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SAR EVALUATION REPORT

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

Date of Testing:
03/13/19 - 04/29/19
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1903060032-01-R1.A3L

FCC ID: **A3LSMG977T**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-G977T, SM-G977P

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.10	0.19	0.65	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.33	0.98	1.85
PCE	UMTS 850	826.40 - 846.60 MHz	0.14	0.26	0.67	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.14	0.97	0.98	2.17
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.19	0.85	1.33	2.35
PCE	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.15	0.27	0.68	N/A
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.19	0.32	0.78	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.19	0.96	1.23	2.34
PCE	LTE Band 71	665.5 - 695.5 MHz	0.19	0.28	0.39	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.22	0.32	0.43	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.24	0.31	0.46	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.19	0.24	0.61	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.17	0.87	1.15	2.58
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	0.21	0.91	1.15	3.30
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	0.20	0.82	1.16	3.30
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.40	0.86	2.06
CBE	LTE Band 48	3552.5 - 3697.5 MHz	< 0.1	0.21	0.33	0.90
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.11	0.45	0.51	2.56
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n41	2506 - 2680 MHz	0.69	0.10	0.30	N/A
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.38	0.10	0.22	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.31	0.18	N/A	1.12
NII	U-NII-2C	5500 - 5720 MHz	0.11	0.23	N/A	1.39
NII	U-NII-3	5745 - 5825 MHz	< 0.1	0.26	0.36	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.36	< 0.1	< 0.1	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.47	1.44	1.59	3.98

Note: This revised Test Report (S/N: 1M1903060032-01-R1.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.8 of this report; for North American frequency bands only.

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

Randy Ortanez
President

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

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
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
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 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 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
2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
ANT+	Data	2402 - 2480 MHz
MST	Data	555 Hz - 8.33 kHz
NR Band n41	Data	2506 - 2690 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz

1.2 Power Reduction for SAR

This device utilizes a power reduction mechanism for some wireless modes and bands for SAR compliance under portable hotspot conditions, under some conditions when the device is being used in close proximity to the user's hand, and when headphones are inserted. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device when being used in phablet use conditions. Additionally, when 5G NR is active, this device reduces power for some phablet conditions for some LTE bands when 5G NR is active and for NR operations in during all voice or VoIP held to ear scenarios. Detailed descriptions of the power reduction mechanism are included in the operational description.

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

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1.3 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.

1.3.1 Maximum 2G/3G/4G/5G Output Power

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (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*
GSM/GPRS/EDGE 850	Maximum	**33.0**	**33.0**	**32.5**	**30.5**	**28.5**	**28.0**	**26.0**	**24.0**	**23.0**
	Nominal	**32.0**	**32.0**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**23.0**	**22.0**
GSM/GPRS/EDGE 1900	Maximum	**30.5**	**30.5**	**29.5**	**27.5**	**25.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**29.5**	**29.5**	**28.5**	**26.5**	**24.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 5 (850 MHz)	Maximum	**25.8**	**24.8**	**24.8**	**24.8**
	Nominal	**24.8**	**23.8**	**23.8**	**23.8**
UMTS Band 4 (1750 MHz)	Maximum	**25.0**	**24.0**	**24.0**	**24.0**
	Nominal	**24.0**	**23.0**	**23.0**	**23.0**
UMTS Band 2 (1900 MHz)	Maximum	**25.0**	**24.0**	**24.0**	**24.0**
	Nominal	**24.0**	**23.0**	**23.0**	**23.0**

Mode / Band		Modulated Average (dBm)
CDMA/EVDO BC10 (§90S)	Maximum	**25.8**
	Nominal	**24.8**
CDMA/EVDO BC0 (§22H)	Maximum	**25.8**
	Nominal	**24.8**
PCS CDMA/EVDO	Maximum	**25.0**
	Nominal	**24.0**

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Mode / Band		Modulated Average (dBm)
LTE Band 71	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 12	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 13	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 26 (Cell)	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 5 (Cell)	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 66 (AWS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 4 (AWS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 25 (PCS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 2 (PCS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 7	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 48	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 38	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 41 (PC3)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 41 (PC2)	Maximum	**27.8**
	Nominal	**26.8**

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1.3.2 Reduced 2G/3G/4G Output Power – Hotspot Mode Active

Mode / Band		Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slots	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 1900	Maximum	**28.5**	**26.0**	**23.5**	**22.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**27.5**	**25.0**	**22.5**	**21.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**20.5**	**19.5**	**19.5**	**19.5**
	Nominal	**19.5**	**18.5**	**18.5**	**18.5**
UMTS Band 2 (1900 MHz)	Maximum	**20.5**	**19.5**	**19.5**	**19.5**
	Nominal	**19.5**	**18.5**	**18.5**	**18.5**

Mode / Band		Modulated Average (dBm)
PCS CDMA/EVDO	Maximum	**20.0**
	Nominal	**19.0**

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 4 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 25 (PCS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 2 (PCS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 7	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 48	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 41 (PC3)	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 41 (PC2)	Maximum	**23.0**
	Nominal	**22.0**

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1.3.3 Reduced 2G/3G/4G Output Power – Grip Sensor and/or Earjack Active

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (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*
GSM/GPRS/EDGE 1900	Maximum	**28.5**	**28.5**	**27.5**	**25.5**	**23.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**27.5**	**27.5**	**26.5**	**24.5**	**22.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**20.5**	**19.5**	**19.5**	**19.5**
	Nominal	**19.5**	**18.5**	**18.5**	**18.5**
UMTS Band 2 (1900 MHz)	Maximum	**21.5**	**20.5**	**20.5**	**20.5**
	Nominal	**20.5**	**19.5**	**19.5**	**19.5**

Mode / Band		Modulated Average (dBm)
PCS CDMA/EVDO	Maximum	**21.0**
	Nominal	**20.0**

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 4 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 25 (PCS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 2 (PCS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 7	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 48	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 41 (PC3)	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 41 (PC2)	Maximum	**23.0**
	Nominal	**22.0**

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1.3.4 Maximum Output Powers with 5G NR FR1 Active

Mode / Band		Modulated Average (dBm)
NR Band n41	Maximum	**24.0**
	Nominal	**23.0**

Mode / Band		Modulated Average (dBm)
LTE Band 41 (PC3)	Maximum	**24.0**
	Nominal	**23.0**

1.3.5 Reduced 4G Output Power – 5G NR FR2 and Grip Sensor Active

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**19.0**
	Nominal	**18.0**
LTE Band 2 (PCS)	Maximum	**18.5**
	Nominal	**17.5**

1.3.6 Reduced 5G Output Power – Receiver Active

Mode / Band		Modulated Average (dBm)
NR Band n41	Maximum	**21.0**
	Nominal	**20.0**

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1.3.7 Maximum Bluetooth and SISO/MIMO WLAN Output Power

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

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
	Channel	1	2 - 10	11
IEEE 802.11b (2.4 GHz)	Maximum	**20.5**		
	Nominal	**19.5**		
IEEE 802.11g (2.4 GHz)	Maximum	**18.0**		
	Nominal	**17.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**18.0**		
	Nominal	**17.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - Single Tx Chain (dBm)											
		20 MHz Bandwidth				40 MHz Bandwidth					80 MHz Bandwidth		
	Channel	36	40-60	64	100-165	38	46-54	62	102	110-159	42-58	106	122-155
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**18.0**	**17.0**	**18.0**								
	Nominal	**15.5**	**17.0**	**16.0**	**17.0**								
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**18.0**	**17.0**	**18.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**			
	Nominal	**15.5**	**17.0**	**16.0**	**17.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**			
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**18.0**	**17.0**	**18.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**	**13.0**	**14.0**	**16.0**
	Nominal	**15.5**	**17.0**	**16.0**	**17.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**	**12.0**	**13.0**	**15.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**				**14.0**					**13.0**		
	Nominal	**15.0**				**13.0**					**12.0**		

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum	**21.0**		
	Nominal	**20.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**21.0**		
	Nominal	**20.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

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Mode / Band		Modulated Average - MIMO (dBm)											
		20 MHz Bandwidth				40 MHz Bandwidth					80 MHz Bandwidth		
	Channel	36	40-60	64	100-165	38	46-54	62	102	110-159	42-58	106	122-155
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**21.0**	**17.0**	**21.0**								
	Nominal	**15.5**	**20.0**	**16.0**	**20.0**								
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**21.0**	**17.0**	**21.0**	**14.0**	**20.0**	**14.5**	**15.5**	**20.0**			
	Nominal	**15.5**	**20.0**	**16.0**	**20.0**	**13.0**	**19.0**	**13.5**	**14.5**	**19.0**			
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**21.0**	**17.0**	**21.0**	**14.0**	**20.0**	**14.5**	**15.5**	**20.0**	**13.0**	**14.0**	**19.0**
	Nominal	**15.5**	**20.0**	**16.0**	**20.0**	**13.0**	**19.0**	**13.5**	**14.5**	**19.0**	**12.0**	**13.0**	**18.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**				**14.0**					**13.0**		
	Nominal	**15.0**				**13.0**					**12.0**		

Mode/Band		Modulated Average (dBm)
Bluetooth	Maximum	**14.0**
	Nominal	**13.0**
Bluetooth EDR	Maximum	**12.5**
	Nominal	**11.5**
Bluetooth LE	Maximum	**10.0**
	Nominal	**9.0**

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1.3.8 Reduced SISO/MIMO WLAN Output Power

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

Mode / Band		Modulated Average (dBm)		
	Channel	1	2 - 10	11
IEEE 802.11b (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - Single Tx Chain (dBm)			
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth	
	Channel	36-165	38-159	42-58	106-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**			
	Nominal	**13.0**			
IEEE 802.11n (5 GHz)	Maximum	**14.0**	**14.0**		
	Nominal	**13.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	
	Nominal	**13.0**	**13.0**	**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum	**20.0**		
	Nominal	**19.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**20.0**		
	Nominal	**19.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - MIMO (dBm)										
		20 MHz Bandwidth		40 MHz Bandwidth					80 MHz Bandwidth			
	Channel	36	40-165	38	46-54	62	102	110-159	42-58	106	122-155	
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**17.0**									
	Nominal	**15.5**	**16.0**									
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.0**	**15.5**	**17.0**				
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.0**	**14.5**	**16.0**				
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**	**13.0**	**14.0**	**17.0**	
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**	**12.0**	**13.0**	**16.0**	
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**		**14.0**					**13.0**			
	Nominal	**15.0**		**13.0**					**12.0**			

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1.3.9 Maximum Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

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

Mode / Band		Modulated Average (dBm)		
	Channel	1	2 - 10	11
IEEE 802.11b (2.4 GHz)	Maximum		**17.0**	
	Nominal		**16.0**	
IEEE 802.11g (2.4 GHz)	Maximum		**17.0**	
	Nominal		**16.0**	
IEEE 802.11n (2.4 GHz)	Maximum		**17.0**	
	Nominal		**16.0**	
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - Single Tx Chain (dBm)			
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth	
	Channel	36-165	38-159	42-58	106-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**			
	Nominal	**13.0**			
IEEE 802.11n (5 GHz)	Maximum	**14.0**	**14.0**		
	Nominal	**13.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	
	Nominal	**13.0**	**13.0**	**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum		**20.0**	
	Nominal		**19.0**	
IEEE 802.11n (2.4 GHz)	Maximum		**20.0**	
	Nominal		**19.0**	
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - MIMO (dBm)										
		20 MHz Bandwidth		40 MHz Bandwidth					80 MHz Bandwidth			
	Channel	36	40-165	38	46-54	62	102	110-159	42-58	106	122-155
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**17.0**									
	Nominal	**15.5**	**16.0**									
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.0**	**15.5**	**17.0**				
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.0**	**14.5**	**16.0**				
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**	**13.0**	**14.0**	**17.0**
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**	**12.0**	**13.0**	**16.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**		**14.0**					**13.0**		
	Nominal	**15.0**		**13.0**					**12.0**		

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1.3.10 Reduced Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

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

Mode / Band		Modulated Average (dBm)
	Channel	1-11
IEEE 802.11b (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11g (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11n (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11ax SU (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**

Mode / Band		Modulated Average - Single Tx Chain (dBm)			
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth	
	Channel	36-165	38-159	42-58	106-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**			
	Nominal	**13.0**			
IEEE 802.11n (5 GHz)	Maximum	**14.0**	**14.0**		
	Nominal	**13.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	
	Nominal	**13.0**	**13.0**	**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - MIMO (dBm)										
		20 MHz Bandwidth		40 MHz Bandwidth					80 MHz Bandwidth			
	Channel	36	40-165	38	46-54	62	102	110-159	42-58	106	122-155
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**17.0**								
	Nominal	**15.5**	**16.0**								
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.0**	**15.5**	**17.0**			
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.0**	**14.5**	**16.0**			
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**	**13.0**	**14.0**	**17.0**
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**	**12.0**	**13.0**	**16.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**		**14.0**					**13.0**		
	Nominal	**15.0**		**13.0**					**12.0**		

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1.3.11 Maximum Output Power During Conditions with Simultaneous 5G NR FR2 and/or 2.4 GHz WLAN and/or 5 GHz WLAN

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

Mode / Band		Modulated Average (dBm)		
	Channel	1	2 - 10	11
IEEE 802.11b (2.4 GHz)	Maximum	17.0		
	Nominal	16.0		
IEEE 802.11g (2.4 GHz)	Maximum	17.0		
	Nominal	16.0		
IEEE 802.11n (2.4 GHz)	Maximum	17.0		
	Nominal	16.0		
IEEE 802.11ax SU (2.4 GHz)	Maximum	16.0	17.0	15.5
	Nominal	15.0	16.0	14.5

Mode / Band		Modulated Average - Single Tx Chain (dBm)			
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth	
	Channel	36-165	38-159	42-58	106-155
IEEE 802.11a (5 GHz)	Maximum	14.0			
	Nominal	13.0			
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0		
	Nominal	13.0	13.0		
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	13.0	14.0
	Nominal	13.0	13.0	12.0	13.0
IEEE 802.11ax SU (5 GHz)	Maximum	14.0	14.0	13.0	
	Nominal	13.0	13.0	12.0	

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum	20.0		
	Nominal	19.0		
IEEE 802.11n (2.4 GHz)	Maximum	20.0		
	Nominal	19.0		
IEEE 802.11ax SU (2.4 GHz)	Maximum	16.0	17.0	15.5
	Nominal	15.0	16.0	14.5

Mode / Band		Modulated Average - MIMO (dBm)											
		20 MHz Bandwidth		40 MHz Bandwidth					80 MHz Bandwidth				
	Channel	36	40-165	38	46-54	62	102	110-159	42-58	106	122-155		
IEEE 802.11a (5 GHz)	Maximum	16.5	17.0										
	Nominal	15.5	16.0										
IEEE 802.11n (5 GHz)	Maximum	16.5	17.0	14.0	17.0	14.0	15.5	17.0					
	Nominal	15.5	16.0	13.0	16.0	13.0	14.5	16.0					
IEEE 802.11ac (5 GHz)	Maximum	16.5	17.0	14.0	17.0	14.5	15.5	17.0	13.0	14.0	17.0		
	Nominal	15.5	16.0	13.0	16.0	13.5	14.5	16.0	12.0	13.0	16.0		
IEEE 802.11ax SU (5 GHz)	Maximum	16.0		14.0					13.0				
	Nominal	15.0		13.0					12.0				

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1.3.12 Reduced Output Power During Conditions with Simultaneous 5G NR FR2 and/or 2.4 GHz WLAN and 5 GHz WLAN

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

Mode / Band		Modulated Average (dBm)
	Channel	1-11
IEEE 802.11b (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11g (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11n (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**
IEEE 802.11ax SU (2.4 GHz)	Maximum	**14.0**
	Nominal	**13.0**

Mode / Band		Modulated Average - Single Tx Chain (dBm)			
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth	
	Channel	36-165	38-159	42-58	106-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**			
	Nominal	**13.0**			
IEEE 802.11n (5 GHz)	Maximum	**14.0**	**14.0**		
	Nominal	**13.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**14.0**	**14.0**	**13.0**	
	Nominal	**13.0**	**13.0**	**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth		
	Channel	1	2 - 10	11
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.5**
	Nominal	**15.0**	**16.0**	**14.5**

Mode / Band		Modulated Average - MIMO (dBm)											
		20 MHz Bandwidth		40 MHz Bandwidth					80 MHz Bandwidth				
	Channel	36	40-165	38	46-54	62	102	110-159	42-58	106	122-155		
IEEE 802.11a (5 GHz)	Maximum	**16.5**	**17.0**										
	Nominal	**15.5**	**16.0**										
IEEE 802.11n (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.0**	**15.5**	**17.0**					
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.0**	**14.5**	**16.0**					
IEEE 802.11ac (5 GHz)	Maximum	**16.5**	**17.0**	**14.0**	**17.0**	**14.5**	**15.5**	**17.0**	**13.0**	**14.0**	**17.0**		
	Nominal	**15.5**	**16.0**	**13.0**	**16.0**	**13.5**	**14.5**	**16.0**	**12.0**	**13.0**	**16.0**		
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**		**14.0**					**13.0**				
	Nominal	**15.0**		**13.0**					**12.0**				

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1.4 DUT Antenna Locations

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

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
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
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 26 (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 2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	No	Yes
LTE Band 48	Yes	Yes	No	Yes	No	Yes
LTE Band 41	Yes	Yes	No	Yes	No	Yes
NR Band n41	Yes	Yes	Yes	Yes	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
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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1.5 Near Field Communications (NFC) Antenna

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

1.6 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 VOLTE.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering.
10. For 5G NR, Antenna J (Patch), Antenna J (Dipole), Antenna K, and Antenna L cannot transmit simultaneously.
11. 5G NR FR2 n260 and n261 and 5G NR FR1 n41 cannot transmit simultaneously.
12. LTE + 5G NR FR1 n41 operations are possible only with LTE B41 under EN-DC mode.
13. LTE + 5G NR FR2 n260 and n261 operations are possible only with LTE B2 and B66 under EN-DC mode.

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

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Per FCC Guidance, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

(B) Licensed Transmitter(s)

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

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

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

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 H.

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 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 41 with two component carriers

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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 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.

NR implementation of n41 is limited to EN-DC operations only, with LTE Band 41 acting as the anchor band. Per FCC Guidance, SAR tests for EN-DC operation were performed with both n41 and LTE B41 active. Please see Section 11 for more details.

This device supports 5G NR for Bands n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in test report 1M1903060032-20.A3L.

1.8 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)

1.9 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.

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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 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 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 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 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 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 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 19, 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 15. It supports carrier aggregation, downlink MIMO, and LAA features as shown in Section 9 and Appendix H. All other uplink communications are identical to the Release 8 specifications. Uplink communications are done on the PCC unless otherwise specified. The following LTE Release 15 Features are not supported: Relay, HetNet, Enhanced eICIC, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR FR1 Operations Information					
Form Factor	Portable Handset				
Frequency Range of each transmission band	NR Band n41 (2506 - 2690 MHz)				
Channel Bandwidths	NR Band n41: 100MHz, 80MHz, 60MHz, 40MHz, 20MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
NR Band n41: 20 MHz	2505.99 (501198)	2549.49 (509898)	2592.99 (518598)	2636.49 (527298)	2679.99 (535998)
NR Band n41: 40 MHz	2516.01 (503202)	2554.5 (510900)	2592.99 (518598)	2631.51 (526302)	2670.0 (534000)
NR Band n41: 60 MHz	2526.0 (505200)	2570.7 (514140)	N/A	2615.4 (523080)	2659.98 (531996)
NR Band n41: 80 MHz	2535.99 (507198)	2574.0 (514800)	N/A	2612.01 (522402)	2649.99 (529998)
NR Band n41: 100 MHz	2546.01 (509202)	2577.3 (515460)	N/A	2608.71 (521742)	2640.0 (528000)
SCS	30kHz				
Modulations Supported in UL	CP-OFDM QPSK, CP-OFDM 16QAM, CP-OFDM 64QAM				
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 Anchor Band	LTE Band 41				

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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:

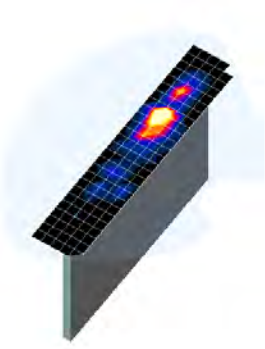


Figure 4-1
Sample SAR Area Scan

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].

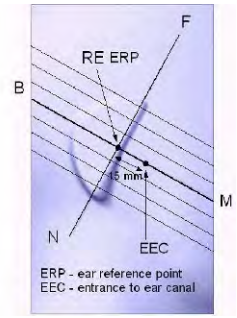


Figure 5-1
Close-Up Side view of ERP

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

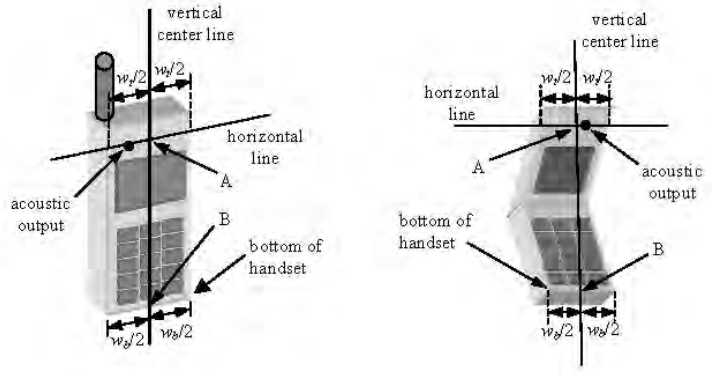


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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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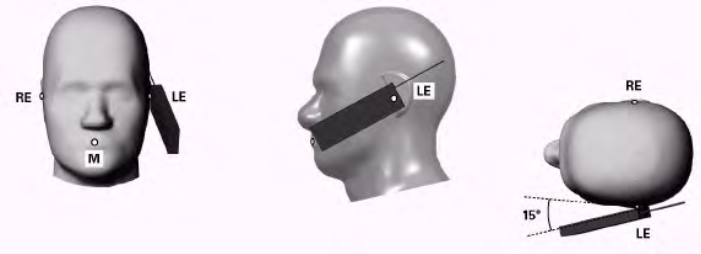


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

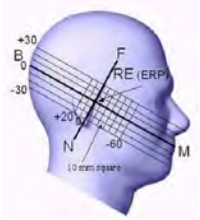


Figure 6-3
Side view w/ relevant markings

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.

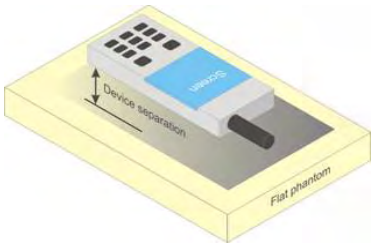


Figure 6-4
Sample Body-Worn Diagram

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 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. 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

9.1 CDMA Conducted Powers

Table 9-1
Maximum Conducted Power

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	24.59	24.54	24.58	24.56	24.53	24.08	24.08
Cellular	1013	22H	824.7	24.54	24.53	24.37	24.55	24.54	24.06	24.04
	384	22H	836.52	24.52	24.53	24.58	24.53	24.53	24.09	24.08
	777	22H	848.31	24.77	24.77	24.57	24.73	24.77	24.32	24.31
PCS	25	24E	1851.25	24.16	24.13	23.73	24.19	24.09	24.26	24.12
	600	24E	1880	24.24	24.23	24.32	24.22	24.19	24.30	24.26
	1175	24E	1908.75	24.09	24.19	24.24	24.09	24.12	24.11	24.01

Table 9-2
Reduced Conducted Power – Hotspot Mode Active

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	19.44	19.45	19.47	19.53
	600	24E	1880	19.51	19.54	19.63	19.66
	1175	24E	1908.75	19.48	19.56	19.55	19.60

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Table 9-3
Reduced Conducted Power – Proximity Sensor and/or Earjack Mode 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	20.40	20.43	20.27	20.44	20.46	20.51	20.53
	600	24E	1880	20.59	20.57	20.47	20.54	20.54	20.65	20.62
	1175	24E	1908.75	20.50	20.46	20.28	20.48	20.48	20.54	20.56

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
Maximum Conducted Power

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	32.08	32.14	31.55	**29.79**	27.42	26.52	25.02	22.92	21.73
	190	32.03	32.21	31.80	**29.52**	27.56	26.65	25.20	23.25	22.29
	251	32.09	32.15	31.88	**29.75**	27.68	26.82	25.28	23.25	22.30
GSM 1900	512	30.01	30.00	29.16	**27.01**	25.23	26.28	24.69	22.63	21.45
	661	29.60	29.62	28.50	**26.69**	25.03	25.86	24.45	22.53	21.67
	810	29.82	29.74	28.31	**27.16**	24.96	26.14	24.26	22.71	21.53

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.05	23.11	25.53	**25.53**	24.41	17.49	19.00	18.66	18.72
	190	23.00	23.18	25.78	**25.26**	24.55	17.62	19.18	18.99	19.28
	251	23.06	23.12	25.86	**25.49**	24.67	17.79	19.26	18.99	19.29
GSM 1900	512	20.98	20.97	23.14	**22.75**	22.22	17.25	18.67	18.37	18.44
	661	20.57	20.59	22.48	**22.43**	22.02	16.83	18.43	18.27	18.66
	810	20.79	20.71	22.29	**22.90**	21.95	17.11	18.24	18.45	18.52

GSM 850	**Frame Avg.Targets:**	22.97	22.97	25.48	**25.24**	24.49	17.97	18.98	18.74	18.99
GSM 1900		20.47	20.47	22.48	**22.24**	21.49	16.97	17.98	17.74	17.99

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Table 9-5
Reduced Conducted Power – Hotspot Mode Active

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.09	**25.79**	23.24	21.87	25.92	24.26	21.77	21.40
	661	28.20	**25.51**	23.06	21.77	26.00	24.10	21.95	21.22
	810	28.04	**25.38**	22.91	21.72	25.77	24.05	21.88	21.90

Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.06	**19.77**	18.98	18.86	16.89	18.24	17.51	18.39
	661	19.17	**19.49**	18.80	18.76	16.97	18.08	17.69	18.21
	810	19.01	**19.36**	18.65	18.71	16.74	18.03	17.62	18.89
GSM 1900	**Frame Avg.Targets:**	18.47	**18.98**	18.24	18.49	16.97	17.98	17.74	17.99

Table 9-6
Reduced Conducted Power – Proximity Sensor and/or Earjack Mode Active

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	27.93	28.09	27.50	**25.50**	22.95	25.92	24.26	21.77	21.40
	661	27.97	28.20	27.42	**25.28**	22.88	26.00	24.10	21.95	21.22
	810	27.76	28.04	27.35	**25.09**	22.68	25.77	24.05	21.88	21.90

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	18.90	19.06	21.48	**21.24**	19.94	16.89	18.24	17.51	18.39
	661	18.94	19.17	21.40	**21.02**	19.87	16.97	18.08	17.69	18.21
	810	18.73	19.01	21.33	**20.83**	19.67	16.74	18.03	17.62	18.89
GSM 1900	**Frame Avg.Targets:**	18.47	18.47	20.48	**20.24**	19.49	16.97	17.98	17.74	17.99

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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 8PSK modulation do not have an impact on output power.

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



Figure 9-2
Power Measurement Setup

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9.3 UMTS Conducted Powers

Table 9-7
Maximum Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.64	24.62	24.83	23.85	24.03	23.83	24.40	24.48	24.62	-
99		12.2 kbps AMR	24.69	24.63	24.87	23.80	24.03	23.95	24.52	24.63	24.47	-
6	HSDPA	Subtest 1	23.88	23.56	23.81	23.17	23.43	23.20	23.37	23.54	22.82	0
6		Subtest 2	23.76	23.61	23.86	23.22	23.31	23.26	23.25	23.43	23.13	0
6		Subtest 3	22.96	23.12	23.30	22.70	22.90	22.87	22.70	23.06	22.89	0.5
6		Subtest 4	23.06	23.11	23.35	22.70	22.86	22.79	22.67	22.81	22.94	0.5
6	HSUPA	Subtest 1	23.83	23.75	23.77	23.10	23.42	23.32	23.18	23.42	23.32	0
6		Subtest 2	21.84	21.60	21.73	21.22	21.41	21.30	21.18	21.35	21.32	2
6		Subtest 3	22.81	22.74	22.77	22.16	22.42	22.27	22.19	22.35	22.32	1
6		Subtest 4	21.81	21.76	21.75	21.14	21.38	21.27	21.19	21.36	21.35	2
6		Subtest 5	23.84	23.74	23.82	23.14	23.39	23.22	23.25	23.48	23.40	0
8	DC-HSDPA	Subtest 1	23.67	23.75	23.90	23.40	23.41	23.39	22.85	22.97	22.73	0
8		Subtest 2	23.70	23.78	23.89	23.24	23.40	23.35	22.84	23.09	22.77	0
8		Subtest 3	23.40	23.29	23.41	22.82	22.92	22.85	22.38	22.51	22.32	0.5
8		Subtest 4	23.25	23.29	23.41	22.67	22.87	22.87	22.35	22.57	22.26	0.5

Table 9-8
Reduced Conducted Power – Hotspot Mode Active

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	20.18	20.39	20.25	19.53	19.65	19.68	-
99		12.2 kbps AMR	20.17	20.39	20.26	19.57	19.73	19.67	-
6	HSDPA	Subtest 1	19.15	19.42	19.23	18.89	19.09	18.75	0
6		Subtest 2	19.27	19.40	19.27	18.87	19.07	18.74	0
6		Subtest 3	18.73	18.82	18.90	18.37	18.55	18.25	0.5
6		Subtest 4	18.69	18.86	18.68	18.38	18.55	18.26	0.5
6	HSUPA	Subtest 1	19.16	19.36	19.24	18.90	19.08	18.75	0
6		Subtest 2	17.17	17.38	17.22	16.84	17.04	16.73	2
6		Subtest 3	18.15	18.35	18.18	17.86	18.01	17.73	1
6		Subtest 4	17.16	17.36	17.23	16.85	17.05	16.72	2
6		Subtest 5	19.21	19.40	19.26	18.92	19.06	18.81	0
8	DC-HSDPA	Subtest 1	19.21	19.38	19.34	18.89	19.15	18.83	0
8		Subtest 2	19.23	19.38	19.30	18.62	18.92	18.65	0
8		Subtest 3	18.69	18.83	18.75	17.98	18.35	18.10	0.5
8		Subtest 4	18.72	18.86	18.78	18.02	18.42	18.09	0.5

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Table 9-9
Reduced Conducted Power – Proximity Sensor Active

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	20.18	20.39	20.25	20.84	21.37	21.47	-
99		12.2 kbps AMR	20.17	20.39	20.26	21.26	21.45	21.37	-
6	HSDPA	Subtest 1	19.15	19.42	19.23	20.34	20.48	20.34	0
6		Subtest 2	19.27	19.40	19.27	20.41	20.47	20.32	0
6		Subtest 3	18.73	18.82	18.90	19.89	19.91	19.88	0.5
6		Subtest 4	18.69	18.86	18.68	19.79	19.93	19.84	0.5
6	HSUPA	Subtest 1	19.16	19.36	19.24	20.32	20.40	20.29	0
6		Subtest 2	17.17	17.38	17.22	17.29	17.42	17.29	2
6		Subtest 3	18.15	18.35	18.18	19.33	19.45	19.26	1
6		Subtest 4	17.16	17.36	17.23	17.36	17.46	17.33	2
6		Subtest 5	19.21	19.40	19.26	20.37	20.46	20.35	0
8	DC-HSDPA	Subtest 1	19.21	19.38	19.34	20.41	20.49	20.23	0
8		Subtest 2	19.23	19.38	19.30	20.34	20.50	20.22	0
8		Subtest 3	18.69	18.83	18.75	19.84	20.05	19.65	0.5
8		Subtest 4	18.72	18.86	18.78	19.84	20.00	19.72	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.

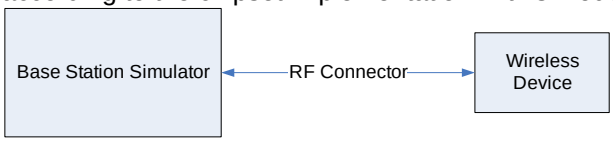


Figure 9-3
Power Measurement Setup

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9.4 LTE Conducted Powers

9.4.1 LTE Band 71

Table 9-10
LTE Band 71 Conducted Powers - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	25.07	0	0
	1	50	**25.35**		0
	1	99	25.08		0
	50	0	**24.40**	0-1	1
	50	25	24.35		1
	50	50	24.22		1
	100	0	24.32		1
16QAM	1	0	24.50	0-1	1
	1	50	24.45		1
	1	99	24.16		1
	50	0	23.38	0-2	2
	50	25	23.34		2
	50	50	23.17		2
	100	0	23.31		2
64QAM	1	0	23.50	0-2	2
	1	50	23.40		2
	1	99	23.17		2
	50	0	22.39	0-3	3
	50	25	22.35		3
	50	50	22.25		3
	100	0	22.31		3
256QAM	1	0	20.46	0-5	5
	1	50	20.39		5
	1	99	20.23		5
	50	0	20.40		5
	50	25	20.31		5
	50	50	20.24		5
	100	0	20.29		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 9-11
LTE Band 71 Conducted Powers - 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	25.35	0	0
	1	36	25.31		0
	1	74	25.13		0
	36	0	24.47	0-1	1
	36	18	24.49		1
	36	37	24.40		1
	75	0	24.39		1
16QAM	1	0	24.10	0-1	1
	1	36	24.48		1
	1	74	24.37		1
	36	0	23.49	0-2	2
	36	18	23.48		2
	36	37	23.43		2
	75	0	23.44		2
64QAM	1	0	23.16	0-2	2
	1	36	23.09		2
	1	74	23.01		2
	36	0	22.10	0-3	3
	36	18	22.49		3
	36	37	22.43		3
	75	0	22.45		3
256QAM	1	0	20.42	0-5	5
	1	36	20.47		5
	1	74	20.10		5
	36	0	20.44		5
	36	18	20.41		5
	36	37	20.39		5
	75	0	20.35		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 9-12
LTE Band 71 Conducted Powers - 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	25.15	25.34	24.89	0	0
	1	25	25.18	25.20	24.70		0
	1	49	25.06	25.09	24.67		0
	25	0	24.31	24.29	23.87	0-1	1
	25	12	24.30	24.29	23.85		1
	25	25	24.29	24.26	23.86		1
	50	0	24.32	24.27	23.86		1
16QAM	1	0	24.35	24.22	24.40	0-1	1
	1	25	24.47	24.43	24.01		1
	1	49	24.39	24.24	23.91		1
	25	0	23.33	23.31	22.89	0-2	2
	25	12	23.33	23.31	22.84		2
	25	25	23.29	23.21	22.81		2
	50	0	23.32	23.30	22.86		2
64QAM	1	0	23.44	23.47	23.38	0-2	2
	1	25	23.37	23.44	22.99		2
	1	49	23.28	23.24	22.87		2
	25	0	22.34	22.33	21.90	0-3	3
	25	12	22.37	22.29	21.89		3
	25	25	22.31	22.27	21.85		3
	50	0	22.35	22.31	21.89		3
256QAM	1	0	20.47	20.36	20.08	0-5	5
	1	25	20.28	20.48	19.97		5
	1	49	20.11	20.35	19.98		5
	25	0	20.39	20.42	19.84		5
	25	12	20.49	20.40	19.99		5
	25	25	20.44	20.39	20.04		5
	50	0	20.42	20.27	19.98		5

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Table 9-13
LTE Band 71 Conducted Powers - 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	24.97	25.12	24.69	0	0
	1	12	25.24	25.25	24.67		0
	1	24	25.27	25.14	24.61		0
	12	0	24.01	24.23	23.80	0-1	1
	12	6	24.36	24.27	23.83		1
	12	13	24.35	24.21	23.80		1
	25	0	24.23	24.27	23.81		1
16QAM	1	0	24.12	24.36	24.03	0-1	1
	1	12	24.48	24.48	23.96		1
	1	24	24.49	24.33	23.87		1
	12	0	23.05	23.26	22.83	0-2	2
	12	6	23.41	23.29	22.89		2
	12	13	23.40	23.30	22.82		2
	25	0	23.21	23.26	22.83		2
64QAM	1	0	23.19	23.35	23.02	0-2	2
	1	12	23.50	23.44	22.95		2
	1	24	23.47	23.33	22.83		2
	12	0	22.23	22.30	21.99	0-3	3
	12	6	22.42	22.39	22.04		3
	12	13	22.46	22.31	21.92		3
	25	0	22.22	22.30	21.85		3
256QAM	1	0	20.27	20.37	20.06	0-5	5
	1	12	20.25	20.43	20.26		5
	1	24	20.27	20.18	19.70		5
	12	0	20.44	20.27	19.81		5
	12	6	20.39	20.22	19.89		5
	12	13	20.39	20.28	19.87		5
	25	0	20.44	20.35	19.94		5

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9.4.2 LTE Band 12

Table 9-14
LTE Band 12 Conducted Powers - 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	**24.49**	0	0
	1	25	24.37		0
	1	49	24.24		0
	25	0	**23.63**	0-1	1
	25	12	23.52		1
	25	25	23.49		1
	50	0	23.56		1
16QAM	1	0	23.86	0-1	1
	1	25	23.69		1
	1	49	23.53		1
	25	0	22.63	0-2	2
	25	12	22.51		2
	25	25	22.48		2
	50	0	22.54		2
64QAM	1	0	23.05	0-2	2
	1	25	22.65		2
	1	49	22.52		2
	25	0	21.60	0-3	3
	25	12	21.55		3
	25	25	21.48		3
	50	0	21.55		3
256QAM	1	0	19.71	0-5	5
	1	25	19.54		5
	1	49	19.30		5
	25	0	19.60		5
	25	12	19.53		5
	25	25	19.46		5
	50	0	19.53		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 9-15
LTE Band 12 Conducted Powers - 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	24.95	24.72	24.56	0	0
	1	12	24.90	24.71	24.51		0
	1	24	24.74	24.52	24.36		0
	12	0	24.09	23.85	23.67	0-1	1
	12	6	24.07	23.80	23.66		1
	12	13	23.92	23.68	23.59		1
	25	0	24.00	23.74	23.60		1
16QAM	1	0	24.27	24.06	23.92	0-1	1
	1	12	24.22	24.02	23.83		1
	1	24	24.04	23.86	23.58		1
	12	0	23.11	22.99	22.67	0-2	2
	12	6	23.10	22.82	22.72		2
	12	13	22.97	22.74	22.63		2
	25	0	23.00	22.74	22.63		2
64QAM	1	0	23.19	23.00	22.84	0-2	2
	1	12	23.17	22.97	22.69		2
	1	24	22.99	22.77	22.65		2
	12	0	22.14	21.92	21.69	0-3	3
	12	6	22.15	21.87	21.71		3
	12	13	22.00	21.75	21.62		3
	25	0	22.04	21.75	21.66		3
256QAM	1	0	20.13	19.98	19.69	0-5	5
	1	12	20.12	19.70	19.50		5
	1	24	19.84	19.54	19.65		5
	12	0	20.03	19.81	19.57		5
	12	6	20.02	19.85	19.66		5
	12	13	19.88	19.72	19.48		5
	25	0	19.99	19.66	19.56		5

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Table 9-16
LTE Band 12 Conducted Powers - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.96	24.67	24.43	0	0
	1	7	24.94	24.67	24.43		0
	1	14	24.83	24.52	24.30		0
	8	0	24.03	23.80	23.55	0-1	1
	8	4	24.05	23.73	23.57		1
	8	7	23.94	23.68	23.52		1
	15	0	24.06	23.74	23.57		1
16QAM	1	0	24.25	23.97	23.73	0-1	1
	1	7	24.22	24.01	23.67		1
	1	14	24.15	23.79	23.61		1
	8	0	23.09	22.88	22.60	0-2	2
	8	4	23.14	22.83	22.66		2
	8	7	23.04	22.76	22.60		2
	15	0	23.06	22.67	22.68		2
64QAM	1	0	23.27	22.98	22.75	0-2	2
	1	7	23.38	22.97	22.88		2
	1	14	23.14	22.89	22.71		2
	8	0	22.19	21.86	21.55	0-3	3
	8	4	22.09	21.88	21.68		3
	8	7	22.00	21.82	21.60		3
	15	0	22.12	21.79	21.49		3
256QAM	1	0	20.13	19.80	19.53	0-5	5
	1	7	20.09	19.86	19.55		5
	1	14	19.98	19.65	19.41		5
	8	0	20.06	19.77	19.62		5
	8	4	20.08	19.70	19.60		5
	8	7	20.05	19.68	19.61		5
	15	0	20.06	19.75	19.57		5

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Table 9-17
LTE Band 12 Conducted Powers -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	24.96	24.62	24.36	0	0
	1	2	24.95	24.71	24.48		0
	1	5	24.92	24.53	24.46		0
	3	0	24.90	24.64	24.35		0
	3	2	24.97	24.64	24.34		0
	3	3	24.96	24.62	24.42		0
	6	0	24.04	23.71	23.48	0-1	1
16QAM	1	0	24.25	24.11	23.93	0-1	1
	1	2	24.27	24.09	23.72		1
	1	5	24.19	23.88	23.60		1
	3	0	24.02	23.73	23.57		1
	3	2	24.31	23.92	23.61		1
	3	3	24.07	23.57	23.52		1
	6	0	23.07	22.75	22.52	0-2	2
64QAM	1	0	23.26	22.95	22.66	0-2	2
	1	2	23.23	22.88	22.78		2
	1	5	23.14	22.90	22.24		2
	3	0	23.10	22.84	22.42		2
	3	2	22.97	22.91	22.57		2
	3	3	23.12	22.77	22.47		2
	6	0	22.05	21.68	21.53	0-3	3
256QAM	1	0	20.10	19.90	19.56	0-5	5
	1	2	20.15	19.92	19.66		5
	1	5	20.01	19.69	19.60		5
	3	0	20.11	19.80	19.50		5
	3	2	20.15	19.81	19.71		5
	3	3	20.10	19.69	19.56		5
	6	0	19.97	19.74	19.46		5

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9.4.3 LTE Band 13

Table 9-18
LTE Band 13 Conducted Powers - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.18**	0	0
	1	25	24.11		0
	1	49	24.04		0
	25	0	**23.34**	0-1	1
	25	12	23.31		1
	25	25	23.21		1
	50	0	23.30		1
16QAM	1	0	23.45	0-1	1
	1	25	23.27		1
	1	49	23.40		1
	25	0	22.26	0-2	2
	25	12	22.22		2
	25	25	22.15		2
	50	0	22.24		2
64QAM	1	0	22.42	0-2	2
	1	25	22.42		2
	1	49	22.28		2
	25	0	21.28	0-3	3
	25	12	21.34		3
	25	25	21.17		3
	50	0	21.23		3
256QAM	1	0	19.30	0-5	5
	1	25	19.40		5
	1	49	19.41		5
	25	0	19.29		5
	25	12	19.24		5
	25	25	19.31		5
	50	0	19.26		5

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Table 9-19
LTE Band 13 Conducted Powers - 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	24.49	0	0
	1	12	24.47		0
	1	24	24.42		0
	12	0	23.64	0-1	1
	12	6	23.69		1
	12	13	23.55		1
	25	0	23.66		1
16QAM	1	0	23.61	0-1	1
	1	12	23.66		1
	1	24	23.59		1
	12	0	22.66	0-2	2
	12	6	22.61		2
	12	13	22.55		2
	25	0	22.64		2
64QAM	1	0	22.67	0-2	2
	1	12	22.69		2
	1	24	22.63		2
	12	0	21.50	0-3	3
	12	6	21.68		3
	12	13	21.49		3
	25	0	21.59		3
256QAM	1	0	19.66	0-5	5
	1	12	19.71		5
	1	24	19.64		5
	12	0	19.64		5
	12	6	19.61		5
	12	13	19.59		5
	25	0	19.60		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 26 (Cell)

Table 9-20
LTE Band 26 (Cell) Conducted Powers - 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	**25.10**	0	0
	1	36	25.05		0
	1	74	25.02		0
	36	0	**24.20**	0-1	1
	36	18	24.16		1
	36	37	24.08		1
	75	0	24.13		1
16QAM	1	0	23.89	0-1	1
	1	36	24.04		1
	1	74	23.77		1
	36	0	23.19	0-2	2
	36	18	23.15		2
	36	37	23.10		2
	75	0	23.22		2
64QAM	1	0	23.18	0-2	2
	1	36	23.17		2
	1	74	23.05		2
	36	0	22.21	0-3	3
	36	18	22.22		3
	36	37	22.14		3
	75	0	22.08		3
256QAM	1	0	20.22	0-5	5
	1	36	20.28		5
	1	74	20.00		5
	36	0	20.17		5
	36	18	20.21		5
	36	37	20.16		5
	75	0	20.17		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) Conducted Powers - 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	24.96	24.92	24.97	0	0
	1	25	24.86	24.82	24.86		0
	1	49	24.88	24.82	24.80		0
	25	0	23.96	23.96	23.99	0-1	1
	25	12	23.99	23.99	24.02		1
	25	25	23.95	23.96	23.98		1
	50	0	24.01	23.97	23.98		1
16QAM	1	0	24.22	24.16	24.22	0-1	1
	1	25	24.14	24.10	24.10		1
	1	49	23.99	24.02	24.06		1
	25	0	23.02	22.98	22.98	0-2	2
	25	12	23.01	22.99	23.02		2
	25	25	22.97	22.94	22.96		2
	50	0	22.98	22.99	22.95		2
64QAM	1	0	23.21	23.20	23.15	0-2	2
	1	25	23.10	23.05	23.06		2
	1	49	23.06	23.04	22.94		2
	25	0	22.01	21.98	21.97	0-3	3
	25	12	22.02	21.99	22.01		3
	25	25	21.94	21.95	22.00		3
	50	0	22.00	21.96	21.99		3
256QAM	1	0	20.28	20.09	20.20	0-5	5
	1	25	20.03	20.26	19.97		5
	1	49	19.90	20.04	19.89		5
	25	0	19.97	19.97	19.93		5
	25	12	19.96	19.96	19.93		5
	25	25	19.81	20.00	19.94		5
	50	0	19.95	19.98	19.96		5

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Table 9-22
LTE Band 26 (Cell) Conducted Powers - 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	24.84	24.78	24.79	0	0
	1	12	24.82	24.80	24.81		0
	1	24	24.86	24.77	24.76		0
	12	0	23.93	23.85	23.86	0-1	1
	12	6	24.03	23.92	23.81		1
	12	13	23.98	23.90	23.88		1
	25	0	23.97	23.94	23.80		1
16QAM	1	0	24.15	24.00	23.96	0-1	1
	1	12	24.26	24.17	24.06		1
	1	24	24.01	24.02	24.01		1
	12	0	22.99	22.95	22.97	0-2	2
	12	6	23.07	22.96	22.98		2
	12	13	23.05	23.01	22.93		2
	25	0	22.97	22.93	22.89		2
64QAM	1	0	23.09	23.07	23.04	0-2	2
	1	12	23.18	23.10	23.07		2
	1	24	23.13	23.06	22.98		2
	12	0	21.93	21.90	21.88	0-3	3
	12	6	21.99	21.93	21.99		3
	12	13	21.99	21.95	21.92		3
	25	0	21.90	21.89	21.83		3
256QAM	1	0	20.08	19.94	19.98	0-5	5
	1	12	20.37	19.98	20.01		5
	1	24	20.03	19.97	19.85		5
	12	0	19.84	19.88	19.79		5
	12	6	20.08	19.87	19.92		5
	12	13	19.84	19.87	19.87		5
	25	0	19.89	19.96	19.88		5

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Table 9-23
LTE Band 26 (Cell) Conducted Powers - 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	24.73	24.84	24.76	0	0
	1	7	24.85	24.75	24.79		0
	1	14	24.75	24.65	24.73		0
	8	0	23.96	23.97	23.87	0-1	1
	8	4	23.94	23.83	23.91		1
	8	7	23.90	23.91	23.86		1
	15	0	23.88	23.95	23.93		1
16QAM	1	0	23.98	23.93	23.98	0-1	1
	1	7	24.21	24.02	24.11		1
	1	14	24.06	23.86	24.13		1
	8	0	23.01	22.99	22.94	0-2	2
	8	4	23.02	22.91	22.99		2
	8	7	22.93	22.92	22.95		2
	15	0	22.96	22.94	22.83		2
64QAM	1	0	23.06	22.97	22.98	0-2	2
	1	7	23.14	23.16	23.28		2
	1	14	23.27	23.04	22.92		2
	8	0	22.03	21.82	21.86	0-3	3
	8	4	21.99	21.94	21.96		3
	8	7	21.94	21.92	21.92		3
	15	0	21.94	21.88	21.91		3
256QAM	1	0	19.85	19.91	19.83	0-5	5
	1	7	20.12	19.97	19.88		5
	1	14	20.09	19.99	19.87		5
	8	0	19.83	19.83	19.82		5
	8	4	19.87	19.97	19.90		5
	8	7	19.90	19.92	19.83		5
	15	0	19.93	19.89	19.91		5

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Table 9-24
LTE Band 26 (Cell) Conducted Powers -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	24.76	24.75	24.74	0	0
	1	2	24.80	24.79	24.79		0
	1	5	24.79	24.64	24.67		0
	3	0	24.79	24.69	24.75		0
	3	2	24.84	24.81	24.76		0
	3	3	24.81	24.72	24.72		0
	6	0	23.90	23.87	23.85	0-1	1
16QAM	1	0	24.05	23.98	23.92	0-1	1
	1	2	23.91	23.99	24.02		1
	1	5	24.11	24.03	23.95		1
	3	0	23.95	23.80	23.89		1
	3	2	23.92	23.94	23.92		1
	3	3	23.93	23.80	23.98		1
	6	0	22.97	22.85	22.89	0-2	2
64QAM	1	0	23.01	23.02	22.93	0-2	2
	1	2	22.98	22.87	23.06		2
	1	5	23.34	22.88	22.87		2
	3	0	23.00	22.92	22.95		2
	3	2	22.88	22.97	22.89		2
	3	3	22.98	22.94	22.78		2
	6	0	21.93	21.85	21.85	0-3	3
256QAM	1	0	19.89	19.82	19.89	0-5	5
	1	2	20.10	19.91	19.95		5
	1	5	19.97	19.66	19.84		5
	3	0	20.04	19.83	19.95		5
	3	2	20.08	19.99	19.83		5
	3	3	20.11	19.91	19.98		5
	6	0	19.93	19.97	19.81		5

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9.4.5 LTE Band 66 (AWS)

Table 9-25
LTE Band 66 (AWS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.64	23.63	23.91	0	0
	1	50	23.65	24.25	24.19		0
	1	99	24.04	**24.28**	24.14		0
	50	0	23.10	23.14	23.42	0-1	1
	50	25	23.11	**23.44**	23.41		1
	50	50	23.09	23.42	23.38		1
	100	0	23.09	23.41	23.29		1
16QAM	1	0	22.66	22.91	23.28	0-1	1
	1	50	22.43	23.11	23.16		1
	1	99	22.84	23.22	23.33		1
	50	0	22.08	22.13	22.47	0-2	2
	50	25	22.09	22.35	22.20		2
	50	50	22.14	22.38	22.32		2
	100	0	22.10	22.39	22.29		2
64QAM	1	0	21.71	21.98	22.20	0-2	2
	1	50	22.05	22.43	22.19		2
	1	99	22.04	22.45	22.01		2
	50	0	21.15	21.12	21.42	0-3	3
	50	25	21.16	21.41	21.29		3
	50	50	21.19	21.38	21.33		3
	100	0	21.14	21.43	21.26		3
256QAM	1	0	18.91	19.30	19.36	0-5	5
	1	50	19.09	19.44	19.27		5
	1	99	19.15	19.41	19.35		5
	50	0	19.16	19.41	19.26		5
	50	25	19.15	19.38	19.37		5
	50	50	19.12	19.31	19.35		5
	100	0	19.14	19.36	19.35		5

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Table 9-26
LTE Band 66 (AWS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.64	23.68	24.05	0	0
	1	36	23.69	24.13	23.99		0
	1	74	23.72	24.13	24.01		0
	36	0	22.98	23.15	23.25	0-1	1
	36	18	22.98	23.31	23.20		1
	36	37	22.97	23.30	23.14		1
	75	0	22.91	23.27	23.14		1
16QAM	1	0	23.03	22.77	23.39	0-1	1
	1	36	22.74	23.43	23.29		1
	1	74	23.13	23.39	23.30		1
	36	0	21.98	22.24	22.19	0-2	2
	36	18	21.97	22.30	22.19		2
	36	37	22.00	22.28	22.14		2
	75	0	21.96	22.33	22.18		2
64QAM	1	0	21.87	21.66	22.22	0-2	2
	1	36	21.81	21.99	22.02		2
	1	74	21.98	21.98	21.92		2
	36	0	20.76	20.91	20.99	0-3	3
	36	18	20.86	20.99	21.00		3
	36	37	20.95	20.88	21.05		3
	75	0	20.87	21.02	21.13		3
256QAM	1	0	18.86	19.18	19.17	0-5	5
	1	36	18.98	19.33	19.04		5
	1	74	19.11	19.36	19.10		5
	36	0	18.83	19.14	19.12		5
	36	18	18.76	19.19	19.10		5
	36	37	18.90	19.12	19.04		5
	75	0	18.86	19.17	19.08		5

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Table 9-27
LTE Band 66 (AWS) Maximum Conducted Powers - 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	23.53	23.66	23.80	0	0
	1	25	23.56	23.97	23.87		0
	1	49	23.62	24.04	23.81		0
	25	0	22.76	23.18	23.02	0-1	1
	25	12	22.79	23.22	23.00		1
	25	25	22.75	23.16	22.93		1
	50	0	22.75	23.20	22.99		1
16QAM	1	0	22.72	22.94	23.13	0-1	1
	1	25	22.81	23.21	23.10		1
	1	49	22.90	23.23	23.08		1
	25	0	21.76	22.16	21.99	0-2	2
	25	12	21.74	22.17	22.00		2
	25	25	21.71	22.13	21.96		2
	50	0	21.76	22.17	21.97		2
64QAM	1	0	21.87	22.21	21.75	0-2	2
	1	25	22.08	22.01	21.91		2
	1	49	22.05	22.46	21.90		2
	25	0	20.69	20.63	20.92	0-3	3
	25	12	20.88	20.97	20.90		3
	25	25	20.89	21.33	20.92		3
	50	0	20.88	20.99	20.91		3
256QAM	1	0	18.81	19.35	18.90	0-5	5
	1	25	18.87	19.40	18.80		5
	1	49	18.92	19.40	18.90		5
	25	0	18.78	19.31	18.92		5
	25	12	18.91	19.29	18.92		5
	25	25	18.83	19.27	18.87		5
	50	0	18.85	19.36	18.85		5

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Table 9-28
LTE Band 66 (AWS) Maximum Conducted Powers - 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	23.48	23.89	23.80	0	0
	1	12	23.61	24.03	23.84		0
	1	24	23.72	24.04	23.85		0
	12	0	22.69	23.12	22.98	0-1	1
	12	6	22.73	23.15	23.02		1
	12	13	22.74	23.15	22.98		1
	25	0	22.75	23.16	23.02		1
16QAM	1	0	22.79	23.10	23.10	0-1	1
	1	12	22.90	23.30	23.14		1
	1	24	22.96	23.33	23.09		1
	12	0	21.70	22.18	22.01	0-2	2
	12	6	21.67	22.14	22.01		2
	12	13	21.70	22.16	22.01		2
	25	0	21.70	22.16	22.01		2
64QAM	1	0	21.92	21.67	22.03	0-2	2
	1	12	21.68	21.97	22.13		2
	1	24	21.97	22.21	21.98		2
	12	0	20.69	20.65	21.02	0-3	3
	12	6	20.88	20.99	21.04		3
	12	13	20.77	20.96	21.00		3
	25	0	20.70	20.97	20.97		3
256QAM	1	0	18.68	19.28	19.03	0-5	5
	1	12	18.87	19.19	19.07		5
	1	24	19.27	19.23	19.09		5
	12	0	18.69	19.06	19.05		5
	12	6	18.79	19.07	18.97		5
	12	13	18.78	19.08	18.93		5
	25	0	18.75	19.08	19.02		5

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Table 9-29
LTE Band 66 (AWS) Maximum Conducted Powers - 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	23.48	23.94	23.78	0	0
	1	7	23.58	24.05	23.83		0
	1	14	23.59	24.02	23.76		0
	8	0	22.74	23.13	22.95	0-1	1
	8	4	22.70	23.16	22.98		1
	8	7	22.69	23.15	22.98		1
	15	0	22.72	23.17	22.91		1
16QAM	1	0	22.78	23.18	23.10	0-1	1
	1	7	22.82	23.27	23.11		1
	1	14	22.87	23.27	23.03		1
	8	0	21.67	22.17	22.00	0-2	2
	8	4	21.75	22.22	22.04		2
	8	7	21.76	22.17	21.96		2
	15	0	21.70	22.14	21.95		2
64QAM	1	0	21.33	21.67	21.97	0-2	2
	1	7	21.56	22.03	22.02		2
	1	14	21.73	22.50	21.92		2
	8	0	20.95	21.16	20.96	0-3	3
	8	4	20.81	21.22	20.96		3
	8	7	20.79	21.33	20.99		3
	15	0	20.82	21.11	20.95		3
256QAM	1	0	18.60	19.23	19.04	0-5	5
	1	7	18.67	19.23	19.15		5
	1	14	18.77	19.03	18.94		5
	8	0	18.85	19.05	18.88		5
	8	4	18.73	19.10	18.95		5
	8	7	18.78	19.11	18.92		5
	15	0	18.67	19.10	18.92		5

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Table 9-30
LTE Band 66 (AWS) Maximum Conducted Powers -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	23.41	23.90	23.69	0	0
	1	2	23.58	24.05	23.78		0
	1	5	23.63	23.97	23.74		0
	3	0	23.42	23.89	23.75		0
	3	2	23.53	23.99	23.79		0
	3	3	23.50	23.99	23.73		0
	6	0	22.59	23.06	22.87	0-1	1
16QAM	1	0	22.70	23.23	23.02	0-1	1
	1	2	22.83	23.23	23.04		1
	1	5	22.75	23.23	23.12		1
	3	0	22.54	23.00	22.86		1
	3	2	22.63	23.18	22.89		1
	3	3	22.62	23.05	22.87		1
	6	0	21.65	22.10	21.88	0-2	2
64QAM	1	0	21.40	21.92	21.95	0-2	2
	1	2	21.57	22.07	21.99		2
	1	5	21.61	22.18	21.87		2
	3	0	21.12	21.45	21.81		2
	3	2	20.93	21.55	21.93		2
	3	3	21.19	21.60	21.91		2
	6	0	20.72	20.96	20.84	0-3	3
256QAM	1	0	18.50	19.13	19.65	0-5	5
	1	2	18.73	19.22	18.80		5
	1	5	18.71	19.31	18.88		5
	3	0	18.66	19.29	19.21		5
	3	2	18.69	19.15	18.98		5
	3	3	18.65	19.16	19.05		5
	6	0	18.67	19.05	18.90		5

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Table 9-31
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**20.55**	20.42	20.41	0	0
	1	50	20.39	20.35	20.21		0
	1	99	20.43	20.37	19.99		0
	50	0	**20.61**	20.59	20.47	0-1	0
	50	25	20.60	20.56	20.45		0
	50	50	20.57	20.54	20.41		0
	100	0	20.50	20.53	20.43		0
16QAM	1	0	20.57	20.56	20.29	0-1	0
	1	50	20.66	20.70	20.22		0
	1	99	20.68	20.68	20.22		0
	50	0	20.63	20.59	20.46	0-2	0
	50	25	20.61	20.57	20.52		0
	50	50	20.55	20.54	20.38		0
	100	0	20.63	20.60	20.42		0
64QAM	1	0	20.65	20.77	20.52	0-2	0
	1	50	20.56	20.64	20.59		0
	1	99	20.74	20.62	20.57		0
	50	0	20.61	20.62	20.41	0-3	0
	50	25	20.57	20.62	20.45		0
	50	50	20.64	20.55	20.42		0
	100	0	20.66	20.58	20.54		0
256QAM	1	0	19.77	19.63	19.46	0-5	1
	1	50	19.46	19.29	19.45		1
	1	99	19.68	19.56	19.53		1
	50	0	19.62	19.57	19.47		1
	50	25	19.65	19.66	19.45		1
	50	50	19.55	19.54	19.41		1
	100	0	19.65	19.59	19.40		1

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Table 9-32
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth– Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.27	20.45	20.43	0	0
	1	36	20.19	20.44	20.40		0
	1	74	20.23	20.39	20.36		0
	36	0	20.47	20.52	20.54	0-1	0
	36	18	20.47	20.51	20.53		0
	36	37	20.41	20.49	20.48		0
	75	0	20.48	20.52	20.52		0
16QAM	1	0	20.58	20.69	20.60	0-1	0
	1	36	20.53	20.59	20.56		0
	1	74	20.46	20.60	20.65		0
	36	0	20.47	20.51	20.50	0-2	0
	36	18	20.46	20.51	20.51		0
	36	37	20.38	20.48	20.49		0
	75	0	20.47	20.52	20.51		0
64QAM	1	0	20.53	20.71	20.58	0-2	0
	1	36	20.49	20.63	20.69		0
	1	74	20.45	20.57	20.55		0
	36	0	20.48	20.59	20.58	0-3	0
	36	18	20.50	20.58	20.57		0
	36	37	20.42	20.54	20.53		0
	75	0	20.46	20.54	20.50		0
256QAM	1	0	19.64	19.90	19.68	0-5	1
	1	36	19.52	19.75	19.85		1
	1	74	19.57	19.85	19.89		1
	36	0	19.70	19.74	19.82		1
	36	18	19.66	19.86	19.86		1
	36	37	19.66	19.69	19.65		1
	75	0	19.69	19.80	19.73		1

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Table 9-33
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth– Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.28	20.39	20.33	0	0
	1	25	20.36	20.36	20.36		0
	1	49	20.38	20.44	20.40		0
	25	0	20.48	20.52	20.53	0-1	0
	25	12	20.49	20.55	20.53		0
	25	25	20.45	20.52	20.51		0
	50	0	20.50	20.57	20.56		0
16QAM	1	0	20.49	20.59	20.69	0-1	0
	1	25	20.56	20.61	20.59		0
	1	49	20.57	20.60	20.63		0
	25	0	20.48	20.58	20.58	0-2	0
	25	12	20.48	20.56	20.55		0
	25	25	20.47	20.53	20.51		0
	50	0	20.49	20.54	20.54		0
64QAM	1	0	20.59	20.67	20.65	0-2	0
	1	25	20.58	20.66	20.62		0
	1	49	20.64	20.65	20.71		0
	25	0	20.52	20.57	20.57	0-3	0
	25	12	20.56	20.60	20.59		0
	25	25	20.50	20.55	20.55		0
	50	0	20.56	20.58	20.57		0
256QAM	1	0	19.58	19.40	19.64	0-5	1
	1	25	19.41	19.63	19.60		1
	1	49	19.64	19.59	19.66		1
	25	0	19.46	19.59	19.49		1
	25	12	19.52	19.58	19.51		1
	25	25	19.50	19.61	19.63		1
	50	0	19.48	19.59	19.57		1

