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



SAR EVALUATION REPORT

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

Date of Testing:
05/25/20 – 07/10/20
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
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FCC ID: **A3LSMN981U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-N981U
Additional Model(s): SM-N981U1

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	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.23	0.44	0.88	N/A
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.25	0.44	0.98	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.18	0.88	1.21	2.52
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.14	0.25	0.34	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.33	1.19	1.88
PCE	UMTS 850	826.40 - 846.60 MHz	0.18	0.32	0.81	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.18	0.92	1.22	2.87
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.16	0.73	1.22	2.21
PCE	LTE Band 71	665.5 - 695.5 MHz	0.10	0.20	0.35	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.15	0.29	0.47	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.18	0.37	0.66	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.17	0.42	0.71	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.24	0.40	0.74	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.25	0.46	0.88	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.13	0.92	1.13	2.74
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.17	0.78	1.08	1.91
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.12	0.57	0.78	1.50
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.13	0.60	0.83	2.28
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.74	0.32	0.89	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.12	0.48	0.78	2.78
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.11	0.23	0.40	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.14	0.26	0.48	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.21	0.39	0.83	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.17	0.92	1.21	2.90
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.19	0.78	1.19	2.28
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n41	2506.02 - 2679.99 MHz	0.41	< 0.1	0.31	N/A
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.41	0.16	0.67	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.15	0.26	N/A	1.17
NII	U-NII-2C	5500 - 5720 MHz	< 0.1	0.28	N/A	1.04
NII	U-NII-3	5745 - 5825 MHz	< 0.1	0.35	0.42	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.78	< 0.1	0.30	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.55	1.39	1.59	3.99

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
CDMA/EVDO BC10 (§90S)	Voice/Data	817.90 - 823.10 MHz
CDMA/EVDO BC0 (§22H)	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 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n71	Data	665.5 - 695.5 MHz
NR Band n12	Data	701.5 - 713.5 MHz
NR Band n5	Data	826.5 - 846.5 MHz
NR Band n66	Data	1712.5 - 1777.5 MHz
NR Band n25	Data	1852.5 - 1912.5 MHz
NR Band n2	Data	1852.5 - 1907.5 MHz
NR Band n41	Data	2506.02 - 2679.99 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
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:

Qualcomm® SDX55M modem supporting 2G/3G/4G/5G NR WWAN technologies

The Qualcomm® 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 could 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 could 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	0 mm	0 mm	10 mm	0 mm	
DSI:	0	0	1	2	3	4	
Technology/Band	**Plimit corresponding to 1mW/g (SAR_design_target)**						Pmax
CDMA/EVDO BC10	29.4		26.7	32.1	26.4	26.7	24.8
CDMA/EVDO BC0	29.4		26.8	31.9	25.9	26.8	24.8
CDMA/EVDO BC1	25.1		19.0	32.1	18.0	19.0	23.5
GSM/GPRS/EDGE 850 MHz	30.3		28.4	33.0	28.4	28.4	24.8
GSM/GPRS/EDGE 1900 MHz	25.7		18.8	31.6	18.8	18.8	21.3
UMTS B5	30.4		26.9	32.9	26.4	26.9	24.5
UMTS B4	24.3		19.0	31.5	19.0	19.0	23.0
UMTS B2	25.4		18.0	31.9	18.0	18.0	23.0
LTE FDD B71	32.7		27.4	36.0	27.4	27.4	24.8
LTE FDD B12	31.1		27.6	34.0	27.6	27.6	24.8
LTE FDD B13	29.8		28.2	33.3	27.4	28.2	24.8
LTE FDD B14	29.6		28.4	33.4	27.3	28.4	24.8
LTE FDD B26	29.6		26.9	32.1	26.9	26.9	24.8
LTE FDD B5	29.3		27.1	31.9	26.4	27.1	24.8
LTE FDD B66/4	24.6		19.0	32.9	19.0	19.0	23.0
LTE FDD B25/2	25.1		18.0	31.8	18.0	18.0	23.0
LTE FDD B30	26.6		20.5	33.3	18.0	20.5	23.2
LTE FDD B7	26.2		20.5	33.0	19.5	20.5	23.0
LTE TDD B48	21.4		21.4	14.5	21.4	21.4	20.5
LTE TDD B41 PC3	26.9		20.0	33.3	19.0	20.0	22.0
LTE TDD B41 PC2	26.9		20.0	33.3	19.0	20.0	22.6
LTE TDD B38	26.9		19.0	33.3	19.0	19.0	21.5
NR FDD n71	32.3		27.4	35.3	27.4	27.4	24.8
NR FDD n12	31.1		28.1	33.9	28.1	28.1	24.5
NR FDD n5	29.8		27.8	32.6	26.3	27.8	24.8
NR FDD n66	24.9		19.0	32.1	19.0	19.0	23.5
NR FDD n25/2	25.5		18.5	31.5	18.5	18.5	23.5
NR TDD n41	24.8		24.8	14.0	24.8	24.8	18.0

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

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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.

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 BC10 (815 MHz)				
Power Level	Mode / Band	Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max (DSI = 0 - 4)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
CDMA BC0 (835 MHz)				
Power Level	Mode / Band	Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max (DSI = 0 - 4)	Max allowed power	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8
CDMA BC1 (1900 MHz)				
Power Level	Mode / Band	Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max (DSI = 0 or 2)	Max allowed power	24.5	24.5	24.5
	Nominal	23.5	23.5	23.5
Earjack Active (DSI = 4)	Max allowed power	20.0	20.0	20.0
	Nominal	19.0	19.0	19.0
Hotspot Mode Active (DSI = 3)	Max allowed power	19.0	19.0	19.0
	Nominal	18.0	18.0	18.0
Proximity Sensor (DSI = 1)	Max allowed power	20.0	20.0	20.0
	Nominal	19.0	19.0	19.0

GSM/GPRS/EDGE 850										
Power Level	Mode / Band	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
Max (DSI = 0 - 4)	Max allowed power	33.5	33.5	32.0	30.0	28.0	27.5	25.5	23.5	22.5
	Nominal	32.5	32.5	31.0	29.0	27.0	26.5	24.5	22.5	21.5
GSM/GPRS/EDGE 1900										
Power Level	Mode / Band	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
Max (DSI = 0 or 2)	Max allowed power	30.0	30.0	28.5	26.5	24.5	26.5	24.0	22.0	21.0
	Nominal	29.0	29.0	27.5	25.5	23.5	25.5	23.0	21.0	20.0
Earjack Active (DSI = 4)	Max allowed power	29.0	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	28.0	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0
Hotspot Mode Active (DSI = 3)	Max allowed power	N/A	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	N/A	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0
Proximity Sensor (DSI = 1)	Max allowed power	29.0	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	28.0	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0

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

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UMTS Band 5 (850 MHz)					
Power Level	Mode / Band	Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Max (DSI = 0 - 4)	Max allowed power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
UMTS Band 4 (1750 MHz)					
Power Level	Mode / Band	Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Max (DSI = 0 or 2)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
Earjack Active (DSI = 4)	Max allowed power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
Hotspot Mode Active (DSI = 3)	Max allowed power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
Proximity Sensor (DSI = 1)	Max allowed power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
UMTS Band 2 (1900 MHz)					
Power Level	Mode / Band	Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Max (DSI = 0 or 2)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
Earjack Active (DSI = 4)	Max allowed power	19.0	18.5	18.5	18.5
	Nominal	18.0	17.5	17.5	17.5
Hotspot Mode Active (DSI = 3)	Max allowed power	19.0	18.5	18.5	18.5
	Nominal	18.0	17.5	17.5	17.5
Proximity Sensor (DSI = 1)	Max allowed power	19.0	18.5	18.5	18.5
	Nominal	18.0	17.5	17.5	17.5

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Mode / Band		Modulated Average Output Power (in dBm)				
		Max (DSI = 0)	RCV Mode Active (DSI = 2)	Hotspot Mode Active (DSI = 3)	Earjack Active (DSI = 4)	Proximity Sensor Active (DSI = 1)
LTE FDD Band 71	Max allowed power	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 12	Max allowed power	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 13	Max allowed power	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 power	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 26	Max allowed power	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 power	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 power	24.0	24.0	20.0	20.0	20.0
	Nominal	23.0	23.0	19.0	19.0	19.0
LTE FDD Band 4	Max allowed power	24.0	24.0	20.0	20.0	20.0
	Nominal	23.0	23.0	19.0	19.0	19.0
LTE FDD Band 2	Max allowed power	24.0	24.0	19.0	19.0	19.0
	Nominal	23.0	23.0	18.0	18.0	18.0
LTE FDD Band 25	Max allowed power	24.0	24.0	19.0	19.0	19.0
	Nominal	23.0	23.0	18.0	18.0	18.0
LTE FDD Band 30	Max allowed power	24.2	24.2	19.0	21.5	21.5
	Nominal	23.2	23.2	18.0	20.5	20.5
LTE FDD Band 7	Max allowed power	24.0	24.0	20.5	21.5	21.5
	Nominal	23.0	23.0	19.5	20.5	20.5
LTE TDD Band 48	Max allowed power	23.5	17.5	23.5	23.5	23.5
	Nominal	22.5	16.5	22.5	22.5	22.5
LTE TDD Band 41 (PC3)	Max allowed power	25.0	25.0	22.0	23.0	23.0
	Nominal	24.0	24.0	21.0	22.0	22.0
LTE TDD Band 41 (PC2)	Max allowed power	27.2	27.2	23.6	24.6	24.6
	Nominal	26.2	26.2	22.6	23.6	23.6
LTE TDD Band 38	Max allowed power	24.5	24.5	22.0	22.0	22.0
	Nominal	23.5	23.5	21.0	21.0	21.0

Mode / Band		Modulated Average Output Power (in dBm)				
		Max (DSI = 0)	RCV Mode Active (DSI = 2)	Hotspot Mode Active (DSI = 3)	Earjack Active (DSI = 4)	Proximity Sensor Active (DSI = 1)
NR FDD Band n71	Max allowed power	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
NR FDD Band n12	Max allowed power	25.5	25.5	25.5	25.5	25.5
	Nominal	24.5	24.5	24.5	24.5	24.5
NR FDD Band n5	Max allowed power	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8
NR FDD Band n66	Max allowed power	24.5	24.5	20.0	20.0	20.0
	Nominal	23.5	23.5	19.0	19.0	19.0
NR FDD Band n25	Max allowed power	24.5	24.5	19.5	19.5	19.5
	Nominal	23.5	23.5	18.5	18.5	18.5
NR FDD Band n2	Max allowed power	24.5	24.5	19.5	19.5	19.5
	Nominal	23.5	23.5	18.5	18.5	18.5
NR TDD Band n41	Max allowed power	25.0	21.0	25.0	25.0	25.0
	Nominal	24.0	20.0	24.0	24.0	24.0

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

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1.4.2 2.4 GHz Maximum 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 (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	21.0	20.0	18.0	17.0	18.0	17.0	17.0	16.0	21.0	20.0	21.0	20.0	17.0	16.0

Mode / Band		Modulated Average (dBm)
Bluetooth	Maximum	**17.0**
	Nominal	**16.0**
Bluetooth (EDR)	Maximum	**13.0**
	Nominal	**12.0**
Bluetooth LE 2Mbps	Maximum	**9.5**
	Nominal	**8.5**
Bluetooth LE 1 Mbps, 125/500 Kbps	Maximum	**8.0**
	Nominal	**7.0**

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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 (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	17.0	16.0

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/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 (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0

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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								MIMO							
		Antenna 1/ Antenna 2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	21.0	20.0	21.0	20.0	21.0	20.0	16.0	15.0
	5300 MHz	18.0 ch. 64: 17.0	17.0 16.0	18.0	17.0	18.0	17.0	16.0	15.0	21.0 ch. 64: 20.0	20.0 19.0	21.0	20.0	21.0	20.0	16.0	15.0
	5500 MHz	18.0 ch. 100: 17.0	17.0 16.0	18.0	17.0	18.0	17.0	16.0	15.0	21.0 ch. 100: 20.0	20.0 19.0	21.0	20.0	21.0	20.0	16.0	15.0
	5800 MHz	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	21.0	20.0	21.0	20.0	21.0	20.0	16.0	15.0
5 GHz WIFI (40MHz BW)	5200 MHz			17.0 ch. 38: 16.0	16.0 15.0	17.0 ch. 38: 16.0	16.0 15.0	14.0	13.0			20.0 ch. 38: 19.0	19.0 18.0	20.0 ch. 38: 19.0	19.0 18.0	14.0	13.0
	5300 MHz			17.0 ch. 62: 15.0	16.0 14.0	17.0 ch. 62: 15.0	16.0 14.0	14.0	13.0			20.0 ch. 62: 18.0	19.0 17.0	20.0 ch. 62: 18.0	19.0 17.0	14.0	13.0
	5500 MHz			17.0 ch. 102: 15.0	16.0 14.0	17.0 ch. 102: 15.0	16.0 14.0	14.0	13.0			20.0 ch. 102: 18.0	19.0 17.0	20.0 ch. 102: 18.0	19.0 17.0	14.0	13.0
	5800 MHz			17.0	16.0	17.0	16.0	14.0	13.0			20.0	19.0	20.0	19.0	14.0	13.0
5 GHz WIFI (80MHz BW)	5200 MHz					15.0	14.0	13.0	12.0					18.0	17.0	13.0	12.0
	5300 MHz					14.0	13.0	13.0	12.0					17.0	16.0	13.0	12.0
	5500 MHz					16.0 ch. 106: 14.0	15.0 13.0	13.0	12.0					19.0 ch. 106: 17.0	18.0 16.0	13.0	12.0
	5800 MHz					16.0	15.0	13.0	12.0					19.0	18.0	13.0	12.0

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1.4.5 5 GHz Reduced WLAN Output Powers

Note: Targets for 802.11ax RU operations can be found in Appendix 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								MIMO							
		Antenna 1/ Antenna 2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0
	5300 MHz	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0
	5500 MHz	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0
	5800 MHz	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0
5 GHz WIFI (40MHz BW)	5200 MHz			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	14.0	13.0
	5300 MHz			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	14.0	13.0
	5500 MHz			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	14.0	13.0
	5800 MHz			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	14.0	13.0
5 GHz WIFI (80MHz BW)	5200 MHz					14.0	13.0	13.0	12.0					17.0	16.0	13.0	12.0
	5300 MHz					14.0	13.0	13.0	12.0					17.0	16.0	13.0	12.0
	5500 MHz					14.0	13.0	13.0	12.0					17.0	16.0	13.0	12.0
	5800 MHz					14.0	13.0	13.0	12.0					17.0	16.0	13.0	12.0

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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
EVDO BC10 (§90S)	Yes	Yes	No	Yes	Yes	Yes
EVDO BC0 (§22H)	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 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30	Yes	Yes	No	Yes	Yes	No
LTE Band 7	Yes	Yes	No	Yes	Yes	No
LTE Band 48	Yes	Yes	Yes	No	Yes	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	No
NR Band n71	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
NR Band n41	Yes	Yes	Yes	No	No	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.

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1.6 Near Field Communications (NFC) Antenna

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

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

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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-NII2A, and U-NII2C 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 VoWIFI.
8. This device supports Bluetooth Tethering.
9. This device supports VoLTE.
10. LTE + 5G NR FR1 Scenarios are limited to LTE Anchor Bands, LTE B2/5/12/13/30/48/66.
11. 5G NR FR2 n260 and n261 cannot transmit simultaneously.
12. LTE + 5G NR FR2 n260 and n261 operations are possible only with LTE 2/5/12/13/14/30/48/66 under EN-DC mode.

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 WLAN, 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 WLAN, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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

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(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.

CDMA 1X Advanced technology was not required for SAR since the maximum allowed output powers for 1x Advanced was not more than 0.25 dB higher than the maximum powers for 1x and the measured SAR in any 1x mode exposure conditions was not greater than 1.2 W/kg per FCC KDB Publication 941225 D01v03r01.

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.

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

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

This device supports LTE 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 both Power Class 2 (PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB Workshop Notes, SAR tests were performed with Power Class 3 (given the specific UL/DL limitations for Power Class 2). Additionally, SAR testing for the power class 2 condition was evaluated for the highest configuration in Power Class 3 for each test configuration to confirm the results were scalable linearly (See Section 14.2).

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

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

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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 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 n71, n12, n5, n66, n2, n25, and n41 is limited to EN-DC operations only, with LTE Band 2/66/5/12/13/30/48 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, LTE Band 41 Power Class 2/3)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)

1.10 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 11.

1.11 Bibliography

Report Type	Report Serial Number
PD Exposure Part 0 Test Report	Rev.C
Near Field PD Report (Part 1)	1M2005050081-22.A3L
RF Exposure Part 0 Test Report	1M2005050081-24.A3L
RF Exposure Part 2 Test Report	1M2005050081-25.A3L
RF Exposure Compliance Summary Report	1M2005050081-26.A3L

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2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71 (665.5 - 695.5 MHz)				
	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
UE Category	DL UE Cat 20, UL UE Cat 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 16. It supports carrier aggregation, downlink MIMO, LAA features as shown in Section 9 and Appendix F. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR Information						
Form Factor	Portable Handset					
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz)					
	NR Band n12 (701.5 - 713.5 MHz)					
	NR Band n5 (Cell) (826.5 - 846.5 MHz)					
	NR Band n66 (AWS) (1712.5 - 1777.5 MHz)					
	NR Band n25 (PCS) (1852.5 - 1912.5 MHz)					
	NR Band n2 (PCS) (1852.5 - 1907.5 MHz)					
	NR Band n41 (2506.02 - 2679.99 MHz)					
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n12: 5 MHz, 10 MHz, 15 MHz					
	NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n41: 20 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz					
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High	
NR Band n71: 5 MHz	665.5 (133100)		680.5 (136100)	695.5 (139100)		
NR Band n71: 10 MHz	668 (133600)		680.5 (136100)	693 (138600)		
NR Band n71: 15 MHz	670.5 (134100)		680.5 (136100)	690.5 (138100)		
NR Band n71: 20 MHz	673 (134600)		680.5 (136100)	688 (137600)		
NR Band n12: 5 MHz	701.5 (140300)		707.5 (141500)	713.5 (142700)		
NR Band n12: 10 MHz	704 (140800)		707.5 (141500)	711 (142200)		
NR Band n12: 15 MHz	706.5 (141300)		707.5 (141500)	708.5 (141700)		
NR Band 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 n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)	1912.5 (382500)		
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)	1910 (382000)		
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)	1907.5 (381500)		
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)	1905 (381000)		
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)	1907.5 (381500)		
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)	1905 (381000)		
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)	1902.5 (380500)		
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)	1900 (380000)		
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)	2636.49 (527298)	2679.99 (535998)	
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A	2618.67 (523734)	2670 (534000)	
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)	2664.99 (532998)		
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)	2659.98 (531996)		
NR Band n41: 80 MHz	2536.02 (507204)		N/A	2649.99 (529998)		
NR Band n41: 90 MHz	2541 (508200)		N/A	2644.98 (528996)		
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)	2640 (528000)		
SCS for NR Band n71/n12/n5/n66/n25/n2	15 kHz					
SCS for NR Band n41	30 kHz					
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM					
NR MPR Permanently implemented per 3GPP TS 38.101	YES					
A-MPR (Additional MPR) disabled for SAR Testing?	YES					
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations					
LTE Anchor Bands for NR Band n71	LTE Band 2/66					
LTE Anchor Bands for NR Band n12	LTE Band 2/66					
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 2/30/66					
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 5/12/13/48					
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12					
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 5/12/13					
LTE Anchor Bands for NR Band n41	LTE Band 2/66					

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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:

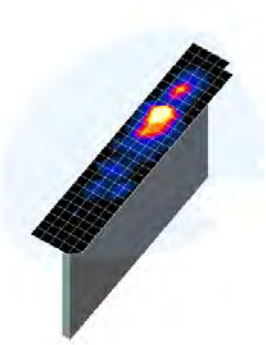


Figure 4-1
Sample SAR Area Scan

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].

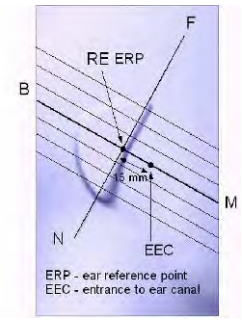


Figure 5-1
Close-Up Side view of ERP

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

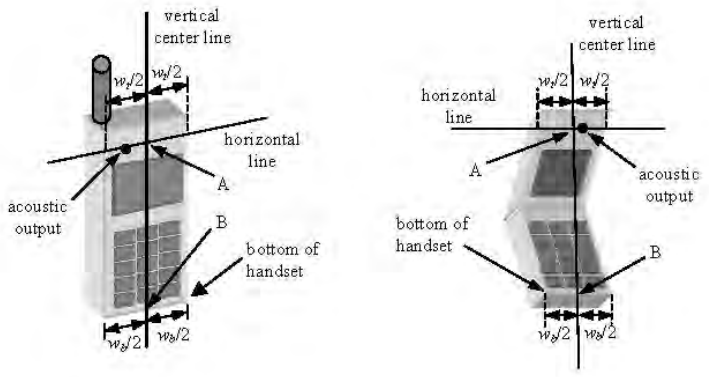


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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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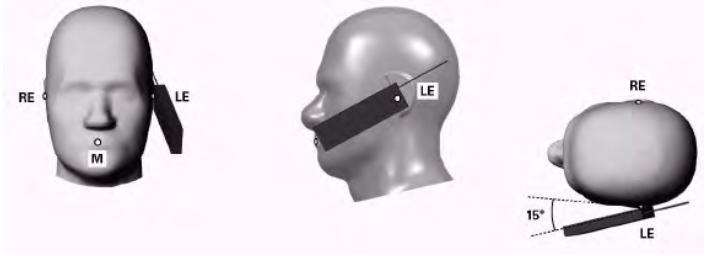


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

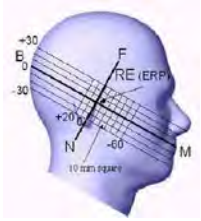


Figure 6-3
Side view w/ relevant markings

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.

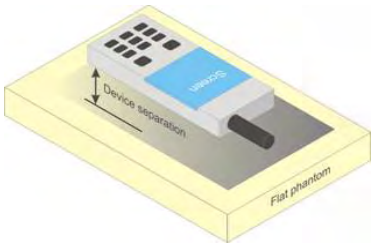


Figure 6-4
Sample Body-Worn Diagram

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.

8.4.6 CDMA2000 1x Advanced

This device additionally supports 1x Advanced. Conducted powers are measured using SO75 with RC8 on the uplink and RC11 on the downlink per FCC KDB Publication 941225 D01v03r01. Smart blanking is disabled for all measurements. The EUT is configured with forward power control Mode 000 and reverse power control at 400 bps. Conducted powers are measured on an Agilent 8960 Series 10 Wireless Communications Test Set, Model E5515C using the CDMA2000 1x Advanced application, Option E1962B-410.

The 3G SAR test reduction procedure is applied to the 1x-Advanced transmission mode with 1x RTT RC3 as the primary mode. When SAR measurement is required, the 1x-Advanced power measurement configurations are used. The1x Advanced SAR procedures are applied separately to head, body-worn accessory and other exposure conditions.

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

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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.

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.

8.5.6 SAR Measurement Conditions for DC-HSDPA

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

8.6 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.

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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.
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

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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.

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

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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.

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.

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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	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	564	90S	820.1	25.22	25.21	25.15	25.22	25.23	25.23	25.33
Cellular	1013	22H	824.7	25.36	25.37	25.31	25.31	25.32	25.51	25.49
	384	22H	836.52	25.16	25.15	25.05	25.15	25.12	25.33	25.34
	777	22H	848.31	24.18	24.16	24.75	24.28	24.22	24.16	24.18
PCS	25	24E	1851.25	23.49	23.50	23.52	23.50	23.51	23.62	23.61
	600	24E	1880	23.54	23.55	23.54	23.57	23.54	23.66	23.68
	1175	24E	1908.75	23.62	23.62	23.66	23.62	23.59	23.71	23.72

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	18.47	18.48	18.60	18.49
	600	24E	1880	18.53	18.53	18.74	18.54
	1175	24E	1908.75	18.58	18.61	18.69	18.62

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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]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	18.95	18.96	19.10	18.95	18.96	19.03	19.02
	600	24E	1880	19.01	19.03	19.13	19.03	19.02	19.12	19.10
	1175	24E	1908.75	19.09	19.09	19.26	19.11	19.08	19.15	19.16

Note: RC1 is only applicable for IS-95 compatibility. For FCC Rule Part 90S, Per FCC KDB Publication 447498 D01v06 4.1.g), only one channel is required since the device operates within the transmission range of 817.90 – 823.10 MHz**.**



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	32.89	32.86	31.71	**29.77**	27.64	26.48	25.02	23.21	22.31
	190	32.75	32.88	31.74	**29.76**	27.67	26.43	25.24	23.18	22.24
	251	32.73	32.84	31.74	**29.41**	27.61	26.39	25.07	23.04	22.08
GSM 1900	512	29.10	28.98	27.75	**26.44**	24.31	25.33	23.67	21.92	20.78
	661	29.07	29.11	28.19	**26.42**	24.46	25.59	24.00	21.94	20.85
	810	29.22	29.24	28.23	**26.47**	24.45	25.61	23.97	21.95	20.93

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.69	23.66	25.52	**25.34**	24.46	17.28	18.83	18.78	19.13
	190	23.55	23.68	25.55	**25.33**	24.49	17.23	19.05	18.75	19.06
	251	23.53	23.64	25.55	**24.98**	24.43	17.19	18.88	18.61	18.90
GSM 1900	512	19.90	19.78	21.56	**22.01**	21.13	16.13	17.48	17.49	17.60
	661	19.87	19.91	22.00	**21.99**	21.28	16.39	17.81	17.51	17.67
	810	20.02	20.04	22.04	**22.04**	21.27	16.41	17.78	17.52	17.75

GSM 850	**Frame Avg.Targets:**	23.30	23.30	24.81	**24.57**	23.82	17.30	18.31	18.07	18.32
GSM 1900		19.80	19.80	21.31	**21.07**	20.32	16.30	16.81	16.57	16.82

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Table 9-5
Measured P_{limit} for DSI = 3 (Hotspot mode), 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	28.28	28.12	25.23	23.20	**21.79**	25.33	23.67	21.92	20.78
	661	28.49	28.37	25.54	23.30	**21.99**	25.59	24.00	21.94	20.85
	810	28.55	28.44	25.63	23.26	**21.88**	25.61	23.97	21.95	20.93

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.08	18.92	19.04	18.77	**18.61**	16.13	17.48	17.49	17.60
	661	19.29	19.17	19.35	18.87	**18.81**	16.39	17.81	17.51	17.67
	810	19.35	19.24	19.44	18.83	**18.70**	16.41	17.78	17.52	17.75
GSM 1900	**Frame Avg.Targets:**	18.80	18.80	18.81	18.77	**18.82**	16.30	16.81	16.57	16.82

Note:

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

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



Figure 9-2
Power Measurement Setup

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9.3 UMTS Conducted Powers

Table 9-6
Measured P_{max}

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	25.16	25.14	25.08	23.46	23.44	23.39	23.37	23.39	23.37	-
99		12.2 kbps AMR	25.29	25.15	25.11	23.36	23.34	23.30	23.31	23.18	23.44	-
6	HSDPA	Subtest 1	24.06	23.98	23.93	22.26	22.23	22.22	22.02	22.13	22.08	0
6		Subtest 2	24.21	24.19	23.92	22.37	22.28	22.27	22.12	22.40	22.21	0
6		Subtest 3	23.65	23.45	23.44	21.83	21.81	21.82	21.62	21.70	21.76	0.5
6		Subtest 4	23.65	23.42	23.39	21.86	21.81	21.81	21.66	21.67	21.77	0.5
6	HSUPA	Subtest 1	24.15	23.98	23.93	22.24	22.18	22.15	22.06	22.16	22.22	0
6		Subtest 2	22.12	21.94	21.87	20.18	20.10	20.18	20.09	20.11	20.23	2
6		Subtest 3	23.13	22.96	22.89	21.25	21.18	21.18	21.06	21.13	21.24	1
6		Subtest 4	22.02	21.88	21.97	20.20	20.17	20.18	20.08	20.13	20.24	2
6		Subtest 5	24.15	23.95	23.90	22.26	22.12	22.18	22.07	22.14	22.23	0
8	DC-HSDPA	Subtest 1	24.13	23.99	23.93	22.27	22.19	22.24	22.13	22.19	22.27	0
8		Subtest 2	24.16	23.99	23.88	22.30	22.26	22.27	22.10	22.18	22.25	0
8		Subtest 3	23.63	23.48	23.41	21.77	21.74	21.75	21.61	21.68	21.75	0.5
8		Subtest 4	23.67	23.48	23.41	21.76	21.76	21.76	21.60	21.68	21.75	0.5

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Table 9-7
Measured P_{limit} for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	19.30	19.24	19.27	18.71	18.76	18.85	-
99		12.2 kbps AMR	19.25	19.24	19.30	18.70	18.75	18.80	-
6	HSDPA	Subtest 1	17.90	18.07	17.86	17.54	17.57	17.70	0
6		Subtest 2	18.09	18.09	18.12	17.49	17.53	17.65	0
6		Subtest 3	17.60	17.58	17.58	16.98	17.15	17.25	0.5
6		Subtest 4	17.51	17.58	17.62	17.10	17.15	17.27	0.5
6	HSUPA	Subtest 1	18.05	18.06	18.06	17.49	17.54	17.66	0
6		Subtest 2	16.06	16.05	16.09	15.56	15.53	15.66	2
6		Subtest 3	17.11	17.09	17.08	16.54	16.58	16.72	1
6		Subtest 4	16.11	16.05	16.08	15.53	15.56	15.68	2
6		Subtest 5	18.14	18.09	18.11	17.56	17.61	17.72	0
8	DC-HSDPA	Subtest 1	18.09	18.06	18.11	17.55	17.61	17.71	0
8		Subtest 2	18.14	18.12	18.12	17.54	17.58	17.67	0
8		Subtest 3	17.63	17.61	17.60	17.05	17.08	17.19	0.5
8		Subtest 4	17.62	17.61	17.62	17.05	17.08	17.16	0.5

DC-HSDPA considerations

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

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



Figure 9-3
Power Measurement Setup

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9.4 LTE Conducted Powers

9.4.1 LTE Band 71

Table 9-8
LTE Band 71 Measured P_{max} for all DSI - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.96**	0	0
	1	50	24.83		0
	1	99	24.84		0
	50	0	24.02	0-1	1
	50	25	**24.04**		1
	50	50	23.88		1
	100	0	23.97		1
16QAM	1	0	24.31	0-1	1
	1	50	24.23		1
	1	99	24.24		1
	50	0	23.00	0-2	2
	50	25	23.02		2
	50	50	22.95		2
	100	0	23.00		2
64QAM	1	0	23.23	0-2	2
	1	50	23.10		2
	1	99	22.99		2
	50	0	22.04	0-3	3
	50	25	22.05		3
	50	50	21.94		3
	100	0	22.01		3
256QAM	1	0	19.92	0-5	5
	1	50	20.06		5
	1	99	20.00		5
	50	0	19.89		5
	50	25	20.02		5
	50	50	19.91		5
	100	0	19.97		5

Note: LTE Band 71 at 20 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 9-9
LTE Band 71 Measured P_{max} for all DSI - 15 MHz Bandwidth

LTE Band 71 15 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **133297 (680.5 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	25.24	0	0
	1	36	25.18		0
	1	74	25.07		0
	36	0	24.22	0-1	1
	36	18	24.23		1
	36	37	24.15		1
	75	0	24.16		1
16QAM	1	0	24.62	0-1	1
	1	36	24.55		1
	1	74	24.48		1
	36	0	23.25	0-2	2
	36	18	23.33		2
	36	37	23.19		2
	75	0	23.22		2
64QAM	1	0	23.00	0-2	2
	1	36	23.00		2
	1	74	22.80		2
	36	0	22.32	0-3	3
	36	18	22.35		3
	36	37	22.27		3
	75	0	22.24		3
256QAM	1	0	20.28	0-5	5
	1	36	20.30		5
	1	74	20.35		5
	36	0	20.11		5
	36	18	20.21		5
	36	37	20.22		5
	75	0	20.18		5

Note: LTE Band 71 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 9-10
LTE Band 71 Measured P_{max} for all DSI - 10 MHz Bandwidth

LTE Band 71 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133172 (668.0 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133422 (693.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	25.34	25.15	25.07	0	0
	1	25	25.23	25.08	25.03		0
	1	49	25.22	25.03	25.00		0
	25	0	24.45	24.20	24.15	0-1	1
	25	12	24.44	24.24	24.25		1
	25	25	24.37	24.20	24.15		1
	50	0	24.36	24.20	24.13		1
16QAM	1	0	24.25	24.24	23.98	0-1	1
	1	25	24.07	24.15	23.94		1
	1	49	24.00	24.19	23.87		1
	25	0	23.57	23.31	23.25	0-2	2
	25	12	23.55	23.37	23.34		2
	25	25	23.47	23.33	23.26		2
	50	0	23.40	23.20	23.17		2
64QAM	1	0	23.69	23.48	23.31	0-2	2
	1	25	23.51	23.42	23.26		2
	1	49	23.40	23.34	23.25		2
	25	0	22.57	22.26	22.28	0-3	3
	25	12	22.52	22.31	22.31		3
	25	25	22.48	22.26	22.25		3
	50	0	22.38	22.20	22.12		3
256QAM	1	0	20.24	20.08	20.38	0-5	5
	1	25	20.38	19.99	20.57		5
	1	49	20.05	20.12	20.30		5
	25	0	20.34	20.10	20.06		5
	25	12	20.38	20.25	20.20		5
	25	25	20.32	20.12	20.16		5
	50	0	20.28	20.10	20.16		5

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Table 9-11
LTE Band 71 Measured P_{max} for all DSI - 5 MHz Bandwidth

LTE Band 71 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133147 (665.5 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133447 (695.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	25.25	25.00	24.99	0	0
	1	12	25.24	25.17	25.10		0
	1	24	25.26	25.18	25.09		0
	12	0	24.42	24.20	24.08	0-1	1
	12	6	24.52	24.23	24.15		1
	12	13	24.42	24.21	24.12		1
	25	0	24.47	24.22	24.08		1
16QAM	1	0	24.53	24.47	24.04	0-1	1
	1	12	24.52	24.42	24.19		1
	1	24	24.50	24.48	24.21		1
	12	0	23.56	23.24	23.15	0-2	2
	12	6	23.60	23.35	23.25		2
	12	13	23.51	23.34	23.26		2
	25	0	23.51	23.35	23.14		2
64QAM	1	0	23.69	23.25	23.54	0-2	2
	1	12	23.61	23.42	23.63		2
	1	24	23.54	23.40	23.58		2
	12	0	22.44	22.18	22.18	0-3	3
	12	6	22.52	22.30	22.25		3
	12	13	22.46	22.22	22.25		3
	25	0	22.43	22.28	22.17		3
256QAM	1	0	20.37	20.16	19.98	0-5	5
	1	12	20.43	20.33	20.10		5
	1	24	20.38	20.27	20.09		5
	12	0	20.42	20.10	20.07		5
	12	6	20.44	20.21	20.14		5
	12	13	20.42	20.19	20.13		5
	25	0	20.44	20.16	20.00		5

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9.4.2 LTE Band 12

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

LTE Band 12 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **23095 (707.5 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**24.94**	0	0
	1	25	24.84		0
	1	49	24.81		0
	25	0	23.98	0-1	1
	25	12	**24.03**		1
	25	25	23.96		1
	50	0	23.96		1
16QAM	1	0	24.29	0-1	1
	1	25	24.27		1
	1	49	24.21		1
	25	0	22.99	0-2	2
	25	12	23.05		2
	25	25	22.95		2
	50	0	22.97		2
64QAM	1	0	23.16	0-2	2
	1	25	23.09		2
	1	49	23.05		2
	25	0	21.98	0-3	3
	25	12	22.02		3
	25	25	21.97		3
	50	0	21.99		3
256QAM	1	0	19.83	0-5	5
	1	25	19.99		5
	1	49	19.84		5
	25	0	19.96		5
	25	12	20.01		5
	25	25	19.95		5
	50	0	19.96		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 9-13
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	24.94	25.02	24.87	0	0
	1	12	25.11	25.03	24.86		0
	1	24	24.98	24.91	24.86		0
	12	0	24.22	24.10	23.98	0-1	1
	12	6	24.16	24.07	23.98		1
	12	13	24.08	24.01	23.94		1
	25	0	24.19	24.04	23.99		1
16QAM	1	0	24.21	24.40	24.18	0-1	1
	1	12	24.23	24.39	24.26		1
	1	24	24.08	24.46	24.17		1
	12	0	23.28	23.18	23.03	0-2	2
	12	6	23.27	23.18	23.07		2
	12	13	23.13	23.09	23.01		2
	25	0	23.18	23.14	23.02		2
64QAM	1	0	22.70	23.00	23.08	0-2	2
	1	12	22.84	23.15	23.00		2
	1	24	22.83	22.84	22.87		2
	12	0	21.58	21.77	22.05	0-3	3
	12	6	21.71	21.81	21.84		3
	12	13	21.63	21.71	21.43		3
	25	0	21.52	21.74	21.71		3
256QAM	1	0	20.20	20.08	20.03	0-5	5
	1	12	20.14	20.02	20.02		5
	1	24	20.11	20.07	19.97		5
	12	0	20.10	19.99	19.94		5
	12	6	20.12	20.00	19.98		5
	12	13	20.02	19.98	19.94		5
	25	0	20.09	19.95	19.95		5

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Table 9-14
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	25.07	24.97	24.78	0	0
	1	7	25.00	24.88	24.95		0
	1	14	24.95	24.89	24.64		0
	8	0	24.21	24.00	23.90	0-1	1
	8	4	24.25	24.03	24.00		1
	8	7	24.12	23.97	23.96		1
	15	0	24.18	24.03	23.92		1
16QAM	1	0	24.09	24.56	24.15	0-1	1
	1	7	24.12	24.40	24.18		1
	1	14	24.11	24.37	24.02		1
	8	0	23.24	23.17	22.90	0-2	2
	8	4	23.25	23.13	22.94		2
	8	7	23.17	23.13	22.87		2
	15	0	23.26	23.07	22.86		2
64QAM	1	0	22.72	22.82	22.83	0-2	2
	1	7	22.94	22.88	22.75		2
	1	14	22.96	22.90	22.84		2
	8	0	21.70	21.99	22.01	0-3	3
	8	4	21.77	22.08	22.14		3
	8	7	21.75	22.00	21.96		3
	15	0	21.70	22.05	21.92		3
256QAM	1	0	20.24	20.06	20.01	0-5	5
	1	7	20.18	20.05	20.05		5
	1	14	20.10	20.02	19.94		5
	8	0	20.16	20.01	19.88		5
	8	4	20.14	20.05	19.97		5
	8	7	20.07	20.04	19.96		5
	15	0	20.16	20.03	19.87		5

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Table 9-15
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	24.91	24.95	24.82	0	0
	1	2	24.97	24.99	24.91		0
	1	5	24.82	24.92	24.87		0
	3	0	25.02	24.87	24.82		0
	3	2	24.97	24.88	24.76		0
	3	3	24.93	24.81	24.71		0
	6	0	24.04	23.92	23.84	0-1	1
16QAM	1	0	23.80	23.91	23.80	0-1	1
	1	2	23.90	23.95	24.04		1
	1	5	23.79	23.85	24.07		1
	3	0	24.20	24.06	23.81		1
	3	2	24.20	24.18	23.94		1
	3	3	24.13	24.17	23.88		1
	6	0	23.25	23.12	23.07	0-2	2
64QAM	1	0	23.05	23.12	23.27	0-2	2
	1	2	23.16	23.24	23.14		2
	1	5	23.20	23.06	23.01		2
	3	0	23.00	23.22	23.33		2
	3	2	23.15	23.26	23.23		2
	3	3	23.11	23.21	23.09		2
	6	0	22.15	21.92	21.93	0-3	3
256QAM	1	0	20.10	19.97	19.95	0-5	5
	1	2	20.16	20.03	20.02		5
	1	5	20.06	19.94	19.93		5
	3	0	20.12	19.97	19.99		5
	3	2	20.18	20.05	20.13		5
	3	3	20.06	20.03	20.08		5
	6	0	19.95	19.89	19.83		5

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9.4.3 LTE Band 13

Table 9-16
LTE Band 13 Measured P_{max} for all DSI - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**25.03**	0	0
	1	25	25.00		0
	1	49	24.95		0
	25	0	24.05	0-1	1
	25	12	24.03		1
	25	25	**24.08**		1
	50	0	23.99		1
16QAM	1	0	24.22	0-1	1
	1	25	24.17		1
	1	49	24.24		1
	25	0	23.10	0-2	2
	25	12	23.09		2
	25	25	23.07		2
	50	0	23.00		2
64QAM	1	0	23.08	0-2	2
	1	25	23.20		2
	1	49	23.17		2
	25	0	22.06	0-3	3
	25	12	22.06		3
	25	25	22.11		3
	50	0	21.98		3
256QAM	1	0	19.97	0-5	5
	1	25	20.02		5
	1	49	19.93		5
	25	0	19.97		5
	25	12	20.00		5
	25	25	20.02		5
	50	0	19.94		5

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Table 9-17
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	24.78	0	0
	1	12	24.86		0
	1	24	24.79		0
	12	0	23.96	0-1	1
	12	6	23.88		1
	12	13	23.95		1
	25	0	23.92		1
16QAM	1	0	24.05	0-1	1
	1	12	24.00		1
	1	24	23.90		1
	12	0	23.03	0-2	2
	12	6	23.09		2
	12	13	23.07		2
	25	0	22.95		2
64QAM	1	0	23.26	0-2	2
	1	12	23.27		2
	1	24	23.20		2
	12	0	22.03	0-3	3
	12	6	22.05		3
	12	13	22.07		3
	25	0	21.99		3
256QAM	1	0	19.81	0-5	5
	1	12	19.79		5
	1	24	19.76		5
	12	0	20.03		5
	12	6	20.07		5
	12	13	20.10		5
	25	0	19.90		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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9.4.4 LTE Band 14

Table 9-18
LTE Band 14 Measured P_{max} for all DSI - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**25.05**	0	0
	1	25	24.86		0
	1	49	24.81		0
	25	0	23.96	0-1	1
	25	12	**24.02**		1
	25	25	23.86		1
	50	0	23.93		1
16QAM	1	0	24.33	0-1	1
	1	25	24.26		1
	1	49	24.22		1
	25	0	22.97	0-2	2
	25	12	23.03		2
	25	25	22.87		2
	50	0	22.93		2
64QAM	1	0	23.17	0-2	2
	1	25	23.10		2
	1	49	22.98		2
	25	0	21.98	0-3	3
	25	12	22.03		3
	25	25	21.88		3
	50	0	21.94		3
256QAM	1	0	19.73	0-5	5
	1	25	20.08		5
	1	49	19.71		5
	25	0	19.94		5
	25	12	19.98		5
	25	25	19.87		5
	50	0	19.88		5

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Table 9-19
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	24.70	0	0
	1	12	24.78		0
	1	24	24.61		0
	12	0	23.87	0-1	1
	12	6	23.94		1
	12	13	23.96		1
	25	0	23.86		1
16QAM	1	0	24.03	0-1	1
	1	12	24.07		1
	1	24	23.95		1
	12	0	23.02	0-2	2
	12	6	23.05		2
	12	13	22.88		2
	25	0	22.90		2
64QAM	1	0	22.94	0-2	2
	1	12	22.89		2
	1	24	22.70		2
	12	0	22.00	0-3	3
	12	6	22.04		3
	12	13	21.89		3
	25	0	21.87		3
256QAM	1	0	19.85	0-5	5
	1	12	19.78		5
	1	24	19.88		5
	12	0	19.91		5
	12	6	19.96		5
	12	13	19.80		5
	25	0	19.90		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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9.4.5 LTE Band 26 (Cell)

Table 9-20
LTE Band 26 (Cell) Measured P_{max} for all DSI - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**25.04**	0	0
	1	36	25.02		0
	1	74	24.97		0
	36	0	24.01	0-1	1
	36	18	24.05		1
	36	37	**24.07**		1
	75	0	23.98		1
16QAM	1	0	24.30	0-1	1
	1	36	24.24		1
	1	74	24.06		1
	36	0	23.03	0-2	2
	36	18	23.07		2
	36	37	23.04		2
	75	0	22.96		2
64QAM	1	0	23.22	0-2	2
	1	36	23.07		2
	1	74	23.14		2
	36	0	22.05	0-3	3
	36	18	22.09		3
	36	37	22.05		3
	75	0	22.01		3
256QAM	1	0	19.82	0-5	5
	1	36	20.19		5
	1	74	19.94		5
	36	0	19.99		5
	36	18	20.08		5
	36	37	20.08		5
	75	0	20.00		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 9-21
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	24.99	25.20	25.11	0	0
	1	25	24.99	24.97	25.00		0
	1	49	25.01	25.12	25.01		0
	25	0	24.05	24.03	23.96	0-1	1
	25	12	24.25	24.14	24.13		1
	25	25	24.13	24.13	24.08		1
	50	0	24.15	24.05	23.94		1
16QAM	1	0	23.94	24.15	24.52	0-1	1
	1	25	23.88	24.14	24.52		1
	1	49	23.92	24.20	24.49		1
	25	0	23.15	23.12	22.99	0-2	2
	25	12	23.30	23.22	23.15		2
	25	25	23.25	23.23	23.12		2
	50	0	23.16	23.05	23.01		2
64QAM	1	0	23.39	23.41	23.07	0-2	2
	1	25	23.30	23.49	23.17		2
	1	49	23.33	23.38	23.02		2
	25	0	22.13	22.09	22.08	0-3	3
	25	12	22.27	22.23	22.26		3
	25	25	22.24	22.18	22.17		3
	50	0	22.15	22.08	22.02		3
256QAM	1	0	19.87	19.88	20.25	0-5	5
	1	25	19.98	20.22	20.12		5
	1	49	19.78	19.95	20.28		5
	25	0	20.16	20.08	19.98		5
	25	12	20.41	20.17	20.23		5
	25	25	20.25	20.15	20.13		5
	50	0	20.23	20.07	20.03		5

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Table 9-22
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	24.88	24.98	25.05	0	0
	1	12	25.12	25.05	25.13		0
	1	24	25.08	25.10	25.15		0
	12	0	24.08	24.11	24.09	0-1	1
	12	6	24.21	24.21	24.14		1
	12	13	24.19	24.23	24.12		1
	25	0	24.17	24.18	24.10		1
16QAM	1	0	24.05	24.25	24.41	0-1	1
	1	12	24.30	24.28	24.45		1
	1	24	24.27	24.31	24.38		1
	12	0	23.22	23.18	23.21	0-2	2
	12	6	23.32	23.28	23.26		2
	12	13	23.30	23.27	23.22		2
	25	0	23.18	23.16	23.17		2
64QAM	1	0	23.42	23.35	23.31	0-2	2
	1	12	23.62	23.39	23.34		2
	1	24	23.61	23.35	23.33		2
	12	0	22.19	22.15	22.09	0-3	3
	12	6	22.31	22.20	22.23		3
	12	13	22.24	22.26	22.11		3
	25	0	22.22	22.16	22.09		3
256QAM	1	0	20.10	20.18	19.99	0-5	5
	1	12	20.27	20.39	20.08		5
	1	24	20.16	20.29	20.06		5
	12	0	20.13	20.21	20.07		5
	12	6	20.28	20.28	20.17		5
	12	13	20.22	20.26	20.14		5
	25	0	20.22	20.16	20.01		5

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Table 9-23
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	24.89	25.07	24.99	0	0
	1	7	24.85	25.09	24.96		0
	1	14	24.90	25.16	24.96		0
	8	0	24.12	24.14	24.12	0-1	1
	8	4	24.20	24.16	24.18		1
	8	7	24.16	24.23	24.09		1
	15	0	24.18	24.15	24.13		1
16QAM	1	0	24.01	24.57	24.39	0-1	1
	1	7	24.16	24.59	24.27		1
	1	14	24.12	24.61	24.22		1
	8	0	23.18	23.25	23.12	0-2	2
	8	4	23.27	23.27	23.14		2
	8	7	23.20	23.34	23.09		2
	15	0	23.23	23.19	23.13		2
64QAM	1	0	23.25	22.98	23.37	0-2	2
	1	7	23.37	23.04	23.33		2
	1	14	23.35	23.03	23.29		2
	8	0	22.21	22.24	22.14	0-3	3
	8	4	22.20	22.28	22.18		3
	8	7	22.20	22.29	22.15		3
	15	0	22.21	22.21	22.15		3
256QAM	1	0	20.18	20.19	19.75	0-5	5
	1	7	20.21	20.24	19.76		5
	1	14	20.16	20.24	19.75		5
	8	0	20.28	20.03	20.11		5
	8	4	20.34	20.07	20.14		5
	8	7	20.29	20.09	20.10		5
	15	0	20.19	20.13	20.07		5

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Table 9-24
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	24.87	24.95	24.92	0	0
	1	2	25.03	25.12	24.98		0
	1	5	24.98	25.03	24.90		0
	3	0	24.99	25.03	24.95		0
	3	2	25.05	25.13	24.99		0
	3	3	25.02	25.12	24.94		0
	6	0	24.05	24.09	24.05	0-1	1
16QAM	1	0	24.36	24.45	24.44	0-1	1
	1	2	24.51	24.57	24.50		1
	1	5	24.48	24.53	24.40		1
	3	0	24.37	24.40	24.36		1
	3	2	24.45	24.52	24.36		1
	3	3	24.35	24.44	24.33		1
	6	0	23.04	23.00	22.96	0-2	2
64QAM	1	0	22.83	22.94	22.86	0-2	2
	1	2	22.96	23.07	22.95		2
	1	5	22.86	22.93	22.82		2
	3	0	23.16	23.18	23.14		2
	3	2	23.25	23.30	23.19		2
	3	3	23.21	23.24	23.14		2
	6	0	22.40	22.36	22.33	0-3	3
256QAM	1	0	20.03	20.06	19.75	0-5	5
	1	2	20.22	20.18	19.72		5
	1	5	20.13	20.16	19.65		5
	3	0	20.23	20.15	19.93		5
	3	2	20.23	20.22	20.01		5
	3	3	20.17	20.17	19.96		5
	6	0	20.17	19.99	20.03		5

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9.4.6 LTE Band 5 (Cell)

Table 9-25
LTE Band 5 (Cell) Measured P_{max} for all DSI - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**25.01**	0	0
	1	25	24.98		0
	1	49	24.92		0
	25	0	24.05	0-1	1
	25	12	**24.15**		1
	25	25	24.11		1
	50	0	24.01		1
16QAM	1	0	24.58	0-1	1
	1	25	24.44		1
	1	49	24.46		1
	25	0	23.05	0-2	2
	25	12	23.17		2
	25	25	23.10		2
	50	0	23.00		2
64QAM	1	0	23.00	0-2	2
	1	25	23.14		2
	1	49	23.28		2
	25	0	22.01	0-3	3
	25	12	22.22		3
	25	25	22.01		3
	50	0	22.11		3
256QAM	1	0	20.09	0-5	5
	1	25	20.19		5
	1	49	20.04		5
	25	0	19.99		5
	25	12	20.10		5
	25	25	20.00		5
	50	0	20.06		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 9-26
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	24.78	25.00	24.95	0	0
	1	12	24.92	25.11	25.06		0
	1	24	24.87	25.09	25.05		0
	12	0	24.20	24.09	24.15	0-1	1
	12	6	23.98	24.19	24.20		1
	12	13	24.22	24.18	24.13		1
	25	0	24.26	24.14	24.16		1
16QAM	1	0	24.44	24.51	24.05	0-1	1
	1	12	24.53	24.50	24.16		1
	1	24	24.34	24.49	24.20		1
	12	0	23.27	23.24	23.18	0-2	2
	12	6	23.36	23.31	23.32		2
	12	13	23.35	23.30	23.26		2
	25	0	23.34	23.30	23.19		2
64QAM	1	0	23.34	23.25	22.98	0-2	2
	1	12	23.35	23.38	22.84		2
	1	24	23.18	23.28	22.78		2
	12	0	21.89	22.09	21.77	0-3	3
	12	6	22.04	22.19	21.83		3
	12	13	22.14	22.14	21.80		3
	25	0	22.10	22.21	21.75		3
256QAM	1	0	20.30	20.25	20.11	0-5	5
	1	12	20.37	20.35	20.20		5
	1	24	20.23	20.27	20.13		5
	12	0	20.32	20.14	20.13		5
	12	6	20.31	20.25	20.25		5
	12	13	20.29	20.19	20.18		5
	25	0	20.36	20.22	20.14		5

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Table 9-27
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	25.09	24.96	24.91	0	0
	1	7	25.09	24.98	24.93		0
	1	14	25.08	25.07	25.00		0
	8	0	24.27	24.08	24.06	0-1	1
	8	4	24.34	24.18	24.15		1
	8	7	24.25	24.16	24.14		1
	15	0	24.26	24.14	24.18		1
16QAM	1	0	24.22	24.45	24.19	0-1	1
	1	7	24.19	24.55	24.08		1
	1	14	24.19	24.51	24.20		1
	8	0	23.29	23.21	23.12	0-2	2
	8	4	23.37	23.27	23.15		2
	8	7	23.32	23.28	23.12		2
	15	0	23.34	23.18	23.13		2
64QAM	1	0	23.17	22.88	22.75	0-2	2
	1	7	23.29	22.95	22.74		2
	1	14	22.98	22.99	22.80		2
	8	0	22.29	22.20	21.80	0-3	3
	8	4	22.19	22.25	21.79		3
	8	7	21.99	22.23	21.82		3
	15	0	22.14	22.22	21.82		3
256QAM	1	0	20.20	20.14	19.90	0-5	5
	1	7	20.18	20.14	19.82		5
	1	14	20.12	20.18	19.85		5
	8	0	20.39	19.96	20.07		5
	8	4	20.37	20.10	20.17		5
	8	7	20.35	20.05	20.17		5
	15	0	20.24	20.14	20.11		5

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Table 9-28
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	25.07	24.94	24.93	0	0
	1	2	25.16	25.08	25.05		0
	1	5	25.09	24.97	24.94		0
	3	0	25.09	24.97	24.97		0
	3	2	25.16	25.08	25.06		0
	3	3	25.16	24.98	25.03		0
	6	0	24.17	24.08	24.06	0-1	1
16QAM	1	0	24.59	24.43	24.49	0-1	1
	1	2	24.60	24.49	24.55		1
	1	5	24.55	24.41	24.47		1
	3	0	24.51	24.42	24.39		1
	3	2	24.59	24.43	24.43		1
	3	3	24.47	24.41	24.34		1
	6	0	23.12	23.02	23.00	0-2	2
64QAM	1	0	23.07	22.91	23.11	0-2	2
	1	2	23.11	22.99	23.05		2
	1	5	22.89	22.90	22.98		2
	3	0	23.32	23.19	23.00		2
	3	2	23.38	23.25	22.91		2
	3	3	23.25	23.19	22.84		2
	6	0	22.52	22.39	22.05	0-3	3
256QAM	1	0	20.19	20.08	19.85	0-5	5
	1	2	20.30	20.11	19.87		5
	1	5	20.20	20.12	19.80		5
	3	0	20.29	20.15	19.94		5
	3	2	20.31	20.17	20.01		5
	3	3	20.23	20.08	19.97		5
	6	0	20.24	19.96	20.03		5

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9.4.7 LTE Band 66 (AWS)

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) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.75	22.81	22.90	0	0
	1	50	23.10	22.95	23.06		0
	1	99	22.87	22.82	**23.12**		0
	50	0	22.18	22.04	22.01	0-1	1
	50	25	22.22	22.14	**22.23**		1
	50	50	22.09	22.06	22.07		1
	100	0	22.16	22.07	22.15		1
16QAM	1	0	22.19	22.34	22.27	0-1	1
	1	50	22.28	22.21	22.26		1
	1	99	22.04	22.00	22.38		1
	50	0	21.15	21.16	21.06	0-2	2
	50	25	21.22	21.25	21.19		2
	50	50	21.08	21.09	20.98		2
	100	0	21.13	21.05	21.11		2
64QAM	1	0	21.01	21.11	21.25	0-2	2
	1	50	21.37	20.89	21.22		2
	1	99	21.07	21.13	21.34		2
	50	0	20.09	20.09	20.02	0-3	3
	50	25	20.23	20.15	20.17		3
	50	50	20.06	20.00	20.07		3
	100	0	20.14	20.06	20.09		3
256QAM	1	0	18.08	18.02	18.00	0-5	5
	1	50	18.17	18.17	18.17		5
	1	99	17.99	17.96	18.00		5
	50	0	18.03	18.05	17.99		5
	50	25	18.25	18.23	18.17		5
	50	50	18.16	18.00	18.03		5
	100	0	18.08	18.07	18.08		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) - 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	22.75	23.06	23.02	0	0
	1	36	23.24	23.28	23.23		0
	1	74	23.16	23.04	23.16		0
	36	0	22.33	22.28	22.22	0-1	1
	36	18	22.39	22.33	22.31		1
	36	37	22.32	22.22	22.26		1
	75	0	22.32	22.23	22.11		1
16QAM	1	0	22.39	22.38	22.45	0-1	1
	1	36	22.45	22.49	22.22		1
	1	74	22.21	22.20	22.50		1
	36	0	21.36	21.22	21.22	0-2	2
	36	18	21.39	21.28	21.25		2
	36	37	21.14	21.17	21.12		2
	75	0	21.20	21.19	21.22		2
64QAM	1	0	21.05	20.98	21.10	0-2	2
	1	36	21.09	20.92	21.39		2
	1	74	21.12	21.25	21.47		2
	36	0	20.02	19.97	20.39	0-3	3
	36	18	20.24	20.27	20.53		3
	36	37	20.38	20.41	20.44		3
	75	0	20.10	20.29	20.34		3
256QAM	1	0	18.34	18.35	18.20	0-5	5
	1	36	18.48	18.40	18.40		5
	1	74	18.30	18.28	18.33		5
	36	0	18.46	18.43	18.32		5
	36	18	18.47	18.41	18.45		5
	36	37	18.38	18.33	18.38		5
	75	0	18.45	18.38	18.38		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) - 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	23.14	23.12	22.83	0	0
	1	25	23.12	23.02	23.07		0
	1	49	22.95	22.93	22.91		0
	25	0	22.19	22.03	22.08	0-1	1
	25	12	22.21	22.15	22.21		1
	25	25	22.01	22.04	22.10		1
	50	0	22.07	22.13	22.08		1
16QAM	1	0	22.22	22.27	22.45	0-1	1
	1	25	22.31	22.13	22.38		1
	1	49	22.18	22.24	22.35		1
	25	0	21.36	21.42	21.37	0-2	2
	25	12	21.24	21.42	21.23		2
	25	25	21.33	21.37	21.40		2
	50	0	21.38	21.34	21.33		2
64QAM	1	0	20.98	20.99	21.01	0-2	2
	1	25	20.93	21.19	20.89		2
	1	49	21.16	21.16	20.96		2
	25	0	20.13	20.08	20.38	0-3	3
	25	12	20.14	20.27	20.44		3
	25	25	20.15	20.39	20.41		3
	50	0	20.25	20.11	20.31		3
256QAM	1	0	18.21	18.21	18.21	0-5	5
	1	25	18.18	18.36	18.11		5
	1	49	18.10	18.01	18.12		5
	25	0	18.33	18.39	18.33		5
	25	12	18.26	18.38	18.39		5
	25	25	18.21	18.26	18.35		5
	50	0	18.39	18.31	18.27		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) - 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	22.92	23.20	23.05	0	0
	1	12	22.91	23.27	23.20		0
	1	24	22.98	23.24	23.20		0
	12	0	22.36	22.28	22.20	0-1	1
	12	6	22.26	22.25	22.21		1
	12	13	22.11	22.15	22.10		1
	25	0	22.16	22.21	22.15		1
16QAM	1	0	22.23	22.42	22.42	0-1	1
	1	12	22.41	22.49	22.44		1
	1	24	22.20	22.36	22.37		1
	12	0	21.25	21.50	21.30	0-2	2
	12	6	21.34	21.47	21.32		2
	12	13	21.27	21.37	21.23		2
	25	0	21.42	21.44	21.37		2
64QAM	1	0	21.16	21.12	21.31	0-2	2
	1	12	21.11	21.20	21.24		2
	1	24	21.20	21.25	20.90		2
	12	0	20.11	20.05	20.39	0-3	3
	12	6	20.17	20.19	20.38		3
	12	13	20.22	20.31	20.31		3
	25	0	20.05	20.12	20.30		3
256QAM	1	0	18.20	18.34	18.32	0-5	5
	1	12	18.18	18.26	18.11		5
	1	24	17.97	18.37	18.27		5
	12	0	18.33	18.29	18.33		5
	12	6	18.36	18.28	18.39		5
	12	13	18.36	18.26	18.35		5
	25	0	18.29	18.31	18.27		5

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Table 9-33
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	23.19	23.29	22.99	0	0
	1	7	23.08	23.23	23.19		0
	1	14	23.04	23.16	23.15		0
	8	0	22.06	22.30	22.30	0-1	1
	8	4	22.34	22.33	22.32		1
	8	7	22.38	22.27	22.27		1
	15	0	22.20	22.32	22.28		1
16QAM	1	0	22.45	22.45	22.14	0-1	1
	1	7	22.40	22.51	22.09		1
	1	14	22.37	22.41	22.07		1
	8	0	21.25	21.40	21.29	0-2	2
	8	4	21.37	21.39	21.34		2
	8	7	21.30	21.31	21.26		2
	15	0	21.28	21.25	21.25		2
64QAM	1	0	20.98	21.10	21.27	0-2	2
	1	7	21.14	21.15	21.33		2
	1	14	21.02	20.90	21.36		2
	8	0	19.98	20.13	20.22	0-3	3
	8	4	20.12	20.22	20.20		3
	8	7	20.26	20.24	20.24		3
	15	0	20.28	20.18	20.25		3
256QAM	1	0	18.39	18.39	18.03	0-5	5
	1	7	18.27	18.35	18.13		5
	1	14	18.31	18.30	18.07		5
	8	0	18.21	18.23	18.38		5
	8	4	18.20	18.26	18.43		5
	8	7	18.28	18.17	18.38		5
	15	0	18.36	18.34	18.31		5

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Table 9-34
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	23.29	23.18	22.97	0	0
	1	2	23.20	23.19	23.14		0
	1	5	23.13	23.09	23.03		0
	3	0	23.25	23.18	23.20		0
	3	2	23.14	23.22	23.25		0
	3	3	23.09	23.18	23.15		0
	6	0	22.20	22.23	22.27	0-1	1
16QAM	1	0	22.49	22.45	22.03	0-1	1
	1	2	22.37	22.55	22.08		1
	1	5	22.39	22.39	22.01		1
	3	0	22.54	22.36	22.39		1
	3	2	22.41	22.37	22.44		1
	3	3	22.49	22.43	22.34		1
	6	0	21.07	21.18	21.43	0-2	2
64QAM	1	0	21.00	21.14	21.37	0-2	2
	1	2	21.08	21.16	21.42		2
	1	5	21.06	21.19	21.38		2
	3	0	21.02	21.21	21.31		2
	3	2	21.01	21.11	21.37		2
	3	3	21.10	21.07	21.29		2
	6	0	20.06	20.36	20.40	0-3	3
256QAM	1	0	18.39	18.26	18.01	0-5	5
	1	2	18.45	18.28	18.05		5
	1	5	18.30	18.27	17.95		5
	3	0	18.41	18.31	18.27		5
	3	2	18.40	18.38	18.33		5
	3	3	18.37	18.26	18.22		5
	6	0	18.38	18.17	18.31		5

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Table 9-35
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	18.86	18.89	19.08	0	0
	1	50	**19.16**	18.90	19.06		0
	1	99	18.88	18.83	19.09		0
	50	0	19.17	19.09	19.09	0-1	0
	50	25	**19.24**	19.15	19.08		0
	50	50	19.05	19.00	19.08		0
	100	0	19.15	19.07	19.08		0
16QAM	1	0	19.40	19.37	19.40	0-1	0
	1	50	19.63	19.49	19.44		0
	1	99	19.43	19.30	19.42		0
	50	0	19.25	19.26	19.23	0-2	0
	50	25	19.33	19.29	19.23		0
	50	50	19.16	19.18	19.22		0
	100	0	19.20	19.14	19.20		0
64QAM	1	0	19.38	19.19	19.31	0-2	0
	1	50	19.39	19.23	19.25		0
	1	99	19.30	19.11	19.22		0
	50	0	19.33	19.18	19.24	0-3	0
	50	25	19.43	19.22	19.27		0
	50	50	19.23	19.19	19.25		0
	100	0	19.35	19.26	19.21		0
256QAM	1	0	18.39	18.28	18.25	0-5	1
	1	50	18.38	18.52	18.39		1
	1	99	18.24	18.25	18.19		1
	50	0	18.21	18.12	18.24		1
	50	25	18.32	18.20	18.20		1
	50	50	18.12	18.15	18.22		1
	100	0	18.22	18.15	18.24		1

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Table 9-36
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.08	18.89	19.10	0	0
	1	36	19.23	19.01	19.04		0
	1	74	19.09	18.99	19.10		0
	36	0	19.35	19.23	19.22	0-1	0
	36	18	19.37	19.25	19.23		0
	36	37	19.21	19.19	19.14		0
	75	0	19.33	19.23	19.26		0
16QAM	1	0	19.47	19.02	19.43	0-1	0
	1	36	19.60	19.49	19.48		0
	1	74	19.51	19.31	19.47		0
	36	0	19.35	19.32	19.25	0-2	0
	36	18	19.40	19.29	19.24		0
	36	37	19.29	19.19	19.18		0
	75	0	19.34	19.26	19.25		0
64QAM	1	0	19.25	19.39	19.40	0-2	0
	1	36	19.51	19.41	19.47		0
	1	74	19.29	19.20	19.35		0
	36	0	19.38	19.29	19.28	0-3	0
	36	18	19.40	19.29	19.33		0
	36	37	19.31	19.12	19.22		0
	75	0	19.37	19.26	19.27		0
256QAM	1	0	18.51	18.34	18.22	0-5	1
	1	36	18.46	18.38	18.34		1
	1	74	18.23	18.21	18.11		1
	36	0	18.35	18.27	18.23		1
	36	18	18.43	18.30	18.31		1
	36	37	18.37	18.21	18.12		1
	75	0	18.32	18.22	18.25		1

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Table 9-37
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	18.86	18.82	18.72	0	0
	1	25	19.08	19.05	19.00		0
	1	49	18.89	18.84	18.84		0
	25	0	19.17	19.11	19.08	0-1	0
	25	12	19.24	19.15	19.17		0
	25	25	19.08	18.98	19.03		0
	50	0	19.17	19.05	19.08		0
16QAM	1	0	19.41	19.26	19.34	0-1	0
	1	25	19.61	19.57	19.55		0
	1	49	19.51	19.17	19.35		0
	25	0	19.33	19.21	19.22	0-2	0
	25	12	19.27	19.27	19.27		0
	25	25	19.20	19.12	19.17		0
	50	0	19.16	19.21	19.16		0
64QAM	1	0	19.18	19.11	19.10	0-2	0
	1	25	19.32	19.43	19.37		0
	1	49	19.12	19.01	19.10		0
	25	0	19.34	19.19	19.20	0-3	0
	25	12	19.36	19.31	19.31		0
	25	25	19.27	19.13	19.18		0
	50	0	19.33	19.26	19.24		0
256QAM	1	0	18.35	18.25	18.19	0-5	1
	1	25	18.45	18.23	18.46		1
	1	49	18.13	18.08	18.15		1
	25	0	18.22	18.22	18.26		1
	25	12	18.30	18.31	18.29		1
	25	25	18.24	18.11	18.15		1
	50	0	18.21	18.24	18.22		1

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Table 9-38
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.27	19.11	19.14	0	0
	1	12	19.31	19.17	19.21		0
	1	24	19.17	18.96	18.94		0
	12	0	19.41	19.33	19.27	0-1	0
	12	6	19.34	19.29	19.27		0
	12	13	19.25	19.15	19.20		0
	25	0	19.31	19.27	19.21		0
16QAM	1	0	19.59	19.46	19.64	0-1	0
	1	12	19.56	19.46	19.44		0
	1	24	19.59	19.39	19.47		0
	12	0	19.47	19.37	19.33	0-2	0
	12	6	19.46	19.42	19.29		0
	12	13	19.38	19.20	19.30		0
	25	0	19.31	19.30	19.29		0
64QAM	1	0	19.46	19.40	19.34	0-2	0
	1	12	19.54	19.45	19.41		0
	1	24	19.40	19.34	19.30		0
	12	0	19.47	19.37	19.38	0-3	0
	12	6	19.37	19.40	19.32		0
	12	13	19.36	19.18	19.28		0
	25	0	19.33	19.33	19.29		0
256QAM	1	0	18.52	18.42	18.31	0-5	1
	1	12	18.41	18.39	18.34		1
	1	24	18.17	18.26	18.36		1
	12	0	18.34	18.38	18.26		1
	12	6	18.38	18.31	18.29		1
	12	13	18.28	18.15	18.23		1
	25	0	18.28	18.28	18.27		1

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Table 9-39
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.27	19.20	19.19	0	0
	1	7	19.23	19.29	19.15		0
	1	14	19.19	19.00	19.03		0
	8	0	19.34	19.30	19.27	0-1	0
	8	4	19.39	19.27	19.29		0
	8	7	19.31	19.14	19.21		0
	15	0	19.35	19.26	19.29		0
16QAM	1	0	19.62	19.56	19.63	0-1	0
	1	7	19.62	19.41	19.64		0
	1	14	19.54	19.40	19.41		0
	8	0	19.49	19.37	19.41	0-2	0
	8	4	19.47	19.40	19.39		0
	8	7	19.43	19.29	19.42		0
	15	0	19.36	19.29	19.27		0
64QAM	1	0	19.47	19.39	19.50	0-2	0
	1	7	19.52	19.41	19.33		0
	1	14	19.51	19.32	19.30		0
	8	0	19.42	19.19	19.31	0-3	0
	8	4	19.44	19.28	19.29		0
	8	7	19.36	19.16	19.24		0
	15	0	19.43	19.33	19.32		0
256QAM	1	0	18.51	18.33	18.34	0-5	1
	1	7	18.43	18.28	18.44		1
	1	14	18.43	18.24	18.27		1
	8	0	18.35	18.32	18.39		1
	8	4	18.39	18.35	18.35		1
	8	7	18.39	18.20	18.24		1
	15	0	18.38	18.29	18.29		1

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Table 9-40
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.21	19.09	19.05	0	0
	1	2	19.22	19.16	19.11		0
	1	5	19.10	19.10	19.16		0
	3	0	19.20	19.12	19.03		0
	3	2	19.18	19.13	19.12		0
	3	3	19.10	19.05	19.10		0
	6	0	19.22	19.20	19.18	0-1	0
16QAM	1	0	19.53	19.54	19.44	0-1	0
	1	2	19.60	19.50	19.44		0
	1	5	19.48	19.49	19.40		0
	3	0	19.47	19.29	19.28		0
	3	2	19.45	19.33	19.30		0
	3	3	19.33	19.34	19.38		0
	6	0	19.29	19.26	19.22	0-2	0
64QAM	1	0	19.43	19.36	19.37	0-2	0
	1	2	19.51	19.52	19.38		0
	1	5	19.33	19.31	19.37		0
	3	0	19.42	19.29	19.29		0
	3	2	19.43	19.38	19.29		0
	3	3	19.28	19.25	19.23		0
	6	0	19.20	19.23	19.23	0-3	0
256QAM	1	0	18.44	18.27	18.26	0-5	1
	1	2	18.44	18.37	18.33		1
	1	5	18.25	18.21	18.27		1
	3	0	18.40	18.37	18.31		1
	3	2	18.45	18.37	18.37		1
	3	3	18.33	18.24	18.27		1
	6	0	18.26	18.22	18.20		1

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9.4.8 LTE Band 25 (PCS)

Table 9-41
LTE Band 25 (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 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.22	23.11	23.16	0	0
	1	50	23.10	23.12	**23.26**		0
	1	99	23.07	23.16	23.25		0
	50	0	22.14	22.15	22.33	0-1	1
	50	25	22.11	22.24	22.38		1
	50	50	22.09	22.19	**22.41**		1
	100	0	22.07	22.16	22.32		1
16QAM	1	0	22.50	22.55	22.56	0-1	1
	1	50	22.53	22.58	22.63		1
	1	99	22.59	22.53	22.49		1
	50	0	21.35	21.33	21.49	0-2	2
	50	25	21.28	21.53	21.58		2
	50	50	21.22	21.40	21.50		2
	100	0	21.48	21.42	21.51		2
64QAM	1	0	21.42	21.58	21.47	0-2	2
	1	50	21.39	21.63	21.63		2
	1	99	21.50	21.55	21.58		2
	50	0	20.53	20.41	20.45	0-3	3
	50	25	20.48	20.40	20.58		3
	50	50	20.41	20.48	20.50		3
	100	0	20.40	20.39	20.54		3
256QAM	1	0	18.15	18.12	18.16	0-5	5
	1	50	18.23	18.27	18.35		5
	1	99	18.21	18.16	18.21		5
	50	0	18.11	18.20	18.13		5
	50	25	18.11	18.15	18.36		5
	50	50	18.12	18.21	18.27		5
	100	0	18.14	18.12	18.29		5

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Table 9-42
LTE Band 25 (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 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.24	23.41	23.38	0	0
	1	36	23.38	23.47	23.46		0
	1	74	23.32	23.42	23.41		0
	36	0	22.37	22.27	22.41	0-1	1
	36	18	22.44	22.34	22.55		1
	36	37	22.38	22.38	22.58		1
	75	0	22.32	22.31	22.46		1
16QAM	1	0	22.53	22.70	22.68	0-1	1
	1	36	22.49	22.67	22.55		1
	1	74	22.52	22.52	22.69		1
	36	0	21.41	21.39	21.55	0-2	2
	36	18	21.56	21.56	21.75		2
	36	37	21.55	21.60	21.72		2
	75	0	21.43	21.52	21.61		2
64QAM	1	0	21.37	21.65	21.40	0-2	2
	1	36	21.41	21.55	21.41		2
	1	74	21.52	21.62	21.37		2
	36	0	20.52	20.46	20.62	0-3	3
	36	18	20.64	20.60	20.80		3
	36	37	20.56	20.62	20.80		3
	75	0	20.41	20.62	20.64		3
256QAM	1	0	18.24	18.05	18.36	0-5	5
	1	36	18.34	18.33	18.43		5
	1	74	18.38	18.39	18.28		5
	36	0	18.29	18.21	18.43		5
	36	18	18.41	18.35	18.54		5
	36	37	18.35	18.41	18.57		5
	75	0	18.32	18.40	18.51		5

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Table 9-43
LTE Band 25 (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 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.05	23.12	23.44	0	0
	1	25	23.25	23.31	23.49		0
	1	49	23.06	23.12	23.49		0
	25	0	22.33	22.28	22.40	0-1	1
	25	12	22.43	22.44	22.46		1
	25	25	22.37	22.37	22.49		1
	50	0	22.35	22.40	22.43		1
16QAM	1	0	22.47	22.44	22.50	0-1	1
	1	25	22.52	22.42	22.41		1
	1	49	22.38	22.50	22.48		1
	25	0	21.56	21.49	21.59	0-2	2
	25	12	21.69	21.65	21.69		2
	25	25	21.59	21.62	21.68		2
	50	0	21.53	21.46	21.61		2
64QAM	1	0	21.32	21.45	21.64	0-2	2
	1	25	21.59	21.67	21.73		2
	1	49	21.29	21.45	21.69		2
	25	0	20.56	20.46	20.61	0-3	3
	25	12	20.66	20.62	20.68		3
	25	25	20.59	20.56	20.74		3
	50	0	20.51	20.51	20.55		3
256QAM	1	0	17.96	18.07	18.40	0-5	5
	1	25	18.02	18.33	18.38		5
	1	49	18.05	18.18	18.42		5
	25	0	18.31	18.24	18.43		5
	25	12	18.49	18.42	18.53		5
	25	25	18.37	18.35	18.53		5
	50	0	18.33	18.34	18.43		5

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Table 9-44
LTE Band 25 (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 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.21	23.33	23.41	0	0
	1	12	23.25	23.46	23.39		0
	1	24	23.28	23.48	23.52		0
	12	0	22.36	22.37	22.46	0-1	1
	12	6	22.41	22.41	22.49		1
	12	13	22.43	22.44	22.48		1
	25	0	22.39	22.39	22.44		1
16QAM	1	0	22.49	22.65	22.67	0-1	1
	1	12	22.51	22.84	22.70		1
	1	24	22.53	22.79	22.72		1
	12	0	21.52	21.51	21.60	0-2	2
	12	6	21.60	21.64	21.69		2
	12	13	21.59	21.68	21.74		2
	25	0	21.54	21.60	21.58		2
64QAM	1	0	21.56	21.59	21.78	0-2	2
	1	12	21.62	21.67	21.62		2
	1	24	21.62	21.66	21.67		2
	12	0	20.51	20.40	20.67	0-3	3
	12	6	20.58	20.57	20.69		3
	12	13	20.60	20.56	20.74		3
	25	0	20.48	20.56	20.64		3
256QAM	1	0	18.29	18.39	18.50	0-5	5
	1	12	18.38	18.52	18.45		5
	1	24	18.34	18.53	18.44		5
	12	0	18.31	18.30	18.54		5
	12	6	18.34	18.43	18.55		5
	12	13	18.37	18.43	18.64		5
	25	0	18.37	18.37	18.51		5

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Table 9-45
LTE Band 25 (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 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.29	23.28	23.39	0	0
	1	7	23.32	23.30	23.45		0
	1	14	23.33	23.44	23.52		0
	8	0	22.34	22.40	22.52	0-1	1
	8	4	22.42	22.52	22.62		1
	8	7	22.35	22.51	22.62		1
	15	0	22.38	22.50	22.60		1
16QAM	1	0	22.48	22.70	22.45	0-1	1
	1	7	22.43	22.77	22.49		1
	1	14	22.49	22.74	22.53		1
	8	0	21.49	21.56	21.54	0-2	2
	8	4	21.57	21.59	21.61		2
	8	7	21.55	21.63	21.64		2
	15	0	21.57	21.55	21.61		2
64QAM	1	0	21.62	21.49	21.70	0-2	2
	1	7	21.64	21.55	21.68		2
	1	14	21.68	21.59	21.83		2
	8	0	20.52	20.52	20.55	0-3	3
	8	4	20.60	20.59	20.69		3
	8	7	20.51	20.59	20.67		3
	15	0	20.52	20.55	20.67		3
256QAM	1	0	18.22	18.31	18.23	0-5	5
	1	7	18.19	18.52	18.27		5
	1	14	18.22	18.47	18.36		5
	8	0	18.36	18.13	18.52		5
	8	4	18.46	18.24	18.66		5
	8	7	18.45	18.23	18.65		5
	15	0	18.30	18.38	18.59		5

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Table 9-46
LTE Band 25 (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 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.40	23.25	23.36	0	0
	1	2	23.44	23.33	23.40		0
	1	5	23.42	23.29	23.38		0
	3	0	23.33	23.28	23.44		0
	3	2	23.32	23.35	23.47		0
	3	3	23.31	23.34	23.46		0
	6	0	22.35	22.39	22.49	0-1	1
16QAM	1	0	22.44	22.74	22.52	0-1	1
	1	2	22.68	22.79	22.53		1
	1	5	22.55	22.75	22.60		1
	3	0	22.54	22.65	22.60		1
	3	2	22.61	22.73	22.70		1
	3	3	22.61	22.67	22.64		1
	6	0	21.61	21.29	21.69	0-2	2
64QAM	1	0	21.58	21.48	21.60	0-2	2
	1	2	21.70	21.57	21.67		2
	1	5	21.57	21.49	21.71		2
	3	0	21.67	21.49	21.54		2
	3	2	21.70	21.57	21.64		2
	3	3	21.67	21.52	21.59		2
	6	0	20.42	20.64	20.55	0-3	3
256QAM	1	0	18.14	18.29	18.15	0-5	5
	1	2	18.33	18.32	18.20		5
	1	5	18.23	18.36	18.18		5
	3	0	18.30	18.31	18.39		5
	3	2	18.37	18.39	18.53		5
	3	3	18.28	18.28	18.45		5
	6	0	18.35	18.21	18.53		5

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Table 9-47
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.63	18.59	**18.73**	0	0
	1	50	18.54	18.60	18.60		0
	1	99	18.57	18.64	18.51		0
	50	0	18.77	18.70	18.77	0-1	0
	50	25	18.70	18.79	**18.94**		0
	50	50	18.70	18.74	18.80		0
	100	0	18.62	18.60	18.71		0
16QAM	1	0	18.83	18.64	18.76	0-1	0
	1	50	18.93	18.96	18.84		0
	1	99	18.91	19.00	18.99		0
	50	0	18.75	18.75	18.68	0-2	0
	50	25	18.73	18.83	18.69		0
	50	50	18.67	18.78	18.72		0
	100	0	18.62	18.65	18.80		0
64QAM	1	0	18.86	18.93	18.89	0-2	0
	1	50	18.94	18.95	18.80		0
	1	99	18.82	18.88	18.76		0
	50	0	18.69	18.79	18.70	0-3	0
	50	25	18.74	18.87	18.69		0
	50	50	18.66	18.84	18.74		0
	100	0	18.70	18.76	18.72		0
256QAM	1	0	18.34	18.43	18.33	0-5	0
	1	50	18.36	18.54	18.40		0
	1	99	18.41	18.51	18.34		0
	50	0	18.31	18.41	18.41		0
	50	25	18.30	18.40	18.30		0
	50	50	18.29	18.34	18.43		0
	100	0	18.33	18.30	18.31		0

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Table 9-48
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.55	18.76	18.81	0	0
	1	36	18.64	18.68	18.80		0
	1	74	18.49	18.55	18.79		0
	36	0	18.78	18.64	18.80	0-1	0
	36	18	18.82	18.82	18.85		0
	36	37	18.81	18.86	19.00		0
	75	0	18.76	18.81	18.86		0
16QAM	1	0	18.75	18.85	19.00	0-1	0
	1	36	19.00	19.00	18.99		0
	1	74	18.99	19.00	18.98		0
	36	0	18.73	18.70	18.82	0-2	0
	36	18	18.87	18.79	18.91		0
	36	37	18.89	18.83	19.00		0
	75	0	18.75	18.84	18.86		0
64QAM	1	0	18.73	18.92	19.00	0-2	0
	1	36	19.00	18.99	18.99		0
	1	74	18.82	19.00	18.99		0
	36	0	18.71	18.73	18.76	0-3	0
	36	18	18.92	18.87	18.99		0
	36	37	18.83	18.89	18.95		0
	75	0	18.80	18.82	18.90		0
256QAM	1	0	18.34	18.49	18.36	0-5	0
	1	36	18.45	18.45	18.53		0
	1	74	18.31	18.46	18.52		0
	36	0	18.24	18.26	18.40		0
	36	18	18.39	18.37	18.46		0
	36	37	18.33	18.45	18.51		0
	75	0	18.24	18.32	18.37		0

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Table 9-49
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.51	18.48	18.83	0	0
	1	25	18.73	18.73	18.82		0
	1	49	18.42	18.51	18.87		0
	25	0	18.71	18.70	18.80	0-1	0
	25	12	18.85	18.88	18.97		0
	25	25	18.79	18.83	18.93		0
	50	0	18.76	18.80	18.81		0
16QAM	1	0	18.80	18.74	19.00	0-1	0
	1	25	18.99	19.00	19.00		0
	1	49	18.82	18.97	18.99		0
	25	0	18.75	18.78	18.81	0-2	0
	25	12	18.80	18.89	18.87		0
	25	25	18.80	18.81	18.85		0
	50	0	18.74	18.85	18.84		0
64QAM	1	0	18.70	18.45	18.96	0-2	0
	1	25	18.95	18.97	18.97		0
	1	49	18.79	18.76	18.99		0
	25	0	18.80	18.73	18.76	0-3	0
	25	12	18.86	18.91	19.00		0
	25	25	18.81	18.91	18.94		0
	50	0	18.84	18.85	18.83		0
256QAM	1	0	18.29	18.38	18.31	0-5	0
	1	25	18.32	18.50	18.48		0
	1	49	18.31	18.28	18.20		0
	25	0	18.35	18.37	18.23		0
	25	12	18.36	18.44	18.54		0
	25	25	18.24	18.33	18.45		0
	50	0	18.30	18.37	18.50		0

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Table 9-50
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.70	18.64	18.75	0	0
	1	12	18.75	18.68	18.73		0
	1	24	18.73	18.74	18.87		0
	12	0	18.77	18.75	18.86	0-1	0
	12	6	18.88	18.83	18.96		0
	12	13	18.80	18.91	18.96		0
	25	0	18.81	18.86	18.88		0
16QAM	1	0	19.00	18.92	18.99	0-1	0
	1	12	18.91	18.99	19.00		0
	1	24	18.99	18.98	18.97		0
	12	0	18.85	18.81	18.95	0-2	0
	12	6	18.88	18.93	18.99		0
	12	13	18.94	18.91	18.99		0
	25	0	18.81	18.81	18.97		0
64QAM	1	0	18.68	18.85	18.98	0-2	0
	1	12	18.77	19.00	18.95		0
	1	24	18.73	18.93	18.94		0
	12	0	18.79	18.78	18.96	0-3	0
	12	6	18.87	18.89	18.95		0
	12	13	18.80	18.98	18.99		0
	25	0	18.89	18.87	18.99		0
256QAM	1	0	18.40	18.29	18.50	0-5	0
	1	12	18.51	18.51	18.57		0
	1	24	18.51	18.60	18.62		0
	12	0	18.26	18.27	18.34		0
	12	6	18.35	18.41	18.45		0
	12	13	18.38	18.37	18.50		0
	25	0	18.33	18.34	18.40		0

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Table 9-51
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.69	18.63	18.76	0	0
	1	7	18.64	18.67	18.78		0
	1	14	18.72	18.73	18.98		0
	8	0	18.73	18.74	18.87	0-1	0
	8	4	18.82	18.82	18.93		0
	8	7	18.74	18.83	18.98		0
	15	0	18.83	18.82	18.96		0
16QAM	1	0	19.00	18.99	18.97	0-1	0
	1	7	18.97	18.99	18.99		0
	1	14	18.99	18.95	19.00		0
	8	0	18.90	18.86	18.91	0-2	0
	8	4	18.95	18.94	18.98		0
	8	7	18.86	18.90	18.97		0
	15	0	18.81	18.88	18.95		0
64QAM	1	0	18.94	18.89	18.99	0-2	0
	1	7	18.98	18.99	18.97		0
	1	14	18.87	18.98	19.00		0
	8	0	18.82	18.73	18.93	0-3	0
	8	4	18.89	18.86	18.99		0
	8	7	18.99	18.91	18.98		0
	15	0	18.88	18.93	19.00		0
256QAM	1	0	18.31	18.31	18.47	0-5	0
	1	7	18.45	18.54	18.44		0
	1	14	18.56	18.49	18.60		0
	8	0	18.33	18.32	18.39		0
	8	4	18.40	18.40	18.20		0
	8	7	18.43	18.42	18.36		0
	15	0	18.41	18.40	18.52		0

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Table 9-52
LTE Band 25 (PCS) Measured Plimit for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) – 1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.67	18.66	18.72	0	0
	1	2	18.72	18.72	18.81		0
	1	5	18.64	18.68	18.74		0
	3	0	18.61	18.67	18.73		0
	3	2	18.66	18.75	18.82		0
	3	3	18.69	18.62	18.77		0
	6	0	18.66	18.74	18.82	0-1	0
16QAM	1	0	19.00	18.96	18.97	0-1	0
	1	2	18.99	18.98	18.99		0
	1	5	18.98	18.90	19.00		0
	3	0	18.87	18.86	19.00		0
	3	2	18.89	18.85	18.94		0
	3	3	18.95	18.96	18.95		0
	6	0	18.85	18.83	18.92	0-2	0
64QAM	1	0	18.89	18.97	18.99	0-2	0
	1	2	18.96	18.95	18.95		0
	1	5	18.93	18.91	18.87		0
	3	0	18.77	18.90	18.95		0
	3	2	18.83	18.89	18.92		0
	3	3	18.89	18.90	18.81		0
	6	0	18.80	18.75	18.83	0-3	0
256QAM	1	0	18.34	18.43	18.53	0-5	0
	1	2	18.41	18.73	18.61		0
	1	5	18.35	18.44	18.50		0
	3	0	18.29	18.36	18.44		0
	3	2	18.45	18.43	18.63		0
	3	3	18.29	18.41	18.53		0
	6	0	18.39	18.28	18.32		0

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9.4.9 LTE Band 30

Table 9-53
LTE Band 30 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**23.79**	0	0
	1	25	23.70		0
	1	49	23.72		0
	25	0	22.70	0-1	1
	25	12	**22.89**		1
	25	25	22.77		1
	50	0	22.69		1
16QAM	1	0	23.17	0-1	1
	1	25	23.11		1
	1	49	23.08		1
	25	0	21.72	0-2	2
	25	12	21.85		2
	25	25	21.89		2
	50	0	21.71		2
64QAM	1	0	21.89	0-2	2
	1	25	21.86		2
	1	49	21.92		2
	25	0	20.75	0-3	3
	25	12	20.89		3
	25	25	20.80		3
	50	0	20.79		3
256QAM	1	0	18.83	0-5	5
	1	25	18.94		5
	1	49	18.61		5
	25	0	18.73		5
	25	12	18.94		5
	25	25	18.80		5
	50	0	18.69		5

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Table 9-54
LTE Band 30 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) – 5 MHz Bandwidth

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	23.61	0	0
	1	12	23.68		0
	1	24	23.64		0
	12	0	22.78	0-1	1
	12	6	22.85		1
	12	13	22.83		1
	25	0	22.80		1
16QAM	1	0	23.01	0-1	1
	1	12	23.03		1
	1	24	23.01		1
	12	0	21.85	0-2	2
	12	6	21.87		2
	12	13	21.90		2
	25	0	21.85		2
64QAM	1	0	21.87	0-2	2
	1	12	21.74		2
	1	24	21.96		2
	12	0	20.79	0-3	3
	12	6	20.92		3
	12	13	20.89		3
	25	0	20.81		3
256QAM	1	0	18.81	0-5	5
	1	12	18.95		5
	1	24	18.86		5
	12	0	18.77		5
	12	6	18.85		5
	12	13	18.79		5
	25	0	18.75		5

Note: LTE Band 30 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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Table 9-55
LTE Band 30 Measured P_{limit} for DSI = 3 (Hotspot mode) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**18.21**	0	0
	1	25	18.06		0
	1	49	18.03		0
	25	0	18.10	0-1	0
	25	12	**18.16**		0
	25	25	18.10		0
	50	0	18.15		0
16QAM	1	0	18.52	0-1	0
	1	25	18.45		0
	1	49	18.44		0
	25	0	18.11	0-2	0
	25	12	18.27		0
	25	25	18.11		0
	50	0	18.16		0
64QAM	1	0	18.35	0-2	0
	1	25	18.28		0
	1	49	18.34		0
	25	0	18.16	0-3	0
	25	12	18.30		0
	25	25	18.19		0
	50	0	18.14		0
256QAM	1	0	18.26	0-5	0
	1	25	18.27		0
	1	49	18.18		0
	25	0	18.20		0
	25	12	18.17		0
	25	25	18.19		0
	50	0	18.12		0

