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SAR EVALUATION REPORT

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

Date of Testing:
03/19/20 - 05/04/20
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2003090034-20-R1.A3L

FCC ID: **A3LSMG981V**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-G981V

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	Cell. CDMA/EVDO	824.70 - 848.31 MHz	0.35	0.39	0.55	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.21	0.70	1.18	2.97
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.20	0.22	0.53	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.10	0.27	0.95	3.08
PCE	UMTS 850	826.40 - 846.60 MHz	0.23	0.27	0.41	N/A
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.21	0.79	1.16	2.89
PCE	LTE Band 12	699.7 - 715.3 MHz	0.15	0.27	0.35	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.27	0.46	0.58	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.22	0.34	0.41	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.30	0.38	0.54	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.31	0.44	0.64	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.32	1.05	0.93	2.70
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	0.27	0.87	1.01	3.13
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.34	1.26	1.67
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.91	0.28	0.79	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	< 0.1	0.25	1.02	1.22
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.35	0.39	0.54	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.25	0.96	1.00	2.99
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	0.20	0.75	0.86	2.58
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.74	0.22	0.74	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	< 0.1	0.23	N/A	1.78
NII	U-NII-2C	5500 - 5720 MHz	< 0.1	0.24	N/A	1.47
NII	U-NII-3	5745 - 5825 MHz	< 0.1	0.22	0.35	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.25	< 0.1	0.18	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.54	1.56	1.59	3.94

Note: This revised test report (S/N: 1M2003090034-20-R1.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
Cell. CDMA/EVDO	Voice/Data	824.70 - 848.31 MHz
PCS CDMA/EVDO	Voice/Data	1851.25 - 1908.75 MHz
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 1900	Voice/Data	1852.4 - 1907.6 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 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n5 (Cell)	Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Data	1712.5 - 1777.5 MHz
NR Band n2 (PCS)	Data	1852.5 - 1907.5 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
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
ANT+	Data	2402 - 2480 MHz
MST	Data	555 Hz - 8.33 kHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

The equipment under test (EUT) contains:

a. Qualcomm® SM8250 modem supporting 2G/3G/4G WWAN technologies

b. Qualcomm® SDX55M modem supporting 5G NR

Both of Qualcomm® SM8250 and SDX55M modems are enabled with Qualcomm® Smart Transmit 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 can be found in Section 1.11 – Bibliography).

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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* or *PD_design_target*, below the predefined time-averaged power limit (i.e., P_{limit} for sub-6 radio, and *input.power.limit* for 5G mmW NR), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN can be found in Section 1.11 - Bibliography).

Smart Transmit allows the device to transmit at higher power instantaneously, as high as P_{max}, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit}. Below table shows P_{limit} EFS settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (Device State Index DSI). Note that the device uncertainty for sub-6GHz WWAN is 1.0dB for this EUT.

Exposure Scenario:		Body-Worn	Phablet	Phablet	Head	Hotspot	Earjack	Maximum Tune-up Output Power*
Averaging Volume:		1g	10g	10g	1g	1g	10g	
Spacing:		15 mm	8, 6, 11 mm	0 mm	0 mm	10 mm	0 mm	
DSI:		0	0	1	2	3	4	
Technology/Band	Antenna	Plimit corresponding to 1mW/g (SAR_design_target)						Pmax
CDMA/EVDO BC0	A	28.6		27.0	30.4	27.0	27.0	24.8
CDMA/EVDO BC1	A	26.1		19.5	31.4	18.5	19.5	23.5
GSM/GPRS/EDGE 850 MHz	A	30.4		29.7	30.9	28.3	29.7	24.8
GSM/GPRS/EDGE 1900 MHz	A	26.8		20.1	30.8	18.8	20.1	21.8
UMTS B5	A	29.7		26.8	30.4	26.8	26.8	23.0
UMTS B2	A	25.0		18.5	30.8	17.5	18.5	23.0
LTE FDD B12	A	30.7		27.3	33.3	27.3	27.3	24.0
LTE FDD B13	A	29.1		26.8	31.2	26.8	26.8	24.8
LTE FDD B14	A	29.8		27.3	31.7	27.3	27.3	24.0
LTE FDD B26	A	29.9		26.9	31.0	26.9	26.9	24.8
LTE FDD B5	A	29.4		26.9	30.5	26.9	26.9	24.8
LTE FDD B66	A	24.3		20.0	29.8	18.5	20.0	23.8
LTE FDD B4	A	24.3		20.0	29.8	18.5	20.0	23.8
LTE FDD B2	A	25.1		19.5	30.2	18.0	19.5	23.5
LTE FDD B7	A	28.4		20.0	37.1	19.5	20.0	23.0
LTE TDD B48	G	21.9		21.9	16.0	21.9	21.9	21.5
LTE TDD B41	A	28.0		24.0	36.5	19.0	24.0	21.0
LTE TDD B38	A	28.0		24.0	36.5	19.0	24.0	21.0
NR FDD n5	A	29.8		27.2	30.3	27.2	27.2	24.8
NR FDD n66	A	25.9		20.0	30.8	18.5	20.0	23.8
NR FDD n2	A	25.8		19.5	31.4	18.0	19.5	23.5

*Note all P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM & LTE TDD).
*Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.

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

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

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

1.3 Power Reduction for SAR

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

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1.4 Nominal and Maximum Output Power Specifications

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

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

CDMA BC0 (835 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
DSI = 1 (Phablet Reduced)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
DSI = 2 (Head)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
DSI = 3 (Hotspot)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
DSI = 4 (Earjack)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
CDMA BC1 (1900 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.5	24.5	24.5
	Nominal	23.5	23.5	23.5
DSI = 1 (Phablet Reduced)	Max allowed power	20.5	20.5	20.5
	Nominal	19.5	19.5	19.5
DSI = 2 (Head)	Max allowed power	24.5	24.5	24.5
	Nominal	23.5	23.5	23.5
DSI = 3 (Hotspot)	Max allowed power	19.5	19.5	19.5
	Nominal	18.5	18.5	18.5
DSI = 4 (Earjack)	Max allowed power	20.5	20.5	20.5
	Nominal	19.5	19.5	19.5

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
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	33.0	33.0	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	32.0	32.0	31.0	29.0	27.0	26.5	24.5	22.5	21.5
DSI = 1 (Phablet Reduced)	Max allowed power	33.0	33.0	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	32.0	32.0	31.0	29.0	27.0	26.5	24.5	22.5	21.5
DSI = 2 (Head)	Max allowed power	33.0	33.0	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	32.0	32.0	31.0	29.0	27.0	26.5	24.5	22.5	21.5
DSI = 3 (Hotspot)	Max allowed power	N/A	33.0	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	N/A	32.0	31.0	29.0	27.0	26.5	24.5	22.5	21.5
DSI = 4 (Earjack)	Max allowed power	33.0	33.0	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	32.0	32.0	31.0	29.0	27.0	26.5	24.5	22.5	21.5
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
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	30.0	30.0	29.0	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	29.0	29.0	28.0	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 1 (Phablet Reduced)	Max allowed power	30.0	30.0	27.3	25.5	24.3	26.5	24.5	22.5	21.5
	Nominal	29.0	29.0	26.3	24.5	23.3	25.5	23.5	21.5	20.5
DSI = 2 (Head)	Max allowed power	30.0	30.0	29.0	27.0	25.0	26.5	24.5	22.5	21.5
	Nominal	29.0	29.0	28.0	26.0	24.0	25.5	23.5	21.5	20.5
DSI = 3 (Hotspot)	Max allowed power	N/A	29.0	26.0	24.2	23.0	26.5	24.5	22.5	21.5
	Nominal	N/A	28.0	25.0	23.2	22.0	25.5	23.5	21.5	20.5
DSI = 4 (Earjack)	Max allowed power	30.0	30.0	27.3	25.5	24.3	26.5	24.5	22.5	21.5
	Nominal	29.0	29.0	26.3	24.5	23.3	25.5	23.5	21.5	20.5

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UMTS Band 5 (850 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 2 (Head)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 3 (Hotspot)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 4 (Earjack)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
UMTS Band 2 (1900 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max allowed power	19.5	18.5	18.5
	Nominal	18.5	17.5	17.5
DSI = 2 (Head)	Max allowed power	24.0	23.0	23.0
	Nominal	23.0	22.0	22.0
DSI = 3 (Hotspot)	Max allowed power	18.5	17.5	17.5
	Nominal	17.5	16.5	16.5
DSI = 4 (Earjack)	Max allowed power	19.5	18.5	18.5
	Nominal	18.5	17.5	17.5

Mode / Band		Modulated Average Output Power (in dBm)				
		DSI = 0 (Body-Worn or Phablet Max)	DSI = 1 (Phablet Reduced)	DSI = 2 (Head)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
LTE FDD Band 12	Max allowed	25.0	25.0	25.0	25.0	25.0
	Nominal	24.0	24.0	24.0	24.0	24.0
LTE FDD Band 13	Max allowed	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 14	Max allowed	25.0	25.0	25.0	25.0	25.0
	Nominal	24.0	24.0	24.0	24.0	24.0
LTE FDD Band 26	Max allowed	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 5	Max allowed	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 66	Max allowed	24.8	21.0	24.8	19.5	21.0
	Nominal	23.8	20.0	23.8	18.5	20.0
LTE FDD Band 4	Max allowed	24.8	21.0	24.8	19.5	21.0
	Nominal	23.8	20.0	23.8	18.5	20.0
LTE FDD Band 2	Max allowed	24.5	20.5	24.5	19.0	20.5
	Nominal	23.5	19.5	23.5	18.0	19.5
LTE FDD Band 7	Max allowed	24.0	21.0	24.0	20.5	21.0
	Nominal	23.0	20.0	23.0	19.5	20.0
LTE TDD Band 48	Max allowed	24.5	24.5	19.0	24.5	24.5
	Nominal	23.5	23.5	18.0	23.5	23.5
LTE TDD Band 41	Max allowed	24.0	24.0	24.0	22.0	24.0
	Nominal	23.0	23.0	23.0	21.0	23.0
LTE TDD Band 38	Max allowed	24.0	24.0	24.0	22.0	24.0
	Nominal	23.0	23.0	23.0	21.0	23.0

Mode / Band		Modulated Average Output Power (in dBm)				
		DSI = 0 (Body-Worn or Phablet Max)	DSI = 1 (Phablet Reduced)	DSI = 2 (Head)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
NR FDD Band 5	Max allowed	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
NR FDD Band 66	Max allowed	24.8	21.0	24.8	19.5	21.0
	Nominal	23.8	20.0	23.8	18.5	20.0
NR FDD Band 2	Max allowed	24.5	20.5	24.5	19.0	20.5
	Nominal	23.5	19.5	23.5	18.0	19.5

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1.4.2 2.4 GHz Maximum Bluetooth and SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)													
		SISO								MIMO					
		Antenna 1 & Antenna 2													
		b		g		n		ax (SU)		g(CDD + STBC)		n		ax (SU)	
Maximum / Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	20.0	21.0	17.5	18.5	17.5	18.5	15.0 ch. 1: 14.5 ch. 11: 12.0	16.0 15.5 13.0	20.5	21.5	20.5	21.5	15.0 ch. 1: 14.5 ch. 11: 12.0	16.0 15.5 13.0

Mode / Band		Modulated Average (dBm)		
	Channel	0	39	78
Bluetooth	Maximum	**14.0**	**15.5**	**14.5**
	Nominal	**13.0**	**14.5**	**13.5**
Bluetooth EDR	Maximum	**11.5**	**13.0**	**10.5**
	Nominal	**10.5**	**12.0**	**9.5**
Bluetooth LE (2 Mbps)	Maximum	**9.0**		
	Nominal	**8.0**		
Bluetooth LE (1 Mbps, 125/500 Kbps)	Maximum	**7.5**		
	Nominal	**6.5**		

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1.4.3 2.4 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

- Head Conditions
- Simultaneous conditions with 5 GHz WLAN
- Simultaneous conditions with 5G NR and/or 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)													
		SISO								MIMO					
		Antenna 1 & Antenna 2													
		b		g		n		ax (SU)		g (CDD + STBC)		n		ax (SU)	
Maximum / Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	13.5	14.5	13.5	14.5	13.5	14.5	13.5 ch. 11: 12.0	14.5 13.0	16.5	17.5	16.5	17.5	15.0 ch. 1: 14.5 ch. 11: 12.0	16.0 15.5 13.0

The below table is applicable in the following conditions:

- Head Conditions during simultaneous conditions with 5 GHz WLAN
- Head Conditions during simultaneous conditions with 5G NR and 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)													
		SISO								MIMO					
		Antenna 1 & Antenna 2													
		b		g		n		ax (SU)		g(CDD + STBC)		n		ax (SU)	
Maximum / Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	13.0	14.0	13.0	14.0	13.0	14.0	13.0 ch. 11: 12.0	14.0 13.0	16.0	17.0	16.0	17.0	15.0 ch. 1: 14.5 ch. 11: 12.0	16.0 15.5 13.0

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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 H

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		a		n		ac		ax (SU)		a(CDD + STBC)		n		ac		ax (SU)	
Maximum / Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
5 GHz WIFI (20MHz BW)	5200 MHz	17.0	18.0	17.0	18.0	17.0	18.0	16.0 ch. 36: 13.5	17.0 14.5	20.0	21.0	20.0	21.0	20.0	21.0	16.0 ch. 36: 13.5	17.0 14.5
	5300 MHz	17.0	18.0	17.0	18.0	17.0	18.0	16.0 ch. 64: 14.0	17.0 15.0	20.0	21.0	20.0	21.0	20.0	21.0	16.0 ch. 64: 14.0	17.0 15.0
	5500 MHz	17.0	18.0	17.0	18.0	17.0	18.0	16.0	17.0	20.0	21.0	20.0	21.0	20.0	21.0	16.0	17.0
	5800 MHz	17.0	18.0	17.0	18.0	17.0	18.0	16.0	17.0	20.0	21.0	20.0	21.0	20.0	21.0	16.0	17.0
5 GHz WIFI (40MHz BW)	5200 MHz			16.5 ch. 38: 15.0	17.5 16.0	16.5 ch. 38: 15.0	17.5 16.0	15.0 ch. 38: 11.0	16.0 12.0			19.5 ch. 38: 18.0	20.5 19.0	19.5 ch. 38: 18.0	20.5 19.0	15.0 ch. 38: 11.0	16.0 12.0
	5300 MHz			16.5 ch. 62: 15.0	17.5 16.0	16.5 ch. 62: 15.0	17.5 16.0	15.0 ch. 62: 9.5	16.0 10.5			19.5 ch. 62: 18.0	20.5 19.0	19.5 ch. 62: 18.0	20.5 19.0	15.0 ch. 62: 9.5	16.0 10.5
	5500 MHz			16.5	17.5	16.5	17.5	15.0 ch. 102: 13.0	16.0 14.0			19.5	20.5	19.5	20.5	15.0 ch. 102: 13.0	16.0 14.0
	5800 MHz			16.5	17.5	16.5	17.5	15.0	16.0			19.5	20.5	19.5	20.5	15.0	16.0
5 GHz WIFI (80MHz BW)	5200 MHz					13.5	14.5	12.0	13.0					16.5	17.5	12.0	13.0
	5300 MHz					14.5	15.5	10.0	11.0					17.5	18.5	10.0	11.0
	5500 MHz					15.5 ch. 106: 14.0	16.5 15.0	14.0 ch. 106: 11.5	15.0 12.5					18.5 ch. 106: 17.0	19.5 18.0	14.0 ch. 106: 11.5	15.0 12.5
	5800 MHz					15.5	16.5	14.0	15.0					18.5	19.5	14.0	15.0

1.4.5 5 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

- Head Conditions
- Simultaneous conditions with 2.4 GHz WLAN
- Simultaneous conditions with 5G NR and/or 2.4 GHz WLAN
- Head Conditions during simultaneous conditions with 2.4 GHz WLAN
- Head Conditions during simultaneous conditions with 5G NR and/or 2.4 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n		ac		ax (SU)	
Maximum / Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
5 GHz WIFI (20MHz BW)	5200 MHz	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0 ch. 36: 13.5	17.0 14.5
	5300 MHz	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0 ch. 64: 14.0	17.0 15.0
	5500 MHz	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
	5800 MHz	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0
5 GHz WIFI (40MHz BW)	5200 MHz			13.0	14.0	13.0	14.0	13.0 ch. 38: 11.0	14.0 12.0			16.0	17.0	16.0	17.0	15.0 ch. 38: 11.0	16.0 12.0
	5300 MHz			13.0	14.0	13.0	14.0	13.0 ch. 62: 9.5	14.0 10.5			16.0	17.0	16.0	17.0	15.0 ch. 62: 9.5	16.0 10.5
	5500 MHz			13.0	14.0	13.0	14.0	13.0	14.0			16.0	17.0	16.0	17.0	15.0 ch. 102: 13.0	16.0 14.0
	5800 MHz			13.0	14.0	13.0	14.0	13.0	14.0			16.0	17.0	16.0	17.0	15.0	16.0
5 GHz WIFI (80MHz BW)	5200 MHz					13.0	14.0	12.0	13.0					16.0	17.0	12.0	13.0
	5300 MHz					13.0	14.0	10.0	11.0					16.0	17.0	10.0	11.0
	5500 MHz					13.0	14.0	13.0 ch. 106: 11.5	14.0 12.5					16.0	17.0	14.0 ch. 106: 11.5	15.0 12.5
	5800 MHz					13.0	14.0	13.0	14.0					16.0	17.0	14.0	15.0

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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 E. Since the diagonal dimension of this device is > 160 mm and <200 mm, it is considered a "phablet."

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
Cell. EVDO	Yes	Yes	No	Yes	Yes	Yes
PCS EVDO	Yes	Yes	No	Yes	Yes	Yes
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 1900	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 2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	Yes	Yes
LTE Band 48	Yes	Yes	Yes	No	No	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
NR Band n2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	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	Yes	No	No	Yes
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
Bluetooth	Yes	Yes	Yes	No	No	Yes

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

1.6 Near Field Communications (NFC) Antenna

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

1.7 Simultaneous Transmission Capabilities

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

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

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Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	1x CDMA voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	
2	1x CDMA voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
3	1x CDMA voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
4	1x CDMA voice + 2.4 GHz Bluetooth + 5GHz WI-FI	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
5	1x CDMA voice + 2.4 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
6	1x CDMA voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
7	1x CDMA voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
8	1x CDMA voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
9	1x CDMA voice + 2.4 GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
10	GSM voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	
11	GSM voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
12	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
13	GSM voice + 2.4 GHz Bluetooth + 5GHz WI-FI	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
14	GSM voice + 2.4 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
15	GSM voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
16	GSM voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
17	GSM voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
18	GSM voice + 2.4 GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
19	UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
20	UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
21	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
22	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
23	UMTS + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
24	UMTS + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
25	UMTS + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
26	UMTS + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
27	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
28	LTE + 5G NR	Yes	Yes	N/A	Yes	
29	LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
30	LTE + 2.4 GHz WI-FI + 5G NR	Yes	Yes	Yes	Yes	
31	LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
32	LTE + 5 GHz WI-FI + 5G NR	Yes	Yes	Yes	Yes	
33	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
34	LTE + 2.4 GHz Bluetooth + 5G NR	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
35	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
36	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI + 5G NR	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
37	LTE + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
38	LTE + 2.4 GHz WI-FI MIMO + 5G NR	Yes	Yes	Yes	Yes	
39	LTE + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
40	LTE + 5 GHz WI-FI MIMO + 5G NR	Yes	Yes	Yes	Yes	
41	LTE + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
42	LTE + 2.4 GHz WI-FI + 5 GHz WI-FI + 5G NR	Yes	Yes	Yes	Yes	
43	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
44	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO + 5G NR	Yes	Yes	Yes	Yes	
45	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
46	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO + 5G NR	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
47	CDMA/EVDO data + 2.4 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
48	CDMA/EVDO data + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
49	CDMA/EVDO data + 2.4 GHz Bluetooth	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
50	CDMA/EVDO data + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
51	CDMA/EVDO data + 2.4 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
52	CDMA/EVDO data + 5 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
53	CDMA/EVDO data + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
54	CDMA/EVDO data + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
55	CDMA/EVDO data + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
56	GPRS/EDGE + 2.4 GHz WI-FI	N/A	N/A	Yes	Yes	
57	GPRS/EDGE + 5 GHz WI-FI	N/A	N/A	Yes	Yes	
58	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
59	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
60	GPRS/EDGE + 2.4 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	
61	GPRS/EDGE + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	
62	GPRS/EDGE + 2.4 GHz WI-FI + 5 GHz WI-FI	N/A	N/A	Yes	Yes	
63	GPRS/EDGE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	
64	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VOLTE.
8. This device supports VOWIFI.
9. This device supports Bluetooth Tethering.
10. LTE + 5G NR FR1 Scenarios are limited to LTE Anchor Bands, LTE B2/5/13/48/66.
11. 5G NR FR2 n260 and n261 cannot transmit simultaneously.
12. LTE + 5G NR FR2 n260 and n261 operations are possible only with LTE B2/4/5/13/66 under EN-DC mode.

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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 WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax with the following features:

a) Up to 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 WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

(B) Licensed Transmitter(s)

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

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

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

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

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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. Phablet SAR was not evaluated for licensed technologies since wireless router 1g SAR was < 1.2 W/kg for these modes.

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 capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE Band falls completely within an LTE band with a larger transmission frequency range, both LTE bands have the same target power (or the band with the larger transmission frequency range has a higher target power), and both LTE 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 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is ≤ ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05.

This device supports LTE Carrier Aggregation (CA) for LTE Band 5, LTE Band 48, and LTE Band 66 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 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 of n5, n66, and n2 is limited to EN-DC operations only, with LTE Bands 2/5/13/48/66 acting as the anchor band. Per FCC Guidance, SAR tests were performed separately for NR Bands and LTE Anchor Bands. Please see Section 11 for more details.

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)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)

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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)	1M2003090034-27-R1.A3L
SAR Exposure Part 0 Test Report	1M2003090034-21.A3L
PD Exposure Part 0 Test Report	Rev B
RF Exposure Part 2 Test Report	1M2003090034-22.A3L
RF Exposure Compliance Summary Report	1M2003090034-28.A3L

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2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 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 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
Channel Bandwidths	LTE Band 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 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 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 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 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 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, and LAA features as shown in Section 9 and Appendix F. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC unless otherwise specified. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	NR Band n5 (Cell) (826.5 - 846.5 MHz)				
	NR Band n66 (AWS) (1712.5 - 1777.5 MHz)				
	NR Band n2 (PCS) (1852.5 - 1907.5 MHz)				
Channel Bandwidths	NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
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 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 SCS	15 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 n5	LTE Band 2/66				
LTE Anchor Bands for NR Band n66	LTE Band 5/13/48				
LTE Anchor Bands for NR Band n2	LTE Band 5/13				

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3 INTRODUCTION

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

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

3.1 SAR Definition

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

Equation 3-1
SAR Mathematical Equation

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

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

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

where:

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

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

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4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

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

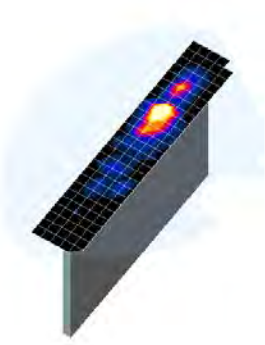


Figure 4-1
Sample SAR Area Scan

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

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

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

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

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

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

*Also compliant to IEEE 1528-2013 Table 6

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5 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

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

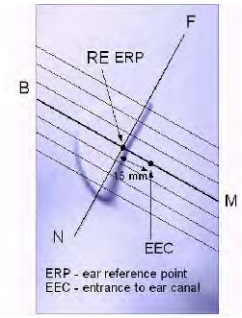


Figure 5-1
Close-Up Side view of ERP

5.2 HANDSET REFERENCE POINTS

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



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

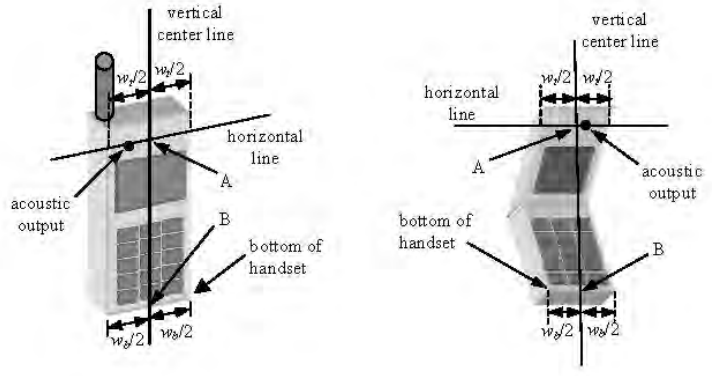


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

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

6.2 Positioning for Cheek

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



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

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

6.3 Positioning for Ear / 15º Tilt

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

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

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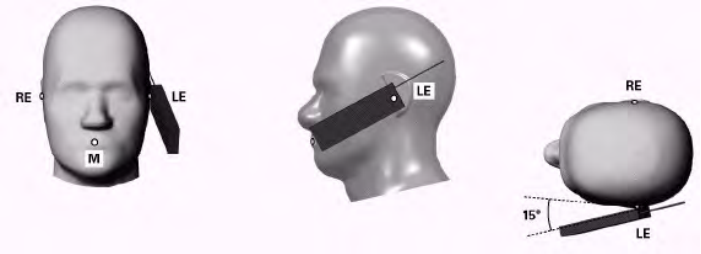


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

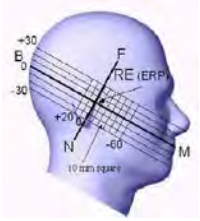


Figure 6-3
Side view w/ relevant markings

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

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

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

6.5 Body-Worn Accessory Configurations

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

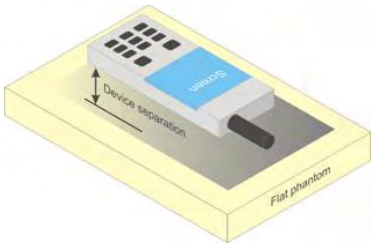


Figure 6-4
Sample Body-Worn Diagram

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

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contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

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

6.6 Extremity Exposure Configurations

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

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

6.7 Wireless Router Configurations

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

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

6.8 Phablet Configurations

For smart phones with a display diagonal dimension > 150 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that

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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 CDMA2000

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

8.4.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.” Maximum output power is verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in the “All Up” condition.

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1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 8-1 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH_0 and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 8-2 was applied.

Table 8-1
Parameters for Max. Power for RC1

Parameter	Units	Value
$\hat{I}_{or}$	dBm/1.23 MHz	-104
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

Table 8-2
Parameters for Max. Power for RC3

Parameter	Units	Value
$\hat{I}_{or}$	dBm/1.23 MHz	-86
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

5. FCHs were configured at full rate for maximum SAR with “All Up” power control bits.

8.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at fullrate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode; otherwise, SAR is required for the channel with maximum measured output in RC1 using the head exposure configuration that results in the highest reported SAR in RC3.

Head SAR is additionally evaluated using EVDO Rev. A to support compliance for VoIP operations. See Section 8.4.5 for EVDO Rev. A configuration parameters.

8.4.3 Body-worn SAR Measurements

SAR for body-worn exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCHn), with FCH only as the primary mode. Otherwise, SAR is required for multiple code channel configuration (FCH + SCHn), with FCH at full rate and SCH0 enabled at 9600 bps, using the highest reported SAR configuration for FCH only. When multiple code channels are enabled, the transmitter output can shift by more than 0.5 dB and may lead to higher SAR drifts and SCH dropouts.

The 3G SAR test reduction procedure is applied to body-worn accessory SAR in RC1 with RC3 as the primary mode. Otherwise, SAR is required for RC1, with SO55 and full rate, using the highest reported SAR configuration for body-worn accessory exposure in RC3.

8.4.4 Body-worn SAR Measurements for EVDO Devices

For handsets with EVDO capabilities, the 3G SAR test reduction procedure is applied to EVDO Rev. 0 with 1x RTT RC3 as the primary mode to determine body-worn accessory test requirements. Otherwise, body-worn accessory SAR is required for Rev. 0, at 153.6 kbps, using the highest reported SAR configuration for body-worn accessory exposure in RC3.

The 3G SAR test reduction procedure is applied to Rev. A, with Rev. 0 as the primary mode to determine body-worn accessory SAR test requirements. When SAR is not required for Rev. 0, the 3G SAR test reduction is applied with 1x RTT RC3 as the primary mode.

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When SAR is required for EVDO Rev. A, SAR is measured with a Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations, using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0 or 1x RTT RC3, as appropriate.

8.4.5 Body SAR Measurements for EVDO Hotspot

Hotspot Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. The 3G SAR test reduction procedure is applied to Rev. A, Subtype 2 Physical layer configuration, with Rev. 0 as the primary mode; otherwise, SAR is measured for Rev. A using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0. The AT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations.

For EVDO data devices that also support 1x RTT voice and/or data operations, the 3G SAR test reduction procedure is applied to 1x RTT RC3 and RC1 with EVDO Rev. 0 and Rev. A as the respective primary modes. Otherwise, the 'Body-Worn Accessory SAR' procedures in the '3GPP2 CDMA 2000 1x Handsets' section are applied.

8.5 SAR Measurement Conditions for UMTS

8.5.1 Output Power Verification

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

8.5.2 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.

8.5.3 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.

8.5.4 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.

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8.5.5 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.

8.6 SAR Measurement Conditions for LTE

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

8.6.1 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.

8.6.2 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.

8.6.3 A-MPR

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

8.6.4 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.

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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.

8.6.5 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.

8.6.6 Downlink Only Carrier Aggregation

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

8.7 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.

8.7.1 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.

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8.7.2 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.

8.7.3 U-NII-2C and U-NII-3

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

8.7.4 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.

8.7.5 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.

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8.7.6 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.

8.7.7 Initial Test Configuration Procedure

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

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 8.7.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.8 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.

8.7.9 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 CDMA Conducted Powers

Table 9-1
Measured P_{Max}

Band	Channel	Frequency	SO55 [dBm]	SO55 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC	MHz	RC1	RC3	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	1013	824.7	25.04	25.00	25.03	25.05	25.12	25.15
	384	836.52	24.95	24.97	24.98	24.95	25.10	25.11
	777	848.31	24.96	24.99	24.96	24.94	25.05	25.06
PCS	25	1851.25	23.14	23.24	23.20	23.21	23.30	23.28
	600	1880	23.20	23.21	23.23	23.17	23.22	23.18
	1175	1908.75	23.44	23.49	23.47	23.43	23.45	23.46

Table 9-2
Measured P_{Limit} for DSI = 3 (Hotspot Mode)

Band	Channel	Rule Part	Frequency	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	18.21	18.21	18.21	18.21
	600	24E	1880	18.14	18.17	18.16	18.14
	1175	24E	1908.75	18.22	18.38	18.37	18.39

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Table 9-3
Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active)

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	19.46	19.47	19.46	19.49	19.51	19.45
	600	24E	1880	19.40	19.42	19.43	19.43	19.44	19.41
	1175	24E	1908.75	19.64	19.67	19.63	19.67	19.68	19.60

Note: RC1 is only applicable for IS-95 compatibility.



Figure 9-1
Power Measurement Setup

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9.2 GSM Conducted Powers

Table 9-4
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	32.43	32.39	31.70	**29.81**	27.58	26.80	25.40	23.49	22.38
	190	32.35	32.30	31.81	**29.66**	27.58	26.88	25.36	23.29	22.42
	251	32.28	32.29	31.71	**29.69**	27.53	26.87	25.39	23.32	22.30
GSM 1900	512	29.21	29.23	28.18	**25.86**	24.48	25.70	23.82	22.00	20.93
	661	28.99	29.03	28.14	**25.88**	24.43	25.40	23.79	21.98	20.74
	810	29.34	29.41	28.13	**26.21**	24.74	25.66	24.05	22.16	20.83

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	23.23	23.19	25.51	**25.38**	24.40	17.60	19.21	19.06	19.20
	190	23.15	23.10	25.62	**25.23**	24.40	17.68	19.17	18.86	19.24
	251	23.08	23.09	25.52	**25.26**	24.35	17.67	19.20	18.89	19.12
GSM 1900	512	20.01	20.03	21.99	**21.43**	21.30	16.50	17.63	17.57	17.75
	661	19.79	19.83	21.95	**21.45**	21.25	16.20	17.60	17.55	17.56
	810	20.14	20.21	21.94	**21.78**	21.56	16.46	17.86	17.73	17.65

GSM 850	**Frame Avg.Targets:**	22.80	22.80	24.81	**24.57**	23.82	17.30	18.31	18.07	18.32
GSM 1900		19.80	19.80	21.81	**21.57**	20.82	16.30	17.31	17.07	17.32

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Table 9-5
Measured P_{Limit} for DSI = 3 (Hotspot Mode)

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.09	24.72	23.05	**21.96**	24.78	23.64	21.19	20.21
	661	27.96	24.80	23.19	**21.82**	24.82	23.55	20.63	20.38
	810	28.15	25.17	23.27	**22.08**	25.30	23.70	21.09	20.40

Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	18.89	18.53	18.62	18.78	15.58	17.45	16.76	17.03
	661	18.76	18.61	18.76	18.64	15.62	17.36	16.20	17.20
	810	18.95	18.98	18.84	18.90	16.10	17.51	16.66	17.22

GSM 1900	**Frame Avg.Targets:**	18.80	18.81	18.77	**18.82**	16.30	17.31	17.07	17.32

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Table 9-6
Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) 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	28.78	28.73	25.76	23.86	**22.99**	24.80	23.59	21.38	20.32
	661	28.32	28.39	25.77	23.99	**22.86**	24.85	23.44	20.79	20.39
	810	28.75	28.89	25.89	24.10	**23.03**	25.30	23.50	21.40	20.53

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.58	19.53	19.57	19.43	**19.81**	15.60	17.40	16.95	17.14
	661	19.12	19.19	19.58	19.56	**19.68**	15.65	17.25	16.36	17.21
	810	19.55	19.69	19.70	19.67	**19.85**	16.10	17.31	16.97	17.35
GSM 1900	**Frame Avg.Targets:**	19.80	19.80	20.11	20.07	**20.12**	16.30	17.31	17.07	17.32

Note:

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

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



Figure 9-2
Power Measurement Setup

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9.3 UMTS Conducted Powers

Table 9-7
Measured P_{Max}

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	23.21	23.17	23.19	23.12	23.06	23.31	-
99		12.2 kbps AMR	23.25	23.21	23.17	23.07	23.00	23.30	-
6	HSDPA	Subtest 1	22.19	22.12	22.12	22.36	22.32	22.47	0
6		Subtest 2	22.19	22.13	22.10	22.38	22.32	22.48	0
6		Subtest 3	21.85	21.56	21.76	21.93	21.78	21.95	0.5
6		Subtest 4	21.81	21.77	21.78	22.03	21.78	21.98	0.5
6	HSUPA	Subtest 1	22.34	22.30	22.28	22.37	22.30	22.48	0
6		Subtest 2	20.35	20.30	20.27	20.33	20.24	20.48	2
6		Subtest 3	21.37	21.31	21.28	21.34	21.31	21.49	1
6		Subtest 4	20.38	20.30	20.30	20.37	20.28	20.51	2
6		Subtest 5	22.36	22.28	22.24	22.34	22.28	22.52	0

Table 9-8
Measured P_{Limit} for DSI = 3 (Hotspot Mode)

3GPP Release Version	Mode	3GPP 34.121 Subtest	PCS Band [dBm]			3GPP MPR [dB]
			9262	9400	9538	
99	WCDMA	12.2 kbps RMC	18.08	17.91	18.15	-
99		12.2 kbps AMR	18.17	17.99	18.23	-
6	HSDPA	Subtest 1	16.73	17.00	17.04	0
6		Subtest 2	16.76	16.95	16.99	0
6		Subtest 3	16.25	16.44	16.51	0.5
6		Subtest 4	16.28	16.45	16.54	0.5
6	HSUPA	Subtest 1	16.58	16.86	16.89	0
6		Subtest 2	14.62	14.78	14.92	2
6		Subtest 3	15.60	15.81	15.88	1
6		Subtest 4	14.64	14.81	14.88	2
6		Subtest 5	16.67	16.86	16.92	0

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Table 9-9
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	PCS Band [dBm]			3GPP MPR [dB]
			9262	9400	9538	
99	WCDMA	12.2 kbps RMC	18.60	18.48	18.72	-
99		12.2 kbps AMR	18.61	18.46	18.71	-
6	HSDPA	Subtest 1	17.24	17.51	17.55	0
6		Subtest 2	17.26	17.49	17.50	0
6		Subtest 3	16.74	16.94	17.01	0.5
6		Subtest 4	16.77	16.97	17.02	0.5
6	HSUPA	Subtest 1	17.12	17.33	17.45	0
6		Subtest 2	15.11	15.33	15.42	2
6		Subtest 3	16.10	16.33	16.38	1
6		Subtest 4	15.14	15.29	15.41	2
6		Subtest 5	17.13	17.34	17.45	0

This device does not support DC-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.

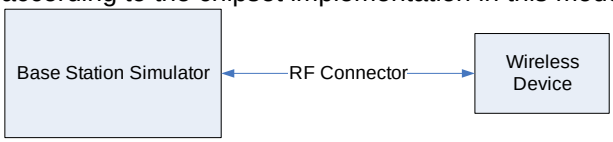


Figure 9-3
Power Measurement Setup

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9.4 LTE Conducted Powers

9.4.1 LTE Band 12

Table 9-10
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	**23.84**	0	0
	1	25	23.61		0
	1	49	23.83		0
	25	0	22.81	0-1	1
	25	12	**22.99**		1
	25	25	22.88		1
	50	0	22.88		1
16QAM	1	0	23.36	0-1	1
	1	25	23.27		1
	1	49	23.22		1
	25	0	21.91	0-2	2
	25	12	22.02		2
	25	25	21.97		2
	50	0	21.92		2
64QAM	1	0	22.12	0-2	2
	1	25	22.19		2
	1	49	22.16		2
	25	0	20.91	0-3	3
	25	12	21.04		3
	25	25	20.93		3
	50	0	20.95		3
256QAM	1	0	18.89	0-5	5
	1	25	19.01		5
	1	49	18.99		5
	25	0	19.13		5
	25	12	19.17		5
	25	25	19.22		5
	50	0	19.01		5

Note: LTE Band 12 at 10 MHz bandwidth does 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.

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Table 9-11
LTE Band 12 Measured P_{Max} for all DSI - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.93	23.89	23.80	0	0
	1	12	24.05	23.89	23.82		0
	1	24	23.95	23.93	23.88		0
	12	0	23.02	22.96	22.96	0-1	1
	12	6	23.09	23.04	23.04		1
	12	13	22.99	22.98	23.04		1
	25	0	23.04	22.99	23.07		1
16QAM	1	0	23.58	23.00	23.01	0-1	1
	1	12	23.66	22.99	23.09		1
	1	24	23.61	23.03	23.05		1
	12	0	22.13	22.04	22.04	0-2	2
	12	6	22.16	22.10	22.14		2
	12	13	22.10	22.05	22.06		2
	25	0	22.15	21.98	22.06		2
64QAM	1	0	22.19	22.41	22.11	0-2	2
	1	12	22.21	22.44	22.18		2
	1	24	22.16	22.37	22.25		2
	12	0	21.02	21.10	21.04	0-3	3
	12	6	21.03	21.09	21.12		3
	12	13	21.05	21.06	21.10		3
	25	0	21.09	21.03	21.05		3
256QAM	1	0	19.23	18.65	18.91	0-5	5
	1	12	19.26	18.68	19.01		5
	1	24	19.22	18.64	19.02		5
	12	0	19.14	19.03	19.17		5
	12	6	19.24	19.11	19.24		5
	12	13	19.13	19.06	19.24		5
	25	0	19.25	19.09	19.18		5

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Table 9-12
LTE Band 12 Measured P_{Max} for all DSI - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.02	23.93	23.97	0	0
	1	7	24.03	23.95	23.95		0
	1	14	24.02	23.90	23.96		0
	8	0	23.10	23.07	23.05	0-1	1
	8	4	23.16	23.11	23.11		1
	8	7	23.05	23.07	23.12		1
	15	0	23.13	23.08	23.08		1
16QAM	1	0	23.47	22.85	23.15	0-1	1
	1	7	23.45	22.80	23.09		1
	1	14	23.46	22.86	23.03		1
	8	0	22.23	22.08	22.08	0-2	2
	8	4	22.28	22.11	22.15		2
	8	7	22.24	22.06	22.12		2
	15	0	22.18	22.09	22.20		2
64QAM	1	0	21.91	22.16	22.32	0-2	2
	1	7	21.90	22.11	22.32		2
	1	14	21.96	22.18	22.36		2
	8	0	21.26	21.08	21.20	0-3	3
	8	4	21.18	21.14	21.05		3
	8	7	21.20	21.12	21.16		3
	15	0	21.21	21.14	21.13		3
256QAM	1	0	18.95	18.94	19.00	0-5	5
	1	7	19.00	18.92	19.50		5
	1	14	18.99	18.98	19.36		5
	8	0	19.21	19.05	19.60		5
	8	4	19.21	19.08	19.14		5
	8	7	19.15	19.06	19.16		5
	15	0	19.17	19.15	19.08		5

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Table 9-13
LTE Band 12 Measured P_{Max} for all DSI - 1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23017 (699.7 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23173 (715.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.89	23.79	24.05	0	0
	1	2	23.96	23.87	24.13		0
	1	5	23.92	23.80	24.10		0
	3	0	23.92	23.91	23.92		0
	3	2	24.02	23.96	24.02		0
	3	3	24.00	23.87	23.98		0
	6	0	23.04	22.96	23.04	0-1	1
16QAM	1	0	23.32	22.76	22.78	0-1	1
	1	2	23.44	22.87	22.87		1
	1	5	23.45	22.80	22.90		1
	3	0	23.33	23.05	23.17		1
	3	2	23.37	23.14	23.28		1
	3	3	23.33	23.11	23.28		1
	6	0	21.93	22.13	22.16	0-2	2
64QAM	1	0	21.83	22.08	22.27	0-2	2
	1	2	21.92	22.15	22.43		2
	1	5	21.82	22.11	22.27		2
	3	0	22.13	22.00	22.28		2
	3	2	22.21	22.08	22.41		2
	3	3	22.19	22.02	22.34		2
	6	0	21.33	21.14	21.06	0-3	3
256QAM	1	0	18.89	19.03	18.88	0-5	5
	1	2	19.15	19.09	18.97		5
	1	5	19.05	18.75	18.99		5
	3	0	19.07	19.07	19.08		5
	3	2	19.14	19.11	19.18		5
	3	3	19.10	19.05	19.11		5
	6	0	19.09	19.00	19.11		5

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9.4.2 LTE Band 13

Table 9-14
LTE Band 13 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.79	0	0
	1	25	24.77		0
	1	49	**24.83**		0
	25	0	23.79	0-1	1
	25	12	23.77		1
	25	25	**23.88**		1
	50	0	23.84		1
16QAM	1	0	24.25	0-1	1
	1	25	24.28		1
	1	49	24.30		1
	25	0	22.90	0-2	2
	25	12	22.93		2
	25	25	22.94		2
	50	0	22.87		2
64QAM	1	0	22.80	0-2	2
	1	25	22.95		2
	1	49	23.01		2
	25	0	21.89	0-3	3
	25	12	21.94		3
	25	25	21.94		3
	50	0	21.89		3
256QAM	1	0	19.66	0-5	5
	1	25	20.00		5
	1	49	19.98		5
	25	0	19.99		5
	25	12	19.97		5
	25	25	19.89		5
	50	0	19.88		5

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Table 9-15
LTE Band 13 Measured P_{Max} for all DSI - 5 MHz Bandwidth

LTE Band 13 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **23230 (782.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	24.64	0	0
	1	12	24.69		0
	1	24	24.75		0
	12	0	24.00	0-1	1
	12	6	24.07		1
	12	13	24.05		1
	25	0	24.07		1
16QAM	1	0	24.13	0-1	1
	1	12	23.94		1
	1	24	24.11		1
	12	0	23.08	0-2	2
	12	6	23.14		2
	12	13	23.12		2
	25	0	23.05		2
64QAM	1	0	23.28	0-2	2
	1	12	23.29		2
	1	24	23.33		2
	12	0	22.05	0-3	3
	12	6	22.16		3
	12	13	22.18		3
	25	0	22.09		3
256QAM	1	0	19.83	0-5	5
	1	12	19.93		5
	1	24	20.04		5
	12	0	20.07		5
	12	6	20.18		5
	12	13	20.16		5
	25	0	20.12		5

Note: LTE Band 13 at 5 MHz bandwidth does 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.

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9.4.3 LTE Band 14

Table 9-16
LTE Band 14 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.41**	0	0
	1	25	24.25		0
	1	49	24.11		0
	25	0	23.41	0-1	1
	25	12	**23.46**		1
	25	25	23.31		1
	50	0	23.34		1
16QAM	1	0	23.34	0-1	1
	1	25	23.36		1
	1	49	23.45		1
	25	0	22.22	0-2	2
	25	12	22.34		2
	25	25	22.45		2
	50	0	22.31		2
64QAM	1	0	22.21	0-2	2
	1	25	22.18		2
	1	49	22.25		2
	25	0	21.30	0-3	3
	25	12	21.35		3
	25	25	21.40		3
	50	0	21.18		3
256QAM	1	0	18.90	0-5	5
	1	25	19.12		5
	1	49	18.95		5
	25	0	19.17		5
	25	12	19.08		5
	25	25	19.10		5
	50	0	18.89		5

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Table 9-17
LTE Band 14 Measured P_{Max} for all DSI - 5 MHz Bandwidth

LTE Band 14 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.07	0	0
	1	12	24.14		0
	1	24	24.05		0
	12	0	23.26	0-1	1
	12	6	23.21		1
	12	13	23.18		1
	25	0	23.23		1
16QAM	1	0	23.42	0-1	1
	1	12	23.50		1
	1	24	23.45		1
	12	0	22.38	0-2	2
	12	6	22.37		2
	12	13	22.28		2
	25	0	22.24		2
64QAM	1	0	22.15	0-2	2
	1	12	22.24		2
	1	24	22.05		2
	12	0	21.34	0-3	3
	12	6	21.30		3
	12	13	21.30		3
	25	0	21.27		3
256QAM	1	0	18.85	0-5	5
	1	12	18.91		5
	1	24	18.74		5
	12	0	19.26		5
	12	6	19.26		5
	12	13	19.18		5
	25	0	19.22		5

Note: LTE Band 14 at 5 MHz bandwidth does 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.

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9.4.4 LTE Band 26 (Cell)

Table 9-18
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.47	0	0
	1	36	**24.51**		0
	1	74	24.45		0
	36	0	23.50	0-1	1
	36	18	**23.56**		1
	36	37	23.54		1
	75	0	23.48		1
16QAM	1	0	24.02	0-1	1
	1	36	24.07		1
	1	74	23.99		1
	36	0	22.51	0-2	2
	36	18	22.58		2
	36	37	22.60		2
	75	0	22.50		2
64QAM	1	0	22.49	0-2	2
	1	36	22.58		2
	1	74	22.51		2
	36	0	21.57	0-3	3
	36	18	21.60		3
	36	37	21.61		3
	75	0	21.53		3
256QAM	1	0	19.77	0-5	5
	1	36	19.89		5
	1	74	19.90		5
	36	0	19.65		5
	36	18	19.63		5
	36	37	19.77		5
	75	0	19.82		5

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does 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.

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Table 9-19
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26740 (819.0 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 26990 (844.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.66	24.67	24.59	0	0
	1	25	24.57	24.60	24.58		0
	1	49	24.67	24.51	24.54		0
	25	0	23.51	23.62	23.52	0-1	1
	25	12	23.70	23.74	23.68		1
	25	25	23.62	23.70	23.57		1
	50	0	23.63	23.67	23.53		1
16QAM	1	0	23.97	23.51	23.72	0-1	1
	1	25	24.05	23.67	23.62		1
	1	49	24.06	23.50	23.61		1
	25	0	22.61	22.79	22.63	0-2	2
	25	12	22.78	22.83	22.81		2
	25	25	22.66	22.83	22.70		2
	50	0	22.65	22.73	22.54		2
64QAM	1	0	22.66	22.77	22.94	0-2	2
	1	25	22.67	22.93	22.86		2
	1	49	22.45	22.93	22.82		2
	25	0	21.63	21.71	21.60	0-3	3
	25	12	21.80	21.84	21.77		3
	25	25	21.74	21.85	21.67		3
	50	0	21.68	21.67	21.61		3
256QAM	1	0	19.50	19.53	19.46	0-5	5
	1	25	19.79	19.84	19.77		5
	1	49	19.72	19.53	19.58		5
	25	0	19.80	20.00	19.79		5
	25	12	19.98	19.97	19.96		5
	25	25	19.88	20.01	19.88		5
	50	0	19.82	19.86	19.74		5

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Table 9-20
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26715 (816.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27015 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.68	24.67	24.70	0	0
	1	12	24.66	24.74	24.58		0
	1	24	24.64	24.70	24.52		0
	12	0	23.57	23.70	23.60	0-1	1
	12	6	23.72	23.76	23.70		1
	12	13	23.66	23.76	23.66		1
	25	0	23.62	23.69	23.62		1
16QAM	1	0	24.13	23.74	23.69	0-1	1
	1	12	24.31	23.93	23.76		1
	1	24	24.28	23.83	23.70		1
	12	0	22.65	22.79	22.65	0-2	2
	12	6	22.80	22.89	22.77		2
	12	13	22.75	22.89	22.69		2
	25	0	22.72	22.74	22.61		2
64QAM	1	0	22.68	23.23	22.80	0-2	2
	1	12	22.86	23.30	22.87		2
	1	24	22.80	23.25	22.78		2
	12	0	21.61	21.81	21.65	0-3	3
	12	6	21.74	21.86	21.73		3
	12	13	21.69	21.86	21.70		3
	25	0	21.69	21.77	21.63		3
256QAM	1	0	19.64	19.94	19.37	0-5	5
	1	12	19.73	20.12	19.47		5
	1	24	19.75	20.07	19.35		5
	12	0	19.89	19.90	19.77		5
	12	6	19.99	20.00	19.87		5
	12	13	19.94	20.00	19.83		5
	25	0	19.89	19.96	19.78		5

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Table 9-21
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26705 (815.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27025 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.44	24.59	24.54	0	0
	1	7	24.52	24.58	24.48		0
	1	14	24.57	24.61	24.48		0
	8	0	23.58	23.71	23.65	0-1	1
	8	4	23.68	23.80	23.66		1
	8	7	23.61	23.77	23.63		1
	15	0	23.63	23.71	23.63		1
16QAM	1	0	23.91	23.55	23.64	0-1	1
	1	7	23.98	23.53	23.63		1
	1	14	24.02	23.59	23.66		1
	8	0	22.71	22.76	22.70	0-2	2
	8	4	22.81	22.82	22.74		2
	8	7	22.75	22.80	22.67		2
	15	0	22.69	22.74	22.71		2
64QAM	1	0	22.37	22.92	22.90	0-2	2
	1	7	22.43	22.86	22.80		2
	1	14	22.50	22.94	22.83		2
	8	0	21.70	21.77	21.70	0-3	3
	8	4	21.80	21.87	21.74		3
	8	7	21.74	21.82	21.68		3
	15	0	21.72	21.84	21.69		3
256QAM	1	0	20.20	19.83	19.78	0-5	5
	1	7	20.24	19.90	19.68		5
	1	14	20.30	19.85	19.78		5
	8	0	19.85	20.01	19.80		5
	8	4	19.95	20.05	19.85		5
	8	7	19.90	20.07	19.75		5
	15	0	19.87	19.95	19.85		5

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Table 9-22
LTE Band 26 (Cell) Measured P_{Max} for all DSI - 1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26697 (814.7 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27033 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.52	24.55	24.59	0	0
	1	2	24.52	24.64	24.64		0
	1	5	24.46	24.59	24.56		0
	3	0	24.50	24.60	24.58		0
	3	2	24.50	24.71	24.54		0
	3	3	24.50	24.66	24.62		0
	6	0	23.53	23.64	23.55	0-1	1
16QAM	1	0	23.86	23.57	23.66	0-1	1
	1	2	23.97	23.57	23.50		1
	1	5	23.90	23.71	23.64		1
	3	0	23.87	23.77	23.73		1
	3	2	23.94	23.90	23.78		1
	3	3	23.83	23.86	23.72		1
	6	0	22.48	22.82	22.73	0-2	2
64QAM	1	0	22.32	22.79	22.76	0-2	2
	1	2	22.45	22.89	22.88		2
	1	5	22.37	22.87	22.77		2
	3	0	22.64	22.71	22.87		2
	3	2	22.74	22.81	22.95		2
	3	3	22.69	22.79	22.83		2
	6	0	21.87	21.83	21.53	0-3	3
256QAM	1	0	19.63	19.92	19.55	0-5	5
	1	2	19.69	20.05	19.68		5
	1	5	19.68	19.92	19.65		5
	3	0	19.85	19.94	19.85		5
	3	2	19.92	20.01	19.89		5
	3	3	19.85	19.98	19.82		5
	6	0	19.79	19.88	19.80		5

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9.4.5 LTE Band 5 (Cell)

Table 9-23
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	**24.71**	0	0
	1	25	24.65		0
	1	49	24.69		0
	25	0	23.83	0-1	1
	25	12	23.84		1
	25	25	**23.85**		1
	50	0	23.77		1
16QAM	1	0	23.96	0-1	1
	1	25	23.94		1
	1	49	23.95		1
	25	0	22.86	0-2	2
	25	12	22.82		2
	25	25	22.86		2
	50	0	22.76		2
64QAM	1	0	22.80	0-2	2
	1	25	22.80		2
	1	49	22.76		2
	25	0	21.92	0-3	3
	25	12	21.94		3
	25	25	21.96		3
	50	0	21.78		3
256QAM	1	0	19.66	0-5	5
	1	25	19.93		5
	1	49	19.68		5
	25	0	19.92		5
	25	12	19.99		5
	25	25	19.93		5
	50	0	19.86		5

Note: LTE Band 5 (Cell) at 10 MHz bandwidth does 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.

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Table 9-24
LTE Band 5 (Cell) Measured P_{Max} for all DSI - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20425 (826.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20625 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.69	24.65	24.62	0	0
	1	12	24.70	24.70	24.69		0
	1	24	24.68	24.68	24.62		0
	12	0	23.89	23.93	23.77	0-1	1
	12	6	23.99	24.02	23.92		1
	12	13	23.92	24.01	23.83		1
	25	0	23.97	23.95	23.87		1
16QAM	1	0	24.41	23.97	23.86	0-1	1
	1	12	24.56	24.07	23.89		1
	1	24	24.53	24.03	23.86		1
	12	0	22.99	23.01	22.91	0-2	2
	12	6	23.08	23.08	22.96		2
	12	13	23.09	23.05	22.90		2
	25	0	23.06	22.95	22.90		2
64QAM	1	0	22.99	23.35	22.94	0-2	2
	1	12	23.13	23.48	23.00		2
	1	24	23.10	23.46	22.93		2
	12	0	21.89	22.02	21.82	0-3	3
	12	6	22.00	22.09	21.96		3
	12	13	21.95	22.07	21.91		3
	25	0	22.01	22.00	21.87		3
256QAM	1	0	19.83	19.92	20.12	0-5	5
	1	12	19.75	19.90	19.89		5
	1	24	19.91	20.09	19.90		5
	12	0	19.82	19.88	19.80		5
	12	6	19.84	19.82	19.84		5
	12	13	19.79	19.97	19.87		5
	25	0	19.88	19.89	19.80		5

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Table 9-25
LTE Band 5 (Cell) Measured P_{Max} for all DSI - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20415 (825.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20635 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.64	24.68	24.62	0	0
	1	7	24.70	24.69	24.68		0
	1	14	24.68	24.67	24.64		0
	8	0	23.82	23.96	23.79	0-1	1
	8	4	23.92	23.98	23.87		1
	8	7	23.91	23.95	23.82		1
	15	0	23.93	23.95	23.81		1
16QAM	1	0	24.21	23.75	23.75	0-1	1
	1	7	24.26	23.75	23.77		1
	1	14	24.26	23.74	23.82		1
	8	0	23.00	22.94	22.82	0-2	2
	8	4	23.04	22.97	22.93		2
	8	7	23.05	22.94	22.85		2
	15	0	22.96	22.92	22.87		2
64QAM	1	0	22.63	23.10	22.98	0-2	2
	1	7	22.76	23.12	23.04		2
	1	14	22.76	23.13	22.98		2
	8	0	21.96	21.96	21.83	0-3	3
	8	4	22.08	22.03	21.93		3
	8	7	22.06	22.00	21.86		3
	15	0	22.00	22.01	21.86		3
256QAM	1	0	19.85	19.72	19.93	0-5	5
	1	7	19.82	20.03	19.82		5
	1	14	19.95	20.01	19.85		5
	8	0	19.86	19.98	19.74		5
	8	4	19.93	20.03	19.82		5
	8	7	20.00	19.76	19.79		5
	15	0	19.94	19.80	19.81		5

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Table 9-26
LTE Band 5 (Cell) Measured P_{Max} for all DSI - 1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20407 (824.7 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20643 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.65	24.68	24.70	0	0
	1	2	24.69	24.70	24.69		0
	1	5	24.63	24.71	24.67		0
	3	0	24.68	24.68	24.70		0
	3	2	24.71	24.70	24.65		0
	3	3	24.67	24.69	24.67		0
	6	0	23.81	23.85	23.75	0-1	1
16QAM	1	0	24.15	23.63	23.52	0-1	1
	1	2	24.25	23.71	23.66		1
	1	5	24.17	23.72	23.56		1
	3	0	24.12	23.96	23.94		1
	3	2	24.17	24.09	23.99		1
	3	3	24.15	24.04	23.96		1
	6	0	22.76	23.03	22.94	0-2	2
64QAM	1	0	22.60	22.95	22.98	0-2	2
	1	2	22.73	23.06	23.09		2
	1	5	22.60	23.06	22.96		2
	3	0	22.91	22.85	23.08		2
	3	2	23.01	23.00	23.12		2
	3	3	22.95	22.95	23.04		2
	6	0	22.17	21.99	21.77	0-3	3
256QAM	1	0	19.77	19.81	19.70	0-5	5
	1	2	19.90	19.92	19.82		5
	1	5	19.93	19.90	20.07		5
	3	0	19.85	19.98	19.71		5
	3	2	19.98	20.03	19.91		5
	3	3	19.90	19.87	19.85		5
	6	0	19.75	19.91	19.70		5

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9.4.6 LTE Band 66 (AWS)

Table 9-27
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	23.83	23.61	23.78	0	0
	1	50	**23.96**	23.60	23.80		0
	1	99	23.66	23.45	23.70		0
	50	0	**23.16**	22.86	22.89	0-1	1
	50	25	23.09	22.90	22.95		1
	50	50	22.93	22.76	22.90		1
	100	0	23.02	22.83	22.88		1
16QAM	1	0	23.16	22.76	23.18	0-1	1
	1	50	23.28	22.97	23.15		1
	1	99	23.06	22.75	23.30		1
	50	0	22.16	21.85	21.91	0-2	2
	50	25	22.12	21.90	21.97		2
	50	50	21.91	21.75	21.98		2
	100	0	22.03	21.82	21.88		2
64QAM	1	0	22.14	21.62	21.57	0-2	2
	1	50	22.07	21.93	22.09		2
	1	99	21.30	21.70	22.11		2
	50	0	21.15	20.83	20.98	0-3	3
	50	25	20.92	20.91	20.99		3
	50	50	20.57	20.79	20.92		3
	100	0	20.80	20.78	20.90		3
256QAM	1	0	19.06	18.82	18.77	0-5	5
	1	50	19.17	18.86	18.97		5
	1	99	18.86	18.67	18.73		5
	50	0	19.15	18.81	18.86		5
	50	25	19.14	18.83	18.95		5
	50	50	18.97	18.79	18.92		5
	100	0	19.01	18.80	18.88		5

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Table 9-28
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.83	23.95	23.90	0	0
	1	36	24.03	24.12	23.93		0
	1	74	23.77	23.84	23.76		0
	36	0	23.05	23.05	23.05	0-1	1
	36	18	23.16	23.13	23.11		1
	36	37	23.06	23.00	23.04		1
	75	0	23.10	23.04	23.04		1
16QAM	1	0	23.34	23.05	23.12	0-1	1
	1	36	23.52	23.15	23.05		1
	1	74	23.24	22.88	22.86		1
	36	0	22.09	22.03	22.02	0-2	2
	36	18	22.20	22.12	22.15		2
	36	37	22.12	22.02	22.04		2
	75	0	22.14	22.06	22.04		2
64QAM	1	0	21.76	22.50	22.14	0-2	2
	1	36	21.96	22.76	22.24		2
	1	74	21.68	22.56	22.15		2
	36	0	21.20	21.09	21.11	0-3	3
	36	18	21.27	21.17	21.16		3
	36	37	21.18	21.06	21.10		3
	75	0	21.17	21.15	21.02		3
256QAM	1	0	19.04	18.98	18.96	0-5	5
	1	36	19.11	19.13	19.27		5
	1	74	18.95	18.90	18.84		5
	36	0	19.03	18.92	18.88		5
	36	18	19.01	19.01	18.90		5
	36	37	19.07	19.00	18.90		5
	75	0	19.00	18.95	18.91		5

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Table 9-29
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	23.96	23.55	23.69	0	0
	1	25	24.06	23.73	23.86		0
	1	49	23.85	23.59	23.70		0
	25	0	23.24	23.20	22.92	0-1	1
	25	12	23.31	22.88	22.94		1
	25	25	23.05	22.73	22.98		1
	50	0	23.20	22.81	22.92		1
16QAM	1	0	23.18	22.51	22.65	0-1	1
	1	25	23.42	22.76	22.97		1
	1	49	23.24	22.56	22.72		1
	25	0	22.10	22.11	22.08	0-2	2
	25	12	22.18	22.22	22.22		2
	25	25	22.13	22.11	22.10		2
	50	0	22.07	22.09	22.03		2
64QAM	1	0	21.57	21.79	21.96	0-2	2
	1	25	21.90	22.12	22.26		2
	1	49	21.70	21.85	22.03		2
	25	0	21.09	21.10	21.05	0-3	3
	25	12	21.22	21.14	21.14		3
	25	25	21.12	21.07	21.06		3
	50	0	21.09	21.06	21.04		3
256QAM	1	0	18.96	18.79	18.85	0-5	5
	1	25	19.11	19.07	18.86		5
	1	49	18.47	18.79	18.74		5
	25	0	18.89	18.86	18.79		5
	25	12	19.06	19.05	18.88		5
	25	25	19.00	19.01	18.96		5
	50	0	18.96	18.90	18.94		5

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Table 9-30
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.00	23.91	23.77	0	0
	1	12	24.09	23.92	23.85		0
	1	24	23.98	23.88	23.78		0
	12	0	23.14	23.10	23.03	0-1	1
	12	6	23.11	23.12	23.12		1
	12	13	23.04	23.03	23.00		1
	25	0	23.12	23.12	23.03		1
16QAM	1	0	23.66	23.06	23.03	0-1	1
	1	12	23.73	23.06	23.07		1
	1	24	23.67	23.00	22.95		1
	12	0	22.25	22.20	22.07	0-2	2
	12	6	22.26	22.21	22.16		2
	12	13	22.12	22.11	22.09		2
	25	0	22.20	22.09	22.03		2
64QAM	1	0	22.23	22.41	22.07	0-2	2
	1	12	22.30	22.43	22.16		2
	1	24	22.19	22.37	22.08		2
	12	0	21.13	21.20	21.06	0-3	3
	12	6	21.14	21.21	21.09		3
	12	13	21.06	21.08	21.05		3
	25	0	21.16	21.10	21.01		3
256QAM	1	0	19.01	18.99	18.91	0-5	5
	1	12	19.17	19.16	18.95		5
	1	24	19.00	18.99	18.93		5
	12	0	19.08	18.98	18.86		5
	12	6	19.12	19.01	18.91		5
	12	13	18.94	18.90	18.88		5
	25	0	19.00	19.01	18.88		5

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Table 9-31
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.00	23.87	23.85	0	0
	1	7	23.97	23.87	23.86		0
	1	14	23.93	23.81	23.76		0
	8	0	23.06	23.06	23.00	0-1	1
	8	4	23.11	23.04	23.02		1
	8	7	23.02	23.02	22.99		1
	15	0	23.09	23.08	22.99		1
16QAM	1	0	23.41	22.83	23.00	0-1	1
	1	7	23.43	22.77	22.91		1
	1	14	23.39	22.73	22.84		1
	8	0	22.24	22.09	22.08	0-2	2
	8	4	22.26	22.08	22.02		2
	8	7	22.16	22.04	22.05		2
	15	0	22.16	22.03	22.05		2
64QAM	1	0	21.89	22.15	22.18	0-2	2
	1	7	21.93	22.16	22.18		2
	1	14	21.88	22.08	22.08		2
	8	0	21.20	21.15	21.06	0-3	3
	8	4	21.23	21.14	21.01		3
	8	7	21.15	21.04	21.05		3
	15	0	21.17	21.10	21.04		3
256QAM	1	0	19.09	19.01	18.92	0-5	5
	1	7	19.18	19.11	18.98		5
	1	14	19.07	19.19	18.90		5
	8	0	19.08	19.05	18.92		5
	8	4	18.94	19.04	18.98		5
	8	7	19.05	18.80	18.91		5
	15	0	19.04	19.09	18.95		5

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Table 9-32
LTE Band 66 (AWS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.08	23.85	23.71	0	0
	1	2	24.11	23.89	23.78		0
	1	5	24.07	23.78	23.74		0
	3	0	23.96	23.90	23.79		0
	3	2	24.03	23.93	23.84		0
	3	3	23.96	23.87	23.81		0
	6	0	23.01	22.96	22.90	0-1	1
16QAM	1	0	22.82	23.33	22.65	0-1	1
	1	2	22.93	23.37	22.67		1
	1	5	22.80	23.27	22.67		1
	3	0	23.18	23.26	22.98		1
	3	2	23.22	23.27	23.05		1
	3	3	23.17	23.23	23.01		1
	6	0	22.18	21.94	22.10	0-2	2
64QAM	1	0	22.28	21.83	21.98	0-2	2
	1	2	22.32	21.86	22.01		2
	1	5	22.18	21.70	21.88		2
	3	0	22.32	22.04	21.93		2
	3	2	22.32	22.12	21.97		2
	3	3	22.27	22.03	21.86		2
	6	0	20.99	21.26	21.06	0-3	3
256QAM	1	0	19.04	19.00	18.91	0-5	5
	1	2	19.32	19.01	18.96		5
	1	5	19.03	18.99	18.88		5
	3	0	19.08	18.99	18.91		5
	3	2	19.01	19.05	18.97		5
	3	3	19.14	19.19	19.07		5
	6	0	19.00	18.96	18.77		5

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Table 9-33
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.75	18.80	18.87	0	0
	1	50	**18.92**	18.80	18.88		0
	1	99	18.60	18.76	18.91		0
	50	0	**18.99**	18.80	18.88	0-1	0
	50	25	18.92	18.83	18.92		0
	50	50	18.78	18.77	18.91		0
	100	0	18.86	18.80	18.88		0
16QAM	1	0	19.17	18.79	18.88	0-1	0
	1	50	19.28	18.80	18.88		0
	1	99	19.01	18.79	18.86		0
	50	0	19.00	18.80	18.89	0-2	0
	50	25	18.97	18.87	18.85		0
	50	50	18.82	18.76	18.87		0
	100	0	18.87	18.80	18.87		0
64QAM	1	0	19.26	18.79	18.87	0-2	0
	1	50	19.32	18.79	18.85		0
	1	99	19.00	18.79	18.90		0
	50	0	19.02	18.80	18.87	0-3	0
	50	25	19.00	18.81	18.89		0
	50	50	18.85	18.81	18.88		0
	100	0	18.91	18.79	18.85		0
256QAM	1	0	19.00	18.64	18.99	0-5	0
	1	50	19.12	18.86	19.38		0
	1	99	18.69	18.65	19.21		0
	50	0	19.01	18.83	18.86		0
	50	25	18.96	18.78	18.93		0
	50	50	18.85	18.67	18.87		0
	100	0	18.93	18.81	18.77		0

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Table 9-34
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.71	18.65	18.79	0	0
	1	36	18.66	18.67	18.86		0
	1	74	18.75	18.70	18.82		0
	36	0	18.69	18.68	18.86	0-1	0
	36	18	18.79	18.67	18.86		0
	36	37	18.69	18.67	18.78		0
	75	0	18.71	18.68	18.79		0
16QAM	1	0	18.99	18.67	18.76	0-1	0
	1	36	19.16	18.67	18.80		0
	1	74	18.88	18.67	18.87		0
	36	0	18.73	18.65	18.79	0-2	0
	36	18	18.86	18.67	18.85		0
	36	37	18.72	18.66	18.84		0
	75	0	18.76	18.65	18.91		0
64QAM	1	0	18.76	18.66	18.80	0-2	0
	1	36	18.59	18.67	18.84		0
	1	74	18.69	18.66	18.87		0
	36	0	18.84	18.65	18.86	0-3	0
	36	18	18.91	18.66	18.93		0
	36	37	18.82	18.67	18.87		0
	75	0	18.83	18.69	18.84		0
256QAM	1	0	18.62	18.75	19.16	0-5	0
	1	36	18.87	19.01	19.38		0
	1	74	18.64	18.78	19.16		0
	36	0	18.72	18.78	18.85		0
	36	18	18.80	18.81	18.95		0
	36	37	18.72	18.78	18.82		0
	75	0	18.79	18.79	18.85		0

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Table 9-35
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.01	18.71	18.83	0	0
	1	25	19.12	18.87	18.96		0
	1	49	18.92	18.75	18.88		0
	25	0	19.30	19.03	19.15	0-1	0
	25	12	19.32	19.11	19.22		0
	25	25	19.16	19.04	19.17		0
	50	0	19.25	19.01	19.13		0
16QAM	1	0	18.82	18.79	18.85	0-1	0
	1	25	19.06	18.76	18.82		0
	1	49	18.81	18.79	18.85		0
	25	0	18.71	18.78	18.85	0-2	0
	25	12	18.87	18.80	18.83		0
	25	25	18.73	18.81	18.82		0
	50	0	18.75	18.77	18.85		0
64QAM	1	0	18.72	18.80	18.85	0-2	0
	1	25	18.89	18.81	18.84		0
	1	49	18.78	18.78	18.85		0
	25	0	18.75	18.79	18.82	0-3	0
	25	12	18.91	18.79	18.86		0
	25	25	18.79	18.80	18.85		0
	50	0	18.77	18.79	18.84		0
256QAM	1	0	18.74	18.78	19.00	0-5	0
	1	25	18.81	18.75	19.29		0
	1	49	18.53	18.80	19.11		0
	25	0	18.70	18.73	18.81		0
	25	12	18.83	18.78	18.94		0
	25	25	18.70	18.73	18.83		0
	50	0	18.71	18.74	18.83		0

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Table 9-36
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.59	18.79	18.80	0	0
	1	12	18.61	18.92	18.82		0
	1	24	18.55	18.86	18.82		0
	12	0	18.63	18.93	18.81	0-1	0
	12	6	18.65	18.88	18.81		0
	12	13	18.59	18.84	18.84		0
	25	0	18.66	18.91	18.82		0
16QAM	1	0	19.20	18.81	18.84	0-1	0
	1	12	19.26	18.93	18.85		0
	1	24	19.16	18.92	18.81		0
	12	0	18.77	18.88	18.81	0-2	0
	12	6	18.79	18.77	18.83		0
	12	13	18.71	18.93	18.83		0
	25	0	18.80	18.80	18.87		0
64QAM	1	0	18.78	18.92	18.83	0-2	0
	1	12	18.84	18.91	18.80		0
	1	24	18.75	18.92	18.84		0
	12	0	18.65	18.82	18.82	0-3	0
	12	6	18.73	18.91	18.82		0
	12	13	18.63	18.83	18.80		0
	25	0	18.74	18.78	18.79		0
256QAM	1	0	18.77	18.66	18.69	0-5	0
	1	12	18.86	18.74	18.73		0
	1	24	18.72	18.69	18.63		0
	12	0	18.68	18.73	18.70		0
	12	6	18.77	18.77	18.77		0
	12	13	18.67	18.70	18.69		0
	25	0	18.70	18.63	18.76		0

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Table 9-37
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.61	18.91	18.78	0	0
	1	7	18.51	18.75	18.79		0
	1	14	18.53	18.88	18.84		0
	8	0	18.66	18.78	18.78	0-1	0
	8	4	18.65	18.86	18.83		0
	8	7	18.64	18.69	18.74		0
	15	0	18.64	18.74	18.82		0
16QAM	1	0	19.01	18.69	18.79	0-1	0
	1	7	19.04	18.82	18.80		0
	1	14	18.97	18.80	18.85		0
	8	0	18.80	18.91	18.81	0-2	0
	8	4	18.76	18.87	18.76		0
	8	7	18.71	18.75	18.77		0
	15	0	18.73	18.88	18.79		0
64QAM	1	0	18.79	18.74	18.84	0-2	0
	1	7	18.67	18.77	18.78		0
	1	14	18.64	18.84	18.80		0
	8	0	18.79	18.82	18.78	0-3	0
	8	4	18.81	18.84	18.79		0
	8	7	18.74	18.86	18.81		0
	15	0	18.78	18.92	18.85		0
256QAM	1	0	18.76	18.83	19.22	0-5	0
	1	7	18.69	18.67	19.24		0
	1	14	18.69	18.79	19.10		0
	8	0	18.65	18.68	18.75		0
	8	4	18.62	18.75	18.87		0
	8	7	18.58	18.66	18.77		0
	15	0	18.74	18.69	18.66		0

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Table 9-38
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.60	18.86	19.04	0	0
	1	2	18.64	18.87	19.04		0
	1	5	18.64	18.85	18.89		0
	3	0	18.61	18.87	18.87		0
	3	2	18.60	18.89	18.92		0
	3	3	18.58	19.00	18.87		0
	6	0	18.66	18.85	19.05	0-1	0
16QAM	1	0	19.06	18.76	19.00	0-1	0
	1	2	19.11	18.77	18.99		0
	1	5	18.97	18.86	18.75		0
	3	0	18.99	18.79	18.88		0
	3	2	18.99	18.87	18.86		0
	3	3	18.93	18.82	18.94		0
	6	0	18.57	18.81	19.04	0-2	0
64QAM	1	0	18.52	18.84	19.07	0-2	0
	1	2	18.59	18.87	18.96		0
	1	5	18.73	18.90	18.97		0
	3	0	18.82	18.84	19.01		0
	3	2	18.86	18.85	19.06		0
	3	3	18.79	18.79	19.01		0
	6	0	19.02	18.87	18.88	0-3	0
256QAM	1	0	18.76	18.82	18.72	0-5	0
	1	2	18.78	18.87	18.77		0
	1	5	18.72	18.69	18.72		0
	3	0	18.78	18.65	18.79		0
	3	2	18.81	18.71	18.78		0
	3	3	18.75	18.62	18.78		0
	6	0	18.64	18.75	18.73		0

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Table 9-39
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.39	20.21	20.28	0	0
	1	50	**20.41**	20.29	20.30		0
	1	99	20.40	20.12	20.27		0
	50	0	20.38	20.31	20.32	0-1	0
	50	25	20.35	20.35	20.40		0
	50	50	**20.41**	20.23	20.36		0
	100	0	20.37	20.21	20.33		0
16QAM	1	0	20.35	20.57	20.52	0-1	0
	1	50	20.34	20.77	20.55		0
	1	99	20.38	20.53	20.59		0
	50	0	20.34	20.32	20.40	0-2	0
	50	25	20.33	20.34	20.39		0
	50	50	20.38	20.23	20.37		0
	100	0	20.38	20.30	20.26		0
64QAM	1	0	20.38	19.91	20.74	0-2	0
	1	50	20.34	20.18	20.74		0
	1	99	20.40	19.83	20.79		0
	50	0	20.40	20.32	20.41	0-3	0
	50	25	20.33	20.34	20.44		0
	50	50	20.33	20.26	20.43		0
	100	0	20.35	20.26	20.40		0
256QAM	1	0	19.26	19.01	19.37	0-5	1.2
	1	50	19.42	19.19	19.67		1.2
	1	99	18.99	18.96	19.53		1.2
	50	0	19.33	19.13	19.09		1.2
	50	25	19.27	19.10	19.21		1.2
	50	50	19.12	19.01	19.15		1.2
	100	0	19.22	19.09	19.13		1.2

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Table 9-40
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.22	20.30	20.21	0	0
	1	36	20.33	20.32	20.23		0
	1	74	20.04	20.33	20.11		0
	36	0	20.25	20.30	20.33	0-1	0
	36	18	20.38	20.34	20.42		0
	36	37	20.25	20.35	20.34		0
	75	0	20.28	20.31	20.34		0
16QAM	1	0	20.14	20.33	20.36	0-1	0
	1	36	20.36	20.40	20.48		0
	1	74	20.15	20.38	20.14		0
	36	0	20.30	20.41	20.32	0-2	0
	36	18	20.39	20.32	20.45		0
	36	37	20.27	20.30	20.35		0
	75	0	20.28	20.33	20.37		0
64QAM	1	0	20.37	20.34	20.41	0-2	0
	1	36	20.51	20.33	20.57		0
	1	74	20.55	20.33	20.41		0
	36	0	20.32	20.32	20.40	0-3	0
	36	18	20.41	20.31	20.49		0
	36	37	20.35	20.35	20.40		0
	75	0	20.36	20.32	20.32		0
256QAM	1	0	19.21	18.96	19.49	0-5	1.2
	1	36	19.36	19.22	19.70		1.2
	1	74	19.13	18.96	19.43		1.2
	36	0	19.15	19.04	19.16		1.2
	36	18	19.21	19.11	19.26		1.2
	36	37	19.11	19.09	19.15		1.2
	75	0	19.18	19.13	19.19		1.2

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Table 9-41
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.32	20.25	20.36	0	0
	1	25	20.33	20.35	20.63		0
	1	49	20.17	20.21	20.64		0
	25	0	20.41	20.58	20.65	0-1	0
	25	12	20.50	20.64	20.71		0
	25	25	20.29	20.56	20.65		0
	50	0	20.55	20.58	20.68		0
16QAM	1	0	20.35	20.31	20.16	0-1	0
	1	25	20.05	20.34	20.32		0
	1	49	20.36	20.32	20.01		0
	25	0	20.32	20.31	20.35	0-2	0
	25	12	20.40	20.33	20.46		0
	25	25	20.34	20.31	20.38		0
	50	0	20.30	20.31	20.29		0
64QAM	1	0	20.00	20.31	20.31	0-2	0
	1	25	20.35	20.31	20.50		0
	1	49	20.06	20.31	20.33		0
	25	0	20.29	20.32	20.32	0-3	0
	25	12	20.40	20.34	20.47		0
	25	25	20.26	20.30	20.32		0
	50	0	20.21	20.31	20.34		0
256QAM	1	0	19.22	19.08	19.44	0-5	1.2
	1	25	19.14	19.14	19.67		1.2
	1	49	19.00	19.12	19.48		1.2
	25	0	19.04	19.00	19.15		1.2
	25	12	19.19	19.06	19.25		1.2
	25	25	19.08	19.03	19.17		1.2
	50	0	19.10	19.06	19.19		1.2

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Table 9-42
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.18	20.65	20.50	0	0
	1	12	20.20	20.60	20.48		0
	1	24	20.13	20.58	20.49		0
	12	0	20.27	20.59	20.54	0-1	0
	12	6	20.35	20.58	20.47		0
	12	13	20.27	20.67	20.50		0
	25	0	20.26	20.65	20.47		0
16QAM	1	0	20.27	20.64	20.50	0-1	0
	1	12	20.28	20.61	20.46		0
	1	24	20.26	20.71	20.45		0
	12	0	20.37	20.64	20.44	0-2	0
	12	6	20.44	20.63	20.47		0
	12	13	20.38	20.58	20.44		0
	25	0	20.30	20.49	20.54		0
64QAM	1	0	20.64	20.63	20.46	0-2	0
	1	12	20.69	20.67	20.50		0
	1	24	20.62	20.54	20.44		0
	12	0	20.34	20.55	20.46	0-3	0
	12	6	20.41	20.64	20.48		0
	12	13	20.31	20.57	20.45		0
	25	0	20.33	20.58	20.47		0
256QAM	1	0	19.10	19.20	19.16	0-5	1.2
	1	12	19.15	19.28	19.24		1.2
	1	24	19.12	19.14	19.13		1.2
	12	0	19.14	19.19	19.16		1.2
	12	6	19.25	19.17	19.23		1.2
	12	13	19.16	19.08	19.15		1.2
	25	0	19.08	19.10	19.21		1.2

