PCTEST
7185 Oakland Mills Road, Columbia, MD 21046 USA
Tel. +1.410.290.6652 / Fax +1.410.290.6654
http://www.pctest.com

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:
09/12/21 - 11/08/21
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2109080099-01 (Rev2).A3L

FCC ID: **A3LSMS901U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-S901U, SM-S901U1

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	0.14	0.19	0.45	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.12	0.29	1.16	1.50
PCE	UMTS 850	826.40 - 846.60 MHz	0.34	0.36	0.55	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.23	1.09	1.13	2.47
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.26	1.02	1.04	1.75
PCE	LTE Band 71	665.5 - 695.5 MHz	0.16	0.29	0.41	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.23	0.32	0.52	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.24	0.38	0.55	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.27	0.36	0.50	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.25	0.30	0.46	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.35	0.34	0.62	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.33	1.15	1.18	1.74
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	0.30	1.01	1.25	2.06
PCE	LTE Band 2 (PCS)	1850.7 - 1914.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.3 MHz	0.10	0.37	0.72	2.80
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.27	0.51	2.47
CBE	LTE Band 48	3552.5 - 3649.2 MHz	0.76	0.14	0.49	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.13	0.36	0.30	2.19
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	0.22	0.40	0.60	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.29	0.44	0.66	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.34	0.45	0.73	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.93	0.95	1.02	2.65
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.84	0.86	1.20	2.41
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	0.96	0.72	1.08	2.91
PCE	NR Band n7	2502.5 - 2567.5 MHz	0.12	0.40	0.89	3.09
PCE	NR Band n41	2506.02 - 2679.99 MHz	1.03	0.19	0.39	1.99
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	0.69	0.10	0.38	2.50
PCE	NR Band n77	3705 - 3975 MHz	0.76	0.12	0.44	2.57
DTS	2.4 GHz WLAN	2412 - 2462 MHz	< 0.1	0.17	0.43	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.28	0.15	N/A	2.05
NII	U-NII-2C	5500 - 5720 MHz	0.23	0.11	N/A	1.17
NII	U-NII-3	5745 - 5825 MHz	0.12	< 0.1	0.18	N/A
NII	U-NII-4	5845 - 5885 MHz	0.27	< 0.1	N/A	0.89
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.22	<0.1	<0.1	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.55	1.57	1.59	3.95

Note: This revised Test Report (S/N: 1M2109080099-01 (Rev2).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 - 1914.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.3 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3649.2 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
Bluetooth	Data	2402 - 2480 MHz
NFC Data	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

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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	29.6		28.1	32.3	28.1	28.1	25.3
GSM 1900	A	AG0	26.2		18.3	29.9	18.3	18.3	22.1
UMTS 850	A	AG0	29.9		26.5	30.2	26.5	26.5	24.5
UMTS 1750	A	AG0	23.6		20.0	30.4	18.5	20.0	23.0
UMTS 1900	A	AG0	24.6		19.0	30.6	18.5	19.0	23.7
LTE Band 71	A	AG0	30.8		28.9	33.4	28.9	28.9	24.5
LTE Band 12	A	AG0	29.7		28.7	31.7	28.1	28.7	24.5
LTE Band 13	A	AG0	29.7		27.2	31.3	27.2	27.2	24.5
LTE Band 14	A	AG0	29.9		27.5	31.2	27.5	27.5	24.5
LTE Band 26 (Cell)	A	AG0	30.5		27.8	31.4	27.8	27.8	24.5
LTE Band 5 (Cell)	A	AG0	29.3		26.4	30.0	26.4	26.4	24.5
LTE Band 66/4 (AWS)	A	AG0	23.9		19.0	29.5	19.0	19.0	23.5
LTE Band 25/2 (PCS)	A	AG0	24.7		19.5	29.6	19.0	19.5	23.7
LTE Band 30	A	AG0	25.6		20.0	33.4	19.0	20.0	22.5
LTE Band 30	B	AG0	25.9		20.0	36.4	19.0	20.0	22.5
LTE Band 7	B	AG0	24.7		19.5	35.4	19.5	19.5	23.0
LTE Band 41/38 (PC3)	B	AG0	25.2		19.0	32.6	19.0	19.0	22.0
LTE Band 41 (PC2)	B	AG0	25.2		19.0	32.6	19.0	19.0	22.0
LTE Band 48	G	AG1	17.5		17.5	14.5	17.5	17.5	21.0
NR Band n71	A	AG0	27.4		27.6	32.1	27.6	27.6	24.5
NR Band n12	A	AG0	28.6		27.4	30.9	27.3	27.4	24.5
NR Band n5 (Cell)	A	AG0	29.0		28.7	30.2	26.9	28.7	24.5
NR Band n66 (AWS)	A	AG0	22.3		19.5	22.3	18.0	19.5	23.8
NR Band n66 (AWS)	F	AG1	20.0		20.0	17.5	20.0	20.0	23.5
NR Band n25/2 (PCS)	A	AG0	25.9		19.0	29.9	17.5	19.0	23.7
NR Band n25/2 (PCS)	F	AG1	21.0		21.0	19.5	21.0	21.0	24.0
NR Band n30	A	AG0	23.5		18.5	31.0	18.5	18.5	22.5
NR Band n30	B	AG0	26.6		18.5	34.8	18.5	18.5	22.5
NR Band n30	F	AG1	21.5		21.5	18.0	21.0	21.5	22.0
NR Band n7	B	AG0	21.5		19.5	21.5	18.5	19.5	23.0
NR Band n41 SRS 1 (PC3)	F	AG1	20.0		20.0	18.0	20.0	20.0	24.5
NR Band n41 SRS 1 (PC2)	F	AG1	20.0		20.0	18.0	20.0	20.0	26.5
NR Band n41 SRS 2 (PC3)	B	AG0	16.5		16.5	16.5	16.5	16.5	21.5
NR Band n41 SRS 2 (PC2)	B	AG0	16.5		16.5	16.5	16.5	16.5	23.0
NR Band n41 SRS 3 (PC3)	E	AG1	15.5		15.5	15.5	15.5	15.5	20.5
NR Band n41 SRS 3 (PC2)	E	AG1	15.5		15.5	15.5	15.5	15.5	22.0
NR Band n41 SRS 4 (PC3)	D	AG0	14.5		14.5	14.5	14.5	14.5	19.0
NR Band n41 SRS 4 (PC2)	D	AG0	14.5		14.5	14.5	14.5	14.5	20.5
NR Band n38	F	AG1	20.0		20.0	18.0	20.0	20.0	24.0
NR Band n77 DoD SRS 1 (PC3)	G	AG1	17.0		17.0	14.0	17.0	17.0	24.0
NR Band n77 DoD SRS 1 (PC2)	G	AG1	17.0		17.0	14.0	17.0	17.0	26.0
NR Band n77 DoD SRS 2 (PC3)	C	AG0	11.5		11.5	11.5	11.5	11.5	20.0
NR Band n77 DoD SRS 2 (PC2)	C	AG0	11.5		11.5	11.5	11.5	11.5	22.0
NR Band n77 DoD SRS 3 (PC3)	H	AG1	17.0		17.0	14.0	17.0	17.0	23.0
NR Band n77 DoD SRS 3 (PC2)	H	AG1	17.0		17.0	14.0	17.0	17.0	25.0
NR Band n77 DoD SRS 4 (PC3)	D	AG0	11.5		11.5	11.5	11.5	11.5	18.0
NR Band n77 DoD SRS 4 (PC2)	D	AG0	11.5		11.5	11.5	11.5	11.5	20.0
NR Band n77 SRS 1 (PC3)	G	AG1	17.0		17.0	14.0	17.0	17.0	24.0
NR Band n77 SRS 1 (PC2)	G	AG1	17.0		17.0	14.0	17.0	17.0	26.0
NR Band n77 SRS 2 (PC3)	C	AG0	11.5		11.5	11.5	11.5	11.5	20.0
NR Band n77 SRS 2 (PC2)	C	AG0	11.5		11.5	11.5	11.5	11.5	22.0
NR Band n77 SRS 3 (PC3)	H	AG1	17.0		17.0	14.0	17.0	17.0	23.0
NR Band n77 SRS 3 (PC2)	H	AG1	17.0		17.0	14.0	17.0	17.0	25.0
NR Band n77 SRS 4 (PC3)	D	AG0	11.5		11.5	11.5	11.5	11.5	18.0
NR Band n77 SRS 4 (PC2)	D	AG0	11.5		11.5	11.5	11.5	11.5	20.0

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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.

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	28.5	28.5	25.5	23.7	22.5	27.0	25.0	23.0	22.0
	Nominal	27.5	27.5	24.5	22.7	21.5	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	28.5	25.5	23.7	22.5	27.0	25.0	23.0	22.0
	Nominal	N/A	27.5	24.5	22.7	21.5	26.0	24.0	22.0	21.0
DSI = 4 (Earjack)	Max Allowed Power	28.5	28.5	25.5	23.7	22.5	27.0	25.0	23.0	22.0
	Nominal	27.5	27.5	24.5	22.7	21.5	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	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 0 (Body-Worn or Phablet Max)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 1 (Phablet Reduced)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 2 (Head)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 3 (Hotspot)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 4 (Earjack)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
UMTS Band 4 (1750 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	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	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0
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	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0
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	24.7	23.7	23.7	23.7
	Nominal	23.7	22.7	22.7	22.7
DSI = 0 (Body-Worn or Phablet Max)	Max Allowed Power	24.7	23.7	23.7	23.7
	Nominal	23.7	22.7	22.7	22.7
DSI = 1 (Phablet Reduced)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 2 (Head)	Max Allowed Power	24.7	23.7	23.7	23.7
	Nominal	23.7	22.7	22.7	22.7
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	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0

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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	25.5	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 12	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 13	A	Max Allowed Power	25.5	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	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 5 (Cell)	A	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 66 (AWS)	A	Max Allowed Power	24.5	24.5	20.0	24.5	20.0	20.0
		Nominal	23.5	23.5	19.0	23.5	19.0	19.0
LTE Band 4 (AWS)	A	Max Allowed Power	24.5	24.5	20.0	24.5	20.0	20.0
		Nominal	23.5	23.5	19.0	23.5	19.0	19.0
LTE Band 25 (PCS)	A	Max Allowed Power	24.7	24.7	20.5	24.7	20.0	20.5
		Nominal	23.7	23.7	19.5	23.7	19.0	19.5
LTE Band 2 (PCS)	A	Max Allowed Power	24.7	24.7	20.5	24.7	20.0	20.5
		Nominal	23.7	23.7	19.5	23.7	19.0	19.5
LTE Band 30	A	Max Allowed Power	23.5	23.5	21.0	23.5	20.0	21.0
		Nominal	22.5	22.5	20.0	22.5	19.0	20.0
LTE Band 30	B	Max Allowed Power	23.5	23.5	21.0	23.5	20.0	21.0
		Nominal	22.5	22.5	20.0	22.5	19.0	20.0
LTE Band 7	B	Max Allowed Power	24.0	24.0	20.5	24.0	20.5	20.5
		Nominal	23.0	23.0	19.5	23.0	19.5	19.5
LTE Band 41 (PC3)	B	Max Allowed Power	25.0	25.0	22.0	25.0	22.0	22.0
		Nominal	24.0	24.0	21.0	24.0	21.0	21.0
LTE Band 41 (PC2)	B	Max Allowed Power	26.7	26.7	23.7	26.7	23.7	23.7
		Nominal	25.7	25.7	22.7	25.7	22.7	22.7
LTE Band 38	B	Max Allowed Power	25.0	25.0	22.0	25.0	22.0	22.0
		Nominal	24.0	24.0	21.0	24.0	21.0	21.0
LTE Band 48	G	Max Allowed Power	24.0	20.5	20.5	17.5	20.5	20.5
		Nominal	23.0	19.5	19.5	16.5	19.5	19.5

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Mode / Band	Antenna		Modulated Average Output Power (in dBm)					
			Pmax	DSI =0 (Body-Worn or Phablet Max)	DSI =1 (Phablet Reduced)	DSI =2 (Head)	DSI =3 (Hotspot)	DSI =4 (Earjack)
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	24.8	23.3	20.5	23.3	19.0	20.5
		Nominal	23.8	22.3	19.5	22.3	18.0	19.5
NR Band n66 (AWS)	F	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	24.7	24.7	20.0	24.7	18.5	20.0
		Nominal	23.7	23.7	19.0	23.7	17.5	19.0
NR Band n25 (PCS)	F	Max Allowed Power	25.0	22.0	22.0	20.5	22.0	22.0
		Nominal	24.0	21.0	21.0	19.5	21.0	21.0
NR Band n2 (PCS)	A	Max Allowed Power	24.7	24.7	20.0	24.7	18.5	20.0
		Nominal	23.7	23.7	19.0	23.7	17.5	19.0
NR Band n2 (PCS)	F	Max Allowed Power	25.0	22.0	22.0	20.5	22.0	22.0
		Nominal	24.0	21.0	21.0	19.5	21.0	21.0
NR Band n30	A	Max Allowed Power	23.5	23.5	19.5	23.5	19.5	19.5
		Nominal	22.5	22.5	18.5	22.5	18.5	18.5
NR Band n30	B	Max Allowed Power	23.5	23.5	19.5	23.5	19.5	19.5
		Nominal	22.5	22.5	18.5	22.5	18.5	18.5
NR Band n30	F	Max Allowed Power	23.0	22.5	22.5	19.0	22.0	22.5
		Nominal	22.0	21.5	21.5	18.0	21.0	21.5
NR Band n7	B	Max Allowed Power	24.0	22.5	20.5	22.5	19.5	20.5
		Nominal	23.0	21.5	19.5	21.5	18.5	19.5
NR Band n41 SRS 1 (PC3)	F	Max Allowed Power	25.5	21.0	21.0	19.0	21.0	21.0
		Nominal	24.5	20.0	20.0	18.0	20.0	20.0
NR Band n41 SRS 1 (PC2)	F	Max Allowed Power	27.5	21.0	21.0	19.0	21.0	21.0
		Nominal	26.5	20.0	20.0	18.0	20.0	20.0
NR Band n41 SRS 2 (PC3)	B	Max Allowed Power	22.5	17.5	17.5	17.5	17.5	17.5
		Nominal	21.5	16.5	16.5	16.5	16.5	16.5
NR Band n41 SRS 2 (PC2)	B	Max Allowed Power	24.0	17.5	17.5	17.5	17.5	17.5
		Nominal	23.0	16.5	16.5	16.5	16.5	16.5
NR Band n41 SRS 3 (PC3)	E	Max Allowed Power	21.5	16.5	16.5	16.5	16.5	16.5
		Nominal	20.5	15.5	15.5	15.5	15.5	15.5
NR Band n41 SRS 3 (PC2)	E	Max Allowed Power	23.0	16.5	16.5	16.5	16.5	16.5
		Nominal	22.0	15.5	15.5	15.5	15.5	15.5
NR Band n41 SRS 4 (PC3)	D	Max Allowed Power	20.0	15.5	15.5	15.5	15.5	15.5
		Nominal	19.0	14.5	14.5	14.5	14.5	14.5
NR Band n41 SRS 4 (PC2)	D	Max Allowed Power	21.5	15.5	15.5	15.5	15.5	15.5
		Nominal	20.5	14.5	14.5	14.5	14.5	14.5
NR Band n38	F	Max Allowed Power	25.0	21.0	21.0	19.0	21.0	21.0
		Nominal	24.0	20.0	20.0	18.0	20.0	20.0
NR Band n77 DoD SRS 1 (PC3)	G	Max Allowed Power	25.0	18.0	18.0	15.0	18.0	18.0
		Nominal	24.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 DoD SRS 1 (PC2)	G	Max Allowed Power	27.0	18.0	18.0	15.0	18.0	18.0
		Nominal	26.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 DoD SRS 2 (PC3)	C	Max Allowed Power	21.0	12.5	12.5	12.5	12.5	12.5
		Nominal	20.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 DoD SRS 2 (PC2)	C	Max Allowed Power	23.0	12.5	12.5	12.5	12.5	12.5
		Nominal	22.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 DoD SRS 3 (PC3)	H	Max Allowed Power	24.0	18.0	18.0	15.0	18.0	18.0
		Nominal	23.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 DoD SRS 3 (PC2)	H	Max Allowed Power	26.0	18.0	18.0	15.0	18.0	18.0
		Nominal	25.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 DoD SRS 4 (PC3)	D	Max Allowed Power	19.0	12.5	12.5	12.5	12.5	12.5
		Nominal	18.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 DoD SRS 4 (PC2)	D	Max Allowed Power	21.0	12.5	12.5	12.5	12.5	12.5
		Nominal	20.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 1 (PC3)	G	Max Allowed Power	25.0	18.0	18.0	15.0	18.0	18.0
		Nominal	24.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 SRS 1 (PC2)	G	Max Allowed Power	27.0	18.0	18.0	15.0	18.0	18.0
		Nominal	26.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 SRS 2 (PC3)	C	Max Allowed Power	21.0	12.5	12.5	12.5	12.5	12.5
		Nominal	20.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 2 (PC2)	C	Max Allowed Power	23.0	12.5	12.5	12.5	12.5	12.5
		Nominal	22.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 3 (PC3)	H	Max Allowed Power	24.0	18.0	18.0	15.0	18.0	18.0
		Nominal	23.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 SRS 3 (PC2)	H	Max Allowed Power	26.0	18.0	18.0	15.0	18.0	18.0
		Nominal	25.0	17.0	17.0	14.0	17.0	17.0
NR Band n77 SRS 4 (PC3)	D	Max Allowed Power	19.0	12.5	12.5	12.5	12.5	12.5
		Nominal	18.0	11.5	11.5	11.5	11.5	11.5
NR Band n77 SRS 4 (PC2)	D	Max Allowed Power	21.0	12.5	12.5	12.5	12.5	12.5
		Nominal	20.0	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		n		ax		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	18.0	19.0	17.0	18.0	17.0 Ch. 11 15.5	18.0 Ch. 11 16.5	17.0 Ch. 11 15.5	18.0 Ch. 11 16.5	21.0	22.0	20.0	21.0	20.0 Ch. 11 18.5	21.0 Ch. 11 19.5	20.0 Ch. 11 18.5	21.0 Ch. 11 19.5

1.4.3 2.4 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

- RCV Active
- Simultaneous conditions with 5 GHz WLAN and/or 5G NR
- RCV Active during simultaneous conditions with 5 GHz WLAN and/or 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		b		g		n		ax		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0

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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) SISO Antenna 1 & Antenna 2								IEEE 802.11 (in dBm) MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	17.0	18.0	17.0 Ch. 36 16.0	18.0 Ch. 36 17.0	17.0 Ch. 36 16.0	18.0 Ch. 36 17.0	17.0 Ch. 36 16.0	18.0 Ch. 36 17.0	20.0	21.0	20.0 Ch. 36 19.0	21.0 Ch. 36 20.0	20.0 Ch. 36 19.0	21.0 Ch. 36 20.0	20.0 Ch. 36 19.0	21.0 Ch. 36 20.0
	UNII-2A	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-2C	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-3	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-4	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
5 GHz WIFI (40MHz BW)	UNII-1			17.0	18.0	17.0	18.0	17.0	18.0			20.0	21.0	20.0	21.0	20.0	21.0
	UNII-2A			17.0	18.0	17.0	18.0	17.0	18.0			20.0	21.0	20.0	21.0	20.0	21.0
	UNII-2C			17.0	18.0	17.0	18.0	17.0	18.0			20.0	21.0	20.0	21.0	20.0	21.0
	UNII-3			17.0	18.0	17.0	18.0	17.0	18.0			20.0	21.0	20.0	21.0	20.0	21.0
	UNII-4			17.0	18.0	17.0	18.0	17.0	18.0			20.0	21.0	20.0	21.0	20.0	21.0
5 GHz WIFI (80MHz BW)	UNII-1					17.0 Ch. 42 16.0	18.0 Ch. 42 17.0	17.0 Ch. 42 16.0	18.0 Ch. 42 17.0					20.0 Ch. 42 19.0	21.0 Ch. 42 20.0	20.0 Ch. 42 19.0	21.0 Ch. 42 20.0
	UNII-2A					17.0	18.0	17.0	18.0					20.0	21.0	20.0	21.0
	UNII-2C					17.0	18.0	17.0	18.0					20.0	21.0	20.0	21.0
	UNII-3					17.0	18.0	17.0	18.0					20.0	21.0	20.0	21.0
	UNII-4					17.0	18.0	17.0	18.0					20.0	21.0	20.0	21.0

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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:

- Simultaneous conditions with 2.4 GHz WLAN and 5G NR

Mode	Band	IEEE 802.11 (in dBm) SISO Antenna 1 & Antenna 2								IEEE 802.11 (in dBm) MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2A	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2C	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-3	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
	UNII-4	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0
5 GHz WIFI (40MHz BW)	UNII-1			12.0	13.0	12.0	13.0	12.0	13.0			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2A			12.0	13.0	12.0	13.0	12.0	13.0			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-2C			12.0	13.0	12.0	13.0	12.0	13.0			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-3			12.0	13.0	12.0	13.0	12.0	13.0			15.0	16.0	15.0	16.0	15.0	16.0
	UNII-4			12.0	13.0	12.0	13.0	12.0	13.0			15.0	16.0	15.0	16.0	15.0	16.0
5 GHz WIFI (80MHz BW)	UNII-1					12.0	13.0	12.0	13.0					15.0	16.0	15.0	16.0
	UNII-2A					12.0	13.0	12.0	13.0					15.0	16.0	15.0	16.0
	UNII-2C					12.0	13.0	12.0	13.0					15.0	16.0	15.0	16.0
	UNII-3					12.0	13.0	12.0	13.0					15.0	16.0	15.0	16.0
	UNII-4					12.0	13.0	12.0	13.0					15.0	16.0	15.0	16.0

The below table is applicable in the following conditions:

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

Mode	Band	IEEE 802.11 (in dBm) SISO Antenna 1 & Antenna 2								IEEE 802.11 (in dBm) MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	UNII-2A	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	UNII-2C	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	UNII-3	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	UNII-4	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
5 GHz WIFI (40MHz BW)	UNII-1			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	UNII-2A			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	UNII-2C			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	UNII-3			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	UNII-4			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
5 GHz WIFI (80MHz BW)	UNII-1					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	UNII-2A					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	UNII-2C					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	UNII-3					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	UNII-4					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0

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1.4.6 2.4 GHz Maximum Bluetooth Output Power

Mode	Single Antenna	
	Nominal	Maximum
Bluetooth (in dBm)	15.0	16.0
Bluetooth EDR (in dBm)	10.5	11.5
Bluetooth LE 1/2Mbps (in dBm)	15.0	16.0
Bluetooth LE 125/500 kbps (in dBm)	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
- During simultaneous conditions with 5GHz WLAN and/or 5G NR
- RCV active during simultaneous conditions with 5 GHz WLAN and/or 5G NR

Mode	Single Antenna	
	Nominal	Maximum
Bluetooth (in dBm)	12.0	13.0
Bluetooth EDR (in dBm)	10.5	11.5
Bluetooth LE 1/2Mbps (in dBm)	12.0	13.0
Bluetooth LE 125/500 kbps (in dBm)	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 display diagonal dimension of this device is > 150 mm and <200 mm, it is considered a “phablet.”

Table 1-1
Device Edges/Sides for SAR Testing – Legacy

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 Antenna A	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30 Antenna B	Yes	Yes	No	Yes	No	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
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 1	Yes	Yes	No	No	No	Yes
5 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
Bluetooth	Yes	Yes	No	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. Some edges were additionally evaluated per manufacturer’s request. 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, and UNII-4 operations are disabled.

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Table 1-2
Device Edges/Sides for SAR Testing – NR

	Back	Front	Top	Bottom	Right	Left
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 F	Yes	Yes	Yes	No	Yes	No
NR Band n25 (PCS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS) Antenna F	Yes	Yes	Yes	No	Yes	No
NR Band n30 Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n30 Antenna B	Yes	Yes	No	Yes	No	Yes
NR Band n30 Antenna F	Yes	Yes	Yes	No	Yes	No
NR Band n7	Yes	Yes	No	Yes	No	Yes
NR Band n41 Antenna F	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	Yes	Yes
NR Band n41 Antenna D	Yes	Yes	No	Yes	Yes	No
NR Band n77 DoD Antenna G	Yes	Yes	Yes	No	No	Yes
NR Band n77 DoD Antenna C	Yes	Yes	No	Yes	No	Yes
NR Band n77 DoD Antenna H	Yes	Yes	Yes	No	No	No
NR Band n77 DoD Antenna D	Yes	Yes	No	Yes	Yes	No
NR Band n77 Antenna G	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna C	Yes	Yes	No	Yes	No	Yes
NR Band n77 Antenna H	Yes	Yes	Yes	No	No	No
NR Band n77 Antenna D	Yes	Yes	No	Yes	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing.

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.

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1.7 Simultaneous Transmission Capabilities

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

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

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
2	GSM voice + 5 GHz WLAN Ant 1	Yes	Yes	N/A	Yes	
3	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
4	GSM voice + 2.4 GHz WLAN MIMO + 5 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 + 2.4 GHz WLAN Ant 2	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
7	GSM voice + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
8	GSM voice + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
9	GSM voice + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
10	GSM voice + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
11	UMTS + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
12	UMTS + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
13	UMTS + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
14	UMTS + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
15	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
16	UMTS + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
17	UMTS + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
18	UMTS + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
19	UMTS + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
20	UMTS + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
21	LTE + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
22	LTE + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
23	LTE + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
24	LTE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
25	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
26	LTE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
27	LTE + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
28	LTE + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
29	LTE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
30	LTE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
31	LTE + NR	Yes	Yes	N/A	Yes	
32	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
33	LTE + NR + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
34	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
35	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
36	LTE + NR + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
37	LTE + NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
38	LTE + NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
39	LTE + NR + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
40	LTE + NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
41	LTE + NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
42	NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
43	NR + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
44	NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
45	NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
46	NR + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
47	NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
48	NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
49	NR + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
50	NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
51	NR + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
52	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
53	GPRS/EDGE + 5 GHz WLAN Ant 1	N/A	N/A	Yes	Yes	
54	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
55	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
56	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
57	GPRS/EDGE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
58	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WLAN Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
59	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
60	GPRS/EDGE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
61	GPRS/EDGE + 2.4 GHz Bluetooth + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN Antenna 1 and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.

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3. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
4. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII2A, U-NII2C, and U-NII4 were not evaluated for wireless router conditions.
5. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. WLAN can transmit only when operating with MIMO.
6. This device supports VoWIFI.
7. This device supports Bluetooth Tethering.
8. This device supports VoLTE.
9. This device supports VoNR.
10. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
11. 5G NR FR2 n258, n260, and n261 cannot transmit simultaneously.
12. 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, & UNII-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 80 MHz Bandwidth only for 5 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) No aggregate channel configurations
d) 2 Tx antenna output
e) Up to 1024 QAM is supported
f) TDWR and Band gap channels are supported for 5 GHz
g) 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, & UNII-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.

(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.

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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 14)

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).

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.

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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)	1M2109080099-22.A3L
Near Field PD Part 0 Report	
RF Exposure Part 2 Test Report	1M2109080099-23.A3L
RF Exposure Compliance Summary Report	1M2109080099-24.A3L
RF Exposure Part 0 Test Report	1M2109080099-21.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 - 1914.3 MHz)				
	LTE Band 30 (2307.5 - 2312.3 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3649.2 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 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 5 (Cell): 20 MHz	834 (20500)		836.5 (20525)	839 (20550)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
UE Category	DL UE Cat 20, UL UE Cat 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 16. It supports carrier aggregation, downlink MIMO, LAA features as shown in Section 9 and Appendix J. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR Information						
Form Factor	Portable Handset					
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz) NR Band n12 (701.5 - 713.5 MHz) NR Band n5 (Cell) (826.5 - 846.5 MHz) NR Band n66 (AWS) (1712.5 - 1777.5 MHz) NR Band n25 (PCS) (1852.5 - 1912.5 MHz) NR Band n2 (PCS) (1852.5 - 1907.5 MHz) NR Band n30 (2307.5 - 2312.5 MHz) NR Band n7 (2502.5 - 2567.5 MHz) NR Band n41 (2506.02 - 2679.99 MHz) NR Band n38 (2575 - 2615 MHz) NR Band n77 DoD (3455.01 - 3544.98 MHz) NR Band n77 (3705 - 3975 MHz)						
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n12: 5 MHz, 10 MHz, 15 MHz NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n30: 5 MHz, 10 MHz NR Band n7: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n38: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR Band n77 DoD: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n77: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
Channel Numbers and Frequencies (MHz)						
NR Band n71: 5 MHz	665.5 (133147)		680.5 (136100)		695.5 (133447)	
NR Band n71: 10 MHz	668 (133600)		680.5 (136100)		693 (138600)	
NR Band n71: 15 MHz	670.5 (134100)		680.5 (136100)		690.5 (138100)	
NR Band n71: 20 MHz	673 (134600)		680.5 (136100)		688 (137600)	
NR Band n12: 5 MHz	701.5 (140300)		707.5 (141500)		713.5 (142700)	
NR Band n12: 10 MHz	704 (140800)		707.5 (141500)		711 (142200)	
NR Band n12: 15 MHz	706.5 (141300)		707.5 (141500)		708.5 (141700)	
NR Band n5 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)	
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)		844 (168800)	
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)	
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)		839 (167800)	
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)	
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)	
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)	
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band n66 (AWS): 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)	
NR Band n66 (AWS): 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)	
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)	
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)	
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)	
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)	
NR Band n25 (PCS): 25 MHz	1862.5 (372500)		1882.5 (376500)		1902.5 (380500)	
NR Band n25 (PCS): 30 MHz	1865 (373000)		1882.5 (376500)		1900 (380000)	
NR Band n25 (PCS): 40 MHz	1870 (374000)		1882.5 (376500)		1895 (379000)	
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n30: 5 MHz	2307.5 (461500)		2310 (462000)		2312.5 (462500)	
NR Band n30: 10 MHz	N/A		2310 (462000)		N/A	
NR Band n7: 5 MHz	2502.5 (500500)		2535 (507000)		2567.5 (513500)	
NR Band n7: 10 MHz	2505 (501000)		2535 (507000)		2565 (513000)	
NR Band n7: 15 MHz	2507.5 (20825)		680.5 (133297)		2562.5 (21375)	
NR Band n7: 20 MHz	2510 (502000)		2535 (507000)		2560 (512000)	
NR Band n7: 25 MHz	2512.5 (502500)		2535 (507000)		2557.5 (511500)	
NR Band n7: 30 MHz	2515 (503000)		2535 (507000)		2555 (511000)	
NR Band n7: 40 MHz	2520 (504000)		2535 (507000)		2550 (510000)	
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)		2636.49 (527298)	2679.99 (535998)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)		2634 (526800)	2674.98 (534996)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A		2618.67 (523734)	2670 (534000)
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)		2664.99 (532998)	
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)		2659.98 (531996)	
NR Band n41: 70 MHz	2531.01 (506202)		N/A		2655 (531000)	
NR Band n41: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)	
NR Band n41: 90 MHz	2541 (508200)		N/A		2644.98 (528996)	
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)		2640 (528000)	
NR Band n38: 10 MHz	2575 (515000)		2593 (518600)		2615 (523000)	
NR Band n38: 15 MHz	2577.5 (515500)		2594 (518800)		2612.5 (522500)	
NR Band n38: 20 MHz	2580 (516000)		2595 (519000)		2610 (522000)	
NR Band n38: 30 MHz	2585 (517000)		2595 (519000)		2605 (521000)	
NR Band n38: 40 MHz	2590 (518000)		2595 (519000)		2600 (520000)	
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/n48/n77	30 kHz					
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM					
A-MPR (Additional MPR) disabled for SAR Testing?	YES					
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations					
LTE Anchor Bands for NR Band n71	LTE Band 66/2/48					
LTE Anchor Bands for NR Band n12	LTE Band 66/2					
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 2/66/30/48					
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 12/13/14/5/2/30/48					
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12/66					
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 12/13/14/5/66/48/30					
LTE Anchor Bands for NR Band n30	LTE Band 12/14/5/66/2					
LTE Anchor Bands for NR Band n7	N/A					
LTE Anchor Bands for NR Band n41	LTE Band 66/25/2					
LTE Anchor Bands for NR Band n38	N/A					
LTE Anchor Bands for NR Band n77	LTE Band 12/13/14/5/66/2/30					

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3 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

3.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 3-1).

Equation 3-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho dv}\right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/m^3)
E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

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4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

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

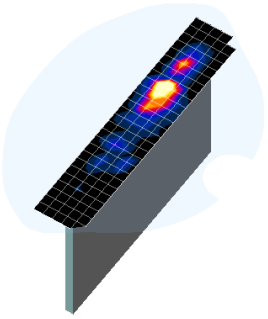

Figure 4-1
Sample SAR Area Scan

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

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

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

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

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

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

*Also compliant to IEEE 1528-2013 Table 6

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5 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

Figure 5-2 shows the front, back and side views of the SAM Twin Phantom. The point "M" is the reference point for the center of the mouth, "LE" is the left ear reference point (ERP), and "RE" is the right ERP. The ERP is 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 5-1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (see Figure 5-1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

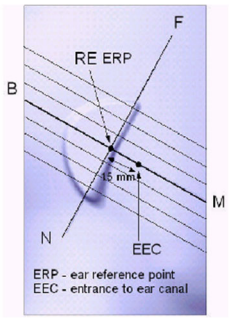

Figure 5-1
Close-Up Side view of ERP

5.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the acoustic output located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Figure 5-3). The acoustic output was than located at the same level as the center of the ear reference point. The test device was positioned so that the "vertical centerline" was bisecting the front surface of the handset at its top and bottom edges, positioning the "ear reference point" on the outer surface of the both the left and right head phantoms on the ear reference point.

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

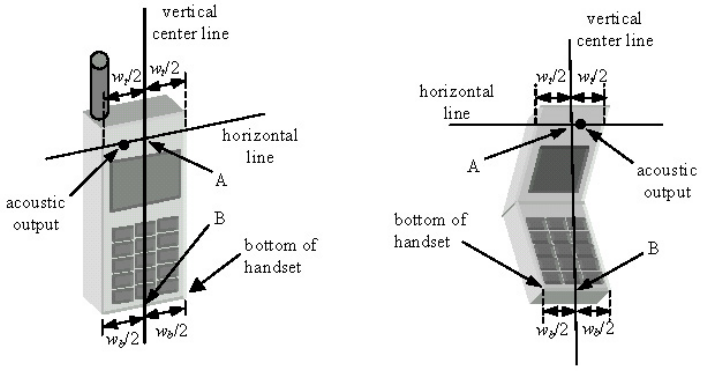

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

6.2 Positioning for Cheek

1. The test device was positioned with the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 6-1), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

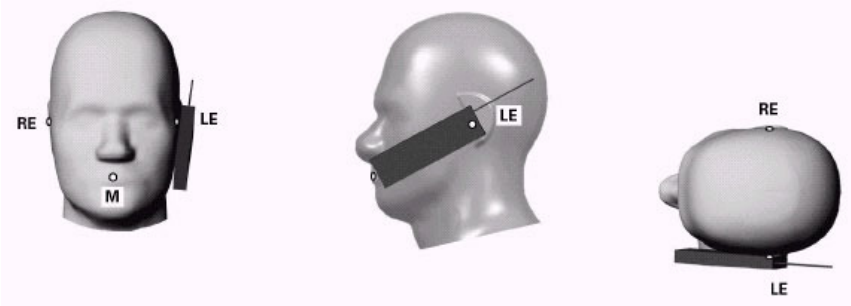

Figure 6-1 Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the device contact with the ear, the device was rotated about the NF line until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 6-2).

6.3 Positioning for Ear / 15º Tilt

With the test device aligned in the “Cheek Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15degrees.
2. The phone was then rotated around the horizontal line by 15 degrees.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the handset touched the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. In this situation, the tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 6-2).

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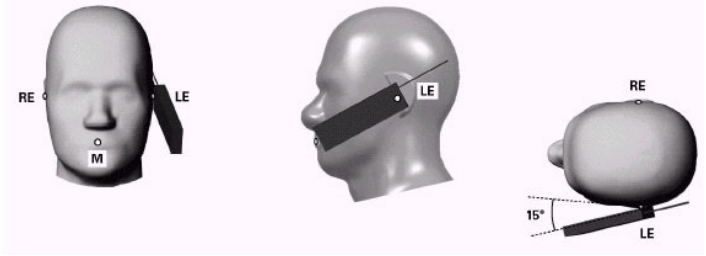

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

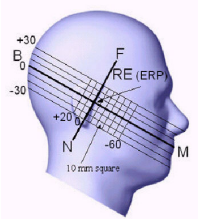

Figure 6-3
Side view w/ relevant markings

6.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones. Per IEEE 1528-2013, a rotated SAM phantom is necessary to allow probe access to such regions. Both SAM heads of the TwinSAM-Chin20 are rotated 20 degrees around the NF line. Each head can be removed from the table for emptying and cleaning.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR location identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

6.5 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-4). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

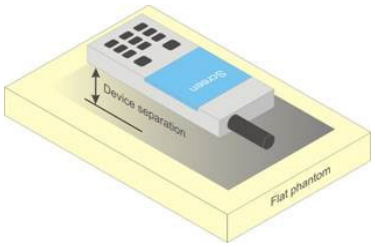

Figure 6-4
Sample Body-Worn Diagram

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Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.
Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

6.6 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions; i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1g body and 10g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D01v06, Cell phones (handsets) are not normally designed to be used on extremities or operated in extremity only exposure conditions. The maximum output power levels of handsets generally do not require extremity SAR testing to show compliance. Therefore, extremity SAR was not evaluated for this device.

6.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

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6.8 Phablet Configurations

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

6.9 Proximity Sensor Considerations

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

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

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

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7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 7-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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8 FCC MEASUREMENT PROCEDURES

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

8.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

8.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

8.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

8.4 SAR Measurement Conditions for UMTS

8.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

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8.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

8.4.3 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all "1s". The 3G SAR test reduction procedure is applied to other spreading codes and multiple $DPDCH_n$ configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or $DPDCH_n$, for the highest reported SAR configuration in 12.2 kbps RMC.

8.4.4 SAR Measurements with Rel 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

8.4.5 SAR Measurements with Rel 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

8.4.6 SAR Measurement Conditions for DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

8.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r04 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

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8.5.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

8.5.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

8.5.3 A-MPR

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

8.5.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
   i. The required channel and offset combination with the highest maximum output power is required for SAR.
   ii. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
   iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to ½ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is <1.45 W/kg.

8.5.5 TDD

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05v02r04. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05v02r04. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4.

8.5.6 Downlink Only Carrier Aggregation

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data

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connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.6 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

8.6.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

8.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

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8.6.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.5 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n/ax OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.6 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. Per April 2019 TCB Workshop guidance, 802.11ax was considered the highest order 802.11 mode. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.6.7 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode. The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

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When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 8.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.9 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

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9 RF CONDUCTED POWERS

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

9.1 GSM Conducted Powers

Table 9-1
Measured P_{max}

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	31.50	31.50	32.38	**30.09**	27.50	26.32	24.93	22.71	21.65
	190	31.95	31.93	31.74	**30.18**	27.55	26.32	24.85	22.64	22.13
	251	31.94	31.91	31.78	**30.17**	27.57	26.41	24.78	22.68	21.97
GSM 1900	512	28.51	28.62	27.74	**25.87**	23.65	25.08	23.80	21.90	20.76
	661	28.11	28.23	27.35	**25.70**	23.50	24.80	23.73	21.57	20.72
	810	28.93	29.03	27.89	**26.13**	24.12	24.99	23.87	21.92	20.93

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	22.30	22.30	26.19	**25.66**	24.32	17.12	18.74	18.28	18.47
	190	22.75	22.73	25.55	**25.75**	24.37	17.12	18.66	18.21	18.95
	251	22.74	22.71	25.59	**25.74**	24.39	17.21	18.59	18.25	18.79
GSM 1900	512	19.31	19.42	21.55	**21.44**	20.47	15.88	17.61	17.47	17.58
	661	18.91	19.03	21.16	**21.27**	20.32	15.60	17.54	17.14	17.54
	810	19.73	19.83	21.70	**21.70**	20.94	15.79	17.68	17.49	17.75

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	28.08	28.20	25.07	23.26	**21.05**	25.08	23.80	21.90	20.76
	661	27.80	27.90	24.60	22.94	**21.03**	24.80	23.73	21.57	20.72
	810	27.92	27.99	24.86	22.70	**21.75**	24.99	23.87	21.92	20.93

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	18.88	19.00	18.88	18.83	**17.87**	15.88	17.61	17.47	17.58
	661	18.60	18.70	18.41	18.51	**17.85**	15.60	17.54	17.14	17.54
	810	18.72	18.79	18.67	18.27	**18.57**	15.79	17.68	17.49	17.75
GSM 1900	**Frame Avg.Targets:**	18.30	18.30	18.31	18.27	**18.32**	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	24.40	24.41	24.35	23.29	23.11	22.95	23.60	23.49	23.79	-
99		12.2 kbps AMR	24.31	24.39	24.35	23.26	23.03	22.90	23.44	23.29	23.60	-
6	HSDPA	Subtest 1	23.29	23.28	23.21	21.97	21.72	21.68	22.52	22.34	22.69	0
6		Subtest 2	23.32	23.29	23.18	21.99	21.74	21.68	22.52	22.36	22.67	0
6		Subtest 3	22.75	22.78	22.73	21.46	21.21	21.16	22.03	21.87	22.16	0.5
6		Subtest 4	22.82	22.79	22.72	21.47	21.22	21.18	22.01	21.82	22.15	0.5
6	HSUPA	Subtest 1	23.27	23.24	23.30	21.98	21.78	21.73	22.57	22.39	22.77	0
6		Subtest 2	21.32	21.29	21.24	19.99	19.76	19.77	20.49	20.45	20.77	2
6		Subtest 3	22.29	22.27	22.25	21.01	20.74	20.71	21.54	21.37	21.81	1
6		Subtest 4	21.29	21.25	21.22	19.97	19.69	19.66	20.55	20.41	20.73	2
6		Subtest 5	23.29	23.33	23.26	22.00	21.72	21.66	22.53	22.39	22.73	0
8	DC-HSDPA	Subtest 1	23.28	23.21	23.00	22.01	21.75	21.69	22.52	22.33	22.73	0
8		Subtest 2	23.18	23.29	23.21	22.05	21.81	21.39	22.55	22.36	22.71	0
8		Subtest 3	22.67	22.62	22.55	21.48	21.14	21.07	21.65	21.54	21.85	0.5
8		Subtest 4	22.47	22.42	22.36	21.21	20.94	20.93	21.65	21.52	21.86	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	20.41	20.21	20.11	19.32	19.29	19.27	-
99		12.2 kbps AMR	20.34	20.16	20.10	19.27	19.28	19.25	-
6	HSDPA	Subtest 1	19.20	18.95	18.96	18.05	17.92	18.22	0
6		Subtest 2	19.23	18.97	18.91	18.03	17.88	18.20	0
6		Subtest 3	18.61	18.41	18.43	17.53	17.39	17.72	0.5
6		Subtest 4	18.69	18.43	18.41	17.51	17.43	17.67	0.5
6	HSUPA	Subtest 1	19.22	18.92	18.93	18.07	17.87	18.24	0
6		Subtest 2	17.23	16.99	16.91	16.04	15.89	16.22	2
6		Subtest 3	18.17	17.93	17.92	17.10	16.86	17.22	1
6		Subtest 4	17.19	16.91	16.91	16.04	15.87	16.19	2
6		Subtest 5	19.19	18.92	18.93	18.06	17.88	18.22	0
8	DC-HSDPA	Subtest 1	19.24	18.97	18.94	18.03	17.92	18.25	0
8		Subtest 2	19.12	18.93	18.92	18.02	17.86	18.24	0
8		Subtest 3	18.69	18.46	18.44	17.52	17.40	17.73	0.5
8		Subtest 4	18.70	18.47	18.43	17.48	17.39	17.72	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	18.90	18.70	18.53	18.68	18.53	18.80	-
99		12.2 kbps AMR	18.85	18.69	18.53	18.68	18.54	18.78	-
6	HSDPA	Subtest 1	17.68	17.40	17.39	17.52	17.32	17.69	0
6		Subtest 2	17.67	17.41	17.37	17.54	17.40	17.68	0
6		Subtest 3	17.18	16.89	16.91	17.02	16.89	17.21	0.5
6		Subtest 4	17.16	16.90	16.87	16.99	16.84	17.01	0.5
6	HSUPA	Subtest 1	17.47	17.22	17.19	17.43	17.17	17.52	0
6		Subtest 2	15.48	15.23	15.27	15.44	15.22	15.55	2
6		Subtest 3	16.51	16.23	16.25	16.47	16.29	16.57	1
6		Subtest 4	15.44	15.22	15.28	15.48	15.26	15.56	2
6		Subtest 5	17.42	17.23	17.24	17.44	17.23	17.55	0
8	DC-HSDPA	Subtest 1	17.73	17.42	17.35	17.51	17.36	17.69	0
8		Subtest 2	17.68	17.41	17.42	17.50	17.33	17.68	0
8		Subtest 3	17.21	16.94	16.86	17.00	16.89	17.19	0.5
8		Subtest 4	17.21	16.97	16.88	17.01	16.84	17.19	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.