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Table 9-56
LTE Band 30 Measured P_{limit} for DSI = 3 (Hotspot mode) - 5 MHz Bandwidth

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	18.11	0	0
	1	12	18.23		0
	1	24	18.09		0
	12	0	18.21	0-1	0
	12	6	18.33		0
	12	13	18.20		0
	25	0	18.28		0
16QAM	1	0	18.31	0-1	0
	1	12	18.51		0
	1	24	18.45		0
	12	0	18.26	0-2	0
	12	6	18.37		0
	12	13	18.33		0
	25	0	18.29		0
64QAM	1	0	18.37	0-2	0
	1	12	18.25		0
	1	24	18.41		0
	12	0	18.29	0-3	0
	12	6	18.38		0
	12	13	18.32		0
	25	0	18.27		0
256QAM	1	0	18.43	0-5	0
	1	12	18.43		0
	1	24	18.32		0
	12	0	18.16		0
	12	6	18.33		0
	12	13	18.27		0
	25	0	18.25		0

Note: LTE Band 30 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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Table 9-57
LTE Band 30 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**20.60**	0	0
	1	25	20.47		0
	1	49	20.59		0
	25	0	20.60	0-1	0
	25	12	**20.74**		0
	25	25	20.55		0
	50	0	20.59		0
16QAM	1	0	21.00	0-1	0
	1	25	21.02		0
	1	49	20.59		0
	25	0	20.57	0-2	0
	25	12	20.54		0
	25	25	20.50		0
	50	0	20.57		0
64QAM	1	0	20.71	0-2	0
	1	25	20.81		0
	1	49	20.71		0
	25	0	19.92	0-3	0.3
	25	12	19.90		0.3
	25	25	19.79		0.3
	50	0	19.85		0.3
256QAM	1	0	18.61	0-5	2.3
	1	25	18.60		2.3
	1	49	18.45		2.3
	25	0	18.40		2.3
	25	12	18.55		2.3
	25	25	18.50		2.3
	50	0	18.54		2.3

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Table 9-58
LTE Band 30 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	20.47	0	0
	1	12	20.70		0
	1	24	20.56		0
	12	0	20.58	0-1	0
	12	6	20.64		0
	12	13	20.71		0
	25	0	20.65		0
16QAM	1	0	20.92	0-1	0
	1	12	21.00		0
	1	24	20.88		0
	12	0	20.67	0-2	0
	12	6	20.79		0
	12	13	20.69		0
	25	0	20.65		0
64QAM	1	0	20.69	0-2	0
	1	12	20.84		0
	1	24	20.81		0
	12	0	20.48	0-3	0.3
	12	6	20.65		0.3
	12	13	20.50		0.3
	25	0	20.47		0.3
256QAM	1	0	18.64	0-5	2.3
	1	12	18.88		2.3
	1	24	18.85		2.3
	12	0	18.66		2.3
	12	6	18.74		2.3
	12	13	18.66		2.3
	25	0	18.69		2.3

Note: LTE Band 30 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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9.4.10 LTE Band 7

Table 9-59
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	23.29	23.48	**23.61**	0	0
	1	50	23.40	23.49	23.45		0
	1	99	23.44	23.56	23.39		0
	50	0	22.44	22.60	**22.65**	0-1	1
	50	25	22.51	22.64	22.61		1
	50	50	22.48	22.62	22.45		1
	100	0	22.45	22.60	22.46		1
16QAM	1	0	22.79	22.87	22.75	0-1	1
	1	50	22.88	22.88	22.83		1
	1	99	22.81	22.85	22.89		1
	50	0	21.45	21.63	21.62	0-2	2
	50	25	21.57	21.69	21.59		2
	50	50	21.55	21.63	21.48		2
	100	0	21.45	21.59	21.54		2
64QAM	1	0	21.59	21.77	21.82	0-2	2
	1	50	21.72	21.76	21.77		2
	1	99	21.77	21.92	21.63		2
	50	0	20.46	20.63	20.64	0-3	3
	50	25	20.59	20.70	20.54		3
	50	50	20.52	20.69	20.78		3
	100	0	20.54	20.62	20.53		3
256QAM	1	0	18.48	18.43	18.60	0-5	5
	1	50	18.68	18.69	18.50		5
	1	99	18.45	18.58	18.41		5
	50	0	18.36	18.54	18.64		5
	50	25	18.58	18.67	18.59		5
	50	50	18.54	18.57	18.64		5
	100	0	18.47	18.61	18.41		5

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Table 9-60
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	23.53	23.32	23.31	0	0
	1	36	23.58	23.33	23.20		0
	1	74	23.48	23.40	23.30		0
	36	0	22.52	22.37	22.42	0-1	1
	36	18	22.61	22.46	22.35		1
	36	37	22.54	22.39	22.33		1
	75	0	22.50	22.38	22.20		1
16QAM	1	0	22.58	22.85	22.57	0-1	1
	1	36	22.65	22.79	22.68		1
	1	74	22.65	22.65	22.73		1
	36	0	21.50	21.40	21.45	0-2	2
	36	18	21.63	21.54	21.38		2
	36	37	21.54	21.46	21.39		2
	75	0	21.52	21.43	21.45		2
64QAM	1	0	21.45	21.54	21.50	0-2	2
	1	36	21.48	21.56	21.52		2
	1	74	21.51	21.65	21.58		2
	36	0	20.57	20.45	20.54	0-3	3
	36	18	20.69	20.52	20.42		3
	36	37	20.61	20.56	20.50		3
	75	0	20.64	20.54	20.46		3
256QAM	1	0	18.50	18.37	18.81	0-5	5
	1	36	18.83	18.53	18.60		5
	1	74	18.57	18.28	18.45		5
	36	0	18.50	18.41	18.46		5
	36	18	18.68	18.49	18.58		5
	36	37	18.64	18.38	18.51		5
	75	0	18.61	18.44	18.56		5

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Table 9-61
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	23.38	23.43	23.35	0	0
	1	25	23.36	23.35	23.22		0
	1	49	23.40	23.37	23.19		0
	25	0	22.50	22.39	22.55	0-1	1
	25	12	22.58	22.45	22.45		1
	25	25	22.57	22.44	22.47		1
	50	0	22.51	22.43	22.36		1
16QAM	1	0	22.53	22.90	22.51	0-1	1
	1	25	22.58	22.85	22.64		1
	1	49	22.61	22.82	22.59		1
	25	0	21.61	21.48	21.58	0-2	2
	25	12	21.72	21.52	21.44		2
	25	25	21.67	21.51	21.65		2
	50	0	21.55	21.44	21.58		2
64QAM	1	0	21.61	21.57	21.63	0-2	2
	1	25	21.46	21.50	21.59		2
	1	49	21.65	21.55	21.55		2
	25	0	20.41	20.44	20.40	0-3	3
	25	12	20.41	20.43	20.45		3
	25	25	20.26	20.41	20.32		3
	50	0	20.34	20.22	20.40		3
256QAM	1	0	18.29	18.31	18.82	0-5	5
	1	25	18.37	18.57	18.51		5
	1	49	18.30	18.27	18.55		5
	25	0	18.58	18.41	18.45		5
	25	12	18.75	18.56	18.64		5
	25	25	18.61	18.45	18.53		5
	50	0	18.55	18.44	18.45		5

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Table 9-62
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	23.23	23.39	23.41	0	0
	1	12	23.41	23.43	23.55		0
	1	24	23.22	23.47	23.36		0
	12	0	22.47	22.39	22.42	0-1	1
	12	6	22.36	22.51	22.62		1
	12	13	22.45	22.43	22.53		1
	25	0	22.50	22.48	22.48		1
16QAM	1	0	22.65	22.99	22.67	0-1	1
	1	12	22.51	22.45	22.62		1
	1	24	22.56	22.54	22.56		1
	12	0	21.64	21.52	21.51	0-2	2
	12	6	21.60	21.63	21.40		2
	12	13	21.55	21.60	21.64		2
	25	0	21.37	21.56	21.49		2
64QAM	1	0	21.52	21.54	21.47	0-2	2
	1	12	21.64	21.49	21.54		2
	1	24	21.63	21.62	21.57		2
	12	0	20.45	20.49	20.53	0-3	3
	12	6	20.90	20.93	20.50		3
	12	13	20.45	20.92	20.50		3
	25	0	20.64	20.47	20.54		3
256QAM	1	0	18.48	18.54	18.55	0-5	5
	1	12	18.62	18.66	18.62		5
	1	24	18.49	18.56	18.60		5
	12	0	18.52	18.50	18.65		5
	12	6	18.63	18.59	18.69		5
	12	13	18.58	18.52	18.60		5
	25	0	18.60	18.49	18.53		5

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Table 9-63
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	19.95	19.96	**20.12**	0	0
	1	50	19.89	19.91	20.05		0
	1	99	19.82	20.05	20.00		0
	50	0	19.99	20.07	20.14	0-1	0
	50	25	20.03	20.14	**20.20**		0
	50	50	20.02	20.12	20.19		0
	100	0	20.00	20.01	20.11		0
16QAM	1	0	19.89	20.11	20.12	0-1	0
	1	50	19.91	20.12	20.32		0
	1	99	19.96	20.03	20.34		0
	50	0	20.00	20.13	20.25	0-2	0
	50	25	20.05	20.14	20.21		0
	50	50	20.04	20.09	20.24		0
	100	0	19.99	20.09	20.08		0
64QAM	1	0	20.18	20.17	20.34	0-2	0
	1	50	20.10	20.08	20.34		0
	1	99	20.19	20.23	20.30		0
	50	0	19.96	20.08	20.28	0-3	0
	50	25	20.05	20.16	20.27		0
	50	50	20.02	20.13	20.10		0
	100	0	19.96	20.08	20.09		0
256QAM	1	0	18.35	18.33	18.37	0-5	1.5
	1	50	18.69	18.65	18.58		1.5
	1	99	18.35	18.50	18.51		1.5
	50	0	18.30	18.49	18.64		1.5
	50	25	18.36	18.63	18.60		1.5
	50	50	18.35	18.53	18.62		1.5
	100	0	18.34	18.50	18.57		1.5

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Table 9-64
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	19.93	19.96	0	0
	1	36	19.74	19.88	19.80		0
	1	74	19.76	19.86	19.71		0
	36	0	19.84	19.95	19.96	0-1	0
	36	18	19.96	20.04	19.99		0
	36	37	19.89	19.98	19.95		0
	75	0	19.88	19.98	19.95		0
16QAM	1	0	20.21	20.22	20.12	0-1	0
	1	36	20.15	20.36	20.18		0
	1	74	19.93	20.24	20.17		0
	36	0	19.83	19.93	20.02	0-2	0
	36	18	19.90	20.02	20.05		0
	36	37	19.87	20.01	19.96		0
	75	0	19.85	19.96	19.96		0
64QAM	1	0	19.96	20.07	20.11	0-2	0
	1	36	20.01	20.15	20.17		0
	1	74	20.00	20.02	20.03		0
	36	0	19.88	19.99	20.02	0-3	0
	36	18	19.93	20.03	20.08		0
	36	37	19.90	20.00	19.99		0
	75	0	19.87	19.95	20.01		0
256QAM	1	0	18.20	18.35	18.55	0-5	1.5
	1	36	18.48	18.44	18.59		1.5
	1	74	18.30	18.38	18.44		1.5
	36	0	18.27	18.43	18.46		1.5
	36	18	18.46	18.55	18.56		1.5
	36	37	18.42	18.44	18.47		1.5
	75	0	18.35	18.46	18.48		1.5

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Table 9-65
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	19.85	20.00	19.91	0	0
	1	25	19.76	19.94	19.84		0
	1	49	19.90	19.94	19.82		0
	25	0	19.88	19.97	19.94	0-1	0
	25	12	19.96	20.03	20.03		0
	25	25	19.92	20.02	19.95		0
	50	0	19.87	19.96	19.88		0
16QAM	1	0	20.17	20.32	20.31	0-1	0
	1	25	20.25	20.36	20.39		0
	1	49	20.26	20.39	20.27		0
	25	0	19.91	19.97	19.94	0-2	0
	25	12	19.94	20.05	20.04		0
	25	25	19.88	20.05	20.03		0
	50	0	19.86	19.96	19.90		0
64QAM	1	0	20.01	20.16	20.20	0-2	0
	1	25	20.08	20.20	20.16		0
	1	49	19.97	20.29	20.20		0
	25	0	19.85	20.01	20.11	0-3	0
	25	12	19.98	20.12	19.88		0
	25	25	19.89	20.03	19.83		0
	50	0	19.90	20.04	19.94		0
256QAM	1	0	18.35	18.37	18.44	0-5	1.5
	1	25	18.55	18.61	18.68		1.5
	1	49	18.33	18.44	18.49		1.5
	25	0	18.32	18.46	18.47		1.5
	25	12	18.46	18.61	18.58		1.5
	25	25	18.29	18.52	18.46		1.5
	50	0	18.37	18.54	18.39		1.5

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Table 9-66
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	19.90	19.98	20.01	0	0
	1	12	19.97	19.98	20.00		0
	1	24	20.00	20.10	19.98		0
	12	0	19.99	20.09	20.10	0-1	0
	12	6	20.07	20.25	20.14		0
	12	13	20.04	20.13	20.06		0
	25	0	20.02	20.20	20.10		0
16QAM	1	0	20.22	20.42	20.35	0-1	0
	1	12	20.21	20.44	20.40		0
	1	24	20.30	20.48	20.41		0
	12	0	20.06	20.20	20.21	0-2	0
	12	6	20.11	20.25	20.17		0
	12	13	20.10	20.22	20.13		0
	25	0	20.02	20.16	20.10		0
64QAM	1	0	20.08	20.35	20.25	0-2	0
	1	12	20.21	20.39	20.21		0
	1	24	20.35	20.38	20.21		0
	12	0	20.01	20.14	20.07	0-3	0
	12	6	20.13	20.31	19.98		0
	12	13	20.07	20.25	20.12		0
	25	0	20.08	20.19	19.99		0
256QAM	1	0	18.52	18.73	18.64	0-5	1.5
	1	12	18.70	18.82	18.69		1.5
	1	24	18.51	18.81	18.68		1.5
	12	0	18.50	18.65	18.67		1.5
	12	6	18.59	18.74	18.69		1.5
	12	13	18.53	18.73	18.58		1.5
	25	0	18.55	18.70	18.67		1.5

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Table 9-67
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	20.86	20.87	**21.18**	0	0
	1	50	20.80	20.88	21.03		0
	1	99	20.86	20.92	20.98		0
	50	0	21.02	21.04	**21.23**	0-1	0
	50	25	21.09	21.01	21.12		0
	50	50	21.00	21.03	21.18		0
	100	0	20.99	21.01	21.09		0
16QAM	1	0	21.24	21.28	21.38	0-1	0
	1	50	21.31	21.30	21.32		0
	1	99	21.34	21.22	21.27		0
	50	0	21.02	21.05	21.27	0-2	0
	50	25	21.12	21.19	21.13		0
	50	50	21.10	21.08	21.21		0
	100	0	21.16	21.10	21.14		0
64QAM	1	0	21.16	21.13	21.31	0-2	0
	1	50	21.13	21.32	21.36		0
	1	99	21.05	21.33	21.30		0
	50	0	20.52	20.55	20.72	0-3	0.5
	50	25	20.58	20.46	20.57		0.5
	50	50	20.56	20.62	20.23		0.5
	100	0	20.50	20.54	20.53		0.5
256QAM	1	0	18.56	18.36	18.45	0-5	2.5
	1	50	18.50	18.40	18.63		2.5
	1	99	18.47	18.39	18.43		2.5
	50	0	18.39	18.48	18.68		2.5
	50	25	18.40	18.34	18.71		2.5
	50	50	18.34	18.37	18.61		2.5
	100	0	18.30	18.40	18.63		2.5

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Table 9-68
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	20.76	20.89	20.87	0	0
	1	36	20.82	20.90	20.91		0
	1	74	20.83	20.85	20.86		0
	36	0	20.91	20.94	21.01	0-1	0
	36	18	21.04	21.05	21.09		0
	36	37	20.98	20.99	21.07		0
	75	0	20.95	20.96	21.04		0
16QAM	1	0	21.39	21.38	21.36	0-1	0
	1	36	21.31	21.48	21.48		0
	1	74	21.38	21.42	21.42		0
	36	0	20.93	21.03	21.09	0-2	0
	36	18	21.02	21.14	21.19		0
	36	37	21.00	21.05	21.14		0
	75	0	20.96	20.99	21.04		0
64QAM	1	0	21.26	21.31	21.34	0-2	0
	1	36	21.41	21.44	21.04		0
	1	74	21.30	21.38	21.05		0
	36	0	20.44	20.46	20.57	0-3	0.5
	36	18	20.56	20.36	20.85		0.5
	36	37	20.50	20.49	20.42		0.5
	75	0	20.51	20.39	20.88		0.5
256QAM	1	0	18.41	18.31	18.20	0-5	2.5
	1	36	18.45	18.20	18.33		2.5
	1	74	18.40	18.35	18.21		2.5
	36	0	18.31	18.22	18.71		2.5
	36	18	18.35	18.35	18.71		2.5
	36	37	18.28	18.31	18.75		2.5
	75	0	18.30	18.34	18.70		2.5

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Table 9-69
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	20.85	20.87	21.09	0	0
	1	25	20.88	20.85	21.04		0
	1	49	20.91	20.86	21.12		0
	25	0	20.90	20.99	21.04	0-1	0
	25	12	21.01	21.07	21.11		0
	25	25	20.97	21.01	21.09		0
	50	0	20.94	21.01	20.99		0
16QAM	1	0	21.37	21.38	21.38	0-1	0
	1	25	21.45	21.35	21.31		0
	1	49	21.46	21.41	21.37		0
	25	0	20.90	21.09	21.08	0-2	0
	25	12	20.98	21.16	21.19		0
	25	25	21.01	21.12	21.17		0
	50	0	20.94	21.03	21.01		0
64QAM	1	0	21.37	21.42	21.24	0-2	0
	1	25	21.40	21.46	20.76		0
	1	49	21.41	21.43	20.93		0
	25	0	20.51	20.25	20.63	0-3	0.5
	25	12	20.62	20.27	20.41		0.5
	25	25	20.60	20.37	20.33		0.5
	50	0	20.51	20.23	20.40		0.5
256QAM	1	0	18.50	18.40	18.40	0-5	2.5
	1	25	18.45	18.37	18.52		2.5
	1	49	18.46	18.36	18.41		2.5
	25	0	18.35	18.41	18.50		2.5
	25	12	18.37	18.40	18.61		2.5
	25	25	18.30	18.31	18.45		2.5
	50	0	18.25	18.30	18.55		2.5

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Table 9-70
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	20.69	20.85	20.97	0	0
	1	12	20.75	20.89	20.96		0
	1	24	20.75	20.93	20.97		0
	12	0	20.90	21.02	21.09	0-1	0
	12	6	20.94	21.02	21.15		0
	12	13	20.98	21.07	21.08		0
	25	0	20.96	21.00	21.14		0
16QAM	1	0	21.39	21.31	21.31	0-1	0
	1	12	21.42	21.33	21.28		0
	1	24	21.45	21.40	21.34		0
	12	0	20.95	20.99	21.24	0-2	0
	12	6	21.03	21.15	21.31		0
	12	13	21.02	21.08	21.27		0
	25	0	20.95	21.04	21.18		0
64QAM	1	0	21.29	21.32	21.12	0-2	0
	1	12	21.31	21.35	21.09		0
	1	24	21.41	21.40	21.32		0
	12	0	20.51	20.28	20.74	0-3	0.5
	12	6	20.61	20.27	20.45		0.5
	12	13	20.59	20.32	20.53		0.5
	25	0	20.47	20.22	20.38		0.5
256QAM	1	0	18.45	18.40	18.50	0-5	2.5
	1	12	18.44	18.41	18.62		2.5
	1	24	18.40	18.35	18.61		2.5
	12	0	18.38	18.32	18.70		2.5
	12	6	18.42	18.28	18.72		2.5
	12	13	18.45	18.40	18.61		2.5
	25	0	18.35	18.41	18.65		2.5

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9.4.11 LTE Band 48

Table 9-71
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 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.20	23.07	**23.23**	23.04	0	0
	1	50	23.10	23.13	23.18	23.00		0
	1	99	23.11	23.15	23.21	23.03		0
	50	0	22.02	22.20	22.17	22.11	0-1	1
	50	25	22.30	22.25	**22.31**	22.16		1
	50	50	22.14	22.18	22.29	22.12		1
	100	0	22.10	22.26	22.16	22.09		1
16QAM	1	0	22.35	22.25	22.28	22.23	0-1	1
	1	50	22.45	22.30	22.29	22.24		1
	1	99	22.39	22.35	22.25	22.26		1
	50	0	21.03	21.17	21.25	21.07	0-2	2
	50	25	21.19	21.28	21.36	21.10		2
	50	50	21.16	21.16	21.29	21.07		2
	100	0	21.13	21.26	21.17	21.07		2
64QAM	1	0	21.17	21.47	21.44	21.42	0-2	2
	1	50	21.22	21.41	21.48	21.46		2
	1	99	21.24	21.45	21.48	21.45		2
	50	0	20.04	20.24	20.25	20.17	0-3	3
	50	25	20.22	20.43	20.36	20.23		3
	50	50	20.14	20.26	20.31	20.16		3
	100	0	20.11	20.31	20.27	20.10		3
256QAM	1	0	17.63	17.86	17.75	17.85	0-5	5
	1	50	17.87	17.99	17.96	17.94		5
	1	99	17.76	17.72	17.82	17.82		5
	50	0	17.86	18.06	17.94	18.14		5
	50	25	18.07	18.25	18.11	18.15		5
	50	50	17.98	17.98	18.12	18.11		5
	100	0	17.93	18.02	18.04	17.95		5

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Table 9-72
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	22.98	23.16	23.25	23.12	0	0
	1	36	23.05	23.21	23.14	23.18		0
	1	74	23.03	23.20	23.14	23.04		0
	36	0	22.05	22.21	22.25	22.18	0-1	1
	36	18	22.15	22.33	22.33	22.21		1
	36	37	22.09	22.31	22.38	22.17		1
	75	0	22.06	22.26	22.33	22.14		1
16QAM	1	0	22.04	22.07	22.35	22.25	0-1	1
	1	36	22.12	22.19	22.20	22.28		1
	1	74	22.09	22.19	22.24	22.14		1
	36	0	21.13	21.24	21.24	21.24	0-2	2
	36	18	21.22	21.35	21.32	21.28		2
	36	37	21.15	21.28	21.36	21.27		2
	75	0	21.03	21.28	21.38	21.12		2
64QAM	1	0	21.19	21.22	21.20	21.19	0-2	2
	1	36	21.14	21.23	21.18	21.24		2
	1	74	21.04	21.13	21.15	21.13		2
	36	0	20.08	20.25	20.26	20.23	0-3	3
	36	18	20.19	20.33	20.40	20.25		3
	36	37	20.14	20.25	20.38	20.22		3
	75	0	20.10	20.30	20.35	20.19		3
256QAM	1	0	17.56	17.85	17.70	17.82	0-5	5
	1	36	17.88	18.06	18.03	18.23		5
	1	74	17.81	17.75	18.00	18.13		5
	36	0	18.03	18.12	18.11	18.00		5
	36	18	18.11	18.21	18.25	18.22		5
	36	37	18.02	18.20	18.14	18.21		5
	75	0	18.03	18.16	18.16	18.15		5

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Table 9-73
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	23.05	23.35	23.35	23.30	0	0
	1	25	23.25	23.39	23.42	23.37		0
	1	49	23.16	23.41	23.39	23.33		0
	25	0	22.18	22.25	22.27	22.15	0-1	1
	25	12	22.21	22.43	22.40	22.26		1
	25	25	22.09	22.39	22.41	22.24		1
	50	0	22.12	22.35	22.33	22.19		1
16QAM	1	0	22.06	22.21	22.49	22.48	0-1	1
	1	25	22.10	22.25	22.42	22.45		1
	1	49	22.04	22.30	22.49	22.48		1
	25	0	21.15	21.10	21.25	21.26	0-2	2
	25	12	21.16	21.35	21.40	21.35		2
	25	25	21.22	21.29	21.39	21.47		2
	50	0	21.14	21.36	21.28	21.23		2
64QAM	1	0	21.18	21.22	21.37	21.21	0-2	2
	1	25	21.17	21.10	21.44	21.10		2
	1	49	21.22	21.08	21.45	21.12		2
	25	0	20.22	20.24	20.24	20.25	0-3	3
	25	12	20.10	20.48	20.35	20.38		3
	25	25	20.18	20.44	20.36	20.38		3
	50	0	20.20	20.36	20.31	20.42		3
256QAM	1	0	17.56	17.61	17.70	17.80	0-5	5
	1	25	18.03	18.01	18.06	18.06		5
	1	49	17.61	17.69	17.93	17.91		5
	25	0	18.00	18.17	18.17	18.10		5
	25	12	18.09	18.28	18.30	18.23		5
	25	25	18.06	18.27	18.34	18.32		5
	50	0	18.08	18.23	18.12	18.18		5

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Table 9-74
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	23.01	23.19	23.19	23.29	0	0
	1	12	23.11	23.29	23.45	23.35		0
	1	24	23.22	23.35	23.32	23.32		0
	12	0	22.17	22.29	22.36	22.33	0-1	1
	12	6	22.21	22.42	22.43	22.38		1
	12	13	22.29	22.42	22.46	22.36		1
	25	0	22.08	22.36	22.36	22.34		1
16QAM	1	0	22.17	22.22	22.03	22.44	0-1	1
	1	12	22.21	22.37	22.15	22.50		1
	1	24	22.12	22.39	22.11	22.47		1
	12	0	21.32	21.31	21.34	21.34	0-2	2
	12	6	21.27	21.47	21.42	21.39		2
	12	13	21.20	21.44	21.47	21.40		2
	25	0	21.26	21.42	21.40	21.37		2
64QAM	1	0	21.15	21.23	21.24	21.38	0-2	2
	1	12	21.13	21.17	21.46	21.42		2
	1	24	21.19	21.03	21.36	21.40		2
	12	0	20.12	20.40	20.19	20.41	0-3	3
	12	6	20.22	20.46	20.28	20.43		3
	12	13	20.08	20.50	20.30	20.44		3
	25	0	20.10	20.42	20.34	20.26		3
256QAM	1	0	17.89	17.87	17.95	18.02	0-5	5
	1	12	18.09	18.13	18.12	18.14		5
	1	24	18.06	18.09	18.14	18.16		5
	12	0	18.21	18.24	18.31	18.35		5
	12	6	18.40	18.39	18.39	18.49		5
	12	13	18.38	18.20	18.44	18.42		5
	25	0	18.32	18.31	18.40	18.36		5

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Table 9-75
LTE Band 48 Measured P_{limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	16.72	16.75	16.89	16.81	0	0
	1	50	16.71	16.74	16.90	16.75		0
	1	99	16.74	16.78	**16.93**	16.76		0
	50	0	16.66	16.81	16.83	16.77	0-1	0
	50	25	16.84	16.92	**16.96**	16.84		0
	50	50	16.78	16.79	16.95	16.78		0
	100	0	16.77	16.85	16.89	16.73		0
16QAM	1	0	16.81	16.90	17.04	16.92	0-1	0
	1	50	16.78	16.86	17.05	16.90		0
	1	99	16.85	16.90	17.06	16.92		0
	50	0	16.68	16.86	16.90	17.01	0-2	0
	50	25	16.85	16.95	17.03	17.08		0
	50	50	16.77	16.82	17.01	17.05		0
	100	0	16.77	16.88	16.94	17.00		0
64QAM	1	0	16.93	16.67	16.94	16.95	0-2	0
	1	50	17.00	16.69	17.01	16.96		0
	1	99	17.01	16.71	17.03	17.03		0
	50	0	16.74	16.89	16.93	16.85	0-3	0
	50	25	16.89	16.97	17.06	16.91		0
	50	50	16.82	16.85	17.03	16.86		0
	100	0	16.79	16.89	16.94	16.99		0
256QAM	1	0	16.90	16.54	16.97	16.97	0-5	0
	1	50	17.27	16.72	16.91	17.15		0
	1	99	16.91	16.75	17.00	16.93		0
	50	0	16.75	16.88	16.95	16.90		0
	50	25	16.93	17.02	17.07	16.94		0
	50	50	16.84	16.85	17.06	16.91		0
	100	0	16.78	16.87	16.93	16.90		0

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Table 9-76
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	16.74	16.87	17.19	17.15	0	0
	1	36	16.78	16.96	17.18	17.19		0
	1	74	16.74	16.95	17.17	17.08		0
	36	0	16.79	16.91	17.14	17.16	0-1	0
	36	18	16.89	17.09	17.34	17.15		0
	36	37	16.80	17.03	17.35	17.19		0
	75	0	16.77	16.96	17.25	17.11		0
16QAM	1	0	16.87	16.83	17.14	17.28	0-1	0
	1	36	16.92	16.94	17.23	17.22		0
	1	74	16.89	16.97	17.43	17.24		0
	36	0	16.83	17.04	17.16	17.17	0-2	0
	36	18	16.93	17.17	17.32	17.23		0
	36	37	16.85	17.13	17.29	17.28		0
	75	0	16.78	17.03	17.28	17.14		0
64QAM	1	0	16.93	16.61	17.08	17.25	0-2	0
	1	36	17.05	16.81	17.19	17.22		0
	1	74	17.02	16.82	17.10	17.21		0
	36	0	16.91	16.98	17.21	17.36	0-3	0
	36	18	16.99	17.10	17.28	17.43		0
	36	37	16.92	17.01	17.34	17.36		0
	75	0	16.82	17.05	17.34	17.30		0
256QAM	1	0	16.97	16.61	17.36	17.28	0-5	0
	1	36	17.34	16.63	17.40	17.34		0
	1	74	17.17	16.41	17.21	17.26		0
	36	0	16.85	17.00	17.20	17.37		0
	36	18	16.95	17.15	17.33	17.32		0
	36	37	16.85	17.05	17.35	17.36		0
	75	0	16.86	17.07	17.32	17.32		0

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Table 9-77
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	16.92	16.99	17.27	17.06	0	0
	1	25	16.85	17.05	17.28	17.09		0
	1	49	16.79	17.11	17.31	17.16		0
	25	0	16.72	16.87	17.16	17.12	0-1	0
	25	12	16.85	17.09	17.29	17.21		0
	25	25	16.74	17.04	17.31	17.16		0
	50	0	16.78	16.99	17.22	17.38		0
16QAM	1	0	17.09	16.94	17.21	17.25	0-1	0
	1	25	16.99	17.00	17.24	17.27		0
	1	49	16.94	17.06	17.20	17.22		0
	25	0	16.79	16.87	17.27	17.25	0-2	0
	25	12	16.93	17.09	17.39	17.40		0
	25	25	16.89	17.06	17.43	17.47		0
	50	0	16.80	17.01	17.25	17.29		0
64QAM	1	0	17.15	16.83	17.24	17.28	0-2	0
	1	25	17.16	16.96	17.36	17.29		0
	1	49	17.11	17.04	17.35	17.18		0
	25	0	16.70	16.91	17.21	17.23	0-3	0
	25	12	16.79	17.19	17.36	17.29		0
	25	25	16.82	17.13	17.30	17.23		0
	50	0	16.78	17.06	17.28	17.30		0
256QAM	1	0	16.89	16.59	17.18	17.02	0-5	0
	1	25	16.81	16.71	17.16	17.22		0
	1	49	16.78	16.60	17.20	17.20		0
	25	0	16.80	16.94	17.16	17.30		0
	25	12	16.92	17.19	17.30	17.35		0
	25	25	16.91	17.18	17.31	17.26		0
	50	0	16.86	17.11	17.15	17.23		0

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Table 9-78
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	16.79	16.88	17.07	17.11	0	0
	1	12	16.86	17.01	17.31	17.17		0
	1	24	16.85	17.05	17.19	17.14		0
	12	0	16.82	16.94	17.25	17.23	0-1	0
	12	6	16.89	17.12	17.33	17.21		0
	12	13	16.87	17.09	17.37	17.28		0
	25	0	16.84	17.05	17.28	17.24		0
16QAM	1	0	17.18	17.04	17.16	17.26	0-1	0
	1	12	17.15	17.22	17.31	17.31		0
	1	24	17.14	17.21	17.30	17.29		0
	12	0	16.83	16.98	17.37	17.30	0-2	0
	12	6	16.96	17.14	17.38	17.36		0
	12	13	16.91	17.16	17.40	17.35		0
	25	0	16.87	17.09	17.27	17.31		0
64QAM	1	0	16.71	16.86	17.33	17.23	0-2	0
	1	12	16.73	16.82	17.34	17.32		0
	1	24	16.73	16.88	17.29	17.27		0
	12	0	16.89	17.07	17.31	17.49	0-3	0
	12	6	17.01	17.18	17.26	17.28		0
	12	13	16.98	17.14	17.34	17.29		0
	25	0	16.91	17.09	17.35	17.48		0
256QAM	1	0	17.19	16.56	17.35	17.21	0-5	0
	1	12	17.20	16.78	17.25	17.29		0
	1	24	17.31	16.78	17.24	17.28		0
	12	0	16.78	17.05	17.27	17.27		0
	12	6	16.85	17.18	17.37	17.34		0
	12	13	16.82	17.21	17.30	17.32		0
	25	0	16.85	17.16	17.28	17.24		0

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9.4.12 LTE Band 41

Table 9-79
LTE Band 41 PC3 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	24.46	23.90	24.12	24.05	23.88	0	0
	1	50	24.46	24.11	24.25	24.19	24.34		0
	1	99	**24.51**	23.76	24.11	23.97	24.28		0
	50	0	23.56	23.11	23.10	23.28	23.23	0-1	1
	50	25	**23.60**	23.17	23.29	23.32	23.36		1
	50	50	23.59	23.09	23.23	23.24	23.42		1
	100	0	23.47	23.04	23.20	23.20	23.31		1
16QAM	1	0	23.33	23.03	23.05	23.24	22.90	0-1	1
	1	50	23.27	23.39	23.17	23.56	23.01		1
	1	99	23.25	23.10	23.26	23.33	23.06		1
	50	0	22.31	22.08	22.10	22.05	22.20	0-2	2
	50	25	22.34	22.17	22.29	22.15	22.17		2
	50	50	22.27	22.09	22.22	22.06	22.27		2
	100	0	22.20	22.03	22.21	22.09	22.29		2
64QAM	1	0	22.24	21.97	22.06	21.92	21.99	0-2	2
	1	50	22.21	22.31	22.07	21.90	22.22		2
	1	99	22.22	21.96	21.85	21.88	22.15		2
	50	0	21.37	21.13	21.28	21.30	21.00	0-3	3
	50	25	21.37	21.17	21.37	21.35	21.07		3
	50	50	21.31	21.10	21.38	21.26	21.16		3
	100	0	21.25	21.04	21.33	21.21	21.06		3
256QAM	1	0	19.26	18.75	19.02	18.91	18.96	0-5	5
	1	50	19.35	19.02	19.22	19.29	19.32		5
	1	99	19.12	18.82	18.99	19.03	19.25		5
	50	0	19.18	19.04	19.14	19.25	19.21		5
	50	25	19.33	19.18	19.31	19.34	19.40		5
	50	50	19.23	19.06	19.21	19.25	19.37		5
	100	0	19.19	19.04	19.23	19.22	19.32		5

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Table 9-80
LTE Band 41 PC3 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	24.29	23.76	24.30	24.22	23.78	0	0
	1	36	24.20	24.03	24.56	24.30	24.08		0
	1	74	24.16	23.80	24.33	24.04	23.93		0
	36	0	23.26	22.94	23.37	23.37	23.05	0-1	1
	36	18	23.24	23.11	23.51	23.43	23.07		1
	36	37	23.27	23.01	23.50	23.26	23.01		1
	75	0	23.23	23.01	23.38	23.31	23.08		1
16QAM	1	0	23.15	23.25	23.06	23.32	22.68	0-1	1
	1	36	23.07	23.13	23.46	23.36	22.83		1
	1	74	22.94	23.27	23.24	23.09	22.77		1
	36	0	22.27	22.04	22.38	22.37	21.89	0-2	2
	36	18	22.24	22.16	22.50	22.42	22.08		2
	36	37	22.16	22.07	22.53	22.24	22.04		2
	75	0	22.17	21.98	22.40	22.35	21.94		2
64QAM	1	0	21.93	21.79	21.72	22.18	21.81	0-2	2
	1	36	21.81	22.03	22.12	22.29	22.11		2
	1	74	21.89	21.83	21.93	22.06	21.96		2
	36	0	21.24	21.03	21.36	21.40	20.89	0-3	3
	36	18	21.26	21.15	21.50	21.41	21.07		3
	36	37	21.17	21.03	21.51	21.29	21.01		3
	75	0	21.21	21.04	21.44	21.34	20.95		3
256QAM	1	0	19.27	18.58	19.22	18.95	19.19	0-5	5
	1	36	19.50	18.86	19.49	19.07	19.50		5
	1	74	19.30	18.53	19.24	18.96	19.33		5
	36	0	19.47	19.26	18.94	18.96	19.27		5
	36	18	19.58	19.30	19.11	19.03	19.39		5
	36	37	19.53	19.19	19.05	19.00	19.46		5
	75	0	19.48	19.23	19.02	18.97	19.30		5

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Table 9-81
LTE Band 41 PC3 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	24.35	24.11	24.39	24.17	23.87	0	0
	1	25	24.24	24.24	24.60	24.41	24.07		0
	1	49	24.21	23.90	24.37	24.11	23.79		0
	25	0	23.30	23.06	23.47	23.41	23.03	0-1	1
	25	12	23.36	23.18	23.57	23.48	23.07		1
	25	25	23.30	23.04	23.53	23.38	22.96		1
	50	0	23.25	23.12	23.43	23.37	23.00		1
16QAM	1	0	23.08	23.41	23.10	23.15	22.60	0-1	1
	1	25	23.06	23.43	23.45	23.35	22.92		1
	1	49	22.95	23.26	23.14	23.08	22.61		1
	25	0	22.21	22.15	22.43	22.35	21.94	0-2	2
	25	12	22.19	22.27	22.48	22.48	22.04		2
	25	25	22.12	22.16	22.48	22.34	21.90		2
	50	0	22.24	22.18	22.48	22.41	22.07		2
64QAM	1	0	21.88	21.68	21.83	22.09	21.96	0-2	2
	1	25	21.85	21.81	22.26	22.37	22.15		2
	1	49	21.82	21.74	21.92	22.10	21.86		2
	25	0	21.36	21.19	21.55	21.35	21.10	0-3	3
	25	12	21.33	21.33	21.63	21.42	21.18		3
	25	25	21.27	21.21	21.57	21.29	21.03		3
	50	0	21.22	21.14	21.51	21.38	21.09		3
256QAM	1	0	19.26	18.60	18.86	18.91	18.98	0-5	5
	1	25	19.38	18.91	18.97	19.27	19.18		5
	1	49	19.14	18.77	18.75	19.03	19.03		5
	25	0	19.53	19.29	18.99	19.02	19.32		5
	25	12	19.55	19.37	19.14	19.16	19.38		5
	25	25	19.43	19.26	19.08	19.09	19.35		5
	50	0	19.48	19.31	19.11	19.06	19.26		5

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Table 9-82
LTE Band 41 PC3 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 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	24.21	24.15	24.41	24.50	23.93	0	0
	1	12	24.20	24.19	24.58	24.38	24.01		0
	1	24	24.12	24.13	24.50	24.35	23.90		0
	12	0	23.27	23.14	23.46	23.49	23.19	0-1	1
	12	6	23.28	23.25	23.48	23.50	23.20		1
	12	13	23.21	23.18	23.51	23.48	23.17		1
	25	0	23.27	23.18	23.58	23.46	23.19		1
16QAM	1	0	22.97	23.18	23.19	23.63	22.69	0-1	1
	1	12	22.88	23.20	23.25	23.65	22.67		1
	1	24	22.87	23.21	23.20	23.61	22.66		1
	12	0	22.26	22.18	22.54	22.49	22.05	0-2	2
	12	6	22.27	22.28	22.52	22.50	22.06		2
	12	13	22.23	22.21	22.58	22.49	22.02		2
	25	0	22.29	22.21	22.56	22.51	22.08		2
64QAM	1	0	22.25	21.78	22.05	22.08	22.00	0-2	2
	1	12	22.28	21.77	22.23	22.21	22.31		2
	1	24	22.00	21.75	22.22	21.93	22.03		2
	12	0	21.09	21.31	21.40	21.54	20.93	0-3	3
	12	6	21.13	21.40	21.41	21.56	20.94		3
	12	13	21.10	21.40	21.44	21.49	20.91		3
	25	0	21.20	21.25	21.50	21.44	21.06		3
256QAM	1	0	19.43	18.88	19.36	19.18	19.36	0-5	5
	1	12	19.41	18.88	19.40	19.30	19.45		5
	1	24	19.39	18.92	19.41	19.29	19.43		5
	12	0	19.43	19.34	18.97	19.08	19.24		5
	12	6	19.46	19.27	19.04	19.09	19.25		5
	12	13	19.42	19.27	19.02	19.14	19.29		5
	25	0	19.49	19.35	19.02	19.11	19.31		5

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Table 9-83
LTE Band 41 PC2 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.43	26.14	25.72	25.96	26.07	0	0
	1	50	26.41	26.20	25.90	26.32	26.47		0
	1	99	26.29	26.10	25.61	25.91	25.92		0
	50	0	25.40	25.13	24.81	25.28	25.36	0-1	1
	50	25	25.41	25.17	25.00	25.36	25.52		1
	50	50	25.39	25.17	24.89	25.28	25.50		1
	100	0	25.35	25.12	24.89	25.32	25.40		1

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Table 9-84
LTE Band 41 PC3 Measured P_{limit} for DSI = 3 (Hotspot mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	**21.32**	21.01	20.79	20.88	20.93	0	0
	1	50	21.26	20.96	20.82	20.90	20.95		0
	1	99	21.21	20.91	20.75	20.83	20.89		0
	50	0	**21.35**	21.03	20.76	20.92	21.07	0-1	0
	50	25	21.33	21.09	20.90	20.97	21.08		0
	50	50	21.32	21.04	20.76	20.90	21.17		0
	100	0	21.25	21.03	20.80	20.85	21.01		0
16QAM	1	0	21.32	21.03	20.74	20.85	20.97	0-1	0
	1	50	21.29	20.94	20.84	21.02	21.04		0
	1	99	21.16	20.90	20.72	20.94	20.92		0
	50	0	21.41	21.04	20.72	20.90	21.00	0-2	0
	50	25	21.36	21.11	20.98	21.01	21.13		0
	50	50	21.37	21.08	20.86	20.94	21.16		0
	100	0	21.33	21.05	20.90	21.01	21.07		0
64QAM	1	0	21.27	21.02	20.30	20.75	20.84	0-2	0
	1	50	21.22	20.91	20.54	20.78	20.87		0
	1	99	21.19	20.93	20.32	20.70	20.76		0
	50	0	21.30	21.04	20.78	20.94	20.99	0-3	0
	50	25	21.31	21.11	20.92	20.99	21.08		0
	50	50	21.38	21.05	20.80	20.87	21.10		0
	100	0	21.40	21.01	20.77	20.84	20.90		0
256QAM	1	0	19.17	18.89	18.40	18.91	18.96	0-5	2
	1	50	19.27	18.84	18.62	18.80	19.01		2
	1	99	19.14	18.94	18.43	18.84	18.72		2
	50	0	19.24	18.96	18.84	18.98	18.88		2
	50	25	19.32	19.09	18.96	18.97	19.06		2
	50	50	19.23	18.99	18.82	18.89	19.11		2
	100	0	19.20	18.97	18.70	18.82	19.02		2

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Table 9-85
LTE Band 41 PC3 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	21.46	21.09	20.79	21.01	21.09	0	0
	1	36	21.42	21.25	20.91	21.11	21.32		0
	1	74	21.45	21.00	20.74	20.89	21.33		0
	36	0	21.53	21.31	20.85	21.11	21.29	0-1	0
	36	18	21.53	21.30	20.99	21.15	21.40		0
	36	37	21.52	21.24	20.93	21.14	21.50		0
	75	0	21.49	21.24	20.93	21.03	21.34		0
16QAM	1	0	21.56	21.15	20.80	21.06	21.24	0-1	0
	1	36	21.44	21.24	20.91	21.18	21.39		0
	1	74	21.43	21.01	20.82	21.01	21.46		0
	36	0	21.47	21.25	20.82	21.06	21.27	0-2	0
	36	18	21.47	21.25	20.94	21.11	21.33		0
	36	37	21.44	21.13	20.85	21.12	21.46		0
	75	0	21.48	21.24	20.90	21.13	21.37		0
64QAM	1	0	21.25	20.92	20.42	20.73	20.82	0-2	0
	1	36	21.15	20.94	20.55	20.87	21.05		0
	1	74	21.16	20.85	20.44	20.64	21.13		0
	36	0	21.46	21.20	20.81	21.06	21.26	0-3	0
	36	18	21.47	21.27	20.89	21.11	21.34		0
	36	37	21.43	21.17	20.85	21.06	21.44		0
	75	0	21.41	21.19	20.87	21.05	21.30		0
256QAM	1	0	19.09	18.89	18.48	18.80	18.92	0-5	2
	1	36	19.23	19.07	18.75	18.98	19.16		2
	1	74	19.11	18.80	18.49	18.73	19.19		2
	36	0	19.37	19.20	18.77	19.03	19.24		2
	36	18	19.45	19.25	18.89	19.11	19.36		2
	36	37	19.41	19.20	18.78	19.08	19.26		2
	75	0	19.38	19.22	18.84	19.03	19.31		2

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Table 9-86
LTE Band 41 PC3 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	21.48	21.15	20.65	20.95	21.20	0	0
	1	25	21.44	21.32	20.88	21.19	21.33		0
	1	49	21.47	21.34	20.56	20.90	21.16		0
	25	0	21.56	21.35	20.84	21.17	21.38	0-1	0
	25	12	21.58	21.44	20.99	21.25	21.47		0
	25	25	21.52	21.28	20.86	21.19	21.46		0
	50	0	21.51	21.33	20.90	21.16	21.38		0
16QAM	1	0	21.67	21.26	20.87	21.15	21.39	0-1	0
	1	25	21.60	21.31	21.10	21.34	21.59		0
	1	49	21.62	21.14	20.78	21.11	21.32		0
	25	0	21.56	21.36	20.88	21.15	21.40	0-2	0
	25	12	21.60	21.44	21.00	21.18	21.46		0
	25	25	21.56	21.32	20.89	21.20	21.46		0
	50	0	21.55	21.40	20.98	21.22	21.45		0
64QAM	1	0	21.24	20.71	20.28	20.68	20.99	0-2	0
	1	25	21.09	20.89	20.48	20.99	21.20		0
	1	49	21.15	20.69	20.24	20.75	21.00		0
	25	0	21.45	21.26	20.75	20.95	21.26	0-3	0
	25	12	21.52	21.36	20.92	21.15	21.38		0
	25	25	21.47	21.21	20.76	21.11	21.34		0
	50	0	21.49	21.31	20.90	21.13	21.37		0
256QAM	1	0	19.05	18.81	18.40	18.85	19.10	0-5	2
	1	25	19.25	19.10	18.64	18.98	19.31		2
	1	49	18.99	18.81	18.39	18.73	19.15		2
	25	0	19.49	19.38	18.87	19.11	19.41		2
	25	12	19.57	19.46	19.00	19.27	19.46		2
	25	25	19.49	19.31	18.87	19.20	19.47		2
	50	0	19.52	19.34	18.93	19.13	19.36		2

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Table 9-87
LTE Band 41 PC3 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	21.29	21.13	20.89	20.88	21.15	0	0
	1	12	21.31	21.20	20.76	20.91	21.21		0
	1	24	21.29	21.10	20.68	20.91	21.22		0
	12	0	21.46	21.24	20.75	20.93	21.19	0-1	0
	12	6	21.50	21.25	20.80	20.95	21.28		0
	12	13	21.45	21.20	20.76	20.98	21.27		0
	25	0	21.46	21.21	20.78	20.92	21.21		0
16QAM	1	0	21.41	21.12	20.77	20.98	21.23	0-1	0
	1	12	21.51	21.17	20.80	21.06	21.37		0
	1	24	21.67	21.19	20.74	21.04	21.33		0
	12	0	21.65	21.16	20.65	20.86	21.17	0-2	0
	12	6	21.64	21.17	20.75	20.93	21.23		0
	12	13	21.63	21.13	20.72	20.95	21.23		0
	25	0	21.73	21.30	20.84	20.98	21.27		0
64QAM	1	0	21.39	20.83	20.42	20.56	20.87	0-2	0
	1	12	21.41	20.94	20.50	20.66	20.97		0
	1	24	21.35	20.85	20.40	20.67	20.95		0
	12	0	21.57	21.13	20.62	20.84	21.10	0-3	0
	12	6	21.64	21.14	20.70	20.81	21.13		0
	12	13	21.59	21.10	20.67	20.86	21.19		0
	25	0	21.63	21.15	20.71	20.83	21.15		0
256QAM	1	0	19.42	18.90	18.51	18.65	18.98	0-5	2
	1	12	19.37	18.89	18.54	18.75	18.99		2
	1	24	19.37	18.86	18.52	18.67	19.03		2
	12	0	19.69	19.22	18.75	18.96	19.24		2
	12	6	19.72	19.26	18.85	18.99	19.28		2
	12	13	19.67	19.12	18.79	19.02	19.26		2
	25	0	19.66	19.06	18.73	18.88	19.21		2

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Table 9-88
LTE Band 41 PC2 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	23.00	22.64	22.99	22.35	22.37	0	0
	1	50	22.86	22.66	22.93	22.64	22.74		0
	1	99	22.83	22.65	22.82	22.29	22.58		0
	50	0	23.10	22.70	22.76	22.65	22.69	0-1	0
	50	25	23.03	22.79	22.84	22.72	22.78		0
	50	50	22.99	22.76	22.81	22.62	22.83		0
	100	0	22.94	22.68	22.77	22.53	22.76		0

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Table 9-89
LTE Band 41 PC3 Measured P_{limit} for 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	**22.68**	22.44	21.79	21.90	22.18	0	0
	1	50	22.66	22.38	22.10	22.13	22.35		0
	1	99	22.61	22.36	21.85	22.09	22.30		0
	50	0	22.63	22.25	21.93	22.18	22.30	0-1	0
	50	25	**22.64**	22.31	22.10	22.23	22.38		0
	50	50	22.56	22.25	21.99	22.16	22.51		0
	100	0	22.56	22.22	22.00	22.15	22.36		0
16QAM	1	0	22.81	22.55	22.04	22.13	22.23	0-1	0
	1	50	22.77	22.48	22.19	22.42	22.61		0
	1	99	22.78	22.36	22.13	22.11	22.63		0
	50	0	22.58	22.22	21.93	22.11	22.23	0-2	0
	50	25	22.56	22.26	22.08	22.17	22.36		0
	50	50	22.56	22.20	22.02	22.09	22.42		0
	100	0	22.48	22.17	21.99	22.04	22.26		0
64QAM	1	0	22.82	22.04	21.73	22.17	22.35	0-2	0
	1	50	22.73	22.07	21.97	22.15	22.59		0
	1	99	22.70	21.97	21.77	22.04	22.48		0
	50	0	21.59	21.27	20.88	21.12	21.29	0-3	1
	50	25	21.59	21.27	21.07	21.18	21.41		1
	50	50	21.53	21.27	20.97	21.14	21.44		1
	100	0	21.47	21.23	20.98	21.05	21.33		1
256QAM	1	0	19.34	18.70	18.89	18.93	19.69	0-5	3
	1	50	19.68	19.03	19.20	19.27	19.66		3
	1	99	19.35	18.58	18.99	18.93	19.74		3
	50	0	19.46	19.10	18.84	19.12	19.24		3
	50	25	19.57	19.22	19.05	19.11	19.37		3
	50	50	19.49	19.19	18.96	19.13	19.42		3
	100	0	19.47	19.16	18.98	19.09	19.31		3

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Table 9-90
LTE Band 41 PC3 Measured P_{limit} for 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 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	22.54	22.13	21.83	22.04	22.10	0	0
	1	36	22.56	22.34	22.07	22.13	22.43		0
	1	74	22.47	22.01	21.83	21.84	22.37		0
	36	0	22.62	22.33	22.01	22.16	22.34	0-1	0
	36	18	22.61	22.40	22.17	22.19	22.47		0
	36	37	22.59	22.27	22.11	22.20	22.55		0
	75	0	22.55	22.28	22.05	22.11	22.38		0
16QAM	1	0	22.68	22.38	21.97	22.18	22.26	0-1	0
	1	36	22.71	22.28	22.23	22.34	22.56		0
	1	74	22.62	22.13	22.00	22.08	22.51		0
	36	0	22.61	22.28	21.99	22.02	22.32	0-2	0
	36	18	22.63	22.34	22.20	22.06	22.45		0
	36	37	22.57	22.23	22.11	22.05	22.55		0
	75	0	22.44	22.18	22.00	21.99	22.30		0
64QAM	1	0	22.67	21.80	21.92	21.84	22.21	0-2	0
	1	36	22.72	22.07	22.22	22.10	22.47		0
	1	74	22.60	21.76	22.04	21.80	22.52		0
	36	0	21.62	21.24	21.01	21.05	21.34	0-3	1
	36	18	21.62	21.32	21.17	21.08	21.43		1
	36	37	21.58	21.18	21.12	21.01	21.54		1
	75	0	21.53	21.21	21.04	21.03	21.34		1
256QAM	1	0	19.61	18.63	19.26	18.98	19.54	0-5	3
	1	36	19.82	18.85	19.53	19.29	19.89		3
	1	74	19.68	18.56	19.29	18.94	19.88		3
	36	0	19.53	19.26	18.97	19.01	19.29		3
	36	18	19.61	19.35	19.15	19.07	19.42		3
	36	37	19.55	19.24	19.07	19.06	19.48		3
	75	0	19.52	19.26	19.04	19.00	19.37		3

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Table 9-91
LTE Band 41 PC3 Measured P_{limit} for 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 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	22.78	22.20	22.00	21.98	22.33	0	0
	1	25	22.68	22.44	22.24	22.25	22.57		0
	1	49	22.57	22.12	22.22	21.98	22.55		0
	25	0	22.71	22.40	22.07	22.20	22.39	0-1	0
	25	12	22.68	22.50	22.29	22.28	22.48		0
	25	25	22.59	22.35	22.11	22.23	22.47		0
	50	0	22.61	22.37	22.17	22.20	22.41		0
16QAM	1	0	22.76	22.13	22.23	22.12	22.58	0-1	0
	1	25	22.75	22.30	22.28	22.39	22.64		0
	1	49	22.72	22.07	22.03	22.23	22.37		0
	25	0	22.57	22.31	22.05	22.14	22.30	0-2	0
	25	12	22.64	22.37	22.19	22.19	22.40		0
	25	25	22.58	22.23	22.05	22.18	22.40		0
	50	0	22.53	22.30	22.08	22.10	22.31		0
64QAM	1	0	22.98	21.91	22.14	21.82	22.31	0-2	0
	1	25	22.97	22.17	22.32	22.12	22.61		0
	1	49	22.82	21.92	22.30	21.87	22.55		0
	25	0	21.53	21.33	20.97	21.09	21.22	0-3	1
	25	12	21.59	21.42	21.17	21.18	21.34		1
	25	25	21.54	21.32	21.00	21.13	21.31		1
	50	0	21.52	21.33	21.09	21.07	21.31		1
256QAM	1	0	19.22	18.64	18.90	18.98	19.57	0-5	3
	1	25	19.59	18.90	19.03	19.33	19.44		3
	1	49	19.57	18.78	18.80	19.07	19.45		3
	25	0	19.55	19.37	19.06	19.00	19.31		3
	25	12	19.58	19.45	19.21	19.19	19.39		3
	25	25	19.60	19.31	19.13	19.13	19.36		3
	50	0	19.52	19.39	19.13	19.13	19.30		3

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Table 9-92
LTE Band 41 PC3 Measured P_{limit} for 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 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	22.67	22.35	22.17	22.14	22.35	0	0
	1	12	22.57	22.40	22.26	22.28	22.53		0
	1	24	22.46	22.37	22.25	22.20	22.51		0
	12	0	22.60	22.49	22.18	22.27	22.49	0-1	0
	12	6	22.57	22.50	22.25	22.27	22.48		0
	12	13	22.48	22.43	22.23	22.30	22.52		0
	25	0	22.50	22.45	22.24	22.27	22.45		0
16QAM	1	0	22.65	22.56	22.34	22.23	22.83	0-1	0
	1	12	22.64	22.60	22.31	22.24	22.87		0
	1	24	22.61	22.54	22.37	22.27	22.87		0
	12	0	22.46	22.40	22.09	22.32	22.37	0-2	0
	12	6	22.53	22.40	22.17	22.30	22.36		0
	12	13	22.47	22.36	22.12	22.33	22.40		0
	25	0	22.42	22.39	22.12	22.19	22.37		0
64QAM	1	0	22.87	22.28	21.99	22.27	22.22	0-2	0
	1	12	22.86	22.28	21.97	22.34	22.25		0
	1	24	22.71	22.25	21.99	22.28	22.27		0
	12	0	21.42	21.40	21.16	21.20	21.44	0-3	1
	12	6	21.48	21.42	21.24	21.22	21.44		1
	12	13	21.43	21.39	21.19	21.23	21.49		1
	25	0	21.41	21.41	21.15	21.20	21.39		1
256QAM	1	0	19.11	18.97	19.26	19.27	19.80	0-5	3
	1	12	19.58	18.96	19.27	19.34	19.81		3
	1	24	19.36	18.60	19.30	19.34	19.83		3
	12	0	19.44	19.38	18.99	19.12	19.30		3
	12	6	19.47	19.41	19.07	19.14	19.31		3
	12	13	19.49	19.36	19.03	19.19	19.33		3
	25	0	19.41	19.44	19.09	19.17	19.36		3

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Table 9-93
LTE Band 41 PC2 Measured P_{limit} for 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	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	**24.27**	23.94	23.54	23.34	23.47	0	0
	1	50	24.22	23.85	23.61	23.70	23.95		0
	1	99	24.19	23.84	23.62	23.28	23.86		0
	50	0	**24.31**	23.94	23.62	23.76	23.82	0-1	0
	50	25	24.28	24.01	23.81	23.82	24.02		0
	50	50	24.26	23.95	23.75	23.75	24.06		0
	100	0	24.24	23.92	23.72	23.76	23.94		0

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9.4.13 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-94
LTE Uplink Carrier Aggregation Measured P_{max} for LTE Band 5/66/48/41 DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) or LTE Band 5/66/41 DSI = 2 (Head) or LTE Band 5/48 DSI = 1 (Phablet with grip sensor triggered), and/or DSI = 4 (Earjack Active) and/or 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_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	1	0	LTE B5	5	20453	829.3	2453	874.3	QPSK	1	24	25.27	25.01

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	23.47	22.82
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	23.66	22.90
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	49	LTE B66	10	132421	1754.9	66885	2154.9	QPSK	1	0	23.15	22.93
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	23.13	22.83

	PCC							SCC								Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	1	99	LTE B48	20	55538	3579.8	QPSK	1	0	23.50	23.11
CA_48C	LTE B48	20	56207	3646.7	QPSK	1	0	LTE B48	20	56009	3626.9	QPSK	1	99	23.50	23.23

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	24.75	24.51

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	26.52	26.29

Table 9-95
LTE Uplink Carrier Aggregation Measured P_{limit} for LTE Band 66 DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active), and LTE Band 41 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	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	1	99	19.25	18.89
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	19.50	19.09
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	10	132223	1735.1	66687	2135.1	QPSK	1	49	19.25	18.82
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66838	2165.1	QPSK	25	25	19.45	19.08

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	1	99	19.25	18.89
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	19.50	19.09
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	10	132223	1735.1	66687	2135.1	QPSK	1	49	19.25	18.82
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66838	2165.1	QPSK	25	25	19.45	19.08

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	21.42	21.21

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	23.13	22.83

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Table 9-96
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/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	41490	2680.0	QPSK	50	0	LTE B41	20	41292	2660.2	QPSK	50	50	22.60	22.30

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	50	0	LTE B41 PC2	20	41292	2660.2	QPSK	50	50	24.19	23.82

Table 9-97
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	56207	3646.7	QPSK	50	50	LTE B48	20	56405	3666.5	QPSK	50	0	17.27	16.95

Notes:

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



Figure 9-4
Power Measurement Setup

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9.5 NR Conducted Powers

9.5.1 NR Band n71

Table 9-98
NR Band n71 Measured P_{max} for all DSI - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	25.33	0	0
	1	53	25.48		0
	1	104	25.30		0
	50	0	24.93	0-0.5	0.5
	50	28	25.50	0	0
	50	56	24.95	0-0.5	0.5
	100	0	24.96		0.5
DFT-s-OFDM QPSK	1	1	25.34	0	0
	1	53	**25.41**		0
	1	104	25.26		0
	50	0	24.27	0-1	1
	50	28	**25.49**	0	0
	50	56	24.32	0-1	1
	100	0	24.40		1
DFT-s-OFDM 16QAM	1	1	24.24	0-1	1
CP-OFDM QPSK	1	1	23.81	0-1.5	1.5

Note: NR Band n71 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 9-99
NR Band n71 Measured P_{max} for all DSI - 15 MHz Bandwidth

NR Band n71 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	25.40	0	0
	1	40	25.45		0
	1	77	25.38		0
	36	0	24.93	0-0.5	0.5
	36	22	25.45	0	0
	36	43	24.85	0-0.5	0.5
	75	0	25.00		0.5
DFT-s-OFDM QPSK	1	1	25.36	0	0
	1	40	25.47		0
	1	77	25.29		0
	36	0	24.31	0-1	1
	36	22	25.36	0	0
	36	43	24.29	0-1	1
	75	0	24.39		1
DFT-s-OFDM 16QAM	1	1	24.13	0-1	1
CP-OFDM QPSK	1	1	23.53	0-1.5	1.5

Note: NR Band n71 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 9-100
NR Band n71 Measured P_{max} for all DSI - 10 MHz Bandwidth

NR Band n71 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133600 (668 MHz)	136100 (680.5 MHz)	138600 (693 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	25.07	25.22	25.06	0	0
	1	26	25.25	25.43	25.24		0
	1	50	25.27	25.23	25.21		0
	25	0	24.71	24.88	24.80	0-0.5	0.5
	25	14	25.28	25.49	25.41	0	0
	25	27	24.66	24.93	24.79	0-0.5	0.5
	50	0	24.80	24.87	24.93		0.5
DFT-s-OFDM QPSK	1	1	25.21	25.36	25.29	0	0
	1	26	25.24	25.41	25.28		0
	1	50	25.14	25.16	25.24		0
	25	0	24.11	24.28	24.16	0-1	1
	25	14	25.29	25.48	25.29	0	0
	25	27	24.13	24.28	24.19	0-1	1
	50	0	24.19	24.27	24.23		1
DFT-s-OFDM 16QAM	1	1	23.93	23.95	24.03	0-1	1
CP-OFDM QPSK	1	1	23.37	23.48	23.56	0-1.5	1.5

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Table 9-101
NR Band n71 Measured P_{max} for all DSI - 5 MHz Bandwidth

NR Band n71 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133100 (665.5 MHz)	136100 (680.5 MHz)	139100 (695.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.98	25.28	25.42	0	0
	1	13	25.02	25.43	25.42		0
	1	23	24.97	25.28	25.27		0
	12	0	24.86	24.94	24.87	0-0.5	0.5
	12	7	25.40	25.49	25.36	0	0
	12	13	24.88	24.93	24.77	0-0.5	0.5
	25	0	24.92	24.94	24.79		0.5
DFT-s-OFDM QPSK	1	1	25.36	25.50	25.46	0	0
	1	13	25.43	25.47	25.49		0
	1	23	25.42	25.39	25.38		0
	12	0	24.14	24.28	24.22	0-1	1
	12	7	25.23	25.47	25.22	0	0
	12	13	24.11	24.33	24.08	0-1	1
	25	0	24.12	24.34	24.07		1
DFT-s-OFDM 16QAM	1	1	23.99	24.26	24.45	0-1	1
CP-OFDM QPSK	1	1	23.28	23.66	23.62	0-1.5	1.5

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9.5.1 NR Band n12

Table 9-102
NR Band n12 Measured P_{max} for all DSI - 15 MHz Bandwidth

NR Band n12 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.35	0	0
	1	40	24.42		0
	1	77	24.41		0
	36	0	23.92	0-0.5	0.5
	36	22	24.35	0	0
	36	43	23.80	0-0.5	0.5
	75	0	23.92		0.5
DFT-s-OFDM QPSK	1	1	24.29	0	0
	1	40	**24.33**		0
	1	77	24.29		0
	36	0	23.41	0-1	1
	36	22	**24.31**	0	0
	36	43	23.38	0-1	1
	75	0	23.47		1
DFT-s-OFDM 16QAM	1	1	23.56	0-1	1
CP-OFDM QPSK	1	1	22.87	0-1.5	1.5

Note: NR Band n12 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 9-103
NR Band n12 Measured P_{max} for all DSI – 10 MHz Bandwidth

NR Band n12 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.73	0	0
	1	26	24.78		0
	1	50	24.56		0
	25	0	24.26	0-0.5	0.5
	25	14	24.71	0	0
	25	27	24.19	0-0.5	0.5
	50	0	24.24		0.5
DFT-s-OFDM QPSK	1	1	24.75	0	0
	1	26	24.80		0
	1	50	24.64		0
	25	0	23.85	0-1	1
	25	14	24.67	0	0
	25	27	23.74	0-1	1
	50	0	23.88		1
DFT-s-OFDM 16QAM	1	1	23.61	0-1	1
CP-OFDM QPSK	1	1	23.57	0-1.5	1.5

Note: NR Band n12 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 9-104
NR Band n12 Measured P_{max} for all DSI – 5 MHz Bandwidth

NR Band n12 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	140300 (701.5 MHz)	141500 (707.5 MHz)	142700 (713.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.73	24.88	24.85	0	0
	1	13	24.72	24.74	24.68		0
	1	23	24.70	24.69	24.61		0
	12	0	24.27	24.35	24.27	0-0.5	0.5
	12	7	24.73	24.71	24.67	0	0
	12	13	24.14	24.19	24.21	0-0.5	0.5
	25	0	24.21	24.20	24.16		0.5
DFT-s-OFDM QPSK	1	1	24.83	24.81	24.91	0	0
	1	13	24.86	24.78	24.77		0
	1	23	24.72	24.68	24.65		0
	12	0	23.94	23.95	23.91	0-1	1
	12	7	24.81	24.74	24.74	0	0
	12	13	23.82	23.85	23.77	0-1	1
	25	0	23.80	23.83	23.79		1
DFT-s-OFDM 16QAM	1	1	23.57	23.58	23.57	0-1	1
CP-OFDM QPSK	1	1	23.51	23.45	23.44	0-1.5	1.5

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9.5.2 NR Band n5

Table 9-105
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	25.36	0	0
	1	53	25.27		0
	1	104	25.17		0
	50	0	24.66	0-0.5	0.5
	50	28	25.30	0	0
	50	56	24.69	0-0.5	0.5
	100	0	24.67		0.5
DFT-s-OFDM QPSK	1	1	**25.33**	0	0
	1	53	25.23		0
	1	104	25.02		0
	50	0	24.29	0-1	1
	50	28	**25.16**	0	0
	50	56	24.13	0-1	1
	100	0	24.30		1
DFT-s-OFDM 16QAM	1	1	24.21	0-1	1
CP-OFDM QPSK	1	1	23.65	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 9-106
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 π/2 BPSK	1	1	25.40	0	0
	1	40	25.57		0
	1	77	25.34		0
	36	0	24.84	0-0.5	0.5
	36	22	25.41	0	0
	36	43	24.71	0-0.5	0.5
	75	0	24.81		0.5
DFT-s-OFDM QPSK	1	1	25.32	0	0
	1	40	25.32		0
	1	77	25.24		0
	36	0	24.33	0-1	1
	36	22	25.21	0	0
	36	43	24.27	0-1	1
	75	0	24.37		1
DFT-s-OFDM 16QAM	1	1	24.41	0-1	1
CP-OFDM QPSK	1	1	23.68	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 9-107
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 π/2 BPSK	1	1	25.47	0	0
	1	26	25.37		0
	1	50	25.31		0
	25	0	24.83	0-0.5	0.5
	25	14	25.49	0	0
	25	27	24.72	0-0.5	0.5
	50	0	24.81		0.5
DFT-s-OFDM QPSK	1	1	25.35	0	0
	1	26	25.25		0
	1	50	25.15		0
	25	0	24.41	0-1	1
	25	14	25.33	0	0
	25	27	24.21	0-1	1
	50	0	24.30		1
DFT-s-OFDM 16QAM	1	1	24.32	0-1	1
CP-OFDM QPSK	1	1	23.58	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 9-108
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	25.46	25.51	25.27	0	0
	1	13	25.31	25.48	25.32		0
	1	23	25.19	25.54	25.03		0
	12	0	24.88	24.95	24.75	0-0.5	0.5
	12	7	25.37	25.63	25.31	0	0
	12	13	24.75	24.82	24.70	0-0.5	0.5
	25	0	24.76	24.86	24.69		0.5
DFT-s-OFDM QPSK	1	1	25.38	25.56	25.32	0	0
	1	13	25.31	25.39	25.30		0
	1	23	25.35	25.28	25.27		0
	12	0	24.40	24.39	24.38	0-1	1
	12	7	25.31	25.33	25.28	0	0
	12	13	24.34	24.33	24.29	0-1	1
	25	0	24.29	24.31	24.25		1
DFT-s-OFDM 16QAM	1	1	24.41	24.32	24.32	0-1	1
CP-OFDM QPSK	1	1	23.61	23.68	23.53	0-1.5	1.5

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9.5.3 NR Band n66

Table 9-109
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	24.11	24.14	24.03	0	0
	1	53	24.07	24.04	23.98		0
	1	104	24.18	24.06	23.97		0
	50	0	23.61	23.63	23.48	0-0.5	0.5
	50	28	24.23	24.19	24.02	0	0
	50	56	23.52	23.53	23.42	0-0.5	0.5
	100	0	23.40	23.39	23.27		0.5
DFT-s-OFDM QPSK	1	1	**24.12**	24.10	23.87	0	0
	1	53	24.08	24.01	23.83		0
	1	104	24.02	24.09	23.93		0
	50	0	22.91	22.95	22.82	0-1	1
	50	28	**24.09**	24.08	23.96	0	0
	50	56	22.92	22.87	22.77	0-1	1
	100	0	22.93	22.89	22.79		1
DFT-s-OFDM 16QAM	1	1	22.97	22.99	22.66	0-1	1
CP-OFDM QPSK	1	1	22.27	22.25	22.26	0-1.5	1.5

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Table 9-110
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	24.35	24.03	24.24	0	0
	1	40	24.27	23.95	24.23		0
	1	77	24.38	24.22	24.28		0
	36	0	23.80	23.51	23.67	0-0.5	0.5
	36	22	24.20	23.99	24.09	0	0
	36	43	23.83	23.68	23.64	0-0.5	0.5
	75	0	23.83	23.63	23.66		0.5
DFT-s-OFDM QPSK	1	1	24.34	24.17	24.21	0	0
	1	40	24.22	23.98	24.05		0
	1	77	24.37	24.08	24.12		0
	36	0	23.12	22.95	23.00	0-1	1
	36	22	24.21	24.01	24.05	0	0
	36	43	23.18	22.99	22.96	0-1	1
	75	0	23.13	22.97	23.05		1
DFT-s-OFDM 16QAM	1	1	23.25	23.12	23.14	0-1	1
CP-OFDM QPSK	1	1	22.47	22.41	22.47	0-1.5	1.5

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Table 9-111
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	24.26	24.12	24.15	0	0
	1	26	24.24	24.23	24.23		0
	1	50	24.30	23.83	23.77		0
	25	0	23.70	23.70	23.67	0-0.5	0.5
	25	14	24.36	24.36	24.39	0	0
	25	27	23.81	23.75	23.63	0-0.5	0.5
	50	0	23.75	23.72	23.70		0.5
DFT-s-OFDM QPSK	1	1	24.12	24.12	24.11	0	0
	1	26	24.17	24.12	24.06		0
	1	50	24.23	24.02	24.13		0
	25	0	23.18	23.04	23.10	0-1	1
	25	14	24.30	24.23	24.17	0	0
	25	27	23.15	23.08	23.05	0-1	1
	50	0	23.19	23.05	23.14		1
DFT-s-OFDM 16QAM	1	1	23.11	23.01	23.12	0-1	1
CP-OFDM QPSK	1	1	22.22	22.28	22.42	0-1.5	1.5

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Table 9-112
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	24.09	24.17	24.04	0	0
	1	13	24.12	24.25	24.23		0
	1	23	24.09	24.15	24.18		0
	12	0	23.64	23.65	23.53	0-0.5	0.5
	12	7	24.27	24.15	24.18	0	0
	12	13	23.72	23.59	23.57	0-0.5	0.5
	25	0	23.67	23.62	23.57		0.5
DFT-s-OFDM QPSK	1	1	24.08	24.01	24.06	0	0
	1	13	24.18	24.03	24.11		0
	1	23	24.02	23.96	24.04		0
	12	0	23.18	22.98	23.08	0-1	1
	12	7	24.13	24.13	24.03	0	0
	12	13	23.15	22.99	23.01	0-1	1
	25	0	23.05	23.01	22.94		1
DFT-s-OFDM 16QAM	1	1	23.22	22.94	23.04	0-1	1
CP-OFDM QPSK	1	1	22.34	22.06	22.22	0-1.5	1.5

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Table 9-113
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.63	19.61	19.48	0	0.0
	1	53	19.91	19.77	19.84		0.0
	1	104	19.68	19.63	19.61		0.0
	50	0	19.69	19.64	19.52	0-0.5	0.0
	50	28	19.70	19.62	19.54	0	0.0
	50	56	19.68	19.60	19.59	0-0.5	0.0
	100	0	19.69	19.62	19.56		0.0
DFT-s-OFDM QPSK	1	1	19.66	19.64	19.51	0	0.0
	1	53	**19.83**	19.61	19.64		0.0
	1	104	19.61	19.57	19.52		0.0
	50	0	19.67	19.57	19.49	0-1	0.0
	50	28	19.68	19.61	19.58	0	0.0
	50	56	**19.72**	19.63	19.57	0-1	0.0
	100	0	19.71	19.57	19.51		0.0
DFT-s-OFDM 16QAM	1	1	19.69	19.72	19.58	0-1	0.0
CP-OFDM QPSK	1	1	19.49	19.62	19.52	0-1.5	0.0

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Table 9-114
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.55	19.56	19.43	0	0.0
	1	40	19.61	19.49	19.48		0.0
	1	77	19.65	19.62	19.58		0.0
	36	0	19.57	19.52	19.50	0-0.5	0.0
	36	22	19.58	19.48	19.48	0	0.0
	36	43	19.62	19.53	19.52	0-0.5	0.0
	75	0	19.60	19.50	19.52		0.0
DFT-s-OFDM QPSK	1	1	19.58	19.51	19.43	0	0.0
	1	40	19.54	19.39	19.39		0.0
	1	77	19.59	19.46	19.47		0.0
	36	0	19.63	19.52	19.51	0-1	0.0
	36	22	19.58	19.53	19.49	0	0.0
	36	43	19.61	19.56	19.50	0-1	0.0
	75	0	19.60	19.52	19.54		0.0
DFT-s-OFDM 16QAM	1	1	19.85	19.75	19.78	0-1	0.0
CP-OFDM QPSK	1	1	19.53	19.36	19.41	0-1.5	0.0

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Table 9-115
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.67	19.43	19.49	0	0.0
	1	26	19.95	19.70	19.82		0.0
	1	50	19.63	19.49	19.51		0.0
	25	0	19.64	19.46	19.47	0-0.5	0.0
	25	14	19.65	19.46	19.52	0	0.0
	25	27	19.66	19.45	19.51	0-0.5	0.0
	50	0	19.67	19.47	19.53		0.0
DFT-s-OFDM QPSK	1	1	19.55	19.44	19.39	0	0.0
	1	26	19.69	19.51	19.42		0.0
	1	50	19.61	19.43	19.46		0.0
	25	0	19.62	19.50	19.48	0-1	0.0
	25	14	19.70	19.53	19.51	0	0.0
	25	27	19.65	19.47	19.49	0-1	0.0
	50	0	19.64	19.48	19.52		0.0
DFT-s-OFDM 16QAM	1	1	19.83	19.76	19.71	0-1	0.0
CP-OFDM QPSK	1	1	19.42	19.43	19.43	0-1.5	0.0

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Table 9-116
NR Band n66 Measured P_{limit} for DSI = 3 (Hotspot mode), 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	19.66	19.54	19.50	0	0.0
	1	13	19.72	19.56	19.52		0.0
	1	23	19.64	19.53	19.62		0.0
	12	0	19.69	19.52	19.57	0-0.5	0.0
	12	7	19.70	19.54	19.54	0	0.0
	12	13	19.70	19.49	19.49	0-0.5	0.0
	25	0	19.66	19.45	19.53		0.0
DFT-s-OFDM QPSK	1	1	19.57	19.37	19.43	0	0.0
	1	13	19.56	19.33	19.37		0.0
	1	23	19.55	19.38	19.41		0.0
	12	0	19.69	19.48	19.52	0-1	0.0
	12	7	19.72	19.47	19.56	0	0.0
	12	13	19.70	19.53	19.60	0-1	0.0
	25	0	19.68	19.45	19.52		0.0
DFT-s-OFDM 16QAM	1	1	19.87	19.78	19.73	0-1	0.0
CP-OFDM QPSK	1	1	19.64	19.44	19.47	0-1.5	0.0

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9.5.4 NR Band n25

Table 9-117
NR Band n25 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.76	23.85	23.77	0	0
	1	53	23.86	23.91	23.87		0
	1	104	23.76	23.76	23.15		0
	50	0	23.34	23.41	23.38	0-0.5	0.5
	50	28	23.69	23.84	23.81	0	0
	50	56	23.32	23.35	23.37	0-0.5	0.5
	100	0	23.35	23.45	23.35		0.5
DFT-s-OFDM QPSK	1	1	23.71	23.71	23.89	0	0
	1	53	23.75	23.83	**24.00**		0
	1	104	23.60	23.61	23.76		0
	50	0	22.64	22.76	22.79	0-1	1
	50	28	23.68	23.74	**23.79**	0	0
	50	56	22.66	22.75	22.69	0-1	1
	100	0	22.65	22.74	22.75		1
DFT-s-OFDM 16QAM	1	1	22.81	22.91	22.86	0-1	1
CP-OFDM QPSK	1	1	22.15	22.28	22.06	0-1.5	1.5

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Table 9-118
NR Band n25 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 15 MHz Bandwidth

NR Band n25 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376500 (1882.5 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.76	23.59	23.81	0	0
	1	40	23.86	23.80	23.88		0
	1	77	23.85	23.76	23.97		0
	36	0	23.45	23.50	23.51	0-0.5	0.5
	36	22	23.79	23.79	23.94	0	0
	36	43	23.39	23.58	23.55	0-0.5	0.5
	75	0	23.45	23.46	23.55		0.5
DFT-s-OFDM QPSK	1	1	23.87	23.96	23.93	0	0
	1	40	23.93	23.91	23.98		0
	1	77	23.82	23.98	23.97		0
	36	0	22.84	22.85	22.92	0-1	1
	36	22	23.80	23.87	23.86	0	0
	36	43	22.80	22.84	22.90	0-1	1
	75	0	22.81	22.83	22.95		1
DFT-s-OFDM 16QAM	1	1	23.16	23.23	23.30	0-1	1
CP-OFDM QPSK	1	1	22.28	22.24	22.29	0-1.5	1.5

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Table 9-119
NR Band n25 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 10 MHz Bandwidth

NR Band n25 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376500 (1882.5 MHz)	382000 (1910 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.72	23.81	23.70	0	0
	1	26	23.90	23.94	23.94		0
	1	50	23.76	23.88	23.78		0
	25	0	23.43	23.51	23.45	0-0.5	0.5
	25	14	23.82	23.92	23.83	0	0
	25	27	23.41	23.49	23.48	0-0.5	0.5
	50	0	23.44	23.56	23.47		0.5
DFT-s-OFDM QPSK	1	1	23.91	23.94	23.92	0	0
	1	26	24.00	24.14	24.06		0
	1	50	23.82	23.95	23.91		0
	25	0	22.77	22.90	22.87	0-1	1
	25	14	23.79	23.87	23.85	0	0
	25	27	22.87	22.89	22.89	0-1	1
	50	0	22.81	22.88	22.88		1
DFT-s-OFDM 16QAM	1	1	23.18	23.17	22.86	0-1	1
CP-OFDM QPSK	1	1	22.22	22.26	22.32	0-1.5	1.5

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Table 9-120
NR Band n25 Measured P_{max} for DSI = 2 (Head) or DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) - 5 MHz Bandwidth

NR Band n25 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376500 (1882.5 MHz)	382500 (1912.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.60	23.73	23.66	0	0
	1	13	23.76	23.86	23.78		0
	1	23	23.72	23.84	23.87		0
	12	0	23.34	23.46	23.41	0-0.5	0.5
	12	7	23.92	23.89	23.86	0	0
	12	13	23.45	23.53	23.49	0-0.5	0.5
	25	0	23.40	23.48	23.46		0.5
DFT-s-OFDM QPSK	1	1	23.87	23.94	23.88	0	0
	1	13	23.91	23.93	23.92		0
	1	23	23.89	23.91	23.97		0
	12	0	22.72	22.86	22.88	0-1	1
	12	7	23.84	23.93	23.89	0	0
	12	13	22.87	22.96	22.98	0-1	1
	25	0	22.78	22.84	22.87		1
DFT-s-OFDM 16QAM	1	1	23.14	23.19	23.16	0-1	1
CP-OFDM QPSK	1	1	22.22	22.21	22.24	0-1.5	1.5

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Table 9-121
NR Band n25 Measured P_{limit} for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.80	19.02	18.93	0	0
	1	53	18.93	19.14	18.92		0
	1	104	18.81	18.90	18.80		0
	50	0	18.82	19.01	18.84	0-0.5	0
	50	28	18.86	19.01	18.90	0	0
	50	56	18.77	18.99	18.85	0-0.5	0
	100	0	18.84	19.02	18.95		0
DFT-s-OFDM QPSK	1	1	18.77	19.03	18.86	0	0
	1	53	18.94	**19.11**	18.88		0
	1	104	18.86	18.91	18.71		0
	50	0	18.76	**18.99**	18.89	0-1	0
	50	28	18.84	18.98	18.85	0	0
	50	56	18.81	18.93	18.81	0-1	0
	100	0	18.80	18.98	18.90		0
DFT-s-OFDM 16QAM	1	1	18.82	19.12	19.07	0-1	0
CP-OFDM QPSK	1	1	18.77	19.05	18.84	0-1.5	0

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Table 9-122
NR Band n25 Measured P_{limit} for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

NR Band n25 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376500 (1882.5 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.92	19.07	18.90	0	0
	1	40	18.89	19.08	19.01		0
	1	77	18.90	19.01	18.97		0
	36	0	18.93	19.08	19.00	0-0.5	0
	36	22	18.85	19.02	18.96	0	0
	36	43	18.87	19.03	18.98	0-0.5	0
	75	0	18.94	19.06	19.00		0
DFT-s-OFDM QPSK	1	1	19.00	19.13	18.97	0	0
	1	40	19.02	19.10	19.01		0
	1	77	18.88	19.04	19.05		0
	36	0	18.88	19.03	18.96	0-1	0
	36	22	18.90	19.01	18.97	0	0
	36	43	18.85	18.97	18.99	0-1	0
	75	0	18.95	19.08	19.00		0
DFT-s-OFDM 16QAM	1	1	19.23	19.49	19.38	0-1	0
CP-OFDM QPSK	1	1	18.95	19.07	18.90	0-1.5	0

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Table 9-123
NR Band n25 Measured P_{limit} for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

NR Band n25 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376500 (1882.5 MHz)	382000 (1910 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.86	19.03	18.99	0	0
	1	26	18.99	19.14	19.21		0
	1	50	18.89	19.03	19.00		0
	25	0	18.88	19.02	19.04	0-0.5	0
	25	14	18.90	19.00	19.06	0	0
	25	27	18.87	18.99	19.04	0-0.5	0
	50	0	18.88	19.00	19.10		0
DFT-s-OFDM QPSK	1	1	18.94	19.07	19.15	0	0
	1	26	19.05	19.29	19.31		0
	1	50	18.94	19.03	19.08		0
	25	0	18.86	18.95	18.99	0-1	0
	25	14	18.85	18.96	18.97	0	0
	25	27	18.90	19.04	19.10	0-1	0
	50	0	18.90	19.03	19.08		0
DFT-s-OFDM 16QAM	1	1	19.21	19.42	19.34	0-1	0
CP-OFDM QPSK	1	1	18.85	18.87	19.00	0-1.5	0

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Table 9-124
NR Band n25 Measured P_{limit} for DSI = 3 (Hotspot mode), DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 5 MHz Bandwidth

NR Band n25 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376500 (1882.5 MHz)	382500 (1912.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.73	18.76	18.89	0	0
	1	13	18.86	18.81	18.97		0
	1	23	18.82	18.82	19.02		0
	12	0	18.83	18.86	18.95	0-0.5	0
	12	7	18.90	18.91	19.00	0	0
	12	13	18.91	18.96	19.07	0-0.5	0
	25	0	18.84	18.95	18.99		0
DFT-s-OFDM QPSK	1	1	18.82	18.91	19.03	0	0
	1	13	18.89	18.98	19.06		0
	1	23	18.86	18.94	19.01		0
	12	0	18.84	18.91	18.95	0-1	0
	12	7	18.85	18.89	19.04	0	0
	12	13	18.91	18.97	19.02	0-1	0
	25	0	18.82	18.91	19.04		0
DFT-s-OFDM 16QAM	1	1	19.14	19.24	19.27	0-1	0
CP-OFDM QPSK	1	1	18.78	18.82	18.98	0-1.5	0

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9.5.5 NR Band n41

Table 9-125
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.21	0	0.0
	1	137	24.22		0.0
	1	271	24.18		0.0
	135	0	23.61	0-0.5	0.5
	135	69	24.12	0	0.0
	135	138	23.69	0-0.5	0.5
	270	0	23.53		0.5
DFT-s-OFDM QPSK	1	1	24.18	0	0.0
	1	137	24.15		0.0
	1	271	**24.19**		0.0
	135	0	23.11	0-1	1.0
	135	69	**24.08**	0	0.0
	135	138	23.16	0-1	1.0
	270	0	23.04		1.0
DFT-s-OFDM 16QAM	1	1	23.38	0-1	1.0
CP-OFDM QPSK	1	1	22.92	0-1.5	1.5

Note: NR Band n41 at 100 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 9-126
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 90 MHz Bandwidth

NR Band n41 90 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	508200 (2541 MHz)	528996 (2644.98 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	24.37	24.10	0	0
	1	123	23.97	23.88		0
	1	243	24.01	24.29		0
	120	0	23.93	23.41	0-0.5	0.5
	120	63	24.10	23.95	0	0
	120	125	23.59	23.83	0-0.5	0.5
	243	0	23.67	23.85		0.5
DFT-s-OFDM QPSK	1	1	24.46	23.89	0	0
	1	123	24.27	24.13		0
	1	243	24.09	24.42		0
	120	0	23.56	23.07	0-1	1
	120	63	24.11	24.06	0	0
	120	125	22.98	23.40	0-1	1
	243	0	23.06	23.17		1
DFT-s-OFDM 16QAM	1	1	23.73	22.96	0-1	1
CP-OFDM QPSK	1	1	22.86	22.60	0-1.5	1.5

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Table 9-127
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 80 MHz Bandwidth

NR Band n41 80 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507204 (2536.02 MHz)	529998 (2649.99 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	24.35	23.96	0	0
	1	109	23.97	23.88		0
	1	215	23.91	24.23		0
	108	0	23.86	23.35	0-0.5	0.5
	108	55	23.78	23.76	0	0
	108	109	23.41	23.60	0-0.5	0.5
	216	0	23.67	23.57		0.5
DFT-s-OFDM QPSK	1	1	24.39	23.72	0	0
	1	109	24.11	23.93		0
	1	215	23.92	24.21		0
	108	0	23.25	22.82	0-1	1
	108	55	23.95	23.77	0	0
	108	109	22.91	23.09	0-1	1
	216	0	22.99	22.92		1
DFT-s-OFDM 16QAM	1	1	23.26	22.85	0-1	1
CP-OFDM QPSK	1	1	22.82	22.66	0-1.5	1.5

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Table 9-128
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 60 MHz Bandwidth

NR Band n41 60 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	505200 (2526 MHz)	518598 (2592.99 MHz)	531996 (2659.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.11	23.79	23.72	0	0
	1	81	24.17	24.09	24.05		0
	1	160	23.67	23.86	24.23		0
	81	0	23.49	23.44	23.34	0-0.5	0.5
	81	41	23.87	23.80	23.83	0	0
	81	81	23.38	23.38	23.68	0-0.5	0.5
	162	0	23.39	23.40	23.48		0.5
DFT-s-OFDM QPSK	1	1	24.14	23.72	23.55	0	0
	1	81	23.74	23.69	23.69		0
	1	160	23.88	23.78	24.13		0
	81	0	23.14	22.77	22.68	0-1	1
	81	41	23.91	23.81	23.81	0	0
	81	81	22.84	22.75	23.09	0-1	1
	162	0	22.91	22.86	22.89		1
DFT-s-OFDM 16QAM	1	1	23.27	22.80	22.69	0-1	1
CP-OFDM QPSK	1	1	22.81	22.66	22.31	0-1.5	1.5

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Table 9-129
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 50 MHz Bandwidth

NR Band n41 50 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	504204 (2521.02 MHz)	518598 (2592.99 MHz)	532998 (2664.99 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.25	23.96	23.99	0	0
	1	67	24.01	23.90	24.04		0
	1	131	23.83	24.03	24.42		0
	64	0	23.67	23.54	23.56	0-0.5	0.5
	64	35	24.08	23.94	24.05	0	0
	64	69	23.52	23.52	23.87	0-0.5	0.5
	128	0	23.54	23.59	23.74		0.5
DFT-s-OFDM QPSK	1	1	24.09	23.93	23.77	0	0
	1	67	23.95	23.85	23.89		0
	1	131	23.76	23.99	24.31		0
	64	0	23.10	22.84	22.78	0-1	1
	64	35	23.94	23.81	23.85	0	0
	64	69	22.88	22.80	23.13	0-1	1
	128	0	23.01	22.83	22.96		1
DFT-s-OFDM 16QAM	1	1	23.26	22.92	22.80	0-1	1
CP-OFDM QPSK	1	1	22.73	22.66	22.59	0-1.5	1.5

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Table 9-130
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 40 MHz Bandwidth

