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SAR EVALUATION REPORT

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

Date of Testing:
09/19/21 - 11/15/21
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2109090103-01 (Rev1).A3L

FCC ID: **A3LSMS906U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-S906U, SM-S906U1

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	0.17	0.24	0.58	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.28	1.07	2.16
PCE	UMTS 850	826.40 - 846.60 MHz	0.24	0.29	0.51	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.19	0.84	1.05	3.14
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.21	0.84	1.04	2.72
PCE	LTE Band 71	665.5 - 695.5 MHz	0.20	0.29	0.45	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.26	0.38	0.58	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.27	0.35	0.71	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.23	0.30	0.65	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.28	0.31	0.68	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.25	0.26	0.60	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.19	1.03	1.26	2.42
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	0.25	1.02	1.17	2.62
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	0.11	0.52	0.90	2.69
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.32	0.52	3.01
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.79	0.18	0.67	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	< 0.1	0.29	0.45	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	0.19	0.24	0.41	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.29	0.40	0.62	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.35	0.31	0.65	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.93	1.08	1.17	3.14
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	1.07	1.00	1.26	3.14
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	1.05	0.50	0.92	2.75
PCE	NR Band n7	2502.5 - 2567.5 MHz	< 0.1	0.26	0.59	2.84
PCE	NR Band n41	2506.02 - 2679.99 MHz	1.19	0.19	0.53	2.80
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	0.54	0.13	0.29	1.75
PCE	NR Band n77	3705 - 3975 MHz	0.94	0.12	0.51	2.59
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.16	0.12	0.38	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*	0.14*	N/A	0.56*
NII	U-NII-2C	5500 - 5720 MHz	0.15*	0.33*	N/A	1.30*
NII	U-NII-3	5745 - 5825 MHz	0.11*	0.30*	0.44*	N/A
NII	U-NII-4	5845 - 5885 MHz	< 0.1*	0.22*	N/A	0.60*
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.17	< 0.1	0.23	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.56	1.57	3.99

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

Note: This revised Test Report (S/N: 1M2109090103-01 (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	11, 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	30.0		28.3	31.6	28.3	28.3	25.3
GSM 1900	A	AG0	26.4		18.8	32.4	18.8	18.8	22.1
UMTS 850	A	AG0	30.3		26.6	31.2	26.6	26.6	24.0
UMTS 1750	A	AG0	24.7		21.0	31.2	19.0	21.0	23.0
UMTS 1900	A	AG0	24.7		20.5	30.8	18.5	20.5	23.0
LTE Band 71	A	AG0	31.2		27.3	32.9	27.3	27.3	24.8
LTE Band 12	A	AG0	30.0		27.1	31.7	27.1	27.1	24.8
LTE Band 13	A	AG0	29.9		27.5	31.2	27.0	27.5	24.5
LTE Band 14	A	AG0	30.2		28.0	31.5	27.3	28.0	24.5
LTE Band 26 (Cell)	A	AG0	30.9		26.3	31.3	26.3	26.3	24.8
LTE Band 5 (Cell)	A	AG0	31.4		26.9	31.8	26.9	26.9	24.8
LTE Band 66/4 (AWS)	A	AG0	23.0		20.0	23.0	19.0	20.0	23.5
LTE Band 25/2 (PCS)	A	AG0	24.4		20.0	30.2	18.5	20.0	23.5
LTE Band 30	A	AG0	26.3		21.0	33.1	19.0	21.0	22.5
LTE Band 7	B	AG0	22.0		20.0	22.0	20.0	20.0	23.0
LTE Band 41/38 (PC3)	B	AG0	21.5		20.0	21.5	20.0	20.0	22.0
LTE Band 41 (PC2)	B	AG0	21.5		20.0	21.5	20.0	20.0	22.9
LTE Band 48	F	AG1	18.5		18.5	16.0	18.5	18.5	21.0
NR Band n71	A	AG0	27.0		27.0	32.5	27.0	27.0	24.5
NR Band n12	A	AG0	29.5		27.5	30.8	27.4	27.5	24.5
NR Band n5 (Cell)	A	AG0	30.6		27.0	30.1	27.0	27.0	24.5
NR Band n66 (AWS)	A	AG0	22.5		20.0	22.5	18.5	20.0	23.5
NR Band n66 (AWS)	I	AG1	20.0		20.0	17.5	20.0	20.0	23.5
NR Band n25/2 (PCS)	A	AG0	22.5		19.0	22.5	18.5	19.0	23.5
NR Band n25/2 (PCS)	I	AG1	20.5		20.5	18.0	20.5	20.5	23.5
NR Band n30	A	AG0	26.0		21.0	32.8	19.0	21.0	22.0
NR Band n30	I	AG1	20.0		20.0	18.5	20.0	20.0	22.5
NR Band n7	B	AG0	22.0		20.0	22.0	20.0	20.0	23.0
NR Band n41 SRS 1 (PC3)/n38	I	AG1	19.5		19.5	17.0	19.5	19.5	24.0
NR Band n41 SRS 1 (PC2)	I	AG1	19.5		19.5	17.0	19.5	19.5	26.0
NR Band n41 SRS 2 (PC3)	B	AG0	16.0		16.0	16.0	16.0	16.0	18.7
NR Band n41 SRS 2 (PC2)	B	AG0	16.0		16.0	16.0	16.0	16.0	20.7
NR Band n41 SRS 3 (PC3)	E	AG1	15.0		15.0	15.0	15.0	15.0	18.5
NR Band n41 SRS 3 (PC2)	E	AG1	15.0		15.0	15.0	15.0	15.0	20.5
NR Band n41 SRS 4 (PC3)	D	AG0	13.0		13.0	13.0	13.0	13.0	16.0
NR Band n41 SRS 4 (PC2)	D	AG0	13.0		13.0	13.0	13.0	13.0	18.0
NR Band n77 DoD SRS 1 (PC3)	F	AG1	17.0		17.0	15.5	17.0	17.0	24.0
NR Band n77 DoD SRS 1 (PC2)	F	AG1	17.0		17.0	15.5	17.0	17.0	26.0
NR Band n77 DoD SRS 2 (PC3)	C	AG0	11.0		11.0	11.0	11.0	11.0	18.0
NR Band n77 DoD SRS 2 (PC2)	C	AG0	11.0		11.0	11.0	11.0	11.0	20.0
NR Band n77 DoD SRS 3 (PC3)	K	AG1	15.0		15.0	15.0	15.0	15.0	23.0
NR Band n77 DoD SRS 3 (PC2)	K	AG1	15.0		15.0	15.0	15.0	15.0	25.0
NR Band n77 DoD SRS 4 (PC3)	D	AG0	11.5		11.5	11.5	11.5	11.5	18.3
NR Band n77 DoD SRS 4 (PC2)	D	AG0	11.5		11.5	11.5	11.5	11.5	20.3
NR Band n77 SRS 1 (PC3)	F	AG1	17.0		17.0	15.5	17.0	17.0	24.0
NR Band n77 SRS 1 (PC2)	F	AG1	17.0		17.0	15.5	17.0	17.0	26.0
NR Band n77 SRS 2 (PC3)	C	AG0	11.0		11.0	11.0	11.0	11.0	18.0
NR Band n77 SRS 2 (PC2)	C	AG0	11.0		11.0	11.0	11.0	11.0	20.0
NR Band n77 SRS 3 (PC3)	K	AG1	15.0		15.0	15.0	15.0	15.0	23.0
NR Band n77 SRS 3 (PC2)	K	AG1	15.0		15.0	15.0	15.0	15.0	25.0
NR Band n77 SRS 4 (PC3)	D	AG0	11.5		11.5	11.5	11.5	11.5	18.3
NR Band n77 SRS 4 (PC2)	D	AG0	11.5		11.5	11.5	11.5	11.5	20.3

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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.

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.

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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	30.0	30.0	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 0 (Body-Worn or Phablet Max)	Max Allowed Power	30.0	30.0	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 1 (Phablet Reduced)	Max Allowed Power	29.0	29.0	26.0	24.2	23.0	27.0	25.0	23.0	22.0
	Nominal	28.0	28.0	25.0	23.2	22.0	26.0	24.0	22.0	21.0
DSI = 2 (Head)	Max Allowed Power	30.0	30.0	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.0	29.0	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 3 (Hotspot)	Max Allowed Power	N/A	29.0	26.0	24.2	23.0	27.0	25.0	23.0	22.0
	Nominal	N/A	28.0	25.0	23.2	22.0	26.0	24.0	22.0	21.0
DSI = 4 (Earjack)	Max Allowed Power	29.0	29.0	26.0	24.2	23.0	27.0	25.0	23.0	22.0
	Nominal	28.0	28.0	25.0	23.2	22.0	26.0	24.0	22.0	21.0

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	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
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	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
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	21.0	21.0	21.0
	Nominal	20.5	20.0	20.0	20.0
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	19.5	18.5	18.5	18.5
	Nominal	18.5	17.5	17.5	17.5
DSI = 4 (Earjack)	Max Allowed Power	21.5	21.0	21.0	21.0
	Nominal	20.5	20.0	20.0	20.0

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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)
LTE Band 71	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
LTE Band 12	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
LTE Band 13	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 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	25.8	25.8	25.8	25.8	25.8	25.8
		Nominal	24.8	24.8	24.8	24.8	24.8	24.8
LTE Band 5 (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
LTE Band 66 (AWS)	A	Max Allowed Power	24.5	24.0	21.0	24.0	20.0	21.0
		Nominal	23.5	23.0	20.0	23.0	19.0	20.0
LTE Band 4 (AWS)	A	Max Allowed Power	24.5	24.0	21.0	24.0	20.0	21.0
		Nominal	23.5	23.0	20.0	23.0	19.0	20.0
LTE Band 25 (PCS)	A	Max Allowed Power	24.5	24.5	21.0	24.5	19.5	21.0
		Nominal	23.5	23.5	20.0	23.5	18.5	20.0
LTE Band 2 (PCS)	A	Max Allowed Power	24.5	24.5	21.0	24.5	19.5	21.0
		Nominal	23.5	23.5	20.0	23.5	18.5	20.0
LTE Band 30	A	Max Allowed Power	23.5	23.5	22.0	23.5	20.0	22.0
		Nominal	22.5	22.5	21.0	22.5	19.0	21.0
LTE Band 7	B	Max Allowed Power	24.0	23.0	21.0	23.0	21.0	21.0
		Nominal	23.0	22.0	20.0	22.0	20.0	20.0
LTE Band 41 (PC3)	B	Max Allowed Power	25.0	24.5	23.0	24.5	23.0	23.0
		Nominal	24.0	23.5	22.0	23.5	22.0	22.0
LTE Band 41 (PC2)	B	Max Allowed Power	27.5	26.1	24.6	26.1	24.6	24.6
		Nominal	26.5	25.1	23.6	25.1	23.6	23.6
LTE Band 38	B	Max Allowed Power	25.0	24.5	23.0	24.5	23.0	23.0
		Nominal	24.0	23.5	22.0	23.5	22.0	22.0
LTE Band 48	F	Max Allowed Power	24.0	21.5	21.5	19.0	21.5	21.5
		Nominal	23.0	20.5	20.5	18.0	20.5	20.5

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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)
NR Band n71	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
NR Band n12	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
NR Band n5 (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
NR Band n66 (AWS)	A	Max Allowed Power	24.5	23.5	21.0	23.5	19.5	21.0
		Nominal	23.5	22.5	20.0	22.5	18.5	20.0
NR Band n66 (AWS)	I	Max Allowed Power	24.5	21.0	21.0	18.5	21.0	21.0
		Nominal	23.5	20.0	20.0	17.5	20.0	20.0
NR Band n25 (PCS)	A	Max Allowed Power	24.5	23.5	20.0	23.5	19.5	20.0
		Nominal	23.5	22.5	19.0	22.5	18.5	19.0
NR Band n25 (PCS)	I	Max Allowed Power	24.5	21.5	21.5	19.0	21.5	21.5
		Nominal	23.5	20.5	20.5	18.0	20.5	20.5
NR Band n2 (PCS)	A	Max Allowed Power	24.5	23.5	20.0	23.5	19.5	20.0
		Nominal	23.5	22.5	19.0	22.5	18.5	19.0
NR Band n2 (PCS)	I	Max Allowed Power	24.5	21.5	21.5	19.0	21.5	21.5
		Nominal	23.5	20.5	20.5	18.0	20.5	20.5
NR Band n30	A	Max Allowed Power	23.0	23.0	22.0	23.0	20.0	22.0
		Nominal	22.0	22.0	21.0	22.0	19.0	21.0
NR Band n30	I	Max Allowed Power	23.5	21.0	21.0	19.5	21.0	21.0
		Nominal	22.5	20.0	20.0	18.5	20.0	20.0
NR Band n7	B	Max Allowed Power	24.0	23.0	21.0	23.0	21.0	21.0
		Nominal	23.0	22.0	20.0	22.0	20.0	20.0
NR Band n41 SRS 1 (PC3)	I	Max Allowed Power	25.0	20.5	20.5	18.0	20.5	20.5
		Nominal	24.0	19.5	19.5	17.0	19.5	19.5
NR Band n41 SRS 1 (PC2)	I	Max Allowed Power	27.0	20.5	20.5	18.0	20.5	20.5
		Nominal	26.0	19.5	19.5	17.0	19.5	19.5
NR Band n41 SRS 2 (PC3)	B	Max Allowed Power	19.7	17.0	17.0	17.0	17.0	17.0
		Nominal	18.7	16.0	16.0	16.0	16.0	16.0
NR Band n41 SRS 2 (PC2)	B	Max Allowed Power	21.7	17.0	17.0	17.0	17.0	17.0
		Nominal	20.7	16.0	16.0	16.0	16.0	16.0
NR Band n41 SRS 3 (PC3)	E	Max Allowed Power	19.5	16.0	16.0	16.0	16.0	16.0
		Nominal	18.5	15.0	15.0	15.0	15.0	15.0
NR Band n41 SRS 3 (PC2)	E	Max Allowed Power	21.5	16.0	16.0	16.0	16.0	16.0
		Nominal	20.5	15.0	15.0	15.0	15.0	15.0
NR Band n41 SRS 4 (PC3)	D	Max Allowed Power	17.0	14.0	14.0	14.0	14.0	14.0
		Nominal	16.0	13.0	13.0	13.0	13.0	13.0
NR Band n41 SRS 4 (PC2)	D	Max Allowed Power	19.0	14.0	14.0	14.0	14.0	14.0
		Nominal	18.0	13.0	13.0	13.0	13.0	13.0
NR Band n38	I	Max Allowed Power	25.0	20.5	20.5	18.0	20.5	20.5
		Nominal	24.0	19.5	19.5	17.0	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)
NR Band n77 DoD SRS 1 (PC3)	F	Max Allowed Power	25.0	18.0	18.0	16.5	18.0	18.0
		Nominal	24.0	17.0	17.0	15.5	17.0	17.0
NR Band n77 DoD SRS 1 (PC2)	F	Max Allowed Power	27.0	18.0	18.0	16.5	18.0	18.0
		Nominal	26.0	17.0	17.0	15.5	17.0	17.0
NR Band n77 DoD SRS 2 (PC3)	C	Max Allowed Power	19.0	12.0	12.0	12.0	12.0	12.0
		Nominal	18.0	11.0	11.0	11.0	11.0	11.0
NR Band n77 DoD SRS 2 (PC2)	C	Max Allowed Power	21.0	12.0	12.0	12.0	12.0	12.0
		Nominal	20.0	11.0	11.0	11.0	11.0	11.0
NR Band n77 DoD SRS 3 (PC3)	K	Max Allowed Power	24.0	16.0	16.0	16.0	16.0	16.0
		Nominal	23.0	15.0	15.0	15.0	15.0	15.0
NR Band n77 DoD SRS 3 (PC2)	K	Max Allowed Power	26.0	16.0	16.0	16.0	16.0	16.0
		Nominal	25.0	15.0	15.0	15.0	15.0	15.0
NR Band n77 DoD SRS 4 (PC3)	D	Max Allowed Power	19.3	12.5	12.5	12.5	12.5	12.5
		Nominal	18.3	11.5	11.5	11.5	11.5	11.5
NR Band n77 DoD SRS 4 (PC2)	D	Max Allowed Power	21.3	12.5	12.5	12.5	12.5	12.5
		Nominal	20.3	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 1 (PC3)	F	Max Allowed Power	25.0	18.0	18.0	16.5	18.0	18.0
		Nominal	24.0	17.0	17.0	15.5	17.0	17.0
NR Band n77 SRS 1 (PC2)	F	Max Allowed Power	27.0	18.0	18.0	16.5	18.0	18.0
		Nominal	26.0	17.0	17.0	15.5	17.0	17.0
NR Band n77 SRS 2 (PC3)	C	Max Allowed Power	19.0	12.0	12.0	12.0	12.0	12.0
		Nominal	18.0	11.0	11.0	11.0	11.0	11.0
NR Band n77 SRS 2 (PC2)	C	Max Allowed Power	21.0	12.0	12.0	12.0	12.0	12.0
		Nominal	20.0	11.0	11.0	11.0	11.0	11.0
NR Band n77 SRS 3 (PC3)	K	Max Allowed Power	24.0	16.0	16.0	16.0	16.0	16.0
		Nominal	23.0	15.0	15.0	15.0	15.0	15.0
NR Band n77 SRS 3 (PC2)	K	Max Allowed Power	26.0	16.0	16.0	16.0	16.0	16.0
		Nominal	25.0	15.0	15.0	15.0	15.0	15.0
NR Band n77 SRS 4 (PC3)	D	Max Allowed Power	19.3	12.5	12.5	12.5	12.5	12.5
		Nominal	18.3	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 4 (PC2)	D	Max Allowed Power	21.3	12.5	12.5	12.5	12.5	12.5
		Nominal	20.3	11.5	11.5	11.5	11.5	11.5

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	18.5	19.5	20.0 Ch. 11: 18.0	21.0 Ch. 11: 19.0	20.0 Ch. 1: 17.5 Ch. 11: 17.0	21.0 Ch. 1: 18.5 Ch. 11: 18.0	20.0 Ch. 1: 17.0 Ch. 11: 16.5	21.0 Ch. 1: 18.0 Ch. 11: 17.5

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 5G FR1/FR2 NR (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. 11: 18.0	20.0 Ch. 11: 19.0	19.0 Ch. 1: 17.5 Ch. 11: 17.0	20.0 Ch. 1: 18.5 Ch. 11: 18.0	19.0 Ch. 1: 17.0 Ch. 11: 16.5	20.0 Ch. 1: 18.0 Ch. 11: 17.5

The below table is applicable in the following conditions:

- Simultaneous conditions with 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	15.0	16.0	18.0	19.0	18.0 Ch. 1: 17.5 Ch. 11: 17.0	19.0 Ch. 1: 18.5 Ch. 11: 18.0	18.0 Ch. 1: 17.0 Ch. 11: 16.5	19.0 Ch. 1: 18.0 Ch. 11: 17.5

The below table is applicable in the following conditions:

- RCV Active during simultaneous conditions with 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	19.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0
	UNII-2A	19.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0
	UNII-2C	19.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0
	UNII-3	19.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0
	UNII-4	19.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0
5 GHz WIFI (40MHz BW)	UNII-1			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-2A			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-2C			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-3			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-4			19.0	20.0	19.0	20.0	19.0	20.0
5 GHz WIFI (80MHz BW)	UNII-1					18.5	19.5	18.5	19.5
	UNII-2A					18.5	19.5	18.5	19.5
	UNII-2C					18.5	19.5	18.5	19.5
	UNII-3					18.5	19.5	18.5	19.5
	UNII-4					18.5	19.5	18.5	19.5
5 GHz WIFI (160MHz BW)	UNII-1/2A					18.0	19.0	18.0	19.0
	UNII-2C					18.0	19.0	18.0	19.0
	UNII-3/4					18.0	19.0	18.0	19.0

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

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-1/2A					16.0	17.0	16.0	17.0
	UNII-2C					16.0	17.0	16.0	17.0
	UNII-3/4					16.0	17.0	16.0	17.0

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The below table is applicable in the following conditions:

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

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	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2A	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2C	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-3	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-4	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
5 GHz WIFI (40MHz BW)	UNII-1			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2A			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2C			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-3			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-4			15.0	16.0	15.0	16.0	15.0	16.0
5 GHz WIFI (80MHz BW)	UNII-1					15.0	16.0	15.0	16.0
	UNII-2A					15.0	16.0	15.0	16.0
	UNII-2C					15.0	16.0	15.0	16.0
	UNII-3					15.0	16.0	15.0	16.0
	UNII-4					15.0	16.0	15.0	16.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					15.0	16.0	15.0	16.0
	UNII-2C					15.0	16.0	15.0	16.0
	UNII-3/4					15.0	16.0	15.0	16.0

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1.4.6 2.4 GHz Maximum Bluetooth Output Power

Mode	ePA Single Antenna				iPA Single Antenna				iPA Dual Antenna	
	Antenna 1		Antenna 2		Antenna 1		Antenna 2			
	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	17.5	18.5	16.0	17.0	11.0	12.0	11.0	12.0	13.5	14.5
Bluetooth EDR (in dBm)	17.0	18.0	15.5	16.5	8.0	9.0	8.0	9.0	12.0	13.0
Bluetooth LE 2Mbps (in dBm)	17.0	18.0	16.0	17.0	10.0	11.0	10.0	11.0	12.5	13.5
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)					10.0	11.0	10.0	11.0		

1.4.7 2.4 GHz Reduced Bluetooth Output Power

The below table is applicable in the following conditions:

- RCV active

Mode	ePA Single Antenna				iPA Single Antenna				iPA Dual Antenna	
	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	11.0	12.0	11.0	12.0	13.5	14.5
Bluetooth EDR (in dBm)	14.0	15.0	14.0	15.0	8.0	9.0	8.0	9.0	12.0	13.0
Bluetooth LE 2Mbps (in dBm)	14.0	15.0	14.0	15.0	10.0	11.0	10.0	11.0	12.5	13.5
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)					10.0	11.0	10.0	11.0		

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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

Device Sides/Edges 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	No	Yes
LTE Band 48	Yes	Yes	Yes	No	No	Yes
LTE Band 41	Yes	Yes	No	Yes	No	Yes
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 I	Yes	Yes	Yes	No	Yes	No
NR Band n25 (PCS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS) Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n30 Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n30 Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n7 Antenna B	Yes	Yes	No	Yes	No	Yes
NR Band n41 Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n41 Antenna B	Yes	Yes	No	Yes	No	Yes
NR Band n41 Antenna E	Yes	Yes	Yes	No	No	Yes
NR Band n41 Antenna D	Yes	Yes	No	Yes	Yes	No
NR Band n77 DoD Antenna F		Yes	Yes	No	No	Yes
NR Band n77 DoD Antenna C	Yes	Yes	No	Yes	No	Yes
NR Band n77 DoD Antenna K	Yes	Yes	Yes	Yes	No	No
NR Band n77 DoD Antenna D	Yes	Yes	No	Yes	Yes	No
NR Band n77 Antenna F	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna C	Yes	Yes	No	Yes	No	Yes
NR Band n77 Antenna K	Yes	Yes	Yes	Yes	No	No
NR Band n77 Antenna D	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, U-NII-4, and WIFI6E operations are disabled.

1.6 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in 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. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
2. 2.4 GHz WLAN and 2.4 GHz Bluetooth 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-NII2A, U-NII2C, and U-NII4 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/g/n/ac/ax. 802.11a/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)
- 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)	1M2109090103-24.A3L
Near Field PD Part 0 Report	
RF Exposure Part 2 Test Report	1M2109090103-25.A3L
RF Exposure Compliance Summary Report	1M2109090103-26.A3L
RF Exposure Part 0 Test Report	1M2109090103-23.A3L
WIFI 6GHz RF exposure	1M2109090103-28.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: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)	
NR Band n41: 70 MHz	2531.01 (506202)		N/A		2655 (531000)	
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)		2595 (519000)		2615 (523000)	
NR Band n38: 15 MHz	2577.5 (515500)		2595 (519000)		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 12/13/14/5/66/30/48					
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:

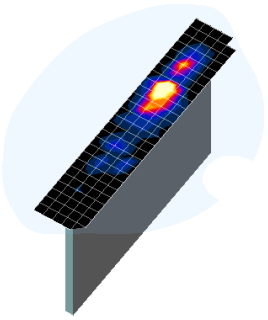

Figure 4-1
Sample SAR Area Scan

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*$\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*$\Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

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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].

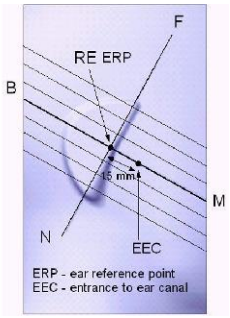

Figure 5-1
Close-Up Side view of ERP

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.

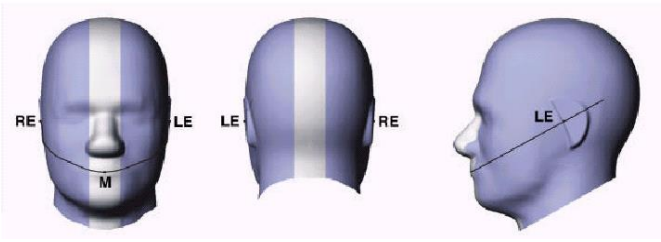

Figure 5-2
Front, back and side view of SAM Twin Phantom

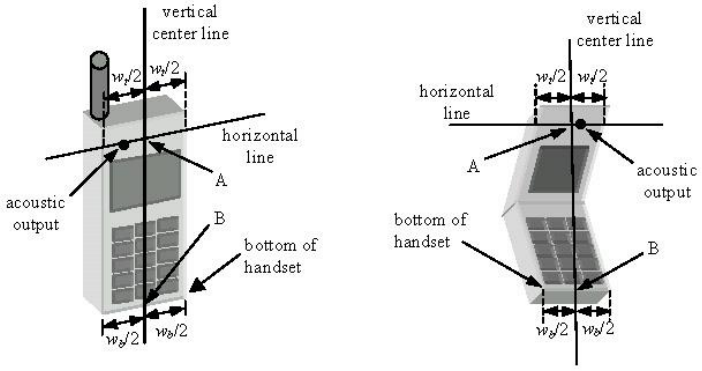

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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.

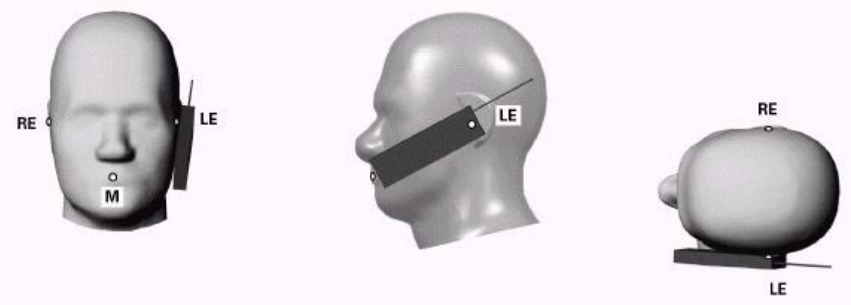

Figure 6-1 Front, Side and Top View of Cheek Position

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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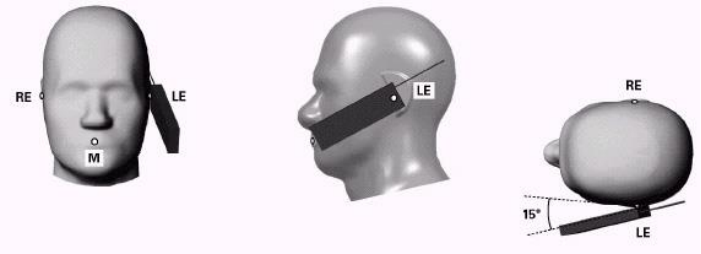

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

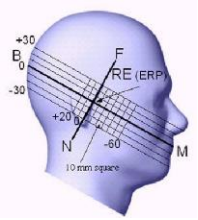

Figure 6-3
Side view w/ relevant markings

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.

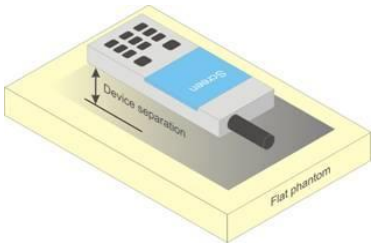

Figure 6-4
Sample Body-Worn Diagram

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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	31.67	31.70	31.84	**29.50**	27.42	26.17	24.69	22.56	21.86
	190	32.12	32.15	31.73	**29.28**	27.49	26.42	24.83	22.85	21.65
	251	31.96	31.98	31.90	**29.82**	27.24	26.32	24.75	22.71	21.72
GSM 1900	512	28.92	28.96	28.13	**26.05**	24.04	25.09	23.66	21.87	20.83
	661	29.00	29.03	28.04	**26.22**	23.75	25.01	23.80	21.91	21.02
	810	28.86	28.90	28.29	**26.03**	23.75	25.00	23.77	21.85	20.92

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	22.47	22.50	25.65	**25.07**	24.24	16.97	18.50	18.13	18.68
	190	22.92	22.95	25.54	**24.85**	24.31	17.22	18.64	18.42	18.47
	251	22.76	22.78	25.71	**25.39**	24.06	17.12	18.56	18.28	18.54
GSM 1900	512	19.72	19.76	21.94	**21.62**	20.86	15.89	17.47	17.44	17.65
	661	19.80	19.83	21.85	**21.79**	20.57	15.81	17.61	17.48	17.84
	810	19.66	19.70	22.10	**21.60**	20.57	15.80	17.58	17.42	17.74

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		19.80	19.80	21.81	**22.07**	21.32	16.80	17.81	17.57	17.82

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Table 9-2
Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), DSI = 3 (Hotspot mode), and/or DSI = 4 (Earjack active)

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	27.45	28.12	24.92	23.01	**21.25**	25.09	23.66	21.87	20.83
	661	27.88	28.19	25.30	22.61	**21.29**	25.01	23.80	21.91	21.02
	810	27.69	27.93	24.78	22.57	**21.00**	25.00	23.77	21.85	20.92

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	18.25	18.92	18.73	18.58	**18.07**	15.89	17.47	17.44	17.65
	661	18.68	18.99	19.11	18.18	**18.11**	15.81	17.61	17.48	17.84
	810	18.49	18.73	18.59	18.14	**17.82**	15.80	17.58	17.42	17.74
GSM 1900	**Frame Avg.Targets:**	18.80	18.80	18.81	18.77	**18.82**	16.80	17.81	17.57	17.82

Note:

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

GSM Class: B
GPRS Multislot class: 33 (Max 4 Tx uplink slots)
EDGE Multislot class: 33 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A

Figure 9-1
Power Measurement Setup

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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	24.13	23.98	24.05	23.35	23.43	23.40	23.27	23.31	23.27	-
99		12.2 kbps AMR	24.11	24.00	24.04	23.35	23.40	23.34	23.22	23.30	23.25	-
6	HSDPA	Subtest 1	23.08	23.13	23.01	22.07	22.01	21.97	21.95	21.99	22.00	0
6		Subtest 2	23.09	23.07	23.03	22.04	22.06	22.05	21.89	21.93	21.95	0
6		Subtest 3	22.53	22.53	22.48	21.58	21.54	21.52	21.57	21.45	21.47	0.5
6		Subtest 4	22.56	22.60	22.54	21.48	20.94	21.62	21.48	21.35	21.44	0.5
6	HSUPA	Subtest 1	23.05	23.02	23.02	22.03	22.06	22.01	21.97	21.95	21.96	0
6		Subtest 2	21.09	21.11	21.06	20.10	20.12	20.05	19.96	19.99	20.00	2
6		Subtest 3	22.07	22.10	22.08	21.08	21.09	21.06	21.00	20.98	20.97	1
6		Subtest 4	21.10	21.08	21.04	20.12	20.07	20.04	19.99	19.98	20.60	2
6		Subtest 5	23.09	23.13	23.07	22.10	22.08	22.06	22.01	21.97	22.02	0
8	DC-HSDPA	Subtest 1	23.15	23.21	23.12	22.05	22.08	22.03	22.05	22.12	22.13	0
8		Subtest 2	23.14	23.19	23.14	22.17	22.20	22.15	22.12	22.14	22.16	0
8		Subtest 3	22.75	22.80	22.77	21.69	21.76	21.70	21.69	21.74	21.75	0.5
8		Subtest 4	22.76	22.75	22.73	21.70	21.73	21.77	21.71	21.77	21.79	0.5

Table 9-4
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	21.65	21.69	21.64	21.32	21.34	21.35	-
99		12.2 kbps AMR	21.65	21.67	21.63	21.28	21.30	21.34	-
6	HSDPA	Subtest 1	19.62	19.70	19.72	19.68	19.71	19.72	0
6		Subtest 2	19.55	19.66	19.69	19.64	19.73	19.73	0
6		Subtest 3	19.16	19.25	19.24	19.28	19.28	19.27	0.5
6		Subtest 4	19.12	19.24	19.26	19.27	19.26	19.28	0.5
6	HSUPA	Subtest 1	19.72	19.75	19.81	19.78	19.74	19.71	0
6		Subtest 2	17.79	17.84	17.78	17.85	19.71	17.79	2
6		Subtest 3	18.67	18.81	18.78	18.75	18.80	18.74	1
6		Subtest 4	17.59	17.84	17.88	17.84	17.77	17.80	2
6		Subtest 5	19.77	19.85	19.86	19.85	19.82	19.77	0
8	DC-HSDPA	Subtest 1	19.87	19.90	19.92	19.88	19.89	19.86	0
8		Subtest 2	19.86	19.95	19.90	19.85	19.82	19.86	0
8		Subtest 3	19.38	19.40	19.41	19.46	19.42	19.59	0.5
8		Subtest 4	19.41	19.43	19.46	19.49	19.43	19.46	0.5

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Table 9-5
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	19.37	19.47	19.39	18.88	18.85	18.94	-
99		12.2 kbps AMR	19.36	19.42	19.34	18.87	18.85	18.92	-
6	HSDPA	Subtest 1	17.91	17.90	17.89	17.47	17.38	17.19	0
6		Subtest 2	18.03	18.10	18.06	17.39	17.43	17.42	0
6		Subtest 3	17.50	17.55	17.56	16.94	16.91	16.87	0.5
6		Subtest 4	17.43	17.58	17.55	16.81	16.95	16.92	0.5
6	HSUPA	Subtest 1	18.06	18.08	18.05	17.45	17.48	17.44	0
6		Subtest 2	15.99	16.02	16.02	15.47	15.42	15.41	2
6		Subtest 3	16.97	17.01	16.99	16.46	16.43	16.40	1
6		Subtest 4	16.01	15.99	16.02	15.48	15.42	15.44	2
6		Subtest 5	17.97	18.04	18.03	17.47	17.44	17.39	0
8	DC-HSDPA	Subtest 1	18.02	18.03	18.04	17.46	17.47	17.45	0
8		Subtest 2	17.97	18.02	18.05	17.47	17.43	17.42	0
8		Subtest 3	17.47	17.55	17.56	16.93	16.90	16.95	0.5
8		Subtest 4	17.51	17.52	17.54	17.01	16.96	16.94	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.

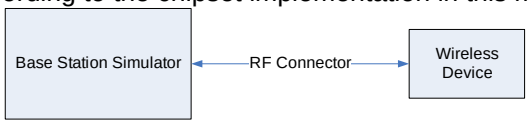

Figure 9-2
Power Measurement Setup

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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	**24.40**	0	0
	1	50	24.36		0
	1	99	24.20		0
	50	0	**23.23**	0-1	1
	50	25	23.20		1
	50	50	23.21		1
	100	0	23.15		1
16QAM	1	0	23.47	0-1	1
	1	50	23.51		1
	1	99	23.45		1
	50	0	22.23	0-2	2
	50	25	22.19		2
	50	50	22.18		2
	100	0	22.15		2
64QAM	1	0	22.52	0-2	2
	1	50	22.49		2
	1	99	22.22		2
	50	0	21.20	0-3	3
	50	25	21.25		3
	50	50	21.23		3
	100	0	21.09		3
256QAM	1	0	19.39	0-5	5
	1	50	19.81		5
	1	99	19.51		5
	50	0	19.46		5
	50	25	19.52		5
	50	50	19.54		5
	100	0	19.45		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	24.37	0	0
	1	25	**24.45**		0
	1	49	24.44		0
	25	0	23.32	0-1	1
	25	12	23.45		1
	25	25	**23.46**		1
	50	0	23.36		1
16QAM	1	0	23.61	0-1	1
	1	25	23.74		1
	1	49	23.70		1
	25	0	22.33	0-2	2
	25	12	22.44		2
	25	25	22.42		2
	50	0	22.37		2
64QAM	1	0	22.66	0-2	2
	1	25	22.75		2
	1	49	22.70		2
	25	0	21.29	0-3	3
	25	12	21.43		3
	25	25	21.42		3
	50	0	21.40		3
256QAM	1	0	19.30	0-5	5
	1	25	19.56		5
	1	49	19.35		5
	25	0	19.32		5
	25	12	19.40		5
	25	25	19.46		5
	50	0	19.39		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					
			Mid Channel		
Modulation	RB Size	RB Offset	23230 (782.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	24.55	0	0
	1	25	24.61		0
	1	49	**24.78**		0
	25	0	23.52	0-1	1
	25	12	23.60		1
	25	25	**23.65**		1
	50	0	23.49		1
16QAM	1	0	23.75	0-1	1
	1	25	23.83		1
	1	49	23.61		1
	25	0	22.54	0-2	2
	25	12	22.62		2
	25	25	22.56		2
	50	0	22.52		2
64QAM	1	0	22.60	0-2	2
	1	25	22.79		2
	1	49	22.77		2
	25	0	21.54	0-3	3
	25	12	21.56		3
	25	25	21.65		3
	50	0	21.45		3
256QAM	1	0	19.31	0-5	5
	1	25	19.78		5
	1	49	19.65		5
	25	0	19.42		5
	25	12	19.60		5
	25	25	19.59		5
	50	0	19.55		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	24.91	0	0
	1	25	24.86		0
	1	49	**25.08**		0
	25	0	23.68	0-1	1
	25	12	**23.77**		1
	25	25	23.76		1
	50	0	23.68		1
16QAM	1	0	23.95	0-1	1
	1	25	24.07		1
	1	49	24.00		1
	25	0	22.70	0-2	2
	25	12	22.79		2
	25	25	22.76		2
	50	0	22.70		2
64QAM	1	0	22.92	0-2	2
	1	25	23.03		2
	1	49	23.08		2
	25	0	21.69	0-3	3
	25	12	21.79		3
	25	25	21.72		3
	50	0	21.65		3
256QAM	1	0	19.46	0-5	5
	1	25	19.96		5
	1	49	19.66		5
	25	0	19.64		5
	25	12	19.83		5
	25	25	19.70		5
	50	0	19.65		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	24.21	0	0
	1	36	**24.31**		0
	1	74	24.17		0
	36	0	23.17	0-1	1
	36	18	23.27		1
	36	37	**23.32**		1
	75	0	23.18		1
16QAM	1	0	23.37	0-1	1
	1	36	23.61		1
	1	74	23.61		1
	36	0	22.20	0-2	2
	36	18	22.29		2
	36	37	22.24		2
	75	0	22.22		2
64QAM	1	0	22.48	0-2	2
	1	36	22.51		2
	1	74	22.40		2
	36	0	21.20	0-3	3
	36	18	21.29		3
	36	37	21.31		3
	75	0	21.22		3
256QAM	1	0	19.13	0-5	5
	1	36	19.45		5
	1	74	19.26		5
	36	0	19.18		5
	36	18	19.28		5
	36	37	19.29		5
	75	0	19.26		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	**25.04**	0	0
	1	25	24.98		0
	1	49	24.88		0
	25	0	23.89	0-1	1
	25	12	23.88		1
	25	25	**23.92**		1
	50	0	23.80		1
16QAM	1	0	23.65	0-1	1
	1	25	23.86		1
	1	49	23.63		1
	25	0	22.47	0-2	2
	25	12	22.45		2
	25	25	22.57		2
	50	0	22.45		2
64QAM	1	0	22.70	0-2	2
	1	25	22.92		2
	1	49	22.47		2
	25	0	21.51	0-3	3
	25	12	21.49		3
	25	25	21.51		3
	50	0	21.40		3
256QAM	1	0	19.45	0-5	5
	1	25	19.71		5
	1	49	19.47		5
	25	0	19.40		5
	25	12	19.58		5
	25	25	19.55		5
	50	0	19.47		5

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	25.09	25.04

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9.3.7 LTE Band 66

Table 9-13
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) – 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.81	22.55	22.87	0	0
	1	50	23.00	22.86	22.91		0
	1	99	**23.05**	22.69	22.87		0
	50	0	22.00	21.89	21.92	0-1	0.5
	50	25	**22.11**	22.09	22.10		0.5
	50	50	21.96	21.95	22.00		0.5
	100	0	22.00	21.94	21.93		0.5
16QAM	1	0	22.03	21.83	22.34	0-1	0.5
	1	50	22.24	22.45	22.54		0.5
	1	99	22.17	21.99	22.24		0.5
	50	0	20.97	20.94	20.91	0-2	1.5
	50	25	21.07	21.07	21.07		1.5
	50	50	20.97	20.95	21.03		1.5
	100	0	20.96	20.93	20.98		1.5
64QAM	1	0	20.72	20.90	21.32	0-2	1.5
	1	50	21.30	21.23	21.22		1.5
	1	99	21.06	20.91	21.15		1.5
	50	0	19.93	19.90	19.90	0-3	2.5
	50	25	20.04	20.09	20.00		2.5
	50	50	19.97	20.00	19.95		2.5
	100	0	19.99	19.98	19.93		2.5
256QAM	1	0	17.86	17.80	18.07	0-5	4.5
	1	50	18.18	18.23	18.24		4.5
	1	99	18.03	18.04	18.04		4.5
	50	0	18.00	17.96	17.95		4.5
	50	25	18.06	18.15	18.11		4.5
	50	50	18.04	18.03	17.98		4.5
	100	0	17.97	18.00	17.97		4.5

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Table 9-14
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) – 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.65	22.67	22.50	0	0
	1	25	22.99	22.85	22.55		0
	1	49	22.77	22.78	22.44		0
	25	0	21.86	21.64	21.69	0-1	0.5
	25	12	22.00	21.73	21.69		0.5
	25	25	21.86	21.70	21.60		0.5
	50	0	21.85	21.72	21.59		0.5
16QAM	1	0	21.93	21.95	22.13	0-1	0.5
	1	25	22.18	22.28	22.32		0.5
	1	49	22.02	22.03	22.10		0.5
	25	0	21.03	20.96	21.07	0-2	1.5
	25	12	21.16	21.10	21.15		1.5
	25	25	21.03	21.04	21.02		1.5
	50	0	21.02	21.03	21.03		1.5
64QAM	1	0	20.92	20.96	20.94	0-2	1.5
	1	25	21.26	21.33	21.22		1.5
	1	49	20.99	21.03	21.03		1.5
	25	0	20.01	19.92	20.04	0-3	2.5
	25	12	20.15	20.08	20.12		2.5
	25	25	20.00	20.00	20.05		2.5
	50	0	20.01	19.99	20.02		2.5
256QAM	1	0	17.91	17.83	17.99	0-5	4.5
	1	25	18.37	18.33	18.30		4.5
	1	49	18.05	17.97	18.06		4.5
	25	0	18.01	17.92	18.04		4.5
	25	12	18.08	18.08	18.12		4.5
	25	25	17.97	18.00	17.98		4.5
	50	0	17.97	17.98	17.97		4.5

Table 9-15
LTE Band 66 (AWS) Uplink Carrier Aggregation Measured Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	1	99	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	1	0	23.56	23.05
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	23.34	22.69
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	22.77
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	49	LTE B66	10	132421	1754.9	66885	2154.9	QPSK	1	0	23.32	22.78