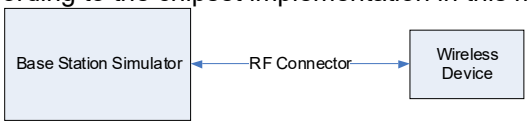

Figure 9-2
Power Measurement Setup

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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	25.31	0	0
	1	50	**25.33**		0
	1	99	25.17		0
	50	0	24.14	0-1	1
	50	25	**24.16**		1
	50	50	24.12		1
	100	0	24.03		1
16QAM	1	0	24.50	0-1	1
	1	50	24.43		1
	1	99	24.32		1
	50	0	23.20	0-2	2
	50	25	23.15		2
	50	50	23.14		2
	100	0	23.12		2
64QAM	1	0	23.21	0-2	2
	1	50	23.26		2
	1	99	23.13		2
	50	0	22.16	0-3	3
	50	25	22.13		3
	50	50	22.16		3
	100	0	22.05		3
256QAM	1	0	20.10	0-5	5
	1	50	20.48		5
	1	99	20.21		5
	50	0	20.28		5
	50	25	20.36		5
	50	50	20.23		5
	100	0	20.28		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	25.45	0	0
	1	25	25.33		0
	1	49	**25.50**		0
	25	0	24.14	0-1	1
	25	12	**24.23**		1
	25	25	24.22		1
	50	0	24.18		1
16QAM	1	0	24.41	0-1	1
	1	25	24.32		1
	1	49	24.49		1
	25	0	23.13	0-2	2
	25	12	23.24		2
	25	25	23.21		2
	50	0	23.10		2
64QAM	1	0	23.49	0-2	2
	1	25	23.48		2
	1	49	23.22		2
	25	0	22.20	0-3	3
	25	12	22.30		3
	25	25	22.31		3
	50	0	22.29		3
256QAM	1	0	20.33	0-5	5
	1	25	20.50		5
	1	49	20.49		5
	25	0	20.44		5
	25	12	20.46		5
	25	25	20.34		5
	50	0	20.36		5

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9.3.3 LTE Band 13

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

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**25.19**	0	0
	1	25	25.17		0
	1	49	25.02		0
	25	0	24.11	0-1	1
	25	12	**24.20**		1
	25	25	24.10		1
	50	0	24.16		1
16QAM	1	0	24.35	0-1	1
	1	25	24.22		1
	1	49	24.11		1
	25	0	23.11	0-2	2
	25	12	23.17		2
	25	25	23.12		2
	50	0	23.17		2
64QAM	1	0	23.42	0-2	2
	1	25	23.37		2
	1	49	23.20		2
	25	0	22.09	0-3	3
	25	12	22.18		3
	25	25	22.09		3
	50	0	22.18		3
256QAM	1	0	19.90	0-5	5
	1	25	20.30		5
	1	49	19.95		5
	25	0	20.02		5
	25	12	20.17		5
	25	25	20.06		5
	50	0	20.07		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	25.34	0	0
	1	25	**25.35**		0
	1	49	25.30		0
	25	0	24.21	0-1	1
	25	12	**24.36**		1
	25	25	24.28		1
	50	0	24.24		1
16QAM	1	0	24.41	0-1	1
	1	25	24.39		1
	1	49	24.36		1
	25	0	23.30	0-2	2
	25	12	23.33		2
	25	25	23.31		2
	50	0	23.26		2
64QAM	1	0	23.44	0-2	2
	1	25	23.49		2
	1	49	23.32		2
	25	0	22.17	0-3	3
	25	12	22.22		3
	25	25	22.19		3
	50	0	22.22		3
256QAM	1	0	20.03	0-5	5
	1	25	20.44		5
	1	49	20.04		5
	25	0	20.31		5
	25	12	20.33		5
	25	25	20.29		5
	50	0	20.22		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	**25.50**	0	0
	1	36	25.49		0
	1	74	25.34		0
	36	0	24.21	0-1	1
	36	18	**24.27**		1
	36	37	24.19		1
	75	0	24.15		1
16QAM	1	0	24.50	0-1	1
	1	36	24.27		1
	1	74	24.22		1
	36	0	23.17	0-2	2
	36	18	23.25		2
	36	37	23.30		2
	75	0	23.17		2
64QAM	1	0	23.17	0-2	2
	1	36	23.50		2
	1	74	23.15		2
	36	0	22.20	0-3	3
	36	18	22.29		3
	36	37	22.10		3
	75	0	22.10		3
256QAM	1	0	19.91	0-5	5
	1	36	20.50		5
	1	74	20.10		5
	36	0	20.15		5
	36	18	20.15		5
	36	37	20.30		5
	75	0	20.16		5

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9.3.6 LTE Band 5

Table 9-11
LTE Band 5 (Cell) Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.50**	0	0
	1	25	24.46		0
	1	49	24.32		0
	25	0	23.37	0-1	1
	25	12	23.36		1
	25	25	**23.38**		1
	50	0	23.34		1
16QAM	1	0	23.86	24.6	1
	1	25	23.89		1
	1	49	23.86		1
	25	0	22.41	0-2	2
	25	12	22.44		2
	25	25	22.45		2
	50	0	22.35		2
64QAM	1	0	22.64	0-2	2
	1	25	22.59		2
	1	49	22.65		2
	25	0	21.36	0-3	3
	25	12	21.42		3
	25	25	21.45		3
	50	0	21.41		3
256QAM	1	0	19.16	0-5	5
	1	25	19.39		5
	1	49	19.10		5
	25	0	19.26		5
	25	12	19.43		5
	25	25	19.32		5
	50	0	19.37		5

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

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	1	0	LTE B5	5	20453	829.3	2453	874.3	QPSK	1	24	24.45	24.50

9.3.7 LTE Band 66

Table 9-13
LTE Band 66 (AWS) Measured P_{Max} – 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.20	23.35	**23.93**	0	0
	1	50	23.61	23.87	23.88		0
	1	99	23.48	23.36	23.75		0
	50	0	22.46	22.73	22.90	0-1	1
	50	25	22.68	22.85	22.84		1
	50	50	22.63	22.84	**22.95**		1
	100	0	22.53	22.69	22.92		1
16QAM	1	0	22.29	22.28	22.90	0-1	1
	1	50	22.59	22.84	23.10		1
	1	99	22.77	22.58	23.16		1
	50	0	21.43	21.71	21.86	0-2	2
	50	25	21.65	21.82	22.01		2
	50	50	21.60	21.91	21.98		2
	100	0	21.58	21.81	21.85		2
64QAM	1	0	21.27	21.50	21.81	0-2	2
	1	50	21.85	21.92	21.84		2
	1	99	21.54	21.82	21.97		2
	50	0	20.42	20.75	20.89	0-3	3
	50	25	20.63	20.93	21.02		3
	50	50	20.59	20.82	20.85		3
	100	0	20.56	20.68	21.02		3
256QAM	1	0	18.16	18.51	18.60	0-5	5
	1	50	18.61	18.83	18.86		5
	1	99	18.53	18.68	18.91		5
	50	0	18.37	18.80	18.88		5
	50	25	18.57	18.82	19.02		5
	50	50	18.53	18.88	18.96		5
	100	0	18.50	18.75	18.95		5

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Table 9-14
LTE Band 66 (AWS) Measured P_{Max} – 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.40	23.73	23.74	0	0
	1	25	23.73	24.04	24.14		0
	1	49	23.49	23.83	23.94		0
	25	0	22.61	22.90	22.91	0-1	1
	25	12	22.79	22.95	23.11		1
	25	25	22.67	22.91	23.00		1
	50	0	22.69	22.83	23.03		1
16QAM	1	0	22.18	22.60	22.57	0-1	1
	1	25	22.32	22.65	22.73		1
	1	49	22.53	22.64	22.71		1
	25	0	21.31	21.52	21.59	0-2	2
	25	12	21.44	21.62	21.72		2
	25	25	21.35	21.64	21.61		2
	50	0	21.36	21.47	21.64		2
64QAM	1	0	21.44	21.57	21.56	0-2	2
	1	25	21.48	21.55	21.69		2
	1	49	21.51	21.64	21.61		2
	25	0	20.39	20.49	20.57	0-3	3
	25	12	20.49	20.61	20.62		3
	25	25	20.35	20.62	20.71		3
	50	0	20.39	20.56	20.62		3
256QAM	1	0	18.26	18.37	18.58	0-5	5
	1	25	18.50	18.59	18.62		5
	1	49	18.41	18.35	18.41		5
	25	0	18.29	18.53	18.52		5
	25	12	18.37	18.63	18.66		5
	25	25	18.35	18.57	18.63		5
	50	0	18.38	18.49	18.57		5

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

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	23.79	23.93
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	24.00	23.74

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Table 9-16
LTE Band 66 (AWS) 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 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	18.33	18.70	19.03	0	0
	1	50	18.74	18.83	**19.13**		0
	1	99	18.83	18.75	19.01		0
	50	0	18.44	18.84	18.95	0-1	0
	50	25	18.78	18.95	18.96		0
	50	50	18.67	18.83	**18.97**		0
	100	0	18.69	18.88	18.95		0
16QAM	1	0	18.27	18.76	19.18	0-1	0
	1	50	18.70	18.92	19.20		0
	1	99	18.38	19.07	19.27		0
	50	0	18.47	18.74	18.89	0-2	0
	50	25	18.68	18.99	18.99		0
	50	50	18.75	18.96	19.05		0
	100	0	18.61	18.89	19.00		0
64QAM	1	0	18.35	18.83	19.12	0-2	0
	1	50	18.86	19.33	19.21		0
	1	99	18.71	18.90	19.08		0
	50	0	18.67	18.80	18.88	0-3	0
	50	25	18.88	18.87	19.09		0
	50	50	18.86	18.89	19.02		0
	100	0	18.71	18.86	18.92		0
256QAM	1	0	18.12	18.27	18.07	0-5	0.5
	1	50	18.46	18.28	18.73		0.5
	1	99	18.06	18.41	18.48		0.5
	50	0	18.35	18.34	18.45		0.5
	50	25	18.53	18.48	18.53		0.5
	50	50	18.40	18.42	18.49		0.5
	100	0	18.43	18.25	18.51		0.5

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Table 9-17
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), 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	18.54	18.77	18.84	0	0
	1	25	18.83	19.10	19.18		0
	1	49	18.68	18.90	19.03		0
	25	0	18.71	18.95	19.03	0-1	0
	25	12	18.85	19.01	19.19		0
	25	25	18.81	18.99	19.13		0
	50	0	18.83	18.97	19.12		0
16QAM	1	0	18.59	18.61	18.82	0-1	0
	1	25	18.77	18.83	19.04		0
	1	49	18.54	18.74	18.95		0
	25	0	18.47	18.72	18.83	0-2	0
	25	12	18.64	18.76	18.97		0
	25	25	18.61	18.79	18.82		0
	50	0	18.50	18.63	18.80		0
64QAM	1	0	18.48	18.58	18.71	0-2	0
	1	25	18.63	18.83	18.84		0
	1	49	18.43	18.78	18.78		0
	25	0	18.38	18.71	18.79	0-3	0
	25	12	18.68	18.81	18.85		0
	25	25	18.47	18.84	18.87		0
	50	0	18.64	18.74	18.90		0
256QAM	1	0	18.18	18.42	18.34	0-5	0.5
	1	25	18.43	18.57	18.47		0.5
	1	49	18.48	18.49	18.52		0.5
	25	0	18.28	18.39	18.64		0.5
	25	12	18.47	18.59	18.76		0.5
	25	25	18.36	18.57	18.66		0.5
	50	0	18.33	18.51	18.69		0.5

Table 9-18
LTE Band 66 (AWS) 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)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	18.53	18.75
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	50	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	50	50	18.46	18.84
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	18.46	18.90
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	25	0	LTE B66	10	132223	1735.1	66588	2135.1	QPSK	25	25	18.51	18.95

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9.3.8 LTE Band 25

Table 9-19
LTE Band 25 (PCS) Measured P_{Max} – 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**23.77**	23.55	23.56	0	0
	1	50	23.74	23.43	23.54		0
	1	99	23.64	23.47	23.52		0
	50	0	**22.77**	22.55	22.60	0-1	1
	50	25	22.68	22.56	22.46		1
	50	50	22.62	22.52	22.49		1
	100	0	22.61	22.45	22.36		1
16QAM	1	0	22.75	22.49	22.58	0-1	1
	1	50	22.70	22.34	22.54		1
	1	99	22.62	22.45	22.63		1
	50	0	21.71	21.49	21.46	0-2	2
	50	25	21.69	21.48	21.50		2
	50	50	21.52	21.52	21.58		2
	100	0	21.50	21.46	21.41		2
64QAM	1	0	21.71	21.45	21.50	0-2	2
	1	50	21.74	21.30	21.53		2
	1	99	21.69	21.43	21.58		2
	50	0	20.73	20.54	20.47	0-3	3
	50	25	20.62	20.55	20.43		3
	50	50	20.62	20.45	20.54		3
	100	0	20.58	20.45	20.36		3
256QAM	1	0	18.37	18.12	18.21	0-5	5
	1	50	18.78	18.46	18.15		5
	1	99	18.30	18.13	18.18		5
	50	0	18.56	18.36	18.32		5
	50	25	18.59	18.51	18.43		5
	50	50	18.55	18.48	18.48		5
	100	0	18.48	18.41	18.42		5

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Table 9-20
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	**19.60**	19.36	19.43	0	0
	1	50	19.51	19.30	19.42		0
	1	99	19.48	19.25	19.30		0
	50	0	**19.46**	19.23	19.25	0-1	0
	50	25	19.44	19.31	19.28		0
	50	50	19.38	19.28	19.33		0
	100	0	19.37	19.21	19.17		0
16QAM	1	0	19.50	19.34	19.14	0-1	0
	1	50	19.45	19.43	19.27		0
	1	99	19.45	19.36	19.23		0
	50	0	19.53	19.32	19.26	0-2	0
	50	25	19.43	19.27	19.16		0
	50	50	19.34	19.28	19.35		0
	100	0	19.37	19.26	19.16		0
64QAM	1	0	19.55	19.38	19.34	0-2	0
	1	50	19.49	19.28	19.45		0
	1	99	19.47	19.25	19.33		0
	50	0	19.50	19.35	19.21	0-3	0
	50	25	19.45	19.34	19.25		0
	50	50	19.37	19.25	19.36		0
	100	0	19.33	19.22	19.11		0
256QAM	1	0	18.30	18.20	18.15	0-5	0.8
	1	50	18.69	18.61	18.53		0.8
	1	99	18.36	18.22	18.20		0.8
	50	0	18.51	18.36	18.31		0.8
	50	25	18.57	18.51	18.43		0.8
	50	50	18.58	18.45	18.52		0.8
	100	0	18.54	18.44	18.30		0.8

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Table 9-21
LTE Band 25 (PCS) Measured P_{Limit} 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	18.49	18.36	18.28	0	0
	1	50	**18.57**	18.27	18.31		0
	1	99	18.43	18.26	18.25		0
	50	0	**18.51**	18.32	18.23	0-1	0
	50	25	18.42	18.28	18.30		0
	50	50	18.31	18.22	18.32		0
	100	0	18.27	18.24	18.16		0
16QAM	1	0	18.50	18.36	18.17	0-1	0
	1	50	18.45	18.21	18.26		0
	1	99	18.40	18.20	18.29		0
	50	0	18.51	18.33	18.26	0-2	0
	50	25	18.45	18.33	18.24		0
	50	50	18.31	18.23	18.27		0
	100	0	18.35	18.28	18.16		0
64QAM	1	0	18.51	18.41	18.28	0-2	0
	1	50	18.53	18.31	18.33		0
	1	99	18.34	18.25	18.23		0
	50	0	18.52	18.34	18.21	0-3	0
	50	25	18.42	18.32	18.23		0
	50	50	18.40	18.28	18.27		0
	100	0	18.34	18.25	18.09		0
256QAM	1	0	17.99	17.94	17.88	0-5	0.3
	1	50	18.67	18.60	18.37		0.3
	1	99	18.03	17.99	18.06		0.3
	50	0	18.32	18.08	18.07		0.3
	50	25	18.45	18.28	18.25		0.3
	50	50	18.31	18.26	18.28		0.3
	100	0	18.26	18.20	18.16		0.3

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9.3.9 LTE Band 30 Antenna A

Table 9-22
LTE Band 30 Antenna A Measured P_{Max} – 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	22.33	0	0
	1	25	**22.44**		0
	1	49	22.24		0
	25	0	21.29	0-1	1
	25	12	**21.35**		1
	25	25	21.21		1
	50	0	21.23		1
16QAM	1	0	21.56	0-1	1
	1	25	21.61		1
	1	49	21.56		1
	25	0	20.29	0-2	2
	25	12	20.41		2
	25	25	20.23		2
	50	0	20.24		2
64QAM	1	0	20.47	0-2	2
	1	25	20.60		2
	1	49	20.32		2
	25	0	19.27	0-3	3
	25	12	19.37		3
	25	25	19.25		3
	50	0	19.22		3
256QAM	1	0	17.19	0-5	5
	1	25	17.47		5
	1	49	17.15		5
	25	0	17.27		5
	25	12	17.37		5
	25	25	17.22		5
	50	0	17.25		5

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Table 9-23
LTE Band 30 Antenna A 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	20.04	0	0
	1	25	**20.14**		0
	1	49	19.89		0
	25	0	19.83	0-1	0
	25	12	**19.96**		0
	25	25	19.82		0
	50	0	19.88		0
16QAM	1	0	20.41	0-1	0
	1	25	20.25		0
	1	49	20.13		0
	25	0	19.91	0-2	0
	25	12	19.99		0
	25	25	19.84		0
	50	0	19.85		0
64QAM	1	0	20.13	0-2	0
	1	25	20.07		0
	1	49	19.86		0
	25	0	19.44	0-3	0.5
	25	12	19.47		0.5
	25	25	19.39		0.5
	50	0	19.37		0.5
256QAM	1	0	17.13	0-5	2.5
	1	25	17.76		2.5
	1	49	17.23		2.5
	25	0	17.36		2.5
	25	12	17.45		2.5
	25	25	17.44		2.5
	50	0	17.45		2.5

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Table 9-24
LTE Band 30 Antenna A 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	18.83	0	0
	1	25	**18.86**		0
	1	49	18.69		0
	25	0	18.73	0-1	0
	25	12	**18.84**		0
	25	25	18.69		0
	50	0	18.70		0
16QAM	1	0	19.08	0-1	0
	1	25	19.10		0
	1	49	18.83		0
	25	0	18.76	0-2	0
	25	12	18.88		0
	25	25	18.72		0
	50	0	18.76		0
64QAM	1	0	19.08	0-2	0
	1	25	19.16		0
	1	49	19.03		0
	25	0	18.77	0-3	0
	25	12	18.88		0
	25	25	18.76		0
	50	0	18.72		0
256QAM	1	0	17.30	0-5	1.5
	1	25	17.55		1.5
	1	49	17.42		1.5
	25	0	17.33		1.5
	25	12	17.31		1.5
	25	25	17.34		1.5
	50	0	17.24		1.5

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9.3.10 LTE Band 30 Antenna B

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

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	22.59	0	0
	1	25	**22.67**		0
	1	49	22.54		0
	25	0	21.53	0-1	1
	25	12	**21.58**		1
	25	25	21.57		1
	50	0	21.40		1
16QAM	1	0	21.93	0-1	1
	1	25	21.90		1
	1	49	21.79		1
	25	0	20.49	0-2	2
	25	12	20.56		2
	25	25	20.54		2
	50	0	20.41		2
64QAM	1	0	20.67	0-2	2
	1	25	20.92		2
	1	49	20.79		2
	25	0	19.43	0-3	3
	25	12	19.45		3
	25	25	19.47		3
	50	0	19.35		3
256QAM	1	0	17.32	0-5	5
	1	25	17.75		5
	1	49	17.36		5
	25	0	17.47		5
	25	12	17.61		5
	25	25	17.57		5
	50	0	17.42		5

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Table 9-26
LTE Band 30 Antenna B 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	**20.30**	0	0
	1	25	20.18		0
	1	49	19.95		0
	25	0	**20.13**	0-1	0
	25	12	20.07		0
	25	25	20.09		0
	50	0	20.02		0
16QAM	1	0	20.45	0-1	0
	1	25	20.27		0
	1	49	20.50		0
	25	0	20.05	0-2	0
	25	12	20.13		0
	25	25	20.10		0
	50	0	20.06		0
64QAM	1	0	20.25	0-2	0
	1	25	20.24		0
	1	49	20.28		0
	25	0	19.38	0-3	0.5
	25	12	19.34		0.5
	25	25	19.40		0.5
	50	0	19.30		0.5
256QAM	1	0	17.35	0-5	2.5
	1	25	17.65		2.5
	1	49	17.39		2.5
	25	0	17.38		2.5
	25	12	17.40		2.5
	25	25	17.33		2.5
	50	0	17.31		2.5

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Table 9-27
LTE Band 30 Antenna B 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	19.23	0	0
	1	25	**19.24**		0
	1	49	19.03		0
	25	0	19.17	0-1	0
	25	12	**19.23**		0
	25	25	19.16		0
	50	0	19.14		0
16QAM	1	0	19.49	0-1	0
	1	25	19.26		0
	1	49	19.39		0
	25	0	19.14	0-2	0
	25	12	19.21		0
	25	25	19.15		0
	50	0	19.04		0
64QAM	1	0	19.45	0-2	0
	1	25	19.36		0
	1	49	19.23		0
	25	0	19.08	0-3	0
	25	12	19.15		0
	25	25	19.13		0
	50	0	19.03		0
256QAM	1	0	17.45	0-5	1.5
	1	25	17.88		1.5
	1	49	17.26		1.5
	25	0	17.63		1.5
	25	12	17.65		1.5
	25	25	17.63		1.5
	50	0	17.65		1.5

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9.3.11 LTE Band 7

Table 9-28
LTE Band 7 Measured P_{Max} - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.61	22.52	22.89	0	0
	1	50	22.80	23.01	22.72		0
	1	99	22.41	23.00	**23.02**		0
	50	0	21.56	21.58	21.83	0-1	1
	50	25	21.67	21.67	21.84		1
	50	50	21.58	21.71	**21.85**		1
	100	0	21.59	21.56	21.70		1
16QAM	1	0	21.80	21.78	22.02	0-1	1
	1	50	21.86	22.02	22.05		1
	1	99	21.75	21.97	21.73		1
	50	0	20.57	20.66	20.78	0-2	2
	50	25	20.71	20.67	20.87		2
	50	50	20.71	20.80	20.80		2
	100	0	20.61	20.54	20.73		2
64QAM	1	0	20.69	20.75	21.08	0-2	2
	1	50	20.54	20.96	21.15		2
	1	99	20.73	20.73	20.94		2
	50	0	19.52	19.72	19.78	0-3	3
	50	25	19.63	19.67	19.81		3
	50	50	19.60	19.71	19.80		3
	100	0	19.51	19.63	19.65		3
256QAM	1	0	17.15	17.36	17.65	0-5	5
	1	50	17.67	17.99	18.00		5
	1	99	17.54	17.65	17.27		5
	50	0	17.47	17.56	17.66		5
	50	25	17.60	17.67	17.80		5
	50	50	17.56	17.65	17.75		5
	100	0	17.59	17.53	17.68		5

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Table 9-29
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.00	18.95	**19.27**	0	0
	1	50	18.96	18.97	19.08		0
	1	99	18.73	19.26	19.05		0
	50	0	18.82	18.87	18.95	0-1	0
	50	25	18.94	18.82	**19.01**		0
	50	50	18.80	18.95	18.98		0
	100	0	18.82	18.76	18.83		0
16QAM	1	0	19.00	18.99	19.27	0-1	0
	1	50	19.10	19.15	19.39		0
	1	99	18.98	19.26	19.31		0
	50	0	18.81	18.93	19.08	0-2	0
	50	25	18.98	18.96	19.01		0
	50	50	18.80	18.94	18.99		0
	100	0	18.83	18.84	18.82		0
64QAM	1	0	18.97	19.15	19.34	0-2	0
	1	50	19.13	19.00	19.30		0
	1	99	19.01	19.17	19.08		0
	50	0	18.80	18.88	19.01	0-3	0
	50	25	18.96	18.83	18.91		0
	50	50	18.86	18.89	18.90		0
	100	0	18.87	18.74	18.85		0
256QAM	1	0	17.01	17.50	17.48	0-5	1.5
	1	50	17.57	17.81	17.56		1.5
	1	99	17.07	17.48	17.18		1.5
	50	0	17.27	17.32	17.50		1.5
	50	25	17.40	17.41	17.41		1.5
	50	50	17.29	17.37	17.40		1.5
	100	0	17.25	17.34	17.36		1.5

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9.3.12 LTE Band 41

Table 9-30
LTE Band 41 PC3 Measured P_{Max} – 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.53	23.88	23.56	23.48	23.40	0	0
	1	50	23.55	24.01	**24.06**	23.98	23.79		0
	1	99	23.59	23.92	23.68	23.44	23.49		0
	50	0	22.60	22.84	22.77	22.76	22.48	0-1	1
	50	25	22.65	22.94	**23.01**	22.95	22.66		1
	50	50	22.63	22.90	22.94	22.76	22.70		1
	100	0	22.57	22.82	22.90	22.78	22.52		1
16QAM	1	0	22.64	23.00	22.60	22.63	22.46	0-1	1
	1	50	22.77	23.10	23.09	23.00	23.07		1
	1	99	22.66	22.91	22.72	22.42	22.76		1
	50	0	21.63	21.85	21.78	21.77	21.47	0-2	2
	50	25	21.67	21.97	22.04	21.95	21.68		2
	50	50	21.67	21.89	21.94	21.75	21.74		2
	100	0	21.61	21.82	21.87	21.80	21.57		2
64QAM	1	0	21.75	21.95	21.48	21.41	21.36	0-2	2
	1	50	21.62	22.03	21.96	21.85	21.68		2
	1	99	21.63	21.86	21.59	21.37	21.40		2
	50	0	20.62	20.84	20.76	20.75	20.47	0-3	3
	50	25	20.63	20.93	21.02	20.92	20.64		3
	50	50	20.61	20.89	20.94	20.76	20.70		3
	100	0	20.61	20.83	20.88	20.78	20.52		3
256QAM	1	0	18.38	18.44	18.41	18.55	18.34	0-5	5
	1	50	18.76	18.95	18.89	18.96	18.69		5
	1	99	18.42	18.55	18.77	18.34	18.35		5
	50	0	18.51	18.71	18.75	18.69	18.45		5
	50	25	18.70	18.88	18.98	18.85	18.61		5
	50	50	18.58	18.73	18.88	18.70	18.66		5
	100	0	18.58	18.81	18.85	18.75	18.51		5

Table 9-31
LTE Band 41 PC2 Measured P_{Max} – 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	25.41	25.48	25.06	25.20	25.09	0	0
	1	50	25.43	25.55	25.65	25.53	25.48		0
	1	99	25.46	25.43	25.24	25.04	25.49		0
	50	0	24.29	24.42	24.23	24.35	24.22	0-1	1
	50	25	24.44	24.46	24.42	24.44	24.38		1
	50	50	24.42	24.41	24.36	24.28	24.44		1
	100	0	24.35	24.34	24.36	24.33	24.30		1

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Table 9-32
LTE Band 41 Uplink Carrier Aggregation Measured P_{Max}

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	23.80	23.59
CA_41C	LTE B41	20	40620	2593.0	QPSK	1	99	LTE B41	20	40818	2612.8	QPSK	1	0	23.78	23.68

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	25.48	25.46
CA_41C	LTE B41 PC2	20	40620	2593.0	QPSK	1	99	LTE B41 PC2	20	40818	2612.8	QPSK	1	0	25.54	25.24

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	20.72	20.90	20.55	20.55	20.30	0	0
	1	50	20.77	20.98	**21.01**	20.75	20.70		0
	1	99	20.83	20.92	20.65	20.20	20.50		0
	50	0	20.74	20.85	20.77	20.40	20.32	0-1	0
	50	25	20.84	20.90	**20.96**	20.73	20.56		0
	50	50	20.80	20.91	20.88	20.54	20.65		0
	100	0	20.74	20.84	20.87	20.65	20.51		0
16QAM	1	0	20.79	20.80	20.47	20.59	20.63	0-1	0
	1	50	20.77	20.83	21.00	20.85	20.71		0
	1	99	20.61	20.89	20.56	20.36	20.51		0
	50	0	20.72	20.67	20.79	20.73	20.70	0-2	0
	50	25	20.88	20.83	21.01	20.80	20.80		0
	50	50	20.81	20.81	20.87	20.67	20.64		0
	100	0	20.76	20.70	20.86	20.65	20.34		0
64QAM	1	0	20.85	20.69	20.50	20.63	20.87	0-2	0
	1	50	20.90	20.72	20.92	20.88	20.77		0
	1	99	20.84	20.77	20.59	20.70	20.47		0
	50	0	20.67	20.72	20.77	20.75	20.67	0-3	0
	50	25	20.77	20.75	20.96	20.89	20.66		0
	50	50	20.75	20.80	20.81	20.66	20.56		0
	100	0	20.70	20.69	20.84	20.74	20.61		0
256QAM	1	0	18.19	18.34	18.50	18.39	18.12	0-5	2
	1	50	18.60	18.77	18.81	18.63	18.52		2
	1	99	18.50	18.33	18.51	18.19	18.42		2
	50	0	18.46	18.65	18.65	18.52	18.30		2
	50	25	18.70	18.52	18.89	18.64	18.46		2
	50	50	18.71	18.70	18.75	18.50	18.60		2
	100	0	18.60	18.68	18.77	18.57	18.57		2

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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	22.44	22.65	22.39	22.37	22.19	0	0
	1	50	22.68	22.69	22.70	22.55	22.65		0
	1	99	22.56	22.71	22.78	22.25	22.53		0
	50	0	22.43	22.54	22.48	22.35	22.18	0-1	0
	50	25	22.54	22.64	22.68	22.45	22.30		0
	50	50	22.51	22.60	22.52	22.21	22.40		0
	100	0	22.42	22.55	22.55	22.38	22.17		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	40620	2593.0	QPSK	50	50	LTE B41	20	40818	2612.8	QPSK	50	0	20.71	20.88

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	40620	2593.0	QPSK	50	50	LTE B41 PC2	20	40818	2612.8	QPSK	50	0	22.42	22.52

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9.3.13 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	19.02	18.98	19.01	19.06	0	0
	1	50	19.07	19.14	**19.21**	19.16		0
	1	99	19.04	19.02	19.02	19.10		0
	50	0	18.84	19.04	19.01	19.03	0-1	0
	50	25	19.05	19.19	**19.27**	19.12		0
	50	50	18.99	19.06	19.15	19.08		0
	100	0	18.94	19.09	19.02	19.02		0
16QAM	1	0	19.00	19.02	19.41	19.18	0-1	0
	1	50	19.14	19.18	19.32	19.31		0
	1	99	19.21	19.07	19.29	19.27		0
	50	0	18.89	19.06	19.07	19.05	0-2	0
	50	25	19.08	19.27	19.26	19.12		0
	50	50	19.05	19.12	19.14	19.10		0
	100	0	18.97	19.10	19.08	19.04		0
64QAM	1	0	19.05	19.04	19.16	19.08	0-2	0
	1	50	19.15	19.17	19.29	19.14		0
	1	99	19.07	19.15	19.14	19.16		0
	50	0	18.89	19.09	19.02	19.03	0-3	0
	50	25	19.12	19.24	19.23	19.12		0
	50	50	19.01	19.14	19.13	19.08		0
	100	0	18.95	19.11	19.12	19.01		0
256QAM	1	0	17.07	17.35	17.25	17.27	0-5	1.5
	1	50	17.63	17.69	17.80	17.64		1.5
	1	99	17.26	17.36	17.44	17.30		1.5
	50	0	17.39	17.55	17.56	17.56		1.5
	50	25	17.58	17.71	17.75	17.62		1.5
	50	50	17.55	17.57	17.69	17.58		1.5
	100	0	17.48	17.58	17.54	17.55		1.5

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	56207	3646.7	QPSK	1	99	LTE B48	20	56405	3666.5	QPSK	1	0	19.00	19.02

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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	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	16.83	17.01	16.95	17.28	0	0
	1	50	16.94	17.09	17.04	**17.43**		0
	1	99	16.86	17.11	17.05	17.27		0
	50	0	16.83	16.96	16.96	17.21	0-1	0
	50	25	16.97	17.13	17.15	**17.30**		0
	50	50	16.86	17.03	17.00	17.27		0
	100	0	16.85	17.00	17.02	17.20		0
16QAM	1	0	16.84	16.96	16.92	17.34	0-1	0
	1	50	16.97	17.10	17.23	17.52		0
	1	99	16.88	17.07	17.05	17.25		0
	50	0	16.87	16.96	16.94	17.19	0-2	0
	50	25	16.97	17.16	17.13	17.29		0
	50	50	16.87	17.00	17.02	17.23		0
	100	0	16.83	17.01	17.01	17.19		0
64QAM	1	0	16.82	16.86	16.76	17.15	0-2	0
	1	50	16.80	17.05	16.95	17.36		0
	1	99	16.78	17.01	16.96	17.21		0
	50	0	16.76	16.97	16.95	17.23	0-3	0
	50	25	16.90	17.14	17.16	17.33		0
	50	50	16.85	17.07	17.00	17.23		0
	100	0	16.83	17.03	16.99	17.21		0
256QAM	1	0	16.78	16.83	16.85	16.88	0-5	0
	1	50	16.98	17.05	17.05	17.25		0
	1	99	16.77	16.88	16.84	16.93		0
	50	0	16.78	16.98	17.01	17.22		0
	50	25	16.93	17.15	17.18	17.27		0
	50	50	16.89	17.00	17.00	17.24		0
	100	0	16.85	17.04	17.04	17.21		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	56640	3690.0	QPSK	50	0	LTE B48	20	56442	3670.2	QPSK	50	50	17.47	17.21

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 π/2 BPSK	1	1	24.48	0	0.0
	1	53	24.43		0.0
	1	104	24.38		0.0
	50	0	24.09	0-0.5	0.5
	50	28	24.44	0	0.0
	50	56	23.89	0-0.5	0.5
	100	0	24.01		0.5
DFT-s-OFDM QPSK	1	1	24.22	0	0.0
	1	53	**24.23**		0.0
	1	104	24.16		0.0
	50	0	23.48	0-1	1.0
	50	28	**24.40**	0	0.0
	50	56	23.39	0-1	1.0
	100	0	23.49		1.0
DFT-s-OFDM 16QAM	1	1	23.92	0-1	1.0
CP-OFDM QPSK	1	1	22.89	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	24.14	0	0.0
	1	40	24.22		0.0
	1	77	24.18		0.0
	36	0	23.79	0-0.5	0.5
	36	22	24.39	0	0.0
	36	43	23.78	0-0.5	0.5
	75	0	23.95		0.5
DFT-s-OFDM QPSK	1	1	24.09	0	0.0
	1	40	**24.16**		0.0
	1	77	24.13		0.0
	36	0	23.37	0-1	1.0
	36	22	**24.37**	0	0.0
	36	43	23.35	0-1	1.0
	75	0	23.41		1.0
DFT-s-OFDM 16QAM	1	1	23.59	0-1	1.0
CP-OFDM QPSK	1	1	22.65	0-1.5	1.5

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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	24.17	0	0.0
	1	53	24.03		0.0
	1	104	23.69		0.0
	50	0	23.71	0-0.5	0.5
	50	28	24.12	0	0.0
	50	56	23.47	0-0.5	0.5
	100	0	23.63		0.5
DFT-s-OFDM QPSK	1	1	**24.08**	0	0.0
	1	53	23.90		0.0
	1	104	23.65		0.0
	50	0	23.18	0-1	1.0
	50	28	**24.13**	0	0.0
	50	56	23.01	0-1	1.0
	100	0	23.10		1.0
DFT-s-OFDM 16QAM	1	1	23.60	0-1	1.0
CP-OFDM QPSK	1	1	22.77	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		
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	22.90	0	0.0
	1	108	22.86		0.0
	1	214	22.82		0.0
	108	0	22.86	0-0.5	0.0
	108	54	22.84	0	0.0
	108	108	23.01	0-0.5	0.0
	216	0	22.90		0.0
DFT-s-OFDM QPSK	1	1	22.69	0	0.0
	1	108	22.63		0.0
	1	214	**22.80**		0.0
	108	0	22.73	0-1	0.0
	108	54	22.77	0	0.0
	108	108	**22.94**	0-1	0.0
	216	0	22.79		0.0
DFT-s-OFDM 16QAM	1	1	22.93	0-1	0.0
CP-OFDM QPSK	1	1	22.64	0-1.5	0.0

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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	19.75	0	0.0
	1	108	19.94		0.0
	1	214	19.93		0.0
	108	0	19.80	0-0.5	0.0
	108	54	19.85	0	0.0
	108	108	19.97	0-0.5	0.0
	216	0	19.91		0.0
DFT-s-OFDM QPSK	1	1	19.61	0	0.0
	1	108	**19.77**		0.0
	1	214	19.73		0.0
	108	0	19.82	0-1	0.0
	108	54	19.84	0	0.0
	108	108	**19.96**	0-1	0.0
	216	0	19.76		0.0
DFT-s-OFDM 16QAM	1	1	19.98	0-1	0.0
CP-OFDM QPSK	1	1	19.59	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 $\pi/2$ BPSK	1	1	18.58	0	0.0
	1	108	18.57		0.0
	1	214	18.43		0.0
	108	0	18.65	0-0.5	0.0
	108	54	18.68	0	0.0
	108	108	18.72	0-0.5	0.0
	216	0	18.74		0.0
DFT-s-OFDM QPSK	1	1	18.45	0	0.0
	1	108	**18.61**		0.0
	1	214	18.51		0.0
	108	0	18.58	0-1	0.0
	108	54	18.71	0	0.0
	108	108	**18.73**	0-1	0.0
	216	0	18.60		0.0
DFT-s-OFDM 16QAM	1	1	18.89	0-1	0.0
CP-OFDM QPSK	1	1	18.45	0-1.5	0.0

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9.4.5 NR Band n66 Antenna F

Table 9-46
NR Band n66 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 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	20.14	0	0.0
	1	108	20.11		0.0
	1	214	20.17		0.0
	108	0	20.26	0-0.5	0.0
	108	54	20.27	0	0.0
	108	108	20.41	0-0.5	0.0
	216	0	20.29		0.0
DFT-s-OFDM QPSK	1	1	20.04	0	0.0
	1	108	20.02		0.0
	1	214	**20.22**		0.0
	108	0	20.27	0-1	0.0
	108	54	20.30	0	0.0
	108	108	**20.38**	0-1	0.0
	216	0	20.21		0.0
DFT-s-OFDM 16QAM	1	1	20.50	0-1	0.0
CP-OFDM QPSK	1	1	20.14	0-1.5	0.0

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Table 9-47
NR Band n66 Antenna F 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	18.03	0	0.0
	1	108	18.01		0.0
	1	214	18.05		0.0
	108	0	18.18	0-0.5	0.0
	108	54	18.23	0	0.0
	108	108	18.22	0-0.5	0.0
	216	0	18.19		0.0
DFT-s-OFDM QPSK	1	1	**18.19**	0	0.0
	1	108	18.05		0.0
	1	214	18.09		0.0
	108	0	18.17	0-1	0.0
	108	54	18.20	0	0.0
	108	108	**18.27**	0-1	0.0
	216	0	18.18		0.0
DFT-s-OFDM 16QAM	1	1	18.30	0-1	0.0
CP-OFDM QPSK	1	1	18.00	0-1.5	0.0

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9.4.6 NR Band n25 Antenna A

Table 9-48
NR Band n25 Antenna A Measured P_{Max} 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	23.85	0	0.0
	1	108	23.72		0.0
	1	214	23.76		0.0
	108	0	23.52	0-0.5	0.5
	108	54	24.03	0	0.0
	108	108	23.46	0-0.5	0.5
	216	0	23.51		0.5
DFT-s-OFDM QPSK	1	1	23.75	0	0.0
	1	108	**23.76**		0.0
	1	214	23.70		0.0
	108	0	23.02	0-1	1.0
	108	54	**24.11**	0	0.0
	108	108	23.00	0-1	1.0
	216	0	23.08		1.0
DFT-s-OFDM 16QAM	1	1	23.39	0-1	1.0
CP-OFDM QPSK	1	1	22.57	0-1.5	1.5

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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	19.82	0	0.0
	1	108	19.94		0.0
	1	214	19.87		0.0
	108	0	19.97	0-0.5	0.0
	108	54	19.95	0	0.0
	108	108	20.00	0-0.5	0.0
	216	0	19.97		0.0
DFT-s-OFDM QPSK	1	1	19.74	0	0.0
	1	108	**19.90**		0.0
	1	214	19.70		0.0
	108	0	19.95	0-1	0.0
	108	54	**20.00**	0	0.0
	108	108	19.99	0-1	0.0
	216	0	19.89		0.0
DFT-s-OFDM 16QAM	1	1	20.00	0-1	0.0
CP-OFDM QPSK	1	1	19.86	0-1.5	0.0

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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		
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	17.82	0	0.0
	1	108	17.82		0.0
	1	214	17.81		0.0
	108	0	18.00	0-0.5	0.0
	108	54	17.82	0	0.0
	108	108	17.98	0-0.5	0.0
	216	0	17.93		0.0
DFT-s-OFDM QPSK	1	1	**17.81**	0	0.0
	1	108	17.68		0.0
	1	214	17.57		0.0
	108	0	17.90	0-1	0.0
	108	54	17.86	0	0.0
	108	108	**17.94**	0-1	0.0
	216	0	17.80		0.0
DFT-s-OFDM 16QAM	1	1	17.87	0-1	0.0
CP-OFDM QPSK	1	1	17.80	0-1.5	0.0

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9.4.7 NR Band n25 Antenna F

Table 9-51
NR Band n25 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 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	21.29	0	0.0
	1	108	21.38		0.0
	1	214	21.23		0.0
	108	0	21.47	0-0.5	0.0
	108	54	21.46	0	0.0
	108	108	21.48	0-0.5	0.0
	216	0	21.43		0.0
DFT-s-OFDM QPSK	1	1	21.33	0	0.0
	1	108	**21.39**		0.0
	1	214	21.27		0.0
	108	0	**21.50**	0-1	0.0
	108	54	21.45	0	0.0
	108	108	21.49	0-1	0.0
	216	0	21.38		0.0
DFT-s-OFDM 16QAM	1	1	21.26	0-1	0.0
CP-OFDM QPSK	1	1	21.29	0-1.5	0.0

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Table 9-52
NR Band n25 Antenna F 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	20.17	0	0.0
	1	108	20.22		0.0
	1	214	20.11		0.0
	108	0	20.32	0-0.5	0.0
	108	54	20.34	0	0.0
	108	108	20.42	0-0.5	0.0
	216	0	20.30		0.0
DFT-s-OFDM QPSK	1	1	20.16	0	0.0
	1	108	**20.33**		0.0
	1	214	20.22		0.0
	108	0	20.34	0-1	0.0
	108	54	20.36	0	0.0
	108	108	**20.41**	0-1	0.0
	216	0	20.32		0.0
DFT-s-OFDM 16QAM	1	1	20.50	0-1	0.0
CP-OFDM QPSK	1	1	20.12	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_{Max} - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	22.38	0	0.0
	1	26	22.43		0.0
	1	50	22.42		0.0
	25	0	22.00	0-0.5	0.5
	25	14	22.55	0	0.0
	25	27	22.01	0-0.5	0.5
	50	0	22.09		0.5
DFT-s-OFDM QPSK	1	1	**22.43**	0	0.0
	1	26	22.34		0.0
	1	50	22.28		0.0
	25	0	21.43	0-1	1.0
	25	14	**22.55**	0	0.0
	25	27	21.53	0-1	1.0
	50	0	21.55		1.0
DFT-s-OFDM 16QAM	1	1	21.87	0-1	1.0
CP-OFDM QPSK	1	1	20.94	0-1.5	1.5

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Table 9-54
NR Band n30 Antenna A Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active), DSI = 3 (Hotspot Mode), 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	18.47	0	0.0
	1	26	18.49		0.0
	1	50	18.42		0.0
	25	0	18.44	0-0.5	0.0
	25	14	18.51	0	0.0
	25	27	18.48	0-0.5	0.0
	50	0	18.49		0.0
DFT-s-OFDM QPSK	1	1	18.35	0	0.0
	1	26	**18.43**		0.0
	1	50	18.27		0.0
	25	0	18.38	0-1	0.0
	25	14	**18.50**	0	0.0
	25	27	18.42	0-1	0.0
	50	0	18.42		0.0
DFT-s-OFDM 16QAM	1	1	18.79	0-1	0.0
CP-OFDM QPSK	1	1	18.38	0-1.5	0.0

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9.4.9 NR Band n30 Antenna B

Table 9-55
NR Band n30 Antenna B Measured P_{Max} - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	22.97	0	0.0
	1	26	22.88		0.0
	1	50	22.89		0.0
	25	0	22.51	0-0.5	0.5
	25	14	22.98	0	0.0
	25	27	22.53	0-0.5	0.5
	50	0	22.53		0.5
DFT-s-OFDM QPSK	1	1	**23.35**	0	0.0
	1	26	23.02		0.0
	1	50	22.54		0.0
	25	0	22.08	0-1	1.0
	25	14	**22.88**	0	0.0
	25	27	22.09	0-1	1.0
	50	0	22.11		1.0
DFT-s-OFDM 16QAM	1	1	22.16	0-1	1.0
CP-OFDM QPSK	1	1	21.78	0-1.5	1.5

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Table 9-56
NR Band n30 Antenna B Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active), DSI = 3 (Hotspot Mode), 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	19.04	0	0.0
	1	26	19.10		0.0
	1	50	19.15		0.0
	25	0	19.03	0-0.5	0.0
	25	14	19.07	0	0.0
	25	27	19.10	0-0.5	0.0
	50	0	19.08		0.0
DFT-s-OFDM QPSK	1	1	18.96	0	0.0
	1	26	**19.10**		0.0
	1	50	18.95		0.0
	25	0	19.05	0-1	0.0
	25	14	**19.15**	0	0.0
	25	27	19.05	0-1	0.0
	50	0	19.09		0.0
DFT-s-OFDM 16QAM	1	1	19.18	0-1	0.0
CP-OFDM QPSK	1	1	19.03	0-1.5	0.0

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9.4.10 NR Band n30 Antenna F