NR Band n41 40 MHz Bandwidth								
			Channel				MPR Allowed per 3GPP [dB]	MPR Allowed per 3GPP [dB]
Modulation	RB Size	RB Offset	503202 (2516.01 MHz)	513468 (2567.34 MHz)	523734 (2618.67 MHz)	534000 (2670 MHz)		
			Conducted Power [dBm]					
DFT-s-OFDM π/2 BPSK	1	1	24.66	24.11	24.22	24.14	0	0
	1	53	24.72	24.32	24.47	24.39		0
	1	104	24.34	24.08	24.26	24.46		0
	50	0	24.05	23.61	23.67	23.57	0-0.5	0.5
	50	28	24.32	23.97	24.13	24.15	0	0
	50	56	23.87	23.57	23.81	24.13	0-0.5	0.5
	100	0	23.99	23.63	23.69	23.80		0.5
DFT-s-OFDM QPSK	1	1	24.65	24.03	24.27	24.17	0	0
	1	53	24.43	23.87	24.39	24.43		0
	1	104	24.36	23.96	24.32	24.58		0
	50	0	23.47	23.22	23.03	23.12	0-1	1
	50	28	24.42	24.18	24.09	24.20	0	0
	50	56	23.25	23.27	23.12	23.56	0-1	1
	100	0	23.44	23.35	23.16	23.27		1
DFT-s-OFDM 16QAM	1	1	23.69	23.58	23.21	22.75	0-1	1
CP-OFDM QPSK	1	1	23.11	22.81	22.64	22.34	0-1.5	1.5

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Table 9-131
NR Band n41 Measured P_{max} for DSI = 0 (Body-worn, or Phablet with grip sensor not triggered) and/or DSI = 3 (Hotspot mode) / DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n41 20 MHz Bandwidth									
			Channel					MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	501204 (2506.02 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
DFT-s-OFDM π/2 BPSK	1	1	24.28	24.06	23.97	23.89	23.91	0	0
	1	26	24.18	23.89	23.88	23.84	24.10		0
	1	49	24.13	23.81	23.94	24.01	24.06		0
	25	0	23.71	23.43	23.48	23.46	23.63	0-0.5	0.5
	25	13	24.13	23.79	23.82	23.86	24.07	0	0
	25	26	23.73	23.34	23.35	23.42	23.72	0-0.5	0.5
	50	0	23.85	23.42	23.41	23.28	23.66		0.5
DFT-s-OFDM QPSK	1	1	24.38	24.09	23.95	23.91	23.98	0	0
	1	26	24.19	23.83	23.76	23.77	23.80		0
	1	49	24.33	23.90	23.84	23.98	24.04		0
	25	0	23.26	22.88	22.79	22.71	22.86	0-1	1
	25	13	24.23	23.95	23.75	23.78	24.11	0	0
	25	26	23.31	22.82	22.81	22.76	23.13	0-1	1
	50	0	23.18	22.95	22.70	22.81	23.09		1
DFT-s-OFDM 16QAM	1	1	23.05	23.26	22.68	22.68	22.95	0-1	1
CP-OFDM QPSK	1	1	22.66	22.40	22.26	22.12	22.44	0-1.5	1.5

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Table 9-132
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	20.38	0	0
	1	137	20.42		0
	1	271	20.32		0
	135	0	20.24	0-0.5	0
	135	69	20.21	0	0
	135	138	20.17	0-0.5	0
	270	0	20.20		0
DFT-s-OFDM QPSK	1	1	**20.37**	0	0
	1	137	20.25		0
	1	271	20.36		0
	135	0	**20.25**	0-1	0
	135	69	20.16	0	0
	135	138	20.19	0-1	0
	270	0	20.23		0
DFT-s-OFDM 16QAM	1	1	20.44	0-1	0
CP-OFDM QPSK	1	1	20.59	0-1.5	0

Note: NR Band n41 at 100 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 9-133
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 90 MHz Bandwidth

NR Band n41 90 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	508200 (2541 MHz)	528996 (2644.98 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	20.17	19.85	0	0
	1	123	20.09	19.91		0
	1	243	19.89	20.32		0
	120	0	20.13	19.77	0-0.5	0
	120	63	19.88	19.84	0	0
	120	125	19.75	20.09	0-0.5	0
	243	0	19.89	19.98		0
DFT-s-OFDM QPSK	1	1	20.36	19.86	0	0
	1	123	19.96	19.88		0
	1	243	19.82	20.31		0
	120	0	20.11	19.82	0-1	0
	120	63	19.99	19.86	0	0
	120	125	19.82	20.17	0-1	0
	243	0	19.94	20.02		0
DFT-s-OFDM 16QAM	1	1	20.45	19.78	0-1	0
CP-OFDM QPSK	1	1	20.15	19.63	0-1.5	0

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Table 9-134
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 80 MHz Bandwidth

NR Band n41 80 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507204 (2536.02 MHz)	529998 (2649.99 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	20.47	19.98	0	0
	1	109	19.96	19.93		0
	1	215	19.91	20.35		0
	108	0	20.13	19.84	0-0.5	0
	108	55	19.94	19.89	0	0
	108	109	19.83	20.12	0-0.5	0
	216	0	19.90	20.07		0
DFT-s-OFDM QPSK	1	1	20.31	19.95	0	0
	1	109	20.09	19.97		0
	1	215	19.87	20.27		0
	108	0	20.07	19.94	0-1	0
	108	55	19.98	19.86	0	0
	108	109	19.95	20.25	0-1	0
	216	0	19.89	20.03		0
DFT-s-OFDM 16QAM	1	1	20.51	19.87	0-1	0
CP-OFDM QPSK	1	1	20.33	19.71	0-1.5	0

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Table 9-135
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 60 MHz Bandwidth

NR Band n41 60 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	505200 (2526 MHz)	518598 (2592.99 MHz)	531996 (2659.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.41	19.84	19.89	0	0
	1	81	20.25	20.03	20.10		0
	1	160	20.04	19.91	20.21		0
	81	0	20.21	19.97	19.74	0-0.5	0
	81	41	20.06	19.87	19.93	0	0
	81	81	20.01	19.76	20.16	0-0.5	0
	162	0	19.96	19.81	20.05		0
DFT-s-OFDM QPSK	1	1	20.32	19.84	19.83	0	0
	1	81	20.23	19.86	19.92		0
	1	160	19.95	19.94	20.19		0
	81	0	20.21	19.82	19.76	0-1	0
	81	41	20.00	19.90	19.87	0	0
	81	81	19.87	19.80	20.02	0-1	0
	162	0	19.92	19.91	19.92		0
DFT-s-OFDM 16QAM	1	1	20.32	20.13	20.26	0-1	0
CP-OFDM QPSK	1	1	20.58	19.95	19.79	0-1.5	0

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Table 9-136
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 50 MHz Bandwidth

NR Band n41 50 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	504204 (2521.02 MHz)	518598 (2592.99 MHz)	532998 (2664.99 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	20.29	19.91	19.78	0	0
	1	67	20.06	19.84	19.85		0
	1	131	19.94	20.03	20.19		0
	64	0	20.25	19.92	19.75	0-0.5	0
	64	35	20.13	19.79	19.81	0	0
	64	69	19.92	19.83	19.97	0-0.5	0
	128	0	20.04	19.74	19.91		0
DFT-s-OFDM QPSK	1	1	20.08	19.89	19.87	0	0
	1	67	20.14	19.79	19.84		0
	1	131	19.95	19.96	20.14		0
	64	0	20.17	19.84	19.81	0-1	0
	64	35	20.09	19.87	19.87	0	0
	64	69	19.94	19.80	20.08	0-1	0
	128	0	20.13	19.78	19.86		0
DFT-s-OFDM 16QAM	1	1	20.35	20.15	20.20	0-1	0
CP-OFDM QPSK	1	1	20.42	19.82	19.85	0-1.5	0

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Table 9-137
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n41 40 MHz Bandwidth								
			Channel				MPR Allowed per 3GPP [dB]	MPR Allowed per 3GPP [dB]
Modulation	RB Size	RB Offset	503202 (2516.01 MHz)	513468 (2567.34 MHz)	523734 (2618.67 MHz)	534000 (2670 MHz)		
			Conducted Power [dBm]					
DFT-s-OFDM π/2 BPSK	1	1	20.38	20.26	20.14	20.11	0	0
	1	53	20.42	20.40	20.23	20.24		0
	1	104	20.30	20.12	20.09	20.40		0
	50	0	20.46	20.04	20.11	20.13	0-0.5	0
	50	28	20.39	20.15	19.97	20.21	0	0
	50	56	20.29	20.08	20.02	20.39	0-0.5	0
	100	0	20.35	20.18	20.13	20.22		0
DFT-s-OFDM QPSK	1	1	20.53	20.23	20.05	20.28	0	0
	1	53	20.46	20.17	20.10	20.32		0
	1	104	20.27	20.05	20.19	20.41		0
	50	0	20.56	20.14	20.07	20.20	0-1	0
	50	28	20.44	19.96	20.03	20.26	0	0
	50	56	20.28	20.01	20.17	20.42	0-1	0
	100	0	20.47	20.09	20.08	20.18		0
DFT-s-OFDM 16QAM	1	1	20.81	20.45	20.41	20.34	0-1	0
CP-OFDM QPSK	1	1	20.66	19.81	20.26	19.99	0-1.5	0

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Table 9-138
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 20 MHz Bandwidth

NR Band n41 20 MHz Bandwidth									
			Channel					MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	501204 (2506.02 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
DFT-s-OFDM π/2 BPSK	1	1	20.14	19.92	19.85	19.81	19.93	0	0
	1	26	20.18	19.89	19.80	19.67	20.02		0
	1	49	20.21	19.82	19.69	19.77	20.17		0
	25	0	20.07	20.06	19.89	19.83	19.90	0-0.5	0
	25	13	20.16	19.90	19.95	19.74	19.98	0	0
	25	26	20.23	19.87	19.78	19.95	20.21	0-0.5	0
	50	0	20.21	19.78	19.71	19.60	19.99		0
DFT-s-OFDM QPSK	1	1	20.33	20.00	19.98	19.80	19.79	0	0
	1	26	20.02	19.86	19.90	19.84	20.15		0
	1	49	20.13	19.82	19.83	19.75	20.25		0
	25	0	20.18	19.95	19.79	19.78	19.93	0-1	0
	25	13	20.11	19.80	19.70	19.74	19.97	0	0
	25	26	20.03	19.77	19.69	19.85	20.00	0-1	0
	50	0	20.09	19.86	19.83	19.77	20.04		0
DFT-s-OFDM 16QAM	1	1	20.14	20.00	19.72	19.61	19.82	0-1	0
CP-OFDM QPSK	1	1	20.08	20.03	19.99	19.78	19.98	0-1.5	0

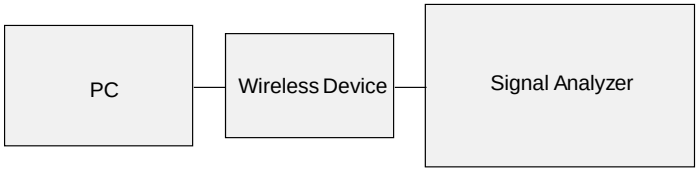


Figure 9-5
Power Measurement Setup

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9.6 WLAN Conducted Powers

Table 9-139
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	20.03	17.23	17.56	16.75
2437	6	20.04	17.73	17.39	16.14
2462	11	20.10	17.72	17.83	16.87

Table 9-140
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	20.67	17.84	17.42	16.61
2437	6	20.84	17.96	17.83	16.50
2462	11	20.26	17.61	17.68	16.97

Table 9-141
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	17.56	17.42	20.50
2437	6	17.39	17.83	20.63
2462	11	17.83	17.68	20.77

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Table 9-142
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	17.45	17.48	17.42	15.34
5200	40	17.80	17.95	17.96	15.28
5220	44	17.86	17.78	17.77	15.10
5240	48	17.84	17.84	17.86	15.12
5260	52	17.26	17.32	17.39	15.94
5280	56	17.20	17.21	17.30	15.88
5300	60	17.25	17.31	17.35	15.97
5320	64	16.79	17.72	17.96	15.80
5500	100	16.60	17.77	17.77	15.67
5520	104	17.89	17.85	17.98	15.72
5600	120	17.45	17.53	17.50	15.21
5620	124	17.42	17.37	17.45	15.13
5720	144	17.79	17.77	17.90	15.56
5745	149	17.80	17.81	17.81	15.28
5785	157	17.82	17.90	17.93	15.40
5825	165	17.47	17.48	17.57	15.01

Table 9-143
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	17.62	17.59	17.68	15.42
5200	40	17.61	17.69	17.81	15.58
5220	44	17.58	17.76	17.82	15.50
5240	48	17.62	17.84	17.90	15.57
5260	52	17.52	17.68	17.75	15.35
5280	56	17.58	17.71	17.81	15.34
5300	60	17.56	17.81	17.84	15.55
5320	64	16.40	17.65	17.75	15.40
5500	100	16.54	17.81	17.83	15.64
5520	104	17.98	17.04	17.08	15.69
5600	120	17.03	17.16	17.17	15.75
5620	124	17.03	17.11	17.23	15.48
5720	144	17.11	17.31	17.34	15.98
5745	149	17.32	17.41	17.46	15.34
5785	157	17.54	17.64	17.62	15.47
5825	165	17.51	17.56	17.58	15.46

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Table 9-144
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.48	17.59	20.55
5200	40	17.95	17.69	20.83
5220	44	17.78	17.76	20.78
5240	48	17.84	17.84	20.85
5260	52	17.32	17.68	20.51
5280	56	17.21	17.71	20.48
5300	60	17.31	17.81	20.58
5320	64	17.72	17.65	20.70
5500	100	17.77	17.81	20.80
5600	120	17.53	17.16	20.36
5620	124	17.37	17.11	20.25
5720	144	17.77	17.31	20.56
5745	149	17.81	17.41	20.62
5785	157	17.90	17.64	20.78
5825	165	17.48	17.56	20.53

Table 9-145
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	13.66	13.98
5290	58	13.61	13.99
5530	106	13.87	13.81
5610	122	13.86	13.67
5690	138	14.00	13.82
5775	155	13.99	13.58

Table 9-146
2.4 GHz WLAN Reduced 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	16.85	16.74	16.66	16.94
2437	6	17.00	16.77	16.82	16.15
2462	11	16.95	16.25	16.30	16.21

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Table 9-147
2.4 GHz WLAN Reduced 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	16.97	16.12	16.20	16.52
2437	6	16.99	16.54	16.16	16.68
2462	11	17.00	16.81	16.58	16.74

Table 9-148
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	13.66	12.99
5290	58	13.61	12.54
5530	106	13.87	12.64
5610	122	13.86	12.11
5690	138	14.00	12.42
5775	155	13.99	12.99

Table 9-149
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	13.98	12.42
5290	58	13.99	12.18
5530	106	13.81	12.42
5610	122	13.67	12.43
5690	138	13.82	12.34
5775	155	13.58	12.41

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Table 9-150
5 GHz WLAN Reduced Average RF Power – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	**Channel**	**ANT1**	**ANT2**	**MIMO**
5210	42	13.66	13.98	16.83
5290	58	13.61	13.99	16.81
5530	106	13.87	13.81	16.85
5610	122	13.86	13.67	16.78
5690	138	14.00	13.82	16.92
5775	155	13.99	13.58	16.80

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

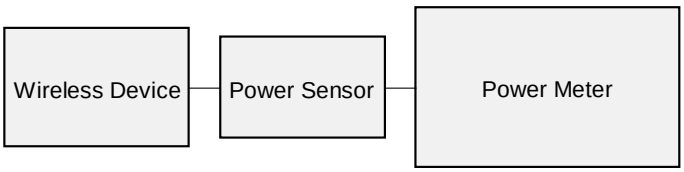


Figure 9-6
Power Measurement Setup

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9.7 Bluetooth Conducted Powers

Table 9-151
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	15.40	34.674
2441	1.0	39	16.58	45.468
2480	1.0	78	16.05	40.275
2402	2.0	0	11.47	14.029
2441	2.0	39	12.65	18.411
2480	2.0	78	11.10	12.881
2402	3.0	0	11.40	13.795
2441	3.0	39	12.73	18.757
2480	3.0	78	11.31	13.521

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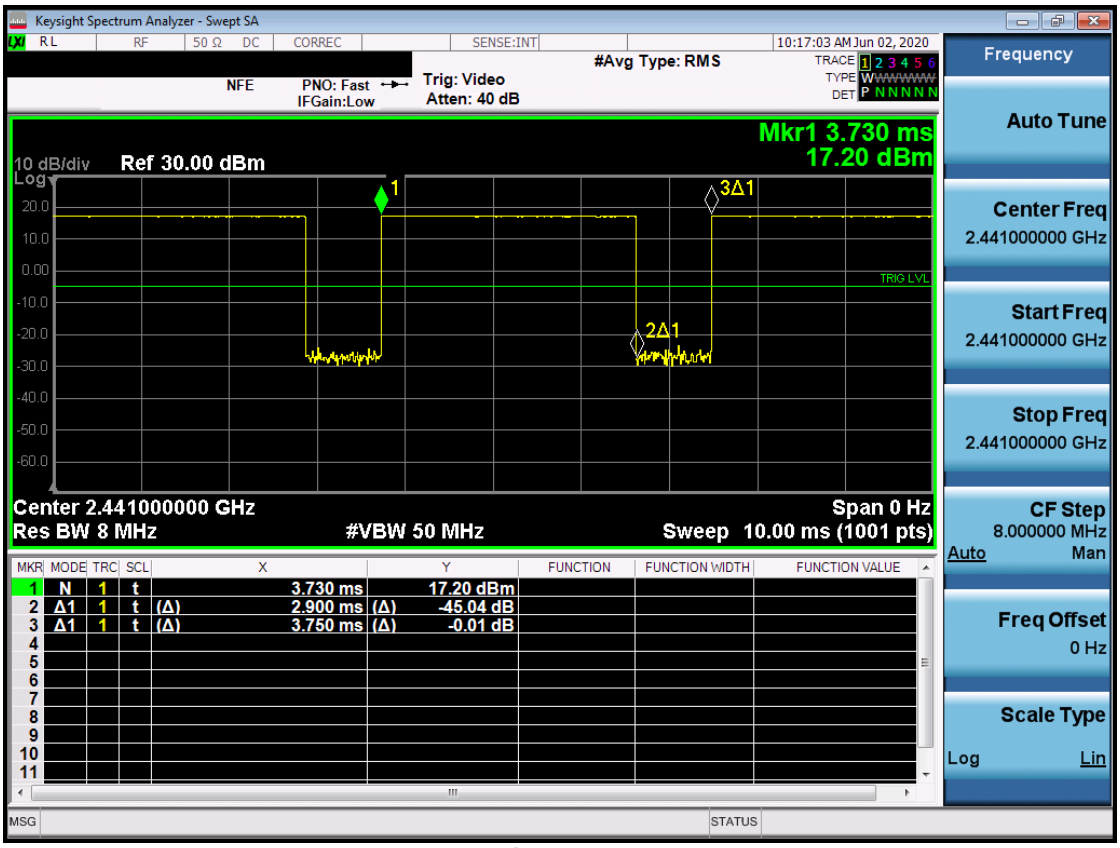


Figure 9-7
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

$$\boldsymbol{Duty\ Cycle} = \frac{\boldsymbol{Pulse\ Width}}{\boldsymbol{Period}} * \mathbf{100\%} = \frac{\mathbf{2.90}\boldsymbol{ms}}{\mathbf{3.75}\boldsymbol{ms}} * \mathbf{100\%} = \mathbf{77.3\%}$$

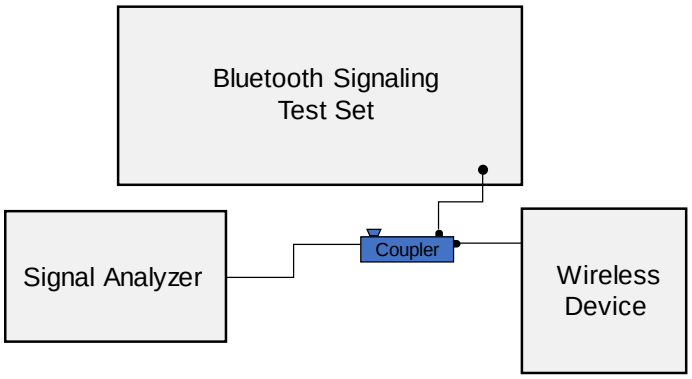


Figure 9-8
Power Measurement Setup

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10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
06/08/2020	750 Head	21.5	700	0.855	41.394	0.889	42.201	-3.82%	-1.91%
			710	0.859	41.355	0.890	42.149	-3.48%	-1.88%
			725	0.864	41.295	0.891	42.071	-3.03%	-1.84%
			750	0.873	41.208	0.894	41.942	-2.35%	-1.75%
			770	0.880	41.159	0.895	41.838	-1.68%	-1.62%
			785	0.885	41.119	0.896	41.760	-1.23%	-1.53%
			800	0.889	41.075	0.897	41.682	-0.89%	-1.46%
6/11/2020	750 Head	21.7	680	0.852	40.788	0.888	42.305	-4.05%	-3.59%
			695	0.856	40.751	0.889	42.227	-3.71%	-3.50%
			750	0.875	40.611	0.894	41.942	-2.13%	-3.17%
05/26/2020	835 Head	21.8	820	0.931	42.218	0.899	41.578	3.56%	1.54%
			835	0.936	42.172	0.900	41.500	4.00%	1.62%
			850	0.942	42.129	0.916	41.500	2.84%	1.52%
05/28/2020	835 Head	21.7	820	0.910	40.616	0.899	41.578	1.22%	-2.31%
			835	0.915	40.568	0.900	41.500	1.67%	-2.25%
			850	0.921	40.525	0.916	41.500	0.55%	-2.35%
06/03/2020	835 Head	21.5	820	0.914	41.796	0.899	41.578	1.67%	0.52%
			835	0.919	41.757	0.900	41.500	2.11%	0.62%
			850	0.925	41.722	0.916	41.500	0.98%	0.53%
06/05/2020	1750 Head	22.0	1710	1.363	39.839	1.348	40.142	1.11%	-0.75%
			1720	1.369	39.839	1.354	40.126	1.11%	-0.72%
			1745	1.384	39.801	1.368	40.087	1.17%	-0.71%
			1750	1.387	39.782	1.371	40.079	1.17%	-0.74%
			1770	1.401	39.761	1.383	40.047	1.30%	-0.71%
			1790	1.412	39.744	1.394	40.016	1.29%	-0.68%
06/08/2020	1750 Head	20.9	1710	1.341	39.536	1.348	40.142	-0.52%	-1.51%
			1720	1.347	39.524	1.354	40.126	-0.52%	-1.50%
			1745	1.362	39.495	1.368	40.087	-0.44%	-1.48%
			1750	1.365	39.488	1.371	40.079	-0.44%	-1.47%
			1770	1.378	39.454	1.383	40.047	-0.36%	-1.48%
			1790	1.391	39.417	1.394	40.016	-0.22%	-1.50%
06/01/2020	1900 Head	21.1	1850	1.404	39.139	1.400	40.000	0.29%	-2.15%
			1860	1.411	39.123	1.400	40.000	0.79%	-2.19%
			1880	1.423	39.093	1.400	40.000	1.64%	-2.27%
			1900	1.436	39.063	1.400	40.000	2.57%	-2.34%
			1905	1.439	39.055	1.400	40.000	2.79%	-2.36%
			1910	1.442	39.045	1.400	40.000	3.00%	-2.39%
06/03/2020	1900 Head	21.5	1850	1.415	39.801	1.400	40.000	1.07%	-0.50%
			1860	1.421	39.786	1.400	40.000	1.50%	-0.53%
			1880	1.433	39.763	1.400	40.000	2.36%	-0.59%
			1900	1.444	39.743	1.400	40.000	3.14%	-0.64%
			1905	1.447	39.736	1.400	40.000	3.36%	-0.66%
			1910	1.450	39.730	1.400	40.000	3.57%	-0.68%
05/27/2020	2450 Head	23.5	2560	1.874	39.370	1.920	39.060	-2.40%	0.79%
			2600	1.901	39.318	1.964	39.009	-3.21%	0.79%
			2650	1.939	39.227	2.018	38.945	-3.91%	0.72%
6/3/2020	2450 Head	23.0	2400	1.758	40.116	1.756	39.289	0.11%	2.10%
			2450	1.794	40.056	1.800	39.200	-0.33%	2.18%
			2480	1.817	40.009	1.833	39.162	-0.87%	2.16%
			2500	1.832	39.969	1.855	39.136	-1.24%	2.13%
			2510	1.840	39.944	1.866	39.123	-1.39%	2.10%
			2535	1.863	39.916	1.893	39.092	-1.58%	2.11%
			2550	1.874	39.910	1.909	39.073	-1.83%	2.14%
			2560	1.883	39.890	1.920	39.060	-1.93%	2.12%
			2600	1.908	39.842	1.964	39.009	-2.85%	2.14%
06/05/2020	2450 Head	22.9	2300	1.671	40.381	1.670	39.500	0.06%	2.23%
			2310	1.678	40.369	1.679	39.480	-0.06%	2.25%
			2320	1.685	40.358	1.687	39.460	-0.12%	2.28%
06/07/2020	2450 Head	23.1	2450	1.790	38.583	1.800	39.200	-0.56%	-1.57%
			2480	1.809	38.539	1.833	39.162	-1.31%	-1.59%
			2500	1.823	38.502	1.855	39.136	-1.73%	-1.62%
			2510	1.831	38.486	1.866	39.123	-1.88%	-1.63%
06/10/2020	2450 Head	21.5	2400	1.736	40.267	1.756	39.289	-1.14%	2.49%
			2450	1.776	40.196	1.800	39.200	-1.33%	2.54%
			2480	1.798	40.148	1.833	39.162	-1.91%	2.52%

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Table 10-2
Measured Head Tissue Properties (Cont.)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
07/06/2020	3600 Head	22.4	3500	2.935	39.733	2.913	37.929	0.76%	4.76%
			3550	2.976	39.645	2.964	37.871	0.40%	4.68%
			3560	2.986	39.634	2.974	37.860	0.40%	4.69%
			3600	3.019	39.594	3.015	37.814	0.13%	4.71%
			3650	3.061	39.523	3.066	37.757	-0.16%	4.68%
			3690	3.089	39.454	3.107	37.711	-0.58%	4.62%
			3700	3.099	39.436	3.117	37.700	-0.58%	4.60%
07/10/2020	5200-5800 Head	20.4	5180	4.418	37.260	4.635	36.009	-4.68%	3.47%
			5190	4.428	37.261	4.645	35.998	-4.67%	3.51%
			5200	4.441	37.262	4.655	35.986	-4.60%	3.55%
			5210	4.451	37.256	4.666	35.975	-4.61%	3.56%
			5220	4.457	37.236	4.676	35.963	-4.68%	3.54%
			5240	4.473	37.166	4.696	35.940	-4.75%	3.41%
			5250	4.488	37.144	4.706	35.929	-4.63%	3.38%
			5260	4.502	37.118	4.717	35.917	-4.56%	3.34%
			5270	4.514	37.097	4.727	35.906	-4.51%	3.32%
			5280	4.524	37.084	4.737	35.894	-4.50%	3.32%
			5290	4.539	37.078	4.748	35.883	-4.40%	3.33%
			5300	4.554	37.084	4.758	35.871	-4.29%	3.38%
			5310	4.565	37.078	4.768	35.860	-4.26%	3.40%
			5320	4.572	37.058	4.778	35.849	-4.31%	3.37%
			5500	4.768	36.749	4.963	35.643	-3.93%	3.10%
			5510	4.780	36.728	4.973	35.632	-3.88%	3.08%
			5520	4.791	36.715	4.983	35.620	-3.85%	3.07%
			5530	4.803	36.708	4.994	35.609	-3.82%	3.09%
			5540	4.813	36.707	5.004	35.597	-3.82%	3.12%
			5550	4.822	36.690	5.014	35.586	-3.83%	3.10%
			5560	4.829	36.654	5.024	35.574	-3.88%	3.04%
			5580	4.854	36.615	5.045	35.551	-3.79%	2.99%
			5600	4.885	36.581	5.065	35.529	-3.55%	2.96%
			5610	4.899	36.559	5.076	35.518	-3.49%	2.93%
			5620	4.912	36.549	5.086	35.506	-3.42%	2.94%
			5640	4.933	36.535	5.106	35.483	-3.39%	2.96%
			5660	4.952	36.493	5.127	35.460	-3.41%	2.91%
			5670	4.959	36.471	5.137	35.449	-3.47%	2.88%
			5680	4.970	36.455	5.147	35.437	-3.44%	2.87%
			5690	4.985	36.441	5.158	35.426	-3.35%	2.87%
			5700	4.999	36.420	5.168	35.414	-3.27%	2.84%
			5710	5.011	36.395	5.178	35.403	-3.23%	2.80%
			5720	5.025	36.385	5.188	35.391	-3.14%	2.81%
			5745	5.060	36.361	5.214	35.363	-2.95%	2.82%
			5750	5.063	36.350	5.219	35.357	-2.99%	2.81%
			5755	5.066	36.342	5.224	35.351	-3.02%	2.80%
			5765	5.073	36.330	5.234	35.340	-3.08%	2.80%
			5775	5.084	36.317	5.245	35.329	-3.07%	2.80%
			5785	5.095	36.299	5.255	35.317	-3.04%	2.78%
			5795	5.106	36.273	5.265	35.305	-3.02%	2.74%
			5800	5.110	36.264	5.270	35.300	-3.04%	2.73%
			5805	5.115	36.257	5.275	35.294	-3.03%	2.73%
			5825	5.142	36.232	5.296	35.271	-2.91%	2.72%

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Table 10-3
Measured Body Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
06/01/2020	750 Body	21.4	680	0.922	54.516	0.958	55.804	-3.76%	-2.31%
			695	0.927	54.477	0.959	55.745	-3.34%	-2.27%
			700	0.929	54.464	0.959	55.726	-3.13%	-2.26%
			710	0.932	54.447	0.960	55.687	-2.92%	-2.23%
			750	0.947	54.369	0.964	55.531	-1.76%	-2.09%
06/03/2020	750 Body	21.5	750	0.965	54.843	0.964	55.531	0.10%	-1.24%
			770	0.970	54.806	0.965	55.453	0.52%	-1.17%
			785	0.978	54.776	0.966	55.395	1.24%	-1.12%
			800	0.981	54.750	0.967	55.336	1.45%	-1.06%
06/18/2020	750 Body	23.0	680	0.915	56.971	0.958	55.804	-4.49%	2.09%
			695	0.921	56.926	0.959	55.745	-3.96%	2.12%
			750	0.939	56.756	0.964	55.531	-2.59%	2.21%
6/8/2020	835 Body	21.5	820	0.945	53.692	0.969	55.258	-2.48%	-2.83%
			835	0.963	53.524	0.970	55.200	-0.72%	-3.04%
			850	0.979	53.374	0.988	55.154	-0.91%	-3.23%
06/10/2020	835 Body	22.6	820	0.940	53.197	0.969	55.258	-2.99%	-3.73%
			835	0.956	53.038	0.970	55.200	-1.44%	-3.92%
			850	0.971	52.886	0.988	55.154	-1.72%	-4.11%
05/25/2020	1750 Body	22.2	1710	1.478	52.357	1.463	53.537	1.03%	-2.20%
			1720	1.491	52.316	1.469	53.511	1.50%	-2.23%
			1745	1.520	52.211	1.485	53.445	2.36%	-2.31%
			1750	1.526	52.191	1.488	53.432	2.55%	-2.32%
			1770	1.548	52.111	1.501	53.379	3.13%	-2.38%
			1790	1.568	52.031	1.514	53.326	3.57%	-2.43%
6/10/2020	1750 Body	22.0	1710	1.462	51.575	1.463	53.537	-0.07%	-3.66%
			1720	1.474	51.532	1.469	53.511	0.34%	-3.70%
			1745	1.503	51.436	1.485	53.445	1.21%	-3.76%
			1750	1.509	51.416	1.488	53.432	1.41%	-3.77%
			1770	1.530	51.334	1.501	53.379	1.93%	-3.83%
			1790	1.550	51.245	1.514	53.326	2.38%	-3.90%
06/12/2020	1750 Body	21.4	1710	1.473	51.124	1.463	53.537	0.68%	-4.51%
			1720	1.486	51.085	1.469	53.511	1.16%	-4.53%
			1745	1.516	50.981	1.485	53.445	2.09%	-4.61%
			1750	1.522	50.958	1.488	53.432	2.28%	-4.63%
			1770	1.544	50.868	1.501	53.379	2.86%	-4.70%
			1790	1.565	50.779	1.514	53.326	3.37%	-4.78%
6/18/2020	1750 Body	21.5	1710	1.451	52.024	1.463	53.537	-0.82%	-2.83%
			1720	1.460	51.992	1.469	53.511	-0.61%	-2.84%
			1745	1.480	51.965	1.485	53.445	-0.34%	-2.77%
			1750	1.483	51.941	1.488	53.432	-0.34%	-2.79%
			1770	1.496	51.941	1.501	53.379	-0.33%	-2.69%
			1790	1.514	51.894	1.514	53.326	0.00%	-2.69%
5/31/2020	1900 Body	24.0	1850	1.503	51.909	1.520	53.300	-1.12%	-2.61%
			1860	1.513	51.883	1.520	53.300	-0.46%	-2.66%
			1880	1.533	51.816	1.520	53.300	0.86%	-2.78%
			1900	1.554	51.737	1.520	53.300	2.24%	-2.93%
			1905	1.560	51.715	1.520	53.300	2.63%	-2.97%
			1910	1.566	51.693	1.520	53.300	3.03%	-3.02%
6/3/2020	1900 Body	24.6	1850	1.501	52.314	1.520	53.300	-1.25%	-1.85%
			1860	1.512	52.275	1.520	53.300	-0.53%	-1.92%
			1880	1.536	52.224	1.520	53.300	1.05%	-2.02%
			1900	1.558	52.135	1.520	53.300	2.50%	-2.19%
			1905	1.565	52.114	1.520	53.300	2.96%	-2.23%
			1910	1.570	52.086	1.520	53.300	3.29%	-2.28%
6/7/2020	1900 Body	23.2	1850	1.522	51.819	1.520	53.300	0.13%	-2.78%
			1860	1.534	51.786	1.520	53.300	0.92%	-2.84%
			1880	1.558	51.720	1.520	53.300	2.50%	-2.96%
			1900	1.579	51.656	1.520	53.300	3.88%	-3.08%
			1905	1.585	51.639	1.520	53.300	4.28%	-3.12%
			1910	1.590	51.620	1.520	53.300	4.61%	-3.15%
6/10/2020	1900 Body	23.8	1850	1.515	52.982	1.520	53.300	-0.33%	-0.60%
			1860	1.526	52.937	1.520	53.300	0.39%	-0.68%
			1880	1.549	52.891	1.520	53.300	1.91%	-0.77%
			1900	1.573	52.802	1.520	53.300	3.49%	-0.93%
			1905	1.579	52.801	1.520	53.300	3.88%	-0.94%
			1910	1.584	52.762	1.520	53.300	4.21%	-1.01%

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Table 10-4
Measured Body Tissue Properties (Cont.)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
06/09/2020	2450 Body	23.2	2400	1.936	51.514	1.902	52.767	1.79%	-2.37%
			2450	2.004	51.322	1.950	52.700	2.77%	-2.61%
			2480	2.044	51.201	1.993	52.662	2.56%	-2.77%
06/11/2020	2450 Body	21.9	2300	1.865	51.212	1.809	52.900	3.10%	-3.19%
			2310	1.876	51.190	1.816	52.887	3.30%	-3.21%
			2320	1.887	51.165	1.826	52.873	3.34%	-3.23%
6/15/2020	2450 Body	23.5	2450	2.017	52.120	1.950	52.700	3.44%	-1.10%
			2480	2.053	51.990	1.993	52.662	3.01%	-1.28%
			2500	2.079	51.926	2.021	52.636	2.87%	-1.35%
			2510	2.091	51.882	2.035	52.623	2.75%	-1.41%
			2535	2.125	51.787	2.071	52.592	2.61%	-1.53%
			2550	2.145	51.735	2.092	52.573	2.53%	-1.59%
			2560	2.160	51.681	2.106	52.560	2.56%	-1.67%
			2600	2.219	51.523	2.163	52.509	2.59%	-1.88%
06/17/2020	2450 Body	21.9	2535	2.160	51.244	2.071	52.592	4.30%	-2.56%
			2550	2.181	51.204	2.092	52.573	4.25%	-2.60%
			2560	2.193	51.178	2.106	52.560	4.13%	-2.63%
			2600	2.244	50.987	2.163	52.509	3.74%	-2.90%
06/17/2020	2450 Body	22.9	2450	2.011	51.690	1.950	52.700	3.13%	-1.92%
			2480	2.045	51.613	1.993	52.662	2.61%	-1.99%
			2500	2.067	51.538	2.021	52.636	2.28%	-2.09%
			2510	2.078	51.501	2.035	52.623	2.11%	-2.13%
			2535	2.108	51.442	2.071	52.592	1.79%	-2.19%
			2550	2.127	51.417	2.092	52.573	1.67%	-2.20%
			2560	2.138	51.388	2.106	52.560	1.52%	-2.23%
			2600	2.183	51.282	2.163	52.509	0.92%	-2.34%
			2650	2.244	51.129	2.234	52.445	0.45%	-2.51%
			2680	2.284	51.032	2.277	52.407	0.31%	-2.62%
			2700	2.306	51.010	2.305	52.382	0.04%	-2.62%
06/22/2020	2450 Body	22.9	2450	2.014	51.173	1.950	52.700	3.28%	-2.90%
			2480	2.054	51.051	1.993	52.662	3.06%	-3.06%
			2500	2.081	50.970	2.021	52.636	2.97%	-3.17%
			2510	2.095	50.930	2.035	52.623	2.95%	-3.22%
			2535	2.131	50.836	2.071	52.592	2.90%	-3.34%
			2550	2.152	50.776	2.092	52.573	2.87%	-3.42%
			2560	2.165	50.736	2.106	52.560	2.80%	-3.47%
			2600	2.219	50.571	2.163	52.509	2.59%	-3.69%
			2650	2.290	50.363	2.234	52.445	2.51%	-3.97%
			2680	2.329	50.243	2.277	52.407	2.28%	-4.13%
			2700	2.356	50.155	2.305	52.382	2.21%	-4.25%
06/22/2020	2450 Body	23.8	2400	1.963	50.850	1.902	52.767	3.21%	-3.63%
			2450	2.019	50.715	1.950	52.700	3.54%	-3.77%
			2480	2.056	50.628	1.993	52.662	3.16%	-3.86%
07/06/2020	2450 Body	21.8	2400	1.961	51.669	1.902	52.767	3.10%	-2.08%
			2450	2.028	51.487	1.950	52.700	4.00%	-2.30%
			2480	2.069	51.368	1.993	52.662	3.81%	-2.46%
06/16/2020	3600 Body	22.3	3600	3.485	49.434	3.431	51.186	1.57%	-3.42%
			3650	3.539	49.372	3.489	51.118	1.43%	-3.42%
			3690	3.579	49.297	3.536	51.063	1.22%	-3.46%
			3700	3.590	49.292	3.548	51.050	1.18%	-3.44%
07/07/2020	3600 Body	21.9	3500	3.386	49.566	3.314	51.321	2.17%	-3.42%
			3550	3.437	49.493	3.372	51.254	1.93%	-3.44%
			3560	3.448	49.477	3.384	51.240	1.89%	-3.44%
			3600	3.489	49.428	3.431	51.186	1.69%	-3.43%
			3650	3.542	49.344	3.489	51.118	1.52%	-3.47%
			3690	3.582	49.260	3.536	51.063	1.30%	-3.53%
			3700	3.592	49.247	3.548	51.050	1.24%	-3.53%
6/14/2020	5200-5800B	21.0	5180	5.351	47.651	5.276	49.041	1.42%	-2.83%
			5200	5.373	47.636	5.299	49.014	1.40%	-2.81%
			5220	5.398	47.594	5.323	48.987	1.41%	-2.84%
			5240	5.422	47.559	5.346	48.960	1.42%	-2.86%
			5260	5.453	47.517	5.369	48.933	1.56%	-2.89%
			5280	5.477	47.481	5.393	48.906	1.56%	-2.91%
			5300	5.509	47.471	5.416	48.879	1.72%	-2.88%
			5320	5.533	47.440	5.439	48.851	1.73%	-2.89%
			5500	5.768	47.138	5.650	48.607	2.09%	-3.02%
			5520	5.796	47.111	5.673	48.580	2.17%	-3.02%
			5540	5.823	47.094	5.696	48.553	2.23%	-3.00%
			5560	5.846	47.035	5.720	48.526	2.20%	-3.07%
			5580	5.871	47.008	5.743	48.499	2.23%	-3.07%
			5600	5.907	46.984	5.766	48.471	2.45%	-3.07%
			5620	5.934	46.948	5.790	48.444	2.49%	-3.09%
			5640	5.965	46.930	5.813	48.417	2.61%	-3.07%
			5660	5.989	46.885	5.837	48.390	2.60%	-3.11%
			5680	6.010	46.853	5.860	48.363	2.56%	-3.12%
			5700	6.040	46.824	5.883	48.336	2.67%	-3.13%
			5745	6.109	46.749	5.936	48.275	2.91%	-3.16%
			5765	6.130	46.711	5.959	48.248	2.87%	-3.19%
			5785	6.159	46.687	5.982	48.220	2.96%	-3.18%
			5800	6.180	46.669	6.000	48.200	3.00%	-3.18%
			5805	6.184	46.665	6.006	48.193	2.96%	-3.17%
			5825	6.216	46.645	6.029	48.166	3.10%	-3.16%

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 D.

Table 10-5
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)	$Deviation_{1g}$ (%)
L	750	HEAD	06/08/2020	22.3	22.0	0.200	1054	7410	1.650	8.630	8.250	-4.40%
L	750	HEAD	06/11/2020	24.0	22.5	0.200	1054	7410	1.650	8.630	8.250	-4.40%
P	835	HEAD	05/26/2020	22.7	21.8	0.200	4d132	7551	1.980	9.650	9.900	2.59%
P	835	HEAD	05/28/2020	22.6	21.7	0.200	4d132	7551	1.930	9.650	9.650	0.00%
P	835	HEAD	06/03/2020	23.1	21.7	0.200	4d132	7551	1.930	9.650	9.650	0.00%
P	1750	HEAD	06/05/2020	24.5	21.9	0.100	1150	7551	3.770	36.500	37.700	3.29%
P	1750	HEAD	06/08/2020	21.6	20.9	0.100	1150	7551	3.890	36.500	38.900	6.58%
P	1900	HEAD	06/01/2020	22.2	21.1	0.100	5d148	7551	4.070	39.100	40.700	4.09%
P	1900	HEAD	06/03/2020	23.1	21.7	0.100	5d080	7551	4.140	39.800	41.400	4.02%
E	2300	HEAD	06/05/2020	23.5	22.9	0.100	1073	3589	4.800	49.200	48.000	-2.44%
E	2450	HEAD	06/03/2020	23.6	21.8	0.100	719	3589	5.070	53.100	50.700	-4.52%
E	2450	HEAD	06/07/2020	21.7	21.5	0.100	719	3589	5.350	53.100	53.500	0.75%
E	2450	HEAD	06/10/2020	21.1	21.5	0.100	719	3589	5.040	53.100	50.400	-5.08%
E	2600	HEAD	05/27/2020	22.9	22.7	0.100	1004	3589	5.780	55.900	57.800	3.40%
E	2600	HEAD	06/03/2020	23.6	21.8	0.100	1064	3589	5.540	58.100	55.400	-4.65%
D	3500	HEAD	07/06/2020	22.8	22.4	0.100	1059	7488	6.350	64.600	63.500	-1.70%
D	3700	HEAD	07/06/2020	22.8	22.4	0.100	1018	7488	6.340	65.800	63.400	-3.65%
H	5250	HEAD	07/10/2020	21.4	22.0	0.050	1057	7357	3.700	79.200	74.000	-6.57%
H	5600	HEAD	07/10/2020	21.4	22.0	0.050	1057	7357	4.110	84.100	82.200	-2.26%
H	5750	HEAD	07/10/2020	21.4	22.0	0.050	1057	7357	3.790	80.500	75.800	-5.84%

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Table 10-6
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)	$Deviation_{1g}$ (%)
L	750	BODY	06/01/2020	22.3	21.4	0.200	1054	7410	1.840	8.530	9.200	7.85%
L	750	BODY	06/03/2020	23.4	21.5	0.200	1054	7410	1.820	8.530	9.100	6.68%
E	750	BODY	06/18/2020	22.2	21.5	0.200	1003	3589	1.740	8.610	8.700	1.05%
D	835	BODY	06/08/2020	22.1	21.5	0.200	4d047	7488	1.910	9.470	9.550	0.84%
D	835	BODY	06/10/2020	23.0	22.6	0.200	4d132	7488	1.990	9.960	9.950	-0.10%
I	1750	BODY	05/25/2020	21.2	21.5	0.100	1150	7527	3.810	36.600	38.100	4.10%
I	1750	BODY	06/10/2020	23.1	22.0	0.100	1008	7527	3.800	37.400	38.000	1.60%
I	1750	BODY	06/12/2020	22.3	21.4	0.100	1008	7527	3.940	37.400	39.400	5.35%
L	1750	BODY	06/18/2020	23.7	21.5	0.100	1150	7410	3.920	36.600	39.200	7.10%
J	1900	BODY	05/31/2020	23.3	24.0	0.100	5d080	7571	4.140	39.200	41.400	5.61%
J	1900	BODY	06/03/2020	22.3	22.6	0.100	5d080	7571	4.220	39.200	42.200	7.65%
J	1900	BODY	06/07/2020	21.3	21.2	0.100	5d080	7571	3.950	39.200	39.500	0.77%
K	2300	BODY	06/11/2020	24.0	22.0	0.100	1073	7547	5.090	47.700	50.900	6.71%
O	2450	BODY	06/09/2020	24.7	21.8	0.100	797	7552	4.840	51.100	48.400	-5.28%
O	2450	BODY	06/15/2020	23.1	22.0	0.100	981	7552	4.970	50.900	49.700	-2.36%
O	2450	BODY	06/22/2020	23.9	22.1	0.100	981	7552	4.830	50.900	48.300	-5.11%
K	2450	BODY	06/22/2020	22.0	22.0	0.100	719	7547	5.200	50.800	52.000	2.36%
O	2450	BODY	07/06/2020	22.8	21.9	0.100	981	7552	4.900	50.900	49.000	-3.73%
O	2600	BODY	06/15/2020	23.1	22.0	0.100	1004	7552	5.390	54.800	53.900	-1.64%
O	2600	BODY	06/17/2020	22.6	21.9	0.100	1004	7552	5.750	54.800	57.500	4.93%
O	2600	BODY	06/22/2020	23.9	22.1	0.100	1004	7552	5.060	54.800	50.600	-7.66%
D	3500	BODY	07/07/2020	22.5	21.9	0.100	1059	7488	6.760	65.100	67.600	3.84%
D	3700	BODY	06/16/2020	22.8	22.3	0.100	1018	7488	6.580	64.300	65.800	2.33%
D	3700	BODY	07/07/2020	22.5	21.9	0.100	1018	7488	6.630	64.300	66.300	3.11%
G	5250	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	3.590	77.000	71.800	-6.75%
G	5600	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	3.760	78.600	75.200	-4.33%
G	5750	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	3.680	76.900	73.600	-4.29%

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Table 10-7
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	06/10/2020	23.1	22.0	0.100	1008	7527	2.000	19.900	20.000	0.50%
L	1750	BODY	06/18/2020	23.7	21.5	0.100	1150	7410	2.080	19.400	20.800	7.22%
J	1900	BODY	06/03/2020	22.3	22.6	0.100	5d080	7571	2.170	20.600	21.700	5.34%
J	1900	BODY	06/07/2020	21.3	21.2	0.100	5d080	7571	2.020	20.600	20.200	-1.94%
J	1900	BODY	06/10/2020	22.0	22.9	0.100	5d080	7571	2.150	20.600	21.500	4.37%
K	2300	BODY	06/11/2020	24.0	22.0	0.100	1073	7547	2.430	23.200	24.300	4.74%
O	2450	BODY	06/15/2020	23.1	22.0	0.100	981	7552	2.280	24.200	22.800	-5.79%
K	2450	BODY	06/17/2020	23.5	22.2	0.100	719	7547	2.320	24.000	23.200	-3.33%
O	2600	BODY	06/15/2020	23.1	22.0	0.100	1004	7552	2.390	24.700	23.900	-3.24%
K	2600	BODY	06/17/2020	23.5	22.2	0.100	1064	7547	2.440	25.000	24.400	-2.40%
G	5250	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	0.996	21.400	19.920	-6.92%
G	5600	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	1.040	21.900	20.800	-5.02%
G	5750	BODY	06/14/2020	22.6	22.4	0.050	1191	7538	1.000	21.300	20.000	-6.10%

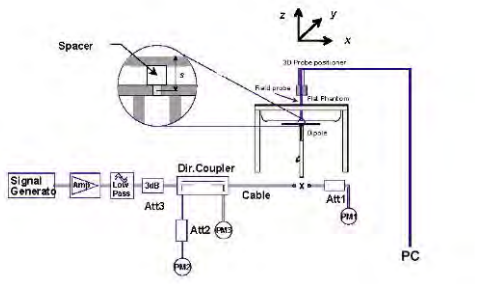


Figure 10-1
System Verification Setup Diagram



Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
CDMA BC10 (§90S) 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)	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	25.21	-0.21	Right	Cheek	58	1842M	1:1	0.107	1.146	0.123	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	25.21	0.02	Right	Tilt	58	1842M	1:1	0.091	1.146	0.104	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	25.21	0.11	Left	Cheek	58	1842M	1:1	0.186	1.146	0.213	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	25.21	0.11	Left	Tilt	58	1842M	1:1	0.094	1.146	0.108	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	25.33	-0.10	Right	Cheek	58	1842M	1:1	0.120	1.114	0.134	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	25.33	0.11	Right	Tilt	58	1842M	1:1	0.093	1.114	0.104	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	25.33	-0.08	Left	Cheek	58	1842M	1:1	0.210	1.114	0.234	A1
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	25.33	0.08	Left	Tilt	58	1842M	1:1	0.094	1.114	0.105	
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
CDMA BC0 (§22H) 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)	
824.70	1013	CDMA BC0 (§22H)	RC3 / SO55	25.8	25.37	-0.10	Right	Cheek	58	1842M	1:1	0.137	1.104	0.151	
824.70	1013	CDMA BC0 (§22H)	RC3 / SO55	25.8	25.37	-0.06	Right	Tilt	58	1842M	1:1	0.113	1.104	0.125	
824.70	1013	CDMA BC0 (§22H)	RC3 / SO55	25.8	25.37	0.16	Left	Cheek	58	1842M	1:1	0.225	1.104	0.248	A2
824.70	1013	CDMA BC0 (§22H)	RC3 / SO55	25.8	25.37	0.07	Left	Tilt	58	1842M	1:1	0.105	1.104	0.116	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. A	25.8	25.49	0.07	Right	Cheek	58	1842M	1:1	0.138	1.074	0.148	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. A	25.8	25.49	-0.18	Right	Tilt	58	1842M	1:1	0.101	1.074	0.108	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. A	25.8	25.49	0.14	Left	Cheek	58	1842M	1:1	0.196	1.074	0.211	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. A	25.8	25.49	-0.06	Left	Tilt	58	1842M	1:1	0.101	1.074	0.108	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-3
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	23.55	0.04	Right	Cheek	2	1828M	1:1	0.141	1.245	0.176	A3
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.55	0.02	Right	Tilt	2	1828M	1:1	0.063	1.245	0.078	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.55	0.14	Left	Cheek	2	1828M	1:1	0.122	1.245	0.152	
1880.00	600	PCS CDMA	RC3 / SO55	24.5	23.55	0.04	Left	Tilt	2	1828M	1:1	0.089	1.245	0.111	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.68	0.15	Right	Cheek	2	1828M	1:1	0.140	1.208	0.169	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.68	0.18	Right	Tilt	2	1828M	1:1	0.080	1.208	0.097	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.68	0.15	Left	Cheek	2	1828M	1:1	0.126	1.208	0.152	
1880.00	600	PCS CDMA	EVDO Rev. A	24.5	23.68	0.19	Left	Tilt	2	1828M	1:1	0.104	1.208	0.126	
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 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	33.5	32.75	0.21	Right	Cheek	1842M	1:8.3	0.090	1.189	0.107	
836.60	190	GSM 850	GSM	33.5	32.75	-0.15	Right	Tilt	1842M	1:8.3	0.064	1.189	0.076	
836.60	190	GSM 850	GSM	33.5	32.75	0.15	Left	Cheek	1842M	1:8.3	0.114	1.189	0.136	A4
836.60	190	GSM 850	GSM	33.5	32.75	0.05	Left	Tilt	1842M	1:8.3	0.058	1.189	0.069	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-5
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	29.07	0.17	Right	Cheek	1828M	1:8.3	0.067	1.239	0.083	A5
1880.00	661	GSM 1900	GSM	30.0	29.07	0.13	Right	Tilt	1828M	1:8.3	0.034	1.239	0.042	
1880.00	661	GSM 1900	GSM	30.0	29.07	0.15	Left	Cheek	1828M	1:8.3	0.049	1.239	0.061	
1880.00	661	GSM 1900	GSM	30.0	29.07	-0.05	Left	Tilt	1828M	1:8.3	0.046	1.239	0.057	
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 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	25.5	25.14	0.08	Right	Cheek	28	1842M	1:1	0.121	1.086	0.131	
836.60	4183	UMTS 850	RMC	25.5	25.14	0.09	Right	Tilt	28	1842M	1:1	0.091	1.086	0.099	
836.60	4183	UMTS 850	RMC	25.5	25.14	-0.04	Left	Cheek	28	1842M	1:1	0.168	1.086	0.182	A6
836.60	4183	UMTS 850	RMC	25.5	25.14	0.02	Left	Tilt	28	1842M	1:1	0.093	1.086	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 11-7
UMTS 1750 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)	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.19	Right	Cheek	9	1851M	1:1	0.157	1.138	0.179	A7
1732.40	1412	UMTS 1750	RMC	24.0	23.44	-0.09	Right	Tilt	9	1851M	1:1	0.102	1.138	0.116	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.11	Left	Cheek	9	1851M	1:1	0.112	1.138	0.127	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.14	Left	Tilt	9	1851M	1:1	0.085	1.138	0.097	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-8
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	23.39	0.17	Right	Cheek	26	1828M	1:1	0.140	1.151	0.161	A8
1880.00	9400	UMTS 1900	RMC	24.0	23.39	0.07	Right	Tilt	26	1828M	1:1	0.090	1.151	0.104	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	0.19	Left	Cheek	26	1828M	1:1	0.110	1.151	0.127	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	-0.18	Left	Tilt	26	1828M	1:1	0.091	1.151	0.105	
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 71 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.14	0	Right	Cheek	45	QPSK	1	0	1848M	1:1	0.055	1.213	0.067	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.15	1	Right	Cheek	45	QPSK	50	25	1848M	1:1	0.038	1.191	0.045	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.11	0	Right	Tilt	45	QPSK	1	0	1848M	1:1	0.032	1.213	0.039	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.17	1	Right	Tilt	45	QPSK	50	25	1848M	1:1	0.021	1.191	0.025	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	-0.13	0	Left	Cheek	44	QPSK	1	0	1848M	1:1	0.079	1.213	0.096	A9
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.20	1	Left	Cheek	44	QPSK	50	25	1848M	1:1	0.051	1.191	0.061	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.11	0	Left	Tilt	44	QPSK	1	0	1848M	1:1	0.029	1.213	0.035	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.12	1	Left	Tilt	44	QPSK	50	25	1848M	1:1	0.017	1.191	0.020	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-10
LTE Band 12 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.15	0	Right	Cheek	15	QPSK	1	0	1848M	1:1	0.109	1.219	0.133	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.03	1	Right	Cheek	15	QPSK	25	12	1848M	1:1	0.075	1.194	0.090	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.17	0	Right	Tilt	2	QPSK	1	0	1848M	1:1	0.066	1.219	0.080	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.16	1	Right	Tilt	2	QPSK	25	12	1848M	1:1	0.054	1.194	0.064	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.04	0	Left	Cheek	2	QPSK	1	0	1848M	1:1	0.120	1.219	0.146	A10
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.10	1	Left	Cheek	2	QPSK	25	12	1848M	1:1	0.100	1.194	0.119	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.12	0	Left	Tilt	2	QPSK	1	0	1848M	1:1	0.046	1.219	0.056	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.16	1	Left	Tilt	2	QPSK	25	12	1848M	1:1	0.041	1.194	0.049	
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 13 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.05	0	Right	Cheek	27	QPSK	1	0	1848M	1:1	0.103	1.194	0.123	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	0.18	1	Right	Cheek	27	QPSK	25	25	1848M	1:1	0.076	1.180	0.090	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.11	0	Right	Tilt	27	QPSK	1	0	1848M	1:1	0.050	1.194	0.060	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	0.13	1	Right	Tilt	27	QPSK	25	25	1848M	1:1	0.034	1.180	0.040	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.00	0	Left	Cheek	27	QPSK	1	0	1848M	1:1	0.149	1.194	0.178	A11
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	0.07	1	Left	Cheek	27	QPSK	25	25	1848M	1:1	0.113	1.180	0.133	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.13	0	Left	Tilt	27	QPSK	1	0	1848M	1:1	0.068	1.194	0.081	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	0.06	1	Left	Tilt	27	QPSK	25	25	1848M	1:1	0.050	1.180	0.059	
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 14 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.11	0	Right	Cheek	27	QPSK	1	0	1848M	1:1	0.095	1.189	0.113	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.03	1	Right	Cheek	27	QPSK	25	12	1848M	1:1	0.081	1.197	0.097	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.08	0	Right	Tilt	27	QPSK	1	0	1848M	1:1	0.057	1.189	0.068	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.20	1	Right	Tilt	27	QPSK	25	12	1848M	1:1	0.043	1.197	0.051	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.02	0	Left	Cheek	27	QPSK	1	0	1848M	1:1	0.145	1.189	0.172	A12
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.05	1	Left	Cheek	27	QPSK	25	12	1848M	1:1	0.108	1.197	0.129	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.10	0	Left	Tilt	27	QPSK	1	0	1848M	1:1	0.056	1.189	0.067	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.09	1	Left	Tilt	27	QPSK	25	12	1848M	1:1	0.043	1.197	0.051	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-13
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.01	0	Right	Cheek	0	QPSK	1	0	1839M	1:1	0.143	1.191	0.170	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.01	1	Right	Cheek	0	QPSK	36	37	1839M	1:1	0.090	1.183	0.106	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	0.04	0	Right	Tilt	0	QPSK	1	0	1839M	1:1	0.105	1.191	0.125	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.03	1	Right	Tilt	0	QPSK	36	37	1839M	1:1	0.063	1.183	0.075	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	0.20	0	Left	Cheek	0	QPSK	1	0	1839M	1:1	0.199	1.191	0.237	A13
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.05	1	Left	Cheek	0	QPSK	36	37	1839M	1:1	0.140	1.183	0.166	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.08	0	Left	Tilt	0	QPSK	1	0	1839M	1:1	0.106	1.191	0.126	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.13	1	Left	Tilt	0	QPSK	36	37	1839M	1:1	0.066	1.183	0.078	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-14
LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.13	0	Right	Cheek	0	QPSK	1	0	1830M	1:1	0.139	1.199	0.167	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	0.07	1	Right	Cheek	0	QPSK	25	12	1830M	1:1	0.105	1.161	0.122	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	0.04	0	Right	Tilt	0	QPSK	1	0	1830M	1:1	0.083	1.199	0.100	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	0.15	1	Right	Tilt	0	QPSK	25	12	1830M	1:1	0.056	1.161	0.065	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.18	0	Left	Cheek	27	QPSK	1	0	1830M	1:1	0.207	1.199	0.248	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	0.00	1	Left	Cheek	27	QPSK	25	12	1830M	1:1	0.156	1.161	0.181	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.27	0.10	0	Left	Cheek	27	QPSK	1	0	1830M	1:1	0.220	1.130	0.249	A14
	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	25.8	25.01	0.20	0	Left	Tilt	0	QPSK	1	0	1830M	1:1	0.082	1.199	0.098	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	0.15	1	Left	Tilt	0	QPSK	25	12	1830M	1:1	0.055	1.161	0.064	
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 66 (AWS) Head SAR

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	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	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	22.90	-0.12	0	Right	Cheek	7	QPSK	1	0	1830M	1:1	0.097	1.288	0.125	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	24.0	22.83	0.12	0	Right	Cheek	7	QPSK	1	0	1830M	1:1	0.102	1.309	0.134	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.17	0	Right	Cheek	7	QPSK	1	99	1830M	1:1	0.098	1.225	0.120	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.07	1	Right	Cheek	7	QPSK	50	25	1830M	1:1	0.086	1.194	0.103	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.66	0.03	0	Right	Cheek	7	QPSK	1	0	1830M	1:1	0.121	1.081	0.131	A15
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20									1	99						
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	24.0	23.13	0.16	0	Right	Cheek	7	QPSK	1	0	1830M	1:1	0.109	1.222	0.133	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10									1	49						
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.18	0	Right	Tilt	7	QPSK	1	99	1830M	1:1	0.071	1.225	0.087	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.10	1	Right	Tilt	7	QPSK	50	25	1830M	1:1	0.063	1.194	0.075	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.09	0	Left	Cheek	7	QPSK	1	99	1830M	1:1	0.082	1.225	0.100	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.15	1	Left	Cheek	7	QPSK	50	25	1830M	1:1	0.061	1.194	0.073	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.19	0	Left	Tilt	7	QPSK	1	99	1830M	1:1	0.080	1.225	0.098	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.10	1	Left	Tilt	7	QPSK	50	25	1830M	1:1	0.054	1.194	0.064	
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 25 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	-0.02	0	Right	Cheek	55	QPSK	1	50	1846M	1:1	0.140	1.186	0.166	A16
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.11	1	Right	Cheek	55	QPSK	50	50	1846M	1:1	0.105	1.146	0.120	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	0.19	0	Right	Tilt	55	QPSK	1	50	1846M	1:1	0.071	1.186	0.084	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.13	1	Right	Tilt	55	QPSK	50	50	1846M	1:1	0.057	1.146	0.065	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	0.15	0	Left	Cheek	55	QPSK	1	50	1846M	1:1	0.106	1.186	0.126	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.02	1	Left	Cheek	55	QPSK	50	50	1846M	1:1	0.083	1.146	0.095	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	-0.01	0	Left	Tilt	55	QPSK	1	50	1846M	1:1	0.074	1.186	0.088	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.15	1	Left	Tilt	55	QPSK	50	50	1846M	1:1	0.066	1.146	0.076	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-17
LTE Band 30 Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.10	0	Right	Cheek	QPSK	1	0	1846M	1:1	0.106	1.099	0.116	A17
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.15	1	Right	Cheek	QPSK	25	12	1846M	1:1	0.090	1.074	0.097	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.12	0	Right	Tilt	QPSK	1	0	1846M	1:1	0.046	1.099	0.051	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.14	1	Right	Tilt	QPSK	25	12	1846M	1:1	0.044	1.074	0.047	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.14	0	Left	Cheek	QPSK	1	0	1846M	1:1	0.074	1.099	0.081	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.15	1	Left	Cheek	QPSK	25	12	1846M	1:1	0.070	1.074	0.075	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.11	0	Left	Tilt	QPSK	1	0	1846M	1:1	0.081	1.099	0.089	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.10	1	Left	Tilt	QPSK	25	12	1846M	1:1	0.065	1.074	0.070	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram						

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Table 11-18
LTE Band 7 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.06	0	Right	Cheek	QPSK	1	0	1845M	1:1	0.114	1.094	0.125	A18
2560.00	21350	High	LTE Band 7	20	23.0	22.65	-0.08	1	Right	Cheek	QPSK	50	0	1845M	1:1	0.085	1.084	0.092	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	0.13	0	Right	Tilt	QPSK	1	0	1845M	1:1	0.054	1.094	0.059	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.12	1	Right	Tilt	QPSK	50	0	1845M	1:1	0.050	1.084	0.054	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.07	0	Left	Cheek	QPSK	1	0	1845M	1:1	0.084	1.094	0.092	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.17	1	Left	Cheek	QPSK	50	0	1845M	1:1	0.065	1.084	0.070	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	0.15	0	Left	Tilt	QPSK	1	0	1845M	1:1	0.085	1.094	0.093	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.13	1	Left	Tilt	QPSK	50	0	1845M	1:1	0.072	1.084	0.078	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-19
LTE Band 48 Head SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	17.5	16.74	0.00	0	Right	Cheek	QPSK	1	99	0648M	1:1.58	0.570	1.191	0.679	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	16.78	0.02	0	Right	Cheek	QPSK	1	99	0648M	1:1.58	0.591	1.180	0.697	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.93	0.00	0	Right	Cheek	QPSK	1	99	0648M	1:1.58	0.638	1.140	0.727	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	16.81	0.00	0	Right	Cheek	QPSK	1	0	0648M	1:1.58	0.573	1.172	0.672	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	17.5	16.84	0.09	0	Right	Cheek	QPSK	50	25	0648M	1:1.58	0.583	1.164	0.679	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	16.92	0.07	0	Right	Cheek	QPSK	50	25	0648M	1:1.58	0.623	1.143	0.712	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.96	0.02	0	Right	Cheek	QPSK	50	25	0648M	1:1.58	0.651	1.132	**0.737**	A19
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.95	0.04	0	Right	Cheek	QPSK	50	50	0648M	1:1.58	0.562	1.135	0.638	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	16.84	0.08	0	Right	Cheek	QPSK	50	25	0648M	1:1.58	0.572	1.164	0.666	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.89	-0.04	0	Right	Cheek	QPSK	100	0	0648M	1:1.58	0.560	1.151	0.645	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	17.5	17.27	0.00	0	Right	Cheek	QPSK	50	50	0648M	1:1.58	0.622	1.054	0.656	
	SCC	3666.50	56405	Mid-High	LTE Band 48	20								50	0						
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	17.5	16.74	-0.02	0	Right	Tilt	QPSK	1	99	0648M	1:1.58	0.574	1.191	0.684	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	16.78	0.00	0	Right	Tilt	QPSK	1	99	0648M	1:1.58	0.572	1.180	0.675	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.93	0.02	0	Right	Tilt	QPSK	1	99	0648M	1:1.58	0.577	1.140	0.658	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	16.81	-0.01	0	Right	Tilt	QPSK	1	0	0648M	1:1.58	0.547	1.172	0.641	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	17.5	16.84	0.01	0	Right	Tilt	QPSK	50	25	0648M	1:1.58	0.577	1.164	0.672	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	17.5	16.92	0.00	0	Right	Tilt	QPSK	50	25	0648M	1:1.58	0.587	1.143	0.671	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.96	-0.01	0	Right	Tilt	QPSK	50	25	0648M	1:1.58	0.595	1.132	0.674	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	17.5	16.84	0.00	0	Right	Tilt	QPSK	50	25	0648M	1:1.58	0.539	1.164	0.627	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.89	-0.01	0	Right	Tilt	QPSK	100	0	0648M	1:1.58	0.581	1.151	0.669	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.93	0.12	0	Left	Cheek	QPSK	1	99	0648M	1:1.58	0.160	1.140	0.182	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.96	-0.01	0	Left	Cheek	QPSK	50	25	0648M	1:1.58	0.167	1.132	0.189	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.93	0.04	0	Left	Tilt	QPSK	1	99	0648M	1:1.58	0.210	1.140	0.239	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	17.5	16.96	0.04	0	Left	Tilt	QPSK	50	25	0648M	1:1.58	0.211	1.132	0.239	
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
LTE Band 41 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.14	0	Right	Cheek	QPSK	1	99	1799M	1:1.58	0.083	1.119	0.093	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.19	1	Right	Cheek	QPSK	50	25	1799M	1:1.58	0.062	1.096	0.068	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.2	26.29	-0.10	0	Right	Cheek	QPSK	1	99	1799M	1:2.31	0.093	1.233	0.115	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	25.0	24.75	0.18	0	Right	Cheek	QPSK	1	99	1799M	1:1.58	0.092	1.059	0.097	
	SCC	2525.80	39948	Low	LTE Band 41	20								1	0						
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	27.2	26.52	0.10	0	Right	Cheek	QPSK	1	99	1799M	1:2.31	0.101	1.169	0.118	A20
	SCC	2525.80	39948	Low	LTE Band 41	20								1	0						
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.00	0	Right	Tilt	QPSK	1	99	1799M	1:1.58	0.044	1.119	0.049	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.16	1	Right	Tilt	QPSK	50	25	1799M	1:1.58	0.036	1.096	0.039	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.18	0	Left	Cheek	QPSK	1	99	1799M	1:1.58	0.066	1.119	0.074	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.13	1	Left	Cheek	QPSK	50	25	1799M	1:1.58	0.051	1.096	0.056	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.07	0	Left	Tilt	QPSK	1	99	1799M	1:1.58	0.070	1.119	0.078	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.10	1	Left	Tilt	QPSK	50	25	1799M	1:1.58	0.060	1.096	0.066	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-21
NR Band n71 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.16	0	Right	Cheek	45	DFT-S-OFDM QPSK	1	53	1843M	1:1	0.071	1.094	0.078	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.19	0	Right	Cheek	45	DFT-S-OFDM QPSK	50	28	1843M	1:1	0.058	1.074	0.062	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.14	0	Right	Tilt	45	DFT-S-OFDM QPSK	1	53	1843M	1:1	0.037	1.094	0.040	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.19	0	Right	Tilt	45	DFT-S-OFDM QPSK	50	28	1843M	1:1	0.032	1.074	0.034	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.11	0	Left	Cheek	44	DFT-S-OFDM QPSK	1	53	1843M	1:1	0.103	1.094	0.113	A21
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.05	0	Left	Cheek	44	DFT-S-OFDM QPSK	50	28	1843M	1:1	0.088	1.074	0.095	
680.50	136100	Mid	NR Band n71	20	24.3	23.81	0.14	1.5	Left	Cheek	44	CP-OFDM QPSK	1	1	1843M	1:1	0.044	1.119	0.049	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.17	0	Left	Tilt	44	DFT-S-OFDM QPSK	1	53	1843M	1:1	0.033	1.094	0.036	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.14	0	Left	Tilt	44	DFT-S-OFDM QPSK	50	28	1843M	1:1	0.029	1.074	0.031	
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 11-22
NR Band n12 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	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	141500	Mid	NR Band n12	15	25.5	24.33	0.16	0	Right	Cheek	15	DFT-S-OFDM QPSK	1	40	1843M	1:1	0.075	1.309	0.098	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	-0.16	0	Right	Cheek	15	DFT-S-OFDM QPSK	36	22	1843M	1:1	0.080	1.315	0.105	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.16	0	Right	Tilt	2	DFT-S-OFDM QPSK	1	40	1843M	1:1	0.051	1.309	0.067	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	0.13	0	Right	Tilt	2	DFT-S-OFDM QPSK	36	22	1843M	1:1	0.055	1.315	0.072	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.07	0	Left	Cheek	2	DFT-S-OFDM QPSK	1	40	1843M	1:1	0.110	1.309	0.144	A22
707.50	141500	Mid	NR Band n12	15	25.5	24.31	0.09	0	Left	Cheek	2	DFT-S-OFDM QPSK	36	22	1843M	1:1	0.107	1.315	0.141	
707.50	141500	Mid	NR Band n12	15	24.0	22.87	0.13	1.5	Left	Cheek	2	CP-OFDM QPSK	1	1	1843M	1:1	0.064	1.297	0.083	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.16	0	Left	Tilt	2	DFT-S-OFDM QPSK	1	40	1843M	1:1	0.053	1.309	0.069	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	0.20	0	Left	Tilt	2	DFT-S-OFDM QPSK	36	22	1843M	1:1	0.050	1.315	0.066	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-23
NR Band n5 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	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	25.8	25.33	0.15	0	Right	Cheek	0	DFT-S-OFDM QPSK	1	1	1837M	1:1	0.141	1.114	0.157	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.08	0	Right	Cheek	0	DFT-S-OFDM QPSK	50	28	1837M	1:1	0.130	1.159	0.151	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	0.14	0	Right	Tilt	0	DFT-S-OFDM QPSK	1	1	1837M	1:1	0.101	1.114	0.113	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.14	0	Right	Tilt	0	DFT-S-OFDM QPSK	50	28	1837M	1:1	0.079	1.159	0.092	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	0.11	0	Left	Cheek	27	DFT-S-OFDM QPSK	1	1	1837M	1:1	0.183	1.114	0.204	A23
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.07	0	Left	Cheek	27	DFT-S-OFDM QPSK	50	28	1837M	1:1	0.182	1.159	0.211	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	23.65	0.08	1.5	Left	Cheek	27	CP-OFDM QPSK	1	1	1837M	1:1	0.124	1.161	0.144	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	0.16	0	Left	Tilt	0	DFT-S-OFDM QPSK	1	1	1837M	1:1	0.097	1.114	0.108	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.15	0	Left	Tilt	0	DFT-S-OFDM QPSK	50	28	1837M	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 11-24
NR Band n66 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	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	24.5	24.12	-0.14	0	Right	Cheek	7	DFT-S-OFDM QPSK	1	1	1797M	1:1	0.158	1.091	0.172	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	0.15	0	Right	Cheek	7	DFT-S-OFDM QPSK	50	28	1797M	1:1	0.158	1.099	0.174	A24
1720.00	344000	Low	NR Band n66 (AWS)	20	23.0	22.27	0.06	1.5	Right	Cheek	7	CP-OFDM QPSK	1	1	1797M	1:1	0.096	1.183	0.114	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	0.18	0	Right	Tilt	7	DFT-S-OFDM QPSK	1	1	1797M	1:1	0.095	1.091	0.104	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	0.13	0	Right	Tilt	7	DFT-S-OFDM QPSK	50	28	1797M	1:1	0.084	1.099	0.092	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	0.07	0	Left	Cheek	7	DFT-S-OFDM QPSK	1	1	1797M	1:1	0.081	1.091	0.088	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	0.04	0	Left	Cheek	7	DFT-S-OFDM QPSK	50	28	1797M	1:1	0.099	1.099	0.109	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	-0.07	0	Left	Tilt	7	DFT-S-OFDM QPSK	1	1	1797M	1:1	0.075	1.091	0.082	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	0.15	0	Left	Tilt	7	DFT-S-OFDM QPSK	50	28	1797M	1:1	0.080	1.099	0.088	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-25
NR Band n25 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Ant State	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	0.15	0	Right	Cheek	55	DFT-S-OFDM QPSK	1	53	1793M	1:1	0.168	1.122	0.188	A25
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.12	0	Right	Cheek	55	DFT-S-OFDM QPSK	50	28	1793M	1:1	0.163	1.178	0.192	
1882.50	376500	Mid	NR Band n25 (PCS)	20	23.0	22.28	-0.18	1.5	Right	Cheek	55	CP-OFDM QPSK	1	1	1793M	1:1	0.119	1.180	0.140	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	0.18	0	Right	Tilt	55	DFT-S-OFDM QPSK	1	53	1793M	1:1	0.065	1.122	0.073	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.15	0	Right	Tilt	55	DFT-S-OFDM QPSK	50	28	1793M	1:1	0.067	1.178	0.079	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	0.17	0	Left	Cheek	55	DFT-S-OFDM QPSK	1	53	1793M	1:1	0.116	1.122	0.130	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.06	0	Left	Cheek	55	DFT-S-OFDM QPSK	50	28	1793M	1:1	0.116	1.178	0.137	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	-0.12	0	Left	Tilt	55	DFT-S-OFDM QPSK	1	53	1793M	1:1	0.092	1.122	0.103	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.20	0	Left	Tilt	55	DFT-S-OFDM QPSK	50	28	1793M	1:1	0.091	1.178	0.107	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-26
NR Band n41 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)	
2592.99	518598	Mid	NR Band n41	100	21.0	20.37	0.12	0	Right	Cheek	DFT-S-OFDM QPSK	1	1	1806M	1:4	0.272	1.156	0.314	
2592.99	518598	Mid	NR Band n41	100	21.0	20.25	0.11	0	Right	Cheek	DFT-S-OFDM QPSK	135	0	1806M	1:4	0.246	1.189	0.292	
2592.99	518598	Mid	NR Band n41	100	21.0	20.37	0.09	0	Right	Tilt	DFT-S-OFDM QPSK	1	1	1806M	1:4	0.351	1.156	**0.406**	
2592.99	518598	Mid	NR Band n41	100	21.0	20.25	0.10	0	Right	Tilt	DFT-S-OFDM QPSK	135	0	1806M	1:4	0.324	1.189	0.385	
2592.99	518598	Mid	NR Band n41	100	21.0	20.59	0.12	0	Right	Tilt	CP-OFDM QPSK	1	1	1806M	1:4	0.354	1.099	0.389	A26
2592.99	518598	Mid	NR Band n41	100	21.0	20.37	0.11	0	Left	Cheek	DFT-S-OFDM QPSK	1	1	1806M	1:4	0.184	1.156	0.213	
2592.99	518598	Mid	NR Band n41	100	21.0	20.25	0.15	0	Left	Cheek	DFT-S-OFDM QPSK	135	0	1806M	1:4	0.181	1.189	0.215	
2592.99	518598	Mid	NR Band n41	100	21.0	20.37	0.19	0	Left	Tilt	DFT-S-OFDM QPSK	1	1	1806M	1:4	0.237	1.156	0.274	
2592.99	518598	Mid	NR Band n41	100	21.0	20.25	0.04	0	Left	Tilt	DFT-S-OFDM QPSK	135	0	1806M	1:4	0.235	1.189	0.279	
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 11-27
DTS Head SISO SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	17.0	17.00	0.19	Right	Cheek	1	1831M	1	99.9	0.445	-	1.000	1.001	-	
2437	6	802.11b	DSSS	22	17.0	17.00	0.08	Right	Tilt	1	1831M	1	99.9	0.674	0.369	1.000	1.001	0.369	
2437	6	802.11b	DSSS	22	17.0	17.00	0.06	Left	Cheek	1	1831M	1	99.9	0.576	-	1.000	1.001	-	
2437	6	802.11b	DSSS	22	17.0	17.00	0.15	Left	Tilt	1	1831M	1	99.9	0.732	0.411	1.000	1.001	**0.411**	A27
2462	11	802.11b	DSSS	22	17.0	17.00	0.18	Right	Cheek	2	1831M	1	99.9	0.026	-	1.000	1.001	-	
2462	11	802.11b	DSSS	22	17.0	17.00	0.12	Right	Tilt	2	1831M	1	99.9	0.028	0.018	1.000	1.001	0.018	
2462	11	802.11b	DSSS	22	17.0	17.00	0.15	Left	Cheek	2	1831M	1	99.9	0.015	-	1.000	1.001	-	
2462	11	802.11b	DSSS	22	17.0	17.00	0.13	Left	Tilt	2	1831M	1	99.9	0.020	-	1.000	1.001	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram						

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Table 11-28
NII SISO Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.61	0.09	Right	Cheek	1	1831M	29.3	94.6	0.294	0.129	1.094	1.057	**0.149**	A28
5290	58	802.11ac	OFDM	80	14.0	13.61	0.11	Right	Tilt	1	1831M	29.3	94.6	0.242	-	1.094	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.61	0.15	Left	Cheek	1	1831M	29.3	94.6	0.101	-	1.094	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.61	0.16	Left	Tilt	1	1831M	29.3	94.6	0.103	-	1.094	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.99	0.14	Right	Cheek	2	1831M	29.3	94.5	0.072	0.032	1.002	1.058	0.034	
5290	58	802.11ac	OFDM	80	14.0	13.99	-0.11	Right	Tilt	2	1831M	29.3	94.5	0.032	-	1.002	1.058	-	
5290	58	802.11ac	OFDM	80	14.0	13.99	0.10	Left	Cheek	2	1831M	29.3	94.5	0.020	-	1.002	1.058	-	
5290	58	802.11ac	OFDM	80	14.0	13.99	0.11	Left	Tilt	2	1831M	29.3	94.5	0.008	-	1.002	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	14.00	0.14	Right	Cheek	1	1831M	29.3	94.6	0.196	-	1.000	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	14.00	0.15	Right	Tilt	1	1831M	29.3	94.6	0.202	0.073	1.000	1.057	0.077	
5690	138	802.11ac	OFDM	80	14.0	14.00	0.19	Left	Cheek	1	1831M	29.3	94.6	0.083	-	1.000	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	14.00	0.10	Left	Tilt	1	1831M	29.3	94.6	0.097	-	1.000	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	13.82	0.17	Right	Cheek	2	1831M	29.3	94.5	0.015	-	1.042	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	13.82	0.05	Right	Tilt	2	1831M	29.3	94.5	0.021	0.005	1.042	1.058	0.006	
5690	138	802.11ac	OFDM	80	14.0	13.82	0.00	Left	Cheek	2	1831M	29.3	94.5	0.017	-	1.042	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	13.82	0.07	Left	Tilt	2	1831M	29.3	94.5	0.018	-	1.042	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.99	0.03	Right	Cheek	1	1831M	29.3	94.6	0.163	-	1.002	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.99	0.19	Right	Tilt	1	1831M	29.3	94.6	0.174	0.061	1.002	1.057	0.065	
5775	155	802.11ac	OFDM	80	14.0	13.99	0.12	Left	Cheek	1	1831M	29.3	94.6	0.079	-	1.002	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.99	0.14	Left	Tilt	1	1831M	29.3	94.6	0.094	-	1.002	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.58	0.00	Right	Cheek	2	1831M	29.3	94.5	0.011	-	1.102	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.58	0.03	Right	Tilt	2	1831M	29.3	94.5	0.015	-	1.102	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.58	0.14	Left	Cheek	2	1831M	29.3	94.5	0.020	-	1.102	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.58	0.20	Left	Tilt	2	1831M	29.3	94.5	0.020	0.009	1.102	1.058	0.010	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram											

Table 11-29
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	17.0	16.58	0.07	Right	Cheek	1831M	1	77.3	0.258	1.102	1.294	0.368	
2441.00	39	Bluetooth	FHSS	17.0	16.58	0.05	Right	Tilt	1831M	1	77.3	0.382	1.102	1.294	0.545	
2441.00	39	Bluetooth	FHSS	17.0	16.58	0.17	Left	Cheek	1831M	1	77.3	0.368	1.102	1.294	0.525	
2402.00	0	Bluetooth	FHSS	17.0	15.40	0.15	Left	Tilt	1831M	1	77.3	0.327	1.445	1.294	0.611	
2441.00	39	Bluetooth	FHSS	17.0	16.58	0.15	Left	Tilt	1831M	1	77.3	0.427	1.102	1.294	0.609	
2480.00	78	Bluetooth	FHSS	17.0	16.05	0.00	Left	Tilt	1831M	1	77.3	0.483	1.245	1.294	**0.778**	A29
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 11-30
GSM/UMTS/CDMA 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)	
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	25.8	25.23	-0.02	15 mm	27	1842M	1:1	back	0.386	1.140	0.440	A30
824.70	1013	CDMA BC0 (§22H)	TDSO / SO32	25.8	25.32	-0.01	15 mm	27	1842M	1:1	back	0.391	1.117	0.437	A32
1851.25	25	PCS CDMA	TDSO / SO32	24.5	23.51	-0.02	15 mm	32	1851M	1:1	back	0.659	1.256	0.828	
1880.00	600	PCS CDMA	TDSO / SO32	24.5	23.54	-0.01	15 mm	32	1851M	1:1	back	0.705	1.247	0.879	A34
1908.75	1175	PCS CDMA	TDSO / SO32	24.5	23.59	-0.10	15 mm	32	1851M	1:1	back	0.651	1.233	0.803	
836.60	190	GSM 850	GSM	33.5	32.75	0.00	15 mm	N/A	1802M	1:8.3	back	0.212	1.189	0.252	A36
1880.00	661	GSM 1900	GSM	30.0	29.07	-0.04	15 mm	N/A	1851M	1:8.3	back	0.264	1.239	0.327	A38
836.60	4183	UMTS 850	RMC	25.5	25.14	0.02	15 mm	0	1842M	1:1	back	0.296	1.086	0.321	A40
1712.40	1312	UMTS 1750	RMC	24.0	23.46	0.06	15 mm	9	1851M	1:1	back	0.713	1.132	0.807	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.03	15 mm	9	1851M	1:1	back	0.764	1.138	0.869	
1752.60	1513	UMTS 1750	RMC	24.0	23.39	0.02	15 mm	9	1851M	1:1	back	0.802	1.151	**0.923**	A42
1852.40	9262	UMTS 1900	RMC	24.0	23.37	-0.07	15 mm	1	1851M	1:1	back	0.528	1.156	0.610	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	0.02	15 mm	1	1851M	1:1	back	0.529	1.151	0.609	
1907.60	9538	UMTS 1900	RMC	24.0	23.37	0.03	15 mm	1	1851M	1:1	back	0.631	1.156	0.729	A44
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 11-31
LTE Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	-0.04	0	39	1848M	QPSK	1	0	15 mm	back	1:1	0.167	1.213	0.203	A46
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.02	1	39	1848M	QPSK	50	25	15 mm	back	1:1	0.120	1.191	0.143	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	-0.04	0	3	1848M	QPSK	1	0	15 mm	back	1:1	0.235	1.219	0.286	A48
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.02	1	3	1848M	QPSK	25	12	15 mm	back	1:1	0.195	1.194	0.233	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.00	0	27	1848M	QPSK	1	0	15 mm	back	1:1	0.306	1.194	0.365	A50
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	0.01	1	27	1848M	QPSK	25	25	15 mm	back	1:1	0.267	1.180	0.315	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.02	0	27	1848M	QPSK	1	0	15 mm	back	1:1	0.352	1.189	0.419	A52
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.01	1	27	1848M	QPSK	25	12	15 mm	back	1:1	0.273	1.197	0.327	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	0.03	0	59	1839M	QPSK	1	0	15 mm	back	1:1	0.336	1.191	0.400	A54
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.01	1	59	1839M	QPSK	36	37	15 mm	back	1:1	0.280	1.183	0.331	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.22	0.02	0	55	1846M	QPSK	1	0	15 mm	back	1:1	0.651	1.197	0.779	A60
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.16	-0.06	0	55	1846M	QPSK	1	99	15 mm	back	1:1	0.536	1.213	0.650	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	0.01	0	55	1846M	QPSK	1	50	15 mm	back	1:1	0.600	1.186	0.712	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	-0.05	1	55	1846M	QPSK	50	50	15 mm	back	1:1	0.483	1.146	0.554	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.00	0	N/A	1846M	QPSK	1	0	15 mm	back	1:1	0.518	1.099	0.569	A62
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.05	1	N/A	1846M	QPSK	25	12	15 mm	back	1:1	0.410	1.074	0.440	
2510.00	20850	Low	LTE Band 7	20	24.0	23.44	-0.01	0	N/A	1845M	QPSK	1	99	15 mm	back	1:1	0.526	1.138	0.599	
2535.00	21100	Mid	LTE Band 7	20	24.0	23.56	-0.03	0	N/A	1845M	QPSK	1	99	15 mm	back	1:1	0.484	1.107	0.536	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.03	0	N/A	1845M	QPSK	1	0	15 mm	back	1:1	0.550	1.094	0.602	A64
2560.00	21350	High	LTE Band 7	20	23.0	22.65	-0.03	1	N/A	1845M	QPSK	50	0	15 mm	back	1:1	0.441	1.084	0.478	
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
LTE Band 5 (Cell) Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.01	0	27	1830M	QPSK	1	0	15 mm	back	1:1	0.369	1.199	0.442	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	0.04	1	27	1830M	QPSK	25	12	15 mm	back	1:1	0.285	1.161	0.331	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.27	-0.02	0	0	1830M	QPSK	1	0	15 mm	back	1:1	0.411	1.130	0.464	A56
	SCC	829.30	20453	Mid	LTE Band 5 (Cell)	5									24	15 mm						
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-33
LTE Band 66 (AWS) Body-Worn SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	24.0	23.10	-0.01	0	9	1830M	QPSK	1	50	15 mm	back	1:1	0.647	1.230	0.796	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	22.95	-0.04	0	9	1830M	QPSK	1	50	15 mm	back	1:1	0.690	1.274	0.879	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	22.82	-0.01	0	9	1830M	QPSK	1	99	15 mm	back	1:1	0.631	1.312	0.828	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	24.0	22.93	-0.03	0	9	1830M	QPSK	1	49	15 mm	back	1:1	0.716	1.279	**0.916**	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.01	0	7	1830M	QPSK	1	99	15 mm	back	1:1	0.641	1.225	0.785	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.01	1	7	1830M	QPSK	50	25	15 mm	back	1:1	0.529	1.194	0.632	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	23.0	22.16	0.00	1	9	1830M	QPSK	100	0	15 mm	back	1:1	0.530	1.213	0.643	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.47	0.04	0	9	1830M	QPSK	1	99	15 mm	back	1:1	0.728	1.130	0.823	A58
	SCC	1764.80	132520	Mid	LTE Band 66 (AWS)	20									0	15 mm						
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	24.0	23.15	-0.02	0	9	1830M	QPSK	1	49	15 mm	back	1:1	0.717	1.216	0.872	
	SCC	1754.90	132421	Mid	LTE Band 66 (AWS)	10									0	15 mm						
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 11-34
LTE Band 48 Body-Worn SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	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	23.5	23.23	-0.05	0	0648M	QPSK	1	0	15 mm	back	1:1.58	0.291	1.064	0.310	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	22.5	22.31	0.01	1	0648M	QPSK	50	25	15 mm	back	1:1.58	0.226	1.045	0.236	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.50	0.00	0	0648M	QPSK	1	0	15 mm	back	1:1.58	0.320	1.000	**0.320**	A66
	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								

