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SAR EVALUATION REPORT

Applicant Name:
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Date of Testing:
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Test Site/Location:
Element, Columbia, MD, USA
Document Serial No.:
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FCC ID: **A3LSMS711U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-S711U, SM-S711U1

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.22	0.37	0.64	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.11	0.14	0.32	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.29	0.48	0.48	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.18	0.50	0.88	1.34
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.23	0.21	0.50	1.47
PCE	LTE Band 71	665.5 - 695.5 MHz	0.23	0.47	0.47	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.26	0.58	0.58	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.35	0.67	0.67	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.38	0.66	0.66	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.28	0.69	0.69	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.27	0.68	0.68	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.56	0.72	1.16	2.28
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.74	0.42	0.88	1.83
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.60	0.37	0.72	1.28
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.73	0.46	0.57	2.34
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.76	0.48	0.96	2.26
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.50	0.20	0.21	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.20	0.46	0.46	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.23	0.51	0.51	N/A
PCE	NR Band n26	816.5 - 846.5 MHz	0.21	0.47	0.47	N/A
PCE	NR Band n66	1712.5 - 1777.5 MHz	0.80	0.68	1.23	2.13
PCE	NR Band n25	1852.5 - 1912.5 MHz	0.76	0.33	0.94	2.96
PCE	NR Band n2	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	0.77	0.37	0.70	0.57
PCE	NR Band n41	2506.02 - 2679.99 MHz	0.80	0.53	0.64	1.37
CBE	NR Band n48	3555 - 3694.98 MHz	0.60	0.16	0.21	N/A
PCE	NR Band n77	3455.01 - 3544.98 MHz 3705 - 3975 MHz	0.74	0.32	0.32	1.76
DTS	2.4 WLAN	2412 - 2462 MHz	0.41	0.12	0.18	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.21*	0.37*	N/A	0.91*
NII	U-NII-2C	5500 - 5720 MHz	0.24*	0.29*	N/A	0.83*
NII	U-NII-3	5745 - 5825 MHz	0.24*	0.19*	0.19*	N/A
NII	U-NII-4	5845 - 5885 MHz	0.25*	0.15*	N/A	0.80*
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.18	0.14	0.30	0.51
DXX	NFC	13.56 MHz	N/A	N/A	N/A	< 0.1
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.59	1.40	3.99

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

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

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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 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (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 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n26	Voice/Data	816.5 - 846.5 MHz
NR Band n66	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2	Voice/Data	1852.5 - 1907.5 MHz
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz
NR Band n41	Voice/Data	2506.02 - 2679.99 MHz
NR Band n48	Voice/Data	3555 - 3694.98 MHz
NR Band n77	Voice/Data	3455.01 - 3544.98 MHz 3705 - 3975 MHz
2.4 WLAN	Voice/Data	2412 - 2462 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 - 6515 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
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit Gen2 Sub6 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* or *PD_design_target*, below the predefined time-averaged power limit (i.e., P_{limit} for sub-6 radio, and *input.power.limit* for 5G mmW NR), 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 Scenario			Maximum Tune-Up Output Power*	Body-Worn	Phablet	Head	Hotspot
Averaging Volume				1g	10g	1g	1g
Spacing				10 mm	0 mm	0 mm	10 mm
DSI				0	0	1	2
Technology/Band	Antenna	Antenna Group	Pmax				
GSM 850	A	AG0	25.3	28.2		30.4	28.0
GSM 1900	A	AG0	22.1	20.0		30.6	20.0
UMTS 850	A	AG0	24.0	27.0		30.4	27.0
UMTS 1750	A	AG0	23.0	19.0		31.5	19.0
UMTS 1900	A	AG0	23.0	19.0		30.4	19.0
LTE Band 71	A	AG0	24.5	28.6		31.9	28.6
LTE Band 12	A	AG0	24.5	27.4		31.4	27.4
LTE Band 13	A	AG0	24.5	26.7		30.0	26.7
LTE Band 14	A	AG0	24.5	26.5		29.7	26.5
LTE Band 26 (Cell)	A	AG0	24.5	26.6		31.0	26.6
LTE Band 5 (Cell)	A	AG0	24.5	26.3		31.3	26.3
LTE Band 66/4 (AWS)	A	AG0	23.5	20.0		29.0	20.0
LTE Band 66/4 (AWS)	F	AG1	22.5	20.0		16.0	20.0
LTE Band 25/2 (PCS)	A	AG0	23.5	19.0		29.8	19.0
LTE Band 25/2 (PCS)	F	AG1	22.5	19.5		17.0	19.5
LTE Band 30	A	AG0	22.0	17.0		34.8	17.0
LTE Band 30	F	AG1	21.5	20.0		15.5	20.0
LTE Band 7	B	AG0	23.0	19.0		32.7	19.0
LTE Band 7	F	AG1	21.0	18.5		14.0	18.5
LTE Band 41/38 (PC3)	B	AG0	22.0	19.0		33.5	19.0
LTE Band 41 (PC2)	B	AG0	22.0	19.0		33.5	19.0
LTE Band 41/38 (PC3)	F	AG1	20.0	19.0		14.5	19.0
LTE Band 41 (PC2)	F	AG1	19.0	19.0		14.5	19.0
LTE Band 48	F	AG1	20.3	18.0		16.0	18.0
NR Band n71	A	AG0	24.5	28.8		32.6	28.8
NR Band n12	A	AG0	24.5	28.4		31.9	28.4
NR Band n26/n5	A	AG0	24.5	27.1		32.4	27.1
NR Band n66	A	AG0	23.5	20.0		30.0	20.0
NR Band n66	F	AG1	22.5	20.0		17.0	20.0
NR Band n25/n2 (PCS)	A	AG0	23.5	19.0		29.7	19.0
NR Band n25/n2 (PCS)	F	AG1	22.5	19.5		16.0	19.5
NR Band n30	A	AG0	22.5	17.0		34.5	17.0
NR Band n30	F	AG1	21.5	20.0		15.5	20.0
NR Band n41 (PC2)	B	AG0	26.0	19.0		19.0	19.0
NR Band n41 (PC2)	F	AG1	22.0	15.5		15.5	15.5
NR Band n41 (PC2)	E	AG1	19.5	16.5		16.5	16.5
NR Band n41 (PC2)	D	AG0	19.0	17.5		17.5	17.5
NR Band n48	F	AG1	22.3	18.0		16.0	18.0
NR Band n77 (PC2)	F	AG1	26.0	18.0		14.5	18.0
NR Band n77 (PC2)	C	AG0	22.0	14.5		13.5	14.5
NR Band n77 (PC2)	I	AG1	24.0	17.5		16.5	17.5
NR Band n77 (PC2)	D	AG0	21.5	13.0		12.0	13.0

*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 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. 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 802.11ax RU SAR Exclusion Appendix.

1.4.1 WWAN Output Power

Antenna A										
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	28.0	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 1 (Head)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 2 (Hotspot)	Max Allowed Power	N/A	33.0	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	N/A	32.0	31.5	29.5	27.5	27.0	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	30.0	30.0	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	30.0	30.0	27.2	25.4	24.2	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	26.2	24.4	23.2	26.0	24.0	22.0	21.0
DSI = 1 (Head)	Max Allowed Power	30.0	30.0	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 2 (Hotspot)	Max Allowed Power	N/A	30.0	27.2	25.4	24.2	27.0	25.0	23.0	22.0
	Nominal	N/A	29.0	26.2	24.4	23.2	26.0	24.0	22.0	21.0

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

Antenna A					
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	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 2 (Hotspot)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
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	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 1 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 2 (Hotspot)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
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	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 1 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 2 (Hotspot)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	DSI = 0 (Body-Worn or Phablet)	DSI = 1 (Head)	DSI = 2 (Hotspot)
LTE Band 71	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 12	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 13	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 14	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 26 (Cell)	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 5 (Cell)	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 66/4 (AWS)	A	Max Allowed Power	24.5	21.0	24.5	21.0
		Nominal	23.5	20.0	23.5	20.0
LTE Band 66/4 (AWS)	F	Max Allowed Power	23.5	21.0	17.0	21.0
		Nominal	22.5	20.0	16.0	20.0
LTE Band 25/2 (PCS)	A	Max Allowed Power	24.5	20.0	24.5	20.0
		Nominal	23.5	19.0	23.5	19.0
LTE Band 25/2 (PCS)	F	Max Allowed Power	23.5	20.5	18.0	20.5
		Nominal	22.5	19.5	17.0	19.5
LTE Band 30	A	Max Allowed Power	23.0	18.0	23.0	18.0
		Nominal	22.0	17.0	22.0	17.0
LTE Band 30	F	Max Allowed Power	22.5	21.0	16.5	21.0
		Nominal	21.5	20.0	15.5	20.0
LTE Band 7	B	Max Allowed Power	24.0	20.0	24.0	20.0
		Nominal	23.0	19.0	23.0	19.0
LTE Band 7	F	Max Allowed Power	22.0	19.5	15.0	19.5
		Nominal	21.0	18.5	14.0	18.5
LTE Band 41/38 (PC3)	B	Max Allowed Power	25.0	22.0	25.0	22.0
		Nominal	24.0	21.0	24.0	21.0
LTE Band 41 (PC2)	B	Max Allowed Power	26.6	23.6	26.6	23.6
		Nominal	25.6	22.6	25.6	22.6
LTE Band 41/38 (PC3)	F	Max Allowed Power	23.0	22.0	17.5	22.0
		Nominal	22.0	21.0	16.5	21.0
LTE Band 41 (PC2)	F	Max Allowed Power	23.6	23.6	19.1	23.6
		Nominal	22.6	22.6	18.1	22.6
LTE Band 48	F	Max Allowed Power	23.3	21.0	19.0	21.0
		Nominal	22.3	20.0	18.0	20.0

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	DSI = 0 (Body-Worn or Phablet)	DSI = 1 (Head)	DSI = 2 (Hotspot)
NR Band n71	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
NR Band n12	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
NR Band n26/n5	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
NR Band n66	A	Max Allowed Power	24.5	21.0	24.5	21.0
		Nominal	23.5	20.0	23.5	20.0
NR Band n66	F	Max Allowed Power	23.5	21.0	18.0	21.0
		Nominal	22.5	20.0	17.0	20.0
NR Band n25/n2	A	Max Allowed Power	24.5	20.0	24.5	20.0
		Nominal	23.5	19.0	23.5	19.0
NR Band n25/n2	F	Max Allowed Power	23.5	20.5	17.0	20.5
		Nominal	22.5	19.5	16.0	19.5
NR Band n30	A	Max Allowed Power	23.5	18.0	23.5	18.0
		Nominal	22.5	17.0	22.5	17.0
NR Band n30	F	Max Allowed Power	22.5	21.0	16.5	21.0
		Nominal	21.5	20.0	15.5	20.0
NR Band n41 (PC2)	B	Max Allowed Power	27.0	20.0	20.0	20.0
		Nominal	26.0	19.0	19.0	19.0
NR Band n41 (PC2)	F	Max Allowed Power	23.0	16.5	16.5	16.5
		Nominal	22.0	15.5	15.5	15.5
NR Band n41 (PC2)	E	Max Allowed Power	20.5	17.5	17.5	17.5
		Nominal	19.5	16.5	16.5	16.5
NR Band n41 (PC2)	D	Max Allowed Power	20.0	18.5	18.5	18.5
		Nominal	19.0	17.5	17.5	17.5
NR Band n48	F	Max Allowed Power	23.3	19.0	17.0	19.0
		Nominal	22.3	18.0	16.0	18.0
NR Band n77 (PC2)	F	Max Allowed Power	27.0	19.0	15.5	19.0
		Nominal	26.0	18.0	14.5	18.0
NR Band n77 (PC2)	C	Max Allowed Power	23.0	15.5	14.5	15.5
		Nominal	22.0	14.5	13.5	14.5
NR Band n77 (PC2)	I	Max Allowed Power	25.0	18.5	17.5	18.5
		Nominal	24.0	17.5	16.5	17.5
NR Band n77 (PC2)	D	Max Allowed Power	22.5	14.0	13.0	14.0
		Nominal	21.5	13.0	12.0	13.0

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

1.4.2 2.4 GHz Maximum WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)															
		Antenna 2								MIMO							
		b		g		n		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	19.0	18.0	18.0	17.0	18.0	17.0	17.0	16.0	22.0	21.0	21.0	20.0	21.0	20.0	20.0	19.0

1.4.3 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 NR FR1/FR2 (RCV not Active)
- Simultaneous conditions with 5G NR FR1/FR2 and 5/6 GHz WLAN (RCV not Active)

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 2															
		b		g		n		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0

The below table is applicable in the following conditions:
- RCV Active
- RCV Active during simultaneous conditions with 5G NR FR1/FR2

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 2															
		b		g		n		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0

The below table is applicable in the following conditions:
- RCV Active during simultaneous conditions with 5/6 GHz WLAN
- RCV Active during simultaneous conditions with 5G NR FR1/FR2 and 5/6 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 2															
		b		g		n		ax (SU)		b CDD + STBC		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	10.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0

1.4.4 5 GHz Maximum WLAN Output Power

Mode	IEEE 802.11 (in dBm)							
	MIMO							
	a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0
5 GHz WIFI (40MHz BW)			19.0	18.0	19.0	18.0	19.0	18.0
5 GHz WIFI (80MHz BW)					18.0	17.0	18.0	17.0
5 GHz WIFI (160MHz BW)					18.0	17.0	18.0	17.0

1.4.5 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 NR FR1/FR2
- Simultaneous conditions with 5G NR FR1/FR2 and 2.4 GHz WLAN Active

Mode	IEEE 802.11 (in dBm)							
	MIMO							
	a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
5 GHz WIFI (40MHz BW)			17.0	16.0	17.0	16.0	17.0	16.0
5 GHz WIFI (80MHz BW)					17.0	16.0	17.0	16.0
5 GHz WIFI (160MHz BW)					17.0	16.0	17.0	16.0

The below table is applicable in the following conditions:

- RCV Active
- RCV Active during simultaneous conditions with 5G NR FR1/FR2

Mode	IEEE 802.11 (in dBm)							
	MIMO							
	a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0
5 GHz WIFI (40MHz BW)			13.0	12.0	13.0	12.0	13.0	12.0
5 GHz WIFI (80MHz BW)					13.0	12.0	13.0	12.0
5 GHz WIFI (160MHz BW)					13.0	12.0	13.0	12.0

The below table is applicable in the following conditions:

- RCV Active during simultaneous conditions with 2.4 GHz WLAN
- RCV Active during simultaneous conditions with 5G NR FR1/FR2, and 2.4 GHz WLAN Active

Mode	IEEE 802.11 (in dBm)							
	MIMO							
	a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	10.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0
5 GHz WIFI (40MHz BW)			10.0	9.0	10.0	9.0	10.0	9.0
5 GHz WIFI (80MHz BW)					10.0	9.0	10.0	9.0
5 GHz WIFI (160MHz BW)					10.0	9.0	10.0	9.0

1.4.6 2.4 GHz Maximum Bluetooth Output Power

Mode	Single Antenna			
	Antenna 1		Antenna 2	
	Maximum	Nominal	Maximum	Nominal
Bluetooth (in dBm)	17.0	16.0	14.8	13.8
Bluetooth EDR (in dBm)	14.0	13.0	11.5	10.5
Bluetooth LE 1Mbps/2Mbps (in dBm)	9.0	8.0	6.5	5.5
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	9.0	8.0		

1.4.7 2.4 GHz Reduced Bluetooth Output Power

The below table is applicable in the following conditions:

- RCV active

Mode	Single Antenna			
	Antenna 1		Antenna 2	
	Maximum	Nominal	Maximum	Nominal
Bluetooth (in dBm)	10.0	9.0	7.0	6.0
Bluetooth EDR (in dBm)	10.0	9.0	6.0	5.0
Bluetooth LE 1Mbps/2Mbps (in dBm)	9.0	8.0	6.5	5.5
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	9.0	8.0		

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 DUT Antenna Diagram & SAR Test Setup Photographs Appendix. Since the display diagonal dimension of this device is > 150 mm and <200 mm, it is considered a “phablet.” Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 1-1
Device Edges/Sides for SAR Testing

Antenna	Back	Front	Top	Bottom	Right	Left
A	Yes	Yes	No	Yes	Yes	Yes
B	Yes	Yes	No	Yes	No	Yes
C	Yes	Yes	No	Yes	No	Yes
D	Yes	Yes	No	Yes	Yes	No
E	Yes	Yes	Yes	No	Yes	No
F	Yes	Yes	Yes	No	No	Yes
H	Yes	Yes	Yes	No	No	Yes
I	Yes	Yes	No	No	No	Yes
J	Yes	Yes	Yes	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 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, U-NII-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 DUT Antenna Diagram & SAR Test Setup Photographs Appendix.

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 procedures.

Table 1-2
Simultaneous Transmission Scenarios

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

1. No other simultaneous scenarios besides described above is supported for this model.
2. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
3. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
4. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
5. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.
7. This device supports VoWIFI.
8. This device supports Bluetooth Tethering on antenna 1 only.
9. This device supports VoLTE.
10. This device supports VoNR.
11. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
12. 5G NR FR2 n258, n260, and n261 cannot transmit simultaneously.
13. LTE + 5G NR FR2 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR2 checklist.
14. NFC was evaluated for phablet 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.

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" since the display diagonal dimension is greater than 150mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A, U-NII-2C, 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 Multi-Tx and Antenna SAR Considerations Appendix 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 Downlink LTE CA RF Conducted Powers Appendix.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

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

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

This device supports 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).

This device supports LTE Carrier Aggregation (CA) for LTE Band 41, LTE Band 5, LTE Band 66, and LTE Band 48 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

This device can transmit with antenna F for LTE B66/4/7/25/2/30/38/41 and NR n2/25/30/66/41. SAR tests for antenna F were additionally performed for these LTE and NR bands to ensure compliance.

This device supports 5G NR for Bands n258, n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in the Near Field PD Report (report SN can be found in Section 1.11 – Bibliography).

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.

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)
- 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)

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
Near Field PD Report (Part 1)	1M2304260060-27.A3L
RF Exposure Part 2 Test Report	1M2304260060-25.A3L
RF Exposure Compliance Summary Report	1M2304260060-28.A3L
RF Exposure Part 0 Test Report	1M2304260060-02.A3L
WIFI 6GHz RF exposure	1M2304260060-26.A3L

2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71 (665.5 - 695.5 MHz)				
	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (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 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (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 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (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 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2405 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	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)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
UE Category	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, downlink MIMO features as shown in the RF Conducted Powers section of this report and the Downlink LTE CA RF Conducted Powers Appendix. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay , HetNet, Enhanced MIMO, eICIC, eMBMS, WIFI Offloading, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information						
Form Factor	Portable Handset					
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz)					
	NR Band n12 (701.5 - 713.5 MHz)					
	NR Band n26 (816.5 - 846.5 MHz)					
	NR Band n66 (1712.5 - 1777.5 MHz)					
	NR Band n25 (1852.5 - 1912.5 MHz)					
	NR Band n2 (1852.5 - 1907.5 MHz)					
	NR Band n30 (2307.5 - 2312.5 MHz)					
	NR Band n41 (2506.02 - 2679.99 MHz)					
	NR Band n48 (3555 - 3694.98 MHz)					
	NR Band n77 (3455.01 - 3544.98 MHz; 3705 - 3975 MHz)					
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n12: 5 MHz, 10 MHz, 15 MHz					
	NR Band n26: 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n66: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz					
	NR Band n25: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz					
	NR Band n2: 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n30: 5 MHz, 10 MHz					
	NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz					
	NR Band n48: 10 MHz, 20 MHz, 40 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 n71: 5 MHz	665.5 (133100)		680.5 (136100)		695.5 (139100)	
NR Band n71: 10 MHz	668 (133600)		680.5 (136100)		693 (138600)	
NR Band n71: 15 MHz	670.5 (134100)		680.5 (136100)		690.5 (138100)	
NR Band n71: 20 MHz	673 (134600)		680.5 (136100)		688 (137600)	
NR Band 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 n26: 5 MHz	816.5 (163300)		831.5 (166300)		846.5 (169300)	
NR Band n26: 10 MHz	819 (163800)		831.5 (166300)		844 (168800)	
NR Band n26: 15 MHz	821.5 (164300)		831.5 (166300)		841.5 (168300)	
NR Band n26: 20 MHz	824 (164800)		831.5 (166300)		839 (167800)	
NR Band n66: 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)	
NR Band n66: 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)	
NR Band n66: 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)	
NR Band n66: 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band n66: 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)	
NR Band n66: 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)	
NR Band n25: 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)	
NR Band n25: 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)	
NR Band n25: 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)	
NR Band n25: 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)	
NR Band n25: 25 MHz	1862.5 (372500)		1882.5 (376500)		1902.5 (380500)	
NR Band n25: 30 MHz	1865 (373000)		1882.5 (376500)		1900 (380000)	
NR Band n25: 40 MHz	1870 (374000)		1882.5 (376500)		1895 (379000)	
NR Band n2: 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
NR Band n2: 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
NR Band n2: 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
NR Band n2: 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n30: 5 MHz	2307.5 (461500)		2310 (462000)		2312.5 (462500)	
NR Band n30: 10 MHz	N/A		2310 (462000)		N/A	
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: 70 MHz	2531.01 (506202)		N/A		2655 (531000)	
NR Band n41: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)	
NR Band n41: 90 MHz	2541 (508200)		N/A		2644.98 (528996)	
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)		2640 (528000)	
NR Band n48: 10 MHz	3555 (637000)	3601.68 (640112)	N/A		3648.33 (643222)	3694.98 (646332)
NR Band n48: 20 MHz	3560.01 (637334)	3603.33 (640222)	N/A		3646.68 (643112)	3690 (646000)
NR Band n48: 40 MHz	3570 (638000)	N/A	3624.99 (641666)		N/A	3679.98 (645332)
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: n71/n12/n26/n66/n25/n2/n30	15 kHz					
SCS for NR Band: n41/n48/n77	30 kHz					
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, 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 n71	LTE Band 2/48/66					
LTE Anchor Bands for NR Band n12	LTE Band 2/48/66					
LTE Anchor Bands for NR Band n5	LTE Band 2/30/48/66					
LTE Anchor Bands for NR Band n66	LTE Band 2/5/12/13/14/30/48					
LTE Anchor Bands for NR Band n25	LTE Band 12/66					
LTE Anchor Bands for NR Band n2	LTE Band 4/5/12/13/14/30/48/66					
LTE Anchor Bands for NR Band n41	LTE Band 2/25/66					
LTE Anchor Bands for NR Band n48	LTE Band 2/66					
LTE Anchor Bands for NR Band n77	LTE Band 2/5/12/13/14/30/66/71					

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:

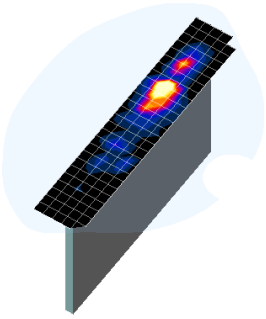

Figure 4-1
Sample SAR Area Scan

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*$\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 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].

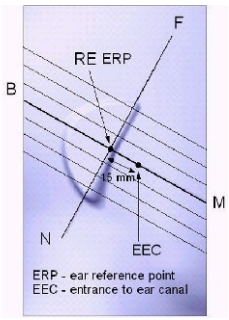

Figure 5-1
Close-Up Side view of ERP

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.

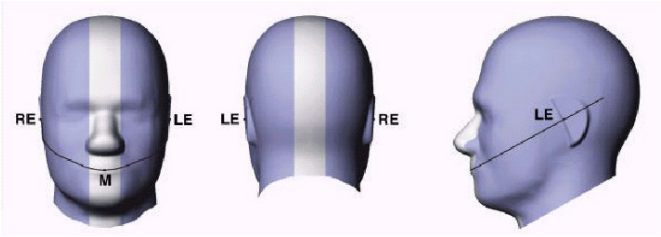

Figure 5-2
Front, back and side view of SAM Twin Phantom

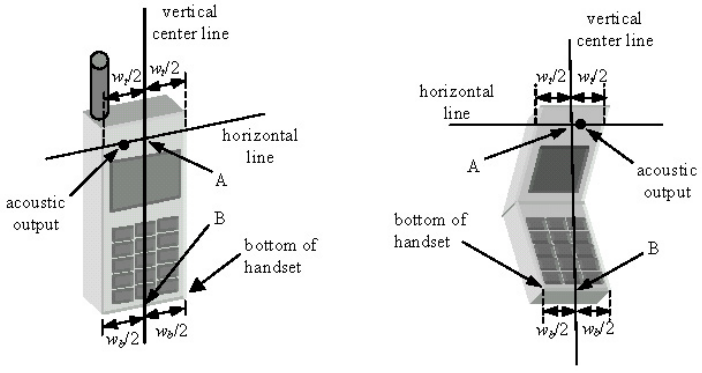

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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.

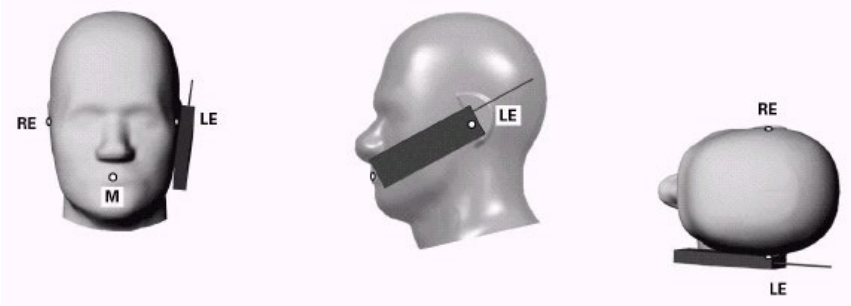

Figure 6-1 Front, Side and Top View of Cheek Position

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).

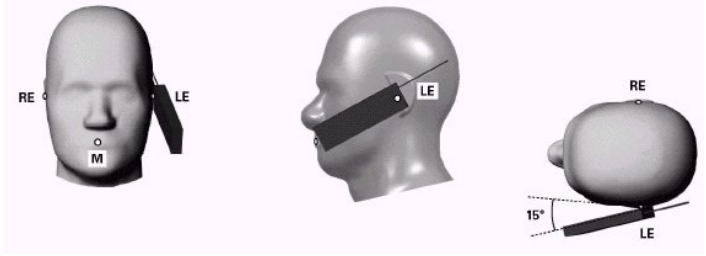

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

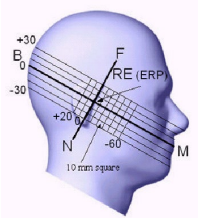

Figure 6-3
Side view w/ relevant markings

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.

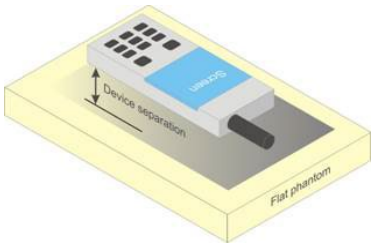

Figure 6-4
Sample Body-Worn Diagram

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.

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 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 DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) for GSM 850; Measured P_{max} for DSI = 1 (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	31.77	31.68	30.83	**28.81**	27.01	26.17	24.72	22.53	21.73
	190	32.13	32.12	31.33	**28.83**	27.35	26.55	25.11	22.75	22.01
	251	32.20	32.09	31.01	**29.37**	26.91	26.63	24.92	22.95	21.91
GSM 1900	512	28.99	29.12	28.18	**26.23**	24.31	25.41	24.19	22.19	21.28
	661	29.58	29.73	28.36	**26.55**	24.41	25.54	24.28	22.43	21.42
	810	29.31	29.42	28.69	**26.71**	24.77	25.72	24.52	22.52	21.59
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	22.57	22.48	24.64	**24.38**	23.83	16.97	18.53	18.10	18.55
	190	22.93	22.92	25.14	**24.40**	24.17	17.35	18.92	18.32	18.83
	251	23.00	22.89	24.82	**24.94**	23.73	17.43	18.73	18.52	18.73
GSM 1900	512	19.79	19.92	21.99	**21.80**	21.13	16.21	18.00	17.76	18.10
	661	20.38	20.53	22.17	**22.12**	21.23	16.34	18.09	18.00	18.24
	810	20.11	20.22	22.50	**22.28**	21.59	16.52	18.33	18.09	18.41
GSM 850	**Frame Avg.Targets:**	22.80	22.80	25.31	**25.07**	24.32	17.80	18.81	18.57	18.82
GSM 1900	**Frame Avg.Targets:**	19.80	19.80	21.81	**22.07**	21.32	16.80	17.81	17.57	17.82

Table 9-2
Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot mode) for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.99	29.17	26.27	24.49	**23.35**	25.41	24.19	22.19	21.28
	661	29.58	29.73	26.41	24.55	**23.61**	25.54	24.28	22.43	21.42
	810	29.31	29.46	26.61	24.79	**23.80**	25.72	24.52	22.52	21.59
Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.79	19.97	20.08	20.06	**20.17**	16.21	18.00	17.76	18.10
	661	20.38	20.53	20.22	20.12	**20.43**	16.34	18.09	18.00	18.24
	810	20.11	20.26	20.42	20.36	**20.62**	16.52	18.33	18.09	18.41
GSM 1900	**Frame Avg.Targets:**	19.80	19.80	20.01	19.97	**20.02**	16.80	17.81	17.57	17.82

Note:

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

GSM Class: B
GPRS Multislot class: 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 DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) for UMTS 850; Measured P_{max} for DSI = 1 (Head) for UMTS 1750 & UMTS 1900

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	24.44	24.77	24.85	23.98	23.91	23.90	23.95	23.82	23.89	-
99		12.2 kbps AMR	24.46	24.79	24.77	23.85	23.90	23.93	23.93	23.81	23.86	-
6	HSDPA	Subtest 1	23.45	23.61	23.79	22.92	22.82	22.91	22.93	22.88	22.86	0
6		Subtest 2	23.34	23.66	23.74	22.84	22.91	22.98	22.94	22.78	22.82	0
6		Subtest 3	22.98	23.19	23.23	22.47	22.40	22.46	22.49	22.22	22.30	0.5
6		Subtest 4	22.90	23.20	23.21	22.53	22.37	22.48	22.39	22.40	22.36	0.5
6	HSUPA	Subtest 1	23.62	23.97	23.93	22.91	22.86	22.97	22.96	22.79	22.92	0
6		Subtest 2	21.40	21.52	21.66	20.90	20.80	20.81	20.88	20.77	20.86	2
6		Subtest 3	22.43	22.56	22.70	21.88	21.76	21.87	21.97	21.89	21.94	1
6		Subtest 4	21.36	21.50	21.77	21.12	21.05	21.26	21.15	21.01	21.11	2
6		Subtest 5	23.42	23.75	23.76	22.95	22.86	22.90	22.97	22.85	22.91	0
8	DC-HSDPA	Subtest 1	23.36	23.71	23.75	22.91	22.88	22.99	22.92	22.73	22.93	0
8		Subtest 2	23.41	23.44	23.66	22.98	22.92	22.97	22.84	22.82	22.98	0
8		Subtest 3	22.91	23.23	23.22	22.47	22.40	22.41	22.48	22.27	22.47	0.5
8		Subtest 4	22.99	23.23	23.30	22.40	22.38	22.46	22.36	22.37	22.43	0.5

Table 9-4
Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot mode) for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]		
			1312	1412	1513	9262	9400	9538
99	WCDMA	12.2 kbps RMC	19.79	19.84	19.85	19.32	19.18	19.29
99		12.2 kbps AMR	19.85	19.81	19.83	19.34	19.19	19.37
6	HSDPA	Subtest 1	18.84	18.76	18.80	18.37	18.23	18.32
6		Subtest 2	18.73	18.79	18.81	18.32	18.19	18.30
6		Subtest 3	18.26	18.23	18.43	17.84	17.68	17.81
6		Subtest 4	18.31	18.30	18.22	17.82	17.69	17.67
6	HSUPA	Subtest 1	18.80	18.77	18.86	18.40	18.26	18.38
6		Subtest 2	16.86	16.68	16.90	16.13	15.98	16.09
6		Subtest 3	17.74	17.69	17.88	17.09	16.96	17.08
6		Subtest 4	16.85	16.78	16.87	16.09	15.97	16.05
6		Subtest 5	18.86	18.82	18.91	18.44	18.31	18.46
8	DC-HSDPA	Subtest 1	18.77	18.82	18.85	18.84	18.68	18.78
8		Subtest 2	18.91	18.81	18.83	18.82	18.66	18.76
8		Subtest 3	18.31	18.32	18.45	18.32	18.19	18.28
8		Subtest 4	18.21	18.35	18.27	18.31	18.20	18.26

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 LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

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

LTE Carrier Aggregation Notes:

1. This device supports uplink carrier aggregation for LTE CA_5B, LTE CA_66B, LTE CA_66C, LTE CA_48C, and LTE CA_41C with a maximum of two component carriers. For intraband contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when non-contiguous RB allocation is implemented. The conducted powers and MPR settings in this device are permanently implemented per the above 3GPP requirements.
2. Per FCC Guidance, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

9.3.1 LTE Band 71

Table 9-5
LTE Band 71 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.20	0	0
	1	50	24.21		0
	1	99	**24.32**		0
	50	0	23.17	0-1	1
	50	25	**23.26**		1
	50	50	23.14		1
	100	0	23.21		1
16QAM	1	0	23.40	0-1	1
	1	50	23.53		1
	1	99	23.26		1
	50	0	22.30	0-2	2
	50	25	22.27		2
	50	50	22.28		2
	100	0	22.24		2
64QAM	1	0	22.28	0-2	2
	1	50	22.35		2
	1	99	22.24		2
	50	0	21.24	0-3	3
	50	25	21.22		3
	50	50	21.25		3
	100	0	21.24		3
256QAM	1	0	19.22	0-5	5
	1	50	19.37		5
	1	99	19.36		5
	50	0	19.24		5
	50	25	19.24		5
	50	50	19.31		5
	100	0	19.22		5

9.3.2 LTE Band 12

Table 9-6
LTE Band 12 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 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	24.41	0	0
	1	25	**24.53**		0
	1	49	24.40		0
	25	0	23.42	0-1	1
	25	12	**23.51**		1
	25	25	23.46		1
	50	0	23.44		1
16QAM	1	0	23.72	0-1	1
	1	25	23.75		1
	1	49	23.75		1
	25	0	22.49	0-2	2
	25	12	22.45		2
	25	25	22.48		2
	50	0	22.42		2
64QAM	1	0	22.56	0-2	2
	1	25	22.62		2
	1	49	22.46		2
	25	0	21.45	0-3	3
	25	12	21.41		3
	25	25	21.42		3
	50	0	21.47		3
256QAM	1	0	19.45	0-5	5
	1	25	19.61		5
	1	49	19.49		5
	25	0	19.49		5
	25	12	19.49		5
	25	25	19.50		5
	50	0	19.38		5

9.3.3 LTE Band 13

Table 9-7
LTE Band 13 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.33	0	0
	1	25	**24.40**		0
	1	49	24.31		0
	25	0	**23.49**	0-1	1
	25	12	23.42		1
	25	25	23.40		1
	50	0	23.39		1
16QAM	1	0	23.57	0-1	1
	1	25	23.56		1
	1	49	23.52		1
	25	0	22.42	0-2	2
	25	12	22.47		2
	25	25	22.41		2
	50	0	22.28		2
64QAM	1	0	22.45	0-2	2
	1	25	22.47		2
	1	49	22.51		2
	25	0	21.44	0-3	3
	25	12	21.37		3
	25	25	21.40		3
	50	0	21.27		3
256QAM	1	0	19.38	0-5	5
	1	25	19.57		5
	1	49	19.45		5
	25	0	19.40		5
	25	12	19.35		5
	25	25	19.36		5
	50	0	19.35		5

9.3.4 LTE Band 14

Table 9-8
LTE Band 14 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.18	0	0
	1	25	**24.26**		0
	1	49	24.11		0
	25	0	**23.21**	0-1	1
	25	12	23.18		1
	25	25	23.11		1
	50	0	23.13		1
16QAM	1	0	23.48	0-1	1
	1	25	23.45		1
	1	49	23.35		1
	25	0	22.19	0-2	2
	25	12	22.20		2
	25	25	22.16		2
	50	0	22.21		2
64QAM	1	0	22.38	0-2	2
	1	25	22.41		2
	1	49	22.33		2
	25	0	21.18	0-3	3
	25	12	21.19		3
	25	25	21.17		3
	50	0	21.19		3
256QAM	1	0	19.24	0-5	5
	1	25	19.26		5
	1	49	19.03		5
	25	0	19.25		5
	25	12	19.23		5
	25	25	19.16		5
	50	0	19.20		5

9.3.5 LTE Band 26

Table 9-9
LTE Band 26 (Cell) Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 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	24.48	0	0
	1	36	24.68		0
	1	74	**24.69**		0
	36	0	23.62	0-1	1
	36	18	**23.64**		1
	36	37	23.62		1
	75	0	23.63		1
16QAM	1	0	23.78	0-1	1
	1	36	23.74		1
	1	74	23.70		1
	36	0	22.65	0-2	2
	36	18	22.53		2
	36	37	22.62		2
	75	0	22.53		2
64QAM	1	0	22.81	0-2	2
	1	36	22.78		2
	1	74	22.65		2
	36	0	21.59	0-3	3
	36	18	21.68		3
	36	37	21.74		3
	75	0	21.60		3
256QAM	1	0	19.47	0-5	5
	1	36	19.71		5
	1	74	19.74		5
	36	0	19.57		5
	36	18	19.59		5
	36	37	19.72		5
	75	0	19.65		5

9.3.6 LTE Band 5

Table 9-10
LTE Band 5 (Cell) Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.46	0	0
	1	25	24.61		0
	1	49	**24.65**		0
	25	0	23.44	0-1	1
	25	12	23.45		1
	25	25	**23.49**		1
	50	0	23.42		1
16QAM	1	0	23.70	0-1	1
	1	25	23.86		1
	1	49	23.99		1
	25	0	22.68	0-2	2
	25	12	22.69		2
	25	25	22.76		2
	50	0	22.66		2
64QAM	1	0	22.75	0-2	2
	1	25	22.95		2
	1	49	22.66		2
	25	0	21.67	0-3	3
	25	12	21.66		3
	25	25	21.71		3
	50	0	21.65		3
256QAM	1	0	19.71	0-5	5
	1	25	19.72		5
	1	49	19.71		5
	25	0	19.64		5
	25	12	19.64		5
	25	25	19.73		5
	50	0	19.60		5

Table 9-11
LTE Band 5 (Cell) Antenna A Uplink Carrier Aggregation Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	1	49	LTE B5	5	20597	843.7	2597	888.7	QPSK	1	0	24.51	24.65

9.3.7 LTE Band 66 Antenna A

Table 9-12
LTE Band 66 (AWS) Antenna A Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.51	**23.70**	23.27	0	0
	1	50	23.54	23.68	23.22		0
	1	99	23.63	23.57	23.01		0
	50	0	22.30	22.53	22.54	0-1	1
	50	25	22.44	**22.68**	22.52		1
	50	50	22.39	22.57	22.43		1
	100	0	22.35	22.67	22.46		1
16QAM	1	0	22.29	22.81	22.57	0-1	1
	1	50	22.48	22.77	22.56		1
	1	99	22.40	22.62	22.42		1
	50	0	21.34	21.69	21.52	0-2	2
	50	25	21.44	21.72	21.52		2
	50	50	21.41	21.61	21.41		2
	100	0	21.38	21.69	21.45		2
64QAM	1	0	21.58	21.84	21.82	0-2	2
	1	50	21.39	21.89	21.73		2
	1	99	21.53	21.72	21.33		2
	50	0	20.28	20.65	20.47	0-3	3
	50	25	20.33	20.71	20.51		3
	50	50	20.34	20.59	20.39		3
	100	0	20.36	20.65	20.47		3
256QAM	1	0	18.43	18.64	18.52	0-5	5
	1	50	18.62	18.87	18.64		5
	1	99	18.57	18.50	18.55		5
	50	0	18.31	18.56	18.44		5
	50	25	18.37	18.64	18.42		5
	50	50	18.35	18.56	18.35		5
	100	0	18.33	18.61	18.43		5

Table 9-13
LTE Band 66 (AWS) Antenna A Measured P_{Max} for DSI = 1 (Head) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.45	23.76	23.67	0	0
	1	25	23.51	23.80	23.57		0
	1	49	23.43	23.75	23.39		0
	25	0	22.39	22.73	22.58	0-1	1
	25	12	22.43	22.72	22.59		1
	25	25	22.48	22.67	22.51		1
	50	0	22.47	22.72	22.52		1
16QAM	1	0	22.69	22.89	22.69	0-1	1
	1	25	22.71	22.94	22.77		1
	1	49	22.57	22.74	22.71		1
	25	0	21.40	21.71	21.56	0-2	2
	25	12	21.48	21.75	21.61		2
	25	25	21.42	21.74	21.48		2
	50	0	21.45	21.74	21.57		2
64QAM	1	0	21.64	21.96	21.73	0-2	2
	1	25	21.64	21.94	21.46		2
	1	49	21.56	21.62	21.74		2
	25	0	20.42	20.70	20.55	0-3	3
	25	12	20.50	20.79	20.55		3
	25	25	20.48	20.69	20.50		3
	50	0	20.46	20.71	20.50		3
256QAM	1	0	18.53	18.80	18.70	0-5	5
	1	25	18.69	18.88	18.46		5
	1	49	18.55	18.85	18.31		5
	25	0	18.35	18.73	18.52		5
	25	12	18.50	18.73	18.55		5
	25	25	18.52	18.72	18.52		5
	50	0	18.40	18.70	18.52		5

Table 9-14
LTE Band 66 (AWS) Antenna A Uplink Carrier Aggregation Measured P_{Max} for DSI = 2 (Head)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	1	99	23.76	23.70
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	10	132223	1735.1	66687	2135.1	QPSK	1	49	23.82	23.76

Table 9-15
LTE Band 66 (AWS) Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.52	**20.12**	19.87	0	0
	1	50	19.60	19.88	19.99		0
	1	99	19.83	19.77	19.71		0
	50	0	19.81	**20.16**	20.00	0-1	0
	50	25	19.94	20.15	19.99		0
	50	50	19.92	20.06	19.89		0
	100	0	19.87	20.10	19.89		0
16QAM	1	0	19.83	20.27	20.36	0-1	0
	1	50	20.03	20.28	20.10		0
	1	99	20.05	20.14	19.99		0
	50	0	19.79	20.13	20.02	0-2	0
	50	25	19.91	20.16	20.01		0
	50	50	19.93	20.04	19.88		0
	100	0	19.86	20.10	19.98		0
64QAM	1	0	19.97	20.17	20.03	0-2	0
	1	50	19.97	20.34	20.27		0
	1	99	19.89	20.22	20.02		0
	50	0	19.78	20.14	19.99	0-3	0
	50	25	19.93	20.17	20.01		0
	50	50	19.87	20.07	19.89		0
	100	0	19.84	20.15	19.92		0
256QAM	1	0	18.38	18.83	18.60	0-5	1.5
	1	50	18.47	19.06	18.57		1.5
	1	99	18.61	18.76	18.29		1.5
	50	0	18.25	18.59	18.46		1.5
	50	25	18.45	18.62	18.51		1.5
	50	50	18.33	18.58	18.39		1.5
	100	0	18.38	18.58	18.42		1.5