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Table 9-34
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth– Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.21	20.24	20.32	0	0
	1	12	20.34	20.37	20.28		0
	1	24	20.35	20.41	20.34		0
	12	0	20.36	20.38	20.44	0-1	0
	12	6	20.44	20.42	20.49		0
	12	13	20.41	20.51	20.48		0
	25	0	20.46	20.44	20.46		0
16QAM	1	0	20.46	20.51	20.53	0-1	0
	1	12	20.57	20.62	20.61		0
	1	24	20.58	20.64	20.53		0
	12	0	20.40	20.40	20.42	0-2	0
	12	6	20.39	20.42	20.44		0
	12	13	20.43	20.41	20.46		0
	25	0	20.41	20.40	20.44		0
64QAM	1	0	20.50	20.53	20.57	0-2	0
	1	12	20.54	20.63	20.58		0
	1	24	20.62	20.63	20.58		0
	12	0	20.47	20.47	20.50	0-3	0
	12	6	20.47	20.50	20.49		0
	12	13	20.49	20.49	20.49		0
	25	0	20.48	20.44	20.50		0
256QAM	1	0	19.39	19.62	19.62	0-5	1
	1	12	19.55	19.71	19.76		1
	1	24	19.42	19.75	19.65		1
	12	0	19.53	19.52	19.60		1
	12	6	19.57	19.59	19.57		1
	12	13	19.54	19.57	19.56		1
	25	0	19.54	19.60	19.58		1

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Table 9-35
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth– Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.13	20.24	20.32	0	0
	1	7	20.22	20.35	20.30		0
	1	14	20.30	20.38	20.31		0
	8	0	20.33	20.35	20.41	0-1	0
	8	4	20.39	20.50	20.47		0
	8	7	20.46	20.46	20.42		0
	15	0	20.41	20.43	20.45		0
16QAM	1	0	20.38	20.53	20.50	0-1	0
	1	7	20.51	20.62	20.49		0
	1	14	20.51	20.55	20.53		0
	8	0	20.41	20.41	20.45	0-2	0
	8	4	20.47	20.54	20.46		0
	8	7	20.41	20.47	20.43		0
	15	0	20.38	20.37	20.40		0
64QAM	1	0	20.41	20.50	20.51	0-2	0
	1	7	20.54	20.58	20.55		0
	1	14	20.51	20.62	20.55		0
	8	0	20.42	20.38	20.46	0-3	0
	8	4	20.49	20.57	20.50		0
	8	7	20.49	20.50	20.44		0
	15	0	20.42	20.43	20.46		0
256QAM	1	0	19.52	19.58	19.55	0-5	1
	1	7	19.43	19.63	19.54		1
	1	14	19.62	19.65	19.47		1
	8	0	19.56	19.53	19.50		1
	8	4	19.46	19.56	19.51		1
	8	7	19.52	19.64	19.50		1
	15	0	19.44	19.57	19.45		1

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Table 9-36
LTE Band 66 (AWS) Reduced Conducted Powers -1.4 MHz Bandwidth– Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.17	20.23	20.22	0	0
	1	2	20.26	20.29	20.31		0
	1	5	20.23	20.26	20.24		0
	3	0	20.19	20.26	20.21		0
	3	2	20.25	20.30	20.26		0
	3	3	20.21	20.32	20.20		0
	6	0	20.29	20.41	20.36	0-1	0
16QAM	1	0	20.38	20.56	20.48	0-1	0
	1	2	20.50	20.50	20.42		0
	1	5	20.45	20.54	20.44		0
	3	0	20.31	20.39	20.35		0
	3	2	20.38	20.45	20.39		0
	3	3	20.38	20.38	20.32		0
	6	0	20.36	20.41	20.38	0-2	0
64QAM	1	0	20.43	20.51	20.44	0-2	0
	1	2	20.46	20.51	20.49		0
	1	5	20.42	20.50	20.51		0
	3	0	20.41	20.52	20.41		0
	3	2	20.49	20.52	20.46		0
	3	3	20.44	20.48	20.39		0
	6	0	20.36	20.38	20.34	0-3	0
256QAM	1	0	19.36	19.51	19.48	0-5	1
	1	2	19.55	19.64	19.56		1
	1	5	19.50	19.57	19.49		1
	3	0	19.46	19.58	19.51		1
	3	2	19.56	19.49	19.54		1
	3	3	19.51	19.58	19.52		1
	6	0	19.50	19.43	19.47		1

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Table 9-37
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth – Grip Sensor and/or Earjack Mode and 5G NR active

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	18.05	18.39	18.47	0	0
	1	50	18.08	18.58	18.38		0
	1	99	18.19	**18.77**	18.48		0
	50	0	18.28	18.51	18.44	0-1	0
	50	25	18.34	18.59	18.48		0
	50	50	18.34	**18.63**	18.46		0
	100	0	18.32	18.59	18.47		0
16QAM	1	0	18.39	18.61	18.71	0-1	0
	1	50	18.44	18.65	18.65		0
	1	99	18.63	18.61	18.64		0
	50	0	18.43	18.52	18.61	0-2	0
	50	25	18.44	18.52	18.58		0
	50	50	18.38	18.53	18.58		0
	100	0	18.42	18.58	18.61		0
64QAM	1	0	18.31	18.57	18.65	0-2	0
	1	50	18.31	18.61	18.62		0
	1	99	18.62	18.64	18.63		0
	50	0	18.45	18.58	18.61	0-3	0
	50	25	18.41	18.59	18.65		0
	50	50	18.38	18.64	18.60		0
	100	0	18.41	18.59	18.60		0
256QAM	1	0	18.29	18.42	18.56	0-5	0
	1	50	18.26	18.52	18.55		0
	1	99	18.52	18.58	18.53		0
	50	0	18.43	18.57	18.60		0
	50	25	18.41	18.59	18.63		0
	50	50	18.39	18.59	18.56		0
	100	0	18.42	18.59	18.55		0

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Table 9-38
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth– Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.14	18.40	18.25	0	0
	1	36	18.08	18.36	18.24		0
	1	74	18.15	18.42	18.22		0
	36	0	18.22	18.45	18.49	0-1	0
	36	18	18.19	18.47	18.44		0
	36	37	18.20	18.46	18.45		0
	75	0	18.30	18.45	18.44		0
16QAM	1	0	18.53	18.72	18.84	0-1	0
	1	36	18.14	18.68	18.70		0
	1	74	18.52	18.78	18.73		0
	36	0	18.24	18.52	18.49	0-2	0
	36	18	18.21	18.45	18.47		0
	36	37	18.18	18.45	18.43		0
	75	0	18.25	18.48	18.44		0
64QAM	1	0	18.43	18.64	18.47	0-2	0
	1	36	18.36	18.62	18.42		0
	1	74	18.37	18.76	18.40		0
	36	0	18.54	18.46	18.37	0-3	0
	36	18	18.22	18.46	18.32		0
	36	37	18.26	18.48	18.30		0
	75	0	18.24	18.49	18.42		0
256QAM	1	0	18.51	18.87	18.66	0-5	0
	1	36	18.47	18.80	18.49		0
	1	74	18.53	18.74	18.67		0
	36	0	18.27	18.57	18.37		0
	36	18	18.23	18.54	18.43		0
	36	37	18.31	18.50	18.37		0
	75	0	18.26	18.57	18.46		0

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Table 9-39
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth– Grip Sensor and/or Earjack Mode and 5G NR active

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	17.84	18.19	18.01	0	0
	1	25	17.90	18.15	18.03		0
	1	49	17.88	18.39	18.13		0
	25	0	17.98	18.30	18.21	0-1	0
	25	12	18.00	18.31	18.22		0
	25	25	17.96	18.31	18.16		0
	50	0	17.97	18.31	18.16		0
16QAM	1	0	18.04	18.44	18.45	0-1	0
	1	25	18.00	18.43	18.47		0
	1	49	18.31	18.42	18.35		0
	25	0	17.97	18.31	18.20	0-2	0
	25	12	17.99	18.31	18.21		0
	25	25	17.97	18.27	18.16		0
	50	0	18.00	18.29	18.13		0
64QAM	1	0	18.01	18.43	18.54	0-2	0
	1	25	17.99	18.43	18.49		0
	1	49	18.38	18.39	18.46		0
	25	0	17.96	18.30	18.20	0-3	0
	25	12	18.02	18.31	18.16		0
	25	25	17.98	18.30	18.19		0
	50	0	18.01	18.33	18.22		0
256QAM	1	0	18.00	18.35	18.56	0-5	0
	1	25	17.95	18.40	18.28		0
	1	49	18.08	18.40	18.60		0
	25	0	18.00	18.31	18.20		0
	25	12	17.99	18.35	18.19		0
	25	25	18.01	18.29	18.22		0
	50	0	18.04	18.34	18.20		0

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Table 9-40
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth– Grip Sensor and/or Earjack Mode and 5G NR active

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	17.78	18.15	18.21	0	0
	1	12	17.87	18.27	18.22		0
	1	24	17.91	18.28	18.18		0
	12	0	17.92	18.31	18.21	0-1	0
	12	6	17.99	18.33	18.25		0
	12	13	18.04	18.36	18.23		0
	25	0	17.99	18.36	18.21		0
16QAM	1	0	17.98	18.50	18.48	0-1	0
	1	12	18.06	18.55	18.44		0
	1	24	18.31	18.53	18.41		0
	12	0	18.12	18.34	18.40	0-2	0
	12	6	18.02	18.35	18.41		0
	12	13	18.03	18.36	18.42		0
	25	0	17.97	18.39	18.23		0
64QAM	1	0	17.96	18.54	18.55	0-2	0
	1	12	18.08	18.60	18.52		0
	1	24	18.20	18.64	18.46		0
	12	0	18.12	18.32	18.11	0-3	0
	12	6	18.03	18.38	18.22		0
	12	13	18.07	18.37	18.12		0
	25	0	17.99	18.39	18.20		0
256QAM	1	0	17.92	18.37	18.24	0-5	0
	1	12	18.00	18.37	18.21		0
	1	24	18.03	18.37	18.24		0
	12	0	18.02	18.36	18.25		0
	12	6	18.03	18.37	18.23		0
	12	13	18.03	18.39	18.23		0
	25	0	18.00	18.38	18.25		0

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Table 9-41
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth– Grip Sensor and/or Earjack Mode and 5G NR active

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	17.75	18.22	18.13	0	0
	1	7	17.80	18.32	18.13		0
	1	14	17.87	18.28	18.06		0
	8	0	17.88	18.32	18.22	0-1	0
	8	4	18.02	18.39	18.27		0
	8	7	17.95	18.36	18.25		0
	15	0	17.96	18.37	18.18		0
16QAM	1	0	18.04	18.42	18.58	0-1	0
	1	7	18.09	18.44	18.59		0
	1	14	18.20	18.38	18.48		0
	8	0	17.97	18.37	18.33	0-2	0
	8	4	18.09	18.44	18.37		0
	8	7	18.06	18.37	18.35		0
	15	0	18.04	18.30	18.29		0
64QAM	1	0	17.85	18.34	18.63	0-2	0
	1	7	17.84	18.39	18.57		0
	1	14	18.18	18.32	18.52		0
	8	0	17.97	18.38	18.34	0-3	0
	8	4	18.04	18.42	18.41		0
	8	7	18.07	18.42	18.37		0
	15	0	17.98	18.46	18.25		0
256QAM	1	0	17.97	18.42	18.21	0-5	0
	1	7	17.97	18.45	18.24		0
	1	14	18.06	18.45	18.25		0
	8	0	17.97	18.46	18.25		0
	8	4	17.96	18.47	18.24		0
	8	7	17.96	18.47	18.24		0
	15	0	17.96	18.45	18.24		0

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Table 9-42
LTE Band 66 (AWS) Reduced Conducted Powers -1.4 MHz Bandwidth– Grip Sensor and/or Earjack Mode and 5G NR active

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	17.77	18.15	18.04	0	0
	1	2	17.90	18.31	18.03		0
	1	5	17.87	18.35	18.05		0
	3	0	17.92	18.19	18.02		0
	3	2	17.97	18.26	18.01		0
	3	3	17.91	18.24	17.99		0
	6	0	18.00	18.30	18.06	0-1	0
16QAM	1	0	17.97	18.40	18.23	0-1	0
	1	2	18.19	18.51	18.31		0
	1	5	18.17	18.46	18.23		0
	3	0	17.96	18.41	18.18		0
	3	2	18.07	18.37	18.12		0
	3	3	17.99	18.41	18.10		0
	6	0	18.06	18.31	18.11	0-2	0
64QAM	1	0	17.98	18.40	18.20	0-2	0
	1	2	18.07	18.47	18.30		0
	1	5	18.19	18.46	18.17		0
	3	0	18.07	18.30	18.13		0
	3	2	18.16	18.42	18.21		0
	3	3	18.08	18.36	18.13		0
	6	0	18.07	18.29	18.12	0-3	0
256QAM	1	0	17.98	18.33	18.18	0-5	0
	1	2	18.15	18.51	18.25		0
	1	5	18.10	18.40	18.20		0
	3	0	18.03	18.42	18.18		0
	3	2	18.14	18.50	18.29		0
	3	3	18.08	18.40	18.20		0
	6	0	17.96	18.30	18.13		0

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9.4.6 LTE Band 25 (PCS)

Table 9-43
LTE Band 25 (PCS) Maximum Conducted Powers - 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	23.81	23.49	23.31	0	0
	1	50	23.79	23.38	23.22		0
	1	99	**23.87**	23.31	23.13		0
	50	0	22.92	22.53	22.27	0-1	1
	50	25	22.97	22.58	22.38		1
	50	50	**22.98**	22.35	22.41		1
	100	0	22.89	22.52	22.43		1
16QAM	1	0	23.14	22.69	22.89	0-1	1
	1	50	23.11	22.79	22.63		1
	1	99	23.21	22.75	22.41		1
	50	0	21.89	21.50	21.46	0-2	2
	50	25	21.97	21.60	21.40		2
	50	50	21.98	21.21	21.40		2
	100	0	21.91	21.55	21.35		2
64QAM	1	0	22.10	21.70	21.39	0-2	2
	1	50	22.03	21.87	21.63		2
	1	99	22.11	21.48	21.33		2
	50	0	20.87	20.53	20.35	0-3	3
	50	25	20.91	20.56	20.40		3
	50	50	20.89	20.41	20.43		3
	100	0	20.85	20.54	20.41		3
256QAM	1	0	18.54	18.61	18.49	0-5	5
	1	50	18.45	18.47	18.35		5
	1	99	18.44	18.56	18.48		5
	50	0	18.32	18.44	18.27		5
	50	25	18.42	18.52	18.39		5
	50	50	18.43	18.49	18.37		5
	100	0	18.37	18.49	18.35		5

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Table 9-44
LTE Band 25 (PCS) Maximum Conducted Powers - 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	23.71	23.80	23.65	0	0
	1	36	23.72	23.78	23.65		0
	1	74	23.81	23.68	23.50		0
	36	0	22.88	22.98	22.73	0-1	1
	36	18	22.97	23.04	22.87		1
	36	37	23.00	22.77	22.89		1
	75	0	23.03	22.72	22.65		1
16QAM	1	0	23.06	23.11	22.80	0-1	1
	1	36	23.22	23.01	23.05		1
	1	74	23.16	22.80	22.68		1
	36	0	21.96	21.92	21.83	0-2	2
	36	18	22.04	21.98	21.81		2
	36	37	22.03	21.67	21.85		2
	75	0	21.98	22.00	21.77		2
64QAM	1	0	22.23	22.12	21.85	0-2	2
	1	36	22.15	21.71	21.90		2
	1	74	22.21	21.45	21.70		2
	36	0	21.15	21.00	20.78	0-3	3
	36	18	21.11	20.65	20.86		3
	36	37	21.09	20.68	20.90		3
	75	0	20.87	20.81	20.56		3
256QAM	1	0	19.03	19.02	18.98	0-5	5
	1	36	18.87	18.93	18.81		5
	1	74	18.90	18.98	18.96		5
	36	0	18.76	18.86	18.68		5
	36	18	18.88	18.92	18.76		5
	36	37	18.85	18.91	18.73		5
	75	0	18.82	18.96	18.70		5

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Table 9-45
LTE Band 25 (PCS) Maximum Conducted Powers - 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	23.87	23.85	23.78	0	0
	1	25	23.87	23.70	23.58		0
	1	49	23.87	23.67	23.53		0
	25	0	22.90	22.95	22.71	0-1	1
	25	12	22.90	23.00	22.82		1
	25	25	22.96	22.78	22.87		1
	50	0	23.00	22.71	22.67		1
16QAM	1	0	23.16	23.13	22.96	0-1	1
	1	25	23.12	23.23	22.79		1
	1	49	23.05	22.90	22.79		1
	25	0	21.99	21.92	21.86	0-2	2
	25	12	22.02	22.06	21.85		2
	25	25	22.01	21.70	21.71		2
	50	0	22.02	21.84	21.67		2
64QAM	1	0	21.83	22.09	21.50	0-2	2
	1	25	21.54	21.85	21.25		2
	1	49	21.67	21.54	21.30		2
	25	0	20.87	21.02	20.82	0-3	3
	25	12	20.83	20.87	20.36		3
	25	25	20.89	20.81	20.38		3
	50	0	20.92	20.44	20.19		3
256QAM	1	0	18.98	18.92	18.77	0-5	5
	1	25	18.88	18.64	18.79		5
	1	49	18.91	18.87	18.73		5
	25	0	18.71	18.83	18.69		5
	25	12	18.46	18.78	18.63		5
	25	25	18.79	18.89	18.72		5
	50	0	18.68	18.88	18.72		5

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Table 9-46
LTE Band 25 (PCS) Maximum Conducted Powers - 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	23.77	23.79	23.63	0	0
	1	12	23.93	23.73	23.54		0
	1	24	23.92	23.70	23.47		0
	12	0	22.98	22.96	22.66	0-1	1
	12	6	23.07	23.06	22.73		1
	12	13	23.06	22.85	22.86		1
	25	0	23.02	22.69	22.73		1
16QAM	1	0	23.21	23.19	22.83	0-1	1
	1	12	23.19	23.18	22.74		1
	1	24	23.23	22.90	22.71		1
	12	0	22.03	21.94	21.90	0-2	2
	12	6	22.07	22.07	21.87		2
	12	13	22.10	21.70	21.87		2
	25	0	22.05	21.91	21.80		2
64QAM	1	0	21.89	21.69	21.08	0-2	2
	1	12	22.01	21.67	21.60		2
	1	24	21.69	21.45	21.68		2
	12	0	20.77	20.96	20.69	0-3	3
	12	6	20.94	20.66	20.28		3
	12	13	20.93	20.49	20.25		3
	25	0	20.81	20.25	20.05		3
256QAM	1	0	18.95	18.93	18.72	0-5	5
	1	12	18.76	18.70	18.76		5
	1	24	18.86	18.90	18.86		5
	12	0	18.75	18.76	18.55		5
	12	6	18.80	18.85	18.75		5
	12	13	18.85	18.90	18.76		5
	25	0	18.79	18.80	18.68		5

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Table 9-47
LTE Band 25 (PCS) Maximum Conducted Powers - 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	23.82	23.75	23.55	0	0
	1	7	23.91	23.80	23.58		0
	1	14	23.90	23.75	23.48		0
	8	0	22.90	22.92	22.74	0-1	1
	8	4	23.02	23.05	22.80		1
	8	7	22.99	22.80	22.90		1
	15	0	23.05	22.75	22.68		1
16QAM	1	0	23.10	23.15	22.69	0-1	1
	1	7	23.13	23.14	22.78		1
	1	14	23.19	23.01	22.72		1
	8	0	22.04	21.96	21.93	0-2	2
	8	4	22.11	22.07	21.84		2
	8	7	22.09	21.69	21.84		2
	15	0	22.00	21.89	21.77		2
64QAM	1	0	21.92	21.44	21.63	0-2	2
	1	7	21.95	21.50	21.18		2
	1	14	21.90	21.29	21.44		2
	8	0	20.84	20.32	20.37	0-3	3
	8	4	20.94	20.35	20.28		3
	8	7	20.74	20.26	20.30		3
	15	0	20.89	20.30	20.20		3
256QAM	1	0	18.87	18.79	18.70	0-5	5
	1	7	18.92	18.95	18.78		5
	1	14	18.91	18.96	18.81		5
	8	0	18.80	18.83	18.65		5
	8	4	18.73	18.88	18.60		5
	8	7	18.86	18.85	18.69		5
	15	0	18.83	18.80	18.64		5

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Table 9-48
LTE Band 25 (PCS) Maximum Conducted Powers -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	23.79	23.79	23.44	0	0
	1	2	23.92	23.80	23.47		0
	1	5	23.84	23.77	23.36		0
	3	0	23.78	23.83	23.45		0
	3	2	23.87	23.88	23.45		0
	3	3	23.88	23.84	23.38		0
	6	0	22.97	22.78	22.74	0-1	1
16QAM	1	0	23.14	23.12	22.67	0-1	1
	1	2	23.21	23.17	22.73		1
	1	5	23.17	23.08	22.62		1
	3	0	23.00	23.08	22.55		1
	3	2	23.08	23.09	22.58		1
	3	3	23.05	22.99	22.52		1
	6	0	21.99	21.94	21.70	0-2	2
64QAM	1	0	21.93	21.39	21.23	0-2	2
	1	2	21.94	21.38	21.49		2
	1	5	21.74	21.18	21.16		2
	3	0	21.85	21.40	21.09		2
	3	2	21.77	21.29	20.98		2
	3	3	21.80	21.22	21.05		2
	6	0	20.76	20.33	20.26	0-3	3
256QAM	1	0	18.88	18.70	18.77	0-5	5
	1	2	18.91	18.87	18.77		5
	1	5	18.84	18.74	18.83		5
	3	0	18.77	18.94	18.72		5
	3	2	18.89	18.90	18.78		5
	3	3	18.76	18.87	18.82		5
	6	0	18.70	18.64	18.61		5

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Table 9-49
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot Mode Active

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.80	**19.85**	19.75	0	0
	1	50	19.73	19.80	19.70		0
	1	99	19.78	19.83	19.76		0
	50	0	19.92	**19.98**	19.80	0-1	0
	50	25	19.84	19.90	19.86		0
	50	50	19.90	19.95	19.91		0
	100	0	19.79	19.82	19.80		0
16QAM	1	0	19.98	20.16	19.95	0-1	0
	1	50	20.00	20.12	19.91		0
	1	99	20.02	20.15	19.97		0
	50	0	19.84	19.93	19.83	0-2	0
	50	25	19.91	19.99	19.88		0
	50	50	19.92	20.00	19.92		0
	100	0	19.88	19.97	19.87		0
64QAM	1	0	19.96	19.94	19.95	0-2	0
	1	50	19.95	20.18	19.92		0
	1	99	20.01	20.16	19.89		0
	50	0	19.87	19.96	19.85	0-3	0
	50	25	19.95	20.05	19.94		0
	50	50	19.96	20.01	19.96		0
	100	0	19.88	20.01	19.91		0
256QAM	1	0	19.30	19.35	19.25	0-5	0.5
	1	50	19.26	19.33	19.29		0.5
	1	99	19.31	19.39	19.32		0.5
	50	0	19.13	19.23	19.14		0.5
	50	25	19.21	19.31	19.19		0.5
	50	50	19.19	19.29	19.21		0.5
	100	0	19.16	19.23	19.19		0.5

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Table 9-50
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot Mode Active

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	19.65	19.87	19.74	0	0
	1	36	19.74	19.85	19.70		0
	1	74	19.79	19.86	19.69		0
	36	0	19.81	19.94	19.78	0-1	0
	36	18	19.89	20.02	19.86		0
	36	37	19.95	20.04	19.87		0
	75	0	19.93	20.02	19.85		0
16QAM	1	0	19.87	20.01	20.04	0-1	0
	1	36	19.90	20.01	19.92		0
	1	74	20.00	20.04	19.85		0
	36	0	19.75	19.85	19.71	0-2	0
	36	18	19.85	19.95	19.74		0
	36	37	19.85	19.91	19.80		0
	75	0	19.81	19.91	19.74		0
64QAM	1	0	19.75	20.10	19.78	0-2	0
	1	36	19.96	20.05	19.74		0
	1	74	19.88	20.21	19.73		0
	36	0	19.61	19.83	19.63	0-3	0
	36	18	19.73	19.97	19.68		0
	36	37	19.81	19.97	19.70		0
	75	0	19.72	19.90	19.65		0
256QAM	1	0	19.36	19.41	19.27	0-5	0.5
	1	36	19.38	19.30	19.21		0.5
	1	74	19.47	19.51	19.33		0.5
	36	0	19.20	19.43	19.37		0.5
	36	18	19.32	19.55	19.23		0.5
	36	37	19.29	19.46	19.30		0.5
	75	0	19.22	19.49	19.23		0.5

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Table 9-51
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot Mode Active

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	19.44	19.61	19.47	0	0
	1	25	19.52	19.56	19.35		0
	1	49	19.49	19.60	19.50		0
	25	0	19.65	19.76	19.61	0-1	0
	25	12	19.70	19.79	19.63		0
	25	25	19.70	19.80	19.64		0
	50	0	19.73	19.81	19.65		0
16QAM	1	0	19.74	19.87	19.70	0-1	0
	1	25	19.79	19.87	19.66		0
	1	49	19.82	19.87	19.79		0
	25	0	19.63	19.74	19.59	0-2	0
	25	12	19.65	19.76	19.60		0
	25	25	19.67	19.79	19.62		0
	50	0	19.66	19.79	19.60		0
64QAM	1	0	19.81	19.77	19.83	0-2	0
	1	25	19.74	19.83	19.86		0
	1	49	19.85	19.80	19.88		0
	25	0	19.61	19.66	19.70	0-3	0
	25	12	19.71	19.65	19.64		0
	25	25	19.70	19.71	19.67		0
	50	0	19.63	19.68	19.66		0
256QAM	1	0	19.30	19.31	18.97	0-5	0.5
	1	25	19.08	19.09	18.94		0.5
	1	49	19.12	19.14	18.92		0.5
	25	0	18.89	18.99	19.04		0.5
	25	12	18.87	19.07	18.97		0.5
	25	25	19.03	18.99	18.87		0.5
	50	0	18.90	19.04	18.89		0.5

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Table 9-52
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot Mode Active

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	19.44	19.47	19.42	0	0
	1	12	19.54	19.56	19.40		0
	1	24	19.59	19.64	19.61		0
	12	0	19.68	19.64	19.70	0-1	0
	12	6	19.63	19.62	19.66		0
	12	13	19.66	19.65	19.69		0
	25	0	19.59	19.61	19.78		0
16QAM	1	0	19.64	19.80	19.71	0-1	0
	1	12	19.68	19.72	19.68		0
	1	24	19.70	19.91	19.75		0
	12	0	19.53	19.68	19.78	0-2	0
	12	6	19.56	19.64	19.64		0
	12	13	19.58	19.62	19.62		0
	25	0	19.54	19.64	19.60		0
64QAM	1	0	19.87	19.71	19.95	0-2	0
	1	12	19.81	19.92	19.93		0
	1	24	19.91	19.92	19.97		0
	12	0	19.61	19.71	20.01	0-3	0
	12	6	19.76	19.76	19.81		0
	12	13	19.67	19.85	19.79		0
	25	0	19.69	19.63	19.78		0
256QAM	1	0	19.05	19.18	19.22	0-5	0.5
	1	12	19.06	19.14	19.11		0.5
	1	24	19.26	19.18	19.12		0.5
	12	0	19.02	19.06	19.14		0.5
	12	6	19.12	19.03	19.20		0.5
	12	13	18.99	19.15	19.06		0.5
	25	0	19.13	19.22	19.05		0.5

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Table 9-53
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth – Hotspot Mode Active

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	19.64	19.61	19.50	0	0
	1	7	19.71	19.66	19.58		0
	1	14	19.57	19.66	19.60		0
	8	0	19.74	19.70	19.68	0-1	0
	8	4	19.64	19.76	19.47		0
	8	7	19.73	19.81	19.53		0
	15	0	19.77	19.79	19.50		0
16QAM	1	0	19.76	19.92	19.69	0-1	0
	1	7	19.73	19.85	19.63		0
	1	14	19.75	20.04	19.72		0
	8	0	19.75	19.87	19.55	0-2	0
	8	4	19.73	19.84	19.52		0
	8	7	19.68	19.85	19.53		0
	15	0	19.92	19.76	19.74		0
64QAM	1	0	19.62	19.91	19.59	0-2	0
	1	7	19.80	19.90	19.58		0
	1	14	19.78	19.76	19.54		0
	8	0	19.70	19.79	19.47	0-3	0
	8	4	19.72	19.80	19.58		0
	8	7	19.67	19.78	19.56		0
	15	0	19.64	19.83	19.51		0
256QAM	1	0	18.98	19.37	19.05	0-5	0.5
	1	7	19.22	19.40	19.08		0.5
	1	14	19.05	19.23	19.01		0.5
	8	0	19.03	19.31	18.99		0.5
	8	4	19.12	19.41	19.09		0.5
	8	7	19.26	19.27	18.95		0.5
	15	0	19.24	19.32	19.00		0.5

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Table 9-54
LTE Band 25 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth- Hotspot Mode Active

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	19.45	19.71	19.78	0	0
	1	2	19.45	19.75	19.74		0
	1	5	19.68	19.66	19.81		0
	3	0	19.77	19.78	19.81		0
	3	2	19.81	19.76	19.90		0
	3	3	19.69	19.81	19.91		0
	6	0	19.77	19.84	19.89	0-1	0
16QAM	1	0	19.87	19.85	20.05	0-1	0
	1	2	20.01	20.03	20.13		0
	1	5	19.99	19.90	19.94		0
	3	0	19.85	19.81	19.97		0
	3	2	19.81	19.79	20.02		0
	3	3	19.78	19.62	19.93		0
	6	0	19.76	19.72	20.01	0-2	0
64QAM	1	0	19.83	19.75	20.05	0-2	0
	1	2	19.77	19.90	19.97		0
	1	5	19.91	19.96	20.06		0
	3	0	19.78	19.92	20.02		0
	3	2	19.97	19.84	20.02		0
	3	3	19.82	19.88	19.94		0
	6	0	19.94	19.82	19.52	0-3	0
256QAM	1	0	19.36	19.15	19.05	0-5	0.5
	1	2	19.25	19.26	19.16		0.5
	1	5	19.17	19.23	19.13		0.5
	3	0	19.21	19.16	19.23		0.5
	3	2	19.22	19.15	19.12		0.5
	3	3	19.30	19.24	19.26		0.5
	6	0	19.13	19.09	19.19		0.5

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Table 9-55
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

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	21.09	21.21	21.12	0	0
	1	50	21.00	**21.28**	21.16		0
	1	99	20.99	21.17	21.14		0
	50	0	21.03	21.01	21.00	0-1	0
	50	25	21.18	21.12	21.18		0
	50	50	21.04	**21.20**	21.11		0
	100	0	21.01	21.09	21.09		0
16QAM	1	0	21.22	21.40	21.27	0-1	0
	1	50	21.25	21.48	21.31		0
	1	99	21.23	21.41	21.32		0
	50	0	20.98	21.07	21.05	0-2	0
	50	25	21.04	21.11	21.14		0
	50	50	21.06	21.09	21.14		0
	100	0	21.03	21.18	21.09		0
64QAM	1	0	21.49	21.29	20.98	0-2	0
	1	50	21.49	21.46	21.01		0
	1	99	21.50	21.49	21.01		0
	50	0	20.51	20.71	20.56	0-3	0
	50	25	20.58	20.81	20.63		0
	50	50	20.52	20.81	20.63		0
	100	0	20.54	20.72	20.62		0
256QAM	1	0	19.01	18.92	18.90	0-5	2
	1	50	18.95	19.01	18.91		2
	1	99	18.93	19.00	18.97		2
	50	0	18.80	18.88	18.80		2
	50	25	18.88	18.94	18.87		2
	50	50	18.89	18.96	18.86		2
	100	0	18.84	18.92	18.83		2

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Table 9-56
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

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	21.05	21.23	21.09	0	0
	1	36	21.17	21.22	21.06		0
	1	74	21.16	21.25	21.14		0
	36	0	21.14	21.34	21.18	0-1	0
	36	18	21.24	21.40	21.24		0
	36	37	21.29	21.42	21.26		0
	75	0	21.25	21.38	21.24		0
16QAM	1	0	21.38	21.52	21.58	0-1	0
	1	36	21.40	21.55	21.41		0
	1	74	21.49	21.58	21.43		0
	36	0	21.23	21.38	21.24	0-2	0
	36	18	21.34	21.48	21.32		0
	36	37	21.30	21.47	21.30		0
	75	0	21.30	21.47	21.30		0
64QAM	1	0	21.38	21.54	21.40	0-2	0
	1	36	21.48	21.16	20.78		0
	1	74	21.50	21.14	20.79		0
	36	0	20.81	20.61	20.62	0-3	0
	36	18	20.88	20.70	20.77		0
	36	37	20.87	20.64	20.73		0
	75	0	20.90	20.88	20.67		0
256QAM	1	0	18.81	18.60	18.69	0-5	2
	1	36	18.83	18.91	18.79		2
	1	74	18.95	18.95	18.68		2
	36	0	18.63	18.79	18.82		2
	36	18	18.78	18.88	18.67		2
	36	37	18.80	18.86	18.71		2
	75	0	18.72	18.85	18.76		2

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Table 9-57
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

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	20.96	20.99	20.89	0	0
	1	25	20.95	21.01	20.84		0
	1	49	20.92	21.07	20.95		0
	25	0	21.03	21.17	21.00	0-1	0
	25	12	21.10	21.22	21.03		0
	25	25	21.10	21.23	21.07		0
	50	0	21.13	21.21	21.28		0
16QAM	1	0	21.21	21.38	21.11	0-1	0
	1	25	21.31	21.43	21.18		0
	1	49	21.28	21.38	21.18		0
	25	0	21.05	21.22	21.06	0-2	0
	25	12	21.12	21.27	21.11		0
	25	25	21.15	21.27	21.06		0
	50	0	21.13	21.24	21.18		0
64QAM	1	0	21.25	21.26	21.09	0-2	0
	1	25	21.10	21.14	21.11		0
	1	49	21.18	21.10	20.69		0
	25	0	20.75	20.73	20.70	0-3	0
	25	12	20.67	20.65	20.76		0
	25	25	20.63	20.67	20.59		0
	50	0	20.62	20.70	20.69		0
256QAM	1	0	18.56	18.67	18.54	0-5	2
	1	25	18.53	18.60	18.52		2
	1	49	18.87	18.66	18.48		2
	25	0	18.56	18.69	18.54		2
	25	12	18.52	18.48	18.49		2
	25	25	18.57	18.64	18.42		2
	50	0	18.61	18.67	18.56		2

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Table 9-58
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

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	20.92	21.03	20.87	0	0
	1	12	21.04	21.18	20.95		0
	1	24	21.08	21.18	20.92		0
	12	0	21.10	21.15	21.00	0-1	0
	12	6	21.17	21.20	21.10		0
	12	13	21.15	21.25	21.09		0
	25	0	21.16	21.17	21.05		0
16QAM	1	0	21.23	21.31	21.16	0-1	0
	1	12	21.35	21.38	21.27		0
	1	24	21.30	21.44	21.25		0
	12	0	21.16	21.20	21.05	0-2	0
	12	6	21.24	21.26	21.12		0
	12	13	21.19	21.33	21.14		0
	25	0	21.16	21.19	21.07		0
64QAM	1	0	21.27	21.30	21.09	0-2	0
	1	12	21.11	21.14	20.98		0
	1	24	21.33	21.12	20.97		0
	12	0	20.66	20.65	20.57	0-3	0
	12	6	20.70	20.74	20.67		0
	12	13	20.63	20.63	20.66		0
	25	0	20.69	20.78	20.55		0
256QAM	1	0	18.96	18.65	18.51	0-5	2
	1	12	18.75	18.70	18.64		2
	1	24	18.54	18.76	18.69		2
	12	0	18.55	18.51	18.44		2
	12	6	18.73	18.55	18.42		2
	12	13	18.58	18.57	18.52		2
	25	0	18.61	18.45	18.54		2

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Table 9-59
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

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	20.92	20.95	20.76	0	0
	1	7	20.99	21.09	20.85		0
	1	14	21.00	21.12	20.86		0
	8	0	21.08	21.10	21.00	0-1	0
	8	4	21.12	21.23	21.07		0
	8	7	21.16	21.25	21.04		0
	15	0	21.14	21.22	21.06		0
16QAM	1	0	21.15	21.23	21.05	0-1	0
	1	7	21.24	21.41	21.22		0
	1	14	21.29	21.38	21.22		0
	8	0	21.17	21.20	21.08	0-2	0
	8	4	21.27	21.32	21.15		0
	8	7	21.23	21.32	21.12		0
	15	0	21.15	21.18	21.02		0
64QAM	1	0	21.13	21.12	21.01	0-2	0
	1	7	21.27	21.14	20.97		0
	1	14	21.23	21.15	20.95		0
	8	0	20.60	20.64	20.55	0-3	0
	8	4	20.71	20.55	20.68		0
	8	7	20.68	20.64	20.44		0
	15	0	20.62	20.54	20.46		0
256QAM	1	0	18.68	18.65	18.55	0-5	2
	1	7	18.62	18.89	18.77		2
	1	14	18.67	18.80	18.65		2
	8	0	18.57	18.57	18.61		2
	8	4	18.65	18.72	18.49		2
	8	7	18.48	18.59	18.50		2
	15	0	18.67	18.65	18.54		2

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Table 9-60
LTE Band 25 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth- Grip Sensor and/or Earjack Mode Active

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	20.88	21.00	20.76	0	0
	1	2	20.98	21.07	20.91		0
	1	5	20.97	21.06	20.86		0
	3	0	20.96	21.06	20.82		0
	3	2	21.01	21.14	20.92		0
	3	3	20.96	21.06	20.88		0
	6	0	21.08	21.16	20.98	0-1	0
16QAM	1	0	21.20	21.37	21.12	0-1	0
	1	2	21.29	21.39	21.24		0
	1	5	21.22	21.38	21.17		0
	3	0	21.15	21.18	21.10		0
	3	2	21.19	21.32	21.12		0
	3	3	21.18	21.21	21.12		0
	6	0	21.14	21.27	21.09	0-2	0
64QAM	1	0	21.27	21.02	21.09	0-2	0
	1	2	21.35	21.09	20.70		0
	1	5	21.41	21.18	20.65		0
	3	0	20.82	20.81	20.35		0
	3	2	20.91	20.80	20.45		0
	3	3	21.02	20.59	20.36		0
	6	0	20.82	20.57	20.47	0-3	0
256QAM	1	0	18.64	18.72	18.54	0-5	2
	1	2	18.57	18.79	18.59		2
	1	5	18.62	18.81	18.60		2
	3	0	18.71	18.67	18.58		2
	3	2	18.68	18.81	18.55		2
	3	3	18.55	18.73	18.61		2
	6	0	18.49	18.69	18.44		2

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9.4.7 LTE Band 2 (PCS)

Table 9-61
LTE Band 2 (PCS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.38	**24.48**	24.36	0	0
	1	50	24.34	24.42	24.36		0
	1	99	24.41	24.07	23.72		0
	50	0	23.48	**23.57**	23.49	0-1	1
	50	25	23.54	23.56	23.52		1
	50	50	23.47	23.28	23.51		1
	100	0	23.53	23.50	23.54		1
16QAM	1	0	23.69	23.80	23.63	0-1	1
	1	50	23.63	23.73	23.62		1
	1	99	23.72	23.36	23.02		1
	50	0	22.51	22.58	22.52	0-2	2
	50	25	22.55	22.60	22.53		2
	50	50	22.60	22.18	22.34		2
	100	0	22.57	22.58	22.46		2
64QAM	1	0	22.70	22.72	22.60	0-2	2
	1	50	22.71	22.66	22.63		2
	1	99	22.68	22.33	22.04		2
	50	0	21.51	21.60	21.55	0-3	3
	50	25	21.55	21.58	21.54		3
	50	50	21.63	21.25	21.47		3
	100	0	21.56	21.62	21.50		3
256QAM	1	0	19.56	19.67	19.65	0-5	5
	1	50	19.54	19.66	19.51		5
	1	99	19.52	19.62	19.53		5
	50	0	19.46	19.54	19.48		5
	50	25	19.52	19.59	19.51		5
	50	50	19.55	19.63	19.52		5
	100	0	19.50	19.61	19.52		5

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Table 9-62
LTE Band 2 (PCS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.33	24.49	24.31	0	0
	1	36	24.29	24.42	24.27		0
	1	74	24.45	24.17	24.05		0
	36	0	23.45	23.56	23.41	0-1	1
	36	18	23.49	23.59	23.44		1
	36	37	23.53	23.61	23.48		1
	75	0	23.64	23.68	23.50		1
16QAM	1	0	23.70	23.89	23.60	0-1	1
	1	36	23.68	23.77	23.61		1
	1	74	23.83	23.31	23.24		1
	36	0	22.64	22.69	22.50	0-2	2
	36	18	22.67	22.73	22.53		2
	36	37	22.71	22.43	22.49		2
	75	0	22.65	22.72	22.53		2
64QAM	1	0	22.51	22.60	22.46	0-2	2
	1	36	22.78	22.77	22.24		2
	1	74	22.62	22.46	22.11		2
	36	0	21.43	21.50	21.35	0-3	3
	36	18	21.48	21.43	21.18		3
	36	37	21.52	21.49	21.00		3
	75	0	21.48	21.16	21.01		3
256QAM	1	0	19.55	19.64	19.38	0-5	5
	1	36	19.28	19.60	19.25		5
	1	74	19.47	19.32	19.40		5
	36	0	19.37	19.50	19.28		5
	36	18	19.44	19.48	19.34		5
	36	37	19.57	19.72	19.32		5
	75	0	19.44	19.49	19.31		5

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Table 9-63
LTE Band 2 (PCS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.09	24.19	24.18	0	0
	1	25	24.21	24.31	24.09		0
	1	49	24.17	24.24	24.12		0
	25	0	23.31	23.46	23.28	0-1	1
	25	12	23.40	23.49	23.30		1
	25	25	23.35	23.43	23.29		1
	50	0	23.43	23.51	23.27		1
16QAM	1	0	23.42	23.56	23.42	0-1	1
	1	25	23.64	23.64	23.46		1
	1	49	23.56	23.48	23.39		1
	25	0	22.46	22.52	22.33	0-2	2
	25	12	22.50	22.51	22.38		2
	25	25	22.43	22.45	22.32		2
	50	0	22.46	22.50	22.32		2
64QAM	1	0	22.40	22.44	22.25	0-2	2
	1	25	22.51	22.25	22.14		2
	1	49	22.45	21.89	21.65		2
	25	0	21.39	21.42	21.08	0-3	3
	25	12	21.36	21.35	21.22		3
	25	25	21.33	21.08	20.97		3
	50	0	21.34	21.20	21.01		3
256QAM	1	0	19.26	19.31	19.24	0-5	5
	1	25	19.35	19.53	19.28		5
	1	49	19.22	19.24	19.23		5
	25	0	19.31	19.34	19.19		5
	25	12	19.33	19.39	19.25		5
	25	25	19.25	19.34	19.13		5
	50	0	19.20	19.35	19.20		5

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Table 9-64
LTE Band 2 (PCS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.18	24.20	24.09	0	0
	1	12	24.30	24.37	24.18		0
	1	24	24.31	24.38	24.14		0
	12	0	23.42	23.42	23.26	0-1	1
	12	6	23.48	23.48	23.35		1
	12	13	23.49	23.53	23.34		1
	25	0	23.51	23.49	23.32		1
16QAM	1	0	23.59	23.63	23.45	0-1	1
	1	12	23.66	23.68	23.51		1
	1	24	23.59	23.67	23.34		1
	12	0	22.52	22.55	22.36	0-2	2
	12	6	22.58	22.55	22.41		2
	12	13	22.61	22.63	22.40		2
	25	0	22.53	22.50	22.31		2
64QAM	1	0	22.41	22.39	22.14	0-2	2
	1	12	22.28	22.25	22.13		2
	1	24	22.29	21.90	21.67		2
	12	0	21.03	21.14	21.18	0-3	3
	12	6	21.08	21.16	21.14		3
	12	13	21.15	20.97	20.97		3
	25	0	21.24	21.13	21.05		3
256QAM	1	0	19.44	19.17	19.20	0-5	5
	1	12	19.42	19.42	19.28		5
	1	24	19.41	19.36	19.26		5
	12	0	19.27	19.28	19.15		5
	12	6	19.32	19.31	19.20		5
	12	13	19.36	19.30	19.16		5
	25	0	19.28	19.27	19.17		5

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Table 9-65
LTE Band 2 (PCS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.21	24.24	24.10	0	0
	1	7	24.27	24.35	24.14		0
	1	14	24.34	24.45	24.10		0
	8	0	23.41	23.43	23.29	0-1	1
	8	4	23.49	23.60	23.37		1
	8	7	23.49	23.58	23.37		1
	15	0	23.54	23.52	23.37		1
16QAM	1	0	23.57	23.58	23.43	0-1	1
	1	7	23.63	23.69	23.37		1
	1	14	23.64	23.73	23.32		1
	8	0	22.51	22.51	22.36	0-2	2
	8	4	22.61	22.64	22.42		2
	8	7	22.56	22.57	22.39		2
	15	0	22.52	22.44	22.32		2
64QAM	1	0	22.36	22.40	22.12	0-2	2
	1	7	22.51	22.27	22.13		2
	1	14	22.46	22.06	21.77		2
	8	0	21.39	21.85	21.67	0-3	3
	8	4	21.53	21.83	21.21		3
	8	7	21.50	21.61	21.39		3
	15	0	21.18	21.14	21.03		3
256QAM	1	0	19.40	19.32	19.59	0-5	5
	1	7	19.38	19.80	19.55		5
	1	14	19.42	19.51	19.22		5
	8	0	19.38	19.27	19.41		5
	8	4	19.29	19.35	19.18		5
	8	7	19.41	19.38	19.33		5
	15	0	19.31	19.38	19.27		5

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Table 9-66
LTE Band 2 (PCS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.23	24.36	24.05	0	0
	1	2	24.31	24.44	24.02		0
	1	5	24.30	24.44	23.98		0
	3	0	24.21	24.30	24.02		0
	3	2	24.31	24.41	24.03		0
	3	3	24.27	24.39	23.98		0
	6	0	23.44	23.47	23.19	0-1	1
16QAM	1	0	23.55	23.60	23.26	0-1	1
	1	2	23.59	23.66	23.27		1
	1	5	23.58	23.63	23.29		1
	3	0	23.47	23.51	23.16		1
	3	2	23.57	23.57	23.16		1
	3	3	23.51	23.61	23.10		1
	6	0	22.48	22.56	22.34	0-2	2
64QAM	1	0	22.24	22.25	22.13	0-2	2
	1	2	22.35	22.16	22.15		2
	1	5	22.25	21.96	21.55		2
	3	0	22.15	21.99	21.47		2
	3	2	22.11	21.95	21.49		2
	3	3	22.14	21.91	21.79		2
	6	0	21.29	21.18	21.01	0-3	3
256QAM	1	0	19.11	19.28	19.16	0-5	5
	1	2	19.17	19.60	19.21		5
	1	5	19.49	19.33	19.14		5
	3	0	19.07	19.41	19.13		5
	3	2	19.35	19.27	19.10		5
	3	3	19.32	19.61	19.10		5
	6	0	19.09	19.24	19.05		5

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Table 9-67
LTE Band 2 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot Mode Active

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.56	19.50	19.43	0	0
	1	50	19.42	19.61	19.43		0
	1	99	**19.70**	19.57	19.44		0
	50	0	19.55	19.73	19.56	0-1	0
	50	25	19.63	19.74	19.60		0
	50	50	19.65	**19.75**	19.61		0
	100	0	19.59	19.69	19.59		0
16QAM	1	0	19.96	19.78	19.81	0-1	0
	1	50	19.77	19.78	19.73		0
	1	99	19.80	19.85	19.71		0
	50	0	19.60	19.72	19.53	0-2	0
	50	25	19.66	19.75	19.59		0
	50	50	19.66	19.78	19.58		0
	100	0	19.66	19.75	19.59		0
64QAM	1	0	19.71	19.76	19.75	0-2	0
	1	50	19.70	19.81	19.65		0
	1	99	19.85	19.90	19.68		0
	50	0	19.62	19.74	19.67	0-3	0
	50	25	19.67	19.81	19.63		0
	50	50	19.71	19.79	19.67		0
	100	0	19.65	19.77	19.62		0
256QAM	1	0	19.28	19.26	19.23	0-5	0.5
	1	50	19.08	19.29	19.08		0.5
	1	99	19.22	19.34	19.20		0.5
	50	0	19.13	19.24	19.05		0.5
	50	25	19.14	19.27	19.14		0.5
	50	50	19.19	19.29	19.14		0.5
	100	0	19.12	19.29	19.13		0.5

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Table 9-68
LTE Band 2 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot Mode Active

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	19.65	19.87	19.74	0	0
	1	36	19.74	19.85	19.70		0
	1	74	19.79	19.86	19.69		0
	36	0	19.81	19.94	19.78	0-1	0
	36	18	19.89	20.02	19.86		0
	36	37	19.95	20.04	19.87		0
	75	0	19.93	20.02	19.85		0
16QAM	1	0	19.87	20.01	20.04	0-1	0
	1	36	19.90	20.01	19.92		0
	1	74	20.00	20.04	19.85		0
	36	0	19.75	19.85	19.71	0-2	0
	36	18	19.85	19.95	19.74		0
	36	37	19.85	19.91	19.80		0
	75	0	19.81	19.91	19.74		0
64QAM	1	0	19.75	20.10	19.78	0-2	0
	1	36	19.96	20.05	19.74		0
	1	74	19.88	20.21	19.73		0
	36	0	19.61	19.83	19.63	0-3	0
	36	18	19.73	19.97	19.68		0
	36	37	19.81	19.97	19.70		0
	75	0	19.72	19.90	19.65		0
256QAM	1	0	19.36	19.41	19.27	0-5	0.5
	1	36	19.38	19.30	19.21		0.5
	1	74	19.47	19.51	19.33		0.5
	36	0	19.20	19.43	19.37		0.5
	36	18	19.32	19.55	19.23		0.5
	36	37	19.29	19.46	19.30		0.5
	75	0	19.22	19.49	19.23		0.5

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Table 9-69
LTE Band 2 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot Mode Active

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	19.44	19.61	19.47	0	0
	1	25	19.52	19.56	19.35		0
	1	49	19.49	19.60	19.50		0
	25	0	19.65	19.76	19.61	0-1	0
	25	12	19.70	19.79	19.63		0
	25	25	19.70	19.80	19.64		0
	50	0	19.73	19.81	19.65		0
16QAM	1	0	19.74	19.87	19.70	0-1	0
	1	25	19.79	19.87	19.66		0
	1	49	19.82	19.87	19.79		0
	25	0	19.63	19.74	19.59	0-2	0
	25	12	19.65	19.76	19.60		0
	25	25	19.67	19.79	19.62		0
	50	0	19.66	19.79	19.60		0
64QAM	1	0	19.81	19.77	19.83	0-2	0
	1	25	19.74	19.83	19.86		0
	1	49	19.85	19.80	19.88		0
	25	0	19.61	19.66	19.70	0-3	0
	25	12	19.71	19.65	19.64		0
	25	25	19.70	19.71	19.67		0
	50	0	19.63	19.68	19.66		0
256QAM	1	0	19.30	19.31	18.97	0-5	0.5
	1	25	19.08	19.09	18.94		0.5
	1	49	19.12	19.14	18.92		0.5
	25	0	18.89	18.99	19.04		0.5
	25	12	18.87	19.07	18.97		0.5
	25	25	19.03	18.99	18.87		0.5
	50	0	18.90	19.04	18.89		0.5

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Table 9-70
LTE Band 2 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot Mode Active

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	19.44	19.47	19.42	0	0
	1	12	19.54	19.56	19.40		0
	1	24	19.59	19.64	19.61		0
	12	0	19.68	19.64	19.70	0-1	0
	12	6	19.63	19.62	19.66		0
	12	13	19.66	19.65	19.69		0
	25	0	19.59	19.61	19.78		0
16QAM	1	0	19.64	19.80	19.71	0-1	0
	1	12	19.68	19.72	19.68		0
	1	24	19.70	19.91	19.75		0
	12	0	19.53	19.68	19.78	0-2	0
	12	6	19.56	19.64	19.64		0
	12	13	19.58	19.62	19.62		0
	25	0	19.54	19.64	19.60		0
64QAM	1	0	19.87	19.71	19.95	0-2	0
	1	12	19.81	19.92	19.93		0
	1	24	19.91	19.92	19.97		0
	12	0	19.61	19.71	20.01	0-3	0
	12	6	19.76	19.76	19.81		0
	12	13	19.67	19.85	19.79		0
	25	0	19.69	19.63	19.78		0
256QAM	1	0	19.05	19.18	19.22	0-5	0.5
	1	12	19.06	19.14	19.11		0.5
	1	24	19.26	19.18	19.12		0.5
	12	0	19.02	19.06	19.14		0.5
	12	6	19.12	19.03	19.20		0.5
	12	13	18.99	19.15	19.06		0.5
	25	0	19.13	19.22	19.05		0.5

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Table 9-71
LTE Band 2 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth – Hotspot Mode Active

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	19.64	19.61	19.50	0	0
	1	7	19.71	19.66	19.58		0
	1	14	19.57	19.66	19.60		0
	8	0	19.74	19.70	19.68	0-1	0
	8	4	19.64	19.76	19.47		0
	8	7	19.73	19.81	19.53		0
	15	0	19.77	19.79	19.50		0
16QAM	1	0	19.76	19.92	19.69	0-1	0
	1	7	19.73	19.85	19.63		0
	1	14	19.75	20.04	19.72		0
	8	0	19.75	19.87	19.55	0-2	0
	8	4	19.73	19.84	19.52		0
	8	7	19.68	19.85	19.53		0
	15	0	19.92	19.76	19.74		0
64QAM	1	0	19.62	19.91	19.59	0-2	0
	1	7	19.80	19.90	19.58		0
	1	14	19.78	19.76	19.54		0
	8	0	19.70	19.79	19.47	0-3	0
	8	4	19.72	19.80	19.58		0
	8	7	19.67	19.78	19.56		0
	15	0	19.64	19.83	19.51		0
256QAM	1	0	18.98	19.37	19.05	0-5	0.5
	1	7	19.22	19.40	19.08		0.5
	1	14	19.05	19.23	19.01		0.5
	8	0	19.03	19.31	18.99		0.5
	8	4	19.12	19.41	19.09		0.5
	8	7	19.26	19.27	18.95		0.5
	15	0	19.24	19.32	19.00		0.5

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Table 9-72
LTE Band 2 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth- Hotspot Mode Active

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	19.45	19.71	19.78	0	0
	1	2	19.45	19.75	19.74		0
	1	5	19.68	19.66	19.81		0
	3	0	19.77	19.78	19.81		0
	3	2	19.81	19.76	19.90		0
	3	3	19.69	19.81	19.91		0
	6	0	19.77	19.84	19.89	0-1	0
16QAM	1	0	19.87	19.85	20.05	0-1	0
	1	2	20.01	20.03	20.13		0
	1	5	19.99	19.90	19.94		0
	3	0	19.85	19.81	19.97		0
	3	2	19.81	19.79	20.02		0
	3	3	19.78	19.62	19.93		0
	6	0	19.76	19.72	20.01	0-2	0
64QAM	1	0	19.83	19.75	20.05	0-2	0
	1	2	19.77	19.90	19.97		0
	1	5	19.91	19.96	20.06		0
	3	0	19.78	19.92	20.02		0
	3	2	19.97	19.84	20.02		0
	3	3	19.82	19.88	19.94		0
	6	0	19.94	19.82	19.52	0-3	0
256QAM	1	0	19.36	19.15	19.05	0-5	0.5
	1	2	19.25	19.26	19.16		0.5
	1	5	19.17	19.23	19.13		0.5
	3	0	19.21	19.16	19.23		0.5
	3	2	19.22	19.15	19.12		0.5
	3	3	19.30	19.24	19.26		0.5
	6	0	19.13	19.09	19.19		0.5

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Table 9-73
LTE Band 2 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	21.00	20.97	**21.10**	0	0
	1	50	20.98	20.98	20.96		0
	1	99	20.99	20.99	21.05		0
	50	0	21.03	21.11	21.07	0-1	0
	50	25	21.05	21.12	21.08		0
	50	50	21.15	21.14	**21.16**		0
	100	0	21.04	21.08	21.03		0
16QAM	1	0	21.36	21.28	21.27	0-1	0
	1	50	21.33	21.17	21.21		0
	1	99	21.33	21.18	21.36		0
	50	0	20.91	20.91	20.95	0-2	0
	50	25	20.91	20.94	21.00		0
	50	50	20.97	21.01	21.06		0
	100	0	20.93	20.96	20.99		0
64QAM	1	0	21.25	21.16	21.45	0-2	0
	1	50	21.17	21.23	21.49		0
	1	99	21.22	21.26	21.48		0
	50	0	20.96	20.98	21.09	0-3	0
	50	25	20.97	21.07	21.06		0
	50	50	21.05	21.10	21.10		0
	100	0	21.00	21.01	21.04		0
256QAM	1	0	19.29	19.32	19.28	0-5	2
	1	50	19.27	19.38	19.21		2
	1	99	19.28	19.31	19.27		2
	50	0	19.20	19.27	19.14		2
	50	25	19.23	19.33	19.18		2
	50	50	19.28	19.36	19.22		2
	100	0	19.22	19.32	19.20		2

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Table 9-74
LTE Band 2 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.83	21.00	20.87	0	0
	1	36	20.79	21.02	20.80		0
	1	74	20.95	20.99	20.85		0
	36	0	20.93	21.11	21.00	0-1	0
	36	18	21.01	21.19	21.03		0
	36	37	21.07	21.20	21.01		0
	75	0	21.11	21.24	21.03		0
16QAM	1	0	21.19	21.40	21.30	0-1	0
	1	36	21.23	21.30	21.21		0
	1	74	21.27	21.30	21.12		0
	36	0	21.07	21.23	21.05	0-2	0
	36	18	21.14	21.27	21.09		0
	36	37	21.14	21.28	21.13		0
	75	0	21.14	21.27	21.12		0
64QAM	1	0	21.21	21.38	21.22	0-2	0
	1	36	21.27	21.47	21.15		0
	1	74	21.52	21.54	21.23		0
	36	0	21.14	21.31	21.04	0-3	0
	36	18	21.23	21.22	20.97		0
	36	37	21.15	21.29	20.98		0
	75	0	21.22	21.35	20.89		0
256QAM	1	0	19.44	19.56	19.38	0-5	2
	1	36	19.15	19.50	19.30		2
	1	74	19.39	19.33	19.39		2
	36	0	19.37	19.40	19.23		2
	36	18	19.33	19.32	19.20		2
	36	37	19.34	19.31	19.27		2
	75	0	19.30	19.27	19.33		2

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Table 9-75
LTE Band 2 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.74	20.84	20.85	0	0
	1	25	20.83	20.97	20.77		0
	1	49	20.79	20.97	20.79		0
	25	0	20.92	21.10	20.92	0-1	0
	25	12	20.99	21.13	20.96		0
	25	25	20.94	21.08	20.92		0
	50	0	21.00	21.14	20.95		0
16QAM	1	0	21.12	21.25	21.14	0-1	0
	1	25	21.18	21.33	21.09		0
	1	49	21.15	21.43	21.02		0
	25	0	21.02	21.12	20.99	0-2	0
	25	12	21.06	21.19	21.02		0
	25	25	21.02	21.11	20.98		0
	50	0	21.03	21.16	20.96		0
64QAM	1	0	21.11	21.13	21.22	0-2	0
	1	25	21.20	21.28	21.12		0
	1	49	21.03	21.26	20.98		0
	25	0	20.98	21.11	20.89	0-3	0
	25	12	20.99	21.01	20.85		0
	25	25	20.97	20.65	20.65		0
	50	0	20.96	20.89	20.77		0
256QAM	1	0	19.30	19.32	19.35	0-5	2
	1	25	19.32	19.28	19.24		2
	1	49	19.41	19.32	19.21		2
	25	0	19.25	19.21	19.19		2
	25	12	19.28	19.24	19.22		2
	25	25	19.21	19.23	19.14		2
	50	0	19.25	19.34	19.24		2

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Table 9-76
LTE Band 2 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.82	20.92	20.74	0	0
	1	12	20.87	21.04	20.82		0
	1	24	20.89	21.07	20.79		0
	12	0	20.99	21.07	20.87	0-1	0
	12	6	21.06	21.11	20.96		0
	12	13	21.09	21.17	20.99		0
	25	0	21.03	21.08	20.96		0
16QAM	1	0	21.17	21.22	21.05	0-1	0
	1	12	21.22	21.33	21.16		0
	1	24	21.14	21.30	21.15		0
	12	0	21.04	21.14	20.96	0-2	0
	12	6	21.14	21.21	21.02		0
	12	13	21.11	21.27	21.03		0
	25	0	21.06	21.11	20.99		0
64QAM	1	0	21.20	21.14	20.98	0-2	0
	1	12	21.18	21.27	21.05		0
	1	24	21.11	21.30	21.12		0
	12	0	21.05	21.10	20.84	0-3	0
	12	6	21.04	20.98	20.58		0
	12	13	20.99	20.78	20.77		0
	25	0	20.95	20.52	20.61		0
256QAM	1	0	19.29	19.43	19.15	0-5	2
	1	12	19.14	19.41	19.26		2
	1	24	19.24	19.51	19.20		2
	12	0	19.21	19.27	19.11		2
	12	6	19.22	19.34	19.19		2
	12	13	19.26	19.35	19.23		2
	25	0	19.24	19.32	19.10		2

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Table 9-77
LTE Band 2 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.80	20.84	20.73	0	0
	1	7	20.85	20.97	20.76		0
	1	14	20.88	21.02	20.78		0
	8	0	20.97	21.02	20.90	0-1	0
	8	4	21.05	21.18	20.96		0
	8	7	21.06	21.16	20.95		0
	15	0	21.06	21.12	20.92		0
16QAM	1	0	21.18	21.18	21.02	0-1	0
	1	7	21.18	21.30	21.04		0
	1	14	21.26	21.32	21.08		0
	8	0	21.06	21.10	20.98	0-2	0
	8	4	21.12	21.25	21.06		0
	8	7	21.12	21.22	21.02		0
	15	0	21.06	21.11	20.93		0
64QAM	1	0	21.05	21.15	20.98	0-2	0
	1	7	21.10	21.27	20.99		0
	1	14	21.02	21.31	21.02		0
	8	0	21.01	20.98	20.70	0-3	0
	8	4	21.03	21.03	20.56		0
	8	7	21.00	20.96	20.63		0
	15	0	20.98	20.57	20.57		0
256QAM	1	0	19.34	19.31	19.23	0-5	2
	1	7	19.33	19.28	19.32		2
	1	14	19.29	19.25	19.26		2
	8	0	19.20	19.32	19.15		2
	8	4	19.30	19.33	19.23		2
	8	7	19.28	19.27	19.11		2
	15	0	19.25	19.22	19.15		2

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Table 9-78
LTE Band 2 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth- Grip Sensor and/or Earjack Mode Active