Table 11-35
LTE Band 41 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																		
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	-0.20	0	1799M	QPSK	1	99	15 mm	back	1:1.58	0.369	1.119	0.413	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.00	1	1799M	QPSK	50	25	15 mm	back	1:1.58	0.290	1.096	0.318	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	27.2	26.29	0.06	0	1799M	QPSK	1	99	15 mm	back	1:2.31	0.381	1.233	0.470	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	25.0	24.75	0.13	0	1799M	QPSK	1	99	15 mm	back	1:1.58	0.396	1.059	0.419	
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	27.2	26.52	-0.07	0	1799M	QPSK	1	99	15 mm	back	1:2.31	0.409	1.169	0.478	A68
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-36
NR Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	-0.07	0	39	1843M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.206	1.094	0.225	A70
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.08	0	39	1843M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.204	1.074	0.219	
680.50	136100	Mid	NR Band n71	20	24.3	23.81	0.03	1.5	39	1843M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.137	1.119	0.153	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.01	0	3	1843M	DFT-S-OFDM QPSK	1	40	15 mm	back	1:1	0.199	1.309	0.260	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	-0.01	0	3	1843M	DFT-S-OFDM QPSK	36	22	15 mm	back	1:1	0.199	1.315	0.262	A72
707.50	141500	Mid	NR Band n12	15	24.0	22.87	0.06	1.5	3	1843M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.150	1.297	0.195	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	0.05	0	27	1837M	DFT-S-OFDM QPSK	1	1	15 mm	back	1:1	0.326	1.114	0.363	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	-0.05	0	27	1837M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.340	1.159	0.394	A74
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	23.65	-0.03	1.5	27	1837M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.243	1.161	0.282	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	-0.09	0	9	1727M	DFT-S-OFDM QPSK	1	1	15 mm	back	1:1	0.616	1.091	0.672	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	-0.01	0	9	1727M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.694	1.099	0.763	
1720.00	344000	Low	NR Band n66 (AWS)	20	23.0	22.27	0.07	1.5	9	1727M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.550	1.183	0.651	
1745.00	349000	Mid	NR Band n66 (AWS)	20	24.5	24.08	0.06	0	9	1727M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.822	1.102	0.906	A76
1770.00	354000	High	NR Band n66 (AWS)	20	24.5	23.96	0.05	0	9	1727M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.813	1.132	**0.920**	
1720.00	344000	Low	NR Band n66 (AWS)	20	23.5	22.93	0.06	1	9	1727M	DFT-S-OFDM QPSK	100	0	15 mm	back	1:1	0.576	1.140	0.657	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	0.07	0	55	1793M	DFT-S-OFDM QPSK	1	53	15 mm	back	1:1	0.653	1.122	0.733	A78
1860.00	372000	Low	NR Band n25 (PCS)	20	24.5	23.68	0.04	0	55	1793M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.646	1.208	0.780	
1882.50	376500	Mid	NR Band n25 (PCS)	20	23.0	22.28	-0.01	1.5	55	1793M	CP-OFDM QPSK	1	1	15 mm	back	1:1	0.476	1.180	0.562	
1882.50	376500	Mid	NR Band n25 (PCS)	20	24.5	23.74	0.06	0	55	1793M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.633	1.191	0.754	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.01	0	55	1793M	DFT-S-OFDM QPSK	50	28	15 mm	back	1:1	0.643	1.178	0.757	
2592.99	518598	Mid	NR Band n41	100	25.0	24.19	0.10	0	N/A	1835M	DFT-S-OFDM QPSK	1	271	15 mm	back	1:4	0.048	1.205	0.058	
2592.99	518598	Mid	NR Band n41	100	25.0	24.08	0.00	0	N/A	1835M	DFT-S-OFDM QPSK	135	69	15 mm	back	1:4	0.054	1.236	0.067	A80
2592.99	518598	Mid	NR Band n41	100	23.5	22.92	0.06	1.5	N/A	1835M	CP-OFDM QPSK	1	1	15 mm	back	1:4	0.045	1.143	0.051	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-37
DTS 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	20.10	0.11	15 mm	1	0287M	1	back	99.9	0.189	0.130	1.230	1.001	**0.160**	A82
2437	6	802.11b	DSSS	22	21.0	20.84	0.20	15 mm	2	0287M	1	back	99.9	0.109	0.079	1.038	1.001	0.082	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-38
NII SISO Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5260	52	802.11a	OFDM	20	18.0	17.26	0.15	15 mm	1	1831M	6	back	98.8	0.245	0.107	1.186	1.012	0.128	
5280	56	802.11a	OFDM	20	18.0	17.58	0.21	15 mm	2	1831M	6	back	98.8	0.479	0.237	1.102	1.012	0.264	
5520	104	802.11a	OFDM	20	18.0	17.89	0.05	15 mm	1	1831M	6	back	98.8	0.309	0.141	1.026	1.012	0.146	
5520	104	802.11a	OFDM	20	18.0	17.98	0.00	15 mm	2	1831M	6	back	98.8	0.565	0.278	1.005	1.012	0.283	
5785	157	802.11a	OFDM	20	18.0	17.82	-0.17	15 mm	1	1831M	6	back	98.8	0.276	0.118	1.042	1.012	0.124	
5785	157	802.11a	OFDM	20	18.0	17.54	-0.15	15 mm	2	1831M	6	back	98.8	0.664	0.308	1.112	1.012	**0.347**	
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 11-39
NII SISO Body-Worn SAR for Conditions with NR Active

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.99	0.18	15 mm	2	1831M	29.3	back	94.5	0.127	0.050	1.002	1.058	0.053	
5690	138	802.11ac	OFDM	80	14.0	13.82	0.05	15 mm	2	1831M	29.3	back	94.5	0.161	0.066	1.042	1.058	0.073	
5775	155	802.11ac	OFDM	80	14.0	13.58	-0.12	15 mm	2	1831M	29.3	back	94.5	0.169	0.070	1.102	1.058	0.082	
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
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)	
5320	64	802.11n	OFDM	20	18.0	17.72	18.0	17.65	0.12	15 mm	MIMO	1831M	13	back	97.6	0.664	0.295	1.084	1.025	0.328	
5500	100	802.11n	OFDM	20	18.0	17.77	18.0	17.81	0.12	15 mm	MIMO	1831M	13	back	97.6	0.787	0.344	1.054	1.025	0.372	
5785	157	802.11n	OFDM	20	18.0	17.90	18.0	17.64	0.14	15 mm	MIMO	1831M	13	back	97.6	0.888	0.368	1.086	1.025	0.410	A84
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 11-41
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	13.61	14.0	13.99	0.19	15 mm	MIMO	1831M	58.5	back	91.1	0.129	0.052	1.094	1.098	0.062	
5690	138	802.11ac	OFDM	80	14.0	14.00	14.0	13.82	0.14	15 mm	MIMO	1831M	58.5	back	91.1	0.226	0.091	1.042	1.098	0.104	
5775	155	802.11ac	OFDM	80	14.0	13.99	14.0	13.58	0.14	15 mm	MIMO	1831M	58.5	back	91.1	0.237	0.090	1.102	1.098	0.109	
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 11-42
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	17.0	16.58	-0.08	15 mm	1831M	1	back	77.3	0.039	1.102	1.294	**0.056**	A86
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram									

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11.3 Standalone Hotspot SAR Data

Table 11-43
GPRS/UMTS/CDMA 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)	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	25.23	-0.03	10 mm	27	1842M	N/A	1:1	back	0.770	1.140	0.878	A31
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	25.23	-0.01	10 mm	27	1842M	N/A	1:1	front	0.578	1.140	0.659	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	25.23	0.03	10 mm	27	1842M	N/A	1:1	bottom	0.420	1.140	0.479	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	25.23	0.04	10 mm	27	1842M	N/A	1:1	right	0.091	1.140	0.104	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	25.23	0.02	10 mm	27	1842M	N/A	1:1	left	0.269	1.140	0.307	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	-0.02	10 mm	27	1842M	N/A	1:1	back	0.882	1.069	0.943	A33
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.33	-0.02	10 mm	27	1842M	N/A	1:1	back	0.878	1.114	0.978	
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.16	-0.05	10 mm	27	1842M	N/A	1:1	back	0.638	1.459	0.931	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	0.01	10 mm	27	1842M	N/A	1:1	front	0.608	1.069	0.650	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	-0.02	10 mm	27	1842M	N/A	1:1	bottom	0.429	1.069	0.459	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	-0.06	10 mm	27	1842M	N/A	1:1	right	0.087	1.069	0.093	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	0.00	10 mm	27	1842M	N/A	1:1	left	0.299	1.069	0.320	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	25.51	-0.01	10 mm	27	1842M	N/A	1:1	back	0.871	1.069	0.931	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.0	18.74	0.00	10 mm	32	1851M	N/A	1:1	back	0.412	1.062	0.438	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.0	18.74	-0.07	10 mm	32	1851M	N/A	1:1	front	0.352	1.062	0.374	
1851.25	25	PCS CDMA	EVDO Rev. 0	19.0	18.60	-0.02	10 mm	32	1851M	N/A	1:1	bottom	0.843	1.096	0.924	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.0	18.74	-0.03	10 mm	32	1851M	N/A	1:1	bottom	0.986	1.062	1.047	
1908.75	1175	PCS CDMA	EVDO Rev. 0	19.0	18.69	-0.11	10 mm	32	1851M	N/A	1:1	bottom	1.130	1.074	1.214	A35
1880.00	600	PCS CDMA	EVDO Rev. 0	19.0	18.74	0.14	10 mm	32	1851M	N/A	1:1	right	0.092	1.062	0.098	
1880.00	600	PCS CDMA	EVDO Rev. 0	19.0	18.74	0.17	10 mm	32	1851M	N/A	1:1	left	0.048	1.062	0.051	
836.60	190	GSM 850	GPRS	30.0	29.76	-0.20	10 mm	N/A	1802M	3	1:2.76	back	0.324	1.057	0.342	A37
836.60	190	GSM 850	GPRS	30.0	29.76	-0.18	10 mm	N/A	1802M	3	1:2.76	front	0.243	1.057	0.257	
836.60	190	GSM 850	GPRS	30.0	29.76	-0.14	10 mm	N/A	1802M	3	1:2.76	bottom	0.190	1.057	0.201	
836.60	190	GSM 850	GPRS	30.0	29.76	-0.21	10 mm	N/A	1802M	3	1:2.76	right	0.046	1.057	0.049	
836.60	190	GSM 850	GPRS	30.0	29.76	-0.07	10 mm	N/A	1802M	3	1:2.76	left	0.145	1.057	0.153	
1880.00	661	GSM 1900	GPRS	23.0	21.99	-0.06	10 mm	N/A	1851M	4	1:2.076	back	0.410	1.262	0.517	
1880.00	661	GSM 1900	GPRS	23.0	21.99	-0.03	10 mm	N/A	1851M	4	1:2.076	front	0.293	1.262	0.370	
1850.20	512	GSM 1900	GPRS	23.0	21.79	-0.02	10 mm	N/A	1851M	4	1:2.076	bottom	0.674	1.321	0.890	
1880.00	661	GSM 1900	GPRS	23.0	21.99	-0.12	10 mm	N/A	1851M	4	1:2.076	bottom	0.924	1.262	1.166	A39
1909.80	810	GSM 1900	GPRS	23.0	21.88	-0.11	10 mm	N/A	1851M	4	1:2.076	bottom	0.922	1.294	1.193	
1880.00	661	GSM 1900	GPRS	23.0	21.99	0.01	10 mm	N/A	1851M	4	1:2.076	right	0.083	1.262	0.105	
1880.00	661	GSM 1900	GPRS	23.0	21.99	0.21	10 mm	N/A	1851M	4	1:2.076	left	0.048	1.262	0.061	
826.40	4132	UMTS 850	RMC	25.5	25.16	-0.03	10 mm	0	1842M	N/A	1:1	back	0.753	1.081	0.814	A41
836.60	4183	UMTS 850	RMC	25.5	25.14	-0.02	10 mm	0	1842M	N/A	1:1	back	0.738	1.086	0.801	
846.60	4233	UMTS 850	RMC	25.5	25.08	-0.01	10 mm	0	1842M	N/A	1:1	back	0.641	1.102	0.706	
836.60	4183	UMTS 850	RMC	25.5	25.14	-0.01	10 mm	0	1842M	N/A	1:1	front	0.445	1.086	0.483	
836.60	4183	UMTS 850	RMC	25.5	25.14	-0.02	10 mm	0	1842M	N/A	1:1	bottom	0.363	1.086	0.394	
836.60	4183	UMTS 850	RMC	25.5	25.14	0.02	10 mm	0	1842M	N/A	1:1	right	0.083	1.086	0.090	
836.60	4183	UMTS 850	RMC	25.5	25.14	-0.01	10 mm	0	1842M	N/A	1:1	left	0.225	1.086	0.244	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	-0.12	10 mm	9	1828M	N/A	1:1	back	0.607	1.191	0.723	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	-0.03	10 mm	9	1828M	N/A	1:1	front	0.482	1.191	0.574	
1712.40	1312	UMTS 1750	RMC	20.0	19.30	0.01	10 mm	9	1828M	N/A	1:1	bottom	0.933	1.175	1.096	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	0.01	10 mm	9	1828M	N/A	1:1	bottom	0.981	1.191	1.168	
1752.60	1513	UMTS 1750	RMC	20.0	19.27	-0.02	10 mm	9	1828M	N/A	1:1	bottom	1.030	1.183	**1.218**	A43
1732.40	1412	UMTS 1750	RMC	20.0	19.24	0.05	10 mm	9	1828M	N/A	1:1	right	0.103	1.191	0.123	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	0.00	10 mm	9	1828M	N/A	1:1	left	0.070	1.191	0.083	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.03	10 mm	1	1851M	N/A	1:1	back	0.443	1.057	0.468	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.01	10 mm	1	1851M	N/A	1:1	front	0.351	1.057	0.371	
1852.40	9262	UMTS 1900	RMC	19.0	18.71	-0.04	10 mm	1	1851M	N/A	1:1	bottom	0.839	1.069	0.897	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.04	10 mm	1	1851M	N/A	1:1	bottom	0.988	1.057	1.044	
1907.60	9538	UMTS 1900	RMC	19.0	18.85	-0.09	10 mm	1	1851M	N/A	1:1	bottom	1.180	1.035	**1.221**	A45
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.03	10 mm	1	1851M	N/A	1:1	right	0.091	1.057	0.096	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	0.14	10 mm	1	1851M	N/A	1:1	left	0.059	1.057	0.062	
1907.60	9538	UMTS 1900	RMC	19.0	18.85	-0.08	10 mm	1	1851M	N/A	1:1	bottom	1.110	1.035	1.149	
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 11-44
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	-0.03	0	39	1848M	QPSK	1	0	10 mm	back	1:1	0.291	1.213	0.353	A47
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	-0.01	1	39	1848M	QPSK	50	25	10 mm	back	1:1	0.274	1.191	0.326	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.01	0	39	1848M	QPSK	1	0	10 mm	front	1:1	0.195	1.213	0.237	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.00	1	39	1848M	QPSK	50	25	10 mm	front	1:1	0.191	1.191	0.227	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.01	0	44	1848M	QPSK	1	0	10 mm	bottom	1:1	0.152	1.213	0.184	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	-0.04	1	44	1848M	QPSK	50	25	10 mm	bottom	1:1	0.114	1.191	0.136	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.07	0	39	1848M	QPSK	1	0	10 mm	right	1:1	0.088	1.213	0.107	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	-0.05	1	39	1848M	QPSK	50	25	10 mm	right	1:1	0.068	1.191	0.081	
680.50	133297	Mid	LTE Band 71	20	25.8	24.96	0.05	0	39	1848M	QPSK	1	0	10 mm	left	1:1	0.165	1.213	0.200	
680.50	133297	Mid	LTE Band 71	20	24.8	24.04	0.04	1	39	1848M	QPSK	50	25	10 mm	left	1:1	0.147	1.191	0.175	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-45
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.17	0	3	1848M	QPSK	1	0	10 mm	back	1:1	0.389	1.219	0.474	A49
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.12	1	3	1848M	QPSK	25	12	10 mm	back	1:1	0.342	1.194	0.408	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	-0.05	0	3	1848M	QPSK	1	0	10 mm	front	1:1	0.258	1.219	0.315	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	-0.07	1	3	1848M	QPSK	25	12	10 mm	front	1:1	0.229	1.194	0.273	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	0.02	0	15	1848M	QPSK	1	0	10 mm	bottom	1:1	0.244	1.219	0.297	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	-0.06	1	15	1848M	QPSK	25	12	10 mm	bottom	1:1	0.204	1.194	0.244	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	-0.03	0	15	1848M	QPSK	1	0	10 mm	right	1:1	0.101	1.219	0.123	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.12	1	15	1848M	QPSK	25	12	10 mm	right	1:1	0.090	1.194	0.107	
707.50	23095	Mid	LTE Band 12	10	25.8	24.94	-0.17	0	15	1848M	QPSK	1	0	10 mm	left	1:1	0.231	1.219	0.282	
707.50	23095	Mid	LTE Band 12	10	24.8	24.03	0.04	1	15	1848M	QPSK	25	12	10 mm	left	1:1	0.222	1.194	0.265	
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 11-46
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	-0.03	0	27	1848M	QPSK	1	0	10 mm	back	1:1	0.549	1.194	0.656	A51
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	-0.05	1	27	1848M	QPSK	25	25	10 mm	back	1:1	0.465	1.180	0.549	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	-0.10	0	27	1848M	QPSK	1	0	10 mm	front	1:1	0.410	1.194	0.490	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	-0.03	1	27	1848M	QPSK	25	25	10 mm	front	1:1	0.359	1.180	0.424	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	-0.10	0	27	1848M	QPSK	1	0	10 mm	bottom	1:1	0.325	1.194	0.388	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	-0.02	1	27	1848M	QPSK	25	25	10 mm	bottom	1:1	0.290	1.180	0.342	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	-0.12	0	27	1848M	QPSK	1	0	10 mm	right	1:1	0.089	1.194	0.106	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	-0.06	1	27	1848M	QPSK	25	25	10 mm	right	1:1	0.086	1.180	0.101	
782.00	23230	Mid	LTE Band 13	10	25.8	25.03	0.05	0	27	1848M	QPSK	1	0	10 mm	left	1:1	0.265	1.194	0.316	
782.00	23230	Mid	LTE Band 13	10	24.8	24.08	-0.03	1	27	1848M	QPSK	25	25	10 mm	left	1:1	0.215	1.180	0.254	
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 11-47
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	-0.04	0	27	1848M	QPSK	1	0	10 mm	back	1:1	0.594	1.189	0.706	A53
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.00	1	27	1848M	QPSK	25	12	10 mm	back	1:1	0.461	1.197	0.552	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	-0.10	0	27	1848M	QPSK	1	0	10 mm	front	1:1	0.452	1.189	0.537	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	-0.12	1	27	1848M	QPSK	25	12	10 mm	front	1:1	0.346	1.197	0.414	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	-0.07	0	27	1848M	QPSK	1	0	10 mm	bottom	1:1	0.343	1.189	0.408	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.01	1	27	1848M	QPSK	25	12	10 mm	bottom	1:1	0.266	1.197	0.318	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	-0.04	0	27	1848M	QPSK	1	0	10 mm	right	1:1	0.108	1.189	0.128	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	-0.06	1	27	1848M	QPSK	25	12	10 mm	right	1:1	0.074	1.197	0.089	
793.00	23330	Mid	LTE Band 14	10	25.8	25.05	0.08	0	27	1848M	QPSK	1	0	10 mm	left	1:1	0.313	1.189	0.372	
793.00	23330	Mid	LTE Band 14	10	24.8	24.02	0.06	1	27	1848M	QPSK	25	12	10 mm	left	1:1	0.235	1.197	0.281	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-48
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.03	0	59	1839M	QPSK	1	0	10 mm	back	1:1	0.620	1.191	0.738	A55
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.02	1	59	1839M	QPSK	36	37	10 mm	back	1:1	0.520	1.183	0.615	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.04	0	59	1839M	QPSK	1	0	10 mm	front	1:1	0.426	1.191	0.507	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	-0.03	1	59	1839M	QPSK	36	37	10 mm	front	1:1	0.355	1.183	0.420	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.02	0	59	1839M	QPSK	1	0	10 mm	bottom	1:1	0.362	1.191	0.431	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.02	1	59	1839M	QPSK	36	37	10 mm	bottom	1:1	0.288	1.183	0.341	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.02	0	59	1839M	QPSK	1	0	10 mm	right	1:1	0.075	1.191	0.089	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.04	1	59	1839M	QPSK	36	37	10 mm	right	1:1	0.064	1.183	0.076	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.04	-0.02	0	59	1839M	QPSK	1	0	10 mm	left	1:1	0.223	1.191	0.266	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.07	0.00	1	59	1839M	QPSK	36	37	10 mm	left	1:1	0.177	1.183	0.209	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-49
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.05	0	0	1830M	QPSK	1	0	10 mm	back	1:1	0.728	1.199	0.873	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	-0.01	1	0	1830M	QPSK	25	12	10 mm	back	1:1	0.584	1.161	0.678	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.01	-0.02	1	0	1830M	QPSK	50	0	10 mm	back	1:1	0.569	1.199	0.682	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.27	0.00	0	0	1830M	QPSK	1	0	10 mm	back	1:1	0.782	1.130	0.884	A57
	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	25.8	25.01	-0.04	0	28	1830M	QPSK	1	0	10 mm	front	1:1	0.445	1.199	0.534	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	-0.01	1	28	1830M	QPSK	25	12	10 mm	front	1:1	0.358	1.161	0.416	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.04	0	31	1830M	QPSK	1	0	10 mm	bottom	1:1	0.377	1.199	0.452	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	-0.07	1	31	1830M	QPSK	25	12	10 mm	bottom	1:1	0.284	1.161	0.330	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.03	0	31	1830M	QPSK	1	0	10 mm	right	1:1	0.079	1.199	0.095	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	-0.02	1	31	1830M	QPSK	25	12	10 mm	right	1:1	0.061	1.161	0.071	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	25.01	-0.01	0	31	1830M	QPSK	1	0	10 mm	left	1:1	0.237	1.199	0.284	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	24.15	-0.01	1	31	1830M	QPSK	25	12	10 mm	left	1:1	0.178	1.161	0.207	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-50
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	20.0	19.16	0.00	0	11	1830M	QPSK	1	50	10 mm	back	1:1	0.454	1.213	0.551	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	0.09	0	11	1830M	QPSK	50	25	10 mm	back	1:1	0.454	1.191	0.541	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	-0.05	0	11	1830M	QPSK	1	50	10 mm	front	1:1	0.388	1.213	0.471	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	-0.02	0	11	1830M	QPSK	50	25	10 mm	front	1:1	0.407	1.191	0.485	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	-0.05	0	9	1830M	QPSK	1	50	10 mm	bottom	1:1	0.763	1.213	0.926	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.90	-0.02	0	9	1830M	QPSK	1	50	10 mm	bottom	1:1	0.837	1.288	1.078	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.09	-0.01	0	9	1830M	QPSK	1	99	10 mm	bottom	1:1	0.882	1.233	1.088	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	-0.05	0	9	1830M	QPSK	50	25	10 mm	bottom	1:1	0.829	1.191	0.987	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	19.15	-0.02	0	9	1830M	QPSK	50	25	10 mm	bottom	1:1	0.896	1.216	1.090	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.09	-0.02	0	9	1830M	QPSK	50	0	10 mm	bottom	1:1	0.916	1.233	1.129	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	20.0	19.08	-0.07	0	7	1830M	QPSK	25	0	10 mm	bottom	1:1	0.890	1.236	1.100	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.15	-0.01	0	9	1830M	QPSK	100	0	10 mm	bottom	1:1	0.815	1.216	0.991	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.50	-0.01	0	9	1830M	QPSK	50	0	10 mm	bottom	1:1	0.969	1.122	1.087	A59
	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	20.0	19.45	0.00	0	7	1830M	QPSK	25	0	10 mm	bottom	1:1	0.929	1.135	1.054	
	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	20.0	19.16	-0.06	0	9	1830M	QPSK	1	50	10 mm	right	1:1	0.102	1.213	0.124	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	-0.09	0	9	1830M	QPSK	50	25	10 mm	right	1:1	0.097	1.191	0.116	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	0.15	0	9	1830M	QPSK	1	50	10 mm	left	1:1	0.057	1.213	0.069	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	0.11	0	9	1830M	QPSK	50	25	10 mm	left	1:1	0.059	1.191	0.070	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-51
LTE Band 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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)	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	-0.04	0	1	1846M	QPSK	1	0	10 mm	back	1:1	0.378	1.064	0.402	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	-0.01	0	1	1846M	QPSK	50	25	10 mm	back	1:1	0.416	1.014	0.422	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	-0.07	0	1	1846M	QPSK	1	0	10 mm	front	1:1	0.301	1.064	0.320	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.04	0	1	1846M	QPSK	50	25	10 mm	front	1:1	0.334	1.014	0.339	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.0	18.63	0.01	0	55	1846M	QPSK	1	0	10 mm	bottom	1:1	0.816	1.089	0.889	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.0	18.64	-0.06	0	55	1846M	QPSK	1	99	10 mm	bottom	1:1	0.937	1.086	1.018	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	-0.13	0	7	1846M	QPSK	1	0	10 mm	bottom	1:1	0.961	1.064	1.023	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.0	18.77	-0.05	0	55	1846M	QPSK	50	0	10 mm	bottom	1:1	0.861	1.054	0.907	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.0	18.79	-0.01	0	55	1846M	QPSK	50	25	10 mm	bottom	1:1	0.976	1.050	1.025	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.00	0	7	1846M	QPSK	50	25	10 mm	bottom	1:1	1.040	1.014	1.055	A61
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.71	-0.01	0	7	1846M	QPSK	100	0	10 mm	bottom	1:1	1.010	1.069	1.080	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	0.04	0	1	1846M	QPSK	1	0	10 mm	right	1:1	0.075	1.064	0.080	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.12	0	1	1846M	QPSK	50	25	10 mm	right	1:1	0.076	1.014	0.077	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	-0.02	0	55	1846M	QPSK	1	0	10 mm	left	1:1	0.051	1.064	0.054	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.15	0	55	1846M	QPSK	50	25	10 mm	left	1:1	0.054	1.014	0.055	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram			

Table 11-52
LTE Band 30 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)	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.21	-0.06	0	1846M	QPSK	1	0	10 mm	back	1:1	0.270	1.199	0.324	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.16	0.00	0	1846M	QPSK	25	12	10 mm	back	1:1	0.273	1.213	0.331	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.21	0.01	0	1846M	QPSK	1	0	10 mm	front	1:1	0.272	1.199	0.326	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.16	-0.08	0	1846M	QPSK	25	12	10 mm	front	1:1	0.275	1.213	0.334	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.21	-0.11	0	1846M	QPSK	1	0	10 mm	bottom	1:1	0.628	1.199	0.753	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.16	-0.07	0	1846M	QPSK	25	12	10 mm	bottom	1:1	0.642	1.213	0.779	A63
2310.00	27710	Mid	LTE Band 30	10	19.0	18.21	0.05	0	1846M	QPSK	1	0	10 mm	right	1:1	0.057	1.199	0.068	
2310.00	27710	Mid	LTE Band 30	10	19.0	18.16	-0.03	0	1846M	QPSK	25	12	10 mm	right	1:1	0.055	1.213	0.067	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram			

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Table 11-53
LTE Band 7 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2560.00	21350	High	LTE Band 7	20	20.5	20.12	-0.03	0	1845M	QPSK	1	0	10 mm	back	1:1	0.409	1.091	0.446	
2560.00	21350	High	LTE Band 7	20	20.5	20.20	0.02	0	1845M	QPSK	50	25	10 mm	back	1:1	0.393	1.072	0.421	
2560.00	21350	High	LTE Band 7	20	20.5	20.12	-0.02	0	1845M	QPSK	1	0	10 mm	front	1:1	0.288	1.091	0.314	
2560.00	21350	High	LTE Band 7	20	20.5	20.20	-0.02	0	1845M	QPSK	50	25	10 mm	front	1:1	0.290	1.072	0.311	
2510.00	20850	Low	LTE Band 7	20	20.5	19.95	0.03	0	1845M	QPSK	1	0	10 mm	bottom	1:1	0.719	1.135	0.816	
2535.00	21100	Mid	LTE Band 7	20	20.5	20.05	-0.02	0	1845M	QPSK	1	99	10 mm	bottom	1:1	0.750	1.109	0.832	A65
2560.00	21350	High	LTE Band 7	20	20.5	20.12	0.04	0	1845M	QPSK	1	0	10 mm	bottom	1:1	0.735	1.091	0.802	
2560.00	21350	High	LTE Band 7	20	20.5	20.20	-0.01	0	1845M	QPSK	50	25	10 mm	bottom	1:1	0.715	1.072	0.766	
2560.00	21350	High	LTE Band 7	20	20.5	20.11	0.00	0	1845M	QPSK	100	0	10 mm	bottom	1:1	0.700	1.094	0.766	
2560.00	21350	High	LTE Band 7	20	20.5	20.12	-0.13	0	1845M	QPSK	1	0	10 mm	right	1:1	0.132	1.091	0.144	
2560.00	21350	High	LTE Band 7	20	20.5	20.20	-0.09	0	1845M	QPSK	50	25	10 mm	right	1:1	0.134	1.072	0.144	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-54
LTE Band 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	23.5	23.23	0.00	0	2243M	QPSK	1	0	10 mm	back	1:1.58	0.519	1.064	0.552	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	22.5	22.31	0.15	1	2243M	QPSK	50	25	10 mm	back	1:1.58	0.424	1.045	0.443	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.23	0.19	0	2243M	QPSK	1	0	10 mm	front	1:1.58	0.271	1.064	0.288	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	22.5	22.31	0.05	1	2243M	QPSK	50	25	10 mm	front	1:1.58	0.216	1.045	0.226	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	23.5	23.20	0.08	0	2243M	QPSK	1	0	10 mm	top	1:1.58	0.769	1.072	0.824	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	23.5	23.11	0.00	0	2243M	QPSK	1	99	10 mm	top	1:1.58	0.778	1.094	0.851	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	23.5	23.15	0.06	0	2243M	QPSK	1	99	10 mm	top	1:1.58	0.728	1.084	0.789	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.23	0.03	0	2243M	QPSK	1	0	10 mm	top	1:1.58	0.754	1.064	0.802	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	23.5	23.04	0.03	0	2243M	QPSK	1	0	10 mm	top	1:1.58	0.682	1.112	0.758	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	22.5	22.30	0.02	1	2243M	QPSK	50	25	10 mm	top	1:1.58	0.637	1.047	0.667	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	22.5	22.25	0.03	1	2243M	QPSK	50	25	10 mm	top	1:1.58	0.578	1.059	0.612	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	22.5	22.31	0.00	1	2243M	QPSK	50	25	10 mm	top	1:1.58	0.575	1.045	0.601	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	22.5	22.16	0.03	1	2243M	QPSK	50	25	10 mm	top	1:1.58	0.537	1.081	0.580	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	22.5	22.26	0.03	1	2243M	QPSK	100	0	10 mm	top	1:1.58	0.590	1.057	0.624	
2 CC Uplink	PCC	3560.00	55340	Low	LTE Band 48	20	23.5	23.50	0.07	0	2243M	QPSK	1	99	10 mm	top	1:1.58	0.893	1.000	**0.893**	A67
	SCC	3579.80	55538	Low	LTE Band 48	20							1	0							
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	23.5	23.23	-0.01	0	2243M	QPSK	1	0	10 mm	left	1:1.58	0.336	1.064	0.358	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	22.5	22.31	0.01	1	2243M	QPSK	50	25	10 mm	left	1:1.58	0.264	1.045	0.276	
2 CC Uplink	PCC	3560.00	55340	Low	LTE Band 48	20	23.5	23.50	0.01	0	2243M	QPSK	1	99	10 mm	top	1:1.58	0.887	1.000	0.887	
	SCC	3579.80	55538	Low	LTE Band 48	20							1	0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note: Blue entry represents variability measurement.

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Table 11-55
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.32	0.02	0	1799M	QPSK	1	0	10 mm	back	1:1.58	0.360	1.169	0.421	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.35	-0.06	0	1799M	QPSK	50	0	10 mm	back	1:1.58	0.369	1.161	0.428	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.32	0.01	0	1799M	QPSK	1	0	10 mm	front	1:1.58	0.270	1.169	0.316	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.35	0.01	0	1799M	QPSK	50	0	10 mm	front	1:1.58	0.270	1.161	0.313	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.32	-0.09	0	1799M	QPSK	1	0	10 mm	bottom	1:1.58	0.670	1.169	0.783	A69
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.21	-0.04	0	1799M	QPSK	1	99	10 mm	bottom	1:1.58	0.609	1.199	0.730	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.0	21.01	0.01	0	1799M	QPSK	1	0	10 mm	bottom	1:1.58	0.577	1.256	0.725	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.82	-0.01	0	1799M	QPSK	1	50	10 mm	bottom	1:1.58	0.501	1.312	0.657	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.90	0.03	0	1799M	QPSK	1	50	10 mm	bottom	1:1.58	0.488	1.288	0.629	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.0	20.95	0.12	0	1799M	QPSK	1	50	10 mm	bottom	1:1.58	0.435	1.274	0.554	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.35	-0.03	0	1799M	QPSK	50	0	10 mm	bottom	1:1.58	0.638	1.161	0.741	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.0	21.09	-0.01	0	1799M	QPSK	50	25	10 mm	bottom	1:1.58	0.588	1.233	0.725	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.0	20.90	-0.03	0	1799M	QPSK	50	25	10 mm	bottom	1:1.58	0.512	1.288	0.659	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.0	20.97	-0.14	0	1799M	QPSK	50	25	10 mm	bottom	1:1.58	0.434	1.268	0.550	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.0	21.17	-0.06	0	1799M	QPSK	50	50	10 mm	bottom	1:1.58	0.433	1.211	0.524	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.25	-0.03	0	1799M	QPSK	100	0	10 mm	bottom	1:1.58	0.592	1.189	0.704	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	23.6	23.00	-0.16	0	1799M	QPSK	1	0	10 mm	bottom	1:2.31	0.622	1.148	0.714	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	23.6	22.83	-0.03	0	1799M	QPSK	1	99	10 mm	bottom	1:2.31	0.605	1.194	0.722	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	22.0	21.42	-0.14	0	1799M	QPSK	1	99	10 mm	bottom	1:1.58	0.622	1.143	0.711	
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	23.6	23.13	-0.04	0	1799M	QPSK	1	99	10 mm	bottom	1:2.31	0.618	1.114	0.688	
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.32	-0.04	0	1799M	QPSK	1	0	10 mm	right	1:1.58	0.134	1.169	0.157	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.0	21.35	0.00	0	1799M	QPSK	50	0	10 mm	right	1:1.58	0.141	1.161	0.164	

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

Table 11-56
NR Band n71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	-0.14	0	39	1843M	DFT-S-OFDM QPSK	1	53	10 mm	back	1:1	0.363	1.094	0.397	A71
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.00	0	39	1843M	DFT-S-OFDM QPSK	50	28	10 mm	back	1:1	0.362	1.074	0.389	
680.50	136100	Mid	NR Band n71	20	24.3	23.81	0.04	1.5	39	1843M	CP-OFDM QPSK	1	1	10 mm	back	1:1	0.196	1.119	0.219	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.06	0	39	1843M	DFT-S-OFDM QPSK	1	53	10 mm	front	1:1	0.243	1.094	0.266	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.00	0	39	1843M	DFT-S-OFDM QPSK	50	28	10 mm	front	1:1	0.235	1.074	0.252	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.06	0	44	1843M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	0.185	1.094	0.202	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.04	0	44	1843M	DFT-S-OFDM QPSK	50	28	10 mm	bottom	1:1	0.175	1.074	0.188	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	0.16	0	39	1843M	DFT-S-OFDM QPSK	1	53	10 mm	right	1:1	0.096	1.094	0.105	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	0.02	0	39	1843M	DFT-S-OFDM QPSK	50	28	10 mm	right	1:1	0.092	1.074	0.099	
680.50	136100	Mid	NR Band n71	20	25.8	25.41	-0.01	0	39	1843M	DFT-S-OFDM QPSK	1	53	10 mm	left	1:1	0.201	1.094	0.220	
680.50	136100	Mid	NR Band n71	20	25.8	25.49	-0.15	0	39	1843M	DFT-S-OFDM QPSK	50	28	10 mm	left	1:1	0.195	1.074	0.209	

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

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Table 11-57
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	141500	Mid	NR Band n12	15	25.5	24.33	0.08	0	3	1843M	DFT-S-OFDM QPSK	1	40	10 mm	back	1:1	0.366	1.309	0.479	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	0.03	0	3	1843M	DFT-S-OFDM QPSK	36	22	10 mm	back	1:1	0.368	1.315	0.484	A73
707.50	141500	Mid	NR Band n12	15	24.0	22.87	0.07	1.5	3	1843M	CP-OFDM QPSK	1	1	10 mm	back	1:1	0.234	1.297	0.303	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.03	0	3	1843M	DFT-S-OFDM QPSK	1	40	10 mm	front	1:1	0.227	1.309	0.297	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	-0.02	0	3	1843M	DFT-S-OFDM QPSK	36	22	10 mm	front	1:1	0.232	1.315	0.305	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	-0.06	0	15	1843M	DFT-S-OFDM QPSK	1	40	10 mm	bottom	1:1	0.215	1.309	0.281	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	-0.14	0	15	1843M	DFT-S-OFDM QPSK	36	22	10 mm	bottom	1:1	0.215	1.315	0.283	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	0.00	0	15	1843M	DFT-S-OFDM QPSK	1	40	10 mm	right	1:1	0.088	1.309	0.115	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	-0.04	0	15	1843M	DFT-S-OFDM QPSK	36	22	10 mm	right	1:1	0.086	1.315	0.113	
707.50	141500	Mid	NR Band n12	15	25.5	24.33	-0.09	0	15	1843M	DFT-S-OFDM QPSK	1	40	10 mm	left	1:1	0.254	1.309	0.332	
707.50	141500	Mid	NR Band n12	15	25.5	24.31	0.00	0	15	1843M	DFT-S-OFDM QPSK	36	22	10 mm	left	1:1	0.248	1.315	0.326	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-58
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	25.8	25.33	0.00	0	0	1837M	DFT-S-OFDM QPSK	1	1	10 mm	back	1:1	0.736	1.114	0.820	A75
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	-0.03	0	0	1837M	DFT-S-OFDM QPSK	50	28	10 mm	back	1:1	0.715	1.159	0.829	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.3	23.65	-0.02	1.5	0	1837M	CP-OFDM QPSK	1	1	10 mm	back	1:1	0.545	1.161	0.633	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.8	24.30	0.04	1	0	1837M	DFT-S-OFDM QPSK	100	0	10 mm	back	1:1	0.582	1.122	0.653	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	-0.06	0	28	1837M	DFT-S-OFDM QPSK	1	1	10 mm	front	1:1	0.408	1.114	0.455	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.01	0	28	1837M	DFT-S-OFDM QPSK	50	28	10 mm	front	1:1	0.420	1.159	0.487	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	-0.05	0	31	1837M	DFT-S-OFDM QPSK	1	1	10 mm	bottom	1:1	0.333	1.114	0.371	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.03	0	31	1837M	DFT-S-OFDM QPSK	50	28	10 mm	bottom	1:1	0.322	1.159	0.373	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	-0.02	0	31	1837M	DFT-S-OFDM QPSK	1	1	10 mm	right	1:1	0.077	1.114	0.086	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	-0.01	0	31	1837M	DFT-S-OFDM QPSK	50	28	10 mm	right	1:1	0.078	1.159	0.090	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.33	0.02	0	31	1837M	DFT-S-OFDM QPSK	1	1	10 mm	left	1:1	0.206	1.114	0.229	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.8	25.16	0.01	0	31	1837M	DFT-S-OFDM QPSK	50	28	10 mm	left	1:1	0.215	1.159	0.249	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-59
NR Band n66 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	20.0	19.83	0.16	0	11	1727M	DFT-S-OFDM QPSK	1	53	10 mm	back	1:1	0.592	1.040	0.616	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.02	0	11	1727M	DFT-S-OFDM QPSK	50	56	10 mm	back	1:1	0.602	1.067	0.642	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	0.10	0	11	1727M	DFT-S-OFDM QPSK	1	53	10 mm	front	1:1	0.506	1.040	0.526	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.01	0	11	1727M	DFT-S-OFDM QPSK	50	56	10 mm	front	1:1	0.508	1.067	0.542	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	0.18	0	9	1727M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	1.040	1.040	1.082	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.64	-0.05	0	9	1727M	DFT-S-OFDM QPSK	1	1	10 mm	bottom	1:1	1.100	1.086	1.195	
1770.00	354000	High	NR Band n66 (AWS)	20	20.0	19.64	-0.10	0	9	1727M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	1.040	1.086	1.129	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.04	0	9	1727M	DFT-S-OFDM QPSK	50	56	10 mm	bottom	1:1	1.080	1.067	1.152	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.63	-0.02	0	9	1727M	DFT-S-OFDM QPSK	50	56	10 mm	bottom	1:1	1.110	1.089	1.209	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.62	0.00	0	9	1727M	CP-OFDM QPSK	1	1	10 mm	bottom	1:1	1.110	1.091	1.211	A77
1770.00	354000	High	NR Band n66 (AWS)	20	20.0	19.58	-0.08	0	9	1727M	DFT-S-OFDM QPSK	50	28	10 mm	bottom	1:1	1.060	1.102	1.168	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.71	-0.11	0	9	1727M	DFT-S-OFDM QPSK	100	0	10 mm	bottom	1:1	1.060	1.069	1.133	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	-0.21	0	9	1727M	DFT-S-OFDM QPSK	1	53	10 mm	right	1:1	0.130	1.040	0.135	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.01	0	9	1727M	DFT-S-OFDM QPSK	50	56	10 mm	right	1:1	0.121	1.067	0.129	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	0.15	0	9	1727M	DFT-S-OFDM QPSK	1	53	10 mm	left	1:1	0.068	1.040	0.071	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	0.01	0	9	1727M	DFT-S-OFDM QPSK	50	56	10 mm	left	1:1	0.070	1.067	0.075	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.62	-0.06	0	9	1727M	CP-OFDM QPSK	1	1	10 mm	bottom	1:1	1.080	1.091	1.178	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Blue entry represents variability measurement.

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Table 11-60
NR Band n25 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.08	0	1	1793M	DFT-S-OFDM QPSK	1	53	10 mm	back	1:1	0.409	1.094	0.447	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	0.00	0	1	1793M	DFT-S-OFDM QPSK	50	0	10 mm	back	1:1	0.401	1.125	0.451	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	0.00	0	1	1793M	DFT-S-OFDM QPSK	1	53	10 mm	front	1:1	0.324	1.094	0.354	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	-0.03	0	1	1793M	DFT-S-OFDM QPSK	50	0	10 mm	front	1:1	0.314	1.125	0.353	
1860.00	372000	Low	NR Band n25 (PCS)	20	19.5	18.94	-0.09	0	55	1793M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	0.883	1.138	1.005	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.12	0	55	1793M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	0.989	1.094	1.082	
1905.00	381000	High	NR Band n25 (PCS)	20	19.5	18.88	-0.03	0	7	1793M	DFT-S-OFDM QPSK	1	53	10 mm	bottom	1:1	1.030	1.153	1.188	A79
1860.00	372000	Low	NR Band n25 (PCS)	20	19.5	18.84	0.02	0	55	1793M	DFT-S-OFDM QPSK	50	28	10 mm	bottom	1:1	0.849	1.164	0.988	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	0.03	0	55	1793M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.970	1.125	1.091	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.05	0.07	0	55	1793M	CP-OFDM QPSK	1	1	10 mm	bottom	1:1	0.936	1.109	1.038	
1905.00	381000	High	NR Band n25 (PCS)	20	19.5	18.89	-0.08	0	7	1793M	DFT-S-OFDM QPSK	50	0	10 mm	bottom	1:1	0.972	1.151	1.119	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.98	-0.10	0	7	1793M	DFT-S-OFDM QPSK	100	0	10 mm	bottom	1:1	0.941	1.127	1.061	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.11	0	1	1793M	DFT-S-OFDM QPSK	1	53	10 mm	right	1:1	0.077	1.094	0.084	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	0.07	0	1	1793M	DFT-S-OFDM QPSK	50	0	10 mm	right	1:1	0.080	1.125	0.090	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	0.04	0	55	1793M	DFT-S-OFDM QPSK	1	53	10 mm	left	1:1	0.062	1.094	0.068	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	0.17	0	55	1793M	DFT-S-OFDM QPSK	50	0	10 mm	left	1:1	0.061	1.125	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 11-61
NR Band n41 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)	
2592.99	518598	Mid	NR Band n41	100	25.0	24.19	0.20	0	1835M	DFT-S-OFDM QPSK	1	271	10 mm	back	1:4	0.105	1.205	0.127	
2592.99	518598	Mid	NR Band n41	100	25.0	24.08	0.08	0	1835M	DFT-S-OFDM QPSK	135	69	10 mm	back	1:4	0.114	1.236	0.141	
2592.99	518598	Mid	NR Band n41	100	25.0	24.19	0.01	0	1835M	DFT-S-OFDM QPSK	1	271	10 mm	front	1:4	0.062	1.205	0.075	
2592.99	518598	Mid	NR Band n41	100	25.0	24.08	0.08	0	1835M	DFT-S-OFDM QPSK	135	69	10 mm	front	1:4	0.076	1.236	0.094	
2592.99	518598	Mid	NR Band n41	100	25.0	24.19	0.14	0	1835M	DFT-S-OFDM QPSK	1	271	10 mm	top	1:4	0.199	1.205	0.240	
2592.99	518598	Mid	NR Band n41	100	25.0	24.08	0.03	0	1835M	DFT-S-OFDM QPSK	135	69	10 mm	top	1:4	0.254	1.236	0.314	A81
2592.99	518598	Mid	NR Band n41	100	23.5	22.92	-0.01	1.5	1835M	CP-OFDM QPSK	1	1	10 mm	top	1:4	0.210	1.143	0.240	
2592.99	518598	Mid	NR Band n41	100	25.0	24.19	0.16	0	1835M	DFT-S-OFDM QPSK	1	271	10 mm	left	1:4	0.041	1.205	0.049	
2592.99	518598	Mid	NR Band n41	100	25.0	24.08	0.15	0	1835M	DFT-S-OFDM QPSK	135	69	10 mm	left	1:4	0.036	1.236	0.044	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-62
WLAN Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan 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	20.10	0.08	10 mm	1	1831M	1	back	99.9	0.358	0.259	1.230	1.001	0.319	
2462	11	802.11b	DSSS	22	21.0	20.10	0.19	10 mm	1	1831M	1	front	99.9	0.309	-	1.230	1.001	-	
2412	1	802.11b	DSSS	22	21.0	20.03	-0.05	10 mm	1	1831M	1	top	99.9	0.704	0.444	1.250	1.001	0.556	
2437	6	802.11b	DSSS	22	21.0	20.04	-0.02	10 mm	1	1831M	1	top	99.9	0.635	0.392	1.247	1.001	0.489	
2462	11	802.11b	DSSS	22	21.0	20.10	-0.14	10 mm	1	1831M	1	top	99.9	0.823	0.544	1.230	1.001	**0.670**	A83
2462	11	802.11b	DSSS	22	21.0	20.10	0.16	10 mm	1	1831M	1	left	99.9	0.070	0.043	1.230	1.001	0.053	
2437	6	802.11b	DSSS	22	21.0	20.84	0.07	10 mm	2	0287M	1	back	99.9	0.327	0.271	1.038	1.001	0.282	
2437	6	802.11b	DSSS	22	21.0	20.84	0.07	10 mm	2	0287M	1	front	99.9	0.020	-	1.038	1.001	-	
2437	6	802.11b	DSSS	22	21.0	20.84	0.14	10 mm	2	0287M	1	top	99.9	0.050	-	1.038	1.001	-	
2437	6	802.11b	DSSS	22	21.0	20.84	-0.03	10 mm	2	0287M	1	left	99.9	0.116	-	1.038	1.001	-	
5785	157	802.11a	OFDM	20	18.0	17.82	-0.10	10 mm	1	1831M	6	back	98.8	0.473	0.177	1.042	1.012	0.187	
5785	157	802.11a	OFDM	20	18.0	17.82	0.00	10 mm	1	1831M	6	front	98.8	0.062	-	1.042	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.82	0.14	10 mm	1	1831M	6	top	98.8	0.176	-	1.042	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.82	0.01	10 mm	1	1831M	6	left	98.8	0.203	-	1.042	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.54	0.15	10 mm	2	1831M	6	back	98.8	0.839	0.373	1.112	1.012	**0.420**	
5785	157	802.11a	OFDM	20	18.0	17.54	-0.14	10 mm	2	1831M	6	front	98.8	0.023	-	1.112	1.012	-	
5785	157	802.11a	OFDM	20	18.0	17.54	0.12	10 mm	2	1831M	6	top	98.8	0.133	0.050	1.112	1.012	0.056	
5785	157	802.11a	OFDM	20	18.0	17.54	0.16	10 mm	2	1831M	6	left	98.8	0.256	0.107	1.112	1.012	0.120	

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

Table 11-63
WLAN SISO Hotspot SAR for Conditions with NR Active

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.																		
5775	155	802.11ac	OFDM	80	14.0	13.58	0.12	10 mm	2	1831M	29.3	back	94.5	0.282	0.119	1.102	1.058	0.139	

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 11-64
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	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2462	11	802.11n	OFDM	20	18.0	17.83	18.0	17.68	0.12	10 mm	MIMO	1831M	13	back	97.3	0.143	0.094	1.076	1.028	0.104	
2462	11	802.11n	OFDM	20	18.0	17.83	18.0	17.68	0.14	10 mm	MIMO	1831M	13	front	97.3	0.085	-	1.076	1.028	-	
2462	11	802.11n	OFDM	20	18.0	17.83	18.0	17.68	0.00	10 mm	MIMO	1831M	13	top	97.3	0.269	0.174	1.076	1.028	0.192	
2462	11	802.11n	OFDM	20	18.0	17.83	18.0	17.68	0.19	10 mm	MIMO	1831M	13	left	97.3	0.028	-	1.076	1.028	-	
5785	157	802.11n	OFDM	20	18.0	17.90	18.0	17.64	0.11	10 mm	MIMO	1831M	13	back	97.6	1.332	0.535	1.086	1.025	0.596	A85
5785	157	802.11n	OFDM	20	18.0	17.90	18.0	17.64	0.00	10 mm	MIMO	1831M	13	front	97.6	0.094	-	1.086	1.025	-	
5785	157	802.11n	OFDM	20	18.0	17.90	18.0	17.64	0.17	10 mm	MIMO	1831M	13	top	97.6	0.385	0.156	1.086	1.025	0.174	
5785	157	802.11n	OFDM	20	18.0	17.90	18.0	17.64	0.18	10 mm	MIMO	1831M	13	left	97.6	0.427	0.187	1.086	1.025	0.208	
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 11-65
NII 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)	
5775	155	802.11ac	OFDM	80	14.0	13.99	14.0	13.58	0.00	10 mm	MIMO	1831M	58.5	back	91.1	0.317	0.150	1.102	1.098	0.181	
5775	155	802.11ac	OFDM	80	14.0	13.99	14.0	13.58	0.01	10 mm	MIMO	1831M	58.5	front	91.1	0.018	-	1.102	1.098	-	
5775	155	802.11ac	OFDM	80	14.0	13.99	14.0	13.58	0.05	10 mm	MIMO	1831M	58.5	top	91.1	0.083	-	1.102	1.098	-	
5775	155	802.11ac	OFDM	80	14.0	13.99	14.0	13.58	0.16	10 mm	MIMO	1831M	58.5	left	91.1	0.092	-	1.102	1.098	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram					

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 NII MIMO evaluations.

Table 11-66
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	17.0	16.58	0.02	10 mm	1831M	1	back	77.3	0.068	1.102	1.294	0.097	
2441	39	Bluetooth	FHSS	17.0	16.58	-0.19	10 mm	1831M	1	front	77.3	0.057	1.102	1.294	0.081	
2441	39	Bluetooth	FHSS	17.0	16.58	-0.07	10 mm	1831M	1	top	77.3	0.208	1.102	1.294	**0.297**	A87
2441	39	Bluetooth	FHSS	17.0	16.58	0.17	10 mm	1831M	1	left	77.3	0.009	1.102	1.294	0.013	
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 11-67
GPRS/UMTS/CDMA 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	23.66	0.08	8 mm	32	1851M	N/A	1:1	back	0.816	1.213	0.990	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.66	-0.03	6 mm	32	1851M	N/A	1:1	front	0.968	1.213	1.174	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.66	-0.02	11 mm	32	1851M	N/A	1:1	bottom	1.460	1.213	1.771	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.66	-0.10	0 mm	32	1851M	N/A	1:1	right	0.631	1.213	0.765	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.5	23.66	-0.04	0 mm	32	1851M	N/A	1:1	left	0.368	1.213	0.446	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.12	-0.04	0 mm	32	1851M	N/A	1:1	back	1.140	1.225	1.397	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.12	0.06	0 mm	32	1851M	N/A	1:1	front	1.310	1.225	1.605	
1851.25	25	PCS CDMA	EVDO Rev. 0	20.0	19.03	-0.03	0 mm	32	1851M	N/A	1:1	bottom	1.860	1.250	2.325	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.12	-0.04	0 mm	32	1851M	N/A	1:1	bottom	1.920	1.225	2.352	
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.0	19.15	-0.03	0 mm	32	1851M	N/A	1:1	bottom	2.070	1.216	2.517	A88
1880.00	661	GSM 1900	GPRS	26.5	26.42	0.02	8 mm	N/A	1851M	3	1:2.76	back	0.551	1.019	0.561	
1880.00	661	GSM 1900	GPRS	26.5	26.42	-0.06	6 mm	N/A	1851M	3	1:2.76	front	0.533	1.019	0.543	
1880.00	661	GSM 1900	GPRS	26.5	26.42	-0.08	11 mm	N/A	1851M	3	1:2.76	bottom	0.880	1.019	0.897	
1880.00	661	GSM 1900	GPRS	26.5	26.42	-0.11	0 mm	N/A	1851M	3	1:2.76	right	0.368	1.019	0.375	
1880.00	661	GSM 1900	GPRS	26.5	26.42	-0.01	0 mm	N/A	1851M	3	1:2.76	left	0.201	1.019	0.205	
1880.00	661	GSM 1900	GPRS	23.0	21.99	0.03	0 mm	N/A	1851M	4	1:2.076	back	1.030	1.262	1.300	
1880.00	661	GSM 1900	GPRS	23.0	21.99	-0.07	0 mm	N/A	1851M	4	1:2.076	front	0.863	1.262	1.089	
1850.20	512	GSM 1900	GPRS	23.0	21.79	-0.07	0 mm	N/A	1851M	4	1:2.076	bottom	1.130	1.321	1.493	
1880.00	661	GSM 1900	GPRS	23.0	21.99	0.00	0 mm	N/A	1851M	4	1:2.076	bottom	1.370	1.262	1.729	
1909.80	810	GSM 1900	GPRS	23.0	21.88	0.11	0 mm	N/A	1851M	4	1:2.076	bottom	1.450	1.294	1.876	A89
1732.40	1412	UMTS 1750	RMC	24.0	23.44	-0.01	8 mm	9	1851M	N/A	1:1	back	1.130	1.138	1.286	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	-0.06	6 mm	9	1851M	N/A	1:1	front	1.320	1.138	1.502	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.00	11 mm	9	1851M	N/A	1:1	bottom	1.240	1.138	1.411	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.00	0 mm	9	1851M	N/A	1:1	right	0.576	1.138	0.655	
1732.40	1412	UMTS 1750	RMC	24.0	23.44	0.07	0 mm	9	1851M	N/A	1:1	left	0.313	1.138	0.356	
1712.40	1312	UMTS 1750	RMC	20.0	19.30	-0.05	0 mm	9	1828M	N/A	1:1	back	1.790	1.175	2.103	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	-0.06	0 mm	9	1828M	N/A	1:1	back	1.740	1.191	2.072	
1752.60	1513	UMTS 1750	RMC	20.0	19.27	-0.07	0 mm	9	1828M	N/A	1:1	back	1.680	1.183	1.987	
1732.40	1412	UMTS 1750	RMC	20.0	19.24	-0.07	0 mm	9	1828M	N/A	1:1	front	1.600	1.191	1.906	
1712.40	1312	UMTS 1750	RMC	20.0	19.30	0.10	0 mm	9	1828M	N/A	1:1	bottom	2.440	1.175	2.867	A90
1732.40	1412	UMTS 1750	RMC	20.0	19.24	0.02	0 mm	9	1828M	N/A	1:1	bottom	2.340	1.191	2.787	
1752.60	1513	UMTS 1750	RMC	20.0	19.27	0.00	0 mm	9	1828M	N/A	1:1	bottom	2.270	1.183	2.685	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	-0.04	8 mm	1	1851M	N/A	1:1	back	0.867	1.151	0.998	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	-0.02	6 mm	1	1851M	N/A	1:1	front	0.952	1.151	1.096	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	0.00	11 mm	1	1851M	N/A	1:1	bottom	1.290	1.151	1.485	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	-0.15	0 mm	1	1851M	N/A	1:1	right	0.557	1.151	0.641	
1880.00	9400	UMTS 1900	RMC	24.0	23.39	-0.08	0 mm	1	1851M	N/A	1:1	left	0.309	1.151	0.356	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	0.02	0 mm	1	1851M	N/A	1:1	back	1.070	1.057	1.131	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.05	0 mm	1	1851M	N/A	1:1	front	0.916	1.057	0.968	
1852.40	9262	UMTS 1900	RMC	19.0	18.71	-0.02	0 mm	1	1851M	N/A	1:1	bottom	1.910	1.069	2.042	
1880.00	9400	UMTS 1900	RMC	19.0	18.76	-0.04	0 mm	1	1851M	N/A	1:1	bottom	1.970	1.057	2.082	
1907.60	9538	UMTS 1900	RMC	19.0	18.85	-0.02	0 mm	1	1851M	N/A	1:1	bottom	2.130	1.035	2.205	A91
1907.60	9538	UMTS 1900	RMC	19.0	18.85	0.05	0 mm	1	1851M	N/A	1:1	bottom	2.110	1.035	2.184	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Phablet 4.0 W/kg (mW/g) averaged over 10 grams				

Note: Blue entry represents variability measurement.

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Table 11-68
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	-0.03	0	7	1830M	QPSK	1	99	8 mm	back	1:1	0.898	1.225	1.100	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.03	1	7	1830M	QPSK	50	25	8 mm	back	1:1	0.751	1.194	0.897	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	0.03	0	9	1830M	QPSK	1	99	6 mm	front	1:1	1.030	1.225	1.262	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	-0.03	1	9	1830M	QPSK	50	25	6 mm	front	1:1	0.864	1.194	1.032	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	-0.02	0	7	1830M	QPSK	1	99	11 mm	bottom	1:1	0.902	1.225	1.105	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.00	1	7	1830M	QPSK	50	25	11 mm	bottom	1:1	0.754	1.194	0.900	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	-0.06	0	9	1830M	QPSK	1	99	0 mm	right	1:1	0.476	1.225	0.583	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	-0.14	1	9	1830M	QPSK	50	25	0 mm	right	1:1	0.397	1.194	0.474	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	24.0	23.12	-0.02	0	5	1830M	QPSK	1	99	0 mm	left	1:1	0.266	1.225	0.326	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	23.0	22.23	0.04	1	5	1830M	QPSK	50	25	0 mm	left	1:1	0.224	1.194	0.267	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	-0.01	0	6	1830M	QPSK	1	50	0 mm	back	1:1	1.280	1.213	1.553	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	-0.02	0	6	1830M	QPSK	50	25	0 mm	back	1:1	1.360	1.191	1.620	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	0.01	0	9	1830M	QPSK	1	50	0 mm	front	1:1	1.280	1.213	1.553	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	-0.03	0	9	1830M	QPSK	50	25	0 mm	front	1:1	1.380	1.191	1.644	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.16	-0.14	0	6	1830M	QPSK	1	50	0 mm	bottom	1:1	2.170	1.213	2.632	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.89	-0.09	0	6	1830M	QPSK	1	0	0 mm	bottom	1:1	2.020	1.291	2.608	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	18.90	0.12	0	6	1830M	QPSK	1	50	0 mm	bottom	1:1	2.130	1.288	2.743	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	18.82	-0.15	0	6	1830M	QPSK	1	0	0 mm	bottom	1:1	1.890	1.312	2.480	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.09	-0.11	0	6	1830M	QPSK	1	99	0 mm	bottom	1:1	2.050	1.233	2.528	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.24	0.14	0	6	1830M	QPSK	50	25	0 mm	bottom	1:1	2.140	1.191	2.549	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	19.15	0.17	0	6	1830M	QPSK	50	25	0 mm	bottom	1:1	2.040	1.216	2.481	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.0	19.09	-0.08	0	6	1830M	QPSK	50	0	0 mm	bottom	1:1	2.190	1.233	2.700	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.0	19.15	-0.05	0	6	1830M	QPSK	100	0	0 mm	bottom	1:1	2.140	1.216	2.602	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.0	19.25	0.11	0	6	1830M	QPSK	1	0	0 mm	bottom	1:1	2.190	1.189	2.604	A92
	SCC	1725.20	132124	Mid	LTE Band 66 (AWS)	20					6			1	99							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	20.0	19.25	0.15	0	6	1830M	QPSK	1	0	0 mm	bottom	1:1	2.040	1.189	2.426	
	SCC	1735.10	132223	Mid	LTE Band 66 (AWS)	10					6			1	49							
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 11-69
LTE Band 25 (PCS) Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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)	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	0.01	0	26	1846M	QPSK	1	50	8 mm	back	1:1	0.907	1.186	1.076	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.01	1	26	1846M	QPSK	50	50	8 mm	back	1:1	0.766	1.146	0.878	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	-0.03	0	31	1846M	QPSK	1	50	6 mm	front	1:1	1.030	1.186	1.222	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.03	1	31	1846M	QPSK	50	50	6 mm	front	1:1	0.855	1.146	0.980	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	-0.10	0	1	1846M	QPSK	1	50	11 mm	bottom	1:1	1.220	1.186	1.447	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	-0.05	1	1	1846M	QPSK	50	50	11 mm	bottom	1:1	1.040	1.146	1.192	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	0.02	0	2	1846M	QPSK	1	50	0 mm	right	1:1	0.566	1.186	0.671	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	0.03	1	2	1846M	QPSK	50	50	0 mm	right	1:1	0.465	1.146	0.533	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.26	-0.14	0	1	1846M	QPSK	1	50	0 mm	left	1:1	0.295	1.186	0.350	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.0	22.41	-0.06	1	1	1846M	QPSK	50	50	0 mm	left	1:1	0.256	1.146	0.293	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	0.02	0	1	1846M	QPSK	1	0	0 mm	back	1:1	1.010	1.064	1.075	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.05	0	1	1846M	QPSK	50	25	0 mm	back	1:1	1.110	1.014	1.126	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	0.07	0	1	1846M	QPSK	1	0	0 mm	front	1:1	1.050	1.064	1.117	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	-0.04	0	1	1846M	QPSK	50	25	0 mm	front	1:1	1.160	1.014	1.176	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.73	-0.05	0	1	1846M	QPSK	1	0	0 mm	bottom	1:1	1.700	1.064	1.809	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.0	18.77	0.02	0	1	1846M	QPSK	50	0	0 mm	bottom	1:1	1.810	1.054	1.908	A93
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.0	18.79	-0.03	0	1	1846M	QPSK	50	25	0 mm	bottom	1:1	1.740	1.050	1.827	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.0	18.94	0.05	0	1	1846M	QPSK	50	25	0 mm	bottom	1:1	1.800	1.014	1.825	
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 11-70
LTE Band 30 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.02	0	1832M	QPSK	1	0	8 mm	back	1:1	0.634	1.099	0.697	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.16	1	1832M	QPSK	25	12	8 mm	back	1:1	0.509	1.074	0.547	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	-0.01	0	1832M	QPSK	1	0	6 mm	front	1:1	0.843	1.099	0.926	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	-0.07	1	1832M	QPSK	25	12	6 mm	front	1:1	0.674	1.074	0.724	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	0.04	0	1832M	QPSK	1	0	11 mm	bottom	1:1	1.110	1.099	1.220	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	0.05	1	1832M	QPSK	25	12	11 mm	bottom	1:1	0.899	1.074	0.966	
2310.00	27710	Mid	LTE Band 30	10	24.2	23.79	-0.13	0	1832M	QPSK	1	0	0 mm	right	1:1	0.582	1.099	0.640	
2310.00	27710	Mid	LTE Band 30	10	23.2	22.89	-0.15	1	1832M	QPSK	25	12	0 mm	right	1:1	0.465	1.074	0.499	
2310.00	27710	Mid	LTE Band 30	10	21.5	20.60	0.10	0	1832M	QPSK	1	0	0 mm	back	1:1	1.220	1.230	1.501	
2310.00	27710	Mid	LTE Band 30	10	21.5	20.74	-0.01	0	1832M	QPSK	25	12	0 mm	back	1:1	1.250	1.191	1.489	A94
2310.00	27710	Mid	LTE Band 30	10	21.5	20.60	-0.05	0	1832M	QPSK	1	0	0 mm	front	1:1	0.910	1.230	1.119	
2310.00	27710	Mid	LTE Band 30	10	21.5	20.74	-0.08	0	1832M	QPSK	25	12	0 mm	front	1:1	0.916	1.191	1.091	
2310.00	27710	Mid	LTE Band 30	10	21.5	20.60	-0.14	0	1832M	QPSK	1	0	0 mm	bottom	1:1	1.100	1.230	1.353	
2310.00	27710	Mid	LTE Band 30	10	21.5	20.74	-0.12	0	1832M	QPSK	25	12	0 mm	bottom	1:1	1.130	1.191	1.346	
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 11-71
LTE Band 7 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.05	0	1845M	QPSK	1	0	8 mm	back	1:1	0.653	1.094	0.714	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.06	1	1845M	QPSK	50	0	8 mm	back	1:1	0.508	1.084	0.551	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.01	0	1845M	QPSK	1	0	6 mm	front	1:1	0.588	1.094	0.643	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.01	1	1845M	QPSK	50	0	6 mm	front	1:1	0.485	1.084	0.526	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	0.00	0	1845M	QPSK	1	0	11 mm	bottom	1:1	0.731	1.094	0.800	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.01	1	1845M	QPSK	50	0	11 mm	bottom	1:1	0.593	1.084	0.643	
2560.00	21350	High	LTE Band 7	20	24.0	23.61	-0.01	0	1845M	QPSK	1	0	0 mm	right	1:1	0.922	1.094	1.009	
2560.00	21350	High	LTE Band 7	20	23.0	22.65	0.04	1	1845M	QPSK	50	0	0 mm	right	1:1	0.778	1.084	0.843	
2560.00	21350	High	LTE Band 7	20	21.5	21.18	-0.04	0	1845M	QPSK	1	0	0 mm	back	1:1	1.690	1.076	1.818	
2560.00	21350	High	LTE Band 7	20	21.5	21.23	-0.05	0	1845M	QPSK	50	0	0 mm	back	1:1	1.720	1.064	1.830	
2560.00	21350	High	LTE Band 7	20	21.5	21.18	-0.03	0	1845M	QPSK	1	0	0 mm	front	1:1	1.580	1.076	1.700	
2560.00	21350	High	LTE Band 7	20	21.5	21.23	-0.06	0	1845M	QPSK	50	0	0 mm	front	1:1	1.590	1.064	1.692	
2510.00	20850	Low	LTE Band 7	20	21.5	20.86	-0.02	0	1845M	QPSK	1	0	0 mm	bottom	1:1	1.970	1.159	2.283	A95
2535.00	21100	Mid	LTE Band 7	20	21.5	20.92	-0.02	0	1845M	QPSK	1	99	0 mm	bottom	1:1	1.930	1.143	2.206	
2560.00	21350	High	LTE Band 7	20	21.5	21.18	-0.01	0	1845M	QPSK	1	0	0 mm	bottom	1:1	1.840	1.076	1.980	
2560.00	21350	High	LTE Band 7	20	21.5	21.23	-0.03	0	1845M	QPSK	50	0	0 mm	bottom	1:1	1.860	1.064	1.979	
2560.00	21350	High	LTE Band 7	20	21.5	21.09	-0.03	0	1845M	QPSK	100	0	0 mm	bottom	1:1	1.860	1.099	2.044	
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 11-72
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.08	0	1799M	QPSK	1	99	8 mm	back	1:1.58	0.457	1.119	0.511	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.08	1	1799M	QPSK	50	25	8 mm	back	1:1.58	0.384	1.096	0.421	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.02	0	1799M	QPSK	1	99	6 mm	front	1:1.58	0.456	1.119	0.510	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	-0.11	1	1799M	QPSK	50	25	6 mm	front	1:1.58	0.293	1.096	0.321	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	-0.06	0	1799M	QPSK	1	99	11 mm	bottom	1:1.58	0.516	1.119	0.577	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	0.03	1	1799M	QPSK	50	25	11 mm	bottom	1:1.58	0.419	1.096	0.459	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.51	0.05	0	1799M	QPSK	1	99	0 mm	right	1:1.58	0.747	1.119	0.836	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.60	-0.02	1	1799M	QPSK	50	25	0 mm	right	1:1.58	0.636	1.096	0.697	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.68	0.12	0	1799M	QPSK	1	0	0 mm	back	1:1.58	1.520	1.076	1.636	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.44	0.13	0	1799M	QPSK	1	0	0 mm	back	1:1.58	1.220	1.138	1.388	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	0.15	0	1799M	QPSK	1	50	0 mm	back	1:1.58	1.010	1.230	1.242	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.13	0.19	0	1799M	QPSK	1	50	0 mm	back	1:1.58	1.120	1.222	1.369	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.35	0.12	0	1799M	QPSK	1	50	0 mm	back	1:1.58	1.280	1.161	1.486	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.64	0.19	0	1799M	QPSK	50	25	0 mm	back	1:1.58	1.510	1.086	1.640	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.31	0.19	0	1799M	QPSK	50	25	0 mm	back	1:1.58	1.270	1.172	1.488	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	0.13	0	1799M	QPSK	50	25	0 mm	back	1:1.58	1.060	1.230	1.304	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.23	0.14	0	1799M	QPSK	50	25	0 mm	back	1:1.58	1.120	1.194	1.337	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.51	0.19	0	1799M	QPSK	50	50	0 mm	back	1:1.58	1.360	1.119	1.522	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.56	0.18	0	1799M	QPSK	100	0	0 mm	back	1:1.58	1.480	1.107	1.638	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.68	-0.14	0	1799M	QPSK	1	0	0 mm	front	1:1.58	1.400	1.076	1.506	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.44	-0.17	0	1799M	QPSK	1	0	0 mm	front	1:1.58	1.190	1.138	1.354	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	-0.07	0	1799M	QPSK	1	50	0 mm	front	1:1.58	1.100	1.230	1.353	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.13	-0.06	0	1799M	QPSK	1	50	0 mm	front	1:1.58	1.570	1.222	1.919	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.35	-0.03	0	1799M	QPSK	1	50	0 mm	front	1:1.58	1.770	1.161	2.055	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.64	-0.12	0	1799M	QPSK	50	25	0 mm	front	1:1.58	1.420	1.086	1.542	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.31	-0.19	0	1799M	QPSK	50	25	0 mm	front	1:1.58	1.220	1.172	1.430	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	-0.11	0	1799M	QPSK	50	25	0 mm	front	1:1.58	1.200	1.230	1.476	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.23	-0.08	0	1799M	QPSK	50	25	0 mm	front	1:1.58	1.610	1.194	1.922	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.51	-0.09	0	1799M	QPSK	50	50	0 mm	front	1:1.58	1.880	1.119	2.104	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.56	-0.14	0	1799M	QPSK	100	0	0 mm	front	1:1.58	1.390	1.107	1.539	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.68	-0.11	0	1799M	QPSK	1	0	0 mm	bottom	1:1.58	1.690	1.076	1.818	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.44	-0.13	0	1799M	QPSK	1	0	0 mm	bottom	1:1.58	1.420	1.138	1.616	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	-0.14	0	1799M	QPSK	1	50	0 mm	bottom	1:1.58	1.370	1.230	1.685	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.13	-0.10	0	1799M	QPSK	1	50	0 mm	bottom	1:1.58	1.800	1.222	2.200	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.35	-0.13	0	1799M	QPSK	1	50	0 mm	bottom	1:1.58	2.340	1.161	2.717	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.64	-0.13	0	1799M	QPSK	50	25	0 mm	bottom	1:1.58	1.730	1.086	1.879	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	22.31	-0.15	0	1799M	QPSK	50	25	0 mm	bottom	1:1.58	1.500	1.172	1.758	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.10	-0.16	0	1799M	QPSK	50	25	0 mm	bottom	1:1.58	1.430	1.230	1.759	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	22.23	-0.13	0	1799M	QPSK	50	25	0 mm	bottom	1:1.58	1.870	1.194	2.233	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.30	-0.15	0	1799M	QPSK	50	0	0 mm	bottom	1:1.58	2.260	1.175	2.656	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	22.51	-0.17	0	1799M	QPSK	50	50	0 mm	bottom	1:1.58	2.470	1.119	2.764	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	22.56	-0.12	0	1799M	QPSK	100	0	0 mm	bottom	1:1.58	1.720	1.107	1.904	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	24.6	23.82	-0.19	0	1799M	QPSK	50	0	0 mm	bottom	1:2.31	2.240	1.197	2.681	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	24.6	24.06	-0.13	0	1799M	QPSK	50	50	0 mm	bottom	1:2.31	2.450	1.132	2.773	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	23.0	22.60	-0.14	0	1799M	QPSK	50	0	0 mm	bottom	1:1.58	2.480	1.096	2.718	
	SCC	2660.20	41292	High	LTE Band 41	20							50	50							
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	24.6	24.19	-0.18	0	1799M	QPSK	50	0	0 mm	bottom	1:2.31	2.530	1.099	2.780	A96
	SCC	2660.20	41292	High	LTE Band 41	20							50	50							
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	24.6	24.19	0.15	0	1799M	QPSK	50	0	0 mm	bottom	1:2.31	2.480	1.099	2.726	
	SCC	2660.20	41292	High	LTE Band 41	20							50	50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams								

Note: Blue entry represents variability measurement.

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Table 11-73
NR Band n66 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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)	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	0.13	0	7	1797M	DFT-S-OFDM QPSK	1	1	8 mm	back	1:1	0.920	1.091	1.004	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	-0.04	0	7	1797M	DFT-S-OFDM QPSK	50	28	8 mm	back	1:1	0.966	1.099	1.062	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	-0.02	0	9	1797M	DFT-S-OFDM QPSK	1	1	6 mm	front	1:1	1.290	1.091	1.407	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	-0.01	0	9	1797M	DFT-S-OFDM QPSK	50	28	6 mm	front	1:1	1.320	1.099	1.451	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	0.09	0	7	1797M	DFT-S-OFDM QPSK	1	1	11 mm	bottom	1:1	1.060	1.091	1.156	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	-0.01	0	7	1797M	DFT-S-OFDM QPSK	50	28	11 mm	bottom	1:1	1.140	1.099	1.253	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	-0.13	0	9	1797M	DFT-S-OFDM QPSK	1	1	0 mm	right	1:1	0.574	1.091	0.626	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	-0.06	0	9	1797M	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.585	1.099	0.643	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.12	-0.05	0	5	1797M	DFT-S-OFDM QPSK	1	1	0 mm	left	1:1	0.235	1.091	0.256	
1720.00	344000	Low	NR Band n66 (AWS)	20	24.5	24.09	0.10	0	5	1797M	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.275	1.099	0.302	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	0.04	0	6	1797M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	1.660	1.040	1.726	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.01	0	6	1797M	DFT-S-OFDM QPSK	50	56	0 mm	back	1:1	1.680	1.067	1.793	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	-0.01	0	9	1797M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	1.550	1.040	1.612	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.18	0	9	1797M	DFT-S-OFDM QPSK	50	56	0 mm	front	1:1	1.560	1.067	1.665	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.83	0.12	0	6	1797M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.610	1.040	2.714	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.64	0.02	0	6	1797M	DFT-S-OFDM QPSK	1	1	0 mm	bottom	1:1	2.580	1.086	2.802	
1770.00	354000	High	NR Band n66 (AWS)	20	20.0	19.64	-0.05	0	6	1797M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	2.460	1.086	2.672	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.72	-0.02	0	6	1797M	DFT-S-OFDM QPSK	50	56	0 mm	bottom	1:1	2.610	1.067	2.785	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.63	-0.01	0	6	1797M	DFT-S-OFDM QPSK	50	56	0 mm	bottom	1:1	2.570	1.089	2.799	
1745.00	349000	Mid	NR Band n66 (AWS)	20	20.0	19.62	-0.05	0	6	1797M	CP-OFDM QPSK	1	1	0 mm	bottom	1:1	2.430	1.091	2.651	
1770.00	354000	High	NR Band n66 (AWS)	20	20.0	19.58	0.03	0	6	1797M	DFT-S-OFDM QPSK	50	28	0 mm	bottom	1:1	2.510	1.102	2.766	
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.71	-0.01	0	6	1797M	DFT-S-OFDM QPSK	100	0	0 mm	bottom	1:1	2.710	1.069	2.897	A97
1720.00	344000	Low	NR Band n66 (AWS)	20	20.0	19.71	0.02	0	6	1797M	DFT-S-OFDM QPSK	100	0	0 mm	bottom	1:1	2.630	1.069	2.811	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

Note: Blue entry represents variability measurement.

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Table 11-74
NR Band n25 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Ant State	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)	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	-0.16	0	26	1793M	DFT-S-OFDM QPSK	1	53	8 mm	back	1:1	0.994	1.122	1.115	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.05	0	26	1793M	DFT-S-OFDM QPSK	50	28	8 mm	back	1:1	1.000	1.178	1.178	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	-0.01	0	31	1793M	DFT-S-OFDM QPSK	1	53	6 mm	front	1:1	1.010	1.122	1.133	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.03	0	31	1793M	DFT-S-OFDM QPSK	50	28	6 mm	front	1:1	1.030	1.178	1.213	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	-0.07	0	1	1793M	DFT-S-OFDM QPSK	1	53	11 mm	bottom	1:1	1.320	1.122	1.481	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	-0.05	0	1	1793M	DFT-S-OFDM QPSK	50	28	11 mm	bottom	1:1	1.350	1.178	1.590	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	0.11	0	2	1793M	DFT-S-OFDM QPSK	1	53	0 mm	right	1:1	0.611	1.122	0.686	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.05	0	2	1793M	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.596	1.178	0.702	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	24.00	-0.09	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	left	1:1	0.336	1.122	0.377	
1905.00	381000	High	NR Band n25 (PCS)	20	24.5	23.79	0.04	0	1	1793M	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.326	1.178	0.384	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.03	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	1.310	1.094	1.433	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	-0.07	0	1	1793M	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	1.320	1.125	1.485	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.06	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	front	1:1	1.110	1.094	1.214	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	-0.12	0	1	1793M	DFT-S-OFDM QPSK	50	0	0 mm	front	1:1	1.110	1.125	1.249	
1860.00	372000	Low	NR Band n25 (PCS)	20	19.5	18.94	-0.11	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	1.910	1.138	2.174	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.11	-0.07	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	1.920	1.094	2.100	
1905.00	381000	High	NR Band n25 (PCS)	20	19.5	18.88	-0.05	0	1	1793M	DFT-S-OFDM QPSK	1	53	0 mm	bottom	1:1	1.870	1.153	2.156	
1860.00	372000	Low	NR Band n25 (PCS)	20	19.5	18.84	-0.03	0	1	1793M	DFT-S-OFDM QPSK	50	28	0 mm	bottom	1:1	1.950	1.164	2.270	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.99	-0.02	0	1	1793M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	2.030	1.125	2.284	A98
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	19.05	-0.08	0	1	1793M	CP-OFDM QPSK	1	1	0 mm	bottom	1:1	1.820	1.109	2.018	
1905.00	381000	High	NR Band n25 (PCS)	20	19.5	18.89	-0.04	0	1	1793M	DFT-S-OFDM QPSK	50	0	0 mm	bottom	1:1	1.930	1.151	2.221	
1882.50	376500	Mid	NR Band n25 (PCS)	20	19.5	18.98	-0.09	0	1	1793M	DFT-S-OFDM QPSK	100	0	0 mm	bottom	1:1	1.960	1.127	2.209	
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 11-75
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	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5260	52	802.11a	OFDM	20	18.0	17.26	-0.15	0 mm	1	1831M	6	back	98.8	6.860	0.869	1.186	1.012	1.043	
5260	52	802.11a	OFDM	20	18.0	17.26	0.19	0 mm	1	1831M	6	front	98.8	1.750	-	1.186	1.012	-	
5260	52	802.11a	OFDM	20	18.0	17.26	-0.16	0 mm	1	1831M	6	top	98.8	2.532	-	1.186	1.012	-	
5260	52	802.11a	OFDM	20	18.0	17.26	0.00	0 mm	1	1831M	6	left	98.8	5.718	0.362	1.186	1.012	0.434	
5280	56	802.11a	OFDM	20	18.0	17.58	-0.16	0 mm	2	1831M	6	back	98.8	18.164	1.050	1.102	1.012	**1.171**	
5280	56	802.11a	OFDM	20	18.0	17.58	0.10	0 mm	2	1831M	6	front	98.8	0.757	-	1.102	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.58	0.21	0 mm	2	1831M	6	top	98.8	0.431	-	1.102	1.012	-	
5280	56	802.11a	OFDM	20	18.0	17.58	0.07	0 mm	2	1831M	6	left	98.8	4.749	0.349	1.102	1.012	0.389	
5520	104	802.11a	OFDM	20	18.0	17.89	0.02	0 mm	1	1831M	6	back	98.8	6.470	-	1.026	1.012	-	
5520	104	802.11a	OFDM	20	18.0	17.89	0.11	0 mm	1	1831M	6	front	98.8	1.679	-	1.026	1.012	-	
5520	104	802.11a	OFDM	20	18.0	17.89	-0.12	0 mm	1	1831M	6	top	98.8	2.531	-	1.026	1.012	-	
5520	104	802.11a	OFDM	20	18.0	17.89	0.00	0 mm	1	1831M	6	left	98.8	6.881	0.405	1.026	1.012	0.421	
5520	104	802.11a	OFDM	20	18.0	17.98	0.11	0 mm	2	1831M	6	back	98.8	19.634	1.020	1.005	1.012	1.037	
5520	104	802.11a	OFDM	20	18.0	17.98	0.04	0 mm	2	1831M	6	front	98.8	0.349	-	1.005	1.012	-	
5520	104	802.11a	OFDM	20	18.0	17.98	0.08	0 mm	2	1831M	6	top	98.8	0.441	-	1.005	1.012	-	
5520	104	802.11a	OFDM	20	18.0	17.98	0.00	0 mm	2	1831M	6	left	98.8	3.777	0.262	1.005	1.012	0.266	

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

Table 11-76
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5260	52	802.11n	OFDM	20	18.0	17.32	18.0	17.68	-0.16	0 mm	MIMO	1831M	13	back	97.6	14.362	1.280	1.169	1.025	1.534	
5300	60	802.11n	OFDM	20	18.0	17.31	18.0	17.81	0.12	0 mm	MIMO	1831M	13	back	97.6	20.433	1.570	1.172	1.025	1.886	A97
5320	64	802.11n	OFDM	20	18.0	17.72	18.0	17.65	0.17	0 mm	MIMO	1831M	13	back	97.6	22.012	1.520	1.084	1.025	1.689	
5320	64	802.11n	OFDM	20	18.0	17.72	18.0	17.65	0.15	0 mm	MIMO	1831M	13	front	97.6	3.227	-	1.084	1.025	-	
5320	64	802.11n	OFDM	20	18.0	17.72	18.0	17.65	0.18	0 mm	MIMO	1831M	13	top	97.6	3.668	-	1.084	1.025	-	
5320	64	802.11n	OFDM	20	18.0	17.72	18.0	17.65	0.00	0 mm	MIMO	1831M	13	left	97.6	6.632	0.752	1.084	1.025	0.836	
5500	100	802.11n	OFDM	20	18.0	17.77	18.0	17.81	-0.19	0 mm	MIMO	1831M	13	back	97.6	14.651	1.430	1.054	1.025	1.545	
5500	100	802.11n	OFDM	20	18.0	17.77	18.0	17.81	0.10	0 mm	MIMO	1831M	13	front	97.6	1.670	-	1.054	1.025	-	
5500	100	802.11n	OFDM	20	18.0	17.77	18.0	17.81	0.11	0 mm	MIMO	1831M	13	top	97.6	2.980	-	1.054	1.025	-	
5500	100	802.11n	OFDM	20	18.0	17.77	18.0	17.81	-0.05	0 mm	MIMO	1831M	13	left	97.6	7.109	0.549	1.054	1.025	0.593	

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

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Table 11-77
WLAN SISO Phablet SAR During Conditions with NR Active

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.61	0.02	0 mm	1	1831M	29.3	back	94.6	1.034	0.104	1.094	1.057	0.120	
5290	58	802.11ac	OFDM	80	14.0	13.99	0.17	0 mm	2	1831M	29.3	back	94.5	3.059	0.270	1.002	1.058	0.286	
5690	138	802.11ac	OFDM	80	14.0	14.00	-0.16	0 mm	1	1831M	29.3	back	94.6	1.526	0.146	1.000	1.057	0.154	
5690	138	802.11ac	OFDM	80	14.0	13.82	-0.16	0 mm	2	1831M	29.3	back	94.5	2.940	0.252	1.042	1.058	0.278	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Phablet 4.0 W/kg (mW/g) averaged over 10 grams									

Table 11-78
WLAN MIMO Phablet SAR During Conditions with NR Active

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.61	14.0	13.99	0.19	0 mm	MIMO	1831M	58.5	back	91.1	2.891	0.370	1.094	1.098	0.444	
5690	138	802.11ac	OFDM	80	14.0	14.00	14.0	13.82	-0.07	0 mm	MIMO	1831M	58.5	back	91.1	4.223	0.449	1.042	1.098	0.514	
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

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11.5 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 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. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the 1g thresholds for the equivalent test cases.
14. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the 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.
6. CDMA 1X Advanced technology was not required for SAR since the maximum allowed output powers for 1X Advanced was not more than 0.25 dB higher than the maximum powers for 1X.

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.

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7. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 14 for linearity results.
8. For LTE Band 5, LTE Band 66, LTE Band 48, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.
9. This device supports LTE Band 41 ULCA active with Power Class 2. Highest SAR test configuration for each exposure condition in Power Class 3 with ULCA active was repeated with Power Class 2 with ULCA active.

NR Notes:

1. NR implementation of n71, n12, n5, n66, n2, n25, and n41 is limited to EN-DC operations only, with LTE Bands 2/5/12/13/30/48/66 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 the bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, 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.
7. For final implementation, NR Band n41 slot configuration is synchronized using maximum duty cycle of 25%. SAR testing was performed using FTM mode with a 25% duty cycle applied to match final duty cycle.

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

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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.

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.

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 WLAN SAR result for the applicable exposure conditions was used for simultaneous transmission analysis.

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.