Table 9-16
LTE Band 66 (AWS) Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.86	20.23	20.06	0	0
	1	25	19.87	20.22	19.91		0
	1	49	19.90	20.19	19.85		0
	25	0	19.87	20.17	20.01	0-1	0
	25	12	19.92	20.22	20.00		0
	25	25	19.94	20.15	19.99		0
	50	0	19.93	20.18	20.03		0
16QAM	1	0	20.14	20.41	20.20	0-1	0
	1	25	20.16	20.50	20.10		0
	1	49	20.02	20.40	20.08		0
	25	0	19.79	20.22	20.04	0-2	0
	25	12	19.95	20.19	20.05		0
	25	25	19.89	20.14	20.03		0
	50	0	19.90	20.20	20.03		0
64QAM	1	0	20.04	20.45	20.32	0-2	0
	1	25	20.17	20.49	20.12		0
	1	49	20.02	20.42	20.13		0
	25	0	19.84	20.22	20.09	0-3	0
	25	12	20.00	20.25	20.04		0
	25	25	19.89	20.16	20.03		0
	50	0	19.95	20.18	20.05		0
256QAM	1	0	18.46	18.77	18.64	0-5	1.5
	1	25	18.54	18.99	18.74		1.5
	1	49	18.41	18.91	18.60		1.5
	25	0	18.37	18.69	18.54		1.5
	25	12	18.45	18.74	18.56		1.5
	25	25	18.46	18.64	18.46		1.5
	50	0	18.45	18.71	18.55		1.5

Table 9-17
LTE Band 66 (AWS) Antenna A Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	1	99	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	1	0	19.68	19.83
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	1	49	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	1	0	19.63	19.90

9.3.8 LTE Band 66 Antenna F

Table 9-18
LTE Band 66 (AWS) Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.94	19.84	19.63	0	0
	1	50	19.96	19.82	19.62		0
	1	99	**19.97**	19.63	19.56		0
	50	0	19.93	19.85	19.54	0-1	0
	50	25	19.95	19.93	19.57		0
	50	50	**19.96**	19.82	19.63		0
	100	0	19.91	19.87	19.58		0
16QAM	1	0	20.17	20.01	19.63	0-1	0
	1	50	20.15	19.87	19.91		0
	1	99	20.29	19.89	19.86		0
	50	0	19.88	19.88	19.56	0-2	0
	50	25	19.95	19.89	19.55		0
	50	50	20.00	19.84	19.65		0
	100	0	19.93	19.85	19.56		0
64QAM	1	0	19.81	19.83	19.67	0-2	0
	1	50	20.27	19.92	19.75		0
	1	99	20.15	19.74	19.88		0
	50	0	19.42	19.40	19.12	0-3	0.5
	50	25	19.48	19.37	19.09		0.5
	50	50	19.48	19.29	19.21		0.5
	100	0	19.44	19.30	19.08		0.5
256QAM	1	0	17.24	17.46	17.25	0-5	2.5
	1	50	17.71	17.67	17.25		2.5
	1	99	17.68	17.38	17.54		2.5
	50	0	17.38	17.31	17.08		2.5
	50	25	17.47	17.42	17.07		2.5
	50	50	17.47	17.31	17.17		2.5
	100	0	17.40	17.34	17.10		2.5

Table 9-19
LTE Band 66 (AWS) Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.77	19.80	19.68	0	0
	1	25	19.86	19.78	19.79		0
	1	49	19.88	19.75	19.95		0
	25	0	19.97	19.91	19.74	0-1	0
	25	12	20.04	20.04	19.90		0
	25	25	20.00	19.95	19.95		0
	50	0	20.01	20.01	19.85		0
16QAM	1	0	20.13	20.32	19.83	0-1	0
	1	25	20.12	20.03	20.01		0
	1	49	20.33	20.18	20.13		0
	25	0	20.01	19.89	19.76	0-2	0
	25	12	20.06	20.03	19.86		0
	25	25	20.09	19.96	19.99		0
	50	0	20.03	19.97	19.89		0
64QAM	1	0	19.93	20.02	19.88	0-2	0
	1	25	20.25	20.03	20.06		0
	1	49	20.26	20.06	20.14		0
	25	0	19.51	19.38	19.20	0-3	0.5
	25	12	19.51	19.49	19.39		0.5
	25	25	19.65	19.46	19.43		0.5
	50	0	19.54	19.45	19.36		0.5
256QAM	1	0	17.24	17.52	17.14	0-5	2.5
	1	25	17.76	17.83	17.63		2.5
	1	49	17.58	17.50	17.57		2.5
	25	0	17.52	17.39	17.25		2.5
	25	12	17.60	17.55	17.38		2.5
	25	25	17.61	17.45	17.49		2.5
	50	0	17.48	17.48	17.38		2.5

Table 9-20
LTE Band 66 (AWS) Antenna F Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC									SCC								Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	50	50	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	50	0	19.83	19.96
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	25	25	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	25	0	19.80	20.00
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	19.54	19.54
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	19.52	19.74

Table 9-21
LTE Band 66 (AWS) Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.23	16.40	16.23	0	0
	1	50	16.45	16.39	16.12		0
	1	99	**16.56**	16.34	16.22		0
	50	0	16.33	16.36	16.00	0-1	0
	50	25	16.43	16.39	16.08		0
	50	50	**16.49**	16.26	16.29		0
	100	0	16.39	16.36	16.16		0
16QAM	1	0	16.36	16.65	16.09	0-1	0
	1	50	16.55	16.62	16.38		0
	1	99	16.66	16.55	16.55		0
	50	0	16.38	16.28	16.06	0-2	0
	50	25	16.50	16.38	16.19		0
	50	50	16.52	16.31	16.17		0
	100	0	16.48	16.39	16.16		0
64QAM	1	0	16.21	16.71	16.19	0-2	0
	1	50	16.58	16.48	16.10		0
	1	99	16.70	16.42	16.51		0
	50	0	16.33	16.33	16.00	0-3	0
	50	25	16.51	16.40	16.12		0
	50	50	16.50	16.33	16.22		0
	100	0	16.45	16.35	16.16		0
256QAM	1	0	16.24	16.33	16.18	0-5	0
	1	50	16.31	16.49	16.14		0
	1	99	16.58	16.27	16.37		0
	50	0	16.24	16.38	16.01		0
	50	25	16.44	16.35	16.16		0
	50	50	16.51	16.32	16.23		0
	100	0	16.45	16.40	16.11		0

Table 9-22
LTE Band 66 (AWS) Antenna F Measured P_{Limit} for all DSI =1 (Head) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.26	16.50	16.11	0	0
	1	25	16.48	16.48	16.30		0
	1	49	16.51	16.40	16.42		0
	25	0	16.47	16.39	16.19	0-1	0
	25	12	16.56	16.50	16.31		0
	25	25	16.53	16.48	16.41		0
	50	0	16.54	16.50	16.29		0
16QAM	1	0	16.52	16.62	16.25	0-1	0
	1	25	16.71	16.69	16.55		0
	1	49	16.73	16.54	16.56		0
	25	0	16.44	16.37	16.19	0-2	0
	25	12	16.60	16.59	16.32		0
	25	25	16.64	16.52	16.37		0
	50	0	16.55	16.47	16.20		0
64QAM	1	0	16.46	16.58	16.39	0-2	0
	1	25	16.69	16.55	16.40		0
	1	49	16.70	16.58	16.51		0
	25	0	16.41	16.40	16.15	0-3	0
	25	12	16.56	16.52	16.26		0
	25	25	16.59	16.44	16.36		0
	50	0	16.47	16.48	16.29		0
256QAM	1	0	16.20	16.41	16.17	0-5	0
	1	25	16.60	16.66	16.41		0
	1	49	16.68	16.44	16.45		0
	25	0	16.48	16.43	16.24		0
	25	12	16.56	16.59	16.29		0
	25	25	16.55	16.52	16.41		0
	50	0	16.52	16.58	16.27		0

Table 9-23
LTE Band 66 (AWS) Antenna F Uplink Carrier Aggregation Measured P_{Limit} for all DSI =1 (Head)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	50	50	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	50	0	16.58	16.49
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	25	25	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	25	0	16.61	16.53

9.3.9 LTE Band 25 Antenna A

Table 9-24
LTE Band 25 (PCS) Antenna A Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.91	23.67	23.91	0	0
	1	50	**23.92**	23.78	23.56		0
	1	99	23.69	23.82	23.85		0
	50	0	22.94	22.81	22.73	0-1	1
	50	25	**22.96**	22.80	22.75		1
	50	50	22.90	22.77	22.70		1
	100	0	22.81	22.79	22.83		1
16QAM	1	0	23.00	22.96	22.81	0-1	1
	1	50	22.98	22.94	22.92		1
	1	99	22.96	23.06	22.72		1
	50	0	21.97	21.81	21.66	0-2	2
	50	25	21.95	21.80	21.80		2
	50	50	21.77	21.79	21.78		2
	100	0	21.87	21.73	21.70		2
64QAM	1	0	22.13	21.95	21.84	0-2	2
	1	50	22.04	21.69	21.84		2
	1	99	21.91	21.72	21.82		2
	50	0	20.98	20.77	20.79	0-3	3
	50	25	20.98	20.82	20.77		3
	50	50	20.81	20.83	20.75		3
	100	0	20.94	20.76	20.74		3
256QAM	1	0	19.02	18.88	18.89	0-5	5
	1	50	19.02	18.80	18.77		5
	1	99	19.09	19.04	18.89		5
	50	0	18.87	18.83	18.73		5
	50	25	18.89	18.80	18.74		5
	50	50	18.83	18.76	18.73		5
	100	0	18.86	18.83	18.73		5

Table 9-25
LTE Band 25 (PCS) Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.33**	18.90	18.85	0	0
	1	50	19.12	18.84	18.87		0
	1	99	18.80	18.90	18.90		0
	50	0	18.92	18.88	18.95	0-1	0
	50	25	**19.24**	18.98	18.94		0
	50	50	18.98	19.03	18.90		0
	100	0	18.92	18.93	19.02		0
16QAM	1	0	19.24	19.04	19.14	0-1	0
	1	50	19.00	19.25	19.45		0
	1	99	19.12	19.10	19.02		0
	50	0	18.81	18.91	18.96	0-2	0
	50	25	19.04	18.98	18.91		0
	50	50	18.94	18.98	19.02		0
	100	0	18.97	18.99	18.94		0
64QAM	1	0	18.80	18.97	18.92	0-2	0
	1	50	19.06	19.03	18.99		0
	1	99	19.04	19.09	19.01		0
	50	0	18.93	18.88	18.95	0-3	0
	50	25	18.99	19.03	18.90		0
	50	50	18.95	18.95	18.97		0
	100	0	18.92	18.97	18.93		0
256QAM	1	0	18.43	18.50	18.63	0-5	0.5
	1	50	18.48	18.67	18.64		0.5
	1	99	18.70	18.59	18.68		0.5
	50	0	18.55	18.53	18.50		0.5
	50	25	18.58	18.56	18.50		0.5
	50	50	18.60	18.56	18.67		0.5
	100	0	18.58	18.53	18.52		0.5

9.3.10 LTE Band 25 Antenna F

Table 9-26
LTE Band 25 (PCS) Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.93	19.18	18.89	0	0
	1	50	19.11	**19.33**	19.14		0
	1	99	19.10	19.06	19.13		0
	50	0	19.27	19.31	18.93	0-1	0
	50	25	19.31	**19.38**	19.08		0
	50	50	19.33	19.32	19.08		0
	100	0	19.30	19.31	19.08		0
16QAM	1	0	19.37	19.44	19.26	0-1	0
	1	50	19.63	19.53	19.47		0
	1	99	19.55	19.31	19.50		0
	50	0	19.27	19.32	18.93	0-2	0
	50	25	19.33	19.42	19.06		0
	50	50	19.34	19.32	19.08		0
	100	0	19.32	19.37	19.06		0
64QAM	1	0	19.28	19.38	19.21	0-2	0
	1	50	19.40	19.45	19.21		0
	1	99	19.40	19.30	19.29		0
	50	0	19.28	19.31	18.94	0-3	0
	50	25	19.35	19.37	19.04		0
	50	50	19.36	19.29	19.09		0
	100	0	19.34	19.34	19.06		0
256QAM	1	0	17.40	17.50	17.17	0-5	2
	1	50	17.56	17.56	17.19		2
	1	99	17.48	17.50	17.46		2
	50	0	17.37	17.40	17.04		2
	50	25	17.43	17.48	17.12		2
	50	50	17.48	17.39	17.22		2
	100	0	17.44	17.45	17.18		2

Table 9-27
LTE Band 25 (PCS) Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.55	**17.00**	16.68	0	0
	1	50	16.78	16.90	16.46		0
	1	99	16.86	16.82	16.63		0
	50	0	16.79	**16.88**	16.56	0-1	0
	50	25	16.86	16.86	16.58		0
	50	50	16.87	16.86	16.62		0
	100	0	16.86	16.87	16.59		0
16QAM	1	0	16.74	16.86	16.78	0-1	0
	1	50	16.93	16.96	16.76		0
	1	99	17.04	16.78	16.81		0
	50	0	16.88	16.86	16.52	0-2	0
	50	25	16.87	16.94	16.65		0
	50	50	16.88	16.87	16.71		0
	100	0	16.83	16.88	16.58		0
64QAM	1	0	16.86	16.91	16.56	0-2	0
	1	50	16.86	16.95	16.64		0
	1	99	16.91	16.72	16.85		0
	50	0	16.89	16.81	16.51	0-3	0
	50	25	16.88	16.88	16.55		0
	50	50	16.87	16.87	16.69		0
	100	0	16.87	16.82	16.60		0
256QAM	1	0	16.70	16.93	16.69	0-5	0
	1	50	16.86	16.92	16.62		0
	1	99	16.91	16.83	16.81		0
	50	0	16.80	16.86	16.42		0
	50	25	16.84	16.90	16.65		0
	50	50	16.88	16.84	16.67		0
	100	0	16.87	16.92	16.62		0

9.3.11 LTE Band 30 Antenna A

Table 9-28
LTE Band 30 Antenna A Measured P_{Max} for DSI = 1 (Head) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	21.86	0	0
	1	25	**21.98**		0
	1	49	21.80		0
	25	0	20.89	0-1	1
	25	12	20.90		1
	25	25	**20.91**		1
	50	0	20.84		1
16QAM	1	0	21.04	0-1	1
	1	25	21.15		1
	1	49	21.13		1
	25	0	19.93	0-2	2
	25	12	19.93		2
	25	25	19.88		2
	50	0	19.78		2
64QAM	1	0	19.96	0-2	2
	1	25	20.14		2
	1	49	20.04		2
	25	0	18.85	0-3	3
	25	12	18.82		3
	25	25	18.87		3
	50	0	18.83		3
256QAM	1	0	16.92	0-5	5
	1	25	17.10		5
	1	49	17.00		5
	25	0	16.87		5
	25	12	16.79		5
	25	25	16.88		5
	50	0	16.92		5

Table 9-29
LTE Band 30 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**17.49**	0	0
	1	25	17.48		0
	1	49	17.41		0
	25	0	**17.48**	0-1	0
	25	12	17.43		0
	25	25	17.46		0
	50	0	17.38		0
16QAM	1	0	17.97	0-1	0
	1	25	17.68		0
	1	49	17.53		0
	25	0	17.49	0-2	0
	25	12	17.39		0
	25	25	17.44		0
	50	0	17.35		0
64QAM	1	0	17.62	0-2	0
	1	25	17.56		0
	1	49	17.46		0
	25	0	17.50	0-3	0
	25	12	17.49		0
	25	25	17.43		0
	50	0	17.39		0
256QAM	1	0	17.40	0-5	0
	1	25	17.49		0
	1	49	17.53		0
	25	0	17.45		0
	25	12	17.47		0
	25	25	17.51		0
	50	0	17.49		0

9.3.12 LTE Band 30 Antenna F

Table 9-30
LTE Band 30 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**19.99**	0	0
	1	25	19.85		0
	1	49	19.74		0
	25	0	**19.92**	0-1	0
	25	12	19.89		0
	25	25	19.79		0
	50	0	19.91		0
16QAM	1	0	20.07	0-1	0
	1	25	20.13		0
	1	49	20.10		0
	25	0	19.45	0-2	0.5
	25	12	19.44		0.5
	25	25	19.28		0.5
	50	0	19.38		0.5
64QAM	1	0	19.64	0-2	0.5
	1	25	19.53		0.5
	1	49	19.44		0.5
	25	0	18.43	0-3	1.5
	25	12	18.43		1.5
	25	25	18.33		1.5
	50	0	18.41		1.5
256QAM	1	0	16.44	0-5	3.5
	1	25	16.48		3.5
	1	49	16.33		3.5
	25	0	16.45		3.5
	25	12	16.39		3.5
	25	25	16.28		3.5
	50	0	16.34		3.5

Table 9-31
LTE Band 30 Antenna F Measured P_{Limit} for all DSI =1 (Head) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**15.06**	0	0
	1	25	14.97		0
	1	49	14.90		0
	25	0	**15.01**	0-1	0
	25	12	14.97		0
	25	25	14.95		0
	50	0	15.00		0
16QAM	1	0	15.28	0-1	0
	1	25	15.19		0
	1	49	15.21		0
	25	0	15.10	0-2	0
	25	12	14.98		0
	25	25	14.85		0
	50	0	14.88		0
64QAM	1	0	15.16	0-2	0
	1	25	15.18		0
	1	49	15.19		0
	25	0	15.04	0-3	0
	25	12	14.93		0
	25	25	14.94		0
	50	0	14.95		0
256QAM	1	0	15.00	0-5	0
	1	25	15.18		0
	1	49	15.07		0
	25	0	15.02		0
	25	12	14.95		0
	25	25	14.96		0
	50	0	14.89		0

9.3.13 LTE Band 7 Antenna B

Table 9-32
LTE Band 7 Antenna B Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**22.87**	22.63	22.77	0	0
	1	50	22.86	22.73	22.86		0
	1	99	22.73	22.39	22.56		0
	50	0	21.80	21.67	21.56	0-1	1
	50	25	**21.90**	21.69	21.65		1
	50	50	21.78	21.62	21.50		1
	100	0	21.81	21.63	21.61		1
16QAM	1	0	21.89	21.92	21.75	0-1	1
	1	50	21.96	21.72	21.75		1
	1	99	21.77	21.70	21.71		1
	50	0	20.85	20.59	20.59	0-2	2
	50	25	20.85	20.70	20.63		2
	50	50	20.75	20.63	20.63		2
	100	0	20.81	20.72	20.66		2
64QAM	1	0	20.76	20.79	20.83	0-2	2
	1	50	20.85	20.71	20.77		2
	1	99	20.93	20.82	20.55		2
	50	0	19.77	19.63	19.55	0-3	3
	50	25	19.80	19.65	19.64		3
	50	50	19.82	19.63	19.52		3
	100	0	19.86	19.69	19.63		3
256QAM	1	0	17.85	17.82	17.65	0-5	5
	1	50	17.84	17.84	17.59		5
	1	99	17.82	17.67	17.75		5
	50	0	17.79	17.61	17.56		5
	50	25	17.80	17.63	17.67		5
	50	50	17.72	17.65	17.63		5
	100	0	17.78	17.73	17.60		5

Table 9-33
LTE Band 7 Antenna B Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) – 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.69	18.64	18.55	0	0
	1	50	**18.83**	18.68	18.62		0
	1	99	18.71	18.62	18.53		0
	50	0	18.75	18.67	18.57	0-1	0
	50	25	**18.87**	18.77	18.69		0
	50	50	18.81	18.70	18.65		0
	100	0	18.81	18.73	18.69		0
16QAM	1	0	18.76	18.86	18.82	0-1	0
	1	50	18.82	18.75	18.89		0
	1	99	18.79	18.73	18.76		0
	50	0	18.78	18.69	18.58	0-2	0
	50	25	18.73	18.82	18.71		0
	50	50	18.69	18.81	18.62		0
	100	0	18.71	18.88	18.67		0
64QAM	1	0	18.73	18.67	18.72	0-2	0
	1	50	18.79	18.76	18.82		0
	1	99	18.74	18.79	18.75		0
	50	0	18.62	18.66	18.58	0-3	0
	50	25	18.67	18.71	18.72		0
	50	50	18.66	18.67	18.64		0
	100	0	18.77	18.69	18.65		0
256QAM	1	0	18.02	17.82	17.91	0-5	1
	1	50	18.11	17.93	17.88		1
	1	99	17.99	17.97	17.94		1
	50	0	17.87	17.77	17.68		1
	50	25	17.99	17.83	17.77		1
	50	50	17.96	17.81	17.76		1
	100	0	17.97	17.82	17.78		1

9.3.14 LTE Band 7 Antenna F

Table 9-34
LTE Band 7 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.91	17.88	17.77	0	0
	1	50	**18.23**	18.04	17.89		0
	1	99	18.10	17.83	17.92		0
	50	0	18.11	18.03	17.88	0-1	0
	50	25	**18.20**	17.95	17.89		0
	50	50	18.15	17.99	17.95		0
	100	0	18.19	17.94	17.91		0
16QAM	1	0	18.14	18.10	18.10	0-1	0
	1	50	18.31	18.29	18.13		0
	1	99	18.18	18.09	18.21		0
	50	0	18.10	18.03	17.81	0-2	0
	50	25	18.27	18.06	17.82		0
	50	50	18.21	17.96	17.92		0
	100	0	18.19	18.00	17.85		0
64QAM	1	0	18.31	18.20	18.00	0-2	0
	1	50	18.33	18.17	18.22		0
	1	99	18.18	17.86	18.14		0
	50	0	17.68	17.53	17.40	0-3	0.5
	50	25	17.76	17.48	17.40		0.5
	50	50	17.74	17.55	17.51		0.5
	100	0	17.73	17.51	17.40		0.5
256QAM	1	0	15.63	15.72	15.46	0-5	2.5
	1	50	15.84	15.51	15.55		2.5
	1	99	15.68	15.57	15.58		2.5
	50	0	15.66	15.52	15.38		2.5
	50	25	15.74	15.51	15.34		2.5
	50	50	15.69	15.51	15.49		2.5
	100	0	15.62	15.47	15.38		2.5

Table 9-35
LTE Band 7 Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.65	13.61	13.81	0	0
	1	50	13.76	**13.85**	13.65		0
	1	99	13.75	13.64	13.70		0
	50	0	13.72	13.82	13.65	0-1	0
	50	25	13.87	13.81	13.55		0
	50	50	13.84	**13.88**	13.80		0
	100	0	13.81	13.82	13.62		0
16QAM	1	0	13.55	14.10	13.82	0-1	0
	1	50	13.86	14.05	13.85		0
	1	99	13.85	13.80	13.61		0
	50	0	13.80	13.92	13.70	0-2	0
	50	25	13.85	13.90	13.62		0
	50	50	13.89	13.90	13.68		0
	100	0	13.82	13.80	13.58		0
64QAM	1	0	13.80	13.94	13.72	0-2	0
	1	50	14.00	13.85	13.65		0
	1	99	13.95	13.81	13.68		0
	50	0	13.76	13.83	13.67	0-3	0
	50	25	13.85	13.87	13.67		0
	50	50	13.86	13.83	13.66		0
	100	0	13.77	13.71	13.65		0
256QAM	1	0	13.82	13.89	13.80	0-5	0
	1	50	13.71	14.00	13.74		0
	1	99	13.92	13.85	13.75		0
	50	0	13.75	13.86	13.75		0
	50	25	13.83	13.81	13.60		0
	50	50	13.92	13.93	13.76		0
	100	0	13.85	13.85	13.67		0

9.3.15 LTE Band 41 Antenna B

Table 9-36
LTE Band 41 PC3 Antenna B Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.92	23.96	23.92	23.96	24.00	0	0
	1	50	**24.04**	23.94	23.94	23.96	23.98		0
	1	99	23.85	23.85	23.97	23.91	23.99		0
	50	0	23.06	23.00	23.05	23.05	23.05	0-1	1
	50	25	**23.20**	23.11	23.15	23.11	23.06		1
	50	50	23.14	23.04	23.14	23.12	23.04		1
	100	0	23.16	23.13	23.12	23.05	23.04		1
16QAM	1	0	23.28	22.93	23.07	23.30	23.20	0-1	1
	1	50	23.47	22.99	23.00	23.55	23.44		1
	1	99	23.27	23.00	23.06	23.40	23.08		1
	50	0	22.07	22.03	22.03	22.05	22.05	0-2	2
	50	25	22.17	22.11	22.15	22.11	22.08		2
	50	50	22.11	22.03	22.12	22.13	22.10		2
	100	0	22.11	22.12	22.13	22.07	22.01		2
64QAM	1	0	22.00	21.93	21.91	22.13	22.13	0-2	2
	1	50	22.02	22.06	21.91	22.09	21.94		2
	1	99	21.90	21.79	21.88	22.06	21.98		2
	50	0	21.08	21.05	21.10	21.12	21.08	0-3	3
	50	25	21.18	21.13	21.17	21.18	21.14		3
	50	50	21.13	21.04	21.17	21.16	21.07		3
	100	0	21.16	21.08	21.12	21.04	21.01		3
256QAM	1	0	19.10	19.21	18.81	19.19	18.98	0-5	5
	1	50	19.09	19.20	18.90	19.19	19.12		5
	1	99	19.00	19.13	18.85	19.06	19.01		5
	50	0	19.02	19.07	19.03	19.14	19.05		5
	50	25	19.16	19.11	19.12	19.09	19.03		5
	50	50	19.11	19.11	19.11	19.10	19.01		5
	100	0	19.11	19.10	19.18	19.10	19.02		5

Table 9-37
LTE Band 41 PC3 Antenna B Uplink Carrier Aggregation Measured P_{Max} for DSI = 1 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	23.87	23.85

Table 9-38
LTE Band 41 PC2 Antenna B Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	25.62	25.55	25.58	25.66	25.48	0	0
	1	50	25.60	25.54	25.54	25.63	25.47		0
	1	99	25.56	25.48	25.50	25.60	25.32		0
	50	0	24.59	24.57	24.56	24.57	24.46	0-1	1
	50	25	24.68	24.66	24.67	24.59	24.49		1
	50	50	24.66	24.56	24.59	24.69	24.53		1
	100	0	24.67	24.63	24.63	24.56	24.45		1

Table 9-39
LTE Band 41 PC2 Antenna B Uplink Carrier Aggregation Measured P_{Max} for DSI = 1 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	25.93	25.56

Table 9-40
LTE Band 41 PC3 Antenna B Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	20.95	20.98	**21.18**	21.05	21.03	0	0
	1	50	21.02	21.01	21.09	21.07	21.03		0
	1	99	20.92	20.83	21.11	21.04	20.93		0
	50	0	21.03	20.99	21.02	21.09	21.04	0-1	0
	50	25	21.18	21.09	**21.21**	21.13	21.08		0
	50	50	21.07	21.05	21.18	21.16	21.09		0
	100	0	21.12	21.07	21.13	21.07	21.01		0
16QAM	1	0	21.06	21.19	21.08	21.07	20.97	0-1	0
	1	50	21.16	21.14	21.34	21.01	21.27		0
	1	99	21.15	20.83	21.14	21.19	21.30		0
	50	0	21.06	21.05	21.10	21.07	21.12	0-2	0
	50	25	21.14	21.16	21.20	21.09	21.10		0
	50	50	21.14	21.09	21.16	21.16	21.08		0
	100	0	21.16	21.04	21.19	21.11	21.02		0
64QAM	1	0	21.02	21.14	20.94	21.02	21.21	0-2	0
	1	50	20.91	21.12	21.15	21.03	21.20		0
	1	99	20.93	21.04	21.15	20.85	21.03		0
	50	0	21.01	21.03	21.08	21.12	20.98	0-3	0
	50	25	21.18	21.16	21.17	21.16	21.03		0
	50	50	21.10	21.07	21.15	21.17	21.05		0
	100	0	21.16	21.10	21.13	21.08	20.98		0
256QAM	1	0	19.06	19.11	18.77	19.08	19.12	0-5	2
	1	50	18.99	18.98	18.86	18.96	19.12		2
	1	99	19.10	19.17	19.07	18.91	18.81		2
	50	0	19.01	18.96	19.06	19.10	18.99		2
	50	25	19.12	19.17	19.14	19.10	19.04		2
	50	50	19.07	19.10	19.12	19.09	19.03		2
	100	0	19.09	19.09	19.14	19.12	19.02		2

Table 9-41
LTE Band 41 PC3 Antenna B Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	40620	2593.0	QPSK	50	50	LTE B41	20	40818	2612.8	QPSK	50	0	21.03	21.18
CA_41C	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	20.82	21.03
CA_41C	LTE B41	20	41055	2636.5	QPSK	1	0	LTE B41	20	40857	2616.7	QPSK	1	99	20.79	21.05

Table 9-42
LTE Band 41 PC2 Antenna B Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.15	23.05	23.19	23.14	23.00	0	0
	1	50	23.16	23.10	23.07	23.16	23.02		0
	1	99	23.04	22.95	23.05	23.17	22.86		0
	50	0	23.09	23.01	23.05	23.06	22.98	0-1	0
	50	25	23.16	23.11	23.16	23.09	22.95		0
	50	50	23.09	23.06	23.16	23.12	23.04		0
	100	0	23.12	23.06	23.16	23.05	22.97		0

Table 9-43
LTE Band 41 PC2 Antenna B Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	40620	2593.0	QPSK	50	50	LTE B41 PC2	20	40818	2612.8	QPSK	50	0	23.06	23.16
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	1	0	LTE B41 PC2	20	41292	2660.2	QPSK	1	99	22.90	23.00
CA_41C	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	LTE B41 PC2	20	40857	2616.7	QPSK	1	99	22.90	23.14

9.3.16 LTE Band 41 Antenna F

Table 9-44
LTE Band 41 PC3 Antenna F Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.76	21.24	20.90	20.92	21.13	0	0
	1	50	20.94	21.25	20.82	21.00	**21.28**		0
	1	99	20.89	20.88	20.92	20.97	21.13		0
	50	0	20.96	21.05	21.07	20.86	**21.39**	0-1	0
	50	25	21.18	21.22	21.04	21.22	21.33		0
	50	50	20.89	21.19	21.06	21.15	21.17		0
	100	0	20.92	21.09	20.92	20.87	21.26		0
16QAM	1	0	21.06	21.01	20.97	21.29	21.05	0-1	0
	1	50	21.03	21.14	21.02	21.24	20.87		0
	1	99	20.95	20.88	20.98	21.33	21.28		0
	50	0	19.89	20.15	20.02	19.79	20.26	0-2	1
	50	25	19.86	20.01	19.97	19.88	20.25		1
	50	50	19.81	19.94	19.79	20.03	19.96		1
	100	0	19.88	20.25	19.91	19.88	20.06		1
64QAM	1	0	19.72	19.91	19.94	19.89	20.03	0-2	1
	1	50	19.81	20.05	19.88	19.99	20.01		1
	1	99	19.95	19.97	19.52	19.64	20.17		1
	50	0	18.84	19.11	19.08	18.76	19.08	0-3	2
	50	25	18.95	19.24	18.93	18.85	19.14		2
	50	50	19.04	18.99	18.83	19.10	18.85		2
	100	0	18.89	19.16	18.83	18.95	19.10		2
256QAM	1	0	16.63	16.71	16.78	16.75	16.67	0-5	4
	1	50	16.99	16.73	16.83	16.63	16.75		4
	1	99	16.88	16.88	16.83	16.75	16.79		4
	50	0	16.81	16.93	16.89	16.93	16.90		4
	50	25	16.94	17.07	16.94	17.02	17.04		4
	50	50	16.87	16.91	16.84	16.94	16.90		4
	100	0	16.73	17.01	16.84	16.80	16.99		4

Table 9-45
LTE Band 41 PC3 Antenna F Uplink Carrier Aggregation Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	20.87	21.13

Table 9-46
LTE Band 41 PC2 Antenna F Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 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	21.63	**22.07**	21.81	21.65	21.87	0	0
	1	50	21.69	22.04	21.89	21.83	22.00		0
	1	99	21.67	21.98	21.72	21.86	21.77		0
	50	0	20.79	21.00	20.88	20.72	20.82	0-1	1
	50	25	20.87	20.98	20.92	20.75	20.85		1
	50	50	20.75	**21.05**	20.88	20.77	20.84		1
	100	0	20.87	21.00	20.87	20.84	20.84		1

Table 9-47
LTE Band 41 PC2 Antenna F Uplink Carrier Aggregation Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	1	0	LTE B41 PC2	20	41292	2660.2	QPSK	1	99	21.96	21.87

Table 9-48
LTE Band 41 PC3 Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	16.23	16.35	16.69	16.41	16.44	0	0
	1	50	16.47	16.62	16.65	16.46	16.55		0
	1	99	16.50	**16.71**	16.66	16.52	16.63		0
	50	0	16.54	16.66	16.68	16.54	16.71	0-1	0
	50	25	16.58	16.71	16.67	16.60	16.69		0
	50	50	16.62	**16.73**	16.63	16.61	16.70		0
	100	0	16.54	16.68	16.67	16.55	16.66		0
16QAM	1	0	16.55	16.37	16.67	16.50	16.69	0-1	0
	1	50	16.78	16.65	16.74	16.61	16.74		0
	1	99	16.30	16.57	16.60	16.60	16.57		0
	50	0	16.50	16.65	16.69	16.47	16.70	0-2	0
	50	25	16.60	16.70	16.68	16.58	16.70		0
	50	50	16.58	16.68	16.63	16.57	16.67		0
	100	0	16.51	16.68	16.65	16.50	16.68		0
64QAM	1	0	16.33	16.49	16.65	16.52	16.62	0-2	0
	1	50	16.62	16.77	16.62	16.50	16.67		0
	1	99	16.46	16.51	16.53	16.57	16.67		0
	50	0	16.52	16.63	16.68	16.55	16.67	0-3	0
	50	25	16.58	16.72	16.70	16.55	16.76		0
	50	50	16.59	16.69	16.63	16.57	16.64		0
	100	0	16.54	16.70	16.64	16.56	16.65		0
256QAM	1	0	16.36	16.57	16.60	16.30	16.66	0-5	0
	1	50	16.56	16.70	16.70	16.40	16.71		0
	1	99	16.52	16.73	16.65	16.38	16.51		0
	50	0	16.40	16.55	16.66	16.57	16.67		0
	50	25	16.58	16.68	16.70	16.60	16.78		0
	50	50	16.56	16.70	16.59	16.62	16.72		0
	100	0	16.52	16.66	16.59	16.51	16.62		0

Table 9-49
LTE Band 41 PC3 Antenna F Uplink Carrier Aggregation Measured P_{Limit} for all DSI =1 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	40620	2593.0	QPSK	1	0	LTE B41	20	40422	2573.2	QPSK	1	99	16.65	16.69

Table 9-50
LTE Band 41 PC2 Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	18.54	18.57	18.62	18.62	18.75	0	0
	1	50	18.68	18.70	18.63	18.67	18.68		0
	1	99	18.60	18.57	18.57	18.70	18.56		0
	50	0	18.63	18.69	18.78	18.65	18.80	0-1	0
	50	25	18.71	18.79	18.77	18.70	18.79		0
	50	50	18.68	18.70	18.69	18.69	18.73		0
	100	0	18.63	18.71	18.71	18.66	18.74		0

Table 9-51
LTE Band 41 PC2 Antenna F Uplink Carrier Aggregation Measured P_{Limit} for all DSI =1 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	40620	2593.0	QPSK	1	0	LTE B41 PC2	20	40422	2573.2	QPSK	1	99	18.63	18.62

9.3.17 LTE Band 48 Antenna F

Table 9-52
LTE Band 48 Antenna F Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.06	20.11	19.98	20.08	0	0
	1	50	**20.23**	20.11	20.05	20.08		0
	1	99	20.09	20.05	20.12	20.12		0
	50	0	20.21	20.20	20.09	20.24	0-1	0
	50	25	**20.27**	20.24	20.14	20.26		0
	50	50	20.24	20.15	20.18	20.26		0
	100	0	20.22	20.16	20.17	20.13		0
16QAM	1	0	20.03	20.11	19.90	19.94	0-1	0
	1	50	20.06	20.09	19.96	20.39		0
	1	99	20.17	20.03	19.98	20.01		0
	50	0	20.20	20.22	20.10	20.17	0-2	0
	50	25	20.29	20.25	20.16	20.27		0
	50	50	20.23	20.14	20.18	20.23		0
	100	0	20.26	20.23	20.16	20.20		0
64QAM	1	0	20.21	20.24	20.11	20.14	0-2	0
	1	50	20.24	20.16	20.07	20.25		0
	1	99	20.21	20.14	20.18	20.28		0
	50	0	19.22	19.24	19.10	19.22	0-3	0.7
	50	25	19.28	19.22	19.18	19.25		0.7
	50	50	19.23	19.13	19.17	19.24		0.7
	100	0	19.25	19.23	19.14	19.21		0.7
256QAM	1	0	17.06	17.09	17.05	17.12	0-5	2.7
	1	50	17.13	17.10	17.08	17.07		2.7
	1	99	17.15	17.07	16.83	17.14		2.7
	50	0	17.22	17.22	17.10	17.22		2.7
	50	25	17.25	17.23	17.16	17.24		2.7
	50	50	17.20	17.14	17.19	17.23		2.7
	100	0	17.23	17.27	17.32	17.23		2.7

Table 9-53
LTE Band 48 Antenna F Uplink Carrier Aggregation Measured P_{Limit} DSI = 0 (Body-worn or Phablet), or DSI = 2 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	1	99	LTE B48	20	55538	3579.8	QPSK	1	0	20.29	20.09

Table 9-54
LTE Band 48 Antenna F Measured P_{Limit} for all DSI =1 (Head) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55340 (3560.0 MHz)	55773 (3603.3 MHz)	56207 (3646.7 MHz)	56640 (3690.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	18.06	18.09	17.94	**18.23**	0	0
	1	50	18.11	18.07	17.99	18.22		0
	1	99	18.10	18.00	18.03	18.08		0
	50	0	18.20	18.22	18.11	**18.28**	0-1	0
	50	25	18.23	18.26	18.17	18.24		0
	50	50	18.22	18.13	18.15	18.27		0
	100	0	18.20	18.21	18.14	18.21		0
16QAM	1	0	18.06	18.13	17.98	18.08	0-1	0
	1	50	18.07	18.04	18.05	18.18		0
	1	99	18.05	18.00	18.07	18.11		0
	50	0	18.23	18.19	18.09	18.22	0-2	0
	50	25	18.27	18.23	18.16	18.23		0
	50	50	18.14	18.17	18.16	18.25		0
	100	0	18.29	18.21	18.14	18.25		0
64QAM	1	0	18.20	18.24	18.07	18.18	0-2	0
	1	50	18.28	18.19	18.02	18.23		0
	1	99	18.29	18.27	18.20	18.24		0
	50	0	18.22	18.24	18.10	18.21	0-3	0
	50	25	18.27	18.22	18.14	18.22		0
	50	50	18.22	18.14	18.17	18.24		0
	100	0	18.29	18.29	18.17	18.19		0
256QAM	1	0	17.13	17.10	16.99	17.15	0-5	0.7
	1	50	17.06	17.09	17.04	17.17		0.7
	1	99	17.12	17.07	17.07	17.20		0.7
	50	0	17.22	17.19	17.10	17.20		0.7
	50	25	17.26	17.24	17.13	17.25		0.7
	50	50	17.25	17.11	17.19	17.24		0.7
	100	0	17.25	17.17	17.14	17.21		0.7

Table 9-55
LTE Band 48 Antenna F Uplink Carrier Aggregation Measured P_{Limit} for all DSI =1 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	56640	3690.0	QPSK	1	0	LTE B48	20	56442	3670.2	QPSK	1	99	18.10	18.23

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 LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

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

9.4.1 NR Band n71

Table 9-56
NR Band n71 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**24.68**	0	0.0
	1	53	24.60		0.0
	1	104	24.55		0.0
	50	0	23.74	0-1	1.0
	50	28	**24.65**	0	0.0
	50	56	23.55	0-1	1.0
	100	0	23.66		1.0
DFT-s-OFDM 16QAM	1	1	23.68	0-1	1.0
CP-OFDM QPSK	1	1	23.19	0-1.5	1.5

9.4.2 NR Band n12

Table 9-57
NR Band n12 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 15 MHz Bandwidth

NR Band n12 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	24.92	0	0.0
	1	40	24.91		0.0
	1	77	**24.93**		0.0
	36	0	23.94	0-1	1.0
	36	22	**24.87**	0	0.0
	36	43	23.82	0-1	1.0
	75	0	23.94		1.0
DFT-s-OFDM 16QAM	1	1	23.83	0-1	1.0
CP-OFDM QPSK	1	1	23.43	0-1.5	1.5

9.4.3 NR Band n26

Table 9-58
NR Band n26 Measured P_{Max} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 20 MHz Bandwidth

NR Band n26 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	166300 (831.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	24.80	0	0.0
	1	53	24.85		0.0
	1	104	**24.97**		0.0
	50	0	23.81	0-1	1.0
	50	28	**24.87**	0	0.0
	50	56	23.82	0-1	1.0
	100	0	23.91		1.0
DFT-s-OFDM 16QAM	1	1	23.84	0-1	1.0
CP-OFDM QPSK	1	1	23.21	0-1.5	1.5

9.4.4 NR Band n66 Antenna A

Table 9-59
NR Band n66 Antenna A Measured P_{Max} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	23.77	0	0.0
	1	108	**23.99**		0.0
	1	214	23.98		0.0
	108	0	22.94	0-1	1.0
	108	54	**23.99**	0	0.0
	108	108	22.99	0-1	1.0
	216	0	22.97		1.0
DFT-s-OFDM 16QAM	1	1	22.75	0-1	1.0
CP-OFDM QPSK	1	1	22.24	0-1.5	1.5

Table 9-60
NR Band n66 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 3 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.50	0	0.0
	1	108	**20.91**		0.0
	1	214	20.61		0.0
	108	0	20.77	0-1	0.0
	108	54	**20.81**	0	0.0
	108	108	20.79	0-1	0.0
	216	0	20.77		0.0
DFT-s-OFDM 16QAM	1	1	20.44	0-1	0.0
CP-OFDM QPSK	1	1	20.60	0-1.5	0.0

9.4.5 NR Band n66 Antenna F

Table 9-61
NR Band n66 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.01	0	0.0
	1	108	**20.03**		0.0
	1	214	19.79		0.0
	108	0	19.98	0-1	0.0
	108	54	**20.03**	0	0.0
	108	108	19.96	0-1	0.0
	216	0	20.01		0.0
DFT-s-OFDM 16QAM	1	1	20.00	0-1	0.0
CP-OFDM QPSK	1	1	20.05	0-1.5	0.0

Table 9-62
NR Band n66 Antenna F Measured P_{Limit} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	16.73	0	0.0
	1	108	**16.90**		0.0
	1	214	16.47		0.0
	108	0	16.71	0-1	0.0
	108	54	**17.10**	0	0.0
	108	108	16.68	0-1	0.0
	216	0	16.80		0.0
DFT-s-OFDM 16QAM	1	1	16.73	0-1	0.0
CP-OFDM QPSK	1	1	16.90	0-1.5	0.0

9.4.6 NR Band n25 Antenna A

Table 9-63
NR Band n25 Antenna A Measured P_{Max} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**23.64**	0	0.0
	1	108	23.63		0.0
	1	214	23.32		0.0
	108	0	22.66	0-1	1.0
	108	54	**23.61**	0	0.0
	108	108	22.52	0-1	1.0
	216	0	22.61		1.0
DFT-s-OFDM 16QAM	1	1	22.61	0-1	1.0
CP-OFDM QPSK	1	1	22.18	0-1.5	1.5

Table 9-64
NR Band n25 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**18.97**	0	0.0
	1	108	18.86		0.0
	1	214	18.62		0.0
	108	0	**18.98**	0-1	0.0
	108	54	18.90	0	0.0
	108	108	18.73	0-1	0.0
	216	0	18.87		0.0
DFT-s-OFDM 16QAM	1	1	19.01	0-1	0.0
CP-OFDM QPSK	1	1	18.98	0-1.5	0.0