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Table 9-43
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.12	20.22	20.40	0	0
	1	7	20.11	20.21	20.45		0
	1	14	20.04	20.22	20.50		0
	8	0	20.32	20.23	20.42	0-1	0
	8	4	20.29	20.32	20.51		0
	8	7	20.24	20.24	20.41		0
	15	0	20.33	20.20	20.39		0
16QAM	1	0	20.05	20.21	20.38	0-1	0
	1	7	20.18	20.26	20.37		0
	1	14	20.17	20.16	20.38		0
	8	0	20.31	20.23	20.40	0-2	0
	8	4	20.29	20.18	20.41		0
	8	7	20.27	20.17	20.39		0
	15	0	20.29	20.20	20.41		0
64QAM	1	0	20.40	20.29	20.44	0-2	0
	1	7	20.42	20.19	20.18		0
	1	14	20.29	20.18	20.50		0
	8	0	20.32	20.30	20.40	0-3	0
	8	4	20.35	20.29	20.39		0
	8	7	20.27	20.17	20.39		0
	15	0	20.33	20.18	20.54		0
256QAM	1	0	19.04	19.12	19.66	0-5	1.2
	1	7	19.14	19.11	19.64		1.2
	1	14	19.04	19.08	19.55		1.2
	8	0	19.25	18.94	19.24		1.2
	8	4	19.19	18.99	19.30		1.2
	8	7	19.14	18.96	19.21		1.2
	15	0	19.24	19.11	19.09		1.2

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Table 9-44
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.03	20.20	20.21	0	0
	1	2	20.06	20.22	20.22		0
	1	5	20.17	20.21	20.20		0
	3	0	20.10	20.20	20.19		0
	3	2	20.20	20.21	20.20		0
	3	3	20.06	20.19	20.18		0
	6	0	20.23	20.19	20.18	0-1	0
16QAM	1	0	20.22	20.22	20.20	0-1	0
	1	2	20.24	20.21	20.22		0
	1	5	20.27	20.30	20.22		0
	3	0	20.31	20.28	20.22		0
	3	2	20.39	20.31	20.23		0
	3	3	20.31	20.29	20.24		0
	6	0	20.37	20.35	20.23	0-2	0
64QAM	1	0	20.26	20.24	20.21	0-2	0
	1	2	20.32	20.24	20.23		0
	1	5	20.26	20.27	20.23		0
	3	0	20.21	20.20	20.22		0
	3	2	20.25	20.19	20.21		0
	3	3	20.20	20.32	20.20		0
	6	0	20.29	20.21	20.23	0-3	0
256QAM	1	0	19.11	19.11	19.13	0-5	1.2
	1	2	19.12	19.11	19.11		1.2
	1	5	19.00	18.97	19.13		1.2
	3	0	19.03	19.08	19.10		1.2
	3	2	19.07	19.13	19.16		1.2
	3	3	18.99	19.07	19.13		1.2
	6	0	19.08	19.04	18.97		1.2

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9.4.7 LTE Band 2 (PCS)

Table 9-45
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.42	23.48	23.50	0	0
	1	50	23.36	23.43	23.55		0
	1	99	23.32	23.49	**23.61**		0
	50	0	22.61	22.44	22.43	0-1	1
	50	25	22.63	22.54	22.52		1
	50	50	22.57	22.53	**22.64**		1
	100	0	22.58	22.49	22.47		1
16QAM	1	0	22.86	22.91	23.08	0-1	1
	1	50	22.82	22.88	23.04		1
	1	99	22.76	22.98	23.15		1
	50	0	21.64	21.44	21.41	0-2	2
	50	25	21.66	21.57	21.54		2
	50	50	21.60	21.55	21.61		2
	100	0	21.56	21.51	21.52		2
64QAM	1	0	21.89	21.62	21.50	0-2	2
	1	50	21.84	21.55	21.55		2
	1	99	21.73	21.62	21.63		2
	50	0	20.62	20.50	20.48	0-3	3
	50	25	20.65	20.64	20.60		3
	50	50	20.59	20.59	20.68		3
	100	0	20.53	20.55	20.52		3
256QAM	1	0	18.40	18.33	18.21	0-5	5
	1	50	18.85	18.55	18.48		5
	1	99	18.60	18.35	18.42		5
	50	0	18.63	18.49	18.32		5
	50	25	18.59	18.54	18.46		5
	50	50	18.61	18.44	18.44		5
	100	0	18.54	18.49	18.43		5

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Table 9-46
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.42	23.57	23.39	0	0
	1	36	23.60	23.58	23.50		0
	1	74	23.50	23.53	23.46		0
	36	0	22.68	22.50	22.50	0-1	1
	36	18	22.74	22.60	22.57		1
	36	37	22.65	22.57	22.67		1
	75	0	22.61	22.64	22.61		1
16QAM	1	0	22.91	22.53	22.60	0-1	1
	1	36	23.11	22.65	22.73		1
	1	74	22.95	22.70	22.69		1
	36	0	21.70	21.50	21.53	0-2	2
	36	18	21.81	21.57	21.64		2
	36	37	21.69	21.58	21.71		2
	75	0	21.66	21.51	21.65		2
64QAM	1	0	21.31	22.11	21.64	0-2	2
	1	36	21.54	22.16	21.82		2
	1	74	21.28	22.23	21.77		2
	36	0	20.74	20.53	20.58	0-3	3
	36	18	20.84	20.67	20.69		3
	36	37	20.74	20.63	20.80		3
	75	0	20.71	20.61	20.60		3
256QAM	1	0	19.01	18.88	18.44	0-5	5
	1	36	19.05	18.78	18.94		5
	1	74	18.88	18.82	18.70		5
	36	0	18.92	18.79	18.72		5
	36	18	19.05	18.81	18.71		5
	36	37	18.95	18.86	18.76		5
	75	0	18.85	18.81	18.71		5

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Table 9-47
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.36	23.52	23.57	0	0
	1	25	23.59	23.47	23.52		0
	1	49	23.45	23.51	23.63		0
	25	0	22.77	22.56	22.54	0-1	1
	25	12	22.86	22.67	22.65		1
	25	25	22.74	22.58	22.61		1
	50	0	22.76	22.60	22.57		1
16QAM	1	0	22.81	23.01	22.63	0-1	1
	1	25	23.15	22.74	22.57		1
	1	49	22.92	22.60	22.62		1
	25	0	21.84	21.68	21.61	0-2	2
	25	12	21.93	21.77	21.73		2
	25	25	21.81	21.64	21.74		2
	50	0	21.78	21.61	21.53		2
64QAM	1	0	21.50	21.46	21.87	0-2	2
	1	25	21.65	21.68	21.91		2
	1	49	21.33	21.34	21.89		2
	25	0	20.86	20.73	20.63	0-3	3
	25	12	20.98	20.78	20.72		3
	25	25	20.85	20.63	20.67		3
	50	0	20.81	20.60	20.62		3
256QAM	1	0	18.92	18.50	18.40	0-5	5
	1	25	19.17	18.92	18.75		5
	1	49	19.00	18.70	18.68		5
	25	0	18.96	18.76	18.67		5
	25	12	19.13	18.90	18.70		5
	25	25	18.89	18.75	18.65		5
	50	0	19.05	18.76	18.63		5

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Table 9-48
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.62	23.50	23.47	0	0
	1	12	23.62	23.51	23.49		0
	1	24	23.55	23.46	23.50		0
	12	0	22.91	22.66	22.63	0-1	1
	12	6	22.93	22.72	22.65		1
	12	13	22.80	22.63	22.63		1
	25	0	22.84	22.60	22.60		1
16QAM	1	0	23.43	22.69	22.80	0-1	1
	1	12	23.21	22.71	22.74		1
	1	24	23.36	22.67	22.70		1
	12	0	21.98	21.73	21.72	0-2	2
	12	6	22.04	21.76	21.74		2
	12	13	21.89	21.66	21.73		2
	25	0	21.97	21.65	21.64		2
64QAM	1	0	22.00	22.01	21.68	0-2	2
	1	12	22.06	22.03	21.83		2
	1	24	21.91	21.97	21.75		2
	12	0	20.89	20.74	20.68	0-3	3
	12	6	20.91	20.76	20.68		3
	12	13	20.83	20.67	20.66		3
	25	0	20.89	20.68	20.64		3
256QAM	1	0	18.71	18.69	18.67	0-5	5
	1	12	18.79	18.91	18.66		5
	1	24	19.01	18.77	18.67		5
	12	0	18.68	18.62	18.45		5
	12	6	18.75	18.68	18.76		5
	12	13	18.80	18.84	18.74		5
	25	0	18.74	18.77	18.69		5

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Table 9-49
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.75	23.46	23.57	0	0
	1	7	23.72	23.42	23.51		0
	1	14	23.71	23.38	23.44		0
	8	0	22.88	22.66	22.70	0-1	1
	8	4	22.87	22.60	22.68		1
	8	7	22.81	22.56	22.65		1
	15	0	22.87	22.66	22.71		1
16QAM	1	0	23.21	22.42	22.67	0-1	1
	1	7	23.18	22.52	22.64		1
	1	14	23.13	22.48	22.56		1
	8	0	21.98	21.63	21.73	0-2	2
	8	4	21.97	21.66	21.75		2
	8	7	21.89	21.55	21.67		2
	15	0	21.87	21.64	21.74		2
64QAM	1	0	21.62	21.75	21.89	0-2	2
	1	7	21.64	21.73	21.84		2
	1	14	21.57	21.65	21.78		2
	8	0	20.93	20.64	20.77	0-3	3
	8	4	20.93	20.69	20.80		3
	8	7	20.91	20.66	20.73		3
	15	0	20.95	20.68	20.72		3
256QAM	1	0	18.61	18.64	18.81	0-5	5
	1	7	18.78	18.81	18.87		5
	1	14	18.62	18.72	18.89		5
	8	0	18.77	18.64	18.65		5
	8	4	18.75	18.82	18.67		5
	8	7	18.68	18.78	18.60		5
	15	0	18.67	18.74	18.63		5

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Table 9-50
LTE Band 2 (PCS) Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.67	23.35	23.63	0	0
	1	2	23.74	23.43	23.68		0
	1	5	23.61	23.36	23.61		0
	3	0	23.66	23.49	23.56		0
	3	2	23.71	23.52	23.57		0
	3	3	23.69	23.47	23.51		0
	6	0	22.76	22.55	22.61	0-1	1
16QAM	1	0	23.15	22.50	22.64	0-1	1
	1	2	23.18	22.39	22.60		1
	1	5	23.07	22.49	22.75		1
	3	0	23.08	22.62	22.71		1
	3	2	23.05	22.67	22.81		1
	3	3	23.01	22.64	22.72		1
	6	0	21.74	21.72	21.83	0-2	2
64QAM	1	0	21.60	21.66	21.80	0-2	2
	1	2	21.66	21.66	21.91		2
	1	5	21.54	21.64	21.73		2
	3	0	21.86	21.53	21.88		2
	3	2	21.88	21.61	21.91		2
	3	3	21.86	21.52	21.84		2
	6	0	21.07	20.68	20.60	0-3	3
256QAM	1	0	18.61	18.47	18.56	0-5	5
	1	2	18.56	18.65	18.52		5
	1	5	18.72	18.61	18.67		5
	3	0	18.48	18.78	18.49		5
	3	2	18.64	18.71	18.71		5
	3	3	18.61	18.80	18.39		5
	6	0	18.55	18.73	18.70		5

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Table 9-51
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.82	17.81	17.75	0	0
	1	50	17.88	17.84	17.64		0
	1	99	**17.98**	17.87	17.70		0
	50	0	17.93	17.86	17.80	0-1	0
	50	25	17.98	17.98	17.77		0
	50	50	**18.01**	17.95	17.68		0
	100	0	17.97	17.94	17.81		0
16QAM	1	0	18.31	18.14	17.90	0-1	0
	1	50	18.24	18.23	17.89		0
	1	99	18.26	18.06	17.98		0
	50	0	17.93	17.89	17.76	0-2	0
	50	25	18.05	18.08	17.86		0
	50	50	18.04	17.96	17.70		0
	100	0	17.88	17.94	17.81		0
64QAM	1	0	18.21	18.25	18.00	0-2	0
	1	50	18.07	18.32	18.08		0
	1	99	18.19	18.15	17.92		0
	50	0	17.99	17.94	17.82	0-3	0
	50	25	18.03	17.95	17.87		0
	50	50	18.02	17.99	17.63		0
	100	0	18.04	17.97	17.81		0
256QAM	1	0	17.83	17.84	17.81	0-5	0
	1	50	18.06	17.89	17.99		0
	1	99	18.15	18.05	17.39		0
	50	0	17.98	17.92	17.79		0
	50	25	17.89	17.95	17.86		0
	50	50	18.06	17.99	17.78		0
	100	0	17.94	17.91	17.83		0

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Table 9-52
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.91	18.02	17.78	0	0
	1	36	18.04	18.00	17.74		0
	1	74	17.97	18.02	17.80		0
	36	0	18.07	18.04	17.86	0-1	0
	36	18	18.05	18.07	17.91		0
	36	37	18.08	18.06	17.90		0
	75	0	18.06	18.07	17.99		0
16QAM	1	0	18.11	18.46	18.21	0-1	0
	1	36	18.30	18.36	18.23		0
	1	74	18.07	18.09	18.06		0
	36	0	18.04	18.01	17.87	0-2	0
	36	18	18.06	18.05	17.95		0
	36	37	18.16	18.07	17.96		0
	75	0	18.07	18.01	17.91		0
64QAM	1	0	18.07	18.20	18.12	0-2	0
	1	36	18.26	18.20	18.12		0
	1	74	18.15	18.24	17.98		0
	36	0	18.07	18.06	17.95	0-3	0
	36	18	18.12	18.07	18.01		0
	36	37	18.15	18.05	17.93		0
	75	0	18.11	18.08	17.93		0
256QAM	1	0	18.07	18.05	18.01	0-5	0
	1	36	18.12	18.27	17.99		0
	1	74	18.11	18.24	17.92		0
	36	0	18.12	18.03	17.90		0
	36	18	18.11	18.13	18.03		0
	36	37	18.13	18.09	17.97		0
	75	0	18.05	17.96	17.94		0

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Table 9-53
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.76	17.76	18.05	0	0
	1	25	18.05	18.10	17.83		0
	1	49	17.87	17.92	17.86		0
	25	0	18.21	18.05	17.88	0-1	0
	25	12	18.21	18.11	17.91		0
	25	25	18.10	18.08	17.86		0
	50	0	18.16	18.07	17.91		0
16QAM	1	0	18.13	18.15	18.41	0-1	0
	1	25	18.45	18.30	18.32		0
	1	49	18.17	18.08	18.25		0
	25	0	18.15	18.07	17.91	0-2	0
	25	12	18.25	18.10	18.05		0
	25	25	18.05	18.01	17.91		0
	50	0	18.12	18.05	17.92		0
64QAM	1	0	18.16	18.10	18.24	0-2	0
	1	25	18.29	18.33	18.13		0
	1	49	17.93	17.82	18.04		0
	25	0	18.19	18.11	18.00	0-3	0
	25	12	18.25	18.19	17.92		0
	25	25	18.04	18.03	18.01		0
	50	0	18.10	18.13	17.92		0
256QAM	1	0	18.15	18.20	17.70	0-5	0
	1	25	18.11	18.24	18.09		0
	1	49	18.00	17.90	17.59		0
	25	0	18.18	18.09	17.85		0
	25	12	18.24	18.15	18.01		0
	25	25	18.15	18.04	17.91		0
	50	0	18.18	18.00	17.87		0

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Table 9-54
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.04	18.11	17.71	0	0
	1	12	18.10	18.04	17.78		0
	1	24	18.00	17.96	17.71		0
	12	0	18.24	18.13	17.94	0-1	0
	12	6	18.26	18.19	18.02		0
	12	13	18.11	18.12	17.90		0
	25	0	18.13	18.15	17.71		0
16QAM	1	0	18.40	18.29	18.18	0-1	0
	1	12	18.29	18.36	18.19		0
	1	24	18.35	18.20	17.97		0
	12	0	18.30	18.24	18.07	0-2	0
	12	6	18.31	18.30	18.08		0
	12	13	18.33	18.15	17.96		0
	25	0	18.24	18.36	18.00		0
64QAM	1	0	18.41	18.24	18.18	0-2	0
	1	12	18.41	18.37	18.12		0
	1	24	18.26	18.32	17.92		0
	12	0	18.33	18.28	18.01	0-3	0
	12	6	18.31	18.18	17.99		0
	12	13	18.21	18.20	18.01		0
	25	0	18.22	18.13	18.00		0
256QAM	1	0	18.19	18.29	18.07	0-5	0
	1	12	18.39	18.31	18.15		0
	1	24	18.15	18.29	17.88		0
	12	0	18.27	18.15	18.00		0
	12	6	18.36	18.25	18.01		0
	12	13	18.15	18.09	17.92		0
	25	0	18.26	18.10	18.01		0

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Table 9-55
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.14	18.20	18.14	0	0
	1	7	18.06	18.25	18.11		0
	1	14	18.02	18.13	18.12		0
	8	0	18.25	18.24	18.15	0-1	0
	8	4	18.28	18.20	18.11		0
	8	7	18.18	18.34	18.17		0
	15	0	18.23	18.41	18.13		0
16QAM	1	0	18.24	18.32	18.19	0-1	0
	1	7	18.19	18.28	18.17		0
	1	14	18.09	18.31	17.99		0
	8	0	18.34	18.60	18.08	0-2	0
	8	4	18.32	18.24	18.10		0
	8	7	18.28	18.16	17.94		0
	15	0	18.30	18.62	18.01		0
64QAM	1	0	18.47	18.40	18.13	0-2	0
	1	7	18.46	18.39	18.10		0
	1	14	18.35	18.41	18.12		0
	8	0	18.33	18.62	18.11	0-3	0
	8	4	18.36	18.61	18.09		0
	8	7	18.28	18.61	18.09		0
	15	0	18.32	18.62	18.13		0
256QAM	1	0	18.24	18.00	18.25	0-5	0
	1	7	18.18	18.09	18.24		0
	1	14	18.24	18.07	18.09		0
	8	0	18.40	18.36	18.10		0
	8	4	18.41	18.37	18.08		0
	8	7	18.33	18.38	18.00		0
	15	0	18.25	18.31	18.22		0

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Table 9-56
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.07	18.30	18.28	0	0
	1	2	18.12	18.21	18.27		0
	1	5	18.03	18.15	18.26		0
	3	0	18.07	18.34	18.25		0
	3	2	18.11	18.15	18.24		0
	3	3	18.08	18.27	18.27		0
	6	0	18.13	18.23	18.28	0-1	0
16QAM	1	0	18.32	18.24	18.24	0-1	0
	1	2	18.34	18.12	18.27		0
	1	5	18.41	18.23	18.26		0
	3	0	18.47	18.51	18.26		0
	3	2	18.48	18.44	18.29		0
	3	3	18.45	18.25	18.29		0
	6	0	18.06	18.59	18.29	0-2	0
64QAM	1	0	18.01	18.42	18.28	0-2	0
	1	2	18.10	18.36	18.28		0
	1	5	17.94	18.43	18.31		0
	3	0	18.28	18.41	18.31		0
	3	2	18.35	18.39	18.29		0
	3	3	18.31	18.40	18.31		0
	6	0	18.48	18.51	18.29	0-3	0
256QAM	1	0	18.24	18.20	17.79	0-5	0
	1	2	18.28	18.37	17.84		0
	1	5	18.24	18.24	17.73		0
	3	0	18.33	18.26	18.07		0
	3	2	18.30	18.38	18.09		0
	3	3	18.25	18.29	18.01		0
	6	0	18.09	18.22	18.10		0

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Table 9-57
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.45**	19.30	19.03	0	0
	1	50	19.26	19.35	19.01		0
	1	99	19.39	19.35	19.19		0
	50	0	19.33	19.36	19.38	0-1	0
	50	25	19.48	19.33	19.42		0
	50	50	**19.50**	19.32	19.33		0
	100	0	19.40	19.38	19.36		0
16QAM	1	0	19.54	19.67	19.20	0-1	0
	1	50	19.74	19.63	18.74		0
	1	99	19.72	19.65	19.44		0
	50	0	19.32	19.45	19.37	0-2	0
	50	25	19.40	19.48	19.21		0
	50	50	19.43	19.50	19.06		0
	100	0	19.44	19.37	19.26		0
64QAM	1	0	19.73	19.61	19.42	0-2	0
	1	50	19.38	19.53	19.50		0
	1	99	19.62	19.36	19.36		0
	50	0	19.38	19.34	19.14	0-3	0
	50	25	19.48	19.41	19.26		0
	50	50	19.55	19.28	19.16		0
	100	0	19.67	19.37	19.34		0
256QAM	1	0	18.24	18.16	17.94	0-5	1
	1	50	18.55	18.58	18.28		1
	1	99	18.43	18.28	18.02		1
	50	0	18.41	18.44	18.17		1
	50	25	18.44	18.37	18.26		1
	50	50	18.39	18.39	18.22		1
	100	0	18.38	18.39	18.21		1

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Table 9-58
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.33	19.57	19.52	0	0
	1	36	19.42	19.58	19.52		0
	1	74	19.30	19.58	19.45		0
	36	0	19.45	19.58	19.47	0-1	0
	36	18	19.56	19.58	19.54		0
	36	37	19.51	19.57	19.53		0
	75	0	19.46	19.59	19.47		0
16QAM	1	0	19.71	19.61	19.54	0-1	0
	1	36	19.90	19.58	19.61		0
	1	74	19.79	19.60	19.51		0
	36	0	19.48	19.62	19.46	0-2	0
	36	18	19.59	19.59	19.58		0
	36	37	19.56	19.61	19.53		0
	75	0	19.51	19.63	19.48		0
64QAM	1	0	19.17	19.61	19.60	0-2	0
	1	36	19.36	19.59	19.55		0
	1	74	19.21	19.60	19.54		0
	36	0	19.56	19.59	19.50	0-3	0
	36	18	19.68	19.61	19.61		0
	36	37	19.62	19.63	19.57		0
	75	0	19.56	19.58	19.58		0
256QAM	1	0	18.39	18.84	18.54	0-5	1
	1	36	18.61	19.17	18.75		1
	1	74	18.52	18.99	18.53		1
	36	0	18.48	18.52	18.52		1
	36	18	18.58	18.66	18.58		1
	36	37	18.55	18.60	18.59		1
	75	0	18.50	18.57	18.56		1

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Table 9-59
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.41	19.59	19.60	0	0
	1	25	19.38	19.60	19.40		0
	1	49	19.19	19.60	19.38		0
	25	0	19.54	19.58	19.45	0-1	0
	25	12	19.63	19.58	19.58		0
	25	25	19.51	19.57	19.44		0
	50	0	19.54	19.57	19.46		0
16QAM	1	0	19.38	19.60	19.52	0-1	0
	1	25	19.33	19.57	19.45		0
	1	49	19.38	19.56	19.44		0
	25	0	19.65	19.57	19.54	0-2	0
	25	12	19.74	19.55	19.66		0
	25	25	19.63	19.58	19.54		0
	50	0	19.57	19.57	19.47		0
64QAM	1	0	19.37	19.55	19.81	0-2	0
	1	25	19.70	19.56	19.68		0
	1	49	19.35	19.56	19.66		0
	25	0	19.62	19.56	19.56	0-3	0
	25	12	19.69	19.55	19.66		0
	25	25	19.60	19.56	19.52		0
	50	0	19.50	19.57	19.53		0
256QAM	1	0	18.30	18.44	18.60	0-5	1
	1	25	18.37	18.75	19.17		1
	1	49	18.48	18.40	18.79		1
	25	0	18.59	18.57	18.54		1
	25	12	18.70	18.69	18.55		1
	25	25	18.56	18.58	18.62		1
	50	0	18.56	18.47	18.58		1

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Table 9-60
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.58	19.35	19.58	0	0
	1	12	19.61	19.38	19.56		0
	1	24	19.64	19.38	19.55		0
	12	0	19.63	19.37	19.55	0-1	0
	12	6	19.63	19.37	19.67		0
	12	13	19.62	19.36	19.61		0
	25	0	19.62	19.36	19.49		0
16QAM	1	0	19.61	19.35	19.58	0-1	0
	1	12	19.62	19.38	19.64		0
	1	24	19.62	19.44	19.60		0
	12	0	19.56	19.38	19.63	0-2	0
	12	6	19.61	19.48	19.66		0
	12	13	19.67	19.44	19.55		0
	25	0	19.58	19.44	19.58		0
64QAM	1	0	19.63	19.50	19.57	0-2	0
	1	12	19.68	19.44	19.56		0
	1	24	19.54	19.41	19.54		0
	12	0	19.58	19.42	19.53	0-3	0
	12	6	19.67	19.74	19.54		0
	12	13	19.63	19.50	19.57		0
	25	0	19.62	19.37	19.54		0
256QAM	1	0	18.67	18.60	18.60	0-5	1
	1	12	18.75	18.74	18.66		1
	1	24	18.61	18.60	18.51		1
	12	0	18.63	18.73	18.59		1
	12	6	18.64	18.73	18.61		1
	12	13	18.56	18.62	18.52		1
	25	0	18.54	18.62	18.50		1

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Table 9-61
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.54	19.68	19.65	0	0
	1	7	19.58	19.67	19.70		0
	1	14	19.54	19.68	19.55		0
	8	0	19.44	19.63	19.64	0-1	0
	8	4	19.58	19.58	19.55		0
	8	7	19.67	19.60	19.67		0
	15	0	19.55	19.62	19.58		0
16QAM	1	0	19.59	19.55	19.71	0-1	0
	1	7	19.64	19.58	19.68		0
	1	14	19.63	19.64	19.57		0
	8	0	19.68	19.58	19.57	0-2	0
	8	4	19.66	19.68	19.64		0
	8	7	19.64	19.64	19.71		0
	15	0	19.71	19.64	19.75		0
64QAM	1	0	19.67	19.70	19.69	0-2	0
	1	7	19.65	19.64	19.64		0
	1	14	19.63	19.61	19.66		0
	8	0	19.67	19.62	19.71	0-3	0
	8	4	19.70	19.94	19.64		0
	8	7	19.60	19.70	19.63		0
	15	0	19.58	19.57	19.67		0
256QAM	1	0	18.60	18.75	18.51	0-5	1
	1	7	18.58	18.67	18.48		1
	1	14	18.53	18.60	18.45		1
	8	0	18.93	18.52	18.58		1
	8	4	18.56	18.66	18.61		1
	8	7	18.61	18.57	18.52		1
	15	0	18.94	18.95	18.63		1

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Table 9-62
LTE Band 2 (PCS) Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.78	19.68	19.87	0	0
	1	2	19.75	19.70	19.70		0
	1	5	19.76	19.66	19.62		0
	3	0	19.75	19.56	19.77		0
	3	2	19.76	19.67	19.64		0
	3	3	19.78	19.71	19.56		0
	6	0	19.77	19.66	19.60	0-1	0
16QAM	1	0	19.75	19.65	19.67	0-1	0
	1	2	19.68	19.61	19.71		0
	1	5	19.71	19.61	19.68		0
	3	0	19.69	19.67	19.61		0
	3	2	19.68	19.63	19.68		0
	3	3	19.64	19.61	19.68		0
	6	0	19.78	19.59	19.67	0-2	0
64QAM	1	0	19.81	19.71	19.70	0-2	0
	1	2	19.66	19.66	19.64		0
	1	5	19.80	19.65	19.67		0
	3	0	19.79	19.64	19.88		0
	3	2	19.68	19.74	19.71		0
	3	3	19.70	19.63	19.67		0
	6	0	19.81	19.64	19.66	0-3	0
256QAM	1	0	18.88	18.64	18.39	0-5	1
	1	2	18.87	18.64	18.45		1
	1	5	18.81	18.58	18.38		1
	3	0	18.57	18.68	18.55		1
	3	2	18.92	18.67	18.73		1
	3	3	18.81	18.57	18.67		1
	6	0	18.73	18.64	18.60		1

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9.4.8 LTE Band 7

Table 9-63
LTE Band 7 Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	**23.20**	23.11	22.90	0	0
	1	50	23.16	23.09	22.82		0
	1	99	23.16	23.08	22.72		0
	50	0	22.22	22.18	22.10	0-1	1
	50	25	**22.32**	22.24	22.15		1
	50	50	22.27	22.20	22.12		1
	100	0	22.23	22.17	22.10		1
16QAM	1	0	22.63	22.69	22.36	0-1	1
	1	50	22.64	22.66	22.27		1
	1	99	22.70	22.67	22.16		1
	50	0	21.23	21.17	21.13	0-2	2
	50	25	21.30	21.22	21.19		2
	50	50	21.27	21.18	21.12		2
	100	0	21.23	21.19	21.08		2
64QAM	1	0	21.26	21.13	21.27	0-2	2
	1	50	21.30	21.12	21.24		2
	1	99	21.32	21.16	21.17		2
	50	0	20.29	20.26	20.11	0-3	3
	50	25	20.36	20.34	20.17		3
	50	50	20.34	20.30	20.10		3
	100	0	20.27	20.24	20.06		3
256QAM	1	0	17.84	17.94	17.96	0-5	5
	1	50	18.25	18.10	18.02		5
	1	99	17.90	18.06	17.68		5
	50	0	17.93	17.99	17.97		5
	50	25	18.09	18.02	18.02		5
	50	50	18.12	17.88	17.97		5
	100	0	18.05	17.87	18.04		5

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Table 9-64
LTE Band 7 Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.35	23.07	23.07	0	0
	1	36	23.40	23.06	23.08		0
	1	74	23.34	23.06	23.08		0
	36	0	22.42	22.06	22.10	0-1	1
	36	18	22.54	22.05	22.07		1
	36	37	22.50	22.08	22.06		1
	75	0	22.48	22.06	22.05		1
16QAM	1	0	22.60	22.07	22.06	0-1	1
	1	36	22.55	22.08	22.05		1
	1	74	22.68	22.06	22.06		1
	36	0	21.49	21.10	21.10	0-2	2
	36	18	21.59	21.10	21.09		2
	36	37	21.53	21.09	21.11		2
	75	0	21.53	21.09	21.11		2
64QAM	1	0	21.15	21.11	21.11	0-2	2
	1	36	21.33	21.13	21.08		2
	1	74	21.16	21.10	21.09		2
	36	0	20.35	20.20	20.30	0-3	3
	36	18	20.31	20.25	20.20		3
	36	37	20.44	20.14	20.43		3
	75	0	20.55	20.45	20.26		3
256QAM	1	0	17.84	17.97	18.33	0-5	5
	1	36	18.16	18.25	18.21		5
	1	74	17.94	18.00	18.23		5
	36	0	17.93	17.97	17.94		5
	36	18	18.11	18.11	18.06		5
	36	37	18.04	18.02	17.97		5
	75	0	18.07	18.02	18.04		5

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Table 9-65
LTE Band 7 Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.40	23.13	22.95	0	0
	1	25	23.18	23.18	23.02		0
	1	49	23.33	23.19	23.01		0
	25	0	22.42	22.21	22.05	0-1	1
	25	12	22.49	22.21	22.02		1
	25	25	22.49	22.26	21.99		1
	50	0	22.42	22.17	22.02		1
16QAM	1	0	22.82	22.20	22.05	0-1	1
	1	25	22.88	22.20	22.04		1
	1	49	22.81	22.19	22.04		1
	25	0	21.53	21.62	21.40	0-2	2
	25	12	21.59	21.61	21.41		2
	25	25	21.51	21.64	21.46		2
	50	0	21.47	21.63	21.45		2
64QAM	1	0	21.12	21.65	21.38	0-2	2
	1	25	21.19	21.65	21.45		2
	1	49	21.28	21.65	21.41		2
	25	0	20.43	20.50	20.34	0-3	3
	25	12	20.53	20.53	20.35		3
	25	25	20.57	20.52	20.36		3
	50	0	20.46	20.53	20.34		3
256QAM	1	0	18.18	17.76	18.25	0-5	5
	1	25	18.40	18.12	18.21		5
	1	49	18.12	17.92	18.27		5
	25	0	18.29	18.22	18.28		5
	25	12	18.27	18.24	18.20		5
	25	25	18.19	18.20	18.19		5
	50	0	18.14	18.11	18.15		5

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Table 9-66
LTE Band 7 Measured P_{Max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.49	23.11	22.94	0	0
	1	12	23.44	23.11	22.93		0
	1	24	23.51	23.11	22.92		0
	12	0	22.44	22.34	22.17	0-1	1
	12	6	22.53	22.35	22.18		1
	12	13	22.46	22.34	22.16		1
	25	0	22.48	22.36	22.17		1
16QAM	1	0	22.45	22.32	22.19	0-1	1
	1	12	22.56	22.33	22.20		1
	1	24	22.63	22.32	22.21		1
	12	0	21.58	21.73	21.59	0-2	2
	12	6	21.65	21.74	21.34		2
	12	13	21.58	21.75	21.36		2
	25	0	21.60	21.76	21.45		2
64QAM	1	0	21.49	21.39	21.40	0-2	2
	1	12	21.50	21.46	21.24		2
	1	24	21.38	21.45	21.26		2
	12	0	20.50	20.29	20.41	0-3	3
	12	6	20.48	20.45	20.32		3
	12	13	20.39	20.45	20.32		3
	25	0	20.37	20.44	20.30		3
256QAM	1	0	18.08	17.96	17.89	0-5	5
	1	12	18.19	18.07	17.99		5
	1	24	18.09	18.01	17.82		5
	12	0	18.03	18.09	17.95		5
	12	6	18.11	18.10	17.96		5
	12	13	18.04	18.08	17.88		5
	25	0	18.01	17.98	17.91		5

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Table 9-67
LTE Band 7 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**20.07**	19.50	19.40	0	0
	1	50	19.62	19.38	19.57		0
	1	99	19.63	19.47	19.42		0
	50	0	**19.82**	19.59	19.47	0-1	0
	50	25	19.79	19.77	19.55		0
	50	50	19.80	19.68	19.60		0
	100	0	19.74	19.58	19.45		0
16QAM	1	0	19.94	19.86	19.87	0-1	0
	1	50	19.89	19.80	19.80		0
	1	99	19.56	19.73	19.72		0
	50	0	19.73	19.60	19.65	0-2	0
	50	25	19.72	19.68	19.60		0
	50	50	19.80	19.52	19.49		0
	100	0	19.71	19.57	19.40		0
64QAM	1	0	19.90	19.80	19.71	0-2	0
	1	50	19.96	19.87	19.74		0
	1	99	19.87	19.76	19.89		0
	50	0	19.84	19.63	19.65	0-3	0
	50	25	19.87	19.71	19.61		0
	50	50	19.74	19.73	19.66		0
	100	0	19.77	19.67	19.47		0
256QAM	1	0	17.65	17.82	18.07	0-5	1.5
	1	50	17.98	18.04	18.02		1.5
	1	99	17.70	17.74	17.65		1.5
	50	0	17.97	17.81	17.88		1.5
	50	25	18.11	17.99	17.84		1.5
	50	50	18.08	17.90	17.81		1.5
	100	0	18.06	17.97	17.77		1.5

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Table 9-68
LTE Band 7 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.78	19.81	19.69	0	0
	1	36	19.75	19.82	19.73		0
	1	74	19.72	19.79	19.59		0
	36	0	19.79	19.79	19.66	0-1	0
	36	18	19.88	19.82	19.70		0
	36	37	19.86	19.77	19.69		0
	75	0	19.80	19.80	19.61		0
16QAM	1	0	20.18	19.82	19.72	0-1	0
	1	36	20.24	19.81	19.82		0
	1	74	20.15	19.83	19.74		0
	36	0	19.74	19.81	19.65	0-2	0
	36	18	19.91	19.81	19.68		0
	36	37	19.87	19.78	19.69		0
	75	0	19.81	19.79	19.62		0
64QAM	1	0	19.57	19.81	20.01	0-2	0
	1	36	19.66	19.80	19.94		0
	1	74	19.43	19.82	20.29		0
	36	0	19.86	19.80	19.75	0-3	0
	36	18	19.96	19.80	19.75		0
	36	37	19.89	19.81	19.76		0
	75	0	19.86	19.82	19.69		0
256QAM	1	0	17.87	18.33	17.99	0-5	1.5
	1	36	18.21	18.62	18.22		1.5
	1	74	18.03	18.41	18.00		1.5
	36	0	17.98	18.05	18.01		1.5
	36	18	18.14	18.18	18.05		1.5
	36	37	18.10	18.10	18.01		1.5
	75	0	18.13	18.14	17.94		1.5

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Table 9-69
LTE Band 7 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.80	19.85	19.66	0	0
	1	25	19.55	19.84	19.65		0
	1	49	19.67	19.87	19.61		0
	25	0	19.72	19.86	19.70	0-1	0
	25	12	19.84	19.87	19.79		0
	25	25	19.81	19.85	19.77		0
	50	0	19.79	19.87	19.72		0
16QAM	1	0	19.55	19.88	19.78	0-1	0
	1	25	19.52	19.87	19.70		0
	1	49	19.56	19.89	19.68		0
	25	0	19.90	19.88	19.82	0-2	0
	25	12	19.95	19.89	19.90		0
	25	25	19.96	19.87	19.86		0
	50	0	19.85	19.87	19.75		0
64QAM	1	0	19.77	19.88	19.96	0-2	0
	1	25	19.93	19.87	19.99		0
	1	49	19.86	19.87	19.96		0
	25	0	19.88	19.89	19.80	0-3	0
	25	12	20.00	19.88	19.90		0
	25	25	19.99	19.89	19.86		0
	50	0	19.82	19.88	19.77		0
256QAM	1	0	18.01	17.94	18.41	0-5	1.5
	1	25	17.94	18.24	18.65		1.5
	1	49	17.89	17.94	18.38		1.5
	25	0	18.10	18.08	18.07		1.5
	25	12	18.25	18.27	18.22		1.5
	25	25	18.20	18.14	18.10		1.5
	50	0	18.15	18.13	18.13		1.5

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Table 9-70
LTE Band 7 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 5 MHz Bandwidth

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.93	19.88	20.04	0	0
	1	12	20.13	19.88	20.02		0
	1	24	20.10	19.87	20.01		0
	12	0	20.14	19.88	20.02	0-1	0
	12	6	20.10	19.90	20.00		0
	12	13	20.14	19.87	20.03		0
	25	0	20.07	19.90	20.02		0
16QAM	1	0	20.10	19.88	20.01	0-1	0
	1	12	20.13	19.87	20.02		0
	1	24	20.10	19.87	20.00		0
	12	0	20.11	19.87	20.01	0-2	0
	12	6	20.14	19.89	20.03		0
	12	13	20.13	19.87	20.02		0
	25	0	20.19	19.88	20.01		0
64QAM	1	0	20.13	19.89	20.02	0-2	0
	1	12	20.11	19.87	20.04		0
	1	24	20.14	19.88	20.00		0
	12	0	20.14	19.89	20.04	0-3	0
	12	6	20.13	19.86	20.03		0
	12	13	20.12	19.88	20.01		0
	25	0	20.11	19.86	20.03		0
256QAM	1	0	18.11	18.02	18.08	0-5	1.5
	1	12	18.23	18.14	18.12		1.5
	1	24	18.17	18.02	18.05		1.5
	12	0	18.22	18.13	18.11		1.5
	12	6	18.25	18.19	18.17		1.5
	12	13	18.19	18.13	18.08		1.5
	25	0	18.10	18.12	18.04		1.5

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Table 9-71
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) 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	**20.43**	20.35	20.26	0	0
	1	50	20.36	20.18	20.19		0
	1	99	20.34	20.13	20.16		0
	50	0	20.51	20.39	20.34	0-1	0
	50	25	**20.54**	20.42	20.30		0
	50	50	20.49	20.38	20.36		0
	100	0	20.41	20.36	20.22		0
16QAM	1	0	20.88	20.66	20.74	0-1	0
	1	50	20.74	20.57	20.68		0
	1	99	20.56	20.56	20.52		0
	50	0	20.51	20.38	20.33	0-2	0
	50	25	20.56	20.44	20.35		0
	50	50	20.45	20.36	20.37		0
	100	0	20.47	20.34	20.27		0
64QAM	1	0	20.74	20.55	20.52	0-2	0
	1	50	20.70	20.44	20.52		0
	1	99	20.59	20.45	20.51		0
	50	0	20.32	20.32	20.19	0-3	0
	50	25	20.33	20.43	20.17		0
	50	50	20.31	20.42	20.19		0
	100	0	20.29	20.37	20.10		0
256QAM	1	0	18.10	18.06	18.12	0-5	2
	1	50	18.38	18.29	18.32		2
	1	99	18.12	18.06	18.01		2
	50	0	18.20	18.14	18.13		2
	50	25	18.35	18.23	18.17		2
	50	50	18.23	18.11	18.06		2
	100	0	18.31	18.21	18.09		2

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Table 9-72
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 15 MHz Bandwidth

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.49	20.24	20.32	0	0
	1	36	20.42	20.18	20.27		0
	1	74	20.36	20.22	20.24		0
	36	0	20.52	20.33	20.36	0-1	0
	36	18	20.58	20.38	20.35		0
	36	37	20.46	20.37	20.38		0
	75	0	20.51	20.36	20.33		0
16QAM	1	0	20.85	20.61	20.68	0-1	0
	1	36	20.84	20.55	20.60		0
	1	74	20.56	20.47	20.51		0
	36	0	20.54	20.36	20.36	0-2	0
	36	18	20.57	20.42	20.37		0
	36	37	20.52	20.41	20.41		0
	75	0	20.51	20.36	20.32		0
64QAM	1	0	20.70	20.53	20.55	0-2	0
	1	36	20.72	20.54	20.58		0
	1	74	20.64	20.44	20.53		0
	36	0	20.33	20.20	20.19	0-3	0
	36	18	20.40	20.23	20.24		0
	36	37	20.33	20.22	20.24		0
	75	0	20.32	20.18	20.12		0
256QAM	1	0	18.24	18.10	18.18	0-5	2
	1	36	18.43	18.21	18.29		2
	1	74	18.32	18.20	18.13		2
	36	0	18.28	18.12	18.14		2
	36	18	18.39	18.23	18.20		2
	36	37	18.32	18.17	18.19		2
	75	0	18.35	18.18	18.11		2

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Table 9-73
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 10 MHz Bandwidth

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.57	20.32	20.33	0	0
	1	25	20.48	20.27	20.22		0
	1	49	20.42	20.35	20.24		0
	25	0	20.54	20.39	20.32	0-1	0
	25	12	20.56	20.42	20.40		0
	25	25	20.49	20.39	20.38		0
	50	0	20.50	20.39	20.32		0
16QAM	1	0	20.85	20.78	20.77	0-1	0
	1	25	20.91	20.69	20.68		0
	1	49	20.81	20.72	20.65		0
	25	0	20.52	20.33	20.33	0-2	0
	25	12	20.59	20.47	20.39		0
	25	25	20.53	20.38	20.36		0
	50	0	20.50	20.35	20.31		0
64QAM	1	0	20.68	20.62	20.64	0-2	0
	1	25	20.66	20.55	20.52		0
	1	49	20.71	20.60	20.60		0
	25	0	20.32	20.16	20.10	0-3	0
	25	12	20.39	20.30	20.26		0
	25	25	20.35	20.22	20.19		0
	50	0	20.32	20.20	20.15		0
256QAM	1	0	18.15	18.08	18.06	0-5	2
	1	25	18.43	18.31	18.31		2
	1	49	18.23	18.11	18.04		2
	25	0	18.27	18.12	18.10		2
	25	12	18.38	18.26	18.21		2
	25	25	18.28	18.17	18.09		2
	50	0	18.33	18.15	18.18		2

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Table 9-74
LTE Band 7 Measured P_{Limit} for DSI = 1 (Phablet with Grip Sensor Active) and/or DSI = 4 (Earjack Active) - 5 MHz Bandwidth

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.46	20.31	20.31	0	0
	1	12	20.44	20.37	20.30		0
	1	24	20.46	20.34	20.28		0
	12	0	20.57	20.41	20.41	0-1	0
	12	6	20.62	20.45	20.42		0
	12	13	20.54	20.39	20.36		0
	25	0	20.55	20.39	20.41		0
16QAM	1	0	20.82	20.62	20.74	0-1	0
	1	12	20.78	20.59	20.64		0
	1	24	20.85	20.69	20.58		0
	12	0	20.66	20.45	20.46	0-2	0
	12	6	20.68	20.50	20.49		0
	12	13	20.63	20.45	20.42		0
	25	0	20.56	20.43	20.40		0
64QAM	1	0	20.70	20.59	20.62	0-2	0
	1	12	20.77	20.59	20.69		0
	1	24	20.76	20.61	20.58		0
	12	0	20.44	20.21	20.21	0-3	0
	12	6	20.47	20.27	20.29		0
	12	13	20.42	20.25	20.19		0
	25	0	20.38	20.20	20.15		0
256QAM	1	0	18.42	18.25	18.34	0-5	2
	1	12	18.56	18.33	18.31		2
	1	24	18.45	18.24	18.25		2
	12	0	18.41	18.18	18.23		2
	12	6	18.42	18.25	18.24		2
	12	13	18.37	18.22	18.19		2
	25	0	18.41	18.20	18.20		2

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9.4.9 LTE Band 48

Table 9-75
LTE Band 48 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), 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	24.18	24.04	**24.19**	23.91	0	0
	1	50	24.15	24.07	24.14	23.76		0
	1	99	24.18	24.08	24.15	23.72		0
	50	0	23.11	23.15	23.19	22.84	0-1	1
	50	25	23.26	23.27	**23.28**	22.90		1
	50	50	23.21	23.14	23.19	22.75		1
	100	0	23.21	23.17	23.21	22.85		1
16QAM	1	0	23.23	23.11	23.22	22.88	0-1	1
	1	50	23.20	23.08	23.20	22.81		1
	1	99	23.29	23.23	23.29	22.87		1
	50	0	22.15	22.16	22.18	21.88	0-2	2
	50	25	22.36	22.27	22.28	21.87		2
	50	50	22.28	22.16	22.18	21.79		2
	100	0	22.29	22.24	22.19	21.85		2
64QAM	1	0	21.91	21.76	21.93	21.63	0-2	2
	1	50	21.96	21.87	21.89	21.54		2
	1	99	22.04	21.89	21.92	21.51		2
	50	0	21.24	21.24	21.23	20.93	0-3	3
	50	25	21.45	21.35	21.35	20.98		3
	50	50	21.34	21.22	21.23	20.84		3
	100	0	21.29	21.26	21.21	20.86		3
256QAM	1	0	18.81	18.85	18.76	18.53	0-5	5
	1	50	19.19	19.08	19.09	18.72		5
	1	99	18.95	18.76	18.76	18.73		5
	50	0	19.26	19.26	19.23	18.75		5
	50	25	19.43	19.38	19.38	19.00		5
	50	50	19.37	19.22	19.24	18.84		5
	100	0	19.34	19.26	19.22	18.79		5

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Table 9-76
LTE Band 48 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), or DSI = 4 (Earjack active) - 15 MHz Bandwidth

LTE Band 48 15 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55315 (3557.5 MHz)	55765 (3602.5 MHz)	56215 (3647.5 MHz)	56665 (3692.5 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	24.11	24.17	24.05	23.97	0	0
	1	36	24.13	24.32	24.08	23.97		0
	1	74	24.03	24.25	24.14	23.96		0
	36	0	23.21	23.31	23.38	22.99	0-1	1
	36	18	23.25	23.39	23.08	22.83		1
	36	37	23.17	22.85	23.13	22.91		1
	75	0	23.18	23.17	23.24	23.02		1
16QAM	1	0	22.88	23.10	23.35	22.88	0-1	1
	1	36	22.88	23.19	23.26	22.89		1
	1	74	22.87	23.21	23.09	22.87		1
	36	0	22.28	22.32	22.31	22.32	0-2	2
	36	18	22.28	22.11	22.16	21.97		2
	36	37	22.30	22.33	22.24	22.29		2
	75	0	22.23	22.26	22.33	22.10		2
64QAM	1	0	22.17	21.66	21.66	21.50	0-2	2
	1	36	22.21	21.91	21.79	21.55		2
	1	74	22.04	21.95	22.04	22.11		2
	36	0	21.29	21.38	21.25	20.89	0-3	3
	36	18	21.36	21.32	21.03	21.03		3
	36	37	21.28	21.39	21.18	21.15		3
	75	0	21.28	21.28	21.13	21.20		3
256QAM	1	0	19.21	18.78	19.06	18.78	0-5	5
	1	36	19.33	18.99	19.10	18.81		5
	1	74	19.16	18.73	18.88	18.79		5
	36	0	19.35	19.32	19.19	18.79		5
	36	18	19.37	19.40	19.20	18.84		5
	36	37	19.30	19.31	19.17	18.95		5
	75	0	19.35	19.36	19.16	19.09		5

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Table 9-77
LTE Band 48 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 48 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55290 (3555.0 MHz)	55757 (3601.7 MHz)	56223 (3648.3 MHz)	56690 (3695.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	23.99	24.00	24.03	24.15	0	0
	1	25	23.91	24.01	24.10	24.03		0
	1	49	23.84	23.99	24.12	23.85		0
	25	0	22.78	22.85	23.10	22.77	0-1	1
	25	12	22.86	23.06	23.18	22.87		1
	25	25	22.80	23.00	23.14	22.83		1
	50	0	22.82	22.98	23.15	22.81		1
16QAM	1	0	23.34	22.74	23.21	23.03	0-1	1
	1	25	23.29	22.83	23.11	23.03		1
	1	49	23.21	22.82	23.15	22.96		1
	25	0	21.81	21.69	22.08	21.95	0-2	2
	25	12	21.92	21.95	22.07	21.86		2
	25	25	21.95	21.94	22.04	21.95		2
	50	0	21.95	22.00	22.04	21.83		2
64QAM	1	0	21.72	21.57	22.10	21.60	0-2	2
	1	25	21.57	21.66	22.13	21.56		2
	1	49	21.69	21.65	22.06	21.59		2
	25	0	20.83	20.85	21.00	20.87	0-3	3
	25	12	21.01	21.09	21.10	20.96		3
	25	25	21.06	21.08	21.01	20.98		3
	50	0	20.94	21.02	21.07	20.82		3
256QAM	1	0	18.61	18.67	18.84	18.52	0-5	5
	1	25	18.83	18.61	19.25	18.77		5
	1	49	18.62	18.59	19.05	18.51		5
	25	0	18.84	18.86	19.02	18.54		5
	25	12	18.96	19.12	19.19	18.82		5
	25	25	18.97	19.04	19.01	18.84		5
	50	0	18.95	19.06	19.04	18.70		5

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Table 9-78
LTE Band 48 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active), or DSI = 3 (Hotspot Mode), or DSI = 4 (Earjack active) - 5 MHz Bandwidth

LTE Band 48 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55265 (3552.5 MHz)	55748 (3600.8 MHz)	56232 (3649.2 MHz)	56715 (3697.5 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	24.19	24.13	24.00	23.83	0	0
	1	12	24.05	24.03	23.95	23.77		0
	1	24	24.02	24.05	23.97	23.76		0
	12	0	23.03	22.89	23.01	22.81	0-1	1
	12	6	23.20	23.28	22.95	22.95		1
	12	13	23.17	23.14	23.02	22.89		1
	25	0	23.13	23.27	23.20	22.98		1
16QAM	1	0	23.24	23.30	22.94	23.11	0-1	1
	1	12	23.00	23.08	22.96	23.14		1
	1	24	23.25	23.14	22.87	22.76		1
	12	0	22.09	22.33	22.32	22.13	0-2	2
	12	6	22.16	22.35	21.77	21.81		2
	12	13	22.05	22.20	22.15	22.05		2
	25	0	22.20	22.12	21.94	22.09		2
64QAM	1	0	22.15	22.13	22.10	22.10	0-2	2
	1	12	21.90	22.07	22.11	22.15		2
	1	24	21.85	21.55	21.64	21.66		2
	12	0	21.15	21.25	21.06	21.12	0-3	3
	12	6	21.22	21.14	20.90	21.04		3
	12	13	21.27	21.30	21.04	21.16		3
	25	0	21.19	21.20	20.99	21.07		3
256QAM	1	0	18.77	18.78	19.21	18.93	0-5	5
	1	12	19.10	18.98	19.11	19.03		5
	1	24	19.17	18.92	18.92	18.97		5
	12	0	18.95	19.28	19.32	18.94		5
	12	6	19.26	19.29	19.20	19.21		5
	12	13	19.16	19.30	19.10	19.07		5
	25	0	19.29	19.27	19.03	19.10		5

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Table 9-79
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	18.32	18.24	**18.46**	18.19	0	0
	1	50	18.40	18.29	18.43	18.12		0
	1	99	18.42	18.41	18.35	18.06		0
	50	0	18.30	18.39	**18.55**	18.25	0-1	0
	50	25	18.44	18.41	18.45	18.18		0
	50	50	18.51	18.53	18.39	18.08		0
	100	0	18.41	18.40	18.43	18.15		0
16QAM	1	0	18.05	18.06	18.13	17.90	0-1	0
	1	50	18.13	18.16	18.20	17.89		0
	1	99	18.16	18.17	18.18	17.92		0
	50	0	18.32	18.41	18.43	18.18	0-2	0
	50	25	18.53	18.54	18.52	18.21		0
	50	50	18.47	18.45	18.45	18.16		0
	100	0	18.43	18.46	18.41	18.16		0
64QAM	1	0	18.30	18.19	18.40	18.16	0-2	0
	1	50	18.41	18.41	18.42	18.13		0
	1	99	18.45	18.42	18.39	18.07		0
	50	0	18.36	18.45	18.44	18.21	0-3	0
	50	25	18.54	18.55	18.54	18.27		0
	50	50	18.48	18.44	18.42	18.17		0
	100	0	18.45	18.47	18.45	18.17		0
256QAM	1	0	18.23	18.26	18.25	18.05	0-5	0
	1	50	18.62	18.60	18.58	18.29		0
	1	99	18.35	18.36	18.17	17.85		0
	50	0	18.42	18.42	18.43	18.22		0
	50	25	18.55	18.58	18.55	18.27		0
	50	50	18.45	18.44	18.43	18.15		0
	100	0	18.46	18.46	18.42	18.16		0

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Table 9-80
LTE Band 48 Measured P_{limit} for DSI = 2 (Head) - 15 MHz Bandwidth

LTE Band 48 15 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55315 (3557.5 MHz)	55765 (3602.5 MHz)	56215 (3647.5 MHz)	56665 (3692.5 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	18.44	18.28	18.39	18.04	0	0
	1	36	18.41	18.36	18.57	18.04		0
	1	74	18.43	18.40	18.29	17.96		0
	36	0	18.41	18.41	18.61	18.19	0-1	0
	36	18	18.44	18.48	18.44	18.08		0
	36	37	18.49	18.53	18.46	18.03		0
	75	0	18.46	18.46	18.41	18.00		0
16QAM	1	0	18.12	18.14	18.60	17.84	0-1	0
	1	36	18.21	18.21	18.56	17.79		0
	1	74	18.07	18.12	18.47	17.65		0
	36	0	18.38	18.38	18.41	18.08	0-2	0
	36	18	18.46	18.50	18.44	18.07		0
	36	37	18.31	18.44	18.44	18.06		0
	75	0	18.43	18.47	18.37	18.01		0
64QAM	1	0	18.22	18.18	18.25	18.07	0-2	0
	1	36	18.32	18.32	18.25	18.11		0
	1	74	18.38	18.34	18.21	17.95		0
	36	0	18.40	18.41	18.36	18.10	0-3	0
	36	18	18.44	18.48	18.43	18.10		0
	36	37	18.38	18.41	18.39	18.05		0
	75	0	18.42	18.51	18.37	18.03		0
256QAM	1	0	18.18	18.30	18.16	18.02	0-5	0
	1	36	18.42	18.43	18.39	18.13		0
	1	74	18.22	18.21	18.14	17.84		0
	36	0	18.26	18.24	18.21	18.01		0
	36	18	18.37	18.44	18.28	18.03		0
	36	37	18.28	18.31	18.33	17.98		0
	75	0	18.28	18.37	18.24	17.89		0

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Table 9-81
LTE Band 48 Measured P_{limit} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 48 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55290 (3555.0 MHz)	55757 (3601.7 MHz)	56223 (3648.3 MHz)	56690 (3695.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	18.39	18.41	18.44	18.06	0	0
	1	25	18.38	18.49	18.45	18.12		0
	1	49	18.43	18.57	18.35	18.05		0
	25	0	18.30	18.34	18.60	18.14	0-1	0
	25	12	18.39	18.58	18.31	18.10		0
	25	25	18.43	18.61	18.47	18.12		0
	50	0	18.35	18.51	18.42	18.03		0
16QAM	1	0	18.22	18.40	18.75	17.92	0-1	0
	1	25	18.33	18.40	18.67	17.96		0
	1	49	18.14	18.31	18.58	17.77		0
	25	0	18.32	18.38	18.37	18.06	0-2	0
	25	12	18.51	18.64	18.56	18.14		0
	25	25	18.43	18.60	18.50	18.18		0
	50	0	18.40	18.59	18.38	18.07		0
64QAM	1	0	18.37	18.27	18.35	18.20	0-2	0
	1	25	18.32	18.32	18.17	18.15		0
	1	49	18.40	18.43	18.18	18.10		0
	25	0	18.24	18.30	18.28	17.99	0-3	0
	25	12	18.41	18.56	18.43	18.08		0
	25	25	18.33	18.52	18.35	18.06		0
	50	0	18.43	18.57	18.36	18.05		0
256QAM	1	0	18.23	18.05	18.17	17.79	0-5	0
	1	25	18.47	18.48	18.49	18.13		0
	1	49	18.22	18.33	18.24	17.84		0
	25	0	18.22	18.28	18.32	18.06		0
	25	12	18.34	18.50	18.35	18.11		0
	25	25	18.30	18.48	18.41	18.11		0
	50	0	18.25	18.46	18.30	17.95		0

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Table 9-82
LTE Band 48 Measured P_{limit} for DSI = 2 (Head) - 5 MHz Bandwidth

LTE Band 48 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55265 (3552.5 MHz)	55748 (3600.8 MHz)	56232 (3649.2 MHz)	56715 (3697.5 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	18.31	18.28	18.34	17.95	0	0
	1	12	18.43	18.49	18.46	18.12		0
	1	24	18.36	18.56	18.30	17.98		0
	12	0	18.38	18.53	18.73	18.25	0-1	0
	12	6	18.45	18.63	18.55	18.18		0
	12	13	18.47	18.74	18.56	18.15		0
	25	0	18.46	18.58	18.56	18.09		0
16QAM	1	0	18.11	18.16	18.63	17.86	0-1	0
	1	12	18.28	18.41	18.63	17.95		0
	1	24	18.07	18.24	18.49	17.77		0
	12	0	18.32	18.47	18.48	18.17	0-2	0
	12	6	18.48	18.63	18.56	18.14		0
	12	13	18.43	18.62	18.50	18.14		0
	25	0	18.48	18.60	18.54	18.17		0
64QAM	1	0	18.19	18.28	18.28	18.09	0-2	0
	1	12	18.37	18.49	18.33	18.09		0
	1	24	18.29	18.51	18.24	17.97		0
	12	0	18.36	18.50	18.47	18.11	0-3	0
	12	6	18.40	18.58	18.50	18.14		0
	12	13	18.41	18.58	18.43	18.07		0
	25	0	18.45	18.62	18.49	18.12		0
256QAM	1	0	18.33	18.24	18.41	18.16	0-5	0
	1	12	18.37	18.47	18.49	18.20		0
	1	24	18.27	18.42	18.36	18.05		0
	12	0	18.35	18.37	18.43	18.19		0
	12	6	18.39	18.50	18.48	18.25		0
	12	13	18.38	18.50	18.38	18.20		0
	25	0	18.30	18.42	18.41	18.12		0

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9.4.10 LTE Band 41

Table 9-83
LTE Band 41 Measured P_{Max} for DSI = 2 (Head), DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	**23.52**	23.30	22.99	22.50	22.49	0	0
	1	50	23.38	23.26	23.12	22.70	22.83		0
	1	99	23.21	23.22	22.68	22.31	22.66		0
	50	0	**22.59**	22.35	22.19	21.75	21.77	0-1	1
	50	25	22.54	22.44	22.29	21.84	21.89		1
	50	50	22.49	22.40	22.13	21.69	21.92		1
	100	0	22.50	22.34	22.23	21.77	21.83		1
16QAM	1	0	22.77	22.47	22.15	21.74	21.64	0-1	1
	1	50	22.53	22.45	22.33	21.88	22.02		1
	1	99	22.45	22.47	21.84	21.43	21.86		1
	50	0	21.58	21.39	21.24	20.75	20.84	0-2	2
	50	25	21.61	21.47	21.34	20.86	20.92		2
	50	50	21.42	21.43	21.18	20.74	20.99		2
	100	0	21.56	21.41	21.29	20.79	20.87		2
64QAM	1	0	21.27	20.95	20.65	20.72	20.16	0-2	2
	1	50	21.13	20.94	20.94	20.31	20.65		2
	1	99	21.16	20.97	20.46	20.45	20.46		2
	50	0	20.62	20.41	20.25	19.77	19.83	0-3	3
	50	25	20.57	20.49	20.35	19.87	19.95		3
	50	50	20.45	20.44	20.19	19.72	19.97		3
	100	0	20.49	20.37	20.25	19.81	19.86		3
256QAM	1	0	18.05	17.98	17.87	17.80	17.71	0-5	5
	1	50	18.33	18.07	18.19	17.94	17.84		5
	1	99	18.03	17.98	17.85	17.87	17.97		5
	50	0	18.48	18.20	18.24	18.13	18.03		5
	50	25	18.54	18.31	18.35	18.13	18.02		5
	50	50	18.49	18.12	18.31	18.00	17.99		5
	100	0	18.20	18.16	18.19	18.00	17.95		5

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Table 9-84
LTE Band 41 Measured P_{Max} for DSI = 2 (Head), DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

LTE Band 41 15 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	23.40	23.14	23.07	22.89	22.66	0	0
	1	36	23.39	23.35	23.01	23.02	22.95		0
	1	74	23.33	23.05	22.89	22.84	22.86		0
	36	0	22.45	22.23	22.28	22.03	21.91	0-1	1
	36	18	22.48	22.40	22.39	22.09	22.11		1
	36	37	22.40	22.30	22.27	22.06	22.09		1
	75	0	22.38	22.24	22.28	21.97	22.00		1
16QAM	1	0	22.14	22.12	22.29	21.96	21.42	0-1	1
	1	36	22.20	22.23	22.31	22.09	21.65		1
	1	74	22.04	22.02	22.30	21.97	21.56		1
	36	0	21.54	21.23	21.29	21.01	21.00	0-2	2
	36	18	21.54	21.37	21.25	21.04	21.20		2
	36	37	21.49	21.31	21.10	21.01	21.19		2
	75	0	21.37	21.26	21.12	21.02	21.03		2
64QAM	1	0	21.39	20.66	20.75	20.86	20.63	0-2	2
	1	36	21.39	20.86	21.03	20.98	20.97		2
	1	74	21.31	20.67	21.06	20.70	20.87		2
	36	0	20.51	20.27	20.40	20.01	19.97	0-3	3
	36	18	20.52	20.40	20.28	20.07	20.16		3
	36	37	20.47	20.27	20.27	20.00	20.13		3
	75	0	20.43	20.32	20.26	19.95	20.07		3
256QAM	1	0	18.30	17.72	17.89	17.66	17.79	0-5	5
	1	36	18.10	18.01	18.02	17.77	17.85		5
	1	74	18.34	18.01	17.72	17.49	17.81		5
	36	0	18.03	17.85	17.88	17.64	17.54		5
	36	18	18.09	18.03	17.97	17.68	17.74		5
	36	37	18.05	17.91	17.98	17.63	17.70		5
	75	0	18.00	17.98	17.87	17.58	17.63		5

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Table 9-85
LTE Band 41 Measured P_{Max} for DSI = 2 (Head), DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 41 10 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	23.51	23.26	23.04	22.87	22.71	0	0
	1	25	23.40	23.45	22.98	23.15	22.95		0
	1	49	23.39	23.07	22.88	22.85	22.68		0
	25	0	22.48	22.28	22.20	22.05	21.97	0-1	1
	25	12	22.47	22.40	22.31	22.13	22.10		1
	25	25	22.43	22.31	22.26	22.06	22.00		1
	50	0	22.42	22.36	22.27	22.04	22.03		1
16QAM	1	0	22.46	22.43	22.34	21.74	21.75	0-1	1
	1	25	22.45	22.56	22.25	22.01	21.97		1
	1	49	22.45	22.41	22.32	21.73	21.75		1
	25	0	21.44	21.40	21.64	20.94	20.89	0-2	2
	25	12	21.42	21.49	21.37	21.05	21.04		2
	25	25	21.42	21.41	21.45	20.98	20.96		2
	50	0	21.37	21.39	21.25	21.09	20.99		2
64QAM	1	0	21.42	20.80	20.81	20.73	20.69	0-2	2
	1	25	21.32	20.94	20.68	20.73	20.97		2
	1	49	21.21	20.71	20.88	20.86	20.76		2
	25	0	20.64	20.63	20.27	20.23	19.90	0-3	3
	25	12	20.43	20.51	20.24	20.15	20.06		3
	25	25	20.38	20.40	20.28	20.12	19.94		3
	50	0	20.37	20.36	20.25	20.07	20.01		3
256QAM	1	0	18.17	17.74	18.03	17.58	17.67	0-5	5
	1	25	18.41	18.04	18.28	17.62	17.99		5
	1	49	18.09	17.83	18.03	17.33	17.74		5
	25	0	18.18	18.09	18.06	17.88	17.71		5
	25	12	18.25	18.29	18.15	17.96	17.92		5
	25	25	18.14	18.17	18.02	17.87	17.74		5
	50	0	18.21	18.19	18.05	17.87	17.80		5

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Table 9-86
LTE Band 41 Measured P_{Max} for DSI = 2 (Head), DSI = 0 (Body-worn, or Phablet with grip sensor not triggered), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

LTE Band 41 5 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	23.57	22.98	23.02	22.99	22.60	0	0
	1	12	23.49	23.11	22.98	22.87	22.57		0
	1	24	23.51	23.12	22.96	22.98	22.80		0
	12	0	22.51	22.34	22.54	22.56	22.40	0-1	1
	12	6	22.52	22.40	22.36	22.63	22.13		1
	12	13	22.55	22.54	22.34	22.45	22.16		1
	25	0	22.47	22.59	22.46	22.56	22.00		1
16QAM	1	0	22.77	22.55	22.33	22.38	21.89	0-1	1
	1	12	22.70	22.60	22.47	22.44	22.12		1
	1	24	22.80	22.54	22.59	22.57	22.18		1
	12	0	21.47	20.87	21.02	21.01	20.90	0-2	2
	12	6	21.39	20.88	21.11	21.17	20.77		2
	12	13	21.41	20.90	20.99	21.15	20.78		2
	25	0	21.14	20.87	21.02	21.13	20.88		2
64QAM	1	0	21.80	20.89	20.87	21.17	20.70	0-2	2
	1	12	21.77	20.70	20.90	21.19	20.66		2
	1	24	21.81	20.76	20.89	21.16	20.65		2
	12	0	20.58	20.46	20.45	20.50	20.47	0-3	3
	12	6	20.54	20.47	20.56	20.68	20.40		3
	12	13	20.52	20.43	20.50	20.56	20.50		3
	25	0	20.45	20.44	20.58	20.54	20.44		3
256QAM	1	0	18.13	18.00	18.14	18.18	18.15	0-5	5
	1	12	18.25	18.05	18.25	18.11	18.19		5
	1	24	18.21	18.03	18.14	18.20	18.12		5
	12	0	18.23	18.05	18.25	17.99	17.89		5
	12	6	18.20	18.25	18.18	18.02	17.99		5
	12	13	18.27	18.15	18.30	18.04	17.95		5
	25	0	18.00	18.08	18.28	18.07	18.03		5

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Table 9-87
LTE Band 41 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	**21.21**	20.94	20.70	20.42	20.24	0	0
	1	50	21.11	20.95	20.86	20.55	20.55		0
	1	99	21.08	20.90	20.50	20.16	20.43		0
	50	0	**21.31**	20.98	20.92	20.56	20.48	0-1	0
	50	25	21.30	21.07	21.03	20.69	20.63		0
	50	50	21.24	21.03	20.94	20.49	20.69		0
	100	0	21.20	20.94	20.93	20.61	20.56		0
16QAM	1	0	21.24	21.09	20.68	20.56	20.43	0-1	0
	1	50	21.20	21.01	20.93	20.16	20.23		0
	1	99	21.16	21.06	20.53	20.15	20.60		0
	50	0	21.19	20.94	20.93	20.49	20.45	0-2	0
	50	25	21.18	21.02	21.08	20.61	20.58		0
	50	50	21.13	20.94	20.93	20.46	20.60		0
	100	0	21.14	20.92	21.01	20.55	20.62		0
64QAM	1	0	20.89	20.57	20.29	19.98	19.82	0-2	0
	1	50	20.76	20.58	20.59	20.18	20.23		0
	1	99	20.76	20.56	20.19	19.70	20.23		0
	50	0	20.27	19.96	19.91	19.50	19.49	0-3	1
	50	25	20.26	20.05	20.07	19.66	19.63		1
	50	50	20.20	20.00	19.93	19.48	19.67		1
	100	0	20.15	19.91	19.90	19.57	19.43		1
256QAM	1	0	17.74	17.47	17.49	17.22	17.00	0-5	3
	1	50	18.04	17.41	17.79	17.42	16.99		3
	1	99	17.76	17.33	17.40	16.96	17.37		3
	50	0	18.19	17.86	17.89	17.55	17.47		3
	50	25	18.29	18.00	18.05	17.69	17.63		3
	50	50	18.22	17.87	17.94	17.45	17.28		3
	100	0	18.14	17.92	17.93	17.51	17.50		3

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Table 9-88
LTE Band 41 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.58	21.36	20.64	20.82	20.56	0	0
	1	36	21.62	21.58	20.82	20.70	20.82		0
	1	74	21.30	21.11	20.62	20.79	20.97		0
	36	0	21.50	21.38	21.01	20.96	20.88	0-1	0
	36	18	21.41	21.28	20.87	21.02	20.98		0
	36	37	21.39	21.22	20.88	20.96	21.09		0
	75	0	21.61	21.54	20.78	20.97	20.93		0
16QAM	1	0	21.22	21.28	20.87	20.94	20.60	0-1	0
	1	36	21.26	21.28	20.90	21.03	21.03		0
	1	74	21.19	21.22	20.82	20.69	20.89		0
	36	0	21.29	21.21	20.90	20.86	20.77	0-2	0
	36	18	21.68	21.58	21.01	20.88	20.92		0
	36	37	21.60	21.50	20.99	20.88	21.00		0
	75	0	21.48	21.48	20.69	20.93	20.85		0
64QAM	1	0	21.50	20.78	21.08	20.69	20.89	0-2	0
	1	36	21.49	21.08	20.92	20.86	20.68		0
	1	74	21.44	20.77	20.74	20.67	20.48		0
	36	0	20.62	20.43	20.30	19.87	19.82	0-3	1
	36	18	20.42	20.40	20.31	19.91	19.94		1
	36	37	20.59	20.44	20.29	19.85	19.98		1
	75	0	20.53	20.49	20.30	19.95	19.87		1
256QAM	1	0	18.80	17.85	18.21	17.99	17.14	0-5	3
	1	36	18.45	18.12	18.04	18.13	17.56		3
	1	74	18.64	17.83	18.05	17.86	17.55		3
	36	0	18.46	18.10	18.02	17.85	17.79		3
	36	18	18.33	18.20	17.98	17.90	17.98		3
	36	37	18.39	18.01	18.12	17.89	18.02		3
	75	0	18.36	18.18	18.08	17.94	17.91		3

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Table 9-89
LTE Band 41 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.50	21.20	20.63	20.89	20.72	0	0
	1	25	21.23	21.11	20.80	21.07	20.99		0
	1	49	21.24	21.28	20.73	20.99	20.73		0
	25	0	21.45	21.01	20.80	20.98	20.86	0-1	0
	25	12	21.27	21.25	20.75	20.87	20.94		0
	25	25	21.36	21.30	20.88	20.92	20.97		0
	50	0	21.42	21.29	20.91	21.05	20.91		0
16QAM	1	0	21.43	21.12	20.70	21.25	20.62	0-1	0
	1	25	21.47	20.99	20.73	21.43	20.95		0
	1	49	21.36	20.97	20.88	21.09	20.65		0
	25	0	21.40	21.32	20.63	20.92	20.70	0-2	0
	25	12	21.49	21.25	20.74	20.94	20.76		0
	25	25	21.32	21.24	20.63	20.96	20.74		0
	50	0	21.29	21.30	20.65	20.94	20.78		0
64QAM	1	0	21.10	20.76	20.89	20.45	20.17	0-2	0
	1	25	21.07	21.02	20.78	20.50	20.55		0
	1	49	21.05	20.89	20.63	20.71	20.22		0
	25	0	20.32	20.11	20.11	19.96	19.79	0-3	1
	25	12	20.49	20.27	20.09	20.01	19.90		1
	25	25	20.43	20.18	20.10	19.98	19.92		1
	50	0	20.28	20.07	20.13	19.92	19.84		1
256QAM	1	0	18.19	18.26	17.81	18.04	17.83	0-5	3
	1	25	18.12	18.14	17.92	17.86	17.84		3
	1	49	18.18	18.00	17.66	17.89	17.96		3
	25	0	18.25	18.01	18.10	17.82	17.85		3
	25	12	18.28	18.25	18.19	17.90	17.95		3
	25	25	18.30	18.16	18.20	17.96	17.91		3
	50	0	18.27	18.14	18.21	17.93	17.89		3

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Table 9-90
LTE Band 41 Measured P_{Limit} for DSI = 3 (Hotspot Mode) - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.37	21.10	21.24	20.70	20.49	0	0
	1	12	21.35	20.85	21.12	20.69	20.86		0
	1	24	21.36	20.89	20.96	20.70	20.90		0
	12	0	21.30	20.67	20.93	20.90	20.87	0-1	0
	12	6	21.28	20.87	21.02	20.85	20.91		0
	12	13	21.38	20.93	20.87	20.89	20.78		0
	25	0	21.40	21.10	20.78	21.01	20.93		0
16QAM	1	0	21.47	20.67	20.93	20.93	20.97	0-1	0
	1	12	21.42	20.87	20.84	20.88	20.91		0
	1	24	21.39	20.79	21.13	20.83	20.92		0
	12	0	21.28	20.75	21.02	20.87	20.89	0-2	0
	12	6	21.05	20.65	21.09	20.86	21.11		0
	12	13	21.03	20.66	21.04	20.97	20.90		0
	25	0	21.41	20.77	20.96	20.79	20.92		0
64QAM	1	0	21.12	20.79	21.00	20.89	20.77	0-2	0
	1	12	21.05	20.70	21.09	20.94	20.78		0
	1	24	21.11	20.67	20.93	20.82	20.68		0
	12	0	20.10	20.12	20.00	19.98	19.88	0-3	1
	12	6	20.07	20.11	19.98	20.14	19.91		1
	12	13	20.14	20.12	20.01	20.22	19.84		1
	25	0	20.25	20.18	20.18	19.89	19.91		1
256QAM	1	0	18.10	17.89	18.14	17.63	17.63	0-5	3
	1	12	18.22	17.92	17.96	17.63	17.74		3
	1	24	17.99	17.89	18.10	17.60	17.65		3
	12	0	18.12	18.12	18.15	17.96	17.86		3
	12	6	18.23	18.08	18.12	18.00	17.93		3
	12	13	18.29	18.11	18.26	18.02	17.97		3
	25	0	18.23	17.96	18.26	18.04	17.91		3

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9.4.11 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-91
LTE Uplink Carrier Aggregation Measured P_{max} for LTE Band 5/66/48 DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) or LTE Band 5/48 DSI = 1, 3, 4 (Phablet with grip sensor active, Hotspot mode, Earjack active) LTE Band 5/66 DSI = 2 (Head)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_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	24.88	24.71

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	1	99	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	1	0	23.90	23.66
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	24.16	23.78
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	1	49	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	1	0	24.09	23.85
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	23.80	23.69

	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	0	LTE B48	20	56009	3626.9	QPSK	1	99	23.98	24.19

Table 9-92
LTE Uplink Carrier Aggregation Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720	66536	2120	QPSK	100	0	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	100	0	20.42	20.37
CA_66B	LTE B66	10	132022	1715	66486	2115	QPSK	50	0	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	50	0	20.62	20.55

Table 9-93
LTE Uplink Carrier Aggregation Measured P_{limit} for DSI = 2 (Head)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	56640	3690.0	QPSK	50	0	LTE B48	20	56442	3670.2	QPSK	50	50	18.30	18.25

Table 9-94
LTE Uplink Carrier Aggregation Measured P_{limit} for DSI = 3 (Hotspot mode)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	19.08	18.88
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	19.12	19.15

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Notes:

1. This device supports uplink carrier aggregation for LTE CA_5B, LTE CA_66B, LTE CA_66C, and LTE CA_ 48C 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.

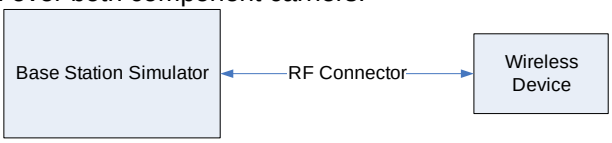


Figure 9-4
Power Measurement Setup

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9.5 NR Conducted Powers

9.5.1 NR Band n5

Table 9-95
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	25.32	0	0
	1	53	25.20		0
	1	104	24.98		0
	50	0	24.61	0-0.5	0.5
	50	28	25.17	0	0
	50	56	24.59	0-0.5	0.5
	100	0	24.69		0.5
DFT-s-OFDM QPSK	1	1	**25.33**	0	0
	1	53	25.32		0
	1	104	24.97		0
	50	0	24.16	0-1	1
	50	28	**25.16**	0	0
	50	56	24.06	0-1	1
	100	0	24.17		1
DFT-s-OFDM 16QAM	1	1	24.32	0-1	1
CP-OFDM QPSK	1	1	23.71	0-1.5	1.5

Note: NR Band n5 (Cell) at 20 MHz bandwidth does 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.

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Table 9-96
NR Band n5 Measured P_{max} for all DSI - 15 MHz Bandwidth

NR Band n5 15 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 $\pi/2$ BPSK	1	1	25.21	0	0
	1	40	25.13		0
	1	77	25.08		0
	36	0	24.71	0-0.5	0.5
	36	22	25.11	0	0
	36	43	24.59	0-0.5	0.5
	75	0	24.64		0.5
DFT-s-OFDM QPSK	1	1	25.30	0	0
	1	40	25.11		0
	1	77	24.87		0
	36	0	24.26	0-1	1
	36	22	25.13	0	0
	36	43	24.08	0-1	1
	75	0	24.12		1
DFT-s-OFDM 16QAM	1	1	24.15	0-1	1
CP-OFDM QPSK	1	1	23.75	0-1.5	1.5

Note: NR Band n5 (Cell) at 15 MHz bandwidth does 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.

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Table 9-97
NR Band n5 Measured P_{max} for all DSI - 10 MHz Bandwidth

NR Band n5 10 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 $\pi/2$ BPSK	1	1	24.63	0	0
	1	26	24.63		0
	1	50	24.22		0
	25	0	24.56	0-0.5	0.5
	25	14	24.46	0	0
	25	27	24.65	0-0.5	0.5
	50	0	24.48		0.5
DFT-s-OFDM QPSK	1	1	24.91	0	0
	1	26	24.61		0
	1	50	24.27		0
	25	0	23.53	0-1	1
	25	14	24.31	0	0
	25	27	23.94	0-1	1
	50	0	23.63		1
DFT-s-OFDM 16QAM	1	1	23.81	0-1	1
CP-OFDM QPSK	1	1	23.39	0-1.5	1.5

Note: NR Band n5 (Cell) at 10 MHz bandwidth does 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.