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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	19.73	19.99	20.03	0	0
	1	50	20.04	**20.20**	20.04		0
	1	99	19.85	19.94	20.03		0
	50	0	19.95	19.87	19.97	0-1	0
	50	25	20.02	**20.05**	20.00		0
	50	50	20.00	19.98	19.97		0
	100	0	19.92	19.98	19.90		0
16QAM	1	0	19.88	19.84	20.19	0-1	0
	1	50	20.44	20.30	20.29		0
	1	99	19.94	19.92	20.14		0
	50	0	19.98	19.84	19.81	0-2	0
	50	25	20.05	19.88	20.04		0
	50	50	19.97	20.02	20.00		0
	100	0	19.97	20.04	19.95		0
64QAM	1	0	19.77	19.87	20.18	0-2	0
	1	50	20.17	20.05	20.08		0
	1	99	19.88	19.88	20.28		0
	50	0	19.91	19.84	19.86	0-3	0
	50	25	20.01	20.01	20.05		0
	50	50	19.96	19.96	20.07		0
	100	0	19.97	20.02	19.98		0
256QAM	1	0	18.20	18.24	18.22	0-5	1.5
	1	50	18.67	18.62	18.66		1.5
	1	99	18.35	18.41	18.43		1.5
	50	0	18.43	18.27	18.37		1.5
	50	25	18.51	18.46	18.50		1.5
	50	50	18.42	18.44	18.46		1.5
	100	0	18.48	18.48	18.47		1.5

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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	19.83	19.88	19.84	0	0
	1	25	20.05	20.18	20.01		0
	1	49	19.86	19.95	19.83		0
	25	0	20.07	20.00	20.06	0-1	0
	25	12	20.11	20.16	20.15		0
	25	25	20.07	20.04	20.05		0
	50	0	20.10	20.06	20.12		0
16QAM	1	0	20.28	19.92	20.27	0-1	0
	1	25	20.54	20.31	20.57		0
	1	49	20.29	20.24	20.33		0
	25	0	20.16	20.00	20.20	0-2	0
	25	12	20.23	20.09	20.30		0
	25	25	20.14	20.18	20.18		0
	50	0	20.13	20.16	20.14		0
64QAM	1	0	20.00	20.10	20.00	0-2	0
	1	25	20.27	20.36	20.30		0
	1	49	20.12	20.30	20.03		0
	25	0	20.12	19.96	20.14	0-3	0
	25	12	20.22	20.09	20.22		0
	25	25	20.10	20.14	20.12		0
	50	0	20.09	20.17	20.14		0
256QAM	1	0	18.50	18.37	18.44	0-5	1.5
	1	25	18.80	18.72	18.80		1.5
	1	49	18.74	18.54	18.70		1.5
	25	0	18.61	18.55	18.64		1.5
	25	12	18.73	18.70	18.72		1.5
	25	25	18.60	18.60	18.64		1.5
	50	0	18.59	18.58	18.66		1.5

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	1720.0	66536	2120.0	QPSK	50	50	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	50	0	19.84	20.00
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	25	25	LTE B66	10	132121	1724.9	66734	2124.9	QPSK	25	0	19.98	20.07

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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	18.30	18.29	18.41	0	0
	1	50	**18.63**	18.51	18.42		0
	1	99	18.46	18.30	18.33		0
	50	0	18.49	18.44	18.46	0-1	0
	50	25	**18.57**	18.56	18.55		0
	50	50	18.47	18.50	18.51		0
	100	0	18.48	18.48	18.50		0
16QAM	1	0	18.45	18.35	18.90	0-1	0
	1	50	18.94	18.70	18.99		0
	1	99	18.64	18.37	18.77		0
	50	0	18.57	18.46	18.50	0-2	0
	50	25	18.59	18.63	18.63		0
	50	50	18.53	18.53	18.56		0
	100	0	18.52	18.54	18.53		0
64QAM	1	0	18.17	18.41	18.77	0-2	0
	1	50	18.61	18.82	18.81		0
	1	99	18.22	18.53	18.70		0
	50	0	18.27	18.45	18.47	0-3	0
	50	25	18.36	18.65	18.68		0
	50	50	18.28	18.56	18.56		0
	100	0	18.37	18.53	18.57		0
256QAM	1	0	17.67	17.95	17.85	0-5	0.5
	1	50	18.16	18.28	18.30		0.5
	1	99	17.84	18.02	18.00		0.5
	50	0	17.77	17.94	18.01		0.5
	50	25	17.94	18.10	18.15		0.5
	50	50	17.89	18.07	18.04		0.5
	100	0	17.89	18.07	18.09		0.5

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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	18.80	18.67	18.75	0	0
	1	25	18.94	19.00	18.85		0
	1	49	18.66	18.80	18.82		0
	25	0	18.93	18.88	18.91	0-1	0
	25	12	19.04	19.03	19.05		0
	25	25	18.93	18.93	18.97		0
	50	0	18.94	18.95	18.99		0
16QAM	1	0	18.93	18.84	18.86	0-1	0
	1	25	19.12	19.11	19.05		0
	1	49	19.01	18.84	18.95		0
	25	0	18.84	18.78	18.81	0-2	0
	25	12	18.97	19.00	18.97		0
	25	25	18.93	18.85	18.88		0
	50	0	18.81	18.91	18.86		0
64QAM	1	0	18.62	18.83	18.71	0-2	0
	1	25	18.99	19.02	19.07		0
	1	49	18.72	18.96	18.92		0
	25	0	18.74	18.79	18.79	0-3	0
	25	12	18.86	19.03	18.91		0
	25	25	18.78	18.87	18.84		0
	50	0	18.87	18.87	18.81		0
256QAM	1	0	18.09	18.10	18.11	0-5	0.5
	1	25	18.57	18.49	18.54		0.5
	1	49	18.27	18.32	18.42		0.5
	25	0	18.27	18.27	18.31		0.5
	25	12	18.44	18.47	18.45		0.5
	25	25	18.38	18.36	18.38		0.5
	50	0	18.38	18.35	18.36		0.5

Table 9-21
LTE Band 66 (AWS) Uplink Carrier Aggregation Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 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_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	18.55	18.41
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	18.87	18.75

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9.3.8 LTE Band 25

Table 9-22
LTE Band 25 (PCS) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.26	23.26	23.23	0	0
	1	50	**23.28**	23.23	23.08		0
	1	99	23.24	23.23	23.05		0
	50	0	22.14	22.12	22.10	0-1	1
	50	25	**22.21**	22.11	22.06		1
	50	50	22.20	22.12	22.05		1
	100	0	22.14	22.02	21.99		1
16QAM	1	0	22.46	22.37	22.27	0-1	1
	1	50	22.49	22.59	22.47		1
	1	99	22.36	22.36	22.26		1
	50	0	21.12	21.09	21.13	0-2	2
	50	25	21.23	21.10	21.08		2
	50	50	21.21	21.15	21.05		2
	100	0	21.01	20.98	21.02		2
64QAM	1	0	21.26	21.32	21.27	0-2	2
	1	50	21.43	21.47	21.32		2
	1	99	21.31	21.24	21.27		2
	50	0	20.09	20.09	20.08	0-3	3
	50	25	20.15	20.08	20.10		3
	50	50	20.14	20.12	20.04		3
	100	0	20.08	19.99	19.99		3
256QAM	1	0	17.81	17.79	17.81	0-5	5
	1	50	18.24	18.19	18.26		5
	1	99	18.02	18.01	17.79		5
	50	0	17.92	17.97	17.93		5
	50	25	18.18	18.09	18.08		5
	50	50	18.12	18.13	18.05		5
	100	0	18.06	18.02	18.02		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	19.55	19.87	19.60	0	0
	1	50	19.56	**19.92**	19.56		0
	1	99	19.62	19.90	19.67		0
	50	0	19.77	19.78	19.77	0-1	0
	50	25	19.79	**19.81**	19.75		0
	50	50	19.79	19.77	19.73		0
	100	0	19.71	19.64	19.80		0
16QAM	1	0	19.86	20.01	19.99	0-1	0
	1	50	20.25	20.15	20.25		0
	1	99	20.20	20.17	20.14		0
	50	0	19.93	19.85	19.91	0-2	0
	50	25	19.75	19.75	19.85		0
	50	50	19.82	19.78	19.82		0
	100	0	19.77	19.79	19.79		0
64QAM	1	0	20.07	19.89	19.78	0-2	0
	1	50	19.97	20.12	19.75		0
	1	99	20.04	20.10	20.06		0
	50	0	19.72	19.84	19.88	0-3	0
	50	25	19.82	19.76	19.75		0
	50	50	19.85	19.78	19.74		0
	100	0	19.73	19.70	19.72		0
256QAM	1	0	18.04	18.10	18.21	0-5	1.5
	1	50	18.77	18.48	18.52		1.5
	1	99	18.76	18.40	18.59		1.5
	50	0	18.56	18.27	18.50		1.5
	50	25	18.44	18.25	18.47		1.5
	50	50	18.46	18.30	18.42		1.5
	100	0	18.34	18.31	18.41		1.5

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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	18.17	18.22	18.33	0	0
	1	50	**18.42**	18.33	18.18		0
	1	99	18.26	18.40	18.12		0
	50	0	18.12	18.19	18.18	0-1	0
	50	25	**18.24**	18.17	18.12		0
	50	50	18.20	18.20	18.12		0
	100	0	18.17	18.03	18.06		0
16QAM	1	0	18.47	18.26	18.67	0-1	0
	1	50	18.36	18.25	18.32		0
	1	99	18.31	18.31	18.22		0
	50	0	18.13	18.17	18.12	0-2	0
	50	25	18.26	18.12	18.21		0
	50	50	18.21	18.29	18.11		0
	100	0	18.10	18.05	18.06		0
64QAM	1	0	18.40	18.36	18.17	0-2	0
	1	50	18.25	18.52	18.46		0
	1	99	18.30	18.32	18.33		0
	50	0	18.12	18.26	18.14	0-3	0
	50	25	18.32	18.11	18.16		0
	50	50	18.23	18.19	18.12		0
	100	0	18.21	18.03	18.03		0
256QAM	1	0	17.91	18.04	17.84	0-5	0
	1	50	18.35	18.51	18.27		0
	1	99	18.13	18.07	18.24		0
	50	0	18.00	17.98	18.03		0
	50	25	18.29	18.16	18.18		0
	50	50	18.23	18.25	18.12		0
	100	0	18.21	18.03	18.11		0

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9.3.9 LTE Band 30

Table 9-25
LTE Band 30 for for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) – 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	22.17	0	0
	1	25	**22.18**		0
	1	49	22.10		0
	25	0	21.09	0-1	1
	25	12	**21.22**		1
	25	25	21.11		1
	50	0	21.08		1
16QAM	1	0	21.42	0-1	1
	1	25	21.39		1
	1	49	21.35		1
	25	0	20.11	0-2	2
	25	12	20.16		2
	25	25	20.10		2
	50	0	20.11		2
64QAM	1	0	20.39	0-2	2
	1	25	20.26		2
	1	49	20.22		2
	25	0	19.10	0-3	3
	25	12	19.16		3
	25	25	19.05		3
	50	0	19.09		3
256QAM	1	0	17.03	0-5	5
	1	25	17.21		5
	1	49	16.98		5
	25	0	17.15		5
	25	12	17.17		5
	25	25	17.06		5
	50	0	17.11		5

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table 9-26
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	**20.82**	0	0
	1	25	20.69		0
	1	49	20.71		0
	25	0	20.67	0-1	0
	25	12	**20.81**		0
	25	25	20.65		0
	50	0	20.69		0
16QAM	1	0	20.73	0-1	0
	1	25	20.77		0
	1	49	20.66		0
	25	0	20.20	0-2	0.5
	25	12	20.24		0.5
	25	25	20.16		0.5
	50	0	20.20		0.5
64QAM	1	0	20.39	0-2	0.5
	1	25	20.46		0.5
	1	49	20.28		0.5
	25	0	19.25	0-3	1.5
	25	12	19.34		1.5
	25	25	19.18		1.5
	50	0	19.22		1.5
256QAM	1	0	17.13	0-5	3.5
	1	25	17.42		3.5
	1	49	17.02		3.5
	25	0	17.19		3.5
	25	12	17.19		3.5
	25	25	17.08		3.5
	50	0	17.15		3.5

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Table 9-27
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	**18.84**	0	0
	1	25	18.82		0
	1	49	18.62		0
	25	0	18.79	0-1	0
	25	12	**18.83**		0
	25	25	18.65		0
	50	0	18.75		0
16QAM	1	0	19.02	0-1	0
	1	25	18.88		0
	1	49	18.89		0
	25	0	18.70	0-2	0
	25	12	18.85		0
	25	25	18.74		0
	50	0	18.63		0
64QAM	1	0	19.00	0-2	0
	1	25	18.78		0
	1	49	18.77		0
	25	0	18.80	0-3	0
	25	12	18.87		0
	25	25	18.73		0
	50	0	18.72		0
256QAM	1	0	17.20	0-5	1.5
	1	25	17.40		1.5
	1	49	17.00		1.5
	25	0	17.34		1.5
	25	12	17.34		1.5
	25	25	17.20		1.5
	50	0	17.26		1.5

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9.3.10 LTE Band 7

Table 9-28
LTE Band 7 Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) – 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.10	22.02	22.14	0	0
	1	50	22.16	**22.26**	22.21		0
	1	99	22.04	22.00	22.25		0
	50	0	22.04	22.10	22.04	0-1	0
	50	25	22.10	22.04	21.96		0
	50	50	22.04	**22.18**	22.00		0
	100	0	21.96	21.98	21.92		0
16QAM	1	0	22.01	22.00	22.08	0-1	0
	1	50	22.18	22.33	22.24		0
	1	99	21.96	22.02	21.86		0
	50	0	20.99	21.06	21.00	0-2	1
	50	25	21.06	20.98	20.99		1
	50	50	21.02	21.10	20.97		1
	100	0	20.91	20.96	20.88		1
64QAM	1	0	21.21	20.98	21.06	0-2	1
	1	50	21.18	21.10	20.93		1
	1	99	20.96	21.00	20.94		1
	50	0	20.01	19.97	20.04	0-3	2
	50	25	20.04	20.03	19.96		2
	50	50	20.03	20.07	20.01		2
	100	0	19.93	19.97	19.97		2
256QAM	1	0	17.82	17.89	17.88	0-5	4
	1	50	17.91	17.66	18.10		4
	1	99	17.75	17.92	17.53		4
	50	0	17.80	17.78	17.94		4
	50	25	18.02	17.85	17.85		4
	50	50	17.97	17.93	17.88		4
	100	0	17.92	17.82	17.85		4

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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	19.66	19.72	19.57	0	0
	1	50	19.75	19.70	19.62		0
	1	99	**19.77**	19.66	19.73		0
	50	0	19.56	19.56	19.54	0-1	0
	50	25	**19.67**	19.60	19.53		0
	50	50	19.56	19.59	19.60		0
	100	0	19.54	19.49	19.44		0
16QAM	1	0	19.62	19.73	19.72	0-1	0
	1	50	19.59	19.92	19.83		0
	1	99	19.74	19.35	19.82		0
	50	0	19.51	19.58	19.51	0-2	0
	50	25	19.60	19.65	19.61		0
	50	50	19.58	19.74	19.58		0
	100	0	19.57	19.49	19.45		0
64QAM	1	0	19.76	19.76	19.47	0-2	0
	1	50	19.83	19.86	19.65		0
	1	99	19.85	19.76	19.74		0
	50	0	19.58	19.54	19.62	0-3	0
	50	25	19.70	19.64	19.54		0
	50	50	19.54	19.64	19.62		0
	100	0	19.48	19.45	19.47		0
256QAM	1	0	17.20	17.49	17.50	0-5	2
	1	50	17.67	17.72	17.64		2
	1	99	17.46	17.51	17.40		2
	50	0	17.35	17.53	17.51		2
	50	25	17.65	17.60	17.54		2
	50	50	17.51	17.57	17.57		2
	100	0	17.58	17.47	17.43		2

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9.3.11 LTE Band 41

Table 9-30
LTE Band 41 PC3 Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head) – 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.51	23.48	23.06	23.13	22.93	0	0
	1	50	**23.54**	23.49	23.50	23.50	23.40		0
	1	99	23.35	23.43	23.28	23.08	23.34		0
	50	0	22.55	22.42	22.40	22.47	22.29	0-1	0.5
	50	25	**22.56**	22.42	22.46	22.55	22.45		0.5
	50	50	22.55	22.41	22.41	22.28	22.41		0.5
	100	0	22.45	22.25	22.38	22.35	22.38		0.5
16QAM	1	0	22.62	22.46	22.21	22.15	22.00	0-1	0.5
	1	50	22.78	22.67	22.92	22.57	22.70		0.5
	1	99	22.63	22.44	22.35	22.07	22.43		0.5
	50	0	21.58	21.34	21.40	21.36	21.28	0-2	1.5
	50	25	21.56	21.33	21.46	21.43	21.46		1.5
	50	50	21.55	21.36	21.41	21.25	21.41		1.5
	100	0	21.48	21.23	21.38	21.33	21.37		1.5
64QAM	1	0	21.39	21.35	21.05	21.00	20.92	0-2	1.5
	1	50	21.45	21.43	21.57	21.37	21.36		1.5
	1	99	21.33	21.32	21.22	21.03	21.23		1.5
	50	0	20.51	20.29	20.45	20.39	20.08	0-3	2.5
	50	25	20.58	20.30	20.50	20.43	20.25		2.5
	50	50	20.55	20.31	20.48	20.24	20.17		2.5
	100	0	20.49	20.20	20.43	20.29	20.18		2.5
256QAM	1	0	18.11	17.99	18.16	18.13	17.90	0-5	4.5
	1	50	18.65	18.46	18.51	18.49	18.41		4.5
	1	99	18.44	18.07	18.29	18.07	18.11		4.5
	50	0	18.39	18.10	18.39	18.36	18.12		4.5
	50	25	18.57	18.23	18.50	18.43	18.29		4.5
	50	50	18.54	18.22	18.45	18.30	18.27		4.5
	100	0	18.48	18.19	18.42	18.34	18.21		4.5

Table 9-31
LTE Band 41 PC2 Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head)– 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	26.09	25.97	25.68	25.70	25.54	0	0
	1	50	26.00	26.03	26.07	26.01	25.94		0
	1	99	26.09	25.99	25.81	25.59	25.86		0
	50	0	25.11	25.08	25.07	25.09	24.94	0-1	0
	50	25	25.19	25.09	25.15	25.18	25.10		0
	50	50	25.16	25.14	25.14	25.01	25.07		0
	100	0	25.12	25.03	25.07	25.08	25.04		0

Table 9-32
LTE Band 41 Uplink Carrier Aggregation Measured 7 Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), for and DSI = 2 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	23.85	23.35
	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	26.10	26.09

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Table 9-33
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	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	**21.62**	21.37	21.15	21.15	21.18	0	0
	1	50	21.49	21.47	21.56	21.23	21.46		0
	1	99	21.44	21.44	21.16	21.15	21.40		0
	50	0	21.51	21.42	21.44	21.25	21.37	0-1	0
	50	25	21.57	21.50	21.52	21.31	21.56		0
	50	50	**21.78**	21.56	21.41	21.22	21.50		0
	100	0	21.50	21.46	21.51	21.29	21.45		0
16QAM	1	0	21.53	21.47	21.32	21.04	21.03	0-1	0
	1	50	21.65	21.60	21.60	21.48	21.55		0
	1	99	21.39	21.53	21.25	21.02	21.44		0
	50	0	21.45	21.40	21.40	21.17	21.27	0-2	0
	50	25	21.54	21.47	21.41	21.23	21.44		0
	50	50	21.43	21.43	21.30	21.04	21.38		0
	100	0	21.41	21.45	21.25	21.15	21.43		0
64QAM	1	0	21.49	21.41	21.18	20.89	20.97	0-2	0
	1	50	21.34	21.50	21.28	21.33	21.39		0
	1	99	21.42	21.45	21.03	20.77	21.31		0
	50	0	20.42	20.40	20.42	20.14	20.18	0-3	1
	50	25	20.51	20.39	20.39	20.22	20.43		1
	50	50	20.45	20.44	20.30	20.04	20.39		1
	100	0	20.44	20.43	20.29	20.20	20.41		1
256QAM	1	0	17.98	17.85	18.00	17.85	17.95	0-5	3
	1	50	18.37	18.30	18.37	18.13	18.42		3
	1	99	18.11	17.91	17.94	17.67	18.28		3
	50	0	18.27	18.23	18.33	18.11	18.26		3
	50	25	18.47	18.33	18.35	18.20	18.43		3
	50	50	18.44	18.29	18.29	18.02	18.30		3
	100	0	18.35	18.28	18.28	18.19	18.42		3

Table 9-34
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	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	23.49	23.33	23.18	23.20	22.91	0	0
	1	50	23.31	23.27	23.24	23.05	23.26		0
	1	99	23.38	23.34	23.08	22.74	23.25		0
	50	0	23.25	23.15	23.15	22.95	23.11	0-1	0
	50	25	23.30	23.17	23.22	23.08	23.27		0
	50	50	23.26	23.23	23.09	22.83	23.20		0
	100	0	23.29	23.22	23.21	23.07	23.25		0

Table 9-35
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	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	21.82	21.78
	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	50	50	LTE B41 PC2	20	39948	2525.8	QPSK	50	0	23.74	23.26

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9.3.1 LTE Band 48

Table 9-36
LTE Band 48 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) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55340 (3560.0 MHz)	55773 (3603.3 MHz)	56207 (3646.7 MHz)	56640 (3690.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	20.89	20.81	20.78	20.50	0	0
	1	50	20.87	20.90	20.79	20.52		0
	1	99	20.83	**20.91**	20.85	20.53		0
	50	0	20.80	20.87	20.74	20.48	0-1	0
	50	25	20.93	**20.94**	20.90	20.60		0
	50	50	20.80	20.86	20.75	20.59		0
	100	0	20.79	20.85	20.80	20.61		0
16QAM	1	0	21.00	20.94	20.92	20.77	0-1	0
	1	50	20.99	20.92	20.93	20.80		0
	1	99	20.84	20.98	20.90	20.74		0
	50	0	20.83	20.94	20.80	20.78	0-2	0
	50	25	20.97	20.88	20.93	20.81		0
	50	50	20.85	20.87	20.77	20.65		0
	100	0	20.88	20.85	20.83	20.70		0
64QAM	1	0	21.20	20.91	21.22	21.32	0-2	0
	1	50	21.26	21.22	21.31	21.27		0
	1	99	21.25	21.20	21.32	21.30		0
	50	0	20.02	20.03	20.11	20.34	0-3	0.5
	50	25	20.20	20.08	20.30	20.47		0.5
	50	50	19.99	19.97	20.16	20.29		0.5
	100	0	20.07	19.96	20.15	20.37		0.5
256QAM	1	0	17.76	17.72	17.83	18.28	0-5	2.5
	1	50	18.20	18.02	18.27	18.44		2.5
	1	99	17.77	17.82	18.00	18.00		2.5
	50	0	18.03	18.03	18.13	18.32		2.5
	50	25	18.16	18.10	18.37	18.47		2.5
	50	50	18.02	18.00	18.24	18.31		2.5
	100	0	18.06	17.99	18.22	18.40		2.5

Table 9-37
LTE Band 48 Uplink Carrier Aggregation 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) - 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	55773	3603.3	QPSK	50	0	LTE B48	20	55575	3583.5	QPSK	50	50	20.98	20.87
CA_48C	LTE B48	20	56640	3690.0	QPSK	50	0	LTE B48	20	56442	3670.2	QPSK	50	50	20.52	20.68

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Table 9-38
LTE Band 48 Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	18.31	18.41	18.65	18.54	0	0
	1	50	18.45	18.60	**18.81**	18.61		0
	1	99	18.43	18.65	18.72	18.48		0
	50	0	18.31	18.51	18.66	18.58	0-1	0
	50	25	18.49	18.59	**18.82**	18.71		0
	50	50	18.35	18.48	18.68	18.49		0
	100	0	18.38	18.46	18.70	18.57		0
16QAM	1	0	18.31	18.57	18.74	18.63	0-1	0
	1	50	18.53	18.72	18.93	18.77		0
	1	99	18.47	18.80	18.91	18.56		0
	50	0	18.33	18.58	18.69	18.59	0-2	0
	50	25	18.52	18.61	18.85	18.70		0
	50	50	18.36	18.51	18.74	18.52		0
	100	0	18.38	18.47	18.75	18.58		0
64QAM	1	0	18.37	18.44	18.73	18.55	0-2	0
	1	50	18.55	18.64	18.81	18.60		0
	1	99	18.42	18.62	18.75	18.63		0
	50	0	18.38	18.59	18.72	18.74	0-3	0
	50	25	18.56	18.67	18.87	18.56		0
	50	50	18.46	18.56	18.75	18.57		0
	100	0	18.43	18.54	18.78	18.61		0
256QAM	1	0	18.14	18.36	18.31	18.33	0-5	0
	1	50	18.54	18.59	18.68	18.70		0
	1	99	18.28	18.37	18.42	18.33		0
	50	0	18.35	18.52	18.64	18.61		0
	50	25	18.56	18.60	18.85	18.73		0
	50	50	18.40	18.54	18.71	18.57		0
	100	0	18.42	18.51	18.74	18.61		0

Table 9-39
LTE Band 48 Uplink Carrier Aggregation Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	1	99	LTE B48	20	55538	3579.8	QPSK	1	0	18.33	18.43

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 9-40
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 $\pi/2$ BPSK	1	1	24.17	0	0.0
	1	53	24.23		0.0
	1	104	24.21		0.0
	50	0	23.76	0-0.5	0.5
	50	28	24.30	0	0.0
	50	56	23.81	0-0.5	0.5
	100	0	23.85		0.5
DFT-s-OFDM QPSK	1	1	24.04	0	0.0
	1	53	24.09		0.0
	1	104	**24.13**		0.0
	50	0	23.31	0-1	1.0
	50	28	**24.34**	0	0.0
	50	56	23.32	0-1	1.0
	100	0	23.31		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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9.4.2 NR Band n12

Table 9-41
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	24.19	0	0.0
	1	40	24.24		0.0
	1	77	24.18		0.0
	36	0	23.87	0-0.5	0.5
	36	22	24.30	0	0.0
	36	43	23.74	0-0.5	0.5
	75	0	23.85		0.5
DFT-s-OFDM QPSK	1	1	24.08	0	0.0
	1	40	**24.09**		0.0
	1	77	24.02		0.0
	36	0	23.36	0-1	1.0
	36	22	**24.37**	0	0.0
	36	43	23.30	0-1	1.0
	75	0	23.34		1.0
DFT-s-OFDM 16QAM	1	1	23.63	0-1	1.0
CP-OFDM QPSK	1	1	22.71	0-1.5	1.5

9.4.3 NR Band n5

Table 9-42
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	24.33	0	0.0
	1	53	24.32		0.0
	1	104	24.37		0.0
	50	0	24.07	0-0.5	0.5
	50	28	24.49	0	0.0
	50	56	23.91	0-0.5	0.5
	100	0	24.03		0.5
DFT-s-OFDM QPSK	1	1	**24.29**	0	0.0
	1	53	24.22		0.0
	1	104	24.25		0.0
	50	0	23.53	0-1	1.0
	50	28	**24.52**	0	0.0
	50	56	23.43	0-1	1.0
	100	0	23.55		1.0
DFT-s-OFDM 16QAM	1	1	23.84	0-1	1.0
CP-OFDM QPSK	1	1	22.82	0-1.5	1.5

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9.4.4 NR Band n66 Antenna A

Table 9-43
NR Band n66 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or 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	23.21	0	0.0
	1	108	23.30		0.0
	1	214	23.24		0.0
	108	0	22.78	0-0.5	0.0
	108	54	23.27	0	0.0
	108	108	22.99	0-0.5	0.0
	216	0	22.80		0.0
DFT-s-OFDM QPSK	1	1	23.10	0	0.0
	1	108	**23.19**		0.0
	1	214	23.11		0.0
	108	0	22.33	0-1	0.0
	108	54	**23.32**	0	0.0
	108	108	22.42	0-1	0.0
	216	0	22.52		0.0
DFT-s-OFDM 16QAM	1	1	22.50	0-1	0.0
CP-OFDM QPSK	1	1	21.85	0-1.5	0.5

Table 9-44
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	20.35	0	0.0
	1	108	20.47		0.0
	1	214	20.34		0.0
	108	0	20.37	0-0.5	0.0
	108	54	20.43	0	0.0
	108	108	20.47	0-0.5	0.0
	216	0	20.42		0.0
DFT-s-OFDM QPSK	1	1	**20.58**	0	0.0
	1	108	20.30		0.0
	1	214	20.21		0.0
	108	0	20.40	0-1	0.0
	108	54	20.44	0	0.0
	108	108	**20.57**	0-1	0.0
	216	0	20.56		0.0
DFT-s-OFDM 16QAM	1	1	20.27	0-1	0.0
CP-OFDM QPSK	1	1	20.42	0-1.5	0.0

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Table 9-45
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	18.83	0	0.0
	1	108	18.92		0.0
	1	214	18.84		0.0
	108	0	18.92	0-0.5	0.0
	108	54	18.90	0	0.0
	108	108	18.96	0-0.5	0.0
	216	0	18.95		0.0
DFT-s-OFDM QPSK	1	1	18.73	0	0.0
	1	108	**18.88**		0.0
	1	214	18.68		0.0
	108	0	18.92	0-1	0.0
	108	54	18.97	0	0.0
	108	108	**19.00**	0-1	0.0
	216	0	18.87		0.0
DFT-s-OFDM 16QAM	1	1	19.10	0-1	0.0
CP-OFDM QPSK	1	1	18.76	0-1.5	0.0

9.4.5 NR Band n66 Antenna I

Table 9-46
NR Band n66 Antenna I 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	20.50	0	0.0
	1	108	20.58		0.0
	1	214	20.63		0.0
	108	0	20.64	0-0.5	0.0
	108	54	20.69	0	0.0
	108	108	20.67	0-0.5	0.0
	216	0	20.65		0.0
DFT-s-OFDM QPSK	1	1	20.48	0	0.0
	1	108	20.52		0.0
	1	214	**20.63**		0.0
	108	0	20.65	0-1	0.0
	108	54	**20.69**	0	0.0
	108	108	20.67	0-1	0.0
	216	0	20.62		0.0
DFT-s-OFDM 16QAM	1	1	20.66	0-1	0.0
CP-OFDM QPSK	1	1	20.56	0-1.5	0.0

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Table 9-47
NR Band n66 Antenna I 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	18.38	0	0.0
	1	108	18.46		0.0
	1	214	18.44		0.0
	108	0	18.40	0-0.5	0.0
	108	54	18.39	0	0.0
	108	108	18.49	0-0.5	0.0
	216	0	18.48		0.0
DFT-s-OFDM QPSK	1	1	18.35	0	0.0
	1	108	18.46		0.0
	1	214	**18.47**		0.0
	108	0	18.42	0-1	0.0
	108	54	18.45	0	0.0
	108	108	**18.49**	0-1	0.0
	216	0	18.46		0.0
DFT-s-OFDM 16QAM	1	1	18.50	0-1	0.0
CP-OFDM QPSK	1	1	18.42	0-1.5	0.0

9.4.6 NR Band n25 Antenna A

Table 9-48
NR Band n25 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or 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	23.22	0	0.0
	1	108	23.20		0.0
	1	214	23.19		0.0
	108	0	22.81	0-0.5	0.0
	108	54	23.22	0	0.0
	108	108	22.81	0-0.5	0.0
	216	0	22.74		0.0
DFT-s-OFDM QPSK	1	1	23.10	0	0.0
	1	108	**23.20**		0.0
	1	214	23.01		0.0
	108	0	22.27	0-1	0.0
	108	54	**23.01**	0	0.0
	108	108	22.41	0-1	0.0
	216	0	22.44		0.0
DFT-s-OFDM 16QAM	1	1	22.25	0-1	0.0
CP-OFDM QPSK	1	1	21.77	0-1.5	0.5

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Table 9-49
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	19.80	0	0.0
	1	108	19.89		0.0
	1	214	19.75		0.0
	108	0	19.82	0-0.5	0.0
	108	54	19.79	0	0.0
	108	108	19.83	0-0.5	0.0
	216	0	19.89		0.0
DFT-s-OFDM QPSK	1	1	19.70	0	0.0
	1	108	**19.73**		0.0
	1	214	19.64		0.0
	108	0	19.84	0-1	0.0
	108	54	19.79	0	0.0
	108	108	**19.92**	0-1	0.0
	216	0	19.72		0.0
DFT-s-OFDM 16QAM	1	1	19.79	0-1	0.0
CP-OFDM QPSK	1	1	19.70	0-1.5	0.0

Table 9-50
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	18.36	0	0.0
	1	108	18.45		0.0
	1	214	18.21		0.0
	108	0	18.39	0-0.5	0.0
	108	54	18.33	0	0.0
	108	108	18.35	0-0.5	0.0
	216	0	18.40		0.0
DFT-s-OFDM QPSK	1	1	18.26	0	0.0
	1	108	**18.51**		0.0
	1	214	18.08		0.0
	108	0	**18.55**	0-1	0.0
	108	54	18.37	0	0.0
	108	108	18.38	0-1	0.0
	216	0	18.50		0.0
DFT-s-OFDM 16QAM	1	1	18.65	0-1	0.0
CP-OFDM QPSK	1	1	18.28	0-1.5	0.0

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9.4.7 NR Band n25 Antenna I

Table 9-51
NR Band n25 Antenna I 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	20.90	0	0.0
	1	108	20.85		0.0
	1	214	20.79		0.0
	108	0	21.02	0-0.5	0.0
	108	54	20.95	0	0.0
	108	108	20.97	0-0.5	0.0
	216	0	20.90		0.0
DFT-s-OFDM QPSK	1	1	**20.95**	0	0.0
	1	108	20.70		0.0
	1	214	20.67		0.0
	108	0	**20.98**	0-1	0.0
	108	54	20.90	0	0.0
	108	108	20.93	0-1	0.0
	216	0	20.94		0.0
DFT-s-OFDM 16QAM	1	1	21.18	0-1	0.0
CP-OFDM QPSK	1	1	20.96	0-1.5	0.0

Table 9-52
NR Band n25 Antenna I 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	18.50	0	0.0
	1	108	18.39		0.0
	1	214	18.33		0.0
	108	0	18.54	0-0.5	0.0
	108	54	18.49	0	0.0
	108	108	18.47	0-0.5	0.0
	216	0	18.52		0.0
DFT-s-OFDM QPSK	1	1	**18.44**	0	0.0
	1	108	18.13		0.0
	1	214	18.19		0.0
	108	0	18.53	0-1	0.0
	108	54	**18.54**	0	0.0
	108	108	18.42	0-1	0.0
	216	0	18.43		0.0
DFT-s-OFDM 16QAM	1	1	18.64	0-1	0.0
CP-OFDM QPSK	1	1	18.35	0-1.5	0.0

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9.4.8 NR Band n30 Antenna A

Table 9-53
NR Band n30 Antenna A Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	21.69	0	0.0
	1	26	21.83		0.0
	1	50	21.79		0.0
	25	0	21.11	0-0.5	0.5
	25	14	21.68	0	0.0
	25	27	21.20	0-0.5	0.5
	50	0	21.13		0.5
DFT-s-OFDM QPSK	1	1	21.49	0	0.0
	1	26	**21.62**		0.0
	1	50	21.61		0.0
	25	0	20.63	0-1	1.0
	25	14	**21.64**	0	0.0
	25	27	20.68	0-1	1.0
	50	0	20.58		1.0
DFT-s-OFDM 16QAM	1	1	20.81	0-1	1.0
CP-OFDM QPSK	1	1	19.93	0-1.5	1.5

Table 9-54
NR Band n30 Antenna A 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	20.18	0	0.0
	1	26	20.30		0.0
	1	50	20.23		0.0
	25	0	20.24	0-0.5	0.0
	25	14	20.26	0	0.0
	25	27	20.27	0-0.5	0.0
	50	0	20.25		0.0
DFT-s-OFDM QPSK	1	1	20.17	0	0.0
	1	26	**20.25**		0.0
	1	50	20.22		0.0
	25	0	**20.27**	0-1	0.0
	25	14	20.26	0	0.0
	25	27	20.23	0-1	0.0
	50	0	20.21		0.0
DFT-s-OFDM 16QAM	1	1	20.49	0-1	0.0
CP-OFDM QPSK	1	1	20.30	0-1.5	0.5

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Table 9-55
NR Band n30 Antenna A 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	18.10	0	0.0
	1	26	18.22		0.0
	1	50	18.21		0.0
	25	0	18.26	0-0.5	0.0
	25	14	18.28	0	0.0
	25	27	18.25	0-0.5	0.0
	50	0	18.40		0.0
DFT-s-OFDM QPSK	1	1	18.19	0	0.0
	1	26	**18.26**		0.0
	1	50	18.18		0.0
	25	0	**18.32**	0-1	0.0
	25	14	18.25	0	0.0
	25	27	18.22	0-1	0.0
	50	0	18.22		0.0
DFT-s-OFDM 16QAM	1	1	18.44	0-1	0.0
CP-OFDM QPSK	1	1	18.25	0-1.5	0.0

9.4.9 NR Band n30 Antenna I

Table 9-56
NR Band n30 Antenna I 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) - 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	19.42	0	0.0
	1	26	19.41		0.0
	1	50	19.43		0.0
	25	0	19.42	0-0.5	0.0
	25	14	19.39	0	0.0
	25	27	19.37	0-0.5	0.0
	50	0	19.34		0.0
DFT-s-OFDM QPSK	1	1	19.38	0	0.0
	1	26	19.32		0.0
	1	50	**19.41**		0.0
	25	0	**19.42**	0-1	0.0
	25	14	19.37	0	0.0
	25	27	19.32	0-1	0.0
	50	0	19.34		0.0
DFT-s-OFDM 16QAM	1	1	19.86	0-1	0.0
CP-OFDM QPSK	1	1	19.35	0-1.5	0.0

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Table 9-57
NR Band n30 Antenna I Measured P_{Limit} for DSI = 2 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	18.62	0	0.0
	1	26	18.60		0.0
	1	50	18.58		0.0
	25	0	18.61	0-0.5	0.0
	25	14	18.55	0	0.0
	25	27	18.60	0-0.5	0.0
	50	0	18.50		0.0
DFT-s-OFDM QPSK	1	1	18.54	0	0.0
	1	26	18.47		0.0
	1	50	**18.55**		0.0
	25	0	**18.58**	0-1	0.0
	25	14	18.47	0	0.0
	25	27	18.50	0-1	0.0
	50	0	18.49		0.0
DFT-s-OFDM 16QAM	1	1	19.02	0-1	0.0
CP-OFDM QPSK	1	1	18.52	0-1.5	0.0

9.4.10 NR Band n7

Table 9-58
NR Band n7 Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 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	22.01	0	0.0
	1	108	22.13		0.0
	1	214	22.04		0.0
	108	0	22.11	0-0.5	0.0
	108	54	22.02	0	0.0
	108	108	22.09	0-0.5	0.0
	216	0	22.02		0.0
DFT-s-OFDM QPSK	1	1	21.90	0	0.0
	1	108	**22.05**		0.0
	1	214	21.83		0.0
	108	0	22.10	0-1	0.0
	108	54	22.06	0	0.0
	108	108	**22.11**	0-1	0.0
	216	0	22.01		0.0
DFT-s-OFDM 16QAM	1	1	22.27	0-1	0.0
CP-OFDM QPSK	1	1	21.38	0-1.5	0.5

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Table 9-59
NR Band n7 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	19.76	0	0.0
	1	108	19.86		0.0
	1	214	19.73		0.0
	108	0	19.85	0-0.5	0.0
	108	54	19.76	0	0.0
	108	108	19.83	0-0.5	0.0
	216	0	19.75		0.0
DFT-s-OFDM QPSK	1	1	19.70	0	0.0
	1	108	**19.81**		0.0
	1	214	19.68		0.0
	108	0	19.78	0-1	0.0
	108	54	19.77	0	0.0
	108	108	**19.80**	0-1	0.0
	216	0	19.73		0.0
DFT-s-OFDM 16QAM	1	1	20.01	0-1	0.0
CP-OFDM QPSK	1	1	19.84	0-1.5	0.0

9.4.11 NR Band n41 Antenna I

Table 9-60
NR Band n41 Antenna I 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	20.08	0	0.0
	1	137	20.10		0.0
	1	271	19.93		0.0
	135	0	19.90	0-0.5	0.0
	135	69	20.00	0	0.0
	135	138	19.97	0-0.5	0.0
	270	0	20.05		0.0
DFT-s-OFDM QPSK	1	1	19.99	0	0.0
	1	137	**20.17**		0.0
	1	271	19.98		0.0
	135	0	19.88	0-1	0.0
	135	69	**20.16**	0	0.0
	135	138	19.92	0-1	0.0
	270	0	20.15		0.0
DFT-s-OFDM 16QAM	1	1	19.77	0-1	0.0
CP-OFDM QPSK	1	1	20.07	0-1.5	0.0

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Table 9-61
NR Band n41 Antenna I 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	17.07	0	0.0
	1	137	17.14		0.0
	1	271	17.08		0.0
	135	0	16.99	0-0.5	0.0
	135	69	17.08	0	0.0
	135	138	17.06	0-0.5	0.0
	270	0	17.05		0.0
DFT-s-OFDM QPSK	1	1	**17.08**	0	0.0
	1	137	17.05		0.0
	1	271	17.00		0.0
	135	0	16.99	0-1	0.0
	135	69	**17.07**	0	0.0
	135	138	17.02	0-1	0.0
	270	0	17.05		0.0
DFT-s-OFDM 16QAM	1	1	16.97	0-1	0.0
CP-OFDM QPSK	1	1	17.00	0-1.5	0.0

9.4.12 NR Band n41 SRS Antenna B, E, D

Table 9-62
NR Band n41 SRS Antenna B, E, D Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz) Conducted Power [dBm]
SRS #2 Ant B	16.38
SRS #3 Ant E	15.28
SRS #4 Ant D	13.22

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9.4.13 NR Band n77 DoD Antenna F

Table 9-63
NR Band n77 DoD Antenna F 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 n77 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	17.35	0	0.0
	1	137	17.49		0.0
	1	271	17.98		0.0
	135	0	17.52	0-0.5	0.0
	135	69	17.60	0	0.0
	135	138	17.71	0-0.5	0.0
	270	0	17.62		0.0
DFT-s-OFDM QPSK	1	1	17.43	0	0.0
	1	137	17.59		0.0
	1	271	**17.78**		0.0
	135	0	17.52	0-1	0.0
	135	69	17.57	0	0.0
	135	138	**17.58**	0-1	0.0
	270	0	17.50		0.0
DFT-s-OFDM 16QAM	1	1	16.99	0-1	0.0
CP-OFDM QPSK	1	1	17.53	0-1.5	0.0

Table 9-64
NR Band n77 DoD Antenna F Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	15.74	0	0.0
	1	137	15.81		0.0
	1	271	16.29		0.0
	135	0	15.79	0-0.5	0.0
	135	69	15.78	0	0.0
	135	138	15.93	0-0.5	0.0
	270	0	15.86		0.0
DFT-s-OFDM QPSK	1	1	15.73	0	0.0
	1	137	15.80		0.0
	1	271	**16.27**		0.0
	135	0	15.81	0-1	0.0
	135	69	15.80	0	0.0
	135	138	**15.93**	0-1	0.0
	270	0	15.88		0.0
DFT-s-OFDM 16QAM	1	1	15.82	0-1	0.0
CP-OFDM QPSK	1	1	15.66	0-1.5	0.0

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9.4.14 NR Band n77 DoD SRS Antenna C, K, D

Table 9-65
NR Band n77 DoD SRS Antenna C, K, D Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01
	Conducted Power [dBm]
SRS#2 Ant C	10.64
SRS#3 Ant K	15.69
SRS#4 Ant D	11.81

9.4.15 NR Band n77 C-Band Antenna F

Table 9-66
NR Band n77 C-Band Antenna F 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 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	17.65	17.31	0	0.0
	1	137	17.26	17.54		0.0
	1	271	17.08	17.04		0.0
	135	0	17.76	17.40	0-0.5	0.0
	135	69	17.25	17.46	0	0.0
	135	138	16.78	17.26	0-0.5	0.0
	270	0	17.32	17.32		0.0
DFT-s-OFDM QPSK	1	1	17.39	17.40	0	0.0
	1	137	17.55	**17.71**		0.0
	1	271	17.45	17.41		0.0
	135	0	17.48	17.37	0-1	0.0
	135	69	17.50	**17.60**	0	0.0
	135	138	17.10	17.27	0-1	0.0
	270	0	17.32	17.44		0.0
DFT-s-OFDM 16QAM	1	1	17.23	16.99	0-1	0.0
CP-OFDM QPSK	1	1	17.24	17.70	0-1.5	0.0

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Table 9-67
NR Band n77 C-Band Antenna F Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	15.40	15.40	0	0.0
	1	137	15.47	15.88		0.0
	1	271	14.78	15.66		0.0
	135	0	15.66	15.72	0-0.5	0.0
	135	69	15.50	15.86	0	0.0
	135	138	14.84	15.82	0-0.5	0.0
	270	0	15.26	15.73		0.0
DFT-s-OFDM QPSK	1	1	15.37	15.47	0	0.0
	1	137	15.50	**15.95**		0.0
	1	271	14.80	15.74		0.0
	135	0	15.63	15.71	0-1	0.0
	135	69	15.49	**15.92**	0	0.0
	135	138	14.81	15.82	0-1	0.0
	270	0	15.26	15.75		0.0
DFT-s-OFDM 16QAM	1	1	15.40	15.80	0-1	0.0
CP-OFDM QPSK	1	1	15.42	15.45	0-1.5	0.0

9.4.16 NR Band n77 C-Band SRS Antenna C, K, D

Table 9-68
NR Band n77 C-Band SRS Antenna C, K, D 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 C	10.28	**11.31**
SRS#3 Ant K	14.86	**15.40**
SRS#4 Ant D	10.58	**12.36**

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Figure 9-4
Power Measurement Setup – NR FDD

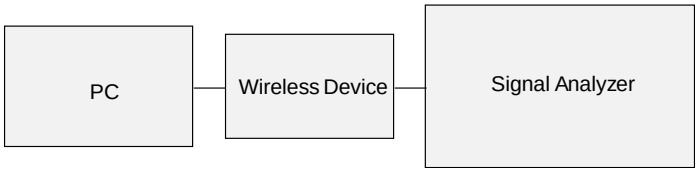

Figure 9-5
Power Measurement Setup – NR TDD

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9.5 WLAN Conducted Powers

Table 9-69
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	19.22
2437	6	18.99
2462	11	18.86

Table 9-70
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	19.42
2437	6	18.55
2462	11	18.51

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

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	15.31	15.15	18.24
2417	2	17.65	17.89	20.78
2437	6	17.76	17.68	20.73
2457	10	17.56	17.72	20.65
2462	11	14.31	14.66	17.50

Table 9-72
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	16.49
2437	6	16.59
2462	11	16.51

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Table 9-73
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	16.23
2437	6	16.37
2462	11	16.54

Table 9-74
2.4 GHz WLAN Reduced Average RF Power with RCV Active or During conditions with 5G NR - MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	15.31	15.15	18.24
2417	2	16.15	16.21	19.19
2437	6	16.29	16.34	19.33
2457	10	15.85	16.38	19.13
2462	11	14.31	14.66	17.50

Table 9-75
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN MIMO -MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	15.31	15.15	18.24
2417	2	15.25	14.86	18.07
2437	6	15.44	15.39	18.43
2457	10	15.12	15.30	18.22
2462	11	14.31	14.66	17.50

Table 9-76
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN MIMO with RCV active -MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	13.84	13.73	16.80
2437	6	13.97	13.99	16.99
2462	11	13.91	13.99	16.96

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Table 9-77
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5190	38	16.94	16.80	19.88
5230	46	16.12	16.13	19.14
5270	54	16.65	16.86	19.77
5310	62	16.23	15.98	19.12
5510	102	16.73	16.65	19.70
5590	118	16.43	16.36	19.41
5630	126	16.76	16.35	19.57
5710	142	16.95	16.91	19.94
5755	151	16.85	16.51	19.69
5795	159	16.65	16.10	19.39

Table 9-78
5 GHz WLAN Reduced Average RF Power with RCV Active - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	12.76	13.52	16.17
5290	58	12.97	13.38	16.19
5530	106	13.11	13.89	16.53
5610	122	13.82	13.94	16.89
5690	138	13.86	13.92	16.90
5775	155	13.75	13.13	16.46
5855	171	13.57	13.78	16.69

Table 9-79
5 GHz WLAN Reduced Average RF Power During Conditions with 2.45 GHz WLAN MIMO or During conditions with 5G NR - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	12.48	12.86	15.68
5290	58	12.35	12.69	15.53
5530	106	12.43	13.00	15.73
5610	122	12.71	13.00	15.87
5690	138	12.10	12.40	15.26
5775	155	12.88	12.90	15.90
5855	171	12.69	12.98	15.85

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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.