Table 9-57
NR Band n30 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack Active)- 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	21.95	0	0.0
	1	26	21.93		0.0
	1	50	21.94		0.0
	25	0	21.97	0-0.5	0.0
	25	14	21.98	0	0.0
	25	27	21.93	0-0.5	0.0
	50	0	21.92		0.0
DFT-s-OFDM QPSK	1	1	21.85	0	0.0
	1	26	**21.91**		0.0
	1	50	21.87		0.0
	25	0	21.93	0-1	0.5
	25	14	**21.96**	0	0.0
	25	27	21.95	0-1	0.5
	50	0	21.90		0.5
DFT-s-OFDM 16QAM	1	1	22.00	0-1	0.5
CP-OFDM QPSK	1	1	21.34	0-1.5	1.0

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Table 9-58
NR Band n30 Antenna F 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	21.25	0	0.0
	1	26	21.28		0.0
	1	50	21.26		0.0
	25	0	21.37	0-0.5	0.0
	25	14	21.35	0	0.0
	25	27	21.32	0-0.5	0.0
	50	0	21.34		0.0
DFT-s-OFDM QPSK	1	1	**21.29**	0	0.0
	1	26	21.18		0.0
	1	50	21.17		0.0
	25	0	21.37	0-1	0.0
	25	14	**21.40**	0	0.0
	25	27	21.38	0-1	0.0
	50	0	21.28		0.0
DFT-s-OFDM 16QAM	1	1	21.63	0-1	0.0
CP-OFDM QPSK	1	1	21.27	0-1.5	0.5

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Table 9-59
NR Band n30 Antenna F 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	18.27	0	0.0
	1	26	18.22		0.0
	1	50	18.21		0.0
	25	0	18.30	0-0.5	0.0
	25	14	18.30	0	0.0
	25	27	18.22	0-0.5	0.0
	50	0	18.29		0.0
DFT-s-OFDM QPSK	1	1	**18.28**	0	0.0
	1	26	18.15		0.0
	1	50	18.17		0.0
	25	0	**18.33**	0-1	0.0
	25	14	18.31	0	0.0
	25	27	18.29	0-1	0.0
	50	0	18.27		0.0
DFT-s-OFDM 16QAM	1	1	18.64	0-1	0.0
CP-OFDM QPSK	1	1	18.32	0-1.5	0.0

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9.4.11 NR Band n7

Table 9-60
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	22.26	0	0.0
	1	108	22.13		0.0
	1	214	22.17		0.0
	108	0	22.25	0-0.5	0.0
	108	54	22.20	0	0.0
	108	108	22.24	0-0.5	0.0
	216	0	22.15		0.0
DFT-s-OFDM QPSK	1	1	22.26	0	0.0
	1	108	22.17		0.0
	1	214	**22.33**		0.0
	108	0	22.30	0-1	0.0
	108	54	**22.36**	0	0.0
	108	108	22.32	0-1	0.0
	216	0	22.21		0.0
DFT-s-OFDM 16QAM	1	1	22.31	0-1	0.0
CP-OFDM QPSK	1	1	21.73	0-1.5	0.0

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Table 9-61
NR Band n7 Measured P_{Limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)- 40 MHz Bandwidth

NR Band n7 40 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM $\pi/2$ BPSK	1	1	20.09	0	0.0
	1	108	20.30		0.0
	1	214	20.16		0.0
	108	0	20.10	0-0.5	0.0
	108	54	20.15	0	0.0
	108	108	20.15	0-0.5	0.0
	216	0	20.10		0.0
DFT-s-OFDM QPSK	1	1	19.99	0	0.0
	1	108	19.94		0.0
	1	214	**20.15**		0.0
	108	0	20.10	0-1	0.0
	108	54	20.12	0	0.0
	108	108	**20.19**	0-1	0.0
	216	0	20.02		0.0
DFT-s-OFDM 16QAM	1	1	20.40	0-1	0.0
CP-OFDM QPSK	1	1	20.11	0-1.5	0.0

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Table 9-62
NR Band n7 Measured P_{Limit} for DSI = 3 (Hotspot Mode)- 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	18.43	0	0.0
	1	108	18.28		0.0
	1	214	18.32		0.0
	108	0	18.39	0-0.5	0.0
	108	54	18.31	0	0.0
	108	108	18.30	0-0.5	0.0
	216	0	18.33		0.0
DFT-s-OFDM QPSK	1	1	18.21	0	0.0
	1	108	18.12		0.0
	1	214	**18.31**		0.0
	108	0	18.36	0-1	0.0
	108	54	18.31	0	0.0
	108	108	**18.37**	0-1	0.0
	216	0	18.30		0.0
DFT-s-OFDM 16QAM	1	1	18.83	0-1	0.0
CP-OFDM QPSK	1	1	18.35	0-1.5	0.0

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9.4.12 NR Band n41 Antenna F

Table 9-63
NR Band n41 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 active) 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	20.56	0	0.0
	1	137	20.35		0.0
	1	271	20.21		0.0
	135	0	20.45	0-0.5	0.0
	135	69	20.40	0	0.0
	135	138	20.26	0-0.5	0.0
	270	0	20.35		0.0
DFT-s-OFDM QPSK	1	1	**20.56**	0	0.0
	1	137	20.34		0.0
	1	271	20.17		0.0
	135	0	**20.45**	0-1	0.0
	135	69	20.36	0	0.0
	135	138	20.23	0-1	0.0
	270	0	20.30		0.0
DFT-s-OFDM 16QAM	1	1	20.39	0-1	0.0
CP-OFDM QPSK	1	1	20.54	0-1.5	0.0

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Table 9-64
NR Band n41 Antenna F Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	18.40	0	0.0
	1	137	18.22		0.0
	1	271	18.11		0.0
	135	0	18.32	0-0.5	0.0
	135	69	18.30	0	0.0
	135	138	18.17	0-0.5	0.0
	270	0	18.27		0.0
DFT-s-OFDM QPSK	1	1	**18.45**	0	0.0
	1	137	18.27		0.0
	1	271	18.11		0.0
	135	0	**18.37**	0-1	0.0
	135	69	18.31	0	0.0
	135	138	18.19	0-1	0.0
	270	0	18.29		0.0
DFT-s-OFDM 16QAM	1	1	18.35	0-1	0.0
CP-OFDM QPSK	1	1	18.46	0-1.5	0.0

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9.4.13 NR Band n41 Antenna B

Table 9-65
NR Band n41 Antenna B Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
	518598 (2592.99 MHz)
	Conducted Power [dBm]
	16.50

9.4.14 NR Band n41 Antenna E

Table 9-66
NR Band n41 Antenna E Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
	518598 (2592.99 MHz)
	Conducted Power [dBm]
	15.38

9.4.15 NR Band n41 Antenna D

Table 9-67
NR Band n41 Antenna D Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
	518598 (2592.99 MHz)
	Conducted Power [dBm]
	14.49

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9.4.16 NR Band n77 DoD Band Antenna G

Table 9-68
NR Band n77 DoD Antenna G 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	16.68	0	0.0
	1	137	16.51		0.0
	1	271	16.31		0.0
	135	0	16.59	0-0.5	0.0
	135	69	16.47	0	0.0
	135	138	16.26	0-0.5	0.0
	270	0	16.44		0.0
DFT-s-OFDM QPSK	1	1	**16.75**	0	0.0
	1	137	16.54		0.0
	1	271	16.34		0.0
	135	0	**16.59**	0-1	0.0
	135	69	16.49	0	0.0
	135	138	16.30	0-1	0.0
	270	0	16.51		0.0
DFT-s-OFDM 16QAM	1	1	16.80	0-1	0.0
CP-OFDM QPSK	1	1	16.86	0-1.5	0.0

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Table 9-69
NR Band n77 DoD Antenna G 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	14.43	0	0.0
	1	137	14.00		0.0
	1	271	13.87		0.0
	135	0	14.15	0-0.5	0.0
	135	69	14.01	0	0.0
	135	138	13.85	0-0.5	0.0
	270	0	14.00		0.0
DFT-s-OFDM QPSK	1	1	**14.36**	0	0.0
	1	137	13.95		0.0
	1	271	13.75		0.0
	135	0	**14.17**	0-1	0.0
	135	69	13.97	0	0.0
	135	138	13.84	0-1	0.0
	270	0	14.03		0.0
DFT-s-OFDM 16QAM	1	1	14.37	0-1	0.0
CP-OFDM QPSK	1	1	14.30	0-1.5	0.0

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9.4.17 NR Band n77 DoD Band Antenna C

Table 9-70
NR Band n77 DoD Antenna C Measured P_{Limit} for all DSI

NR Band n77 100 MHz Bandwidth	
	Channel
	633334 (3500.01 MHz)
	Conducted Power [dBm]
	11.20

9.4.18 NR Band n77 DoD Band Antenna H

Table 9-71
NR Band n77 DoD Antenna H Measured 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
	633334 (3500.01 MHz)
	Conducted Power [dBm]
	16.53

Table 9-72
NR Band n77 DoD Antenna H Measured P_{Limit} for DSI = 2 (Head)- 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth	
	Channel
	633334 (3500.01 MHz)
	Conducted Power [dBm]
	14.32

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9.4.19 NR Band n77 DoD Band Antenna D

Table 9-73
NR Band n77 DoD Antenna D Measured P_{Limit} for all DSI

NR Band n77 100 MHz Bandwidth	
	Channel
	633334 (3500.01 MHz)
	Conducted Power [dBm]
	11.13

9.4.20 NR Band n77 Antenna G

Table 9-74
NR Band n77 Antenna G 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	17.28	17.41	0	0.0
	1	137	17.65	17.48		0.0
	1	271	17.35	16.97		0.0
	135	0	17.7	17.43	0-0.5	0.0
	135	69	17.57	17.45	0	0.0
	135	138	17.3	17.21	0-0.5	0.0
	270	0	17.3	17.38		0.0
DFT-s-OFDM QPSK	1	1	17.32	17.61	0	0.0
	1	137	17.65	**17.70**		0.0
	1	271	17.30	17.21		0.0
	135	0	17.68	17.55	0-1	0.0
	135	69	17.64	**17.69**	0	0.0
	135	138	17.35	17.31	0-1	0.0
	270	0	17.35	17.59		0.0
DFT-s-OFDM 16QAM	1	1	17.32	17.34	0-1	0.0
CP-OFDM QPSK	1	1	17.23	17.59	0-1.5	0.0

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Table 9-75
NR Band n77 Antenna G 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	14.15	14.57	0	0.0
	1	137	14.75	14.75		0.0
	1	271	13.90	14.04		0.0
	135	0	14.69	14.66	0-0.5	0.0
	135	69	14.57	14.70	0	0.0
	135	138	13.96	14.22	0-0.5	0.0
	270	0	14.36	14.61		0.0
DFT-s-OFDM QPSK	1	1	14.10	14.67	0	0.0
	1	137	14.76	**14.96**		0.0
	1	271	13.89	14.42		0.0
	135	0	14.69	14.78	0-1	0.0
	135	69	14.56	**14.90**	0	0.0
	135	138	13.92	14.58	0-1	0.0
	270	0	14.34	14.77		0.0
DFT-s-OFDM 16QAM	1	1	14.21	14.85	0-1	0.0
CP-OFDM QPSK	1	1	13.98	14.61	0-1.5	0.0

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9.4.21 NR Band n77 Antenna C

Table 9-76
NR Band n77 Antenna C Measured P_{Limit} for all DSI

NR Band n77 100 MHz Bandwidth		
	Channel	
	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
	11.62	11.75

9.4.22 NR Band n77 Antenna H

Table 9-77
NR Band n77 Antenna H 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	
	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
	17.30	17.96

Table 9-78
NR Band n77 Antenna H Measured P_{Limit} for DSI = 2 (Head)- 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
	14.29	**14.91**

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9.4.23 NR Band n77 Antenna D

Table 9-79
NR Band n77 Antenna D Measured P_{Limit} for all DSI

NR Band n77 100 MHz Bandwidth		
	Channel	
	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
	11.46	**11.92**

Figure 9-4
Power Measurement Setup – NR FDD

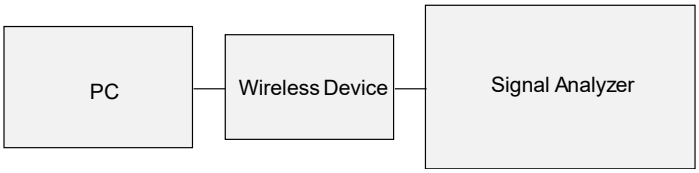

Figure 9-5
Power Measurement Setup – NR TDD

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9.5 WLAN Conducted Powers

Table 9-80
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	18.92	17.79	17.99	17.63
2437	6	18.79	17.69	17.79	17.84
2457	10	N/A	N/A	17.72	17.99
2462	11	18.73	17.61	16.45	16.25

Table 9-81
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11b Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.90	18.92	21.92
2437	6	18.49	18.79	21.65
2462	11	18.99	18.73	21.87

Table 9-82
2.4 GHz WLAN Reduced Average RF Power with RCV Active, and/or During Conditions with 2.4 GHz and 5 GHz WLAN, and/or with 5G NR – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	14.64	14.61	14.74	14.67
2437	6	14.84	14.61	14.76	14.87
2462	11	14.63	14.93	14.91	14.97

Table 9-83
2.4 GHz WLAN Reduced Average RF Power with RCV Active, and/or During Conditions with 2.4 GHz and 5 GHz WLAN, and/or with 5G NR – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	14.61	14.73	17.68
2437	6	14.27	14.87	17.59
2462	11	14.08	14.99	17.57

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Table 9-84
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	16.93	16.65
5290	58	17.66	17.52
5530	106	17.62	17.13
5610	122	17.93	17.83
5690	138	17.75	17.74
5775	155	17.76	17.83
5855	171	17.51	17.71

Table 9-85
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	16.93	16.91	19.93
5290	58	17.66	17.67	20.68
5530	106	17.62	17.70	20.67
5610	122	17.93	17.95	20.95
5690	138	17.75	17.66	20.72
5775	155	17.76	17.96	20.87
5855	171	17.51	17.69	20.61

Table 9-86
5 GHz WLAN Reduced Average RF Power During Conditions with 2.4 GHz and 5 GHz WLAN, and/or with 5G NR – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	12.94	12.92
5290	58	12.83	12.44
5530	106	12.99	12.77
5610	122	12.98	12.55
5690	138	12.97	12.75
5775	155	12.83	12.56
5855	171	12.48	12.36

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Table 9-87
5 GHz WLAN Reduced Average RF Power During Conditions with 2.4 GHz WLAN and/or with 5G NR - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	12.94	12.71	15.84
5290	58	12.83	12.84	15.85
5530	106	12.99	12.99	16.00
5610	122	12.98	12.54	15.78
5690	138	12.97	12.73	15.86
5775	155	12.83	12.73	15.79
5855	171	12.48	12.86	15.68

Table 9-88
5 GHz WLAN Reduced Average RF Power During Conditions with RCV Active, or RCV Active during Conditions with 2.4 GHz WLAN and/or with 5G NR – Ant 1

Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	11.89	11.88
5290	58	11.99	11.84
5530	106	11.83	11.82
5610	122	11.95	11.99
5690	138	11.74	11.77
5775	155	11.65	11.61
5855	171	11.52	11.57

Table 9-89
5 GHz WLAN Reduced Average RF Power During Conditions with RCV Active, or RCV Active during Conditions with 2.4 GHz and/or with 5G NR – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	11.89	11.92	14.92
5290	58	11.99	11.99	15.00
5530	106	11.83	11.49	14.67
5610	122	11.95	11.38	14.68
5690	138	11.74	11.62	14.69
5775	155	11.65	11.91	14.79
5855	171	11.52	11.84	14.69

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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.

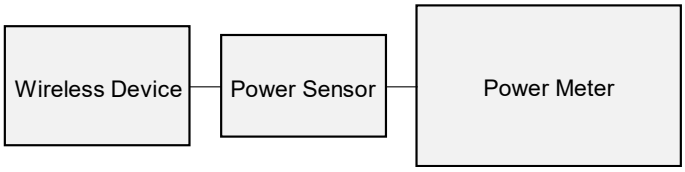

Figure 9-6
Power Measurement Setup

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9.6 Bluetooth Conducted Powers

Table 9-90
Bluetooth Maximum Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	15.56	35.975
2441	1.0	GFSK	39	15.22	33.266
2480	1.0	GFSK	78	13.86	24.322
2402	2.0	π/4-DQPSK	0	11.23	13.274
2441	2.0	π/4-DQPSK	39	11.07	12.794
2480	2.0	π/4-DQPSK	78	9.73	9.397
2402	3.0	8DPSK	0	11.26	13.366
2441	3.0	8DPSK	39	11.08	12.823
2480	3.0	8DPSK	78	9.77	9.484

Table 9-91
Bluetooth Reduced Average RF Power (RCV Active)

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	12.34	17.140
2441	1.0	GFSK	39	12.53	17.906
2480	1.0	GFSK	78	12.05	16.032

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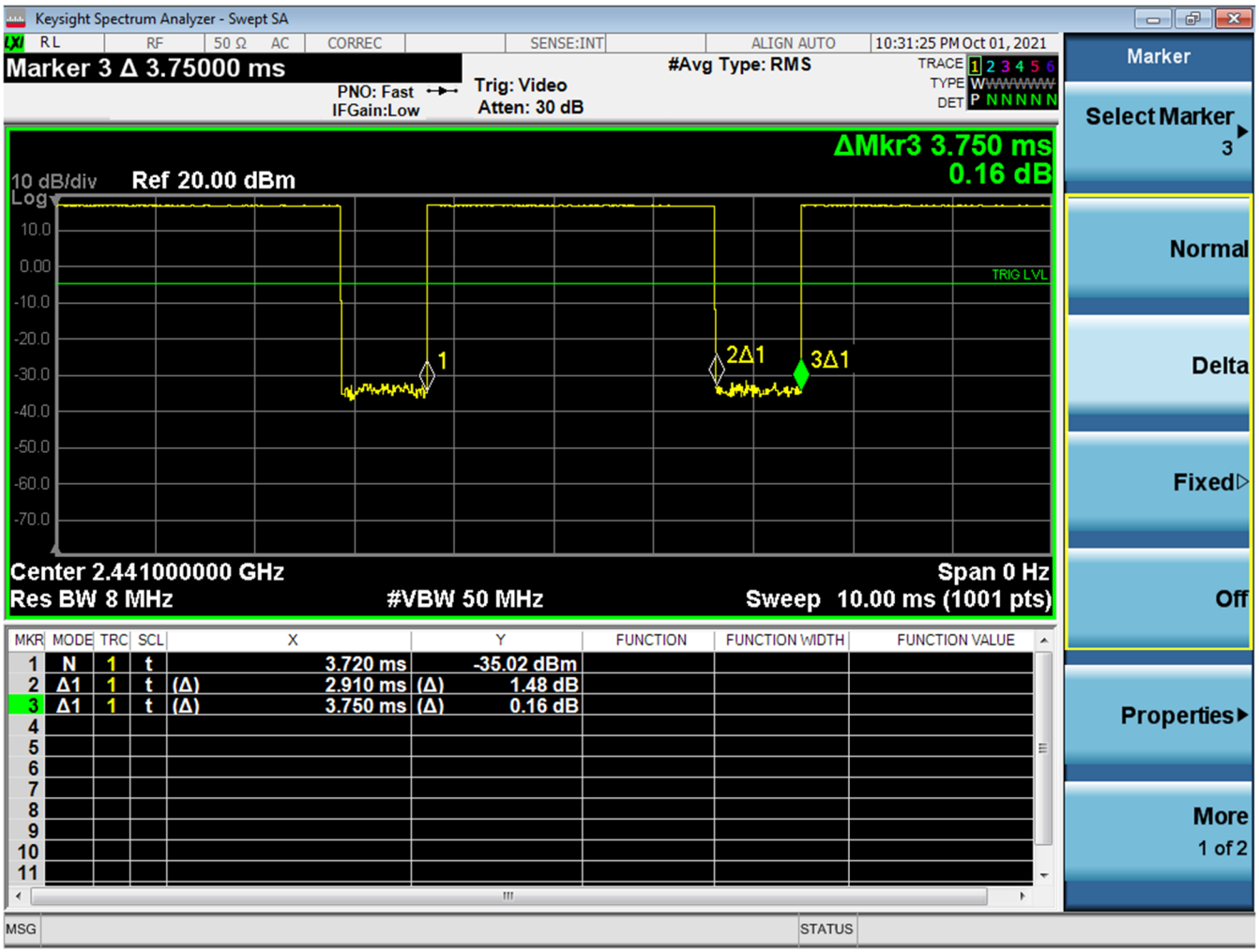

Figure 9-7
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

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

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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
09/26/2021	750 Head	21.8	680	0.896	42.715	0.888	42.305	0.90%	0.97%
			695	0.901	42.668	0.889	42.227	1.35%	1.04%
			700	0.903	42.652	0.889	42.201	1.57%	1.07%
			710	0.907	42.620	0.890	42.149	1.91%	1.12%
			725	0.912	42.574	0.891	42.071	2.36%	1.20%
			750	0.921	42.503	0.894	41.942	3.02%	1.34%
			770	0.927	42.445	0.895	41.838	3.58%	1.45%
			785	0.933	42.403	0.896	41.760	4.13%	1.54%
			800	0.938	42.361	0.897	41.682	4.57%	1.63%
10/12/2021	750 Head	21.8	680	0.895	40.843	0.888	42.305	0.79%	-3.46%
			695	0.899	40.794	0.889	42.227	1.12%	-3.39%
			700	0.901	40.773	0.889	42.201	1.35%	-3.38%
			710	0.904	40.735	0.890	42.149	1.57%	-3.35%
			725	0.908	40.673	0.891	42.071	1.91%	-3.32%
			750	0.915	40.566	0.894	41.942	2.35%	-3.28%
			770	0.921	40.487	0.895	41.838	2.91%	-3.23%
			785	0.925	40.429	0.896	41.760	3.24%	-3.19%
			800	0.930	40.375	0.897	41.682	3.68%	-3.14%
09/22/2021	835 Head	20.8	815	0.937	42.973	0.898	41.594	4.34%	3.32%
			820	0.939	42.962	0.899	41.578	4.45%	3.33%
			835	0.945	42.933	0.900	41.500	5.00%	3.45%
			850	0.952	42.905	0.916	41.500	3.93%	3.39%
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%
09/28/2021	835 Head	22.1	815	0.931	42.181	0.898	41.594	3.67%	1.41%
			820	0.933	42.168	0.899	41.578	3.78%	1.42%
			835	0.939	42.132	0.900	41.500	4.33%	1.52%
			850	0.944	42.088	0.916	41.500	3.06%	1.42%
09/30/2021	835 Head	19.9	815	0.878	40.501	0.898	41.594	-2.23%	-2.63%
			820	0.883	40.435	0.899	41.578	-1.78%	-2.75%
			835	0.898	40.234	0.900	41.500	-0.22%	-3.05%
			850	0.912	40.034	0.916	41.500	-0.44%	-3.53%
09/22/2021	1750 Head	23.1	1710	1.347	40.953	1.348	40.142	-0.07%	2.02%
			1720	1.353	40.941	1.354	40.126	-0.07%	2.03%
			1745	1.369	40.908	1.368	40.087	0.07%	2.05%
			1750	1.371	40.901	1.371	40.079	0.00%	2.05%
			1770	1.383	40.873	1.383	40.047	0.00%	2.06%
			1790	1.394	40.851	1.394	40.016	0.00%	2.09%
10/04/2021	1750 Head	22.0	1710	1.348	39.441	1.348	40.142	0.00%	-1.75%
			1720	1.354	39.420	1.354	40.126	0.00%	-1.76%
			1745	1.369	39.359	1.368	40.087	0.07%	-1.82%
			1750	1.372	39.347	1.371	40.079	0.07%	-1.83%
			1770	1.383	39.309	1.383	40.047	0.00%	-1.84%
			1790	1.395	39.280	1.394	40.016	0.07%	-1.84%
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%
09/19/2021	1900 Head	22.7	1850	1.386	39.131	1.400	40.000	-1.00%	-2.17%
			1860	1.397	39.087	1.400	40.000	-0.21%	-2.28%
			1880	1.418	39.005	1.400	40.000	1.29%	-2.49%
			1900	1.440	38.927	1.400	40.000	2.86%	-2.68%
			1905	1.445	38.906	1.400	40.000	3.21%	-2.74%
			1910	1.450	38.885	1.400	40.000	3.57%	-2.79%
09/30/2021	1900 Head	22.0	1850	1.428	39.407	1.400	40.000	2.00%	-1.48%
			1860	1.434	39.388	1.400	40.000	2.43%	-1.53%
			1880	1.447	39.351	1.400	40.000	3.36%	-1.62%
			1900	1.459	39.332	1.400	40.000	4.21%	-1.67%
			1905	1.462	39.329	1.400	40.000	4.43%	-1.68%
			1910	1.466	39.326	1.400	40.000	4.71%	-1.69%
10/17/2021	1900 Head	22.3	1850	1.407	38.890	1.400	40.000	0.50%	-2.78%
			1860	1.417	38.845	1.400	40.000	1.21%	-2.89%
			1880	1.437	38.754	1.400	40.000	2.64%	-3.12%
			1900	1.457	38.670	1.400	40.000	4.07%	-3.33%
			1905	1.462	38.649	1.400	40.000	4.43%	-3.38%
			1910	1.467	38.627	1.400	40.000	4.79%	-3.43%

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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
10/06/2021	2450 Head	22.6	2300	1.743	38.360	1.670	39.500	4.37%	-2.89%
			2310	1.750	38.344	1.679	39.480	4.23%	-2.88%
			2320	1.758	38.329	1.687	39.460	4.21%	-2.87%
			2400	1.815	38.212	1.756	39.289	3.36%	-2.74%
			2450	1.853	38.141	1.800	39.200	2.94%	-2.70%
			2480	1.874	38.102	1.833	39.162	2.24%	-2.71%
			2500	1.889	38.072	1.855	39.136	1.83%	-2.72%
			2510	1.897	38.056	1.866	39.123	1.66%	-2.73%
			2535	1.918	38.014	1.893	39.092	1.32%	-2.76%
			2550	1.931	37.994	1.909	39.073	1.15%	-2.76%
			2560	1.939	37.980	1.920	39.060	0.99%	-2.76%
			2600	1.972	37.918	1.964	39.009	0.41%	-2.80%
			2650	2.013	37.823	2.018	38.945	-0.25%	-2.88%
			2680	2.037	37.779	2.051	38.907	-0.68%	-2.90%
			2700	2.052	37.746	2.073	38.882	-1.01%	-2.92%
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%
10/17/2021	2450 Head	23.5	2300	1.663	40.645	1.670	39.500	-0.42%	2.90%
			2310	1.675	40.602	1.679	39.480	-0.24%	2.84%
			2320	1.687	40.563	1.687	39.460	0.00%	2.80%
			2400	1.784	40.228	1.756	39.289	1.59%	2.39%
			2450	1.843	40.012	1.800	39.200	2.39%	2.07%
			2480	1.877	39.889	1.833	39.162	2.40%	1.86%
			2500	1.900	39.797	1.855	39.136	2.43%	1.69%
			2510	1.911	39.752	1.866	39.123	2.41%	1.61%
			2535	1.941	39.645	1.893	39.092	2.54%	1.41%
			2550	1.959	39.587	1.909	39.073	2.62%	1.32%
			2560	1.971	39.546	1.920	39.060	2.66%	1.24%
			2600	2.018	39.382	1.964	39.009	2.75%	0.96%
			2650	2.077	39.181	2.018	38.945	2.92%	0.61%
			2680	2.112	39.068	2.051	38.907	2.97%	0.41%
			2700	2.135	38.991	2.073	38.882	2.99%	0.28%
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%
10/25/2021	2450 Head	20.5	2300	1.733	37.873	1.670	39.500	3.77%	-4.12%
			2310	1.740	37.858	1.679	39.480	3.63%	-4.11%
			2320	1.748	37.844	1.687	39.460	3.62%	-4.10%
			2400	1.810	37.747	1.756	39.289	3.08%	-3.92%
			2450	1.849	37.652	1.800	39.200	2.72%	-3.95%
			2480	1.874	37.616	1.833	39.162	2.24%	-3.95%
			2500	1.889	37.590	1.855	39.136	1.83%	-3.95%
			2510	1.896	37.571	1.866	39.123	1.61%	-3.97%
			2535	1.916	37.514	1.893	39.092	1.22%	-4.04%
			2550	1.929	37.478	1.909	39.073	1.05%	-4.08%
			2560	1.938	37.456	1.920	39.060	0.94%	-4.11%
			2600	1.972	37.405	1.964	39.009	0.41%	-4.11%
			2650	2.008	37.286	2.018	38.945	-0.50%	-4.26%
			2680	2.035	37.233	2.051	38.907	-0.78%	-4.30%
			2700	2.051	37.221	2.073	38.882	-1.06%	-4.27%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/18/2021	3600 Head	20.6	3300	2.626	38.288	2.708	38.157	-3.03%	0.34%
			3350	2.671	38.212	2.759	38.100	-3.19%	0.29%
			3450	2.761	38.023	2.861	37.986	-3.50%	0.10%
			3500	2.808	37.923	2.913	37.929	-3.60%	-0.02%
			3550	2.859	37.840	2.964	37.871	-3.54%	-0.08%
			3560	2.868	37.826	2.974	37.860	-3.56%	-0.09%
			3600	2.902	37.737	3.015	37.814	-3.75%	-0.20%
			3650	2.952	37.665	3.066	37.757	-3.72%	-0.24%
			3690	2.989	37.600	3.107	37.711	-3.80%	-0.29%
			3700	2.996	37.584	3.117	37.700	-3.88%	-0.31%
			3750	3.048	37.480	3.169	37.643	-3.82%	-0.43%
			3900	3.197	37.258	3.323	37.471	-3.79%	-0.57%
			3930	3.227	37.191	3.353	37.437	-3.76%	-0.66%
			4100	3.407	36.899	3.528	37.243	-3.43%	-0.92%
			4150	3.460	36.821	3.579	37.186	-3.32%	-0.98%
10/28/2021	3600 Head	21.0	3300	2.620	39.667	2.708	38.157	-3.25%	3.96%
			3350	2.658	39.661	2.759	38.100	-3.66%	4.10%
			3450	2.752	39.476	2.861	37.986	-3.81%	3.92%
			3500	2.792	39.338	2.913	37.929	-4.15%	3.71%
			3550	2.841	39.294	2.964	37.871	-4.15%	3.76%
			3560	2.851	39.278	2.974	37.860	-4.14%	3.75%
			3600	2.886	39.195	3.015	37.814	-4.28%	3.65%
			3650	2.935	39.104	3.066	37.757	-4.27%	3.57%
			3690	2.973	39.063	3.107	37.711	-4.31%	3.59%
			3700	2.979	39.046	3.117	37.700	-4.43%	3.57%
			3750	3.022	38.950	3.169	37.643	-4.64%	3.47%
			3900	3.179	38.708	3.323	37.471	-4.33%	3.30%
			3930	3.208	38.679	3.353	37.437	-4.32%	3.32%
			4100	3.383	38.343	3.528	37.243	-4.11%	2.95%
10/24/2021	5200-5800 Head	22.0	5180	4.447	34.869	4.635	36.009	-4.06%	-3.17%
			5190	4.457	34.853	4.645	35.998	-4.05%	-3.18%
			5200	4.470	34.824	4.655	35.986	-3.97%	-3.23%
			5210	4.482	34.804	4.666	35.975	-3.94%	-3.26%
			5220	4.493	34.787	4.676	35.963	-3.91%	-3.27%
			5240	4.506	34.747	4.696	35.940	-4.05%	-3.32%
			5250	4.517	34.724	4.706	35.929	-4.02%	-3.35%
			5260	4.530	34.711	4.717	35.917	-3.96%	-3.36%
			5270	4.544	34.695	4.727	35.906	-3.87%	-3.37%
			5280	4.558	34.673	4.737	35.894	-3.78%	-3.40%
			5290	4.569	34.655	4.748	35.883	-3.77%	-3.42%
			5300	4.580	34.648	4.758	35.871	-3.74%	-3.41%
			5310	4.591	34.642	4.768	35.860	-3.71%	-3.40%
			5320	4.602	34.625	4.778	35.849	-3.68%	-3.41%
			5500	4.799	34.328	4.963	35.643	-3.30%	-3.69%
			5510	4.811	34.311	4.973	35.632	-3.26%	-3.71%
			5520	4.824	34.294	4.983	35.620	-3.19%	-3.72%
			5530	4.839	34.276	4.994	35.609	-3.10%	-3.74%
			5540	4.852	34.258	5.004	35.597	-3.04%	-3.76%
			5550	4.864	34.247	5.014	35.586	-2.99%	-3.76%
			5560	4.877	34.242	5.024	35.574	-2.93%	-3.74%
			5580	4.897	34.213	5.045	35.551	-2.93%	-3.76%
			5600	4.916	34.161	5.065	35.529	-2.94%	-3.85%
			5610	4.929	34.142	5.076	35.518	-2.90%	-3.87%
			5620	4.941	34.126	5.086	35.506	-2.85%	-3.89%
			5640	4.967	34.093	5.106	35.483	-2.72%	-3.92%
			5660	4.989	34.083	5.127	35.460	-2.69%	-3.88%
			5670	4.998	34.077	5.137	35.449	-2.71%	-3.87%
			5680	5.005	34.064	5.147	35.437	-2.76%	-3.87%
			5690	5.016	34.042	5.158	35.426	-2.75%	-3.91%
			5700	5.027	34.018	5.168	35.414	-2.73%	-3.94%
			5710	5.041	34.001	5.178	35.403	-2.65%	-3.96%
			5720	5.052	33.982	5.188	35.391	-2.62%	-3.98%
			5745	5.080	33.936	5.214	35.363	-2.57%	-4.04%
			5750	5.085	33.929	5.219	35.357	-2.57%	-4.04%
			5755	5.091	33.923	5.224	35.351	-2.55%	-4.04%
			5765	5.103	33.915	5.234	35.340	-2.50%	-4.03%
			5775	5.112	33.904	5.245	35.329	-2.54%	-4.03%
			5785	5.120	33.891	5.255	35.317	-2.57%	-4.04%
			5795	5.130	33.874	5.265	35.305	-2.56%	-4.05%
			5800	5.135	33.869	5.270	35.300	-2.56%	-4.05%
			5800	5.135	33.869	5.270	35.300	-2.56%	-4.05%
			5805	5.140	33.864	5.275	35.294	-2.56%	-4.05%
			5825	5.158	33.825	5.296	35.271	-2.61%	-4.10%
11/01/2021	5200-5800 Head	21.6	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 10-4
Measured Body Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
09/20/2021	750 Body	22.3	680	0.933	54.899	0.958	55.804	-2.61%	-1.62%
			695	0.938	54.861	0.959	55.745	-2.19%	-1.59%
			700	0.940	54.848	0.959	55.726	-1.98%	-1.58%
			710	0.944	54.826	0.960	55.687	-1.67%	-1.55%
			725	0.949	54.794	0.961	55.629	-1.25%	-1.50%
			750	0.958	54.742	0.964	55.531	-0.62%	-1.42%
			770	0.966	54.695	0.965	55.453	0.10%	-1.37%
			785	0.971	54.656	0.966	55.395	0.52%	-1.33%
			800	0.976	54.618	0.967	55.336	0.93%	-1.30%
10/06/2021	750 Body	21.0	700	0.972	54.180	0.959	55.726	1.36%	-2.77%
			710	0.976	54.161	0.960	55.687	1.67%	-2.74%
			725	0.981	54.123	0.961	55.629	2.08%	-2.71%
			750	0.990	54.065	0.964	55.531	2.70%	-2.64%
			770	0.997	54.025	0.965	55.453	3.32%	-2.58%
			785	1.003	53.995	0.966	55.395	3.83%	-2.53%
			800	1.009	53.962	0.967	55.336	4.34%	-2.48%
10/07/2021	750 Body	21.0	680	0.951	54.622	0.958	55.804	-0.73%	-2.12%
			695	0.957	54.584	0.959	55.745	-0.21%	-2.08%
			700	0.958	54.572	0.959	55.726	-0.10%	-2.07%
			710	0.962	54.549	0.960	55.687	0.21%	-2.04%
			725	0.967	54.512	0.961	55.629	0.62%	-2.01%
			750	0.976	54.440	0.964	55.531	1.24%	-1.96%
			770	0.984	54.389	0.965	55.453	1.97%	-1.92%
			785	0.990	54.353	0.966	55.395	2.48%	-1.88%
			800	0.995	54.325	0.967	55.336	2.90%	-1.83%
10/17/2021	750 Body	19.8	680	0.929	54.051	0.958	55.804	-3.03%	-3.14%
			695	0.934	54.008	0.959	55.745	-2.61%	-3.12%
			700	0.936	53.995	0.959	55.726	-2.40%	-3.11%
			710	0.940	53.974	0.960	55.687	-2.08%	-3.08%
			725	0.946	53.942	0.961	55.629	-1.56%	-3.03%
			750	0.956	53.878	0.964	55.531	-0.83%	-2.98%
			770	0.963	53.819	0.965	55.453	-0.21%	-2.95%
			785	0.969	53.770	0.966	55.395	0.31%	-2.93%
			800	0.975	53.731	0.967	55.336	0.83%	-2.90%
09/20/2021	835 Body	22.2	815	0.926	54.850	0.968	55.271	-4.34%	-0.76%
			820	0.931	54.811	0.969	55.258	-3.92%	-0.81%
			835	0.947	54.693	0.970	55.200	-2.37%	-0.92%
			850	0.962	54.566	0.988	55.154	-2.63%	-1.07%
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	20.5	815	0.997	53.291	0.968	55.271	3.00%	-3.58%
			820	0.999	53.280	0.969	55.258	3.10%	-3.58%
			835	1.005	53.240	0.970	55.200	3.61%	-3.55%
			850	1.012	53.199	0.988	55.154	2.43%	-3.54%
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%
10/01/2021	835 Body	21.1	815	1.009	54.018	0.968	55.271	4.24%	-2.27%
			820	1.011	54.011	0.969	55.258	4.33%	-2.26%
			835	1.017	53.993	0.970	55.200	4.85%	-2.19%
			850	1.024	53.979	0.988	55.154	3.64%	-2.13%
10/04/2021	835 Body	21.3	815	1.008	54.215	0.968	55.271	4.13%	-1.91%
			820	1.010	54.204	0.969	55.258	4.23%	-1.91%
			835	1.017	54.166	0.970	55.200	4.85%	-1.87%
			850	1.024	54.115	0.988	55.154	3.64%	-1.88%
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%
09/12/2021	1750 Body	21.2	1710	1.452	52.773	1.463	53.537	-0.75%	-1.43%
			1720	1.463	52.745	1.469	53.511	-0.41%	-1.43%
			1745	1.491	52.673	1.485	53.445	0.40%	-1.44%
			1750	1.497	52.657	1.488	53.432	0.60%	-1.45%
			1770	1.519	52.593	1.501	53.379	1.20%	-1.47%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
			1790	1.542	52.527	1.514	53.326	1.85%	-1.50%
			1710	1.449	51.695	1.463	53.537	-0.96%	-3.44%
			1720	1.461	51.661	1.469	53.511	-0.54%	-3.46%
09/14/2021	1750 Body	21.5	1745	1.489	51.566	1.485	53.445	0.27%	-3.52%
			1750	1.495	51.545	1.488	53.432	0.47%	-3.53%
			1770	1.516	51.457	1.501	53.379	1.00%	-3.60%
			1790	1.537	51.372	1.514	53.326	1.52%	-3.66%
			1710	1.426	52.350	1.463	53.537	-2.53%	-2.22%
			1720	1.436	52.316	1.469	53.511	-2.25%	-2.23%
10/04/2021	1750 Body	21.6	1745	1.463	52.229	1.485	53.445	-1.48%	-2.28%
			1750	1.468	52.211	1.488	53.432	-1.34%	-2.29%
			1770	1.490	52.135	1.501	53.379	-0.73%	-2.33%
			1790	1.511	52.063	1.514	53.326	-0.20%	-2.37%
			1710	1.470	52.875	1.463	53.537	0.48%	-1.24%
			1720	1.481	52.832	1.469	53.511	0.82%	-1.27%
10/19/2021	1750 Body	21.5	1745	1.510	52.725	1.485	53.445	1.68%	-1.35%
			1750	1.515	52.703	1.488	53.432	1.81%	-1.36%
			1770	1.537	52.614	1.501	53.379	2.40%	-1.43%
			1790	1.559	52.529	1.514	53.326	2.97%	-1.49%
			1850	1.527	51.466	1.520	53.300	0.46%	-3.44%
			1860	1.538	51.423	1.520	53.300	1.18%	-3.52%
09/16/2021	1900 Body	23.2	1880	1.560	51.346	1.520	53.300	2.63%	-3.67%
			1900	1.583	51.285	1.520	53.300	4.14%	-3.78%
			1905	1.589	51.271	1.520	53.300	4.54%	-3.81%
			1910	1.594	51.257	1.520	53.300	4.87%	-3.83%
			1850	1.480	51.549	1.520	53.300	-2.63%	-3.29%
			1860	1.491	51.515	1.520	53.300	-1.91%	-3.35%
09/20/2021	1900 Body	21.6	1880	1.514	51.452	1.520	53.300	-0.39%	-3.47%
			1900	1.536	51.400	1.520	53.300	1.05%	-3.56%
			1905	1.542	51.388	1.520	53.300	1.45%	-3.59%
			1910	1.547	51.378	1.520	53.300	1.78%	-3.61%
			1850	1.510	51.283	1.520	53.300	-0.66%	-3.78%
			1860	1.521	51.245	1.520	53.300	0.07%	-3.86%
10/11/2021	1900 Body	23.8	1880	1.545	51.174	1.520	53.300	1.64%	-3.99%
			1900	1.568	51.123	1.520	53.300	3.16%	-4.08%
			1905	1.573	51.112	1.520	53.300	3.49%	-4.11%
			1910	1.579	51.100	1.520	53.300	3.88%	-4.13%
			1850	1.501	51.751	1.520	53.300	-1.25%	-2.91%
			1860	1.512	51.702	1.520	53.300	-0.53%	-3.00%
10/14/2021	1900 Body	24.5	1880	1.537	51.630	1.520	53.300	1.12%	-3.13%
			1900	1.561	51.596	1.520	53.300	2.70%	-3.20%
			1905	1.567	51.590	1.520	53.300	3.09%	-3.21%
			1910	1.571	51.583	1.520	53.300	3.36%	-3.22%
			1850	1.526	52.093	1.520	53.300	0.39%	-2.26%
			1860	1.537	52.060	1.520	53.300	1.12%	-2.33%
10/18/2021	1900 Body	21.4	1880	1.558	51.993	1.520	53.300	2.50%	-2.45%
			1900	1.581	51.941	1.520	53.300	4.01%	-2.55%
			1905	1.586	51.929	1.520	53.300	4.34%	-2.57%
			1910	1.592	51.915	1.520	53.300	4.74%	-2.60%
			1850	1.518	52.870	1.520	53.300	-0.13%	-0.81%
			1860	1.529	52.838	1.520	53.300	0.59%	-0.87%
10/20/2021	1900 Body	22.0	1880	1.551	52.777	1.520	53.300	2.04%	-0.98%
			1900	1.574	52.718	1.520	53.300	3.55%	-1.09%
			1905	1.580	52.700	1.520	53.300	3.95%	-1.13%
			1910	1.586	52.682	1.520	53.300	4.34%	-1.16%
			2300	1.795	54.379	1.809	52.900	-0.77%	2.80%
			2310	1.809	54.340	1.816	52.887	-0.39%	2.75%
			2320	1.823	54.311	1.826	52.873	-0.16%	2.72%
			2400	1.932	54.072	1.902	52.767	1.58%	2.47%
			2450	2.005	53.877	1.950	52.700	2.82%	2.23%
			2480	2.047	53.797	1.993	52.662	2.71%	2.16%
			2500	2.073	53.721	2.021	52.636	2.57%	2.06%
09/19/2021	2450 Body	23.0	2510	2.085	53.673	2.035	52.623	2.46%	2.00%
			2535	2.120	53.552	2.071	52.592	2.37%	1.83%
			2550	2.143	53.494	2.092	52.573	2.44%	1.75%
			2560	2.159	53.460	2.106	52.560	2.52%	1.71%
			2600	2.215	53.343	2.163	52.509	2.40%	1.59%
			2650	2.282	53.115	2.234	52.445	2.15%	1.28%
			2680	2.329	53.018	2.277	52.407	2.28%	1.17%
			2700	2.357	52.966	2.305	52.382	2.26%	1.11%