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Table 9-98
NR Band n5 Measured P_{max} for all DSI - 5 MHz Bandwidth

NR Band n5 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	165300 (826.5 MHz)	167300 (836.5 MHz)	169300 (846.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.78	24.41	25.02	0	0
	1	13	24.67	24.71	24.83		0
	1	23	24.45	24.47	24.43		0
	12	0	23.67	24.04	23.97	0-0.5	0.5
	12	7	24.07	24.53	24.96	0	0
	12	13	23.73	24.45	24.38	0-0.5	0.5
	25	0	23.90	24.52	24.75		0.5
DFT-s-OFDM QPSK	1	1	24.76	24.87	24.98	0	0
	1	13	24.59	24.66	24.76		0
	1	23	24.30	24.41	24.60		0
	12	0	23.36	23.91	23.98	0-1	1
	12	7	24.44	24.93	24.88	0	0
	12	13	23.06	23.76	23.38	0-1	1
	25	0	23.87	24.32	23.80		1
DFT-s-OFDM 16QAM	1	1	23.59	23.96	23.92	0-1	1
CP-OFDM QPSK	1	1	23.15	23.11	22.86	0-1.5	1.5

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9.5.2 NR Band n66

Table 9-99
NR Band n66 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.06	24.03	23.96	0	0
	1	53	24.01	24.09	23.86		0
	1	104	24.05	23.92	23.92		0
	50	0	23.55	23.52	23.51	0-0.5	0.5
	50	28	24.01	23.97	23.98	0	0
	50	56	23.51	23.43	23.40	0-0.5	0.5
	100	0	23.48	23.52	23.45		0.5
DFT-s-OFDM QPSK	1	1	24.19	23.55	23.38	0	0
	1	53	24.01	**24.20**	24.04		0
	1	104	23.66	23.91	23.56		0
	50	0	22.92	22.96	22.52	0-1	1
	50	28	23.61	**24.13**	23.90	0	0
	50	56	22.44	22.96	22.74	0-1	1
	100	0	22.66	22.92	22.72		1
DFT-s-OFDM 16QAM	1	1	23.15	22.65	22.37	0-1	1
CP-OFDM QPSK	1	1	22.48	22.05	21.92	0-1.5	1.5

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Table 9-100
NR Band n66 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

NR Band n66 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343500 (1717.5 MHz)	349000 (1745 MHz)	354500 (1772.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.11	24.04	23.91	0	0
	1	40	23.91	23.95	23.84		0
	1	77	24.12	24.01	23.89		0
	36	0	23.55	23.51	23.45	0-0.5	0.5
	36	22	23.98	24.02	23.85	0	0
	36	43	23.56	23.53	23.41	0-0.5	0.5
	75	0	23.48	23.47	23.37		0.5
DFT-s-OFDM QPSK	1	1	23.77	23.97	23.60	0	0
	1	40	23.81	24.05	23.79		0
	1	77	23.36	24.07	23.78		0
	36	0	22.85	23.02	22.76	0-1	1
	36	22	23.74	23.99	23.89	0	0
	36	43	22.47	22.95	22.73	0-1	1
	75	0	22.61	22.96	22.73		1
DFT-s-OFDM 16QAM	1	1	22.79	23.12	22.63	0-1	1
CP-OFDM QPSK	1	1	22.25	22.50	22.12	0-1.5	1.5

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Table 9-101
NR Band n66 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

NR Band n66 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343000 (1715 MHz)	349000 (1745 MHz)	355000 (1775 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.36	24.05	23.96	0	0
	1	26	24.38	24.13	23.95		0
	1	50	24.27	23.90	23.85		0
	25	0	23.63	23.28	23.24	0-0.5	0.5
	25	14	24.23	23.97	23.86	0	0
	25	27	23.70	23.32	23.21	0-0.5	0.5
	50	0	23.59	23.34	23.30		0.5
DFT-s-OFDM QPSK	1	1	23.85	23.93	23.64	0	0
	1	26	24.01	24.14	23.91		0
	1	50	23.91	24.10	23.35		0
	25	0	23.02	22.84	22.74	0-1	1
	25	14	23.95	23.95	23.67	0	0
	25	27	22.87	22.92	22.37	0-1	1
	50	0	22.86	22.83	22.66		1
DFT-s-OFDM 16QAM	1	1	22.66	22.77	22.43	0-1	1
CP-OFDM QPSK	1	1	22.48	22.17	21.86	0-1.5	1.5

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Table 9-102
NR Band n66 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

NR Band n66 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	342500 (1712.5 MHz)	349000 (1745 MHz)	355500 (1777.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.22	24.07	23.86	0	0
	1	13	24.28	24.02	23.91		0
	1	23	24.22	23.99	23.92		0
	12	0	23.64	23.33	23.28	0-0.5	0.5
	12	7	24.27	23.93	23.83	0	0
	12	13	23.58	23.33	23.21	0-0.5	0.5
	25	0	23.54	23.31	23.20		0.5
DFT-s-OFDM QPSK	1	1	23.99	24.07	23.49	0	0
	1	13	24.13	24.08	23.50		0
	1	23	24.10	24.07	23.21		0
	12	0	23.04	22.86	22.69	0-1	1
	12	7	24.13	23.90	23.52	0	0
	12	13	23.01	22.88	22.45	0-1	1
	25	0	22.93	22.87	22.46		1
DFT-s-OFDM 16QAM	1	1	22.88	22.74	22.55	0-1	1
CP-OFDM QPSK	1	1	22.36	22.36	21.82	0-1.5	1.5

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Table 9-103
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.86	18.70	18.34	0	0
	1	53	18.76	18.53	18.30		0
	1	104	18.51	18.38	18.23		0
	50	0	18.64	18.59	18.32	0-0.5	0
	50	28	18.67	18.55	18.30	0	0
	50	56	18.59	18.45	18.13	0-0.5	0
	100	0	18.68	18.55	18.31		0
DFT-s-OFDM QPSK	1	1	18.62	18.56	18.40	0	0
	1	53	**18.95**	18.69	18.53		0
	1	104	18.56	18.36	18.19		0
	50	0	**18.70**	18.60	18.27	0-1	0
	50	28	18.59	18.53	18.21	0	0
	50	56	18.66	18.42	18.23	0-1	0
	100	0	18.67	18.56	18.26		0
DFT-s-OFDM 16QAM	1	1	19.15	18.91	18.62	0-1	0
CP-OFDM QPSK	1	1	18.87	18.69	18.30	0-1.5	0

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Table 9-104
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode) - 15 MHz Bandwidth

NR Band n66 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343500 (1717.5 MHz)	349000 (1745 MHz)	354500 (1772.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.83	18.79	18.43	0	0
	1	40	18.71	18.57	18.40		0
	1	77	18.81	18.61	18.23		0
	36	0	18.79	18.65	18.40	0-0.5	0
	36	22	18.73	18.56	18.31	0	0
	36	43	18.71	18.52	18.35	0-0.5	0
	75	0	18.73	18.62	18.39		0
DFT-s-OFDM QPSK	1	1	18.82	18.62	18.12	0	0
	1	40	18.62	18.53	18.14		0
	1	77	18.73	18.64	18.24		0
	36	0	18.81	18.60	18.38	0-1	0
	36	22	18.75	18.56	18.30	0	0
	36	43	18.71	18.54	18.33	0-1	0
	75	0	18.76	18.62	18.33		0
DFT-s-OFDM 16QAM	1	1	18.93	19.13	18.59	0-1	0
CP-OFDM QPSK	1	1	18.74	18.77	18.20	0-1.5	0

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Table 9-105
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode) - 10 MHz Bandwidth

NR Band n66 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343000 (1715 MHz)	349000 (1745 MHz)	355000 (1775 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.80	18.66	18.49	0	0
	1	26	18.72	18.62	18.54		0
	1	50	18.70	18.53	18.49		0
	25	0	18.71	18.48	18.42	0-0.5	0
	25	14	18.67	18.47	18.45	0	0
	25	27	18.61	18.46	18.37	0-0.5	0
	50	0	18.67	18.43	18.38		0
DFT-s-OFDM QPSK	1	1	18.83	18.62	18.42	0	0
	1	26	19.18	18.98	18.96		0
	1	50	18.70	18.56	18.42		0
	25	0	18.69	18.48	18.42	0-1	0
	25	14	18.66	18.47	18.35	0	0
	25	27	18.63	18.42	18.33	0-1	0
	50	0	18.72	18.45	18.39		0
DFT-s-OFDM 16QAM	1	1	18.82	18.52	18.55	0-1	0
CP-OFDM QPSK	1	1	18.88	18.63	18.44	0-1.5	0

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Table 9-106
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode) - 5 MHz Bandwidth

NR Band n66 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	342500 (1712.5 MHz)	349000 (1745 MHz)	355500 (1777.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.65	18.56	18.39	0	0
	1	13	18.68	18.52	18.40		0
	1	23	18.71	18.45	18.25		0
	12	0	18.70	18.53	18.31	0-0.5	0
	12	7	18.70	18.45	18.42	0	0
	12	13	18.65	18.45	18.29	0-0.5	0
	25	0	18.61	18.47	18.38		0
DFT-s-OFDM QPSK	1	1	18.90	18.63	18.42	0	0
	1	13	18.51	18.65	18.49		0
	1	23	18.41	18.62	18.31		0
	12	0	18.33	18.46	18.32	0-1	0
	12	7	18.43	18.57	18.41	0	0
	12	13	18.40	18.47	18.34	0-1	0
	25	0	18.41	18.45	18.40		0
DFT-s-OFDM 16QAM	1	1	18.86	18.57	18.63	0-1	0
CP-OFDM QPSK	1	1	18.74	18.33	18.34	0-1.5	0

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Table 9-107
NR Band n66 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.33	20.38	19.95	0	0
	1	53	20.24	20.27	19.94		0
	1	104	20.13	20.12	19.87		0
	50	0	20.25	20.21	20.04	0-0.5	0
	50	28	20.15	20.16	19.92	0	0
	50	56	20.11	20.08	19.85	0-0.5	0
	100	0	20.17	20.16	19.93		0
DFT-s-OFDM QPSK	1	1	20.32	20.23	19.95	0	0
	1	53	**20.42**	20.33	20.10		0
	1	104	20.12	20.07	19.82		0
	50	0	**20.41**	20.39	20.19	0-1	0
	50	28	20.17	20.15	19.85	0	0
	50	56	20.09	20.05	19.82	0-1	0
	100	0	20.38	20.25	20.01		0
DFT-s-OFDM 16QAM	1	1	20.69	20.49	20.36	0-1	0
CP-OFDM QPSK	1	1	20.35	20.28	19.92	0-1.5	0

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Table 9-108
NR Band n66 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

NR Band n66 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343500 (1717.5 MHz)	349000 (1745 MHz)	354500 (1772.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.41	20.30	19.98	0	0
	1	40	20.37	20.17	19.86		0
	1	77	20.23	20.11	19.80		0
	36	0	20.28	20.15	19.90	0-0.5	0
	36	22	20.22	20.04	19.81	0	0
	36	43	20.23	20.05	19.80	0-0.5	0
	75	0	20.29	20.14	19.84		0
DFT-s-OFDM QPSK	1	1	20.30	20.14	19.86	0	0
	1	40	20.23	20.03	19.76		0
	1	77	20.25	20.06	19.94		0
	36	0	20.36	20.13	19.92	0-1	0
	36	22	20.25	20.04	19.77	0	0
	36	43	20.25	20.08	19.79	0-1	0
	75	0	20.21	20.13	19.85		0
DFT-s-OFDM 16QAM	1	1	20.72	20.53	20.32	0-1	0
CP-OFDM QPSK	1	1	20.31	20.19	19.92	0-1.5	0

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Table 9-109
NR Band n66 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

NR Band n66 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343000 (1715 MHz)	349000 (1745 MHz)	355000 (1775 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.34	20.10	20.07	0	0
	1	26	20.37	20.16	20.11		0
	1	50	20.21	20.06	19.83		0
	25	0	20.14	20.05	19.83	0-0.5	0
	25	14	20.18	20.05	19.81	0	0
	25	27	20.21	19.97	19.80	0-0.5	0
	50	0	20.22	20.03	19.85		0
DFT-s-OFDM QPSK	1	1	20.32	20.08	19.89	0	0
	1	26	20.87	20.56	20.30		0
	1	50	20.22	20.02	19.93		0
	25	0	20.23	20.05	19.83	0-1	0
	25	14	20.19	20.07	19.87	0	0
	25	27	20.19	20.00	19.79	0-1	0
	50	0	20.22	19.98	19.83		0
DFT-s-OFDM 16QAM	1	1	20.39	20.09	20.04	0-1	0
CP-OFDM QPSK	1	1	20.15	20.24	19.71	0-1.5	0

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Table 9-110
NR Band n66 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

NR Band n66 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	342500 (1712.5 MHz)	349000 (1745 MHz)	355500 (1777.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.22	20.11	19.77	0	0
	1	13	20.17	20.15	19.69		0
	1	23	20.19	20.00	19.89		0
	12	0	20.20	19.97	19.77	0-0.5	0
	12	7	20.16	20.06	19.87	0	0
	12	13	20.17	20.04	19.85	0-0.5	0
	25	0	20.20	19.92	19.79		0
DFT-s-OFDM QPSK	1	1	20.12	20.12	19.83	0	0
	1	13	20.35	20.20	19.84		0
	1	23	20.20	20.05	19.72		0
	12	0	20.21	19.97	19.84	0-1	0
	12	7	20.28	20.06	19.87	0	0
	12	13	20.15	20.01	19.80	0-1	0
	25	0	20.15	19.97	19.79		0
DFT-s-OFDM 16QAM	1	1	20.41	20.02	20.03	0-1	0
CP-OFDM QPSK	1	1	20.13	19.91	19.90	0-1.5	0

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9.5.3 NR Band n2

Table 9-111
NR Band n2 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 20 MHz Bandwidth

NR Band n2 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376000 (1880 MHz)	380000 (1900 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.76	23.63	23.69	0	0
	1	53	23.72	23.66	23.55		0
	1	104	23.69	23.62	23.49		0
	50	0	23.22	23.25	23.17	0-0.5	0.5
	50	28	23.62	23.67	23.53	0	0
	50	56	23.12	23.13	23.05	0-0.5	0.5
	100	0	23.16	23.17	23.04		0.5
DFT-s-OFDM QPSK	1	1	23.52	23.72	23.58	0	0
	1	53	23.88	**23.95**	23.94		0
	1	104	23.79	23.50	23.61		0
	50	0	22.67	22.72	22.57	0-1	1
	50	28	**23.67**	23.66	23.51	0	0
	50	56	22.73	22.61	22.55	0-1	1
	100	0	22.63	22.68	22.59		1
DFT-s-OFDM 16QAM	1	1	22.39	22.63	22.55	0-1	1
CP-OFDM QPSK	1	1	22.04	22.05	22.01	0-1.5	1.5

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Table 9-112
NR Band n2 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

NR Band n2 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376000 (1880 MHz)	380500 (1902.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.75	23.77	23.56	0	0
	1	40	23.63	23.56	23.40		0
	1	77	23.70	23.61	23.42		0
	36	0	23.23	23.15	22.94	0-0.5	0.5
	36	22	23.66	23.58	23.46	0	0
	36	43	23.10	23.11	22.96	0-0.5	0.5
	75	0	23.15	23.03	22.98		0.5
DFT-s-OFDM QPSK	1	1	23.66	23.74	23.39	0	0
	1	40	23.71	23.63	23.37		0
	1	77	23.61	23.64	23.43		0
	36	0	22.73	22.71	22.52	0-1	1
	36	22	23.67	23.59	23.44	0	0
	36	43	22.65	22.64	22.45	0-1	1
	75	0	22.69	22.66	22.46		1
DFT-s-OFDM 16QAM CP-OFDM QPSK	1	1	22.60	22.70	22.49	0-1	1
	1	1	22.10	21.98	22.03	0-1.5	1.5

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Table 9-113
NR Band n2 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

NR Band n2 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376000 (1880 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.78	23.74	23.71	0	0
	1	26	24.09	24.04	24.03		0
	1	50	23.92	23.83	23.77		0
	25	0	23.12	23.13	23.01	0-0.5	0.5
	25	14	23.79	23.75	23.65	0	0
	25	27	23.14	23.14	23.11	0-0.5	0.5
	50	0	23.18	23.17	23.03		0.5
DFT-s-OFDM QPSK	1	1	23.53	23.83	23.84	0	0
	1	26	23.83	23.96	23.88		0
	1	50	23.85	23.88	23.74		0
	25	0	22.52	22.78	22.62	0-1	1
	25	14	23.77	23.76	23.64	0	0
	25	27	22.75	22.78	22.67	0-1	1
	50	0	22.64	22.76	22.57		1
DFT-s-OFDM 16QAM	1	1	22.66	22.77	22.64	0-1	1
CP-OFDM QPSK	1	1	22.22	22.32	22.04	0-1.5	1.5

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Table 9-114
NR Band n2 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

NR Band n2 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376000 (1880 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.75	23.81	23.56	0	0
	1	13	23.83	23.82	23.68		0
	1	23	23.82	23.72	23.59		0
	12	0	23.15	23.12	22.95	0-0.5	0.5
	12	7	23.73	23.73	23.68	0	0
	12	13	23.56	23.07	22.98	0-0.5	0.5
	25	0	23.04	23.08	22.91		0.5
DFT-s-OFDM QPSK	1	1	23.41	23.88	23.72	0	0
	1	13	23.55	23.76	23.72		0
	1	23	23.62	23.67	23.71		0
	12	0	22.39	22.68	22.63	0-1	1
	12	7	23.45	23.71	23.56	0	0
	12	13	22.63	22.69	22.64	0-1	1
	25	0	22.45	22.71	22.60		1
DFT-s-OFDM 16QAM	1	1	22.62	22.58	22.45	0-1	1
CP-OFDM QPSK	1	1	22.15	22.25	22.02	0-1.5	1.5

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Table 9-115
NR Band n2 Measured P_{limit} for DSI = 3 (Hotspot mode) - 20 MHz Bandwidth

NR Band n2 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376000 (1880 MHz)	380000 (1900 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.20	18.25	18.16	0	0
	1	53	18.17	18.28	18.11		0
	1	104	18.14	18.33	18.06		0
	50	0	18.16	18.29	18.11	0-0.5	0
	50	28	18.09	18.15	18.05	0	0
	50	56	18.06	18.21	18.03	0-0.5	0
	100	0	18.11	18.31	18.08		0
DFT-s-OFDM QPSK	1	1	18.11	18.30	18.03	0	0
	1	53	18.43	**18.56**	18.32		0
	1	104	18.07	18.20	17.99		0
	50	0	18.20	**18.29**	18.15	0-1	0
	50	28	18.13	18.23	18.01	0	0
	50	56	18.07	18.26	18.04	0-1	0
	100	0	18.16	18.28	18.08		0
DFT-s-OFDM 16QAM	1	1	18.66	18.55	18.42	0-1	0
CP-OFDM QPSK	1	1	18.14	18.34	18.10	0-1.5	0

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Table 9-116
NR Band n2 Measured P_{limit} for DSI = 3 (Hotspot mode) - 15 MHz Bandwidth

NR Band n2 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376000 (1880 MHz)	380500 (1902.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.29	18.16	17.94	0	0
	1	40	18.05	18.19	17.89		0
	1	77	18.06	18.17	17.99		0
	36	0	18.15	18.16	17.91	0-0.5	0
	36	22	18.02	18.06	17.91	0	0
	36	43	17.97	18.09	17.92	0-0.5	0
	75	0	18.09	18.12	17.93		0
DFT-s-OFDM QPSK	1	1	18.19	18.23	18.01	0	0
	1	40	18.11	18.18	17.99		0
	1	77	18.11	18.31	18.14		0
	36	0	18.06	18.16	17.86	0-1	0
	36	22	18.00	18.05	17.82	0	0
	36	43	18.02	18.16	17.92	0-1	0
	75	0	18.10	18.15	17.87		0
DFT-s-OFDM 16QAM	1	1	18.30	18.20	17.91	0-1	0
CP-OFDM QPSK	1	1	18.03	18.04	17.93	0-1.5	0

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Table 9-117
NR Band n2 Measured P_{limit} for DSI = 3 (Hotspot mode) - 10 MHz Bandwidth

NR Band n2 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376000 (1880 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	17.90	18.14	18.03	0	0
	1	26	17.89	18.22	17.99		0
	1	50	17.99	18.25	18.02		0
	25	0	17.92	18.06	18.02	0-0.5	0
	25	14	17.88	18.03	18.07	0	0
	25	27	17.95	18.01	18.03	0-0.5	0
	50	0	17.97	18.05	17.92		0
DFT-s-OFDM QPSK	1	1	18.11	18.06	18.02	0	0
	1	26	18.42	18.53	18.48		0
	1	50	17.96	18.24	17.97		0
	25	0	17.97	18.03	17.94	0-1	0
	25	14	17.93	18.05	17.94	0	0
	25	27	18.00	18.01	17.95	0-1	0
	50	0	18.00	18.05	17.96		0
DFT-s-OFDM 16QAM	1	1	18.04	18.02	17.93	0-1	0
CP-OFDM QPSK	1	1	17.83	18.12	17.94	0-1.5	0

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Table 9-118
NR Band n2 Measured P_{limit} for DSI = 3 (Hotspot mode) - 5 MHz Bandwidth

NR Band n2 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376000 (1880 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.00	18.26	17.90	0	0
	1	13	17.95	18.20	17.91		0
	1	23	17.91	18.22	18.04		0
	12	0	17.92	18.06	17.91	0-0.5	0
	12	7	17.95	18.18	17.94	0	0
	12	13	17.93	18.14	17.90	0-0.5	0
	25	0	18.10	18.13	17.89		0
DFT-s-OFDM QPSK	1	1	18.07	18.34	18.00	0	0
	1	13	18.18	18.33	18.02		0
	1	23	18.14	18.22	18.08		0
	12	0	18.05	18.16	17.92	0-1	0
	12	7	18.05	18.22	18.01	0	0
	12	13	17.96	18.19	17.96	0-1	0
	25	0	17.96	18.15	17.93		0
DFT-s-OFDM 16QAM	1	1	18.10	18.22	17.84	0-1	0
CP-OFDM QPSK	1	1	17.99	18.09	17.83	0-1.5	0

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Table 9-119
NR Band n2 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n2 20 MHz Bandwidth							
			Channel				
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376000 (1880 MHz)	380000 (1900 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	19.76	19.83	19.72	0	0
	1	53	19.65	19.79	19.76		0
	1	104	19.71	19.65	19.56		0
	50	0	19.70	19.68	19.71	0-0.5	0
	50	28	19.62	19.71	19.61	0	0
	50	56	19.60	19.66	19.54	0-0.5	0
	100	0	19.67	19.71	19.59		0
DFT-s-OFDM QPSK	1	1	19.61	19.67	19.54	0	0
	1	53	19.96	**20.05**	19.82		0
	1	104	19.66	19.58	19.58		0
	50	0	19.73	**19.77**	19.66	0-1	0
	50	28	19.62	19.72	19.55	0	0
	50	56	19.58	19.67	19.59	0-1	0
	100	0	19.64	19.68	19.63		0
DFT-s-OFDM 16QAM	1	1	19.84	20.06	20.01	0-1	0
CP-OFDM QPSK	1	1	19.66	19.64	19.44	0-1.5	0

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Table 9-120
NR Band n2 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

NR Band n2 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376000 (1880 MHz)	380500 (1902.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	19.64	19.56	19.56	0	0
	1	40	19.57	19.47	19.39		0
	1	77	19.59	19.65	19.56		0
	36	0	19.59	19.64	19.47	0-0.5	0
	36	22	19.55	19.60	19.36	0	0
	36	43	19.52	19.60	19.42	0-0.5	0
	75	0	19.58	19.57	19.47		0
DFT-s-OFDM QPSK	1	1	19.73	19.69	19.60	0	0
	1	40	19.68	19.63	19.50		0
	1	77	19.66	19.71	19.51		0
	36	0	19.60	19.61	19.46	0-1	0
	36	22	19.54	19.57	19.34	0	0
	36	43	19.56	19.57	19.41	0-1	0
	75	0	19.60	19.59	19.42		0
DFT-s-OFDM 16QAM	1	1	19.67	19.61	19.58	0-1	0
CP-OFDM QPSK	1	1	19.51	19.37	19.45	0-1.5	0

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Table 9-121
NR Band n2 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

NR Band n2 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376000 (1880 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	19.60	19.72	19.54	0	0
	1	26	19.59	19.80	19.59		0
	1	50	19.54	19.77	19.42		0
	25	0	19.46	19.73	19.43	0-0.5	0
	25	14	19.48	19.68	19.43	0	0
	25	27	19.40	19.72	19.45	0-0.5	0
	50	0	19.50	19.68	19.50		0
DFT-s-OFDM QPSK	1	1	19.55	19.85	19.55	0	0
	1	26	19.92	20.15	20.06		0
	1	50	19.56	19.82	19.62		0
	25	0	19.46	19.66	19.44	0-1	0
	25	14	19.44	19.70	19.48	0	0
	25	27	19.38	19.65	19.41	0-1	0
	50	0	19.47	19.55	19.48		0
DFT-s-OFDM 16QAM	1	1	19.60	19.61	19.55	0-1	0
CP-OFDM QPSK	1	1	19.48	19.62	19.45	0-1.5	0

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Table 9-122
NR Band n2 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

NR Band n2 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376000 (1880 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	19.44	19.66	19.46	0	0
	1	13	19.56	19.65	19.49		0
	1	23	19.31	19.64	19.33		0
	12	0	19.49	19.54	19.51	0-0.5	0
	12	7	19.43	19.53	19.46	0	0
	12	13	19.47	19.54	19.41	0-0.5	0
	25	0	19.45	19.59	19.44		0
DFT-s-OFDM QPSK	1	1	19.62	19.67	19.59	0	0
	1	13	19.63	19.80	19.60		0
	1	23	19.58	19.80	19.60		0
	12	0	19.49	19.55	19.41	0-1	0
	12	7	19.49	19.60	19.53	0	0
	12	13	19.54	19.59	19.47	0-1	0
	25	0	19.42	19.62	19.43		0
DFT-s-OFDM 16QAM	1	1	19.46	19.51	19.37	0-1	0
CP-OFDM QPSK	1	1	19.51	19.46	19.47	0-1.5	0

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9.6 WLAN Conducted Powers

Table 9-123
2.4 GHz WLAN Maximum Average RF Power – Ant 1

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	20.39	18.49	18.40	15.17
2417	2	N/A	N/A	N/A	15.56
2437	6	20.26	18.48	18.48	15.01
2457	10	N/A	N/A	N/A	15.88
2462	11	20.65	18.24	18.47	12.95

Table 9-124
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	20.90	18.27	18.31	14.88
2417	2	N/A	N/A	N/A	15.21
2437	6	20.01	18.22	18.30	15.85
2457	10	N/A	N/A	N/A	15.80
2462	11	20.06	18.10	18.01	12.99

Table 9-125
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.40	18.31	21.37
2437	6	18.48	18.30	21.40
2462	11	18.47	18.01	21.26

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Table 9-126
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	17.66	17.62	17.67	14.19
5200	40	17.80	17.65	17.69	16.89
5220	44	17.96	17.67	17.65	16.96
5240	48	17.05	17.69	17.70	16.94
5260	52	17.27	17.18	17.17	16.63
5280	56	17.40	17.17	17.28	16.71
5300	60	17.35	17.11	17.32	16.81
5320	64	17.40	17.10	17.34	14.31
5500	100	17.32	17.98	17.22	16.63
5600	120	17.50	17.35	17.41	16.86
5620	124	17.54	17.47	17.37	16.86
5720	144	17.50	17.46	17.32	16.80
5745	149	17.58	17.55	17.45	16.98
5785	157	17.61	17.55	17.65	16.84
5825	165	17.58	17.46	17.46	16.79

Table 9-127
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	17.63	17.64	17.62	14.43
5200	40	17.69	17.77	17.69	16.34
5220	44	17.77	17.75	17.74	16.45
5240	48	17.80	17.83	17.85	16.50
5260	52	17.63	17.74	17.67	16.36
5280	56	17.78	17.80	17.95	16.50
5300	60	17.86	17.94	17.24	16.57
5320	64	17.96	17.89	17.19	14.59
5500	100	17.39	17.39	17.50	16.89
5600	120	17.45	17.44	17.52	16.88
5620	124	17.40	17.43	17.56	16.80
5720	144	17.18	17.18	17.34	16.62
5745	149	17.03	17.12	17.14	16.49
5785	157	17.04	17.99	17.12	16.45
5825	165	17.65	17.66	17.77	16.07

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Table 9-128
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.62	17.64	20.64
5200	40	17.65	17.77	20.72
5220	44	17.67	17.75	20.72
5240	48	17.69	17.83	20.77
5260	52	17.18	17.74	20.48
5280	56	17.17	17.80	20.51
5300	60	17.11	17.94	20.56
5320	64	17.10	17.89	20.52
5500	100	17.98	17.39	20.71
5600	120	17.35	17.44	20.41
5620	124	17.47	17.43	20.46
5720	144	17.46	17.18	20.33
5745	149	17.55	17.12	20.35
5785	157	17.55	17.99	20.79
5825	165	17.46	17.66	20.57

Table 9-129
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	14.48	14.04
2437	6	14.22	14.02
2462	11	14.36	13.84

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	13.99	13.64
5290	58	13.72	13.34
5530	106	13.33	13.23
5610	122	13.34	13.95
5690	138	13.46	13.90
5775	155	13.79	13.67

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Table 9-130
2.4 GHz WLAN Reduced Average RF Power (RCV Active) – Ant 1

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	13.88	14.47	14.48	13.67
2437	6	14.11	14.15	14.22	14.48
2462	11	14.23	14.33	14.36	12.90

Table 9-131
2.4 GHz WLAN Reduced Average RF Power (RCV Active) – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	14.03	14.05	14.04	14.34
2437	6	14.24	14.15	14.02	14.33
2462	11	13.91	13.94	13.84	12.25

Table 9-132
2.4 GHz WLAN Reduced Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	14.48	14.04	17.28
2437	6	14.22	14.02	17.13
2462	11	14.36	13.84	17.12

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Table 9-133
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	13.99	12.27
5290	58	13.72	10.92
5530	106	13.33	11.80
5610	122	13.34	13.56
5690	138	13.46	13.84
5775	155	13.79	13.11

Table 9-134
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	13.64	12.17
5290	58	13.34	10.57
5530	106	13.23	12.35
5610	122	13.95	13.38
5690	138	13.90	13.27
5775	155	13.67	13.93

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Table 9-135
5 GHz WLAN Reduced Average RF Power – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	13.99	13.64	16.83
5290	58	13.72	13.34	16.54
5530	106	13.33	13.23	16.29
5610	122	13.34	13.95	16.67
5690	138	13.46	13.90	16.70
5775	155	13.79	13.67	16.74

Table 9-136
Reduced Output Powers when RCV Active During Conditions with 2.4 GHz and 5 GHz WLAN

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	13.79	13.90
2437	6	13.45	13.89
2462	11	13.61	13.74

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	13.99	13.64
5290	58	13.72	13.34
5530	106	13.33	13.23
5610	122	13.34	13.95
5690	138	13.46	13.90
5775	155	13.79	13.67

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.

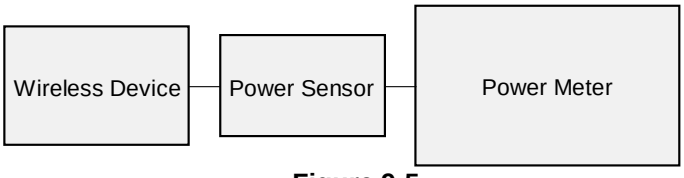


Figure 9-5
Power Measurement Setup

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9.7 Bluetooth Conducted Powers

Table 9-137
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	13.60	22.909
2441	1.0	39	15.17	32.876
2480	1.0	78	14.24	26.573
2402	2.0	0	10.84	12.121
2441	2.0	39	12.55	17.983
2480	2.0	78	10.35	10.848
2402	3.0	0	11.22	13.243
2441	3.0	39	12.64	18.379
2480	3.0	78	10.47	11.146

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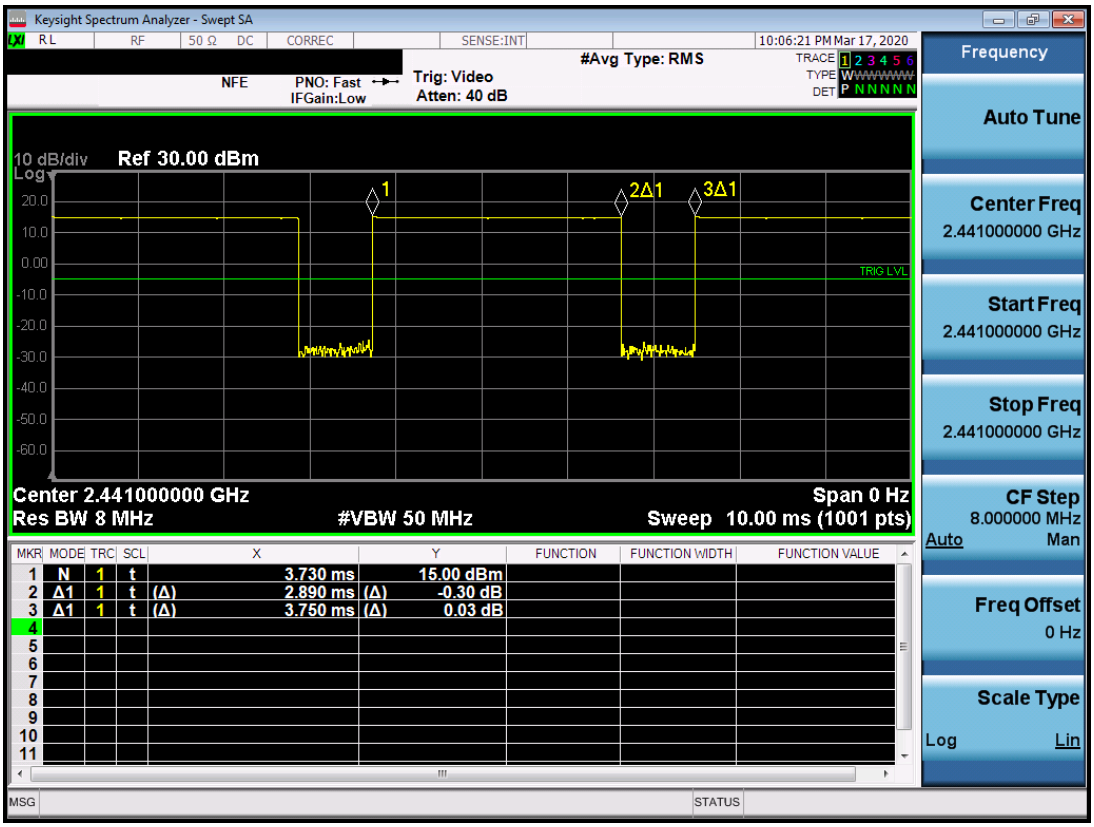


Figure 9-6
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

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

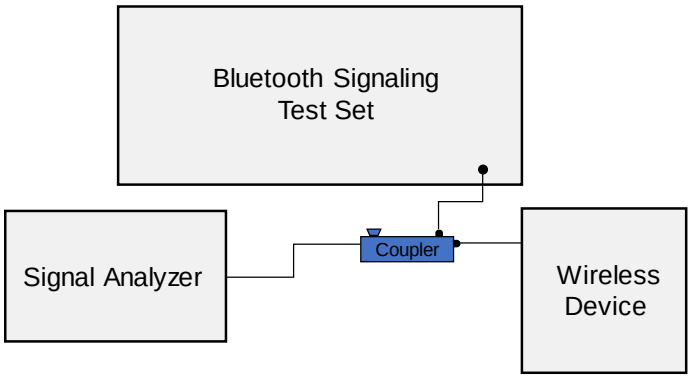


Figure 9-7
Power Measurement Setup

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10.1 Tissue Verification

Table 10-1
Measured Head Tissue Properties (1 of 2)

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
03/23/2020	750 Head	20.2	700	0.872	41.879	0.889	42.201	-1.91%	-0.76%
			710	0.875	41.848	0.890	42.149	-1.69%	-0.71%
			740	0.886	41.761	0.893	41.994	-0.78%	-0.55%
			750	0.889	41.735	0.894	41.942	-0.56%	-0.49%
			755	0.891	41.722	0.894	41.916	-0.34%	-0.46%
			770	0.896	41.682	0.895	41.838	0.11%	-0.37%
			785	0.901	41.640	0.896	41.760	0.56%	-0.29%
			800	0.906	41.594	0.897	41.682	1.00%	-0.21%
03/30/2020	750 Head	20.5	700	0.864	41.529	0.889	42.201	-2.81%	-1.59%
			710	0.867	41.503	0.890	42.149	-2.58%	-1.53%
			740	0.879	41.401	0.893	41.994	-1.57%	-1.41%
			750	0.883	41.359	0.894	41.942	-1.23%	-1.39%
			755	0.884	41.341	0.894	41.916	-1.12%	-1.37%
			770	0.890	41.294	0.895	41.838	-0.56%	-1.30%
			785	0.895	41.257	0.896	41.760	-0.11%	-1.20%
			800	0.901	41.228	0.897	41.682	0.45%	-1.09%
3/23/2020	835 Head	20.7	820	0.887	40.817	0.899	41.578	-1.33%	-1.83%
			835	0.895	40.771	0.900	41.500	-0.56%	-1.76%
			850	0.901	40.708	0.916	41.500	-1.64%	-1.91%
4/7/2020	835 Head	21.3	820	0.899	40.411	0.899	41.578	0.00%	-2.81%
			835	0.905	40.369	0.900	41.500	0.56%	-2.73%
			850	0.911	40.326	0.916	41.500	-0.55%	-2.83%
03/26/2020	1750 Head	19.7	1710	1.347	39.759	1.348	40.142	-0.07%	-0.95%
			1720	1.353	39.743	1.354	40.126	-0.07%	-0.95%
			1745	1.368	39.701	1.368	40.087	0.00%	-0.96%
			1750	1.371	39.692	1.371	40.079	0.00%	-0.97%
			1770	1.383	39.658	1.383	40.047	0.00%	-0.97%
			1790	1.396	39.632	1.394	40.016	0.14%	-0.96%
04/09/2020	1750 Head	22.7	1710	1.327	41.215	1.348	40.142	-1.56%	2.67%
			1720	1.338	41.166	1.354	40.126	-1.18%	2.59%
			1745	1.365	41.058	1.368	40.087	-0.22%	2.42%
			1750	1.370	41.037	1.371	40.079	-0.07%	2.39%
			1770	1.389	40.945	1.383	40.047	0.43%	2.24%
			1790	1.408	40.856	1.394	40.016	1.00%	2.10%
03/23/2020	1900 Head	22.0	1850	1.367	39.212	1.400	40.000	-2.36%	-1.97%
			1860	1.378	39.167	1.400	40.000	-1.57%	-2.08%
			1880	1.399	39.073	1.400	40.000	-0.07%	-2.32%
			1900	1.420	38.982	1.400	40.000	1.43%	-2.55%
			1905	1.425	38.961	1.400	40.000	1.79%	-2.60%
			1910	1.430	38.938	1.400	40.000	2.14%	-2.65%
03/26/2020	1900 Head	21.6	1850	1.395	39.719	1.400	40.000	-0.36%	-0.70%
			1860	1.406	39.678	1.400	40.000	0.43%	-0.81%
			1880	1.428	39.598	1.400	40.000	2.00%	-1.01%
			1900	1.449	39.516	1.400	40.000	3.50%	-1.21%
			1905	1.455	39.494	1.400	40.000	3.93%	-1.27%
			1910	1.460	39.473	1.400	40.000	4.29%	-1.32%
04/02/2020	1900 Head	22.0	1850	1.396	38.932	1.400	40.000	-0.29%	-2.67%
			1860	1.405	38.894	1.400	40.000	0.36%	-2.77%
			1880	1.430	38.807	1.400	40.000	2.14%	-2.98%
			1900	1.448	38.730	1.400	40.000	3.43%	-3.18%
			1905	1.453	38.689	1.400	40.000	3.79%	-3.28%
			1910	1.458	38.686	1.400	40.000	4.14%	-3.29%

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Table 10-2
Measured Head Tissue Properties (2 of 2)

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
3/25/2020	2450 Head	24.0	2400	1.766	38.561	1.756	39.289	0.57%	-1.85%
			2450	1.801	38.511	1.800	39.200	0.06%	-1.76%
			2500	1.834	38.437	1.855	39.136	-1.13%	-1.79%
			2510	1.841	38.419	1.866	39.123	-1.34%	-1.80%
3/30/2020	2450 Head	23.7	2400	1.785	37.700	1.756	39.289	1.65%	-4.04%
			2450	1.824	37.621	1.800	39.200	1.33%	-4.03%
			2500	1.858	37.530	1.855	39.136	0.16%	-4.10%
			2510	1.865	37.509	1.866	39.123	-0.05%	-4.13%
4/19/2020	2450 Head	23.0	2400	1.747	38.390	1.756	39.289	-0.51%	-2.29%
			2450	1.785	38.324	1.800	39.200	-0.83%	-2.23%
			2500	1.821	38.239	1.855	39.136	-1.83%	-2.29%
			2510	1.830	38.221	1.866	39.123	-1.93%	-2.31%
04/21/2020	2450 Head	23.0	2400	1.742	37.440	1.756	39.289	-0.80%	-4.71%
			2450	1.780	37.370	1.800	39.200	-1.11%	-4.67%
			2500	1.816	37.296	1.855	39.136	-2.10%	-4.70%
			2510	1.824	37.279	1.866	39.123	-2.25%	-4.71%
04/22/2020	3500-3700 Head	21.7	3500	2.944	37.906	2.913	37.929	1.06%	-0.06%
			3550	2.983	37.850	2.964	37.871	0.64%	-0.06%
			3560	2.991	37.835	2.974	37.860	0.57%	-0.07%
			3600	3.022	37.775	3.015	37.814	0.23%	-0.10%
			3650	3.065	37.727	3.066	37.757	-0.03%	-0.08%
			3690	3.096	37.652	3.107	37.711	-0.35%	-0.16%
			3700	3.106	37.638	3.117	37.700	-0.35%	-0.16%
04/13/2020	5200-5800 Head	21.0	5250	4.594	34.644	4.706	35.929	-2.38%	-3.58%
			5260	4.606	34.624	4.717	35.917	-2.35%	-3.60%
			5270	4.617	34.609	4.727	35.906	-2.33%	-3.61%
			5280	4.629	34.596	4.737	35.894	-2.28%	-3.62%
			5290	4.643	34.585	4.748	35.883	-2.21%	-3.62%
			5300	4.654	34.573	4.758	35.871	-2.19%	-3.62%
			5310	4.660	34.553	4.768	35.860	-2.27%	-3.64%
			5320	4.667	34.535	4.778	35.849	-2.32%	-3.67%
			5500	4.877	34.236	4.963	35.643	-1.73%	-3.95%
			5510	4.890	34.181	4.973	35.632	-1.67%	-4.07%
			5520	4.898	34.182	4.983	35.620	-1.71%	-4.04%
			5530	4.907	34.169	4.994	35.609	-1.74%	-4.04%
			5540	4.916	34.149	5.004	35.597	-1.76%	-4.07%
			5550	4.927	34.124	5.014	35.586	-1.74%	-4.11%
			5560	4.936	34.092	5.024	35.574	-1.75%	-4.17%
			5580	4.962	34.051	5.045	35.551	-1.65%	-4.22%
			5600	4.994	34.009	5.065	35.529	-1.40%	-4.28%
			5610	5.005	33.994	5.076	35.518	-1.40%	-4.29%
			5620	5.017	33.982	5.086	35.506	-1.36%	-4.29%
			5640	5.040	33.966	5.106	35.483	-1.29%	-4.28%
			5660	5.059	33.926	5.127	35.460	-1.33%	-4.33%
			5670	5.068	33.905	5.137	35.449	-1.34%	-4.36%
			5680	5.080	33.877	5.147	35.437	-1.30%	-4.40%
			5690	5.093	33.851	5.158	35.426	-1.26%	-4.45%
			5700	5.106	33.826	5.168	35.414	-1.20%	-4.48%
			5710	5.120	33.809	5.178	35.403	-1.12%	-4.50%
			5720	5.133	33.798	5.188	35.391	-1.06%	-4.50%
			5745	5.164	33.763	5.214	35.363	-0.96%	-4.52%
			5750	5.169	33.756	5.219	35.357	-0.96%	-4.53%
			5755	5.174	33.748	5.224	35.351	-0.96%	-4.53%
			5765	5.184	33.741	5.234	35.340	-0.96%	-4.52%
			5775	5.193	33.731	5.245	35.329	-0.99%	-4.52%

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Table 10-3
Measured Body Tissue Properties (1 of 3)

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
03/22/2020	750 Body	21.0	700	0.950	53.101	0.959	55.726	-0.94%	-4.71%
			710	0.955	53.062	0.960	55.687	-0.52%	-4.71%
			740	0.966	52.958	0.963	55.570	0.31%	-4.70%
			750	0.969	52.948	0.964	55.531	0.52%	-4.65%
			755	0.971	52.940	0.964	55.512	0.73%	-4.63%
			770	0.977	52.952	0.965	55.453	1.24%	-4.51%
			785	0.982	52.934	0.966	55.395	1.66%	-4.44%
			800	0.989	52.864	0.967	55.336	2.28%	-4.47%
04/08/2020	750 Body	21.8	700	0.964	53.805	0.959	55.726	0.52%	-3.45%
			710	0.967	53.777	0.960	55.687	0.73%	-3.43%
			750	0.982	53.700	0.964	55.531	1.87%	-3.30%
			770	0.990	53.665	0.965	55.453	2.59%	-3.22%
			785	0.996	53.627	0.966	55.395	3.11%	-3.19%
			800	1.002	53.581	0.967	55.336	3.62%	-3.17%
03/23/2020	835 Body	21.2	820	0.927	55.135	0.969	55.258	-4.33%	-0.22%
			835	0.945	54.979	0.970	55.200	-2.58%	-0.40%
			850	0.961	54.832	0.988	55.154	-2.73%	-0.58%
03/26/2020	835 Body	21.3	820	0.939	53.298	0.969	55.258	-3.10%	-3.55%
			835	0.955	53.145	0.970	55.200	-1.55%	-3.72%
			850	0.970	52.993	0.988	55.154	-1.82%	-3.92%
03/31/2020	835 Body	21.1	820	0.938	54.941	0.969	55.258	-3.20%	-0.57%
			835	0.954	54.800	0.970	55.200	-1.65%	-0.72%
			850	0.969	54.656	0.988	55.154	-1.92%	-0.90%
04/06/2020	835 Body	21.1	820	0.929	54.615	0.969	55.258	-4.13%	-1.16%
			835	0.946	54.461	0.970	55.200	-2.47%	-1.34%
			850	0.962	54.312	0.988	55.154	-2.63%	-1.53%
04/13/2020	835 Body	21.4	820	0.991	53.993	0.969	55.258	2.27%	-2.29%
			835	0.997	53.960	0.970	55.200	2.78%	-2.25%
			850	1.003	53.928	0.988	55.154	1.52%	-2.22%
04/15/2020	1750 Body	21.7	1710	1.433	54.078	1.463	53.537	-2.05%	1.01%
			1720	1.445	54.043	1.469	53.511	-1.63%	0.99%
			1745	1.475	53.947	1.485	53.445	-0.67%	0.94%
			1750	1.481	53.929	1.488	53.432	-0.47%	0.93%
			1770	1.503	53.858	1.501	53.379	0.13%	0.90%
			1790	1.524	53.774	1.514	53.326	0.66%	0.84%
04/20/2020	1750 Body	20.7	1710	1.464	53.630	1.463	53.537	0.07%	0.17%
			1720	1.477	53.592	1.469	53.511	0.54%	0.15%
			1745	1.506	53.504	1.485	53.445	1.41%	0.11%
			1750	1.512	53.486	1.488	53.432	1.61%	0.10%
			1770	1.534	53.407	1.501	53.379	2.20%	0.05%
			1790	1.555	53.320	1.514	53.326	2.71%	-0.01%
04/22/2020	1750 Body	21.1	1710	1.491	53.592	1.463	53.537	1.91%	0.10%
			1720	1.504	53.554	1.469	53.511	2.38%	0.08%
			1745	1.535	53.462	1.485	53.445	3.37%	0.03%
			1750	1.541	53.444	1.488	53.432	3.56%	0.02%
			1770	1.565	53.363	1.501	53.379	4.26%	-0.03%
			1790	1.588	53.277	1.514	53.326	4.89%	-0.09%
04/29/2020	1750 Body	22.2	1710	1.487	52.019	1.463	53.537	1.64%	-2.84%
			1720	1.498	51.988	1.469	53.511	1.97%	-2.85%
			1745	1.526	51.885	1.485	53.445	2.76%	-2.92%
			1750	1.532	51.860	1.488	53.432	2.96%	-2.94%
			1770	1.554	51.756	1.501	53.379	3.53%	-3.04%
			1790	1.575	51.661	1.514	53.326	4.03%	-3.12%

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Table 10-4
Measured Body Tissue Properties (2 of 3)

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
03/19/2020	1900 Body	23.8	1850	1.513	51.078	1.520	53.300	-0.46%	-4.17%
			1860	1.523	51.044	1.520	53.300	0.20%	-4.23%
			1880	1.544	50.975	1.520	53.300	1.58%	-4.36%
			1900	1.565	50.901	1.520	53.300	2.96%	-4.50%
			1905	1.571	50.882	1.520	53.300	3.36%	-4.54%
			1910	1.577	50.863	1.520	53.300	3.75%	-4.57%
03/22/2020	1900 Body	21.7	1850	1.524	51.557	1.520	53.300	0.26%	-3.27%
			1860	1.536	51.527	1.520	53.300	1.05%	-3.33%
			1880	1.560	51.450	1.520	53.300	2.63%	-3.47%
			1900	1.581	51.376	1.520	53.300	4.01%	-3.61%
			1905	1.587	51.357	1.520	53.300	4.41%	-3.65%
			1910	1.592	51.354	1.520	53.300	4.74%	-3.65%
04/12/2020	1900 Body	23.1	1850	1.507	55.220	1.520	53.300	-0.86%	3.60%
			1860	1.519	55.186	1.520	53.300	-0.07%	3.54%
			1880	1.542	55.126	1.520	53.300	1.45%	3.43%
			1900	1.565	55.055	1.520	53.300	2.96%	3.29%
			1905	1.571	55.036	1.520	53.300	3.36%	3.26%
			1910	1.577	55.018	1.520	53.300	3.75%	3.22%
04/16/2020	1900 Body	24.0	1850	1.506	54.490	1.520	53.300	-0.92%	2.23%
			1860	1.518	54.463	1.520	53.300	-0.13%	2.18%
			1880	1.540	54.408	1.520	53.300	1.32%	2.08%
			1900	1.564	54.343	1.520	53.300	2.89%	1.96%
			1905	1.570	54.326	1.520	53.300	3.29%	1.92%
			1910	1.576	54.308	1.520	53.300	3.68%	1.89%
04/19/2020	1900 Body	23.1	1850	1.522	54.462	1.520	53.300	0.13%	2.18%
			1860	1.534	54.432	1.520	53.300	0.92%	2.12%
			1880	1.557	54.375	1.520	53.300	2.43%	2.02%
			1900	1.581	54.312	1.520	53.300	4.01%	1.90%
			1905	1.586	54.294	1.520	53.300	4.34%	1.86%
			1910	1.592	54.278	1.520	53.300	4.74%	1.83%
04/21/2020	1900 Body	23.2	1850	1.508	55.639	1.520	53.300	-0.79%	4.39%
			1860	1.520	55.609	1.520	53.300	0.00%	4.33%
			1880	1.543	55.548	1.520	53.300	1.51%	4.22%
			1900	1.566	55.477	1.520	53.300	3.03%	4.08%
			1905	1.572	55.461	1.520	53.300	3.42%	4.05%
			1910	1.578	55.446	1.520	53.300	3.82%	4.03%
03/23/2020	2450 Body	22.6	2400	1.952	52.037	1.902	52.767	2.63%	-1.38%
			2450	2.010	51.889	1.950	52.700	3.08%	-1.54%
			2500	2.069	51.743	2.021	52.636	2.38%	-1.70%
			2510	2.081	51.711	2.035	52.623	2.26%	-1.73%
03/29/2020	2450 Body	23.9	2400	1.981	51.658	1.902	52.767	4.15%	-2.10%
			2450	2.042	51.503	1.950	52.700	4.72%	-2.27%
			2500	2.099	51.336	2.021	52.636	3.86%	-2.47%
			2510	2.110	51.301	2.035	52.623	3.69%	-2.51%
04/01/2020	2450 Body	22.0	2400	1.985	51.343	1.902	52.767	4.36%	-2.70%
			2450	2.043	51.186	1.950	52.700	4.77%	-2.87%
			2500	2.100	51.025	2.021	52.636	3.91%	-3.06%
			2510	2.112	50.992	2.035	52.623	3.78%	-3.10%
04/20/2020	2450 Body	22.2	2400	1.987	51.385	1.902	52.767	4.47%	-2.62%
			2450	2.046	51.245	1.950	52.700	4.92%	-2.76%
			2480	2.080	51.163	1.993	52.662	4.37%	-2.85%
			2500	2.104	51.100	2.021	52.636	4.11%	-2.92%
			2510	2.117	51.070	2.035	52.623	4.03%	-2.95%
			2535	2.148	50.996	2.071	52.592	3.72%	-3.03%
			2550	2.167	50.959	2.092	52.573	3.59%	-3.07%
			2560	2.180	50.936	2.106	52.560	3.51%	-3.09%
			2600	2.227	50.808	2.163	52.509	2.96%	-3.24%
			2650	2.290	50.632	2.234	52.445	2.51%	-3.46%
			2680	2.328	50.547	2.277	52.407	2.24%	-3.55%
			2700	2.352	50.489	2.305	52.382	2.04%	-3.61%
04/23/2020	2450 Body	23.0	2400	1.971	51.641	1.902	52.767	3.63%	-2.13%
			2450	2.029	51.509	1.950	52.700	4.05%	-2.26%
			2480	2.062	51.422	1.993	52.662	3.46%	-2.35%
			2500	2.086	51.361	2.021	52.636	3.22%	-2.42%
			2510	2.098	51.333	2.035	52.623	3.10%	-2.45%
			2535	2.128	51.265	2.071	52.592	2.75%	-2.52%
			2550	2.146	51.229	2.092	52.573	2.58%	-2.56%
			2560	2.159	51.206	2.106	52.560	2.52%	-2.58%
			2600	2.205	51.095	2.163	52.509	1.94%	-2.69%
			2650	2.268	50.932	2.234	52.445	1.52%	-2.88%
			2680	2.305	50.847	2.277	52.407	1.23%	-2.98%
			2700	2.328	50.787	2.305	52.382	1.00%	-3.04%
05/04/2020	2450 Body	23.1	2400	1.960	52.861	1.902	52.767	3.05%	0.18%
			2450	2.020	52.722	1.950	52.700	3.59%	0.04%
			2500	2.078	52.575	2.021	52.636	2.82%	-0.12%
			2510	2.091	52.542	2.035	52.623	2.75%	-0.15%

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Table 10-5
Measured Body Tissue Properties (3 of 3)

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
04/20/2020	3500-3700 Body	21.3	3500	3.394	50.043	3.314	51.321	2.41%	-2.49%
			3550	3.446	49.973	3.372	51.254	2.19%	-2.50%
			3560	3.457	49.958	3.384	51.240	2.16%	-2.50%
			3600	3.501	49.906	3.431	51.186	2.04%	-2.50%
			3650	3.552	49.833	3.489	51.118	1.81%	-2.51%
			3690	3.597	49.770	3.536	51.063	1.73%	-2.53%
			3700	3.608	49.750	3.548	51.050	1.69%	-2.55%
04/20/2020	5200-5800 Body	22.5	5250	5.507	47.089	5.358	48.947	2.78%	-3.80%
			5260	5.522	47.076	5.369	48.933	2.85%	-3.79%
			5270	5.534	47.063	5.381	48.919	2.84%	-3.79%
			5280	5.547	47.060	5.393	48.906	2.86%	-3.77%
			5290	5.558	47.062	5.404	48.892	2.85%	-3.74%
			5300	5.566	47.051	5.416	48.879	2.77%	-3.74%
			5310	5.576	47.032	5.428	48.865	2.73%	-3.75%
			5320	5.587	46.999	5.439	48.851	2.72%	-3.79%
			5500	5.831	46.673	5.650	48.607	3.20%	-3.98%
			5510	5.845	46.659	5.661	48.594	3.25%	-3.98%
			5520	5.857	46.658	5.673	48.580	3.24%	-3.96%
			5530	5.870	46.665	5.685	48.566	3.25%	-3.91%
			5540	5.882	46.661	5.696	48.553	3.27%	-3.90%
			5550	5.895	46.629	5.708	48.539	3.28%	-3.93%
			5560	5.907	46.591	5.720	48.526	3.27%	-3.99%
			5580	5.935	46.536	5.743	48.499	3.34%	-4.05%
			5600	5.973	46.513	5.766	48.471	3.59%	-4.04%
			5610	5.988	46.500	5.778	48.458	3.63%	-4.04%
			5620	5.998	46.488	5.790	48.444	3.59%	-4.04%
			5640	6.027	46.489	5.813	48.417	3.68%	-3.98%
			5660	6.055	46.432	5.837	48.390	3.73%	-4.05%
			5670	6.064	46.395	5.848	48.376	3.69%	-4.10%
			5680	6.073	46.369	5.860	48.363	3.63%	-4.12%
			5690	6.093	46.349	5.872	48.349	3.76%	-4.14%
			5700	6.108	46.328	5.883	48.336	3.82%	-4.15%
			5710	6.122	46.305	5.895	48.322	3.85%	-4.17%
			5720	6.133	46.295	5.907	48.309	3.83%	-4.17%
			5745	6.171	46.287	5.936	48.275	3.96%	-4.12%
			5750	6.179	46.276	5.942	48.268	3.99%	-4.13%
04/27/2020	5200-5800 Body	22.9	5240	5.484	47.464	5.346	48.960	2.58%	-3.06%
			5260	5.512	47.424	5.369	48.933	2.66%	-3.08%
			5280	5.545	47.425	5.393	48.906	2.82%	-3.03%
			5300	5.573	47.357	5.416	48.879	2.90%	-3.11%
			5320	5.585	47.327	5.439	48.851	2.68%	-3.12%
			5500	5.842	47.018	5.650	48.607	3.40%	-3.27%
			5520	5.864	47.011	5.673	48.580	3.37%	-3.23%
			5540	5.889	46.981	5.696	48.553	3.39%	-3.24%
			5560	5.907	46.958	5.720	48.526	3.27%	-3.23%
			5580	5.954	46.916	5.743	48.499	3.67%	-3.26%
			5600	5.978	46.859	5.766	48.471	3.68%	-3.33%
			5620	6.008	46.849	5.790	48.444	3.77%	-3.29%
			5640	6.034	46.800	5.813	48.417	3.80%	-3.34%
			5660	6.054	46.783	5.837	48.390	3.72%	-3.32%
			5680	6.091	46.749	5.860	48.363	3.94%	-3.34%
			5700	6.125	46.692	5.883	48.336	4.11%	-3.40%
			5745	6.180	46.625	5.936	48.275	4.11%	-3.42%
			5765	6.203	46.629	5.959	48.248	4.09%	-3.36%
			5785	6.244	46.576	5.982	48.220	4.38%	-3.41%
			5800	6.266	46.548	6.000	48.200	4.43%	-3.43%
			5805	6.274	46.545	6.006	48.193	4.46%	-3.42%
			5825	6.310	46.480	6.029	48.166	4.66%	-3.50%

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 E.

Table 10-6
System Verification Results – 1g Head

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
D	750	HEAD	03/23/2020	21.3	20.2	0.200	1161	7488	1.670	8.030	8.350	3.99%
P	750	HEAD	03/30/2020	20.7	20.5	0.200	1161	7551	1.590	8.030	7.950	-1.00%
P	835	HEAD	03/23/2020	20.1	20.7	0.200	4d132	7551	1.950	9.650	9.750	1.04%
P	835	HEAD	04/07/2020	21.5	21.3	0.200	4d132	7551	1.940	9.650	9.700	0.52%
P	1750	HEAD	03/26/2020	20.2	19.7	0.100	1148	7551	3.440	37.000	34.400	-7.03%
D	1750	HEAD	04/09/2020	23.0	22.7	0.100	1150	7488	3.690	36.500	36.900	1.10%
H	1900	HEAD	03/23/2020	22.1	22.0	0.100	5d148	7406	4.070	39.100	40.700	4.09%
H	1900	HEAD	03/26/2020	21.4	21.0	0.100	5d148	7406	4.220	39.100	42.200	7.93%
H	1900	HEAD	04/02/2020	20.6	21.2	0.100	5d080	7406	4.170	39.800	41.700	4.77%
E	2450	HEAD	03/25/2020	23.1	22.0	0.100	797	3589	5.540	52.700	55.400	5.12%
E	2450	HEAD	03/30/2020	21.8	22.7	0.100	797	3589	5.160	52.700	51.600	-2.09%
E	2450	HEAD	04/19/2020	22.5	22.1	0.100	719	3589	5.420	53.100	54.200	2.07%
E	2450	HEAD	04/21/2020	23.4	22.4	0.100	719	3589	5.270	53.100	52.700	-0.75%
D	3500	HEAD	04/22/2020	22.2	21.7	0.100	1097	7488	6.460	66.400	64.600	-2.71%
D	3700	HEAD	04/22/2020	22.2	21.7	0.100	1067	7488	6.670	67.200	66.700	-0.74%
H	5250	HEAD	04/13/2020	23.0	21.0	0.050	1191	7406	3.840	80.800	76.800	-4.95%
H	5600	HEAD	04/13/2020	23.0	21.0	0.050	1191	7406	3.760	82.700	75.200	-9.07%
H	5750	HEAD	04/13/2020	23.0	21.0	0.050	1191	7406	3.710	80.200	74.200	-7.48%

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Table 10-7
System Verification Results – 1g Body

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	Deviation$_{1g}$ (%)
E	750	BODY	03/22/2020	22.7	21.0	0.200	1161	3589	1.810	8.430	9.050	7.35%
G	750	BODY	04/08/2020	23.2	21.8	0.200	1161	7409	1.800	8.430	9.000	6.76%
O	835	BODY	03/23/2020	20.3	21.2	0.200	4d132	7552	2.070	9.960	10.350	3.92%
D	835	BODY	03/26/2020	21.8	21.3	0.200	4d133	7488	1.860	9.750	9.300	-4.62%
D	835	BODY	03/31/2020	21.8	21.1	0.200	4d133	7488	1.830	9.750	9.150	-6.15%
H	835	BODY	04/06/2020	21.6	21.2	0.200	4d132	7406	2.120	9.960	10.600	6.43%
L	835	BODY	04/13/2020	23.9	21.9	0.200	4d132	7410	2.130	9.960	10.650	6.93%
I	1750	BODY	04/15/2020	23.0	21.7	0.100	1150	7527	3.590	36.600	35.900	-1.91%
I	1750	BODY	04/20/2020	20.0	20.4	0.100	1150	7527	3.640	36.600	36.400	-0.55%
I	1750	BODY	04/22/2020	22.3	21.1	0.100	1150	7527	3.800	36.600	38.000	3.83%
I	1750	BODY	04/29/2020	23.1	22.2	0.100	1150	7527	3.820	36.600	38.200	4.37%
J	1900	BODY	03/19/2020	22.9	22.7	0.100	5d148	7571	4.090	39.100	40.900	4.60%
J	1900	BODY	03/22/2020	22.4	21.7	0.100	5d148	7571	4.210	39.100	42.100	7.67%
J	1900	BODY	04/12/2020	21.1	21.4	0.100	5d080	7571	4.080	39.200	40.800	4.08%
J	1900	BODY	04/16/2020	21.7	24.0	0.100	5d080	7571	4.160	39.200	41.600	6.12%
J	1900	BODY	04/19/2020	21.5	21.1	0.100	5d080	7571	4.180	39.200	41.800	6.63%
J	1900	BODY	04/21/2020	22.0	21.5	0.100	5d080	7571	4.170	39.200	41.700	6.38%
K	2450	BODY	03/23/2020	22.7	22.6	0.100	797	7547	5.030	51.100	50.300	-1.57%
K	2450	BODY	03/29/2020	22.6	22.0	0.100	797	7547	5.060	51.100	50.600	-0.98%
K	2450	BODY	04/01/2020	23.1	22.0	0.100	797	7547	5.040	51.100	50.400	-1.37%
K	2450	BODY	04/20/2020	22.4	22.0	0.100	797	7547	5.170	51.100	51.700	1.17%
K	2450	BODY	05/04/2020	22.5	21.9	0.100	719	7547	5.180	50.800	51.800	1.97%
K	2600	BODY	04/20/2020	22.4	22.0	0.100	1064	7547	5.560	55.600	55.600	0.00%
D	3500	BODY	04/20/2020	21.8	21.3	0.100	1097	7488	6.380	64.200	63.800	-0.62%
D	3700	BODY	04/20/2020	21.8	21.3	0.100	1067	7488	6.530	65.200	65.300	0.15%
G	5250	BODY	04/27/2020	23.0	22.9	0.050	1057	7409	3.800	75.900	76.000	0.13%
G	5600	BODY	04/27/2020	23.0	22.9	0.050	1057	7409	4.090	79.900	81.800	2.38%
G	5750	BODY	04/27/2020	23.0	22.9	0.050	1057	7409	3.820	76.700	76.400	-0.39%

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Table 10-8
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 SAR_{10g} (W/kg)	1 W Target SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	$Deviation_{10g}$ (%)
I	1750	BODY	04/20/2020	20.0	20.4	0.100	1150	7527	1.920	19.400	19.200	-1.03%
I	1750	BODY	04/22/2020	22.3	21.1	0.100	1150	7527	2.000	19.400	20.000	3.09%
J	1900	BODY	04/16/2020	21.7	24.0	0.100	5d080	7571	2.160	20.600	21.600	4.85%
J	1900	BODY	04/19/2020	21.5	21.1	0.100	5d080	7571	2.150	20.600	21.500	4.37%
J	1900	BODY	04/21/2020	22.0	21.5	0.100	5d080	7571	2.140	20.600	21.400	3.88%
K	2450	BODY	03/29/2020	22.6	22.0	0.100	797	7547	2.310	24.200	23.100	-4.55%
K	2450	BODY	04/23/2020	23.2	21.6	0.100	719	7547	2.430	24.000	24.300	1.25%
K	2600	BODY	04/23/2020	23.2	21.6	0.100	1064	7547	2.430	25.000	24.300	-2.80%
G	5250	BODY	04/20/2020	22.8	22.5	0.050	1057	7409	1.030	21.100	20.600	-2.37%
G	5600	BODY	04/20/2020	22.8	22.5	0.050	1057	7409	1.120	22.300	22.400	0.45%
G	5750	BODY	04/20/2020	22.8	22.5	0.050	1057	7409	1.020	21.200	20.400	-3.77%

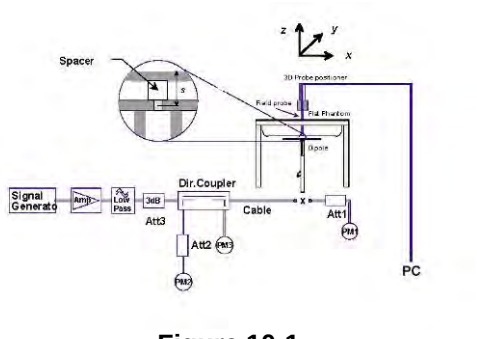


Figure 10-1
System Verification Setup Diagram



Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
Cell. CDMA Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Ant State	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.52	384	Cell. CDMA	RC3 / SO55	25.8	24.97	0.02	Right	Cheek	1	6768M	1:1	0.267	1.211	0.323	
836.52	384	Cell. CDMA	RC3 / SO55	25.8	24.97	0.04	Right	Tilt	1	6768M	1:1	0.120	1.211	0.145	
836.52	384	Cell. CDMA	RC3 / SO55	25.8	24.97	0.03	Left	Cheek	1	6768M	1:1	0.205	1.211	0.248	
836.52	384	Cell. CDMA	RC3 / SO55	25.8	24.97	-0.07	Left	Tilt	1	6768M	1:1	0.119	1.211	0.144	
836.52	384	Cell. CDMA	EVDO Rev. A	25.8	25.11	0.12	Right	Cheek	1	6768M	1:1	0.298	1.172	**0.349**	A1
836.52	384	Cell. CDMA	EVDO Rev. A	25.8	25.11	0.03	Right	Tilt	1	6768M	1:1	0.123	1.172	0.144	
836.52	384	Cell. CDMA	EVDO Rev. A	25.8	25.11	0.18	Left	Cheek	1	6768M	1:1	0.190	1.172	0.223	
836.52	384	Cell. CDMA	EVDO Rev. A	25.8	25.11	0.04	Left	Tilt	1	6768M	1:1	0.123	1.172	0.144	
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
PCS CDMA Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Ant State	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.21	0.07	Right	Cheek	26	6755M	1:1	0.079	1.346	0.106	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.21	0.03	Right	Tilt	26	6755M	1:1	0.042	1.346	0.057	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.21	0.03	Left	Cheek	26	6755M	1:1	0.149	1.346	0.201	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.21	0.17	Left	Tilt	26	6755M	1:1	0.035	1.346	0.047	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.18	0.12	Right	Cheek	26	6755M	1:1	0.102	1.355	0.138	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.18	-0.04	Right	Tilt	26	6755M	1:1	0.066	1.355	0.089	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.18	0.02	Left	Cheek	26	6755M	1:1	0.151	1.355	0.205	A2
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.18	0.13	Left	Tilt	26	6755M	1:1	0.040	1.355	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 11-3
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	32.35	-0.10	Right	Cheek	6768M	1:8.3	0.168	1.161	0.195	A3
836.60	190	GSM 850	GSM	33.0	32.35	0.11	Right	Tilt	6768M	1:8.3	0.065	1.161	0.075	
836.60	190	GSM 850	GSM	33.0	32.35	0.02	Left	Cheek	6768M	1:8.3	0.112	1.161	0.130	
836.60	190	GSM 850	GSM	33.0	32.35	-0.12	Left	Tilt	6768M	1:8.3	0.053	1.161	0.062	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-4
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)	
1880.00	661	GSM 1900	GSM	30.0	28.99	0.16	Right	Cheek	6755M	1:8.3	0.036	1.262	0.045	
1880.00	661	GSM 1900	GSM	30.0	28.99	0.21	Right	Tilt	6755M	1:8.3	0.019	1.262	0.024	
1880.00	661	GSM 1900	GSM	30.0	28.99	-0.07	Left	Cheek	6755M	1:8.3	0.080	1.262	0.101	A4
1880.00	661	GSM 1900	GSM	30.0	28.99	0.17	Left	Tilt	6755M	1:8.3	0.015	1.262	0.019	
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 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Ant State	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	24.0	23.17	0.00	Right	Cheek	13	6768M	1:1	0.189	1.211	0.229	A5
836.60	4183	UMTS 850	RMC	24.0	23.17	0.07	Right	Tilt	13	6768M	1:1	0.072	1.211	0.087	
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.07	Left	Cheek	13	6768M	1:1	0.128	1.211	0.155	
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.12	Left	Tilt	13	6768M	1:1	0.068	1.211	0.082	
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 11-6
UMTS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Ant State	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	-0.09	Right	Cheek	27	6755M	1:1	0.096	1.242	0.119	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	0.15	Right	Tilt	27	6755M	1:1	0.050	1.242	0.062	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	0.01	Left	Cheek	27	6755M	1:1	0.169	1.242	0.210	A6
1880.00	9400	UMTS 1900	RMC	24.0	23.06	0.15	Left	Tilt	27	6755M	1:1	0.031	1.242	0.039	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-7
LTE Band 12 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.03	0	Right	Cheek	QPSK	1	0	6932M	1:1	0.113	1.306	0.148	A7
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.06	1	Right	Cheek	QPSK	25	12	6932M	1:1	0.094	1.262	0.119	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.02	0	Right	Tilt	QPSK	1	0	6932M	1:1	0.058	1.306	0.076	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.02	1	Right	Tilt	QPSK	25	12	6932M	1:1	0.049	1.262	0.062	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.03	0	Left	Cheek	QPSK	1	0	6932M	1:1	0.100	1.306	0.131	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.05	1	Left	Cheek	QPSK	25	12	6932M	1:1	0.085	1.262	0.107	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.19	0	Left	Tilt	QPSK	1	0	6932M	1:1	0.048	1.306	0.063	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.13	1	Left	Tilt	QPSK	25	12	6932M	1:1	0.037	1.262	0.047	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-8
LTE Band 13 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	-0.15	0	Right	Cheek	QPSK	1	49	6950M	1:1	0.216	1.250	0.270	A8
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.01	1	Right	Cheek	QPSK	25	25	6950M	1:1	0.185	1.236	0.229	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	0.12	0	Right	Tilt	QPSK	1	49	6950M	1:1	0.125	1.250	0.156	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.03	1	Right	Tilt	QPSK	25	25	6950M	1:1	0.099	1.236	0.122	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	-0.10	0	Left	Cheek	QPSK	1	49	6950M	1:1	0.192	1.250	0.240	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	0.01	1	Left	Cheek	QPSK	25	25	6950M	1:1	0.155	1.236	0.192	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	0.09	0	Left	Tilt	QPSK	1	49	6950M	1:1	0.142	1.250	0.178	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	0.09	1	Left	Tilt	QPSK	25	25	6950M	1:1	0.110	1.236	0.136	
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 11-9
LTE Band 14 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
793.00	23330	Mid	LTE Band 14	10	54	25.0	24.41	0.16	0	Right	Cheek	QPSK	1	0	6950M	1:1	0.188	1.146	0.215	A9
793.00	23330	Mid	LTE Band 14	10	54	24.0	23.46	0.05	1	Right	Cheek	QPSK	25	12	6950M	1:1	0.146	1.132	0.165	
793.00	23330	Mid	LTE Band 14	10	54	25.0	24.41	0.14	0	Right	Tilt	QPSK	1	0	6950M	1:1	0.101	1.146	0.116	
793.00	23330	Mid	LTE Band 14	10	54	24.0	23.46	-0.02	1	Right	Tilt	QPSK	25	12	6950M	1:1	0.078	1.132	0.088	
793.00	23330	Mid	LTE Band 14	10	54	25.0	24.41	0.07	0	Left	Cheek	QPSK	1	0	6950M	1:1	0.140	1.146	0.160	
793.00	23330	Mid	LTE Band 14	10	54	24.0	23.46	0.06	1	Left	Cheek	QPSK	25	12	6950M	1:1	0.106	1.132	0.120	
793.00	23330	Mid	LTE Band 14	10	54	25.0	24.41	0.11	0	Left	Tilt	QPSK	1	0	6950M	1:1	0.102	1.146	0.117	
793.00	23330	Mid	LTE Band 14	10	54	24.0	23.46	0.10	1	Left	Tilt	QPSK	25	12	6950M	1:1	0.073	1.132	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 11-10
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.13	0	Right	Cheek	QPSK	1	36	6950M	1:1	0.223	1.346	0.300	A10
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.05	1	Right	Cheek	QPSK	36	18	6950M	1:1	0.182	1.330	0.242	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	-0.05	0	Right	Tilt	QPSK	1	36	6950M	1:1	0.100	1.346	0.135	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.06	1	Right	Tilt	QPSK	36	18	6950M	1:1	0.080	1.330	0.106	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.00	0	Left	Cheek	QPSK	1	36	6950M	1:1	0.165	1.346	0.222	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.03	1	Left	Cheek	QPSK	36	18	6950M	1:1	0.141	1.330	0.188	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.03	0	Left	Tilt	QPSK	1	36	6950M	1:1	0.102	1.346	0.137	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.11	1	Left	Tilt	QPSK	36	18	6950M	1:1	0.076	1.330	0.101	
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 | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.06	0	Right	Cheek	QPSK	1	0	6805M	1:1	0.244	1.285	0.314	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	-0.07	1	Right	Cheek	QPSK	25	25	6805M	1:1	0.217	1.245	0.270	
2CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.88	-0.02	0	Right	Cheek	QPSK	1	0	6805M	1:1	0.250	1.236	0.309	A11
	SCC	829.30	20453	Mid	LTE Band 5 (Cell)	5									1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	0.10	0	Right	Tilt	QPSK	1	0	6805M	1:1	0.102	1.285	0.131	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.03	1	Right	Tilt	QPSK	25	25	6805M	1:1	0.096	1.245	0.120	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.14	0	Left	Cheek	QPSK	1	0	6805M	1:1	0.199	1.285	0.256	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.10	1	Left	Cheek	QPSK	25	25	6805M	1:1	0.152	1.245	0.189	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.05	0	Left	Tilt	QPSK	1	0	6805M	1:1	0.126	1.285	0.162	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.07	1	Left	Tilt	QPSK	25	25	6805M	1:1	0.093	1.245	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										

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

MEASUREMENT RESULTS																								
1 CC Uplink | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.96	-0.12	0	Right	Cheek	QPSK	1	50	6784M	1:1	0.155	1.213	0.188	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	23.8	23.16	0.08	1	Right	Cheek	QPSK	50	0	6784M	1:1	0.128	1.159	0.148	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.96	0.20	0	Right	Tilt	QPSK	1	50	6784M	1:1	0.098	1.213	0.119	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	23.8	23.16	0.03	1	Right	Tilt	QPSK	50	0	6784M	1:1	0.089	1.159	0.103	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.96	0.04	0	Left	Cheek	QPSK	1	50	6784M	1:1	0.262	1.213	0.318	A12
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.66	-0.03	0	Left	Cheek	QPSK	1	99	6784M	1:1	0.240	1.300	0.312	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	0	24.8	23.85	0.14	0	Left	Cheek	QPSK	1	49	6784M	1:1	0.215	1.245	0.268	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	23.8	23.16	0.01	1	Left	Cheek	QPSK	50	0	6784M	1:1	0.201	1.159	0.233	
2CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.90	0.07	0	Left	Cheek	QPSK	1	99	6784M	1:1	0.255	1.230	0.314	
	SCC	1739.80	132270	Low	LTE Band 66 (AWS)	20									1	0						
2CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	0	24.8	24.09	-0.08	0	Left	Cheek	QPSK	1	49	6784M	1:1	0.238	1.178	0.280	
	SCC	1724.90	132121	Low	LTE Band 66 (AWS)	10									1	0						
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	24.8	23.96	-0.06	0	Left	Tilt	QPSK	1	50	6784M	1:1	0.090	1.213	0.109	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	23.8	23.16	0.21	1	Left	Tilt	QPSK	50	0	6784M	1:1	0.072	1.159	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 11-13
LTE Band 2 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	0.06	0	Right	Cheek	QPSK	1	99	6952M	1:1	0.146	1.227	0.179	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.10	1	Right	Cheek	QPSK	50	50	6952M	1:1	0.119	1.219	0.145	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	0.04	0	Right	Tilt	QPSK	1	99	6952M	1:1	0.100	1.227	0.123	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.01	1	Right	Tilt	QPSK	50	50	6952M	1:1	0.076	1.219	0.093	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	0.11	0	Left	Cheek	QPSK	1	99	6952M	1:1	0.218	1.227	0.267	A13
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.03	1	Left	Cheek	QPSK	50	50	6952M	1:1	0.166	1.219	0.202	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	0.07	0	Left	Tilt	QPSK	1	99	6952M	1:1	0.053	1.227	0.065	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.17	1	Left	Tilt	QPSK	50	50	6952M	1:1	0.051	1.219	0.062	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-14
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																		
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	0.14	0	Right	Cheek	QPSK	1	0	6799M	1:1	0.035	1.202	0.042	A14
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.20	1	Right	Cheek	QPSK	50	25	6799M	1:1	0.033	1.169	0.039	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	0.19	0	Right	Tilt	QPSK	1	0	6799M	1:1	0.017	1.202	0.020	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.19	1	Right	Tilt	QPSK	50	25	6799M	1:1	0.016	1.169	0.019	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	0.21	0	Left	Cheek	QPSK	1	0	6799M	1:1	0.024	1.202	0.029	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.13	1	Left	Cheek	QPSK	50	25	6799M	1:1	0.024	1.169	0.028	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	0.20	0	Left	Tilt	QPSK	1	0	6799M	1:1	0.012	1.202	0.014	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.17	1	Left	Tilt	QPSK	50	25	6799M	1:1	0.008	1.169	0.009	
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 48 Head SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2CC 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	19.0	18.42	-0.03	0	Right	Cheek	QPSK	1	99	0117M	1:1.58	0.567	1.143	0.648	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.41	0.05	0	Right	Cheek	QPSK	1	99	0117M	1:1.58	0.579	1.146	0.664	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.46	0.03	0	Right	Cheek	QPSK	1	0	0117M	1:1.58	0.630	1.132	0.713	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.19	0.03	0	Right	Cheek	QPSK	1	0	0117M	1:1.58	0.667	1.205	0.804	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	19.0	18.51	0.00	0	Right	Cheek	QPSK	50	50	0117M	1:1.58	0.569	1.119	0.637	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.53	0.01	0	Right	Cheek	QPSK	50	50	0117M	1:1.58	0.579	1.114	0.645	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.55	-0.03	0	Right	Cheek	QPSK	50	0	0117M	1:1.58	0.633	1.109	0.702	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.25	0.04	0	Right	Cheek	QPSK	50	0	0117M	1:1.58	0.675	1.189	0.803	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.43	-0.01	0	Right	Cheek	QPSK	100	0	0117M	1:1.58	0.640	1.140	0.730	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	19.0	18.42	0.00	0	Right	Tilt	QPSK	1	99	0117M	1:1.58	0.681	1.143	0.778	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.41	0.06	0	Right	Tilt	QPSK	1	99	0117M	1:1.58	0.683	1.146	0.783	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.46	0.07	0	Right	Tilt	QPSK	1	0	0117M	1:1.58	0.731	1.132	0.827	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.19	0.01	0	Right	Tilt	QPSK	1	0	0117M	1:1.58	0.730	1.205	0.880	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	19.0	18.51	0.04	0	Right	Tilt	QPSK	50	50	0117M	1:1.58	0.691	1.119	0.773	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	19.0	18.53	-0.01	0	Right	Tilt	QPSK	50	50	0117M	1:1.58	0.686	1.114	0.764	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.55	0.04	0	Right	Tilt	QPSK	50	0	0117M	1:1.58	0.718	1.109	0.796	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	19.0	18.25	-0.01	0	Right	Tilt	QPSK	50	0	0117M	1:1.58	0.741	1.189	0.881	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.43	0.04	0	Right	Tilt	QPSK	100	0	0117M	1:1.58	0.725	1.140	0.827	
2CC Uplink	PCC	3690.00	56640	High	LTE Band 48	20	19.0	18.30	0.04	0	Right	Tilt	QPSK	50	0	0117M	1:1.58	0.773	1.175	**0.908**	A15
	SCC	3670.20	56442	High	LTE Band 48									50	50						
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.46	0.02	0	Left	Cheek	QPSK	1	0	0117M	1:1.58	0.160	1.132	0.181	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.55	0.04	0	Left	Cheek	QPSK	50	0	0117M	1:1.58	0.158	1.109	0.175	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.46	0.12	0	Left	Tilt	QPSK	1	0	0117M	1:1.58	0.221	1.132	0.250	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	19.0	18.55	0.04	0	Left	Tilt	QPSK	50	0	0117M	1:1.58	0.223	1.109	0.247	

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																		
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)	
2506.00	39750	Low	LTE Band 41	20	24.0	23.52	0.20	0	Right	Cheek	QPSK	1	0	6799M	1:1.58	0.022	1.117	0.025	
2506.00	39750	Low	LTE Band 41	20	23.0	22.59	0.05	1	Right	Cheek	QPSK	50	0	6799M	1:1.58	0.016	1.099	0.018	
2506.00	39750	Low	LTE Band 41	20	24.0	23.52	0.20	0	Right	Tilt	QPSK	1	0	6799M	1:1.58	0.019	1.117	0.021	
2506.00	39750	Low	LTE Band 41	20	23.0	22.59	0.19	1	Right	Tilt	QPSK	50	0	6799M	1:1.58	0.018	1.099	0.020	
2506.00	39750	Low	LTE Band 41	20	24.0	23.52	0.20	0	Left	Cheek	QPSK	1	0	6799M	1:1.58	0.030	1.117	0.034	A16
2506.00	39750	Low	LTE Band 41	20	23.0	22.59	0.12	1	Left	Cheek	QPSK	50	0	6799M	1:1.58	0.026	1.099	0.029	
2506.00	39750	Low	LTE Band 41	20	24.0	23.52	0.20	0	Left	Tilt	QPSK	1	0	6799M	1:1.58	0.015	1.117	0.017	
2506.00	39750	Low	LTE Band 41	20	23.0	22.59	0.16	1	Left	Tilt	QPSK	50	0	6799M	1:1.58	0.011	1.099	0.012	

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

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Table 11-17
NR Band n5 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.12	0	Right	Cheek	DFT-S-OFDM QPSK	1	1	6938M	1:1	0.317	1.114	**0.353**	A17
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	0.04	0	Right	Cheek	DFT-S-OFDM QPSK	50	28	6938M	1:1	0.297	1.159	0.344	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	24.3	23.71	0.01	1.5	Right	Cheek	CP-OFDM QPSK	1	1	6938M	1:1	0.209	1.146	0.240	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.12	0	Right	Tilt	DFT-S-OFDM QPSK	1	1	6938M	1:1	0.145	1.114	0.162	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	0.03	0	Right	Tilt	DFT-S-OFDM QPSK	50	28	6938M	1:1	0.129	1.159	0.150	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.11	0	Left	Cheek	DFT-S-OFDM QPSK	1	1	6938M	1:1	0.252	1.114	0.281	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	0.02	0	Left	Cheek	DFT-S-OFDM QPSK	50	28	6938M	1:1	0.173	1.159	0.201	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	0.11	0	Left	Tilt	DFT-S-OFDM QPSK	1	1	6938M	1:1	0.145	1.114	0.162	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	0.05	0	Left	Tilt	DFT-S-OFDM QPSK	50	28	6938M	1:1	0.106	1.159	0.123	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-18
NR Band n66 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.20	-0.06	0	Right	Cheek	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.164	1.148	0.188	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.13	0.06	0	Right	Cheek	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.172	1.167	0.201	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.20	0.10	0	Right	Tilt	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.106	1.148	0.122	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.13	0.10	0	Right	Tilt	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.107	1.167	0.125	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.20	0.13	0	Left	Cheek	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.218	1.148	0.250	A18
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.13	0.00	0	Left	Cheek	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.208	1.167	0.243	
1720.00	344000	Low	NR Band n66 (AWS)	20	0	23.3	22.48	-0.15	1.5	Left	Cheek	CP-OFDM QPSK	1	1	6943M	1:1	0.101	1.208	0.122	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.20	0.03	0	Left	Tilt	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.067	1.148	0.077	
1745.00	349000	Mid	NR Band n66 (AWS)	20	0	24.8	24.13	-0.01	0	Left	Tilt	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.070	1.167	0.082	
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 n2 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.20	0	Right	Cheek	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.112	1.135	0.127	
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.18	0	Right	Cheek	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.105	1.211	0.127	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.18	0	Right	Tilt	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.069	1.135	0.078	
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.11	0	Right	Tilt	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.062	1.211	0.075	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.07	0	Left	Cheek	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.175	1.135	0.199	A19
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.06	0	Left	Cheek	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.167	1.211	0.202	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	23.0	22.05	0.13	1.5	Left	Cheek	CP-OFDM QPSK	1	1	6943M	1:1	0.030	1.245	0.037	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.13	0	Left	Tilt	DFT-S-OFDM QPSK	1	53	6943M	1:1	0.065	1.135	0.074	
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.03	0	Left	Tilt	DFT-S-OFDM QPSK	50	28	6943M	1:1	0.062	1.211	0.075	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-20
DTS 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)	
2462	11	802.11b	DSSS	22	14.5	14.23	0.04	Right	Cheek	1	0558M	1	98.9	0.474	-	1.064	1.011	-	
2462	11	802.11b	DSSS	22	14.5	14.23	0.00	Right	Tilt	1	0558M	1	98.9	0.700	0.387	1.064	1.011	0.416	
2462	11	802.11b	DSSS	22	14.5	14.23	0.17	Left	Cheek	1	0558M	1	98.9	0.416	-	1.064	1.011	-	
2412	1	802.11b	DSSS	22	14.5	13.88	0.05	Left	Tilt	1	0558M	1	98.9	1.072	0.635	1.153	1.011	**0.740**	A20
2437	6	802.11b	DSSS	22	14.5	14.11	-0.01	Left	Tilt	1	0558M	1	98.9	0.871	0.593	1.094	1.011	0.656	
2462	11	802.11b	DSSS	22	14.5	14.23	0.11	Left	Tilt	1	0558M	1	98.9	0.803	0.576	1.064	1.011	0.620	
2437	6	802.11b	DSSS	22	14.5	14.24	0.20	Right	Cheek	2	0558M	1	98.9	0.017	0.010	1.062	1.011	0.011	
2437	6	802.11b	DSSS	22	14.5	14.24	0.15	Right	Tilt	2	0558M	1	98.9	0.011	-	1.062	1.011	-	
2437	6	802.11b	DSSS	22	14.5	14.24	0.16	Left	Cheek	2	0558M	1	98.9	0.009	-	1.062	1.011	-	
2437	6	802.11b	DSSS	22	14.5	14.24	0.18	Left	Tilt	2	0558M	1	98.9	0.012	-	1.062	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 11-21
DTS 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)	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.12	Right	Cheek	MIMO	0489M	13	93.3	0.212	-	1.112	1.072	-	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.21	Right	Tilt	MIMO	0489M	13	93.3	0.362	-	1.112	1.072	-	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.12	Left	Cheek	MIMO	0489M	13	93.3	0.340	-	1.112	1.072	-	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.15	Left	Tilt	MIMO	0489M	13	93.3	0.415	0.276	1.112	1.072	0.329	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Note: To achieve the 17.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14.5 dBm.