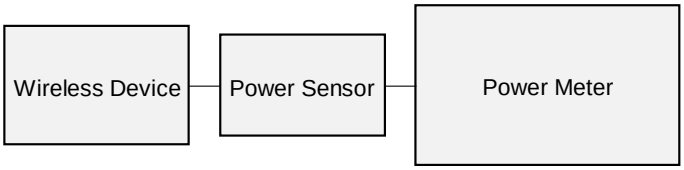

Figure 9-6
Power Measurement Setup

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9.6 Bluetooth Conducted Powers

Table 9-80
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	17.85	60.890
2441	1.0	GFSK	ePA	39	18.26	66.918
2480	1.0	GFSK	ePA	78	17.14	51.819
2402	1.0	GFSK	iPA	0	11.81	15.174
2441	1.0	GFSK	iPA	39	11.95	15.666
2480	1.0	GFSK	iPA	78	11.29	13.462
2402	2.0	π/4-DQPSK	ePA	0	16.38	43.430
2441	2.0	π/4-DQPSK	ePA	39	17.36	54.411
2480	2.0	π/4-DQPSK	ePA	78	15.97	39.535
2402	2.0	π/4-DQPSK	iPA	0	8.40	6.918
2441	2.0	π/4-DQPSK	iPA	39	8.60	7.244
2480	2.0	π/4-DQPSK	iPA	78	7.74	5.943
2402	3.0	8DPSK	ePA	0	16.45	44.135
2441	3.0	8DPSK	ePA	39	17.47	55.788
2480	3.0	8DPSK	ePA	78	15.90	38.874
2402	3.0	8DPSK	iPA	0	8.47	7.031
2441	3.0	8DPSK	iPA	39	8.68	7.379
2480	3.0	8DPSK	iPA	78	7.83	6.067

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Table 9-81
Bluetooth Maximum Average RF Power– Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	15.57	36.043
2441	1.0	GFSK	ePA	39	16.61	45.854
2480	1.0	GFSK	ePA	78	15.50	35.483
2402	1.0	GFSK	iPA	0	11.18	13.123
2441	1.0	GFSK	iPA	39	11.69	14.767
2480	1.0	GFSK	iPA	78	10.80	12.025
2402	2.0	π/4-DQPSK	ePA	0	15.02	31.778
2441	2.0	π/4-DQPSK	ePA	39	16.15	41.244
2480	2.0	π/4-DQPSK	ePA	78	15.38	34.486
2402	2.0	π/4-DQPSK	iPA	0	8.42	6.945
2441	2.0	π/4-DQPSK	iPA	39	8.79	7.573
2480	2.0	π/4-DQPSK	iPA	78	7.63	5.793
2402	3.0	8DPSK	ePA	0	14.89	30.849
2441	3.0	8DPSK	ePA	39	16.04	40.148
2480	3.0	8DPSK	ePA	78	15.45	35.093
2402	3.0	8DPSK	iPA	0	8.62	7.285
2441	3.0	8DPSK	iPA	39	8.94	7.840
2480	3.0	8DPSK	iPA	78	7.63	5.789

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Table 9-82
Bluetooth Maximum Average RF Power– MIMO

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	ANT1 Avg Conducted Power		ANT2 Avg Conducted Power		Dual Avg Conducted Power	
					[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]
2402	1.0	GFSK	iPA	0	11.14	13.000	10.52	11.284	13.85	24.284
2441	1.0	GFSK	iPA	39	11.00	12.585	10.96	12.463	13.99	25.047
2480	1.0	GFSK	iPA	78	10.15	10.354	9.80	9.549	12.99	19.904
2402	2.0	π/4-DQPSK	iPA	0	8.57	7.194	9.86	9.683	12.27	16.878
2441	2.0	π/4-DQPSK	iPA	39	8.45	6.998	10.09	10.205	12.36	17.203
2480	2.0	π/4-DQPSK	iPA	78	7.31	5.383	9.11	8.153	11.31	13.535
2402	3.0	8DPSK	iPA	0	8.02	6.336	9.42	8.745	11.78	15.081
2441	3.0	8DPSK	iPA	39	8.53	7.133	9.71	9.357	12.17	16.489
2480	3.0	8DPSK	iPA	78	7.50	5.625	9.20	8.311	11.44	13.936

Table 9-83
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	13.62	23.014
2441	1.0	GFSK	ePA	39	14.28	26.792
2480	1.0	GFSK	ePA	78	13.45	22.131

Table 9-84
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	12.87	19.364
2441	1.0	GFSK	ePA	39	13.87	24.378
2480	1.0	GFSK	ePA	78	12.77	18.923

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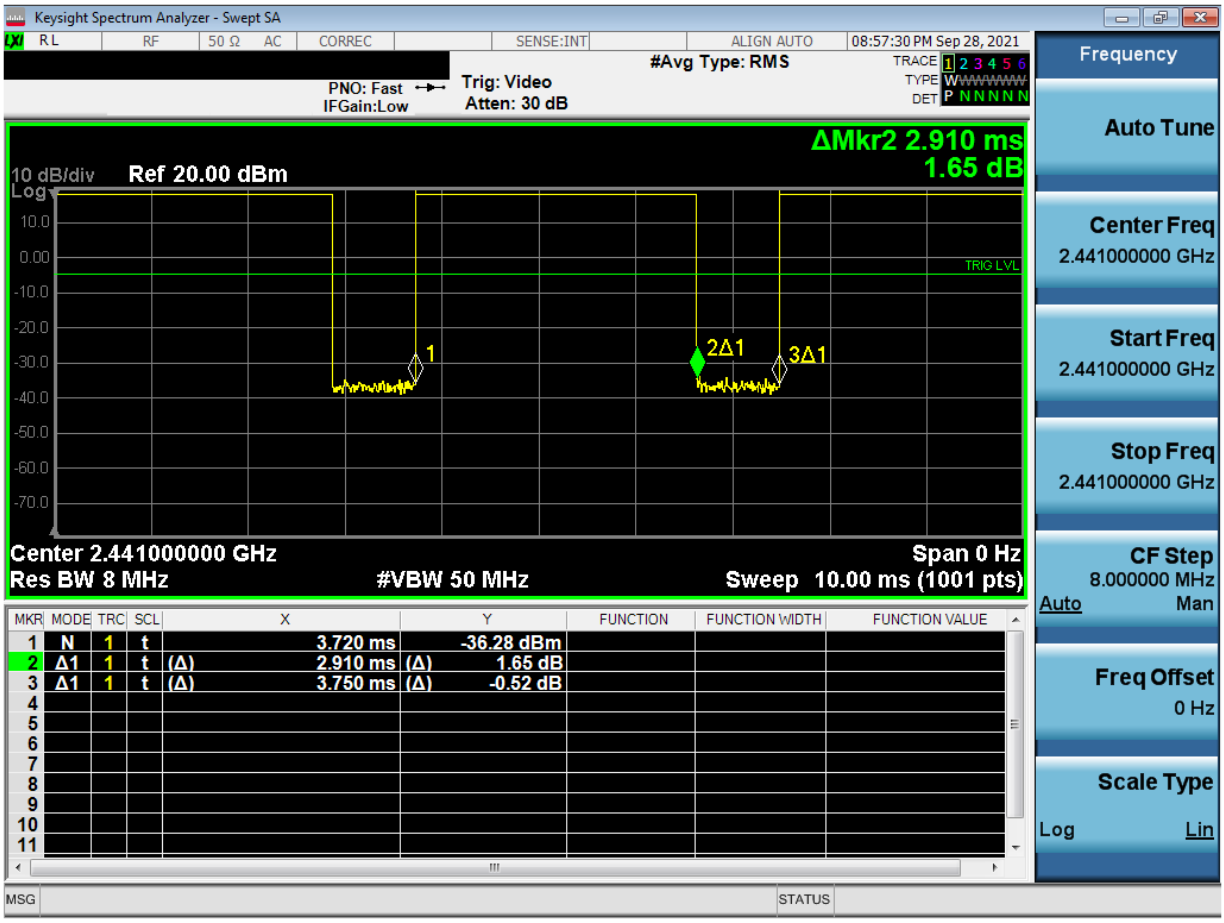
Figure 9-7
Bluetooth Antenna 1 Transmission Plot



Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.91ms}{3.75ms} * 100\% = 77.6\%$$

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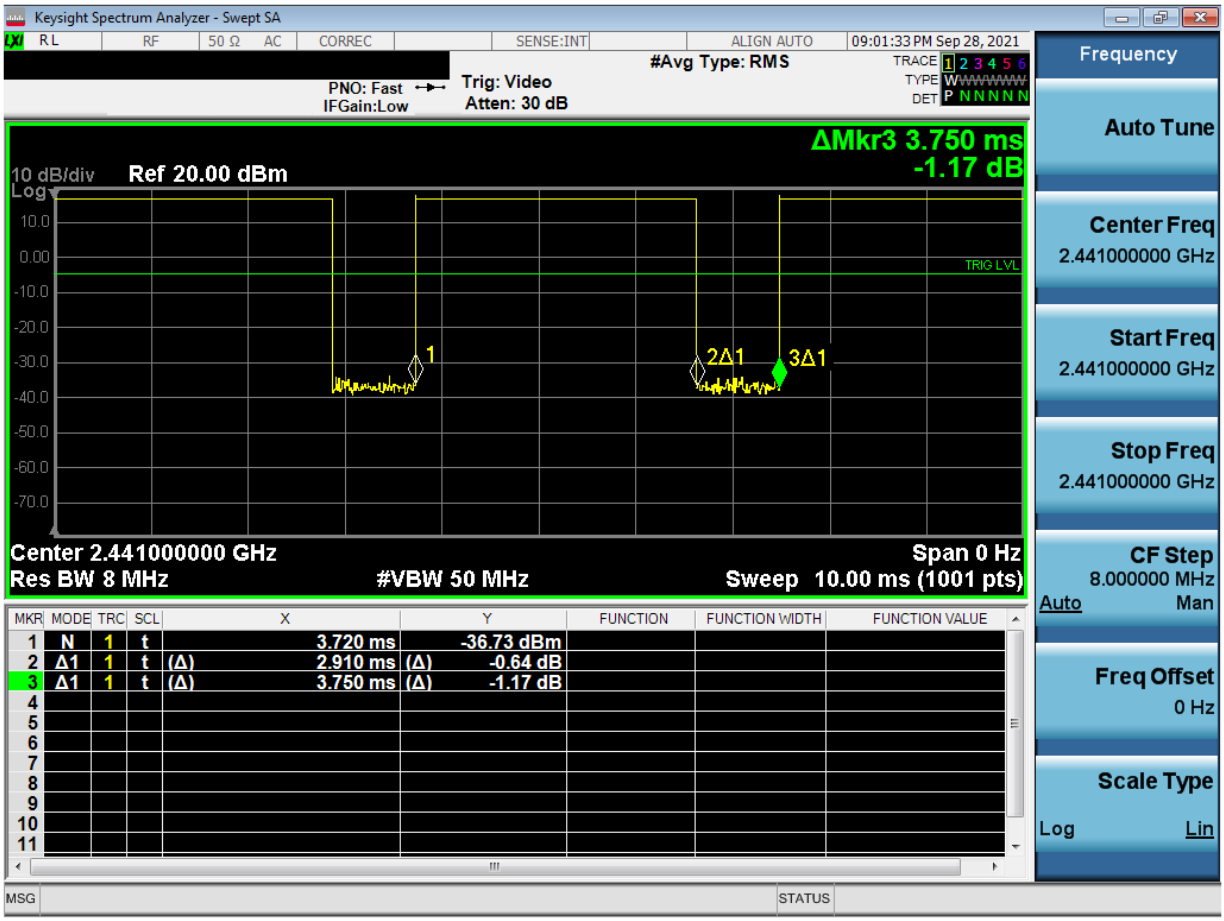
Figure 9-8
Bluetooth Antenna 2 Transmission Plot



Equation 9-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.91ms}{3.75ms} * 100\% = 77.6\%$$

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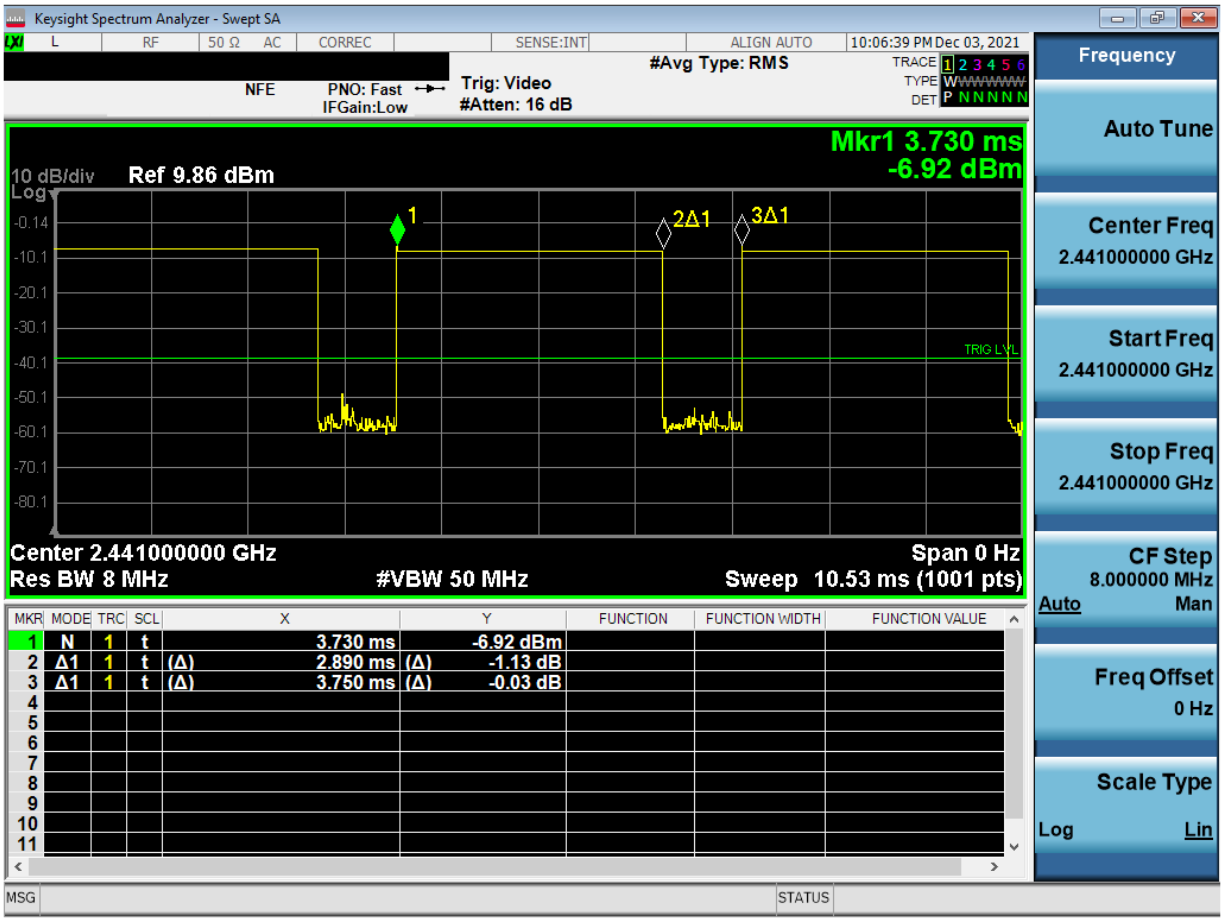
Figure 9-9
Bluetooth MIMO Transmission Plot



Equation 9-3
Bluetooth MIMO Duty Cycle Calculation

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

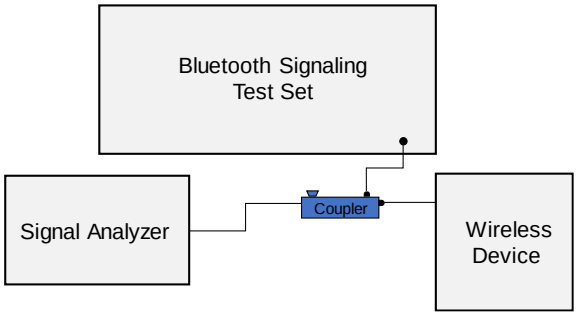


Figure 9-10
Power Measurement Setup

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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
09/28/2021	750 Head	22.1	680	0.883	42.587	0.888	42.305	-0.56%	0.67%
			695	0.888	42.540	0.889	42.227	-0.11%	0.74%
			700	0.890	42.525	0.889	42.201	0.11%	0.77%
			710	0.894	42.495	0.890	42.149	0.45%	0.82%
			725	0.899	42.445	0.891	42.071	0.90%	0.89%
			750	0.908	42.366	0.894	41.942	1.57%	1.01%
			770	0.914	42.301	0.895	41.838	2.12%	1.11%
			785	0.919	42.253	0.896	41.760	2.57%	1.18%
			800	0.925	42.215	0.897	41.682	3.12%	1.28%
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	22.7	680	0.893	41.306	0.888	42.305	0.56%	-2.36%
			695	0.898	41.258	0.889	42.227	1.01%	-2.29%
			700	0.900	41.244	0.889	42.201	1.24%	-2.27%
			710	0.903	41.216	0.890	42.149	1.46%	-2.21%
			725	0.908	41.173	0.891	42.071	1.91%	-2.13%
			750	0.917	41.095	0.894	41.942	2.57%	-2.02%
			770	0.924	41.027	0.895	41.838	3.24%	-1.94%
			785	0.929	40.979	0.896	41.760	3.68%	-1.87%
			800	0.935	40.931	0.897	41.682	4.24%	-1.80%
10/14/2021	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%
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%
10/24/2021	1750 Head	20.3	1710	1.308	40.689	1.348	40.142	-2.97%	1.36%
			1720	1.319	40.644	1.354	40.126	-2.58%	1.29%
			1745	1.346	40.530	1.368	40.087	-1.61%	1.11%
			1750	1.351	40.506	1.371	40.079	-1.46%	1.07%
			1770	1.373	40.409	1.383	40.047	-0.72%	0.90%
			1790	1.394	40.307	1.394	40.016	0.00%	0.73%
10/10/2021	1900 Head	22.8	1850	1.383	39.209	1.400	40.000	-1.21%	-1.98%
			1860	1.393	39.168	1.400	40.000	-0.50%	-2.08%
			1880	1.413	39.085	1.400	40.000	0.93%	-2.29%
			1900	1.433	39.002	1.400	40.000	2.36%	-2.49%
			1905	1.438	38.980	1.400	40.000	2.71%	-2.55%
			1910	1.444	38.958	1.400	40.000	3.14%	-2.61%
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%
10/25/2021	1900 Head	22.2	1850	1.394	38.671	1.400	40.000	-0.43%	-3.32%
			1860	1.404	38.625	1.400	40.000	0.29%	-3.44%
			1880	1.425	38.535	1.400	40.000	1.79%	-3.66%
			1900	1.446	38.447	1.400	40.000	3.29%	-3.88%
			1905	1.451	38.425	1.400	40.000	3.64%	-3.94%
			1910	1.456	38.404	1.400	40.000	4.00%	-3.99%

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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
10/10/2021	2450 Head	23.2	2400	1.843	38.325	1.756	39.289	4.95%	-2.45%
			2450	1.882	38.253	1.800	39.200	4.56%	-2.42%
			2480	1.903	38.216	1.833	39.162	3.82%	-2.42%
			2500	1.919	38.184	1.855	39.136	3.45%	-2.43%
			2510	1.927	38.166	1.866	39.123	3.27%	-2.45%
			2535	1.948	38.121	1.893	39.092	2.91%	-2.48%
			2550	1.961	38.100	1.909	39.073	2.72%	-2.49%
			2560	1.969	38.086	1.920	39.060	2.55%	-2.49%
			2600	2.000	38.025	1.964	39.009	1.83%	-2.52%
			2650	2.041	37.933	2.018	38.945	1.14%	-2.60%
			2680	2.065	37.889	2.051	38.907	0.68%	-2.62%
			2700	2.080	37.857	2.073	38.882	0.34%	-2.64%
10/13/2021	2450 Head	24.5	2300	1.673	39.742	1.670	39.500	0.18%	0.61%
			2310	1.685	39.700	1.679	39.480	0.36%	0.56%
			2320	1.697	39.660	1.687	39.460	0.59%	0.51%
			2400	1.788	39.340	1.756	39.289	1.82%	0.13%
			2450	1.847	39.140	1.800	39.200	2.61%	-0.15%
			2480	1.881	39.026	1.833	39.162	2.62%	-0.35%
			2500	1.904	38.949	1.855	39.136	2.64%	-0.48%
			2510	1.916	38.909	1.866	39.123	2.68%	-0.55%
			2535	1.946	38.805	1.893	39.092	2.80%	-0.73%
			2550	1.964	38.745	1.909	39.073	2.88%	-0.84%
			2560	1.976	38.707	1.920	39.060	2.92%	-0.90%
			2600	2.023	38.553	1.964	39.009	3.00%	-1.17%
			2650	2.082	38.356	2.018	38.945	3.17%	-1.51%
			2680	2.117	38.244	2.051	38.907	3.22%	-1.70%
			2700	2.141	38.168	2.073	38.882	3.28%	-1.84%
10/20/2021	2450 Head	24.8	2300	1.686	39.273	1.670	39.500	0.96%	-0.57%
			2310	1.698	39.236	1.679	39.480	1.13%	-0.62%
			2320	1.709	39.203	1.687	39.460	1.30%	-0.65%
			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%
10/22/2021	2450 Head	23.5	2300	1.683	39.736	1.670	39.500	0.78%	0.60%
			2310	1.694	39.704	1.679	39.480	0.89%	0.57%
			2320	1.705	39.668	1.687	39.460	1.07%	0.53%
			2400	1.793	39.403	1.756	39.289	2.11%	0.29%
			2450	1.849	39.237	1.800	39.200	2.72%	0.09%
			2480	1.880	39.138	1.833	39.162	2.56%	-0.06%
			2500	1.902	39.059	1.855	39.136	2.53%	-0.20%
			2510	1.914	39.022	1.866	39.123	2.57%	-0.26%
			2535	1.943	38.937	1.893	39.092	2.64%	-0.40%
			2550	1.960	38.892	1.909	39.073	2.67%	-0.46%
			2560	1.971	38.863	1.920	39.060	2.66%	-0.50%
			2600	2.015	38.730	1.964	39.009	2.60%	-0.72%
			2650	2.072	38.552	2.018	38.945	2.68%	-1.01%
			2680	2.105	38.457	2.051	38.907	2.63%	-1.16%
			2700	2.127	38.389	2.073	38.882	2.60%	-1.27%
10/31/2021	2450 Head	22.9	2300	1.732	38.496	1.670	39.500	3.71%	-2.54%
			2310	1.739	38.485	1.679	39.480	3.57%	-2.52%
			2320	1.748	38.474	1.687	39.460	3.62%	-2.50%
			2400	1.810	38.349	1.756	39.289	3.08%	-2.39%
			2450	1.851	38.264	1.800	39.200	2.83%	-2.39%
			2480	1.873	38.213	1.833	39.162	2.18%	-2.42%
			2500	1.888	38.178	1.855	39.136	1.78%	-2.45%
			2510	1.896	38.160	1.866	39.123	1.61%	-2.46%
			2535	1.917	38.117	1.893	39.092	1.27%	-2.49%
			2550	1.929	38.097	1.909	39.073	1.05%	-2.50%
			2560	1.937	38.082	1.920	39.060	0.89%	-2.50%
			2600	1.968	38.019	1.964	39.009	0.20%	-2.54%
			2650	2.009	37.937	2.018	38.945	-0.45%	-2.59%
			2680	2.034	37.898	2.051	38.907	-0.83%	-2.59%
			2700	2.050	37.870	2.073	38.882	-1.11%	-2.60%
11/02/2021	2450 Head	21.5	2300	1.753	38.192	1.670	39.500	4.97%	-3.31%
			2310	1.760	38.171	1.679	39.480	4.82%	-3.32%
			2320	1.768	38.146	1.687	39.460	4.80%	-3.33%
			2400	1.826	38.015	1.756	39.289	3.99%	-3.24%
			2450	1.865	37.925	1.800	39.200	3.61%	-3.25%
			2480	1.887	37.893	1.833	39.162	2.95%	-3.24%
			2500	1.902	37.861	1.855	39.136	2.53%	-3.26%
			2510	1.911	37.844	1.866	39.123	2.41%	-3.27%
			2535	1.933	37.793	1.893	39.092	2.11%	-3.32%
			2550	1.945	37.765	1.909	39.073	1.89%	-3.35%
			2560	1.954	37.751	1.920	39.060	1.77%	-3.35%
			2600	1.984	37.692	1.964	39.009	1.02%	-3.38%
			2650	2.025	37.584	2.018	38.945	0.35%	-3.49%
			2680	2.049	37.532	2.051	38.907	-0.10%	-3.53%
			2700	2.065	37.501	2.073	38.882	-0.39%	-3.55%

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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
11/14/2021	2450 Head	22.3	2300	1.751	39.734	1.670	39.500	4.85%	0.59%
			2310	1.759	39.718	1.679	39.480	4.76%	0.60%
			2320	1.767	39.704	1.687	39.460	4.74%	0.62%
			2400	1.828	39.590	1.756	39.289	4.10%	0.77%
			2450	1.869	39.519	1.800	39.200	3.83%	0.81%
			2480	1.893	39.482	1.833	39.162	3.27%	0.82%
			2500	1.910	39.450	1.855	39.136	2.96%	0.80%
			2510	1.918	39.432	1.866	39.123	2.79%	0.79%
			2535	1.941	39.388	1.893	39.092	2.54%	0.76%
			2550	1.955	39.365	1.909	39.073	2.41%	0.75%
			2560	1.964	39.351	1.920	39.060	2.29%	0.75%
			2600	1.998	39.284	1.964	39.009	1.73%	0.70%
			2650	2.042	39.182	2.018	38.945	1.19%	0.61%
			2680	2.067	39.134	2.051	38.907	0.78%	0.58%
			2700	2.084	39.099	2.073	38.882	0.53%	0.56%
11/02/2021	2450 Head	21.5	2300	1.753	38.192	1.670	39.500	4.97%	-3.31%
			2310	1.760	38.171	1.679	39.480	4.82%	-3.32%
			2320	1.768	38.146	1.687	39.460	4.80%	-3.33%
			2400	1.826	38.015	1.756	39.289	3.99%	-3.24%
			2450	1.865	37.925	1.800	39.200	3.61%	-3.25%
			2480	1.887	37.893	1.833	39.162	2.95%	-3.24%
			2500	1.902	37.861	1.855	39.136	2.53%	-3.26%
			2510	1.911	37.844	1.866	39.123	2.41%	-3.27%
			2535	1.933	37.793	1.893	39.092	2.11%	-3.32%
			2550	1.945	37.765	1.909	39.073	1.89%	-3.35%
			2560	1.954	37.751	1.920	39.060	1.77%	-3.35%
			2600	1.984	37.692	1.964	39.009	1.02%	-3.38%
			2650	2.025	37.584	2.018	38.945	0.35%	-3.49%
			2680	2.049	37.532	2.051	38.907	-0.10%	-3.53%
			2700	2.065	37.501	2.073	38.882	-0.39%	-3.55%
10/11/2021	3600 Head	20.0	3300	2.603	38.533	2.708	38.157	-3.88%	0.99%
			3350	2.650	38.445	2.759	38.100	-3.95%	0.91%
			3450	2.740	38.279	2.861	37.986	-4.23%	0.77%
			3500	2.786	38.172	2.913	37.929	-4.36%	0.64%
			3550	2.838	38.082	2.964	37.871	-4.25%	0.56%
			3560	2.845	38.079	2.974	37.860	-4.34%	0.58%
			3600	2.881	38.022	3.015	37.814	-4.44%	0.55%
			3650	2.933	37.937	3.066	37.757	-4.34%	0.48%
			3690	2.967	37.866	3.107	37.711	-4.51%	0.41%
			3700	2.975	37.851	3.117	37.700	-4.56%	0.40%
			3750	3.030	37.754	3.169	37.643	-4.39%	0.29%
			3900	3.181	37.531	3.323	37.471	-4.27%	0.16%
			3930	3.212	37.478	3.353	37.437	-4.21%	0.11%
			4100	3.392	37.190	3.528	37.243	-3.85%	-0.14%
			4150	3.446	37.100	3.579	37.186	-3.72%	-0.23%
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%

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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
11/01/2021	3600 Head	21.3	3300	2.626	39.604	2.708	38.157	-3.03%	3.79%
			3350	2.669	39.517	2.759	38.100	-3.26%	3.72%
			3450	2.762	39.354	2.861	37.986	-3.46%	3.60%
			3500	2.806	39.264	2.913	37.929	-3.67%	3.52%
			3550	2.856	39.177	2.964	37.871	-3.64%	3.45%
			3560	2.864	39.160	2.974	37.860	-3.70%	3.43%
			3600	2.899	39.087	3.015	37.814	-3.85%	3.37%
			3650	2.951	39.015	3.066	37.757	-3.75%	3.33%
			3690	2.982	38.946	3.107	37.711	-4.02%	3.27%
			3700	2.992	38.920	3.117	37.700	-4.01%	3.24%
			3750	3.046	38.845	3.169	37.643	-3.88%	3.19%
			3900	3.192	38.624	3.323	37.471	-3.94%	3.08%
			3930	3.219	38.564	3.353	37.437	-4.00%	3.01%
			4100	3.399	38.303	3.528	37.243	-3.66%	2.85%
			4150	3.449	38.200	3.579	37.186	-3.63%	2.73%
11/07/2021	5200-5800 Head	20.1	5180	4.641	34.893	4.635	36.009	0.13%	-3.10%
			5190	4.650	34.877	4.645	35.998	0.11%	-3.11%
			5200	4.661	34.857	4.655	35.986	0.13%	-3.14%
			5210	4.671	34.841	4.666	35.975	0.11%	-3.15%
			5220	4.681	34.814	4.676	35.963	0.11%	-3.19%
			5240	4.701	34.772	4.696	35.940	0.11%	-3.25%
			5250	4.714	34.752	4.706	35.929	0.17%	-3.28%
			5260	4.727	34.732	4.717	35.917	0.21%	-3.30%
			5270	4.740	34.707	4.727	35.906	0.28%	-3.34%
			5280	4.754	34.686	4.737	35.894	0.36%	-3.37%
			5290	4.766	34.670	4.748	35.883	0.38%	-3.38%
			5300	4.776	34.658	4.758	35.871	0.38%	-3.38%
			5310	4.786	34.652	4.768	35.860	0.38%	-3.37%
			5320	4.797	34.636	4.778	35.849	0.40%	-3.38%
			5500	5.001	34.310	4.963	35.643	0.77%	-3.74%
			5510	5.015	34.288	4.973	35.632	0.84%	-3.77%
			5520	5.030	34.266	4.983	35.620	0.94%	-3.80%
			5530	5.045	34.251	4.994	35.609	1.02%	-3.81%
			5540	5.059	34.240	5.004	35.597	1.10%	-3.81%
			5550	5.072	34.227	5.014	35.586	1.16%	-3.82%
			5560	5.082	34.216	5.024	35.574	1.15%	-3.82%
			5580	5.102	34.188	5.045	35.551	1.13%	-3.83%
			5600	5.125	34.131	5.065	35.529	1.18%	-3.93%
			5610	5.136	34.109	5.076	35.518	1.18%	-3.97%
			5620	5.150	34.089	5.086	35.506	1.26%	-3.99%
			5640	5.174	34.053	5.106	35.483	1.33%	-4.03%
			5660	5.199	34.041	5.127	35.460	1.40%	-4.00%
			5670	5.209	34.040	5.137	35.449	1.40%	-3.97%
			5680	5.218	34.028	5.147	35.437	1.38%	-3.98%
			5690	5.227	34.004	5.158	35.426	1.34%	-4.01%
			5700	5.237	33.978	5.168	35.414	1.34%	-4.05%
			5710	5.248	33.959	5.178	35.403	1.35%	-4.08%
			5720	5.260	33.941	5.188	35.391	1.39%	-4.10%
			5745	5.290	33.882	5.214	35.363	1.46%	-4.19%
			5750	5.296	33.873	5.219	35.357	1.48%	-4.20%
			5755	5.302	33.866	5.224	35.351	1.49%	-4.20%
			5765	5.314	33.860	5.234	35.340	1.53%	-4.19%
			5775	5.325	33.855	5.245	35.329	1.53%	-4.17%
			5785	5.335	33.843	5.255	35.317	1.52%	-4.17%
			5795	5.343	33.825	5.265	35.305	1.48%	-4.19%
			5800	5.348	33.815	5.270	35.300	1.48%	-4.21%
			5800	5.348	33.815	5.270	35.300	1.48%	-4.21%
			5805	5.352	33.808	5.275	35.294	1.46%	-4.21%
			5825	5.370	33.765	5.296	35.271	1.40%	-4.27%
			5835	5.380	33.737	5.305	35.230	1.41%	-4.24%
			5845	5.389	33.713	5.315	35.210	1.39%	-4.25%
			5855	5.401	33.699	5.325	35.197	1.43%	-4.26%
			5865	5.414	33.688	5.336	35.190	1.46%	-4.27%
			5865	5.414	33.688	5.336	35.190	1.46%	-4.27%
			5865	5.414	33.688	5.336	35.190	1.46%	-4.27%
			5865	5.414	33.688	5.336	35.190	1.46%	-4.27%
			5875	5.429	33.666	5.347	35.183	1.53%	-4.31%
			5885	5.442	33.644	5.357	35.177	1.59%	-4.36%
			5905	5.459	33.616	5.379	35.163	1.49%	-4.40%
11/01/2021	5200-5800 Head	21.6	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%
			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%
10/13/2021	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%
10/14/2021	750 Body	21.3	680	0.947	53.458	0.958	55.804	-1.15%	-4.20%
			695	0.952	53.419	0.959	55.745	-0.73%	-4.17%
			700	0.954	53.406	0.959	55.726	-0.52%	-4.16%
			710	0.958	53.380	0.960	55.687	-0.21%	-4.14%
			725	0.963	53.353	0.961	55.629	0.21%	-4.09%
			750	0.973	53.309	0.964	55.531	0.93%	-4.00%
			770	0.980	53.258	0.965	55.453	1.55%	-3.96%
			785	0.986	53.214	0.966	55.395	2.07%	-3.94%
			800	0.992	53.175	0.967	55.336	2.59%	-3.91%
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%
10/05/2021	835 Body	21.4	815	0.931	54.995	0.968	55.271	-3.82%	-0.50%
			820	0.936	54.954	0.969	55.258	-3.41%	-0.55%
			835	0.953	54.827	0.970	55.200	-1.75%	-0.68%
			850	0.969	54.693	0.988	55.154	-1.92%	-0.84%
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%
09/19/2021	1750 Body	22.6	1710	1.420	52.604	1.463	53.537	-2.94%	-1.74%
			1720	1.431	52.580	1.469	53.511	-2.59%	-1.74%
			1745	1.460	52.511	1.485	53.445	-1.68%	-1.75%
			1750	1.465	52.496	1.488	53.432	-1.55%	-1.75%
			1770	1.487	52.433	1.501	53.379	-0.93%	-1.77%
			1790	1.509	52.370	1.514	53.326	-0.33%	-1.79%
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%
09/28/2021	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%
09/30/2021	1750 Body	22.1	1710	1.457	52.139	1.463	53.537	-0.41%	-2.61%
			1720	1.468	52.110	1.469	53.511	-0.07%	-2.62%
			1745	1.494	52.043	1.485	53.445	0.61%	-2.62%
			1750	1.499	52.026	1.488	53.432	0.74%	-2.63%
			1770	1.520	51.949	1.501	53.379	1.27%	-2.68%
			1790	1.541	51.858	1.514	53.326	1.78%	-2.75%
10/03/2021	1750 Body	21.7	1710	1.464	52.454	1.463	53.537	0.07%	-2.02%
			1720	1.475	52.414	1.469	53.511	0.41%	-2.05%
			1745	1.502	52.310	1.485	53.445	1.14%	-2.12%
			1750	1.507	52.289	1.488	53.432	1.28%	-2.14%
			1770	1.528	52.209	1.501	53.379	1.80%	-2.19%
			1790	1.550	52.131	1.514	53.326	2.38%	-2.24%
10/28/2021	1750 Body	21.4	1710	1.452	54.416	1.463	53.537	-0.75%	1.64%
			1720	1.463	54.377	1.469	53.511	-0.41%	1.62%
			1745	1.491	54.282	1.485	53.445	0.40%	1.57%
			1750	1.496	54.264	1.488	53.432	0.54%	1.56%
			1770	1.518	54.184	1.501	53.379	1.13%	1.51%
			1790	1.540	54.101	1.514	53.326	1.72%	1.45%

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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
09/26/2021	1900 Body	25.0	1850	1.453	51.395	1.520	53.300	-4.41%	-3.57%
			1860	1.463	51.364	1.520	53.300	-3.75%	-3.63%
			1880	1.484	51.315	1.520	53.300	-2.37%	-3.72%
			1900	1.505	51.276	1.520	53.300	-0.99%	-3.80%
			1905	1.511	51.266	1.520	53.300	-0.59%	-3.82%
			1910	1.516	51.254	1.520	53.300	-0.26%	-3.84%
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%
10/12/2021	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%
10/17/2021	1900 Body	21.9	1850	1.513	52.173	1.520	53.300	-0.46%	-2.11%
			1860	1.524	52.134	1.520	53.300	0.26%	-2.19%
			1880	1.547	52.060	1.520	53.300	1.78%	-2.33%
			1900	1.569	52.000	1.520	53.300	3.22%	-2.44%
			1905	1.575	51.985	1.520	53.300	3.62%	-2.47%
			1910	1.581	51.970	1.520	53.300	4.01%	-2.50%
10/24/2021	1900 Body	24.0	1850	1.521	51.186	1.520	53.300	0.07%	-3.97%
			1860	1.532	51.162	1.520	53.300	0.79%	-4.01%
			1880	1.553	51.107	1.520	53.300	2.17%	-4.11%
			1900	1.576	51.048	1.520	53.300	3.68%	-4.23%
			1905	1.581	51.031	1.520	53.300	4.01%	-4.26%
			1910	1.587	51.014	1.520	53.300	4.41%	-4.29%
10/28/2021	1900 Body	24.2	1850	1.507	51.260	1.520	53.300	-0.86%	-3.83%
			1860	1.517	51.229	1.520	53.300	-0.20%	-3.89%
			1880	1.538	51.167	1.520	53.300	1.18%	-4.00%
			1900	1.560	51.117	1.520	53.300	2.63%	-4.10%
			1905	1.566	51.102	1.520	53.300	3.03%	-4.12%
			1910	1.571	51.088	1.520	53.300	3.36%	-4.15%
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%
09/26/2021	2450 Body	22.5	2300	1.867	51.388	1.809	52.900	3.21%	-2.86%
			2310	1.878	51.364	1.816	52.887	3.41%	-2.88%
			2320	1.889	51.340	1.826	52.873	3.45%	-2.90%
			2400	1.980	51.113	1.902	52.767	4.10%	-3.13%
			2450	2.039	50.969	1.950	52.700	4.56%	-3.28%
			2480	2.073	50.879	1.993	52.662	4.01%	-3.39%
			2500	2.095	50.821	2.021	52.636	3.66%	-3.45%
			2510	2.107	50.792	2.035	52.623	3.54%	-3.48%
			2535	2.137	50.712	2.071	52.592	3.19%	-3.57%
			2550	2.156	50.664	2.092	52.573	3.06%	-3.63%
			2560	2.169	50.631	2.106	52.560	2.99%	-3.67%
			2600	2.214	50.518	2.163	52.509	2.36%	-3.79%
			2650	2.272	50.332	2.234	52.445	1.70%	-4.03%
			2680	2.309	50.254	2.277	52.407	1.41%	-4.11%
			2700	2.330	50.208	2.305	52.382	1.08%	-4.15%
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%