9.4.7 NR Band n25 Antenna F

Table 9-65
NR Band n25 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	19.16	0	0.0
	1	108	**19.48**		0.0
	1	214	19.09		0.0
	108	0	19.26	0-1	0.0
	108	54	19.27	0	0.0
	108	108	**19.31**	0-1	0.0
	216	0	19.28		0.0
DFT-s-OFDM 16QAM	1	1	19.18	0-1	0.0
CP-OFDM QPSK	1	1	19.13	0-1.5	0.0

Table 9-66
NR Band n25 Antenna F Measured P_{Limit} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	15.62	0	0.0
	1	108	**16.00**		0.0
	1	214	15.34		0.0
	108	0	**15.91**	0-1	0.0
	108	54	15.68	0	0.0
	108	108	15.59	0-1	0.0
	216	0	15.58		0.0
DFT-s-OFDM 16QAM	1	1	15.50	0-1	0.0
CP-OFDM QPSK	1	1	15.84	0-1.5	0.0

9.4.8 NR Band n30 Antenna A

Table 9-67
NR Band n30 Antenna A Measured P_{Max} for DSI = 1 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	21.40	0	0.0
	1	26	21.80		0.0
	1	50	**22.14**		0.0
	25	0	21.08	0-1	1.0
	25	14	**21.67**	0	0.0
	25	27	21.07	0-1	1.0
	50	0	21.06		1.0
DFT-s-OFDM 16QAM	1	1	20.60	0-1	1.0
CP-OFDM QPSK	1	1	20.43	0-1.5	1.5

Table 9-68
NR Band n30 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**17.31**	0	0.0
	1	26	17.28		0.0
	1	50	17.24		0.0
	25	0	17.25	0-1	0.0
	25	14	**17.27**	0	0.0
	25	27	17.25	0-1	0.0
	50	0	17.26		0.0
DFT-s-OFDM 16QAM	1	1	17.36	0-1	0.0
CP-OFDM QPSK	1	1	17.38	0-1.5	0.0

9.4.9 NR Band n30 Antenna F

Table 9-69
NR Band n30 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.58	0	0.0
	1	26	**20.80**		0.0
	1	50	20.43		0.0
	25	0	20.20	0-1	0.0
	25	14	20.39	0	0.0
	25	27	**20.71**	0-1	0.0
	50	0	20.43		0.0
DFT-s-OFDM 16QAM	1	1	20.54	0-1	0.0
CP-OFDM QPSK	1	1	20.80	0-1.5	0.0

Table 9-70
NR Band n30 Antenna F Measured P_{Limit} for DSI = 1 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	14.96	0	0.0
	1	26	**15.00**		0.0
	1	50	14.90		0.0
	25	0	14.90	0-1	0.0
	25	14	**14.94**	0	0.0
	25	27	14.89	0-1	0.0
	50	0	14.91		0.0
DFT-s-OFDM 16QAM	1	1	14.87	0-1	0.0
CP-OFDM QPSK	1	1	14.97	0-1.5	0.0

9.4.10 NR Band n41 Antenna B

Table 9-71
NR Band n41 Antenna B Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), DSI = 1 (Head), or DSI = 2 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	19.29	0	0.0
	1	137	**19.42**		0.0
	1	271	19.17		0.0
	135	0	**19.34**	0-1	0.0
	135	69	19.32	0	0.0
	135	138	19.17	0-1	0.0
	270	0	19.23		0.0
DFT-s-OFDM 16QAM	1	1	19.12	0-1	0.0
CP-OFDM QPSK	1	1	19.09	0-1.5	0.0

9.4.11 NR Band n41 Antenna F, E, D

Table 9-72
NR Band n41 Antenna F, E, D 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 F	**15.61**
SRS #3 Ant E	**16.76**
SRS #4 Ant D	**17.47**

9.4.12 NR Band n48 Antenna F

Table 9-73
NR Band n48 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) – 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM QPSK	1	1	17.90	18.28	18.48	0	0.0
	1	53	17.98	18.40	18.33		0.0
	1	104	18.09	18.54	**18.62**		0.0
	50	0	18.00	18.25	18.26	0-1	0.0
	50	28	18.00	18.20	18.28	0	0.0
	50	56	18.04	18.18	**18.39**	0-1	0.0
	100	0	17.96	18.24	18.31		0.0
DFT-s-OFDM 16QAM	1	1	17.78	18.38	18.29	0-1	0.0
CP-OFDM QPSK	1	1	17.86	18.14	18.37	0-1.5	0.0

Table 9-74
NR Band n48 Antenna F Measured P_{Limit} for DSI = 1 (Head) – 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM QPSK	1	1	15.83	16.22	16.49	0	0.0
	1	53	15.92	16.27	16.31		0.0
	1	104	16.03	16.36	**16.59**		0.0
	50	0	15.96	16.15	16.26	0-1	0.0
	50	28	15.95	16.18	16.27	0	0.0
	50	56	16.01	16.12	**16.36**	0-1	0.0
	100	0	15.92	16.16	16.26		0.0
DFT-s-OFDM 16QAM	1	1	15.75	16.30	16.23	0-1	0.0
CP-OFDM QPSK	1	1	15.82	16.09	16.35	0-1.5	0.0

9.4.13 NR Band n77 DoD Antenna F

Table 9-75
NR Band n77 DoD Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	18.18	0	0.0
	1	137	18.19		0.0
	1	271	**18.23**		0.0
	135	0	**18.22**	0-1	0.0
	135	69	18.11	0	0.0
	135	138	18.12	0-1	0.0
	270	0	18.12		0.0
DFT-s-OFDM 16QAM	1	1	17.99	0-1	0.0
CP-OFDM QPSK	1	1	18.22	0-1.5	0.0

Table 9-76
NR Band n77 DoD Antenna F Measured P_{Limit} for DSI = 1 (Head) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	14.74	0	0.0
	1	137	14.65		0.0
	1	271	**14.77**		0.0
	135	0	**14.72**	0-1	0.0
	135	69	14.64	0	0.0
	135	138	14.63	0-1	0.0
	270	0	14.64		0.0
DFT-s-OFDM 16QAM	1	1	14.78	0-1	0.0
CP-OFDM QPSK	1	1	14.58	0-1.5	0.0

9.4.14 NR Band n77 DoD Antenna C, I, D

Table 9-77
NR Band n77 DoD Antenna C, I, D Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant C	14.73
SRS #3 Ant I	16.62
SRS #4 Ant D	13.00

Table 9-78
NR Band n77 DoD Antenna C, I, D Measured P_{Limit} for DSI = 1 (Head) – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant C	13.70
SRS #3 Ant I	16.00
SRS #4 Ant D	11.95

9.4.15 NR Band n77 C-Band Antenna F

Table 9-79
NR Band n77 C-Band Antenna F Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	18.24	**18.56**	0	0.0
	1	137	18.44	18.50		0.0
	1	271	18.14	18.34		0.0
	135	0	18.34	**18.52**	0-1	0.0
	135	69	18.36	18.44	0	0.0
	135	138	18.23	18.38	0-1	0.0
	270	0	18.29	18.51		0.0
DFT-s-OFDM 16QAM	1	1	18.16	18.48	0-1	0.0
CP-OFDM QPSK	1	1	18.14	18.34	0-1.5	0.0

Table 9-80
NR Band n77 C-Band Antenna F Measured P_{Limit} for DSI = 1 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	15.07	**15.12**	0	0.0
	1	137	15.08	15.02		0.0
	1	271	14.87	14.82		0.0
	135	0	14.96	**15.00**	0-1	0.0
	135	69	14.97	14.95	0	0.0
	135	138	14.81	14.81	0-1	0.0
	270	0	14.92	14.92		0.0
DFT-s-OFDM 16QAM	1	1	15.01	15.08	0-1	0.0
CP-OFDM QPSK	1	1	14.89	15.18	0-1.5	0.0

9.4.16 NR Band n77 C-Band Antenna C, I, D

Table 9-81
NR Band n77 C-Band Antenna C, I, D Measured P_{Limit} for DSI = 0 (Body-worn or phablet), or DSI = 2 (Hotspot Mode) – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant C	**14.94**	14.80
SRS #3 Ant I	17.35	**18.08**
SRS #4 Ant D	12.73	**13.08**

Table 9-82
NR Band n77 C-Band Antenna C, I, D Measured P_{Limit} for DSI = 1 (Head) – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant C	**13.93**	13.80
SRS #3 Ant I	16.39	**17.03**
SRS #4 Ant D	11.77	**12.07**

Figure 9-4
Power Measurement Setup – NR FDD

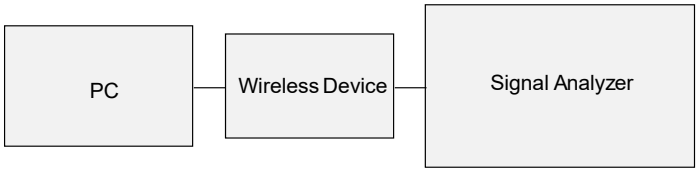

Figure 9-5
Power Measurement Setup – NR TDD

9.5 WLAN Conducted Powers

Table 9-83
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz WIFI (20MHz 802.11b SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	18.72
2437	6		18.99
2462	11		18.96
2.4GHz WIFI (20MHz 802.11g SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.73
2437	6		17.78
2462	11		17.67
2.4GHz WIFI (20MHz 802.11n SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.75
2437	6		17.69
2462	11		17.67
2.4GHz WIFI (20MHz 802.11ax SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	16.67
2437	6		16.84
2462	11		16.80

Table 9-84
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	18.55	18.79	21.68
2437	6		18.20	18.99	21.62
2462	11		18.59	18.97	21.79

Table 9-85
2.4 GHz WLAN Reduced Average RF Power with RCV Active – Ant 2

2.4GHz WIFI (20MHz 802.11b SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.66
2437	6		12.85
2462	11		12.86
2.4GHz WIFI (20MHz 802.11g SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.75
2437	6		12.62
2462	11		12.96
2.4GHz WIFI (20MHz 802.11n SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.77
2437	6		12.61
2462	11		12.92
2.4GHz WIFI (20MHz 802.11ax SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.88
2437	6		12.73
2462	11		12.96

Table 9-86
2.4 GHz WLAN Reduced Average RF Power with RCV Active or During Conditions with 5G NR and/or 5/6 GHz WLAN – MIMO

2.4GHz WIFI (20MHz 802.11n MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
12	1	Average	12.57	12.41	15.50
37	6		11.86	12.73	15.33
62	11		12.46	12.58	15.53

Table 9-87
2.4 GHz WLAN Reduced Average RF Power with RSDB Active – Ant 2

2.4GHz WIFI (20MHz 802.11b SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	16.40
2437	6		16.95
2462	11		16.91
2.4GHz WIFI (20MHz 802.11g SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	16.92
2437	6		16.74
2462	11		16.79
2.4GHz WIFI (20MHz 802.11n SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	16.77
2437	6		16.71
2462	11		16.78
2.4GHz WIFI (20MHz 802.11ax SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	16.97
2437	6		16.86
2462	11		16.82

Table 9-88
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN and/or 5G NR with RSDB Active - MIMO

2.4GHz WIFI (20MHz 802.11n MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	16.74	16.20	19.49
2437	6		16.29	16.79	19.56
2462	11		16.81	16.49	19.66

Table 9-89
2.4 GHz WLAN Reduced Average RF Power with RSDB+RCV Active – Ant 2

2.4GHz WIFI (20MHz 802.11b SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	9.75
2437	6		9.90
2462	11		9.71
2.4GHz WIFI (20MHz 802.11g SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	9.66
2437	6		9.58
2462	11		9.72
2.4GHz WIFI (20MHz 802.11n SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	9.57
2437	6		9.64
2462	11		9.60
2.4GHz WIFI (20MHz 802.11ax SISO ANT2)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	9.54
2437	6		9.64
2462	11		9.67

Table 9-90
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN and/or 5G NR with RSDB Active - MIMO

2.4GHz WIFI (20MHz 802.11n MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
12	1	Average	9.56	9.71	12.65
37	6		9.81	9.92	12.88
62	11		9.59	9.68	12.65

Table 9-91
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz WIFI (20MHz 802.11n MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5180	36	16.77	16.58	19.68
	5200	40	16.83	16.54	19.70
	5220	44	16.71	16.72	19.73
	5240	48	16.87	16.02	19.47
UNII-2A	5260	52	16.99	16.43	19.73
	5280	56	16.56	15.85	19.23
	5300	60	16.46	16.85	19.67
	5320	64	16.98	16.98	19.99
UNII-2C	5500	100	16.72	16.39	19.57
	5600	120	16.88	16.76	19.83
	5620	124	16.85	16.78	19.82
	5720	144	16.92	16.61	19.78
UNII-3	5745	149	16.89	16.57	19.74
	5785	157	16.98	15.85	19.46
	5825	165	16.99	16.40	19.72
UNII-4	5845	169	16.98	16.43	19.72
	5865	173	16.95	15.65	19.36
	5885	177	16.84	16.57	19.72

Table 9-92
5 GHz WLAN Reduced Average RF Power with RCV Active or During Conditions with 5G FR1 NR and/or 2.4 GHz WLAN - MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	9.63	9.51	12.58
UNII-2A	5290	58	9.66	9.56	12.62
UNII-2C	5530	106	9.63	9.42	12.54
	5610	122	9.98	9.73	12.87
	5690	138	9.65	9.03	12.36
UNII-3	5775	155	9.43	9.46	12.46
UNII-4	5885	171	9.57	9.55	12.57

Table 9-93
5 GHz WLAN Reduced Average RF Power with RSDB Active or During Conditions with 5G FR1 NR and/or 2.4 GHz WLAN - MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	12.68	13.97	16.38
UNII-2A	5290	58	13.44	13.63	16.55
UNII-2C	5530	106	12.41	13.94	16.25
	5610	122	13.51	13.89	16.71
	5690	138	12.42	13.61	16.07
UNII-3	5775	155	12.93	13.49	16.23
UNII-4	5885	171	13.27	13.89	16.60

Table 9-94
5 GHz WLAN Reduced Average RF Power with RSDB+RCV Active or During Conditions with 5G FR1 NR and/or 2.4 GHz WLAN - MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	6.61	6.75	9.69
UNII-2A	5290	58	6.78	6.88	9.84
UNII-2C	5530	106	6.72	6.78	9.76
	5610	122	6.67	6.80	9.75
	5690	138	6.69	6.66	9.69
UNII-3	5775	155	6.82	6.99	9.92
UNII-4	5885	171	6.67	6.82	9.76

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.

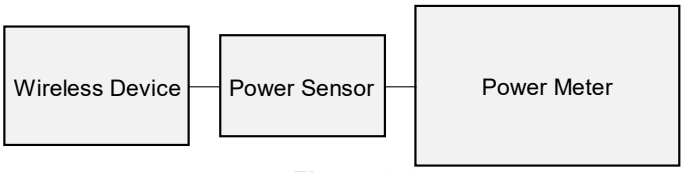

Figure 9-6
Power Measurement Setup

9.6 Bluetooth Conducted Powers

Table 9-95
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Peak Conducted Power		Avg Conducted Power	
			[dBm]	[mW]	[dBm]	[mW]
2402	1.0	0	15.73	37.368	15.27	33.675
2441	1.0	39	16.55	45.196	16.27	42.391
2480	1.0	78	15.87	38.592	15.46	35.183

Table 9-96
Bluetooth Maximum Average RF Power– Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Peak Conducted Power		Avg Conducted Power	
			[dBm]	[mW]	[dBm]	[mW]
2402	1.0	0	14.41	27.580	14.17	26.123
2441	1.0	39	13.94	24.797	13.81	24.070
2480	1.0	78	13.05	20.198	12.85	19.297

Table 9-97
Bluetooth Reduced Average RF Power (RCV Active) – Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Peak Conducted Power		Avg Conducted Power	
					[dBm]	[mW]	[dBm]	[mW]
2402	1.0	GFSK	ePA	0	8.21	6.619	8.18	6.572
2441	1.0	GFSK	ePA	39	9.31	8.539	9.23	8.384
2480	1.0	GFSK	ePA	78	8.68	7.371	8.60	7.252

Table 9-98
Bluetooth Reduced Average RF Power (RCV Active) – Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Peak Conducted Power		Avg Conducted Power	
					[dBm]	[mW]	[dBm]	[mW]
2402	1.0	GFSK	ePA	0	6.17	4.135	6.00	3.983
2441	1.0	GFSK	ePA	39	5.84	3.834	5.75	3.759
2480	1.0	GFSK	ePA	78	5.28	3.374	5.20	3.308

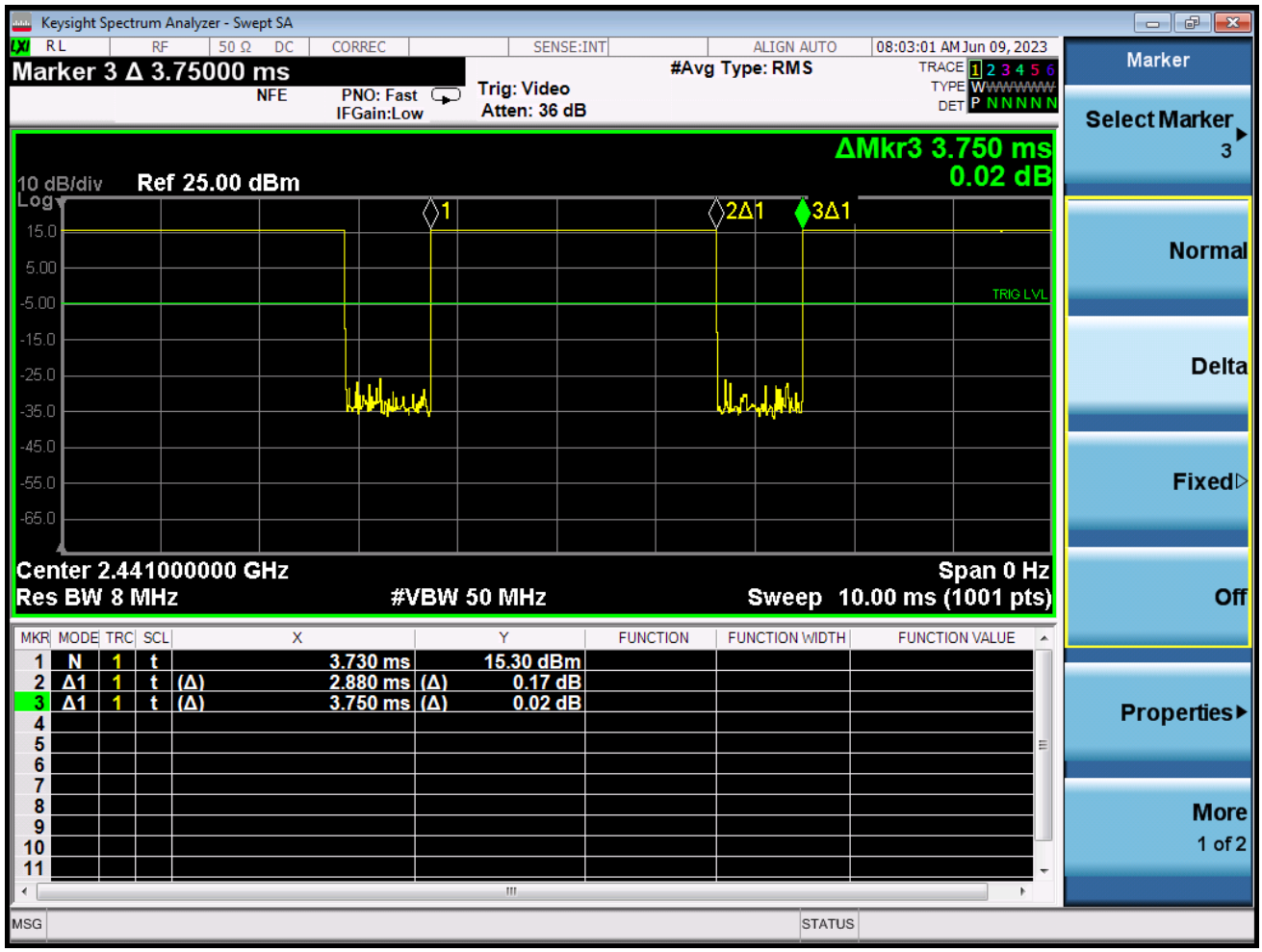

Figure 9-7
Bluetooth Antenna 1 Transmission Plot

Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.88ms}{3.75ms} * 100\% = 76.8\%$$

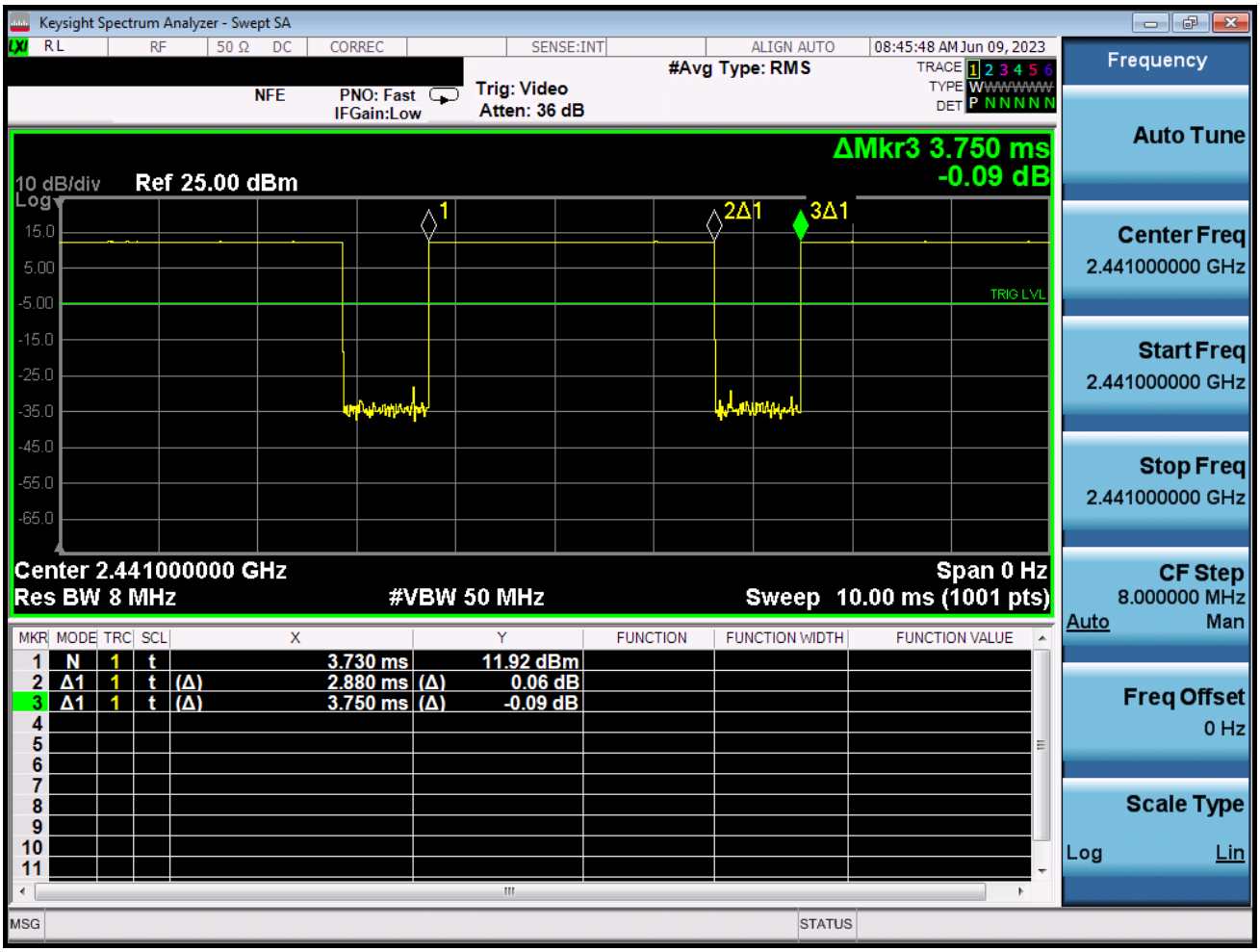

Figure 9-8
Bluetooth Antenna 2 Transmission Plot

Equation 9-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.88ms}{3.75ms} * 100\% = 76.8\%$$

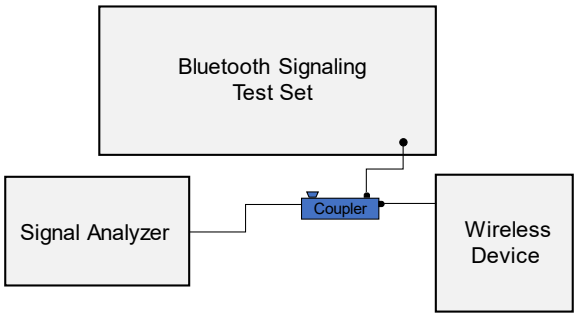

Figure 9-9
Power Measurement Setup

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
07/06/2023	30 Head	20.6	12	0.717	52.460	0.750	55.000	-4.40%	-4.62%
			13	0.717	52.685	0.750	55.000	-4.40%	-4.21%
			14	0.717	52.780	0.750	55.000	-4.40%	-4.04%
06/08/2023	750 Head	23.1	680	0.866	42.948	0.888	42.305	-2.48%	1.52%
			695	0.871	42.919	0.889	42.227	-2.02%	1.64%
			700	0.872	42.907	0.889	42.201	-1.91%	1.67%
			710	0.875	42.880	0.890	42.149	-1.69%	1.73%
			725	0.878	42.830	0.891	42.071	-1.46%	1.80%
			750	0.884	42.747	0.894	41.942	-1.12%	1.92%
			770	0.891	42.697	0.895	41.838	-0.45%	2.05%
			785	0.897	42.667	0.896	41.760	0.11%	2.17%
			800	0.903	42.626	0.897	41.682	0.67%	2.26%
06/12/2023	750 Head	23.9	680	0.851	41.892	0.888	42.305	-4.17%	-0.98%
			695	0.856	41.846	0.889	42.227	-3.71%	-0.90%
			700	0.857	41.830	0.889	42.201	-3.60%	-0.88%
			710	0.860	41.797	0.890	42.149	-3.37%	-0.84%
			725	0.865	41.750	0.891	42.071	-2.92%	-0.76%
			750	0.871	41.674	0.894	41.942	-2.57%	-0.64%
			770	0.877	41.633	0.895	41.838	-2.01%	-0.49%
			785	0.882	41.605	0.896	41.760	-1.56%	-0.37%
			800	0.887	41.561	0.897	41.682	-1.11%	-0.29%
06/14/2023	750 Head	24.2	680	0.847	42.489	0.888	42.305	-4.62%	0.43%
			695	0.852	42.458	0.889	42.227	-4.16%	0.55%
			700	0.853	42.446	0.889	42.201	-4.05%	0.58%
			710	0.856	42.422	0.890	42.149	-3.82%	0.65%
			725	0.861	42.384	0.891	42.071	-3.37%	0.74%
			750	0.869	42.317	0.894	41.942	-2.80%	0.89%
			770	0.876	42.261	0.895	41.838	-2.12%	1.01%
			785	0.881	42.217	0.896	41.760	-1.67%	1.09%
			800	0.886	42.173	0.897	41.682	-1.23%	1.18%
06/19/2023	750 Head	23.5	680	0.864	42.925	0.888	42.305	-2.70%	1.47%
			695	0.869	42.889	0.889	42.227	-2.25%	1.57%
			700	0.870	42.881	0.889	42.201	-2.14%	1.61%
			710	0.874	42.861	0.890	42.149	-1.80%	1.69%
			725	0.879	42.831	0.891	42.071	-1.35%	1.81%
			750	0.887	42.766	0.894	41.942	-0.78%	1.96%
			770	0.894	42.703	0.895	41.838	-0.11%	2.07%
			785	0.899	42.656	0.896	41.760	0.33%	2.15%
			800	0.904	42.608	0.897	41.682	0.78%	2.22%
06/21/2023	750 Head	21.5	680	0.845	41.388	0.888	42.305	-4.84%	-2.17%
			695	0.851	41.351	0.889	42.227	-4.27%	-2.07%
			700	0.852	41.335	0.889	42.201	-4.16%	-2.05%
			710	0.856	41.305	0.890	42.149	-3.82%	-2.00%
			725	0.861	41.259	0.891	42.071	-3.37%	-1.93%
			750	0.869	41.184	0.894	41.942	-2.80%	-1.81%
			770	0.875	41.129	0.895	41.838	-2.23%	-1.69%
			785	0.880	41.090	0.896	41.760	-1.79%	-1.60%
			800	0.885	41.053	0.897	41.682	-1.34%	-1.51%
06/07/2023	835 Head	21.7	815	0.870	40.909	0.898	41.594	-3.12%	-1.65%
			820	0.874	40.840	0.899	41.578	-2.78%	-1.77%
			835	0.889	40.639	0.900	41.500	-1.22%	-2.07%
			850	0.903	40.446	0.916	41.500	-1.42%	-2.54%
06/12/2023	835 Head	20.6	815	0.863	40.426	0.898	41.594	-3.90%	-2.81%
			820	0.868	40.359	0.899	41.578	-3.45%	-2.93%
			835	0.883	40.160	0.900	41.500	-1.89%	-3.23%
			850	0.897	39.974	0.916	41.500	-2.07%	-3.68%
06/14/2023	835 Head	20.9	815	0.863	40.002	0.898	41.594	-3.90%	-3.83%
			820	0.868	39.932	0.899	41.578	-3.45%	-3.96%
			835	0.882	39.730	0.900	41.500	-2.00%	-4.27%
			850	0.896	39.545	0.916	41.500	-2.18%	-4.71%
06/15/2023	835 Head	21.5	815	0.869	41.867	0.898	41.594	-3.23%	0.66%
			820	0.874	41.802	0.899	41.578	-2.78%	0.54%
			835	0.888	41.616	0.900	41.500	-1.33%	0.28%
			850	0.903	41.444	0.916	41.500	-1.42%	-0.13%
06/20/2023	835 Head	21.8	815	0.867	40.413	0.898	41.594	-3.45%	-2.84%
			820	0.871	40.345	0.899	41.578	-3.11%	-2.97%
			835	0.885	40.149	0.900	41.500	-1.67%	-3.26%
			850	0.899	39.958	0.916	41.500	-1.86%	-3.72%
06/22/2023	835 Head	19.8	815	0.859	41.078	0.898	41.594	-4.34%	-1.24%
			820	0.861	41.058	0.899	41.578	-4.23%	-1.25%
			835	0.866	41.001	0.900	41.500	-3.78%	-1.20%
			850	0.872	40.956	0.916	41.500	-4.80%	-1.31%

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
06/12/2023	1750 Head	21.8	1710	1.281	41.793	1.348	40.142	-4.97%	4.11%
			1720	1.287	41.778	1.354	40.126	-4.95%	4.12%
			1745	1.301	41.740	1.368	40.087	-4.90%	4.12%
			1750	1.304	41.731	1.371	40.079	-4.89%	4.12%
			1770	1.314	41.689	1.383	40.047	-4.99%	4.10%
			1790	1.326	41.651	1.394	40.016	-4.88%	4.09%
06/13/2023	1750 Head	21.4	1710	1.288	40.454	1.348	40.142	-4.45%	0.78%
			1720	1.294	40.436	1.354	40.126	-4.43%	0.77%
			1745	1.309	40.392	1.368	40.087	-4.31%	0.76%
			1750	1.312	40.384	1.371	40.079	-4.30%	0.76%
			1770	1.323	40.356	1.383	40.047	-4.34%	0.77%
			1790	1.332	40.324	1.394	40.016	-4.45%	0.77%
06/21/2023	1750 Head	22.0	1710	1.282	39.767	1.348	40.142	-4.90%	-0.93%
			1720	1.288	39.750	1.354	40.126	-4.87%	-0.94%
			1745	1.304	39.708	1.368	40.087	-4.68%	-0.95%
			1750	1.307	39.702	1.371	40.079	-4.67%	-0.94%
			1770	1.318	39.680	1.383	40.047	-4.70%	-0.92%
			1790	1.328	39.651	1.394	40.016	-4.73%	-0.91%
06/29/2023	1750 Head	22.0	1710	1.407	39.435	1.348	40.142	4.38%	-1.76%
			1720	1.415	39.430	1.354	40.126	4.51%	-1.73%
			1745	1.428	39.279	1.368	40.087	4.39%	-2.02%
			1750	1.429	39.232	1.371	40.079	4.23%	-2.11%
			1770	1.440	39.034	1.383	40.047	4.12%	-2.53%
			1790	1.462	38.906	1.394	40.016	4.88%	-2.77%
07/20/2023	1750 Head	19.6	1710	1.347	38.733	1.348	40.142	-0.07%	-3.51%
			1720	1.354	38.714	1.354	40.126	0.00%	-3.52%
			1745	1.370	38.668	1.368	40.087	0.15%	-3.54%
			1750	1.373	38.660	1.371	40.079	0.15%	-3.54%
			1770	1.386	38.632	1.383	40.047	0.22%	-3.53%
			1790	1.398	38.606	1.394	40.016	0.29%	-3.52%
07/23/2023	1750 Head	21.8	1710	1.363	39.404	1.348	40.142	1.11%	-1.84%
			1720	1.369	39.386	1.354	40.126	1.11%	-1.84%
			1745	1.384	39.342	1.368	40.087	1.17%	-1.86%
			1750	1.387	39.335	1.371	40.079	1.17%	-1.86%
			1770	1.399	39.303	1.383	40.047	1.16%	-1.86%
			1790	1.410	39.278	1.394	40.016	1.15%	-1.84%
07/26/2023	1750 Head	20.5	1710	1.347	39.162	1.348	40.142	-0.07%	-2.44%
			1720	1.353	39.143	1.354	40.126	-0.07%	-2.45%
			1745	1.367	39.095	1.368	40.087	-0.07%	-2.47%
			1750	1.370	39.084	1.371	40.079	-0.07%	-2.48%
			1770	1.381	39.041	1.383	40.047	-0.14%	-2.51%
			1790	1.393	39.010	1.394	40.016	-0.07%	-2.51%
06/08/2023	1900 Head	20.7	1850	1.425	41.214	1.400	40.000	1.79%	3.04%
			1860	1.430	41.201	1.400	40.000	2.14%	3.00%
			1880	1.441	41.156	1.400	40.000	2.93%	2.89%
			1900	1.456	41.114	1.400	40.000	4.00%	2.78%
			1905	1.460	41.107	1.400	40.000	4.29%	2.77%
			1910	1.463	41.101	1.400	40.000	4.50%	2.75%
			1920	1.469	41.099	1.400	40.000	4.93%	2.75%
06/12/2023	1900 Head	21.2	1850	1.366	39.582	1.400	40.000	-2.43%	-1.05%
			1860	1.372	39.566	1.400	40.000	-2.00%	-1.08%
			1880	1.384	39.531	1.400	40.000	-1.14%	-1.17%
			1900	1.397	39.513	1.400	40.000	-0.21%	-1.22%
			1905	1.400	39.508	1.400	40.000	0.00%	-1.23%
			1910	1.403	39.506	1.400	40.000	0.21%	-1.24%
			1920	1.409	39.497	1.400	40.000	0.64%	-1.26%
06/14/2023	1900 Head	21.7	1850	1.359	40.551	1.400	40.000	-2.93%	1.38%
			1860	1.365	40.538	1.400	40.000	-2.50%	1.34%
			1880	1.378	40.516	1.400	40.000	-1.57%	1.29%
			1900	1.391	40.500	1.400	40.000	-0.64%	1.25%
			1905	1.394	40.497	1.400	40.000	-0.43%	1.24%
			1910	1.397	40.492	1.400	40.000	-0.21%	1.23%
			1920	1.402	40.484	1.400	40.000	0.14%	1.21%
06/19/2023	1900 Head	23.5	1850	1.335	41.872	1.400	40.000	-4.64%	4.68%
			1860	1.340	41.864	1.400	40.000	-4.29%	4.66%
			1880	1.350	41.849	1.400	40.000	-3.57%	4.62%
			1900	1.361	41.831	1.400	40.000	-2.79%	4.58%
			1905	1.364	41.826	1.400	40.000	-2.57%	4.57%
			1910	1.367	41.822	1.400	40.000	-2.36%	4.56%
			1920	1.373	41.815	1.400	40.000	-1.93%	4.54%
06/19/2023	1900 Head	21.7	1850	1.366	39.189	1.400	40.000	-2.43%	-2.03%
			1860	1.372	39.175	1.400	40.000	-2.00%	-2.06%
			1880	1.385	39.148	1.400	40.000	-1.07%	-2.13%
			1900	1.397	39.128	1.400	40.000	-0.21%	-2.18%
			1905	1.401	39.123	1.400	40.000	0.07%	-2.19%
			1910	1.404	39.119	1.400	40.000	0.29%	-2.20%
			1920	1.409	39.109	1.400	40.000	0.64%	-2.23%
07/24/2023	1900 Head	24.0	1850	1.332	41.188	1.400	40.000	-4.86%	2.97%
			1860	1.344	41.135	1.400	40.000	-4.00%	2.84%
			1880	1.371	41.049	1.400	40.000	-2.07%	2.62%
			1900	1.395	40.997	1.400	40.000	-0.36%	2.49%
			1905	1.400	40.987	1.400	40.000	0.00%	2.47%
			1910	1.404	40.978	1.400	40.000	0.29%	2.45%
			1920	1.412	40.954	1.400	40.000	0.86%	2.39%

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
06/15/2023	2450 Head	20.1	2300	1.751	38.629	1.670	39.500	4.85%	-2.21%
			2310	1.759	38.612	1.679	39.480	4.76%	-2.20%
			2320	1.767	38.594	1.687	39.460	4.74%	-2.19%
			2400	1.829	38.453	1.756	39.289	4.16%	-2.13%
			2450	1.871	38.353	1.800	39.200	3.94%	-2.16%
			2480	1.895	38.297	1.833	39.162	3.38%	-2.21%
			2500	1.910	38.262	1.855	39.136	2.96%	-2.23%
			2510	1.918	38.242	1.866	39.123	2.79%	-2.25%
			2535	1.939	38.184	1.893	39.092	2.43%	-2.32%
			2550	1.952	38.152	1.909	39.073	2.25%	-2.36%
			2560	1.961	38.132	1.920	39.060	2.14%	-2.38%
			2600	1.994	38.071	1.964	39.009	1.53%	-2.40%
			2650	2.033	37.947	2.018	38.945	0.74%	-2.56%
			2680	2.061	37.889	2.051	38.907	0.49%	-2.62%
			2700	2.077	37.871	2.073	38.882	0.19%	-2.60%
06/18/2023	2450 Head	23.7	2300	1.681	38.184	1.670	39.500	0.66%	-3.33%
			2310	1.688	38.178	1.679	39.480	0.54%	-3.30%
			2320	1.695	38.168	1.687	39.460	0.47%	-3.27%
			2400	1.752	38.053	1.756	39.289	-0.23%	-3.15%
			2450	1.790	37.980	1.800	39.200	-0.56%	-3.11%
			2480	1.812	37.914	1.833	39.162	-1.15%	-3.19%
			2500	1.827	37.885	1.855	39.136	-1.51%	-3.20%
			2510	1.834	37.871	1.866	39.123	-1.71%	-3.20%
			2535	1.853	37.836	1.893	39.092	-2.11%	-3.21%
			2550	1.866	37.810	1.909	39.073	-2.25%	-3.23%
			2560	1.874	37.791	1.920	39.060	-2.40%	-3.25%
			2600	1.903	37.723	1.964	39.009	-3.11%	-3.30%
			2650	1.941	37.628	2.018	38.945	-3.82%	-3.38%
			2680	1.965	37.580	2.051	38.907	-4.19%	-3.41%
			2700	1.978	37.559	2.073	38.882	-4.58%	-3.40%
06/20/2023	2450 Head	22.9	2300	1.696	38.953	1.670	39.500	1.56%	-1.38%
			2310	1.703	38.940	1.679	39.480	1.43%	-1.37%
			2320	1.710	38.927	1.687	39.460	1.36%	-1.35%
			2400	1.769	38.822	1.756	39.289	0.74%	-1.19%
			2450	1.808	38.745	1.800	39.200	0.44%	-1.16%
			2480	1.830	38.694	1.833	39.162	-0.16%	-1.20%
			2500	1.844	38.660	1.855	39.136	-0.59%	-1.22%
			2510	1.851	38.645	1.866	39.123	-0.80%	-1.22%
			2535	1.871	38.601	1.893	39.092	-1.16%	-1.26%
			2550	1.883	38.578	1.909	39.073	-1.36%	-1.27%
			2560	1.892	38.563	1.920	39.060	-1.46%	-1.27%
			2600	1.922	38.509	1.964	39.009	-2.14%	-1.28%
			2650	1.958	38.398	2.018	38.945	-2.97%	-1.40%
			2680	1.984	38.356	2.051	38.907	-3.27%	-1.42%
			2700	1.998	38.344	2.073	38.882	-3.62%	-1.38%
07/02/2023	2450 Head	22.5	2400	1.813	37.371	1.756	39.289	3.25%	-4.88%
			2450	1.848	37.348	1.800	39.200	2.67%	-4.72%
			2480	1.865	37.293	1.833	39.162	1.75%	-4.77%
			2500	1.879	37.260	1.855	39.136	1.29%	-4.79%
			2510	1.887	37.248	1.866	39.123	1.13%	-4.79%
			2535	1.907	37.229	1.893	39.092	0.74%	-4.77%
			2550	1.919	37.218	1.909	39.073	0.52%	-4.75%
			2560	1.925	37.203	1.920	39.060	0.26%	-4.75%
			2600	1.949	37.135	1.964	39.009	-0.76%	-4.80%
			2650	1.988	37.062	2.018	38.945	-1.49%	-4.84%
			2680	2.010	37.030	2.051	38.907	-2.00%	-4.82%
			2700	2.020	37.002	2.073	38.882	-2.56%	-4.84%
07/05/2023	2450 Head	20.6	2300	1.744	39.545	1.670	39.500	4.43%	0.11%
			2310	1.752	39.532	1.679	39.480	4.35%	0.13%
			2320	1.759	39.518	1.687	39.460	4.27%	0.15%
			2400	1.821	39.387	1.756	39.289	3.70%	0.25%
			2450	1.861	39.307	1.800	39.200	3.39%	0.27%
			2480	1.885	39.265	1.833	39.162	2.84%	0.26%
			2500	1.900	39.223	1.855	39.136	2.43%	0.22%
			2510	1.908	39.199	1.866	39.123	2.25%	0.19%
			2535	1.927	39.146	1.893	39.092	1.80%	0.14%
			2550	1.940	39.122	1.909	39.073	1.62%	0.13%
			2560	1.949	39.109	1.920	39.060	1.51%	0.13%
			2600	1.981	39.049	1.964	39.009	0.87%	0.10%
			2650	2.020	38.949	2.018	38.945	0.10%	0.01%
			2680	2.047	38.896	2.051	38.907	-0.20%	-0.03%
			2700	2.063	38.865	2.073	38.882	-0.48%	-0.04%
07/12/2023	2450 Head	23.0	2300	1.737	38.859	1.670	39.500	4.01%	-1.62%
			2310	1.744	38.851	1.679	39.480	3.87%	-1.59%
			2320	1.751	38.843	1.687	39.460	3.79%	-1.56%
			2400	1.808	38.706	1.756	39.289	2.96%	-1.48%
			2450	1.847	38.645	1.800	39.200	2.61%	-1.42%
			2480	1.868	38.595	1.833	39.162	1.91%	-1.45%
			2500	1.883	38.558	1.855	39.136	1.51%	-1.48%
			2510	1.891	38.540	1.866	39.123	1.34%	-1.49%
			2535	1.912	38.501	1.893	39.092	1.00%	-1.51%
			2550	1.925	38.478	1.909	39.073	0.84%	-1.52%
			2560	1.933	38.463	1.920	39.060	0.68%	-1.53%
			2600	1.962	38.397	1.964	39.009	-0.10%	-1.57%
			2650	2.001	38.293	2.018	38.945	-0.84%	-1.67%
			2680	2.027	38.258	2.051	38.907	-1.17%	-1.67%
			2700	2.040	38.241	2.073	38.882	-1.59%	-1.65%
07/12/2023	2450 Head	20.4	2300	1.706	37.767	1.670	39.500	2.16%	-4.39%
			2310	1.713	37.754	1.679	39.480	2.03%	-4.37%
			2320	1.720	37.742	1.687	39.460	1.96%	-4.35%
			2400	1.782	37.636	1.756	39.289	1.48%	-4.21%
			2450	1.820	37.560	1.800	39.200	1.11%	-4.18%
			2480	1.842	37.506	1.833	39.162	0.49%	-4.23%
			2500	1.858	37.465	1.855	39.136	0.16%	-4.27%
			2510	1.867	37.444	1.866	39.123	0.05%	-4.29%
			2535	1.886	37.398	1.893	39.092	-0.37%	-4.33%
			2550	1.897	37.377	1.909	39.073	-0.63%	-4.34%
			2560	1.905	37.363	1.920	39.060	-0.78%	-4.34%
			2600	1.935	37.296	1.964	39.009	-1.48%	-4.39%
			2650	1.975	37.204	2.018	38.945	-2.13%	-4.47%
			2680	2.000	37.166	2.051	38.907	-2.49%	-4.47%
			2700	2.015	37.136	2.073	38.882	-2.80%	-4.49%