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.79	20.91	20.68	0	0
	1	2	20.91	21.02	20.77		0
	1	5	20.87	21.01	20.78		0
	3	0	20.78	20.91	20.69		0
	3	2	20.89	21.00	20.77		0
	3	3	20.83	20.98	20.76		0
	6	0	20.98	21.08	20.84	0-1	0
16QAM	1	0	21.12	21.14	21.00	0-1	0
	1	2	21.18	21.27	21.03		0
	1	5	21.19	21.27	21.00		0
	3	0	20.98	21.10	20.91		0
	3	2	21.07	21.16	20.99		0
	3	3	21.06	21.14	20.90		0
	6	0	21.05	21.16	20.92	0-2	0
64QAM	1	0	21.01	21.06	21.09	0-2	0
	1	2	21.06	21.18	21.17		0
	1	5	21.02	21.09	20.98		0
	3	0	21.00	20.97	20.79		0
	3	2	20.98	21.12	20.75		0
	3	3	20.89	21.08	20.89		0
	6	0	20.91	20.93	20.87	0-3	0
256QAM	1	0	19.17	19.26	19.34	0-5	2
	1	2	19.31	19.36	19.20		2
	1	5	19.28	19.35	19.18		2
	3	0	19.19	19.20	19.05		2
	3	2	19.31	19.33	19.17		2
	3	3	19.23	19.31	19.10		2
	6	0	19.16	19.40	19.01		2

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Table 9-79
LTE Band 2 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18700 (1860.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19100 (1900.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.93	**18.08**	17.90	0	0
	1	50	17.94	18.04	17.93		0
	1	99	17.98	18.06	17.97		0
	50	0	17.98	18.04	17.85	0-1	0
	50	25	18.03	18.09	17.93		0
	50	50	18.05	**18.12**	17.95		0
	100	0	18.02	18.06	17.93		0
16QAM	1	0	18.02	18.07	18.09	0-1	0
	1	50	18.03	18.12	18.03		0
	1	99	17.97	18.14	18.03		0
	50	0	17.87	17.97	17.86	0-2	0
	50	25	17.92	18.05	17.91		0
	50	50	17.97	18.08	17.92		0
	100	0	17.92	18.05	17.90		0
64QAM	1	0	18.06	18.06	18.09	0-2	0
	1	50	17.97	18.11	17.98		0
	1	99	18.04	18.20	18.03		0
	50	0	17.91	18.03	17.91	0-3	0
	50	25	17.95	18.07	17.97		0
	50	50	18.01	18.12	18.00		0
	100	0	17.95	18.08	17.95		0
256QAM	1	0	18.01	18.01	17.95	0-5	0
	1	50	18.02	18.09	17.92		0
	1	99	17.98	18.10	17.92		0
	50	0	17.92	18.04	17.89		0
	50	25	17.97	18.08	17.93		0
	50	50	18.01	18.14	17.95		0
	100	0	17.96	18.09	17.94		0

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Table 9-80
LTE Band 2 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18675 (1857.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19125 (1902.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.95	17.93	17.84	0	0
	1	36	17.86	17.89	17.77		0
	1	74	18.00	17.88	17.76		0
	36	0	17.94	18.00	17.87	0-1	0
	36	18	18.00	18.04	17.90		0
	36	37	18.04	18.08	17.93		0
	75	0	18.00	18.03	17.93		0
16QAM	1	0	18.13	18.16	18.02	0-1	0
	1	36	18.06	18.11	18.02		0
	1	74	18.15	18.24	18.06		0
	36	0	17.94	18.00	17.90	0-2	0
	36	18	18.02	18.03	17.91		0
	36	37	18.02	18.06	17.95		0
	75	0	18.03	18.03	17.91		0
64QAM	1	0	18.05	18.11	18.11	0-2	0
	1	36	18.09	18.16	17.98		0
	1	74	18.17	18.15	18.10		0
	36	0	18.00	18.06	17.91	0-3	0
	36	18	18.05	18.07	17.95		0
	36	37	18.07	18.13	18.06		0
	75	0	18.01	18.08	17.95		0
256QAM	1	0	18.05	18.15	18.04	0-5	0
	1	36	18.02	18.08	18.02		0
	1	74	18.11	18.22	18.11		0
	36	0	18.06	18.06	17.90		0
	36	18	18.02	18.09	17.96		0
	36	37	18.06	18.11	17.98		0
	75	0	18.01	18.08	17.96		0

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Table 9-81
LTE Band 2 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18650 (1855.0 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19150 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.64	17.66	17.80	0	0
	1	25	17.77	17.83	17.60		0
	1	49	17.72	17.73	17.63		0
	25	0	17.85	17.86	17.72	0-1	0
	25	12	17.82	17.89	17.73		0
	25	25	17.82	17.84	17.71		0
	50	0	17.86	17.85	17.70		0
16QAM	1	0	17.95	18.03	17.99	0-1	0
	1	25	17.98	18.02	17.93		0
	1	49	18.08	18.03	17.92		0
	25	0	17.84	17.87	17.73	0-2	0
	25	12	17.85	17.91	17.78		0
	25	25	17.83	17.89	17.70		0
	50	0	17.81	17.88	17.70		0
64QAM	1	0	17.86	18.05	18.01	0-2	0
	1	25	18.04	18.05	17.92		0
	1	49	18.02	18.05	17.97		0
	25	0	17.83	17.90	17.81	0-3	0
	25	12	17.85	17.96	17.81		0
	25	25	17.85	17.86	17.75		0
	50	0	17.87	17.96	17.77		0
256QAM	1	0	17.92	17.93	17.75	0-5	0
	1	25	17.90	18.01	17.88		0
	1	49	17.93	18.00	17.84		0
	25	0	17.84	17.93	17.76		0
	25	12	17.87	17.92	17.80		0
	25	25	17.89	17.86	17.73		0
	50	0	17.84	17.92	17.78		0

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Table 9-82
LTE Band 2 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18625 (1852.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19175 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.72	17.69	17.61	0	0
	1	12	17.73	17.84	17.63		0
	1	24	17.78	17.83	17.71		0
	12	0	17.82	17.79	17.74	0-1	0
	12	6	17.88	17.82	17.77		0
	12	13	17.85	17.91	17.78		0
	25	0	17.85	17.83	17.75		0
16QAM	1	0	17.97	18.00	17.91	0-1	0
	1	12	18.00	18.05	17.92		0
	1	24	18.02	18.04	18.00		0
	12	0	17.88	17.90	17.78	0-2	0
	12	6	17.93	17.93	17.84		0
	12	13	17.94	17.98	17.85		0
	25	0	17.88	17.84	17.73		0
64QAM	1	0	17.93	17.94	17.85	0-2	0
	1	12	17.93	18.08	17.95		0
	1	24	18.00	18.09	18.00		0
	12	0	17.89	17.85	17.78	0-3	0
	12	6	17.92	17.96	17.86		0
	12	13	17.93	17.99	17.83		0
	25	0	17.88	17.86	17.76		0
256QAM	1	0	17.89	17.93	17.89	0-5	0
	1	12	17.96	18.02	17.92		0
	1	24	17.90	18.01	17.97		0
	12	0	17.80	17.86	17.74		0
	12	6	17.92	17.96	17.84		0
	12	13	17.89	17.99	17.82		0
	25	0	17.88	17.87	17.80		0

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Table 9-83
LTE Band 2 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18615 (1851.5 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19185 (1908.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.71	17.68	17.57	0	0
	1	7	17.74	17.77	17.61		0
	1	14	17.78	17.80	17.65		0
	8	0	17.79	17.81	17.68	0-1	0
	8	4	17.87	17.90	17.77		0
	8	7	17.82	17.92	17.75		0
	15	0	17.81	17.84	17.73		0
16QAM	1	0	17.96	17.93	17.89	0-1	0
	1	7	17.97	18.03	17.88		0
	1	14	18.02	18.04	17.95		0
	8	0	17.86	17.91	17.79	0-2	0
	8	4	18.00	18.03	17.85		0
	8	7	17.92	18.02	17.82		0
	15	0	17.82	17.86	17.76		0
64QAM	1	0	17.93	17.93	17.85	0-2	0
	1	7	17.93	17.99	17.90		0
	1	14	18.00	18.08	17.91		0
	8	0	17.87	17.85	17.75	0-3	0
	8	4	17.92	18.00	17.82		0
	8	7	17.90	17.95	17.82		0
	15	0	17.88	17.91	17.76		0
256QAM	1	0	17.91	17.89	17.81	0-5	0
	1	7	17.84	17.96	17.85		0
	1	14	17.91	18.05	17.91		0
	8	0	17.88	17.85	17.78		0
	8	4	17.94	18.01	17.87		0
	8	7	17.89	17.99	17.80		0
	15	0	17.88	17.88	17.78		0

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Table 9-84
LTE Band 2 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth- Grip Sensor and/or Earjack Mode and 5G NR active

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 18607 (1850.7 MHz)	Mid Channel 18900 (1880.0 MHz)	High Channel 19193 (1909.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.58	17.64	17.47	0	0
	1	2	17.65	17.74	17.58		0
	1	5	17.62	17.68	17.57		0
	3	0	17.60	17.70	17.54		0
	3	2	17.62	17.76	17.52		0
	3	3	17.64	17.73	17.58		0
	6	0	17.65	17.78	17.58	0-1	0
16QAM	1	0	18.05	17.96	17.93	0-1	0
	1	2	17.92	18.05	17.83		0
	1	5	17.95	18.02	18.13		0
	3	0	17.68	17.82	17.77		0
	3	2	17.78	17.90	17.78		0
	3	3	17.83	17.84	17.67		0
	6	0	17.70	17.87	17.83	0-2	0
64QAM	1	0	18.00	17.89	17.80	0-2	0
	1	2	17.96	18.03	17.83		0
	1	5	17.98	18.01	18.05		0
	3	0	17.92	17.85	17.77		0
	3	2	17.80	17.98	17.93		0
	3	3	17.89	17.90	17.80		0
	6	0	17.83	17.86	17.77	0-3	0
256QAM	1	0	17.74	17.90	17.71	0-5	0
	1	2	17.84	18.00	17.96		0
	1	5	17.77	17.91	17.90		0
	3	0	17.77	17.95	17.85		0
	3	2	17.89	18.01	17.96		0
	3	3	18.01	17.83	17.80		0
	6	0	17.68	17.96	17.55		0

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9.4.8 LTE Band 7

Table 9-85
LTE Band 7 Maximum Conducted Powers - 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	21.61	21.35	21.60	0	0
	1	50	21.47	21.22	21.71		0
	1	99	21.41	21.35	**21.95**		0
	50	0	20.56	20.42	20.86	0-1	1
	50	25	20.64	20.34	20.87		1
	50	50	20.56	20.38	**20.90**		1
	100	0	20.66	20.42	20.77		1
16QAM	1	0	20.81	20.59	20.89	0-1	1
	1	50	20.70	20.55	21.00		1
	1	99	20.61	20.37	21.12		1
	50	0	19.67	19.50	19.93	0-2	2
	50	25	19.68	19.42	19.96		2
	50	50	19.60	19.36	19.95		2
	100	0	19.65	19.36	19.94		2
64QAM	1	0	19.89	19.60	19.87	0-2	2
	1	50	19.69	19.48	19.99		2
	1	99	19.64	19.52	20.16		2
	50	0	18.70	18.49	18.94	0-3	3
	50	25	18.69	18.42	18.93		3
	50	50	18.62	18.37	18.93		3
	100	0	18.83	18.57	19.12		3
256QAM	1	0	16.75	16.45	16.72	0-5	5
	1	50	16.65	16.29	16.95		5
	1	99	16.53	16.31	17.11		5
	50	0	16.73	16.39	16.85		5
	50	25	16.69	16.43	16.88		5
	50	50	16.65	16.34	16.95		5
	100	0	16.67	16.32	16.89		5

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Table 9-86
LTE Band 7 Maximum Conducted Powers - 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	21.81	21.45	21.82	0	0
	1	36	21.73	21.27	21.91		0
	1	74	21.59	21.34	22.06		0
	36	0	20.78	20.46	21.01	0-1	1
	36	18	20.79	20.43	21.09		1
	36	37	20.76	20.42	21.09		1
	75	0	20.86	20.47	21.14		1
16QAM	1	0	21.09	20.73	21.10	0-1	1
	1	36	20.94	20.56	21.24		1
	1	74	20.82	20.59	21.38		1
	36	0	19.90	19.54	20.02	0-2	2
	36	18	19.88	19.49	20.11		2
	36	37	19.82	19.47	20.10		2
	75	0	19.83	19.47	20.12		2
64QAM	1	0	19.92	19.60	20.04	0-2	2
	1	36	19.83	19.45	20.07		2
	1	74	19.75	19.46	20.37		2
	36	0	18.88	18.50	19.03	0-3	3
	36	18	18.90	18.49	19.10		3
	36	37	18.81	18.49	19.11		3
	75	0	18.83	18.45	19.10		3
256QAM	1	0	16.77	16.44	16.80	0-5	5
	1	36	16.72	16.31	17.02		5
	1	74	16.67	16.36	17.13		5
	36	0	16.76	16.39	16.92		5
	36	18	16.74	16.33	16.99		5
	36	37	16.73	16.31	16.97		5
	75	0	16.73	16.33	16.98		5

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Table 9-87
LTE Band 7 Maximum Conducted Powers - 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	21.59	21.20	21.80	0	0
	1	25	21.56	21.14	21.81		0
	1	49	21.51	21.16	21.92		0
	25	0	20.68	20.31	20.90	0-1	1
	25	12	20.67	20.26	21.02		1
	25	25	20.59	20.22	21.02		1
	50	0	20.70	20.27	21.03		1
16QAM	1	0	20.92	20.51	21.02	0-1	1
	1	25	20.75	20.38	21.07		1
	1	49	20.76	20.50	21.17		1
	25	0	19.77	19.34	19.94	0-2	2
	25	12	19.71	19.29	20.03		2
	25	25	19.67	19.21	20.02		2
	50	0	19.68	19.30	20.04		2
64QAM	1	0	19.84	19.46	20.08	0-2	2
	1	25	19.74	19.33	20.10		2
	1	49	19.75	19.35	20.24		2
	25	0	18.74	18.36	18.94	0-3	3
	25	12	18.74	18.34	19.03		3
	25	25	18.65	18.21	19.01		3
	50	0	18.76	18.30	19.04		3
256QAM	1	0	16.65	16.40	17.01	0-5	5
	1	25	16.60	16.24	16.96		5
	1	49	16.54	16.20	17.02		5
	25	0	16.62	16.21	16.78		5
	25	12	16.57	16.22	16.89		5
	25	25	16.53	16.14	16.90		5
	50	0	16.57	16.19	16.89		5

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Table 9-88
LTE Band 7 Maximum Conducted Powers - 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	21.55	21.15	21.86	0	0
	1	12	21.64	21.19	21.99		0
	1	24	21.61	21.25	22.01		0
	12	0	20.69	20.22	20.95	0-1	1
	12	6	20.75	20.32	21.11		1
	12	13	20.76	20.35	21.13		1
	25	0	20.76	20.34	21.04		1
16QAM	1	0	20.92	20.44	21.11	0-1	1
	1	12	20.88	20.50	21.29		1
	1	24	20.89	20.54	21.26		1
	12	0	19.83	19.27	20.07	0-2	2
	12	6	19.89	19.43	20.22		2
	12	13	19.83	19.39	20.22		2
	25	0	19.76	19.36	20.06		2
64QAM	1	0	19.87	19.46	20.12	0-2	2
	1	12	19.88	19.50	20.30		2
	1	24	19.83	19.52	20.32		2
	12	0	18.81	18.30	19.07	0-3	3
	12	6	18.87	18.41	19.22		3
	12	13	18.83	18.42	19.21		3
	25	0	18.79	18.34	19.09		3
256QAM	1	0	16.58	16.25	16.98	0-5	5
	1	12	16.69	16.33	17.08		5
	1	24	16.55	16.31	17.09		5
	12	0	16.60	16.14	16.90		5
	12	6	16.69	16.25	17.02		5
	12	13	16.65	16.22	16.93		5
	25	0	16.63	16.23	16.95		5

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Table 9-89
LTE Band 7 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.72	19.73	19.87	0	0
	1	50	19.64	19.56	19.92		0
	1	99	19.54	19.67	**19.93**		0
	50	0	19.78	19.80	19.92	0-1	0
	50	25	19.78	19.79	19.91		0
	50	50	19.75	19.74	**19.97**		0
	100	0	19.75	19.76	19.86		0
16QAM	1	0	19.98	20.00	19.61	0-1	0
	1	50	19.88	19.87	19.72		0
	1	99	19.79	19.94	19.97		0
	50	0	19.78	19.82	19.90	0-2	0
	50	25	19.77	19.80	19.96		0
	50	50	19.75	19.75	19.97		0
	100	0	19.78	19.76	19.94		0
64QAM	1	0	20.01	20.00	19.90	0-2	0
	1	50	19.84	19.85	20.06		0
	1	99	19.78	19.95	20.30		0
	50	0	18.81	18.87	18.96	0-3	1
	50	25	18.84	18.80	18.97		1
	50	50	18.77	18.78	18.99		1
	100	0	18.78	18.76	18.96		1
256QAM	1	0	16.84	16.90	16.83	0-5	3
	1	50	16.48	16.78	16.96		3
	1	99	16.71	16.83	17.20		3
	50	0	16.78	16.82	16.97		3
	50	25	16.78	16.74	16.94		3
	50	50	16.74	16.73	17.00		3
	100	0	16.76	16.71	16.98		3

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Table 9-90
LTE Band 7 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.75	19.41	19.78	0	0
	1	36	19.64	19.24	19.93		0
	1	74	19.58	19.33	20.09		0
	36	0	19.86	19.48	20.02	0-1	0
	36	18	19.86	19.45	20.10		0
	36	37	19.82	19.43	20.10		0
	75	0	19.36	19.47	19.55		0
16QAM	1	0	19.89	19.69	19.58	0-1	0
	1	36	20.02	19.52	20.07		0
	1	74	19.84	19.58	20.25		0
	36	0	19.32	19.32	19.40	0-2	0
	36	18	19.32	19.39	19.52		0
	36	37	19.30	19.31	19.54		0
	75	0	19.85	19.45	19.60		0
64QAM	1	0	19.95	19.65	20.05	0-2	0
	1	36	19.94	19.78	20.09		0
	1	74	19.88	19.59	20.14		0
	36	0	18.76	18.45	18.94	0-3	1
	36	18	18.75	18.59	19.05		1
	36	37	18.67	18.42	19.05		1
	75	0	18.71	18.65	19.07		1
256QAM	1	0	16.95	16.68	16.93	0-5	3
	1	36	16.90	16.70	16.92		3
	1	74	16.99	16.77	17.05		3
	36	0	17.01	16.85	17.02		3
	36	18	16.94	16.78	17.09		3
	36	37	16.90	16.87	17.11		3
	75	0	16.99	16.84	17.09		3

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Table 9-91
LTE Band 7 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.57	19.24	19.83	0	0
	1	25	19.52	19.12	19.84		0
	1	49	19.46	19.19	19.94		0
	25	0	19.68	19.38	19.89	0-1	0
	25	12	19.64	19.87	20.00		0
	25	25	19.60	19.30	19.99		0
	50	0	19.75	19.78	20.03		0
16QAM	1	0	19.84	19.54	19.99	0-1	0
	1	25	19.81	19.38	19.97		0
	1	49	19.69	19.55	19.98		0
	25	0	19.76	19.59	19.94	0-2	0
	25	12	19.75	19.55	19.89		0
	25	25	19.67	19.78	19.57		0
	50	0	19.68	19.66	19.89		0
64QAM	1	0	19.87	19.58	19.97	0-2	0
	1	25	19.75	19.48	20.04		0
	1	49	19.74	19.52	20.11		0
	25	0	18.76	18.45	18.94	0-3	1
	25	12	18.75	18.61	18.97		1
	25	25	18.67	18.67	19.00		1
	50	0	18.71	18.44	19.04		1
256QAM	1	0	16.78	16.68	16.92	0-5	3
	1	25	16.88	16.69	17.02		3
	1	49	16.85	16.65	17.03		3
	25	0	16.77	16.56	17.04		3
	25	12	16.78	16.64	17.05		3
	25	25	16.75	16.67	17.09		3
	50	0	16.74	16.68	17.10		3

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Table 9-92
LTE Band 7 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.70	19.50	19.91	0	0
	1	12	19.73	19.46	20.07		0
	1	24	19.69	19.64	20.11		0
	12	0	19.73	19.55	19.98	0-1	0
	12	6	19.81	19.56	19.95		0
	12	13	19.78	19.57	20.01		0
	25	0	19.83	19.69	20.03		0
16QAM	1	0	19.85	19.65	19.98	0-1	0
	1	12	19.96	19.66	20.04		0
	1	24	19.86	19.48	20.01		0
	12	0	19.86	19.57	19.97	0-2	0
	12	6	19.91	19.44	20.05		0
	12	13	19.94	19.53	19.98		0
	25	0	19.86	19.67	19.99		0
64QAM	1	0	20.01	19.68	20.03	0-2	0
	1	12	19.95	19.66	20.04		0
	1	24	19.98	19.56	19.98		0
	12	0	18.87	18.49	19.16	0-3	1
	12	6	18.91	18.54	19.31		1
	12	13	18.91	18.63	19.32		1
	25	0	18.90	18.55	19.15		1
256QAM	1	0	17.02	16.68	16.99	0-5	3
	1	12	16.93	16.66	17.05		3
	1	24	16.75	16.73	16.95		3
	12	0	16.86	16.62	17.02		3
	12	6	16.91	16.53	17.07		3
	12	13	16.90	16.67	17.08		3
	25	0	16.89	16.64	17.10		3

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9.4.9 LTE Band 48

Table 9-93
LTE Band 48 Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55340 (3560.0 MHz)	55773 (3603.3 MHz)	56207 (3646.7 MHz)	56640 (3690.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	**22.88**	22.22	22.60	22.60	0	0
	1	50	22.61	22.18	22.66	22.48		0
	1	99	22.58	22.20	22.68	22.40		0
	50	0	**21.97**	21.41	21.80	21.90	0-1	1
	50	25	21.96	21.27	21.83	21.87		1
	50	50	21.92	21.25	21.84	21.73		1
	100	0	21.95	21.33	21.79	21.88		1
16QAM	1	0	21.89	21.32	21.55	21.57	0-1	1
	1	50	21.68	21.18	21.60	21.52		1
	1	99	21.80	21.20	21.66	21.22		1
	50	0	20.83	20.57	20.59	20.97	0-2	2
	50	25	20.92	20.62	20.80	20.94		2
	50	50	20.89	20.19	20.85	20.58		2
	100	0	20.90	20.55	20.79	20.83		2
64QAM	1	0	20.06	19.70	20.10	20.05	0-2	2
	1	50	20.11	19.88	20.07	20.02		2
	1	99	20.09	19.65	20.02	20.01		2
	50	0	19.93	19.35	19.68	19.79	0-3	3
	50	25	19.95	19.48	19.88	19.86		3
	50	50	19.96	19.40	19.88	19.73		3
	100	0	19.60	19.43	19.82	19.77		3
256QAM	1	0	17.68	17.29	17.63	17.65	0-5	5
	1	50	17.61	17.19	17.62	17.55		5
	1	99	17.57	17.21	17.83	17.42		5
	50	0	17.98	17.62	17.85	17.93		5
	50	25	17.97	17.45	17.61	17.85		5
	50	50	17.94	17.42	17.73	17.74		5
	100	0	17.90	17.41	17.59	17.82		5

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Table 9-94
LTE Band 48 Maximum Conducted Powers - 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	22.53	22.01	22.41	22.29	0	0
	1	36	22.48	21.93	22.23	22.30		0
	1	74	22.51	21.96	22.27	22.22		0
	36	0	21.67	21.25	21.37	21.61	0-1	1
	36	18	21.70	21.25	21.42	21.52		1
	36	37	21.64	21.19	21.40	21.44		1
	75	0	21.75	21.20	21.44	21.69		1
16QAM	1	0	21.56	21.07	21.22	21.45	0-1	1
	1	36	21.57	21.09	21.23	21.28		1
	1	74	21.59	21.03	21.22	21.20		1
	36	0	20.67	20.20	20.29	20.52	0-2	2
	36	18	20.70	20.16	20.35	20.46		2
	36	37	20.67	20.12	20.42	20.37		2
	75	0	20.69	20.19	20.37	20.55		2
64QAM	1	0	20.42	19.85	19.97	20.18	0-2	2
	1	36	20.38	19.75	20.01	20.07		2
	1	74	20.39	19.86	20.04	19.95		2
	36	0	19.75	19.27	19.40	19.58	0-3	3
	36	18	19.77	19.23	19.42	19.53		3
	36	37	19.72	19.18	19.39	19.40		3
	75	0	19.77	19.27	19.42	19.58		3
256QAM	1	0	17.66	17.07	17.19	17.35	0-5	5
	1	36	17.59	16.99	17.18	17.32		5
	1	74	17.64	17.00	17.34	17.23		5
	36	0	17.82	17.33	17.44	17.55		5
	36	18	17.85	17.30	17.45	17.57		5
	36	37	17.79	17.23	17.41	17.46		5
	75	0	17.84	17.28	17.32	17.71		5

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Table 9-95
LTE Band 48 Maximum Conducted Powers - 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	22.30	22.10	22.06	22.32	0	0
	1	25	22.33	22.08	22.07	22.26		0
	1	49	22.35	22.07	22.12	22.21		0
	25	0	21.54	21.31	21.29	21.33	0-1	1
	25	12	21.60	21.34	21.24	21.47		1
	25	25	21.67	21.37	21.27	21.31		1
	50	0	21.60	21.29	21.28	21.31		1
16QAM	1	0	21.35	21.17	21.38	21.20	0-1	1
	1	25	21.36	21.16	21.22	21.22		1
	1	49	21.42	21.12	21.24	21.24		1
	25	0	20.51	20.20	20.19	20.39	0-2	2
	25	12	20.59	20.35	20.29	20.42		2
	25	25	20.64	20.32	20.26	20.37		2
	50	0	20.71	20.35	20.27	20.33		2
64QAM	1	0	20.07	19.76	19.86	19.94	0-2	2
	1	25	20.16	19.70	19.95	20.04		2
	1	49	20.18	19.74	20.01	19.84		2
	25	0	19.50	19.26	19.19	19.34	0-3	3
	25	12	19.56	19.30	19.33	19.44		3
	25	25	19.50	19.47	19.25	19.34		3
	50	0	19.65	19.26	19.32	19.43		3
256QAM	1	0	17.39	16.98	16.97	17.18	0-5	5
	1	25	17.38	17.13	17.09	17.17		5
	1	49	17.41	17.11	17.09	17.07		5
	25	0	17.58	17.16	17.26	17.43		5
	25	12	17.63	17.36	17.36	17.41		5
	25	25	17.63	17.40	17.32	17.42		5
	50	0	17.65	17.41	17.21	17.35		5

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Table 9-96
LTE Band 48 Maximum Conducted Powers - 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	22.22	22.08	22.01	22.23	0	0
	1	12	22.31	22.23	22.14	22.25		0
	1	24	22.36	22.11	22.16	22.29		0
	12	0	21.47	21.30	21.16	21.39	0-1	1
	12	6	21.55	21.27	21.34	21.53		1
	12	13	21.55	21.20	21.28	21.53		1
	25	0	21.47	21.38	21.22	21.50		1
16QAM	1	0	21.36	21.17	21.04	21.28	0-1	1
	1	12	21.43	21.07	21.15	21.24		1
	1	24	21.46	21.21	21.21	21.23		1
	12	0	20.38	20.18	20.07	20.32	0-2	2
	12	6	20.54	20.19	20.21	20.41		2
	12	13	20.44	20.17	20.21	20.46		2
	25	0	20.59	20.19	20.27	20.56		2
64QAM	1	0	20.10	19.88	19.76	19.98	0-2	2
	1	12	20.20	19.93	19.94	20.07		2
	1	24	20.19	19.92	19.95	20.05		2
	12	0	19.46	19.37	19.12	19.35	0-3	3
	12	6	19.45	19.26	19.31	19.53		3
	12	13	19.52	19.24	19.26	19.33		3
	25	0	19.54	19.25	19.26	19.45		3
256QAM	1	0	17.33	17.23	17.06	17.08	0-5	5
	1	12	17.37	17.18	17.15	17.18		5
	1	24	17.27	17.10	17.20	17.26		5
	12	0	17.51	17.41	17.32	17.50		5
	12	6	17.72	17.43	17.42	17.61		5
	12	13	17.41	17.38	17.38	17.58		5
	25	0	17.49	17.32	17.43	17.48		5

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Table 9-97
LTE Band 48 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.89	19.56	19.70	**20.09**	0	0
	1	50	19.87	19.48	19.74	20.01		0
	1	99	19.86	19.47	19.91	19.94		0
	50	0	19.92	19.46	19.94	**20.19**	0-1	0
	50	25	20.05	19.48	20.06	20.17		0
	50	50	20.09	19.79	20.10	20.14		0
	100	0	20.07	19.73	20.02	20.08		0
16QAM	1	0	19.95	19.63	19.94	20.09	0-1	0
	1	50	19.92	19.53	19.58	20.03		0
	1	99	20.01	19.56	19.73	19.97		0
	50	0	20.04	19.77	19.47	20.37	0-2	0
	50	25	20.11	19.73	19.67	20.20		0
	50	50	20.08	19.67	19.64	20.06		0
	100	0	20.09	19.74	19.55	20.24		0
64QAM	1	0	19.51	19.33	19.40	19.80	0-2	0
	1	50	19.64	19.17	19.58	19.72		0
	1	99	19.66	19.35	19.72	19.62		0
	50	0	19.63	19.25	19.48	19.81	0-3	0
	50	25	19.62	19.37	19.59	19.77		0
	50	50	19.61	19.23	19.69	19.66		0
	100	0	19.55	19.20	19.54	19.74		0
256QAM	1	0	17.45	17.12	17.18	17.58	0-5	2
	1	50	17.35	16.97	17.30	17.50		2
	1	99	17.38	16.97	17.45	17.41		2
	50	0	17.62	17.40	17.52	17.82		2
	50	25	17.66	17.34	17.50	17.52		2
	50	50	17.66	17.27	17.53	17.71		2
	100	0	17.59	17.25	17.72	17.77		2

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Table 9-98
LTE Band 48 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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	19.69	19.44	19.42	19.62	0	0
	1	36	19.59	19.38	19.40	19.58		0
	1	74	19.62	19.40	19.47	19.52		0
	36	0	19.78	19.68	19.57	19.84	0-1	0
	36	18	19.83	19.62	19.62	19.82		0
	36	37	19.77	19.62	19.68	19.70		0
	75	0	19.84	19.69	19.59	19.91		0
16QAM	1	0	19.73	19.50	19.48	19.73	0-1	0
	1	36	19.69	19.42	19.38	19.68		0
	1	74	19.73	19.42	19.30	19.62		0
	36	0	19.55	19.46	19.57	19.87	0-2	0
	36	18	19.63	19.65	19.45	19.71		0
	36	37	19.75	19.55	19.46	19.56		0
	75	0	19.84	19.68	19.52	19.83		0
64QAM	1	0	19.44	19.22	19.20	19.39	0-2	0
	1	36	19.43	19.30	19.14	19.36		0
	1	74	19.42	19.20	19.25	19.30		0
	36	0	19.77	19.62	19.51	19.80	0-3	0
	36	18	19.80	19.59	19.53	19.82		0
	36	37	19.75	19.52	19.42	19.68		0
	75	0	19.79	19.67	19.57	19.81		0
256QAM	1	0	17.63	17.38	17.42	17.62	0-5	2
	1	36	17.52	17.33	17.32	17.49		2
	1	74	17.60	17.35	17.28	17.50		2
	36	0	17.80	17.53	17.70	17.75		2
	36	18	17.68	17.61	17.64	17.71		2
	36	37	17.79	17.59	17.38	17.65		2
	75	0	17.76	17.56	17.50	17.76		2

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Table 9-99
LTE Band 48 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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)	55773 (3601.7 MHz)	56207 (3648.3 MHz)	56690 (3695.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	19.53	19.49	19.46	19.88	0	0
	1	25	19.50	19.49	19.41	19.67		0
	1	49	19.52	19.47	19.62	19.60		0
	25	0	19.61	19.64	19.55	19.82	0-1	0
	25	12	19.65	19.62	19.71	19.79		0
	25	25	19.69	19.69	19.71	19.85		0
	50	0	19.69	19.69	19.70	19.82		0
16QAM	1	0	19.61	19.55	19.58	19.72	0-1	0
	1	25	19.53	19.57	19.38	19.72		0
	1	49	19.62	19.58	19.36	19.59		0
	25	0	19.65	19.65	19.45	19.97	0-2	0
	25	12	19.74	19.67	19.52	19.86		0
	25	25	19.68	19.69	19.43	19.71		0
	50	0	19.76	19.77	19.49	19.88		0
64QAM	1	0	19.30	19.25	19.31	19.43	0-2	0
	1	25	19.32	19.27	19.34	19.35		0
	1	49	19.26	19.42	19.40	19.30		0
	25	0	19.55	19.58	19.46	19.54	0-3	0
	25	12	19.55	19.63	19.41	19.58		0
	25	25	19.62	19.56	19.53	19.61		0
	50	0	19.73	19.52	19.45	19.68		0
256QAM	1	0	17.41	17.44	17.32	17.65	0-5	2
	1	25	17.43	17.19	17.31	17.57		2
	1	49	17.45	17.26	17.48	17.45		2
	25	0	17.70	17.61	17.56	17.67		2
	25	12	17.57	17.56	17.51	17.60		2
	25	25	17.71	17.50	17.57	17.65		2
	50	0	17.74	17.54	17.51	17.67		2

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Table 9-100
LTE Band 48 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

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)	55773 (3600.8 MHz)	56207 (3649.2 MHz)	56715 (3697.5 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	19.57	19.33	19.40	19.75	0	0
	1	12	19.56	19.40	19.47	19.69		0
	1	24	19.55	19.42	19.58	19.67		0
	12	0	19.59	19.51	19.62	19.80	0-1	0
	12	6	19.72	19.56	19.69	19.79		0
	12	13	19.73	19.55	19.72	19.79		0
	25	0	19.67	19.55	19.62	19.72		0
16QAM	1	0	19.56	19.32	19.57	19.78	0-1	0
	1	12	19.58	19.52	19.51	19.74		0
	1	24	19.69	19.47	19.52	19.76		0
	12	0	19.68	19.41	19.40	19.97	0-2	0
	12	6	19.72	19.45	19.40	19.82		0
	12	13	19.70	19.43	19.60	19.69		0
	25	0	19.69	19.61	19.73	19.87		0
64QAM	1	0	19.28	19.09	19.25	19.49	0-2	0
	1	12	19.32	19.20	19.34	19.47		0
	1	24	19.36	19.22	19.38	19.25		0
	12	0	19.60	19.45	19.40	19.47	0-3	0
	12	6	19.61	19.47	19.49	19.55		0
	12	13	19.61	19.48	19.53	19.47		0
	25	0	19.62	19.46	19.62	19.45		0
256QAM	1	0	17.57	17.29	17.32	17.38	0-5	2
	1	12	17.50	17.30	17.43	17.48		2
	1	24	17.51	17.28	17.34	17.40		2
	12	0	17.65	17.63	17.52	17.64		2
	12	6	17.72	17.65	17.60	17.76		2
	12	13	17.75	17.66	17.71	17.72		2
	25	0	17.64	17.64	17.63	17.61		2

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9.4.10 LTE Band 41

Table 9-101
LTE Band 41 PC3 Maximum Conducted Powers - 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	23.70	23.46	23.46	**23.79**	23.54	0	0
	1	50	23.49	23.36	23.53	23.68	23.59		0
	1	99	23.42	23.32	23.50	23.44	23.65		0
	50	0	22.74	22.65	22.70	**22.99**	22.78	0-1	1
	50	25	22.72	22.58	22.71	22.90	22.78		1
	50	50	22.65	22.45	22.65	22.75	22.77		1
	100	0	22.69	22.56	22.69	22.88	22.77		1
16QAM	1	0	22.64	22.52	22.49	22.90	22.61	0-1	1
	1	50	22.49	22.36	22.50	22.75	22.60		1
	1	99	22.41	22.33	22.54	22.51	22.72		1
	50	0	21.71	21.69	21.74	22.02	21.79	0-2	2
	50	25	21.69	21.59	21.75	21.92	21.77		2
	50	50	21.68	21.48	21.69	21.75	21.79		2
	100	0	21.68	21.59	21.73	21.90	21.80		2
64QAM	1	0	21.47	21.25	21.24	21.62	21.33	0-2	2
	1	50	21.23	21.11	21.22	21.45	21.36		2
	1	99	21.12	21.11	21.26	21.25	21.38		2
	50	0	20.76	20.71	20.80	21.06	20.83	0-3	3
	50	25	20.75	20.64	20.78	20.96	20.83		3
	50	50	20.73	20.51	20.72	20.80	20.82		3
	100	0	20.71	20.59	20.72	20.90	20.81		3
256QAM	1	0	18.62	18.40	18.38	18.80	18.49	0-5	5
	1	50	18.41	18.28	18.40	18.61	18.50		5
	1	99	18.34	18.24	18.41	18.41	18.56		5
	50	0	18.76	18.69	18.77	19.09	18.84		5
	50	25	18.77	18.63	18.77	19.00	18.84		5
	50	50	18.72	18.51	18.74	18.85	18.83		5
	100	0	18.67	18.57	18.71	18.93	18.80		5

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Table 9-102
LTE Band 41 PC3 Maximum Conducted Powers - 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	23.75	23.46	23.76	23.78	23.74	0	0
	1	36	23.59	23.27	23.68	23.77	23.76		0
	1	74	23.50	23.18	23.55	23.52	23.77		0
	36	0	22.81	23.07	22.87	22.94	23.01	0-1	1
	36	18	22.78	22.51	22.88	22.88	22.99		1
	36	37	22.73	22.46	22.81	22.79	22.96		1
	75	0	22.78	22.49	22.86	22.88	23.00		1
16QAM	1	0	22.83	22.48	22.80	22.89	22.96	0-1	1
	1	36	22.67	22.33	22.70	22.82	22.86		1
	1	74	22.58	22.25	22.55	22.55	22.96		1
	36	0	21.75	21.49	21.81	21.87	21.94	0-2	2
	36	18	21.73	21.48	21.84	21.83	21.92		2
	36	37	21.70	21.45	21.77	21.73	21.91		2
	75	0	21.81	21.41	21.86	21.85	21.97		2
64QAM	1	0	21.55	21.26	21.56	21.69	21.63	0-2	2
	1	36	21.40	21.35	21.43	21.46	21.60		2
	1	74	21.31	21.25	21.34	21.23	21.60		2
	36	0	20.84	20.60	20.87	20.90	20.98	0-3	3
	36	18	20.81	20.53	20.89	20.89	20.99		3
	36	37	20.74	20.40	20.82	20.80	20.98		3
	75	0	20.80	20.55	20.89	20.91	21.05		3
256QAM	1	0	18.70	18.43	18.71	18.82	18.81	0-5	5
	1	36	18.55	18.24	18.59	18.60	18.80		5
	1	74	18.52	18.65	18.46	18.46	18.81		5
	36	0	18.46	18.57	18.86	18.92	18.95		5
	36	18	18.80	18.53	18.91	18.88	19.01		5
	36	37	18.76	18.41	18.88	18.79	18.99		5
	75	0	18.78	18.54	18.90	18.79	19.02		5

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Table 9-103
LTE Band 41 PC3 Maximum Conducted Powers - 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	23.71	23.47	23.63	23.75	23.78	0	0
	1	25	23.62	23.26	23.52	23.74	23.76		0
	1	49	23.62	23.33	23.50	23.72	23.62		0
	25	0	22.89	22.63	23.01	22.95	23.19	0-1	1
	25	12	22.88	22.61	23.01	22.96	23.16		1
	25	25	22.89	22.58	22.93	22.93	23.03		1
	50	0	22.80	22.69	23.00	22.97	23.12		1
16QAM	1	0	22.79	22.58	22.88	22.93	23.02	0-1	1
	1	25	22.77	22.48	22.94	22.87	22.95		1
	1	49	22.68	22.22	22.77	22.81	22.91		1
	25	0	21.95	21.67	22.03	22.02	22.16	0-2	2
	25	12	21.94	21.66	22.02	22.00	22.10		2
	25	25	21.83	21.64	21.91	21.87	22.07		2
	50	0	21.87	21.67	22.01	22.05	22.12		2
64QAM	1	0	21.43	21.15	21.62	21.68	21.74	0-2	2
	1	25	21.39	21.20	21.59	21.59	21.78		2
	1	49	21.42	21.09	21.46	21.59	21.74		2
	25	0	20.89	20.52	21.02	20.98	21.10	0-3	3
	25	12	20.85	20.61	20.96	20.98	21.09		3
	25	25	20.74	20.46	20.93	20.81	20.96		3
	50	0	20.90	20.63	21.04	21.04	21.15		3
256QAM	1	0	18.69	18.33	18.88	18.86	18.94	0-5	5
	1	25	18.60	18.40	18.67	18.76	18.89		5
	1	49	18.56	18.27	18.64	18.65	18.77		5
	25	0	18.92	18.69	19.02	19.02	19.17		5
	25	12	18.90	18.61	19.01	19.06	19.11		5
	25	25	18.74	18.58	18.93	18.95	19.08		5
	50	0	18.94	18.55	19.05	19.03	19.19		5

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Table 9-104
LTE Band 41 PC3 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.75	23.78	23.64	23.66	23.75	0	0
	1	12	23.76	23.70	23.77	23.67	23.76		0
	1	24	23.76	23.77	23.78	23.64	23.72		0
	12	0	22.82	22.90	22.94	22.96	23.06	0-1	1
	12	6	22.91	22.94	23.00	22.97	23.05		1
	12	13	22.87	22.90	23.02	22.98	23.11		1
	25	0	22.89	22.96	23.01	23.02	23.01		1
16QAM	1	0	22.86	22.94	22.95	22.98	23.04	0-1	1
	1	12	22.82	22.83	22.96	22.92	23.07		1
	1	24	22.83	22.76	22.93	22.98	23.06		1
	12	0	21.82	21.88	21.89	21.87	21.96	0-2	2
	12	6	21.80	21.86	21.98	21.93	22.01		2
	12	13	21.79	21.94	21.93	21.93	22.07		2
	25	0	21.83	22.00	22.02	22.05	22.11		2
64QAM	1	0	21.55	21.61	21.62	21.65	21.79	0-2	2
	1	12	21.52	21.59	21.68	21.69	21.77		2
	1	24	21.53	21.61	21.69	21.70	21.78		2
	12	0	20.87	20.85	20.92	20.88	21.04	0-3	3
	12	6	20.84	20.89	20.99	20.94	21.06		3
	12	13	20.85	20.97	20.94	20.99	21.10		3
	25	0	20.84	20.94	21.06	21.00	21.01		3
256QAM	1	0	18.72	18.83	18.80	18.81	18.94	0-5	5
	1	12	18.71	18.71	18.78	18.85	18.96		5
	1	24	18.64	18.67	18.77	18.84	18.92		5
	12	0	18.98	19.04	19.03	19.02	19.16		5
	12	6	19.01	19.08	19.07	19.03	19.19		5
	12	13	18.94	18.99	19.04	19.09	19.18		5
	25	0	18.94	19.02	19.00	19.10	19.09		5

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Table 9-105
LTE Band 41 PC2 Maximum Conducted Powers - 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	26.63	26.37	26.58	26.38	26.52	0	0
	1	50	26.58	26.27	26.64	26.26	26.65		0
	1	99	26.50	26.28	26.59	26.22	**26.74**		0
	50	0	25.75	25.57	25.82	25.34	25.88	0-1	1
	50	25	25.77	25.49	25.84	25.39	25.91		1
	50	50	25.75	25.41	25.75	25.44	**25.94**		1
	100	0	25.77	25.48	25.79	25.33	25.88		1
16QAM	1	0	25.93	25.68	25.86	25.66	25.85	0-1	1
	1	50	25.88	25.57	25.90	25.54	25.98		1
	1	99	25.77	25.58	25.82	25.52	26.05		1
	50	0	24.78	24.57	24.85	24.34	24.90	0-2	2
	50	25	24.80	24.52	24.86	24.41	24.95		2
	50	50	24.77	24.42	24.79	24.46	24.97		2
	100	0	24.81	24.50	24.85	24.37	24.95		2
64QAM	1	0	24.82	24.55	24.64	24.49	24.68	0-2	2
	1	50	24.71	24.42	24.71	24.37	24.84		2
	1	99	24.58	24.41	24.67	24.34	24.90		2
	50	0	23.84	23.62	23.90	23.42	23.95	0-3	3
	50	25	23.86	23.56	23.88	23.46	23.99		3
	50	50	23.81	23.45	23.83	23.51	24.01		3
	100	0	23.79	23.48	23.82	23.38	23.93		3
256QAM	1	0	21.87	21.48	21.63	21.57	21.71	0-5	5
	1	50	21.66	21.38	21.66	21.44	21.82		5
	1	99	21.58	21.37	21.58	21.31	21.87		5
	50	0	21.88	21.62	21.86	21.72	21.95		5
	50	25	21.87	21.56	21.87	21.63	21.97		5
	50	50	21.81	21.47	21.80	21.54	22.01		5
	100	0	21.79	21.47	21.78	21.56	21.92		5

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Table 9-106
LTE Band 41 PC2 Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.67	26.69	26.70	26.26	26.71	0	0
	1	36	26.72	26.67	26.69	26.15	26.72		0
	1	74	26.71	26.50	26.73	26.16	26.73		0
	36	0	26.06	25.87	26.06	25.38	26.05	0-1	1
	36	18	26.04	25.85	26.05	25.42	26.09		1
	36	37	25.99	25.74	26.03	25.45	26.04		1
	75	0	25.95	25.78	26.00	25.35	26.08		1
16QAM	1	0	25.93	26.05	26.16	25.49	26.18	0-1	1
	1	36	26.15	25.90	26.14	25.44	26.19		1
	1	74	26.05	25.76	26.18	25.46	26.07		1
	36	0	24.82	24.88	25.03	24.36	25.05	0-2	2
	36	18	24.97	24.81	25.12	24.39	25.08		2
	36	37	24.96	24.70	25.04	24.42	25.02		2
	75	0	24.95	24.80	25.09	24.44	25.09		2
64QAM	1	0	24.78	24.91	25.02	24.33	24.99	0-2	2
	1	36	24.94	24.78	24.98	24.27	25.13		2
	1	74	24.88	24.75	25.00	24.27	24.92		2
	36	0	23.96	23.97	24.08	23.47	24.10	0-3	3
	36	18	24.05	23.89	24.04	23.45	24.14		3
	36	37	24.02	23.76	24.09	23.44	24.11		3
	75	0	24.04	23.89	24.11	23.43	24.05		3
256QAM	1	0	22.03	21.90	22.07	21.99	22.05	0-5	5
	1	36	21.90	21.74	22.02	21.89	22.04		5
	1	74	21.91	21.58	21.99	21.64	22.21		5
	36	0	21.98	21.85	22.06	21.96	22.11		5
	36	18	22.02	21.81	22.11	21.91	22.10		5
	36	37	22.00	21.86	22.07	21.83	22.09		5
	75	0	21.97	21.77	22.08	21.90	22.13		5

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Table 9-107
LTE Band 41 PC2 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.67	26.58	26.68	26.35	26.68	0	0
	1	25	26.64	26.56	26.62	26.32	26.55		0
	1	49	26.56	26.42	26.43	26.30	26.67		0
	25	0	25.80	25.75	25.86	25.30	25.86	0-1	1
	25	12	25.84	25.72	25.82	25.43	25.87		1
	25	25	25.79	25.64	25.76	25.39	25.80		1
	50	0	25.86	25.71	25.99	25.39	25.85		1
16QAM	1	0	25.98	25.91	25.87	25.56	25.96	0-1	1
	1	25	25.96	25.78	25.80	25.57	25.85		1
	1	49	25.88	25.69	25.79	25.56	25.83		1
	25	0	24.90	24.79	24.88	24.41	24.90	0-2	2
	25	12	24.85	24.76	24.79	24.48	24.91		2
	25	25	24.84	24.66	24.78	24.49	24.84		2
	50	0	24.84	24.80	24.81	24.40	24.88		2
64QAM	1	0	24.85	24.71	24.78	24.39	24.82	0-2	2
	1	25	24.80	24.64	24.80	24.40	24.80		2
	1	49	24.81	24.52	24.64	24.37	24.61		2
	25	0	23.87	23.72	23.87	23.42	23.87	0-3	3
	25	12	23.85	23.73	23.84	23.49	23.86		3
	25	25	23.79	23.66	23.75	23.50	23.81		3
	50	0	23.91	23.79	23.91	23.50	23.90		3
256QAM	1	0	21.81	21.68	21.86	21.69	21.90	0-5	5
	1	25	21.71	21.63	21.87	21.57	21.72		5
	1	49	21.72	21.53	21.62	21.47	21.71		5
	25	0	21.92	21.80	21.86	21.72	21.98		5
	25	12	21.90	21.75	21.84	21.70	21.91		5
	25	25	21.79	21.61	21.79	21.68	21.81		5
	50	0	21.90	21.78	21.87	21.72	21.93		5

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Table 9-108
LTE Band 41 PC2 Maximum Conducted Powers - 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	26.64	26.51	26.62	26.26	26.63	0	0
	1	12	26.66	26.55	26.66	26.26	26.62		0
	1	24	26.63	26.51	26.61	26.42	26.68		0
	12	0	25.70	25.55	25.74	25.43	25.77	0-1	1
	12	6	25.79	25.66	25.77	25.46	25.76		1
	12	13	25.73	25.62	25.71	25.46	25.84		1
	25	0	25.79	25.60	25.76	25.28	25.81		1
16QAM	1	0	25.98	25.78	25.87	25.52	25.95	0-1	1
	1	12	25.90	25.83	25.89	25.54	25.95		1
	1	24	25.90	25.80	25.88	25.53	25.96		1
	12	0	24.77	24.56	24.70	24.33	24.78	0-2	2
	12	6	24.79	24.60	24.79	24.43	24.84		2
	12	13	24.77	24.63	24.71	24.37	24.86		2
	25	0	24.85	24.66	24.82	24.47	24.87		2
64QAM	1	0	24.71	24.55	24.72	24.31	24.79	0-2	2
	1	12	24.74	24.62	24.73	24.37	24.81		2
	1	24	24.74	24.57	24.69	24.36	24.76		2
	12	0	23.80	23.59	23.73	23.39	23.81	0-3	3
	12	6	23.82	23.67	23.79	23.45	23.85		3
	12	13	23.75	23.60	23.77	23.42	23.85		3
	25	0	23.82	23.71	23.49	23.44	23.80		3
256QAM	1	0	21.73	21.61	21.72	21.63	21.84	0-5	5
	1	12	21.74	21.61	21.71	21.61	21.85		5
	1	24	21.73	21.57	21.72	21.65	21.83		5
	12	0	21.91	21.63	21.82	21.72	21.95		5
	12	6	21.89	21.75	21.78	21.71	21.92		5
	12	13	21.87	21.75	21.86	21.80	21.94		5
	25	0	21.83	21.35	21.76	21.65	21.80		5

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Table 9-109
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.51	21.32	**22.02**	21.81	21.43	0	0
	1	50	21.40	21.34	21.86	21.71	21.40		0
	1	99	21.37	21.50	21.95	21.43	21.45		0
	50	0	21.58	21.61	**22.21**	21.99	21.57	0-1	0
	50	25	21.59	21.50	22.16	21.94	21.63		0
	50	50	21.56	21.55	22.10	21.82	21.65		0
	100	0	21.58	21.58	21.99	21.91	21.60		0
16QAM	1	0	21.59	21.46	22.16	21.90	21.46	0-1	0
	1	50	21.42	21.39	22.07	21.73	21.48		0
	1	99	21.37	21.52	22.06	21.59	21.65		0
	50	0	21.59	21.63	22.29	22.06	21.68	0-2	0
	50	25	21.58	21.58	22.30	22.03	21.66		0
	50	50	21.27	21.57	22.24	21.81	21.71		0
	100	0	21.61	21.55	22.31	21.93	21.68		0
64QAM	1	0	21.85	21.20	21.80	21.85	21.71	0-2	0
	1	50	21.70	21.15	21.83	21.77	21.91		0
	1	99	21.58	21.27	21.78	21.63	21.95		0
	50	0	21.18	20.70	21.21	21.32	21.32	0-3	1
	50	25	21.21	20.62	21.35	21.28	21.38		1
	50	50	21.15	20.63	21.27	21.19	21.33		1
	100	0	20.59	20.55	21.22	21.17	21.32		1
256QAM	1	0	19.01	18.62	18.77	19.01	18.95	0-5	3
	1	50	18.76	18.50	18.87	18.95	19.05		3
	1	99	18.76	18.56	18.92	18.80	19.10		3
	50	0	19.20	18.93	19.22	19.36	19.30		3
	50	25	19.22	18.75	19.26	19.31	19.39		3
	50	50	19.15	18.78	19.24	19.12	19.30		3
	100	0	19.14	18.80	19.21	19.25	19.31		3

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Table 9-110
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.77	21.50	21.84	21.70	21.33	0	0
	1	36	21.76	21.38	21.76	21.50	21.24		0
	1	74	21.72	21.28	21.69	21.28	21.49		0
	36	0	22.00	21.56	21.97	21.71	21.50	0-1	0
	36	18	21.98	21.59	21.98	21.70	21.60		0
	36	37	21.92	21.55	21.96	21.56	21.54		0
	75	0	21.99	21.56	21.92	21.68	21.55		0
16QAM	1	0	21.98	21.57	21.88	21.70	21.43	0-1	0
	1	36	21.80	21.43	21.83	21.53	21.38		0
	1	74	21.74	21.31	21.85	21.30	21.56		0
	36	0	21.71	21.56	21.99	21.68	21.46	0-2	0
	36	18	21.72	21.57	22.02	21.61	21.48		0
	36	37	21.65	21.46	21.96	21.49	21.55		0
	75	0	21.75	21.62	22.05	21.64	21.51		0
64QAM	1	0	21.50	21.31	21.60	21.65	21.35	0-2	0
	1	36	21.33	21.18	21.55	21.47	21.44		0
	1	74	21.29	20.83	21.50	21.25	21.45		0
	36	0	20.78	20.42	21.01	20.91	20.86	0-3	1
	36	18	20.78	20.38	21.10	20.88	20.96		1
	36	37	20.71	20.30	21.05	20.78	20.92		1
	75	0	20.80	20.40	20.99	20.89	20.90		1
256QAM	1	0	18.68	18.22	18.79	18.64	18.87	0-5	3
	1	36	18.42	18.19	18.68	18.53	18.62		3
	1	74	18.81	18.15	18.71	19.03	18.64		3
	36	0	18.80	18.49	19.00	18.97	18.81		3
	36	18	18.73	18.37	18.99	18.82	18.93		3
	36	37	18.72	18.37	19.03	18.79	18.83		3
	75	0	18.78	18.36	18.98	18.90	18.83		3

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Table 9-111
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.55	21.25	21.70	21.48	21.45	0	0
	1	25	21.56	21.19	21.67	21.34	21.69		0
	1	49	21.30	21.16	21.62	21.36	21.36		0
	25	0	21.66	21.35	21.84	21.62	21.48	0-1	0
	25	12	21.68	21.35	21.85	21.57	21.40		0
	25	25	21.55	21.30	21.84	21.61	21.43		0
	50	0	21.62	21.36	21.81	21.62	21.46		0
16QAM	1	0	21.60	21.26	21.75	21.44	21.36	0-1	0
	1	25	21.39	21.19	21.69	21.39	21.39		0
	1	49	21.50	21.18	21.70	21.32	21.30		0
	25	0	21.55	21.38	21.86	21.56	21.48	0-2	0
	25	12	21.43	21.38	21.89	21.60	21.49		0
	25	25	21.36	21.33	21.82	21.44	21.43		0
	50	0	21.43	21.33	21.93	21.59	21.48		0
64QAM	1	0	21.55	20.99	21.53	21.45	21.49	0-2	0
	1	25	21.39	20.89	21.51	21.45	21.48		0
	1	49	21.38	20.89	21.38	21.29	21.69		0
	25	0	20.85	20.33	20.95	20.89	20.90	0-3	1
	25	12	20.85	20.30	20.94	20.98	20.94		1
	25	25	20.80	20.33	20.78	20.74	20.88		1
	50	0	20.86	20.42	20.90	20.83	20.95		1
256QAM	1	0	18.58	18.15	18.65	18.69	18.69	0-5	3
	1	25	18.53	18.05	18.67	18.59	18.68		3
	1	49	18.56	18.08	18.60	18.46	18.68		3
	25	0	18.70	18.45	18.85	18.90	18.85		3
	25	12	18.88	18.37	18.89	18.83	18.89		3
	25	25	18.80	18.33	18.82	18.75	18.82		3
	50	0	18.90	18.35	18.89	18.85	18.92		3

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Table 9-112
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.65	21.29	21.68	21.49	21.50	0	0
	1	12	21.56	21.30	21.69	21.45	21.50		0
	1	24	21.54	21.35	21.70	21.47	21.48		0
	12	0	21.74	21.35	21.78	21.59	21.55	0-1	0
	12	6	21.72	21.48	21.80	21.55	21.58		0
	12	13	21.72	21.45	21.75	21.59	21.60		0
	25	0	21.72	21.40	21.79	21.61	21.59		0
16QAM	1	0	21.67	21.44	21.75	21.53	21.55	0-1	0
	1	12	21.62	21.39	21.76	21.48	21.53		0
	1	24	21.61	21.42	21.79	21.55	21.52		0
	12	0	21.50	21.36	21.82	21.59	21.44	0-2	0
	12	6	21.40	21.42	21.85	21.56	21.47		0
	12	13	21.45	21.41	21.76	21.50	21.49		0
	25	0	21.52	21.20	21.90	21.61	21.59		0
64QAM	1	0	21.45	21.48	21.52	21.45	21.45	0-2	0
	1	12	21.47	21.11	21.50	21.45	21.45		0
	1	24	21.34	21.14	21.48	21.50	21.53		0
	12	0	20.77	20.36	20.73	20.85	20.84	0-3	1
	12	6	20.79	20.40	20.86	20.83	20.89		1
	12	13	20.69	20.40	20.84	20.71	20.84		1
	25	0	20.69	20.46	20.80	20.77	20.87		1
256QAM	1	0	18.55	18.25	18.65	18.62	18.56	0-5	3
	1	12	18.50	18.24	18.59	18.63	18.55		3
	1	24	18.49	18.21	18.59	18.61	18.66		3
	12	0	18.82	18.45	18.80	18.94	18.82		3
	12	6	18.81	18.49	18.86	18.89	18.91		3
	12	13	18.75	18.51	18.80	18.87	18.84		3
	25	0	18.73	18.48	18.72	18.77	18.83		3

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Table 9-113
LTE Band 41 PC2 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	**21.97**	21.33	21.53	21.63	21.58	0	0
	1	50	21.79	21.17	21.60	21.55	21.71		0
	1	99	21.66	21.14	21.55	21.40	21.71		0
	50	0	22.00	21.22	**22.08**	21.85	21.92	0-1	0
	50	25	21.97	21.45	21.84	21.81	21.96		0
	50	50	21.93	21.27	21.80	21.66	21.96		0
	100	0	21.93	21.36	21.82	21.78	21.92		0
16QAM	1	0	22.21	21.58	21.79	21.88	21.97	0-1	0
	1	50	22.02	21.38	21.87	21.81	22.07		0
	1	99	21.94	21.40	21.87	21.66	21.95		0
	50	0	22.00	21.46	21.84	21.88	21.98	0-2	0
	50	25	21.99	21.40	21.89	21.74	21.94		0
	50	50	21.94	21.31	21.81	21.67	21.94		0
	100	0	21.98	21.40	21.85	21.70	21.95		0
64QAM	1	0	22.04	21.37	21.64	21.73	21.65	0-2	0
	1	50	21.82	21.22	21.72	21.68	21.76		0
	1	99	21.73	21.24	21.65	21.49	21.83		0
	50	0	22.06	21.51	21.90	21.92	21.99	0-3	0
	50	25	22.03	21.41	21.88	21.40	22.02		0
	50	50	21.97	21.32	21.86	21.65	22.03		0
	100	0	21.98	21.35	21.85	21.77	21.97		0
256QAM	1	0	21.86	21.41	21.67	21.78	21.77	0-5	0.5
	1	50	21.68	21.24	21.73	21.69	21.87		0.5
	1	99	21.52	21.25	21.68	21.56	21.94		0.5
	50	0	21.88	21.47	21.93	21.89	21.94		0.5
	50	25	21.86	21.44	21.92	21.85	21.96		0.5
	50	50	21.79	21.33	21.89	21.76	21.95		0.5
	100	0	21.79	21.38	21.87	21.82	21.99		0.5

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Table 9-114
LTE Band 41 PC2 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.06	21.76	21.93	22.04	21.96	0	0
	1	36	21.95	21.60	21.94	21.99	21.94		0
	1	74	21.87	21.46	21.77	21.88	21.95		0
	36	0	22.12	21.63	21.99	22.12	22.07	0-1	0
	36	18	22.18	21.86	22.10	22.06	22.09		0
	36	37	22.07	21.76	22.08	21.96	22.05		0
	75	0	22.10	21.85	22.03	22.04	22.14		0
16QAM	1	0	22.34	22.00	22.20	22.31	22.20	0-1	0
	1	36	22.17	21.83	22.13	22.13	22.16		0
	1	74	22.04	21.67	22.03	21.95	22.18		0
	36	0	22.10	21.86	22.03	22.03	21.99	0-2	0
	36	18	22.09	21.81	22.02	21.99	22.06		0
	36	37	22.02	21.69	21.97	21.91	22.03		0
	75	0	22.16	21.82	22.05	21.97	22.05		0
64QAM	1	0	22.15	21.81	22.01	22.11	22.03	0-2	0
	1	36	22.03	21.65	21.93	21.93	21.99		0
	1	74	21.92	21.49	21.73	21.68	22.02		0
	36	0	22.16	21.93	22.06	22.14	22.08	0-3	0
	36	18	22.18	21.89	22.12	21.84	22.11		0
	36	37	22.13	21.76	22.12	21.96	22.09		0
	75	0	22.17	21.80	22.08	22.07	22.09		0
256QAM	1	0	21.97	21.89	21.91	21.94	21.96	0-5	0.5
	1	36	21.94	21.72	21.92	21.83	21.91		0.5
	1	74	21.78	21.62	21.78	21.68	21.91		0.5
	36	0	21.98	21.93	21.97	22.00	21.94		0.5
	36	18	21.99	21.88	21.97	21.96	22.00		0.5
	36	37	21.94	21.81	21.91	21.85	22.00		0.5
	75	0	21.97	21.88	22.00	21.95	21.99		0.5

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Table 9-115
LTE Band 41 PC2 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.85	21.37	21.68	21.69	21.87	0	0
	1	25	21.80	21.34	21.64	21.63	21.74		0
	1	49	21.69	21.23	21.51	21.66	21.55		0
	25	0	21.95	21.52	21.72	21.58	21.60	0-1	0
	25	12	21.98	21.49	21.76	21.85	21.65		0
	25	25	21.89	21.43	21.78	21.78	21.87		0
	50	0	21.88	21.52	21.76	21.84	21.95		0
16QAM	1	0	22.11	21.65	21.96	21.94	22.14	0-1	0
	1	25	21.99	21.56	21.86	21.87	22.04		0
	1	49	21.88	21.49	21.83	21.82	21.95		0
	25	0	22.03	21.60	21.89	21.91	22.03	0-2	0
	25	12	21.96	21.52	21.85	21.88	22.04		0
	25	25	21.56	21.52	21.80	21.79	21.93		0
	50	0	22.01	21.48	21.83	21.88	21.95		0
64QAM	1	0	21.91	21.47	21.76	21.83	21.98	0-2	0
	1	25	21.87	21.54	21.76	21.80	21.92		0
	1	49	21.74	21.28	21.61	21.64	21.98		0
	25	0	22.02	21.50	21.70	21.86	22.01	0-3	0
	25	12	21.96	21.49	21.81	21.84	22.00		0
	25	25	21.90	21.47	21.73	21.79	21.91		0
	50	0	21.98	21.58	21.87	21.92	22.03		0
256QAM	1	0	21.73	21.49	21.80	21.89	21.95	0-5	0.5
	1	25	21.75	21.45	21.68	21.80	21.98		0.5
	1	49	21.59	21.33	21.63	21.75	21.81		0.5
	25	0	21.85	21.58	21.91	21.95	21.96		0.5
	25	12	21.85	21.53	21.94	21.92	21.95		0.5
	25	25	21.75	21.62	21.81	21.85	21.98		0.5
	50	0	21.84	21.56	21.82	21.96	21.91		0.5