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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
10/06/2021	2450 Body	21.7	2300	1.867	51.580	1.809	52.900	3.21%	-2.50%
			2310	1.879	51.549	1.816	52.887	3.47%	-2.53%
			2320	1.890	51.520	1.826	52.873	3.50%	-2.56%
			2400	1.983	51.296	1.902	52.767	4.26%	-2.79%
			2450	2.042	51.152	1.950	52.700	4.72%	-2.94%
			2480	2.077	51.071	1.993	52.662	4.21%	-3.02%
			2500	2.101	51.013	2.021	52.636	3.96%	-3.08%
			2510	2.114	50.984	2.035	52.623	3.88%	-3.11%
			2535	2.145	50.909	2.071	52.592	3.57%	-3.20%
			2550	2.163	50.869	2.092	52.573	3.39%	-3.24%
			2560	2.175	50.841	2.106	52.560	3.28%	-3.27%
			2600	2.225	50.724	2.163	52.509	2.87%	-3.40%
			2650	2.286	50.581	2.234	52.445	2.33%	-3.55%
			2680	2.324	50.495	2.277	52.407	2.06%	-3.65%
			2700	2.349	50.433	2.305	52.382	1.91%	-3.72%
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%
10/26/2021	2450 Body	22.9	2300	1.763	52.058	1.809	52.900	-2.54%	-1.59%
			2310	1.776	52.020	1.816	52.887	-2.20%	-1.64%
			2320	1.788	51.981	1.826	52.873	-2.08%	-1.69%
			2400	1.890	51.684	1.902	52.767	-0.63%	-2.05%
			2450	1.955	51.493	1.950	52.700	0.26%	-2.29%
			2480	1.994	51.398	1.993	52.662	0.05%	-2.40%
			2500	2.019	51.330	2.021	52.636	-0.10%	-2.48%
			2510	2.032	51.295	2.035	52.623	-0.15%	-2.52%
			2535	2.066	51.196	2.071	52.592	-0.24%	-2.65%
			2550	2.087	51.140	2.092	52.573	-0.24%	-2.73%
			2560	2.102	51.105	2.106	52.560	-0.19%	-2.77%
			2600	2.155	50.983	2.163	52.509	-0.37%	-2.91%
			2650	2.223	50.764	2.234	52.445	-0.49%	-3.21%
			2680	2.266	50.662	2.277	52.407	-0.48%	-3.33%
			2700	2.292	50.605	2.305	52.382	-0.56%	-3.39%
10/27/2021	2450 Body	20.9	2300	1.829	52.657	1.809	52.900	1.11%	-0.46%
			2310	1.843	52.621	1.816	52.887	1.49%	-0.50%
			2320	1.856	52.582	1.826	52.873	1.64%	-0.55%
			2400	1.966	52.261	1.902	52.767	3.36%	-0.96%
			2450	2.036	52.059	1.950	52.700	4.41%	-1.22%
			2480	2.078	51.932	1.993	52.662	4.26%	-1.39%
			2500	2.106	51.848	2.021	52.636	4.21%	-1.50%
			2510	2.120	51.807	2.035	52.623	4.18%	-1.55%
			2535	2.156	51.698	2.071	52.592	4.10%	-1.70%
			2550	2.178	51.635	2.092	52.573	4.11%	-1.78%
			2560	2.192	51.594	2.106	52.560	4.08%	-1.84%
			2600	2.248	51.435	2.163	52.509	3.93%	-2.05%
			2650	2.318	51.202	2.234	52.445	3.76%	-2.37%
			2680	2.362	51.087	2.277	52.407	3.73%	-2.52%
10/29/2021	2450 Body	23.8	2300	1.845	52.864	1.809	52.900	1.99%	-0.07%
			2310	1.856	52.835	1.816	52.887	2.20%	-0.10%
			2320	1.869	52.808	1.826	52.873	2.35%	-0.12%
			2400	1.966	52.591	1.902	52.767	3.36%	-0.33%
			2450	2.024	52.426	1.950	52.700	3.79%	-0.52%
			2480	2.059	52.333	1.993	52.662	3.31%	-0.62%
			2500	2.082	52.267	2.021	52.636	3.02%	-0.70%
			2510	2.094	52.234	2.035	52.623	2.90%	-0.74%
			2535	2.123	52.158	2.071	52.592	2.51%	-0.83%
			2550	2.140	52.116	2.092	52.573	2.29%	-0.87%
			2560	2.152	52.087	2.106	52.560	2.18%	-0.90%
			2600	2.198	51.968	2.163	52.509	1.62%	-1.03%
			2650	2.256	51.824	2.234	52.445	0.98%	-1.18%
			2680	2.292	51.743	2.277	52.407	0.66%	-1.27%
			2700	2.316	51.687	2.305	52.382	0.48%	-1.33%

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

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
10/29/2021	2450 Body	23.2	2300	1.832	51.657	1.809	52.900	1.27%	-2.35%
			2310	1.845	51.625	1.816	52.887	1.60%	-2.39%
			2320	1.858	51.591	1.826	52.873	1.75%	-2.42%
			2400	1.965	51.292	1.902	52.767	3.31%	-2.80%
			2450	2.034	51.098	1.950	52.700	4.31%	-3.04%
			2480	2.075	50.983	1.993	52.662	4.11%	-3.19%
			2500	2.102	50.908	2.021	52.636	4.01%	-3.28%
			2510	2.116	50.866	2.035	52.623	3.98%	-3.34%
			2535	2.153	50.763	2.071	52.592	3.96%	-3.48%
			2550	2.174	50.705	2.092	52.573	3.92%	-3.55%
			2560	2.188	50.666	2.106	52.560	3.89%	-3.60%
			2600	2.242	50.522	2.163	52.509	3.65%	-3.78%
			2650	2.312	50.310	2.234	52.445	3.49%	-4.07%
			2680	2.357	50.199	2.277	52.407	3.51%	-4.21%
10/29/2021	2450 Body	21.5	2300	1.773	51.862	1.809	52.900	-1.99%	-1.96%
			2310	1.786	51.836	1.816	52.887	-1.65%	-1.99%
			2320	1.799	51.809	1.826	52.873	-1.48%	-2.01%
			2400	1.902	51.539	1.902	52.767	0.00%	-2.33%
			2450	1.970	51.364	1.950	52.700	1.03%	-2.54%
			2480	2.008	51.259	1.993	52.662	0.75%	-2.66%
			2500	2.034	51.184	2.021	52.636	0.64%	-2.76%
			2510	2.048	51.146	2.035	52.623	0.64%	-2.81%
			2535	2.083	51.047	2.071	52.592	0.58%	-2.94%
			2550	2.105	50.993	2.092	52.573	0.62%	-3.01%
			2560	2.119	50.957	2.106	52.560	0.62%	-3.05%
			2600	2.173	50.815	2.163	52.509	0.46%	-3.23%
			2650	2.240	50.590	2.234	52.445	0.27%	-3.54%
			2680	2.283	50.489	2.277	52.407	0.26%	-3.66%
			2700	2.309	50.425	2.305	52.382	0.17%	-3.74%
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%
09/27/2021	3600 Body	20.7	3300	2.932	51.876	3.080	51.593	-4.81%	0.55%
			3350	2.991	51.806	3.139	51.525	-4.71%	0.55%
			3450	3.102	51.631	3.256	51.389	-4.73%	0.47%
			3500	3.158	51.559	3.314	51.321	-4.71%	0.46%
			3550	3.218	51.470	3.372	51.254	-4.57%	0.42%
			3560	3.231	51.454	3.384	51.240	-4.52%	0.42%
			3600	3.277	51.403	3.431	51.186	-4.49%	0.42%
			3650	3.336	51.316	3.489	51.118	-4.39%	0.39%
			3690	3.385	51.262	3.536	51.063	-4.27%	0.39%
			3700	3.397	51.245	3.548	51.050	-4.26%	0.38%
			3750	3.459	51.161	3.606	50.982	-4.08%	0.35%
			3900	3.646	50.917	3.781	50.779	-3.57%	0.27%
			3930	3.691	50.868	3.816	50.738	-3.28%	0.26%
			4100	3.917	50.580	4.015	50.507	-2.44%	0.14%
			4150	3.985	50.500	4.073	50.439	-2.16%	0.12%
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 10-8
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
10/20/2021	5200-5800 Body	23.2	5180	5.281	47.802	5.276	49.041	0.09%	-2.53%
			5190	5.298	47.791	5.288	49.028	0.19%	-2.52%
			5200	5.313	47.767	5.299	49.014	0.26%	-2.54%
			5210	5.324	47.747	5.311	49.001	0.24%	-2.56%
			5220	5.337	47.733	5.323	48.987	0.26%	-2.56%
			5240	5.370	47.682	5.346	48.960	0.45%	-2.61%
			5250	5.382	47.647	5.358	48.947	0.45%	-2.66%
			5260	5.391	47.626	5.369	48.933	0.41%	-2.67%
			5270	5.401	47.607	5.381	48.919	0.37%	-2.68%
			5280	5.416	47.586	5.393	48.906	0.43%	-2.70%
			5290	5.435	47.564	5.404	48.892	0.57%	-2.72%
			5300	5.451	47.553	5.416	48.879	0.65%	-2.71%
			5310	5.466	47.537	5.428	48.865	0.70%	-2.72%
			5320	5.482	47.523	5.439	48.851	0.79%	-2.72%
			5500	5.742	47.178	5.650	48.607	1.63%	-2.94%
			5510	5.755	47.153	5.661	48.594	1.66%	-2.97%
			5520	5.773	47.133	5.673	48.580	1.76%	-2.98%
			5530	5.792	47.113	5.685	48.566	1.88%	-2.99%
			5540	5.809	47.096	5.696	48.553	1.98%	-3.00%
			5550	5.825	47.081	5.708	48.539	2.05%	-3.00%
			5560	5.841	47.068	5.720	48.526	2.12%	-3.00%
			5580	5.872	47.029	5.743	48.499	2.25%	-3.03%
			5600	5.895	46.982	5.766	48.471	2.24%	-3.07%
			5610	5.909	46.969	5.778	48.458	2.27%	-3.07%
			5620	5.925	46.953	5.790	48.444	2.33%	-3.08%
			5640	5.957	46.906	5.813	48.417	2.48%	-3.12%
			5660	5.989	46.880	5.837	48.390	2.60%	-3.12%
			5670	6.003	46.872	5.848	48.376	2.65%	-3.11%
			5680	6.015	46.859	5.860	48.363	2.65%	-3.11%
			5690	6.029	46.841	5.872	48.349	2.67%	-3.12%
			5700	6.045	46.824	5.883	48.336	2.75%	-3.13%
			5710	6.061	46.808	5.895	48.322	2.82%	-3.13%
			5720	6.077	46.788	5.907	48.309	2.88%	-3.15%
			5745	6.113	46.723	5.936	48.275	2.98%	-3.21%
			5750	6.120	46.716	5.942	48.268	3.00%	-3.22%
			5755	6.127	46.709	5.947	48.261	3.03%	-3.22%
			5765	6.142	46.698	5.959	48.248	3.07%	-3.21%
			5775	6.156	46.684	5.971	48.234	3.10%	-3.21%
			5785	6.169	46.672	5.982	48.220	3.13%	-3.21%
			5795	6.183	46.665	5.994	48.207	3.15%	-3.20%
			5800	6.190	46.663	6.000	48.200	3.17%	-3.19%
			5805	6.198	46.657	6.006	48.193	3.20%	-3.19%
			5825	6.226	46.616	6.029	48.166	3.27%	-3.22%
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 10-9
System Verification Results

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	09/26/2021	23.5	21.8	0.20	1003	7406	1.620	8.78	8.100	-7.74%
K2	750	HEAD	10/12/2021	21.6	21.8	0.20	1034	7402	1.700	8.64	8.500	-1.62%
K2	835	HEAD	09/22/2021	22.1	20.8	0.20	4d180	7402	1.980	9.45	9.900	4.76%
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	09/28/2021	23.9	22.1	0.20	4d133	7406	1.970	9.43	9.850	4.45%
K1	835	HEAD	09/30/2021	20.1	19.9	0.20	4d119	7565	2.040	9.64	10.200	5.81%
A	1750	HEAD	09/22/2021	23.6	23.1	0.10	1150	7406	3.680	36.50	36.800	0.82%
A	1750	HEAD	10/04/2021	24.0	22.0	0.10	1150	7406	3.840	36.50	38.400	5.21%
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	09/19/2021	22.9	22.7	0.10	5d080	7406	4.270	39.80	42.700	7.29%
A	1900	HEAD	09/30/2021	24.9	23.7	0.10	5d148	7406	4.090	39.10	40.900	4.60%
A	1900	HEAD	10/17/2021	24.0	22.3	0.10	5d148	7406	4.140	39.10	41.400	5.88%
B	2300	HEAD	10/17/2021	24.3	23.5	0.10	1073	7660	4.730	49.50	47.300	-4.44%
B	2450	HEAD	10/06/2021	23.0	22.6	0.10	797	7660	5.540	52.40	55.400	5.73%
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	10/17/2021	24.3	23.5	0.10	719	7660	5.210	55.00	52.100	-5.27%
E	2450	HEAD	10/25/2021	20.5	20.5	0.10	719	7571	5.350	55.00	53.500	-2.73%
B	2600	HEAD	10/06/2021	23.0	22.6	0.10	1064	7660	5.630	58.10	56.300	-3.10%
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	10/20/2021	23.5	23.0	0.10	1071	7660	5.550	56.10	55.500	-1.07%
E	2600	HEAD	11/02/2021	22.6	22.2	0.10	1004	7571	6.060	57.80	60.600	4.84%
L	3500	HEAD	10/18/2021	21.9	20.4	0.10	1097	7670	6.380	66.40	63.800	-3.92%
L	3500	HEAD	10/28/2021	21.3	21.0	0.10	1097	7670	6.250	66.40	62.500	-5.87%
L	3700	HEAD	10/18/2021	21.9	20.4	0.10	1067	7670	6.780	67.20	67.800	0.89%
L	3700	HEAD	10/28/2021	21.3	21.0	0.10	1067	7670	6.790	67.20	67.900	1.04%
L	3900	HEAD	10/28/2021	21.3	21.0	0.10	1056	7670	6.860	68.90	68.600	-0.44%
J	5250	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.890	79.70	77.800	-2.38%
J	5600	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.820	83.80	76.400	-8.83%
J	5750	HEAD	10/24/2021	19.3	20.5	0.05	1057	7526	3.620	80.10	72.400	-9.61%
B	5800	HEAD	11/01/2021	22.5	21.6	0.05	1191	7552	3.710	79.20	74.200	-6.31%
E	750	BODY	09/20/2021	23.0	22.3	0.20	1161	7571	1.800	8.43	9.000	6.76%
K1	750	BODY	10/06/2021	21.0	21.0	0.20	1046	7565	1.770	8.79	8.850	0.68%
K1	750	BODY	10/07/2021	21.5	21.0	0.20	1046	7565	1.650	8.79	8.250	-6.14%
H	750	BODY	10/17/2021	21.5	20.0	0.20	1054	7409	1.820	8.82	9.100	3.17%
H	835	BODY	09/20/2021	23.5	22.2	0.20	4d133	7409	1.990	9.75	9.950	2.05%
K1	835	BODY	09/27/2021	20.5	20.5	0.20	4d119	7565	2.080	9.90	10.400	5.05%
K1	835	BODY	09/29/2021	20.5	20.5	0.20	4d119	7565	2.030	9.90	10.150	2.53%
K2	835	BODY	09/29/2021	21.9	21.5	0.20	4d180	7402	2.010	9.67	10.050	3.93%
K2	835	BODY	10/01/2021	20.7	21.1	0.20	4d180	7402	1.970	9.67	9.850	1.86%
K2	835	BODY	10/04/2021	21.4	21.3	0.20	4d180	7402	1.970	9.67	9.850	1.86%
H	835	BODY	10/05/2021	21.1	21.3	0.20	4d132	7409	2.020	9.81	10.100	2.96%
G	1750	BODY	09/12/2021	22.4	21.2	0.10	1148	7357	3.930	36.30	39.300	8.26%
G	1750	BODY	09/14/2021	24.4	21.5	0.10	1150	7357	3.760	36.60	37.600	2.73%
D	1750	BODY	10/04/2021	22.3	21.6	0.10	1150	3589	3.750	36.60	37.500	2.46%
G	1750	BODY	10/19/2021	23.5	21.5	0.10	1148	7357	3.900	36.30	39.000	7.44%
G	1750	BODY	10/28/2021	22.8	21.4	0.10	1148	7357	3.850	36.30	38.500	6.06%
P	1900	BODY	09/16/2021	22.2	21.7	0.10	5d148	7410	4.160	39.10	41.600	6.39%
P	1900	BODY	09/20/2021	21.0	20.7	0.10	5d148	7410	4.160	39.10	41.600	6.39%
P	1900	BODY	10/11/2021	23.3	22.0	0.10	5d148	7410	4.140	39.10	41.400	5.88%
P	1900	BODY	10/14/2021	23.5	23.0	0.10	5d080	7410	4.180	39.20	41.800	6.63%
D	1900	BODY	10/20/2021	23.1	22.0	0.10	5d149	3589	4.350	40.40	43.500	7.67%
L	2300	BODY	09/19/2021	21.1	21.5	0.10	1116	7539	4.700	49.20	47.000	-4.47%
K	2300	BODY	10/31/2021	22.1	24.5	0.10	1073	3914	4.880	48.40	48.800	0.83%
L	2450	BODY	09/19/2021	21.1	21.5	0.10	981	7539	4.990	50.10	49.900	-0.40%
K	2450	BODY	10/21/2021	22.4	22.9	0.10	719	3914	5.210	52.00	52.100	0.19%
L	2450	BODY	10/26/2021	21.9	20.9	0.10	797	7670	5.020	49.40	50.200	1.62%
L	2450	BODY	10/29/2021	22.1	20.2	0.10	981	7670	4.960	50.10	49.600	-1.00%
O	2450	BODY	10/29/2021	23.3	22.5	0.10	797	7659	4.770	49.40	47.700	-3.44%
L	2600	BODY	09/19/2021	21.1	21.5	0.10	1071	7539	5.250	54.30	52.500	-3.31%
K	2600	BODY	10/06/2021	23.5	23.0	0.10	1004	3914	5.440	55.40	54.400	-1.81%
K	2600	BODY	10/21/2021	22.4	22.9	0.10	1004	3914	5.560	55.40	55.600	0.36%
L	2600	BODY	10/26/2021	21.9	20.9	0.10	1064	7670	5.450	55.60	54.500	-1.98%
O	2600	BODY	10/27/2021	22.9	21.7	0.10	1064	7659	5.760	55.60	57.600	3.60%
I	3500	BODY	09/27/2021	22.7	20.7	0.10	1059	7551	6.210	63.00	62.100	-1.43%
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	09/27/2021	22.7	20.7	0.10	1018	7551	6.010	63.50	60.100	-5.35%
I	3700	BODY	10/21/2021	21.0	21.0	0.10	1018	7661	6.700	63.50	67.000	5.51%
I	3900	BODY	09/27/2021	22.7	20.7	0.10	1073	7551	6.640	64.30	66.400	3.27%
J	5250	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	3.680	74.30	73.600	-0.94%
J	5600	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	3.810	77.40	76.200	-1.55%
J	5750	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	3.500	72.80	70.000	-3.85%
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 10-10
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	09/12/2021	22.4	21.2	0.10	1148	7357	2.080	19.30	20.800	7.77%
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	10/19/2021	23.5	21.5	0.10	1148	7357	2.070	19.30	20.700	7.25%
P	1900	BODY	09/22/2021	22.1	21.3	0.10	5d148	7410	2.160	20.50	21.600	5.37%
P	1900	BODY	10/11/2021	23.3	22.0	0.10	5d148	7410	2.130	20.50	21.300	3.90%
P	1900	BODY	10/14/2021	23.5	23.0	0.10	5d080	7410	2.160	20.60	21.600	4.85%
D	1900	BODY	10/18/2021	23.9	21.2	0.10	5d148	3589	2.090	20.50	20.900	1.95%
L	2300	BODY	09/19/2021	21.1	21.5	0.10	1116	7539	2.310	23.70	23.100	-2.53%
K	2300	BODY	10/29/2021	23.4	22.6	0.10	1073	7538	2.330	23.40	23.300	-0.43%
L	2450	BODY	09/19/2021	21.1	21.5	0.10	981	7539	2.300	23.70	23.000	-2.95%
L	2450	BODY	10/26/2021	21.9	20.9	0.10	797	7670	2.280	23.40	22.800	-2.56%
L	2600	BODY	09/19/2021	21.1	21.5	0.10	1071	7539	2.320	24.10	23.200	-3.73%
L	2600	BODY	10/26/2021	21.9	20.9	0.10	1064	7670	2.370	25.00	23.700	-5.20%
L	2600	BODY	11/03/2021	23.5	21.2	0.10	1071	7670	2.260	24.10	22.600	-6.22%
L	2600	BODY	11/08/2021	23.1	20.5	0.10	1064	7670	2.340	25.00	23.400	-6.40%
I	3500	BODY	09/27/2021	22.7	20.7	0.10	1059	7551	2.350	23.30	23.500	0.86%
I	3700	BODY	10/31/2021	20.0	19.6	0.10	1018	7661	2.410	22.50	24.100	7.11%
I	3900	BODY	10/31/2021	20.0	19.6	0.10	1073	7661	2.230	22.00	22.300	1.36%
J	5250	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	1.050	20.70	21.000	1.45%
J	5600	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	1.060	21.40	21.200	-0.93%
J	5750	BODY	10/20/2021	20.1	21.3	0.05	1057	7526	0.997	20.00	19.940	-0.30%
B	5800	BODY	11/04/2021	24.5	21.2	0.05	1191	7552	0.970	20.20	19.400	-3.96%

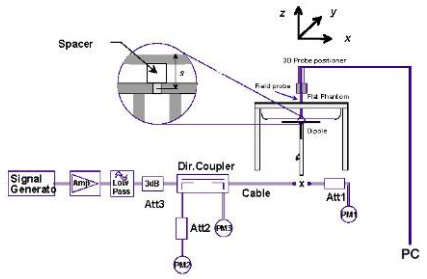

Figure 10-1
System Verification Setup Diagram

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	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	31.95	0.14	Right	Cheek	0534M	1:8.3	0.111	1.274	0.141	A1
836.60	190	GSM 850	GSM	33.0	31.95	0.20	Right	Tilt	0534M	1:8.3	0.061	1.274	0.078	
836.60	190	GSM 850	GSM	33.0	31.95	-0.02	Left	Cheek	0534M	1:8.3	0.104	1.274	0.132	
836.60	190	GSM 850	GSM	33.0	31.95	0.13	Left	Tilt	0534M	1:8.3	0.065	1.274	0.083	
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	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1909.80	810	GSM 1900	GSM	30.0	28.93	-0.02	Right	Cheek	0553M	1:8.3	0.053	1.279	0.068	
1909.80	810	GSM 1900	GSM	30.0	28.93	0.03	Right	Tilt	0553M	1:8.3	0.037	1.279	0.047	
1909.80	810	GSM 1900	GSM	30.0	28.93	-0.01	Left	Cheek	0553M	1:8.3	0.097	1.279	0.124	A2
1909.80	810	GSM 1900	GSM	30.0	28.93	0.13	Left	Tilt	0553M	1:8.3	0.031	1.279	0.040	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.5	24.41	14	0.06	Right	Cheek	0534M	1:1	0.266	1.285	0.342	A3
836.60	4183	UMTS 850	RMC	25.5	24.41	14	-0.17	Right	Tilt	0534M	1:1	0.173	1.285	0.222	
836.60	4183	UMTS 850	RMC	25.5	24.41	14	-0.02	Left	Cheek	0534M	1:1	0.209	1.285	0.269	
836.60	4183	UMTS 850	RMC	25.5	24.41	14	0.07	Left	Tilt	0534M	1:1	0.137	1.285	0.176	
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	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.														
1712.40	1312	UMTS 1750	RMC	24.0	23.29	116	0.05	Right	Cheek	0553M	1:1	0.105	1.178	0.124	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	116	-0.05	Right	Tilt	0553M	1:1	0.084	1.178	0.099	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	116	-0.01	Left	Cheek	0553M	1:1	0.193	1.178	0.227	A4
1712.40	1312	UMTS 1750	RMC	24.0	23.29	116	-0.08	Left	Tilt	0553M	1:1	0.066	1.178	0.078	
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	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.														
1907.60	9538	UMTS 1900	RMC	24.7	23.79	8	0.05	Right	Cheek	0553M	1:1	0.116	1.233	0.143	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	8	-0.03	Right	Tilt	0553M	1:1	0.093	1.233	0.115	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	8	0.03	Left	Cheek	0553M	1:1	0.209	1.233	0.258	A5
1907.60	9538	UMTS 1900	RMC	24.7	23.79	8	0.00	Left	Tilt	0553M	1:1	0.066	1.233	0.081	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-6
LTE Band 71 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	106	0.00	0	Right	Cheek	QPSK	1	50	0540M	1:1	0.152	1.040	0.158	A6
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	106	0.06	1	Right	Cheek	QPSK	50	25	0540M	1:1	0.119	1.081	0.129	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	106	0.08	0	Right	Tilt	QPSK	1	50	0540M	1:1	0.069	1.040	0.072	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	106	0.11	1	Right	Tilt	QPSK	50	25	0540M	1:1	0.052	1.081	0.056	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	106	0.15	0	Left	Cheek	QPSK	1	50	0540M	1:1	0.150	1.040	0.156	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	106	0.07	1	Left	Cheek	QPSK	50	25	0540M	1:1	0.117	1.081	0.126	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	106	0.08	0	Left	Tilt	QPSK	1	50	0540M	1:1	0.072	1.040	0.075	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	106	0.01	1	Left	Tilt	QPSK	50	25	0540M	1:1	0.056	1.081	0.061	
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	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	106	0.05	0	Right	Cheek	QPSK	1	49	0540M	1:1	0.208	1.000	0.208	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	106	-0.01	1	Right	Cheek	QPSK	25	12	0540M	1:1	0.167	1.064	0.178	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	106	0.17	0	Right	Tilt	QPSK	1	49	0540M	1:1	0.106	1.000	0.106	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	106	0.06	1	Right	Tilt	QPSK	25	12	0540M	1:1	0.077	1.064	0.082	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	106	0.15	0	Left	Cheek	QPSK	1	49	0540M	1:1	0.226	1.000	0.226	A7
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	106	0.05	1	Left	Cheek	QPSK	25	12	0540M	1:1	0.181	1.064	0.193	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	106	-0.02	0	Left	Tilt	QPSK	1	49	0540M	1:1	0.148	1.000	0.148	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	106	0.05	1	Left	Tilt	QPSK	25	12	0540M	1:1	0.109	1.064	0.116	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

Table 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	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	25.19	26	-0.01	0	Right	Cheek	QPSK	1	0	0540M	1:1	0.226	1.074	0.243	A8
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	26	0.02	1	Right	Cheek	QPSK	25	12	0540M	1:1	0.193	1.072	0.207	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	26	0.15	0	Right	Tilt	QPSK	1	0	0540M	1:1	0.140	1.074	0.150	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	26	0.06	1	Right	Tilt	QPSK	25	12	0540M	1:1	0.108	1.072	0.116	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	26	0.16	0	Left	Cheek	QPSK	1	0	0540M	1:1	0.219	1.074	0.235	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	26	0.08	1	Left	Cheek	QPSK	25	12	0540M	1:1	0.165	1.072	0.177	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	26	-0.13	0	Left	Tilt	QPSK	1	0	0540M	1:1	0.152	1.074	0.163	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	26	0.05	1	Left	Tilt	QPSK	25	12	0540M	1:1	0.117	1.072	0.125	
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	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	25.35	54	0.16	0	Right	Cheek	QPSK	1	25	0540M	1:1	0.258	1.035	0.267	A9
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.04	1	Right	Cheek	QPSK	25	12	0540M	1:1	0.193	1.033	0.199	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.07	0	Right	Tilt	QPSK	1	25	0540M	1:1	0.140	1.035	0.145	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.01	1	Right	Tilt	QPSK	25	12	0540M	1:1	0.110	1.033	0.114	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.08	0	Left	Cheek	QPSK	1	25	0540M	1:1	0.197	1.035	0.204	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.09	1	Left	Cheek	QPSK	25	12	0540M	1:1	0.153	1.033	0.158	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	-0.01	0	Left	Tilt	QPSK	1	25	0540M	1:1	0.137	1.035	0.142	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.09	1	Left	Tilt	QPSK	25	12	0540M	1:1	0.104	1.033	0.107	
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	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	0.08	0	Right	Cheek	QPSK	1	0	0540M	1:1	0.254	1.000	0.254	A10
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.04	1	Right	Cheek	QPSK	36	18	0540M	1:1	0.194	1.054	0.204	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	-0.03	0	Right	Tilt	QPSK	1	0	0540M	1:1	0.140	1.000	0.140	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.02	1	Right	Tilt	QPSK	36	18	0540M	1:1	0.105	1.054	0.111	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	0.10	0	Left	Cheek	QPSK	1	0	0540M	1:1	0.208	1.000	0.208	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.06	1	Left	Cheek	QPSK	36	18	0540M	1:1	0.154	1.054	0.162	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	-0.02	0	Left	Tilt	QPSK	1	0	0540M	1:1	0.145	1.000	0.145	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.14	1	Left	Tilt	QPSK	36	18	0540M	1:1	0.103	1.054	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										

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	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	0.07	0	Right	Cheek	QPSK	1	0	0277M	1:1	0.275	1.259	0.346	A11
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	0.00	1	Right	Cheek	QPSK	25	25	0277M	1:1	0.216	1.294	0.280	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.45	1	-0.15	0	Right	Cheek	QPSK	1	0	0277M	1:1	0.275	1.274	0.350	
	SCC	829.30	20453			5									1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	-0.02	0	Right	Tilt	QPSK	1	0	0277M	1:1	0.177	1.259	0.223	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	-0.02	1	Right	Tilt	QPSK	25	25	0277M	1:1	0.126	1.294	0.163	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	-0.09	0	Left	Cheek	QPSK	1	0	0277M	1:1	0.211	1.259	0.266	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	-0.02	1	Left	Cheek	QPSK	25	25	0277M	1:1	0.171	1.294	0.221	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	-0.04	0	Left	Tilt	QPSK	1	0	0277M	1:1	0.157	1.259	0.198	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	-0.03	1	Left	Tilt	QPSK	25	25	0277M	1:1	0.125	1.294	0.162	
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	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	14	0.05	0	Right	Cheek	QPSK	1	0	0427M	1:1	0.136	1.140	0.155	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	14	-0.07	1	Right	Cheek	QPSK	50	50	0427M	1:1	0.105	1.135	0.119	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	14	0.14	0	Right	Tilt	QPSK	1	0	0427M	1:1	0.104	1.140	0.119	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	14	0.15	1	Right	Tilt	QPSK	50	50	0427M	1:1	0.060	1.135	0.068	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	14	0.05	0	Left	Cheek	QPSK	1	0	0427M	1:1	0.276	1.140	0.315	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	14	-0.03	1	Left	Cheek	QPSK	50	50	0427M	1:1	0.194	1.135	0.220	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	24.5	23.74	14	-0.11	0	Left	Cheek	QPSK	1	0	0427M	1:1	0.272	1.191	0.324	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.79	14	-0.20	0	Left	Cheek	QPSK	1	0	0427M	1:1	0.280	1.178	0.330	
	SCC	1750.20	132374												1	99						
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	24.5	24.00	14	-0.05	0	Left	Cheek	QPSK	1	0	0427M	1:1	0.281	1.122	0.315	A12
	SCC	1765.10	132523												1	49						
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	14	0.09	0	Left	Tilt	QPSK	1	0	0427M	1:1	0.056	1.140	0.064	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	14	0.11	1	Left	Tilt	QPSK	50	50	0427M	1:1	0.048	1.135	0.054	
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	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	24.7	23.77	0	0.10	0	Right	Cheek	QPSK	1	0	0586M	1:1	0.127	1.239	0.157	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.12	1	Right	Cheek	QPSK	50	0	0586M	1:1	0.101	1.239	0.125	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	-0.14	0	Right	Tilt	QPSK	1	0	0586M	1:1	0.101	1.239	0.125	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	-0.16	1	Right	Tilt	QPSK	50	0	0586M	1:1	0.087	1.239	0.108	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	0.19	0	Left	Cheek	QPSK	1	0	0586M	1:1	0.241	1.239	0.299	A13
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.07	1	Left	Cheek	QPSK	50	0	0586M	1:1	0.206	1.239	0.255	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	0.14	0	Left	Tilt	QPSK	1	0	0586M	1:1	0.099	1.239	0.123	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.03	1	Left	Tilt	QPSK	50	0	0586M	1:1	0.077	1.239	0.095	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-14
LTE Band 30 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	0.14	0	Right	Cheek	A	QPSK	1	25	0577M	1:1	0.067	1.276	0.085	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.18	1	Right	Cheek	A	QPSK	25	12	0577M	1:1	0.050	1.303	0.065	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	0.08	0	Right	Tilt	A	QPSK	1	25	0577M	1:1	0.078	1.276	0.100	A14
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	0.18	1	Right	Tilt	A	QPSK	25	12	0577M	1:1	0.062	1.303	0.081	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	-0.10	0	Left	Cheek	A	QPSK	1	25	0577M	1:1	0.064	1.276	0.082	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.04	1	Left	Cheek	A	QPSK	25	12	0577M	1:1	0.051	1.303	0.066	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	-0.13	0	Left	Tilt	A	QPSK	1	25	0577M	1:1	0.050	1.276	0.064	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.06	1	Left	Tilt	A	QPSK	25	12	0577M	1:1	0.037	1.303	0.048	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	-0.12	0	Right	Cheek	B	QPSK	1	25	0997M	1:1	0.029	1.211	0.035	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	0.00	1	Right	Cheek	B	QPSK	25	12	0997M	1:1	0.022	1.236	0.027	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	-0.04	0	Right	Tilt	B	QPSK	1	25	0997M	1:1	0.033	1.211	0.040	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.06	1	Right	Tilt	B	QPSK	25	12	0997M	1:1	0.028	1.236	0.035	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	0.07	0	Left	Cheek	B	QPSK	1	25	0997M	1:1	0.042	1.211	0.051	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	0.06	1	Left	Cheek	B	QPSK	25	12	0997M	1:1	0.033	1.236	0.041	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	-0.13	0	Left	Tilt	B	QPSK	1	25	0997M	1:1	0.021	1.211	0.025	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.09	1	Left	Tilt	B	QPSK	25	12	0997M	1:1	0.016	1.236	0.020	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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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	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	-0.02	0	Right	Cheek	QPSK	1	99	0570M	1:1	0.054	1.253	0.068	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	-0.01	1	Right	Cheek	QPSK	50	50	0570M	1:1	0.044	1.303	0.057	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	-0.15	0	Right	Tilt	QPSK	1	99	0570M	1:1	0.042	1.253	0.053	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	0.12	1	Right	Tilt	QPSK	50	50	0570M	1:1	0.033	1.303	0.043	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	0.03	0	Left	Cheek	QPSK	1	99	0570M	1:1	0.056	1.253	0.070	A15
2560.00	21350	High	LTE Band 7	20	23.0	21.85	-0.03	1	Left	Cheek	QPSK	50	50	0570M	1:1	0.044	1.303	0.057	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	-0.21	0	Left	Tilt	QPSK	1	99	0570M	1:1	0.054	1.253	0.068	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	0.06	1	Left	Tilt	QPSK	50	50	0570M	1:1	0.041	1.303	0.053	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-16
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	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	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.18	0	Right	Cheek	QPSK	1	50	0421M	1:1.58	0.046	1.242	0.057	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	-0.04	1	Right	Cheek	QPSK	50	25	0421M	1:1.58	0.036	1.256	0.045	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.12	0	Right	Tilt	QPSK	1	50	0421M	1:1.58	0.029	1.242	0.036	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	0.04	1	Right	Tilt	QPSK	50	25	0421M	1:1.58	0.025	1.256	0.031	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.08	0	Left	Cheek	QPSK	1	50	0421M	1:1.58	0.087	1.242	0.108	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	23.68	-0.02	0	Left	Cheek	QPSK	1	99	0421M	1:1.58	0.091	1.355	0.123	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	0.03	1	Left	Cheek	QPSK	50	25	0421M	1:1.58	0.069	1.256	0.087	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	26.7	25.65	0.03	0	Left	Cheek	QPSK	1	50	0421M	1:2.31	0.088	1.274	0.112	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	26.7	25.24	-0.13	0	Left	Cheek	QPSK	1	99	0421M	1:2.31	0.088	1.400	0.123	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	25.0	23.78	-0.14	0	Left	Cheek	QPSK	1	99	0421M	1:1.58	0.090	1.324	0.119	
	SCC	2612.80	40818											1	0						
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	26.7	25.54	-0.02	0	Left	Cheek	QPSK	1	99	0421M	1:2.31	0.099	1.306	0.129	A16
	SCC	2612.80	40818											1	0						
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.03	0	Left	Tilt	QPSK	1	50	0421M	1:1.58	0.046	1.242	0.057	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	0.11	1	Left	Tilt	QPSK	50	25	0421M	1:1.58	0.036	1.256	0.045	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

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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	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	17.5	16.94	0.03	0	Right	Cheek	QPSK	1	50	0950M	1:1.58	0.649	1.138	0.739	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	17.11	-0.06	0	Right	Cheek	QPSK	1	99	0950M	1:1.58	0.660	1.094	0.722	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	17.05	-0.01	0	Right	Cheek	QPSK	1	99	0950M	1:1.58	0.670	1.109	0.743	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.43	0.01	0	Right	Cheek	QPSK	1	50	0950M	1:1.58	0.728	1.016	0.740	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	17.5	16.97	-0.05	0	Right	Cheek	QPSK	50	25	0950M	1:1.58	0.651	1.130	0.736	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	17.13	-0.01	0	Right	Cheek	QPSK	50	25	0950M	1:1.58	0.649	1.089	0.707	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	17.15	0.04	0	Right	Cheek	QPSK	50	25	0950M	1:1.58	0.676	1.084	0.733	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.21	-0.03	0	Right	Cheek	QPSK	50	0	0950M	1:1.58	0.666	1.069	0.712	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.30	0.00	0	Right	Cheek	QPSK	50	25	0950M	1:1.58	0.728	1.047	**0.762**	A17
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.20	0.01	0	Right	Cheek	QPSK	100	0	0950M	1:1.58	0.695	1.072	0.745	
2 CC Uplink	PCC	3690.00	56640	High	LTE Band 48	20	17.5	17.47	-0.03	0	Right	Cheek	QPSK	50	0	0950M	1:1.58	0.676	1.007	0.681	
	SCC	3670.20	56442											50	50						
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.43	-0.02	0	Right	Tilt	QPSK	1	50	0950M	1:1.58	0.349	1.016	0.355	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.30	0.00	0	Right	Tilt	QPSK	50	25	0950M	1:1.58	0.335	1.047	0.351	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.43	0.10	0	Left	Cheek	QPSK	1	50	0950M	1:1.58	0.185	1.016	0.188	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.30	0.02	0	Left	Cheek	QPSK	50	25	0950M	1:1.58	0.182	1.047	0.191	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.43	-0.02	0	Left	Tilt	QPSK	1	50	0950M	1:1.58	0.211	1.016	0.214	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	17.30	0.09	0	Left	Tilt	QPSK	50	25	0950M	1:1.58	0.210	1.047	0.220	
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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]	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	24.23	0.05	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	53	0194M	1:1	0.160	1.340	0.214	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.04	0	Right	Cheek	0	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.169	1.288	0.218	A18
680.50	136100	Mid	NR Band n71	20	24.0	22.89	-0.07	1.5	Right	Cheek	0	CP-OFDM	QPSK	1	1	0194M	1:1	0.098	1.291	0.127	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	-0.03	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	53	0194M	1:1	0.092	1.340	0.123	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	-0.01	0	Right	Tilt	0	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.085	1.288	0.109	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	0.09	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	53	0194M	1:1	0.153	1.340	0.205	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	-0.02	0	Left	Cheek	0	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.164	1.288	0.211	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	0.21	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	53	0194M	1:1	0.090	1.340	0.121	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.01	0	Left	Tilt	0	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.093	1.288	0.120	
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]	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	24.16	-0.05	0	Right	Cheek	2	DFT-S-OFDM	QPSK	1	40	0194M	1:1	0.207	1.361	0.282	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	0.04	0	Right	Cheek	2	DFT-S-OFDM	QPSK	36	22	0194M	1:1	0.214	1.297	0.278	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.17	0	Right	Tilt	2	DFT-S-OFDM	QPSK	1	40	0194M	1:1	0.105	1.361	0.143	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	0.09	0	Right	Tilt	2	DFT-S-OFDM	QPSK	36	22	0194M	1:1	0.109	1.297	0.141	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.04	0	Left	Cheek	2	DFT-S-OFDM	QPSK	1	40	0194M	1:1	0.212	1.361	0.289	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	-0.08	0	Left	Cheek	2	DFT-S-OFDM	QPSK	36	22	0194M	1:1	0.222	1.297	0.288	A19
707.50	141500	Mid	NR Band n12	15	24.0	22.65	0.04	1.5	Left	Cheek	2	CP-OFDM	QPSK	1	1	0194M	1:1	0.145	1.365	0.198	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.04	0	Left	Tilt	2	DFT-S-OFDM	QPSK	1	40	0194M	1:1	0.129	1.361	0.176	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	-0.01	0	Left	Tilt	2	DFT-S-OFDM	QPSK	36	22	0194M	1:1	0.132	1.297	0.171	
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 11-20
NR Band n5 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	24.08	-0.08	0	Right	Cheek	1	DFT-S-OFDM	QPSK	1	1	0194M	1:1	0.244	1.387	0.338	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	0.01	0	Right	Cheek	1	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.248	1.371	0.340	A20
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.77	0.00	1.5	Right	Cheek	1	CP-OFDM	QPSK	1	1	0194M	1:1	0.178	1.327	0.236	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	0.03	0	Right	Tilt	1	DFT-S-OFDM	QPSK	1	1	0194M	1:1	0.143	1.387	0.198	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	-0.04	0	Right	Tilt	1	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.133	1.371	0.182	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	0.01	0	Left	Cheek	1	DFT-S-OFDM	QPSK	1	1	0194M	1:1	0.233	1.387	0.323	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	0.00	0	Left	Cheek	1	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.214	1.371	0.293	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	0.08	0	Left	Tilt	1	DFT-S-OFDM	QPSK	1	1	0194M	1:1	0.168	1.387	0.233	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	0.00	0	Left	Tilt	1	DFT-S-OFDM	QPSK	50	28	0194M	1:1	0.155	1.371	0.213	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram													

Table 11-21
NR Band n66 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			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	23.3	22.80	A	-0.12	0	Right	Cheek	14	DFT-S-OFDM	QPSK	1	214	0274M	1:1	0.143	1.122	0.160	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.03	0	Right	Cheek	14	DFT-S-OFDM	QPSK	108	108	0274M	1:1	0.149	1.086	0.162	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.00	0	Right	Tilt	14	DFT-S-OFDM	QPSK	1	214	0274M	1:1	0.113	1.122	0.127	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.09	0	Right	Tilt	14	DFT-S-OFDM	QPSK	108	108	0274M	1:1	0.112	1.086	0.122	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.13	0	Left	Cheek	14	DFT-S-OFDM	QPSK	1	214	0274M	1:1	0.238	1.122	0.267	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.12	0	Left	Cheek	14	DFT-S-OFDM	QPSK	108	108	0274M	1:1	0.271	1.086	0.294	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.64	A	0.08	0	Left	Cheek	14	CP-OFDM	QPSK	1	1	0274M	1:1	0.229	1.164	0.267	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.19	0	Left	Tilt	14	DFT-S-OFDM	QPSK	1	214	0274M	1:1	0.068	1.122	0.076	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	-0.14	0	Left	Tilt	14	DFT-S-OFDM	QPSK	108	108	0274M	1:1	0.088	1.086	0.096	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.19	F	-0.03	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0198M	1:1	0.326	1.074	0.350	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.27	F	0.03	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.338	1.054	0.356	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.19	F	0.05	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0198M	1:1	0.580	1.074	0.623	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.27	F	0.09	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.595	1.054	0.627	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.19	F	0.12	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0198M	1:1	0.632	1.074	0.679	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.27	F	-0.01	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.637	1.054	0.671	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.19	F	0.15	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0198M	1:1	0.795	1.074	0.854	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.27	F	0.05	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.793	1.054	0.836	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.18	F	-0.03	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	216	0	0198M	1:1	0.792	1.076	0.852	
1745.00	349000	Mid	NR Band n66 (AWS)	40	18.5	18.00	F	-0.02	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0198M	1:1	0.832	1.122	0.934	A21
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Table 11-22
NR Band n25 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	0.15	0	Right	Cheek	2	DFT-S-OFDM	QPSK	1	108	0303M	1:1	0.147	1.242	0.183	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.14	0	Right	Cheek	2	DFT-S-OFDM	QPSK	108	54	0303M	1:1	0.152	1.146	0.174	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	0.13	0	Right	Tilt	2	DFT-S-OFDM	QPSK	1	108	0303M	1:1	0.127	1.242	0.158	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.12	0	Right	Tilt	2	DFT-S-OFDM	QPSK	108	54	0303M	1:1	0.117	1.146	0.134	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	0.03	0	Left	Cheek	2	DFT-S-OFDM	QPSK	1	108	0303M	1:1	0.273	1.242	0.339	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.07	0	Left	Cheek	2	DFT-S-OFDM	QPSK	108	54	0303M	1:1	0.217	1.146	0.249	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.2	22.57	A	-0.03	1.5	Left	Cheek	2	CP-OFDM	QPSK	1	1	0303M	1:1	0.179	1.156	0.207	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	0.15	0	Left	Tilt	2	DFT-S-OFDM	QPSK	1	108	0303M	1:1	0.079	1.242	0.098	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.09	0	Left	Tilt	2	DFT-S-OFDM	QPSK	108	54	0303M	1:1	0.077	1.146	0.088	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.33	F	-0.07	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	108	0198M	1:1	0.396	1.040	0.412	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.41	F	-0.11	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.414	1.021	0.423	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.33	F	0.06	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	108	0198M	1:1	0.519	1.040	0.540	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.41	F	-0.02	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.539	1.021	0.550	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.33	F	-0.02	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	108	0198M	1:1	0.589	1.040	0.613	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.41	F	0.05	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.602	1.021	0.615	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.33	F	0.04	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	108	0198M	1:1	0.738	1.040	0.768	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.41	F	-0.05	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	108	0198M	1:1	0.764	1.021	0.780	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.5	20.12	F	-0.03	0	Left	Tilt	N/A	CP-OFDM	QPSK	1	1	0198M	1:1	0.765	1.091	0.835	A22
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram													