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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/5G 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
Head SAR	CDMA/EVDO BC10 (§90S)	0.234	0.411	0.018	0.645	0.252	0.663
	CDMA/EVDO BC0 (§22H)	0.248	0.411	0.018	0.659	0.266	0.677
	PCS CDMA/EVDO	0.176	0.411	0.018	0.587	0.194	0.605
	GSM 850	0.136	0.411	0.018	0.547	0.154	0.565
	GSM 1900	0.083	0.411	0.018	0.494	0.101	0.512
	UMTS 850	0.182	0.411	0.018	0.593	0.200	0.611
	UMTS 1750	0.179	0.411	0.018	0.590	0.197	0.608
	UMTS 1900	0.161	0.411	0.018	0.572	0.179	0.590
	LTE Band 71	0.096	0.411	0.018	0.507	0.114	0.525
	LTE Band 12	0.146	0.411	0.018	0.557	0.164	0.575
	LTE Band 13	0.178	0.411	0.018	0.589	0.196	0.607
	LTE Band 14	0.172	0.411	0.018	0.583	0.190	0.601
	LTE Band 26 (Cell)	0.237	0.411	0.018	0.648	0.255	0.666
	LTE Band 5 (Cell)	0.249	0.411	0.018	0.660	0.267	0.678
	LTE Band 66 (AWS)	0.134	0.411	0.018	0.545	0.152	0.563
	LTE Band 25 (PCS)	0.166	0.411	0.018	0.577	0.184	0.595
	LTE Band 30	0.116	0.411	0.018	0.527	0.134	0.545
	LTE Band 7	0.125	0.411	0.018	0.536	0.143	0.554
	LTE Band 48	0.737	0.411	0.018	1.148	0.755	**1.166**
	LTE Band 41	0.118	0.411	0.018	0.529	0.136	0.547
	NR Band n71	0.113	0.411	0.018	0.524	0.131	0.542
	NR Band n12	0.144	0.411	0.018	0.555	0.162	0.573
	NR Band n5 (Cell)	0.211	0.411	0.018	0.622	0.229	0.640
	NR Band n66 (AWS)	0.174	0.411	0.018	0.585	0.192	0.603
	NR Band n25 (PCS)	0.192	0.411	0.018	0.603	0.210	0.621
	NR Band n41	0.406	0.411	0.018	0.817	0.424	0.835

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Table 12-2
Simultaneous Transmission Scenario with 5 GHz WLAN (Held to Ear)

Exposure Condition	Mode	2G/3G/4G/5G 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	CDMA/EVDO BC10 (§90S)	0.234	0.149	0.034	0.383	0.268	0.417
	CDMA/EVDO BC0 (§22H)	0.248	0.149	0.034	0.397	0.282	0.431
	PCS CDMA/EVDO	0.176	0.149	0.034	0.325	0.210	0.359
	GSM 850	0.136	0.149	0.034	0.285	0.170	0.319
	GSM 1900	0.083	0.149	0.034	0.232	0.117	0.266
	UMTS 850	0.182	0.149	0.034	0.331	0.216	0.365
	UMTS 1750	0.179	0.149	0.034	0.328	0.213	0.362
	UMTS 1900	0.161	0.149	0.034	0.310	0.195	0.344
	LTE Band 71	0.096	0.149	0.034	0.245	0.130	0.279
	LTE Band 12	0.146	0.149	0.034	0.295	0.180	0.329
	LTE Band 13	0.178	0.149	0.034	0.327	0.212	0.361
	LTE Band 14	0.172	0.149	0.034	0.321	0.206	0.355
	LTE Band 26 (Cell)	0.237	0.149	0.034	0.386	0.271	0.420
	LTE Band 5 (Cell)	0.249	0.149	0.034	0.398	0.283	0.432
	LTE Band 66 (AWS)	0.134	0.149	0.034	0.283	0.168	0.317
	LTE Band 25 (PCS)	0.166	0.149	0.034	0.315	0.200	0.349
	LTE Band 30	0.116	0.149	0.034	0.265	0.150	0.299
	LTE Band 7	0.125	0.149	0.034	0.274	0.159	0.308
	LTE Band 48	0.737	0.149	0.034	0.886	0.771	**0.920**
	LTE Band 41	0.118	0.149	0.034	0.267	0.152	0.301
	NR Band n71	0.113	0.149	0.034	0.262	0.147	0.296
	NR Band n12	0.144	0.149	0.034	0.293	0.178	0.327
	NR Band n5 (Cell)	0.211	0.149	0.034	0.360	0.245	0.394
	NR Band n66 (AWS)	0.174	0.149	0.034	0.323	0.208	0.357
	NR Band n25 (PCS)	0.192	0.149	0.034	0.341	0.226	0.375
	NR Band n41	0.406	0.149	0.034	0.555	0.440	0.589

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Table 12-3
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Held to Ear)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 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	5	1+2+3+4+5
Head SAR	CDMA/EVDO BC10 (§90S)	0.234	0.411	0.018	0.149	0.034	0.846
	CDMA/EVDO BC0 (§22H)	0.248	0.411	0.018	0.149	0.034	0.860
	PCS CDMA/EVDO	0.176	0.411	0.018	0.149	0.034	0.788
	GSM 850	0.136	0.411	0.018	0.149	0.034	0.748
	GSM 1900	0.083	0.411	0.018	0.149	0.034	0.695
	UMTS 850	0.182	0.411	0.018	0.149	0.034	0.794
	UMTS 1750	0.179	0.411	0.018	0.149	0.034	0.791
	UMTS 1900	0.161	0.411	0.018	0.149	0.034	0.773
	LTE Band 71	0.096	0.411	0.018	0.149	0.034	0.708
	LTE Band 12	0.146	0.411	0.018	0.149	0.034	0.758
	LTE Band 13	0.178	0.411	0.018	0.149	0.034	0.790
	LTE Band 14	0.172	0.411	0.018	0.149	0.034	0.784
	LTE Band 26 (Cell)	0.237	0.411	0.018	0.149	0.034	0.849
	LTE Band 5 (Cell)	0.249	0.411	0.018	0.149	0.034	0.861
	LTE Band 66 (AWS)	0.134	0.411	0.018	0.149	0.034	0.746
	LTE Band 25 (PCS)	0.166	0.411	0.018	0.149	0.034	0.778
	LTE Band 30	0.116	0.411	0.018	0.149	0.034	0.728
	LTE Band 7	0.125	0.411	0.018	0.149	0.034	0.737
	LTE Band 48	0.737	0.411	0.018	0.149	0.034	**1.349**
	LTE Band 41	0.118	0.411	0.018	0.149	0.034	0.730
	NR Band n71	0.113	0.411	0.018	0.149	0.034	0.725
	NR Band n12	0.144	0.411	0.018	0.149	0.034	0.756
	NR Band n5 (Cell)	0.211	0.411	0.018	0.149	0.034	0.823
	NR Band n66 (AWS)	0.174	0.411	0.018	0.149	0.034	0.786
	NR Band n25 (PCS)	0.192	0.411	0.018	0.149	0.034	0.804
	NR Band n41	0.406	0.411	0.018	0.149	0.034	1.018

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Table 12-4
Simultaneous Transmission Scenario with Bluetooth (Held to Ear)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S)	0.234	0.778	1.012
	CDMA/EVDO BC0 (§22H)	0.248	0.778	1.026
	PCS CDMA/EVDO	0.176	0.778	0.954
	GSM 850	0.136	0.778	0.914
	GSM 1900	0.083	0.778	0.861
	UMTS 850	0.182	0.778	0.960
	UMTS 1750	0.179	0.778	0.957
	UMTS 1900	0.161	0.778	0.939
	LTE Band 71	0.096	0.778	0.874
	LTE Band 12	0.146	0.778	0.924
	LTE Band 13	0.178	0.778	0.956
	LTE Band 14	0.172	0.778	0.950
	LTE Band 26 (Cell)	0.237	0.778	1.015
	LTE Band 5 (Cell)	0.249	0.778	1.027
	LTE Band 66 (AWS)	0.134	0.778	0.912
	LTE Band 25 (PCS)	0.166	0.778	0.944
	LTE Band 30	0.116	0.778	0.894
	LTE Band 7	0.125	0.778	0.903
	LTE Band 48	0.737	0.778	**1.515**
	LTE Band 41	0.118	0.778	0.896
	NR Band n71	0.113	0.778	0.891
	NR Band n12	0.144	0.778	0.922
	NR Band n5 (Cell)	0.211	0.778	0.989
	NR Band n66 (AWS)	0.174	0.778	0.952
	NR Band n25 (PCS)	0.192	0.778	0.970
	NR Band n41	0.406	0.778	1.184

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

Exposure Condition	Mode	2G/3G/4G/5G 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	CDMA/EVDO BC10 (§90S)	0.234	0.778	0.149	0.034	1.161	1.046	1.195
	CDMA/EVDO BC0 (§22H)	0.248	0.778	0.149	0.034	1.175	1.060	1.209
	PCS CDMA/EVDO	0.176	0.778	0.149	0.034	1.103	0.988	1.137
	GSM 850	0.136	0.778	0.149	0.034	1.063	0.948	1.097
	GSM 1900	0.083	0.778	0.149	0.034	1.010	0.895	1.044
	UMTS 850	0.182	0.778	0.149	0.034	1.109	0.994	1.143
	UMTS 1750	0.179	0.778	0.149	0.034	1.106	0.991	1.140
	UMTS 1900	0.161	0.778	0.149	0.034	1.088	0.973	1.122
	LTE Band 71	0.096	0.778	0.149	0.034	1.023	0.908	1.057
	LTE Band 12	0.146	0.778	0.149	0.034	1.073	0.958	1.107
	LTE Band 13	0.178	0.778	0.149	0.034	1.105	0.990	1.139
	LTE Band 14	0.172	0.778	0.149	0.034	1.099	0.984	1.133
	LTE Band 26 (Cell)	0.237	0.778	0.149	0.034	1.164	1.049	1.198
	LTE Band 5 (Cell)	0.249	0.778	0.149	0.034	1.176	1.061	1.210
	LTE Band 66 (AWS)	0.134	0.778	0.149	0.034	1.061	0.946	1.095
	LTE Band 25 (PCS)	0.166	0.778	0.149	0.034	1.093	0.978	1.127
	LTE Band 30	0.116	0.778	0.149	0.034	1.043	0.928	1.077
	LTE Band 7	0.125	0.778	0.149	0.034	1.052	0.937	1.086
	LTE Band 48	0.737	0.778	0.149	0.034	See Table Below	**1.549**	See Table Below
	LTE Band 41	0.118	0.778	0.149	0.034	1.045	0.930	1.079
	NR Band n71	0.113	0.778	0.149	0.034	1.040	0.925	1.074
	NR Band n12	0.144	0.778	0.149	0.034	1.071	0.956	1.105
	NR Band n5 (Cell)	0.211	0.778	0.149	0.034	1.138	1.023	1.172
	NR Band n66 (AWS)	0.174	0.778	0.149	0.034	1.101	0.986	1.135
	NR Band n25 (PCS)	0.192	0.778	0.149	0.034	1.119	1.004	1.153
	NR Band n41	0.406	0.778	0.149	0.034	1.333	1.218	1.367

Simult Tx	Configuration	LTE Band 48 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+3+4
Head SAR	Right Cheek	0.737	0.368	0.149	0.034	1.254	1.288
	Right Tilt	0.684	0.545	0.077	0.006	1.306	**1.312**
	Left Cheek	0.189	0.525	0.149*	0.034*	0.863	0.897
	Left Tilt	0.239	0.778	0.149*	0.010	1.166	1.176

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12.4 Body-Worn Simultaneous Transmission Analysis

Table 12-6
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G/5G 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
Body-Worn	CDMA BC10 (§90S)	0.440	0.160	0.082	0.600	0.522	0.682
	CDMA BC0 (§22H)	0.437	0.160	0.082	0.597	0.519	0.679
	PCS CDMA	0.879	0.160	0.082	1.039	0.961	1.121
	GSM 850	0.252	0.160	0.082	0.412	0.334	0.494
	GSM 1900	0.327	0.160	0.082	0.487	0.409	0.569
	UMTS 850	0.321	0.160	0.082	0.481	0.403	0.563
	UMTS 1750	0.923	0.160	0.082	1.083	1.005	**1.165**
	UMTS 1900	0.729	0.160	0.082	0.889	0.811	0.971
	LTE Band 71	0.203	0.160	0.082	0.363	0.285	0.445
	LTE Band 12	0.286	0.160	0.082	0.446	0.368	0.528
	LTE Band 13	0.365	0.160	0.082	0.525	0.447	0.607
	LTE Band 14	0.419	0.160	0.082	0.579	0.501	0.661
	LTE Band 26 (Cell)	0.400	0.160	0.082	0.560	0.482	0.642
	LTE Band 5 (Cell)	0.464	0.160	0.082	0.624	0.546	0.706
	LTE Band 66 (AWS)	0.916	0.160	0.082	1.076	0.998	1.158
	LTE Band 25 (PCS)	0.779	0.160	0.082	0.939	0.861	1.021
	LTE Band 30	0.569	0.160	0.082	0.729	0.651	0.811
	LTE Band 7	0.602	0.160	0.082	0.762	0.684	0.844
	LTE Band 48	0.320	0.160	0.082	0.480	0.402	0.562
	LTE Band 41	0.478	0.160	0.082	0.638	0.560	0.720
	NR Band n71	0.225	0.160	0.082	0.385	0.307	0.467
	NR Band n12	0.262	0.160	0.082	0.422	0.344	0.504
	NR Band n5 (Cell)	0.394	0.160	0.082	0.554	0.476	0.636
	NR Band n66 (AWS)	0.920	0.160	0.082	1.080	1.002	1.162
	NR Band n25 (PCS)	0.780	0.160	0.082	0.940	0.862	1.022
	NR Band n41	0.067	0.160	0.082	0.227	0.149	0.309

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Table 12-7
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G/5G 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
Body-Worn	CDMA BC10 (§90S)	0.440	0.146	0.347	0.586	0.787
	CDMA BC0 (§22H)	0.437	0.146	0.347	0.583	0.784
	PCS CDMA	0.879	0.146	0.347	1.025	1.226
	GSM 850	0.252	0.146	0.347	0.398	0.599
	GSM 1900	0.327	0.146	0.347	0.473	0.674
	UMTS 850	0.321	0.146	0.347	0.467	0.668
	UMTS 1750	0.923	0.146	0.347	1.069	**1.270**
	UMTS 1900	0.729	0.146	0.347	0.875	1.076
	LTE Band 71	0.203	0.146	0.347	0.349	0.550
	LTE Band 12	0.286	0.146	0.347	0.432	0.633
	LTE Band 13	0.365	0.146	0.347	0.511	0.712
	LTE Band 14	0.419	0.146	0.347	0.565	0.766
	LTE Band 26 (Cell)	0.400	0.146	0.347	0.546	0.747
	LTE Band 5 (Cell)	0.464	0.146	0.347	0.610	0.811
	LTE Band 66 (AWS)	0.916	0.146	0.347	1.062	1.263
	LTE Band 25 (PCS)	0.779	0.146	0.347	0.925	1.126
	LTE Band 30	0.569	0.146	0.347	0.715	0.916
	LTE Band 7	0.602	0.146	0.347	0.748	0.949
	LTE Band 48	0.320	0.146	0.347	0.466	0.667
	LTE Band 41	0.478	0.146	0.347	0.624	0.825
	NR Band n71	0.225	0.146	0.347	0.371	0.572
	NR Band n12	0.262	0.146	0.347	0.408	0.609
	NR Band n5 (Cell)	0.394	0.146	0.347	0.540	0.741
	NR Band n66 (AWS)	0.920	0.146	0.347	1.066	1.267
	NR Band n25 (PCS)	0.780	0.146	0.347	0.926	1.127
	NR Band n41	0.067	0.146	0.347	0.213	0.414

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

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	CDMA BC10 (§90S)	0.440	0.410	0.850
	CDMA BC0 (§22H)	0.437	0.410	0.847
	PCS CDMA	0.879	0.410	1.289
	GSM 850	0.252	0.410	0.662
	GSM 1900	0.327	0.410	0.737
	UMTS 850	0.321	0.410	0.731
	UMTS 1750	0.923	0.410	**1.333**
	UMTS 1900	0.729	0.410	1.139
	LTE Band 71	0.203	0.410	0.613
	LTE Band 12	0.286	0.410	0.696
	LTE Band 13	0.365	0.410	0.775
	LTE Band 14	0.419	0.410	0.829
	LTE Band 26 (Cell)	0.400	0.410	0.810
	LTE Band 5 (Cell)	0.464	0.410	0.874
	LTE Band 66 (AWS)	0.916	0.410	1.326
	LTE Band 25 (PCS)	0.779	0.410	1.189
	LTE Band 30	0.569	0.410	0.979
	LTE Band 7	0.602	0.410	1.012
	LTE Band 48	0.320	0.410	0.730
	LTE Band 41	0.478	0.410	0.888
	NR Band n71	0.225	0.410	0.635
	NR Band n12	0.262	0.410	0.672
	NR Band n5 (Cell)	0.394	0.410	0.804
	NR Band n66 (AWS)	0.920	0.410	1.330
	NR Band n25 (PCS)	0.780	0.410	1.190
	NR Band n41	0.067	0.410	0.477

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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)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body-Worn	CDMA BC10 (§90S)	0.440	0.160	0.082	0.109	0.791
	CDMA BC0 (§22H)	0.437	0.160	0.082	0.109	0.788
	PCS CDMA	0.879	0.160	0.082	0.109	1.230
	GSM 850	0.252	0.160	0.082	0.109	0.603
	GSM 1900	0.327	0.160	0.082	0.109	0.678
	UMTS 850	0.321	0.160	0.082	0.109	0.672
	UMTS 1750	0.923	0.160	0.082	0.109	**1.274**
	UMTS 1900	0.729	0.160	0.082	0.109	1.080
	LTE Band 71	0.203	0.160	0.082	0.109	0.554
	LTE Band 12	0.286	0.160	0.082	0.109	0.637
	LTE Band 13	0.365	0.160	0.082	0.109	0.716
	LTE Band 14	0.419	0.160	0.082	0.109	0.770
	LTE Band 26 (Cell)	0.400	0.160	0.082	0.109	0.751
	LTE Band 5 (Cell)	0.464	0.160	0.082	0.109	0.815
	LTE Band 66 (AWS)	0.916	0.160	0.082	0.109	1.267
	LTE Band 25 (PCS)	0.779	0.160	0.082	0.109	1.130
	LTE Band 30	0.569	0.160	0.082	0.109	0.920
	LTE Band 7	0.602	0.160	0.082	0.109	0.953
	LTE Band 48	0.320	0.160	0.082	0.109	0.671
	LTE Band 41	0.478	0.160	0.082	0.109	0.829
	NR Band n71	0.225	0.160	0.082	0.109	0.576
	NR Band n12	0.262	0.160	0.082	0.109	0.613
	NR Band n5 (Cell)	0.394	0.160	0.082	0.109	0.745
	NR Band n66 (AWS)	0.920	0.160	0.082	0.109	1.271
	NR Band n25 (PCS)	0.780	0.160	0.082	0.109	1.131
	NR Band n41	0.067	0.160	0.082	0.109	0.418

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

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	CDMA BC10 (§90S)	0.440	0.056	0.496
	CDMA BC0 (§22H)	0.437	0.056	0.493
	PCS CDMA	0.879	0.056	0.935
	GSM 850	0.252	0.056	0.308
	GSM 1900	0.327	0.056	0.383
	UMTS 850	0.321	0.056	0.377
	UMTS 1750	0.923	0.056	**0.979**
	UMTS 1900	0.729	0.056	0.785
	LTE Band 71	0.203	0.056	0.259
	LTE Band 12	0.286	0.056	0.342
	LTE Band 13	0.365	0.056	0.421
	LTE Band 14	0.419	0.056	0.475
	LTE Band 26 (Cell)	0.400	0.056	0.456
	LTE Band 5 (Cell)	0.464	0.056	0.520
	LTE Band 66 (AWS)	0.916	0.056	0.972
	LTE Band 25 (PCS)	0.779	0.056	0.835
	LTE Band 30	0.569	0.056	0.625
	LTE Band 7	0.602	0.056	0.658
	LTE Band 48	0.320	0.056	0.376
	LTE Band 41	0.478	0.056	0.534
	NR Band n71	0.225	0.056	0.281
	NR Band n12	0.262	0.056	0.318
	NR Band n5 (Cell)	0.394	0.056	0.450
	NR Band n66 (AWS)	0.920	0.056	0.976
	NR Band n25 (PCS)	0.780	0.056	0.836
	NR Band n41	0.067	0.056	0.123

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

Exposure Condition	Mode	2G/3G/4G/5G 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
Body-Worn	CDMA BC10 (§90S)	0.440	0.056	0.146	0.347	0.642	0.843
	CDMA BC0 (§22H)	0.437	0.056	0.146	0.347	0.639	0.840
	PCS CDMA	0.879	0.056	0.146	0.347	1.081	1.282
	GSM 850	0.252	0.056	0.146	0.347	0.454	0.655
	GSM 1900	0.327	0.056	0.146	0.347	0.529	0.730
	UMTS 850	0.321	0.056	0.146	0.347	0.523	0.724
	UMTS 1750	0.923	0.056	0.146	0.347	1.125	**1.326**
	UMTS 1900	0.729	0.056	0.146	0.347	0.931	1.132
	LTE Band 71	0.203	0.056	0.146	0.347	0.405	0.606
	LTE Band 12	0.286	0.056	0.146	0.347	0.488	0.689
	LTE Band 13	0.365	0.056	0.146	0.347	0.567	0.768
	LTE Band 14	0.419	0.056	0.146	0.347	0.621	0.822
	LTE Band 26 (Cell)	0.400	0.056	0.146	0.347	0.602	0.803
	LTE Band 5 (Cell)	0.464	0.056	0.146	0.347	0.666	0.867
	LTE Band 66 (AWS)	0.916	0.056	0.146	0.347	1.118	1.319
	LTE Band 25 (PCS)	0.779	0.056	0.146	0.347	0.981	1.182
	LTE Band 30	0.569	0.056	0.146	0.347	0.771	0.972
	LTE Band 7	0.602	0.056	0.146	0.347	0.804	1.005
	LTE Band 48	0.320	0.056	0.146	0.347	0.522	0.723
	LTE Band 41	0.478	0.056	0.146	0.347	0.680	0.881
	NR Band n71	0.225	0.056	0.146	0.347	0.427	0.628
	NR Band n12	0.262	0.056	0.146	0.347	0.464	0.665
	NR Band n5 (Cell)	0.394	0.056	0.146	0.347	0.596	0.797
	NR Band n66 (AWS)	0.920	0.056	0.146	0.347	1.122	1.323
	NR Band n25 (PCS)	0.780	0.056	0.146	0.347	0.982	1.183
	NR Band n41	0.067	0.056	0.146	0.347	0.269	0.470

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

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body-Worn	CDMA BC10 (§90S)	0.440	0.056	0.410	0.906
	CDMA BC0 (§22H)	0.437	0.056	0.410	0.903
	PCS CDMA	0.879	0.056	0.410	1.345
	GSM 850	0.252	0.056	0.410	0.718
	GSM 1900	0.327	0.056	0.410	0.793
	UMTS 850	0.321	0.056	0.410	0.787
	UMTS 1750	0.923	0.056	0.410	**1.389**
	UMTS 1900	0.729	0.056	0.410	1.195
	LTE Band 71	0.203	0.056	0.410	0.669
	LTE Band 12	0.286	0.056	0.410	0.752
	LTE Band 13	0.365	0.056	0.410	0.831
	LTE Band 14	0.419	0.056	0.410	0.885
	LTE Band 26 (Cell)	0.400	0.056	0.410	0.866
	LTE Band 5 (Cell)	0.464	0.056	0.410	0.930
	LTE Band 66 (AWS)	0.916	0.056	0.410	1.382
	LTE Band 25 (PCS)	0.779	0.056	0.410	1.245
	LTE Band 30	0.569	0.056	0.410	1.035
	LTE Band 7	0.602	0.056	0.410	1.068
	LTE Band 48	0.320	0.056	0.410	0.786
	LTE Band 41	0.478	0.056	0.410	0.944
	NR Band n71	0.225	0.056	0.410	0.691
	NR Band n12	0.262	0.056	0.410	0.728
	NR Band n5 (Cell)	0.394	0.056	0.410	0.860
	NR Band n66 (AWS)	0.920	0.056	0.410	1.386
	NR Band n25 (PCS)	0.780	0.056	0.410	1.246
	NR Band n41	0.067	0.056	0.410	0.533

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12.5 Hotspot SAR Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G/5G 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	EVDO BC10 (§90S)	0.878	0.670	0.282	1.548	1.160
	EVDO BC0 (§22H)	0.978	0.670	0.282	See Table Below	1.260
	PCS EVDO	1.214	0.670	0.282	See Table Below	1.496
	GPRS 850	0.342	0.670	0.282	1.012	0.624
	GPRS 1900	1.193	0.670	0.282	See Table Below	1.475
	UMTS 850	0.814	0.670	0.282	1.484	1.096
	UMTS 1750	1.218	0.670	0.282	See Table Below	1.500
	UMTS 1900	1.221	0.670	0.282	See Table Below	1.503
	LTE Band 71	0.353	0.670	0.282	1.023	0.635
	LTE Band 12	0.474	0.670	0.282	1.144	0.756
	LTE Band 13	0.656	0.670	0.282	1.326	0.938
	LTE Band 14	0.706	0.670	0.282	1.376	0.988
	LTE Band 26 (Cell)	0.738	0.670	0.282	1.408	1.020
	LTE Band 5 (Cell)	0.884	0.670	0.282	1.554	1.166
	LTE Band 66 (AWS)	1.129	0.670	0.282	See Table Below	1.411
	LTE Band 25 (PCS)	1.080	0.670	0.282	See Table Below	1.362
	LTE Band 30	0.779	0.670	0.282	1.449	1.061
	LTE Band 7	0.832	0.670	0.282	1.502	1.114
	LTE Band 48	0.893	0.670	0.282	**1.563**	1.175
	LTE Band 41	0.783	0.670	0.282	1.453	1.065
	NR Band n71	0.397	0.670	0.282	1.067	0.679
	NR Band n12	0.484	0.670	0.282	1.154	0.766
	NR Band n5 (Cell)	0.829	0.670	0.282	1.499	1.111
	NR Band n66 (AWS)	1.211	0.670	0.282	See Table Below	1.493
	NR Band n25 (PCS)	1.188	0.670	0.282	See Table Below	1.470
	NR Band n41	0.314	0.670	0.282	0.984	0.596

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Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.978	0.319	1.297
	Front	0.650	0.670*	**1.320**
	Top	-	0.670	0.670
	Bottom	0.459	-	0.459
	Right	0.093	-	0.093
	Left	0.320	0.053	0.373

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	0.438	0.319	0.757
	Front	0.374	0.670*	1.044
	Top	-	0.670	0.670
	Bottom	1.214	-	**1.214**
	Right	0.098	-	0.098
	Left	0.051	0.053	0.104

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	0.517	0.319	0.836
	Front	0.370	0.670*	1.040
	Top	-	0.670	0.670
	Bottom	1.193	-	**1.193**
	Right	0.105	-	0.105
	Left	0.061	0.053	0.114

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.723	0.319	1.042
	Front	0.574	0.670*	**1.244**
	Top	-	0.670	0.670
	Bottom	1.218	-	1.218
	Right	0.123	-	0.123
	Left	0.083	0.053	0.136

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	0.468	0.319	0.787
	Front	0.371	0.670*	1.041
	Top	-	0.670	0.670
	Bottom	1.221	-	**1.221**
	Right	0.096	-	0.096
	Left	0.062	0.053	0.115

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	0.551	0.319	0.870
	Front	0.485	0.670*	**1.155**
	Top	-	0.670	0.670
	Bottom	1.129	-	1.129
	Right	0.124	-	0.124
	Left	0.070	0.053	0.123

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.422	0.319	0.741
	Front	0.339	0.670*	1.009
	Top	-	0.670	0.670
	Bottom	1.080	-	**1.080**
	Right	0.080	-	0.080
	Left	0.055	0.053	0.108

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	0.642	0.319	0.961
	Front	0.542	0.670*	**1.212**
	Top	-	0.670	0.670
	Bottom	1.211	-	1.211
	Right	0.135	-	0.135
	Left	0.075	0.053	0.128

Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.451	0.319	0.770
	Front	0.354	0.670*	1.024
	Top	-	0.670	0.670
	Bottom	1.188	-	**1.188**
	Right	0.090	-	0.090
	Left	0.069	0.053	0.122

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Table 12-14
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.878	0.192	1.070
	EVDO BC0 (§22H)	0.978	0.192	1.170
	PCS EVDO	1.214	0.192	1.406
	GPRS 850	0.342	0.192	0.534
	GPRS 1900	1.193	0.192	1.385
	UMTS 850	0.814	0.192	1.006
	UMTS 1750	1.218	0.192	1.410
	UMTS 1900	1.221	0.192	**1.413**
	LTE Band 71	0.353	0.192	0.545
	LTE Band 12	0.474	0.192	0.666
	LTE Band 13	0.656	0.192	0.848
	LTE Band 14	0.706	0.192	0.898
	LTE Band 26 (Cell)	0.738	0.192	0.930
	LTE Band 5 (Cell)	0.884	0.192	1.076
	LTE Band 66 (AWS)	1.129	0.192	1.321
	LTE Band 25 (PCS)	1.080	0.192	1.272
	LTE Band 30	0.779	0.192	0.971
	LTE Band 7	0.832	0.192	1.024
	LTE Band 48	0.893	0.192	1.085
	LTE Band 41	0.783	0.192	0.975
	NR Band n71	0.397	0.192	0.589
	NR Band n12	0.484	0.192	0.676
	NR Band n5 (Cell)	0.829	0.192	1.021
	NR Band n66 (AWS)	1.211	0.192	1.403
	NR Band n25 (PCS)	1.188	0.192	1.380
	NR Band n41	0.314	0.192	0.506

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

Exposure Condition	Mode	2G/3G/4G/5G 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	EVDO BC10 (§90S)	0.878	0.187	0.420	1.065	1.298
	EVDO BC0 (§22H)	0.978	0.187	0.420	1.165	1.398
	PCS EVDO	1.214	0.187	0.420	1.401	See Table Below
	GPRS 850	0.342	0.187	0.420	0.529	0.762
	GPRS 1900	1.193	0.187	0.420	1.380	See Table Below
	UMTS 850	0.814	0.187	0.420	1.001	1.234
	UMTS 1750	1.218	0.187	0.420	1.405	See Table Below
	UMTS 1900	1.221	0.187	0.420	1.408	See Table Below
	LTE Band 71	0.353	0.187	0.420	0.540	0.773
	LTE Band 12	0.474	0.187	0.420	0.661	0.894
	LTE Band 13	0.656	0.187	0.420	0.843	1.076
	LTE Band 14	0.706	0.187	0.420	0.893	1.126
	LTE Band 26 (Cell)	0.738	0.187	0.420	0.925	1.158
	LTE Band 5 (Cell)	0.884	0.187	0.420	1.071	1.304
	LTE Band 66 (AWS)	1.129	0.187	0.420	1.316	**1.549**
	LTE Band 25 (PCS)	1.080	0.187	0.420	1.267	1.500
	LTE Band 30	0.779	0.187	0.420	0.966	1.199
	LTE Band 7	0.832	0.187	0.420	1.019	1.252
	LTE Band 48	0.893	0.187	0.420	1.080	1.313
	LTE Band 41	0.783	0.187	0.420	0.970	1.203
	NR Band n71	0.397	0.187	0.420	0.584	0.817
	NR Band n12	0.484	0.187	0.420	0.671	0.904
	NR Band n5 (Cell)	0.829	0.187	0.420	1.016	1.249
	NR Band n66 (AWS)	1.211	0.187	0.420	1.398	See Table Below
	NR Band n25 (PCS)	1.188	0.187	0.420	1.375	See Table Below
	NR Band n41	0.314	0.187	0.420	0.501	0.734

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Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.438	0.420	0.858	Hotspot SAR	Back	0.517	0.420	0.937
	Front	0.374	0.420*	0.794		Front	0.370	0.420*	0.790
	Top	-	0.056	0.056		Top	-	0.056	0.056
	Bottom	1.214	-	**1.214**		Bottom	1.193	-	**1.193**
	Right	0.098	-	0.098		Right	0.105	-	0.105
	Left	0.051	0.120	0.171		Left	0.061	0.120	0.181

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.723	0.420	1.143	Hotspot SAR	Back	0.468	0.420	0.888
	Front	0.574	0.420*	0.994		Front	0.371	0.420*	0.791
	Top	-	0.056	0.056		Top	-	0.056	0.056
	Bottom	1.218	-	**1.218**		Bottom	1.221	-	**1.221**
	Right	0.123	-	0.123		Right	0.096	-	0.096
	Left	0.083	0.120	0.203		Left	0.062	0.120	0.182

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.642	0.420	1.062	Hotspot SAR	Back	0.451	0.420	0.871
	Front	0.542	0.420*	0.962		Front	0.354	0.420*	0.774
	Top	-	0.056	0.056		Top	-	0.056	0.056
	Bottom	1.211	-	**1.211**		Bottom	1.188	-	**1.188**
	Right	0.135	-	0.135		Right	0.090	-	0.090
	Left	0.075	0.120	0.195		Left	0.069	0.120	0.189

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

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.878	0.596	1.474
	EVDO BC0 (§22H)	0.978	0.596	**1.574**
	PCS EVDO	1.214	0.596	See Table Below
	GPRS 850	0.342	0.596	0.938
	GPRS 1900	1.193	0.596	See Table Below
	UMTS 850	0.814	0.596	1.410
	UMTS 1750	1.218	0.596	See Table Below
	UMTS 1900	1.221	0.596	See Table Below
	LTE Band 71	0.353	0.596	0.949
	LTE Band 12	0.474	0.596	1.070
	LTE Band 13	0.656	0.596	1.252
	LTE Band 14	0.706	0.596	1.302
	LTE Band 26 (Cell)	0.738	0.596	1.334
	LTE Band 5 (Cell)	0.884	0.596	1.480
	LTE Band 66 (AWS)	1.129	0.596	See Table Below
	LTE Band 25 (PCS)	1.080	0.596	See Table Below
	LTE Band 30	0.779	0.596	1.375
	LTE Band 7	0.832	0.596	1.428
	LTE Band 48	0.893	0.596	1.489
	LTE Band 41	0.783	0.596	1.379
	NR Band n71	0.397	0.596	0.993
	NR Band n12	0.484	0.596	1.080
	NR Band n5 (Cell)	0.829	0.596	1.425
	NR Band n66 (AWS)	1.211	0.596	See Table Below
	NR Band n25 (PCS)	1.188	0.596	See Table Below
	NR Band n41	0.314	0.596	0.910

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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	0.438	0.596	1.034	Hotspot SAR	Back	0.517	0.596	1.113
	Front	0.374	0.596*	0.970		Front	0.370	0.596*	0.966
	Top	-	0.174	0.174		Top	-	0.174	0.174
	Bottom	1.214	-	**1.214**		Bottom	1.193	-	**1.193**
	Right	0.098	-	0.098		Right	0.105	-	0.105
	Left	0.051	0.208	0.259		Left	0.061	0.208	0.269

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 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	0.723	0.596	**1.319**	Hotspot SAR	Back	0.468	0.596	1.064
	Front	0.574	0.596*	1.170		Front	0.371	0.596*	0.967
	Top	-	0.174	0.174		Top	-	0.174	0.174
	Bottom	1.218	-	1.218		Bottom	1.221	-	**1.221**
	Right	0.123	-	0.123		Right	0.096	-	0.096
	Left	0.083	0.208	0.291		Left	0.062	0.208	0.270

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) 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	0.551	0.596	**1.147**	Hotspot SAR	Back	0.422	0.596	1.018
	Front	0.485	0.596*	1.081		Front	0.339	0.596*	0.935
	Top	-	0.174	0.174		Top	-	0.174	0.174
	Bottom	1.129	-	1.129		Bottom	1.080	-	**1.080**
	Right	0.124	-	0.124		Right	0.080	-	0.080
	Left	0.070	0.208	0.278		Left	0.055	0.208	0.263

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) 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	0.642	0.596	**1.238**	Hotspot SAR	Back	0.451	0.596	1.047
	Front	0.542	0.596*	1.138		Front	0.354	0.596*	0.950
	Top	-	0.174	0.174		Top	-	0.174	0.174
	Bottom	1.211	-	1.211		Bottom	1.188	-	**1.188**
	Right	0.135	-	0.135		Right	0.090	-	0.090
	Left	0.075	0.208	0.283		Left	0.069	0.208	0.277

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Table 12-17
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/5G SAR (W/kg)	2.4 GHz WLAN MIMO 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	EVDO BC10 (§90S)	0.878	0.192	0.181	1.251
	EVDO BC0 (§22H)	0.978	0.192	0.181	1.351
	PCS EVDO	1.214	0.192	0.181	1.587
	GPRS 850	0.342	0.192	0.181	0.715
	GPRS 1900	1.193	0.192	0.181	1.566
	UMTS 850	0.814	0.192	0.181	1.187
	UMTS 1750	1.218	0.192	0.181	1.591
	UMTS 1900	1.221	0.192	0.181	**1.594**
	LTE Band 71	0.353	0.192	0.181	0.726
	LTE Band 12	0.474	0.192	0.181	0.847
	LTE Band 13	0.656	0.192	0.181	1.029
	LTE Band 14	0.706	0.192	0.181	1.079
	LTE Band 26 (Cell)	0.738	0.192	0.181	1.111
	LTE Band 5 (Cell)	0.884	0.192	0.181	1.257
	LTE Band 66 (AWS)	1.129	0.192	0.181	1.502
	LTE Band 25 (PCS)	1.080	0.192	0.181	1.453
	LTE Band 30	0.779	0.192	0.181	1.152
	LTE Band 7	0.832	0.192	0.181	1.205
	LTE Band 48	0.893	0.192	0.181	1.266
	LTE Band 41	0.783	0.192	0.181	1.156
	NR Band n71	0.397	0.192	0.181	0.770
	NR Band n12	0.484	0.192	0.181	0.857
	NR Band n5 (Cell)	0.829	0.192	0.181	1.202
	NR Band n66 (AWS)	1.211	0.192	0.181	1.584
	NR Band n25 (PCS)	1.188	0.192	0.181	1.561
	NR Band n41	0.314	0.192	0.181	0.687

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Table 12-18
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.878	0.297	1.175
	EVDO BC0 (§22H)	0.978	0.297	1.275
	PCS EVDO	1.214	0.297	1.511
	GPRS 850	0.342	0.297	0.639
	GPRS 1900	1.193	0.297	1.490
	UMTS 850	0.814	0.297	1.111
	UMTS 1750	1.218	0.297	1.515
	UMTS 1900	1.221	0.297	**1.518**
	LTE Band 71	0.353	0.297	0.650
	LTE Band 12	0.474	0.297	0.771
	LTE Band 13	0.656	0.297	0.953
	LTE Band 14	0.706	0.297	1.003
	LTE Band 26 (Cell)	0.738	0.297	1.035
	LTE Band 5 (Cell)	0.884	0.297	1.181
	LTE Band 66 (AWS)	1.129	0.297	1.426
	LTE Band 25 (PCS)	1.080	0.297	1.377
	LTE Band 30	0.779	0.297	1.076
	LTE Band 7	0.832	0.297	1.129
	LTE Band 48	0.893	0.297	1.190
	LTE Band 41	0.783	0.297	1.080
	NR Band n71	0.397	0.297	0.694
	NR Band n12	0.484	0.297	0.781
	NR Band n5 (Cell)	0.829	0.297	1.126
	NR Band n66 (AWS)	1.211	0.297	1.508
	NR Band n25 (PCS)	1.188	0.297	1.485
	NR Band n41	0.314	0.297	0.611

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

Exposure Condition	Mode	2G/3G/4G/5G 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	EVDO BC10 (§90S)	0.878	0.297	0.187	0.420	1.362	See Table Below
	EVDO BC0 (§22H)	0.978	0.297	0.187	0.420	1.462	See Table Below
	PCS EVDO	1.214	0.297	0.187	0.420	See Table Below	See Table Below
	GPRS 850	0.342	0.297	0.187	0.420	0.826	1.059
	GPRS 1900	1.193	0.297	0.187	0.420	See Table Below	See Table Below
	UMTS 850	0.814	0.297	0.187	0.420	1.298	1.531
	UMTS 1750	1.218	0.297	0.187	0.420	See Table Below	See Table Below
	UMTS 1900	1.221	0.297	0.187	0.420	See Table Below	See Table Below
	LTE Band 71	0.353	0.297	0.187	0.420	0.837	1.070
	LTE Band 12	0.474	0.297	0.187	0.420	0.958	1.191
	LTE Band 13	0.656	0.297	0.187	0.420	1.140	1.373
	LTE Band 14	0.706	0.297	0.187	0.420	1.190	1.423
	LTE Band 26 (Cell)	0.738	0.297	0.187	0.420	1.222	1.455
	LTE Band 5 (Cell)	0.884	0.297	0.187	0.420	1.368	See Table Below
	LTE Band 66 (AWS)	1.129	0.297	0.187	0.420	See Table Below	See Table Below
	LTE Band 25 (PCS)	1.080	0.297	0.187	0.420	**1.564**	See Table Below
	LTE Band 30	0.779	0.297	0.187	0.420	1.263	1.496
	LTE Band 7	0.832	0.297	0.187	0.420	1.316	1.549
	LTE Band 48	0.893	0.297	0.187	0.420	1.377	See Table Below
	LTE Band 41	0.783	0.297	0.187	0.420	1.267	1.500
	NR Band n71	0.397	0.297	0.187	0.420	0.881	1.114
	NR Band n12	0.484	0.297	0.187	0.420	0.968	1.201
	NR Band n5 (Cell)	0.829	0.297	0.187	0.420	1.313	1.546
	NR Band n66 (AWS)	1.211	0.297	0.187	0.420	See Table Below	See Table Below
	NR Band n25 (PCS)	1.188	0.297	0.187	0.420	See Table Below	See Table Below
	NR Band n41	0.314	0.297	0.187	0.420	0.798	1.031

Simult Tx	Configuration	EVDO BC10 (§90S) 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	Back	0.878	0.097	0.187	0.420	1.162	**1.395**
	Front	0.659	0.081	0.187*	0.420*	0.927	1.160
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	0.479	-	-	-	0.479	0.479
	Right	0.104	-	-	-	0.104	0.104
	Left	0.307	0.013	0.187*	0.120	0.507	0.440

Simult Tx	Configuration	EVDO BC0 (§22H) 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	Back	0.978	0.097	0.187	0.420	1.262	**1.495**
	Front	0.650	0.081	0.187*	0.420*	0.918	1.151
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	0.459	-	-	-	0.459	0.459
	Right	0.093	-	-	-	0.093	0.093
	Left	0.320	0.013	0.187*	0.120	0.520	0.453

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+3	1+2+4
Hotspot SAR	Back	0.438	0.097	0.187	0.420	0.722	0.955
	Front	0.374	0.081	0.187*	0.420*	0.642	0.875
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.214	-	-	-	**1.214**	**1.214**
	Right	0.098	-	-	-	0.098	0.098
	Left	0.051	0.013	0.187*	0.120	0.251	0.184

Simult Tx	Configuration	GPRS 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+3	1+2+4
Hotspot SAR	Back	0.517	0.097	0.187	0.420	0.801	1.034
	Front	0.370	0.081	0.187*	0.420*	0.638	0.871
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.193	-	-	-	**1.193**	**1.193**
	Right	0.105	-	-	-	0.105	0.105
	Left	0.061	0.013	0.187*	0.120	0.261	0.194

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Simult Tx	Configuration	UMTS 1750 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	Back	0.723	0.097	0.187	0.420	1.007	**1.240**
	Front	0.574	0.081	0.187*	0.420*	0.842	1.075
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.218	-	-	-	1.218	1.218
	Right	0.123	-	-	-	0.123	0.123
	Left	0.083	0.013	0.187*	0.120	0.283	0.216

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+3	1+2+4
Hotspot SAR	Back	0.468	0.097	0.187	0.420	0.752	0.985
	Front	0.371	0.081	0.187*	0.420*	0.639	0.872
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.221	-	-	-	**1.221**	**1.221**
	Right	0.096	-	-	-	0.096	0.096
	Left	0.062	0.013	0.187*	0.120	0.262	0.195

Simult Tx	Configuration	LTE Band 5 (Cell) 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	Back	0.884	0.097	0.187	0.420	1.168	**1.401**
	Front	0.534	0.081	0.187*	0.420*	0.802	1.035
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	0.452	-	-	-	0.452	0.452
	Right	0.095	-	-	-	0.095	0.095
	Left	0.284	0.013	0.187*	0.120	0.484	0.417

Simult Tx	Configuration	LTE Band 66 (AWS) 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	Back	0.551	0.097	0.187	0.420	0.835	1.068
	Front	0.485	0.081	0.187*	0.420*	0.753	0.986
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.129	-	-	-	**1.129**	**1.129**
	Right	0.124	-	-	-	0.124	0.124
	Left	0.070	0.013	0.187*	0.120	0.270	0.203

Simult Tx	Configuration	LTE Band 25 (PCS) 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	Back	0.422	0.097	0.187	0.420	0.706	0.939
	Front	0.339	0.081	0.187*	0.420*	0.607	0.840
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.080	-	-	-	**1.080**	**1.080**
	Right	0.080	-	-	-	0.080	0.080
	Left	0.055	0.013	0.187*	0.120	0.255	0.188

Simult Tx	Configuration	LTE Band 48 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	Back	0.552	0.097	0.187	0.420	0.836	1.069
	Front	0.288	0.081	0.187*	0.420*	0.556	0.789
	Top	0.893	0.297	0.187*	0.056	**1.377**	1.246
	Left	0.358	0.013	0.187*	0.120	0.558	0.491

Simult Tx	Configuration	NR Band n66 (AWS) 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	Back	0.642	0.097	0.187	0.420	0.926	1.159
	Front	0.542	0.081	0.187*	0.420*	0.810	1.043
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.211	-	-	-	**1.211**	**1.211**
	Right	0.135	-	-	-	0.135	0.135
	Left	0.075	0.013	0.187*	0.120	0.275	0.208

Simult Tx	Configuration	NR Band n25 (PCS) 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	Back	0.451	0.097	0.187	0.420	0.735	0.968
	Front	0.354	0.081	0.187*	0.420*	0.622	0.855
	Top	-	0.297	0.187*	0.056	0.484	0.353
	Bottom	1.188	-	-	-	**1.188**	**1.188**
	Right	0.090	-	-	-	0.090	0.090
	Left	0.069	0.013	0.187*	0.120	0.269	0.202

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Table 12-20
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G/5G 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	EVDO BC10 (§90S)	0.878	0.297	0.596	See Table Below
	EVDO BC0 (§22H)	0.978	0.297	0.596	See Table Below
	PCS EVDO	1.214	0.297	0.596	See Table Below
	GPRS 850	0.342	0.297	0.596	1.235
	GPRS 1900	1.193	0.297	0.596	See Table Below
	UMTS 850	0.814	0.297	0.596	See Table Below
	UMTS 1750	1.218	0.297	0.596	See Table Below
	UMTS 1900	1.221	0.297	0.596	See Table Below
	LTE Band 71	0.353	0.297	0.596	1.246
	LTE Band 12	0.474	0.297	0.596	1.367
	LTE Band 13	0.656	0.297	0.596	**1.549**
	LTE Band 14	0.706	0.297	0.596	See Table Below
	LTE Band 26 (Cell)	0.738	0.297	0.596	See Table Below
	LTE Band 5 (Cell)	0.884	0.297	0.596	See Table Below
	LTE Band 66 (AWS)	1.129	0.297	0.596	See Table Below
	LTE Band 25 (PCS)	1.080	0.297	0.596	See Table Below
	LTE Band 30	0.779	0.297	0.596	See Table Below
	LTE Band 7	0.832	0.297	0.596	See Table Below
	LTE Band 48	0.893	0.297	0.596	See Table Below
	LTE Band 41	0.783	0.297	0.596	See Table Below
	NR Band n71	0.397	0.297	0.596	1.290
	NR Band n12	0.484	0.297	0.596	1.377
	NR Band n5 (Cell)	0.829	0.297	0.596	See Table Below
	NR Band n66 (AWS)	1.211	0.297	0.596	See Table Below
	NR Band n25 (PCS)	1.188	0.297	0.596	See Table Below
	NR Band n41	0.314	0.297	0.596	1.207

Simult Tx	Configuration	EVDO BC10 (§90S) 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	0.878	0.097	0.596	**1.571**
	Front	0.659	0.081	0.596*	1.336
	Top	-	0.297	0.174	0.471
	Bottom	0.479	-	-	0.479
	Right	0.104	-	-	0.104
	Left	0.307	0.013	0.208	0.528

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Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Hotspot SAR	Back	0.978	0.097	0.596	See Note 1	0.01	0.01	0.01
	Front	0.650	0.081	0.596*	**1.327**	N/A	N/A	N/A
	Top	-	0.297	0.174	0.471	N/A	N/A	N/A
	Bottom	0.459	-	-	0.459	N/A	N/A	N/A
	Right	0.093	-	-	0.093	N/A	N/A	N/A
	Left	0.320	0.013	0.208	0.541	N/A	N/A	N/A

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	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			1	2	3	1+2+3
Hotspot SAR	Back	0.438	0.097	0.596	1.131	Hotspot SAR	Back	0.517	0.097	0.596	**1.210**
	Front	0.374	0.081	0.596*	1.051		Front	0.370	0.081	0.596*	1.047
	Top	-	0.297	0.174	0.471		Top	-	0.297	0.174	0.471
	Bottom	1.214	-	-	**1.214**		Bottom	1.193	-	-	1.193
	Right	0.098	-	-	0.098		Right	0.105	-	-	0.105
	Left	0.051	0.013	0.208	0.272		Left	0.061	0.013	0.208	0.282

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 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	0.814	0.097	0.596	**1.507**	Hotspot SAR	Back	0.723	0.097	0.596	**1.416**
	Front	0.483	0.081	0.596*	1.160		Front	0.574	0.081	0.596*	1.251
	Top	-	0.297	0.174	0.471		Top	-	0.297	0.174	0.471
	Bottom	0.394	-	-	0.394		Bottom	1.218	-	-	1.218
	Right	0.090	-	-	0.090		Right	0.123	-	-	0.123
	Left	0.244	0.013	0.208	0.465		Left	0.083	0.013	0.208	0.304

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 14 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	0.468	0.097	0.596	1.161	Hotspot SAR	Back	0.706	0.097	0.596	**1.399**
	Front	0.371	0.081	0.596*	1.048		Front	0.537	0.081	0.596*	1.214
	Top	-	0.297	0.174	0.471		Top	-	0.297	0.174	0.471
	Bottom	1.221	-	-	**1.221**		Bottom	0.408	-	-	0.408
	Right	0.096	-	-	0.096		Right	0.128	-	-	0.128
	Left	0.062	0.013	0.208	0.283		Left	0.372	0.013	0.208	0.593

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) 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	0.738	0.097	0.596	**1.431**	Hotspot SAR	Back	0.884	0.097	0.596	**1.577**
	Front	0.507	0.081	0.596*	1.184		Front	0.534	0.081	0.596*	1.211
	Top	-	0.297	0.174	0.471		Top	-	0.297	0.174	0.471
	Bottom	0.431	-	-	0.431		Bottom	0.452	-	-	0.452
	Right	0.089	-	-	0.089		Right	0.095	-	-	0.095
	Left	0.266	0.013	0.208	0.487		Left	0.284	0.013	0.208	0.505

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)	Simult Tx	Configuration	LTE Band 25 (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	0.551	0.097	0.596	**1.244**	Hotspot SAR	Back	0.422	0.097	0.596	**1.115**
	Front	0.485	0.081	0.596*	1.162		Front	0.339	0.081	0.596*	1.016
	Top	-	0.297	0.174	0.471		Top	-	0.297	0.174	0.471
	Bottom	1.129	-	-	1.129		Bottom	1.080	-	-	1.080
	Right	0.124	-	-	0.124		Right	0.080	-	-	0.080
	Left	0.070	0.013	0.208	0.291		Left	0.055	0.013	0.208	0.276

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Simult Tx	Configuration	LTE Band 30 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	0.331	0.097	0.596	**1.024**
	Front	0.334	0.081	0.596*	1.011
	Top	-	0.297	0.174	0.471
	Bottom	0.779	-	-	0.779
	Right	0.068	-	-	0.068
	Left	-	0.013	0.208	0.221

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	0.446	0.097	0.596	**1.139**
	Front	0.314	0.081	0.596*	0.991
	Top	-	0.297	0.174	0.471
	Bottom	0.832	-	-	0.832
	Right	0.144	-	-	0.144
	Left	-	0.013	0.208	0.221

Simult Tx	Configuration	LTE Band 48 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	0.552	0.097	0.596	1.245
	Front	0.288	0.081	0.596*	0.965
	Top	0.893	0.297	0.174	**1.364**
	Left	0.358	0.013	0.208	0.579

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
Hotspot SAR	Back	0.428	0.097	0.596	**1.121**
	Front	0.316	0.081	0.596*	0.993
	Top	-	0.297	0.174	0.471
	Bottom	0.783	-	-	0.783
	Right	0.164	-	-	0.164
	Left	-	0.013	0.208	0.221

Simult Tx	Configuration	NR Band n5 (Cell) 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	0.829	0.097	0.596	**1.522**
	Front	0.487	0.081	0.596*	1.164
	Top	-	0.297	0.174	0.471
	Bottom	0.373	-	-	0.373
	Right	0.090	-	-	0.090
	Left	0.249	0.013	0.208	0.470

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)
		1	2	3	1+2+3
Hotspot SAR	Back	0.642	0.097	0.596	**1.335**
	Front	0.542	0.081	0.596*	1.219
	Top	-	0.297	0.174	0.471
	Bottom	1.211	-	-	1.211
	Right	0.135	-	-	0.135
	Left	0.075	0.013	0.208	0.296

Simult Tx	Configuration	NR Band n25 (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	0.451	0.097	0.596	1.144
	Front	0.354	0.081	0.596*	1.031
	Top	-	0.297	0.174	0.471
	Bottom	1.188	-	-	**1.188**
	Right	0.090	-	-	0.090
	Left	0.069	0.013	0.208	0.290

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12.6 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 12-21
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Phablet)

Exposure Condition	Mode	2G/3G/4G/5G 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	PCS EVDO	2.517	1.043	1.171	3.560	3.688
	GPRS 1900	1.876	1.043	1.171	2.919	3.047
	UMTS 1750	2.867	1.043	1.171	3.910	See Table Below
	UMTS 1900	2.205	1.043	1.171	3.248	3.376
	LTE Band 66 (AWS)	2.743	1.043	1.171	3.786	3.914
	LTE Band 25 (PCS)	1.908	1.043	1.171	2.951	3.079
	LTE Band 30	1.501	1.043	1.171	2.544	2.672
	LTE Band 7	2.283	1.043	1.171	3.326	3.454
	LTE Band 41	2.780	1.043	1.171	3.823	**3.951**
	NR Band n66 (AWS)	2.897	1.043	1.171	3.940	See Table Below
	NR Band n25 (PCS)	2.284	1.043	1.171	3.327	3.455

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.103	1.171	**3.274**
	Front	1.906	1.171*	3.077
	Top	-	1.171*	1.171
	Bottom	2.867	-	2.867
	Right	0.655	-	0.655
	Left	0.356	0.389	0.745

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.793	1.171	**2.964**
	Front	1.665	1.171*	2.836
	Top	-	1.171*	1.171
	Bottom	2.897	-	2.897
	Right	0.643	-	0.643
	Left	0.302	0.389	0.691

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Table 12-22
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Phablet)

Exposure Condition	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	PCS EVDO	2.517	1.886	See Table Below
	GPRS 1900	1.876	1.886	3.762
	UMTS 1750	2.867	1.886	See Table Below
	UMTS 1900	2.205	1.886	See Table Below
	LTE Band 66 (AWS)	2.743	1.886	See Table Below
	LTE Band 25 (PCS)	1.908	1.886	**3.794**
	LTE Band 30	1.501	1.886	3.387
	LTE Band 7	2.283	1.886	See Table Below
	LTE Band 41	2.780	1.886	See Table Below
	NR Band n66 (AWS)	2.897	1.886	See Table Below
	NR Band n25 (PCS)	2.284	1.886	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.397	1.886	3.283
	Front	1.605	1.886*	**3.491**
	Top	-	1.886*	1.886
	Bottom	2.517	-	2.517
	Right	0.765	-	0.765
	Left	0.446	0.836	1.282

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.103	1.886	**3.989**
	Front	1.906	1.886*	3.792
	Top	-	1.886*	1.886
	Bottom	2.867	-	2.867
	Right	0.655	-	0.655
	Left	0.356	0.836	1.192

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.131	1.886	**3.017**
	Front	1.096	1.886*	2.982
	Top	-	1.886*	1.886
	Bottom	2.205	-	2.205
	Right	0.641	-	0.641
	Left	0.356	0.836	1.192

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
Phablet SAR	Back	1.620	1.886	3.506
	Front	1.644	1.886*	**3.530**
	Top	-	1.886*	1.886
	Bottom	2.743	-	2.743
	Right	0.583	-	0.583
	Left	0.326	0.836	1.162

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Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.830	1.886	**3.716**
	Front	1.700	1.886*	3.586
	Top	-	1.886*	1.886
	Bottom	2.283	-	2.283
	Right	1.009	-	1.009
	Left	-	0.836	0.836

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	1.640	1.886	3.526
	Front	2.104	1.886*	**3.990**
	Top	-	1.886*	1.886
	Bottom	2.780	-	2.780
	Right	0.836	-	0.836
	Left	-	0.836	0.836

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
Phablet SAR	Back	1.793	1.886	**3.679**
	Front	1.665	1.886*	3.551
	Top	-	1.886*	1.886
	Bottom	2.897	-	2.897
	Right	0.643	-	0.643
	Left	0.302	0.836	1.138

Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.485	1.886	**3.371**
	Front	1.249	1.886*	3.135
	Top	-	1.886*	1.886
	Bottom	2.284	-	2.284
	Right	0.702	-	0.702
	Left	0.384	0.836	1.220

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12.7 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, 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, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

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

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

12.7.1 Hotspot Back Side SPLSR Evaluation and Analysis

Table 12-23
Peak SAR Locations for Hotspot Back Side

Mode/Band	x (mm)	y (mm)
5 GHz WLAN MIMO	-4.00	57.00
Bluetooth	-41.80	78.00
EVDO BC0 (§22H)	-40.00	-85.50

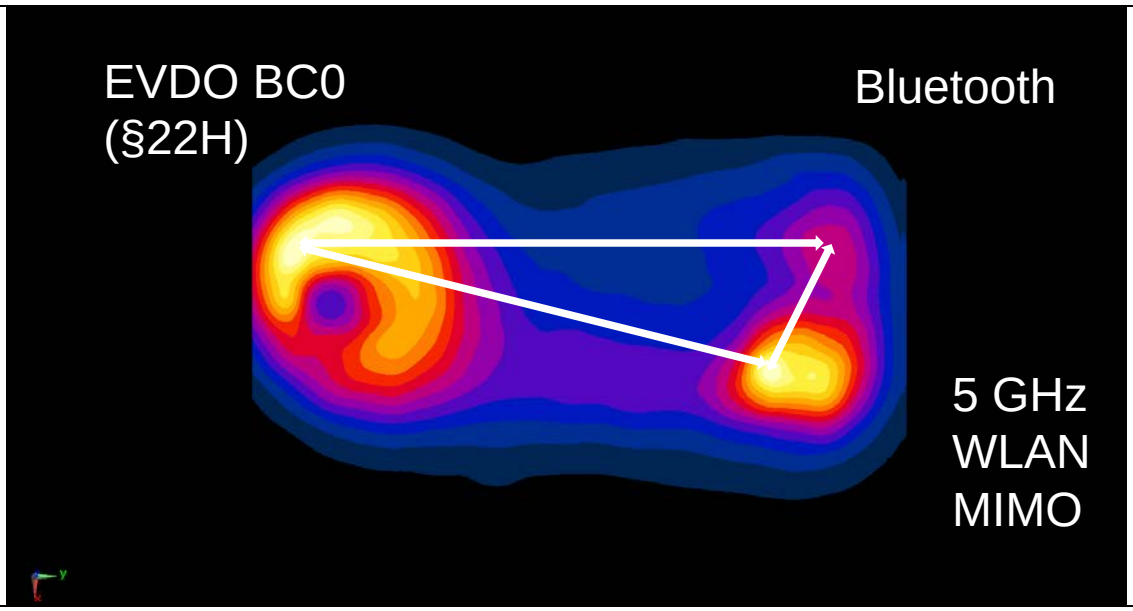
Table 12-24
Hotspot Back Side SAR to Peak Location Separation Ratio Calculations

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}	$(a+b)^{1.5}/D_{a-b}$	
Bluetooth	5 GHz WLAN MIMO	0.097	0.596	0.693	43.24	0.01	1
EVDO BC0 (§22H)	Bluetooth	0.978	0.097	1.075	163.51	0.01	
EVDO BC0 (§22H)	5 GHz WLAN MIMO	0.978	0.596	1.574	146.98	0.01	

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Table 12-25
Hotspot Back Side SAR to Peak Location Separation Ratio Plots



1

12.8 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)	
835	824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	back	10 mm	0.882	0.871	1.01	N/A	N/A	N/A	N/A
1750	1745.00	349000	NR Band n66 (AWS), 20 MHz Bandwidth	CP-OFDM QPSK, 1 RB, 1 RB Offset	bottom	10 mm	1.110	1.080	1.03	N/A	N/A	N/A	N/A
1900	1907.60	9538	UMTS 1900	RMC	bottom	10 mm	1.180	1.110	1.06	N/A	N/A	N/A	N/A
3500	3560.00	PCC: 55340	LTE Band 48 ULCA, 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	top	10 mm	0.893	0.887	1.01	N/A	N/A	N/A	N/A
	3579.80	SCC: 55538		QPSK, 1 RB, 0 RB Offset									
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	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, 100 RB, 0 RB Offset	bottom	0 mm	2.710	2.630	1.03	N/A	N/A	N/A	N/A
1900	1907.60	9538	UMTS 1900	RMC	bottom	0 mm	2.130	2.110	1.01	N/A	N/A	N/A	N/A
2600	2680.00	PCC: 41490	LTE Band 41 PC 2 with ULCA, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	bottom	0 mm	2.530	2.480	1.02	N/A	N/A	N/A	N/A
	2660.20	SCC: 41292		QPSK, 50 RB, 50 RB Offset									
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 B4		UMTS B2		CDMA BC10		CDMA BC0		CDMA BC1	
RMC		RMC		RMC		EVDO Rev. A		RC3 / SO55		RC3 / SO55	
Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	836.60	Frequency (MHz)	1732.40	Frequency (MHz)	1880.00	Frequency (MHz)	820.10	Frequency (MHz)	824.70	Frequency (MHz)	1880.00
Channel	4183	Channel	1412	Channel	9400	Channel	564	Channel	1013	Channel	600
Measured 1g SAR (W/kg)	0.168	Measured 1g SAR (W/kg)	0.157	Measured 1g SAR (W/kg)	0.140	Measured 1g SAR (W/kg)	0.210	Measured 1g SAR (W/kg)	0.225	Measured 1g SAR (W/kg)	0.141
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 28)	0.247	Auto-tune (State 9)	0.230	Auto-tune (State 26)	0.215	Auto-tune (State 58)	0.260	Auto-tune (State 58)	0.282	Auto-tune (State 2)	0.202
Default (State 0)	0.253	Default (State 0)	0.199	Default (State 0)	0.197	Default (State 0)	0.274	Default (State 0)	0.307	Default (State 0)	0.238
State 0	0.253	State 0	0.199	State 0	0.197	State 0	0.274	State 0	0.307	State 0	0.238
State 1	0.226	State 9	0.223	State 26	0.203	State 42	0.244	State 48	0.088	State 2	0.235
State 5	0.183	State 14	0.109	State 28	0.203	State 46	0.160	State 52	0.309	State 30	0.238
State 9	0.062	State 18	0.112	State 32	0.191	State 50	0.164	State 56	0.284	State 34	0.206
State 12	0.017	State 22	0.122	State 36	0.141	State 54	0.274	State 58	0.284	State 39	0.149
State 28	0.246	State 26	0.181	State 41	0.116	State 58	0.254	State 59	0.289	State 44	0.136

Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data																	
LTE B71		LTE B12		LTE B13		LTE B14		LTE B5		LTE B26		LTE B66/4		LTE B25/2	
QPSK, 20 MHz Bandwidth, 1 RB, 0 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, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset	
Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1905.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Channel	132572	Channel	26590
Measured 1g SAR (W/kg)	0.079	Measured 1g SAR (W/kg)	0.120	Measured 1g SAR (W/kg)	0.149	Measured 1g SAR (W/kg)	0.145	Measured 1g SAR (W/kg)	0.207	Measured 1g SAR (W/kg)	0.199	Measured 1g SAR (W/kg)	0.098	Measured 1g SAR (W/kg)	0.140
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 44)	0.096	Auto-tune (State 2)	0.154	Auto-tune (State 27)	0.192	Auto-tune (State 27)	0.188	Auto-tune (State 27)	0.262	Auto-tune (State 0)	0.220	Auto-tune (State 7)	0.133	Auto-tune (State 55)	0.199
Default (State 26)	0.100	Default (State 0)	0.130	Default (State 0)	0.205	Default (State 0)	0.187	Default (State 0)	0.267	Default (State 0)	0.238	Default (State 0)	0.123	Default (State 0)	0.204
State 15	0.101	State 0	0.130	State 0	0.205	State 0	0.187	State 0	0.267	State 0	0.238	State 0	0.123	State 0	0.204
State 26	0.100	State 2	0.167	State 2	0.154	State 19	0.058	State 27	0.260	State 49	0.057	State 7	0.123	State 20	0.077
State 27	0.105	State 7	0.117	State 6	0.091	State 24	0.008	State 40	0.245	State 53	0.209	State 38	0.093	State 30	0.202
State 31	0.099	State 13	0.137	State 17	0.101	State 27	0.194	State 43	0.223	State 57	0.225	State 55	0.119	State 35	0.152
State 44	0.107	State 15	0.172	State 27	0.192	State 29	0.179	State 45	0.176	State 59	0.231	State 58	0.057	State 55	0.207

Table 14-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data									
NR Band n71		NR Band n12		NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 40 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	1720.00	Frequency (MHz)	1905.00
Channel	136100	Channel	141500	Channel	167300	Channel	344000	Channel	381000
Measured 1g SAR (W/kg)	0.103	Measured 1g SAR (W/kg)	0.110	Measured 1g SAR (W/kg)	0.182	Measured 1g SAR (W/kg)	0.158	Measured 1g SAR (W/kg)	0.163
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 44)	0.139	Auto-tune (State 2)	0.131	Auto-tune (State 27)	0.238	Auto-tune (State 7)	0.220	Auto-tune (State 55)	0.236
Default (State 26)	0.122	Default (State 26)	0.070	Default (State 0)	0.236	Default (State 0)	0.189	Default (State 0)	0.235
State 3	0.123	State 2	0.131	State 0	0.236	State 0	0.189	State 0	0.235
State 4	0.104	State 3	0.134	State 23	0.031	State 7	0.220	State 37	0.127
State 26	0.122	State 7	0.102	State 27	0.238	State 41	0.145	State 46	0.103
State 44	0.139	State 15	0.132	State 29	0.231	State 44	0.148	State 51	0.030
State 45	0.084	State 18	0.129	State 34	0.093	State 48	0.165	State 55	0.236
State 53	0.114	State 26	0.070	State 39	0.232	State 53	0.170	State 57	0.147

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Table 14-4
UMTS/CDMA Supplemental Body SAR Data

Supplemental Body SAR Data												
UMTS B5		UMTS B4		UMTS B2		CDMA BC10		CDMA BC0		CDMA BC1	
RMC		RMC		RMC		EVDO Rev. 0		EVDO Rev. 0		EVDO Rev. 0	
Test Position	Back	Test Position	Bottom	Test Position	Bottom	Test Position	Back	Test Position	Back	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	826.40	Frequency (MHz)	1752.60	Frequency (MHz)	1907.60	Frequency (MHz)	820.10	Frequency (MHz)	836.52	Frequency (MHz)	1908.75
Channel	4132	Channel	1513	Channel	9538	Channel	564	Channel	384	Channel	1175
Measured 1g SAR (W/kg)	0.753	Measured 1g SAR (W/kg)	1.030	Measured 1g SAR (W/kg)	1.180	Measured 1g SAR (W/kg)	0.770	Measured 1g SAR (W/kg)	0.878	Measured 1g SAR (W/kg)	1.130
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 0)	1.179	Auto-tune (State 9)	1.634	Auto-tune (State 1)	1.823	Auto-tune (State 27)	1.196	Auto-tune (State 27)	1.395	Auto-tune (State 32)	1.799
Default (State 0)	1.191	Default (State 0)	1.307	Default (State 0)	1.883	Default (State 0)	1.199	Default (State 0)	1.331	Default (State 0)	1.831
State 0	1.191	State 0	1.307	State 0	1.883	State 0	1.199	State 0	1.331	State 0	1.831
State 4	1.063	State 1	1.384	State 1	1.755	State 27	1.194	State 1	1.254	State 1	1.826
State 8	0.580	State 2	1.397	State 2	1.742	State 40	1.050	State 2	1.208	State 2	1.823
State 12	0.131	State 3	1.410	State 3	1.755	State 47	0.678	State 3	1.190	State 3	1.819
State 17	0.870	State 4	1.438	State 4	1.720	State 52	1.127	State 4	1.125	State 4	1.804
		State 5	1.448	State 5	1.728			State 5	1.059	State 5	1.807
		State 6	1.510	State 6	1.698			State 6	0.867	State 6	1.766
		State 7	1.556	State 7	1.664			State 7	0.701	State 7	1.731
		State 8	1.612	State 8	1.573			State 8	0.545	State 8	1.670
		State 9	1.647	State 9	1.468			State 9	0.545	State 9	1.545
		State 10	1.645	State 10	1.375			State 10	0.280	State 10	1.425
		State 11	1.573	State 11	1.210			State 11	0.194	State 11	1.268
		State 12	1.320	State 12	0.965			State 12	0.116	State 12	1.005
		State 13	0.753	State 13	0.879			State 13	1.300	State 13	0.934
		State 14	0.838	State 14	0.893			State 14	1.047	State 14	0.947
		State 15	0.851	State 15	0.879			State 15	1.005	State 15	0.941
		State 16	0.865	State 16	0.868			State 16	0.960	State 16	0.931
		State 17	0.887	State 17	0.866			State 17	0.878	State 17	0.918
		State 18	0.901	State 18	0.861			State 18	0.796	State 18	0.921
		State 19	0.961	State 19	0.816			State 19	0.598	State 19	0.883
		State 20	1.006	State 20	0.788			State 20	0.464	State 20	0.860
		State 21	1.047	State 21	0.729			State 21	0.353	State 21	0.795
		State 22	1.057	State 22	0.647			State 22	0.237	State 22	0.701
		State 23	1.012	State 23	0.572			State 23	0.179	State 23	0.625
		State 24	0.879	State 24	0.478			State 24	0.125	State 24	0.519
		State 25	0.623	State 25	0.360			State 25	0.075	State 25	0.379
		State 26	1.150	State 26	1.778			State 26	1.190	State 26	1.799
		State 27	1.216	State 27	1.774			State 27	1.366	State 27	1.813
		State 28	1.232	State 28	1.790			State 28	1.363	State 28	1.808
		State 29	1.249	State 29	1.772			State 29	1.350	State 29	1.802
		State 30	1.269	State 30	1.755			State 30	1.308	State 30	1.779
		State 31	1.276	State 31	1.771			State 31	1.256	State 31	1.803
		State 32	1.346	State 32	1.720			State 32	1.032	State 32	1.790
		State 33	1.402	State 33	1.704			State 33	0.802	State 33	1.749
		State 34	1.470	State 34	1.651			State 34	0.587	State 34	1.688
		State 35	1.551	State 35	1.553			State 35	0.361	State 35	1.582
		State 36	1.589	State 36	1.456			State 36	0.255	State 36	1.488
		State 37	1.580	State 37	1.300			State 37	0.164	State 37	1.332
		State 38	1.414	State 38	1.061			State 38	0.090	State 38	1.069
		State 39	0.946	State 39	1.067			State 39	1.263	State 39	1.122
		State 40	1.028	State 40	1.067			State 40	1.278	State 40	1.114
		State 41	1.042	State 41	1.055			State 41	1.262	State 41	1.104
		State 42	1.053	State 42	1.049			State 42	1.233	State 42	1.102
		State 43	1.079	State 43	1.034			State 43	1.180	State 43	1.087
		State 44	1.087	State 44	1.027			State 44	1.116	State 44	1.076
		State 45	1.149	State 45	0.982			State 45	0.928	State 45	1.036
		State 46	1.191	State 46	0.944			State 46	0.747	State 46	0.989
		State 47	1.234	State 47	0.885			State 47	0.573	State 47	0.931
		State 48	1.242	State 48	0.786			State 48	0.375	State 48	0.825
		State 49	1.194	State 49	0.707			State 49	0.277	State 49	0.736
		State 50	1.059	State 50	0.590			State 50	0.185	State 50	0.610
		State 51	0.785	State 51	0.445			State 51	0.106	State 51	0.457
		State 52	1.291	State 52	1.764			State 52	1.345	State 52	1.831
		State 53	1.146	State 53	1.767			State 53	1.204	State 53	1.835
		State 54	1.288	State 54	1.765			State 54	1.338	State 54	1.823
		State 55	1.147	State 55	1.773			State 55	1.187	State 55	1.826
		State 56	0.743	State 56	0.883			State 56	1.304	State 56	0.938
		State 57	0.944	State 57	1.056			State 57	1.256	State 57	1.122
		State 58	0.745	State 58	0.885			State 58	1.303	State 58	0.933
		State 59	0.946	State 59	1.068			State 59	1.256	State 59	1.122

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Table 14-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data																				
LTE B71		LTE B12		LTE B13		LTE B14		LTE B5		LTE B26		LTE B66/4		LTE B25/2	
QPSK, 20 MHz Bandwidth, 1 RB, 0 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, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 100 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1905.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	20525	Channel	26865	Channel	132572	Channel	26590
Measured 1g SAR (W/kg)	0.291	Measured 1g SAR (W/kg)	0.389	Measured 1g SAR (W/kg)	0.549	Measured 1g SAR (W/kg)	0.594	Measured 1g SAR (W/kg)	0.728	Measured 1g SAR (W/kg)	0.620	Measured 1g SAR (W/kg)	0.916	Measured 1g SAR (W/kg)	1.010
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 39)	0.490	Auto-tune (State 3)	0.595	Auto-tune (State 27)	0.899	Auto-tune (State 27)	0.935	Auto-tune (State 0)	1.116	Auto-tune (State 59)	0.963	Auto-tune (State 9)	1.419	Auto-tune (State 7)	1.502
Default (State 26)	0.445	Default (State 0)	0.534	Default (State 0)	0.928	Default (State 0)	0.966	Default (State 0)	1.121	Default (State 0)	0.927	Default (State 0)	1.174	Default (State 0)	1.571
State 26	0.445	State 0	0.534	State 0	0.928	State 0	0.966	State 0	1.121	State 0	0.927	State 0	1.174	State 0	1.571
State 27	0.471	State 2	0.643	State 27	0.884	State 18	0.574	State 13	1.066	State 12	0.118	State 1	1.231	State 1	1.566
State 28	0.470	State 3	0.642	State 43	0.859	State 22	0.168	State 27	1.095	State 15	0.764	State 2	1.242	State 2	1.560
State 39	0.462	State 15	0.641	State 50	0.121	State 27	0.971	State 28	1.084	State 21	0.344	State 3	1.250	State 3	1.553
State 44	0.439	State 41	0.554	State 58	0.949	State 34	0.320	State 31	1.024	State 59	0.958	State 4	1.270	State 4	1.546
												State 5	1.277	State 5	1.542
												State 6	1.321	State 6	1.506
												State 7	1.357	State 7	1.486
												State 8	1.396	State 8	1.426
												State 9	1.426	State 9	1.326
												State 10	1.421	State 10	1.234
												State 11	1.367	State 11	1.095
												State 12	1.178	State 12	0.877
												State 13	0.640	State 13	0.762
												State 14	0.703	State 14	0.770
												State 15	0.714	State 15	0.766
												State 16	0.721	State 16	0.759
												State 17	0.736	State 17	0.750
												State 18	0.747	State 18	0.752
												State 19	0.786	State 19	0.721
												State 20	0.817	State 20	0.698
												State 21	0.839	State 21	0.653
												State 22	0.841	State 22	0.583
												State 23	0.808	State 23	0.521
												State 24	0.718	State 24	0.440
												State 25	0.537	State 25	0.328
												State 26	1.049	State 26	1.570
												State 27	1.101	State 27	1.573
												State 28	1.111	State 28	1.577
												State 29	1.121	State 29	1.570
												State 30	1.142	State 30	1.563
												State 31	1.148	State 31	1.564
												State 32	1.201	State 32	1.543
												State 33	1.243	State 33	1.519
												State 34	1.298	State 34	1.483
												State 35	1.357	State 35	1.403
												State 36	1.380	State 36	1.323
												State 37	1.375	State 37	1.183
												State 38	1.247	State 38	1.007
												State 39	0.805	State 39	0.922
												State 40	0.863	State 40	0.921
												State 41	0.873	State 41	0.917
												State 42	0.885	State 42	0.914
												State 43	0.900	State 43	0.902
												State 44	0.904	State 44	0.900
												State 45	0.949	State 45	0.866
												State 46	0.977	State 46	0.838
												State 47	1.000	State 47	0.789
												State 48	0.997	State 48	0.708
												State 49	0.962	State 49	0.639
												State 50	0.871	State 50	0.542
												State 51	0.670	State 51	0.409
												State 52	1.153	State 52	1.551
												State 53	1.042	State 53	1.566
												State 54	1.153	State 54	1.548
												State 55	1.045	State 55	1.568
												State 56	0.631	State 56	0.755
												State 57	0.800	State 57	0.917
												State 58	0.631	State 58	0.755
												State 59	0.801	State 59	0.918

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Table 14-6
NR Supplemental Body SAR Data

Supplemental Body SAR Data									
NR Band n71		NR Band n12		NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		CP-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1905.00
Channel	136100	Channel	141500	Channel	167300	Channel	349000	Channel	381000
Measured 1g SAR (W/kg)	0.363	Measured 1g SAR (W/kg)	0.368	Measured 1g SAR (W/kg)	0.715	Measured 1g SAR (W/kg)	1.110	Measured 1g SAR (W/kg)	1.030
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 39)	0.623	Auto-tune (State 3)	0.616	Auto-tune (State 0)	1.047	Auto-tune (State 9)	1.803	Auto-tune (State 7)	1.564
Default (State 26)	0.604	Default (State 26)	0.347	Default (State 0)	1.047	Default (State 0)	1.481	Default (State 0)	1.664
State 26	0.604	State 0	0.522	State 0	1.047	State 0	1.481	State 0	1.664
State 32	0.382	State 2	0.614	State 1	0.977	State 1	1.547	State 1	1.668
State 37	0.078	State 3	0.616	State 12	0.106	State 2	1.566	State 2	1.652
State 39	0.623	State 15	0.613	State 18	0.666	State 3	1.583	State 3	1.650
State 43	0.507	State 19	0.459	State 27	1.045	State 4	1.607	State 4	1.651
State 44	0.473	State 26	0.347	State 28	1.036	State 5	1.616	State 5	1.632
State 59	0.624	State 32	0.542	State 31	0.944	State 6	1.678	State 6	1.591
						State 7	1.719	State 7	1.564
						State 8	1.768	State 8	1.496
						State 9	1.803	State 9	1.383
						State 10	1.782	State 10	1.267
						State 11	1.726	State 11	1.123
						State 12	1.453	State 12	0.907
						State 13	0.838	State 13	0.810
						State 14	0.926	State 14	0.819
						State 15	0.939	State 15	0.821
						State 16	0.949	State 16	0.808
						State 17	0.969	State 17	0.792
						State 18	0.978	State 18	0.790
						State 19	1.045	State 19	0.751
						State 20	1.081	State 20	0.717
						State 21	1.118	State 21	0.667
						State 22	1.112	State 22	0.577
						State 23	1.068	State 23	0.515
						State 24	0.937	State 24	0.436
						State 25	0.674	State 25	0.315
						State 26	1.340	State 26	1.691
						State 27	1.416	State 27	1.690
						State 28	1.433	State 28	1.708
						State 29	1.446	State 29	1.703
						State 30	1.476	State 30	1.665
						State 31	1.486	State 31	1.679
						State 32	1.538	State 32	1.656
						State 33	1.572	State 33	1.650
						State 34	1.651	State 34	1.575
						State 35	1.748	State 35	1.489
						State 36	1.771	State 36	1.385
						State 37	1.764	State 37	1.255
						State 38	1.584	State 38	1.007
						State 39	1.064	State 39	0.983
						State 40	1.157	State 40	0.983
						State 41	1.177	State 41	0.973
						State 42	1.189	State 42	0.961
						State 43	1.214	State 43	0.953
						State 44	1.220	State 44	0.952
						State 45	1.268	State 45	0.905
						State 46	1.315	State 46	0.875
						State 47	1.342	State 47	0.814
						State 48	1.345	State 48	0.716
						State 49	1.278	State 49	0.635
						State 50	1.145	State 50	0.532
						State 51	0.848	State 51	0.393
						State 52	1.477	State 52	1.678
						State 53	1.322	State 53	1.696
						State 54	1.477	State 54	1.666
						State 55	1.322	State 55	1.681
						State 56	0.845	State 56	0.809
						State 57	1.062	State 57	0.992
						State 58	0.847	State 58	0.808
						State 59	1.065	State 59	0.987

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

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

Table 14-7
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.2
Measured Output Power (dBm)	24.51	26.29
Measured SAR (W/kg)	0.083	0.093
Measured Power (mW)	282.49	425.60
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	178.81	184.28
% deviation from expected linearity		8.21%

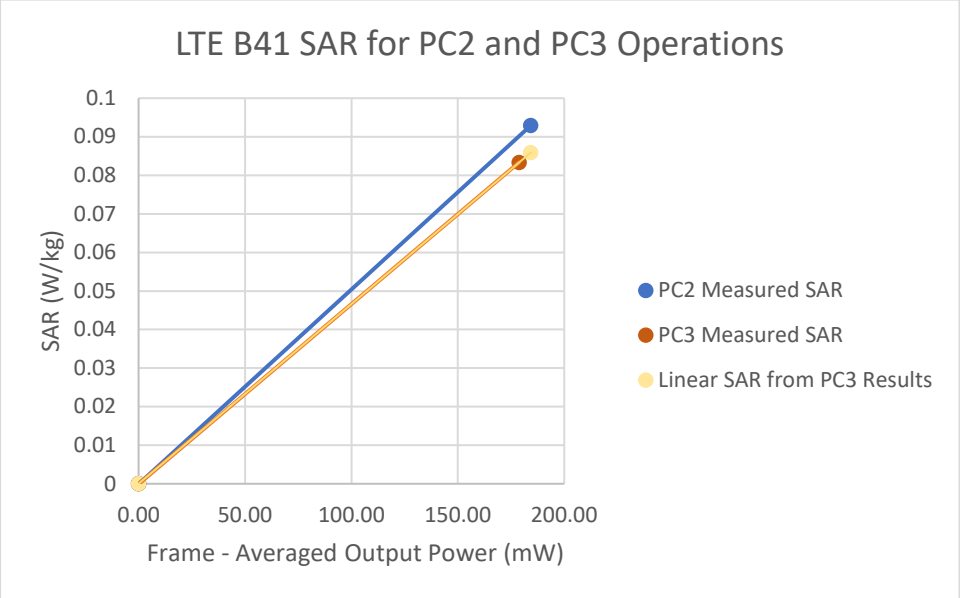


Figure 14-1
LTE Band 41 Head Linearity

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Table 14-8
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.2
Measured Output Power (dBm)	24.75	26.52
Measured SAR (W/kg)	0.092	0.101
Measured Power (mW)	298.54	448.75
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	188.97	194.31
% deviation from expected linearity		7.24%

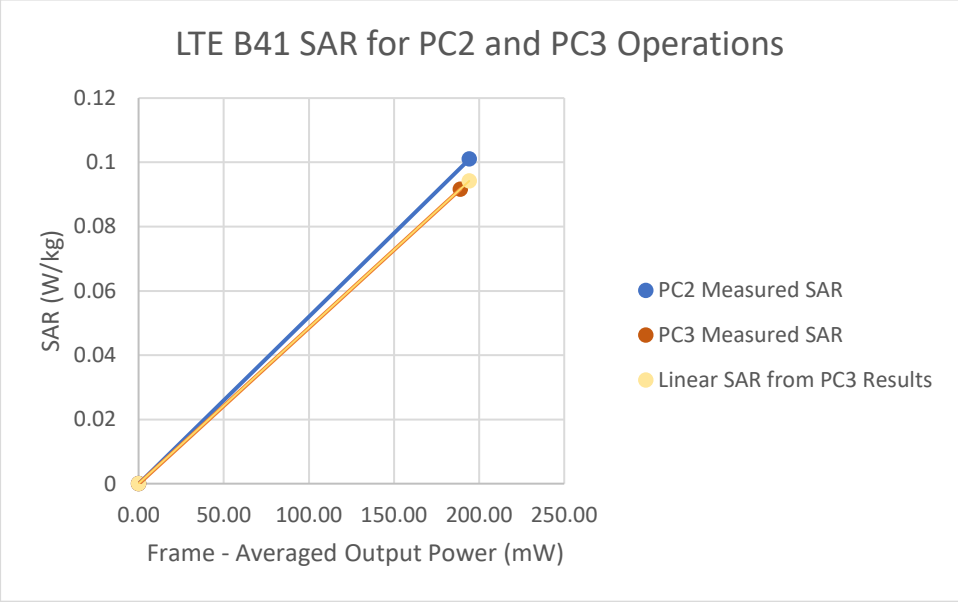


Figure 14-2
LTE Band 41 ULCA Head Linearity

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Table 14-9
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.2
Measured Output Power (dBm)	24.51	26.29
Measured SAR (W/kg)	0.369	0.381
Measured Power (mW)	282.49	425.60
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	178.81	184.28
% deviation from expected linearity		0.19%

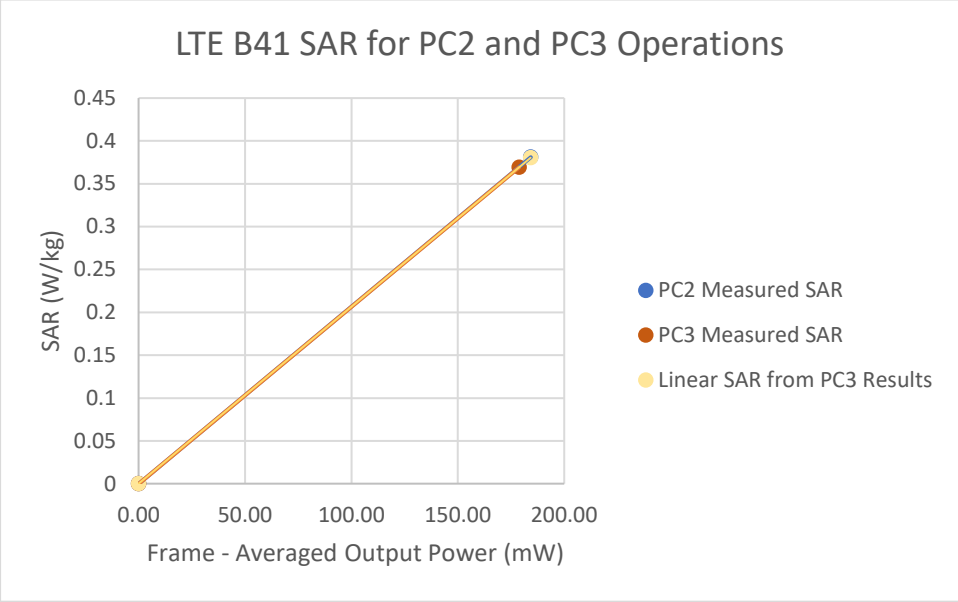


Figure 14-3
LTE Band 41 Body-Worn Linearity

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Table 14-10
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.0	27.2
Measured Output Power (dBm)	24.75	26.52
Measured SAR (W/kg)	0.396	0.409
Measured Power (mW)	298.54	448.75
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	188.97	194.31
% deviation from expected linearity		0.45%

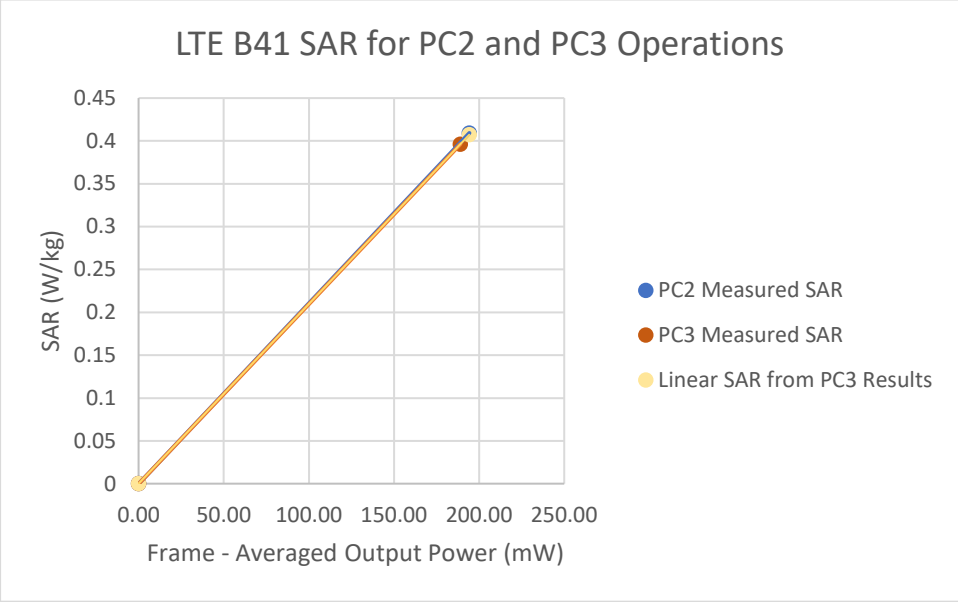


Figure 14-4
LTE Band 41 ULCA Body-Worn Linearity

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Table 14-11
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.0	23.6
Measured Output Power (dBm)	21.32	23.00
Measured SAR (W/kg)	0.670	0.622
Measured Power (mW)	135.52	199.53
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	85.78	86.39
% deviation from expected linearity		-7.82%

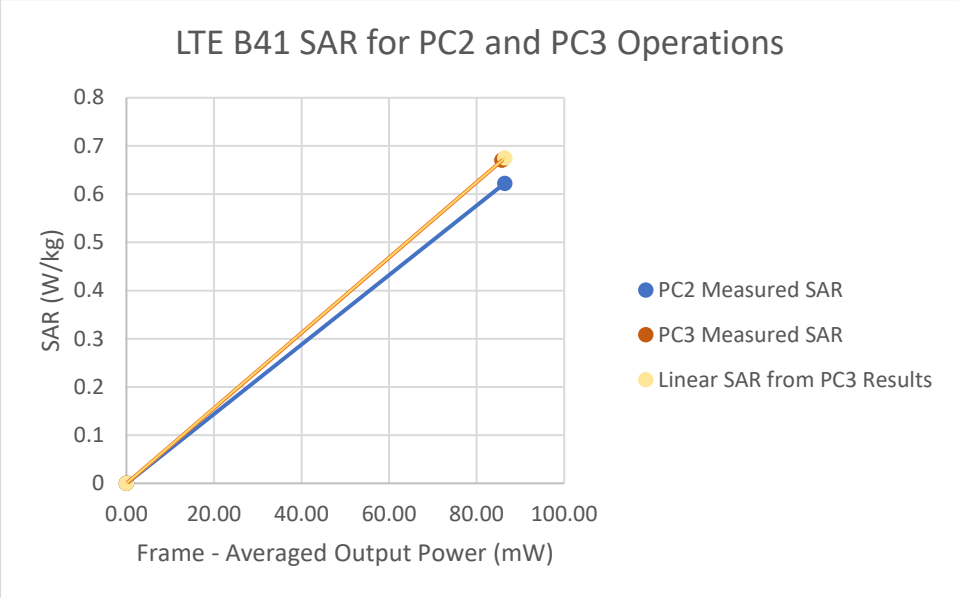


Figure 14-5
LTE Band 41 Hotspot Linearity

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Table 14-12
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.0	23.6
Measured Output Power (dBm)	21.42	23.13
Measured SAR (W/kg)	0.622	0.618
Measured Power (mW)	138.68	205.59
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	87.78	89.02
% deviation from expected linearity		-2.03%

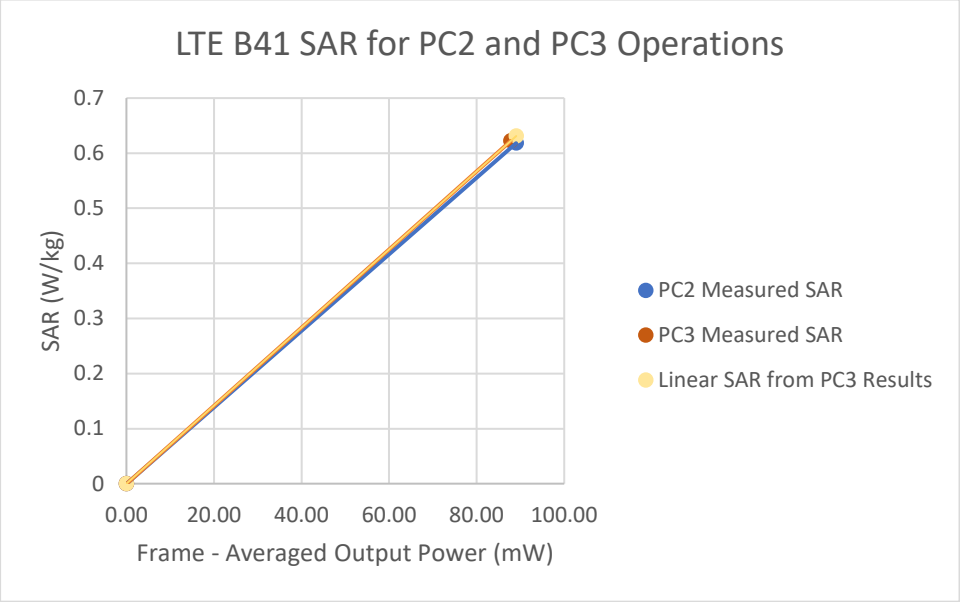


Figure 14-6
LTE Band 41 ULCA Hotspot Linearity

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Table 14-13
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	22.30	23.82
Measured SAR (W/kg)	2.260	2.240
Measured Power (mW)	169.82	240.99
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	107.50	104.35
% deviation from expected linearity		2.11%

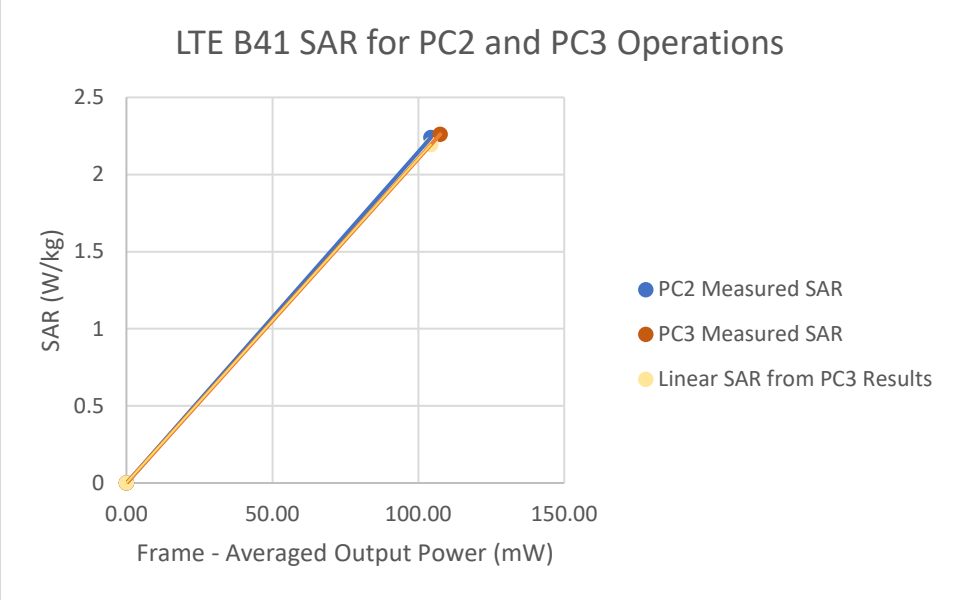


Figure 14-7
LTE Band 41 Phablet Linearity

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Table 14-14
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.0	24.6
Measured Output Power (dBm)	22.60	24.19
Measured SAR (W/kg)	2.480	2.530
Measured Power (mW)	181.97	262.42
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	115.19	113.63
% deviation from expected linearity		3.42%

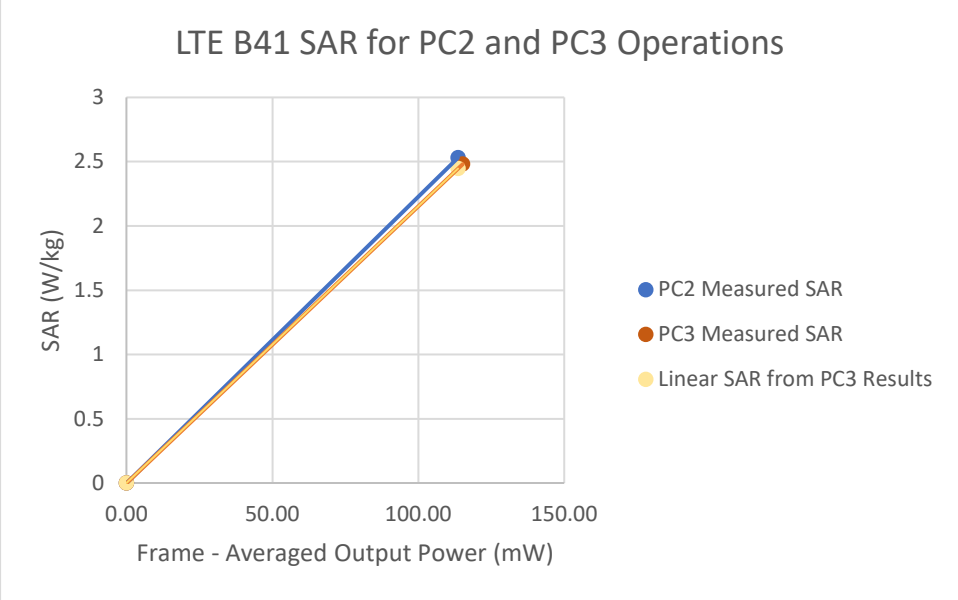


Figure 14-8
LTE Band 41 ULCA Phablet Linearity

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer (9KHZ-6.7GHZ)	1/16/2020	Triennial	1/16/2023	US41441489
Agilent	8753ES	S-Parameter Network Analyzer	12/31/2019	Annual	12/31/2020	US39170122
Agilent	8753ES	S-Parameter Network Analyzer	8/26/2019	Annual	8/26/2020	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/19/2019	Annual	9/19/2020	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	3/8/2019	Biennial	3/8/2021	MY42082385
Agilent	E4438C	ESG Vector Signal Generator	3/11/2019	Biennial	3/11/2021	MY45090700
Agilent	E4438C	ESG Vector Signal Generator	12/13/2019	Annual	12/13/2020	MY42082659
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	2/10/2020	Annual	2/10/2021	GB42230325
Agilent	E5515C	Wireless Communications Test Set	1/14/2020	Triennial	1/14/2023	GB43304447
Agilent	E5515C	Wireless Communications Test Set	6/26/2019	Annual	6/26/2020	MY50267125
Agilent	E5515C	Wireless Communications Test Set	2/26/2020	Annual	2/26/2021	GB44400860
Agilent	E5515C	Wireless Communications Test Set	9/25/2019	Annual	9/25/2020	GB43304278
Agilent	N5182A	MXG Vector Signal Generator	5/13/2020	Annual	5/13/2021	MY47420603
Agilent	N5182A	MXG Vector Signal Generator	2/19/2020	Annual	2/19/2021	MY47420651
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	433976
Anritsu	MA24106A	USB Power Sensor	2/27/2020	Annual	2/27/2021	1244524
Anritsu	MA24106A	USB Power Sensor	10/10/2019	Annual	10/10/2020	1344545
Anritsu	MA24106A	USB Power Sensor	10/10/2019	Annual	10/10/2020	1344559
Anritsu	MA2411B	Pulse Power Sensor	1/21/2020	Annual	1/21/2021	1207470
Anritsu	MA2411B	Pulse Power Sensor	12/4/2019	Annual	12/4/2020	1126066
Anritsu	ML2495A	Power Meter	12/17/2019	Annual	12/17/2020	941001
Anritsu	ML2496A	Power Meter	3/23/2020	Annual	3/23/2021	1351001
Anritsu	MT8821C	Radio Communication Analyzer	3/10/2020	Annual	3/10/2021	6200901190
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	MT8821C	Radio Communication Analyzer	11/22/2019	Annual	11/22/2020	6262044715
Anritsu	MT8862A	Wireless Connectivity Test Set	8/8/2019	Annual	8/8/2020	6261782395
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291455
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291460
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291463
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043588
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043655
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043647
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766816
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766817
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
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
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	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Seekonk	NC-100	Torque Wrench	7/18/2019	Annual	7/18/2020	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	3/27/2020	Annual	3/27/2021	128633
Rohde & Schwarz	CMW500	Radio Communication Tester	8/14/2019	Annual	8/14/2020	140144
Rohde & Schwarz	CMW500	Radio Communication Tester	10/4/2019	Annual	10/4/2020	166462
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	2/4/2020	Annual	2/4/2021	162125
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	11/14/2019	Annual	11/14/2020	164948
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Rohde & Schwarz	CMU200	Base Station Simulator	6/3/2019	Annual	6/3/2020	109892
Rohde& Schwarz	CMW500	Wideband Radio Communication Tester	7/12/2019	Annual	7/12/2020	145645
Rohde& Schwarz	CMW500	Wideband Radio Communication Tester	7/24/2019	Annual	7/24/2020	151849
SPEAG	D750V3	750 MHz Dipole	3/11/2020	Annual	3/11/2021	1054
SPEAG	D835V2	835 MHz SAR Dipole	1/13/2020	Annual	1/13/2021	4d132
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	D1900V2	1900 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	5d080
SPEAG	D2300V2	2300 MHz SAR Dipole	8/13/2018	Biennial	8/13/2020	1073
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2019	Annual	8/14/2020	719
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Triennial	4/11/2021	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Biennial	6/14/2021	1064
SPEAG	D3500V2	3500 MHz SAR Dipole	1/11/2018	Triennial	1/11/2021	1059
SPEAG	D3700V2	3700 MHz SAR Dipole	1/11/2018	Triennial	1/11/2021	1018
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Triennial	1/16/2021	1057
SPEAG	D750V3	750 MHz SAR Dipole	3/16/2020	Annual	3/16/2021	1003
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Biennial	3/13/2021	4d047
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Triennial	5/23/2021	1008
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Triennial	9/11/2020	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Biennial	8/16/2020	981
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/17/2019	Annual	9/17/2020	1191
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/17/2019	Annual	9/17/2020	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/15/2020	Annual	4/15/2021	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/12/2020	Annual	3/12/2021	1368
SPEAG	DAE4	Dasy 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
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2019	Annual	9/12/2020	1449
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/20/2020	Annual	5/20/2021	728
SPEAG	DAK-3.5	Dielectric Assessment Kit	10/22/2019	Annual	10/22/2020	1091
SPEAG	EX3DV4	SAR Probe	7/16/2019	Annual	7/16/2020	7410
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7551
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	3589
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	EX3DV4	SAR Probe	4/21/2020	Annual	4/21/2021	7357
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	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7552
SPEAG	EX3DV4	SAR Probe	5/18/2020	Annual	5/18/2021	7538

Note:

1. 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.
2. Each equipment item was used solely within its respective calibration period.