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Table 9-116
LTE Band 41 PC2 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.70	21.33	21.70	21.69	21.68	0	0
	1	12	21.81	21.33	21.68	21.73	21.70		0
	1	24	21.82	21.36	21.70	21.75	21.73		0
	12	0	21.88	21.42	21.74	21.74	21.81	0-1	0
	12	6	21.88	21.50	21.73	21.79	21.85		0
	12	13	21.84	21.45	21.81	21.85	21.86		0
	25	0	21.83	21.47	21.77	21.87	21.84		0
16QAM	1	0	22.08	21.59	21.91	21.90	21.98	0-1	0
	1	12	22.00	21.63	21.90	21.93	21.98		0
	1	24	22.01	21.60	21.90	21.90	21.91		0
	12	0	21.90	21.42	21.73	21.88	21.78	0-2	0
	12	6	21.84	21.51	21.83	21.71	21.80		0
	12	13	21.90	21.47	21.77	21.77	21.83		0
	25	0	21.98	21.50	21.83	21.72	21.73		0
64QAM	1	0	21.82	21.37	21.66	21.70	21.80	0-2	0
	1	12	21.78	21.44	21.73	21.75	21.83		0
	1	24	21.77	21.43	21.70	21.78	21.82		0
	12	0	21.87	21.52	21.78	21.72	21.83	0-3	0
	12	6	21.88	21.47	21.85	21.78	21.85		0
	12	13	21.86	21.48	21.79	21.83	21.85		0
	25	0	21.91	21.43	21.82	21.81	21.79		0
256QAM	1	0	21.74	21.42	21.73	21.70	21.84	0-5	0.5
	1	12	21.63	21.47	21.80	21.77	21.84		0.5
	1	24	21.60	21.53	21.82	21.71	21.85		0.5
	12	0	21.77	21.62	21.89	21.70	21.94		0.5
	12	6	21.85	21.59	21.94	21.77	21.96		0.5
	12	13	21.80	21.52	21.87	21.83	21.98		0.5
	25	0	21.74	21.48	21.83	21.83	21.86		0.5

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9.4.11 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-117
LTE Uplink Carrier Aggregation Maximum Conducted Powers

	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	41055	2636.5	QPSK	1	0	LTE B41	20	40857	2616.7	QPSK	1	99	24.68	23.79
CA_41C	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	LTE B41 PC2	20	40857	2616.7	QPSK	1	99	26.88	26.38

Table 9-118
LTE Uplink Carrier Aggregation Reduced Conducted Powers – Hotspot/Grip Sensor and/or Earjack Mode 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	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	22.20	21.43
CA_41C	LTE B41	20	40620	2593.0	QPSK	50	0	LTE B41	20	40422	2573.2	QPSK	50	50	22.80	22.21
CA_41C	LTE B41 PC2	20	41490	2680	QPSK	1	0	LTE B41 PC2	20	41292	2660.2	QPSK	1	99	22.36	21.58
CA_41C	LTE B41 PC2	20	40620	2593	QPSK	50	0	LTE B41 PC2	20	40422	2573.2	QPSK	50	50	22.80	22.08

Notes:

1. This device supports uplink carrier aggregation for LTE CA_41C with a maximum of two 20 MHz 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 n41

Table 9-119
NR Band n41 Maximum Conducted Powers – 100 MHz Bandwidth

n41 100 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			509202 (2546.01 MHz)	515460 (2577.30 MHz)	521742 (2608.71 MHz)	528000 (2640.00 MHz)		
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	23.20	23.47	22.58	23.42	0-3	0
	1	1	23.30	23.49	22.81	23.45	0-1.5	0
	1	136	23.13	23.13	22.60	22.39		0
	1	271	22.63	**22.56**	22.48	23.01		0
	1	272	22.56	22.52	22.51	23.01	0-3	0
	137	0	23.33	23.55	23.17	23.07		0
	137	67	22.73	23.33	22.75	22.58	0-1.5	0
	137	136	23.06	**22.85**	22.56	22.42	0-3	0
	273	0	22.67	23.20	22.61	22.73		0
CP-OFDM 16QAM	1	0	23.55	23.51	22.79	23.42	0-3	0
	1	136	23.55	23.47	23.22	23.21	0-2	0
	1	272	23.21	22.76	22.60	23.09	0-3	0
	137	0	23.48	23.50	23.16	23.24		0
	137	67	22.74	23.17	22.84	22.67	0-2	0
	137	136	22.88	22.86	22.65	22.67	0-3	0
	273	0	22.72	23.22	22.66	22.56		0
CP-OFDM 64QAM	1	0	23.32	23.33	22.40	23.21	0-3.5	0
	1	136	22.39	22.98	22.78	22.29		0
	1	272	22.72	22.37	22.27	22.32		0
	137	0	23.38	23.35	23.19	22.71		0
	137	67	22.79	23.21	22.77	22.25		0
	137	136	22.97	22.85	22.29	22.23		0
	273	0	22.77	23.22	22.75	22.31		0

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Table 9-120
NR Band n41 Maximum Conducted Powers – 80 MHz Bandwidth

n41 80 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 507198 (2535.99 MHz)	Low-Mid Channel 514800 (2574.00 MHz)	Mid-High Channel 522402 (2612.01 MHz)	High Channel 529998 (2649.99 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	23.10	23.25	23.20	23.45	0-3	0
	1	1	23.17	23.22	23.37	23.51	0-1.5	0
	1	108	23.29	23.11	22.92	22.69		0
	1	215	22.55	23.11	22.67	22.94		0
	1	216	22.58	22.85	22.69	22.80	0-3	0
	109	0	23.27	23.61	23.34	22.93		0
	109	53	22.86	23.40	23.14	22.81	0-1.5	0
	109	108	22.81	23.24	22.60	22.84	0-3	0
	217	0	22.69	23.44	22.93	22.91		0
CP-OFDM 16QAM	1	0	23.45	23.70	23.62	23.61	0-3	0
	1	108	23.53	23.60	23.20	22.75	0-2	0
	1	216	22.80	23.33	22.64	23.11	0-3	0
	109	0	23.26	23.62	23.08	22.97		0
	109	53	22.78	23.21	22.83	22.69	0-2	0
	109	108	22.81	23.05	22.69	22.67	0-3	0
	217	0	22.71	23.20	22.79	22.80		0
CP-OFDM 64QAM	1	0	22.97	23.18	23.28	23.05	0-3.5	0
	1	108	22.29	23.02	22.84	22.05		0
	1	216	22.13	22.80	22.29	22.55		0
	109	0	23.05	23.48	23.15	22.74		0
	109	53	22.51	23.17	22.82	22.34		0
	109	108	22.55	22.92	22.32	22.21		0
	217	0	22.44	23.25	22.70	22.51		0

Table 9-121
NR Band n41 Maximum Conducted Powers – 60 MHz Bandwidth

n41 60 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 505200 (2526.00 MHz)	Low-Mid Channel 514140 (2570.70 MHz)	Mid-High Channel 523080 (2615.40 MHz)	High Channel 531996 (2659.98 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	22.71	22.87	23.41	22.65	0-3	0
	1	1	22.81	22.95	23.47	22.69	0-1.5	0
	1	81	23.30	23.01	23.04	22.27		0
	1	160	22.44	23.02	22.64	22.72		0
	1	161	22.41	23.04	22.65	22.25	0-3	0
	81	0	23.11	23.40	23.35	22.65		0
	81	40	22.41	23.13	23.08	22.51	0-1.5	0
	81	81	22.92	23.03	22.71	22.22	0-3	0
	162	0	22.71	23.23	23.02	22.31		0
CP-OFDM 16QAM	1	0	23.07	23.30	23.62	23.17	0-3	0
	1	81	23.19	23.45	23.43	22.63	0-2	0
	1	161	22.94	23.41	22.68	22.99	0-3	0
	81	0	23.07	23.43	23.32	22.25		0
	81	40	22.77	23.20	23.01	22.30	0-2	0
	81	81	22.96	23.14	22.66	22.33	0-3	0
	162	0	22.57	23.24	22.99	22.38		0
CP-OFDM 64QAM	1	0	22.71	22.90	23.24	22.58	0-3.5	0
	1	81	22.21	23.01	22.68	21.86		0
	1	161	22.26	23.00	22.37	22.41		0
	81	0	23.00	23.44	23.12	22.17		0
	81	40	22.63	23.15	22.78	21.98		0
	81	81	22.80	23.08	22.50	22.02		0
	162	0	22.55	23.28	22.77	22.21		0

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Table 9-122
NR Band n41 Maximum Conducted Powers – 40 MHz Bandwidth

n41 40 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]
			503202 (2516.01 MHz)	510900 (2554.50 MHz)	518598 (2592.99 MHz)	526302 (2631.51 MHz)	534000 (2670.00 MHz)		
			Conducted Power [dBm]						
CP-OFDM QPSK	1	0	22.64	23.67	22.76	23.27	22.35	0-3	0
	1	1	22.69	23.73	22.73	23.25	22.35	0-1.5	0
	1	53	23.55	23.38	22.64	22.57	22.29		0
	1	104	22.95	22.94	22.50	22.58	22.71		0
	1	105	22.93	22.96	22.46	22.89	22.73	0-3	0
	53	0	23.11	23.66	22.84	23.07	22.45		0
	53	26	23.06	23.28	22.71	22.80	22.44	0-1.5	0
	53	53	23.28	23.17	22.66	22.69	22.57	0-3	0
	106	0	22.84	23.40	22.74	22.77	22.48		0
CP-OFDM 16QAM	1	0	22.94	23.70	23.32	23.51	22.77	0-3	0
	1	53	23.61	23.63	23.16	23.09	22.72	0-2	0
	1	105	23.25	23.35	22.94	22.63	23.16	0-3	0
	53	0	23.00	23.49	22.85	23.04	22.42		0
	53	26	22.91	23.25	22.76	22.76	22.39	0-2	0
	53	53	23.27	22.96	22.68	22.61	22.48	0-3	0
	106	0	22.79	23.25	22.72	22.78	22.55		0
CP-OFDM 64QAM	1	0	22.35	23.41	22.76	22.97	22.18	0-3.5	0
	1	53	22.45	23.08	22.62	22.20	21.88		0
	1	105	22.54	22.75	22.41	22.07	22.37		0
	53	0	22.76	23.31	23.05	22.58	22.07		0
	53	26	22.72	23.14	22.79	22.31	22.05		0
	53	53	23.09	22.95	22.66	22.12	22.54		0
	106	0	22.61	23.17	22.81	22.38	22.08		0

Table 9-123
NR Band n41 Maximum Conducted Powers – 20 MHz Bandwidth

n41 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]
			501198 (2505.99 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
CP-OFDM QPSK	1	0	22.41	23.18	22.45	22.75	22.21	0-3	0
	1	1	22.43	23.21	22.44	22.79	22.24	0-1.5	0
	1	25	22.93	22.71	22.35	22.32	22.14		0
	1	49	22.88	22.69	22.41	22.25	22.58		0
	1	50	22.95	22.68	22.37	22.24	22.65	0-3	0
	26	0	22.69	23.08	22.52	22.69	22.29		0
	26	12	22.63	22.91	22.52	22.56	22.35	0-1.5	0
	26	25	23.10	22.71	22.49	22.38	22.48	0-3	0
	51	0	22.53	22.89	22.43	22.49	22.27		0
CP-OFDM 16QAM	1	0	22.44	23.63	23.03	23.18	22.73	0-3	0
	1	25	23.39	23.24	22.89	22.81	22.62	0-2	0
	1	50	23.33	23.01	22.94	22.62	23.06	0-3	0
	26	0	22.58	23.16	22.62	22.75	22.31		0
	26	12	22.51	22.99	22.58	22.59	22.42	0-2	0
	26	25	23.22	22.86	22.54	22.51	22.58	0-3	0
	51	0	22.54	22.87	22.36	22.44	22.28		0
CP-OFDM 64QAM	1	0	22.29	23.14	22.42	22.31	21.64	0-3.5	0
	1	25	22.96	22.27	22.33	21.86	21.66		0
	1	50	22.89	22.55	22.35	21.71	22.17		0
	26	0	22.40	23.15	22.60	22.27	21.90		0
	26	12	22.49	23.03	22.53	22.13	21.97		0
	26	25	23.11	22.88	22.63	22.03	22.57		0
	51	0	22.39	22.94	22.49	22.04	21.94		0

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Table 9-124
NR Band n41 Reduced Conducted Powers – 100 MHz Bandwidth – Receiver Active

n41 100 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 509202 (2546.01 MHz)	Low-Mid Channel 515460 (2577.30 MHz)	Mid-High Channel 521742 (2608.71 MHz)	High Channel 528000 (2640.00 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	20.33	20.44	20.35	19.76	0-3	0
	1	1	20.43	20.45	20.43	19.83	0-1.5	0
	1	136	19.84	19.62	19.57	19.55		0
	1	271	19.50	**19.53**	19.67	19.53		0
	1	272	19.51	19.51	19.65	19.68	0-3	0
	137	0	20.25	20.30	19.55	19.74		0
	137	67	19.87	19.61	19.65	19.80	0-1.5	0
	137	136	19.51	**19.72**	19.57	19.58	0-3	0
	273	0	19.78	19.51	19.53	19.71		0
CP-OFDM 16QAM	1	0	20.48	20.50	20.49	20.17	0-3	0
	1	136	20.25	20.15	19.91	19.91	0-2	0
	1	272	19.51	19.96	19.53	19.71	0-3	0
	137	0	20.23	20.26	19.96	19.81		0
	137	67	19.86	19.74	19.56	19.77	0-2	0
	137	136	19.88	19.90	19.50	19.57	0-3	0
	273	0	19.82	19.57	19.58	19.81		0
CP-OFDM 64QAM	1	0	20.40	20.48	20.31	20.25	0-3.5	0
	1	136	20.32	19.98	19.51	19.53		0
	1	272	19.53	19.59	19.62	19.69		0
	137	0	20.38	20.24	19.92	19.89		0
	137	67	20.23	19.98	19.66	19.68		0
	137	136	19.97	19.62	19.50	19.66		0
	273	0	20.17	19.87	19.54	19.72		0

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Table 9-125
NR Band n41 Reduced Conducted Powers – 80 MHz Bandwidth – Receiver Active

n41 80 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			507204 (2536.02 MHz)	514800 (2574.00 MHz)	522402 (2612.01 MHz)	529998 (2649.99 MHz)		
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	20.02	20.25	20.22	20.45	0-3	0
	1	1	20.03	20.28	20.31	20.59	0-1.5	0
	1	108	19.93	20.13	19.74	19.85		0
	1	215	19.65	20.11	19.75	20.02		0
	1	216	19.50	19.71	19.69	19.80	0-3	0
	109	0	20.21	20.43	20.14	20.11		0
	109	53	20.02	20.34	20.32	20.01	0-1.5	0
	109	108	19.79	20.08	19.64	19.92	0-3	0
	217	0	19.63	20.24	19.93	19.91		0
CP-OFDM 16QAM	1	0	20.39	20.50	20.56	20.43	0-3	0
	1	108	20.33	20.52	20.26	19.71	0-2	0
	1	216	19.98	20.37	19.80	19.91	0-3	0
	109	0	20.08	20.56	20.00	19.79		0
	109	53	19.98	20.09	20.01	19.69	0-2	0
	109	108	19.75	20.19	19.91	19.69	0-3	0
	217	0	19.91	20.20	19.69	19.98		0
CP-OFDM 64QAM	1	0	20.31	20.46	20.60	20.53	0-3.5	0
	1	108	19.63	20.34	20.42	19.83		0
	1	216	19.69	20.16	19.95	20.15		0
	109	0	20.45	20.46	20.45	20.38		0
	109	53	19.85	20.37	20.12	19.98		0
	109	108	20.25	20.16	19.86	19.75		0
	217	0	19.90	20.27	20.26	20.09		0

Table 9-126
NR Band n41 Reduced Conducted Powers – 60 MHz Bandwidth – Receiver Active

n41 60 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			505200 (2526.00 MHz)	514140 (2570.70 MHz)	523080 (2615.40 MHz)	531996 (2659.98 MHz)		
			Conducted Power [dBm]					
CP-OFDM QPSK	1	0	19.67	19.87	20.51	19.69	0-3	0
	1	1	19.85	19.99	20.31	19.67	0-1.5	0
	1	81	20.24	20.07	20.06	19.41		0
	1	160	19.42	19.96	19.80	19.90		0
	1	161	19.55	20.10	19.62	19.37	0-3	0
	81	0	20.13	20.32	20.21	19.59		0
	81	40	19.49	20.31	20.06	19.53	0-1.5	0
	81	81	19.88	20.23	19.91	19.38	0-3	0
	162	0	19.63	20.37	20.06	19.37		0
CP-OFDM 16QAM	1	0	20.13	20.12	20.60	20.35	0-3	0
	1	81	20.33	20.45	20.37	19.53	0-2	0
	1	161	19.78	20.53	19.66	20.09	0-3	0
	81	0	20.13	20.53	20.36	19.35		0
	81	40	19.81	20.20	20.09	19.46	0-2	0
	81	81	20.12	20.26	19.78	19.53	0-3	0
	162	0	19.65	20.26	20.07	19.42		0
CP-OFDM 64QAM	1	0	20.39	20.52	20.54	19.96	0-3.5	0
	1	81	19.73	20.55	20.28	19.40		0
	1	161	19.86	20.54	19.83	19.83		0
	81	0	20.38	20.85	20.44	19.59		0
	81	40	20.23	20.75	20.18	19.52		0
	81	81	20.30	20.66	20.20	19.42		0
	162	0	19.89	20.80	20.15	19.79		0

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Table 9-127
NR Band n41 Reduced Conducted Powers – 40 MHz Bandwidth – Receiver Active

n41 40 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]
			503202 (2516.01 MHz)	510900 (2554.50 MHz)	518598 (2592.99 MHz)	526302 (2631.51 MHz)	534000 (2670.00 MHz)		
			Conducted Power [dBm]						
CP-OFDM QPSK	1	0	19.72	20.75	19.56	20.43	22.35	0-3	0
	1	1	19.83	20.61	19.71	20.11	22.35	0-1.5	0
	1	53	20.59	20.20	19.74	19.73	22.29		0
	1	104	19.81	19.94	19.86	19.48	22.71		0
	1	105	20.11	20.14	19.74	19.75	22.73	0-3	0
	53	0	20.25	20.84	19.88	19.89	22.45		0
	53	26	20.08	20.22	19.73	19.94	22.44	0-1.5	0
	53	53	20.36	20.33	19.70	19.53	22.57	0-3	0
	106	0	20.02	20.48	19.90	19.89	22.48		0
CP-OFDM 16QAM	1	0	19.96	20.84	20.36	20.39	22.77	0-3	0
	1	53	20.69	20.43	20.34	19.91	22.72	0-2	0
	1	105	20.21	20.39	19.94	19.77	22.86	0-3	0
	53	0	20.06	20.29	20.03	20.16	22.42		0
	53	26	19.93	20.45	19.84	19.80	22.39	0-2	0
	53	53	20.25	19.94	19.70	19.49	22.48	0-3	0
	106	0	19.75	20.27	19.82	19.84	22.55		0
CP-OFDM 64QAM	1	0	19.75	20.89	20.22	20.33	22.18	0-3.5	0
	1	53	19.85	20.78	20.00	19.88	21.98		0
	1	105	20.06	20.15	20.03	19.77	22.37		0
	53	0	20.10	20.85	20.51	20.18	22.07		0
	53	26	20.40	20.64	20.23	19.75	22.05		0
	53	53	20.59	20.55	20.28	19.46	22.54		0
	106	0	19.93	20.49	20.21	19.78	22.08		0

Table 9-128
NR Band n41 Reduced Conducted Powers – 20 MHz Bandwidth – Receiver Active

n41 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]
			501204 (2506.02 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
CP-OFDM QPSK	1	0	19.59	20.22	19.35	19.87	22.21	0-3	0
	1	1	19.53	20.37	19.26	19.65	22.24	0-1.5	0
	1	25	20.07	19.85	19.43	19.28	22.14		0
	1	49	19.82	19.69	19.35	19.41	22.58		0
	1	50	20.11	19.68	19.45	19.34	22.65	0-3	0
	26	0	19.57	20.18	19.56	19.87	22.29		0
	26	12	19.71	19.85	19.70	19.58	22.35	0-1.5	0
	26	25	20.18	19.73	19.45	19.34	22.48	0-3	0
	51	0	19.55	19.75	19.59	19.31	22.27		0
CP-OFDM 16QAM	1	0	19.60	20.59	19.89	20.14	22.73	0-3	0
	1	25	20.33	20.30	19.89	19.63	22.62	0-2	0
	1	50	20.31	19.93	20.14	19.48	22.76	0-3	0
	26	0	19.58	20.12	19.68	19.87	22.31		0
	26	12	19.63	19.81	19.60	19.65	22.42	0-2	0
	26	25	20.06	19.86	19.72	19.49	22.58	0-3	0
	51	0	19.58	19.71	19.24	19.34	22.28		0
CP-OFDM 64QAM	1	0	19.85	20.54	19.80	20.01	21.84	0-3.5	0
	1	25	20.48	19.67	19.85	19.40	21.86		0
	1	50	20.29	20.07	20.05	19.37	22.17		0
	26	0	19.96	20.53	19.90	19.71	21.90		0
	26	12	19.93	20.33	19.83	19.47	21.97		0
	26	25	20.39	20.34	19.95	19.35	22.57		0
	51	0	19.71	20.36	19.97	19.58	21.94		0

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Table 9-129
LTE Band 41 Conducted Powers - 20 MHz Bandwidth - During EN-DC Operations

LTE Band 41 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	40708 (2601.8 MHz)	41021 (2633.1 MHz)	40219 (2552.9 MHz)	40532 (2584.2 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.47	23.58	23.41	23.22	0	0
	1	50	23.24	23.62	23.56	23.41		0
	1	99	23.35	23.41	23.55	23.42		0

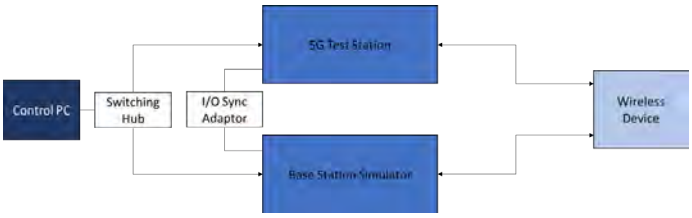


Figure 9-5
EN-DC Power Measurement Setup

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9.6 WLAN Conducted Powers

Table 9-130
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 SU
		Average	Average	Average	Average
2412	1	20.18	17.77	17.52	15.63
2437	6	**20.23**	17.86	17.53	16.78
2462	11	20.00	17.85	17.80	15.41

Table 9-131
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 SU
		Average	Average	Average	Average
2412	1	20.25	17.60	17.42	15.66
2437	6	**20.25**	17.56	17.49	16.65
2462	11	20.05	17.67	17.60	15.42

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Table 9-132
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 SU
		Average	Average	Average	Average
5180	36	16.44	16.32	16.31	15.86
5200	40	17.63	17.54	17.99	15.93
5220	44	17.66	17.52	17.93	15.76
5240	48	17.54	17.51	17.92	15.81
5260	52	17.63	17.63	17.98	15.66
5280	56	17.68	17.59	17.99	15.62
5300	60	**17.68**	17.56	17.62	15.67
5320	64	16.86	16.76	16.94	15.59
5500	100	17.60	17.83	17.89	15.62
5600	120	**17.90**	17.80	17.84	15.58
5620	124	17.84	17.70	17.72	15.59
5720	144	17.54	17.50	17.98	15.56
5745	149	17.56	17.94	17.56	15.96
5785	157	17.53	17.99	17.99	15.85
5825	165	**17.68**	17.73	17.71	15.55

Table 9-133
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 SU
		Average	Average	Average	Average
5180	36	16.15	16.11	16.06	15.81
5200	40	17.75	17.92	17.92	15.77
5220	44	17.72	17.89	17.97	15.72
5240	48	17.73	17.94	17.98	15.73
5260	52	17.54	17.72	17.75	15.55
5280	56	17.61	17.83	17.71	15.66
5300	60	**17.61**	17.81	17.90	15.68
5320	64	16.64	16.71	16.53	15.65
5500	100	**17.73**	17.88	17.87	15.79
5600	120	17.55	17.82	17.73	15.70
5620	124	17.50	17.82	17.67	15.62
5720	144	17.59	17.84	17.83	15.69
5745	149	17.86	17.62	17.65	15.98
5785	157	**17.89**	17.50	17.58	15.85
5825	165	17.59	17.73	17.68	15.60

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Table 9-134
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	12.85	12.82	15.85
5200	40	17.54	17.92	20.74
5220	44	17.52	17.89	20.72
5240	48	17.51	17.94	20.74
5260	52	17.63	17.72	20.69
5280	56	**17.59**	**17.83**	**20.72**
5300	60	17.56	17.81	20.70
5320	64	13.73	13.09	16.43
5500	100	**17.83**	**17.88**	**20.87**
5600	120	17.80	17.82	20.82
5620	124	17.70	17.82	20.77
5720	144	17.50	17.84	20.68
5745	149	**17.94**	**17.62**	**20.79**
5785	157	17.99	17.50	20.76
5825	165	17.73	17.73	20.74

Table 9-135
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

5GHz (40MHz) 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5190	38	10.62	10.81
5230	46	13.86	13.63
5270	54	**13.74**	**13.88**
5310	62	10.75	10.78
5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	9.52	9.57
5290	58	9.79	9.63
5530	106	10.40	10.64
5610	122	**13.72**	**13.95**
5690	138	13.85	13.72
5775	155	**13.50**	**13.65**

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Table 9-136
5GHz WLAN Maximum Output Powers During Conditions with 5G NR FR2

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5190	38	10.19	10.13	13.17
5230	46	13.86	13.63	16.76
5270	54	**13.74**	**13.88**	**16.82**
5310	62	10.81	11.01	13.92
5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	9.69	9.49	12.60
5290	58	9.63	8.63	12.17
5530	106	10.59	10.47	13.54
5610	122	**13.72**	**13.95**	**16.85**
5690	138	13.85	13.72	16.80
5775	155	**13.50**	**13.65**	**16.59**

Table 9-137
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 SU
		Average	Average	Average	Average
2412	1	16.77	16.63	16.61	15.80
2437	6	**16.92**	16.54	16.52	16.33
2462	11	16.83	16.73	16.94	15.23

Table 9-138
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 SU
		Average	Average	Average	Average
2412	1	16.55	16.64	16.49	15.84
2437	6	**16.80**	16.54	16.35	16.64
2462	11	16.80	16.94	16.82	15.10

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Table 9-139
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax SU
		Average	Average	Average
5190	38	13.70	13.82	13.57
5230	46	13.86	13.92	13.59
5270	54	13.74	13.66	13.84
5310	62	**13.94**	13.82	13.72
5510	102	13.80	13.78	13.92
5590	118	13.87	13.82	13.78
5630	126	13.89	13.85	13.72
5710	142	13.64	13.60	13.80
5755	151	13.59	13.49	13.87
5795	159	13.86	13.79	13.58

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax SU
		Average	Average
5210	42	12.51	12.71
5290	58	12.68	12.73
5530	106	13.42	12.89
5610	122	13.72	12.56
5690	138	**13.85**	12.94
5775	155	**13.50**	12.38

Table 9-140
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax SU
		Average	Average	Average
5190	38	13.73	13.63	13.85
5230	46	13.63	13.63	13.96
5270	54	13.88	13.91	13.73
5310	62	**13.89**	13.93	13.63
5510	102	13.70	13.67	13.92
5590	118	13.85	13.84	13.62
5630	126	13.67	13.68	13.65
5710	142	13.60	13.54	13.82
5755	151	13.93	13.94	13.77
5795	159	13.70	13.67	13.96

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	IEEE Transmission Mode
		802.11ac	802.11ax SU
		Average	Average
5210	42	12.75	12.69
5290	58	12.77	12.93
5530	106	13.71	12.50
5610	122	**13.95**	12.85
5690	138	13.72	12.96
5775	155	**13.65**	12.43

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

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

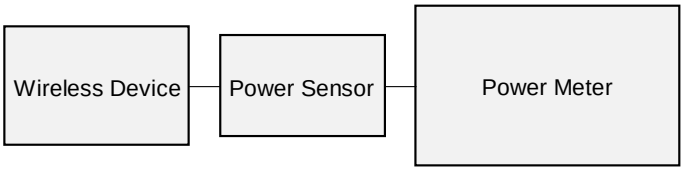


Figure 9-6
Power Measurement Setup

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9.7 Bluetooth Conducted Powers

Table 9-141
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	13.46	22.158
2441	1.0	39	13.60	22.890
2480	1.0	78	**13.75**	23.721
2402	2.0	0	11.78	15.066
2441	2.0	39	12.36	17.231
2480	2.0	78	11.38	13.740
2402	3.0	0	11.88	15.409
2441	3.0	39	12.44	17.534
2480	3.0	78	11.41	13.822

Note: The bolded data rates and channel above were tested for SAR.

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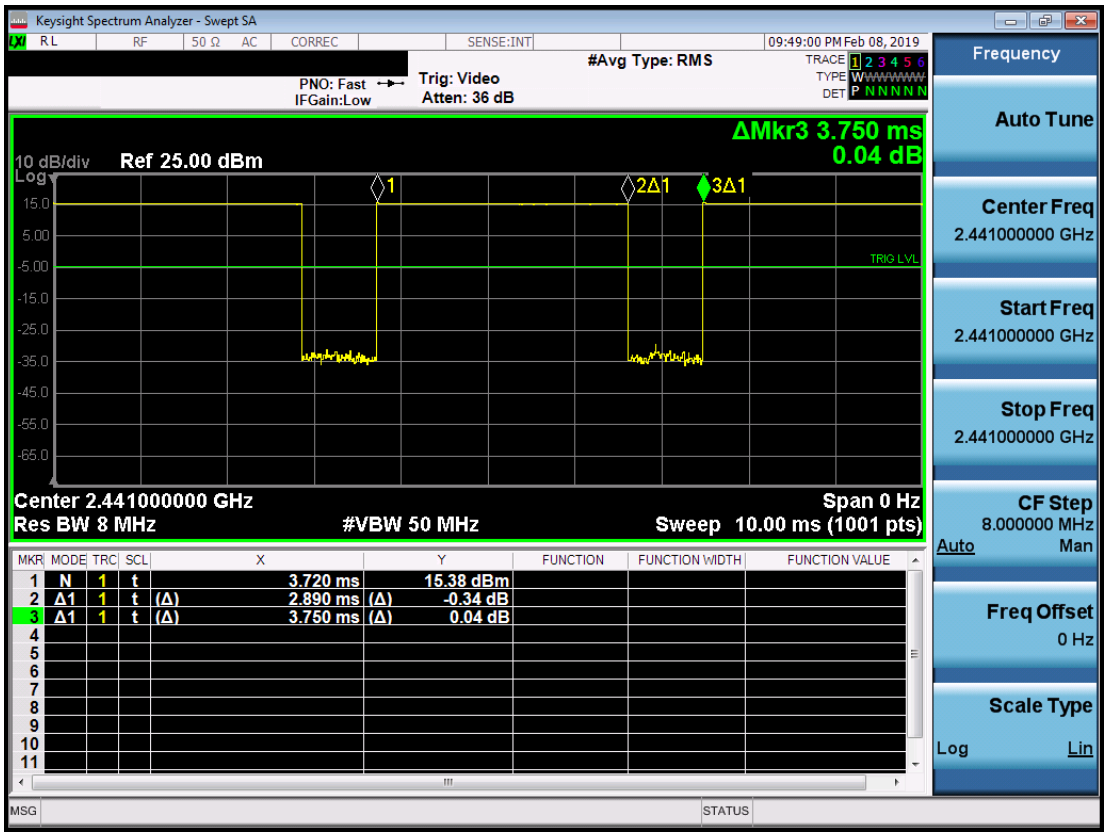


Figure 9-7
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

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

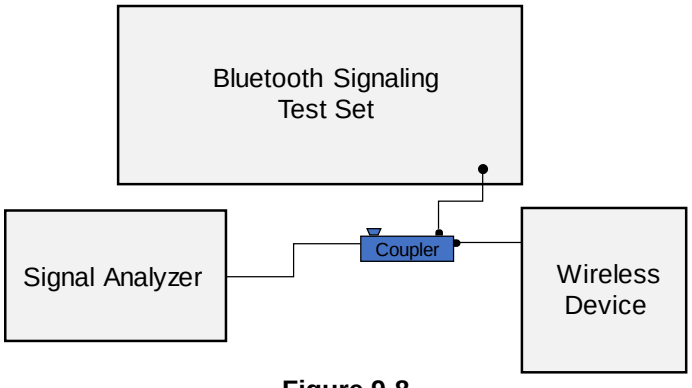


Figure 9-8
Power Measurement Setup

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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
3/14/2019	750H	20.9	680	0.869	42.262	0.888	42.305	-2.14%	-0.10%
			695	0.874	42.213	0.889	42.227	-1.69%	-0.03%
			700	0.876	42.197	0.889	42.201	-1.46%	-0.01%
			710	0.880	42.164	0.890	42.149	-1.12%	0.04%
			720	0.883	42.129	0.891	42.097	-0.90%	0.08%
			725	0.885	42.112	0.891	42.071	-0.67%	0.10%
			740	0.890	42.063	0.893	41.994	-0.34%	0.16%
			755	0.895	42.023	0.894	41.916	0.11%	0.26%
			770	0.901	41.980	0.895	41.838	0.67%	0.34%
			785	0.907	41.931	0.896	41.760	1.23%	0.41%
3/27/2019	835H	21.5	820	0.906	43.229	0.899	41.578	0.78%	3.97%
			835	0.922	43.058	0.900	41.500	2.44%	3.75%
			850	0.937	42.886	0.916	41.500	2.29%	3.34%
3/24/2019	1750H	20.4	1710	1.332	38.501	1.348	40.142	-1.19%	-4.09%
			1750	1.356	38.434	1.371	40.079	-1.09%	-4.10%
			1790	1.379	38.357	1.394	40.016	-1.08%	-4.15%
3/18/2019	1900H	20.8	1850	1.398	38.828	1.400	40.000	-0.14%	-2.93%
			1880	1.415	38.788	1.400	40.000	1.07%	-3.03%
			1910	1.434	38.750	1.400	40.000	2.43%	-3.13%
3/18/2019	2450H	20.3	2400	1.799	38.797	1.756	39.289	2.45%	-1.25%
			2450	1.837	38.691	1.800	39.200	2.06%	-1.30%
			2500	1.881	38.626	1.855	39.136	1.40%	-1.30%
3/26/2019	2450H	21.8	2400	1.770	38.422	1.756	39.289	0.80%	-2.21%
			2450	1.809	38.338	1.800	39.200	0.50%	-2.20%
			2500	1.849	38.259	1.855	39.136	-0.32%	-2.24%
3/21/2019	2450H	21.3	2500	1.867	38.123	1.855	39.136	0.65%	-2.59%
			2550	1.904	38.026	1.909	39.073	-0.26%	-2.68%
			2600	1.948	37.934	1.964	39.009	-0.81%	-2.76%
			2650	1.985	37.862	2.018	38.945	-1.64%	-2.78%
			2700	2.027	37.749	2.073	38.882	-2.22%	-2.91%
4/3/2019	2450H	21.6	2500	1.849	37.750	1.855	39.136	-0.32%	-3.54%
			2550	1.887	37.655	1.909	39.073	-1.15%	-3.63%
			2600	1.929	37.566	1.964	39.009	-1.78%	-3.70%
			2650	1.966	37.489	2.018	38.945	-2.58%	-3.74%
			2700	2.007	37.394	2.073	38.882	-3.18%	-3.83%
4/29/2019	2450H	22.8	2500	1.830	38.768	1.855	39.136	-1.35%	-0.94%
			2550	1.867	38.672	1.909	39.073	-2.20%	-1.03%
			2600	1.905	38.595	1.964	39.009	-3.00%	-1.06%
			2650	1.943	38.514	2.018	38.945	-3.72%	-1.11%
			2700	1.980	38.428	2.073	38.882	-4.49%	-1.17%
3/29/2019	3500H-3700H	19.3	3500	2.774	38.807	2.913	37.929	-4.77%	2.31%
			3550	2.820	38.714	2.964	37.871	-4.86%	2.23%
			3600	2.870	38.635	3.015	37.814	-4.81%	2.17%
04/08/2019	5200H-5800H	20.5	5240	4.588	35.628	4.696	35.940	-2.30%	-0.87%
			5260	4.609	35.567	4.717	35.917	-2.29%	-0.97%
			5280	4.631	35.545	4.737	35.894	-2.24%	-0.97%
			5300	4.653	35.521	4.758	35.871	-2.21%	-0.98%
			5320	4.677	35.488	4.778	35.849	-2.11%	-1.01%
			5580	4.974	35.028	5.045	35.551	-1.41%	-1.47%
			5600	4.994	34.982	5.065	35.529	-1.40%	-1.54%
			5620	5.020	34.950	5.086	35.506	-1.30%	-1.57%
			5640	5.046	34.916	5.106	35.483	-1.18%	-1.60%
			5660	5.070	34.881	5.127	35.460	-1.11%	-1.63%
			5680	5.089	34.850	5.147	35.437	-1.13%	-1.66%
			5700	5.111	34.819	5.168	35.414	-1.10%	-1.68%
			5745	5.166	34.723	5.214	35.363	-0.92%	-1.81%
			5765	5.188	34.694	5.234	35.340	-0.88%	-1.83%
			5785	5.212	34.665	5.255	35.317	-0.82%	-1.85%
			5800	5.225	34.635	5.270	35.300	-0.85%	-1.88%

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Table 10-2
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
3/14/2019	750B	20.7	680	0.927	54.217	0.958	55.804	-3.24%	-2.84%
			695	0.933	54.184	0.959	55.745	-2.71%	-2.80%
			700	0.935	54.174	0.959	55.726	-2.50%	-2.79%
			710	0.939	54.154	0.960	55.687	-2.19%	-2.75%
			720	0.943	54.131	0.961	55.648	-1.87%	-2.73%
			725	0.945	54.119	0.961	55.629	-1.66%	-2.71%
			740	0.951	54.074	0.963	55.570	-1.25%	-2.69%
			755	0.957	54.025	0.964	55.512	-0.73%	-2.68%
			770	0.962	53.984	0.965	55.453	-0.31%	-2.65%
			785	0.968	53.957	0.966	55.395	0.21%	-2.60%
3/13/2019	835B	21.5	820	0.982	55.141	0.969	55.258	1.34%	-0.21%
			835	0.998	54.990	0.970	55.200	2.89%	-0.38%
			850	1.012	54.832	0.988	55.154	2.43%	-0.58%
3/25/2019	835B	21.4	820	0.966	54.929	0.969	55.258	-0.31%	-0.60%
			835	0.980	54.807	0.970	55.200	1.03%	-0.71%
			850	0.995	54.686	0.988	55.154	0.71%	-0.85%
4/1/2019	1750B	20.3	1710	1.496	51.798	1.463	53.537	2.26%	-3.25%
			1750	1.540	51.617	1.488	53.432	3.49%	-3.40%
			1790	1.582	51.447	1.514	53.326	4.49%	-3.52%
4/4/2019	1750B	21.8	1710	1.478	51.662	1.463	53.537	1.03%	-3.50%
			1750	1.524	51.502	1.488	53.432	2.42%	-3.61%
			1790	1.569	51.330	1.514	53.326	3.63%	-3.74%
4/29/2019	1750B	19.9	1710	1.484	52.043	1.463	53.537	1.44%	-2.79%
			1750	1.529	51.886	1.488	53.432	2.76%	-2.89%
			1790	1.575	51.742	1.514	53.326	4.03%	-2.97%
3/20/2019	1900B	22.3	1850	1.501	52.492	1.520	53.300	-1.25%	-1.52%
			1880	1.537	52.383	1.520	53.300	1.12%	-1.72%
			1910	1.570	52.262	1.520	53.300	3.29%	-1.95%
3/25/2019	1900B	22.9	1850	1.516	52.881	1.520	53.300	-0.26%	-0.79%
			1880	1.549	52.779	1.520	53.300	1.91%	-0.98%
			1910	1.584	52.688	1.520	53.300	4.21%	-1.15%
3/27/2019	1900B	22.9	1850	1.517	52.153	1.520	53.300	-0.20%	-2.15%
			1880	1.551	52.047	1.520	53.300	2.04%	-2.35%
			1910	1.585	51.946	1.520	53.300	4.28%	-2.54%
4/1/2019	1900B	20.8	1850	1.518	51.671	1.520	53.300	-0.13%	-3.06%
			1880	1.550	51.572	1.520	53.300	1.97%	-3.24%
			1910	1.584	51.481	1.520	53.300	4.21%	-3.41%
4/3/2019	1900B	23.0	1850	1.512	52.296	1.520	53.300	-0.53%	-1.88%
			1880	1.546	52.196	1.520	53.300	1.71%	-2.07%
			1910	1.580	52.108	1.520	53.300	3.95%	-2.24%
3/13/2019	2450B	23.7	2400	1.973	51.517	1.902	52.767	3.73%	-2.37%
			2450	2.031	51.366	1.950	52.700	4.15%	-2.53%
			2500	2.087	51.220	2.021	52.636	3.27%	-2.69%
			2550	2.146	51.073	2.092	52.573	2.58%	-2.85%
			2600	2.205	50.931	2.163	52.509	1.94%	-3.01%
			2650	2.264	50.772	2.234	52.445	1.34%	-3.19%
			2700	2.324	50.626	2.305	52.382	0.82%	-3.35%
4/3/2019	2450B	23.7	2400	1.986	50.713	1.902	52.767	4.42%	-3.89%
			2450	2.043	50.575	1.950	52.700	4.77%	-4.03%
			2500	2.098	50.422	2.021	52.636	3.81%	-4.21%
4/5/2019	2450B	22.1	2400	1.983	51.124	1.902	52.767	4.26%	-3.11%
			2450	2.043	51.006	1.950	52.700	4.77%	-3.21%
			2500	2.102	50.863	2.021	52.636	4.01%	-3.37%
			2550	2.164	50.709	2.092	52.573	3.44%	-3.55%
			2600	2.225	50.567	2.163	52.509	2.87%	-3.70%
			2650	2.287	50.398	2.234	52.445	2.37%	-3.90%
			2700	2.349	50.249	2.305	52.382	1.91%	-4.07%
4/8/2019	2450B	22.4	2400	1.982	52.154	1.902	52.767	4.21%	-1.16%
			2450	2.040	52.022	1.950	52.700	4.62%	-1.29%
			2500	2.098	51.888	2.021	52.636	3.81%	-1.42%
			2550	2.160	51.739	2.092	52.573	3.25%	-1.59%
			2600	2.221	51.594	2.163	52.509	2.68%	-1.74%
			2650	2.283	51.432	2.234	52.445	2.19%	-1.93%
			2700	2.345	51.269	2.305	52.382	1.74%	-2.12%
4/29/2019	2450B	23.8	2500	2.102	50.972	2.021	52.636	4.01%	-3.16%
			2550	2.164	50.821	2.092	52.573	3.44%	-3.33%
			2600	2.225	50.654	2.163	52.509	2.87%	-3.53%
			2650	2.286	50.486	2.234	52.445	2.33%	-3.74%
			2700	2.346	50.318	2.305	52.382	1.78%	-3.94%
4/1/2019	3500B-3700B	22.0	3500	3.400	49.725	3.314	51.321	2.60%	-3.11%
			3550	3.450	49.638	3.372	51.254	2.31%	-3.15%
			3600	3.505	49.567	3.431	51.186	2.16%	-3.16%
			3645	3.551	49.505	3.483	51.125	1.95%	-3.17%
			3685	3.595	49.429	3.530	51.070	1.84%	-3.21%
			3725	3.637	49.382	3.577	51.016	1.68%	-3.20%

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Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
03/18/2019	5200B-5800B	19.9	5240	5.422	48.966	5.346	48.960	1.42%	0.01%
			5260	5.450	48.913	5.369	48.933	1.51%	-0.04%
			5280	5.476	48.878	5.393	48.906	1.54%	-0.06%
			5300	5.501	48.847	5.416	48.879	1.57%	-0.07%
			5500	5.789	48.472	5.650	48.607	2.46%	-0.28%
			5520	5.827	48.417	5.673	48.580	2.71%	-0.34%
			5540	5.867	48.371	5.696	48.553	3.00%	-0.37%
			5560	5.903	48.348	5.720	48.526	3.20%	-0.37%
			5580	5.931	48.327	5.743	48.499	3.27%	-0.35%
			5600	5.951	48.289	5.766	48.471	3.21%	-0.38%
			5620	5.977	48.223	5.790	48.444	3.23%	-0.46%
			5640	6.011	48.160	5.813	48.417	3.41%	-0.53%
			5660	6.051	48.127	5.837	48.390	3.67%	-0.54%
			5680	6.086	48.117	5.860	48.363	3.86%	-0.51%
			5700	6.112	48.104	5.883	48.336	3.89%	-0.48%
			5745	6.179	47.980	5.936	48.275	4.09%	-0.61%
			5765	6.211	47.931	5.959	48.248	4.23%	-0.66%
			5785	6.246	47.904	5.982	48.220	4.41%	-0.66%
			5800	6.268	47.897	6.000	48.200	4.47%	-0.63%
			5805	6.274	47.895	6.006	48.193	4.46%	-0.62%
			5825	6.294	47.879	6.029	48.166	4.40%	-0.60%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

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10.2 Test System Verification

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

Table 10-3
System Verification Results – 1g

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)	$Deviation_{1g}$ (%)
H	750	HEAD	03/14/2019	21.9	20.9	0.200	1003	7409	1.680	8.280	8.400	1.45%
D	835	HEAD	03/27/2019	22.0	21.5	0.200	4d133	7357	1.920	9.430	9.600	1.80%
E	1750	HEAD	03/24/2019	21.9	20.3	0.100	1150	3589	3.630	36.500	36.300	-0.55%
H	1900	HEAD	03/18/2019	20.9	20.8	0.100	5d080	7409	4.200	39.800	42.000	5.53%
E	2450	HEAD	03/18/2019	24.3	19.8	0.100	797	3589	5.350	52.700	53.500	1.52%
E	2450	HEAD	03/26/2019	24.3	21.8	0.100	981	3589	5.290	52.300	52.900	1.15%
E	2600	HEAD	03/21/2019	23.1	20.8	0.100	1071	3589	5.740	56.300	57.400	1.95%
E	2600	HEAD	04/03/2019	24.0	21.6	0.100	1126	3589	5.220	54.500	52.200	-4.22%
E	2600	HEAD	04/29/2019	24.4	22.8	0.100	1064	3589	5.770	57.000	57.700	1.23%
H	3500	HEAD	03/29/2019	22.7	20.2	0.100	1059	3949	6.290	64.600	62.900	-2.63%
H	5250	HEAD	04/08/2019	20.9	20.5	0.050	1057	7409	3.730	79.200	74.600	-5.81%
H	5600	HEAD	04/08/2019	20.9	20.5	0.050	1057	7409	4.050	84.100	81.000	-3.69%
H	5750	HEAD	04/08/2019	20.9	20.5	0.050	1057	7409	3.760	80.500	75.200	-6.58%
L	750	BODY	03/14/2019	24.2	20.7	0.200	1161	7308	1.630	8.430	8.150	-3.32%
D	835	BODY	03/13/2019	21.9	21.5	0.200	4d133	7357	2.030	9.750	10.150	4.10%
D	835	BODY	03/25/2019	22.1	21.4	0.200	4d133	7357	1.880	9.750	9.400	-3.59%
J	1750	BODY	04/01/2019	20.6	20.3	0.100	1148	7488	3.390	37.000	33.900	-8.38%
D	1750	BODY	04/29/2019	20.7	19.9	0.100	1148	3914	3.840	37.000	38.400	3.78%
G	1900	BODY	03/20/2019	22.2	20.9	0.100	5d080	7410	4.200	39.200	42.000	7.14%
G	1900	BODY	03/25/2019	22.2	21.0	0.100	5d080	7410	4.170	39.200	41.700	6.38%
G	1900	BODY	03/27/2019	22.4	22.9	0.100	5d080	7410	4.220	39.200	42.200	7.65%
K	2450	BODY	03/13/2019	22.7	21.9	0.100	719	7417	5.170	50.100	51.700	3.19%
K	2450	BODY	04/03/2019	24.4	23.1	0.100	981	7417	5.160	50.900	51.600	1.38%
K	2450	BODY	04/05/2019	22.7	20.8	0.100	797	7417	5.250	51.100	52.500	2.74%
K	2600	BODY	03/13/2019	22.7	21.9	0.100	1004	7417	5.430	54.800	54.300	-0.91%
K	2600	BODY	04/05/2019	22.7	20.8	0.100	1071	7417	5.650	54.200	56.500	4.24%
K	2600	BODY	04/29/2019	22.2	21.9	0.100	1071	7417	5.290	54.200	52.900	-2.40%
E	3500	BODY	04/01/2019	24.0	21.5	0.100	1055	3589	6.150	64.600	61.500	-4.80%
E	3700	BODY	04/01/2019	24.0	21.5	0.100	1002	3589	6.310	65.000	63.100	-2.92%
L	5250	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	3.600	77.000	72.000	-6.49%
L	5600	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	4.070	79.200	81.400	2.78%
L	5750	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	3.540	76.100	70.800	-6.96%

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Table 10-4
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)	$Deviation_{10g}$ (%)
J	1750	BODY	04/01/2019	20.6	20.3	0.100	1148	7488	1.820	19.800	18.200	-8.08%
J	1750	BODY	04/04/2019	20.8	19.9	0.100	1148	7488	1.990	19.800	19.900	0.51%
G	1900	BODY	03/27/2019	22.4	22.9	0.100	5d080	7410	2.180	20.600	21.800	5.83%
G	1900	BODY	04/01/2019	21.3	21.6	0.100	5d080	7410	2.140	20.600	21.400	3.88%
G	1900	BODY	04/03/2019	22.2	22.5	0.100	5d080	7410	2.180	20.600	21.800	5.83%
K	2450	BODY	04/08/2019	23.0	22.4	0.100	797	7417	2.320	24.200	23.200	-4.13%
K	2600	BODY	04/08/2019	23.0	22.4	0.100	1126	7417	2.360	24.400	23.600	-3.28%
E	3500	BODY	04/01/2019	24.0	21.5	0.100	1055	3589	2.270	24.100	22.700	-5.81%
E	3700	BODY	04/01/2019	24.0	21.5	0.100	1002	3589	2.240	23.100	22.400	-3.03%
L	5250	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	1.000	21.600	20.000	-7.41%
L	5600	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	1.120	22.200	22.400	0.90%
L	5750	BODY	03/18/2019	21.3	19.8	0.050	1191	7308	0.987	21.200	19.740	-6.89%

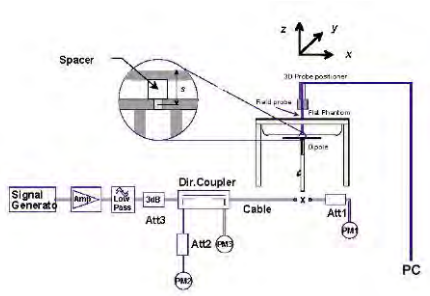


Figure 10-1
System Verification Setup Diagram



Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.0	32.03	0.08	Right	Cheek	0268M	1:8.3	0.083	1.250	0.104	A1
836.60	190	GSM 850	GSM	33.0	32.03	0.16	Right	Tilt	0268M	1:8.3	0.039	1.250	0.049	
836.60	190	GSM 850	GSM	33.0	32.03	0.12	Left	Cheek	0268M	1:8.3	0.060	1.250	0.075	
836.60	190	GSM 850	GSM	33.0	32.03	0.19	Left	Tilt	0268M	1:8.3	0.037	1.250	0.046	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
GSM 1900 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/Band	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	30.5	29.60	0.09	Right	Cheek	0268M	1:8.3	0.054	1.230	0.066	
1880.00	661	GSM 1900	GSM	30.5	29.60	0.20	Right	Tilt	0268M	1:8.3	0.031	1.230	0.038	
1880.00	661	GSM 1900	GSM	30.5	29.60	0.13	Left	Cheek	0268M	1:8.3	0.066	1.230	0.081	A2
1880.00	661	GSM 1900	GSM	30.5	29.60	0.20	Left	Tilt	0268M	1:8.3	0.022	1.230	0.027	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.8	24.62	1	0.08	Right	Cheek	0268M	1:1	0.108	1.312	0.142	A3
836.60	4183	UMTS 850	RMC	25.8	24.62	1	0.15	Right	Tilt	0268M	1:1	0.052	1.312	0.068	
836.60	4183	UMTS 850	RMC	25.8	24.62	1	0.14	Left	Cheek	0268M	1:1	0.089	1.312	0.117	
836.60	4183	UMTS 850	RMC	25.8	24.62	1	0.17	Left	Tilt	0268M	1:1	0.057	1.312	0.075	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	28	0.13	Right	Cheek	0267M	1:1	0.071	1.250	0.089	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	28	0.06	Right	Tilt	0267M	1:1	0.097	1.250	0.121	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	28	-0.17	Left	Cheek	0267M	1:1	0.112	1.250	0.140	A4
1732.40	1412	UMTS 1750	RMC	25.0	24.03	28	0.16	Left	Tilt	0267M	1:1	0.097	1.250	0.121	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-5
UMTS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	17	-0.08	Right	Cheek	0267M	1:1	0.131	1.127	0.148	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	17	0.14	Right	Tilt	0267M	1:1	0.066	1.127	0.074	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	17	0.20	Left	Cheek	0267M	1:1	0.165	1.127	0.186	A5
1880.00	9400	UMTS 1900	RMC	25.0	24.48	17	-0.13	Left	Tilt	0267M	1:1	0.058	1.127	0.065	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-6
CDMA BC10 (§90S) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	24.54	2	0.09	Right	Cheek	0268M	1:1	0.109	1.337	0.146	A6
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	24.54	2	0.20	Right	Tilt	0268M	1:1	0.051	1.337	0.068	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	24.54	2	0.14	Left	Cheek	0268M	1:1	0.078	1.337	0.104	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	25.8	24.54	2	0.15	Left	Tilt	0268M	1:1	0.051	1.337	0.068	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	24.08	2	0.11	Right	Cheek	0268M	1:1	0.101	1.486	0.150	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	24.08	2	0.20	Right	Tilt	0268M	1:1	0.058	1.486	0.086	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	24.08	2	0.13	Left	Cheek	0268M	1:1	0.086	1.486	0.128	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	25.8	24.08	2	0.13	Left	Tilt	0268M	1:1	0.068	1.486	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							

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Table 11-7
CDMA BC0 (§22H) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	25.8	24.53	2	0.02	Right	Cheek	0268M	1:1	0.124	1.340	0.166	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	25.8	24.53	2	0.18	Right	Tilt	0268M	1:1	0.062	1.340	0.083	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	25.8	24.53	2	0.19	Left	Cheek	0268M	1:1	0.105	1.340	0.141	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	25.8	24.53	2	0.16	Left	Tilt	0268M	1:1	0.066	1.340	0.088	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	25.8	24.08	2	0.09	Right	Cheek	0268M	1:1	0.126	1.486	0.187	A7
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	25.8	24.08	2	0.11	Right	Tilt	0268M	1:1	0.079	1.486	0.117	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	25.8	24.08	2	0.11	Left	Cheek	0268M	1:1	0.086	1.486	0.128	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	25.8	24.08	2	0.16	Left	Tilt	0268M	1:1	0.085	1.486	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 11-8
PCS CDMA Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.23	17	-0.01	Right	Cheek	0267M	1:1	0.133	1.194	0.159	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.23	17	0.04	Right	Tilt	0267M	1:1	0.059	1.194	0.070	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.23	17	0.08	Left	Cheek	0267M	1:1	0.144	1.194	0.172	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.23	17	-0.16	Left	Tilt	0267M	1:1	0.047	1.194	0.056	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.26	17	0.05	Right	Cheek	0267M	1:1	0.114	1.186	0.135	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.26	17	0.03	Right	Tilt	0267M	1:1	0.052	1.186	0.062	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.26	17	-0.05	Left	Cheek	0267M	1:1	0.159	1.186	0.189	A8
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.26	17	0.18	Left	Tilt	0267M	1:1	0.036	1.186	0.043	
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.04	0	Right	Cheek	0	QPSK	1	50	0186M	1:1	0.183	1.035	0.189	A9
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.01	1	Right	Cheek	0	QPSK	50	0	0186M	1:1	0.139	1.023	0.142	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	0.12	0	Right	Tilt	0	QPSK	1	50	0186M	1:1	0.088	1.035	0.091	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.13	1	Right	Tilt	0	QPSK	50	0	0186M	1:1	0.064	1.023	0.065	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.03	0	Left	Cheek	0	QPSK	1	50	0186M	1:1	0.130	1.035	0.135	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.10	1	Left	Cheek	0	QPSK	50	0	0186M	1:1	0.106	1.023	0.108	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.03	0	Left	Tilt	0	QPSK	1	50	0186M	1:1	0.070	1.035	0.072	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.00	1	Left	Tilt	0	QPSK	50	0	0186M	1:1	0.053	1.023	0.054	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram				

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	-0.04	0	Right	Cheek	76	QPSK	1	0	0186M	1:1	0.165	1.352	0.223	A10
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	-0.04	1	Right	Cheek	76	QPSK	25	0	0186M	1:1	0.126	1.309	0.165	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.06	0	Right	Tilt	76	QPSK	1	0	0186M	1:1	0.080	1.352	0.108	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.11	1	Right	Tilt	76	QPSK	25	0	0186M	1:1	0.060	1.309	0.079	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.06	0	Left	Cheek	76	QPSK	1	0	0186M	1:1	0.139	1.352	0.188	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.05	1	Left	Cheek	76	QPSK	25	0	0186M	1:1	0.110	1.309	0.144	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.08	0	Left	Tilt	76	QPSK	1	0	0186M	1:1	0.087	1.352	0.118	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.05	1	Left	Tilt	76	QPSK	25	0	0186M	1:1	0.067	1.309	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				

