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SAR EVALUATION REPORT

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

Date of Testing:
09/21/21 - 12/06/21
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2109090102-01(Rev1).A3L

FCC ID: **A3LSMS908U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-S908U, SM-S908U1

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	0.13	0.19	1.14	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.36	1.18	3.06
PCE	UMTS 850	826.40 - 846.60 MHz	0.23	0.36	0.74	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.13	0.79	1.19	3.10
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.11	0.69	0.97	2.93
PCE	LTE Band 71	665.5 - 695.5 MHz	0.12	0.27	0.41	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.18	0.27	0.44	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.22	0.36	0.66	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.25	0.37	0.79	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.33	0.41	0.84	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.30	0.43	0.88	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.15	0.84	1.14	3.06
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	0.13	0.98	0.99	3.10
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	< 0.1	0.58	1.07	2.85
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.37	1.03	2.77
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.72	0.20	0.60	2.47
PCE	LTE Band 41	2498.5 - 2687.5 MHz	< 0.1	0.37	1.06	2.24
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.20	0.33	0.55	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.23	0.34	0.49	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.35	0.50	1.05	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	1.17	0.88	0.91	3.08
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.92	0.71	0.93	2.89
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	0.75	0.64	1.22	2.78
PCE	NR Band n7	2502.5 - 2567.5 MHz	< 0.1	0.47	0.92	2.03
PCE	NR Band n41	2506.02 - 2679.99 MHz	1.18	0.12	0.41	2.67
PCE	NR Band n38	2575 - 2615 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n77 DoD	3455.01 - 3544.98 MHz	0.63	0.12	0.46	1.84
PCE	NR Band n77	3705 - 3975 MHz	0.56	0.13	0.38	1.86
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.18	< 0.1	0.21	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.14*	0.16*	N/A	0.43*
NII	U-NII-2C	5500 - 5720 MHz	0.26*	0.22*	N/A	0.85*
NII	U-NII-3	5745 - 5825 MHz	0.26*	0.25*	0.52*	N/A
NII	U-NII-4	5845 - 5850 MHz	0.17*	0.16*	N/A	0.70*
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.19	< 0.1	0.22	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.55	1.51	1.58	3.92

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

Note: This revised Test Report (S/N: 1M2109090102-01(Rev1).A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.9 of this report; for North American frequency bands only.

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

Randy Ortanez
President

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

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 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 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz
NR Band n41	Voice/Data	2506.02 - 2679.99 MHz
NR Band n38	Voice/Data	2575 - 2615 MHz
NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz
NR Band n77	Voice/Data	3705 - 3975 MHz
2.4 GHz WLAN	Voice/Data	2412 - 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 - 6525 MHz
U-NII-7	Voice/Data	6535 - 6875 MHz
U-NII-8	Voice/Data	6895 - 7115 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz
UWB	Data	6489.6 - 7987.2 MHz

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1.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. Refer to Compliance Summary document for detailed description of Qualcomm® Smart Transmit feature (report SN could be found in Section 1.11 – Bibliography).

Note that WLAN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target*, below the predefined time-averaged power limit (i.e., P_{limit} for sub-6 radio), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN could be found in Section 1.11 - Bibliography).

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target* 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.

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Exposure Senario			Body-Worn	Phablet Max	Phablet Reduced	Head	Hotspot	Earjack	Maximum Tune-Up Output Power*
Averaging Volume			1g	10g	10g	1g	1g	10g	
Spacing			15 mm	12, 8, 6, 0 mm	0 mm	0 mm	10 mm	0 mm	
DSI			0	0	1	2	3	4	
Technology/Band	Antenna	Antenna Group							Pmax
GSM 850	A	AG0	30.9		28.3	32.7	25.5	28.3	25.3
GSM 1900	A	AG0	24.9		22.7	34.5	18.5	22.7	21.6
UMTS 850	A	AG0	29.4		27.8	31.5	26.3	27.8	24.0
UMTS 1750	A	AG0	25.0		19.0	32.9	19.0	19.0	23.0
UMTS 1900	A	AG0	25.6		20.5	33.6	17.5	20.5	23.0
LTE Band 71	A	AG0	31.4		28.9	34.4	29.4	28.9	24.7
LTE Band 12	A	AG0	31.0		28.0	33.0	28.8	28.0	24.5
LTE Band 13	A	AG0	29.7		28.0	31.9	27.0	28.0	24.2
LTE Band 14	A	AG0	29.8		28.1	31.5	26.5	28.1	24.5
LTE Band 26 (Cell)	A	AG0	29.2		27.6	29.5	26.1	27.6	24.5
LTE Band 5 (Cell)	A	AG0	29.2		27.7	31.4	25.9	27.7	24.5
LTE Band 66/4 (AWS)	A	AG0	25.6		20.0	33.0	18.5	20.0	23.8
LTE Band 25/2 (PCS)	A	AG0	24.6		20.5	33.5	17.5	20.5	23.5
LTE Band 30	A	AG0	26.3		21.5	36.8	18.5	21.5	22.5
LTE Band 7	B	AG0	26.3		20.0	36.5	20.0	20.0	23.0
LTE Band 41/38 (PC3)	B	AG0	27.9		20.0	36.7	20.0	20.0	22.0
LTE Band 41 (PC2)	B	AG0	27.9		20.0	36.7	20.0	20.0	22.9
LTE Band 48	F	AG1	17.0		17.0	17.0	17.0	17.0	21.0
NR Band n71	A	AG0	26.4		27.3	32.7	28.4	27.3	24.8
NR Band n12	A	AG0	30.3		27.4	32.1	28.8	27.4	24.7
NR Band n5 (Cell)	A	AG0	28.8		26.4	30.3	25.6	26.4	24.8
NR Band n66 (AWS)	A	AG0	25.2		20.0	32.8	18.5	20.0	23.9
NR Band n66 (AWS)	J	AG1	19.0		19.0	18.0	19.0	19.0	23.5
NR Band n25/2 (PCS)	A	AG0	26.0		20.5	32.4	17.5	20.5	23.5
NR Band n25/2 (PCS)	J	AG1	19.0		19.0	18.0	19.0	19.0	23.5
NR Band n30	A	AG0	25.5		21.5	36.9	18.5	21.5	22.5
NR Band n30	J	AG1	18.0		18.0	18.0	18.0	18.0	22.0
NR Band n7	B	AG0	26.9		20.0	35.8	20.0	20.0	23.0
NR Band n41 SRS 1 (PC3)/n38	J	AG1	19.0		19.0	18.0	19.0	19.0	24.0
NR Band n41 SRS 1 (PC2)	J	AG1	19.0		19.0	18.0	19.0	19.0	26.0
NR Band n41 SRS 2 (PC3)	D	AG0	15.5		15.5	15.5	15.5	15.5	18.5
NR Band n41 SRS 2 (PC2)	D	AG0	15.5		15.5	15.5	15.5	15.5	20.5
NR Band n41 SRS 3 (PC3)	E	AG1	14.0		14.0	14.0	14.0	14.0	17.8
NR Band n41 SRS 3 (PC2)	E	AG1	14.0		14.0	14.0	14.0	14.0	19.8
NR Band n41 SRS 4 (PC3)	B	AG0	18.0		18.0	18.0	18.0	18.0	20.0
NR Band n41 SRS 4 (PC2)	B	AG0	18.0		18.0	18.0	18.0	18.0	22.0
NR Band n77 DoD SRS 1 (PC3)	F	AG1	17.0		17.0	17.0	17.0	17.0	24.0
NR Band n77 DoD SRS 1 (PC2)	F	AG1	17.0		17.0	17.0	17.0	17.0	26.0
NR Band n77 DoD SRS 2 (PC3)	I	AG1	17.0		17.0	17.0	17.0	17.0	24.0
NR Band n77 DoD SRS 2 (PC2)	I	AG1	17.0		17.0	17.0	17.0	17.0	26.0
NR Band n77 DoD SRS 3 (PC3)	D	AG0	10.5		10.5	10.5	10.5	10.5	17.5
NR Band n77 DoD SRS 3 (PC2)	D	AG0	10.5		10.5	10.5	10.5	10.5	19.5
NR Band n77 DoD SRS 4 (PC3)	C	AG0	11.0		11.0	11.0	11.0	11.0	16.5
NR Band n77 DoD SRS 4 (PC2)	C	AG0	11.0		11.0	11.0	11.0	11.0	18.5
NR Band n77 SRS 1 (PC3)	F	AG1	17.0		17.0	17.0	17.0	17.0	24.0
NR Band n77 SRS 1 (PC2)	F	AG1	17.0		17.0	17.0	17.0	17.0	26.0
NR Band n77 SRS 2 (PC3)	I	AG1	17.0		17.0	17.0	17.0	17.0	24.0
NR Band n77 SRS 2 (PC2)	I	AG1	17.0		17.0	17.0	17.0	17.0	26.0
NR Band n77 SRS 3 (PC3)	D	AG0	10.5		10.5	10.5	10.5	10.5	17.5
NR Band n77 SRS 3 (PC2)	D	AG0	10.5		10.5	10.5	10.5	10.5	19.5
NR Band n77 SRS 4 (PC3)	C	AG0	11.0		11.0	11.0	11.0	11.0	16.5
NR Band n77 SRS 4 (PC2)	C	AG0	11.0		11.0	11.0	11.0	11.0	18.5

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

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

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

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

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

1.3 Power Reduction for SAR

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

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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.

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

GSM/GPRS/EDGE 850										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	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)	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 (Phablet Reduced)	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 (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 = 3 (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
DSI = 4 (Earjack)	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
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	29.7	29.7	28.5	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	28.7	28.7	27.5	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 0 (Body-Worn or Phablet Max)	Max Allowed Power	29.7	29.7	28.5	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	28.7	28.7	27.5	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 1 (Phablet Reduced)	Max Allowed Power	29.7	29.7	28.5	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	28.7	28.7	27.5	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 2 (Head)	Max Allowed Power	29.7	29.7	28.5	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	28.7	28.7	27.5	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 3 (Hotspot)	Max Allowed Power	N/A	28.7	25.7	23.9	22.7	26.5	24.5	22.5	21.5
	Nominal	N/A	27.7	24.7	22.9	21.7	25.5	23.5	21.5	20.5
DSI = 4 (Earjack)	Max Allowed Power	29.7	29.7	28.5	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	28.7	28.7	27.5	26.0	24.0	25.5	23.5	21.5	20.5

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

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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)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Phablet Reduced)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 2 (Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 3 (Hotspot)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 4 (Earjack)	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)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 2 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 3 (Hotspot)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 4 (Earjack)	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)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max Allowed Power	21.5	20.5	20.5	20.5
	Nominal	20.5	19.5	19.5	19.5
DSI = 2 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 3 (Hotspot)	Max Allowed Power	18.5	17.5	17.5	17.5
	Nominal	17.5	16.5	16.5	16.5
DSI = 4 (Earjack)	Max Allowed Power	21.5	20.5	20.5	20.5
	Nominal	20.5	19.5	19.5	19.5

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Mode / Band	Antenna		Modulated Average Output Power (in dBm)					
			Pmax	DSI =0 (Body-Worn or Phablet Max)	DSI =1 (Phablet Reduced)	DSI =2 (Head)	DSI =3 (Hotspot)	DSI =4 (Earjack)
LTE Band 71	A	Max Allowed Power	25.7	25.7	25.7	25.7	25.7	25.7
		Nominal	24.7	24.7	24.7	24.7	24.7	24.7
LTE Band 12	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 13	A	Max Allowed Power	25.2	25.2	25.2	25.2	25.2	25.2
		Nominal	24.2	24.2	24.2	24.2	24.2	24.2
LTE Band 14	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 26 (Cell)	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 5 (Cell)	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 66 (AWS)	A	Max Allowed Power	24.8	24.8	21.0	24.8	19.5	21.0
		Nominal	23.8	23.8	20.0	23.8	18.5	20.0
LTE Band 4 (AWS)	A	Max Allowed Power	24.8	24.8	21.0	24.8	19.5	21.0
		Nominal	23.8	23.8	20.0	23.8	18.5	20.0
LTE Band 25 (PCS)	A	Max Allowed Power	24.5	24.5	21.5	24.5	18.5	21.5
		Nominal	23.5	23.5	20.5	23.5	17.5	20.5
LTE Band 2 (PCS)	A	Max Allowed Power	24.5	24.5	21.5	24.5	18.5	21.5
		Nominal	23.5	23.5	20.5	23.5	17.5	20.5
LTE Band 30	A	Max Allowed Power	23.5	23.5	22.5	23.5	19.5	22.5
		Nominal	22.5	22.5	21.5	22.5	18.5	21.5
LTE Band 7	B	Max Allowed Power	24.0	24.0	21.0	24.0	21.0	21.0
		Nominal	23.0	23.0	20.0	23.0	20.0	20.0
LTE Band 41 (PC3)	B	Max Allowed Power	25.0	25.0	23.0	25.0	23.0	23.0
		Nominal	24.0	24.0	22.0	24.0	22.0	22.0
LTE Band 41 (PC2)	B	Max Allowed Power	27.5	27.5	24.6	27.5	24.6	24.6
		Nominal	26.5	26.5	23.6	26.5	23.6	23.6
LTE Band 38	B	Max Allowed Power	25.0	25.0	23.0	25.0	23.0	23.0
		Nominal	24.0	24.0	22.0	24.0	22.0	22.0
LTE Band 48	F	Max Allowed Power	24.0	20.0	20.0	20.0	20.0	20.0
		Nominal	23.0	19.0	19.0	19.0	19.0	19.0

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Mode / Band	Antenna		Modulated Average Output Power (in dBm)					
			Pmax	DSI =0 (Body-Worn or Phablet Max)	DSI =1 (Phablet Reduced)	DSI =2 (Head)	DSI =3 (Hotspot)	DSI =4 (Earjack)
NR Band n71	A	Max Allowed Power	25.8	25.8	25.8	25.8	25.8	25.8
		Nominal	24.8	24.8	24.8	24.8	24.8	24.8
NR Band n12	A	Max Allowed Power	25.7	25.7	25.7	25.7	25.7	25.7
		Nominal	24.7	24.7	24.7	24.7	24.7	24.7
NR Band n5 (Cell)	A	Max Allowed Power	25.8	25.8	25.8	25.8	25.8	25.8
		Nominal	24.8	24.8	24.8	24.8	24.8	24.8
NR Band n66 (AWS)	A	Max Allowed Power	24.9	24.9	21.0	24.9	19.5	21.0
		Nominal	23.9	23.9	20.0	23.9	18.5	20.0
NR Band n66 (AWS)	J	Max Allowed Power	24.5	20.0	20.0	19.0	20.0	20.0
		Nominal	23.5	19.0	19.0	18.0	19.0	19.0
NR Band n25 (PCS)	A	Max Allowed Power	24.5	24.5	21.5	24.5	18.5	21.5
		Nominal	23.5	23.5	20.5	23.5	17.5	20.5
NR Band n25 (PCS)	J	Max Allowed Power	24.5	20.0	20.0	19.0	20.0	20.0
		Nominal	23.5	19.0	19.0	18.0	19.0	19.0
NR Band n2 (PCS)	A	Max Allowed Power	24.5	24.5	21.5	24.5	18.5	21.5
		Nominal	23.5	23.5	20.5	23.5	17.5	20.5
NR Band n2 (PCS)	J	Max Allowed Power	24.5	20.0	20.0	19.0	20.0	20.0
		Nominal	23.5	19.0	19.0	18.0	19.0	19.0
NR Band n30	A	Max Allowed Power	23.5	23.5	22.5	23.5	19.5	22.5
		Nominal	22.5	22.5	21.5	22.5	18.5	21.5
NR Band n30	J	Max Allowed Power	23.0	19.0	19.0	19.0	19.0	19.0
		Nominal	22.0	18.0	18.0	18.0	18.0	18.0
NR Band n7	B	Max Allowed Power	24.0	24.0	21.0	24.0	21.0	21.0
		Nominal	23.0	23.0	20.0	23.0	20.0	20.0
NR Band n41 SRS 1 (PC3)	J	Max Allowed Power	25.0	20.0	20.0	19.0	20.0	20.0
		Nominal	24.0	19.0	19.0	18.0	19.0	19.0
NR Band n41 SRS 1 (PC2)	J	Max Allowed Power	27.0	20.0	20.0	19.0	20.0	20.0
		Nominal	26.0	19.0	19.0	18.0	19.0	19.0
NR Band n41 SRS 2 (PC3)	D	Max Allowed Power	19.5	16.5	16.5	16.5	16.5	16.5
		Nominal	18.5	15.5	15.5	15.5	15.5	15.5
NR Band n41 SRS 2 (PC2)	D	Max Allowed Power	21.5	16.5	16.5	16.5	16.5	16.5
		Nominal	20.5	15.5	15.5	15.5	15.5	15.5
NR Band n41 SRS 3 (PC3)	E	Max Allowed Power	18.8	15.0	15.0	15.0	15.0	15.0
		Nominal	17.8	14.0	14.0	14.0	14.0	14.0
NR Band n41 SRS 3 (PC2)	E	Max Allowed Power	20.8	15.0	15.0	15.0	15.0	15.0
		Nominal	19.8	14.0	14.0	14.0	14.0	14.0
NR Band n41 SRS 4 (PC3)	B	Max Allowed Power	21.0	19.0	19.0	19.0	19.0	19.0
		Nominal	20.0	18.0	18.0	18.0	18.0	18.0
NR Band n41 SRS 4 (PC2)	B	Max Allowed Power	23.0	19.0	19.0	19.0	19.0	19.0
		Nominal	22.0	18.0	18.0	18.0	18.0	18.0
NR Band n38	J	Max Allowed Power	25.0	20.0	20.0	19.0	20.0	20.0
		Nominal	24.0	19.0	19.0	18.0	19.0	19.0
NR Band n77 DoD SRS 1 (PC3)	F	Max Allowed Power	25.0	18.0	18.0	18.0	18.0	18.0
		Nominal	24.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 DoD SRS 1 (PC2)	F	Max Allowed Power	27.0	18.0	18.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 DoD SRS 2 (PC3)	I	Max Allowed Power	25.0	18.0	18.0	18.0	18.0	18.0
		Nominal	24.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 DoD SRS 2 (PC2)	I	Max Allowed Power	27.0	18.0	18.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 DoD SRS 3 (PC3)	D	Max Allowed Power	18.5	11.5	11.5	11.5	11.5	11.5
		Nominal	17.5	10.5	10.5	10.5	10.5	10.5
NR Band n77 DoD SRS 3 (PC2)	D	Max Allowed Power	20.5	11.5	11.5	11.5	11.5	11.5
		Nominal	19.5	10.5	10.5	10.5	10.5	10.5
NR Band n77 DoD SRS 4 (PC3)	C	Max Allowed Power	17.5	12.0	12.0	12.0	12.0	12.0
		Nominal	16.5	11.0	11.0	11.0	11.0	11.0
NR Band n77 DoD SRS 4 (PC2)	C	Max Allowed Power	19.5	12.0	12.0	12.0	12.0	12.0
		Nominal	18.5	11.0	11.0	11.0	11.0	11.0
NR Band n77 SRS 1 (PC3)	F	Max Allowed Power	25.0	18.0	18.0	18.0	18.0	18.0
		Nominal	24.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 SRS 1 (PC2)	F	Max Allowed Power	27.0	18.0	18.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 SRS 2 (PC3)	I	Max Allowed Power	25.0	18.0	18.0	18.0	18.0	18.0
		Nominal	24.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 SRS 2 (PC2)	I	Max Allowed Power	27.0	18.0	18.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 SRS 3 (PC3)	D	Max Allowed Power	18.5	11.5	11.5	11.5	11.5	11.5
		Nominal	17.5	10.5	10.5	10.5	10.5	10.5
NR Band n77 SRS 3 (PC2)	D	Max Allowed Power	20.5	11.5	11.5	11.5	11.5	11.5
		Nominal	19.5	10.5	10.5	10.5	10.5	10.5
NR Band n77 SRS 4 (PC3)	C	Max Allowed Power	17.5	12.0	12.0	12.0	12.0	12.0
		Nominal	16.5	11.0	11.0	11.0	11.0	11.0
NR Band n77 SRS 4 (PC2)	C	Max Allowed Power	19.5	12.0	12.0	12.0	12.0	12.0
		Nominal	18.5	11.0	11.0	11.0	11.0	11.0

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

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1.4.2 2.4 GHz Maximum SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)							
		SISO Antenna 1 & Antenna 2		MIMO					
		b		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	19.5	20.5	20.5 Ch. 1: 18.5 Ch. 11: 18.5	21.5 Ch. 1: 19.5 Ch. 11: 19.5	20.5 Ch. 1: 18.5 Ch. 11: 18.5	21.5 Ch. 1: 19.5 Ch. 11: 19.5	20.5 Ch. 1: 17.5 Ch. 2: 19.5 Ch. 11: 17.5	21.5 Ch. 1: 18.5 Ch. 2: 20.5 Ch. 11: 18.5

1.4.3 2.4 GHz Reduced WLAN Output Powers

Note: Targets for 802.11ax RU operations can be found in Appendix K
The below table is applicable in the following conditions:

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

Mode	Band	IEEE 802.11 (in dBm)							
		SISO Antenna 1 & Antenna 2		MIMO					
		b		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	16.0	17.0	19.0 Ch. 1: 18.5 Ch. 11: 18.5	20.0 Ch. 1: 19.5 Ch. 11: 19.5	19.0 Ch. 1: 18.5 Ch. 11: 18.5	20.0 Ch. 1: 19.5 Ch. 11: 19.5	19.0 Ch. 1: 17.5 Ch. 11: 17.5	20.0 Ch. 1: 18.5 Ch. 11: 18.5

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 FR1/FR2 NR and 5/6 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)							
		SISO Antenna 1 & Antenna 2		MIMO					
		b		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	13.0	14.0	16.0	17.0	16.0	17.0	16.0	17.0

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1.4.4 5 GHz Maximum SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	17.5	18.5	17.5	18.5	17.5	18.5	17.5	18.5
	UNII-2A	17.5	18.5	17.5	18.5	17.5	18.5	17.5	18.5
	UNII-2C	17.5	18.5	17.5	18.5	17.5	18.5	17.5	18.5
	UNII-3	17.5	18.5	17.5	18.5	17.5	18.5	17.5	18.5
	UNII-4	17.5	18.5	17.5	18.5	17.5	18.5	17.5	18.5
5 GHz WIFI (40MHz BW)	UNII-1			17.5	18.5	17.5	18.5	17.5	18.5
	UNII-2A			17.5	18.5	17.5	18.5	17.5	18.5
	UNII-2C			17.5	18.5	17.5	18.5	17.5	18.5
	UNII-3			17.5	18.5	17.5	18.5	17.5	18.5
	UNII-4			17.5	18.5	17.5	18.5	17.5	18.5
5 GHz WIFI (80MHz BW)	UNII-1					16.5	17.5	17.5	18.5
	UNII-2A					17.5	18.5	17.5	18.5
	UNII-2C					17.5	18.5	17.5	18.5
	UNII-3					17.5	18.5	17.5	18.5
	UNII-4					17.5	18.5	17.5	18.5
5 GHz WIFI (160MHz BW)	UNII-1					16.0	17.0	16.5	17.5
	UNII-2C					17.5	18.5	17.5	18.5
	UNII-3					17.5	18.5	17.5	18.5

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1.4.5 5 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

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

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
	UNII-2A	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
	UNII-2C	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
	UNII-3	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
	UNII-4	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
5 GHz WIFI (40MHz BW)	UNII-1			16.0	17.0	16.0	17.0	16.0	17.0
	UNII-2A			16.0	17.0	16.0	17.0	16.0	17.0
	UNII-2C			16.0	17.0	16.0	17.0	16.0	17.0
	UNII-3			16.0	17.0	16.0	17.0	16.0	17.0
	UNII-4			16.0	17.0	16.0	17.0	16.0	17.0
5 GHz WIFI (80MHz BW)	UNII-1					16.0	17.0	16.0	17.0
	UNII-2A					16.0	17.0	16.0	17.0
	UNII-2C					16.0	17.0	16.0	17.0
	UNII-3					16.0	17.0	16.0	17.0
	UNII-4					16.0	17.0	16.0	17.0
5 GHz WIFI (160MHz BW)	UNII-1					16.0	17.0	16.0	17.0
	UNII-2C					16.0	17.0	16.0	17.0
	UNII-3					16.0	17.0	16.0	17.0

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The below table is applicable in the following conditions:

- Simultaneous conditions with 5G FR2 NR
- Simultaneous conditions with 5G FR2 NR and 2.4 GHz WLAN
- RCV Active during simultaneous conditions with 5G FR2 NR
- RCV Active during simultaneous conditions with 5G FR2 NR and 2.4 GHz WLAN

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

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1.4.6 2.4 GHz Maximum Bluetooth Output Power

Mode	Single Antenna				Single Antenna in Dual Mode				Dual	
	Antenna 1		Antenna 2		Antenna 1		Antenna 2			
	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	17.0	18.0	16.5	17.5	12.0	13.0	10.0	11.0	14.0	15.0
Bluetooth EDR (in dBm)	17.0	18.0	16.5	17.5	9.5	10.5	8.5	9.5	12.0	13.0
Bluetooth LE 2Mbps (in dBm)	17.0	18.0	15.0	16.0	11.0	12.0	9.0	10.0	13.0	14.0

1.4.7 2.4 GHz Reduced Bluetooth Output Power

The below table is applicable in the following conditions:

- RCV active

Mode	Single Antenna				Single Antenna in Dual Mode				Dual	
	Antenna 1		Antenna 2		Antenna 1		Antenna 2			
	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	14.0	15.0	14.0	15.0	12.0	13.0	10.0	11.0	14.0	15.0
Bluetooth EDR (in dBm)	14.0	15.0	14.0	15.0	9.5	10.5	8.5	9.5	12.0	13.0
Bluetooth LE 2Mbps (in dBm)	14.0	15.0	14.0	15.0	11.0	12.0	9.0	10.0	13.0	14.0

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1.5 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device antennas can be found in Appendix F. Since the diagonal dimension of this device is > 160 mm and <200 mm, it is considered a "phablet."

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	Yes	No
LTE Band 48	Yes	Yes	Yes	No	No	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	No
NR Band n71	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna J	Yes	Yes	Yes	No	Yes	No
NR Band n25 (PCS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS) Antenna J	Yes	Yes	Yes	No	Yes	No
NR Band n30 Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n30 Antenna J	Yes	Yes	Yes	No	Yes	No
NR Band n7 Antenna B	Yes	Yes	No	Yes	Yes	No
NR Band n41 Antenna J	Yes	Yes	Yes	No	Yes	No
NR Band n41 Antenna D	Yes	Yes	No	Yes	No	Yes
NR Band n41 Antenna E	Yes	Yes	Yes	No	No	Yes
NR Band n41 Antenna B	Yes	Yes	No	Yes	Yes	No
NR Band n77 DoD Antenna F	Yes	Yes	Yes	No	No	Yes
NR Band n77 DoD Antenna I	Yes	Yes	Yes	No	No	Yes
NR Band n77 DoD Antenna D	Yes	Yes	No	Yes	No	Yes
NR Band n77 DoD Antenna C	Yes	Yes	No	Yes	Yes	No
NR Band n77 Antenna F	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna I	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna D	Yes	Yes	No	Yes	No	Yes
NR Band n77 Antenna C	Yes	Yes	No	Yes	Yes	No
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	No	Yes
2.4 GHz WLAN Ant 2	Yes	Yes	No	No	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
Bluetooth Ant 1	Yes	Yes	Yes	No	No	Yes
Bluetooth Ant 2	Yes	Yes	No	No	No	Yes
Bluetooth MIMO	Yes	Yes	Yes	No	No	Yes

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, U-NII-1, U-NII-2A, U-NII-2C, UNII-4, and WIFI6E operations are disabled.

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1.6 Near Field Communications (NFC) Antenna

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

1.7 Simultaneous Transmission Capabilities

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

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

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Table 1-2
Simultaneous Transmission Scenarios

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

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1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
6. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
7. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. WLAN can transmit only when operating with MIMO.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering in SISO Mode.
10. This device supports VoLTE.
11. This device supports VoNR.
12. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
13. 5G NR FR2 n258, n260, and n261 cannot transmit simultaneously.
14. LTE + 5G NR FR2 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR2 checklist.

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 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 diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz 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.

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This device supports 6 GHz WIFI Operations. RF Exposure assessment for these bands can be found in the WIFI6E RF Exposure Report (report SN can be found in Section 1.11 – Bibliography). Simultaneous transmission analysis is addressed in Appendix E of this report.

(B) Licensed Transmitter(s)

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

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

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r04.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive. The downlink carrier aggregation exclusion analysis can be found in Appendix J.

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

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

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

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

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 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).

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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, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- October 2020 TCB Workshop Notes (5G-FR1 SAR Evaluations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO, LTE Band 41 Power Class 2/3)
- April 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)	1M2109090102-22.A3L
Near Field PD Part 0 Report	
RF Exposure Part 2 Test Report	1M2109090102-23.A3L
RF Exposure Compliance Summary Report	1M2109090102-24.A3L
RF Exposure Part 0 Test Report	1M2109090102-21.A3L
WIFI 6GHz RF exposure	1M2109090102-26.A3L

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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 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 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 48: 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				
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)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
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)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
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, LAA features as shown in Section 9 and Appendix J. 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, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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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 n5 (Cell) (826.5 - 846.5 MHz) NR Band n66 (AWS) (1712.5 - 1777.5 MHz) NR Band n25 (PCS) (1852.5 - 1912.5 MHz) NR Band n2 (PCS) (1852.5 - 1907.5 MHz) NR Band n30 (2307.5 - 2312.5 MHz) NR Band n7 (2502.5 - 2567.5 MHz) NR Band n41 (2506.02 - 2679.99 MHz) NR Band n38 (2575 - 2615 MHz) NR Band n77 DoD (3455.01 - 3544.98 MHz) NR Band n77 (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 n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n30: 5 MHz, 10 MHz NR Band n7: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n38: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR Band n77 DoD: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n77: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
Channel Numbers and Frequencies (MHz)						
NR Band n71: 5 MHz	665.5 (133147)		680.5 (136100)		695.5 (133447)	
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 n5 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)	
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)		844 (168800)	
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)	
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)		839 (167800)	
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)	
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)	
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)	
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band n66 (AWS): 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)	
NR Band n66 (AWS): 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)	
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)	
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)	
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)	
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)	
NR Band n25 (PCS): 25 MHz	1862.5 (372500)		1882.5 (376500)		1902.5 (380500)	
NR Band n25 (PCS): 30 MHz	1865 (373000)		1882.5 (376500)		1900 (380000)	
NR Band n25 (PCS): 40 MHz	1870 (374000)		1882.5 (376500)		1895 (379000)	
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n30: 5 MHz	2307.5 (461500)		2310 (462000)		2312.5 (462500)	
NR Band n30: 10 MHz	N/A		2310 (462000)		N/A	
NR Band n7: 5 MHz	2502.5 (500500)		2535 (507000)		2567.5 (513500)	
NR Band n7: 10 MHz	2505 (501000)		2535 (507000)		2565 (513000)	
NR Band n7: 15 MHz	2507.5 (20825)		680.5 (133297)		2562.5 (21375)	
NR Band n7: 20 MHz	2510 (502000)		2535 (507000)		2560 (512000)	
NR Band n7: 25 MHz	2512.5 (502500)		2535 (507000)		2557.5 (511500)	
NR Band n7: 30 MHz	2515 (503000)		2535 (507000)		2555 (511000)	
NR Band n7: 40 MHz	2520 (504000)		2535 (507000)		2550 (510000)	
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 n38: 10 MHz	2575 (515000)		2593 (518600)		2615 (523000)	
NR Band n38: 15 MHz	2577.5 (515500)		2594 (518800)		2612.5 (522500)	
NR Band n38: 20 MHz	2580 (516000)		2595 (519000)		2560 (512000)	
NR Band n38: 30 MHz	2585 (517000)		2595 (519000)		2555 (511000)	
NR Band n38: 40 MHz	2590 (518000)		2595 (519000)		2550 (510000)	
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/n5/n66/n25/n2/n30/n7	15 kHz					
SCS for NR Band n41/n38/n77	30 kHz					
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM					
A-MPR (Additional MPR) disabled for SAR Testing?	YES					
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations					
LTE Anchor Bands for NR Band n71	LTE Band 66/2/48					
LTE Anchor Bands for NR Band n12	LTE Band 66/2					
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 2/66/30/48					
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 12/13/14/5/2/30/48					
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12/66					
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 12/13/14/5/66/48/30					
LTE Anchor Bands for NR Band n30	LTE Band 12/14/5/66/2					
LTE Anchor Bands for NR Band n7	N/A					
LTE Anchor Bands for NR Band n41	LTE Band 66/25/2					
LTE Anchor Bands for NR Band n38	N/A					
LTE Anchor Bands for NR Band n77	LTE Band 12/13/14/5/66/2/30					

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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]

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4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

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

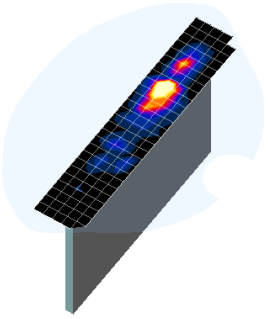

Figure 4-1
Sample SAR Area Scan

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 4-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

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

*Also compliant to IEEE 1528-2013 Table 6

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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].

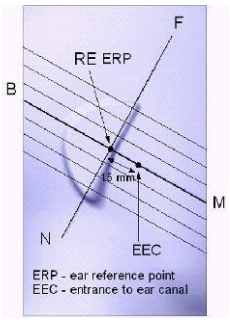

Figure 5-1
Close-Up Side view of ERP

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

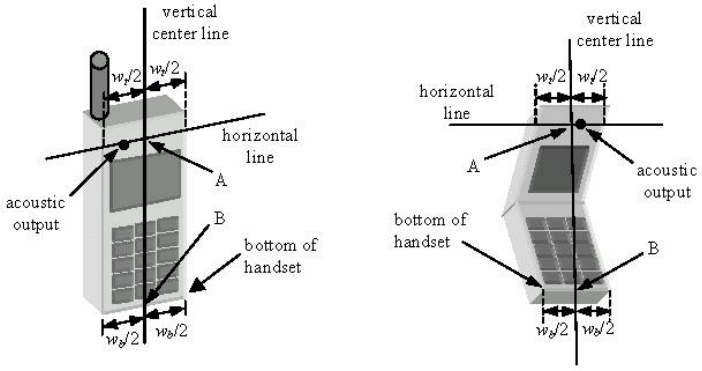

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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.

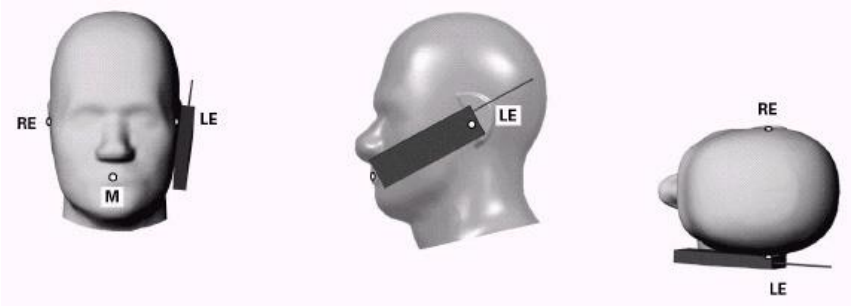

Figure 6-1 Front, Side and Top View of Cheek Position

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).

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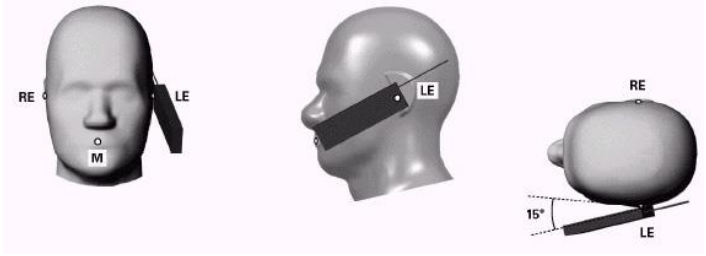

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

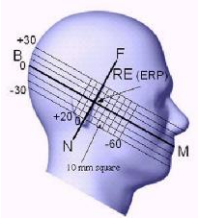

Figure 6-3
Side view w/ relevant markings

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.

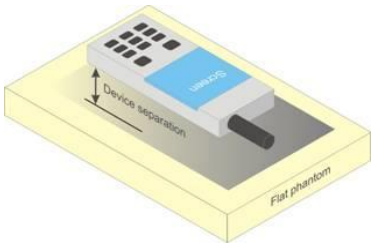

Figure 6-4
Sample Body-Worn Diagram

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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.

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6.8 Phablet Configurations

For smart phones with a display diagonal dimension > 150 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna <=25 mm from that surface or edge, in direct contact with the phantom, for 10g SAR. The UMPC mini-tablet 1g SAR at 5 mm is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

6.9 Proximity Sensor Considerations

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

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

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

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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.

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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.

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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).

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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

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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.

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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.

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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.

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9 RF CONDUCTED POWERS

All conducted power measurements for 2G/3G/4G/5G Sub6 WWAN technologies and bands in this section were performed by setting *Reserve_power_margin* (Qualcomm® Smart Transmit EFS entry) to 0dB, so that the EUT transmits continuously at minimum (P_{limit}, maximum tune up output power P_{max}).

9.1 GSM Conducted Powers

Table 9-1
Measured P_{max}

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	31.81	31.81	31.07	**28.64**	26.66	26.10	24.63	22.55	21.84
	190	31.66	31.67	31.70	**29.18**	26.56	26.01	24.55	22.40	21.66
	251	31.67	31.66	31.85	**29.82**	27.17	26.01	24.46	22.49	21.65
GSM 1900	512	28.21	28.21	28.19	**26.03**	23.32	24.18	23.54	21.60	20.67
	661	28.59	28.59	28.46	**25.32**	23.53	24.27	23.72	21.90	20.86
	810	28.72	28.74	28.49	**25.42**	23.89	24.35	24.02	21.89	21.05

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	22.61	22.61	24.88	**24.21**	23.48	16.90	18.44	18.12	18.66
	190	22.46	22.47	25.51	**24.75**	23.38	16.81	18.36	17.97	18.48
	251	22.47	22.46	25.66	**25.39**	23.99	16.81	18.27	18.06	18.47
GSM 1900	512	19.01	19.01	22.00	**21.60**	20.14	14.98	17.35	17.17	17.49
	661	19.39	19.39	22.27	**20.89**	20.35	15.07	17.53	17.47	17.68
	810	19.52	19.54	22.30	**20.99**	20.71	15.15	17.83	17.46	17.87

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		19.50	19.50	21.31	**21.57**	20.82	16.30	17.31	17.07	17.32

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Table 9-2
Measured P_{limit} for DSI = 3 (Hotspot mode)

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	27.10	23.70	21.95	**20.81**	24.18	23.54	21.60	20.67
	661	27.24	23.87	22.03	**21.27**	24.27	23.72	21.90	20.86
	810	27.20	24.83	22.53	**20.99**	24.35	24.02	21.89	21.05

Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	17.90	17.51	17.52	**17.63**	14.98	17.35	17.17	17.49
	661	18.04	17.68	17.60	**18.09**	15.07	17.53	17.47	17.68
	810	18.00	18.64	18.10	**17.81**	15.15	17.83	17.46	17.87
GSM 1900	**Frame Avg.Targets:**	18.50	18.51	18.47	**18.52**	16.30	17.31	17.07	17.32

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

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9.2 UMTS Conducted Powers

Table 9-3
Measured P_{max}

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	23.98	23.97	23.99	22.83	22.64	22.75	22.40	22.46	22.70	-
99		12.2 kbps AMR	23.97	23.96	24.00	22.77	22.62	22.71	22.36	22.46	22.69	-
6	HSDPA	Subtest 1	22.89	22.83	22.72	21.84	21.71	21.85	21.56	21.64	21.94	0
6		Subtest 2	22.92	22.84	22.69	21.90	21.66	21.89	21.61	21.61	21.85	0
6		Subtest 3	22.54	22.47	22.25	21.37	21.17	21.43	21.07	21.11	21.33	0.5
6		Subtest 4	22.56	22.49	22.34	21.36	21.25	21.37	21.06	21.10	21.34	0.5
6	HSUPA	Subtest 1	22.91	22.82	22.71	21.87	21.70	21.86	21.55	21.58	21.84	0
6		Subtest 2	20.90	20.84	20.73	19.88	19.67	19.82	19.59	19.61	19.83	2
6		Subtest 3	21.89	21.81	21.67	20.91	20.68	20.81	20.52	20.53	20.80	1
6		Subtest 4	20.85	20.79	20.64	19.87	19.68	19.83	19.56	19.56	19.79	2
6		Subtest 5	22.91	22.86	22.69	21.86	21.61	21.81	21.55	21.57	21.82	0
8	DC-HSDPA	Subtest 1	22.88	22.85	22.72	21.85	21.63	21.83	21.53	21.58	21.86	0
8		Subtest 2	22.90	22.83	22.75	21.87	21.62	21.86	21.55	21.53	21.81	0
8		Subtest 3	22.41	22.34	22.22	21.34	21.14	21.37	21.04	21.07	21.28	0.5
8		Subtest 4	22.42	22.35	22.19	21.30	21.12	21.35	21.07	21.09	21.33	0.5

Table 9-4
Measured P_{limit} for DSI = 3 (Hotspot mode)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	19.47	19.37	19.26	18.16	18.20	18.36	-
99		12.2 kbps AMR	19.46	19.25	19.26	18.16	18.21	18.34	-
6	HSDPA	Subtest 1	18.47	18.25	18.38	16.98	17.12	17.44	0
6		Subtest 2	18.37	18.27	18.39	16.93	17.08	17.41	0
6		Subtest 3	17.87	17.69	17.82	16.51	16.68	16.95	0.5
6		Subtest 4	17.93	17.74	17.84	16.54	16.67	16.94	0.5
6	HSUPA	Subtest 1	18.49	18.31	18.41	17.05	17.23	17.50	0
6		Subtest 2	16.51	16.31	16.42	15.17	15.38	15.48	2
6		Subtest 3	17.50	17.27	17.40	16.10	16.23	16.42	1
6		Subtest 4	16.47	16.30	16.46	15.10	15.26	15.42	2
6		Subtest 5	18.40	18.27	18.34	17.01	17.16	17.45	0
8	DC-HSDPA	Subtest 1	18.64	18.41	18.61	17.13	17.36	17.48	0
8		Subtest 2	18.62	18.48	18.60	17.21	17.30	17.47	0
8		Subtest 3	18.23	17.96	18.10	16.71	16.87	16.97	0.5
8		Subtest 4	18.16	17.97	17.98	16.68	16.88	16.96	0.5

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Table 9-5
Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	19.47	19.37	19.26	20.04	20.23	20.15	-
99		12.2 kbps AMR	19.46	19.25	19.26	20.02	20.21	20.14	-
6	HSDPA	Subtest 1	18.47	18.25	18.38	19.03	19.08	19.41	0
6		Subtest 2	18.37	18.27	18.39	19.00	19.06	19.36	0
6		Subtest 3	17.87	17.69	17.82	18.55	18.64	18.84	0.5
6		Subtest 4	17.93	17.74	17.84	18.53	18.57	18.87	0.5
6	HSUPA	Subtest 1	18.49	18.31	18.41	19.05	19.06	19.32	0
6		Subtest 2	16.51	16.31	16.42	17.03	17.04	17.29	2
6		Subtest 3	17.50	17.27	17.40	18.01	18.07	18.36	1
6		Subtest 4	16.47	16.30	16.46	17.04	17.05	17.34	2
6		Subtest 5	18.40	18.27	18.34	19.04	19.08	19.34	0
8	DC-HSDPA	Subtest 1	18.64	18.41	18.61	19.18	19.03	19.62	0
8		Subtest 2	18.62	18.48	18.60	19.21	19.35	19.69	0
8		Subtest 3	18.23	17.96	18.10	18.84	18.91	19.18	0.5
8		Subtest 4	18.16	17.97	17.98	18.70	18.89	19.21	0.5

DC-HSDPA considerations

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

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

Figure 9-2
Power Measurement Setup

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9.3 LTE Conducted Powers

Note: Per FCC KDB Publication 941225 D05v02r05, LTE SAR for the lower bandwidths was not required for testing since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg. Lower bandwidth conducted powers for all LTE bands can be found in Appendix I.

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

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.