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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
10/21/2021	2450 Body	21.0	2300	1.824	52.093	1.809	52.900	0.83%	-1.53%
			2310	1.836	52.064	1.816	52.887	1.10%	-1.56%
			2320	1.847	52.035	1.826	52.873	1.15%	-1.58%
			2400	1.939	51.809	1.902	52.767	1.95%	-1.82%
			2450	1.997	51.678	1.950	52.700	2.41%	-1.94%
			2480	2.031	51.607	1.993	52.662	1.91%	-2.00%
			2500	2.055	51.540	2.021	52.636	1.68%	-2.08%
			2510	2.068	51.507	2.035	52.623	1.62%	-2.12%
			2535	2.099	51.431	2.071	52.592	1.35%	-2.21%
			2550	2.117	51.393	2.092	52.573	1.20%	-2.24%
			2560	2.129	51.371	2.106	52.560	1.09%	-2.26%
			2600	2.178	51.251	2.163	52.509	0.69%	-2.40%
			2650	2.242	51.094	2.234	52.445	0.36%	-2.58%
			2680	2.277	51.009	2.277	52.407	0.00%	-2.67%
			2700	2.301	50.943	2.305	52.382	-0.17%	-2.75%
10/21/2021	2450 Body	24.3	2300	1.863	53.500	1.809	52.900	2.99%	1.13%
			2310	1.874	53.469	1.816	52.887	3.19%	1.10%
			2320	1.886	53.442	1.826	52.873	3.29%	1.08%
			2400	1.980	53.226	1.902	52.767	4.10%	0.87%
			2450	2.040	53.076	1.950	52.700	4.62%	0.71%
			2480	2.076	52.985	1.993	52.662	4.16%	0.61%
			2500	2.100	52.921	2.021	52.636	3.91%	0.54%
			2510	2.111	52.888	2.035	52.623	3.73%	0.50%
			2535	2.142	52.809	2.071	52.592	3.43%	0.41%
			2550	2.161	52.763	2.092	52.573	3.30%	0.36%
			2560	2.173	52.732	2.106	52.560	3.18%	0.33%
			2600	2.222	52.598	2.163	52.509	2.73%	0.17%
			2650	2.281	52.449	2.234	52.445	2.10%	0.01%
			2680	2.318	52.354	2.277	52.407	1.80%	-0.10%
			2700	2.341	52.289	2.305	52.382	1.56%	-0.18%
10/25/2021	2450 Body	23.6	2300	1.794	53.355	1.809	52.900	-0.83%	0.86%
			2310	1.808	53.328	1.816	52.887	-0.44%	0.83%
			2320	1.821	53.301	1.826	52.873	-0.27%	0.81%
			2400	1.924	52.983	1.902	52.767	1.16%	0.41%
			2450	1.992	52.833	1.950	52.700	2.15%	0.25%
			2480	2.030	52.711	1.993	52.662	1.86%	0.09%
			2500	2.059	52.638	2.021	52.636	1.88%	0.00%
			2510	2.074	52.606	2.035	52.623	1.92%	-0.03%
			2535	2.111	52.531	2.071	52.592	1.93%	-0.12%
			2550	2.132	52.481	2.092	52.573	1.91%	-0.17%
			2560	2.145	52.441	2.106	52.560	1.85%	-0.23%
			2600	2.200	52.270	2.163	52.509	1.71%	-0.46%
			2650	2.273	52.072	2.234	52.445	1.75%	-0.71%
			2680	2.314	51.968	2.277	52.407	1.62%	-0.84%
			2700	2.340	51.890	2.305	52.382	1.52%	-0.94%
10/27/2021	2450 Body	21.5	2300	1.806	52.094	1.809	52.900	-0.17%	-1.52%
			2310	1.817	52.073	1.816	52.887	0.06%	-1.54%
			2320	1.828	52.050	1.826	52.873	0.11%	-1.56%
			2400	1.919	51.830	1.902	52.767	0.89%	-1.78%
			2450	1.977	51.702	1.950	52.700	1.38%	-1.89%
			2480	2.012	51.614	1.993	52.662	0.95%	-1.99%
			2500	2.036	51.550	2.021	52.636	0.74%	-2.06%
			2510	2.048	51.521	2.035	52.623	0.64%	-2.09%
			2535	2.079	51.454	2.071	52.592	0.39%	-2.16%
			2550	2.096	51.415	2.092	52.573	0.19%	-2.20%
			2560	2.108	51.388	2.106	52.560	0.09%	-2.23%
			2600	2.156	51.255	2.163	52.509	-0.32%	-2.39%
			2650	2.218	51.110	2.234	52.445	-0.72%	-2.55%
			2680	2.253	51.012	2.277	52.407	-1.05%	-2.66%
			2700	2.276	50.942	2.305	52.382	-1.26%	-2.75%
10/31/2021	2450 Body	24.5	2300	1.856	52.560	1.809	52.900	2.60%	-0.64%
			2310	1.867	52.530	1.816	52.887	2.81%	-0.68%
			2320	1.878	52.502	1.826	52.873	2.85%	-0.70%
			2400	1.969	52.288	1.902	52.767	3.52%	-0.91%
			2450	2.028	52.136	1.950	52.700	4.00%	-1.07%
			2480	2.064	52.052	1.993	52.662	3.56%	-1.16%
			2500	2.088	51.993	2.021	52.636	3.32%	-1.22%
			2510	2.100	51.963	2.035	52.623	3.19%	-1.25%
			2535	2.130	51.886	2.071	52.592	2.85%	-1.34%
			2550	2.149	51.842	2.092	52.573	2.72%	-1.39%
			2560	2.161	51.813	2.106	52.560	2.61%	-1.42%
			2600	2.211	51.689	2.163	52.509	2.22%	-1.56%
			2650	2.272	51.536	2.234	52.445	1.70%	-1.73%
			2680	2.309	51.451	2.277	52.407	1.41%	-1.82%
			2700	2.333	51.390	2.305	52.382	1.21%	-1.89%

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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
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%
11/03/2021	2450 Body	24.5	2300	1.831	53.341	1.809	52.900	1.22%	0.83%
			2310	1.843	53.315	1.816	52.887	1.49%	0.81%
			2320	1.855	53.293	1.826	52.873	1.59%	0.79%
			2400	1.949	53.078	1.902	52.767	2.47%	0.59%
			2450	2.009	52.935	1.950	52.700	3.03%	0.45%
			2480	2.043	52.845	1.993	52.662	2.51%	0.35%
			2500	2.067	52.780	2.021	52.636	2.28%	0.27%
			2510	2.079	52.748	2.035	52.623	2.16%	0.24%
			2535	2.109	52.669	2.071	52.592	1.83%	0.15%
			2550	2.127	52.627	2.092	52.573	1.67%	0.10%
			2560	2.139	52.598	2.106	52.560	1.57%	0.07%
			2600	2.187	52.475	2.163	52.509	1.11%	-0.06%
			2650	2.247	52.329	2.234	52.445	0.58%	-0.22%
			2680	2.283	52.244	2.277	52.407	0.26%	-0.31%
			2700	2.306	52.182	2.305	52.382	0.04%	-0.38%
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%
10/18/2021	3600 Body	19.8	3300	2.999	49.980	3.080	51.593	-2.63%	-3.13%
			3350	3.055	49.873	3.139	51.525	-2.68%	-3.21%
			3450	3.170	49.675	3.256	51.389	-2.64%	-3.34%
			3500	3.225	49.590	3.314	51.321	-2.69%	-3.37%
			3550	3.283	49.512	3.372	51.254	-2.64%	-3.40%
			3560	3.294	49.494	3.384	51.240	-2.66%	-3.41%
			3600	3.341	49.422	3.431	51.186	-2.62%	-3.45%
			3650	3.401	49.343	3.489	51.118	-2.52%	-3.47%
			3690	3.449	49.267	3.536	51.063	-2.46%	-3.52%
			3700	3.462	49.247	3.548	51.050	-2.42%	-3.53%
			3750	3.524	49.170	3.606	50.982	-2.27%	-3.55%
			3900	3.715	48.888	3.781	50.779	-1.75%	-3.72%
			3930	3.753	48.859	3.816	50.738	-1.65%	-3.70%
			4100	3.987	48.537	4.015	50.507	-0.70%	-3.90%
			4150	4.056	48.447	4.073	50.439	-0.42%	-3.95%
10/21/2021	3600 Body	21.0	3300	2.954	49.674	3.080	51.593	-4.09%	-3.72%
			3350	3.007	49.572	3.139	51.525	-4.21%	-3.79%
			3450	3.119	49.395	3.256	51.389	-4.21%	-3.88%
			3500	3.173	49.318	3.314	51.321	-4.25%	-3.90%
			3550	3.231	49.242	3.372	51.254	-4.18%	-3.93%
			3560	3.242	49.226	3.384	51.240	-4.20%	-3.93%
			3600	3.288	49.158	3.431	51.186	-4.17%	-3.96%
			3650	3.349	49.087	3.489	51.118	-4.01%	-3.97%
			3690	3.393	49.020	3.536	51.063	-4.04%	-4.00%
			3700	3.406	49.001	3.548	51.050	-4.00%	-4.01%
			3750	3.465	48.930	3.606	50.982	-3.91%	-4.02%
			3900	3.658	48.707	3.781	50.779	-3.25%	-4.08%
			3930	3.697	48.652	3.816	50.738	-3.12%	-4.11%
			4100	3.917	48.393	4.015	50.507	-2.44%	-4.19%
			4150	3.981	48.297	4.073	50.439	-2.26%	-4.25%

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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
11/15/2021	3600 Body	19.8	3300	2.982	51.499	3.080	51.593	-3.18%	-0.18%
			3350	3.042	51.402	3.139	51.525	-3.09%	-0.24%
			3450	3.159	51.219	3.256	51.389	-2.98%	-0.33%
			3500	3.216	51.149	3.314	51.321	-2.96%	-0.34%
			3550	3.277	51.070	3.372	51.254	-2.82%	-0.36%
			3560	3.289	51.053	3.384	51.240	-2.81%	-0.36%
			3600	3.338	50.984	3.431	51.186	-2.71%	-0.39%
			3650	3.398	50.904	3.489	51.118	-2.61%	-0.42%
			3690	3.447	50.838	3.536	51.063	-2.52%	-0.44%
			3700	3.460	50.813	3.548	51.050	-2.48%	-0.46%
			3750	3.523	50.735	3.606	50.982	-2.30%	-0.48%
			3900	3.717	50.447	3.781	50.779	-1.69%	-0.65%
			3930	3.756	50.398	3.816	50.738	-1.57%	-0.67%
			4100	3.994	50.071	4.015	50.507	-0.52%	-0.86%
			4150	4.065	49.949	4.073	50.439	-0.20%	-0.97%
11/15/2021	5200-5800 Body	21.1	5180	5.210	48.415	5.276	49.041	-1.25%	-1.28%
			5190	5.220	48.402	5.288	49.028	-1.29%	-1.28%
			5200	5.232	48.381	5.299	49.014	-1.26%	-1.29%
			5210	5.249	48.358	5.311	49.001	-1.17%	-1.31%
			5220	5.265	48.334	5.323	48.987	-1.09%	-1.33%
			5240	5.291	48.292	5.346	48.960	-1.03%	-1.36%
			5250	5.304	48.277	5.358	48.947	-1.01%	-1.37%
			5260	5.319	48.261	5.369	48.933	-0.93%	-1.37%
			5270	5.334	48.240	5.381	48.919	-0.87%	-1.39%
			5280	5.347	48.219	5.393	48.906	-0.85%	-1.40%
			5290	5.361	48.201	5.404	48.892	-0.80%	-1.41%
			5300	5.373	48.182	5.416	48.879	-0.79%	-1.43%
			5310	5.385	48.162	5.428	48.865	-0.79%	-1.44%
			5320	5.399	48.139	5.439	48.851	-0.74%	-1.46%
			5500	5.650	47.794	5.650	48.607	0.00%	-1.67%
			5510	5.665	47.771	5.661	48.594	0.07%	-1.69%
			5520	5.682	47.748	5.673	48.580	0.16%	-1.71%
			5530	5.699	47.729	5.685	48.566	0.25%	-1.72%
			5540	5.715	47.714	5.696	48.553	0.33%	-1.73%
			5550	5.729	47.700	5.708	48.539	0.37%	-1.73%
			5560	5.743	47.686	5.720	48.526	0.40%	-1.73%
			5580	5.771	47.646	5.743	48.499	0.49%	-1.76%
			5600	5.799	47.599	5.766	48.471	0.57%	-1.80%
			5610	5.815	47.581	5.778	48.458	0.64%	-1.81%
			5620	5.830	47.560	5.790	48.444	0.69%	-1.82%
			5640	5.860	47.526	5.813	48.417	0.81%	-1.84%
			5660	5.891	47.502	5.837	48.390	0.93%	-1.84%
			5670	5.902	47.492	5.848	48.376	0.92%	-1.83%
			5680	5.915	47.475	5.860	48.363	0.94%	-1.84%
			5690	5.929	47.460	5.872	48.349	0.97%	-1.84%
			5700	5.945	47.438	5.883	48.336	1.05%	-1.86%
			5710	5.960	47.417	5.895	48.322	1.10%	-1.87%
			5720	5.974	47.398	5.907	48.309	1.13%	-1.89%
			5745	6.014	47.349	5.936	48.275	1.31%	-1.92%
			5750	6.022	47.339	5.942	48.268	1.35%	-1.92%
			5755	6.030	47.330	5.947	48.261	1.40%	-1.93%
			5765	6.042	47.319	5.959	48.248	1.39%	-1.93%
			5775	6.055	47.311	5.971	48.234	1.41%	-1.91%
			5785	6.069	47.303	5.982	48.220	1.45%	-1.90%
			5795	6.082	47.285	5.994	48.207	1.47%	-1.91%
			5800	6.090	47.277	6.000	48.200	1.50%	-1.91%
			5805	6.096	47.269	6.006	48.193	1.50%	-1.92%
			5825	6.125	47.236	6.029	48.166	1.59%	-1.93%

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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
11/03/2021	5200-5800 Body	23.1	5180	5.325	47.544	5.276	49.041	0.93%	-3.05%
			5190	5.337	47.528	5.288	49.028	0.93%	-3.06%
			5200	5.352	47.508	5.299	49.014	1.00%	-3.07%
			5210	5.367	47.487	5.311	49.001	1.05%	-3.09%
			5220	5.381	47.462	5.323	48.987	1.09%	-3.11%
			5240	5.404	47.421	5.346	48.960	1.08%	-3.14%
			5250	5.421	47.404	5.358	48.947	1.18%	-3.15%
			5260	5.436	47.389	5.369	48.933	1.25%	-3.16%
			5270	5.449	47.364	5.381	48.919	1.26%	-3.18%
			5280	5.460	47.339	5.393	48.906	1.24%	-3.20%
			5290	5.474	47.315	5.404	48.892	1.30%	-3.23%
			5300	5.490	47.293	5.416	48.879	1.37%	-3.24%
			5310	5.507	47.276	5.428	48.865	1.46%	-3.25%
			5320	5.520	47.260	5.439	48.851	1.49%	-3.26%
			5500	5.771	46.897	5.650	48.607	2.14%	-3.52%
			5510	5.787	46.873	5.661	48.594	2.23%	-3.54%
			5520	5.805	46.852	5.673	48.580	2.33%	-3.56%
			5530	5.822	46.832	5.685	48.566	2.41%	-3.57%
			5540	5.838	46.808	5.696	48.553	2.49%	-3.59%
			5550	5.853	46.792	5.708	48.539	2.54%	-3.60%
			5560	5.868	46.781	5.720	48.526	2.59%	-3.60%
			5580	5.898	46.743	5.743	48.499	2.70%	-3.62%
			5600	5.925	46.692	5.766	48.471	2.76%	-3.67%
			5610	5.939	46.670	5.778	48.458	2.79%	-3.69%
			5620	5.954	46.650	5.790	48.444	2.83%	-3.70%
			5640	5.986	46.613	5.813	48.417	2.98%	-3.73%
			5660	6.019	46.588	5.837	48.390	3.12%	-3.72%
			5670	6.031	46.578	5.848	48.376	3.13%	-3.72%
			5680	6.043	46.565	5.860	48.363	3.12%	-3.72%
			5690	6.055	46.544	5.872	48.349	3.12%	-3.73%
			5700	6.070	46.519	5.883	48.336	3.18%	-3.76%
			5710	6.086	46.491	5.895	48.322	3.24%	-3.79%
			5720	6.101	46.468	5.907	48.309	3.28%	-3.81%
			5745	6.139	46.430	5.936	48.275	3.42%	-3.82%
			5750	6.146	46.418	5.942	48.268	3.43%	-3.83%
			5755	6.153	46.410	5.947	48.261	3.46%	-3.84%
			5765	6.166	46.391	5.959	48.248	3.47%	-3.85%
			5775	6.180	46.386	5.971	48.234	3.50%	-3.83%
			5785	6.194	46.382	5.982	48.220	3.54%	-3.81%
			5795	6.207	46.371	5.994	48.207	3.55%	-3.81%
			5800	6.213	46.360	6.000	48.200	3.55%	-3.82%
			5805	6.221	46.348	6.006	48.193	3.58%	-3.83%
			5825	6.250	46.308	6.029	48.166	3.67%	-3.86%
			5835	6.264	46.286	6.042	48.130	3.67%	-3.83%
			5845	6.279	46.265	6.054	48.110	3.72%	-3.83%
			5855	6.298	46.250	6.066	48.093	3.82%	-3.83%
			5865	6.315	46.226	6.077	48.080	3.92%	-3.86%
			5875	6.329	46.200	6.088	48.067	3.96%	-3.88%
			5885	6.345	46.170	6.100	48.053	4.02%	-3.92%
			5905	6.372	46.145	6.122	48.027	4.08%	-3.92%
11/04/2021	5200-5800 Body	22.2	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 10-11
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 (%)
A	750	HEAD	09/28/2021	23.9	22.1	0.20	1003	7406	1.630	8.78	8.150	-7.18%
K2	750	HEAD	10/07/2021	22.2	20.6	0.20	1034	7402	1.690	8.64	8.450	-2.20%
E	750	HEAD	10/12/2021	23.1	22.5	0.20	1161	7571	1.730	8.03	8.650	7.72%
K2	750	HEAD	10/14/2021	21.6	21.8	0.20	1034	7402	1.710	8.64	8.550	-1.04%
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	10/24/2021	21.0	20.6	0.10	1148	7409	3.820	35.90	38.200	6.41%
A	1900	HEAD	10/10/2021	23.7	23.0	0.10	5d080	7406	4.130	39.80	41.300	3.77%
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	10/25/2021	23.1	21.8	0.10	5d149	7406	4.110	40.50	41.100	1.48%
B	2300	HEAD	10/20/2021	23.5	23.0	0.10	1116	7660	5.070	49.60	50.700	2.22%
B	2300	HEAD	11/14/2021	22.9	22.3	0.10	1116	7660	4.740	49.60	47.400	-4.44%
B	2450	HEAD	10/10/2021	23.4	23.2	0.10	797	7660	5.080	52.40	50.800	-3.05%
B	2450	HEAD	10/13/2021	24.0	23.2	0.10	797	7660	4.860	52.40	48.600	-7.25%
K3	2450	HEAD	10/22/2021	22.5	23.5	0.10	882	7637	5.240	52.50	52.400	-0.19%
K2	2450	HEAD	11/02/2021	21.4	21.5	0.10	945	7402	5.310	52.70	53.100	0.76%
B	2600	HEAD	10/10/2021	23.4	23.2	0.10	1064	7660	5.720	58.10	57.200	-1.55%
B	2600	HEAD	10/13/2021	24.0	23.2	0.10	1064	7660	5.390	58.10	53.900	-7.23%
B	2600	HEAD	10/20/2021	23.5	23.0	0.10	1071	7660	5.550	56.10	55.500	-1.07%
E	2600	HEAD	10/31/2021	23.2	22.9	0.10	1004	7571	5.910	57.80	59.100	2.25%
B	2600	HEAD	11/14/2021	22.9	22.3	0.10	1004	7660	5.620	57.80	56.200	-2.77%
L	3500	HEAD	10/11/2021	20.5	20.0	0.10	1097	7539	6.730	66.40	67.300	1.36%
L	3500	HEAD	10/20/2021	22.7	21.2	0.10	1097	7670	6.110	66.40	61.100	-7.98%
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	11/01/2021	21.3	21.3	0.10	1067	7670	6.670	67.20	66.700	-0.74%
L	3900	HEAD	11/01/2021	21.3	21.3	0.10	1056	7670	6.660	68.90	66.600	-3.34%
J	5250	HEAD	11/07/2021	19.5	20.1	0.05	1057	7526	3.710	79.70	74.200	-6.90%
J	5600	HEAD	11/07/2021	19.5	20.1	0.05	1057	7526	3.990	83.80	79.800	-4.77%
J	5750	HEAD	11/07/2021	19.5	20.1	0.05	1057	7526	3.760	80.10	75.200	-6.12%
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 10-12
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 (%)
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%
H	750	BODY	10/14/2021	21.2	20.9	0.20	1161	7409	1.770	8.43	8.850	4.98%
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	10/05/2021	21.1	21.3	0.20	4d132	7409	2.020	9.81	10.100	2.96%
H	835	BODY	10/07/2021	21.1	20.9	0.20	4d132	7409	2.000	9.81	10.000	1.94%
G	1750	BODY	09/19/2021	24.2	22.6	0.10	1150	7357	3.930	36.60	39.300	7.38%
G	1750	BODY	09/23/2021	23.0	21.9	0.10	1148	7357	3.890	36.30	38.900	7.16%
G	1750	BODY	09/30/2021	24.2	22.2	0.10	1150	7357	3.940	36.60	39.400	7.65%
G	1750	BODY	10/28/2021	22.8	21.4	0.10	1148	7357	3.850	36.30	38.500	6.06%
H	1900	BODY	09/26/2021	23.0	25.0	0.10	5d080	7409	4.130	39.20	41.300	5.36%
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	10/24/2021	23.7	22.5	0.10	5d148	7410	4.170	39.10	41.700	6.65%
P	1900	BODY	10/28/2021	22.3	22.4	0.10	5d148	7410	4.120	39.10	41.200	5.37%
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	09/26/2021	20.5	23.5	0.10	1116	3914	4.780	49.20	47.800	-2.85%
K	2300	BODY	10/31/2021	22.1	24.5	0.10	1073	3914	4.880	48.40	48.800	0.83%
K	2300	BODY	11/03/2021	22.2	22.6	0.10	1073	3914	4.990	48.40	49.900	3.10%
L	2450	BODY	09/28/2021	20.7	20.6	0.10	797	7539	4.940	49.40	49.400	0.00%
K3	2450	BODY	10/21/2021	21.0	20.7	0.10	882	7637	4.860	50.60	48.600	-3.95%
K3	2450	BODY	10/27/2021	21.5	21.5	0.10	882	7637	4.880	50.60	48.800	-3.56%
L	2450	BODY	11/01/2021	21.3	23.3	0.10	719	7670	4.940	52.00	49.400	-5.00%
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	10/25/2021	22.1	23.6	0.10	1064	7659	5.410	55.60	54.100	-2.70%
L	2600	BODY	11/01/2021	21.3	23.3	0.10	1004	7670	5.250	55.40	52.500	-5.23%
I	3500	BODY	10/18/2021	20.3	20.0	0.10	1059	7661	6.740	63.00	67.400	6.98%
I	3500	BODY	10/21/2021	21.0	21.0	0.10	1059	7661	6.760	63.00	67.600	7.30%
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	10/18/2021	20.3	20.0	0.10	1018	7661	6.550	63.50	65.500	3.15%
I	3900	BODY	10/07/2021	21.5	21.5	0.10	1073	7551	6.730	64.30	67.300	4.67%
J	5250	BODY	11/03/2021	19.7	23.1	0.05	1057	7526	3.680	74.30	73.600	-0.94%
J	5600	BODY	11/03/2021	19.7	23.1	0.05	1057	7526	3.640	77.40	72.800	-5.94%
J	5750	BODY	11/03/2021	19.7	23.1	0.05	1057	7526	3.620	72.80	72.400	-0.55%
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 10-13
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	09/19/2021	24.2	22.6	0.10	1150	7357	2.090	19.40	20.900	7.73%
G	1750	BODY	09/28/2021	24.6	21.8	0.10	1150	7357	2.050	19.40	20.500	5.67%
G	1750	BODY	10/03/2021	22.2	21.7	0.10	1150	7357	2.090	19.40	20.900	7.73%
H	1900	BODY	09/26/2021	23.0	25.0	0.10	5d080	7409	2.130	20.60	21.300	3.40%
O	1900	BODY	10/12/2021	21.9	21.5	0.10	5d148	7659	2.090	20.50	20.900	1.95%
P	1900	BODY	10/17/2021	20.9	21.0	0.10	5d148	7410	2.090	20.50	20.900	1.95%
K	2300	BODY	09/26/2021	20.5	23.5	0.10	1116	3914	2.290	23.70	22.900	-3.38%
K	2300	BODY	11/03/2021	22.2	22.6	0.10	1073	3914	2.370	23.40	23.700	1.28%
K	2450	BODY	10/21/2021	22.4	22.9	0.10	719	3914	2.400	24.70	24.000	-2.83%
L	2450	BODY	11/01/2021	21.3	23.3	0.10	719	7670	2.250	24.70	22.500	-8.91%
K	2600	BODY	10/21/2021	22.4	22.9	0.10	1004	3914	2.460	24.80	24.600	-0.81%
O	2600	BODY	10/25/2021	22.1	23.6	0.10	1064	7659	2.420	25.00	24.200	-3.20%
L	2600	BODY	11/01/2021	21.3	23.3	0.10	1004	7670	2.280	24.80	22.800	-8.06%
I	3500	BODY	11/15/2021	20.0	20.0	0.10	1059	7661	2.390	23.30	23.900	2.58%
I	3700	BODY	10/07/2021	21.5	21.5	0.10	1018	7551	2.280	22.50	22.800	1.33%
I	3900	BODY	10/07/2021	21.5	21.5	0.10	1073	7551	2.360	22.00	23.600	7.27%
J	5250	BODY	11/15/2021	20.5	20.1	0.05	1057	7526	1.040	20.70	20.800	0.48%
J	5600	BODY	11/15/2021	20.5	20.1	0.05	1057	7526	1.070	21.40	21.400	0.00%
J	5750	BODY	11/15/2021	20.5	20.1	0.05	1057	7526	1.020	20.00	20.400	2.00%
B	5800	BODY	11/04/2021	24.5	21.2	0.05	1191	7552	0.970	20.20	19.400	-3.96%

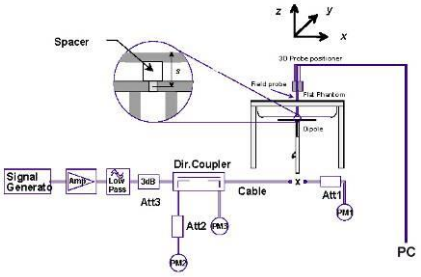

Figure 10-1
System Verification Setup Diagram

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)	
836.60	190	GSM 850	GSM	33.0	32.12	0.03	Right	Cheek	A	1226M	1:8.3	0.135	1.225	0.165	A1
836.60	190	GSM 850	GSM	33.0	32.12	0.02	Right	Tilt	A	1226M	1:8.3	0.061	1.225	0.075	
836.60	190	GSM 850	GSM	33.0	32.12	0.06	Left	Cheek	A	1226M	1:8.3	0.125	1.225	0.153	
836.60	190	GSM 850	GSM	33.0	32.12	-0.04	Left	Tilt	A	1226M	1:8.3	0.070	1.225	0.086	
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)	
1880.00	661	GSM 1900	GSM	30.0	29.00	-0.10	Right	Cheek	A	0075M	1:8.3	0.041	1.259	0.052	
1880.00	661	GSM 1900	GSM	30.0	29.00	0.07	Right	Tilt	A	0075M	1:8.3	0.031	1.259	0.039	
1880.00	661	GSM 1900	GSM	30.0	29.00	0.03	Left	Cheek	A	0075M	1:8.3	0.055	1.259	0.069	A2
1880.00	661	GSM 1900	GSM	30.0	29.00	-0.02	Left	Tilt	A	0075M	1:8.3	0.023	1.259	0.029	
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)	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.07	Right	Cheek	A	1226M	1:1	0.196	1.222	0.240	A3
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.00	Right	Tilt	A	1226M	1:1	0.089	1.222	0.109	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.07	Left	Cheek	A	1226M	1:1	0.159	1.222	0.194	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.08	Left	Tilt	A	1226M	1:1	0.089	1.222	0.109	
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)	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.04	Right	Cheek	A	0124M	1:1	0.089	1.140	0.101	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	0.05	Right	Tilt	A	0124M	1:1	0.107	1.140	0.122	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	0.03	Left	Cheek	A	0124M	1:1	0.169	1.140	0.193	A4
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.03	Left	Tilt	A	0124M	1:1	0.067	1.140	0.076	
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)	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	13	-0.07	Right	Cheek	A	0075M	1:1	0.084	1.172	0.098	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	13	0.04	Right	Tilt	A	0075M	1:1	0.083	1.172	0.097	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	13	0.04	Left	Cheek	A	0075M	1:1	0.178	1.172	0.209	A5
1880.00	9400	UMTS 1900	RMC	24.0	23.31	13	-0.10	Left	Tilt	A	0075M	1:1	0.057	1.172	0.067	
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	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)	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	0.02	0	Right	Cheek	A	QPSK	1	0	1219M	1:1	0.109	1.380	0.150	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.12	1	Right	Cheek	A	QPSK	50	0	1219M	1:1	0.085	1.435	0.122	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	0.07	0	Right	Tilt	A	QPSK	1	0	1219M	1:1	0.049	1.380	0.068	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.02	1	Right	Tilt	A	QPSK	50	0	1219M	1:1	0.040	1.435	0.057	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	0.11	0	Left	Cheek	A	QPSK	1	0	1219M	1:1	0.142	1.380	0.196	A6
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.12	1	Left	Cheek	A	QPSK	50	0	1219M	1:1	0.108	1.435	0.155	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	0.04	0	Left	Tilt	A	QPSK	1	0	1219M	1:1	0.065	1.380	0.090	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.07	1	Left	Tilt	A	QPSK	50	0	1219M	1:1	0.050	1.435	0.072	
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	25.8	24.45	1	0.15	0	Right	Cheek	A	QPSK	1	25	1219M	1:1	0.187	1.365	0.255	A7
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.02	1	Right	Cheek	A	QPSK	25	25	1219M	1:1	0.148	1.361	0.201	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	0.03	0	Right	Tilt	A	QPSK	1	25	1219M	1:1	0.103	1.365	0.141	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	-0.02	1	Right	Tilt	A	QPSK	25	25	1219M	1:1	0.079	1.361	0.108	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	0.05	0	Left	Cheek	A	QPSK	1	25	1219M	1:1	0.164	1.365	0.224	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.00	1	Left	Cheek	A	QPSK	25	25	1219M	1:1	0.128	1.361	0.174	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	-0.01	0	Left	Tilt	A	QPSK	1	25	1219M	1:1	0.104	1.365	0.142	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.04	1	Left	Tilt	A	QPSK	25	25	1219M	1:1	0.082	1.361	0.112	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-8
LTE Band 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	25.5	24.78	112	0.16	0	Right	Cheek	A	QPSK	1	49	1219M	1:1	0.229	1.180	0.270	A8
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.05	1	Right	Cheek	A	QPSK	25	25	1219M	1:1	0.173	1.216	0.210	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	0.02	0	Right	Tilt	A	QPSK	1	49	1219M	1:1	0.117	1.180	0.138	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.04	1	Right	Tilt	A	QPSK	25	25	1219M	1:1	0.088	1.216	0.107	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	-0.09	0	Left	Cheek	A	QPSK	1	49	1219M	1:1	0.173	1.180	0.204	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.06	1	Left	Cheek	A	QPSK	25	25	1219M	1:1	0.132	1.216	0.161	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	0.12	0	Left	Tilt	A	QPSK	1	49	1219M	1:1	0.114	1.180	0.135	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.06	1	Left	Tilt	A	QPSK	25	25	1219M	1:1	0.089	1.216	0.108	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-9
LTE Band 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	25.08	112	0.02	0	Right	Cheek	A	QPSK	1	49	1219M	1:1	0.208	1.102	0.229	A9
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.02	1	Right	Cheek	A	QPSK	25	12	1219M	1:1	0.170	1.183	0.201	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	0.07	0	Right	Tilt	A	QPSK	1	49	1219M	1:1	0.109	1.102	0.120	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.04	1	Right	Tilt	A	QPSK	25	12	1219M	1:1	0.084	1.183	0.099	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	0.17	0	Left	Cheek	A	QPSK	1	49	1219M	1:1	0.165	1.102	0.182	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.09	1	Left	Cheek	A	QPSK	25	12	1219M	1:1	0.132	1.183	0.156	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	-0.08	0	Left	Tilt	A	QPSK	1	49	1219M	1:1	0.122	1.102	0.134	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.00	1	Left	Tilt	A	QPSK	25	12	1219M	1:1	0.092	1.183	0.109	
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 11-10
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	25.8	24.31	0	0.06	0	Right	Cheek	A	QPSK	1	36	1219M	1:1	0.200	1.409	0.282	A10
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.02	1	Right	Cheek	A	QPSK	36	37	1219M	1:1	0.161	1.406	0.226	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	0.02	0	Right	Tilt	A	QPSK	1	36	1219M	1:1	0.103	1.409	0.145	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.00	1	Right	Tilt	A	QPSK	36	37	1219M	1:1	0.087	1.406	0.122	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	0.07	0	Left	Cheek	A	QPSK	1	36	1219M	1:1	0.139	1.409	0.196	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.07	1	Left	Cheek	A	QPSK	36	37	1219M	1:1	0.121	1.406	0.170	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	0.10	0	Left	Tilt	A	QPSK	1	36	1219M	1:1	0.082	1.409	0.116	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.09	1	Left	Tilt	A	QPSK	36	37	1219M	1:1	0.079	1.406	0.111	
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	25.8	25.04	0	-0.06	0	Right	Cheek	A	QPSK	1	0	0351M	1:1	0.205	1.191	0.244	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.03	1	Right	Cheek	A	QPSK	25	25	0351M	1:1	0.163	1.225	0.200	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.09	0	-0.05	0	Right	Cheek	A	QPSK	1	0	0351M	1:1	0.210	1.178	0.247	A11
	SCC	829.30	20453			5										1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	0.14	0	Right	Tilt	A	QPSK	1	0	0351M	1:1	0.112	1.191	0.133	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.00	1	Right	Tilt	A	QPSK	25	25	0351M	1:1	0.093	1.225	0.114	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	0.03	0	Left	Cheek	A	QPSK	1	0	0351M	1:1	0.196	1.191	0.233	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	-0.04	1	Left	Cheek	A	QPSK	25	25	0351M	1:1	0.123	1.225	0.151	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	0.15	0	Left	Tilt	A	QPSK	1	0	0351M	1:1	0.123	1.191	0.146	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.05	1	Left	Tilt	A	QPSK	25	25	0351M	1:1	0.084	1.225	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 11-12
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	24.0	23.05	22	-0.11	0	Right	Cheek	A	QPSK	1	99	0068M	1:1	0.074	1.245	0.092	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	-0.08	0.5	Right	Cheek	A	QPSK	50	25	0068M	1:1	0.072	1.377	0.099	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	-0.09	0	Right	Tilt	A	QPSK	1	99	0068M	1:1	0.082	1.245	0.102	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	-0.08	0.5	Right	Tilt	A	QPSK	50	25	0068M	1:1	0.073	1.377	0.101	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	-0.03	0	Left	Cheek	A	QPSK	1	99	0068M	1:1	0.135	1.245	0.168	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	0.02	0.5	Left	Cheek	A	QPSK	50	25	0068M	1:1	0.113	1.377	0.156	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	24.0	22.77	22	0.02	0	Left	Cheek	A	QPSK	1	49	0068M	1:1	0.141	1.327	0.187	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.56	22	0.02	0	Left	Cheek	A	QPSK	1	99	0068M	1:1	0.159	1.107	0.176	A12
	SCC	1739.80	132270														0						
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	24.0	23.49	22	0.03	0	Left	Cheek	A	QPSK	1	49	0068M	1:1	0.159	1.125	0.179	
	SCC	1724.90	132121														0						
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	0.08	0	Left	Tilt	A	QPSK	1	99	0068M	1:1	0.073	1.245	0.091	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	0.03	0.5	Left	Tilt	A	QPSK	50	25	0068M	1:1	0.058	1.377	0.080	
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 11-13
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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.03	0	Right	Cheek	A	QPSK	1	50	0042M	1:1	0.118	1.324	0.156	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	0.00	1	Right	Cheek	A	QPSK	50	25	0042M	1:1	0.089	1.346	0.120	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	0.04	0	Right	Tilt	A	QPSK	1	50	0042M	1:1	0.086	1.324	0.114	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	0.01	1	Right	Tilt	A	QPSK	50	25	0042M	1:1	0.064	1.346	0.086	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	0.07	0	Left	Cheek	A	QPSK	1	50	0042M	1:1	0.191	1.324	0.253	A13
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	0.02	1	Left	Cheek	A	QPSK	50	25	0042M	1:1	0.160	1.346	0.215	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.02	0	Left	Tilt	A	QPSK	1	50	0042M	1:1	0.062	1.324	0.082	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.04	1	Left	Tilt	A	QPSK	50	25	0042M	1:1	0.052	1.346	0.070	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-14
LTE Band 30 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			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	Md	LTE Band 30	10	23.5	22.18	0.13	0	Right	Cheek	A	QPSK	1	25	0064M	1:1	0.062	1.355	0.084	
2310.00	27710	Md	LTE Band 30	10	22.5	21.22	0.03	1	Right	Cheek	A	QPSK	25	12	0064M	1:1	0.045	1.343	0.060	
2310.00	27710	Md	LTE Band 30	10	23.5	22.18	-0.02	0	Right	Tilt	A	QPSK	1	25	0064M	1:1	0.081	1.355	0.110	A14
2310.00	27710	Md	LTE Band 30	10	22.5	21.22	0.13	1	Right	Tilt	A	QPSK	25	12	0064M	1:1	0.060	1.343	0.081	
2310.00	27710	Md	LTE Band 30	10	23.5	22.18	-0.02	0	Left	Cheek	A	QPSK	1	25	0064M	1:1	0.056	1.355	0.076	
2310.00	27710	Md	LTE Band 30	10	22.5	21.22	0.12	1	Left	Cheek	A	QPSK	25	12	0064M	1:1	0.043	1.343	0.058	
2310.00	27710	Md	LTE Band 30	10	23.5	22.18	-0.03	0	Left	Tilt	A	QPSK	1	25	0064M	1:1	0.047	1.355	0.064	
2310.00	27710	Md	LTE Band 30	10	22.5	21.22	-0.03	1	Left	Tilt	A	QPSK	25	12	0064M	1:1	0.039	1.343	0.052	
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)	
2535.00	21100	Md	LTE Band 7	20	23.0	22.26	0.01	0	Right	Cheek	B	QPSK	1	50	0053M	1:1	0.040	1.186	0.047	
2535.00	21100	Md	LTE Band 7	20	23.0	22.18	-0.07	0	Right	Cheek	B	QPSK	50	50	0053M	1:1	0.034	1.208	0.041	
2535.00	21100	Md	LTE Band 7	20	23.0	22.26	0.07	0	Right	Tilt	B	QPSK	1	50	0053M	1:1	0.041	1.186	0.049	A15
2535.00	21100	Md	LTE Band 7	20	23.0	22.18	0.14	0	Right	Tilt	B	QPSK	50	50	0053M	1:1	0.038	1.208	0.046	
2535.00	21100	Md	LTE Band 7	20	23.0	22.26	0.00	0	Left	Cheek	B	QPSK	1	50	0053M	1:1	0.037	1.186	0.044	
2535.00	21100	Md	LTE Band 7	20	23.0	22.18	0.18	0	Left	Cheek	B	QPSK	50	50	0053M	1:1	0.040	1.208	0.048	
2535.00	21100	Md	LTE Band 7	20	23.0	22.26	-0.04	0	Left	Tilt	B	QPSK	1	50	0053M	1:1	0.030	1.186	0.036	
2535.00	21100	Md	LTE Band 7	20	23.0	22.18	0.09	0	Left	Tilt	B	QPSK	50	50	0053M	1:1	0.030	1.208	0.036	
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	24.5	23.54	0.03	0	Right	Cheek	B	QPSK	1	50	0060M	1:1.58	0.036	1.247	0.045	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	-0.19	0.5	Right	Cheek	B	QPSK	50	25	0060M	1:1.58	0.026	1.393	0.036	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	-0.04	0	Right	Tilt	B	QPSK	1	50	0060M	1:1.58	0.018	1.247	0.022	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.14	0.5	Right	Tilt	B	QPSK	50	25	0060M	1:1.58	0.014	1.393	0.020	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	-0.02	0	Left	Cheek	B	QPSK	1	50	0060M	1:1.58	0.049	1.247	0.061	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.35	-0.11	0	Left	Cheek	B	QPSK	1	99	0060M	1:1.58	0.045	1.303	0.059	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.01	0.5	Left	Cheek	B	QPSK	50	25	0060M	1:1.58	0.039	1.393	0.054	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.00	-0.15	0	Left	Cheek	B	QPSK	1	50	0060M	1:2.31	0.054	1.023	0.055	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.09	-0.15	0	Left	Cheek	B	QPSK	1	99	0060M	1:2.31	0.057	1.002	0.057	A16
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.5	23.85	0.13	0	Left	Cheek	B	QPSK	1	99	0060M	1:1.58	0.053	1.161	0.062	
	SCC	2525.80	39948													0						
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	26.1	26.10	0.03	0	Left	Cheek	B	QPSK	1	99	0060M	1:2.31	0.055	1.000	0.055	
	SCC	2525.80	39948													0						
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	-0.05	0	Left	Tilt	B	QPSK	1	50	0060M	1:1.58	0.027	1.247	0.034	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.15	0.5	Left	Tilt	B	QPSK	50	25	0060M	1:1.58	0.022	1.393	0.031	