Table 11-23
NR Band n30 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			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	23.5	22.43	A	0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0292M	1:1	0.090	1.279	0.115	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.08	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	0292M	1:1	0.097	1.245	0.121	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0292M	1:1	0.112	1.279	0.143	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.06	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	0292M	1:1	0.122	1.245	0.152	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.05	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0292M	1:1	0.140	1.279	0.179	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	0292M	1:1	0.131	1.245	0.163	
2310.00	462000	Mid	NR Band n30	10	22.0	20.94	A	-0.02	1.5	Left	Cheek	CP-OFDM	QPSK	1	1	0292M	1:1	0.089	1.276	0.114	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	-0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0292M	1:1	0.082	1.279	0.105	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	0292M	1:1	0.093	1.245	0.116	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	0.10	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0997M	1:1	0.029	1.035	0.030	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.11	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	0997M	1:1	0.034	1.153	0.039	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	0.08	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0997M	1:1	0.021	1.035	0.022	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	0997M	1:1	0.024	1.153	0.028	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	-0.20	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0997M	1:1	0.066	1.035	0.068	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	-0.16	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	0997M	1:1	0.064	1.153	0.074	
2310.00	462000	Mid	NR Band n30	10	22.0	21.78	B	0.15	1.5	Left	Cheek	CP-OFDM	QPSK	1	1	0997M	1:1	0.043	1.052	0.045	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0997M	1:1	0.028	1.035	0.029	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	0997M	1:1	0.029	1.153	0.033	
2310.00	462000	Mid	NR Band n30	10	19.0	18.28	F	0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	1035M	1:1	0.499	1.180	0.589	
2310.00	462000	Mid	NR Band n30	10	19.0	18.33	F	0.13	0	Right	Cheek	DFT-S-OFDM	QPSK	25	0	1035M	1:1	0.494	1.167	0.576	
2310.00	462000	Mid	NR Band n30	10	19.0	18.28	F	0.10	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	1035M	1:1	0.616	1.180	0.727	
2310.00	462000	Mid	NR Band n30	10	19.0	18.33	F	0.04	0	Right	Tilt	DFT-S-OFDM	QPSK	25	0	1035M	1:1	0.611	1.167	0.713	
2310.00	462000	Mid	NR Band n30	10	19.0	18.28	F	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	1035M	1:1	0.654	1.180	0.772	
2310.00	462000	Mid	NR Band n30	10	19.0	18.33	F	0.01	0	Left	Cheek	DFT-S-OFDM	QPSK	25	0	1035M	1:1	0.669	1.167	0.781	
2310.00	462000	Mid	NR Band n30	10	19.0	18.28	F	0.02	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	1035M	1:1	0.771	1.180	0.910	
2310.00	462000	Mid	NR Band n30	10	19.0	18.33	F	0.03	0	Left	Tilt	DFT-S-OFDM	QPSK	25	0	1035M	1:1	0.782	1.167	0.913	
2310.00	462000	Mid	NR Band n30	10	19.0	18.27	F	0.06	0	Left	Tilt	DFT-S-OFDM	QPSK	50	0	1035M	1:1	0.808	1.183	0.956	A23
2310.00	462000	Mid	NR Band n30	10	19.0	18.32	F	0.04	0	Left	Tilt	CP-OFDM	QPSK	1	1	1035M	1:1	0.787	1.169	0.920	
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Table 11-24
NR Band n7 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	22.5	22.33	0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	1	214	0294M	1:1	0.060	1.040	0.062	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	0.12	0	Right	Cheek	DFT-S-OFDM	QPSK	108	54	0294M	1:1	0.069	1.033	0.071	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	0.19	0	Right	Tilt	DFT-S-OFDM	QPSK	1	214	0294M	1:1	0.042	1.040	0.044	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	-0.01	0	Right	Tilt	DFT-S-OFDM	QPSK	108	54	0294M	1:1	0.059	1.033	0.061	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	1	214	0294M	1:1	0.078	1.040	0.081	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	108	54	0294M	1:1	0.112	1.033	0.116	A24
2535.00	507000	Mid	NR Band n7	40	22.5	21.73	0.12	0	Left	Cheek	CP-OFDM	QPSK	1	1	0294M	1:1	0.072	1.194	0.086	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	0.13	0	Left	Tilt	DFT-S-OFDM	QPSK	1	214	0294M	1:1	0.072	1.040	0.075	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	0.05	0	Left	Tilt	DFT-S-OFDM	QPSK	108	54	0294M	1:1	0.091	1.033	0.094	
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Table 11-25
NR Band n41 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	19.0	18.45	F	0.04	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0919M	1:1	0.421	1.135	0.478	
2592.99	518598	Mid	NR Band n41	100	19.0	18.37	F	0.03	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0919M	1:1	0.385	1.156	0.445	
2592.99	518598	Mid	NR Band n41	100	19.0	18.45	F	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0919M	1:1	0.660	1.135	0.749	
2592.99	518598	Mid	NR Band n41	100	19.0	18.37	F	0.09	0	Right	Tilt	DFT-S-OFDM	QPSK	135	0	0919M	1:1	0.619	1.156	0.716	
2592.99	518598	Mid	NR Band n41	100	19.0	18.29	F	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	270	0	0919M	1:1	0.545	1.178	0.642	
2592.99	518598	Mid	NR Band n41	100	19.0	18.45	F	0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0919M	1:1	0.866	1.135	0.983	
2592.99	518598	Mid	NR Band n41	100	19.0	18.37	F	0.10	0	Left	Cheek	DFT-S-OFDM	QPSK	135	0	0919M	1:1	0.704	1.156	0.814	
2592.99	518598	Mid	NR Band n41	100	19.0	18.29	F	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	270	0	0919M	1:1	0.659	1.178	0.776	
2592.99	518598	Mid	NR Band n41	100	19.0	18.45	F	0.01	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0919M	1:1	0.904	1.135	**1.026**	A25
2592.99	518598	Mid	NR Band n41	100	19.0	18.37	F	0.02	0	Left	Tilt	DFT-S-OFDM	QPSK	135	0	0919M	1:1	0.856	1.156	0.990	
2592.99	518598	Mid	NR Band n41	100	19.0	18.29	F	0.03	0	Left	Tilt	DFT-S-OFDM	QPSK	270	0	0919M	1:1	0.785	1.178	0.925	
2592.99	518598	Mid	NR Band n41	100	19.0	18.46	F	0.02	0	Left	Tilt	CP-OFDM	QPSK	1	1	0919M	1:1	0.887	1.132	1.004	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	0.12	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.037	1.259	0.047	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	-0.13	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.021	1.259	0.026	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	0.05	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.044	1.259	0.055	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	0.07	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.033	1.259	0.042	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.01	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.327	1.294	0.423	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.05	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.285	1.294	0.369	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.00	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.239	1.294	0.309	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.02	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.224	1.294	0.290	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.13	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.000	1.262	0.000	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.00	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.000	1.262	0.000	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.16	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.000	1.262	0.000	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.19	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0919M	1:1	0.000	1.262	0.000	
2592.99	518598	Mid	NR Band n41	100	19.0	18.45	F	-0.03	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0919M	1:1	0.866	1.135	0.983	
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	15.0	14.36	G	0.02	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0885M	1:1	0.583	1.159	0.676	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.17	G	0.03	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0885M	1:1	0.559	1.211	0.677	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.30	G	0.08	0	Right	Cheek	CP-OFDM	QPSK	1	1	0885M	1:1	0.586	1.175	0.689	A26
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.36	G	-0.05	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0885M	1:1	0.179	1.159	0.207	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.17	G	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	135	0	0885M	1:1	0.172	1.211	0.208	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.36	G	0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0885M	1:1	0.062	1.159	0.072	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.17	G	0.15	0	Left	Cheek	DFT-S-OFDM	QPSK	135	0	0885M	1:1	0.068	1.211	0.082	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.36	G	0.20	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0885M	1:1	0.072	1.159	0.083	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.17	G	0.15	0	Left	Tilt	DFT-S-OFDM	QPSK	135	0	0885M	1:1	0.070	1.211	0.085	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	-0.12	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.011	1.349	0.015	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	-0.13	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.010	1.349	0.013	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	0.11	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.019	1.349	0.026	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	0.03	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.007	1.349	0.009	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.32	H	0.17	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.169	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.32	H	0.14	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.011	1.169	0.013	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.32	H	-0.14	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.169	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	15.0	14.32	H	-0.16	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.169	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.19	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.371	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.13	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.001	1.371	0.001	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	0.16	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.371	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.12	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.371	0.000	
3750.00	650000	Low	NR Band n77	100	15.0	14.76	G	-0.07	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0885M	1:1	0.533	1.057	0.563	
3930.00	662000	High	NR Band n77	100	15.0	14.96	G	0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0885M	1:1	0.749	1.009	0.756	A27
3750.00	650000	Low	NR Band n77	100	15.0	14.69	G	-0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0885M	1:1	0.528	1.074	0.567	
3930.00	662000	High	NR Band n77	100	15.0	14.90	G	-0.01	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0885M	1:1	0.738	1.023	0.755	
3930.00	662000	High	NR Band n77	100	15.0	14.77	G	-0.10	0	Right	Cheek	DFT-S-OFDM	QPSK	270	0	0885M	1:1	0.715	1.054	0.754	
3930.00	662000	High	NR Band n77	100	15.0	14.61	G	-0.03	0	Right	Cheek	CP-OFDM	QPSK	1	1	0885M	1:1	0.658	1.094	0.720	
3930.00	662000	High	NR Band n77	100	15.0	14.96	G	-0.01	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0885M	1:1	0.283	1.009	0.286	
3930.00	662000	High	NR Band n77	100	15.0	14.90	G	0.01	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0885M	1:1	0.273	1.023	0.279	
3930.00	662000	High	NR Band n77	100	15.0	14.96	G	-0.03	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0885M	1:1	0.108	1.009	0.109	
3930.00	662000	High	NR Band n77	100	15.0	14.90	G	0.19	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0885M	1:1	0.099	1.023	0.101	
3930.00	662000	High	NR Band n77	100	15.0	14.96	G	0.15	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0885M	1:1	0.107	1.009	0.108	
3930.00	662000	High	NR Band n77	100	15.0	14.90	G	0.07	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0885M	1:1	0.069	1.023	0.071	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.15	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.005	1.189	0.006	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.19	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.006	1.189	0.007	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.06	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.036	1.189	0.043	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.19	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.008	1.189	0.010	
3930.00	662000	High	NR Band n77	100	15.0	14.91	H	0.03	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.002	1.021	0.002	
3930.00	662000	High	NR Band n77	100	15.0	14.91	H	0.14	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.002	1.021	0.002	
3930.00	662000	High	NR Band n77	100	15.0	14.91	H	0.14	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.021	0.000	
3930.00	662000	High	NR Band n77	100	15.0	14.91	H	0.19	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.021	0.000	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.00	N/A	Right	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.143	0.000	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.12	N/A	Right	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.002	1.143	0.002	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	-0.13	N/A	Left	Cheek	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.143	0.000	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	-0.08	N/A	Left	Tilt	CW/SRS	N/A	N/A	N/A	0885M	1:1	0.000	1.143	0.000	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram							

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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	15.0	14.84	0.19	Right	Cheek	2	0878M	1	98.9	0.051	0.030	1.038	1.011	**0.031**	
2437	6	802.11b	DSSS	22	15.0	14.84	-0.17	Right	Tilt	2	0878M	1	98.9	0.044	-	1.038	1.011	-	
2437	6	802.11b	DSSS	22	15.0	14.84	-0.15	Left	Cheek	2	0878M	1	98.9	0.028	-	1.038	1.011	-	
2437	6	802.11b	DSSS	22	15.0	14.84	0.19	Left	Tilt	2	0878M	1	98.9	0.028	-	1.038	1.011	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-28
DTS Head MIMO SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	0.07	Right	Cheek	MIMO	0878M	13	91.3	0.260	0.175	1.094	1.095	0.210	A28
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	0.06	Right	Tilt	MIMO	0878M	13	91.3	0.116	-	1.094	1.095	-	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	-0.04	Left	Cheek	MIMO	0878M	13	91.3	0.136	-	1.094	1.095	-	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	-0.07	Left	Tilt	MIMO	0878M	13	91.3	0.078	-	1.094	1.095	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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

Table 11-29
NII SISO Head 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)	
5290	58	802.11ac	OFDM	80	12.0	11.99	-0.08	Right	Cheek	1	1342M	29.3	92.4	0.298	0.259	1.002	1.082	**0.281**	
5290	58	802.11ac	OFDM	80	12.0	11.99	-0.19	Right	Tilt	1	1342M	29.3	92.4	0.031	-	1.002	1.082	-	
5290	58	802.11ac	OFDM	80	12.0	11.99	0.17	Left	Cheek	1	1342M	29.3	92.4	0.172	-	1.002	1.082	-	
5290	58	802.11ac	OFDM	80	12.0	11.99	-0.13	Left	Tilt	1	1342M	29.3	92.4	0.024	0.014	1.002	1.082	0.015	
5610	122	802.11ac	OFDM	80	12.0	11.95	-0.14	Right	Cheek	1	1342M	29.3	92.4	0.246	0.206	1.012	1.082	0.226	
5610	122	802.11ac	OFDM	80	12.0	11.95	-0.17	Right	Tilt	1	1342M	29.3	92.4	0.016	-	1.012	1.082	-	
5610	122	802.11ac	OFDM	80	12.0	11.95	0.06	Left	Cheek	1	1342M	29.3	92.4	0.096	-	1.012	1.082	-	
5610	122	802.11ac	OFDM	80	12.0	11.95	-0.12	Left	Tilt	1	1342M	29.3	92.4	0.005	0.005	1.012	1.082	0.005	
5775	155	802.11ac	OFDM	80	12.0	11.65	0.00	Right	Cheek	1	1342M	29.3	92.4	0.176	0.104	1.084	1.082	0.122	
5775	155	802.11ac	OFDM	80	12.0	11.65	0.17	Right	Tilt	1	1342M	29.3	92.4	0.002	-	1.084	1.082	-	
5775	155	802.11ac	OFDM	80	12.0	11.65	-0.13	Left	Cheek	1	1342M	29.3	92.4	0.034	-	1.084	1.082	-	
5775	155	802.11ac	OFDM	80	12.0	11.65	-0.15	Left	Tilt	1	1342M	29.3	92.4	0.000	0.000	1.084	1.082	0.000	
5855	171	802.11ac	OFDM	80	12.0	11.52	-0.18	Right	Cheek	1	1342M	29.3	92.4	0.275	0.225	1.117	1.082	0.272	
5855	171	802.11ac	OFDM	80	12.0	11.52	0.15	Right	Tilt	1	1342M	29.3	92.4	0.025	-	1.117	1.082	-	
5855	171	802.11ac	OFDM	80	12.0	11.52	-0.12	Left	Cheek	1	1342M	29.3	92.4	0.127	-	1.117	1.082	-	
5855	171	802.11ac	OFDM	80	12.0	11.52	0.17	Left	Tilt	1	1342M	29.3	92.4	0.095	0.000	1.117	1.082	0.000	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-30
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	12.0	11.99	12.0	11.99	0.05	Right	Cheek	MIMO	1342M	58.5	91.7	0.470	0.277	1.002	1.091	0.303	A29
5290	58	802.11ac	OFDM	80	12.0	11.99	12.0	11.99	0.14	Right	Tilt	MIMO	1342M	58.5	91.7	0.033	-	1.002	1.091	-	
5290	58	802.11ac	OFDM	80	12.0	11.99	12.0	11.99	0.00	Left	Cheek	MIMO	1342M	58.5	91.7	0.185	-	1.002	1.091	-	
5290	58	802.11ac	OFDM	80	12.0	11.99	12.0	11.99	0.12	Left	Tilt	MIMO	1342M	58.5	91.7	0.027	0.009	1.002	1.091	0.010	
5690	138	802.11ac	OFDM	80	12.0	11.74	12.0	11.62	-0.07	Right	Cheek	MIMO	1342M	58.5	91.7	0.358	0.238	1.091	1.091	0.283	
5690	138	802.11ac	OFDM	80	12.0	11.74	12.0	11.62	0.15	Right	Tilt	MIMO	1342M	58.5	91.7	0.011	-	1.091	1.091	-	
5690	138	802.11ac	OFDM	80	12.0	11.74	12.0	11.62	0.00	Left	Cheek	MIMO	1342M	58.5	91.7	0.122	-	1.091	1.091	-	
5690	138	802.11ac	OFDM	80	12.0	11.74	12.0	11.62	-0.13	Left	Tilt	MIMO	1342M	58.5	91.7	0.011	0.004	1.091	1.091	0.005	
5775	155	802.11ac	OFDM	80	12.0	11.65	12.0	11.91	0.05	Right	Cheek	MIMO	1342M	58.5	91.7	0.301	0.202	1.084	1.091	0.239	
5775	155	802.11ac	OFDM	80	12.0	11.65	12.0	11.91	-0.13	Right	Tilt	MIMO	1342M	58.5	91.7	0.019	-	1.084	1.091	-	
5775	155	802.11ac	OFDM	80	12.0	11.65	12.0	11.91	-0.17	Left	Cheek	MIMO	1342M	58.5	91.7	0.092	-	1.084	1.091	-	
5775	155	802.11ac	OFDM	80	12.0	11.65	12.0	11.91	0.19	Left	Tilt	MIMO	1342M	58.5	91.7	0.006	0.002	1.084	1.091	0.002	
5855	171	802.11ac	OFDM	80	12.0	11.52	12.0	11.84	0.15	Right	Cheek	MIMO	1342M	58.5	91.7	0.160	0.129	1.117	1.091	0.157	
5855	171	802.11ac	OFDM	80	12.0	11.52	12.0	11.84	0.17	Right	Tilt	MIMO	1342M	58.5	91.7	0.096	-	1.117	1.091	-	
5855	171	802.11ac	OFDM	80	12.0	11.52	12.0	11.84	0.00	Left	Cheek	MIMO	1342M	58.5	91.7	0.116	-	1.117	1.091	-	
5855	171	802.11ac	OFDM	80	12.0	11.52	12.0	11.84	0.20	Left	Tilt	MIMO	1342M	58.5	91.7	0.017	0.009	1.117	1.091	0.011	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Note: To achieve the 15.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12.0 dBm.

Table 11-31
DSS Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2441.00	39	Bluetooth	FHSS	13.0	12.53	0.18	Right	Cheek	1102M	1	77.60	0.156	1.114	1.289	**0.224**	A30
2441.00	39	Bluetooth	FHSS	13.0	12.53	-0.11	Right	Tilt	1102M	1	77.60	0.031	1.114	1.289	0.045	
2441.00	39	Bluetooth	FHSS	13.0	12.53	0.18	Left	Cheek	1102M	1	77.60	0.130	1.114	1.289	0.187	
2441.00	39	Bluetooth	FHSS	13.0	12.53	0.07	Left	Tilt	1102M	1	77.60	0.015	1.114	1.289	0.022	
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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11.2 Standalone Body-Worn SAR Data

Table 11-32
GSM/UMTS Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	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	31.95	N/A	0.01	15 mm	0534M	1:8.3	back	0.148	1.274	0.189	A31
1909.80	810	GSM 1900	GSM	30.0	28.93	N/A	-0.01	15 mm	0300M	1:8.3	back	0.223	1.279	0.285	A33
836.60	4183	UMTS 850	RMC	25.5	24.41	68	0.09	15 mm	0534M	1:1	back	0.280	1.285	0.360	A35
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	0.00	15 mm	0553M	1:1	back	0.777	1.178	0.915	
1732.40	1412	UMTS 1750	RMC	24.0	23.11	14	0.09	15 mm	0553M	1:1	back	0.866	1.227	1.063	A37
1752.60	1513	UMTS 1750	RMC	24.0	22.95	14	0.03	15 mm	0553M	1:1	back	0.852	1.274	1.085	
1852.40	9262	UMTS 1900	RMC	24.7	23.60	0	0.00	15 mm	0586M	1:1	back	0.795	1.288	1.024	A39
1880.00	9400	UMTS 1900	RMC	24.7	23.49	0	-0.07	15 mm	0586M	1:1	back	0.640	1.321	0.845	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	-0.16	15 mm	0586M	1:1	back	0.632	1.233	0.779	
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 11-33
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																				
1 CC Uplink	N/A	680.50	133297	Mid	LTE Band 71	20	25.5	25.33	118	-0.03	0	A	0540M	QPSK	1	50	15 mm	back	1:1	0.275	1.040	0.286	A41
1 CC Uplink	N/A	680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	0.02	1	A	0540M	QPSK	50	25	15 mm	back	1:1	0.215	1.081	0.232	
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	0.00	0	A	0540M	QPSK	1	49	15 mm	back	1:1	0.322	1.000	0.322	A43
1 CC Uplink	N/A	707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	0.03	1	A	0540M	QPSK	25	12	15 mm	back	1:1	0.258	1.064	0.275	
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	25.5	25.19	79	0.01	0	A	0540M	QPSK	1	0	15 mm	back	1:1	0.349	1.074	0.375	A45
1 CC Uplink	N/A	782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	0.00	1	A	0540M	QPSK	25	12	15 mm	back	1:1	0.283	1.072	0.303	
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.03	0	A	0540M	QPSK	1	25	15 mm	back	1:1	0.351	1.035	0.363	A47
1 CC Uplink	N/A	793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.04	1	A	0540M	QPSK	25	12	15 mm	back	1:1	0.280	1.033	0.289	
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	-0.03	0	A	0540M	QPSK	1	0	15 mm	back	1:1	0.295	1.000	0.295	A49
1 CC Uplink	N/A	831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.03	1	A	0540M	QPSK	36	18	15 mm	back	1:1	0.228	1.054	0.240	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	0.13	0	A	0277M	QPSK	1	0	15 mm	back	1:1	0.273	1.259	0.344	A51
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	0.05	1	A	0277M	QPSK	25	25	15 mm	back	1:1	0.200	1.294	0.259	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.45	1	-0.02	0	A	0277M	QPSK	1	0	15 mm	back	1:1	0.269	1.274	0.343	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.5	23.61	18	0.20	0	A	0427M	QPSK	1	50	15 mm	back	1:1	0.726	1.227	0.891	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.87	18	0.07	0	A	0427M	QPSK	1	50	15 mm	back	1:1	0.898	1.156	1.038	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	-0.03	0	A	0427M	QPSK	1	0	15 mm	back	1:1	1.010	1.140	**1.151**	A53
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.5	22.68	18	0.00	1	A	0427M	QPSK	50	25	15 mm	back	1:1	0.594	1.208	0.718	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.5	22.85	18	0.03	1	A	0427M	QPSK	50	25	15 mm	back	1:1	0.707	1.161	0.821	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	0.02	1	A	0427M	QPSK	50	50	15 mm	back	1:1	0.748	1.135	0.849	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.92	18	0.01	1	A	0427M	QPSK	100	0	15 mm	back	1:1	0.766	1.143	0.876	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	24.5	23.74	18	0.06	0	A	0427M	QPSK	1	0	15 mm	back	1:1	0.906	1.191	1.079	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.79	18	0.10	0	A	0427M	QPSK	1	0	15 mm	back	1:1	0.972	1.178	**1.145**	
	SCC	1750.20	132374												1	99							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	24.5	24.00	18	0.10	0	A	0427M	QPSK	1	0	15 mm	back	1:1	1.000	1.122	1.122	
	SCC	1765.10	132523												1	49							
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	0.08	0	A	0427M	QPSK	1	0	15 mm	back	1:1	0.994	1.140	1.133	
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	0.07	0	A	0586M	QPSK	1	0	15 mm	back	1:1	0.813	1.239	1.007	A55
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	23.55	0	-0.05	0	A	0586M	QPSK	1	0	15 mm	back	1:1	0.622	1.303	0.810	
1 CC Uplink	N/A	1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	23.56	0	0.07	0	A	0586M	QPSK	1	0	15 mm	back	1:1	0.573	1.300	0.745	
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	-0.03	1	A	0586M	QPSK	50	0	15 mm	back	1:1	0.602	1.239	0.746	
1 CC Uplink	N/A	1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.7	22.56	0	0.00	1	A	0586M	QPSK	50	25	15 mm	back	1:1	0.478	1.300	0.621	
1 CC Uplink	N/A	1905.00	26590	High	LTE Band 25 (PCS)	20	23.7	22.60	0	-0.04	1	A	0586M	QPSK	50	0	15 mm	back	1:1	0.441	1.288	0.568	
1 CC Uplink	N/A	1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.61	0	-0.05	1	A	0586M	QPSK	100	0	15 mm	back	1:1	0.565	1.285	0.726	
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	N/A	-0.13	0	A	0577M	QPSK	1	25	15 mm	back	1:1	0.292	1.276	0.373	A57
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	N/A	-0.19	1	A	0577M	QPSK	25	12	15 mm	back	1:1	0.226	1.303	0.294	
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	N/A	0.01	0	B	0997M	QPSK	1	25	15 mm	back	1:1	0.124	1.211	0.150	
1 CC Uplink	N/A	2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	N/A	-0.03	1	B	0997M	QPSK	25	12	15 mm	back	1:1	0.097	1.236	0.120	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	24.0	23.02	N/A	-0.10	0	B	0570M	QPSK	1	99	15 mm	back	1:1	0.216	1.253	0.271	A59
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	23.0	21.85	N/A	-0.10	1	B	0570M	QPSK	50	50	15 mm	back	1:1	0.171	1.303	0.223	
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Note: Blue entry represents variability measurement.

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Table 11-34
LTE 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]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.05	0	0421M	QPSK	1	50	15 mm	back	1:1.58	0.258	1.242	0.320	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	23.68	0.05	0	0421M	QPSK	1	99	15 mm	back	1:1.58	0.252	1.355	0.341	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	-0.06	1	0421M	QPSK	50	25	15 mm	back	1:1.58	0.202	1.256	0.254	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	26.7	25.65	-0.05	0	0421M	QPSK	1	50	15 mm	back	1:2.31	0.279	1.274	0.355	A61
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	26.7	25.24	-0.01	0	0421M	QPSK	1	99	15 mm	back	1:2.31	0.255	1.400	0.357	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	25.0	23.78	0.06	0	0421M	QPSK	1	99	15 mm	back	1:1.58	0.265	1.324	0.351	
	SCC	2612.80	40818										1	0							
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	26.7	25.54	0.03	0	0421M	QPSK	1	99	15 mm	back	1:2.31	0.264	1.306	0.345	
	SCC	2612.80	40818										1	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 11-35
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]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.21	-0.03	0	G	0950M	QPSK	1	50	15 mm	back	1:1.58	0.096	1.346	0.129	A63
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.02	-0.15	0	G	0950M	QPSK	1	99	15 mm	back	1:1.58	0.096	1.406	**0.135**	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.27	0.15	0	G	0950M	QPSK	50	25	15 mm	back	1:1.58	0.093	1.327	0.123	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.00	-0.12	0	G	0950M	QPSK	1	99	15 mm	back	1:1.58	0.092	1.413	0.130	
	SCC	3666.50	56405											1	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 11-36
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	24.23	A	-0.01	0	0	0194M	DFT-S-OFDM	QPSK	1	53	15 mm	back	1:1	0.287	1.340	0.385	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	A	0.06	0	0	0194M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.313	1.288	0.403	A65
680.50	136100	Mid	NR Band n71	20	24.0	22.89	A	0.02	1.5	0	0194M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.178	1.291	0.230	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	A	-0.02	0	0	0194M	DFT-S-OFDM	QPSK	1	40	15 mm	back	1:1	0.326	1.361	0.444	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	A	0.03	0	0	0194M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1:1	0.331	1.297	0.429	A67
707.50	141500	Mid	NR Band n12	15	24.0	22.65	A	-0.01	1.5	0	0194M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.194	1.365	0.265	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	A	-0.03	0	39	0194M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.322	1.387	0.447	A69
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	A	0.02	0	39	0194M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.313	1.371	0.429	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.77	A	0.00	1.5	39	0194M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.237	1.327	0.314	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.03	0	26	0274M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.782	1.122	0.877	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.12	0	26	0274M	DFT-S-OFDM	QPSK	108	108	15 mm	back	1:1	0.755	1.086	0.820	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.79	A	0.12	0	26	0274M	DFT-S-OFDM	QPSK	216	0	15 mm	back	1:1	0.801	1.125	0.901	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.64	A	-0.08	0	26	0274M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.818	1.164	0.952	A71
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	0.00	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.182	1.197	0.218	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	0.01	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	15 mm	back	1:1	0.185	1.153	0.213	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.14	F	-0.18	0	N/A	1004M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.150	1.219	0.183	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.14	0	0	0303M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.691	1.242	0.858	A73
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	-0.18	0	0	0303M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.680	1.146	0.779	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.7	23.08	A	-0.01	1	0	0303M	DFT-S-OFDM	QPSK	216	0	15 mm	back	1:1	0.563	1.153	0.649	
1882.50	376500	Mid	NR Band n25 (PCS)	40	23.2	22.57	A	-0.12	1.5	0	0303M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.554	1.156	0.640	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.39	F	0.01	0	N/A	0198M	DFT-S-OFDM	QPSK	1	108	15 mm	back	1:1	0.094	1.151	0.108	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.50	F	0.01	0	N/A	0198M	DFT-S-OFDM	QPSK	108	0	15 mm	back	1:1	0.112	1.122	0.126	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.29	F	0.02	0	N/A	0198M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.110	1.178	0.130	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.03	0	N/A	0292M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.536	1.279	0.686	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.00	0	N/A	0292M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.579	1.245	0.721	A75
2310.00	462000	Mid	NR Band n30	10	22.0	20.94	A	-0.02	1.5	N/A	0292M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.403	1.276	0.514	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	-0.01	0	N/A	0997M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.116	1.035	0.120	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	-0.03	0	N/A	0997M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.103	1.153	0.119	
2310.00	462000	Mid	NR Band n30	10	22.0	21.78	B	0.02	1.5	N/A	0997M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.078	1.052	0.082	
2310.00	462000	Mid	NR Band n30	10	22.5	21.91	F	-0.05	0	N/A	1035M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1:1	0.227	1.146	0.260	
2310.00	462000	Mid	NR Band n30	10	22.5	21.96	F	-0.02	0	N/A	1035M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1:1	0.231	1.132	0.261	
2310.00	462000	Mid	NR Band n30	10	21.5	21.34	F	-0.03	1	N/A	1035M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.205	1.038	0.213	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	B	-0.08	0	N/A	0294M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1:1	0.382	1.040	0.397	A77
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	B	-0.13	0	N/A	0294M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1:1	0.351	1.033	0.363	
2535.00	507000	Mid	NR Band n7	40	22.5	21.73	B	-0.14	0	N/A	0294M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.243	1.194	0.290	
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 11-37
NR Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	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	21.0	20.56	F	0.06	0	0919M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.168	1.107	0.186	A79
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	-0.03	0	0919M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1:1	0.161	1.135	0.183	
2592.99	518598	Mid	NR Band n41	100	21.0	20.54	F	0.04	0	0919M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.155	1.112	0.172	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	-0.03	N/A	0919M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.065	1.259	0.082	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.12	N/A	0919M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.012	1.294	0.016	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.07	N/A	0919M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.022	1.262	0.028	
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 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	16.75	G	0.01	0	0885M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.071	1.334	0.095	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	0.13	0	0885M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1:1	0.075	1.384	0.104	A81
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.86	G	-0.02	0	0885M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.074	1.300	0.096	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	0.00	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.002	1.349	0.003	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.53	H	-0.17	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.028	1.403	0.039	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.19	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.033	1.371	0.045	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.08	0	0885M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.112	1.072	0.120	A83
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	-0.02	0	0885M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.109	1.074	0.117	
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	-0.16	0	0885M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.109	1.099	0.120	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.19	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.026	1.189	0.031	
3930.00	662000	High	NR Band n77	100	18.0	17.96	H	0.15	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.066	1.009	0.067	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.14	N/A	0885M	CW/SRS	N/A	N/A	N/A	15 mm	back	1:1	0.008	1.143	0.009	
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	19.0	18.92	-0.09	15 mm	2	1133M	1	back	98.9	0.215	0.168	1.019	1.011	0.173	
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 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)	
2412	1	802.11b	DSSS	22	19.0	18.90	19.0	18.92	0.05	15 mm	MIMO	1133M	1	back	99.1	0.393	0.306	1.023	1.009	0.316	A85
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: To achieve the 22 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19 dBm.

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Table 11-41
NII 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)	
5290	58	802.11ac	OFDM	80	18.0	17.66	0.02	15 mm	1	1342M	29.3	back	92.4	0.167	0.132	1.081	1.082	**0.154**	
5610	122	802.11ac	OFDM	80	18.0	17.93	0.14	15 mm	1	1342M	29.3	back	92.4	0.130	0.099	1.016	1.082	0.109	
5775	155	802.11ac	OFDM	80	18.0	17.76	-0.15	15 mm	1	1342M	29.3	back	92.4	0.083	0.066	1.057	1.082	0.075	
5855	171	802.11ac	OFDM	80	18.0	17.51	-0.17	15 mm	1	1342M	29.3	back	92.4	0.099	0.067	1.119	1.082	0.081	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Body** **1.6 W/kg (mW/g)** averaged over 1 gram											

Table 11-42
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)	
5290	58	802.11ac	OFDM	80	18.0	17.66	18.0	17.67	0.05	15 mm	MIMO	1342M	58.5	back	91.7	0.277	0.206	1.081	1.091	0.243	
5610	122	802.11ac	OFDM	80	18.0	17.93	18.0	17.95	-0.16	15 mm	MIMO	1342M	58.5	back	91.7	0.252	0.182	1.016	1.091	0.202	
5775	155	802.11ac	OFDM	80	18.0	17.76	18.0	17.96	0.02	15 mm	MIMO	1342M	58.5	back	91.7	0.252	0.177	1.057	1.091	0.204	
5855	171	802.11ac	OFDM	80	18.0	17.51	18.0	17.69	-0.15	15 mm	MIMO	1342M	58.5	back	91.7	0.293	0.228	1.119	1.091	0.278	A87
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**										**Body** **1.6 W/kg (mW/g)** averaged over 1 gram											

Note: To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

Table 11-43
DTS Body-Worn SISO SAR during conditions with 5 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	15.0	14.84	-0.01	15 mm	2	1350M	1	back	98.9	0.073	0.052	1.038	1.011	0.055	
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 SISO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5 GHz WLAN or 5G NR. 5GHz WIFI or 5G NR was not transmitting during the above evaluations.

Table 11-44
DTS Body-Worn MIMO SAR during conditions with 5 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	-0.09	15 mm	MIMO	1350M	13	back	91.3	0.071	0.050	1.094	1.095	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											

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

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

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	13.0	12.83	-0.19	15 mm	1	1342M	29.3	back	92.4	0.046	0.033	1.040	1.082	0.037	
5530	106	802.11ac	OFDM	80	13.0	12.99	-0.15	15 mm	1	1342M	29.3	back	92.4	0.055	0.028	1.002	1.082	0.030	
5775	155	802.11ac	OFDM	80	13.0	12.83	0.14	15 mm	1	1342M	29.3	back	92.4	0.002	0.002	1.040	1.082	0.002	
5855	171	802.11ac	OFDM	80	13.0	12.48	-0.19	15 mm	1	1342M	29.3	back	92.4	0.030	0.015	1.127	1.082	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: NII SISO was additionally evaluated at the maximum allowed output power during simultaneous operations with 2.4 GHz WLAN and/or 5G NR. 2.4 GHz WIFI or 5G NR was not transmitting during the above evaluations.

Table 11-46
NII Body-Worn MIMO SAR during Conditions with 2.4 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	13.0	12.83	13.0	12.84	0.16	15 mm	MIMO	1342M	58.5	back	91.7	0.052	0.035	1.040	1.091	0.040	
5530	106	802.11ac	OFDM	80	13.0	12.99	13.0	12.99	0.14	15 mm	MIMO	1342M	58.5	back	91.7	0.064	0.050	1.002	1.091	0.055	
5775	155	802.11ac	OFDM	80	13.0	12.83	13.0	12.73	-0.17	15 mm	MIMO	1342M	58.5	back	91.7	0.031	0.014	1.064	1.091	0.016	
5855	171	802.11ac	OFDM	80	13.0	12.48	13.0	12.86	-0.15	15 mm	MIMO	1342M	58.5	back	91.7	0.062	0.041	1.127	1.091	0.050	
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: NII 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 WIFI or 5G NR was not transmitting during the above evaluations.

Table 11-47
DSS Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	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)	
2402	0	Bluetooth	FHSS	16.0	15.56	-0.12	15 mm	0878M	1	back	77.6	0.016	1.107	1.289	**0.023**	A89
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram									

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11.3 Standalone Hotspot SAR Data

Table 11-48
GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	30.5	30.18	N/A	-0.08	10 mm	0534M	3	1:2.76	back	0.356	1.076	0.383	
836.60	190	GSM 850	GPRS	30.5	30.18	N/A	0.00	10 mm	0534M	3	1:2.76	front	0.239	1.076	0.257	
836.60	190	GSM 850	GPRS	30.5	30.18	N/A	-0.14	10 mm	0534M	3	1:2.76	bottom	0.119	1.076	0.128	
836.60	190	GSM 850	GPRS	30.5	30.18	N/A	-0.08	10 mm	0534M	3	1:2.76	right	0.420	1.076	0.452	A32
836.60	190	GSM 850	GPRS	30.5	30.18	N/A	-0.12	10 mm	0534M	3	1:2.76	left	0.243	1.076	0.261	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.07	10 mm	0300M	4	1:2.076	back	0.283	1.189	0.336	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.03	10 mm	0300M	4	1:2.076	front	0.291	1.189	0.346	
1850.20	512	GSM 1900	GPRS	22.5	21.05	N/A	0.04	10 mm	0300M	4	1:2.076	bottom	0.724	1.396	1.011	
1880.00	661	GSM 1900	GPRS	22.5	21.03	N/A	-0.04	10 mm	0300M	4	1:2.076	bottom	0.826	1.403	1.159	A34
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.07	10 mm	0300M	4	1:2.076	bottom	0.809	1.189	0.962	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.19	10 mm	0300M	4	1:2.076	right	0.032	1.189	0.038	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.16	10 mm	0300M	4	1:2.076	left	0.071	1.189	0.084	
836.60	4183	UMTS 850	RMC	25.5	24.41	68	-0.02	10 mm	0534M	N/A	1:1	back	0.428	1.285	0.550	A36
836.60	4183	UMTS 850	RMC	25.5	24.41	68	0.00	10 mm	0534M	N/A	1:1	front	0.338	1.285	0.434	
836.60	4183	UMTS 850	RMC	25.5	24.41	68	0.02	10 mm	0534M	N/A	1:1	bottom	0.128	1.285	0.164	
836.60	4183	UMTS 850	RMC	25.5	24.41	68	0.00	10 mm	0534M	N/A	1:1	right	0.380	1.285	0.488	
836.60	4183	UMTS 850	RMC	25.5	24.41	68	-0.01	10 mm	0534M	N/A	1:1	left	0.251	1.285	0.323	
1712.40	1312	UMTS 1750	RMC	19.5	18.90	14	0.03	10 mm	0553M	N/A	1:1	back	0.440	1.148	0.505	
1712.40	1312	UMTS 1750	RMC	19.5	18.90	14	0.02	10 mm	0553M	N/A	1:1	front	0.330	1.148	0.379	
1712.40	1312	UMTS 1750	RMC	19.5	18.90	14	0.06	10 mm	0553M	N/A	1:1	bottom	0.713	1.148	0.819	
1732.40	1412	UMTS 1750	RMC	19.5	18.70	14	0.02	10 mm	0553M	N/A	1:1	bottom	0.928	1.202	1.115	A38
1752.60	1513	UMTS 1750	RMC	19.5	18.53	14	0.05	10 mm	0553M	N/A	1:1	bottom	0.905	1.250	1.131	
1712.40	1312	UMTS 1750	RMC	19.5	18.90	14	0.13	10 mm	0553M	N/A	1:1	right	0.054	1.148	0.062	
1712.40	1312	UMTS 1750	RMC	19.5	18.90	14	0.08	10 mm	0553M	N/A	1:1	left	0.132	1.148	0.152	
1907.60	9538	UMTS 1900	RMC	19.5	18.80	0	0.00	10 mm	0586M	N/A	1:1	back	0.435	1.175	0.511	
1907.60	9538	UMTS 1900	RMC	19.5	18.80	0	0.00	10 mm	0586M	N/A	1:1	front	0.315	1.175	0.370	
1852.40	9262	UMTS 1900	RMC	19.5	18.68	0	-0.03	10 mm	0586M	N/A	1:1	bottom	0.783	1.208	0.946	
1880.00	9400	UMTS 1900	RMC	19.5	18.53	0	-0.06	10 mm	0586M	N/A	1:1	bottom	0.756	1.250	0.945	
1907.60	9538	UMTS 1900	RMC	19.5	18.80	0	-0.04	10 mm	0586M	N/A	1:1	bottom	0.887	1.175	1.042	A40
1907.60	9538	UMTS 1900	RMC	19.5	18.80	0	0.00	10 mm	0586M	N/A	1:1	right	0.053	1.175	0.062	
1907.60	9538	UMTS 1900	RMC	19.5	18.80	0	-0.03	10 mm	0586M	N/A	1:1	left	0.094	1.175	0.110	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-49
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	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	25.5	25.33	118	0.01	0	0540M	QPSK	1	50	10 mm	back	1:1	0.397	1.040	0.413	A42
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	-0.01	1	0540M	QPSK	50	25	10 mm	back	1:1	0.316	1.081	0.342	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	118	0.05	0	0540M	QPSK	1	50	10 mm	front	1:1	0.308	1.040	0.320	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	0.00	1	0540M	QPSK	50	25	10 mm	front	1:1	0.214	1.081	0.231	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	118	-0.06	0	0540M	QPSK	1	50	10 mm	bottom	1:1	0.089	1.040	0.093	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	-0.01	1	0540M	QPSK	50	25	10 mm	bottom	1:1	0.075	1.081	0.081	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	118	0.00	0	0540M	QPSK	1	50	10 mm	right	1:1	0.213	1.040	0.222	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	0.02	1	0540M	QPSK	50	25	10 mm	right	1:1	0.150	1.081	0.162	
680.50	133297	Mid	LTE Band 71	20	25.5	25.33	118	-0.01	0	0540M	QPSK	1	50	10 mm	left	1:1	0.125	1.040	0.130	
680.50	133297	Mid	LTE Band 71	20	24.5	24.16	118	0.09	1	0540M	QPSK	50	25	10 mm	left	1:1	0.097	1.081	0.105	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-50
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	-0.03	0	0540M	QPSK	1	49	10 mm	back	1:1	0.518	1.000	0.518	A44
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	-0.01	1	0540M	QPSK	25	12	10 mm	back	1:1	0.409	1.064	0.435	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	-0.17	0	0540M	QPSK	1	49	10 mm	front	1:1	0.346	1.000	0.346	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	-0.01	1	0540M	QPSK	25	12	10 mm	front	1:1	0.271	1.064	0.288	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	-0.01	0	0540M	QPSK	1	49	10 mm	bottom	1:1	0.127	1.000	0.127	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	-0.08	1	0540M	QPSK	25	12	10 mm	bottom	1:1	0.097	1.064	0.103	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	0.07	0	0540M	QPSK	1	49	10 mm	right	1:1	0.292	1.000	0.292	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	0.01	1	0540M	QPSK	25	12	10 mm	right	1:1	0.210	1.064	0.223	
707.50	23095	Mid	LTE Band 12	10	25.5	25.50	118	0.07	0	0540M	QPSK	1	49	10 mm	left	1:1	0.280	1.000	0.280	
707.50	23095	Mid	LTE Band 12	10	24.5	24.23	118	-0.06	1	0540M	QPSK	25	12	10 mm	left	1:1	0.201	1.064	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 13 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	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	25.19	79	0.02	0	0540M	QPSK	1	0	10 mm	back	1:1	0.512	1.074	0.550	A46
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	0.00	1	0540M	QPSK	25	12	10 mm	back	1:1	0.410	1.072	0.440	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	79	-0.05	0	0540M	QPSK	1	0	10 mm	front	1:1	0.341	1.074	0.366	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	-0.02	1	0540M	QPSK	25	12	10 mm	front	1:1	0.274	1.072	0.294	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	79	-0.03	0	0540M	QPSK	1	0	10 mm	bottom	1:1	0.116	1.074	0.125	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	0.05	1	0540M	QPSK	25	12	10 mm	bottom	1:1	0.093	1.072	0.100	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	79	-0.04	0	0540M	QPSK	1	0	10 mm	right	1:1	0.265	1.074	0.285	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	-0.01	1	0540M	QPSK	25	12	10 mm	right	1:1	0.205	1.072	0.220	
782.00	23230	Mid	LTE Band 13	10	25.5	25.19	79	-0.01	0	0540M	QPSK	1	0	10 mm	left	1:1	0.303	1.074	0.325	
782.00	23230	Mid	LTE Band 13	10	24.5	24.20	79	0.00	1	0540M	QPSK	25	12	10 mm	left	1:1	0.239	1.072	0.256	
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 11-52
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]	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	25.35	54	-0.01	0	0540M	QPSK	1	25	10 mm	back	1:1	0.486	1.035	0.503	A48
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	-0.02	1	0540M	QPSK	25	12	10 mm	back	1:1	0.393	1.033	0.406	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.06	0	0540M	QPSK	1	25	10 mm	front	1:1	0.366	1.035	0.379	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	-0.01	1	0540M	QPSK	25	12	10 mm	front	1:1	0.297	1.033	0.307	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.00	0	0540M	QPSK	1	25	10 mm	bottom	1:1	0.116	1.035	0.120	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	-0.07	1	0540M	QPSK	25	12	10 mm	bottom	1:1	0.099	1.033	0.102	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	0.07	0	0540M	QPSK	1	25	10 mm	right	1:1	0.262	1.035	0.271	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.00	1	0540M	QPSK	25	12	10 mm	right	1:1	0.233	1.033	0.241	
793.00	23330	Mid	LTE Band 14	10	25.5	25.35	54	-0.02	0	0540M	QPSK	1	25	10 mm	left	1:1	0.302	1.035	0.313	
793.00	23330	Mid	LTE Band 14	10	24.5	24.36	54	0.00	1	0540M	QPSK	25	12	10 mm	left	1:1	0.250	1.033	0.258	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-53
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	0.14	0	0540M	QPSK	1	0	10 mm	back	1:1	0.458	1.000	0.458	A50
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.00	1	0540M	QPSK	36	18	10 mm	back	1:1	0.347	1.054	0.366	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	0.00	0	0540M	QPSK	1	0	10 mm	front	1:1	0.330	1.000	0.330	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	-0.01	1	0540M	QPSK	36	18	10 mm	front	1:1	0.257	1.054	0.271	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	-0.04	0	0540M	QPSK	1	0	10 mm	bottom	1:1	0.127	1.000	0.127	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.04	1	0540M	QPSK	36	18	10 mm	bottom	1:1	0.106	1.054	0.112	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	-0.04	0	0540M	QPSK	1	0	10 mm	right	1:1	0.375	1.000	0.375	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	0.01	1	0540M	QPSK	36	18	10 mm	right	1:1	0.290	1.054	0.306	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	25.50	14	0.02	0	0540M	QPSK	1	0	10 mm	left	1:1	0.228	1.000	0.228	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	24.27	14	-0.02	1	0540M	QPSK	36	18	10 mm	left	1:1	0.161	1.054	0.170	
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 11-54
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]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	-0.20	0	0277M	QPSK	1	0	10 mm	back	1:1	0.474	1.259	0.597	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	-0.06	1	0277M	QPSK	25	25	10 mm	back	1:1	0.356	1.294	0.461	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.45	1	-0.18	0	0277M	QPSK	1	0	10 mm	back	1:1	0.488	1.274	0.622	A52
	SCC	829.30	20453			5								1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	0.01	0	0277M	QPSK	1	0	10 mm	front	1:1	0.311	1.259	0.392	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	0.01	1	0277M	QPSK	25	25	10 mm	front	1:1	0.247	1.294	0.320	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	0.08	0	0277M	QPSK	1	0	10 mm	bottom	1:1	0.148	1.259	0.186	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	0.00	1	0277M	QPSK	25	25	10 mm	bottom	1:1	0.125	1.294	0.162	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	-0.08	0	0277M	QPSK	1	0	10 mm	right	1:1	0.429	1.259	0.540	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	0.04	1	0277M	QPSK	25	25	10 mm	right	1:1	0.288	1.294	0.373	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.5	24.50	1	0.09	0	0277M	QPSK	1	0	10 mm	left	1:1	0.237	1.259	0.298	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.5	23.38	1	-0.01	1	0277M	QPSK	25	25	10 mm	left	1:1	0.158	1.294	0.204	
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 11-55
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]	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	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	-0.02	0	0427M	QPSK	1	50	10 mm	back	1:1	0.537	1.222	0.656	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.05	0	0427M	QPSK	50	50	10 mm	back	1:1	0.533	1.268	0.676	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	0.13	0	0427M	QPSK	1	50	10 mm	front	1:1	0.474	1.222	0.579	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.01	0	0427M	QPSK	50	50	10 mm	front	1:1	0.446	1.268	0.566	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.83	18	-0.03	0	0427M	QPSK	1	99	10 mm	bottom	1:1	0.814	1.309	1.066	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.83	18	-0.03	0	0427M	QPSK	1	50	10 mm	bottom	1:1	0.885	1.309	1.158	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.75	18	-0.11	0	0427M	QPSK	1	99	10 mm	bottom	1:1	0.835	1.334	1.114	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	-0.08	0	0427M	QPSK	1	50	10 mm	bottom	1:1	0.910	1.222	1.112	A54
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.78	18	0.10	0	0427M	QPSK	50	25	10 mm	bottom	1:1	0.834	1.324	1.104	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.95	18	0.03	0	0427M	QPSK	50	25	10 mm	bottom	1:1	0.888	1.274	1.131	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	-0.01	0	0427M	QPSK	50	50	10 mm	bottom	1:1	0.884	1.268	1.121	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.95	18	0.00	0	0427M	QPSK	100	0	10 mm	bottom	1:1	0.897	1.274	1.143	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	18.90	18	-0.04	0	0427M	QPSK	1	49	10 mm	bottom	1:1	0.876	1.288	1.128	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.53	18	0.00	0	0427M	QPSK	1	99	10 mm	bottom	1:1	0.825	1.403	1.157	
	SCC	1764.80	132520											1	0							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	18.46	18	-0.01	0	0427M	QPSK	1	49	10 mm	bottom	1:1	0.825	1.426	1.176	
	SCC	1754.90	132421											1	0							
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	-0.08	0	0427M	QPSK	1	50	10 mm	right	1:1	0.056	1.222	0.068	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.09	0	0427M	QPSK	50	50	10 mm	right	1:1	0.054	1.268	0.068	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	0.03	0	0427M	QPSK	1	50	10 mm	left	1:1	0.119	1.222	0.145	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	-0.11	0	0427M	QPSK	50	50	10 mm	left	1:1	0.118	1.268	0.150	