Table 10-4
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
07/17/2023	2450 Head	20.6	2300	1.722	39.799	1.670	39.500	3.11%	0.76%
			2310	1.730	39.784	1.679	39.480	3.04%	0.77%
			2320	1.737	39.772	1.687	39.460	2.96%	0.79%
			2400	1.798	39.664	1.756	39.289	2.39%	0.95%
			2450	1.837	39.590	1.800	39.200	2.06%	0.99%
			2480	1.863	39.547	1.833	39.162	1.64%	0.98%
			2500	1.879	39.514	1.855	39.136	1.29%	0.97%
			2510	1.887	39.497	1.866	39.123	1.13%	0.96%
			2535	1.908	39.453	1.893	39.092	0.79%	0.92%
			2550	1.921	39.428	1.909	39.073	0.63%	0.91%
			2560	1.930	39.410	1.920	39.060	0.52%	0.90%
			2600	1.964	39.348	1.964	39.009	0.00%	0.87%
			2650	2.005	39.233	2.018	38.945	-0.64%	0.74%
			2680	2.032	39.178	2.051	38.907	-0.93%	0.70%
			2700	2.048	39.154	2.073	38.882	-1.21%	0.70%
07/19/2023	2450 Head	19.9	2300	1.731	38.108	1.670	39.500	3.65%	-3.52%
			2310	1.738	38.096	1.679	39.480	3.51%	-3.51%
			2320	1.745	38.087	1.687	39.460	3.44%	-3.48%
			2400	1.804	37.968	1.756	39.289	2.73%	-3.36%
			2450	1.843	37.912	1.800	39.200	2.39%	-3.29%
			2480	1.866	37.874	1.833	39.162	1.80%	-3.29%
			2500	1.881	37.831	1.855	39.136	1.40%	-3.33%
			2510	1.889	37.807	1.866	39.123	1.23%	-3.36%
			2535	1.909	37.758	1.893	39.092	0.85%	-3.41%
			2550	1.922	37.739	1.909	39.073	0.68%	-3.41%
			2560	1.931	37.729	1.920	39.060	0.57%	-3.41%
			2600	1.964	37.674	1.964	39.009	0.00%	-3.42%
			2650	2.003	37.563	2.018	38.945	-0.74%	-3.55%
			2680	2.029	37.510	2.051	38.907	-1.07%	-3.59%
			2700	2.046	37.485	2.073	38.882	-1.30%	-3.59%
07/21/2023	2450 Head	21.1	2300	1.736	39.611	1.670	39.500	3.95%	0.28%
			2310	1.745	39.609	1.679	39.480	3.95%	0.33%
			2320	1.753	39.609	1.687	39.460	3.94%	0.38%
			2400	1.816	39.455	1.756	39.289	3.42%	0.42%
			2450	1.858	39.414	1.800	39.200	3.24%	0.55%
			2480	1.880	39.328	1.833	39.162	2.58%	0.42%
			2500	1.898	39.270	1.855	39.136	2.32%	0.34%
			2510	1.907	39.252	1.866	39.123	2.22%	0.33%
			2535	1.931	39.227	1.893	39.092	1.98%	0.34%
			2550	1.943	39.210	1.909	39.073	1.80%	0.35%
			2560	1.951	39.192	1.920	39.060	1.61%	0.34%
			2600	1.982	39.085	1.964	39.009	0.90%	0.19%
			2650	2.027	39.004	2.018	38.945	0.45%	0.15%
			2680	2.050	38.961	2.051	38.907	-0.04%	0.14%
			2700	2.065	38.910	2.073	38.882	-0.39%	0.07%
07/24/2023	2450 Head	19.9	2300	1.722	38.029	1.670	39.500	3.11%	-3.72%
			2310	1.730	38.015	1.679	39.480	3.04%	-3.71%
			2320	1.737	38.000	1.687	39.460	2.96%	-3.70%
			2400	1.797	37.879	1.756	39.289	2.33%	-3.59%
			2450	1.835	37.809	1.800	39.200	1.94%	-3.55%
			2480	1.857	37.754	1.833	39.162	1.31%	-3.60%
			2500	1.874	37.721	1.855	39.136	1.02%	-3.62%
			2510	1.883	37.708	1.866	39.123	0.91%	-3.62%
			2535	1.903	37.674	1.893	39.092	0.53%	-3.63%
			2550	1.914	37.652	1.909	39.073	0.26%	-3.64%
			2560	1.922	37.637	1.920	39.060	0.10%	-3.64%
			2600	1.954	37.562	1.964	39.009	-0.51%	-3.71%
			2650	1.996	37.472	2.018	38.945	-1.09%	-3.78%
			2680	2.021	37.429	2.051	38.907	-1.46%	-3.80%
			2700	2.036	37.391	2.073	38.882	-1.78%	-3.83%
07/24/2023	2450 Head	20.4	2300	1.674	38.744	1.670	39.500	0.24%	-1.91%
			2310	1.682	38.734	1.679	39.480	0.18%	-1.89%
			2320	1.689	38.723	1.687	39.460	0.12%	-1.87%
			2400	1.751	38.598	1.756	39.289	-0.28%	-1.76%
			2450	1.790	38.512	1.800	39.200	-0.56%	-1.76%
			2480	1.813	38.458	1.833	39.162	-1.09%	-1.80%
			2500	1.829	38.428	1.855	39.136	-1.40%	-1.81%
			2510	1.836	38.412	1.866	39.123	-1.61%	-1.82%
			2535	1.857	38.363	1.893	39.092	-1.90%	-1.86%
			2550	1.870	38.333	1.909	39.073	-2.04%	-1.89%
			2560	1.878	38.312	1.920	39.060	-2.19%	-1.92%
			2600	1.909	38.247	1.964	39.009	-2.80%	-1.95%
			2650	1.948	38.143	2.018	38.945	-3.47%	-2.06%
			2680	1.973	38.093	2.051	38.907	-3.80%	-2.09%
			2700	1.988	38.072	2.073	38.882	-4.10%	-2.08%
07/27/2023	2450 Head	21.5	2300	1.668	38.215	1.670	39.500	-0.12%	-3.25%
			2310	1.676	38.203	1.679	39.480	-0.18%	-3.23%
			2320	1.683	38.190	1.687	39.460	-0.24%	-3.22%
			2400	1.740	38.081	1.756	39.289	-0.91%	-3.07%
			2450	1.778	38.003	1.800	39.200	-1.22%	-3.05%
			2480	1.800	37.958	1.833	39.162	-1.80%	-3.07%
			2500	1.814	37.930	1.855	39.136	-2.21%	-3.08%
			2510	1.822	37.917	1.866	39.123	-2.36%	-3.08%
			2535	1.841	37.875	1.893	39.092	-2.75%	-3.11%
			2550	1.854	37.848	1.909	39.073	-2.88%	-3.14%
			2560	1.862	37.831	1.920	39.060	-3.02%	-3.15%
			2600	1.893	37.776	1.964	39.009	-3.62%	-3.16%
			2650	1.931	37.681	2.018	38.945	-4.31%	-3.25%
			2680	1.957	37.639	2.051	38.907	-4.58%	-3.26%
			2700	1.971	37.620	2.073	38.882	-4.92%	-3.25%

Table 10-5
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
06/12/2023	3600 Head	19.0	3300	2.614	38.161	2.708	38.157	-3.47%	0.01%
			3350	2.670	38.136	2.759	38.100	-3.23%	0.09%
			3450	2.757	37.960	2.861	37.986	-3.64%	-0.07%
			3500	2.793	37.824	2.913	37.929	-4.12%	-0.28%
			3550	2.847	37.730	2.964	37.871	-3.95%	-0.37%
			3560	2.857	37.715	2.974	37.860	-3.93%	-0.38%
			3600	2.889	37.621	3.015	37.814	-4.18%	-0.51%
			3650	2.948	37.531	3.066	37.757	-3.85%	-0.60%
			3690	2.985	37.478	3.107	37.711	-3.93%	-0.62%
			3700	2.995	37.468	3.117	37.700	-3.91%	-0.62%
			3750	3.038	37.398	3.169	37.643	-4.13%	-0.65%
			3900	3.180	37.104	3.323	37.471	-4.30%	-0.98%
			3930	3.208	37.024	3.353	37.437	-4.32%	-1.10%
			4100	3.385	36.793	3.528	37.243	-4.05%	-1.21%
			4150	3.420	36.769	3.579	37.186	-4.44%	-1.12%
06/19/2023	3600 Head	19.6	3300	2.621	37.119	2.708	38.157	-3.21%	-2.72%
			3350	2.668	37.045	2.759	38.100	-3.30%	-2.77%
			3450	2.752	36.838	2.861	37.986	-3.81%	-3.02%
			3500	2.794	36.758	2.913	37.929	-4.09%	-3.09%
			3550	2.840	36.650	2.964	37.871	-4.18%	-3.22%
			3560	2.850	36.630	2.974	37.860	-4.17%	-3.25%
			3600	2.892	36.577	3.015	37.814	-4.08%	-3.27%
			3650	2.934	36.498	3.066	37.757	-4.31%	-3.33%
			3690	2.973	36.422	3.107	37.711	-4.31%	-3.42%
			3700	2.983	36.412	3.117	37.700	-4.30%	-3.42%
			3750	3.030	36.351	3.169	37.643	-4.39%	-3.43%
			3900	3.169	36.097	3.323	37.471	-4.63%	-3.67%
			3930	3.198	36.036	3.353	37.437	-4.62%	-3.74%
			4100	3.381	35.754	3.528	37.243	-4.17%	-4.00%
			4150	3.429	35.673	3.579	37.186	-4.19%	-4.07%
07/04/2023	3600 Head	20.0	3300	2.616	37.616	2.708	38.157	-3.40%	-1.42%
			3350	2.670	37.589	2.759	38.100	-3.23%	-1.34%
			3450	2.759	37.445	2.861	37.986	-3.57%	-1.42%
			3500	2.794	37.304	2.913	37.929	-4.09%	-1.65%
			3550	2.839	37.290	2.964	37.871	-4.22%	-1.53%
			3560	2.841	37.267	2.974	37.860	-4.47%	-1.57%
			3600	2.885	37.127	3.015	37.814	-4.31%	-1.82%
			3650	2.927	37.072	3.066	37.757	-4.53%	-1.81%
			3690	2.963	36.945	3.107	37.711	-4.63%	-2.03%
			3700	2.976	36.924	3.117	37.700	-4.52%	-2.06%
			3750	3.026	36.873	3.169	37.643	-4.51%	-2.05%
			3900	3.179	36.636	3.323	37.471	-4.33%	-2.23%
			3930	3.218	36.603	3.353	37.437	-4.03%	-2.23%
			4100	3.388	36.331	3.528	37.243	-3.97%	-2.45%
			4150	3.432	36.257	3.579	37.186	-4.11%	-2.50%

Table 10-6
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
06/27/2023	5200-5800 Head	22.5	5180	4.425	35.181	4.635	36.009	-4.53%	-2.30%
			5190	4.434	35.165	4.645	35.998	-4.54%	-2.31%
			5200	4.443	35.154	4.655	35.986	-4.55%	-2.31%
			5210	4.452	35.130	4.666	35.975	-4.59%	-2.35%
			5220	4.461	35.094	4.676	35.963	-4.60%	-2.42%
			5240	4.488	35.044	4.696	35.940	-4.43%	-2.49%
			5250	4.502	35.036	4.706	35.929	-4.33%	-2.49%
			5260	4.516	35.020	4.717	35.917	-4.26%	-2.50%
			5270	4.528	35.007	4.727	35.906	-4.21%	-2.50%
			5280	4.539	34.999	4.737	35.894	-4.18%	-2.49%
			5290	4.550	34.988	4.748	35.883	-4.17%	-2.49%
			5300	4.559	34.968	4.758	35.871	-4.18%	-2.52%
			5310	4.567	34.948	4.768	35.860	-4.22%	-2.54%
			5320	4.573	34.920	4.778	35.849	-4.29%	-2.59%
			5500	4.771	34.641	4.963	35.643	-3.87%	-2.81%
			5510	4.784	34.627	4.973	35.632	-3.80%	-2.82%
			5520	4.796	34.608	4.983	35.620	-3.75%	-2.84%
			5530	4.805	34.585	4.994	35.609	-3.78%	-2.88%
			5540	4.811	34.559	5.004	35.597	-3.86%	-2.92%
			5550	4.822	34.528	5.014	35.586	-3.83%	-2.97%
			5560	4.834	34.504	5.024	35.574	-3.78%	-3.01%
			5580	4.865	34.479	5.045	35.551	-3.57%	-3.02%
			5600	4.894	34.459	5.065	35.529	-3.38%	-3.01%
			5610	4.903	34.450	5.076	35.518	-3.41%	-3.01%
			5620	4.912	34.433	5.086	35.506	-3.42%	-3.02%
			5640	4.928	34.395	5.106	35.483	-3.49%	-3.07%
			5660	4.951	34.356	5.127	35.460	-3.43%	-3.11%
			5670	4.965	34.324	5.137	35.449	-3.35%	-3.17%
			5680	4.979	34.287	5.147	35.437	-3.26%	-3.25%
			5690	4.993	34.273	5.158	35.426	-3.20%	-3.25%
			5700	5.005	34.261	5.168	35.414	-3.15%	-3.26%
			5710	5.017	34.258	5.178	35.403	-3.11%	-3.23%
			5720	5.027	34.249	5.188	35.391	-3.10%	-3.23%
			5745	5.047	34.206	5.214	35.363	-3.20%	-3.27%
			5750	5.052	34.193	5.219	35.357	-3.20%	-3.29%
			5755	5.058	34.178	5.224	35.351	-3.18%	-3.32%
			5765	5.071	34.155	5.234	35.340	-3.11%	-3.35%
			5775	5.081	34.132	5.245	35.329	-3.13%	-3.39%
			5785	5.093	34.111	5.255	35.317	-3.08%	-3.41%
			5795	5.108	34.096	5.265	35.305	-2.98%	-3.42%
			5800	5.115	34.087	5.270	35.300	-2.94%	-3.44%
			5800	5.115	34.087	5.270	35.300	-2.94%	-3.44%
			5805	5.123	34.084	5.275	35.294	-2.88%	-3.43%
			5825	5.148	34.079	5.296	35.271	-2.79%	-3.38%
			5835	5.158	34.071	5.305	35.230	-2.77%	-3.29%
			5845	5.164	34.057	5.315	35.210	-2.84%	-3.27%
			5855	5.170	34.048	5.325	35.197	-2.91%	-3.26%
			5865	5.179	34.029	5.336	35.190	-2.94%	-3.30%
			5865	5.179	34.029	5.336	35.190	-2.94%	-3.30%
			5865	5.179	34.029	5.336	35.190	-2.94%	-3.30%
			5865	5.179	34.029	5.336	35.190	-2.94%	-3.30%
			5875	5.188	34.002	5.347	35.183	-2.97%	-3.36%
			5885	5.202	33.971	5.357	35.177	-2.89%	-3.43%
			5905	5.234	33.920	5.379	35.163	-2.70%	-3.53%
07/17/2023	5200-5800 Head	22.2	5180	4.588	35.447	4.635	36.009	-1.01%	-1.56%
			5190	4.603	35.437	4.645	35.998	-0.90%	-1.56%
			5200	4.616	35.436	4.655	35.986	-0.84%	-1.53%
			5210	4.629	35.426	4.666	35.975	-0.79%	-1.53%
			5220	4.640	35.409	4.676	35.963	-0.77%	-1.54%
			5240	4.659	35.366	4.696	35.940	-0.79%	-1.60%
			5250	4.669	35.345	4.706	35.929	-0.79%	-1.63%
			5260	4.680	35.324	4.717	35.917	-0.78%	-1.65%
			5270	4.692	35.307	4.727	35.906	-0.74%	-1.67%
			5280	4.707	35.298	4.737	35.894	-0.63%	-1.66%
			5290	4.725	35.292	4.748	35.883	-0.48%	-1.65%
			5300	4.740	35.284	4.758	35.871	-0.38%	-1.64%
			5310	4.752	35.282	4.768	35.860	-0.34%	-1.61%
			5320	4.759	35.279	4.778	35.849	-0.40%	-1.59%
			5500	4.927	34.887	4.963	35.643	-0.73%	-2.12%
			5510	4.942	34.866	4.973	35.632	-0.62%	-2.15%
			5520	4.957	34.849	4.983	35.620	-0.52%	-2.16%
			5530	4.973	34.834	4.994	35.609	-0.42%	-2.18%
			5540	4.988	34.828	5.004	35.597	-0.32%	-2.16%
			5550	4.998	34.814	5.014	35.586	-0.32%	-2.17%
			5560	5.003	34.788	5.024	35.574	-0.42%	-2.21%
			5580	5.021	34.730	5.045	35.551	-0.48%	-2.31%
			5600	5.058	34.682	5.065	35.529	-0.14%	-2.38%
			5610	5.077	34.679	5.076	35.518	0.02%	-2.36%
			5620	5.093	34.678	5.086	35.506	0.14%	-2.33%
			5640	5.126	34.685	5.106	35.483	0.39%	-2.25%
			5660	5.139	34.666	5.127	35.460	0.23%	-2.24%
			5670	5.143	34.634	5.137	35.449	0.12%	-2.30%
			5680	5.154	34.605	5.147	35.437	0.14%	-2.35%
			5690	5.172	34.592	5.158	35.426	0.27%	-2.35%
			5700	5.189	34.589	5.168	35.414	0.41%	-2.33%
			5710	5.202	34.585	5.178	35.403	0.46%	-2.31%
			5720	5.208	34.591	5.188	35.391	0.39%	-2.26%
			5745	5.221	34.574	5.214	35.363	0.13%	-2.23%
			5750	5.221	34.557	5.219	35.357	0.04%	-2.26%
			5755	5.220	34.541	5.224	35.351	-0.08%	-2.29%
			5765	5.218	34.504	5.234	35.340	-0.31%	-2.37%
			5775	5.223	34.471	5.245	35.329	-0.42%	-2.43%
			5785	5.237	34.436	5.255	35.317	-0.34%	-2.49%
			5795	5.252	34.400	5.265	35.305	-0.25%	-2.56%
			5800	5.259	34.383	5.270	35.300	-0.21%	-2.60%
			5800	5.259	34.383	5.270	35.300	-0.21%	-2.60%
			5805	5.268	34.369	5.275	35.294	-0.13%	-2.62%
			5825	5.292	34.337	5.296	35.271	-0.08%	-2.65%
			5835	5.303	34.318	5.305	35.230	-0.04%	-2.59%
			5845	5.312	34.308	5.315	35.210	-0.06%	-2.56%
			5855	5.318	34.295	5.325	35.197	-0.13%	-2.56%
			5865	5.325	34.275	5.336	35.190	-0.21%	-2.60%
			5865	5.325	34.275	5.336	35.190	-0.21%	-2.60%
			5865	5.325	34.275	5.336	35.190	-0.21%	-2.60%
			5865	5.325	34.275	5.336	35.190	-0.21%	-2.60%
			5875	5.332	34.233	5.347	35.183	-0.28%	-2.70%
			5885	5.348	34.196	5.357	35.177	-0.17%	-2.79%
			5905	5.381	34.155	5.379	35.163	0.04%	-2.87%

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 SAR System Validation Appendix.

Table 10-7
System Verification Results – Head

System Verification TARGET & MEASURED																	
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	DAE	Measured SAR 1g (W/kg)	1W Target SAR 1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation 1g (%)	Measured SAR 10g (W/kg)	1W Target SAR 10g (W/kg)	1W Normalized SAR 10g (W/kg)	Deviation 10g (%)
G	13	HEAD	07/06/2023	22.6	21.6	1.00	1002	7417	665	0.508	0.557	0.508	-8.80%	0.314	0.346	0.314	-9.25%
K5	750	HEAD	06/08/2023	22.6	23.1	0.20	1046	7637	1652	1.730	8.690	8.650	-0.46%	1.160	5.700	5.800	1.75%
K5	750	HEAD	06/12/2023	21.2	21.9	0.20	1003	7637	1652	1.640	8.480	8.200	-3.30%	1.120	5.560	5.600	0.72%
K5	750	HEAD	06/14/2023	22.7	22.5	0.20	1046	7637	1652	1.770	8.690	8.850	1.84%	1.190	5.700	5.950	4.39%
K4	750	HEAD	06/19/2023	22.1	22.5	0.20	1046	7640	1645	1.610	8.690	8.050	-7.36%	1.070	5.700	5.350	-6.14%
K4	750	HEAD	06/21/2023	22.1	21.5	0.20	1046	7640	1645	1.630	8.690	8.150	-6.21%	1.080	5.700	5.400	-5.26%
K4	835	HEAD	06/07/2023	22.5	21.7	0.20	4d119	7640	1645	1.860	9.720	9.300	-4.32%	1.210	6.380	6.050	-5.17%
K4	835	HEAD	06/12/2023	22.4	20.6	0.20	4d119	7640	1645	1.900	9.720	9.500	-2.26%	1.240	6.380	6.200	-2.82%
K4	835	HEAD	06/14/2023	21.1	20.9	0.20	4d119	7640	1645	1.910	9.720	9.550	-1.75%	1.250	6.380	6.250	-2.04%
S	835	HEAD	06/15/2023	22.3	21.9	0.20	4d132	7713	1530	2.020	9.660	10.100	4.55%	1.320	6.270	6.600	5.26%
K5	835	HEAD	06/20/2023	22.4	21.8	0.20	4d119	7637	1652	1.980	9.720	9.900	1.85%	1.300	6.380	6.500	1.88%
C	835	HEAD	06/22/2023	21.0	21.0	0.20	4d132	7406	1677	1.840	9.660	9.200	-4.76%	1.200	6.270	6.000	-4.31%
K3	1750	HEAD	06/12/2023	22.5	21.0	0.10	1051	7547	1322	3.620	36.100	36.200	0.28%	1.950	19.000	19.500	2.63%
L	1750	HEAD	06/13/2023	21.6	21.6	0.10	1148	7410	1583	3.870	37.200	38.700	4.03%	2.080	19.400	20.800	7.22%
K3	1750	HEAD	06/21/2023	21.0	22.0	0.10	1051	7547	1322	3.670	36.100	36.700	1.66%	1.980	19.000	19.800	4.21%
K3	1750	HEAD	06/29/2023	22.0	20.7	0.10	1051	7547	1322	3.750	36.100	37.500	3.88%	1.960	19.000	19.600	3.16%
K2	1750	HEAD	07/20/2023	20.1	19.6	0.10	1092	7565	1466	3.560	36.200	35.600	-1.66%	1.880	19.100	18.800	-1.57%
D	1750	HEAD	07/23/2023	22.5	22.5	0.10	1148	7551	1323	3.610	37.200	36.100	-2.96%	1.910	19.400	19.100	-1.55%
K2	1750	HEAD	07/26/2023	19.5	20.5	0.10	1092	7565	1466	3.580	36.200	35.800	-1.10%	1.890	19.100	18.900	-1.05%
K2	1900	HEAD	06/08/2023	20.0	20.7	0.10	5d141	7565	1466	3.940	39.900	39.400	-1.25%	2.030	20.800	20.300	-2.40%
O	1900	HEAD	06/12/2023	22.5	21.2	0.10	5d080	7570	1558	4.100	39.600	41.000	3.54%	2.120	20.700	21.200	2.42%
K3	1900	HEAD	06/14/2023	22.3	21.7	0.10	5d141	7547	1322	4.100	39.900	41.000	2.76%	2.140	20.800	21.400	2.88%
L	1900	HEAD	06/19/2023	21.4	21.7	0.10	5d149	7410	1583	4.340	40.500	43.400	7.16%	2.270	21.200	22.700	7.08%
K3	1900	HEAD	06/19/2023	23.0	22.0	0.10	5d141	7547	1322	4.190	39.900	41.900	5.01%	2.220	20.800	22.200	6.73%
L	1900	HEAD	07/24/2023	20.8	22.8	0.10	5d149	7409	1334	4.020	40.500	40.200	-0.74%	2.070	21.200	20.700	-2.36%
C	2300	HEAD	06/15/2023	21.0	21.0	0.10	1073	7406	1677	4.940	48.600	49.400	1.65%	2.350	23.700	23.500	-0.84%
O	2300	HEAD	06/18/2023	22.9	22.7	0.10	1073	7570	1558	4.810	48.600	48.100	-1.03%	2.300	23.700	23.000	-2.95%
O	2300	HEAD	07/12/2023	24.6	23.0	0.10	1073	7570	1558	4.960	48.600	49.600	2.06%	2.360	23.700	23.600	-0.42%
S	2300	HEAD	07/17/2023	21.3	20.7	0.10	1073	7713	1530	5.050	48.600	50.500	3.91%	2.420	23.700	24.200	2.11%
S	2300	HEAD	07/21/2023	22.1	21.1	0.10	1073	7713	1530	4.720	48.600	47.200	-2.88%	2.270	23.700	22.700	-4.22%
O	2450	HEAD	06/20/2023	24.6	22.9	0.10	981	7570	1558	4.940	53.900	49.400	-8.35%	2.330	25.400	23.300	-8.27%
O	2450	HEAD	07/02/2023	23.5	22.5	0.10	981	7570	1558	5.110	53.900	51.100	-5.19%	2.380	25.400	23.800	-6.30%
K2	2450	HEAD	07/05/2023	20.3	20.6	0.10	945	7565	1466	5.500	51.900	55.000	5.97%	2.530	24.600	25.300	2.85%
O	2450	HEAD	07/12/2023	24.6	23.0	0.10	981	7570	1558	4.920	53.900	49.200	-8.72%	2.290	25.400	22.900	-9.84%
K2	2450	HEAD	07/12/2023	20.4	20.4	0.10	945	7565	1466	5.480	51.900	54.800	5.59%	2.520	24.600	25.200	2.44%
K2	2450	HEAD	07/19/2023	19.5	19.9	0.10	945	7565	1466	5.440	51.900	54.400	4.82%	2.500	24.600	25.000	1.63%
S	2450	HEAD	07/21/2023	22.1	21.1	0.10	981	7713	1530	5.220	53.900	52.200	-3.15%	2.430	25.400	24.300	-4.33%
K2	2450	HEAD	07/24/2023	19.9	19.9	0.10	945	7565	1466	5.450	51.900	54.500	5.01%	2.500	24.600	25.000	1.63%
AM3	2600	HEAD	06/21/2023	24.9	21.1	0.10	1069	3837	793	5.620	55.600	56.200	1.08%	2.520	24.900	25.200	1.20%
K2	2600	HEAD	07/05/2023	20.3	20.6	0.10	1009	7565	1466	5.580	57.300	55.800	-2.62%	2.470	25.800	24.700	-4.26%
K2	2600	HEAD	07/12/2023	20.4	20.4	0.10	1009	7565	1466	5.750	57.300	57.500	0.35%	2.550	25.800	25.500	-1.16%
K2	2600	HEAD	07/19/2023	19.5	19.9	0.10	1009	7565	1466	5.720	57.300	57.200	-0.17%	2.530	25.800	25.300	-1.94%
O	2600	HEAD	07/24/2023	21.1	20.4	0.10	1071	7570	1558	6.010	56.500	60.100	6.37%	2.740	25.400	27.400	7.87%
K2	2600	HEAD	07/24/2023	19.9	19.9	0.10	1009	7565	1466	5.710	57.300	57.100	-0.35%	2.540	25.800	25.400	-1.55%
O	2600	HEAD	07/27/2023	21.9	21.5	0.10	1071	7570	1558	5.490	56.500	54.900	-2.83%	2.520	25.400	25.200	-0.79%
C	3500	HEAD	06/12/2023	22.0	21.0	0.10	1097	7406	1677	6.510	65.400	65.100	-0.46%	2.500	24.700	25.000	1.21%
AM6	3500	HEAD	06/19/2023	19.9	20.4	0.10	1055	7638	1408	7.120	66.000	71.200	7.88%	2.690	24.900	26.900	8.03%
AM6	3500	HEAD	07/04/2023	20.5	20.0	0.10	1055	7638	1408	7.070	66.000	70.700	7.12%	2.680	24.900	26.800	7.63%
C	3700	HEAD	06/12/2023	22.0	21.0	0.10	1018	7406	1677	6.160	67.000	61.600	-8.06%	2.350	24.200	23.500	-2.89%
AM6	3700	HEAD	06/19/2023	19.9	20.4	0.10	1002	7638	1408	6.850	67.900	68.500	0.88%	2.510	24.700	25.100	1.62%
AM6	3700	HEAD	07/04/2023	20.5	20.0	0.10	1002	7638	1408	7.030	67.900	70.300	3.53%	2.550	24.700	25.500	3.24%
AM6	3900	HEAD	07/04/2023	20.5	20.0	0.10	1062	7638	1408	7.340	68.600	73.400	7.00%	2.550	23.800	25.500	7.14%
O	5250	HEAD	06/27/2023	23.9	22.5	0.05	1191	7570	1558	3.830	80.400	76.600	-4.73%	1.120	23.100	22.400	-3.03%
G	5250	HEAD	07/17/2023	22.3	22.2	0.05	1191	7417	665	3.820	80.400	76.400	-4.98%	1.080	23.100	21.600	-6.49%
O	5600	HEAD	06/27/2023	23.9	22.5	0.05	1191	7570	1558	4.240	81.900	84.800	3.54%	1.240	23.300	24.800	6.44%
G	5600	HEAD	07/17/2023	22.3	22.2	0.05	1191	7417	665	4.110	81.900	82.200	0.37%	1.160	23.300	23.200	-0.43%
O	5750	HEAD	06/27/2023	23.9	22.5	0.05	1191	7570	1558	4.050	78.400	81.000	3.32%	1.170	22.300	23.400	4.93%
G	5750	HEAD	07/17/2023	22.3	22.2	0.05	1191	7417	665	3.720	78.400	74.400	-5.10%	1.060	22.300	21.200	-4.93%
O	5800	HEAD	06/27/2023	23.9	22.5	0.05	1191	7570	1558	4.000	79.000	80.000	1.27%	1.160	22.300	23.200	4.04%
G	5800	HEAD	07/17/2023	22.3	22.2	0.05	1191	7417	665	3.890	79.000	77.800	-1.52%	1.100	22.300	22.000	-1.35%

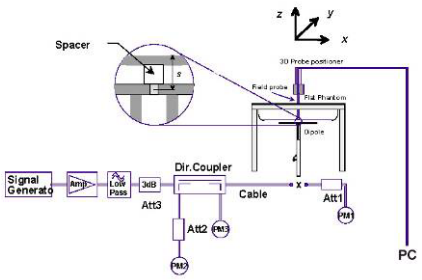

Figure 10-1
System Verification Setup Diagram

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	26895	33.0	32.20	0.06	1:8.3	0.182	1.202	0.219	A1
848.80	251	Right	Tilt	GSM 850	GSM	A	26895	33.0	32.20	0.03	1:8.3	0.085	1.202	0.102	
848.80	251	Left	Cheek	GSM 850	GSM	A	26895	33.0	32.20	0.00	1:8.3	0.121	1.202	0.145	
848.80	251	Left	Tilt	GSM 850	GSM	A	26895	33.0	32.20	0.03	1:8.3	0.080	1.202	0.096	
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)	
1880.00	661	Right	Cheek	GSM 1900	GSM	A	26747	30.0	29.58	0.02	1:8.3	0.067	1.102	0.074	
1880.00	661	Right	Tilt	GSM 1900	GSM	A	26747	30.0	29.58	-0.01	1:8.3	0.043	1.102	0.047	
1880.00	661	Left	Cheek	GSM 1900	GSM	A	26747	30.0	29.58	0.06	1:8.3	0.096	1.102	0.106	A2
1880.00	661	Left	Tilt	GSM 1900	GSM	A	26747	30.0	29.58	-0.01	1:8.3	0.051	1.102	0.056	
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)	
846.60	4233	Right	Cheek	UMTS 850	RMC	A	3	26895	25.0	24.85	0.00	1:1	0.276	1.035	0.286	A3
846.60	4233	Right	Tilt	UMTS 850	RMC	A	3	26895	25.0	24.85	0.05	1:1	0.124	1.035	0.128	
846.60	4233	Left	Cheek	UMTS 850	RMC	A	3	26895	25.0	24.85	0.00	1:1	0.172	1.035	0.178	
846.60	4233	Left	Tilt	UMTS 850	RMC	A	3	26895	25.0	24.85	0.11	1:1	0.114	1.035	0.118	
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.	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)	
1712.40	1312	Right	Cheek	UMTS 1750	RMC	A	135	26655	24.0	23.98	0.04	1:1	0.113	1.005	0.114	
1712.40	1312	Right	Tilt	UMTS 1750	RMC	A	135	26655	24.0	23.98	0.08	1:1	0.069	1.005	0.069	
1712.40	1312	Left	Cheek	UMTS 1750	RMC	A	135	26655	24.0	23.98	0.01	1:1	0.178	1.005	0.179	A4
1712.40	1312	Left	Tilt	UMTS 1750	RMC	A	135	26655	24.0	23.98	-0.01	1:1	0.066	1.005	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.	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)	
1852.40	9262	Right	Cheek	UMTS 1900	RMC	A	65	26747	24.0	23.95	0.00	1:1	0.161	1.012	0.163	
1852.40	9262	Right	Tilt	UMTS 1900	RMC	A	65	26747	24.0	23.95	-0.06	1:1	0.092	1.012	0.093	
1852.40	9262	Left	Cheek	UMTS 1900	RMC	A	71	26747	24.0	23.95	0.03	1:1	0.225	1.012	0.228	A5
1852.40	9262	Left	Tilt	UMTS 1900	RMC	A	108	26747	24.0	23.95	-0.03	1:1	0.112	1.012	0.113	

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 71 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)	
680.50	133297	Mid	Right	Cheek	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	-0.01	1:1	0.175	1.312	0.230	A6
680.50	133297	Mid	Right	Cheek	LTE Band 71	A	64	25764	20	QPSK	50	25	24.5	23.26	1	-0.07	1:1	0.131	1.330	0.174	
680.50	133297	Mid	Right	Tilt	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.19	1:1	0.074	1.312	0.097	
680.50	133297	Mid	Right	Tilt	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.01	1:1	0.056	1.330	0.074	
680.50	133297	Mid	Left	Cheek	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.15	1:1	0.161	1.312	0.211	
680.50	133297	Mid	Left	Cheek	LTE Band 71	A	64	25764	20	QPSK	50	25	24.5	23.26	1	0.17	1:1	0.137	1.330	0.182	
680.50	133297	Mid	Left	Tilt	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.11	1:1	0.083	1.312	0.109	
680.50	133297	Mid	Left	Tilt	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.04	1:1	0.070	1.330	0.093	

ICNIRP 1998 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**	**Head** **1.6 W/kg (mW/g)** averaged over 1 gram

Table 11-7
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
707.50	23095	Mid	Right	Cheek	LTE Band 12	A	132	25764	10	QPSK	1	25	25.5	24.53	0	0.09	1:1	0.206	1.250	0.258	A7
707.50	23095	Mid	Right	Cheek	LTE Band 12	A	132	25764	10	QPSK	25	12	24.5	23.51	1	0.05	1:1	0.162	1.256	0.203	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A	132	25764	10	QPSK	1	25	25.5	24.53	0	0.09	1:1	0.083	1.250	0.104	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A	132	25764	10	QPSK	25	12	24.5	23.51	1	0.13	1:1	0.065	1.256	0.082	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A	132	25764	10	QPSK	1	25	25.5	24.53	0	0.04	1:1	0.159	1.250	0.199	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A	132	25764	10	QPSK	25	12	24.5	23.51	1	-0.02	1:1	0.125	1.256	0.157	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A	132	25764	10	QPSK	1	25	25.5	24.53	0	0.01	1:1	0.082	1.250	0.103	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A	132	25764	10	QPSK	25	12	24.5	23.51	1	0.10	1:1	0.064	1.256	0.080	

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

Table 11-8
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
782.00	23230	Mid	Right	Cheek	LTE Band 13	A	1	25764	10	QPSK	1	25	25.5	24.40	0	0.07	1:1	0.273	1.288	0.352	A8
782.00	23230	Mid	Right	Cheek	LTE Band 13	A	1	25764	10	QPSK	25	0	24.5	23.49	1	0.05	1:1	0.210	1.262	0.265	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A	5	25764	10	QPSK	1	25	25.5	24.40	0	0.18	1:1	0.147	1.288	0.189	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A	5	25764	10	QPSK	25	0	24.5	23.49	1	0.05	1:1	0.107	1.262	0.135	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A	132	25764	10	QPSK	1	25	25.5	24.40	0	0.08	1:1	0.218	1.288	0.281	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A	132	25764	10	QPSK	25	0	24.5	23.49	1	0.07	1:1	0.171	1.262	0.216	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A	5	25764	10	QPSK	1	25	25.5	24.40	0	-0.01	1:1	0.141	1.288	0.182	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A	5	25764	10	QPSK	25	0	24.5	23.49	1	0.01	1:1	0.113	1.262	0.143	

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

Table 11-9
LTE Band 14 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
793.00	23330	Mid	Right	Cheek	LTE Band 14	A	132	25764	10	QPSK	1	25	25.5	24.26	0	0.08	1:1	0.283	1.330	0.376	A9
793.00	23330	Mid	Right	Cheek	LTE Band 14	A	132	25764	10	QPSK	25	0	24.5	23.21	1	0.07	1:1	0.200	1.346	0.269	
793.00	23330	Mid	Right	Tilt	LTE Band 14	A	132	25764	10	QPSK	1	25	25.5	24.26	0	-0.11	1:1	0.151	1.330	0.201	
793.00	23330	Mid	Right	Tilt	LTE Band 14	A	132	25764	10	QPSK	25	0	24.5	23.21	1	0.04	1:1	0.111	1.346	0.149	
793.00	23330	Mid	Left	Cheek	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	-0.01	1:1	0.222	1.330	0.295	
793.00	23330	Mid	Left	Cheek	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	0.01	1:1	0.170	1.346	0.229	
793.00	23330	Mid	Left	Tilt	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	-0.11	1:1	0.134	1.330	0.178	
793.00	23330	Mid	Left	Tilt	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	0.06	1:1	0.106	1.346	0.143	

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

Table 11-10
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	140	26895	15	QPSK	1	74	25.5	24.69	0	0.10	1:1	0.232	1.205	0.280	A10
831.50	26865	Mid	Right	Cheek	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.04	1:1	0.169	1.219	0.206	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.07	1:1	0.131	1.205	0.158	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.07	1:1	0.089	1.219	0.108	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.15	1:1	0.163	1.205	0.196	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.10	1:1	0.108	1.219	0.132	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.06	1:1	0.127	1.205	0.153	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.19	1:1	0.086	1.219	0.105	

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

Table 11-11
LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																								
# CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	836.50	20525	Mid	Right	Cheek	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	0.07	1:1	0.216	1.216	0.263	A11
1 CC Uplink	N/A	836.50	20525	Mid	Right	Cheek	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	-0.06	1:1	0.155	1.262	0.196	
2 CC Uplink	PCC	836.50	20525	Mid	Right	Cheek	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.51	0	0.01	1:1	0.213	1.256	0.268	
	SCC	843.70	20597								5		1	0									
1 CC Uplink	N/A	836.50	20525	Mid	Right	Tilt	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	0.02	1:1	0.105	1.216	0.128	
1 CC Uplink	N/A	836.50	20525	Mid	Right	Tilt	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.03	1:1	0.076	1.262	0.096	
1 CC Uplink	N/A	836.50	20525	Mid	Left	Cheek	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	0.03	1:1	0.170	1.216	0.207	
1 CC Uplink	N/A	836.50	20525	Mid	Left	Cheek	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.03	1:1	0.122	1.262	0.154	
1 CC Uplink	N/A	836.50	20525	Mid	Left	Tilt	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	0.11	1:1	0.130	1.216	0.158	
1 CC Uplink	N/A	836.50	20525	Mid	Left	Tilt	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	-0.01	1:1	0.099	1.262	0.125	