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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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APPENDIX A: SAR TEST DATA

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DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

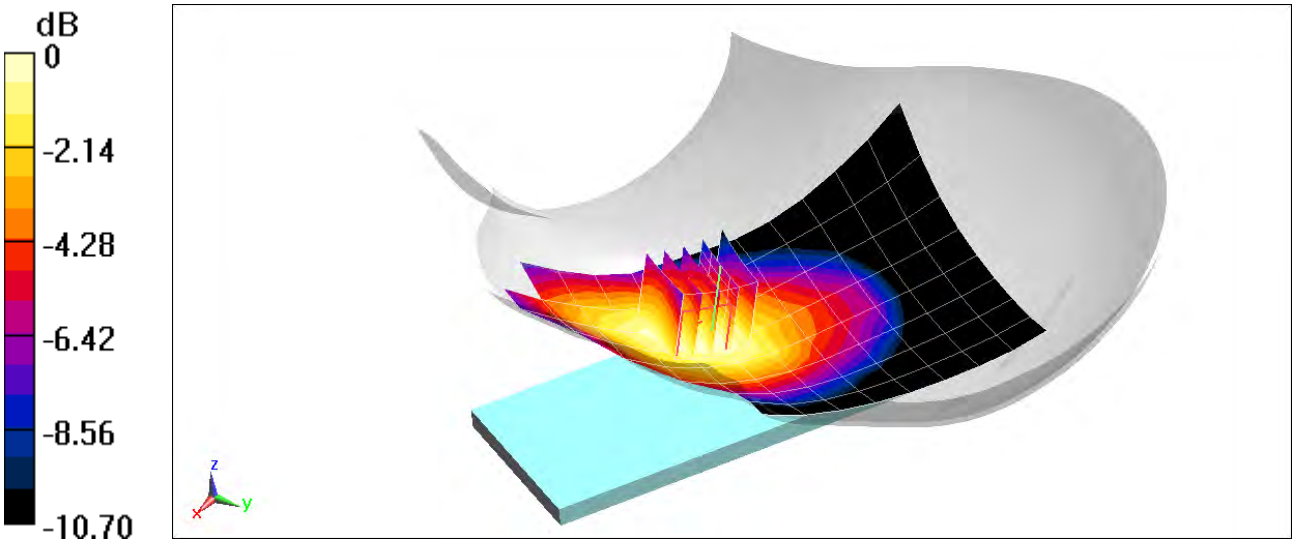
Communication System: UID 0, Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.91 S/m; ε_r = 40.616; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 820.1 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, BC 10, 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 = 15.83 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.210 W/kg



0 dB = 0.248 W/kg = -6.06 dBW/kg

PCTEST

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

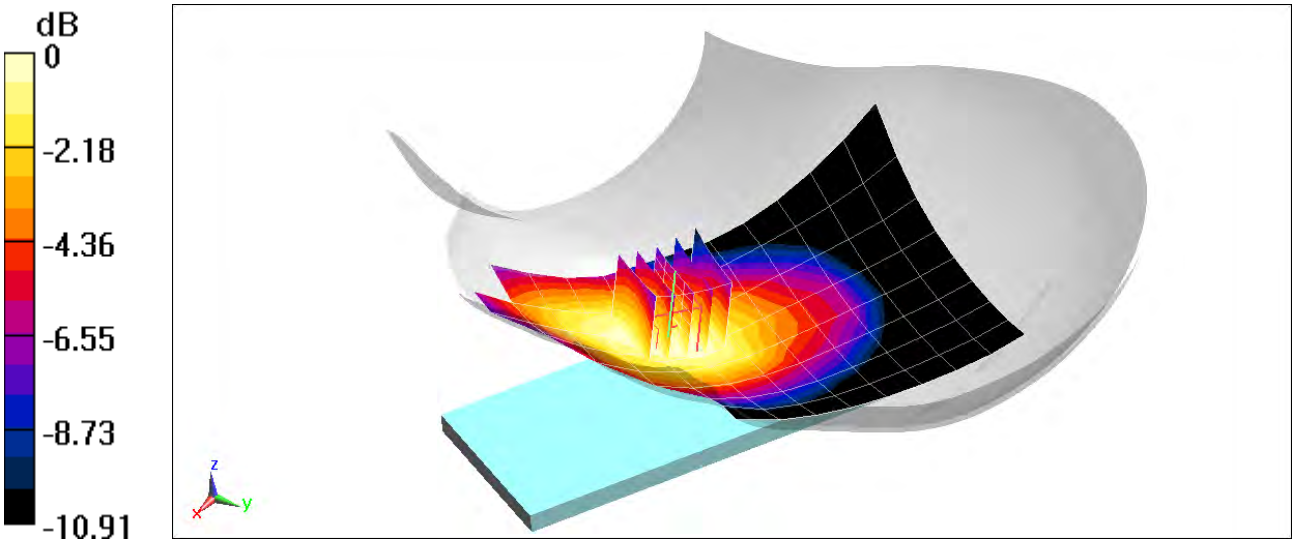
Communication System: UID 0, CDMA; Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 824.7 MHz; σ = 0.912 S/m; ε_r = 40.601; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 824.7 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. CDMA, BC 0, Left Head, Cheek, Low.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 = 15.55 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.225 W/kg



0 dB = 0.268 W/kg = -5.72 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1828M

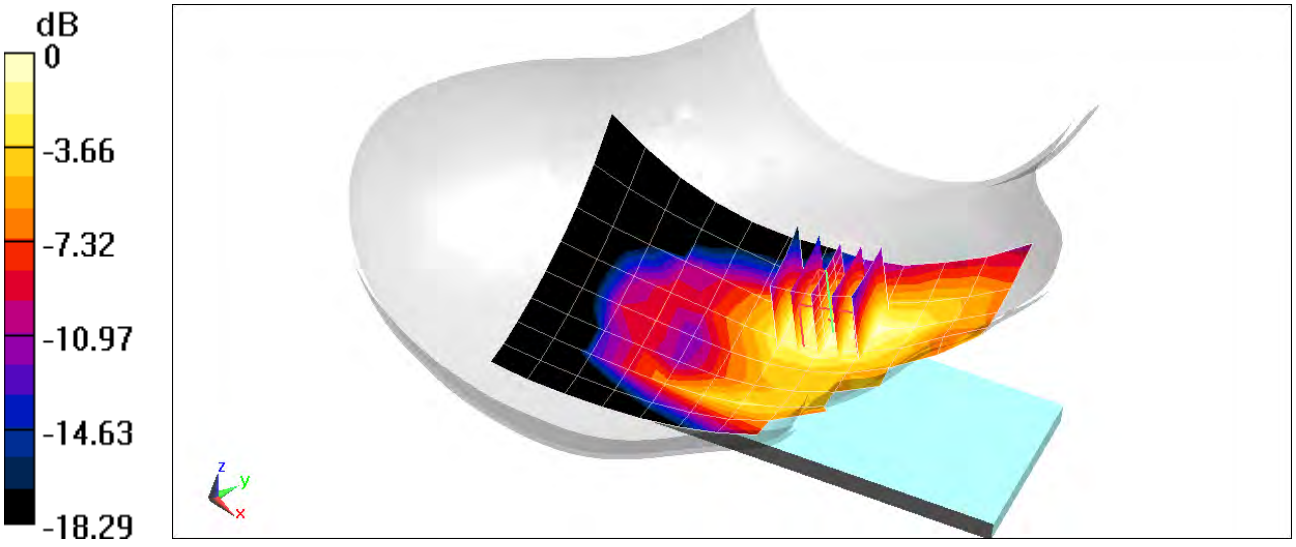
Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.433 S/m; ε_r = 39.763; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1880 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: PCS CDMA, 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 = 10.92 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.225 W/kg
SAR(1 g) = 0.141 W/kg



0 dB = 0.186 W/kg = -7.30 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

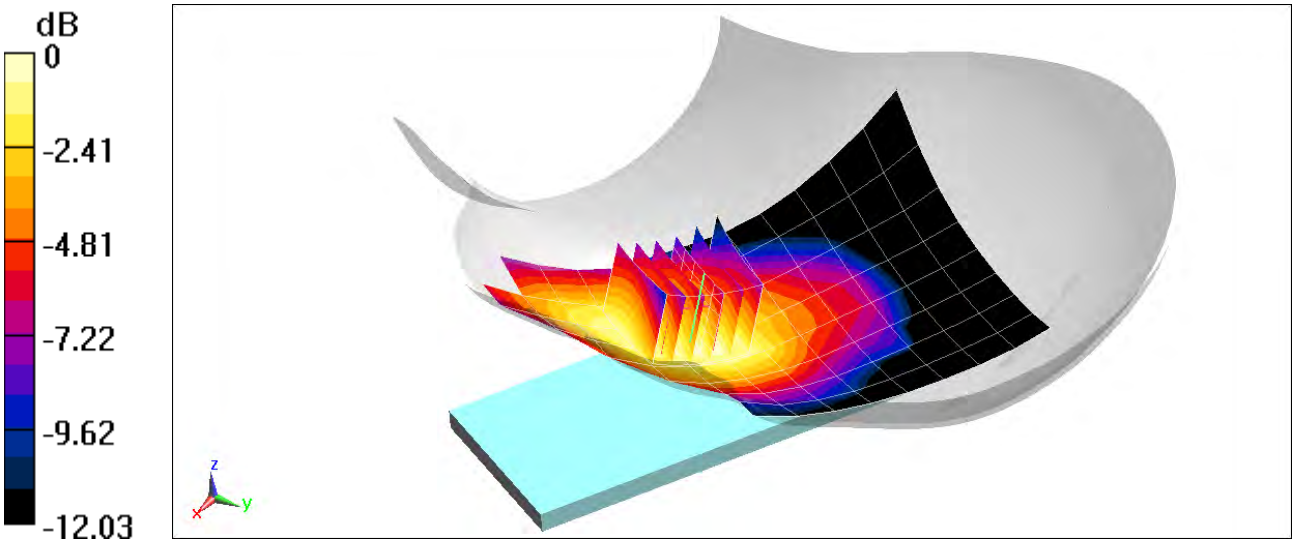
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.937 S/m; ε_r = 42.167; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/26/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.8°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, Left Head, Cheek, 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 = 11.25 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.114 W/kg



0 dB = 0.136 W/kg = -8.66 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1828M

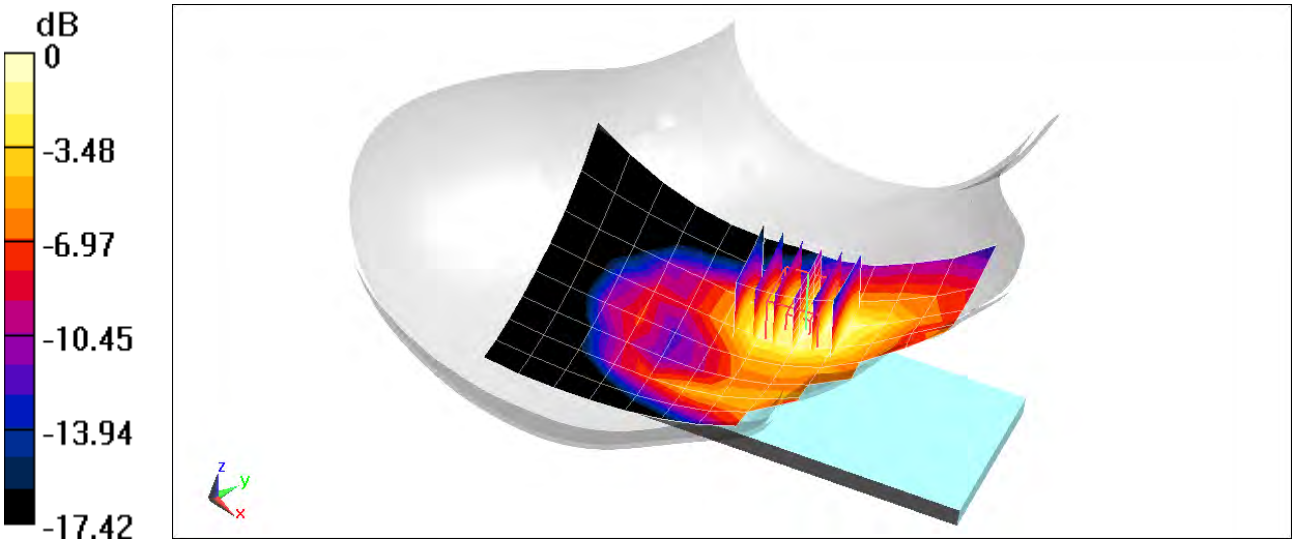
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.423 S/m; ε_r = 39.093; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/01/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1880 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 1900, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.948 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.109 W/kg
SAR(1 g) = 0.067 W/kg



0 dB = 0.0891 W/kg = -10.50 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

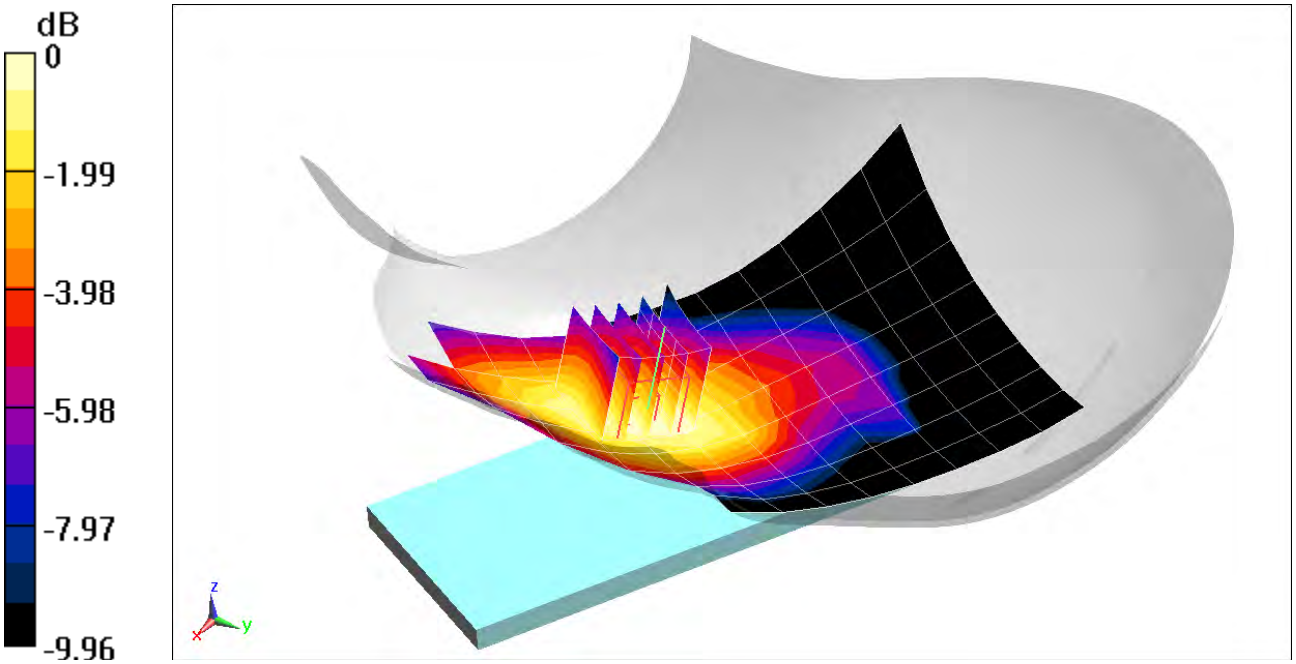
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.916 S/m; ε_r = 40.563; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°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, 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 = 13.93 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.217 W/kg
SAR(1 g) = 0.168 W/kg



0 dB = 0.198 W/kg = -7.03 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

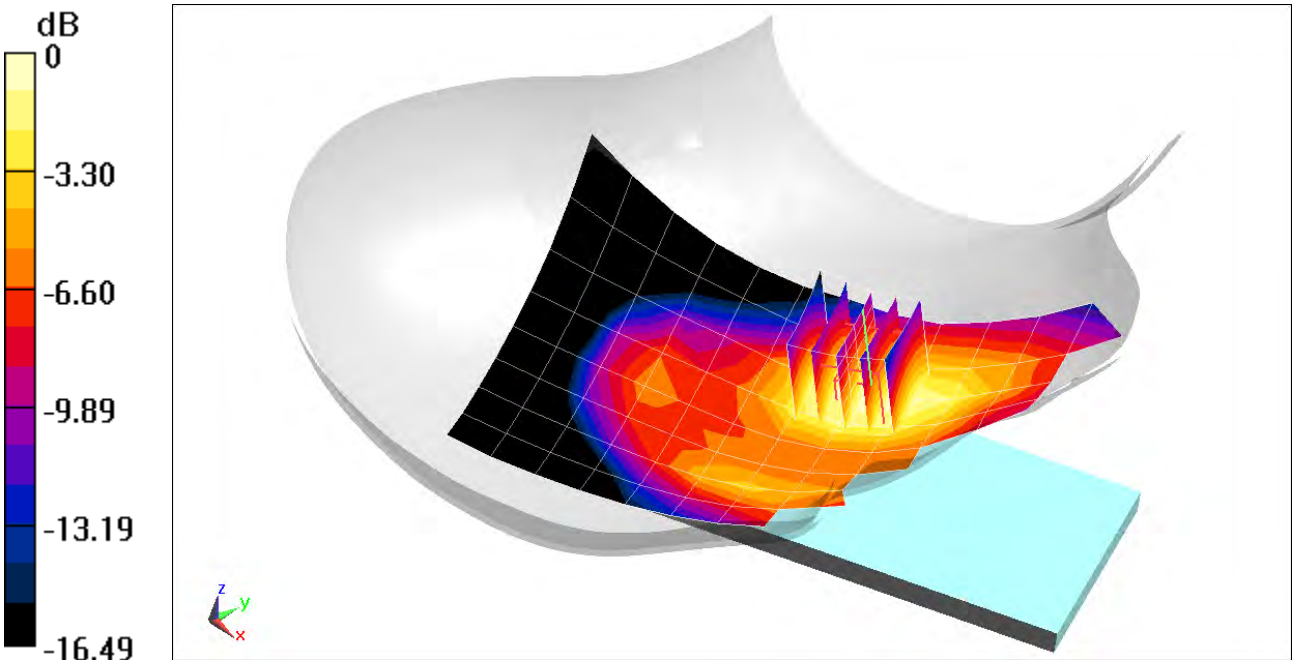
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.376 S/m; ε_r = 39.82; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/05/2020; Ambient Temp: 24.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(8.34, 8.34, 8.34) @ 1732.4 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 1750, 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 = 11.18 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.157 W/kg



0 dB = 0.203 W/kg = -6.93 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1828M

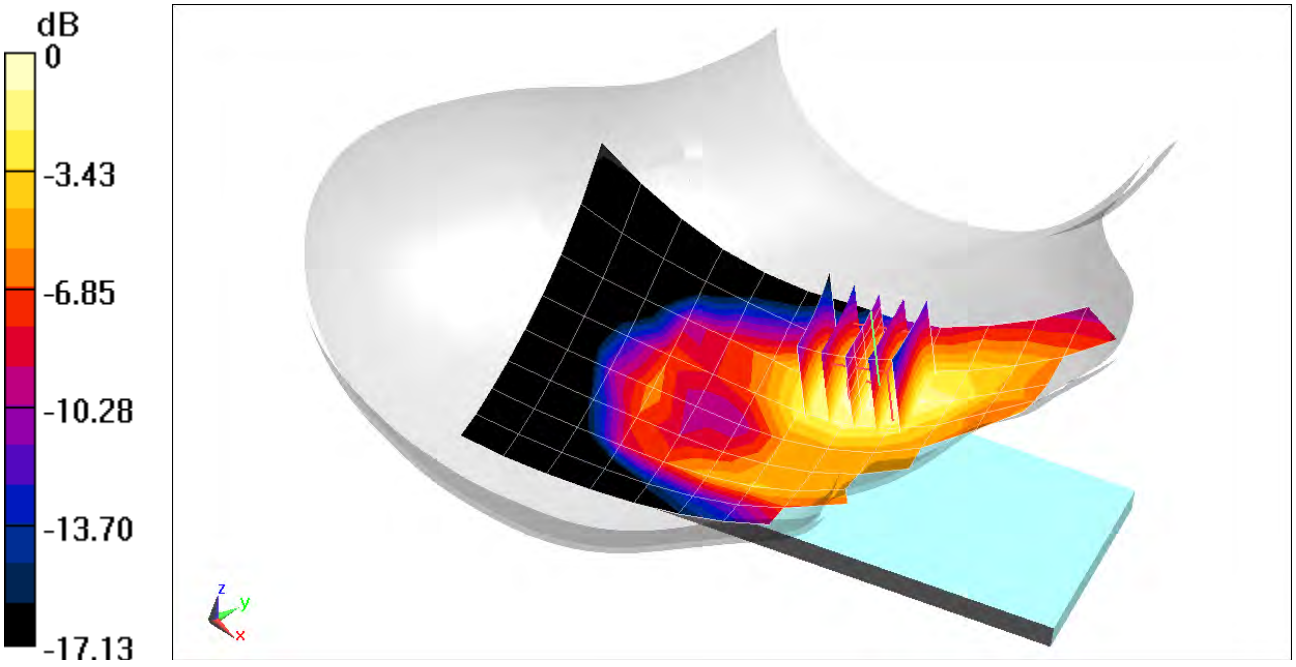
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.423 S/m; ε_r = 39.093; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/01/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1880 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 1900, 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 = 10.18 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.140 W/kg



0 dB = 0.186 W/kg = -7.30 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

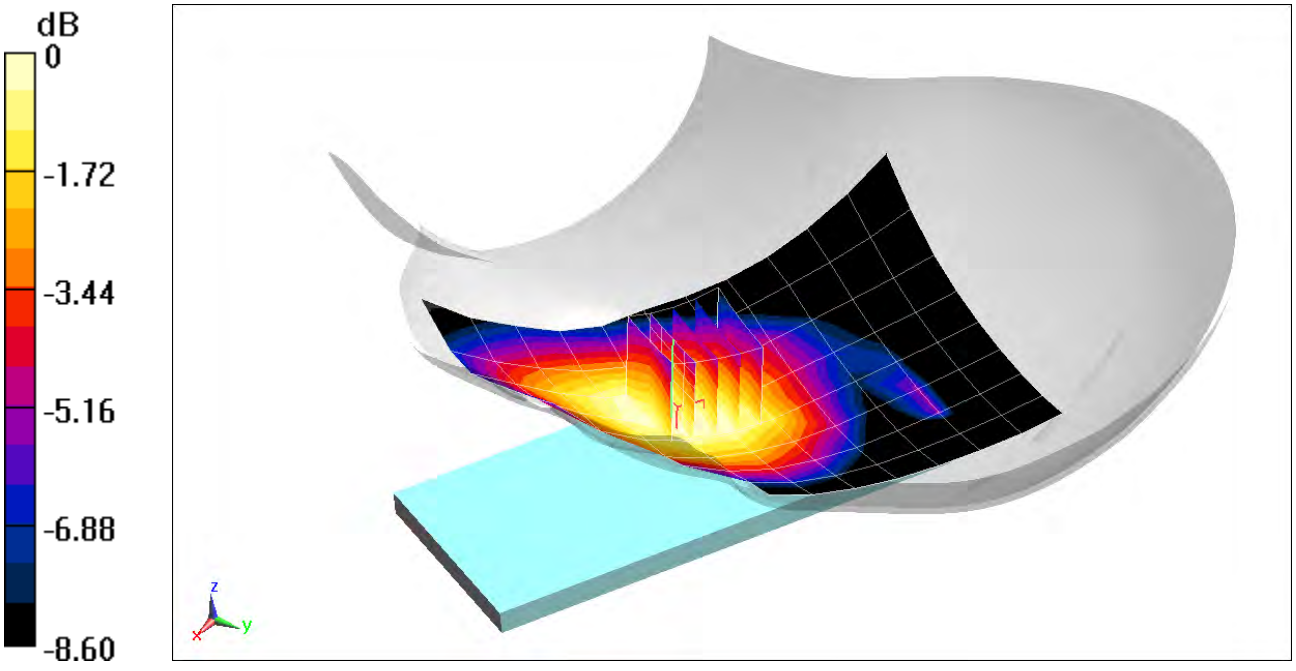
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.852 S/m; ε_r = 40.787; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/11/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 680.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 71, Left Head, Cheek, Mid.ch, 20 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 = 10.19 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.0930 W/kg
SAR(1 g) = 0.079 W/kg



0 dB = 0.0887 W/kg = -10.52 dBW/kg

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DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

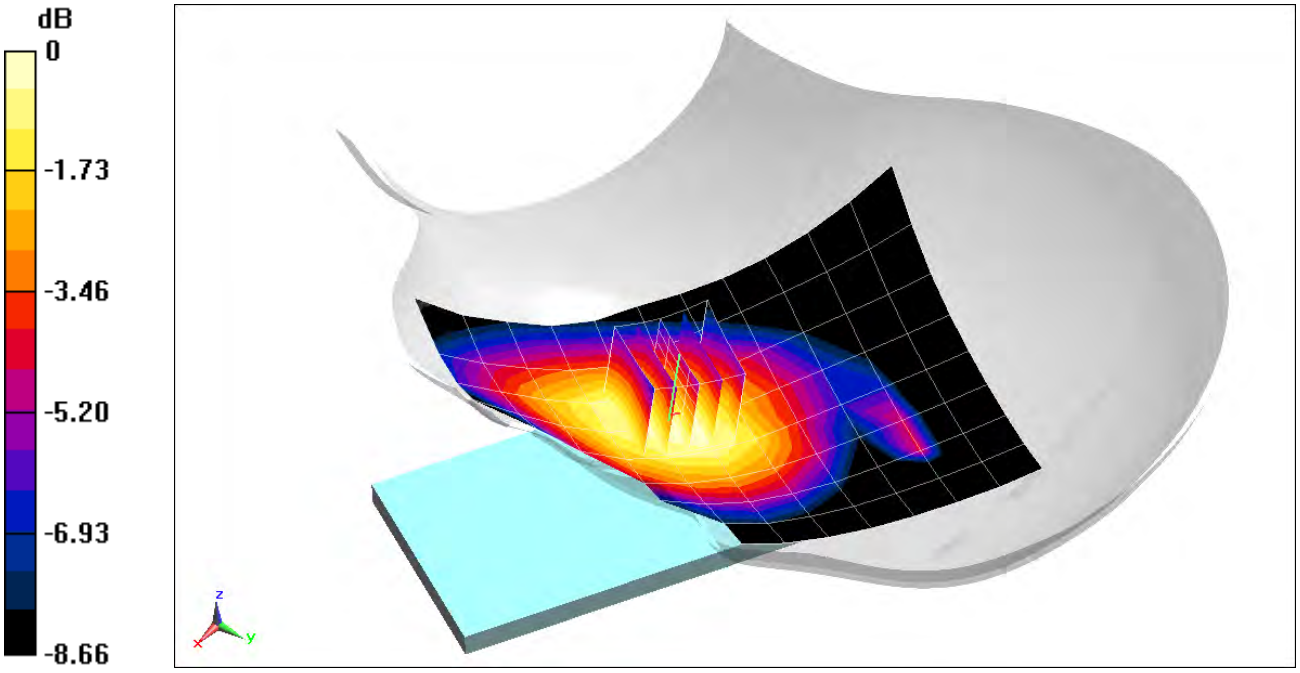
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.858 S/m; ε_r = 41.365; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/08/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 707.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 12, Left 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 = 12.57 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.144 W/kg
SAR(1 g) = 0.120 W/kg



0 dB = 0.138 W/kg = -8.60 dBW/kg

PCTEST

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

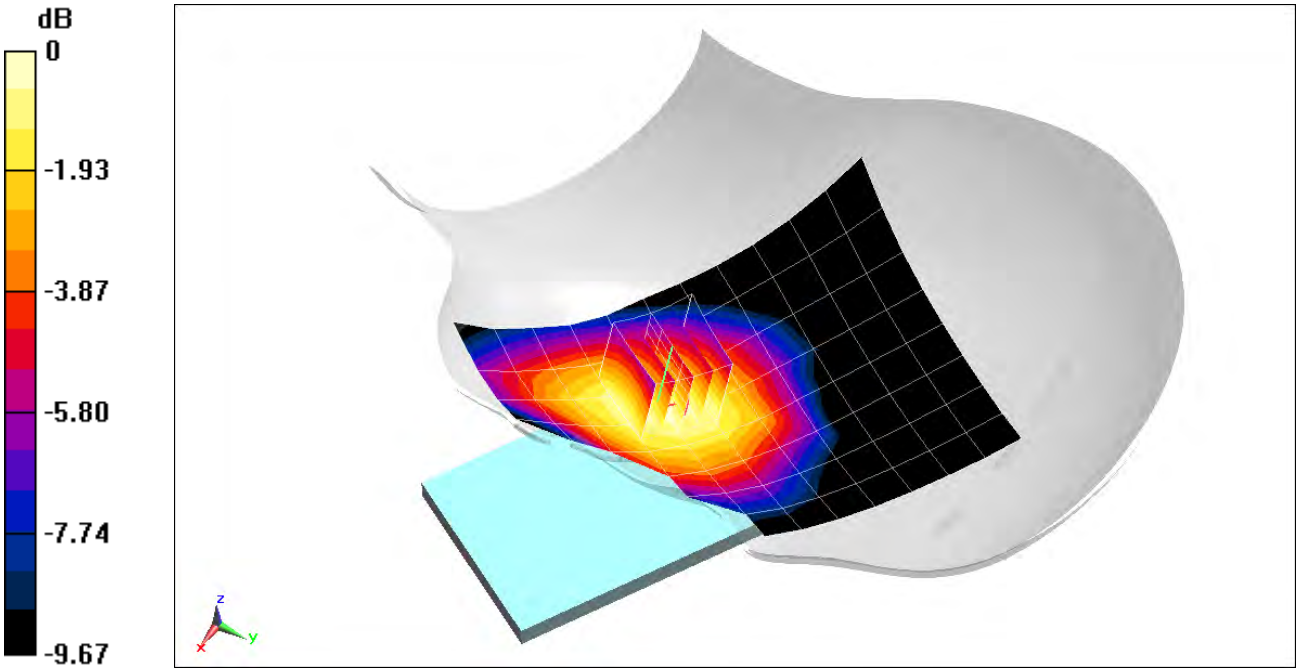
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.884 S/m; ε_r = 41.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/08/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 782 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 13, Left Head, Cheek, Mid.ch, QPSK, 10 MHz Bandwidth, 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 = 13.74 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.149 W/kg



0 dB = 0.168 W/kg = -7.75 dBW/kg

PCTEST

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

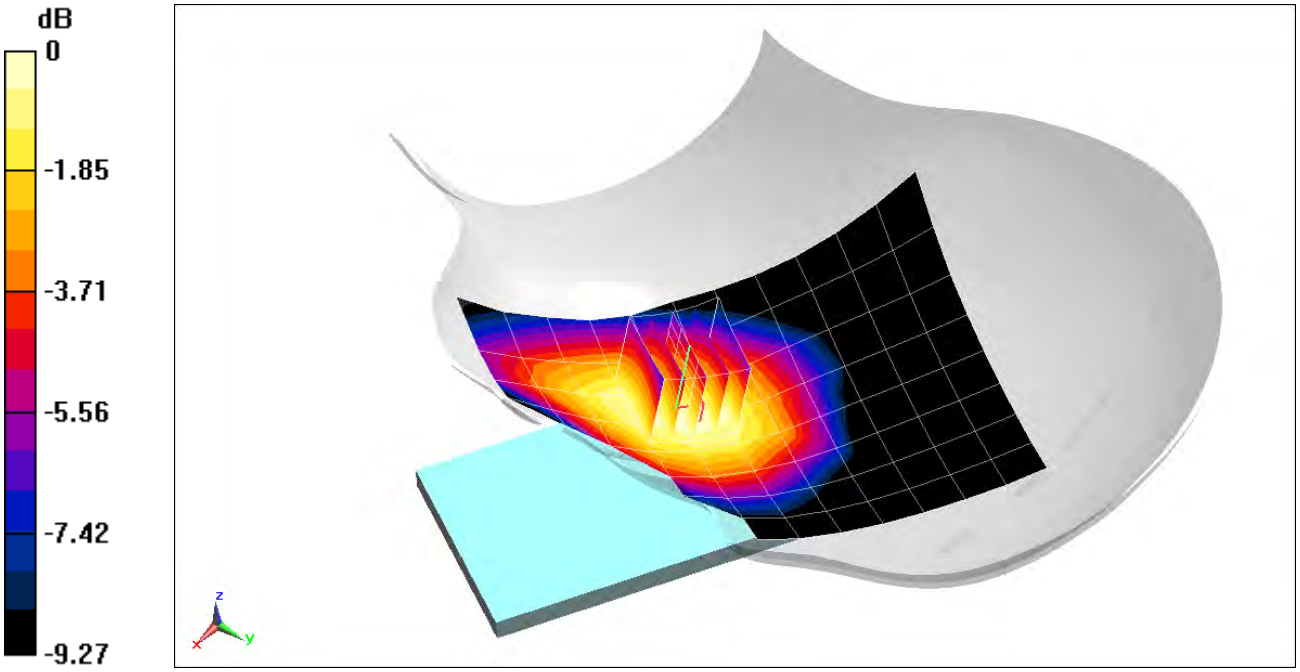
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 793 MHz; σ = 0.887 S/m; ε_r = 41.096; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/08/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 793 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 14, Left Head, Cheek, Mid.ch, QPSK, 10 MHz Bandwidth, 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 = 13.61 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.171 W/kg
SAR(1 g) = 0.145 W/kg



0 dB = 0.164 W/kg = -7.85 dBW/kg

PCTEST

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1839M

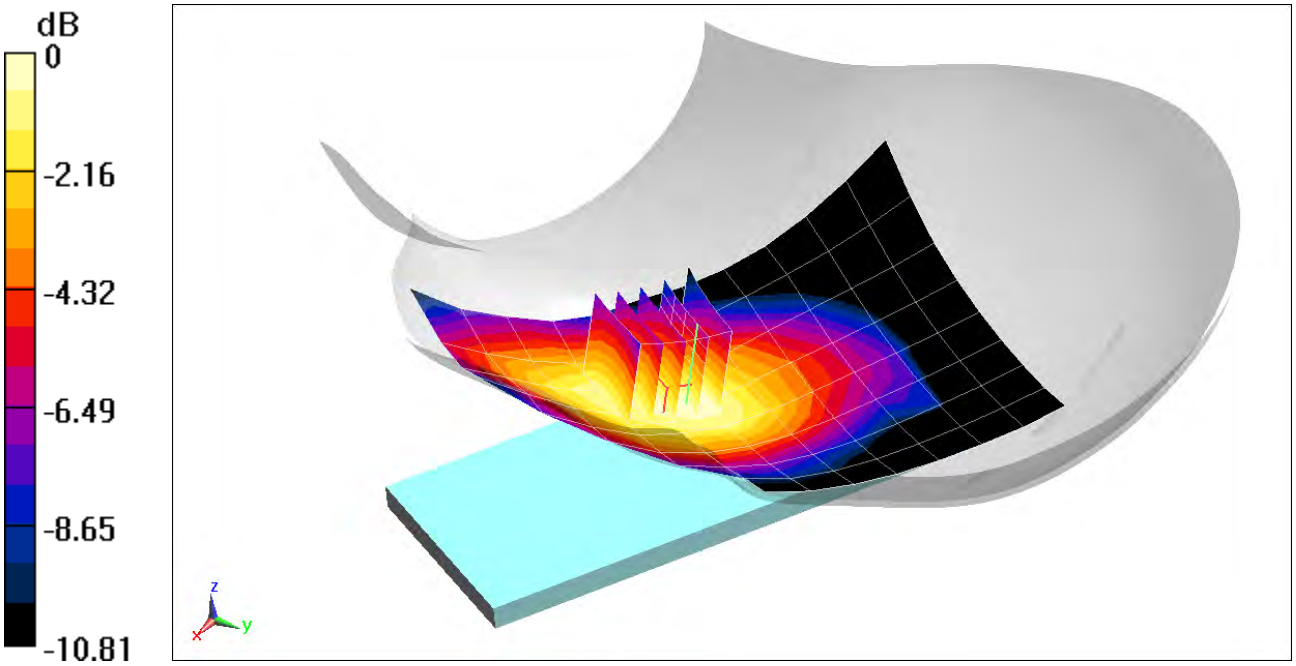
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 831.5$ MHz; $\sigma = 0.935$ S/m; $\varepsilon_r = 42.183$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05/26/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.8°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.), Left Head, Cheek, Mid.ch, QPSK, 15 MHz Bandwidth, 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 = 14.92 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.261 W/kg
SAR(1 g) = 0.199 W/kg



0 dB = 0.240 W/kg = -6.20 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

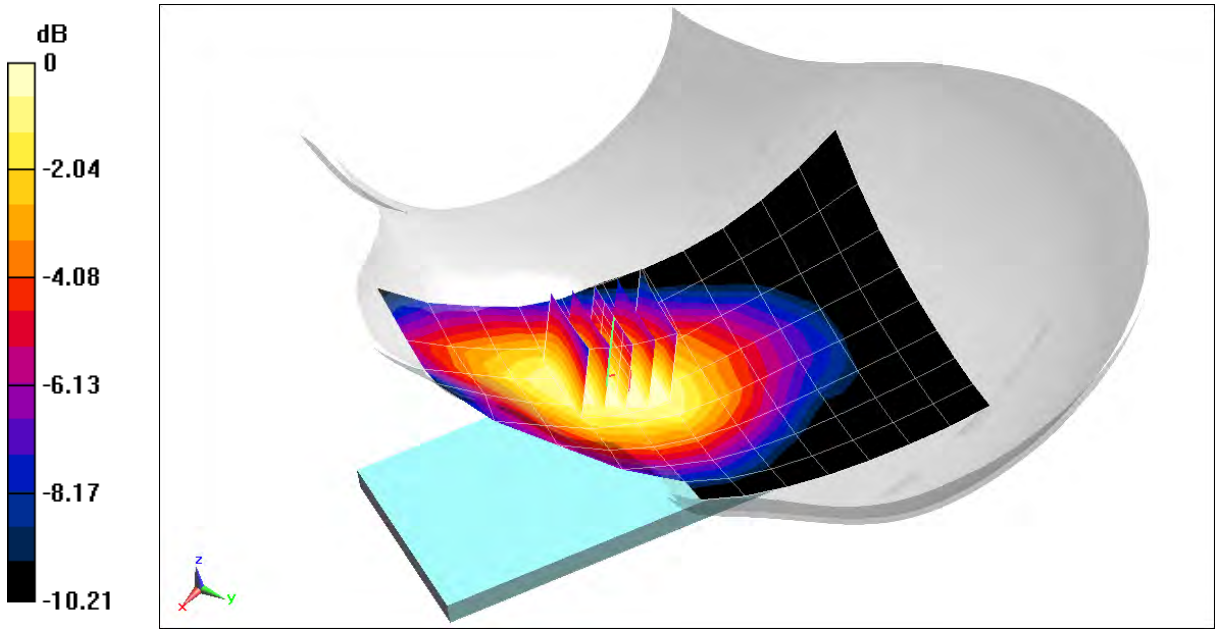
Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.5$ MHz; $\sigma = 0.92$ S/m; $\varepsilon_r = 41.753$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 06/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°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, Left 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 (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.21 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.220 W/kg



0 dB = 0.262 W/kg = -5.82 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

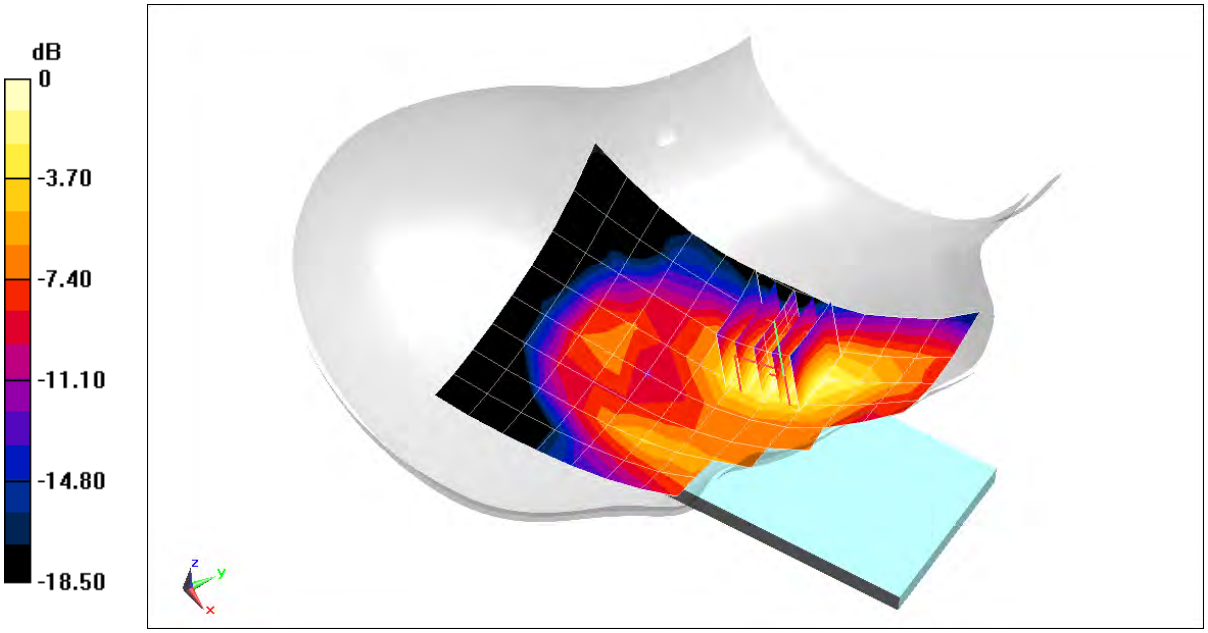
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1770 MHz; σ = 1.401 S/m; ε_r = 39.761; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/05/2020; Ambient Temp: 24.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(8.34, 8.34, 8.34) @ 1770 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) ULCA, Right Head, Cheek,
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 (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.01 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.121 W/kg



0 dB = 0.166 W/kg = -7.80 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

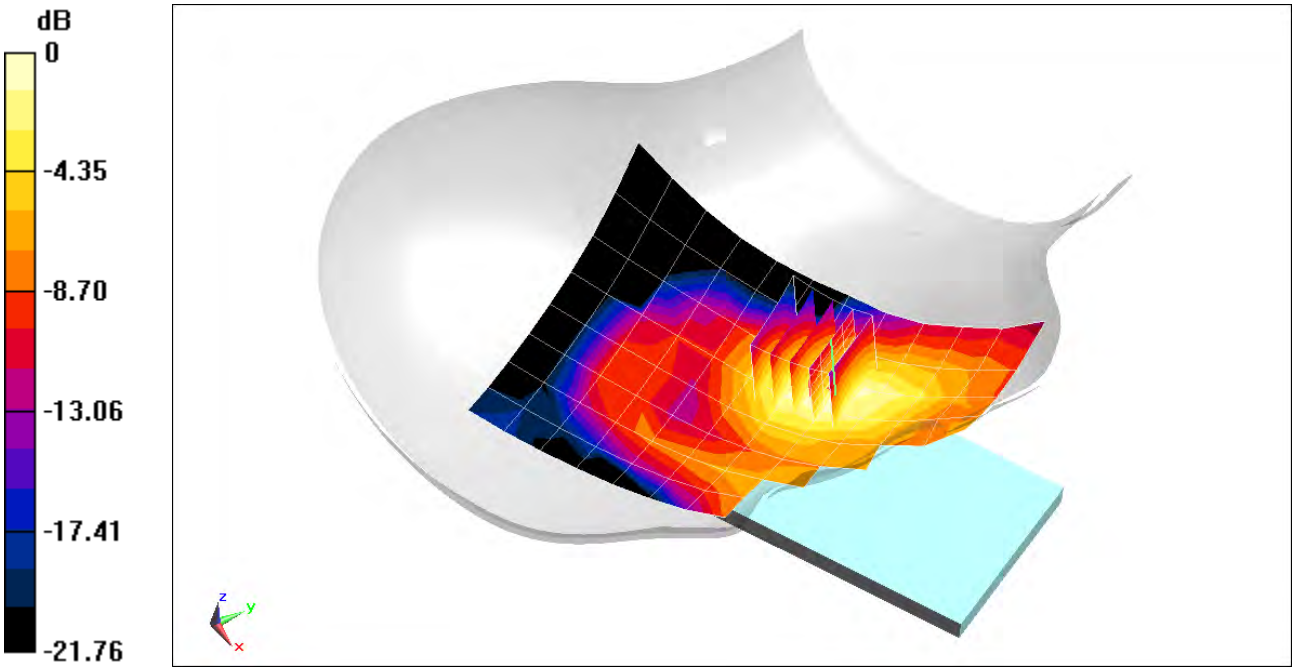
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1905 MHz; σ = 1.447 S/m; ε_r = 39.736; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1905 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 25 (PCS), Right Head, Cheek, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 50 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 = 10.70 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.228 W/kg
SAR(1 g) = 0.140 W/kg



0 dB = 0.193 W/kg = -7.14 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

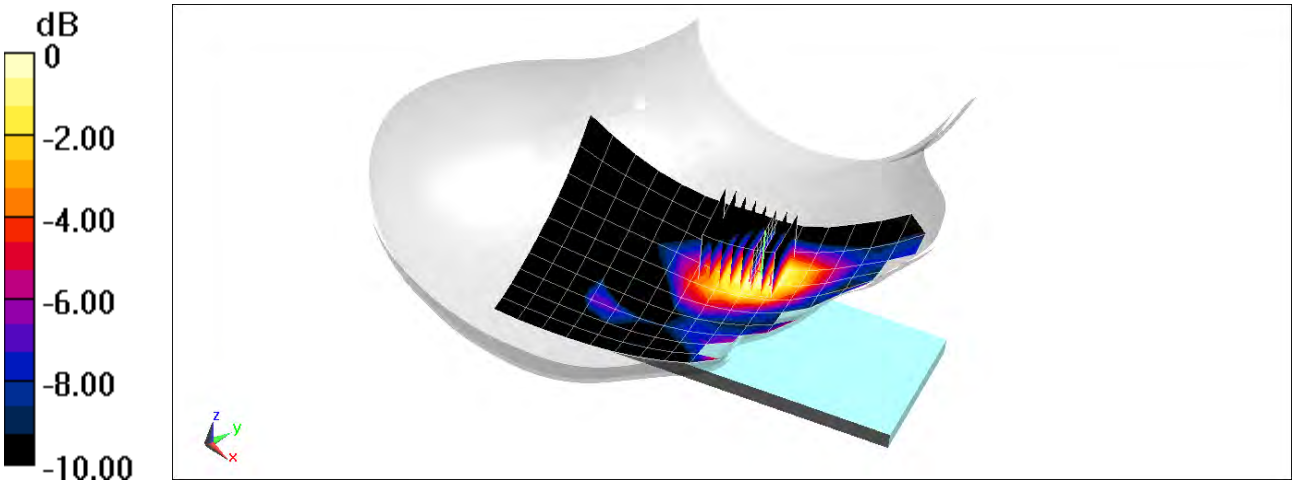
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2310 MHz; σ = 1.678 S/m; ε_r = 40.369; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/05/2020; Ambient Temp: 23.5°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN3589; ConvF(7.11, 7.11, 7.11) @ 2310 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 30, Right Head, Cheek, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.097 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.106 W/kg



0 dB = 0.150 W/kg = -8.24 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1845M

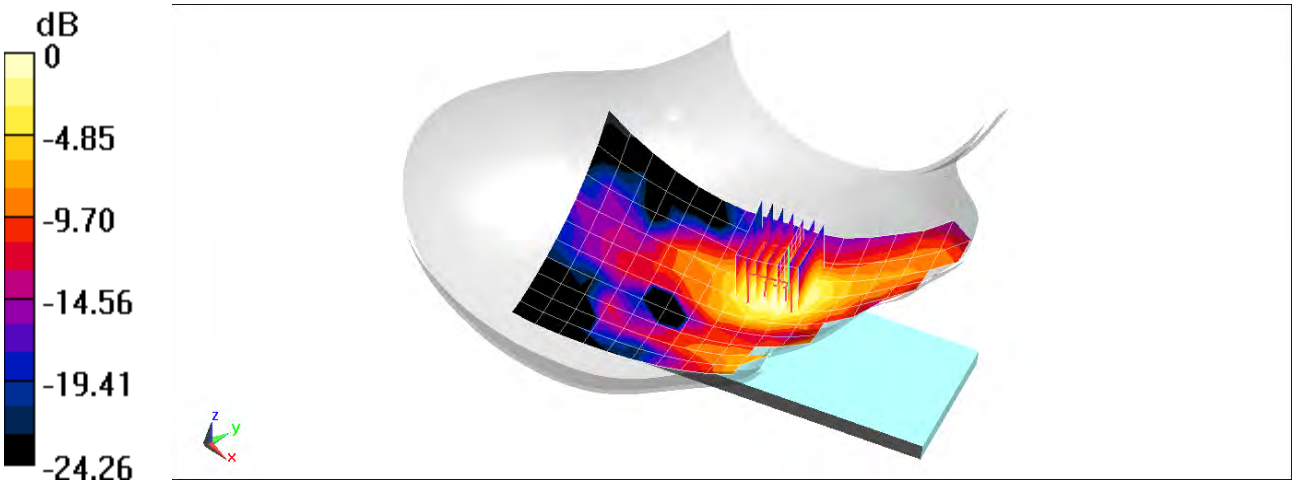
Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2560 MHz; σ = 1.874 S/m; ε_r = 39.37; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/27/2020; Ambient Temp: 22.9°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2560 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, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.472 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.205 W/kg
SAR(1 g) = 0.114 W/kg



0 dB = 0.165 W/kg = -7.83 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 0648M

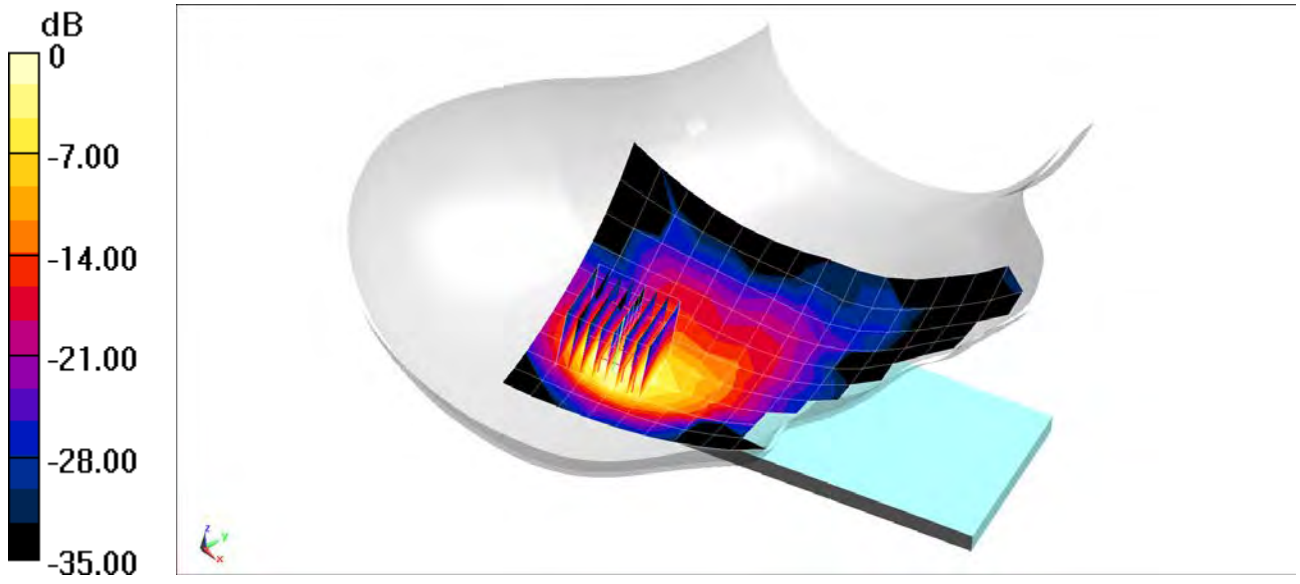
Communication System: UID 0, LTE Band 48; Frequency: 3646.7 MHz; Duty Cycle: 1:1.58
Medium: 3600 Head Medium parameters used (interpolated):
f = 3646.7 MHz; σ = 3.058 S/m; ε_r = 39.528; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07/06/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7488; ConvF(7.2, 7.2, 7.2) @ 3646.7 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, Right Head, Cheek, Mid-High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 15.43 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.08 W/kg
SAR(1 g) = 0.651 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1799M

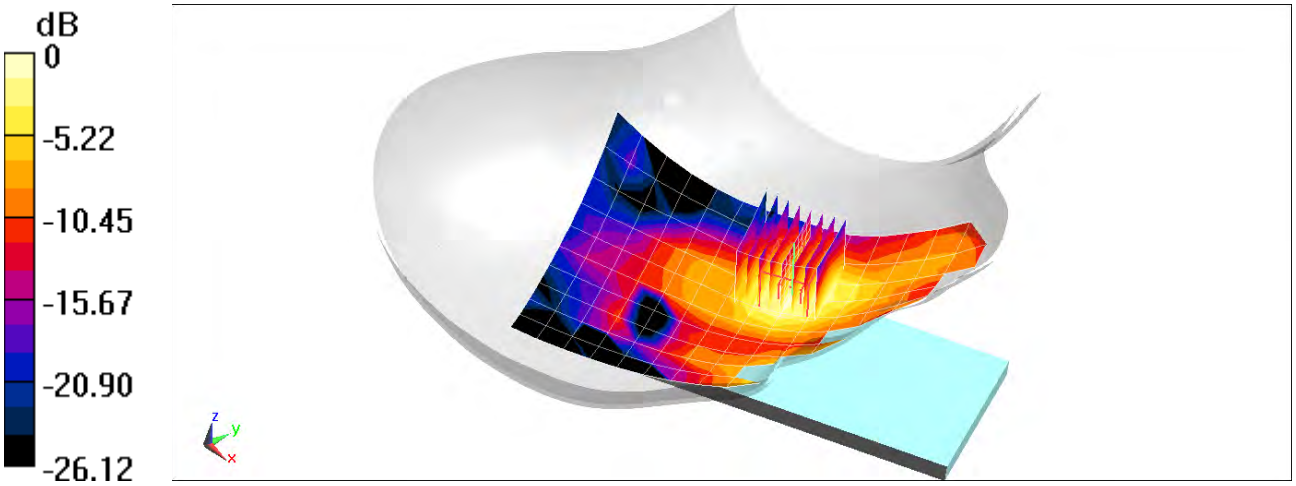
Communication System: UID 0, _LTE Band 41 (Class 2); Frequency: 2506 MHz; Duty Cycle: 1:2.31
Medium: 2450 Head Medium parameters used (interpolated):
f = 2506 MHz; σ = 1.828 S/m; ε_r = 38.492; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/07/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.5°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 PC2 with ULCA, Right Head, Cheek,
PCC: Ch. 39750, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset
SCC: Ch. 39948, 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 = 7.857 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.101 W/kg



0 dB = 0.143 W/kg = -8.45 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

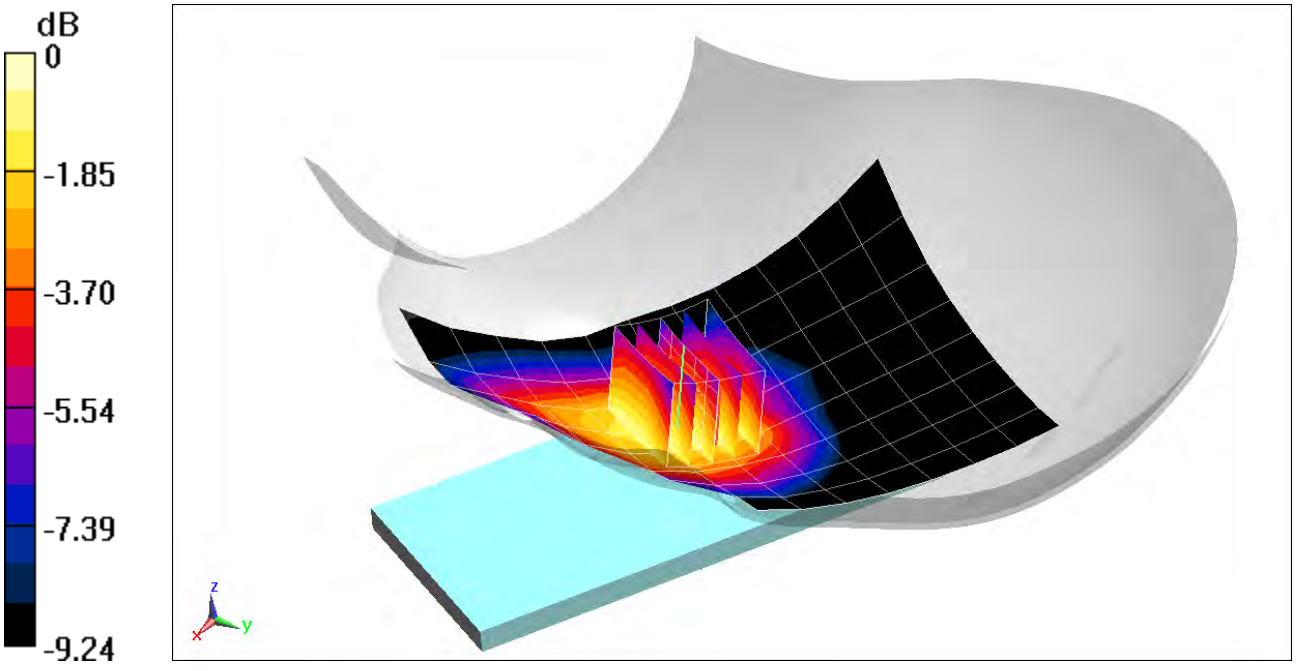
Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.852 S/m; ε_r = 40.787; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/11/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 680.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n71, Left Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 136100, 1 RB, 53 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.35 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.103 W/kg



0 dB = 0.117 W/kg = -9.32 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

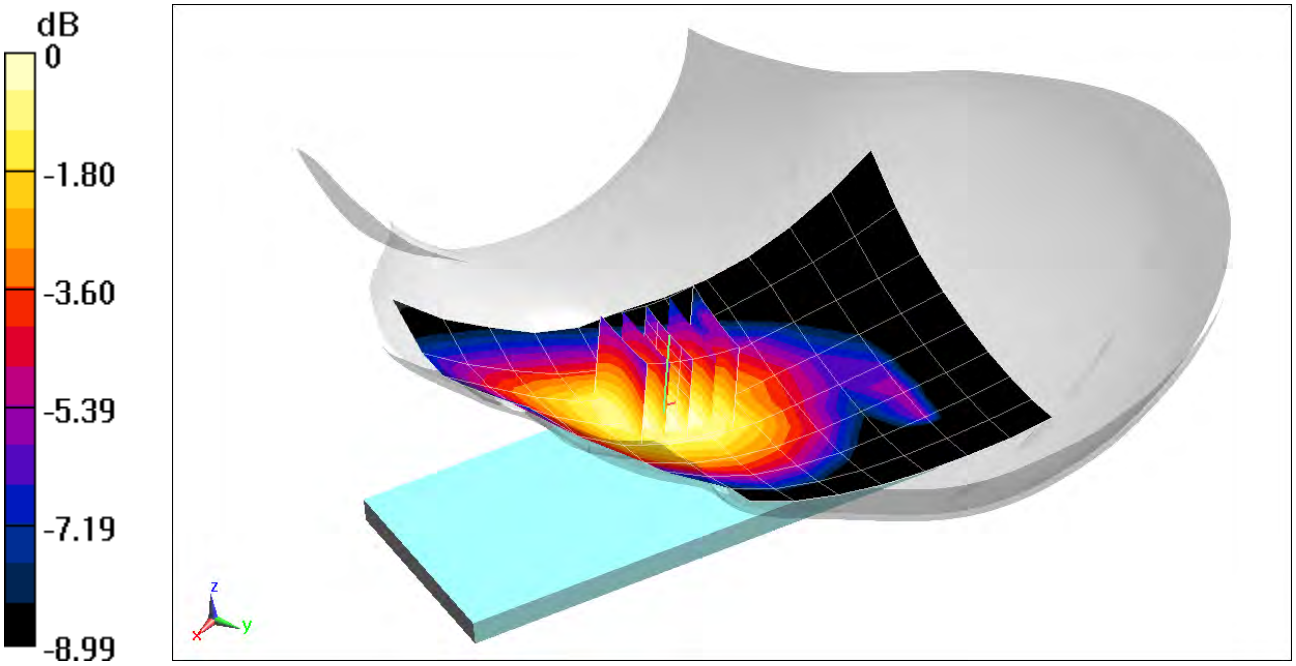
Communication System: UID 0, NR Band n12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.858 S/m; ε_r = 41.365; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/08/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 707.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n12, Left Head, Cheek, 15 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 141500, 1 RB, 40 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 = 11.84 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.132 W/kg
SAR(1 g) = 0.110 W/kg



0 dB = 0.126 W/kg = -9.00 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1837M

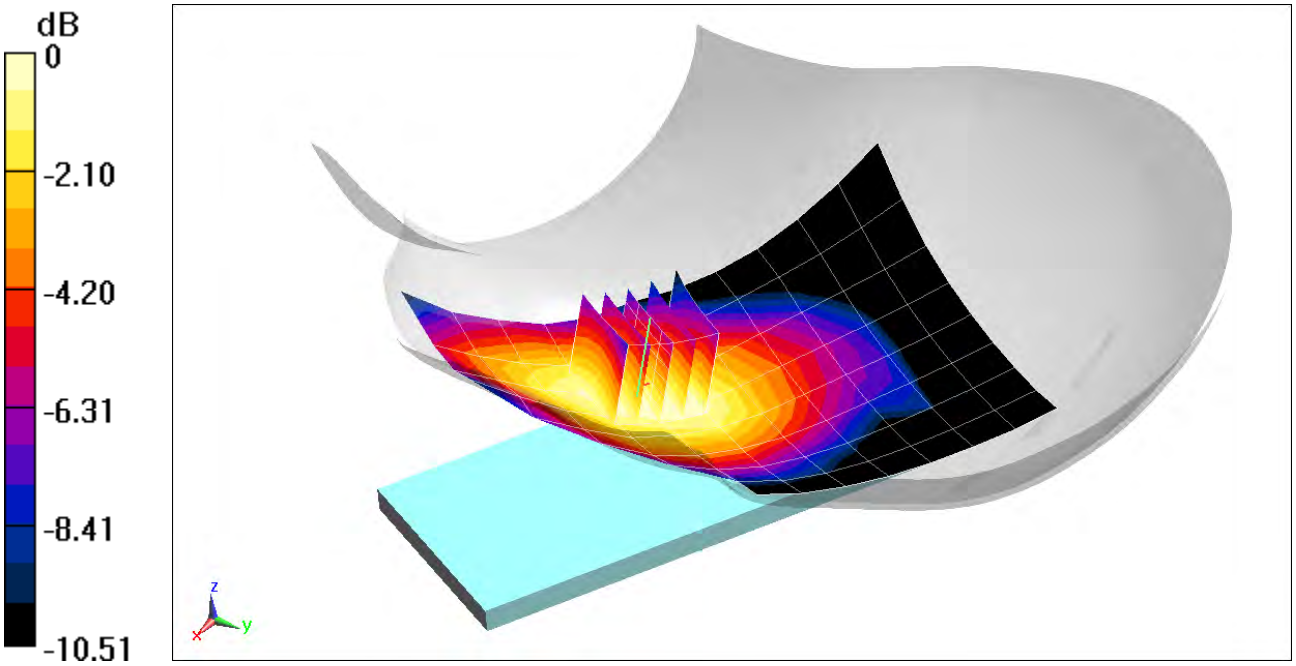
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.92 S/m; ε_r = 41.753; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°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: NR Band n5, Left Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 1 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 = 15.09 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.236 W/kg
SAR(1 g) = 0.183 W/kg



0 dB = 0.218 W/kg = -6.62 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1797M

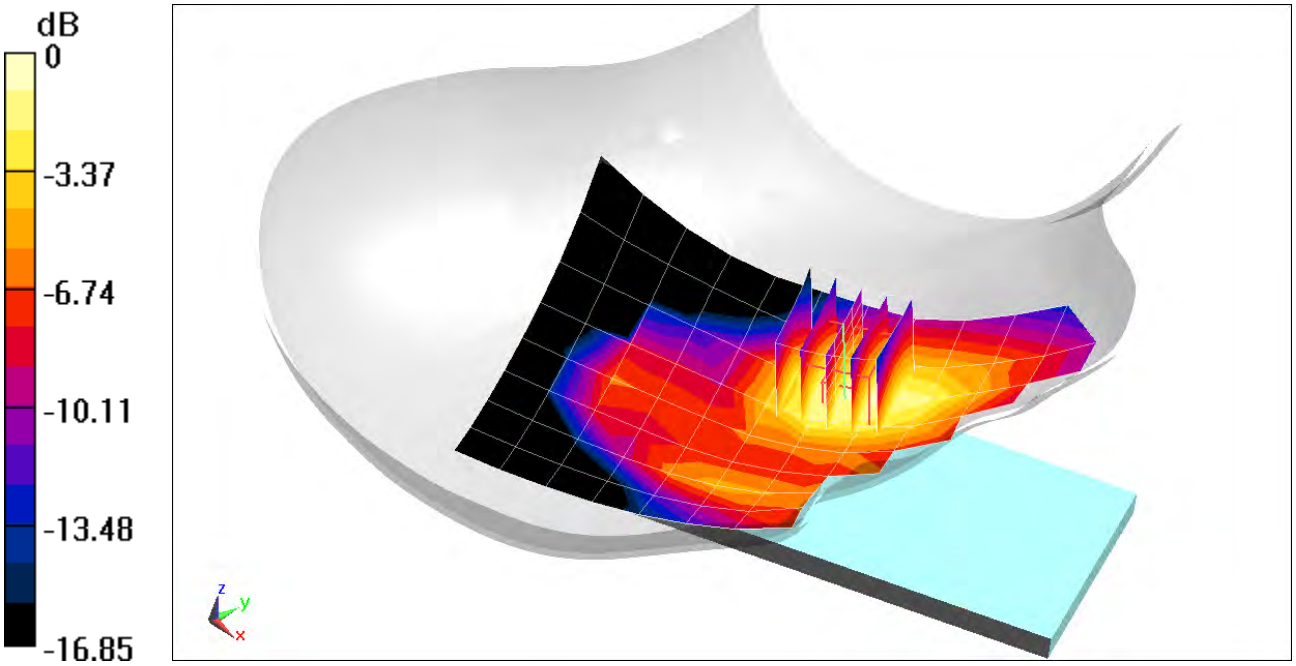
Communication System: UID 0, NR Band n66; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1720 MHz; σ = 1.347 S/m; ε_r = 39.524; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/08/2020; Ambient Temp: 21.6°C; Tissue Temp: 20.9°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: NR Band n66, Right Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 344000, 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 = 11.41 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.250 W/kg
SAR(1 g) = 0.158 W/kg



0 dB = 0.211 W/kg = -6.76 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1793M

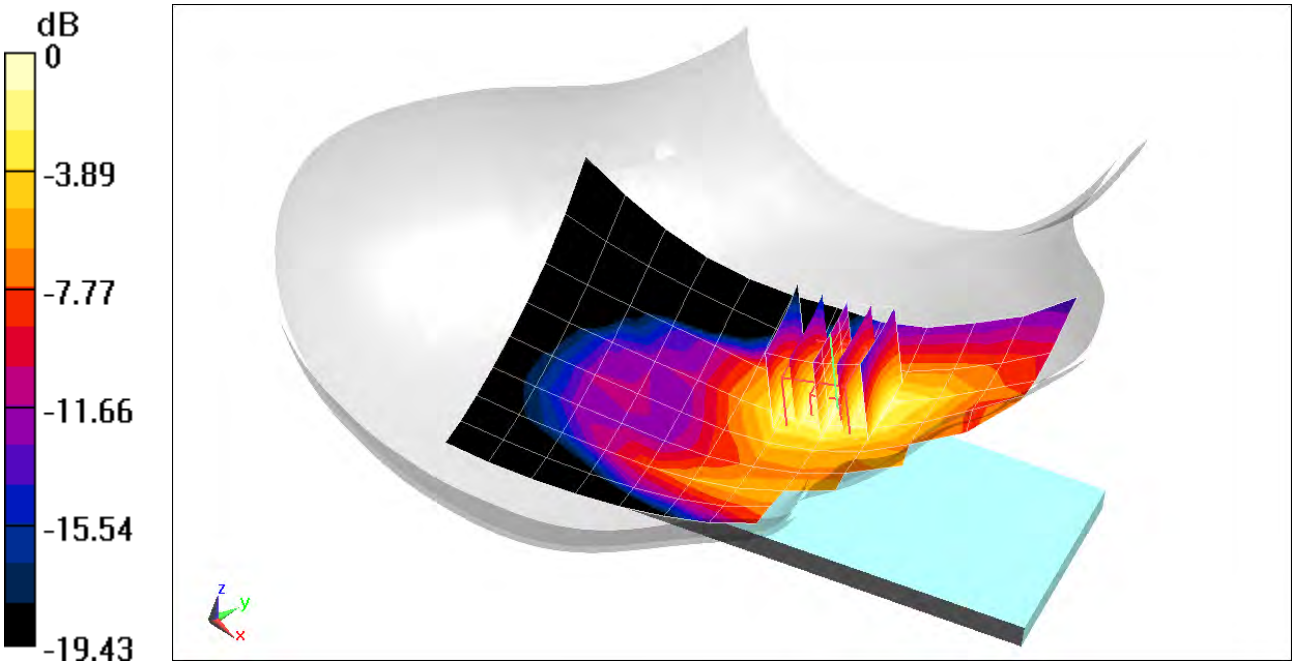
Communication System: UID 0, NR Band n25; Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1905 MHz; σ = 1.447 S/m; ε_r = 39.736; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1905 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 n25, Right Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 381000, 1 RB, 53 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 = 11.60 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.273 W/kg
SAR(1 g) = 0.168 W/kg



0 dB = 0.232 W/kg = -6.35 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1806M

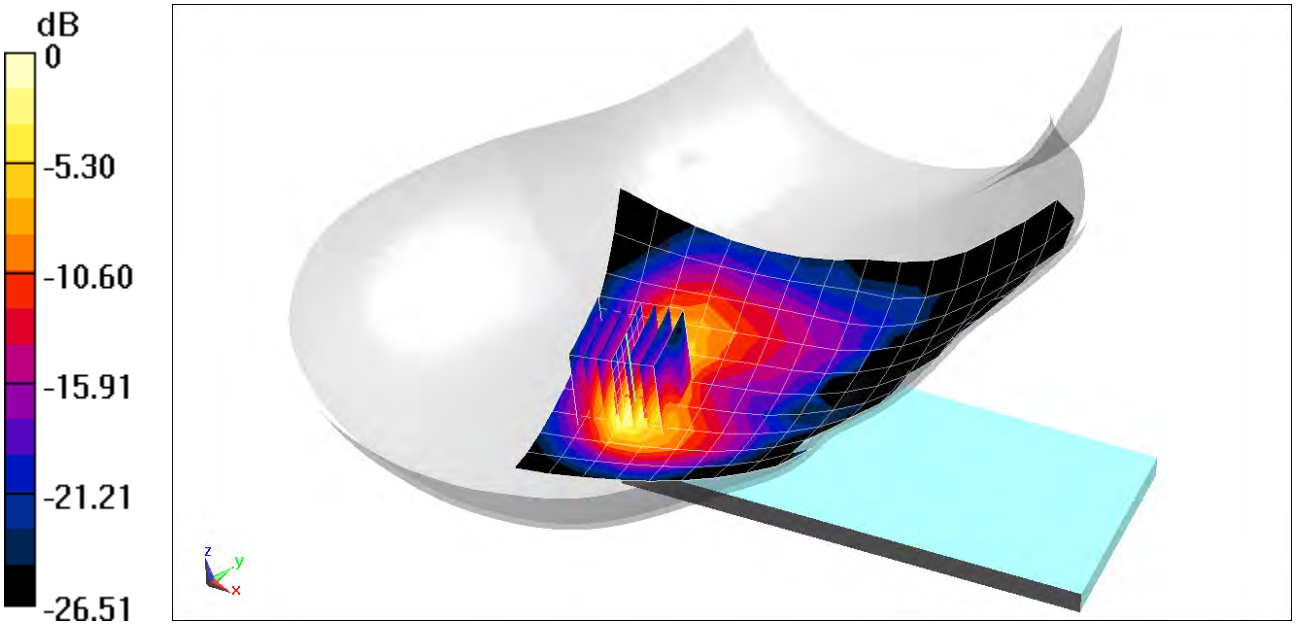
Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Head Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 1.904 S/m; ε_r = 39.85; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/03/2020; Ambient Temp: 23.6°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2592.99 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: NR Band n41, Right Head, Tilt, 100 MHz Bandwidth, CP-OFDM QPSK, Ch. 518598, 1 RB, 1 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 = 16.46 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.354 W/kg



0 dB = 0.685 W/kg = -1.64 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

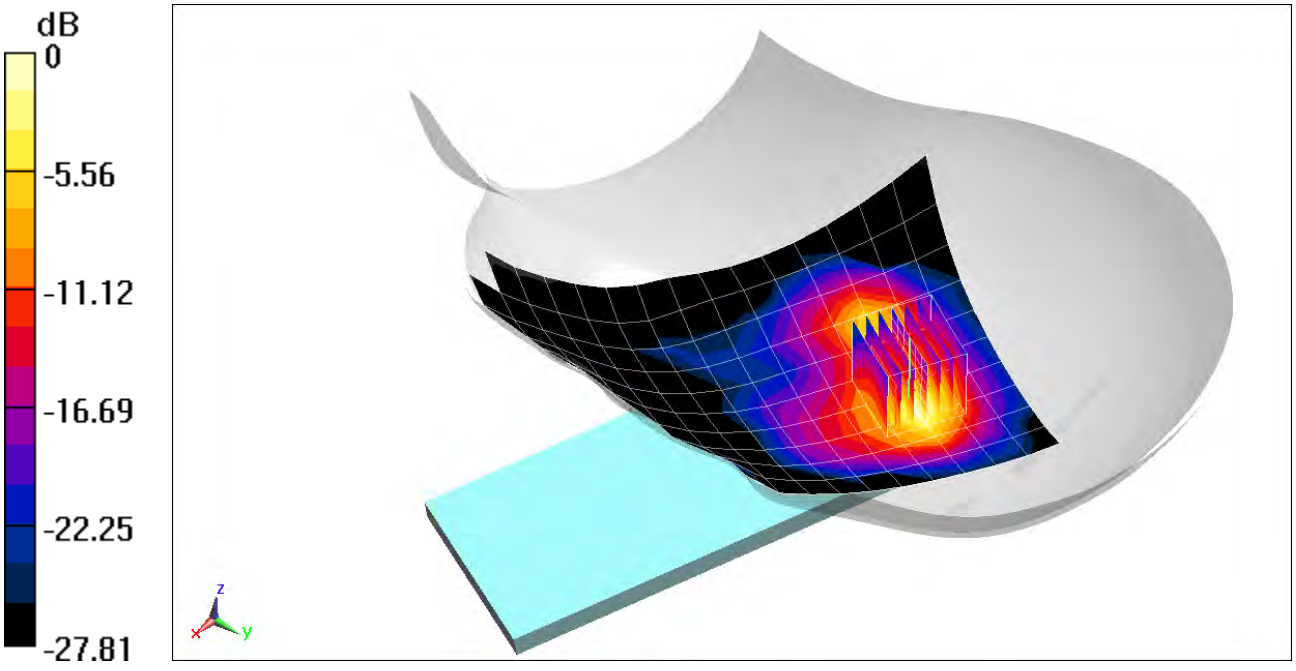
Communication System: UID 0, 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.785 S/m; ε_r = 40.072; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/03/2020; Ambient Temp: 23.6°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2437 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 Ant 1, 22 MHz Bandwidth, Left Head, Tilt, Ch 6, 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 = 12.49 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.916 W/kg
SAR(1 g) = 0.411 W/kg



0 dB = 0.734 W/kg = -1.34 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

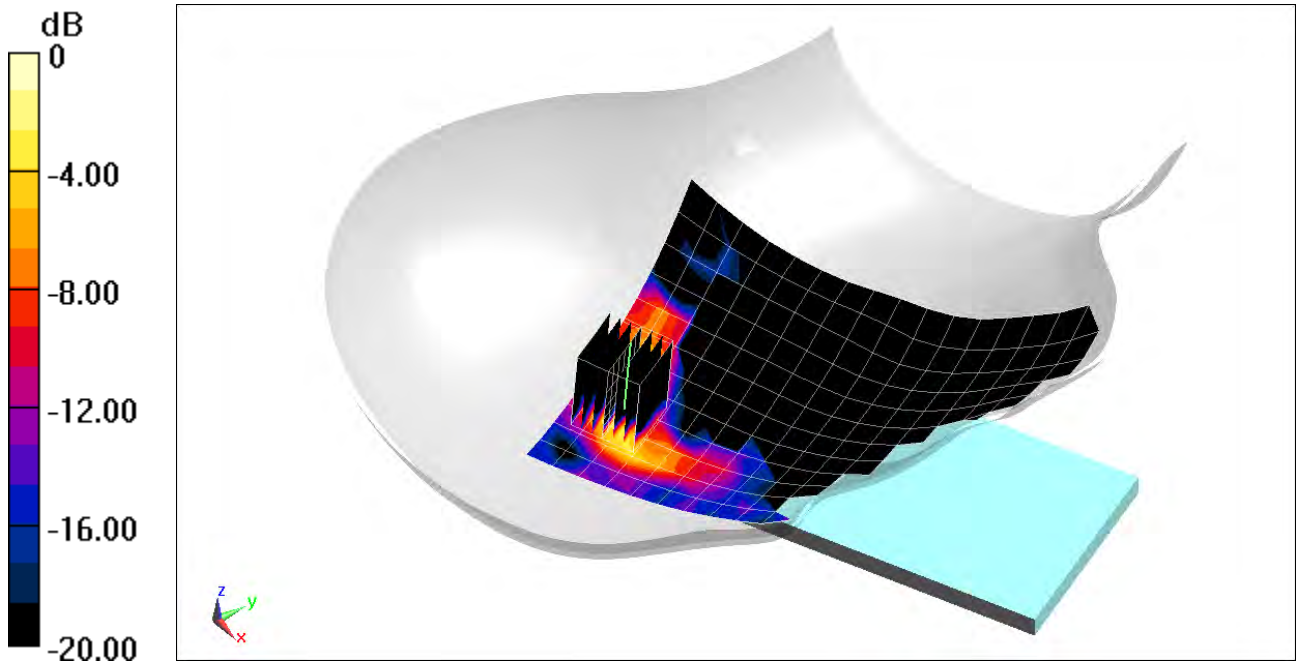
Communication System: UID 0, IEEE 802.11ac; Frequency: 5290 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5290 MHz; σ = 4.539 S/m; ε_r = 37.078; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07/10/2020; Ambient Temp: 21.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7357; ConvF(5.5, 5.5, 5.5) @ 5290 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Right 20; Type: QD 000 P40 CD; Serial: 1759
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

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

Area Scan (9x8x1): 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 = 5.153 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.603 W/kg
SAR(1 g) = 0.129 W/kg



0 dB = 0.356 W/kg = -4.49 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

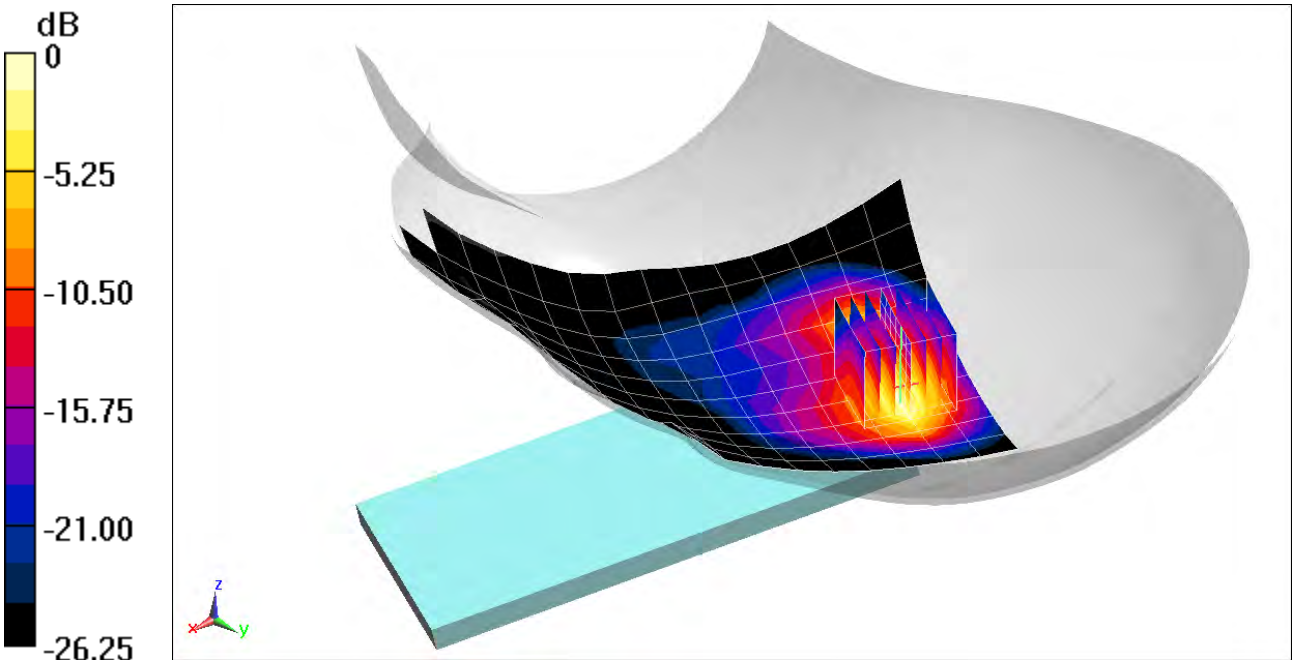
Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.294
Medium: 2450 Head Medium parameters used:
f = 2480 MHz; σ = 1.798 S/m; ε_r = 40.148; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/10/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2480 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 78, 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 = 17.57 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.483 W/kg



0 dB = 0.865 W/kg = -0.63 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

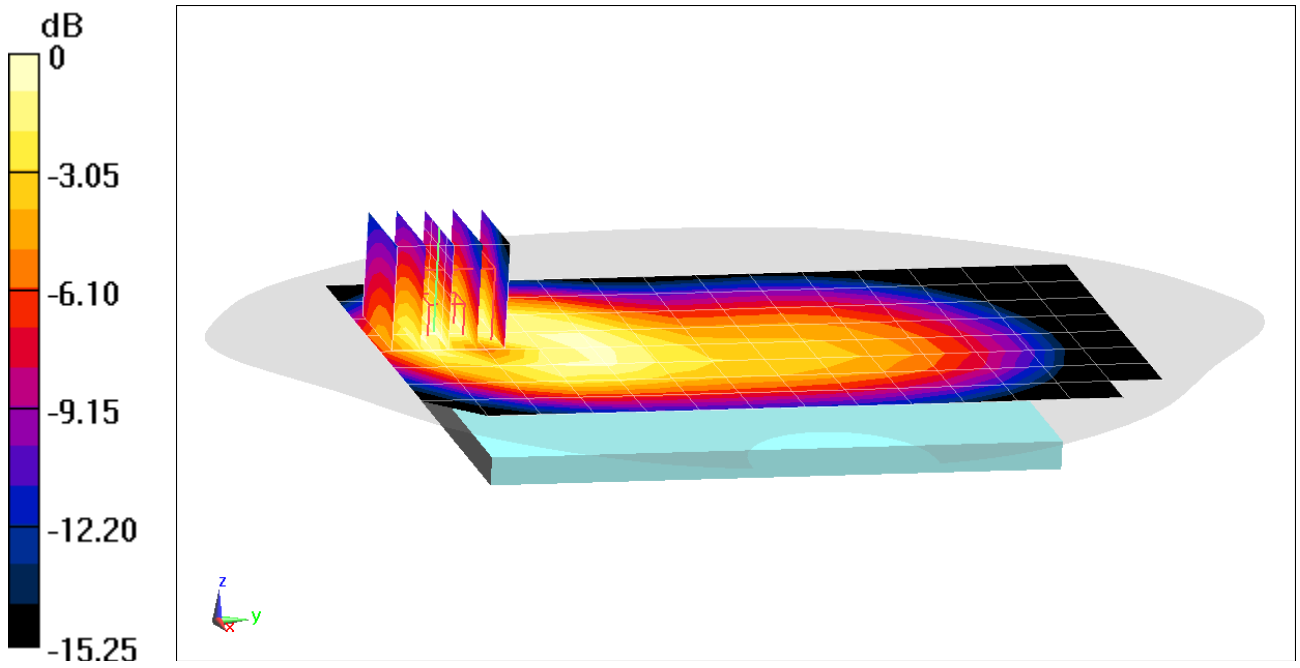
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.94 S/m; ε_r = 53.196; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 820.1 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 BC10, 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 = 21.07 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.634 W/kg
SAR(1 g) = 0.386 W/kg