Table 11-22
DTS Head MIMO SAR During Conditions with 2.4 GHz and 5 GHz WLAN

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	14.0	13.79	14.0	13.90	0.14	Right	Cheek	MIMO	0489M	13	93.3	0.166	-	1.050	1.072	-	
2412	1	802.11n	OFDM	20	14.0	13.79	14.0	13.90	0.21	Right	Tilt	MIMO	0489M	13	93.3	0.255	-	1.050	1.072	-	
2412	1	802.11n	OFDM	20	14.0	13.79	14.0	13.90	0.18	Left	Cheek	MIMO	0489M	13	93.3	0.179	-	1.050	1.072	-	
2412	1	802.11n	OFDM	20	14.0	13.79	14.0	13.90	0.19	Left	Tilt	MIMO	0489M	13	93.3	0.321	0.198	1.050	1.072	0.223	
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: DTS MIMO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 5 GHz WIFI was not transmitting during the above evaluations.

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Table 11-23
NII 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	14.0	13.72	0.13	Right	Cheek	1	0122M	29.3	95.4	0.154	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	0.16	Right	Tilt	1	0122M	29.3	95.4	0.171	0.060	1.067	1.048	**0.067**	A21
5290	58	802.11ac	OFDM	80	14.0	13.72	0.15	Left	Cheek	1	0122M	29.3	95.4	0.112	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	0.17	Left	Tilt	1	0122M	29.3	95.4	0.124	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.19	Right	Cheek	2	0122M	29.3	94.7	0.039	0.017	1.164	1.056	0.021	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.19	Right	Tilt	2	0122M	29.3	94.7	0.036	-	1.164	1.056	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.19	Left	Cheek	2	0122M	29.3	94.7	0.024	-	1.164	1.056	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.00	Left	Tilt	2	0122M	29.3	94.7	0.028	-	1.164	1.056	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.19	Right	Cheek	1	0122M	29.3	95.4	0.099	0.040	1.132	1.048	0.047	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.13	Right	Tilt	1	0122M	29.3	95.4	0.085	-	1.132	1.048	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.12	Left	Cheek	1	0122M	29.3	95.4	0.057	-	1.132	1.048	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.16	Left	Tilt	1	0122M	29.3	95.4	0.064	-	1.132	1.048	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.20	Right	Cheek	2	0122M	29.3	94.7	0.084	0.028	1.012	1.056	0.030	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.12	Right	Tilt	2	0122M	29.3	94.7	0.064	-	1.012	1.056	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.14	Left	Cheek	2	0122M	29.3	94.7	0.037	-	1.012	1.056	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.19	Left	Tilt	2	0122M	29.3	94.7	0.047	-	1.012	1.056	-	
5775	155	802.11ac	OFDM	80	14.0	13.79	0.12	Right	Cheek	1	0122M	29.3	95.4	0.126	0.048	1.050	1.048	0.053	
5775	155	802.11ac	OFDM	80	14.0	13.79	0.16	Right	Tilt	1	0122M	29.3	95.4	0.111	-	1.050	1.048	-	
5775	155	802.11ac	OFDM	80	14.0	13.79	0.19	Left	Cheek	1	0122M	29.3	95.4	0.084	-	1.050	1.048	-	
5775	155	802.11ac	OFDM	80	14.0	13.79	0.21	Left	Tilt	1	0122M	29.3	95.4	0.072	-	1.050	1.048	-	
5775	155	802.11ac	OFDM	80	14.0	13.67	0.19	Right	Cheek	2	0122M	29.3	94.7	0.089	0.023	1.079	1.056	0.026	
5775	155	802.11ac	OFDM	80	14.0	13.67	0.17	Right	Tilt	2	0122M	29.3	94.7	0.059	-	1.079	1.056	-	
5775	155	802.11ac	OFDM	80	14.0	13.67	0.19	Left	Cheek	2	0122M	29.3	94.7	0.027	-	1.079	1.056	-	
5775	155	802.11ac	OFDM	80	14.0	13.67	0.19	Left	Tilt	2	0122M	29.3	94.7	0.035	-	1.079	1.056	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**														**Head** **1.6 W/kg (mW/g)** averaged over 1 gram					

Table 11-24
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	15.5	15.17	0.08	Right	Cheek	0469M	1	77.1	0.084	1.079	1.297	0.118	
2441.00	39	Bluetooth	FHSS	15.5	15.17	0.04	Right	Tilt	0469M	1	77.1	0.124	1.079	1.297	0.174	
2441.00	39	Bluetooth	FHSS	15.5	15.17	0.06	Left	Cheek	0469M	1	77.1	0.126	1.079	1.297	0.176	
2441.00	39	Bluetooth	FHSS	15.5	15.17	0.06	Left	Tilt	0469M	1	77.1	0.175	1.079	1.297	**0.245**	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				

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11.2 Standalone Body-Worn SAR Data

Table 11-25
CDMA/GSM/UMTS Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Ant State	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.52	384	Cell. CDMA	TDSO / SO32	25.8	24.95	0.01	15 mm	54	6768M	1:1	back	0.324	1.216	0.394	A23
1851.25	25	PCS CDMA	TDSO / SO32	24.5	23.21	-0.02	15 mm	53	6945M	1:1	back	0.482	1.346	0.649	
1880.00	600	PCS CDMA	TDSO / SO32	24.5	23.17	-0.02	15 mm	53	6945M	1:1	back	0.461	1.358	0.626	
1908.75	1175	PCS CDMA	TDSO / SO32	24.5	23.43	0.18	15 mm	53	6945M	1:1	back	0.546	1.279	0.698	A25
836.60	190	GSM 850	GSM	33.0	32.35	-0.01	15 mm	N/A	6768M	1:8.3	back	0.190	1.161	0.221	A27
1880.00	661	GSM 1900	GSM	30.0	28.99	-0.03	15 mm	N/A	6945M	1:8.3	back	0.213	1.262	0.269	A29
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.02	15 mm	54	6768M	1:1	back	0.225	1.211	0.272	A31
1852.40	9262	UMTS 1900	RMC	24.0	23.12	-0.01	15 mm	54	6945M	1:1	back	0.601	1.225	0.736	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	-0.01	15 mm	54	6945M	1:1	back	0.546	1.242	0.678	
1907.60	9538	UMTS 1900	RMC	24.0	23.31	0.01	15 mm	54	6945M	1:1	back	0.675	1.172	0.791	A33
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram			

Table 11-26
LTE Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.01	0	6950M	QPSK	1	0	15 mm	back	1:1	0.203	1.306	0.265	A35
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.02	1	6950M	QPSK	25	12	15 mm	back	1:1	0.169	1.262	0.213	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	-0.02	0	6950M	QPSK	1	49	15 mm	back	1:1	0.369	1.250	0.461	A37
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.01	1	6950M	QPSK	25	25	15 mm	back	1:1	0.298	1.236	0.368	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	0.03	0	6932M	QPSK	1	0	15 mm	back	1:1	0.292	1.146	0.335	A39
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	0.05	1	6932M	QPSK	25	12	15 mm	back	1:1	0.226	1.132	0.256	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.04	0	6938M	QPSK	1	36	15 mm	back	1:1	0.285	1.346	0.384	A41
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.00	1	6938M	QPSK	36	18	15 mm	back	1:1	0.232	1.330	0.309	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	24.5	23.42	-0.08	0	6759M	QPSK	1	0	15 mm	back	1:1	0.679	1.282	0.870	A47
1880.00	18900	Mid	LTE Band 2 (PCS)	20	53	24.5	23.49	-0.02	0	6759M	QPSK	1	99	15 mm	back	1:1	0.615	1.262	0.776	
1900.00	19100	High	LTE Band 2 (PCS)	20	53	24.5	23.61	0.03	0	6759M	QPSK	1	99	15 mm	back	1:1	0.627	1.227	0.769	
1900.00	19100	High	LTE Band 2 (PCS)	20	53	23.5	22.64	0.00	1	6759M	QPSK	50	50	15 mm	back	1:1	0.522	1.219	0.636	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	23.5	22.58	0.00	1	6759M	QPSK	100	0	15 mm	back	1:1	0.490	1.236	0.606	
2510.00	20850	Low	LTE Band 7	20	N/A	24.0	23.20	0.00	0	6752M	QPSK	1	0	15 mm	back	1:1	0.280	1.202	0.337	A49
2510.00	20850	Low	LTE Band 7	20	N/A	23.0	22.32	0.00	1	6752M	QPSK	50	25	15 mm	back	1:1	0.246	1.169	0.288	
2506.00	39750	Low	LTE Band 41	20	N/A	24.0	23.52	0.00	0	6752M	QPSK	1	0	15 mm	back	1:1.58	0.226	1.117	0.252	A53
2506.00	39750	Low	LTE Band 41	20	N/A	23.0	22.59	-0.01	1	6752M	QPSK	50	0	15 mm	back	1:1.58	0.181	1.099	0.199	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-27
LTE Band 5 (Cell) Body-Worn SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Upink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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) (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	13	25.8	24.71	-0.03	0	6805M	QPSK	1	0	15 mm	back	1:1	0.343	1.285	0.441	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.01	1	6805M	QPSK	25	25	15 mm	back	1:1	0.279	1.245	0.347	
2CC Upink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.88	0.00	0	6805M	QPSK	1	0	15 mm	back	1:1	0.351	1.236	0.434	A43
	SCC	829.30	20453	Mid	LTE Band 5 (Cell)	5								1	24							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-28
LTE Band 66 (AWS) Body-Worn SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	0.00	0	6784M	QPSK	1	50	15 mm	back	1:1	0.716	1.213	0.869	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	2	24.8	23.61	-0.02	0	6784M	QPSK	1	0	15 mm	back	1:1	0.754	1.315	0.992	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	2	24.8	23.78	0.00	0	6784M	QPSK	1	0	15 mm	back	1:1	0.801	1.265	1.013	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	2	24.8	23.80	0.00	0	6784M	QPSK	1	50	15 mm	back	1:1	0.832	1.259	**1.047**	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	2	24.8	23.69	0.04	0	6784M	QPSK	1	0	15 mm	back	1:1	0.752	1.291	0.971	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	0.04	1	6784M	QPSK	50	0	15 mm	back	1:1	0.640	1.159	0.742	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.02	0.02	1	6784M	QPSK	100	0	15 mm	back	1:1	0.633	1.197	0.758	
2CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	2	24.8	24.16	0.02	0	6784M	QPSK	1	0	15 mm	back	1:1	0.902	1.159	1.045	A45
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20								1	99							
2CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	2	24.8	23.80	0.02	0	6784M	QPSK	1	0	15 mm	back	1:1	0.809	1.259	1.019	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10								1	49							
2CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	2	24.8	24.16	-0.01	0	6784M	QPSK	1	0	15 mm	back	1:1	0.863	1.159	1.000	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20								1	99							
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 entries represent variability measurements.

Table 11-29
LTE Band 48 Body-Worn SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2CC 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																		
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	24.5	24.19	-0.06	0	0117M	QPSK	1	0	15 mm	back	1:1.58	0.261	1.074	0.280	A51
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.28	0.01	1	0117M	QPSK	50	25	15 mm	back	1:1.58	0.210	1.052	0.221	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	24.5	23.98	0.04	0	0117M	QPSK	1	0	15 mm	back	1:1.58	0.251	1.127	**0.283**	
	SCC	3626.90	56009	Mid-High	LTE Band 48	20							1	99							
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 11-30
NR Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.18	0	6938M	DFT-S-OFDM QPSK	1	1	15 mm	back	1:1	0.347	1.114	0.387	A55
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	0.02	0	6938M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.294	1.159	0.341	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	24.3	23.71	0.00	1.5	6938M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.248	1.146	0.284	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	24.8	24.19	0.02	0	6787M	DFT-S-OFDM QPSK	1	1	15 mm	back	1:1	0.517	1.151	0.595	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	-0.16	0	6787M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.795	1.148	0.913	
1770.00	354000	High	NR Band n66 (AWS)	20	2	24.8	24.04	-0.04	0	6787M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.599	1.191	0.713	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	24.8	23.61	0.01	0	6787M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.623	1.315	0.819	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	-0.05	0	6787M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.825	1.167	0.963	A57
1770.00	354000	High	NR Band n66 (AWS)	20	2	24.8	23.90	0.06	0	6787M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.696	1.230	0.856	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	23.8	22.92	-0.03	1	6787M	DFT-S-OFDM QPSK	100	0	15 mm	back	1:1	0.603	1.225	0.739	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	23.3	22.48	0.06	1.5	6787M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.379	1.208	0.458	
1860.00	372000	Low	NR Band n2 (PCS)	20	53	24.5	23.88	-0.04	0	6943M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.646	1.153	0.745	A59
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	24.5	23.95	-0.02	0	6943M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.594	1.135	0.674	
1900.00	380000	High	NR Band n2 (PCS)	20	53	24.5	23.94	0.07	0	6943M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.566	1.138	0.644	
1860.00	372000	Low	NR Band n2 (PCS)	20	53	24.5	23.67	-0.03	0	6943M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.514	1.211	0.622	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	23.0	22.05	-0.02	1.5	6943M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.385	1.245	0.479	
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 11-31
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)	
2462	11	802.11b	DSSS	22	21.0	20.65	-0.04	15 mm	1	0558M	1	back	98.9	0.298	0.201	1.084	1.011	**0.220**	A61
2412	1	802.11b	DSSS	22	21.0	20.90	0.12	15 mm	2	0558M	1	back	98.9	0.110	0.067	1.023	1.011	0.069	
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 11-32
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)	
2437	6	802.11n	OFDM	20	18.5	18.48	18.5	18.30	-0.02	15 mm	MIMO	0558M	13	back	93.3	0.118	0.086	1.047	1.072	0.097	
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 21.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.5 dBm.

Table 11-33
DTS MIMO Body-Worn SAR for Conditions with 2.4 GHz and 5 GHz WLAN 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	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.14	15 mm	MIMO	0558M	13	back	93.3	0.055	0.040	1.112	1.072	0.048	
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: DTS MIMO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 5 GHz WIFI was not transmitting during the above evaluations.

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Table 11-34
NII 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)	
5280	56	802.11a	OFDM	20	18.0	17.40	-0.09	15 mm	1	0489M	6	back	98.8	0.313	0.155	1.148	1.012	0.180	
5320	64	802.11a	OFDM	20	18.0	17.96	0.08	15 mm	2	0489M	6	back	98.9	0.448	0.229	1.009	1.011	0.234	
5620	124	802.11a	OFDM	20	18.0	17.54	-0.14	15 mm	1	0489M	6	back	98.8	0.454	0.209	1.112	1.012	**0.235**	
5600	120	802.11a	OFDM	20	18.0	17.45	0.10	15 mm	2	0489M	6	back	98.9	0.440	0.200	1.135	1.011	0.229	
5785	157	802.11a	OFDM	20	18.0	17.61	-0.02	15 mm	1	0489M	6	back	98.8	0.441	0.202	1.094	1.012	0.224	
5825	165	802.11a	OFDM	20	18.0	17.65	-0.12	15 mm	2	0489M	6	back	98.9	0.323	0.158	1.084	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 11-35
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)	
5300	60	802.11n	OFDM	20	18.0	17.11	18.0	17.94	0.09	15 mm	MIMO	0122M	13	back	98.7	0.495	0.238	1.227	1.013	0.296	
5500	100	802.11n	OFDM	20	18.0	17.98	18.0	17.39	0.14	15 mm	MIMO	0122M	13	back	98.7	0.653	0.322	1.151	1.013	0.375	
5785	157	802.11n	OFDM	20	18.0	17.55	18.0	17.99	0.14	15 mm	MIMO	0122M	13	back	98.7	0.849	0.373	1.109	1.013	0.419	A63
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram										

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

Table 11-36
NII MIMO Body-Worn SAR for Conditions with 2.4 GHz and 5 GHz WLAN 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	14.0	13.72	14.0	13.34	0.19	15 mm	MIMO	0122M	58.5	back	91.0	0.141	0.064	1.164	1.099	0.082	
5690	138	802.11ac	OFDM	80	14.0	13.46	14.0	13.90	0.15	15 mm	MIMO	0122M	58.5	back	91.0	0.254	0.114	1.132	1.099	0.142	
5775	155	802.11ac	OFDM	80	14.0	13.79	14.0	13.67	0.09	15 mm	MIMO	0122M	58.5	back	91.0	0.302	0.136	1.079	1.099	0.161	
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 operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 2.4 GHz WIFI was not transmitting during the above evaluations.

Table 11-37
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)	
2441	39	Bluetooth	FHSS	15.5	15.17	0.13	15 mm	0558M	1	back	77.1	0.031	1.079	1.297	**0.043**	A65
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 11-38
CDMA/GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Ant State	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.52	384	Cell. CDMA	EVDO Rev. 0	25.8	25.10	-0.10	10 mm	54	6768M	N/A	1:1	back	0.468	1.175	0.550	A24
836.52	384	Cell. CDMA	EVDO Rev. 0	25.8	25.10	0.00	10 mm	54	6768M	N/A	1:1	front	0.407	1.175	0.478	
836.52	384	Cell. CDMA	EVDO Rev. 0	25.8	25.10	-0.01	10 mm	54	6768M	N/A	1:1	bottom	0.311	1.175	0.365	
836.52	384	Cell. CDMA	EVDO Rev. 0	25.8	25.10	-0.02	10 mm	54	6768M	N/A	1:1	right	0.326	1.175	0.383	
836.52	384	Cell. CDMA	EVDO Rev. 0	25.8	25.10	0.06	10 mm	54	6768M	N/A	1:1	left	0.157	1.175	0.184	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.5	18.16	-0.04	10 mm	53	6945M	N/A	1:1	back	0.463	1.361	0.630	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.5	18.16	0.03	10 mm	53	6945M	N/A	1:1	front	0.383	1.361	0.521	
1851.25	25	PCS CDMA	EVDO Rev. 0	19.5	18.21	0.00	10 mm	53	6945M	N/A	1:1	bottom	0.698	1.346	0.940	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.5	18.16	-0.02	10 mm	53	6945M	N/A	1:1	bottom	0.792	1.361	1.078	
1908.75	1175	PCS CDMA	EVDO Rev. 0	19.5	18.37	-0.08	10 mm	53	6945M	N/A	1:1	bottom	0.908	1.297	1.178	A26
1880.00	600	PCS CDMA	EVDO Rev. 0	19.5	18.16	0.05	10 mm	53	6945M	N/A	1:1	right	0.057	1.361	0.078	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.5	18.16	0.04	10 mm	53	6945M	N/A	1:1	left	0.068	1.361	0.093	
836.60	190	GSM 850	GPRS	30.0	29.66	0.17	10 mm	N/A	6768M	3	1:2.76	back	0.494	1.081	0.534	A28
836.60	190	GSM 850	GPRS	30.0	29.66	0.12	10 mm	N/A	6768M	3	1:2.76	front	0.415	1.081	0.449	
836.60	190	GSM 850	GPRS	30.0	29.66	-0.11	10 mm	N/A	6768M	3	1:2.76	bottom	0.283	1.081	0.306	
836.60	190	GSM 850	GPRS	30.0	29.66	-0.06	10 mm	N/A	6768M	3	1:2.76	right	0.351	1.081	0.379	
836.60	190	GSM 850	GPRS	30.0	29.66	0.21	10 mm	N/A	6768M	3	1:2.76	left	0.121	1.081	0.131	
1880.00	661	GSM 1900	GPRS	23.0	21.82	0.08	10 mm	N/A	6945M	4	1:2.076	back	0.304	1.312	0.399	
1880.00	661	GSM 1900	GPRS	23.0	21.82	-0.08	10 mm	N/A	6945M	4	1:2.076	front	0.288	1.312	0.378	
1850.20	512	GSM 1900	GPRS	23.0	21.96	-0.07	10 mm	N/A	6945M	4	1:2.076	bottom	0.597	1.271	0.759	
1880.00	661	GSM 1900	GPRS	23.0	21.82	-0.10	10 mm	N/A	6945M	4	1:2.076	bottom	0.622	1.312	0.816	
1909.80	810	GSM 1900	GPRS	23.0	22.08	-0.19	10 mm	N/A	6945M	4	1:2.076	bottom	0.766	1.236	0.947	A30
1880.00	661	GSM 1900	GPRS	23.0	21.82	0.03	10 mm	N/A	6945M	4	1:2.076	right	0.043	1.312	0.056	
1880.00	661	GSM 1900	GPRS	23.0	21.82	-0.06	10 mm	N/A	6945M	4	1:2.076	left	0.052	1.312	0.068	
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.13	10 mm	54	6768M	N/A	1:1	back	0.342	1.211	0.414	A32
836.60	4183	UMTS 850	RMC	24.0	23.17	0.00	10 mm	54	6768M	N/A	1:1	front	0.320	1.211	0.388	
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.03	10 mm	54	6768M	N/A	1:1	bottom	0.215	1.211	0.260	
836.60	4183	UMTS 850	RMC	24.0	23.17	0.00	10 mm	54	6768M	N/A	1:1	right	0.194	1.211	0.235	
836.60	4183	UMTS 850	RMC	24.0	23.17	-0.03	10 mm	54	6768M	N/A	1:1	left	0.093	1.211	0.113	
1880.00	9400	UMTS 1900	RMC	18.5	17.91	-0.02	10 mm	54	6945M	N/A	1:1	back	0.449	1.146	0.515	
1880.00	9400	UMTS 1900	RMC	18.5	17.91	0.02	10 mm	54	6945M	N/A	1:1	front	0.377	1.146	0.432	
1852.40	9262	UMTS 1900	RMC	18.5	18.08	0.01	10 mm	54	6945M	N/A	1:1	bottom	0.826	1.102	0.910	
1880.00	9400	UMTS 1900	RMC	18.5	17.91	-0.01	10 mm	54	6945M	N/A	1:1	bottom	0.882	1.146	1.011	
1907.60	9538	UMTS 1900	RMC	18.5	18.15	0.04	10 mm	54	6945M	N/A	1:1	bottom	1.070	1.084	1.160	A34
1880.00	9400	UMTS 1900	RMC	18.5	17.91	-0.10	10 mm	54	6945M	N/A	1:1	right	0.056	1.146	0.064	
1880.00	9400	UMTS 1900	RMC	18.5	17.91	-0.07	10 mm	54	6945M	N/A	1:1	left	0.076	1.146	0.087	
1907.60	9538	UMTS 1900	RMC	18.5	18.15	-0.01	10 mm	54	6945M	N/A	1:1	bottom	1.030	1.084	1.117	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram			

Note: Blue entries represent variability measurements.

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Table 11-39
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.02	0	6950M	QPSK	1	0	10 mm	back	1:1	0.270	1.306	0.353	A36
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.03	1	6950M	QPSK	25	12	10 mm	back	1:1	0.222	1.262	0.280	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.01	0	6950M	QPSK	1	0	10 mm	front	1:1	0.259	1.306	0.338	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	-0.01	1	6950M	QPSK	25	12	10 mm	front	1:1	0.216	1.262	0.273	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	-0.05	0	6950M	QPSK	1	0	10 mm	bottom	1:1	0.180	1.306	0.235	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	-0.02	1	6950M	QPSK	25	12	10 mm	bottom	1:1	0.144	1.262	0.182	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	0.02	0	6950M	QPSK	1	0	10 mm	right	1:1	0.183	1.306	0.239	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	0.05	1	6950M	QPSK	25	12	10 mm	right	1:1	0.155	1.262	0.196	
707.50	23095	Mid	LTE Band 12	10	54	25.0	23.84	-0.02	0	6950M	QPSK	1	0	10 mm	left	1:1	0.177	1.306	0.231	
707.50	23095	Mid	LTE Band 12	10	54	24.0	22.99	-0.02	1	6950M	QPSK	25	12	10 mm	left	1:1	0.146	1.262	0.184	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-40
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	0.02	0	6950M	QPSK	1	49	10 mm	back	1:1	0.463	1.250	0.579	A38
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	0.00	1	6950M	QPSK	25	25	10 mm	back	1:1	0.380	1.236	0.470	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	0.01	0	6950M	QPSK	1	49	10 mm	front	1:1	0.407	1.250	0.509	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.02	1	6950M	QPSK	25	25	10 mm	front	1:1	0.332	1.236	0.410	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	-0.06	0	6950M	QPSK	1	49	10 mm	bottom	1:1	0.308	1.250	0.385	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.05	1	6950M	QPSK	25	25	10 mm	bottom	1:1	0.247	1.236	0.305	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	0.00	0	6950M	QPSK	1	49	10 mm	right	1:1	0.386	1.250	0.483	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	0.02	1	6950M	QPSK	25	25	10 mm	right	1:1	0.313	1.236	0.387	
782.00	23230	Mid	LTE Band 13	10	54	25.8	24.83	-0.09	0	6950M	QPSK	1	49	10 mm	left	1:1	0.194	1.250	0.243	
782.00	23230	Mid	LTE Band 13	10	54	24.8	23.88	-0.09	1	6950M	QPSK	25	25	10 mm	left	1:1	0.156	1.236	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						

Table 11-41
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	-0.11	0	6932M	QPSK	1	0	10 mm	back	1:1	0.360	1.146	0.413	A40
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	-0.10	1	6932M	QPSK	25	12	10 mm	back	1:1	0.273	1.132	0.309	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	-0.02	0	6932M	QPSK	1	0	10 mm	front	1:1	0.345	1.146	0.395	
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	-0.02	1	6932M	QPSK	25	12	10 mm	front	1:1	0.262	1.132	0.297	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	0.01	0	6932M	QPSK	1	0	10 mm	bottom	1:1	0.250	1.146	0.287	
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	-0.01	1	6932M	QPSK	25	12	10 mm	bottom	1:1	0.185	1.132	0.209	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	0.07	0	6932M	QPSK	1	0	10 mm	right	1:1	0.291	1.146	0.333	
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	-0.02	1	6932M	QPSK	25	12	10 mm	right	1:1	0.262	1.132	0.297	
793.00	23330	Mid	LTE Band 14	10	0	25.0	24.41	-0.13	0	6932M	QPSK	1	0	10 mm	left	1:1	0.182	1.146	0.209	
793.00	23330	Mid	LTE Band 14	10	0	24.0	23.46	-0.02	1	6932M	QPSK	25	12	10 mm	left	1:1	0.134	1.132	0.152	
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 11-42
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.14	0	6938M	QPSK	1	36	10 mm	back	1:1	0.404	1.346	0.544	A42
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	-0.09	1	6938M	QPSK	36	18	10 mm	back	1:1	0.323	1.330	0.430	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.01	0	6938M	QPSK	1	36	10 mm	front	1:1	0.336	1.346	0.452	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	-0.01	1	6938M	QPSK	36	18	10 mm	front	1:1	0.274	1.330	0.364	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.00	0	6938M	QPSK	1	36	10 mm	bottom	1:1	0.287	1.346	0.386	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.03	1	6938M	QPSK	36	18	10 mm	bottom	1:1	0.232	1.330	0.309	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	-0.01	0	6938M	QPSK	1	36	10 mm	right	1:1	0.349	1.346	0.470	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	-0.01	1	6938M	QPSK	36	18	10 mm	right	1:1	0.289	1.330	0.384	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	25.8	24.51	0.06	0	6938M	QPSK	1	36	10 mm	left	1:1	0.147	1.346	0.198	
831.50	26865	Mid	LTE Band 26 (Cell)	15	14	24.8	23.56	0.01	1	6938M	QPSK	36	18	10 mm	left	1:1	0.121	1.330	0.161	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-43
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.02	0	6805M	QPSK	1	0	10 mm	back	1:1	0.495	1.285	0.636	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	-0.03	1	6805M	QPSK	25	25	10 mm	back	1:1	0.419	1.245	0.522	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.88	-0.01	0	6805M	QPSK	1	0	10 mm	back	1:1	0.506	1.236	0.625	A44
	SCC	829.30	20453	Mid	LTE Band 5 (Cell)	5								1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	54	25.8	24.71	-0.02	0	6805M	QPSK	1	0	10 mm	front	1:1	0.374	1.285	0.481	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	54	24.8	23.85	-0.01	1	6805M	QPSK	25	25	10 mm	front	1:1	0.317	1.245	0.395	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.08	0	6805M	QPSK	1	0	10 mm	bottom	1:1	0.313	1.285	0.402	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.01	1	6805M	QPSK	25	25	10 mm	bottom	1:1	0.260	1.245	0.324	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.03	0	6805M	QPSK	1	0	10 mm	right	1:1	0.382	1.285	0.491	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.01	1	6805M	QPSK	25	25	10 mm	right	1:1	0.305	1.245	0.380	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	25.8	24.71	-0.03	0	6805M	QPSK	1	0	10 mm	left	1:1	0.169	1.285	0.217	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	13	24.8	23.85	0.01	1	6805M	QPSK	25	25	10 mm	left	1:1	0.121	1.245	0.151	
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 11-44
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.92	0.03	0	6784M	QPSK	1	50	10 mm	back	1:1	0.428	1.143	0.489	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.99	-0.18	0	6784M	QPSK	50	0	10 mm	back	1:1	0.413	1.125	0.465	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	19.5	18.92	0.07	0	6784M	QPSK	1	50	10 mm	front	1:1	0.298	1.143	0.341	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	19.5	18.99	0.08	0	6784M	QPSK	50	0	10 mm	front	1:1	0.320	1.125	0.360	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.92	0.03	0	6784M	QPSK	1	50	10 mm	bottom	1:1	0.748	1.143	0.855	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	8	19.5	18.80	-0.05	0	6784M	QPSK	1	0	10 mm	bottom	1:1	0.713	1.175	0.838	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	8	19.5	18.91	0.00	0	6784M	QPSK	1	99	10 mm	bottom	1:1	0.787	1.146	0.902	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.99	-0.04	0	6784M	QPSK	50	0	10 mm	bottom	1:1	0.770	1.125	0.866	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	8	19.5	18.83	0.00	0	6784M	QPSK	50	25	10 mm	bottom	1:1	0.767	1.167	0.895	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	8	19.5	18.88	0.00	0	6784M	QPSK	50	0	10 mm	bottom	1:1	0.807	1.153	0.930	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	8	19.5	18.92	0.01	0	6784M	QPSK	50	25	10 mm	bottom	1:1	0.811	1.143	0.927	A46
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	8	19.5	19.15	-0.02	0	6784M	QPSK	25	0	10 mm	bottom	1:1	0.775	1.084	0.840	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	8	19.5	18.88	-0.02	0	6784M	QPSK	100	0	10 mm	bottom	1:1	0.801	1.153	0.924	
2CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	8	19.5	19.08	0.00	0	6784M	QPSK	50	0	10 mm	bottom	1:1	0.797	1.102	0.878	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20								50	50							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	8	19.5	19.12	-0.05	0	6784M	QPSK	25	0	10 mm	bottom	1:1	0.760	1.091	0.829	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10								25	25							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.92	0.10	0	6784M	QPSK	1	50	10 mm	right	1:1	0.081	1.143	0.093	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	8	19.5	18.99	0.02	0	6784M	QPSK	50	0	10 mm	right	1:1	0.080	1.125	0.090	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	4	19.5	18.92	0.02	0	6784M	QPSK	1	50	10 mm	left	1:1	0.066	1.143	0.075	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	4	19.5	18.99	0.03	0	6784M	QPSK	50	0	10 mm	left	1:1	0.073	1.125	0.082	

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

Table 11-45
LTE Band 2 (PCS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1860.00	18700	Low	LTE Band 2 (PCS)	20	1	19.0	17.98	-0.02	0	6759M	QPSK	1	99	10 mm	back	1:1	0.355	1.265	0.449	
1860.00	18700	Low	LTE Band 2 (PCS)	20	1	19.0	18.01	-0.02	0	6759M	QPSK	50	50	10 mm	back	1:1	0.367	1.256	0.461	
1860.00	18700	Low	LTE Band 2 (PCS)	20	28	19.0	17.98	-0.02	0	6759M	QPSK	1	99	10 mm	front	1:1	0.299	1.265	0.378	
1860.00	18700	Low	LTE Band 2 (PCS)	20	28	19.0	18.01	0.00	0	6759M	QPSK	50	50	10 mm	front	1:1	0.314	1.256	0.394	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	19.0	17.98	-0.03	0	6759M	QPSK	1	99	10 mm	bottom	1:1	0.695	1.265	0.879	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	53	19.0	17.87	0.01	0	6759M	QPSK	1	99	10 mm	bottom	1:1	0.729	1.297	0.946	
1900.00	19100	High	LTE Band 2 (PCS)	20	53	19.0	17.75	0.03	0	6759M	QPSK	1	0	10 mm	bottom	1:1	0.742	1.334	0.990	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	19.0	18.01	-0.06	0	6759M	QPSK	50	50	10 mm	bottom	1:1	0.709	1.256	0.891	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	53	19.0	17.98	0.21	0	6759M	QPSK	50	25	10 mm	bottom	1:1	0.723	1.265	0.915	
1900.00	19100	High	LTE Band 2 (PCS)	20	53	19.0	17.80	0.14	0	6759M	QPSK	50	0	10 mm	bottom	1:1	0.764	1.318	1.007	A48
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	19.0	17.97	0.15	0	6759M	QPSK	100	0	10 mm	bottom	1:1	0.721	1.268	0.914	
1860.00	18700	Low	LTE Band 2 (PCS)	20	27	19.0	17.98	-0.07	0	6759M	QPSK	1	99	10 mm	right	1:1	0.048	1.265	0.061	
1860.00	18700	Low	LTE Band 2 (PCS)	20	27	19.0	18.01	0.01	0	6759M	QPSK	50	50	10 mm	right	1:1	0.051	1.256	0.064	
1860.00	18700	Low	LTE Band 2 (PCS)	20	31	19.0	17.98	-0.05	0	6759M	QPSK	1	99	10 mm	left	1:1	0.065	1.265	0.082	
1860.00	18700	Low	LTE Band 2 (PCS)	20	31	19.0	18.01	-0.05	0	6759M	QPSK	50	50	10 mm	left	1:1	0.067	1.256	0.084	

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 11-46
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)	
2510.00	20850	Low	LTE Band 7	20	20.5	20.07	0.01	0	6799M	QPSK	1	0	10 mm	back	1:1	0.415	1.104	0.458	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	0.13	0	6799M	QPSK	50	0	10 mm	back	1:1	0.420	1.169	0.491	
2510.00	20850	Low	LTE Band 7	20	20.5	20.07	-0.08	0	6799M	QPSK	1	0	10 mm	front	1:1	0.470	1.104	0.519	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	-0.16	0	6799M	QPSK	50	0	10 mm	front	1:1	0.477	1.169	0.558	
2510.00	20850	Low	LTE Band 7	20	20.5	20.07	0.06	0	6799M	QPSK	1	0	10 mm	bottom	1:1	1.050	1.104	1.159	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.50	-0.15	0	6799M	QPSK	1	0	10 mm	bottom	1:1	0.999	1.259	**1.258**	
2560.00	21350	High	LTE Band 7	20	20.5	19.57	-0.13	0	6799M	QPSK	1	50	10 mm	bottom	1:1	0.744	1.239	0.922	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	-0.02	0	6799M	QPSK	50	0	10 mm	bottom	1:1	1.070	1.169	1.251	A50
2535.00	21100	Mid	LTE Band 7	20	20.5	19.77	-0.20	0	6799M	QPSK	50	25	10 mm	bottom	1:1	1.060	1.183	1.254	
2560.00	21350	High	LTE Band 7	20	20.5	19.60	-0.20	0	6799M	QPSK	50	50	10 mm	bottom	1:1	0.785	1.230	0.966	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	-0.12	0	6799M	QPSK	100	0	10 mm	bottom	1:1	1.030	1.191	1.227	
2510.00	20850	Low	LTE Band 7	20	20.5	20.07	0.19	0	6799M	QPSK	1	0	10 mm	right	1:1	0.045	1.104	0.050	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	-0.07	0	6799M	QPSK	50	0	10 mm	right	1:1	0.044	1.169	0.051	
2510.00	20850	Low	LTE Band 7	20	20.5	20.07	0.09	0	6799M	QPSK	1	0	10 mm	left	1:1	0.075	1.104	0.083	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	-0.06	0	6799M	QPSK	50	0	10 mm	left	1:1	0.075	1.169	0.088	
2510.00	20850	Low	LTE Band 7	20	20.5	19.82	-0.02	0	6799M	QPSK	50	0	10 mm	bottom	1:1	0.983	1.169	1.149	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.77	-0.20	0	6799M	QPSK	50	25	10 mm	bottom	1:1	1.020	1.183	1.207	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note: Blue entries represent variability measurements.

Table 11-47
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	24.5	24.19	-0.05	0	0117M	QPSK	1	0	10 mm	back	1:1.58	0.473	1.074	0.508	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.28	0.03	1	0117M	QPSK	50	25	10 mm	back	1:1.58	0.394	1.052	0.414	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	24.5	24.19	0.01	0	0117M	QPSK	1	0	10 mm	front	1:1.58	0.261	1.074	0.280	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.28	-0.06	1	0117M	QPSK	50	25	10 mm	front	1:1.58	0.212	1.052	0.223	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	24.5	24.18	0.05	0	0117M	QPSK	1	99	10 mm	top	1:1.58	0.693	1.076	0.746	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	24.5	24.08	0.04	0	0117M	QPSK	1	99	10 mm	top	1:1.58	0.706	1.102	0.778	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	24.5	24.19	0.04	0	0117M	QPSK	1	0	10 mm	top	1:1.58	0.736	1.074	**0.790**	A52
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	24.5	23.91	0.00	0	0117M	QPSK	1	0	10 mm	top	1:1.58	0.687	1.146	0.787	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	23.5	23.26	0.05	1	0117M	QPSK	50	25	10 mm	top	1:1.58	0.584	1.057	0.617	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	23.5	23.27	0.08	1	0117M	QPSK	50	25	10 mm	top	1:1.58	0.583	1.054	0.614	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.28	0.01	1	0117M	QPSK	50	25	10 mm	top	1:1.58	0.601	1.052	0.632	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	23.5	22.90	0.05	1	0117M	QPSK	50	25	10 mm	top	1:1.58	0.559	1.148	0.642	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.21	0.05	1	0117M	QPSK	100	0	10 mm	top	1:1.58	0.583	1.069	0.623	
2CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	24.5	23.98	0.12	0	0117M	QPSK	1	0	10 mm	top	1:1.58	0.680	1.127	0.766	
	SCC	3626.90	56009	Mid-High	LTE Band 48							QPSK	1	99							
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	24.5	24.18	-0.16	0	0117M	QPSK	1	99	10 mm	left	1:1.58	0.595	1.076	0.640	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	24.5	24.08	-0.16	0	0117M	QPSK	1	99	10 mm	left	1:1.58	0.610	1.102	0.672	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	24.5	24.19	-0.05	0	0117M	QPSK	1	0	10 mm	left	1:1.58	0.638	1.074	0.685	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	24.5	23.91	-0.09	0	0117M	QPSK	1	0	10 mm	left	1:1.58	0.650	1.146	0.745	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.28	-0.10	1	0117M	QPSK	50	25	10 mm	left	1:1.58	0.536	1.052	0.564	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.21	-0.02	1	0117M	QPSK	100	0	10 mm	left	1:1.58	0.519	1.069	0.555	
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Table 11-48
LTE Band 41 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)	
2506.00	39750	Low	LTE Band 41	20	22.0	21.21	-0.04	0	6799M	QPSK	1	0	10 mm	back	1:1.58	0.249	1.199	0.299	
2506.00	39750	Low	LTE Band 41	20	22.0	21.31	-0.02	0	6799M	QPSK	50	0	10 mm	back	1:1.58	0.249	1.172	0.292	
2506.00	39750	Low	LTE Band 41	20	22.0	21.21	-0.11	0	6799M	QPSK	1	0	10 mm	front	1:1.58	0.319	1.199	0.382	
2506.00	39750	Low	LTE Band 41	20	22.0	21.31	-0.05	0	6799M	QPSK	50	0	10 mm	front	1:1.58	0.326	1.172	0.382	
2506.00	39750	Low	LTE Band 41	20	22.0	21.21	0.00	0	6799M	QPSK	1	0	10 mm	bottom	1:1.58	0.835	1.199	1.001	
2549.50	40185	Low-Mid	LTE Band 41	20	22.0	20.95	0.14	0	6799M	QPSK	1	50	10 mm	bottom	1:1.58	0.783	1.274	0.998	
2593.00	40620	Mid	LTE Band 41	20	22.0	20.86	0.15	0	6799M	QPSK	1	50	10 mm	bottom	1:1.58	0.727	1.300	0.945	
2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.55	0.09	0	6799M	QPSK	1	50	10 mm	bottom	1:1.58	0.409	1.396	0.571	
2680.00	41490	High	LTE Band 41	20	22.0	20.55	0.14	0	6799M	QPSK	1	50	10 mm	bottom	1:1.58	0.423	1.396	0.591	
2506.00	39750	Low	LTE Band 41	20	22.0	21.31	-0.03	0	6799M	QPSK	50	0	10 mm	bottom	1:1.58	0.832	1.172	0.975	
2549.50	40185	Low-Mid	LTE Band 41	20	22.0	21.07	0.19	0	6799M	QPSK	50	25	10 mm	bottom	1:1.58	0.801	1.239	0.992	
2593.00	40620	Mid	LTE Band 41	20	22.0	21.03	0.21	0	6799M	QPSK	50	25	10 mm	bottom	1:1.58	0.748	1.250	0.935	
2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.69	0.18	0	6799M	QPSK	50	25	10 mm	bottom	1:1.58	0.424	1.352	0.573	
2680.00	41490	High	LTE Band 41	20	22.0	20.69	0.19	0	6799M	QPSK	50	50	10 mm	bottom	1:1.58	0.426	1.352	0.576	
2506.00	39750	Low	LTE Band 41	20	22.0	21.20	0.13	0	6799M	QPSK	100	0	10 mm	bottom	1:1.58	0.846	1.202	1.017	A54
2506.00	39750	Low	LTE Band 41	20	22.0	21.21	-0.02	0	6799M	QPSK	1	0	10 mm	right	1:1.58	0.034	1.199	0.041	
2506.00	39750	Low	LTE Band 41	20	22.0	21.31	0.10	0	6799M	QPSK	50	0	10 mm	right	1:1.58	0.035	1.172	0.041	
2506.00	39750	Low	LTE Band 41	20	22.0	21.21	-0.05	0	6799M	QPSK	1	0	10 mm	left	1:1.58	0.044	1.199	0.053	
2506.00	39750	Low	LTE Band 41	20	22.0	21.31	-0.07	0	6799M	QPSK	50	0	10 mm	left	1:1.58	0.042	1.172	0.049	

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

Table 11-49
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	0.01	0	6938M	DFT-S-OFDM QPSK	1	1	10 mm	back	1:1	0.478	1.114	0.532	A56
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	-0.01	0	6938M	DFT-S-OFDM QPSK	50	28	10 mm	back	1:1	0.466	1.159	0.540	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	24.3	23.71	-0.01	1.5	6938M	CP-OFDM QPSK	1	1	10 mm	back	1:1	0.336	1.146	0.385	
836.50	167300	Mid	NR Band n5 (Cell)	20	54	25.8	25.33	0.01	0	6938M	DFT-S-OFDM QPSK	1	1	10 mm	front	1:1	0.398	1.114	0.443	
836.50	167300	Mid	NR Band n5 (Cell)	20	54	25.8	25.16	0.18	0	6938M	DFT-S-OFDM QPSK	50	28	10 mm	front	1:1	0.448	1.159	0.519	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.05	0	6938M	DFT-S-OFDM QPSK	1	1	10 mm	bottom	1:1	0.285	1.114	0.317	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	-0.02	0	6938M	DFT-S-OFDM QPSK	50	28	10 mm	bottom	1:1	0.278	1.159	0.322	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.01	0	6938M	DFT-S-OFDM QPSK	1	1	10 mm	right	1:1	0.474	1.114	0.528	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	-0.08	0	6938M	DFT-S-OFDM QPSK	50	28	10 mm	right	1:1	0.464	1.159	0.538	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.33	-0.14	0	6938M	DFT-S-OFDM QPSK	1	1	10 mm	left	1:1	0.219	1.114	0.244	
836.50	167300	Mid	NR Band n5 (Cell)	20	13	25.8	25.16	-0.02	0	6938M	DFT-S-OFDM QPSK	50	28	10 mm	left	1:1	0.175	1.159	0.203	

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

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Table 11-50
NR Band n66 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.95	0.16	0	6787M	DFT-S-OFDM QPSK	1	53	10 mm	back	1:1	0.397	1.135	0.451	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.70	0.01	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	back	1:1	0.405	1.202	0.487	
1720.00	344000	Low	NR Band n66 (AWS)	20	0	19.5	18.95	0.17	0	6787M	DFT-S-OFDM QPSK	1	53	10 mm	front	1:1	0.372	1.135	0.422	
1720.00	344000	Low	NR Band n66 (AWS)	20	0	19.5	18.70	0.08	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	front	1:1	0.378	1.202	0.454	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.95	0.16	0	6787M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	0.700	1.135	0.795	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.70	-0.02	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.712	1.202	0.856	
1745.00	349000	Mid	NR Band n66 (AWS)	20	8	19.5	18.60	0.01	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.760	1.230	0.935	A58
1770.00	354000	High	NR Band n66 (AWS)	20	8	19.5	18.27	0.05	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.753	1.327	0.999	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.67	-0.04	0	6787M	DFT-S-OFDM QPSK	100	0	10 mm	bottom	1:1	0.699	1.211	0.846	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.87	0.06	0	6787M	CP-OFDM QPSK	1	1	10 mm	bottom	1:1	0.738	1.156	0.853	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.95	-0.01	0	6787M	DFT-S-OFDM QPSK	1	53	10 mm	right	1:1	0.100	1.135	0.114	
1720.00	344000	Low	NR Band n66 (AWS)	20	8	19.5	18.70	-0.01	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	right	1:1	0.097	1.202	0.117	
1720.00	344000	Low	NR Band n66 (AWS)	20	4	19.5	18.95	0.01	0	6787M	DFT-S-OFDM QPSK	1	53	10 mm	left	1:1	0.077	1.135	0.087	
1720.00	344000	Low	NR Band n66 (AWS)	20	4	19.5	18.70	0.12	0	6787M	DFT-S-OFDM QPSK	50	0	10 mm	left	1:1	0.078	1.202	0.094	
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
NR Band n2 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1880.00	376000	Mid	NR Band n2 (PCS)	20	1	19.0	18.56	0.18	0	6943M	DFT-S-OFDM QPSK	1	53	10 mm	back	1:1	0.283	1.107	0.313	
1880.00	376000	Mid	NR Band n2 (PCS)	20	1	19.0	18.29	0.19	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	back	1:1	0.272	1.178	0.320	
1880.00	376000	Mid	NR Band n2 (PCS)	20	28	19.0	18.56	-0.15	0	6943M	DFT-S-OFDM QPSK	1	53	10 mm	front	1:1	0.276	1.107	0.306	
1880.00	376000	Mid	NR Band n2 (PCS)	20	28	19.0	18.29	-0.18	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	front	1:1	0.267	1.178	0.315	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	19.0	18.56	-0.14	0	6943M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	0.598	1.107	0.662	
1860.00	372000	Low	NR Band n2 (PCS)	20	53	19.0	18.20	-0.20	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.565	1.202	0.679	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	19.0	18.29	-0.13	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.578	1.178	0.681	
1900.00	380000	High	NR Band n2 (PCS)	20	53	19.0	18.15	-0.16	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.710	1.216	0.863	A60
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	19.0	18.28	0.15	0	6943M	DFT-S-OFDM QPSK	100	0	10 mm	bottom	1:1	0.569	1.180	0.671	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	19.0	18.34	-0.04	0	6943M	CP-OFDM QPSK	1	1	10 mm	bottom	1:1	0.558	1.164	0.650	
1880.00	376000	Mid	NR Band n2 (PCS)	20	27	19.0	18.56	0.11	0	6943M	DFT-S-OFDM QPSK	1	53	10 mm	right	1:1	0.042	1.107	0.046	
1880.00	376000	Mid	NR Band n2 (PCS)	20	27	19.0	18.29	0.15	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	right	1:1	0.042	1.178	0.049	
1880.00	376000	Mid	NR Band n2 (PCS)	20	31	19.0	18.56	0.02	0	6943M	DFT-S-OFDM QPSK	1	53	10 mm	left	1:1	0.055	1.107	0.061	
1880.00	376000	Mid	NR Band n2 (PCS)	20	31	19.0	18.29	0.16	0	6943M	DFT-S-OFDM QPSK	50	0	10 mm	left	1:1	0.051	1.178	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								

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Table 11-52
WLAN SISO 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 W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																		
2462	11	802.11b	DSSS	22	21.0	20.65	0.06	10 mm	1	0117M	1	back	98.9	0.511	0.389	1.084	1.011	0.426	
2462	11	802.11b	DSSS	22	21.0	20.65	0.00	10 mm	1	0117M	1	front	98.9	0.478	-	1.084	1.011	-	
2412	1	802.11b	DSSS	22	21.0	20.39	0.15	10 mm	1	0117M	1	top	98.9	0.978	0.632	1.151	1.011	**0.735**	A62
2437	6	802.11b	DSSS	22	21.0	20.26	0.15	10 mm	1	0117M	1	top	98.9	0.868	0.554	1.186	1.011	0.664	
2462	11	802.11b	DSSS	22	21.0	20.65	0.13	10 mm	1	0117M	1	top	98.9	0.907	0.558	1.084	1.011	0.612	
2462	11	802.11b	DSSS	22	21.0	20.65	0.18	10 mm	1	0117M	1	left	98.9	0.052	0.033	1.084	1.011	0.036	
2412	1	802.11b	DSSS	22	21.0	20.90	-0.20	10 mm	2	0117M	1	back	98.9	0.346	0.228	1.023	1.011	0.236	
2412	1	802.11b	DSSS	22	21.0	20.90	0.13	10 mm	2	0117M	1	front	98.9	0.014	-	1.023	1.011	-	
2412	1	802.11b	DSSS	22	21.0	20.90	0.17	10 mm	2	0117M	1	top	98.9	0.039	-	1.023	1.011	-	
2412	1	802.11b	DSSS	22	21.0	20.90	0.13	10 mm	2	0117M	1	left	98.9	0.063	-	1.023	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.61	-0.18	10 mm	1	0122M	6	back	98.8	0.776	0.318	1.094	1.012	**0.352**	
5785	157	802.11a	OFDM	20	18.0	17.61	-0.13	10 mm	1	0122M	6	front	98.8	0.079	-	1.094	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.61	0.16	10 mm	1	0122M	6	top	98.8	0.150	-	1.094	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.61	0.13	10 mm	1	0122M	6	left	98.8	0.478	-	1.094	1.012	-	
5825	165	802.11a	OFDM	20	18.0	17.65	-0.12	10 mm	2	0122M	6	back	98.9	0.672	0.292	1.084	1.011	0.320	
5825	165	802.11a	OFDM	20	18.0	17.65	-0.12	10 mm	2	0122M	6	front	98.9	0.031	-	1.084	1.011	-	
5825	165	802.11a	OFDM	20	18.0	17.65	-0.16	10 mm	2	0122M	6	top	98.9	0.100	-	1.084	1.011	-	
5825	165	802.11a	OFDM	20	18.0	17.65	0.18	10 mm	2	0122M	6	left	98.9	0.273	-	1.084	1.011	-	

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 11-53
WLAN MIMO 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 W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
2437	6	802.11n	OFDM	20	18.5	18.48	18.5	18.30	0.18	10 mm	MIMO	0558M	13	back	93.3	0.218	-	1.047	1.072	-	
2437	6	802.11n	OFDM	20	18.5	18.48	18.5	18.30	0.12	10 mm	MIMO	0558M	13	front	93.3	0.172	0.116	1.047	1.072	0.130	
2437	6	802.11n	OFDM	20	18.5	18.48	18.5	18.30	0.17	10 mm	MIMO	0558M	13	top	93.3	0.487	0.330	1.047	1.072	0.370	
2437	6	802.11n	OFDM	20	18.5	18.48	18.5	18.30	0.20	10 mm	MIMO	0558M	13	left	93.3	0.047	0.032	1.047	1.072	0.036	
5745	149	802.11n	OFDM	20	18.0	17.55	18.0	17.12	-0.03	10 mm	MIMO	0122M	13	back	98.7	1.263	0.589	1.225	1.013	0.731	A64
5785	157	802.11n	OFDM	20	18.0	17.55	18.0	17.99	0.20	10 mm	MIMO	0122M	13	back	98.7	1.261	0.557	1.109	1.013	0.626	
5825	165	802.11n	OFDM	20	18.0	17.46	18.0	17.66	0.21	10 mm	MIMO	0122M	13	back	98.7	1.157	0.526	1.132	1.013	0.603	
5785	157	802.11n	OFDM	20	18.0	17.55	18.0	17.99	0.16	10 mm	MIMO	0122M	13	front	98.7	0.070	0.029	1.109	1.013	0.033	
5785	157	802.11n	OFDM	20	18.0	17.55	18.0	17.99	-0.13	10 mm	MIMO	0122M	13	top	98.7	0.154	0.059	1.109	1.013	0.066	
5785	157	802.11n	OFDM	20	18.0	17.55	18.0	17.99	-0.03	10 mm	MIMO	0122M	13	left	98.7	0.520	0.228	1.109	1.013	0.256	

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

Note: To achieve the 21.0 dBm (5 GHz WLAN) and 21.5 dBm (2.4 GHz WLAN) maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm (5 GHz WLAN) and 18.5 dBm (2.4 GHz WLAN)

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Table 11-54
WLAN MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN 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	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.16	10 mm	MIMO	0558M	13	back	93.3	0.096	-	1.112	1.072	-	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.17	10 mm	MIMO	0558M	13	front	93.3	0.081	0.054	1.112	1.072	0.064	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.12	10 mm	MIMO	0558M	13	top	93.3	0.214	0.140	1.112	1.072	0.167	
2412	1	802.11n	OFDM	20	14.5	14.48	14.5	14.04	0.15	10 mm	MIMO	0558M	13	left	93.3	0.023	0.013	1.112	1.072	0.015	
5775	155	802.11ac	OFDM	80	14.0	13.79	14.0	13.67	0.00	10 mm	MIMO	0122M	58.5	back	91.0	0.436	0.198	1.079	1.099	0.235	
5775	155	802.11ac	OFDM	80	14.0	13.79	14.0	13.67	-0.21	10 mm	MIMO	0122M	58.5	front	91.0	0.017	0.008	1.079	1.099	0.009	
5775	155	802.11ac	OFDM	80	14.0	13.79	14.0	13.67	-0.15	10 mm	MIMO	0122M	58.5	top	91.0	0.050	-	1.079	1.099	-	
5775	155	802.11ac	OFDM	80	14.0	13.79	14.0	13.67	0.21	10 mm	MIMO	0122M	58.5	left	91.0	0.182	-	1.079	1.099	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram							

DTS and NII MIMO were additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz and 5 GHz WLAN. 2.4 GHz WIFI was not transmitting during NII MIMO evaluations and 5 GHz WIFI was not transmitting during DTS MIMO evaluations.

Table 11-55
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)	
2441	39	Bluetooth	FHSS	15.5	15.17	0.01	10 mm	0558M	1	back	77.1	0.059	1.079	1.297	0.083	
2441	39	Bluetooth	FHSS	15.5	15.17	0.03	10 mm	0558M	1	front	77.1	0.049	1.079	1.297	0.069	
2441	39	Bluetooth	FHSS	15.5	15.17	0.00	10 mm	0558M	1	top	77.1	0.126	1.079	1.297	**0.176**	A66
2441	39	Bluetooth	FHSS	15.5	15.17	0.21	10 mm	0558M	1	left	77.1	0.007	1.079	1.297	0.010	
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 11-56
CDMA/GPRS/UMTS Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Ant State	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.22	-0.04	8 mm	53	6945M	N/A	1:1	back	0.759	1.343	1.019	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.22	0.06	6 mm	53	6945M	N/A	1:1	front	0.961	1.343	1.291	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.22	-0.11	11 mm	53	6945M	N/A	1:1	bottom	1.160	1.343	1.558	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.22	-0.19	0 mm	53	6945M	N/A	1:1	right	0.306	1.343	0.411	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.22	0.03	0 mm	53	6945M	N/A	1:1	left	0.507	1.343	0.681	
1851.25	25	PCS CDMA	EVDO Rev. 0	20.5	19.51	0.00	0 mm	53	6945M	N/A	1:1	back	1.720	1.256	2.160	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.5	19.44	0.04	0 mm	53	6945M	N/A	1:1	back	1.620	1.276	2.067	
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.5	19.68	0.01	0 mm	53	6945M	N/A	1:1	back	1.610	1.208	1.945	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.5	19.44	-0.10	0 mm	53	6945M	N/A	1:1	front	1.400	1.276	1.786	
1851.25	25	PCS CDMA	EVDO Rev. 0	20.5	19.51	0.12	0 mm	53	6945M	N/A	1:1	bottom	2.070	1.256	2.600	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.5	19.44	0.20	0 mm	53	6945M	N/A	1:1	bottom	2.330	1.276	2.973	
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.5	19.68	0.14	0 mm	53	6945M	N/A	1:1	bottom	2.460	1.208	2.972	A67
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.5	19.68	-0.03	0 mm	53	6945M	N/A	1:1	bottom	2.360	1.208	2.851	
1880.00	661	GSM 1900	GPRS	27.0	25.88	-0.01	8 mm	N/A	6945M	3	1:2.76	back	0.419	1.294	0.542	
1880.00	661	GSM 1900	GPRS	27.0	25.88	0.00	6 mm	N/A	6945M	3	1:2.76	front	0.669	1.294	0.866	
1880.00	661	GSM 1900	GPRS	27.0	25.88	0.03	11 mm	N/A	6945M	3	1:2.76	bottom	0.656	1.294	0.849	
1880.00	661	GSM 1900	GPRS	27.0	25.88	0.13	0 mm	N/A	6945M	3	1:2.76	right	0.189	1.294	0.245	
1880.00	661	GSM 1900	GPRS	27.0	25.88	-0.13	0 mm	N/A	6945M	3	1:2.76	left	0.312	1.294	0.404	
1880.00	661	GSM 1900	GPRS	24.3	22.86	0.14	0 mm	N/A	6945M	4	1:2.076	back	1.350	1.393	1.881	
1880.00	661	GSM 1900	GPRS	24.3	22.86	-0.09	0 mm	N/A	6945M	4	1:2.076	front	1.260	1.393	1.755	
1850.20	512	GSM 1900	GPRS	24.3	22.99	-0.16	0 mm	N/A	6945M	4	1:2.076	bottom	1.790	1.352	2.420	
1880.00	661	GSM 1900	GPRS	24.3	22.86	-0.04	0 mm	N/A	6945M	4	1:2.076	bottom	2.000	1.393	2.786	
1909.80	810	GSM 1900	GPRS	24.3	23.03	-0.19	0 mm	N/A	6945M	4	1:2.076	bottom	2.300	1.340	3.082	A68
1880.00	9400	UMTS 1900	RMC	24.0	23.06	-0.04	8 mm	54	6945M	N/A	1:1	back	0.892	1.242	1.108	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	0.02	6 mm	54	6945M	N/A	1:1	front	1.140	1.242	1.416	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	0.01	11 mm	54	6945M	N/A	1:1	bottom	1.060	1.242	1.317	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	-0.09	0 mm	54	6945M	N/A	1:1	right	0.370	1.242	0.460	
1880.00	9400	UMTS 1900	RMC	24.0	23.06	-0.09	0 mm	54	6945M	N/A	1:1	left	0.592	1.242	0.735	
1880.00	9400	UMTS 1900	RMC	19.5	18.48	-0.03	0 mm	54	6945M	N/A	1:1	back	1.530	1.265	1.935	
1880.00	9400	UMTS 1900	RMC	19.5	18.48	-0.03	0 mm	54	6945M	N/A	1:1	front	1.170	1.265	1.480	
1852.40	9262	UMTS 1900	RMC	19.5	18.60	-0.15	0 mm	54	6945M	N/A	1:1	bottom	1.850	1.230	2.276	
1880.00	9400	UMTS 1900	RMC	19.5	18.48	-0.12	0 mm	54	6945M	N/A	1:1	bottom	2.140	1.265	2.707	
1907.60	9538	UMTS 1900	RMC	19.5	18.72	-0.15	0 mm	54	6945M	N/A	1:1	bottom	2.410	1.197	2.885	A69
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entries represent variability measurements.

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Table 11-57
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	0.02	0	6784M	QPSK	1	50	8 mm	back	1:1	0.913	1.213	1.107	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	0.01	1	6784M	QPSK	50	0	8 mm	back	1:1	0.778	1.159	0.902	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	-0.03	0	6784M	QPSK	1	50	6 mm	front	1:1	1.210	1.213	1.468	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	-0.01	1	6784M	QPSK	50	0	6 mm	front	1:1	1.020	1.159	1.182	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	-0.04	0	6784M	QPSK	1	50	11 mm	bottom	1:1	1.080	1.213	1.310	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	-0.01	1	6784M	QPSK	50	0	11 mm	bottom	1:1	0.917	1.159	1.063	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	-0.02	0	6784M	QPSK	1	50	0 mm	right	1:1	0.532	1.213	0.645	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	0.02	1	6784M	QPSK	50	0	0 mm	right	1:1	0.434	1.159	0.503	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	24.8	23.96	-0.04	0	6784M	QPSK	1	50	0 mm	left	1:1	0.476	1.213	0.577	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	23.8	23.16	0.00	1	6784M	QPSK	50	0	0 mm	left	1:1	0.403	1.159	0.467	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.41	0.03	0	6784M	QPSK	1	50	0 mm	back	1:1	1.790	1.146	2.051	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	0	21.0	20.29	0.01	0	6784M	QPSK	1	50	0 mm	back	1:1	1.830	1.178	2.156	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	0	21.0	20.30	0.06	0	6784M	QPSK	1	50	0 mm	back	1:1	1.990	1.175	2.338	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.41	0.02	0	6784M	QPSK	50	50	0 mm	back	1:1	1.830	1.146	2.097	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	0	21.0	20.35	0.05	0	6784M	QPSK	50	25	0 mm	back	1:1	1.940	1.161	2.252	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	0	21.0	20.40	0.06	0	6784M	QPSK	50	25	0 mm	back	1:1	2.040	1.148	2.342	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.37	0.02	0	6784M	QPSK	100	0	0 mm	back	1:1	1.810	1.156	2.092	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.41	0.02	0	6784M	QPSK	1	50	0 mm	front	1:1	2.000	1.146	2.292	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	0	21.0	20.29	0.09	0	6784M	QPSK	1	50	0 mm	front	1:1	1.970	1.178	2.321	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	0	21.0	20.30	0.10	0	6784M	QPSK	1	50	0 mm	front	1:1	2.210	1.175	2.597	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.41	0.06	0	6784M	QPSK	50	50	0 mm	front	1:1	2.040	1.146	2.338	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	0	21.0	20.35	0.10	0	6784M	QPSK	50	25	0 mm	front	1:1	2.200	1.161	2.554	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	0	21.0	20.40	0.10	0	6784M	QPSK	50	25	0 mm	front	1:1	2.300	1.148	2.640	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	0	21.0	20.37	0.14	0	6784M	QPSK	100	0	0 mm	front	1:1	2.060	1.156	2.381	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	21.0	20.41	-0.03	0	6784M	QPSK	1	50	0 mm	bottom	1:1	2.300	1.146	2.636	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	2	21.0	20.29	0.05	0	6784M	QPSK	1	50	0 mm	bottom	1:1	2.070	1.178	2.438	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	2	21.0	20.30	0.13	0	6784M	QPSK	1	50	0 mm	bottom	1:1	2.110	1.175	2.479	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	21.0	20.41	0.02	0	6784M	QPSK	50	50	0 mm	bottom	1:1	2.260	1.146	2.590	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	2	21.0	20.35	0.12	0	6784M	QPSK	50	25	0 mm	bottom	1:1	2.140	1.161	2.485	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	2	21.0	20.40	0.09	0	6784M	QPSK	50	25	0 mm	bottom	1:1	2.190	1.148	2.514	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	21.0	20.37	0.00	0	6784M	QPSK	100	0	0 mm	bottom	1:1	2.290	1.156	2.647	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	2	21.0	20.55	0.03	0	6784M	QPSK	50	0	0 mm	bottom	1:1	2.430	1.109	2.695	A70
2 CC Uplink CA_66C	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	2	21.0	20.42	-0.02	0	6784M	QPSK	100	0	0 mm	bottom	1:1	2.360	1.143	2.697	
	SCC	1739.80	132270	Low	LTE Band 66 (AWS)	20								100	0							
2 CC Uplink CA_66B	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	2	21.0	20.62	0.05	0	6784M	QPSK	50	0	0 mm	bottom	1:1	2.300	1.091	2.509	
	SCC	1724.90	132121	Low	LTE Band 66 (AWS)	10								50	0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams								

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Table 11-58
LTE Band 2 (PCS) Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1900.00	19100	High	LTE Band 2 (PCS)	20	26	24.5	23.61	0.08	0	6759M	QPSK	1	99	8 mm	back	1:1	0.827	1.227	1.015	
1900.00	19100	High	LTE Band 2 (PCS)	20	55	23.5	22.64	0.07	1	6759M	QPSK	50	50	8 mm	back	1:1	0.702	1.219	0.856	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	-0.08	0	6759M	QPSK	1	99	6 mm	front	1:1	0.926	1.227	1.136	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.04	1	6759M	QPSK	50	50	6 mm	front	1:1	0.784	1.219	0.956	
1900.00	19100	High	LTE Band 2 (PCS)	20	55	24.5	23.61	0.02	0	6759M	QPSK	1	99	11 mm	bottom	1:1	1.290	1.227	1.583	
1900.00	19100	High	LTE Band 2 (PCS)	20	55	23.5	22.64	0.00	1	6759M	QPSK	50	50	11 mm	bottom	1:1	1.040	1.219	1.268	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	24.5	23.61	0.05	0	6759M	QPSK	1	99	0 mm	right	1:1	0.417	1.227	0.512	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	23.5	22.64	0.02	1	6759M	QPSK	50	50	0 mm	right	1:1	0.353	1.219	0.430	
1900.00	19100	High	LTE Band 2 (PCS)	20	1	24.5	23.61	-0.14	0	6759M	QPSK	1	99	0 mm	left	1:1	0.567	1.227	0.696	
1900.00	19100	High	LTE Band 2 (PCS)	20	1	23.5	22.64	-0.19	1	6759M	QPSK	50	50	0 mm	left	1:1	0.479	1.219	0.584	
1860.00	18700	Low	LTE Band 2 (PCS)	20	54	20.5	19.45	-0.02	0	6759M	QPSK	1	0	0 mm	back	1:1	1.630	1.274	2.077	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	54	20.5	19.35	0.01	0	6759M	QPSK	1	50	0 mm	back	1:1	1.440	1.303	1.876	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	20.5	19.19	0.04	0	6759M	QPSK	1	99	0 mm	back	1:1	1.310	1.352	1.771	
1860.00	18700	Low	LTE Band 2 (PCS)	20	54	20.5	19.50	-0.01	0	6759M	QPSK	50	50	0 mm	back	1:1	1.600	1.259	2.014	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	54	20.5	19.36	0.06	0	6759M	QPSK	50	0	0 mm	back	1:1	1.460	1.300	1.898	
1900.00	19100	High	LTE Band 2 (PCS)	20	54	20.5	19.42	0.06	0	6759M	QPSK	50	25	0 mm	back	1:1	1.430	1.282	1.833	
1860.00	18700	Low	LTE Band 2 (PCS)	20	54	20.5	19.40	-0.06	0	6759M	QPSK	100	0	0 mm	back	1:1	1.630	1.288	2.099	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	20.5	19.45	-0.09	0	6759M	QPSK	1	0	0 mm	front	1:1	1.500	1.274	1.911	
1860.00	18700	Low	LTE Band 2 (PCS)	20	53	20.5	19.50	-0.12	0	6759M	QPSK	50	50	0 mm	front	1:1	1.500	1.259	1.889	
1860.00	18700	Low	LTE Band 2 (PCS)	20	8	20.5	19.45	0.03	0	6759M	QPSK	1	0	0 mm	bottom	1:1	2.310	1.274	2.943	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	8	20.5	19.35	0.08	0	6759M	QPSK	1	50	0 mm	bottom	1:1	2.090	1.303	2.723	
1900.00	19100	High	LTE Band 2 (PCS)	20	8	20.5	19.19	0.06	0	6759M	QPSK	1	99	0 mm	bottom	1:1	2.310	1.352	3.123	
1860.00	18700	Low	LTE Band 2 (PCS)	20	8	20.5	19.50	0.05	0	6759M	QPSK	50	50	0 mm	bottom	1:1	2.400	1.259	3.022	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	8	20.5	19.36	0.07	0	6759M	QPSK	50	0	0 mm	bottom	1:1	2.210	1.300	2.873	
1900.00	19100	High	LTE Band 2 (PCS)	20	8	20.5	19.42	0.09	0	6759M	QPSK	50	25	0 mm	bottom	1:1	2.440	1.282	**3.128**	A71
1860.00	18700	Low	LTE Band 2 (PCS)	20	8	20.5	19.40	0.12	0	6759M	QPSK	100	0	0 mm	bottom	1:1	2.340	1.288	3.014	
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 11-59
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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																			
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	0.02	0	6752M	QPSK	1	0	8 mm	back	1:1	0.354	1.202	0.426	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.00	1	6752M	QPSK	50	25	8 mm	back	1:1	0.311	1.169	0.364	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	-0.12	0	6752M	QPSK	1	0	6 mm	front	1:1	0.502	1.202	0.603	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	-0.06	1	6752M	QPSK	50	25	6 mm	front	1:1	0.450	1.169	0.526	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	-0.05	0	6752M	QPSK	1	0	11 mm	bottom	1:1	0.557	1.202	0.670	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	-0.10	1	6752M	QPSK	50	25	11 mm	bottom	1:1	0.494	1.169	0.577	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	-0.02	0	6752M	QPSK	1	0	0 mm	right	1:1	0.089	1.202	0.107	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	0.00	1	6752M	QPSK	50	25	0 mm	right	1:1	0.083	1.169	0.097	
2510.00	20850	Low	LTE Band 7	20	24.0	23.20	-0.14	0	6752M	QPSK	1	0	0 mm	left	1:1	0.202	1.202	0.243	
2510.00	20850	Low	LTE Band 7	20	23.0	22.32	-0.21	1	6752M	QPSK	50	25	0 mm	left	1:1	0.170	1.169	0.199	
2510.00	20850	Low	LTE Band 7	20	21.0	20.43	-0.05	0	6752M	QPSK	1	0	0 mm	back	1:1	1.220	1.140	1.391	
2510.00	20850	Low	LTE Band 7	20	21.0	20.54	-0.02	0	6752M	QPSK	50	25	0 mm	back	1:1	1.220	1.112	1.357	
2510.00	20850	Low	LTE Band 7	20	21.0	20.43	-0.12	0	6752M	QPSK	1	0	0 mm	front	1:1	1.360	1.140	1.550	
2535.00	21100	Mid	LTE Band 7	20	21.0	20.35	-0.19	0	6752M	QPSK	1	0	0 mm	front	1:1	1.440	1.161	1.672	A72
2560.00	21350	High	LTE Band 7	20	21.0	20.26	0.00	0	6752M	QPSK	1	0	0 mm	front	1:1	1.260	1.186	1.494	
2510.00	20850	Low	LTE Band 7	20	21.0	20.54	-0.21	0	6752M	QPSK	50	25	0 mm	front	1:1	1.390	1.112	1.546	
2510.00	20850	Low	LTE Band 7	20	21.0	20.43	-0.10	0	6752M	QPSK	1	0	0 mm	bottom	1:1	1.080	1.140	1.231	
2510.00	20850	Low	LTE Band 7	20	21.0	20.54	-0.18	0	6752M	QPSK	50	25	0 mm	bottom	1:1	1.070	1.112	1.190	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-60
LTE Band 41 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																			
2506.00	39750	Low	LTE Band 41	20	24.0	23.52	-0.04	0	6752M	QPSK	1	0	0 mm	bottom	1:1.58	1.090	1.117	1.218	A73
2506.00	39750	Low	LTE Band 41	20	23.0	22.59	-0.06	1	6752M	QPSK	50	0	0 mm	bottom	1:1.58	0.844	1.099	0.928	
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 11-61
NR Band n66 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	0.06	0	6787M	DFT-S-OFDM QPSK	1	53	8 mm	back	1:1	1.050	1.148	1.205	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	0.08	0	6787M	DFT-S-OFDM QPSK	50	28	8 mm	back	1:1	1.020	1.167	1.190	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	0.08	0	6787M	DFT-S-OFDM QPSK	1	53	6 mm	front	1:1	1.330	1.148	1.527	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	0.10	0	6787M	DFT-S-OFDM QPSK	50	28	6 mm	front	1:1	1.310	1.167	1.529	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	-0.01	0	6787M	DFT-S-OFDM QPSK	1	53	11 mm	bottom	1:1	1.080	1.148	1.240	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	0.07	0	6787M	DFT-S-OFDM QPSK	50	28	11 mm	bottom	1:1	1.080	1.167	1.260	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	0.00	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	right	1:1	0.453	1.148	0.520	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	0.03	0	6787M	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.454	1.167	0.530	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.20	-0.01	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	left	1:1	0.452	1.148	0.519	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	24.8	24.13	-0.05	0	6787M	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.445	1.167	0.519	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.42	0.08	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	1.820	1.143	2.080	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.33	0.06	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	2.010	1.167	2.346	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.10	0.07	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	2.120	1.230	2.608	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.41	0.12	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	1.800	1.146	2.063	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.39	0.11	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	1.940	1.151	2.233	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.19	0.03	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	2.060	1.205	2.482	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.38	0.06	0	6787M	DFT-S-OFDM QPSK	100	0	0 mm	back	1:1	1.810	1.153	2.087	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.42	0.02	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	1.990	1.143	2.275	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.33	0.00	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	2.140	1.167	2.497	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.10	0.02	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	2.130	1.230	2.620	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.41	0.08	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	front	1:1	1.970	1.146	2.258	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.39	0.04	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	front	1:1	2.080	1.151	2.394	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.19	0.00	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	front	1:1	2.180	1.205	2.627	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.38	-0.02	0	6787M	DFT-S-OFDM QPSK	100	0	0 mm	front	1:1	1.940	1.153	2.237	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.42	-0.08	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.490	1.143	2.846	
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.33	-0.08	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.470	1.167	2.882	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.10	-0.08	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.410	1.230	2.964	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.41	-0.08	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.560	1.146	2.934	A74
1745.00	349000	Mid	NR Band n66 (AWS)	20	2	21.0	20.39	-0.07	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.300	1.151	2.647	
1770.00	354000	High	NR Band n66 (AWS)	20	2	21.0	20.19	-0.10	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.480	1.205	2.988	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.38	-0.12	0	6787M	DFT-S-OFDM QPSK	100	0	0 mm	bottom	1:1	2.500	1.153	2.883	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.35	-0.06	0	6787M	CP-OFDM QPSK	1	1	0 mm	bottom	1:1	2.460	1.161	2.856	
1720.00	344000	Low	NR Band n66 (AWS)	20	2	21.0	20.41	-0.18	0	6787M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.510	1.146	2.876	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entries represent variability measurements.