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9.3.1 LTE Band 71

Table 9-6
LTE Band 71 Measured P_{Max} for all DSI - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.95**	0	0
	1	50	24.92		0
	1	99	24.73		0
	50	0	**23.81**	0-1	1
	50	25	23.75		1
	50	50	23.65		1
	100	0	23.74		1
16QAM	1	0	23.79	0-1	1
	1	50	23.95		1
	1	99	23.85		1
	50	0	22.77	0-2	2
	50	25	22.76		2
	50	50	22.62		2
	100	0	22.71		2
64QAM	1	0	22.94	0-2	2
	1	50	22.83		2
	1	99	22.93		2
	50	0	21.70	0-3	3
	50	25	21.70		3
	50	50	21.65		3
	100	0	21.65		3
256QAM	1	0	19.67	0-5	5
	1	50	19.79		5
	1	99	19.73		5
	50	0	19.66		5
	50	25	19.79		5
	50	50	19.74		5
	100	0	19.65		5

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9.3.2 LTE Band 12

Table 9-7
LTE Band 12 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.84**	0	0
	1	25	24.75		0
	1	49	24.80		0
	25	0	23.64	0-1	1
	25	12	**23.78**		1
	25	25	23.68		1
	50	0	23.72		1
16QAM	1	0	23.93	0-1	1
	1	25	23.95		1
	1	49	23.84		1
	25	0	22.68	0-2	2
	25	12	22.81		2
	25	25	22.72		2
	50	0	22.68		2
64QAM	1	0	22.92	0-2	2
	1	25	22.91		2
	1	49	22.82		2
	25	0	21.63	0-3	3
	25	12	21.78		3
	25	25	21.67		3
	50	0	21.69		3
256QAM	1	0	19.53	0-5	5
	1	25	19.83		5
	1	49	19.61		5
	25	0	19.61		5
	25	12	19.79		5
	25	25	19.62		5
	50	0	19.70		5

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9.3.3 LTE Band 13

Table 9-8
LTE Band 13 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.45	0	0
	1	25	24.41		0
	1	49	**24.53**		0
	25	0	23.43	0-1	1
	25	12	**23.53**		1
	25	25	23.43		1
	50	0	23.44		1
16QAM	1	0	23.85	0-1	1
	1	25	23.67		1
	1	49	23.60		1
	25	0	22.45	0-2	2
	25	12	22.55		2
	25	25	22.50		2
	50	0	22.42		2
64QAM	1	0	22.70	0-2	2
	1	25	22.65		2
	1	49	22.61		2
	25	0	21.44	0-3	3
	25	12	21.51		3
	25	25	21.44		3
	50	0	21.43		3
256QAM	1	0	19.05	0-5	5
	1	25	19.59		5
	1	49	19.31		5
	25	0	19.31		5
	25	12	19.51		5
	25	25	19.45		5
	50	0	19.44		5

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9.3.4 LTE Band 14

Table 9-9
LTE Band 14 Measured P_{Max} for all DSI - 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	24.38	0	0
	1	25	**24.49**		0
	1	49	24.48		0
	25	0	23.32	0-1	1
	25	12	**23.36**		1
	25	25	23.35		1
	50	0	23.22		1
16QAM	1	0	23.64	0-1	1
	1	25	23.68		1
	1	49	23.77		1
	25	0	22.33	0-2	2
	25	12	22.37		2
	25	25	22.35		2
	50	0	22.37		2
64QAM	1	0	22.64	0-2	2
	1	25	22.66		2
	1	49	22.64		2
	25	0	21.32	0-3	3
	25	12	21.36		3
	25	25	21.37		3
	50	0	21.38		3
256QAM	1	0	19.18	0-5	5
	1	25	19.59		5
	1	49	19.31		5
	25	0	19.29		5
	25	12	19.35		5
	25	25	19.33		5
	50	0	19.38		5

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9.3.5 LTE Band 26

Table 9-10
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.00	0	0
	1	36	**24.02**		0
	1	74	23.94		0
	36	0	22.92	0-1	1
	36	18	22.89		1
	36	37	**22.99**		1
	75	0	22.89		1
16QAM	1	0	23.33	0-1	1
	1	36	23.21		1
	1	74	23.16		1
	36	0	21.91	0-2	2
	36	18	22.03		2
	36	37	22.03		2
	75	0	21.91		2
64QAM	1	0	22.22	0-2	2
	1	36	22.18		2
	1	74	21.97		2
	36	0	20.90	0-3	3
	36	18	21.01		3
	36	37	21.06		3
	75	0	20.95		3
256QAM	1	0	19.02	0-5	5
	1	36	19.26		5
	1	74	19.08		5
	36	0	18.90		5
	36	18	19.02		5
	36	37	19.07		5
	75	0	18.91		5

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9.3.6 LTE Band 5

Table 9-11
LTE Band 5 (Cell) Measured P_{Max} for all DSI - 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	24.08	0	0
	1	25	**24.09**		0
	1	49	24.02		0
	25	0	**23.13**	0-1	1
	25	12	23.10		1
	25	25	23.03		1
	50	0	22.93		1
16QAM	1	0	23.05	0-1	1
	1	25	23.21		1
	1	49	22.82		1
	25	0	22.02	0-2	2
	25	12	22.05		2
	25	25	22.09		2
	50	0	21.99		2
64QAM	1	0	22.06	0-2	2
	1	25	22.16		2
	1	49	22.04		2
	25	0	21.04	0-3	3
	25	12	21.21		3
	25	25	21.06		3
	50	0	20.98		3
256QAM	1	0	18.81	0-5	5
	1	25	19.00		5
	1	49	19.10		5
	25	0	19.10		5
	25	12	19.00		5
	25	25	19.03		5
	50	0	18.93		5

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Table 9-12
LTE Band 5 (Cell) Uplink Carrier Aggregation Measured P_{Max} for all DSI - 10 MHz Bandwidth

	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	0	LTE B5	5	20453	829.3	2453	874.3	QPSK	1	24	24.15	24.08

9.3.7 LTE Band 66

Table 9-13
LTE Band 66 (AWS) Measured P_{Max} – 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	23.20	22.82	23.17	0	0
	1	50	**23.24**	23.14	23.11		0
	1	99	23.00	22.82	23.16		0
	50	0	22.25	22.09	21.95	0-1	1
	50	25	**22.32**	22.21	22.07		1
	50	50	22.23	22.03	21.88		1
	100	0	22.17	22.05	21.99		1
16QAM	1	0	22.06	22.10	22.35	0-1	1
	1	50	22.39	22.60	22.04		1
	1	99	22.26	21.97	22.01		1
	50	0	21.21	21.13	20.92	0-2	2
	50	25	21.28	21.20	21.11		2
	50	50	21.22	21.25	20.86		2
	100	0	21.16	21.16	21.00		2
64QAM	1	0	21.07	21.12	21.15	0-2	2
	1	50	21.34	21.21	21.23		2
	1	99	21.22	21.16	21.15		2
	50	0	20.19	20.02	19.91	0-3	3
	50	25	20.28	20.11	20.00		3
	50	50	20.19	20.13	19.88		3
	100	0	20.20	20.02	19.96		3
256QAM	1	0	17.90	17.96	17.92	0-5	5
	1	50	18.45	18.22	18.02		5
	1	99	18.11	18.29	17.92		5
	50	0	18.15	18.10	17.80		5
	50	25	18.27	18.18	18.08		5
	50	50	18.19	18.00	17.89		5
	100	0	18.18	18.16	17.95		5

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Table 9-14
LTE Band 66 (AWS) Measured P_{Max} – 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	23.22	23.13	22.83	0	0
	1	25	23.41	23.39	23.13		0
	1	49	23.12	23.21	22.96		0
	25	0	22.46	22.17	22.02	0-1	1
	25	12	22.42	22.32	22.15		1
	25	25	22.34	22.18	22.05		1
	50	0	22.39	22.19	22.12		1
16QAM	1	0	22.05	22.02	22.02	0-1	1
	1	25	22.40	22.36	22.04		1
	1	49	22.18	22.15	21.85		1
	25	0	21.25	21.10	20.92	0-2	2
	25	12	21.31	21.18	21.05		2
	25	25	21.25	21.07	21.02		2
	50	0	21.25	21.08	20.92		2
64QAM	1	0	21.10	21.06	20.76	0-2	2
	1	25	21.51	21.35	21.15		2
	1	49	21.18	21.12	20.85		2
	25	0	20.26	20.10	19.96	0-3	3
	25	12	20.32	20.18	20.01		3
	25	25	20.25	20.04	19.96		3
	50	0	20.23	20.05	19.93		3
256QAM	1	0	18.15	18.00	17.90	0-5	5
	1	25	18.35	18.31	18.23		5
	1	49	18.15	18.17	17.75		5
	25	0	18.23	18.08	18.01		5
	25	12	18.32	18.18	18.02		5
	25	25	18.22	18.03	18.01		5
	50	0	18.27	18.06	17.92		5

Table 9-15
LTE Band 66 (AWS) Uplink Carrier Aggregation Measured P_{Max}

	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	23.42	23.00
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	23.21	23.17
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	23.49	23.12
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	23.34	22.83

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Table 9-16
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.67	19.56	19.97	0	0
	1	50	**20.13**	19.90	19.96		0
	1	99	19.88	19.75	19.72		0
	50	0	19.97	19.86	19.88	0-1	0
	50	25	20.07	19.98	19.89		0
	50	50	**20.12**	19.87	19.66		0
	100	0	20.05	19.89	19.78		0
16QAM	1	0	19.85	19.76	19.94	0-1	0
	1	50	20.33	20.36	19.88		0
	1	99	20.00	20.05	19.80		0
	50	0	20.11	19.88	19.80	0-2	0
	50	25	20.07	19.91	19.93		0
	50	50	20.08	19.81	19.63		0
	100	0	20.13	19.84	19.83		0
64QAM	1	0	19.82	19.89	20.02	0-2	0
	1	50	20.27	20.11	19.76		0
	1	99	19.90	19.87	19.95		0
	50	0	20.00	19.81	19.83	0-3	0
	50	25	20.18	19.93	19.90		0
	50	50	20.05	19.78	19.61		0
	100	0	19.97	19.90	19.76		0
256QAM	1	0	18.44	18.45	18.11	0-5	1.2
	1	50	18.62	18.58	18.47		1.2
	1	99	18.41	18.39	18.02		1.2
	50	0	18.63	18.39	18.32		1.2
	50	25	18.74	18.35	18.36		1.2
	50	50	18.52	18.31	18.13		1.2
	100	0	18.61	18.32	18.32		1.2

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Table 9-17
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 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	19.91	19.87	19.56	0	0
	1	25	20.14	20.11	19.99		0
	1	49	19.88	19.89	19.60		0
	25	0	20.17	19.99	19.88	0-1	0
	25	12	20.25	20.06	19.93		0
	25	25	20.15	20.00	19.81		0
	50	0	20.16	19.95	19.85		0
16QAM	1	0	19.56	19.43	19.57	0-1	0
	1	25	19.84	19.87	19.62		0
	1	49	19.63	19.64	19.40		0
	25	0	19.67	19.61	19.42	0-2	0
	25	12	19.85	19.66	19.53		0
	25	25	19.70	19.59	19.43		0
	50	0	19.73	19.50	19.51		0
64QAM	1	0	19.60	19.57	19.70	0-2	0
	1	25	19.85	19.65	19.77		0
	1	49	19.64	19.46	19.51		0
	25	0	19.80	19.37	19.47	0-3	0
	25	12	19.95	19.66	19.46		0
	25	25	19.75	19.61	19.31		0
	50	0	19.78	19.61	19.45		0
256QAM	1	0	18.06	18.02	17.94	0-5	1.2
	1	25	18.22	18.29	18.15		1.2
	1	49	18.12	18.03	17.93		1.2
	25	0	18.24	18.08	17.90		1.2
	25	12	18.33	18.24	18.06		1.2
	25	25	18.29	18.10	17.92		1.2
	50	0	18.31	18.08	17.94		1.2

Table 9-18
LTE Band 66 (AWS) Uplink Carrier Aggregation Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)

	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	66536	2120	QPSK	100	0	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	100	0	20.00	20.05
CA_66B	LTE B66	10	132022	1715	66486	2115	QPSK	50	0	LTE B66	10	132121	1724.9	66734	2124.9	QPSK	50	0	20.14	20.16

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Table 9-19
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (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	18.28	18.46	18.41	0	0
	1	50	**18.54**	18.52	18.30		0
	1	99	18.15	18.40	18.43		0
	50	0	18.39	18.25	18.22	0-1	0
	50	25	**18.48**	18.31	18.21		0
	50	50	18.39	18.22	18.07		0
	100	0	18.38	18.19	18.04		0
16QAM	1	0	18.25	18.18	18.66	0-1	0
	1	50	18.75	18.70	18.51		0
	1	99	18.63	18.47	18.33		0
	50	0	18.43	18.26	18.18	0-2	0
	50	25	18.52	18.36	18.14		0
	50	50	18.42	18.34	18.17		0
	100	0	18.40	18.37	18.12		0
64QAM	1	0	18.43	18.47	18.60	0-2	0
	1	50	18.58	18.77	18.59		0
	1	99	18.48	18.56	18.47		0
	50	0	18.47	18.40	18.14	0-3	0
	50	25	18.54	18.45	18.19		0
	50	50	18.42	18.41	18.13		0
	100	0	18.40	18.32	18.12		0
256QAM	1	0	17.95	17.97	18.04	0-5	0
	1	50	18.18	18.20	18.08		0
	1	99	17.77	18.15	17.80		0
	50	0	17.90	17.89	17.93		0
	50	25	17.99	17.94	17.97		0
	50	50	17.90	17.86	17.92		0
	100	0	17.90	17.85	17.82		0

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Table 9-20
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (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	18.25	18.27	18.23	0	0
	1	25	18.80	18.40	18.19		0
	1	49	18.58	18.25	18.14		0
	25	0	18.56	18.38	18.21	0-1	0
	25	12	18.56	18.45	18.20		0
	25	25	18.49	18.39	18.16		0
	50	0	18.45	18.36	18.17		0
16QAM	1	0	18.00	18.01	18.16	0-1	0
	1	25	18.43	18.33	18.13		0
	1	49	18.20	18.01	17.91		0
	25	0	18.26	18.09	17.91	0-2	0
	25	12	18.40	18.13	18.13		0
	25	25	18.24	18.00	17.92		0
	50	0	18.23	18.08	17.94		0
64QAM	1	0	18.12	18.10	18.15	0-2	0
	1	25	18.35	18.33	18.16		0
	1	49	18.18	18.20	18.09		0
	25	0	18.32	18.03	18.01	0-3	0
	25	12	18.41	18.12	18.11		0
	25	25	18.24	18.02	18.01		0
	50	0	18.31	18.07	18.00		0
256QAM	1	0	18.06	17.86	17.81	0-5	0
	1	25	18.34	18.25	18.07		0
	1	49	18.06	17.84	17.74		0
	25	0	18.21	18.02	18.00		0
	25	12	18.38	18.21	18.13		0
	25	25	18.26	18.02	18.00		0
	50	0	18.29	18.06	18.01		0

Table 9-21
LTE Band 66 (AWS) Uplink Carrier Aggregation Measured P_{Limit} for DSI = 3 (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	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	18.13	18.22
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	18.14	18.21

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9.3.8 LTE Band 25

Table 9-22
LTE Band 25 (PCS) Measured P_{Max} – 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.88	23.30	22.96	0	0
	1	50	22.91	**23.41**	23.16		0
	1	99	22.90	23.40	23.01		0
	50	0	22.06	22.41	22.28	0-1	1
	50	25	22.18	22.42	22.41		1
	50	50	22.13	**22.48**	22.34		1
	100	0	22.08	22.33	22.28		1
16QAM	1	0	22.21	22.26	22.43	0-1	1
	1	50	22.26	22.49	22.52		1
	1	99	22.27	22.33	22.35		1
	50	0	21.10	21.21	21.31	0-2	2
	50	25	21.19	21.24	21.39		2
	50	50	21.17	21.27	21.32		2
	100	0	21.10	21.11	21.25		2
64QAM	1	0	21.15	21.32	21.39	0-2	2
	1	50	21.33	21.64	21.58		2
	1	99	21.28	21.42	21.60		2
	50	0	20.06	20.15	20.25	0-3	3
	50	25	20.18	20.26	20.31		3
	50	50	20.11	20.22	20.31		3
	100	0	20.06	20.09	20.25		3
256QAM	1	0	17.69	17.80	17.92	0-5	5
	1	50	18.32	18.44	18.57		5
	1	99	18.08	18.11	18.25		5
	50	0	17.93	18.04	18.10		5
	50	25	18.13	18.21	18.29		5
	50	50	18.10	18.22	18.24		5
	100	0	18.01	18.10	18.23		5

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Table 9-23
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.05	20.31	20.09	0	0
	1	50	20.23	**20.52**	20.17		0
	1	99	20.13	20.45	20.00		0
	50	0	20.06	20.20	20.22	0-1	0
	50	25	20.20	20.26	20.34		0
	50	50	20.17	**20.35**	20.25		0
	100	0	20.04	20.13	20.19		0
16QAM	1	0	20.25	20.44	20.38	0-1	0
	1	50	20.39	20.44	20.76		0
	1	99	20.29	20.33	20.38		0
	50	0	20.07	20.21	20.22	0-2	0
	50	25	20.19	20.27	20.34		0
	50	50	20.18	20.33	20.31		0
	100	0	20.05	20.13	20.22		0
64QAM	1	0	20.15	20.24	20.43	0-2	0
	1	50	20.40	20.49	20.44		0
	1	99	20.30	20.38	20.56		0
	50	0	20.09	20.27	20.21	0-3	0
	50	25	20.20	20.29	20.33		0
	50	50	20.19	20.31	20.30		0
	100	0	20.11	20.19	20.25		0
256QAM	1	0	17.71	17.88	17.84	0-5	2
	1	50	18.49	18.58	18.42		2
	1	99	18.20	18.22	18.11		2
	50	0	17.94	18.07	18.05		2
	50	25	18.23	18.22	18.32		2
	50	50	18.14	18.25	18.26		2
	100	0	18.08	18.11	18.22		2

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Table 9-24
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 3 (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	18.14	18.32	17.97	0	0
	1	50	18.21	**18.50**	18.25		0
	1	99	18.26	18.37	18.03		0
	50	0	18.02	18.32	18.20	0-1	0
	50	25	18.17	**18.34**	18.31		0
	50	50	18.12	18.28	18.27		0
	100	0	18.06	18.12	18.22		0
16QAM	1	0	18.11	18.26	18.50	0-1	0
	1	50	18.30	18.35	18.49		0
	1	99	18.26	18.41	18.28		0
	50	0	18.02	18.22	18.20	0-2	0
	50	25	18.19	18.26	18.34		0
	50	50	18.13	18.33	18.29		0
	100	0	18.03	18.12	18.20		0
64QAM	1	0	18.20	18.35	18.35	0-2	0
	1	50	18.33	18.45	18.38		0
	1	99	18.35	18.32	18.43		0
	50	0	18.00	18.20	18.22	0-3	0
	50	25	18.19	18.27	18.36		0
	50	50	18.17	18.30	18.33		0
	100	0	18.04	18.14	18.24		0
256QAM	1	0	17.66	17.84	17.96	0-5	0
	1	50	18.32	18.45	18.31		0
	1	99	18.01	18.09	18.21		0
	50	0	17.88	18.05	18.10		0
	50	25	18.12	18.27	18.34		0
	50	50	18.12	18.27	18.29		0
	100	0	18.04	18.12	18.23		0

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9.3.9 LTE Band 30

Table 9-25
LTE Band 30 Measured P_{Max} – 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**22.23**	0	0
	1	25	22.06		0
	1	49	22.01		0
	25	0	21.00	0-1	1
	25	12	**21.12**		1
	25	25	21.04		1
	50	0	20.99		1
16QAM	1	0	21.31	0-1	1
	1	25	21.23		1
	1	49	21.20		1
	25	0	20.06	0-2	2
	25	12	20.12		2
	25	25	19.96		2
	50	0	20.12		2
64QAM	1	0	20.22	0-2	2
	1	25	20.20		2
	1	49	20.31		2
	25	0	19.02	0-3	3
	25	12	19.07		3
	25	25	19.00		3
	50	0	19.02		3
256QAM	1	0	16.99	0-5	5
	1	25	17.22		5
	1	49	16.85		5
	25	0	17.05		5
	25	12	17.17		5
	25	25	16.96		5
	50	0	17.00		5

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Table 9-26
LTE Band 30 Measured P_{Limit} for DSI = 3 (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	**18.52**	0	0
	1	25	18.38		0
	1	49	18.30		0
	25	0	**18.41**	0-1	0
	25	12	18.38		0
	25	25	18.30		0
	50	0	18.28		0
16QAM	1	0	18.50	0-1	0
	1	25	18.51		0
	1	49	18.39		0
	25	0	18.40	0-2	0
	25	12	18.38		0
	25	25	18.29		0
	50	0	18.33		0
64QAM	1	0	18.44	0-2	0
	1	25	18.68		0
	1	49	18.63		0
	25	0	18.39	0-3	0
	25	12	18.36		0
	25	25	18.28		0
	50	0	18.32		0
256QAM	1	0	17.30	0-5	1
	1	25	17.82		1
	1	49	17.22		1
	25	0	17.32		1
	25	12	17.39		1
	25	25	17.24		1
	50	0	17.31		1

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Table 9-27
LTE Band 30 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 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	**21.28**	0	0
	1	25	21.08		0
	1	49	21.03		0
	25	0	21.04	0-1	0
	25	12	**21.05**		0
	25	25	20.94		0
	50	0	20.97		0
16QAM	1	0	21.30	0-1	0
	1	25	21.26		0
	1	49	21.35		0
	25	0	20.03	0-2	1
	25	12	20.04		1
	25	25	19.94		1
	50	0	19.94		1
64QAM	1	0	20.20	0-2	1
	1	25	20.21		1
	1	49	20.10		1
	25	0	19.00	0-3	2
	25	12	19.03		2
	25	25	18.94		2
	50	0	18.92		2
256QAM	1	0	16.99	0-5	4
	1	25	17.22		4
	1	49	16.85		4
	25	0	17.00		4
	25	12	17.05		4
	25	25	16.91		4
	50	0	16.93		4

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9.3.10 LTE Band 7

Table 9-28
LTE Band 7 Measured P_{Max} – 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	22.63	22.62	22.24	0	0
	1	50	**22.77**	22.64	22.23		0
	1	99	22.66	22.55	22.15		0
	50	0	21.58	21.49	21.44	0-1	1
	50	25	**21.64**	21.56	21.46		1
	50	50	21.58	21.49	21.53		1
	100	0	21.51	21.47	21.34		1
16QAM	1	0	21.61	21.57	21.79	0-1	1
	1	50	21.77	21.58	21.68		1
	1	99	21.64	21.40	21.57		1
	50	0	20.62	20.51	20.46	0-2	2
	50	25	20.66	20.54	20.49		2
	50	50	20.59	20.51	20.53		2
	100	0	20.54	20.42	20.35		2
64QAM	1	0	20.71	20.57	20.57	0-2	2
	1	50	20.91	20.59	20.73		2
	1	99	20.55	20.39	20.75		2
	50	0	19.62	19.49	19.44	0-3	3
	50	25	19.63	19.56	19.49		3
	50	50	19.59	19.49	19.49		3
	100	0	19.54	19.42	19.35		3
256QAM	1	0	17.34	17.51	17.41	0-5	5
	1	50	17.92	17.69	17.72		5
	1	99	17.37	17.46	17.25		5
	50	0	17.43	17.44	17.38		5
	50	25	17.62	17.55	17.46		5
	50	50	17.51	17.44	17.42		5
	100	0	17.50	17.44	17.37		5

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Table 9-29
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode) and/or DSI = 4 (Earjack Active) - 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	**19.56**	19.21	19.44	0	0
	1	50	19.47	19.25	19.35		0
	1	99	19.40	19.42	19.54		0
	50	0	19.39	19.26	19.33	0-1	0
	50	25	19.33	19.31	19.37		0
	50	50	**19.45**	19.30	19.42		0
	100	0	19.37	19.20	19.28		0
16QAM	1	0	19.70	19.38	19.53	0-1	0
	1	50	19.62	19.53	19.75		0
	1	99	19.57	19.53	19.61		0
	50	0	19.39	19.31	19.46	0-2	0
	50	25	19.41	19.30	19.39		0
	50	50	19.36	19.27	19.45		0
	100	0	19.32	19.25	19.26		0
64QAM	1	0	19.60	19.39	19.50	0-2	0
	1	50	19.57	19.38	19.56		0
	1	99	19.44	19.36	19.61		0
	50	0	19.41	19.32	19.33	0-3	0
	50	25	19.41	19.35	19.36		0
	50	50	19.38	19.29	19.41		0
	100	0	19.36	19.25	19.30		0
256QAM	1	0	17.28	17.15	17.33	0-5	2
	1	50	17.53	17.40	17.53		2
	1	99	17.27	17.33	17.26		2
	50	0	17.30	17.23	17.30		2
	50	25	17.41	17.35	17.41		2
	50	50	17.35	17.29	17.39		2
	100	0	17.31	17.25	17.29		2

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9.3.11 LTE Band 48

Table 9-30
LTE Band 48 Measured P_{Limit} for all DSI - 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	18.62	18.66	18.94	18.61	0	0
	1	50	18.68	18.76	**19.13**	18.66		0
	1	99	18.64	18.77	18.92	18.58		0
	50	0	18.51	18.78	18.87	18.60	0-1	0
	50	25	18.73	18.84	**19.09**	18.68		0
	50	50	18.63	18.73	18.81	18.52		0
	100	0	18.61	18.75	18.89	18.61		0
16QAM	1	0	18.60	18.70	18.87	18.62	0-1	0
	1	50	18.71	18.76	18.97	18.74		0
	1	99	18.67	18.72	18.85	18.63		0
	50	0	18.54	18.77	18.83	18.61	0-2	0
	50	25	18.74	18.84	18.98	18.69		0
	50	50	18.67	18.73	18.80	18.54		0
	100	0	18.63	18.78	18.90	18.63		0
64QAM	1	0	18.71	18.82	19.03	18.73	0-2	0
	1	50	18.80	18.87	19.05	18.75		0
	1	99	18.77	18.84	18.97	18.74		0
	50	0	18.55	18.78	18.86	18.65	0-3	0
	50	25	18.72	18.85	18.99	18.71		0
	50	50	18.64	18.72	18.82	18.55		0
	100	0	18.62	18.75	18.91	18.60		0
256QAM	1	0	17.14	17.32	17.47	17.20	0-5	1
	1	50	17.57	17.64	17.82	17.54		1
	1	99	17.30	17.26	17.39	17.16		1
	50	0	17.44	17.68	17.76	17.52		1
	50	25	17.61	17.75	17.90	17.63		1
	50	50	17.55	17.62	17.72	17.47		1
	100	0	17.51	17.65	17.81	17.54		1

Table 9-31
LTE Band 48 Uplink Carrier Aggregation Measured P_{Limit} for all DSI - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	50	50	LTE B48	20	55538	3579.8	QPSK	50	0	18.80	18.63
CA_48C	LTE B48	20	56207	3646.7	QPSK	50	0	LTE B48	20	56009	3626.9	QPSK	50	50	19.05	18.97

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9.3.12 LTE Band 41

Table 9-32
LTE Band 41 PC3 Measured P_{Max} – 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	23.93	23.85	23.51	23.52	23.41	0	0
	1	50	**24.06**	23.84	23.88	23.83	23.90		0
	1	99	23.82	23.80	23.47	23.34	23.73		0
	50	0	22.81	22.82	22.79	22.79	22.75	0-1	1
	50	25	**22.95**	22.81	22.94	22.89	22.93		1
	50	50	22.91	22.91	22.87	22.81	22.92		1
	100	0	22.84	22.72	22.79	22.87	22.84		1
16QAM	1	0	22.74	22.81	22.62	22.48	22.49	0-1	1
	1	50	22.78	22.61	22.71	22.96	22.96		1
	1	99	22.76	22.75	22.56	22.41	22.67		1
	50	0	21.88	21.86	21.74	21.78	21.83	0-2	2
	50	25	21.96	21.87	21.97	21.87	21.90		2
	50	50	21.91	21.93	21.88	21.84	21.97		2
	100	0	21.87	21.72	21.83	21.89	21.90		2
64QAM	1	0	21.91	21.74	21.50	21.55	21.40	0-2	2
	1	50	21.88	21.65	21.85	21.86	21.87		2
	1	99	21.93	21.72	21.57	21.47	21.63		2
	50	0	20.93	20.76	20.74	20.76	20.76	0-3	3
	50	25	20.96	20.76	20.93	20.92	20.97		3
	50	50	20.93	20.84	20.87	20.70	20.97		3
	100	0	20.88	20.69	20.84	20.85	20.95		3
256QAM	1	0	18.56	18.41	18.46	18.58	18.41	0-5	5
	1	50	19.15	18.96	18.75	19.03	19.07		5
	1	99	18.88	18.71	18.68	18.60	18.95		5
	50	0	18.67	18.66	18.86	18.79	18.82		5
	50	25	18.98	18.87	18.98	18.87	18.96		5
	50	50	18.92	18.84	18.81	18.84	18.97		5
	100	0	18.70	18.66	18.87	18.80	18.85		5

Table 9-33
LTE Band 41 PC2 Measured P_{Max} – 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	26.61	26.65	26.32	26.68	26.22	0	0
	1	50	26.60	26.59	26.29	26.59	27.14		0
	1	99	25.82	26.57	26.62	26.47	26.63		0
	50	0	25.43	25.41	25.35	25.35	25.40	0-1	1
	50	25	25.44	25.49	25.52	25.47	25.57		1
	50	50	25.38	25.50	25.48	25.37	25.51		1
	100	0	25.30	25.34	25.40	25.41	25.44		1

Table 9-34
LTE Band 41 Uplink Carrier Aggregation Measured P_{Max}

	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	23.74	23.82

	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	25.94	25.82

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Table 9-35
LTE Band 41 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) or DSI = 3 (Hotspot Mode), and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.84	21.87	21.64	21.64	21.46	0	0
	1	50	21.86	21.89	**22.01**	21.99	21.85		0
	1	99	21.85	21.85	21.67	21.54	21.82		0
	50	0	21.82	21.88	21.86	21.83	21.86	0-1	0
	50	25	21.97	21.94	**22.06**	22.04	21.98		0
	50	50	21.92	21.91	21.82	21.90	21.98		0
	100	0	21.88	21.80	21.96	21.95	21.91		0
16QAM	1	0	21.91	21.88	21.67	21.79	21.53	0-1	0
	1	50	21.65	21.98	21.84	21.87	22.04		0
	1	99	21.88	21.96	21.78	21.60	21.97		0
	50	0	21.79	21.77	21.78	21.84	21.70	0-2	0
	50	25	21.87	21.78	21.96	21.91	21.92		0
	50	50	21.87	21.76	21.88	21.83	21.94		0
	100	0	21.81	21.68	21.82	21.85	21.83		0
64QAM	1	0	21.92	21.81	21.58	21.42	21.46	0-2	0
	1	50	21.85	21.75	21.96	21.91	21.81		0
	1	99	22.02	21.73	21.51	21.47	21.68		0
	50	0	20.75	20.77	20.73	20.80	20.71	0-3	1
	50	25	20.88	20.74	20.96	20.96	20.92		1
	50	50	20.79	20.84	20.83	20.83	20.87		1
	100	0	20.79	20.70	20.81	20.84	20.85		1
256QAM	1	0	18.37	18.35	18.50	18.65	18.59	0-5	3
	1	50	18.90	19.00	19.02	18.73	18.93		3
	1	99	18.53	18.46	18.73	18.59	18.91		3
	50	0	18.68	18.62	18.72	18.81	18.75		3
	50	25	18.86	18.71	18.97	18.93	18.87		3
	50	50	18.79	18.68	18.85	18.79	18.90		3
	100	0	18.76	18.69	18.81	18.81	18.79		3

Table 9-36
LTE Band 41 PC2 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) or DSI = 3 (Hotspot Mode), and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.82	23.65	23.61	23.68	23.44	0	0
	1	50	23.86	23.66	23.79	23.79	23.60		0
	1	99	23.80	23.63	23.78	23.58	23.91		0
	50	0	23.57	23.59	23.56	23.59	23.55	0-1	0
	50	25	23.66	23.61	23.79	23.75	23.69		0
	50	50	23.65	23.63	23.65	23.61	23.66		0
	100	0	23.53	23.48	23.68	23.67	23.61		0

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Table 9-37
LTE Band 41 Uplink Carrier Aggregation Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) or DSI = 3 (Hotspot Mode), and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	21.53	21.85
CA_41C	LTE B41	20	40185	2549.5	QPSK	1	0	LTE B41	20	39987	2529.7	QPSK	1	99	21.55	21.87

	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	23.70	23.80
CA_41C	LTE B41 PC2	20	40185	2549.5	QPSK	1	0	LTE B41 PC2	20	39987	2529.7	QPSK	1	99	23.50	23.65

Figure 9-3
Power Measurement Setup

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9.4 NR Conducted Powers

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

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

9.4.1 NR Band n71

Table 9-38
NR Band n71 Measured P_{Max} for all DSI - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.12	0	0.0
	1	53	24.08		0.0
	1	104	24.15		0.0
	50	0	23.31	0-0.5	0.5
	50	28	24.29	0	0.0
	50	56	23.34	0-0.5	0.5
	100	0	23.33		0.5
DFT-s-OFDM QPSK	1	1	24.25	0	0.0
	1	53	24.21		0.0
	1	104	**24.32**		0.0
	50	0	23.32	0-1	1.0
	50	28	**24.26**	0	0.0
	50	56	23.27	0-1	1.0
	100	0	23.31		1.0
DFT-s-OFDM 16QAM	1	1	23.54	0-1	1.0
CP-OFDM QPSK	1	1	22.77	0-1.5	1.5

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9.4.2 NR Band n12

Table 9-39
NR Band n12 Measured P_{Max} for all DSI - 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 π/2 BPSK	1	1	24.32	0	0.0
	1	40	24.27		0.0
	1	77	24.13		0.0
	36	0	23.82	0-0.5	0.5
	36	22	24.26	0	0.0
	36	43	23.81	0-0.5	0.5
	75	0	23.77		0.5
DFT-s-OFDM QPSK	1	1	**24.26**	0	0.0
	1	40	24.20		0.0
	1	77	24.07		0.0
	36	0	23.30	0-1	1.0
	36	22	**24.22**	0	0.0
	36	43	23.25	0-1	1.0
	75	0	23.29		1.0
DFT-s-OFDM 16QAM	1	1	23.62	0-1	1.0
CP-OFDM QPSK	1	1	22.75	0-1.5	1.5

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9.4.3 NR Band n5

Table 9-40
NR Band n5 Measured P_{Max} for all DSI - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	167300 (836.5 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.13	0	0.0
	1	53	24.00		0.0
	1	104	24.00		0.0
	50	0	23.31	0-0.5	0.5
	50	28	24.13	0	0.0
	50	56	23.35	0-0.5	0.5
	100	0	23.33		0.5
DFT-s-OFDM QPSK	1	1	**24.22**	0	0.0
	1	53	24.02		0.0
	1	104	23.90		0.0
	50	0	23.30	0-1	1.0
	50	28	**24.20**	0	0.0
	50	56	23.11	0-1	1.0
	100	0	23.17		1.0
DFT-s-OFDM 16QAM	1	1	23.67	0-1	1.0
CP-OFDM QPSK	1	1	22.73	0-1.5	1.5

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9.4.4 NR Band n66 Antenna A

Table 9-41
NR Band n66 Antenna A Measured P_{Max} - 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 π/2 BPSK	1	1	23.54	0	0.0
	1	108	23.51		0.0
	1	214	23.33		0.0
	108	0	22.60	0-0.5	0.5
	108	54	23.57	0	0.0
	108	108	22.63	0-0.5	0.5
	216	0	22.60		0.5
DFT-s-OFDM QPSK	1	1	**23.65**	0	0.0
	1	108	23.61		0.0
	1	214	23.43		0.0
	108	0	22.66	0-1	1.0
	108	54	**23.60**	0	0.0
	108	108	22.68	0-1	1.0
	216	0	**22.62**		1.0
DFT-s-OFDM 16QAM	1	1	22.47	0-1	1.0
CP-OFDM QPSK	1	1	**22.10**	0-1.5	1.5

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Table 9-42
NR Band n66 Antenna A Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 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 π/2 BPSK	1	1	19.96	0	0.0
	1	108	19.93		0.0
	1	214	19.78		0.0
	108	0	20.01	0-0.5	0.0
	108	54	19.96	0	0.0
	108	108	20.07	0-0.5	0.0
	216	0	19.97		0.0
DFT-s-OFDM QPSK	1	1	**20.00**	0	0.0
	1	108	19.83		0.0
	1	214	19.70		0.0
	108	0	19.98	0-1	0.0
	108	54	20.02	0	0.0
	108	108	**20.05**	0-1	0.0
	216	0	**19.99**		0.0
DFT-s-OFDM 16QAM	1	1	20.23	0-1	0.0
CP-OFDM QPSK	1	1	**19.92**	0-1.5	0.0

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Table 9-43
NR Band n66 Antenna A Measured P_{Limit} for 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 π/2 BPSK	1	1	19.05	0	0.0
	1	108	19.06		0.0
	1	214	19.00		0.0
	108	0	19.07	0-0.5	0.0
	108	54	19.08	0	0.0
	108	108	19.18	0-0.5	0.0
	216	0	19.03		0.0
DFT-s-OFDM QPSK	1	1	**19.11**	0	0.0
	1	108	19.03		0.0
	1	214	18.98		0.0
	108	0	19.06	0-1	0.0
	108	54	19.09	0	0.0
	108	108	**19.17**	0-1	0.0
	216	0	**19.10**		0.0
DFT-s-OFDM 16QAM	1	1	19.31	0-1	0.0
CP-OFDM QPSK	1	1	**19.13**	0-1.5	0.0

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9.4.5 NR Band n66 Antenna J

Table 9-44
NR Band n66 Antenna J Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot mode active) and/or DSI = 4 (Earjack Active) - 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 π/2 BPSK	1	1	18.55	0	0.0
	1	108	18.84		0.0
	1	214	18.80		0.0
	108	0	18.86	0-0.5	0.0
	108	54	19.00	0	0.0
	108	108	19.11	0-0.5	0.0
	216	0	18.99		0.0
DFT-s-OFDM QPSK	1	1	18.67	0	0.0
	1	108	18.93		0.0
	1	214	**18.97**		0.0
	108	0	18.84	0-1	0.0
	108	54	18.96	0	0.0
	108	108	**19.10**	0-1	0.0
	216	0	**18.95**		0.0
DFT-s-OFDM 16QAM	1	1	18.57	0-1	0.0
CP-OFDM QPSK	1	1	18.56	0-1.5	0.0

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Table 9-45
NR Band n66 Antenna J Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	18.42	0	0.0
	1	108	18.56		0.0
	1	214	18.51		0.0
	108	0	18.47	0-0.5	0.0
	108	54	18.66	0	0.0
	108	108	18.69	0-0.5	0.0
	216	0	18.59		0.0
DFT-s-OFDM QPSK	1	1	18.21	0	0.0
	1	108	18.40		0.0
	1	214	**18.50**		0.0
	108	0	18.50	0-1	0.0
	108	54	18.59	0	0.0
	108	108	**18.70**	0-1	0.0
	216	0	**18.49**		0.0
DFT-s-OFDM 16QAM	1	1	18.62	0-1	0.0
CP-OFDM QPSK	1	1	18.48	0-1.5	0.0

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9.4.6 NR Band n25 Antenna A

Table 9-46
NR Band n25 Antenna A Measured P_{Max} - 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 π/2 BPSK	1	1	23.66	0	0.0
	1	108	23.64		0.0
	1	214	23.45		0.0
	108	0	22.80	0-0.5	0.5
	108	54	23.74	0	0.0
	108	108	22.84	0-0.5	0.5
	216	0	22.80		0.5
DFT-s-OFDM QPSK	1	1	23.75	0	0.0
	1	108	**23.76**		0.0
	1	214	23.56		0.0
	108	0	22.90	0-1	1.0
	108	54	**23.76**	0	0.0
	108	108	22.82	0-1	1.0
	216	0	22.86		1.0
DFT-s-OFDM 16QAM	1	1	22.90	0-1	1.0
CP-OFDM QPSK	1	1	22.30	0-1.5	1.5

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Table 9-47
NR Band n25 Antenna A Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 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 π/2 BPSK	1	1	20.69	0	0.0
	1	108	20.78		0.0
	1	214	20.61		0.0
	108	0	20.81	0-0.5	0.0
	108	54	20.74	0	0.0
	108	108	20.79	0-0.5	0.0
	216	0	20.77		0.0
DFT-s-OFDM QPSK	1	1	20.72	0	0.0
	1	108	**20.80**		0.0
	1	214	20.66		0.0
	108	0	20.79	0-1	0.0
	108	54	20.78	0	0.0
	108	108	**20.82**	0-1	0.0
	216	0	**20.79**		0.0
DFT-s-OFDM 16QAM	1	1	21.05	0-1	0.0
CP-OFDM QPSK	1	1	**20.66**	0-1.5	0.0

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Table 9-48
NR Band n25 Antenna A Measured P_{Limit} for DSI = 3 (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 π/2 BPSK	1	1	18.02	0	0.0
	1	108	18.00		0.0
	1	214	17.92		0.0
	108	0	18.15	0-0.5	0.0
	108	54	18.10	0	0.0
	108	108	18.08	0-0.5	0.0
	216	0	18.08		0.0
DFT-s-OFDM QPSK	1	1	**18.11**	0	0.0
	1	108	18.00		0.0
	1	214	17.87		0.0
	108	0	**18.16**	0-1	0.0
	108	54	18.05	0	0.0
	108	108	18.07	0-1	0.0
	216	0	**18.10**		0.0
DFT-s-OFDM 16QAM	1	1	17.99	0-1	0.0
CP-OFDM QPSK	1	1	18.09	0-1.5	0.0

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9.4.7 NR Band n25 Antenna J

Table 9-49
NR Band n25 Antenna J Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot mode active) and/or DSI = 4 (Earjack Active) - 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 π/2 BPSK	1	1	19.05	0	0.0
	1	108	19.00		0.0
	1	214	19.18		0.0
	108	0	19.09	0-0.5	0.0
	108	54	19.13	0	0.0
	108	108	19.21	0-0.5	0.0
	216	0	19.18		0.0
DFT-s-OFDM QPSK	1	1	19.02	0	0.0
	1	108	18.89		0.0
	1	214	**19.07**		0.0
	108	0	19.05	0-1	0.0
	108	54	19.12	0	0.0
	108	108	**19.19**	0-1	0.0
	216	0	19.06		0.0
DFT-s-OFDM 16QAM	1	1	19.31	0-1	0.0
CP-OFDM QPSK	1	1	**18.93**	0-1.5	0.0

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Table 9-50
NR Band n25 Antenna J Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	18.00	0	0.0
	1	108	17.91		0.0
	1	214	18.08		0.0
	108	0	18.04	0-0.5	0.0
	108	54	18.02	0	0.0
	108	108	18.09	0-0.5	0.0
	216	0	18.10		0.0
DFT-s-OFDM QPSK	1	1	18.01	0	0.0
	1	108	17.90		0.0
	1	214	**18.07**		0.0
	108	0	17.98	0-1	0.0
	108	54	18.03	0	0.0
	108	108	**18.08**	0-1	0.0
	216	0	18.06		0.0
DFT-s-OFDM 16QAM	1	1	17.53	0-1	0.0
CP-OFDM QPSK	1	1	**17.90**	0-1.5	0.0

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9.4.8 NR Band n30 Antenna A

Table 9-51
NR Band n30 Antenna A Measured P_{Max} - 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 π/2 BPSK	1	1	21.97	0	0.0
	1	26	22.11		0.0
	1	50	22.08		0.0
	25	0	21.67	0-0.5	0.5
	25	14	22.22	0	0.0
	25	27	21.70	0-0.5	0.5
	50	0	21.69		0.5
DFT-s-OFDM QPSK	1	1	21.98	0	0.0
	1	26	**22.01**		0.0
	1	50	21.57		0.0
	25	0	21.18	0-1	1.0
	25	14	**22.22**	0	0.0
	25	27	21.15	0-1	1.0
	50	0	**21.22**		1.0
DFT-s-OFDM 16QAM	1	1	21.29	0-1	1.0
CP-OFDM QPSK	1	1	20.51	0-1.5	1.5

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Table 9-52
NR Band n30 Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 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 π/2 BPSK	1	1	21.11	0	0.0
	1	26	21.20		0.0
	1	50	21.20		0.0
	25	0	21.21	0-0.5	0.0
	25	14	21.17	0	0.0
	25	27	21.20	0-0.5	0.0
	50	0	21.26		0.0
DFT-s-OFDM QPSK	1	1	21.08	0	0.0
	1	26	**21.16**		0.0
	1	50	21.14		0.0
	25	0	21.18	0-1	0.0
	25	14	21.17	0	0.0
	25	27	**21.19**	0-1	0.0
	50	0	**21.15**		0.0
DFT-s-OFDM 16QAM	1	1	21.33	0-1	0.0
CP-OFDM QPSK	1	1	**20.63**	0-1.5	0.5

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Table 9-53
NR Band n30 Measured P_{Limit} for DSI = 3 (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 π/2 BPSK	1	1	18.61	0	0.0
	1	26	18.68		0.0
	1	50	18.69		0.0
	25	0	18.68	0-0.5	0.0
	25	14	18.73	0	0.0
	25	27	18.67	0-0.5	0.0
	50	0	18.74		0.0
DFT-s-OFDM QPSK	1	1	18.48	0	0.0
	1	26	18.53		0.0
	1	50	**18.59**		0.0
	25	0	18.69	0-1	0.0
	25	14	**18.74**	0	0.0
	25	27	18.72	0-1	0.0
	50	0	**18.58**		0.0
DFT-s-OFDM 16QAM	1	1	18.90	0-1	0.0
CP-OFDM QPSK	1	1	18.67	0-1.5	0.0

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9.4.1 NR Band n30 Antenna J

Table 9-54
NR Band n30 Antenna J Measured P_{Limit} for all DSI - 40 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 π/2 BPSK	1	1	17.67	0	0.0
	1	26	17.79		0.0
	1	50	17.79		0.0
	25	0	17.83	0-0.5	0.0
	25	14	17.88	0	0.0
	25	27	17.84	0-0.5	0.0
	50	0	17.87		0.0
DFT-s-OFDM QPSK	1	1	17.66	0	0.0
	1	26	**17.81**		0.0
	1	50	17.69		0.0
	25	0	17.86	0-1	0.0
	25	14	**17.93**	0	0.0
	25	27	17.87	0-1	0.0
	50	0	17.80		0.0
DFT-s-OFDM 16QAM	1	1	18.15	0-1	0.0
CP-OFDM QPSK	1	1	**17.74**	0-1.5	0.0

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9.4.1 NR Band n7 Antenna B

Table 9-55
NR Band n7 Antenna B Measured P_{Max} - 40 MHz Bandwidth

NR Band n7 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	23.02	0	0.0
	1	108	22.91		0.0
	1	214	22.92		0.0
	108	0	22.36	0-0.5	0.5
	108	54	22.82	0	0.0
	108	108	22.29	0-0.5	0.5
	216	0	22.32		0.5
DFT-s-OFDM QPSK	1	1	**22.85**	0	0.0
	1	108	22.74		0.0
	1	214	22.80		0.0
	108	0	21.78	0-1	1.0
	108	54	**22.74**	0	0.0
	108	108	21.75	0-1	1.0
	216	0	**21.73**		1.0
DFT-s-OFDM 16QAM	1	1	22.15	0-1	1.0
CP-OFDM QPSK	1	1	**21.39**	0-1.5	1.5

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Table 9-56
NR Band n7 Antenna B Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active), or DSI = 3 (Hotspot Mode), and/or DSI = 4 (Earjack Active) - 40 MHz Bandwidth

NR Band n7 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	20.83	0	0.0
	1	108	20.57		0.0
	1	214	20.73		0.0
	108	0	20.78	0-0.5	0.0
	108	54	20.73	0	0.0
	108	108	20.67	0-0.5	0.0
	216	0	20.75		0.0
DFT-s-OFDM QPSK	1	1	**20.74**	0	0.0
	1	108	20.49		0.0
	1	214	20.53		0.0
	108	0	**20.81**	0-1	0.0
	108	54	20.75	0	0.0
	108	108	20.74	0-1	0.0
	216	0	**20.73**		0.0
DFT-s-OFDM 16QAM	1	1	21.00	0-1	0.0
CP-OFDM QPSK	1	1	**20.77**	0-1.5	0.0

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9.4.2 NR Band n41 Antenna J

Table 9-57
NR Band n41 Antenna J Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), and/or DSI = 4 (Earjack Active) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	19.17	0	0.0
	1	137	19.22		0.0
	1	271	19.23		0.0
	135	0	19.25	0-0.5	0.0
	135	69	19.22	0	0.0
	135	138	19.12	0-0.5	0.0
	270	0	19.18		0.0
DFT-s-OFDM QPSK	1	1	**19.30**	0	0.0
	1	137	19.22		0.0
	1	271	19.12		0.0
	135	0	**19.28**	0-1	0.0
	135	69	19.22	0	0.0
	135	138	19.11	0-1	0.0
	270	0	19.22		0.0
DFT-s-OFDM 16QAM	1	1	19.51	0-1	0.0
CP-OFDM QPSK	1	1	**19.20**	0-1.5	0.0

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Table 9-58
NR Band n41 Antenna J Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	18.35	0	0.0
	1	137	18.27		0.0
	1	271	18.20		0.0
	135	0	18.36	0-0.5	0.0
	135	69	18.28	0	0.0
	135	138	18.15	0-0.5	0.0
	270	0	18.25		0.0
DFT-s-OFDM QPSK	1	1	**18.40**	0	0.0
	1	137	18.30		0.0
	1	271	18.23		0.0
	135	0	**18.38**	0-1	0.0
	135	69	18.28	0	0.0
	135	138	18.17	0-1	0.0
	270	0	18.31		0.0
DFT-s-OFDM 16QAM	1	1	18.33	0-1	0.0
CP-OFDM QPSK	1	1	**18.38**	0-1.5	0.0

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9.4.3 NR Band n41 Antenna D, E, B

Table 9-59
NR Band n41 Antenna D, E, B 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 D	15.63
SRS #3 Ant E	14.51
SRS #4 Ant B	17.05

9.4.4 NR Band n77 DoD Antenna F

Table 9-60
NR Band n77 DoD Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	633334 (3500.01 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	17.27	0	0.0
	1	137	17.24		0.0
	1	271	17.50		0.0
	135	0	17.15	0-0.5	0.0
	135	69	17.23	0	0.0
	135	138	17.21	0-0.5	0.0
	270	0	17.25		0.0
DFT-s-OFDM QPSK	1	1	17.20	0	0.0
	1	137	17.07		0.0
	1	271	**17.32**		0.0
	135	0	17.13	0-1	0.0
	135	69	17.23	0	0.0
	135	138	**17.24**	0-1	0.0
	270	0	17.23		0.0
DFT-s-OFDM 16QAM	1	1	17.36	0-1	0.0
CP-OFDM QPSK	1	1	**17.23**	0-1.5	0.0

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9.4.1 NR Band n77 DoD Antenna I, D, C

Table 9-61
NR Band n77 DoD Measured P_{Limit} for all DSI – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant I	16.30
SRS #3 Ant D	10.61
SRS #4 Ant C	11.71

9.4.1 NR Band n77 C-Band Antenna F

Table 9-62
NR Band n77 DoD Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	17.05	16.98	0	0.0
	1	137	17.40	17.45		0.0
	1	271	16.80	17.21		0.0
	135	0	17.45	17.19	0-0.5	0.0
	135	69	17.27	17.35	0	0.0
	135	138	17.00	17.33	0-0.5	0.0
	270	0	17.09	17.19		0.0
DFT-s-OFDM QPSK	1	1	17.00	16.91	0	0.0
	1	137	17.35	**17.36**		0.0
	1	271	16.80	17.15		0.0
	135	0	17.40	17.20	0-1	0.0
	135	69	17.25	17.33	0	0.0
	135	138	17.01	**17.41**	0-1	0.0
	270	0	17.11	17.29		0.0
DFT-s-OFDM 16QAM	1	1	17.13	17.00	0-1	0.0
CP-OFDM QPSK	1	1	17.03	**17.04**	0-1.5	0.0

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

Table 9-63
NR Band n77 C-Band Measured P_{Limit} for all DSI – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant I	16.53	**17.56**
SRS #3 Ant D	**10.65**	9.70
SRS #4 Ant C	**10.80**	10.73

Figure 9-4
Power Measurement Setup – NR FDD

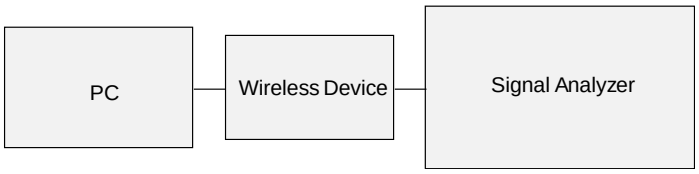

Figure 9-5
Power Measurement Setup – NR TDD

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9.5 WLAN Conducted Powers

Table 9-64
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11b
		Average
2412	1	20.48
2437	6	20.41
2462	11	20.23

Table 9-65
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11b
		Average
2412	1	20.49
2437	6	19.76
2462	11	19.98

Table 9-66
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.06	15.78	18.94
2417	2	18.27	17.88	21.09
2437	6	18.17	18.41	21.30
2457	10	17.88	18.13	21.02
2462	11	15.96	16.51	19.26

Table 9-67
2.4 GHz WLAN Reduced Average RF Power with RCV Active – Ant 1

2.4GHz Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11b
		Average
2412	1	16.86
2437	6	16.51
2462	11	16.44

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Table 9-68
2.4 GHz WLAN Reduced Average RF Power with RCV Active – Ant 2

2.4GHz Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11b
		Average
2412	1	16.99
2437	6	16.20
2462	11	16.33

Table 9-69
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 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.06	15.78	18.94
2417	2	15.97	16.51	19.26
2437	6	16.52	16.30	19.42
2457	10	16.15	16.05	19.11
2462	11	15.96	16.51	19.26

Table 9-70
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN and/or 5G NR with RCV Active - MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	13.91	13.52	16.73
2437	6	13.56	13.21	16.40
2462	11	13.54	13.46	16.51

Table 9-71
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	14.34	14.49	17.43
5290	58	15.46	15.44	18.46
5530	106	14.71	14.85	17.79
5610	122	14.92	14.57	17.76
5690	138	15.24	15.21	18.24
5775	155	14.67	14.93	17.81

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Table 9-72
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 (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	13.97	13.88	16.94
5290	58	13.72	13.75	16.75
5530	106	13.43	13.77	16.61
5610	122	13.77	13.92	16.86
5690	138	13.51	13.72	16.63
5775	155	13.61	13.74	16.69
5855	171	13.49	13.83	16.67

Table 9-73
5 GHz WLAN Reduced Average RF Power During Conditions with 5G FR2 NR

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	11.34	11.64	14.50
5290	58	11.52	11.83	14.69
5530	106	11.62	11.79	14.72
5610	122	11.88	11.59	14.75
5690	138	11.52	11.38	14.46
5775	155	11.61	11.27	14.45
5855	171	11.55	11.87	14.72

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.