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 11-17
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	19.0	18.45	0.02	0	Right	Cheek	F	QPSK	1	50	0382M	1:1.58	0.698	1.135	**0.792**	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	19.0	18.43	0.00	0	Right	Cheek	F	QPSK	1	99	0382M	1:1.58	0.671	1.140	0.765	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.65	0.04	0	Right	Cheek	F	QPSK	1	99	0382M	1:1.58	0.651	1.084	0.706	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.81	-0.05	0	Right	Cheek	F	QPSK	1	50	0382M	1:1.58	0.745	1.045	0.779	A17
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.61	-0.02	0	Right	Cheek	F	QPSK	1	50	0382M	1:1.58	0.635	1.094	0.695	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	19.0	18.49	-0.01	0	Right	Cheek	F	QPSK	50	25	0382M	1:1.58	0.699	1.125	**0.786**	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.59	0.00	0	Right	Cheek	F	QPSK	50	25	0382M	1:1.58	0.665	1.099	0.731	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.82	-0.05	0	Right	Cheek	F	QPSK	50	25	0382M	1:1.58	0.736	1.042	0.767	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.71	-0.05	0	Right	Cheek	F	QPSK	50	25	0382M	1:1.58	0.653	1.069	0.698	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.70	0.02	0	Right	Cheek	F	QPSK	100	0	0382M	1:1.58	0.720	1.072	0.772	
2 CC Uplink	PCC	3560.00	55340	Low	LTE Band 48	20	19.0	18.33	0.01	0	Right	Cheek	F	QPSK	1	99	0382M	1:1.58	0.658	1.167	0.768	
	SCC	3579.80	55538													0						
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.81	-0.02	0	Right	Tilt	F	QPSK	1	50	0382M	1:1.58	0.420	1.045	0.439	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.82	0.00	0	Right	Tilt	F	QPSK	50	25	0382M	1:1.58	0.428	1.042	0.446	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.81	0.05	0	Left	Cheek	F	QPSK	1	50	0382M	1:1.58	0.143	1.045	0.149	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.82	0.05	0	Left	Cheek	F	QPSK	50	25	0382M	1:1.58	0.126	1.042	0.131	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.81	0.04	0	Left	Tilt	F	QPSK	1	50	0382M	1:1.58	0.139	1.045	0.145	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.82	-0.08	0	Left	Tilt	F	QPSK	50	25	0382M	1:1.58	0.139	1.042	0.145	

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 11-18
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	25.5	24.13	A	0.10	0	Right	Cheek	112	DFT-S-OFDM	QPSK	1	104	0346M	1:1	0.123	1.371	0.169	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.03	0	Right	Cheek	112	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.148	1.306	0.193	A18
680.50	136100	Mid	NR Band n71	20	24.0	22.73	A	0.02	1.5	Right	Cheek	112	CP-OFDM	QPSK	1	1	0346M	1:1	0.105	1.340	0.141	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.02	0	Right	Tilt	112	DFT-S-OFDM	QPSK	1	104	0346M	1:1	0.063	1.371	0.086	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.12	0	Right	Tilt	112	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.076	1.306	0.099	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.02	0	Left	Cheek	112	DFT-S-OFDM	QPSK	1	104	0346M	1:1	0.128	1.371	0.175	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.02	0	Left	Cheek	112	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.141	1.306	0.184	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	-0.03	0	Left	Tilt	112	DFT-S-OFDM	QPSK	1	104	0346M	1:1	0.069	1.371	0.095	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.07	0	Left	Tilt	112	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.074	1.306	0.097	
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	25.5	24.09	A	-0.01	0	Right	Cheek	4	DFT-S-OFDM	QPSK	1	40	0346M	1:1	0.212	1.384	0.293	A19
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	-0.02	0	Right	Cheek	4	DFT-S-OFDM	QPSK	36	22	0346M	1:1	0.208	1.297	0.270	
707.50	141500	Mid	NR Band n12	15	24.0	22.71	A	0.00	1.5	Right	Cheek	4	CP-OFDM	QPSK	1	1	0346M	1:1	0.121	1.346	0.163	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	-0.07	0	Right	Tilt	4	DFT-S-OFDM	QPSK	1	40	0346M	1:1	0.155	1.384	0.215	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.06	0	Right	Tilt	4	DFT-S-OFDM	QPSK	36	22	0346M	1:1	0.169	1.297	0.219	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	-0.07	0	Left	Cheek	4	DFT-S-OFDM	QPSK	1	40	0346M	1:1	0.184	1.384	0.255	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.04	0	Left	Cheek	4	DFT-S-OFDM	QPSK	36	22	0346M	1:1	0.179	1.297	0.232	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	-0.10	0	Left	Tilt	4	DFT-S-OFDM	QPSK	1	40	0346M	1:1	0.118	1.384	0.163	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	-0.02	0	Left	Tilt	4	DFT-S-OFDM	QPSK	36	22	0346M	1:1	0.113	1.297	0.147	
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	25.5	24.29	A	0.01	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	1	0346M	1:1	0.224	1.321	0.296	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.00	0	Right	Cheek	0	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.275	1.253	0.345	A20
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.82	A	-0.08	1.5	Right	Cheek	0	CP-OFDM	QPSK	1	1	0346M	1:1	0.166	1.312	0.218	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.01	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	1	0346M	1:1	0.148	1.321	0.196	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.00	0	Right	Tilt	0	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.167	1.253	0.209	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.04	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	1	0346M	1:1	0.189	1.321	0.250	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.00	0	Left	Cheek	0	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.213	1.253	0.267	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.04	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	1	0346M	1:1	0.176	1.321	0.232	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	-0.01	0	Left	Tilt	0	DFT-S-OFDM	QPSK	50	28	0346M	1:1	0.183	1.253	0.229	
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 11-21
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	23.5	23.19	A	-0.05	0	Right	Cheek	22	DFT-S-OFDM	QPSK	1	108	0050M	1:1	0.094	1.074	0.101	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.10	0	Right	Cheek	22	DFT-S-OFDM	QPSK	108	54	0050M	1:1	0.110	1.042	0.115	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	-0.05	0	Right	Tilt	22	DFT-S-OFDM	QPSK	1	108	0050M	1:1	0.108	1.074	0.116	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.12	0	Right	Tilt	22	DFT-S-OFDM	QPSK	108	54	0050M	1:1	0.113	1.042	0.118	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	0.03	0	Left	Cheek	22	DFT-S-OFDM	QPSK	1	108	0050M	1:1	0.201	1.074	0.216	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.04	0	Left	Cheek	22	DFT-S-OFDM	QPSK	108	54	0050M	1:1	0.215	1.042	0.224	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.0	21.85	A	0.11	0.5	Left	Cheek	22	CP-OFDM	QPSK	1	1	0050M	1:1	0.148	1.303	0.193	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	0.04	0	Left	Tilt	22	DFT-S-OFDM	QPSK	1	108	0050M	1:1	0.079	1.074	0.085	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.15	0	Left	Tilt	22	DFT-S-OFDM	QPSK	108	54	0050M	1:1	0.077	1.042	0.080	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.47	I	-0.01	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0353M	1:1	0.367	1.007	0.370	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.49	I	0.00	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0353M	1:1	0.393	1.002	0.394	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.47	I	-0.01	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0353M	1:1	0.548	1.007	0.552	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.49	I	0.06	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0353M	1:1	0.587	1.002	0.588	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.47	I	0.02	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	0353M	1:1	0.625	1.007	0.629	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.49	I	0.06	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0353M	1:1	0.674	1.002	0.675	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.47	I	0.13	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	0353M	1:1	0.800	1.007	0.806	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.49	I	0.08	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0353M	1:1	0.853	1.002	0.855	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.46	I	-0.03	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	216	0	0353M	1:1	0.870	1.009	0.878	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.42	I	-0.03	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0353M	1:1	0.913	1.019	0.930	A21
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram													

Table 11-22
NR Band n25 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			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	23.5	23.20	A	0.07	0	Right	Cheek	26	DFT-S-OFDM	QPSK	1	108	0056M	1:1	0.148	1.072	0.159	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.07	0	Right	Cheek	26	DFT-S-OFDM	QPSK	108	54	0056M	1:1	0.125	1.119	0.140	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	0.03	0	Right	Tilt	26	DFT-S-OFDM	QPSK	1	108	0056M	1:1	0.053	1.072	0.057	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.07	0	Right	Tilt	26	DFT-S-OFDM	QPSK	108	54	0056M	1:1	0.060	1.119	0.067	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	-0.05	0	Left	Cheek	26	DFT-S-OFDM	QPSK	1	108	0056M	1:1	0.222	1.072	0.238	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.04	0	Left	Cheek	26	DFT-S-OFDM	QPSK	108	54	0056M	1:1	0.214	1.119	0.239	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.0	21.77	A	-0.08	0.5	Left	Cheek	26	CP-OFDM	QPSK	1	1	0056M	1:1	0.151	1.327	0.200	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	-0.12	0	Left	Tilt	26	DFT-S-OFDM	QPSK	1	108	0056M	1:1	0.076	1.072	0.081	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.02	0	Left	Tilt	26	DFT-S-OFDM	QPSK	108	54	0056M	1:1	0.069	1.119	0.077	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.44	I	-0.01	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0338M	1:1	0.338	1.138	0.385	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.54	I	0.02	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	54	0338M	1:1	0.364	1.112	0.405	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.44	I	-0.03	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0338M	1:1	0.533	1.138	0.607	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.54	I	-0.02	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	54	0338M	1:1	0.594	1.112	0.661	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.44	I	0.03	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0338M	1:1	0.764	1.138	0.869	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.54	I	0.00	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	54	0338M	1:1	0.766	1.112	0.852	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.43	I	0.01	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	216	0	0338M	1:1	0.775	1.140	0.884	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.44	I	-0.04	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0338M	1:1	0.894	1.138	1.017	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.54	I	0.00	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	54	0338M	1:1	0.924	1.112	1.027	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.43	I	-0.03	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	216	0	0338M	1:1	0.924	1.140	1.053	A22
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.0	18.35	I	-0.05	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0338M	1:1	0.920	1.161	1.068	
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)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	-0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	1	26	0054M	1:1	0.053	1.374	0.073	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	-0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	0054M	1:1	0.051	1.368	0.070	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	26	0054M	1:1	0.076	1.374	0.104	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.03	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	0054M	1:1	0.075	1.368	0.103	
2310.00	462000	Mid	NR Band n30	10	21.5	19.93	A	0.02	1.5	Right	Tilt	CP-OFDM	QPSK	1	1	0054M	1:1	0.041	1.435	0.059	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	-0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	1	26	0054M	1:1	0.063	1.374	0.087	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	-0.18	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	0054M	1:1	0.063	1.368	0.086	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	1	26	0054M	1:1	0.062	1.374	0.085	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	-0.05	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	0054M	1:1	0.063	1.368	0.086	
2310.00	462000	Mid	NR Band n30	10	19.5	18.55	I	-0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	1	50	0370M	1:1	0.410	1.245	0.510	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	I	0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	25	0	0370M	1:1	0.421	1.236	0.520	
2310.00	462000	Mid	NR Band n30	10	19.5	18.55	I	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	1	50	0370M	1:1	0.548	1.245	0.682	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	I	0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	25	0	0370M	1:1	0.576	1.236	0.712	
2310.00	462000	Mid	NR Band n30	10	19.5	18.49	I	0.01	0	Right	Tilt	DFT-S-OFDM	QPSK	50	0	0370M	1:1	0.566	1.262	0.714	
2310.00	462000	Mid	NR Band n30	10	19.5	18.55	I	-0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	1	50	0370M	1:1	0.776	1.245	0.966	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	I	-0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	25	0	0370M	1:1	0.840	1.236	1.038	A23
2310.00	462000	Mid	NR Band n30	10	19.5	18.49	I	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	50	0	0370M	1:1	0.831	1.262	1.049	
2310.00	462000	Mid	NR Band n30	10	19.5	18.52	I	0.03	0	Left	Cheek	CP-OFDM	QPSK	1	1	0370M	1:1	0.802	1.253	1.005	
2310.00	462000	Mid	NR Band n30	10	19.5	18.55	I	-0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	1	50	0370M	1:1	0.758	1.245	0.944	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	I	0.05	0	Left	Tilt	DFT-S-OFDM	QPSK	25	0	0370M	1:1	0.810	1.236	1.001	
2310.00	462000	Mid	NR Band n30	10	19.5	18.49	I	-0.04	0	Left	Tilt	DFT-S-OFDM	QPSK	50	0	0370M	1:1	0.805	1.262	1.016	
2310.00	462000	Mid	NR Band n30	10	19.5	18.58	I	0.03	0	Left	Cheek	DFT-S-OFDM	QPSK	25	0	0370M	1:1	0.806	1.236	0.996	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entry represents variability measurement

Table 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)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	0.17	0	Right	Cheek	DFT-S-OFDM	QPSK	1	108	0069M	1:1	0.038	1.245	0.047	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.12	0	Right	Cheek	DFT-S-OFDM	QPSK	108	108	0069M	1:1	0.034	1.227	0.042	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	108	0069M	1:1	0.040	1.245	0.050	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.17	0	Right	Tilt	DFT-S-OFDM	QPSK	108	108	0069M	1:1	0.039	1.227	0.048	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	0.18	0	Left	Cheek	DFT-S-OFDM	QPSK	1	108	0069M	1:1	0.044	1.245	0.055	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	108	108	0069M	1:1	0.046	1.227	0.056	A24
2535.00	507000	Mid	NR Band n7	40	22.5	21.38	B	-0.04	0.5	Left	Cheek	CP-OFDM	QPSK	1	1	0069M	1:1	0.037	1.294	0.048	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	1	108	0069M	1:1	0.031	1.245	0.039	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.04	0	Left	Tilt	DFT-S-OFDM	QPSK	108	108	0069M	1:1	0.033	1.227	0.040	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

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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	18.0	17.08	I	-0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0331M	1:1	0.390	1.236	0.482	
2592.99	518598	Mid	NR Band n41	100	18.0	17.07	I	0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0331M	1:1	0.401	1.239	0.497	
2592.99	518598	Mid	NR Band n41	100	18.0	17.08	I	0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0331M	1:1	0.558	1.236	0.690	
2592.99	518598	Mid	NR Band n41	100	18.0	17.07	I	0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0331M	1:1	0.578	1.239	0.716	
2592.99	518598	Mid	NR Band n41	100	18.0	17.05	I	0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	270	0	0331M	1:1	0.683	1.245	0.850	
2592.99	518598	Mid	NR Band n41	100	18.0	17.08	I	-0.01	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0331M	1:1	0.801	1.236	0.990	
2592.99	518598	Mid	NR Band n41	100	18.0	17.07	I	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0331M	1:1	0.825	1.239	1.022	
2592.99	518598	Mid	NR Band n41	100	18.0	17.05	I	0.03	0	Left	Cheek	DFT-S-OFDM	QPSK	270	0	0331M	1:1	0.821	1.245	1.022	
2592.99	518598	Mid	NR Band n41	100	18.0	17.08	I	0.02	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0331M	1:1	0.910	1.236	1.125	
2592.99	518598	Mid	NR Band n41	100	18.0	17.07	I	-0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0331M	1:1	0.951	1.239	1.178	
2592.99	518598	Mid	NR Band n41	100	18.0	17.05	I	0.02	0	Left	Tilt	DFT-S-OFDM	QPSK	270	0	0331M	1:1	0.953	1.245	**1.186**	A25
2592.99	518598	Mid	NR Band n41	100	18.0	17.00	I	0.00	0	Left	Tilt	CP-OFDM	QPSK	1	1	0331M	1:1	0.925	1.259	1.165	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.06	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.017	1.153	0.020	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	-0.06	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.013	1.153	0.015	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	-0.12	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.014	1.153	0.016	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.09	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.017	1.153	0.020	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	-0.02	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.237	1.180	0.280	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	-0.03	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.165	1.180	0.195	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	-0.03	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.167	1.180	0.197	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	0.01	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.142	1.180	0.168	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.00	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.000	1.197	0.000	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.07	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.007	1.197	0.008	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.10	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.000	1.197	0.000	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	-0.10	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0331M	1:1	0.011	1.197	0.013	
2592.99	518598	Mid	NR Band n41	100	18.0	17.05	I	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	270	0	0331M	1:1	0.859	1.245	1.069	
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	16.5	16.27	F	-0.17	0	Right	Cheek	DFT-S-OFDM	QPSK	1	271	0343M	1:1	0.507	1.054	0.534	A26
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	15.93	F	-0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	135	138	0343M	1:1	0.474	1.140	0.540	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	15.66	F	-0.13	0	Right	Cheek	CP-OFDM	QPSK	1	1	0343M	1:1	0.395	1.213	0.479	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	16.27	F	-0.03	0	Right	Tilt	DFT-S-OFDM	QPSK	1	271	0343M	1:1	0.264	1.054	0.278	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	15.93	F	-0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	135	138	0343M	1:1	0.237	1.140	0.270	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	16.27	F	-0.13	0	Left	Cheek	DFT-S-OFDM	QPSK	1	271	0343M	1:1	0.101	1.054	0.106	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	15.93	F	-0.11	0	Left	Cheek	DFT-S-OFDM	QPSK	135	138	0343M	1:1	0.093	1.140	0.106	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	16.27	F	0.08	0	Left	Tilt	DFT-S-OFDM	QPSK	1	271	0343M	1:1	0.090	1.054	0.095	
3500.01	633334	Mid	NR Band n77 DoD	100	16.5	15.93	F	-0.12	0	Left	Tilt	DFT-S-OFDM	QPSK	135	138	0343M	1:1	0.081	1.140	0.092	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.04	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.368	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	0.00	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.001	1.368	0.001	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.04	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.006	1.368	0.008	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.11	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.368	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	-0.03	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	-0.06	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	0.06	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	-0.06	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.02	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.003	1.172	0.004	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.02	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.003	1.172	0.004	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	0.02	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	0.00	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3750.00	650000	Low	NR Band n77	100	16.5	15.50	F	0.04	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.682	1.259	0.859	
3930.00	662000	High	NR Band n77	100	16.5	15.95	F	0.00	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.808	1.135	0.917	A27
3750.00	650000	Low	NR Band n77	100	16.5	15.63	F	0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0343M	1:1	0.648	1.222	0.792	
3930.00	662000	High	NR Band n77	100	16.5	15.92	F	-0.04	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0343M	1:1	0.787	1.143	0.900	
3930.00	662000	High	NR Band n77	100	16.5	15.75	F	0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	270	0	0343M	1:1	0.783	1.189	0.931	
3930.00	662000	High	NR Band n77	100	16.5	15.45	F	-0.11	0	Right	Cheek	CP-OFDM	QPSK	1	1	0343M	1:1	0.739	1.274	0.941	
3930.00	662000	High	NR Band n77	100	16.5	15.95	F	-0.03	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.340	1.135	0.386	
3930.00	662000	High	NR Band n77	100	16.5	15.92	F	0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0343M	1:1	0.349	1.143	0.399	
3930.00	662000	High	NR Band n77	100	16.5	15.95	F	-0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.125	1.135	0.142	
3930.00	662000	High	NR Band n77	100	16.5	15.92	F	0.13	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0343M	1:1	0.125	1.143	0.143	
3930.00	662000	High	NR Band n77	100	16.5	15.95	F	0.10	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.101	1.135	0.115	
3930.00	662000	High	NR Band n77	100	16.5	15.92	F	0.12	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0343M	1:1	0.105	1.143	0.120	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	-0.04	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.02	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.03	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	-0.05	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	-0.09	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.148	0.000	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	-0.04	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.148	0.000	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	0.02	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.148	0.000	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	0.16	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.148	0.000	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.11	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.001	1.033	0.001	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.04	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.002	1.033	0.002	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.00	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.033	0.000	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	-0.06	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0343M	1:1	0.000	1.033	0.000	
3930.00	662000	High	NR Band n77	100	16.5	15.95	F	-0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0343M	1:1	0.794	1.135	0.901	
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 11-27
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)	
2437	6	802.11b	DSSS	22	17.0	16.59	0.02	Right	Cheek	1	0281M	1	99.8	0.024	0.017	1.099	1.002	0.019	
2437	6	802.11b	DSSS	22	17.0	16.59	0.08	Right	Tilt	1	0281M	1	99.8	0.032	0.020	1.099	1.002	0.022	
2437	6	802.11b	DSSS	22	17.0	16.59	-0.02	Left	Cheek	1	0281M	1	99.8	0.010	0.009	1.099	1.002	0.010	
2437	6	802.11b	DSSS	22	17.0	16.59	-0.06	Left	Tilt	1	0281M	1	99.8	0.016	0.010	1.099	1.002	0.011	
2462	11	802.11b	DSSS	22	17.0	16.54	-0.11	Right	Cheek	2	0281M	1	99.9	0.150	0.139	1.112	1.001	**0.155**	A28
2462	11	802.11b	DSSS	22	17.0	16.54	-0.05	Right	Tilt	2	0281M	1	99.9	0.029	0.022	1.112	1.001	0.024	
2462	11	802.11b	DSSS	22	17.0	16.54	0.05	Left	Cheek	2	0281M	1	99.9	0.108	0.077	1.112	1.001	0.086	
2462	11	802.11b	DSSS	22	17.0	16.54	-0.09	Left	Tilt	2	0281M	1	99.9	0.015	0.011	1.112	1.001	0.012	
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 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)	
2437	6	802.11n	OFDM	20	14.0	13.97	14.0	13.99	-0.05	Right	Cheek	MIMO	0281M	13	96.8	0.124	0.089	1.007	1.033	0.093	
2437	6	802.11n	OFDM	20	14.0	13.97	14.0	13.99	0.08	Right	Tilt	MIMO	0281M	13	96.8	0.052	0.041	1.007	1.033	0.043	
2437	6	802.11n	OFDM	20	14.0	13.97	14.0	13.99	-0.18	Left	Cheek	MIMO	0281M	13	96.8	0.126	0.101	1.007	1.033	0.105	
2437	6	802.11n	OFDM	20	14.0	13.97	14.0	13.99	-0.03	Left	Tilt	MIMO	0281M	13	96.8	0.034	0.020	1.007	1.033	0.021	
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. 5/6 GHz WIFI 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 11-29
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	12.97	14.0	13.38	-0.02	Right	Cheek	MIMO	0273M	58.5	90.5	0.530	0.096	1.268	1.105	0.135	
5290	58	802.11ac	OFDM	80	14.0	12.97	14.0	13.38	0.10	Right	Tilt	MIMO	0273M	58.5	90.5	0.070	-	1.268	1.105	-	
5290	58	802.11ac	OFDM	80	14.0	12.97	14.0	13.38	0.03	Left	Cheek	MIMO	0273M	58.5	90.5	0.305	0.065	1.268	1.105	0.091	
5290	58	802.11ac	OFDM	80	14.0	12.97	14.0	13.38	0.11	Left	Tilt	MIMO	0273M	58.5	90.5	0.037	0.011	1.268	1.105	0.015	
5690	138	802.11ac	OFDM	80	14.0	13.86	14.0	13.92	-0.17	Right	Cheek	MIMO	0273M	58.5	90.5	0.381	0.135	1.033	1.105	0.154	A29
5690	138	802.11ac	OFDM	80	14.0	13.86	14.0	13.92	0.12	Right	Tilt	MIMO	0273M	58.5	90.5	0.057	-	1.033	1.105	-	
5690	138	802.11ac	OFDM	80	14.0	13.86	14.0	13.92	0.03	Left	Cheek	MIMO	0273M	58.5	90.5	0.121	0.053	1.033	1.105	0.060	
5690	138	802.11ac	OFDM	80	14.0	13.86	14.0	13.92	0.05	Left	Tilt	MIMO	0273M	58.5	90.5	0.031	0.011	1.033	1.105	0.013	
5775	155	802.11ac	OFDM	80	14.0	13.75	14.0	13.13	-0.10	Right	Cheek	MIMO	0273M	58.5	90.5	0.333	0.084	1.222	1.105	0.113	
5775	155	802.11ac	OFDM	80	14.0	13.75	14.0	13.13	0.11	Right	Tilt	MIMO	0273M	58.5	90.5	0.041	-	1.222	1.105	-	
5775	155	802.11ac	OFDM	80	14.0	13.75	14.0	13.13	0.13	Left	Cheek	MIMO	0273M	58.5	90.5	0.109	0.033	1.222	1.105	0.045	
5775	155	802.11ac	OFDM	80	14.0	13.75	14.0	13.13	0.09	Left	Tilt	MIMO	0273M	58.5	90.5	0.024	0.004	1.222	1.105	0.005	
5855	171	802.11ac	OFDM	80	14.0	13.57	14.0	13.78	0.00	Right	Cheek	MIMO	1233M	58.5	90.5	0.129	0.067	1.104	1.105	0.082	
5855	171	802.11ac	OFDM	80	14.0	13.57	14.0	13.78	0.02	Right	Tilt	MIMO	1233M	58.5	90.5	0.017	-	1.104	1.105	-	
5855	171	802.11ac	OFDM	80	14.0	13.57	14.0	13.78	-0.19	Left	Cheek	MIMO	1233M	58.5	90.5	0.040	0.037	1.104	1.105	0.045	
5855	171	802.11ac	OFDM	80	14.0	13.57	14.0	13.78	0.00	Left	Tilt	MIMO	1233M	58.5	90.5	0.023	0.004	1.104	1.105	0.005	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

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
DSS 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	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	14.28	-0.05	Right	Cheek	1	0281M	1	77.60	0.016	1.180	1.289	0.024	
2441.00	39	Bluetooth	FHSS	15.0	14.28	-0.03	Right	Tilt	1	0281M	1	77.60	0.017	1.180	1.289	0.026	
2441.00	39	Bluetooth	FHSS	15.0	14.28	0.03	Left	Cheek	1	0281M	1	77.60	0.007	1.180	1.289	0.011	
2441.00	39	Bluetooth	FHSS	15.0	14.28	-0.03	Left	Tilt	1	0281M	1	77.60	0.007	1.180	1.289	0.011	
2441.00	39	Bluetooth	FHSS	15.0	13.87	-0.02	Right	Cheek	2	0281M	1	77.60	0.089	1.297	1.289	0.149	
2441.00	39	Bluetooth	FHSS	15.0	13.87	0.06	Right	Tilt	2	0281M	1	77.60	0.029	1.297	1.289	0.048	
2441.00	39	Bluetooth	FHSS	15.0	13.87	-0.06	Left	Cheek	2	0281M	1	77.60	0.099	1.297	1.289	**0.166**	A30
2441.00	39	Bluetooth	FHSS	15.0	13.87	0.09	Left	Tilt	2	0281M	1	77.60	0.018	1.297	1.289	0.030	
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 11-31
DSS MIMO Head 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	11.5	11.00	11.5	10.96	0.09	Right	Cheek	MIMO	0281M	1	77.10	0.048	1.133	1.297	0.071	
2441.00	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	-0.18	Right	Tilt	MIMO	0281M	1	77.10	0.005	1.133	1.297	0.007	
2441.00	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	-0.02	Left	Cheek	MIMO	0281M	1	77.10	0.048	1.133	1.297	0.071	
2441.00	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	0.11	Left	Tilt	MIMO	0281M	1	77.10	0.012	1.133	1.297	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								

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

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11.2 Standalone Body-Worn SAR Data

Table 11-32
GSM Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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)	
836.60	190	GSM 850	GSM	33.0	32.12	0.04	15 mm	A	1226M	1:1	back	0.198	1.225	0.243	A31
1880.00	661	GSM 1900	GSM	30.0	29.00	0.03	15 mm	A	0124M	1:1	back	0.220	1.259	0.277	A33
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-33
UMTS 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)	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.01	15 mm	A	1226M	1:1	back	0.239	1.222	0.292	A35
1712.40	1312	UMTS 1750	RMC	24.0	23.35	22	-0.01	15 mm	A	0124M	1:1	back	0.660	1.161	0.766	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	0.01	15 mm	A	0124M	1:1	back	0.708	1.140	0.807	
1752.60	1513	UMTS 1750	RMC	24.0	23.40	22	0.05	15 mm	A	0124M	1:1	back	0.734	1.148	0.843	A37
1852.40	9262	UMTS 1900	RMC	24.0	23.27	26	0.01	15 mm	A	0124M	1:1	back	0.700	1.183	0.828	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	0.00	15 mm	A	0124M	1:1	back	0.720	1.172	0.844	A39
1907.60	9538	UMTS 1900	RMC	24.0	23.27	26	-0.02	15 mm	A	0124M	1:1	back	0.652	1.183	0.771	
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	25.8	24.40	112	0.00	0	A	1219M	QPSK	1	0	15 mm	back	1:1	0.207	1.380	0.286	A41
1 CC Uplink	N/A	680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	-0.03	1	A	1219M	QPSK	50	0	15 mm	back	1:1	0.156	1.435	0.224	
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	0.03	0	A	1219M	QPSK	1	25	15 mm	back	1:1	0.276	1.365	0.377	A43
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.01	1	A	1219M	QPSK	25	25	15 mm	back	1:1	0.221	1.361	0.301	
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	-0.11	0	A	1219M	QPSK	1	49	15 mm	back	1:1	0.297	1.180	0.350	A45
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.01	1	A	1219M	QPSK	25	25	15 mm	back	1:1	0.238	1.216	0.289	
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	-0.02	0	A	1219M	QPSK	1	49	15 mm	back	1:1	0.276	1.102	0.304	A47
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	-0.01	1	A	1219M	QPSK	25	12	15 mm	back	1:1	0.229	1.183	0.271	
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	-0.09	0	A	1219M	QPSK	1	36	15 mm	back	1:1	0.218	1.409	0.307	A49
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.03	1	A	1219M	QPSK	36	37	15 mm	back	1:1	0.176	1.406	0.247	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	0.03	0	A	0351M	QPSK	1	0	15 mm	back	1:1	0.214	1.191	0.255	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	-0.01	1	A	0351M	QPSK	25	25	15 mm	back	1:1	0.179	1.225	0.219	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.09	0	0.02	0	A	0351M	QPSK	1	0	15 mm	back	1:1	0.216	1.178	0.254	A51
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	0.03	0	A	0068M	QPSK	1	99	15 mm	back	1:1	0.726	1.245	0.904	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	22.86	22	0.00	0	A	0068M	QPSK	1	50	15 mm	back	1:1	0.777	1.300	1.010	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	22.69	22	-0.04	0	A	0068M	QPSK	1	99	15 mm	back	1:1	0.759	1.352	**1.026**	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	22.91	22	-0.04	0	A	0068M	QPSK	1	50	15 mm	back	1:1	0.728	1.285	0.935	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	0.02	0.5	A	0068M	QPSK	50	25	15 mm	back	1:1	0.573	1.377	0.789	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.00	22	-0.04	0.5	A	0068M	QPSK	100	0	15 mm	back	1:1	0.601	1.413	0.849	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	24.0	22.78	22	-0.01	0	A	0068M	QPSK	1	49	15 mm	back	1:1	0.769	1.324	1.018	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.34	22	0.01	0	A	0068M	QPSK	1	99	15 mm	back	1:1	0.838	1.164	0.975	A53
	SCC	1764.80	132520													0							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	24.0	23.32	22	-0.02	0	A	0068M	QPSK	1	49	15 mm	back	1:1	0.830	1.169	0.970	
	SCC	1754.90	132421													0							
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.07	0	A	0064M	QPSK	1	50	15 mm	back	1:1	0.710	1.324	0.940	
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.5	23.26	26	-0.02	0	A	0064M	QPSK	1	0	15 mm	back	1:1	0.746	1.330	0.992	
1 CC Uplink	N/A	1905.00	26590	High	LTE Band 25 (PCS)	20	24.5	23.23	26	-0.04	0	A	0064M	QPSK	1	0	15 mm	back	1:1	0.762	1.340	1.021	A55
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.05	1	A	0064M	QPSK	50	25	15 mm	back	1:1	0.566	1.346	0.762	
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.14	26	-0.05	1	A	0064M	QPSK	100	0	15 mm	back	1:1	0.552	1.368	0.755	
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	23.5	22.18	N/A	0.05	0	A	0064M	QPSK	1	25	15 mm	back	1:1	0.382	1.355	0.518	A57
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	N/A	-0.03	1	A	0064M	QPSK	25	12	15 mm	back	1:1	0.310	1.343	0.416	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	23.0	22.26	N/A	0.12	0	B	0053M	QPSK	1	50	15 mm	back	1:1	0.273	1.186	0.324	A59
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	23.0	22.18	N/A	0.16	0	B	0053M	QPSK	50	50	15 mm	back	1:1	0.214	1.208	0.259	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.91	N/A	-0.03	0	F	0382M	QPSK	1	99	15 mm	back	1:1.58	0.157	1.146	0.180	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.87	N/A	0.03	0	F	0382M	QPSK	50	0	15 mm	back	1:1.58	0.157	1.156	**0.181**	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.94	N/A	-0.01	0	F	0382M	QPSK	50	25	15 mm	back	1:1.58	0.160	1.138	**0.182**	A63
2 CC Uplink	PCC	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.98	N/A	-0.01	0	F	0382M	QPSK	50	0	15 mm	back	1:1.58	0.156	1.127	0.176	
	SCC	3583.50	55575													50							

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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)	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	24.5	23.54	-0.06	0	B	0060M	QPSK	1	50	15 mm	back	1:1.58	0.223	1.247	0.278	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.35	0.04	0	B	0060M	QPSK	1	99	15 mm	back	1:1.58	0.220	1.303	0.287	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.00	0.5	B	0060M	QPSK	50	25	15 mm	back	1:1.58	0.178	1.393	0.248	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.00	0.06	0	B	0060M	QPSK	1	50	15 mm	back	1:2.31	0.270	1.023	0.276	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.09	0.00	0	B	0060M	QPSK	1	99	15 mm	back	1:2.31	0.271	1.002	0.272	A61
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.5	23.85	0.00	0	B	0060M	QPSK	1	99	15 mm	back	1:1.58	0.237	1.161	0.275	
	SCC	2525.80	39948												0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	26.1	26.10	-0.01	0	B	0060M	QPSK	1	99	15 mm	back	1:2.31	0.267	1.000	0.267	
	SCC	2525.80	39948												0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-36
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	25.5	24.13	A	0.05	0	112	0346M	DFT-S-OFDM	QPSK	1	104	15 mm	back	1:1	0.154	1.371	0.211	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.01	0	112	0346M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.187	1.306	0.244	A65
680.50	136100	Mid	NR Band n71	20	24.0	22.73	A	-0.01	1.5	112	0346M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.137	1.340	0.184	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	0.07	0	112	0346M	DFT-S-OFDM	QPSK	1	40	15 mm	back	1:1	0.289	1.384	0.400	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	-0.02	0	112	0346M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1:1	0.299	1.297	0.388	A67
707.50	141500	Mid	NR Band n12	15	24.0	22.71	A	-0.07	1.5	112	0346M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.202	1.346	0.272	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.07	0	39	0346M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.215	1.321	0.284	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	-0.06	0	39	0346M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.246	1.253	0.308	A69
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.82	A	-0.12	1.5	39	0346M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.155	1.312	0.203	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	-0.05	0	21	0050M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.932	1.074	1.001	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	-0.03	0	21	0050M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.933	1.042	0.972	A71
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	22.52	A	0.07	0	21	0050M	DFT-S-OFDM	QPSK	216	0	15 mm	back	1:1	0.859	1.253	1.076	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.0	21.85	A	0.03	0.5	21	0050M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.718	1.303	0.936	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.63	I	0.10	0	N/A	0353M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.162	1.089	0.176	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.69	I	0.02	0	N/A	0353M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.153	1.074	0.164	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.56	I	0.03	0	N/A	0353M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.155	1.107	0.172	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	0.03	0	26	0056M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.865	1.072	0.927	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.892	1.119	0.998	A73
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	22.44	A	-0.03	0	26	0056M	DFT-S-OFDM	QPSK	216	0	15 mm	back	1:1	0.702	1.276	0.896	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.0	21.77	A	-0.02	0.5	26	0056M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.620	1.327	0.823	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.13	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.136	1.135	0.154	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	-0.02	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	15 mm	back	1:1	0.139	1.127	0.157	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.96	I	-0.16	0	N/A	0338M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.101	1.132	0.114	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	0.13	0	N/A	0054M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1:1	0.363	1.374	0.499	A75
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.06	0	N/A	0054M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.356	1.368	0.487	
2310.00	462000	Mid	NR Band n30	10	21.5	19.93	A	0.12	0	N/A	0054M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.249	1.435	0.357	
2310.00	462000	Mid	NR Band n30	10	21.0	19.41	I	0.02	0	N/A	0370M	DFT-S-OFDM	QPSK	1	50	15 mm	back	1:1	0.085	1.442	0.123	
2310.00	462000	Mid	NR Band n30	10	21.0	19.42	I	0.00	0	N/A	0370M	DFT-S-OFDM	QPSK	25	0	15 mm	back	1:1	0.084	1.439	0.121	
2310.00	462000	Mid	NR Band n30	10	21.0	19.35	I	-0.01	0	N/A	0370M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.083	1.462	0.121	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.02	0	N/A	0069M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.209	1.245	0.260	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.03	0	N/A	0069M	DFT-S-OFDM	QPSK	108	108	15 mm	back	1:1	0.211	1.227	0.259	A77
2535.00	507000	Mid	NR Band n7	40	22.5	21.38	B	-0.09	0.5	N/A	0069M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.146	1.294	0.189	
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Table 11-37
NR n41 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	20.5	20.17	I	-0.02	0	0331M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.170	1.079	0.183	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	0.00	0	0331M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.173	1.081	0.187	A79
2592.99	518598	Mid	NR Band n41	100	20.5	20.07	I	0.03	0	0331M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.172	1.104	0.190	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.04	N/A	0296M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.116	1.153	0.134	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	0.06	N/A	0331M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.010	1.180	0.012	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	-0.14	N/A	0331M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.022	1.197	0.026	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-38
NR n77 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	17.78	F	0.03	0	0343M	DFT-S-OFDM	QPSK	1	271	15 mm	back	1:1	0.042	1.052	0.044	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	-0.05	0	0343M	DFT-S-OFDM	QPSK	135	138	15 mm	back	1:1	0.042	1.102	0.046	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.53	F	0.02	0	0343M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.031	1.114	0.035	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	0.03	N/A	0343M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.022	1.368	0.030	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	0.07	N/A	0343M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.020	1.074	0.021	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.11	N/A	0343M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.109	1.172	0.128	A81
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	0.12	0	0343M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.115	1.069	0.123	A83
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	0.05	0	0343M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.113	1.096	0.124	
3930.00	662000	High	NR Band n77	100	18.0	17.70	F	-0.04	0	0343M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.113	1.072	0.121	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.08	N/A	0343M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	0.02	N/A	0273M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.048	1.148	0.055	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	-0.20	N/A	0343M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.058	1.033	0.060	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-39
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	19.5	19.22	-0.01	15 mm	1	0281M	1	back	99.8	0.135	0.110	1.067	1.002	**0.118**	A85
2412	1	802.11b	DSSS	22	19.5	19.42	-0.04	15 mm	2	0281M	1	back	99.9	0.090	0.072	1.019	1.001	0.073	
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 Body-worn 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]	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	16.0	15.44	16.0	15.39	0.17	15 mm	MIMO	0281M	13	back	96.8	0.107	0.083	1.151	1.033	0.099	
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 19.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 16.0 dBm

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Table 11-41
DTS Body-worn MIMO SAR during conditions with 5G NR mmW

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	16.29	17.0	16.34	-0.05	15 mm	MIMO	0273M	13	back	96.8	0.073	0.087	1.178	1.033	0.106	
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 5G NR. 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

Table 11-42
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)	
5270	54	802.11n	OFDM	40	17.0	16.65	17.0	16.86	0.02	15 mm	MIMO	0586M	27	back	94.8	0.142	0.119	1.084	1.055	0.136	
5710	142	802.11n	OFDM	40	17.0	16.95	17.0	16.91	-0.01	15 mm	MIMO	0586M	27	back	94.8	0.368	0.302	1.021	1.055	0.325	A87
5755	151	802.11n	OFDM	40	17.0	16.85	17.0	16.51	-0.05	15 mm	MIMO	0586M	27	back	94.8	0.301	0.250	1.119	1.055	0.295	
5875	175	802.11n	OFDM	40	17.0	16.93	17.0	16.50	-0.02	15 mm	MIMO	0586M	27	back	94.8	0.221	0.183	1.122	1.055	0.217	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

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

Table 11-43
DSS 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	18.5	18.26	-0.09	15 mm	1	0281M	1	back	77.6	0.066	1.058	1.289	0.090	A89
2441	39	Bluetooth	FHSS	17.0	16.61	-0.03	15 mm	2	0281M	1	back	77.60	0.027	1.093	1.289	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 11-44
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	11.5	11.00	11.50	10.96	-0.02	15 mm	MIMO	0281M	1	back	77.10	0.018	1.133	1.297	0.026	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram									

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

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11.3 Standalone Hotspot SAR Data

Table 11-45
GPRS Hotspot 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 (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
848.80	251	GSM 850	GPRS	30.5	29.82	-0.11	10 mm	A	1226M	3	1:2.76	back	0.496	1.169	0.580	A32
848.80	251	GSM 850	GPRS	30.5	29.82	-0.03	10 mm	A	1226M	3	1:2.76	front	0.259	1.169	0.303	
848.80	251	GSM 850	GPRS	30.5	29.82	-0.06	10 mm	A	1226M	3	1:2.76	bottom	0.135	1.169	0.158	
848.80	251	GSM 850	GPRS	30.5	29.82	-0.01	10 mm	A	1226M	3	1:2.76	right	0.393	1.169	0.459	
848.80	251	GSM 850	GPRS	30.5	29.82	0.00	10 mm	A	1226M	3	1:2.76	left	0.308	1.169	0.360	
1880.00	661	GSM 1900	GPRS	23.0	21.29	-0.04	10 mm	A	0124M	4	1:2.076	back	0.321	1.483	0.476	
1880.00	661	GSM 1900	GPRS	23.0	21.29	-0.19	10 mm	A	0124M	4	1:2.076	front	0.227	1.483	0.337	
1850.20	512	GSM 1900	GPRS	23.0	21.25	-0.02	10 mm	A	0124M	4	1:2.076	bottom	0.542	1.496	0.811	
1880.00	661	GSM 1900	GPRS	23.0	21.29	-0.05	10 mm	A	0124M	4	1:2.076	bottom	0.597	1.483	0.885	
1909.80	810	GSM 1900	GPRS	23.0	21.00	-0.03	10 mm	A	0124M	4	1:2.076	bottom	0.674	1.585	1.068	A34
1880.00	661	GSM 1900	GPRS	23.0	21.29	0.02	10 mm	A	0124M	4	1:2.076	right	0.033	1.483	0.049	
1880.00	661	GSM 1900	GPRS	23.0	21.29	0.02	10 mm	A	0124M	4	1:2.076	left	0.048	1.483	0.071	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-46
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	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	-0.01	10 mm	A	1226M	1:1	back	0.420	1.222	0.513	A36
826.40	4132	UMTS 850	RMC	25.0	24.13	0	-0.01	10 mm	A	1226M	1:1	front	0.265	1.222	0.324	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.06	10 mm	A	1226M	1:1	bottom	0.134	1.222	0.164	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.09	10 mm	A	1226M	1:1	right	0.343	1.222	0.419	
826.40	4132	UMTS 850	RMC	25.0	24.13	0	0.08	10 mm	A	1226M	1:1	left	0.280	1.222	0.342	
1732.40	1412	UMTS 1750	RMC	20.0	19.47	22	0.02	10 mm	A	0124M	1:1	back	0.561	1.130	0.634	
1732.40	1412	UMTS 1750	RMC	20.0	19.47	22	-0.01	10 mm	A	0124M	1:1	front	0.427	1.130	0.483	
1712.40	1312	UMTS 1750	RMC	20.0	19.37	22	-0.03	10 mm	A	0124M	1:1	bottom	0.837	1.156	0.968	
1732.40	1412	UMTS 1750	RMC	20.0	19.47	22	0.00	10 mm	A	0124M	1:1	bottom	0.886	1.130	1.001	
1752.60	1513	UMTS 1750	RMC	20.0	19.39	22	-0.06	10 mm	A	0124M	1:1	bottom	0.910	1.151	1.047	A38
1732.40	1412	UMTS 1750	RMC	20.0	19.47	22	0.16	10 mm	A	0124M	1:1	right	0.060	1.130	0.068	
1732.40	1412	UMTS 1750	RMC	20.0	19.47	22	-0.11	10 mm	A	0124M	1:1	left	0.130	1.130	0.147	
1907.60	9538	UMTS 1900	RMC	19.5	18.94	26	0.02	10 mm	A	0124M	1:1	back	0.494	1.138	0.562	
1907.60	9538	UMTS 1900	RMC	19.5	18.94	26	0.00	10 mm	A	0124M	1:1	front	0.388	1.138	0.442	
1852.40	9262	UMTS 1900	RMC	19.5	18.88	26	-0.05	10 mm	A	0124M	1:1	bottom	0.714	1.153	0.823	
1880.00	9400	UMTS 1900	RMC	19.5	18.85	26	-0.04	10 mm	A	0124M	1:1	bottom	0.819	1.161	0.951	
1907.60	9538	UMTS 1900	RMC	19.5	18.94	26	-0.04	10 mm	A	0124M	1:1	bottom	0.916	1.138	1.042	A40
1907.60	9538	UMTS 1900	RMC	19.5	18.94	26	0.01	10 mm	A	0124M	1:1	right	0.144	1.138	0.164	
1907.60	9538	UMTS 1900	RMC	19.5	18.94	26	-0.03	10 mm	A	0124M	1:1	left	0.244	1.138	0.278	
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 11-47
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	25.8	24.40	112	0.10	0	A	1219M	QPSK	1	0	10 mm	back	1:1	0.323	1.380	0.446	A42
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.02	1	A	1219M	QPSK	50	0	10 mm	back	1:1	0.247	1.435	0.354	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	-0.09	0	A	1219M	QPSK	1	0	10 mm	front	1:1	0.227	1.380	0.313	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.03	1	A	1219M	QPSK	50	0	10 mm	front	1:1	0.147	1.435	0.211	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	0.04	0	A	1219M	QPSK	1	0	10 mm	bottom	1:1	0.040	1.380	0.055	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.01	1	A	1219M	QPSK	50	0	10 mm	bottom	1:1	0.031	1.435	0.044	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	-0.05	0	A	1219M	QPSK	1	0	10 mm	right	1:1	0.196	1.380	0.270	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.00	1	A	1219M	QPSK	50	0	10 mm	right	1:1	0.152	1.435	0.218	
680.50	133297	Mid	LTE Band 71	20	25.8	24.40	112	-0.11	0	A	1219M	QPSK	1	0	10 mm	left	1:1	0.318	1.380	0.439	
680.50	133297	Mid	LTE Band 71	20	24.8	23.23	112	0.01	1	A	1219M	QPSK	50	0	10 mm	left	1:1	0.234	1.435	0.336	
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	25.8	24.45	1	-0.12	0	A	1219M	QPSK	1	25	10 mm	back	1:1	0.425	1.365	0.580	A44
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	-0.02	1	A	1219M	QPSK	25	25	10 mm	back	1:1	0.338	1.361	0.460	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	0.05	0	A	1219M	QPSK	1	25	10 mm	front	1:1	0.277	1.365	0.378	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.03	1	A	1219M	QPSK	25	25	10 mm	front	1:1	0.222	1.361	0.302	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	-0.03	0	A	1219M	QPSK	1	25	10 mm	bottom	1:1	0.128	1.365	0.175	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	-0.01	1	A	1219M	QPSK	25	25	10 mm	bottom	1:1	0.104	1.361	0.142	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	-0.01	0	A	1219M	QPSK	1	25	10 mm	right	1:1	0.281	1.365	0.384	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	-0.02	1	A	1219M	QPSK	25	25	10 mm	right	1:1	0.206	1.361	0.280	
707.50	23095	Mid	LTE Band 12	10	25.8	24.45	1	0.01	0	A	1219M	QPSK	1	25	10 mm	left	1:1	0.173	1.365	0.236	
707.50	23095	Mid	LTE Band 12	10	24.8	23.46	1	0.01	1	A	1219M	QPSK	25	25	10 mm	left	1:1	0.145	1.361	0.197	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