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

Table 11-12
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																							
# CC Uplink	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																				
1 CC Uplink	N/A	1745.00	132322	Mid	Right	Cheek	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	24.5	23.70	0	0.03	1:1	0.162	1.202	0.195	
1 CC Uplink	N/A	1745.00	132322	Mid	Right	Cheek	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	25	23.5	22.68	1	0.01	1:1	0.118	1.208	0.143	
1 CC Uplink	N/A	1745.00	132322	Mid	Right	Tilt	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	24.5	23.70	0	-0.02	1:1	0.112	1.202	0.135	
1 CC Uplink	N/A	1745.00	132322	Mid	Right	Tilt	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	25	23.5	22.68	1	0.03	1:1	0.095	1.208	0.115	
1 CC Uplink	N/A	1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	24.5	23.70	0	0.04	1:1	0.274	1.202	0.329	
1 CC Uplink	N/A	1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	25	23.5	22.68	1	0.03	1:1	0.233	1.208	0.281	
1 CC Uplink	N/A	1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	A	135	26218	10	QPSK	1	0	24.5	23.76	0	-0.07	1:1	0.257	1.186	0.305	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	24.5	23.76	0	-0.17	1:1	0.281	1.186	0.333	
	SCC	1725.20	132124											99									
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	A	135	26218	10	QPSK	1	0	24.5	23.82	0	0.02	1:1	0.260	1.169	0.304	
	SCC	1735.10	132223											49									
1 CC Uplink	N/A	1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	24.5	23.70	0	-0.02	1:1	0.108	1.202	0.130	
1 CC Uplink	N/A	1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	25	23.5	22.68	1	-0.08	1:1	0.081	1.208	0.098	
1 CC Uplink	N/A	1720.00	132072	Low	Right	Cheek	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	17.0	16.56	0	0.03	1:1	0.477	1.107	0.528	
1 CC Uplink	N/A	1720.00	132072	Low	Right	Cheek	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	17.0	16.49	0	0.03	1:1	0.481	1.125	0.541	
1 CC Uplink	N/A	1720.00	132072	Low	Right	Tilt	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	17.0	16.56	0	-0.05	1:1	0.468	1.107	0.518	
1 CC Uplink	N/A	1720.00	132072	Low	Right	Tilt	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	17.0	16.49	0	0.00	1:1	0.484	1.125	0.545	
1 CC Uplink	N/A	1715.00	132022	Low	Right	Tilt	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	17.0	16.53	0	0.01	1:1	0.505	1.114	0.563	A12
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	Right	Tilt	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	17.0	16.58	0	0.01	1:1	0.472	1.102	0.520	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	Right	Tilt	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	17.0	16.61	0	0.00	1:1	0.491	1.094	0.537	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1720.00	132072	Low	Left	Cheek	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	17.0	16.56	0	-0.01	1:1	0.318	1.107	0.352	
1 CC Uplink	N/A	1720.00	132072	Low	Left	Cheek	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	17.0	16.49	0	0.01	1:1	0.324	1.125	0.365	
1 CC Uplink	N/A	1720.00	132072	Low	Left	Tilt	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	17.0	16.56	0	0.02	1:1	0.397	1.107	0.439	
1 CC Uplink	N/A	1720.00	132072	Low	Left	Tilt	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	17.0	16.49	0	0.01	1:1	0.404	1.125	0.455	
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
LTE Band 25 (PCS) 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)	
1860.00	26140	Low	Right	Cheek	LTE Band 25 (PCS)	A	108	26747	20	QPSK	1	50	24.5	23.92	0	0.00	1:1	0.149	1.143	0.170	
1860.00	26140	Low	Right	Cheek	LTE Band 25 (PCS)	A	108	26747	20	QPSK	50	25	23.5	22.96	1	0.01	1:1	0.123	1.132	0.139	
1860.00	26140	Low	Right	Tilt	LTE Band 25 (PCS)	A	106	26747	20	QPSK	1	50	24.5	23.92	0	0.03	1:1	0.095	1.143	0.109	
1860.00	26140	Low	Right	Tilt	LTE Band 25 (PCS)	A	106	26747	20	QPSK	50	25	23.5	22.96	1	0.03	1:1	0.076	1.132	0.086	
1860.00	26140	Low	Left	Cheek	LTE Band 25 (PCS)	A	108	26747	20	QPSK	1	50	24.5	23.92	0	0.00	1:1	0.228	1.143	0.261	
1860.00	26140	Low	Left	Cheek	LTE Band 25 (PCS)	A	108	26747	20	QPSK	50	25	23.5	22.96	1	0.00	1:1	0.205	1.132	0.232	
1860.00	26140	Low	Left	Tilt	LTE Band 25 (PCS)	A	108	26747	20	QPSK	1	50	24.5	23.92	0	0.00	1:1	0.121	1.143	0.138	
1860.00	26140	Low	Left	Tilt	LTE Band 25 (PCS)	A	108	26747	20	QPSK	50	25	23.5	22.96	1	-0.02	1:1	0.095	1.132	0.108	
1882.50	26365	Mid	Right	Cheek	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	0	18.0	17.00	0	0.08	1:1	0.563	1.259	0.709	
1882.50	26365	Mid	Right	Cheek	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	0	18.0	16.88	0	-0.02	1:1	0.566	1.294	0.732	
1882.50	26365	Mid	Right	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	0	18.0	17.00	0	0.01	1:1	0.571	1.259	0.719	
1860.00	26140	Low	Right	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	50	18.0	16.87	0	0.00	1:1	0.543	1.297	0.704	
1882.50	26365	Mid	Right	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	0	18.0	16.88	0	-0.02	1:1	0.574	1.294	0.743	A13
1905.00	26590	High	Right	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	50	18.0	16.62	0	0.01	1:1	0.504	1.374	0.692	
1882.50	26365	Mid	Left	Cheek	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	0	18.0	17.00	0	-0.07	1:1	0.339	1.259	0.427	
1882.50	26365	Mid	Left	Cheek	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	0	18.0	16.88	0	0.00	1:1	0.341	1.294	0.441	
1882.50	26365	Mid	Left	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	0	18.0	17.00	0	0.00	1:1	0.391	1.259	0.492	
1882.50	26365	Mid	Left	Tilt	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	0	18.0	16.88	0	-0.01	1:1	0.392	1.294	0.507	
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
LTE Band 30 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)	
2310.00	27710	Mid	Right	Cheek	LTE Band 30	A	26259	10	QPSK	1	25	23.0	21.98	0	0.07	1:1	0.051	1.265	0.065	
2310.00	27710	Mid	Right	Cheek	LTE Band 30	A	26259	10	QPSK	25	25	22.0	20.91	1	0.07	1:1	0.041	1.285	0.053	
2310.00	27710	Mid	Right	Tilt	LTE Band 30	A	26259	10	QPSK	1	25	23.0	21.98	0	0.02	1:1	0.048	1.265	0.061	
2310.00	27710	Mid	Right	Tilt	LTE Band 30	A	26259	10	QPSK	25	25	22.0	20.91	1	0.11	1:1	0.038	1.285	0.049	
2310.00	27710	Mid	Left	Cheek	LTE Band 30	A	26259	10	QPSK	1	25	23.0	21.98	0	-0.16	1:1	0.046	1.265	0.058	
2310.00	27710	Mid	Left	Cheek	LTE Band 30	A	26259	10	QPSK	25	25	22.0	20.91	1	0.04	1:1	0.039	1.285	0.050	
2310.00	27710	Mid	Left	Tilt	LTE Band 30	A	26259	10	QPSK	1	25	23.0	21.98	0	0.16	1:1	0.045	1.265	0.057	
2310.00	27710	Mid	Left	Tilt	LTE Band 30	A	26259	10	QPSK	25	25	22.0	20.91	1	0.02	1:1	0.033	1.285	0.042	
2310.00	27710	Mid	Right	Cheek	LTE Band 30	F	26531	10	QPSK	1	0	16.5	15.06	0	0.00	1:1	0.380	1.393	0.529	
2310.00	27710	Mid	Right	Cheek	LTE Band 30	F	26531	10	QPSK	25	0	16.5	15.01	0	0.01	1:1	0.366	1.409	0.516	
2310.00	27710	Mid	Right	Tilt	LTE Band 30	F	26531	10	QPSK	1	0	16.5	15.06	0	0.03	1:1	0.427	1.393	0.595	A14
2310.00	27710	Mid	Right	Tilt	LTE Band 30	F	26531	10	QPSK	25	0	16.5	15.01	0	-0.04	1:1	0.402	1.409	0.566	
2310.00	27710	Mid	Left	Cheek	LTE Band 30	F	26531	10	QPSK	1	0	16.5	15.06	0	0.00	1:1	0.211	1.393	0.294	
2310.00	27710	Mid	Left	Cheek	LTE Band 30	F	26531	10	QPSK	25	0	16.5	15.01	0	0.03	1:1	0.208	1.409	0.293	
2310.00	27710	Mid	Left	Tilt	LTE Band 30	F	26531	10	QPSK	1	0	16.5	15.06	0	-0.01	1:1	0.284	1.393	0.396	
2310.00	27710	Mid	Left	Tilt	LTE Band 30	F	26531	10	QPSK	25	0	16.5	15.01	0	0.00	1:1	0.287	1.409	0.404	
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
LTE Band 7 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)	
2510.00	20850	Low	Right	Cheek	LTE Band 7	B	26259	20	QPSK	1	0	24.0	22.87	0	-0.11	1:1	0.047	1.297	0.061	
2510.00	20850	Low	Right	Cheek	LTE Band 7	B	26259	20	QPSK	50	25	23.0	21.90	1	0.04	1:1	0.037	1.288	0.048	
2510.00	20850	Low	Right	Tilt	LTE Band 7	B	26259	20	QPSK	1	0	24.0	22.87	0	0.07	1:1	0.045	1.297	0.058	
2510.00	20850	Low	Right	Tilt	LTE Band 7	B	26259	20	QPSK	50	25	23.0	21.90	1	0.14	1:1	0.029	1.288	0.037	
2510.00	20850	Low	Left	Cheek	LTE Band 7	B	26259	20	QPSK	1	0	24.0	22.87	0	-0.05	1:1	0.105	1.297	0.136	
2510.00	20850	Low	Left	Cheek	LTE Band 7	B	26259	20	QPSK	50	25	23.0	21.90	1	0.04	1:1	0.074	1.288	0.095	
2510.00	20850	Low	Left	Tilt	LTE Band 7	B	26259	20	QPSK	1	0	24.0	22.87	0	0.20	1:1	0.070	1.297	0.091	
2510.00	20850	Low	Left	Tilt	LTE Band 7	B	26259	20	QPSK	50	25	23.0	21.90	1	0.01	1:1	0.046	1.288	0.059	
2535.00	21100	Mid	Right	Cheek	LTE Band 7	F	26747	20	QPSK	1	50	15.0	13.85	0	0.00	1:1	0.477	1.303	0.622	
2510.00	20850	Low	Right	Cheek	LTE Band 7	F	26747	20	QPSK	50	25	15.0	13.87	0	0.02	1:1	0.433	1.297	0.562	
2535.00	21100	Mid	Right	Cheek	LTE Band 7	F	26747	20	QPSK	50	50	15.0	13.88	0	0.03	1:1	0.493	1.294	0.638	
2560.00	21350	High	Right	Cheek	LTE Band 7	F	26747	20	QPSK	50	50	15.0	13.80	0	0.02	1:1	0.554	1.318	0.730	A15
2535.00	21100	Mid	Right	Tilt	LTE Band 7	F	26747	20	QPSK	1	50	15.0	13.85	0	0.03	1:1	0.449	1.303	0.585	
2535.00	21100	Mid	Right	Tilt	LTE Band 7	F	26747	20	QPSK	50	50	15.0	13.88	0	0.00	1:1	0.457	1.294	0.591	
2535.00	21100	Mid	Left	Cheek	LTE Band 7	F	26747	20	QPSK	1	50	15.0	13.85	0	0.00	1:1	0.244	1.303	0.318	
2535.00	21100	Mid	Left	Cheek	LTE Band 7	F	26747	20	QPSK	50	50	15.0	13.88	0	0.00	1:1	0.257	1.294	0.333	
2535.00	21100	Mid	Left	Tilt	LTE Band 7	F	26747	20	QPSK	1	50	15.0	13.85	0	-0.03	1:1	0.316	1.303	0.412	
2535.00	21100	Mid	Left	Tilt	LTE Band 7	F	26747	20	QPSK	50	50	15.0	13.88	0	0.01	1:1	0.325	1.294	0.421	
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
LTE Band 41 Head SAR

MEASUREMENT RESULTS																						
# CC Uplink, Power Class	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Cheek	LTE Band 41	B	26424	20	QPSK	1	50	25.0	24.04	0	0.02	1:1.58	0.040	1.247	0.050	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Cheek	LTE Band 41	B	26424	20	QPSK	50	25	24.0	23.20	1	-0.11	1:1.58	0.037	1.202	0.044	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Tilt	LTE Band 41	B	26424	20	QPSK	1	50	25.0	24.04	0	-0.14	1:1.58	0.031	1.247	0.039	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Tilt	LTE Band 41	B	26424	20	QPSK	50	25	24.0	23.20	1	0.07	1:1.58	0.029	1.202	0.035	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	50	25.0	24.04	0	0.01	1:1.58	0.071	1.247	0.089	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	99	25.0	23.85	0	-0.01	1:1.58	0.056	1.303	0.073	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	50	25	24.0	23.20	1	-0.08	1:1.58	0.055	1.202	0.066	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	50	26.6	25.60	0	0.08	1:2.31	0.066	1.259	0.083	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	99	26.6	25.56	0	-0.03	1:2.31	0.056	1.271	0.071	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	99	25.0	23.87	0	-0.05	1:1.58	0.058	1.297	0.075	
	SCC	2525.80	39948										0									
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	Left	Cheek	LTE Band 41	B	26424	20	QPSK	1	99	26.6	25.93	0	-0.02	1:2.31	0.061	1.167	0.071	
	SCC	2525.80	39948										0									
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Left	Tilt	LTE Band 41	B	26424	20	QPSK	1	50	25.0	24.04	0	0.10	1:1.58	0.059	1.247	0.074	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Left	Tilt	LTE Band 41	B	26424	20	QPSK	50	25	24.0	23.20	1	0.05	1:1.58	0.049	1.202	0.059	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Cheek	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.50	0	-0.06	1:1.58	0.485	1.259	0.611	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Cheek	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.71	0	0.03	1:1.58	0.582	1.199	0.698	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	Right	Cheek	LTE Band 41	F	26424	20	QPSK	1	0	17.5	16.69	0	-0.09	1:1.58	0.617	1.205	0.743	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	Right	Cheek	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.52	0	0.00	1:1.58	0.492	1.253	0.616	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	Right	Cheek	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.63	0	0.08	1:1.58	0.479	1.222	0.585	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Cheek	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.62	0	0.02	1:1.58	0.487	1.225	0.597	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Cheek	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.73	0	0.00	1:1.58	0.621	1.194	0.741	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	Right	Cheek	LTE Band 41	F	26424	20	QPSK	50	0	17.5	16.68	0	0.00	1:1.58	0.616	1.208	0.744	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	Right	Cheek	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.61	0	-0.01	1:1.58	0.516	1.227	0.633	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	Right	Cheek	LTE Band 41	F	26424	20	QPSK	50	0	17.5	16.71	0	0.04	1:1.58	0.482	1.199	0.578	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Cheek	LTE Band 41	F	26424	20	QPSK	100	0	17.5	16.68	0	0.03	1:1.58	0.604	1.208	0.730	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.50	0	0.05	1:1.58	0.449	1.259	0.565	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.71	0	0.01	1:1.58	0.579	1.199	0.694	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	0	17.5	16.69	0	-0.09	1:1.58	0.623	1.205	0.751	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.52	0	0.02	1:1.58	0.497	1.253	0.623	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.63	0	-0.08	1:1.58	0.483	1.222	0.590	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	Right	Tilt	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.62	0	0.00	1:1.58	0.468	1.225	0.573	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.73	0	0.02	1:1.58	0.603	1.194	0.720	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	50	0	17.5	16.68	0	-0.01	1:1.58	0.615	1.208	0.743	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	Right	Tilt	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.61	0	-0.01	1:1.58	0.521	1.227	0.639	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	Right	Tilt	LTE Band 41	F	26424	20	QPSK	50	0	17.5	16.71	0	-0.04	1:1.58	0.490	1.199	0.588	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	100	0	17.5	16.68	0	0.02	1:1.58	0.588	1.208	0.710	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	0	19.1	18.62	0	0.00	1:2.31	0.671	1.117	0.750	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	0	17.5	16.65	0	-0.03	1:1.58	0.627	1.216	0.762	
	SCC	2573.20	40422										99									
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	Right	Tilt	LTE Band 41	F	26424	20	QPSK	1	0	19.1	18.63	0	-0.01	1:2.31	0.683	1.114	0.761	A16
	SCC	2573.20	40422										99									
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Left	Cheek	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.71	0	-0.03	1:1.58	0.317	1.199	0.380	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Left	Cheek	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.73	0	0.06	1:1.58	0.320	1.194	0.382	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Left	Tilt	LTE Band 41	F	26424	20	QPSK	1	99	17.5	16.71	0	-0.02	1:1.58	0.298	1.199	0.357	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	Left	Tilt	LTE Band 41	F	26424	20	QPSK	50	50	17.5	16.73	0	-0.04	1:1.58	0.278	1.194	0.332	
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
LTE Band 48 Head SAR

MEASUREMENT RESULTS																								
# CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	3690.00	56640	High	Right	Cheek	LTE Band 48	F	25913	20	QPSK	1	0	19.0	18.23	0	-0.07	1:1.58	0.406	1.194	0.485	
1 CC Uplink	N/A	3690.00	56640	High	Right	Cheek	LTE Band 48	F	25913	20	QPSK	50	0	19.0	18.28	0	-0.06	1:1.58	0.400	1.180	0.472	
1 CC Uplink	N/A	3690.00	56640	High	Right	Tilt	LTE Band 48	F	25913	20	QPSK	1	0	19.0	18.23	0	-0.02	1:1.58	0.416	1.194	0.497	
1 CC Uplink	N/A	3690.00	56640	High	Right	Tilt	LTE Band 48	F	25913	20	QPSK	50	0	19.0	18.28	0	0.00	1:1.58	0.418	1.180	0.493	A17
2 CC Uplink	PCC	3690.00	56640	High	Right	Tilt	LTE Band 48	F	25913	20	QPSK	1	0	19.0	18.10	0	-0.04	1:1.58	0.389	1.230	0.478	
	SCC	3670.20	56442										99									
1 CC Uplink	N/A	3690.00	56640	High	Left	Cheek	LTE Band 48	F	25913	20	QPSK	1	0	19.0	18.23	0	-0.01	1:1.58	0.158	1.194	0.189	
1 CC Uplink	N/A	3690.00	56640	High	Left	Cheek	LTE Band 48	F	25913	20	QPSK	50	0	19.0	18.28	0	0.01	1:1.58	0.156	1.180	0.184	
1 CC Uplink	N/A	3690.00	56640	High	Left	Tilt	LTE Band 48	F	25913	20	QPSK	1	0	19.0	18.23	0	-0.04	1:1.58	0.175	1.194	0.209	
1 CC Uplink	N/A	3690.00	56640	High	Left	Tilt	LTE Band 48	F	25913	20	QPSK	50	0	19.0	18.28	0	-0.03	1:1.58	0.173	1.180	0.204	

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

Table 11-18
NR Band n71 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)	
680.50	136100	Mid	Right	Cheek	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	-0.07	1:1	0.151	1.208	0.182	
680.50	136100	Mid	Right	Cheek	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.04	1:1	0.161	1.216	0.196	A18
680.50	136100	Mid	Right	Cheek	NR Band n71	A	65	26192	20	CP-OFDM	QPSK	1	1	24.0	23.19	1.5	0.00	1:1	0.106	1.205	0.128	
680.50	136100	Mid	Right	Tilt	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	-0.03	1:1	0.074	1.208	0.089	
680.50	136100	Mid	Right	Tilt	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.16	1:1	0.088	1.216	0.107	
680.50	136100	Mid	Left	Cheek	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.09	1:1	0.147	1.208	0.178	
680.50	136100	Mid	Left	Cheek	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	-0.02	1:1	0.158	1.216	0.192	
680.50	136100	Mid	Left	Tilt	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.01	1:1	0.071	1.208	0.086	
680.50	136100	Mid	Left	Tilt	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.05	1:1	0.080	1.216	0.097	

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

Table 11-19
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	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.02	1:1	0.169	1.140	0.193	
707.50	141500	Mid	Right	Cheek	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	-0.02	1:1	0.196	1.156	0.227	A19
707.50	141500	Mid	Right	Cheek	NR Band n12	A	132	26192	15	CP-OFDM	QPSK	1	1	24.0	23.43	1.5	0.02	1:1	0.128	1.140	0.146	
707.50	141500	Mid	Right	Tilt	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	0.00	1:1	0.111	1.140	0.127	
707.50	141500	Mid	Right	Tilt	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.09	1:1	0.095	1.156	0.110	
707.50	141500	Mid	Left	Cheek	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	0.05	1:1	0.115	1.140	0.131	
707.50	141500	Mid	Left	Cheek	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.04	1:1	0.156	1.156	0.180	
707.50	141500	Mid	Left	Tilt	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	0.02	1:1	0.080	1.140	0.091	
707.50	141500	Mid	Left	Tilt	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.02	1:1	0.094	1.156	0.109	

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

Table 11-20
NR Band n26 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)	
831.50	166300	Mid	Right	Cheek	NR Band n26	A	140	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	-0.14	1:1	0.182	1.130	0.206	A20
831.50	166300	Mid	Right	Cheek	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.14	1:1	0.168	1.156	0.194	
831.50	166300	Mid	Right	Cheek	NR Band n26	A	140	26374	20	CP-OFDM	QPSK	1	1	24.0	23.21	1.5	-0.17	1:1	0.104	1.199	0.125	
831.50	166300	Mid	Right	Tilt	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.02	1:1	0.109	1.130	0.123	
831.50	166300	Mid	Right	Tilt	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.02	1:1	0.102	1.156	0.118	
831.50	166300	Mid	Left	Cheek	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	-0.18	1:1	0.150	1.130	0.170	
831.50	166300	Mid	Left	Cheek	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.01	1:1	0.137	1.156	0.158	
831.50	166300	Mid	Left	Tilt	NR Band n26	A	140	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	-0.04	1:1	0.095	1.130	0.107	
831.50	166300	Mid	Left	Tilt	NR Band n26	A	140	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	-0.02	1:1	0.076	1.156	0.088	
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 11-21
NR Band n66 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)	
1745.00	349000	Mid	Right	Cheek	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	1	108	24.5	23.99	0	0.11	1:1	0.142	1.125	0.160	
1745.00	349000	Mid	Right	Cheek	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	108	54	24.5	23.99	0	0.08	1:1	0.126	1.125	0.142	
1745.00	349000	Mid	Right	Tilt	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	1	108	24.5	23.99	0	-0.19	1:1	0.106	1.125	0.119	
1745.00	349000	Mid	Right	Tilt	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	108	54	24.5	23.99	0	0.05	1:1	0.099	1.125	0.111	
1745.00	349000	Mid	Left	Cheek	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	1	108	24.5	23.99	0	0.06	1:1	0.249	1.125	0.280	
1745.00	349000	Mid	Left	Cheek	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	108	54	24.5	23.99	0	-0.01	1:1	0.225	1.125	0.253	
1745.00	349000	Mid	Left	Cheek	NR Band n66	A	135	26127	40	CP-OFDM	QPSK	1	1	23.0	22.24	1.5	0.20	1:1	0.169	1.191	0.201	
1745.00	349000	Mid	Left	Tilt	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	1	108	24.5	23.99	0	0.18	1:1	0.049	1.125	0.055	
1745.00	349000	Mid	Left	Tilt	NR Band n66	A	135	26127	40	DFT-S-OFDM	QPSK	108	54	24.5	23.99	0	0.02	1:1	0.051	1.125	0.057	
1745.00	349000	Mid	Right	Cheek	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	1	108	18.0	16.90	0	0.04	1:1	0.573	1.288	0.738	
1745.00	349000	Mid	Right	Cheek	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	108	54	18.0	17.10	0	-0.02	1:1	0.592	1.230	0.728	
1745.00	349000	Mid	Right	Tilt	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	1	108	18.0	16.90	0	-0.01	1:1	0.590	1.288	0.760	
1745.00	349000	Mid	Right	Tilt	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	108	54	18.0	17.10	0	-0.02	1:1	0.610	1.230	0.750	
1745.00	349000	Mid	Right	Tilt	NR Band n66	F	N/A	37611	40	CP-OFDM	QPSK	1	1	18.0	16.90	0	-0.01	1:1	0.623	1.288	**0.802**	A21
1745.00	349000	Mid	Left	Cheek	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	1	108	18.0	16.90	0	-0.14	1:1	0.367	1.288	0.473	
1745.00	349000	Mid	Left	Cheek	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	108	54	18.0	17.10	0	0.04	1:1	0.368	1.230	0.453	
1745.00	349000	Mid	Left	Tilt	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	1	108	18.0	16.90	0	-0.07	1:1	0.476	1.288	0.613	
1745.00	349000	Mid	Left	Tilt	NR Band n66	F	N/A	37611	40	DFT-S-OFDM	QPSK	108	54	18.0	17.10	0	0.06	1:1	0.496	1.230	0.610	
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 11-22
NR Band n25 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)	
1882.50	376500	Mid	Right	Cheek	NR Band n25	A	71	25772	40	DFT-S-OFDM	QPSK	1	1	24.5	23.64	0	-0.03	1:1	0.118	1.219	0.144	
1882.50	376500	Mid	Right	Cheek	NR Band n25	A	71	25772	40	DFT-S-OFDM	QPSK	108	54	24.5	23.61	0	0.01	1:1	0.122	1.227	0.150	
1882.50	376500	Mid	Right	Tilt	NR Band n25	A	71	25772	40	DFT-S-OFDM	QPSK	1	1	24.5	23.64	0	-0.20	1:1	0.087	1.219	0.106	
1882.50	376500	Mid	Right	Tilt	NR Band n25	A	71	25772	40	DFT-S-OFDM	QPSK	108	54	24.5	23.61	0	0.09	1:1	0.078	1.227	0.096	
1882.50	376500	Mid	Left	Cheek	NR Band n25	A	64	25772	40	DFT-S-OFDM	QPSK	1	1	24.5	23.64	0	-0.04	1:1	0.239	1.219	0.291	
1882.50	376500	Mid	Left	Cheek	NR Band n25	A	64	25772	40	DFT-S-OFDM	QPSK	108	54	24.5	23.61	0	0.01	1:1	0.244	1.227	0.299	
1882.50	376500	Mid	Left	Cheek	NR Band n25	A	64	25772	40	CP-OFDM	QPSK	1	1	23.0	22.18	1.5	-0.01	1:1	0.165	1.208	0.199	
1882.50	376500	Mid	Left	Tilt	NR Band n25	A	106	25772	40	DFT-S-OFDM	QPSK	1	1	24.5	23.64	0	-0.03	1:1	0.112	1.219	0.137	
1882.50	376500	Mid	Left	Tilt	NR Band n25	A	106	25772	40	DFT-S-OFDM	QPSK	108	54	24.5	23.61	0	0.03	1:1	0.084	1.227	0.103	
1882.50	376500	Mid	Right	Cheek	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	1	108	17.0	16.00	0	-0.01	1:1	0.566	1.259	0.713	
1882.50	376500	Mid	Right	Cheek	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	108	0	17.0	15.91	0	0.04	1:1	0.567	1.285	0.729	
1882.50	376500	Mid	Right	Tilt	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	1	108	17.0	16.00	0	0.00	1:1	0.585	1.259	0.737	
1882.50	376500	Mid	Right	Tilt	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	108	0	17.0	15.91	0	-0.03	1:1	0.585	1.285	0.752	
1882.50	376500	Mid	Right	Tilt	NR Band n25	F	N/A	37520	40	CP-OFDM	QPSK	1	1	17.0	15.84	0	0.04	1:1	0.585	1.306	0.764	A22
1882.50	376500	Mid	Left	Cheek	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	1	108	17.0	16.00	0	-0.01	1:1	0.332	1.259	0.418	
1882.50	376500	Mid	Left	Cheek	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	108	0	17.0	15.91	0	0.03	1:1	0.333	1.285	0.428	
1882.50	376500	Mid	Left	Tilt	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	1	108	17.0	16.00	0	0.00	1:1	0.427	1.259	0.538	
1882.50	376500	Mid	Left	Tilt	NR Band n25	F	N/A	37520	40	DFT-S-OFDM	QPSK	108	0	17.0	15.91	0	-0.01	1:1	0.429	1.285	0.551	
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 11-23
NR Band n30 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)	
2310.00	462000	Mid	Right	Cheek	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	1	50	23.5	22.14	0	0.04	1:1	0.050	1.368	0.068	
2310.00	462000	Mid	Right	Cheek	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	25	14	23.5	21.67	0	-0.05	1:1	0.048	1.524	0.073	
2310.00	462000	Mid	Right	Cheek	NR Band n30	A	26259	10	CP-OFDM	QPSK	1	1	22.0	20.43	1.5	-0.06	1:1	0.039	1.435	0.056	
2310.00	462000	Mid	Right	Tilt	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	1	50	23.5	22.14	0	0.06	1:1	0.023	1.368	0.031	
2310.00	462000	Mid	Right	Tilt	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	25	14	23.5	21.67	0	0.04	1:1	0.025	1.524	0.038	
2310.00	462000	Mid	Left	Cheek	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	1	50	23.5	22.14	0	0.19	1:1	0.036	1.368	0.049	
2310.00	462000	Mid	Left	Cheek	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	25	14	23.5	21.67	0	-0.03	1:1	0.035	1.524	0.053	
2310.00	462000	Mid	Left	Tilt	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	1	50	23.5	22.14	0	0.02	1:1	0.032	1.368	0.044	
2310.00	462000	Mid	Left	Tilt	NR Band n30	A	26259	10	DFT-S-OFDM	QPSK	25	14	23.5	21.67	0	-0.15	1:1	0.032	1.524	0.049	
2310.00	462000	Mid	Right	Cheek	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	16.5	15.00	0	0.02	1:1	0.482	1.413	0.681	
2310.00	462000	Mid	Right	Cheek	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	14	16.5	14.94	0	0.01	1:1	0.480	1.432	0.687	
2310.00	462000	Mid	Right	Tilt	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	16.5	15.00	0	-0.03	1:1	0.533	1.413	0.753	
2310.00	462000	Mid	Right	Tilt	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	14	16.5	14.94	0	-0.01	1:1	0.529	1.432	0.758	
2310.00	462000	Mid	Right	Tilt	NR Band n30	F	26549	10	CP-OFDM	QPSK	1	1	16.5	14.97	0	0.04	1:1	0.539	1.422	0.766	A23
2310.00	462000	Mid	Left	Cheek	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	16.5	15.00	0	0.07	1:1	0.276	1.413	0.390	
2310.00	462000	Mid	Left	Cheek	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	14	16.5	14.94	0	0.00	1:1	0.278	1.432	0.398	
2310.00	462000	Mid	Left	Tilt	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	16.5	15.00	0	-0.01	1:1	0.404	1.413	0.571	
2310.00	462000	Mid	Left	Tilt	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	14	16.5	14.94	0	-0.01	1:1	0.398	1.432	0.570	
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 11-24
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	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.03	1:1	0.017	1.143	0.019	
2592.99	518598	Mid	Right	Cheek	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.07	1:1	0.020	1.164	0.023	
2592.99	518598	Mid	Right	Tilt	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.09	1:1	0.022	1.143	0.025	
2592.99	518598	Mid	Right	Tilt	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.03	1:1	0.023	1.164	0.027	
2592.99	518598	Mid	Left	Cheek	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	0.09	1:1	0.036	1.143	0.041	
2592.99	518598	Mid	Left	Cheek	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.02	1:1	0.044	1.164	0.051	
2592.99	518598	Mid	Left	Cheek	NR Band n41	B	26366	100	CP-OFDM	QPSK	1	1	20.0	19.09	0	-0.20	1:1	0.054	1.233	0.067	
2592.99	518598	Mid	Left	Tilt	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	0.12	1:1	0.028	1.143	0.032	
2592.99	518598	Mid	Left	Tilt	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	-0.16	1:1	0.029	1.164	0.034	
2592.99	518598	Mid	Right	Cheek	NR Band n41	F	37306	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	0.00	1:1	0.465	1.227	0.571	
2592.99	518598	Mid	Right	Tilt	NR Band n41	F	37306	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	0.04	1:1	0.653	1.227	**0.801**	A24
2592.99	518598	Mid	Left	Cheek	NR Band n41	F	37306	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	0.03	1:1	0.181	1.227	0.222	
2592.99	518598	Mid	Left	Tilt	NR Band n41	F	37306	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	-0.07	1:1	0.267	1.227	0.328	
2592.99	518598	Mid	Right	Cheek	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	-0.03	1:1	0.228	1.186	0.270	
2592.99	518598	Mid	Right	Tilt	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.04	1:1	0.185	1.186	0.219	
2592.99	518598	Mid	Left	Cheek	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.02	1:1	0.607	1.186	0.720	
2592.99	518598	Mid	Left	Tilt	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.02	1:1	0.453	1.186	0.537	
2592.99	518598	Mid	Right	Cheek	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	0.01	1:1	0.000	1.268	0.000	
2592.99	518598	Mid	Right	Tilt	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	0.02	1:1	0.000	1.268	0.000	
2592.99	518598	Mid	Left	Cheek	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	0.01	1:1	0.000	1.268	0.000	
2592.99	518598	Mid	Left	Tilt	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	0.08	1:1	0.000	1.268	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 11-25
NR Band n48 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)	
3679.98	645332	High	Right	Cheek	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	1	104	17.0	16.59	0	0.03	1:1	0.493	1.099	0.542	
3679.98	645332	High	Right	Cheek	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	50	56	17.0	16.36	0	-0.01	1:1	0.497	1.159	0.576	
3679.98	645332	High	Right	Tilt	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	1	104	17.0	16.59	0	0.01	1:1	0.491	1.099	0.540	
3679.98	645332	High	Right	Tilt	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	50	56	17.0	16.36	0	0.00	1:1	0.498	1.159	0.577	
3679.98	645332	High	Right	Tilt	NR Band n48	F	26366	40	CP-OFDM	QPSK	1	1	17.0	16.35	0	-0.07	1:1	0.513	1.161	**0.596**	A25
3679.98	645332	High	Left	Cheek	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	1	104	17.0	16.59	0	0.07	1:1	0.220	1.099	0.242	
3679.98	645332	High	Left	Cheek	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	50	56	17.0	16.36	0	0.03	1:1	0.214	1.159	0.248	
3679.98	645332	High	Left	Tilt	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	1	104	17.0	16.59	0	0.03	1:1	0.249	1.099	0.274	
3679.98	645332	High	Left	Tilt	NR Band n48	F	26366	40	DFT-S-OFDM	QPSK	50	56	17.0	16.36	0	-0.01	1:1	0.261	1.159	0.302	
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 11-26
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)	
3930.00	662000	High	Right	Cheek	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	15.5	15.12	0	0.08	1:1	0.329	1.091	0.359	
3930.00	662000	High	Right	Cheek	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	15.5	15.00	0	0.04	1:1	0.343	1.122	0.385	
3930.00	662000	High	Right	Cheek	NR Band n77	F	26903	100	CP-OFDM	QPSK	1	1	15.5	15.18	0	0.08	1:1	0.319	1.076	0.343	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	F	26366	100	DFT-S-OFDM	QPSK	1	271	15.5	14.77	0	0.03	1:1	0.377	1.183	0.446	
3930.00	662000	High	Right	Tilt	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	15.5	15.12	0	0.12	1:1	0.311	1.091	0.339	
3930.00	662000	High	Right	Tilt	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	15.5	15.00	0	0.11	1:1	0.315	1.122	0.353	
3930.00	662000	High	Left	Cheek	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	15.5	15.12	0	0.10	1:1	0.146	1.091	0.159	
3930.00	662000	High	Left	Cheek	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	15.5	15.00	0	0.00	1:1	0.157	1.122	0.176	
3930.00	662000	High	Left	Tilt	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	15.5	15.12	0	0.03	1:1	0.152	1.091	0.166	
3930.00	662000	High	Left	Tilt	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	15.5	15.00	0	-0.12	1:1	0.159	1.122	0.178	
3750.00	650000	Low	Right	Cheek	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	14.5	13.93	N/A	0.02	1:1	0.007	1.140	0.008	
3750.00	650000	Low	Right	Tilt	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	14.5	13.93	N/A	0.06	1:1	0.016	1.140	0.018	
3750.00	650000	Low	Left	Cheek	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	14.5	13.93	N/A	0.08	1:1	0.032	1.140	0.036	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	C	26366	100	CW/SRS	N/A	N/A	N/A	14.5	13.70	N/A	0.20	1:1	0.013	1.202	0.016	
3750.00	650000	Low	Left	Tilt	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	14.5	13.93	N/A	0.20	1:1	0.005	1.140	0.006	
3750.00	650000	Low	Right	Cheek	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	16.39	N/A	0.00	1:1	0.383	1.291	0.494	
3930.00	662000	High	Right	Cheek	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	17.03	N/A	0.03	1:1	0.435	1.114	0.485	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	16.00	N/A	0.01	1:1	0.525	1.413	0.742	A26
3930.00	662000	High	Right	Tilt	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	17.03	N/A	0.08	1:1	0.014	1.114	0.016	
3930.00	662000	High	Left	Cheek	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	17.03	N/A	0.08	1:1	0.294	1.114	0.328	
3930.00	662000	High	Left	Tilt	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	17.5	17.03	N/A	0.01	1:1	0.000	1.114	0.000	
3930.00	662000	High	Right	Cheek	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	13.0	12.07	N/A	0.04	1:1	0.005	1.239	0.006	
3930.00	662000	High	Right	Tilt	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	13.0	12.07	N/A	0.07	1:1	0.016	1.239	0.020	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	D	26366	100	CW/SRS	N/A	N/A	N/A	13.0	11.95	N/A	0.02	1:1	0.000	1.274	0.000	
3930.00	662000	High	Left	Cheek	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	13.0	12.07	N/A	0.20	1:1	0.002	1.239	0.002	
3930.00	662000	High	Left	Tilt	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	13.0	12.07	N/A	0.05	1:1	0.000	1.239	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								

Note: Light Purple entries indicate the additional DoD check on the worst case exposure scenario from C-band antennas.

Table 11-27
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2462	11	Right	Cheek	802.11b	DSSS	2	29519	22	1	13.0	12.86	-0.01	100.00	98.86	0.276	1.033	1.012	0.289	
2462	11	Right	Tilt	802.11b	DSSS	2	29519	22	1	13.0	12.86	-0.08	100.00	98.86	0.030	1.033	1.012	0.031	
2462	11	Left	Cheek	802.11b	DSSS	2	29519	22	1	13.0	12.86	0.03	100.00	98.86	0.393	1.033	1.012	**0.411**	
2462	11	Left	Tilt	802.11b	DSSS	2	29519	22	1	13.0	12.86	-0.05	100.00	98.86	0.049	1.033	1.012	0.051	
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 11-28
DTS Head SISO SAR during Conditions with 5/6 GHz and/or 5G NR

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2437	6	Right	Cheek	802.11b	DSSS	2	29352	22	1	10.0	9.90	0.00	100.00	98.86	0.122	1.023	1.012	0.126	
2437	6	Right	Tilt	802.11b	DSSS	2	29352	22	1	10.0	9.90	0.01	100.00	98.86	0.009	1.023	1.012	0.009	
2437	6	Left	Cheek	802.11b	DSSS	2	29352	22	1	10.0	9.90	0.03	100.00	98.86	0.197	1.023	1.012	0.204	
2437	6	Left	Tilt	802.11b	DSSS	2	29352	22	1	10.0	9.90	0.01	100.00	98.86	0.017	1.023	1.012	0.018	
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 11-29
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2462	11	Right	Cheek	802.11n	OFDM	MIMO	29519	20	13	13.0	12.46	13.0	12.58	0.09	100.00	97.94	0.267	1.132	1.021	0.309	
2462	11	Right	Tilt	802.11n	OFDM	MIMO	29519	20	13	13.0	12.46	13.0	12.58	0.05	100.00	97.94	0.283	1.132	1.021	0.327	
2462	11	Left	Cheek	802.11n	OFDM	MIMO	29519	20	13	13.0	12.46	13.0	12.58	0.08	100.00	97.94	0.429	1.132	1.021	0.496	A27
2462	11	Left	Tilt	802.11n	OFDM	MIMO	29519	20	13	13.0	12.46	13.0	12.58	0.07	100.00	97.94	0.077	1.132	1.021	0.089	
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 11-30
DTS Head MIMO SAR during Conditions with 5/6 GHz and/or 5G NR

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2437	6	Right	Cheek	802.11n	OFDM	MIMO	37611	20	13	10.0	9.81	10.0	9.92	0.04	100.00	97.94	0.152	1.045	1.021	0.162	
2437	6	Right	Tilt	802.11n	OFDM	MIMO	37611	20	13	10.0	9.81	10.0	9.92	0.01	100.00	97.94	0.160	1.045	1.021	0.171	
2437	6	Left	Cheek	802.11n	OFDM	MIMO	37611	20	13	10.0	9.81	10.0	9.92	-0.20	100.00	97.94	0.286	1.045	1.021	0.305	
2437	6	Left	Tilt	802.11n	OFDM	MIMO	37611	20	13	10.0	9.81	10.0	9.92	0.08	100.00	97.94	0.036	1.045	1.021	0.038	
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 13.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 10.0 dBm.

Table 11-31
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
5290	58	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.66	10.0	9.56	0.19	100.00	92.36	0.172	1.107	1.083	0.206	
5290	58	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.66	10.0	9.56	0.01	100.00	92.36	0.081	1.107	1.083	0.097	
5290	58	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.66	10.0	9.56	0.06	100.00	92.36	0.031	1.107	1.083	0.037	
5290	58	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.66	10.0	9.56	0.08	100.00	92.36	0.015	1.107	1.083	0.018	
5610	122	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.98	10.0	9.73	-0.05	100.00	92.36	0.209	1.064	1.083	0.241	
5610	122	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.98	10.0	9.73	-0.11	100.00	92.36	0.102	1.064	1.083	0.118	
5610	122	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.98	10.0	9.73	0.07	100.00	92.36	0.049	1.064	1.083	0.056	
5610	122	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.98	10.0	9.73	0.09	100.00	92.36	0.027	1.064	1.083	0.031	
5775	155	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.43	10.0	9.46	0.00	100.00	92.36	0.193	1.140	1.083	0.238	
5775	155	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.43	10.0	9.46	0.00	100.00	92.36	0.093	1.140	1.083	0.115	
5775	155	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.43	10.0	9.46	-0.04	100.00	92.36	0.055	1.140	1.083	0.068	
5775	155	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.43	10.0	9.46	0.05	100.00	92.36	0.030	1.140	1.083	0.037	
5855	171	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.57	10.0	9.55	0.10	100.00	92.36	0.211	1.109	1.083	**0.253**	A28
5855	171	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.57	10.0	9.55	0.07	100.00	92.36	0.120	1.109	1.083	0.144	
5855	171	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.57	10.0	9.55	0.03	100.00	92.36	0.138	1.109	1.083	0.166	
5855	171	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	10.0	9.57	10.0	9.55	0.01	100.00	92.36	0.036	1.109	1.083	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				

Note: To achieve the 13.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 10.0 dBm.

Table 11-32
NII MIMO Head SAR during Conditions with 2.4 GHz WLAN and/or 5G

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
5290	58	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.78	7.0	6.88	0.09	100.00	92.36	0.137	1.052	1.083	0.156	
5290	58	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.78	7.0	6.88	0.17	100.00	92.36	0.039	1.052	1.083	0.044	
5290	58	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.78	7.0	6.88	0.06	100.00	92.36	0.016	1.052	1.083	0.018	
5290	58	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.78	7.0	6.88	0.20	100.00	92.36	0.007	1.052	1.083	0.008	
5530	106	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.72	7.0	6.78	-0.12	100.00	92.36	0.138	1.067	1.083	0.159	
5530	106	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.72	7.0	6.78	0.03	100.00	92.36	0.048	1.067	1.083	0.055	
5530	106	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.72	7.0	6.78	0.06	100.00	92.36	0.029	1.067	1.083	0.034	
5530	106	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.72	7.0	6.78	0.20	100.00	92.36	0.025	1.067	1.083	0.029	
5775	155	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.82	7.0	6.99	0.09	100.00	92.36	0.116	1.042	1.083	0.131	
5775	155	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.82	7.0	6.99	0.08	100.00	92.36	0.078	1.042	1.083	0.088	
5775	155	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.82	7.0	6.99	0.04	100.00	92.36	0.034	1.042	1.083	0.038	
5775	155	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.82	7.0	6.99	0.06	100.00	92.36	0.020	1.042	1.083	0.023	
5855	171	Right	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.67	7.0	6.82	0.05	100.00	92.36	0.125	1.079	1.083	0.146	
5855	171	Right	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.67	7.0	6.82	0.03	100.00	92.36	0.111	1.079	1.083	0.130	
5855	171	Left	Cheek	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.67	7.0	6.82	0.03	100.00	92.36	0.063	1.079	1.083	0.074	
5855	171	Left	Tilt	802.11ac	OFDM	MIMO	29568	80	58.5	7.0	6.67	7.0	6.82	-0.02	100.00	92.36	0.033	1.079	1.083	0.039	
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 10.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 7.0 dBm.