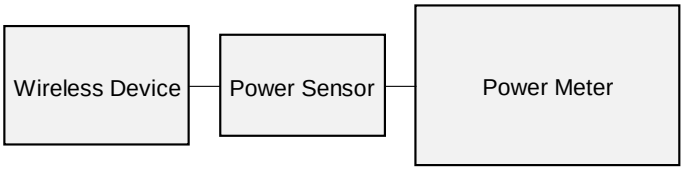

Figure 9-6
Power Measurement Setup

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9.6 Bluetooth Conducted Powers

Table 9-74
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Power Scheme	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	ePA	0	17.11	51.428
2441	1.0	ePA	39	17.47	55.898
2480	1.0	ePA	78	16.73	47.130
2402	1.0	iPA	0	12.13	16.334
2441	1.0	iPA	39	12.63	18.302
2480	1.0	iPA	78	12.17	16.497
2402	2.0	ePA	0	18.00	63.023
2441	2.0	ePA	39	17.73	59.252
2480	2.0	ePA	78	17.14	51.785
2402	2.0	iPA	0	9.49	8.883
2441	2.0	iPA	39	9.75	9.446
2480	2.0	iPA	78	9.16	8.248
2402	3.0	ePA	0	17.81	60.353
2441	3.0	ePA	39	17.69	58.749
2480	3.0	ePA	78	17.15	51.904
2402	3.0	iPA	0	9.49	8.883
2441	3.0	iPA	39	9.86	9.676
2480	3.0	iPA	78	9.00	7.946

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Table 9-75
Bluetooth Maximum Average RF Power– Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Power Scheme	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	ePA	0	16.57	45.373
2441	1.0	ePA	39	16.73	47.044
2480	1.0	ePA	78	16.57	45.384
2402	1.0	iPA	0	10.67	11.660
2441	1.0	iPA	39	10.97	12.491
2480	1.0	iPA	78	10.81	12.036
2402	2.0	ePA	0	16.71	46.925
2441	2.0	ePA	39	16.51	44.802
2480	2.0	ePA	78	16.62	45.867
2402	2.0	iPA	0	8.33	6.800
2441	2.0	iPA	39	8.77	7.535
2480	2.0	iPA	78	8.31	6.775
2402	3.0	ePA	0	16.74	47.152
2441	3.0	ePA	39	16.53	45.009
2480	3.0	ePA	78	16.64	46.132
2402	3.0	iPA	0	8.39	6.896
2441	3.0	iPA	39	8.84	7.649
2480	3.0	iPA	78	8.32	6.788

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Table 9-76
Bluetooth Maximum Average RF Power – MIMO

Frequency [MHz]	Data Rate [Mbps]	Power Scheme	Channel No.	Avg Conducted Power ANT 1		Avg Conducted Power ANT 2		Avg Conducted Power Dual	
				[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]
2402	1.0	iPA	0	12.33	17.096	9.96	9.920	14.32	27.040
2441	1.0	iPA	39	12.44	17.535	10.08	10.186	14.43	27.733
2480	1.0	iPA	78	12.10	16.214	9.65	9.224	14.05	25.410
2402	2.0	iPA	0	10.24	10.575	8.09	6.435	12.31	17.022
2441	2.0	iPA	39	10.63	11.553	9.00	7.935	12.90	19.498
2480	2.0	iPA	78	10.26	10.624	8.05	6.378	12.31	17.022
2402	3.0	iPA	0	10.55	11.340	7.58	5.724	12.32	17.061
2441	3.0	iPA	39	10.75	11.890	8.50	7.084	12.78	18.967
2480	3.0	iPA	78	10.18	10.411	7.50	5.626	12.05	16.032

Table 9-77
Bluetooth Reduced Average RF Power (RCV Active) – Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	13.82	24.099
2441	1.0	GFSK	ePA	39	14.72	29.648
2480	1.0	GFSK	ePA	78	13.74	23.659

Table 9-78
Bluetooth Reduced Average RF Power (RCV Active) – Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	14.29	26.853
2441	1.0	GFSK	ePA	39	14.01	25.177
2480	1.0	GFSK	ePA	78	14.19	26.242

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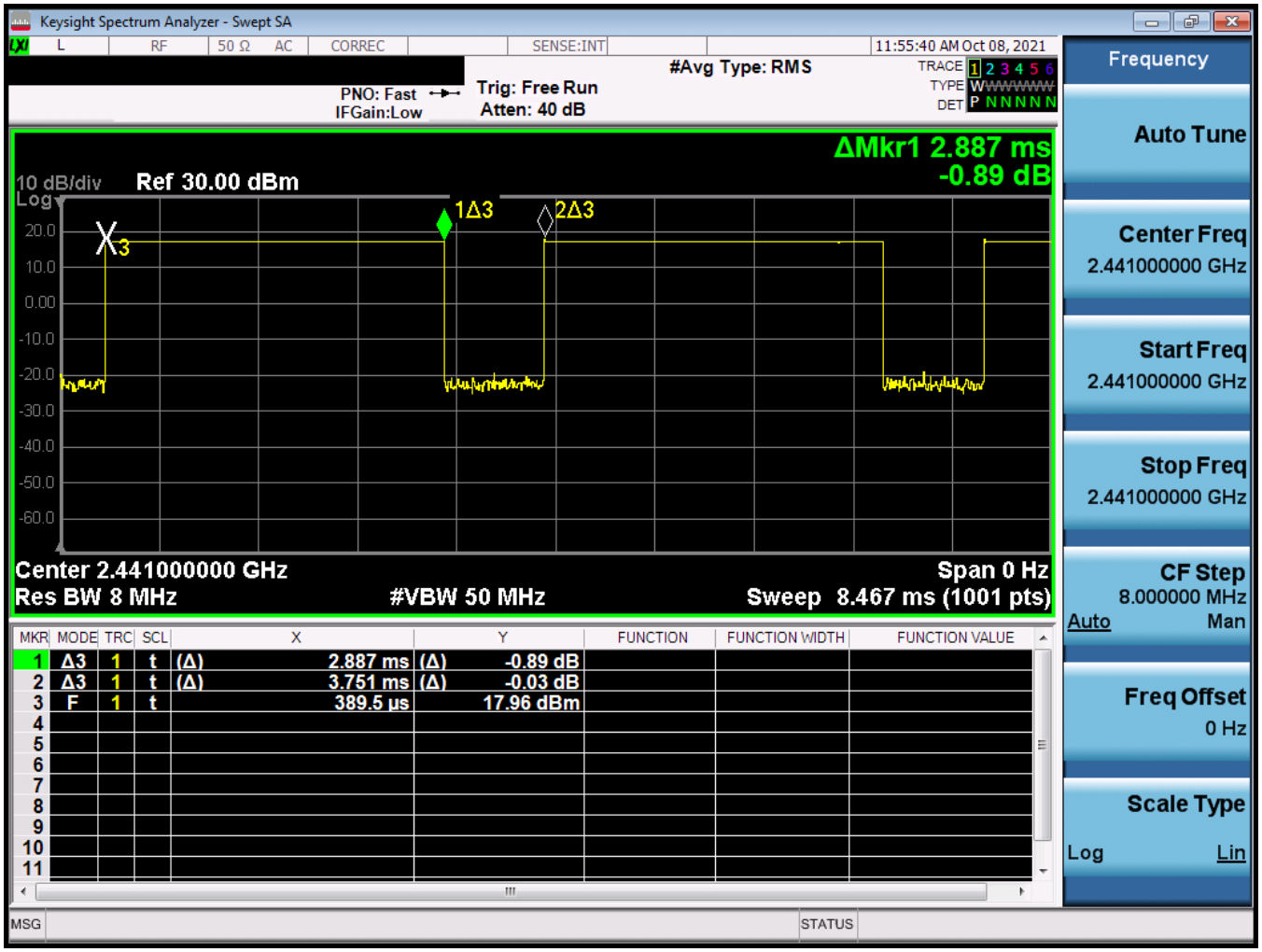
Figure 9-7
Bluetooth Antenna 1 Transmission Plot



Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.887ms}{3.751ms} * 100\% = 77.0\%$$

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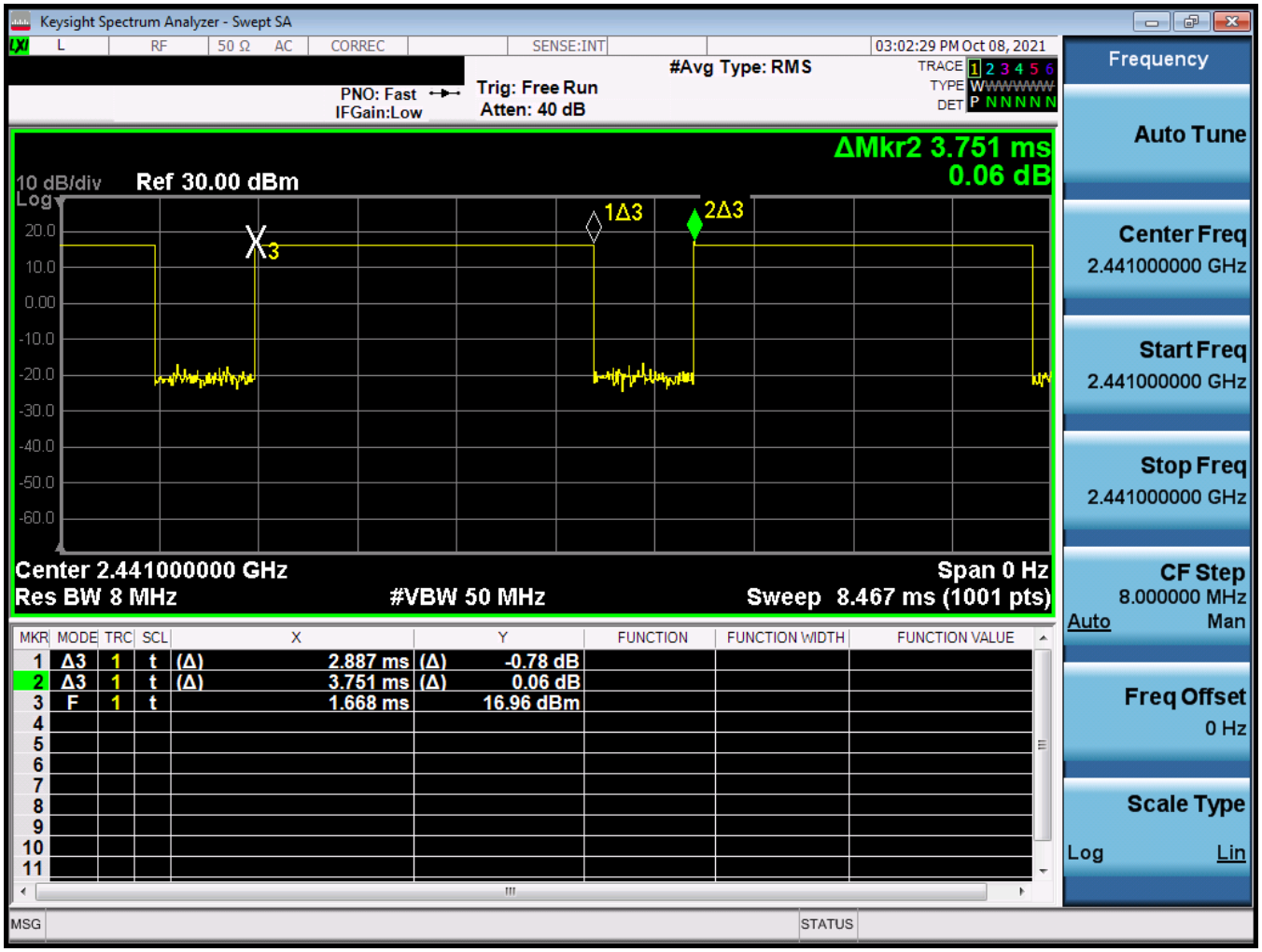
Figure 9-8
Bluetooth Antenna 2 Transmission Plot



Equation 9-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.887ms}{3.751ms} * 100\% = 77.0\%$$

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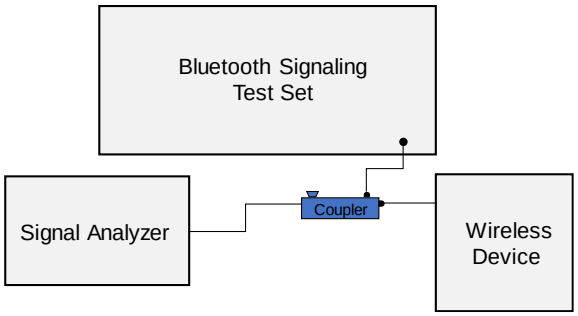

Figure 9-9
Power Measurement Setup

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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
10/07/2021	750 Head	21.3	700	0.896	42.882	0.889	42.201	0.79%	1.61%
			710	0.899	42.838	0.890	42.149	1.01%	1.63%
			725	0.904	42.775	0.891	42.071	1.46%	1.67%
			750	0.913	42.687	0.894	41.942	2.13%	1.78%
			770	0.920	42.632	0.895	41.838	2.79%	1.90%
			785	0.926	42.595	0.896	41.760	3.35%	2.00%
			800	0.931	42.559	0.897	41.682	3.79%	2.10%
10/12/2021	750 Head	21.8	680	0.895	40.843	0.888	42.305	0.79%	-3.46%
			695	0.899	40.794	0.889	42.227	1.12%	-3.39%
			700	0.901	40.773	0.889	42.201	1.35%	-3.38%
			710	0.904	40.735	0.890	42.149	1.57%	-3.35%
			725	0.908	40.673	0.891	42.071	1.91%	-3.32%
			750	0.915	40.566	0.894	41.942	2.35%	-3.28%
			770	0.921	40.487	0.895	41.838	2.91%	-3.23%
			785	0.925	40.429	0.896	41.760	3.24%	-3.19%
			800	0.930	40.375	0.897	41.682	3.68%	-3.14%
10/14/2021	750 Head	22.4	680	0.898	41.035	0.888	42.305	1.13%	-3.00%
			695	0.903	40.984	0.889	42.227	1.57%	-2.94%
			700	0.905	40.970	0.889	42.201	1.80%	-2.92%
			710	0.908	40.939	0.890	42.149	2.02%	-2.87%
			725	0.914	40.900	0.891	42.071	2.58%	-2.78%
			750	0.922	40.831	0.894	41.942	3.13%	-2.65%
			770	0.929	40.772	0.895	41.838	3.80%	-2.55%
			785	0.934	40.722	0.896	41.760	4.24%	-2.49%
			800	0.939	40.678	0.897	41.682	4.68%	-2.41%
09/23/2021	835 Head	20.4	815	0.875	40.509	0.898	41.594	-2.56%	-2.61%
			820	0.879	40.450	0.899	41.578	-2.22%	-2.71%
			835	0.894	40.280	0.900	41.500	-0.67%	-2.94%
			850	0.910	40.107	0.916	41.500	-0.66%	-3.36%
09/27/2021	835 Head	19.3	815	0.921	43.270	0.898	41.594	2.56%	4.03%
			820	0.923	43.258	0.899	41.578	2.67%	4.04%
			835	0.929	43.210	0.900	41.500	3.22%	4.12%
			850	0.935	43.157	0.916	41.500	2.07%	3.99%
09/30/2021	835 Head	22.0	815	0.931	41.371	0.898	41.594	3.67%	-0.54%
			820	0.933	41.360	0.899	41.578	3.78%	-0.52%
			835	0.939	41.329	0.900	41.500	4.33%	-0.41%
			850	0.945	41.297	0.916	41.500	3.17%	-0.49%
10/18/2021	835 Head	21.0	815	0.912	40.417	0.898	41.594	1.56%	-2.83%
			820	0.914	40.404	0.899	41.578	1.67%	-2.82%
			835	0.920	40.363	0.900	41.500	2.22%	-2.74%
			850	0.926	40.317	0.916	41.500	1.09%	-2.85%
10/06/2021	1750 Head	21.6	1710	1.357	39.766	1.348	40.142	0.67%	-0.94%
			1720	1.363	39.756	1.354	40.126	0.66%	-0.92%
			1745	1.378	39.728	1.368	40.087	0.73%	-0.90%
			1750	1.381	39.723	1.371	40.079	0.73%	-0.89%
			1770	1.393	39.694	1.383	40.047	0.72%	-0.88%
			1790	1.406	39.662	1.394	40.016	0.86%	-0.88%
10/21/2021	1750 Head	19.7	1710	1.301	39.145	1.348	40.142	-3.49%	-2.48%
			1720	1.312	39.099	1.354	40.126	-3.10%	-2.56%
			1745	1.339	38.982	1.368	40.087	-2.12%	-2.76%
			1750	1.344	38.959	1.371	40.079	-1.97%	-2.79%
			1770	1.365	38.861	1.383	40.047	-1.30%	-2.96%
			1790	1.387	38.759	1.394	40.016	-0.50%	-3.14%
10/26/2021	1750 Head	21.8	1710	1.380	40.909	1.348	40.142	2.37%	1.91%
			1720	1.391	40.861	1.354	40.126	2.73%	1.83%
			1745	1.416	40.742	1.368	40.087	3.51%	1.63%
			1750	1.421	40.719	1.371	40.079	3.65%	1.60%
			1770	1.441	40.623	1.383	40.047	4.19%	1.44%
			1790	1.460	40.526	1.394	40.016	4.73%	1.27%
10/12/2021	1900 Head	22.3	1850	1.389	38.891	1.400	40.000	-0.79%	-2.77%
			1860	1.399	38.846	1.400	40.000	-0.07%	-2.89%
			1880	1.420	38.758	1.400	40.000	1.43%	-3.10%
			1900	1.440	38.671	1.400	40.000	2.86%	-3.32%
			1905	1.446	38.649	1.400	40.000	3.29%	-3.38%
			1910	1.451	38.626	1.400	40.000	3.64%	-3.44%
10/20/2021	1900 Head	22.6	1850	1.406	38.963	1.400	40.000	0.43%	-2.59%
			1860	1.416	38.921	1.400	40.000	1.14%	-2.70%
			1880	1.436	38.840	1.400	40.000	2.57%	-2.90%
			1900	1.456	38.760	1.400	40.000	4.00%	-3.10%
			1905	1.461	38.739	1.400	40.000	4.36%	-3.15%
			1910	1.466	38.719	1.400	40.000	4.71%	-3.20%

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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
10/20/2021	2450 Head	24.8	2400	1.799	38.906	1.756	39.289	2.45%	-0.97%
			2450	1.858	38.693	1.800	39.200	3.22%	-1.29%
			2480	1.892	38.574	1.833	39.162	3.22%	-1.50%
			2500	1.915	38.496	1.855	39.136	3.23%	-1.64%
			2510	1.926	38.453	1.866	39.123	3.22%	-1.71%
			2535	1.955	38.341	1.893	39.092	3.28%	-1.92%
			2550	1.974	38.274	1.909	39.073	3.40%	-2.04%
			2560	1.986	38.229	1.920	39.060	3.44%	-2.13%
			2600	2.032	38.073	1.964	39.009	3.46%	-2.40%
			2650	2.088	37.848	2.018	38.945	3.47%	-2.82%
			2680	2.124	37.724	2.051	38.907	3.56%	-3.04%
			2700	2.146	37.658	2.073	38.882	3.52%	-3.15%
10/24/2021	2450 Head	22.7	2400	1.787	38.447	1.756	39.289	1.77%	-2.14%
			2450	1.843	38.225	1.800	39.200	2.39%	-2.49%
			2480	1.874	38.143	1.833	39.162	2.24%	-2.60%
			2500	1.894	38.053	1.855	39.136	2.10%	-2.77%
			2510	1.905	38.004	1.866	39.123	2.09%	-2.86%
			2535	1.933	37.886	1.893	39.092	2.11%	-3.09%
			2550	1.951	37.836	1.909	39.073	2.20%	-3.17%
			2560	1.962	37.808	1.920	39.060	2.19%	-3.21%
			2600	2.004	37.685	1.964	39.009	2.04%	-3.39%
			2650	2.061	37.460	2.018	38.945	2.13%	-3.81%
			2680	2.095	37.375	2.051	38.907	2.15%	-3.94%
			2700	2.116	37.312	2.073	38.882	2.07%	-4.04%
10/24/2021	2450 Head	24.9	2300	1.683	40.133	1.670	39.500	0.78%	1.60%
			2310	1.695	40.094	1.679	39.480	0.95%	1.56%
			2320	1.707	40.053	1.687	39.460	1.19%	1.50%
			2400	1.802	39.735	1.756	39.289	2.62%	1.14%
			2450	1.861	39.534	1.800	39.200	3.39%	0.85%
			2480	1.896	39.417	1.833	39.162	3.44%	0.65%
			2500	1.919	39.337	1.855	39.136	3.45%	0.51%
			2510	1.930	39.295	1.866	39.123	3.43%	0.44%
			2535	1.961	39.193	1.893	39.092	3.59%	0.26%
			2550	1.979	39.135	1.909	39.073	3.67%	0.16%
			2560	1.991	39.097	1.920	39.060	3.70%	0.09%
			2600	2.037	38.946	1.964	39.009	3.72%	-0.16%
			2650	2.096	38.752	2.018	38.945	3.87%	-0.50%
			2680	2.131	38.640	2.051	38.907	3.90%	-0.69%
			2700	2.154	38.568	2.073	38.882	3.91%	-0.81%
10/27/2021	2450 Head	23.8	2300	1.640	40.737	1.670	39.500	-1.80%	3.13%
			2310	1.652	40.696	1.679	39.480	-1.61%	3.08%
			2320	1.664	40.658	1.687	39.460	-1.36%	3.04%
			2400	1.755	40.353	1.756	39.289	-0.06%	2.71%
			2450	1.813	40.171	1.800	39.200	0.72%	2.48%
			2480	1.847	40.067	1.833	39.162	0.76%	2.31%
			2500	1.870	39.994	1.855	39.136	0.81%	2.19%
			2510	1.882	39.955	1.866	39.123	0.86%	2.13%
			2535	1.913	39.858	1.893	39.092	1.06%	1.96%
			2550	1.932	39.807	1.909	39.073	1.20%	1.88%
			2560	1.944	39.772	1.920	39.060	1.25%	1.82%
			2600	1.993	39.621	1.964	39.009	1.48%	1.57%
			2650	2.054	39.425	2.018	38.945	1.78%	1.23%
			2680	2.090	39.315	2.051	38.907	1.90%	1.05%
			2700	2.114	39.240	2.073	38.882	1.98%	0.92%
10/31/2021	2450 Head	21.4	2400	1.797	37.890	1.756	39.289	2.33%	-3.56%
			2450	1.833	37.835	1.800	39.200	1.83%	-3.48%
			2480	1.854	37.787	1.833	39.162	1.15%	-3.51%
			2500	1.868	37.753	1.855	39.136	0.70%	-3.53%
			2510	1.876	37.737	1.866	39.123	0.54%	-3.54%
			2535	1.897	37.700	1.893	39.092	0.21%	-3.56%
			2550	1.909	37.683	1.909	39.073	0.00%	-3.56%
			2560	1.916	37.675	1.920	39.060	-0.21%	-3.55%
			2600	1.944	37.603	1.964	39.009	-1.02%	-3.60%
			2650	1.987	37.514	2.018	38.945	-1.54%	-3.67%
			2680	2.008	37.485	2.051	38.907	-2.10%	-3.65%
			2700	2.022	37.440	2.073	38.882	-2.46%	-3.71%
11/09/2021	2450 Head	22.1	2400	1.838	39.634	1.756	39.289	4.67%	0.88%
			2450	1.879	39.559	1.800	39.200	4.39%	0.92%
			2480	1.901	39.518	1.833	39.162	3.71%	0.91%
			2500	1.915	39.480	1.855	39.136	3.23%	0.88%
			2510	1.923	39.458	1.866	39.123	3.05%	0.86%
			2535	1.945	39.408	1.893	39.092	2.75%	0.81%
			2550	1.958	39.385	1.909	39.073	2.57%	0.80%
			2560	1.966	39.371	1.920	39.060	2.40%	0.80%
			2600	1.998	39.307	1.964	39.009	1.73%	0.76%
			2650	2.039	39.205	2.018	38.945	1.04%	0.67%
			2680	2.064	39.173	2.051	38.907	0.63%	0.68%
			2700	2.082	39.095	2.073	38.882	0.43%	0.55%

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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
10/20/2021	3600 Head	20.9	3300	2.627	39.783	2.708	38.157	-2.99%	4.26%
			3350	2.673	39.682	2.759	38.100	-3.12%	4.15%
			3450	2.765	39.515	2.861	37.986	-3.36%	4.03%
			3500	2.811	39.424	2.913	37.929	-3.50%	3.94%
			3550	2.859	39.329	2.964	37.871	-3.54%	3.85%
			3560	2.868	39.310	2.974	37.860	-3.56%	3.83%
			3600	2.904	39.237	3.015	37.814	-3.68%	3.76%
			3650	2.956	39.152	3.066	37.757	-3.59%	3.69%
			3690	2.990	39.099	3.107	37.711	-3.77%	3.68%
			3700	2.998	39.080	3.117	37.700	-3.82%	3.66%
			3750	3.051	38.998	3.169	37.643	-3.72%	3.60%
			3900	3.200	38.759	3.323	37.471	-3.70%	3.44%
			3930	3.230	38.705	3.353	37.437	-3.67%	3.39%
			4100	3.406	38.445	3.528	37.243	-3.46%	3.23%
			4150	3.464	38.352	3.579	37.186	-3.21%	3.14%
10/22/2021	3600 Head	21.2	3300	2.643	39.752	2.708	38.157	-2.40%	4.18%
			3350	2.688	39.674	2.759	38.100	-2.57%	4.13%
			3450	2.778	39.485	2.861	37.986	-2.90%	3.95%
			3500	2.824	39.399	2.913	37.929	-3.06%	3.88%
			3550	2.873	39.305	2.964	37.871	-3.07%	3.79%
			3560	2.881	39.287	2.974	37.860	-3.13%	3.77%
			3600	2.917	39.206	3.015	37.814	-3.25%	3.68%
			3650	2.970	39.129	3.066	37.757	-3.13%	3.63%
			3690	3.004	39.068	3.107	37.711	-3.32%	3.60%
			3700	3.014	39.061	3.117	37.700	-3.30%	3.61%
			3750	3.066	38.953	3.169	37.643	-3.25%	3.48%
			3900	3.214	38.724	3.323	37.471	-3.28%	3.34%
			3930	3.246	38.668	3.353	37.437	-3.19%	3.29%
			4100	3.427	38.400	3.528	37.243	-2.86%	3.11%
			4150	3.476	38.297	3.579	37.186	-2.88%	2.99%
10/28/2021	3600 Head	21.0	3300	2.620	39.667	2.708	38.157	-3.25%	3.96%
			3350	2.658	39.661	2.759	38.100	-3.66%	4.10%
			3450	2.752	39.476	2.861	37.986	-3.81%	3.92%
			3500	2.792	39.338	2.913	37.929	-4.15%	3.71%
			3550	2.841	39.294	2.964	37.871	-4.15%	3.76%
			3560	2.851	39.278	2.974	37.860	-4.14%	3.75%
			3600	2.886	39.195	3.015	37.814	-4.28%	3.65%
			3650	2.935	39.104	3.066	37.757	-4.27%	3.57%
			3690	2.973	39.063	3.107	37.711	-4.31%	3.59%
			3700	2.979	39.046	3.117	37.700	-4.43%	3.57%
			3750	3.022	38.950	3.169	37.643	-4.64%	3.47%
			3900	3.179	38.708	3.323	37.471	-4.33%	3.30%
			3930	3.208	38.679	3.353	37.437	-4.32%	3.32%
			4100	3.383	38.343	3.528	37.243	-4.11%	2.95%

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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
10/24/2021	5200-5800 Head	22.0	5180	4.447	34.869	4.635	36.009	-4.06%	-3.17%
			5190	4.457	34.853	4.645	35.998	-4.05%	-3.18%
			5200	4.470	34.824	4.655	35.986	-3.97%	-3.23%
			5210	4.482	34.804	4.666	35.975	-3.94%	-3.26%
			5220	4.493	34.787	4.676	35.963	-3.91%	-3.27%
			5240	4.506	34.747	4.696	35.940	-4.05%	-3.32%
			5250	4.517	34.724	4.706	35.929	-4.02%	-3.35%
			5260	4.530	34.711	4.717	35.917	-3.96%	-3.36%
			5270	4.544	34.695	4.727	35.906	-3.87%	-3.37%
			5280	4.558	34.673	4.737	35.894	-3.78%	-3.40%
			5290	4.569	34.655	4.748	35.883	-3.77%	-3.42%
			5300	4.580	34.648	4.758	35.871	-3.74%	-3.41%
			5310	4.591	34.642	4.768	35.860	-3.71%	-3.40%
			5320	4.602	34.625	4.778	35.849	-3.68%	-3.41%
			5500	4.799	34.328	4.963	35.643	-3.30%	-3.69%
			5510	4.811	34.311	4.973	35.632	-3.26%	-3.71%
			5520	4.824	34.294	4.983	35.620	-3.19%	-3.72%
			5530	4.839	34.276	4.994	35.609	-3.10%	-3.74%
			5540	4.852	34.258	5.004	35.597	-3.04%	-3.76%
			5550	4.864	34.247	5.014	35.586	-2.99%	-3.76%
			5560	4.877	34.242	5.024	35.574	-2.93%	-3.74%
			5580	4.897	34.213	5.045	35.551	-2.93%	-3.76%
			5600	4.916	34.161	5.065	35.529	-2.94%	-3.85%
			5610	4.929	34.142	5.076	35.518	-2.90%	-3.87%
			5620	4.941	34.126	5.086	35.506	-2.85%	-3.89%
			5640	4.967	34.093	5.106	35.483	-2.72%	-3.92%
			5660	4.989	34.083	5.127	35.460	-2.69%	-3.88%
			5670	4.998	34.077	5.137	35.449	-2.71%	-3.87%
			5680	5.005	34.064	5.147	35.437	-2.76%	-3.87%
			5690	5.016	34.042	5.158	35.426	-2.75%	-3.91%
			5700	5.027	34.018	5.168	35.414	-2.73%	-3.94%
			5710	5.041	34.001	5.178	35.403	-2.65%	-3.96%
			5720	5.052	33.982	5.188	35.391	-2.62%	-3.98%
			5745	5.080	33.936	5.214	35.363	-2.57%	-4.04%
			5750	5.085	33.929	5.219	35.357	-2.57%	-4.04%
			5755	5.091	33.923	5.224	35.351	-2.55%	-4.04%
			5765	5.103	33.915	5.234	35.340	-2.50%	-4.03%
			5775	5.112	33.904	5.245	35.329	-2.54%	-4.03%
			5785	5.120	33.891	5.255	35.317	-2.57%	-4.04%
			5795	5.130	33.874	5.265	35.305	-2.56%	-4.05%
			5800	5.135	33.869	5.270	35.300	-2.56%	-4.05%
			5800	5.135	33.869	5.270	35.300	-2.56%	-4.05%
			5805	5.140	33.864	5.275	35.294	-2.56%	-4.05%
			5825	5.158	33.825	5.296	35.271	-2.61%	-4.10%
11/01/2021	5200-5800 Head	21.6	5180	4.668	36.044	4.635	36.009	0.71%	0.10%
			5190	4.677	36.030	4.645	35.998	0.69%	0.09%
			5200	4.688	36.012	4.655	35.986	0.71%	0.07%
			5210	4.702	35.989	4.666	35.975	0.77%	0.04%
			5220	4.716	35.958	4.676	35.963	0.86%	-0.01%
			5240	4.740	35.914	4.696	35.940	0.94%	-0.07%
			5250	4.753	35.894	4.706	35.929	1.00%	-0.10%
			5260	4.766	35.879	4.717	35.917	1.04%	-0.11%
			5270	4.778	35.860	4.727	35.906	1.08%	-0.13%
			5280	4.789	35.845	4.737	35.894	1.10%	-0.14%
			5290	4.801	35.833	4.748	35.883	1.12%	-0.14%
			5300	4.815	35.825	4.758	35.871	1.20%	-0.13%
			5310	4.826	35.816	4.768	35.860	1.22%	-0.12%
			5320	4.837	35.795	4.778	35.849	1.23%	-0.15%
			5500	5.045	35.467	4.963	35.643	1.65%	-0.49%
			5510	5.059	35.450	4.973	35.632	1.73%	-0.51%
			5520	5.075	35.436	4.983	35.620	1.85%	-0.52%
			5530	5.088	35.423	4.994	35.609	1.88%	-0.52%
			5540	5.100	35.409	5.004	35.597	1.92%	-0.53%
			5550	5.112	35.395	5.014	35.586	1.95%	-0.54%
			5560	5.123	35.382	5.024	35.574	1.97%	-0.54%
			5580	5.144	35.344	5.045	35.551	1.96%	-0.58%
			5600	5.167	35.286	5.065	35.529	2.01%	-0.68%
			5610	5.180	35.267	5.076	35.518	2.05%	-0.71%
			5620	5.194	35.249	5.086	35.506	2.12%	-0.72%
			5640	5.220	35.215	5.106	35.483	2.23%	-0.76%
			5660	5.244	35.196	5.127	35.460	2.28%	-0.74%
			5670	5.253	35.190	5.137	35.449	2.26%	-0.73%
			5680	5.261	35.172	5.147	35.437	2.21%	-0.75%
			5690	5.270	35.150	5.158	35.426	2.17%	-0.78%
			5700	5.282	35.125	5.168	35.414	2.21%	-0.82%
			5710	5.296	35.104	5.178	35.403	2.28%	-0.84%
			5720	5.309	35.080	5.188	35.391	2.33%	-0.88%
			5745	5.339	35.025	5.214	35.363	2.40%	-0.96%
			5750	5.347	35.018	5.219	35.357	2.45%	-0.96%
			5755	5.353	35.012	5.224	35.351	2.47%	-0.96%
			5765	5.364	35.005	5.234	35.340	2.48%	-0.95%
			5775	5.372	34.994	5.245	35.329	2.42%	-0.95%
			5785	5.380	34.979	5.255	35.317	2.38%	-0.96%
			5795	5.388	34.959	5.265	35.305	2.34%	-0.98%
			5800	5.394	34.950	5.270	35.300	2.35%	-0.99%
			5800	5.394	34.950	5.270	35.300	2.35%	-0.99%
			5805	5.398	34.941	5.275	35.294	2.33%	-1.00%
			5825	5.420	34.892	5.296	35.271	2.34%	-1.07%
			5835	5.431	34.858	5.305	35.230	2.38%	-1.06%
			5845	5.441	34.835	5.315	35.210	2.37%	-1.07%
			5855	5.455	34.822	5.325	35.197	2.44%	-1.07%
			5865	5.468	34.812	5.336	35.190	2.47%	-1.07%
			5865	5.468	34.812	5.336	35.190	2.47%	-1.07%
			5865	5.468	34.812	5.336	35.190	2.47%	-1.07%
			5865	5.468	34.812	5.336	35.190	2.47%	-1.07%
			5875	5.481	34.794	5.347	35.183	2.51%	-1.11%
			5885	5.492	34.768	5.357	35.177	2.52%	-1.16%
			5905	5.514	34.734	5.379	35.163	2.51%	-1.22%