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	25.5	24.78	112	0.00	0	A	1219M	QPSK	1	49	10 mm	back	1:1	0.600	1.180	0.708	A46
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.00	1	A	1219M	QPSK	25	25	10 mm	back	1:1	0.460	1.216	0.559	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	0.10	0	A	1219M	QPSK	1	49	10 mm	front	1:1	0.339	1.180	0.400	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.04	1	A	1219M	QPSK	25	25	10 mm	front	1:1	0.265	1.216	0.322	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	-0.01	0	A	1219M	QPSK	1	49	10 mm	bottom	1:1	0.163	1.180	0.192	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	-0.02	1	A	1219M	QPSK	25	25	10 mm	bottom	1:1	0.121	1.216	0.147	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	-0.01	0	A	1219M	QPSK	1	49	10 mm	right	1:1	0.316	1.180	0.373	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	0.01	1	A	1219M	QPSK	25	25	10 mm	right	1:1	0.250	1.216	0.304	
782.00	23230	Mid	LTE Band 13	10	25.5	24.78	112	0.11	0	A	1219M	QPSK	1	49	10 mm	left	1:1	0.213	1.180	0.251	
782.00	23230	Mid	LTE Band 13	10	24.5	23.65	112	-0.09	1	A	1219M	QPSK	25	25	10 mm	left	1:1	0.183	1.216	0.223	
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 11-50
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	25.08	112	-0.01	0	A	1219M	QPSK	1	49	10 mm	back	1:1	0.586	1.102	0.646	A48
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.01	1	A	1219M	QPSK	25	12	10 mm	back	1:1	0.440	1.183	0.521	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	-0.02	0	A	1219M	QPSK	1	49	10 mm	front	1:1	0.350	1.102	0.386	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.04	1	A	1219M	QPSK	25	12	10 mm	front	1:1	0.255	1.183	0.302	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	0.06	0	A	1219M	QPSK	1	49	10 mm	bottom	1:1	0.164	1.102	0.181	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	-0.08	1	A	1219M	QPSK	25	12	10 mm	bottom	1:1	0.134	1.183	0.159	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	0.02	0	A	1219M	QPSK	1	49	10 mm	right	1:1	0.337	1.102	0.371	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.02	1	A	1219M	QPSK	25	12	10 mm	right	1:1	0.262	1.183	0.310	
793.00	23330	Mid	LTE Band 14	10	25.5	25.08	112	0.00	0	A	1219M	QPSK	1	49	10 mm	left	1:1	0.228	1.102	0.251	
793.00	23330	Mid	LTE Band 14	10	24.5	23.77	112	0.04	1	A	1219M	QPSK	25	12	10 mm	left	1:1	0.181	1.183	0.214	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-51
LTE Band 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	25.8	24.31	0	-0.08	0	A	1219M	QPSK	1	36	10 mm	back	1:1	0.483	1.409	0.681	A50
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.01	1	A	1219M	QPSK	36	37	10 mm	back	1:1	0.387	1.406	0.544	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	0.00	0	A	1219M	QPSK	1	36	10 mm	front	1:1	0.266	1.409	0.375	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.03	1	A	1219M	QPSK	36	37	10 mm	front	1:1	0.214	1.406	0.301	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	-0.02	0	A	1219M	QPSK	1	36	10 mm	bottom	1:1	0.117	1.409	0.165	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	-0.02	1	A	1219M	QPSK	36	37	10 mm	bottom	1:1	0.094	1.406	0.132	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	-0.02	0	A	1219M	QPSK	1	36	10 mm	right	1:1	0.305	1.409	0.430	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.01	1	A	1219M	QPSK	36	37	10 mm	right	1:1	0.237	1.406	0.333	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.31	0	-0.06	0	A	1219M	QPSK	1	36	10 mm	left	1:1	0.152	1.409	0.214	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.32	0	0.02	1	A	1219M	QPSK	36	37	10 mm	left	1:1	0.110	1.406	0.155	
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	25.8	25.04	0	-0.06	0	A	0351M	QPSK	1	0	10 mm	back	1:1	0.498	1.191	0.593	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	-0.01	1	A	0351M	QPSK	25	25	10 mm	back	1:1	0.417	1.225	0.511	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.09	0	0.10	0	A	0351M	QPSK	1	0	10 mm	back	1:1	0.505	1.178	0.595	A52
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	-0.01	0	A	0351M	QPSK	1	0	10 mm	front	1:1	0.284	1.191	0.338	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.00	1	A	0351M	QPSK	25	25	10 mm	front	1:1	0.232	1.225	0.284	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	-0.08	0	A	0351M	QPSK	1	0	10 mm	bottom	1:1	0.128	1.191	0.152	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	-0.08	1	A	0351M	QPSK	25	25	10 mm	bottom	1:1	0.116	1.225	0.142	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	-0.06	0	A	0351M	QPSK	1	0	10 mm	right	1:1	0.296	1.191	0.353	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.00	1	A	0351M	QPSK	25	25	10 mm	right	1:1	0.223	1.225	0.273	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.04	0	0.00	0	A	0351M	QPSK	1	0	10 mm	left	1:1	0.169	1.191	0.201	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.92	0	0.02	1	A	0351M	QPSK	25	25	10 mm	left	1:1	0.117	1.225	0.143	
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	20.0	18.63	22	0.03	0	A	0068M	QPSK	1	50	10 mm	back	1:1	0.479	1.371	0.657	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.57	22	-0.02	0	A	0068M	QPSK	50	25	10 mm	back	1:1	0.477	1.390	0.663	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.63	22	-0.05	0	A	0068M	QPSK	1	50	10 mm	front	1:1	0.377	1.371	0.517	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.57	22	0.01	0	A	0068M	QPSK	50	25	10 mm	front	1:1	0.377	1.390	0.524	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.63	22	-0.06	0	A	0068M	QPSK	1	50	10 mm	bottom	1:1	0.765	1.371	1.049	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.51	22	-0.03	0	A	0068M	QPSK	1	50	10 mm	bottom	1:1	0.848	1.409	1.195	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.41	22	-0.06	0	A	0068M	QPSK	1	0	10 mm	bottom	1:1	0.864	1.442	1.246	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.42	22	-0.01	0	A	0068M	QPSK	1	50	10 mm	bottom	1:1	0.874	1.439	1.258	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.57	22	0.03	0	A	0068M	QPSK	50	25	10 mm	bottom	1:1	0.769	1.390	1.069	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.56	22	-0.02	0	A	0068M	QPSK	50	25	10 mm	bottom	1:1	0.850	1.393	1.184	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.55	22	-0.05	0	A	0068M	QPSK	50	25	10 mm	bottom	1:1	0.882	1.396	1.231	A54
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.50	22	-0.01	0	A	0068M	QPSK	100	0	10 mm	bottom	1:1	0.866	1.413	1.224	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	20.0	18.75	22	-0.11	0	A	0068M	QPSK	1	0	10 mm	bottom	1:1	0.798	1.334	1.065	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.55	22	-0.13	0	A	0068M	QPSK	1	0	10 mm	bottom	1:1	0.854	1.396	1.192	
	SCC	1750.20	132374													99							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	20.0	18.87	22	0.04	0	A	0068M	QPSK	1	0	10 mm	bottom	1:1	0.799	1.297	1.036	
	SCC	1765.10	132523													49							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.63	22	0.05	0	A	0068M	QPSK	1	50	10 mm	right	1:1	0.050	1.371	0.069	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.57	22	0.03	0	A	0068M	QPSK	50	25	10 mm	right	1:1	0.051	1.390	0.071	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.63	22	0.02	0	A	0068M	QPSK	1	50	10 mm	left	1:1	0.132	1.371	0.181	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.57	22	0.03	0	A	0068M	QPSK	50	25	10 mm	left	1:1	0.130	1.390	0.181	

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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.42	26	-0.03	0	A	0064M	QPSK	1	50	10 mm	back	1:1	0.431	1.282	0.553	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.24	26	-0.03	0	A	0064M	QPSK	50	25	10 mm	back	1:1	0.450	1.337	0.602	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.42	26	0.04	0	A	0064M	QPSK	1	50	10 mm	front	1:1	0.372	1.282	0.477	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.24	26	0.02	0	A	0064M	QPSK	50	25	10 mm	front	1:1	0.374	1.337	0.500	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.42	26	0.00	0	A	0064M	QPSK	1	50	10 mm	bottom	1:1	0.713	1.282	0.914	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.5	18.40	26	0.03	0	A	0064M	QPSK	1	99	10 mm	bottom	1:1	0.841	1.288	1.083	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.5	18.33	26	-0.06	0	A	0064M	QPSK	1	0	10 mm	bottom	1:1	0.853	1.309	1.117	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.24	26	0.01	0	A	0064M	QPSK	50	25	10 mm	bottom	1:1	0.722	1.337	0.965	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.5	18.20	26	-0.02	0	A	0064M	QPSK	50	50	10 mm	bottom	1:1	0.822	1.349	1.109	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.5	18.18	26	-0.02	0	A	0064M	QPSK	50	0	10 mm	bottom	1:1	0.862	1.355	1.168	A56
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.17	26	0.00	0	A	0064M	QPSK	100	0	10 mm	bottom	1:1	0.708	1.358	0.961	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.42	26	-0.02	0	A	0064M	QPSK	1	50	10 mm	right	1:1	0.045	1.282	0.058	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.24	26	0.00	0	A	0064M	QPSK	50	25	10 mm	right	1:1	0.048	1.337	0.064	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.42	26	-0.03	0	A	0064M	QPSK	1	50	10 mm	left	1:1	0.084	1.282	0.108	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.5	18.24	26	0.02	0	A	0064M	QPSK	50	25	10 mm	left	1:1	0.084	1.337	0.112	

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	20.0	18.84	0.07	0	A	0064M	QPSK	1	0	10 mm	back	1:1	0.303	1.306	0.396	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.83	-0.03	0	A	0064M	QPSK	25	12	10 mm	back	1:1	0.295	1.309	0.386	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	-0.04	0	A	0064M	QPSK	1	0	10 mm	front	1:1	0.303	1.306	0.396	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.83	0.07	0	A	0064M	QPSK	25	12	10 mm	front	1:1	0.303	1.309	0.397	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	0.02	0	A	0064M	QPSK	1	0	10 mm	bottom	1:1	0.687	1.306	0.897	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.83	-0.01	0	A	0064M	QPSK	25	12	10 mm	bottom	1:1	0.688	1.309	0.901	A58
2310.00	27710	Mid	LTE Band 30	10	20.0	18.75	-0.01	0	A	0064M	QPSK	50	0	10 mm	bottom	1:1	0.677	1.334	0.903	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	0.03	0	A	0064M	QPSK	1	0	10 mm	right	1:1	0.033	1.306	0.043	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.83	-0.13	0	A	0064M	QPSK	25	12	10 mm	right	1:1	0.032	1.309	0.042	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	-0.06	0	A	0064M	QPSK	1	0	10 mm	left	1:1	0.071	1.306	0.093	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.83	-0.08	0	A	0064M	QPSK	25	12	10 mm	left	1:1	0.076	1.309	0.099	
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	19.77	0.03	0	B	0053M	QPSK	1	99	10 mm	back	1:1	0.324	1.327	0.430	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.19	0	B	0053M	QPSK	50	25	10 mm	back	1:1	0.340	1.358	0.462	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	0.04	0	B	0053M	QPSK	1	99	10 mm	front	1:1	0.222	1.327	0.295	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.03	0	B	0053M	QPSK	50	25	10 mm	front	1:1	0.211	1.358	0.287	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	0.05	0	B	0053M	QPSK	1	99	10 mm	bottom	1:1	0.392	1.327	0.520	A60
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.14	0	B	0053M	QPSK	50	25	10 mm	bottom	1:1	0.362	1.358	0.492	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	0.15	0	B	0053M	QPSK	1	99	10 mm	left	1:1	0.321	1.327	0.426	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.03	0	B	0053M	QPSK	50	25	10 mm	left	1:1	0.310	1.358	0.421	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-57
LTE Band 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	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	0.06	0	B	0060M	QPSK	1	0	10 mm	back	1:1.58	0.309	1.374	0.425	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	0.01	0	B	0060M	QPSK	50	50	10 mm	back	1:1.58	0.312	1.324	0.413	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	-0.05	0	B	0060M	QPSK	1	0	10 mm	front	1:1.58	0.210	1.374	0.289	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	0.00	0	B	0060M	QPSK	50	50	10 mm	front	1:1.58	0.212	1.324	0.281	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	-0.03	0	B	0060M	QPSK	1	0	10 mm	bottom	1:1.58	0.267	1.374	0.367	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	-0.04	0	B	0060M	QPSK	50	50	10 mm	bottom	1:1.58	0.255	1.324	0.338	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	0.06	0	B	0060M	QPSK	1	0	10 mm	left	1:1.58	0.326	1.374	0.448	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	0.03	0	B	0060M	QPSK	50	50	10 mm	left	1:1.58	0.339	1.324	0.449	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	24.6	23.26	0.00	0	B	0060M	QPSK	50	50	10 mm	left	1:2.31	0.313	1.361	0.426	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	23.0	21.82	0.01	0	B	0060M	QPSK	50	50	10 mm	left	1:1.58	0.332	1.312	0.436	
	SCC	2525.80	39948												0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	24.6	23.74	0.01	0	B	0060M	QPSK	50	50	10 mm	left	1:2.31	0.342	1.219	0.417	A62
	SCC	2525.80	39948												0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram														

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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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.91	0.12	0	F	0382M	QPSK	1	99	10 mm	back	1:1.58	0.331	1.146	0.379	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.94	0.01	0	F	0382M	QPSK	50	25	10 mm	back	1:1.58	0.332	1.138	0.378	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.91	0.01	0	F	0382M	QPSK	1	99	10 mm	front	1:1.58	0.221	1.146	0.253	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.94	0.06	0	F	0382M	QPSK	50	25	10 mm	front	1:1.58	0.219	1.138	0.249	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.91	0.00	0	F	0382M	QPSK	1	99	10 mm	top	1:1.58	0.275	1.146	0.315	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.94	0.01	0	F	0382M	QPSK	50	25	10 mm	top	1:1.58	0.275	1.138	0.313	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	21.5	20.89	0.04	0	F	0382M	QPSK	1	0	10 mm	left	1:1.58	0.548	1.151	0.631	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.91	0.04	0	F	0382M	QPSK	1	99	10 mm	left	1:1.58	0.556	1.146	0.637	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	21.5	20.85	0.01	0	F	0382M	QPSK	1	99	10 mm	left	1:1.58	0.549	1.161	0.637	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	21.5	20.53	0.01	0	F	0382M	QPSK	1	99	10 mm	left	1:1.58	0.535	1.250	0.669	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	21.5	20.93	0.00	0	F	0382M	QPSK	50	25	10 mm	left	1:1.58	0.561	1.140	0.640	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.94	0.05	0	F	0382M	QPSK	50	25	10 mm	left	1:1.58	0.566	1.138	0.644	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	21.5	20.90	0.01	0	F	0382M	QPSK	50	25	10 mm	left	1:1.58	0.567	1.148	0.651	A64
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	21.5	20.48	0.04	0	F	0382M	QPSK	50	0	10 mm	left	1:1.58	0.533	1.265	**0.674**	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	21.5	20.60	0.00	0	F	0382M	QPSK	50	25	10 mm	left	1:1.58	0.546	1.230	0.672	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	21.5	20.85	-0.02	0	F	0382M	QPSK	100	0	10 mm	left	1:1.58	0.551	1.161	0.640	
2 CC Uplink	PCC	3690.00	56640	High	LTE Band 48	20	21.5	20.52	-0.02	0	F	0382M	QPSK	50	0	10 mm	left	1:1.58	0.532	1.253	0.667	
	SCC	3670.20	56442												50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**Body 1.6 W/kg (mW/g) averaged over 1 gram**														

Table 11-59
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.05	0	112	0346M	DFT-S-OFDM	QPSK	1	104	10 mm	back	1:1	0.270	1.371	0.370	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.06	0	112	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.316	1.306	0.413	A66
680.50	136100	Mid	NR Band n71	20	24.0	22.73	A	0.07	1.5	112	0346M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.221	1.340	0.296	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.02	0	112	0346M	DFT-S-OFDM	QPSK	1	104	10 mm	front	1:1	0.184	1.371	0.252	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.04	0	112	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.198	1.306	0.259	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.07	0	112	0346M	DFT-S-OFDM	QPSK	1	104	10 mm	bottom	1:1	0.042	1.371	0.058	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.03	0	112	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.049	1.306	0.064	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.08	0	112	0346M	DFT-S-OFDM	QPSK	1	104	10 mm	right	1:1	0.142	1.371	0.195	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.03	0	112	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.179	1.306	0.234	
680.50	136100	Mid	NR Band n71	20	25.5	24.13	A	0.02	0	112	0346M	DFT-S-OFDM	QPSK	1	104	10 mm	left	1:1	0.250	1.371	0.343	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.01	0	112	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.305	1.306	0.398	
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																					
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	0.09	0	112	0346M	DFT-S-OFDM	QPSK	1	40	10 mm	back	1:1	0.450	1.384	0.623	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.02	0	112	0346M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.472	1.297	0.612	A68
707.50	141500	Mid	NR Band n12	15	24.0	22.71	A	0.02	1.5	112	0346M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.342	1.346	0.460	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	0.04	0	112	0346M	DFT-S-OFDM	QPSK	1	40	10 mm	front	1:1	0.307	1.384	0.425	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.01	0	112	0346M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.341	1.297	0.442	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	0.01	0	112	0346M	DFT-S-OFDM	QPSK	1	40	10 mm	bottom	1:1	0.139	1.384	0.192	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	-0.03	0	112	0346M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.145	1.297	0.188	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	-0.09	0	112	0346M	DFT-S-OFDM	QPSK	1	40	10 mm	right	1:1	0.306	1.384	0.424	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	-0.02	0	112	0346M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.322	1.297	0.418	
707.50	141500	Mid	NR Band n12	15	25.5	24.09	A	0.01	0	112	0346M	DFT-S-OFDM	QPSK	1	40	10 mm	left	1:1	0.256	1.384	0.354	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.01	0	112	0346M	DFT-S-OFDM	QPSK	36	22	10 mm	left	1:1	0.269	1.297	0.349	
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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	25.5	24.29	A	-0.08	0	39	0346M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.458	1.321	0.605	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	-0.07	0	39	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.520	1.253	0.652	A70
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.82	A	-0.01	1.5	39	0346M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.330	1.312	0.433	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	0.00	0	39	0346M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.271	1.321	0.358	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	-0.04	0	39	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.288	1.253	0.361	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.04	0	39	0346M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.122	1.321	0.161	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.04	0	39	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.153	1.253	0.192	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	-0.02	0	39	0346M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.307	1.321	0.406	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.00	0	39	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.303	1.253	0.380	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.29	A	0.00	0	39	0346M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.192	1.321	0.254	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.52	A	0.03	0	39	0346M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.175	1.253	0.219	
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 11-62
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	18.88	A	0.05	0	21	0050M	DFT-S-OFDM	QPSK	1	108	10 mm	back	1:1	0.625	1.153	0.721	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	-0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.657	1.122	0.737	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.88	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	1	108	10 mm	front	1:1	0.539	1.153	0.621	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.540	1.122	0.606	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.88	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	1	108	10 mm	bottom	1:1	0.906	1.153	1.045	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	1.030	1.122	1.156	A72
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.87	A	-0.02	0	21	0050M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	1.010	1.156	1.168	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.76	A	-0.08	0	21	0050M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.898	1.186	1.065	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.88	A	0.13	0	21	0050M	DFT-S-OFDM	QPSK	1	108	10 mm	right	1:1	0.059	1.153	0.068	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	0.03	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.057	1.122	0.064	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	18.88	A	0.11	0	21	0050M	DFT-S-OFDM	QPSK	1	108	10 mm	left	1:1	0.133	1.153	0.153	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	-0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.140	1.122	0.157	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.63	I	-0.02	0	N/A	0353M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.349	1.089	0.380	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.69	I	0.00	0	N/A	0353M	DFT-S-OFDM	QPSK	108	54	10 mm	back	1:1	0.336	1.074	0.361	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.63	I	0.00	0	N/A	0353M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.273	1.089	0.297	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.69	I	0.02	0	N/A	0353M	DFT-S-OFDM	QPSK	108	54	10 mm	front	1:1	0.281	1.074	0.302	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.63	I	0.07	0	N/A	0353M	DFT-S-OFDM	QPSK	1	214	10 mm	top	1:1	0.452	1.089	0.492	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.69	I	-0.02	0	N/A	0353M	DFT-S-OFDM	QPSK	108	54	10 mm	top	1:1	0.460	1.074	0.494	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.56	I	-0.01	0	N/A	0353M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.477	1.107	0.528	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.63	I	0.05	0	N/A	0353M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.082	1.089	0.089	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.69	I	-0.06	0	N/A	0353M	DFT-S-OFDM	QPSK	108	54	10 mm	right	1:1	0.096	1.074	0.103	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.5	19.00	A	-0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.942	1.122	1.057	
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Note: Blue entry represents variability measurement

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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	19.5	18.51	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	1	108	10 mm	back	1:1	0.514	1.256	0.646	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.55	A	0.05	0	26	0056M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.528	1.245	0.657	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.51	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	1	108	10 mm	front	1:1	0.397	1.256	0.499	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.55	A	-0.02	0	26	0056M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.409	1.245	0.509	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.51	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	1	108	10 mm	bottom	1:1	0.956	1.256	1.201	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.55	A	-0.06	0	26	0056M	DFT-S-OFDM	QPSK	108	0	10 mm	bottom	1:1	0.964	1.245	1.200	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.50	A	0.03	0	26	0056M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.997	1.259	1.255	A74
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.28	A	0.02	0	26	0056M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.888	1.324	1.176	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.51	A	0.10	0	26	0056M	DFT-S-OFDM	QPSK	1	108	10 mm	right	1:1	0.056	1.256	0.070	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.55	A	0.05	0	26	0056M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.060	1.245	0.075	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.51	A	-0.06	0	26	0056M	DFT-S-OFDM	QPSK	1	108	10 mm	left	1:1	0.098	1.256	0.123	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.55	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	108	0	10 mm	left	1:1	0.104	1.245	0.129	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.03	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.316	1.135	0.359	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	0.00	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.323	1.127	0.364	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.03	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.191	1.135	0.217	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	0.01	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.203	1.127	0.229	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.01	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.642	1.135	0.729	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	0.04	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	10 mm	top	1:1	0.667	1.127	0.752	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.96	I	-0.05	0	N/A	0338M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.668	1.132	0.756	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.00	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.136	1.135	0.154	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	0.11	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.136	1.127	0.153	
1882.50	376500	Mid	NR Band n25 (PCS)	40	19.5	18.50	A	0.03	0	26	0056M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.991	1.259	1.248	
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 11-64
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	20.0	18.26	A	-0.05	0	0054M	DFT-S-OFDM	QPSK	1	26	10 mm	back	1:1	0.283	1.493	0.423	
2310.00	462000	Mid	NR Band n30	10	20.0	18.32	A	0.01	0	0054M	DFT-S-OFDM	QPSK	25	0	10 mm	back	1:1	0.291	1.472	0.428	
2310.00	462000	Mid	NR Band n30	10	20.0	18.26	A	0.01	0	0054M	DFT-S-OFDM	QPSK	1	26	10 mm	front	1:1	0.284	1.493	0.424	
2310.00	462000	Mid	NR Band n30	10	20.0	18.32	A	-0.01	0	0054M	DFT-S-OFDM	QPSK	25	0	10 mm	front	1:1	0.294	1.472	0.433	
2310.00	462000	Mid	NR Band n30	10	20.0	18.26	A	0.02	0	0054M	DFT-S-OFDM	QPSK	1	26	10 mm	bottom	1:1	0.608	1.493	0.908	
2310.00	462000	Mid	NR Band n30	10	20.0	18.32	A	0.04	0	0054M	DFT-S-OFDM	QPSK	25	0	10 mm	bottom	1:1	0.613	1.472	0.902	
2310.00	462000	Mid	NR Band n30	10	20.0	18.22	A	0.01	0	0054M	DFT-S-OFDM	QPSK	50	0	10 mm	bottom	1:1	0.613	1.507	0.924	A76
2310.00	462000	Mid	NR Band n30	10	20.0	18.25	A	0.02	0	0054M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.571	1.496	0.854	
2310.00	462000	Mid	NR Band n30	10	20.0	18.26	A	-0.03	0	0054M	DFT-S-OFDM	QPSK	1	26	10 mm	right	1:1	0.028	1.493	0.042	
2310.00	462000	Mid	NR Band n30	10	20.0	18.32	A	0.19	0	0054M	DFT-S-OFDM	QPSK	25	0	10 mm	right	1:1	0.029	1.472	0.043	
2310.00	462000	Mid	NR Band n30	10	20.0	18.26	A	0.07	0	0054M	DFT-S-OFDM	QPSK	1	26	10 mm	left	1:1	0.083	1.493	0.124	
2310.00	462000	Mid	NR Band n30	10	20.0	18.32	A	-0.03	0	0054M	DFT-S-OFDM	QPSK	25	0	10 mm	left	1:1	0.082	1.472	0.121	
2310.00	462000	Mid	NR Band n30	10	21.0	19.41	I	0.01	0	0370M	DFT-S-OFDM	QPSK	1	50	10 mm	back	1:1	0.167	1.442	0.241	
2310.00	462000	Mid	NR Band n30	10	21.0	19.42	I	0.02	0	0370M	DFT-S-OFDM	QPSK	25	0	10 mm	back	1:1	0.178	1.439	0.256	
2310.00	462000	Mid	NR Band n30	10	21.0	19.41	I	0.00	0	0370M	DFT-S-OFDM	QPSK	1	50	10 mm	front	1:1	0.111	1.442	0.160	
2310.00	462000	Mid	NR Band n30	10	21.0	19.42	I	0.00	0	0370M	DFT-S-OFDM	QPSK	25	0	10 mm	front	1:1	0.119	1.439	0.171	
2310.00	462000	Mid	NR Band n30	10	21.0	19.41	I	-0.04	0	0370M	DFT-S-OFDM	QPSK	1	50	10 mm	top	1:1	0.291	1.442	0.420	
2310.00	462000	Mid	NR Band n30	10	21.0	19.42	I	0.08	0	0370M	DFT-S-OFDM	QPSK	25	0	10 mm	top	1:1	0.303	1.439	0.436	
2310.00	462000	Mid	NR Band n30	10	21.0	19.35	I	0.06	0	0370M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.303	1.462	0.443	
2310.00	462000	Mid	NR Band n30	10	21.0	19.41	I	-0.10	0	0370M	DFT-S-OFDM	QPSK	1	50	10 mm	right	1:1	0.055	1.442	0.079	
2310.00	462000	Mid	NR Band n30	10	21.0	19.42	I	0.05	0	0370M	DFT-S-OFDM	QPSK	25	0	10 mm	right	1:1	0.053	1.439	0.076	
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 11-65
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	19.81	B	0.04	0	0069M	DFT-S-OFDM	QPSK	1	108	10 mm	back	1:1	0.304	1.315	0.400	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.04	0	0069M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.305	1.318	0.402	
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	0.03	0	0069M	DFT-S-OFDM	QPSK	1	108	10 mm	front	1:1	0.222	1.315	0.292	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.04	0	0069M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.235	1.318	0.310	
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	0.00	0	0069M	DFT-S-OFDM	QPSK	1	108	10 mm	bottom	1:1	0.411	1.315	0.540	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.02	0	0069M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.444	1.318	0.585	A78
2535.00	507000	Mid	NR Band n7	40	21.0	19.84	B	0.04	0	0069M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.341	1.306	0.445	
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	0.00	0	0069M	DFT-S-OFDM	QPSK	1	108	10 mm	left	1:1	0.348	1.315	0.458	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.02	0	0069M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.345	1.318	0.455	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-66
NR Band 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	20.5	20.17	I	-0.01	0	0331M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.336	1.079	0.363	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	-0.01	0	0331M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1:1	0.337	1.081	0.364	
2592.99	518598	Mid	NR Band n41	100	20.5	20.17	I	0.02	0	0331M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.173	1.079	0.187	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	-0.03	0	0331M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1:1	0.175	1.081	0.189	
2592.99	518598	Mid	NR Band n41	100	20.5	20.17	I	-0.02	0	0331M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.485	1.079	0.523	A80
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	0.01	0	0331M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1:1	0.478	1.081	0.517	
2592.99	518598	Mid	NR Band n41	100	20.5	20.15	I	0.02	0	0331M	DFT-S-OFDM	QPSK	270	0	10 mm	top	1:1	0.484	1.084	0.525	
2592.99	518598	Mid	NR Band n41	100	20.5	20.07	I	0.02	0	0331M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.478	1.104	0.528	
2592.99	518598	Mid	NR Band n41	100	20.5	20.17	I	0.10	0	0331M	DFT-S-OFDM	QPSK	1	137	10 mm	right	1:1	0.062	1.079	0.067	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	-0.01	0	0331M	DFT-S-OFDM	QPSK	135	69	10 mm	right	1:1	0.065	1.081	0.070	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.00	N/A	0296M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.267	1.153	0.308	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.01	N/A	0296M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.151	1.153	0.174	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	0.09	N/A	0296M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.322	1.153	0.371	
2592.99	518598	Mid	NR Band n41	100	17.0	16.38	B	-0.09	N/A	0296M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.047	1.153	0.054	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	0.03	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.029	1.180	0.034	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	0.19	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.033	1.180	0.039	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	-0.02	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.015	1.180	0.018	
2592.99	518598	Mid	NR Band n41	100	16.0	15.28	E	-0.01	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.011	1.180	0.013	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	-0.03	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.039	1.197	0.047	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.08	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.004	1.197	0.005	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.05	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.015	1.197	0.018	
2592.99	518598	Mid	NR Band n41	100	14.0	13.22	D	0.00	N/A	0331M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.003	1.197	0.004	
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	17.78	F	-0.02	0	0343M	DFT-S-OFDM	QPSK	1	271	10 mm	back	1:1	0.086	1.052	0.090	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	-0.02	0	0343M	DFT-S-OFDM	QPSK	135	138	10 mm	back	1:1	0.080	1.102	0.088	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.78	F	0.11	0	0343M	DFT-S-OFDM	QPSK	1	271	10 mm	front	1:1	0.059	1.052	0.062	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	-0.05	0	0343M	DFT-S-OFDM	QPSK	135	138	10 mm	front	1:1	0.057	1.102	0.063	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.78	F	0.04	0	0343M	DFT-S-OFDM	QPSK	1	271	10 mm	top	1:1	0.052	1.052	0.055	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	-0.04	0	0343M	DFT-S-OFDM	QPSK	135	138	10 mm	top	1:1	0.059	1.102	0.065	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.78	F	-0.01	0	0343M	DFT-S-OFDM	QPSK	1	271	10 mm	left	1:1	0.202	1.052	0.213	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	0.06	0	0343M	DFT-S-OFDM	QPSK	135	138	10 mm	left	1:1	0.182	1.102	0.201	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.53	F	0.04	0	0343M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.137	1.114	0.153	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	0.02	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.053	1.368	0.073	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.03	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.032	1.368	0.044	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.10	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.014	1.368	0.019	
3500.01	633334	Mid	NR Band n77 DoD	100	12.0	10.64	C	-0.08	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.089	1.368	0.122	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	0.04	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.068	1.074	0.073	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	-0.05	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	16.0	15.69	K	-0.09	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.000	1.074	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.05	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.243	1.172	0.285	A82
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	0.11	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.013	1.172	0.015	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.01	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.048	1.172	0.056	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.09	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.014	1.172	0.016	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	-0.02	0	0343M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.261	1.069	0.279	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	0.07	0	0343M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1:1	0.254	1.096	0.278	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	-0.06	0	0343M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.133	1.069	0.142	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	0.02	0	0343M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1:1	0.133	1.096	0.146	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	-0.10	0	0343M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.075	1.069	0.080	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	-0.16	0	0343M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1:1	0.074	1.096	0.081	
3750.00	650000	Low	NR Band n77	100	18.0	17.55	F	0.01	0	0343M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.302	1.109	0.335	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	0.01	0	0343M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.435	1.069	0.465	
3750.00	650000	Low	NR Band n77	100	18.0	17.50	F	0.04	0	0343M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1:1	0.321	1.122	0.360	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	-0.07	0	0343M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1:1	0.452	1.096	0.495	A84
3930.00	662000	High	NR Band n77	100	18.0	17.44	F	0.03	0	0343M	DFT-S-OFDM	QPSK	270	0	10 mm	left	1:1	0.451	1.138	0.513	
3930.00	662000	High	NR Band n77	100	18.0	17.70	F	0.05	0	0343M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.430	1.072	0.461	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.05	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.006	1.172	0.007	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	-0.07	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.05	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.000	1.172	0.000	
3930.00	662000	High	NR Band n77	100	12.0	11.31	C	0.07	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.008	1.172	0.009	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	0.17	N/A	0273M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.143	1.148	0.164	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	-0.06	N/A	0273M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.002	1.148	0.002	
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	0.09	N/A	0273M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.012	1.148	0.014	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.12	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.145	1.033	0.150	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.00	N/A	0343M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.002	1.033	0.002	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	0.12	N/A	0343M	CW/SRS	N/A	N/A	N/A	11 mm	bottom	1:1	0.016	1.033	0.017	
3930.00	662000	High	NR Band n77	100	12.5	12.36	D	-0.09	N/A	0343M	CW/SRS	N/A	N/A	N/A	11 mm	right	1:1	0.000	1.033	0.000	
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	19.5	19.22	0.03	10 mm	1	0281M	1	back	99.8	0.401	0.351	1.067	1.002	**0.375**	A86
2412	1	802.11b	DSSS	22	19.5	19.22	0.02	10 mm	1	0281M	1	front	99.8	0.006	0.004	1.067	1.002	0.004	
2412	1	802.11b	DSSS	22	19.5	19.22	-0.03	10 mm	1	0281M	1	top	99.8	0.032	0.024	1.067	1.002	0.026	
2412	1	802.11b	DSSS	22	19.5	19.22	0.18	10 mm	1	0281M	1	left	99.8	0.007	0.003	1.067	1.002	0.003	
2412	1	802.11b	DSSS	22	19.5	19.42	-0.06	10 mm	2	0281M	1	back	99.9	0.192	0.153	1.019	1.001	0.156	
2412	1	802.11b	DSSS	22	19.5	19.42	-0.06	10 mm	2	0281M	1	front	99.9	0.172	0.131	1.019	1.001	0.134	
2412	1	802.11b	DSSS	22	19.5	19.42	-0.03	10 mm	2	0281M	1	left	99.9	0.237	0.181	1.019	1.001	0.185	
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
DTS Hotspot 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]	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	16.0	15.44	16.0	15.39	0.02	10 mm	MIMO	0586M	13	back	96.8	0.243	0.184	1.151	1.033	0.219	
2437	6	802.11n	OFDM	20	16.0	15.44	16.0	15.39	-0.04	10 mm	MIMO	0586M	13	front	96.8	0.076	0.068	1.151	1.033	0.081	
2437	6	802.11n	OFDM	20	16.0	15.44	16.0	15.39	-0.05	10 mm	MIMO	0586M	13	top	96.8	0.041	0.018	1.151	1.033	0.021	
2437	6	802.11n	OFDM	20	16.0	15.44	16.0	15.39	0.09	10 mm	MIMO	0586M	13	left	96.8	0.153	0.113	1.151	1.033	0.134	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: 2.4 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN. 5/6 GHz WLAN was not transmitting during the above evaluations. To achieve the 19.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 16.0 dBm

Table 11-70
DTS Hotspot MIMO SAR during Conditions with 5G NR mmWave

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	16.29	17.0	16.34	0.03	10 mm	MIMO	0273M	13	back	96.8	0.183	0.263	1.178	1.033	0.320	
2437	6	802.11n	OFDM	20	17.0	16.29	17.0	16.34	-0.03	10 mm	MIMO	0273M	13	front	96.8	0.075	0.057	1.178	1.033	0.069	
2437	6	802.11n	OFDM	20	17.0	16.29	17.0	16.34	0.03	10 mm	MIMO	0273M	13	top	96.8	0.024	0.020	1.178	1.033	0.024	
2437	6	802.11n	OFDM	20	17.0	16.29	17.0	16.34	-0.08	10 mm	MIMO	0273M	13	left	96.8	0.123	0.119	1.178	1.033	0.145	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: 2.4 GHz 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 20.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm

Table 11-71
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)	
5755	151	802.11n	OFDM	40	17.0	16.85	17.0	16.51	-0.02	10 mm	MIMO	0586M	27	back	94.8	0.440	0.376	1.119	1.055	**0.444**	A88
5755	151	802.11n	OFDM	40	17.0	16.85	17.0	16.51	-0.02	10 mm	MIMO	0586M	27	front	94.8	0.060	-	1.119	1.055	-	
5755	151	802.11n	OFDM	40	17.0	16.85	17.0	16.51	0.10	10 mm	MIMO	0586M	27	top	94.8	0.036	-	1.119	1.055	-	
5755	151	802.11n	OFDM	40	17.0	16.85	17.0	16.51	-0.05	10 mm	MIMO	0586M	27	left	94.8	0.096	0.072	1.119	1.055	0.085	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram					

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

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Table 11-72
WLAN MIMO Hotspot SAR for Conditions with 2.4 GHz WLAN SAR or with 5G NR FR2 mmWave Active

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	13.0	12.88	13.0	12.90	0.03	10 mm	MIMO	0586M	58.5	back	90.5	0.179	0.157	1.028	1.105	0.178	
5775	155	802.11ac	OFDM	80	13.0	12.88	13.0	12.90	0.03	10 mm	MIMO	0586M	58.5	front	90.5	0.026	-	1.028	1.105	-	
5775	155	802.11ac	OFDM	80	13.0	12.88	13.0	12.90	0.05	10 mm	MIMO	0586M	58.5	top	90.5	0.081	-	1.028	1.105	-	
5775	155	802.11ac	OFDM	80	13.0	12.88	13.0	12.90	-0.14	10 mm	MIMO	0586M	58.5	left	90.5	0.040	0.016	1.028	1.105	0.018	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: 5 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 2.4 GHz WLAN and/or 5G NR. 2.4 GHz WLAN and/or 5G NR was not transmitting during the above evaluations. To achieve the 16.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 13.0 dBm

Table 11-73
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	18.5	18.26	-0.05	10 mm	1	0281M	1	back	77.60	0.168	1.058	1.289	**0.229**	A90
2441	39	Bluetooth	FHSS	18.5	18.26	0.00	10 mm	1	0281M	1	front	77.60	0.000	1.058	1.289	0.000	
2441	39	Bluetooth	FHSS	18.5	18.26	0.04	10 mm	1	0281M	1	top	77.60	0.012	1.058	1.289	0.016	
2441	39	Bluetooth	FHSS	18.5	18.26	-0.06	10 mm	1	0281M	1	left	77.60	0.001	1.058	1.289	0.001	
2441	39	Bluetooth	FHSS	17.0	16.61	0.04	10 mm	2	0281M	1	back	77.60	0.065	1.093	1.289	0.092	
2441	39	Bluetooth	FHSS	17.0	16.61	-0.09	10 mm	2	0281M	1	front	77.60	0.041	1.093	1.289	0.058	
2441	39	Bluetooth	FHSS	17.0	16.61	-0.07	10 mm	2	0281M	1	left	77.60	0.073	1.093	1.289	0.103	
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 11-74
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	11.5	11.00	11.5	10.96	0.19	10 mm	MIMO	0281M	1	back	77.10	0.035	1.133	1.297	0.051	
2441	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	-0.01	10 mm	MIMO	0281M	1	front	77.10	0.015	1.133	1.297	0.022	
2441	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	-0.14	10 mm	MIMO	0281M	1	top	77.10	0.004	1.133	1.297	0.006	
2441	39	Bluetooth	FHSS	11.5	11.00	11.5	10.96	0.11	10 mm	MIMO	0281M	1	left	77.10	0.024	1.133	1.297	0.035	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram									

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

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11.4 Standalone Phablet SAR Data