Table 11-33
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]	Maximum Duty Cycle (%)	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	29352	1	10.0	9.23	0.12	78.00	76.80	0.148	1.194	1.016	**0.180**	A29
2441	39	Right	Tilt	Bluetooth	FHSS	1	29352	1	10.0	9.23	-0.04	78.00	76.80	0.106	1.194	1.016	0.129	
2441	39	Left	Cheek	Bluetooth	FHSS	1	29352	1	10.0	9.23	0.02	78.00	76.80	0.027	1.194	1.016	0.033	
2441	39	Left	Tilt	Bluetooth	FHSS	1	29352	1	10.0	9.23	0.07	78.00	76.80	0.031	1.194	1.016	0.038	
2402	0	Right	Cheek	Bluetooth	FHSS	2	29352	1	7.0	6.00	0.00	78.00	76.80	0.034	1.259	1.016	0.043	
2402	0	Right	Tilt	Bluetooth	FHSS	2	29352	1	7.0	6.00	0.07	78.00	76.80	0.000	1.259	1.016	0.000	
2402	0	Left	Cheek	Bluetooth	FHSS	2	29352	1	7.0	6.00	0.09	78.00	76.80	0.057	1.259	1.016	0.073	
2402	0	Left	Tilt	Bluetooth	FHSS	2	29352	1	7.0	6.00	0.05	78.00	76.80	0.001	1.259	1.016	0.001	
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 11-34
GSM 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)	
848.80	251	back	10 mm	GSM 850	GSM	A	26895	33.0	32.20	-0.01	1:8.3	0.304	1.202	0.365	A30
1880.00	661	back	10 mm	GSM 1900	GSM	A	26655	30.0	29.58	0.06	1:8.3	0.125	1.102	0.138	A31
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
UMTS Body-Worn 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)	
846.60	4233	back	10 mm	UMTS 850	RMC	A	140	26895	25.0	24.85	-0.01	1:1	0.459	1.035	0.475	A32
1752.60	1513	back	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.01	1:1	0.478	1.035	0.495	A33
1852.40	9262	back	10 mm	UMTS 1900	RMC	A	111	26655	20.0	19.32	0.00	1:1	0.176	1.169	0.206	A34
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 Body-Worn SAR

MEASUREMENT RESULTS																									
# CC Uplink, Power Class	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																				
1 CC Uplink	N/A	680.50	133297	Mid	back	10 mm	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.01	1:1	0.359	1.312	0.471	A35
1 CC Uplink	N/A	680.50	133297	Mid	back	10 mm	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.03	1:1	0.291	1.330	0.387	
1 CC Uplink	N/A	707.50	23095	Mid	back	10 mm	LTE Band 12	A	132	25764	10	QPSK	1	25	25.5	24.53	0	-0.10	1:1	0.466	1.250	0.583	A36
1 CC Uplink	N/A	707.50	23095	Mid	back	10 mm	LTE Band 12	A	132	25764	10	QPSK	25	12	24.5	23.51	1	-0.01	1:1	0.354	1.256	0.445	
1 CC Uplink	N/A	782.00	23230	Mid	back	10 mm	LTE Band 13	A	6	25764	10	QPSK	1	25	25.5	24.40	0	0.09	1:1	0.517	1.288	0.666	A37
1 CC Uplink	N/A	782.00	23230	Mid	back	10 mm	LTE Band 13	A	6	25764	10	QPSK	25	0	24.5	23.49	1	0.01	1:1	0.396	1.262	0.500	
1 CC Uplink	N/A	793.00	23330	Mid	back	10 mm	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	0.08	1:1	0.497	1.330	0.661	A38
1 CC Uplink	N/A	793.00	23330	Mid	back	10 mm	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	0.00	1:1	0.387	1.346	0.521	
1 CC Uplink	N/A	831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	-0.01	1:1	0.570	1.205	0.687	A39
1 CC Uplink	N/A	831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.04	1:1	0.412	1.219	0.502	
1 CC Uplink	N/A	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	-0.12	1:1	0.537	1.216	0.653	
1 CC Uplink	N/A	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.05	1:1	0.411	1.262	0.519	
2 CC Uplink	PCC	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.51	0	0.00	1:1	0.541	1.256	0.679	A40
	SCC	843.70	20597								5		1	0									
1 CC Uplink	N/A	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	99	21.0	19.83	0	0.00	1:1	0.536	1.309	0.702	A41
1 CC Uplink	N/A	1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	0	21.0	20.12	0	-0.01	1:1	0.513	1.225	0.628	
1 CC Uplink	N/A	1770.00	132572	High	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	50	21.0	19.99	0	0.00	1:1	0.447	1.262	0.564	
1 CC Uplink	N/A	1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	0	21.0	20.16	0	0.00	1:1	0.502	1.213	0.609	
1 CC Uplink	N/A	1715.00	132022	Low	back	10 mm	LTE Band 66 (AWS)	A	99	26218	10	QPSK	1	49	21.0	19.90	0	-0.02	1:1	0.507	1.288	0.653	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	99	21.0	19.68	0	-0.02	1:1	0.529	1.355	0.717	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	back	10 mm	LTE Band 66 (AWS)	A	99	26218	10	QPSK	1	49	21.0	19.63	0	0.00	1:1	0.459	1.371	0.629	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	-0.05	1:1	0.225	1.268	0.285	
1 CC Uplink	N/A	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	0.00	1:1	0.234	1.271	0.297	
1 CC Uplink	N/A	1715.00	132022	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	21.0	20.00	0	-0.03	1:1	0.245	1.259	0.308	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.83	0	0.01	1:1	0.217	1.309	0.284	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	21.0	19.80	0	-0.01	1:1	0.225	1.318	0.297	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1860.00	26140	Low	back	10 mm	LTE Band 25 (PCS)	A	132	26598	20	QPSK	1	0	20.0	19.33	0	0.03	1:1	0.328	1.167	0.383	
1 CC Uplink	N/A	1860.00	26140	Low	back	10 mm	LTE Band 25 (PCS)	A	132	26598	20	QPSK	50	25	20.0	19.24	0	-0.03	1:1	0.351	1.191	0.418	A42
1 CC Uplink	N/A	1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	0.05	1:1	0.158	1.309	0.207	
1 CC Uplink	N/A	1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	0.00	1:1	0.154	1.294	0.199	
1 CC Uplink	N/A	2310.00	27710	Mid	back	10 mm	LTE Band 30	A	N/A	26259	10	QPSK	1	0	18.0	17.49	0	-0.03	1:1	0.327	1.125	0.368	A43
1 CC Uplink	N/A	2310.00	27710	Mid	back	10 mm	LTE Band 30	A	N/A	26259	10	QPSK	25	0	18.0	17.48	0	-0.04	1:1	0.313	1.127	0.353	
1 CC Uplink	N/A	2310.00	27710	Mid	back	10 mm	LTE Band 30	F	N/A	25848	10	QPSK	1	0	21.0	19.99	0	-0.06	1:1	0.217	1.262	0.274	
1 CC Uplink	N/A	2310.00	27710	Mid	back	10 mm	LTE Band 30	F	N/A	25848	10	QPSK	25	0	21.0	19.92	0	-0.11	1:1	0.216	1.282	0.277	
1 CC Uplink	N/A	2510.00	20850	Low	back	10 mm	LTE Band 7	B	N/A	26747	20	QPSK	1	50	20.0	18.83	0	0.00	1:1	0.348	1.309	0.456	
1 CC Uplink	N/A	2510.00	20850	Low	back	10 mm	LTE Band 7	B	N/A	26747	20	QPSK	50	25	20.0	18.87	0	0.02	1:1	0.350	1.297	0.454	A44
1 CC Uplink	N/A	2510.00	20850	Low	back	10 mm	LTE Band 7	F	N/A	26747	20	QPSK	1	50	19.5	18.23	0	-0.02	1:1	0.151	1.340	0.202	
1 CC Uplink	N/A	2510.00	20850	Low	back	10 mm	LTE Band 7	F	N/A	26747	20	QPSK	50	25	19.5	18.20	0	0.01	1:1	0.152	1.349	0.205	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	1	0	22.0	21.18	0	-0.05	1:1.58	0.379	1.208	0.458	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	25	22.0	21.21	0	-0.02	1:1.58	0.392	1.199	0.470	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	50	22.0	21.18	0	-0.03	1:1.58	0.387	1.208	0.467	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	25	23.6	23.16	0	0.10	1:2.31	0.417	1.107	0.462	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	50	23.6	23.16	0	0.03	1:2.31	0.431	1.107	0.477	A45
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	50	22.0	21.03	0	0.00	1:1.58	0.380	1.250	0.475	
	SCC	2612.80	40818											0									
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	N/A	26424	20	QPSK	50	50	23.6	23.06	0	0.00	1:2.31	0.420	1.132	0.475	
	SCC	2612.80	40818											0									
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	1	0	22.0	21.13	0	-0.05	1:1.58	0.132	1.222	0.161	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	1	50	22.0	21.28	0	-0.06	1:1.58	0.132	1.180	0.156	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	50	0	22.0	21.39	0	-0.01	1:1.58	0.134	1.151	0.154	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	1	0	23.6	21.87	0	-0.03	1:2.31	0.117	1.489	0.174	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	1	0	22.0	20.87	0	0.02	1:1.58	0.130	1.297	0.169	
	SCC	2660.20	41292											99									
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	back	10 mm	LTE Band 41	F	N/A	26424	20	QPSK	1	0	23.6	21.96	0	0.00	1:2.31	0.117	1.459	0.171	
	SCC	2660.20	41292											99									
1 CC Uplink	N/A	3560.00	55340	Low	back	10 mm	LTE Band 48	F	N/A	25913	20	QPSK	1	50	21.0	20.23	0	-0.03	1:1.58	0.164	1.194	**0.196**	
1 CC Uplink	N/A	3560.00	55340	Low	back	10 mm	LTE Band 48	F	N/A	25913	20	QPSK	1	99	21.0	20.09	0	0.09	1:1.58	0.160	1.233	**0.197**	
1 CC Uplink	N/A	3560.00	55340	Low	back	10 mm	LTE Band 48	F	N/A	25913	20	QPSK	50	25	21.0	20.27	0	-0.07	1:1.58	0.165	1.183	**0.195**	A46
2 CC Uplink	PCC	3560.00	55340	Low	back	10 mm	LTE Band 48	F	N/A	25913	20	QPSK	1	99	21.0	20.29	0	0.04	1:1.58	0.160	1.178	0.188	
	SCC	3579.80	55538											0									
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-37
NR Body-Worn 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)	
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.09	1:1	0.384	1.208	0.464	A47
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.01	1:1	0.374	1.216	0.455	
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	CP-OFDM	QPSK	1	1	24.0	23.19	1.5	-0.10	1:1	0.269	1.205	0.324	
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.01	1:1	0.380	1.140	0.433	
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.05	1:1	0.443	1.156	0.512	A48
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	CP-OFDM	QPSK	1	1	24.0	23.43	1.5	0.03	1:1	0.282	1.140	0.321	
831.50	166300	Mid	back	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.02	1:1	0.418	1.130	0.472	A49
831.50	166300	Mid	back	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.06	1:1	0.403	1.156	0.466	
831.50	166300	Mid	back	10 mm	NR Band n26	A	140	26374	20	CP-OFDM	QPSK	1	1	24.0	23.21	1.5	0.01	1:1	0.209	1.199	0.251	
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	-0.01	1:1	0.662	1.021	0.676	A50
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	-0.02	1:1	0.655	1.045	0.684	
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	CP-OFDM	QPSK	1	1	21.0	20.60	0	-0.05	1:1	0.536	1.096	0.587	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	-0.03	1:1	0.242	1.250	0.303	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	-0.02	1:1	0.245	1.250	0.306	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	CP-OFDM	QPSK	1	1	21.0	20.05	0	0.00	1:1	0.295	1.245	0.367	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.04	1:1	0.199	1.268	0.252	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.07	1:1	0.204	1.265	0.258	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	CP-OFDM	QPSK	1	1	20.0	18.98	0	-0.05	1:1	0.192	1.265	0.243	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	0.02	1:1	0.227	1.265	0.287	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	0.03	1:1	0.219	1.315	0.288	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	CP-OFDM	QPSK	1	1	20.5	19.13	0	0.06	1:1	0.243	1.371	0.333	A51
2310.00	462000	Mid	back	10 mm	NR Band n30	A	N/A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	-0.01	1:1	0.227	1.172	0.266	
2310.00	462000	Mid	back	10 mm	NR Band n30	A	N/A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.02	1:1	0.232	1.183	0.274	
2310.00	462000	Mid	back	10 mm	NR Band n30	A	N/A	26549	10	CP-OFDM	QPSK	1	1	18.0	17.38	0	0.00	1:1	0.225	1.153	0.259	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	N/A	26549	10	DFT-S-OFDM	QPSK	1	26	21.0	20.80	0	0.03	1:1	0.338	1.047	0.354	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	N/A	26549	10	DFT-S-OFDM	QPSK	25	27	21.0	20.71	0	-0.03	1:1	0.335	1.069	0.358	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	N/A	26549	10	CP-OFDM	QPSK	1	1	21.0	20.80	0	-0.08	1:1	0.352	1.047	0.369	A52
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 11-38
NR Band 41/48 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	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	0.02	1:1	0.385	1.143	0.440	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.00	1:1	0.387	1.164	0.450	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	26366	100	CP-OFDM	QPSK	1	1	20.0	19.09	0	-0.04	1:1	0.429	1.233	0.529	A53
2592.99	518598	Mid	back	10 mm	NR Band n41	F	26903	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	-0.08	1:1	0.098	1.227	0.120	
2592.99	518598	Mid	back	10 mm	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.06	1:1	0.057	1.186	0.068	
2592.99	518598	Mid	back	10 mm	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	-0.07	1:1	0.104	1.268	0.132	
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	1	104	19.0	18.62	0	-0.15	1:1	0.141	1.091	0.154	
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	50	56	19.0	18.39	0	-0.06	1:1	0.142	1.151	0.163	A54
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	CP-OFDM	QPSK	1	1	19.0	18.37	0	-0.15	1:1	0.140	1.156	0.162	
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 11-39
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	19.0	18.56	0	0.04	1:1	0.136	1.107	0.151	
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.52	0	-0.05	1:1	0.130	1.117	0.145	
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	CP-OFDM	QPSK	1	1	19.0	18.34	0	-0.08	1:1	0.126	1.164	0.147	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	26903	100	DFT-S-OFDM	QPSK	1	271	19.0	18.23	0	-0.07	1:1	0.167	1.194	0.199	
3750.00	650000	Low	back	10 mm	NR Band n77	C	26366	100	CW/SRS	N/A	NA	NA	15.5	14.94	N/A	-0.02	1:1	0.056	1.138	0.064	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	C	26366	100	CW/SRS	N/A	NA	NA	15.5	14.73	N/A	0.03	1:1	0.034	1.194	0.041	
3930.00	662000	High	back	10 mm	NR Band n77	I	26366	100	CW/SRS	N/A	NA	NA	18.5	18.08	N/A	-0.14	1:1	0.055	1.102	0.061	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	I	26366	100	CW/SRS	N/A	NA	NA	18.5	16.62	N/A	0.12	1:1	0.093	1.542	0.143	
3930.00	662000	High	back	10 mm	NR Band n77	D	26366	100	CW/SRS	N/A	NA	NA	14.0	13.08	N/A	-0.11	1:1	0.189	1.236	0.234	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	D	26366	100	CW/SRS	N/A	NA	NA	14.0	13.00	N/A	-0.09	1:1	0.254	1.259	0.320	A55
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: Light Purple entries indicate the additional DoD check on the worst case exposure scenario from C-band antennas.

Table 11-40
DTS SISO Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																
2437	6	back	10 mm	2	29519	22	1	19.0	18.99	-0.03	100.00	98.86	0.118	1.002	1.012	**0.120**	
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
DTS SISO Body-Worn SAR during Conditions with 5/6 GHz and/or 5G NR

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																
2437	6	back	10 mm	2	29352	22	1	17.0	16.95	-0.12	100.00	98.86	0.057	1.012	1.012	0.058	
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
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
2462	11	back	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	0.03	100.00	98.86	0.269	1.099	1.012	0.299	A56
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 11-43
DTS MIMO Body-Worn SAR during Conditions with 5/6 GHz and/or 5G NR

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
2462	11	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	-0.07	100.00	97.94	0.117	1.125	1.021	0.134	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: To achieve the 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

Table 11-44
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
5320	64	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	0.00	100.00	98.09	0.359	1.005	1.019	**0.368**	A57
5600	120	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	0.00	100.00	98.09	0.272	1.056	1.019	0.293	
5745	149	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	-0.10	100.00	98.09	0.171	1.105	1.019	0.193	
5885	177	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	0.17	100.00	98.09	0.129	1.104	1.019	0.145	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: To achieve the 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

Table 11-45
NII MIMO Body-Worn SAR Body-Worn SAR during Conditions with 2.4 GHz WLAN and/or 5G

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
5290	58	back	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	-0.01	100.00	92.36	0.119	1.138	1.083	0.147	
5610	122	back	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	-0.04	100.00	92.36	0.144	1.119	1.083	0.175	
5775	155	back	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	-0.10	100.00	92.36	0.109	1.279	1.083	0.151	
5855	171	back	10 mm	802.11ac	OFDM	MIMO	29568	80	58.5	14.0	13.27	14.0	13.89	-0.08	100.00	92.36	0.101	1.183	1.083	0.129	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: To achieve the 17.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14.0 dBm.

Table 11-46
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																	
2441	39	back	10 mm	Bluetooth	FHSS	1	29568	1	17.0	16.27	0.08	78.00	76.80	0.116	1.183	1.016	**0.139**	A58
2402	0	back	10 mm	Bluetooth	FHSS	2	29568	1	14.8	14.17	0.01	78.00	76.80	0.022	1.156	1.016	0.026	
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 11-47
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	26895	3	30.5	28.81	-0.05	1:2.76	0.391	1.476	0.577	
836.60	190	back	10 mm	GSM 850	GPRS	A	26895	3	30.5	28.83	0.02	1:2.76	0.411	1.469	0.604	
848.80	251	back	10 mm	GSM 850	GPRS	A	26895	3	30.5	29.37	-0.05	1:2.76	0.490	1.297	0.636	A59
848.80	251	front	10 mm	GSM 850	GPRS	A	26895	3	30.5	29.37	-0.01	1:2.76	0.434	1.297	0.563	
848.80	251	bottom	10 mm	GSM 850	GPRS	A	26895	3	30.5	29.37	-0.03	1:2.76	0.288	1.297	0.374	
848.80	251	right	10 mm	GSM 850	GPRS	A	26895	3	30.5	29.37	0.02	1:2.76	0.356	1.297	0.462	
848.80	251	left	10 mm	GSM 850	GPRS	A	26895	3	30.5	29.37	0.00	1:2.76	0.096	1.297	0.125	
1909.80	810	back	10 mm	GSM 1900	GPRS	A	26655	4	24.2	23.80	-0.08	1:2.076	0.144	1.096	0.158	
1909.80	810	front	10 mm	GSM 1900	GPRS	A	26655	4	24.2	23.80	-0.10	1:2.076	0.142	1.096	0.156	
1909.80	810	bottom	10 mm	GSM 1900	GPRS	A	26655	4	24.2	23.80	0.01	1:2.076	0.296	1.096	0.324	A60
1909.80	810	right	10 mm	GSM 1900	GPRS	A	26655	4	24.2	23.80	0.00	1:2.076	0.040	1.096	0.044	
1909.80	810	left	10 mm	GSM 1900	GPRS	A	26655	4	24.2	23.80	-0.10	1:2.076	0.074	1.096	0.081	
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 11-48
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)	
846.60	4233	back	10 mm	UMTS 850	RMC	A	140	26895	25.0	24.85	-0.01	1:1	0.459	1.035	0.475	A32
846.60	4233	front	10 mm	UMTS 850	RMC	A	140	26895	25.0	24.85	0.01	1:1	0.387	1.035	0.401	
846.60	4233	bottom	10 mm	UMTS 850	RMC	A	140	26895	25.0	24.85	-0.03	1:1	0.250	1.035	0.259	
846.60	4233	right	10 mm	UMTS 850	RMC	A	0	26895	25.0	24.85	-0.01	1:1	0.294	1.035	0.304	
846.60	4233	left	10 mm	UMTS 850	RMC	A	3	26895	25.0	24.85	0.01	1:1	0.089	1.035	0.092	
1752.60	1513	back	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.01	1:1	0.478	1.035	0.495	
1752.60	1513	front	10 mm	UMTS 1750	RMC	A	102	26655	20.0	19.85	0.02	1:1	0.404	1.035	0.418	
1712.40	1312	bottom	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.79	0.01	1:1	0.685	1.050	0.719	
1732.40	1412	bottom	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.84	0.00	1:1	0.766	1.038	0.795	
1752.60	1513	bottom	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.00	1:1	0.850	1.035	0.880	A61
1752.60	1513	right	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.00	1:1	0.070	1.035	0.072	
1752.60	1513	left	10 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.02	1:1	0.133	1.035	0.138	
1852.40	9262	back	10 mm	UMTS 1900	RMC	A	111	26655	20.0	19.32	0.00	1:1	0.176	1.169	0.206	
1852.40	9262	front	10 mm	UMTS 1900	RMC	A	111	26655	20.0	19.32	0.00	1:1	0.185	1.169	0.216	
1852.40	9262	bottom	10 mm	UMTS 1900	RMC	A	47	26655	20.0	19.32	0.00	1:1	0.428	1.169	0.500	A62
1852.40	9262	right	10 mm	UMTS 1900	RMC	A	111	26655	20.0	19.32	-0.03	1:1	0.063	1.169	0.074	
1852.40	9262	left	10 mm	UMTS 1900	RMC	A	111	26655	20.0	19.32	-0.02	1:1	0.120	1.169	0.140	

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 11-49
LTE Band 71 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)	
680.50	133297	Mid	back	10 mm	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.01	1:1	0.359	1.312	0.471	A35
680.50	133297	Mid	back	10 mm	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.00	1:1	0.291	1.330	0.387	
680.50	133297	Mid	front	10 mm	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.10	1:1	0.273	1.312	0.358	
680.50	133297	Mid	front	10 mm	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.00	1:1	0.231	1.330	0.307	
680.50	133297	Mid	bottom	10 mm	LTE Band 71	A	64	25764	20	QPSK	1	99	25.5	24.32	0	0.01	1:1	0.091	1.312	0.119	
680.50	133297	Mid	bottom	10 mm	LTE Band 71	A	64	25764	20	QPSK	50	25	24.5	23.26	1	0.01	1:1	0.066	1.330	0.088	
680.50	133297	Mid	right	10 mm	LTE Band 71	A	64	25764	20	QPSK	1	99	25.5	24.32	0	0.01	1:1	0.313	1.312	0.411	
680.50	133297	Mid	right	10 mm	LTE Band 71	A	64	25764	20	QPSK	50	25	24.5	23.26	1	0.00	1:1	0.233	1.330	0.310	
680.50	133297	Mid	left	10 mm	LTE Band 71	A	130	25764	20	QPSK	1	99	25.5	24.32	0	0.13	1:1	0.355	1.312	0.466	
680.50	133297	Mid	left	10 mm	LTE Band 71	A	130	25764	20	QPSK	50	25	24.5	23.26	1	0.01	1:1	0.299	1.330	0.398	

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 11-50
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	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	132	25764	10	QPSK	1	25	25.5	24.53	0	-0.10	1:1	0.466	1.250	0.583	A36
707.50	23095	Mid	back	10 mm	LTE Band 12	132	25764	10	QPSK	25	12	24.5	23.51	1	-0.01	1:1	0.354	1.256	0.445	
707.50	23095	Mid	front	10 mm	LTE Band 12	132	25764	10	QPSK	1	25	25.5	24.53	0	-0.01	1:1	0.363	1.250	0.454	
707.50	23095	Mid	front	10 mm	LTE Band 12	132	25764	10	QPSK	25	12	24.5	23.51	1	0.00	1:1	0.274	1.256	0.344	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	132	25764	10	QPSK	1	25	25.5	24.53	0	0.18	1:1	0.175	1.250	0.219	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	132	25764	10	QPSK	25	12	24.5	23.51	1	0.02	1:1	0.131	1.256	0.165	
707.50	23095	Mid	right	10 mm	LTE Band 12	132	25764	10	QPSK	1	25	25.5	24.53	0	-0.07	1:1	0.285	1.250	0.356	
707.50	23095	Mid	right	10 mm	LTE Band 12	132	25764	10	QPSK	25	12	24.5	23.51	1	0.03	1:1	0.217	1.256	0.273	
707.50	23095	Mid	left	10 mm	LTE Band 12	132	25764	10	QPSK	1	25	25.5	24.53	0	-0.10	1:1	0.284	1.250	0.355	
707.50	23095	Mid	left	10 mm	LTE Band 12	132	25764	10	QPSK	25	12	24.5	23.51	1	0.06	1:1	0.218	1.256	0.274	
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 11-51
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	6	25764	10	QPSK	1	25	25.5	24.40	0	0.09	1:1	0.517	1.288	0.666	A37
782.00	23230	Mid	back	10 mm	LTE Band 13	A	6	25764	10	QPSK	25	0	24.5	23.49	1	0.01	1:1	0.396	1.262	0.500	
782.00	23230	Mid	front	10 mm	LTE Band 13	A	1	25764	10	QPSK	1	25	25.5	24.40	0	-0.06	1:1	0.402	1.288	0.518	
782.00	23230	Mid	front	10 mm	LTE Band 13	A	1	25764	10	QPSK	25	0	24.5	23.49	1	0.00	1:1	0.308	1.262	0.389	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A	16	25764	10	QPSK	1	25	25.5	24.40	0	0.07	1:1	0.199	1.288	0.256	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A	16	25764	10	QPSK	25	0	24.5	23.49	1	0.06	1:1	0.152	1.262	0.192	
782.00	23230	Mid	right	10 mm	LTE Band 13	A	1	25764	10	QPSK	1	25	25.5	24.40	0	0.11	1:1	0.370	1.288	0.477	
782.00	23230	Mid	right	10 mm	LTE Band 13	A	1	25764	10	QPSK	25	0	24.5	23.49	1	0.03	1:1	0.298	1.262	0.376	
782.00	23230	Mid	left	10 mm	LTE Band 13	A	1	25764	10	QPSK	1	25	25.5	24.40	0	0.05	1:1	0.194	1.288	0.250	
782.00	23230	Mid	left	10 mm	LTE Band 13	A	1	25764	10	QPSK	25	0	24.5	23.49	1	-0.01	1:1	0.150	1.262	0.189	
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 11-52
LTE Band 14 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)	
793.00	23330	Mid	back	10 mm	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	0.08	1:1	0.497	1.330	0.661	A38
793.00	23330	Mid	back	10 mm	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	0.00	1:1	0.387	1.346	0.521	
793.00	23330	Mid	front	10 mm	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	0.07	1:1	0.308	1.330	0.410	
793.00	23330	Mid	front	10 mm	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	-0.01	1:1	0.248	1.346	0.334	
793.00	23330	Mid	bottom	10 mm	LTE Band 14	A	1	25764	10	QPSK	1	25	25.5	24.26	0	-0.05	1:1	0.175	1.330	0.233	
793.00	23330	Mid	bottom	10 mm	LTE Band 14	A	1	25764	10	QPSK	25	0	24.5	23.21	1	0.03	1:1	0.137	1.346	0.184	
793.00	23330	Mid	right	10 mm	LTE Band 14	A	132	25764	10	QPSK	1	25	25.5	24.26	0	0.01	1:1	0.372	1.330	0.495	
793.00	23330	Mid	right	10 mm	LTE Band 14	A	132	25764	10	QPSK	25	0	24.5	23.21	1	0.01	1:1	0.287	1.346	0.386	
793.00	23330	Mid	left	10 mm	LTE Band 14	A	5	25764	10	QPSK	1	25	25.5	24.26	0	0.09	1:1	0.193	1.330	0.257	
793.00	23330	Mid	left	10 mm	LTE Band 14	A	5	25764	10	QPSK	25	0	24.5	23.21	1	-0.01	1:1	0.154	1.346	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 11-53
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	140	26895	15	QPSK	1	74	25.5	24.69	0	-0.01	1:1	0.570	1.205	0.687	A39
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.04	1:1	0.412	1.219	0.502	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.03	1:1	0.448	1.205	0.540	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	-0.01	1:1	0.326	1.219	0.397	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.04	1:1	0.279	1.205	0.336	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.01	1:1	0.212	1.219	0.258	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	0.01	1:1	0.161	1.205	0.194	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.02	1:1	0.135	1.219	0.165	
831.50	26865	Mid	left	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	1	74	25.5	24.69	0	-0.04	1:1	0.089	1.205	0.107	
831.50	26865	Mid	left	10 mm	LTE Band 26 (Cell)	A	140	26895	15	QPSK	36	18	24.5	23.64	1	0.01	1:1	0.067	1.219	0.082	

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 11-54
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
# CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	-0.12	1:1	0.537	1.216	0.653	
1 CC Uplink	N/A	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.05	1:1	0.411	1.262	0.519	
2 CC Uplink	PCC	836.50	20525	Mid	back	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.51	0	0.00	1:1	0.541	1.256	0.679	A40
	SCC	843.70	20597								5		1	0									
1 CC Uplink	N/A	836.50	20525	Mid	front	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	-0.11	1:1	0.425	1.216	0.517	
1 CC Uplink	N/A	836.50	20525	Mid	front	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	-0.04	1:1	0.332	1.262	0.419	
1 CC Uplink	N/A	836.50	20525	Mid	bottom	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	0.18	1:1	0.301	1.216	0.366	
1 CC Uplink	N/A	836.50	20525	Mid	bottom	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.00	1:1	0.236	1.262	0.298	
1 CC Uplink	N/A	836.50	20525	Mid	right	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	-0.01	1:1	0.205	1.216	0.249	
1 CC Uplink	N/A	836.50	20525	Mid	right	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.01	1:1	0.162	1.262	0.204	
1 CC Uplink	N/A	836.50	20525	Mid	left	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	1	49	25.5	24.65	0	-0.13	1:1	0.091	1.216	0.111	
1 CC Uplink	N/A	836.50	20525	Mid	left	10 mm	LTE Band 5 (Cell)	A	140	26523	10	QPSK	25	25	24.5	23.49	1	0.10	1:1	0.066	1.262	0.083	

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 11-55
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																								
# CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	0	21.0	20.12	0	-0.01	1:1	0.513	1.225	0.628	
1 CC Uplink	N/A	1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	0	21.0	20.16	0	0.00	1:1	0.502	1.213	0.609	
1 CC Uplink	N/A	1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	0	21.0	20.12	0	0.00	1:1	0.438	1.225	0.537	
1 CC Uplink	N/A	1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	0	21.0	20.16	0	-0.02	1:1	0.431	1.213	0.523	
1 CC Uplink	N/A	1720.00	132072	Low	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	99	21.0	19.83	0	0.03	1:1	0.883	1.309	1.156	
1 CC Uplink	N/A	1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	0	21.0	20.12	0	-0.03	1:1	0.917	1.225	1.123	
1 CC Uplink	N/A	1770.00	132572	High	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	50	21.0	19.99	0	0.03	1:1	0.860	1.262	1.085	
1 CC Uplink	N/A	1720.00	132072	Low	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	25	21.0	19.94	0	0.01	1:1	0.871	1.276	1.111	
1 CC Uplink	N/A	1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	0	21.0	20.16	0	-0.04	1:1	0.949	1.213	1.151	A63
1 CC Uplink	N/A	1770.00	132572	High	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	50	0	21.0	20.00	0	0.01	1:1	0.905	1.259	1.139	
1 CC Uplink	N/A	1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	A	101	26218	20	QPSK	100	0	21.0	20.10	0	0.00	1:1	0.908	1.230	1.117	
1 CC Uplink	N/A	1715.00	132022	Low	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	10	QPSK	1	49	21.0	19.90	0	0.01	1:1	0.860	1.288	1.108	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	20	QPSK	1	99	21.0	19.68	0	0.00	1:1	0.859	1.355	1.164	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	bottom	10 mm	LTE Band 66 (AWS)	A	32	26218	10	QPSK	1	49	21.0	19.63	0	0.03	1:1	0.811	1.371	1.112	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	21.0	20.12	0	0.01	1:1	0.068	1.225	0.083	
1 CC Uplink	N/A	1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	A	N/A	26218	20	QPSK	50	0	21.0	20.16	0	-0.03	1:1	0.072	1.213	0.087	
1 CC Uplink	N/A	1745.00	132322	Mid	left	10 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	21.0	20.12	0	-0.04	1:1	0.222	1.225	0.272	
1 CC Uplink	N/A	1745.00	132322	Mid	left	10 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	0	21.0	20.16	0	0.02	1:1	0.225	1.213	0.273	
1 CC Uplink	N/A	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	-0.05	1:1	0.225	1.268	0.285	
1 CC Uplink	N/A	1720.00	132072	Low	back	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	0.00	1:1	0.234	1.271	0.297	
1 CC Uplink	N/A	1720.00	132072	Low	front	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	0.01	1:1	0.253	1.268	0.321	
1 CC Uplink	N/A	1720.00	132072	Low	front	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	-0.01	1:1	0.264	1.271	0.336	
1 CC Uplink	N/A	1720.00	132072	Low	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	0.01	1:1	0.565	1.268	0.716	
1 CC Uplink	N/A	1720.00	132072	Low	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	0.03	1:1	0.585	1.271	0.744	
1 CC Uplink	N/A	1745.00	132322	Mid	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	25	21.0	19.93	0	0.03	1:1	0.536	1.279	0.686	
1 CC Uplink	N/A	1770.00	132572	High	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.63	0	-0.05	1:1	0.463	1.371	0.635	
1 CC Uplink	N/A	1715.00	132022	Low	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	21.0	20.00	0	0.02	1:1	0.603	1.259	0.759	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.83	0	-0.01	1:1	0.559	1.309	0.732	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	top	10 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	25	21.0	19.80	0	0.00	1:1	0.575	1.318	0.758	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1720.00	132072	Low	left	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	-0.03	1:1	0.122	1.268	0.155	
1 CC Uplink	N/A	1720.00	132072	Low	left	10 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	-0.01	1:1	0.128	1.271	0.163	
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 11-56
LTE Band 25 (PCS) 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)	
1860.00	26140	Low	back	10 mm	LTE Band 25 (PCS)	A	132	26598	20	QPSK	1	0	20.0	19.33	0	0.03	1:1	0.328	1.167	0.383	
1860.00	26140	Low	back	10 mm	LTE Band 25 (PCS)	A	132	26598	20	QPSK	50	25	20.0	19.24	0	-0.03	1:1	0.351	1.191	0.418	
1860.00	26140	Low	front	10 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	1	0	20.0	19.33	0	0.02	1:1	0.294	1.167	0.343	
1860.00	26140	Low	front	10 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	50	25	20.0	19.24	0	-0.04	1:1	0.318	1.191	0.379	
1860.00	26140	Low	bottom	10 mm	LTE Band 25 (PCS)	A	65	26598	20	QPSK	1	0	20.0	19.33	0	-0.02	1:1	0.539	1.167	0.629	
1860.00	26140	Low	bottom	10 mm	LTE Band 25 (PCS)	A	65	26598	20	QPSK	50	25	20.0	19.24	0	0.00	1:1	0.561	1.191	0.668	
1882.50	26365	Mid	bottom	10 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	50	50	20.0	19.03	0	0.02	1:1	0.641	1.250	0.801	
1905.00	26590	High	bottom	10 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	50	0	20.0	18.95	0	-0.02	1:1	0.671	1.274	0.855	
1905.00	26590	High	bottom	10 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	100	0	20.0	19.02	0	-0.01	1:1	0.702	1.253	0.880	A64
1860.00	26140	Low	right	10 mm	LTE Band 25 (PCS)	A	71	26598	20	QPSK	1	0	20.0	19.33	0	-0.01	1:1	0.078	1.167	0.091	
1860.00	26140	Low	right	10 mm	LTE Band 25 (PCS)	A	71	26598	20	QPSK	50	25	20.0	19.24	0	0.04	1:1	0.073	1.191	0.087	
1860.00	26140	Low	left	10 mm	LTE Band 25 (PCS)	A	36	26598	20	QPSK	1	0	20.0	19.33	0	-0.02	1:1	0.115	1.167	0.134	
1860.00	26140	Low	left	10 mm	LTE Band 25 (PCS)	A	36	26598	20	QPSK	50	25	20.0	19.24	0	-0.05	1:1	0.122	1.191	0.145	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	0.05	1:1	0.158	1.309	0.207	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	0.00	1:1	0.154	1.294	0.199	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	-0.15	1:1	0.160	1.309	0.209	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	-0.02	1:1	0.169	1.294	0.219	
1860.00	26140	Low	top	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.11	0	-0.01	1:1	0.460	1.377	0.633	
1882.50	26365	Mid	top	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	-0.04	1:1	0.462	1.309	0.605	
1905.00	26590	High	top	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.14	0	0.02	1:1	0.416	1.368	0.569	
1882.50	26365	Mid	top	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	0.00	1:1	0.457	1.294	0.591	
1882.50	26365	Mid	left	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	-0.07	1:1	0.051	1.309	0.067	
1882.50	26365	Mid	left	10 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	0.03	1:1	0.049	1.294	0.063	
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 11-57
LTE Band 30 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)	
2310.00	27710	Mid	back	10 mm	LTE Band 30	A	26259	10	QPSK	1	0	18.0	17.49	0	-0.03	1:1	0.327	1.125	0.368	
2310.00	27710	Mid	back	10 mm	LTE Band 30	A	26259	10	QPSK	25	0	18.0	17.48	0	-0.04	1:1	0.313	1.127	0.353	
2310.00	27710	Mid	front	10 mm	LTE Band 30	A	26259	10	QPSK	1	0	18.0	17.49	0	-0.08	1:1	0.314	1.125	0.353	
2310.00	27710	Mid	front	10 mm	LTE Band 30	A	26259	10	QPSK	25	0	18.0	17.48	0	-0.04	1:1	0.304	1.127	0.343	
2310.00	27710	Mid	bottom	10 mm	LTE Band 30	A	26259	10	QPSK	1	0	18.0	17.49	0	-0.01	1:1	0.639	1.125	0.719	A65
2310.00	27710	Mid	bottom	10 mm	LTE Band 30	A	26259	10	QPSK	25	0	18.0	17.48	0	-0.01	1:1	0.622	1.127	0.701	
2310.00	27710	Mid	right	10 mm	LTE Band 30	A	26259	10	QPSK	1	0	18.0	17.49	0	-0.12	1:1	0.030	1.125	0.034	
2310.00	27710	Mid	right	10 mm	LTE Band 30	A	26259	10	QPSK	25	0	18.0	17.48	0	-0.09	1:1	0.029	1.127	0.033	
2310.00	27710	Mid	left	10 mm	LTE Band 30	A	26259	10	QPSK	1	0	18.0	17.49	0	0.02	1:1	0.008	1.125	0.009	
2310.00	27710	Mid	left	10 mm	LTE Band 30	A	26259	10	QPSK	25	0	18.0	17.48	0	0.07	1:1	0.007	1.127	0.008	
2310.00	27710	Mid	back	10 mm	LTE Band 30	F	25848	10	QPSK	1	0	21.0	19.99	0	-0.06	1:1	0.217	1.262	0.274	
2310.00	27710	Mid	back	10 mm	LTE Band 30	F	25848	10	QPSK	25	0	21.0	19.92	0	-0.11	1:1	0.216	1.282	0.277	
2310.00	27710	Mid	front	10 mm	LTE Band 30	F	25848	10	QPSK	1	0	21.0	19.99	0	-0.03	1:1	0.197	1.262	0.249	
2310.00	27710	Mid	front	10 mm	LTE Band 30	F	25848	10	QPSK	25	0	21.0	19.92	0	-0.01	1:1	0.197	1.282	0.253	
2310.00	27710	Mid	top	10 mm	LTE Band 30	F	25848	10	QPSK	1	0	21.0	19.99	0	0.02	1:1	0.404	1.262	0.510	
2310.00	27710	Mid	top	10 mm	LTE Band 30	F	25848	10	QPSK	25	0	21.0	19.92	0	0.00	1:1	0.401	1.282	0.514	
2310.00	27710	Mid	left	10 mm	LTE Band 30	F	25848	10	QPSK	1	0	21.0	19.99	0	0.02	1:1	0.028	1.262	0.035	
2310.00	27710	Mid	left	10 mm	LTE Band 30	F	25848	10	QPSK	25	0	21.0	19.92	0	0.01	1:1	0.028	1.282	0.036	
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 11-58
LTE Band 7 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)	
2510.00	20850	Low	back	10 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.83	0	0.00	1:1	0.348	1.309	0.456	
2510.00	20850	Low	back	10 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.87	0	0.02	1:1	0.350	1.297	0.454	
2510.00	20850	Low	front	10 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.83	0	-0.01	1:1	0.277	1.309	0.363	
2510.00	20850	Low	front	10 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.87	0	-0.02	1:1	0.276	1.297	0.358	
2510.00	20850	Low	bottom	10 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.83	0	0.00	1:1	0.437	1.309	0.572	
2510.00	20850	Low	bottom	10 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.87	0	0.01	1:1	0.438	1.297	0.568	A66
2510.00	20850	Low	left	10 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.83	0	0.00	1:1	0.167	1.309	0.219	
2510.00	20850	Low	left	10 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.87	0	0.00	1:1	0.168	1.297	0.218	
2510.00	20850	Low	back	10 mm	LTE Band 7	F	26747	20	QPSK	1	50	19.5	18.23	0	-0.02	1:1	0.151	1.340	0.202	
2510.00	20850	Low	back	10 mm	LTE Band 7	F	26747	20	QPSK	50	25	19.5	18.20	0	0.01	1:1	0.152	1.349	0.205	
2510.00	20850	Low	front	10 mm	LTE Band 7	F	26747	20	QPSK	1	50	19.5	18.23	0	0.01	1:1	0.158	1.340	0.212	
2510.00	20850	Low	front	10 mm	LTE Band 7	F	26747	20	QPSK	50	25	19.5	18.20	0	0.04	1:1	0.158	1.349	0.213	
2510.00	20850	Low	top	10 mm	LTE Band 7	F	26747	20	QPSK	1	50	19.5	18.23	0	0.00	1:1	0.382	1.340	0.512	
2510.00	20850	Low	top	10 mm	LTE Band 7	F	26747	20	QPSK	50	25	19.5	18.20	0	0.00	1:1	0.389	1.349	0.525	
2510.00	20850	Low	left	10 mm	LTE Band 7	F	26747	20	QPSK	1	50	19.5	18.23	0	0.05	1:1	0.039	1.340	0.052	
2510.00	20850	Low	left	10 mm	LTE Band 7	F	26747	20	QPSK	50	25	19.5	18.20	0	-0.08	1:1	0.038	1.349	0.051	
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 11-59
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																						
# CC Uplink, Power Class	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.18	0	-0.05	1:1.58	0.379	1.208	0.458	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	back	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.21	0	-0.02	1:1.58	0.392	1.199	0.470	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	front	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.18	0	-0.03	1:1.58	0.348	1.208	0.420	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	front	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.21	0	0.00	1:1.58	0.346	1.199	0.415	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.02	0	-0.02	1:1.58	0.441	1.253	0.553	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.01	0	0.00	1:1.58	0.387	1.256	0.486	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.18	0	-0.12	1:1.58	0.684	1.208	0.826	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.07	0	-0.05	1:1.58	0.624	1.239	0.773	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.03	0	-0.18	1:1.58	0.741	1.250	0.926	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.18	0	0.00	1:1.58	0.452	1.208	0.546	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.09	0	-0.01	1:1.58	0.394	1.233	0.486	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.21	0	-0.03	1:1.58	0.699	1.199	0.838	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	50	50	22.0	21.16	0	0.00	1:1.58	0.632	1.213	0.767	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	50	50	22.0	21.09	0	-0.02	1:1.58	0.690	1.233	0.851	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	100	0	22.0	21.13	0	-0.01	1:1.58	0.686	1.222	0.838	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	23.6	23.00	0	-0.11	1:2.31	0.776	1.148	0.891	A67
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	20.82	0	-0.01	1:1.58	0.732	1.312	0.960	
	SCC	2660.20	41292										99									
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	23.6	22.90	0	-0.04	1:2.31	0.747	1.175	0.878	
	SCC	2660.20	41292										99									
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	left	10 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.18	0	0.04	1:1.58	0.168	1.208	0.203	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	left	10 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.21	0	0.01	1:1.58	0.165	1.199	0.198	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	26424	20	QPSK	1	50	22.0	21.28	0	-0.06	1:1.58	0.132	1.180	0.156	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	back	10 mm	LTE Band 41	F	26424	20	QPSK	50	0	22.0	21.39	0	-0.01	1:1.58	0.134	1.151	0.154	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	front	10 mm	LTE Band 41	F	26424	20	QPSK	1	50	22.0	21.28	0	0.05	1:1.58	0.149	1.180	0.176	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	front	10 mm	LTE Band 41	F	26424	20	QPSK	50	0	22.0	21.39	0	-0.01	1:1.58	0.147	1.151	0.169	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	1	0	22.0	21.13	0	-0.03	1:1.58	0.386	1.222	0.472	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	1	50	22.0	21.28	0	0.02	1:1.58	0.390	1.180	0.460	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	50	0	22.0	21.39	0	0.01	1:1.58	0.386	1.151	0.444	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	1	0	23.6	21.87	0	0.02	1:2.31	0.321	1.489	0.478	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	1	0	22.0	20.87	0	-0.01	1:1.58	0.372	1.297	0.482	
	SCC	2660.20	41292										99									
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	top	10 mm	LTE Band 41	F	26424	20	QPSK	1	0	23.6	21.96	0	0.02	1:2.31	0.330	1.459	0.481	
	SCC	2660.20	41292										99									
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	left	10 mm	LTE Band 41	F	26424	20	QPSK	1	50	22.0	21.28	0	-0.08	1:1.58	0.030	1.180	0.035	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	left	10 mm	LTE Band 41	F	26424	20	QPSK	50	0	22.0	21.39	0	0.15	1:1.58	0.029	1.151	0.033	
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 11-60
LTE Band 48 Hotspot SAR