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	0.08	0	Right	Cheek	1	QPSK	1	0	0186M	1:1	0.165	1.452	0.240	A11
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	0.02	1	Right	Cheek	1	QPSK	25	0	0186M	1:1	0.128	1.400	0.179	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	0.13	0	Right	Tilt	1	QPSK	1	0	0186M	1:1	0.075	1.452	0.109	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	0.11	1	Right	Tilt	1	QPSK	25	0	0186M	1:1	0.061	1.400	0.085	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	0.08	0	Left	Cheek	1	QPSK	1	0	0186M	1:1	0.095	1.452	0.138	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	0.06	1	Left	Cheek	1	QPSK	25	0	0186M	1:1	0.094	1.400	0.132	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	-0.05	0	Left	Tilt	1	QPSK	1	0	0186M	1:1	0.067	1.452	0.097	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	0.06	1	Left	Tilt	1	QPSK	25	0	0186M	1:1	0.067	1.400	0.094	
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 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)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.00	0	Right	Cheek	1	QPSK	1	0	0186M	1:1	0.165	1.175	0.194	A12
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.04	1	Right	Cheek	1	QPSK	36	0	0186M	1:1	0.132	1.148	0.152	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.20	0	Right	Tilt	1	QPSK	1	0	0186M	1:1	0.082	1.175	0.096	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	-0.04	1	Right	Tilt	1	QPSK	36	0	0186M	1:1	0.072	1.148	0.083	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	-0.12	0	Left	Cheek	1	QPSK	1	0	0186M	1:1	0.105	1.175	0.123	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.21	1	Left	Cheek	1	QPSK	36	0	0186M	1:1	0.085	1.148	0.098	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.20	0	Left	Tilt	1	QPSK	1	0	0186M	1:1	0.077	1.175	0.090	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	-0.19	1	Left	Tilt	1	QPSK	36	0	0186M	1:1	0.063	1.148	0.072	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-13
LTE Band 66 (AWS) 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)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	0.19	0	Right	Cheek	29	QPSK	1	99	0228M	1:1	0.092	1.180	0.109	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	0.14	1	Right	Cheek	29	QPSK	50	25	0228M	1:1	0.069	1.138	0.079	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	0.10	0	Right	Tilt	29	QPSK	1	99	0228M	1:1	0.087	1.180	0.103	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	0.13	1	Right	Tilt	29	QPSK	50	25	0228M	1:1	0.078	1.138	0.089	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	0.12	0	Left	Cheek	29	QPSK	1	99	0228M	1:1	0.141	1.180	0.166	A13
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	0.10	1	Left	Cheek	29	QPSK	50	25	0228M	1:1	0.119	1.138	0.135	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	0.07	0	Left	Tilt	29	QPSK	1	99	0228M	1:1	0.085	1.180	0.100	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	0.13	1	Left	Tilt	29	QPSK	50	25	0228M	1:1	0.084	1.138	0.096	
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 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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.01	0	Right	Cheek	17	QPSK	1	99	0228M	1:1	0.121	1.297	0.157	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	0.18	1	Right	Cheek	17	QPSK	50	50	0228M	1:1	0.081	1.265	0.102	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.08	0	Right	Tilt	17	QPSK	1	99	0228M	1:1	0.061	1.297	0.079	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	0.10	1	Right	Tilt	17	QPSK	50	50	0228M	1:1	0.049	1.265	0.062	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	-0.15	0	Left	Cheek	17	QPSK	1	99	0228M	1:1	0.165	1.297	0.214	A14
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	0.11	1	Left	Cheek	17	QPSK	50	50	0228M	1:1	0.121	1.265	0.153	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	-0.19	0	Left	Tilt	17	QPSK	1	99	0228M	1:1	0.048	1.297	0.062	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	-0.21	1	Left	Tilt	17	QPSK	50	50	0228M	1:1	0.044	1.265	0.056	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-15
LTE Band 2 (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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	-0.06	0	Right	Cheek	17	QPSK	1	0	0228M	1:1	0.142	1.127	0.160	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.10	1	Right	Cheek	17	QPSK	50	0	0228M	1:1	0.113	1.104	0.125	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.21	0	Right	Tilt	17	QPSK	1	0	0228M	1:1	0.073	1.127	0.082	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.17	1	Right	Tilt	17	QPSK	50	0	0228M	1:1	0.055	1.104	0.061	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.03	0	Left	Cheek	17	QPSK	1	0	0228M	1:1	0.177	1.127	0.199	A15
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.14	1	Left	Cheek	17	QPSK	50	0	0228M	1:1	0.131	1.104	0.145	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.12	0	Left	Tilt	17	QPSK	1	0	0228M	1:1	0.045	1.127	0.051	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.13	1	Left	Tilt	17	QPSK	50	0	0228M	1:1	0.043	1.104	0.047	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-16
LTE Band 7 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.21	0	Right	Cheek	QPSK	1	99	0291M	1:1	0.064	1.274	0.082	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.15	1	Right	Cheek	QPSK	50	50	0291M	1:1	0.056	1.288	0.072	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.19	0	Right	Tilt	QPSK	1	99	0291M	1:1	0.058	1.274	0.074	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.18	1	Right	Tilt	QPSK	50	50	0291M	1:1	0.040	1.288	0.052	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.13	0	Left	Cheek	QPSK	1	99	0291M	1:1	0.065	1.274	0.083	A16
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.16	1	Left	Cheek	QPSK	50	50	0291M	1:1	0.057	1.288	0.073	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.15	0	Left	Tilt	QPSK	1	99	0291M	1:1	0.044	1.274	0.056	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.12	1	Left	Tilt	QPSK	50	50	0291M	1:1	0.034	1.288	0.044	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-17
LTE Band 48 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.18	0	Right	Cheek	QPSK	1	0	0291M	1:1.58	0.025	1.294	0.032	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.14	1	Right	Cheek	QPSK	50	0	0291M	1:1.58	0.015	1.268	0.019	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.11	0	Right	Tilt	QPSK	1	0	0291M	1:1.58	0.056	1.294	0.072	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.17	1	Right	Tilt	QPSK	50	0	0291M	1:1.58	0.049	1.268	0.062	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.12	0	Left	Cheek	QPSK	1	0	0291M	1:1.58	0.059	1.294	**0.076**	A17
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.17	1	Left	Cheek	QPSK	50	0	0291M	1:1.58	0.045	1.268	0.057	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.11	0	Left	Tilt	QPSK	1	0	0291M	1:1.58	0.043	1.294	0.056	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.19	1	Left	Tilt	QPSK	50	0	0291M	1:1.58	0.031	1.268	0.039	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-18
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	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.14	0	Right	Cheek	QPSK	1	0	0244M	1:1.58	0.060	1.321	0.079	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.17	1	Right	Cheek	QPSK	50	0	0244M	1:1.58	0.042	1.262	0.053	
1 CC Uplink - Power Class 2	N/A	2636.50	41055	Mid-High	LTE Band 41	20	27.8	26.38	0.17	0	Right	Cheek	QPSK	1	0	0244M	1:2.31	0.077	1.387	0.107	A18
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.68	-0.18	0	Right	Cheek	QPSK	1	0	0244M	1:1.58	0.074	1.076	0.080	
	SCC	2616.70	40857	Mid-High	LTE Band 41	20								1	99						
2 CC Uplink - Power Class 2	PCC	2636.50	41055	Mid-High	LTE Band 41	20	27.8	26.88	0.12	0	Right	Cheek	QPSK	1	0	0244M	1:2.31	0.076	1.236	0.094	
	SCC	2616.70	40857	Mid-High	LTE Band 41	20								1	99						
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.14	0	Right	Tilt	QPSK	1	0	0244M	1:1.58	0.048	1.321	0.063	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.17	1	Right	Tilt	QPSK	50	0	0244M	1:1.58	0.041	1.262	0.052	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.17	0	Left	Cheek	QPSK	1	0	0244M	1:1.58	0.047	1.321	0.062	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.17	1	Left	Cheek	QPSK	50	0	0244M	1:1.58	0.037	1.262	0.047	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.20	0	Left	Tilt	QPSK	1	0	0244M	1:1.58	0.035	1.321	0.046	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.21	1	Left	Tilt	QPSK	50	0	0244M	1:1.58	0.023	1.262	0.029	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-19
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	Device Serial Number	Modulation	RB Size	RB Offset	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.														(W/kg)		(W/kg)	
2577.30	515460	NR Band n41	100	21.0	19.53	0.03	0	Right	Cheek	0894M	CP-OFDM-QPSK	1	271	1:4.37	0.425	1.403	0.596	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2577.30	515460	NR Band n41	100	21.0	19.72	0.07	0	Right	Cheek	0894M	CP-OFDM-QPSK	137	136	1:4.37	0.445	1.343	0.598	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2546.01	509202	NR Band n41	100	21.0	19.50	0.04	0	Right	Tilt	0894M	CP-OFDM-QPSK	1	271	1:4.37	0.475	1.413	0.671	
2601.80	40708	LTE Band 41	20	24.0	23.47		0				QPSK	1	0					
2577.30	515460	NR Band n41	100	21.0	19.53	0.04	0	Right	Tilt	0894M	CP-OFDM-QPSK	1	271	1:4.37	0.469	1.403	0.658	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2608.71	521742	NR Band n41	100	21.0	19.57	0.09	0	Right	Tilt	0894M	CP-OFDM-QPSK	1	136	1:4.37	0.459	1.390	0.638	
2552.90	40219	LTE Band 41	20	24.0	23.56		0				QPSK	1	50					
2640.00	528000	NR Band n41	100	21.0	19.76	0.00	0	Right	Tilt	0894M	CP-OFDM-QPSK	1	0	1:4.37	0.518	1.330	**0.689**	A19
2584.20	40532	LTE Band 41	20	24.0	23.42		0				QPSK	1	99					
2546.01	509202	NR Band n41	100	21.0	19.51	0.06	0	Right	Tilt	0894M	CP-OFDM-QPSK	137	136	1:4.37	0.403	1.409	0.568	
2601.80	40708	LTE Band 41	20	24.0	23.47		0				QPSK	1	0					
2577.30	515460	NR Band n41	100	21.0	19.72	0.04	0	Right	Tilt	0894M	CP-OFDM-QPSK	137	136	1:4.37	0.504	1.343	0.677	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2608.71	521742	NR Band n41	100	21.0	19.65	0.04	0	Right	Tilt	0894M	CP-OFDM-QPSK	137	67	1:4.37	0.475	1.365	0.648	
2552.90	40219	LTE Band 41	20	24.0	23.56		0				QPSK	1	50					
2640.00	528000	NR Band n41	100	21.0	19.74	0.00	0	Right	Tilt	0894M	CP-OFDM-QPSK	137	0	1:4.37	0.498	1.337	0.666	
2584.20	40532	LTE Band 41	20	24.0	23.42		0				QPSK	1	99					
2546.01	509202	NR Band n41	100	21.0	19.78	0.07	0	Right	Tilt	0894M	CP-OFDM-QPSK	273	0	1:4.37	0.341	1.324	0.451	
2601.80	40708	LTE Band 41	20	24.0	23.47		0				QPSK	1	0					
2577.30	515460	NR Band n41	100	21.0	19.53	0.07	0	Left	Cheek	0894M	CP-OFDM-QPSK	1	271	1:4.37	0.147	1.403	0.206	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2577.30	515460	NR Band n41	100	21.0	19.72	0.07	0	Left	Cheek	0894M	CP-OFDM-QPSK	137	136	1:4.37	0.155	1.343	0.208	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2577.30	515460	NR Band n41	100	21.0	19.53	0.12	0	Left	Tilt	0894M	CP-OFDM-QPSK	1	271	1:4.37	0.178	1.403	0.250	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
2577.30	515460	NR Band n41	100	21.0	19.72	0.02	0	Left	Tilt	0894M	CP-OFDM-QPSK	137	136	1:4.37	0.185	1.343	0.248	
2633.10	41021	LTE Band 41	20	24.0	23.62		0				QPSK	1	50					
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-20
DTS 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)	
2437	6	802.11b	DSSS	22	17.0	16.92	0.19	Right	Cheek	1	0181M	1	100.0	0.623	-	1.019	1.000	-	
2437	6	802.11b	DSSS	22	17.0	16.92	0.18	Right	Tilt	1	0181M	1	100.0	0.641	0.371	1.019	1.000	**0.378**	A20
2437	6	802.11b	DSSS	22	17.0	16.92	-0.14	Left	Cheek	1	0181M	1	100.0	0.178	-	1.019	1.000	-	
2437	6	802.11b	DSSS	22	17.0	16.92	0.19	Left	Tilt	1	0181M	1	100.0	0.132	-	1.019	1.000	-	
2437	6	802.11b	DSSS	22	17.0	16.80	0.18	Right	Cheek	2	0181M	1	100.0	0.059	0.045	1.047	1.000	0.047	
2437	6	802.11b	DSSS	22	17.0	16.80	0.18	Right	Tilt	2	0181M	1	100.0	0.050	-	1.047	1.000	-	
2437	6	802.11b	DSSS	22	17.0	16.80	0.19	Left	Cheek	2	0181M	1	100.0	0.013	-	1.047	1.000	-	
2437	6	802.11b	DSSS	22	17.0	16.80	0.20	Left	Tilt	2	0181M	1	100.0	0.012	-	1.047	1.000	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-21
NII Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.94	0.18	Right	Cheek	1	0181M	13.5	98.5	0.738	0.305	1.014	1.015	**0.314**	A21
5310	62	802.11n	OFDM	40	14.0	13.94	0.12	Right	Tilt	1	0181M	13.5	98.5	0.579	-	1.014	1.015	-	
5310	62	802.11n	OFDM	40	14.0	13.94	-0.19	Left	Cheek	1	0181M	13.5	98.5	0.194	-	1.014	1.015	-	
5310	62	802.11n	OFDM	40	14.0	13.94	-0.15	Left	Tilt	1	0181M	13.5	98.5	0.230	-	1.014	1.015	-	
5310	62	802.11n	OFDM	40	14.0	13.89	0.14	Right	Cheek	2	0181M	13.5	98.5	0.117	-	1.026	1.015	-	
5310	62	802.11n	OFDM	40	14.0	13.89	0.16	Right	Tilt	2	0181M	13.5	98.5	0.138	0.042	1.026	1.015	0.044	
5310	62	802.11n	OFDM	40	14.0	13.89	0.00	Left	Cheek	2	0181M	13.5	98.5	0.056	-	1.026	1.015	-	
5310	62	802.11n	OFDM	40	14.0	13.89	0.16	Left	Tilt	2	0181M	13.5	98.5	0.055	-	1.026	1.015	-	
5690	138	802.11ac	OFDM	80	14.0	13.85	0.18	Right	Cheek	1	0181M	29.3	95.2	0.253	0.101	1.035	1.050	0.110	
5690	138	802.11ac	OFDM	80	14.0	13.85	0.20	Right	Tilt	1	0181M	29.3	95.2	0.200	-	1.035	1.050	-	
5690	138	802.11ac	OFDM	80	14.0	13.85	-0.19	Left	Cheek	1	0181M	29.3	95.2	0.076	-	1.035	1.050	-	
5690	138	802.11ac	OFDM	80	14.0	13.85	0.00	Left	Tilt	1	0181M	29.3	95.2	0.096	-	1.035	1.050	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.20	Right	Cheek	2	0181M	29.3	97.1	0.065	-	1.012	1.030	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	-0.05	Right	Tilt	2	0181M	29.3	97.1	0.069	0.035	1.012	1.030	0.036	
5610	122	802.11ac	OFDM	80	14.0	13.95	0.12	Left	Cheek	2	0181M	29.3	97.1	0.043	-	1.012	1.030	-	
5610	122	802.11ac	OFDM	80	14.0	13.95	-0.19	Left	Tilt	2	0181M	29.3	97.1	0.065	-	1.012	1.030	-	
5775	155	802.11ac	OFDM	80	14.0	13.50	0.09	Right	Cheek	1	0181M	29.3	95.2	0.104	0.044	1.122	1.050	0.052	
5775	155	802.11ac	OFDM	80	14.0	13.50	-0.16	Right	Tilt	1	0181M	29.3	95.2	0.082	-	1.122	1.050	-	
5775	155	802.11ac	OFDM	80	14.0	13.50	0.16	Left	Cheek	1	0181M	29.3	95.2	0.049	-	1.122	1.050	-	
5775	155	802.11ac	OFDM	80	14.0	13.50	-0.14	Left	Tilt	1	0181M	29.3	95.2	0.050	-	1.122	1.050	-	
5775	155	802.11ac	OFDM	80	14.0	13.65	0.19	Right	Cheek	2	0181M	29.3	97.1	0.055	0.019	1.084	1.030	0.021	
5775	155	802.11ac	OFDM	80	14.0	13.65	0.18	Right	Tilt	2	0181M	29.3	97.1	0.038	-	1.084	1.030	-	
5775	155	802.11ac	OFDM	80	14.0	13.65	0.19	Left	Cheek	2	0181M	29.3	97.1	0.028	-	1.084	1.030	-	
5775	155	802.11ac	OFDM	80	14.0	13.65	0.19	Left	Tilt	2	0181M	29.3	97.1	0.038	-	1.084	1.030	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-22
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)	
2480.00	78	Bluetooth	FHSS	14.0	13.75	0.09	Right	Cheek	0181M	1	77.1	0.265	1.059	1.297	**0.364**	A22
2480.00	78	Bluetooth	FHSS	14.0	13.75	-0.01	Right	Tilt	0181M	1	77.1	0.265	1.059	1.297	0.364	
2480.00	78	Bluetooth	FHSS	14.0	13.75	0.10	Left	Cheek	0181M	1	77.1	0.051	1.059	1.297	0.070	
2480.00	78	Bluetooth	FHSS	14.0	13.75	0.10	Left	Tilt	0181M	1	77.1	0.057	1.059	1.297	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							

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11.2 Standalone Body-Worn SAR Data

Table 11-23
GSM/UMTS/CDMA Body-Worn SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of Time Slots	Ant State	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.0	32.03	0.01	15 mm	0268M	1	N/A	1:8.3	back	0.155	1.250	0.194	A23
1880.00	661	GSM 1900	GSM	30.5	29.60	-0.06	15 mm	0267M	1	N/A	1:8.3	back	0.268	1.230	0.330	A25
836.60	4183	UMTS 850	RMC	25.8	24.62	0.01	15 mm	0268M	N/A	4	1:1	back	0.199	1.312	0.261	A27
1712.40	1312	UMTS 1750	RMC	25.0	23.85	0.01	15 mm	0267M	N/A	28	1:1	back	0.747	1.303	**0.973**	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	0.04	15 mm	0267M	N/A	28	1:1	back	0.754	1.250	0.943	A29
1752.60	1513	UMTS 1750	RMC	25.0	23.83	0.00	15 mm	0267M	N/A	28	1:1	back	0.664	1.309	0.869	
1852.40	9262	UMTS 1900	RMC	25.0	24.40	-0.02	15 mm	0267M	N/A	16	1:1	back	0.743	1.148	0.853	A31
1880.00	9400	UMTS 1900	RMC	25.0	24.48	0.04	15 mm	0267M	N/A	16	1:1	back	0.706	1.127	0.796	
1907.60	9538	UMTS 1900	RMC	25.0	24.62	0.03	15 mm	0267M	N/A	16	1:1	back	0.701	1.091	0.765	
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	25.8	24.53	0.07	15 mm	0268M	N/A	1	1:1	back	0.200	1.340	0.268	A33
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	25.8	24.53	0.01	15 mm	0268M	N/A	1	1:1	back	0.238	1.340	0.319	A35
1851.25	25	PCS CDMA	TDSO / SO32	25.0	24.09	0.00	15 mm	0267M	N/A	17	1:1	back	0.775	1.233	0.956	A37
1880.00	600	PCS CDMA	TDSO / SO32	25.0	24.19	0.09	15 mm	0267M	N/A	17	1:1	back	0.712	1.205	0.858	
1908.75	1175	PCS CDMA	TDSO / SO32	25.0	24.12	0.04	15 mm	0267M	N/A	17	1:1	back	0.674	1.225	0.826	
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 11-24
LTE Body-Worn 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	Ant State	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.18	0	0186M	QPSK	1	50	15 mm	68	back	1:1	0.270	1.035	0.279	A39
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	-0.01	1	0186M	QPSK	50	0	15 mm	68	back	1:1	0.225	1.023	0.230	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.04	0	0186M	QPSK	1	0	15 mm	76	back	1:1	0.235	1.352	0.318	A41
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.00	1	0186M	QPSK	25	0	15 mm	76	back	1:1	0.192	1.309	0.251	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	-0.05	0	0186M	QPSK	1	0	15 mm	1	back	1:1	0.215	1.452	0.312	A43
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	0.01	1	0186M	QPSK	25	0	15 mm	1	back	1:1	0.175	1.400	0.245	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.07	0	0186M	QPSK	1	0	15 mm	2	back	1:1	0.202	1.175	0.237	A45
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.01	1	0186M	QPSK	36	0	15 mm	2	back	1:1	0.167	1.148	0.192	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.04	0.01	0	0228M	QPSK	1	99	15 mm	30	back	1:1	0.672	1.247	0.838	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.03	0	0228M	QPSK	1	99	15 mm	30	back	1:1	0.736	1.180	0.868	A47
1770.00	132572	High	LTE Band 66 (AWS)	20	25.0	24.19	-0.10	0	0228M	QPSK	1	50	15 mm	30	back	1:1	0.690	1.205	0.831	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.05	1	0228M	QPSK	50	25	15 mm	30	back	1:1	0.606	1.138	0.690	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.41	-0.02	1	0228M	QPSK	100	0	15 mm	30	back	1:1	0.590	1.146	0.676	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.00	0	0228M	QPSK	1	99	15 mm	16	back	1:1	0.620	1.297	0.804	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	25.0	23.49	-0.04	0	0228M	QPSK	1	0	15 mm	16	back	1:1	0.639	1.416	0.905	A49
1905.00	26590	High	LTE Band 25 (PCS)	20	25.0	23.31	0.09	0	0228M	QPSK	1	0	15 mm	16	back	1:1	0.611	1.476	0.902	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	0.01	1	0228M	QPSK	50	50	15 mm	16	back	1:1	0.500	1.265	0.633	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.89	0.03	1	0228M	QPSK	100	0	15 mm	16	back	1:1	0.519	1.291	0.670	
1860.00	18700	Low	LTE Band 2 (PCS)	20	25.0	24.41	0.00	0	0228M	QPSK	1	99	15 mm	16	back	1:1	0.706	1.146	0.809	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	-0.01	0	0228M	QPSK	1	0	15 mm	16	back	1:1	0.730	1.127	0.823	A51
1900.00	19100	High	LTE Band 2 (PCS)	20	25.0	24.36	0.03	0	0228M	QPSK	1	0	15 mm	16	back	1:1	0.693	1.159	0.803	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.01	1	0228M	QPSK	50	0	15 mm	16	back	1:1	0.588	1.104	0.649	
1900.00	19100	High	LTE Band 2 (PCS)	20	24.0	23.54	0.07	1	0228M	QPSK	100	0	15 mm	16	back	1:1	0.607	1.112	0.675	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.07	0	0291M	QPSK	1	99	15 mm	N/A	back	1:1	0.311	1.274	0.396	A53
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.08	1	0291M	QPSK	50	50	15 mm	N/A	back	1:1	0.240	1.288	0.309	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	-0.07	0	0291M	QPSK	1	0	15 mm	N/A	back	1:1.58	0.159	1.294	**0.206**	A55
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.07	1	0291M	QPSK	50	0	15 mm	N/A	back	1:1.58	0.130	1.268	0.165	

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Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-25
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)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.02	0	0244M	QPSK	1	0	15 mm	back	1:1.58	0.230	1.321	0.304	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.00	1	0244M	QPSK	50	0	15 mm	back	1:1.58	0.190	1.262	0.240	
1 CC Uplink - Power Class 2	N/A	2636.50	41055	Mid-High	LTE Band 41	20	27.8	26.38	-0.09	0	0244M	QPSK	1	0	15 mm	back	1:2.31	0.305	1.387	0.423	
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.68	-0.05	0	0244M	QPSK	1	0	15 mm	back	1:1.58	0.307	1.076	0.330	
	SCC	2616.70	40857	Mid-High	LTE Band 41	20							1	99							
2 CC Uplink - Power Class 2	PCC	2636.50	41055	Mid-High	LTE Band 41	20	27.8	26.88	-0.14	0	0244M	QPSK	1	0	15 mm	back	1:2.31	0.366	1.236	0.452	A57
	SCC	2616.70	40857	Mid-High	LTE Band 41	20							1	99							

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 11-26
NR Band n41 Body-Worn 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)	
2577.30	515460	NR Band n41	100	24.0	22.56	-0.04	0	0894M	CP-OFDM-QPSK	1	271	15 mm	back	1:4.37	0.073	1.393	0.101	A59
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.21	0	0894M	CP-OFDM-QPSK	137	136	15 mm	back	1:4.37	0.068	1.303	0.088	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-27
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)	
2437	6	802.11b	DSSS	22	20.5	20.23	0.01	15 mm	1	0181M	1	back	100.0	0.124	0.089	1.064	1.000	0.095	A61
2437	6	802.11b	DSSS	22	20.5	20.25	0.13	15 mm	2	0181M	1	back	100.0	0.030	0.018	1.059	1.000	0.019	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-28
NII Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5300	60	802.11a	OFDM	20	18.0	17.68	-0.12	15 mm	1	0221M	6	back	99.3	0.355	0.163	1.076	1.007	0.177	
5300	60	802.11a	OFDM	20	18.0	17.61	-0.04	15 mm	2	0221M	6	back	99.7	0.351	0.156	1.094	1.003	0.171	
5600	120	802.11a	OFDM	20	18.0	17.90	0.03	15 mm	1	0221M	6	back	99.3	0.324	0.139	1.023	1.007	0.143	
5500	100	802.11a	OFDM	20	18.0	17.73	-0.14	15 mm	2	0221M	6	back	99.7	0.506	0.212	1.064	1.003	0.226	
5825	165	802.11a	OFDM	20	18.0	17.68	0.21	15 mm	1	0221M	6	back	99.3	0.156	0.055	1.076	1.007	0.060	
5785	157	802.11a	OFDM	20	18.0	17.89	0.09	15 mm	2	0221M	6	back	99.7	0.574	0.254	1.026	1.003	0.261	A63
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-29
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)	
5270	54	802.11n	OFDM	40	14.0	13.74	14.0	13.88	-0.14	15 mm	MIMO	0221M	27	back	98.7	0.155	0.052	1.062	1.013	0.056	
5610	122	802.11ac	OFDM	80	14.0	13.72	14.0	13.95	0.07	15 mm	MIMO	0221M	58.5	back	94.4	0.283	0.116	1.067	1.059	0.131	
5775	155	802.11ac	OFDM	80	14.0	13.50	14.0	13.65	0.14	15 mm	MIMO	0221M	58.5	back	94.4	0.216	0.075	1.122	1.059	0.089	
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 the above evaluations.

Table 11-30
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)	
2480	78	Bluetooth	FHSS	14.0	13.75	0.19	15 mm	0228M	1	back	77.1	0.019	1.059	1.297	0.026	A65
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram					

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11.3 Standalone Hotspot SAR Data

Table 11-31
GPRS/UMTS/CDMA Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Ant State	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
824.20	128	GSM 850	GPRS	30.5	29.79	-0.01	10 mm	0268M	3	N/A	1:2.76	back	0.411	1.178	0.484	
836.60	190	GSM 850	GPRS	30.5	29.52	-0.06	10 mm	0268M	3	N/A	1:2.76	back	0.519	1.253	0.650	
848.80	251	GSM 850	GPRS	30.5	29.75	-0.13	10 mm	0268M	3	N/A	1:2.76	back	0.549	1.189	0.653	A24
836.60	190	GSM 850	GPRS	30.5	29.52	-0.04	10 mm	0268M	3	N/A	1:2.76	front	0.435	1.253	0.545	
836.60	190	GSM 850	GPRS	30.5	29.52	-0.01	10 mm	0268M	3	N/A	1:2.76	bottom	0.372	1.253	0.466	
836.60	190	GSM 850	GPRS	30.5	29.52	0.06	10 mm	0268M	3	N/A	1:2.76	right	0.263	1.253	0.330	
836.60	190	GSM 850	GPRS	30.5	29.52	0.12	10 mm	0268M	3	N/A	1:2.76	left	0.114	1.253	0.143	
1880.00	661	GSM 1900	GPRS	26.0	25.51	0.00	10 mm	0267M	2	N/A	1:4.15	back	0.358	1.119	0.401	
1880.00	661	GSM 1900	GPRS	26.0	25.51	0.08	10 mm	0267M	2	N/A	1:4.15	front	0.291	1.119	0.326	
1850.20	512	GSM 1900	GPRS	26.0	25.79	-0.03	10 mm	0267M	2	N/A	1:4.15	bottom	0.801	1.050	0.841	
1880.00	661	GSM 1900	GPRS	26.0	25.51	-0.01	10 mm	0267M	2	N/A	1:4.15	bottom	0.875	1.119	0.979	A26
1909.80	810	GSM 1900	GPRS	26.0	25.38	-0.04	10 mm	0267M	2	N/A	1:4.15	bottom	0.773	1.153	0.891	
1880.00	661	GSM 1900	GPRS	26.0	25.51	0.04	10 mm	0267M	2	N/A	1:4.15	right	0.057	1.119	0.064	
1880.00	661	GSM 1900	GPRS	26.0	25.51	-0.15	10 mm	0267M	2	N/A	1:4.15	left	0.045	1.119	0.050	
826.40	4132	UMTS 850	RMC	25.8	24.64	-0.04	10 mm	0268M	N/A	4	1:1	back	0.450	1.306	0.588	
836.60	4183	UMTS 850	RMC	25.8	24.62	-0.02	10 mm	0268M	N/A	4	1:1	back	0.508	1.312	0.666	
846.60	4233	UMTS 850	RMC	25.8	24.83	-0.06	10 mm	0268M	N/A	4	1:1	back	0.515	1.250	0.644	A28
836.60	4183	UMTS 850	RMC	25.8	24.62	0.03	10 mm	0268M	N/A	4	1:1	front	0.426	1.312	0.559	
836.60	4183	UMTS 850	RMC	25.8	24.62	-0.04	10 mm	0268M	N/A	4	1:1	bottom	0.312	1.312	0.409	
836.60	4183	UMTS 850	RMC	25.8	24.62	0.00	10 mm	0268M	N/A	4	1:1	right	0.257	1.312	0.337	
836.60	4183	UMTS 850	RMC	25.8	24.62	0.06	10 mm	0268M	N/A	4	1:1	left	0.097	1.312	0.127	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	-0.01	10 mm	0267M	N/A	28	1:1	back	0.601	1.026	0.617	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	0.01	10 mm	0267M	N/A	28	1:1	front	0.466	1.026	0.478	
1712.40	1312	UMTS 1750	RMC	20.5	20.18	0.00	10 mm	0267M	N/A	28	1:1	bottom	0.802	1.076	0.863	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	0.00	10 mm	0267M	N/A	28	1:1	bottom	0.856	1.026	0.878	
1752.60	1513	UMTS 1750	RMC	20.5	20.25	-0.12	10 mm	0267M	N/A	28	1:1	bottom	0.927	1.059	0.982	A30
1732.40	1412	UMTS 1750	RMC	20.5	20.39	0.01	10 mm	0267M	N/A	28	1:1	right	0.084	1.026	0.086	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	0.02	10 mm	0267M	N/A	28	1:1	left	0.079	1.026	0.081	
1880.00	9400	UMTS 1900	RMC	20.5	19.65	-0.01	10 mm	0267M	N/A	16	1:1	back	0.475	1.216	0.578	
1880.00	9400	UMTS 1900	RMC	20.5	19.65	0.00	10 mm	0267M	N/A	16	1:1	front	0.419	1.216	0.510	
1852.40	9262	UMTS 1900	RMC	20.5	19.53	0.00	10 mm	0267M	N/A	16	1:1	bottom	1.010	1.250	1.263	
1880.00	9400	UMTS 1900	RMC	20.5	19.65	-0.01	10 mm	0267M	N/A	16	1:1	bottom	1.090	1.216	**1.325**	A32
1907.60	9538	UMTS 1900	RMC	20.5	19.68	-0.01	10 mm	0267M	N/A	16	1:1	bottom	1.090	1.208	1.317	
1880.00	9400	UMTS 1900	RMC	20.5	19.65	0.09	10 mm	0267M	N/A	16	1:1	right	0.077	1.216	0.094	
1880.00	9400	UMTS 1900	RMC	20.5	19.65	0.06	10 mm	0267M	N/A	16	1:1	left	0.061	1.216	0.074	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	24.08	-0.01	10 mm	0268M	N/A	1	1:1	back	0.457	1.486	0.679	A34
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	24.08	0.02	10 mm	0268M	N/A	1	1:1	front	0.378	1.486	0.562	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	24.08	0.01	10 mm	0268M	N/A	1	1:1	bottom	0.334	1.486	0.496	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	24.08	0.04	10 mm	0268M	N/A	1	1:1	right	0.208	1.486	0.309	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	25.8	24.08	0.01	10 mm	0268M	N/A	1	1:1	left	0.113	1.486	0.168	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.06	-0.02	10 mm	0268M	N/A	1	1:1	back	0.467	1.493	0.697	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.09	0.00	10 mm	0268M	N/A	1	1:1	back	0.527	1.483	0.782	
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.32	-0.01	10 mm	0268M	N/A	1	1:1	back	0.532	1.406	0.748	A36
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.09	0.04	10 mm	0268M	N/A	1	1:1	front	0.480	1.483	0.712	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.09	-0.04	10 mm	0268M	N/A	1	1:1	bottom	0.436	1.483	0.647	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.09	0.05	10 mm	0268M	N/A	1	1:1	right	0.195	1.483	0.289	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	25.8	24.09	-0.01	10 mm	0268M	N/A	1	1:1	left	0.096	1.483	0.142	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	0.07	10 mm	0267M	N/A	17	1:1	back	0.487	1.089	0.530	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	0.01	10 mm	0267M	N/A	17	1:1	front	0.427	1.089	0.465	
1851.25	25	PCS CDMA	EVDO Rev. 0	20.0	19.47	-0.07	10 mm	0267M	N/A	17	1:1	bottom	1.020	1.130	1.153	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	-0.07	10 mm	0267M	N/A	17	1:1	bottom	1.130	1.089	1.231	A38
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.0	19.55	-0.02	10 mm	0267M	N/A	17	1:1	bottom	1.100	1.109	1.220	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	-0.14	10 mm	0267M	N/A	17	1:1	right	0.083	1.089	0.090	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	-0.03	10 mm	0267M	N/A	17	1:1	left	0.058	1.089	0.063	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.63	-0.05	10 mm	0267M	N/A	17	1:1	bottom	1.110	1.089	1.209	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram				

Note: Blue entry represents variability measurement

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Table 11-32
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	25.5	25.35	-0.14	0	68	0186M	QPSK	1	50	10 mm	back	1:1	0.372	1.035	0.385	A40
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	-0.01	1	68	0186M	QPSK	50	0	10 mm	back	1:1	0.314	1.023	0.321	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.12	0	68	0186M	QPSK	1	50	10 mm	front	1:1	0.284	1.035	0.294	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	-0.14	1	68	0186M	QPSK	50	0	10 mm	front	1:1	0.259	1.023	0.265	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	0.01	0	68	0186M	QPSK	1	50	10 mm	bottom	1:1	0.194	1.035	0.201	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.09	1	68	0186M	QPSK	50	0	10 mm	bottom	1:1	0.159	1.023	0.163	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	-0.14	0	68	0186M	QPSK	1	50	10 mm	right	1:1	0.300	1.035	0.311	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.00	1	68	0186M	QPSK	50	0	10 mm	right	1:1	0.215	1.023	0.220	
680.50	133297	Mid	LTE Band 71	20	25.5	25.35	0.08	0	68	0186M	QPSK	1	50	10 mm	left	1:1	0.183	1.035	0.189	
680.50	133297	Mid	LTE Band 71	20	24.5	24.40	0.04	1	68	0186M	QPSK	50	0	10 mm	left	1:1	0.138	1.023	0.141	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-33
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	24.49	-0.09	0	76	0186M	QPSK	1	0	10 mm	back	1:1	0.318	1.352	0.430	A42
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.00	1	76	0186M	QPSK	25	0	10 mm	back	1:1	0.262	1.309	0.343	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.01	0	76	0186M	QPSK	1	0	10 mm	front	1:1	0.256	1.352	0.346	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	0.01	1	76	0186M	QPSK	25	0	10 mm	front	1:1	0.210	1.309	0.275	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	-0.12	0	76	0186M	QPSK	1	0	10 mm	bottom	1:1	0.179	1.352	0.242	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	-0.10	1	76	0186M	QPSK	25	0	10 mm	bottom	1:1	0.149	1.309	0.195	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	-0.03	0	76	0186M	QPSK	1	0	10 mm	right	1:1	0.269	1.352	0.364	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	-0.02	1	76	0186M	QPSK	25	0	10 mm	right	1:1	0.204	1.309	0.267	
707.50	23095	Mid	LTE Band 12	10	25.8	24.49	0.14	0	76	0186M	QPSK	1	0	10 mm	left	1:1	0.163	1.352	0.220	
707.50	23095	Mid	LTE Band 12	10	24.8	23.63	-0.01	1	76	0186M	QPSK	25	0	10 mm	left	1:1	0.126	1.309	0.165	
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 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	24.18	-0.07	0	1	0186M	QPSK	1	0	10 mm	back	1:1	0.316	1.452	0.459	A44
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	-0.07	1	1	0186M	QPSK	25	0	10 mm	back	1:1	0.263	1.400	0.368	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	0.02	0	1	0186M	QPSK	1	0	10 mm	front	1:1	0.281	1.452	0.408	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	-0.02	1	1	0186M	QPSK	25	0	10 mm	front	1:1	0.235	1.400	0.329	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	-0.07	0	1	0186M	QPSK	1	0	10 mm	bottom	1:1	0.189	1.452	0.274	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	-0.09	1	1	0186M	QPSK	25	0	10 mm	bottom	1:1	0.158	1.400	0.221	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	-0.04	0	1	0186M	QPSK	1	0	10 mm	right	1:1	0.243	1.452	0.353	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	-0.05	1	1	0186M	QPSK	25	0	10 mm	right	1:1	0.194	1.400	0.272	
782.00	23230	Mid	LTE Band 13	10	25.8	24.18	0.01	0	1	0186M	QPSK	1	0	10 mm	left	1:1	0.130	1.452	0.189	
782.00	23230	Mid	LTE Band 13	10	24.8	23.34	-0.21	1	1	0186M	QPSK	25	0	10 mm	left	1:1	0.099	1.400	0.139	
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 11-35
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.01	0	2	0186M	QPSK	1	0	10 mm	back	1:1	0.519	1.175	0.610	A46
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	-0.03	1	2	0186M	QPSK	36	0	10 mm	back	1:1	0.432	1.148	0.496	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.09	0	2	0186M	QPSK	1	0	10 mm	front	1:1	0.389	1.175	0.457	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.05	1	2	0186M	QPSK	36	0	10 mm	front	1:1	0.323	1.148	0.371	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	-0.10	0	2	0186M	QPSK	1	0	10 mm	bottom	1:1	0.332	1.175	0.390	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	-0.04	1	2	0186M	QPSK	36	0	10 mm	bottom	1:1	0.263	1.148	0.302	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.04	0	2	0186M	QPSK	1	0	10 mm	right	1:1	0.178	1.175	0.209	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.05	1	2	0186M	QPSK	36	0	10 mm	right	1:1	0.151	1.148	0.173	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	25.10	0.05	0	2	0186M	QPSK	1	0	10 mm	left	1:1	0.086	1.175	0.101	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	24.20	0.06	1	2	0186M	QPSK	36	0	10 mm	left	1:1	0.077	1.148	0.088	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-36
LTE Band 66 (AWS) 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.06	0	30	0228M	QPSK	1	0	10 mm	back	1:1	0.437	1.109	0.485	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.05	0	30	0228M	QPSK	50	0	10 mm	back	1:1	0.462	1.094	0.505	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	0.01	0	30	0228M	QPSK	1	0	10 mm	front	1:1	0.385	1.109	0.427	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	0.03	0	30	0228M	QPSK	50	0	10 mm	front	1:1	0.421	1.094	0.461	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.01	0	30	0228M	QPSK	1	0	10 mm	bottom	1:1	0.896	1.109	0.994	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.42	-0.09	0	30	0228M	QPSK	1	0	10 mm	bottom	1:1	0.944	1.143	1.079	
1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.41	-0.03	0	30	0228M	QPSK	1	0	10 mm	bottom	1:1	1.000	1.146	1.146	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.03	0	30	0228M	QPSK	50	0	10 mm	bottom	1:1	0.935	1.094	1.023	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.59	0.12	0	30	0228M	QPSK	50	0	10 mm	bottom	1:1	1.000	1.099	1.099	
1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.47	-0.03	0	30	0228M	QPSK	50	0	10 mm	bottom	1:1	0.975	1.130	1.102	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.53	-0.03	0	30	0228M	QPSK	100	0	10 mm	bottom	1:1	1.020	1.114	1.136	A48
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.05	0	30	0228M	QPSK	1	0	10 mm	right	1:1	0.075	1.109	0.083	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.13	0	30	0228M	QPSK	50	0	10 mm	right	1:1	0.082	1.094	0.090	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.02	0	30	0228M	QPSK	1	0	10 mm	left	1:1	0.090	1.109	0.100	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	0.01	0	30	0228M	QPSK	50	0	10 mm	left	1:1	0.095	1.094	0.104	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.53	-0.05	0	30	0228M	QPSK	100	0	10 mm	bottom	1:1	0.890	1.114	0.991	
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 11-37
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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.85	0.05	0	16	0228M	QPSK	1	0	10 mm	back	1:1	0.403	1.161	0.468	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.98	0.06	0	16	0228M	QPSK	50	0	10 mm	back	1:1	0.417	1.127	0.470	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.85	-0.05	0	16	0228M	QPSK	1	0	10 mm	front	1:1	0.360	1.161	0.418	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.98	-0.01	0	16	0228M	QPSK	50	0	10 mm	front	1:1	0.360	1.127	0.406	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.80	0.13	0	16	0228M	QPSK	1	0	10 mm	bottom	1:1	0.942	1.175	1.107	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.85	-0.02	0	16	0228M	QPSK	1	0	10 mm	bottom	1:1	0.989	1.161	1.148	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.76	-0.15	0	16	0228M	QPSK	1	99	10 mm	bottom	1:1	0.917	1.186	1.088	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.92	-0.02	0	16	0228M	QPSK	50	0	10 mm	bottom	1:1	0.942	1.143	1.077	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.98	-0.03	0	16	0228M	QPSK	50	0	10 mm	bottom	1:1	0.995	1.127	1.121	A50
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.91	-0.05	0	16	0228M	QPSK	50	50	10 mm	bottom	1:1	0.956	1.146	1.096	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.82	-0.08	0	16	0228M	QPSK	100	0	10 mm	bottom	1:1	0.975	1.169	1.140	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.85	-0.11	0	16	0228M	QPSK	1	0	10 mm	right	1:1	0.063	1.161	0.073	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.98	-0.01	0	16	0228M	QPSK	50	0	10 mm	right	1:1	0.063	1.127	0.071	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.85	-0.02	0	16	0228M	QPSK	1	0	10 mm	left	1:1	0.053	1.161	0.062	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.98	0.12	0	16	0228M	QPSK	50	0	10 mm	left	1:1	0.054	1.127	0.061	
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
LTE Band 2 (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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.70	0.04	0	16	0228M	QPSK	1	99	10 mm	back	1:1	0.394	1.202	0.474	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.75	0.07	0	16	0228M	QPSK	50	50	10 mm	back	1:1	0.408	1.189	0.485	
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.70	0.00	0	16	0228M	QPSK	1	99	10 mm	front	1:1	0.343	1.202	0.412	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.75	0.01	0	16	0228M	QPSK	50	50	10 mm	front	1:1	0.352	1.189	0.419	
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.70	-0.04	0	16	0228M	QPSK	1	99	10 mm	bottom	1:1	0.903	1.202	1.085	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.61	-0.04	0	16	0228M	QPSK	1	50	10 mm	bottom	1:1	0.919	1.227	1.128	
1900.00	19100	High	LTE Band 2 (PCS)	20	20.5	19.44	-0.04	0	16	0228M	QPSK	1	99	10 mm	bottom	1:1	0.903	1.276	1.152	
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.65	-0.02	0	16	0228M	QPSK	50	50	10 mm	bottom	1:1	0.914	1.216	1.111	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.75	-0.01	0	16	0228M	QPSK	50	50	10 mm	bottom	1:1	0.977	1.189	1.162	A52
1900.00	19100	High	LTE Band 2 (PCS)	20	20.5	19.61	-0.03	0	16	0228M	QPSK	50	50	10 mm	bottom	1:1	0.935	1.227	1.147	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.69	-0.03	0	16	0228M	QPSK	100	0	10 mm	bottom	1:1	0.947	1.205	1.141	
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.70	0.05	0	16	0228M	QPSK	1	99	10 mm	right	1:1	0.062	1.202	0.075	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.75	-0.02	0	16	0228M	QPSK	50	50	10 mm	right	1:1	0.063	1.189	0.075	
1860.00	18700	Low	LTE Band 2 (PCS)	20	20.5	19.70	-0.17	0	16	0228M	QPSK	1	99	10 mm	left	1:1	0.057	1.202	0.069	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	20.5	19.75	0.02	0	16	0228M	QPSK	50	50	10 mm	left	1:1	0.062	1.189	0.074	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-39
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	21.0	19.93	0.04	0	0291M	QPSK	1	99	10 mm	back	1:1	0.317	1.279	0.405	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	0.04	0	0291M	QPSK	50	50	10 mm	back	1:1	0.314	1.268	0.398	
2560.00	21350	High	LTE Band 7	20	21.0	19.93	0.04	0	0291M	QPSK	1	99	10 mm	front	1:1	0.333	1.279	0.426	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	0.05	0	0291M	QPSK	50	50	10 mm	front	1:1	0.327	1.268	0.415	
2510.00	20850	Low	LTE Band 7	20	21.0	19.72	0.13	0	0291M	QPSK	1	0	10 mm	bottom	1:1	0.607	1.343	0.815	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.73	0.16	0	0291M	QPSK	1	0	10 mm	bottom	1:1	0.621	1.340	0.832	
2560.00	21350	High	LTE Band 7	20	21.0	19.93	-0.04	0	0291M	QPSK	1	99	10 mm	bottom	1:1	0.658	1.279	0.842	
2510.00	20850	Low	LTE Band 7	20	21.0	19.78	0.14	0	0291M	QPSK	50	0	10 mm	bottom	1:1	0.603	1.324	0.798	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.80	0.18	0	0291M	QPSK	50	0	10 mm	bottom	1:1	0.652	1.318	0.859	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	-0.03	0	0291M	QPSK	50	50	10 mm	bottom	1:1	0.659	1.268	0.836	
2560.00	21350	High	LTE Band 7	20	21.0	19.86	-0.03	0	0291M	QPSK	100	0	10 mm	bottom	1:1	0.662	1.300	0.861	A54
2560.00	21350	High	LTE Band 7	20	21.0	19.93	0.04	0	0291M	QPSK	1	99	10 mm	left	1:1	0.146	1.279	0.187	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	0.06	0	0291M	QPSK	50	50	10 mm	left	1:1	0.144	1.268	0.183	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-40
LTE Band 48 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)	
3690.00	56640	High	LTE Band 48	20	21.0	20.09	0.02	0	0291M	QPSK	1	0	10 mm	back	1:1.58	0.161	1.233	0.199	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	-0.08	0	0291M	QPSK	50	0	10 mm	back	1:1.58	0.159	1.205	0.192	
3690.00	56640	High	LTE Band 48	20	21.0	20.09	-0.03	0	0291M	QPSK	1	0	10 mm	front	1:1.58	0.135	1.233	0.166	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	-0.04	0	0291M	QPSK	50	0	10 mm	front	1:1.58	0.136	1.205	0.164	
3690.00	56640	High	LTE Band 48	20	21.0	20.09	0.03	0	0291M	QPSK	1	0	10 mm	bottom	1:1.58	0.267	1.233	0.329	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	-0.10	0	0291M	QPSK	50	0	10 mm	bottom	1:1.58	0.275	1.205	**0.331**	A56
3690.00	56640	High	LTE Band 48	20	21.0	20.09	0.13	0	0291M	QPSK	1	0	10 mm	left	1:1.58	0.054	1.233	0.067	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	0.17	0	0291M	QPSK	50	0	10 mm	left	1:1.58	0.052	1.205	0.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-41
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	-0.01	0	0244M	QPSK	1	0	10 mm	back	1:1.58	0.287	1.253	0.360	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	0.00	0	0244M	QPSK	50	0	10 mm	back	1:1.58	0.307	1.199	0.368	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	-0.11	0	0244M	QPSK	1	0	10 mm	front	1:1.58	0.243	1.253	0.304	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	-0.01	0	0244M	QPSK	50	0	10 mm	front	1:1.58	0.254	1.199	0.305	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	-0.20	0	0244M	QPSK	1	0	10 mm	bottom	1:1.58	0.390	1.253	0.489	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	0.13	0	0244M	QPSK	50	0	10 mm	bottom	1:1.58	0.409	1.199	0.490	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.08	-0.03	0	0244M	QPSK	50	0	10 mm	bottom	1:2.31	0.271	1.236	0.335	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	23.0	22.80	-0.12	0	0244M	QPSK	50	0	10 mm	bottom	1:1.58	0.488	1.047	0.511	A58
	SCC	2573.20	40422	Mid	LTE Band 41	20							50	50							
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	23.0	22.80	-0.20	0	0244M	QPSK	50	0	10 mm	bottom	1:2.31	0.334	1.047	0.350	
	SCC	2573.20	40422	Mid	LTE Band 41	20							50	50							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	0.00	0	0244M	QPSK	1	0	10 mm	left	1:1.58	0.143	1.253	0.179	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	0.04	0	0244M	QPSK	50	0	10 mm	left	1:1.58	0.152	1.199	0.182	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram						

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Table 11-42
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)	
2577.30	515460	NR Band n41	100	24.0	22.56	0.12	0	0894M	CP-OFDM-QPSK	1	271	10 mm	back	1:4.37	0.153	1.393	0.213	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.00	0	0894M	CP-OFDM-QPSK	137	136	10 mm	back	1:4.37	0.131	1.303	0.171	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.56	0.00	0	0894M	CP-OFDM-QPSK	1	271	10 mm	front	1:4.37	0.122	1.393	0.170	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.07	0	0894M	CP-OFDM-QPSK	137	136	10 mm	front	1:4.37	0.120	1.303	0.156	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.56	-0.03	0	0894M	CP-OFDM-QPSK	1	271	10 mm	top	1:4.37	0.214	1.393	0.298	A60
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.04	0	0894M	CP-OFDM-QPSK	137	136	10 mm	top	1:4.37	0.198	1.303	0.258	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.56	-0.06	0	0894M	CP-OFDM-QPSK	1	271	10 mm	bottom	1:4.37	0.197	1.393	0.274	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.02	0	0894M	CP-OFDM-QPSK	137	136	10 mm	bottom	1:4.37	0.190	1.303	0.248	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.56	-0.08	0	0894M	CP-OFDM-QPSK	1	271	10 mm	left	1:4.37	0.089	1.393	0.124	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
2577.30	515460	NR Band n41	100	24.0	22.85	0.20	0	0894M	CP-OFDM-QPSK	137	136	10 mm	left	1:4.37	0.076	1.303	0.099	
2633.10	41021	LTE Band 41	20	24.0	23.62		0		QPSK	1	50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-43
WLAN Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	20.5	20.23	0.12	10 mm	1	0181M	1	back	100.0	0.324	0.192	1.064	1.000	0.204	
2437	6	802.11b	DSSS	22	20.5	20.23	0.17	10 mm	1	0181M	1	front	100.0	0.259	-	1.064	1.000	-	
2437	6	802.11b	DSSS	22	20.5	20.23	0.20	10 mm	1	0181M	1	top	100.0	0.220	-	1.064	1.000	-	
2437	6	802.11b	DSSS	22	20.5	20.23	0.18	10 mm	1	0181M	1	left	100.0	0.336	0.205	1.064	1.000	**0.218**	A62
2437	6	802.11b	DSSS	22	20.5	20.25	0.18	10 mm	2	0181M	1	back	100.0	0.090	0.057	1.059	1.000	0.060	
2437	6	802.11b	DSSS	22	20.5	20.25	0.14	10 mm	2	0181M	1	front	100.0	0.015	-	1.059	1.000	-	
2437	6	802.11b	DSSS	22	20.5	20.25	0.19	10 mm	2	0181M	1	top	100.0	0.006	-	1.059	1.000	-	
2437	6	802.11b	DSSS	22	20.5	20.25	0.20	10 mm	2	0181M	1	left	100.0	0.032	-	1.059	1.000	-	
5825	165	802.11a	OFDM	20	18.0	17.68	0.13	10 mm	1	0221M	6	back	99.3	0.247	0.100	1.076	1.007	0.108	
5825	165	802.11a	OFDM	20	18.0	17.68	0.19	10 mm	1	0221M	6	front	99.3	0.054	-	1.076	1.007	-	
5825	165	802.11a	OFDM	20	18.0	17.68	0.19	10 mm	1	0221M	6	top	99.3	0.162	-	1.076	1.007	-	
5825	165	802.11a	OFDM	20	18.0	17.68	0.19	10 mm	1	0221M	6	left	99.3	0.109	-	1.076	1.007	-	
5785	157	802.11a	OFDM	20	18.0	17.89	0.03	10 mm	2	0221M	6	back	99.7	0.722	0.352	1.026	1.003	**0.362**	A64
5785	157	802.11a	OFDM	20	18.0	17.89	0.00	10 mm	2	0221M	6	front	99.7	0.062	-	1.026	1.003	-	
5785	157	802.11a	OFDM	20	18.0	17.89	0.19	10 mm	2	0221M	6	top	99.7	0.094	-	1.026	1.003	-	
5785	157	802.11a	OFDM	20	18.0	17.89	-0.18	10 mm	2	0221M	6	left	99.7	0.538	-	1.026	1.003	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-44
WLAN MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan 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	13.50	14.0	13.65	0.01	10 mm	MIMO	0221M	58.5	back	94.4	0.301	0.119	1.122	1.059	0.141	
5775	155	802.11ac	OFDM	80	14.0	13.50	14.0	13.65	0.21	10 mm	MIMO	0221M	58.5	front	94.4	0.022	-	1.122	1.059	-	
5775	155	802.11ac	OFDM	80	14.0	13.50	14.0	13.65	0.19	10 mm	MIMO	0221M	58.5	top	94.4	0.073	-	1.122	1.059	-	
5775	155	802.11ac	OFDM	80	14.0	13.50	14.0	13.65	0.21	10 mm	MIMO	0221M	58.5	left	94.4	0.220	-	1.122	1.059	-	
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 the above evaluations.

Table 11-45
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) (W/kg)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.															
2480	78	Bluetooth	FHSS	14.0	13.75	-0.15	10 mm	0228M	1	back	77.1	0.038	1.059	1.297	0.052	
2480	78	Bluetooth	FHSS	14.0	13.75	0.16	10 mm	0228M	1	front	77.1	0.027	1.059	1.297	0.037	
2480	78	Bluetooth	FHSS	14.0	13.75	0.11	10 mm	0228M	1	top	77.1	0.043	1.059	1.297	**0.059**	A66
2480	78	Bluetooth	FHSS	14.0	13.75	0.03	10 mm	0228M	1	left	77.1	0.038	1.059	1.297	0.052	
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 11-46
GPRS/UMTS/CDMA Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Ant State	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GPRS	27.5	26.69	-0.05	7 mm	0267M	3	N/A	1:2.76	back	0.750	1.205	0.904	
1880.00	661	GSM 1900	GPRS	27.5	26.69	0.08	5 mm	0267M	3	N/A	1:2.76	front	0.928	1.205	1.118	
1880.00	661	GSM 1900	GPRS	27.5	26.69	0.01	9 mm	0267M	3	N/A	1:2.76	bottom	1.220	1.205	1.470	
1880.00	661	GSM 1900	GPRS	27.5	26.69	0.05	0 mm	0267M	3	N/A	1:2.76	right	0.341	1.205	0.411	
1880.00	661	GSM 1900	GPRS	27.5	26.69	-0.14	0 mm	0267M	3	N/A	1:2.76	left	0.290	1.205	0.349	
1880.00	661	GSM 1900	GPRS	25.5	25.28	0.02	0 mm	0267M	3	N/A	1:2.76	back	1.520	1.052	1.599	
1880.00	661	GSM 1900	GPRS	25.5	25.28	-0.05	0 mm	0267M	3	N/A	1:2.76	front	1.500	1.052	1.578	
1850.20	512	GSM 1900	GPRS	25.5	25.50	-0.06	0 mm	0267M	3	N/A	1:2.76	bottom	1.840	1.000	1.840	A67
1880.00	661	GSM 1900	GPRS	25.5	25.28	-0.14	0 mm	0267M	3	N/A	1:2.76	bottom	1.530	1.052	1.610	
1909.80	810	GSM 1900	GPRS	25.5	25.09	-0.03	0 mm	0267M	3	N/A	1:2.76	bottom	1.680	1.099	1.846	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	0.07	7 mm	0267M	N/A	28	1:1	back	0.649	1.250	0.811	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	-0.16	5 mm	0267M	N/A	28	1:1	front	0.808	1.250	1.010	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	-0.11	9 mm	0267M	N/A	28	1:1	bottom	0.864	1.250	1.080	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	-0.04	0 mm	0267M	N/A	28	1:1	right	0.296	1.250	0.370	
1732.40	1412	UMTS 1750	RMC	25.0	24.03	-0.13	0 mm	0267M	N/A	28	1:1	left	0.305	1.250	0.381	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	0.00	0 mm	0267M	N/A	28	1:1	back	1.180	1.026	1.211	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	-0.04	0 mm	0267M	N/A	28	1:1	front	1.050	1.026	1.077	
1712.40	1312	UMTS 1750	RMC	20.5	20.18	-0.10	0 mm	0267M	N/A	28	1:1	bottom	1.970	1.076	2.120	
1732.40	1412	UMTS 1750	RMC	20.5	20.39	-0.07	0 mm	0267M	N/A	28	1:1	bottom	2.110	1.026	2.165	A68
1752.60	1513	UMTS 1750	RMC	20.5	20.25	-0.09	0 mm	0267M	N/A	28	1:1	bottom	1.990	1.059	2.107	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	0.02	7 mm	0267M	N/A	16	1:1	back	1.040	1.127	1.172	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	0.00	5 mm	0267M	N/A	16	1:1	front	1.420	1.127	1.600	
1852.40	9262	UMTS 1900	RMC	25.0	24.40	0.01	9 mm	0267M	N/A	16	1:1	bottom	1.780	1.148	2.043	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	-0.07	9 mm	0267M	N/A	16	1:1	bottom	1.960	1.127	2.209	
1907.60	9538	UMTS 1900	RMC	25.0	24.62	-0.01	9 mm	0267M	N/A	16	1:1	bottom	1.880	1.091	2.051	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	0.04	0 mm	0267M	N/A	16	1:1	right	0.625	1.127	0.704	
1880.00	9400	UMTS 1900	RMC	25.0	24.48	-0.06	0 mm	0267M	N/A	16	1:1	left	0.449	1.127	0.506	
1852.40	9262	UMTS 1900	RMC	21.5	20.84	-0.02	0 mm	0267M	N/A	16	1:1	back	2.020	1.164	2.351	
1880.00	9400	UMTS 1900	RMC	21.5	21.37	0.01	0 mm	0267M	N/A	16	1:1	back	2.120	1.030	2.184	A69
1907.60	9538	UMTS 1900	RMC	21.5	21.47	0.03	0 mm	0267M	N/A	16	1:1	back	2.050	1.007	2.064	
1907.60	9538	UMTS 1900	RMC	21.5	21.47	-0.08	0 mm	0267M	N/A	16	1:1	front	1.970	1.007	1.984	
1907.60	9538	UMTS 1900	RMC	21.5	21.47	-0.04	0 mm	0267M	N/A	16	1:1	bottom	1.980	1.007	1.994	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.30	0.03	7 mm	0267M	N/A	17	1:1	back	1.030	1.175	1.210	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.30	-0.03	5 mm	0267M	N/A	17	1:1	front	1.340	1.175	1.575	
1851.25	25	PCS CDMA	EVDO Rev. 0	25.0	24.26	-0.11	9 mm	0267M	N/A	17	1:1	bottom	1.730	1.186	2.052	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.30	-0.02	9 mm	0267M	N/A	17	1:1	bottom	1.790	1.175	2.103	
1908.75	1175	PCS CDMA	EVDO Rev. 0	25.0	24.11	-0.04	9 mm	0267M	N/A	17	1:1	bottom	1.520	1.227	1.865	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.30	-0.10	0 mm	0267M	N/A	17	1:1	right	0.550	1.175	0.646	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.30	-0.03	0 mm	0267M	N/A	17	1:1	left	0.439	1.175	0.516	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.65	0.05	0 mm	0267M	N/A	17	1:1	back	1.820	1.084	1.973	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.65	-0.16	0 mm	0267M	N/A	17	1:1	front	1.720	1.084	1.864	
1851.25	25	PCS CDMA	EVDO Rev. 0	21.0	20.51	-0.19	0 mm	0267M	N/A	17	1:1	bottom	2.090	1.119	2.339	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.65	-0.15	0 mm	0267M	N/A	17	1:1	bottom	2.110	1.084	2.287	A70
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	20.54	-0.11	0 mm	0267M	N/A	17	1:1	bottom	1.870	1.112	2.079	
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 11-47
LTE Band 66 Phablet 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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.03	0	30	0228M	QPSK	1	99	7 mm	back	1:1	0.943	1.180	1.113	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.01	1	30	0228M	QPSK	50	25	7 mm	back	1:1	0.766	1.138	0.872	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.06	0	30	0228M	QPSK	1	99	5 mm	front	1:1	1.290	1.180	1.522	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.08	1	30	0228M	QPSK	50	25	5 mm	front	1:1	1.010	1.138	1.149	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.06	0	30	0228M	QPSK	1	99	9 mm	bottom	1:1	1.440	1.180	1.699	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.06	1	30	0228M	QPSK	50	25	9 mm	bottom	1:1	1.180	1.138	1.343	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.02	0	30	0228M	QPSK	1	99	0 mm	right	1:1	0.391	1.180	0.461	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.09	1	30	0228M	QPSK	50	25	0 mm	right	1:1	0.329	1.138	0.374	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.28	-0.16	0	30	0228M	QPSK	1	99	0 mm	left	1:1	0.511	1.180	0.603	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.44	-0.06	1	30	0228M	QPSK	50	25	0 mm	left	1:1	0.419	1.138	0.477	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.09	0	30	0228M	QPSK	1	0	0 mm	back	1:1	1.430	1.109	1.586	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.01	0	30	0228M	QPSK	50	0	0 mm	back	1:1	1.500	1.094	1.641	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.05	0	30	0228M	QPSK	1	0	0 mm	front	1:1	1.210	1.109	1.342	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.04	0	30	0228M	QPSK	50	0	0 mm	front	1:1	1.270	1.094	1.389	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.55	-0.10	0	30	0228M	QPSK	1	0	0 mm	bottom	1:1	2.060	1.109	2.285	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.42	-0.11	0	30	0228M	QPSK	1	0	0 mm	bottom	1:1	2.110	1.143	2.412	
1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.41	-0.14	0	30	0228M	QPSK	1	0	0 mm	bottom	1:1	2.090	1.146	2.395	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	20.61	-0.12	0	30	0228M	QPSK	50	0	0 mm	bottom	1:1	2.150	1.094	2.352	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.59	-0.04	0	30	0228M	QPSK	50	0	0 mm	bottom	1:1	2.350	1.099	2.583	A71
1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	20.47	-0.12	0	30	0228M	QPSK	50	0	0 mm	bottom	1:1	2.110	1.130	2.384	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.53	-0.11	0	30	0228M	QPSK	100	0	0 mm	bottom	1:1	2.040	1.114	2.273	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	20.59	-0.11	0	30	0228M	QPSK	50	0	0 mm	bottom	1:1	2.220	1.099	2.440	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entry represents variability measurement