0 dB = 0.538 W/kg = -2.69 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

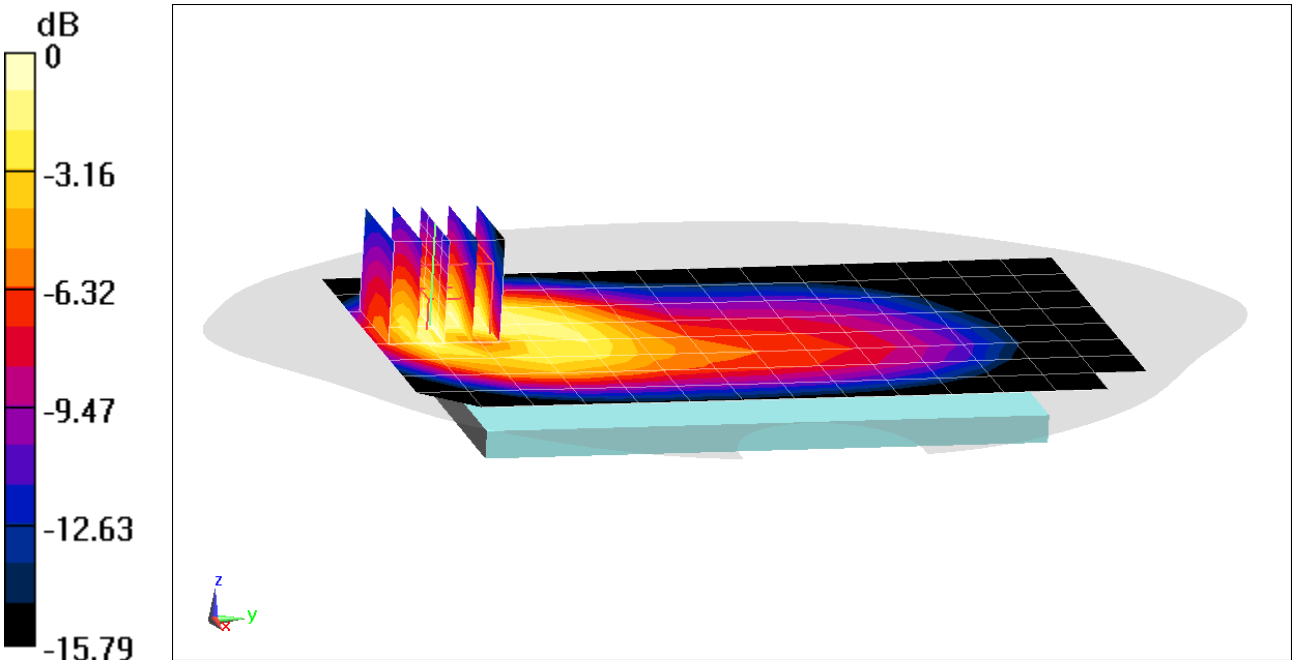
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.94 S/m; ε_r = 53.196; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 820.1 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 BC10, 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 = 29.75 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.770 W/kg



0 dB = 1.12 W/kg = 0.49 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

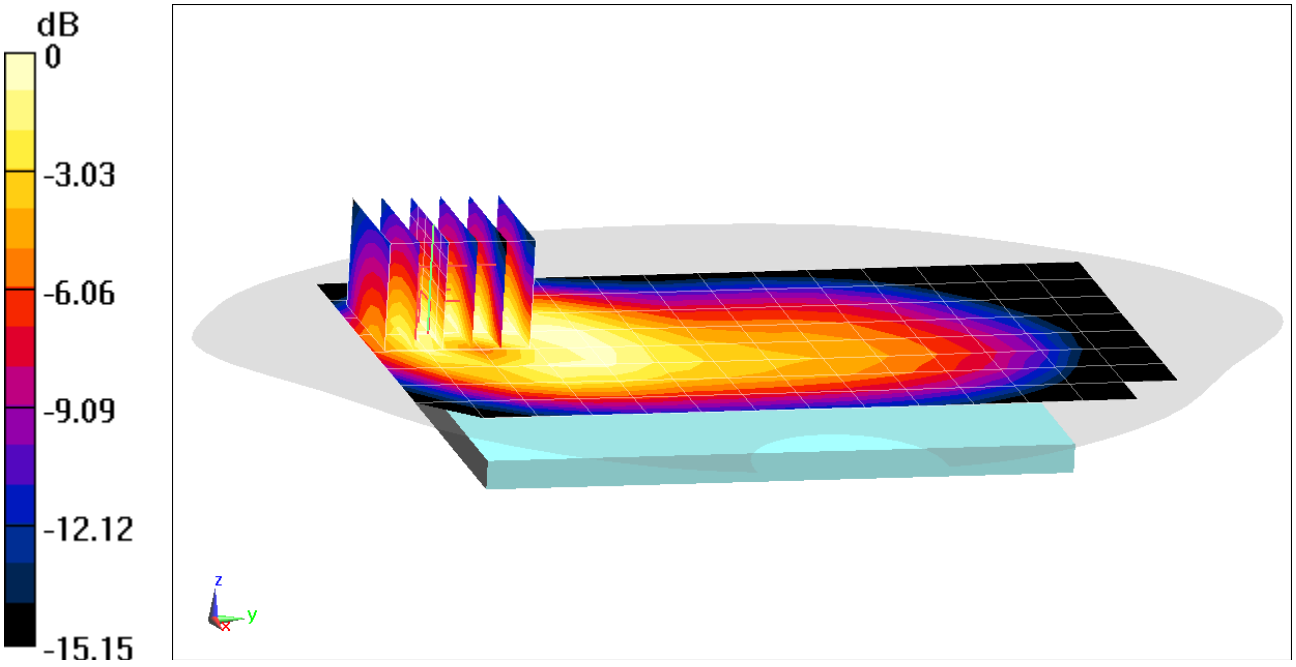
Communication System: UID 0, CDMA; Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 824.7 MHz; σ = 0.945 S/m; ε_r = 53.147; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 824.7 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, Low.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 = 20.87 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.643 W/kg
SAR(1 g) = 0.391 W/kg



0 dB = 0.536 W/kg = -2.71 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

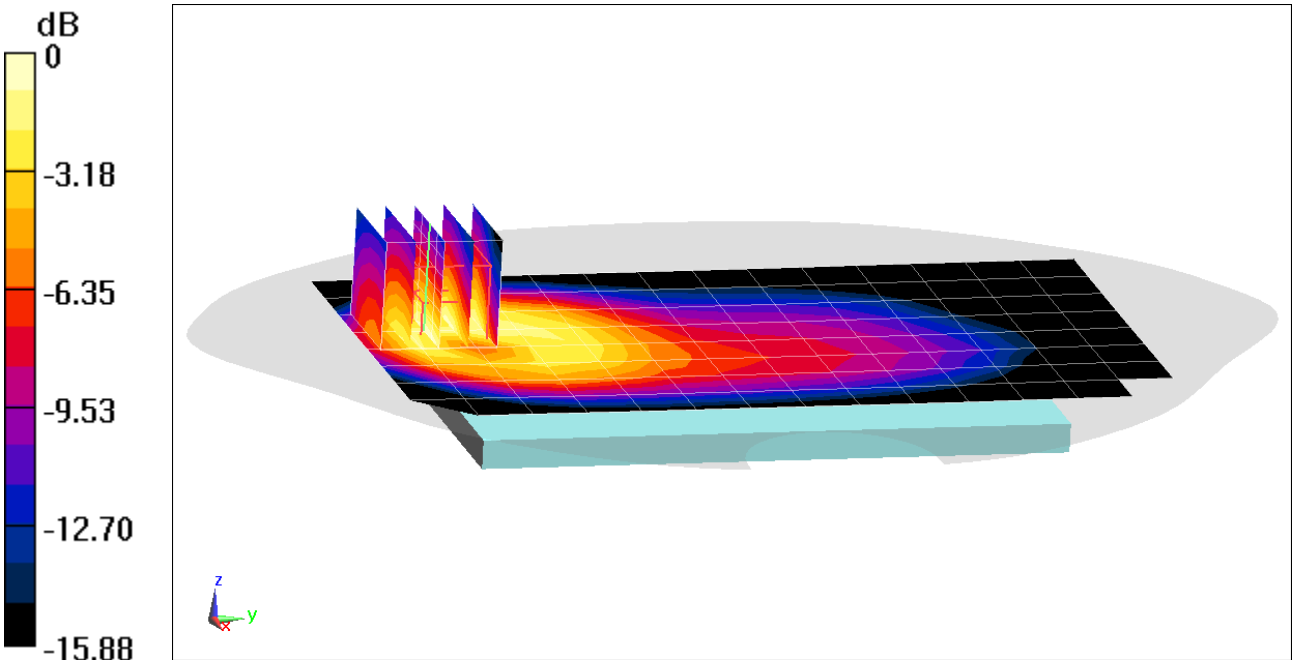
Communication System: UID 0, CDMA; Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 824.7 MHz; σ = 0.945 S/m; ε_r = 53.147; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 824.7 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, Low.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 = 31.73 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.882 W/kg



0 dB = 1.28 W/kg = 1.07 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

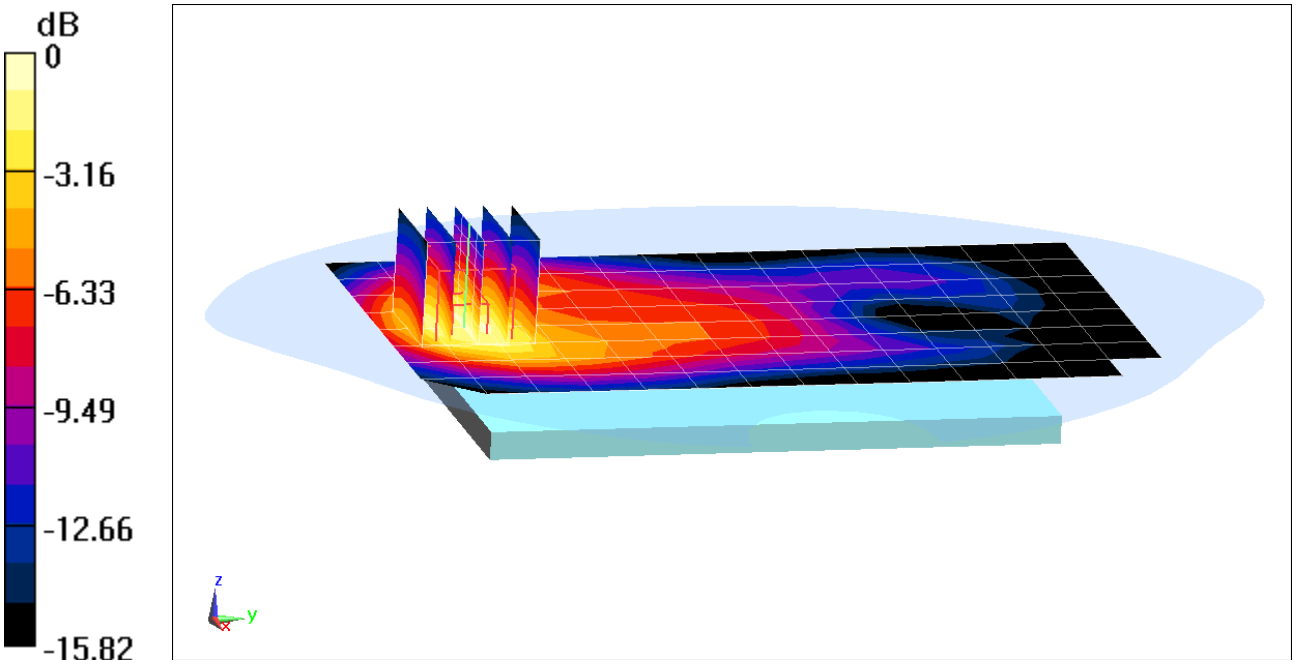
Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.536 S/m; ε_r = 52.224; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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: PCS CDMA, 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 = 22.57 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.705 W/kg



0 dB = 1.01 W/kg = 0.04 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

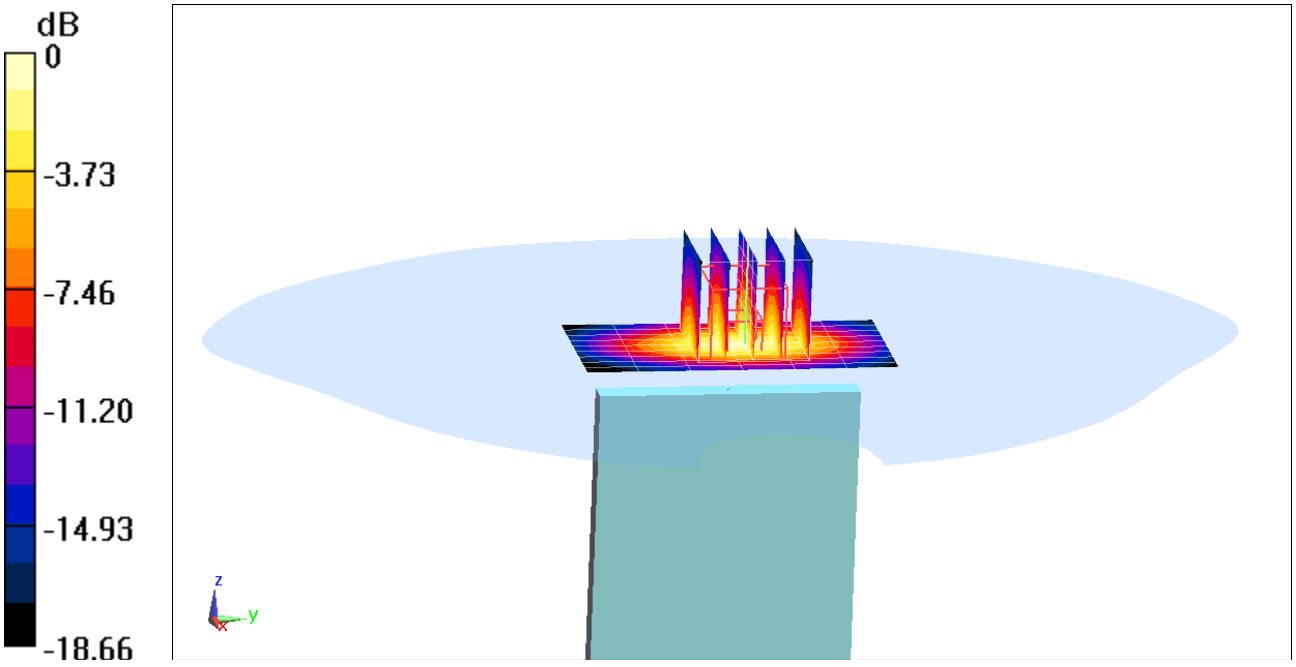
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
$f = 1908.75$ MHz; $\sigma = 1.569$ S/m; $\varepsilon_r = 52.093$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 = 28.71 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.13 W/kg



0 dB = 1.72 W/kg = 2.36 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1802M

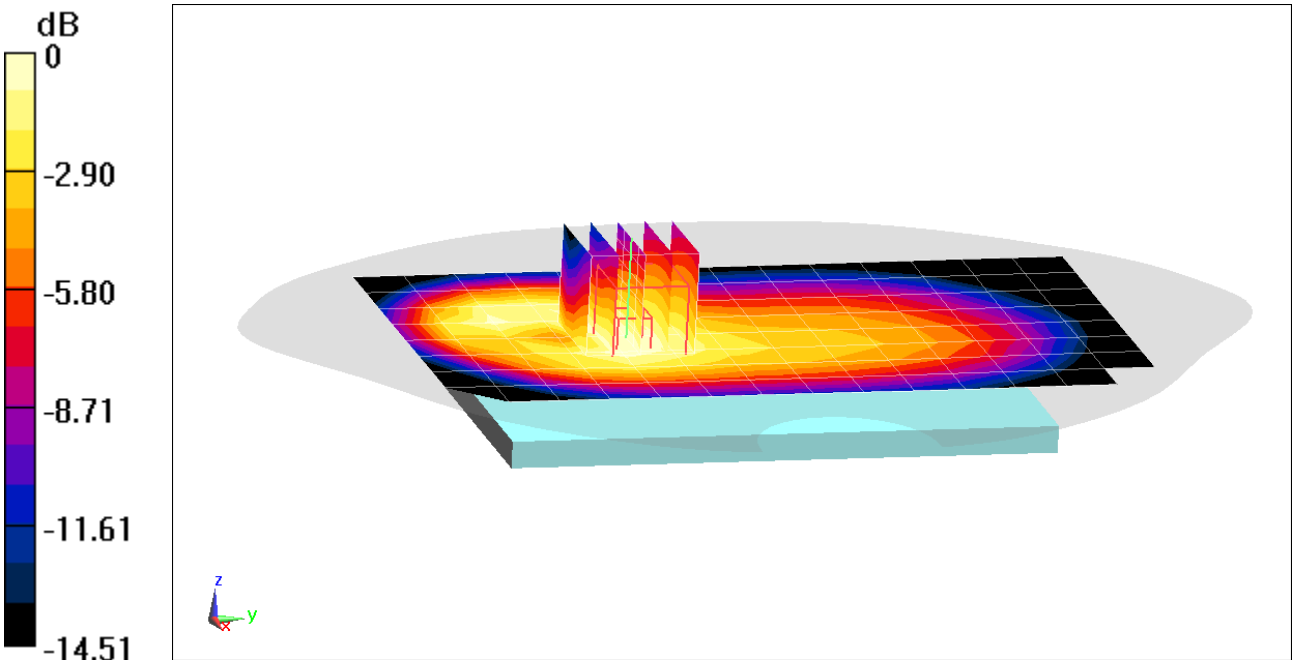
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.965 S/m; ε_r = 53.508; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°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: GSM 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 = 15.16 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.303 W/kg
SAR(1 g) = 0.212 W/kg



0 dB = 0.269 W/kg = -5.70 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1802M

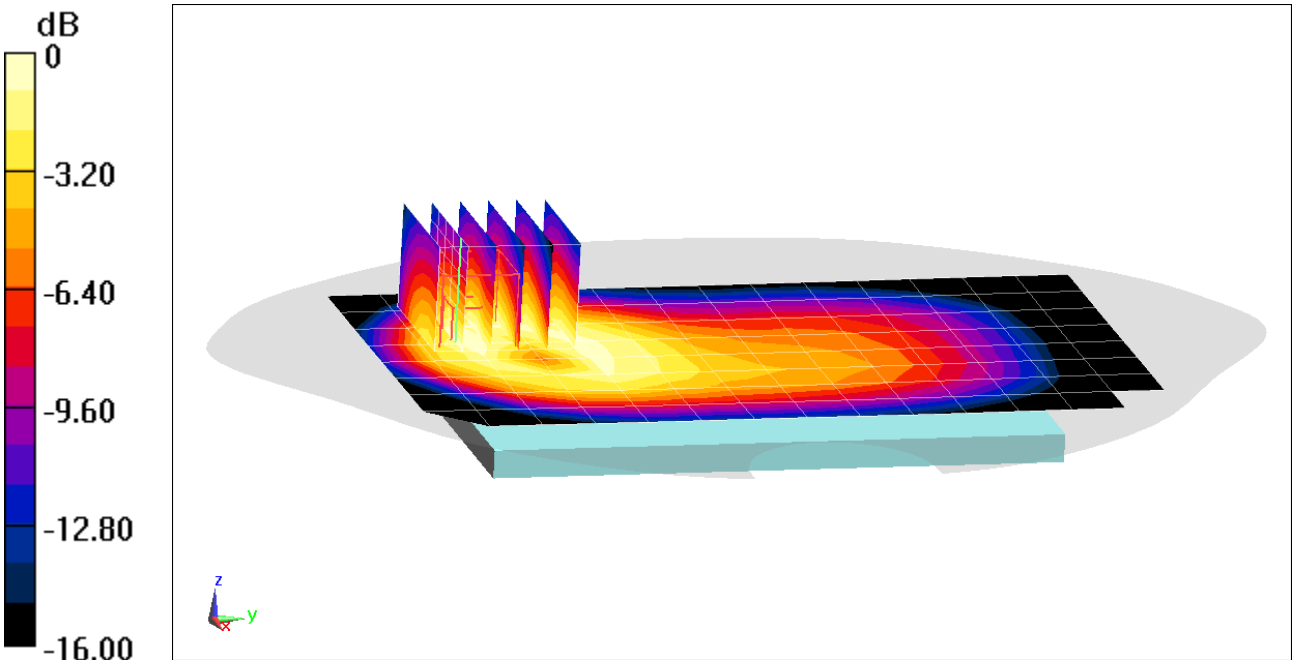
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.965 S/m; ε_r = 53.508; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°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: 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 = 19.20 V/m; Power Drift = -0.20 dB
Peak SAR (extrapolated) = 0.558 W/kg
SAR(1 g) = 0.324 W/kg



0 dB = 0.458 W/kg = -3.39 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

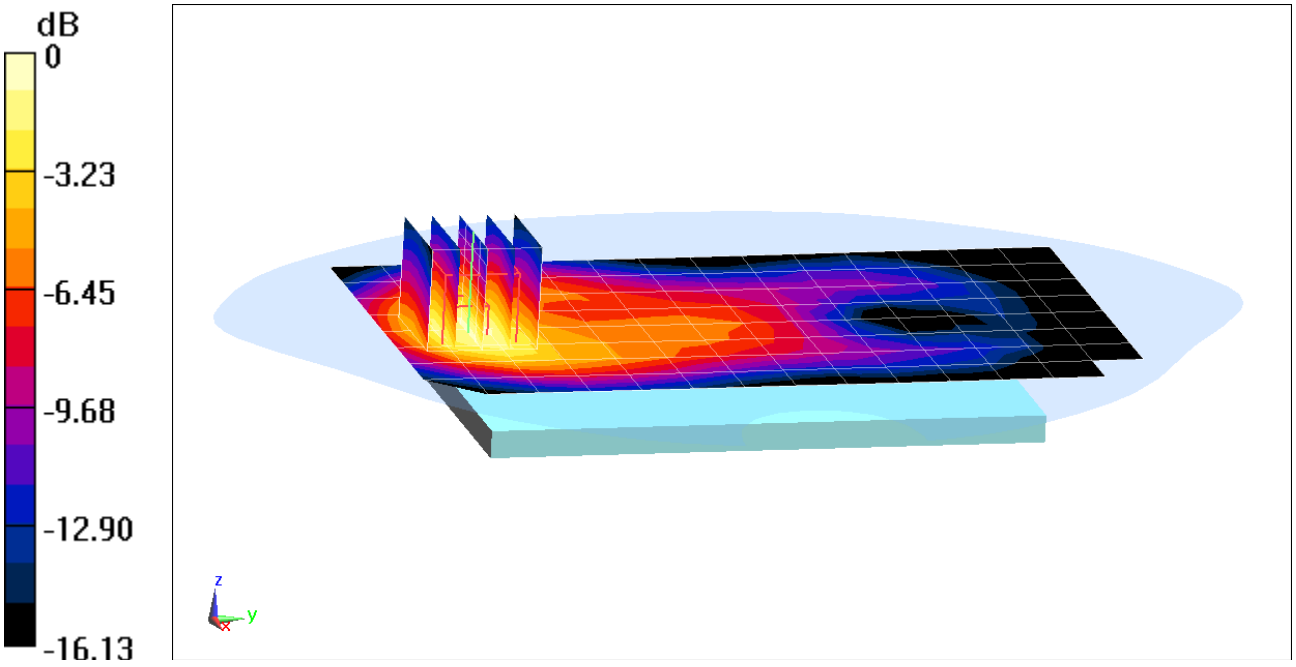
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.533 S/m; ε_r = 51.816; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/31/2020; Ambient Temp: 23.3°C; Tissue Temp: 24.0°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 = 14.06 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.449 W/kg
SAR(1 g) = 0.264 W/kg



0 dB = 0.384 W/kg = -4.16 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

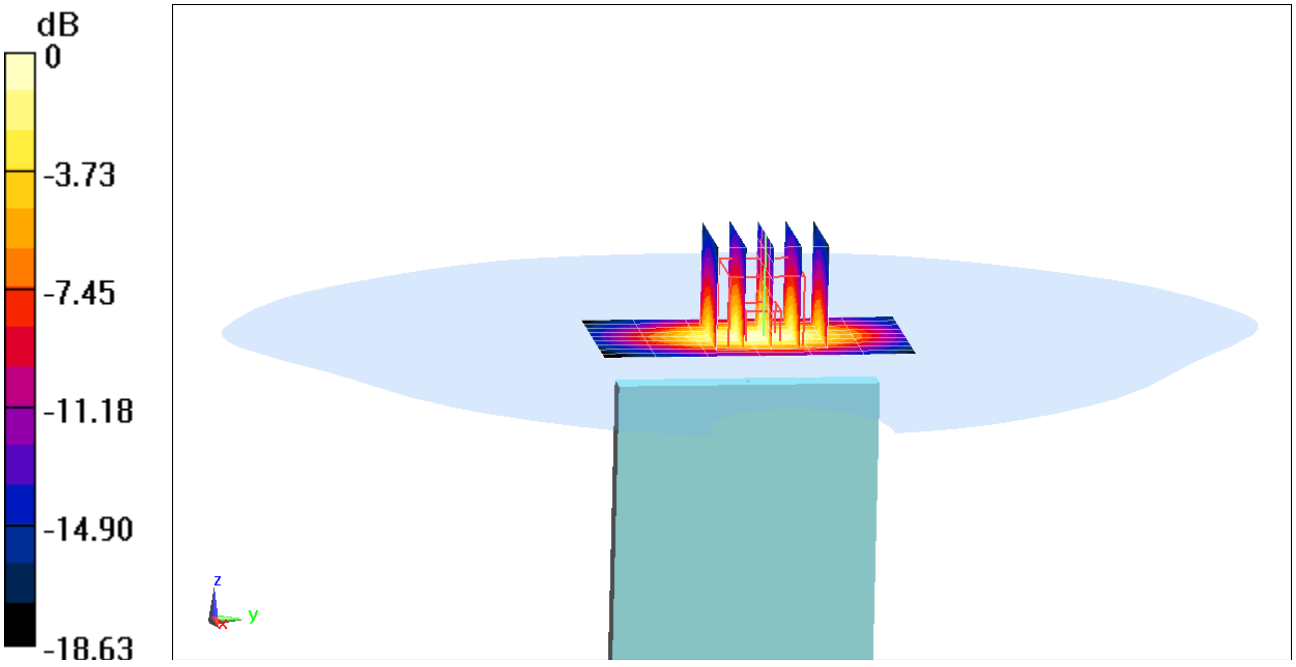
Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.076
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.533 S/m; ε_r = 51.816; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/31/2020; Ambient Temp: 23.3°C; Tissue Temp: 24.0°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: GPRS 1900, Body SAR, Bottom Edge, Mid.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 = 26.36 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.924 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

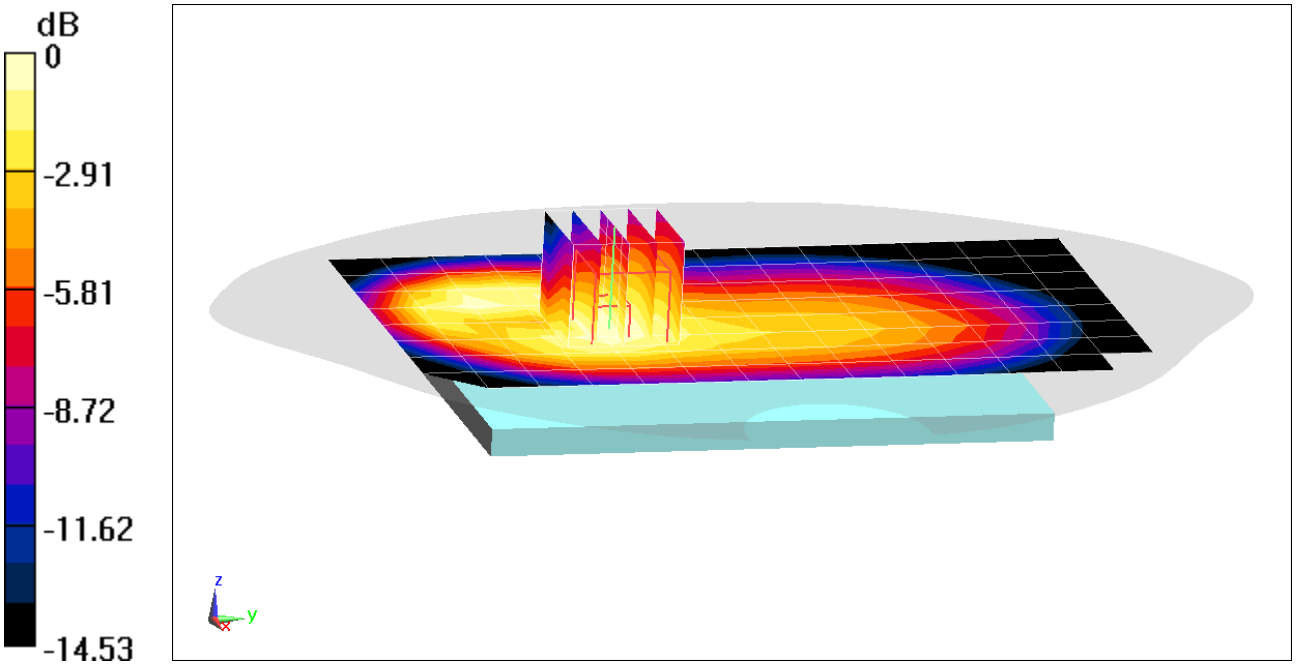
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.965 S/m; ε_r = 53.508; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°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 = 17.95 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.419 W/kg
SAR(1 g) = 0.296 W/kg



0 dB = 0.372 W/kg = -4.29 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1842M

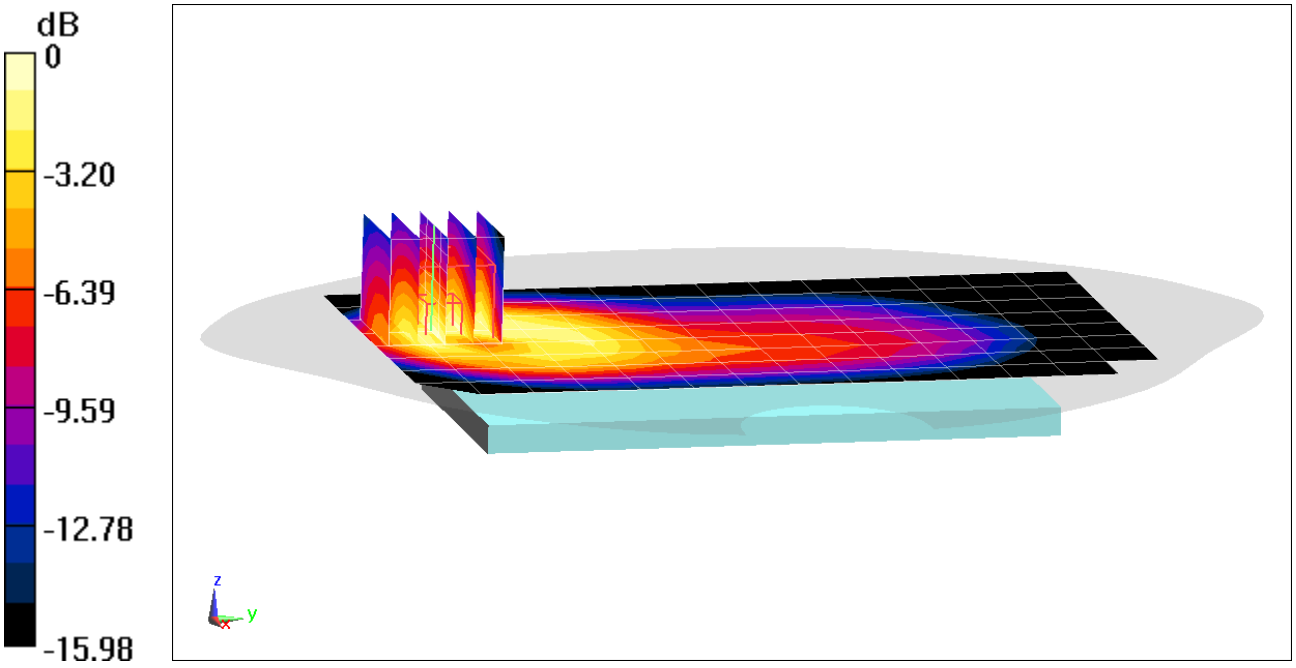
Communication System: UID 0, UMTS; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 826.4 MHz; σ = 0.953 S/m; ε_r = 53.62; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 826.4 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, Low.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 = 29.20 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.753 W/kg



0 dB = 1.08 W/kg = 0.33 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

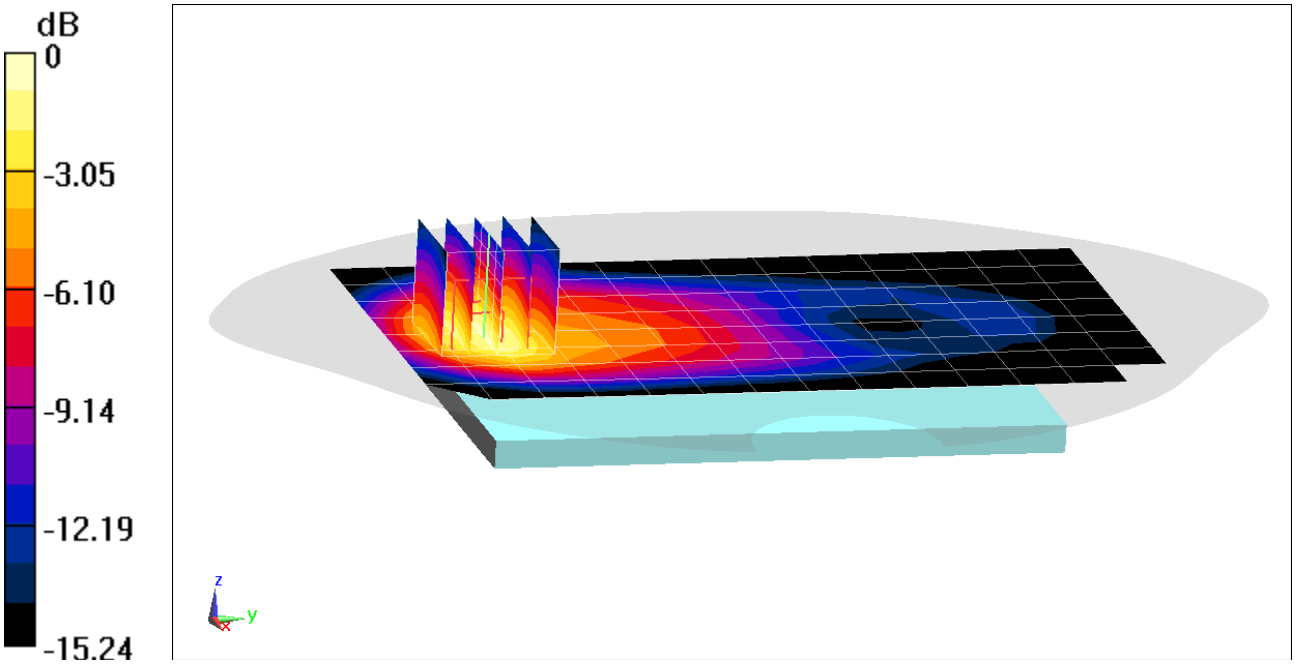
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.529 S/m; ε_r = 52.181; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/25/2020; Ambient Temp: 21.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1752.6 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: UMTS 1750, 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 = 24.13 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.802 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1828M

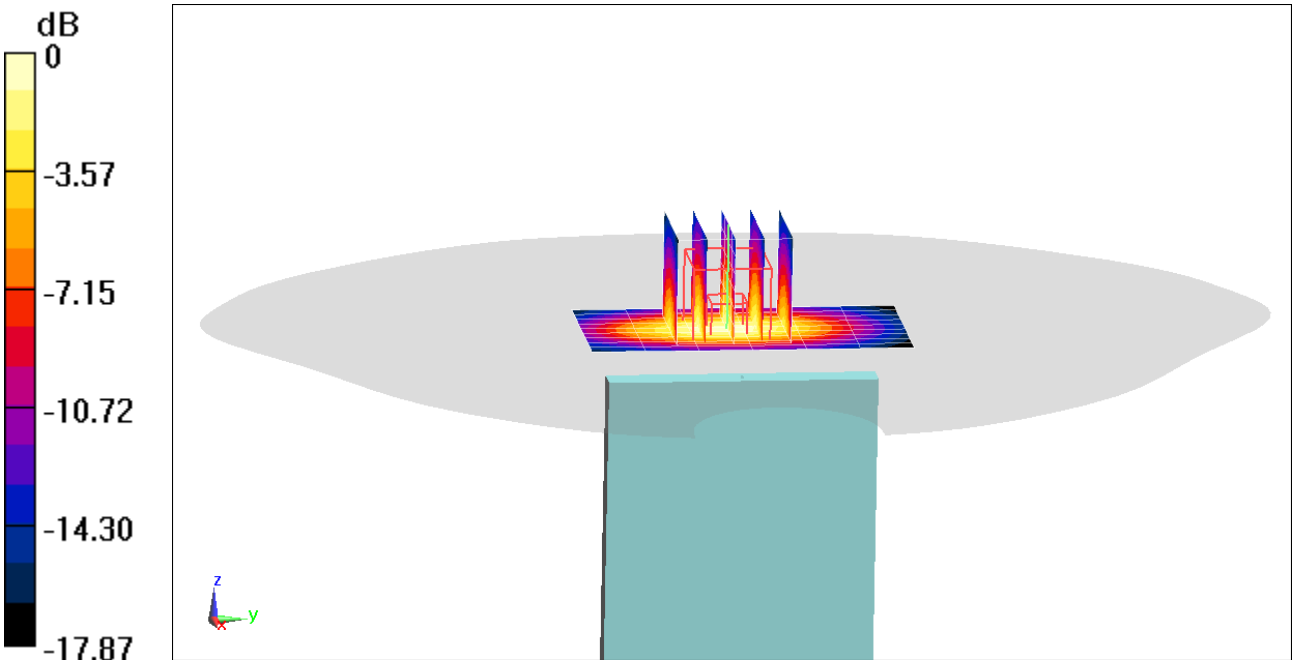
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.512 S/m; ε_r = 51.405; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1752.6 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: UMTS 1750, 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 = 27.83 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 1.03 W/kg



0 dB = 1.52 W/kg = 1.82 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

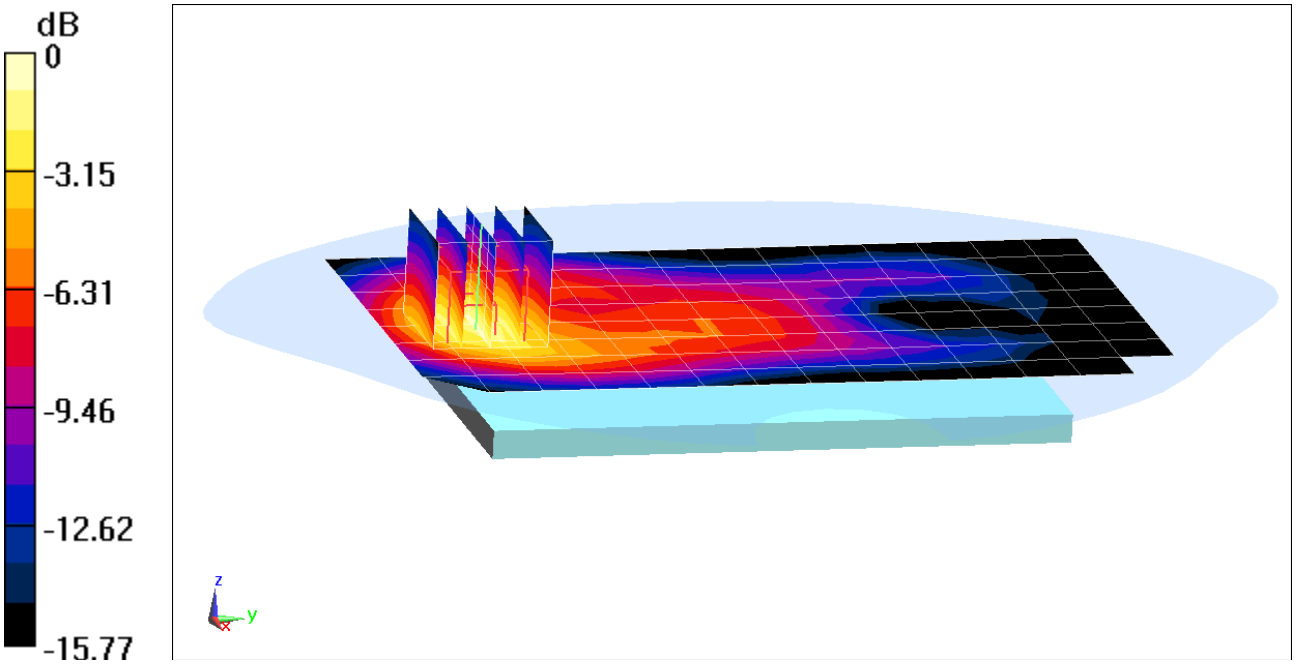
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.568 S/m; ε_r = 52.099; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 = 21.15 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.631 W/kg



0 dB = 0.896 W/kg = -0.48 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

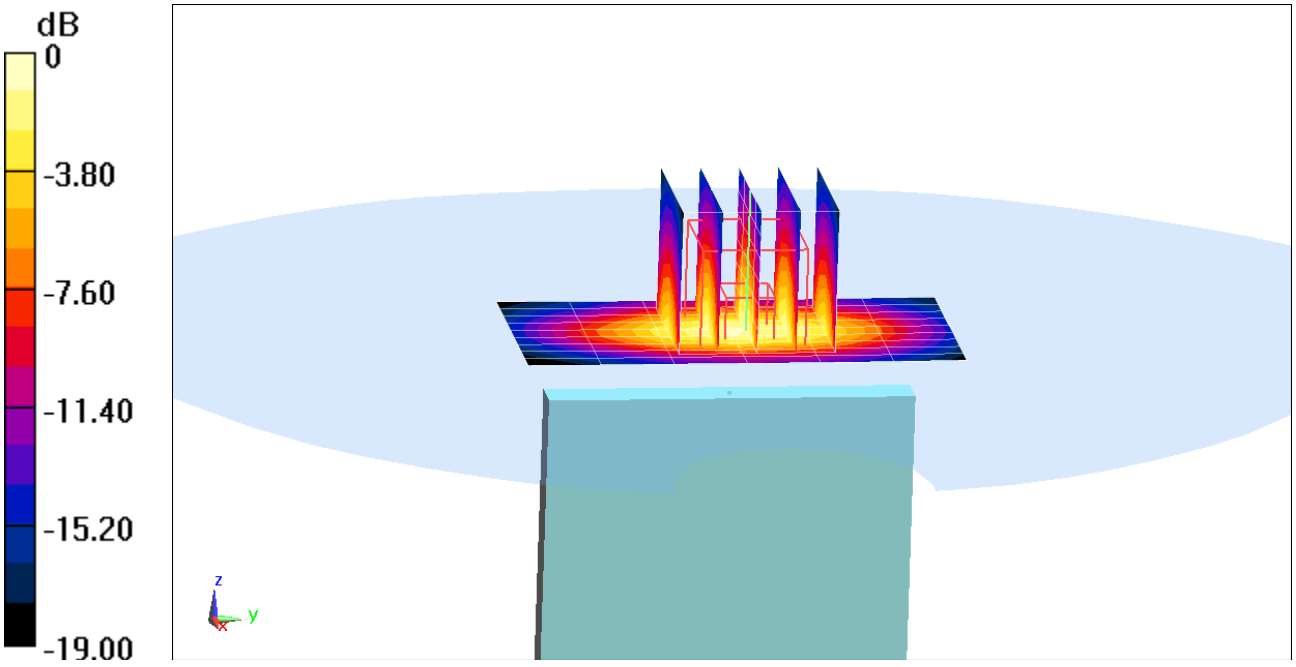
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.568 S/m; ε_r = 52.099; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 = 29.32 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.15 W/kg
SAR(1 g) = 1.18 W/kg



0 dB = 1.81 W/kg = 2.58 dBW/kg

PCTEST

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

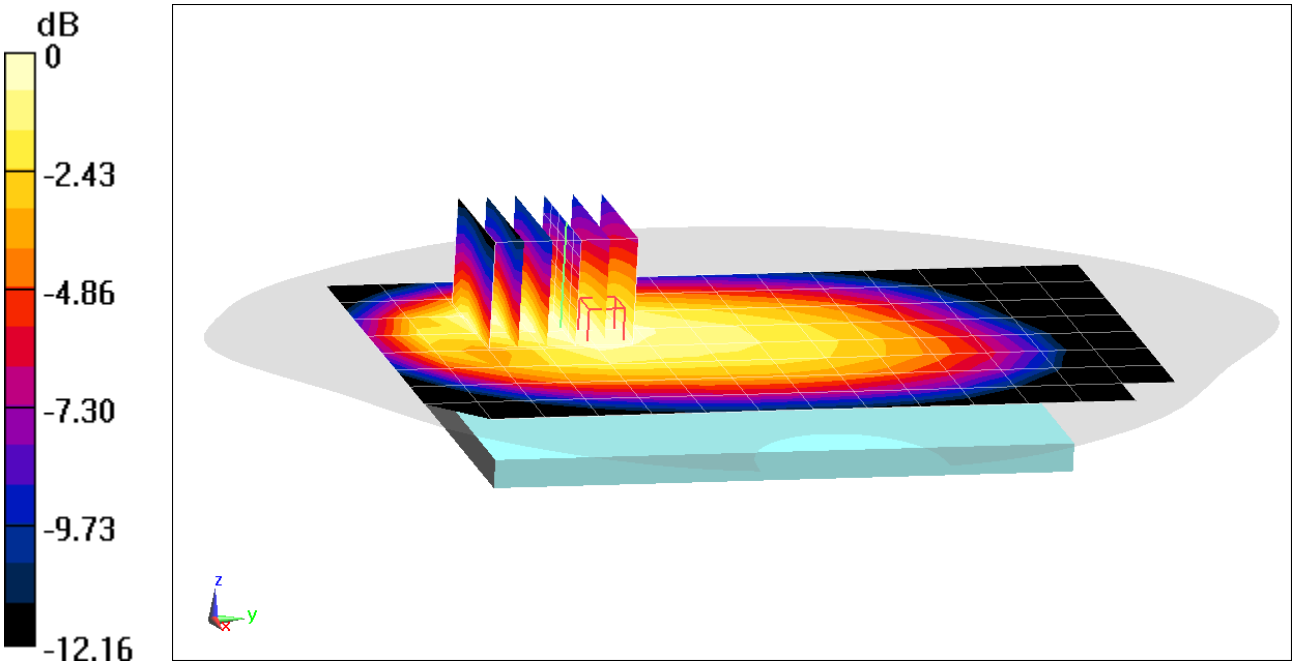
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.915 S/m; ε_r = 56.969; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 680.5 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 71, Body SAR, Back side, Mid.ch, 20 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 = 13.31 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.246 W/kg
SAR(1 g) = 0.167 W/kg



0 dB = 0.213 W/kg = -6.72 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

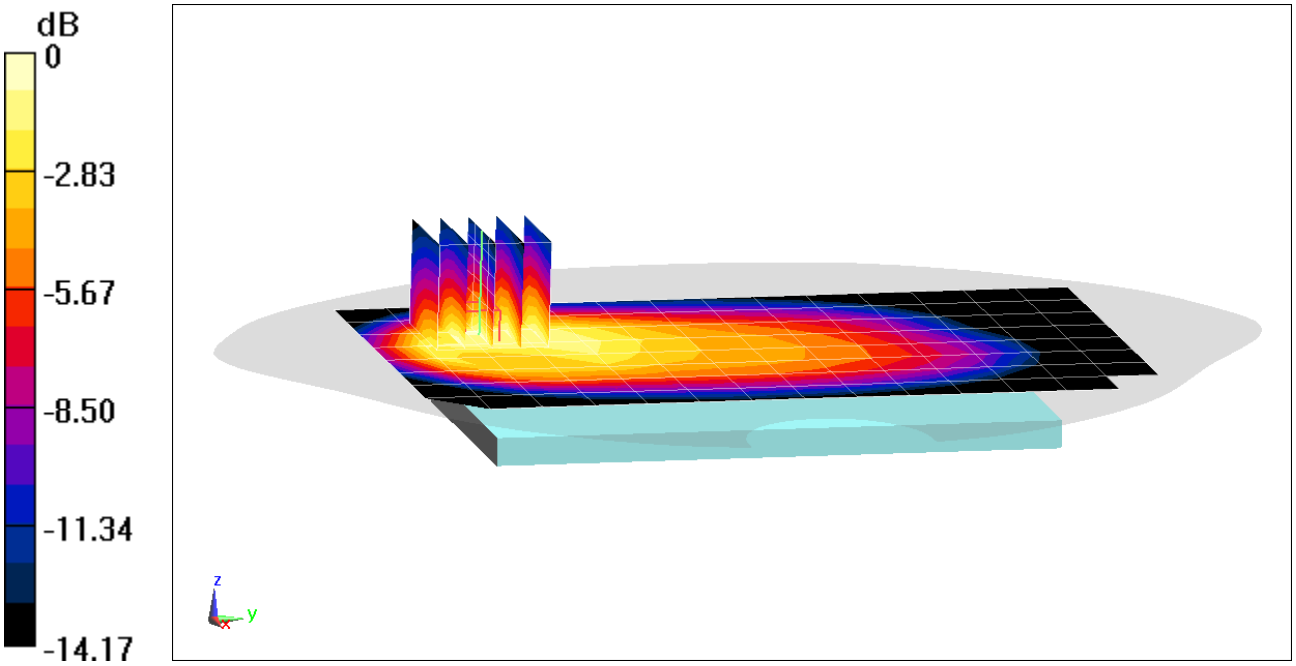
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.915 S/m; ε_r = 56.969; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 680.5 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 71, Body SAR, Back side, Mid.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 = 18.28 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.549 W/kg
SAR(1 g) = 0.291 W/kg



0 dB = 0.439 W/kg = -3.58 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

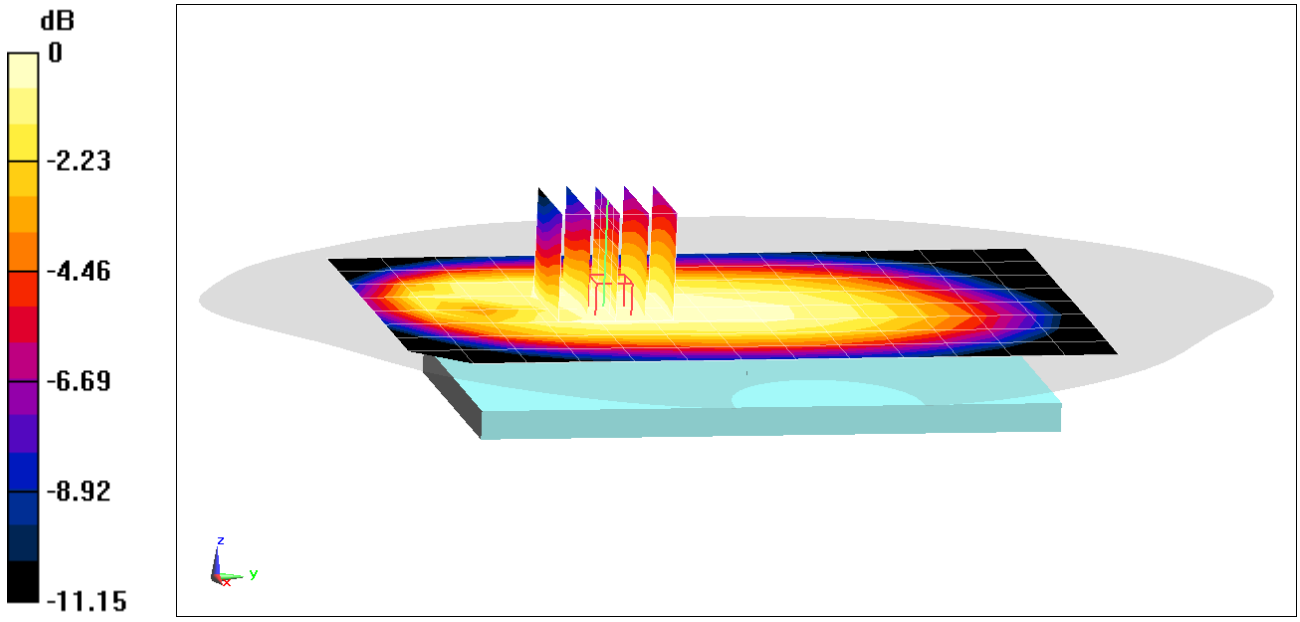
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 54.451; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 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: LTE Band 12, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 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 = 16.25 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.235 W/kg



0 dB = 0.280 W/kg = -5.53 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

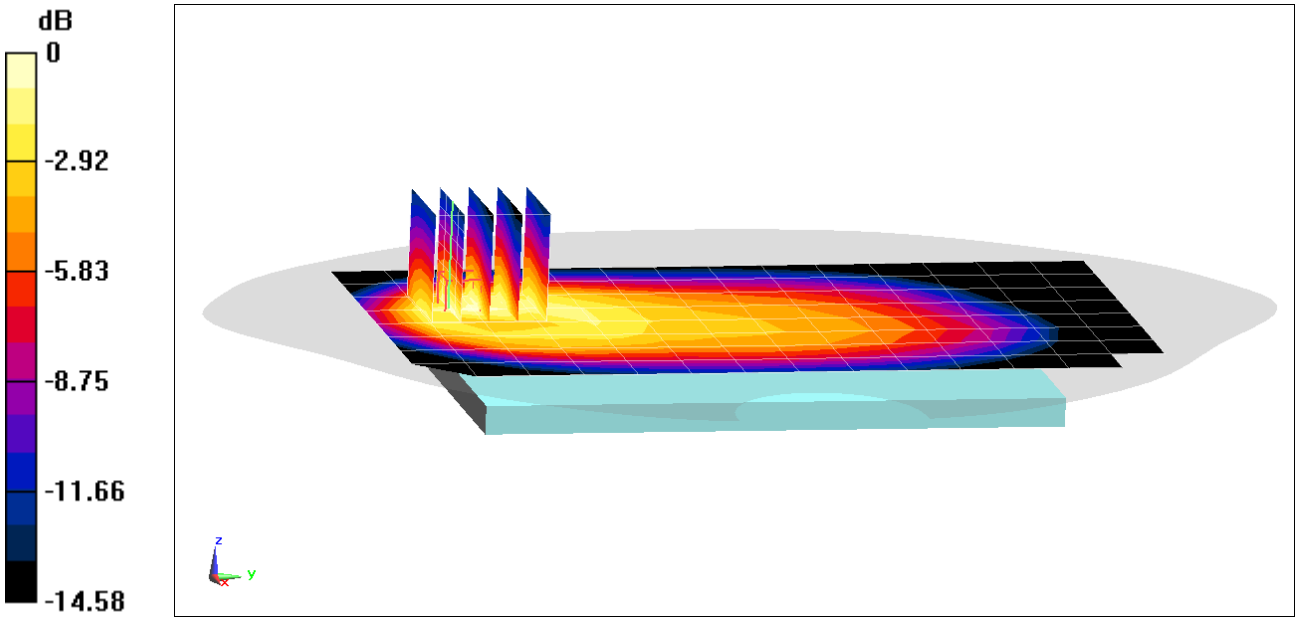
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 54.451; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 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: LTE Band 12, 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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.39 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.705 W/kg
SAR(1 g) = 0.389 W/kg



0 dB = 0.577 W/kg = -2.39 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

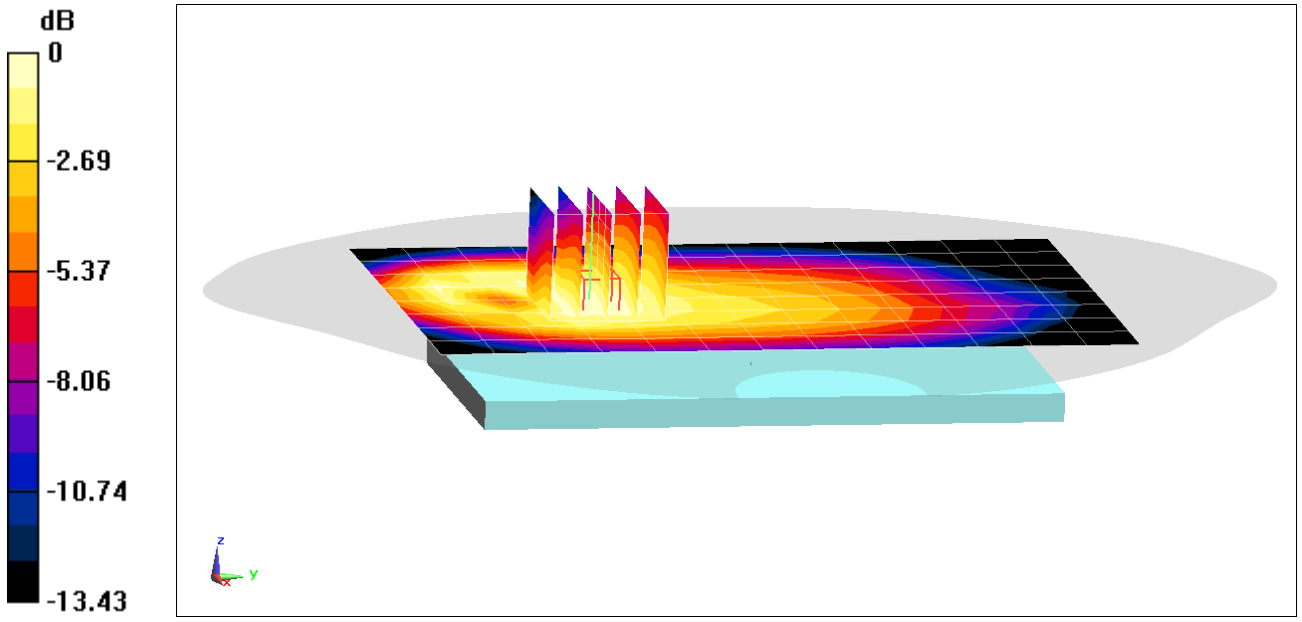
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.976 S/m; ε_r = 54.782; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/03/2020; Ambient Temp: 23.4°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 782 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: LTE Band 13, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 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 = 18.23 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.413 W/kg
SAR(1 g) = 0.306 W/kg



0 dB = 0.377 W/kg = -4.24 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

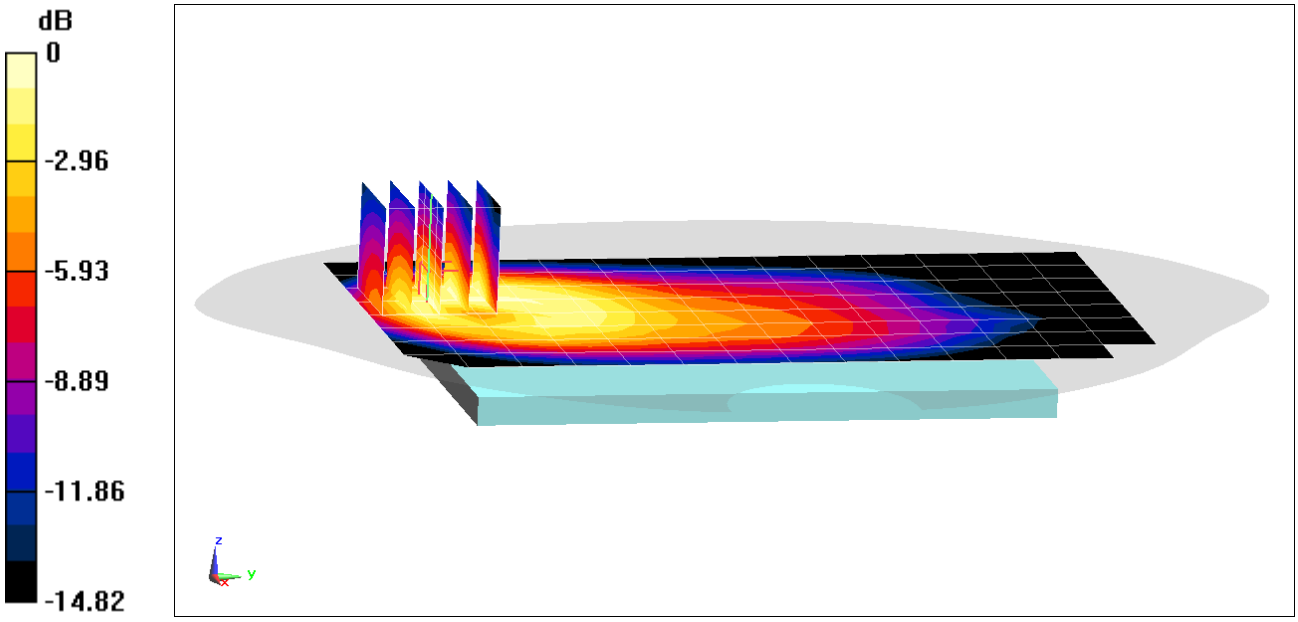
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.976 S/m; ε_r = 54.782; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/03/2020; Ambient Temp: 23.4°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 782 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: LTE Band 13, 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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.70 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.936 W/kg
SAR(1 g) = 0.549 W/kg



0 dB = 0.775 W/kg = -1.11 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

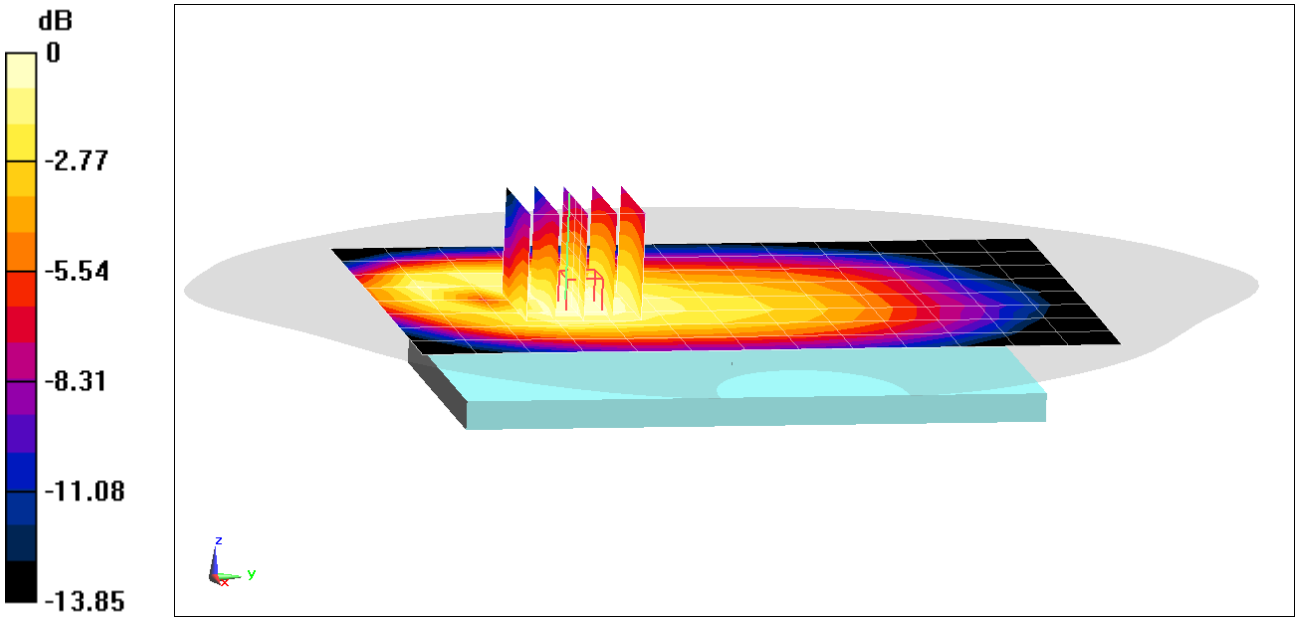
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 793 MHz; σ = 0.98 S/m; ε_r = 54.762; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/03/2020; Ambient Temp: 23.4°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 793 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: LTE Band 14, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 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 = 19.46 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.474 W/kg
SAR(1 g) = 0.352 W/kg



0 dB = 0.431 W/kg = -3.66 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1848M

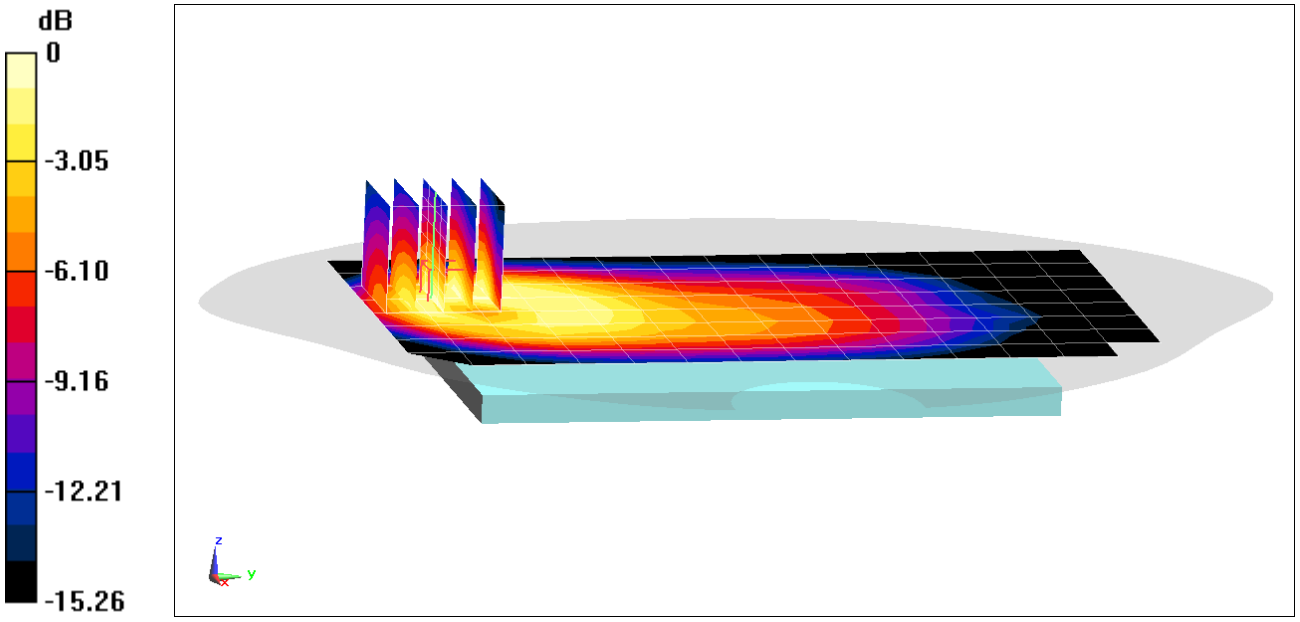
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 793 MHz; σ = 0.98 S/m; ε_r = 54.762; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/03/2020; Ambient Temp: 23.4°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 793 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: 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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.70 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.594 W/kg



0 dB = 0.844 W/kg = -0.74 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1839M

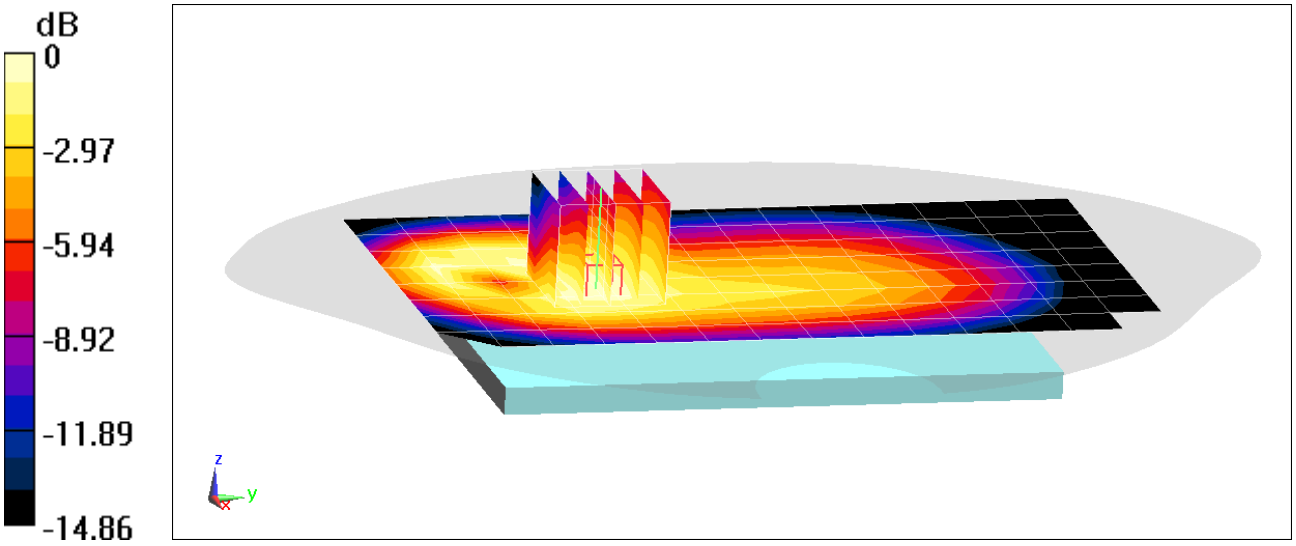
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.959 S/m; ε_r = 53.563; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 831.5 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 26 (Cell.), Body SAR, Back side, Mid.ch, 15 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 = 19.16 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.475 W/kg
SAR(1 g) = 0.336 W/kg



0 dB = 0.426 W/kg = -3.71 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1839M

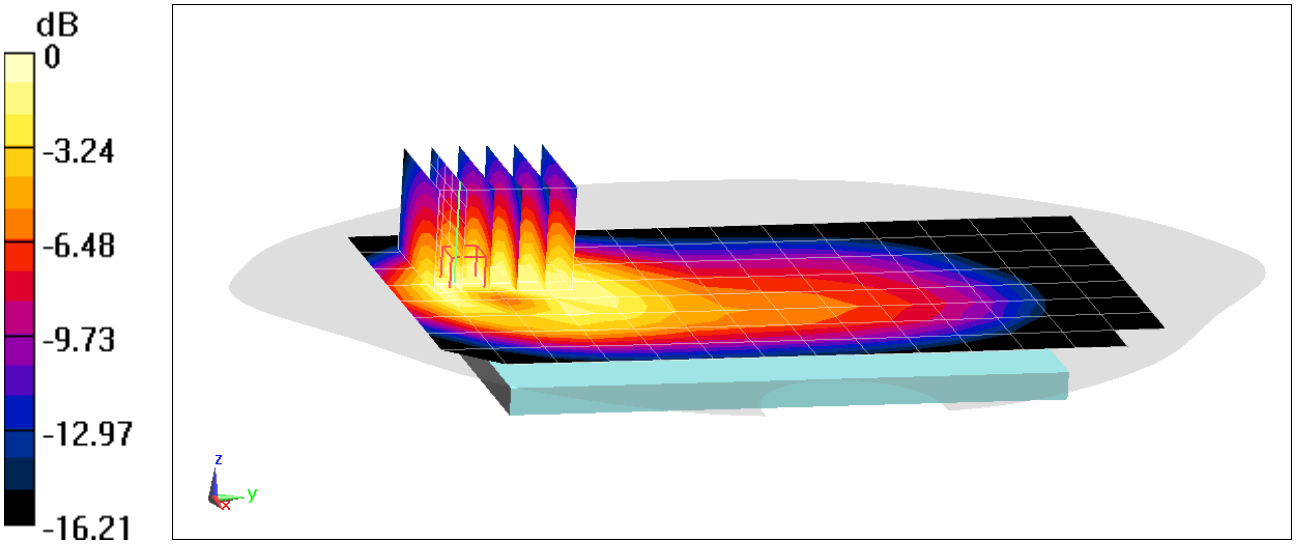
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.959 S/m; ε_r = 53.563; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 831.5 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 26 (Cell.), Body SAR, Back side, Mid.ch, 15 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 = 26.28 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.620 W/kg



0 dB = 0.885 W/kg = -0.53 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

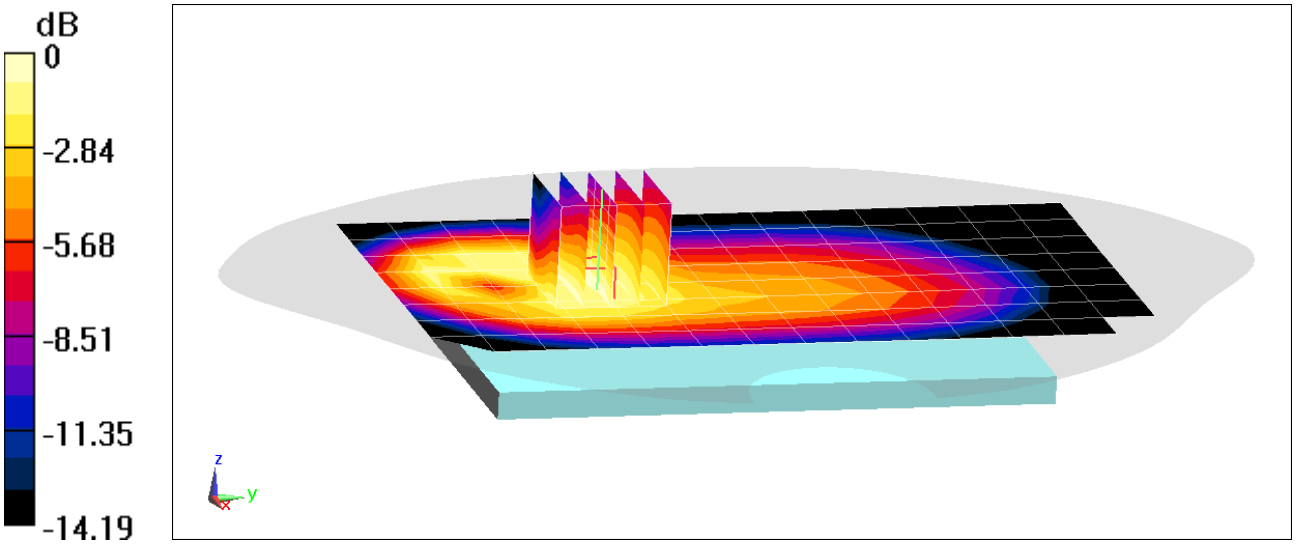
Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.965 S/m; ε_r = 53.509; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 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 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 (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.12 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.590 W/kg
SAR(1 g) = 0.411 W/kg



0 dB = 0.516 W/kg = -2.87 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

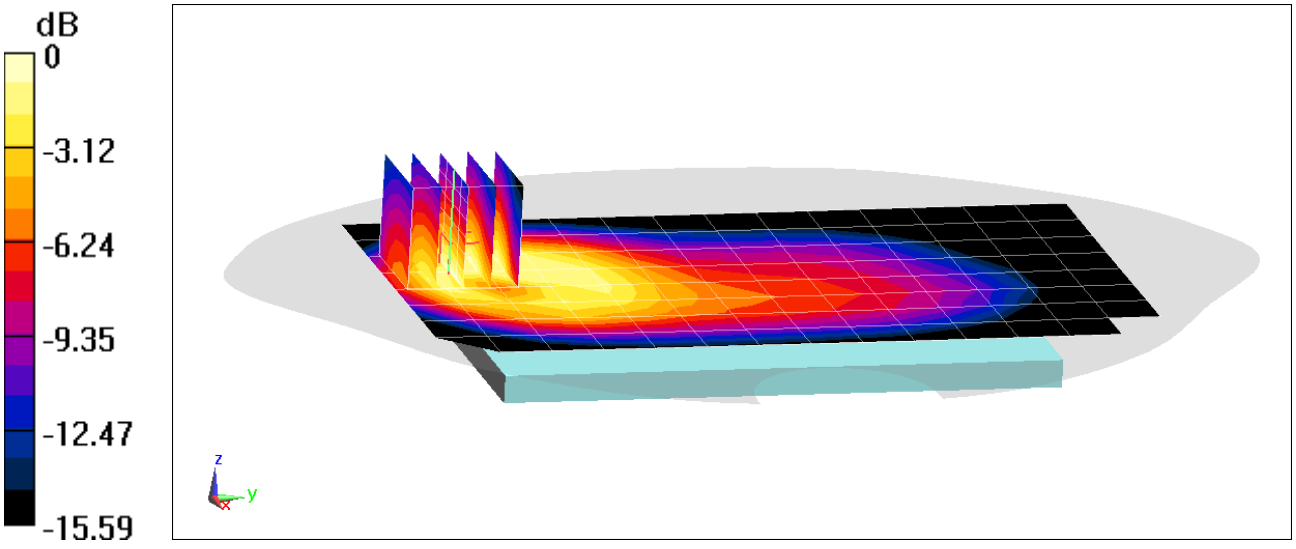
Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.965 S/m; ε_r = 53.509; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/08/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 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 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 (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.54 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.782 W/kg



0 dB = 1.12 W/kg = 0.49 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

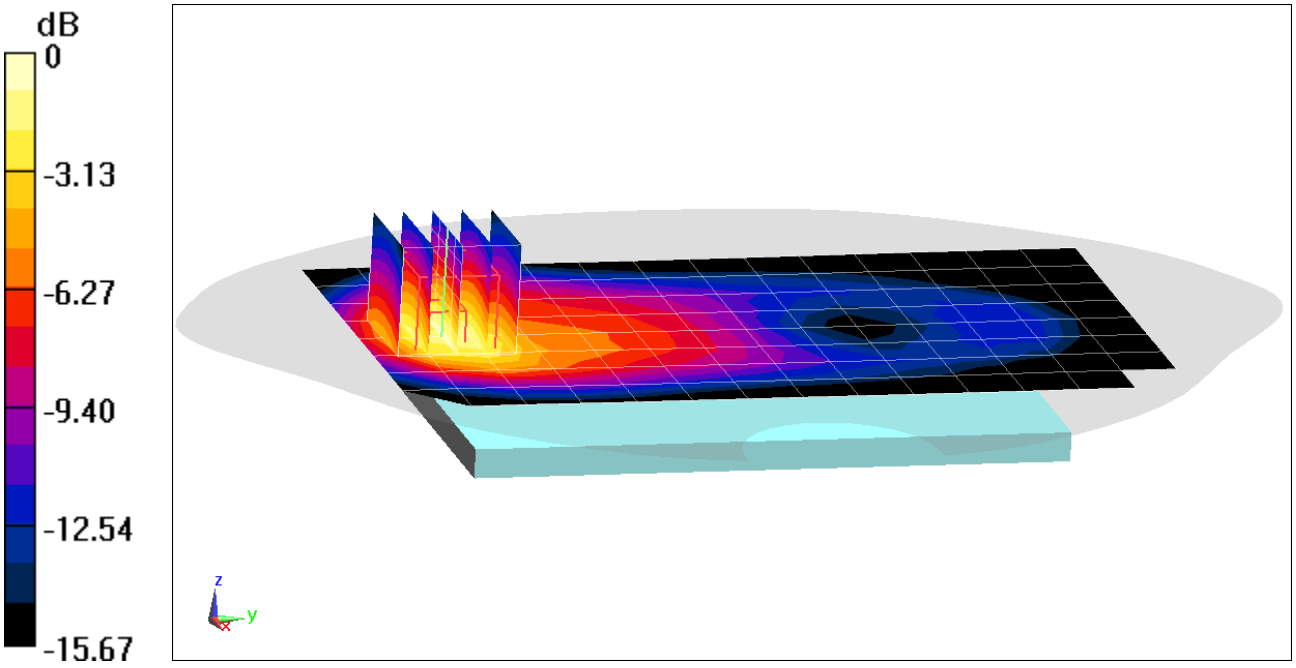
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1745 MHz; σ = 1.516 S/m; ε_r = 50.981; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/12/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°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: LTE Band 66 (AWS) ULCA, Body SAR, Back side,
PCC: Ch. 132322, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset
SCC: Ch. 132520, 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 = 23.00 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.728 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

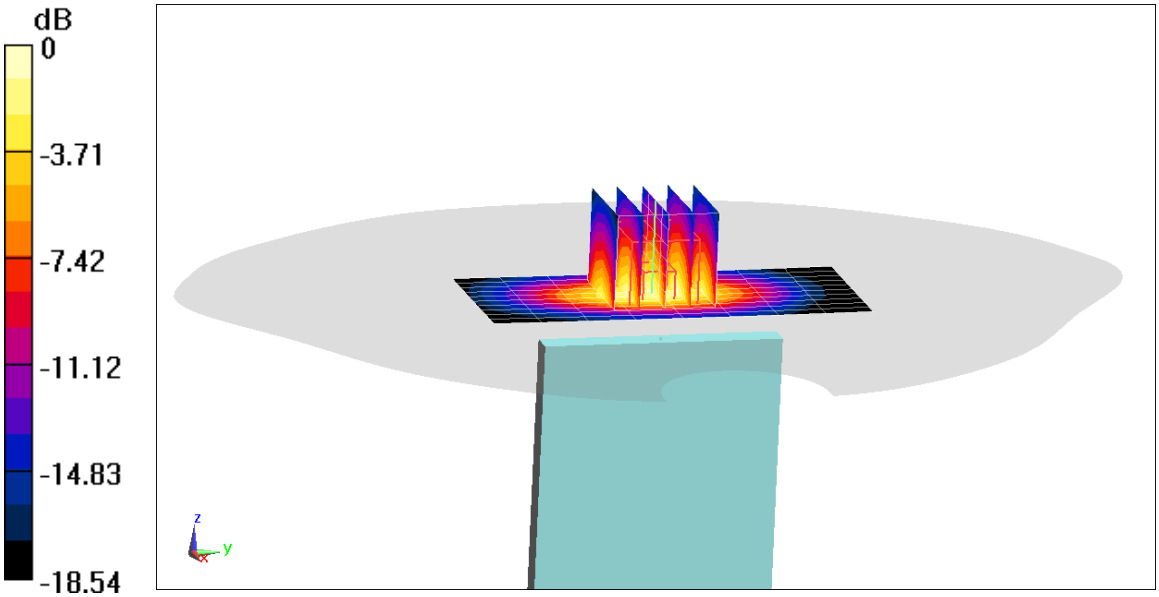
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1770 MHz; σ = 1.544 S/m; ε_r = 50.868; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/12/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°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, Bottom Edge,
PCC: Ch. 132572, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset
SCC: Ch. 132374, 20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.57 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 0.969 W/kg



0 dB = 1.45 W/kg = 1.61 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

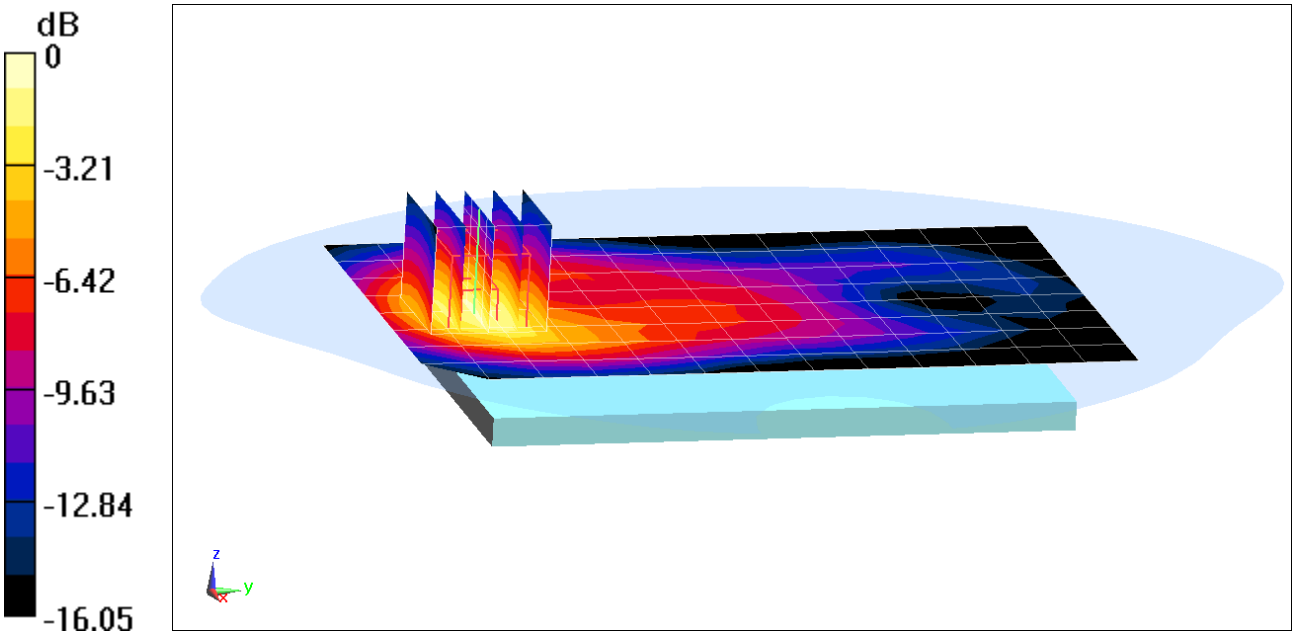
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.534 S/m; ε_r = 51.786; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/07/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.2°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 25 (PCS), Body SAR, Back side, Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 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 = 21.64 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.651 W/kg



0 dB = 0.924 W/kg = -0.34 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

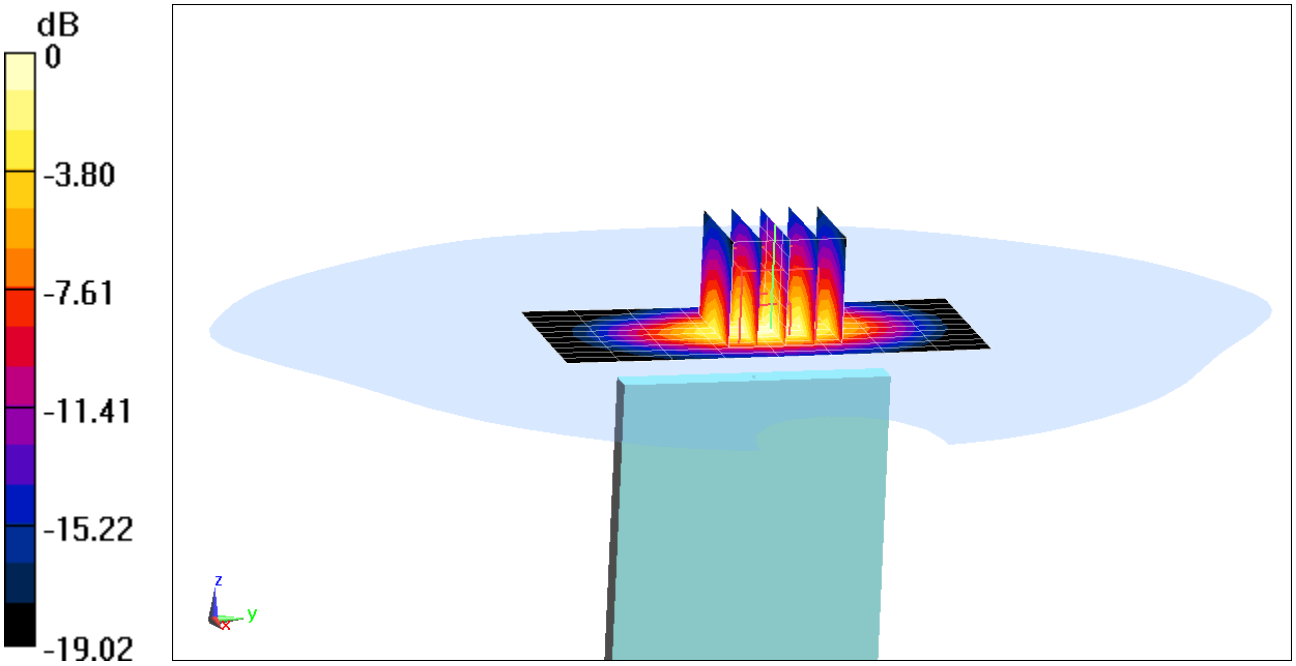
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.585 S/m; ε_r = 51.639; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/07/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 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 25 (PCS), Body SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.23 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 1.04 W/kg



0 dB = 1.59 W/kg = 2.01 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

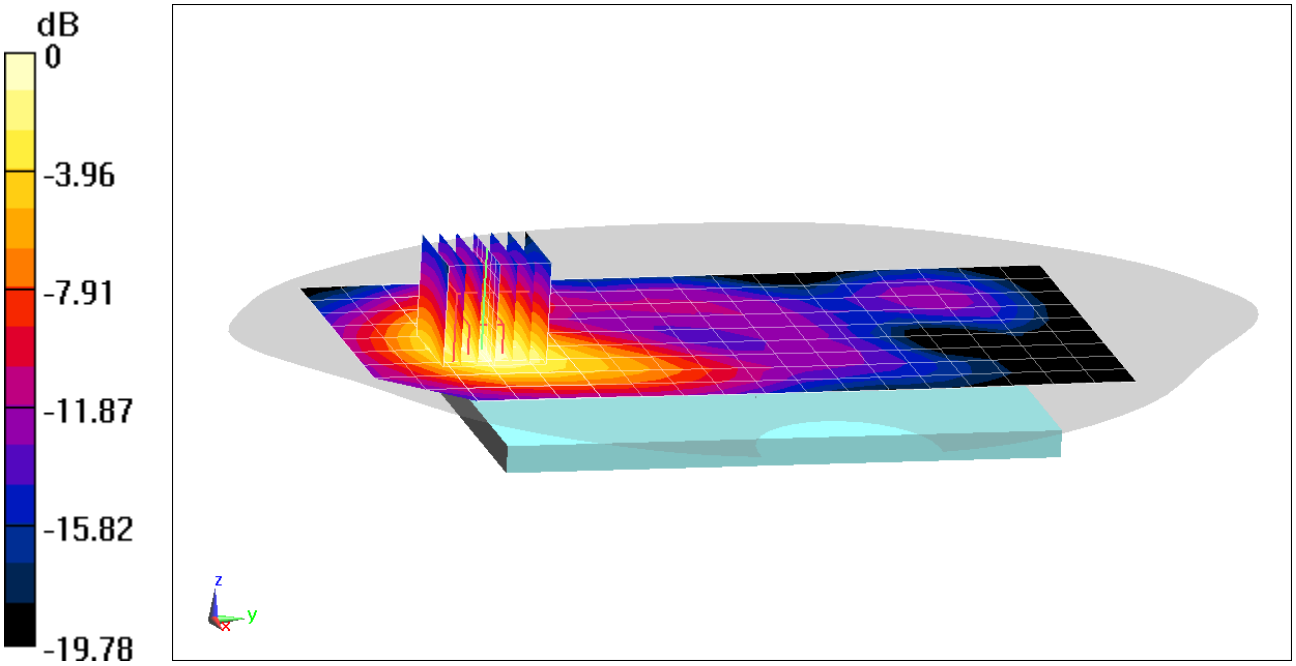
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2310 MHz; σ = 1.876 S/m; ε_r = 51.19; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/11/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2310 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 30, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.55 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.910 W/kg
SAR(1 g) = 0.518 W/kg