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Table 11-62
NR Band n2 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	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)	
1880.00	376000	Mid	NR Band n2 (PCS)	20	26	24.5	23.95	-0.17	0	6787M	DFT-S-OFDM QPSK	1	53	8 mm	back	1:1	0.754	1.135	0.856	
1860.00	372000	Low	NR Band n2 (PCS)	20	55	24.5	23.67	-0.15	0	6787M	DFT-S-OFDM QPSK	50	28	8 mm	back	1:1	0.760	1.211	0.920	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.00	0	6787M	DFT-S-OFDM QPSK	1	53	6 mm	front	1:1	0.944	1.135	1.071	
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.03	0	6787M	DFT-S-OFDM QPSK	50	28	6 mm	front	1:1	0.888	1.211	1.075	
1880.00	376000	Mid	NR Band n2 (PCS)	20	55	24.5	23.95	-0.12	0	6787M	DFT-S-OFDM QPSK	1	53	11 mm	bottom	1:1	1.390	1.135	1.578	
1860.00	372000	Low	NR Band n2 (PCS)	20	55	24.5	23.67	-0.18	0	6787M	DFT-S-OFDM QPSK	50	28	11 mm	bottom	1:1	1.300	1.211	1.574	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	24.5	23.95	0.03	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	right	1:1	0.342	1.135	0.388	
1860.00	372000	Low	NR Band n2 (PCS)	20	54	24.5	23.67	0.10	0	6787M	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.311	1.211	0.377	
1880.00	376000	Mid	NR Band n2 (PCS)	20	1	24.5	23.95	0.09	0	6787M	DFT-S-OFDM QPSK	1	53	0 mm	left	1:1	0.625	1.135	0.709	
1860.00	372000	Low	NR Band n2 (PCS)	20	1	24.5	23.67	0.21	0	6787M	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.594	1.211	0.719	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	20.5	20.05	0.06	0	6943M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	1.610	1.109	1.785	
1880.00	376000	Mid	NR Band n2 (PCS)	20	54	20.5	19.77	0.02	0	6943M	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	1.380	1.183	1.633	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	20.5	20.05	-0.15	0	6943M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	1.400	1.109	1.553	
1880.00	376000	Mid	NR Band n2 (PCS)	20	53	20.5	19.77	-0.13	0	6943M	DFT-S-OFDM QPSK	50	0	0 mm	front	1:1	1.230	1.183	1.455	
1860.00	372000	Low	NR Band n2 (PCS)	20	8	20.5	19.96	0.21	0	6943M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	1.930	1.132	2.185	
1880.00	376000	Mid	NR Band n2 (PCS)	20	8	20.5	20.05	0.12	0	6943M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.160	1.109	2.395	
1900.00	380000	High	NR Band n2 (PCS)	20	8	20.5	19.82	0.12	0	6943M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.170	1.169	2.537	A75
1860.00	372000	Low	NR Band n2 (PCS)	20	8	20.5	19.73	0.07	0	6943M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.040	1.194	2.436	
1880.00	376000	Mid	NR Band n2 (PCS)	20	8	20.5	19.77	0.12	0	6943M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	1.900	1.183	2.248	
1900.00	380000	High	NR Band n2 (PCS)	20	8	20.5	19.66	0.16	0	6943M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.130	1.213	2.584	
1880.00	376000	Mid	NR Band n2 (PCS)	20	8	20.5	19.68	0.21	0	6943M	DFT-S-OFDM QPSK	100	0	0 mm	bottom	1:1	1.910	1.208	2.307	
1860.00	372000	Low	NR Band n2 (PCS)	20	8	20.5	19.66	-0.20	0	6943M	CP-OFDM QPSK	1	1	0 mm	bottom	1:1	1.850	1.213	2.244	
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 11-63
WLAN SISO 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 W/kg	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
5280	56	802.11a	OFDM	20	18.0	17.40	-0.10	0 mm	1	0122M	6	back	98.8	8.806	0.713	1.148	1.012	0.828	
5280	56	802.11a	OFDM	20	18.0	17.40	0.12	0 mm	1	0122M	6	front	98.8	0.434	-	1.148	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.40	0.17	0 mm	1	0122M	6	top	98.8	2.695	-	1.148	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.40	-0.20	0 mm	1	0122M	6	left	98.8	1.616	0.130	1.148	1.012	0.151	
5260	52	802.11a	OFDM	20	18.0	17.63	0.17	0 mm	2	0122M	6	back	98.9	6.156	1.410	1.089	1.011	1.552	
5300	60	802.11a	OFDM	20	18.0	17.86	0.17	0 mm	2	0122M	6	back	98.9	11.430	1.480	1.033	1.011	1.546	
5320	64	802.11a	OFDM	20	18.0	17.96	-0.16	0 mm	2	0122M	6	back	98.9	10.431	1.740	1.009	1.011	**1.775**	
5320	64	802.11a	OFDM	20	18.0	17.96	0.19	0 mm	2	0122M	6	front	98.9	0.587	0.047	1.009	1.011	0.048	
5320	64	802.11a	OFDM	20	18.0	17.96	-0.16	0 mm	2	0122M	6	top	98.9	0.953	-	1.009	1.011	-	
5320	64	802.11a	OFDM	20	18.0	17.96	-0.14	0 mm	2	0122M	6	left	98.9	3.433	0.371	1.009	1.011	0.378	
5620	124	802.11a	OFDM	20	18.0	17.54	0.17	0 mm	1	0122M	6	back	98.8	8.434	0.955	1.112	1.012	1.075	
5620	124	802.11a	OFDM	20	18.0	17.54	0.20	0 mm	1	0122M	6	front	98.8	0.726	-	1.112	1.012	-	
5620	124	802.11a	OFDM	20	18.0	17.54	0.12	0 mm	1	0122M	6	top	98.8	1.339	-	1.112	1.012	-	
5620	124	802.11a	OFDM	20	18.0	17.54	0.19	0 mm	1	0122M	6	left	98.8	2.957	0.214	1.112	1.012	0.241	
5600	120	802.11a	OFDM	20	18.0	17.45	-0.15	0 mm	2	0122M	6	back	98.9	12.012	1.280	1.135	1.011	1.469	
5600	120	802.11a	OFDM	20	18.0	17.45	-0.14	0 mm	2	0122M	6	front	98.9	0.478	0.040	1.135	1.011	0.046	
5600	120	802.11a	OFDM	20	18.0	17.45	-0.19	0 mm	2	0122M	6	top	98.9	1.346	-	1.135	1.011	-	
5600	120	802.11a	OFDM	20	18.0	17.45	0.19	0 mm	2	0122M	6	left	98.9	3.351	0.283	1.135	1.011	0.325	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

Table 11-64
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan W/kg	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
5260	52	802.11n	OFDM	20	18.0	17.18	18.0	17.74	0.07	0 mm	MIMO	0122M	13	back	98.7	15.843	2.310	1.208	1.013	2.827	A76
5300	60	802.11n	OFDM	20	18.0	17.11	18.0	17.94	0.18	0 mm	MIMO	0122M	13	back	98.7	14.403	2.140	1.227	1.013	2.660	
5320	64	802.11n	OFDM	20	18.0	17.10	18.0	17.89	0.19	0 mm	MIMO	0122M	13	back	98.7	11.484	1.920	1.230	1.013	2.392	
5300	60	802.11n	OFDM	20	18.0	17.11	18.0	17.94	0.13	0 mm	MIMO	0122M	13	front	98.7	0.532	0.119	1.227	1.013	0.148	
5300	60	802.11n	OFDM	20	18.0	17.11	18.0	17.94	0.21	0 mm	MIMO	0122M	13	top	98.7	2.941	-	1.227	1.013	-	
5300	60	802.11n	OFDM	20	18.0	17.11	18.0	17.94	-0.18	0 mm	MIMO	0122M	13	left	98.7	4.488	0.408	1.227	1.013	0.507	
5500	100	802.11n	OFDM	20	18.0	17.98	18.0	17.39	-0.21	0 mm	MIMO	0122M	13	back	98.7	15.111	1.780	1.151	1.013	2.075	
5620	124	802.11n	OFDM	20	18.0	17.47	18.0	17.43	-0.17	0 mm	MIMO	0122M	13	back	98.7	12.343	1.840	1.140	1.013	2.125	
5720	144	802.11n	OFDM	20	18.0	17.46	18.0	17.18	-0.14	0 mm	MIMO	0122M	13	back	98.7	13.675	1.770	1.208	1.013	2.166	
5500	100	802.11n	OFDM	20	18.0	17.98	18.0	17.39	0.18	0 mm	MIMO	0122M	13	front	98.7	1.127	0.157	1.151	1.013	0.183	
5500	100	802.11n	OFDM	20	18.0	17.98	18.0	17.39	0.21	0 mm	MIMO	0122M	13	top	98.7	2.768	-	1.151	1.013	-	
5500	100	802.11n	OFDM	20	18.0	17.98	18.0	17.39	0.19	0 mm	MIMO	0122M	13	left	98.7	6.959	0.509	1.151	1.013	0.593	
5260	52	802.11n	OFDM	20	18.0	17.18	18.0	17.74	0.15	0 mm	MIMO	0122M	13	back	98.7	37.661	2.280	1.208	1.013	2.790	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm. Blue entries represent variability measurements.

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Table 11-65
WLAN SISO 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 W/kg	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
5290	58	802.11ac	OFDM	80	14.0	13.72	0.19	0 mm	1	0122M	29.3	back	95.4	3.235	0.315	1.067	1.048	0.352	
5290	58	802.11ac	OFDM	80	14.0	13.72	-0.17	0 mm	1	0122M	29.3	front	95.4	0.133	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	0.12	0 mm	1	0122M	29.3	top	95.4	1.041	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	0.19	0 mm	1	0122M	29.3	left	95.4	0.967	-	1.067	1.048	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.18	0 mm	2	0122M	29.3	back	94.7	2.992	0.473	1.164	1.056	0.581	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.17	0 mm	2	0122M	29.3	front	94.7	0.066	-	1.164	1.056	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.17	0 mm	2	0122M	29.3	top	94.7	0.122	-	1.164	1.056	-	
5290	58	802.11ac	OFDM	80	14.0	13.34	0.12	0 mm	2	0122M	29.3	left	94.7	0.860	-	1.164	1.056	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	-0.19	0 mm	1	0122M	29.3	back	95.4	2.876	0.359	1.132	1.048	0.426	
5690	138	802.11ac	OFDM	80	14.0	13.46	-0.12	0 mm	1	0122M	29.3	front	95.4	0.226	-	1.132	1.048	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.21	0 mm	1	0122M	29.3	top	95.4	0.529	-	1.132	1.048	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	0.19	0 mm	1	0122M	29.3	left	95.4	1.337	-	1.132	1.048	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.17	0 mm	2	0122M	29.3	back	94.7	4.317	0.491	1.012	1.056	0.525	
5610	122	802.11ac	OFDM	80	14.0	13.95	-0.20	0 mm	2	0122M	29.3	front	94.7	0.104	-	1.012	1.056	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.12	0 mm	2	0122M	29.3	top	94.7	0.456	-	1.012	1.056	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.17	0 mm	2	0122M	29.3	left	94.7	1.655	-	1.012	1.056	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

Table 11-66
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 W/kg	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																				
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.34	-0.16	0 mm	MIMO	0122M	58.5	back	91.0	6.383	0.709	1.164	1.099	0.907	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.34	0.18	0 mm	MIMO	0122M	58.5	front	91.0	0.176	-	1.164	1.099	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.34	0.17	0 mm	MIMO	0122M	58.5	top	91.0	1.105	-	1.164	1.099	-	
5290	58	802.11ac	OFDM	80	14.0	13.72	14.0	13.34	-0.19	0 mm	MIMO	0122M	58.5	left	91.0	1.319	0.122	1.164	1.099	0.156	
5690	138	802.11ac	OFDM	80	14.0	13.46	14.0	13.90	0.21	0 mm	MIMO	0122M	58.5	back	91.0	6.369	0.722	1.132	1.099	0.898	
5690	138	802.11ac	OFDM	80	14.0	13.46	14.0	13.90	0.18	0 mm	MIMO	0122M	58.5	front	91.0	0.252	-	1.132	1.099	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	14.0	13.90	0.15	0 mm	MIMO	0122M	58.5	top	91.0	0.759	-	1.132	1.099	-	
5690	138	802.11ac	OFDM	80	14.0	13.46	14.0	13.90	0.19	0 mm	MIMO	0122M	58.5	left	91.0	1.484	0.130	1.132	1.099	0.162	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

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

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.

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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 13 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 14 for supplemental data.
12. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.4. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
14. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or 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). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

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CDMA Notes:

1. Head SAR for CDMA2000 mode was tested under RC3/SO55 per FCC KDB Publication 941225 D01v03r01.
2. Body-Worn SAR was tested with 1x RTT with TDSO / SO32 FCH Only. EVDO Rev0 and RevA and TDSO / SO32 FCH+SCH SAR tests were not required per the 3G SAR Test Reduction Procedure in FCC KDB Publication 941225 D01v03r01.
3. CDMA Wireless Router SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0 according to KDB 941225 D01v03r01 procedures for data devices. Wireless Router SAR tests for Subtype 2 of Rev.A and 1x RTT configurations were not required per the 3G SAR Test Reduction Policy in KDB Publication 941225 D01v03r01.
4. Head SAR was additionally evaluated using EVDO Rev. A to determine compliance for VoIP operations.
5. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or 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). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

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 middle channel or 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). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

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 8.6.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 41 or LTE Band 48 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. For LTE Band 5, LTE Band 66, and LTE Band 48, 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

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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.

NR Notes:

1. NR implementation of n5, n66, and n2 is limited to EN-DC operations only, with LTE Bands 2/5/13/48/66 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 was performed using test mode software to establish the connection.
3. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in Section 1.11 - Bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency as the NR test results. Additional tuner states were evaluated per April 2019 TCBC Workshop Guidance. Please see Section 14 for supplemental data.
6. 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.

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 8.7.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain 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 8.7.6 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 Section 12 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.

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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 9.7 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 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

12.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G operations is demonstrated in the Qualcomm Part 2 Report during algorithm validation.

Per FCC KDB Publication 941225 D06v02r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR ("-").

(*) For test positions that were not required to be evaluated for WLAN SAR per FCC KDB publication 248227, the worst case

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12.3 Head SAR Simultaneous Transmission Analysis

Table 12-1
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Head SAR	Cell. CDMA/EVDO	0.349	0.740	0.011	1.089	0.360
	PCS CDMA/EVDO	0.205	0.740	0.011	0.945	0.216
	GSM 850	0.195	0.740	0.011	0.935	0.206
	GSM 1900	0.101	0.740	0.011	0.841	0.112
	UMTS 850	0.229	0.740	0.011	0.969	0.240
	UMTS 1900	0.210	0.740	0.011	0.950	0.221
	LTE Band 12	0.148	0.740	0.011	0.888	0.159
	LTE Band 13	0.270	0.740	0.011	1.010	0.281
	LTE Band 14	0.215	0.740	0.011	0.955	0.226
	LTE Band 26 (Cell)	0.300	0.740	0.011	1.040	0.311
	LTE Band 5 (Cell)	0.314	0.740	0.011	1.054	0.325
	LTE Band 66 (AWS)	0.318	0.740	0.011	1.058	0.329
	LTE Band 2 (PCS)	0.267	0.740	0.011	1.007	0.278
	LTE Band 7	0.042	0.740	0.011	0.782	0.053
	LTE Band 48	0.908	0.740	0.011	See Table Below	0.919
	LTE Band 41	0.034	0.740	0.011	0.774	0.045
	NR Band n5	0.353	0.740	0.011	**1.093**	0.364
	NR Band n66	0.250	0.740	0.011	0.990	0.261
	NR Band n2	0.202	0.740	0.011	0.942	0.213

Simult Tx	Configuration	LTE Band 48 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Right Cheek	0.804	0.740*	**1.544**
	Right Tilt	0.908	0.416	1.324
	Left Cheek	0.181	0.740*	0.921
	Left Tilt	0.250	0.740	0.990

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Table 12-2
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.349	0.329	0.678
	PCS CDMA/EVDO	0.205	0.329	0.534
	GSM 850	0.195	0.329	0.524
	GSM 1900	0.101	0.329	0.430
	UMTS 850	0.229	0.329	0.558
	UMTS 1900	0.210	0.329	0.539
	LTE Band 12	0.148	0.329	0.477
	LTE Band 13	0.270	0.329	0.599
	LTE Band 14	0.215	0.329	0.544
	LTE Band 26 (Cell)	0.300	0.329	0.629
	LTE Band 5 (Cell)	0.314	0.329	0.643
	LTE Band 66 (AWS)	0.318	0.329	0.647
	LTE Band 2 (PCS)	0.267	0.329	0.596
	LTE Band 7	0.042	0.329	0.371
	LTE Band 48	0.908	0.329	**1.237**
	LTE Band 41	0.034	0.329	0.363
	NR Band n5	0.353	0.329	0.682
	NR Band n66	0.250	0.329	0.579
	NR Band n2	0.202	0.329	0.531

Table 12-3
Simultaneous Transmission Scenario with 5 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.349	0.067	0.030	0.416	0.379	0.446
	PCS CDMA/EVDO	0.205	0.067	0.030	0.272	0.235	0.302
	GSM 850	0.195	0.067	0.030	0.262	0.225	0.292
	GSM 1900	0.101	0.067	0.030	0.168	0.131	0.198
	UMTS 850	0.229	0.067	0.030	0.296	0.259	0.326
	UMTS 1900	0.210	0.067	0.030	0.277	0.240	0.307
	LTE Band 12	0.148	0.067	0.030	0.215	0.178	0.245
	LTE Band 13	0.270	0.067	0.030	0.337	0.300	0.367
	LTE Band 14	0.215	0.067	0.030	0.282	0.245	0.312
	LTE Band 26 (Cell)	0.300	0.067	0.030	0.367	0.330	0.397
	LTE Band 5 (Cell)	0.314	0.067	0.030	0.381	0.344	0.411
	LTE Band 66 (AWS)	0.318	0.067	0.030	0.385	0.348	0.415
	LTE Band 2 (PCS)	0.267	0.067	0.030	0.334	0.297	0.364
	LTE Band 7	0.042	0.067	0.030	0.109	0.072	0.139
	LTE Band 48	0.908	0.067	0.030	0.975	0.938	**1.005**
	LTE Band 41	0.034	0.067	0.030	0.101	0.064	0.131
	NR Band n5	0.353	0.067	0.030	0.420	0.383	0.450
	NR Band n66	0.250	0.067	0.030	0.317	0.280	0.347
	NR Band n2	0.202	0.067	0.030	0.269	0.232	0.299

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Table 12-4
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Cell. CDMA/EVDO	0.349	0.223	0.067	0.030	0.669
	PCS CDMA/EVDO	0.205	0.223	0.067	0.030	0.525
	GSM 850	0.195	0.223	0.067	0.030	0.515
	GSM 1900	0.101	0.223	0.067	0.030	0.421
	UMTS 850	0.229	0.223	0.067	0.030	0.549
	UMTS 1900	0.210	0.223	0.067	0.030	0.530
	LTE Band 12	0.148	0.223	0.067	0.030	0.468
	LTE Band 13	0.270	0.223	0.067	0.030	0.590
	LTE Band 14	0.215	0.223	0.067	0.030	0.535
	LTE Band 26 (Cell)	0.300	0.223	0.067	0.030	0.620
	LTE Band 5 (Cell)	0.314	0.223	0.067	0.030	0.634
	LTE Band 66 (AWS)	0.318	0.223	0.067	0.030	0.638
	LTE Band 2 (PCS)	0.267	0.223	0.067	0.030	0.587
	LTE Band 7	0.042	0.223	0.067	0.030	0.362
	LTE Band 48	0.908	0.223	0.067	0.030	**1.228**
	LTE Band 41	0.034	0.223	0.067	0.030	0.354
	NR Band n5	0.353	0.223	0.067	0.030	0.673
	NR Band n66	0.250	0.223	0.067	0.030	0.570
	NR Band n2	0.202	0.223	0.067	0.030	0.522

Table 12-5
Simultaneous Transmission Scenario with Bluetooth (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.349	0.245	0.594
	PCS CDMA/EVDO	0.205	0.245	0.450
	GSM 850	0.195	0.245	0.440
	GSM 1900	0.101	0.245	0.346
	UMTS 850	0.229	0.245	0.474
	UMTS 1900	0.210	0.245	0.455
	LTE Band 12	0.148	0.245	0.393
	LTE Band 13	0.270	0.245	0.515
	LTE Band 14	0.215	0.245	0.460
	LTE Band 26 (Cell)	0.300	0.245	0.545
	LTE Band 5 (Cell)	0.314	0.245	0.559
	LTE Band 66 (AWS)	0.318	0.245	0.563
	LTE Band 2 (PCS)	0.267	0.245	0.512
	LTE Band 7	0.042	0.245	0.287
	LTE Band 48	0.908	0.245	**1.153**
	LTE Band 41	0.034	0.245	0.279
	NR Band n5	0.353	0.245	0.598
	NR Band n66	0.250	0.245	0.495
	NR Band n2	0.202	0.245	0.447

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Table 12-6
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2+3	1+2+4	1+2+3+4
Head SAR	Cell. CDMA/EVDO	0.349	0.245	0.067	0.030	0.661	0.624	0.691
	PCS CDMA/EVDO	0.205	0.245	0.067	0.030	0.517	0.480	0.547
	GSM 850	0.195	0.245	0.067	0.030	0.507	0.470	0.537
	GSM 1900	0.101	0.245	0.067	0.030	0.413	0.376	0.443
	UMTS 850	0.229	0.245	0.067	0.030	0.541	0.504	0.571
	UMTS 1900	0.210	0.245	0.067	0.030	0.522	0.485	0.552
	LTE Band 12	0.148	0.245	0.067	0.030	0.460	0.423	0.490
	LTE Band 13	0.270	0.245	0.067	0.030	0.582	0.545	0.612
	LTE Band 14	0.215	0.245	0.067	0.030	0.527	0.490	0.557
	LTE Band 26 (Cell)	0.300	0.245	0.067	0.030	0.612	0.575	0.642
	LTE Band 5 (Cell)	0.314	0.245	0.067	0.030	0.626	0.589	0.656
	LTE Band 66 (AWS)	0.318	0.245	0.067	0.030	0.630	0.593	0.660
	LTE Band 2 (PCS)	0.267	0.245	0.067	0.030	0.579	0.542	0.609
	LTE Band 7	0.042	0.245	0.067	0.030	0.354	0.317	0.384
	LTE Band 48	0.908	0.245	0.067	0.030	1.220	1.183	**1.250**
	LTE Band 41	0.034	0.245	0.067	0.030	0.346	0.309	0.376
	NR Band n5	0.353	0.245	0.067	0.030	0.665	0.628	0.695
	NR Band n66	0.250	0.245	0.067	0.030	0.562	0.525	0.592
	NR Band n2	0.202	0.245	0.067	0.030	0.514	0.477	0.544

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12.1 Body-Worn Simultaneous Transmission Analysis

Table 12-7
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Back Side	Cell. CDMA	0.394	0.220	0.069	0.614	0.463	0.683
	PCS CDMA	0.698	0.220	0.069	0.918	0.767	0.987
	GPRS 850	0.221	0.220	0.069	0.441	0.290	0.510
	GPRS 1900	0.269	0.220	0.069	0.489	0.338	0.558
	UMTS 850	0.272	0.220	0.069	0.492	0.341	0.561
	UMTS 1900	0.791	0.220	0.069	1.011	0.860	1.080
	LTE Band 12	0.265	0.220	0.069	0.485	0.334	0.554
	LTE Band 13	0.461	0.220	0.069	0.681	0.530	0.750
	LTE Band 14	0.335	0.220	0.069	0.555	0.404	0.624
	LTE Band 26 (Cell)	0.384	0.220	0.069	0.604	0.453	0.673
	LTE Band 5 (Cell)	0.441	0.220	0.069	0.661	0.510	0.730
	LTE Band 66 (AWS)	1.047	0.220	0.069	1.267	1.116	**1.336**
	LTE Band 2 (PCS)	0.870	0.220	0.069	1.090	0.939	1.159
	LTE Band 7	0.337	0.220	0.069	0.557	0.406	0.626
	LTE Band 48	0.283	0.220	0.069	0.503	0.352	0.572
	LTE Band 41	0.252	0.220	0.069	0.472	0.321	0.541
	NR Band n5 (Cell)	0.387	0.220	0.069	0.607	0.456	0.676
	NR Band n66 (AWS)	0.963	0.220	0.069	1.183	1.032	1.252
	NR Band n2 (PCS)	0.745	0.220	0.069	0.965	0.814	1.034

Table 12-8
Simultaneous Transmission Scenario with 5 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Back Side	Cell. CDMA	0.394	0.235	0.234	0.629	0.628	0.863
	PCS CDMA	0.698	0.235	0.234	0.933	0.932	1.167
	GPRS 850	0.221	0.235	0.234	0.456	0.455	0.690
	GPRS 1900	0.269	0.235	0.234	0.504	0.503	0.738
	UMTS 850	0.272	0.235	0.234	0.507	0.506	0.741
	UMTS 1900	0.791	0.235	0.234	1.026	1.025	1.260
	LTE Band 12	0.265	0.235	0.234	0.500	0.499	0.734
	LTE Band 13	0.461	0.235	0.234	0.696	0.695	0.930
	LTE Band 14	0.335	0.235	0.234	0.570	0.569	0.804
	LTE Band 26 (Cell)	0.384	0.235	0.234	0.619	0.618	0.853
	LTE Band 5 (Cell)	0.441	0.235	0.234	0.676	0.675	0.910
	LTE Band 66 (AWS)	1.047	0.235	0.234	1.282	1.281	**1.516**
	LTE Band 2 (PCS)	0.870	0.235	0.234	1.105	1.104	1.339
	LTE Band 7	0.337	0.235	0.234	0.572	0.571	0.806
	LTE Band 48	0.283	0.235	0.234	0.518	0.517	0.752
	LTE Band 41	0.252	0.235	0.234	0.487	0.486	0.721
	NR Band n5 (Cell)	0.387	0.235	0.234	0.622	0.621	0.856
	NR Band n66 (AWS)	0.963	0.235	0.234	1.198	1.197	1.432
	NR Band n2 (PCS)	0.745	0.235	0.234	0.980	0.979	1.214

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Table 12-9
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 16.5 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Back Side	Cell. CDMA	0.394	0.048	0.161	0.603
	PCS CDMA	0.698	0.048	0.161	0.907
	GPRS 850	0.221	0.048	0.161	0.430
	GPRS 1900	0.269	0.048	0.161	0.478
	UMTS 1900	0.791	0.048	0.161	1.000
	LTE Band 12	0.265	0.048	0.161	0.474
	LTE Band 13	0.461	0.048	0.161	0.670
	LTE Band 14	0.335	0.048	0.161	0.544
	LTE Band 26 (Cell)	0.384	0.048	0.161	0.593
	LTE Band 5 (Cell)	0.441	0.048	0.161	0.650
	LTE Band 66 (AWS)	1.047	0.048	0.161	**1.256**
	LTE Band 2 (PCS)	0.870	0.048	0.161	1.079
	LTE Band 7	0.337	0.048	0.161	0.546
	LTE Band 48	0.283	0.048	0.161	0.492
	LTE Band 41	0.252	0.048	0.161	0.461
	NR Band n5 (Cell)	0.387	0.048	0.161	0.596
	NR Band n66 (AWS)	0.963	0.048	0.161	1.172
	NR Band n2 (PCS)	0.745	0.048	0.161	0.954

Table 12-10
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Back Side	Cell. CDMA	0.394	0.043	0.437
	PCS CDMA	0.698	0.043	0.741
	GPRS 850	0.221	0.043	0.264
	GPRS 1900	0.269	0.043	0.312
	UMTS 850	0.272	0.043	0.315
	UMTS 1900	0.791	0.043	0.834
	LTE Band 12	0.265	0.043	0.308
	LTE Band 13	0.461	0.043	0.504
	LTE Band 14	0.335	0.043	0.378
	LTE Band 26 (Cell)	0.384	0.043	0.427
	LTE Band 5 (Cell)	0.441	0.043	0.484
	LTE Band 66 (AWS)	1.047	0.043	**1.090**
	LTE Band 2 (PCS)	0.870	0.043	0.913
	LTE Band 7	0.337	0.043	0.380
	LTE Band 48	0.283	0.043	0.326
	LTE Band 41	0.252	0.043	0.295
	NR Band n5 (Cell)	0.387	0.043	0.430
	NR Band n66 (AWS)	0.963	0.043	1.006
	NR Band n2 (PCS)	0.745	0.043	0.788

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Table 12-11
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2+3	1+2+4	1+2+3+4
Back Side	Cell. CDMA	0.394	0.043	0.235	0.234	0.672	0.671	0.906
	PCS CDMA	0.698	0.043	0.235	0.234	0.976	0.975	1.210
	GPRS 850	0.221	0.043	0.235	0.234	0.499	0.498	0.733
	GPRS 1900	0.269	0.043	0.235	0.234	0.547	0.546	0.781
	UMTS 850	0.272	0.043	0.235	0.234	0.550	0.549	0.784
	UMTS 1900	0.791	0.043	0.235	0.234	1.069	1.068	1.303
	LTE Band 12	0.265	0.043	0.235	0.234	0.543	0.542	0.777
	LTE Band 13	0.461	0.043	0.235	0.234	0.739	0.738	0.973
	LTE Band 14	0.335	0.043	0.235	0.234	0.613	0.612	0.847
	LTE Band 26 (Cell)	0.384	0.043	0.235	0.234	0.662	0.661	0.896
	LTE Band 5 (Cell)	0.441	0.043	0.235	0.234	0.719	0.718	0.953
	LTE Band 66 (AWS)	1.047	0.043	0.235	0.234	1.325	1.324	**1.559**
	LTE Band 2 (PCS)	0.870	0.043	0.235	0.234	1.148	1.147	1.382
	LTE Band 7	0.337	0.043	0.235	0.234	0.615	0.614	0.849
	LTE Band 48	0.283	0.043	0.235	0.234	0.561	0.560	0.795
	LTE Band 41	0.252	0.043	0.235	0.234	0.530	0.529	0.764
	NR Band n5 (Cell)	0.387	0.043	0.235	0.234	0.665	0.664	0.899
	NR Band n66 (AWS)	0.963	0.043	0.235	0.234	1.241	1.240	1.475
	NR Band n2 (PCS)	0.745	0.043	0.235	0.234	1.023	1.022	1.257

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12.2 Hotspot SAR Simultaneous Transmission Analysis

Table 12-12
Simultaneous Transmission Scenario with 2.4 GHz WLAN SISO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Hotspot SAR	Cell. EVDO	0.550	0.735	0.236	1.285	0.786
	PCS EVDO	1.178	0.735	0.236	See Table Below	1.414
	GPRS 850	0.534	0.735	0.236	1.269	0.770
	GPRS 1900	0.947	0.735	0.236	See Table Below	1.183
	UMTS 850	0.414	0.735	0.236	1.149	0.650
	UMTS 1900	1.160	0.735	0.236	See Table Below	1.396
	LTE Band 12	0.353	0.735	0.236	1.088	0.589
	LTE Band 13	0.579	0.735	0.236	1.314	0.815
	LTE Band 14	0.413	0.735	0.236	1.148	0.649
	LTE Band 26 (Cell)	0.544	0.735	0.236	1.279	0.780
	LTE Band 5 (Cell)	0.636	0.735	0.236	1.371	0.872
	LTE Band 66 (AWS)	0.930	0.735	0.236	See Table Below	1.166
	LTE Band 2 (PCS)	1.007	0.735	0.236	See Table Below	1.243
	LTE Band 7	1.258	0.735	0.236	See Table Below	1.494
	LTE Band 48	0.790	0.735	0.236	**1.525**	1.026
	LTE Band 41	1.017	0.735	0.236	See Table Below	1.253
	NR Band n5	0.540	0.735	0.236	1.275	0.776
	NR Band n66	0.999	0.735	0.236	See Table Below	1.235
	NR Band n2	0.863	0.735	0.236	See Table Below	1.099

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.630	0.426	1.056
	Front	0.521	0.735*	**1.256**
	Top	-	0.735	0.735
	Bottom	1.178	-	1.178
	Right	0.078	-	0.078
	Left	0.093	0.036	0.129

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.399	0.426	0.825
	Front	0.378	0.735*	**1.113**
	Top	-	0.735	0.735
	Bottom	0.947	-	0.947
	Right	0.056	-	0.056
	Left	0.068	0.036	0.104

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.515	0.426	0.941
	Front	0.432	0.735*	**1.167**
	Top	-	0.735	0.735
	Bottom	1.160	-	1.160
	Right	0.064	-	0.064
	Left	0.087	0.036	0.123

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.489	0.426	0.915
	Front	0.360	0.735*	**1.095**
	Top	-	0.735	0.735
	Bottom	0.930	-	0.930
	Right	0.093	-	0.093
	Left	0.082	0.036	0.118

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.461	0.426	0.887
	Front	0.394	0.735*	**1.129**
	Top	-	0.735	0.735
	Bottom	1.007	-	1.007
	Right	0.064	-	0.064
	Left	0.084	0.036	0.120

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.491	0.426	0.917
	Front	0.558	0.735*	**1.293**
	Top	-	0.735	0.735
	Bottom	1.258	-	1.258
	Right	0.051	-	0.051
	Left	0.088	0.036	0.124

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.299	0.426	0.725
	Front	0.382	0.735*	**1.117**
	Top	-	0.735	0.735
	Bottom	1.017	-	1.017
	Right	0.041	-	0.041
	Left	0.053	0.036	0.089

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.487	0.426	0.913
	Front	0.454	0.735*	**1.189**
	Top	-	0.735	0.735
	Bottom	0.999	-	0.999
	Right	0.117	-	0.117
	Left	0.094	0.036	0.130

Simult Tx	Configuration	NR Band n2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.320	0.426	0.746
	Front	0.315	0.735*	**1.050**
	Top	-	0.735	0.735
	Bottom	0.863	-	0.863
	Right	0.049	-	0.049
	Left	0.061	0.036	0.097

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Table 12-13
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.550	0.370	0.920
	PCS EVDO	1.178	0.370	**1.548**
	GPRS 850	0.534	0.370	0.904
	GPRS 1900	0.947	0.370	1.317
	UMTS 850	0.414	0.370	0.784
	UMTS 1900	1.160	0.370	1.530
	LTE Band 12	0.353	0.370	0.723
	LTE Band 13	0.579	0.370	0.949
	LTE Band 14	0.413	0.370	0.783
	LTE Band 26 (Cell)	0.544	0.370	0.914
	LTE Band 5 (Cell)	0.636	0.370	1.006
	LTE Band 66 (AWS)	0.930	0.370	1.300
	LTE Band 2 (PCS)	1.007	0.370	1.377
	LTE Band 7	1.258	0.370	See Table Below
	LTE Band 48	0.790	0.370	1.160
	LTE Band 41	1.017	0.370	1.387
	NR Band n5	0.540	0.370	0.910
	NR Band n66	0.999	0.370	1.369
	NR Band n2	0.863	0.370	1.233

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.491	0.370*	0.861
	Front	0.558	0.130	0.688
	Top	-	0.370	0.370
	Bottom	1.258	-	**1.258**
	Right	0.051	-	0.051
	Left	0.088	0.036	0.124

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Table 12-14
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Hotspot SAR	Cell. EVDO	0.550	0.352	0.320	0.902	0.870
	PCS EVDO	1.178	0.352	0.320	1.530	1.498
	GPRS 850	0.534	0.352	0.320	0.886	0.854
	GPRS 1900	0.947	0.352	0.320	1.299	1.267
	UMTS 850	0.414	0.352	0.320	0.766	0.734
	UMTS 1900	1.160	0.352	0.320	1.512	1.480
	LTE Band 12	0.353	0.352	0.320	0.705	0.673
	LTE Band 13	0.579	0.352	0.320	0.931	0.899
	LTE Band 14	0.413	0.352	0.320	0.765	0.733
	LTE Band 26 (Cell)	0.544	0.352	0.320	0.896	0.864
	LTE Band 5 (Cell)	0.636	0.352	0.320	0.988	0.956
	LTE Band 66 (AWS)	0.930	0.352	0.320	1.282	1.250
	LTE Band 2 (PCS)	1.007	0.352	0.320	1.359	1.327
	LTE Band 7	1.258	0.352	0.320	See Table Below	**1.578**
	LTE Band 48	0.790	0.352	0.320	1.142	1.110
	LTE Band 41	1.017	0.352	0.320	1.369	1.337
	NR Band n5	0.540	0.352	0.320	0.892	0.860
	NR Band n66	0.999	0.352	0.320	1.351	1.319
	NR Band n2	0.863	0.352	0.320	1.215	1.183

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.491	0.352	0.843
	Front	0.558	0.352*	0.910
	Top	-	0.352*	0.352
	Bottom	1.258	-	**1.258**
	Right	0.051	-	0.051
	Left	0.088	0.352*	0.440

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Table 12-15
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.550	0.731	1.281
	PCS EVDO	1.178	0.731	See Table Below
	GPRS 850	0.534	0.731	1.265
	GPRS 1900	0.947	0.731	See Table Below
	UMTS 850	0.414	0.731	1.145
	UMTS 1900	1.160	0.731	See Table Below
	LTE Band 12	0.353	0.731	1.084
	LTE Band 13	0.579	0.731	1.310
	LTE Band 14	0.413	0.731	1.144
	LTE Band 26 (Cell)	0.544	0.731	1.275
	LTE Band 5 (Cell)	0.636	0.731	1.367
	LTE Band 66 (AWS)	0.930	0.731	See Table Below
	LTE Band 2 (PCS)	1.007	0.731	See Table Below
	LTE Band 7	1.258	0.731	See Table Below
	LTE Band 48	0.790	0.731	1.521
	LTE Band 41	1.017	0.731	See Table Below
	NR Band n5	0.540	0.731	1.271
	NR Band n66	0.999	0.731	See Table Below
	NR Band n2	0.863	0.731	**1.594**

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.630	0.731	**1.361**	Hotspot SAR	Back	0.399	0.731	**1.130**
	Front	0.521	0.033	0.554		Front	0.378	0.033	0.411
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	1.178	-	1.178		Bottom	0.947	-	0.947
	Right	0.078	-	0.078		Right	0.056	-	0.056
	Left	0.093	0.256	0.349		Left	0.068	0.256	0.324

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.515	0.731	**1.246**	Hotspot SAR	Back	0.489	0.731	**1.220**
	Front	0.432	0.033	0.465		Front	0.360	0.033	0.393
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	1.160	-	1.160		Bottom	0.930	-	0.930
	Right	0.064	-	0.064		Right	0.093	-	0.093
	Left	0.087	0.256	0.343		Left	0.082	0.256	0.338

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.461	0.731	**1.192**	Hotspot SAR	Back	0.491	0.731	1.222
	Front	0.394	0.033	0.427		Front	0.558	0.033	0.591
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	1.007	-	1.007		Bottom	1.258	-	**1.258**
	Right	0.064	-	0.064		Right	0.051	-	0.051
	Left	0.084	0.256	0.340		Left	0.088	0.256	0.344

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.299	0.731	**1.030**	Hotspot SAR	Back	0.487	0.731	**1.218**
	Front	0.382	0.033	0.415		Front	0.454	0.033	0.487
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	1.017	-	1.017		Bottom	0.999	-	0.999
	Right	0.041	-	0.041		Right	0.117	-	0.117
	Left	0.053	0.256	0.309		Left	0.094	0.256	0.350

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Table 12-16
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 16.5 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.550	0.167	0.235	0.952
	PCS EVDO	1.178	0.167	0.235	**1.580**
	GPRS 850	0.534	0.167	0.235	0.936
	GPRS 1900	0.947	0.167	0.235	1.349
	UMTS 850	0.414	0.167	0.235	0.816
	UMTS 1900	1.160	0.167	0.235	1.562
	LTE Band 12	0.353	0.167	0.235	0.755
	LTE Band 13	0.579	0.167	0.235	0.981
	LTE Band 14	0.413	0.167	0.235	0.815
	LTE Band 26 (Cell)	0.544	0.167	0.235	0.946
	LTE Band 5 (Cell)	0.636	0.167	0.235	1.038
	LTE Band 66 (AWS)	0.930	0.167	0.235	1.332
	LTE Band 2 (PCS)	1.007	0.167	0.235	1.409
	LTE Band 7	1.258	0.167	0.235	See Table Below
	LTE Band 48	0.790	0.167	0.235	1.192
	LTE Band 41	1.017	0.167	0.235	1.419
	NR Band n5	0.540	0.167	0.235	0.942
	NR Band n66	0.999	0.167	0.235	1.401
	NR Band n2	0.863	0.167	0.235	1.265

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO at 16.5 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.491	0.167*	0.235	0.893
	Front	0.558	0.064	0.009	0.631
	Top	-	0.167	0.235*	0.402
	Bottom	1.258	-	-	**1.258**
	Right	0.051	-	-	0.051
	Left	0.088	0.015	0.235*	0.338

Table 12-17
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.550	0.176	0.726
	PCS EVDO	1.178	0.176	1.354
	GPRS 850	0.534	0.176	0.710
	GPRS 1900	0.947	0.176	1.123
	UMTS 850	0.414	0.176	0.590
	UMTS 1900	1.160	0.176	1.336
	LTE Band 12	0.353	0.176	0.529
	LTE Band 13	0.579	0.176	0.755
	LTE Band 14	0.413	0.176	0.589
	LTE Band 26 (Cell)	0.544	0.176	0.720
	LTE Band 5 (Cell)	0.636	0.176	0.812
	LTE Band 66 (AWS)	0.930	0.176	1.106
	LTE Band 2 (PCS)	1.007	0.176	1.183
	LTE Band 7	1.258	0.176	**1.434**
	LTE Band 48	0.790	0.176	0.966
	LTE Band 41	1.017	0.176	1.193
	NR Band n5	0.540	0.176	0.716
	NR Band n66	0.999	0.176	1.175
	NR Band n2	0.863	0.176	1.039

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Table 12-18
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN SISO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Hotspot SAR	Cell. EVDO	0.550	0.176	0.352	0.320	1.078	1.046
	PCS EVDO	1.178	0.176	0.352	0.320	See Table Below	See Table Below
	GPRS 850	0.534	0.176	0.352	0.320	1.062	1.030
	GPRS 1900	0.947	0.176	0.352	0.320	1.475	1.443
	UMTS 850	0.414	0.176	0.352	0.320	0.942	0.910
	UMTS 1900	1.160	0.176	0.352	0.320	See Table Below	See Table Below
	LTE Band 12	0.353	0.176	0.352	0.320	0.881	0.849
	LTE Band 13	0.579	0.176	0.352	0.320	1.107	1.075
	LTE Band 14	0.413	0.176	0.352	0.320	0.941	0.909
	LTE Band 26 (Cell)	0.544	0.176	0.352	0.320	1.072	1.040
	LTE Band 5 (Cell)	0.636	0.176	0.352	0.320	1.164	1.132
	LTE Band 66 (AWS)	0.930	0.176	0.352	0.320	1.458	1.426
	LTE Band 2 (PCS)	1.007	0.176	0.352	0.320	1.535	1.503
	LTE Band 7	1.258	0.176	0.352	0.320	See Table Below	See Table Below
	LTE Band 48	0.790	0.176	0.352	0.320	1.318	1.286
	LTE Band 41	1.017	0.176	0.352	0.320	**1.545**	1.513
	NR Band n5	0.540	0.176	0.352	0.320	1.068	1.036
	NR Band n66	0.999	0.176	0.352	0.320	1.527	1.495
	NR Band n2	0.863	0.176	0.352	0.320	1.391	1.359

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
Hotspot SAR	Back	0.630	0.083	0.352	0.320	0.713	1.065	1.033
	Front	0.521	0.069	0.352*	0.320*	0.590	0.942	0.910
	Top	-	0.176	0.352*	0.320*	0.176	0.528	0.496
	Bottom	1.178	-	-	-	**1.178**	**1.178**	**1.178**
	Right	0.078	-	-	-	0.078	0.078	0.078
	Left	0.093	0.010	0.352*	0.320*	0.103	0.455	0.423

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
Hotspot SAR	Back	0.515	0.083	0.352	0.320	0.598	0.950	0.918
	Front	0.432	0.069	0.352*	0.320*	0.501	0.853	0.821
	Top	-	0.176	0.352*	0.320*	0.176	0.528	0.496
	Bottom	1.160	-	-	-	**1.160**	**1.160**	**1.160**
	Right	0.064	-	-	-	0.064	0.064	0.064
	Left	0.087	0.010	0.352*	0.320*	0.097	0.449	0.417

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
Hotspot SAR	Back	0.491	0.083	0.352	0.320	0.574	0.926	0.894
	Front	0.558	0.069	0.352*	0.320*	0.627	0.979	0.947
	Top	-	0.176	0.352*	0.320*	0.176	0.528	0.496
	Bottom	1.258	-	-	-	**1.258**	**1.258**	**1.258**
	Right	0.051	-	-	-	0.051	0.051	0.051
	Left	0.088	0.010	0.352*	0.320*	0.098	0.450	0.418

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Table 12-19
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.550	0.176	0.731	1.457
	PCS EVDO	1.178	0.176	0.731	See Table Below
	GPRS 850	0.534	0.176	0.731	1.441
	GPRS 1900	0.947	0.176	0.731	See Table Below
	UMTS 850	0.414	0.176	0.731	1.321
	UMTS 1900	1.160	0.176	0.731	See Table Below
	LTE Band 12	0.353	0.176	0.731	1.260
	LTE Band 13	0.579	0.176	0.731	1.486
	LTE Band 14	0.413	0.176	0.731	1.320
	LTE Band 26 (Cell)	0.544	0.176	0.731	1.451
	LTE Band 5 (Cell)	0.636	0.176	0.731	**1.543**
	LTE Band 66 (AWS)	0.930	0.176	0.731	See Table Below
	LTE Band 2 (PCS)	1.007	0.176	0.731	See Table Below
	LTE Band 7	1.258	0.176	0.731	See Table Below
	LTE Band 48	0.790	0.176	0.731	See Table Below
	LTE Band 41	1.017	0.176	0.731	See Table Below
	NR Band n5	0.540	0.176	0.731	1.447
	NR Band n66	0.999	0.176	0.731	See Table Below
	NR Band n2	0.863	0.176	0.731	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.630	0.083	0.731	**1.444**
	Front	0.521	0.069	0.033	0.623
	Top	-	0.176	0.066	0.242
	Bottom	1.178	-	-	1.178
	Right	0.078	-	-	0.078
	Left	0.093	0.010	0.256	0.359

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.399	0.083	0.731	**1.213**
	Front	0.378	0.069	0.033	0.480
	Top	-	0.176	0.066	0.242
	Bottom	0.947	-	-	0.947
	Right	0.056	-	-	0.056
	Left	0.068	0.010	0.256	0.334

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.515	0.083	0.731	**1.329**
	Front	0.432	0.069	0.033	0.534
	Top	-	0.176	0.066	0.242
	Bottom	1.160	-	-	1.160
	Right	0.064	-	-	0.064
	Left	0.087	0.010	0.256	0.353

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.489	0.083	0.731	**1.303**
	Front	0.360	0.069	0.033	0.462
	Top	-	0.176	0.066	0.242
	Bottom	0.930	-	-	0.930
	Right	0.093	-	-	0.093
	Left	0.082	0.010	0.256	0.348

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.461	0.083	0.731	**1.275**
	Front	0.394	0.069	0.033	0.496
	Top	-	0.176	0.066	0.242
	Bottom	1.007	-	-	1.007
	Right	0.064	-	-	0.064
	Left	0.084	0.010	0.256	0.350

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.491	0.083	0.731	**1.305**
	Front	0.558	0.069	0.033	0.660
	Top	-	0.176	0.066	0.242
	Bottom	1.258	-	-	1.258
	Right	0.051	-	-	0.051
	Left	0.088	0.010	0.256	0.354

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Simult Tx	Configuration	LTE Band 48 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Hotspot SAR	Back	0.508	0.083	0.731	**1.322**	Hotspot SAR	Back	0.299	0.083	0.731	**1.113**
	Front	0.280	0.069	0.033	0.382		Front	0.382	0.069	0.033	0.484
	Top	0.790	0.176	0.066	1.032		Top	-	0.176	0.066	0.242
	Bottom	-	-	-	-		Bottom	1.017	-	-	1.017
	Right	-	-	-	-		Right	0.041	-	-	0.041
	Left	0.745	0.010	0.256	1.011		Left	0.053	0.010	0.256	0.319

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n2 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Hotspot SAR	Back	0.487	0.083	0.731	**1.301**	Hotspot SAR	Back	0.320	0.083	0.731	**1.134**
	Front	0.454	0.069	0.033	0.556		Front	0.315	0.069	0.033	0.417
	Top	-	0.176	0.066	0.242		Top	-	0.176	0.066	0.242
	Bottom	0.999	-	-	0.999		Bottom	0.863	-	-	0.863
	Right	0.117	-	-	0.117		Right	0.049	-	-	0.049
	Left	0.094	0.010	0.256	0.360		Left	0.061	0.010	0.256	0.327

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12.3 Phablet Simultaneous Transmission Analysis

For SAR summation, the highest reported SAR across all test distances was used as the most conservative evaluation for simultaneous transmission analysis for each device edge.

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required if wireless router 1g SAR (scaled to the maximum output power, including tolerance) < 1.2 W/kg. Therefore no further analysis beyond the tables included in this section was required to determine that possible simultaneous transmission scenarios would not exceed the SAR limit.

Table 12-20
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Phablet)

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	2.160	1.075	1.775	3.235	**3.935**
	Front	1.786	1.075*	0.048	2.861	1.834
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	2.973	-	-	2.973	2.973
	Right	0.411	-	-	0.411	0.411
	Left	0.681	0.241	0.378	0.922	1.059

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	1.881	1.075	1.775	2.956	**3.656**
	Front	1.755	1.075*	0.048	2.830	1.803
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	3.082	-	-	3.082	3.082
	Right	0.245	-	-	0.245	0.245
	Left	0.404	0.241	0.378	0.645	0.782

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	1.935	1.075	1.775	3.010	**3.710**
	Front	1.480	1.075*	0.048	2.555	1.528
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	2.885	-	-	2.885	2.885
	Right	0.460	-	-	0.460	0.460
	Left	0.735	0.241	0.378	0.976	1.113

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
Phablet SAR	Back	2.342	1.075	1.775	3.417	See Note 1	0.06
	Front	2.640	1.075*	0.048	**3.715**	2.688	N/A
	Top	-	1.075*	1.775*	1.075	1.775	N/A
	Bottom	2.697	-	-	2.697	2.697	N/A
	Right	0.645	-	-	0.645	0.645	N/A
	Left	0.577	0.241	0.378	0.818	0.955	N/A

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	2.099	1.075	1.775	3.174	**3.874**
	Front	1.911	1.075*	0.048	2.986	1.959
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	3.128	-	-	3.128	3.128
	Right	0.512	-	-	0.512	0.512
	Left	0.696	0.241	0.378	0.937	1.074

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	1.391	1.075	1.775	2.466	**3.166**
	Front	1.672	1.075*	0.048	2.747	1.720
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	1.231	-	-	1.231	1.231
	Right	0.107	-	-	0.107	0.107
	Left	0.243	0.241	0.378	0.484	0.621

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	-	1.075	1.775	1.075	**1.775**
	Front	-	1.075*	0.048	1.075	0.048
	Top	-	1.075*	1.775*	1.075	**1.775**
	Bottom	1.218	-	-	1.218	1.218
	Right	-	-	-	-	-
	Left	-	0.241	0.378	0.241	0.378

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
Phablet SAR	Back	2.608	1.075	1.775	3.683	See Note 1	0.07
	Front	2.627	1.075*	0.048	**3.702**	2.675	N/A
	Top	-	1.075*	1.775*	1.075	1.775	N/A
	Bottom	2.988	-	-	2.988	2.988	N/A
	Right	0.530	-	-	0.530	0.530	N/A
	Left	0.519	0.241	0.378	0.760	0.897	N/A

Simult Tx	Configuration	NR Band n2 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	1.785	1.075	1.775	2.860	**3.560**
	Front	1.553	1.075*	0.048	2.628	1.601
	Top	-	1.075*	1.775*	1.075	1.775
	Bottom	2.584	-	-	2.584	2.584
	Right	0.388	-	-	0.388	0.388
	Left	0.719	0.241	0.378	0.960	1.097

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Table 12-21
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Phablet)

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.160	2.827	See Note 1	0.08
	Front	1.786	0.183	1.969	N/A
	Top	-	2.827*	2.827	N/A
	Bottom	2.973	-	**2.973**	N/A
	Right	0.411	-	0.411	N/A
	Left	0.681	0.593	1.274	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.881	2.827	See Note 1	0.08
	Front	1.755	0.183	1.938	N/A
	Top	-	2.827*	2.827	N/A
	Bottom	3.082	-	**3.082**	N/A
	Right	0.245	-	0.245	N/A
	Left	0.404	0.593	0.997	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.935	2.827	See Note 1	0.08
	Front	1.480	0.183	1.663	N/A
	Top	-	2.827*	2.827	N/A
	Bottom	2.885	-	**2.885**	N/A
	Right	0.460	-	0.460	N/A
	Left	0.735	0.593	1.328	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.342	2.827	See Note 1	0.09
	Front	2.640	0.183	2.823	N/A
	Top	-	2.827*	**2.827**	N/A
	Bottom	2.697	-	2.697	N/A
	Right	0.645	-	0.645	N/A
	Left	0.577	0.593	1.170	N/A

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.099	2.827	See Note 1	0.08
	Front	1.911	0.183	2.094	N/A
	Top	-	2.827*	2.827	N/A
	Bottom	3.128	-	**3.128**	N/A
	Right	0.512	-	0.512	N/A
	Left	0.696	0.593	1.289	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.391	2.827	See Note 1	0.07
	Front	1.672	0.183	1.855	N/A
	Top	-	2.827*	**2.827**	N/A
	Bottom	1.231	-	1.231	N/A
	Right	0.107	-	0.107	N/A
	Left	0.243	0.593	0.836	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	-	2.827	**2.827**
	Front	-	0.183	0.183
	Top	-	2.827*	**2.827**
	Bottom	1.218	-	1.218
	Right	-	-	0.000
	Left	-	0.593	0.593

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.608	2.827	See Note 1	0.09
	Front	2.627	0.183	2.810	N/A
	Top	-	2.827*	2.827	N/A
	Bottom	2.988	-	**2.988**	N/A
	Right	0.530	-	0.530	N/A
	Left	0.519	0.593	1.112	N/A

Simult Tx	Configuration	NR Band n2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.785	2.827	See Note 1	0.08
	Front	1.553	0.183	1.736	N/A
	Top	-	2.827*	**2.827**	N/A
	Bottom	2.584	-	2.584	N/A
	Right	0.388	-	0.388	N/A
	Left	0.719	0.593	1.312	N/A

Note 1 - No evaluation was performed to determine the aggregate 10g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.10 per FCC KDB 447498 D01v06. See Section 12.7 for detailed SPLS ratio analysis.

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12.4 SPLSR Evaluation and Analysis

Per FCC KDB Publication 447498 D01v06, when the sum of the standalone transmitters is more than 1.6 W/kg for 1g and 4 W/kg for 10g, the SAR sum to peak locations can be analyzed to determine SAR distribution overlaps. When the SAR peak to location ratio (shown below) for each pair of antennas is ≤ 0.04 for 1g and ≤ 0.10 for 10g, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

$$\text{Distance}_{Tx1-Tx2} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \text{ (Phablet)}$$

$$\text{SPLS Ratio} = \frac{(SAR_1 + SAR_2)^{1.5}}{R_i}$$

12.4.1 Phablet Back Side SPLSR Evaluation and Analysis

Table 12-22
Peak SAR Locations for Phablet Back Side

Mode/Band	x (mm)	y (mm)
5 GHz WLAN Ant 2	-5.00	53.10
5 GHz WLAN MIMO	-7.90	56.00
EVDO 1900	-17.00	-75.00
GPRS 1900	-17.00	-75.00
UMTS 1900	-17.00	-75.00
LTE Band 66 (AWS)	-26.50	-78.00
LTE Band 2 (PCS)	-17.00	-75.00
LTE Band 7	-13.00	-67.80
NR Band n66	-26.50	-76.50
NR Band n2	-17.00	-75.00

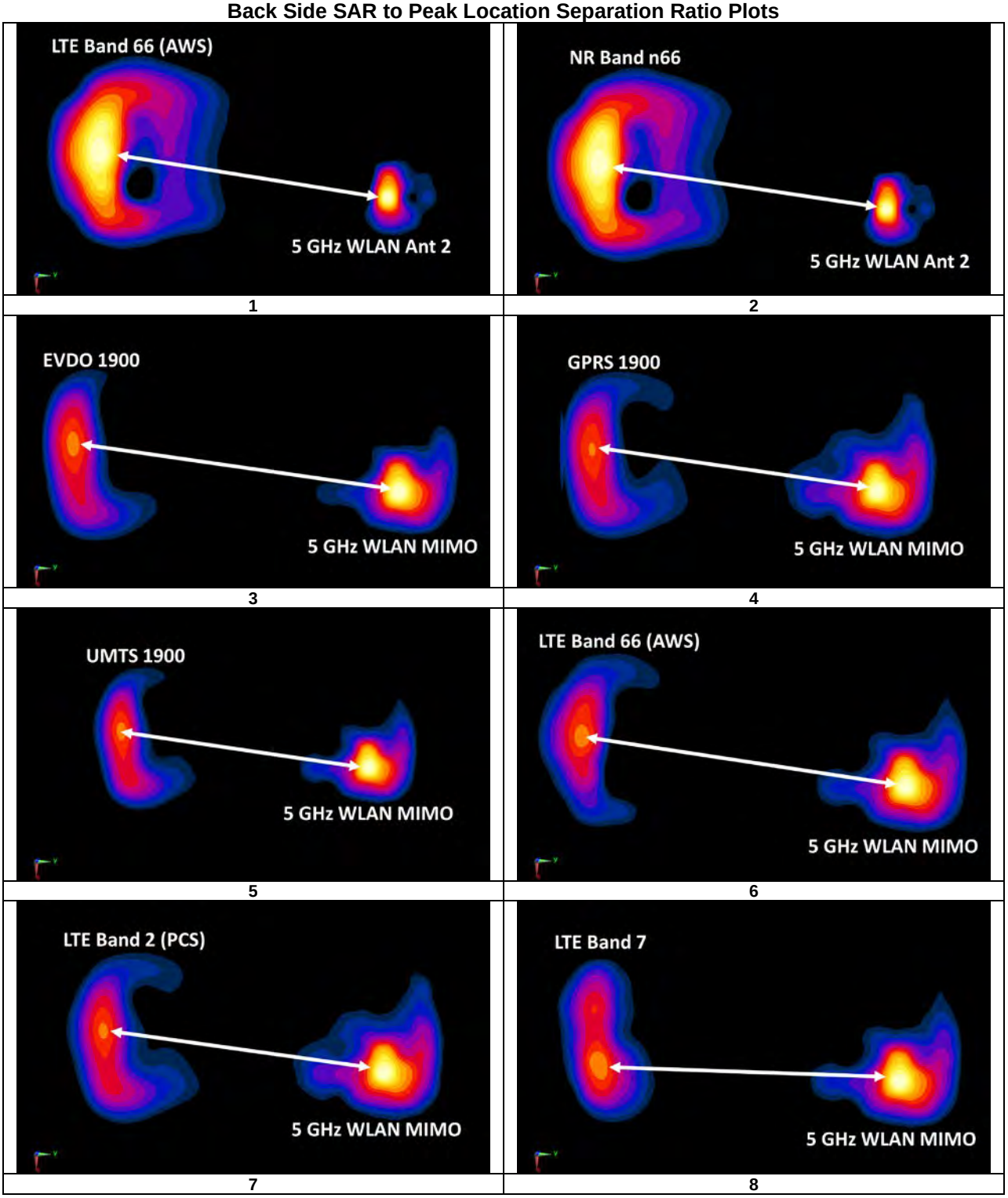
Table 12-23
Phablet Back Side SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
LTE Band 66 (AWS)	5 GHz WLAN Ant 2	2.342	1.775	4.117	132.85	0.06	1
NR Band n66	5 GHz WLAN Ant 2	2.608	1.775	4.383	131.37	0.07	2
EVDO 1900	5 GHz WLAN MIMO	2.160	2.827	4.987	131.32	0.08	3
GPRS 1900	5 GHz WLAN MIMO	1.881	2.827	4.708	131.32	0.08	4
UMTS 1900	5 GHz WLAN MIMO	1.935	2.827	4.762	131.32	0.08	5
LTE Band 66 (AWS)	5 GHz WLAN MIMO	2.342	2.827	5.169	135.28	0.09	6
LTE Band 2 (PCS)	5 GHz WLAN MIMO	2.099	2.827	4.926	131.32	0.08	7
LTE Band 7	5 GHz WLAN MIMO	1.391	2.827	4.218	123.91	0.07	8
NR Band n66	5 GHz WLAN MIMO	2.608	2.827	5.435	133.80	0.09	9
NR Band n2	5 GHz WLAN MIMO	1.785	2.827	4.612	131.32	0.08	10

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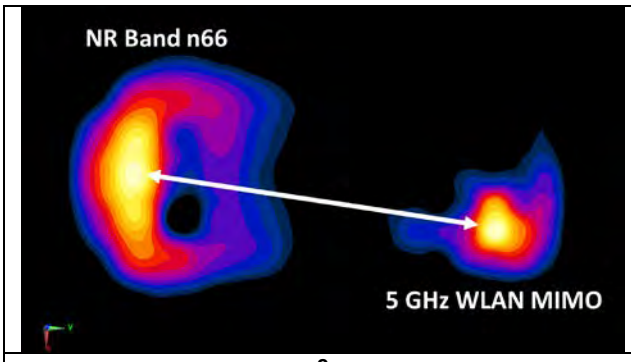
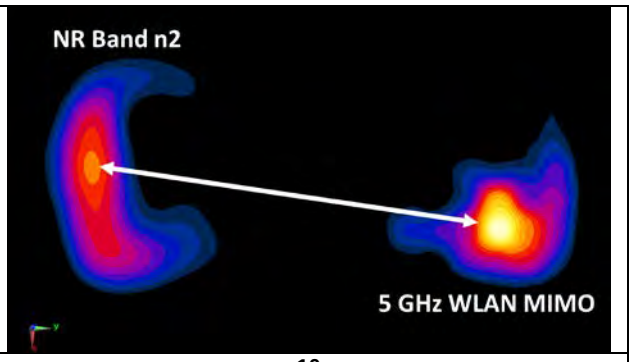
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Table 12-24
Back Side SAR to Peak Location Separation Ratio Plots



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9	10

12.5 Simultaneous Transmission Conclusion

The above numerical summed SAR results and SPLSR analysis are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

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13 SAR MEASUREMENT VARIABILITY

13.1 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 13-1
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	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), ULCA, 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	back	15 mm	0.902	0.863	1.05	N/A	N/A	N/A	N/A
	1750.20	132374		QPSK, 1 RB, 99 RB Offset									
1900	1907.60	9538	UMTS 1900	RMC	bottom	10 mm	1.070	1.030	1.04	N/A	N/A	N/A	N/A
2450	2510.00	20850	LTE Band 7, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	bottom	10 mm	1.070	0.983	1.09	N/A	N/A	N/A	N/A
2600	2535.00	21100	LTE Band 7, 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	bottom	10 mm	1.060	1.020	1.04	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 13-2
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1720.00	344000	NR Band n66 (AWS), 20 MHz Bandwidth	DFT-S-OFDM QPSK, 50 RB, 0	N/A	bottom	0 mm	2.560	2.510	1.02	N/A	N/A	N/A	N/A
1900	1908.75	1175	PCS CDMA	EVDO Rev. 0	N/A	bottom	0 mm	2.460	2.360	1.04	N/A	N/A	N/A	N/A
5250	5260.00	52	802.11n, 20 MHz Bandwidth	OFDM , MIMO	13	back	0 mm	2.310	2.280	1.01	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						

13.2 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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14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 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. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 60 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 reported 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 60 states.

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

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Table 14-1
UMTS/CDMA Supplemental Head SAR Data

Supplemental Head SAR Data							
UMTS B5		UMTS B2		CDMA BC0		CDMA BC1	
RMC		RMC		EVDO		EVDO	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	836.6	Frequency (MHz)	1880.0	Frequency (MHz)	836.52	Frequency (MHz)	1880.0
Channel	4183	Channel	9400	Channel	384	Channel	600
Measured 1g SAR (W/kg)	0.189	Measured 1g SAR (W/kg)	0.169	Measured 1g SAR (W/kg)	0.298	Measured 1g SAR (W/kg)	0.151
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.241	Auto-tune (State 27)	0.229	Auto-tune (State 1)	0.363	Auto-tune (State 26)	0.215
Default (State 0)	0.239	Default (State 0)	0.233	Default (State 0)	0.362	Default (State 0)	0.220
State 0	0.239	State 0	0.233	State 0	0.362	State 0	0.220
State 1	0.249	State 14	0.176	State 1	0.376	State 26	0.219
State 13	0.243	State 27	0.236	State 3	0.372	State 33	0.204
State 18	0.216	State 37	0.103	State 8	0.193	State 42	0.196
State 23	0.067	State 52	0.233	State 39	0.180	State 52	0.220

Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data													
LTE B12		LTE B13		LTE B14		LTE B5		LTE B26		LTE B66/4		LTE B2	
QPSK, 10 MHz Bandwith, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwith, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwith, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB 36 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	707.5	Frequency (MHz)	782.0	Frequency (MHz)	793.0	Frequency (MHz)	836.5	Frequency (MHz)	831.5	Frequency (MHz)	1720.0	Frequency (MHz)	1900.0
Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Channel	132072	Channel	19100
Measured 1g SAR (W/kg)	0.113	Measured 1g SAR (W/kg)	0.216	Measured 1g SAR (W/kg)	0.188	Measured 1g SAR (W/kg)	0.244	Measured 1g SAR (W/kg)	0.223	Measured 1g SAR (W/kg)	0.262	Measured 1g SAR (W/kg)	0.218
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 54)	0.163	Auto-tune (State 54)	0.282	Auto-tune (State 54)	0.232	Auto-tune (State 13)	0.319	Auto-tune (State 14)	0.291	Auto-tune (State 0)	0.371	Auto-tune (State 54)	0.307
Default (State 0)	0.162	Default (State 0)	0.277	Default (State 0)	0.224	Default (State 0)	0.341	Default (State 0)	0.272	Default (State 0)	0.371	Default (State 0)	0.307
State 0	0.162	State 0	0.277	State 0	0.224	State 0	0.341	State 0	0.272	State 0	0.371	State 0	0.307
State 2	0.145	State 18	0.137	State 2	0.178	State 4	0.307	State 14	0.281	State 13	0.237	State 23	0.092
State 5	0.131	State 35	0.016	State 24	0.014	State 7	0.215	State 16	0.270	State 25	0.092	State 28	0.286
State 44	0.052	State 41	0.234	State 54	0.231	State 12	0.039	State 31	0.170	State 29	0.307	State 34	0.283
State 54	0.162	State 54	0.269	State 59	0.203	State 13	0.325	State 54	0.269	State 38	0.209	State 54	0.307

Table 14-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data					
NR Band n5		NR Band n66		NR Band n2	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offfset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offfset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	836.5	Frequency (MHz)	1745.0	Frequency (MHz)	1860.0
Channel	167300	Channel	349000	Channel	372000
Measured 1g SAR (W/kg)	0.317	Measured 1g SAR (W/kg)	0.218	Measured 1g SAR (W/kg)	0.167
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.419	Auto-tune (State 0)	0.355	Auto-tune (State 54)	0.241
Default (State 0)	0.414	Default (State 0)	0.355	Default (State 0)	0.243
State 0	0.414	State 0	0.355	State 39	0.232
State 13	0.419	State 18	0.153	State 42	0.220
State 25	0.047	State 33	0.278	State 47	0.154
State 51	0.015	State 48	0.149	State 53	0.233
State 58	0.426	State 56	0.205	State 54	0.241

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Table 14-4
UMTS/CDMA Supplemental Body SAR Data

Supplemental Body SAR Data							
UMTS B5		UMTS B2		CDMA BC0		CDMA BC1	
RMC		RMC		EVDO		EVDO	
Test Position	Back Side	Test Position	Bottom Edge	Test Position	Back Side	Test Position	Bottom Edge
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.6	Frequency (MHz)	1907.6	Frequency (MHz)	836.52	Frequency (MHz)	1908.75
Channel	4183	Channel	9538	Channel	384	Channel	1175
Measured 1g SAR (W/kg)	0.342	Measured 1g SAR (W/kg)	1.070	Measured 1g SAR (W/kg)	0.468	Measured 1g SAR (W/kg)	0.908
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 54)	0.512	Auto-tune (State 54)	1.659	Auto-tune (State 54)	0.755	Auto-tune (State 53)	1.393
Default (State 0)	0.473	Default (State 0)	1.665	Default (State 0)	0.668	Default (State 0)	1.356
State 0	0.473	State 0	1.665	State 0	0.668	State 0	1.356
State 7	0.358	State 1	1.631	State 38	0.024	State 1	1.297
State 17	0.462	State 2	1.598	State 47	0.278	State 2	1.277
State 50	0.041	State 3	1.586	State 49	0.106	State 3	1.256
State 54	0.518	State 4	1.579	State 54	0.742	State 4	1.217
		State 5	1.517			State 5	1.211
		State 6	1.382			State 6	1.097
		State 7	1.286			State 7	1.014
		State 8	1.137			State 8	0.894
		State 9	0.928			State 9	0.722
		State 10	0.781			State 10	0.598
		State 11	0.602			State 11	0.461
		State 12	0.408			State 12	0.310
		State 13	1.347			State 13	1.107
		State 14	1.235			State 14	1.011
		State 15	1.199			State 15	0.982
		State 16	1.170			State 16	0.955
		State 17	1.116			State 17	0.900
		State 18	1.107			State 18	0.888
		State 19	0.963			State 19	0.758
		State 20	0.859			State 20	0.675
		State 21	0.726			State 21	0.563
		State 22	0.557			State 22	0.427
		State 23	0.451			State 23	0.341
		State 24	0.334			State 24	0.253
		State 25	0.218			State 25	0.162
		State 26	1.639			State 26	1.354
		State 27	1.661			State 27	1.371
		State 28	1.656			State 28	1.365
		State 29	1.656			State 29	1.357
		State 30	1.634			State 30	1.344
		State 31	1.638			State 31	1.341
		State 32	1.604			State 32	1.287
		State 33	1.534			State 33	1.224
		State 34	1.415			State 34	1.121
		State 35	1.203			State 35	0.936
		State 36	1.033			State 36	0.794
		State 37	0.798			State 37	0.611
		State 38	0.537			State 38	0.403
		State 39	1.604			State 39	1.300
		State 40	1.538			State 40	1.243
		State 41	1.516			State 41	1.226
		State 42	1.491			State 42	1.209
		State 43	1.439			State 43	1.175
		State 44	1.434			State 44	1.159
		State 45	1.318			State 45	1.054
		State 46	1.223			State 46	0.971
		State 47	0.925			State 47	0.855
		State 48	0.880			State 48	0.687
		State 49	0.733			State 49	0.571
		State 50	0.573			State 50	0.438
		State 51	0.388			State 51	0.290
		State 52	1.659			State 52	1.341
		State 53	1.674			State 53	1.357
		State 54	1.664			State 54	1.342
		State 55	1.665			State 55	1.344
		State 56	1.346			State 56	1.096
		State 57	1.606			State 57	1.296
		State 58	1.345			State 58	1.092
		State 59	1.606			State 59	1.300

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Table 14-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data									
LTE B12		LTE B13		LTE B14		LTE B5		LTE B26	
QPSK, 10 MHz Bandwidth, 1 RB 0 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 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB 36 RB Offset	
Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	707.5	Frequency (MHz)	782.0	Frequency (MHz)	793.0	Frequency (MHz)	836.5 MHz	Frequency (MHz)	831.5
Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865
Measured 1g SAR (W/kg)	0.270	Measured 1g SAR (W/kg)	0.463	Measured 1g SAR (W/kg)	0.360	Measured 1g SAR (W/kg)	0.495	Measured 1g SAR (W/kg)	0.404
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 54)	0.444	Auto-tune (State 54)	0.799	Auto-tune (State 0)	0.624	Auto-tune (State 13)	0.799	Auto-tune (State 14)	0.641
Default (State 0)	0.445	Default (State 0)	0.803	Default (State 0)	0.620	Default (State 0)	0.789	Default (State 0)	0.611
State 0	0.445	State 0	0.803	State 0	0.620	State 0	0.789	State 0	0.611
State 6	0.297	State 11	0.068	State 7	0.222	State 1	0.781	State 14	0.641
State 9	0.170	State 21	0.157	State 8	0.168	State 10	0.217	State 22	0.210
State 17	0.317	State 43	0.567	State 45	0.233	State 13	0.797	State 32	0.402
State 54	0.445	State 54	0.793	State 57	0.497	State 15	0.724	State 58	0.627

Supplemental Body SAR Data			
LTE B66/4		LTE B2	
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB offset,		QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset	
Test Position	Back Side	Test Position	Bottom Edge
Spacing	15 mm	Spacing	10 mm
Frequency (MHz)	1770.0	Frequency (MHz)	1900.0
Channel	132572	Channel	19100
Measured 1g SAR (W/kg)	0.832	Measured 1g SAR (W/kg)	0.764
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 2)	1.328	Auto-tune (State 53)	1.300
Default (State 0)	1.185	Default (State 0)	1.294
State 0	1.185	State 0	1.294
State 1	1.347	State 1	1.231
State 2	1.335	State 2	1.217
State 3	1.336	State 3	1.198
State 4	1.329	State 4	1.158
State 5	1.320	State 5	1.147
State 6	1.299	State 6	1.042
State 7	1.274	State 7	0.963
State 8	1.224	State 8	0.848
State 9	1.130	State 9	0.688
State 10	1.041	State 10	0.574
State 11	0.913	State 11	0.445
State 12	0.717	State 12	0.302
State 13	0.914	State 13	1.026
State 14	0.918	State 14	0.933
State 15	0.916	State 15	0.907
State 16	0.910	State 16	0.882
State 17	0.899	State 17	0.836
State 18	0.897	State 18	0.826
State 19	0.860	State 19	0.709
State 20	0.830	State 20	0.631
State 21	0.777	State 21	0.527
State 22	0.691	State 22	0.404
State 23	0.614	State 23	0.327
State 24	0.510	State 24	0.243
State 25	0.376	State 25	0.158
State 26	1.140	State 26	1.328
State 27	1.174	State 27	1.328
State 28	1.178	State 28	1.322
State 29	1.181	State 29	1.320
State 30	1.191	State 30	1.308
State 31	1.193	State 31	1.298
State 32	1.222	State 32	1.234
State 33	1.227	State 33	1.177
State 34	1.239	State 34	1.068
State 35	1.217	State 35	0.896
State 36	1.176	State 36	0.758
State 37	1.084	State 37	0.589
State 38	0.891	State 38	0.393
State 39	1.243	State 39	1.244
State 40	1.247	State 40	1.187
State 41	1.247	State 41	1.171
State 42	1.248	State 42	1.152
State 43	1.247	State 43	1.114
State 44	1.237	State 44	1.108
State 45	1.230	State 45	1.003
State 46	1.212	State 46	0.929
State 47	1.177	State 47	0.811
State 48	1.108	State 48	0.658
State 49	1.043	State 49	0.548
State 50	0.922	State 50	0.421
State 51	0.739	State 51	0.284
State 52	1.333	State 52	1.280
State 53	1.138	State 53	1.326
State 54	1.329	State 54	1.278
State 55	1.137	State 55	1.318
State 56	0.908	State 56	1.010
State 57	1.238	State 57	1.244
State 58	0.909	State 58	1.009
State 59	1.238	State 59	1.243

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Table 14-6
NR Supplemental Body SAR Data

Supplemental Body SAR Data					
NR Band n5		NR Band n66		NR Band n2	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offfset		DFTS-s-OFDM QPSK 20 MHz Bandwidth, 50 RB, 0 RB Offset		DFTS-s-OFDM QPSK 20 MHz Bandwidth, 50 RB, 0 RB Offset	
Test Position	Back Side	Test Position	Bottom Edge	Test Position	Bottom Edge
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.5	Frequency (MHz)	1770.0	Frequency (MHz)	1900.0
Channel	167300	Channel	354000	Channel	380000
Measured 1g SAR (W/kg)	0.466	Measured 1g SAR (W/kg)	0.753	Measured 1g SAR (W/kg)	0.710
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.786	Auto-tune (State 8)	1.212	Auto-tune (State 53)	1.216
Default (State 0)	0.819	Default (State 0)	1.202	Default (State 0)	1.172
State 0	0.819	State 0	1.202	State 0	1.172
State 13	0.786	State 1	1.368	State 1	1.117
State 26	0.720	State 2	1.368	State 2	1.097
State 40	0.769	State 3	1.363	State 3	1.076
State 57	0.733	State 4	1.363	State 4	1.045
		State 5	1.361	State 5	1.034
		State 6	1.319	State 6	0.947
		State 7	1.280	State 7	0.876
		State 8	1.212	State 8	0.781
		State 9	1.115	State 9	0.630
		State 10	1.025	State 10	0.535
		State 11	0.890	State 11	0.413
		State 12	0.677	State 12	0.278
		State 13	0.896	State 13	0.896
		State 14	0.909	State 14	0.814
		State 15	0.904	State 15	0.790
		State 16	0.898	State 16	0.770
		State 17	0.890	State 17	0.727
		State 18	0.889	State 18	0.720
		State 19	0.854	State 19	0.626
		State 20	0.821	State 20	0.553
		State 21	0.763	State 21	0.466
		State 22	0.666	State 22	0.357
		State 23	0.582	State 23	0.288
		State 24	0.482	State 24	0.214
		State 25	0.340	State 25	0.139
		State 26	1.202	State 26	1.223
		State 27	1.233	State 27	1.226
		State 28	1.238	State 28	1.216
		State 29	1.245	State 29	1.213
		State 30	1.256	State 30	1.203
		State 31	1.255	State 31	1.196
		State 32	1.274	State 32	1.139
		State 33	1.305	State 33	1.081
		State 34	1.298	State 34	0.988
		State 35	1.278	State 35	0.835
		State 36	1.241	State 36	0.709
		State 37	1.135	State 37	0.548
		State 38	0.918	State 38	0.362
		State 39	1.258	State 39	1.126
		State 40	1.258	State 40	1.076
		State 41	1.259	State 41	1.054
		State 42	1.259	State 42	1.037
		State 43	1.254	State 43	1.003
		State 44	1.247	State 44	0.995
		State 45	1.248	State 45	0.904
		State 46	1.223	State 46	0.835
		State 47	1.173	State 47	0.734
		State 48	1.094	State 48	0.600
		State 49	1.018	State 49	0.497
		State 50	0.890	State 50	0.382
		State 51	0.686	State 51	0.257
		State 52	1.334	State 52	1.165
		State 53	1.180	State 53	1.216
		State 54	1.331	State 54	1.163
		State 55	1.182	State 55	1.214
		State 56	0.878	State 56	0.889
		State 57	1.257	State 57	1.121
		State 58	0.876	State 58	0.886
		State 59	1.256	State 59	1.113

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	1/16/2020	Annual	1/16/2021	US39170118
Agilent	8753ES	S-Parameter Network Analyzer	12/31/2019	Annual	12/31/2020	US39170122
Agilent	E4438C	ESG Vector Signal Generator	9/13/2019	Annual	9/13/2020	MY42081752
Agilent	E4438C	ESG Vector Signal Generator	3/8/2019	Biennial	3/8/2021	MY42082385
Agilent	E5515C	Wireless Communications Test Set	5/22/2018	Biennial	5/22/2020	GB43193563
Agilent	E5515C	Wireless Communications Test Set	9/25/2019	Annual	9/25/2020	GB43304278
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N5182A	MXG Vector Signal Generator	2/19/2020	Annual	2/19/2021	MY47420651
Agilent	N5182A	MXG Vector Signal Generator	7/10/2019	Annual	7/10/2020	MY47420800
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	343971
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	343972
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	353317
Anritsu	MA24106A	USB Power Sensor	8/5/2019	Annual	8/5/2020	1827527
Anritsu	MA24106A	USB Power Sensor	5/22/2019	Annual	5/22/2020	1231535
Anritsu	MA24106A	USB Power Sensor	7/12/2019	Annual	7/12/2020	1244512
Anritsu	MA24106A	USB Power Sensor	6/21/2019	Annual	6/21/2020	1244515
Anritsu	MA24106A	USB Power Sensor	2/27/2020	Annual	2/27/2021	1244524
Anritsu	MA24106A	USB Power Sensor	7/8/2019	Annual	7/8/2020	1248508
Anritsu	MA2411B	Pulse Power Sensor	12/4/2019	Annual	12/4/2020	1126066
Anritsu	MA2411B	Pulse Power Sensor	6/11/2019	Annual	6/11/2020	1207364
Anritsu	ML2495A	Power Meter	11/15/2019	Annual	11/15/2020	1039008
Anritsu	ML2496A	Power Meter	12/17/2019	Annual	12/17/2020	1138001
Anritsu	MT8820C	Radio Communication Analyzer	7/25/2019	Annual	7/25/2020	6201240328
Anritsu	MT8821C	Radio Communication Analyzer	3/10/2020	Annual	3/10/2021	6200901190
Anritsu	MT8821C	Radio Communication Analyzer	8/16/2019	Annual	8/16/2020	6201144418
Anritsu	MT8821C	Radio Communication Analyzer	10/2/2019	Annual	10/2/2020	6201664756
Anritsu	MT8821C	Radio Communication Analyzer	2/22/2020	Annual	2/22/2021	6261895213
Anritsu	MT8862A	Wireless Connectivity Test Set	8/8/2019	Annual	8/8/2020	6261782395
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	10/9/2018	Biennial	10/9/2020	181647802
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647811
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647812
Control Company	4352	Ultra Long Stem Thermometer	8/2/2018	Biennial	8/2/2020	181292000
Control Company	4352	Ultra Long Stem Thermometer	8/2/2018	Biennial	8/2/2020	181292054
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282744
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Keysight Technologies	AT/N6705B	DC Power Supply	CBT	N/A	CBT	MY53001315
Keysight Technologies	N6705B	DC Power Analyzer	4/27/2019	Biennial	4/27/2021	MY53004059
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
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
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	5/23/2018	Biennial	5/23/2020	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	8/26/2019	Annual	8/26/2020	100976
Rohde & Schwarz	CMW500	Radio Communication Tester	6/24/2019	Annual	6/24/2020	101699
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Seekonk	NC-100	Torque Wrench	7/18/2019	Annual	7/18/2020	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/7/2019	Annual	5/7/2020	1070
SPEAG	DAK-3.5	Dielectric Assessment Kit	10/22/2019	Annual	10/22/2020	1091
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Biennial	10/19/2020	1161
SPEAG	D835V2	835 MHz SAR Dipole	1/13/2020	Annual	1/13/2021	4d132
SPEAG	D1750V2	1750 MHz SAR Dipole	5/15/2019	Annual	5/15/2020	1148
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Biennial	10/22/2020	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Biennial	2/21/2021	5d148
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Triennial	9/11/2020	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2019	Annual	8/14/2020	719
SPEAG	D3500V2	3500 MHz SAR Dipole	1/21/2020	Annual	1/21/2021	1097
SPEAG	D3700V2	3700 MHz SAR Dipole	1/21/2020	Annual	1/21/2021	1067
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/17/2019	Annual	9/17/2020	1191
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Biennial	10/19/2020	4d133
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	5d080
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Annual	6/14/2020	1064
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Triennial	1/16/2021	1057
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7551
SPEAG	EX3DV4	SAR Probe	5/16/2019	Annual	5/16/2020	7406
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	3589
SPEAG	EX3DV4	SAR Probe	6/19/2019	Annual	6/19/2020	7409
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7552
SPEAG	EX3DV4	SAR Probe	7/16/2019	Annual	7/16/2020	7410
SPEAG	EX3DV4	SAR Probe	3/17/2020	Annual	3/17/2021	7527
SPEAG	EX3DV4	SAR Probe	12/11/2019	Annual	12/11/2020	7571
SPEAG	EX3DV4	SAR Probe	7/15/2019	Annual	7/15/2020	7547
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/17/2019	Annual	9/17/2020	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2019	Annual	5/8/2020	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/20/2019	Annual	6/20/2020	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2019	Annual	9/12/2020	1449
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/9/2019	Annual	5/9/2020	1368
SPEAG	DAE4	Data Data Acquisition Electronics	12/5/2019	Annual	12/5/2020	1533
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1323

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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16 MEASUREMENT UNCERTAINTIES

a	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i 1gm**	**c_i 10 gms**	**1gm u_i (± %)**	**10gms u_i (± %)**	**v_i**
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)		RSS				11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2				23.0	22.6	

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17 CONCLUSION

17.1 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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18 REFERENCES

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.