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Table 10-5
Measured Body Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/11/2021	750 Body	21.0	680	0.951	54.520	0.958	55.804	-0.73%	-2.30%
			695	0.957	54.475	0.959	55.745	-0.21%	-2.28%
			700	0.958	54.460	0.959	55.726	-0.10%	-2.27%
			710	0.962	54.435	0.960	55.687	0.21%	-2.25%
			725	0.967	54.405	0.961	55.629	0.62%	-2.20%
			750	0.977	54.347	0.964	55.531	1.35%	-2.13%
			770	0.985	54.293	0.965	55.453	2.07%	-2.09%
			785	0.990	54.252	0.966	55.395	2.48%	-2.06%
			800	0.996	54.212	0.967	55.336	3.00%	-2.03%
10/11/2021	750 Body	21.3	680	0.952	54.404	0.958	55.804	-0.63%	-2.51%
			695	0.957	54.373	0.959	55.745	-0.21%	-2.46%
			700	0.959	54.364	0.959	55.726	0.00%	-2.44%
			710	0.963	54.344	0.960	55.687	0.31%	-2.41%
			725	0.969	54.316	0.961	55.629	0.83%	-2.36%
			750	0.978	54.262	0.964	55.531	1.45%	-2.29%
			770	0.986	54.207	0.965	55.453	2.18%	-2.25%
			785	0.991	54.164	0.966	55.395	2.59%	-2.22%
			800	0.998	54.130	0.967	55.336	3.21%	-2.18%
10/13/2021	750 Body	21.0	680	0.950	53.981	0.958	55.804	-0.84%	-3.27%
			695	0.955	53.940	0.959	55.745	-0.42%	-3.24%
			700	0.957	53.927	0.959	55.726	-0.21%	-3.23%
			710	0.960	53.902	0.960	55.687	0.00%	-3.21%
			725	0.966	53.859	0.961	55.629	0.52%	-3.18%
			750	0.977	53.794	0.964	55.531	1.35%	-3.13%
			770	0.984	53.734	0.965	55.453	1.97%	-3.10%
			785	0.990	53.705	0.966	55.395	2.48%	-3.05%
			800	0.996	53.680	0.967	55.336	3.00%	-2.99%
10/15/2021	750 Body	20.0	680	0.966	53.065	0.958	55.804	0.84%	-4.91%
			695	0.971	53.033	0.959	55.745	1.25%	-4.87%
			700	0.972	53.024	0.959	55.726	1.36%	-4.85%
			710	0.976	53.009	0.960	55.687	1.67%	-4.81%
			725	0.981	52.986	0.961	55.629	2.08%	-4.75%
			750	0.991	52.918	0.964	55.531	2.80%	-4.71%
			770	0.999	52.866	0.965	55.453	3.52%	-4.67%
			785	1.004	52.833	0.966	55.395	3.93%	-4.62%
			800	1.009	52.810	0.967	55.336	4.34%	-4.56%
10/17/2021	750 Body	19.8	680	0.929	54.051	0.958	55.804	-3.03%	-3.14%
			695	0.934	54.008	0.959	55.745	-2.61%	-3.12%
			700	0.936	53.995	0.959	55.726	-2.40%	-3.11%
			710	0.940	53.974	0.960	55.687	-2.08%	-3.08%
			725	0.946	53.942	0.961	55.629	-1.56%	-3.03%
			750	0.956	53.878	0.964	55.531	-0.83%	-2.98%
			770	0.963	53.819	0.965	55.453	-0.21%	-2.95%
			785	0.969	53.770	0.966	55.395	0.31%	-2.93%
			800	0.975	53.731	0.967	55.336	0.83%	-2.90%
09/27/2021	835 Body	20.5	815	1.006	54.831	0.968	55.271	3.93%	-0.80%
			820	1.008	54.820	0.969	55.258	4.02%	-0.79%
			835	1.015	54.779	0.970	55.200	4.64%	-0.76%
			850	1.022	54.734	0.988	55.154	3.44%	-0.76%
09/29/2021	835 Body	21.5	815	1.003	52.896	0.968	55.271	3.62%	-4.30%
			820	1.005	52.883	0.969	55.258	3.72%	-4.30%
			835	1.011	52.832	0.970	55.200	4.23%	-4.29%
			850	1.018	52.783	0.988	55.154	3.04%	-4.30%
10/07/2021	835 Body	21.5	815	0.932	54.415	0.968	55.271	-3.72%	-1.55%
			820	0.937	54.371	0.969	55.258	-3.30%	-1.61%
			835	0.953	54.235	0.970	55.200	-1.75%	-1.75%
			850	0.970	54.087	0.988	55.154	-1.82%	-1.93%
10/10/2021	835 Body	20.4	815	0.935	54.250	0.968	55.271	-3.41%	-1.85%
			820	0.941	54.200	0.969	55.258	-2.89%	-1.91%
			835	0.957	54.054	0.970	55.200	-1.34%	-2.08%
			850	0.974	53.903	0.988	55.154	-1.42%	-2.27%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
09/21/2021	1750 Body	21.7	1710	1.452	52.392	1.463	53.537	-0.75%	-2.14%
			1720	1.464	52.360	1.469	53.511	-0.34%	-2.15%
			1745	1.493	52.279	1.485	53.445	0.54%	-2.18%
			1750	1.499	52.262	1.488	53.432	0.74%	-2.19%
			1770	1.521	52.189	1.501	53.379	1.33%	-2.23%
			1790	1.544	52.120	1.514	53.326	1.98%	-2.26%
09/23/2021	1750 Body	21.9	1710	1.456	51.912	1.463	53.537	-0.48%	-3.04%
			1720	1.467	51.881	1.469	53.511	-0.14%	-3.05%
			1745	1.495	51.806	1.485	53.445	0.67%	-3.07%
			1750	1.501	51.790	1.488	53.432	0.87%	-3.07%
			1770	1.523	51.717	1.501	53.379	1.47%	-3.11%
			1790	1.546	51.644	1.514	53.326	2.11%	-3.15%
09/26/2021	1750 Body	21.8	1710	1.474	53.622	1.463	53.537	0.75%	0.16%
			1720	1.486	53.583	1.469	53.511	1.16%	0.13%
			1745	1.514	53.480	1.485	53.445	1.95%	0.07%
			1750	1.520	53.459	1.488	53.432	2.15%	0.05%
			1770	1.542	53.376	1.501	53.379	2.73%	-0.01%
			1790	1.563	53.302	1.514	53.326	3.24%	-0.05%
09/28/2021	1750 Body	21.8	1710	1.454	52.898	1.463	53.537	-0.62%	-1.19%
			1720	1.466	52.856	1.469	53.511	-0.20%	-1.22%
			1745	1.494	52.754	1.485	53.445	0.61%	-1.29%
			1750	1.499	52.735	1.488	53.432	0.74%	-1.30%
			1770	1.520	52.649	1.501	53.379	1.27%	-1.37%
			1790	1.541	52.568	1.514	53.326	1.78%	-1.42%
10/05/2021	1750 Body	22.7	1710	1.448	52.632	1.463	53.537	-1.03%	-1.69%
			1720	1.459	52.602	1.469	53.511	-0.68%	-1.70%
			1745	1.487	52.523	1.485	53.445	0.13%	-1.73%
			1750	1.493	52.506	1.488	53.432	0.34%	-1.73%
			1770	1.515	52.437	1.501	53.379	0.93%	-1.76%
			1790	1.538	52.366	1.514	53.326	1.59%	-1.80%
10/14/2021	1750 Body	22.5	1710	1.447	53.434	1.463	53.537	-1.09%	-0.19%
			1720	1.458	53.401	1.469	53.511	-0.75%	-0.21%
			1745	1.486	53.322	1.485	53.445	0.07%	-0.23%
			1750	1.492	53.304	1.488	53.432	0.27%	-0.24%
			1770	1.515	53.227	1.501	53.379	0.93%	-0.28%
			1790	1.537	53.148	1.514	53.326	1.52%	-0.33%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
09/28/2021	1900 Body	21.2	1850	1.505	50.912	1.520	53.300	-0.99%	-4.48%
			1860	1.516	50.876	1.520	53.300	-0.26%	-4.55%
			1880	1.538	50.813	1.520	53.300	1.18%	-4.67%
			1900	1.561	50.748	1.520	53.300	2.70%	-4.79%
			1905	1.567	50.730	1.520	53.300	3.09%	-4.82%
			1910	1.572	50.710	1.520	53.300	3.42%	-4.86%
10/07/2021	1900 Body	23.7	1850	1.512	51.908	1.520	53.300	-0.53%	-2.61%
			1860	1.523	51.858	1.520	53.300	0.20%	-2.71%
			1880	1.547	51.777	1.520	53.300	1.78%	-2.86%
			1900	1.571	51.737	1.520	53.300	3.36%	-2.93%
			1905	1.577	51.733	1.520	53.300	3.75%	-2.94%
			1910	1.582	51.727	1.520	53.300	4.08%	-2.95%
10/10/2021	1900 Body	22.2	1850	1.498	51.014	1.520	53.300	-1.45%	-4.29%
			1860	1.509	50.977	1.520	53.300	-0.72%	-4.36%
			1880	1.532	50.908	1.520	53.300	0.79%	-4.49%
			1900	1.554	50.845	1.520	53.300	2.24%	-4.61%
			1905	1.559	50.830	1.520	53.300	2.57%	-4.63%
			1910	1.564	50.815	1.520	53.300	2.89%	-4.66%
10/12/2021	1900 Body	23.0	1850	1.473	51.464	1.520	53.300	-3.09%	-3.44%
			1860	1.484	51.421	1.520	53.300	-2.37%	-3.53%
			1880	1.506	51.336	1.520	53.300	-0.92%	-3.68%
			1900	1.528	51.257	1.520	53.300	0.53%	-3.83%
			1905	1.533	51.237	1.520	53.300	0.86%	-3.87%
			1910	1.538	51.216	1.520	53.300	1.18%	-3.91%
10/19/2021	1900 Body	21.8	1850	1.498	51.004	1.520	53.300	-1.45%	-4.31%
			1860	1.509	50.964	1.520	53.300	-0.72%	-4.38%
			1880	1.532	50.891	1.520	53.300	0.79%	-4.52%
			1900	1.555	50.826	1.520	53.300	2.30%	-4.64%
			1905	1.561	50.811	1.520	53.300	2.70%	-4.67%
			1910	1.566	50.794	1.520	53.300	3.03%	-4.70%
11/04/2021	1900 Body	25.0	1850	1.484	52.142	1.520	53.300	-2.37%	-2.17%
			1860	1.495	52.108	1.520	53.300	-1.64%	-2.24%
			1880	1.516	52.043	1.520	53.300	-0.26%	-2.36%
			1900	1.538	51.981	1.520	53.300	1.18%	-2.47%
			1905	1.543	51.965	1.520	53.300	1.51%	-2.50%
			1910	1.548	51.950	1.520	53.300	1.84%	-2.53%
11/18/2021	1900 Body	24.3	1850	1.522	51.907	1.520	53.300	0.13%	-2.61%
			1860	1.533	51.874	1.520	53.300	0.86%	-2.68%
			1880	1.555	51.812	1.520	53.300	2.30%	-2.79%
			1900	1.576	51.755	1.520	53.300	3.68%	-2.90%
			1905	1.582	51.740	1.520	53.300	4.08%	-2.93%
			1910	1.587	51.723	1.520	53.300	4.41%	-2.96%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
09/22/2021	2450 Body	23.5	2300	1.864	52.762	1.809	52.900	3.04%	-0.26%
			2310	1.876	52.731	1.816	52.887	3.30%	-0.29%
			2320	1.887	52.703	1.826	52.873	3.34%	-0.32%
			2400	1.979	52.463	1.902	52.767	4.05%	-0.58%
			2450	2.035	52.317	1.950	52.700	4.36%	-0.73%
			2480	2.070	52.238	1.993	52.662	3.86%	-0.81%
			2500	2.094	52.182	2.021	52.636	3.61%	-0.86%
			2510	2.106	52.154	2.035	52.623	3.49%	-0.89%
			2535	2.136	52.082	2.071	52.592	3.14%	-0.97%
			2550	2.155	52.043	2.092	52.573	3.01%	-1.01%
			2560	2.168	52.018	2.106	52.560	2.94%	-1.03%
			2600	2.216	51.911	2.163	52.509	2.45%	-1.14%
			2650	2.278	51.754	2.234	52.445	1.97%	-1.32%
			2680	2.315	51.665	2.277	52.407	1.67%	-1.42%
			2700	2.339	51.604	2.305	52.382	1.48%	-1.49%
09/28/2021	2450 Body	20.3	2300	1.818	54.436	1.809	52.900	0.50%	2.90%
			2310	1.831	54.413	1.816	52.887	0.83%	2.89%
			2320	1.843	54.381	1.826	52.873	0.93%	2.85%
			2400	1.954	54.116	1.902	52.767	2.73%	2.56%
			2450	2.025	53.930	1.950	52.700	3.85%	2.33%
			2480	2.068	53.812	1.993	52.662	3.76%	2.18%
			2500	2.096	53.740	2.021	52.636	3.71%	2.10%
			2510	2.111	53.704	2.035	52.623	3.73%	2.05%
			2535	2.148	53.608	2.071	52.592	3.72%	1.93%
			2550	2.169	53.546	2.092	52.573	3.68%	1.85%
			2560	2.184	53.506	2.106	52.560	3.70%	1.80%
			2600	2.239	53.361	2.163	52.509	3.51%	1.62%
			2650	2.310	53.140	2.234	52.445	3.40%	1.33%
			2680	2.354	53.038	2.277	52.407	3.38%	1.20%
10/04/2021	2450 Body	22.7	2300	1.835	53.728	1.809	52.900	1.44%	1.57%
			2310	1.849	53.686	1.816	52.887	1.82%	1.51%
			2320	1.863	53.646	1.826	52.873	2.03%	1.46%
			2400	1.971	53.351	1.902	52.767	3.63%	1.11%
			2450	2.042	53.133	1.950	52.700	4.72%	0.82%
			2480	2.085	53.039	1.993	52.662	4.62%	0.72%
			2500	2.110	52.964	2.021	52.636	4.40%	0.62%
			2510	2.123	52.917	2.035	52.623	4.32%	0.56%
			2535	2.157	52.787	2.071	52.592	4.15%	0.37%
			2550	2.180	52.716	2.092	52.573	4.21%	0.27%
			2560	2.195	52.677	2.106	52.560	4.23%	0.22%
			2600	2.251	52.559	2.163	52.509	4.07%	0.10%
			2650	2.318	52.305	2.234	52.445	3.76%	-0.27%
			2680	2.363	52.196	2.277	52.407	3.78%	-0.40%
10/10/2021	2450 Body	24.5	2300	1.840	51.865	1.809	52.900	1.71%	-1.96%
			2310	1.851	51.840	1.816	52.887	1.93%	-1.98%
			2320	1.863	51.817	1.826	52.873	2.03%	-2.00%
			2400	1.954	51.611	1.902	52.767	2.73%	-2.19%
			2450	2.012	51.494	1.950	52.700	3.18%	-2.29%
			2480	2.045	51.412	1.993	52.662	2.61%	-2.37%
			2500	2.067	51.353	2.021	52.636	2.28%	-2.44%
			2510	2.079	51.324	2.035	52.623	2.16%	-2.47%
			2535	2.109	51.260	2.071	52.592	1.83%	-2.53%
			2550	2.127	51.224	2.092	52.573	1.67%	-2.57%
			2560	2.138	51.200	2.106	52.560	1.52%	-2.59%
			2600	2.182	51.098	2.163	52.509	0.88%	-2.69%
			2650	2.240	50.950	2.234	52.445	0.27%	-2.85%
			2680	2.274	50.874	2.277	52.407	-0.13%	-2.93%
			2700	2.297	50.815	2.305	52.382	-0.35%	-2.99%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/11/2021	2450 Body	21.9	2300	1.895	53.403	1.809	52.900	4.75%	0.95%
			2310	1.903	53.387	1.816	52.887	4.79%	0.95%
			2320	1.913	53.373	1.826	52.873	4.76%	0.95%
			2400	1.988	53.264	1.902	52.767	4.52%	0.94%
			2450	2.036	53.184	1.950	52.700	4.41%	0.92%
			2480	2.064	53.136	1.993	52.662	3.56%	0.90%
			2500	2.083	53.100	2.021	52.636	3.07%	0.88%
			2510	2.093	53.083	2.035	52.623	2.85%	0.87%
			2535	2.119	53.041	2.071	52.592	2.32%	0.85%
			2550	2.134	53.021	2.092	52.573	2.01%	0.85%
			2560	2.144	53.005	2.106	52.560	1.80%	0.85%
			2600	2.184	52.936	2.163	52.509	0.97%	0.81%
			2650	2.235	52.840	2.234	52.445	0.04%	0.75%
			2680	2.265	52.788	2.277	52.407	-0.53%	0.73%
			2700	2.285	52.752	2.305	52.382	-0.87%	0.71%
10/13/2021	2450 Body	22.9	2300	1.878	50.937	1.809	52.900	3.81%	-3.71%
			2310	1.890	50.908	1.816	52.887	4.07%	-3.74%
			2320	1.901	50.879	1.826	52.873	4.11%	-3.77%
			2400	1.990	50.642	1.902	52.767	4.63%	-4.03%
			2450	2.046	50.496	1.950	52.700	4.92%	-4.18%
			2480	2.079	50.407	1.993	52.662	4.32%	-4.28%
			2500	2.101	50.349	2.021	52.636	3.96%	-4.34%
			2510	2.112	50.319	2.035	52.623	3.78%	-4.38%
			2535	2.142	50.246	2.071	52.592	3.43%	-4.46%
			2550	2.159	50.206	2.092	52.573	3.20%	-4.50%
			2560	2.171	50.180	2.106	52.560	3.09%	-4.53%
			2600	2.216	50.065	2.163	52.509	2.45%	-4.65%
			2650	2.275	49.917	2.234	52.445	1.84%	-4.82%
			2680	2.309	49.834	2.277	52.407	1.41%	-4.91%
			2700	2.332	49.773	2.305	52.382	1.17%	-4.98%
10/14/2021	2450 Body	21.2	2300	1.879	52.138	1.809	52.900	3.87%	-1.44%
			2310	1.887	52.125	1.816	52.887	3.91%	-1.44%
			2320	1.896	52.113	1.826	52.873	3.83%	-1.44%
			2400	1.967	52.020	1.902	52.767	3.42%	-1.42%
			2450	2.013	51.952	1.950	52.700	3.23%	-1.42%
			2480	2.039	51.907	1.993	52.662	2.31%	-1.43%
			2500	2.057	51.879	2.021	52.636	1.78%	-1.44%
			2510	2.066	51.862	2.035	52.623	1.52%	-1.45%
			2535	2.090	51.825	2.071	52.592	0.92%	-1.46%
			2550	2.103	51.808	2.092	52.573	0.53%	-1.46%
			2560	2.112	51.794	2.106	52.560	0.28%	-1.46%
			2600	2.148	51.738	2.163	52.509	-0.69%	-1.47%
			2650	2.193	51.668	2.234	52.445	-1.84%	-1.48%
			2680	2.221	51.623	2.277	52.407	-2.46%	-1.50%
			2700	2.239	51.596	2.305	52.382	-2.86%	-1.50%
10/24/2021	2450 Body	21.0	2300	1.861	51.941	1.809	52.900	2.87%	-1.81%
			2310	1.873	51.917	1.816	52.887	3.14%	-1.83%
			2320	1.884	51.891	1.826	52.873	3.18%	-1.86%
			2400	1.978	51.665	1.902	52.767	4.00%	-2.09%
			2450	2.038	51.516	1.950	52.700	4.51%	-2.25%
			2480	2.075	51.432	1.993	52.662	4.11%	-2.34%
			2500	2.100	51.373	2.021	52.636	3.91%	-2.40%
			2510	2.112	51.343	2.035	52.623	3.78%	-2.43%
			2535	2.144	51.268	2.071	52.592	3.52%	-2.52%
			2550	2.163	51.225	2.092	52.573	3.39%	-2.56%
			2560	2.175	51.197	2.106	52.560	3.28%	-2.59%
			2600	2.225	51.069	2.163	52.509	2.87%	-2.74%
			2650	2.291	50.897	2.234	52.445	2.55%	-2.95%
			2680	2.327	50.804	2.277	52.407	2.20%	-3.06%
			2700	2.352	50.735	2.305	52.382	2.04%	-3.14%
11/01/2021	2450 Body	22.7	2300	1.807	52.337	1.809	52.900	-0.11%	-1.06%
			2310	1.820	52.276	1.816	52.887	0.22%	-1.16%
			2320	1.834	52.225	1.826	52.873	0.44%	-1.23%
			2400	1.943	52.005	1.902	52.767	2.16%	-1.44%
			2450	2.017	51.746	1.950	52.700	3.44%	-1.81%
			2480	2.061	51.711	1.993	52.662	3.41%	-1.81%
			2500	2.083	51.636	2.021	52.636	3.07%	-1.90%
			2510	2.093	51.576	2.035	52.623	2.85%	-1.99%
			2535	2.125	51.405	2.071	52.592	2.61%	-2.26%
			2550	2.150	51.334	2.092	52.573	2.77%	-2.36%
			2560	2.168	51.306	2.106	52.560	2.94%	-2.39%
			2600	2.228	51.253	2.163	52.509	3.01%	-2.39%
			2650	2.287	50.932	2.234	52.445	2.37%	-2.88%
			2680	2.340	50.840	2.277	52.407	2.77%	-2.99%
			2700	2.370	50.825	2.305	52.382	2.82%	-2.97%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
11/01/2021	2450 Body	23.0	2300	1.802	52.495	1.809	52.900	-0.39%	-0.77%
			2310	1.816	52.455	1.816	52.887	0.00%	-0.82%
			2320	1.829	52.417	1.826	52.873	0.16%	-0.86%
			2400	1.937	52.142	1.902	52.767	1.84%	-1.18%
			2450	2.008	51.934	1.950	52.700	2.97%	-1.45%
			2480	2.049	51.837	1.993	52.662	2.81%	-1.57%
			2500	2.075	51.756	2.021	52.636	2.67%	-1.67%
			2510	2.088	51.711	2.035	52.623	2.60%	-1.73%
			2535	2.122	51.595	2.071	52.592	2.46%	-1.90%
			2550	2.145	51.534	2.092	52.573	2.53%	-1.98%
			2560	2.159	51.498	2.106	52.560	2.52%	-2.02%
			2600	2.215	51.375	2.163	52.509	2.40%	-2.16%
			2650	2.283	51.129	2.234	52.445	2.19%	-2.51%
			2680	2.329	51.025	2.277	52.407	2.28%	-2.64%
			2700	2.357	50.971	2.305	52.382	2.26%	-2.69%
11/03/2021	2450 Body	21.9	2300	1.834	51.941	1.809	52.900	1.38%	-1.81%
			2310	1.845	51.911	1.816	52.887	1.60%	-1.85%
			2320	1.856	51.875	1.826	52.873	1.64%	-1.89%
			2400	1.950	51.652	1.902	52.767	2.52%	-2.11%
			2450	2.007	51.486	1.950	52.700	2.92%	-2.30%
			2480	2.044	51.410	1.993	52.662	2.56%	-2.38%
			2500	2.069	51.353	2.021	52.636	2.38%	-2.44%
			2510	2.083	51.324	2.035	52.623	2.36%	-2.47%
			2535	2.113	51.240	2.071	52.592	2.03%	-2.57%
			2550	2.131	51.193	2.092	52.573	1.86%	-2.62%
			2560	2.143	51.158	2.106	52.560	1.76%	-2.67%
			2600	2.193	51.044	2.163	52.509	1.39%	-2.79%
			2650	2.254	50.870	2.234	52.445	0.90%	-3.00%
			2680	2.291	50.764	2.277	52.407	0.61%	-3.14%
			2700	2.316	50.702	2.305	52.382	0.48%	-3.21%
11/03/2021	2450 Body	23.2	2300	1.785	51.517	1.809	52.900	-1.33%	-2.61%
			2310	1.798	51.486	1.816	52.887	-0.99%	-2.65%
			2320	1.811	51.454	1.826	52.873	-0.82%	-2.68%
			2400	1.917	51.153	1.902	52.767	0.79%	-3.06%
			2450	1.984	50.952	1.950	52.700	1.74%	-3.32%
			2480	2.022	50.839	1.993	52.662	1.46%	-3.46%
			2500	2.047	50.762	2.021	52.636	1.29%	-3.56%
			2510	2.061	50.723	2.035	52.623	1.28%	-3.61%
			2535	2.094	50.619	2.071	52.592	1.11%	-3.75%
			2550	2.115	50.560	2.092	52.573	1.10%	-3.83%
			2560	2.129	50.522	2.106	52.560	1.09%	-3.88%
			2600	2.179	50.389	2.163	52.509	0.74%	-4.04%
			2650	2.245	50.169	2.234	52.445	0.49%	-4.34%
			2680	2.287	50.070	2.277	52.407	0.44%	-4.46%
			2700	2.311	50.018	2.305	52.382	0.26%	-4.51%
11/18/2021	2450 Body	24.9	2400	1.835	51.646	1.902	52.767	-3.52%	-2.12%
			2450	1.903	51.505	1.950	52.700	-2.41%	-2.27%
			2480	1.940	51.406	1.993	52.662	-2.66%	-2.39%
			2500	1.966	51.328	2.021	52.636	-2.72%	-2.48%
			2510	1.980	51.296	2.035	52.623	-2.70%	-2.52%
			2535	2.016	51.232	2.071	52.592	-2.66%	-2.59%
			2550	2.037	51.193	2.092	52.573	-2.63%	-2.62%
			2560	2.049	51.159	2.106	52.560	-2.71%	-2.67%
			2600	2.102	50.997	2.163	52.509	-2.82%	-2.88%
			2650	2.172	50.827	2.234	52.445	-2.78%	-3.09%
			2680	2.208	50.701	2.277	52.407	-3.03%	-3.26%
			2700	2.235	50.614	2.305	52.382	-3.04%	-3.38%
12/06/2021	2450 Body	24.0	2300	1.861	54.306	1.809	52.900	2.87%	2.66%
			2310	1.872	54.281	1.816	52.887	3.08%	2.64%
			2320	1.884	54.256	1.826	52.873	3.18%	2.62%
			2400	1.977	54.059	1.902	52.767	3.94%	2.45%
			2450	2.038	53.933	1.950	52.700	4.51%	2.34%
			2480	2.073	53.857	1.993	52.662	4.01%	2.27%
			2500	2.098	53.800	2.021	52.636	3.81%	2.21%
			2510	2.110	53.770	2.035	52.623	3.69%	2.18%
			2535	2.142	53.697	2.071	52.592	3.43%	2.10%
			2550	2.161	53.658	2.092	52.573	3.30%	2.06%
			2560	2.173	53.630	2.106	52.560	3.18%	2.04%
			2600	2.222	53.516	2.163	52.509	2.73%	1.92%
			2650	2.284	53.362	2.234	52.445	2.24%	1.75%
			2680	2.320	53.276	2.277	52.407	1.89%	1.66%
			2700	2.344	53.215	2.305	52.382	1.69%	1.59%

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Table 10-11
Measured Body Tissue Properties (Cont.)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/07/2021	3600 Body	20.5	3300	2.937	50.843	3.080	51.593	-4.64%	-1.45%
			3350	2.996	50.759	3.139	51.525	-4.56%	-1.49%
			3450	3.110	50.592	3.256	51.389	-4.48%	-1.55%
			3500	3.164	50.527	3.314	51.321	-4.53%	-1.55%
			3550	3.223	50.458	3.372	51.254	-4.42%	-1.55%
			3560	3.235	50.441	3.384	51.240	-4.40%	-1.56%
			3600	3.280	50.381	3.431	51.186	-4.40%	-1.57%
			3650	3.337	50.290	3.489	51.118	-4.36%	-1.62%
			3690	3.384	50.227	3.536	51.063	-4.30%	-1.64%
			3700	3.395	50.207	3.548	51.050	-4.31%	-1.65%
			3750	3.451	50.128	3.606	50.982	-4.30%	-1.68%
			3900	3.635	49.837	3.781	50.779	-3.86%	-1.86%
			3930	3.670	49.781	3.816	50.738	-3.83%	-1.89%
			4100	3.894	49.495	4.015	50.507	-3.01%	-2.00%
			4150	3.964	49.379	4.073	50.439	-2.68%	-2.10%
10/11/2021	3600 Body	20.0	3300	3.003	50.046	3.080	51.593	-2.50%	-3.00%
			3350	3.062	49.951	3.139	51.525	-2.45%	-3.05%
			3450	3.176	49.768	3.256	51.389	-2.46%	-3.15%
			3500	3.231	49.695	3.314	51.321	-2.50%	-3.17%
			3550	3.291	49.617	3.372	51.254	-2.40%	-3.19%
			3560	3.303	49.600	3.384	51.240	-2.39%	-3.20%
			3600	3.349	49.533	3.431	51.186	-2.39%	-3.23%
			3650	3.406	49.442	3.489	51.118	-2.38%	-3.28%
			3690	3.454	49.371	3.536	51.063	-2.32%	-3.31%
			3700	3.466	49.347	3.548	51.050	-2.31%	-3.34%
			3750	3.525	49.261	3.606	50.982	-2.25%	-3.38%
			3900	3.711	48.963	3.781	50.779	-1.85%	-3.58%
			3930	3.748	48.907	3.816	50.738	-1.78%	-3.61%
			4100	3.973	48.581	4.015	50.507	-1.05%	-3.81%
			4150	4.043	48.485	4.073	50.439	-0.74%	-3.87%
10/28/2021	3600 Body	19.8	3300	2.983	49.732	3.080	51.593	-3.15%	-3.61%
			3350	3.038	49.620	3.139	51.525	-3.22%	-3.70%
			3450	3.150	49.419	3.256	51.389	-3.26%	-3.83%
			3500	3.204	49.333	3.314	51.321	-3.32%	-3.87%
			3550	3.264	49.255	3.372	51.254	-3.20%	-3.90%
			3560	3.275	49.232	3.384	51.240	-3.22%	-3.92%
			3600	3.322	49.159	3.431	51.186	-3.18%	-3.96%
			3650	3.382	49.093	3.489	51.118	-3.07%	-3.96%
			3690	3.430	49.031	3.536	51.063	-3.00%	-3.98%
			3700	3.442	49.013	3.548	51.050	-2.99%	-3.99%
			3750	3.507	48.942	3.606	50.982	-2.75%	-4.00%
			3900	3.696	48.710	3.781	50.779	-2.25%	-4.07%
			3930	3.739	48.685	3.816	50.738	-2.02%	-4.05%
			4100	3.964	48.378	4.015	50.507	-1.27%	-4.22%
			4150	4.028	48.281	4.073	50.439	-1.10%	-4.28%
11/18/2021	3600 Body	20.0	3300	2.962	51.715	3.080	51.593	-3.83%	0.24%
			3350	3.017	51.625	3.139	51.525	-3.89%	0.19%
			3450	3.130	51.448	3.256	51.389	-3.87%	0.11%
			3500	3.188	51.348	3.314	51.321	-3.80%	0.05%
			3550	3.249	51.245	3.372	51.254	-3.65%	-0.02%
			3560	3.263	51.227	3.384	51.240	-3.58%	-0.03%
			3600	3.305	51.177	3.431	51.186	-3.67%	-0.02%
			3650	3.364	51.099	3.489	51.118	-3.58%	-0.04%
			3690	3.415	51.038	3.536	51.063	-3.42%	-0.05%
			3700	3.425	51.022	3.548	51.050	-3.47%	-0.05%
			3900	3.676	50.668	3.781	50.779	-2.78%	-0.22%
			3930	3.716	50.628	3.816	50.738	-2.62%	-0.22%

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Table 10-12
Measured Body Tissue Properties (Cont.)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/25/2021	5200-5800 Body	23.0	5180	5.317	47.415	5.276	49.041	0.78%	-3.32%
			5190	5.335	47.399	5.288	49.028	0.89%	-3.32%
			5200	5.348	47.372	5.299	49.014	0.92%	-3.35%
			5210	5.358	47.347	5.311	49.001	0.88%	-3.38%
			5220	5.370	47.334	5.323	48.987	0.88%	-3.37%
			5240	5.402	47.303	5.346	48.960	1.05%	-3.38%
			5250	5.415	47.264	5.358	48.947	1.06%	-3.44%
			5260	5.425	47.231	5.369	48.933	1.04%	-3.48%
			5270	5.435	47.223	5.381	48.919	1.00%	-3.47%
			5280	5.448	47.215	5.393	48.906	1.02%	-3.46%
			5290	5.465	47.196	5.404	48.892	1.13%	-3.47%
			5300	5.480	47.174	5.416	48.879	1.18%	-3.49%
			5310	5.496	47.164	5.428	48.865	1.25%	-3.48%
			5320	5.511	47.157	5.439	48.851	1.32%	-3.47%
			5500	5.761	46.806	5.650	48.607	1.96%	-3.71%
			5510	5.776	46.782	5.661	48.594	2.03%	-3.73%
			5520	5.793	46.760	5.673	48.580	2.12%	-3.75%
			5530	5.812	46.744	5.685	48.566	2.23%	-3.75%
			5540	5.827	46.728	5.696	48.553	2.30%	-3.76%
			5550	5.841	46.714	5.708	48.539	2.33%	-3.76%
			5560	5.856	46.704	5.720	48.526	2.38%	-3.75%
			5580	5.884	46.657	5.743	48.499	2.46%	-3.80%
			5600	5.909	46.609	5.766	48.471	2.48%	-3.84%
			5610	5.924	46.598	5.778	48.458	2.53%	-3.84%
			5620	5.939	46.579	5.790	48.444	2.57%	-3.85%
			5640	5.972	46.533	5.813	48.417	2.74%	-3.89%
			5660	6.003	46.511	5.837	48.390	2.84%	-3.88%
			5670	6.018	46.501	5.848	48.376	2.91%	-3.88%
			5680	6.030	46.479	5.860	48.363	2.90%	-3.90%
			5690	6.043	46.456	5.872	48.349	2.91%	-3.92%
			5700	6.057	46.432	5.883	48.336	2.96%	-3.94%
			5710	6.074	46.419	5.895	48.322	3.04%	-3.94%
			5720	6.090	46.404	5.907	48.309	3.10%	-3.94%
			5745	6.123	46.337	5.936	48.275	3.15%	-4.01%
			5750	6.130	46.328	5.942	48.268	3.16%	-4.02%
			5755	6.137	46.321	5.947	48.261	3.19%	-4.02%
			5765	6.153	46.311	5.959	48.248	3.26%	-4.01%
			5775	6.168	46.293	5.971	48.234	3.30%	-4.02%
			5785	6.180	46.279	5.982	48.220	3.31%	-4.03%
			5795	6.194	46.264	5.994	48.207	3.34%	-4.03%
			5800	6.202	46.258	6.000	48.200	3.37%	-4.03%
			5805	6.210	46.252	6.006	48.193	3.40%	-4.03%
			5825	6.234	46.203	6.029	48.166	3.40%	-4.08%
11/04/2021	5200-5800 Body	22.2	5180	5.362	48.045	5.276	49.041	1.63%	-2.03%
			5190	5.379	48.018	5.288	49.028	1.72%	-2.06%
			5200	5.392	47.994	5.299	49.014	1.76%	-2.08%
			5210	5.402	47.975	5.311	49.001	1.71%	-2.09%
			5220	5.415	47.958	5.323	48.987	1.73%	-2.10%
			5240	5.448	47.897	5.346	48.960	1.91%	-2.17%
			5250	5.460	47.860	5.358	48.947	1.90%	-2.22%
			5260	5.472	47.842	5.369	48.933	1.92%	-2.23%
			5290	5.520	47.835	5.404	48.892	2.15%	-2.16%
			5300	5.535	47.821	5.416	48.879	2.20%	-2.16%
			5310	5.551	47.810	5.428	48.865	2.27%	-2.16%
			5320	5.565	47.799	5.439	48.851	2.32%	-2.15%
			5500	5.832	47.471	5.650	48.607	3.22%	-2.34%
			5510	5.847	47.455	5.661	48.594	3.29%	-2.34%
			5520	5.866	47.438	5.673	48.580	3.40%	-2.35%
			5530	5.884	47.417	5.685	48.566	3.50%	-2.37%
			5540	5.898	47.396	5.696	48.553	3.55%	-2.38%
			5550	5.911	47.379	5.708	48.539	3.56%	-2.39%
			5560	5.926	47.366	5.720	48.526	3.60%	-2.39%
			5580	5.954	47.321	5.743	48.499	3.67%	-2.43%
			5600	5.981	47.277	5.766	48.471	3.73%	-2.46%
			5610	5.996	47.262	5.778	48.458	3.77%	-2.47%
			5620	6.013	47.242	5.790	48.444	3.85%	-2.48%
			5640	6.045	47.191	5.813	48.417	3.99%	-2.53%
			5660	6.076	47.166	5.837	48.390	4.09%	-2.53%
			5670	6.087	47.154	5.848	48.376	4.09%	-2.53%
			5680	6.097	47.131	5.860	48.363	4.04%	-2.55%
			5690	6.108	47.102	5.872	48.349	4.02%	-2.58%
			5700	6.123	47.075	5.883	48.336	4.08%	-2.61%
			5710	6.139	47.049	5.895	48.322	4.14%	-2.63%
			5720	6.156	47.023	5.907	48.309	4.22%	-2.66%
			5745	6.191	46.967	5.936	48.275	4.30%	-2.71%
			5750	6.200	46.956	5.942	48.268	4.34%	-2.72%
			5755	6.209	46.949	5.947	48.261	4.41%	-2.72%
			5765	6.223	46.933	5.959	48.248	4.43%	-2.73%
			5775	6.230	46.922	5.971	48.234	4.34%	-2.72%
			5785	6.237	46.910	5.982	48.220	4.26%	-2.72%
			5795	6.251	46.894	5.994	48.207	4.29%	-2.72%
			5800	6.260	46.881	6.000	48.200	4.33%	-2.74%
			5805	6.268	46.864	6.006	48.193	4.36%	-2.76%
			5825	6.288	46.793	6.029	48.166	4.30%	-2.85%
			5835	6.300	46.776	6.042	48.130	4.27%	-2.81%
			5845	6.321	46.764	6.054	48.110	4.41%	-2.80%
			5855	6.344	46.736	6.066	48.093	4.58%	-2.82%
			5865	6.359	46.702	6.077	48.080	4.64%	-2.87%
			5875	6.369	46.674	6.088	48.067	4.62%	-2.90%
			5885	6.380	46.659	6.100	48.053	4.59%	-2.90%
			5905	6.412	46.616	6.122	48.027	4.74%	-2.94%

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.

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10.2 Test System Verification

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

Table 10-13
System Verification Results – 1g 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	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation1g (%)
K2	750	HEAD	10/07/2021	22.2	20.6	0.20	1034	7402	1.690	8.64	8.450	-2.20%
K2	750	HEAD	10/12/2021	21.6	21.8	0.20	1034	7402	1.700	8.64	8.500	-1.62%
E	750	HEAD	10/14/2021	23.1	22.4	0.20	1003	7571	1.860	8.78	9.300	5.92%
K1	835	HEAD	09/23/2021	20.2	20.4	0.20	4d119	7565	2.020	9.64	10.100	4.77%
K2	835	HEAD	09/27/2021	19.5	19.3	0.20	4d180	7402	1.970	9.45	9.850	4.23%
A	835	HEAD	09/30/2021	24.9	23.7	0.20	4d132	7406	1.980	9.66	9.900	2.48%
E	835	HEAD	10/18/2021	22.7	21.8	0.20	4d132	7571	1.920	9.66	9.600	-0.62%
A	1750	HEAD	10/06/2021	23.9	22.2	0.10	1150	7406	3.760	36.50	37.600	3.01%
H	1750	HEAD	10/21/2021	20.9	20.5	0.10	1148	7409	3.750	35.90	37.500	4.46%
A	1750	HEAD	10/26/2021	24.6	21.8	0.10	1148	7406	3.800	35.90	38.000	5.85%
A	1900	HEAD	10/12/2021	23.5	22.3	0.10	5d080	7406	4.270	39.80	42.700	7.29%
A	1900	HEAD	10/20/2021	23.6	22.3	0.10	5d149	7406	4.260	40.50	42.600	5.19%
B	2300	HEAD	10/24/2021	22.5	23.9	0.10	1116	7660	4.890	49.60	48.900	-1.41%
B	2300	HEAD	10/27/2021	22.5	22.8	0.10	1073	7660	4.790	49.50	47.900	-3.23%
B	2450	HEAD	10/24/2021	22.5	23.9	0.10	797	7660	4.980	52.40	49.800	-4.96%
K3	2450	HEAD	10/24/2021	21.0	22.7	0.10	882	7637	5.100	52.50	51.000	-2.86%
K2	2450	HEAD	10/31/2021	21.5	21.4	0.10	945	7402	5.330	52.70	53.300	1.14%
B	2600	HEAD	10/20/2021	23.5	23.0	0.10	1071	7660	5.550	56.10	55.500	-1.07%
B	2600	HEAD	10/24/2021	22.5	23.9	0.10	1071	7660	5.530	56.10	55.300	-1.43%
B	2600	HEAD	10/27/2021	22.5	22.8	0.10	1004	7660	5.360	57.80	53.600	-7.27%
E	2600	HEAD	11/09/2021	23.9	22.1	0.10	1004	7571	5.970	57.80	59.700	3.29%
L	3500	HEAD	10/22/2021	24.3	21.2	0.10	1097	7670	6.330	66.40	63.300	-4.67%
L	3500	HEAD	10/28/2021	21.3	21.0	0.10	1097	7670	6.250	66.40	62.500	-5.87%
L	3700	HEAD	10/20/2021	22.7	21.2	0.10	1067	7670	6.510	67.20	65.100	-3.13%
L	3700	HEAD	10/22/2021	24.3	21.2	0.10	1067	7670	6.850	67.20	68.500	1.93%
L	3700	HEAD	10/28/2021	21.3	21.0	0.10	1067	7670	6.790	67.20	67.900	1.04%
L	3900	HEAD	10/20/2021	22.7	21.2	0.10	1056	7670	6.800	68.90	68.000	-1.31%
J	5250	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.890	79.70	77.800	-2.38%
J	5600	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.820	83.80	76.400	-8.83%
J	5750	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.620	80.10	72.400	-9.61%
B	5800	HEAD	11/01/2021	22.5	21.6	0.05	1191	7552	3.710	79.20	74.200	-6.31%

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Table 10-14
System Verification Results – 1g Body

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation1g (%)
H	750	BODY	10/11/2021	22.8	21.6	0.20	1161	7409	1.660	8.43	8.300	-1.54%
K1	750	BODY	10/11/2021	20.5	21.0	0.20	1046	7565	1.710	8.79	8.550	-2.73%
K1	750	BODY	10/13/2021	20.9	21.0	0.20	1046	7565	1.740	8.79	8.700	-1.02%
K1	750	BODY	10/15/2021	20.5	21.0	0.20	1046	7565	1.750	8.79	8.750	-0.46%
H	750	BODY	10/17/2021	21.5	20.0	0.20	1054	7409	1.820	8.82	9.100	3.17%
K1	835	BODY	09/27/2021	20.5	20.5	0.20	4d119	7565	2.080	9.90	10.400	5.05%
K2	835	BODY	09/29/2021	21.9	21.5	0.20	4d180	7402	2.010	9.67	10.050	3.93%
H	835	BODY	10/07/2021	21.1	20.9	0.20	4d132	7409	2.000	9.81	10.000	1.94%
H	835	BODY	10/10/2021	21.1	20.5	0.20	4d132	7409	2.020	9.81	10.100	2.96%
G	1750	BODY	09/21/2021	23.5	21.7	0.10	1150	7357	3.900	36.60	39.000	6.56%
G	1750	BODY	09/26/2021	22.4	21.8	0.10	1150	7357	3.760	36.60	37.600	2.73%
G	1750	BODY	09/28/2021	24.6	21.8	0.10	1150	7357	3.840	36.60	38.400	4.92%
G	1750	BODY	10/05/2021	23.4	22.4	0.10	1150	7357	3.930	36.60	39.300	7.38%
H	1900	BODY	09/28/2021	23.5	19.4	0.10	5d080	7409	4.100	39.20	41.000	4.59%
P	1900	BODY	10/07/2021	21.6	21.9	0.10	5d148	7410	4.180	39.10	41.800	6.91%
O	1900	BODY	10/12/2021	21.9	21.5	0.10	5d148	7659	4.070	39.10	40.700	4.09%
O	1900	BODY	10/19/2021	21.2	20.4	0.10	5d148	7659	4.060	39.10	40.600	3.84%
P	1900	BODY	11/04/2021	21.0	23.0	0.10	5d148	7410	4.080	39.10	40.800	4.35%
K	2300	BODY	09/22/2021	23.6	23.5	0.10	1116	3914	4.900	49.20	49.000	-0.41%
K	2300	BODY	10/04/2021	22.8	22.9	0.10	1116	3914	4.910	49.20	49.100	-0.20%
J	2300	BODY	10/11/2021	19.9	21.9	0.10	1116	7526	4.870	49.20	48.700	-1.02%
K	2300	BODY	12/06/2021	24.0	22.2	0.10	1073	3914	4.820	48.40	48.200	-0.41%
L	2450	BODY	09/28/2021	20.7	20.6	0.10	797	7539	4.940	49.40	49.400	0.00%
K	2450	BODY	10/10/2021	22.4	22.5	0.10	981	3914	5.020	50.10	50.200	0.20%
L	2450	BODY	11/03/2021	23.5	21.2	0.10	719	7670	5.130	52.00	51.300	-1.35%
L	2450	BODY	11/03/2021	23.5	21.2	0.10	719	7670	5.130	52.00	51.300	-1.35%
K3	2450	BODY	11/03/2021	21.5	21.9	0.10	882	7637	4.860	50.60	48.600	-3.95%
L	2600	BODY	09/28/2021	20.7	20.6	0.10	1004	7539	5.450	55.40	54.500	-1.62%
O	2600	BODY	11/01/2021	21.3	21.2	0.10	1004	7659	5.430	55.40	54.300	-1.99%
O	2600	BODY	11/01/2021	21.3	21.2	0.10	1004	7659	5.430	55.40	54.300	-1.99%
L	2600	BODY	11/01/2021	21.3	23.3	0.10	1004	7670	5.250	55.40	52.500	-5.23%
L	2600	BODY	11/03/2021	23.5	21.2	0.10	1071	7670	5.190	54.30	51.900	-4.42%
I	3500	BODY	10/07/2021	21.5	21.5	0.10	1059	7551	6.730	63.00	67.300	6.83%
I	3500	BODY	10/11/2021	20.3	20.0	0.10	1059	7551	6.320	63.00	63.200	0.32%
I	3700	BODY	10/07/2021	21.5	21.5	0.10	1018	7551	6.150	63.50	61.500	-3.15%
I	3700	BODY	10/11/2021	20.3	20.0	0.10	1018	7551	6.180	63.50	61.800	-2.68%
I	3900	BODY	10/11/2021	20.3	20.0	0.10	1073	7551	6.230	64.30	62.300	-3.11%
I	3900	BODY	11/18/2021	20.5	20.5	0.10	1073	7661	6.780	64.30	67.800	5.44%
J	5250	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	3.420	74.30	68.400	-7.94%
J	5600	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	4.040	77.40	80.800	4.39%
J	5750	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	3.670	72.80	73.400	0.82%
B	5800	BODY	11/04/2021	24.5	21.2	0.05	1191	7552	3.440	73.50	68.800	-6.39%

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Table 10-15
System Verification Results – 10g

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR10g (W/kg)	1W Target SAR10g (W/kg)	1W Normalized SAR10g (W/kg)	Deviation10g (%)
G	1750	BODY	09/23/2021	23.0	21.9	0.10	1148	7357	2.070	19.30	20.700	7.25%
G	1750	BODY	10/05/2021	23.4	22.4	0.10	1150	7357	2.080	19.40	20.800	7.22%
G	1750	BODY	10/14/2021	23.2	22.5	0.10	1150	7357	2.040	19.40	20.400	5.15%
H	1900	BODY	09/28/2021	23.5	19.4	0.10	5d080	7409	2.070	20.60	20.700	0.49%
O	1900	BODY	10/10/2021	21.9	21.5	0.10	5d148	7659	2.040	20.50	20.400	-0.49%
O	1900	BODY	10/12/2021	21.9	21.5	0.10	5d148	7659	2.090	20.50	20.900	1.95%
O	1900	BODY	10/19/2021	21.2	20.4	0.10	5d148	7659	2.070	20.50	20.700	0.98%
P	1900	BODY	11/18/2021	23.3	22.5	0.10	5d080	7410	2.160	21.40	21.600	0.93%
J	2300	BODY	10/11/2021	19.9	21.9	0.10	1116	7526	2.320	23.70	23.200	-2.11%
J	2300	BODY	10/14/2021	21.5	21.9	0.10	1073	7526	2.400	23.40	24.000	2.56%
K	2450	BODY	10/10/2021	22.4	22.5	0.10	981	3914	2.300	23.70	23.000	-2.95%
K	2450	BODY	10/13/2021	21.9	22.9	0.10	719	3914	2.470	24.70	24.700	0.00%
O	2450	BODY	11/01/2021	21.3	21.2	0.10	719	7659	2.290	24.70	22.900	-7.29%
O	2450	BODY	11/18/2021	24.8	24.9	0.10	719	7659	2.290	24.70	22.900	-7.29%
K	2600	BODY	10/10/2021	22.4	22.5	0.10	1071	3914	2.450	24.10	24.500	1.66%
K	2600	BODY	10/13/2021	21.9	22.9	0.10	1004	3914	2.420	24.80	24.200	-2.42%
O	2600	BODY	11/01/2021	21.3	21.2	0.10	1004	7659	2.390	24.80	23.900	-3.63%
O	2600	BODY	11/18/2021	24.8	24.9	0.10	1004	7659	2.420	24.80	24.200	-2.42%
I	3500	BODY	10/11/2021	20.3	20.0	0.10	1059	7551	2.380	23.30	23.800	2.15%
I	3500	BODY	11/18/2021	20.5	20.5	0.10	1059	7661	2.430	23.30	24.300	4.29%
I	3700	BODY	10/28/2021	20.5	20.0	0.10	1018	7661	2.380	22.50	23.800	5.78%
I	3700	BODY	11/18/2021	20.5	20.5	0.10	1018	7661	2.470	22.50	24.700	9.78%
I	3900	BODY	10/28/2021	20.5	20.0	0.10	1073	7661	2.320	22.00	23.200	5.45%
J	5250	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	0.955	20.70	19.100	-7.73%
J	5600	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	1.120	21.40	22.400	4.67%
J	5750	BODY	10/25/2021	20.7	21.5	0.05	1057	7526	1.030	20.00	20.600	3.00%
B	5800	BODY	11/04/2021	24.5	21.2	0.05	1191	7552	0.970	20.20	19.400	-3.96%

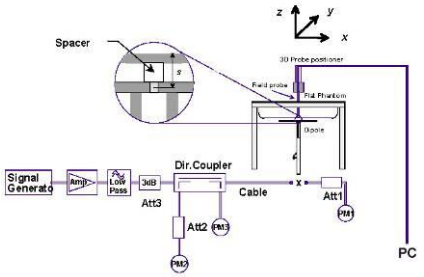

Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
824.20	128	GSM 850	GSM	33.0	31.81	0.06	Right	Cheek	A	0418M	1:8.3	0.072	1.315	0.095	
824.20	128	GSM 850	GSM	33.0	31.81	0.04	Right	Tilt	A	0418M	1:8.3	0.047	1.315	0.062	
824.20	128	GSM 850	GSM	33.0	31.81	-0.10	Left	Cheek	A	0418M	1:8.3	0.099	1.315	0.130	A1
824.20	128	GSM 850	GSM	33.0	31.81	0.03	Left	Tilt	A	0418M	1:8.3	0.047	1.315	0.062	
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		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1909.80	810	GSM 1900	GSM	29.7	28.72	-0.19	Right	Cheek	A	1246M	1:8.3	0.023	1.253	0.029	
1909.80	810	GSM 1900	GSM	29.7	28.72	0.10	Right	Tilt	A	1246M	1:8.3	0.008	1.253	0.010	
1909.80	810	GSM 1900	GSM	29.7	28.72	0.12	Left	Cheek	A	1246M	1:8.3	0.032	1.253	0.040	A2
1909.80	810	GSM 1900	GSM	29.7	28.72	0.13	Left	Tilt	A	1246M	1:8.3	0.016	1.253	0.020	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
846.60	4233	UMTS 850	RMC	25.0	23.99	13	0.01	Right	Cheek	A	0418M	1:1	0.141	1.262	0.178	
846.60	4233	UMTS 850	RMC	25.0	23.99	13	0.05	Right	Tilt	A	0418M	1:1	0.096	1.262	0.121	
846.60	4233	UMTS 850	RMC	25.0	23.99	13	0.01	Left	Cheek	A	0418M	1:1	0.178	1.262	0.225	A3
846.60	4233	UMTS 850	RMC	25.0	23.99	13	0.06	Left	Tilt	A	0418M	1:1	0.074	1.262	0.093	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	78	0.11	Right	Cheek	A	1246M	1:1	0.098	1.309	0.128	A4
1712.40	1312	UMTS 1750	RMC	24.0	22.83	78	0.09	Right	Tilt	A	1246M	1:1	0.057	1.309	0.075	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	78	0.10	Left	Cheek	A	1246M	1:1	0.071	1.309	0.093	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	78	-0.03	Left	Tilt	A	1246M	1:1	0.057	1.309	0.075	
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		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	54	-0.02	Right	Cheek	A	1258M	1:1	0.049	1.349	0.066	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	54	-0.14	Right	Tilt	A	1258M	1:1	0.025	1.349	0.034	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	54	0.01	Left	Cheek	A	1258M	1:1	0.082	1.349	0.111	A5
1907.60	9538	UMTS 1900	RMC	24.0	22.70	54	-0.09	Left	Tilt	A	1258M	1:1	0.034	1.349	0.046	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-6
LTE Band 71 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.18	0	Right	Cheek	QPSK	1	0	0352M	1:1	0.093	1.189	0.111	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.11	1	Right	Cheek	QPSK	50	0	0352M	1:1	0.078	1.227	0.096	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.11	0	Right	Tilt	QPSK	1	0	0352M	1:1	0.040	1.189	0.048	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.03	1	Right	Tilt	QPSK	50	0	0352M	1:1	0.035	1.227	0.043	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.05	0	Left	Cheek	QPSK	1	0	0352M	1:1	0.104	1.189	0.124	A6
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.16	1	Left	Cheek	QPSK	50	0	0352M	1:1	0.088	1.227	0.108	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.07	0	Left	Tilt	QPSK	1	0	0352M	1:1	0.041	1.189	0.049	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.07	1	Left	Tilt	QPSK	50	0	0352M	1:1	0.034	1.227	0.042	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-7
LTE Band 12 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	0.10	0	Right	Cheek	A	QPSK	1	0	0352M	1:1	0.120	1.164	0.140	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.01	1	Right	Cheek	A	QPSK	25	12	0352M	1:1	0.107	1.180	0.126	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.08	0	Right	Tilt	A	QPSK	1	0	0352M	1:1	0.060	1.164	0.070	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.05	1	Right	Tilt	A	QPSK	25	12	0352M	1:1	0.052	1.180	0.061	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	0.00	0	Left	Cheek	A	QPSK	1	0	0352M	1:1	0.150	1.164	0.175	A7
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.00	1	Left	Cheek	A	QPSK	25	12	0352M	1:1	0.121	1.180	0.143	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	0.05	0	Left	Tilt	A	QPSK	1	0	0352M	1:1	0.060	1.164	0.070	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.03	1	Left	Tilt	A	QPSK	25	12	0352M	1:1	0.051	1.180	0.060	

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			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	116	-0.09	0	Right	Cheek	A	QPSK	1	49	0352M	1:1	0.174	1.167	0.203	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	116	0.10	1	Right	Cheek	A	QPSK	25	12	0352M	1:1	0.120	1.167	0.140	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	116	0.02	0	Right	Tilt	A	QPSK	1	49	0352M	1:1	0.105	1.167	0.123	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	116	0.04	1	Right	Tilt	A	QPSK	25	12	0352M	1:1	0.069	1.167	0.081	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	116	0.04	0	Left	Cheek	A	QPSK	1	49	0352M	1:1	0.184	1.167	0.215	A8
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	116	0.04	1	Left	Cheek	A	QPSK	25	12	0352M	1:1	0.141	1.167	0.165	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	116	-0.08	0	Left	Tilt	A	QPSK	1	49	0352M	1:1	0.090	1.167	0.105	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	116	-0.05	1	Left	Tilt	A	QPSK	25	12	0352M	1:1	0.066	1.167	0.077	

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			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	0.16	0	Right	Cheek	A	QPSK	1	25	0352M	1:1	0.184	1.262	0.232	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.04	1	Right	Cheek	A	QPSK	25	12	0352M	1:1	0.140	1.300	0.182	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	0.03	0	Right	Tilt	A	QPSK	1	25	0352M	1:1	0.112	1.262	0.141	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.07	1	Right	Tilt	A	QPSK	25	12	0352M	1:1	0.084	1.300	0.109	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	-0.01	0	Left	Cheek	A	QPSK	1	25	0352M	1:1	0.200	1.262	0.252	A9
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.06	1	Left	Cheek	A	QPSK	25	12	0352M	1:1	0.155	1.300	0.202	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	0.03	0	Left	Tilt	A	QPSK	1	25	0352M	1:1	0.099	1.262	0.125	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	-0.03	1	Left	Tilt	A	QPSK	25	12	0352M	1:1	0.073	1.300	0.095	