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 11-56
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]	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	20.0	18.57	0	-0.02	0	0586M	QPSK	1	50	10 mm	back	1:1	0.478	1.390	0.664	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.51	0	0.02	0	0586M	QPSK	50	0	10 mm	back	1:1	0.489	1.409	0.689	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.57	0	0.00	0	0586M	QPSK	1	50	10 mm	front	1:1	0.495	1.390	0.688	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.51	0	-0.01	0	0586M	QPSK	50	0	10 mm	front	1:1	0.500	1.409	0.705	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.57	0	0.07	0	0586M	QPSK	1	50	10 mm	bottom	1:1	0.741	1.390	1.030	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	18.36	0	0.06	0	0586M	QPSK	1	0	10 mm	bottom	1:1	0.743	1.459	1.084	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	18.31	0	0.02	0	0586M	QPSK	1	50	10 mm	bottom	1:1	0.847	1.476	**1.250**	A56
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.51	0	-0.01	0	0586M	QPSK	50	0	10 mm	bottom	1:1	0.751	1.409	1.058	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.0	18.32	0	0.07	0	0586M	QPSK	50	0	10 mm	bottom	1:1	0.769	1.472	1.132	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.0	18.32	0	-0.01	0	0586M	QPSK	50	50	10 mm	bottom	1:1	0.823	1.472	1.211	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.27	0	0.02	0	0586M	QPSK	100	0	10 mm	bottom	1:1	0.730	1.489	1.087	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.57	0	-0.11	0	0586M	QPSK	1	50	10 mm	right	1:1	0.048	1.390	0.067	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.51	0	-0.07	0	0586M	QPSK	50	0	10 mm	right	1:1	0.049	1.409	0.069	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.57	0	-0.02	0	0586M	QPSK	1	50	10 mm	left	1:1	0.126	1.390	0.175	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.0	18.51	0	-0.06	0	0586M	QPSK	50	0	10 mm	left	1:1	0.126	1.409	0.178	

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 11-57
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	18.86	-0.11	0	A	0577M	QPSK	1	25	10 mm	back	1:1	0.263	1.300	0.342	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	0.01	0	A	0577M	QPSK	25	12	10 mm	back	1:1	0.257	1.306	0.336	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.86	0.13	0	A	0577M	QPSK	1	25	10 mm	front	1:1	0.261	1.300	0.339	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	-0.12	0	A	0577M	QPSK	25	12	10 mm	front	1:1	0.253	1.306	0.330	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.86	0.04	0	A	0577M	QPSK	1	25	10 mm	bottom	1:1	0.550	1.300	0.715	A58
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	0.00	0	A	0577M	QPSK	25	12	10 mm	bottom	1:1	0.543	1.306	0.709	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.86	0.01	0	A	0577M	QPSK	1	25	10 mm	right	1:1	0.041	1.300	0.053	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	0.19	0	A	0577M	QPSK	25	12	10 mm	right	1:1	0.039	1.306	0.051	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.86	-0.14	0	A	0577M	QPSK	1	25	10 mm	left	1:1	0.150	1.300	0.195	
2310.00	27710	Mid	LTE Band 30	10	20.0	18.84	-0.13	0	A	0577M	QPSK	25	12	10 mm	left	1:1	0.144	1.306	0.188	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.24	0.00	0	B	0997M	QPSK	1	25	10 mm	back	1:1	0.138	1.191	0.164	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.23	0.02	0	B	0997M	QPSK	25	12	10 mm	back	1:1	0.137	1.194	0.164	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.24	0.01	0	B	0997M	QPSK	1	25	10 mm	front	1:1	0.081	1.191	0.096	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.23	-0.04	0	B	0997M	QPSK	25	12	10 mm	front	1:1	0.080	1.194	0.096	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.24	0.02	0	B	0997M	QPSK	1	25	10 mm	bottom	1:1	0.158	1.191	0.188	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.23	-0.03	0	B	0997M	QPSK	25	12	10 mm	bottom	1:1	0.158	1.194	0.189	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.24	0.00	0	B	0997M	QPSK	1	25	10 mm	left	1:1	0.125	1.191	0.149	
2310.00	27710	Mid	LTE Band 30	10	20.0	19.23	-0.04	0	B	0997M	QPSK	25	12	10 mm	left	1:1	0.123	1.194	0.147	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-58
LTE Band 7 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	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)	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.11	0	0570M	QPSK	1	0	10 mm	back	1:1	0.228	1.327	0.303	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	-0.10	0	0570M	QPSK	50	25	10 mm	back	1:1	0.219	1.409	0.309	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.19	0	0570M	QPSK	1	0	10 mm	front	1:1	0.186	1.327	0.247	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	-0.14	0	0570M	QPSK	50	25	10 mm	front	1:1	0.177	1.409	0.249	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.01	0	0570M	QPSK	1	0	10 mm	bottom	1:1	0.373	1.327	0.495	A60
2560.00	21350	High	LTE Band 7	20	20.5	19.01	-0.04	0	0570M	QPSK	50	25	10 mm	bottom	1:1	0.361	1.409	0.509	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.09	0	0570M	QPSK	1	0	10 mm	left	1:1	0.204	1.327	0.271	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	-0.03	0	0570M	QPSK	50	25	10 mm	left	1:1	0.208	1.409	0.293	
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 11-59
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]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.01	0	0421M	QPSK	1	50	10 mm	back	1:1.58	0.218	1.256	0.274	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.03	0	0421M	QPSK	50	25	10 mm	back	1:1.58	0.224	1.271	0.285	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.88	0.01	0	0421M	QPSK	50	50	10 mm	back	1:1.58	0.234	1.294	0.303	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	23.7	22.68	0.03	0	0421M	QPSK	50	25	10 mm	back	1:2.31	0.239	1.265	0.302	A62
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	23.7	22.52	0.07	0	0421M	QPSK	50	50	10 mm	back	1:2.31	0.226	1.312	0.297	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	22.0	20.71	-0.01	0	0421M	QPSK	50	50	10 mm	back	1:1.58	0.220	1.346	0.296	
	SCC	2612.80	40818											0							
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	23.7	22.42	-0.04	0	0421M	QPSK	50	50	10 mm	back	1:2.31	0.223	1.343	0.299	
	SCC	2612.80	40818											0							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.08	0	0421M	QPSK	1	50	10 mm	front	1:1.58	0.151	1.256	0.190	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.08	0	0421M	QPSK	50	25	10 mm	front	1:1.58	0.152	1.271	0.193	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.05	0	0421M	QPSK	1	50	10 mm	bottom	1:1.58	0.216	1.256	0.271	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.03	0	0421M	QPSK	50	25	10 mm	bottom	1:1.58	0.216	1.271	0.275	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.01	0	0421M	QPSK	1	50	10 mm	left	1:1.58	0.220	1.256	0.276	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.05	0	0421M	QPSK	50	25	10 mm	left	1:1.58	0.219	1.271	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						

Table 11-60
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]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.														(W/kg)		(W/kg)	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.21	0.03	0	0950M	QPSK	1	50	10 mm	back	1:1.58	0.162	1.346	0.218	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.27	0.01	0	0950M	QPSK	50	25	10 mm	back	1:1.58	0.164	1.327	0.218	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.21	0.13	0	0950M	QPSK	1	50	10 mm	front	1:1.58	0.128	1.346	0.172	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.27	0.07	0	0950M	QPSK	50	25	10 mm	front	1:1.58	0.127	1.327	0.169	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.21	0.13	0	0950M	QPSK	1	50	10 mm	top	1:1.58	0.123	1.346	0.166	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.27	-0.02	0	0950M	QPSK	50	25	10 mm	top	1:1.58	0.124	1.327	0.165	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.21	-0.16	0	0950M	QPSK	1	50	10 mm	left	1:1.58	0.366	1.346	**0.493**	A64
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.02	0.13	0	0950M	QPSK	1	99	10 mm	left	1:1.58	0.347	1.406	**0.488**	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.27	-0.04	0	0950M	QPSK	50	25	10 mm	left	1:1.58	0.363	1.327	0.482	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	20.5	19.00	0.13	0	0950M	QPSK	1	99	10 mm	left	1:1.58	0.345	1.413	0.487	
	SCC	3666.50	56405										1	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 11-61
NR Band n71 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	24.23	0.09	0	0	0194M	DFT-S-OFDM	QPSK	1	53	10 mm	back	1:1	0.440	1.340	0.590	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.03	0	0	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.465	1.288	0.599	A66
680.50	136100	Mid	NR Band n71	20	24.0	22.89	0.08	1.5	0	0194M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.312	1.291	0.403	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	-0.01	0	0	0194M	DFT-S-OFDM	QPSK	1	53	10 mm	front	1:1	0.289	1.340	0.387	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.02	0	0	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.310	1.288	0.399	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	0.05	0	0	0194M	DFT-S-OFDM	QPSK	1	53	10 mm	bottom	1:1	0.102	1.340	0.137	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	-0.04	0	0	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.105	1.288	0.135	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	0.16	0	0	0194M	DFT-S-OFDM	QPSK	1	53	10 mm	right	1:1	0.165	1.340	0.221	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.04	0	0	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.181	1.288	0.233	
680.50	136100	Mid	NR Band n71	20	25.5	24.23	0.05	0	0	0194M	DFT-S-OFDM	QPSK	1	53	10 mm	left	1:1	0.213	1.340	0.285	
680.50	136100	Mid	NR Band n71	20	25.5	24.40	0.00	0	0	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.232	1.288	0.299	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-62
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.06	0	0	0194M	DFT-S-OFDM	QPSK	1	40	10 mm	back	1:1	0.484	1.361	0.659	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	0.01	0	0	0194M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.500	1.297	0.649	A68
707.50	141500	Mid	NR Band n12	15	24.0	22.65	0.02	1.5	0	0194M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.308	1.365	0.420	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.00	0	0	0194M	DFT-S-OFDM	QPSK	1	40	10 mm	front	1:1	0.341	1.361	0.464	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	-0.03	0	0	0194M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.352	1.297	0.457	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	-0.07	0	0	0194M	DFT-S-OFDM	QPSK	1	40	10 mm	bottom	1:1	0.115	1.361	0.157	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	0.02	0	0	0194M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.121	1.297	0.157	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.08	0	0	0194M	DFT-S-OFDM	QPSK	1	40	10 mm	right	1:1	0.262	1.361	0.357	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	0.06	0	0	0194M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.264	1.297	0.342	
707.50	141500	Mid	NR Band n12	15	25.5	24.16	0.05	0	0	0194M	DFT-S-OFDM	QPSK	1	40	10 mm	left	1:1	0.285	1.361	0.388	
707.50	141500	Mid	NR Band n12	15	25.5	24.37	-0.01	0	0	0194M	DFT-S-OFDM	QPSK	36	22	10 mm	left	1:1	0.282	1.297	0.366	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-63
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	24.08	0.01	0	39	0194M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.500	1.387	0.694	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	0.01	0	39	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.533	1.371	0.731	A70
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	22.77	-0.03	1.5	39	0194M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.362	1.327	0.480	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	0.00	0	39	0194M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.313	1.387	0.434	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	0.02	0	39	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.347	1.371	0.476	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	-0.14	0	39	0194M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.159	1.387	0.221	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	-0.10	0	39	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.177	1.371	0.243	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	-0.04	0	39	0194M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.456	1.387	0.632	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	-0.04	0	39	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.417	1.371	0.572	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.08	0.03	0	39	0194M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.286	1.387	0.397	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	24.13	-0.05	0	39	0194M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.228	1.371	0.313	
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Table 11-64
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	19.0	18.61	A	0.07	0	26	0274M	DFT-S-OFDM	QPSK	1	108	10 mm	back	1:1	0.541	1.094	0.592	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.73	A	0.02	0	26	0274M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.524	1.064	0.558	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.61	A	0.01	0	26	0274M	DFT-S-OFDM	QPSK	1	108	10 mm	front	1:1	0.400	1.094	0.438	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.73	A	0.02	0	26	0274M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.406	1.064	0.432	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.61	A	-0.01	0	26	0274M	DFT-S-OFDM	QPSK	1	108	10 mm	bottom	1:1	0.822	1.094	0.899	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.73	A	-0.03	0	26	0274M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.855	1.064	0.910	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.60	A	-0.02	0	26	0274M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.865	1.096	0.948	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.45	A	-0.01	0	26	0274M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.898	1.135	1.019	A72
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.61	A	0.03	0	26	0274M	DFT-S-OFDM	QPSK	1	108	10 mm	right	1:1	0.053	1.094	0.058	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.73	A	0.11	0	26	0274M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.055	1.064	0.059	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.61	A	0.04	0	26	0274M	DFT-S-OFDM	QPSK	1	108	10 mm	left	1:1	0.112	1.094	0.123	
1745.00	349000	Mid	NR Band n66 (AWS)	40	19.0	18.73	A	-0.03	0	26	0274M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.117	1.064	0.124	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	-0.01	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.278	1.197	0.333	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	0.04	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.287	1.153	0.331	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	0.04	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.247	1.197	0.296	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	-0.04	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.255	1.153	0.294	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	0.04	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	10 mm	top	1:1	0.381	1.197	0.456	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	-0.12	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	10 mm	top	1:1	0.448	1.153	0.517	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.14	F	0.13	0	N/A	1004M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.469	1.219	0.572	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	0.01	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.085	1.197	0.102	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	-0.02	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.091	1.153	0.105	
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 11-65
NR Band n25 Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.81	A	0.05	0	0	0303M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.540	1.172	0.633	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.94	A	0.07	0	0	0303M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.486	1.138	0.553	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.81	A	0.07	0	0	0303M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.472	1.172	0.553	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.94	A	-0.03	0	0	0303M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.450	1.138	0.512	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.81	A	0.02	0	0	0303M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.973	1.172	1.140	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.94	A	0.00	0	0	0303M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	1.000	1.138	1.138	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.80	A	0.04	0	0	0303M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	1.020	1.175	1.199	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.80	A	0.00	0	0	0303M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	1.020	1.175	1.199	A74
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.81	A	0.06	0	0	0303M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.205	1.172	0.240	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.94	A	-0.02	0	0	0303M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.189	1.138	0.215	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.81	A	0.07	0	0	0303M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.130	1.172	0.152	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.94	A	0.03	0	0	0303M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.123	1.138	0.140	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.39	F	-0.02	0	N/A	0198M	DFT-S-OFDM	QPSK	1	108	10 mm	back	1:1	0.193	1.151	0.222	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.50	F	-0.03	0	N/A	0198M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.208	1.122	0.233	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.39	F	-0.12	0	N/A	0198M	DFT-S-OFDM	QPSK	1	108	10 mm	front	1:1	0.158	1.151	0.182	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.50	F	-0.01	0	N/A	0198M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.156	1.122	0.175	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.39	F	-0.04	0	N/A	0198M	DFT-S-OFDM	QPSK	1	108	10 mm	top	1:1	0.371	1.151	0.427	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.50	F	0.04	0	N/A	0198M	DFT-S-OFDM	QPSK	108	0	10 mm	top	1:1	0.386	1.122	0.433	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.29	F	0.06	0	N/A	0198M	CP-OFDM	QPSK	1	1	10 mm	top	1:1	0.373	1.178	0.439	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.39	F	-0.04	0	N/A	0198M	DFT-S-OFDM	QPSK	1	108	10 mm	right	1:1	0.078	1.151	0.090	
1882.50	376500	Mid	NR Band n25 (PCS)	40	22.0	21.50	F	0.08	0	N/A	0198M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.082	1.122	0.092	
1882.50	376500	Mid	NR Band n25 (PCS)	40	18.5	17.80	A	0.00	0	0	0303M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.990	1.175	1.163	
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Note: Blue entry represents variability measurement.

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Table 11-66
NR Band n30 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	0.02	0	0292M	DFT-S-OFDM	QPSK	1	26	10 mm	back	1:1	0.367	1.279	0.469	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.01	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	back	1:1	0.382	1.259	0.481	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	0.00	0	0292M	DFT-S-OFDM	QPSK	1	26	10 mm	front	1:1	0.373	1.279	0.477	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	0.01	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	front	1:1	0.387	1.259	0.487	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	-0.07	0	0292M	DFT-S-OFDM	QPSK	1	26	10 mm	bottom	1:1	0.831	1.279	1.063	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.02	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	bottom	1:1	0.848	1.259	1.068	A76
2310.00	462000	Mid	NR Band n30	10	19.5	18.42	A	0.01	0	0292M	DFT-S-OFDM	QPSK	50	0	10 mm	bottom	1:1	0.843	1.282	1.081	
2310.00	462000	Mid	NR Band n30	10	19.5	18.38	A	0.08	0	0292M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.804	1.294	1.040	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	-0.01	0	0292M	DFT-S-OFDM	QPSK	1	26	10 mm	right	1:1	0.033	1.279	0.042	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.14	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	right	1:1	0.039	1.259	0.049	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	0.01	0	0292M	DFT-S-OFDM	QPSK	1	26	10 mm	left	1:1	0.158	1.279	0.202	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	0.08	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	left	1:1	0.164	1.259	0.206	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.01	0	0292M	DFT-S-OFDM	QPSK	25	14	10 mm	bottom	1:1	0.740	1.259	0.932	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	0.01	0	0997M	DFT-S-OFDM	QPSK	1	26	10 mm	back	1:1	0.076	1.096	0.083	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	-0.01	0	0997M	DFT-S-OFDM	QPSK	25	14	10 mm	back	1:1	0.078	1.084	0.085	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	0.04	0	0997M	DFT-S-OFDM	QPSK	1	26	10 mm	front	1:1	0.040	1.096	0.044	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	-0.07	0	0997M	DFT-S-OFDM	QPSK	25	14	10 mm	front	1:1	0.033	1.084	0.036	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	-0.14	0	0997M	DFT-S-OFDM	QPSK	1	26	10 mm	bottom	1:1	0.079	1.096	0.087	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	0.06	0	0997M	DFT-S-OFDM	QPSK	25	14	10 mm	bottom	1:1	0.084	1.084	0.091	
2310.00	462000	Mid	NR Band n30	10	19.5	19.03	B	-0.04	0	0997M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.089	1.114	0.099	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	-0.06	0	0997M	DFT-S-OFDM	QPSK	1	26	10 mm	left	1:1	0.057	1.096	0.062	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	0.17	0	0997M	DFT-S-OFDM	QPSK	25	14	10 mm	left	1:1	0.058	1.084	0.063	
2310.00	462000	Mid	NR Band n30	10	22.0	21.29	F	0.01	0	1035M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.443	1.178	0.522	
2310.00	462000	Mid	NR Band n30	10	22.0	21.40	F	-0.02	0	1035M	DFT-S-OFDM	QPSK	25	14	10 mm	back	1:1	0.460	1.148	0.528	
2310.00	462000	Mid	NR Band n30	10	21.5	21.27	F	0.01	0.5	1035M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.393	1.054	0.414	
2310.00	462000	Mid	NR Band n30	10	22.0	21.29	F	0.07	0	1035M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.264	1.178	0.311	
2310.00	462000	Mid	NR Band n30	10	22.0	21.40	F	-0.03	0	1035M	DFT-S-OFDM	QPSK	25	14	10 mm	front	1:1	0.270	1.148	0.310	
2310.00	462000	Mid	NR Band n30	10	22.0	21.29	F	0.16	0	1035M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.021	1.178	0.025	
2310.00	462000	Mid	NR Band n30	10	22.0	21.40	F	-0.18	0	1035M	DFT-S-OFDM	QPSK	25	14	10 mm	top	1:1	0.020	1.148	0.023	
2310.00	462000	Mid	NR Band n30	10	22.0	21.29	F	0.19	0	1035M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.052	1.178	0.061	
2310.00	462000	Mid	NR Band n30	10	22.0	21.40	F	0.07	0	1035M	DFT-S-OFDM	QPSK	25	14	10 mm	right	1:1	0.055	1.148	0.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

Note: Blue entry represents variability measurement.

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Table 11-67
NR Band n7 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	19.5	18.31	0.03	0	0294M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.252	1.315	0.331	
2535.00	507000	Mid	NR Band n7	40	19.5	18.37	0.02	0	0294M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.276	1.297	0.358	
2535.00	507000	Mid	NR Band n7	40	19.5	18.31	0.01	0	0294M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.257	1.315	0.338	
2535.00	507000	Mid	NR Band n7	40	19.5	18.37	0.01	0	0294M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.274	1.297	0.355	
2535.00	507000	Mid	NR Band n7	40	19.5	18.31	-0.03	0	0294M	DFT-S-OFDM	QPSK	1	214	10 mm	bottom	1:1	0.630	1.315	0.828	
2535.00	507000	Mid	NR Band n7	40	19.5	18.37	0.03	0	0294M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.658	1.297	0.853	
2535.00	507000	Mid	NR Band n7	40	19.5	18.30	-0.10	0	0294M	DFT-S-OFDM	QPSK	216	0	10 mm	bottom	1:1	0.660	1.318	0.870	
2535.00	507000	Mid	NR Band n7	40	19.5	18.35	0.01	0	0294M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.683	1.303	0.890	A78
2535.00	507000	Mid	NR Band n7	40	19.5	18.31	0.03	0	0294M	DFT-S-OFDM	QPSK	1	214	10 mm	left	1:1	0.240	1.315	0.316	
2535.00	507000	Mid	NR Band n7	40	19.5	18.37	-0.03	0	0294M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.262	1.297	0.340	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-68
NR Band 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	21.0	20.56	F	0.05	0	0919M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.334	1.107	0.370	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	0.03	0	0919M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.311	1.135	0.353	
2592.99	518598	Mid	NR Band n41	100	21.0	20.54	F	0.07	0	0919M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.337	1.112	0.375	A80
2592.99	518598	Mid	NR Band n41	100	21.0	20.56	F	-0.18	0	0919M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.180	1.107	0.199	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	0.02	0	0919M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.146	1.135	0.166	
2592.99	518598	Mid	NR Band n41	100	21.0	20.56	F	-0.02	0	0919M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.282	1.107	0.312	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	0.01	0	0919M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.295	1.135	0.335	
2592.99	518598	Mid	NR Band n41	100	21.0	20.56	F	0.08	0	0919M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.043	1.107	0.048	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	0.03	0	0919M	DFT-S-OFDM	QPSK	135	0	10 mm	right	1:1	0.053	1.135	0.060	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	-0.01	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.128	1.259	0.161	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	0.00	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.144	1.259	0.181	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	0.01	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.307	1.259	0.387	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	-0.01	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.097	1.259	0.122	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.11	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.034	1.294	0.044	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	-0.01	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.126	1.294	0.163	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	-0.15	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.065	1.294	0.084	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	0.15	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.001	1.294	0.001	
2592.99	518598	Mid	NR Band n41	100	16.5	15.38	E	-0.14	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.010	1.294	0.013	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.02	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.064	1.262	0.081	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	-0.19	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.013	1.262	0.016	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	-0.13	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.014	1.262	0.018	
2592.99	518598	Mid	NR Band n41	100	15.5	14.49	D	0.17	N/A	0919M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.000	1.262	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 11-69
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	16.75	G	-0.03	0	0885M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.150	1.334	0.200	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	0.10	0	0885M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.152	1.384	0.210	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.75	G	-0.02	0	0885M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.108	1.334	0.144	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	-0.11	0	0885M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.098	1.384	0.136	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.75	G	0.14	0	0885M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.069	1.334	0.092	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	-0.07	0	0885M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.068	1.384	0.094	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.75	G	0.09	0	0885M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.270	1.334	0.360	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	-0.01	0	0885M	DFT-S-OFDM	QPSK	135	0	10 mm	left	1:1	0.271	1.384	0.375	A82
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.86	G	-0.02	0	0885M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.268	1.300	0.348	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	-0.16	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.016	1.349	0.022	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	-0.17	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.016	1.349	0.022	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	0.00	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.005	1.349	0.007	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.20	C	-0.02	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.033	1.349	0.045	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.53	H	-0.04	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.079	1.403	0.111	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.53	H	0.15	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.000	1.403	0.000	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.53	H	0.17	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.001	1.403	0.001	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	0.02	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.081	1.371	0.111	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.10	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.004	1.371	0.005	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	-0.13	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.006	1.371	0.008	
3500.01	633334	Mid	NR Band n77 DoD	100	12.5	11.13	D	0.00	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.006	1.371	0.008	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.03	0	0885M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.220	1.072	0.236	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	-0.04	0	0885M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1:1	0.216	1.074	0.232	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.04	0	0885M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.131	1.072	0.140	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	0.04	0	0885M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1:1	0.132	1.074	0.142	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	-0.03	0	0885M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.115	1.072	0.123	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	-0.04	0	0885M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1:1	0.114	1.074	0.122	
3750.00	650000	Low	NR Band n77	100	18.0	17.65	G	-0.08	0	0885M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.303	1.084	0.328	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	-0.03	0	0885M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.400	1.072	0.429	
3750.00	650000	Low	NR Band n77	100	18.0	17.68	G	0.00	0	0885M	DFT-S-OFDM	QPSK	135	0	10 mm	left	1:1	0.303	1.076	0.326	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	0.03	0	0885M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1:1	0.408	1.074	0.438	A84
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	0.08	0	0885M	DFT-S-OFDM	QPSK	270	0	10 mm	left	1:1	0.370	1.099	0.407	
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	0.01	0	0885M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.370	1.099	0.407	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.18	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.049	1.189	0.058	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	-0.11	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.051	1.189	0.061	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	-0.05	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.032	1.189	0.038	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	0.08	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	left	1:1	0.093	1.189	0.111	
3930.00	662000	High	NR Band n77	100	18.0	17.96	H	0.05	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.183	1.009	0.185	
3930.00	662000	High	NR Band n77	100	18.0	17.96	H	-0.20	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.000	1.009	0.000	
3930.00	662000	High	NR Band n77	100	18.0	17.96	H	-0.17	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	top	1:1	0.011	1.009	0.011	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	-0.14	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	back	1:1	0.037	1.143	0.042	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.13	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	front	1:1	0.001	1.143	0.001	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.12	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	bottom	1:1	0.005	1.143	0.006	
3930.00	662000	High	NR Band n77	100	12.5	11.92	D	0.20	N/A	0885M	CW/SRS	N/A	N/A	N/A	10 mm	right	1:1	0.000	1.143	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 11-70
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	19.0	18.92	-0.07	10 mm	2	1133M	1	back	98.9	0.573	0.414	1.019	1.011	**0.427**	
2412	1	802.11b	DSSS	22	19.0	18.92	0.01	10 mm	2	1133M	1	front	98.9	0.046	0.034	1.019	1.011	0.035	
2412	1	802.11b	DSSS	22	19.0	18.92	0.11	10 mm	2	1133M	1	top	98.9	0.130	0.103	1.019	1.011	0.106	
2412	1	802.11b	DSSS	22	19.0	18.92	0.14	10 mm	2	1133M	1	left	98.9	0.017	-	1.019	1.011	-	
5775	155	802.11ac	OFDM	80	18.0	17.76	0.19	10 mm	1	1342M	29.3	back	92.4	0.141	-	1.057	1.082	-	
5775	155	802.11ac	OFDM	80	18.0	17.76	0.17	10 mm	1	1342M	29.3	front	92.4	0.150	-	1.057	1.082	-	
5775	155	802.11ac	OFDM	80	18.0	17.76	-0.13	10 mm	1	1342M	29.3	left	92.4	0.200	0.159	1.057	1.082	**0.182**	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-71
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)	
2412	1	802.11b	DSSS	22	19.0	18.90	19.0	18.92	0.01	10 mm	MIMO	1133M	1	back	99.1	0.883	0.634	1.023	1.009	0.654	
2437	6	802.11b	DSSS	22	19.0	18.49	19.0	18.79	0.06	10 mm	MIMO	1133M	1	back	99.1	1.000	0.618	1.125	1.009	0.702	
2462	11	802.11b	DSSS	22	19.0	18.99	19.0	18.73	-0.08	10 mm	MIMO	1133M	1	back	99.1	1.280	0.870	1.064	1.009	0.934	A86
2412	1	802.11b	DSSS	22	19.0	18.90	19.0	18.92	-0.10	10 mm	MIMO	1133M	1	front	99.1	0.218	0.174	1.023	1.009	0.180	
2412	1	802.11b	DSSS	22	19.0	18.90	19.0	18.92	-0.17	10 mm	MIMO	1133M	1	top	99.1	0.167	0.125	1.023	1.009	0.129	
2412	1	802.11b	DSSS	22	19.0	18.90	19.0	18.92	0.00	10 mm	MIMO	1133M	1	left	99.1	0.484	0.387	1.023	1.009	0.399	
2462	11	802.11b	DSSS	22	19.0	18.99	19.0	18.73	0.01	10 mm	MIMO	1133M	1	back	99.1	1.280	0.870	1.064	1.009	0.934	
5775	155	802.11ac	OFDM	80	18.0	17.76	18.0	17.96	-0.09	10 mm	MIMO	1342M	58.5	back	91.7	0.334	0.258	1.057	1.091	0.298	A88
5775	155	802.11ac	OFDM	80	18.0	17.76	18.0	17.96	0.09	10 mm	MIMO	1342M	58.5	front	91.7	0.146	0.132	1.057	1.091	0.152	
5775	155	802.11ac	OFDM	80	18.0	17.76	18.0	17.96	0.15	10 mm	MIMO	1342M	58.5	top	91.7	0.053	0.035	1.057	1.091	0.040	
5775	155	802.11ac	OFDM	80	18.0	17.76	18.0	17.96	-0.18	10 mm	MIMO	1342M	58.5	left	91.7	0.216	0.167	1.057	1.091	0.193	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Note: 1)Blue entry represents variability measurement. 2)For 2.4 GHz WLAN, to achieve the 22 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19 dBm. 3)For 5 GHz WLAN, to achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

Table 11-72
DTS Hotspot SISO SAR during Conditions with 5 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	15.0	14.84	0.06	10 mm	2	1350M	1	back	98.9	0.100	0.070	1.038	1.011	0.073	
2437	6	802.11b	DSSS	22	15.0	14.84	0.13	10 mm	2	1350M	1	front	98.9	0.007	-	1.038	1.011	-	
2437	6	802.11b	DSSS	22	15.0	14.84	-0.16	10 mm	2	1350M	1	top	98.9	0.021	-	1.038	1.011	-	
2437	6	802.11b	DSSS	22	15.0	14.84	-0.18	10 mm	2	1350M	1	left	98.9	0.002	-	1.038	1.011	-	
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 SISO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5 GHz WLAN, or 5G NR. 5 GHz WIFI or 5G NR was not transmitting during the above evaluations.

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Table 11-73
WLAN MIMO Hotspot SAR for Conditions with 2.4 GHz/5 GHz WLAN and/or 5G NR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	0.11	10 mm	MIMO	1350M	13	back	91.3	0.177	0.123	1.094	1.095	0.147	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	0.21	10 mm	MIMO	1350M	13	front	91.3	0.053	-	1.094	1.095	-	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	-0.04	10 mm	MIMO	1350M	13	top	91.3	0.041	-	1.094	1.095	-	
2412	1	802.11n	OFDM	20	15.0	14.61	15.0	14.73	-0.07	10 mm	MIMO	1350M	13	left	91.3	0.091	-	1.094	1.095	-	
5775	155	802.11ac	OFDM	80	13.0	12.83	13.0	12.73	0.09	10 mm	MIMO	1342M	58.5	back	91.7	0.056	0.020	1.064	1.091	0.023	
5775	155	802.11ac	OFDM	80	13.0	12.83	13.0	12.73	-0.05	10 mm	MIMO	1342M	58.5	front	91.7	0.038	0.017	1.064	1.091	0.020	
5775	155	802.11ac	OFDM	80	13.0	12.83	13.0	12.73	0.12	10 mm	MIMO	1342M	58.5	top	91.7	0.000	-	1.064	1.091	-	
5775	155	802.11ac	OFDM	80	13.0	12.83	13.0	12.73	-0.18	10 mm	MIMO	1342M	58.5	left	91.7	0.049	-	1.064	1.091	-	
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: 1)2.4 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5 GHz WLAN, or 5G NR. 5 GHz WIFI or 5G NR was not transmitting during the above evaluations. 2) 5 GHz MIMO was additionally evaluated at the maximum allowed output power during simultaneous operations with 2.4 GHz WLAN, or 5G NR. 2.4 GHz WIFI or 5G NR was not transmitting during the above evaluations.

Table 11-74
DSS Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	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)	
2402	0	Bluetooth	FHSS	16.0	15.56	0.12	10 mm	0878M	1	back	77.60	0.030	1.107	1.289	0.043	
2402	0	Bluetooth	FHSS	16.0	15.56	0.20	10 mm	0878M	1	front	77.60	0.030	1.107	1.289	0.043	
2402	0	Bluetooth	FHSS	16.0	15.56	0.06	10 mm	0878M	1	top	77.60	0.003	1.107	1.289	0.004	
2402	0	Bluetooth	FHSS	16.0	15.56	0.03	10 mm	0878M	1	left	77.60	0.047	1.107	1.289	**0.067**	A90
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram									

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11.4 Standalone Phablet SAR Data

Table 11-75
GPRS/UMTS Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1909.80	810	GSM 1900	GPRS	27.5	26.13	N/A	-0.01	8 mm	0300M	3	1:2.76	back	0.575	1.371	0.788	
1909.80	810	GSM 1900	GPRS	27.5	26.13	N/A	0.17	6 mm	0300M	3	1:2.76	front	0.634	1.371	0.869	
1909.80	810	GSM 1900	GPRS	27.5	26.13	N/A	-0.03	11 mm	0300M	3	1:2.76	bottom	0.701	1.371	0.961	
1909.80	810	GSM 1900	GPRS	27.5	26.13	N/A	0.02	0 mm	0300M	3	1:2.76	right	0.203	1.371	0.278	
1909.80	810	GSM 1900	GPRS	27.5	26.13	N/A	-0.03	0 mm	0300M	3	1:2.76	left	0.528	1.371	0.724	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	0.18	0 mm	0300M	4	1:2.076	back	1.260	1.189	1.498	A91
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.06	0 mm	0300M	4	1:2.076	front	0.834	1.189	0.992	
1909.80	810	GSM 1900	GPRS	22.5	21.75	N/A	-0.18	0 mm	0300M	4	1:2.076	bottom	0.765	1.189	0.910	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	0.01	8 mm	0553M	N/A	1:1	back	0.913	1.178	1.076	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	0.01	6 mm	0553M	N/A	1:1	front	0.906	1.178	1.067	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	0.01	11 mm	0553M	N/A	1:1	bottom	1.050	1.178	1.237	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	-0.05	0 mm	0553M	N/A	1:1	right	0.356	1.178	0.419	
1712.40	1312	UMTS 1750	RMC	24.0	23.29	14	0.02	0 mm	0553M	N/A	1:1	left	0.833	1.178	0.981	
1712.40	1312	UMTS 1750	RMC	21.0	20.41	14	0.03	0 mm	0553M	N/A	1:1	back	1.800	1.146	2.063	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	14	0.01	0 mm	0553M	N/A	1:1	back	2.060	1.199	2.470	A92
1752.60	1513	UMTS 1750	RMC	21.0	20.11	14	0.03	0 mm	0553M	N/A	1:1	back	1.890	1.227	2.319	
1712.40	1312	UMTS 1750	RMC	21.0	20.41	14	0.01	0 mm	0553M	N/A	1:1	front	1.470	1.146	1.685	
1712.40	1312	UMTS 1750	RMC	21.0	20.41	14	-0.03	0 mm	0553M	N/A	1:1	bottom	1.650	1.146	1.891	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	-0.04	8 mm	0586M	N/A	1:1	back	0.974	1.233	1.201	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	0.03	6 mm	0586M	N/A	1:1	front	1.330	1.233	1.640	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	-0.02	11 mm	0586M	N/A	1:1	bottom	1.300	1.233	1.603	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	0.06	0 mm	0586M	N/A	1:1	right	0.403	1.233	0.497	
1907.60	9538	UMTS 1900	RMC	24.7	23.79	0	-0.04	0 mm	0586M	N/A	1:1	left	0.792	1.233	0.977	
1852.40	9262	UMTS 1900	RMC	20.0	19.32	0	-0.08	0 mm	0586M	N/A	1:1	back	1.090	1.169	1.274	
1852.40	9262	UMTS 1900	RMC	20.0	19.32	0	-0.04	0 mm	0586M	N/A	1:1	front	0.847	1.169	0.990	
1852.40	9262	UMTS 1900	RMC	20.0	19.32	0	-0.14	0 mm	0586M	N/A	1:1	bottom	1.500	1.169	1.754	A93
1880.00	9400	UMTS 1900	RMC	20.0	19.29	0	-0.02	0 mm	0586M	N/A	1:1	bottom	1.350	1.178	1.590	
1907.60	9538	UMTS 1900	RMC	20.0	19.27	0	0.17	0 mm	0586M	N/A	1:1	bottom	1.400	1.183	1.656	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-76
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]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	0.05	0	0427M	QPSK	1	0	8 mm	back	1:1	1.060	1.140	1.208	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	0.03	1	0427M	QPSK	50	50	8 mm	back	1:1	0.853	1.135	0.968	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	0.00	0	0427M	QPSK	1	0	6 mm	front	1:1	1.160	1.140	1.322	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	0.03	1	0427M	QPSK	50	50	6 mm	front	1:1	0.849	1.135	0.964	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	-0.01	0	0427M	QPSK	1	0	11 mm	bottom	1:1	1.250	1.140	1.425	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	-0.06	1	0427M	QPSK	50	50	11 mm	bottom	1:1	0.960	1.135	1.090	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	-0.12	0	0427M	QPSK	1	0	0 mm	right	1:1	0.391	1.140	0.446	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	0.04	1	0427M	QPSK	50	50	0 mm	right	1:1	0.309	1.135	0.351	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.5	23.93	18	0.07	0	0427M	QPSK	1	0	0 mm	left	1:1	0.804	1.140	0.917	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.5	22.95	18	0.05	1	0427M	QPSK	50	50	0 mm	left	1:1	0.639	1.135	0.725	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	0.02	0	0427M	QPSK	1	50	0 mm	back	1:1	1.160	1.222	1.418	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.07	0	0427M	QPSK	50	50	0 mm	back	1:1	1.150	1.268	1.458	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	-0.01	0	0427M	QPSK	1	50	0 mm	front	1:1	1.210	1.222	1.479	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.01	0	0427M	QPSK	50	50	0 mm	front	1:1	1.210	1.268	1.534	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.13	18	0.03	0	0427M	QPSK	1	50	0 mm	bottom	1:1	1.240	1.222	1.515	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	18.78	18	0.05	0	0427M	QPSK	50	25	0 mm	bottom	1:1	1.240	1.324	1.642	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.84	18	0.09	0	0427M	QPSK	50	0	0 mm	bottom	1:1	1.270	1.306	1.659	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.95	18	0.02	0	0427M	QPSK	50	25	0 mm	bottom	1:1	1.320	1.274	1.682	A94
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	18.97	18	0.01	0	0427M	QPSK	50	50	0 mm	bottom	1:1	1.210	1.268	1.534	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	18.95	18	-0.09	0	0427M	QPSK	25	0	0 mm	bottom	1:1	1.290	1.274	1.643	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.46	18	0.12	0	0427M	QPSK	50	0	0 mm	bottom	1:1	1.220	1.426	1.740	
	SCC	1725.20	132124											50	50							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	18.51	18	0.14	0	0427M	QPSK	25	0	0 mm	bottom	1:1	1.210	1.409	1.705	
	SCC	1735.10	132223											25	25							
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Table 11-77
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]	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	24.7	23.77	0	0.03	0	0586M	QPSK	1	0	8 mm	back	1:1	1.070	1.239	1.326	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	-0.02	1	0586M	QPSK	50	0	8 mm	back	1:1	0.854	1.239	1.058	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	-0.01	0	0586M	QPSK	1	0	6 mm	front	1:1	1.110	1.239	1.375	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.04	1	0586M	QPSK	50	0	6 mm	front	1:1	0.859	1.239	1.064	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	0.00	0	0586M	QPSK	1	0	11 mm	bottom	1:1	1.210	1.239	1.499	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.01	1	0586M	QPSK	50	0	11 mm	bottom	1:1	0.962	1.239	1.192	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	-0.02	0	0586M	QPSK	1	0	0 mm	right	1:1	0.396	1.239	0.491	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	0.03	1	0586M	QPSK	50	0	0 mm	right	1:1	0.310	1.239	0.384	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	23.77	0	-0.04	0	0586M	QPSK	1	0	0 mm	left	1:1	1.010	1.239	1.251	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	22.77	0	-0.01	1	0586M	QPSK	50	0	0 mm	left	1:1	0.781	1.239	0.968	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.60	0	0.10	0	0586M	QPSK	1	0	0 mm	back	1:1	1.390	1.230	1.710	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.46	0	0.07	0	0586M	QPSK	50	0	0 mm	back	1:1	1.400	1.271	1.779	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.60	0	0.01	0	0586M	QPSK	1	0	0 mm	front	1:1	1.170	1.230	1.439	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.46	0	-0.03	0	0586M	QPSK	50	0	0 mm	front	1:1	1.160	1.271	1.474	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.60	0	0.17	0	0586M	QPSK	1	0	0 mm	bottom	1:1	1.570	1.230	1.931	A95
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.36	0	-0.16	0	0586M	QPSK	1	0	0 mm	bottom	1:1	1.380	1.300	1.794	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.43	0	0.01	0	0586M	QPSK	1	0	0 mm	bottom	1:1	1.540	1.279	1.970	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.46	0	0.02	0	0586M	QPSK	50	0	0 mm	bottom	1:1	1.520	1.271	1.932	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.31	0	0.16	0	0586M	QPSK	50	25	0 mm	bottom	1:1	1.480	1.315	1.946	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.33	0	0.16	0	0586M	QPSK	50	50	0 mm	bottom	1:1	1.570	1.309	2.055	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.37	0	-0.02	0	0586M	QPSK	100	0	0 mm	bottom	1:1	1.460	1.297	1.894	

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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 11-78
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	22.44	0.04	0	A	0577M	QPSK	1	25	8 mm	back	1:1	0.411	1.276	0.524	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.01	1	A	0577M	QPSK	25	12	8 mm	back	1:1	0.308	1.303	0.401	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	0.10	0	A	0577M	QPSK	1	25	6 mm	front	1:1	0.532	1.276	0.679	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.10	1	A	0577M	QPSK	25	12	6 mm	front	1:1	0.411	1.303	0.536	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	-0.12	0	A	0577M	QPSK	1	25	11 mm	bottom	1:1	0.535	1.276	0.683	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.03	1	A	0577M	QPSK	25	12	11 mm	bottom	1:1	0.421	1.303	0.549	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	0.05	0	A	0577M	QPSK	1	25	0 mm	right	1:1	0.141	1.276	0.180	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.07	1	A	0577M	QPSK	25	12	0 mm	right	1:1	0.109	1.303	0.142	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.44	0.01	0	A	0577M	QPSK	1	25	0 mm	left	1:1	1.220	1.276	1.557	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.35	-0.05	1	A	0577M	QPSK	25	12	0 mm	left	1:1	0.948	1.303	1.235	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.14	0.02	0	A	0577M	QPSK	1	25	0 mm	back	1:1	2.260	1.219	2.755	A96
2310.00	27710	Mid	LTE Band 30	10	21.0	19.96	-0.01	0	A	0577M	QPSK	25	12	0 mm	back	1:1	2.160	1.271	2.745	
2310.00	27710	Mid	LTE Band 30	10	21.0	19.88	0.04	0	A	0577M	QPSK	50	0	0 mm	back	1:1	2.160	1.294	2.795	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.14	0.02	0	A	0577M	QPSK	1	25	0 mm	front	1:1	0.910	1.219	1.109	
2310.00	27710	Mid	LTE Band 30	10	21.0	19.96	-0.04	0	A	0577M	QPSK	25	12	0 mm	front	1:1	0.846	1.271	1.075	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.14	-0.02	0	A	0577M	QPSK	1	25	0 mm	bottom	1:1	1.120	1.219	1.365	
2310.00	27710	Mid	LTE Band 30	10	21.0	19.96	0.06	0	A	0577M	QPSK	25	12	0 mm	bottom	1:1	1.040	1.271	1.322	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	-0.05	0	B	0997M	QPSK	1	25	8 mm	back	1:1	0.157	1.211	0.190	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.01	1	B	0997M	QPSK	25	12	8 mm	back	1:1	0.122	1.236	0.151	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	0.03	0	B	0997M	QPSK	1	25	6 mm	front	1:1	0.170	1.211	0.206	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	0.00	1	B	0997M	QPSK	25	12	6 mm	front	1:1	0.134	1.236	0.166	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	-0.02	0	B	0997M	QPSK	1	25	11 mm	bottom	1:1	0.160	1.211	0.194	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	0.00	1	B	0997M	QPSK	25	12	11 mm	bottom	1:1	0.127	1.236	0.157	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.67	0.07	0	B	0997M	QPSK	1	25	0 mm	left	1:1	1.230	1.211	1.490	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	0.01	1	B	0997M	QPSK	25	12	0 mm	left	1:1	0.914	1.236	1.130	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.30	-0.02	0	B	0997M	QPSK	1	0	0 mm	back	1:1	1.120	1.175	1.316	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.13	0.01	0	B	0997M	QPSK	25	0	0 mm	back	1:1	1.090	1.222	1.332	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.30	0.03	0	B	0997M	QPSK	1	0	0 mm	front	1:1	0.674	1.175	0.792	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.13	0.00	0	B	0997M	QPSK	25	0	0 mm	front	1:1	0.656	1.222	0.802	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.30	0.06	0	B	0997M	QPSK	1	0	0 mm	bottom	1:1	0.974	1.175	1.144	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.13	0.16	0	B	0997M	QPSK	25	0	0 mm	bottom	1:1	0.987	1.222	1.206	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.14	-0.17	0	A	0577M	QPSK	1	25	0 mm	back	1:1	2.220	1.219	2.706	
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Note: Blue entry represents variability measurement.