0 dB = 0.771 W/kg = -1.13 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

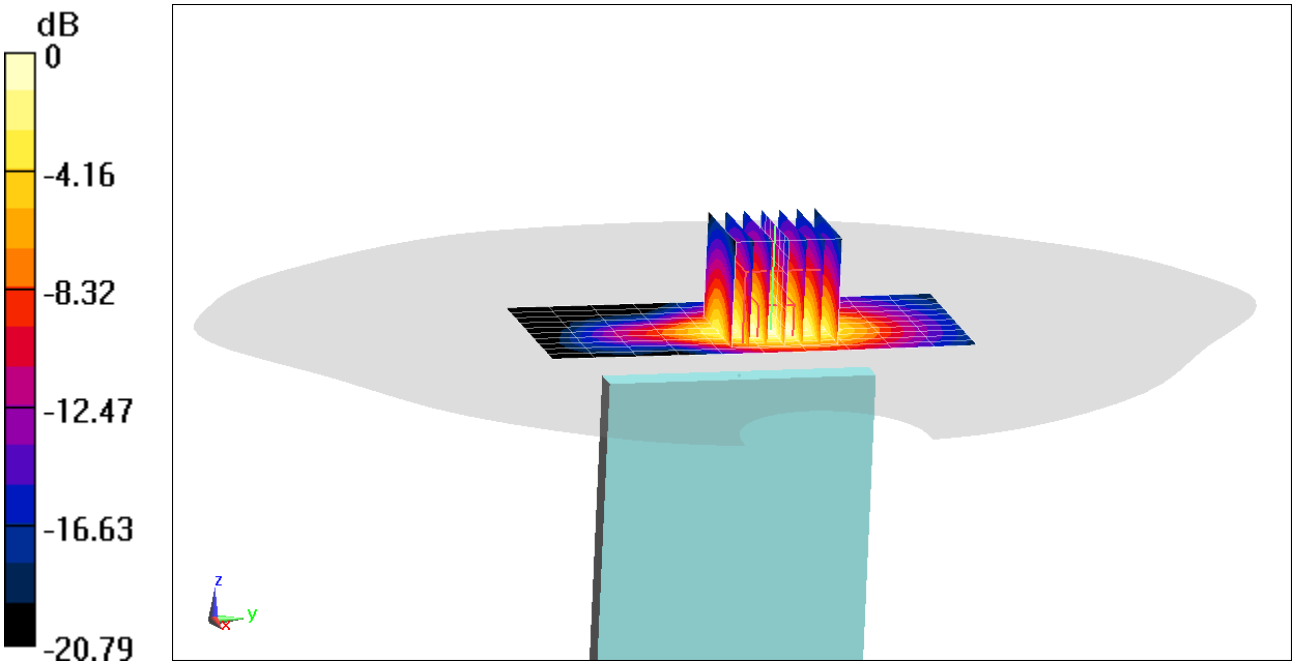
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2310 MHz; σ = 1.876 S/m; ε_r = 51.19; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/11/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2310 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 30, Body SAR, Bottom Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.77 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.642 W/kg



0 dB = 0.999 W/kg = 0.00 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1845M

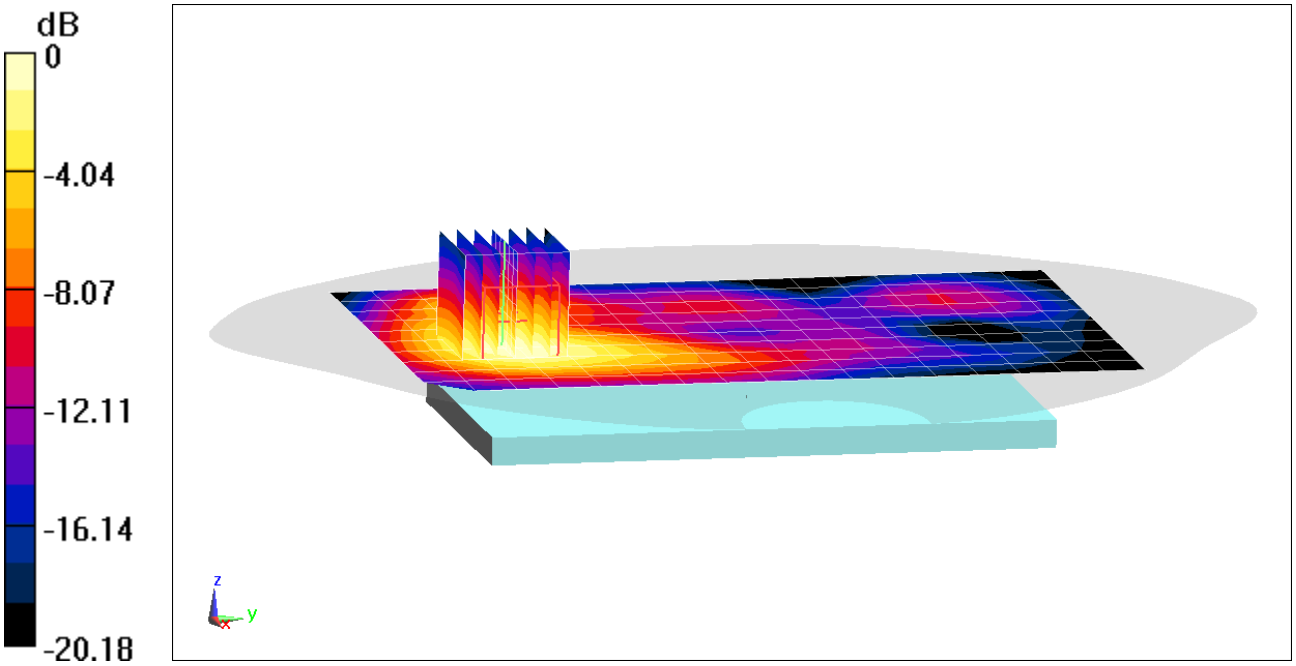
Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2560 MHz; σ = 2.16 S/m; ε_r = 51.681; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2560 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 7, Body SAR, Back side, High.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 = 16.53 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.550 W/kg



0 dB = 0.827 W/kg = -0.82 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1845M

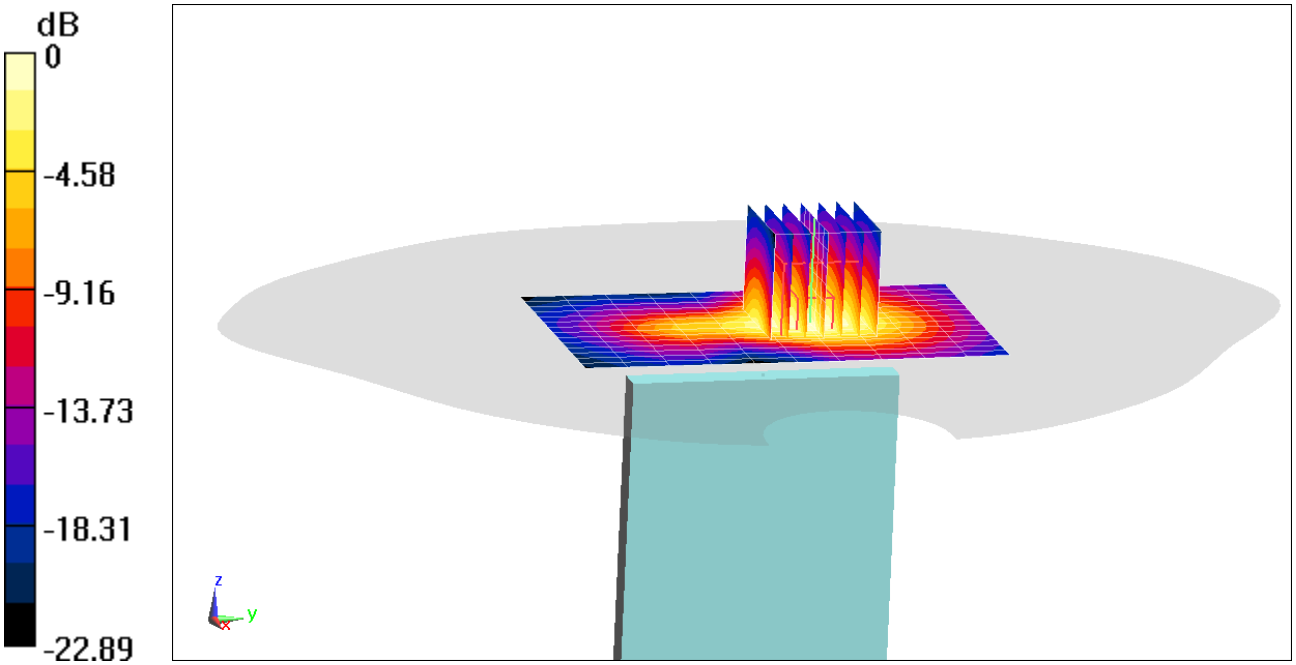
Communication System: UID 0, LTE Band 7; Frequency: 2535 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2535 MHz; σ = 2.125 S/m; ε_r = 51.787; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2535 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 7, Body SAR, Bottom Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 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 = 19.72 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 0.750 W/kg



0 dB = 1.22 W/kg = 0.86 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 0648M

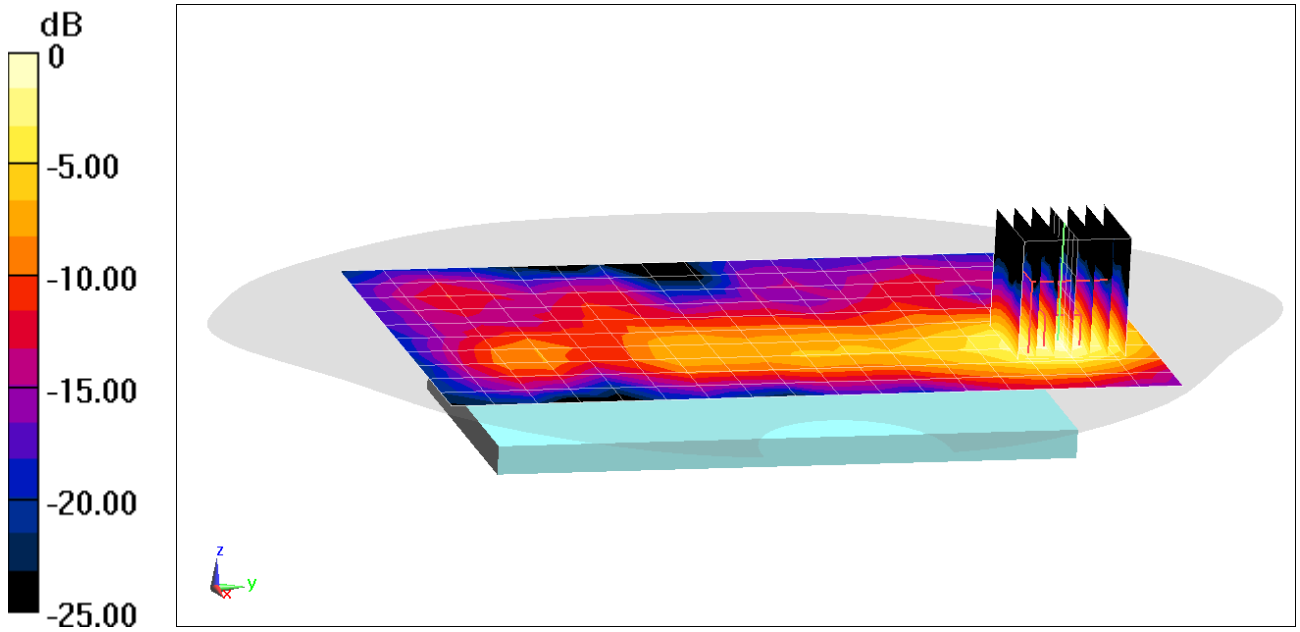
Communication System: UID 0, LTE Band 48; Frequency: 3646.7 MHz; Duty Cycle: 1:1.58
Medium: 3600 Body Medium parameters used (interpolated):
f = 3646.7 MHz; σ = 3.535 S/m; ε_r = 49.376; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/16/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.3°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; 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 ULCA, Body SAR, Back side,
PCC: Ch. 56207, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 56009, 20 MHz Bandwidth, QPSK, 1 RB, 99 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 = 10.20 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.320 W/kg



0 dB = 0.587 W/kg = -2.31 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 2243M

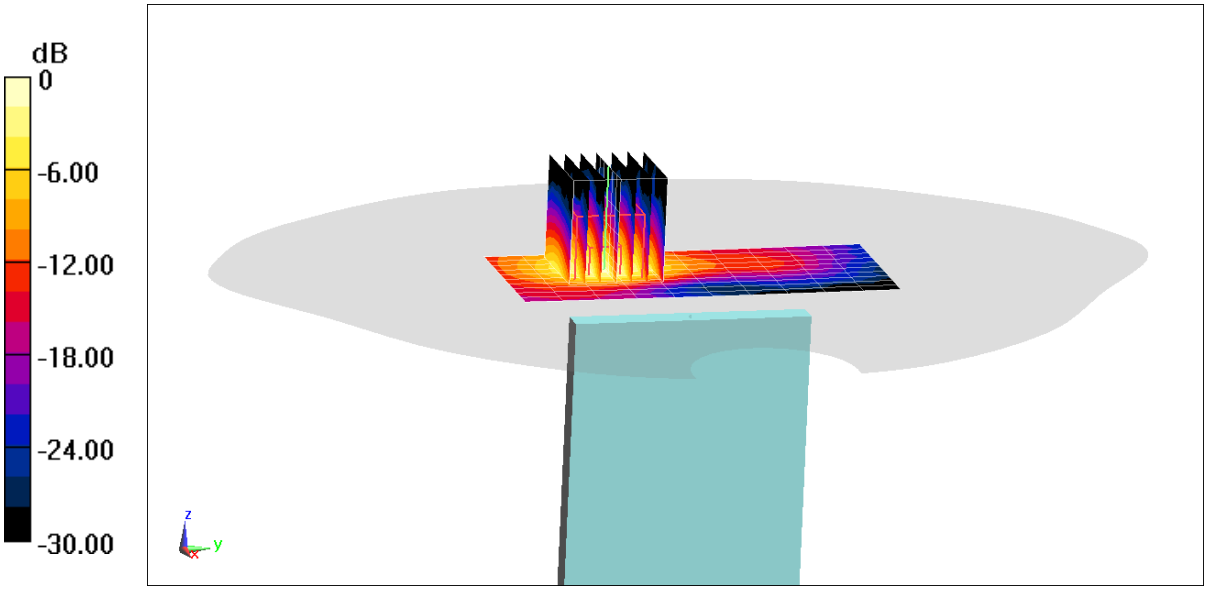
Communication System: UID 0, LTE Band 48; Frequency: 3560 MHz; Duty Cycle: 1:1.58
Medium: 3600 Body Medium parameters used:
f = 3560 MHz; σ = 3.448 S/m; ε_r = 49.477; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/07/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7488; ConvF(7, 7, 7) @ 3560 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0; 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 ULCA, Body SAR, Top Edge,
PCC: Ch. 55340, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset
SCC: Ch. 55538, 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 = 17.33 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.42 W/kg
SAR(1 g) = 0.893 W/kg



0 dB = 1.74 W/kg = 2.41 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1799M

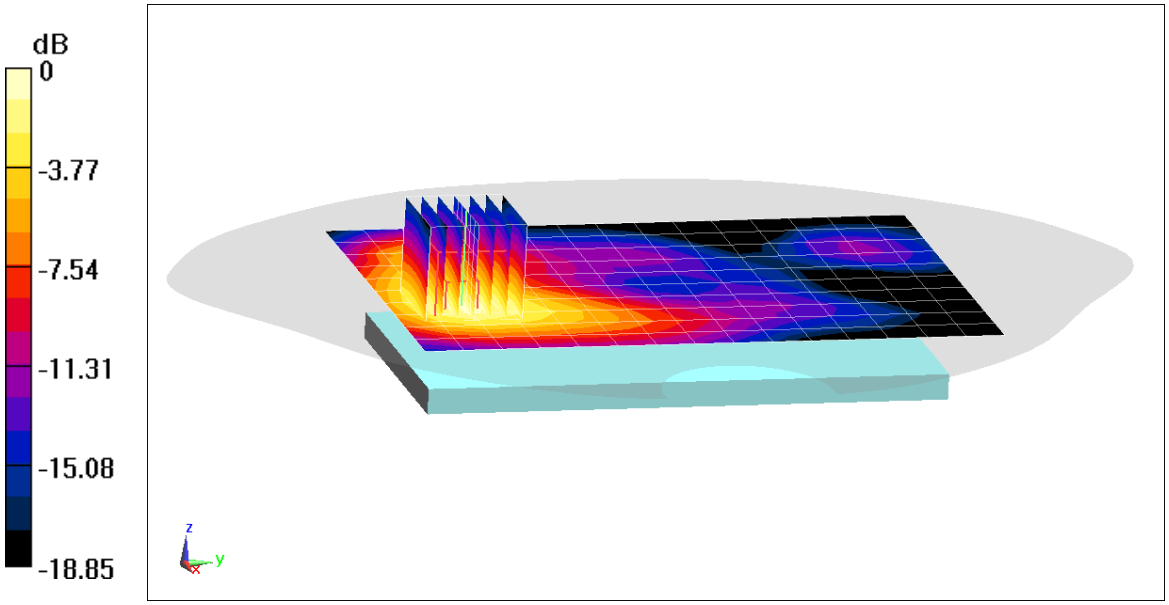
Communication System: UID 0, LTE Band 41 (Class 2); Frequency: 2506 MHz; Duty Cycle: 1:2.31
Medium: 2450 Body Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.089 S/m; ε_r = 50.946; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/22/2020; Ambient Temp: 23.9°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2506 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 41 PC2 with ULCA, Body SAR, Back side,
PCC: Ch. 39750, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset
SCC: Ch. 39948, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.67 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.409 W/kg



0 dB = 0.607 W/kg = -2.17 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1799M

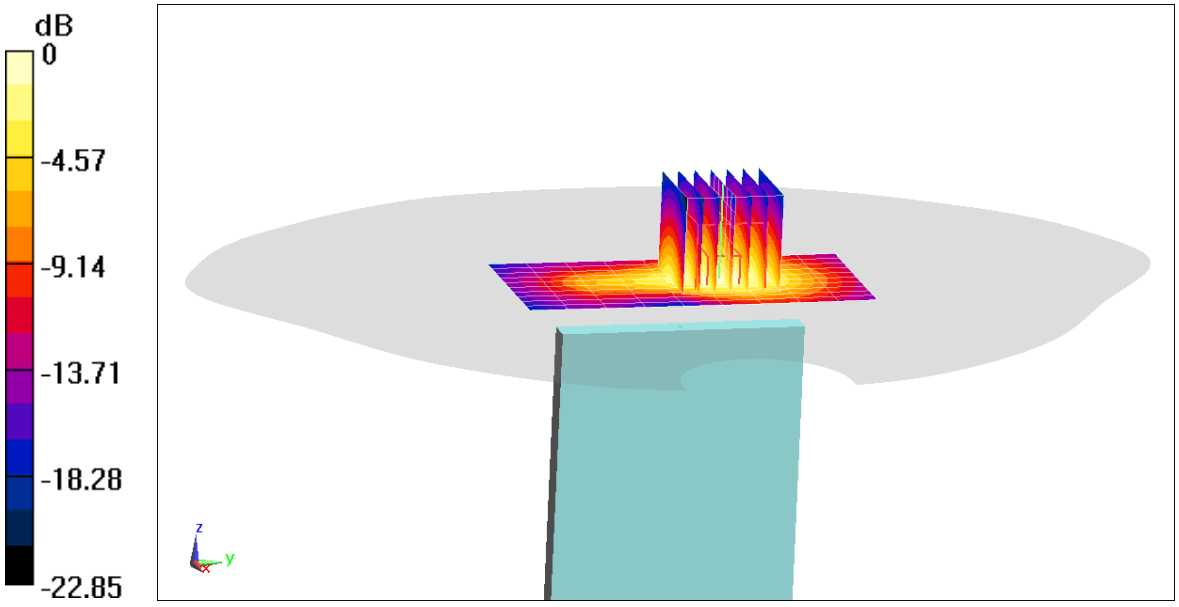
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.089 S/m; ε_r = 50.946; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/22/2020; Ambient Temp: 23.9°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2506 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 41, Body 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 = 18.21 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.670 W/kg



0 dB = 1.06 W/kg = 0.25 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

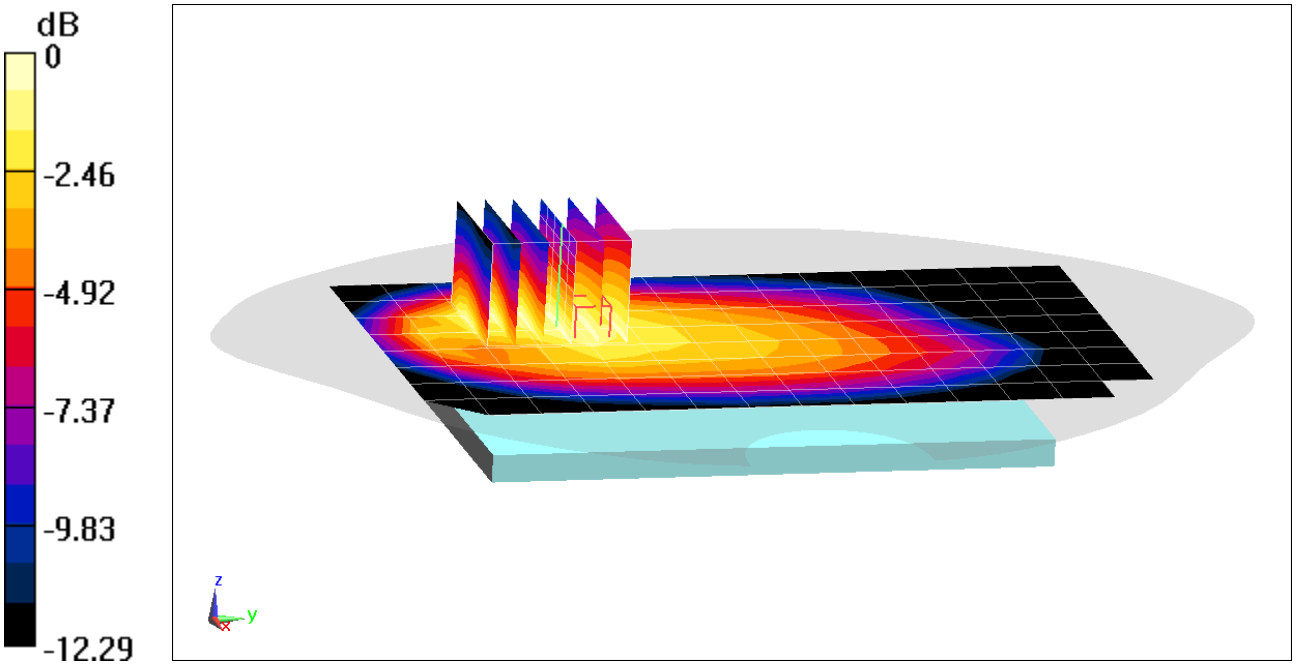
Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.915 S/m; ε_r = 56.969; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 680.5 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: NR Band n71, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 136100, 1 RB, 53 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 = 15.26 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.326 W/kg
SAR(1 g) = 0.206 W/kg



0 dB = 0.276 W/kg = -5.59 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

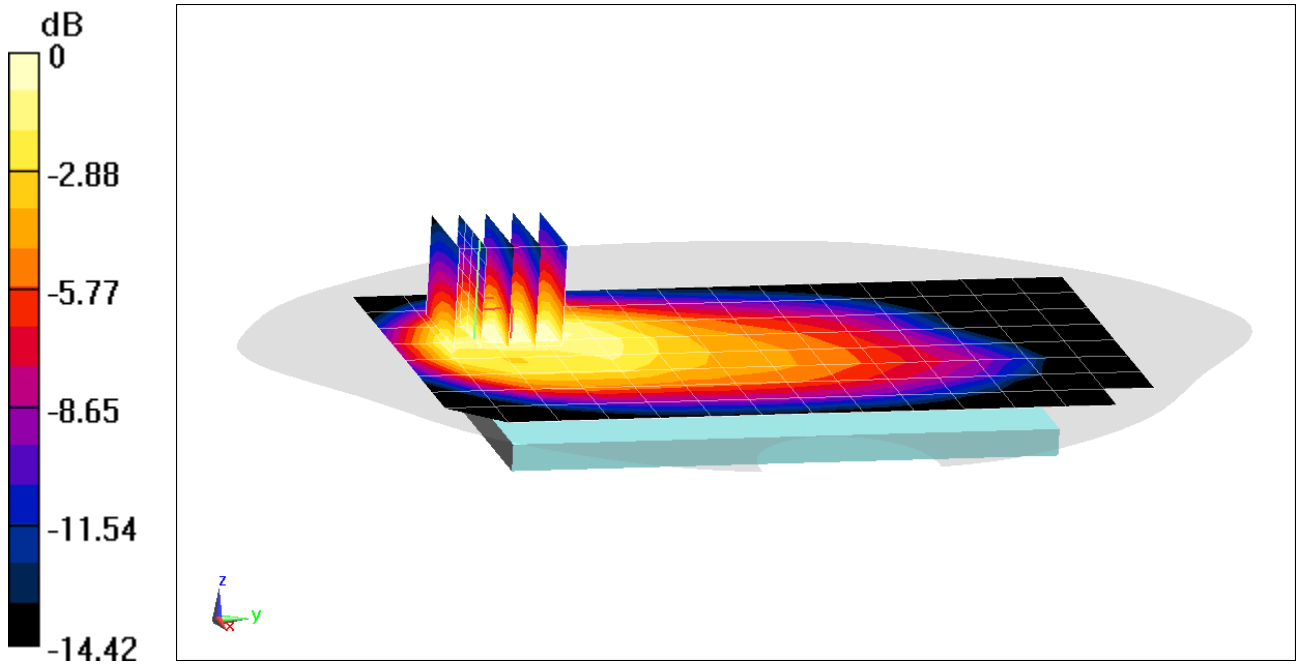
Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.915 S/m; ε_r = 56.969; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 680.5 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: NR Band n71, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 136100, 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 = 20.58 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.688 W/kg
SAR(1 g) = 0.363 W/kg



0 dB = 0.545 W/kg = -2.64 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

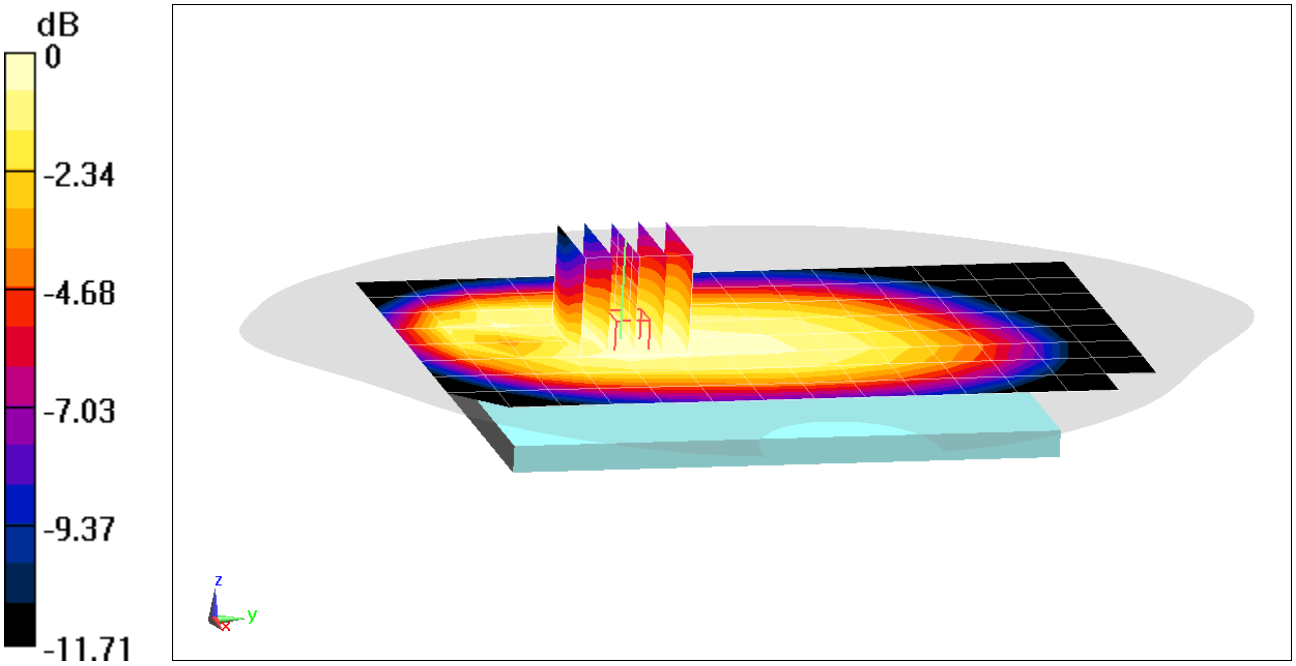
Communication System: UID 0, NR Band n12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 54.451; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 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: NR Band n12, Body SAR, Back Side, 15 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 141500, 36 RB, 22 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 = 14.87 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.261 W/kg
SAR(1 g) = 0.199 W/kg



0 dB = 0.240 W/kg = -6.20 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1843M

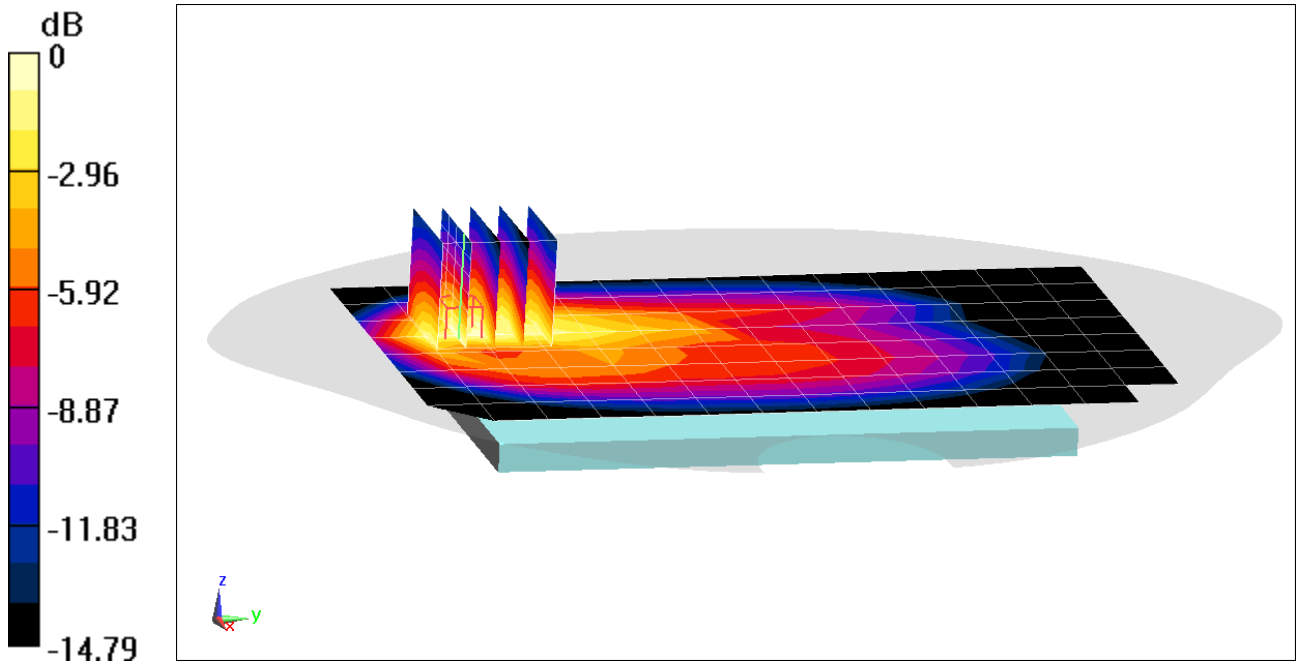
Communication System: UID 0, NR Band n12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 54.451; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 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: NR Band n12, Body SAR, Back Side, 15 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 141500, 36 RB, 22 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 = 20.51 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.675 W/kg
SAR(1 g) = 0.368 W/kg



0 dB = 0.538 W/kg = -2.69 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1837M

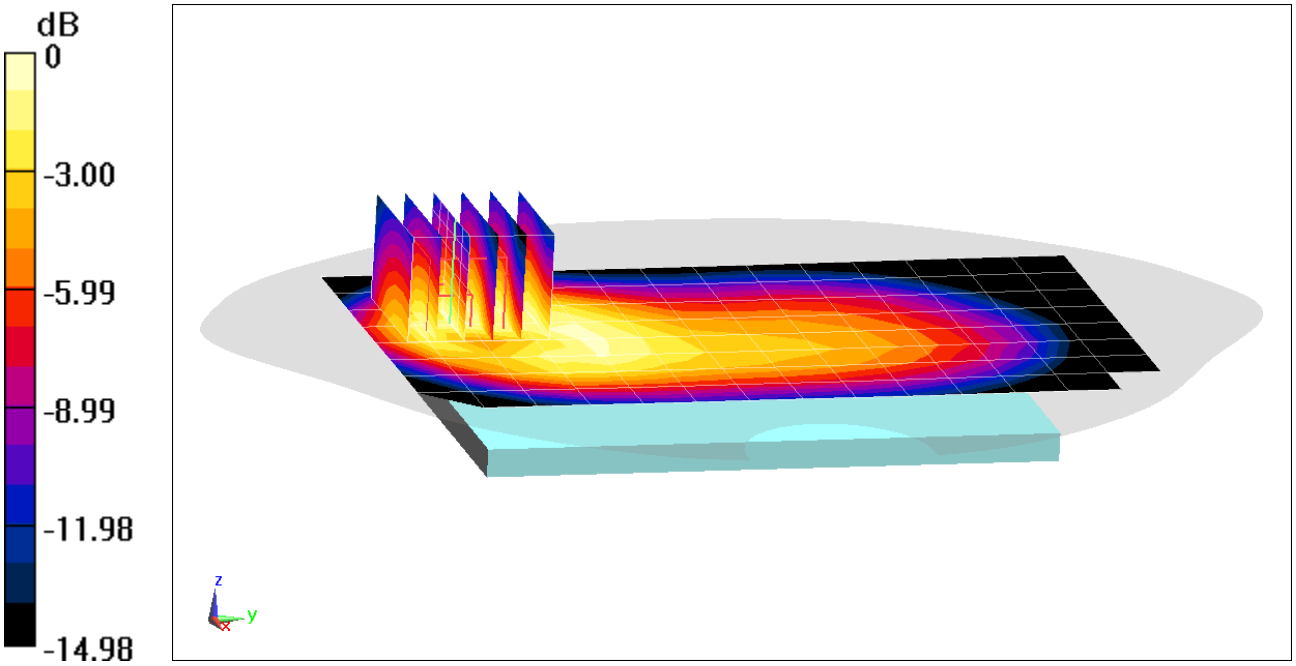
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.957 S/m; ε_r = 53.023; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 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: NR Band n5, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 50 RB, 28 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 = 19.14 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.568 W/kg
SAR(1 g) = 0.340 W/kg



0 dB = 0.478 W/kg = -3.21 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1837M

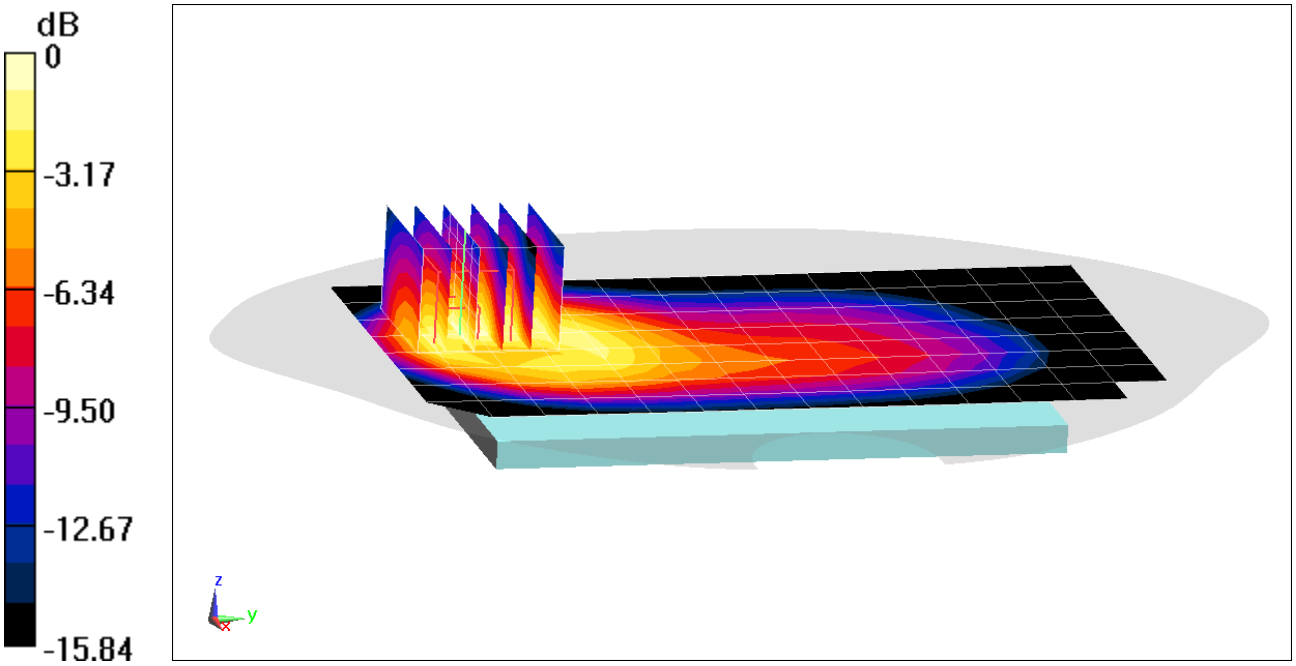
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.957 S/m; ε_r = 53.023; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 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: 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 = 27.81 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.736 W/kg



0 dB = 1.08 W/kg = 0.33 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1727M

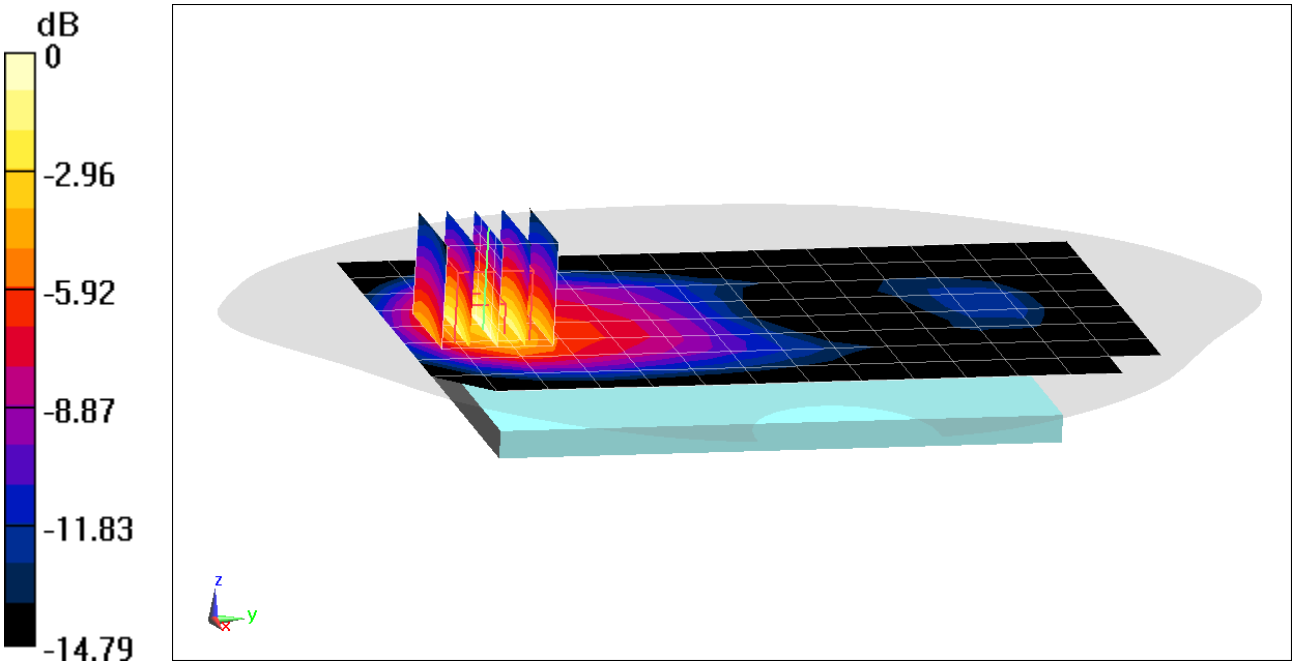
Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1745 MHz; σ = 1.48 S/m; ε_r = 51.965; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/18/2020; Ambient Temp: 23.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1745 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: 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 = 24.63 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.822 W/kg



0 dB = 1.14 W/kg = 0.57 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1727M

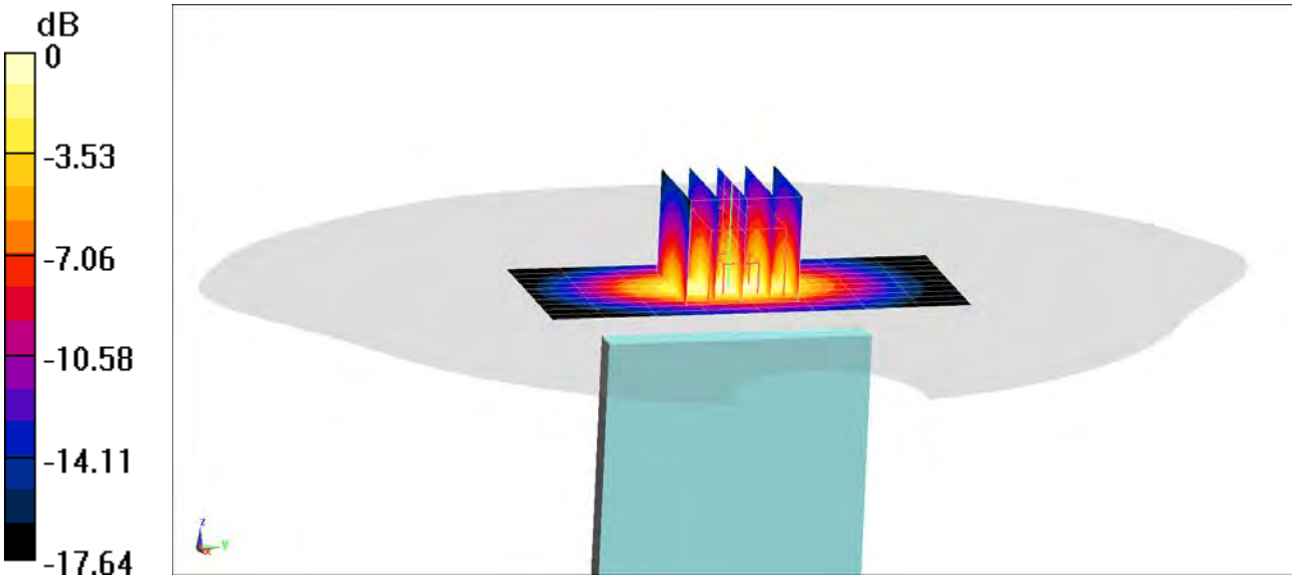
Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1745 MHz; σ = 1.48 S/m; ε_r = 51.965; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 23.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1745 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: NR Band n66, Body SAR, Bottom Edge, 20 MHz Bandwidth, CP-OFDM QPSK, Ch. 349000, 1 RB, 1 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.64 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.11 W/kg



0 dB = 1.59 W/kg = 2.01 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1793M

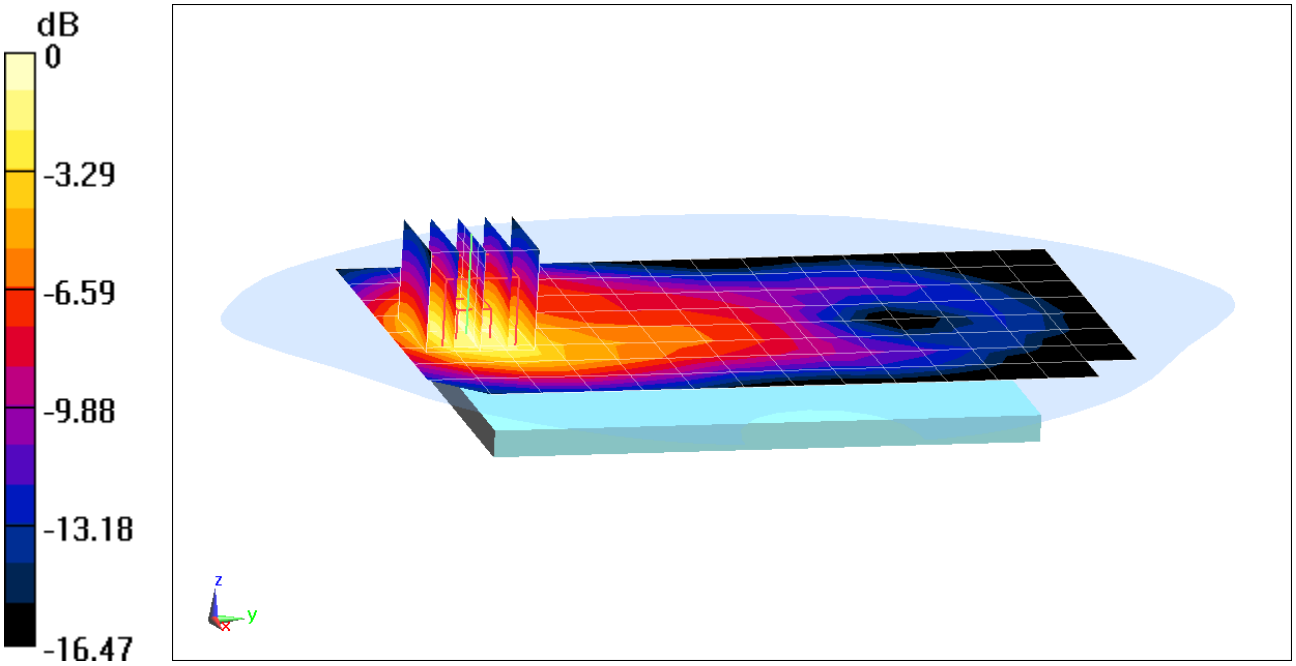
Communication System: UID 0, NR Band n25; Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.585 S/m; ε_r = 51.639; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/07/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 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 n25, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 381000, 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 = 21.23 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.653 W/kg



0 dB = 0.932 W/kg = -0.31 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1793M

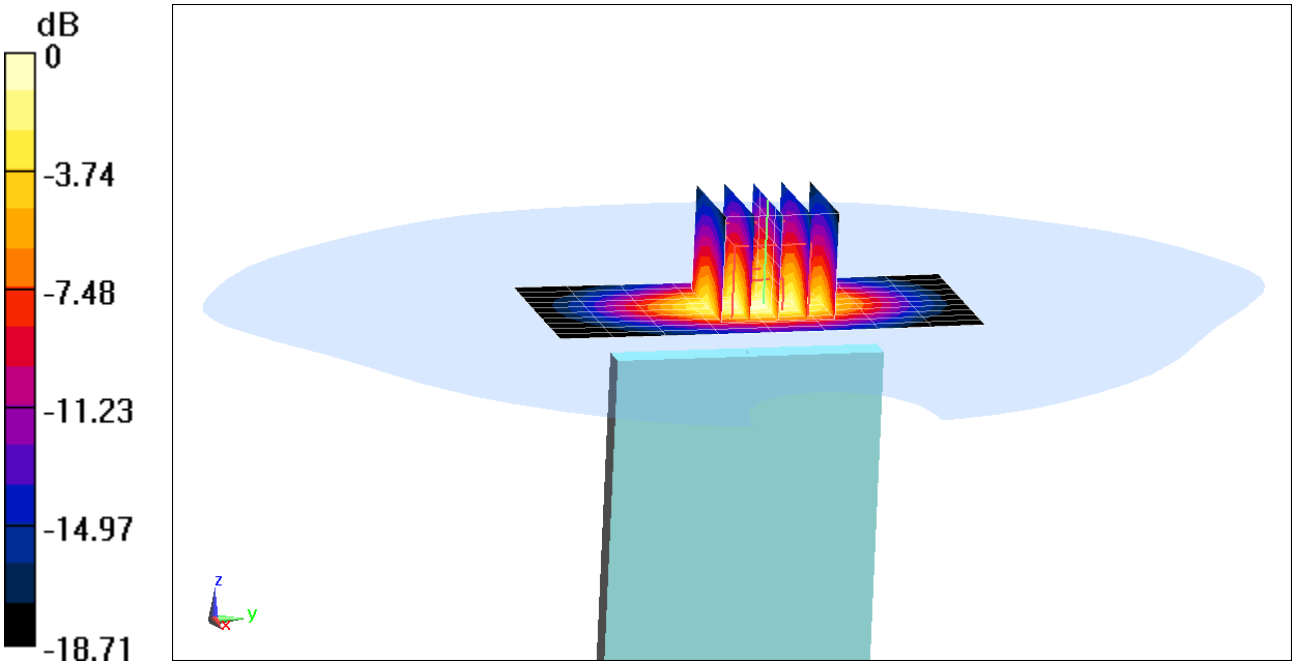
Communication System: UID 0, NR Band n25; Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.585 S/m; ε_r = 51.639; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/07/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 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 n25, Body SAR, Bottom Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 381000, 1 RB, 53 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.06 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 1.03 W/kg



0 dB = 1.60 W/kg = 2.04 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1835M

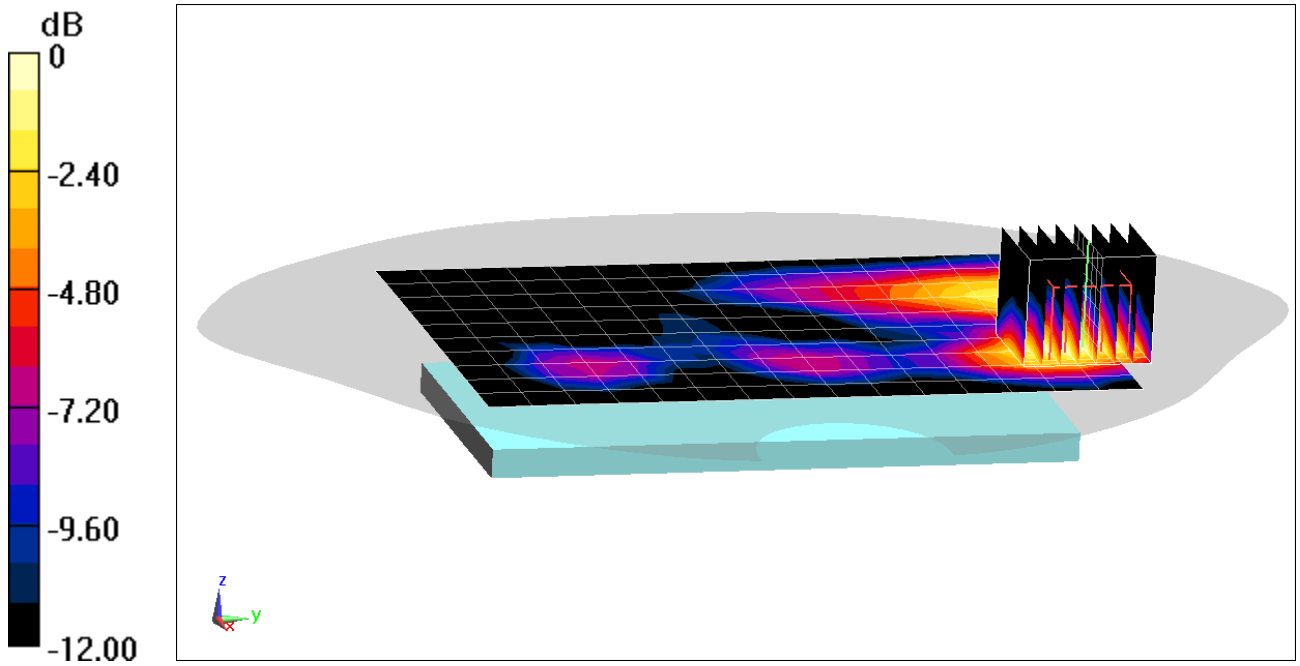
Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Body Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 2.235 S/m; ε_r = 51.02; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/17/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2592.99 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: NR Band n41, Body SAR, Back Side, 100 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 518598, 135 RB, 69 RB Offset

Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.190 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.113 W/kg
SAR(1 g) = 0.054 W/kg



0 dB = 0.0868 W/kg = -10.61 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1835M

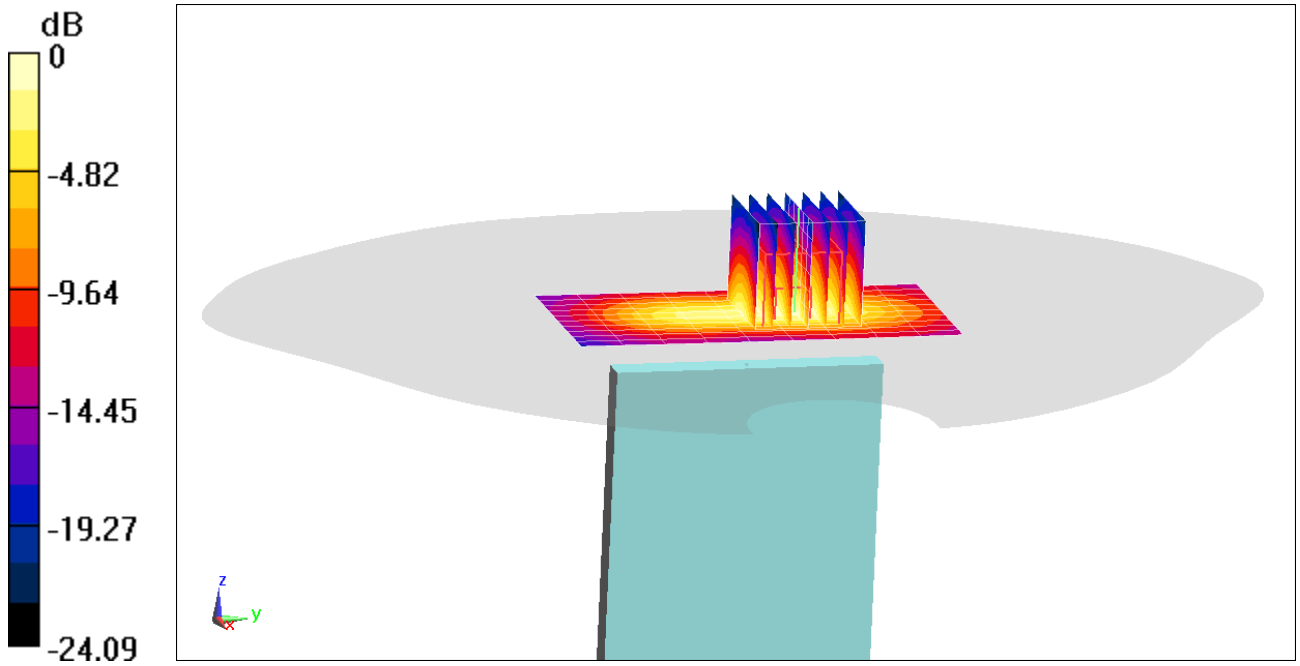
Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Body Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 2.235 S/m; ε_r = 51.02; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/17/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2592.99 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: NR Band n41, Body SAR, Top Edge, 100 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 518598, 135 RB, 69 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 = 11.22 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.545 W/kg
SAR(1 g) = 0.254 W/kg



0 dB = 0.424 W/kg = -3.73 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 0287M

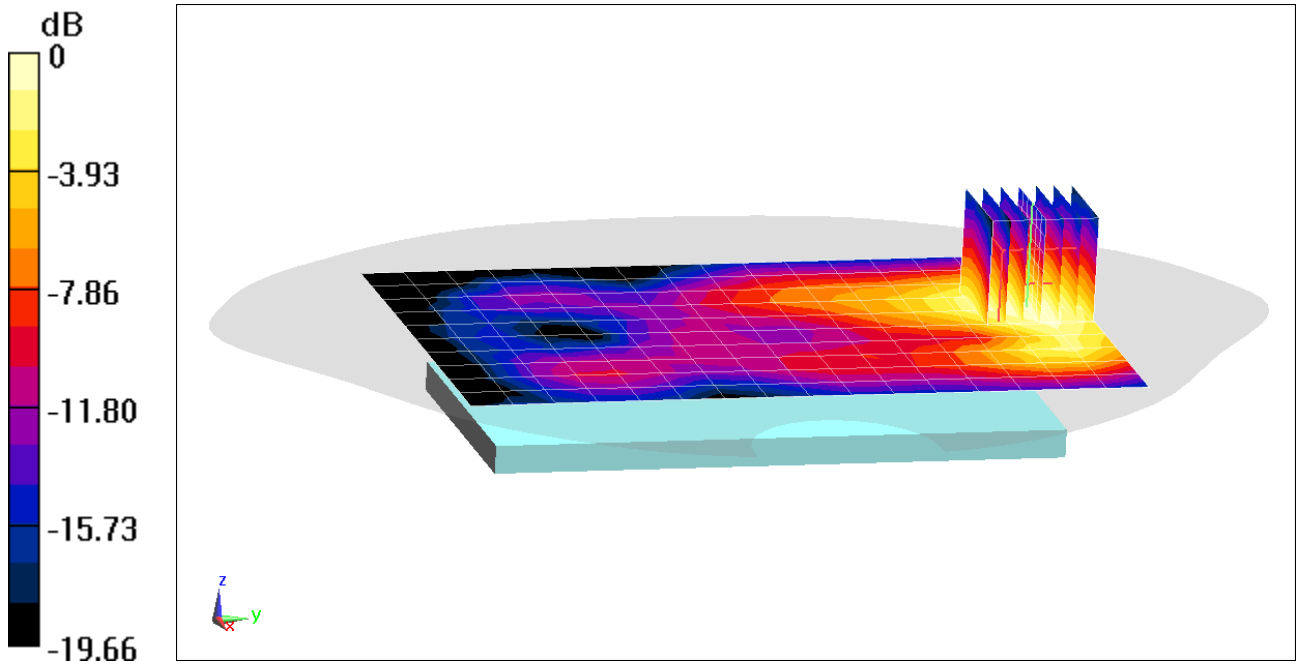
Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.02 S/m; ε_r = 51.274; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/09/2020; Ambient Temp: 24.7°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2462 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: IEEE 802.11b Ant 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 = 8.262 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.234 W/kg
SAR(1 g) = 0.130 W/kg



0 dB = 0.195 W/kg = -7.10 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

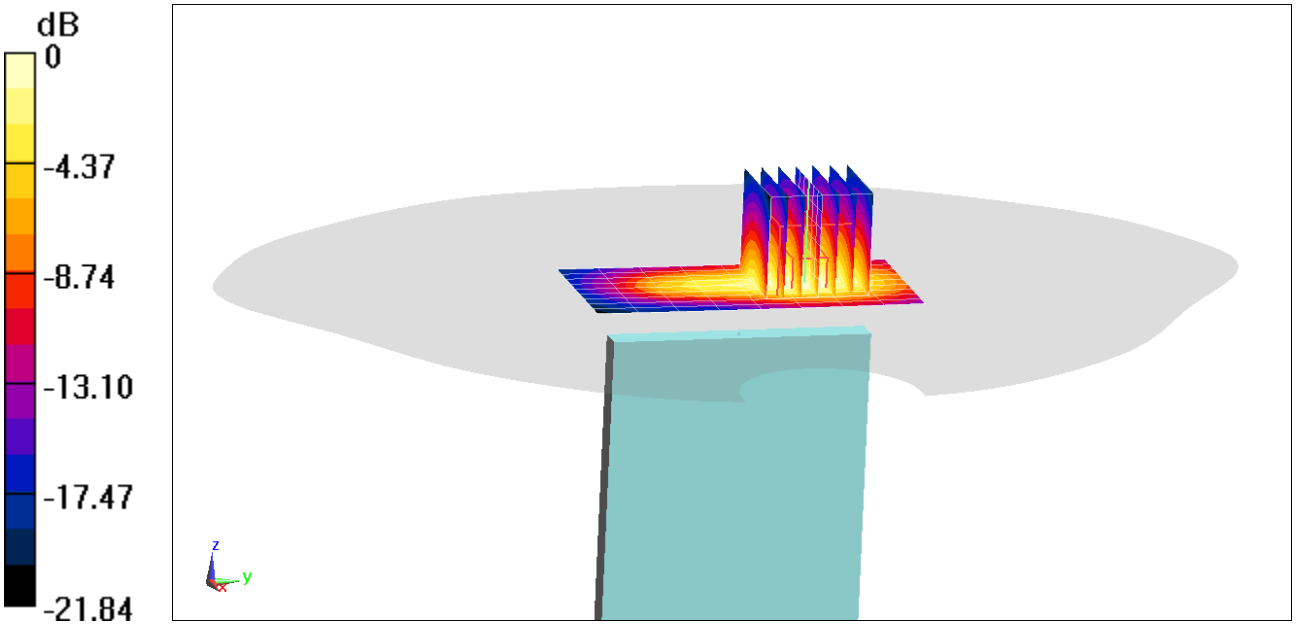
Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.044 S/m; ε_r = 51.439; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2020; Ambient Temp: 22.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2462 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: IEEE 802.11b Ant 1, 22 MHz Bandwidth, Body SAR, Ch 11, 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 = 13.74 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.544 W/kg



0 dB = 0.877 W/kg = -0.57 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

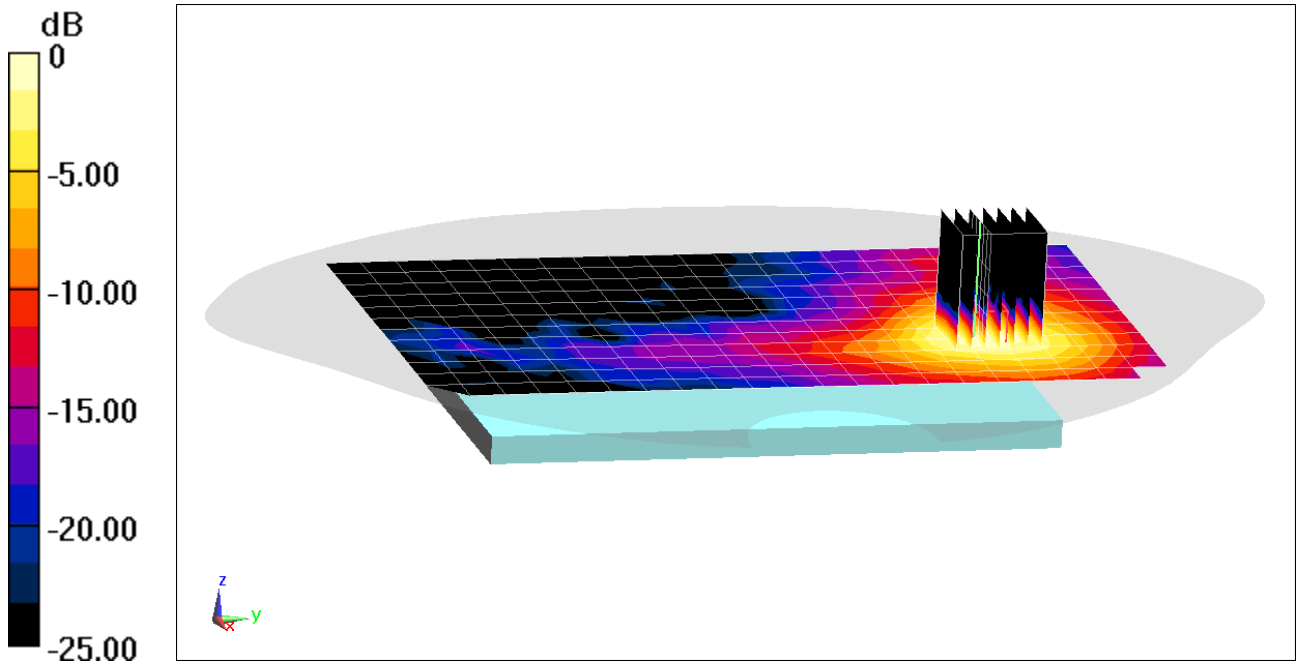
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5785 MHz; σ = 6.159 S/m; ε_r = 46.687; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 6/14/2020; Ambient Temp: 22.6°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5785 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
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 (7x7x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 7.646 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.368 W/kg



0 dB = 0.859 W/kg = -0.66 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

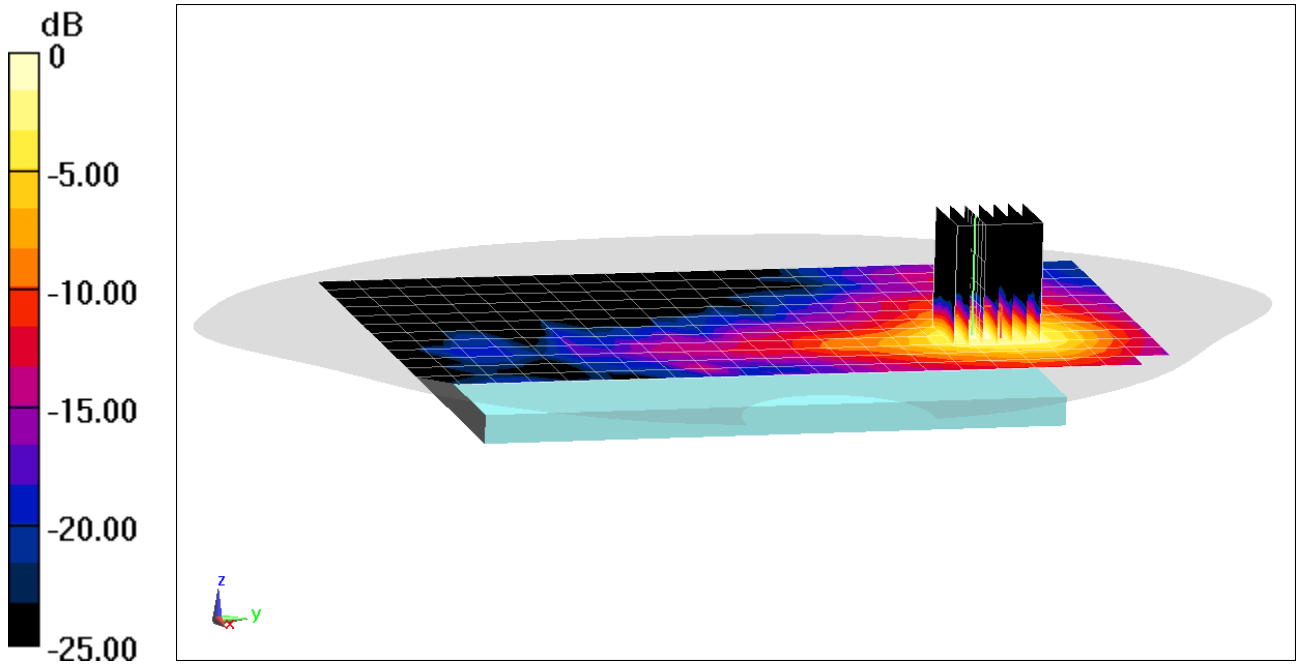
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5785 MHz; σ = 6.159 S/m; ε_r = 46.687; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 6/14/2020; Ambient Temp: 22.6°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5785 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
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 (7x7x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 0.7040 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 2.32 W/kg
SAR(1 g) = 0.535 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

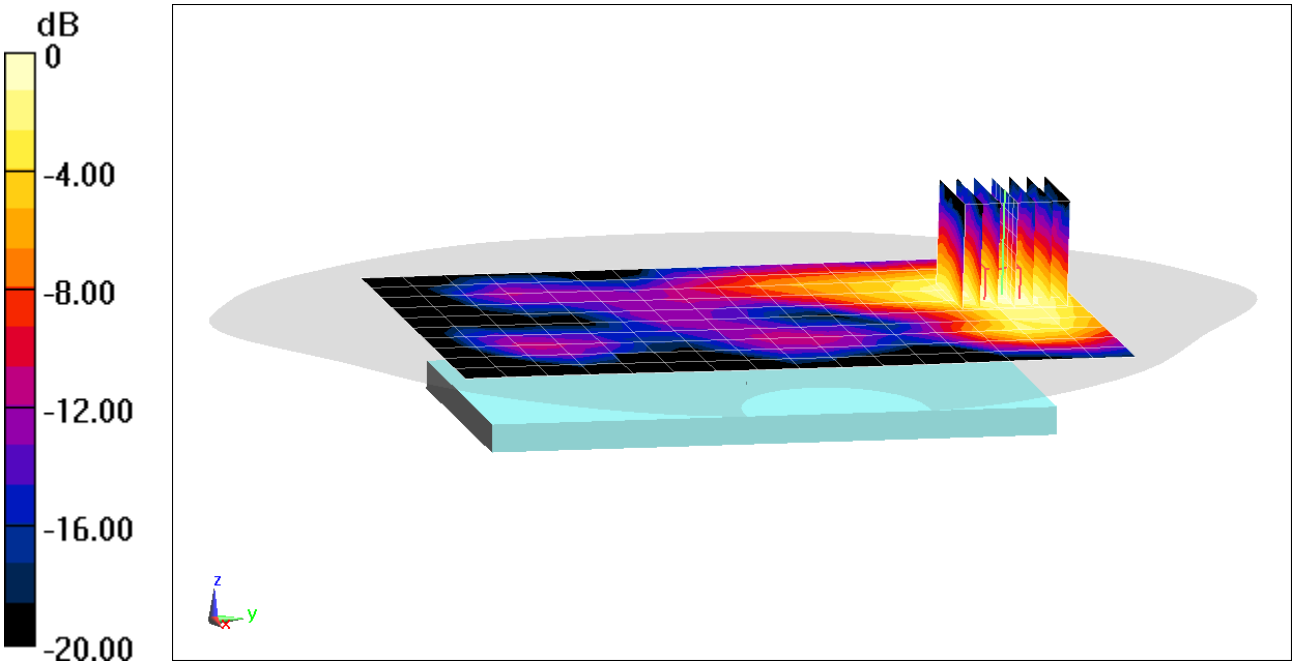
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.294
Medium: 2450 Body Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.009 S/m; ε_r = 50.739; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/22/2020; Ambient Temp: 22.0°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 = 4.708 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.0740 W/kg
SAR(1 g) = 0.039 W/kg



0 dB = 0.0612 W/kg = -12.13 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1831M

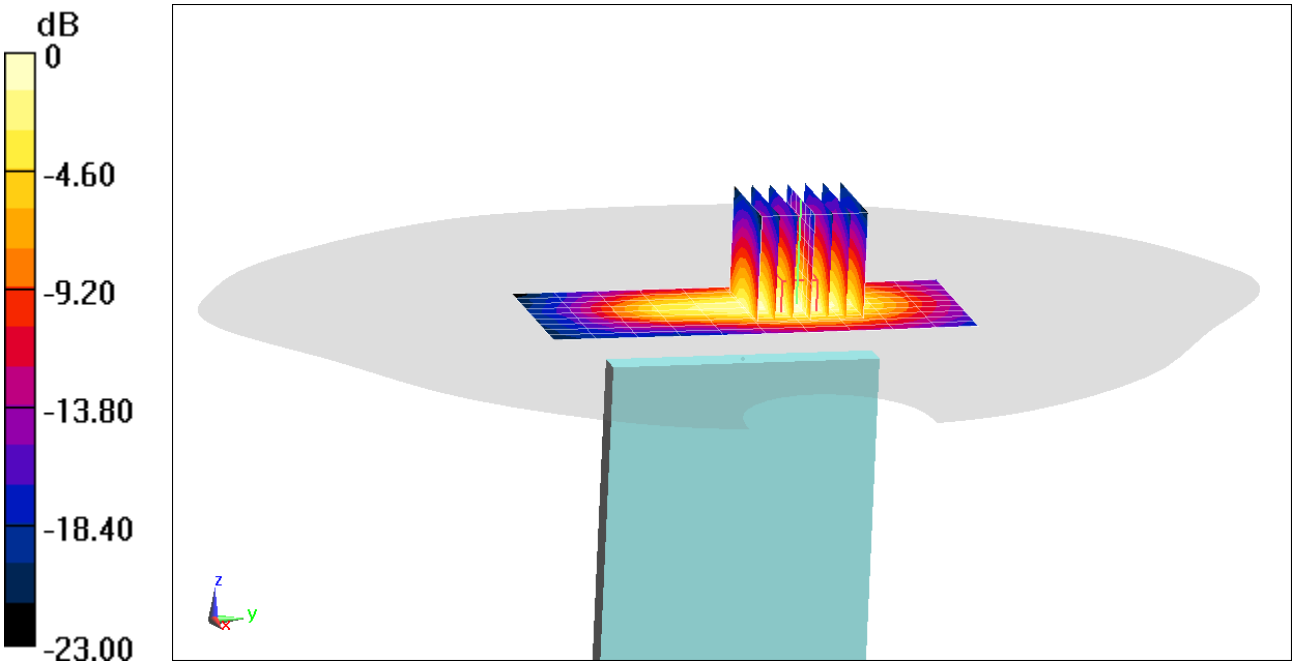
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.294
Medium: 2450 Body Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.009 S/m; ε_r = 50.739; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/22/2020; Ambient Temp: 22.0°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 = 10.88 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.419 W/kg
SAR(1 g) = 0.208 W/kg



0 dB = 0.338 W/kg = -4.71 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

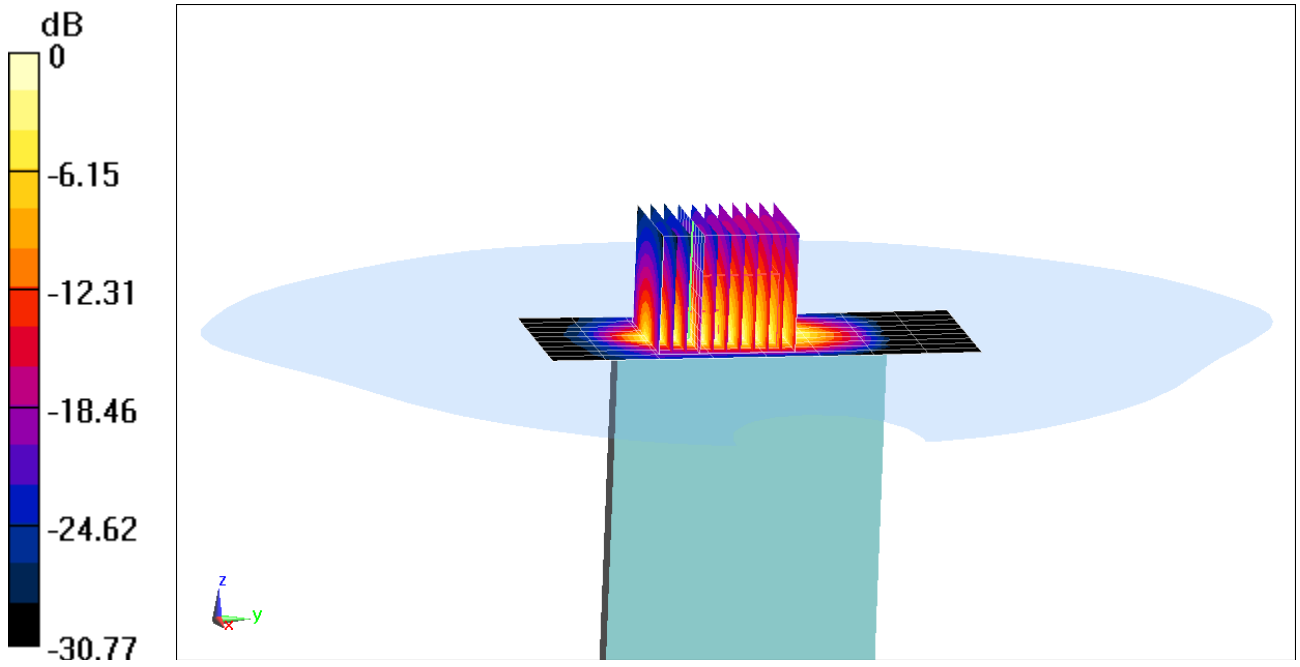
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.569 S/m; ε_r = 52.093; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 (10x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 57.87 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 19.4 W/kg
SAR(10 g) = 2.07 W/kg



0 dB = 9.67 W/kg = 9.85 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

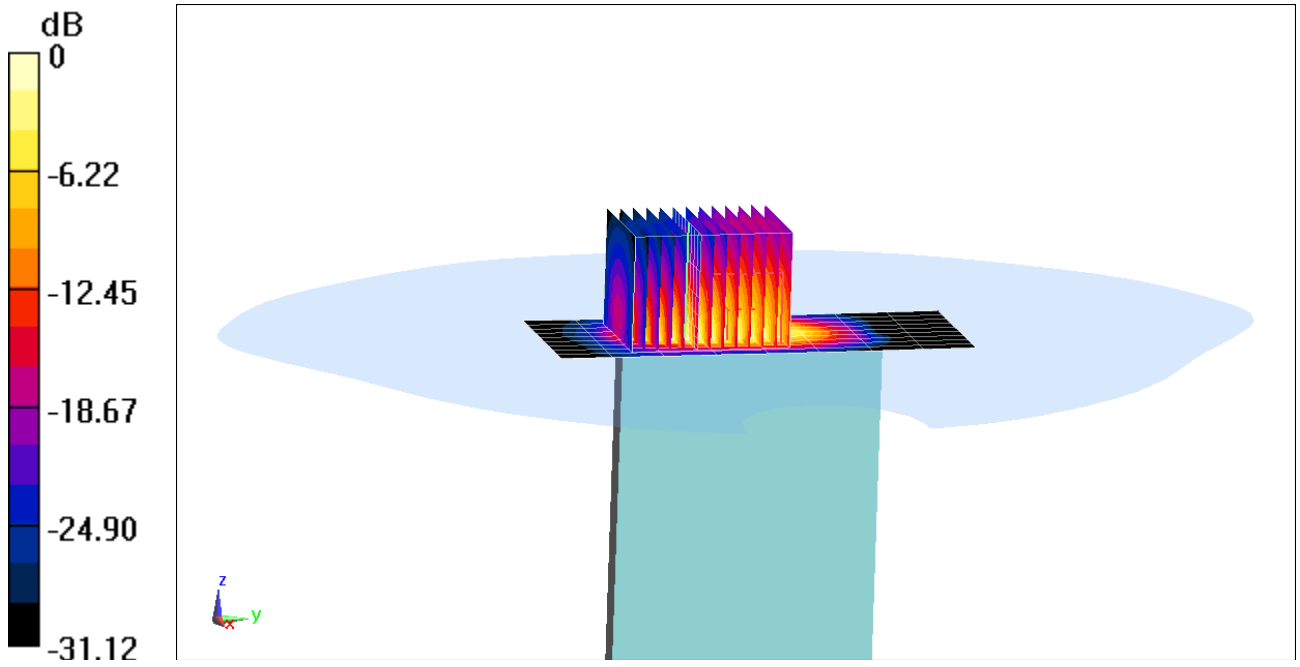
Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1909.8 MHz; Duty Cycle: 1:2.076
Medium: 1900 Body Medium parameters used:
f = 1910 MHz; σ = 1.57 S/m; ε_r = 52.086; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 (10x13x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 45.82 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(10 g) = 1.45 W/kg



0 dB = 6.77 W/kg = 8.31 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1828M

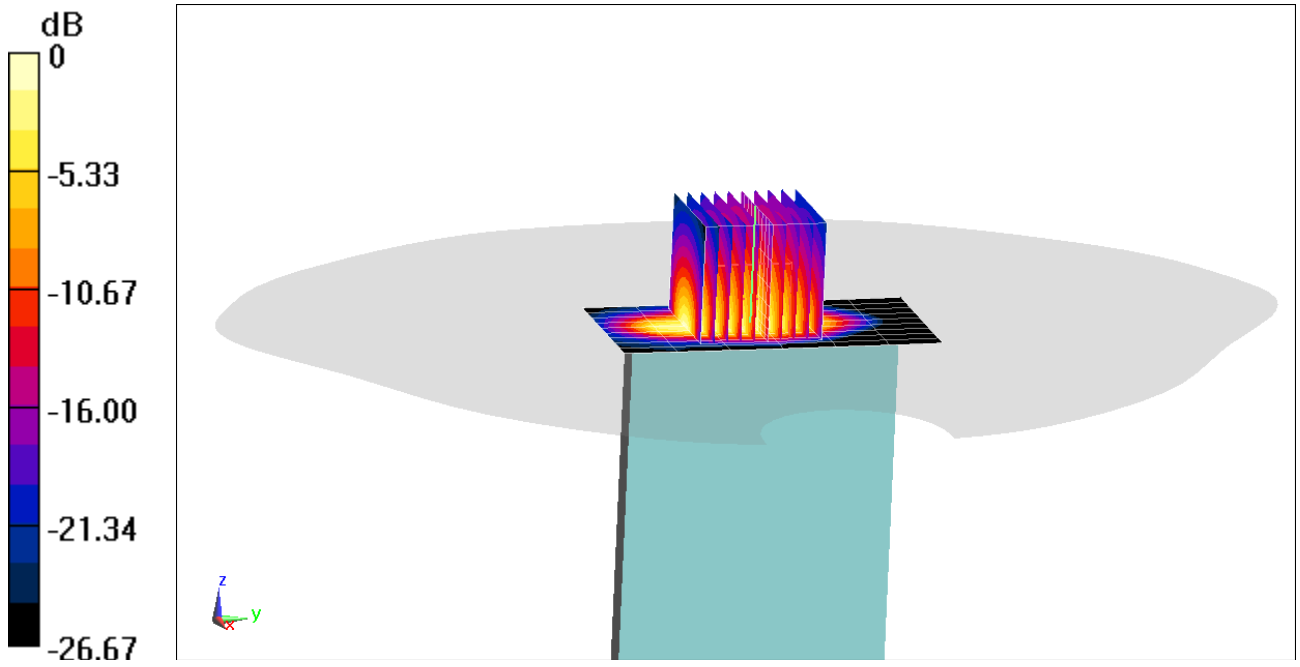
Communication System: UID 0, UMTS; Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1712.4 MHz; σ = 1.465 S/m; ε_r = 51.565; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1712.4 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: UMTS 1750, Phablet SAR, Bottom Edge, Low.ch

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 = 65.00 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(10 g) = 2.44 W/kg



0 dB = 9.20 W/kg = 9.64 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1851M

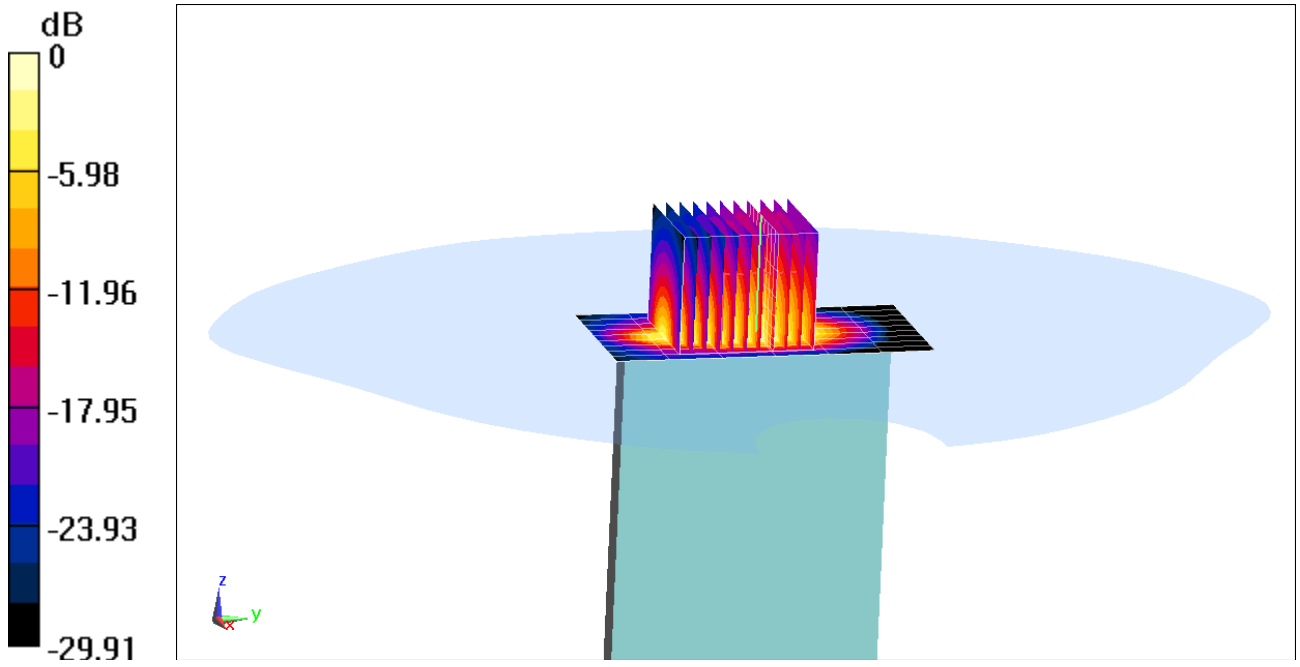
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.568 S/m; ε_r = 52.099; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/03/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.6°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 = 56.22 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 17.2 W/kg
SAR(10 g) = 2.13 W/kg



0 dB = 8.66 W/kg = 9.38 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1830M

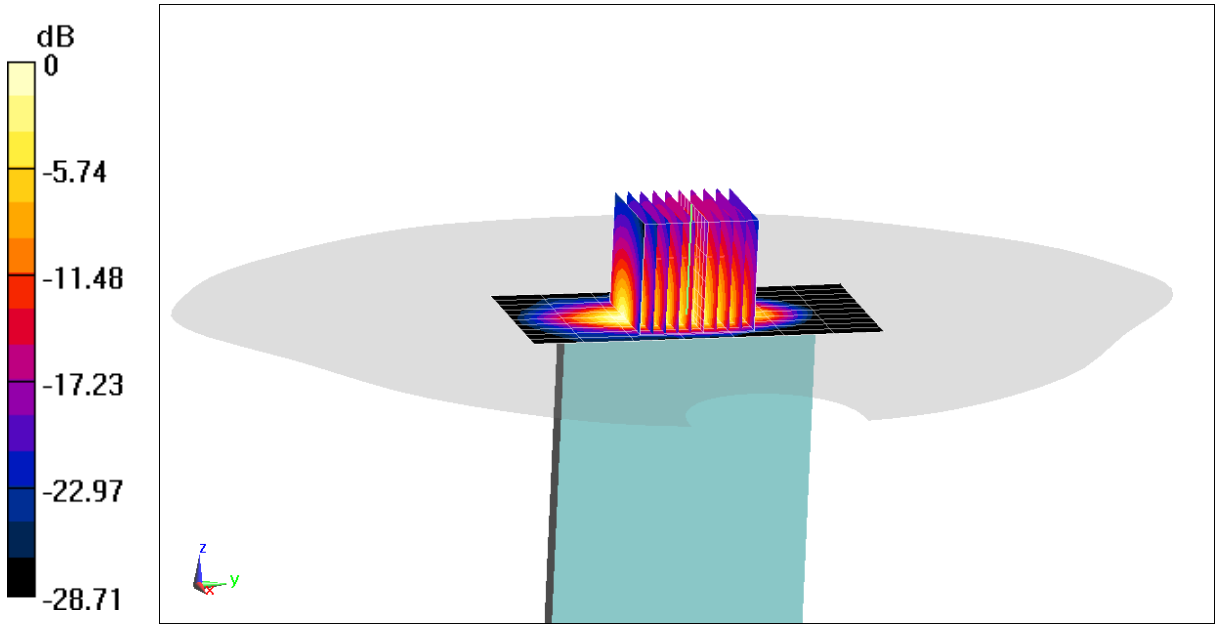
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1745 MHz; σ = 1.48 S/m; ε_r = 51.965; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/18/2020; Ambient Temp: 23.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1745 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: LTE Band 66 (AWS) ULCA, Phablet SAR, Bottom Edge,
PCC: Ch. 132322, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset
SCC: Ch. 132124, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (11x8x1): 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 = 60.23 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 13.9 W/kg
SAR(10 g) = 2.19 W/kg



0 dB = 8.85 W/kg = 9.47 dBW/kg

DUT: A3LSMN981U; Type: Portable Handset; Serial: 1846M

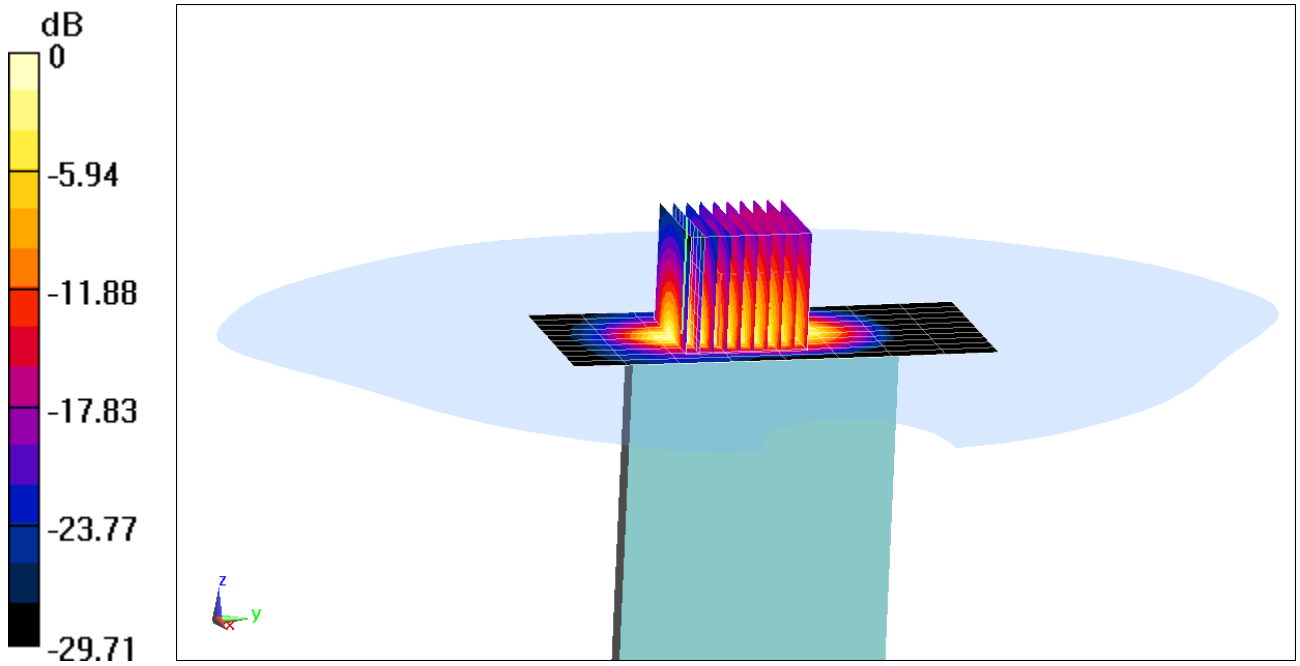
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.534 S/m; ε_r = 51.786; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/07/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.2°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 25 (PCS), Phablet SAR, Bottom Edge, Low.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (11x9x1): 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 = 54.06 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 16.2 W/kg
SAR(10 g) = 1.81 W/kg



0 dB = 7.36 W/kg = 8.67 dBW/kg