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

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Table 11-10
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.10	0	Right	Cheek	A	QPSK	1	36	0352M	1:1	0.144	1.406	0.202	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	-0.02	1	Right	Cheek	A	QPSK	36	37	0352M	1:1	0.130	1.416	0.184	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.05	0	Right	Tilt	A	QPSK	1	36	0352M	1:1	0.093	1.406	0.131	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.04	1	Right	Tilt	A	QPSK	36	37	0352M	1:1	0.077	1.416	0.109	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.05	0	Left	Cheek	A	QPSK	1	36	0352M	1:1	0.234	1.406	0.329	A10
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.00	1	Left	Cheek	A	QPSK	36	37	0352M	1:1	0.225	1.416	0.319	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	-0.06	0	Left	Tilt	A	QPSK	1	36	0352M	1:1	0.149	1.406	0.209	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.13	1	Left	Tilt	A	QPSK	36	37	0352M	1:1	0.144	1.416	0.204	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram			

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

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	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	LTE Band 5 (Cell)	10	25.5	24.09	108	0.04	0	Right	Cheek	A	QPSK	1	25	0315M	1:1	0.126	1.384	0.174	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	0.06	1	Right	Cheek	A	QPSK	25	0	0315M	1:1	0.100	1.371	0.137	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	-0.14	0	Right	Tilt	A	QPSK	1	25	0315M	1:1	0.076	1.384	0.105	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.20	1	Right	Tilt	A	QPSK	25	0	0315M	1:1	0.061	1.371	0.084	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.08	108	0.10	0	Left	Cheek	A	QPSK	1	0	0315M	1:1	0.208	1.387	0.288	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	0.12	0	Left	Cheek	A	QPSK	1	25	0315M	1:1	0.173	1.384	0.239	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	0.09	1	Left	Cheek	A	QPSK	25	0	0315M	1:1	0.148	1.371	0.203	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.15	108	0.00	0	Left	Cheek	A	QPSK	1	0	0315M	1:1	0.216	1.365	0.295	A11
	SCC	829.30	20453			5										1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	0.05	0	Left	Tilt	A	QPSK	1	25	0315M	1:1	0.084	1.384	0.116	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.03	1	Left	Tilt	A	QPSK	25	0	0315M	1:1	0.069	1.371	0.095	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram					

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

MEASUREMENT RESULTS																									
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	60	0.06	0	Right	Cheek	A	QPSK	1	50	1267M	1:1	0.105	1.432	0.150	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.00	60	0.06	0	Right	Cheek	A	QPSK	1	99	1267M	1:1	0.099	1.514	0.150	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	60	-0.17	1	Right	Cheek	A	QPSK	50	25	1267M	1:1	0.084	1.406	0.118	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	24.8	23.12	60	-0.14	0	Right	Cheek	A	QPSK	1	49	1267M	1:1	0.081	1.472	0.119	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.42	60	0.06	0	Right	Cheek	A	QPSK	1	99	1267M	1:1	0.106	1.374	0.146	A12
	SCC	1739.80	132270														0						
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	24.8	23.49	60	0.12	0	Right	Cheek	A	QPSK	1	49	1267M	1:1	0.088	1.352	0.119	
	SCC	1724.90	132121														0						
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	60	0.18	0	Right	Tilt	A	QPSK	1	50	1267M	1:1	0.081	1.432	0.116	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	60	0.16	1	Right	Tilt	A	QPSK	50	25	1267M	1:1	0.047	1.406	0.066	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	60	0.15	0	Left	Cheek	A	QPSK	1	50	1267M	1:1	0.072	1.432	0.103	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	60	0.05	1	Left	Cheek	A	QPSK	50	25	1267M	1:1	0.051	1.406	0.072	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	60	0.16	0	Left	Tilt	A	QPSK	1	50	1267M	1:1	0.042	1.432	0.060	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	60	0.20	1	Left	Tilt	A	QPSK	50	25	1267M	1:1	0.036	1.406	0.051	

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 11-13
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	1	-0.13	0	Right	Cheek	A	QPSK	1	50	1168M	1:1	0.098	1.285	0.126	A13
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	1	-0.01	1	Right	Cheek	A	QPSK	50	50	1168M	1:1	0.067	1.265	0.085	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	1	0.21	0	Right	Tilt	A	QPSK	1	50	1168M	1:1	0.062	1.285	0.080	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	1	0.01	1	Right	Tilt	A	QPSK	50	50	1168M	1:1	0.040	1.265	0.051	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	1	0.13	0	Left	Cheek	A	QPSK	1	50	1168M	1:1	0.082	1.285	0.105	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	1	0.05	1	Left	Cheek	A	QPSK	50	50	1168M	1:1	0.068	1.265	0.086	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	1	0.13	0	Left	Tilt	A	QPSK	1	50	1168M	1:1	0.047	1.285	0.060	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	1	-0.11	1	Left	Tilt	A	QPSK	50	50	1168M	1:1	0.037	1.265	0.047	

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

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Table 11-14
LTE Band 30 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.13	0	Right	Cheek	A	QPSK	1	0	1168M	1:1	0.018	1.340	0.024	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	-0.12	1	Right	Cheek	A	QPSK	25	12	1168M	1:1	0.012	1.374	0.016	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.11	0	Right	Tilt	A	QPSK	1	0	1168M	1:1	0.017	1.340	0.023	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	0.14	1	Right	Tilt	A	QPSK	25	12	1168M	1:1	0.012	1.374	0.016	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.07	0	Left	Cheek	A	QPSK	1	0	1168M	1:1	0.032	1.340	0.043	A14
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	-0.04	1	Left	Cheek	A	QPSK	25	12	1168M	1:1	0.024	1.374	0.033	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	-0.13	0	Left	Tilt	A	QPSK	1	0	1168M	1:1	0.031	1.340	0.042	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	-0.13	1	Left	Tilt	A	QPSK	25	12	1168M	1:1	0.027	1.374	0.037	
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			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	0.01	0	Right	Cheek	B	QPSK	1	50	1170M	1:1	0.030	1.327	0.040	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.12	1	Right	Cheek	B	QPSK	50	25	1170M	1:1	0.022	1.368	0.030	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	-0.13	0	Right	Tilt	B	QPSK	1	50	1170M	1:1	0.026	1.327	0.035	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.18	1	Right	Tilt	B	QPSK	50	25	1170M	1:1	0.017	1.368	0.023	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	0.00	0	Left	Cheek	B	QPSK	1	50	1170M	1:1	0.035	1.327	0.046	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.09	1	Left	Cheek	B	QPSK	50	25	1170M	1:1	0.026	1.368	0.036	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	0.02	0	Left	Tilt	B	QPSK	1	50	1170M	1:1	0.042	1.327	0.056	A15
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.13	1	Left	Tilt	B	QPSK	50	25	1170M	1:1	0.028	1.368	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											

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Table 11-16
LTE Band 41 Head SAR

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	0.13	0	Right	Cheek	B	QPSK	1	50	1149M	1:1.58	0.024	1.242	0.030	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	-0.04	1	Right	Cheek	B	QPSK	50	25	1149M	1:1.58	0.019	1.274	0.024	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	0.18	0	Right	Tilt	B	QPSK	1	50	1149M	1:1.58	0.021	1.242	0.026	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.12	1	Right	Tilt	B	QPSK	50	25	1149M	1:1.58	0.017	1.274	0.022	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	0.07	0	Left	Cheek	B	QPSK	1	50	1149M	1:1.58	0.032	1.242	0.040	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.00	1	Left	Cheek	B	QPSK	50	25	1149M	1:1.58	0.027	1.274	0.034	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	-0.01	0	Left	Tilt	B	QPSK	1	50	1149M	1:1.58	0.033	1.242	0.041	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	23.82	-0.14	0	Left	Tilt	B	QPSK	1	99	1149M	1:1.58	0.033	1.312	0.043	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	-0.03	1	Left	Tilt	B	QPSK	50	25	1149M	1:1.58	0.027	1.274	0.034	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.5	26.60	0.04	0	Left	Tilt	B	QPSK	1	50	1149M	1:2.31	0.039	1.230	0.048	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.5	25.82	0.11	0	Left	Tilt	B	QPSK	1	99	1149M	1:2.31	0.039	1.472	0.057	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	25.0	23.74	-0.14	0	Left	Tilt	B	QPSK	1	99	1149M	1:1.58	0.039	1.337	0.052	
	SCC	2525.80	39948													0						
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	27.5	25.94	0.13	0	Left	Tilt	B	QPSK	1	99	1149M	1:2.31	0.041	1.432	0.059	A16
	SCC	2525.80	39948													0						
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-17
LTE Band 48 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.68	0.00	0	Right	Cheek	F	QPSK	1	50	0543M	1:1.58	0.532	1.355	**0.721**	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	20.0	18.77	0.00	0	Right	Cheek	F	QPSK	1	99	0543M	1:1.58	0.532	1.327	0.706	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.04	0	Right	Cheek	F	QPSK	1	50	0543M	1:1.58	0.543	1.222	0.664	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	20.0	18.66	-0.07	0	Right	Cheek	F	QPSK	1	50	0543M	1:1.58	0.511	1.361	0.695	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.73	-0.02	0	Right	Cheek	F	QPSK	50	25	0543M	1:1.58	0.540	1.340	**0.724**	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.63	-0.02	0	Right	Cheek	F	QPSK	50	50	0543M	1:1.58	0.528	1.371	**0.724**	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	20.0	18.84	-0.02	0	Right	Cheek	F	QPSK	50	25	0543M	1:1.58	0.547	1.306	0.714	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	-0.01	0	Right	Cheek	F	QPSK	50	25	0543M	1:1.58	0.550	1.233	0.678	A17
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	20.0	18.68	0.01	0	Right	Cheek	F	QPSK	50	25	0543M	1:1.58	0.520	1.355	0.705	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	18.89	-0.04	0	Right	Cheek	F	QPSK	100	0	0543M	1:1.58	0.538	1.291	0.695	
2 CC Uplink	PCC	3560.00	55340	Low	LTE Band 48	20	20.0	18.80	-0.02	0	Right	Cheek	F	QPSK	50	50	0543M	1:1.58	0.524	1.318	0.691	
	SCC	3579.80	55538													0						
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.16	0	Right	Tilt	F	QPSK	1	50	0543M	1:1.58	0.213	1.222	0.260	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	-0.02	0	Right	Tilt	F	QPSK	50	25	0543M	1:1.58	0.212	1.233	0.261	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.02	0	Left	Cheek	F	QPSK	1	50	0543M	1:1.58	0.260	1.222	0.318	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.04	0	Left	Cheek	F	QPSK	50	25	0543M	1:1.58	0.255	1.233	0.314	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	-0.17	0	Left	Tilt	F	QPSK	1	50	0543M	1:1.58	0.148	1.222	0.181	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.03	0	Left	Tilt	F	QPSK	50	25	0543M	1:1.58	0.148	1.233	0.182	
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Table 11-18
NR Band n71 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.13	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	104	0417M	1:1	0.129	1.406	0.181	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.01	0	Right	Cheek	0	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.114	1.426	0.163	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.01	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	104	0417M	1:1	0.097	1.406	0.136	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.03	0	Right	Tilt	0	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.086	1.426	0.123	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.03	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	104	0417M	1:1	0.145	1.406	0.204	A18
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.16	0	Left	Cheek	0	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.138	1.426	0.197	
680.50	136100	Mid	NR Band n71	20	24.3	22.77	A	0.01	1.5	Left	Cheek	0	CP-OFDM	QPSK	1	1	0417M	1:1	0.069	1.422	0.098	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.02	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	104	0417M	1:1	0.089	1.406	0.125	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.03	0	Left	Tilt	0	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.072	1.426	0.103	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-19
NR Band n12 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	-0.02	0	Right	Cheek	14	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.097	1.393	0.135	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	-0.03	0	Right	Cheek	14	DFT-S-OFDM	QPSK	36	22	0417M	1:1	0.122	1.406	0.172	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	-0.01	0	Right	Tilt	14	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.045	1.393	0.063	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	-0.02	0	Right	Tilt	14	DFT-S-OFDM	QPSK	36	22	0417M	1:1	0.059	1.406	0.083	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	0.02	0	Left	Cheek	14	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.145	1.393	0.202	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	0.07	0	Left	Cheek	14	DFT-S-OFDM	QPSK	36	22	0417M	1:1	0.164	1.406	0.231	A19
707.50	141500	Mid	NR Band n12	15	24.2	22.75	A	-0.02	1.5	Left	Cheek	14	CP-OFDM	QPSK	1	1	0417M	1:1	0.094	1.396	0.131	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	-0.05	0	Left	Tilt	14	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.058	1.393	0.081	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	-0.02	0	Left	Tilt	14	DFT-S-OFDM	QPSK	36	22	0417M	1:1	0.074	1.406	0.104	
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 11-20
NR Band n5 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	0.03	0	Right	Cheek	108	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.161	1.439	0.232	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	0.01	0	Right	Cheek	108	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.157	1.445	0.227	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	-0.04	0	Right	Tilt	108	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.132	1.439	0.190	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	0.02	0	Right	Tilt	108	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.120	1.445	0.173	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	0.02	0	Left	Cheek	108	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.242	1.439	0.348	A20
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	0.03	0	Left	Cheek	108	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.240	1.445	0.347	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	22.73	A	0.02	1.5	Left	Cheek	108	CP-OFDM	QPSK	1	1	0417M	1:1	0.175	1.435	0.251	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	-0.10	0	Left	Tilt	108	DFT-S-OFDM	QPSK	1	1	0417M	1:1	0.145	1.439	0.209	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	-0.01	0	Left	Tilt	108	DFT-S-OFDM	QPSK	50	28	0417M	1:1	0.142	1.445	0.205	
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Table 11-21
NR Band n66 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.12	0	Right	Cheek	58	DFT-S-OFDM	QPSK	1	1	1137M	1:1	0.115	1.334	0.153	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.04	0	Right	Cheek	58	DFT-S-OFDM	QPSK	108	54	1137M	1:1	0.119	1.349	0.161	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.4	22.10	A	0.13	1.5	Right	Cheek	58	CP-OFDM	QPSK	1	1	1137M	1:1	0.080	1.349	0.108	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.12	0	Right	Tilt	58	DFT-S-OFDM	QPSK	1	1	1137M	1:1	0.066	1.334	0.088	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.21	0	Right	Tilt	58	DFT-S-OFDM	QPSK	108	54	1137M	1:1	0.067	1.349	0.090	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.11	0	Left	Cheek	58	DFT-S-OFDM	QPSK	1	1	1137M	1:1	0.078	1.334	0.104	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.15	0	Left	Cheek	58	DFT-S-OFDM	QPSK	108	54	1137M	1:1	0.073	1.349	0.098	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.06	0	Left	Tilt	58	DFT-S-OFDM	QPSK	1	1	1137M	1:1	0.065	1.334	0.087	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.15	0	Left	Tilt	58	DFT-S-OFDM	QPSK	108	54	1137M	1:1	0.070	1.349	0.094	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.50	J	-0.05	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0589M	1:1	0.418	1.122	0.469	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.70	J	-0.07	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0589M	1:1	0.437	1.072	0.468	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.50	J	0.04	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0589M	1:1	0.581	1.122	0.652	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.70	J	-0.12	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0589M	1:1	0.645	1.072	0.691	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.50	J	0.02	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0589M	1:1	0.752	1.122	0.844	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.70	J	0.00	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0589M	1:1	0.789	1.072	0.846	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.49	J	0.01	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	216	0	0589M	1:1	0.783	1.125	0.881	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.50	J	-0.17	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0589M	1:1	0.919	1.122	1.031	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.70	J	-0.08	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0589M	1:1	1.040	1.072	1.115	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.49	J	-0.02	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	216	0	0589M	1:1	1.040	1.125	1.170	A21
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.48	J	-0.12	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0589M	1:1	1.030	1.127	1.161	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.70	J	-0.15	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0589M	1:1	1.030	1.072	1.104	
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Note: Blue entry represents variability measurement.

Table 11-22
NR Band n25 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.10	0	Right	Cheek	5	DFT-S-OFDM	QPSK	1	108	1125M	1:1	0.111	1.186	0.132	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.10	0	Right	Cheek	5	DFT-S-OFDM	QPSK	108	54	1125M	1:1	0.094	1.186	0.111	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.0	22.30	A	0.00	1.5	Right	Cheek	5	CP-OFDM	QPSK	1	1	1125M	1:1	0.079	1.175	0.093	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.16	0	Right	Tilt	5	DFT-S-OFDM	QPSK	1	108	1125M	1:1	0.043	1.186	0.051	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.15	0	Right	Tilt	5	DFT-S-OFDM	QPSK	108	54	1125M	1:1	0.066	1.186	0.078	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.14	0	Left	Cheek	5	DFT-S-OFDM	QPSK	1	108	1125M	1:1	0.092	1.186	0.109	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.06	0	Left	Cheek	5	DFT-S-OFDM	QPSK	108	54	1125M	1:1	0.097	1.186	0.115	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.12	0	Left	Tilt	5	DFT-S-OFDM	QPSK	1	108	1125M	1:1	0.076	1.186	0.090	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.03	0	Left	Tilt	5	DFT-S-OFDM	QPSK	108	54	1125M	1:1	0.080	1.186	0.095	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.07	J	0.01	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0574M	1:1	0.478	1.239	0.592	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.08	J	0.03	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0574M	1:1	0.522	1.236	0.645	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.07	J	0.00	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0574M	1:1	0.509	1.239	0.631	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.08	J	0.00	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0574M	1:1	0.540	1.236	0.667	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.07	J	0.01	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0574M	1:1	0.659	1.239	0.817	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.08	J	0.00	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0574M	1:1	0.703	1.236	0.869	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.06	J	0.01	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	216	0	0574M	1:1	0.703	1.242	0.873	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.07	J	0.00	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0574M	1:1	0.617	1.239	0.764	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.08	J	0.01	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0574M	1:1	0.747	1.236	0.923	A22
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.06	J	-0.01	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	216	0	0574M	1:1	0.743	1.242	0.923	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	17.90	J	0.00	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0574M	1:1	0.707	1.288	0.911	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-23
NR Band n30 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	1	26	1156M	1:1	0.013	1.409	0.018	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	1156M	1:1	0.015	1.343	0.020	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	-0.15	0	Right	Tilt	DFT-S-OFDM	QPSK	1	26	1156M	1:1	0.015	1.409	0.021	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.15	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	1156M	1:1	0.013	1.343	0.017	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.05	0	Left	Cheek	DFT-S-OFDM	QPSK	1	26	1156M	1:1	0.031	1.409	0.044	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	0.15	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	1156M	1:1	0.034	1.343	0.046	
2310.00	462000	Mid	NR Band n30	10	22.0	20.51	A	-0.10	1.5	Left	Cheek	CP-OFDM	QPSK	1	1	1156M	1:1	0.010	1.409	0.014	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	-0.10	0	Left	Tilt	DFT-S-OFDM	QPSK	1	26	1156M	1:1	0.030	1.409	0.042	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	0.21	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	1156M	1:1	0.030	1.343	0.040	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	-0.06	0	Right	Cheek	DFT-S-OFDM	QPSK	1	26	0317M	1:1	0.309	1.315	0.406	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.00	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	0317M	1:1	0.310	1.279	0.396	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	-0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	1	26	0317M	1:1	0.494	1.315	0.650	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	0317M	1:1	0.503	1.279	0.643	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	1	26	0317M	1:1	0.530	1.315	0.697	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	0317M	1:1	0.550	1.279	0.703	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	-0.03	0	Left	Tilt	DFT-S-OFDM	QPSK	1	26	0317M	1:1	0.570	1.315	0.750	A23
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	-0.20	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	0317M	1:1	0.568	1.279	0.726	
2310.00	462000	Mid	NR Band n30	10	19.0	17.74	J	-0.01	0	Left	Tilt	CP-OFDM	QPSK	1	1	0317M	1:1	0.477	1.337	0.638	

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 n7 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	1145M	1:1	0.045	1.303	0.059	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	-0.06	0	Right	Cheek	DFT-S-OFDM	QPSK	108	54	1145M	1:1	0.042	1.337	0.056	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	-0.13	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	1145M	1:1	0.028	1.303	0.036	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	0.12	0	Right	Tilt	DFT-S-OFDM	QPSK	108	54	1145M	1:1	0.034	1.337	0.045	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	1145M	1:1	0.034	1.303	0.044	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	0.07	0	Left	Cheek	DFT-S-OFDM	QPSK	108	54	1145M	1:1	0.040	1.337	0.053	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	-0.07	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	1145M	1:1	0.051	1.303	0.066	A24
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	-0.14	0	Left	Tilt	DFT-S-OFDM	QPSK	108	54	1145M	1:1	0.048	1.337	0.064	
2535.00	507000	Mid	NR Band n7	40	22.5	21.39	B	0.11	1.5	Left	Tilt	CP-OFDM	QPSK	1	1	1145M	1:1	0.036	1.291	0.046	

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

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Table 11-25
NR Band n41 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	19.0	18.40	J	-0.03	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0955M	1:1	0.426	1.148	0.489	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.00	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0955M	1:1	0.424	1.153	0.489	
2592.99	518598	Mid	NR Band n41	100	19.0	18.40	J	0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0955M	1:1	0.659	1.148	0.757	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	135	0	0955M	1:1	0.640	1.153	0.738	
2592.99	518598	Mid	NR Band n41	100	19.0	18.31	J	0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	270	0	0955M	1:1	0.624	1.172	0.731	
2592.99	518598	Mid	NR Band n41	100	19.0	18.40	J	0.08	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0955M	1:1	0.655	1.148	0.752	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	135	0	0955M	1:1	0.680	1.153	0.784	
2592.99	518598	Mid	NR Band n41	100	19.0	18.31	J	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	270	0	0955M	1:1	0.688	1.172	0.806	
2592.99	518598	Mid	NR Band n41	100	19.0	18.40	J	0.07	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0955M	1:1	0.982	1.148	1.127	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	135	0	0955M	1:1	0.997	1.153	1.150	
2592.99	518598	Mid	NR Band n41	100	19.0	18.31	J	0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	270	0	0955M	1:1	0.998	1.172	1.170	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.02	0	Left	Tilt	CP-OFDM	QPSK	1	1	0955M	1:1	1.020	1.153	**1.176**	A25
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	0.17	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.222	0.000	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	0.13	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.222	0.000	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	0.13	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.222	0.000	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	0.00	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.222	0.000	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.06	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.403	1.119	0.451	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.01	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.283	1.119	0.317	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	0.07	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.234	1.119	0.262	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.03	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.202	1.119	0.226	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	0.00	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.567	0.000	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.21	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.567	0.000	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.19	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.002	1.567	0.003	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.14	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0955M	1:1	0.000	1.567	0.000	
2592.99	518598	Mid	NR Band n41	100	19.0	18.38	J	0.03	0	Left	Tilt	CP-OFDM	QPSK	1	1	0955M	1:1	1.000	1.153	1.153	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

Note: Blue entry represents variability measurement.

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Table 11-26
NR Band n77 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.03	0	Right	Cheek	DFT-S-OFDM	QPSK	1	271	0575M	1:1	0.307	1.169	0.359	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.07	0	Right	Cheek	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.318	1.191	0.379	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	0.01	0	Right	Cheek	CP-OFDM	QPSK	1	1	0575M	1:1	0.332	1.194	0.396	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	271	0575M	1:1	0.206	1.169	0.241	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.201	1.191	0.239	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	1	271	0575M	1:1	0.112	1.169	0.131	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	-0.05	0	Left	Cheek	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.116	1.191	0.138	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	-0.07	0	Left	Tilt	DFT-S-OFDM	QPSK	1	271	0575M	1:1	0.087	1.169	0.102	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.05	0	Left	Tilt	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.083	1.191	0.099	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	0.01	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.426	1.479	0.630	A26
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	0.05	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.423	1.479	0.626	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	0.09	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.351	1.479	0.519	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	0.02	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.253	1.479	0.374	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	0.21	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.227	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.12	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.227	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.13	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.227	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.10	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.227	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	0.12	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.004	1.069	0.004	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.12	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.069	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.16	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.069	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.17	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.002	1.069	0.002	
3750.00	650000	Low	NR Band n77	100	18.0	17.35	F	-0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0575M	1:1	0.332	1.161	0.385	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	-0.04	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0575M	1:1	0.419	1.159	0.486	
3750.00	650000	Low	NR Band n77	100	18.0	17.40	F	-0.09	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0575M	1:1	0.293	1.148	0.336	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.03	0	Right	Cheek	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.406	1.146	0.465	
3930.00	662000	High	NR Band n77	100	18.0	17.29	F	0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	270	0	0575M	1:1	0.417	1.178	0.491	
3930.00	662000	High	NR Band n77	100	18.0	17.04	F	-0.02	0	Right	Cheek	CP-OFDM	QPSK	1	1	0575M	1:1	0.451	1.247	0.562	A27
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.04	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0575M	1:1	0.299	1.159	0.347	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.280	1.146	0.321	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.05	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0575M	1:1	0.100	1.159	0.116	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.094	1.146	0.108	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0575M	1:1	0.080	1.159	0.093	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.04	0	Left	Tilt	DFT-S-OFDM	QPSK	135	138	0575M	1:1	0.079	1.146	0.091	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	0.15	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.038	1.107	0.042	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	0.04	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.038	1.107	0.042	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	-0.02	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.024	1.107	0.027	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	0.03	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0838M	1:1	0.027	1.107	0.030	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	-0.12	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.216	0.000	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	0.16	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.216	0.000	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	0.13	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.216	0.000	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	-0.12	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.216	0.000	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	0.17	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.005	1.318	0.007	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	-0.12	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.003	1.318	0.004	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	-0.10	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.000	1.318	0.000	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	-0.12	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0575M	1:1	0.001	1.318	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						

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Table 11-27
DTS Head SISO SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	17.0	16.86	-0.10	Right	Cheek	1	0954M	1	99.8	0.032	0.027	1.033	1.002	0.028	
2412	1	802.11b	DSSS	22	17.0	16.86	0.06	Right	Tilt	1	0954M	1	99.8	0.021	0.016	1.033	1.002	0.017	
2412	1	802.11b	DSSS	22	17.0	16.86	0.11	Left	Cheek	1	0954M	1	99.8	0.021	0.017	1.033	1.002	0.018	
2412	1	802.11b	DSSS	22	17.0	16.86	-0.15	Left	Tilt	1	0954M	1	99.8	0.014	0.012	1.033	1.002	0.012	
2412	1	802.11b	DSSS	22	17.0	16.99	0.03	Right	Cheek	2	0954M	1	99.8	0.184	0.157	1.002	1.002	0.158	
2412	1	802.11b	DSSS	22	17.0	16.99	-0.07	Right	Tilt	2	0954M	1	99.8	0.044	0.017	1.002	1.002	0.017	
2412	1	802.11b	DSSS	22	17.0	16.99	-0.02	Left	Cheek	2	0954M	1	99.8	0.230	0.177	1.002	1.002	**0.178**	A28
2412	1	802.11b	DSSS	22	17.0	16.99	-0.15	Left	Tilt	2	0954M	1	99.8	0.025	0.018	1.002	1.002	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 11-28
DTS Head MIMO SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	0.05	Right	Cheek	MIMO	0990M	13	98.0	0.206	0.152	1.175	1.020	0.182	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.14	Right	Tilt	MIMO	0990M	13	98.0	0.081	0.064	1.175	1.020	0.077	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.18	Left	Cheek	MIMO	0990M	13	98.0	0.154	0.116	1.175	1.020	0.139	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.12	Left	Tilt	MIMO	0990M	13	98.0	0.053	0.044	1.175	1.020	0.053	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**												**Head** **1.6 W/kg (mW/g)** averaged over 1 gram								

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.

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Table 11-29
NII MIMO Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.75	0.08	Right	Cheek	MIMO	0990M	58.5	92.4	0.400	0.121	1.067	1.082	0.140	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.75	0.17	Right	Tilt	MIMO	0990M	58.5	92.4	0.294	0.032	1.067	1.082	0.037	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.75	0.10	Left	Cheek	MIMO	0990M	58.5	92.4	0.278	0.068	1.067	1.082	0.079	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.75	0.19	Left	Tilt	MIMO	0990M	58.5	92.4	0.131	0.007	1.067	1.082	0.008	
5610	122	802.11ac	OFDM	80	14.0	13.77	14.0	13.92	0.12	Right	Cheek	MIMO	0990M	58.5	92.4	0.412	0.224	1.054	1.082	0.255	A29
5610	122	802.11ac	OFDM	80	14.0	13.77	14.0	13.92	0.14	Right	Tilt	MIMO	0990M	58.5	92.4	0.164	0.061	1.054	1.082	0.070	
5610	122	802.11ac	OFDM	80	14.0	13.77	14.0	13.92	0.08	Left	Cheek	MIMO	0990M	58.5	92.4	0.165	0.101	1.054	1.082	0.115	
5610	122	802.11ac	OFDM	80	14.0	13.77	14.0	13.92	-0.19	Left	Tilt	MIMO	0990M	58.5	92.4	0.065	0.036	1.054	1.082	0.041	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	-0.11	Right	Cheek	MIMO	0990M	58.5	92.4	0.392	0.222	1.094	1.082	0.263	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	0.03	Right	Tilt	MIMO	0990M	58.5	92.4	0.142	0.072	1.094	1.082	0.085	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	0.13	Left	Cheek	MIMO	0990M	58.5	92.4	0.153	0.067	1.094	1.082	0.079	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	0.12	Left	Tilt	MIMO	0990M	58.5	92.4	0.070	0.029	1.094	1.082	0.034	
5855	171	802.11ac	OFDM	80	14.0	13.49	14.0	13.83	-0.15	Right	Cheek	MIMO	0958M	58.5	92.4	0.212	0.138	1.125	1.082	0.168	
5855	171	802.11ac	OFDM	80	14.0	13.49	14.0	13.83	0.09	Right	Tilt	MIMO	0958M	58.5	92.4	0.093	0.065	1.125	1.082	0.079	
5855	171	802.11ac	OFDM	80	14.0	13.49	14.0	13.83	0.10	Left	Cheek	MIMO	0958M	58.5	92.4	0.054	0.043	1.125	1.082	0.052	
5855	171	802.11ac	OFDM	80	14.0	13.49	14.0	13.83	0.14	Left	Tilt	MIMO	0958M	58.5	92.4	0.050	0.029	1.125	1.082	0.035	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

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

Table 11-30
DTS Head MIMO SAR during conditions with 5/6 GHz WLAN

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	14.0	13.91	14.0	13.52	0.00	Right	Cheek	MIMO	0954M	13	98.0	0.116	0.093	1.117	1.020	0.106	
2412	1	802.11n	OFDM	20	14.0	13.91	14.0	13.52	0.13	Right	Tilt	MIMO	0954M	13	98.0	0.047	0.036	1.117	1.020	0.041	
2412	1	802.11n	OFDM	20	14.0	13.91	14.0	13.52	0.04	Left	Cheek	MIMO	0954M	13	98.0	0.094	0.068	1.117	1.020	0.077	
2412	1	802.11n	OFDM	20	14.0	13.91	14.0	13.52	0.13	Left	Tilt	MIMO	0954M	13	98.0	0.023	0.015	1.117	1.020	0.017	
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: 2.4 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN or 5G NR. 5/6 GHz WIFI or 5G NR was not transmitting during the above evaluations. 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.

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Table 11-31
DSS Head SISO SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441.00	39	Bluetooth	FHSS	15.0	14.72	-0.15	Right	Cheek	1	0954M	1	77.00	0.098	1.067	1.299	0.136	
2441.00	39	Bluetooth	FHSS	15.0	14.72	0.11	Right	Tilt	1	0954M	1	77.00	0.035	1.067	1.299	0.049	
2441.00	39	Bluetooth	FHSS	15.0	14.72	-0.18	Left	Cheek	1	0954M	1	77.00	0.023	1.067	1.299	0.032	
2441.00	39	Bluetooth	FHSS	15.0	14.72	-0.12	Left	Tilt	1	0954M	1	77.00	0.020	1.067	1.299	0.028	
2402.00	0	Bluetooth	FHSS	15.0	14.29	0.00	Right	Cheek	2	0954M	1	77.00	0.127	1.178	1.299	**0.194**	A30
2402.00	0	Bluetooth	FHSS	15.0	14.29	-0.15	Right	Tilt	2	0954M	1	77.00	0.028	1.178	1.299	0.043	
2402.00	0	Bluetooth	FHSS	15.0	14.29	0.13	Left	Cheek	2	0954M	1	77.00	0.121	1.178	1.299	**0.185**	
2402.00	0	Bluetooth	FHSS	15.0	14.29	0.12	Left	Tilt	2	0954M	1	77.00	0.017	1.178	1.299	0.026	

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 11-32
DSS Head MIMO SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	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]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2441.00	39	Bluetooth	FHSS	13.0	12.44	11.00	10.08	0.15	Right	Cheek	MIMO	0954M	1	77.00	0.088	1.236	1.299	0.141	
2441.00	39	Bluetooth	FHSS	13.0	12.44	11.00	10.08	0.13	Right	Tilt	MIMO	0954M	1	77.00	0.060	1.236	1.299	0.096	
2441.00	39	Bluetooth	FHSS	13.0	12.44	11.00	10.08	-0.02	Left	Cheek	MIMO	0954M	1	77.00	0.057	1.236	1.299	0.092	
2441.00	39	Bluetooth	FHSS	13.0	12.44	11.00	10.08	0.14	Left	Tilt	MIMO	0954M	1	77.00	0.020	1.236	1.299	0.032	

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

Note: To achieve the 15.0 dBm maximum allowed MIMO power shown in the documentation, antenna 1 transmits at a maximum allowed power of 13 dBm, and antenna 2 transmits at a maximum allowed power of 11 dBm.

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11.2 Standalone Body-Worn SAR Data

Table 11-33
GSM/UMTS Body-Worn SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
824.20	128	GSM 850	GSM	33.0	31.81	N/A	-0.02	15 mm	A	0418M	1:8.3	back	0.145	1.315	0.191	A31
1909.80	810	GSM 1900	GSM	29.7	28.72	N/A	0.03	15 mm	A	1246M	1:8.3	back	0.287	1.253	0.360	A33
846.60	4233	UMTS 850	RMC	25.0	23.99	0	0.02	15 mm	A	0418M	1:1	back	0.288	1.262	0.363	A35
1712.40	1312	UMTS 1750	RMC	24.0	22.83	26	0.04	15 mm	A	1258M	1:1	back	0.595	1.309	0.779	A37
1732.40	1412	UMTS 1750	RMC	24.0	22.64	26	0.03	15 mm	A	1258M	1:1	back	0.575	1.368	0.787	
1752.60	1513	UMTS 1750	RMC	24.0	22.75	26	0.01	15 mm	A	1258M	1:1	back	0.582	1.334	0.776	
1852.40	9262	UMTS 1900	RMC	24.0	22.40	54	-0.02	15 mm	A	1246M	1:1	back	0.378	1.445	0.546	
1880.00	9400	UMTS 1900	RMC	24.0	22.46	54	0.00	15 mm	A	1246M	1:1	back	0.415	1.426	0.592	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	54	-0.01	15 mm	A	1246M	1:1	back	0.513	1.349	0.692	A39
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-34
LTE Body-Worn SAR

MEASUREMENT RESULTS

1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.01	0	A	0352M	QPSK	1	0	15 mm	back	1:1	0.227	1.189	0.270	A41
1 CC Uplink	N/A	680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.14	1	A	0352M	QPSK	50	0	15 mm	back	1:1	0.165	1.227	0.202	
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.01	0	A	0352M	QPSK	1	0	15 mm	back	1:1	0.230	1.164	0.268	A43
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.06	1	A	0352M	QPSK	25	12	15 mm	back	1:1	0.189	1.180	0.223	
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	-0.14	0	A	0352M	QPSK	1	49	15 mm	back	1:1	0.304	1.167	0.355	A45
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	-0.02	1	A	0352M	QPSK	25	12	15 mm	back	1:1	0.231	1.167	0.270	
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	-0.07	0	A	0352M	QPSK	1	25	15 mm	back	1:1	0.293	1.262	0.370	A47
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.03	1	A	0352M	QPSK	25	12	15 mm	back	1:1	0.225	1.300	0.293	
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.01	0	A	0352M	QPSK	1	36	15 mm	back	1:1	0.288	1.406	0.405	A49
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.00	1	A	0352M	QPSK	36	37	15 mm	back	1:1	0.238	1.416	0.337	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.08	108	-0.01	0	A	0315M	QPSK	1	0	15 mm	back	1:1	0.310	1.387	0.430	A51
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	-0.03	0	A	0315M	QPSK	1	25	15 mm	back	1:1	0.310	1.384	0.429	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.01	1	A	0315M	QPSK	25	0	15 mm	back	1:1	0.246	1.371	0.337	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.15	108	-0.06	0	A	0315M	QPSK	1	0	15 mm	back	1:1	0.307	1.365	0.419	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	60	0.01	0	A	1267M	QPSK	1	50	15 mm	back	1:1	0.567	1.432	0.812	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.8	23.14	60	-0.12	0	A	1267M	QPSK	1	50	15 mm	back	1:1	0.562	1.466	0.824	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.8	23.17	60	0.01	0	A	1267M	QPSK	1	0	15 mm	back	1:1	0.575	1.455	0.837	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	60	0.01	1	A	1267M	QPSK	50	25	15 mm	back	1:1	0.441	1.406	0.620	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.17	60	0.16	1	A	1267M	QPSK	100	0	15 mm	back	1:1	0.400	1.455	0.582	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	24.8	22.83	60	-0.01	0	A	1267M	QPSK	1	0	15 mm	back	1:1	0.512	1.574	0.806	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	24.8	23.21	60	0.05	0	A	1267M	QPSK	1	0	15 mm	back	1:1	0.583	1.442	0.841	A53
	SCC	1750.20	132374													99							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	24.8	23.34	60	0.02	0	A	1267M	QPSK	1	0	15 mm	back	1:1	0.563	1.400	0.788	
	SCC	1765.10	132523													49							
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	22.91	5	-0.15	0	A	1168M	QPSK	1	50	15 mm	back	1:1	0.590	1.442	0.851	
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	5	-0.13	0	A	1168M	QPSK	1	50	15 mm	back	1:1	0.623	1.285	0.801	
1 CC Uplink	N/A	1905.00	26590	High	LTE Band 25 (PCS)	20	24.5	23.16	5	0.14	0	A	1168M	QPSK	1	50	15 mm	back	1:1	0.718	1.361	**0.977**	A55
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	5	-0.13	1	A	1168M	QPSK	50	50	15 mm	back	1:1	0.495	1.265	0.626	
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.33	5	-0.04	1	A	1168M	QPSK	100	0	15 mm	back	1:1	0.471	1.309	0.617	
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	N/A	0.13	0	A	1143M	QPSK	1	0	15 mm	back	1:1	0.434	1.340	0.582	A57
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	N/A	0.03	1	A	1143M	QPSK	25	12	15 mm	back	1:1	0.339	1.374	0.466	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.0	22.77	N/A	0.03	0	B	1170M	QPSK	1	50	15 mm	back	1:1	0.278	1.327	0.369	A59
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.0	21.64	N/A	0.03	1	B	1170M	QPSK	50	25	15 mm	back	1:1	0.218	1.368	0.298	

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Spatial Peak
Uncontrolled Exposure/General Population

Body
1.6 W/kg (mW/g)
averaged over 1 gram

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Table 11-35
LTE Band 41 Body-Worn SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	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	LTE Band 41	20	25.0	24.06	-0.02	0	B	1149M	QPSK	1	50	15 mm	back	1:1.58	0.236	1.242	0.293	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	23.82	-0.01	0	B	1149M	QPSK	1	99	15 mm	back	1:1.58	0.245	1.312	0.321	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.03	1	B	1149M	QPSK	50	25	15 mm	back	1:1.58	0.190	1.274	0.242	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.5	26.60	-0.08	0	B	1149M	QPSK	1	50	15 mm	back	1:2.31	0.277	1.230	0.341	A61
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.5	25.82	-0.04	0	B	1149M	QPSK	1	99	15 mm	back	1:2.31	0.240	1.472	0.353	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	25.0	23.74	-0.12	0	B	1149M	QPSK	1	99	15 mm	back	1:1.58	0.245	1.337	0.328	
	SCC	2525.80	39948												0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	27.5	25.94	-0.13	0	B	1149M	QPSK	1	99	15 mm	back	1:2.31	0.255	1.432	0.365	
	SCC	2525.80	39948												0							
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Table 11-36
LTE Band 48 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.01	0	F	0543M	QPSK	1	50	15 mm	back	1:1.58	0.158	1.222	0.193	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	18.97	-0.06	0	F	0543M	QPSK	50	0	15 mm	back	1:1.58	0.152	1.268	0.193	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.07	0	F	0543M	QPSK	50	25	15 mm	back	1:1.58	0.160	1.233	**0.197**	A63
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.05	-0.08	0	F	0543M	QPSK	50	0	15 mm	back	1:1.58	0.150	1.245	0.187	
	SCC	3626.90	56009												50							
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Table 11-37
NR Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.08	0	112	0417M	DFT-S-OFDM	QPSK	1	104	15 mm	back	1:1	0.237	1.406	0.333	A65
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.01	0	112	0417M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.225	1.426	0.321	
680.50	136100	Mid	NR Band n71	20	24.3	22.77	A	0.03	1.5	112	0417M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.128	1.422	0.182	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	0.04	0	13	0417M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.205	1.393	0.286	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	0.00	0	13	0417M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1:1	0.245	1.406	0.344	A67
707.50	141500	Mid	NR Band n12	15	24.2	22.75	A	0.02	1.5	13	0417M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.150	1.396	0.209	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	0.04	0	108	0417M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.288	1.439	0.414	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	0.02	0	108	0417M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.346	1.445	0.500	A69
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	22.73	A	0.00	1.5	108	0417M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.215	1.435	0.309	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.06	0	62	1137M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.626	1.334	0.835	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.14	0	62	1137M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.653	1.349	0.881	A71
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.9	22.62	A	0.03	1	62	1137M	DFT-S-OFDM	QPSK	216	0	15 mm	back	1:1	0.522	1.343	0.701	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.4	22.10	A	0.01	1.5	62	1137M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.495	1.349	0.668	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	-0.08	0	0	5869M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.061	1.268	0.077	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	-0.06	0	0	5869M	DFT-S-OFDM	QPSK	108	108	15 mm	back	1:1	0.062	1.230	0.076	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.56	J	-0.17	0	0	5869M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.061	1.393	0.085	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.02	0	59	1125M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.599	1.186	0.710	A73
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.08	0	59	1125M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.599	1.186	0.710	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.0	22.30	A	0.01	1.5	59	1125M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.414	1.175	0.486	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	0.05	0	N/A	0574M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.071	1.239	0.088	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	0.13	0	N/A	0574M	DFT-S-OFDM	QPSK	108	108	15 mm	back	1:1	0.072	1.205	0.087	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	18.93	J	0.15	0	N/A	0574M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.072	1.279	0.092	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	-0.02	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1:1	0.451	1.409	0.635	A75
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	0.08	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.450	1.343	0.604	
2310.00	462000	Mid	NR Band n30	10	22.0	20.51	A	-0.01	1.5	N/A	1156M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.309	1.409	0.435	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	-0.03	0	N/A	0317M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1:1	0.063	1.315	0.083	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.01	0	N/A	0317M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.059	1.279	0.075	
2310.00	462000	Mid	NR Band n30	10	19.0	17.74	J	0.09	0	N/A	0317M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.054	1.337	0.072	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.06	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.347	1.303	0.452	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	-0.03	0	N/A	1145M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.354	1.337	0.473	A77
2535.00	507000	Mid	NR Band n7	40	22.5	21.39	B	0.07	1.5	N/A	1145M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.246	1.291	0.318	
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Table 11-38
NR Band 41 Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	0.10	0	0959M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.099	1.175	0.116	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	-0.01	0	0959M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1:1	0.094	1.180	0.111	
2592.99	518598	Mid	NR Band n41	100	20.0	19.20	J	0.04	0	0959M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.100	1.202	0.120	A79
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	-0.09	N/A	0955M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.035	1.222	0.043	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.12	N/A	0955M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.008	1.119	0.009	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.06	N/A	0955M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.065	1.567	0.102	
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Table 11-39
NR Band 77 Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.03	0	0575M	DFT-S-OFDM	QPSK	1	271	15 mm	back	1:1	0.096	1.169	0.112	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.09	0	0575M	DFT-S-OFDM	QPSK	135	138	15 mm	back	1:1	0.097	1.191	0.116	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	-0.19	0	0575M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.099	1.194	0.118	A81
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	-0.13	N/A	0934M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.049	1.479	0.072	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.13	N/A	0934M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.039	1.227	0.048	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.14	N/A	0575M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.001	1.069	0.001	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.04	0	0575M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.105	1.159	0.122	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.04	0	0575M	DFT-S-OFDM	QPSK	135	138	15 mm	back	1:1	0.114	1.146	0.131	A83
3930.00	662000	High	NR Band n77	100	18.0	17.04	F	-0.09	0	0575M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.106	1.247	0.132	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	-0.13	N/A	0838M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.050	1.107	0.055	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	0.13	N/A	0838M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.012	1.216	0.015	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	0.00	N/A	0575M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.006	1.318	0.008	
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 11-40
DTS SISO Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.5	20.48	-0.01	15 mm	1	0954M	1	back	99.8	0.043	0.032	1.005	1.002	0.032	
2412	1	802.11b	DSSS	22	20.5	20.49	0.16	15 mm	2	0954M	1	back	99.8	0.072	0.060	1.002	1.002	**0.060**	A85
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		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	17.0	16.86	-0.12	15 mm	1	0954M	1	back	99.8	0.009	0.007	1.033	1.002	0.007	
2412	1	802.11b	DSSS	22	17.0	16.99	-0.04	15 mm	2	0954M	1	back	99.8	0.037	0.027	1.002	1.002	0.027	
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 during Conditions with 5/6 GHz and/or 5G NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.08	15 mm	MIMO	0954M	13	back	98.0	0.047	0.035	1.175	1.020	0.042	
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: 2.4 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN, or 5G NR. 5/6 GHz WIFI or 5G NR was not transmitting during the above evaluations. 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.

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Table 11-43
NII MIMO Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	15.5	15.46	15.5	15.44	0.02	15 mm	MIMO	0990M	58.5	back	92.4	0.164	0.143	1.014	1.082	0.157	
5690	138	802.11ac	OFDM	80	15.5	15.24	15.5	15.21	-0.02	15 mm	MIMO	0990M	58.5	back	92.4	0.267	0.191	1.069	1.082	0.221	A87
5775	155	802.11ac	OFDM	80	15.5	14.67	15.5	14.93	0.14	15 mm	MIMO	0990M	58.5	back	92.4	0.249	0.187	1.211	1.082	**0.245**	
5855	171	802.11ac	OFDM	80	15.5	14.64	15.5	15.14	-0.15	15 mm	MIMO	0958M	58.5	back	92.4	0.169	0.120	1.219	1.082	0.158	
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 18.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 15.5 dBm.

Table 11-44
DSS SISO Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	18.0	17.47	-0.03	15 mm	1	0954M	1	back	77	0.008	1.130	1.299	0.012	
2441	39	Bluetooth	FHSS	17.5	16.73	-0.01	15 mm	2	0954M	1	back	77.00	0.052	1.194	1.299	**0.081**	A89
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Body** **1.6 W/kg (mW/g)** averaged over 1 gram									

Table 11-45
DSS MIMO Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	13.0	12.44	11.00	10.08	0.19	15 mm	MIMO	0954M	1	back	77.00	0.017	1.236	1.299	0.027	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Body** **1.6 W/kg (mW/g)** averaged over 1 gram											

Note: To achieve the 15.0 dBm maximum allowed MIMO power shown in the documentation, antenna 1 transmits at a maximum allowed power of 13 dBm, and antenna 2 transmits at a maximum allowed power of 11 dBm.