Table 11-75
GPRS 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)	
1880.00	661	GSM 1900	GPRS	27.5	26.22	-0.02	8 mm	A	0075M	3	1:2.76	back	0.419	1.343	0.563	
1880.00	661	GSM 1900	GPRS	27.5	26.22	-0.02	6 mm	A	0075M	3	1:2.76	front	0.547	1.343	0.735	
1880.00	661	GSM 1900	GPRS	27.5	26.22	0.04	11 mm	A	0075M	3	1:2.76	bottom	0.571	1.343	0.767	
1880.00	661	GSM 1900	GPRS	27.5	26.22	-0.03	0 mm	A	0075M	3	1:2.76	right	0.191	1.343	0.257	
1880.00	661	GSM 1900	GPRS	27.5	26.22	-0.05	0 mm	A	0075M	3	1:2.76	left	0.376	1.343	0.505	
1880.00	661	GSM 1900	GPRS	23.0	21.29	-0.09	0 mm	A	0075M	4	1:2.076	back	1.110	1.483	1.646	
1880.00	661	GSM 1900	GPRS	23.0	21.29	-0.05	0 mm	A	0075M	4	1:2.076	front	1.020	1.483	1.513	
1850.20	512	GSM 1900	GPRS	23.0	21.25	0.01	0 mm	A	0075M	4	1:2.076	bottom	1.150	1.496	1.720	
1880.00	661	GSM 1900	GPRS	23.0	21.29	0.01	0 mm	A	0075M	4	1:2.076	bottom	1.270	1.483	1.883	
1909.80	810	GSM 1900	GPRS	23.0	21.00	0.00	0 mm	A	0075M	4	1:2.076	bottom	1.360	1.585	2.156	A91
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 11-76
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)	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	0.00	8 mm	A	0124M	1:1	back	1.010	1.140	1.151	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.04	6 mm	A	0124M	1:1	front	1.080	1.140	1.231	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.03	11 mm	A	0124M	1:1	bottom	0.998	1.140	1.138	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.06	0 mm	A	0124M	1:1	right	0.307	1.140	0.350	
1732.40	1412	UMTS 1750	RMC	24.0	23.43	22	-0.08	0 mm	A	0124M	1:1	left	0.674	1.140	0.768	
1712.40	1312	UMTS 1750	RMC	22.0	21.65	22	0.10	0 mm	A	0124M	1:1	back	2.100	1.084	2.276	
1732.40	1412	UMTS 1750	RMC	22.0	21.69	22	0.06	0 mm	A	0124M	1:1	back	2.290	1.074	2.459	
1752.60	1513	UMTS 1750	RMC	22.0	21.64	22	0.07	0 mm	A	0124M	1:1	back	2.290	1.086	2.487	
1712.40	1312	UMTS 1750	RMC	22.0	21.65	22	0.00	0 mm	A	0124M	1:1	front	1.940	1.084	2.103	
1732.40	1412	UMTS 1750	RMC	22.0	21.69	22	0.02	0 mm	A	0124M	1:1	front	2.090	1.074	2.245	
1752.60	1513	UMTS 1750	RMC	22.0	21.64	22	0.01	0 mm	A	0124M	1:1	front	1.980	1.086	2.150	
1712.40	1312	UMTS 1750	RMC	22.0	21.65	22	0.01	0 mm	A	0124M	1:1	bottom	2.890	1.084	3.133	
1732.40	1412	UMTS 1750	RMC	22.0	21.69	22	0.05	0 mm	A	0124M	1:1	bottom	2.920	1.074	**3.136**	A92
1752.60	1513	UMTS 1750	RMC	22.0	21.64	22	0.03	0 mm	A	0124M	1:1	bottom	2.810	1.086	3.052	
1732.40	1412	UMTS 1750	RMC	22.0	21.69	22	0.02	0 mm	A	0124M	1:1	bottom	2.890	1.074	3.104	
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 11-77
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)	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	-0.02	8 mm	A	0124M	1:1	back	0.885	1.172	1.037	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	0.00	6 mm	A	0124M	1:1	front	1.170	1.172	1.371	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	-0.07	11 mm	A	0124M	1:1	bottom	1.060	1.172	1.242	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	-0.04	0 mm	A	0124M	1:1	right	0.350	1.172	0.410	
1880.00	9400	UMTS 1900	RMC	24.0	23.31	26	-0.08	0 mm	A	0124M	1:1	left	0.585	1.172	0.686	
1852.40	9262	UMTS 1900	RMC	21.5	21.32	26	0.07	0 mm	A	0124M	1:1	back	2.260	1.042	2.355	
1880.00	9400	UMTS 1900	RMC	21.5	21.34	26	0.02	0 mm	A	0124M	1:1	back	2.350	1.038	2.439	
1907.60	9538	UMTS 1900	RMC	21.5	21.35	26	0.09	0 mm	A	0124M	1:1	back	2.330	1.035	2.412	
1852.40	9262	UMTS 1900	RMC	21.5	21.32	26	0.07	0 mm	A	0124M	1:1	front	1.960	1.042	2.042	
1880.00	9400	UMTS 1900	RMC	21.5	21.34	26	0.05	0 mm	A	0124M	1:1	front	1.930	1.038	2.003	
1907.60	9538	UMTS 1900	RMC	21.5	21.35	26	0.05	0 mm	A	0124M	1:1	front	2.040	1.035	2.111	
1852.40	9262	UMTS 1900	RMC	21.5	21.32	26	-0.06	0 mm	A	0124M	1:1	bottom	2.610	1.042	2.720	A93
1880.00	9400	UMTS 1900	RMC	21.5	21.34	26	-0.05	0 mm	A	0124M	1:1	bottom	2.410	1.038	2.502	
1907.60	9538	UMTS 1900	RMC	21.5	21.35	26	-0.08	0 mm	A	0124M	1:1	bottom	2.560	1.035	2.650	

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

Table 11-78
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)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	-0.03	0	A	0068M	QPSK	1	99	8 mm	back	1:1	0.921	1.245	1.147	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	-0.03	1	A	0068M	QPSK	50	25	8 mm	back	1:1	0.744	1.377	1.024	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	-0.01	0	A	0068M	QPSK	1	99	6 mm	front	1:1	0.973	1.245	1.211	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	-0.02	1	A	0068M	QPSK	50	25	6 mm	front	1:1	0.774	1.377	1.066	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	0.01	0	A	0068M	QPSK	1	99	11 mm	bottom	1:1	1.050	1.245	1.307	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	0.04	1	A	0068M	QPSK	50	25	11 mm	bottom	1:1	0.864	1.377	1.190	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	-0.05	0	A	0068M	QPSK	1	99	0 mm	right	1:1	0.350	1.245	0.436	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	0.10	1	A	0068M	QPSK	50	25	0 mm	right	1:1	0.273	1.377	0.376	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.05	22	0.04	0	A	0068M	QPSK	1	99	0 mm	left	1:1	0.681	1.245	0.848	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.11	22	-0.02	1	A	0068M	QPSK	50	25	0 mm	left	1:1	0.570	1.377	0.785	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.20	22	-0.06	0	A	0068M	QPSK	1	50	0 mm	back	1:1	1.130	1.202	1.358	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.05	22	0.02	0	A	0068M	QPSK	50	25	0 mm	back	1:1	1.130	1.245	1.407	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.20	22	0.09	0	A	0068M	QPSK	1	50	0 mm	front	1:1	1.450	1.202	1.743	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.05	22	0.03	0	A	0068M	QPSK	50	25	0 mm	front	1:1	1.440	1.245	1.793	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.04	22	-0.10	0	A	0068M	QPSK	1	50	0 mm	bottom	1:1	1.840	1.247	2.294	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.20	22	-0.07	0	A	0068M	QPSK	1	50	0 mm	bottom	1:1	1.930	1.202	2.320	A94
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.04	22	-0.02	0	A	0068M	QPSK	1	50	0 mm	bottom	1:1	1.680	1.247	2.095	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.02	22	0.01	0	A	0068M	QPSK	50	25	0 mm	bottom	1:1	1.860	1.253	2.331	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.00	22	-0.03	0	A	0068M	QPSK	50	50	0 mm	bottom	1:1	1.920	1.259	2.417	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.05	22	-0.05	0	A	0068M	QPSK	50	25	0 mm	bottom	1:1	1.830	1.245	2.278	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.00	22	-0.07	0	A	0068M	QPSK	50	25	0 mm	bottom	1:1	1.690	1.259	2.128	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.98	22	-0.02	0	A	0068M	QPSK	100	0	0 mm	bottom	1:1	1.780	1.265	2.252	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	21.0	20.07	22	-0.06	0	A	0068M	QPSK	25	25	0 mm	bottom	1:1	1.900	1.239	2.354	
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	19.84	22	-0.08	0	A	0068M	QPSK	50	50	0 mm	bottom	1:1	1.810	1.306	2.364	
	SCC	1739.80	132270													0							
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	21.0	19.98	22	-0.03	0	A	0068M	QPSK	25	25	0 mm	bottom	1:1	1.830	1.265	2.315	
	SCC	1724.90	132121													0							

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 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)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.10	0	A	0064M	QPSK	1	50	8 mm	back	1:1	0.936	1.324	1.239	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	0.01	1	A	0064M	QPSK	50	25	8 mm	back	1:1	0.738	1.346	0.993	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.02	0	A	0064M	QPSK	1	50	6 mm	front	1:1	1.030	1.324	1.364	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.04	1	A	0064M	QPSK	50	25	6 mm	front	1:1	0.807	1.346	1.086	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.07	0	A	0064M	QPSK	1	50	11 mm	bottom	1:1	1.070	1.324	1.417	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.05	1	A	0064M	QPSK	50	25	11 mm	bottom	1:1	0.829	1.346	1.116	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	0.00	0	A	0064M	QPSK	1	50	0 mm	right	1:1	0.361	1.324	0.478	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.05	1	A	0064M	QPSK	50	25	0 mm	right	1:1	0.280	1.346	0.377	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.5	23.28	26	-0.12	0	A	0064M	QPSK	1	50	0 mm	left	1:1	0.615	1.324	0.814	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.5	22.21	26	-0.14	1	A	0064M	QPSK	50	25	0 mm	left	1:1	0.491	1.346	0.661	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	19.62	26	0.02	0	A	0064M	QPSK	1	99	0 mm	back	1:1	1.560	1.374	2.143	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.92	26	0.02	0	A	0064M	QPSK	1	50	0 mm	back	1:1	1.580	1.282	2.026	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.67	26	-0.02	0	A	0064M	QPSK	1	99	0 mm	back	1:1	1.580	1.358	2.146	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	19.79	26	0.01	0	A	0064M	QPSK	50	25	0 mm	back	1:1	1.570	1.321	2.074	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.81	26	0.00	0	A	0064M	QPSK	50	25	0 mm	back	1:1	1.550	1.315	2.038	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.77	26	0.01	0	A	0064M	QPSK	50	0	0 mm	back	1:1	1.580	1.327	2.097	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.80	26	0.01	0	A	0064M	QPSK	100	0	0 mm	back	1:1	1.540	1.318	2.030	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.92	26	0.00	0	A	0064M	QPSK	1	50	0 mm	front	1:1	1.490	1.282	1.910	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.81	26	0.02	0	A	0064M	QPSK	50	25	0 mm	front	1:1	1.490	1.315	1.959	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	19.62	26	-0.05	0	A	0064M	QPSK	1	99	0 mm	bottom	1:1	1.910	1.374	2.624	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.92	26	-0.07	0	A	0064M	QPSK	1	50	0 mm	bottom	1:1	1.930	1.282	2.474	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.67	26	-0.04	0	A	0064M	QPSK	1	99	0 mm	bottom	1:1	1.840	1.358	2.499	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	19.79	26	-0.01	0	A	0064M	QPSK	50	25	0 mm	bottom	1:1	1.950	1.321	2.576	A95
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	19.81	26	-0.01	0	A	0064M	QPSK	50	25	0 mm	bottom	1:1	1.920	1.315	2.525	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.77	26	-0.01	0	A	0064M	QPSK	50	0	0 mm	bottom	1:1	1.860	1.327	2.468	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	19.80	26	0.01	0	A	0064M	QPSK	100	0	0 mm	bottom	1:1	1.800	1.318	2.372	

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 11-80
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	22.18	-0.03	0	A	0064M	QPSK	1	25	8 mm	back	1:1	0.539	1.355	0.730	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	0.02	1	A	0064M	QPSK	25	12	8 mm	back	1:1	0.440	1.343	0.591	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.18	0.02	0	A	0064M	QPSK	1	25	6 mm	front	1:1	0.617	1.355	0.836	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	0.00	1	A	0064M	QPSK	25	12	6 mm	front	1:1	0.496	1.343	0.666	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.18	-0.03	0	A	0064M	QPSK	1	25	11 mm	bottom	1:1	0.650	1.355	0.881	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	-0.01	1	A	0064M	QPSK	25	12	11 mm	bottom	1:1	0.526	1.343	0.706	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.18	0.04	0	A	0064M	QPSK	1	25	0 mm	right	1:1	0.203	1.355	0.275	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	0.04	1	A	0064M	QPSK	25	12	0 mm	right	1:1	0.169	1.343	0.227	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.18	-0.01	0	A	0064M	QPSK	1	25	0 mm	left	1:1	0.838	1.355	1.135	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.22	0.01	1	A	0064M	QPSK	25	12	0 mm	left	1:1	0.674	1.343	0.905	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.82	-0.01	0	A	0064M	QPSK	1	0	0 mm	back	1:1	2.010	1.312	2.637	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.81	-0.02	0	A	0064M	QPSK	25	12	0 mm	back	1:1	2.040	1.315	2.683	A96
2310.00	27710	Mid	LTE Band 30	10	22.0	20.69	-0.01	0	A	0064M	QPSK	50	0	0 mm	back	1:1	1.990	1.352	2.690	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.82	0.01	0	A	0064M	QPSK	1	0	0 mm	front	1:1	1.210	1.312	1.588	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.81	-0.01	0	A	0064M	QPSK	25	12	0 mm	front	1:1	1.220	1.315	1.604	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.82	-0.06	0	A	0064M	QPSK	1	0	0 mm	bottom	1:1	1.590	1.312	2.086	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.81	0.00	0	A	0064M	QPSK	25	12	0 mm	bottom	1:1	1.570	1.315	2.065	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.69	0.03	0	A	0064M	QPSK	50	0	0 mm	bottom	1:1	1.530	1.352	2.069	
2310.00	27710	Mid	LTE Band 30	10	22.0	20.81	0.00	0	A	0064M	QPSK	25	12	0 mm	back	1:1	1.960	1.315	2.577	
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 11-81
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)	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.26	0.04	0	B	0053M	QPSK	1	50	8 mm	back	1:1	0.334	1.186	0.396	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.18	0.01	0	B	0053M	QPSK	50	50	8 mm	back	1:1	0.327	1.208	0.395	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.26	0.00	0	B	0053M	QPSK	1	50	6 mm	front	1:1	0.362	1.186	0.429	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.18	0.01	0	B	0053M	QPSK	50	50	6 mm	front	1:1	0.354	1.208	0.428	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.26	0.02	0	B	0053M	QPSK	1	50	11 mm	bottom	1:1	0.326	1.186	0.387	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.18	-0.03	0	B	0053M	QPSK	50	50	11 mm	bottom	1:1	0.314	1.208	0.379	
2510.00	20850	Low	LTE Band 7	20	23.0	22.16	-0.05	0	B	0053M	QPSK	1	50	0 mm	left	1:1	1.760	1.213	2.135	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.26	-0.04	0	B	0053M	QPSK	1	50	0 mm	left	1:1	1.870	1.186	2.218	
2560.00	21350	High	LTE Band 7	20	23.0	22.25	-0.14	0	B	0053M	QPSK	1	99	0 mm	left	1:1	1.730	1.189	2.057	
2510.00	20850	Low	LTE Band 7	20	23.0	22.10	0.00	0	B	0053M	QPSK	50	25	0 mm	left	1:1	1.680	1.230	2.066	
2535.00	21100	Mid	LTE Band 7	20	23.0	22.18	0.05	0	B	0053M	QPSK	50	50	0 mm	left	1:1	1.810	1.208	2.186	
2560.00	21350	High	LTE Band 7	20	23.0	22.04	-0.05	0	B	0053M	QPSK	50	0	0 mm	left	1:1	1.710	1.247	2.132	
2535.00	21100	Mid	LTE Band 7	20	23.0	21.98	0.05	0	B	0053M	QPSK	100	0	0 mm	left	1:1	1.770	1.265	2.239	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	-0.02	0	B	0053M	QPSK	1	99	0 mm	back	1:1	2.230	1.327	2.959	A97
2535.00	21100	Mid	LTE Band 7	20	21.0	19.72	-0.05	0	B	0053M	QPSK	1	0	0 mm	back	1:1	2.150	1.343	2.887	
2560.00	21350	High	LTE Band 7	20	21.0	19.73	-0.02	0	B	0053M	QPSK	1	99	0 mm	back	1:1	2.070	1.340	2.774	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.01	0	B	0053M	QPSK	50	25	0 mm	back	1:1	2.180	1.358	2.960	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.60	0.00	0	B	0053M	QPSK	50	25	0 mm	back	1:1	2.130	1.380	2.939	
2560.00	21350	High	LTE Band 7	20	21.0	19.60	-0.03	0	B	0053M	QPSK	50	50	0 mm	back	1:1	2.080	1.380	2.870	
2510.00	20850	Low	LTE Band 7	20	21.0	19.54	0.03	0	B	0053M	QPSK	100	0	0 mm	back	1:1	2.150	1.400	3.010	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	-0.03	0	B	0053M	QPSK	1	99	0 mm	front	1:1	1.260	1.327	1.672	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	-0.02	0	B	0053M	QPSK	50	25	0 mm	front	1:1	1.260	1.358	1.711	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	0.02	0	B	0053M	QPSK	1	99	0 mm	bottom	1:1	1.300	1.327	1.725	
2510.00	20850	Low	LTE Band 7	20	21.0	19.67	0.00	0	B	0053M	QPSK	50	25	0 mm	bottom	1:1	1.300	1.358	1.765	
2510.00	20850	Low	LTE Band 7	20	21.0	19.77	0.00	0	B	0053M	QPSK	1	99	0 mm	back	1:1	2.220	1.327	2.946	
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Note: Blue entry represents variability measurement

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Table 11-82
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	24.5	23.54	0.02	0	B	0060M	QPSK	1	50	8 mm	back	1:1.58	0.336	1.247	0.419	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.02	0.5	B	0060M	QPSK	50	25	8 mm	back	1:1.58	0.267	1.393	0.372	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	0.07	0	B	0060M	QPSK	1	50	6 mm	front	1:1.58	0.307	1.247	0.383	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.00	0.5	B	0060M	QPSK	50	25	6 mm	front	1:1.58	0.245	1.393	0.341	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	-0.05	0	B	0060M	QPSK	1	50	11 mm	bottom	1:1.58	0.182	1.247	0.227	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	0.03	0.5	B	0060M	QPSK	50	25	11 mm	bottom	1:1.58	0.142	1.393	0.198	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.54	-0.06	0	B	0060M	QPSK	1	50	0 mm	left	1:1.58	1.720	1.247	2.145	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.5	23.35	0.13	0	B	0060M	QPSK	1	99	0 mm	left	1:1.58	1.720	1.303	2.241	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.5	23.49	0.02	0	B	0060M	QPSK	1	50	0 mm	left	1:1.58	1.450	1.262	1.830	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.5	23.50	-0.07	0	B	0060M	QPSK	1	50	0 mm	left	1:1.58	1.370	1.259	1.725	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.5	23.50	-0.04	0	B	0060M	QPSK	1	50	0 mm	left	1:1.58	0.922	1.259	1.161	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.5	23.40	-0.01	0	B	0060M	QPSK	1	50	0 mm	left	1:1.58	0.889	1.288	1.145	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.56	-0.07	0.5	B	0060M	QPSK	50	25	0 mm	left	1:1.58	1.350	1.393	1.881	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.42	-0.08	0.5	B	0060M	QPSK	50	25	0 mm	left	1:1.58	1.180	1.439	1.698	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.46	-0.05	0.5	B	0060M	QPSK	50	25	0 mm	left	1:1.58	1.110	1.426	1.583	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.55	-0.04	0.5	B	0060M	QPSK	50	25	0 mm	left	1:1.58	0.748	1.396	1.044	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.45	-0.03	0.5	B	0060M	QPSK	50	25	0 mm	left	1:1.58	0.720	1.429	1.029	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.45	-0.10	0.5	B	0060M	QPSK	100	0	0 mm	left	1:1.58	1.270	1.429	1.815	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.00	0.07	0	B	0060M	QPSK	1	50	0 mm	left	1:2.31	2.150	1.023	2.199	A98
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.1	26.09	0.03	0	B	0060M	QPSK	1	99	0 mm	left	1:2.31	2.060	1.002	2.064	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.5	23.85	0.05	0	B	0060M	QPSK	1	99	0 mm	left	1:1.58	1.770	1.161	2.055	
	SCC	2525.80	39948								B				0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	26.1	26.10	0.04	0	B	0060M	QPSK	1	99	0 mm	left	1:2.31	2.150	1.000	2.150	
	SCC	2525.80	39948								B				0							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	-0.07	0	B	0060M	QPSK	1	0	0 mm	back	1:1.58	1.480	1.374	2.034	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.47	0.02	0	B	0060M	QPSK	1	50	0 mm	back	1:1.58	1.480	1.422	2.105	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.56	-0.02	0	B	0060M	QPSK	1	50	0 mm	back	1:1.58	1.530	1.393	2.131	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.23	0.00	0	B	0060M	QPSK	1	50	0 mm	back	1:1.58	1.010	1.503	1.518	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.46	-0.02	0	B	0060M	QPSK	1	50	0 mm	back	1:1.58	1.060	1.426	1.512	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	-0.01	0	B	0060M	QPSK	50	50	0 mm	back	1:1.58	1.520	1.324	2.012	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.56	0.01	0	B	0060M	QPSK	50	50	0 mm	back	1:1.58	1.490	1.393	2.076	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.52	0.04	0	B	0060M	QPSK	50	25	0 mm	back	1:1.58	1.500	1.406	2.109	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.31	0.02	0	B	0060M	QPSK	50	25	0 mm	back	1:1.58	1.010	1.476	1.491	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.56	-0.16	0	B	0060M	QPSK	50	25	0 mm	back	1:1.58	1.110	1.393	1.546	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.51	0.06	0	B	0060M	QPSK	100	0	0 mm	back	1:1.58	1.480	1.409	2.085	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	-0.07	0	B	0060M	QPSK	1	0	0 mm	front	1:1.58	1.110	1.374	1.525	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	0.02	0	B	0060M	QPSK	50	50	0 mm	front	1:1.58	1.100	1.324	1.456	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.62	0.05	0	B	0060M	QPSK	1	0	0 mm	bottom	1:1.58	1.030	1.374	1.415	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.78	-0.08	0	B	0060M	QPSK	50	50	0 mm	bottom	1:1.58	1.020	1.324	1.350	

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Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

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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	23.5	23.19	A	-0.02	0	21	0050M	DFT-S-OFDM	QPSK	1	108	8 mm	back	1:1	1.270	1.074	1.364	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.00	0	21	0050M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	1.330	1.042	1.386	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	0.07	0	21	0050M	DFT-S-OFDM	QPSK	1	108	6 mm	front	1:1	1.320	1.074	1.418	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	1.370	1.042	1.428	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	-0.07	0	21	0050M	DFT-S-OFDM	QPSK	1	108	11 mm	bottom	1:1	1.160	1.074	1.246	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.00	0	21	0050M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	1.230	1.042	1.282	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	1	108	0 mm	right	1:1	0.366	1.074	0.393	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	0.08	0	21	0050M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.392	1.042	0.408	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.19	A	-0.03	0	21	0050M	DFT-S-OFDM	QPSK	1	108	0 mm	left	1:1	0.927	1.074	0.996	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.5	23.32	A	-0.01	0	21	0050M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.983	1.042	1.024	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.58	A	0.11	0	21	0050M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	2.420	1.102	2.667	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.57	A	0.15	0	21	0050M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	2.600	1.104	2.870	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.56	A	0.10	0	21	0050M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	2.590	1.107	2.867	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.58	A	0.02	0	21	0050M	DFT-S-OFDM	QPSK	1	1	0 mm	front	1:1	2.040	1.102	2.248	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.57	A	0.01	0	21	0050M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	2.170	1.104	2.396	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.56	A	0.08	0	21	0050M	DFT-S-OFDM	QPSK	216	0	0 mm	front	1:1	2.170	1.107	2.402	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.58	A	0.00	0	21	0050M	DFT-S-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.590	1.102	2.854	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.57	A	-0.07	0	21	0050M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	2.770	1.104	3.058	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.56	A	-0.08	0	21	0050M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.840	1.107	**3.144**	A99
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.42	A	-0.01	0	21	0050M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.750	1.143	**3.143**	
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 11-84
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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																					
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	-0.01	0	26	0056M	DFT-S-OFDM	QPSK	1	108	8 mm	back	1:1	0.954	1.072	1.023	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.994	1.119	1.112	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	-0.03	0	26	0056M	DFT-S-OFDM	QPSK	1	108	6 mm	front	1:1	1.040	1.072	1.115	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	-0.03	0	26	0056M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	1.100	1.119	1.231	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	1	108	11 mm	bottom	1:1	1.370	1.072	1.469	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	1.440	1.119	1.611	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	22.44	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	216	0	11 mm	bottom	1:1	1.150	1.276	1.467	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	1	108	0 mm	right	1:1	0.309	1.072	0.331	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.333	1.119	0.373	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.20	A	-0.05	0	26	0056M	DFT-S-OFDM	QPSK	1	108	0 mm	left	1:1	0.626	1.072	0.671	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.5	23.01	A	0.00	0	26	0056M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.665	1.119	0.744	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.73	A	0.04	0	26	0056M	DFT-S-OFDM	QPSK	1	108	0 mm	back	1:1	1.760	1.064	1.873	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.92	A	0.03	0	26	0056M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	1.850	1.019	1.885	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.73	A	-0.01	0	26	0056M	DFT-S-OFDM	QPSK	1	108	0 mm	front	1:1	1.690	1.064	1.798	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.92	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.790	1.019	1.824	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.73	A	0.02	0	26	0056M	DFT-S-OFDM	QPSK	1	108	0 mm	bottom	1:1	2.510	1.064	2.671	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.92	A	-0.02	0	26	0056M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	2.690	1.019	2.741	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.72	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.810	1.067	2.998	A100
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.70	A	-0.04	0	26	0056M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.720	1.072	2.916	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.95	I	0.03	0	N/A	0338M	DFT-S-OFDM	QPSK	1	1	0 mm	top	1:1	2.690	1.135	3.053	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.98	I	-0.03	0	N/A	0338M	DFT-S-OFDM	QPSK	108	0	0 mm	top	1:1	2.790	1.127	**3.144**	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.94	I	0.01	0	N/A	0338M	DFT-S-OFDM	QPSK	216	0	0 mm	top	1:1	2.760	1.138	**3.141**	
1882.50	376500	Mid	NR Band n25 (PCS)	40	21.5	20.96	I	-0.01	0	N/A	0338M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.640	1.132	2.988	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.72	A	0.01	0	26	0056M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.790	1.067	2.977	
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 11-85
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]	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	23.0	21.62	A	0.10	0	0054M	DFT-S-OFDM	QPSK	1	26	8 mm	back	1:1	0.469	1.374	0.644	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.00	0	0054M	DFT-S-OFDM	QPSK	25	14	8 mm	back	1:1	0.493	1.368	0.674	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	0.00	0	0054M	DFT-S-OFDM	QPSK	1	26	6 mm	front	1:1	0.584	1.374	0.802	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.04	0	0054M	DFT-S-OFDM	QPSK	25	14	6 mm	front	1:1	0.604	1.368	0.826	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	-0.01	0	0054M	DFT-S-OFDM	QPSK	1	26	11 mm	bottom	1:1	0.652	1.374	0.896	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.02	0	0054M	DFT-S-OFDM	QPSK	25	14	11 mm	bottom	1:1	0.655	1.368	0.896	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	-0.02	0	0054M	DFT-S-OFDM	QPSK	1	26	0 mm	right	1:1	0.205	1.374	0.282	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	-0.02	0	0054M	DFT-S-OFDM	QPSK	25	14	0 mm	right	1:1	0.210	1.368	0.287	
2310.00	462000	Mid	NR Band n30	10	23.0	21.62	A	0.08	0	0054M	DFT-S-OFDM	QPSK	1	26	0 mm	left	1:1	0.790	1.374	1.085	
2310.00	462000	Mid	NR Band n30	10	23.0	21.64	A	0.08	0	0054M	DFT-S-OFDM	QPSK	25	14	0 mm	left	1:1	0.824	1.368	1.127	
2310.00	462000	Mid	NR Band n30	10	22.0	20.25	A	-0.01	0	0054M	DFT-S-OFDM	QPSK	1	26	0 mm	back	1:1	1.840	1.496	2.753	A101
2310.00	462000	Mid	NR Band n30	10	22.0	20.27	A	-0.03	0	0054M	DFT-S-OFDM	QPSK	25	0	0 mm	back	1:1	1.840	1.489	2.740	
2310.00	462000	Mid	NR Band n30	10	22.0	20.21	A	0.00	0	0054M	DFT-S-OFDM	QPSK	50	0	0 mm	back	1:1	1.810	1.510	2.733	
2310.00	462000	Mid	NR Band n30	10	21.5	20.30	A	0.04	0.5	0054M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	1.800	1.318	2.372	
2310.00	462000	Mid	NR Band n30	10	22.0	20.25	A	0.00	0	0054M	DFT-S-OFDM	QPSK	1	26	0 mm	front	1:1	1.030	1.496	1.541	
2310.00	462000	Mid	NR Band n30	10	22.0	20.27	A	0.00	0	0054M	DFT-S-OFDM	QPSK	25	0	0 mm	front	1:1	1.060	1.489	1.578	
2310.00	462000	Mid	NR Band n30	10	22.0	20.25	A	-0.02	0	0054M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	1.480	1.496	2.214	
2310.00	462000	Mid	NR Band n30	10	22.0	20.27	A	-0.01	0	0054M	DFT-S-OFDM	QPSK	25	0	0 mm	bottom	1:1	1.530	1.489	2.278	
2310.00	462000	Mid	NR Band n30	10	22.0	20.21	A	0.05	0	0054M	DFT-S-OFDM	QPSK	50	0	0 mm	bottom	1:1	1.540	1.510	2.325	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

Table 11-86
NR Band n7 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)	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.01	0	0069M	DFT-S-OFDM	QPSK	1	108	8 mm	back	1:1	0.301	1.245	0.375	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.04	0	0069M	DFT-S-OFDM	QPSK	108	108	8 mm	back	1:1	0.301	1.227	0.369	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.01	0	0069M	DFT-S-OFDM	QPSK	1	108	6 mm	front	1:1	0.322	1.245	0.401	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	0.04	0	0069M	DFT-S-OFDM	QPSK	108	108	6 mm	front	1:1	0.326	1.227	0.400	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.01	0	0069M	DFT-S-OFDM	QPSK	1	108	11 mm	bottom	1:1	0.283	1.245	0.352	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	0.01	0	0069M	DFT-S-OFDM	QPSK	108	108	11 mm	bottom	1:1	0.309	1.227	0.379	
2535.00	507000	Mid	NR Band n7	40	23.0	22.05	B	-0.07	0	0069M	DFT-S-OFDM	QPSK	1	108	0 mm	left	1:1	2.040	1.245	2.540	
2535.00	507000	Mid	NR Band n7	40	23.0	22.11	B	-0.11	0	0069M	DFT-S-OFDM	QPSK	108	108	0 mm	left	1:1	1.960	1.227	2.405	
2535.00	507000	Mid	NR Band n7	40	23.0	22.01	B	0.03	0	0069M	DFT-S-OFDM	QPSK	216	0	0 mm	left	1:1	1.900	1.256	2.386	
2535.00	507000	Mid	NR Band n7	40	22.5	21.38	B	0.00	0.5	0069M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.570	1.294	2.032	
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	0.08	0	0069M	DFT-S-OFDM	QPSK	1	108	0 mm	back	1:1	2.100	1.315	2.762	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.03	0	0069M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	2.110	1.318	2.781	
2535.00	507000	Mid	NR Band n7	40	21.0	19.73	B	0.04	0	0069M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	2.120	1.340	2.841	
2535.00	507000	Mid	NR Band n7	40	21.0	19.84	B	0.00	0	0069M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	2.140	1.306	2.795	A102
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	-0.03	0	0069M	DFT-S-OFDM	QPSK	1	108	0 mm	front	1:1	1.230	1.315	1.617	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	-0.02	0	0069M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.250	1.318	1.648	
2535.00	507000	Mid	NR Band n7	40	21.0	19.81	B	0.00	0	0069M	DFT-S-OFDM	QPSK	1	108	0 mm	bottom	1:1	1.280	1.315	1.683	
2535.00	507000	Mid	NR Band n7	40	21.0	19.80	B	0.02	0	0069M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	1.180	1.318	1.555	
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	20.5	20.17	I	0.05	0	0	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.330	1.079	1.435	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	0.00	0	0	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	1.320	1.081	1.427	
2592.99	518598	Mid	NR Band n41	100	20.5	20.15	I	0.01	0	0	DFT-S-OFDM	QPSK	270	0	0 mm	back	1:1	1.320	1.084	1.431	
2592.99	518598	Mid	NR Band n41	100	20.5	20.17	I	-0.02	0	0331M	DFT-S-OFDM	QPSK	1	137	0 mm	top	1:1	2.540	1.079	2.741	
2592.99	518598	Mid	NR Band n41	100	20.5	20.16	I	0.01	0	0331M	DFT-S-OFDM	QPSK	135	69	0 mm	top	1:1	2.520	1.081	2.724	
2592.99	518598	Mid	NR Band n41	100	20.5	20.15	I	0.05	0	0331M	DFT-S-OFDM	QPSK	270	0	0 mm	top	1:1	2.580	1.084	2.797	A103
2592.99	518598	Mid	NR Band n41	100	20.5	20.07	I	0.03	0	0331M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.520	1.104	2.782	
2592.99	518598	Mid	NR Band n41	100	20.5	20.15	I	0.01	0	0331M	DFT-S-OFDM	QPSK	270	0	0 mm	top	1:1	2.570	1.084	2.786	
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	Side	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	17.78	F	-0.01	0	0343M	DFT-S-OFDM	QPSK	1	271	0 mm	left	1:1	1.052	1.630	1.715	A104
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.58	F	0.03	0	0343M	DFT-S-OFDM	QPSK	135	138	0 mm	left	1:1	1.102	1.590	1.752	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	17.53	F	-0.01	0	0343M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.114	1.330	1.482	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.81	D	-0.06	N/A	0343M	CW/SRS	N/A	N/A	N/A	0 mm	back	1:1	1.172	0.647	0.758	
3750.00	650000	Low	NR Band n77	100	18.0	17.55	F	0.03	0	0343M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.109	1.090	1.209	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	0.06	0	0343M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.069	0.996	1.065	
3750.00	650000	Low	NR Band n77	100	18.0	17.50	F	0.01	0	0343M	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	1.122	1.080	1.212	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	0.05	0	0343M	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	1.096	1.040	1.140	
3930.00	662000	High	NR Band n77	100	18.0	17.44	F	-0.06	0	0343M	DFT-S-OFDM	QPSK	270	0	0 mm	back	1:1	1.138	0.852	0.970	
3750.00	650000	Low	NR Band n77	100	18.0	17.55	F	0.03	0	0343M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.109	2.090	2.318	
3930.00	662000	High	NR Band n77	100	18.0	17.71	F	0.00	0	0343M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.069	2.380	2.544	
3750.00	650000	Low	NR Band n77	100	18.0	17.50	F	0.02	0	0343M	DFT-S-OFDM	QPSK	135	69	0 mm	left	1:1	1.122	2.090	2.345	
3930.00	662000	High	NR Band n77	100	18.0	17.60	F	0.01	0	0343M	DFT-S-OFDM	QPSK	135	69	0 mm	left	1:1	1.096	2.360	2.587	
3930.00	662000	High	NR Band n77	100	18.0	17.44	F	0.00	0	0343M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.138	1.810	2.060	
3930.00	662000	High	NR Band n77	100	18.0	17.70	F	0.01	0	0343M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.072	2.400	2.573	A105
3930.00	662000	High	NR Band n77	100	16.0	15.40	K	-0.05	N/A	0273M	CW/SRS	N/A	N/A	N/A	0 mm	back	1:1	1.148	0.728	0.836	
3750.00	650000	Low	NR Band n77	100	18.0	17.55	F	0.02	0	0343M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.109	1.950	2.163	
3930.00	662000	High	NR Band n77	100	18.0	17.70	F	-0.12	0	0343M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.072	2.180	2.337	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 1.6 W/kg (mW/g) averaged over 1 gram												

Note: Blue entries represent variability measurements

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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)	
5270	54	802.11n	OFDM	40	17.0	16.65	17.0	16.86	0.18	0 mm	MIMO	0273M	27	back	94.8	11.200	0.489	1.084	1.055	0.559	
5270	54	802.11n	OFDM	40	17.0	16.65	17.0	16.86	-0.05	0 mm	MIMO	0273M	27	front	94.8	2.180	0.360	1.084	1.055	0.412	
5270	54	802.11n	OFDM	40	17.0	16.65	17.0	16.86	0.09	0 mm	MIMO	0273M	27	top	94.8	0.118	0.025	1.084	1.055	0.029	
5270	54	802.11n	OFDM	40	17.0	16.65	17.0	16.86	0.06	0 mm	MIMO	0273M	27	left	94.8	1.700	0.453	1.084	1.055	0.518	
5710	142	802.11n	OFDM	40	17.0	16.95	17.0	16.91	-0.04	0 mm	MIMO	0273M	27	back	94.8	26.400	1.210	1.021	1.055	1.303	A106
5710	142	802.11n	OFDM	40	17.0	16.95	17.0	16.91	0.00	0 mm	MIMO	0273M	27	front	94.8	1.920	0.497	1.021	1.055	0.535	
5710	142	802.11n	OFDM	40	17.0	16.95	17.0	16.91	0.11	0 mm	MIMO	0273M	27	top	94.8	0.295	0.067	1.021	1.055	0.072	
5710	142	802.11n	OFDM	40	17.0	16.95	17.0	16.91	-0.09	0 mm	MIMO	0273M	27	left	94.8	1.450	0.231	1.021	1.055	0.249	
5875	175	802.11n	OFDM	40	17.0	16.93	17.0	16.50	-0.14	0 mm	MIMO	0586M	27	back	94.8	3.830	0.509	1.122	1.055	0.603	
5875	175	802.11n	OFDM	40	17.0	16.93	17.0	16.50	-0.02	0 mm	MIMO	0586M	27	front	94.8	1.250	0.233	1.122	1.055	0.276	
5875	175	802.11n	OFDM	40	17.0	16.93	17.0	16.50	-0.07	0 mm	MIMO	0586M	27	top	94.8	0.064	0.010	1.122	1.055	0.012	
5875	175	802.11n	OFDM	40	17.0	16.93	17.0	16.50	-0.15	0 mm	MIMO	0586M	27	left	94.8	0.781	0.140	1.122	1.055	0.166	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

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

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

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	13.0	12.35	13.0	12.69	0.17	0 mm	MIMO	0273M	58.5	back	90.5	2.960	0.185	1.161	1.105	0.237	
5290	58	802.11ac	OFDM	80	13.0	12.35	13.0	12.69	-0.06	0 mm	MIMO	0273M	58.5	front	90.5	1.370	-	1.161	1.105	-	
5290	58	802.11ac	OFDM	80	13.0	12.35	13.0	12.69	0.12	0 mm	MIMO	0273M	58.5	top	90.5	0.063	-	1.161	1.105	-	
5290	58	802.11ac	OFDM	80	13.0	12.35	13.0	12.69	-0.05	0 mm	MIMO	0273M	58.5	left	90.5	1.180	-	1.161	1.105	-	
5610	122	802.11ac	OFDM	80	13.0	12.71	13.0	13.00	0.07	0 mm	MIMO	0273M	58.5	back	90.5	9.320	0.436	1.069	1.105	0.515	
5610	122	802.11ac	OFDM	80	13.0	12.71	13.0	13.00	-0.05	0 mm	MIMO	0273M	58.5	front	90.5	1.080	-	1.069	1.105	-	
5610	122	802.11ac	OFDM	80	13.0	12.71	13.0	13.00	0.03	0 mm	MIMO	0273M	58.5	top	90.5	0.170	-	1.069	1.105	-	
5610	122	802.11ac	OFDM	80	13.0	12.71	13.0	13.00	0.14	0 mm	MIMO	0273M	58.5	left	90.5	0.686	-	1.069	1.105	-	
5855	171	802.11ac	OFDM	80	13.0	12.69	13.0	12.98	-0.18	0 mm	MIMO	0586M	58.5	back	90.5	1.560	0.226	1.074	1.105	0.268	
5855	171	802.11ac	OFDM	80	13.0	12.69	13.0	12.98	-0.18	0 mm	MIMO	0586M	58.5	front	90.5	0.604	-	1.074	1.105	-	
5855	171	802.11ac	OFDM	80	13.0	12.69	13.0	12.98	-0.03	0 mm	MIMO	0586M	58.5	top	90.5	0.037	-	1.074	1.105	-	
5855	171	802.11ac	OFDM	80	13.0	12.69	13.0	12.98	-0.09	0 mm	MIMO	0586M	58.5	left	90.5	0.419	-	1.074	1.105	-	
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 16.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 13.0 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.
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 BR 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)	
2300	2310.00	462000	NR Band n30, 10 MHz Bandwidth	DFT-S-OFDM, QPSK, 25 RB, 0 RB Offset	Left	Cheek	I	0.840	0.806	1.04	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41,100 MHz Bandwidth	DFT-S-OFDM, QPSK, 270 RB, 0 RB Offset	Left	Tilt	I	0.953	0.859	1.11	N/A	N/A	N/A	N/A
3900	3930.00	662000	NR Band n77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 137 RB Offset	Right	Cheek	F	0.808	0.794	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	Side	Spacing	Antenna Config	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1745.00	349000	NR Band n66 (AWS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 108 RB, 108 RB Offset	bottom	10 mm	A	1.030	0.942	1.09	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	bottom	10 mm	A	0.997	0.991	1.01	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	Data Rate (Mbps)	Side	Spacing	Antenna Config	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1732.40	1412	UMTS 1750	RMC	N/A	bottom	0 mm	A	2.920	2.890	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	N/A	bottom	0 mm	A	2.810	2.790	1.01	N/A	N/A	N/A	N/A
2300	2310.00	27710	LTE Band 30, 10 MHz Bandwidth	QPSK, 25 RB, 12 RB Offset	N/A	back	0 mm	A	2.040	1.960	1.04	N/A	N/A	N/A	N/A
2450	2510.00	20850	LTE Band 7, 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	N/A	back	0 mm	B	2.230	2.220	1.00	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 270 RB, 0 RB Offset	N/A	top	0 mm	I	2.580	2.570	1.00	N/A	N/A	N/A	N/A
3700	3750.00	650000	NR Band n77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 137 RB Offset	N/A	left	0 mm	F	2.090	1.950	1.07	N/A	N/A	N/A	N/A
3900	3930.00	662000	NR Band n77, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	N/A	left	0 mm	F	2.400	2.180	1.10	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

Supplemental Head SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	826.40	Frequency (MHz)	1732.40	Frequency (MHz)	1880.00
Channel	4132	Channel	1412	Channel	9400
Measured 1g SAR (W/kg)	0.196	Measured 1g SAR (W/kg)	0.169	Measured 1g SAR (W/kg)	0.178
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)	0.260	Auto-tune (State 22)	0.188	Auto-tune (State 13)	0.192
Default (State 0)	0.259	Default (State 0)	0.154	Default (State 0)	0.147
State 0	0.259	State 1	0.155	State 2	0.072
State 10	0.085	State 22	0.212	State 13	0.182
State 39	0.236	State 26	0.123	State 41	0.029
State 78	0.155	State 40	0.085	State 49	0.117
State 105	0.221	State 79	0.143	State 80	0.166
State 117	0.233	State 118	0.144	State 119	0.138