[2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.

[3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.

[4] ANSI/IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: IEEE, December 2002.

[5] IEEE Standards Coordinating Committee 39 –Standards Coordinating Committee 34 – IEEE Std. 1528-2013, IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

[6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for RadioFrequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.

[7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.

[8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. 1 -124.

[9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.

[10] Schmid & Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.

[11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct. 1996, pp. 1865-1873.

[12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.

[13] G. Hartsgrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bioelectromagnetics, Canada: 1987, pp. 29-36.

[14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.

[15] W. Gander, Computermathematick, Birkhaeuser, Basel, 1992.

[16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.

[17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.

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[18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10kHz-300GHz, Jan. 1995.

[19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hoschschule Zürich, Dosimetric Evaluation of the Cellular Phone.

[20] IEC 62209-1, Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz), July 2016.

[21] Innovation, Science, Economic Development Canada RSS-102 Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) Issue 5, March 2015.

[22] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2015

[23] FCC SAR Test Procedures for 2G-3G Devices, Mobile Hotspot and UMPC Devices KDB Publications 941225, D01-D07

[24] SAR Measurement Guidance for IEEE 802.11 Transmitters, KDB Publication 248227 D01

[25] FCC SAR Considerations for Handsets with Multiple Transmitters and Antennas, KDB Publications 648474 D03-D04

[26] FCC SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers, FCC KDB Publication 616217 D04

[27] FCC SAR Measurement and Reporting Requirements for 100MHz – 6 GHz, KDB Publications 865664 D01-D02

[28] FCC General RF Exposure Guidance and SAR Procedures for Dongles, KDB Publication 447498, D01-D02

[29] Anexo à Resolução No. 533, de 10 de Septembro de 2009.

[30] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), Mar. 2010.

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APPENDIX A: SAR TEST DATA

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DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

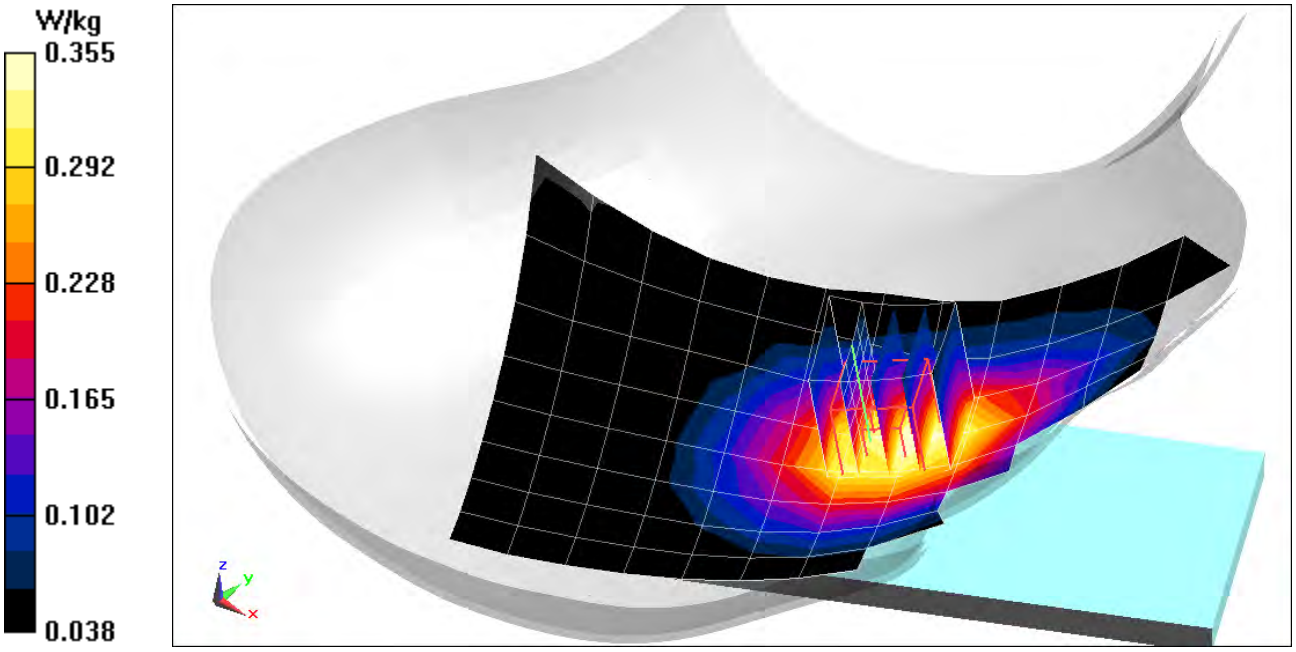
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.895 S/m; ε_r = 40.764; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 20.1°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.52 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Cell. EVDO Rev. A, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.56 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.298 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6755M

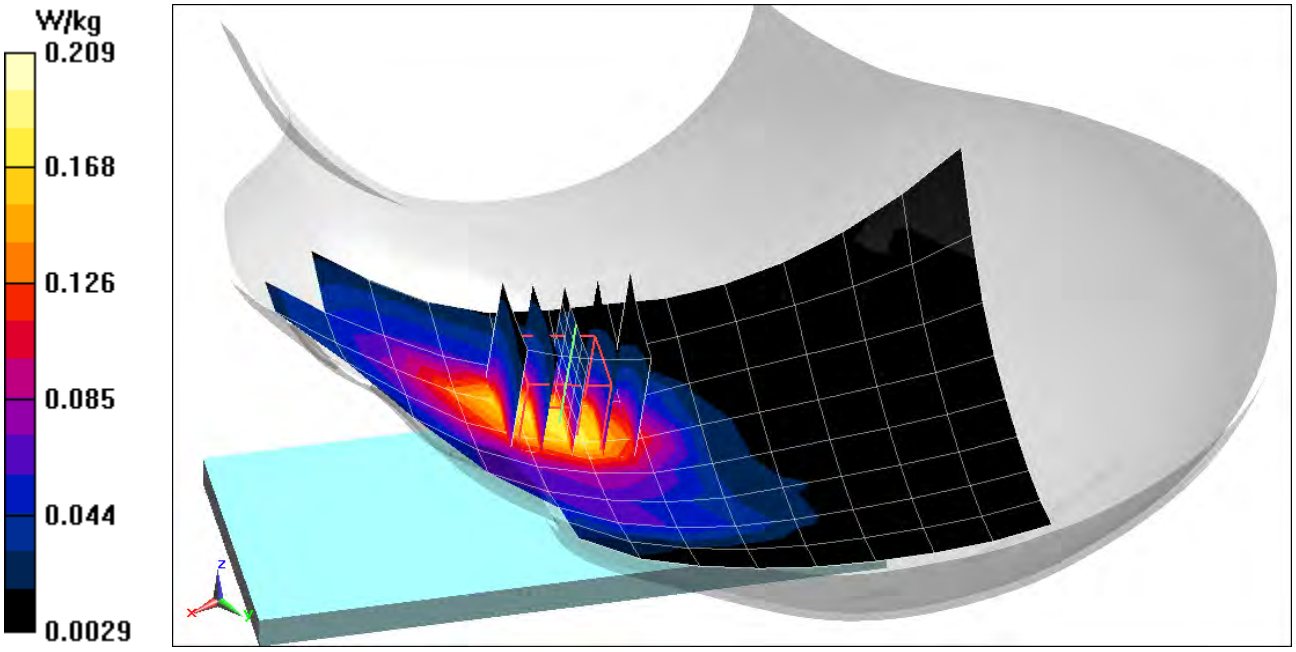
Communication System: UID 0, PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.399 S/m; ε_r = 39.073; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/23/2020; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7406; ConvF(8.18, 8.18, 8.18) @ 1880 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: PCS EVDO Rev A, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.88 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.151 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

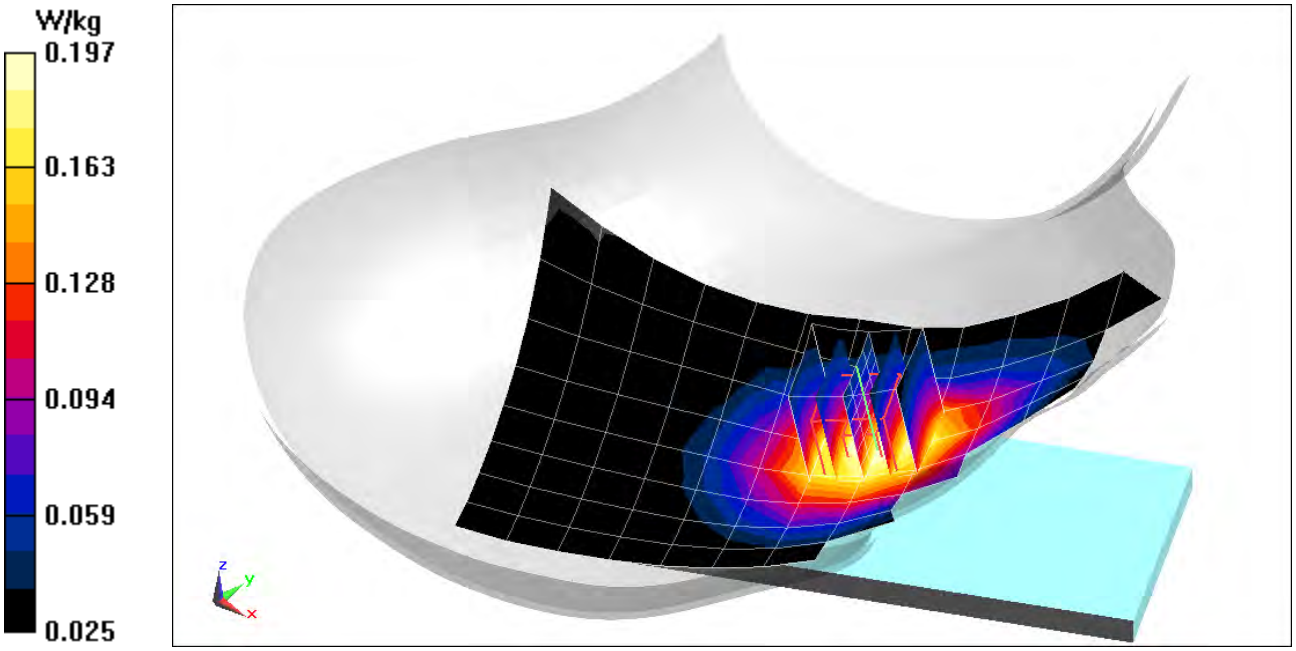
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head; Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.895$ S/m; $\varepsilon_r = 40.764$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 20.1°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.6 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GSM 850, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.10 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.219 W/kg
SAR(1 g) = 0.168 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6755M

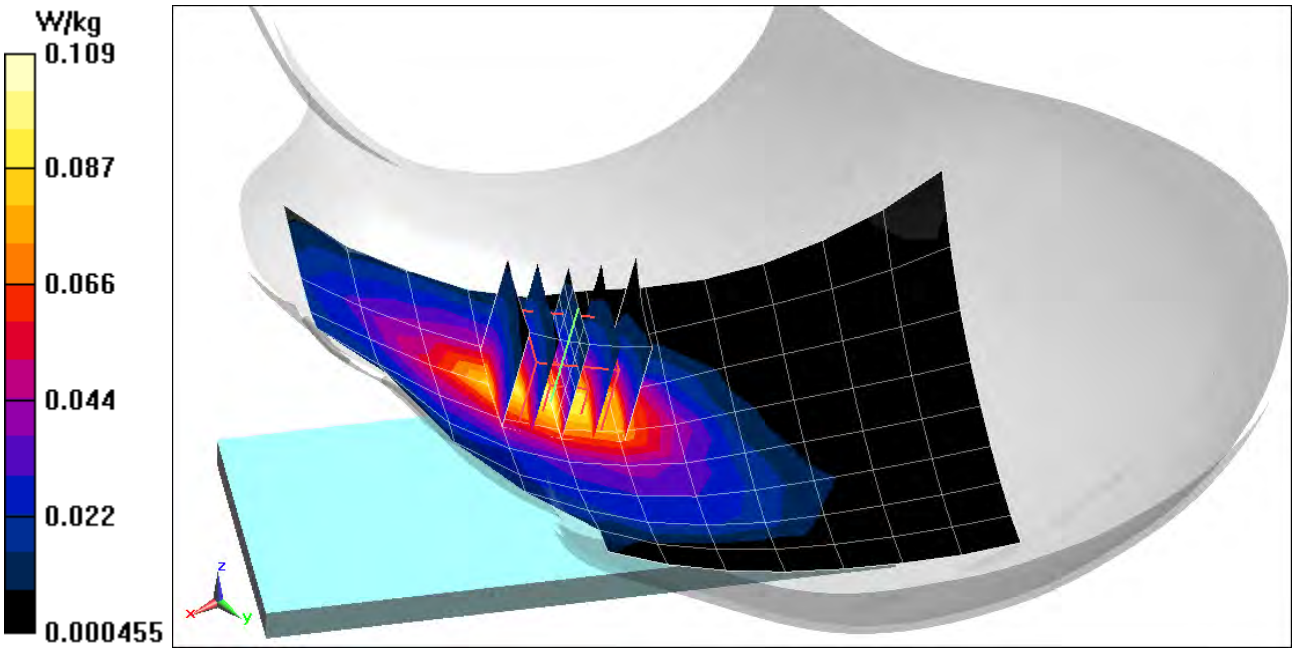
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.399 S/m; ε_r = 39.073; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/23/2020; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7406; ConvF(8.18, 8.18, 8.18) @ 1880 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GSM 1900, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.860 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.126 W/kg
SAR(1 g) = 0.080 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

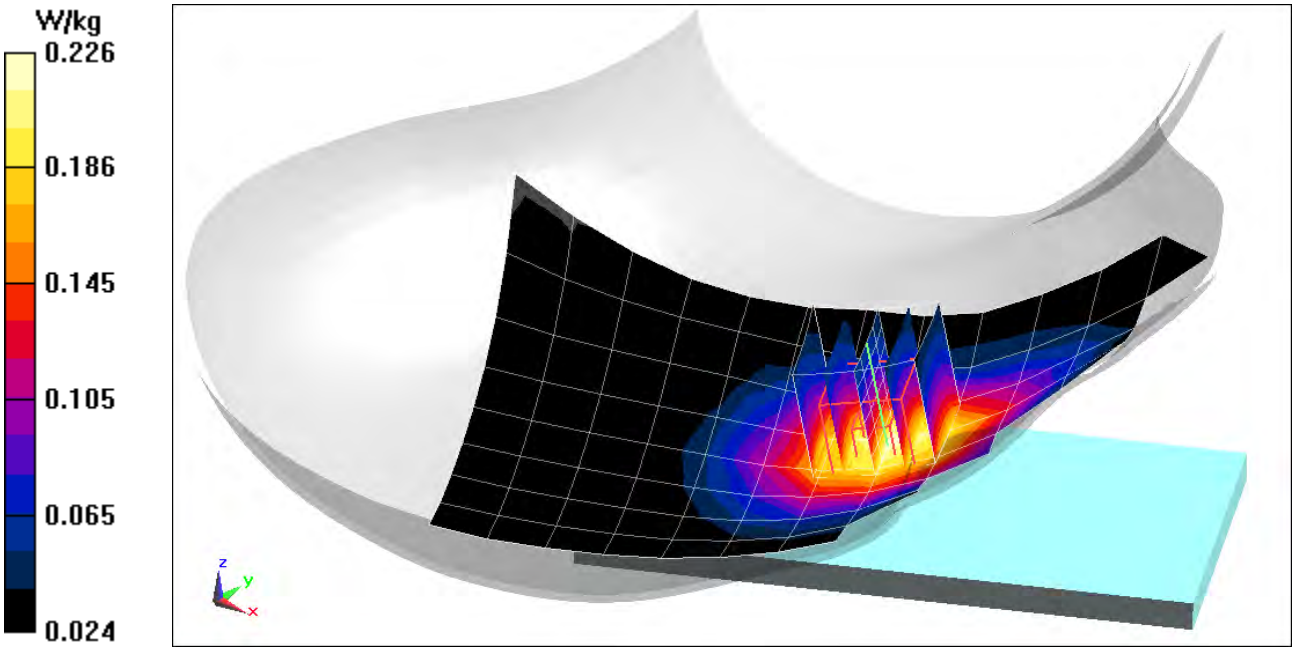
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.895 S/m; ε_r = 40.764; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 20.1°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.6 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 850, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.83 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.245 W/kg
SAR(1 g) = 0.189 W/kg



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DUT: A3LSMG981V; Type: Portable Handset; Serial: 6755M

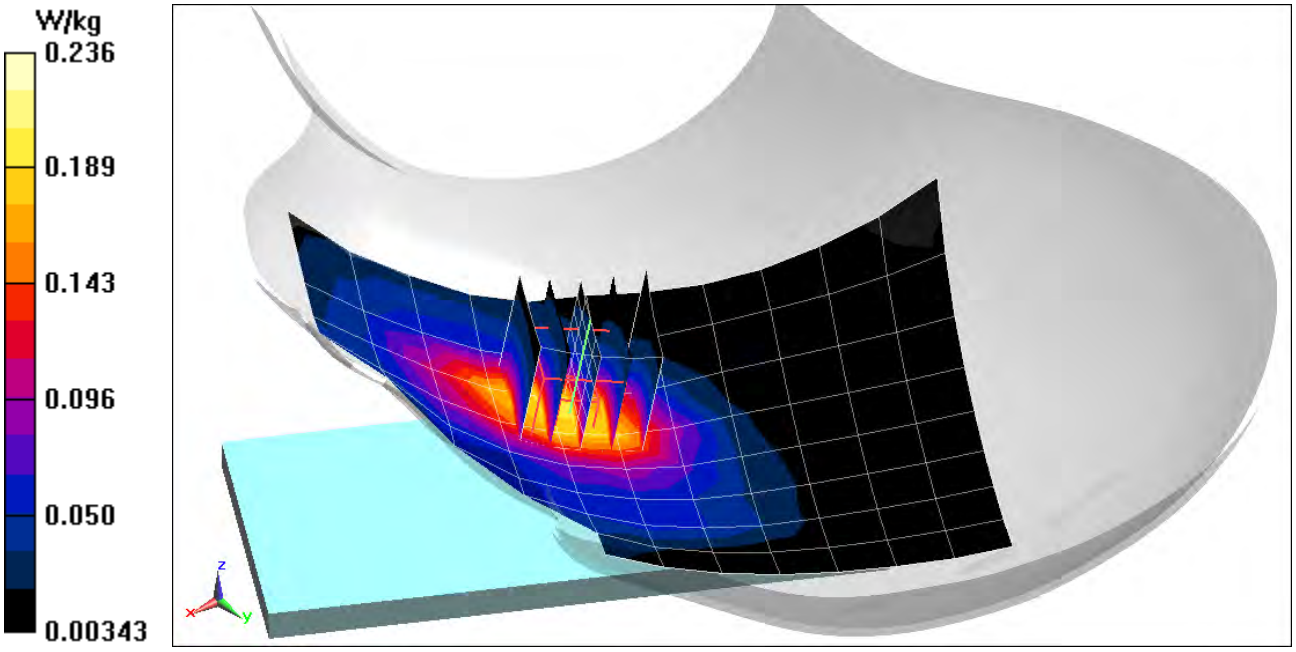
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.399 S/m; ε_r = 39.073; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/23/2020; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7406; ConvF(8.18, 8.18, 8.18) @ 1880 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1900, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.50 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.274 W/kg
SAR(1 g) = 0.169 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6932M

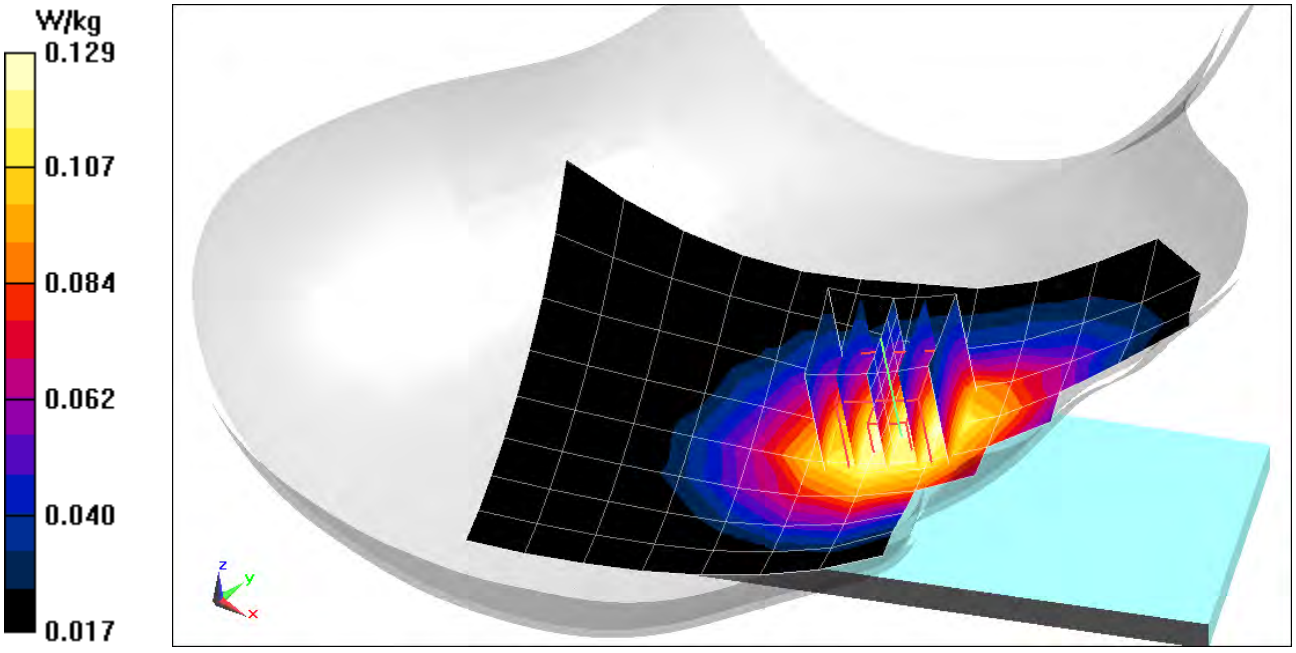
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.874 S/m; ε_r = 41.856; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(10.64, 10.64, 10.64) @ 707.5 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 12, Right Head, Cheek, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.95 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.137 W/kg
SAR(1 g) = 0.113 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

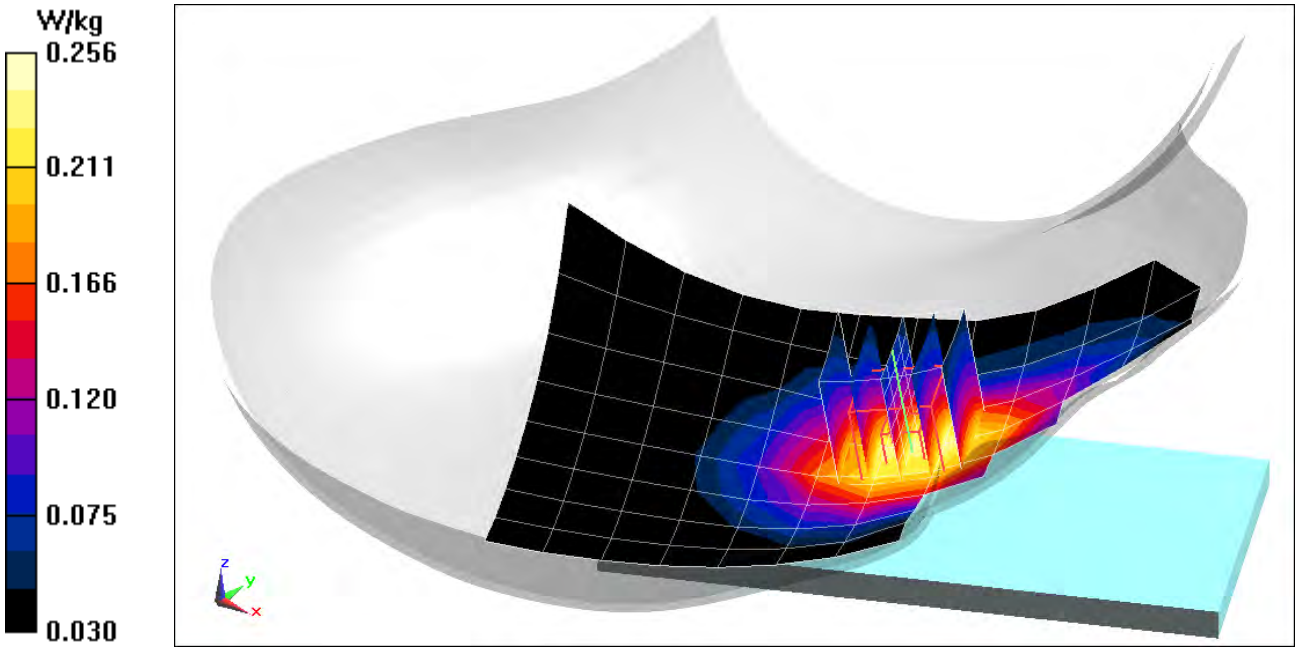
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used (interpolated):
f = 782 MHz; σ = 0.894 S/m; ε_r = 41.264; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/30/2020; Ambient Temp: 20.7°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7551; ConvF(10.11, 10.11, 10.11) @ 782 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 13, Right Head, Cheek, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.45 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.280 W/kg
SAR(1 g) = 0.216 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

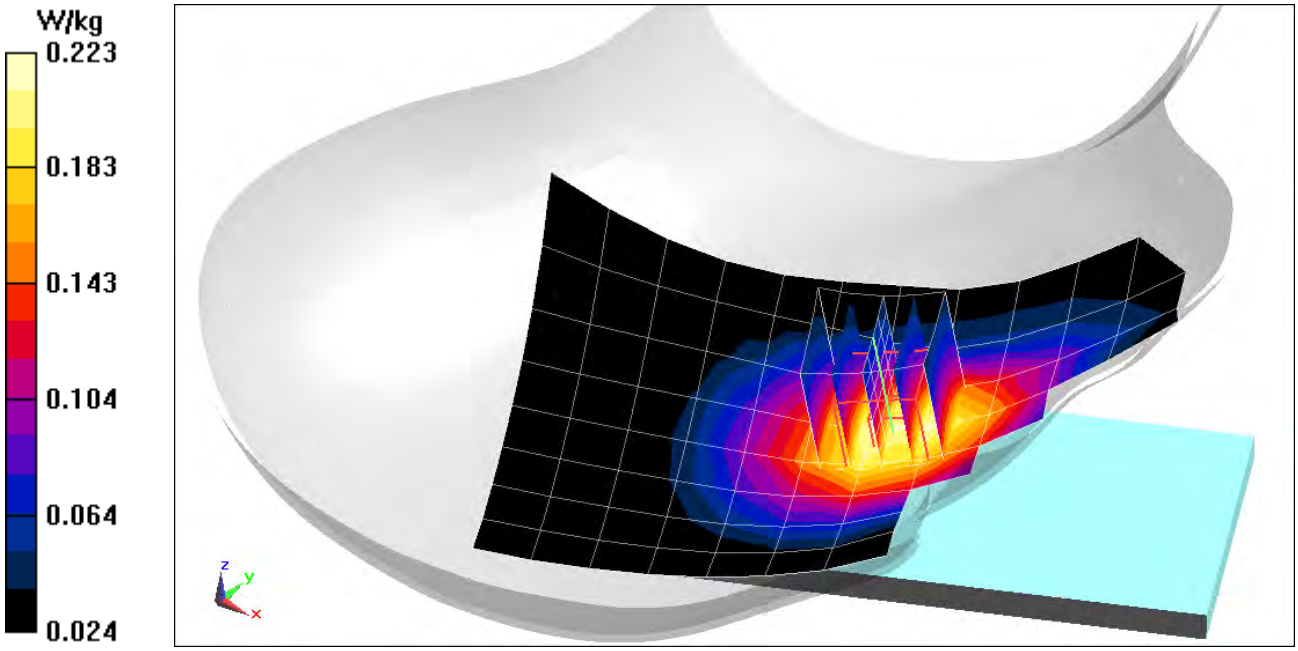
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used (interpolated):
f = 793 MHz; σ = 0.898 S/m; ε_r = 41.242; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/30/2020; Ambient Temp: 20.7°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7551; ConvF(10.11, 10.11, 10.11) @ 793 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 14, Right Head, Cheek, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.81 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.188 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

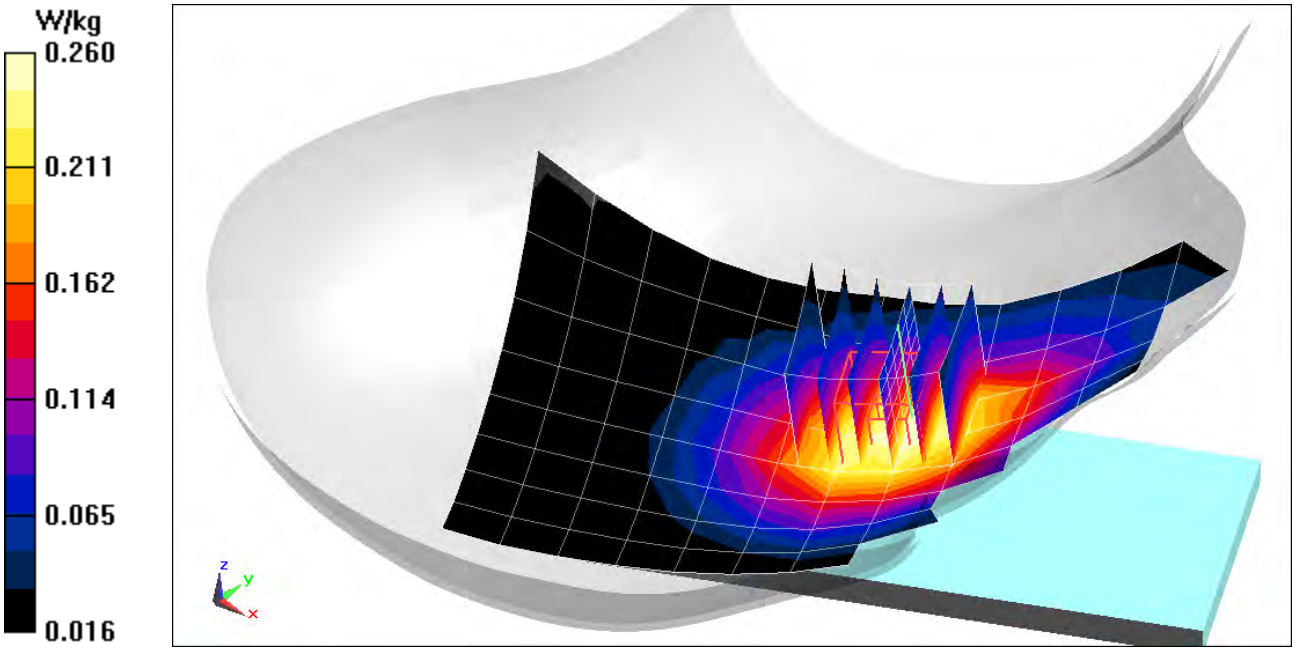
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.893 S/m; ε_r = 40.781; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 20.1°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 831.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 26 (Cell.), Right Head, Cheek, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 36 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.24 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.223 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6805M

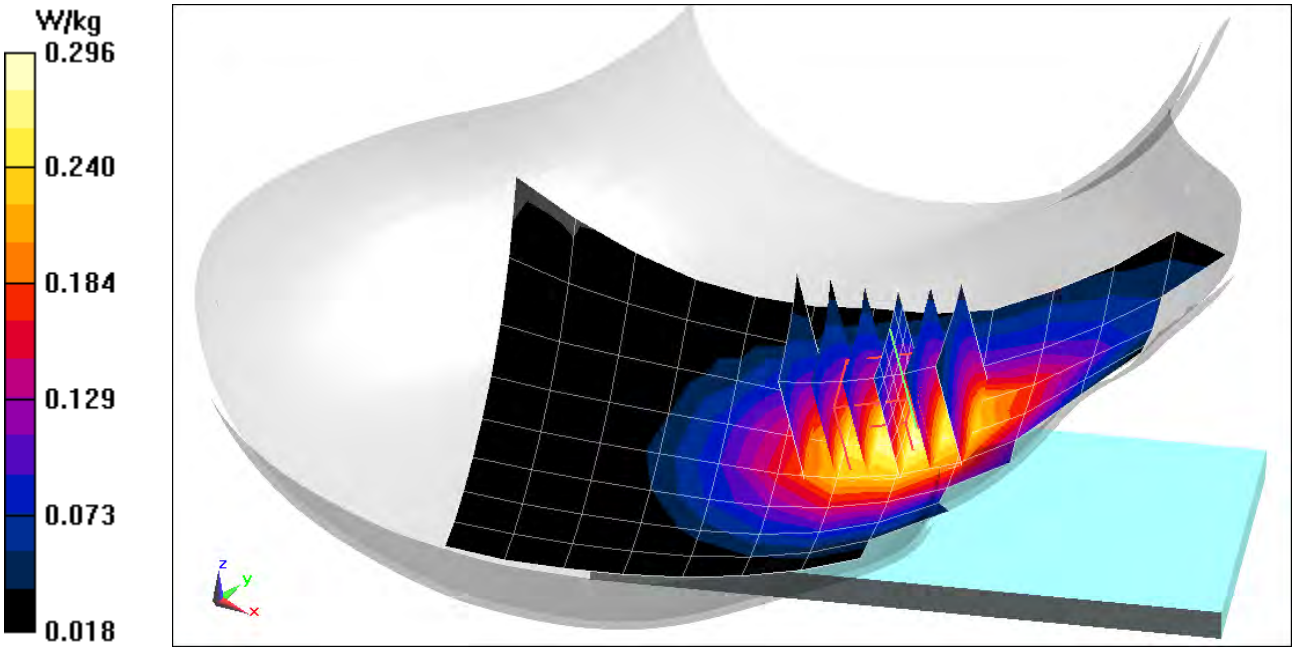
Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.895 S/m; ε_r = 40.764; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/23/2020; Ambient Temp: 20.1°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 5 (Cell.), ULCA, Right Head, Cheek,
PCC: Ch. 20525, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 20453, 5 MHz Bandwidth, QPSK, 1 RB, 24 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.54 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.323 W/kg
SAR(1 g) = 0.250 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6784M

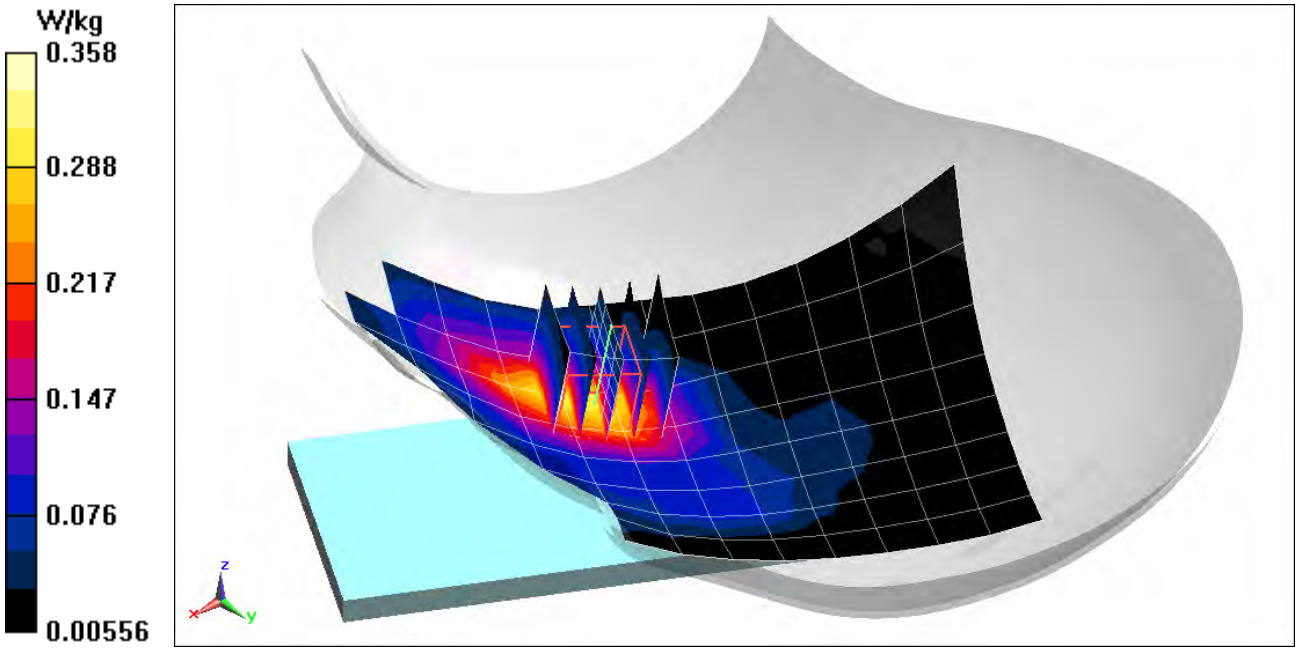
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Head; Medium parameters used:
f = 1720 MHz; σ = 1.353 S/m; ε_r = 39.743; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/26/2020; Ambient Temp: 20.2°C; Tissue Temp: 19.7°C

Probe: EX3DV4 - SN7551; ConvF(8.34, 8.34, 8.34) @ 1720 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 66 (AWS), Left Head, Cheek, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.83 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.411 W/kg
SAR(1 g) = 0.262 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6952M

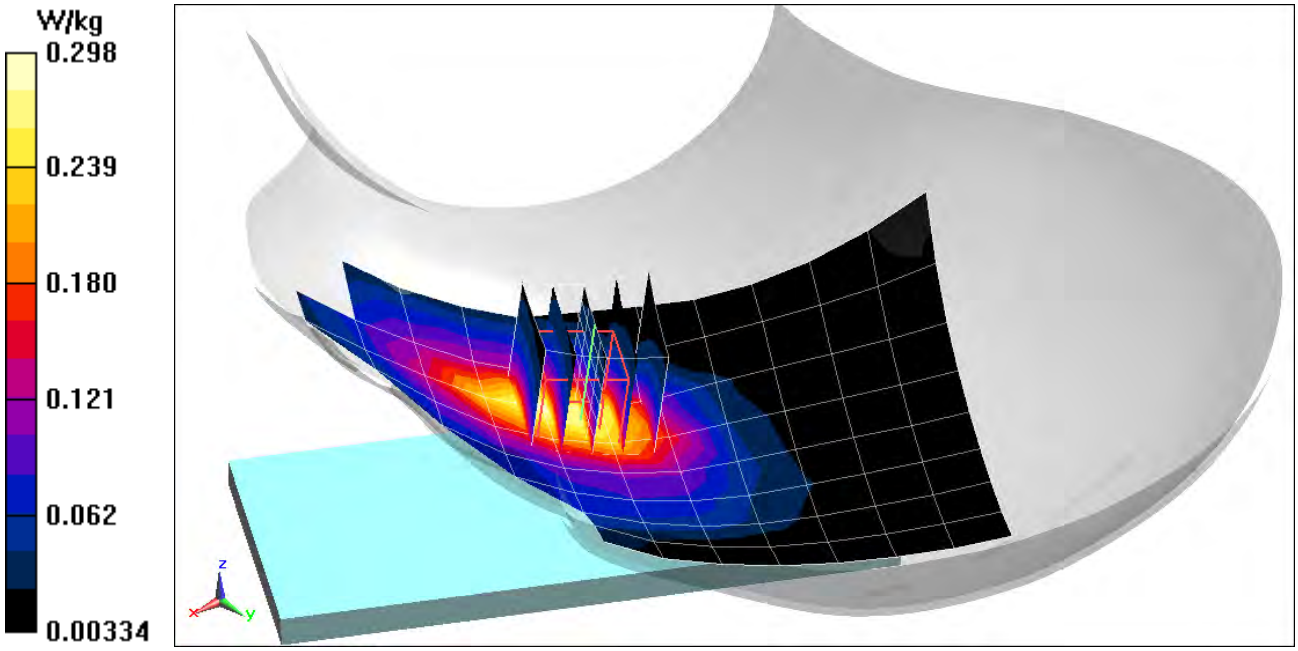
Communication System: UID 0, _LTE Band 2 (PCS); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1900 MHz; σ = 1.449 S/m; ε_r = 39.516; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/26/2020; Ambient Temp: 21.4°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7406; ConvF(8.18, 8.18, 8.18) @ 1900 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 2 (PCS), Left Head, Cheek, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.19 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.218 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6799M

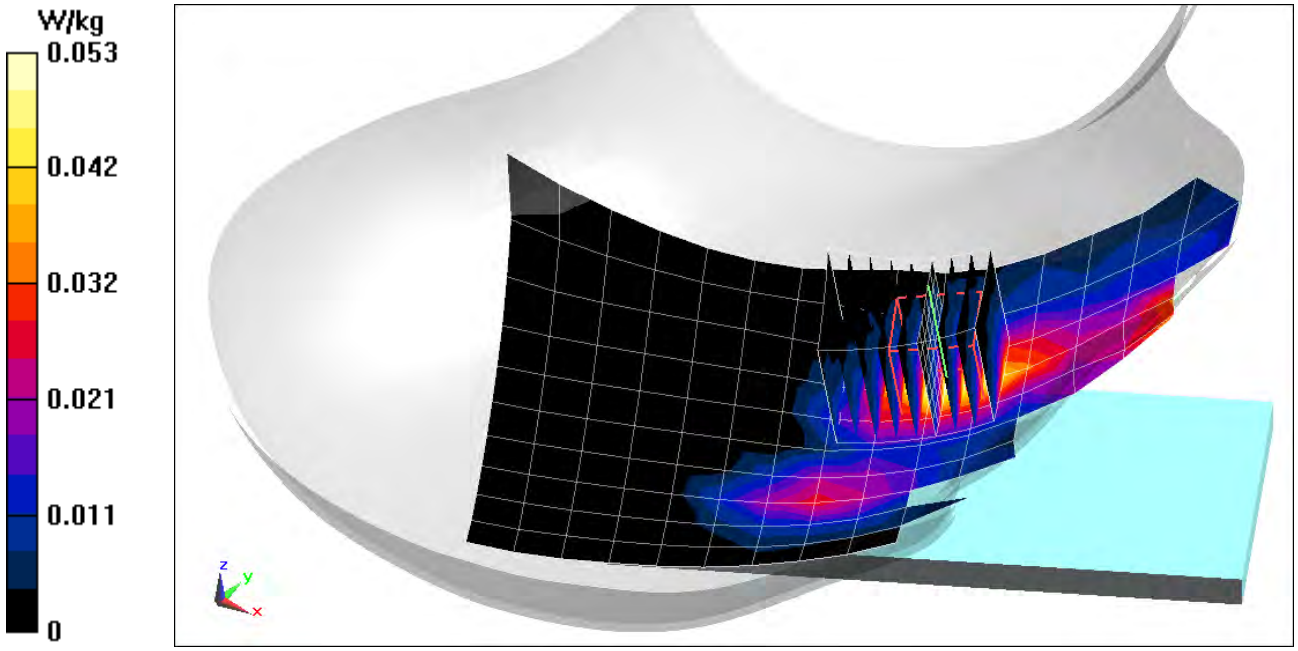
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2510 MHz; σ = 1.865 S/m; ε_r = 37.509; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03/30/2020; Ambient Temp: 21.8°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2510 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 7, Right Head, Cheek, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.236 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.0670 W/kg
SAR(1 g) = 0.035 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 0117M

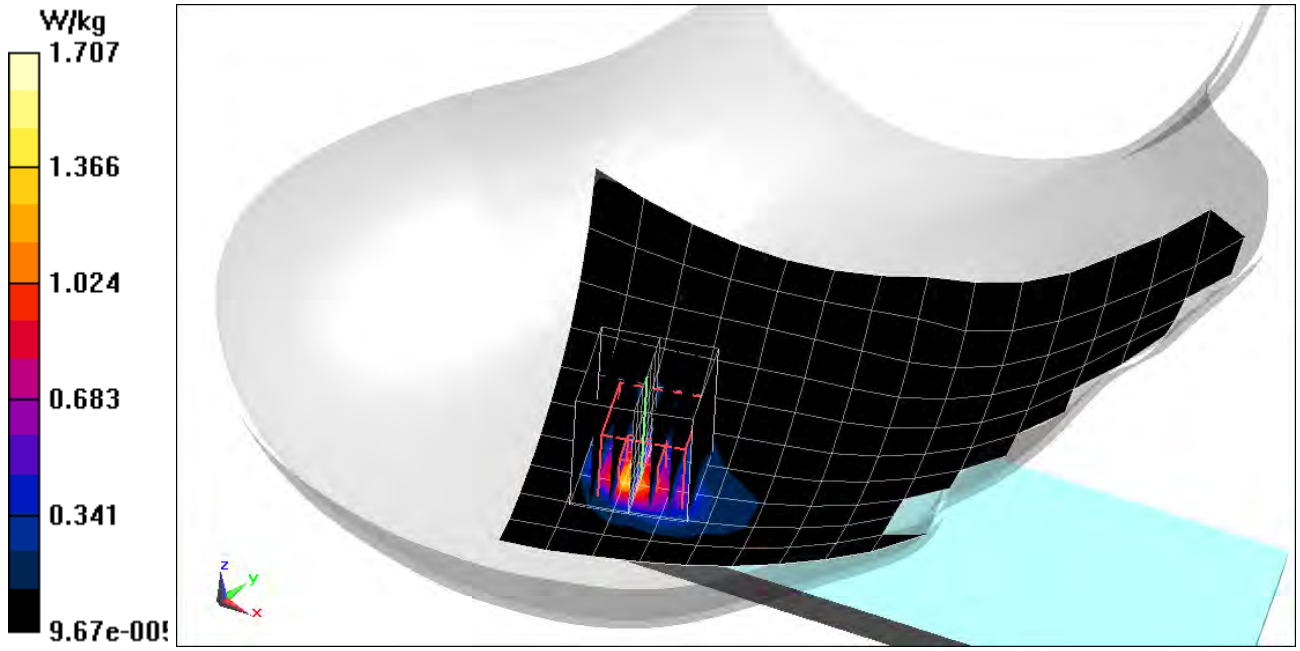
Communication System: UID 0, LTE Band 48; Frequency: 3690 MHz; Duty Cycle: 1:1.58
Medium: 3600 Head; Medium parameters used:
f = 3690 MHz; σ = 3.096 S/m; ε_r = 37.652; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 04/22/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(7.2, 7.2, 7.2) @ 3690 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 left 20; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 48, ULCA, Right Head, Tilt,
PCC: Ch 56640, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset;
SCC: Ch 56442, 20 MHz Bandwidth, QPSK, RB 50 RB, 50 RB Offset

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 18.63 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 2.75 W/kg
SAR(1 g) = 0.773 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6799M

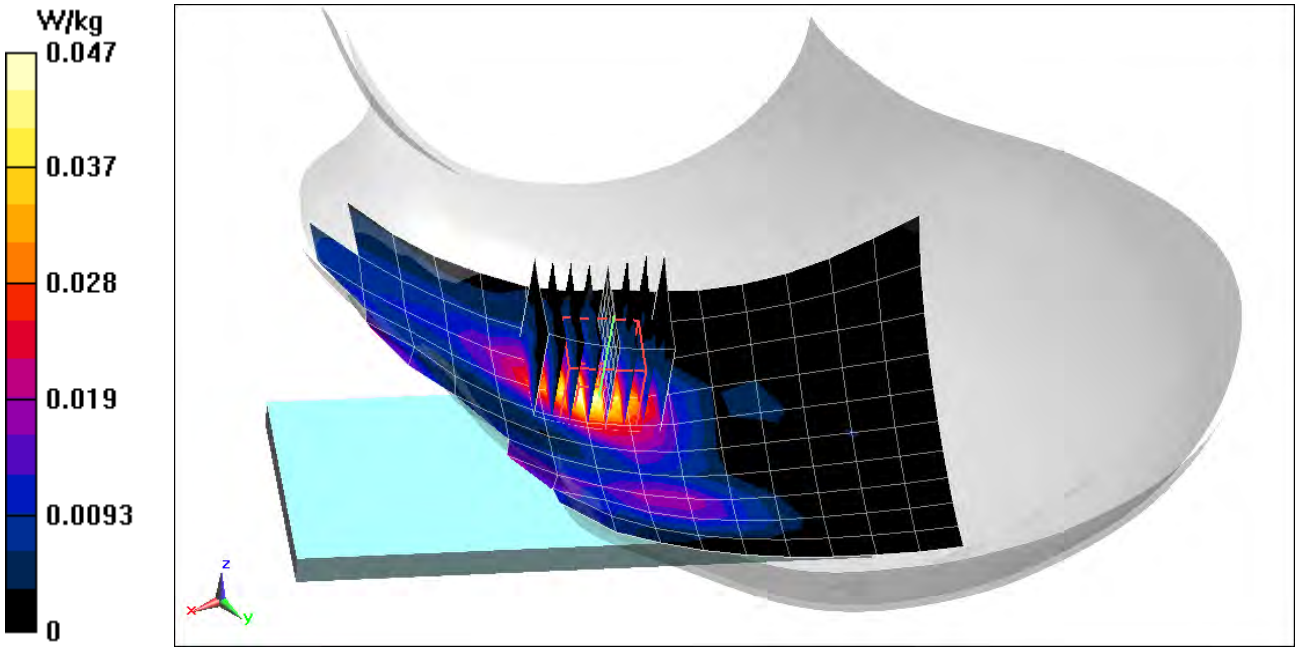
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2506 MHz; σ = 1.838 S/m; ε_r = 38.426; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03/25/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2506 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 41, Left Head, Cheek, Low.ch, QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.408 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.0740 W/kg
SAR(1 g) = 0.030 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6938M

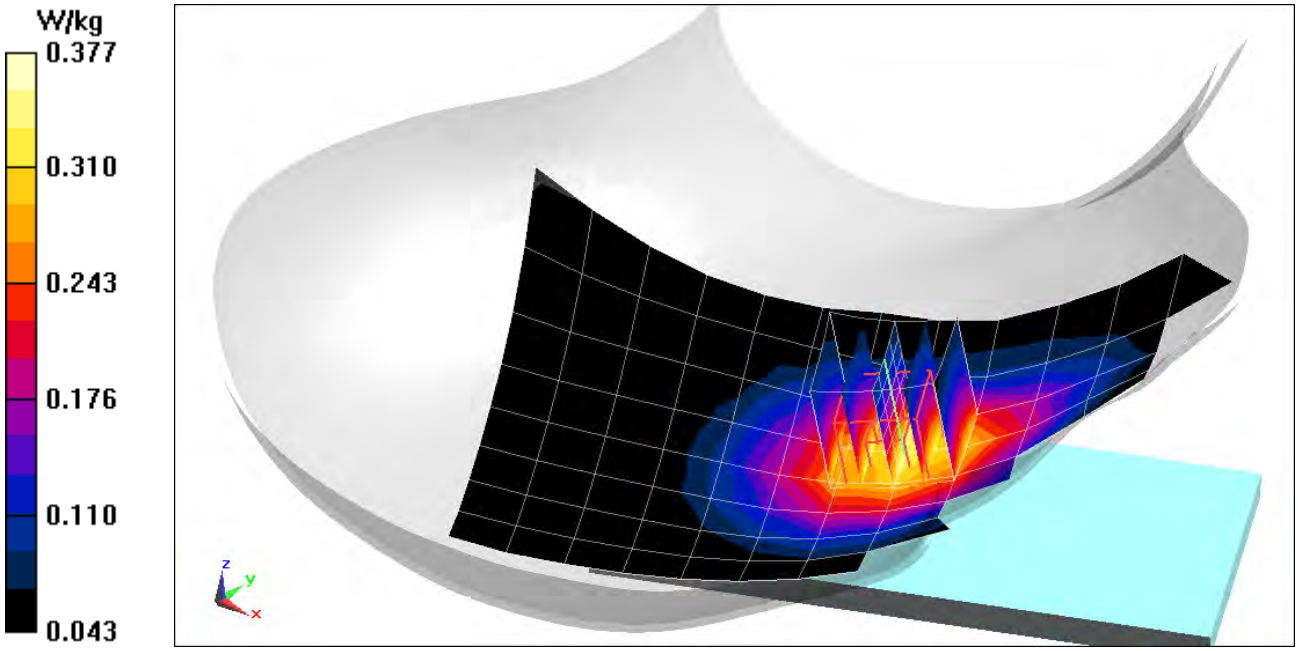
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.906 S/m; ε_r = 40.365; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 04/07/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n5, Right Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 1 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.65 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.412 W/kg
SAR(1 g) = 0.317 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6943M

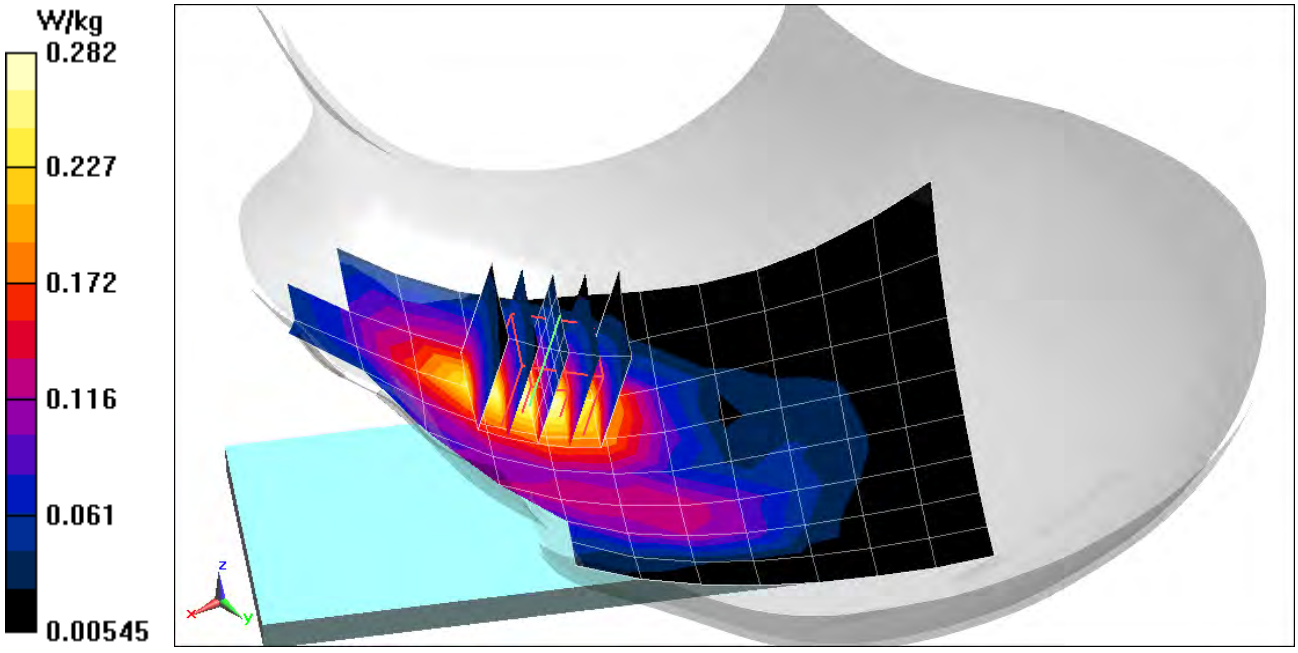
Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Head; Medium parameters used:
f = 1745 MHz; σ = 1.365 S/m; ε_r = 41.058; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 04/09/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7488; ConvF(8.71, 8.71, 8.71) @ 1745 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n66, Left Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 349000, 1 RB, 53 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.51 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.330 W/kg
SAR(1 g) = 0.218 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6943M

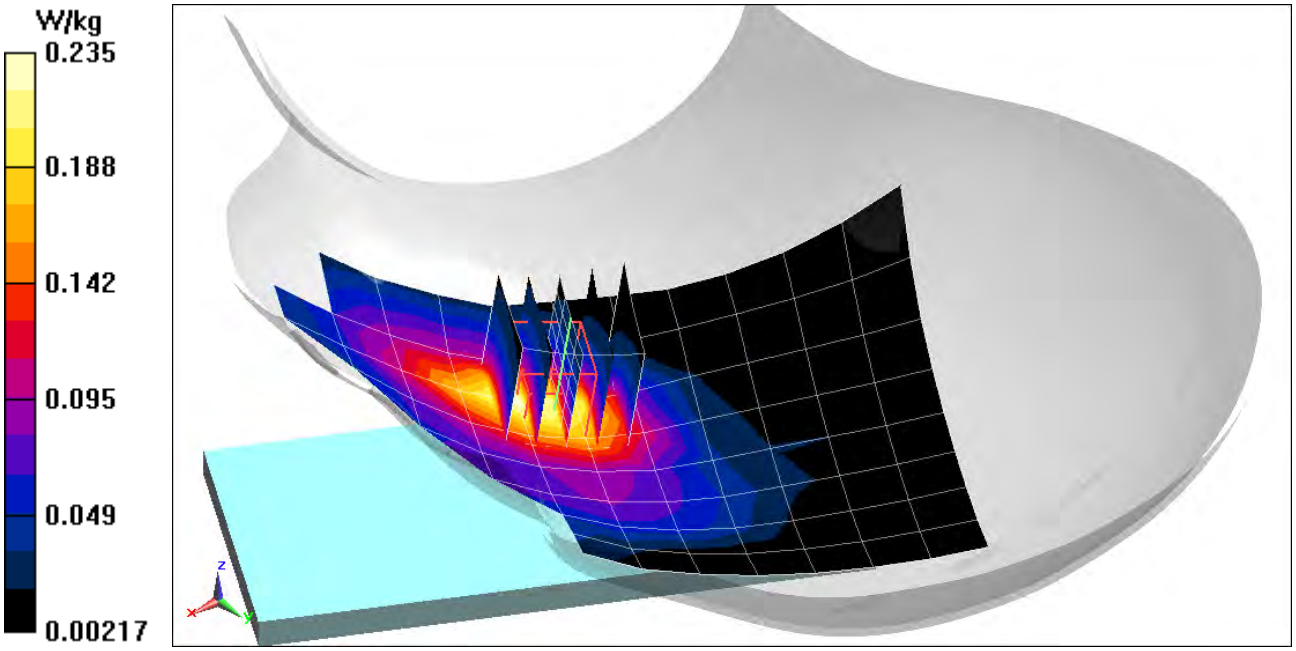
Communication System: UID 0, NR Band n2; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.43 S/m; ε_r = 38.807; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 04/02/2020; Ambient Temp: 20.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7406; ConvF(8.18, 8.18, 8.18) @ 1880 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n2, Left Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 376000, 1 RB, 53 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.93 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.175 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0558M

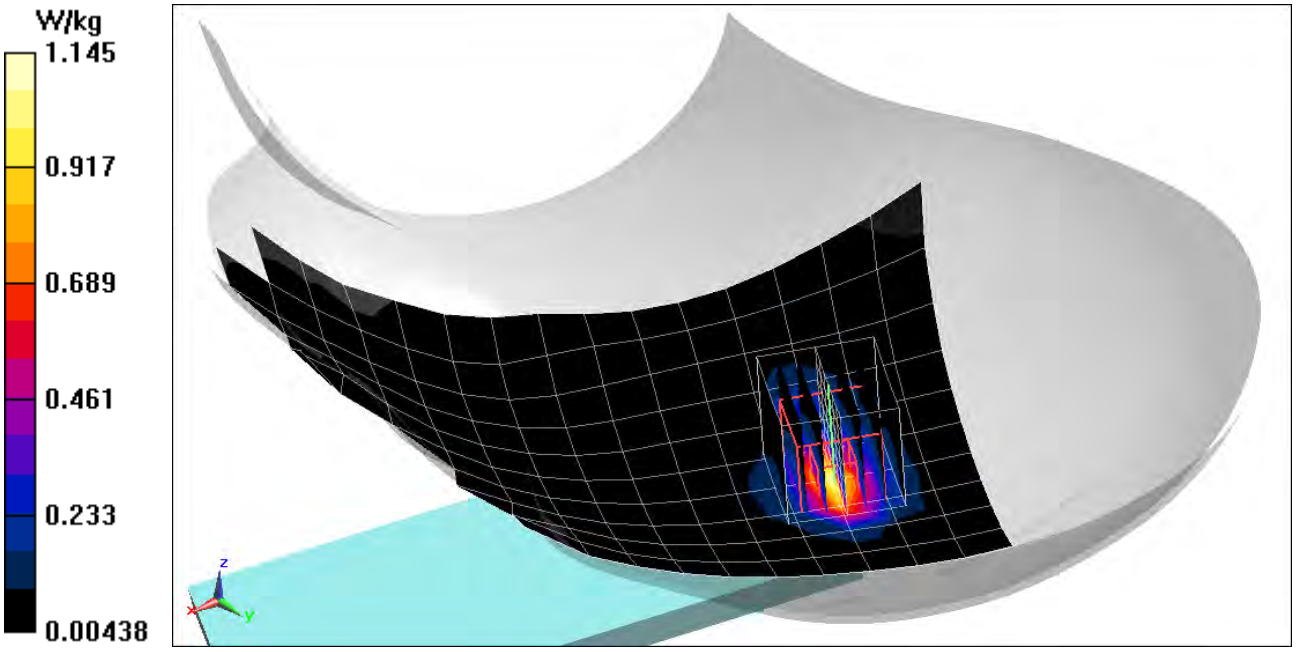
Communication System: UID 0, 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.751 S/m; ε_r = 37.423; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 04/21/2020; Ambient Temp: 23.4°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2412 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Left Head, Tilt, Ch 1, 1 Mbps

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.11 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.635 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0122M

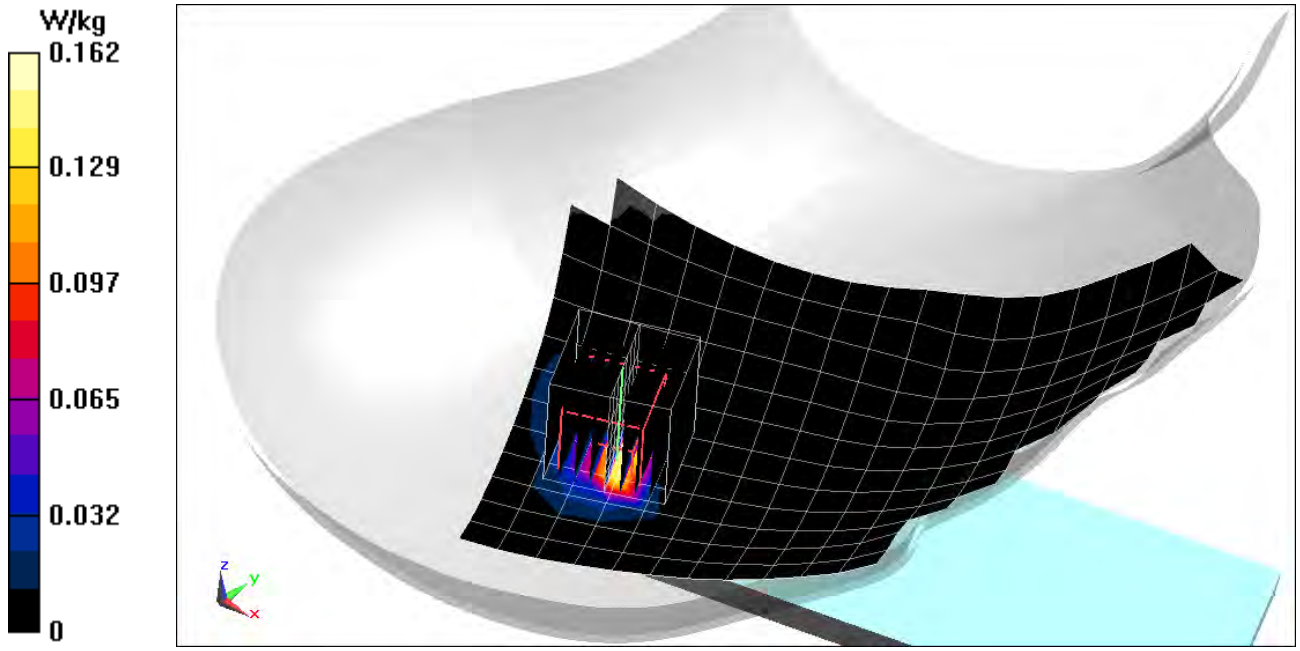
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5290 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head; Medium parameters used:
f = 5290 MHz; σ = 4.643 S/m; ε_r = 34.585; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 04/13/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7406; ConvF(5.54, 5.54, 5.54) @ 5290 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11ac, Antenna 1, U-NII-2A, 80 MHz Bandwidth, Right Head, Tilt, Ch 58, 29.3 Mbps

Area Scan (13x21x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 1.899 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.060 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0469M

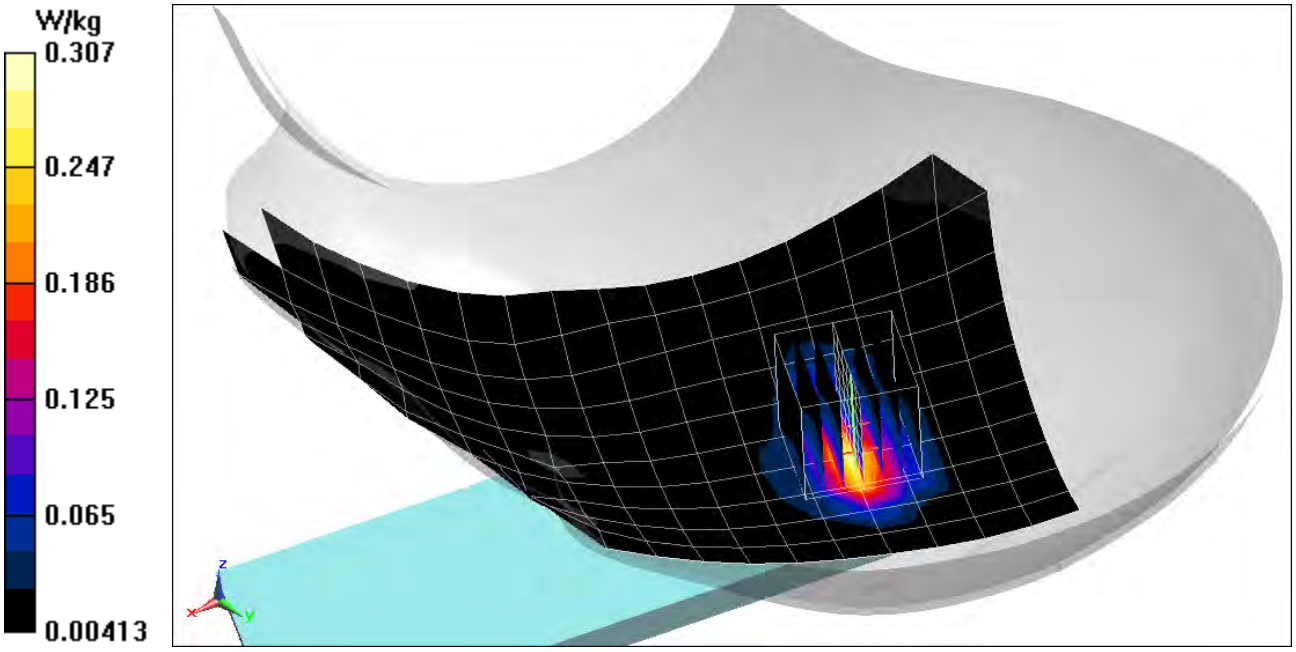
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.778 S/m; ε_r = 38.336; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 04/19/2020; Ambient Temp: 22.5°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2441 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Left Head, Tilt, Ch 39, 1 Mbps

Area Scan (11x19x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.46 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.175 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

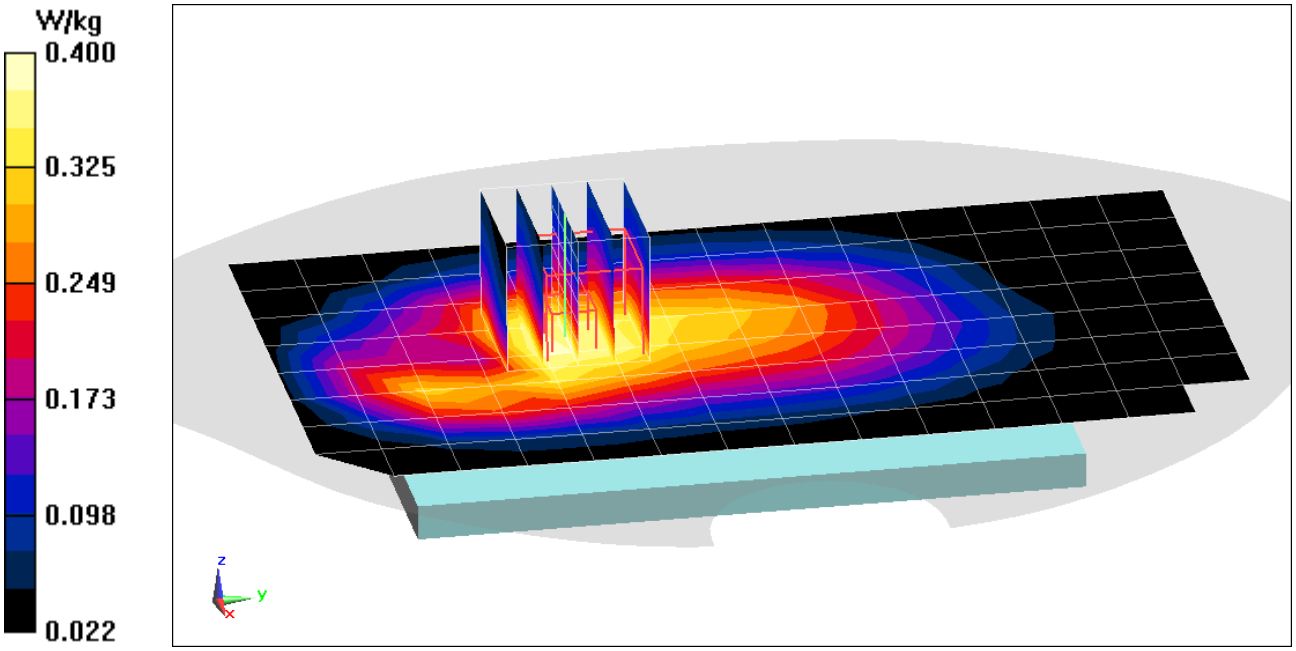
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.956 S/m; ε_r = 54.785; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/31/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.52 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Cell. CDMA, BC 0, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.76 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.443 W/kg
SAR(1 g) = 0.324 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