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11.3 Standalone Hotspot SAR Data

Table 11-46
GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
824.20	128	GSM 850	GPRS	30.5	28.64	N/A	-0.03	10 mm	A	0418M	3	1:2.76	back	0.484	1.535	0.743	
836.60	190	GSM 850	GPRS	30.5	29.18	N/A	0.01	10 mm	A	0418M	3	1:2.76	back	0.673	1.355	0.912	
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	0.04	10 mm	A	0418M	3	1:2.76	back	0.973	1.169	1.137	A32
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	-0.04	10 mm	A	0418M	3	1:2.76	front	0.542	1.169	0.634	
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	-0.02	10 mm	A	0418M	3	1:2.76	bottom	0.287	1.169	0.336	
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	-0.03	10 mm	A	0418M	3	1:2.76	right	0.154	1.169	0.180	
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	-0.01	10 mm	A	0418M	3	1:2.76	left	0.309	1.169	0.361	
848.80	251	GSM 850	GPRS	30.5	29.82	N/A	-0.10	10 mm	A	0418M	3	1:2.76	back	0.943	1.169	1.102	
1880.00	661	GSM 1900	GPRS	22.7	21.27	N/A	0.03	10 mm	A	1246M	4	1:2.076	back	0.211	1.390	0.293	
1880.00	661	GSM 1900	GPRS	22.7	21.27	N/A	0.01	10 mm	A	1246M	4	1:2.076	front	0.209	1.390	0.291	
1850.20	512	GSM 1900	GPRS	22.7	20.81	N/A	-0.02	10 mm	A	1246M	4	1:2.076	bottom	0.479	1.545	0.740	
1880.00	661	GSM 1900	GPRS	22.7	21.27	N/A	0.03	10 mm	A	1246M	4	1:2.076	bottom	0.520	1.390	0.723	
1909.80	810	GSM 1900	GPRS	22.7	20.99	N/A	-0.13	10 mm	A	1246M	4	1:2.076	bottom	0.793	1.483	1.176	A34
1880.00	661	GSM 1900	GPRS	22.7	21.27	N/A	0.19	10 mm	A	1246M	4	1:2.076	right	0.040	1.390	0.056	
1880.00	661	GSM 1900	GPRS	22.7	21.27	N/A	0.20	10 mm	A	1246M	4	1:2.076	left	0.038	1.390	0.053	
826.40	4132	UMTS 850	RMC	25.0	23.98	0	-0.02	10 mm	A	0418M	N/A	1:1	back	0.449	1.265	0.568	
836.60	4183	UMTS 850	RMC	25.0	23.97	0	-0.13	10 mm	A	0418M	N/A	1:1	back	0.540	1.268	0.685	
846.60	4233	UMTS 850	RMC	25.0	23.99	0	-0.02	10 mm	A	0418M	N/A	1:1	back	0.587	1.262	0.741	A36
846.60	4233	UMTS 850	RMC	25.0	23.99	0	0.02	10 mm	A	0418M	N/A	1:1	front	0.371	1.262	0.468	
846.60	4233	UMTS 850	RMC	25.0	23.99	0	-0.02	10 mm	A	0418M	N/A	1:1	bottom	0.237	1.262	0.299	
846.60	4233	UMTS 850	RMC	25.0	23.99	0	0.04	10 mm	A	0418M	N/A	1:1	right	0.095	1.262	0.120	
846.60	4233	UMTS 850	RMC	25.0	23.99	0	0.00	10 mm	A	0418M	N/A	1:1	left	0.226	1.262	0.285	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	26	-0.01	10 mm	A	1258M	N/A	1:1	back	0.438	1.130	0.495	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	26	-0.02	10 mm	A	1258M	N/A	1:1	front	0.395	1.130	0.446	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	26	0.00	10 mm	A	1258M	N/A	1:1	bottom	0.984	1.130	1.112	
1732.40	1412	UMTS 1750	RMC	20.0	19.37	26	-0.02	10 mm	A	1258M	N/A	1:1	bottom	1.030	1.156	1.191	A38
1752.60	1513	UMTS 1750	RMC	20.0	19.26	26	-0.04	10 mm	A	1258M	N/A	1:1	bottom	1.000	1.186	1.186	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	26	0.06	10 mm	A	1258M	N/A	1:1	right	0.113	1.130	0.128	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	26	0.05	10 mm	A	1258M	N/A	1:1	left	0.058	1.130	0.066	
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	0.01	10 mm	A	1246M	N/A	1:1	back	0.376	1.033	0.388	
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	-0.01	10 mm	A	1246M	N/A	1:1	front	0.323	1.033	0.334	
1852.40	9262	UMTS 1900	RMC	18.5	18.16	54	0.00	10 mm	A	1246M	N/A	1:1	bottom	0.707	1.081	0.764	
1880.00	9400	UMTS 1900	RMC	18.5	18.20	54	-0.01	10 mm	A	1246M	N/A	1:1	bottom	0.797	1.072	0.854	
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	-0.01	10 mm	A	1246M	N/A	1:1	bottom	0.940	1.033	0.971	A40
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	0.01	10 mm	A	1246M	N/A	1:1	right	0.039	1.033	0.040	
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	0.07	10 mm	A	1246M	N/A	1:1	left	0.031	1.033	0.032	
1907.60	9538	UMTS 1900	RMC	18.5	18.36	54	-0.02	10 mm	A	1246M	N/A	1:1	bottom	0.908	1.033	0.938	
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.

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Table 11-47
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	-0.17	0	A	0352M	QPSK	1	0	10 mm	back	1:1	0.342	1.189	0.407	A42
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.01	1	A	0352M	QPSK	50	0	10 mm	back	1:1	0.275	1.227	0.337	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	-0.04	0	A	0352M	QPSK	1	0	10 mm	front	1:1	0.236	1.189	0.281	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.04	1	A	0352M	QPSK	50	0	10 mm	front	1:1	0.191	1.227	0.234	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	-0.01	0	A	0352M	QPSK	1	0	10 mm	bottom	1:1	0.092	1.189	0.109	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.02	1	A	0352M	QPSK	50	0	10 mm	bottom	1:1	0.082	1.227	0.101	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.05	0	A	0352M	QPSK	1	0	10 mm	right	1:1	0.181	1.189	0.215	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	0.02	1	A	0352M	QPSK	50	0	10 mm	right	1:1	0.129	1.227	0.158	
680.50	133297	Mid	LTE Band 71	20	25.7	24.95	13	0.02	0	A	0352M	QPSK	1	0	10 mm	left	1:1	0.249	1.189	0.296	
680.50	133297	Mid	LTE Band 71	20	24.7	23.81	13	-0.06	1	A	0352M	QPSK	50	0	10 mm	left	1:1	0.190	1.227	0.233	
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
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.02	0	A	0352M	QPSK	1	0	10 mm	back	1:1	0.380	1.164	0.442	A44
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	-0.01	1	A	0352M	QPSK	25	12	10 mm	back	1:1	0.314	1.180	0.371	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.14	0	A	0352M	QPSK	1	0	10 mm	front	1:1	0.253	1.164	0.294	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	-0.02	1	A	0352M	QPSK	25	12	10 mm	front	1:1	0.225	1.180	0.266	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.07	0	A	0352M	QPSK	1	0	10 mm	bottom	1:1	0.123	1.164	0.143	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.00	1	A	0352M	QPSK	25	12	10 mm	bottom	1:1	0.110	1.180	0.130	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	-0.13	0	A	0352M	QPSK	1	0	10 mm	right	1:1	0.149	1.164	0.173	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	0.02	1	A	0352M	QPSK	25	12	10 mm	right	1:1	0.119	1.180	0.140	
707.50	23095	Mid	LTE Band 12	10	25.5	24.84	14	0.09	0	A	0352M	QPSK	1	0	10 mm	left	1:1	0.213	1.164	0.248	
707.50	23095	Mid	LTE Band 12	10	24.5	23.78	14	-0.03	1	A	0352M	QPSK	25	12	10 mm	left	1:1	0.188	1.180	0.222	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-49
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	-0.05	0	A	0352M	QPSK	1	49	10 mm	back	1:1	0.562	1.167	0.656	A46
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	0.01	1	A	0352M	QPSK	25	12	10 mm	back	1:1	0.418	1.167	0.488	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	0.12	0	A	0352M	QPSK	1	49	10 mm	front	1:1	0.354	1.167	0.413	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	-0.01	1	A	0352M	QPSK	25	12	10 mm	front	1:1	0.277	1.167	0.323	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	0.03	0	A	0352M	QPSK	1	49	10 mm	bottom	1:1	0.256	1.167	0.299	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	0.00	1	A	0352M	QPSK	25	12	10 mm	bottom	1:1	0.183	1.167	0.214	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	-0.13	0	A	0352M	QPSK	1	49	10 mm	right	1:1	0.166	1.167	0.194	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	-0.02	1	A	0352M	QPSK	25	12	10 mm	right	1:1	0.128	1.167	0.149	
782.00	23230	Mid	LTE Band 13	10	25.2	24.53	104	-0.05	0	A	0352M	QPSK	1	49	10 mm	left	1:1	0.302	1.167	0.352	
782.00	23230	Mid	LTE Band 13	10	24.2	23.53	104	0.08	1	A	0352M	QPSK	25	12	10 mm	left	1:1	0.200	1.167	0.233	
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 11-50
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	0.09	0	A	0352M	QPSK	1	25	10 mm	back	1:1	0.625	1.262	0.789	A48
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	-0.03	1	A	0352M	QPSK	25	12	10 mm	back	1:1	0.488	1.300	0.634	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	-0.05	0	A	0352M	QPSK	1	25	10 mm	front	1:1	0.393	1.262	0.496	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	-0.02	1	A	0352M	QPSK	25	12	10 mm	front	1:1	0.291	1.300	0.378	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	-0.08	0	A	0352M	QPSK	1	25	10 mm	bottom	1:1	0.252	1.262	0.318	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.03	1	A	0352M	QPSK	25	12	10 mm	bottom	1:1	0.198	1.300	0.257	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	0.09	0	A	0352M	QPSK	1	25	10 mm	right	1:1	0.177	1.262	0.223	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	-0.02	1	A	0352M	QPSK	25	12	10 mm	right	1:1	0.133	1.300	0.173	
793.00	23330	Mid	LTE Band 14	10	25.5	24.49	13	-0.02	0	A	0352M	QPSK	1	25	10 mm	left	1:1	0.317	1.262	0.400	
793.00	23330	Mid	LTE Band 14	10	24.5	23.36	13	0.03	1	A	0352M	QPSK	25	12	10 mm	left	1:1	0.238	1.300	0.309	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-51
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.01	0	A	0352M	QPSK	1	36	10 mm	back	1:1	0.597	1.406	0.839	A50
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.02	1	A	0352M	QPSK	36	37	10 mm	back	1:1	0.490	1.416	0.694	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.89	108	0.00	1	A	0352M	QPSK	75	0	10 mm	back	1:1	0.450	1.449	0.652	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	-0.03	0	A	0352M	QPSK	1	36	10 mm	front	1:1	0.348	1.406	0.489	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.02	1	A	0352M	QPSK	36	37	10 mm	front	1:1	0.282	1.416	0.399	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	-0.01	0	A	0352M	QPSK	1	36	10 mm	bottom	1:1	0.217	1.406	0.305	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.01	1	A	0352M	QPSK	36	37	10 mm	bottom	1:1	0.170	1.416	0.241	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	0.15	0	A	0352M	QPSK	1	36	10 mm	right	1:1	0.094	1.406	0.132	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.03	1	A	0352M	QPSK	36	37	10 mm	right	1:1	0.070	1.416	0.099	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.02	108	-0.04	0	A	0352M	QPSK	1	36	10 mm	left	1:1	0.165	1.406	0.232	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	22.99	108	0.15	1	A	0352M	QPSK	36	37	10 mm	left	1:1	0.126	1.416	0.178	
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 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	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	LTE Band 5 (Cell)	10	25.5	24.08	108	0.01	0	A	0315M	QPSK	1	0	10 mm	back	1:1	0.625	1.387	0.867	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	0.02	0	A	0315M	QPSK	1	25	10 mm	back	1:1	0.634	1.384	0.877	A52
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.04	1	A	0315M	QPSK	25	0	10 mm	back	1:1	0.505	1.371	0.692	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	22.93	108	0.03	1	A	0315M	QPSK	50	0	10 mm	back	1:1	0.501	1.435	0.719	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.15	108	-0.06	0	A	0315M	QPSK	1	0	10 mm	back	1:1	0.628	1.365	0.857	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	-0.11	0	A	0315M	QPSK	1	25	10 mm	front	1:1	0.372	1.384	0.515	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.07	1	A	0315M	QPSK	25	0	10 mm	front	1:1	0.297	1.371	0.407	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	-0.03	0	A	0315M	QPSK	1	25	10 mm	bottom	1:1	0.237	1.384	0.328	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	0.01	1	A	0315M	QPSK	25	0	10 mm	bottom	1:1	0.192	1.371	0.263	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	-0.05	0	A	0315M	QPSK	1	25	10 mm	right	1:1	0.075	1.384	0.104	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	0.04	1	A	0315M	QPSK	25	0	10 mm	right	1:1	0.060	1.371	0.082	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.09	108	0.05	0	A	0315M	QPSK	1	25	10 mm	left	1:1	0.165	1.384	0.228	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.13	108	-0.01	1	A	0315M	QPSK	25	0	10 mm	left	1:1	0.134	1.371	0.184	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-53
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.54	60	0.05	0	A	1267M	QPSK	1	50	10 mm	back	1:1	0.423	1.247	0.527	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.48	60	-0.01	0	A	1267M	QPSK	50	25	10 mm	back	1:1	0.426	1.265	0.539	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.54	60	-0.04	0	A	1267M	QPSK	1	50	10 mm	front	1:1	0.342	1.247	0.426	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.48	60	0.00	0	A	1267M	QPSK	50	25	10 mm	front	1:1	0.348	1.265	0.440	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.54	60	-0.03	0	A	1267M	QPSK	1	50	10 mm	bottom	1:1	0.816	1.247	1.018	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	18.52	60	-0.10	0	A	1267M	QPSK	1	50	10 mm	bottom	1:1	0.821	1.253	1.029	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	18.43	60	-0.06	0	A	1267M	QPSK	1	99	10 mm	bottom	1:1	0.813	1.279	1.040	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.48	60	0.00	0	A	1267M	QPSK	50	25	10 mm	bottom	1:1	0.812	1.265	1.027	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.5	18.31	60	0.05	0	A	1267M	QPSK	50	25	10 mm	bottom	1:1	0.807	1.315	1.061	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	18.22	60	-0.02	0	A	1267M	QPSK	50	0	10 mm	bottom	1:1	0.793	1.343	1.065	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.38	60	0.02	0	A	1267M	QPSK	100	0	10 mm	bottom	1:1	0.803	1.294	1.039	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	19.5	18.21	60	0.01	0	A	1267M	QPSK	25	0	10 mm	bottom	1:1	0.848	1.346	1.141	A54
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	19.5	18.13	60	-0.08	0	A	1267M	QPSK	50	0	10 mm	bottom	1:1	0.783	1.371	1.073	
	SCC	1750.20	132374													50							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	19.5	18.14	60	0.01	0	A	1267M	QPSK	25	0	10 mm	bottom	1:1	0.808	1.368	1.105	
	SCC	1765.10	132523													25							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.54	60	0.01	0	A	1267M	QPSK	1	50	10 mm	right	1:1	0.079	1.247	0.099	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.48	60	0.10	0	A	1267M	QPSK	50	25	10 mm	right	1:1	0.076	1.265	0.096	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.54	60	0.12	0	A	1267M	QPSK	1	50	10 mm	left	1:1	0.048	1.247	0.060	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.5	18.48	60	0.12	0	A	1267M	QPSK	50	25	10 mm	left	1:1	0.043	1.265	0.054	

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 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.50	5	-0.03	0	A	1168M	QPSK	1	50	10 mm	back	1:1	0.358	1.000	0.358	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.34	5	-0.03	0	A	1168M	QPSK	50	25	10 mm	back	1:1	0.348	1.038	0.361	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.50	5	-0.02	0	A	1168M	QPSK	1	50	10 mm	front	1:1	0.313	1.000	0.313	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.34	5	-0.02	0	A	1168M	QPSK	50	25	10 mm	front	1:1	0.302	1.038	0.313	
1860.00	26140	Low	LTE Band 25 (PCS)	20	18.5	18.26	5	0.01	0	A	1168M	QPSK	1	99	10 mm	bottom	1:1	0.843	1.057	0.891	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.50	5	-0.15	0	A	1168M	QPSK	1	50	10 mm	bottom	1:1	0.905	1.000	0.905	
1905.00	26590	High	LTE Band 25 (PCS)	20	18.5	18.25	5	-0.05	0	A	1168M	QPSK	1	50	10 mm	bottom	1:1	0.935	1.059	0.990	
1860.00	26140	Low	LTE Band 25 (PCS)	20	18.5	18.17	5	-0.04	0	A	1168M	QPSK	50	25	10 mm	bottom	1:1	0.839	1.079	0.905	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.34	5	0.03	0	A	1168M	QPSK	50	25	10 mm	bottom	1:1	0.868	1.038	0.901	
1905.00	26590	High	LTE Band 25 (PCS)	20	18.5	18.31	5	0.02	0	A	1168M	QPSK	50	25	10 mm	bottom	1:1	0.938	1.045	0.980	A56
1905.00	26590	High	LTE Band 25 (PCS)	20	18.5	18.22	5	-0.01	0	A	1168M	QPSK	100	0	10 mm	bottom	1:1	0.917	1.067	0.978	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.50	5	-0.11	0	A	1168M	QPSK	1	50	10 mm	right	1:1	0.050	1.000	0.050	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.34	5	-0.13	0	A	1168M	QPSK	50	25	10 mm	right	1:1	0.049	1.038	0.051	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.50	5	0.09	0	A	1168M	QPSK	1	50	10 mm	left	1:1	0.048	1.000	0.048	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	18.5	18.34	5	-0.09	0	A	1168M	QPSK	50	25	10 mm	left	1:1	0.057	1.038	0.059	

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

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Table 11-55
LTE Band 30 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.52	0.02	0	A	1143M	QPSK	1	0	10 mm	back	1:1	0.323	1.253	0.405	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.41	-0.03	0	A	1143M	QPSK	25	0	10 mm	back	1:1	0.305	1.285	0.392	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.52	0.15	0	A	1143M	QPSK	1	0	10 mm	front	1:1	0.304	1.253	0.381	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.41	0.01	0	A	1143M	QPSK	25	0	10 mm	front	1:1	0.292	1.285	0.375	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.52	-0.14	0	A	1143M	QPSK	1	0	10 mm	bottom	1:1	0.803	1.253	1.006	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.41	0.00	0	A	1143M	QPSK	25	0	10 mm	bottom	1:1	0.797	1.285	1.024	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.28	-0.03	0	A	1143M	QPSK	50	0	10 mm	bottom	1:1	0.810	1.324	1.072	A58
2310.00	27710	Mid	LTE Band 30	10	19.5	18.52	0.12	0	A	1143M	QPSK	1	0	10 mm	right	1:1	0.001	1.253	0.001	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.41	-0.06	0	A	1143M	QPSK	25	0	10 mm	right	1:1	0.004	1.285	0.005	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.52	0.12	0	A	1143M	QPSK	1	0	10 mm	left	1:1	0.036	1.253	0.045	
2310.00	27710	Mid	LTE Band 30	10	19.5	18.41	0.12	0	A	1143M	QPSK	25	0	10 mm	left	1:1	0.034	1.285	0.044	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-56
LTE Band 7 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	-0.03	0	B	1170M	QPSK	1	0	10 mm	back	1:1	0.254	1.393	0.354	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	-0.01	0	B	1170M	QPSK	50	50	10 mm	back	1:1	0.247	1.429	0.353	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	0.05	0	B	1170M	QPSK	1	0	10 mm	front	1:1	0.275	1.393	0.383	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	-0.02	0	B	1170M	QPSK	50	50	10 mm	front	1:1	0.272	1.429	0.389	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	-0.01	0	B	1170M	QPSK	1	0	10 mm	bottom	1:1	0.671	1.393	0.935	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.42	-0.05	0	B	1170M	QPSK	1	99	10 mm	bottom	1:1	0.715	1.439	1.029	A60
2560.00	21350	High	LTE Band 7	20	21.0	19.54	0.08	0	B	1170M	QPSK	1	99	10 mm	bottom	1:1	0.527	1.400	0.738	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	0.00	0	B	1170M	QPSK	50	50	10 mm	bottom	1:1	0.685	1.429	0.979	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.31	0.01	0	B	1170M	QPSK	50	25	10 mm	bottom	1:1	0.698	1.476	1.030	
2560.00	21350	High	LTE Band 7	20	21.0	19.42	-0.01	0	B	1170M	QPSK	50	50	10 mm	bottom	1:1	0.533	1.439	0.767	
2510.00	20850	Low	LTE Band 7	20	21.0	19.37	0.00	0	B	1170M	QPSK	100	0	10 mm	bottom	1:1	0.662	1.455	0.963	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	0.05	0	B	1170M	QPSK	1	0	10 mm	right	1:1	0.155	1.393	0.216	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	-0.05	0	B	1170M	QPSK	50	50	10 mm	right	1:1	0.149	1.429	0.213	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

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Table 11-57
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	0.03	0	B	1149M	QPSK	1	50	10 mm	back	1:1.58	0.255	1.256	0.320	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	-0.06	0	B	1149M	QPSK	50	25	10 mm	back	1:1.58	0.256	1.242	0.318	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	-0.03	0	B	1149M	QPSK	1	50	10 mm	front	1:1.58	0.285	1.256	0.358	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	0.02	0	B	1149M	QPSK	50	25	10 mm	front	1:1.58	0.276	1.242	0.343	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.86	-0.01	0	B	1149M	QPSK	1	50	10 mm	bottom	1:1.58	0.714	1.300	0.928	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.87	-0.04	0	B	1149M	QPSK	1	0	10 mm	bottom	1:1.58	0.778	1.297	1.009	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.89	-0.01	0	B	1149M	QPSK	1	50	10 mm	bottom	1:1.58	0.801	1.291	1.034	A62
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	0.03	0	B	1149M	QPSK	1	50	10 mm	bottom	1:1.58	0.612	1.256	0.769	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	-0.04	0	B	1149M	QPSK	1	50	10 mm	bottom	1:1.58	0.537	1.262	0.678	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.85	0.04	0	B	1149M	QPSK	1	50	10 mm	bottom	1:1.58	0.410	1.303	0.534	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.97	-0.01	0	B	1149M	QPSK	50	25	10 mm	bottom	1:1.58	0.723	1.268	0.917	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.94	0.01	0	B	1149M	QPSK	50	25	10 mm	bottom	1:1.58	0.780	1.276	0.995	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	-0.02	0	B	1149M	QPSK	50	25	10 mm	bottom	1:1.58	0.615	1.242	0.764	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.04	0.01	0	B	1149M	QPSK	50	25	10 mm	bottom	1:1.58	0.538	1.247	0.671	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.98	-0.04	0	B	1149M	QPSK	50	25	10 mm	bottom	1:1.58	0.397	1.265	0.502	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.96	-0.01	0	B	1149M	QPSK	100	0	10 mm	bottom	1:1.58	0.549	1.271	0.698	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.6	23.65	0.00	0	B	1149M	QPSK	1	0	10 mm	bottom	1:2.31	0.794	1.245	0.989	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.6	23.66	-0.01	0	B	1149M	QPSK	1	50	10 mm	bottom	1:2.31	0.786	1.242	0.976	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.55	0.00	0	B	1149M	QPSK	1	0	10 mm	bottom	1:1.58	0.757	1.396	1.057	
	SCC	2529.70	39987												99							
2 CC Uplink - Power Class 2	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	24.6	23.50	0.01	0	B	1149M	QPSK	1	0	10 mm	bottom	1:2.31	0.789	1.288	1.016	
	SCC	2529.70	39987												99							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	-0.05	0	B	1149M	QPSK	1	50	10 mm	right	1:1.58	0.166	1.256	0.208	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	0.02	0	B	1149M	QPSK	50	25	10 mm	right	1:1.58	0.167	1.242	0.207	

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 11-58
LTE Band 48 Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.03	0	F	0543M	QPSK	1	50	10 mm	back	1:1.58	0.308	1.222	0.376	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.00	0	F	0543M	QPSK	50	25	10 mm	back	1:1.58	0.316	1.233	0.390	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.01	0	F	0543M	QPSK	1	50	10 mm	front	1:1.58	0.160	1.222	0.196	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.00	0	F	0543M	QPSK	50	25	10 mm	front	1:1.58	0.160	1.233	0.197	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.01	0	F	0543M	QPSK	1	50	10 mm	top	1:1.58	0.152	1.222	0.186	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	-0.04	0	F	0543M	QPSK	50	25	10 mm	top	1:1.58	0.153	1.233	0.189	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	0.03	0	F	0543M	QPSK	1	50	10 mm	left	1:1.58	0.476	1.222	0.582	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	18.97	0.00	0	F	0543M	QPSK	50	0	10 mm	left	1:1.58	0.472	1.268	**0.598**	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	0.06	0	F	0543M	QPSK	50	25	10 mm	left	1:1.58	0.485	1.233	**0.598**	A64
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.05	-0.02	0	F	0543M	QPSK	50	0	10 mm	left	1:1.58	0.480	1.245	**0.598**	
	SCC	3626.90	56009												50							

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

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Table 11-59
NR Band n71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	-0.01	0	112	0417M	DFT-S-OFDM	QPSK	1	104	10 mm	back	1:1	0.393	1.406	0.553	A66
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	0.09	0	112	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.367	1.426	0.523	
680.50	136100	Mid	NR Band n71	20	24.3	22.77	A	-0.04	1.5	112	0417M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.220	1.422	0.313	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.01	0	112	0417M	DFT-S-OFDM	QPSK	1	104	10 mm	front	1:1	0.266	1.406	0.374	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	-0.02	0	112	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.244	1.426	0.348	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.03	0	112	0417M	DFT-S-OFDM	QPSK	1	104	10 mm	bottom	1:1	0.162	1.406	0.228	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	0.02	0	112	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.134	1.426	0.191	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.03	0	112	0417M	DFT-S-OFDM	QPSK	1	104	10 mm	right	1:1	0.132	1.406	0.186	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	0.00	0	112	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.147	1.426	0.210	
680.50	136100	Mid	NR Band n71	20	25.8	24.32	A	0.10	0	112	0417M	DFT-S-OFDM	QPSK	1	104	10 mm	left	1:1	0.195	1.406	0.274	
680.50	136100	Mid	NR Band n71	20	25.8	24.26	A	0.02	0	112	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.197	1.426	0.281	
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
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	-0.06	0	13	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.300	1.393	0.418	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	-0.05	0	13	0417M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.346	1.406	0.486	A68
707.50	141500	Mid	NR Band n12	15	24.2	22.75	A	-0.01	1.5	13	0417M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.221	1.396	0.309	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	0.05	0	13	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.213	1.393	0.297	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	-0.04	0	13	0417M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.244	1.406	0.343	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	0.01	0	13	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.141	1.393	0.196	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	0.02	0	13	0417M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.158	1.406	0.222	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	0.02	0	13	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.120	1.393	0.167	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	0.03	0	13	0417M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.162	1.406	0.228	
707.50	141500	Mid	NR Band n12	15	25.7	24.26	A	-0.01	0	13	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.163	1.393	0.227	
707.50	141500	Mid	NR Band n12	15	25.7	24.22	A	0.01	0	13	0417M	DFT-S-OFDM	QPSK	36	22	10 mm	left	1:1	0.235	1.406	0.330	
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 11-61
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	-0.06	0	108	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.631	1.439	0.908	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	-0.04	0	108	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.725	1.445	1.048	A70
836.50	167300	Mid	NR Band n5 (Cell)	20	24.8	23.17	A	-0.11	1	108	0417M	DFT-S-OFDM	QPSK	100	0	10 mm	back	1:1	0.508	1.455	0.739	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	22.73	A	-0.03	1.5	108	0417M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.446	1.435	0.640	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	-0.10	0	108	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.367	1.439	0.528	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	-0.08	0	108	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.397	1.445	0.574	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	-0.03	0	108	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.221	1.439	0.318	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	-0.03	0	108	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.261	1.445	0.377	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	0.06	0	108	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.112	1.439	0.161	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	0.05	0	108	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.094	1.445	0.136	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.22	A	0.01	0	108	0417M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.205	1.439	0.295	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	24.20	A	-0.05	0	108	0417M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.199	1.445	0.288	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram									

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Table 11-62
NR Band n66 Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.11	A	-0.03	0	62	1137M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.460	1.094	0.503	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.17	A	0.04	0	62	1137M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.464	1.079	0.501	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.11	A	-0.05	0	62	1137M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.399	1.094	0.437	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.17	A	-0.02	0	62	1137M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.404	1.079	0.436	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.11	A	-0.03	0	62	1137M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.782	1.094	0.856	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.17	A	-0.01	0	62	1137M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.807	1.079	0.871	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.10	A	0.16	0	62	1137M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.829	1.096	0.909	A72
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.13	A	-0.01	0	62	1137M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.824	1.089	0.897	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.11	A	0.05	0	62	1137M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.089	1.094	0.097	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.17	A	0.01	0	62	1137M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.108	1.079	0.117	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.11	A	0.15	0	62	1137M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.054	1.094	0.059	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.17	A	0.02	0	62	1137M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.059	1.079	0.064	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	0.03	0	N/A	5869M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.125	1.268	0.159	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	-0.02	0	N/A	5869M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.127	1.230	0.156	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	0.08	0	N/A	5869M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.153	1.268	0.194	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	0.00	0	N/A	5869M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.160	1.230	0.197	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	-0.01	0	N/A	5869M	DFT-S-OFDM	QPSK	1	214	10 mm	top	1:1	0.463	1.268	0.587	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	0.02	0	N/A	5869M	DFT-S-OFDM	QPSK	108	108	10 mm	top	1:1	0.467	1.230	0.574	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.56	J	-0.02	0	N/A	5869M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.458	1.393	0.638	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	0.12	0	N/A	5869M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.030	1.268	0.038	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	-0.20	0	N/A	5869M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.031	1.230	0.038	
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 11-63
NR Band n25 Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.11	A	-0.05	0	59	1125M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.331	1.094	0.362	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.16	A	0.05	0	59	1125M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.348	1.081	0.376	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.11	A	-0.01	0	59	1125M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.331	1.094	0.362	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.16	A	0.04	0	59	1125M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.349	1.081	0.377	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.11	A	-0.03	0	59	1125M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.753	1.094	0.824	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.16	A	-0.01	0	59	1125M	DFT-S-OFDM	QPSK	108	0	10 mm	bottom	1:1	0.814	1.081	0.880	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.10	A	-0.02	0	59	1125M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.846	1.096	0.927	A74
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.09	A	-0.05	0	59	1125M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.770	1.099	0.846	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.11	A	-0.18	0	59	1125M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.045	1.094	0.049	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.16	A	-0.14	0	59	1125M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.047	1.081	0.051	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.11	A	-0.01	0	59	1125M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.045	1.094	0.049	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	18.16	A	-0.02	0	59	1125M	DFT-S-OFDM	QPSK	108	0	10 mm	left	1:1	0.047	1.081	0.051	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	-0.12	0	0	0574M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.157	1.239	0.195	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	0.01	0	0	0574M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.157	1.205	0.189	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	0.03	0	0	0574M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.160	1.239	0.198	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	-0.04	0	0	0574M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.168	1.205	0.202	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	0.03	0	0	0574M	DFT-S-OFDM	QPSK	1	214	10 mm	top	1:1	0.512	1.239	0.634	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	0.14	0	0	0574M	DFT-S-OFDM	QPSK	108	108	10 mm	top	1:1	0.562	1.205	0.677	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	18.93	J	-0.05	0	0	0574M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.509	1.279	0.651	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	0.09	0	0	0574M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.065	1.239	0.081	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	-0.17	0	0	0574M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.068	1.205	0.082	
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Table 11-64
NR Band n30 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2310.00	462000	Mid	NR Band n30	10	19.5	18.59	A	0.00	0	1156M	DFT-S-OFDM	QPSK	1	50	10 mm	back	1:1	0.378	1.233	0.466	
2310.00	462000	Mid	NR Band n30	10	19.5	18.74	A	-0.02	0	1156M	DFT-S-OFDM	QPSK	25	14	10 mm	back	1:1	0.438	1.191	0.522	
2310.00	462000	Mid	NR Band n30	10	19.5	18.59	A	0.01	0	1156M	DFT-S-OFDM	QPSK	1	50	10 mm	front	1:1	0.367	1.233	0.453	
2310.00	462000	Mid	NR Band n30	10	19.5	18.74	A	0.02	0	1156M	DFT-S-OFDM	QPSK	25	14	10 mm	front	1:1	0.392	1.191	0.467	
2310.00	462000	Mid	NR Band n30	10	19.5	18.59	A	-0.01	0	1156M	DFT-S-OFDM	QPSK	1	50	10 mm	bottom	1:1	0.932	1.233	1.149	
2310.00	462000	Mid	NR Band n30	10	19.5	18.74	A	-0.01	0	1156M	DFT-S-OFDM	QPSK	25	14	10 mm	bottom	1:1	0.968	1.191	1.153	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	A	0.05	0	1156M	DFT-S-OFDM	QPSK	50	0	10 mm	bottom	1:1	0.983	1.236	**1.215**	A76
2310.00	462000	Mid	NR Band n30	10	19.5	18.67	A	0.00	0	1156M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.976	1.211	1.182	
2310.00	462000	Mid	NR Band n30	10	19.5	18.59	A	-0.12	0	1156M	DFT-S-OFDM	QPSK	1	50	10 mm	right	1:1	0.008	1.233	0.010	
2310.00	462000	Mid	NR Band n30	10	19.5	18.74	A	0.15	0	1156M	DFT-S-OFDM	QPSK	25	14	10 mm	right	1:1	0.008	1.191	0.010	
2310.00	462000	Mid	NR Band n30	10	19.5	18.59	A	-0.09	0	1156M	DFT-S-OFDM	QPSK	1	50	10 mm	left	1:1	0.033	1.233	0.041	
2310.00	462000	Mid	NR Band n30	10	19.5	18.74	A	-0.17	0	1156M	DFT-S-OFDM	QPSK	25	14	10 mm	left	1:1	0.036	1.191	0.043	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	0.04	0	0317M	DFT-S-OFDM	QPSK	1	26	10 mm	back	1:1	0.108	1.315	0.142	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.03	0	0317M	DFT-S-OFDM	QPSK	25	14	10 mm	back	1:1	0.108	1.279	0.138	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	0.05	0	0317M	DFT-S-OFDM	QPSK	1	26	10 mm	front	1:1	0.095	1.315	0.125	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.00	0	0317M	DFT-S-OFDM	QPSK	25	14	10 mm	front	1:1	0.100	1.279	0.128	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	0.10	0	0317M	DFT-S-OFDM	QPSK	1	26	10 mm	top	1:1	0.313	1.315	0.412	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.01	0	0317M	DFT-S-OFDM	QPSK	25	14	10 mm	top	1:1	0.324	1.279	0.414	
2310.00	462000	Mid	NR Band n30	10	19.0	17.74	J	0.15	0	0317M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.328	1.337	0.439	
2310.00	462000	Mid	NR Band n30	10	19.0	17.81	J	0.13	0	0317M	DFT-S-OFDM	QPSK	1	26	10 mm	right	1:1	0.033	1.315	0.043	
2310.00	462000	Mid	NR Band n30	10	19.0	17.93	J	0.00	0	0317M	DFT-S-OFDM	QPSK	25	14	10 mm	right	1:1	0.041	1.279	0.052	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	A	0.00	0	1156M	DFT-S-OFDM	QPSK	50	0	10 mm	bottom	1:1	0.886	1.236	1.095	
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 n7 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	0.00	0	1145M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.273	1.062	0.290	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	-0.04	0	1145M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.286	1.045	0.299	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	-0.03	0	1145M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.357	1.062	0.379	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	0.02	0	1145M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.383	1.045	0.400	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	-0.02	0	1145M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.825	1.062	0.876	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	-0.02	0	1145M	DFT-S-OFDM	QPSK	108	0	10 mm	bottom	1:1	0.846	1.045	0.884	
2535.00	507000	Mid	NR Band n7	40	21.0	20.73	B	0.02	0	1145M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.860	1.064	0.915	A78
2535.00	507000	Mid	NR Band n7	40	21.0	20.77	B	0.00	0	1145M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.852	1.054	0.898	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	-0.07	0	1145M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.166	1.062	0.176	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	-0.06	0	1145M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.157	1.045	0.164	
2535.00	507000	Mid	NR Band n7	40	21.0	20.73	B	-0.16	0	1145M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.812	1.064	0.864	
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Note: Blue entry represents variability measurement.

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Table 11-66
NR Band n41 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	0.03	0	0959M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.187	1.175	0.220	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	0.01	0	0959M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.176	1.180	0.208	
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	0.03	0	0959M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.118	1.175	0.139	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	0.03	0	0959M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.125	1.180	0.148	
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	-0.03	0	0959M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.337	1.175	0.396	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	-0.01	0	0959M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.315	1.180	0.372	
2592.99	518598	Mid	NR Band n41	100	20.0	19.20	J	0.02	0	0959M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.338	1.202	0.406	A80
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	-0.03	0	0959M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.049	1.175	0.058	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	0.00	0	0959M	DFT-S-OFDM	QPSK	135	0	10 mm	right	1:1	0.045	1.180	0.053	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	0.04	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.089	1.222	0.109	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	-0.15	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.011	1.222	0.013	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	-0.11	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.024	1.222	0.029	
2592.99	518598	Mid	NR Band n41	100	16.5	15.63	D	-0.17	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.004	1.222	0.005	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.07	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.022	1.119	0.025	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	-0.05	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.018	1.119	0.020	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	0.03	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.020	1.119	0.022	
2592.99	518598	Mid	NR Band n41	100	15.0	14.51	E	0.04	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.008	1.119	0.009	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	0.03	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.131	1.567	0.205	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	0.01	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.110	1.567	0.172	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	0.08	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.258	1.567	0.404	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.07	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.100	1.567	0.157	
2592.99	518598	Mid	NR Band n41	100	19.0	17.05	B	-0.14	N/A	0955M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.025	1.567	0.039	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-67
NR Band n77 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.04	0	0575M	DFT-S-OFDM	QPSK	1	271	10 mm	back	1:1	0.247	1.169	0.289	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.02	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	back	1:1	0.246	1.191	0.293	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.18	0	0575M	DFT-S-OFDM	QPSK	1	271	10 mm	front	1:1	0.107	1.169	0.125	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	front	1:1	0.108	1.191	0.129	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	-0.09	0	0575M	DFT-S-OFDM	QPSK	1	271	10 mm	top	1:1	0.135	1.169	0.158	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.00	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	top	1:1	0.125	1.191	0.149	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.02	0	0575M	DFT-S-OFDM	QPSK	1	271	10 mm	left	1:1	0.369	1.169	0.431	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	-0.03	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	left	1:1	0.360	1.191	0.429	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	0.02	0	0575M	DFT-S-OFDM	QPSK	270	0	10 mm	left	1:1	0.387	1.194	**0.462**	A82
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	0.03	0	0575M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.363	1.194	0.433	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	-0.10	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.173	1.479	0.256	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	0.08	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.056	1.479	0.083	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	-0.12	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.027	1.479	0.040	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	-0.12	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.006	1.479	0.009	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	0.10	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.091	1.227	0.112	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.14	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.006	1.227	0.007	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	-0.14	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.016	1.227	0.020	
3500.01	633334	Mid	NR Band n77 DoD	100	11.5	10.61	D	0.19	N/A	0934M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.004	1.227	0.005	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	0.12	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.010	1.069	0.011	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	0.12	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.007	1.069	0.007	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.15	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.010	1.069	0.011	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	11.71	C	-0.07	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.023	1.069	0.025	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.01	0	0575M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.206	1.159	0.239	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	0.06	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	back	1:1	0.231	1.146	0.265	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.11	0	0575M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.086	1.159	0.100	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	0.06	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	front	1:1	0.092	1.146	0.105	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	-0.13	0	0575M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.102	1.159	0.118	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.08	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	top	1:1	0.102	1.146	0.117	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.06	0	0575M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.298	1.159	0.345	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	0.11	0	0575M	DFT-S-OFDM	QPSK	135	138	10 mm	left	1:1	0.295	1.146	0.338	
3930.00	662000	High	NR Band n77	100	18.0	17.04	F	0.07	0	0575M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.301	1.247	0.375	A84
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	-0.11	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.134	1.107	0.148	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	-0.16	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.004	1.107	0.004	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	0.15	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.019	1.107	0.021	
3930.00	662000	High	NR Band n77	100	18.0	17.56	I	0.00	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.007	1.107	0.008	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	-0.13	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.030	1.216	0.036	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	0.16	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.004	1.216	0.005	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	-0.21	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.002	1.216	0.002	
3750.00	650000	Low	NR Band n77	100	11.5	10.65	D	-0.13	N/A	0838M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.000	1.216	0.000	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	0.09	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.012	1.318	0.016	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	-0.16	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.004	1.318	0.005	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	-0.14	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.000	1.318	0.000	
3750.00	650000	Low	NR Band n77	100	12.0	10.80	C	0.15	N/A	0575M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.028	1.318	0.037	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																**Body 1.6 W/kg (mW/g) averaged over 1 gram**						

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Table 11-68
DTS SISO WLAN Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.5	20.48	0.09	10 mm	1	0954M	1	back	99.8	0.129	0.107	1.005	1.002	0.108	
2412	1	802.11b	DSSS	22	20.5	20.48	-0.16	10 mm	1	0954M	1	front	99.8	0.022	-	1.005	1.002	-	
2412	1	802.11b	DSSS	22	20.5	20.48	0.17	10 mm	1	0954M	1	top	99.8	0.023	-	1.005	1.002	-	
2412	1	802.11b	DSSS	22	20.5	20.48	-0.06	10 mm	1	0954M	1	left	99.8	0.029	0.023	1.005	1.002	0.023	
2412	1	802.11b	DSSS	22	20.5	20.49	0.01	10 mm	2	0954M	1	back	99.8	0.221	0.170	1.002	1.002	0.171	
2412	1	802.11b	DSSS	22	20.5	20.49	0.05	10 mm	2	0954M	1	front	99.8	0.117	-	1.002	1.002	-	
2412	1	802.11b	DSSS	22	20.5	20.49	-0.03	10 mm	2	0954M	1	left	99.8	0.275	0.207	1.002	1.002	**0.208**	A86
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
NII MIMO WLAN Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5775	155	802.11ac	OFDM	80	15.5	14.67	15.5	14.93	-0.16	10 mm	MIMO	0990M	58.5	back	92.4	0.514	0.394	1.211	1.082	**0.516**	A88
5775	155	802.11ac	OFDM	80	15.5	14.67	15.5	14.93	-0.12	10 mm	MIMO	0990M	58.5	front	92.4	0.105	-	1.211	1.082	-	
5775	155	802.11ac	OFDM	80	15.5	14.67	15.5	14.93	0.13	10 mm	MIMO	0990M	58.5	top	92.4	0.096	-	1.211	1.082	-	
5775	155	802.11ac	OFDM	80	15.5	14.67	15.5	14.93	-0.10	10 mm	MIMO	0990M	58.5	left	92.4	0.216	0.182	1.211	1.082	0.238	
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 18.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 15.5 dBm

Table 11-70
DTS Hotspot MIMO SAR during Conditions with 5/6 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.17	10 mm	MIMO	0954M	13	back	98.0	0.100	0.074	1.175	1.020	0.089	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	-0.12	10 mm	MIMO	0954M	13	front	98.0	0.056	0.043	1.175	1.020	0.052	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	0.17	10 mm	MIMO	0954M	13	top	98.0	0.023	0.015	1.175	1.020	0.018	
2437	6	802.11n	OFDM	20	17.0	16.52	17.0	16.30	0.06	10 mm	MIMO	0954M	13	left	98.0	0.131	0.096	1.175	1.020	0.115	
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: 2.4 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN, or 5G NR. 5/6 GHz WIFI or 5G NR was not transmitting during the above evaluations. 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

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Table 11-71
WLAN MIMO Hotspot SAR during Conditions with 2.4 GHz WLAN SAR and/or 5G FR1 NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	-0.13	10 mm	MIMO	0990M	58.5	back	92.4	0.303	0.195	1.094	1.082	0.231	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	-0.13	10 mm	MIMO	0990M	58.5	front	92.4	0.074	-	1.094	1.082	-	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	0.14	10 mm	MIMO	0990M	58.5	top	92.4	0.087	-	1.094	1.082	-	
5775	155	802.11ac	OFDM	80	14.0	13.61	14.0	13.74	0.19	10 mm	MIMO	0990M	58.5	left	92.4	0.203	0.163	1.094	1.082	0.193	
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: 5 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 2.4 GHz WLAN and/or 5G FR1 NR. 2.4 GHz WLAN and/or 5G FR1 NR was not transmitting during the above evaluations. 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 11-72
DSS Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	18.0	17.47	0.02	10 mm	1	0954M	1	back	77.00	0.024	1.130	1.299	0.035	
2441	39	Bluetooth	FHSS	18.0	17.47	0.16	10 mm	1	0954M	1	front	77.00	0.009	1.130	1.299	0.013	
2441	39	Bluetooth	FHSS	18.0	17.47	-0.13	10 mm	1	0954M	1	top	77.00	0.006	1.130	1.299	0.009	
2441	39	Bluetooth	FHSS	18.0	17.47	-0.07	10 mm	1	0954M	1	left	77.00	0.007	1.130	1.299	0.010	
2441	39	Bluetooth	FHSS	17.5	16.73	-0.19	10 mm	2	0954M	1	back	77.00	0.119	1.194	1.299	0.185	
2441	39	Bluetooth	FHSS	17.5	16.73	-0.01	10 mm	2	0954M	1	front	77.00	0.057	1.194	1.299	0.088	
2441	39	Bluetooth	FHSS	17.5	16.73	-0.19	10 mm	2	0954M	1	left	77.00	0.142	1.194	1.299	0.220	A90
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 11-73
DSS MIMO Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	13.0	12.44	11.0	10.08	0.14	10 mm	MIMO	0954M	1	back	77.00	0.034	1.236	1.299	0.055	
2441	39	Bluetooth	FHSS	13.0	12.44	11.0	10.08	0.09	10 mm	MIMO	0954M	1	front	77.00	0.023	1.236	1.299	0.037	
2441	39	Bluetooth	FHSS	13.0	12.44	11.0	10.08	-0.17	10 mm	MIMO	0954M	1	top	77.00	0.008	1.236	1.299	0.013	
2441	39	Bluetooth	FHSS	13.0	12.44	11.0	10.08	0.03	10 mm	MIMO	0954M	1	left	77.00	0.046	1.236	1.299	0.074	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: To achieve the 15.0 dBm maximum allowed MIMO power shown in the documentation, antenna 1 transmits at a maximum allowed power of 13 dBm, and antenna 2 transmits at a maximum allowed power of 11 dBm.