Table 11-48
LTE Band 66 Phablet SAR for Conditions with 5G NR

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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.77	-0.04	0	30	0228M	QPSK	1	99	0 mm	back	1:1	0.922	1.054	0.972	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.63	-0.07	0	30	0228M	QPSK	50	50	0 mm	back	1:1	0.894	1.089	0.974	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.77	-0.03	0	30	0228M	QPSK	1	99	0 mm	front	1:1	0.949	1.054	1.000	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.63	-0.02	0	30	0228M	QPSK	50	50	0 mm	front	1:1	0.851	1.089	0.927	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.77	0.07	0	30	0228M	QPSK	1	99	0 mm	bottom	1:1	1.480	1.054	1.560	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.0	18.63	0.02	0	30	0228M	QPSK	50	50	0 mm	bottom	1:1	1.440	1.089	1.568	
																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-49
LTE Band 25 Phablet 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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.00	0	16	0228M	QPSK	1	99	7 mm	back	1:1	0.946	1.297	1.227	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	-0.02	1	16	0228M	QPSK	50	50	7 mm	back	1:1	0.777	1.265	0.983	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.05	0	16	0228M	QPSK	1	99	5 mm	front	1:1	1.310	1.297	1.699	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	-0.01	1	16	0228M	QPSK	50	50	5 mm	front	1:1	1.070	1.265	1.354	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	-0.07	0	16	0228M	QPSK	1	99	9 mm	bottom	1:1	1.660	1.297	2.153	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	25.0	23.49	-0.02	0	16	0228M	QPSK	1	0	9 mm	bottom	1:1	1.720	1.416	2.436	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.0	23.31	-0.03	0	16	0228M	QPSK	1	0	9 mm	bottom	1:1	1.660	1.476	2.450	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	-0.01	1	16	0228M	QPSK	50	50	9 mm	bottom	1:1	1.330	1.265	1.682	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.89	0.00	1	16	0228M	QPSK	100	0	9 mm	bottom	1:1	1.280	1.291	1.652	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	0.09	0	16	0228M	QPSK	1	99	0 mm	right	1:1	0.521	1.297	0.676	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	0.04	1	16	0228M	QPSK	50	50	0 mm	right	1:1	0.402	1.265	0.509	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	23.87	-0.15	0	16	0228M	QPSK	1	99	0 mm	left	1:1	0.454	1.297	0.589	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	22.98	-0.10	1	16	0228M	QPSK	50	50	0 mm	left	1:1	0.361	1.265	0.457	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.09	-0.02	0	16	0228M	QPSK	1	0	0 mm	back	1:1	1.750	1.233	2.158	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.28	0.03	0	16	0228M	QPSK	1	50	0 mm	back	1:1	1.830	1.180	2.159	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.16	-0.01	0	16	0228M	QPSK	1	50	0 mm	back	1:1	1.790	1.213	2.171	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.18	0.01	0	16	0228M	QPSK	50	25	0 mm	back	1:1	1.820	1.208	2.199	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.20	0.02	0	16	0228M	QPSK	50	50	0 mm	back	1:1	1.890	1.202	2.272	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.18	0.03	0	16	0228M	QPSK	50	25	0 mm	back	1:1	1.850	1.208	2.235	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.09	0.01	0	16	0228M	QPSK	100	0	0 mm	back	1:1	1.870	1.233	2.306	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.09	-0.07	0	16	0228M	QPSK	1	0	0 mm	front	1:1	1.920	1.233	2.367	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.28	-0.03	0	16	0228M	QPSK	1	50	0 mm	front	1:1	1.880	1.180	2.218	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.16	-0.07	0	16	0228M	QPSK	1	50	0 mm	front	1:1	1.800	1.213	2.183	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.18	-0.01	0	16	0228M	QPSK	50	25	0 mm	front	1:1	1.920	1.208	2.319	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.20	-0.02	0	16	0228M	QPSK	50	50	0 mm	front	1:1	1.940	1.202	2.332	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.18	-0.06	0	16	0228M	QPSK	50	25	0 mm	front	1:1	1.860	1.208	2.247	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.09	-0.01	0	16	0228M	QPSK	100	0	0 mm	front	1:1	1.920	1.233	2.367	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.09	0.01	0	16	0228M	QPSK	1	0	0 mm	bottom	1:1	2.640	1.233	3.255	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.28	-0.03	0	16	0228M	QPSK	1	50	0 mm	bottom	1:1	2.560	1.180	3.021	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.16	0.01	0	16	0228M	QPSK	1	50	0 mm	bottom	1:1	2.700	1.213	3.275	
1860.00	26140	Low	LTE Band 25 (PCS)	20	22.0	21.18	-0.02	0	16	0228M	QPSK	50	25	0 mm	bottom	1:1	2.650	1.208	3.201	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.20	0.01	0	16	0228M	QPSK	50	50	0 mm	bottom	1:1	2.670	1.202	3.209	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.18	-0.05	0	16	0228M	QPSK	50	25	0 mm	bottom	1:1	2.730	1.208	**3.298**	A72
1882.50	26365	Mid	LTE Band 25 (PCS)	20	22.0	21.09	0.00	0	16	0228M	QPSK	100	0	0 mm	bottom	1:1	2.660	1.233	3.280	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.0	21.18	0.03	0	16	0228M	QPSK	50	25	0 mm	bottom	1:1	2.720	1.208	3.286	
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 11-50
LTE Band 2 Phablet 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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.10	0	16	0228M	QPSK	1	0	7 mm	back	1:1	1.140	1.127	1.285	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.06	1	16	0228M	QPSK	50	0	7 mm	back	1:1	0.916	1.104	1.011	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.07	0	16	0228M	QPSK	1	0	5 mm	front	1:1	1.530	1.127	1.724	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.00	1	16	0228M	QPSK	50	0	5 mm	front	1:1	1.250	1.104	1.380	
1860.00	18700	Low	LTE Band 2 (PCS)	20	25.0	24.41	-0.06	0	16	0228M	QPSK	1	99	9 mm	bottom	1:1	1.900	1.146	2.177	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	-0.04	0	16	0228M	QPSK	1	0	9 mm	bottom	1:1	1.970	1.127	2.220	
1900.00	19100	High	LTE Band 2 (PCS)	20	25.0	24.36	-0.10	0	16	0228M	QPSK	1	0	9 mm	bottom	1:1	2.010	1.159	2.330	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	-0.01	1	16	0228M	QPSK	50	0	9 mm	bottom	1:1	1.590	1.104	1.755	
1900.00	19100	High	LTE Band 2 (PCS)	20	24.0	23.54	-0.03	1	16	0228M	QPSK	100	0	9 mm	bottom	1:1	1.570	1.112	1.746	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	0.15	0	16	0228M	QPSK	1	0	0 mm	right	1:1	0.592	1.127	0.667	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	0.01	1	16	0228M	QPSK	50	0	0 mm	right	1:1	0.502	1.104	0.554	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	25.0	24.48	-0.14	0	16	0228M	QPSK	1	0	0 mm	left	1:1	0.540	1.127	0.609	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	24.0	23.57	-0.15	1	16	0228M	QPSK	50	0	0 mm	left	1:1	0.428	1.104	0.473	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.00	0.01	0	16	0228M	QPSK	1	0	0 mm	back	1:1	1.690	1.259	2.128	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	20.99	0.01	0	16	0228M	QPSK	1	99	0 mm	back	1:1	1.780	1.262	2.246	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.10	0.02	0	16	0228M	QPSK	1	0	0 mm	back	1:1	1.740	1.230	2.140	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.15	0.04	0	16	0228M	QPSK	50	50	0 mm	back	1:1	1.760	1.216	2.140	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.14	0.07	0	16	0228M	QPSK	50	50	0 mm	back	1:1	1.840	1.219	2.243	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.16	0.07	0	16	0228M	QPSK	50	50	0 mm	back	1:1	1.790	1.213	2.171	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.08	0.06	0	16	0228M	QPSK	100	0	0 mm	back	1:1	1.820	1.236	2.250	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.00	-0.08	0	16	0228M	QPSK	1	0	0 mm	front	1:1	2.030	1.259	2.556	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	20.99	-0.02	0	16	0228M	QPSK	1	99	0 mm	front	1:1	1.780	1.262	2.246	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.10	-0.03	0	16	0228M	QPSK	1	0	0 mm	front	1:1	1.800	1.230	2.214	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.15	-0.03	0	16	0228M	QPSK	50	50	0 mm	front	1:1	2.030	1.216	2.468	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.14	-0.04	0	16	0228M	QPSK	50	50	0 mm	front	1:1	2.040	1.219	2.487	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.16	-0.04	0	16	0228M	QPSK	50	50	0 mm	front	1:1	1.800	1.213	2.183	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.08	-0.01	0	16	0228M	QPSK	100	0	0 mm	front	1:1	1.870	1.236	2.311	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.00	-0.11	0	16	0228M	QPSK	1	0	0 mm	bottom	1:1	2.590	1.259	3.261	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	20.99	-0.07	0	16	0228M	QPSK	1	99	0 mm	bottom	1:1	2.500	1.262	3.155	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.10	0.03	0	16	0228M	QPSK	1	0	0 mm	bottom	1:1	2.600	1.230	3.198	
1860.00	18700	Low	LTE Band 2 (PCS)	20	22.0	21.15	0.01	0	16	0228M	QPSK	50	50	0 mm	bottom	1:1	2.710	1.216	**3.295**	A73
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.14	-0.07	0	16	0228M	QPSK	50	50	0 mm	bottom	1:1	2.650	1.219	3.230	
1900.00	19100	High	LTE Band 2 (PCS)	20	22.0	21.16	-0.02	0	16	0228M	QPSK	50	50	0 mm	bottom	1:1	2.650	1.213	3.214	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	22.0	21.08	-0.05	0	16	0228M	QPSK	100	0	0 mm	bottom	1:1	2.630	1.236	3.251	
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 11-51
LTE Band 2 Phablet SAR for Conditions with 5G NR

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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.08	0.09	0	16	0228M	QPSK	1	0	0 mm	back	1:1	0.871	1.102	0.960	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.12	0.06	0	16	0228M	QPSK	50	50	0 mm	back	1:1	0.895	1.091	0.976	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.08	-0.10	0	16	0228M	QPSK	1	0	0 mm	front	1:1	0.935	1.102	1.030	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.12	-0.06	0	16	0228M	QPSK	50	50	0 mm	front	1:1	0.943	1.091	1.029	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.08	0.00	0	16	0228M	QPSK	1	0	0 mm	bottom	1:1	1.270	1.102	1.400	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18.5	18.12	-0.02	0	16	0228M	QPSK	50	50	0 mm	bottom	1:1	1.240	1.091	1.353	
																	Phablet **4.0 W/kg (mW/g)** averaged over 10 grams			

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Table 11-52
LTE Band 7 Phablet 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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.04	0	0291M	QPSK	1	99	7 mm	back	1:1	0.417	1.274	0.531	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.05	1	0291M	QPSK	50	50	7 mm	back	1:1	0.348	1.288	0.448	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	0.15	0	0291M	QPSK	1	99	5 mm	front	1:1	0.518	1.274	0.660	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	0.21	1	0291M	QPSK	50	50	5 mm	front	1:1	0.408	1.288	0.526	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	-0.08	0	0291M	QPSK	1	99	9 mm	bottom	1:1	0.625	1.274	0.796	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	-0.11	1	0291M	QPSK	50	50	9 mm	bottom	1:1	0.482	1.288	0.621	
2560.00	21350	High	LTE Band 7	20	23.0	21.95	-0.09	0	0291M	QPSK	1	99	0 mm	left	1:1	0.793	1.274	1.010	
2560.00	21350	High	LTE Band 7	20	22.0	20.90	-0.06	1	0291M	QPSK	50	50	0 mm	left	1:1	0.605	1.288	0.779	
2560.00	21350	High	LTE Band 7	20	21.0	19.93	-0.09	0	0291M	QPSK	1	99	0 mm	back	1:1	1.210	1.279	1.548	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	-0.10	0	0291M	QPSK	50	50	0 mm	back	1:1	1.200	1.268	1.522	
2560.00	21350	High	LTE Band 7	20	21.0	19.93	0.10	0	0291M	QPSK	1	99	0 mm	front	1:1	1.020	1.279	1.305	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	0.12	0	0291M	QPSK	50	50	0 mm	front	1:1	1.090	1.268	1.382	
2510.00	20850	Low	LTE Band 7	20	21.0	19.72	-0.21	0	0291M	QPSK	1	0	0 mm	bottom	1:1	1.530	1.343	2.055	A74
2535.00	21100	Mid	LTE Band 7	20	21.0	19.73	-0.16	0	0291M	QPSK	1	0	0 mm	bottom	1:1	1.320	1.340	1.769	
2560.00	21350	High	LTE Band 7	20	21.0	19.93	0.07	0	0291M	QPSK	1	99	0 mm	bottom	1:1	1.460	1.279	1.867	
2560.00	21350	High	LTE Band 7	20	21.0	19.97	-0.15	0	0291M	QPSK	50	50	0 mm	bottom	1:1	1.450	1.268	1.839	
2560.00	21350	High	LTE Band 7	20	21.0	19.86	-0.17	0	0291M	QPSK	100	0	0 mm	bottom	1:1	1.450	1.300	1.885	

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 11-53
LTE Band 48 Phablet 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 (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	-0.16	0	0291M	QPSK	1	0	7 mm	back	1:1.58	0.238	1.294	0.308	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.01	1	0291M	QPSK	50	0	7 mm	back	1:1.58	0.195	1.268	0.247	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.02	0	0291M	QPSK	1	0	5 mm	front	1:1.58	0.316	1.294	0.409	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.11	1	0291M	QPSK	50	0	5 mm	front	1:1.58	0.258	1.268	0.327	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	-0.04	0	0291M	QPSK	1	0	9 mm	bottom	1:1.58	0.234	1.294	0.303	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	-0.06	1	0291M	QPSK	50	0	9 mm	bottom	1:1.58	0.193	1.268	0.245	
3560.00	55340	Low	LTE Band 48	20	24.0	22.88	0.07	0	0291M	QPSK	1	0	0 mm	left	1:1.58	0.602	1.294	0.779	
3560.00	55340	Low	LTE Band 48	20	23.0	21.97	0.01	1	0291M	QPSK	50	0	0 mm	left	1:1.58	0.494	1.268	0.626	
3690.00	56640	High	LTE Band 48	20	21.0	20.09	0.12	0	0291M	QPSK	1	0	0 mm	back	1:1.58	0.587	1.233	0.724	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	-0.14	0	0291M	QPSK	50	0	0 mm	back	1:1.58	0.582	1.205	0.701	
3690.00	56640	High	LTE Band 48	20	21.0	20.09	-0.14	0	0291M	QPSK	1	0	0 mm	front	1:1.58	0.729	1.233	**0.899**	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	0.17	0	0291M	QPSK	50	0	0 mm	front	1:1.58	0.733	1.205	0.883	A75
3690.00	56640	High	LTE Band 48	20	21.0	20.09	-0.18	0	0291M	QPSK	1	0	0 mm	bottom	1:1.58	0.707	1.233	0.872	
3690.00	56640	High	LTE Band 48	20	21.0	20.19	-0.13	0	0291M	QPSK	50	0	0 mm	bottom	1:1.58	0.701	1.205	0.845	

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

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Table 11-54
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]	Device 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	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	0.03	0	0244M	QPSK	1	0	7 mm	back	1:1.58	0.397	1.321	0.524	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.04	1	0244M	QPSK	50	0	7 mm	back	1:1.58	0.317	1.262	0.400	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	-0.01	0	0244M	QPSK	1	0	5 mm	front	1:1.58	0.459	1.321	0.606	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	0.02	1	0244M	QPSK	50	0	5 mm	front	1:1.58	0.369	1.262	0.466	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	-0.01	0	0244M	QPSK	1	0	9 mm	bottom	1:1.58	0.415	1.321	0.548	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	-0.01	1	0244M	QPSK	50	0	9 mm	bottom	1:1.58	0.336	1.262	0.424	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.79	-0.18	0	0244M	QPSK	1	0	0 mm	left	1:1.58	0.655	1.321	0.865	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.99	-0.19	1	0244M	QPSK	50	0	0 mm	left	1:1.58	0.551	1.262	0.695	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.51	0.04	0	0244M	QPSK	1	0	0 mm	back	1:1.58	1.120	1.409	1.578	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.50	0.01	0	0244M	QPSK	1	99	0 mm	back	1:1.58	0.940	1.413	1.328	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	-0.09	0	0244M	QPSK	1	0	0 mm	back	1:1.58	1.340	1.253	1.679	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.81	0.16	0	0244M	QPSK	1	0	0 mm	back	1:1.58	1.530	1.315	2.012	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.43	-0.01	0	0244M	QPSK	1	0	0 mm	back	1:1.58	1.670	1.435	2.396	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.45	0.16	0	0244M	QPSK	1	99	0 mm	back	1:1.58	1.790	1.429	2.558	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.59	0.04	0	0244M	QPSK	50	25	0 mm	back	1:1.58	1.100	1.384	1.522	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.61	-0.01	0	0244M	QPSK	50	0	0 mm	back	1:1.58	1.000	1.377	1.377	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	0.04	0	0244M	QPSK	50	0	0 mm	back	1:1.58	1.440	1.199	1.727	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	0.15	0	0244M	QPSK	50	0	0 mm	back	1:1.58	1.600	1.262	2.019	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.65	0.12	0	0244M	QPSK	50	50	0 mm	back	1:1.58	1.800	1.365	2.457	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.99	0.13	0	0244M	QPSK	100	0	0 mm	back	1:1.58	1.470	1.262	1.855	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.58	0.03	0	0244M	QPSK	1	0	0 mm	back	1:2.31	1.110	1.387	1.540	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.71	0.03	0	0244M	QPSK	1	99	0 mm	back	1:2.31	1.190	1.346	1.602	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	23.0	22.20	0.09	0	0244M	QPSK	1	0	0 mm	back	1:1.58	1.950	1.202	2.344	A76
	SCC	2660.20	41292	High	LTE Band 41	20							1	99							
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	23.0	22.36	0.06	0	0244M	QPSK	1	0	0 mm	back	1:2.31	1.400	1.159	1.623	
	SCC	2660.20	41292	High	LTE Band 41	20							1	99							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	0.05	0	0244M	QPSK	1	0	0 mm	front	1:1.58	1.100	1.253	1.378	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.59	-0.11	0	0244M	QPSK	50	25	0 mm	front	1:1.58	0.906	1.384	1.254	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.61	-0.18	0	0244M	QPSK	50	0	0 mm	front	1:1.58	0.817	1.377	1.125	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	-0.16	0	0244M	QPSK	50	0	0 mm	front	1:1.58	1.260	1.199	1.511	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	-0.18	0	0244M	QPSK	50	0	0 mm	front	1:1.58	0.952	1.262	1.201	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.65	-0.09	0	0244M	QPSK	50	50	0 mm	front	1:1.58	1.060	1.365	1.447	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.99	-0.20	0	0244M	QPSK	100	0	0 mm	front	1:1.58	1.040	1.262	1.312	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.51	-0.12	0	0244M	QPSK	1	0	0 mm	bottom	1:1.58	1.090	1.409	1.536	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.50	-0.09	0	0244M	QPSK	1	99	0 mm	bottom	1:1.58	0.803	1.413	1.135	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.02	-0.01	0	0244M	QPSK	1	0	0 mm	bottom	1:1.58	1.340	1.253	1.679	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.81	-0.08	0	0244M	QPSK	1	0	0 mm	bottom	1:1.58	1.520	1.315	1.999	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.45	-0.02	0	0244M	QPSK	1	99	0 mm	bottom	1:1.58	1.600	1.429	2.286	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	23.0	21.59	-0.06	0	0244M	QPSK	50	25	0 mm	bottom	1:1.58	1.130	1.384	1.564	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.61	-0.10	0	0244M	QPSK	50	0	0 mm	bottom	1:1.58	0.917	1.377	1.263	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	22.21	-0.06	0	0244M	QPSK	50	0	0 mm	bottom	1:1.58	1.420	1.199	1.703	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.99	-0.08	0	0244M	QPSK	50	0	0 mm	bottom	1:1.58	1.530	1.262	1.931	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.0	21.65	-0.19	0	0244M	QPSK	50	50	0 mm	bottom	1:1.58	1.640	1.365	2.239	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	23.0	21.99	-0.02	0	0244M	QPSK	100	0	0 mm	bottom	1:1.58	1.410	1.262	1.779	
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 11-55
WLAN Phablet SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5300	60	802.11a	OFDM	20	18.0	17.68	-0.18	7 mm	1	0221M	6	back	99.3	1.060	0.161	1.076	1.007	0.174	
5300	60	802.11a	OFDM	20	18.0	17.68	0.20	0 mm	1	0221M	6	back	99.3	9.344	1.030	1.076	1.007	1.116	
5300	60	802.11a	OFDM	20	18.0	17.68	0.21	0 mm	1	0221M	6	front	99.3	3.315	-	1.076	1.007	-	
5300	60	802.11a	OFDM	20	18.0	17.68	-0.18	0 mm	1	0221M	6	top	99.3	5.177	0.390	1.076	1.007	0.423	
5300	60	802.11a	OFDM	20	18.0	17.68	0.03	0 mm	1	0221M	6	left	99.3	5.144	-	1.076	1.007	-	
5300	60	802.11a	OFDM	20	18.0	17.61	0.16	7 mm	2	0221M	6	back	99.7	0.900	0.150	1.094	1.003	0.165	
5300	60	802.11a	OFDM	20	18.0	17.61	-0.15	0 mm	2	0221M	6	back	99.7	9.013	0.906	1.094	1.003	0.994	
5300	60	802.11a	OFDM	20	18.0	17.61	0.02	0 mm	2	0221M	6	front	99.7	0.535	0.046	1.094	1.003	0.050	
5300	60	802.11a	OFDM	20	18.0	17.61	0.19	0 mm	2	0221M	6	top	99.7	0.446	-	1.094	1.003	-	
5300	60	802.11a	OFDM	20	18.0	17.61	0.07	0 mm	2	0221M	6	left	99.7	1.722	0.224	1.094	1.003	0.246	
5600	120	802.11a	OFDM	20	18.0	17.90	0.14	7 mm	1	0221M	6	back	99.3	1.113	0.145	1.023	1.007	0.149	
5600	120	802.11a	OFDM	20	18.0	17.90	0.19	0 mm	1	0221M	6	back	99.3	10.372	1.040	1.023	1.007	1.071	
5600	120	802.11a	OFDM	20	18.0	17.90	0.12	0 mm	1	0221M	6	front	99.3	1.397	-	1.023	1.007	-	
5600	120	802.11a	OFDM	20	18.0	17.90	-0.21	0 mm	1	0221M	6	top	99.3	3.058	0.403	1.023	1.007	0.415	
5600	120	802.11a	OFDM	20	18.0	17.90	0.17	0 mm	1	0221M	6	left	99.3	2.849	-	1.023	1.007	-	
5500	100	802.11a	OFDM	20	18.0	17.73	0.16	7 mm	2	0221M	6	back	99.7	1.269	0.169	1.064	1.003	0.180	
5500	100	802.11a	OFDM	20	18.0	17.73	0.21	0 mm	2	0221M	6	back	99.7	7.435	1.300	1.064	1.003	1.387	
5500	100	802.11a	OFDM	20	18.0	17.73	0.12	0 mm	2	0221M	6	front	99.7	0.557	0.044	1.064	1.003	0.047	
5500	100	802.11a	OFDM	20	18.0	17.73	0.14	0 mm	2	0221M	6	top	99.7	0.428	-	1.064	1.003	-	
5500	100	802.11a	OFDM	20	18.0	17.73	0.03	0 mm	2	0221M	6	left	99.7	2.059	0.270	1.064	1.003	0.288	
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 11-56
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)	
5280	56	802.11n	OFDM	20	18.0	17.59	18.0	17.83	-0.06	0 mm	MIMO	0221M	13	back	99.3	10.280	1.580	1.099	1.007	1.749	
5280	56	802.11n	OFDM	20	18.0	17.59	18.0	17.83	0.16	0 mm	MIMO	0221M	13	front	99.3	3.898	0.541	1.099	1.007	0.599	
5280	56	802.11n	OFDM	20	18.0	17.59	18.0	17.83	-0.19	0 mm	MIMO	0221M	13	top	99.3	5.222	-	1.099	1.007	-	
5280	56	802.11n	OFDM	20	18.0	17.59	18.0	17.83	-0.04	0 mm	MIMO	0221M	13	left	99.3	5.976	0.720	1.099	1.007	0.797	
5500	100	802.11n	OFDM	20	18.0	17.83	18.0	17.88	-0.03	0 mm	MIMO	0221M	13	back	99.3	13.614	2.260	1.040	1.007	2.367	
5600	120	802.11n	OFDM	20	18.0	17.80	18.0	17.82	-0.01	0 mm	MIMO	0221M	13	back	99.3	14.369	2.260	1.047	1.007	2.383	A77
5720	144	802.11n	OFDM	20	18.0	17.50	18.0	17.84	-0.09	0 mm	MIMO	0221M	13	back	99.3	14.128	2.080	1.122	1.007	2.350	
5500	100	802.11n	OFDM	20	18.0	17.83	18.0	17.88	0.04	0 mm	MIMO	0221M	13	front	99.3	3.974	0.477	1.040	1.007	0.500	
5500	100	802.11n	OFDM	20	18.0	17.83	18.0	17.88	-0.14	0 mm	MIMO	0221M	13	top	99.3	4.428	-	1.040	1.007	-	
5500	100	802.11n	OFDM	20	18.0	17.83	18.0	17.88	-0.14	0 mm	MIMO	0221M	13	left	99.3	6.278	0.759	1.040	1.007	0.795	
5600	120	802.11n	OFDM	20	18.0	17.80	18.0	17.82	-0.12	0 mm	MIMO	0221M	13	back	99.3	14.347	2.180	1.047	1.007	2.298	
5720	144	802.11n	OFDM	20	18.0	17.50	18.0	17.84	-0.05	0 mm	MIMO	0221M	13	back	99.3	13.913	2.070	1.122	1.007	2.339	
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:

1. For channels 56, 100, 120, and 144, to achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.
2. Blue entries represent variability measurements.

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Table 11-57
WLAN MIMO Phablet SAR for Conditions with 5G NR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan W/kg	SAR (10g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																					
5270	54	802.11n	OFDM	40	14.0	13.74	14.0	13.88	0.10	0 mm	MIMO	0221M	27	back	98.7	4.113	0.529	1.062	1.013	0.569		
5270	54	802.11n	OFDM	40	14.0	13.74	14.0	13.88	0.21	0 mm	MIMO	0221M	27	front	98.7	1.131	-	1.062	1.013	-		
5270	54	802.11n	OFDM	40	14.0	13.74	14.0	13.88	-0.12	0 mm	MIMO	0221M	27	top	98.7	1.711	-	1.062	1.013	-		
5270	54	802.11n	OFDM	40	14.0	13.74	14.0	13.88	0.05	0 mm	MIMO	0221M	27	left	98.7	2.830	-	1.062	1.013	-		
5610	122	802.11ac	OFDM	80	14.0	13.72	14.0	13.95	-0.15	0 mm	MIMO	0221M	58.5	back	94.4	4.572	0.764	1.067	1.059	0.863		
5610	122	802.11ac	OFDM	80	14.0	13.72	14.0	13.95	0.21	0 mm	MIMO	0221M	58.5	front	94.4	0.711	-	1.067	1.059	-		
5610	122	802.11ac	OFDM	80	14.0	13.72	14.0	13.95	0.19	0 mm	MIMO	0221M	58.5	top	94.4	1.903	-	1.067	1.059	-		
5610	122	802.11ac	OFDM	80	14.0	13.72	14.0	13.95	-0.14	0 mm	MIMO	0221M	58.5	left	94.4	2.167	-	1.067	1.059	-		
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: For channels 54 and 122, to achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

11.5 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 14 for supplemental data.
12. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.3. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
14. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).

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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.

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 in 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 Considerations: 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.

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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 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. 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 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 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 n41 is limited to EN-DC operations only, with LTE Band 41 acting as the anchor band. Per FCC Guidance, SAR tests for EN-DC operation were performed with both n41 and LTE B41 transmitting simultaneously. A single probe calibration factor covered transmission for both operations and the highest 1g SAR among both distributions was captured in the measurement.
2. The LTE Band 41 configuration with channel frequency contiguous to the testing channel frequency of NR band n41 was selected as the anchor configuration for the EN-DC testing. The SAR test guidance in FCC KDB Publication 941225 D05v02r02 was used as a guideline for selection of NR channel, channel bandwidth, and modulation configurations.
3. Additional SAR investigations were carried out to select RB configuration with worst case SAR. Measured SAR was scaled using worst case scaling factor of NR Band n41 and LTE Band 41 anchor band. Some additional conducted powers for 1 RB size test cases were considered for NR band n41 when MPR=1.5.
4. FCC KDB Publication 447498 D01v06 was used as a guideline for additional channel for SAR testing. When the reported SAR in EN-DC mode measured in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configuration.
5. In EN-DC transmission at the theoretical maximum duty cycle of 22.9%, NR Band n41 testing was performed with DL/UL Periodicity 5ms, Common DL duration 8, Common UL duration 2 at SCS=30kHz using normal cyclic prefix. To have sychronized duty cycle with NR Band n41, LTE Band 41 anchor band was set with UL-DL configuration 2 and special subframe 6. NR testing was performed with a base station simulator.

WLAN Notes:

1. For held-to-ear, 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

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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) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.7.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.7.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Section 12 for complete analysis.
5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

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 0 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.

Simultaneous transmission analysis including 5G NR combinations is addressed in RF Exposure report: 1M1903060032-20.A3L.

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12.3 Head SAR Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	0.104	0.378	0.047	0.482	0.151	0.529
	GSM 1900	0.081	0.378	0.047	0.459	0.128	0.506
	UMTS 850	0.142	0.378	0.047	0.520	0.189	0.567
	UMTS 1750	0.140	0.378	0.047	0.518	0.187	0.565
	UMTS 1900	0.186	0.378	0.047	0.564	0.233	0.611
	CDMA/EVDO BC10 (§90S)	0.150	0.378	0.047	0.528	0.197	0.575
	CDMA/EVDO BC0 (§22H)	0.187	0.378	0.047	0.565	0.234	0.612
	PCS CDMA/EVDO	0.189	0.378	0.047	0.567	0.236	0.614
	LTE Band 71	0.189	0.378	0.047	0.567	0.236	0.614
	LTE Band 12	0.223	0.378	0.047	0.601	0.270	0.648
	LTE Band 13	0.240	0.378	0.047	0.618	0.287	**0.665**
	LTE Band 26 (Cell)	0.194	0.378	0.047	0.572	0.241	0.619
	LTE Band 66 (AWS)	0.166	0.378	0.047	0.544	0.213	0.591
	LTE Band 25 (PCS)	0.214	0.378	0.047	0.592	0.261	0.639
	LTE Band 2 (PCS)	0.199	0.378	0.047	0.577	0.246	0.624
	LTE Band 7	0.083	0.378	0.047	0.461	0.130	0.508
	LTE Band 48	0.076	0.378	0.047	0.454	0.123	0.501
	LTE Band 41	0.107	0.378	0.047	0.485	0.154	0.532

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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	Right Cheek	0.598	0.378*	0.047	0.976	0.645	1.023
	Right Tilt	0.689	0.378	0.047*	1.067	0.736	**1.114**
	Left Cheek	0.208	0.378*	0.047*	0.586	0.255	0.633
	Left Tilt	0.250	0.378*	0.047*	0.628	0.297	0.675

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	0.104	0.314	0.044	0.418	0.148	0.462
	GSM 1900	0.081	0.314	0.044	0.395	0.125	0.439
	UMTS 850	0.142	0.314	0.044	0.456	0.186	0.500
	UMTS 1750	0.140	0.314	0.044	0.454	0.184	0.498
	UMTS 1900	0.186	0.314	0.044	0.500	0.230	0.544
	CDMA/EVDO BC10 (§90S)	0.150	0.314	0.044	0.464	0.194	0.508
	CDMA/EVDO BC0 (§22H)	0.187	0.314	0.044	0.501	0.231	0.545
	PCS CDMA/EVDO	0.189	0.314	0.044	0.503	0.233	0.547
	LTE Band 71	0.189	0.314	0.044	0.503	0.233	0.547
	LTE Band 12	0.223	0.314	0.044	0.537	0.267	0.581
	LTE Band 13	0.240	0.314	0.044	0.554	0.284	**0.598**
	LTE Band 26 (Cell)	0.194	0.314	0.044	0.508	0.238	0.552
	LTE Band 66 (AWS)	0.166	0.314	0.044	0.480	0.210	0.524
	LTE Band 25 (PCS)	0.214	0.314	0.044	0.528	0.258	0.572
	LTE Band 2 (PCS)	0.199	0.314	0.044	0.513	0.243	0.557
	LTE Band 7	0.083	0.314	0.044	0.397	0.127	0.441
	LTE Band 48	0.076	0.314	0.044	0.390	0.120	0.434
	LTE Band 41	0.107	0.314	0.044	0.421	0.151	0.465

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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	Right Cheek	0.598	0.314	0.021	0.912	0.619	0.933
	Right Tilt	0.689	0.314*	0.044	1.003	0.733	**1.047**
	Left Cheek	0.208	0.314*	0.044*	0.522	0.252	0.566
	Left Tilt	0.250	0.314*	0.044*	0.564	0.294	0.608

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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 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	GSM 850	0.104	0.378	0.047	0.314	0.044	0.887
	GSM 1900	0.081	0.378	0.047	0.314	0.044	0.864
	UMTS 850	0.142	0.378	0.047	0.314	0.044	0.925
	UMTS 1750	0.140	0.378	0.047	0.314	0.044	0.923
	UMTS 1900	0.186	0.378	0.047	0.314	0.044	0.969
	CDMA/EVDO BC10 (§90S)	0.150	0.378	0.047	0.314	0.044	0.933
	CDMA/EVDO BC0 (§22H)	0.187	0.378	0.047	0.314	0.044	0.970
	PCS CDMA/EVDO	0.189	0.378	0.047	0.314	0.044	0.972
	LTE Band 71	0.189	0.378	0.047	0.314	0.044	0.972
	LTE Band 12	0.223	0.378	0.047	0.314	0.044	1.006
	LTE Band 13	0.240	0.378	0.047	0.314	0.044	**1.023**
	LTE Band 26 (Cell)	0.194	0.378	0.047	0.314	0.044	0.977
	LTE Band 66 (AWS)	0.166	0.378	0.047	0.314	0.044	0.949
	LTE Band 25 (PCS)	0.214	0.378	0.047	0.314	0.044	0.997
	LTE Band 2 (PCS)	0.199	0.378	0.047	0.314	0.044	0.982
	LTE Band 7	0.083	0.378	0.047	0.314	0.044	0.866
	LTE Band 48	0.076	0.378	0.047	0.314	0.044	0.859
	LTE Band 41	0.107	0.378	0.047	0.314	0.044	0.890

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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	Right Cheek	0.598	0.378*	0.047	0.314	0.021	1.358
	Right Tilt	0.689	0.378	0.047*	0.314*	0.044	**1.472**
	Left Cheek	0.208	0.378*	0.047*	0.314*	0.044*	0.991
	Left Tilt	0.250	0.378*	0.047*	0.314*	0.044*	1.033

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	GSM 850	0.104	0.364	0.468
	GSM 1900	0.081	0.364	0.445
	UMTS 850	0.142	0.364	0.506
	UMTS 1750	0.140	0.364	0.504
	UMTS 1900	0.186	0.364	0.550
	CDMA/EVDO BC10 (§90S)	0.150	0.364	0.514
	CDMA/EVDO BC0 (§22H)	0.187	0.364	0.551
	PCS CDMA/EVDO	0.189	0.364	0.553
	LTE Band 71	0.189	0.364	0.553
	LTE Band 12	0.223	0.364	0.587
	LTE Band 13	0.240	0.364	**0.604**
	LTE Band 26 (Cell)	0.194	0.364	0.558
	LTE Band 66 (AWS)	0.166	0.364	0.530
	LTE Band 25 (PCS)	0.214	0.364	0.578
	LTE Band 2 (PCS)	0.199	0.364	0.563
	LTE Band 7	0.083	0.364	0.447
	LTE Band 48	0.076	0.364	0.440
	LTE Band 41	0.107	0.364	0.471

Simult Tx	Configuration	EN-DC (DC_(n)41AA) SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Right Cheek	0.598	0.364	0.962
	Right Tilt	0.689	0.364	**1.053**
	Left Cheek	0.208	0.070	0.278
	Left Tilt	0.250	0.078	0.328

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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 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+4
Head SAR	GSM 850	0.104	0.364	0.314	0.044	0.826
	GSM 1900	0.081	0.364	0.314	0.044	0.803
	UMTS 850	0.142	0.364	0.314	0.044	0.864
	UMTS 1750	0.140	0.364	0.314	0.044	0.862
	UMTS 1900	0.186	0.364	0.314	0.044	0.908
	CDMA/EVDO BC10 (§90S)	0.150	0.364	0.314	0.044	0.872
	CDMA/EVDO BC0 (§22H)	0.187	0.364	0.314	0.044	0.909
	PCS CDMA/EVDO	0.189	0.364	0.314	0.044	0.911
	LTE Band 71	0.189	0.364	0.314	0.044	0.911
	LTE Band 12	0.223	0.364	0.314	0.044	0.945
	LTE Band 13	0.240	0.364	0.314	0.044	**0.962**
	LTE Band 26 (Cell)	0.194	0.364	0.314	0.044	0.916
	LTE Band 66 (AWS)	0.166	0.364	0.314	0.044	0.888
	LTE Band 25 (PCS)	0.214	0.364	0.314	0.044	0.936
	LTE Band 2 (PCS)	0.199	0.364	0.314	0.044	0.921
	LTE Band 7	0.083	0.364	0.314	0.044	0.805
	LTE Band 48	0.076	0.364	0.314	0.044	0.798
	LTE Band 41	0.107	0.364	0.314	0.044	0.829

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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	Right Cheek	0.598	0.364	0.314	0.021	1.276	0.983	1.297
	Right Tilt	0.689	0.364	0.314*	0.044	1.367	1.097	**1.411**
	Left Cheek	0.208	0.070	0.314*	0.044*	0.592	0.322	0.636
	Left Tilt	0.250	0.078	0.314*	0.044*	0.642	0.372	0.686

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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 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	GSM 850	0.194	0.095	0.019	0.289	0.213	0.308
	GSM 1900	0.330	0.095	0.019	0.425	0.349	0.444
	UMTS 850	0.261	0.095	0.019	0.356	0.280	0.375
	UMTS 1750	0.973	0.095	0.019	1.068	0.992	**1.087**
	UMTS 1900	0.853	0.095	0.019	0.948	0.872	0.967
	CDMA BC10 (§90S)	0.268	0.095	0.019	0.363	0.287	0.382
	CDMA BC0 (§22H)	0.319	0.095	0.019	0.414	0.338	0.433
	PCS CDMA	0.956	0.095	0.019	1.051	0.975	1.070
	LTE Band 71	0.279	0.095	0.019	0.374	0.298	0.393
	LTE Band 12	0.318	0.095	0.019	0.413	0.337	0.432
	LTE Band 13	0.312	0.095	0.019	0.407	0.331	0.426
	LTE Band 26 (Cell)	0.237	0.095	0.019	0.332	0.256	0.351
	LTE Band 66 (AWS)	0.868	0.095	0.019	0.963	0.887	0.982
	LTE Band 25 (PCS)	0.905	0.095	0.019	1.000	0.924	1.019
	LTE Band 2 (PCS)	0.823	0.095	0.019	0.918	0.842	0.937
	LTE Band 7	0.396	0.095	0.019	0.491	0.415	0.510
	LTE Band 48	0.206	0.095	0.019	0.301	0.225	0.320
	LTE Band 41	0.452	0.095	0.019	0.547	0.471	0.566

Exposure Condition	Mode	EN-DC (DC_(n)41AA) 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	NR Band n41	0.101	0.095	0.019	0.196	0.120	**0.215**

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.194	0.177	0.261	0.371	0.455	0.632
	GSM 1900	0.330	0.177	0.261	0.507	0.591	0.768
	UMTS 850	0.261	0.177	0.261	0.438	0.522	0.699
	UMTS 1750	0.973	0.177	0.261	1.150	1.234	**1.411**
	UMTS 1900	0.853	0.177	0.261	1.030	1.114	1.291
	CDMA BC10 (§90S)	0.268	0.177	0.261	0.445	0.529	0.706
	CDMA BC0 (§22H)	0.319	0.177	0.261	0.496	0.580	0.757
	PCS CDMA	0.956	0.177	0.261	1.133	1.217	1.394
	LTE Band 71	0.279	0.177	0.261	0.456	0.540	0.717
	LTE Band 12	0.318	0.177	0.261	0.495	0.579	0.756
	LTE Band 13	0.312	0.177	0.261	0.489	0.573	0.750
	LTE Band 26 (Cell)	0.237	0.177	0.261	0.414	0.498	0.675
	LTE Band 66 (AWS)	0.868	0.177	0.261	1.045	1.129	1.306
	LTE Band 25 (PCS)	0.905	0.177	0.261	1.082	1.166	1.343
	LTE Band 2 (PCS)	0.823	0.177	0.261	1.000	1.084	1.261
	LTE Band 7	0.396	0.177	0.261	0.573	0.657	0.834
	LTE Band 48	0.206	0.177	0.261	0.383	0.467	0.644
	LTE Band 41	0.452	0.177	0.261	0.629	0.713	0.890

Exposure Condition	Mode	EN-DC (DC_(n)41AA) 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
Body-Worn	NR Band n41	0.101	0.177	0.261	0.278	0.362	**0.539**

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Table 12-8
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 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	GSM 850	0.194	0.095	0.019	0.131	0.439
	GSM 1900	0.330	0.095	0.019	0.131	0.575
	UMTS 850	0.261	0.095	0.019	0.131	0.506
	UMTS 1750	0.973	0.095	0.019	0.131	**1.218**
	UMTS 1900	0.853	0.095	0.019	0.131	1.098
	CDMA BC10 (§90S)	0.268	0.095	0.019	0.131	0.513
	CDMA BC0 (§22H)	0.319	0.095	0.019	0.131	0.564
	PCS CDMA	0.956	0.095	0.019	0.131	1.201
	LTE Band 71	0.279	0.095	0.019	0.131	0.524
	LTE Band 12	0.318	0.095	0.019	0.131	0.563
	LTE Band 13	0.312	0.095	0.019	0.131	0.557
	LTE Band 26 (Cell)	0.237	0.095	0.019	0.131	0.482
	LTE Band 66 (AWS)	0.868	0.095	0.019	0.131	1.113
	LTE Band 25 (PCS)	0.905	0.095	0.019	0.131	1.150
	LTE Band 2 (PCS)	0.823	0.095	0.019	0.131	1.068
	LTE Band 7	0.396	0.095	0.019	0.131	0.641
	LTE Band 48	0.206	0.095	0.019	0.131	0.451
	LTE Band 41	0.452	0.095	0.019	0.131	0.697

Exposure Condition	Mode	EN-DC (DC_(n)41AA) 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	NR Band n41	0.101	0.095	0.019	0.131	**0.346**

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Table 12-9
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	GSM 850	0.194	0.026	0.220
	GSM 1900	0.330	0.026	0.356
	UMTS 850	0.261	0.026	0.287
	UMTS 1750	0.973	0.026	**0.999**
	UMTS 1900	0.853	0.026	0.879
	CDMA BC10 (§90S)	0.268	0.026	0.294
	CDMA BC0 (§22H)	0.319	0.026	0.345
	PCS CDMA	0.956	0.026	0.982
	LTE Band 71	0.279	0.026	0.305
	LTE Band 12	0.318	0.026	0.344
	LTE Band 13	0.312	0.026	0.338
	LTE Band 26 (Cell)	0.237	0.026	0.263
	LTE Band 66 (AWS)	0.868	0.026	0.894
	LTE Band 25 (PCS)	0.905	0.026	0.931
	LTE Band 2 (PCS)	0.823	0.026	0.849
	LTE Band 7	0.396	0.026	0.422
	LTE Band 48	0.206	0.026	0.232
	LTE Band 41	0.452	0.026	0.478

Exposure Condition	Mode	EN-DC (DC_(n)41AA) SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	NR Band n41	0.101	0.026	**0.127**

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Table 12-10
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2+3	1+2+4	1+2+3+4
Body-Worn	GSM 850	0.194	0.026	0.177	0.261	0.397	0.481	0.658
	GSM 1900	0.330	0.026	0.177	0.261	0.533	0.617	0.794
	UMTS 850	0.261	0.026	0.177	0.261	0.464	0.548	0.725
	UMTS 1750	0.973	0.026	0.177	0.261	1.176	1.260	**1.437**
	UMTS 1900	0.853	0.026	0.177	0.261	1.056	1.140	1.317
	CDMA BC10 (§90S)	0.268	0.026	0.177	0.261	0.471	0.555	0.732
	CDMA BC0 (§22H)	0.319	0.026	0.177	0.261	0.522	0.606	0.783
	PCS CDMA	0.956	0.026	0.177	0.261	1.159	1.243	1.420
	LTE Band 71	0.279	0.026	0.177	0.261	0.482	0.566	0.743
	LTE Band 12	0.318	0.026	0.177	0.261	0.521	0.605	0.782
	LTE Band 13	0.312	0.026	0.177	0.261	0.515	0.599	0.776
	LTE Band 26 (Cell)	0.237	0.026	0.177	0.261	0.440	0.524	0.701
	LTE Band 66 (AWS)	0.868	0.026	0.177	0.261	1.071	1.155	1.332
	LTE Band 25 (PCS)	0.905	0.026	0.177	0.261	1.108	1.192	1.369
	LTE Band 2 (PCS)	0.823	0.026	0.177	0.261	1.026	1.110	1.287
	LTE Band 7	0.396	0.026	0.177	0.261	0.599	0.683	0.860
	LTE Band 48	0.206	0.026	0.177	0.261	0.409	0.493	0.670
	LTE Band 41	0.452	0.026	0.177	0.261	0.655	0.739	0.916

Exposure Condition	Mode	EN-DC (DC_(n)41AA) 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
Body-Worn	NR Band n41	0.101	0.026	0.177	0.261	0.304	0.388	**0.565**

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12.5 Hotspot SAR Simultaneous Transmission Analysis

Table 12-11
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.653	0.218	0.060	0.871	0.713	0.931
	GPRS 1900	0.979	0.218	0.060	1.197	1.039	1.257
	UMTS 850	0.666	0.218	0.060	0.884	0.726	0.944
	UMTS 1750	0.982	0.218	0.060	1.200	1.042	1.260
	UMTS 1900	1.325	0.218	0.060	**1.543**	1.385	See Table Below
	EVDO BC10 (§90S)	0.679	0.218	0.060	0.897	0.739	0.957
	EVDO BC0 (§22H)	0.782	0.218	0.060	1.000	0.842	1.060
	PCS EVDO	1.231	0.218	0.060	1.449	1.291	1.509
	LTE Band 71	0.385	0.218	0.060	0.603	0.445	0.663
	LTE Band 12	0.430	0.218	0.060	0.648	0.490	0.708
	LTE Band 13	0.459	0.218	0.060	0.677	0.519	0.737
	LTE Band 26 (Cell)	0.610	0.218	0.060	0.828	0.670	0.888
	LTE Band 66 (AWS)	1.146	0.218	0.060	1.364	1.206	1.424
	LTE Band 25 (PCS)	1.148	0.218	0.060	1.366	1.208	1.426
	LTE Band 2 (PCS)	1.162	0.218	0.060	1.380	1.222	1.440
	LTE Band 7	0.861	0.218	0.060	1.079	0.921	1.139
	LTE Band 48	0.331	0.218	0.060	0.549	0.391	0.609
	LTE Band 41	0.511	0.218	0.060	0.729	0.571	0.789

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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
Hotspot SAR	Back	0.213	0.204	0.060	0.417	0.273	0.477
	Front	0.170	0.218*	0.060*	0.388	0.230	0.448
	Top	0.298	0.218*	0.060*	0.516	0.358	**0.576**
	Bottom	0.274	-	-	0.274	0.274	0.274
	Right	-	-	-	0.000	0.000	0.000
	Left	0.124	0.218	0.060*	0.342	0.184	0.402

Simult Tx	Configuration	UMTS 1900 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+3
Hotspot SAR	Back	0.578	0.204	0.060	0.842
	Front	0.510	0.218*	0.060*	0.788
	Top	-	0.218*	0.060*	0.278
	Bottom	1.325	-	-	**1.325**
	Right	0.094	-	-	0.094
	Left	0.074	0.218	0.060*	0.352

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.653	0.108	0.362	0.761	1.015	1.123
	GPRS 1900	0.979	0.108	0.362	1.087	1.341	1.449
	UMTS 850	0.666	0.108	0.362	0.774	1.028	1.136
	UMTS 1750	0.982	0.108	0.362	1.090	1.344	1.452
	UMTS 1900	1.325	0.108	0.362	1.433	See Table Below	See Table Below
	EVDO BC10 (§90S)	0.679	0.108	0.362	0.787	1.041	1.149
	EVDO BC0 (§22H)	0.782	0.108	0.362	0.890	1.144	1.252
	PCS EVDO	1.231	0.108	0.362	1.339	**1.593**	See Table Below
	LTE Band 71	0.385	0.108	0.362	0.493	0.747	0.855
	LTE Band 12	0.430	0.108	0.362	0.538	0.792	0.900
	LTE Band 13	0.459	0.108	0.362	0.567	0.821	0.929
	LTE Band 26 (Cell)	0.610	0.108	0.362	0.718	0.972	1.080
	LTE Band 66 (AWS)	1.146	0.108	0.362	1.254	1.508	See Table Below
	LTE Band 25 (PCS)	1.148	0.108	0.362	1.256	1.510	See Table Below
	LTE Band 2 (PCS)	1.162	0.108	0.362	1.270	1.524	See Table Below
	LTE Band 7	0.861	0.108	0.362	0.969	1.223	1.331
	LTE Band 48	0.331	0.108	0.362	0.439	0.693	0.801
	LTE Band 41	0.511	0.108	0.362	0.619	0.873	0.981

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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
Hotspot SAR	Back	0.213	0.108	0.362	0.321	0.575	0.683
	Front	0.170	0.108*	0.362*	0.278	0.532	0.640
	Top	0.298	0.108*	0.362*	0.406	0.660	**0.768**
	Bottom	0.274	-	-	0.274	0.274	0.274
	Right	-	-	-	0.000	0.000	0.000
	Left	0.124	0.108*	0.362*	0.232	0.486	0.594

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+3	1+2+3
Hotspot SAR	Back	0.578	0.108	0.362	0.940	1.048
	Front	0.510	0.108*	0.362*	0.872	0.980
	Top	-	0.108*	0.362*	0.362	0.470
	Bottom	1.325	-	-	**1.325**	**1.325**
	Right	0.094	-	-	0.094	0.094
	Left	0.074	0.108*	0.362*	0.436	0.544

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.530	0.108	0.362	1.000
	Front	0.465	0.108*	0.362*	0.935
	Top	-	0.108*	0.362*	0.470
	Bottom	1.231	-	-	**1.231**
	Right	0.090	-	-	0.090
	Left	0.063	0.108*	0.362*	0.533

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.505	0.108	0.362	0.975
	Front	0.461	0.108*	0.362*	0.931
	Top	-	0.108*	0.362*	0.470
	Bottom	1.146	-	-	**1.146**
	Right	0.090	-	-	0.090
	Left	0.104	0.108*	0.362*	0.574

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.470	0.108	0.362	0.940
	Front	0.418	0.108*	0.362*	0.888
	Top	-	0.108*	0.362*	0.470
	Bottom	1.148	-	-	**1.148**
	Right	0.073	-	-	0.073
	Left	0.062	0.108*	0.362*	0.532

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.485	0.108	0.362	0.955
	Front	0.419	0.108*	0.362*	0.889
	Top	-	0.108*	0.362*	0.470
	Bottom	1.162	-	-	**1.162**
	Right	0.075	-	-	0.075
	Left	0.074	0.108*	0.362*	0.544

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Table 12-13
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN 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
Hotspot SAR	GPRS 850	0.653	0.218	0.060	0.141	1.072
	GPRS 1900	0.979	0.218	0.060	0.141	1.398
	UMTS 850	0.666	0.218	0.060	0.141	1.085
	UMTS 1750	0.982	0.218	0.060	0.141	1.401
	UMTS 1900	1.325	0.218	0.060	0.141	See Table Below
	EVDO BC10 (§90S)	0.679	0.218	0.060	0.141	1.098
	EVDO BC0 (§22H)	0.782	0.218	0.060	0.141	1.201
	PCS EVDO	1.231	0.218	0.060	0.141	See Table Below
	LTE Band 71	0.385	0.218	0.060	0.141	0.804
	LTE Band 12	0.430	0.218	0.060	0.141	0.849
	LTE Band 13	0.459	0.218	0.060	0.141	0.878
	LTE Band 26 (Cell)	0.610	0.218	0.060	0.141	1.029
	LTE Band 66 (AWS)	1.146	0.218	0.060	0.141	1.565
	LTE Band 25 (PCS)	1.148	0.218	0.060	0.141	1.567
	LTE Band 2 (PCS)	1.162	0.218	0.060	0.141	**1.581**
	LTE Band 7	0.861	0.218	0.060	0.141	1.280
	LTE Band 48	0.331	0.218	0.060	0.141	0.750
	LTE Band 41	0.511	0.218	0.060	0.141	0.930

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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
Hotspot SAR	Back	0.213	0.204	0.060	0.141	0.618
	Front	0.170	0.218*	0.060*	0.141*	0.589
	Top	0.298	0.218*	0.060*	0.141*	**0.717**
	Bottom	0.274	-	-	-	0.274
	Right	-	-	-	-	0.000
	Left	0.124	0.218	0.060*	0.141*	0.543

Simult Tx	Configuration	UMTS 1900 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
Hotspot SAR	Back	0.578	0.204	0.060	0.141	0.983
	Front	0.510	0.218*	0.060*	0.141*	0.929
	Top	-	0.218*	0.060*	0.141*	0.419
	Bottom	1.325	-	-	-	**1.325**
	Right	0.094	-	-	-	0.094
	Left	0.074	0.218	0.060*	0.141*	0.493

Simult Tx	Configuration	PCS EVDO 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
Hotspot SAR	Back	0.530	0.204	0.060	0.141	0.935
	Front	0.465	0.218*	0.060*	0.141*	0.884
	Top	-	0.218*	0.060*	0.141*	0.419
	Bottom	1.231	-	-	-	**1.231**
	Right	0.090	-	-	-	0.090
	Left	0.063	0.218	0.060*	0.141*	0.482

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Table 12-14
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	GPRS 850	0.653	0.059	0.712
	GPRS 1900	0.979	0.059	1.038
	UMTS 850	0.666	0.059	0.725
	UMTS 1750	0.982	0.059	1.041
	UMTS 1900	1.325	0.059	**1.384**
	EVDO BC10 (§90S)	0.679	0.059	0.738
	EVDO BC0 (§22H)	0.782	0.059	0.841
	PCS EVDO	1.231	0.059	1.290
	LTE Band 71	0.385	0.059	0.444
	LTE Band 12	0.430	0.059	0.489
	LTE Band 13	0.459	0.059	0.518
	LTE Band 26 (Cell)	0.610	0.059	0.669
	LTE Band 66 (AWS)	1.146	0.059	1.205
	LTE Band 25 (PCS)	1.148	0.059	1.207
	LTE Band 2 (PCS)	1.162	0.059	1.221
	LTE Band 7	0.861	0.059	0.920
	LTE Band 48	0.331	0.059	0.390
	LTE Band 41	0.511	0.059	0.570

Simult Tx	Configuration	EN-DC (DC_(n)41AA) SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.213	0.052	0.265
	Front	0.170	0.037	0.207
	Top	0.298	0.059	**0.357**
	Bottom	0.274	-	0.274
	Right	-	-	0.000
	Left	0.124	0.052	0.176

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2+3	1+2+4	1+2+3+4
Hotspot SAR	GPRS 850	0.653	0.059	0.108	0.362	0.820	1.074	1.182
	GPRS 1900	0.979	0.059	0.108	0.362	1.146	1.400	1.508
	UMTS 850	0.666	0.059	0.108	0.362	0.833	1.087	1.195
	UMTS 1750	0.982	0.059	0.108	0.362	1.149	1.403	1.511
	UMTS 1900	1.325	0.059	0.108	0.362	1.492	See Table Below	See Table Below
	EVDO BC10 (§90S)	0.679	0.059	0.108	0.362	0.846	1.100	1.208
	EVDO BC0 (§22H)	0.782	0.059	0.108	0.362	0.949	1.203	1.311
	PCS EVDO	1.231	0.059	0.108	0.362	1.398	See Table Below	See Table Below
	LTE Band 71	0.385	0.059	0.108	0.362	0.552	0.806	0.914
	LTE Band 12	0.430	0.059	0.108	0.362	0.597	0.851	0.959
	LTE Band 13	0.459	0.059	0.108	0.362	0.626	0.880	0.988
	LTE Band 26 (Cell)	0.610	0.059	0.108	0.362	0.777	1.031	1.139
	LTE Band 66 (AWS)	1.146	0.059	0.108	0.362	1.313	1.567	See Table Below
	LTE Band 25 (PCS)	1.148	0.059	0.108	0.362	1.315	1.569	See Table Below
	LTE Band 2 (PCS)	1.162	0.059	0.108	0.362	1.329	**1.583**	See Table Below
	LTE Band 7	0.861	0.059	0.108	0.362	1.028	1.282	1.390
	LTE Band 48	0.331	0.059	0.108	0.362	0.498	0.752	0.860
	LTE Band 41	0.511	0.059	0.108	0.362	0.678	0.932	1.040

Simult Tx	Configuration	EN-DC (DC_(n)41AA) 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
Hotspot SAR	Back	0.213	0.052	0.108	0.362	0.373	0.627	0.735
	Front	0.170	0.037	0.108*	0.362*	0.315	0.569	0.677
	Top	0.298	0.059	0.108*	0.362*	0.465	0.719	**0.827**
	Bottom	0.274	-	-	-	0.274	0.274	0.274
	Right	-	-	-	-	0.000	0.000	0.000
	Left	0.124	0.052	0.108*	0.362*	0.284	0.538	0.646

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+4	1+2+3+4
Hotspot SAR	Back	0.578	0.052	0.108	0.362	0.992	1.100
	Front	0.510	0.037	0.108*	0.362*	0.909	1.017
	Top	-	0.059	0.108*	0.362*	0.421	0.529
	Bottom	1.325	-	-	-	**1.325**	**1.325**
	Right	0.094	-	-	-	0.094	0.094
	Left	0.074	0.052	0.108*	0.362*	0.488	0.596

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+4	1+2+3+4
Hotspot SAR	Back	0.530	0.052	0.108	0.362	0.944	1.052
	Front	0.465	0.037	0.108*	0.362*	0.864	0.972
	Top	-	0.059	0.108*	0.362*	0.421	0.529
	Bottom	1.231	-	-	-	**1.231**	**1.231**
	Right	0.090	-	-	-	0.090	0.090
	Left	0.063	0.052	0.108*	0.362*	0.477	0.585

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+4
Hotspot SAR	Back	0.505	0.052	0.108	0.362	1.027
	Front	0.461	0.037	0.108*	0.362*	0.968
	Top	-	0.059	0.108*	0.362*	0.529
	Bottom	1.146	-	-	-	**1.146**
	Right	0.090	-	-	-	0.090
	Left	0.104	0.052	0.108*	0.362*	0.626

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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+4
Hotspot SAR	Back	0.470	0.052	0.108	0.362	0.992
	Front	0.418	0.037	0.108*	0.362*	0.925
	Top	-	0.059	0.108*	0.362*	0.529
	Bottom	1.148	-	-	-	**1.148**
	Right	0.073	-	-	-	0.073
	Left	0.062	0.052	0.108*	0.362*	0.584

Simult Tx	Configuration	LTE Band 2 (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+4
Hotspot SAR	Back	0.485	0.052	0.108	0.362	1.007
	Front	0.419	0.037	0.108*	0.362*	0.926
	Top	-	0.059	0.108*	0.362*	0.529
	Bottom	1.162	-	-	-	**1.162**
	Right	0.075	-	-	-	0.075
	Left	0.074	0.052	0.108*	0.362*	0.596

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12.6 Phablet Simultaneous Transmission Analysis

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.

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.

Table 12-16
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Phablet)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	GPRS 1900	1.846	1.116	1.387	2.962	3.233
	UMTS 1750	2.165	1.116	1.387	3.281	3.552
	UMTS 1900	2.351	1.116	1.387	3.467	3.738
	PCS EVDO	2.339	1.116	1.387	3.455	3.726
	LTE Band 66 (AWS)	2.583	1.116	1.387	3.699	**3.970**
	LTE Band 25 (PCS)	3.298	1.116	1.387	See Table Below	See Table Below
	LTE Band 2 (PCS)	3.295	1.116	1.387	See Table Below	See Table Below
	LTE Band 7	2.055	1.116	1.387	3.171	3.442
	LTE Band 48	0.899	1.116	1.387	2.015	2.286
	LTE Band 41	2.558	1.116	1.387	3.674	3.945

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	2.306	1.116	1.387	3.422	**3.693**
	Front	2.367	1.116*	0.050	3.483	2.417
	Top	-	0.423	1.387*	0.423	1.387
	Bottom	3.298	-	-	3.298	3.298
	Right	0.676	-	-	0.676	0.676
	Left	0.589	1.116*	0.288	1.705	0.877

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Phablet SAR	Back	2.250	1.116	1.387	3.366	**3.637**
	Front	2.556	1.116*	0.050	3.672	2.606
	Top	-	0.423	1.387*	0.423	1.387
	Bottom	3.295	-	-	3.295	3.295
	Right	0.667	-	-	0.667	0.667
	Left	0.609	1.116*	0.288	1.725	0.897

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Table 12-17
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Phablet)

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.599	2.383	**3.982**
	Front	1.578	0.599	2.177
	Top	-	2.383*	2.383
	Bottom	1.846	-	1.846
	Right	0.411	-	0.411
	Left	0.349	0.797	1.146

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	1.211	2.383	**3.594**
	Front	1.077	0.599	1.676
	Top	-	2.383*	2.383
	Bottom	2.165	-	2.165
	Right	0.370	-	0.370
	Left	0.381	0.797	1.178

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.351	2.383	See Note 1	0.07
	Front	1.984	0.599	**2.583**	N/A
	Top	-	2.383*	2.383	N/A
	Bottom	2.209	-	2.209	N/A
	Right	0.704	-	0.704	N/A
	Left	0.506	0.797	1.303	N/A

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.973	2.383	See Note 1	0.07
	Front	1.864	0.599	**2.463**	N/A
	Top	-	2.383*	2.383	N/A
	Bottom	2.339	-	2.339	N/A
	Right	0.646	-	0.646	N/A
	Left	0.516	0.797	1.313	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.641	2.383	See Note 1	0.06
	Front	1.522	0.599	2.121	N/A
	Top	-	2.383*	2.383	N/A
	Bottom	2.583	-	**2.583**	N/A
	Right	0.461	-	0.461	N/A
	Left	0.603	0.797	1.400	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.306	2.383	See Note 1	0.07
	Front	2.367	0.599	2.966	N/A
	Top	-	2.383*	2.383	N/A
	Bottom	3.298	-	**3.298**	N/A
	Right	0.676	-	0.676	N/A
	Left	0.589	0.797	1.386	N/A

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.250	2.383	See Note 1	0.07
	Front	2.556	0.599	3.155	N/A
	Top	-	2.383*	2.383	N/A
	Bottom	3.295	-	**3.295**	N/A
	Right	0.667	-	0.667	N/A
	Left	0.609	0.797	1.406	N/A

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	1.548	2.383	**3.931**
	Front	1.382	0.599	1.981
	Top	-	2.383*	2.383
	Bottom	2.055	-	2.055
	Right	-	-	0.000
	Left	1.010	0.797	1.807

Simult Tx	Configuration	LTE Band 48 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	0.724	2.383	**3.107**
	Front	0.899	0.599	1.498
	Top	-	2.383*	2.383
	Bottom	0.872	-	0.872
	Right	-	-	0.000
	Left	0.779	0.797	1.576

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.558	2.383	See Note 1	0.08
	Front	1.511	0.599	2.110	N/A
	Top	-	2.383*	**2.383**	N/A
	Bottom	2.286	-	2.286	N/A
	Right	-	-	0.000	N/A
	Left	0.865	0.797	1.662	N/A

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

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12.7 SPLSR Evaluation and Analysis

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

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

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

12.7.1 Phablet Back Side SPLSR Evaluation and Analysis

Table 12-18
Peak SAR Locations for Phablet Back Side

Mode/Band	x (mm)	y (mm)
5 GHz WLAN MIMO	9.00	55.00
UMTS 1900	-31.00	-79.50
PCS EVDO	-29.50	-78.00
LTE Band 66 (AWS)	-9.50	-81.00
LTE Band 25 (PCS)	-28.00	-79.50
LTE Band 2 (PCS)	-28.00	-81.00
LTE Band 41	1.30	-75.60

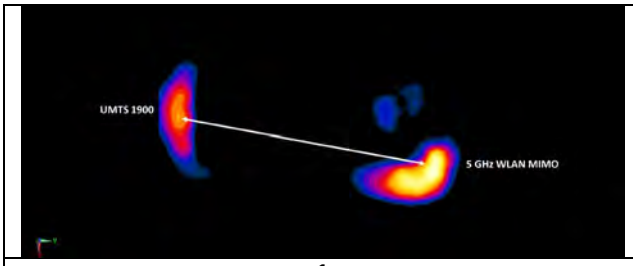
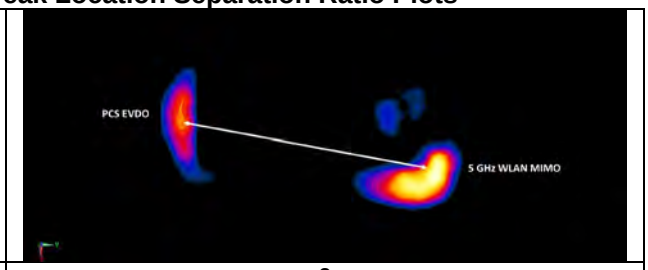
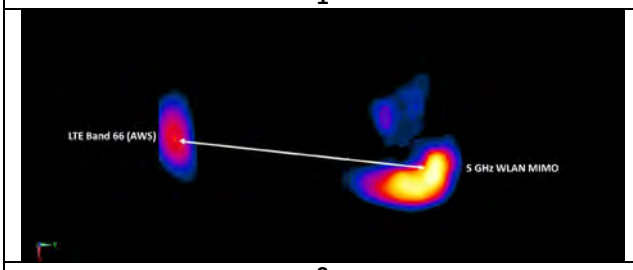
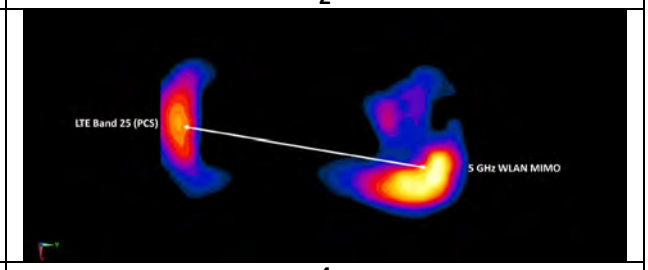
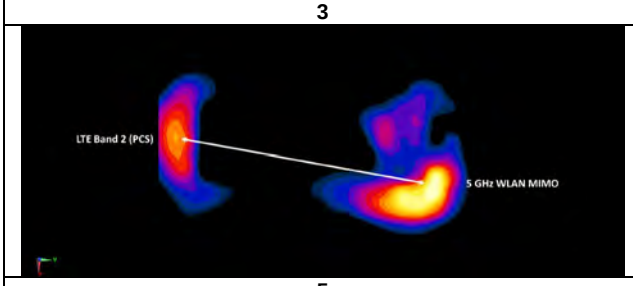
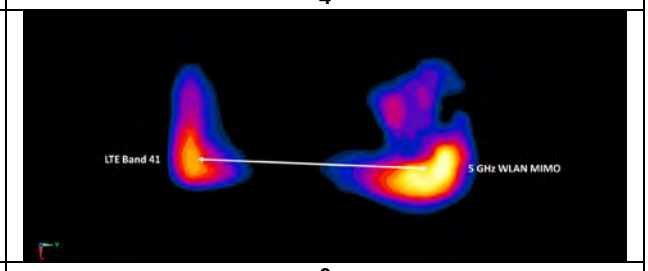
Table 12-19
Phablet Back Side SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
5 GHz WLAN MIMO	UMTS 1900	2.383	2.351	4.734	140.32	0.07	1
5 GHz WLAN MIMO	PCS EVDO	2.383	1.973	4.356	138.46	0.07	2
5 GHz WLAN MIMO	LTE Band 66 (AWS)	2.383	1.641	4.024	137.25	0.06	3
5 GHz WLAN MIMO	LTE Band 25 (PCS)	2.383	2.306	4.689	139.50	0.07	4
5 GHz WLAN MIMO	LTE Band 2 (PCS)	2.383	2.250	4.633	140.94	0.07	5
5 GHz WLAN MIMO	LTE Band 41	2.383	2.558	4.941	130.83	0.08	6

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Table 12-20
Phablet Back Side SAR to Peak Location Separation Ratio Plots

	
1	2
	
3	4
	
5	6

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)	
1900	1880.00	600	PCS CDMA	EVDO Rev. 0	bottom	10 mm	1.130	1.110	1.02	N/A	N/A	N/A	N/A
1750	1745.00	132322	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 100 RB, 0 RB Offset	bottom	10 mm	1.020	0.890	1.15	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 13-2
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1745.00	132322	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	2.350	2.220	1.06	N/A	N/A	N/A	N/A
1900	1905.00	26590	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	N/A	bottom	0 mm	2.730	2.720	1.00	N/A	N/A	N/A	N/A
5600	5600.00	120	802.11n, 20 MHz Bandwidth	OFDM, MIMO	13	back	0 mm	2.260	2.180	1.04	N/A	N/A	N/A	N/A
5750	5720.00	144	802.11n, 20 MHz Bandwidth	OFDM, MIMO	13	back	0 mm	2.080	2.070	1.00	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

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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

The following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 80 tuner states were divided among the aggregate band, mode and exposure combinations so that each combination was evaluated for at least 20 tuner states and also so that at least 3 single point SAR measurements were made for every available tuner state. 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 80 states.