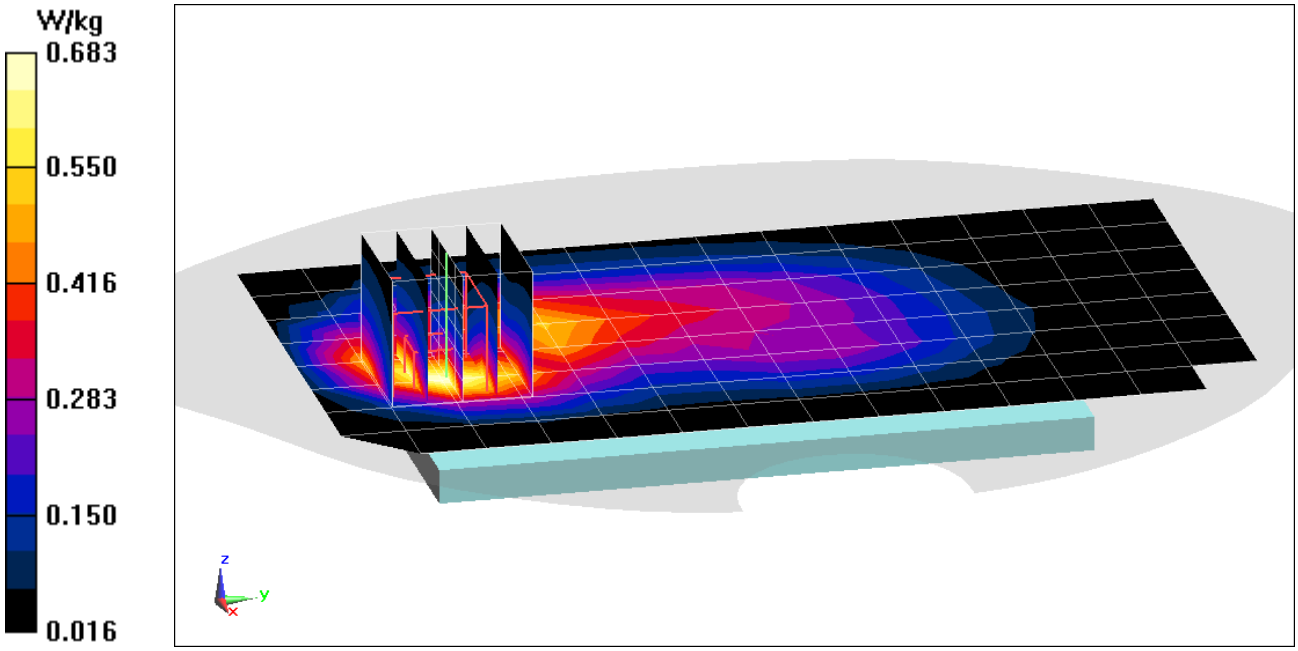
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.957 S/m; ε_r = 53.13; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03/26/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.52 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Cell. EVDO, BC 0, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.87 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.838 W/kg
SAR(1 g) = 0.468 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

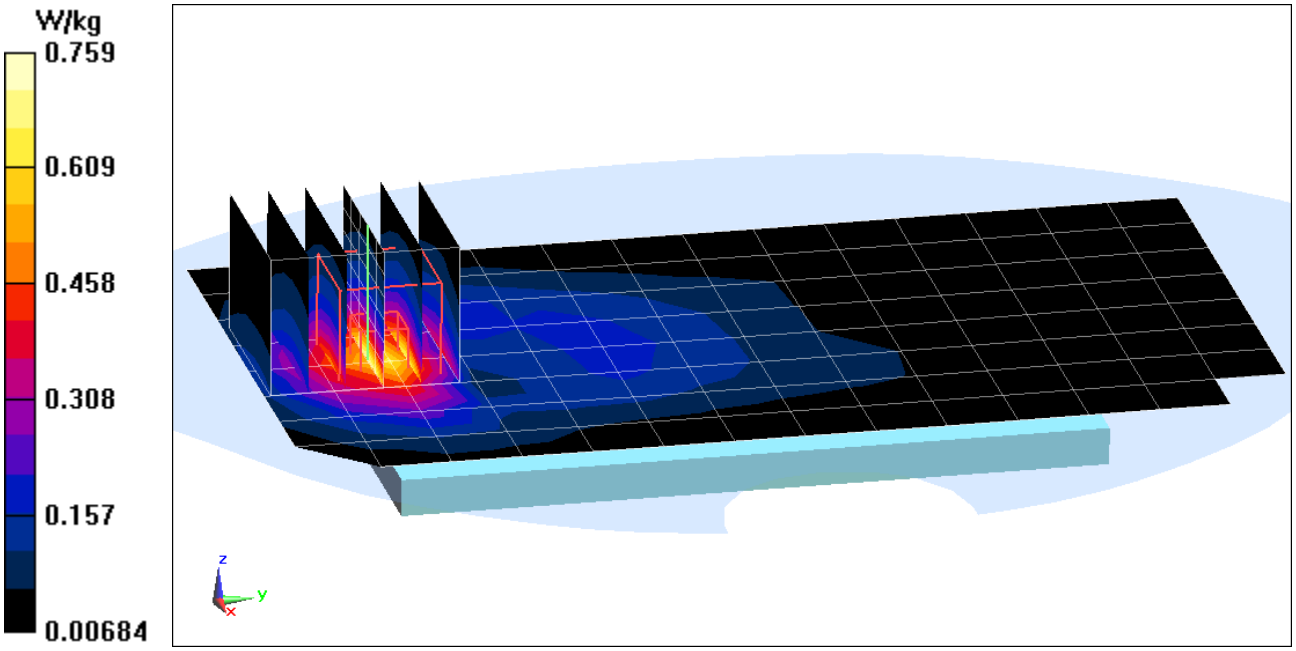
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.591 S/m; ε_r = 51.355; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/22/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1908.75 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: PCS CDMA, Body SAR, Back side, High.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.58 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.906 W/kg
SAR(1 g) = 0.546 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

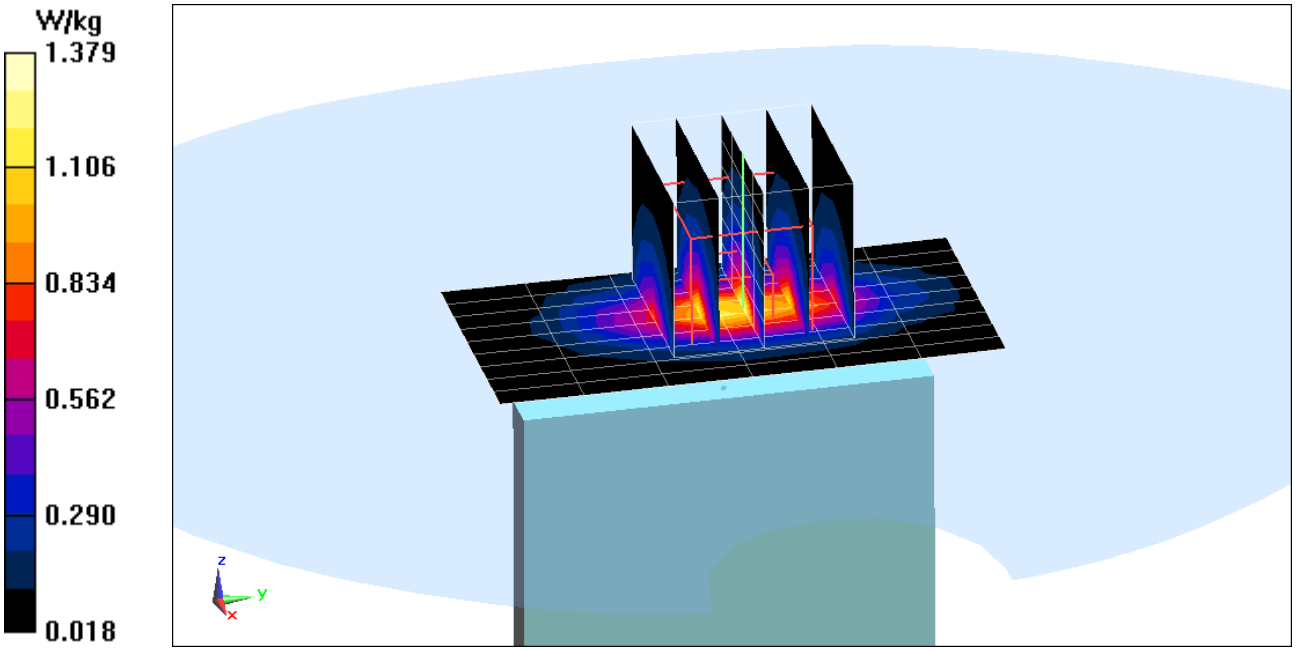
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.591 S/m; ε_r = 54.282; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1908.75 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: PCS EVDO, Body SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.36 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.908 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

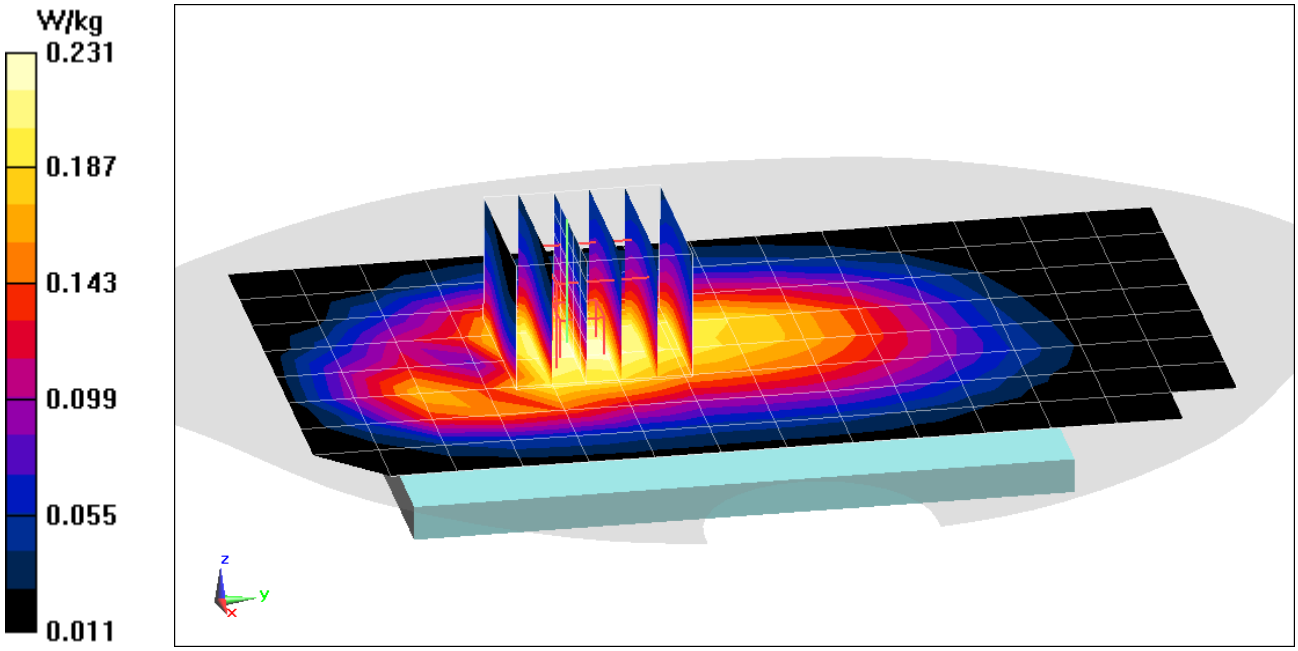
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.998 S/m; ε_r = 53.957; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/13/2020; Ambient Temp: 23.9°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7410; ConvF(9.79, 9.79, 9.79) @ 836.6 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GSM 850, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.14 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.255 W/kg
SAR(1 g) = 0.190 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

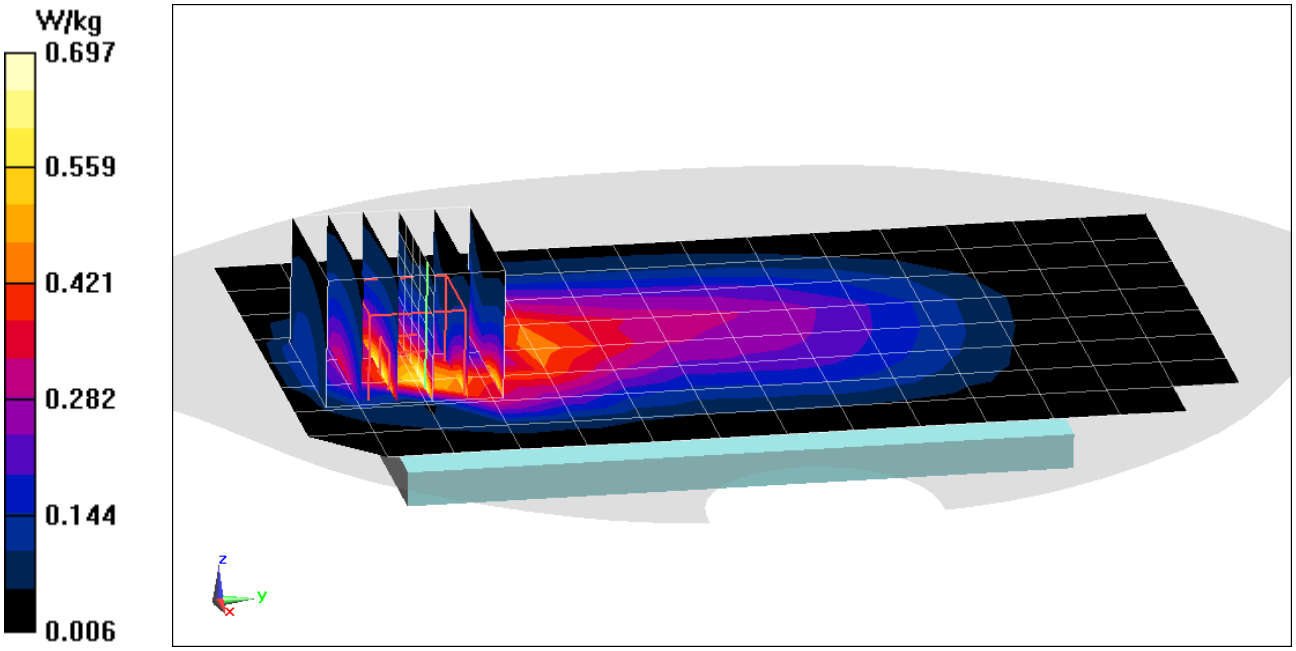
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.998 S/m; ε_r = 53.957; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/13/2020; Ambient Temp: 23.9°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7410; ConvF(9.79, 9.79, 9.79) @ 836.6 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GPRS 850, Body SAR, Back side, Mid.ch, 3 Tx Slots

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.70 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.856 W/kg
SAR(1 g) = 0.494 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

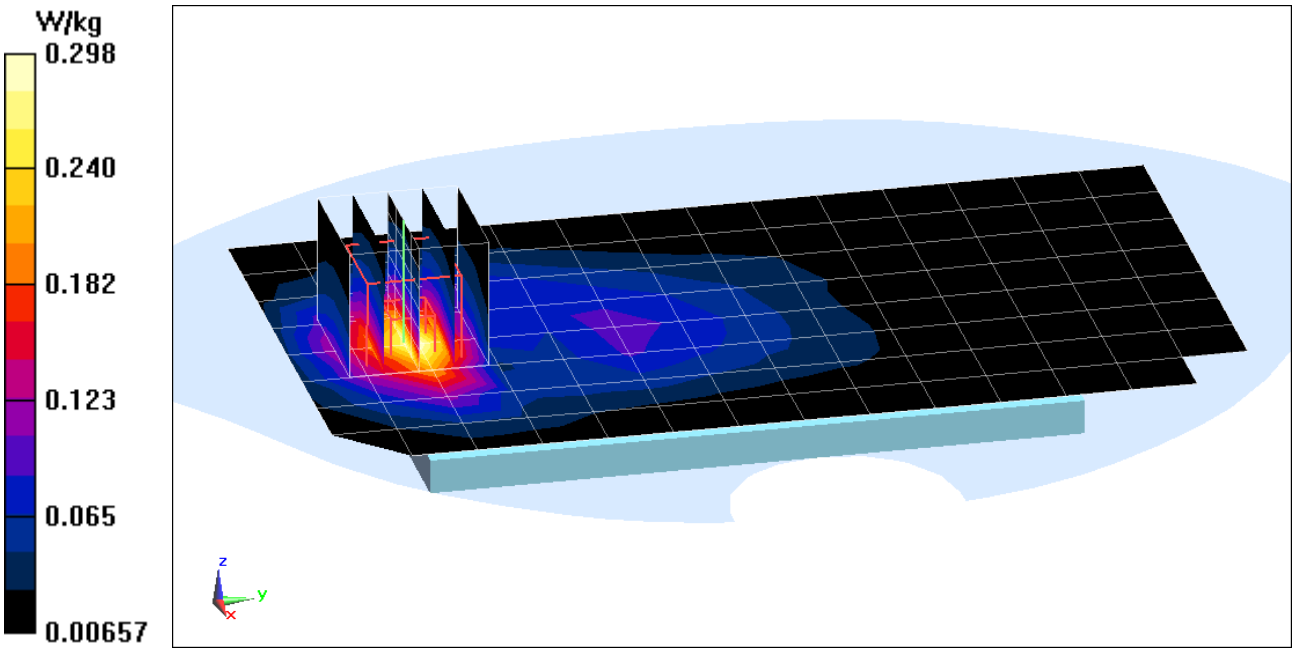
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 54.375; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1880 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GSM 1900, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.30 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.345 W/kg
SAR(1 g) = 0.213 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

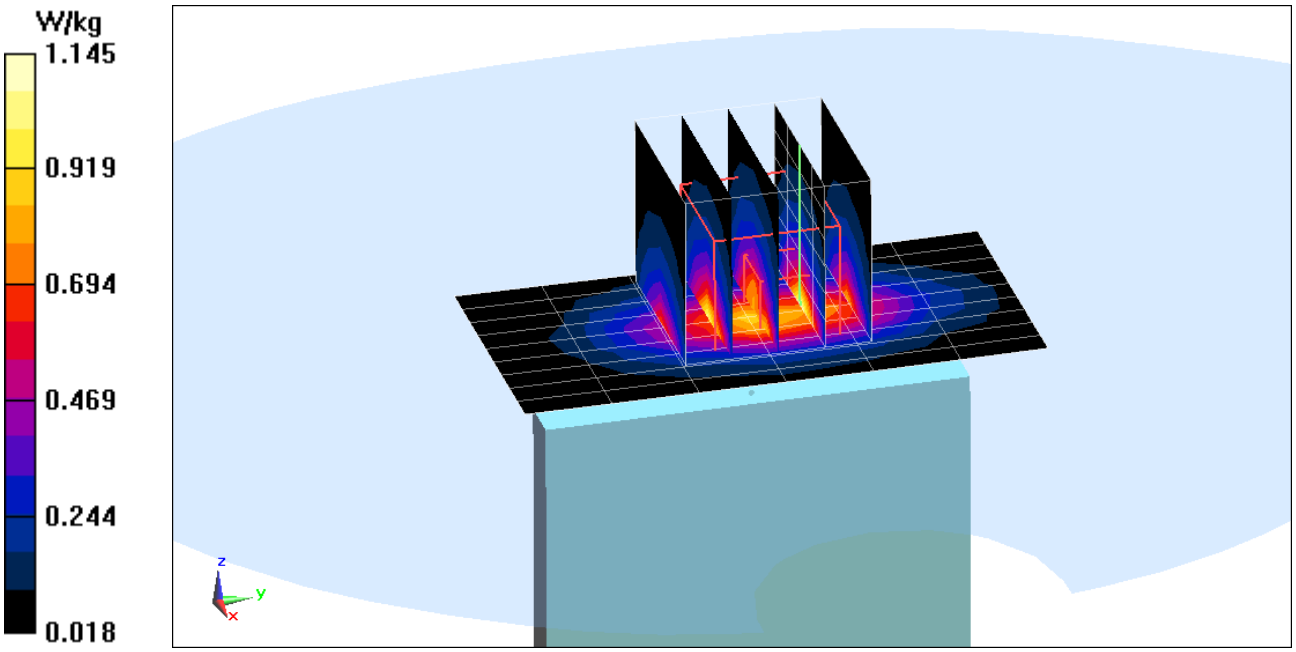
Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1909.8 MHz; Duty Cycle: 1:2.076
Medium: 1900 Body; Medium parameters used:
f = 1910 MHz; σ = 1.592 S/m; ε_r = 54.278; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1909.8 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GPRS 1900, Body SAR, Bottom Edge, High.ch, 4 Tx Slots

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.42 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.766 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

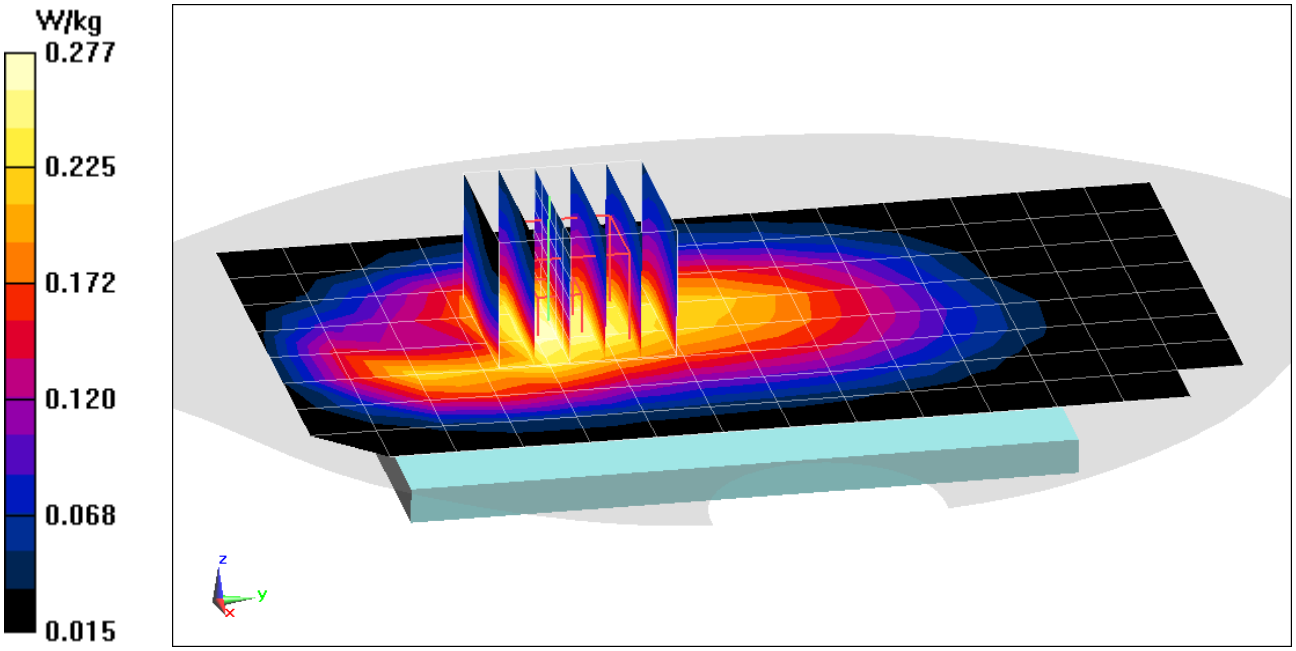
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.956 S/m; ε_r = 54.785; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/31/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.6 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 850, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.04 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.306 W/kg
SAR(1 g) = 0.225 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6768M

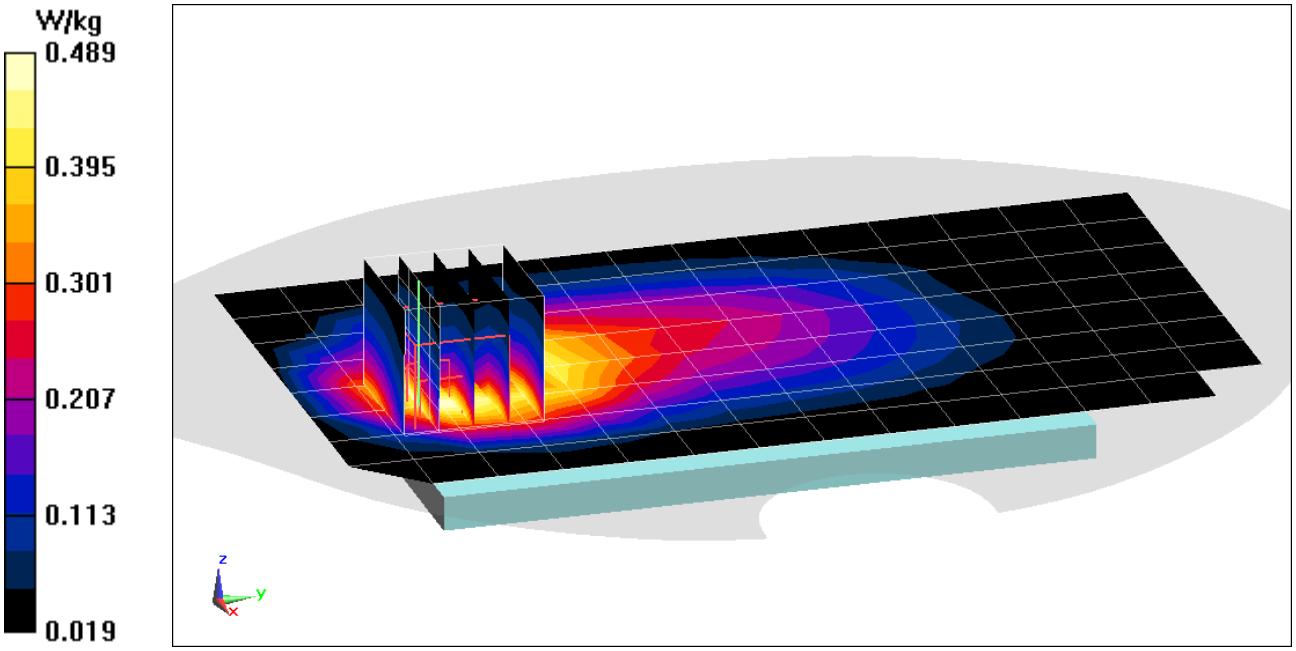
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.956 S/m; ε_r = 54.785; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03/31/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.6 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 850, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.17 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.600 W/kg
SAR(1 g) = 0.342 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

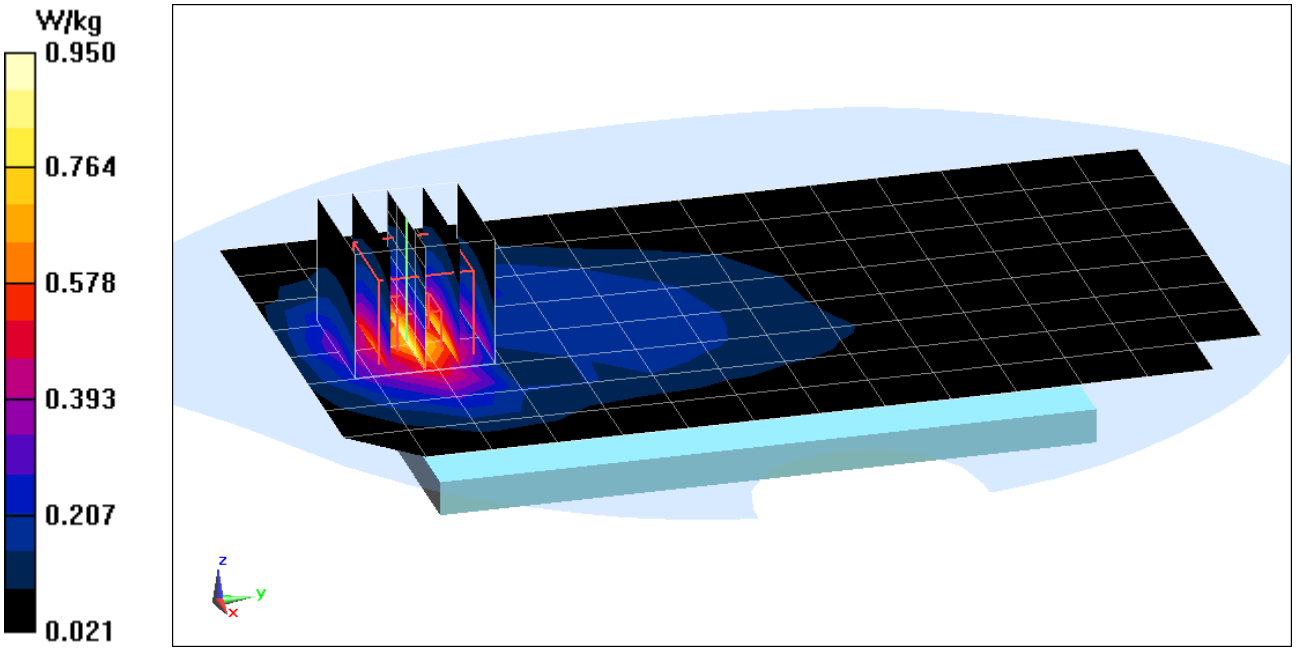
Communication System: UID 0, UMTS; Frequency: 1880 MHz, Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.574 S/m; ε_r = 50.872; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/19/2020; Ambient Temp: 22.9°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1907.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1900, Body SAR, Back side, High.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.67 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.675 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

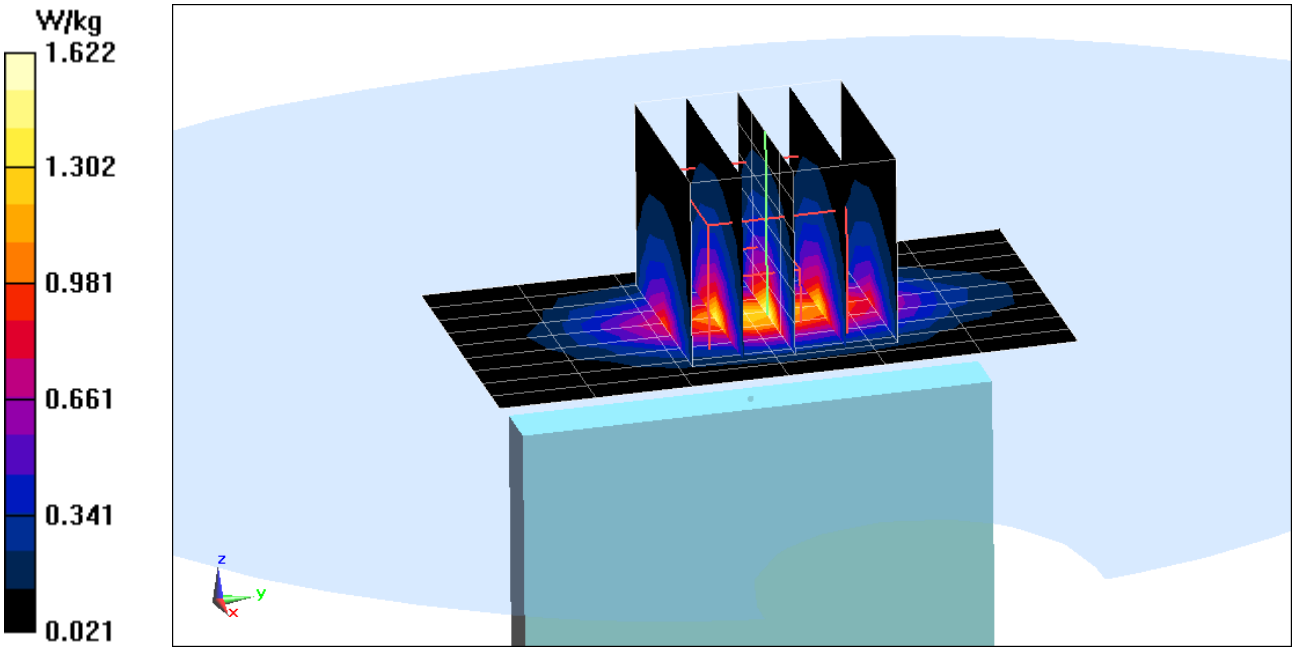
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.573 S/m; ε_r = 54.317; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/16/2020; Ambient Temp: 21.7°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1907.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1900, Body SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.73 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 1.07 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

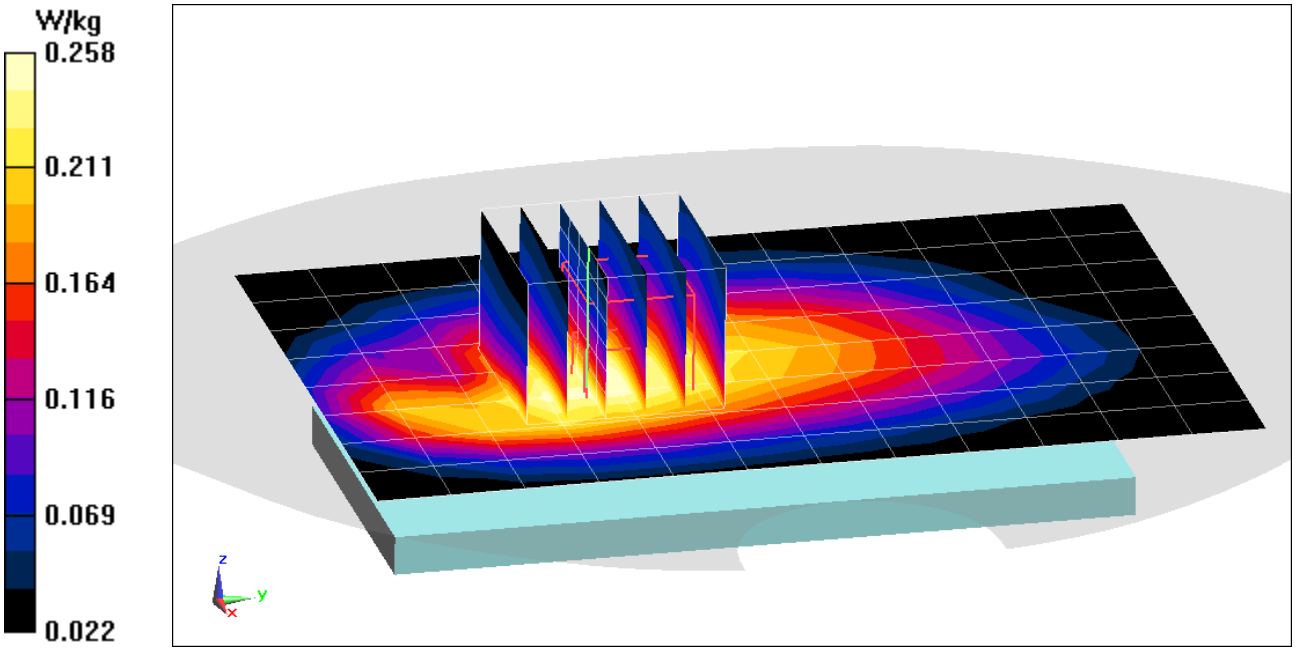
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.954 S/m; ε_r = 53.071; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 707.5 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.77 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.291 W/kg
SAR(1 g) = 0.203 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

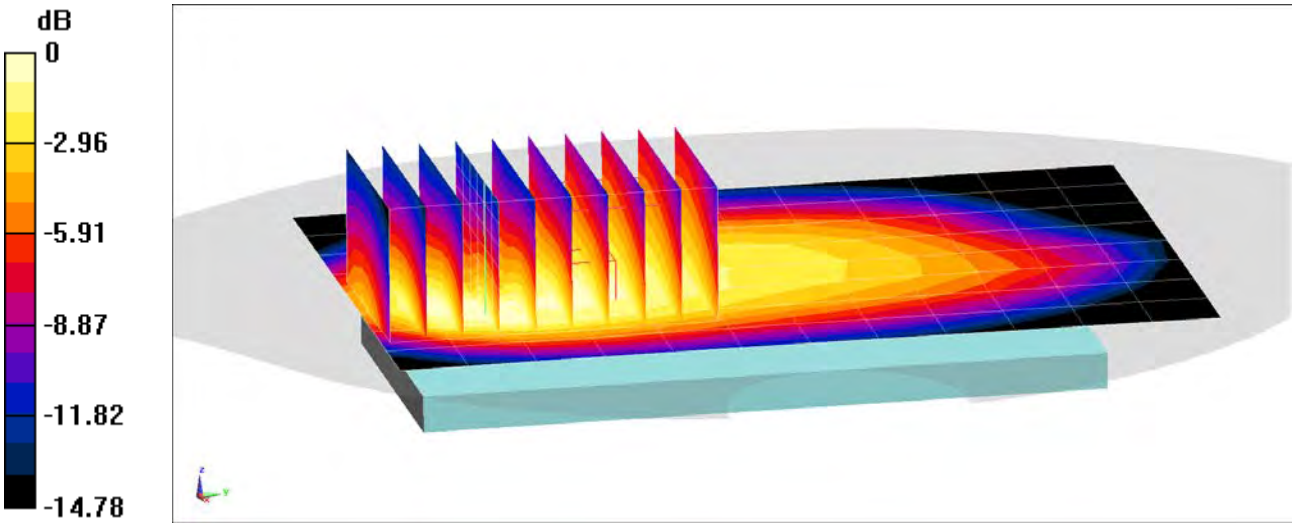
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.954 S/m; ε_r = 53.071; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 707.5 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (7x10x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.92 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.486 W/kg
SAR(1 g) = 0.270 W/kg



0 dB = 0.390 W/kg = -4.09 dBW/kg

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

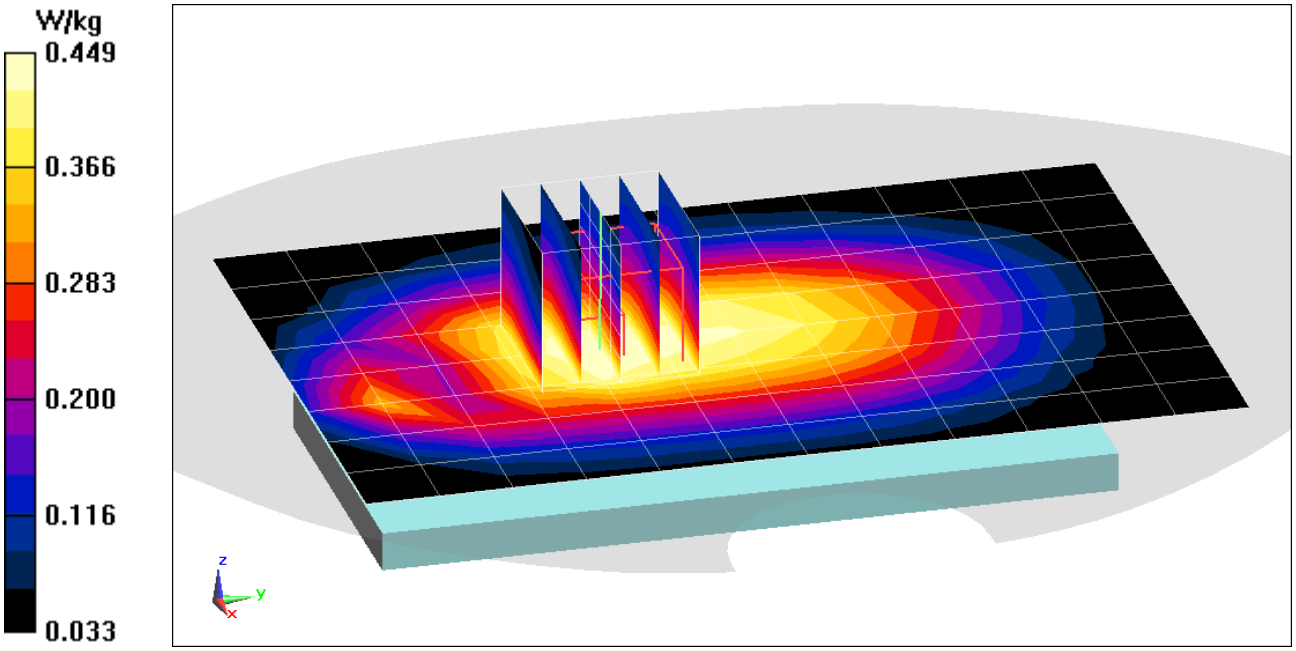
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 782 MHz; σ = 0.981 S/m; ε_r = 52.938; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 782 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.72 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.502 W/kg
SAR(1 g) = 0.369 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6950M

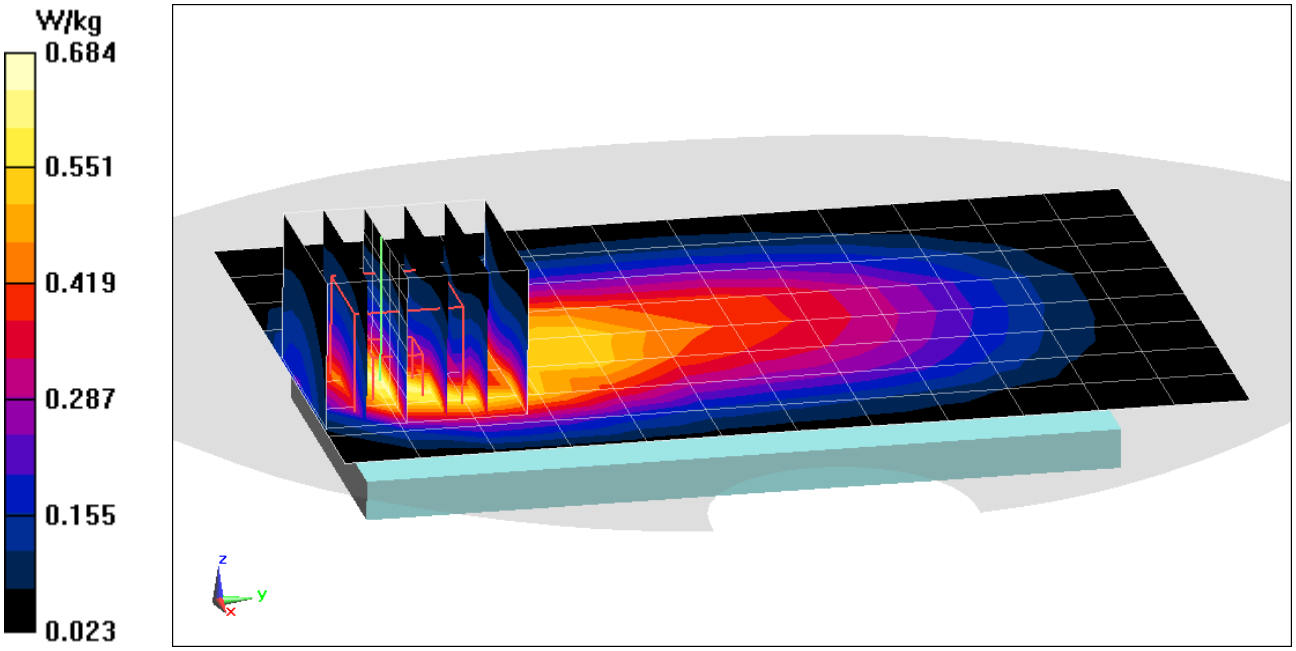
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 782 MHz; σ = 0.981 S/m; ε_r = 52.938; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 782 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.44 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.854 W/kg
SAR(1 g) = 0.463 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6932M

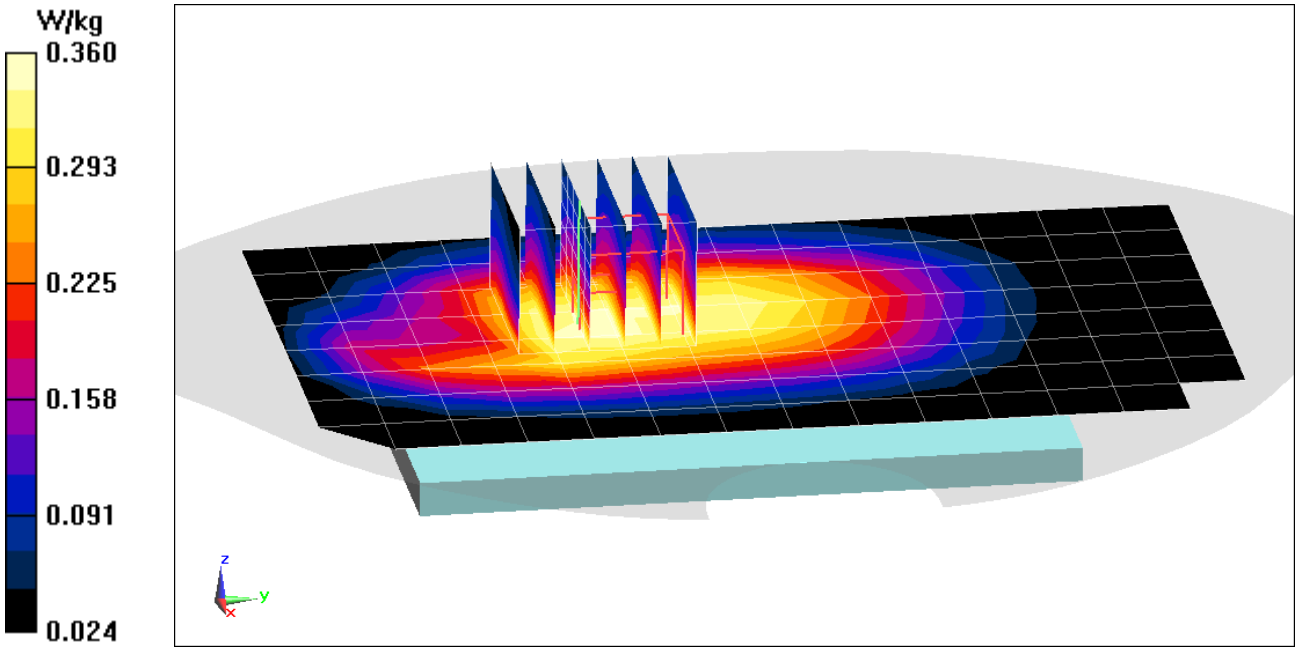
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 793 MHz; σ = 0.999 S/m; ε_r = 53.602; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/08/2020; Ambient Temp: 23.2°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7409; ConvF(9.96, 9.96, 9.96) @ 793 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 14, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.20 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.400 W/kg
SAR(1 g) = 0.292 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6932M

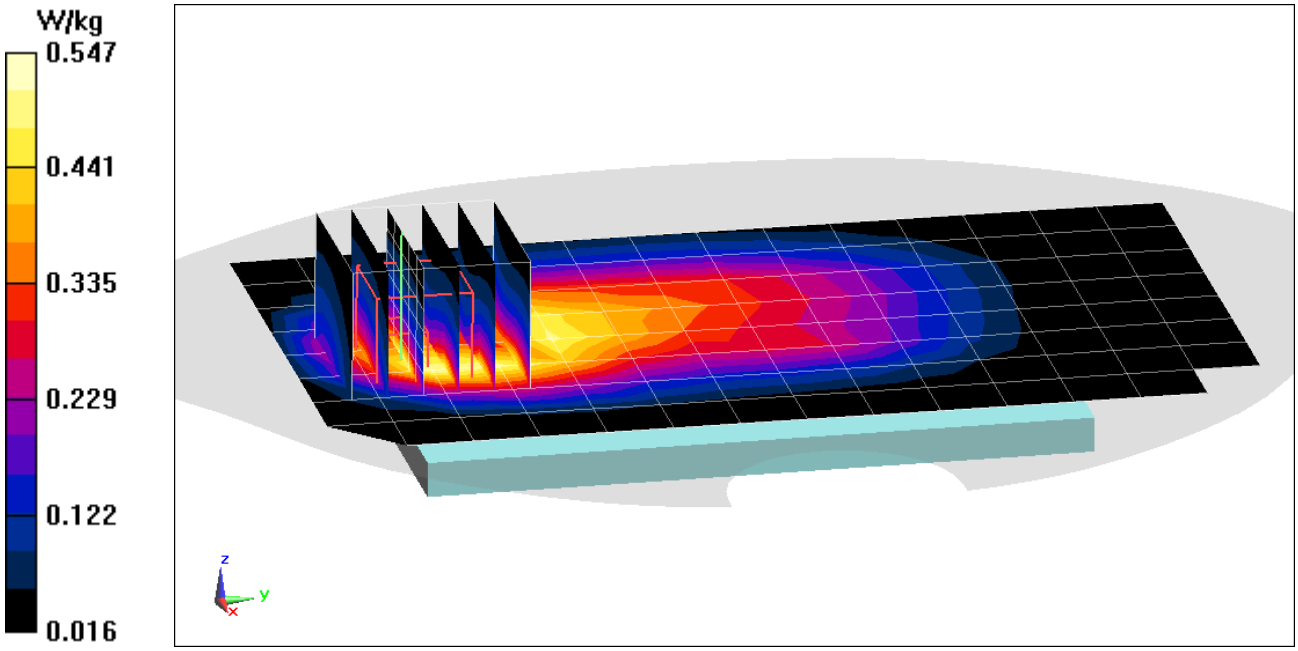
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 793 MHz; σ = 0.999 S/m; ε_r = 53.602; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/08/2020; Ambient Temp: 23.2°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7409; ConvF(9.96, 9.96, 9.96) @ 793 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 14, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.99 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.662 W/kg
SAR(1 g) = 0.360 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6938M

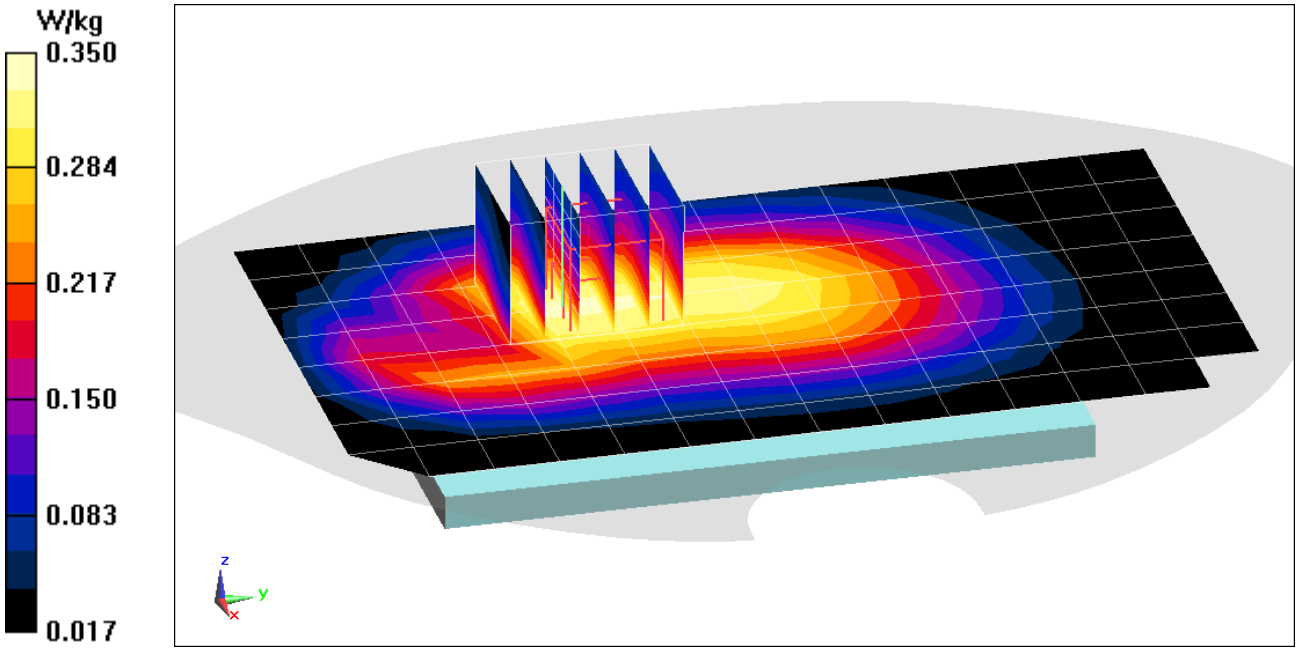
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.942 S/m; ε_r = 54.497; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/06/2020; Ambient Temp: 21.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 831.5 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 36 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.59 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.285 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6938M

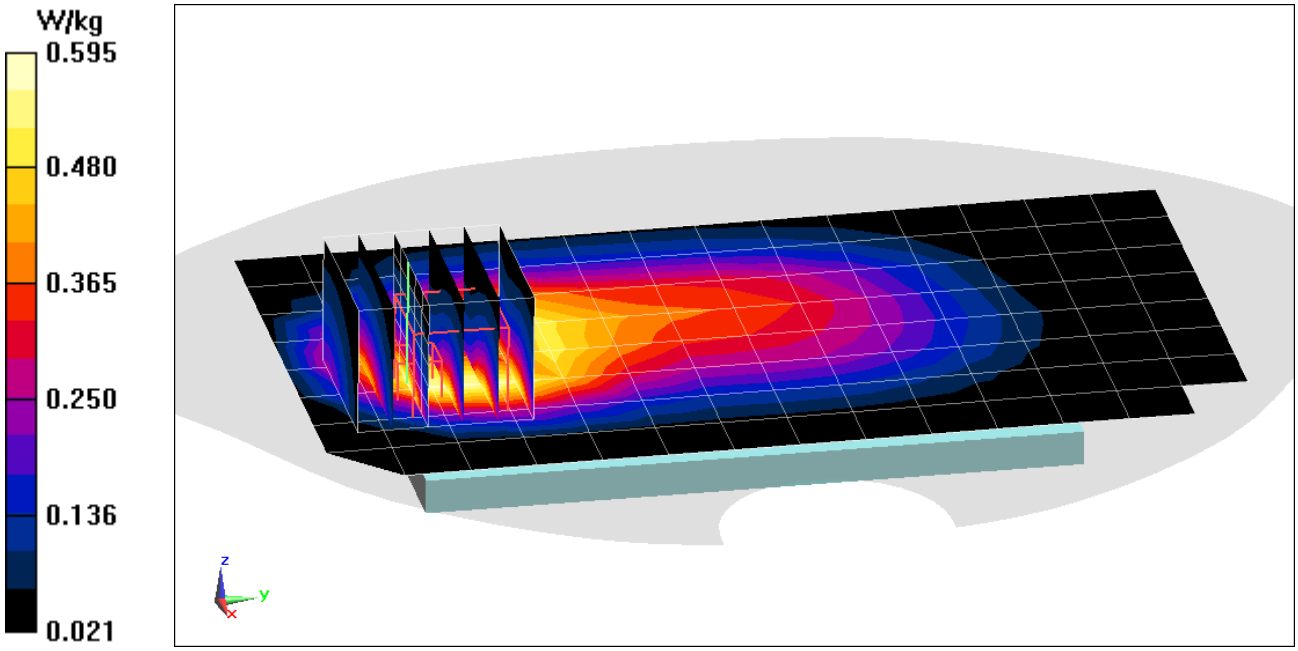
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.942 S/m; ε_r = 54.497; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/06/2020; Ambient Temp: 21.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 831.5 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 36 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.61 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.707 W/kg
SAR(1 g) = 0.404 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6805M

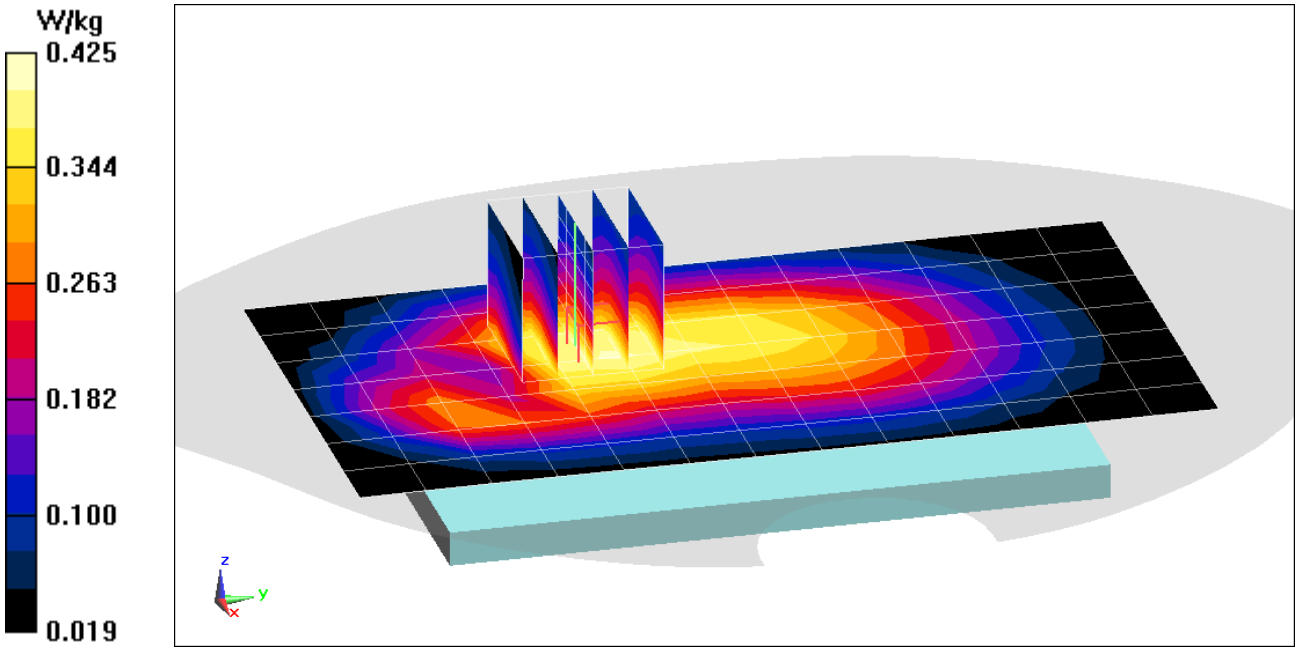
Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.946 S/m; ε_r = 54.964; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/23/2020; Ambient Temp: 20.3°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7552; ConvF(9.94, 9.94, 9.94) @ 836.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 5 (Cell.), ULCA, Body SAR, Back side,
PCC: Ch. 20525, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 20453, 5 MHz Bandwidth, QPSK, 1 RB, 24 RB Offset

Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.51 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.471 W/kg
SAR(1 g) = 0.351 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6805M

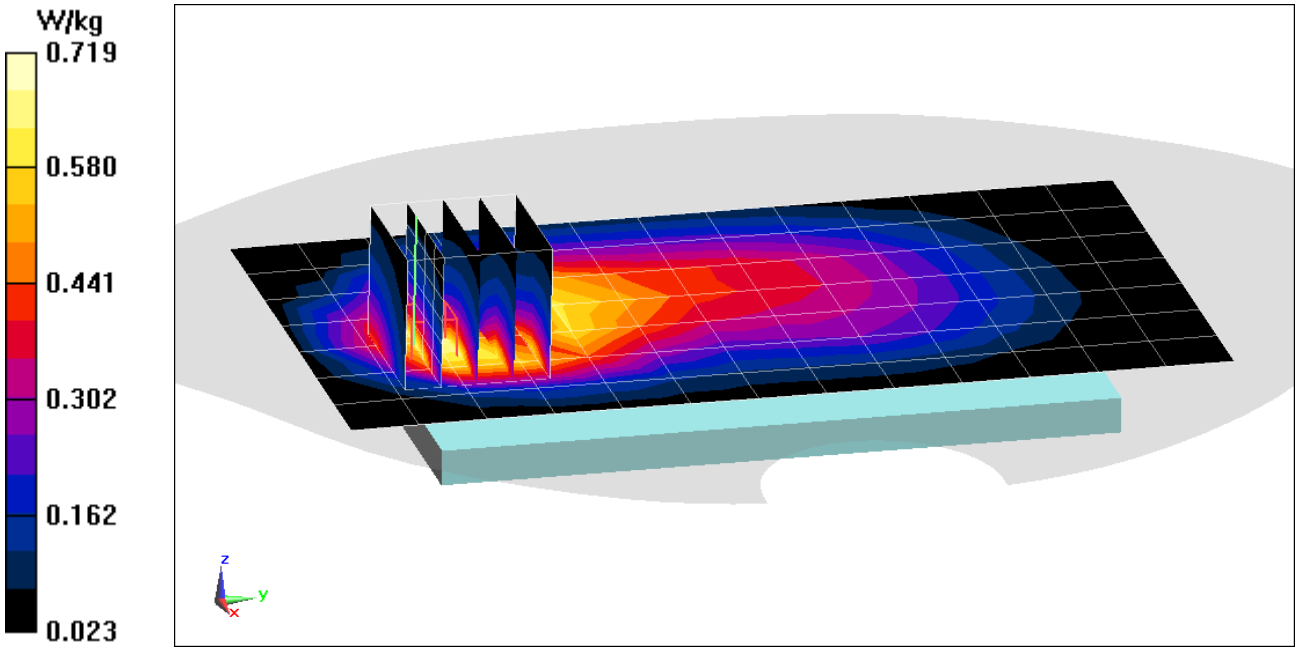
Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.946 S/m; ε_r = 54.964; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03/23/2020; Ambient Temp: 20.3°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7552; ConvF(9.94, 9.94, 9.94) @ 836.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 5 (Cell.), ULCA, Body SAR, Back side,
PCC: Ch. 20525, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 20453, 5 MHz Bandwidth, QPSK, 1 RB, 24 RB Offset

Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.69 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.883 W/kg
SAR(1 g) = 0.506 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6784M

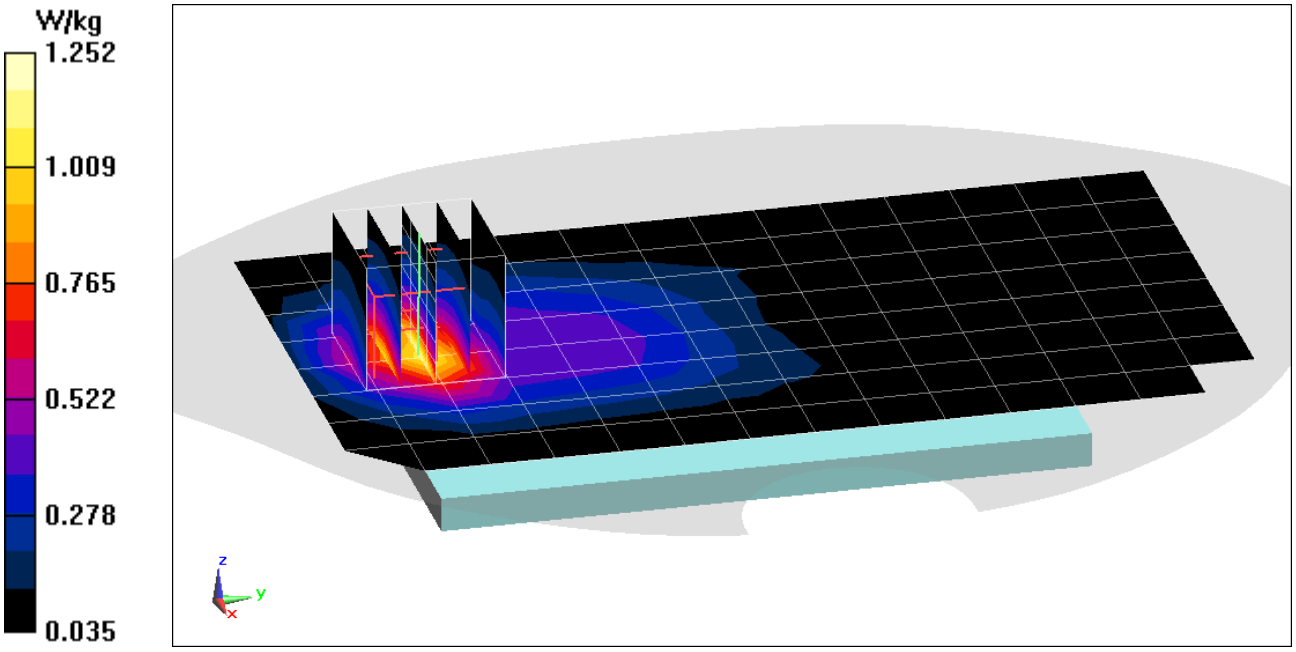
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1770 MHz; σ = 1.554 S/m; ε_r = 51.756; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/29/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1770 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 66 (AWS), ULCA, Body SAR, Back side,
PCC: Ch. 132572, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 132374, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.31 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.902 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6784M

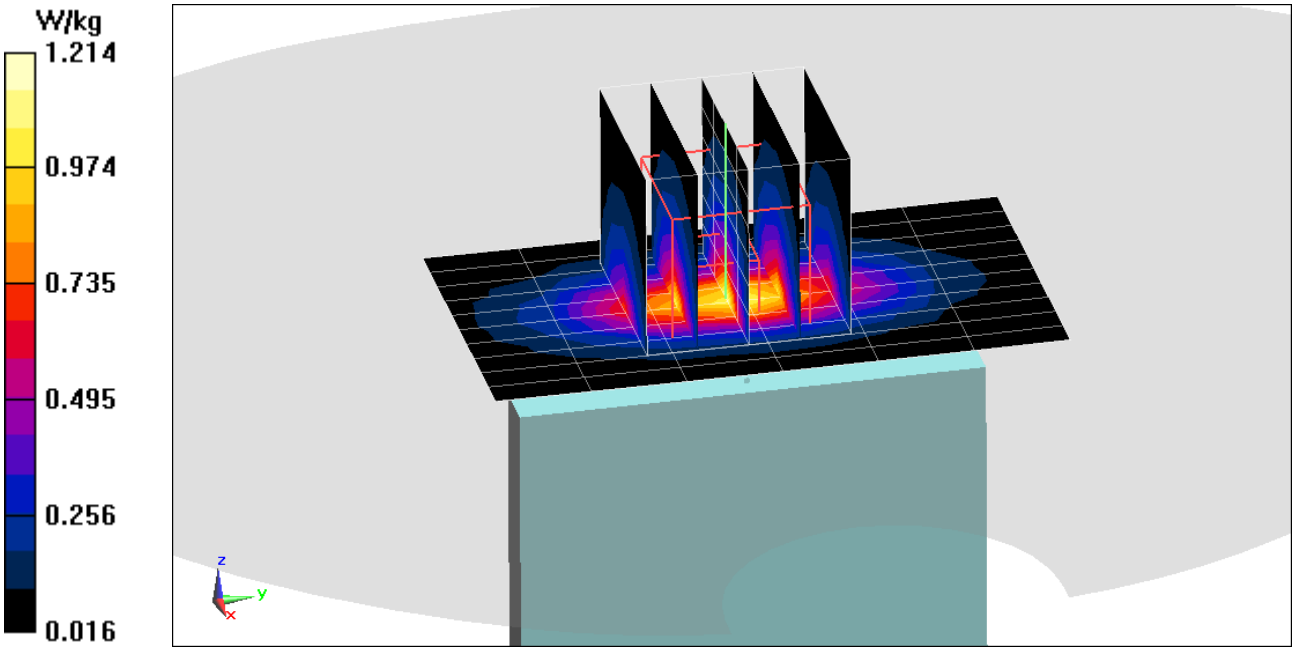
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1770 MHz; σ = 1.503 S/m; ε_r = 53.858; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/15/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1770 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 66 (AWS), Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.93 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.811 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6759M

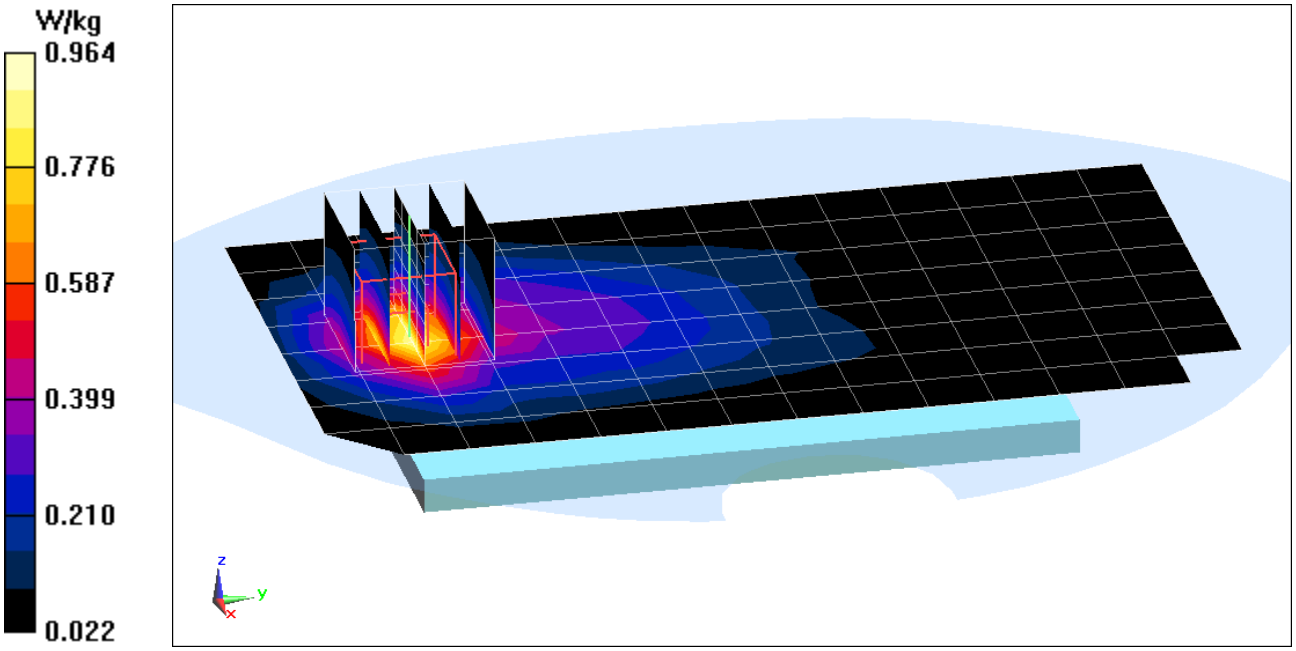
Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1860 MHz; σ = 1.536 S/m; ε_r = 51.527; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/22/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 2 (PCS), Body SAR, Back side, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.99 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.679 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6759M

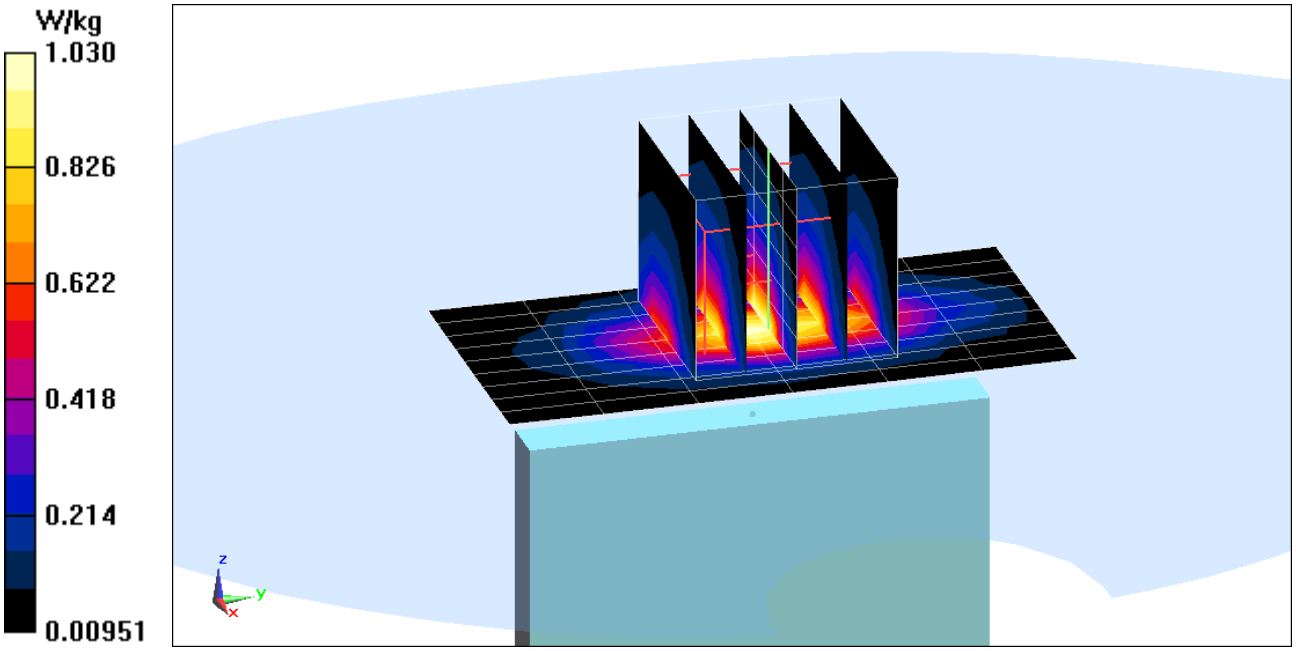
Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1900 MHz; σ = 1.566 S/m; ε_r = 55.477; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/21/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 2 (PCS), Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.95 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.764 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6752M

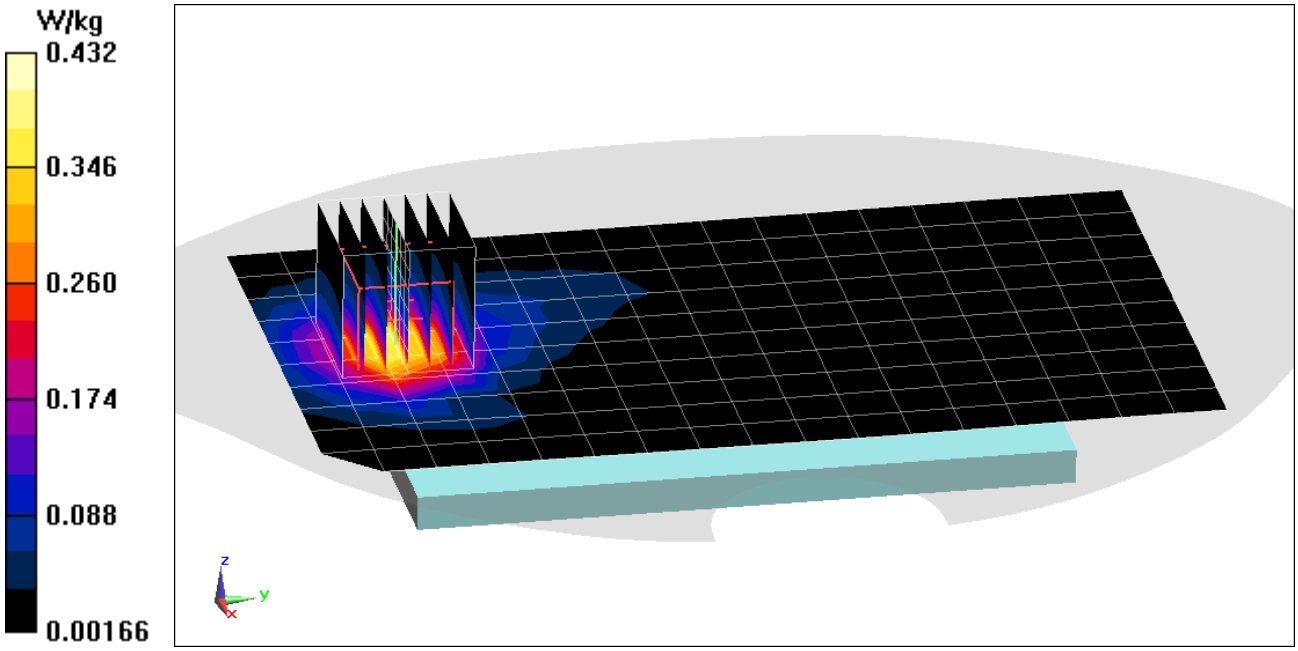
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2510 MHz; σ = 2.11 S/m; ε_r = 51.301; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/29/2020; Ambient Temp: 22.6°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2510 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 7, Body SAR, Back side, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.13 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.526 W/kg
SAR(1 g) = 0.280 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6799M

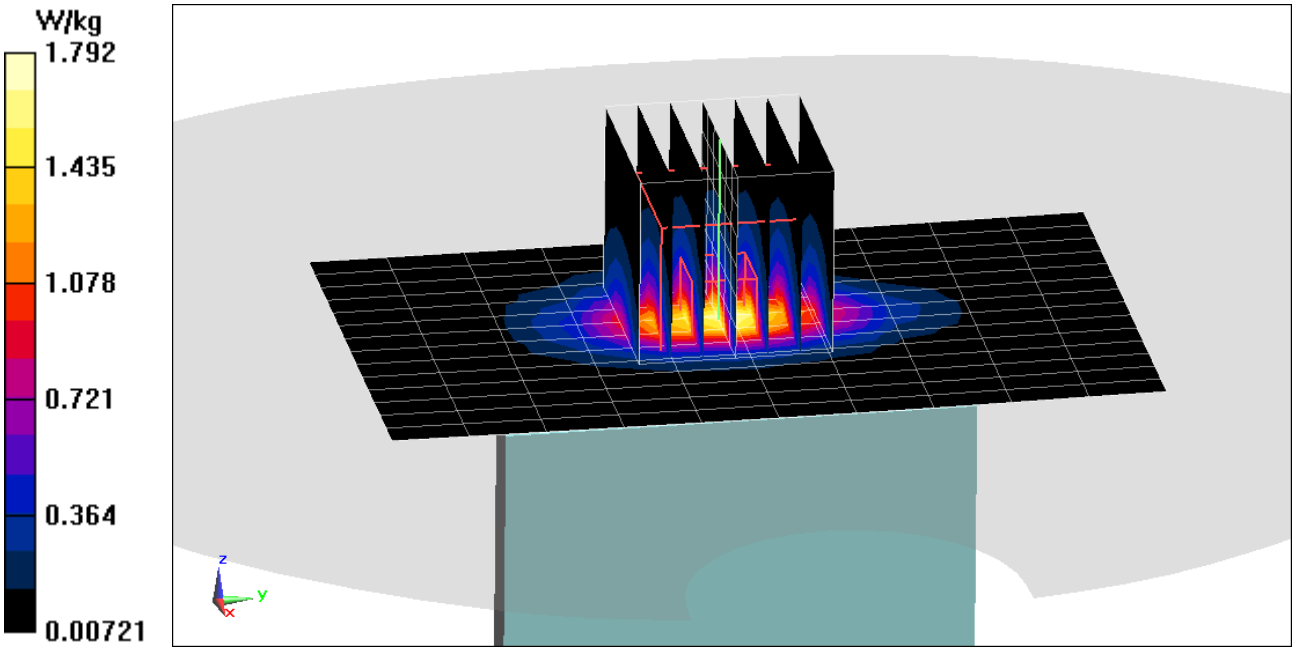
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2510 MHz; σ = 2.117 S/m; ε_r = 51.07; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/20/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2510 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 7, Body SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (15x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.06 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 1.07 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0117M

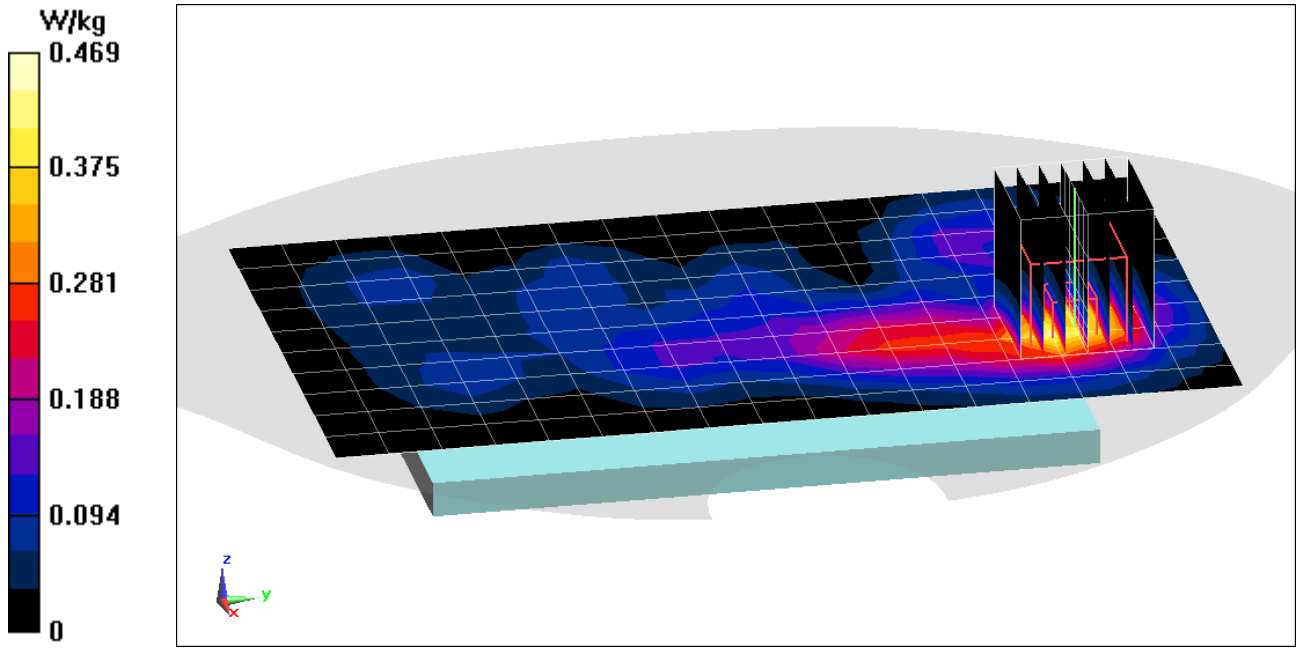
Communication System: UID 0, LTE Band 48; Frequency: 3646.7 MHz; Duty Cycle: 1:1.58
Medium: 3600 Body; Medium parameters used (interpolated):
f = 3646.7 MHz; σ = 3.549 S/m; ε_r = 49.838; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/20/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7488; ConvF(6.85, 6.85, 6.85) @ 3646.7 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 48, Body SAR, Back side, Mid-High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 9.076 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.261 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0117M