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11.4 Standalone Phablet SAR Data

Table 11-74
GSM 1900 Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1850.20	512	GSM 1900	GPRS	27.0	26.03	-0.16	0 mm	A	1246M	3	1:2.76	bottom	2.270	1.250	2.838	A91
1880.00	661	GSM 1900	GPRS	27.0	25.32	-0.06	0 mm	A	1246M	3	1:2.76	bottom	2.080	1.472	3.062	
1909.80	810	GSM 1900	GPRS	27.0	25.42	-0.15	0 mm	A	1246M	3	1:2.76	bottom	1.970	1.439	2.835	
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 11-75
UMTS 1750 Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	8	-0.02	8 mm	A	1258M	1:1	back	0.648	1.309	0.848	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	8	0.03	6 mm	A	1258M	1:1	front	0.916	1.309	1.199	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	8	-0.05	12 mm	A	1258M	1:1	bottom	0.959	1.309	1.255	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	8	-0.01	0 mm	A	1258M	1:1	right	0.637	1.309	0.834	
1712.40	1312	UMTS 1750	RMC	24.0	22.83	8	-0.09	0 mm	A	1258M	1:1	left	0.239	1.309	0.313	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	8	0.01	0 mm	A	1258M	1:1	back	1.770	1.130	2.000	
1732.40	1412	UMTS 1750	RMC	20.0	19.37	8	-0.02	0 mm	A	1258M	1:1	back	1.740	1.156	2.011	
1752.60	1513	UMTS 1750	RMC	20.0	19.26	8	-0.01	0 mm	A	1258M	1:1	back	1.760	1.186	2.087	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	8	0.00	0 mm	A	1258M	1:1	front	1.620	1.130	1.831	
1732.40	1412	UMTS 1750	RMC	20.0	19.37	8	-0.01	0 mm	A	1258M	1:1	front	1.520	1.156	1.757	
1752.60	1513	UMTS 1750	RMC	20.0	19.26	8	-0.01	0 mm	A	1258M	1:1	front	1.590	1.186	1.886	
1712.40	1312	UMTS 1750	RMC	20.0	19.47	8	-0.01	0 mm	A	1258M	1:1	bottom	2.480	1.130	2.802	
1732.40	1412	UMTS 1750	RMC	20.0	19.37	8	0.00	0 mm	A	1258M	1:1	bottom	2.680	1.156	**3.098**	A92
1752.60	1513	UMTS 1750	RMC	20.0	19.26	8	0.00	0 mm	A	1258M	1:1	bottom	2.580	1.186	3.060	
1732.40	1412	UMTS 1750	RMC	20.0	19.37	8	0.00	0 mm	A	1258M	1:1	bottom	2.660	1.156	3.075	
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.

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Table 11-76
UMTS 1900 Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	62	0.01	8 mm	A	1246M	1:1	back	0.696	1.349	0.939	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	62	0.00	6 mm	A	1246M	1:1	front	0.958	1.349	1.292	
1852.40	9262	UMTS 1900	RMC	24.0	22.40	62	0.01	12 mm	A	1246M	1:1	bottom	0.814	1.445	1.176	
1880.00	9400	UMTS 1900	RMC	24.0	22.46	62	0.00	12 mm	A	1246M	1:1	bottom	0.972	1.426	1.386	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	62	0.01	12 mm	A	1246M	1:1	bottom	1.170	1.349	1.578	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	62	-0.14	0 mm	A	1246M	1:1	right	0.371	1.349	0.500	
1907.60	9538	UMTS 1900	RMC	24.0	22.70	62	0.03	0 mm	A	1246M	1:1	left	0.236	1.349	0.318	
1852.40	9262	UMTS 1900	RMC	21.5	20.04	62	0.00	0 mm	A	1246M	1:1	back	1.520	1.400	2.128	
1880.00	9400	UMTS 1900	RMC	21.5	20.23	62	-0.02	0 mm	A	1246M	1:1	back	1.640	1.340	2.198	
1907.60	9538	UMTS 1900	RMC	21.5	20.15	62	0.00	0 mm	A	1246M	1:1	back	1.760	1.365	2.402	
1852.40	9262	UMTS 1900	RMC	21.5	20.04	62	-0.02	0 mm	A	1246M	1:1	front	1.420	1.400	1.988	
1880.00	9400	UMTS 1900	RMC	21.5	20.23	62	0.00	0 mm	A	1246M	1:1	front	1.520	1.340	2.037	
1907.60	9538	UMTS 1900	RMC	21.5	20.15	62	-0.01	0 mm	A	1246M	1:1	front	1.600	1.365	2.184	
1852.40	9262	UMTS 1900	RMC	21.5	20.04	62	0.01	0 mm	A	1246M	1:1	bottom	2.090	1.400	2.926	
1880.00	9400	UMTS 1900	RMC	21.5	20.23	62	0.00	0 mm	A	1246M	1:1	bottom	1.960	1.340	2.626	
1907.60	9538	UMTS 1900	RMC	21.5	20.15	62	-0.01	0 mm	A	1246M	1:1	bottom	2.130	1.365	2.907	A93
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-77
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS

1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
		MHz	Ch.																				
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	8	-0.02	0	A	1267M	QPSK	1	50	8 mm	back	1:1	0.764	1.432	1.094	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	8	0.00	1	A	1267M	QPSK	50	25	8 mm	back	1:1	0.619	1.406	0.870	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	8	0.01	0	A	1267M	QPSK	1	50	6 mm	front	1:1	0.687	1.432	0.984	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	8	0.01	1	A	1267M	QPSK	50	25	6 mm	front	1:1	0.556	1.406	0.782	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	8	-0.05	0	A	1267M	QPSK	1	50	12 mm	bottom	1:1	0.837	1.432	1.199	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	8	0.02	1	A	1267M	QPSK	50	25	12 mm	bottom	1:1	0.678	1.406	0.953	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	8	0.01	0	A	1267M	QPSK	1	50	0 mm	right	1:1	0.570	1.432	0.816	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	8	0.00	1	A	1267M	QPSK	50	25	0 mm	right	1:1	0.463	1.406	0.651	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.8	23.24	8	0.07	0	A	1267M	QPSK	1	50	0 mm	left	1:1	0.281	1.432	0.402	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.8	22.32	8	0.03	1	A	1267M	QPSK	50	25	0 mm	left	1:1	0.224	1.406	0.315	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.13	8	-0.03	0	A	1267M	QPSK	1	50	0 mm	back	1:1	1.660	1.222	2.029	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.90	8	-0.07	0	A	1267M	QPSK	1	50	0 mm	back	1:1	1.720	1.288	2.215	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	19.97	8	-0.03	0	A	1267M	QPSK	1	0	0 mm	back	1:1	1.730	1.268	2.194	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.12	8	-0.02	0	A	1267M	QPSK	50	50	0 mm	back	1:1	1.710	1.225	2.095	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.98	8	-0.04	0	A	1267M	QPSK	50	25	0 mm	back	1:1	1.700	1.265	2.151	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	19.89	8	-0.04	0	A	1267M	QPSK	50	25	0 mm	back	1:1	1.660	1.291	2.143	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.05	8	-0.07	0	A	1267M	QPSK	100	0	0 mm	back	1:1	1.700	1.245	2.117	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.13	8	0.01	0	A	1267M	QPSK	1	50	0 mm	front	1:1	1.440	1.222	1.760	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.12	8	0.01	0	A	1267M	QPSK	50	50	0 mm	front	1:1	1.470	1.225	1.801	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.13	8	0.01	0	A	1267M	QPSK	1	50	0 mm	bottom	1:1	2.400	1.222	2.933	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.90	8	0.06	0	A	1267M	QPSK	1	50	0 mm	bottom	1:1	2.340	1.288	3.014	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	19.97	8	0.00	0	A	1267M	QPSK	1	0	0 mm	bottom	1:1	2.250	1.268	2.853	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.12	8	-0.01	0	A	1267M	QPSK	50	50	0 mm	bottom	1:1	2.440	1.225	2.989	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.98	8	0.02	0	A	1267M	QPSK	50	25	0 mm	bottom	1:1	2.310	1.265	2.922	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	19.89	8	0.06	0	A	1267M	QPSK	50	25	0 mm	bottom	1:1	2.180	1.291	2.814	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.05	8	0.00	0	A	1267M	QPSK	100	0	0 mm	bottom	1:1	2.430	1.245	3.025	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	21.0	20.16	8	-0.02	0	A	1267M	QPSK	50	0	0 mm	bottom	1:1	2.520	1.213	3.057	A94
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.00	8	0.01	0	A	1267M	QPSK	100	0	0 mm	bottom	1:1	2.290	1.259	2.883	
	SCC	1739.80	132270													0							
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	21.0	20.14	8	0.13	0	A	1267M	QPSK	50	0	0 mm	bottom	1:1	2.350	1.219	2.865	
	SCC	1724.90	132121													0							

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Spatial PeAK
Uncontrolled Exposure/General Population

Phablet
4.0 W/kg (mW/g)
averaged over 10 grams

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Table 11-78
LTE Band 25 (PCS) Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	62	0.00	0	A	1168M	QPSK	1	50	8 mm	back	1:1	0.683	1.285	0.878	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	62	0.01	1	A	1168M	QPSK	50	50	8 mm	back	1:1	0.542	1.265	0.686	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	62	-0.03	0	A	1168M	QPSK	1	50	6 mm	front	1:1	1.070	1.285	1.375	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	62	-0.03	1	A	1168M	QPSK	50	50	6 mm	front	1:1	0.851	1.265	1.077	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	62	0.02	0	A	1168M	QPSK	1	50	12 mm	bottom	1:1	1.010	1.285	1.298	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	62	0.01	1	A	1168M	QPSK	50	50	12 mm	bottom	1:1	0.800	1.265	1.012	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	62	0.01	0	A	1168M	QPSK	1	50	0 mm	right	1:1	0.448	1.285	0.576	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	62	0.00	1	A	1168M	QPSK	50	50	0 mm	right	1:1	0.351	1.265	0.444	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.41	62	0.04	0	A	1168M	QPSK	1	50	0 mm	left	1:1	0.280	1.285	0.360	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.5	22.48	62	0.00	1	A	1168M	QPSK	50	50	0 mm	left	1:1	0.227	1.265	0.287	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.52	62	-0.06	0	A	1168M	QPSK	1	50	0 mm	back	1:1	1.400	1.253	1.754	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.35	62	-0.04	0	A	1168M	QPSK	50	50	0 mm	back	1:1	1.390	1.303	1.811	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	20.23	62	-0.03	0	A	1168M	QPSK	1	50	0 mm	front	1:1	1.540	1.340	2.064	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.52	62	-0.09	0	A	1168M	QPSK	1	50	0 mm	front	1:1	1.600	1.253	2.005	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.17	62	-0.03	0	A	1168M	QPSK	1	50	0 mm	front	1:1	1.600	1.358	2.173	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	20.20	62	-0.03	0	A	1168M	QPSK	50	25	0 mm	front	1:1	1.540	1.349	2.077	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.35	62	0.00	0	A	1168M	QPSK	50	50	0 mm	front	1:1	1.570	1.303	2.046	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.34	62	-0.02	0	A	1168M	QPSK	50	25	0 mm	front	1:1	1.600	1.306	2.090	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.19	62	-0.03	0	A	1168M	QPSK	100	0	0 mm	front	1:1	1.550	1.352	2.096	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	20.23	62	-0.02	0	A	1168M	QPSK	1	50	0 mm	bottom	1:1	2.160	1.340	2.894	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.52	62	0.00	0	A	1168M	QPSK	1	50	0 mm	bottom	1:1	2.210	1.253	2.769	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.17	62	-0.06	0	A	1168M	QPSK	1	50	0 mm	bottom	1:1	2.280	1.358	**3.096**	A95
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	20.20	62	-0.01	0	A	1168M	QPSK	50	25	0 mm	bottom	1:1	2.150	1.349	2.900	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	20.35	62	0.01	0	A	1168M	QPSK	50	50	0 mm	bottom	1:1	2.170	1.303	2.828	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.34	62	0.00	0	A	1168M	QPSK	50	25	0 mm	bottom	1:1	2.260	1.306	2.952	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	20.19	62	-0.01	0	A	1168M	QPSK	100	0	0 mm	bottom	1:1	2.230	1.352	3.015	

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

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Table 11-79
LTE Band 30 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.00	0	A	1143M	QPSK	1	0	8 mm	back	1:1	0.625	1.340	0.838	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	0.02	1	A	1143M	QPSK	25	12	8 mm	back	1:1	0.504	1.374	0.692	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.00	0	A	1143M	QPSK	1	0	6 mm	front	1:1	0.899	1.340	1.205	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	0.02	1	A	1143M	QPSK	25	12	6 mm	front	1:1	0.727	1.374	0.999	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.00	0	A	1143M	QPSK	1	0	12 mm	bottom	1:1	0.718	1.340	0.962	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	-0.02	1	A	1143M	QPSK	25	12	12 mm	bottom	1:1	0.590	1.374	0.811	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	-0.05	0	A	1143M	QPSK	1	0	0 mm	right	1:1	0.076	1.340	0.102	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	-0.04	1	A	1143M	QPSK	25	12	0 mm	right	1:1	0.047	1.374	0.065	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.23	0.01	0	A	1143M	QPSK	1	0	0 mm	left	1:1	0.164	1.340	0.220	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.12	0.06	1	A	1143M	QPSK	25	12	0 mm	left	1:1	0.133	1.374	0.183	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.28	0.00	0	A	1143M	QPSK	1	0	0 mm	back	1:1	2.010	1.324	2.661	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.05	0.02	0	A	1143M	QPSK	25	12	0 mm	back	1:1	2.040	1.396	2.848	A96
2310.00	27710	Mid	LTE Band 30	10	22.5	20.97	0.01	0	A	1143M	QPSK	50	0	0 mm	back	1:1	2.000	1.422	2.844	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.28	0.03	0	A	1143M	QPSK	1	0	0 mm	front	1:1	1.540	1.324	2.039	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.05	0.00	0	A	1143M	QPSK	25	12	0 mm	front	1:1	1.560	1.396	2.178	
2310.00	27710	Mid	LTE Band 30	10	22.5	20.97	0.01	0	A	1143M	QPSK	50	0	0 mm	front	1:1	1.530	1.422	2.176	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.28	0.01	0	A	1143M	QPSK	1	0	0 mm	bottom	1:1	1.340	1.324	1.774	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.05	-0.01	0	A	1143M	QPSK	25	12	0 mm	bottom	1:1	1.350	1.396	1.885	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial PeAK Uncontrolled Exposure/General Population																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-80
LTE Band 7 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	0.01	0	B	1170M	QPSK	1	50	8 mm	back	1:1	0.515	1.327	0.683	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.06	1	B	1170M	QPSK	50	25	8 mm	back	1:1	0.393	1.368	0.538	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	-0.08	0	B	1170M	QPSK	1	50	6 mm	front	1:1	0.596	1.327	0.791	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	0.01	1	B	1170M	QPSK	50	25	6 mm	front	1:1	0.466	1.368	0.637	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	-0.09	0	B	1170M	QPSK	1	50	12 mm	bottom	1:1	0.524	1.327	0.695	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	0.02	1	B	1170M	QPSK	50	25	12 mm	bottom	1:1	0.414	1.368	0.566	
2510.00	20850	Low	LTE Band 7	20	24.0	22.77	-0.12	0	B	1170M	QPSK	1	50	0 mm	right	1:1	1.120	1.327	1.486	
2510.00	20850	Low	LTE Band 7	20	23.0	21.64	-0.01	1	B	1170M	QPSK	50	25	0 mm	right	1:1	0.918	1.368	1.256	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	-0.03	0	B	1170M	QPSK	1	0	0 mm	back	1:1	1.480	1.393	2.062	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.42	-0.02	0	B	1170M	QPSK	1	99	0 mm	back	1:1	1.340	1.439	1.928	
2560.00	21350	High	LTE Band 7	20	21.0	19.54	-0.08	0	B	1170M	QPSK	1	99	0 mm	back	1:1	1.400	1.400	1.960	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	-0.01	0	B	1170M	QPSK	50	50	0 mm	back	1:1	1.500	1.429	2.144	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.31	0.01	0	B	1170M	QPSK	50	25	0 mm	back	1:1	1.400	1.476	2.066	
2560.00	21350	High	LTE Band 7	20	21.0	19.42	-0.02	0	B	1170M	QPSK	50	50	0 mm	back	1:1	1.380	1.439	1.986	
2510.00	20850	Low	LTE Band 7	20	21.0	19.37	-0.01	0	B	1170M	QPSK	100	0	0 mm	back	1:1	1.430	1.455	2.081	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	0.00	0	B	1170M	QPSK	1	0	0 mm	front	1:1	1.270	1.393	1.769	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	0.03	0	B	1170M	QPSK	50	50	0 mm	front	1:1	1.280	1.429	1.829	
2510.00	20850	Low	LTE Band 7	20	21.0	19.56	-0.06	0	B	1170M	QPSK	1	0	0 mm	bottom	1:1	1.930	1.393	2.688	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.42	0.00	0	B	1170M	QPSK	1	99	0 mm	bottom	1:1	1.770	1.439	2.547	
2560.00	21350	High	LTE Band 7	20	21.0	19.54	-0.16	0	B	1170M	QPSK	1	99	0 mm	bottom	1:1	1.920	1.400	2.688	
2510.00	20850	Low	LTE Band 7	20	21.0	19.45	0.00	0	B	1170M	QPSK	50	50	0 mm	bottom	1:1	1.940	1.429	2.772	A97
2535.00	21100	Mid	LTE Band 7	20	21.0	19.31	-0.01	0	B	1170M	QPSK	50	25	0 mm	bottom	1:1	1.760	1.476	2.598	
2560.00	21350	High	LTE Band 7	20	21.0	19.42	0.03	0	B	1170M	QPSK	50	50	0 mm	bottom	1:1	1.880	1.439	2.705	
2510.00	20850	Low	LTE Band 7	20	21.0	19.37	0.00	0	B	1170M	QPSK	100	0	0 mm	bottom	1:1	1.790	1.455	2.604	

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

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Table 11-81
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS

1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	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	LTE Band 41	20	25.0	24.06	0.03	0	B	1149M	QPSK	1	50	8 mm	back	1:1.58	0.280	1.242	0.348	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.05	1	B	1149M	QPSK	50	25	8 mm	back	1:1.58	0.228	1.274	0.290	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	0.00	0	B	1149M	QPSK	1	50	6 mm	front	1:1.58	0.398	1.242	0.494	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.00	1	B	1149M	QPSK	50	25	6 mm	front	1:1.58	0.322	1.274	0.410	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	-0.01	0	B	1149M	QPSK	1	50	12 mm	bottom	1:1.58	0.399	1.242	0.496	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	0.01	1	B	1149M	QPSK	50	25	12 mm	bottom	1:1.58	0.322	1.274	0.410	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.06	0.01	0	B	1149M	QPSK	1	50	0 mm	right	1:1.58	0.791	1.242	0.982	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.95	-0.02	1	B	1149M	QPSK	50	25	0 mm	right	1:1.58	0.635	1.274	0.809	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.86	-0.01	0	B	1149M	QPSK	1	50	0 mm	back	1:1.58	1.520	1.300	1.976	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.89	0.02	0	B	1149M	QPSK	1	50	0 mm	back	1:1.58	1.490	1.291	1.924	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	-0.02	0	B	1149M	QPSK	1	50	0 mm	back	1:1.58	1.500	1.256	1.884	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	0.01	0	B	1149M	QPSK	1	50	0 mm	back	1:1.58	1.540	1.262	1.943	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.85	-0.03	0	B	1149M	QPSK	1	50	0 mm	back	1:1.58	1.450	1.303	1.889	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.97	-0.06	0	B	1149M	QPSK	50	25	0 mm	back	1:1.58	1.530	1.268	1.940	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.94	-0.05	0	B	1149M	QPSK	50	25	0 mm	back	1:1.58	1.460	1.276	1.863	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	-0.01	0	B	1149M	QPSK	50	25	0 mm	back	1:1.58	1.510	1.242	1.875	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.04	-0.02	0	B	1149M	QPSK	50	25	0 mm	back	1:1.58	1.560	1.247	1.945	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.98	-0.01	0	B	1149M	QPSK	50	25	0 mm	back	1:1.58	1.480	1.265	1.872	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.96	-0.04	0	B	1149M	QPSK	100	0	0 mm	back	1:1.58	1.480	1.271	1.881	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.86	0.04	0	B	1149M	QPSK	1	50	0 mm	front	1:1.58	1.210	1.300	1.573	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.89	0.08	0	B	1149M	QPSK	1	50	0 mm	front	1:1.58	1.190	1.291	1.536	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	0.02	0	B	1149M	QPSK	1	50	0 mm	front	1:1.58	1.210	1.256	1.520	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	-0.08	0	B	1149M	QPSK	1	50	0 mm	front	1:1.58	1.250	1.262	1.578	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.85	0.01	0	B	1149M	QPSK	1	50	0 mm	front	1:1.58	1.120	1.303	1.459	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.97	0.02	0	B	1149M	QPSK	50	25	0 mm	front	1:1.58	1.220	1.268	1.547	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.94	0.00	0	B	1149M	QPSK	50	25	0 mm	front	1:1.58	1.110	1.276	1.416	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	-0.01	0	B	1149M	QPSK	50	25	0 mm	front	1:1.58	1.230	1.242	1.528	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.04	0.10	0	B	1149M	QPSK	50	25	0 mm	front	1:1.58	1.190	1.247	1.484	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.98	-0.01	0	B	1149M	QPSK	50	25	0 mm	front	1:1.58	1.110	1.265	1.404	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.96	-0.02	0	B	1149M	QPSK	100	0	0 mm	front	1:1.58	1.190	1.271	1.512	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.86	0.01	0	B	1149M	QPSK	1	50	0 mm	bottom	1:1.58	1.720	1.300	2.236	A98
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.85	0.13	0	B	1149M	QPSK	1	99	0 mm	bottom	1:1.58	1.620	1.303	2.111	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.89	0.01	0	B	1149M	QPSK	1	50	0 mm	bottom	1:1.58	1.480	1.291	1.911	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.01	0.08	0	B	1149M	QPSK	1	50	0 mm	bottom	1:1.58	1.680	1.256	2.110	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	0.00	0	B	1149M	QPSK	1	50	0 mm	bottom	1:1.58	1.690	1.262	2.133	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.85	0.02	0	B	1149M	QPSK	1	50	0 mm	bottom	1:1.58	1.600	1.303	2.085	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.97	0.01	0	B	1149M	QPSK	50	25	0 mm	bottom	1:1.58	1.700	1.268	2.156	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.94	0.00	0	B	1149M	QPSK	50	25	0 mm	bottom	1:1.58	1.450	1.276	1.850	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.06	-0.01	0	B	1149M	QPSK	50	25	0 mm	bottom	1:1.58	1.680	1.242	2.087	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.04	-0.02	0	B	1149M	QPSK	50	25	0 mm	bottom	1:1.58	1.720	1.247	2.145	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.98	0.01	0	B	1149M	QPSK	50	25	0 mm	bottom	1:1.58	1.600	1.265	2.024	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.96	0.02	0	B	1149M	QPSK	100	0	0 mm	bottom	1:1.58	1.640	1.271	2.084	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	24.6	23.86	0.00	0	B	1149M	QPSK	1	50	0 mm	bottom	1:2.31	1.720	1.186	2.040	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	24.6	23.80	0.00	0	B	1149M	QPSK	1	99	0 mm	bottom	1:2.31	1.670	1.202	2.007	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	23.0	21.53	0.09	0	B	1149M	QPSK	1	99	0 mm	bottom	1:1.58	1.560	1.403	2.189	
	SCC	2525.80	39948												0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	24.6	23.70	-0.01	0	B	1149M	QPSK	1	99	0 mm	bottom	1:2.31	1.690	1.230	2.079	
	SCC	2525.80	39948												0							

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
Spatial Peak
Uncontrolled Exposure/General Population

Phablet
4.0 W/kg (mW/g)
averaged over 10 grams

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Table 11-82
LTE Band 48 Phablet SAR

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.68	0.00	0	F	0543M	QPSK	1	50	0 mm	left	1:1.58	1.810	1.355	2.453	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	20.0	18.77	0.01	0	F	0543M	QPSK	1	99	0 mm	left	1:1.58	1.770	1.327	2.349	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.13	-0.06	0	F	0543M	QPSK	1	50	0 mm	left	1:1.58	1.770	1.222	2.163	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	20.0	18.66	0.00	0	F	0543M	QPSK	1	50	0 mm	left	1:1.58	1.700	1.361	2.314	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.73	-0.06	0	F	0543M	QPSK	50	25	0 mm	left	1:1.58	1.840	1.340	2.466	A99
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	20.0	18.63	0.03	0	F	0543M	QPSK	50	50	0 mm	left	1:1.58	1.750	1.371	2.399	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	20.0	18.84	0.01	0	F	0543M	QPSK	50	25	0 mm	left	1:1.58	1.810	1.306	2.364	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	19.09	-0.08	0	F	0543M	QPSK	50	25	0 mm	left	1:1.58	1.790	1.233	2.207	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	20.0	18.68	0.02	0	F	0543M	QPSK	50	25	0 mm	left	1:1.58	1.720	1.355	2.331	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.0	18.89	-0.01	0	F	0543M	QPSK	100	0	0 mm	left	1:1.58	1.720	1.291	2.221	
2 CC Uplink	PCC	3560.00	55340	Low	LTE Band 48	20	20.0	18.80	0.01	0	F	0543M	QPSK	50	50	0 mm	left	1:1.58	1.750	1.318	2.307	
	SCC	3579.80	55538												0							
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 11-83
NR Band n66 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																					
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	1	1	8 mm	back	1:1	0.937	1.334	1.250	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	-0.04	0	7	1137M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.988	1.349	1.333	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	1	1	6 mm	front	1:1	1.020	1.334	1.361	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	-0.08	0	7	1137M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	0.991	1.349	1.337	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	1	1	12 mm	bottom	1:1	1.020	1.334	1.361	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	108	54	12 mm	bottom	1:1	1.040	1.349	1.403	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.9	22.62	A	0.00	1	7	1137M	DFT-S-OFDM	QPSK	216	0	12 mm	bottom	1:1	0.795	1.343	1.068	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	-0.02	0	7	1137M	DFT-S-OFDM	QPSK	1	1	0 mm	right	1:1	0.655	1.334	0.874	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	0.05	0	7	1137M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.623	1.349	0.840	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.65	A	0.07	0	7	1137M	DFT-S-OFDM	QPSK	1	1	0 mm	left	1:1	0.292	1.334	0.390	
1745.00	349000	Mid	NR Band n66 (AWS)	40	24.9	23.60	A	-0.01	0	7	1137M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.296	1.349	0.399	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.00	A	-0.02	0	7	1137M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	1.840	1.259	2.317	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.05	A	0.02	0	7	1137M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	1.890	1.245	2.353	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	19.99	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	1.880	1.262	2.373	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.00	A	-0.02	0	7	1137M	DFT-S-OFDM	QPSK	1	1	0 mm	front	1:1	1.470	1.259	1.851	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.05	A	-0.08	0	7	1137M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.510	1.245	1.880	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.00	A	-0.07	0	7	1137M	DFT-S-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.340	1.259	2.946	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.05	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	2.350	1.245	2.926	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	19.99	A	-0.03	0	7	1137M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.380	1.262	3.004	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	19.92	A	-0.04	0	7	1137M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.400	1.282	3.077	A100
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.97	J	0.07	0	N/A	0589M	DFT-S-OFDM	QPSK	1	214	0 mm	top	1:1	2.070	1.268	2.625	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	19.10	J	0.05	0	N/A	0589M	DFT-S-OFDM	QPSK	108	108	0 mm	top	1:1	2.120	1.230	2.608	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.95	J	0.06	0	N/A	0589M	DFT-S-OFDM	QPSK	216	0	0 mm	top	1:1	2.190	1.274	2.790	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.0	18.56	J	0.02	0	N/A	0589M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.110	1.393	2.939	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																			Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-84
NR Band n25 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.02	0	61	1125M	DFT-S-OFDM	QPSK	1	108	8 mm	back	1:1	0.849	1.186	1.007	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.01	0	61	1125M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.860	1.186	1.020	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.01	0	61	1125M	DFT-S-OFDM	QPSK	1	108	6 mm	front	1:1	1.190	1.186	1.411	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.03	0	61	1125M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	1.220	1.186	1.447	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.08	0	61	1125M	DFT-S-OFDM	QPSK	1	108	12 mm	bottom	1:1	1.300	1.186	1.542	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.07	0	61	1125M	DFT-S-OFDM	QPSK	108	54	12 mm	bottom	1:1	1.280	1.186	1.518	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	-0.15	0	61	1125M	DFT-S-OFDM	QPSK	1	108	0 mm	right	1:1	0.486	1.186	0.576	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.03	0	61	1125M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.474	1.186	0.562	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.04	0	61	1125M	DFT-S-OFDM	QPSK	1	108	0 mm	left	1:1	0.373	1.186	0.442	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.5	23.76	A	0.06	0	61	1125M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.346	1.186	0.410	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.80	A	0.02	0	61	1125M	DFT-S-OFDM	QPSK	1	108	0 mm	back	1:1	1.760	1.175	2.068	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.82	A	0.02	0	61	1125M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	1.850	1.169	2.163	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.79	A	-0.04	0	61	1125M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	1.840	1.178	2.168	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.80	A	0.00	0	61	1125M	DFT-S-OFDM	QPSK	1	108	0 mm	front	1:1	1.670	1.175	1.962	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.82	A	0.01	0	61	1125M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.690	1.169	1.976	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.80	A	-0.14	0	61	1125M	DFT-S-OFDM	QPSK	1	108	0 mm	bottom	1:1	2.140	1.175	2.515	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.82	A	0.01	0	61	1125M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	2.420	1.169	2.829	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.79	A	0.02	0	61	1125M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.450	1.178	2.886	A101
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.66	A	-0.01	0	61	1125M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.290	1.213	2.778	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.07	J	-0.02	0	N/A	0574M	DFT-S-OFDM	QPSK	1	214	0 mm	top	1:1	1.760	1.239	2.181	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.19	J	-0.05	0	N/A	0574M	DFT-S-OFDM	QPSK	108	108	0 mm	top	1:1	2.070	1.205	2.494	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.06	J	-0.01	0	N/A	0574M	DFT-S-OFDM	QPSK	216	0	0 mm	top	1:1	1.850	1.242	2.298	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	18.93	J	-0.12	0	N/A	0574M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	1.720	1.279	2.200	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.79	A	-0.04	0	N/A	1125M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.250	1.178	2.651	
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Note: Blue entry represents variability measurement.

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Table 11-85
NR Band n30 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.03	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	8 mm	back	1:1	0.610	1.409	0.859	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.10	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	8 mm	back	1:1	0.571	1.343	0.767	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	6 mm	front	1:1	0.700	1.409	0.986	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	6 mm	front	1:1	0.697	1.343	0.936	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.03	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	12 mm	bottom	1:1	0.869	1.409	1.224	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.07	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	12 mm	bottom	1:1	0.864	1.343	1.160	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	-0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	right	1:1	0.070	1.409	0.099	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	-0.13	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	0 mm	right	1:1	0.072	1.343	0.097	
2310.00	462000	Mid	NR Band n30	10	23.5	22.01	A	0.03	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	left	1:1	0.150	1.409	0.211	
2310.00	462000	Mid	NR Band n30	10	23.5	22.22	A	0.02	0	N/A	1156M	DFT-S-OFDM	QPSK	25	14	0 mm	left	1:1	0.176	1.343	0.236	
2310.00	462000	Mid	NR Band n30	10	22.5	21.16	A	0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	back	1:1	1.970	1.361	2.681	
2310.00	462000	Mid	NR Band n30	10	22.5	21.19	A	0.04	0	N/A	1156M	DFT-S-OFDM	QPSK	25	27	0 mm	back	1:1	2.030	1.352	2.745	
2310.00	462000	Mid	NR Band n30	10	22.5	21.15	A	0.00	0	N/A	1156M	DFT-S-OFDM	QPSK	50	0	0 mm	back	1:1	2.030	1.365	2.771	
2310.00	462000	Mid	NR Band n30	10	22.5	21.16	A	-0.04	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	front	1:1	1.750	1.361	2.382	
2310.00	462000	Mid	NR Band n30	10	22.5	21.19	A	0.05	0	N/A	1156M	DFT-S-OFDM	QPSK	25	27	0 mm	front	1:1	1.860	1.352	2.515	
2310.00	462000	Mid	NR Band n30	10	22.5	21.15	A	-0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	50	0	0 mm	front	1:1	1.790	1.365	2.443	
2310.00	462000	Mid	NR Band n30	10	22.5	21.16	A	0.02	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	2.040	1.361	2.776	A102
2310.00	462000	Mid	NR Band n30	10	22.5	21.19	A	-0.02	0	N/A	1156M	DFT-S-OFDM	QPSK	25	27	0 mm	bottom	1:1	2.030	1.352	2.745	
2310.00	462000	Mid	NR Band n30	10	22.5	21.15	A	0.01	0	N/A	1156M	DFT-S-OFDM	QPSK	50	0	0 mm	bottom	1:1	1.980	1.365	2.703	
2310.00	462000	Mid	NR Band n30	10	22.0	20.63	A	0.02	0.5	N/A	1156M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	1.790	1.371	2.454	
2310.00	462000	Mid	NR Band n30	10	22.5	21.16	A	0.21	0	N/A	1156M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	1.970	1.361	2.681	
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 11-86
NR Band n7 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	-0.07	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	8 mm	back	1:1	0.488	1.303	0.636	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	-0.03	0	N/A	1145M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.463	1.337	0.619	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.02	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	6 mm	front	1:1	0.655	1.303	0.853	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	0.05	0	N/A	1145M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	0.661	1.337	0.884	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.01	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	12 mm	bottom	1:1	0.798	1.303	1.040	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	-0.02	0	N/A	1145M	DFT-S-OFDM	QPSK	108	54	12 mm	bottom	1:1	0.746	1.337	0.997	
2535.00	507000	Mid	NR Band n7	40	24.0	22.85	B	0.04	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	0 mm	right	1:1	0.995	1.303	1.296	
2535.00	507000	Mid	NR Band n7	40	24.0	22.74	B	0.04	0	N/A	1145M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.848	1.337	1.134	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	-0.01	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	1.620	1.062	1.720	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	0.01	0	N/A	1145M	DFT-S-OFDM	QPSK	108	0	0 mm	back	1:1	1.610	1.045	1.682	
2535.00	507000	Mid	NR Band n7	40	21.0	20.73	B	-0.07	0	N/A	1145M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	1.820	1.064	1.936	
2535.00	507000	Mid	NR Band n7	40	21.0	20.77	B	0.05	0	N/A	1145M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	1.930	1.054	2.034	A103
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	0.02	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	0 mm	front	1:1	1.170	1.062	1.243	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	-0.01	0	N/A	1145M	DFT-S-OFDM	QPSK	108	0	0 mm	front	1:1	1.140	1.045	1.191	
2535.00	507000	Mid	NR Band n7	40	21.0	20.74	B	-0.08	0	N/A	1145M	DFT-S-OFDM	QPSK	1	1	0 mm	bottom	1:1	1.520	1.062	1.614	
2535.00	507000	Mid	NR Band n7	40	21.0	20.81	B	-0.04	0	N/A	1145M	DFT-S-OFDM	QPSK	108	0	0 mm	bottom	1:1	1.480	1.045	1.547	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams									

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Table 11-87
NR Band n41 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	20.0	19.30	J	0.05	0	0959M	DFT-S-OFDM	QPSK	1	1	0 mm	top	1:1	2.200	1.175	2.585	
2592.99	518598	Mid	NR Band n41	100	20.0	19.28	J	0.00	0	0959M	DFT-S-OFDM	QPSK	135	0	0 mm	top	1:1	2.130	1.180	2.513	
2592.99	518598	Mid	NR Band n41	100	20.0	19.22	J	0.00	0	0959M	DFT-S-OFDM	QPSK	270	0	0 mm	top	1:1	2.110	1.197	2.526	
2592.99	518598	Mid	NR Band n41	100	20.0	19.20	J	0.00	0	0959M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.220	1.202	2.668	A104
2592.99	518598	Mid	NR Band n41	100	20.0	19.20	J	0.01	0	0959M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.210	1.202	2.656	
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 11-88
NR Band n77 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	Scaling Factor	SAR (10g)	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)	(W/kg)	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	0.01	0	0575M	DFT-S-OFDM	QPSK	1	271	0 mm	back	1:1	1.169	0.787	0.920	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	135	138	0 mm	back	1:1	1.191	0.776	0.924	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	1	271	0 mm	top	1:1	1.169	0.138	0.161	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	135	138	0 mm	top	1:1	1.191	0.134	0.160	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.32	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	1	271	0 mm	left	1:1	1.169	1.430	1.672	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.24	F	0.07	0	0575M	DFT-S-OFDM	QPSK	135	138	0 mm	left	1:1	1.191	1.470	1.751	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	0.01	0	0575M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.194	1.490	1.779	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.23	F	0.02	0	0575M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.194	1.540	1.839	A105
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.30	I	-0.02	N/A	0934M	CW/SRS	N/A	N/A	N/A	0 mm	back	1:1	1.479	1.060	1.568	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.159	0.746	0.865	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	0.04	0	0575M	DFT-S-OFDM	QPSK	135	138	0 mm	back	1:1	1.146	0.699	0.801	
3750.00	650000	Low	NR Band n77	100	18.0	17.35	F	0.01	0	0575M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.161	1.260	1.463	
3930.00	662000	High	NR Band n77	100	18.0	17.36	F	0.07	0	0575M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.159	1.450	1.681	
3750.00	650000	Low	NR Band n77	100	18.0	17.40	F	0.07	0	0575M	DFT-S-OFDM	QPSK	135	0	0 mm	left	1:1	1.148	1.250	1.435	
3930.00	662000	High	NR Band n77	100	18.0	17.41	F	-0.02	0	0575M	DFT-S-OFDM	QPSK	135	138	0 mm	left	1:1	1.146	1.410	1.616	
3930.00	662000	High	NR Band n77	100	18.0	17.29	F	-0.01	0	0575M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.178	1.440	1.696	
3930.00	662000	High	NR Band n77	100	18.0	17.04	F	-0.03	0	0575M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.247	1.490	1.858	A106
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-89
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	15.5	15.46	15.5	15.44	0.06	0 mm	MIMO	0990M	58.5	back	92.4	1.720	0.393	1.014	1.082	0.431	
5290	58	802.11ac	OFDM	80	15.5	15.46	15.5	15.44	-0.21	0 mm	MIMO	0990M	58.5	front	92.4	0.889	-	1.014	1.082	-	
5290	58	802.11ac	OFDM	80	15.5	15.46	15.5	15.44	0.19	0 mm	MIMO	0990M	58.5	top	92.4	0.270	-	1.014	1.082	-	
5290	58	802.11ac	OFDM	80	15.5	15.46	15.5	15.44	0.10	0 mm	MIMO	0990M	58.5	left	92.4	1.480	-	1.014	1.082	-	
5690	138	802.11ac	OFDM	80	15.5	15.24	15.5	15.21	-0.13	0 mm	MIMO	0990M	58.5	back	92.4	3.550	0.733	1.069	1.082	**0.848**	A107
5690	138	802.11ac	OFDM	80	15.5	15.24	15.5	15.21	0.10	0 mm	MIMO	0990M	58.5	front	92.4	1.230	-	1.069	1.082	-	
5690	138	802.11ac	OFDM	80	15.5	15.24	15.5	15.21	-0.07	0 mm	MIMO	0990M	58.5	top	92.4	0.700	-	1.069	1.082	-	
5690	138	802.11ac	OFDM	80	15.5	15.24	15.5	15.21	-0.03	0 mm	MIMO	0990M	58.5	left	92.4	2.270	-	1.069	1.082	-	
5855	171	802.11ac	OFDM	80	15.5	14.64	15.5	15.14	0.03	0 mm	MIMO	0958M	58.5	back	92.4	4.210	0.530	1.219	1.082	0.699	
5855	171	802.11ac	OFDM	80	15.5	14.64	15.5	15.14	-0.20	0 mm	MIMO	0958M	58.5	front	92.4	0.471	-	1.219	1.082	-	
5855	171	802.11ac	OFDM	80	15.5	14.64	15.5	15.14	-0.10	0 mm	MIMO	0958M	58.5	top	92.4	0.283	-	1.219	1.082	-	
5855	171	802.11ac	OFDM	80	15.5	14.64	15.5	15.14	-0.02	0 mm	MIMO	0958M	58.5	left	92.4	2.020	-	1.219	1.082	-	
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 18.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 15.5 dBm.

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Table 11-90
WLAN MIMO Phablet SAR during Conditions with 5G FR2 NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	12.0	11.52	12.0	11.83	0.13	0 mm	MIMO	0881M	58.5	back	92.4	0.968	0.225	1.117	1.082	0.272	
5290	58	802.11ac	OFDM	80	12.0	11.52	12.0	11.83	-0.13	0 mm	MIMO	0881M	58.5	front	92.4	0.337	0.051	1.117	1.082	0.062	
5290	58	802.11ac	OFDM	80	12.0	11.52	12.0	11.83	0.01	0 mm	MIMO	0881M	58.5	top	92.4	0.201	0.031	1.117	1.082	0.037	
5290	58	802.11ac	OFDM	80	12.0	11.52	12.0	11.83	0.01	0 mm	MIMO	0881M	58.5	left	92.4	0.954	0.146	1.117	1.082	0.176	
5610	122	802.11ac	OFDM	80	12.0	11.88	12.0	11.59	0.05	0 mm	MIMO	0990M	58.5	back	92.4	1.750	0.336	1.099	1.082	0.400	
5610	122	802.11ac	OFDM	80	12.0	11.88	12.0	11.59	0.13	0 mm	MIMO	0990M	58.5	front	92.4	0.429	0.063	1.099	1.082	0.075	
5610	122	802.11ac	OFDM	80	12.0	11.88	12.0	11.59	0.00	0 mm	MIMO	0990M	58.5	top	92.4	0.279	0.052	1.099	1.082	0.062	
5610	122	802.11ac	OFDM	80	12.0	11.88	12.0	11.59	0.07	0 mm	MIMO	0990M	58.5	left	92.4	1.110	0.207	1.099	1.082	0.246	
5855	171	802.11ac	OFDM	80	12.0	11.55	12.0	11.87	0.02	0 mm	MIMO	0958M	58.5	back	92.4	3.310	0.358	1.109	1.082	0.430	
5855	171	802.11ac	OFDM	80	12.0	11.55	12.0	11.87	0.04	0 mm	MIMO	0958M	58.5	front	92.4	0.672	0.131	1.109	1.082	0.157	
5855	171	802.11ac	OFDM	80	12.0	11.55	12.0	11.87	-0.01	0 mm	MIMO	0958M	58.5	top	92.4	0.378	0.078	1.109	1.082	0.094	
5855	171	802.11ac	OFDM	80	12.0	11.55	12.0	11.87	0.02	0 mm	MIMO	0958M	58.5	left	92.4	1.790	0.339	1.109	1.082	0.407	
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: 5GHz WLAN MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5G NR. 5G NR was not transmitting during the above evaluations. To achieve the 15.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12.0 dBm.

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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 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 12 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 13 for supplemental data.
12. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the 1g thresholds for the equivalent test cases.
14. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

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).

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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).

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4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
6. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n77 C-Band SAR measured at the highest output power channel in a given a test configuration was > 0.4 W/kg for 1g evaluations and > 1 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
7. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations and > 1 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.

WLAN Notes:

1. For held-to-ear, and 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 Appendix E for complete analysis.
5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 9 for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BDR tethering applications.

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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
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Test Position	Antenna Config	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1745.00	349000	NR Band n66 (AWS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 108 RB, 108 RB Offset	Left	Tilt	J	1.040	1.030	1.01	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41,100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	Left	Tilt	J	1.020	1.000	1.02	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS																
Band	FREQUENCY		Mode	Service	# of Time Slots	Antenna Config	Side	Spacing	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)	
835	848.80	251	GSM 850	GPRS	3	A	back	10 mm	0.973	0.943	1.03	N/A	N/A	N/A	N/A
1900	1907.60	9538	UMTS 1900	RMC	N/A	A	bottom	10 mm	0.940	0.908	1.04	N/A	N/A	N/A	N/A
2300	2310.00	462000	NR Band n30, 10 MHz Bandwidth	DFT-S-OFDM, QPSK, 50 RB, 0 RB Offset	N/A	A	bottom	10 mm	0.983	0.886	1.11	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							

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Table 12-3
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Antenna Config	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1732.40	1412	UMTS 1750	RMC	A	bottom	0 mm	2.680	2.660	1.01	N/A	N/A	N/A	N/A
1900	1882.50	376500	NR Band n25 (PCS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 216 RB, 0 RB Offset	A	bottom	0 mm	2.450	2.250	1.09	N/A	N/A	N/A	N/A
2300	2310.00	462000	NR Band n30, 10 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 26 RB Offset	A	back	0 mm	2.040	1.970	1.04	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	J	top	0 mm	2.220	2.210	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.

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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 120 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 120 states.