Per FCC Guidance, several bands/modes were combined to be treated as a single aggregate band. For the CDMA Band Class 0 and 10 pair, the highest reported SAR configuration per exposure condition was evaluated. For the LTE Band 2 and 25 pair, the highest reported SAR configuration per exposure condition was evaluated. Additionally, LTE Bands 12 and 13 were considered as an aggregated band to select single point measurement configurations. The wireless configuration and exposure condition combinations were divided evenly among the two bands (i.e., the number of required single point measurements (at least 20) apply to the aggregated band). All other bands were treated independently.

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 850		UMTS 1750		UMTS 1900		CDMA BC0/10		CDMA BC1	
RMC		RMC		RMC		EVDO Rev. A		EVDO Rev. A	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	836.60	Frequency (MHz)	1732.40	Frequency (MHz)	1880.00	Frequency (MHz)	836.52	Frequency (MHz)	1880.00
Channel	4183	Channel	1412	Channel	9400	Channel	384	Channel	600
Measured 1g SAR (W/kg)	0.108	Measured 1g SAR (W/kg)	0.112	Measured 1g SAR (W/kg)	0.165	Measured 1g SAR (W/kg)	0.126	Measured 1g SAR (W/kg)	0.159
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 1)	0.157	Auto-tune (State 28)	0.176	Auto-tune (State 17)	0.265	Auto-tune (State 2)	0.160	Auto-tune (State 17)	0.189
Default (State 1)	0.155	Default (State 17)	0.136	Default (State 17)	0.272	Default (State 1)	0.159	Default (State 17)	0.188
State 1	0.155	State 0	0.170	State 2	0.192	State 1	0.159	State 0	0.140
State 6	0.152	State 2	0.155	State 3	0.187	State 2	0.166	State 1	0.141
State 8	0.146	State 7	0.141	State 4	0.184	State 7	0.150	State 5	0.119
State 11	0.090	State 8	0.141	State 14	0.082	State 9	0.131	State 11	0.081
State 15	0.022	State 10	0.123	State 15	0.063	State 16	0.082	State 14	0.048
State 19	0.084	State 13	0.086	State 17	0.272	State 17	0.084	State 15	0.037
State 24	0.069	State 17	0.136	State 20	0.258	State 22	0.087	State 17	0.188
State 29	0.010	State 19	0.150	State 21	0.258	State 27	0.028	State 23	0.157
State 32	0.155	State 26	0.171	State 22	0.250	State 28	0.016	State 25	0.149
State 39	0.129	State 28	0.179	State 30	0.135	State 29	0.011	State 27	0.127
State 40	0.126	State 29	0.180	State 32	0.132	State 36	0.146	State 36	0.072
State 43	0.076	State 31	0.164	State 36	0.110	State 45	0.044	State 38	0.068
State 48	0.085	State 33	0.091	State 37	0.110	State 48	0.089	State 40	0.068
State 52	0.095	State 42	0.059	State 38	0.103	State 63	0.004	State 41	0.060
State 53	0.094	State 46	0.027	State 41	0.094	State 67	0.088	State 49	0.144
State 54	0.087	State 55	0.139	State 42	0.087	State 68	0.160	State 52	0.123
State 56	0.082	State 60	0.109	State 49	0.218	State 69	0.084	State 54	0.116
State 61	0.013	State 62	0.089	State 52	0.190	State 71	0.091	State 59	0.086
State 65	0.076	State 63	0.075	State 54	0.181	State 74	0.160	State 66	0.069
State 68	0.154	State 69	0.134	State 64	0.178	State 77	0.084	State 69	0.185
State 73	0.077	State 73	0.129	State 71	0.215	State 78	0.161	State 72	0.133
State 75	0.083	State 76	0.168	State 77	0.273	State 79	0.091	State 77	0.184

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Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data												
LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 26		LTE Band 66		LTE Band 25/2	
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offsets	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	1745.00	Frequency (MHz)	1860.00
Channel	133297	Channel	23095	Channel	23230	Channel	26865	Channel	132322	Channel	26140
Measured 1g SAR (W/kg)	0.183	Measured 1g SAR (W/kg)	0.165	Measured 1g SAR (W/kg)	0.165	Measured 1g SAR (W/kg)	0.165	Measured 1g SAR (W/kg)	0.141	Measured 1g SAR (W/kg)	0.165
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)	0.228	Auto-tune (State 76)	0.217	Auto-tune (State 1)	0.217	Auto-tune (State 1)	0.218	Auto-tune (State 29)	0.192	Auto-tune (State 17)	0.227
Default (State 1)	0.234	Default (State 1)	0.223	Default (State 1)	0.217	Default (State 1)	0.228	Default (State 49)	0.165	Default (State 17)	0.228
State 0	0.227	State 1	0.223	State 1	0.217	State 1	0.228	State 0	0.176	State 4	0.161
State 1	0.234	State 8	0.220	State 6	0.173	State 4	0.227	State 2	0.160	State 5	0.159
State 2	0.207	State 21	0.045	State 14	0.045	State 6	0.212	State 7	0.144	State 8	0.150
State 3	0.204	State 31	0.000	State 17	0.119	State 10	0.163	State 13	0.085	State 9	0.137
State 4	0.202	State 45	0.082	State 19	0.123	State 14	0.061	State 17	0.180	State 11	0.111
State 7	0.179	State 49	0.058	State 20	0.119	State 17	0.116	State 19	0.187	State 16	0.226
State 10	0.135	State 57	0.034	State 41	0.101	State 20	0.140	State 24	0.190	State 17	0.228
State 14	0.058	State 67	0.058	State 55	0.114	State 27	0.040	State 27	0.193	State 18	0.217
State 26	0.036	State 68	0.223	State 61	0.017	State 29	0.015	State 29	0.184	State 23	0.202
State 29	0.013	State 70	0.207	State 65	0.116	State 30	0.009	State 30	0.179	State 25	0.194
State 33	0.206	State 76	0.223	State 69	0.120	State 34	0.195	State 33	0.090	State 28	0.148
State 35	0.170	State 78	0.207	State 76	0.221	State 39	0.166	State 34	0.082	State 32	0.114
State 36	0.165					State 43	0.100	State 37	0.078	State 35	0.100
State 43	0.085					State 46	0.045	State 42	0.059	State 39	0.088
State 47	0.028					State 49	0.126	State 45	0.034	State 41	0.082
State 52	0.087					State 53	0.153	State 48	0.171	State 47	0.024
State 61	0.016					State 54	0.143	State 49	0.165	State 50	0.165
State 63	0.006					State 55	0.135	State 51	0.158	State 59	0.116
State 64	0.230					State 61	0.020	State 52	0.157	State 60	0.098
State 65	0.081					State 62	0.012	State 56	0.149	State 64	0.149
State 69	0.082					State 68	0.228	State 58	0.134	State 71	0.179
State 73	0.081					State 73	0.113	State 69	0.179	State 72	0.172
State 77	0.082					State 77	0.115	State 76	0.178	State 74	0.103

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Table 14-3
UMTS/CDMA Supplemental Body SAR Data

Supplemental Body SAR Data									
UMTS 850		UMTS 1750		UMTS 1900		CDMA BC0/10		CDMA BC1	
RMC		RMC		RMC		EVDO Rev. 0		EVDO Rev. 0	
Test Position	Back	Test Position	Bottom	Test Position	Bottom	Test Position	Back	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.60	Frequency (MHz)	1752.60	Frequency (MHz)	1880.00	Frequency (MHz)	836.52	Frequency (MHz)	1880.00
Channel	4183	Channel	1513	Channel	9400	Channel	384	Channel	600
Measured 1g SAR (W/kg)	0.508	Measured 1g SAR (W/kg)	0.927	Measured 1g SAR (W/kg)	1.090	Measured 1g SAR (W/kg)	0.527	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)	
Auto-tune (State 4)	0.563	Auto-tune (State 28)	1.337	Auto-tune (State 16)	1.371	Auto-tune (State 1)	0.661	Auto-tune (State 17)	1.358
Default (State 1)	0.557	Default (State 17)	1.071	Default (State 17)	1.349	Default (State 1)	0.668	Default (State 17)	1.351
State 0	0.551	State 0	1.355	State 0	1.276	State 0	0.654	State 0	1.146
State 1	0.557	State 1	1.346	State 1	1.176	State 1	0.668	State 1	1.149
State 4	0.577	State 2	1.273	State 2	1.074	State 3	0.691	State 2	1.054
State 6	0.552	State 3	1.255	State 3	1.053	State 6	0.659	State 3	1.026
State 7	0.539	State 4	1.230	State 4	1.040	State 8	0.633	State 4	1.017
State 12	0.243	State 5	1.239	State 5	1.032	State 12	0.287	State 5	1.009
State 15	0.092	State 6	1.188	State 6	0.988	State 20	0.344	State 6	0.964
State 21	0.284	State 7	1.170	State 7	0.968	State 25	0.232	State 7	0.918
State 22	0.263	State 8	1.175	State 8	0.981	State 26	0.169	State 8	0.935
State 26	0.143	State 9	0.062	State 9	0.905	State 28	0.072	State 9	0.869
State 36	0.517	State 10	1.079	State 10	0.845	State 35	0.627	State 10	0.811
State 37	0.510	State 11	1.007	State 11	0.760	State 38	0.580	State 11	0.730
State 43	0.287	State 12	0.892	State 12	0.652	State 40	0.549	State 12	0.635
State 44	0.214	State 13	0.819	State 13	0.577	State 45	0.207	State 13	0.552
State 49	0.305	State 14	0.724	State 14	0.489	State 47	0.106	State 14	0.469
State 53	0.325	State 15	0.601	State 15	0.383	State 50	0.411	State 15	0.371
State 54	0.302	State 16	1.049	State 16	1.365	State 53	0.387	State 16	1.333
State 55	0.289	State 17	1.071	State 17	1.349	State 59	0.142	State 17	1.351
State 59	0.119	State 18	1.149	State 18	1.363	State 62	0.042	State 18	1.327
State 63	0.021	State 19	1.164	State 19	1.360	State 64	0.643	State 19	1.320
State 69	0.278	State 20	1.172	State 20	1.355	State 65	0.322	State 20	1.313
State 76	0.548	State 21	1.178	State 21	1.364	State 70	0.662	State 21	1.311
State 78	0.555	State 22	1.210	State 22	1.342	State 76	0.654	State 22	1.296
		State 23	1.222	State 23	1.332			State 23	1.287
		State 24	1.220	State 24	1.323			State 24	1.287
		State 25	1.271	State 25	1.321			State 25	1.255
		State 26	1.319	State 26	1.290			State 26	1.226
		State 27	1.367	State 27	1.239			State 27	1.176
		State 28	1.304	State 28	1.149			State 28	1.097
		State 29	1.312	State 29	1.072			State 29	1.045
		State 30	1.289	State 30	0.964			State 30	0.925
		State 31	1.286	State 31	0.815			State 31	0.782
		State 32	0.758	State 32	0.685			State 32	0.646
		State 33	0.759	State 33	0.686			State 33	0.652
		State 34	0.679	State 34	0.605			State 34	0.576
		State 35	0.662	State 35	0.587			State 35	0.558
		State 36	0.653	State 36	0.578			State 36	0.549
		State 37	0.645	State 37	0.573			State 37	0.542
		State 38	0.610	State 38	0.537			State 38	0.508
		State 39	0.593	State 39	0.521			State 39	0.493
		State 40	0.604	State 40	0.536			State 40	0.507
		State 41	0.545	State 41	0.481			State 41	0.454
		State 42	0.499	State 42	0.440			State 42	0.414
		State 43	0.438	State 43	0.382			State 43	0.362
		State 44	0.362	State 44	0.312			State 44	0.298
		State 45	0.311	State 45	0.267			State 45	0.255
		State 46	0.254	State 46	0.216			State 46	0.206
		State 47	0.190	State 47	0.161			State 47	0.152
		State 48	1.175	State 48	1.133			State 48	1.071
		State 49	1.174	State 49	1.125			State 49	1.071
		State 50	1.148	State 50	1.037			State 50	0.986
		State 51	1.145	State 51	1.021			State 51	0.971
		State 52	1.144	State 52	1.012			State 52	0.958
		State 53	1.134	State 53	1.004			State 53	0.959
		State 54	1.113	State 54	0.969			State 54	0.922
		State 55	1.106	State 55	0.952			State 55	0.896
		State 56	1.102	State 56	0.959			State 56	0.906
		State 57	0.060	State 57	0.891			State 57	0.845
		State 58	0.058	State 58	0.841			State 58	0.795
		State 59	0.056	State 59	0.767			State 59	0.727
		State 60	0.053	State 60	0.668			State 60	0.658
		State 61	0.050	State 61	0.596			State 61	0.577
		State 62	0.046	State 62	0.512			State 62	0.495
		State 63	0.040	State 63	0.407			State 63	0.394
		State 64	0.068	State 64	0.992			State 64	1.071
		State 65	0.053	State 65	1.223			State 65	1.312
		State 66	0.035	State 66	0.532			State 66	0.580
		State 67	0.059	State 67	0.951			State 67	1.033
		State 68	0.074	State 68	1.173			State 68	1.128
		State 69	0.058	State 69	1.360			State 69	1.322
		State 70	0.041	State 70	0.685			State 70	0.741
		State 71	0.064	State 71	1.114			State 71	1.209
		State 72	0.073	State 72	1.149			State 72	1.094
		State 73	0.055	State 73	1.330			State 73	1.291
		State 74	0.039	State 74	0.635			State 74	0.613
		State 75	0.063	State 75	1.079			State 75	1.044
		State 76	0.074	State 76	1.185			State 76	1.120
		State 77	0.058	State 77	1.355			State 77	1.333
		State 78	0.042	State 78	0.689			State 78	0.668
		State 79	0.065	State 79	1.126			State 79	1.091

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Table 14-4
LTE Supplemental Body SAR Data

Supplemental Body SAR Data												
LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 26		LTE Band 66		LTE Band 25/2	
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20 MHz Bandwidth, 50 RB, 50 RB Offsets	
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
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1880.00
Channel	133297	Channel	23095	Channel	23230	Channel	26865	Channel	132572	Channel	18900
Measured 1g SAR (W/kg)	0.372	Measured 1g SAR (W/kg)	0.318	Measured 1g SAR (W/kg)	0.316	Measured 1g SAR (W/kg)	0.519	Measured 1g SAR (W/kg)	1.000	Measured 1g SAR (W/kg)	0.977
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 68)	0.632	Auto-tune (State 76)	0.523	Auto-tune (State 1)	0.587	Auto-tune (State 2)	0.730	Auto-tune (State 30)	1.306	Auto-tune (State 16)	1.272
Default (State 1)	0.646	Default (State 1)	0.525	Default (State 1)	0.599	Default (State 1)	0.697	Default (State 49)	1.087	Default (State 17)	1.239
State 0	0.642	State 1	0.525	State 1	0.599	State 0	0.691	State 0	1.231	State 0	1.019
State 1	0.646	State 24	0.093	State 5	0.522	State 1	0.697	State 1	1.231	State 1	1.015
State 6	0.520	State 27	0.038	State 9	0.413	State 2	0.725	State 2	1.142	State 2	0.924
State 12	0.253	State 40	0.390	State 13	0.179	State 5	0.716	State 3	1.125	State 3	0.904
State 18	0.220	State 42	0.315	State 14	0.135	State 6	0.695	State 4	1.117	State 4	0.891
State 26	0.104	State 46	0.149	State 21	0.290	State 9	0.621	State 5	1.108	State 5	0.885
State 28	0.053	State 58	0.063	State 23	0.239	State 13	0.284	State 6	1.076	State 6	0.845
State 32	0.588	State 66	0.489	State 28	0.052	State 20	0.406	State 7	1.056	State 7	0.825
State 33	0.588	State 70	0.489	State 34	0.459	State 22	0.362	State 8	1.063	State 8	0.837
State 35	0.476	State 76	0.523	State 44	0.160	State 26	0.172	State 9	1.000	State 9	0.770
State 39	0.412	State 77	0.125	State 67	0.331	State 28	0.071	State 10	0.946	State 10	0.714
State 41	0.349	State 79	0.142	State 74	0.548	State 31	0.020	State 11	0.874	State 11	0.638
State 47	0.089					State 39	0.552	State 12	0.777	State 12	0.543
State 49	0.256					State 40	0.541	State 13	0.708	State 13	0.476
State 52	0.236					State 46	0.169	State 14	0.617	State 14	0.398
State 57	0.156					State 51	0.459	State 15	0.500	State 15	0.307
State 62	0.033					State 54	0.414	State 16	0.984	State 16	1.240
State 63	0.033					State 58	0.210	State 17	1.006	State 17	1.239
State 66	0.583					State 59	0.147	State 18	1.085	State 18	1.217
State 68	0.653					State 63	0.025	State 19	1.100	State 19	1.211
State 70	0.584					State 65	0.329	State 20	1.103	State 20	1.205
State 72	0.650					State 71	0.373	State 21	1.107	State 21	1.202
State 77	0.232					State 74	0.685	State 22	1.126	State 22	1.184
State 78	0.590					State 79	0.372	State 23	1.138	State 23	1.172
								State 24	1.138	State 24	1.180
								State 25	1.179	State 25	1.138
								State 26	1.215	State 26	1.102
								State 27	1.255	State 27	1.047
								State 28	1.299	State 28	0.956
								State 29	1.317	State 29	0.884
								State 30	1.319	State 30	0.786
								State 31	1.202	State 31	0.647
								State 32	0.654	State 32	0.586
								State 33	0.655	State 33	0.586
								State 34	0.591	State 34	0.518
								State 35	0.572	State 35	0.502
								State 36	0.564	State 36	0.494
								State 37	0.561	State 37	0.489
								State 38	0.530	State 38	0.457
								State 39	0.513	State 39	0.440
								State 40	0.520	State 40	0.456
								State 41	0.469	State 41	0.407
								State 42	0.430	State 42	0.372
								State 43	0.377	State 43	0.322
								State 44	0.308	State 44	0.261
								State 45	0.264	State 45	0.222
								State 46	0.215	State 46	0.179
								State 47	0.158	State 47	0.131
								State 48	1.086	State 48	0.978
								State 49	1.087	State 49	0.970
								State 50	1.046	State 50	0.892
								State 51	1.037	State 51	0.875
								State 52	1.028	State 52	0.865
								State 53	1.024	State 53	0.858
								State 54	1.006	State 54	0.822
								State 55	0.996	State 55	0.802
								State 56	0.992	State 56	0.814
								State 57	0.958	State 57	0.755
								State 58	0.927	State 58	0.704
								State 59	0.882	State 59	0.636
								State 60	0.815	State 60	0.547
								State 61	0.760	State 61	0.484
								State 62	0.689	State 62	0.409
								State 63	0.590	State 63	0.318
								State 64	1.129	State 64	0.852
								State 65	0.913	State 65	1.082
								State 66	0.542	State 66	0.462
								State 67	0.986	State 67	0.812
								State 68	1.224	State 68	1.005
								State 69	1.001	State 69	1.230
								State 70	0.655	State 70	0.578
								State 71	1.076	State 71	0.957
								State 72	1.217	State 72	0.975
								State 73	0.959	State 73	1.178
								State 74	0.621	State 74	0.534
								State 75	1.064	State 75	0.921
								State 76	1.232	State 76	1.014
								State 77	1.005	State 77	1.238
								State 78	0.659	State 78	0.582
								State 79	1.072	State 79	0.963

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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.

LTE Band 41 SAR testing 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.

Table 14-5
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25	27.8
Measured Output Power (dBm)	23.79	26.38
Measured SAR (W/kg)	0.060	0.077
Measured Power (mW)	239.33	434.51
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	151.50	188.14
% deviation from expected linearity		3.41%

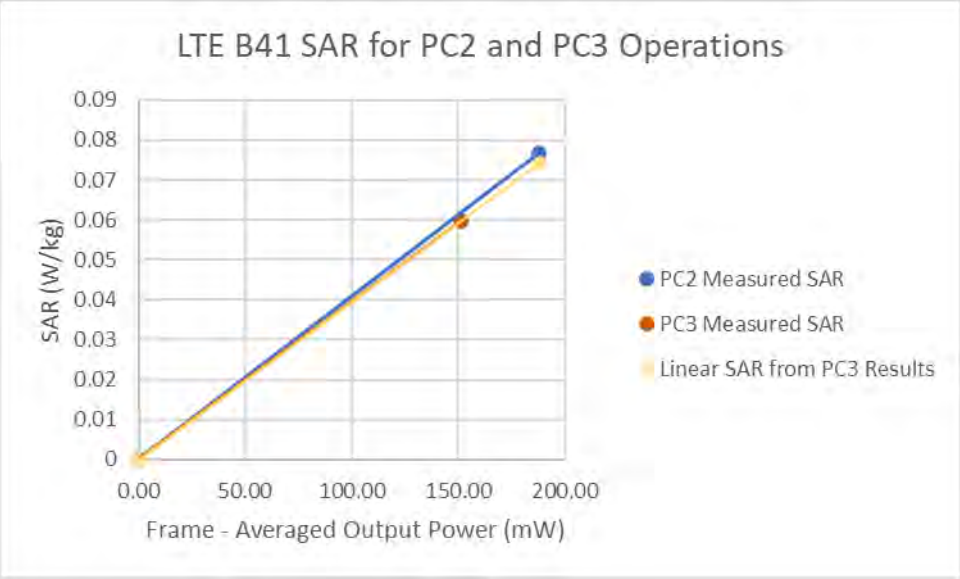


Figure 14-1
LTE Band 41 Head Linearity

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Table 14-6
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25	27.8
Measured Output Power (dBm)	24.68	26.88
Measured SAR (W/kg)	0.074	0.076
Measured Power (mW)	293.76	487.53
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	185.95	211.10
% deviation from expected linearity		-9.89%

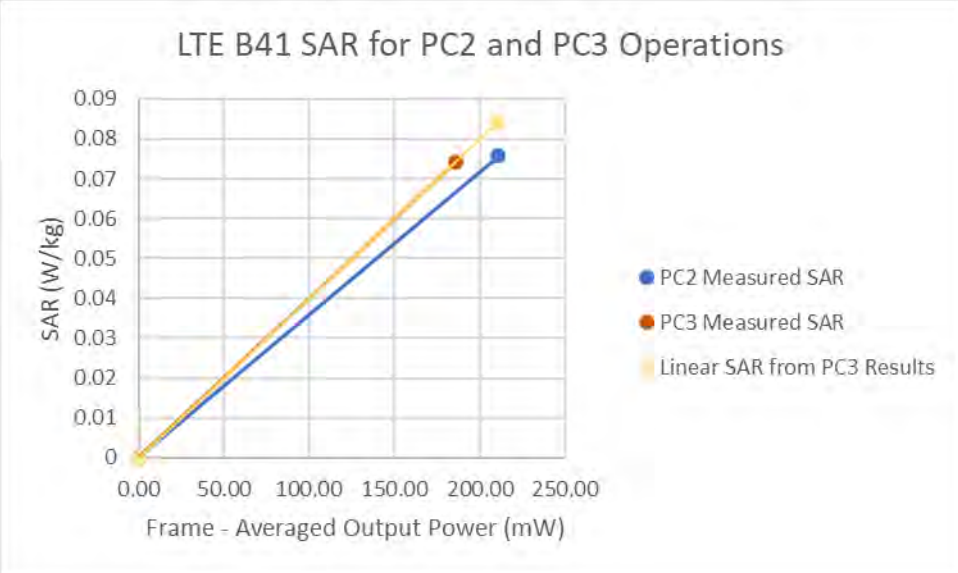


Figure 14-2
LTE Band 41 ULCA Head Linearity

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Table 14-7
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25	27.8
Measured Output Power (dBm)	23.79	26.38
Measured SAR (W/kg)	0.23	0.305
Measured Power (mW)	239.33	434.51
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	151.50	188.14
% deviation from expected linearity		6.78%

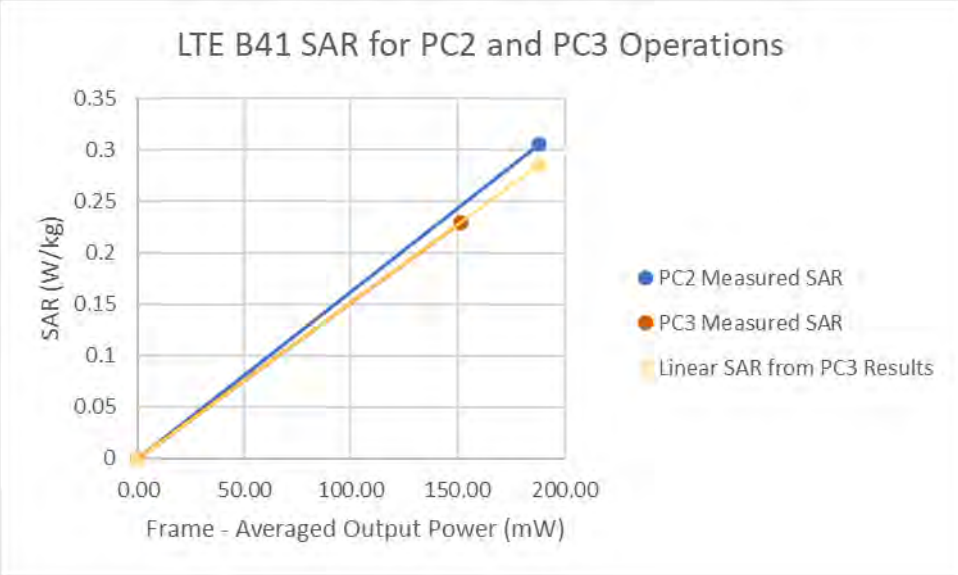


Figure 14-3
LTE Band 41 Body-Worn Linearity

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Table 14-8
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25	27.8
Measured Output Power (dBm)	24.68	26.88
Measured SAR (W/kg)	0.307	0.366
Measured Power (mW)	293.76	487.53
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	185.95	211.10
% deviation from expected linearity		5.02%

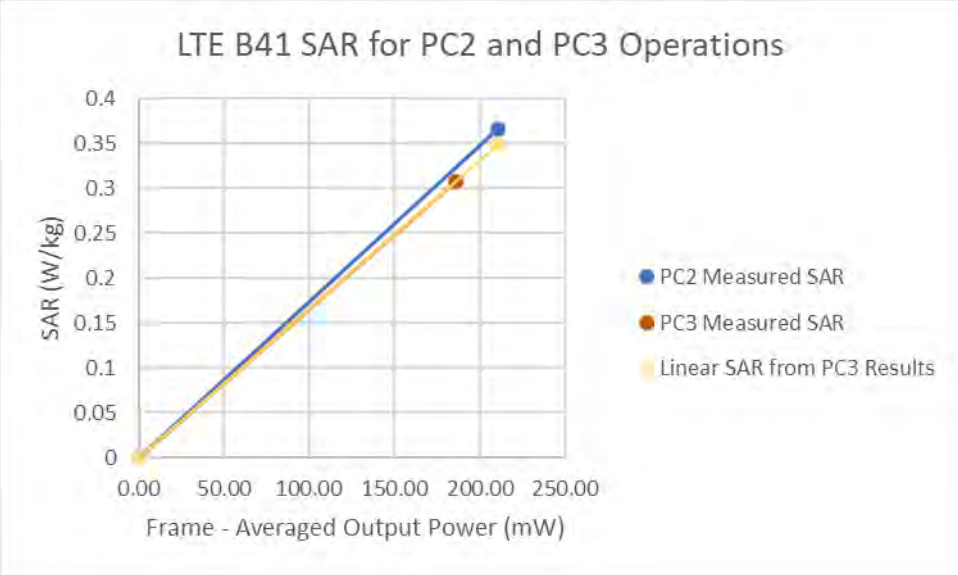


Figure 14-4
LTE Band 41 UCLA Body-Worn Linearity

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Table 14-9
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23	23
Measured Output Power (dBm)	22.21	22.08
Measured SAR (W/kg)	0.409	0.271
Measured Power (mW)	166.34	161.44
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	105.29	69.90
% deviation from expected linearity		-0.19%

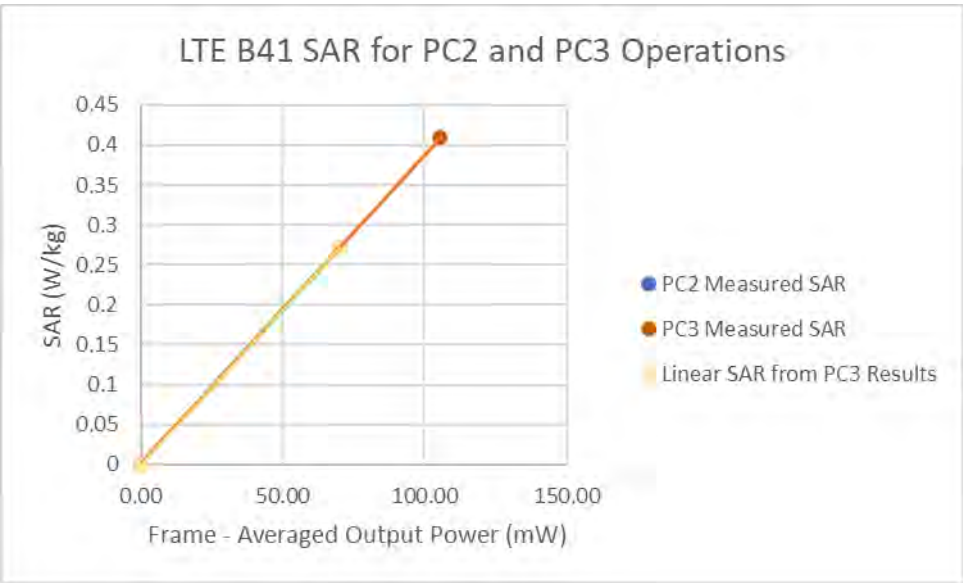


Figure 14-5
LTE Band 41 Hotspot Linearity

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Table 14-10
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23	23
Measured Output Power (dBm)	22.8	22.8
Measured SAR (W/kg)	0.488	0.334
Measured Power (mW)	190.55	190.55
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	120.62	82.51
% deviation from expected linearity		0.06%

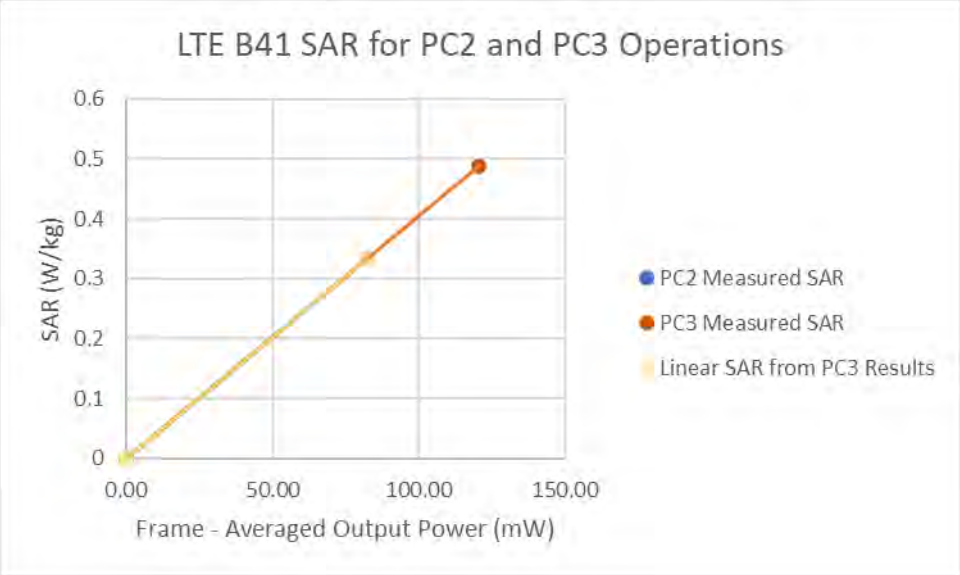


Figure 14-6
LTE Band 41 ULCA Hotspot Linearity

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Table 14-11
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23	23
Measured Output Power (dBm)	21.45	21.71
Measured SAR (W/kg)	1.79	1.19
Measured Power (mW)	139.64	148.25
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	88.39	64.19
% deviation from expected linearity		-8.46%

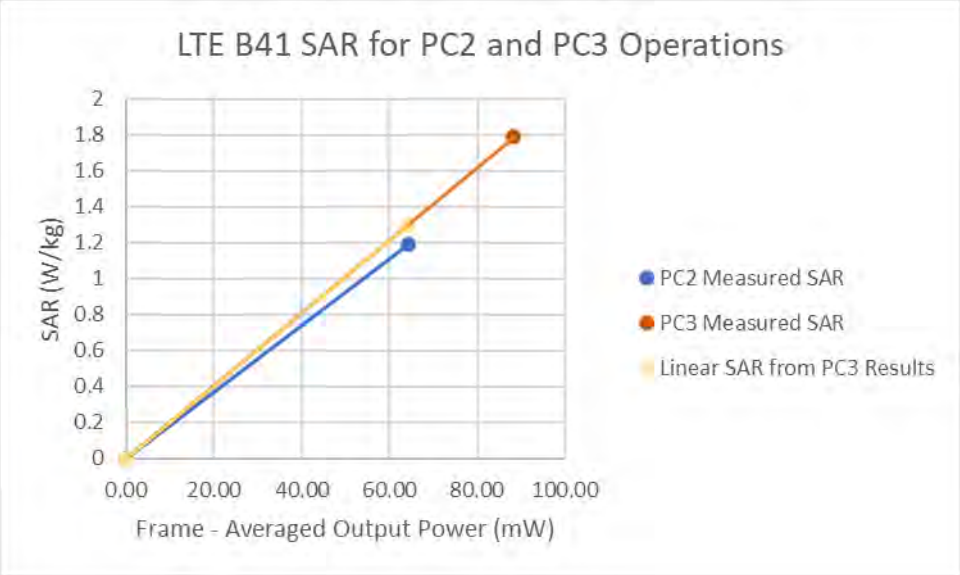


Figure 14-7
LTE Band 41 Phablet Linearity

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Table 14-12
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23	23
Measured Output Power (dBm)	22.2	22.36
Measured SAR (W/kg)	1.95	1.4
Measured Power (mW)	165.96	172.19
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	105.05	74.56
% deviation from expected linearity		1.16%

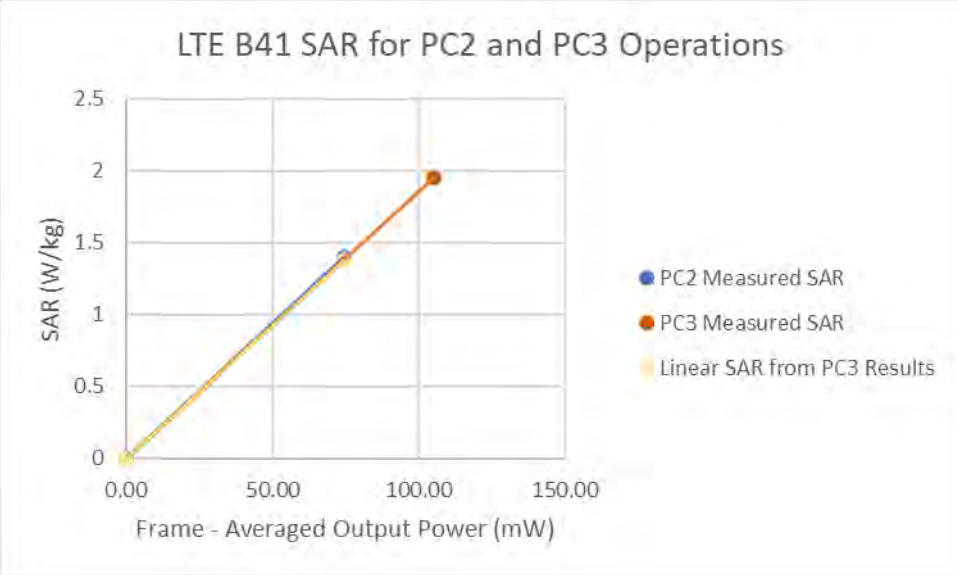


Figure 14-8
LTE Band 41 ULCA Phablet Linearity

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	7/30/2018	Annual	7/30/2019	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Agilent	E4432B	ESG-D Series Signal Generator	4/19/2018	Annual	4/19/2019	US40053896
Agilent	E4438C	ESG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY45091346
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	12/18/2018	Annual	12/18/2019	GB42230325
Agilent	E5515C	Wireless Communications Test Set	2/7/2018	Triennial	2/7/2021	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N5182A	MXG Vector Signal Generator	11/28/2018	Annual	11/28/2019	MY47420603
Agilent	N5182A-506	MXG Vector Signal Generator	6/19/2018	Annual	6/19/2019	MY48180366
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433978
Anritsu	MA24106A	USB Power Sensor	8/20/2018	Annual	8/20/2019	1520504
Anritsu	MA24106A	USB Power Sensor	7/16/2018	Annual	7/16/2019	1520505
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1126066
Anritsu	MA2411B	Pulse Power Sensor	11/20/2018	Annual	11/20/2019	1339008
Anritsu	ML2496A	Power Meter	6/19/2018	Annual	6/19/2019	1306009
Anritsu	ML2496A	Power Meter	5/21/2018	Annual	5/21/2019	1351001
Anritsu	MT8000A	Radio Communication Test Station	11/14/2018	Annual	11/14/2019	6261914237
Anritsu	MT8821C	Radio Communication Analyzer	7/24/2018	Annual	7/24/2019	6201664756
Anritsu	MT8821C	Radio Communication Analyzer	1/25/2019	Annual	1/25/2020	6261895213
Anritsu	MT8862A	Wireless Connectivity Test Set	7/3/2018	Annual	7/3/2019	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	10/9/2018	Biennial	10/9/2020	181647802
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647811
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330174
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766777
Intelligent Weigh	PD-3000	Electronic Balance	N/A	N/A	N/A	11081534
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mitutoyo	CD-6"CSX	Digital Caliper	4/18/2018	Biennial	4/18/2020	13264165
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	5/23/2018	Biennial	5/23/2020	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE5011-1	Torque Wrench	7/19/2017	Biennial	7/19/2019	N/A
Rohde & Schwarz	CMW500	Radio Communication tester	8/3/2018	Annual	8/3/2019	140144
Rohde & Schwarz	CMW500	Radio Communication Tester	11/5/2018	Annual	11/5/2019	140148
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/30/2019	Annual	1/30/2020	162125
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/30/2018	Annual	10/30/2019	164948
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	D750V3	750 MHz SAR Dipole	1/15/2018	Biennial	1/15/2020	1003
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	4d133
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Annual	10/22/2019	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d080
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Biennial	9/11/2019	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Annual	8/16/2019	981
SPEAG	D2600V2	2600 MHz SAR Dipole	9/13/2016	Triennial	9/13/2019	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	8/13/2018	Annual	8/13/2019	1126
SPEAG	D3500V2	3500 MHz SAR Dipole	1/11/2018	Biennial	1/11/2020	1059
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Biennial	1/16/2020	1057
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	1161
SPEAG	D1750V2	1750 MHz SAR Dipole	5/9/2017	Biennial	5/9/2019	1148
SPEAG	D2450V2	2450 MHz SAR Dipole	8/17/2017	Biennial	8/17/2019	719
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Annual	4/11/2019	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/7/2017	Biennial	6/7/2019	1064
SPEAG	D3500V2	3500 MHz SAR Dipole	8/15/2018	Annual	8/15/2019	1055
SPEAG	D3700V2	3700 MHz SAR Dipole	9/13/2018	Annual	9/13/2019	1002
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/21/2016	Triennial	9/21/2019	1191
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409
SPEAG	EX3DV4	SAR Probe	4/18/2018	Annual	4/18/2019	7357
SPEAG	EX3DV4	SAR Probe	1/25/2019	Annual	1/25/2020	3589
SPEAG	EX3DV4	SAR Probe	8/24/2018	Annual	8/24/2019	3949
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	1/24/2019	Annual	1/24/2020	7488
SPEAG	EX3DV4	SAR Probe	7/20/2018	Annual	7/20/2019	7410
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	7417
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	3914
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/11/2018	Annual	4/11/2019	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/22/2018	Annual	8/22/2019	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/15/2019	Annual	1/15/2020	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2019	Annual	2/13/2020	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/14/2019	Annual	2/14/2020	1272

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

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

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

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APPENDIX A: SAR TEST DATA

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PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

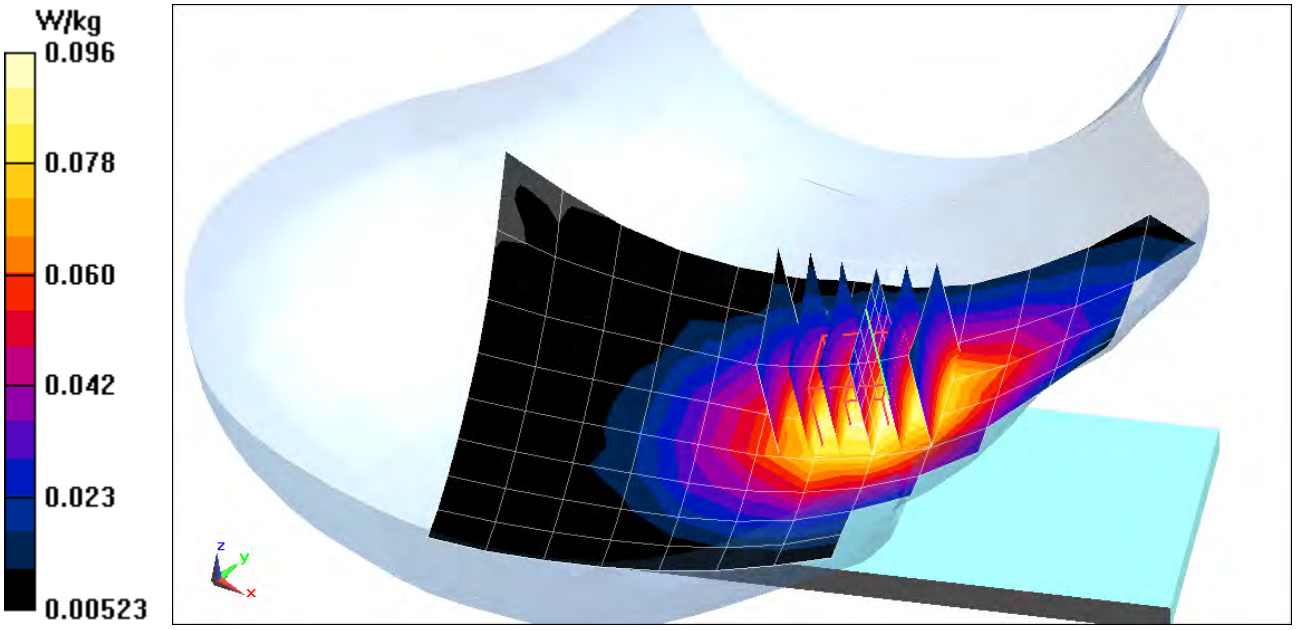
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.924 S/m; ε_r = 43.04; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 836.6 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 850, Right 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 = 9.604 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.083 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

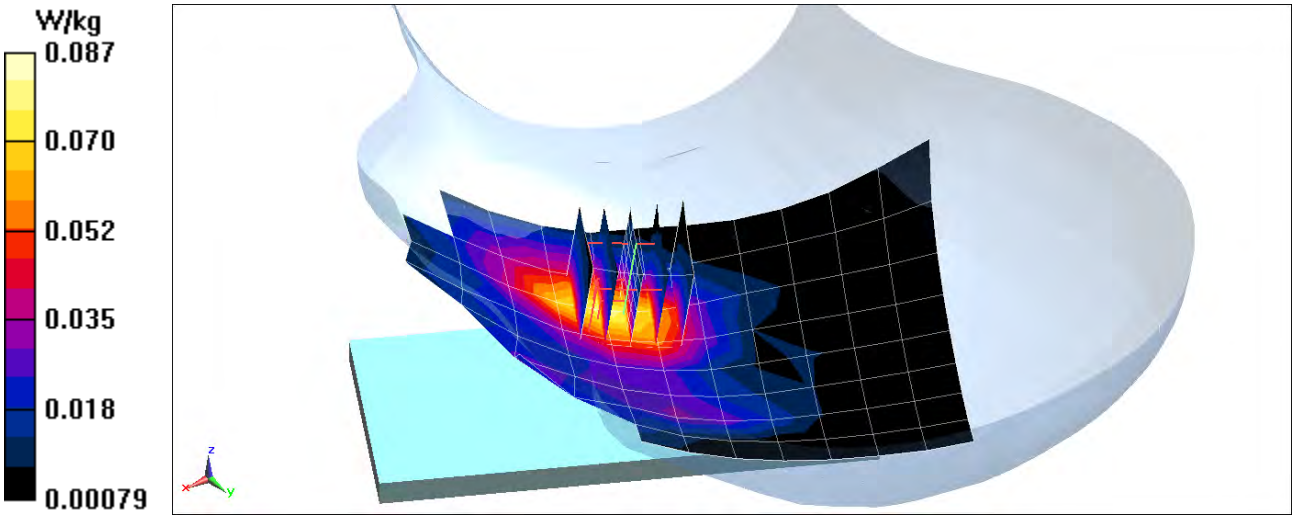
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.415 S/m; ε_r = 38.788; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.043 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.101 W/kg
SAR(1 g) = 0.066 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

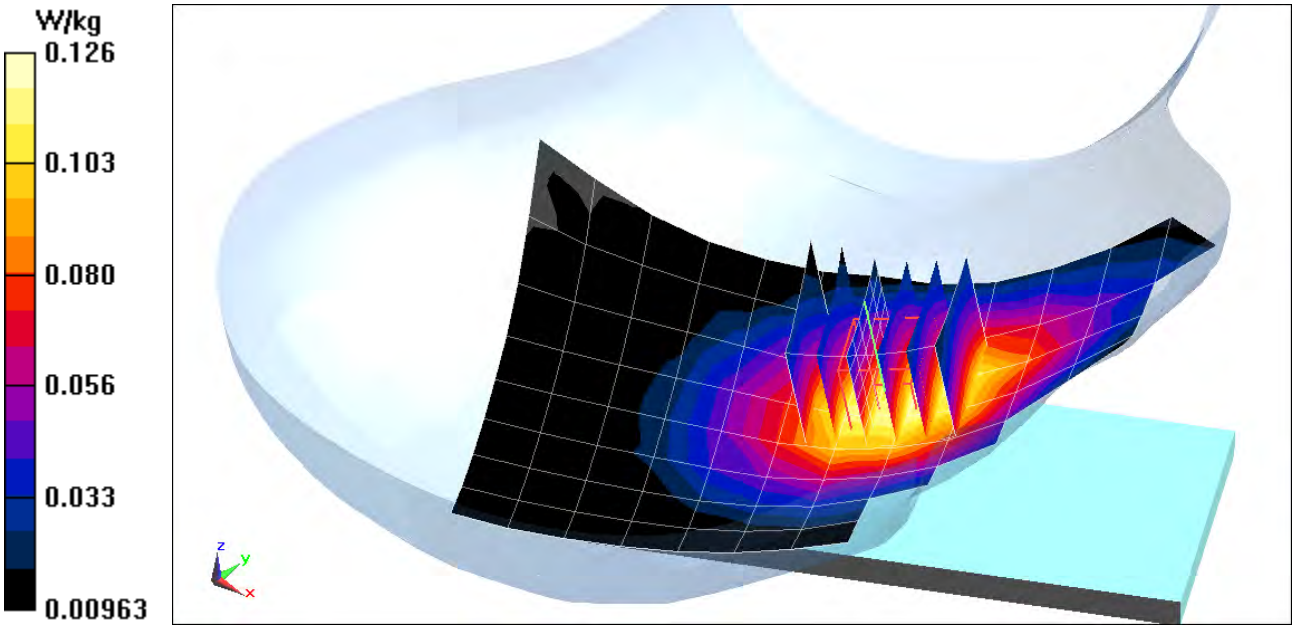
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.924 S/m; ε_r = 43.04; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 836.6 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Right 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 = 11.07 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.108 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

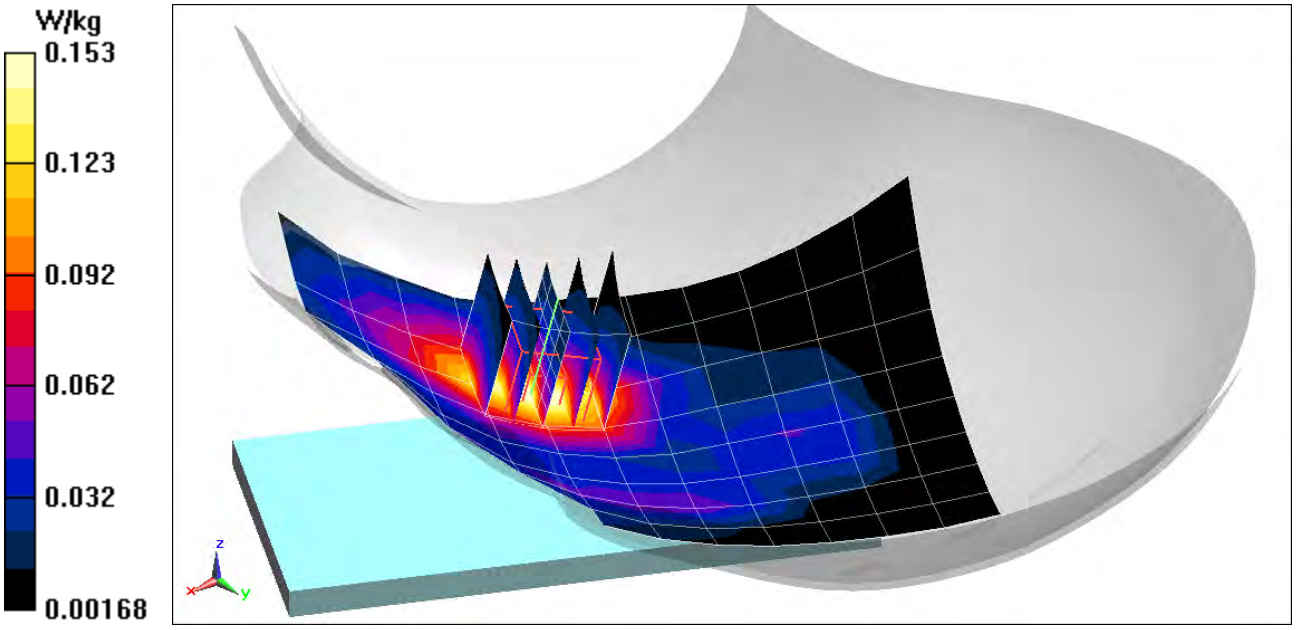
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.345 S/m; ε_r = 38.463; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-24-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN3589; ConvF(7.31, 7.31, 7.31) @ 1732.4 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.04 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.112 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

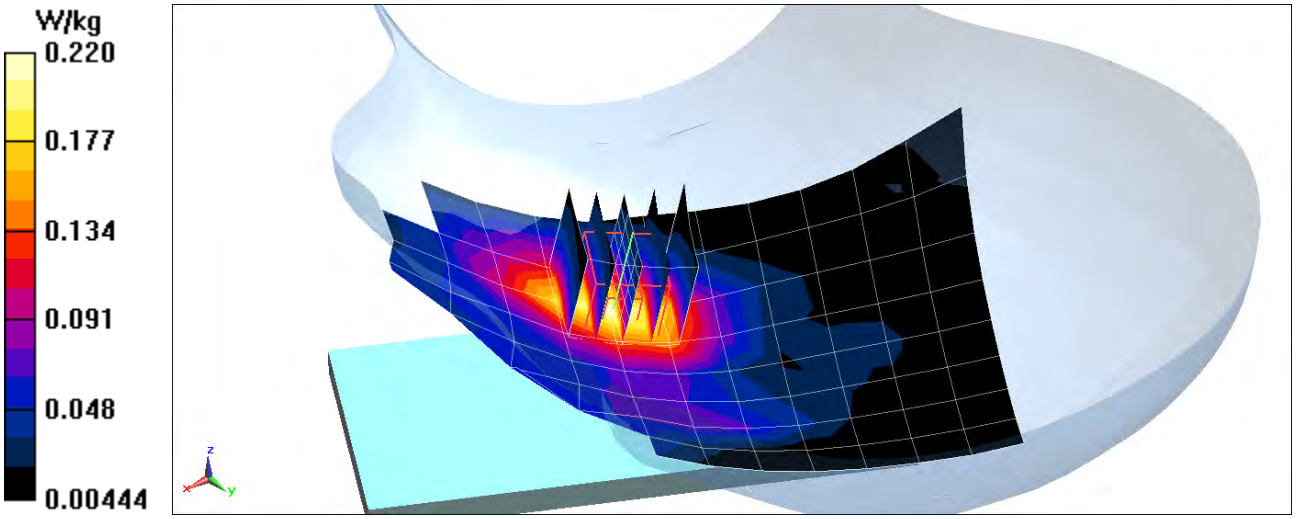
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.415 S/m; ε_r = 38.788; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.16 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.165 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

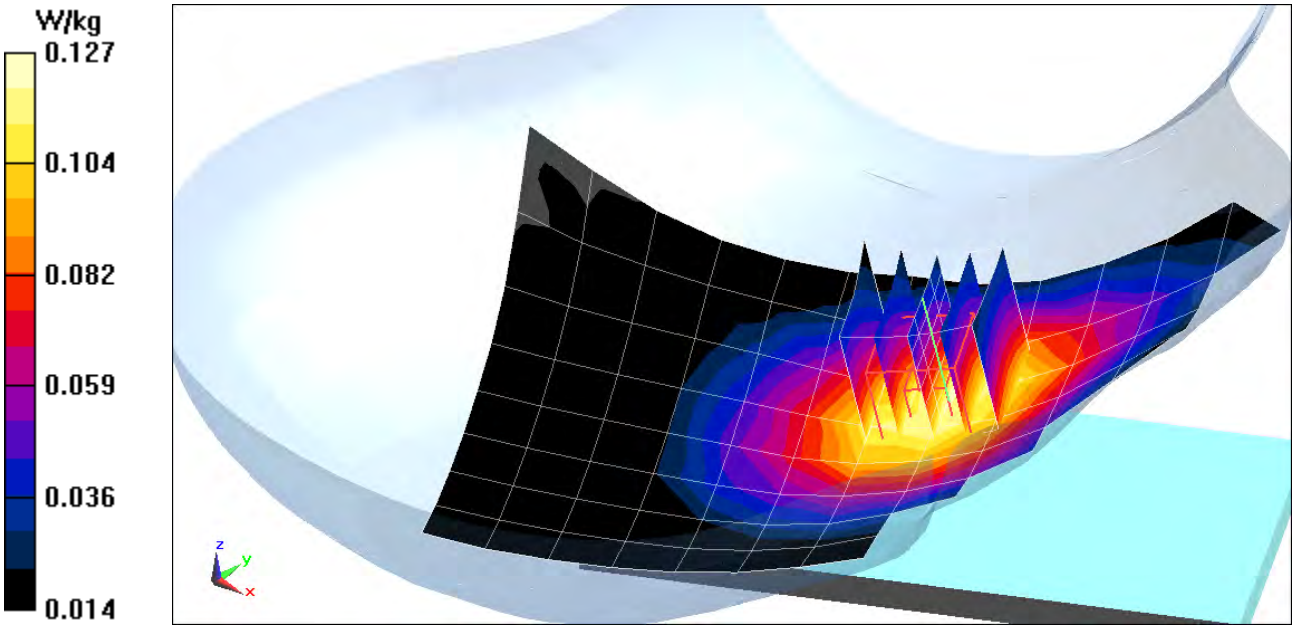
Communication System: UID 0, Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.906 S/m; ε_r = 43.228; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 820.1 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. CDMA, Rule Part 90S, 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 = 11.25 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.137 W/kg
SAR(1 g) = 0.109 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

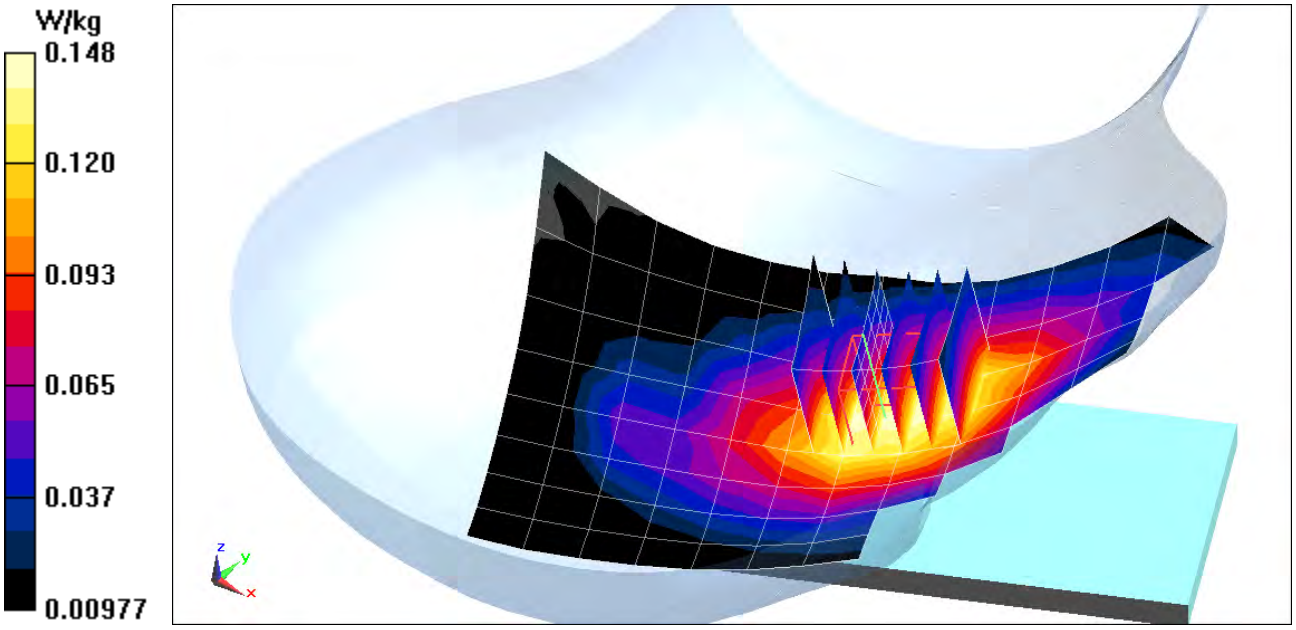
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.924 S/m; ε_r = 43.041; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 836.52 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. EVDO Rev. A, Rule Part 22H, Right 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 = 11.86 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.160 W/kg
SAR(1 g) = 0.126 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

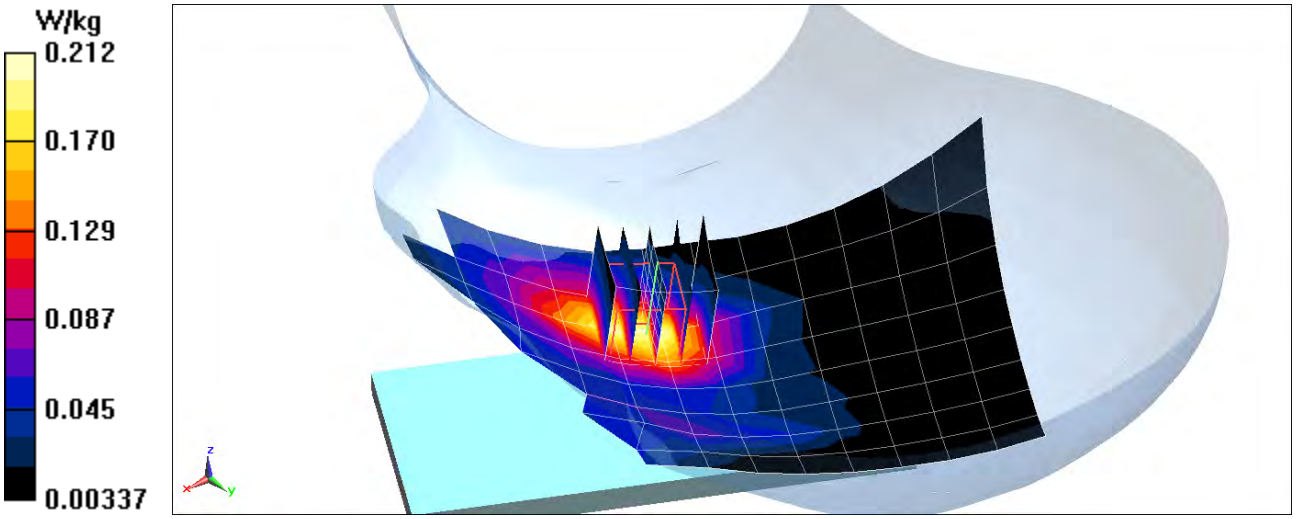
Communication System: UID 0, PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.415 S/m; ε_r = 38.788; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.11 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.245 W/kg
SAR(1 g) = 0.159 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