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Table 11-79
LTE Band 7 Phablet SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	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)	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	0.00	0	0570M	QPSK	1	99	8 mm	back	1:1	0.327	1.253	0.410	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	0.02	1	0570M	QPSK	50	50	8 mm	back	1:1	0.257	1.303	0.335	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	-0.03	0	0570M	QPSK	1	99	6 mm	front	1:1	0.390	1.253	0.489	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	0.03	1	0570M	QPSK	50	50	6 mm	front	1:1	0.309	1.303	0.403	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	-0.03	0	0570M	QPSK	1	99	11 mm	bottom	1:1	0.335	1.253	0.420	
2560.00	21350	High	LTE Band 7	20	23.0	21.85	-0.03	1	0570M	QPSK	50	50	11 mm	bottom	1:1	0.262	1.303	0.341	
2510.00	20850	Low	LTE Band 7	20	24.0	22.80	0.03	0	0570M	QPSK	1	50	0 mm	left	1:1	1.630	1.318	2.148	
2535.00	21100	Mid	LTE Band 7	20	24.0	23.01	0.02	0	0570M	QPSK	1	50	0 mm	left	1:1	1.730	1.256	2.173	
2560.00	21350	High	LTE Band 7	20	24.0	23.02	0.06	0	0570M	QPSK	1	99	0 mm	left	1:1	1.820	1.253	2.280	A97
2560.00	21350	High	LTE Band 7	20	23.0	21.85	0.02	1	0570M	QPSK	50	50	0 mm	left	1:1	1.400	1.303	1.824	
2560.00	21350	High	LTE Band 7	20	23.0	21.70	0.00	1	0570M	QPSK	100	0	0 mm	left	1:1	1.400	1.349	1.889	
2510.00	20850	Low	LTE Band 7	20	20.5	19.00	-0.01	0	0570M	QPSK	1	0	0 mm	back	1:1	1.640	1.413	2.317	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.26	0.00	0	0570M	QPSK	1	99	0 mm	back	1:1	1.650	1.330	2.195	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	0.02	0	0570M	QPSK	1	0	0 mm	back	1:1	1.680	1.327	2.229	
2510.00	20850	Low	LTE Band 7	20	20.5	18.94	-0.01	0	0570M	QPSK	50	25	0 mm	back	1:1	1.660	1.432	2.377	
2535.00	21100	Mid	LTE Band 7	20	20.5	18.95	-0.02	0	0570M	QPSK	50	50	0 mm	back	1:1	1.650	1.429	2.358	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	0.02	0	0570M	QPSK	50	25	0 mm	back	1:1	1.710	1.409	2.409	
2560.00	21350	High	LTE Band 7	20	20.5	18.83	0.02	0	0570M	QPSK	100	0	0 mm	back	1:1	1.680	1.468	2.466	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.02	0	0570M	QPSK	1	0	0 mm	front	1:1	1.080	1.327	1.433	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	-0.05	0	0570M	QPSK	50	25	0 mm	front	1:1	1.090	1.409	1.536	
2560.00	21350	High	LTE Band 7	20	20.5	19.27	-0.04	0	0570M	QPSK	1	0	0 mm	bottom	1:1	1.030	1.327	1.367	
2560.00	21350	High	LTE Band 7	20	20.5	19.01	0.01	0	0570M	QPSK	50	25	0 mm	bottom	1:1	1.050	1.409	1.479	

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

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Table 11-80
LTE Band 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]	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	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	-0.14	0	0421M	QPSK	1	50	8 mm	back	1:1.58	0.318	1.242	0.395	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	-0.01	1	0421M	QPSK	50	25	8 mm	back	1:1.58	0.265	1.256	0.333	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	-0.10	0	0421M	QPSK	1	50	6 mm	front	1:1.58	0.277	1.242	0.344	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	0.00	1	0421M	QPSK	50	25	6 mm	front	1:1.58	0.225	1.256	0.283	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.01	0	0421M	QPSK	1	50	11 mm	bottom	1:1.58	0.193	1.242	0.240	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	-0.06	1	0421M	QPSK	50	25	11 mm	bottom	1:1.58	0.148	1.256	0.186	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	23.59	0.01	0	0421M	QPSK	1	99	0 mm	left	1:1.58	1.580	1.384	2.187	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	24.01	0.08	0	0421M	QPSK	1	50	0 mm	left	1:1.58	1.590	1.256	1.997	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	24.06	0.07	0	0421M	QPSK	1	50	0 mm	left	1:1.58	1.380	1.242	1.714	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.98	-0.02	0	0421M	QPSK	1	50	0 mm	left	1:1.58	1.320	1.265	1.670	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	25.0	23.79	0.18	0	0421M	QPSK	1	50	0 mm	left	1:1.58	1.140	1.321	1.506	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	23.01	0.00	1	0421M	QPSK	50	25	0 mm	left	1:1.58	1.110	1.256	1.394	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.90	0.00	1	0421M	QPSK	100	0	0 mm	left	1:1.58	1.080	1.288	1.391	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	26.7	25.46	0.03	0	0421M	QPSK	1	99	0 mm	left	1:2.31	1.500	1.330	1.995	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	25.0	23.80	0.01	0	0421M	QPSK	1	99	0 mm	left	1:1.58	1.640	1.318	2.162	A98
	SCC	2525.80	39948											0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	26.7	25.48	0.02	0	0421M	QPSK	1	99	0 mm	left	1:2.31	1.580	1.324	2.092	
	SCC	2525.80	39948											0							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	20.83	0.00	0	0421M	QPSK	1	99	0 mm	back	1:1.58	1.350	1.309	1.767	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.0	20.98	0.08	0	0421M	QPSK	1	50	0 mm	back	1:1.58	1.410	1.265	1.784	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.08	0	0421M	QPSK	1	50	0 mm	back	1:1.58	1.430	1.256	1.796	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.75	-0.05	0	0421M	QPSK	1	50	0 mm	back	1:1.58	1.200	1.334	1.601	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.0	20.70	-0.04	0	0421M	QPSK	1	50	0 mm	back	1:1.58	1.130	1.349	1.524	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	20.84	0.04	0	0421M	QPSK	50	25	0 mm	back	1:1.58	1.350	1.306	1.763	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.0	20.91	0.09	0	0421M	QPSK	50	50	0 mm	back	1:1.58	1.390	1.285	1.786	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.00	0	0421M	QPSK	50	25	0 mm	back	1:1.58	1.440	1.271	1.830	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.73	0.07	0	0421M	QPSK	50	25	0 mm	back	1:1.58	1.190	1.340	1.595	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.0	20.65	-0.06	0	0421M	QPSK	50	50	0 mm	back	1:1.58	1.150	1.365	1.570	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.87	-0.02	0	0421M	QPSK	100	0	0 mm	back	1:1.58	1.390	1.297	1.803	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.06	0	0421M	QPSK	1	50	0 mm	front	1:1.58	0.908	1.256	1.140	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.03	0	0421M	QPSK	50	25	0 mm	front	1:1.58	0.911	1.271	1.158	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	21.01	0.06	0	0421M	QPSK	1	50	0 mm	bottom	1:1.58	1.090	1.256	1.369	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.96	0.03	0	0421M	QPSK	50	25	0 mm	bottom	1:1.58	1.090	1.271	1.385	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-81
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)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.04	0	14	0274M	DFT-S-OFDM	QPSK	1	214	8 mm	back	1:1	0.940	1.122	1.055	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.01	0	14	0274M	DFT-S-OFDM	QPSK	108	108	8 mm	back	1:1	1.000	1.086	1.086	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	-0.07	0	14	0274M	DFT-S-OFDM	QPSK	1	214	6 mm	front	1:1	1.030	1.122	1.156	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	-0.08	0	14	0274M	DFT-S-OFDM	QPSK	108	108	6 mm	front	1:1	1.070	1.086	1.162	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	0.05	0	14	0274M	DFT-S-OFDM	QPSK	1	214	11 mm	bottom	1:1	1.010	1.122	1.133	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	0.00	0	14	0274M	DFT-S-OFDM	QPSK	108	108	11 mm	bottom	1:1	0.988	1.086	1.073	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	-0.12	0	14	0274M	DFT-S-OFDM	QPSK	1	214	0 mm	right	1:1	0.365	1.122	0.410	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	-0.12	0	14	0274M	DFT-S-OFDM	QPSK	108	108	0 mm	right	1:1	0.378	1.086	0.411	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.80	A	-0.13	0	14	0274M	DFT-S-OFDM	QPSK	1	214	0 mm	left	1:1	0.621	1.122	0.697	
1745.00	349000	Mid	NR Band n66 (AWS)	40	23.3	22.94	A	-0.12	0	14	0274M	DFT-S-OFDM	QPSK	108	108	0 mm	left	1:1	0.600	1.086	0.652	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.77	A	0.06	0	14	0274M	DFT-S-OFDM	QPSK	1	108	0 mm	back	1:1	1.670	1.183	1.976	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.96	A	0.02	0	14	0274M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	1.770	1.132	2.004	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.76	A	0.03	0	14	0274M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	1.800	1.186	2.135	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.77	A	-0.06	0	14	0274M	DFT-S-OFDM	QPSK	1	108	0 mm	front	1:1	1.620	1.183	1.916	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.96	A	-0.06	0	14	0274M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.700	1.132	1.924	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.77	A	-0.21	0	14	0274M	DFT-S-OFDM	QPSK	1	108	0 mm	bottom	1:1	1.810	1.183	2.141	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.96	A	-0.05	0	14	0274M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	1.840	1.132	2.083	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.76	A	-0.14	0	14	0274M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	1.910	1.186	2.265	
1745.00	349000	Mid	NR Band n66 (AWS)	40	20.5	19.59	A	-0.09	0	14	0274M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.030	1.233	2.503	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.22	F	0.07	0	N/A	1004M	DFT-S-OFDM	QPSK	1	214	0 mm	top	1:1	2.080	1.197	2.490	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	0.02	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	0 mm	top	1:1	2.260	1.153	2.606	A99
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.21	F	0.09	0	N/A	1004M	DFT-S-OFDM	QPSK	216	0	0 mm	top	1:1	2.210	1.199	2.650	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.14	F	0.02	0	N/A	1004M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	2.110	1.219	2.572	
1745.00	349000	Mid	NR Band n66 (AWS)	40	21.0	20.38	F	0.02	0	N/A	1004M	DFT-S-OFDM	QPSK	108	108	0 mm	top	1:1	2.260	1.153	2.606	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Note: Blue entry represents variability measurement.

Table 11-82
NR Band n25 Phablet SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.07	0	0	0303M	DFT-S-OFDM	QPSK	1	108	8 mm	back	1:1	1.100	1.242	1.366	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	-0.16	0	0	0303M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	1.030	1.146	1.180	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.12	0	0	0303M	DFT-S-OFDM	QPSK	1	108	6 mm	front	1:1	1.330	1.242	1.652	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	-0.16	0	0	0303M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	1.240	1.146	1.421	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.03	0	0	0303M	DFT-S-OFDM	QPSK	1	108	11 mm	bottom	1:1	1.570	1.242	1.950	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	-0.06	0	0	0303M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	1.520	1.146	1.742	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.03	0	0	0303M	DFT-S-OFDM	QPSK	1	108	0 mm	right	1:1	0.440	1.242	0.546	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.00	0	0	0303M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.459	1.146	0.526	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	23.76	A	-0.12	0	0	0303M	DFT-S-OFDM	QPSK	1	108	0 mm	left	1:1	1.230	1.242	1.528	
1882.50	376500	Mid	NR Band n25 (PCS)	40	24.7	24.11	A	0.02	0	0	0303M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	1.170	1.146	1.341	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.90	A	0.12	0	0	0303M	DFT-S-OFDM	QPSK	1	108	0 mm	back	1:1	2.190	1.023	2.240	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	20.00	A	-0.02	0	0	0303M	DFT-S-OFDM	QPSK	108	54	0 mm	back	1:1	2.230	1.000	2.230	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.89	A	0.10	0	0	0303M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	2.250	1.026	2.309	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.90	A	-0.01	0	0	0303M	DFT-S-OFDM	QPSK	1	108	0 mm	front	1:1	1.460	1.023	1.494	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	20.00	A	-0.03	0	0	0303M	DFT-S-OFDM	QPSK	108	54	0 mm	front	1:1	1.510	1.000	1.510	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.90	A	-0.12	0	0	0303M	DFT-S-OFDM	QPSK	1	108	0 mm	bottom	1:1	2.210	1.023	2.261	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	20.00	A	-0.16	0	0	0303M	DFT-S-OFDM	QPSK	108	54	0 mm	bottom	1:1	2.300	1.000	2.300	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.89	A	-0.03	0	0	0303M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.340	1.026	2.401	A100
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.86	A	0.00	0	0	0303M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	2.330	1.033	2.407	
1882.50	376500	Mid	NR Band n25 (PCS)	40	20.0	19.89	A	-0.13	0	0	0303M	DFT-S-OFDM	QPSK	216	0	0 mm	bottom	1:1	2.340	1.026	2.401	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Note: Blue entry represents variability measurement.

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Table 11-83
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	23.5	22.43	A	0.01	0	0292M	DFT-S-OFDM	QPSK	1	1	8 mm	back	1:1	0.513	1.279	0.656	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	-0.09	0	0292M	DFT-S-OFDM	QPSK	25	14	8 mm	back	1:1	0.551	1.245	0.686	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.01	0	0292M	DFT-S-OFDM	QPSK	1	1	6 mm	front	1:1	0.576	1.279	0.737	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.05	0	0292M	DFT-S-OFDM	QPSK	25	14	6 mm	front	1:1	0.607	1.245	0.756	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	-0.07	0	0292M	DFT-S-OFDM	QPSK	1	1	11 mm	bottom	1:1	0.665	1.279	0.851	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.02	0	0292M	DFT-S-OFDM	QPSK	25	14	11 mm	bottom	1:1	0.642	1.245	0.799	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.04	0	0292M	DFT-S-OFDM	QPSK	1	1	0 mm	right	1:1	0.193	1.279	0.247	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	0.00	0	0292M	DFT-S-OFDM	QPSK	25	14	0 mm	right	1:1	0.203	1.245	0.253	
2310.00	462000	Mid	NR Band n30	10	23.5	22.43	A	0.01	0	0292M	DFT-S-OFDM	QPSK	1	1	0 mm	left	1:1	1.750	1.279	2.238	
2310.00	462000	Mid	NR Band n30	10	23.5	22.55	A	-0.06	0	0292M	DFT-S-OFDM	QPSK	25	14	0 mm	left	1:1	1.730	1.245	2.154	
2310.00	462000	Mid	NR Band n30	10	22.5	21.55	A	0.05	1	0292M	DFT-S-OFDM	QPSK	50	0	0 mm	left	1:1	1.610	1.245	2.004	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	-0.19	0	0292M	DFT-S-OFDM	QPSK	1	26	0 mm	back	1:1	1.920	1.279	2.456	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.10	0	0292M	DFT-S-OFDM	QPSK	25	14	0 mm	back	1:1	1.860	1.259	2.342	
2310.00	462000	Mid	NR Band n30	10	19.5	18.42	A	-0.04	0	0292M	DFT-S-OFDM	QPSK	50	0	0 mm	back	1:1	1.800	1.282	2.308	
2310.00	462000	Mid	NR Band n30	10	19.5	18.38	A	0.00	0	0292M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	2.250	1.294	2.912	A101
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	-0.01	0	0292M	DFT-S-OFDM	QPSK	1	26	0 mm	front	1:1	0.879	1.279	1.124	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	-0.03	0	0292M	DFT-S-OFDM	QPSK	25	14	0 mm	front	1:1	0.888	1.259	1.118	
2310.00	462000	Mid	NR Band n30	10	19.5	18.43	A	0.01	0	0292M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	0.900	1.279	1.151	
2310.00	462000	Mid	NR Band n30	10	19.5	18.50	A	0.06	0	0292M	DFT-S-OFDM	QPSK	25	14	0 mm	bottom	1:1	0.915	1.259	1.152	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	-0.03	0	0997M	DFT-S-OFDM	QPSK	1	1	8 mm	back	1:1	0.386	1.035	0.400	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.04	0	0997M	DFT-S-OFDM	QPSK	25	14	8 mm	back	1:1	0.384	1.153	0.443	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	0.00	0	0997M	DFT-S-OFDM	QPSK	1	1	6 mm	front	1:1	0.420	1.035	0.435	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.00	0	0997M	DFT-S-OFDM	QPSK	25	14	6 mm	front	1:1	0.415	1.153	0.478	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	-0.05	0	0997M	DFT-S-OFDM	QPSK	1	1	11 mm	bottom	1:1	0.530	1.035	0.549	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	-0.03	0	0997M	DFT-S-OFDM	QPSK	25	14	11 mm	bottom	1:1	0.553	1.153	0.638	
2310.00	462000	Mid	NR Band n30	10	23.5	23.35	B	0.15	0	0997M	DFT-S-OFDM	QPSK	1	1	0 mm	left	1:1	1.040	1.035	1.076	
2310.00	462000	Mid	NR Band n30	10	23.5	22.88	B	0.15	0	0997M	DFT-S-OFDM	QPSK	25	14	0 mm	left	1:1	1.070	1.153	1.234	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	-0.02	0	0997M	DFT-S-OFDM	QPSK	1	26	0 mm	back	1:1	1.250	1.096	1.370	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	0.01	0	0997M	DFT-S-OFDM	QPSK	25	14	0 mm	back	1:1	1.330	1.084	1.442	
2310.00	462000	Mid	NR Band n30	10	19.5	19.03	B	0.08	0	0997M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	1.170	1.114	1.303	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	0.02	0	0997M	DFT-S-OFDM	QPSK	1	26	0 mm	front	1:1	0.545	1.096	0.597	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	0.04	0	0997M	DFT-S-OFDM	QPSK	25	14	0 mm	front	1:1	0.636	1.084	0.689	
2310.00	462000	Mid	NR Band n30	10	19.5	19.10	B	0.04	0	0997M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	0.535	1.096	0.586	
2310.00	462000	Mid	NR Band n30	10	19.5	19.15	B	0.05	0	0997M	DFT-S-OFDM	QPSK	25	14	0 mm	bottom	1:1	0.571	1.084	0.619	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-84
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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	B	-0.08	0	0294M	DFT-S-OFDM	QPSK	1	214	8 mm	back	1:1	0.367	1.040	0.382	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	B	0.01	0	0294M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.491	1.033	0.507	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	B	0.03	0	0294M	DFT-S-OFDM	QPSK	1	214	6 mm	front	1:1	0.338	1.040	0.352	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	B	0.05	0	0294M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	0.502	1.033	0.519	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	B	0.02	0	0294M	DFT-S-OFDM	QPSK	1	214	11 mm	bottom	1:1	0.483	1.040	0.502	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	B	-0.10	0	0294M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	0.487	1.033	0.503	
2535.00	507000	Mid	NR Band n7	40	22.5	22.33	B	0.01	0	0294M	DFT-S-OFDM	QPSK	1	214	0 mm	left	1:1	2.110	1.040	2.194	
2535.00	507000	Mid	NR Band n7	40	22.5	22.36	B	-0.01	0	0294M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	2.210	1.033	2.283	
2535.00	507000	Mid	NR Band n7	40	22.5	22.21	B	-0.02	0	0294M	DFT-S-OFDM	QPSK	216	0	0 mm	left	1:1	2.190	1.069	2.341	
2535.00	507000	Mid	NR Band n7	40	20.5	20.15	B	0.00	0	0294M	DFT-S-OFDM	QPSK	1	214	0 mm	back	1:1	2.460	1.084	2.667	
2535.00	507000	Mid	NR Band n7	40	20.5	20.19	B	0.03	0	0294M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	2.560	1.074	2.749	
2535.00	507000	Mid	NR Band n7	40	20.5	20.02	B	-0.01	0	0294M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	2.620	1.117	2.927	
2535.00	507000	Mid	NR Band n7	40	20.5	20.11	B	-0.03	0	0294M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	2.820	1.094	**3.085**	A102
2535.00	507000	Mid	NR Band n7	40	20.5	20.15	B	-0.02	0	0294M	DFT-S-OFDM	QPSK	1	214	0 mm	front	1:1	1.500	1.084	1.626	
2535.00	507000	Mid	NR Band n7	40	20.5	20.19	B	-0.03	0	0294M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	1.580	1.074	1.697	
2535.00	507000	Mid	NR Band n7	40	20.5	20.15	B	0.04	0	0294M	DFT-S-OFDM	QPSK	1	214	0 mm	bottom	1:1	1.680	1.084	1.821	
2535.00	507000	Mid	NR Band n7	40	20.5	20.19	B	0.04	0	0294M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	1.730	1.074	1.858	
2535.00	507000	Mid	NR Band n7	40	20.5	20.11	B	-0.02	0	0294M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	2.800	1.094	3.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Extremity 4.0 W/kg (mW/g) averaged over 10 grams								

Note: Blue entry represents variability measurement.

Table 11-85
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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
2592.99	518598	Mid	NR Band n41	100	21.0	20.56	F	-0.02	0	0919M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	0.785	1.107	0.869	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	0.02	0	0919M	DFT-S-OFDM	QPSK	135	0	0 mm	back	1:1	0.839	1.135	0.952	
2592.99	518598	Mid	NR Band n41	100	21.0	20.56	F	0.03	0	0919M	DFT-S-OFDM	QPSK	1	1	0 mm	top	1:1	1.680	1.107	1.860	
2592.99	518598	Mid	NR Band n41	100	21.0	20.45	F	-0.01	0	0919M	DFT-S-OFDM	QPSK	135	0	0 mm	top	1:1	1.750	1.135	1.986	A103
2592.99	518598	Mid	NR Band n41	100	21.0	20.30	F	0.08	0	0919M	DFT-S-OFDM	QPSK	270	0	0 mm	top	1:1	1.580	1.175	1.857	
2592.99	518598	Mid	NR Band n41	100	21.0	20.54	F	-0.02	0	0919M	CP-OFDM	QPSK	1	1	0 mm	top	1:1	1.510	1.112	1.679	
2592.99	518598	Mid	NR Band n41	100	17.5	16.50	B	-0.08	N/A	0919M	CW/SRS	N/A	N/A	N/A	0 mm	bottom	1:1	0.422	1.259	0.531	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Extremity 4.0 W/kg (mW/g) averaged over 10 grams								

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Table 11-86
NR Band n77 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	Scaling Factor	SAR (10g)	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)	(W/kg)	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.75	G	-0.01	0	0885M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	1.334	0.680	0.907	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	-0.01	0	0885M	DFT-S-OFDM	QPSK	135	0	0 mm	back	1:1	1.384	0.679	0.940	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.75	G	0.04	0	0885M	DFT-S-OFDM	QPSK	1	1	0 mm	left	1:1	1.334	1.780	2.375	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.59	G	-0.02	0	0885M	DFT-S-OFDM	QPSK	135	0	0 mm	left	1:1	1.384	1.760	2.436	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.51	G	-0.07	0	0885M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.409	1.750	2.466	
3500.01	633334	Mid	NR Band n77 DoD	100	18.0	16.86	G	0.08	0	0885M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.300	1.920	2.496	A104
3750.00	650000	Low	NR Band n77	100	18.0	17.65	G	-0.01	0	0885M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.084	0.978	1.060	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.02	0	0885M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.072	1.020	1.093	
3750.00	650000	Low	NR Band n77	100	18.0	17.68	G	0.00	0	0885M	DFT-S-OFDM	QPSK	135	0	0 mm	back	1:1	1.076	0.992	1.067	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	0.03	0	0885M	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	1.074	1.020	1.095	
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	-0.01	0	0885M	DFT-S-OFDM	QPSK	270	0	0 mm	back	1:1	1.099	1.230	1.352	
3750.00	650000	Low	NR Band n77	100	18.0	17.65	G	0.02	0	0885M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.084	1.970	2.135	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.01	0	0885M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.072	2.400	2.573	A105
3750.00	650000	Low	NR Band n77	100	18.0	17.68	G	0.00	0	0885M	DFT-S-OFDM	QPSK	135	0	0 mm	left	1:1	1.076	2.090	2.249	
3930.00	662000	High	NR Band n77	100	18.0	17.69	G	0.06	0	0885M	DFT-S-OFDM	QPSK	135	69	0 mm	left	1:1	1.074	2.190	2.352	
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	0.00	0	0885M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.099	2.100	2.308	
3930.00	662000	High	NR Band n77	100	18.0	17.59	G	0.03	0	0885M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.099	2.090	2.297	
3930.00	662000	High	NR Band n77	100	12.5	11.75	C	-0.12	N/A	0885M	CW/SRS	N/A	N/A	N/A	0 mm	left	1:1	1.189	0.428	0.509	
3750.00	650000	Low	NR Band n77	100	18.0	17.68	G	0.02	0	0885M	DFT-S-OFDM	QPSK	135	0	0 mm	left	1:1	1.076	2.060	2.217	
3930.00	662000	High	NR Band n77	100	18.0	17.70	G	0.02	0	0885M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.072	2.210	2.369	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Extremity 1.6 W/kg (mW/g) averaged over 1 gram									

Note: Blue entries represent variability measurements

Table 11-87
NII SISO WLAN Phablet 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 (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	18.0	17.66	-0.03	0 mm	1	1342M	29.3	back	92.4	4.540	1.040	1.081	1.082	1.216	
5290	58	802.11ac	OFDM	80	18.0	17.66	-0.04	0 mm	1	1342M	29.3	front	92.4	6.900	0.988	1.081	1.082	1.156	
5290	58	802.11ac	OFDM	80	18.0	17.66	0.04	0 mm	1	1342M	29.3	left	92.4	11.800	1.750	1.081	1.082	**2.047**	A106
5610	122	802.11ac	OFDM	80	18.0	17.93	-0.01	0 mm	1	1342M	29.3	back	92.4	4.860	0.875	1.016	1.082	0.962	
5610	122	802.11ac	OFDM	80	18.0	17.93	0.00	0 mm	1	1342M	29.3	front	92.4	4.560	0.754	1.016	1.082	0.829	
5610	122	802.11ac	OFDM	80	18.0	17.93	0.07	0 mm	1	1342M	29.3	left	92.4	6.160	1.060	1.016	1.082	1.165	
5855	171	802.11ac	OFDM	80	18.0	17.51	-0.02	0 mm	1	1342M	29.3	back	92.4	2.300	0.342	1.119	1.082	0.414	
5855	171	802.11ac	OFDM	80	18.0	17.51	0.00	0 mm	1	1342M	29.3	front	92.4	3.270	0.688	1.119	1.082	0.833	
5855	171	802.11ac	OFDM	80	18.0	17.51	-0.03	0 mm	1	1342M	29.3	left	92.4	3.650	0.736	1.119	1.082	0.891	
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 11-88
NII MIMO WLAN Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	18.0	17.66	18.0	17.67	-0.02	0 mm	MIMO	1342M	58.5	back	91.7	3.170	0.590	1.081	1.091	0.696	
5290	58	802.11ac	OFDM	80	18.0	17.66	18.0	17.67	-0.06	0 mm	MIMO	1342M	58.5	front	91.7	2.880	-	1.081	1.091	-	
5290	58	802.11ac	OFDM	80	18.0	17.66	18.0	17.67	0.02	0 mm	MIMO	1342M	58.5	top	91.7	0.240	-	1.081	1.091	-	
5290	58	802.11ac	OFDM	80	18.0	17.66	18.0	17.67	-0.01	0 mm	MIMO	1342M	58.5	left	91.7	5.910	0.975	1.081	1.091	1.150	
5610	122	802.11ac	OFDM	80	18.0	17.93	18.0	17.95	0.03	0 mm	MIMO	1342M	58.5	back	91.7	2.010	-	1.016	1.091	-	
5610	122	802.11ac	OFDM	80	18.0	17.93	18.0	17.95	0.00	0 mm	MIMO	1342M	58.5	front	91.7	2.420	-	1.016	1.091	-	
5610	122	802.11ac	OFDM	80	18.0	17.93	18.0	17.95	-0.16	0 mm	MIMO	1342M	58.5	top	91.7	0.144	-	1.016	1.091	-	
5610	122	802.11ac	OFDM	80	18.0	17.93	18.0	17.95	-0.06	0 mm	MIMO	1342M	58.5	left	91.7	3.840	0.618	1.016	1.091	0.685	
5855	171	802.11ac	OFDM	80	18.0	17.51	18.0	17.69	-0.04	0 mm	MIMO	1342M	58.5	back	91.7	3.570	0.841	1.119	1.091	1.027	
5855	171	802.11ac	OFDM	80	18.0	17.51	18.0	17.69	0.00	0 mm	MIMO	1342M	58.5	front	91.7	3.560	0.698	1.119	1.091	0.852	
5855	171	802.11ac	OFDM	80	18.0	17.51	18.0	17.69	-0.17	0 mm	MIMO	1342M	58.5	top	91.7	0.324	-	1.119	1.091	-	
5855	171	802.11ac	OFDM	80	18.0	17.51	18.0	17.69	0.01	0 mm	MIMO	1342M	58.5	left	91.7	3.090	-	1.119	1.091	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

Note: To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

Table 11-89
NII SISO WLAN Phablet SAR during Conditions with 5G NR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (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	12.83	-0.01	0 mm	1	1342M	29.3	back	92.4	1.160	0.247	1.040	1.082	0.278	
5290	58	802.11ac	OFDM	80	13.0	12.83	0.07	0 mm	1	1342M	29.3	front	92.4	1.410	-	1.040	1.082	-	
5290	58	802.11ac	OFDM	80	13.0	12.83	-0.02	0 mm	1	1342M	29.3	left	92.4	2.830	0.410	1.040	1.082	0.461	
5530	106	802.11ac	OFDM	80	13.0	12.99	-0.01	0 mm	1	1342M	29.3	back	92.4	1.050	0.249	1.002	1.082	0.270	
5530	106	802.11ac	OFDM	80	13.0	12.99	-0.03	0 mm	1	1342M	29.3	front	92.4	1.840	-	1.002	1.082	-	
5530	106	802.11ac	OFDM	80	13.0	12.99	-0.04	0 mm	1	1342M	29.3	left	92.4	1.960	0.399	1.002	1.082	0.433	
5855	171	802.11ac	OFDM	80	13.0	12.48	0.00	0 mm	1	1342M	29.3	back	92.4	0.950	0.125	1.127	1.082	0.152	
5855	171	802.11ac	OFDM	80	13.0	12.48	-0.11	0 mm	1	1342M	29.3	front	92.4	1.140	0.228	1.127	1.082	0.278	
5855	171	802.11ac	OFDM	80	13.0	12.48	-0.02	0 mm	1	1342M	29.3	left	92.4	0.762	-	1.127	1.082	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

Note: 5GHz WLAN SISO was additionally evaluated at the maximum allowed output power during simultaneous operations with 5G NR. 5G NR was not transmitting during the above evaluations.

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

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (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	12.83	13.0	12.84	-0.12	0 mm	MIMO	1342M	58.5	back	91.7	1.120	0.237	1.040	1.091	0.269	
5290	58	802.11ac	OFDM	80	13.0	12.83	13.0	12.84	0.09	0 mm	MIMO	1342M	58.5	front	91.7	1.020	-	1.040	1.091	-	
5290	58	802.11ac	OFDM	80	13.0	12.83	13.0	12.84	0.15	0 mm	MIMO	1342M	58.5	top	91.7	0.153	-	1.040	1.091	-	
5290	58	802.11ac	OFDM	80	13.0	12.83	13.0	12.84	-0.05	0 mm	MIMO	1342M	58.5	left	91.7	1.440	0.397	1.040	1.091	0.450	
5530	106	802.11ac	OFDM	80	13.0	12.99	13.0	12.99	0.18	0 mm	MIMO	1342M	58.5	back	91.7	0.878	0.115	1.002	1.091	0.126	
5530	106	802.11ac	OFDM	80	13.0	12.99	13.0	12.99	0.02	0 mm	MIMO	1342M	58.5	front	91.7	1.020	0.238	1.002	1.091	0.260	
5530	106	802.11ac	OFDM	80	13.0	12.99	13.0	12.99	-0.12	0 mm	MIMO	1342M	58.5	top	91.7	0.079	-	1.002	1.091	-	
5530	106	802.11ac	OFDM	80	13.0	12.99	13.0	12.99	0.00	0 mm	MIMO	1342M	58.5	left	91.7	0.681	-	1.002	1.091	-	
5855	171	802.11ac	OFDM	80	13.0	12.48	13.0	12.86	-0.05	0 mm	MIMO	1342M	58.5	back	91.7	0.979	0.173	1.127	1.091	0.213	
5855	171	802.11ac	OFDM	80	13.0	12.48	13.0	12.86	-0.04	0 mm	MIMO	1342M	58.5	front	91.7	1.150	0.217	1.127	1.091	0.267	
5855	171	802.11ac	OFDM	80	13.0	12.48	13.0	12.86	0.20	0 mm	MIMO	1342M	58.5	top	91.7	0.079	-	1.127	1.091	-	
5855	171	802.11ac	OFDM	80	13.0	12.48	13.0	12.86	-0.01	0 mm	MIMO	1342M	58.5	left	91.7	0.711	-	1.127	1.091	-	
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.

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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).
15. 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, and > 0.4 for NR Band n77 C-Band, testing at the other channels was required for such test configurations.

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.

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3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

UMTS Notes:

1. UMTS mode was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

LTE Notes:

1. LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 8.5.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

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3. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
6. 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 K 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 9.6 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)	
2600	2592.99	518598	NR Band n41,100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 1 RB Offset	Left	Tilt	F	0.904	0.866	1.04	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	Antenna Config	Data Rate (Mbps)	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	A	N/A	back	15 mm	1.010	0.994	1.02	N/A	N/A	N/A	N/A
1900	1882.50	376500	NR Band n25 (PCS), 40 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	A	N/A	bottom	10 mm	1.020	0.990	1.03	N/A	N/A	N/A	N/A
2300	2310.00	462000	NR Band n30, 10 MHz Bandwidth	DFT-S-OFDM, QPSK, 25 RB, 14 RB Offset	A	N/A	bottom	10 mm	0.848	0.740	1.15	N/A	N/A	N/A	N/A
2450	2462.00	11	802.11b, 22 MHz Bandwidth	DSSS , MIMO	MIMO	1	back	10 mm	0.870	0.870	1.00	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 12-3
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Antenna Config	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
2300	2310.00	27710	LTE Band 30, 10 MHz Bandwidth	QPSK, 1 RB, 25 RB Offset	A	back	0 mm	2.260	2.220	1.02	N/A	N/A	N/A	N/A
1750	1745.00	349000	NR Band n66 (AWS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 108 RB, 108 RB Offset	F	top	0 mm	2.260	2.260	1.00	N/A	N/A	N/A	N/A
1900	1882.50	376500	NR Band n25 (PCS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 216 RB, 0 RB Offset	A	bottom	0 mm	2.340	2.340	1.00	N/A	N/A	N/A	N/A
2600	2535.00	507000	NR Band n7, 40 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	B	back	0 mm	2.820	2.800	1.01	N/A	N/A	N/A	N/A
3700	3750.00	650000	NR Band n77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 135 RB, 0 RB Offset	G	left	0 mm	2.090	2.060	1.01	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	G	left	0 mm	2.400	2.210	1.09	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.