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

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Table 13-1
UMTS Supplemental Head SAR Data

UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	846.60	Frequency (MHz)	1712.40	Frequency (MHz)	1907.60
Channel	4233	Channel	1312	Channel	9538
Measured 1g SAR (W/kg)	0.178	Measured 1g SAR (W/kg)	0.098	Measured 1g SAR (W/kg)	0.082
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.239	Auto-tune (State 78)	0.141	Auto-tune (State 54)	0.093
Default (State 0)	0.250	Default (State 0)	0.130	Default (State 0)	0.085
State 10	0.065	State 1	0.120	State 2	0.087
State 13	0.246	State 40	0.120	State 41	0.078
State 39	0.149	State 78	0.147	State 54	0.075
State 78	0.093	State 79	0.147	State 80	0.044
State 117	0.149	State 118	0.104	State 119	0.073

Table 13-2
LTE Supplemental Head SAR Data

LTE B71		LTE B12		LTE B13		LTE B14		LTE B5		LTE B26		LTE B66		LTE B25	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset	
Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left 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	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1720.00	Frequency (MHz)	1882.50
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Channel	132072	Channel	26365
Measured 1g SAR (W/kg)	0.104	Measured 1g SAR (W/kg)	0.150	Measured 1g SAR (W/kg)	0.184	Measured 1g SAR (W/kg)	0.200	Measured 1g SAR (W/kg)	0.208	Measured 1g SAR (W/kg)	0.234	Measured 1g SAR (W/kg)	0.105	Measured 1g SAR (W/kg)	0.098
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.133	Auto-tune (State 14)	0.202	Auto-tune (State 116)	0.263	Auto-tune (State 13)	0.296	Auto-tune (State 108)	0.163	Auto-tune (State 108)	0.305	Auto-tune (State 60)	0.112	Auto-tune (State 1)	0.113
Default (State 0)	0.131	Default (State 0)	0.151	Default (State 0)	0.278	Default (State 0)	0.317	Default (State 0)	0.160	Default (State 0)	0.299	Default (State 0)	0.104	Default (State 0)	0.107
State 6	0.101	State 7	0.121	State 8	0.146	State 9	0.107	State 2	0.143	State 11	0.109	State 12	0.035	State 1	0.100
State 13	0.146	State 14	0.196	State 29	0.172	State 13	0.311	State 10	0.031	State 50	0.078	State 51	0.036	State 14	0.085
State 45	0.099	State 46	0.109	State 47	0.094	State 19	0.195	State 49	0.019	State 89	0.064	State 60	0.119	State 53	0.104
State 79	0.066	State 52	0.081	State 86	0.056	State 48	0.052	State 88	0.008	State 108	0.308	State 90	0.044	State 83	0.098
State 84	0.034	State 85	0.022	State 116	0.278	State 87	0.028	State 108	0.161	State 110	0.243	State 117	0.110	State 92	0.099

Table 13-3
NR Supplemental Head SAR Data

NR Band n71		NR Band n12		NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 104 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 54 RB Offset		DFT-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 108 RB Offset	
Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	136100	Channel	141500	Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.145	Measured 1g SAR (W/kg)	0.164	Measured 1g SAR (W/kg)	0.242	Measured 1g SAR (W/kg)	0.119	Measured 1g SAR (W/kg)	0.111
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.158	Auto-tune (State 14)	0.183	Auto-tune (State 108)	0.267	Auto-tune (State 58)	0.168	Auto-tune (State 5)	0.117
Default (State 0)	0.164	Default (State 0)	0.141	Default (State 0)	0.260	Default (State 0)	0.174	Default (State 0)	0.125
State 0	0.164	State 14	0.171	State 17	0.233	State 18	0.113	State 5	0.116
State 15	0.148	State 16	0.169	State 42	0.173	State 30	0.175	State 7	0.106
State 54	0.114	State 55	0.085	State 56	0.190	State 57	0.181	State 19	0.081
State 71	0.057	State 59	0.034	State 95	0.175	State 58	0.176	State 58	0.115
State 93	0.100	State 94	0.088	State 108	0.259	State 96	0.167	State 97	0.115

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Table 13-4
UMTS Supplemental Body SAR Data

UMTS B5	
RMC	
Test Position	Back
Spacing	10 mm
Frequency (MHz)	846.60
Channel	4233
Measured 1g SAR (W/kg)	0.587
Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.952
Default (State 0)	0.956
State 0	0.956
State 1	0.928
State 20	0.504
State 59	0.468
State 98	0.506

UMTS B4	
RMC	
Test Position	Bottom
Spacing	10 mm
Frequency (MHz)	1732.40
Channel	1412
Measured 1g SAR (W/kg)	1.030
Average Value of Time Sweep (W/kg)	
Auto-tune (State 26)	1.561
Default (State 0)	1.365
State 0	1.365
State 1	1.270
State 2	1.242
State 3	1.225
State 4	1.174
State 5	1.165
State 6	1.064
State 7	0.989
State 8	0.888
State 9	0.743
State 10	0.647
State 11	0.527
State 12	0.384
State 13	0.914
State 14	0.850
State 15	0.834
State 16	0.815
State 17	0.781
State 18	0.775
State 19	0.696
State 20	0.638
State 21	0.560
State 22	0.463
State 23	0.394
State 24	0.316
State 25	0.227
State 26	1.559
State 27	1.451
State 28	1.423
State 29	1.400
State 30	1.361
State 31	1.347
State 32	1.246
State 33	1.161
State 34	1.047
State 35	0.885
State 36	0.769
State 37	0.626
State 38	0.453
State 39	1.305
State 40	1.215
State 41	1.193
State 42	1.177
State 43	1.135
State 44	1.120
State 45	1.028
State 46	0.951
State 47	0.853
State 48	0.720
State 49	0.624
State 50	0.508
State 51	0.370
State 52	1.408
State 53	1.396
State 54	1.390
State 55	1.381
State 56	1.368
State 57	1.368
State 58	1.317
State 59	1.278
State 60	1.212
State 61	1.101
State 62	1.002
State 63	0.862
State 64	0.662
State 65	0.998
State 66	0.997
State 67	0.983
State 68	0.977
State 69	0.966
State 70	0.966
State 71	0.922
State 72	0.886
State 73	0.828
State 74	0.733
State 75	0.659
State 76	0.555
State 77	0.417
State 78	1.435
State 79	1.426
State 80	1.422
State 81	1.422
State 82	1.418
State 83	1.411
State 84	1.379
State 85	1.349
State 86	1.303
State 87	1.201
State 88	1.109
State 89	0.972
State 90	0.754
State 91	1.341
State 92	1.321
State 93	1.311
State 94	1.307
State 95	1.295
State 96	1.290
State 97	1.248
State 98	1.209
State 99	1.151
State 100	1.048
State 101	0.959
State 102	0.826
State 103	0.636
State 104	1.317
State 105	1.529
State 106	1.395
State 107	1.438
State 108	1.318
State 109	1.527
State 110	1.396
State 111	1.435
State 112	0.902
State 113	1.302
State 114	0.992
State 115	1.337
State 116	0.898
State 117	1.296
State 118	0.993
State 119	1.337

UMTS B2	
RMC	
Test Position	Bottom
Spacing	10 mm
Frequency (MHz)	1907.60
Channel	9538
Measured 1g SAR (W/kg)	0.940
Average Value of Time Sweep (W/kg)	
Auto-tune (State 54)	1.030
Default (State 0)	1.070
State 22	0.421
State 54	1.070
State 61	0.807
State 80	0.997
State 100	0.740

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Table 13-5
LTE Supplemental Body SAR Data

LTE B71		LTE B12		LTE B13		LTE B14		LTE B5		LTE B26		LTE B66		LTE B25	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 25 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Spacing	10 mm	Spacing	10 mm
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Frequency (MHz)	Bottom	Frequency (MHz)	Bottom
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Channel	132322	Channel	26590
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Measured 1g SAR (W/kg)	0.821	Measured 1g SAR (W/kg)	0.938
Measured 1g SAR (W/kg)	0.342	Measured 1g SAR (W/kg)	0.380	Measured 1g SAR (W/kg)	0.562	Measured 1g SAR (W/kg)	0.625	Measured 1g SAR (W/kg)	0.634	Measured 1g SAR (W/kg)	0.597	Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Auto-tune (State 60)	1.299	Auto-tune (State 5)	1.524
Auto-tune (State 13)	0.501	Auto-tune (State 14)	0.585	Auto-tune (State 104)	0.958	Auto-tune (State 13)	1.051	Auto-tune (State 108)	0.953	Auto-tune (State 108)	0.887	Default (State 0)	1.070	Default (State 0)	1.658
Default (State 0)	0.474	Default (State 0)	0.494	Default (State 0)	0.942	Default (State 0)	1.041	Default (State 0)	0.958	Default (State 0)	0.917	State 0	1.070	State 0	1.658
State 13	0.505	State 5	0.570	State 13	0.974	State 13	1.068	State 30	0.763	State 31	0.597	State 1	1.099	State 1	1.595
State 21	0.142	State 14	0.618	State 28	0.634	State 29	0.726	State 44	0.767	State 70	0.610	State 2	1.106	State 2	1.575
State 26	0.146	State 27	0.278	State 41	0.676	State 34	0.284	State 69	0.606	State 91	0.307	State 3	1.112	State 3	1.558
State 44	0.500	State 64	0.585	State 67	0.705	State 68	0.769	State 77	0.050	State 102	0.920	State 4	1.116	State 4	1.518
State 65	0.306	State 66	0.301	State 104	0.940	State 82	0.685	State 103	0.022	State 108	0.918	State 5	1.116	State 5	1.538
State 104	0.471	State 105	0.157	State 106	0.686	State 107	0.338	State 108	0.950	State 109	0.435	State 6	1.123	State 6	1.412
												State 7	1.123	State 7	1.336
												State 8	1.109	State 8	1.210
												State 9	1.051	State 9	1.021
												State 10	0.983	State 10	0.880
												State 11	0.861	State 11	0.703
												State 12	0.659	State 12	0.497
												State 13	0.863	State 13	1.262
												State 14	0.888	State 14	1.184
												State 15	0.891	State 15	1.153
												State 16	0.894	State 16	1.130
												State 17	0.896	State 17	1.080
												State 18	0.895	State 18	1.077
												State 19	0.892	State 19	0.952
												State 20	0.882	State 20	0.870
												State 21	0.852	State 21	0.753
												State 22	0.788	State 22	0.604
												State 23	0.715	State 23	0.504
												State 24	0.605	State 24	0.391
												State 25	0.443	State 25	0.272
												State 26	0.938	State 26	1.641
												State 27	0.963	State 27	1.642
												State 28	0.971	State 28	1.642
												State 29	0.978	State 29	1.638
												State 30	0.990	State 30	1.617
												State 31	0.992	State 31	1.613
												State 32	1.021	State 32	1.551
												State 33	1.033	State 33	1.485
												State 34	1.045	State 34	1.372
												State 35	1.026	State 35	1.171
												State 36	0.983	State 36	1.004
												State 37	0.881	State 37	0.791
												State 38	0.685	State 38	0.543
												State 39	0.990	State 39	1.536
												State 40	1.008	State 40	1.486
												State 41	1.016	State 41	1.468
												State 42	1.022	State 42	1.451
												State 43	1.032	State 43	1.415
												State 44	1.025	State 44	1.410
												State 45	1.036	State 45	1.307
												State 46	1.036	State 46	1.229
												State 47	1.027	State 47	1.103
												State 48	0.984	State 48	0.923
												State 49	0.925	State 49	0.793
												State 50	0.815	State 50	0.629
												State 51	0.623	State 51	0.445
												State 52	0.985	State 52	1.657
												State 53	1.055	State 53	1.639
												State 54	1.068	State 54	1.632
												State 55	1.084	State 55	1.617
												State 56	1.109	State 56	1.593
												State 57	1.116	State 57	1.591
												State 58	1.172	State 58	1.522
												State 59	1.205	State 59	1.462
												State 60	1.233	State 60	1.351
												State 61	1.192	State 61	1.173
												State 62	1.106	State 62	1.030
												State 63	0.925	State 63	0.839
												State 64	0.637	State 64	0.601
												State 65	0.881	State 65	1.340
												State 66	0.960	State 66	1.294
												State 67	0.975	State 67	1.271
												State 68	0.987	State 68	1.252
												State 69	1.009	State 69	1.210
												State 70	1.016	State 70	1.212
												State 71	1.015	State 71	1.099
												State 72	1.082	State 72	1.021
												State 73	1.069	State 73	0.902
												State 74	0.976	State 74	0.736
												State 75	0.855	State 75	0.621
												State 76	0.668	State 76	0.487
												State 77	0.432	State 77	0.338
												State 78	0.786	State 78	1.553
												State 79	0.842	State 79	1.576
												State 80	0.859	State 80	1.581
												State 81	0.876	State 81	1.584
												State 82	0.907	State 82	1.584
												State 83	0.909	State 83	1.582
												State 84	0.985	State 84	1.568
												State 85	1.041	State 85	1.539
												State 86	1.115	State 86	1.464
												State 87	1.163	State 87	1.287
												State 88	1.135	State 88	1.158
												State 89	1.003	State 89	0.941
												State 90	0.699	State 90	0.656
												State 91	0.892	State 91	1.564
												State 92	0.951	State 92	1.543
												State 93	0.970	State 93	1.539
												State 94	0.982	State 94	1.528
												State 95	1.009	State 95	1.504
												State 96	1.010	State 96	1.499
												State 97	1.075	State 97	1.429
												State 98	1.111	State 98	1.366
												State 99	1.150	State 99	1.251
												State 100	1.130	State 100	1.077
												State 101	1.058	State 101	0.937
												State 102	0.888	State 102	0.757
												State 103	0.609	State 103	0.538
												State 104	1.062	State 104	1.613
												State 105	0.932	State 105	1.610
												State 106	0.979	State 106	1.653
												State 107	0.783	State 107	1.541
												State 108	1.065	State 108	1.618
												State 109	0.934	State 109	1.615
												State 110	0.982	State 110	1.660
												State 111	0.784	State 111	1.546
												State 112	0.856	State 112	1.244
												State 113	0.983	State 113	1.530
												State 114	0.876	State 114	1.335
												State 115	0.890	State 115	1.561
												State 116	0.856	State 116	1.243
												State 117	0.983	State 117	1.531
												State 118	0.876	State 118	1.333
												State 119	0.894	State 119	1.557

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Table 13-6
NR Supplemental Body SAR Data

NR Band n71		NR Band n12		NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 104 RB Offset		DFT-s--OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s--OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 216 RB, 0 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 216 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)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	136100	Channel	141500	Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.393	Measured 1g SAR (W/kg)	0.346	Measured 1g SAR (W/kg)	0.725	Measured 1g SAR (W/kg)	0.829	Measured 1g SAR (W/kg)	0.846
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 112)	0.636	Auto-tune (State 13)	0.544	Auto-tune (State 108)	1.175	Auto-tune (State 62)	1.314	Auto-tune (State 59)	1.394
Default (State 0)	0.512	Default (State 0)	0.538	Default (State 0)	1.186	Default (State 0)	1.092	Default (State 0)	1.409
State 25	0.036	State 4	0.594	State 36	0.146	State 0	1.092	State 0	1.409
State 34	0.091	State 13	0.563	State 43	0.922	State 1	1.110	State 1	1.369
State 73	0.089	State 35	0.084	State 75	0.158	State 2	1.114	State 2	1.353
State 85	0.094	State 65	0.364	State 81	0.779	State 3	1.120	State 3	1.343
State 112	0.517	State 74	0.044	State 108	1.188	State 4	1.126	State 4	1.312
State 118	0.391	State 113	0.199	State 114	1.005	State 5	1.128	State 5	1.310
						State 6	1.144	State 6	1.215
						State 7	1.150	State 7	1.159
						State 8	1.138	State 8	1.056
						State 9	1.093	State 9	0.899
						State 10	1.037	State 10	0.783
						State 11	0.934	State 11	0.631
						State 12	0.735	State 12	0.445
						State 13	0.835	State 13	1.046
						State 14	0.865	State 14	0.979
						State 15	0.869	State 15	0.958
						State 16	0.871	State 16	0.937
						State 17	0.875	State 17	0.897
						State 18	0.878	State 18	0.894
						State 19	0.882	State 19	0.795
						State 20	0.880	State 20	0.734
						State 21	0.866	State 21	0.637
						State 22	0.812	State 22	0.514
						State 23	0.758	State 23	0.429
						State 24	0.658	State 24	0.333
						State 25	0.494	State 25	0.228
						State 26	0.958	State 26	1.391
						State 27	0.975	State 27	1.379
						State 28	0.981	State 28	1.376
						State 29	0.989	State 29	1.369
						State 30	1.003	State 30	1.355
						State 31	0.999	State 31	1.351
						State 32	1.030	State 32	1.310
						State 33	1.048	State 33	1.254
						State 34	1.067	State 34	1.158
						State 35	1.065	State 35	1.002
						State 36	1.037	State 36	0.860
						State 37	0.958	State 37	0.684
						State 38	0.775	State 38	0.466
						State 39	0.987	State 39	1.301
						State 40	1.006	State 40	1.270
						State 41	1.014	State 41	1.252
						State 42	1.018	State 42	1.232
						State 43	1.030	State 43	1.212
						State 44	1.022	State 44	1.202
						State 45	1.042	State 45	1.122
						State 46	1.057	State 46	1.053
						State 47	1.057	State 47	0.956
						State 48	1.026	State 48	0.814
						State 49	0.975	State 49	0.698
						State 50	0.880	State 50	0.561
						State 51	0.697	State 51	0.394
						State 52	0.999	State 52	1.408
						State 53	1.077	State 53	1.394
						State 54	1.094	State 54	1.389
						State 55	1.110	State 55	1.382
						State 56	1.139	State 56	1.365
						State 57	1.139	State 57	1.364
						State 58	1.211	State 58	1.320
						State 59	1.253	State 59	1.293
						State 60	1.294	State 60	1.185
						State 61	1.285	State 61	1.057
						State 62	1.212	State 62	0.937
						State 63	1.010	State 63	0.776
						State 64	0.694	State 64	0.562
						State 65	0.859	State 65	1.124
						State 66	0.949	State 66	1.088
						State 67	0.964	State 67	1.078
						State 68	0.976	State 68	1.056
						State 69	1.004	State 69	1.032
						State 70	1.015	State 70	1.033
						State 71	1.075	State 71	0.942
						State 72	1.116	State 72	0.882
						State 73	1.128	State 73	0.784
						State 74	1.061	State 74	0.653
						State 75	0.938	State 75	0.556
						State 76	0.739	State 76	0.436
						State 77	0.466	State 77	0.303
						State 78	0.792	State 78	1.296
						State 79	0.854	State 79	1.319
						State 80	0.871	State 80	1.314
						State 81	0.887	State 81	1.327
						State 82	0.919	State 82	1.329
						State 83	0.922	State 83	1.328
						State 84	1.011	State 84	1.317
						State 85	1.075	State 85	1.295
						State 86	1.156	State 86	1.247
						State 87	1.232	State 87	1.136
						State 88	1.221	State 88	1.010
						State 89	1.110	State 89	0.840
						State 90	0.777	State 90	0.589
						State 91	0.894	State 91	1.321
						State 92	0.957	State 92	1.309
						State 93	0.975	State 93	1.315
						State 94	0.992	State 94	1.307
						State 95	1.019	State 95	1.289
						State 96	1.023	State 96	1.284
						State 97	1.098	State 97	1.226
						State 98	1.150	State 98	1.178
						State 99	1.206	State 99	1.103
						State 100	1.214	State 100	0.966
						State 101	1.149	State 101	0.861
						State 102	0.983	State 102	0.707
						State 103	0.671	State 103	0.507
						State 104	1.063	State 104	1.398
						State 105	0.947	State 105	1.379
						State 106	0.983	State 106	1.414
						State 107	0.787	State 107	1.285
						State 108	1.066	State 108	1.393
						State 109	0.948	State 109	1.387
						State 110	0.986	State 110	1.405
						State 111	0.789	State 111	1.285
						State 112	0.828	State 112	1.023
						State 113	0.985	State 113	1.307
						State 114	0.853	State 114	1.110
						State 115	0.896	State 115	1.322
						State 116	0.828	State 116	1.023
						State 117	0.982	State 117	1.313
						State 118	0.856	State 118	1.109
						State 119	0.896	State 119	1.321

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

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the highest power and available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR for each exposure condition. The linearity between the Power Class 2 and Power Class 3 SAR results and the respective frame averaged powers was calculated to determine that the results were linear. 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 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.00	27.50
Measured Output Power (dBm)	23.82	25.82
Measured SAR (W/kg)	0.033	0.039
Measured Power (mW)	240.99	381.94
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	152.55	165.38
% deviation from expected linearity		9.01%

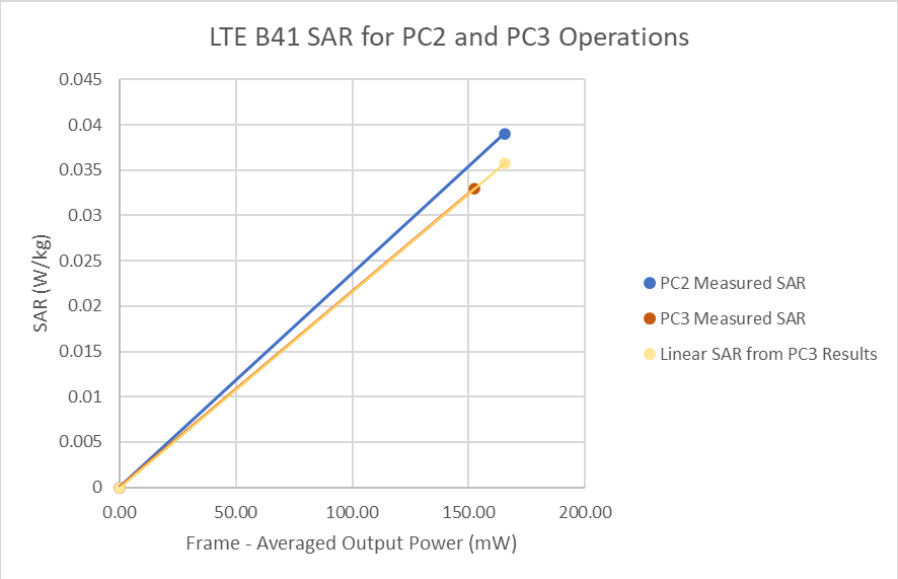

Figure 13-1
LTE Band 41 Head Linearity

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Table 13-8
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.5
Measured Output Power (dBm)	23.74	25.94
Measured SAR (W/kg)	0.039	0.041
Measured Power (mW)	236.59	392.64
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	149.76	170.02
% deviation from expected linearity		-7.39%

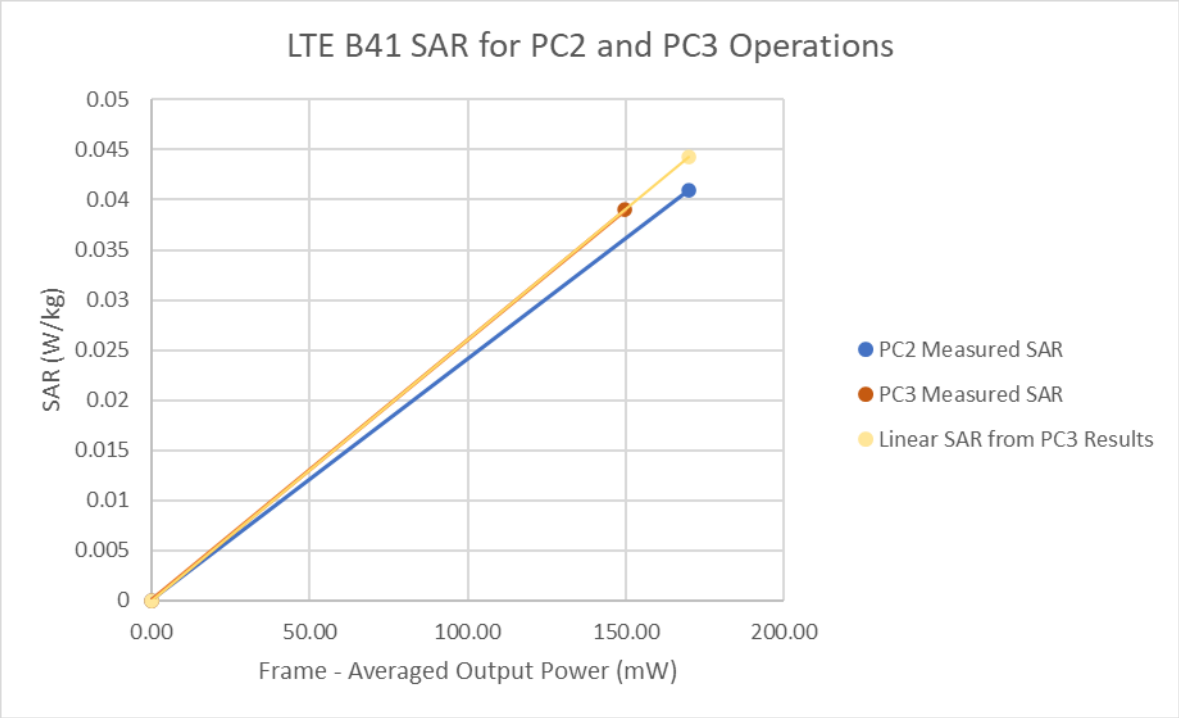

Figure 13-2
LTE Band 41 ULCA Head Linearity

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Table 13-9
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.00	27.50
Measured Output Power (dBm)	23.82	25.82
Measured SAR (W/kg)	0.245	0.240
Measured Power (mW)	240.99	381.94
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	152.55	165.38
% deviation from expected linearity		-9.64%

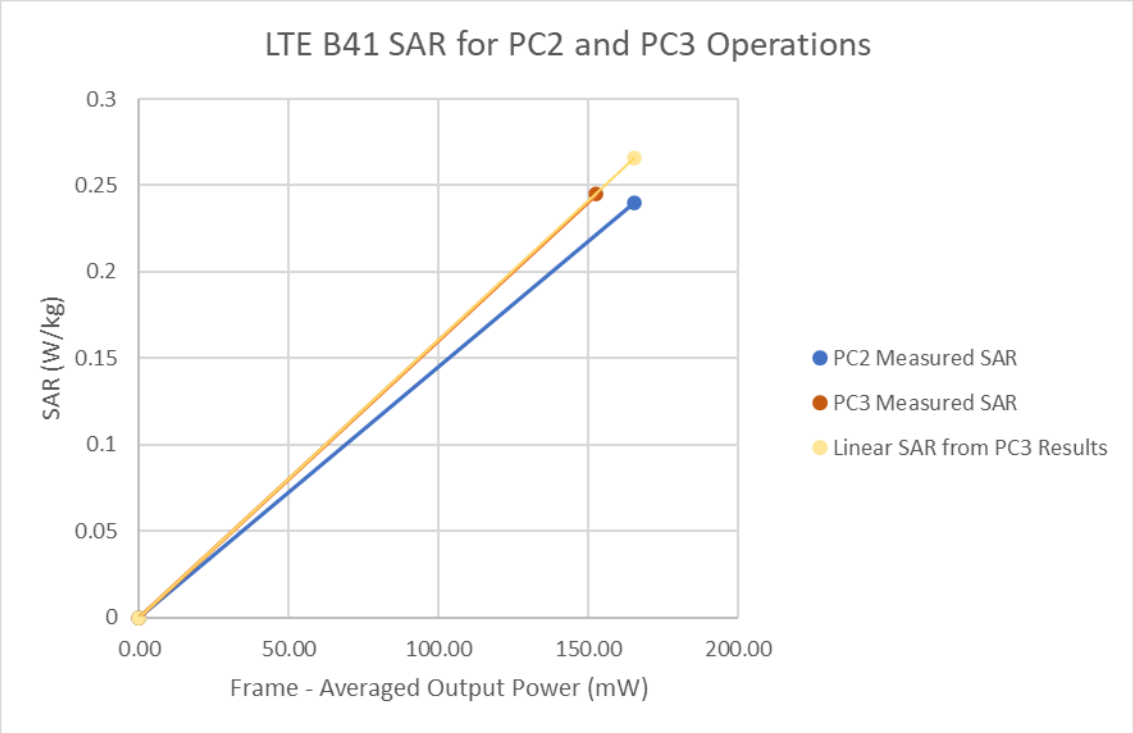

Figure 13-3
LTE Band 41 Body-Worn Linearity

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Table 13-10
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.5
Measured Output Power (dBm)	23.74	25.94
Measured SAR (W/kg)	0.245	0.255
Measured Power (mW)	236.59	392.64
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	149.76	170.02
% deviation from expected linearity		-8.32%

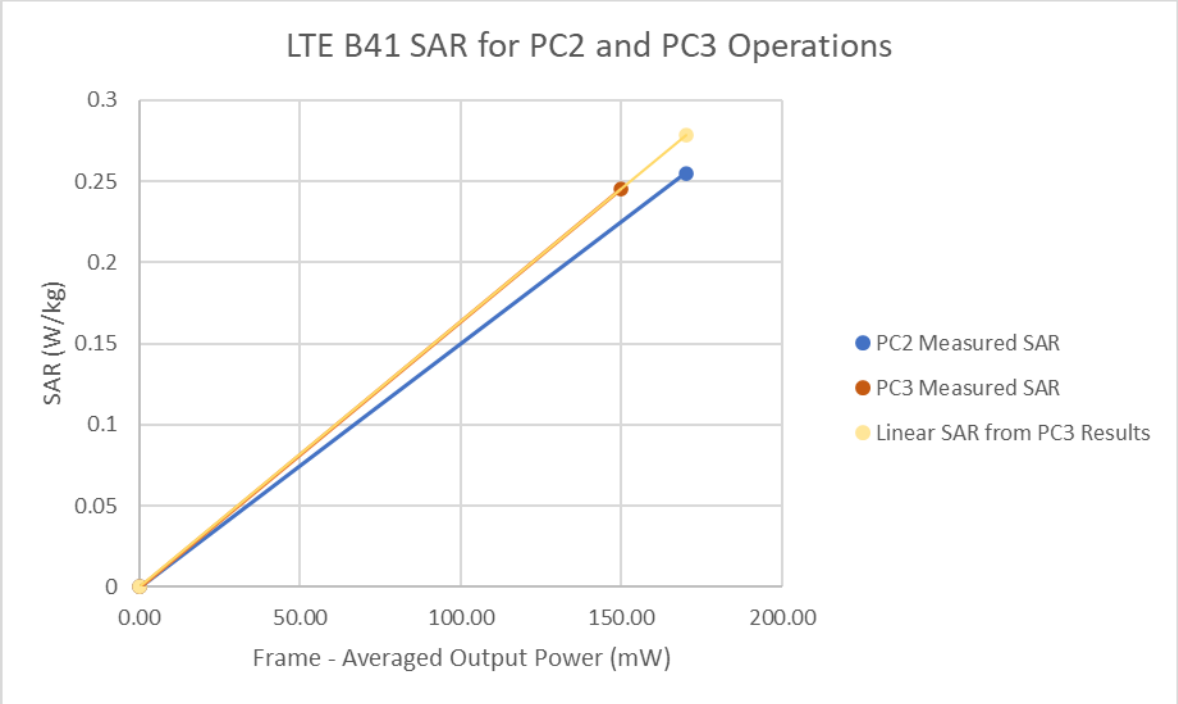

Figure 13-4
LTE Band 41 ULCA Body-Worn Linearity

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Table 13-11
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	21.89	23.66
Measured SAR (W/kg)	0.801	0.786
Measured Power (mW)	154.53	232.27
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	97.81	100.57
% deviation from expected linearity		-4.57%

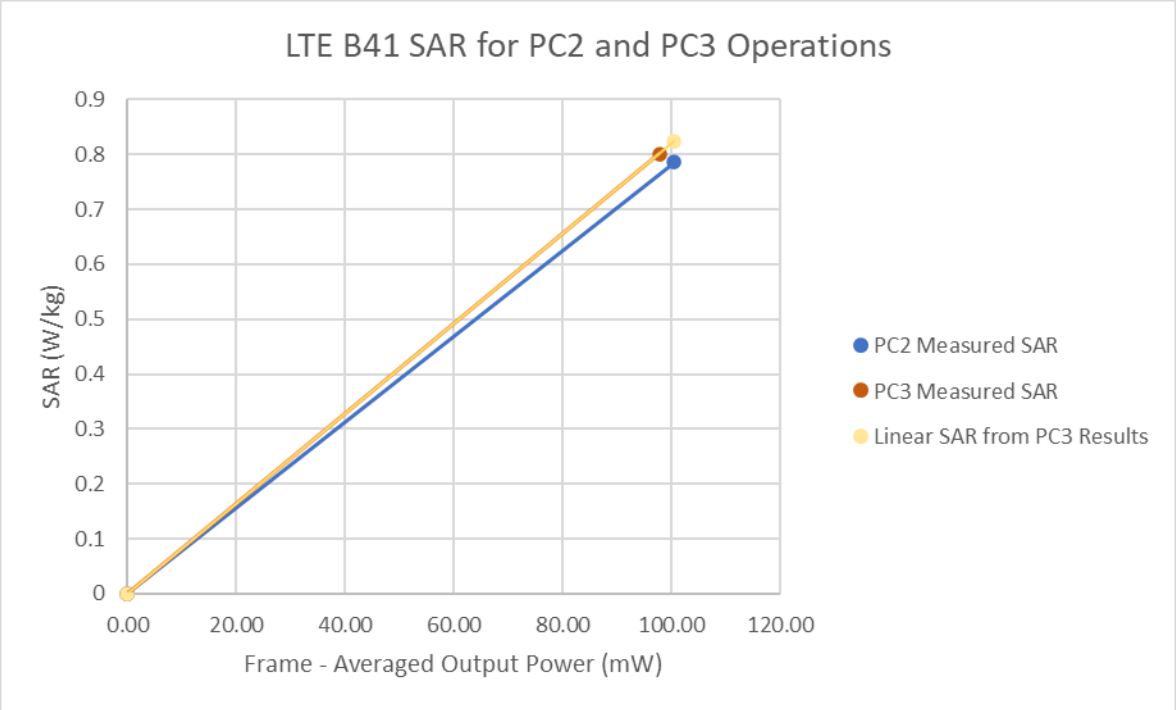

Figure 13-5
LTE Band 41 Hotspot Linearity

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Table 13-12
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	21.55	23.50
Measured SAR (W/kg)	0.757	0.789
Measured Power (mW)	142.89	223.87
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	90.45	96.94
% deviation from expected linearity		-2.75%

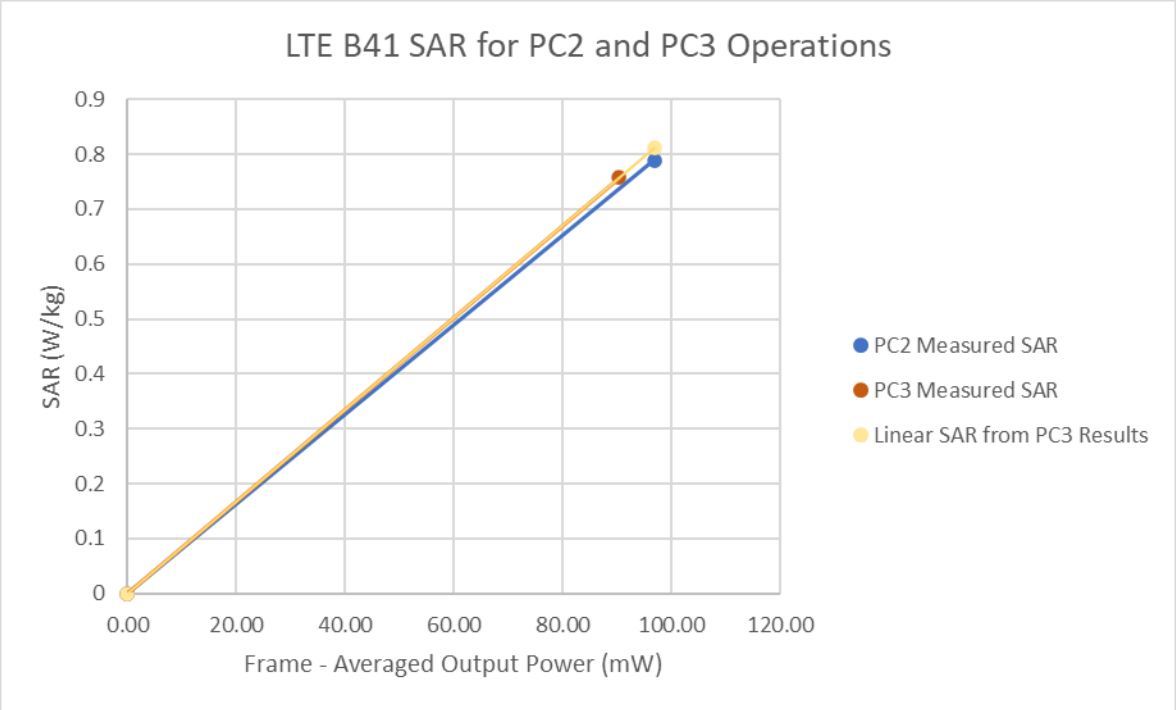

Figure 13-6
LTE Band 41 ULCA Hotspot Linearity

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Table 13-13
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	21.86	23.86
Measured SAR (W/kg)	1.720	1.720
Measured Power (mW)	153.46	243.22
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	97.14	105.31
% deviation from expected linearity		-7.76%

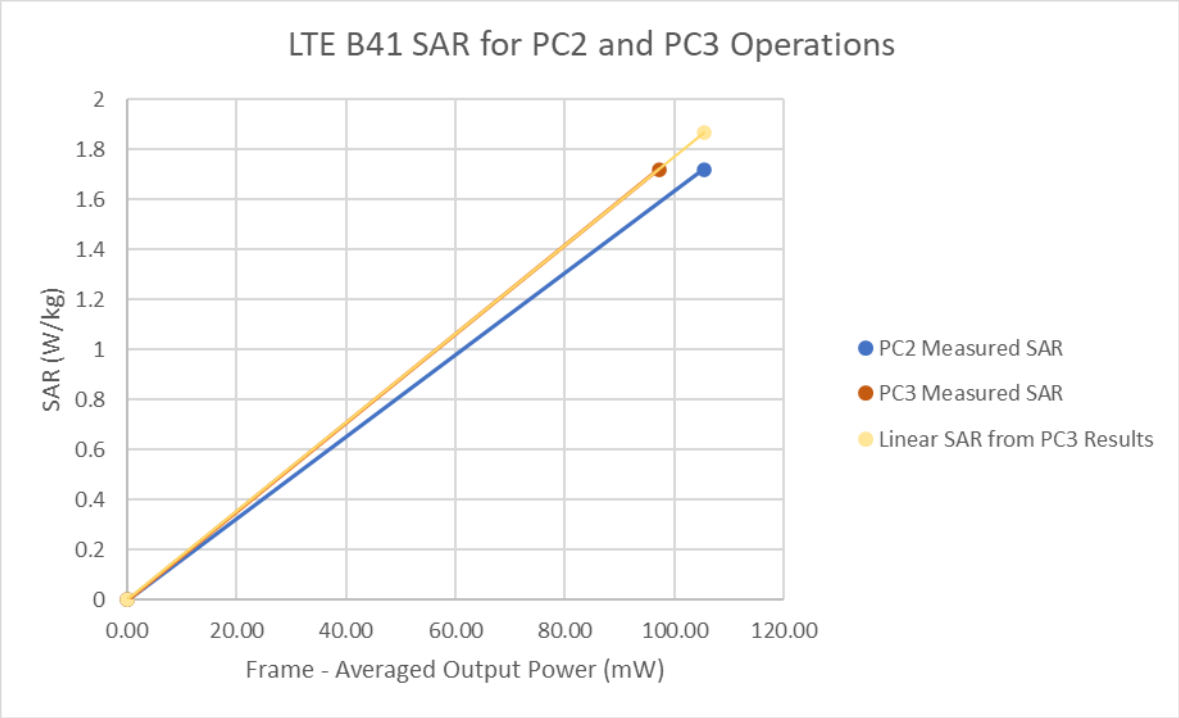

Figure 13-7
LTE Band 41 Phablet Linearity

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Table 13-14
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	21.53	23.70
Measured SAR (W/kg)	1.560	1.690
Measured Power (mW)	142.23	234.42
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	90.03	101.51
% deviation from expected linearity		-3.91%

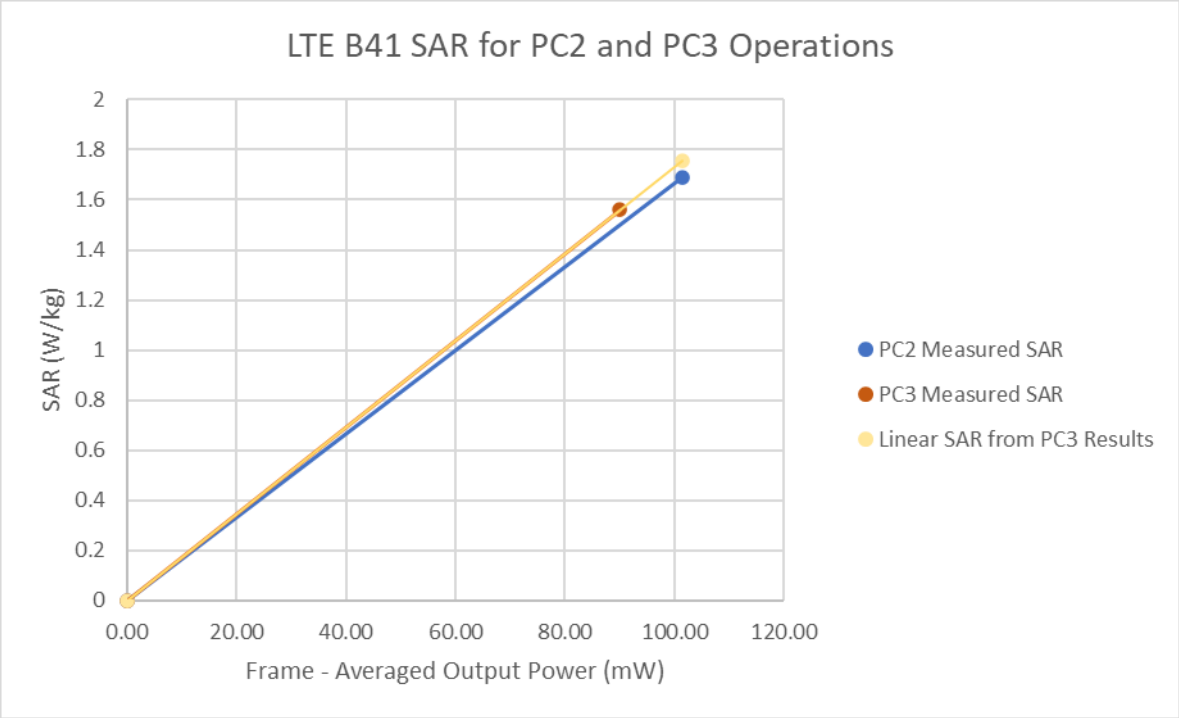

Figure 13-8
LTE Band 41 ULCA Phablet Linearity

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14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	85033E	3.5mm Standard Calibration Kit	7/7/2021	Annual	7/7/2022	MY53402352
Agilent	E4438C	ESG Vector Signal Generator	12/14/2020	Biennial	12/14/2022	MY42082385
Agilent	E4432B	ESG-D Series Signal Generator	2/24/2021	Annual	2/24/2022	US40053896
Agilent	N5182A	MXG Vector Signal Generator	6/21/2021	Annual	6/21/2022	MY47420603
Agilent	N5182A	MXG Vector Signal Generator	6/15/2021	Annual	6/15/2022	MY47420800
Agilent	8753ES	S-Parameter Vector Network Analyzer	2/2/2021	Annual	2/2/2022	US39170122
Agilent	E5515C	Wireless Communications Test Set	2/4/2021	Annual	2/4/2022	GB43193563
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	1S51G6	Amplifier	CBT	N/A	CBT	353317
Amplifier Research	1S51G6	Amplifier	CBT	N/A	CBT	413978
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	3/3/2021	Annual	3/3/2022	1306009
Anritsu	ML2496A	Power Meter	4/21/2021	Annual	4/21/2022	1351001
Anritsu	MA2411B	Pulse Power Sensor	12/18/2020	Annual	12/18/2021	1126066
Anritsu	MA2411B	Pulse Power Sensor	3/9/2021	Annual	3/9/2022	1207470
Anritsu	MT8821C	Radio Communication Analyzer	4/16/2021	Annual	4/16/2022	6200901190
Anritsu	MT8821C	Radio Communication Analyzer	7/18/2021	Annual	7/18/2022	6262150047
Anritsu	MA24106A	USB Power Sensor	3/2/2021	Annual	3/2/2022	1349509
Anritsu	MA24106A	USB Power Sensor	6/29/2021	Annual	6/29/2022	1349513
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M15SA00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043588
Control Company	4352	Long Stem Thermometer	5/16/2020	Biennial	5/16/2022	200294604
Control Company	4040	Therm./ Clock/ Humidity Monitor	3/6/2020	Biennial	3/6/2022	200170296
Control Company	4040	Therm./ Clock/ Humidity Monitor	3/6/2020	Biennial	3/6/2022	200170313
Insize	1108-150	Digital Caliper	1/17/2020	Biennial	1/17/2022	409193536
Intelligent Weigh	PD-3000	Electronic Balance	CBT	N/A	CBT	11081534
Intelligent Weighing	PD-3000	Electronic Balance	CBT	N/A	CBT	120405017
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	N6705B	DC Power Analyzer	5/5/2021	Triennial	5/5/2024	MY53004059
Keysight Technologies	N9020A	MXA Signal Analyzer	2/24/2021	Annual	2/24/2022	MY48010233
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
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	TVA-11-422	RF Power Amp	CBT	N/A	CBT	QA1303002
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/1/2020	Annual	12/1/2021	N/A
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
Pasternack	NC-100	Torque Wrench (8in-lbs)	8/5/2020	Biennial	8/5/2022	47639-47
Rohde & Schwarz	NRP50S	3-Path Dipole Power Sensor	5/7/2021	Annual	5/7/2022	101339
Rohde & Schwarz	NRP8S	3-Path Dipole Power Sensor	5/13/2021	Annual	5/13/2022	109052
Rohde & Schwarz	CMW500	Radio Communication Tester	2/18/2021	Annual	2/18/2022	101767
Rohde & Schwarz	CMW500	Radio Communication Tester	1/19/2021	Annual	1/19/2022	111427
Rohde & Schwarz	CMW500	Radio Communication Tester	3/22/2021	Annual	3/22/2022	167283
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	2/10/2021	Annual	2/10/2022	161662
Rohde & Schwarz	NRP8S	3 Path Dipole Power Sensor	3/24/2021	Annual	3/24/2022	108168
Rohde & Schwarz	NRP50S	3-Path Dipole Power Sensor	3/24/2021	Annual	3/24/2022	101164
Seekonk	NC-100	Torque Wrench	8/5/2020	Biennial	8/5/2022	N/A
Seekonk	NC-100	Torque Wrench (8" lb)	8/4/2020	Biennial	8/4/2022	21053
Seekonk Inc	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
SPEAG	D750V3	750 MHz SAR Dipole	3/16/2020	Biennial	3/16/2022	1003
SPEAG	D750V3	750 MHz SAR Dipole	3/9/2021	Annual	3/9/2022	1054
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	1161
SPEAG	D750V3	750 MHz SAR Dipole	5/11/2021	Annual	5/11/2022	1034
SPEAG	D750V3	750 MHz SAR Dipole	2/17/2021	Annual	2/17/2022	1046
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Annual	1/21/2022	4d132
SPEAG	D835V2	835 MHz SAR Dipole	4/15/2021	Annual	4/15/2022	4d119
SPEAG	D835V2	835 MHz SAR Dipole	5/11/2021	Annual	5/11/2022	4d180
SPEAG	D1750V2	1750 MHz SAR Dipole	5/12/2020	Biennial	5/12/2022	1148
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Triennial	10/22/2021	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	10/22/2021	Annual	10/22/2022	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Triennial	2/21/2022	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	9/21/2021	Annual	9/21/2022	5d149
SPEAG	D2300V2	2300 MHz SAR Dipole	6/3/2021	Annual	6/3/2022	1116
SPEAG	D2300V2	2300 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	1073
SPEAG	D2450V2	2450 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	981
SPEAG	D2450V2	2450 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	719
SPEAG	D2450V2	2450 MHz SAR Dipole	2/8/2021	Annual	2/8/2022	882
SPEAG	D2450V2	2450 MHz SAR Dipole	5/12/2021	Annual	5/12/2022	945
SPEAG	D2600V2	2600 MHz SAR Dipole	4/14/2021	Annual	4/14/2022	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	11/12/2019	Biennial	11/12/2021	1071
SPEAG	D3500V2	3500 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	1059
SPEAG	D3500V2	3500 MHz SAR Dipole	1/21/2020	Biennial	1/21/2022	1097
SPEAG	D3700V2	3700 MHz SAR Dipole	1/21/2020	Biennial	1/21/2022	1067
SPEAG	D3700V2	3700 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	1018
SPEAG	D3900V2	3900 MHz SAR Dipole	10/9/2020	Biennial	10/9/2022	1056
SPEAG	D3900V2	3900 MHz SAR Dipole	6/10/2021	Annual	6/10/2022	1073
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/20/2021	Annual	1/20/2022	1057
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/15/2021	Annual	9/15/2022	1191
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/11/2021	Annual	5/11/2022	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/18/2021	Annual	3/18/2022	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/16/2020	Annual	10/16/2021	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2021	Annual	6/15/2022	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/3/2021	Annual	8/3/2022	1681
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/7/2021	Annual	4/7/2022	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/10/2021	Annual	3/10/2022	1415
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/7/2020	Annual	12/7/2021	1533
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/13/2021	Annual	7/13/2022	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1676
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/22/2021	Annual	6/22/2022	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1678
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/6/2020	Annual	11/6/2021	1466
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/9/2021	Annual	4/9/2022	1502
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/1/2021	Annual	3/1/2022	1652
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/16/2021	Annual	8/16/2022	1450
SPEAG	DAK-3.5	Dielectric Parameter Probes	12/9/2020	Annual	12/9/2021	1278
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	N/A
SPEAG	EX3DV4	SAR Probe	5/18/2021	Annual	5/18/2022	3914
SPEAG	EX3DV4	SAR Probe	4/19/2021	Annual	4/19/2022	7357
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7406
SPEAG	EX3DV4	SAR Probe	6/21/2021	Annual	6/21/2022	7409
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7410
SPEAG	EX3DV4	SAR Probe	3/16/2021	Annual	3/16/2022	7526
SPEAG	EX3DV4	SAR Probe	10/20/2020	Annual	10/20/2021	7539
SPEAG	EX3DV4	SAR Probe	10/20/2020	Annual	10/20/2021	7551
SPEAG	EX3DV4	SAR Probe	6/28/2021	Annual	6/28/2022	7660
SPEAG	EX3DV4	SAR Probe	8/5/2021	Annual	8/5/2022	7670
SPEAG	EX3DV4	SAR Probe	12/11/2020	Annual	12/11/2021	7571
SPEAG	EX3DV4	SAR Probe	9/20/2021	Annual	9/20/2022	7552
SPEAG	EX3DV4	SAR Probe	6/29/2021	Annual	6/29/2022	7659
SPEAG	EX3DV4	SAR Probe	11/12/2020	Annual	11/12/2021	7565
SPEAG	EX3DV4	SAR Probe	4/16/2021	Annual	4/16/2022	7402
SPEAG	EX3DV4	SAR Probe	3/3/2021	Annual	3/3/2022	7637
SPEAG	EX3DV4	SAR Probe	8/5/2021	Annual	6/28/2022	7661

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.

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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

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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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