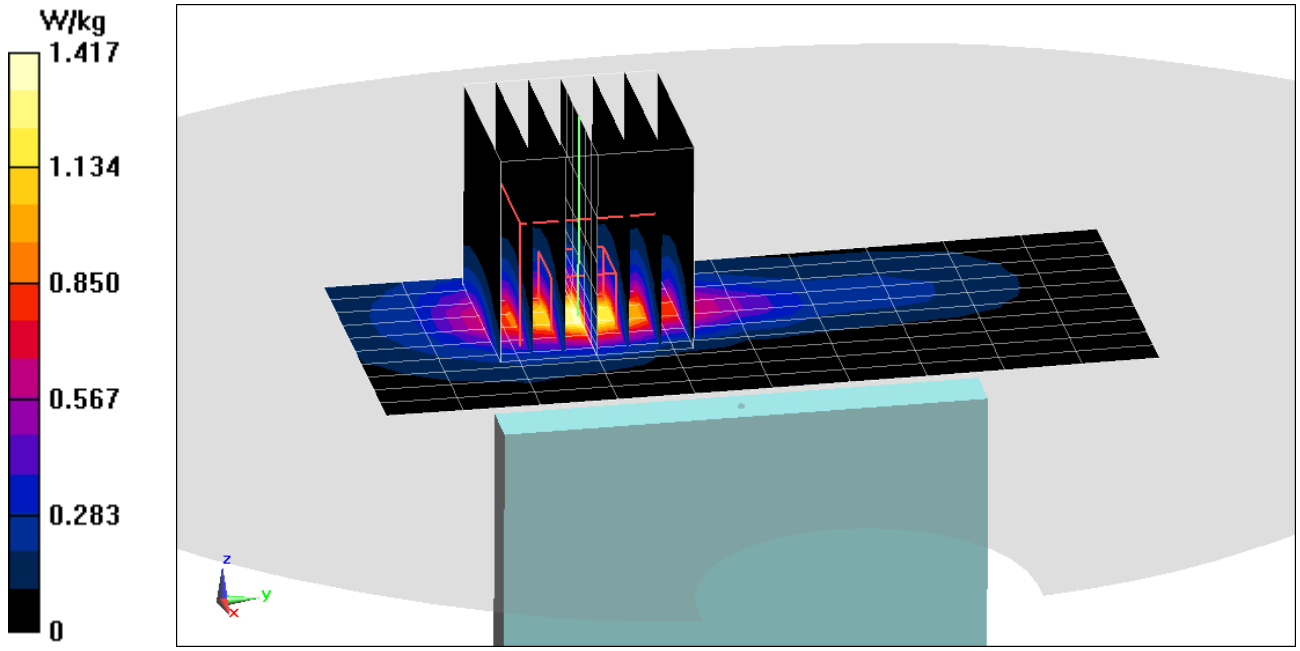
Communication System: UID 0, LTE Band 48; Frequency: 3646.7 MHz; Duty Cycle: 1:1.58
Medium: 3600 Body; Medium parameters used (interpolated):
f = 3646.7 MHz; σ = 3.549 S/m; ε_r = 49.838; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/20/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7488; ConvF(6.85, 6.85, 6.85) @ 3646.7 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 48, Body SAR, Top Edge, Mid-High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 15.50 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.736 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6752M

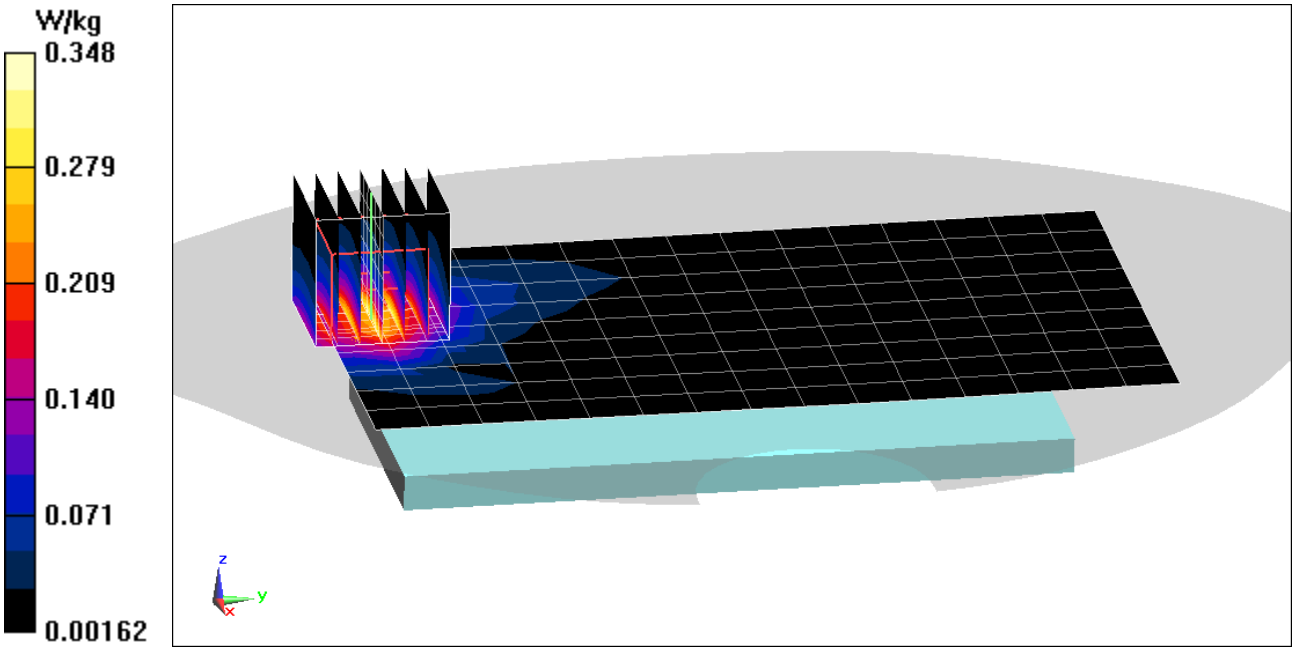
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.076 S/m; ε_r = 51.724; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/23/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2506 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 41, Body SAR, Back side, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan 1 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.98 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.425 W/kg
SAR(1 g) = 0.226 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6799M

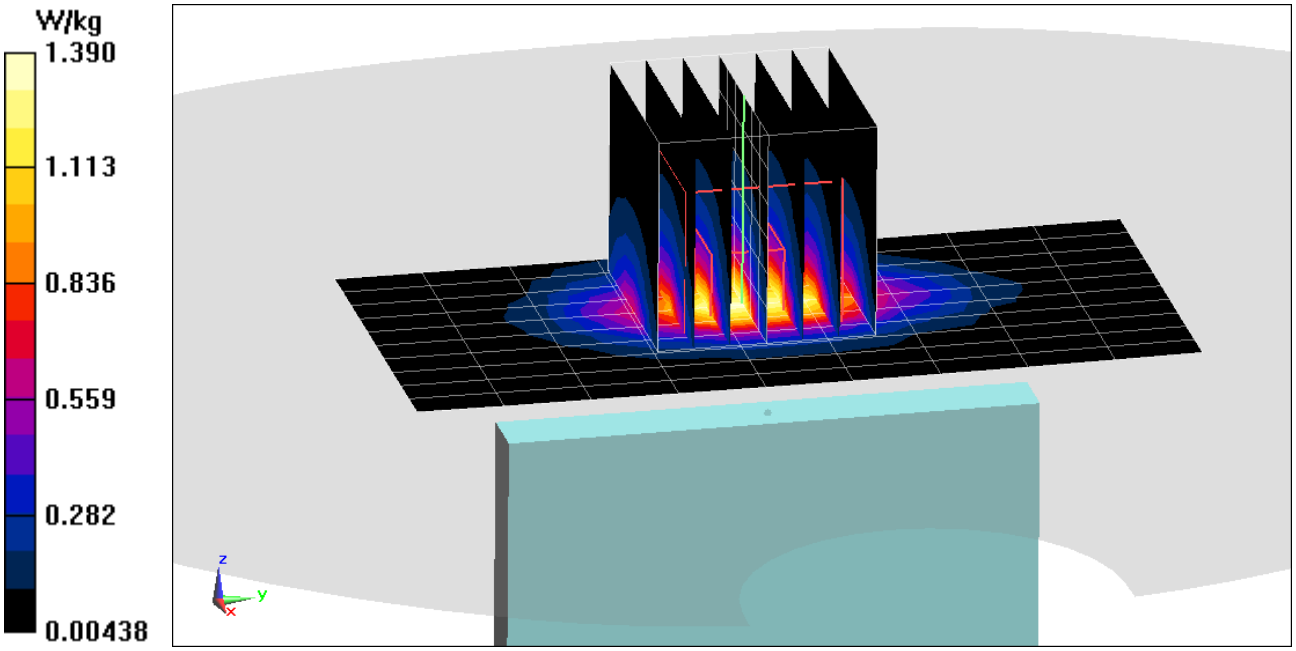
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.112 S/m; ε_r = 51.082; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/20/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2506 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 41, Body SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 100 RB, 0 RB Offset

Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.20 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 0.846 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6938M

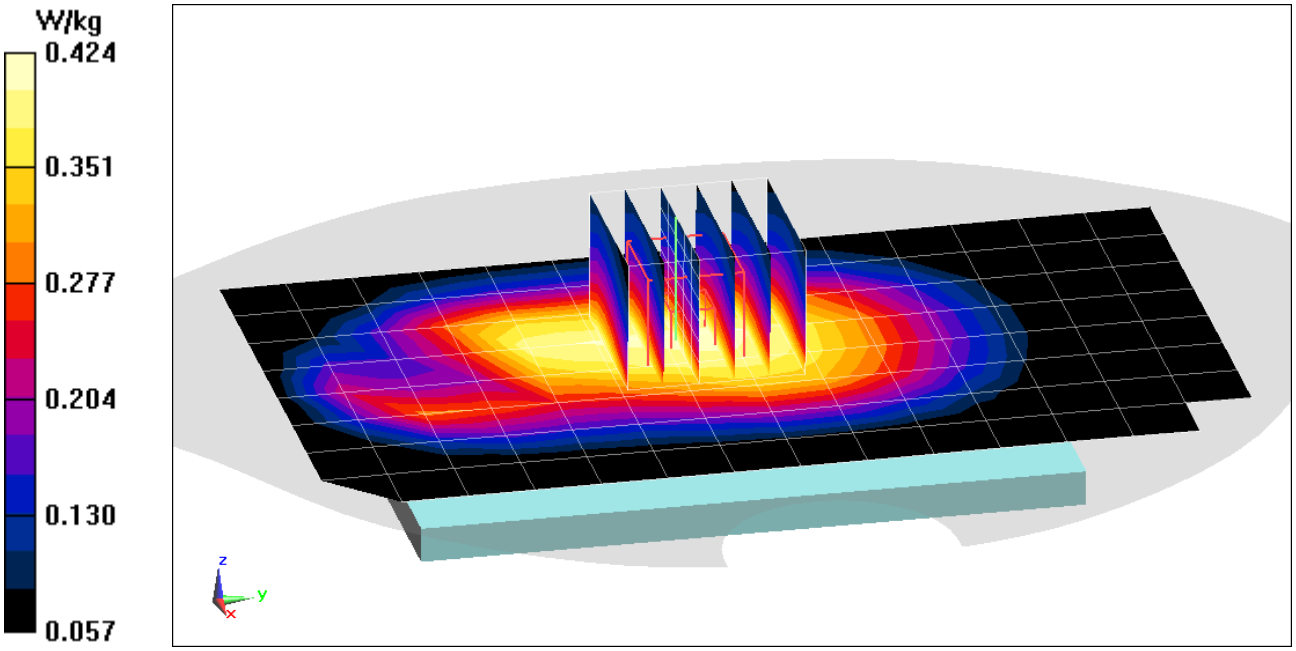
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.948 S/m; ε_r = 54.446; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/06/2020; Ambient Temp: 21.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 836.5 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n5, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 1 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.84 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.470 W/kg
SAR(1 g) = 0.347 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6938M

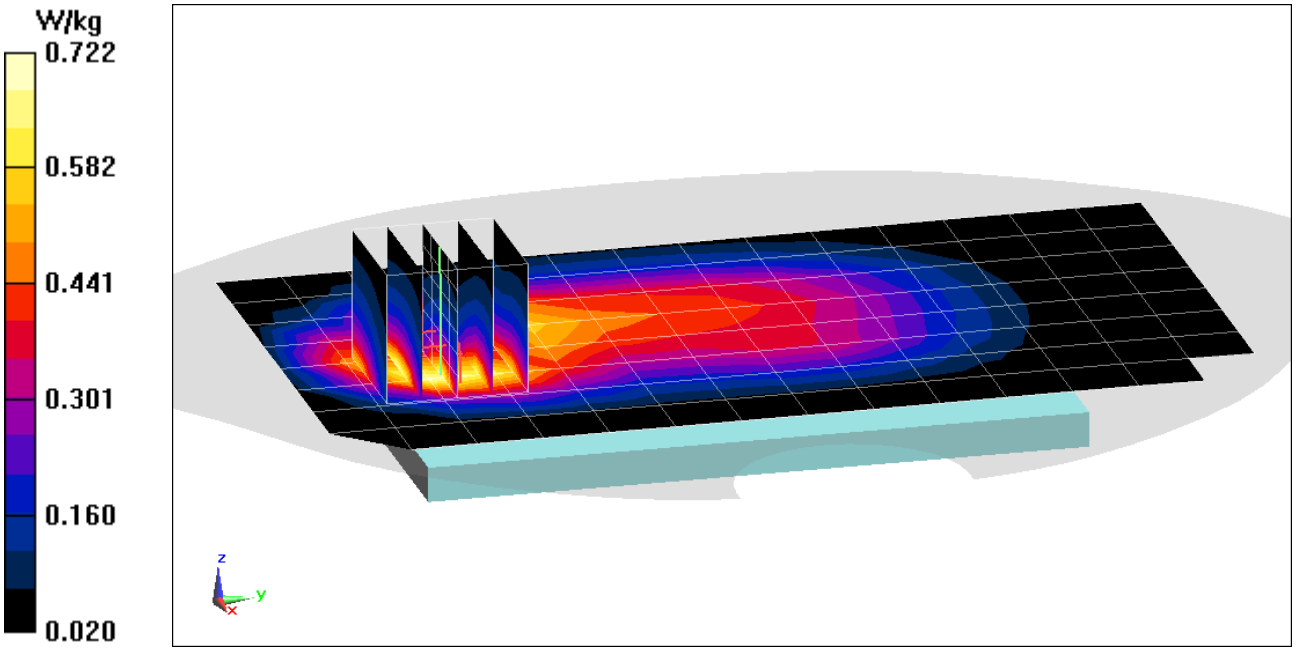
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.948 S/m; ε_r = 54.446; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/06/2020; Ambient Temp: 21.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7406; ConvF(9.78, 9.78, 9.78) @ 836.5 MHz; Calibrated: 5/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/8/2019
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n5, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 1 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.20 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.868 W/kg
SAR(1 g) = 0.478 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6787M

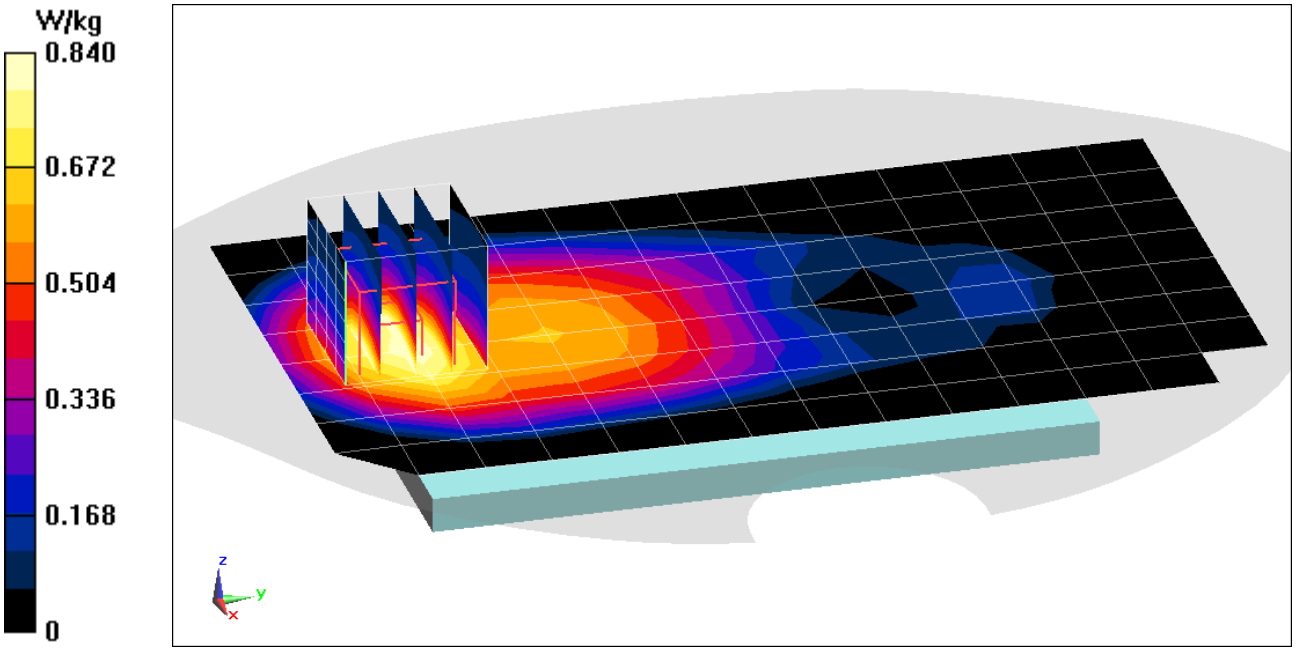
Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1745 MHz; σ = 1.506 S/m; ε_r = 53.504; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/20/2020; Ambient Temp: 20.0°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1745 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n66, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 349000, 50 RB, 28 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.86 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.825 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6787M

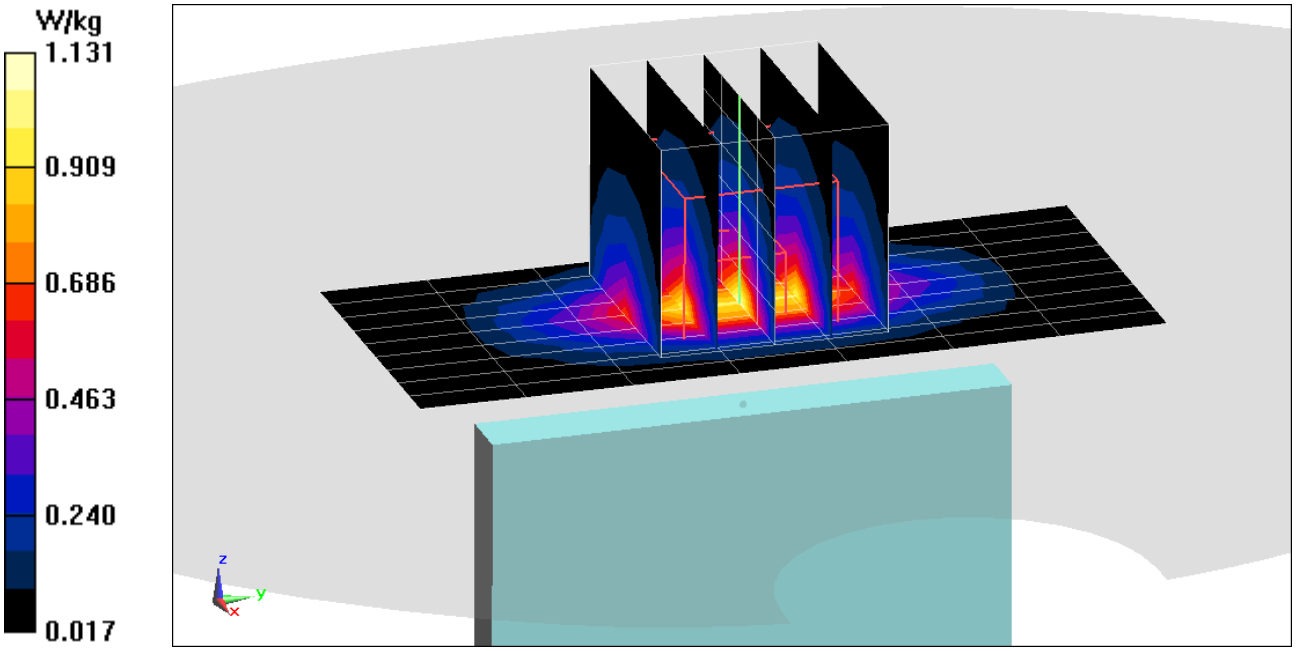
Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1745 MHz; σ = 1.535 S/m; ε_r = 53.462; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/22/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1745 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n66, Body SAR, Bottom Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 349000, 50 RB, 0 RB Offset

Area Scan (10x8x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.78 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.760 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6943M

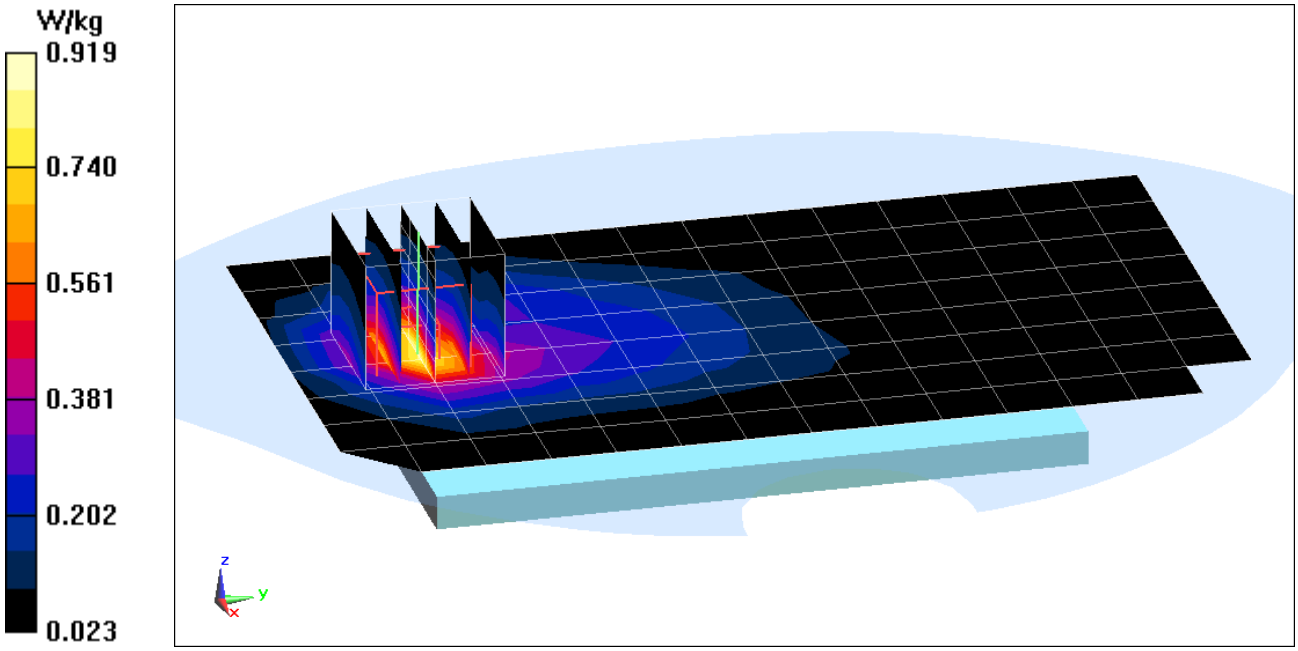
Communication System: UID 0, NR Band n2; Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1860 MHz; σ = 1.519 S/m; ε_r = 55.186; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/12/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n2, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 372000, 1 RB, 53 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.88 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.646 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6943M

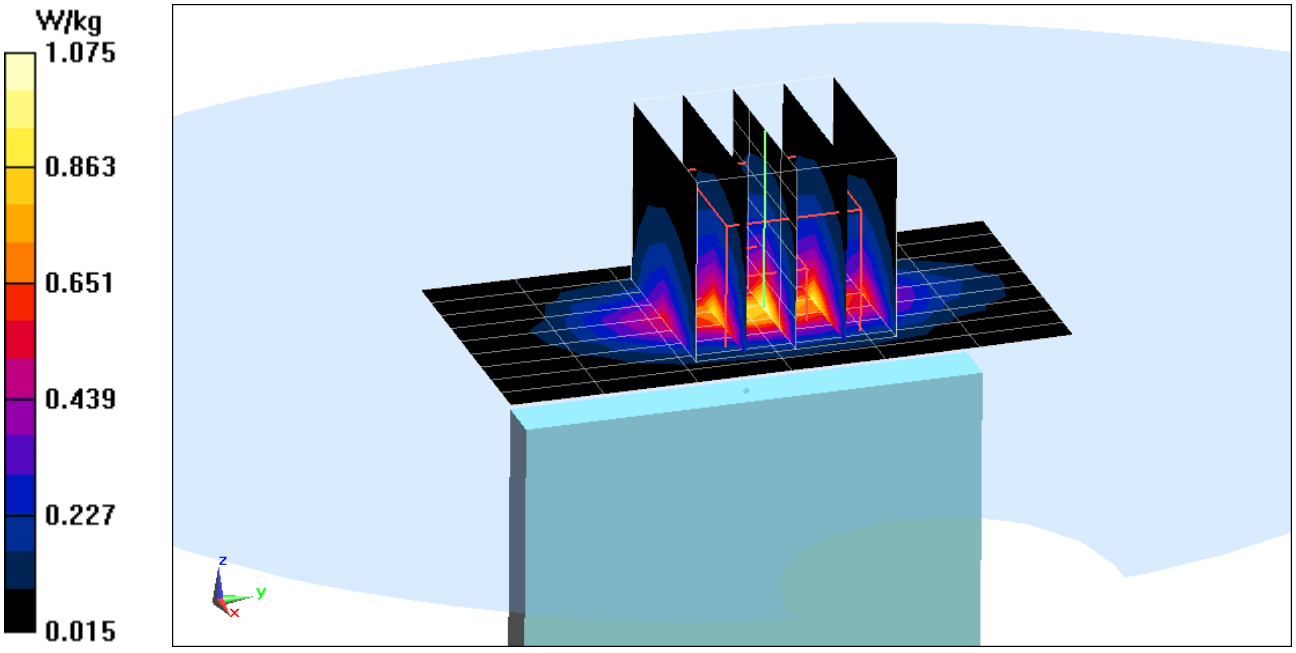
Communication System: UID 0, NR Band n2; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1900 MHz; σ = 1.566 S/m; ε_r = 55.477; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/21/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n2, Body SAR, Bottom Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 380000, 50 RB, 0 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.69 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.710 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0558M

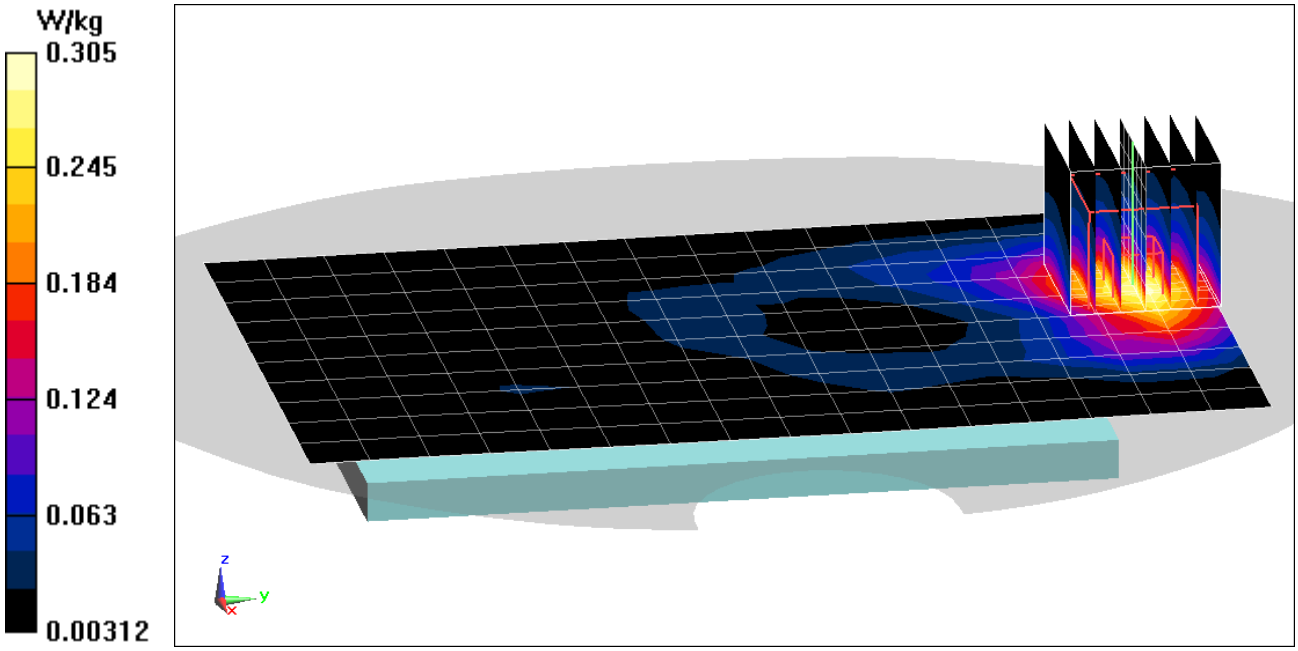
Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.057 S/m; ε_r = 51.147; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/01/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2462 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Body SAR, Ch 11, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.39 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.369 W/kg
SAR(1 g) = 0.201 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0117M

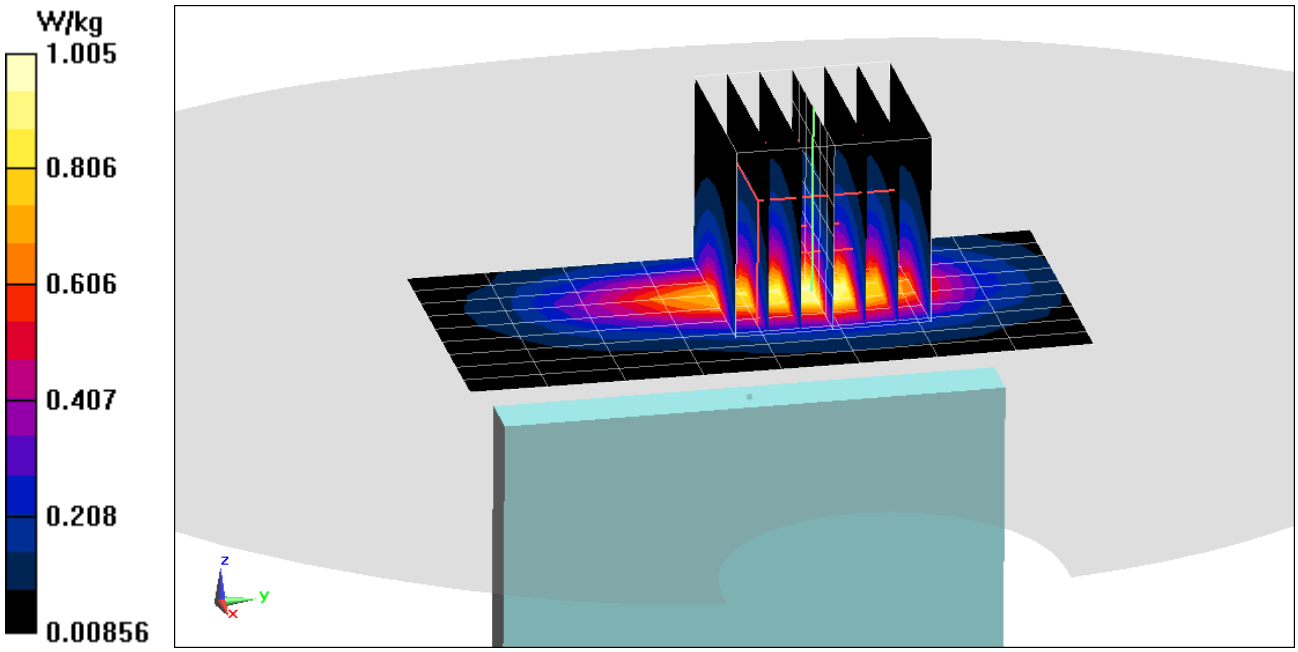
Communication System: UID 0, 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.974 S/m; ε_r = 52.828; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2412 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Body SAR, Ch 1, 1 Mbps, Top Edge

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.82 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.632 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0122M

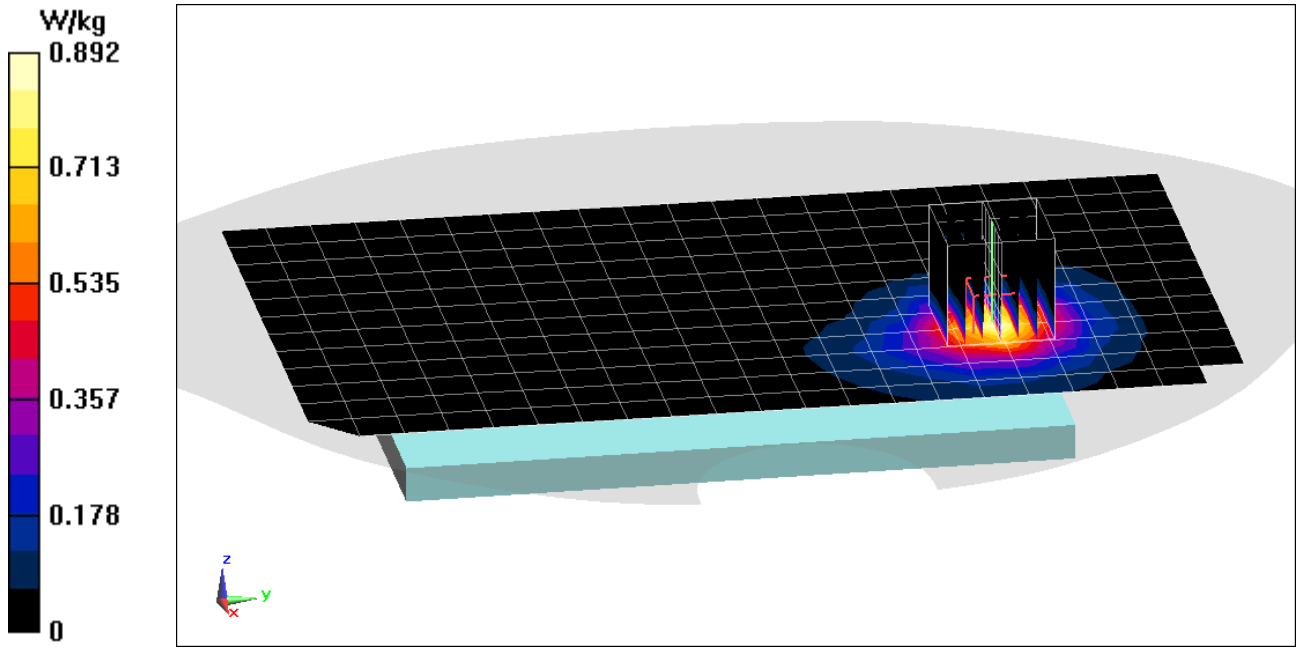
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5785 MHz; σ = 6.244 S/m; ε_r = 46.576; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.23, 4.23, 4.23) @ 5785 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, MIMO, UNII-3, 20 MHz Bandwidth,
Body SAR, Ch 157, 13 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 7.753 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.373 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0122M

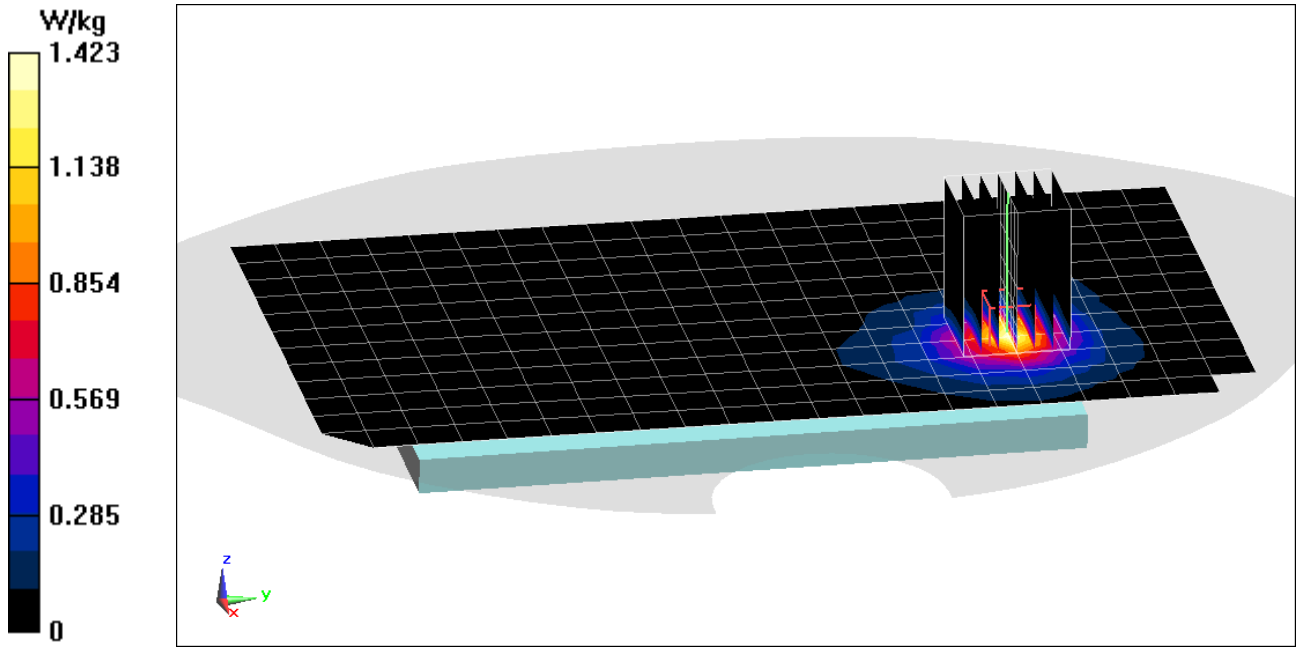
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5745 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5745 MHz; σ = 6.18 S/m; ε_r = 46.625; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.23, 4.23, 4.23) @ 5745 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, MIMO, UNII-3, 20 MHz Bandwidth,
Body SAR, Ch 149, 13 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 1.839 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.58 W/kg
SAR(1 g) = 0.589 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0558M

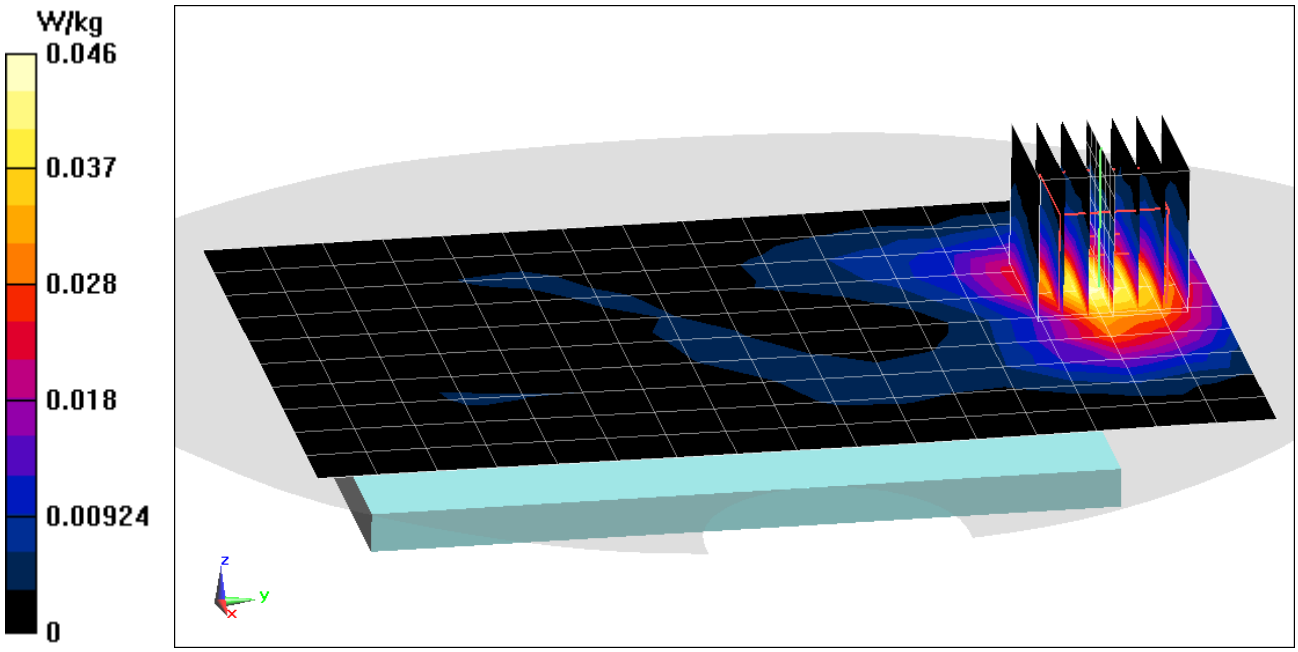
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.033 S/m; ε_r = 51.214; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/01/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2441 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Body SAR, Ch 39, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.026 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.0560 W/kg
SAR(1 g) = 0.031 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0558M

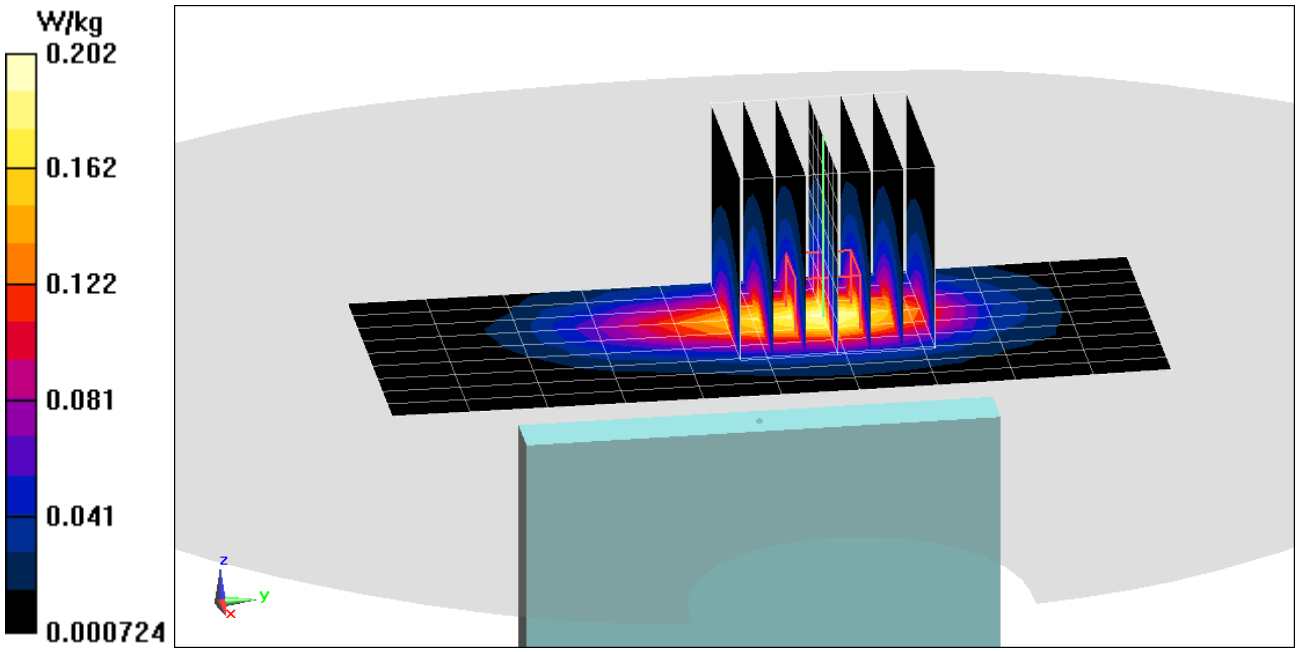
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.033 S/m; ε_r = 51.214; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/01/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2441 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Body SAR, Ch 39, 1 Mbps, Top Edge

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.350 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.247 W/kg
SAR(1 g) = 0.126 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

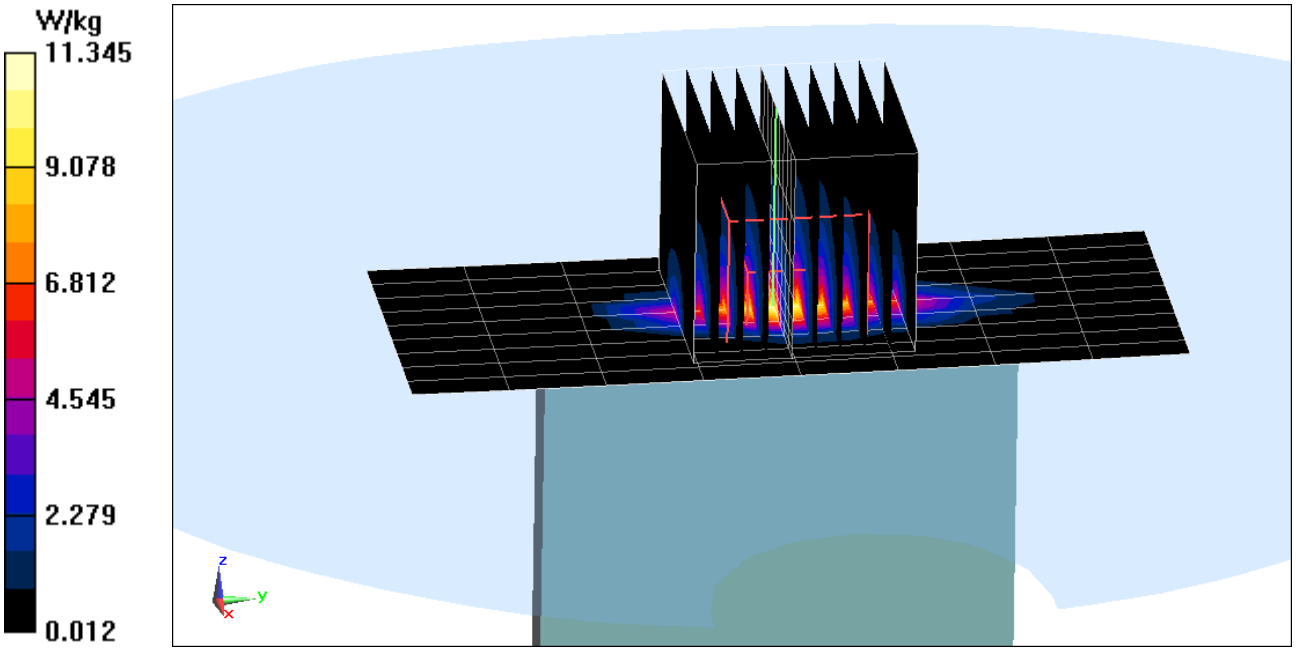
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.591 S/m; ε_r = 54.282; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1908.75 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: PCS EVDO, Phablet SAR, Bottom Edge, High.ch

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 68.49 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 17.2 W/kg
SAR(10 g) = 2.46 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

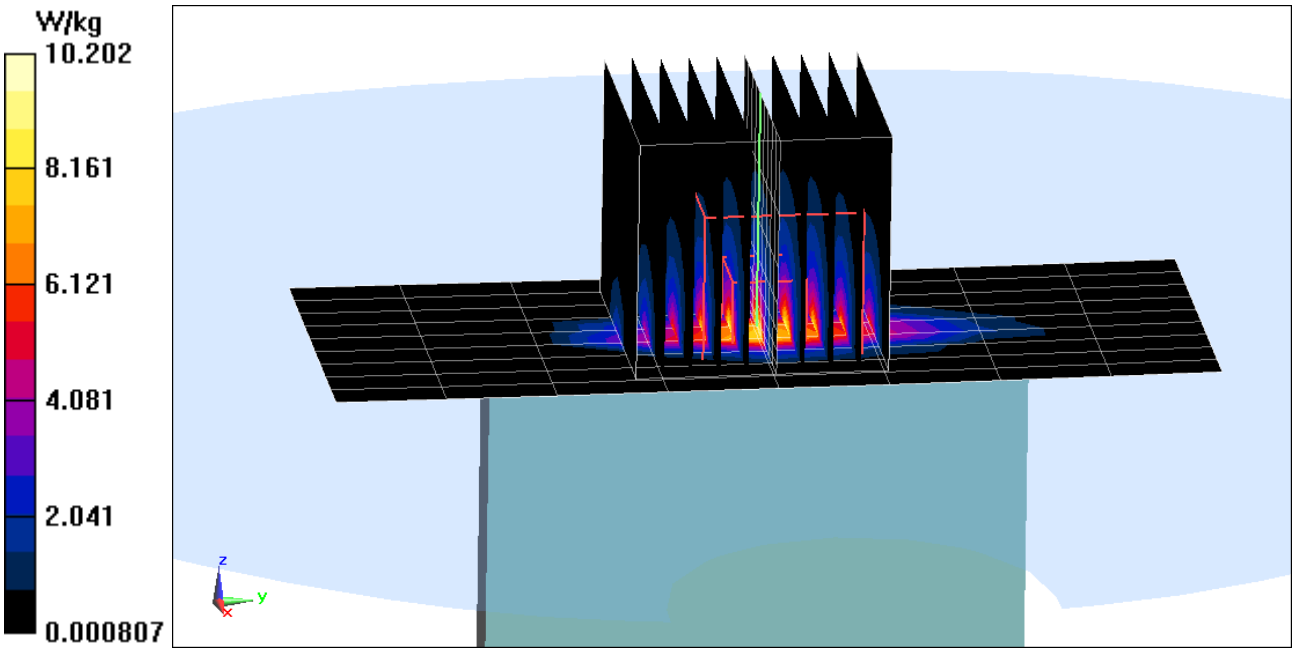
Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1909.8 MHz; Duty Cycle: 1:2.076
Medium: 1900 Body; Medium parameters used:
f = 1910 MHz; σ = 1.592 S/m; ε_r = 54.278; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1909.8 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: GPRS 1900, Phablet SAR, Bottom Edge, High.ch, 4 Tx Slots

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 66.12 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 14.9 W/kg
SAR(10 g) = 2.3 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6945M

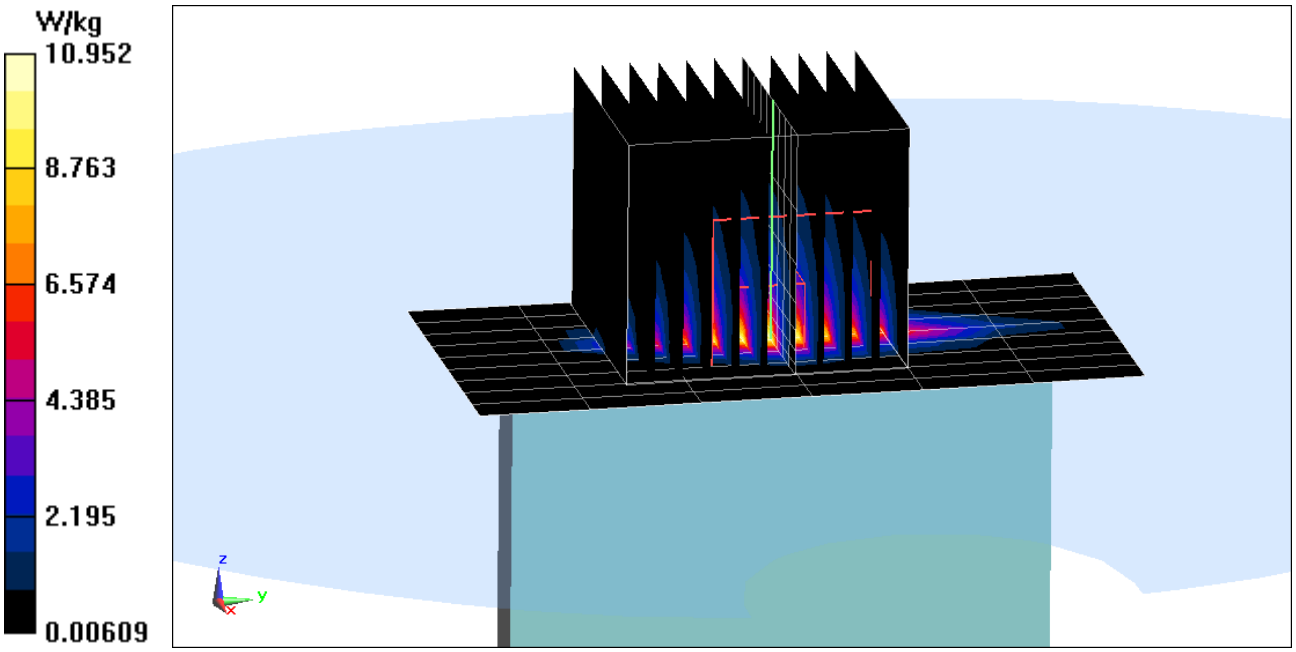
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.573 S/m; ε_r = 54.317; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/16/2020; Ambient Temp: 21.7°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1907.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1900, Phablet SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 65.18 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 16.5 W/kg
SAR(10 g) = 2.41 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6784M

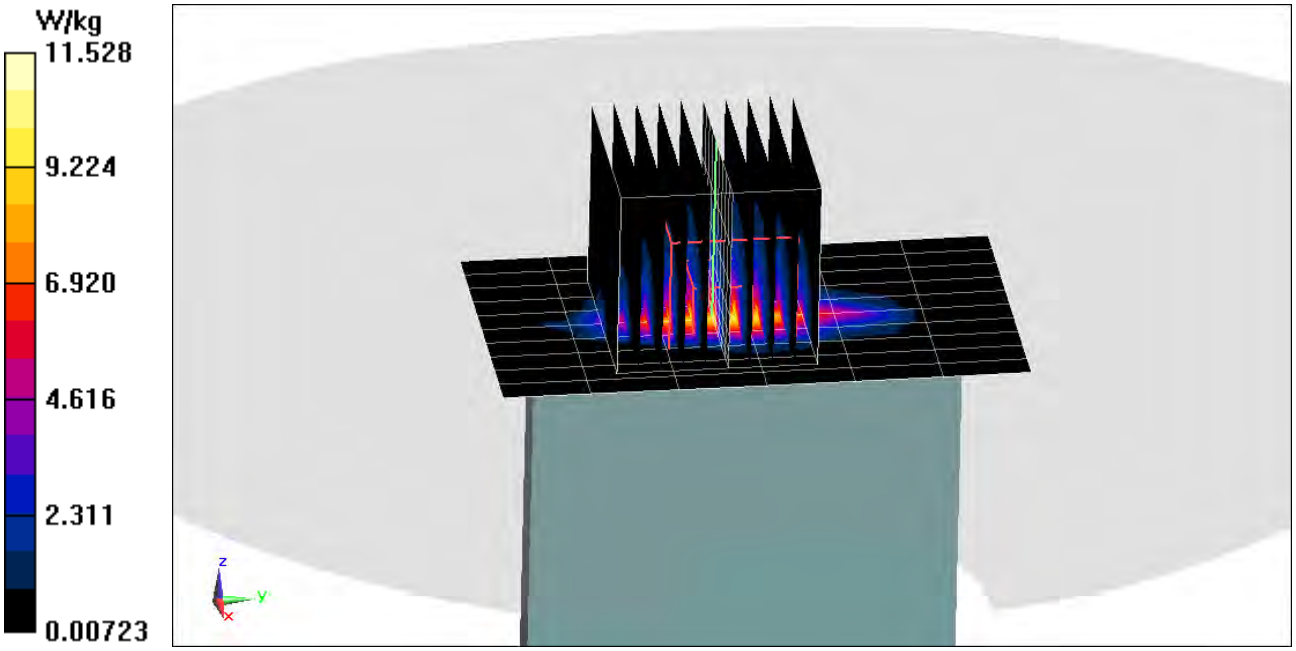
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1715 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1715 MHz; σ = 1.471 S/m; ε_r = 53.611; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/20/2020; Ambient Temp: 20.0°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1715 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 66 (AWS), Phablet SAR, Bottom Edge, Low.ch,
10 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (11x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 70.12 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(10 g) = 2.43 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6759M

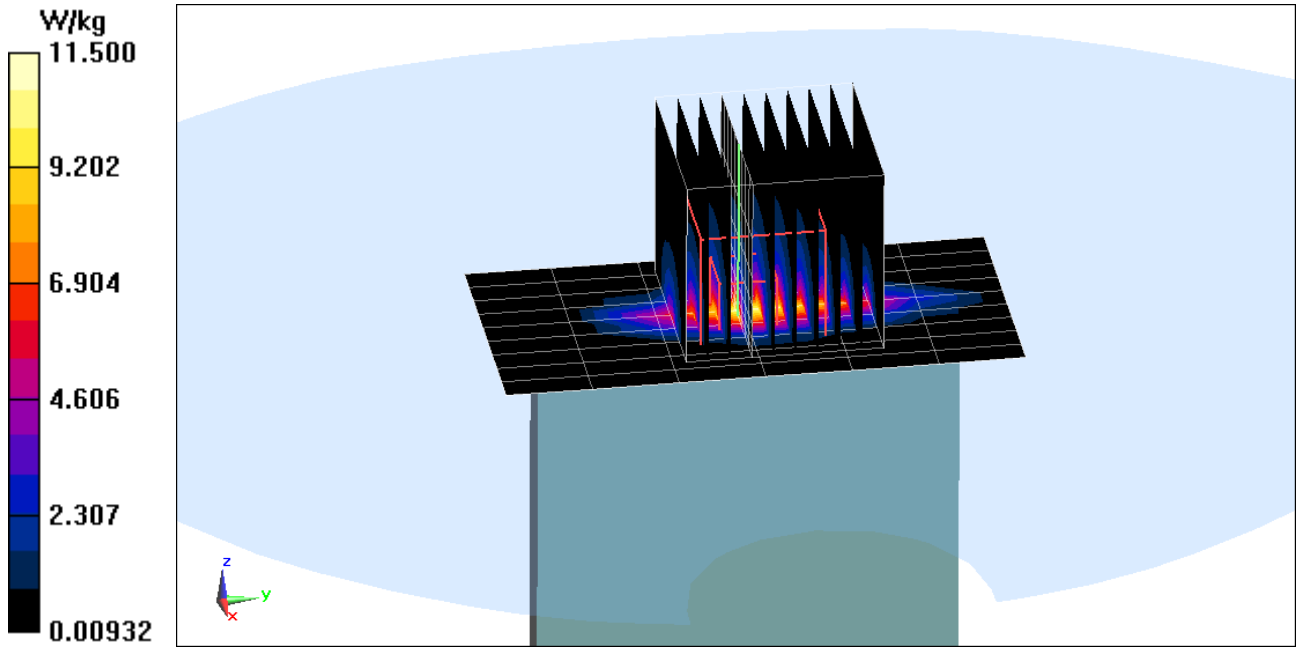
Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1900 MHz; σ = 1.581 S/m; εr = 54.312; ρ = 1000 kg/m3,
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/19/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 2 (PCS), Phablet SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 65.08 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(10 g) = 2.44 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6752M

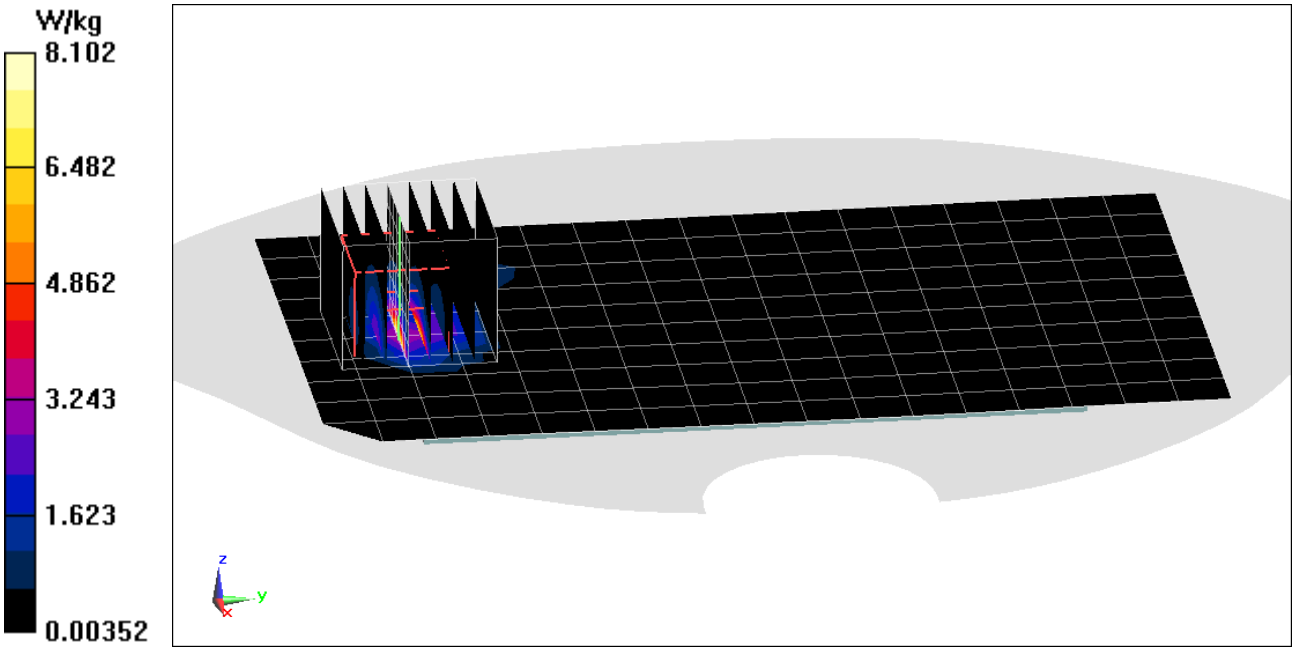
Communication System: UID 0, LTE Band 7; Frequency: 2535 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2535 MHz; σ = 2.128 S/m; ε_r = 51.265; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/23/2020; Ambient Temp: 23.2°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2535 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 7, Phablet SAR, Front side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 42.25 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 13.1 W/kg
SAR(10 g) = 1.44 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 6752M

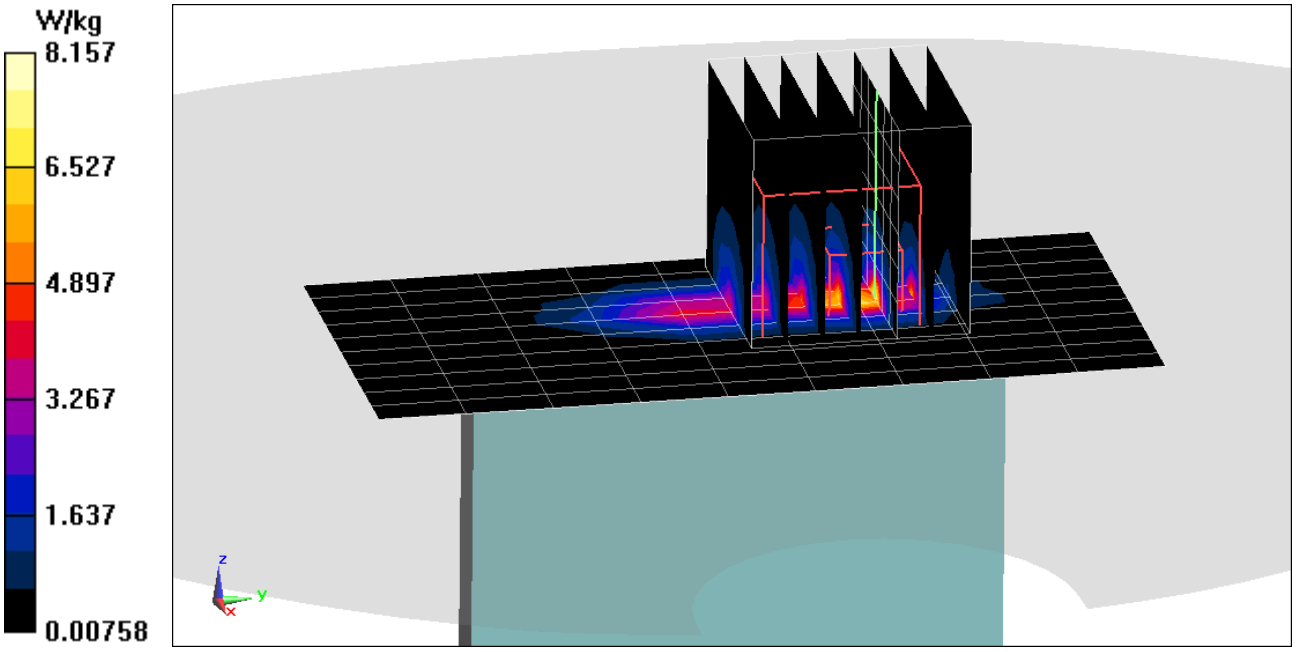
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.106 S/m; ε_r = 51.315; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03/29/2020; Ambient Temp: 22.6°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2506 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 41, Phablet SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 41.84 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 11.8 W/kg
SAR(10 g) = 1.09 W/kg



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DUT: A3LSMG981V; Type: Portable Handset; Serial: 6787M

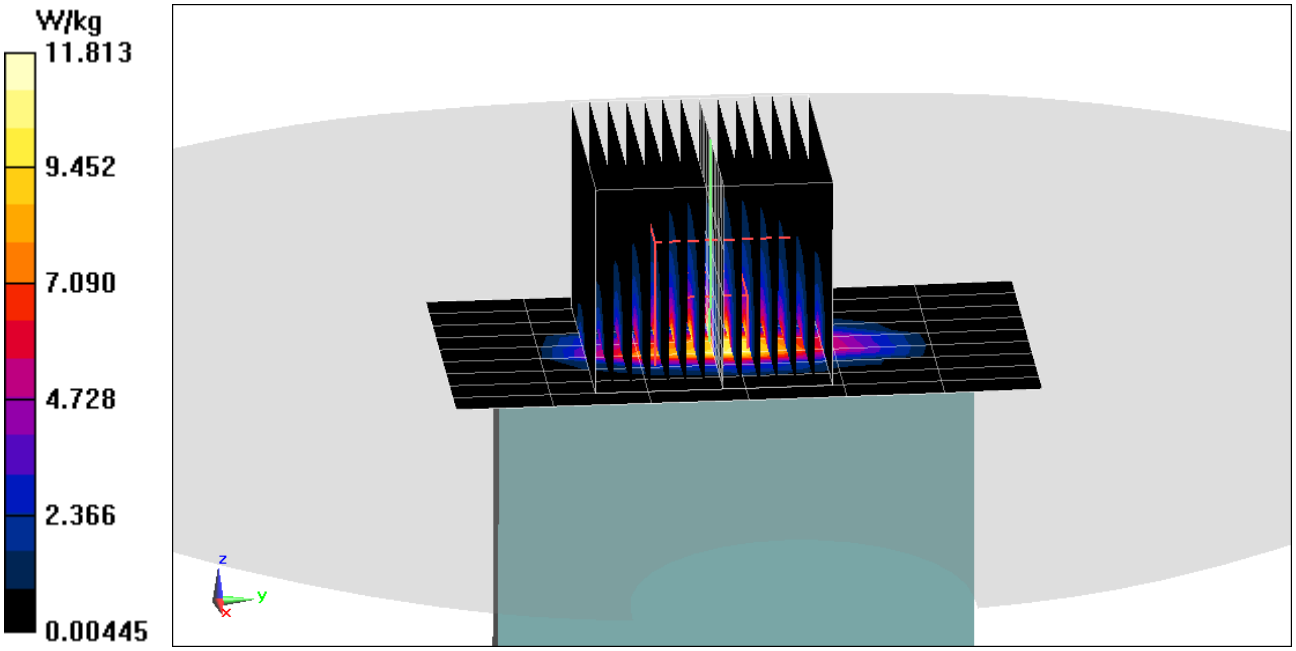
Communication System: UID 0, NR Band n66; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1720 MHz; σ = 1.504 S/m; ε_r = 53.554; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/22/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1720 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n66, Phablet SAR, Bottom Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 344000, 50 RB, 0 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (14x14x8)/Cube 0: Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 72.34 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(10 g) = 2.56 W/kg



PCTEST

DUT: A3LSMG981V; Type: Portable Handset; Serial: 6943M

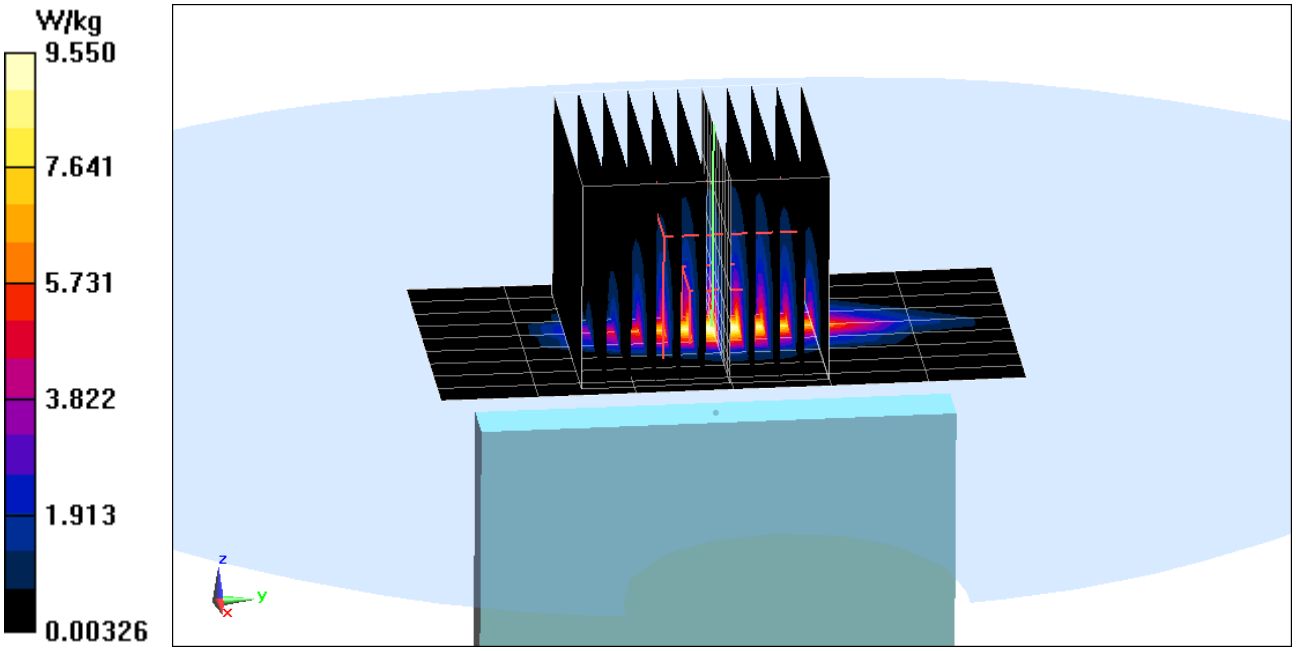
Communication System: UID 0, NR Band n2; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1900 MHz; σ = 1.566 S/m; ε_r = 55.477; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/21/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n2, Body SAR, Bottom Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 380000, 1 RB, 53 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (11x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 60.94 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 14.1 W/kg
SAR(10 g) = 2.17 W/kg



DUT: A3LSMG981V; Type: Portable Handset; Serial: 0122M

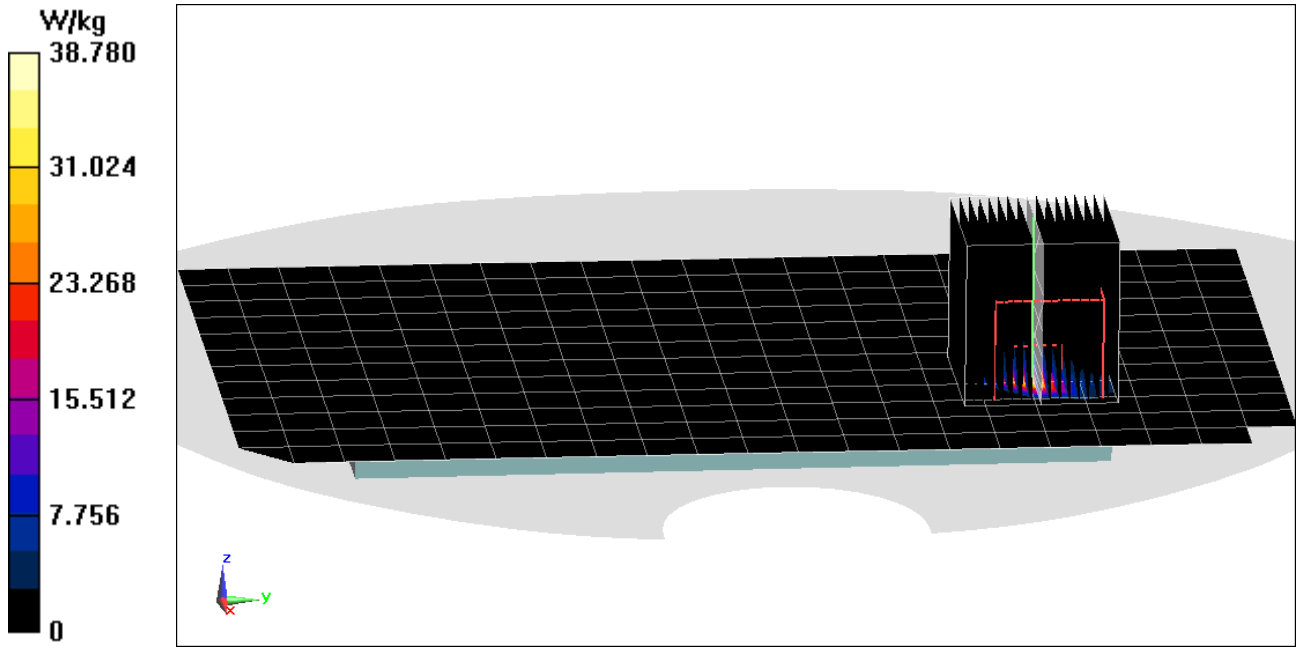
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5260 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5260 MHz; σ = 5.522 S/m; ε_r = 47.076; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04/20/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5260 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, MIMO, U-NII-2A, 20 MHz Bandwidth, Phablet SAR, Ch 52, 13 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (17x17x8)/Cube 0: Measurement grid: dx=1.9mm, dy=1.9mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 1.678 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 73.3 W/kg
SAR(10 g) = 2.31 W/kg



APPENDIX B: SYSTEM VERIFICATION

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DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

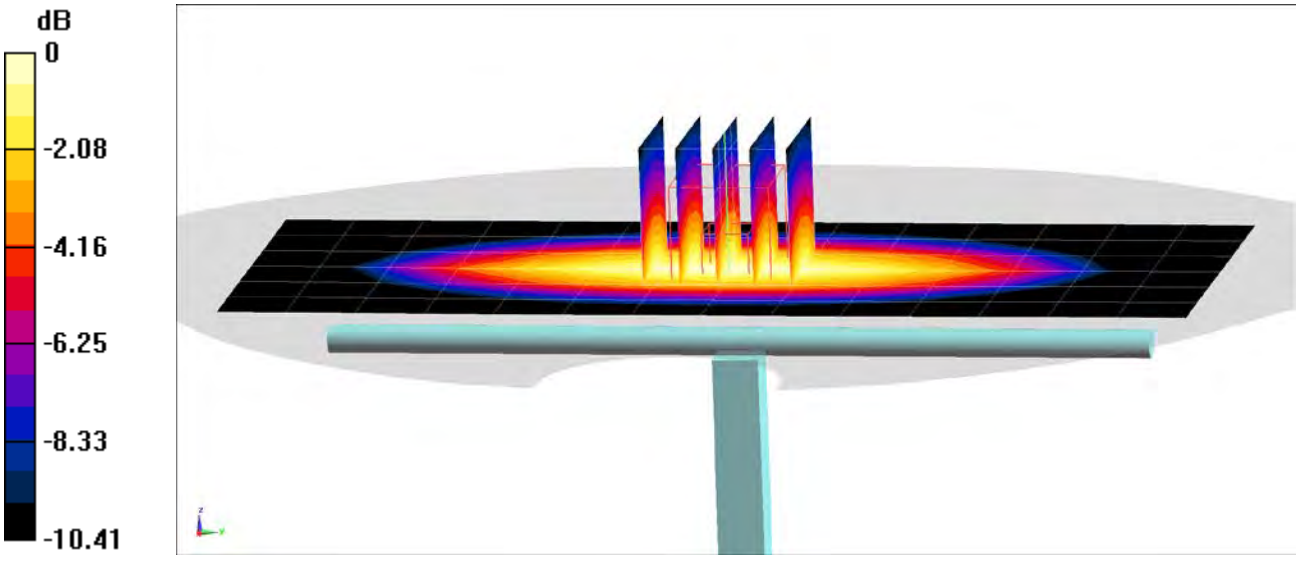
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used:
f = 750 MHz; σ = 0.889 S/m; ε_r = 41.735; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/23/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7488; ConvF(10.64, 10.64, 10.64) @ 750 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.51 W/kg
SAR(1 g) = 1.67 W/kg
Deviation(1 g) = 3.99%



0 dB = 2.23 W/kg = 3.48 dBW/kg

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DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

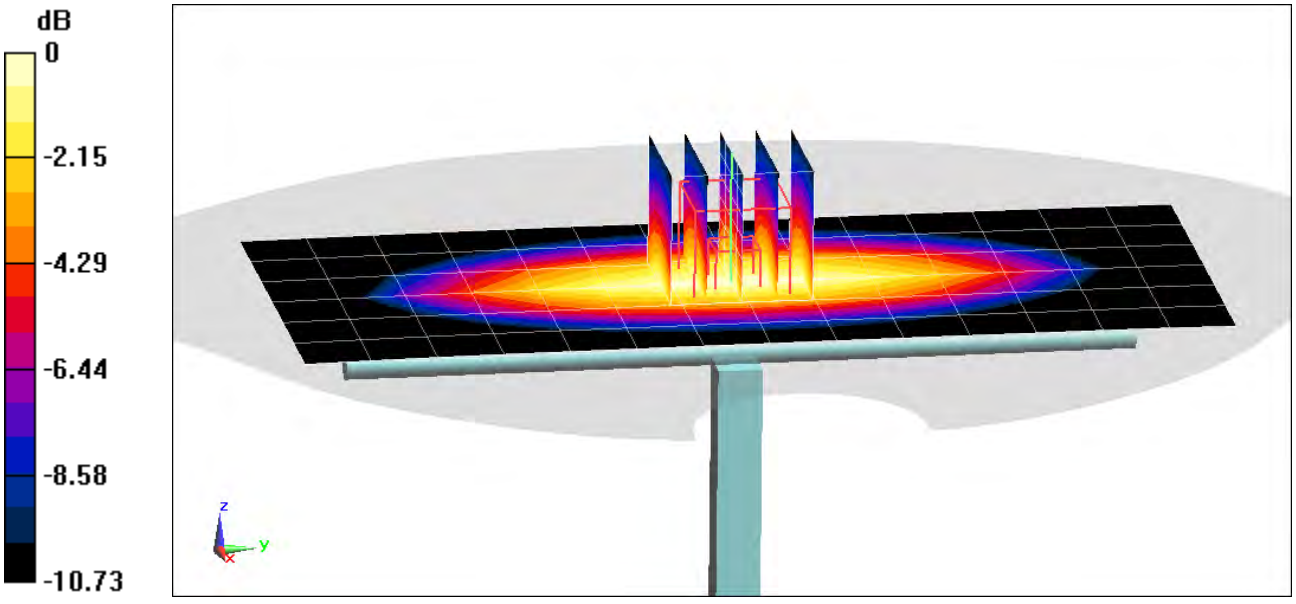
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used:
f = 750 MHz; σ = 0.883 S/m; ε_r = 41.359; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03/30/2020; Ambient Temp: 20.7°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7551; ConvF(10.11, 10.11, 10.11) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.47 W/kg
SAR(1 g) = 1.59 W/kg
Deviation(1 g) = -1.00%



0 dB = 2.16 W/kg = 3.34 dBW/kg