MEASUREMENT RESULTS																							
# CC Uplink	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	3560.00	55340	Low	back	10 mm	LTE Band 48	F	25913	20	QPSK	1	50	21.0	20.23	0	-0.03	1:1.58	0.164	1.194	0.196	
1 CC Uplink	N/A	3560.00	55340	Low	back	10 mm	LTE Band 48	F	25913	20	QPSK	50	25	21.0	20.27	0	-0.07	1:1.58	0.165	1.183	0.195	
1 CC Uplink	N/A	3560.00	55340	Low	front	10 mm	LTE Band 48	F	25913	20	QPSK	1	50	21.0	20.23	0	-0.03	1:1.58	0.044	1.194	0.053	
1 CC Uplink	N/A	3560.00	55340	Low	front	10 mm	LTE Band 48	F	25913	20	QPSK	50	25	21.0	20.27	0	-0.10	1:1.58	0.035	1.183	0.041	
1 CC Uplink	N/A	3560.00	55340	Low	top	10 mm	LTE Band 48	F	25913	20	QPSK	1	50	21.0	20.23	0	0.01	1:1.58	0.175	1.194	**0.209**	A68
1 CC Uplink	N/A	3560.00	55340	Low	top	10 mm	LTE Band 48	F	25913	20	QPSK	1	99	21.0	20.09	0	0.00	1:1.58	0.165	1.233	0.203	
1 CC Uplink	N/A	3560.00	55340	Low	top	10 mm	LTE Band 48	F	25913	20	QPSK	50	25	21.0	20.27	0	0.02	1:1.58	0.163	1.183	0.193	
2 CC Uplink	PCC	3560.00	55340	Low	top	10 mm	LTE Band 48	F	25913	20	QPSK	1	99	21.0	20.29	0	0.01	1:1.58	0.164	1.178	0.193	
	SCC	3579.80	55538										0									
1 CC Uplink	N/A	3560.00	55340	Low	left	10 mm	LTE Band 48	F	25913	20	QPSK	1	50	21.0	20.23	0	0.04	1:1.58	0.014	1.194	0.017	
1 CC Uplink	N/A	3560.00	55340	Low	left	10 mm	LTE Band 48	F	25913	20	QPSK	50	25	21.0	20.27	0	0.07	1:1.58	0.016	1.183	0.019	

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 11-61
NR Band n71 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.09	1:1	0.384	1.208	0.464	A47
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.01	1:1	0.374	1.216	0.455	
680.50	136100	Mid	back	10 mm	NR Band n71	A	65	26192	20	CP-OFDM	QPSK	1	1	24.0	23.19	1.5	-0.10	1:1	0.269	1.205	0.324	
680.50	136100	Mid	front	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.06	1:1	0.308	1.208	0.372	
680.50	136100	Mid	front	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	-0.05	1:1	0.294	1.216	0.358	
680.50	136100	Mid	bottom	10 mm	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	-0.04	1:1	0.080	1.208	0.097	
680.50	136100	Mid	bottom	10 mm	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.06	1:1	0.088	1.216	0.107	
680.50	136100	Mid	right	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	-0.02	1:1	0.283	1.208	0.342	
680.50	136100	Mid	right	10 mm	NR Band n71	A	65	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	-0.01	1:1	0.300	1.216	0.365	
680.50	136100	Mid	left	10 mm	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	1	1	25.5	24.68	0	0.01	1:1	0.372	1.208	0.449	
680.50	136100	Mid	left	10 mm	NR Band n71	A	134	26192	20	DFT-S-OFDM	QPSK	50	28	25.5	24.65	0	0.01	1:1	0.380	1.216	0.462	

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 11-62
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.01	1:1	0.380	1.140	0.433	
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.05	1:1	0.443	1.156	0.512	A48
707.50	141500	Mid	back	10 mm	NR Band n12	A	132	26192	15	CP-OFDM	QPSK	1	1	24.0	23.43	1.5	0.03	1:1	0.282	1.140	0.321	
707.50	141500	Mid	front	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.02	1:1	0.320	1.140	0.365	
707.50	141500	Mid	front	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	-0.02	1:1	0.365	1.156	0.422	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.02	1:1	0.155	1.140	0.177	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.06	1:1	0.173	1.156	0.200	
707.50	141500	Mid	right	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	0.02	1:1	0.212	1.140	0.242	
707.50	141500	Mid	right	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.02	1:1	0.287	1.156	0.332	
707.50	141500	Mid	left	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	1	77	25.5	24.93	0	-0.03	1:1	0.275	1.140	0.314	
707.50	141500	Mid	left	10 mm	NR Band n12	A	132	26192	15	DFT-S-OFDM	QPSK	36	22	25.5	24.87	0	0.04	1:1	0.292	1.156	0.338	

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 11-63
NR Band n26 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)	
831.50	166300	Mid	back	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.02	1:1	0.418	1.130	0.472	A49
831.50	166300	Mid	back	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.06	1:1	0.403	1.156	0.466	
831.50	166300	Mid	back	10 mm	NR Band n26	A	140	26374	20	CP-OFDM	QPSK	1	1	24.0	23.21	1.5	0.01	1:1	0.209	1.199	0.251	
831.50	166300	Mid	front	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.00	1:1	0.351	1.130	0.397	
831.50	166300	Mid	front	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	-0.01	1:1	0.336	1.156	0.388	
831.50	166300	Mid	bottom	10 mm	NR Band n26	A	140	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.02	1:1	0.239	1.130	0.270	
831.50	166300	Mid	bottom	10 mm	NR Band n26	A	140	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.02	1:1	0.202	1.156	0.234	
831.50	166300	Mid	right	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	-0.03	1:1	0.137	1.130	0.155	
831.50	166300	Mid	right	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	-0.05	1:1	0.148	1.156	0.171	
831.50	166300	Mid	left	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	1	104	25.5	24.97	0	0.01	1:1	0.077	1.130	0.087	
831.50	166300	Mid	left	10 mm	NR Band n26	A	17	26374	20	DFT-S-OFDM	QPSK	50	28	25.5	24.87	0	0.03	1:1	0.077	1.156	0.089	
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 11-64
NR Band n66 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)	
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	-0.01	1:1	0.662	1.021	0.676	
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	-0.02	1:1	0.655	1.045	0.684	
1745.00	349000	Mid	back	10 mm	NR Band n66	A	32	25772	40	CP-OFDM	QPSK	1	1	21.0	20.60	0	-0.05	1:1	0.536	1.096	0.587	
1745.00	349000	Mid	front	10 mm	NR Band n66	A	135	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	0.03	1:1	0.608	1.021	0.621	
1745.00	349000	Mid	front	10 mm	NR Band n66	A	135	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	-0.02	1:1	0.597	1.045	0.624	
1745.00	349000	Mid	bottom	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	-0.04	1:1	1.080	1.021	1.103	
1745.00	349000	Mid	bottom	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	0.02	1:1	1.110	1.045	1.160	
1745.00	349000	Mid	bottom	10 mm	NR Band n66	A	32	25772	40	DFT-S-OFDM	QPSK	216	0	21.0	20.77	0	0.04	1:1	1.120	1.054	1.180	
1745.00	349000	Mid	bottom	10 mm	NR Band n66	A	32	25772	40	CP-OFDM	QPSK	1	1	21.0	20.60	0	0.00	1:1	1.120	1.096	1.228	A69
1745.00	349000	Mid	right	10 mm	NR Band n66	A	97	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	0.11	1:1	0.066	1.021	0.067	
1745.00	349000	Mid	right	10 mm	NR Band n66	A	97	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	0.04	1:1	0.068	1.045	0.071	
1745.00	349000	Mid	left	10 mm	NR Band n66	A	135	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	-0.01	1:1	0.236	1.021	0.241	
1745.00	349000	Mid	left	10 mm	NR Band n66	A	135	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	0.02	1:1	0.239	1.045	0.250	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	-0.03	1:1	0.242	1.250	0.303	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	-0.02	1:1	0.245	1.250	0.306	
1745.00	349000	Mid	back	10 mm	NR Band n66	F	N/A	26549	40	CP-OFDM	QPSK	1	1	21.0	20.05	0	0.00	1:1	0.295	1.245	0.367	
1745.00	349000	Mid	front	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	-0.03	1:1	0.294	1.250	0.368	
1745.00	349000	Mid	front	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	-0.02	1:1	0.293	1.250	0.366	
1745.00	349000	Mid	top	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	0.04	1:1	0.593	1.250	0.741	
1745.00	349000	Mid	top	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	0.00	1:1	0.585	1.250	0.731	
1745.00	349000	Mid	top	10 mm	NR Band n66	F	N/A	26549	40	CP-OFDM	QPSK	1	1	21.0	20.05	0	0.03	1:1	0.651	1.245	0.810	
1745.00	349000	Mid	left	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	-0.04	1:1	0.103	1.250	0.129	
1745.00	349000	Mid	left	10 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	-0.02	1:1	0.106	1.250	0.133	
1745.00	349000	Mid	bottom	10 mm	NR Band n66	A	32	25772	40	CP-OFDM	QPSK	1	1	21.0	20.77	0	-0.12	1:1	1.100	1.054	1.159	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entry represents variability measurement.

Table 11-65
NR Band n25 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)	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.04	1:1	0.199	1.268	0.252	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.07	1:1	0.204	1.265	0.258	
1882.50	376500	Mid	back	10 mm	NR Band n25	A	96	25772	40	CP-OFDM	QPSK	1	1	20.0	18.98	0	-0.05	1:1	0.192	1.265	0.243	
1882.50	376500	Mid	front	10 mm	NR Band n25	A	75	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	0.01	1:1	0.227	1.268	0.288	
1882.50	376500	Mid	front	10 mm	NR Band n25	A	75	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.04	1:1	0.200	1.265	0.253	
1882.50	376500	Mid	bottom	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.01	1:1	0.399	1.268	0.506	
1882.50	376500	Mid	bottom	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.02	1:1	0.440	1.265	0.557	
1882.50	376500	Mid	bottom	10 mm	NR Band n25	A	96	25772	40	CP-OFDM	QPSK	1	1	20.0	18.98	0	-0.03	1:1	0.401	1.265	0.507	
1882.50	376500	Mid	right	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.20	1:1	0.069	1.268	0.087	
1882.50	376500	Mid	right	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.08	1:1	0.075	1.265	0.095	
1882.50	376500	Mid	left	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.01	1:1	0.125	1.268	0.159	
1882.50	376500	Mid	left	10 mm	NR Band n25	A	96	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.05	1:1	0.122	1.265	0.154	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	0.02	1:1	0.227	1.265	0.287	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	0.03	1:1	0.219	1.315	0.288	
1882.50	376500	Mid	back	10 mm	NR Band n25	F	N/A	26549	40	CP-OFDM	QPSK	1	1	20.5	19.13	0	0.06	1:1	0.243	1.371	0.333	
1882.50	376500	Mid	front	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	-0.02	1:1	0.273	1.265	0.345	
1882.50	376500	Mid	front	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	-0.04	1:1	0.256	1.315	0.337	
1882.50	376500	Mid	top	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	-0.06	1:1	0.645	1.265	0.816	
1882.50	376500	Mid	top	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	0.02	1:1	0.601	1.315	0.790	
1882.50	376500	Mid	top	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	216	0	20.5	19.28	0	-0.04	1:1	0.638	1.324	0.845	
1882.50	376500	Mid	top	10 mm	NR Band n25	F	N/A	26549	40	CP-OFDM	QPSK	1	1	20.5	19.13	0	0.11	1:1	0.682	1.371	0.935	A70
1882.50	376500	Mid	left	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	-0.06	1:1	0.091	1.265	0.115	
1882.50	376500	Mid	left	10 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	-0.18	1:1	0.089	1.315	0.117	
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 11-66
NR Band n30 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)	
2310.00	462000	Mid	back	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	-0.01	1:1	0.227	1.172	0.266	
2310.00	462000	Mid	back	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.02	1:1	0.232	1.183	0.274	
2310.00	462000	Mid	back	10 mm	NR Band n30	A	26549	10	CP-OFDM	QPSK	1	1	18.0	17.38	0	0.00	1:1	0.225	1.153	0.259	
2310.00	462000	Mid	front	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	-0.04	1:1	0.209	1.172	0.245	
2310.00	462000	Mid	front	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.01	1:1	0.208	1.183	0.246	
2310.00	462000	Mid	bottom	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	-0.02	1:1	0.576	1.172	0.675	
2310.00	462000	Mid	bottom	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.02	1:1	0.584	1.183	0.691	
2310.00	462000	Mid	bottom	10 mm	NR Band n30	A	26549	10	CP-OFDM	QPSK	1	1	18.0	17.38	0	0.01	1:1	0.611	1.153	0.704	A71
2310.00	462000	Mid	right	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	0.11	1:1	0.032	1.172	0.038	
2310.00	462000	Mid	right	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	0.10	1:1	0.029	1.183	0.034	
2310.00	462000	Mid	left	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	0.08	1:1	0.003	1.172	0.004	
2310.00	462000	Mid	left	10 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.10	1:1	0.015	1.183	0.018	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	21.0	20.80	0	0.03	1:1	0.338	1.047	0.354	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	27	21.0	20.71	0	-0.03	1:1	0.335	1.069	0.358	
2310.00	462000	Mid	back	10 mm	NR Band n30	F	26549	10	CP-OFDM	QPSK	1	1	21.0	20.80	0	-0.08	1:1	0.352	1.047	0.369	
2310.00	462000	Mid	front	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	21.0	20.80	0	-0.02	1:1	0.274	1.047	0.287	
2310.00	462000	Mid	front	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	27	21.0	20.71	0	-0.03	1:1	0.276	1.069	0.295	
2310.00	462000	Mid	top	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	21.0	20.80	0	0.05	1:1	0.571	1.047	0.598	
2310.00	462000	Mid	top	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	27	21.0	20.71	0	0.03	1:1	0.571	1.069	0.610	
2310.00	462000	Mid	top	10 mm	NR Band n30	F	26549	10	CP-OFDM	QPSK	1	1	21.0	20.80	0	0.00	1:1	0.571	1.047	0.598	
2310.00	462000	Mid	left	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	1	26	21.0	20.80	0	0.09	1:1	0.067	1.047	0.070	
2310.00	462000	Mid	left	10 mm	NR Band n30	F	26549	10	DFT-S-OFDM	QPSK	25	27	21.0	20.71	0	0.20	1:1	0.066	1.069	0.071	
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 11-67
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	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	0.02	1:1	0.385	1.143	0.440	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.00	1:1	0.387	1.164	0.450	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	26366	100	CP-OFDM	QPSK	1	1	20.0	19.09	0	-0.04	1:1	0.429	1.233	0.529	
2592.99	518598	Mid	front	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.07	1:1	0.259	1.143	0.296	
2592.99	518598	Mid	front	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	-0.06	1:1	0.260	1.164	0.303	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	0.03	1:1	0.504	1.143	0.576	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	-0.04	1:1	0.497	1.164	0.579	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	B	26366	100	CP-OFDM	QPSK	1	1	20.0	19.09	0	-0.02	1:1	0.522	1.233	0.644	A72
2592.99	518598	Mid	left	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.04	1:1	0.215	1.143	0.246	
2592.99	518598	Mid	left	10 mm	NR Band n41	B	26366	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.01	1:1	0.211	1.164	0.246	
2592.99	518598	Mid	back	10 mm	NR Band n41	F	26903	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	-0.08	1:1	0.098	1.227	0.120	
2592.99	518598	Mid	front	10 mm	NR Band n41	F	26903	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	0.05	1:1	0.105	1.227	0.129	
2592.99	518598	Mid	top	10 mm	NR Band n41	F	26903	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	-0.01	1:1	0.191	1.227	0.234	
2592.99	518598	Mid	left	10 mm	NR Band n41	F	26903	100	CW/SRS	N/A	N/A	N/A	16.5	15.61	N/A	0.02	1:1	0.013	1.227	0.016	
2592.99	518598	Mid	back	10 mm	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.06	1:1	0.057	1.186	0.068	
2592.99	518598	Mid	front	10 mm	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.04	1:1	0.106	1.186	0.126	
2592.99	518598	Mid	top	10 mm	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	-0.05	1:1	0.062	1.186	0.074	
2592.99	518598	Mid	right	10 mm	NR Band n41	E	26903	100	CW/SRS	N/A	N/A	N/A	17.5	16.76	N/A	0.05	1:1	0.065	1.186	0.077	
2592.99	518598	Mid	back	10 mm	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	-0.07	1:1	0.104	1.268	0.132	
2592.99	518598	Mid	front	10 mm	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	-0.12	1:1	0.032	1.268	0.041	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	-0.10	1:1	0.072	1.268	0.091	
2592.99	518598	Mid	right	10 mm	NR Band n41	D	26903	100	CW/SRS	N/A	N/A	N/A	18.5	17.47	N/A	0.06	1:1	0.002	1.268	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 11-68
NR Band n48 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)	
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	1	104	19.0	18.62	0	-0.15	1:1	0.141	1.091	0.154	
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	50	56	19.0	18.39	0	-0.06	1:1	0.142	1.151	0.163	
3679.98	645332	High	back	10 mm	NR Band n48	F	26903	40	CP-OFDM	QPSK	1	1	19.0	18.37	0	-0.15	1:1	0.140	1.156	0.162	
3679.98	645332	High	front	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	1	104	19.0	18.62	0	-0.12	1:1	0.080	1.091	0.087	
3679.98	645332	High	front	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	50	56	19.0	18.39	0	-0.12	1:1	0.078	1.151	0.090	
3679.98	645332	High	top	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	1	104	19.0	18.62	0	-0.11	1:1	0.159	1.091	0.173	
3679.98	645332	High	top	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	50	56	19.0	18.39	0	-0.04	1:1	0.162	1.151	0.186	
3679.98	645332	High	top	10 mm	NR Band n48	F	26903	40	CP-OFDM	QPSK	1	1	19.0	18.37	0	-0.19	1:1	0.180	1.156	**0.208**	A73
3679.98	645332	High	left	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	1	104	19.0	18.62	0	0.08	1:1	0.020	1.091	0.022	
3679.98	645332	High	left	10 mm	NR Band n48	F	26903	40	DFT-S-OFDM	QPSK	50	56	19.0	18.39	0	0.09	1:1	0.016	1.151	0.018	
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 11-69
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)	
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	19.0	18.56	0	0.04	1:1	0.136	1.107	0.151	
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.52	0	-0.05	1:1	0.130	1.117	0.145	
3930.00	662000	High	back	10 mm	NR Band n77	F	26903	100	CP-OFDM	QPSK	1	1	19.0	18.34	0	-0.08	1:1	0.126	1.164	0.147	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	26903	100	DFT-S-OFDM	QPSK	1	271	19.0	18.23	0	-0.07	1:1	0.167	1.194	0.199	
3930.00	662000	High	front	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	19.0	18.56	0	-0.17	1:1	0.113	1.107	0.125	
3930.00	662000	High	front	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.52	0	-0.11	1:1	0.118	1.117	0.132	
3930.00	662000	High	top	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	19.0	18.56	0	0.02	1:1	0.098	1.107	0.108	
3930.00	662000	High	top	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.52	0	0.01	1:1	0.098	1.117	0.109	
3930.00	662000	High	left	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	1	1	19.0	18.56	0	0.03	1:1	0.010	1.107	0.011	
3930.00	662000	High	left	10 mm	NR Band n77	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.52	0	0.09	1:1	0.005	1.117	0.006	
3750.00	650000	Low	back	10 mm	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	15.5	14.94	N/A	-0.02	1:1	0.056	1.138	0.064	
3750.00	650000	Low	front	10 mm	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	15.5	14.94	N/A	-0.05	1:1	0.093	1.138	0.106	
3750.00	650000	Low	bottom	10 mm	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	15.5	14.94	N/A	0.07	1:1	0.046	1.138	0.052	
3750.00	650000	Low	left	10 mm	NR Band n77	C	26366	100	CW/SRS	N/A	N/A	N/A	15.5	14.94	N/A	-0.12	1:1	0.131	1.138	0.149	
3500.01	633334	Mid	left	10 mm	NR Band n77 DoD	C	26366	100	CW/SRS	N/A	N/A	N/A	15.5	14.73	N/A	-0.02	1:1	0.056	1.194	0.067	
3930.00	662000	High	back	10 mm	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	18.5	18.08	N/A	-0.14	1:1	0.055	1.102	0.061	
3930.00	662000	High	front	10 mm	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	18.5	18.08	N/A	-0.11	1:1	0.056	1.102	0.062	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	I	26366	100	CW/SRS	N/A	N/A	N/A	18.5	16.62	N/A	-0.08	1:1	0.079	1.542	0.122	
3930.00	662000	High	top	10 mm	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	18.5	18.08	N/A	0.04	1:1	0.002	1.102	0.002	
3930.00	662000	High	left	10 mm	NR Band n77	I	26366	100	CW/SRS	N/A	N/A	N/A	18.5	18.08	N/A	0.05	1:1	0.013	1.102	0.014	
3930.00	662000	High	back	10 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.08	N/A	-0.11	1:1	0.189	1.236	0.234	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.00	N/A	-0.09	1:1	0.254	1.259	0.320	A55
3930.00	662000	High	front	10 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.08	N/A	0.06	1:1	0.000	1.236	0.000	
3930.00	662000	High	bottom	10 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.08	N/A	0.06	1:1	0.023	1.236	0.028	
3930.00	662000	High	right	10 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.08	N/A	0.04	1:1	0.018	1.236	0.022	
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: Light Purple entries indicate the additional DoD check on the worst case exposure scenario from C-band antennas.

Table 11-70
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2437	6	back	10 mm	802.11b	DSSS	2	29519	22	1	19.0	18.99	-0.03	100.00	98.86	0.118	1.002	1.012	0.120	
2437	6	front	10 mm	802.11b	DSSS	2	29519	22	1	19.0	18.99	0.06	100.00	98.86	0.175	1.002	1.012	**0.177**	
2437	6	top	10 mm	802.11b	DSSS	2	29519	22	1	19.0	18.99	0.01	100.00	98.86	0.004	1.002	1.012	0.004	
2437	6	right	10 mm	802.11b	DSSS	2	29519	22	1	19.0	18.99	-0.11	100.00	98.86	0.046	1.002	1.012	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 11-71
DTS SISO Hotspot SAR during Conditions with 5/6 GHz and/or 5G NR

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2437	6	back	10 mm	802.11b	DSSS	2	29352	22	1	17.0	16.95	-0.12	100.00	98.86	0.057	1.012	1.012	0.058	
2437	6	front	10 mm	802.11b	DSSS	2	29352	22	1	17.0	16.95	0.19	100.00	98.86	0.101	1.012	1.012	0.103	
2437	6	top	10 mm	802.11b	DSSS	2	29352	22	1	17.0	16.95	0.03	100.00	98.86	0.000	1.012	1.012	0.000	
2437	6	right	10 mm	802.11b	DSSS	2	29352	22	1	17.0	16.95	-0.16	100.00	98.86	0.015	1.012	1.012	0.015	
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 11-72
DTS MIMO Hotspot WLAN 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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2462	11	back	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	0.03	100.00	98.86	0.269	1.099	1.012	0.299	
2462	11	front	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	-0.03	100.00	98.86	0.247	1.099	1.012	0.275	
2462	11	top	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	-0.08	100.00	98.86	0.101	1.099	1.012	0.112	
2462	11	right	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	0.06	100.00	98.86	0.039	1.099	1.012	0.043	
2462	11	left	10 mm	802.11b	DSSS	MIMO	29519	22	1	19.0	18.59	19.0	18.97	-0.05	100.00	98.86	0.292	1.099	1.012	0.325	A74
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 11-73
DTS MIMO Hotspot SAR during Conditions with 5/6 GHz and/or 5G NR

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2462	11	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	-0.07	100.00	97.94	0.117	1.125	1.021	0.134	
2462	11	front	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	-0.12	100.00	97.94	0.177	1.125	1.021	0.203	
2462	11	top	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	0.06	100.00	97.94	0.092	1.125	1.021	0.106	
2462	11	right	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	0.08	100.00	97.94	0.021	1.125	1.021	0.024	
2462	11	left	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.81	17.0	16.49	-0.02	100.00	97.94	0.184	1.125	1.021	0.211	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: To achieve the 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

Table 11-74
NII MIMO Hotspot WLAN 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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
5745	149	back	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	-0.10	100.00	98.09	0.171	1.105	1.019	0.193	A75
5745	149	front	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	-0.09	100.00	98.09	0.096	1.105	1.019	0.108	
5745	149	top	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	-0.02	100.00	98.09	0.068	1.105	1.019	0.077	
5745	149	right	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	0.03	100.00	98.09	0.033	1.105	1.019	0.037	
5745	149	left	10 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.89	17.0	16.57	0.04	100.00	98.09	0.136	1.105	1.019	0.153	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: To achieve the 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

Table 11-75
NII MIMO Hotspot SAR during Conditions with 2.4 GHz WLAN and/or 5G

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
5775	155	back	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	-0.10	100.00	92.36	0.109	1.279	1.083	0.151	
5775	155	front	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	-0.03	100.00	92.36	0.051	1.279	1.083	0.071	
5775	155	top	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	0.08	100.00	92.36	0.039	1.279	1.083	0.054	
5775	155	right	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	0.04	100.00	92.36	0.014	1.279	1.083	0.019	
5775	155	left	10 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	12.93	14.0	13.49	-0.03	100.00	92.36	0.108	1.279	1.083	0.150	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: To achieve the 17.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14.0 dBm.

Table 11-76
DSS SISO 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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																	
2441	39	back	10 mm	Bluetooth	FHSS	1	29568	1	17.0	16.27	0.08	78.00	76.80	0.116	1.183	1.016	0.139	
2441	39	front	10 mm	Bluetooth	FHSS	1	29568	1	17.0	16.27	0.02	78.00	76.80	0.133	1.183	1.016	0.160	
2441	39	top	10 mm	Bluetooth	FHSS	1	29568	1	17.0	16.27	0.04	78.00	76.80	0.151	1.183	1.016	0.181	
2441	39	left	10 mm	Bluetooth	FHSS	1	29568	1	17.0	16.27	-0.01	78.00	76.80	0.250	1.183	1.016	0.300	A76
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 11-77
UMTS Phablet 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.															
1752.60	1513	back	0 mm	UMTS 1750	RMC	A	135	26655	20.0	19.85	0.00	1:1	1.150	1.035	1.190	
1752.60	1513	bottom	0 mm	UMTS 1750	RMC	A	132	26655	20.0	19.85	-0.01	1:1	1.290	1.035	1.335	A77
1852.40	9262	bottom	0 mm	UMTS 1900	RMC	A	74	26655	20.0	19.32	0.00	1:1	1.260	1.169	1.473	A78
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 11-78
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS																									
# CC Uplink	Component Carrier	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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
		MHz	Ch.																				
1 CC Uplink	N/A	1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	21.0	20.12	0	0.04	1:1	1.450	1.225	1.776	
1 CC Uplink	N/A	1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	0	21.0	20.16	0	-0.01	1:1	1.420	1.213	1.722	
1 CC Uplink	N/A	1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	1	0	21.0	20.12	0	-0.03	1:1	1.510	1.225	1.850	
1 CC Uplink	N/A	1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	A	135	26218	20	QPSK	50	0	21.0	20.16	0	-0.02	1:1	1.490	1.213	1.807	
1 CC Uplink	N/A	1720.00	132072	Low	bottom	0 mm	LTE Band 66 (AWS)	A	41	26218	20	QPSK	1	99	21.0	19.83	0	0.01	1:1	1.460	1.309	1.911	
1 CC Uplink	N/A	1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	A	134	26218	20	QPSK	1	0	21.0	20.12	0	0.04	1:1	1.560	1.225	1.911	
1 CC Uplink	N/A	1770.00	132572	High	bottom	0 mm	LTE Band 66 (AWS)	A	33	26218	20	QPSK	1	50	21.0	19.99	0	0.07	1:1	1.460	1.262	1.843	
1 CC Uplink	N/A	1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	A	134	26218	20	QPSK	50	0	21.0	20.16	0	0.00	1:1	1.500	1.213	1.820	
1 CC Uplink	N/A	1715.00	132022	Low	bottom	0 mm	LTE Band 66 (AWS)	A	42	26218	10	QPSK	1	49	21.0	19.90	0	0.07	1:1	1.610	1.288	2.074	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	bottom	0 mm	LTE Band 66 (AWS)	A	41	26218	20	QPSK	1	99	21.0	19.68	0	0.04	1:1	1.410	1.355	1.911	
	SCC	1739.80	132270											0									
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	bottom	0 mm	LTE Band 66 (AWS)	A	135	26218	10	QPSK	1	49	21.0	19.63	0	0.01	1:1	1.510	1.371	2.070	
	SCC	1724.90	132121											0									
1 CC Uplink	N/A	1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	99	21.0	19.97	0	-0.05	1:1	1.660	1.268	2.105	
1 CC Uplink	N/A	1745.00	132322	Mid	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	0	21.0	19.84	0	0.01	1:1	1.670	1.306	2.181	
1 CC Uplink	N/A	1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	1	0	21.0	19.63	0	0.02	1:1	1.580	1.371	2.166	
1 CC Uplink	N/A	1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.96	0	0.01	1:1	1.710	1.271	2.173	
1 CC Uplink	N/A	1745.00	132322	Mid	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	25	21.0	19.93	0	-0.03	1:1	1.670	1.279	2.136	
1 CC Uplink	N/A	1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	0	21.0	19.54	0	-0.03	1:1	1.510	1.400	2.114	
1 CC Uplink	N/A	1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	50	21.0	19.63	0	0.02	1:1	1.660	1.371	2.276	
1 CC Uplink	N/A	1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	100	0	21.0	19.91	0	0.03	1:1	1.710	1.285	2.197	A79
1 CC Uplink	N/A	1775.00	132622	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	0	21.0	19.74	0	-0.02	1:1	1.590	1.337	2.126	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	20	QPSK	50	0	21.0	19.54	0	0.01	1:1	1.570	1.400	2.198	
	SCC	1750.20	132374											50									
2 CC Uplink CA_66B	PCC	1775.00	132622	High	top	0 mm	LTE Band 66 (AWS)	F	N/A	26218	10	QPSK	25	0	21.0	19.52	0	0.02	1:1	1.560	1.406	2.193	
	SCC	1765.10	132523											25									

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

Table 11-79
LTE Band 25 (PCS) Phablet 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	1	0	20.0	19.33	0	0.02	1:1	1.120	1.167	1.307	
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	A	64	26598	20	QPSK	50	25	20.0	19.24	0	-0.02	1:1	1.150	1.191	1.370	
1882.50	26365	Mid	top	0 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	1	50	20.5	19.33	0	0.03	1:1	1.390	1.309	1.820	
1860.00	26140	Low	top	0 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	50	20.5	19.33	0	0.00	1:1	1.400	1.309	1.833	
1882.50	26365	Mid	top	0 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.38	0	0.02	1:1	1.400	1.294	1.812	A80
1905.00	26590	High	top	0 mm	LTE Band 25 (PCS)	F	N/A	26531	20	QPSK	50	25	20.5	19.08	0	-0.03	1:1	1.310	1.387	1.817	

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

Table 11-80
LTE Band 30 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																			
2310.00	27710	Mid	bottom	0 mm	LTE Band 30	A	26598	10	QPSK	1	0	18.0	17.49	0	0.00	1:1	1.140	1.125	1.283	A81
2310.00	27710	Mid	bottom	0 mm	LTE Band 30	A	26598	10	QPSK	25	0	18.0	17.48	0	0.02	1:1	1.130	1.127	1.274	

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

Table 11-81
LTE Band 7 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)	
2510.00	20850	Low	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.83	0	0.02	1:1	1.770	1.309	2.317	A82
2535.00	21100	Mid	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.68	0	0.03	1:1	1.660	1.355	2.249	
2560.00	21350	High	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	1	50	20.0	18.62	0	-0.01	1:1	1.700	1.374	2.336	
2510.00	20850	Low	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.87	0	-0.03	1:1	1.750	1.297	2.270	
2535.00	21100	Mid	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.77	0	0.01	1:1	1.660	1.327	2.203	
2560.00	21350	High	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	50	25	20.0	18.69	0	-0.02	1:1	1.720	1.352	2.325	
2510.00	20850	Low	bottom	0 mm	LTE Band 7	B	26747	20	QPSK	100	0	20.0	18.81	0	-0.01	1:1	1.740	1.315	2.288	

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

Table 11-82
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																							
# CC Uplink, Power Class	Component Carrier	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)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.02	0	-0.03	1:1.58	1.490	1.253	1.867	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.01	0	-0.04	1:1.58	1.390	1.256	1.746	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.18	0	0.04	1:1.58	1.580	1.208	1.909	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.05	0	0.08	1:1.58	1.730	1.245	2.154	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	50	22.0	21.07	0	0.02	1:1.58	1.730	1.239	2.143	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	21.03	0	0.02	1:1.58	1.710	1.250	2.138	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.18	0	-0.05	1:1.58	1.510	1.208	1.824	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.09	0	0.02	1:1.58	1.420	1.233	1.751	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	50	25	22.0	21.21	0	-0.01	1:1.58	1.610	1.199	1.930	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	50	50	22.0	21.16	0	0.02	1:1.58	1.730	1.213	2.098	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	50	50	22.0	21.09	0	0.01	1:1.58	1.700	1.233	2.096	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	100	0	22.0	21.13	0	0.03	1:1.58	1.610	1.222	1.967	
1 CC Uplink - Power Class 2	N/A	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	23.6	23.14	0	0.00	1:2.31	1.840	1.112	2.046	A83
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	22.0	20.79	0	-0.01	1:1.58	1.710	1.321	2.259	
	SCC	2616.70	40857					B					99									
2 CC Uplink - Power Class 2	PCC	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	26424	20	QPSK	1	0	23.6	22.90	0	-0.02	1:2.31	1.810	1.175	2.127	
	SCC	2616.70	40857					B					99									

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

Table 11-83
NR Band n66 Phablet 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)	
1745.00	349000	Mid	back	0 mm	NR Band n66	A	0	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	0.00	1:1	1.550	1.021	1.583	
1745.00	349000	Mid	back	0 mm	NR Band n66	A	0	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	-0.06	1:1	1.560	1.045	1.630	
1745.00	349000	Mid	front	0 mm	NR Band n66	A	0	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	0.01	1:1	1.620	1.021	1.654	
1745.00	349000	Mid	front	0 mm	NR Band n66	A	0	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	0.04	1:1	1.610	1.045	1.682	
1745.00	349000	Mid	bottom	0 mm	NR Band n66	A	103	25772	40	DFT-S-OFDM	QPSK	1	108	21.0	20.91	0	0.02	1:1	1.680	1.021	1.715	
1745.00	349000	Mid	bottom	0 mm	NR Band n66	A	103	25772	40	DFT-S-OFDM	QPSK	108	54	21.0	20.81	0	-0.01	1:1	1.670	1.045	1.745	
1745.00	349000	Mid	bottom	0 mm	NR Band n66	A	39	25772	40	CP-OFDM	QPSK	1	1	21.0	20.60	0	-0.01	1:1	1.660	1.096	1.819	
1745.00	349000	Mid	top	0 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	21.0	20.03	0	-0.05	1:1	1.650	1.250	2.063	
1745.00	349000	Mid	top	0 mm	NR Band n66	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	54	21.0	20.03	0	0.03	1:1	1.650	1.250	2.063	
1745.00	349000	Mid	top	0 mm	NR Band n66	F	N/A	26549	40	CP-OFDM	QPSK	1	1	21.0	20.05	0	0.02	1:1	1.710	1.245	2.129	A84

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

Table 11-84
NR Band n25 Phablet 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.																						
1882.50	376500	Mid	bottom	0 mm	NR Band n25	A	65	25772	40	DFT-S-OFDM	QPSK	1	1	20.0	18.97	0	-0.06	1:1	1.340	1.268	1.699		
1882.50	376500	Mid	bottom	0 mm	NR Band n25	A	65	25772	40	DFT-S-OFDM	QPSK	108	0	20.0	18.98	0	-0.01	1:1	1.340	1.265	1.695		
1882.50	376500	Mid	bottom	0 mm	NR Band n25	A	65	25772	40	CP-OFDM	QPSK	1	1	20.0	18.98	0	-0.02	1:1	1.350	1.265	1.708		
1882.50	376500	Mid	top	0 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	1	108	20.5	19.48	0	-0.02	1:1	2.140	1.265	2.707		
1882.50	376500	Mid	top	0 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	108	108	20.5	19.31	0	0.00	1:1	1.940	1.315	2.551		
1882.50	376500	Mid	top	0 mm	NR Band n25	F	N/A	26549	40	DFT-S-OFDM	QPSK	216	0	20.5	19.28	0	-0.01	1:1	2.020	1.324	2.674		
1882.50	376500	Mid	top	0 mm	NR Band n25	F	N/A	26549	40	CP-OFDM	QPSK	1	1	20.5	19.13	0	-0.03	1:1	2.160	1.371	2.961	A85	
1882.50	376500	Mid	top	0 mm	NR Band n25	F	N/A	26549	40	CP-OFDM	QPSK	1	1	20.5	19.13	0	0.01	1:1	2.150	1.371	2.948		
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 represents variability measurement.

Table 11-85
NR Band n30 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
2310.00	462000	Mid	bottom	0 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	1	1	18.0	17.31	0	0.00	1:1	0.482	1.172	0.565	
2310.00	462000	Mid	bottom	0 mm	NR Band n30	A	26549	10	DFT-S-OFDM	QPSK	25	14	18.0	17.27	0	-0.01	1:1	0.482	1.183	0.570	
2310.00	462000	Mid	bottom	0 mm	NR Band n30	A	26549	10	CP-OFDM	QPSK	1	1	18.0	17.38	0	-0.01	1:1	0.485	1.153	0.559	A86
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 11-86
NR Band n41 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
2592.99	518598	Mid	back	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.05	1:1	1.160	1.143	1.326	A87
2592.99	518598	Mid	back	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	-0.06	1:1	1.150	1.164	1.339	
2592.99	518598	Mid	back	0 mm	NR Band n41	B	37611	100	CP-OFDM	QPSK	1	1	20.0	19.09	0	-0.01	1:1	1.110	1.233	1.369	
2592.99	518598	Mid	front	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.08	1:1	0.738	1.143	0.844	
2592.99	518598	Mid	front	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	-0.02	1:1	0.719	1.164	0.837	
2592.99	518598	Mid	bottom	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.02	1:1	0.966	1.143	1.104	
2592.99	518598	Mid	bottom	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.03	1:1	0.898	1.164	1.045	
2592.99	518598	Mid	left	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	1	137	20.0	19.42	0	-0.02	1:1	0.305	1.143	0.349	
2592.99	518598	Mid	left	0 mm	NR Band n41	B	37611	100	DFT-S-OFDM	QPSK	135	0	20.0	19.34	0	0.00	1:1	0.325	1.164	0.378	
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 11-87
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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	26903	100	DFT-S-OFDM	QPSK	1	271	19.0	18.23	0	0.03	1:1	0.896	1.194	1.070	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	26903	100	DFT-S-OFDM	QPSK	135	0	19.0	18.22	0	-0.03	1:1	1.030	1.197	1.233	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	26903	100	DFT-S-OFDM	QPSK	270	0	19.0	18.12	0	-0.01	1:1	0.975	1.225	1.194	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	26903	100	CP-OFDM	QPSK	1	1	19.0	18.22	0	0.02	1:1	1.070	1.197	1.281	
3750.00	650000	Low	back	0 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	12.73	N/A	-0.04	1:1	1.160	1.340	1.554	
3930.00	662000	High	back	0 mm	NR Band n77	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.08	N/A	-0.12	1:1	0.847	1.236	1.047	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	D	26366	100	CW/SRS	N/A	N/A	N/A	14.0	13.00	N/A	-0.01	1:1	1.400	1.259	1.763	A88
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4 W/kg (mW/g) averaged over 10 grams												

Note: Light Purple entries indicate the additional DoD check on the worst case exposure scenario from C-band antennas.