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)	836.60	Frequency (MHz)	1712.40	Frequency (MHz)	1907.60
Channel	4183	Channel	1312	Channel	9538
Measured 1g SAR (W/kg)	0.266	Measured 1g SAR (W/kg)	0.193	Measured 1g SAR (W/kg)	0.209
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 14)	0.352	Auto-tune (State 116)	0.209	Auto-tune (State 8)	0.216
Default (State 0)	0.256	Default (State 0)	0.197	Default (State 0)	0.224
State 0	0.256	State 1	0.184	State 2	0.233
State 14	0.350	State 40	0.056	State 8	0.243
State 39	0.219	State 79	0.108	State 41	0.091
State 78	0.298	State 116	0.203	State 80	0.159
State 117	0.214	State 118	0.114	State 119	0.154

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, 50 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.152	Measured 1g SAR (W/kg)	0.226	Measured 1g SAR (W/kg)	0.226	Measured 1g SAR (W/kg)	0.258
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 106)	0.201	Auto-tune (State 106)	0.304	Auto-tune (State 26)	0.304	Auto-tune (State 54)	0.337
Default (State 0)	0.097	Default (State 0)	0.158	Default (State 0)	0.216	Default (State 0)	0.228
State 6	0.026	State 7	0.033	State 8	0.048	State 9	0.034
State 45	0.019	State 46	0.023	State 26	0.304	State 19	0.103
State 79	0.145	State 52	0.225	State 29	0.287	State 48	0.025
State 84	0.080	State 85	0.100	State 47	0.032	State 54	0.334
State 106	0.199	State 106	0.296	State 86	0.113	State 87	0.067

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, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 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)	1770.00	Frequency (MHz)	1860.00
Channel	20525	Channel	26865	Channel	132572	Channel	26140
Measured 1g SAR (W/kg)	0.275	Measured 1g SAR (W/kg)	0.254	Measured 1g SAR (W/kg)	0.276	Measured 1g SAR (W/kg)	0.241
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	0.275	Auto-tune (State 14)	0.337	Auto-tune (State 14)	0.301	Auto-tune (State 0)	0.285
Default (State 0)	0.264	Default (State 0)	0.259	Default (State 0)	0.280	Default (State 0)	0.309
State 1	0.274	State 11	0.021	State 12	0.068	State 0	0.309
State 2	0.258	State 14	0.333	State 14	0.275	State 53	0.258
State 10	0.061	State 50	0.015	State 51	0.014	State 81	0.184
State 49	0.057	State 89	0.038	State 90	0.035	State 83	0.183
State 88	0.053	State 110	0.313	State 117	0.111	State 92	0.206

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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, 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, 1 RB, 108 RB Offset	
Test Position	Right Cheek	Test Position	Left 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)	0.169	Measured 1g SAR (W/kg)	0.222	Measured 1g SAR (W/kg)	0.248	Measured 1g SAR (W/kg)	0.271	Measured 1g SAR (W/kg)	0.273
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.171	Auto-tune (State 2)	0.232	Auto-tune (State 1)	0.250	Auto-tune (State 14)	0.299	Auto-tune (State 2)	0.272
Default (State 0)	0.171	Default (State 0)	0.227	Default (State 0)	0.287	Default (State 0)	0.276	Default (State 0)	0.272
State 0	0.171	State 2	0.231	State 1	0.277	State 14	0.288	State 2	0.316
State 15	0.107	State 16	0.152	State 17	0.287	State 18	0.294	State 7	0.264
State 54	0.117	State 55	0.127	State 42	0.251	State 30	0.283	State 19	0.271
State 71	0.022	State 59	0.063	State 56	0.254	State 57	0.288	State 58	0.104
State 93	0.117	State 94	0.130	State 95	0.259	State 96	0.197	State 97	0.226

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)	836.60	Frequency (MHz)	1732.40	Frequency (MHz)	1907.60
Channel	4183	Channel	1412	Channel	9538
Measured 1g SAR (W/kg)	0.428	Measured 1g SAR (W/kg)	0.928	Measured 1g SAR (W/kg)	0.887
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 68)	0.498	Auto-tune (State 14)	1.437	Auto-tune (State 0)	1.437
Default (State 0)	0.636	Default (State 0)	1.424	Default (State 0)	1.424
State 1	0.542	State 0	1.424	State 0	1.424
State 20	0.283	State 1	1.425	State 1	1.425
State 25	0.018	State 2	1.424	State 2	1.424
State 59	0.398	State 3	1.420	State 3	1.420
State 68	0.721	State 4	1.414	State 4	1.414
State 98	0.374	State 5	1.413	State 5	1.413
		State 6	1.379	State 6	1.379
		State 7	1.350	State 7	1.350
		State 8	1.278	State 8	1.278
		State 9	1.143	State 9	1.143
		State 10	1.015	State 10	1.015
		State 11	0.833	State 11	0.833
		State 12	0.589	State 12	0.589
		State 13	1.278	State 13	1.278
		State 14	1.324	State 14	1.324
		State 15	1.345	State 15	1.345
		State 16	1.346	State 16	1.346
		State 17	1.363	State 17	1.363
		State 18	1.368	State 18	1.368
		State 19	1.389	State 19	1.389
		State 20	1.399	State 20	1.399
		State 21	1.380	State 21	1.380
		State 22	1.293	State 22	1.293
		State 23	1.181	State 23	1.181
		State 24	0.991	State 24	0.991
		State 25	0.694	State 25	0.694
		State 26	1.301	State 26	1.301
		State 27	1.325	State 27	1.325
		State 28	1.334	State 28	1.334
		State 29	1.342	State 29	1.342
		State 30	1.345	State 30	1.345
		State 31	1.348	State 31	1.348
		State 32	1.353	State 32	1.353
		State 33	1.351	State 33	1.351
		State 34	1.322	State 34	1.322
		State 35	1.226	State 35	1.226
		State 36	1.120	State 36	1.120
		State 37	0.942	State 37	0.942
		State 38	0.674	State 38	0.674
		State 39	0.513	State 39	0.513
		State 40	0.547	State 40	0.547
		State 41	0.534	State 41	0.534
		State 42	0.520	State 42	0.520
		State 43	0.504	State 43	0.504
		State 44	0.520	State 44	0.520
		State 45	0.466	State 45	0.466
		State 46	0.435	State 46	0.435
		State 47	0.373	State 47	0.373
		State 48	0.293	State 48	0.293
		State 49	0.236	State 49	0.236
		State 50	0.171	State 50	0.171
		State 51	0.105	State 51	0.105
		State 52	1.080	State 52	1.080
		State 53	1.133	State 53	1.133
		State 54	1.147	State 54	1.147
		State 55	1.160	State 55	1.160
		State 56	1.188	State 56	1.188
		State 57	1.186	State 57	1.186
		State 58	1.246	State 58	1.246
		State 59	1.280	State 59	1.280
		State 60	1.319	State 60	1.319
		State 61	1.314	State 61	1.314
		State 62	1.252	State 62	1.252
		State 63	1.095	State 63	1.095
		State 64	0.787	State 64	0.787
		State 65	0.527	State 65	0.527
		State 66	0.619	State 66	0.619
		State 67	0.615	State 67	0.615
		State 68	0.609	State 68	0.609
		State 69	0.608	State 69	0.608
		State 70	0.633	State 70	0.633
		State 71	0.606	State 71	0.606
		State 72	0.587	State 72	0.587
		State 73	0.522	State 73	0.522
		State 74	0.418	State 74	0.418
		State 75	0.334	State 75	0.334
		State 76	0.237	State 76	0.237
		State 77	0.139	State 77	0.139
		State 78	0.822	State 78	0.822
		State 79	0.875	State 79	0.875
		State 80	0.859	State 80	0.859
		State 81	0.850	State 81	0.850
		State 82	0.826	State 82	0.826
		State 83	0.836	State 83	0.836
		State 84	0.768	State 84	0.768
		State 85	0.726	State 85	0.726
		State 86	0.643	State 86	0.643
		State 87	0.532	State 87	0.532
		State 88	0.447	State 88	0.447
		State 89	0.344	State 89	0.344
		State 90	0.227	State 90	0.227
		State 91	0.903	State 91	0.903
		State 92	0.961	State 92	0.961
		State 93	0.954	State 93	0.954
		State 94	0.949	State 94	0.949
		State 95	0.943	State 95	0.943
		State 96	0.958	State 96	0.958
		State 97	0.921	State 97	0.921
		State 98	0.889	State 98	0.889
		State 99	0.813	State 99	0.813
		State 100	0.877	State 100	0.877
		State 101	0.569	State 101	0.569
		State 102	0.434	State 102	0.434
		State 103	0.276	State 103	0.276
		State 104	1.417	State 104	1.417
		State 105	1.289	State 105	1.289
		State 106	1.294	State 106	1.294
		State 107	0.504	State 107	0.504
		State 108	1.079	State 108	1.079
		State 109	0.513	State 100	0.513
		State 110	0.862	State 110	0.862
		State 111	0.877	State 111	0.877
		State 112	1.419	State 112	1.419
		State 113	1.286	State 113	1.286
		State 114	1.296	State 114	1.296
		State 115	0.504	State 115	0.504
		State 116	1.080	State 116	1.080
		State 117	0.514	State 117	0.514
		State 118	0.861	State 118	0.861
		State 119	0.876	State 119	0.876

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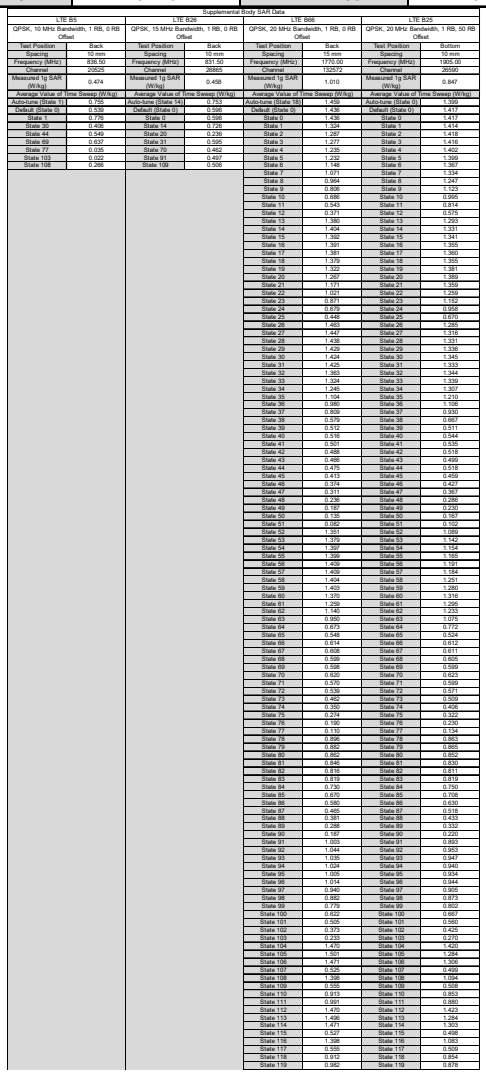
Table 13-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data							
LTE B71		LTE B12		LTE B13		LTE B14	
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.397	Measured 1g SAR (W/kg)	0.518	Measured 1g SAR (W/kg)	0.512	Measured 1g SAR (W/kg)	0.486
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 118)	0.615	Auto-tune (State 118)	0.783	Auto-tune (State 79)	0.767	Auto-tune (State 54)	0.761
Default (State 0)	0.340	Default (State 0)	0.464	Default (State 0)	0.656	Default (State 0)	0.650
State 21	0.028	State 5	0.218	State 3	0.508	State 26	0.828
State 26	0.669	State 15	0.439	State 13	0.702	State 29	0.787
State 65	0.376	State 27	0.714	State 14	0.757	State 34	0.362
State 86	0.165	State 66	0.431	State 28	0.801	State 54	0.788
State 104	0.340	State 105	0.618	State 67	0.629	State 68	0.635
State 106	0.668	State 108	0.628	State 79	0.773	State 89	0.110
State 118	0.608	State 118	0.745	State 106	0.820	State 107	0.525



Supplemental Body 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, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	15 mm	Spacing	10 mm
Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1905.00
Channel	20525	Channel	26865	Channel	132572	Channel	26590
Measured 1g SAR (W/kg)	0.474	Measured 1g SAR (W/kg)	0.458	Measured 1g SAR (W/kg)	1.010	Measured 1g SAR (W/kg)	0.847
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 11)	0.755	Auto-tune (State 14)	0.753	Auto-tune (State 18)	1.459	Auto-tune (State 0)	1.399
Default (State 0)	0.539	Default (State 0)	0.596	Default (State 0)	1.436	Default (State 0)	1.417
State 1	0.776	State 0	0.595	State 0	1.436	State 0	1.417
State 30	0.466	State 14	0.726	State 1	1.324	State 1	1.414
State 44	0.540	State 29	0.235	State 2	1.267	State 2	1.418
State 69	0.637	State 31	0.595	State 3	1.277	State 3	1.416
State 77	0.035	State 70	0.462	State 4	1.235	State 4	1.402
State 103	0.022	State 91	0.497	State 5	1.232	State 5	1.399
State 108	0.266	State 109	0.506	State 6	1.148	State 6	1.367
				State 7	1.071	State 7	1.334
				State 8	0.964	State 8	1.247
				State 9	0.806	State 9	1.123
				State 10	0.686	State 10	0.995
				State 11	0.543	State 11	0.814
				State 12	0.371	State 12	0.575
				State 13	1.380	State 13	1.293
				State 14	1.404	State 14	1.331
				State 15	1.392	State 15	1.341
				State 16	1.391	State 16	1.355
				State 17	1.381	State 17	1.360
				State 18	1.379	State 18	1.355
				State 19	1.322	State 19	1.381
				State 20	1.267	State 20	1.389
				State 21	1.171	State 21	1.359
				State 22	1.021	State 22	1.259
				State 23	0.871	State 23	1.152
				State 24	0.679	State 24	0.958
				State 25	0.449	State 25	0.670
				State 26	1.483	State 26	1.285
				State 27	1.447	State 27	1.318
				State 28	1.438	State 28	1.331
				State 29	1.429	State 29	1.336
				State 30	1.424	State 30	1.345
				State 31	1.425	State 31	1.333
				State 32	1.393	State 32	1.344
				State 33	1.324	State 33	1.339
				State 34	1.245	State 34	1.307
				State 35	1.104	State 35	1.210
				State 36	0.980	State 36	1.106
				State 37	0.809	State 37	0.930
				State 38	0.579	State 38	0.667
				State 39	0.512	State 39	0.511
				State 40	0.516	State 40	0.544
				State 41	0.501	State 41	0.535
				State 42	0.488	State 42	0.518
				State 43	0.466	State 43	0.499
				State 44	0.475	State 44	0.518
				State 45	0.413	State 45	0.459
				State 46	0.374	State 46	0.427
				State 47	0.311	State 47	0.367
				State 48	0.236	State 48	0.286
				State 49	0.197	State 49	0.230
				State 50	0.135	State 50	0.167
				State 51	0.082	State 51	0.102
				State 52	1.351	State 52	1.089
				State 53	1.379	State 53	1.142
				State 54	1.397	State 54	1.154
				State 55	1.399	State 55	1.165
				State 56	1.409	State 56	1.191
				State 57	1.409	State 57	1.184
				State 58	1.404	State 58	1.251
				State 59	1.403	State 59	1.280
				State 60	1.370	State 60	1.316
				State 61	1.259	State 61	1.295
				State 62	1.140	State 62	1.233
				State 63	0.950	State 63	1.075
				State 64	0.673	State 64	0.772
				State 65	0.546	State 65	0.524
				State 66	0.614	State 66	0.612
				State 67	0.608	State 67	0.611
				State 68	0.599	State 68	0.605
				State 69	0.598	State 69	0.599
				State 70	0.620	State 70	0.623
				State 71	0.570	State 71	0.599
				State 72	0.539	State 72	0.571
				State 73	0.462	State 73	0.509
				State 74	0.302	State 74	0.405
				State 75	0.274	State 75	0.322
				State 76	0.190	State 76	0.230
				State 77	0.110	State 77	0.134
				State 78	0.896	State 78	0.863
				State 79	0.882	State 79	0.865
				State 80	0.862	State 80	0.852
				State 81	0.848	State 81	0.830
				State 82	0.818	State 82	0.811
				State 83	0.819	State 83	0.819
				State 84	0.730	State 84	0.750
				State 85	0.670	State 85	0.708
				State 86	0.580	State 86	0.630
				State 87	0.465	State 87	0.518
				State 88	0.381	State 88	0.433
				State 89	0.288	State 89	0.332
				State 90	0.187	State 90	0.220
				State 91	1.003	State 91	0.893
				State 92	1.044	State 92	0.953
				State 93	1.035	State 93	0.947
				State 94	1.024	State 94	0.940
				State 95	1.005	State 95	0.934
				State 96	1.014	State 96	0.944
				State 97	0.940	State 97	0.905
				State 98	0.882	State 98	0.873
				State 99	0.779	State 99	0.802
				State 100	0.622	State 100	0.667
				State 101	0.505	State 101	0.560
				State 102	0.373	State 102	0.425
				State 103	0.233	State 103	0.270
				State 104	1.470	State 104	1.420
				State 105	1.501	State 105	1.284
				State 106	1.471	State 106	1.306
				State 107	0.525	State 107	0.499
				State 108	1.396	State 108	1.094
				State 109	0.595	State 109	0.508
				State 110	0.913	State 110	0.853
				State 111	0.991	State 111	0.880
				State 112	1.470	State 112	1.423
				State 113	1.406	State 113	1.284
				State 114	1.471	State 114	1.303
				State 115	0.527	State 115	0.498
				State 116	1.398	State 116	1.083
				State 117	0.595	State 117	0.509
				State 118	0.912	State 118	0.854
				State 119	0.982	State 119	0.876

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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		CP-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 1 RB Offset		CP-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 1 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)	0.465	Measured 1g SAR (W/kg)	0.500	Measured 1g SAR (W/kg)	0.533	Measured 1g SAR (W/kg)	0.898	Measured 1g SAR (W/kg)	1.020
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.725	Auto-tune (State 0)	0.781	Auto-tune (State 39)	0.887	Auto-tune (State 26)	1.402	Auto-tune (State 0)	1.664
Default (State 0)	0.700	Default (State 0)	0.754	Default (State 0)	0.934	Default (State 0)	1.369	Default (State 0)	1.629
State 0	0.700	State 0	0.754	State 36	0.178	State 0	1.369	State 0	1.629
State 34	0.145	State 35	0.051	State 39	0.961	State 1	1.333	State 1	1.591
State 62	0.027	State 64	0.007	State 43	0.863	State 2	1.335	State 2	1.590
State 73	0.126	State 65	0.522	State 75	0.126	State 3	1.317	State 3	1.580
State 85	0.176	State 74	0.112	State 102	0.057	State 4	1.278	State 4	1.558
State 112	0.703	State 113	0.432	State 114	0.674	State 5	1.277	State 5	1.555
						State 6	1.203	State 6	1.467
						State 7	1.143	State 7	1.410
						State 8	1.050	State 8	1.310
						State 9	0.913	State 9	1.137
						State 10	0.814	State 10	1.001
						State 11	0.683	State 11	0.801
						State 12	0.512	State 12	0.569
						State 13	1.500	State 13	1.577
						State 14	1.495	State 14	1.591
						State 15	1.482	State 15	1.601
						State 16	1.471	State 16	1.585
						State 17	1.454	State 17	1.583
						State 18	1.453	State 18	1.577
						State 19	1.387	State 19	1.542
						State 20	1.347	State 20	1.513
						State 21	1.267	State 21	1.437
						State 22	1.124	State 22	1.283
						State 23	1.006	State 23	1.134
						State 24	0.836	State 24	0.942
						State 25	0.605	State 25	0.641
						State 26	1.384	State 26	1.517
						State 27	1.404	State 27	1.535
						State 28	1.410	State 28	1.537
						State 29	1.418	State 29	1.552
						State 30	1.409	State 30	1.555
						State 31	1.414	State 31	1.553
						State 32	1.407	State 32	1.538
						State 33	1.405	State 33	1.528
						State 34	1.379	State 34	1.452
						State 35	1.325	State 35	1.342
						State 36	1.251	State 36	1.228
						State 37	1.126	State 37	1.044
						State 38	0.902	State 38	0.769
						State 39	0.361	State 39	0.464
						State 40	0.359	State 40	0.488
						State 41	0.352	State 41	0.478
						State 42	0.343	State 42	0.468
						State 43	0.326	State 43	0.448
						State 44	0.332	State 44	0.461
						State 45	0.293	State 45	0.408
						State 46	0.266	State 46	0.374
						State 47	0.229	State 47	0.318
						State 48	0.178	State 48	0.242
						State 49	0.144	State 49	0.190
						State 50	0.182	State 50	0.136
						State 51	0.068	State 51	0.080
						State 52	1.161	State 52	1.355
						State 53	1.206	State 53	1.405
						State 54	1.207	State 54	1.417
						State 55	1.220	State 55	1.435
						State 56	1.226	State 56	1.443
						State 57	1.230	State 57	1.443
						State 58	1.269	State 58	1.481
						State 59	1.295	State 59	1.513
						State 60	1.318	State 60	1.523
						State 61	1.320	State 61	1.471
						State 62	1.245	State 62	1.386
						State 63	1.225	State 63	1.214
						State 64	1.015	State 64	0.905
						State 65	0.408	State 65	0.488
						State 66	0.466	State 66	0.579
						State 67	0.463	State 67	0.577
						State 68	0.458	State 68	0.567
						State 69	0.454	State 69	0.564
						State 70	0.472	State 70	0.591
						State 71	0.442	State 71	0.552
						State 72	0.419	State 72	0.527
						State 73	0.366	State 73	0.454
						State 74	0.288	State 74	0.349
						State 75	0.232	State 75	0.273
						State 76	0.186	State 76	0.174
						State 77	0.104	State 77	0.100
						State 78	0.735	State 78	0.795
						State 79	0.702	State 79	0.791
						State 80	0.680	State 80	0.774
						State 81	0.672	State 81	0.760
						State 82	0.650	State 82	0.731
						State 83	0.654	State 83	0.742
						State 84	0.589	State 84	0.665
						State 85	0.550	State 85	0.620
						State 86	0.482	State 86	0.533
						State 87	0.397	State 87	0.465
						State 88	0.336	State 88	0.382
						State 89	0.264	State 89	0.289
						State 90	0.181	State 90	0.186
						State 91	0.883	State 91	0.930
						State 92	0.903	State 92	0.994
						State 93	0.895	State 93	0.987
						State 94	0.889	State 94	0.970
						State 95	0.869	State 95	0.957
						State 96	0.870	State 96	0.981
						State 97	0.820	State 97	0.909
						State 98	0.768	State 98	0.854
						State 99	0.687	State 99	0.757
						State 100	0.574	State 100	0.614
						State 101	0.477	State 101	0.498
						State 102	0.367	State 102	0.371
						State 103	0.238	State 103	0.229
						State 104	1.414	State 104	1.647
						State 105	1.503	State 105	1.602
						State 106	1.396	State 106	1.560
						State 107	0.354	State 107	0.467
						State 108	1.168	State 108	1.372
						State 109	0.398	State 109	0.483
						State 110	0.735	State 110	0.859
						State 111	0.864	State 111	0.923
						State 112	1.391	State 112	1.659
						State 113	1.491	State 113	1.613
						State 114	1.389	State 114	1.565
						State 115	0.354	State 115	0.465
						State 116	1.161	State 116	1.381
						State 117	0.395	State 117	0.480
						State 118	0.727	State 118	0.866
						State 119	0.863	State 119	0.927

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

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

Table 13-7
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	26.7
Measured Output Power (dBm)	24.06	25.65
Measured SAR (W/kg)	0.087	0.088
Measured Power (mW)	254.68	367.28
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	161.21	159.03
% deviation from expected linearity		2.54%

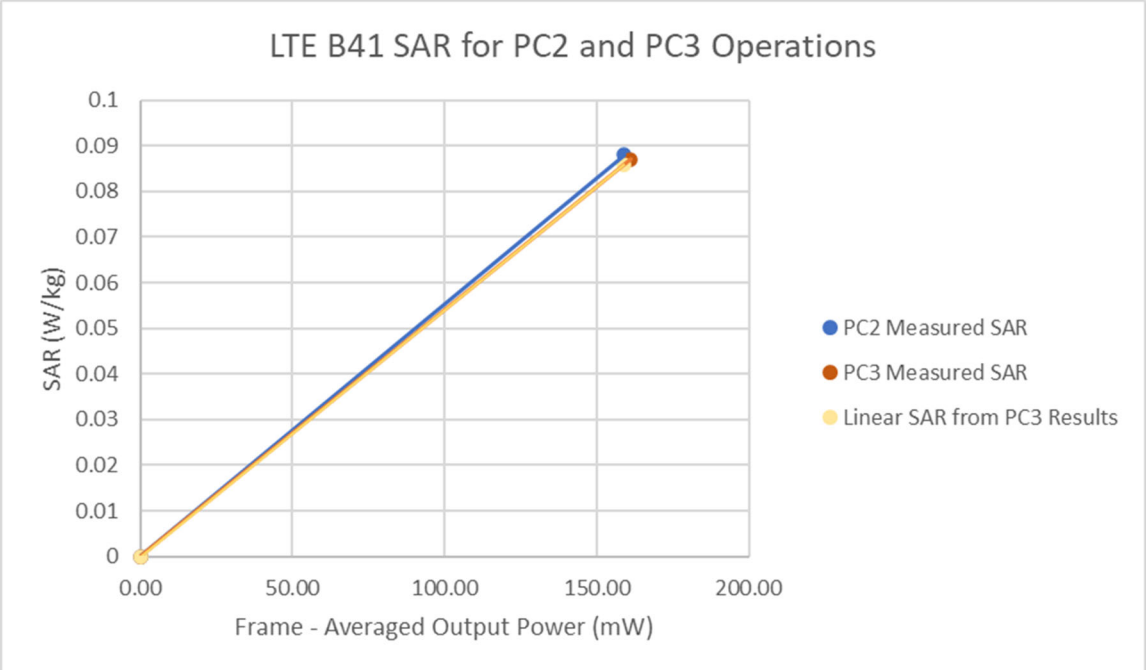

Figure 13-1
LTE Band 41 Head Linearity

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Table 13-8
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	26.7
Measured Output Power (dBm)	23.78	25.54
Measured SAR (W/kg)	0.090	0.099
Measured Power (mW)	238.78	358.10
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	151.15	155.06
% deviation from expected linearity		7.23%

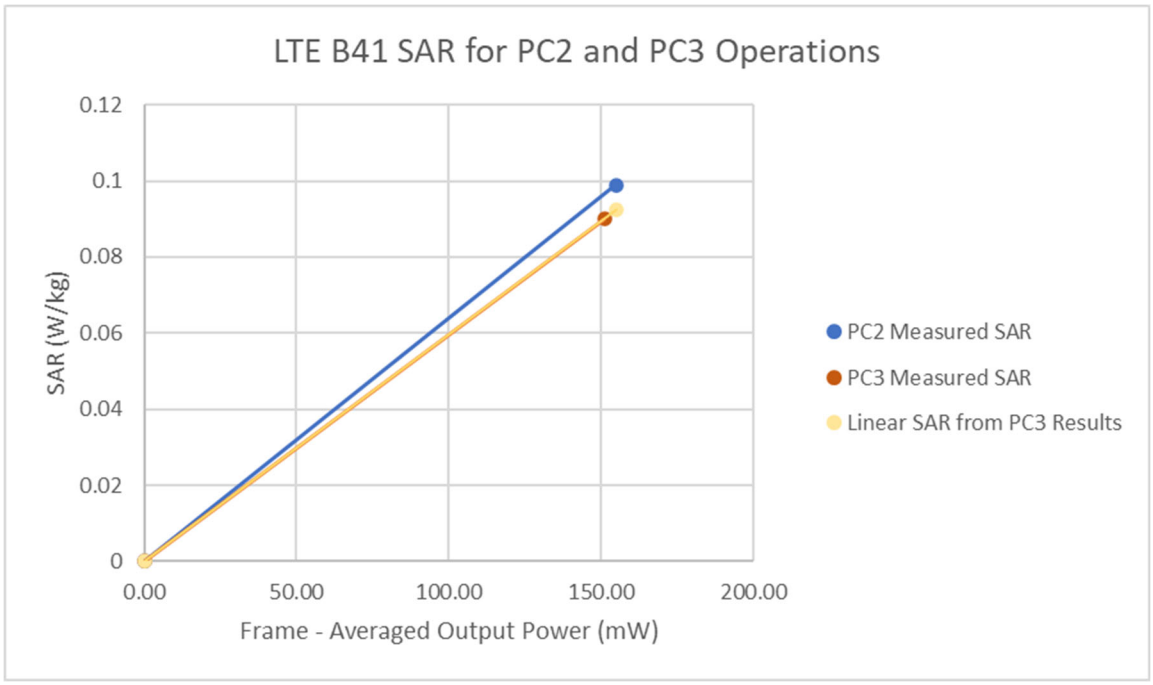

Figure 13-2
LTE Band 41 ULCA Head Linearity

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

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	26.7
Measured Output Power (dBm)	24.06	25.65
Measured SAR (W/kg)	0.258	0.279
Measured Power (mW)	254.68	367.28
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	161.21	159.03
% deviation from expected linearity		9.62%

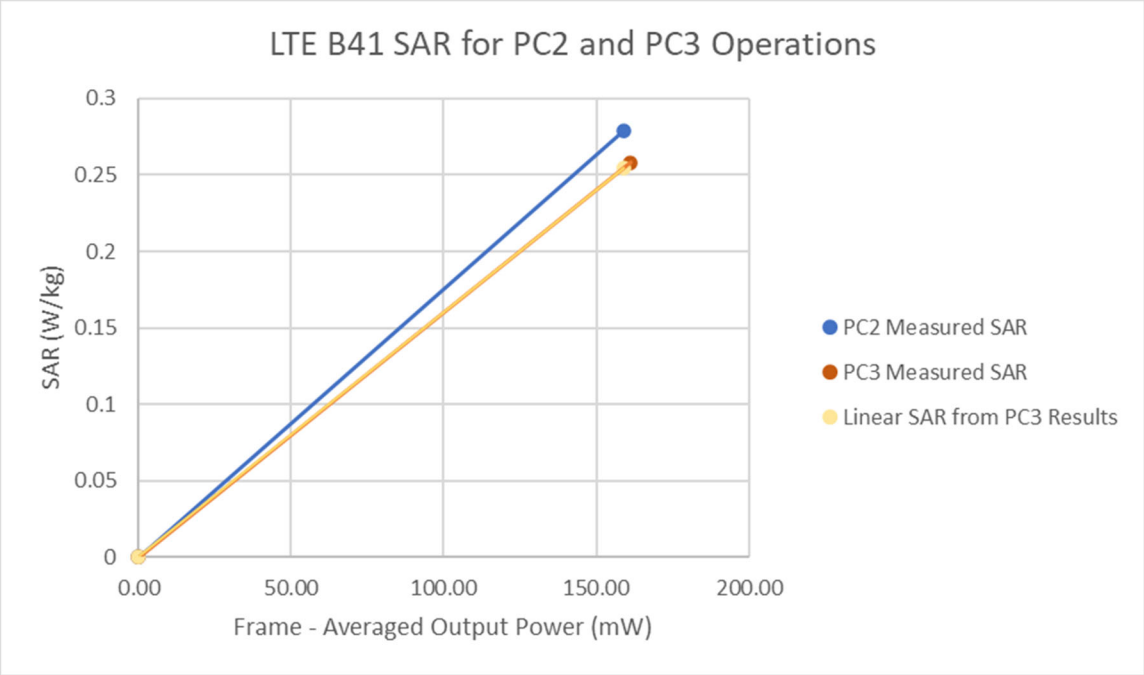

Figure 13-3
LTE Band 41 Body-Worn Linearity

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

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	26.7
Measured Output Power (dBm)	23.78	25.54
Measured SAR (W/kg)	0.265	0.264
Measured Power (mW)	238.78	358.10
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	151.15	155.06
% deviation from expected linearity		-2.89%

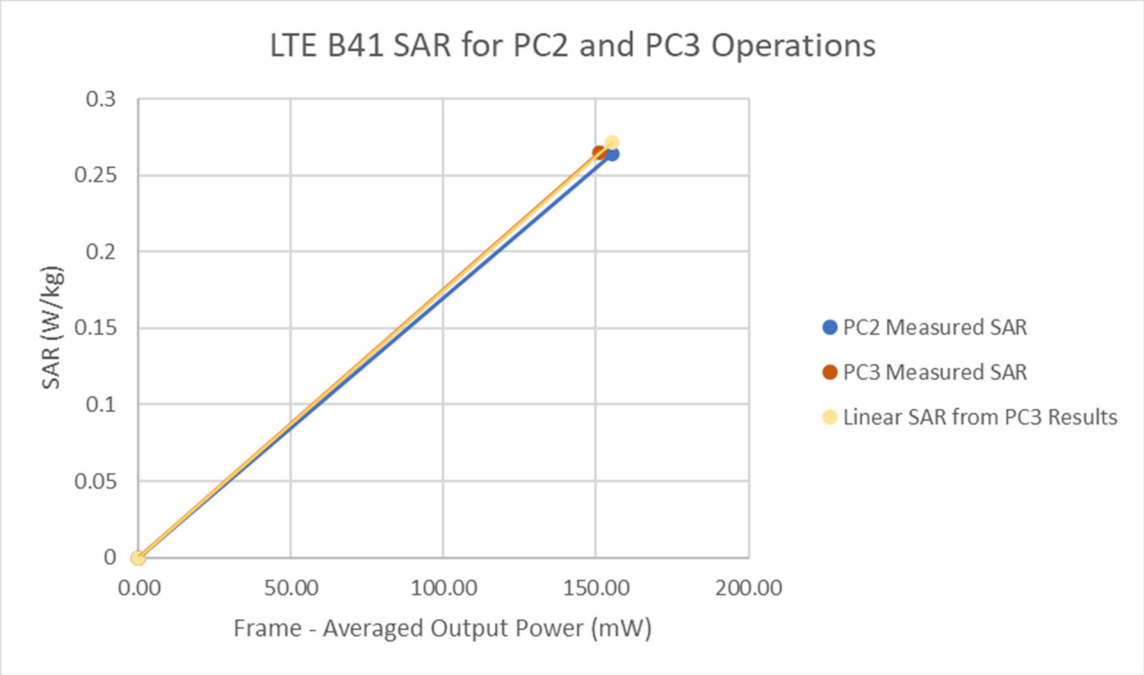

Figure 13-4
LTE Band 41 ULCA Body-Worn Linearity

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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)	22.0	23.7
Measured Output Power (dBm)	20.96	22.68
Measured SAR (W/kg)	0.224	0.239
Measured Power (mW)	124.74	185.35
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	78.96	80.26
% deviation from expected linearity		4.97%

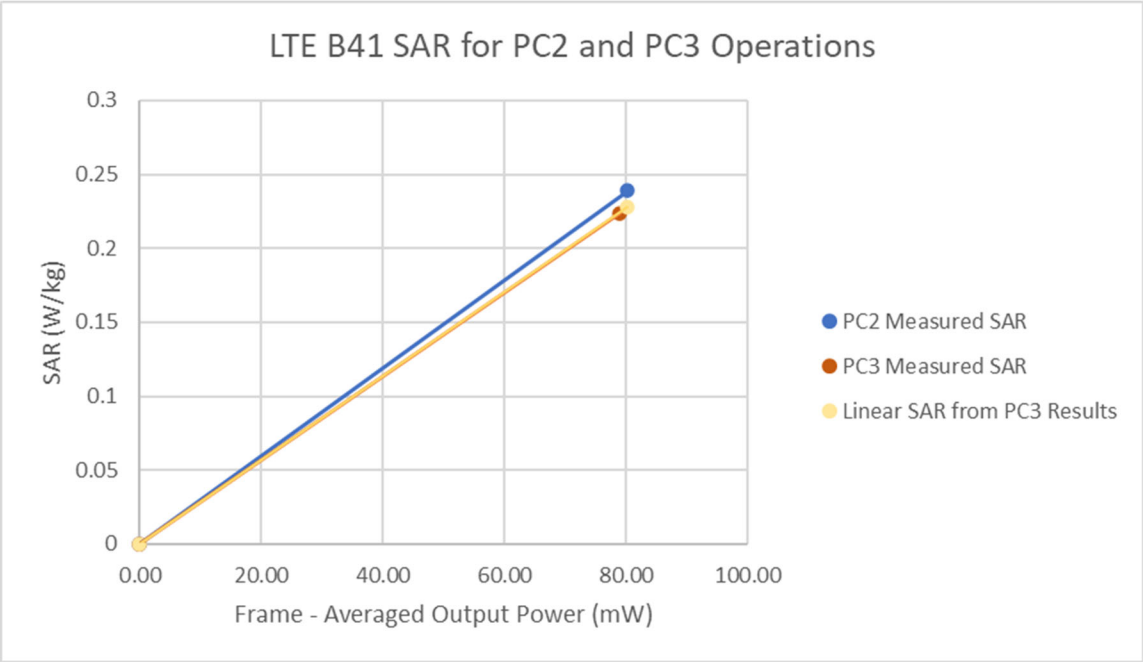

Figure 13-5
LTE Band 41 Hotspot Linearity

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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)	22.0	23.7
Measured Output Power (dBm)	20.71	22.42
Measured SAR (W/kg)	0.220	0.223
Measured Power (mW)	117.76	174.58
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	74.54	75.59
% deviation from expected linearity		-0.05%

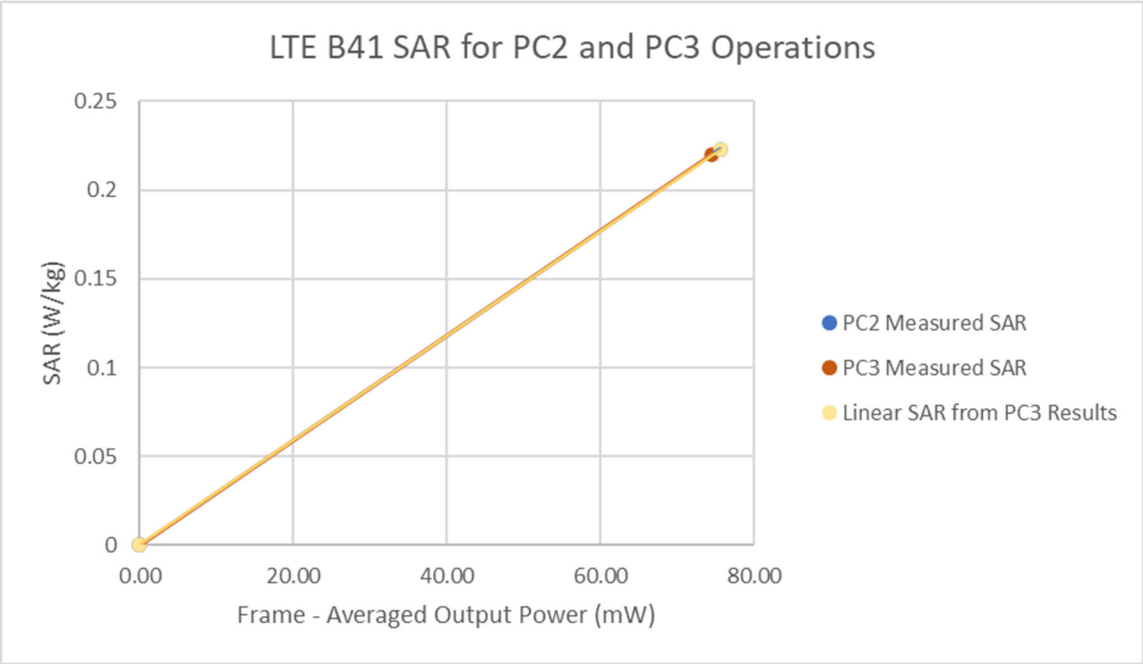

Figure 13-6
LTE Band 41 ULCA Hotspot Linearity

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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)	25.00	26.70
Measured Output Power (dBm)	23.59	25.46
Measured SAR (W/kg)	1.580	1.500
Measured Power (mW)	228.56	351.56
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	144.68	152.23
% deviation from expected linearity		-9.77%

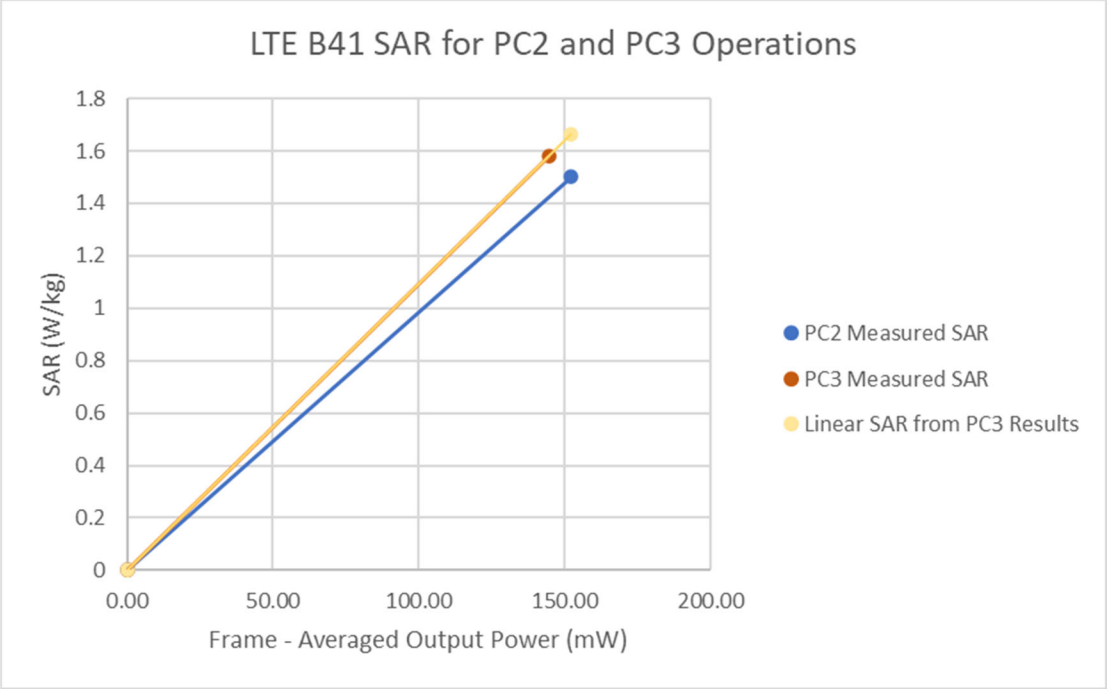

Figure 13-7
LTE Band 41 Phablet Linearity

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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)	25.0	26.7
Measured Output Power (dBm)	23.80	25.48
Measured SAR (W/kg)	1.640	1.580
Measured Power (mW)	239.88	353.18
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	151.85	152.93
% deviation from expected linearity		-4.34%

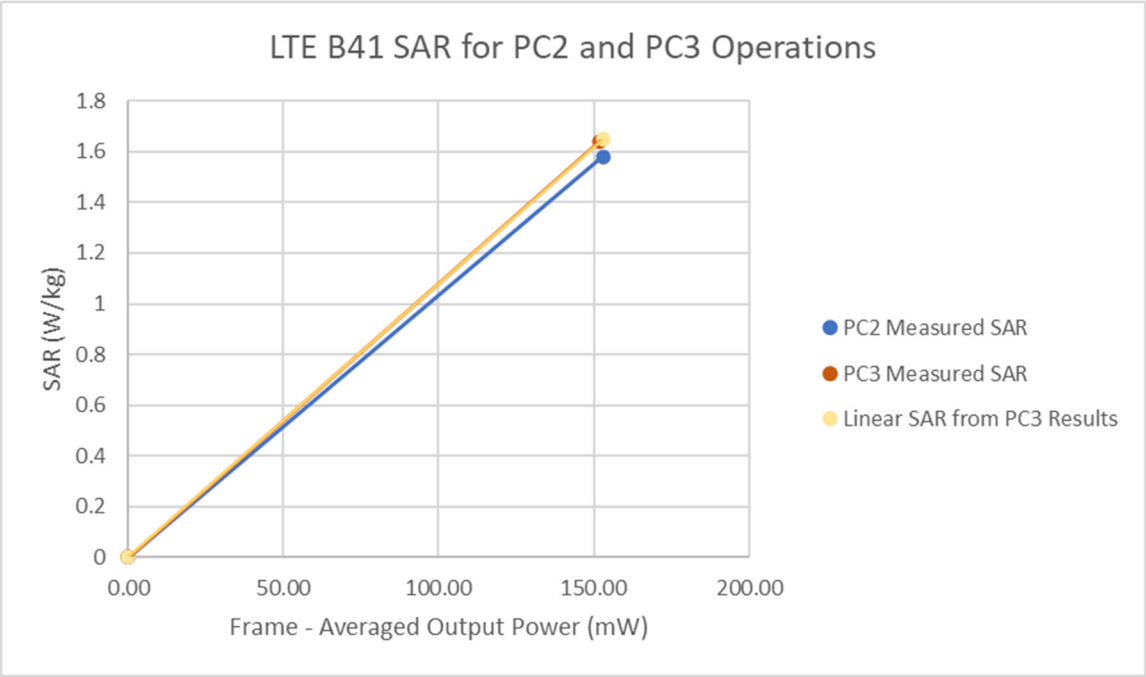

Figure 13-8
LTE Band 41 ULCA Phablet Linearity

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14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	85033E	3.5mm Standard Calibration Kit	7/7/2021	Annual	7/7/2022	MY53402352
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	CBT	N/A	CBT	3051A00187
Agilent	8753ES	S-Parameter Vector Network Analyzer	12/15/2020	Annual	12/15/2021	MY40003841
Agilent	8753ES	S-Parameter Vector Network Analyzer	2/2/2021	Annual	2/2/2022	US39170122
Agilent	E4432B	ESG-D Series Signal Generator	2/24/2021	Annual	2/24/2022	US40053896
Agilent	E4438C	ESG Vector Signal Generator	5/6/2021	Annual	5/6/2022	MY42082659
Agilent	E5515C	Wireless Communications Test Set	2/4/2021	Annual	2/4/2022	GB43193563
Agilent	E5515C	Wireless Communications Test Set	2/6/2021	Annual	2/6/2022	GB43304278
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Agilent	N5182A	MXG Vector Signal Generator	6/15/2021	Annual	6/15/2022	MY47420800
Agilent	N5182A	MXG Vector Signal Generator	6/21/2021	Annual	6/21/2022	MY47420603
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	353317
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	353468
Anritsu	ML2496A	Power Meter	2/19/2021	Annual	2/19/2022	1138001
Anritsu	ML2496A	Power Meter	4/21/2021	Annual	4/21/2022	1351001
Anritsu	MA24106A	USB Power Sensor	1/15/2021	Annual	1/15/2022	1344554
Anritsu	MA24106A	USB Power Sensor	1/15/2021	Annual	1/15/2022	1349503
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	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	MT8821C	Radio Communication Analyzer	2/1/2021	Annual	2/1/2022	6201664756
Anritsu	MT8821C	Radio Communication Analyzer	3/2/2021	Annual	3/2/2022	6262044715
Anritsu	MT8821C	Radio Communication Analyzer	3/23/2021	Annual	3/23/2022	6201144418
Anritsu	MT8821C	Radio Communication Analyzer	4/14/2021	Annual	4/14/2022	6261895213
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	MT8000A	Radio Communication Test Station	7/28/2021	Annual	7/28/2022	6272337419
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M15SA00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4040	Therm./ Clock/ Humidity Monitor	2/17/2020	Biennial	2/17/2022	200113269
Control Company	4040	Therm./ Clock/ Humidity Monitor	2/17/2020	Biennial	2/17/2022	200113274
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043588
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043634
Insize	1108-150	Digital Caliper	1/17/2020	Biennial	1/17/2022	409193536
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	MY49010233
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8975S00903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
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	TVA-11-422	RF Power Amp	CBT	N/A	CBT	QA1303002
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	1445
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	1/19/2021	Annual	1/19/2022	111427
Rohde & Schwarz	CMW500	Radio Communication Tester	2/18/2021	Annual	2/18/2022	101767
Rohde & Schwarz	CMW500	Radio Communication Tester	2/23/2021	Annual	2/23/2022	164948
Rohde & Schwarz	CMW500	Radio Communication Tester	3/19/2021	Annual	3/19/2022	128633
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Triennial	10/22/2021	1150
SPEAG	D1750V2	1750 MHz SAR Dipole	5/12/2020	Biennial	5/12/2022	1148
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Triennial	2/21/2022	5d148
SPEAG	D2300V2	2300 MHz SAR Dipole	6/3/2021	Annual	6/3/2022	1116
SPEAG	D2300V2	2300 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	1073
SPEAG	D2450V2	2450 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	981
SPEAG	D2450V2	2450 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	719
SPEAG	D2600V2	2600 MHz SAR Dipole	11/12/2019	Triennial	11/12/2021	1071
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	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	Biennial	10/9/2022	1056
SPEAG	D3900V2	3900 MHz SAR Dipole	6/10/2021	Annual	6/10/2022	1073
SPEAG	D5GHV2	5 GHz SAR Dipole	1/20/2021	Annual	1/20/2022	1057
SPEAG	D5GHV2	5 GHz SAR Dipole	9/15/2021	Annual	9/15/2022	1191
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	1161
SPEAG	D750V3	750 MHz SAR Dipole	3/9/2021	Annual	3/9/2022	1054
SPEAG	D750V3	750 MHz SAR Dipole	5/11/2021	Annual	5/11/2022	1034
SPEAG	D750V3	750 MHz SAR Dipole	3/16/2020	Biennial	3/16/2022	1003
SPEAG	D750V3	750 MHz SAR Dipole	2/17/2021	Annual	2/17/2022	1046
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	4d133
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Annual	1/21/2022	4d132
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Triennial	3/13/2022	4d047
SPEAG	D835V2	835 MHz SAR Dipole	5/11/2021	Annual	5/11/2022	4d180
SPEAG	D835V2	835 MHz SAR Dipole	4/15/2021	Annual	4/15/2022	4d119
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/9/2021	Annual	4/9/2022	1502
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/6/2020	Annual	11/6/2021	1466
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/3/2021	Annual	8/3/2022	1681
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/16/2021	Annual	8/16/2022	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/16/2020	Annual	10/16/2021	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/7/2020	Annual	12/7/2021	1533
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2021	Annual	1/13/2022	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/10/2021	Annual	3/10/2022	1415
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/18/2021	Annual	3/18/2022	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/7/2021	Annual	4/7/2022	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/11/2021	Annual	5/11/2022	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2021	Annual	6/15/2022	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1676
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1678
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/22/2021	Annual	6/22/2022	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/13/2021	Annual	7/13/2022	1583
SPEAG	DAK-3.5	Dielectric Parameter Probes	12/9/2020	Annual	12/9/2021	1278
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	11/23/2020	Annual	11/23/2021	7538
SPEAG	EX3DV4	SAR Probe	1/20/2021	Annual	1/20/2022	3589
SPEAG	EX3DV4	SAR Probe	3/16/2021	Annual	3/16/2022	7526
SPEAG	EX3DV4	SAR Probe	4/19/2021	Annual	4/19/2022	7357
SPEAG	EX3DV4	SAR Probe	5/18/2021	Annual	5/18/2022	3914
SPEAG	EX3DV4	SAR Probe	6/21/2021	Annual	6/21/2022	7409
SPEAG	EX3DV4	SAR Probe	6/28/2021	Annual	6/28/2022	7660
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7406
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7410
SPEAG	EX3DV4	SAR Probe	4/16/2021	Annual	4/16/2022	7402
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	8/5/2021	Annual	8/5/2022	7670
SPEAG	EX3DV4	SAR Probe	9/20/2021	Annual	9/20/2022	7552
SPEAG	EX3DV4	SAR Probe	6/29/2021	Annual	6/29/2022	7659
SPEAG	EX3DV4	SAR Probe	6/28/2021	Annual	6/28/2022	7661
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	N/A

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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