Table 13-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data							
LTE B71		LTE B12		LTE B13		LTE B14	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset	
Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.142	Measured 1g SAR (W/kg)	0.187	Measured 1g SAR (W/kg)	0.229	Measured 1g SAR (W/kg)	0.208
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)	0.169	Auto-tune (State 1)	0.249	Auto-tune (State 112)	0.314	Auto-tune (State 112)	0.281
Default (State 0)	0.170	Default (State 0)	0.216	Default (State 0)	0.307	Default (State 0)	0.279
State 6	0.112	State 1	0.249	State 8	0.152	State 9	0.077
State 45	0.093	State 7	0.223	State 29	0.158	State 19	0.214
State 55	0.087	State 43	0.252	State 47	0.119	State 48	0.058
State 79	0.081	State 46	0.192	State 66	0.290	State 57	0.177
State 84	0.039	State 52	0.028	State 86	0.082	State 87	0.035
State 112	0.174	State 85	0.116	State 112	0.309	State 112	0.278
Supplemental Head SAR Data							
LTE B5		LTE B26		LTE B66		LTE B25	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1720.00	Frequency (MHz)	1860.00
Channel	20525	Channel	26865	Channel	132072	Channel	26140
Measured 1g SAR (W/kg)	0.205	Measured 1g SAR (W/kg)	0.200	Measured 1g SAR (W/kg)	0.135	Measured 1g SAR (W/kg)	0.191
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)	0.210	Auto-tune (State 0)	0.263	Auto-tune (State 22)	0.157	Auto-tune (State 26)	0.196
Default (State 0)	0.206	Default (State 0)	0.256	Default (State 0)	0.121	Default (State 0)	0.172
State 0	0.206	State 0	0.256	State 12	0.111	State 14	0.192
State 2	0.177	State 11	0.059	State 22	0.170	State 26	0.202
State 10	0.052	State 39	0.234	State 51	0.180	State 53	0.193
State 28	0.137	State 50	0.047	State 61	0.135	State 81	0.151
State 49	0.104	State 89	0.024	State 90	0.113	State 83	0.143
State 88	0.026	State 110	0.157	State 117	0.076	State 92	0.179

Table 13-3
NR Supplemental Head SAR Data

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, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 40 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 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	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	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)	0.148	Measured 1g SAR (W/kg)	0.212	Measured 1g SAR (W/kg)	0.275	Measured 1g SAR (W/kg)	0.215	Measured 1g SAR (W/kg)	0.222
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)	0.148	Auto-tune (State 4)	0.231	Auto-tune (State 0)	0.316	Auto-tune (State 22)	0.310	Auto-tune (State 26)	0.238
Default (State 0)	0.112	Default (State 0)	0.192	Default (State 0)	0.298	Default (State 0)	0.269	Default (State 0)	0.198
State 15	0.108	State 4	0.221	State 0	0.298	State 18	0.296	State 7	0.141
State 54	0.064	State 16	0.122	State 17	0.268	State 22	0.311	State 19	0.190
State 71	0.069	State 55	0.057	State 42	0.223	State 27	0.256	State 26	0.224
State 93	0.071	State 59	0.041	State 56	0.195	State 30	0.255	State 46	0.066
State 99	0.009	State 94	0.089	State 60	0.091	State 57	0.227	State 58	0.216
State 112	0.113	State 115	0.202	State 95	0.211	State 96	0.268	State 97	0.183

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Table 13-4
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	826.40	Frequency (MHz)	1752.60	Frequency (MHz)	1907.60
Channel	4132	Channel	1513	Channel	9538
Measured 1g SAR (W/kg)	0.420	Measured 1g SAR (W/kg)	0.910	Measured 1g SAR (W/kg)	0.916
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)	0.652	Auto-tune (State 22)	1.484	Auto-tune (State 26)	1.541
Default (State 0)	0.679	Default (State 0)	1.131	Default (State 0)	1.345
State 0	0.679	State 0	1.131	State 0	1.345
State 1	0.664	State 1	1.167	State 1	1.287
State 12	0.128	State 2	1.174	State 2	1.268
State 20	0.419	State 3	1.172	State 3	1.251
State 59	0.364	State 4	1.183	State 4	1.212
State 98	0.395	State 5	1.192	State 5	1.210
		State 6	1.217	State 6	1.114
		State 7	1.234	State 7	1.052
		State 8	1.248	State 8	0.951
		State 9	1.262	State 9	0.814
		State 10	1.258	State 10	0.713
		State 11	1.224	State 11	0.587
		State 12	1.116	State 12	0.433
		State 13	1.033	State 13	1.498
		State 14	1.110	State 14	1.473
		State 15	1.128	State 15	1.464
		State 16	1.142	State 16	1.451
		State 17	1.174	State 17	1.431
		State 18	1.182	State 18	1.432
		State 19	1.264	State 19	1.369
		State 20	1.326	State 20	1.328
		State 21	1.403	State 21	1.249
		State 22	1.484	State 22	1.131
		State 23	1.469	State 23	1.032
		State 24	1.384	State 24	0.893
		State 25	1.121	State 25	0.708
		State 26	0.865	State 26	1.553
		State 27	0.892	State 27	1.524
		State 28	0.901	State 28	1.513
		State 29	0.911	State 29	1.500
		State 30	0.921	State 30	1.473
		State 31	0.924	State 31	1.470
		State 32	0.956	State 32	1.387
		State 33	0.981	State 33	1.323
		State 34	1.016	State 34	1.215
		State 35	1.058	State 35	1.044
		State 36	1.083	State 36	0.910
		State 37	1.092	State 37	0.734
		State 38	1.039	State 38	0.518
		State 39	0.646	State 39	0.687
		State 40	0.701	State 40	0.647
		State 41	0.702	State 41	0.629
		State 42	0.713	State 42	0.613
		State 43	0.723	State 43	0.584
		State 44	0.736	State 44	0.590
		State 45	0.754	State 45	0.517
		State 46	0.773	State 46	0.474
		State 47	0.790	State 47	0.412
		State 48	0.798	State 48	0.335
		State 49	0.791	State 49	0.285
		State 50	0.759	State 50	0.224
		State 51	0.671	State 51	0.159
		State 52	0.666	State 52	1.454
		State 53	0.720	State 53	1.456
		State 54	0.732	State 54	1.455
		State 55	0.747	State 55	1.452
		State 56	0.770	State 56	1.447
		State 57	0.775	State 57	1.444
		State 58	0.857	State 58	1.416
		State 59	0.926	State 59	1.394
		State 60	1.023	State 60	1.338
		State 61	1.180	State 61	1.235
		State 62	1.301	State 62	1.131
		State 63	1.407	State 63	0.974
		State 64	1.291	State 64	0.741
		State 65	0.768	State 65	0.847
		State 66	0.909	State 66	0.851
		State 67	0.933	State 67	0.837
		State 68	0.953	State 68	0.825
		State 69	0.994	State 69	0.805
		State 70	1.022	State 70	0.816
		State 71	1.130	State 71	0.758
		State 72	1.212	State 72	0.725
		State 73	1.283	State 73	0.664
		State 74	1.293	State 74	0.582
		State 75	1.221	State 75	0.519
		State 76	1.044	State 76	0.440
		State 77	0.746	State 77	0.343
		State 78	1.019	State 78	1.237
		State 79	1.057	State 79	1.181
		State 80	1.065	State 80	1.160
		State 81	1.072	State 81	1.144
		State 82	1.083	State 82	1.109
		State 83	1.089	State 83	1.109
		State 84	1.117	State 84	1.022
		State 85	1.145	State 85	0.963
		State 86	1.168	State 86	0.872
		State 87	1.191	State 87	0.746
		State 88	1.197	State 88	0.653
		State 89	1.177	State 89	0.537
		State 90	1.094	State 90	0.396
		State 91	0.880	State 91	1.372
		State 92	0.956	State 92	1.358
		State 93	0.971	State 93	1.349
		State 94	0.985	State 94	1.340
		State 95	1.015	State 95	1.321
		State 96	1.028	State 96	1.325
		State 97	1.108	State 97	1.272
		State 98	1.169	State 98	1.233
		State 99	1.252	State 99	1.164
		State 100	1.345	State 100	1.058
		State 101	1.383	State 101	0.967
		State 102	1.352	State 102	0.842
		State 103	1.152	State 103	0.670
		State 104	1.120	State 104	1.342
		State 105	1.026	State 105	1.492
		State 106	0.870	State 106	1.553
		State 107	0.644	State 107	0.684
		State 108	0.666	State 108	1.460
		State 109	0.760	State 109	0.840
		State 110	1.015	State 110	1.230
		State 111	0.874	State 111	1.361
		State 112	1.125	State 112	1.336
		State 113	1.028	State 113	1.486
		State 114	0.869	State 114	1.546
		State 115	0.643	State 115	0.680
		State 116	0.666	State 116	1.455
		State 117	0.756	State 117	0.836
		State 118	1.015	State 118	1.224
		State 119	0.874	State 119	1.354

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Table 13-5
LTE Supplemental Body SAR Data

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, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 25 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	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	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1905.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Channel	132572	Channel	26590
Measured 1g SAR (W/kg)	0.323	Measured 1g SAR (W/kg)	0.425	Measured 1g SAR (W/kg)	0.600	Measured 1g SAR (W/kg)	0.586	Measured 1g SAR (W/kg)	0.498	Measured 1g SAR (W/kg)	0.483	Measured 1g SAR (W/kg)	0.882	Measured 1g SAR (W/kg)	0.862
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 112)	0.533	Auto-tune (State 1)	0.653	Auto-tune (State 112)	0.970	Auto-tune (State 112)	0.912	Auto-tune (State 0)	0.841	Auto-tune (State 0)	0.756	Auto-tune (State 22)	1.406	Auto-tune (State 26)	1.415
Default (State 0)	0.463	Default (State 0)	0.589	Default (State 0)	1.007	Default (State 0)	0.905	Default (State 0)	0.779	Default (State 0)	0.779	Default (State 0)	1.146	Default (State 0)	1.190
State 21	0.222	State 1	0.658	State 13	0.856	State 13	0.853	State 0	0.779	State 0	0.779	State 0	1.132	State 0	1.190
State 26	0.236	State 5	0.660	State 28	0.536	State 29	0.545	State 30	0.473	State 31	0.428	State 1	1.167	State 1	1.132
State 65	0.453	State 27	0.200	State 41	0.798	State 34	0.177	State 64	0.012	State 39	0.723	State 2	1.168	State 2	1.116
State 86	0.043	State 52	0.082	State 67	0.868	State 68	0.769	State 69	0.650	State 70	0.619	State 3	1.173	State 3	1.098
State 104	0.483	State 66	0.373	State 106	0.502	State 107	0.829	State 81	0.550	State 91	0.299	State 4	1.181	State 4	1.065
State 112	0.490	State 105	0.319	State 112	1.006	State 112	0.905	State 108	0.331	State 109	0.698	State 5	1.180	State 5	1.062
												State 6	1.200	State 6	0.977
												State 7	1.205	State 7	0.920
												State 8	1.211	State 8	0.828
												State 9	1.202	State 9	0.709
												State 10	1.182	State 10	0.616
												State 11	1.133	State 11	0.506
												State 12	1.005	State 12	0.371
												State 13	1.054	State 13	1.317
												State 14	1.123	State 14	1.296
												State 15	1.142	State 15	1.287
												State 16	1.157	State 16	1.278
												State 17	1.186	State 17	1.258
												State 18	1.191	State 18	1.260
												State 19	1.263	State 19	1.205
												State 20	1.314	State 20	1.164
												State 21	1.374	State 21	1.097
												State 22	1.434	State 22	0.987
												State 23	1.418	State 23	0.897
												State 24	1.340	State 24	0.776
												State 25	1.098	State 25	0.609
												State 26	0.897	State 26	1.416
												State 27	0.919	State 27	1.354
												State 28	0.925	State 28	1.352
												State 29	0.930	State 29	1.337
												State 30	0.942	State 30	1.317
												State 31	0.942	State 31	1.315
												State 32	0.967	State 32	1.238
												State 33	0.989	State 33	1.185
												State 34	1.011	State 34	1.086
												State 35	1.036	State 35	0.940
												State 36	1.044	State 36	0.821
												State 37	1.032	State 37	0.666
												State 38	0.951	State 38	0.474
												State 39	0.630	State 39	0.602
												State 40	0.676	State 40	0.569
												State 41	0.678	State 41	0.554
												State 42	0.678	State 42	0.540
												State 43	0.685	State 43	0.512
												State 44	0.698	State 44	0.518
												State 45	0.709	State 45	0.456
												State 46	0.723	State 46	0.418
												State 47	0.725	State 47	0.365
												State 48	0.720	State 48	0.297
												State 49	0.700	State 49	0.250
												State 50	0.660	State 50	0.198
												State 51	0.572	State 51	0.139
												State 52	0.692	State 52	1.323
												State 53	0.740	State 53	1.323
												State 54	0.754	State 54	1.326
												State 55	0.764	State 55	1.322
												State 56	0.787	State 56	1.316
												State 57	0.793	State 57	1.316
												State 58	0.866	State 58	1.294
												State 59	0.922	State 59	1.271
												State 60	1.013	State 60	1.225
												State 61	1.152	State 61	1.132
												State 62	1.248	State 62	1.041
												State 63	1.325	State 63	0.895
												State 64	1.208	State 64	0.685
												State 65	0.749	State 65	0.735
												State 66	0.876	State 66	0.741
												State 67	0.896	State 67	0.732
												State 68	0.913	State 68	0.722
												State 69	0.951	State 69	0.704
												State 70	0.972	State 70	0.716
												State 71	1.059	State 71	0.668
												State 72	1.128	State 72	0.641
												State 73	1.185	State 73	0.588
												State 74	1.189	State 74	0.516
												State 75	1.120	State 75	0.459
												State 76	0.968	State 76	0.388
												State 77	0.710	State 77	0.302
												State 78	1.022	State 78	1.075
												State 79	1.057	State 79	1.025
												State 80	1.062	State 80	1.009
												State 81	1.067	State 81	0.991
												State 82	1.073	State 82	0.960
												State 83	1.080	State 83	0.962
												State 84	1.095	State 84	0.881
												State 85	1.111	State 85	0.831
												State 86	1.123	State 86	0.750
												State 87	1.127	State 87	0.639
												State 88	1.117	State 88	0.558
												State 89	1.085	State 89	0.457
												State 90	0.979	State 90	0.334
												State 91	0.896	State 91	1.193
												State 92	0.968	State 92	1.187
												State 93	0.984	State 93	1.177
												State 94	0.993	State 94	1.168
												State 95	1.023	State 95	1.151
												State 96	1.032	State 96	1.157
												State 97	1.100	State 97	1.108
												State 98	1.156	State 98	1.076
												State 99	1.156	State 99	1.011
												State 100	1.222	State 100	0.920
												State 101	1.317	State 101	0.836
												State 102	1.283	State 102	0.835
												State 103	1.099	State 103	0.572
												State 104	1.132	State 104	1.184
												State 105	1.049	State 105	1.316
												State 106	0.891	State 106	1.392
												State 107	0.623	State 107	0.597
												State 108	0.689	State 108	1.323
												State 109	0.740	State 109	0.726
												State 110	1.022	State 110	1.071
												State 111	0.895	State 111	1.192
												State 112	1.132	State 112	1.184
												State 113	1.046	State 113	1.317
												State 114	0.891	State 114	1.391
												State 115	0.623	State 115	0.598
												State 116	0.691	State 116	1.325
												State 117	0.738	State 117	0.723
												State 118	1.022	State 118	1.071
												State 119	0.895	State 119	1.189

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Table 13-6
NR Supplemental Body SAR Data

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, 50 RB, 28 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, 108 RB, 108 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)	0.316	Measured 1g SAR (W/kg)	0.472	Measured 1g SAR (W/kg)	0.520	Measured 1g SAR (W/kg)	1.030	Measured 1g SAR (W/kg)	0.997
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)	0.536	Auto-tune (State 112)	0.747	Auto-tune (State 39)	0.839	Auto-tune (State 21)	1.622	Auto-tune (State 26)	1.711
Default (State 0)	0.543	Default (State 0)	0.708	Default (State 0)	0.917	Default (State 0)	1.335	Default (State 0)	1.307
State 34	0.032	State 35	0.098	State 33	0.323	State 0	1.335	State 0	1.307
State 56	0.266	State 65	0.474	State 36	0.098	State 1	1.357	State 1	0.582
State 73	0.209	State 70	0.381	State 39	0.856	State 2	1.358	State 2	0.563
State 85	0.066	State 74	0.100	State 43	0.668	State 3	1.361	State 3	0.553
State 103	0.000	State 112	0.706	State 75	0.212	State 4	1.364	State 4	0.536
State 112	0.544	State 113	0.409	State 114	0.545	State 5	1.366	State 5	0.533
						State 6	1.376	State 6	0.491
						State 7	1.387	State 7	0.461
						State 8	1.392	State 8	0.419
						State 9	1.372	State 9	0.362
						State 10	1.336	State 10	0.317
						State 11	1.273	State 11	0.262
						State 12	1.122	State 12	0.196
						State 13	1.261	State 13	0.660
						State 14	1.349	State 14	0.651
						State 15	1.373	State 15	0.648
						State 16	1.386	State 16	0.644
						State 17	1.414	State 17	0.637
						State 18	1.423	State 18	0.635
						State 19	1.498	State 19	0.609
						State 20	1.554	State 20	0.593
						State 21	1.610	State 21	0.564
						State 22	1.637	State 22	0.520
						State 23	1.612	State 23	0.477
						State 24	1.491	State 24	0.422
						State 25	1.206	State 25	0.340
						State 26	1.093	State 26	1.611
						State 27	1.119	State 27	0.673
						State 28	1.126	State 28	0.662
						State 29	1.130	State 29	0.653
						State 30	1.139	State 30	0.641
						State 31	1.142	State 31	0.638
						State 32	1.174	State 32	0.602
						State 33	1.202	State 33	0.573
						State 34	1.220	State 34	0.527
						State 35	1.252	State 35	0.454
						State 36	1.255	State 36	0.397
						State 37	1.233	State 37	0.327
						State 38	1.132	State 38	0.235
						State 39	0.706	State 39	0.293
						State 40	0.758	State 40	0.280
						State 41	0.762	State 41	0.272
						State 42	0.762	State 42	0.265
						State 43	0.769	State 43	0.254
						State 44	0.784	State 44	0.257
						State 45	0.791	State 45	0.226
						State 46	0.796	State 46	0.210
						State 47	0.799	State 47	0.184
						State 48	0.784	State 48	0.153
						State 49	0.764	State 49	0.130
						State 50	0.718	State 50	0.104
						State 51	0.616	State 51	0.075
						State 52	0.838	State 52	0.627
						State 53	0.895	State 53	0.630
						State 54	0.913	State 54	0.630
						State 55	0.926	State 55	0.628
						State 56	0.957	State 56	0.627
						State 57	0.962	State 57	0.627
						State 58	1.045	State 58	0.618
						State 59	1.106	State 59	0.606
						State 60	1.217	State 60	0.588
						State 61	1.366	State 61	0.552
						State 62	1.464	State 62	0.514
						State 63	1.535	State 63	0.453
						State 64	1.406	State 64	0.359
						State 65	0.851	State 65	0.359
						State 66	1.001	State 66	0.367
						State 67	1.029	State 67	0.362
						State 68	1.042	State 68	0.359
						State 69	1.089	State 69	0.353
						State 70	1.124	State 70	0.357
						State 71	1.208	State 71	0.339
						State 72	1.286	State 72	0.329
						State 73	1.329	State 73	0.308
						State 74	1.318	State 74	0.275
						State 75	1.240	State 75	0.250
						State 76	1.057	State 76	0.218
						State 77	0.767	State 77	0.173
						State 78	1.216	State 78	0.541
						State 79	1.253	State 79	0.517
						State 80	1.258	State 80	0.507
						State 81	1.260	State 81	0.496
						State 82	1.268	State 82	0.482
						State 83	1.277	State 83	0.482
						State 84	1.295	State 84	0.446
						State 85	1.308	State 85	0.423
						State 86	1.315	State 86	0.385
						State 87	1.311	State 87	0.332
						State 88	1.292	State 88	0.291
						State 89	1.241	State 89	0.243
						State 90	1.118	State 90	0.182
						State 91	1.087	State 91	0.593
						State 92	1.168	State 92	0.588
						State 93	1.183	State 93	0.586
						State 94	1.196	State 94	0.580
						State 95	1.226	State 95	0.581
						State 96	1.242	State 96	0.560
						State 97	1.314	State 97	0.547
						State 98	1.377	State 98	0.522
						State 99	1.439	State 99	0.482
						State 100	1.508	State 100	0.448
						State 101	1.512	State 101	0.398
						State 102	1.460	State 102	0.325
						State 103	1.233	State 103	0.325
						State 104	1.323	State 104	0.573
						State 105	1.264	State 105	0.637
						State 106	1.090	State 106	1.289
						State 107	0.698	State 107	0.553
						State 108	0.835	State 108	1.188
						State 109	0.847	State 109	0.675
						State 110	1.213	State 110	1.017
						State 111	1.080	State 111	1.120
						State 112	1.323	State 112	1.099
						State 113	1.261	State 113	1.217
						State 114	1.090	State 114	1.292
						State 115	0.700	State 115	0.551
						State 116	0.839	State 116	1.194
						State 117	0.845	State 117	0.675
						State 118	1.219	State 118	1.023
						State 119	1.083	State 119	1.119

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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)	24.5	26.1
Measured Output Power (dBm)	23.54	26.00
Measured SAR (W/kg)	0.049	0.054
Measured Power (mW)	225.94	398.11
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	143.02	172.38
% deviation from expected linearity		-8.56%

Figure 13-1
LTE Band 41 Head Linearity

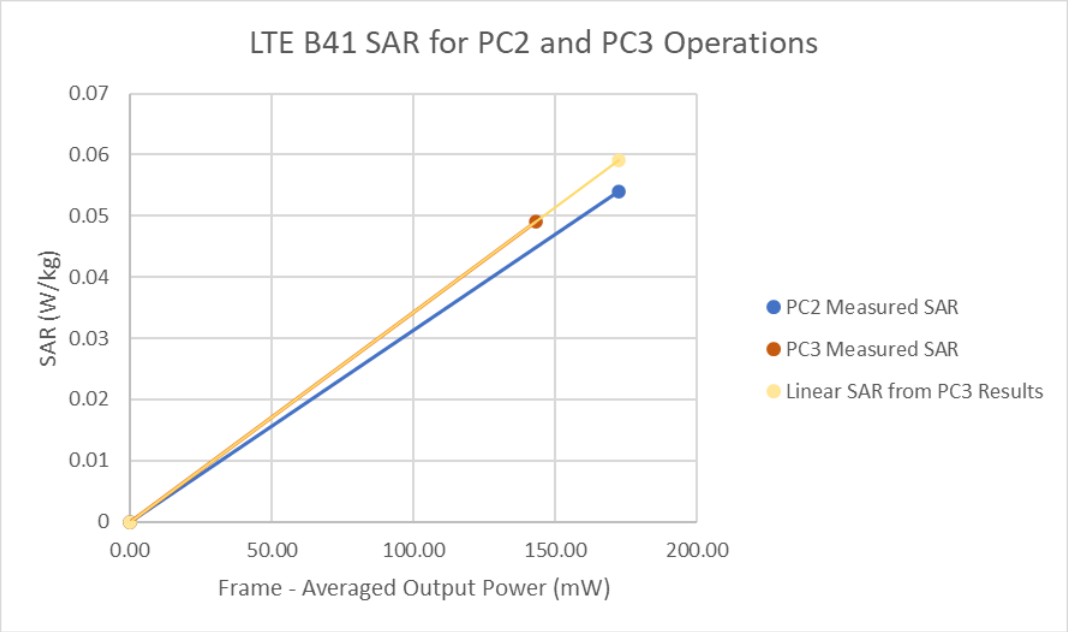

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Table 13-8
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.5	26.1
Measured Output Power (dBm)	23.85	26.10
Measured SAR (W/kg)	0.053	0.055
Measured Power (mW)	242.66	407.38
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	153.60	176.40
% deviation from expected linearity		-9.63%

Figure 13-2
LTE Band 41 ULCA Head Linearity

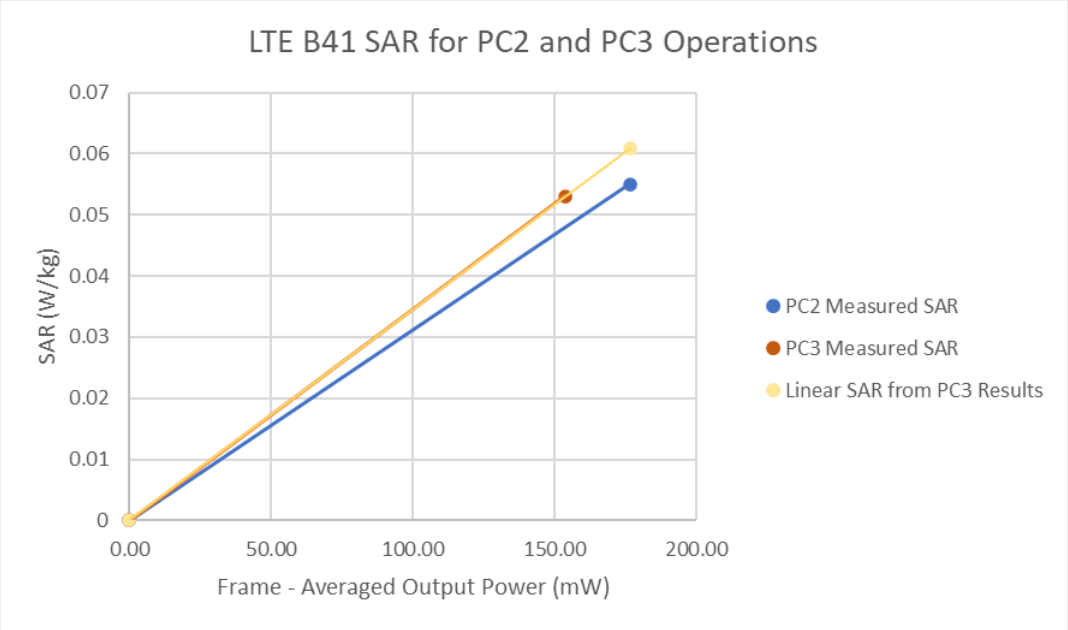

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Table 13-9
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.50	26.10
Measured Output Power (dBm)	23.35	26.09
Measured SAR (W/kg)	0.220	0.271
Measured Power (mW)	216.27	406.44
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	136.90	175.99
% deviation from expected linearity		-4.18%

Figure 13-3
LTE Band 41 Body-Worn Linearity

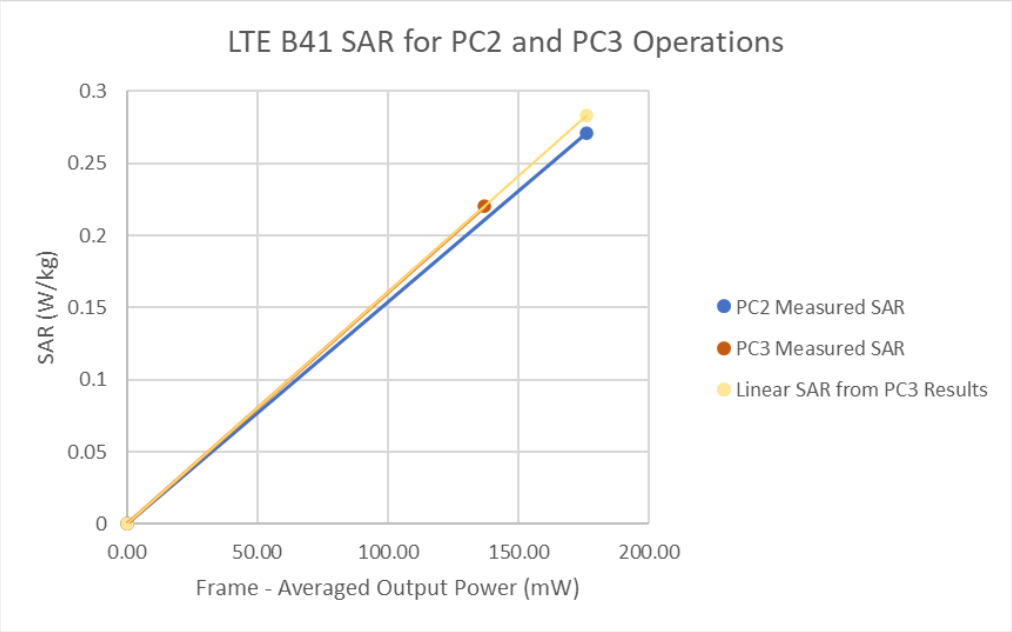

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Table 13-10
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.5	26.1
Measured Output Power (dBm)	23.85	26.10
Measured SAR (W/kg)	0.237	0.267
Measured Power (mW)	242.66	407.38
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	153.60	176.40
% deviation from expected linearity		-1.90%

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

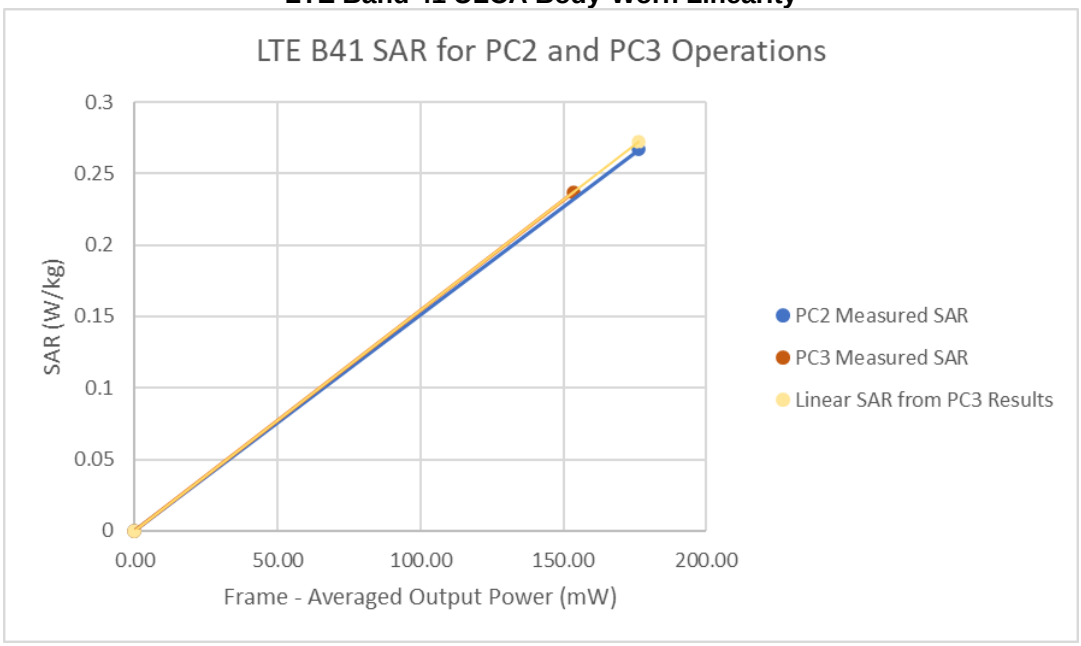

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Table 13-11
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.00	24.60
Measured Output Power (dBm)	21.78	23.26
Measured SAR (W/kg)	0.339	0.313
Measured Power (mW)	150.66	211.84
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	95.37	91.73
% deviation from expected linearity		-4.00%

Figure 13-5
LTE Band 41 Hotspot Linearity

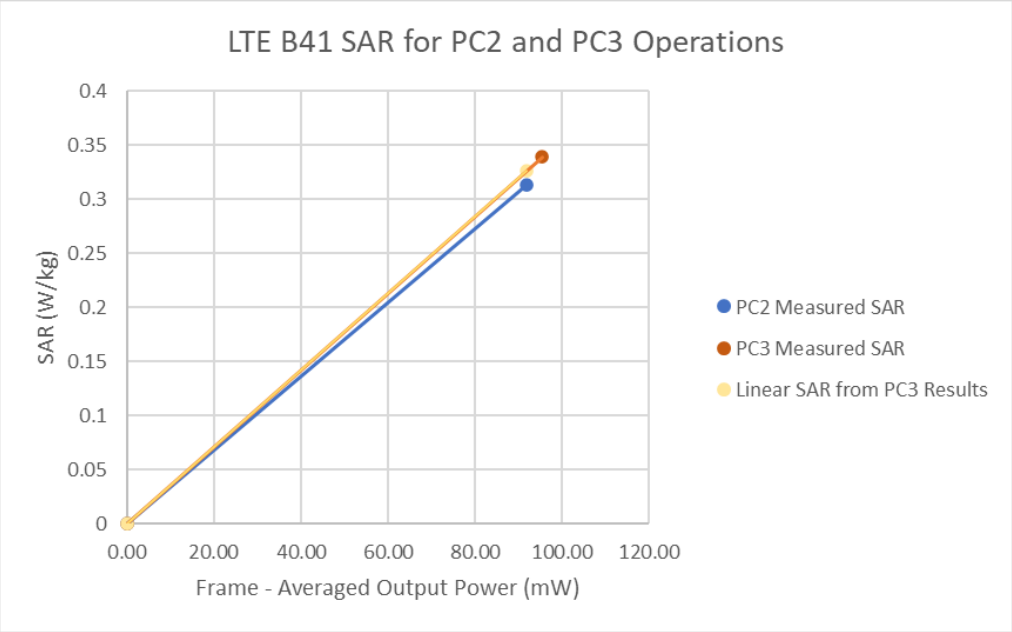

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Table 13-12
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	21.82	23.74
Measured SAR (W/kg)	0.332	0.342
Measured Power (mW)	152.05	236.59
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	96.25	102.44
% deviation from expected linearity		-3.22%

Figure 13-6
LTE Band 41 ULCA Hotspot Linearity

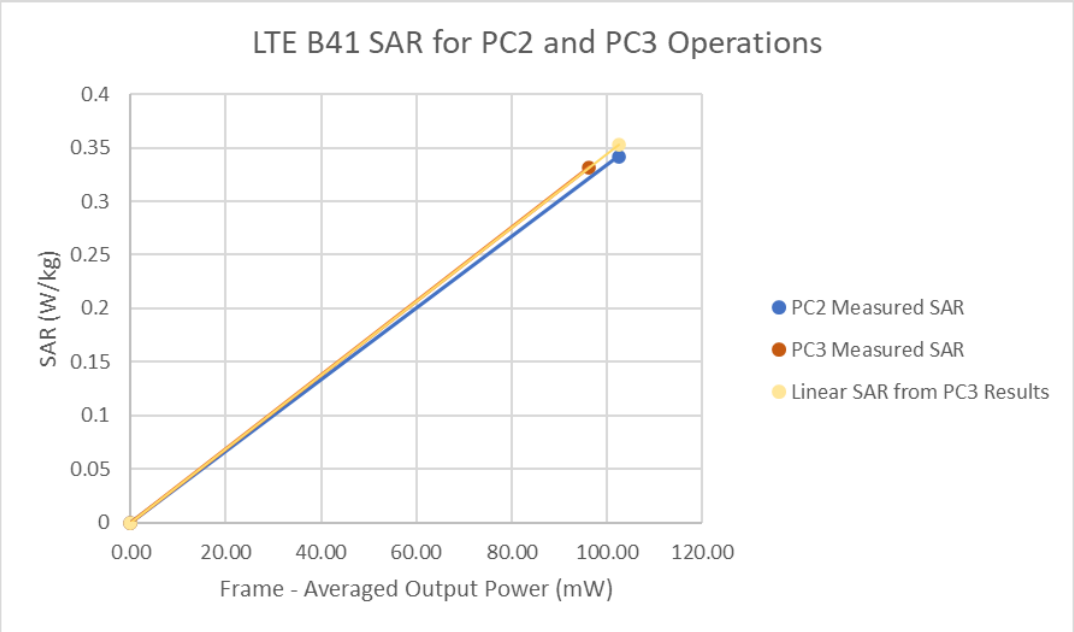

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Table 13-13
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.50	26.10
Measured Output Power (dBm)	23.35	26.09
Measured SAR (W/kg)	1.720	2.060
Measured Power (mW)	216.27	406.44
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	136.90	175.99
% deviation from expected linearity		-6.83%

Figure 13-7
LTE Band 41 Phablet Linearity

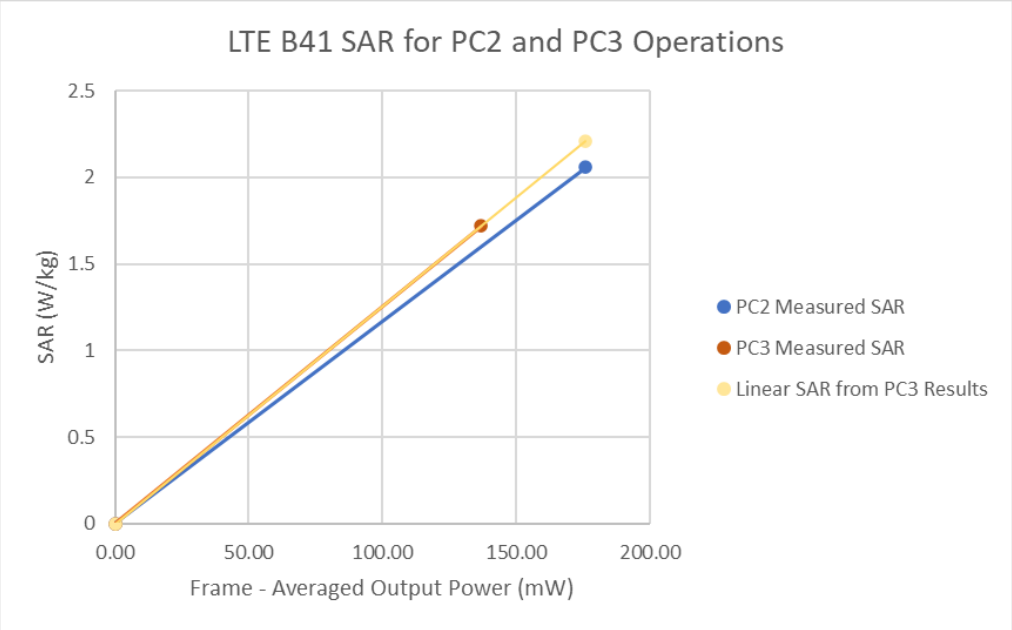

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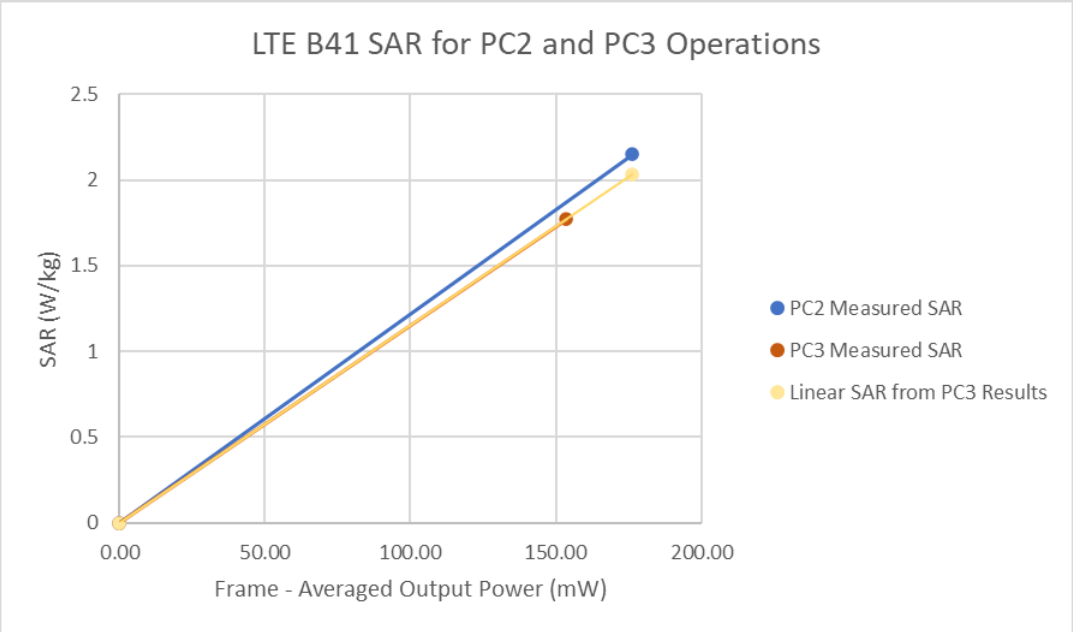
Table 13-14
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.5	26.1
Measured Output Power (dBm)	23.85	26.10
Measured SAR (W/kg)	1.770	2.150
Measured Power (mW)	242.66	407.38
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	153.60	176.40
% deviation from expected linearity		5.77%

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	CBT	N/A	CBT	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	GB43193963
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	433978
Anritsu	MN810B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	3/3/2021	Annual	3/3/2022	1336009
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	1348509
Anritsu	MA24106A	USB Power Sensor	6/29/2021	Annual	6/29/2022	1348513
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M151A00-009
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-300D	Electronic Balance	CBT	N/A	CBT	11081534
Intelligent Weighing	PD-300D	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	R897950903
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 5MA 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	CMX500	Radio Communication Tester	CBT	N/A	CBT	100298
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	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	2/21/2019	Triennial	2/21/2022	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	5d149
SPEAG	D2300V2	2300 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	1073
SPEAG	D2300V2	2300 MHz SAR Dipole	6/3/2021	Annual	6/3/2022	1116
SPEAG	D2450V2	2450 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	797
SPEAG	D2450V2	2450 MHz SAR Dipole	2/8/2021	Annual	2/8/2022	882
SPEAG	D2450V2	2450 MHz SAR Dipole	5/12/2021	Annual	5/12/2022	945
SPEAG	D2450V2	2450 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	981
SPEAG	D2600V2	2600 MHz SAR Dipole	4/14/2021	Annual	4/14/2022	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Triennial	6/14/2022	1064
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	1/19/2021	Annual	1/19/2022	1018
SPEAG	D3700V2	3700 MHz SAR Dipole	1/21/2020	Biennial	1/21/2022	1067
SPEAG	D3900V2	3900 MHz SAR Dipole	10/9/2020	Annual	10/9/2021	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	D750V3	750 MHz SAR Dipole	3/16/2020	Biennial	3/16/2022	1003
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	D750V3	750 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	1161
SPEAG	D835V2	835 MHz SAR Dipole	4/15/2021	Annual	4/15/2022	4d119
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Annual	1/21/2022	4d132
SPEAG	D835V2	835 MHz SAR Dipole	5/11/2021	Annual	5/11/2022	4d180
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	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	8/16/2021	Annual	8/16/2022	1450
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	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	3/1/2021	Annual	3/1/2022	1652
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	8/3/2021	Annual	8/3/2022	1681
SPEAG	DAK-3.5	Dielectric Parameter Probes	12/9/2020	Annual	12/9/2021	1278
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	4/16/2021	Annual	4/16/2022	7402
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	9/20/2021	Annual	9/20/2022	7552
SPEAG	EX3DV4	SAR Probe	11/12/2020	Annual	11/12/2021	7565
SPEAG	EX3DV4	SAR Probe	12/11/2020	Annual	12/11/2021	7571
SPEAG	EX3DV4	SAR Probe	3/3/2021	Annual	3/3/2022	7637
SPEAG	EX3DV4	SAR Probe	6/29/2021	Annual	6/29/2022	7659
SPEAG	EX3DV4	SAR Probe	6/28/2021	Annual	6/28/2022	7660
SPEAG	EX3DV4	SAR Probe	6/28/2021	Annual	6/28/2022	7661
SPEAG	EX3DV4	SAR Probe	8/5/2021	Annual	8/5/2022	7670

Note: all equipment was used solely within its respective calibration period.

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.

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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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