Table 11-88
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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
5320	64	back	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	-0.02	100.00	98.09	0.664	1.005	1.019	0.680	
5320	64	front	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	-0.05	100.00	98.09	0.889	1.005	1.019	0.910	A89
5320	64	top	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	-0.02	100.00	98.09	0.246	1.005	1.019	0.252	
5320	64	right	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	0.01	100.00	98.09	0.071	1.005	1.019	0.073	
5320	64	left	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.98	17.0	16.98	0.07	100.00	98.09	0.492	1.005	1.019	0.504	
5600	120	back	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	-0.02	100.00	98.09	0.644	1.056	1.019	0.693	
5600	120	front	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	0.03	100.00	98.09	0.866	1.056	1.019	0.932	
5600	120	top	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	-0.01	100.00	98.09	0.215	1.056	1.019	0.231	
5600	120	right	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	-0.05	100.00	98.09	0.149	1.056	1.019	0.160	
5600	120	left	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.88	17.0	16.76	0.03	100.00	98.09	0.861	1.056	1.019	**0.926**	
5885	177	back	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	-0.08	100.00	98.09	0.379	1.104	1.019	0.426	
5885	177	front	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	-0.01	100.00	98.09	0.663	1.104	1.019	0.746	
5885	177	top	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	-0.04	100.00	98.09	0.174	1.104	1.019	0.196	
5885	177	right	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	-0.02	100.00	98.09	0.170	1.104	1.019	0.191	
5885	177	left	0 mm	802.11n	OFDM	MIMO	29568	20	13	17.0	16.84	17.0	16.57	-0.02	100.00	98.09	0.713	1.104	1.019	0.802	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams				

Note: To achieve the 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

Table 11-89
WLAN MIMO Phablet SAR during Conditions with 5G

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]	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
5290	58	back	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	-0.06	100.00	92.36	0.317	1.138	1.083	0.391	
5290	58	front	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	-0.01	100.00	92.36	0.401	1.138	1.083	0.494	
5290	58	top	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	0.09	100.00	92.36	0.061	1.138	1.083	0.075	
5290	58	right	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	0.03	100.00	92.36	0.035	1.138	1.083	0.043	
5290	58	left	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.44	14.0	13.63	-0.02	100.00	92.36	0.260	1.138	1.083	0.320	
5610	122	back	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	-0.10	100.00	92.36	0.367	1.119	1.083	0.445	
5610	122	front	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	0.05	100.00	92.36	0.392	1.119	1.083	0.475	
5610	122	top	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	-0.03	100.00	92.36	0.076	1.119	1.083	0.092	
5610	122	right	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	-0.04	100.00	92.36	0.051	1.119	1.083	0.062	
5610	122	left	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.51	14.0	13.89	0.03	100.00	92.36	0.427	1.119	1.083	0.517	
5855	171	back	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.27	14.0	13.89	-0.06	100.00	92.36	0.287	1.183	1.083	0.368	
5855	171	front	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.27	14.0	13.89	-0.05	100.00	92.36	0.385	1.183	1.083	0.493	
5855	171	top	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.27	14.0	13.89	-0.14	100.00	92.36	0.091	1.183	1.083	0.117	
5855	171	right	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.27	14.0	13.89	-0.06	100.00	92.36	0.055	1.183	1.083	0.070	
5855	171	left	0 mm	802.11ac	OFDM	MIMO	37306	80	58.5	14.0	13.27	14.0	13.89	-0.08	100.00	92.36	0.442	1.183	1.083	0.566	
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 17.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14.0 dBm.

Table 11-90
DSS Phablet 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	Maximum Duty Cycle (%)	Duty Cycle (%)	SAR (10g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
2402	0	back	0 mm	Bluetooth	FHSS	2	29568	1	14.8	14.17	-0.05	78.00	76.80	0.186	1.156	1.016	0.218	
2402	0	front	0 mm	Bluetooth	FHSS	2	29568	1	14.8	14.17	0.02	78.00	76.80	0.430	1.156	1.016	**0.505**	A90
2402	0	top	0 mm	Bluetooth	FHSS	2	29568	1	14.8	14.17	0.03	78.00	76.80	0.002	1.156	1.016	0.002	
2402	0	right	0 mm	Bluetooth	FHSS	2	29568	1	14.8	14.17	-0.03	78.00	76.80	0.074	1.156	1.016	0.087	

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 11-91
NFC Phablet SAR

MEASUREMENT RESULTS									
FREQUENCY		Side	Spacing	Mode	Type	Device Serial Number	Power Drift	SAR (10g)	Plot #
MHz	Ch.							(W/kg)	
13.56	N/A	back	0 mm	NFC	B	26267	-0.02	**0.024**	A91
13.56	N/A	front	0 mm	NFC	B	26267	0.06	0.000	
13.56	N/A	right	0 mm	NFC	B	26267	0.05	0.000	
13.56	N/A	left	0 mm	NFC	B	26267	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 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 10 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 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" since the display diagonal dimension is > 150 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 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 WWAN 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).

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 B41/48, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. 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.
8. For LTE Band 5, LTE Band 66, LTE Band 48, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.
9. This device supports LTE Band 41 ULCA active with Power Class 2. Highest SAR test configuration for each exposure condition in Power Class 3 with ULCA active was repeated with Power Class 2 with ULCA active.

NR Notes:

1. NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Due to test setup limitations, SAR testing for NR TDD was performed using test mode software to establish the connection.
3. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).

4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
6. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n77 C-Band SAR measured at the highest output power channel in a given a test configuration was > 0.4 W/kg for 1g evaluations and > 1 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
7. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n41/48 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations and > 1.5 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
8. SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.
9. For final implementation, NR Band n41, n48 and n77 slot configuration is synchronized using maximum duty cycle of 100%. SAR testing was performed using FTM mode with a 100% duty cycle applied to match final duty cycle.
10. Per FCC Guidance, C-Band for NR n77 (3705 – 3975 MHz) was fully tested according to FCC procedures. For each exposure condition and antenna, the worst-case position was additionally evaluated for the NR n77 DoD (3455.01 – 3544.98 MHz).

WLAN Notes:

1. For held-to-ear, hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 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 Multi-TX and Antenna SAR Considerations Appendix for complete analysis.
5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

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 78% transmission duty factor to determine compliance. See RF Conducted Power Section for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BDR tethering applications.

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
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1745.00	349000	NR Band n66, 40 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	bottom	10 mm	A	1.120	1.100	1.02	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-2
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)	
1900	1882.50	376500	NR Band n25, 40 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	top	0 mm	F	2.160	2.150	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									

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 Head SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	846.60	Frequency (MHz)	1712.40	Frequency (MHz)	1852.40
Channel	4233	Channel	1312	Channel	9262
Measured 1g SAR (W/kg)	0.276	Measured 1g SAR (W/kg)	0.178	Measured 1g SAR (W/kg)	0.225
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 3)	0.331	Auto-tune (State 135)	0.193	Auto-tune (State 71)	0.238
Default (State 0)	0.341	Default (State 96)	0.192	Default (State 96)	0.186
State 0	0.341	State 1	0.100	State 2	0.216
State 3	0.348	State 66	0.139	State 65	0.229
State 67	0.201	State 69	0.135	State 70	0.229
State 68	0.198	State 134	0.149	State 71	0.229
State 135	0.064	State 135	0.190	State 133	0.219
State 136	0.322	State 137	0.076	State 138	0.093

Table 13-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data							
LTE B71		LTE B12		LTE B13		LTE B14	
QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.175	Measured 1g SAR (W/kg)	0.206	Measured 1g SAR (W/kg)	0.273	Measured 1g SAR (W/kg)	0.283
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 130)	0.216	Auto-tune (State 132)	0.259	Auto-tune (State 1)	0.343	Auto-tune (State 132)	0.348
Default (State 0)	0.166	Default (State 0)	0.241	Default (State 0)	0.343	Default (State 0)	0.356
State 3	0.112	State 4	0.196	State 1	0.353	State 6	0.352
State 10	0.043	State 63	0.003	State 5	0.347	State 61	0.188
State 64	0.216	State 72	0.211	State 12	0.209	State 74	0.188
State 71	0.162	State 78	0.041	State 62	0.044	State 125	0.031
State 130	0.215	State 131	0.053	State 73	0.200	State 129	0.107
State 132	0.165	State 132	0.240	State 130	0.206	State 132	0.358
State 139	0.114	State 140	0.198	State 141	0.137	State 142	0.031

Supplemental Head SAR Data							
LTE B26		LTE B5		LTE B66		LTE B25	
QPSK, 15 MHz Bandwidth, 1 RB, 74 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	831.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1860.00
Channel	26865	Channel	20525	Channel	132322	Channel	26140
Measured 1g SAR (W/kg)	0.232	Measured 1g SAR (W/kg)	0.216	Measured 1g SAR (W/kg)	0.274	Measured 1g SAR (W/kg)	0.228
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 140)	0.292	Auto-tune (State 140)	0.230	Auto-tune (State 135)	0.281	Auto-tune (State 108)	0.251
Default (State 0)	0.297	Default (State 0)	0.199	Default (State 96)	0.290	Default (State 96)	0.287
State 7	0.302	State 0	0.199	State 9	0.145	State 11	0.240
State 60	0.142	State 8	0.194	State 58	0.083	State 56	0.175
State 75	0.077	State 59	0.120	State 77	0.120	State 79	0.159
State 128	0.297	State 76	0.038	State 126	0.052	State 108	0.263
State 140	0.301	State 127	0.002	State 135	0.291	State 124	0.166
State 141	0.113	State 140	0.222	State 139	0.175	State 137	0.203

Table 13-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data									
NR Band n71		NR Band n12		NR Band n26		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 104 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 108 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 54 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	831.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	136100	Channel	141500	Channel	166300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.161	Measured 1g SAR (W/kg)	0.196	Measured 1g SAR (W/kg)	0.182	Measured 1g SAR (W/kg)	0.249	Measured 1g SAR (W/kg)	0.244
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 134)	0.194	Auto-tune (State 132)	0.245	Auto-tune (State 140)	0.187	Auto-tune (State 135)	0.271	Auto-tune (State 64)	0.267
Default (State 0)	0.175	Default (State 0)	0.237	Default (State 0)	0.164	Default (State 96)	0.273	Default (State 96)	0.269
State 13	0.016	State 14	0.039	State 15	0.026	State 16	0.071	State 17	0.100
State 54	0.057	State 53	0.089	State 52	0.091	State 51	0.097	State 50	0.128
State 81	0.171	State 82	0.204	State 83	0.089	State 84	0.067	State 64	0.287
State 122	0.051	State 121	0.133	State 120	0.103	State 119	0.117	State 85	0.041
State 134	0.205	State 132	0.235	State 133	0.037	State 132	0.149	State 118	0.067
State 135	0.084	State 134	0.178	State 140	0.181	State 135	0.240	State 131	0.097

Table 13-4
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	846.60	Frequency (MHz)	1752.60	Frequency (MHz)	1852.40
Channel	4233	Channel	1513	Channel	9262
Measured 1g SAR (W/kg)	0.459	Measured 1g SAR (W/kg)	0.850	Measured 1g SAR (W/kg)	0.428
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 140)	0.688	Auto-tune (State 135)	0.939	Auto-tune (State 47)	0.468
Default (State 0)	0.696	Default (State 96)	0.921	Default (State 96)	0.228
State 18	0.660	State 19	0.180	State 20	0.123
State 49	0.393	State 48	0.399	State 47	0.431
State 86	0.330	State 87	0.217	State 88	0.198
State 117	0.333	State 116	0.450	State 111	0.328
State 130	0.402	State 129	0.852	State 115	0.270
State 140	0.696	State 135	0.919	State 128	0.364

Table 13-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data							
LTE B71		LTE B12		LTE B13		LTE B14	
QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.359	Measured 1g SAR (W/kg)	0.466	Measured 1g SAR (W/kg)	0.517	Measured 1g SAR (W/kg)	0.497
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 130)	0.584	Auto-tune (State 132)	0.700	Auto-tune (State 6)	0.810	Auto-tune (State 1)	0.753
Default (State 0)	0.458	Default (State 0)	0.690	Default (State 0)	0.828	Default (State 0)	0.755
State 21	0.203	State 22	0.419	State 6	0.839	State 1	0.764
State 46	0.006	State 45	0.037	State 23	0.660	State 24	0.526
State 89	0.252	State 90	0.335	State 44	0.148	State 43	0.205
State 114	0.317	State 113	0.330	State 91	0.181	State 92	0.110
State 127	0.009	State 126	0.029	State 112	0.182	State 111	0.009
State 130	0.562	State 132	0.690	State 125	0.059	State 124	0.107

Supplemental Body SAR Data							
LTE B26		LTE B5		LTE B66		LTE B25	
QPSK, 15 MHz Bandwidth, 1 RB, 74 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 100 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	831.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1905.00
Channel	26865	Channel	20525	Channel	132322	Channel	26590
Measured 1g SAR (W/kg)	0.570	Measured 1g SAR (W/kg)	0.537	Measured 1g SAR (W/kg)	0.949	Measured 1g SAR (W/kg)	0.702
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 140)	0.831	Auto-tune (State 140)	0.852	Auto-tune (State 32)	1.060	Auto-tune (State 64)	0.831
Default (State 0)	0.759	Default (State 0)	0.745	Default (State 96)	1.060	Default (State 96)	0.722
State 25	0.553	State 26	0.431	State 27	0.128	State 28	0.157
State 42	0.526	State 41	0.531	State 32	1.040	State 39	0.813
State 93	0.044	State 94	0.024	State 40	0.948	State 64	0.853
State 110	0.022	State 109	0.116	State 95	0.078	State 96	0.722
State 123	0.259	State 122	0.378	State 108	0.832	State 107	0.804
State 140	0.806	State 140	0.824	State 121	0.51	State 120	0.544

Table 13-6
NR Supplemental Body SAR Data

Supplemental Body SAR Data									
NR Band n71		NR Band n12		NR Band n26		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 104 RB Offset		CP-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	831.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	136100	Channel	141500	Channel	166300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.384	Measured 1g SAR (W/kg)	0.443	Measured 1g SAR (W/kg)	0.418	Measured 1g SAR (W/kg)	1.120	Measured 1g SAR (W/kg)	0.440
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 65)	0.580	Auto-tune (State 132)	0.678	Auto-tune (State 17)	0.445	Auto-tune (State 32)	1.270	Auto-tune (State 96)	0.566
Default (State 0)	0.576	Default (State 0)	0.673	Default (State 0)	0.414	Default (State 96)	1.200	Default (State 96)	0.551
State 29	0.052	State 30	0.064	State 17	0.494	State 0	0.820	State 33	0.556
State 38	0.158	State 37	0.215	State 31	0.033	State 1	0.759	State 34	0.557
State 65	0.634	State 57	0.187	State 36	0.180	State 2	0.754	State 96	0.551
State 80	0.617	State 98	0.267	State 55	0.283	State 3	0.746	State 101	0.524
State 97	0.285	State 105	0.319	State 99	0.134	State 4	0.726	State 102	0.528
State 106	0.154	State 118	0.385	State 104	0.301	State 5	0.717	State 115	0.409
State 119	0.315	State 132	0.671	State 117	0.178	State 6	0.697	State 138	0.234
						State 7	0.688		
						State 8	0.656		
						State 9	0.625		
						State 10	0.581		
						State 11	0.521		
						State 12	0.435		
						State 13	0.383		
						State 14	0.312		
						State 15	0.228		
						State 16	0.290		
						State 17	0.252		
						State 18	0.249		
						State 19	0.244		
						State 20	0.235		
						State 21	0.228		
						State 22	0.219		
						State 23	0.217		
						State 24	0.196		
						State 25	0.182		
						State 26	0.162		
						State 27	0.135		
						State 28	0.105		
						State 29	0.086		
						State 30	0.067		
						State 31	0.045		
						State 32	1.190		
						State 33	1.140		
						State 34	1.140		
						State 35	1.130		
						State 36	1.120		
						State 37	1.110		
						State 38	1.090		
						State 39	1.090		
						State 40	1.050		
						State 41	1.010		
						State 42	0.955		
						State 43	0.865		
						State 44	0.726		
						State 45	0.626		
						State 46	0.500		
						State 47	0.351		
						State 48	0.565		
						State 49	0.505		
						State 50	0.498		
						State 51	0.491		
						State 52	0.479		
						State 53	0.464		
						State 54	0.453		
						State 55	0.447		
						State 56	0.417		
						State 57	0.394		
						State 58	0.356		
						State 59	0.310		
						State 60	0.252		
						State 61	0.212		
						State 62	0.170		
						State 63	0.120		
						State 64	1.050		
						State 65	1.010		
						State 66	1.010		
						State 67	1.000		
						State 68	0.993		
						State 69	0.981		
						State 70	0.973		
						State 71	0.969		
						State 72	0.947		
						State 73	0.922		
						State 74	0.879		
						State 75	0.816		
						State 76	0.724		
						State 77	0.656		
						State 78	0.563		
						State 79	0.438		
						State 80	0.360		
						State 81	0.338		
						State 82	0.315		
						State 83	0.327		
						State 84	0.321		
						State 85	0.296		
						State 86	0.307		
						State 87	0.305		
						State 88	0.289		
						State 89	0.275		
						State 90	0.254		
						State 91	0.212		
						State 92	0.186		
						State 93	0.160		
						State 94	0.129		
						State 95	0.094		
						State 96	1.200		
						State 97	1.170		
						State 98	1.170		
						State 99	1.170		
						State 100	1.160		
						State 101	1.160		
						State 102	1.160		
						State 103	1.160		
						State 104	1.140		
						State 105	1.130		
						State 106	1.100		
						State 107	1.050		
						State 108	0.965		
						State 109	0.887		
						State 110	0.770		
						State 111	0.599		
						State 112	0.723		
						State 113	0.678		
						State 114	0.676		
						State 115	0.670		
						State 116	0.659		
						State 117	0.650		
						State 118	0.636		
						State 119	0.633		
						State 120	0.606		
						State 121	0.584		
						State 122	0.547		
						State 123	0.498		
						State 124	0.430		
						State 125	0.380		
						State 126	0.317		
						State 127	0.240		
						State 128	0.815		
						State 129	1.180		
						State 130	1.070		
						State 131	1.190		
						State 132	0.816		
						State 133	1.170		
						State 134	1.060		
						State 135	1.190		
						State 136	0.295		
						State 137	0.574		
						State 138	0.332		
						State 139	0.721		
						State 140	0.292		
						State 141	0.531		
						State 142	0.353		
						State 143	0.715		

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. When ULCA is active, the linearity between the Power Class 2 with ULCA active and Power Class 3 with ULCA active 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 Antenna B Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.00	26.60
Measured Output Power (dBm)	23.85	25.56
Measured SAR (W/kg)	0.056	0.056
Measured Power (mW)	242.66	359.75
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	153.60	155.77
% deviation from expected linearity		-1.39%

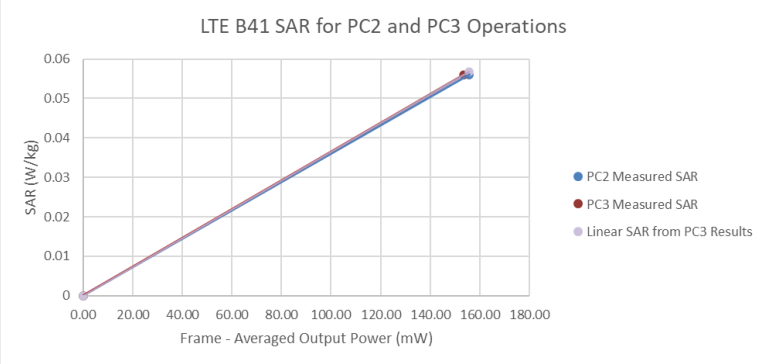

Figure 13-1
LTE Band 41 Antenna B Head Linearity

Table 13-8
LTE Band 41 Antenna B ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.00	26.60
Measured Output Power (dBm)	23.87	25.93
Measured SAR (W/kg)	0.058	0.061
Measured Power (mW)	243.78	391.74
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	154.31	169.62
% deviation from expected linearity		-4.32%

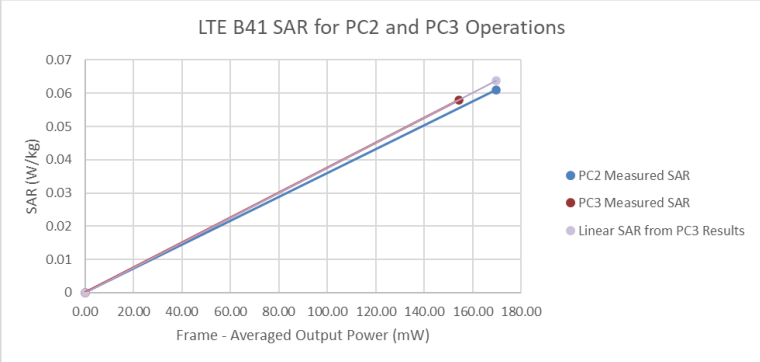

Figure 13-2
LTE Band 41 Antenna B ULCA Head Linearity

Table 13-9
LTE Band 41 Antenna F Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	17.50	19.10
Measured Output Power (dBm)	16.69	18.62
Measured SAR (W/kg)	0.623	0.671
Measured Power (mW)	46.67	72.78
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	29.54	31.51
% deviation from expected linearity		0.96%

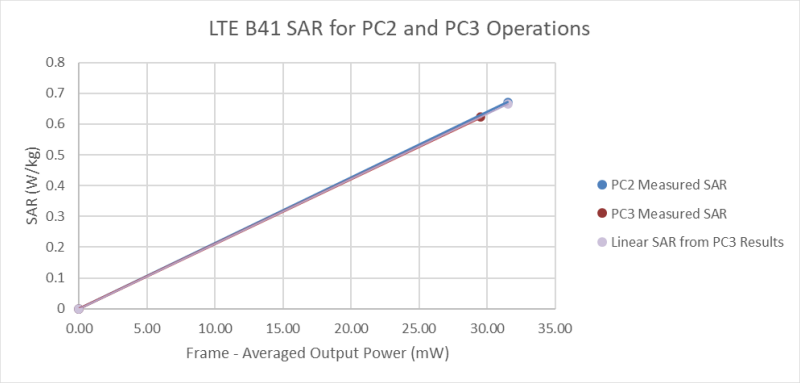

Figure 13-3
LTE Band 41 Antenna F Head Linearity

Table 13-10
LTE Band 41 Antenna F ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	17.50	19.10
Measured Output Power (dBm)	16.65	18.63
Measured SAR (W/kg)	0.627	0.683
Measured Power (mW)	46.24	72.95
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	29.27	31.59
% deviation from expected linearity		0.94%

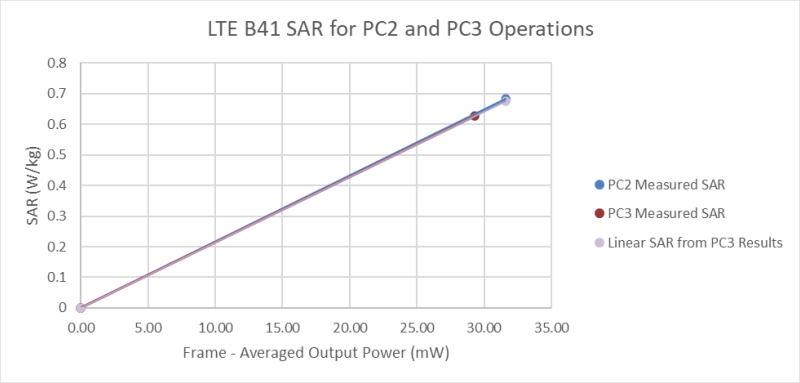

Figure 13-4
LTE Band 41 Antenna F ULCA Head Linearity

Table 13-11
LTE Band 41 Antenna B Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.18	23.16
Measured SAR (W/kg)	0.387	0.431
Measured Power (mW)	131.22	207.01
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	83.06	89.64
% deviation from expected linearity		3.20%

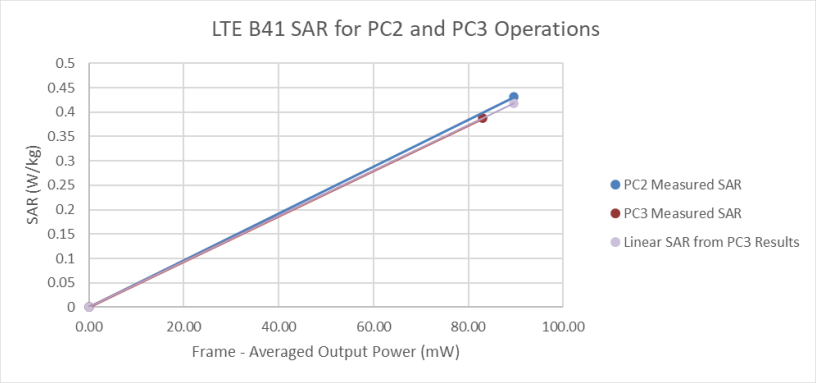

Figure 13-5
LTE Band 41 Antenna B Body-Worn Linearity

Table 13-12
LTE Band 41 Antenna B ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.03	23.06
Measured SAR (W/kg)	0.380	0.420
Measured Power (mW)	126.77	202.30
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	80.24	87.60
% deviation from expected linearity		1.25%

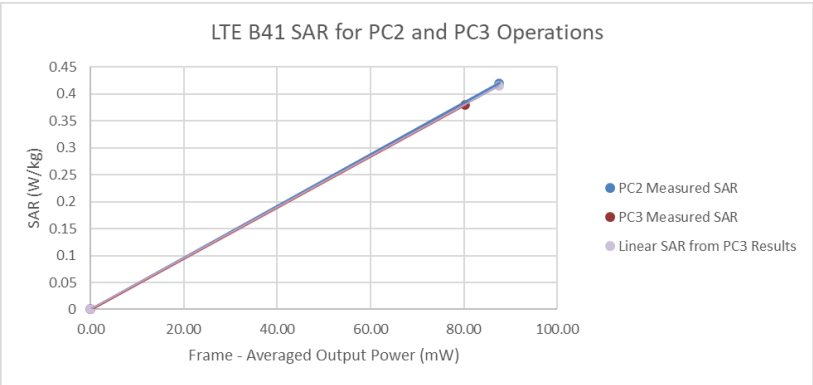

Figure 13-6
LTE Band 41 Antenna B ULCA Body-Worn Linearity

Table 13-13
LTE Band 41 Antenna F Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.13	21.87
Measured SAR (W/kg)	0.132	0.117
Measured Power (mW)	129.72	153.82
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	82.11	66.60
% deviation from expected linearity		9.28%

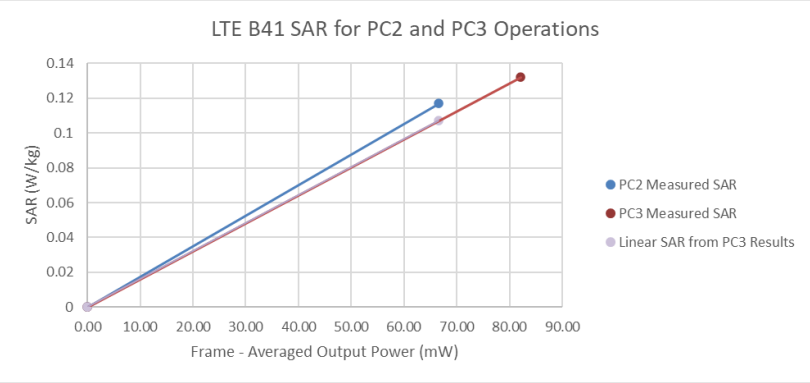

Figure 13-7
LTE Band 41 Antenna F Body-Worn Linearity

Table 13-14
LTE Band 41 ULCA Antenna F Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	20.87	21.96
Measured SAR (W/kg)	0.130	0.117
Measured Power (mW)	122.18	157.04
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	77.34	68.00
% deviation from expected linearity		2.37%

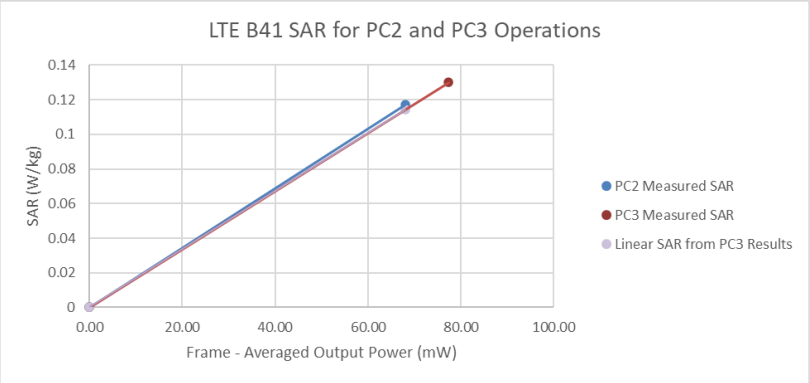

Figure 13-8
LTE Band 41 ULCA Antenna F Body-Worn Linearity

Table 13-15
LTE Band 41 Antenna B Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.03	23.00
Measured SAR (W/kg)	0.741	0.776
Measured Power (mW)	126.77	199.53
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	80.24	86.39
% deviation from expected linearity		-2.73%

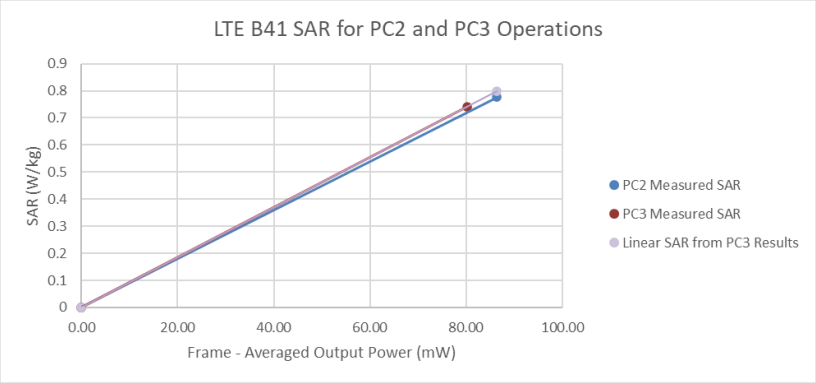

Figure 13-9
LTE Band 41 Antenna B Hotspot Linearity

Table 13-16
LTE Band 41 Antenna B ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	20.82	22.90
Measured SAR (W/kg)	0.732	0.747
Measured Power (mW)	120.78	194.98
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	76.45	84.43
% deviation from expected linearity		-7.59%

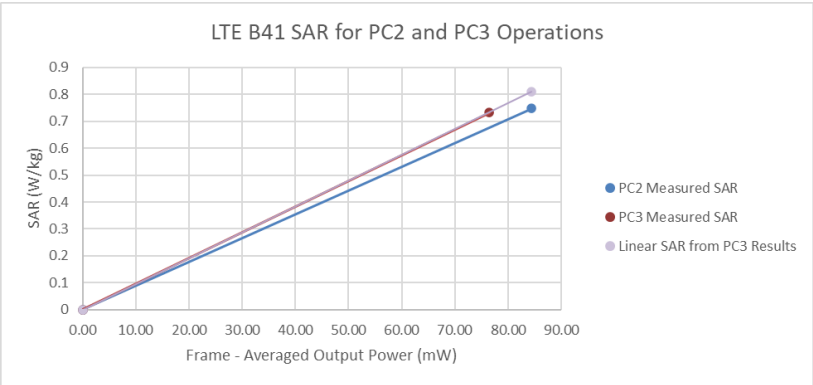

Figure 13-10
LTE Band 41 Antenna B ULCA Hotspot Linearity

Table 13-17
LTE Band 41 Antenna F Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.13	21.87
Measured SAR (W/kg)	0.386	0.321
Measured Power (mW)	129.72	153.82
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	82.11	66.60
% deviation from expected linearity		2.53%

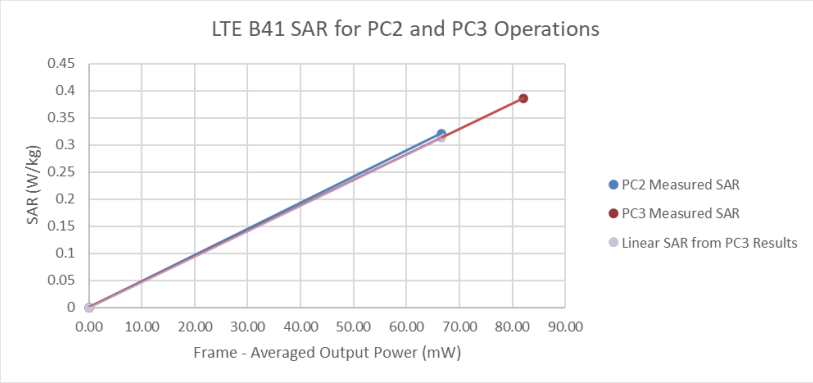

Figure 13-11
LTE Band 41 Antenna F Hotspot Linearity

Table 13-18
LTE Band 41 Antenna F ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	20.87	21.96
Measured SAR (W/kg)	0.372	0.330
Measured Power (mW)	122.18	157.04
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	77.34	68.00
% deviation from expected linearity		0.90%

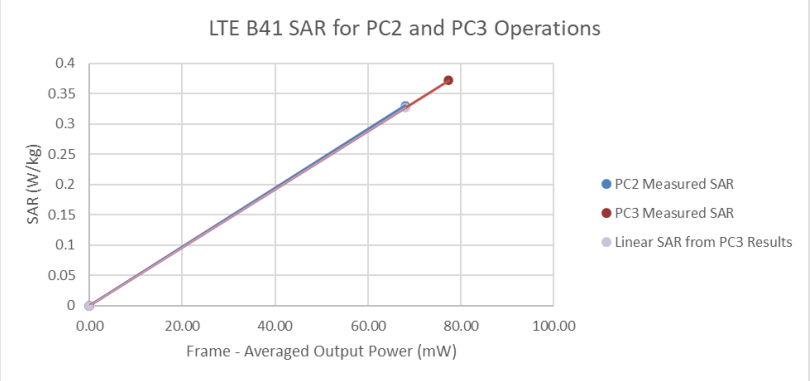

Figure 13-12
LTE Band 41 Antenna F ULCA Hotspot Linearity

Table 13-19
LTE Band 41 Antenna B Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.05	23.14
Measured SAR (W/kg)	1.730	1.840
Measured Power (mW)	127.35	206.06
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	80.61	89.23
% deviation from expected linearity		-3.91%

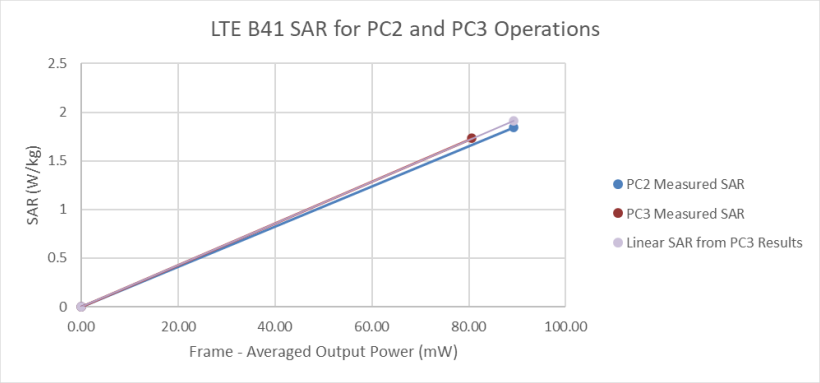

Figure 13-13
LTE Band 41 Antenna B Phablet Linearity

Table 13-20
LTE Band 41 Antenna B ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.0	23.6
Measured Output Power (dBm)	20.79	22.90
Measured SAR (W/kg)	1.710	1.810
Measured Power (mW)	119.95	194.98
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	75.93	84.43
% deviation from expected linearity		-4.81%

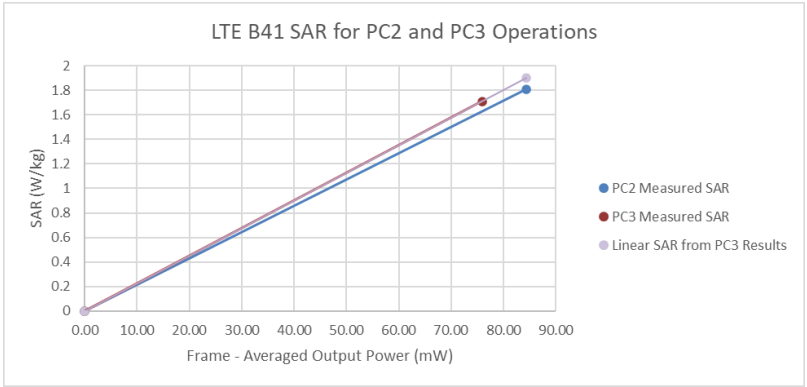

Figure 13-14
LTE Band 41 Antenna B ULCA Phablet Linearity

14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	1/18/2023	Annual	1/18/2024	MY47270002
Agilent	E4438C	ESG Vector Signal Generator	4/25/2023	Annual	4/25/2024	US41460739
Agilent	N5182A	MXG Vector Signal Generator	11/30/2022	Annual	11/30/2023	MY47420603
Agilent	N5182A	MXG Vector Signal Generator	4/1/2023	Annual	4/1/2024	MY47420837
Agilent	N5182A	MXG Vector Signal Generator	7/4/2022	Annual	7/4/2023	MY48180366
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/12/2023	Annual	1/12/2024	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E5515C	Wireless Communications Test Set	1/12/2023	Annual	1/12/2024	MY50262130
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	1S51G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	1S51G6	Amplifier	CBT	N/A	CBT	343972
Amplifier Research	1S51G6	Amplifier	CBT	N/A	CBT	433971
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	ML2496A	Power Meter	8/16/2022	Annual	8/16/2023	1351001
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA2411B	Pulse Power Sensor	1/10/2023	Annual	1/10/2024	1315051
Anritsu	MA2411B	Pulse Power Sensor	10/21/2022	Annual	10/21/2023	1207364
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	1/10/2023	Annual	1/10/2024	6201524637
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/31/2023	Annual	3/31/2024	6201381794
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	11/28/2022	Annual	11/28/2023	6262150047
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	6/27/2022	Annual	6/27/2023	6261895213
Anritsu	MT8000A	Radio Communication Test Station	3/1/2023	Annual	3/1/2024	6272337419
Anritsu	MT8000A	Radio Communication Test Station	6/15/2023	Annual	6/15/2024	6261914237
Anritsu	MT8000A	Radio Communication Test Station	2/9/2023	Annual	2/9/2024	6272337408
Anritsu	MA24106A	USB Power Sensor	2/9/2023	Annual	2/9/2024	1520505
Anritsu	MA24106A	USB Power Sensor	4/21/2023	Annual	4/21/2024	1244515
Anritsu	MA24106A	USB Power Sensor	1/13/2023	Annual	1/13/2024	1344557
Mini-Circuits	PWR-4GHS	USB Power Sensor	11/11/2022	Annual	11/11/2023	11710030062
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774678
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Control Company	4352	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774675
Control Company	4040	Therm./ Clock/ Humidity Monitor	1/17/2023	Annual	1/17/2024	160574418
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514925
Mitutoyo	500-196-30	CD-6"ASX 6Inch Digital Caliper	2/16/2022	Triennial	2/16/2025	A20238413
Keysight Technologies	N6705B	DC Power Analyzer	5/5/2021	Triennial	5/5/2024	MY53004059
Keysight Technologies	N9020A	MXA Signal Analyzer	3/15/2023	Annual	3/15/2024	US46470561
Keysight Technologies	N9020A	MXA Signal Analyzer	4/6/2023	Annual	4/6/2024	MY48010233
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	31634
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
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	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2111
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	PE5011-1	Torque Wrench	12/21/2021	Biennial	12/21/2023	82475
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	3/8/2023	Annual	3/8/2024	128635
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/5/2023	Annual	4/5/2024	167284
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/12/2023	Annual	1/12/2024	150117
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	2/17/2023	Annual	2/17/2024	164948
SPEAG	DAK-3.5	Dielectric Assessment Kit	12/15/2022	Annual	12/15/2023	1278
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/15/2022	Annual	8/15/2023	1041
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	7/4/2023	Annual	7/4/2024	1039
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/13/2023	Annual	3/13/2024	1102
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1379
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1243
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237
SPEAG	CLA-13	Confined Loop Antenna	9/13/2022	Annual	9/13/2023	1002
SPEAG	D750V3	750 MHz SAR Dipole	2/13/2023	Annual	2/13/2024	1046
SPEAG	D750V3	750 MHz SAR Dipole	5/11/2023	Annual	5/11/2024	1003
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Triennial	1/21/2024	4d132
SPEAG	D835V2	835 MHz SAR Dipole	4/13/2023	Annual	4/13/2024	4d119
SPEAG	D1750V2	1750 MHz SAR Dipole	1/18/2022	Biennial	1/18/2024	1148
SPEAG	D1750V2	1750 MHz SAR Dipole	4/19/2023	Annual	4/19/2024	1051
SPEAG	D1750V2	1750 MHz SAR Dipole	5/17/2023	Annual	5/17/2024	1092
SPEAG	D1900V2	1900 MHz SAR Dipole	9/21/2021	Biennial	9/21/2023	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	8/8/2022	Annual	8/8/2023	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	4/18/2023	Annual	4/18/2024	5d141
SPEAG	D2300V2	2300 MHz SAR Dipole	8/25/2022	Annual	8/25/2023	1073
SPEAG	D2450V2	2450 MHz SAR Dipole	11/25/2021	Biennial	11/25/2023	981
SPEAG	D2450V2	2450 MHz SAR Dipole	5/11/2023	Annual	5/11/2024	945
SPEAG	D2600V2	2600 MHz SAR Dipole	11/15/2022	Annual	11/15/2023	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	6/12/2023	Annual	6/12/2024	1009
SPEAG	D2600V2	2600 MHz SAR Dipole	9/9/2020	Triennial	9/9/2023	1069
SPEAG	D3500V2	3500 MHz SAR Dipole	1/10/2023	Annual	1/10/2024	1097
SPEAG	D3500V2	3500 MHz SAR Dipole	8/17/2022	Annual	8/17/2023	1055
SPEAG	D3700V2	3700 MHz SAR Dipole	1/19/2021	Triennial	1/19/2024	1018
SPEAG	D3700V2	3700 MHz SAR Dipole	10/21/2022	Annual	10/21/2023	1002
SPEAG	D3900V2	3900 MHz SAR Dipole	11/13/2020	Triennial	11/13/2023	1062
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/18/2023	Annual	1/18/2024	1191
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/18/2022	Annual	7/18/2023	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/17/2023	Annual	1/17/2024	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/18/2022	Annual	7/18/2023	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/18/2023	Annual	1/18/2024	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/10/2022	Annual	11/10/2023	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2023	Annual	6/15/2024	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/16/2023	Annual	2/16/2024	1645
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/20/2023	Annual	1/20/2024	1466
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/17/2022	Annual	10/17/2023	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/16/2023	Annual	3/16/2024	1652
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/13/2023	Annual	3/13/2024	1408
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/17/2023	Annual	1/17/2024	793
SPEAG	EX3DV4	SAR Probe	7/19/2022	Annual	7/19/2023	7410
SPEAG	EX3DV4	SAR Probe	1/11/2023	Annual	1/11/2024	7570
SPEAG	EX3DV4	SAR Probe	7/18/2022	Annual	7/18/2023	7406
SPEAG	EX3DV4	SAR Probe	1/11/2023	Annual	1/11/2024	7713
SPEAG	EX3DV4	SAR Probe	11/11/2022	Annual	11/11/2023	7551
SPEAG	EX3DV4	SAR Probe	6/15/2023	Annual	6/15/2024	7409
SPEAG	EX3DV4	SAR Probe	2/8/2023	Annual	2/8/2024	7417
SPEAG	EX3DV4	SAR Probe	2/10/2023	Annual	2/10/2024	7640
SPEAG	EX3DV4	SAR Probe	1/12/2023	Annual	1/12/2024	7565
SPEAG	EX3DV4	SAR Probe	10/19/2022	Annual	10/19/2023	7547
SPEAG	EX3DV4	SAR Probe	3/16/2023	Annual	3/16/2024	7637
SPEAG	EX3DV4	SAR Probe	3/16/2023	Annual	3/16/2024	7638
SPEAG	EX3DV4	SAR Probe	1/17/2023	Annual	1/17/2024	3837

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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