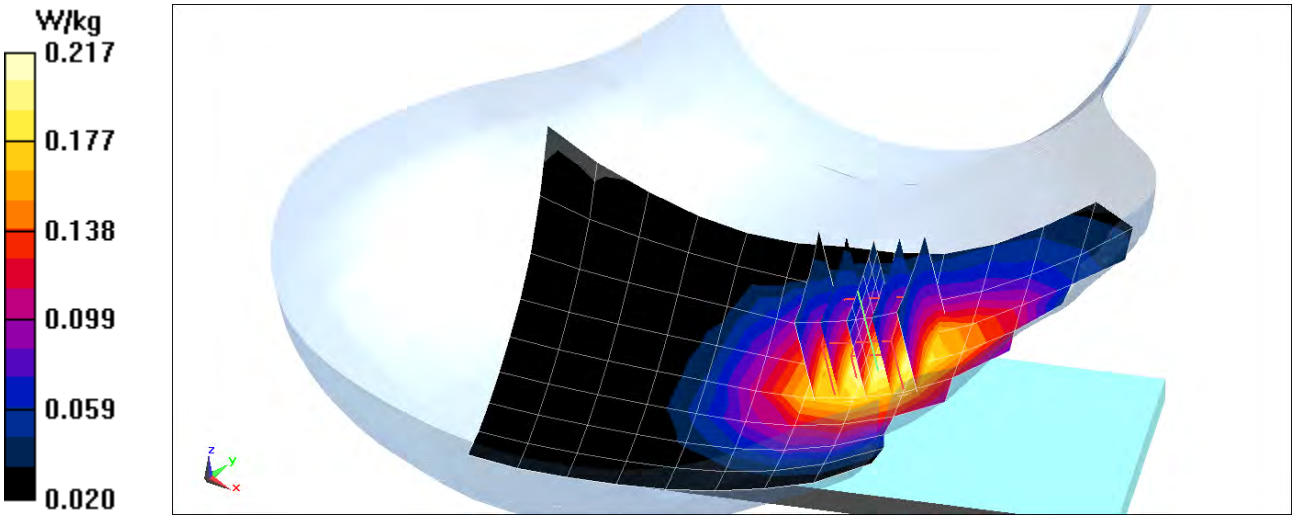
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.869 S/m; ε_r = 42.26; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-14-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(9.91, 9.91, 9.91) @ 680.5 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Right Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.07 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.234 W/kg
SAR(1 g) = 0.183 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

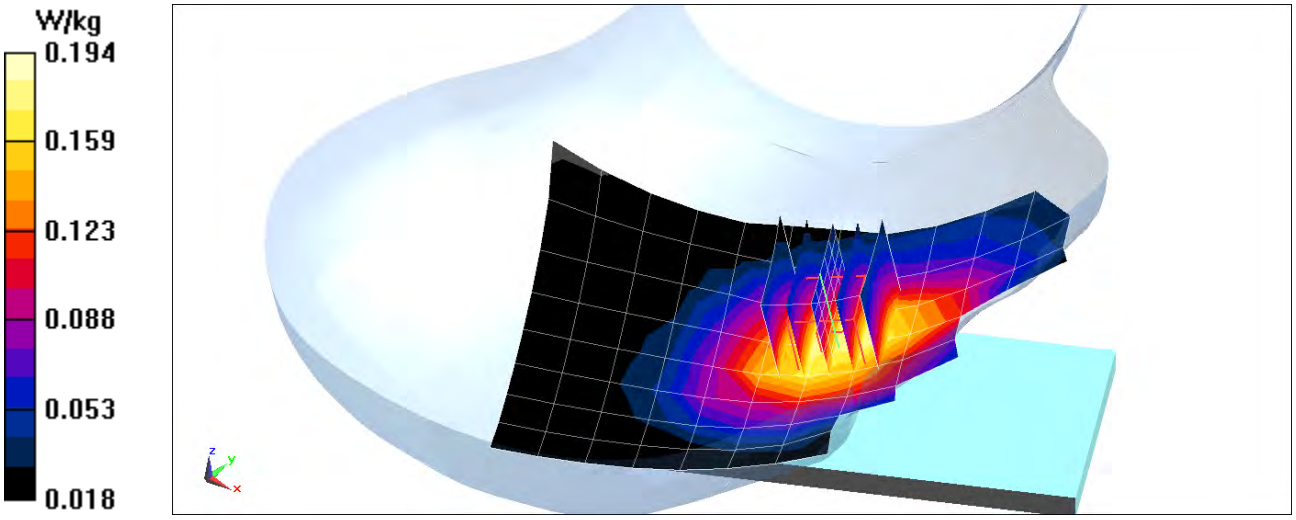
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.879 S/m; ε_r = 42.172; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-14-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(9.91, 9.91, 9.91) @ 707.5 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.30 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.211 W/kg
SAR(1 g) = 0.165 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

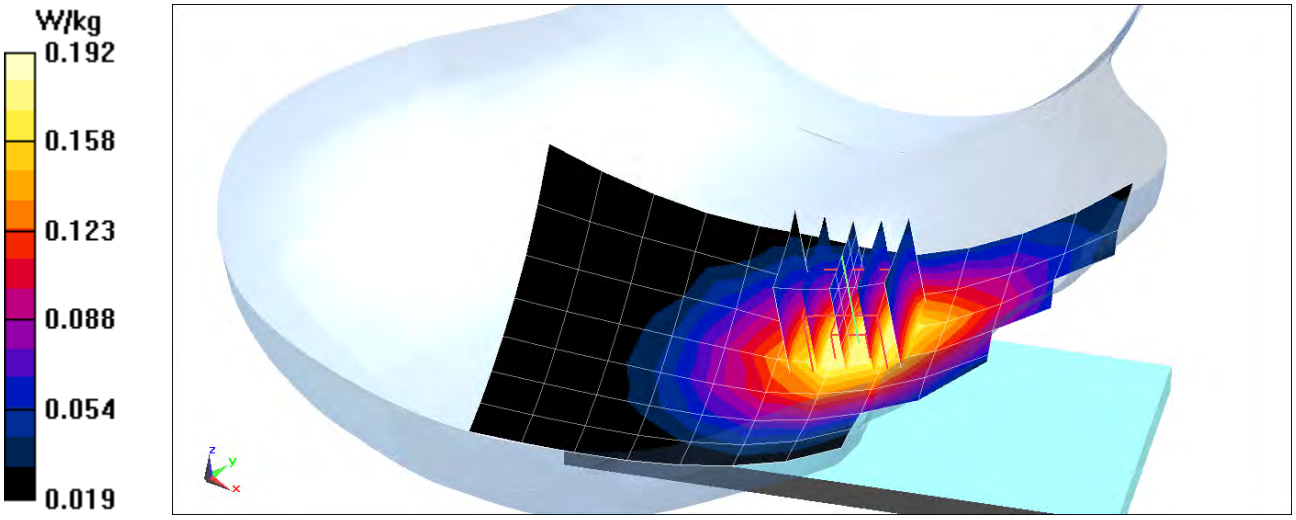
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.906 S/m; ε_r = 41.941; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-14-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(9.91, 9.91, 9.91) @ 782 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 13, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (8x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.19 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.207 W/kg
SAR(1 g) = 0.165 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

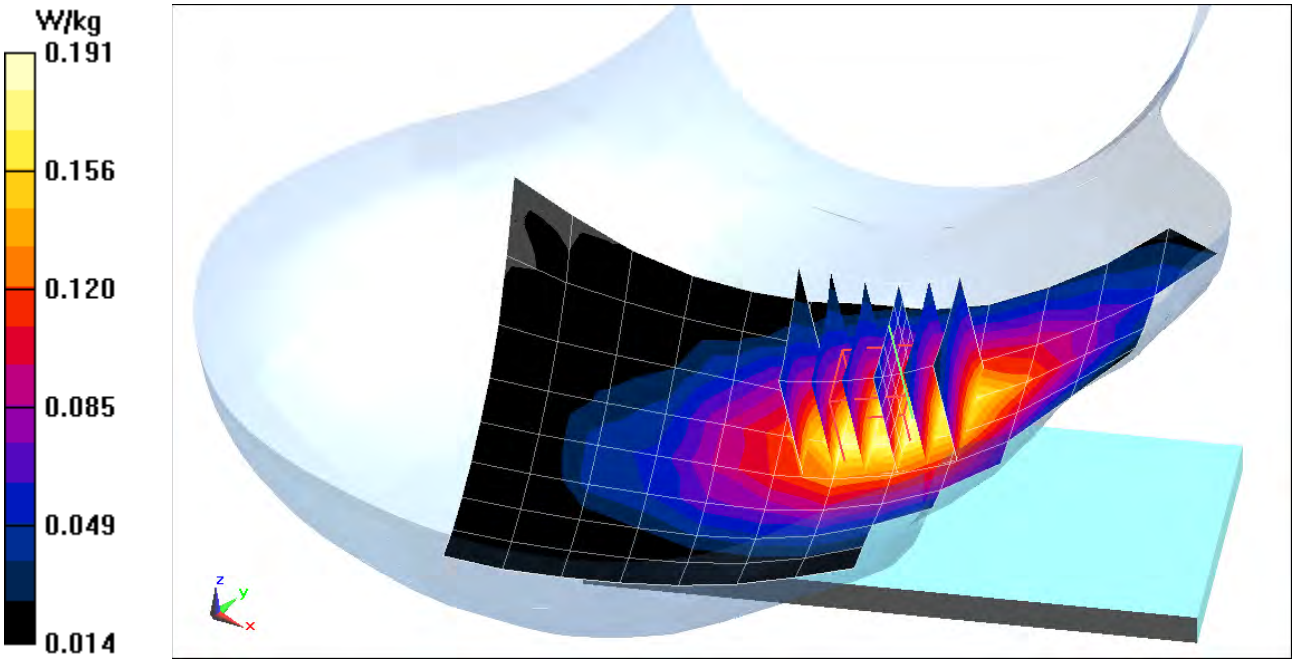
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.918 S/m; ε_r = 43.098; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 831.5 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), Right Head, Cheek, 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 = 14.10 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.210 W/kg
SAR(1 g) = 0.165 W/kg



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DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

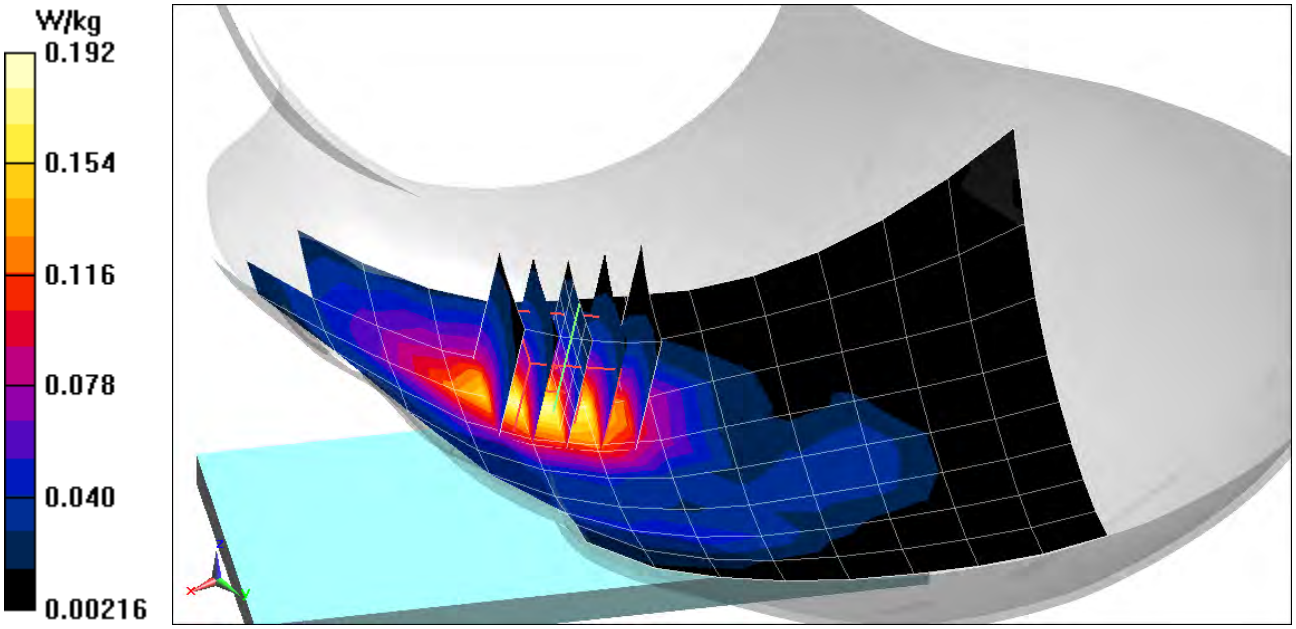
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1745 MHz; σ = 1.353 S/m; ε_r = 38.442; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-24-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN3589; ConvF(7.31, 7.31, 7.31) @ 1745 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Left Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.07 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.221 W/kg
SAR(1 g) = 0.141 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

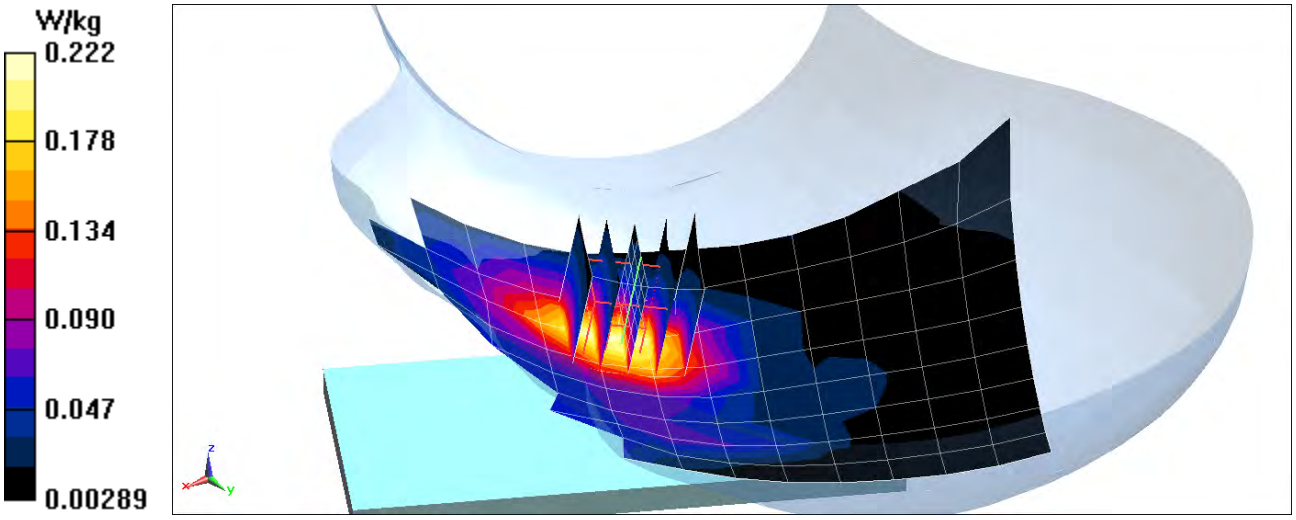
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1860 MHz; σ = 1.404 S/m; ε_r = 38.815; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1860 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Left Head, Cheek, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.89 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.165 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

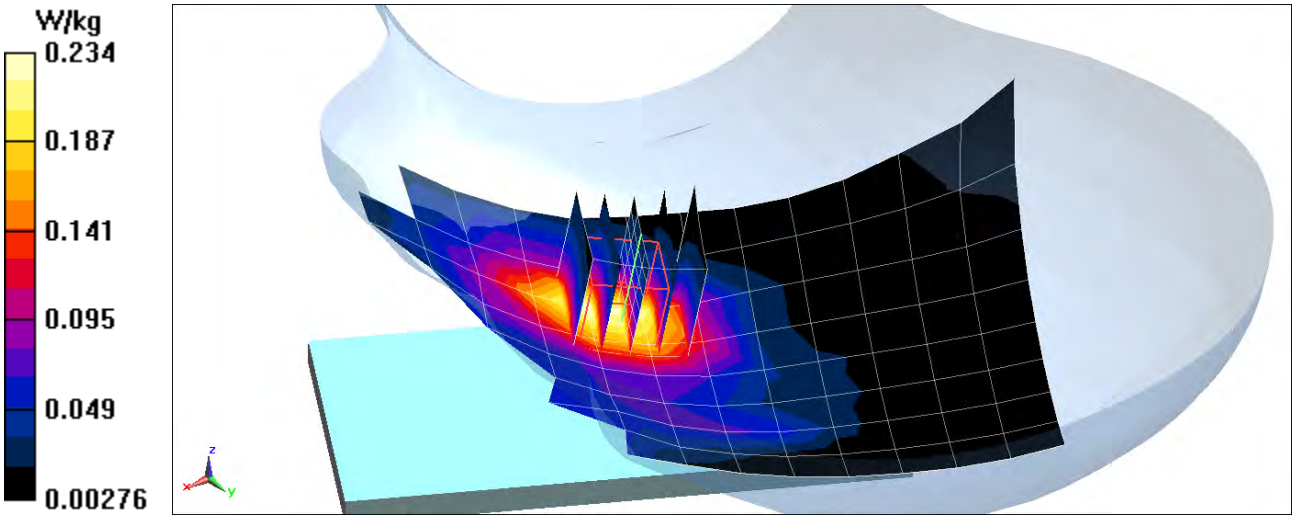
Communication System: UID 0, _LTE Band 2 (PCS); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.415 S/m; ε_r = 38.788; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 2 (PCS), Left Head, Cheek, 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 = 12.05 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.271 W/kg
SAR(1 g) = 0.177 W/kg



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DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

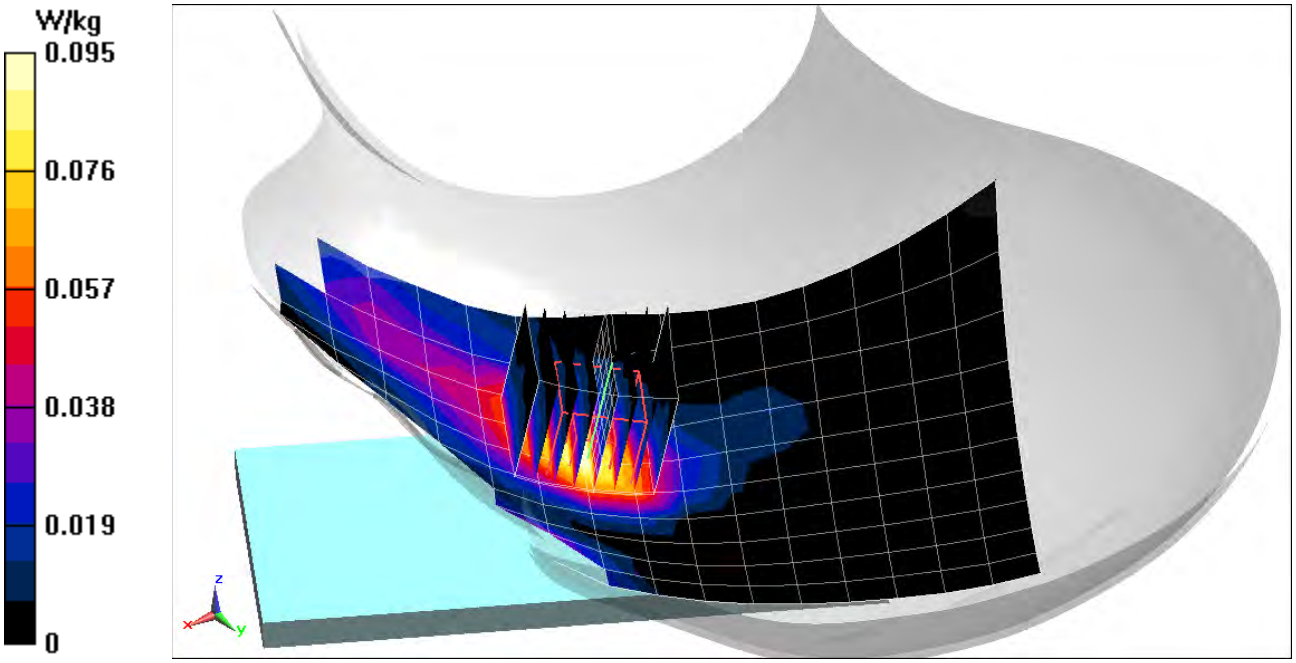
Communication System: UID 0, _LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2560 MHz; σ = 1.895 S/m; ε_r = 37.637; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 04-03-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2560 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Left Head, Cheek, High.ch, QPSK,
20 MHz Bandwidth, 1 RB, 99 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 = 6.560 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.117 W/kg
SAR(1 g) = 0.065 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

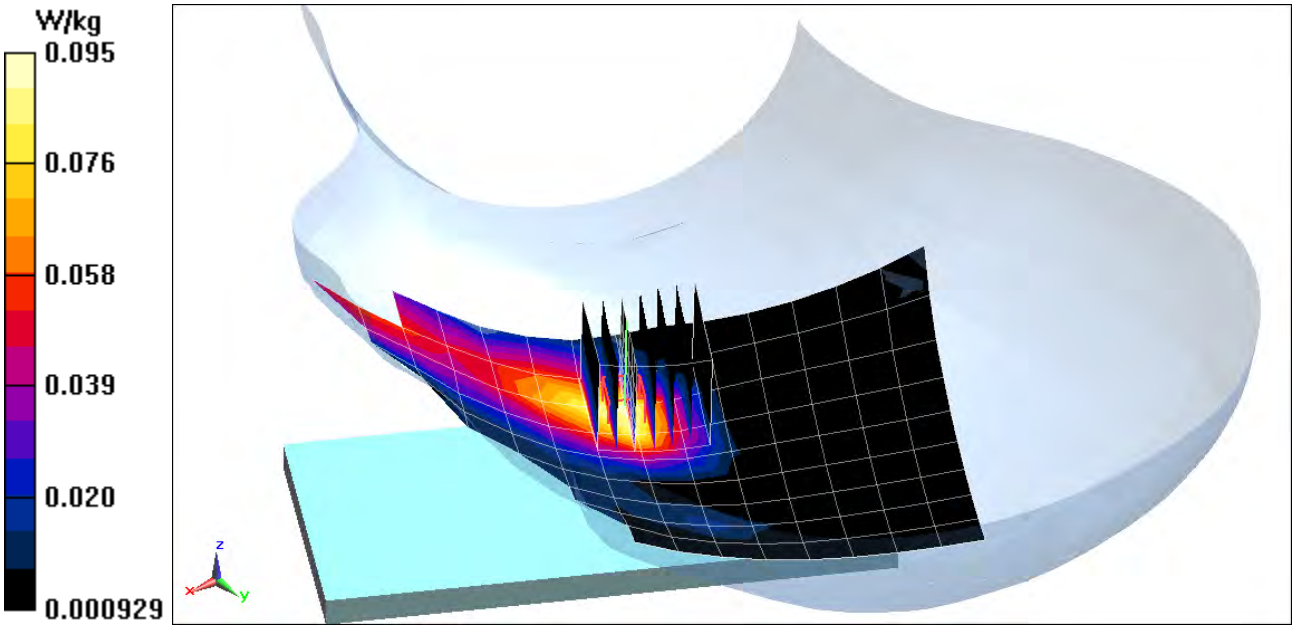
Communication System: UID 0, LTE Band 48; Frequency: 3560 MHz; Duty Cycle: 1:1.58
Medium: 3500-3700 Head Medium parameters used (interpolated):
$f = 3560$ MHz; $\sigma = 2.83$ S/m; $\varepsilon_r = 38.698$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 03-29-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN3949; ConvF(7.36, 7.36, 7.36) @ 3560 MHz; Calibrated: 8/24/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 48, Left Head, Cheek, Low.ch, QPSK,
20 MHz Bandwidth, 1 RB, 0 RB Offset

Area Scan (10x17x1): 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 = 4.935 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.187 W/kg
SAR(1 g) = 0.059 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0244M

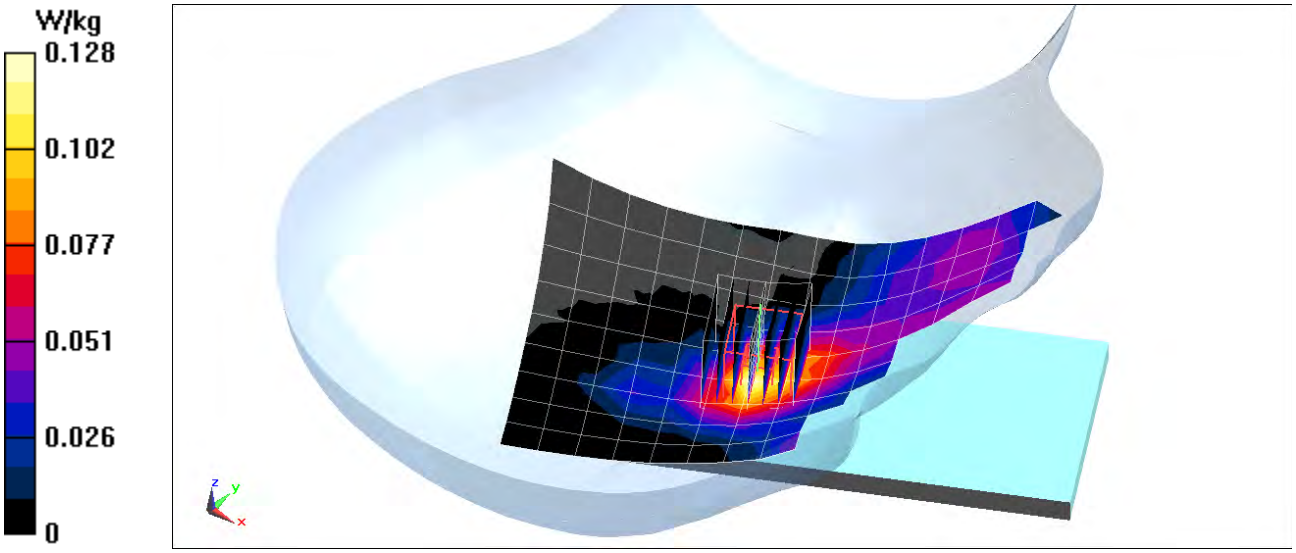
Communication System: UID 0, _LTE Band 41 (Class 2); Frequency: 2636.5 MHz; Duty Cycle: 1:2.31
Medium: 2450 Head Medium parameters used (interpolated):
$f = 2636.5$ MHz; $\sigma = 1.975$ S/m; $\varepsilon_r = 37.881$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 03-21-2019; Ambient Temp: 23.1°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2636.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41 (PC2), Right Head, Cheek, Mid-High.ch,
20 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 = 7.082 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.161 W/kg
SAR(1 g) = 0.077 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0894M

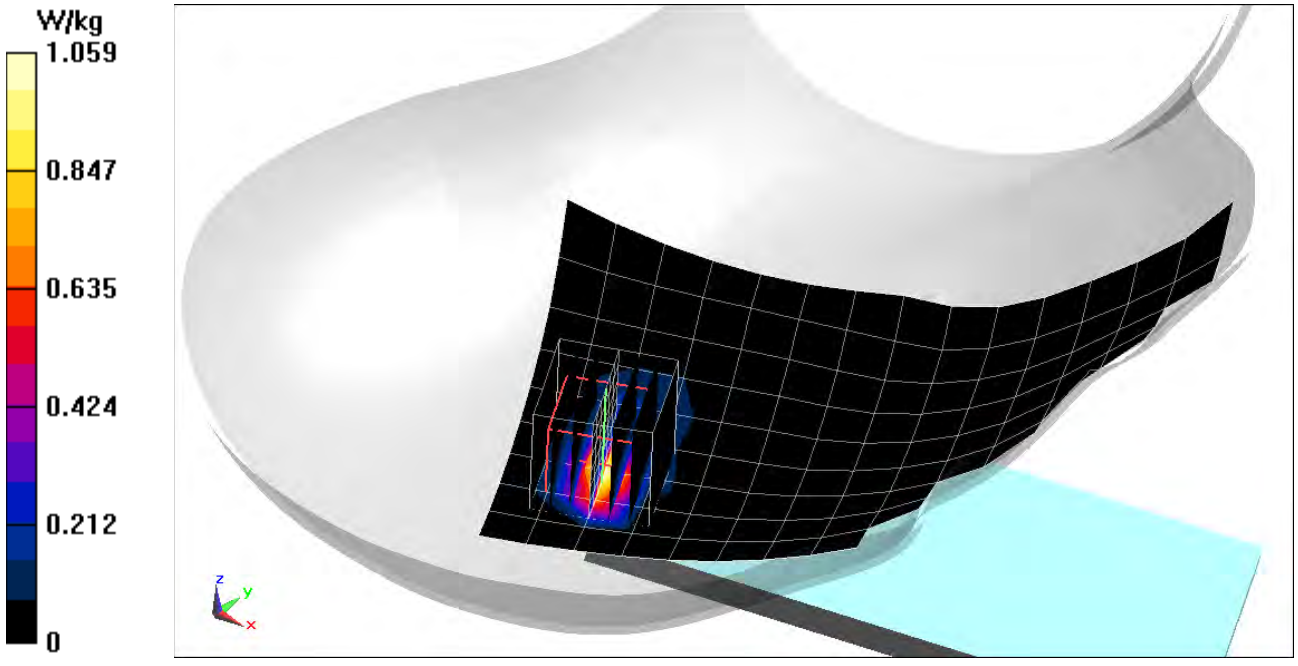
Communication System: UID 0, _n41; Frequency: 2640 MHz; Duty Cycle: 1:4.37
Medium: 2450 Head Medium parameters used (interpolated):
f = 2640 MHz; σ = 1.935 S/m; ε_r = 38.53; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 04-29-2019; Ambient Temp: 24.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2640 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: EN-DC DC_(n)41AA, Right Head, Tilt
NR Band n41: 100 MHz Bandwidth, CP-OFDM-QPSK, Ch. 528000, 1 RB, 0 RB Offset
LTE Band 41: 20 MHz Bandwidth, QPSK, Ch. 40532, 1 RB, 99 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 = 19.84 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.518 W/kg



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DUT: A3LSMG977T; Type: Portable Handset; Serial: 0181M

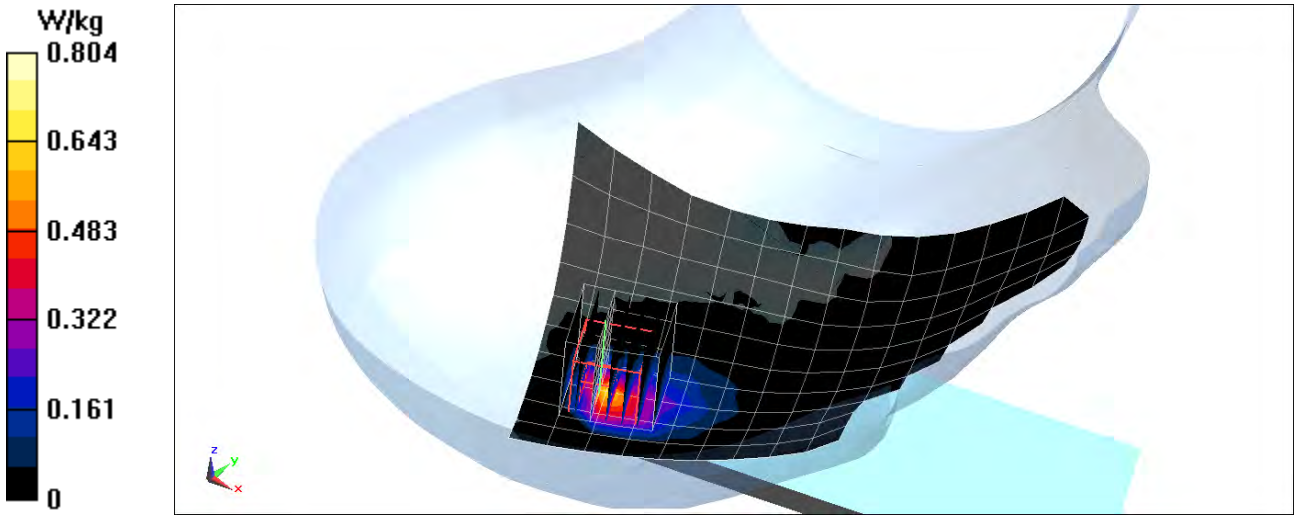
Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
$f = 2437$ MHz; $\sigma = 1.827$ S/m; $\varepsilon_r = 38.719$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 03-18-2019; Ambient Temp: 24.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2437 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Right 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 = 4.072 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.371 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0181M

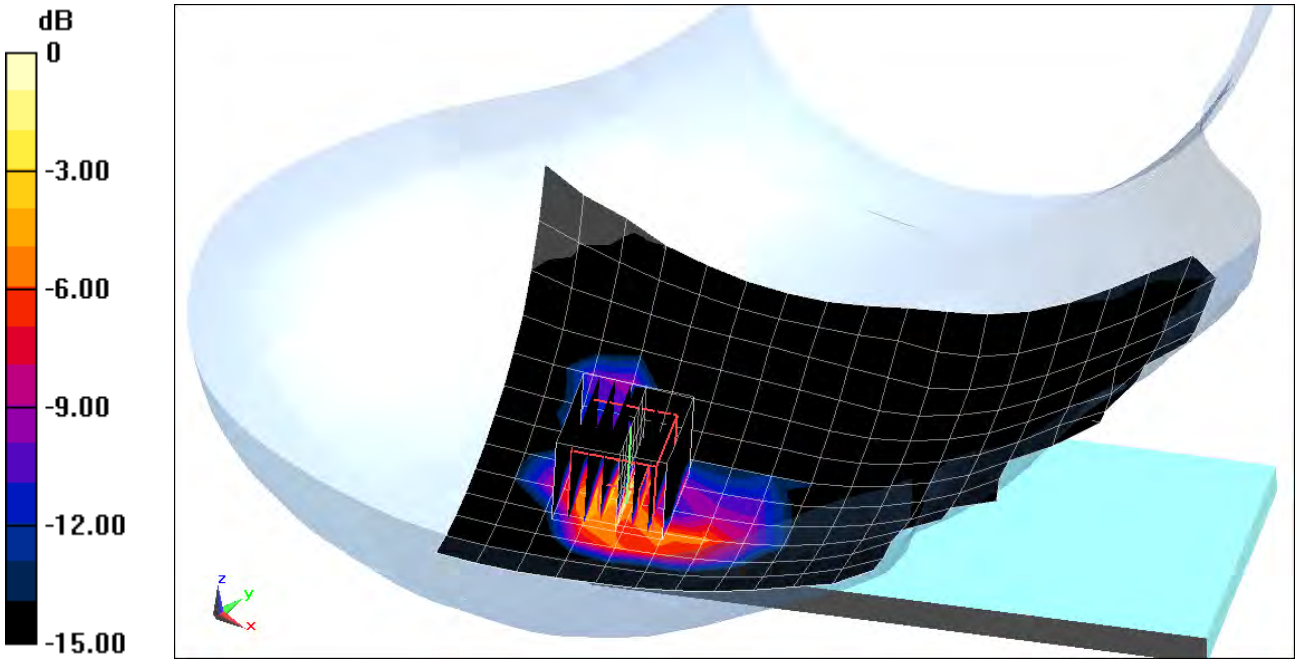
Communication System: UID 0, _IEEE 802.11n; Frequency: 5310 MHz; Duty Cycle: 1:1
Medium: 5GHz Head Medium parameters used (interpolated):
f = 5310 MHz; σ = 4.665 S/m; ε_r = 35.505; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 04-08-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7409; ConvF(5.2, 5.2, 5.2) @ 5310 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11n, Antenna 1, U-NII-2A, 40 MHz Bandwidth,
Right Head, Cheek, Ch 62, 13.5 Mbps

Area Scan (13x21x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 4.284 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.305 W/kg



0 dB = 0.783 W/kg = -1.06 dBW/kg

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0181M

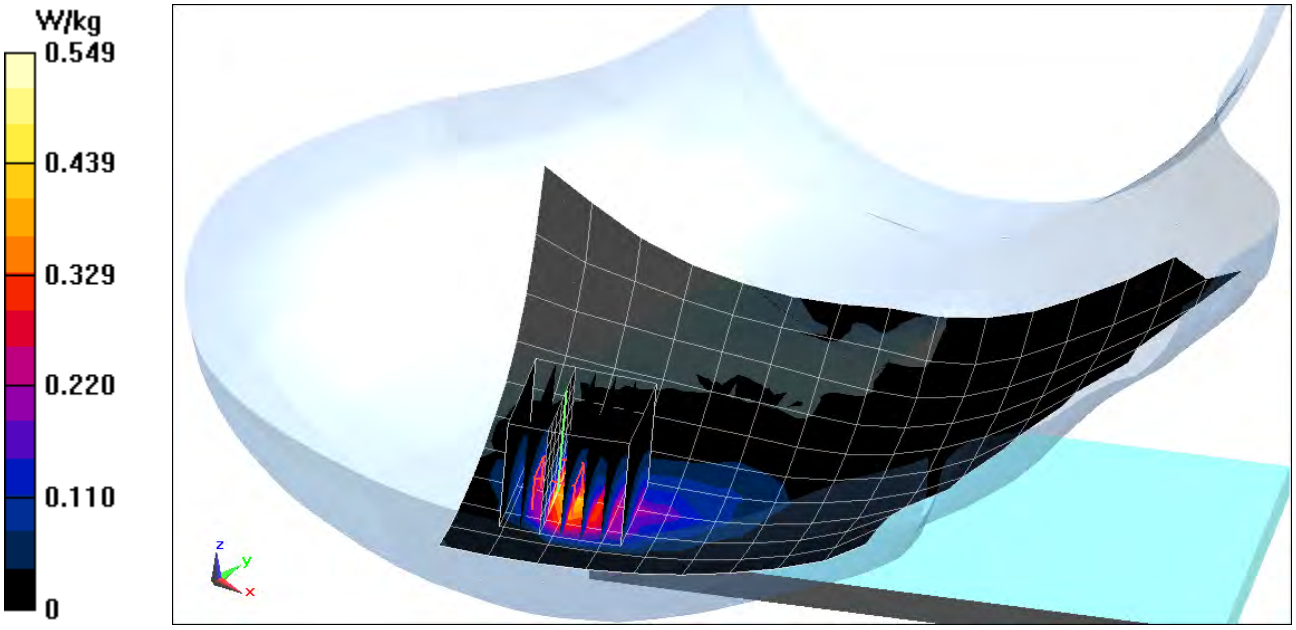
Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.297
Medium: 2450 MHz Medium parameters used (interpolated):
f = 2480 MHz; σ = 1.833 S/m; ε_r = 38.291; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 03-26-2019; Ambient Temp: 24.3°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2480 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Right Head, Cheek, Ch 78, 1 Mbps

Area Scan (11x19x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.96 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.736 W/kg
SAR(1 g) = 0.265 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

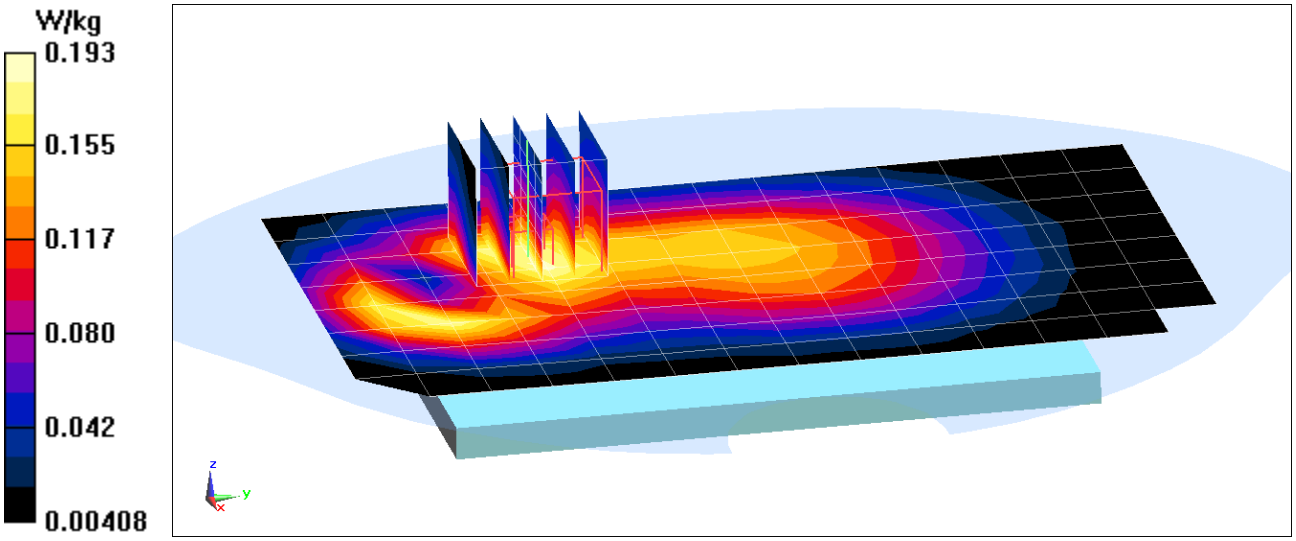
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.999 S/m; ε_r = 54.973; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 836.6 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 12.80 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.214 W/kg
SAR(1 g) = 0.155 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

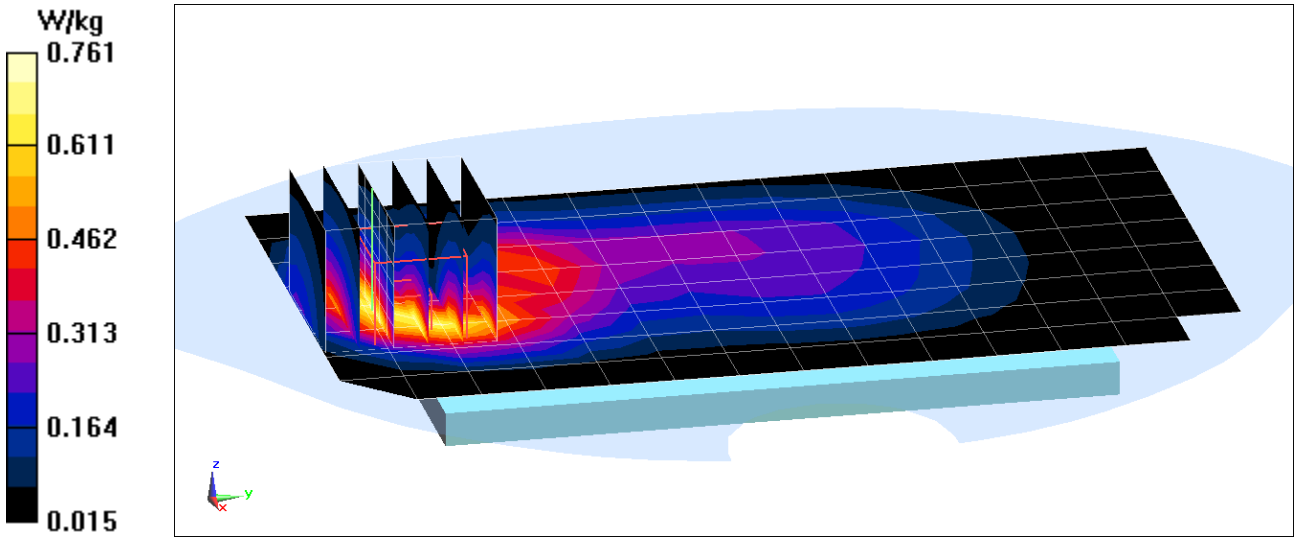
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 848.8 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
f = 848.8 MHz; σ = 1.011 S/m; ε_r = 54.845; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 848.8 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 850, Body SAR, Back side, High.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 = 24.18 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.922 W/kg
SAR(1 g) = 0.549 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

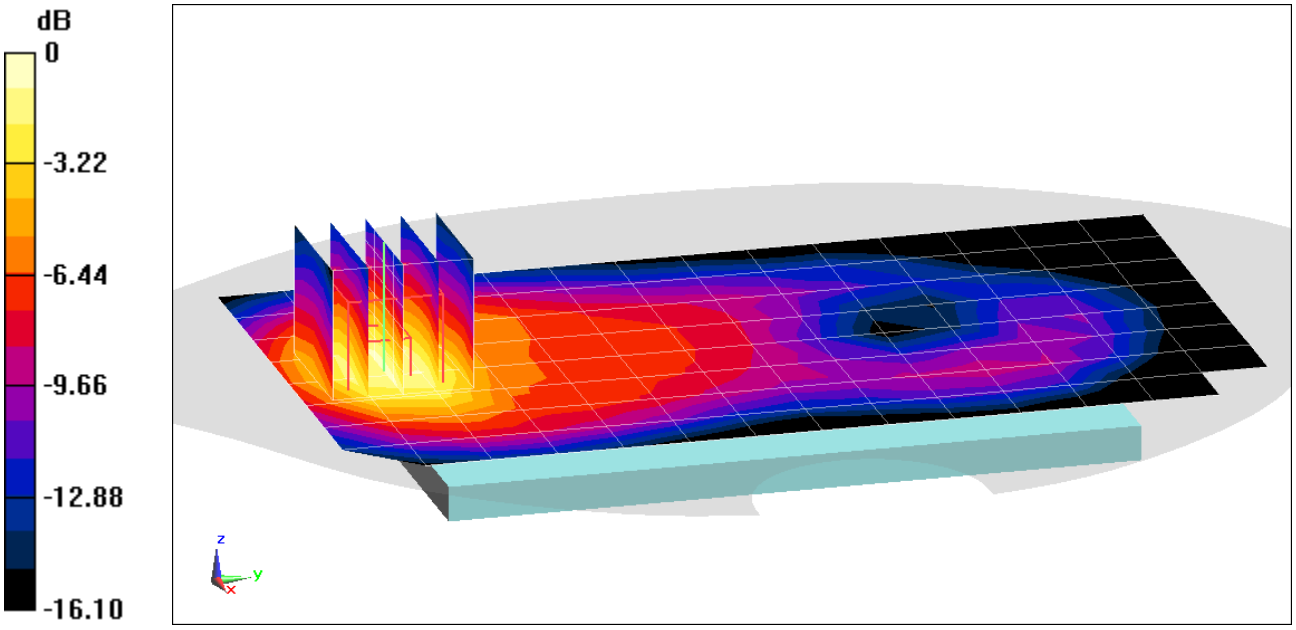
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.551 S/m; ε_r = 52.047; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 14.02 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.440 W/kg
SAR(1 g) = 0.268 W/kg



0 dB = 0.381 W/kg = -4.19 dBW/kg

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

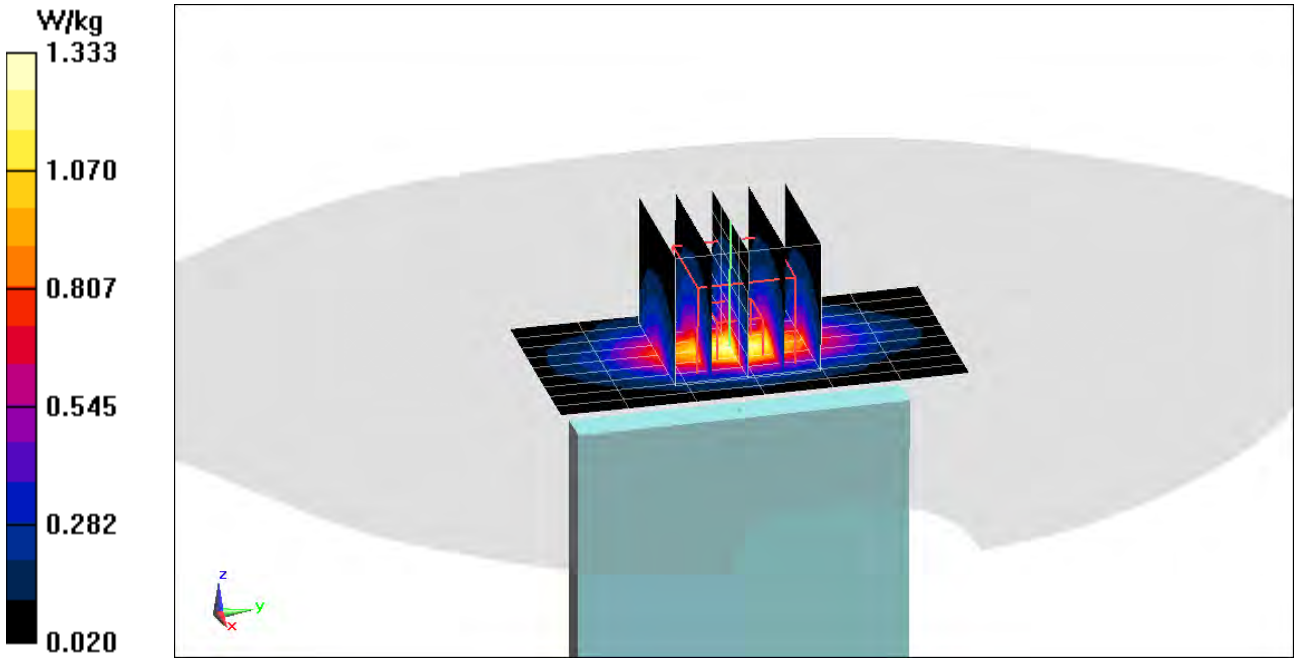
Communication System: UID 0, _GSM GPRS; 2 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:4.15
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.551 S/m; ε_r = 52.047; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Body SAR, Bottom Edge, Mid.ch, 2 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 = 25.33 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.875 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

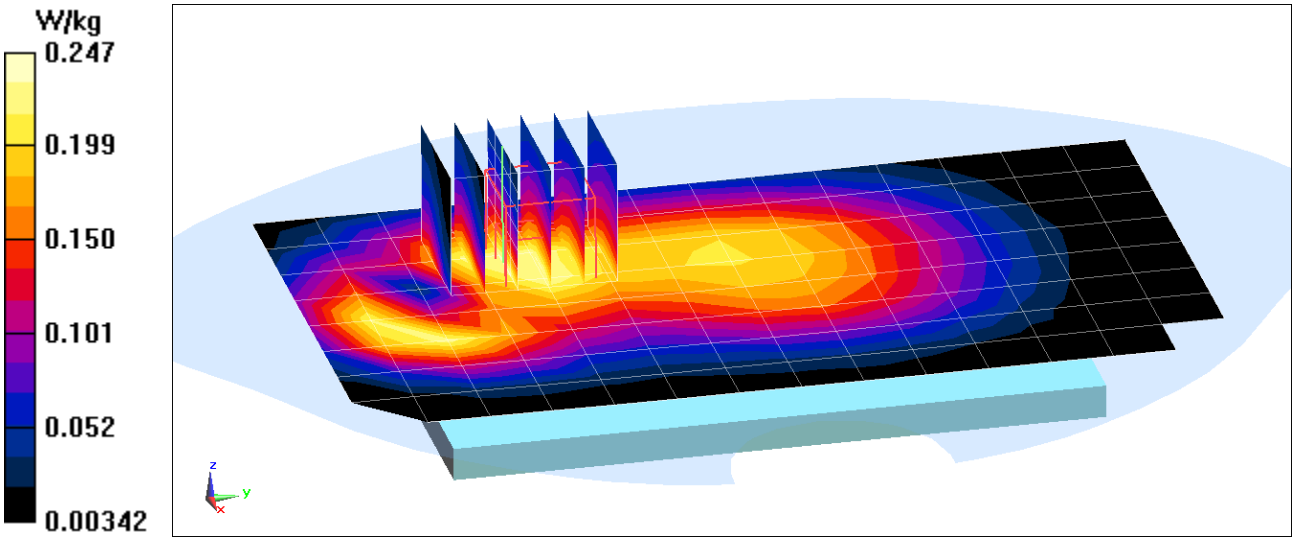
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.999 S/m; ε_r = 54.973; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 836.6 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Body SAR, Back side, 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 = 14.47 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.199 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

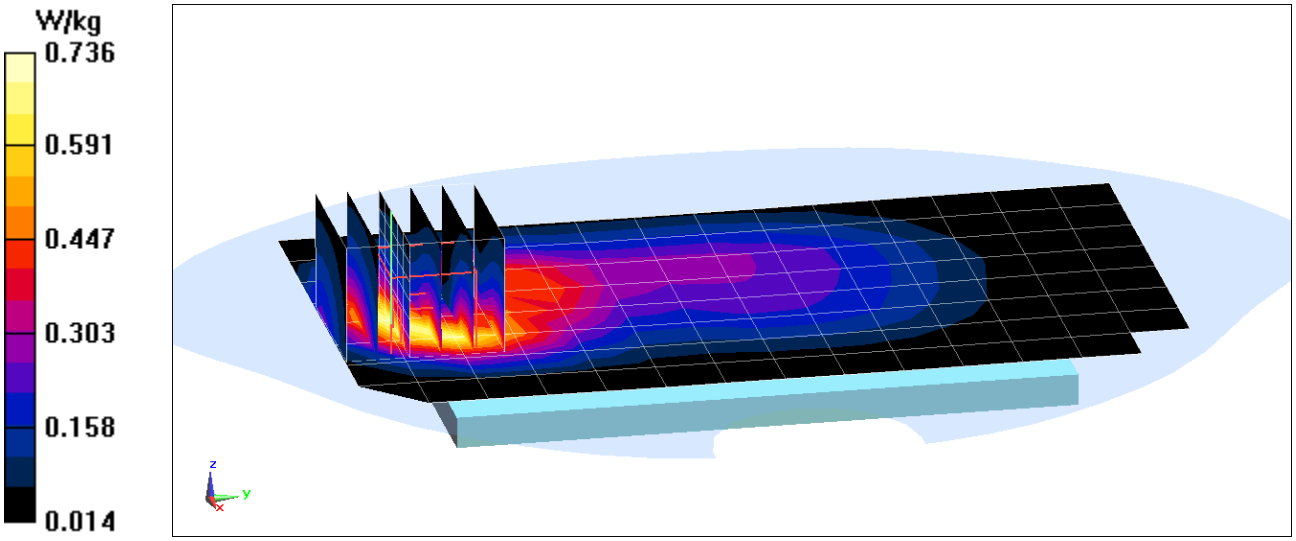
Communication System: UID 0, UMTS; Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 846.6 MHz; σ = 1.009 S/m; ε_r = 54.868; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 846.6 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Body SAR, Back side, High.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.42 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.874 W/kg
SAR(1 g) = 0.515 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

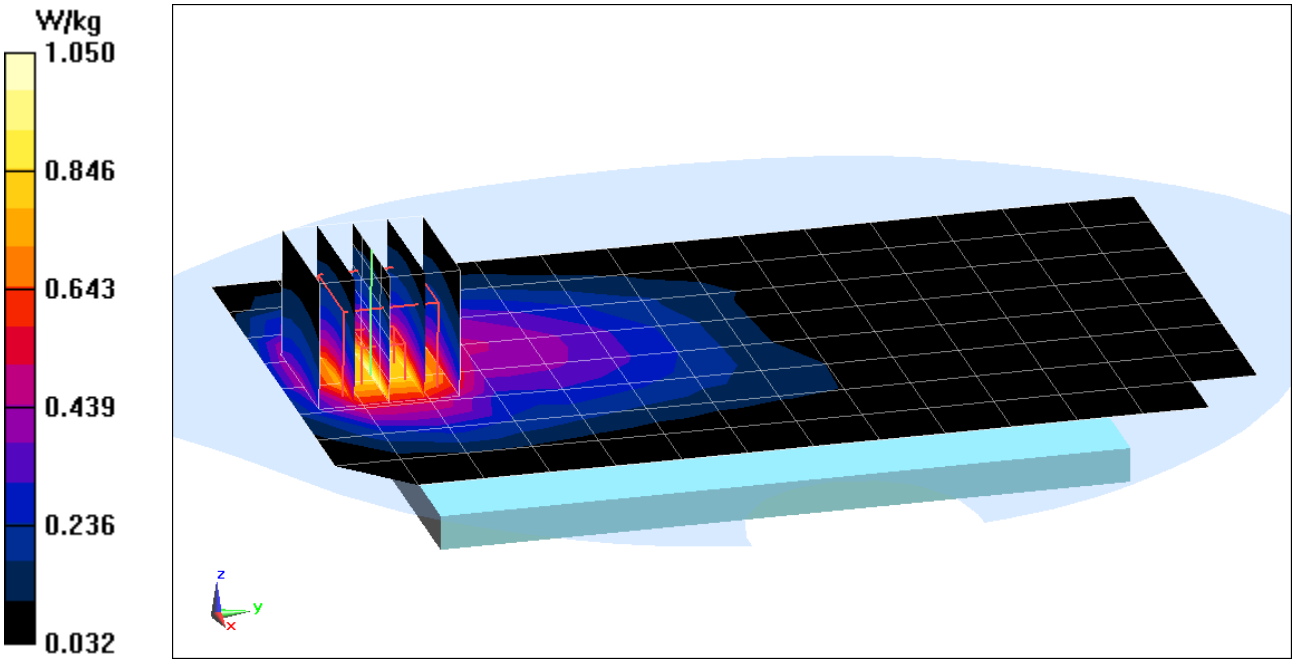
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.509 S/m; ε_r = 51.955; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-29-2019; Ambient Temp: 20.7°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1732.4 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, 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 = 23.05 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.754 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

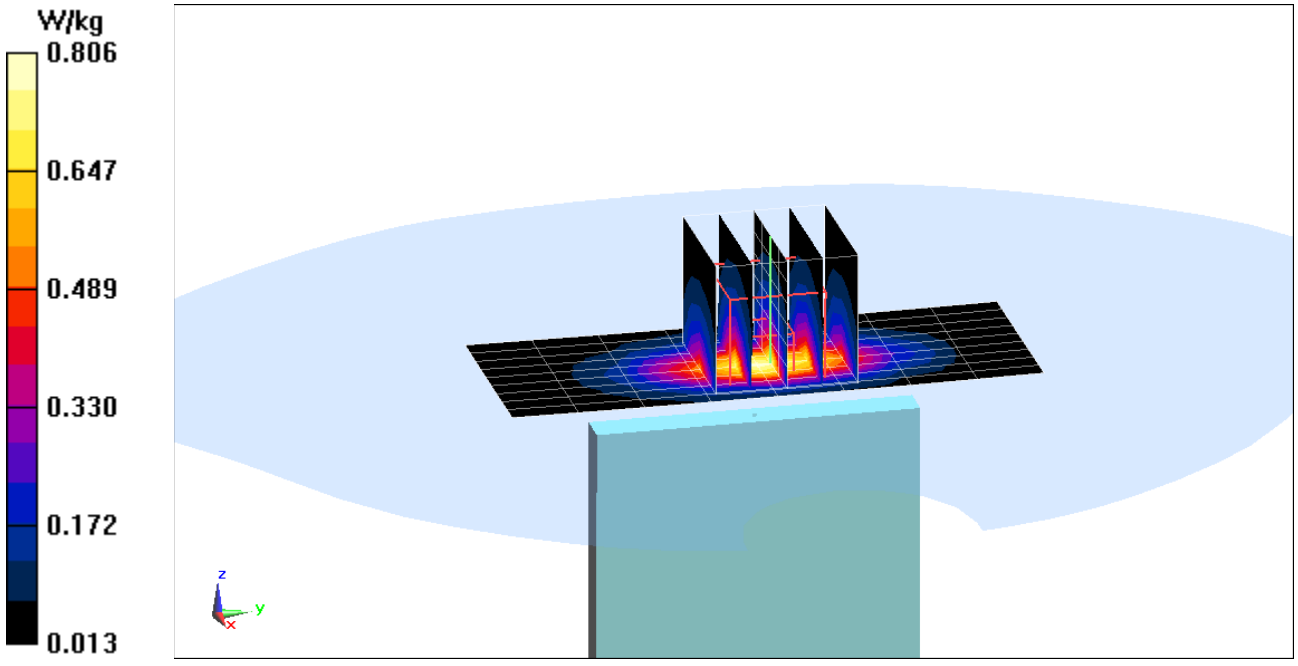
Communication System: UID 0, _UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.532 S/m; ε_r = 51.877; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-29-2019; Ambient Temp: 20.7°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1752.6 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Body SAR, Bottom Edge, High.ch

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.32 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.927 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

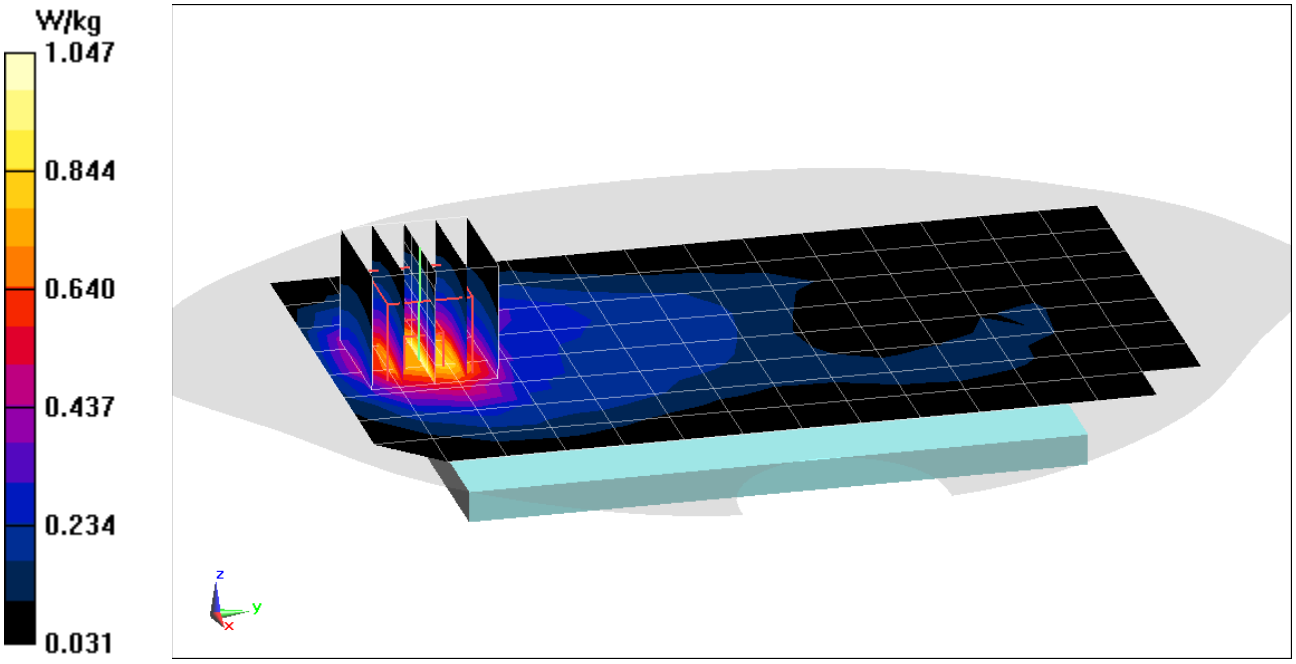
Communication System: UID 0, UMTS; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1852.4 MHz; σ = 1.519 S/m; ε_r = 52.873; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-25-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1852.4 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, 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 = 23.25 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.743 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

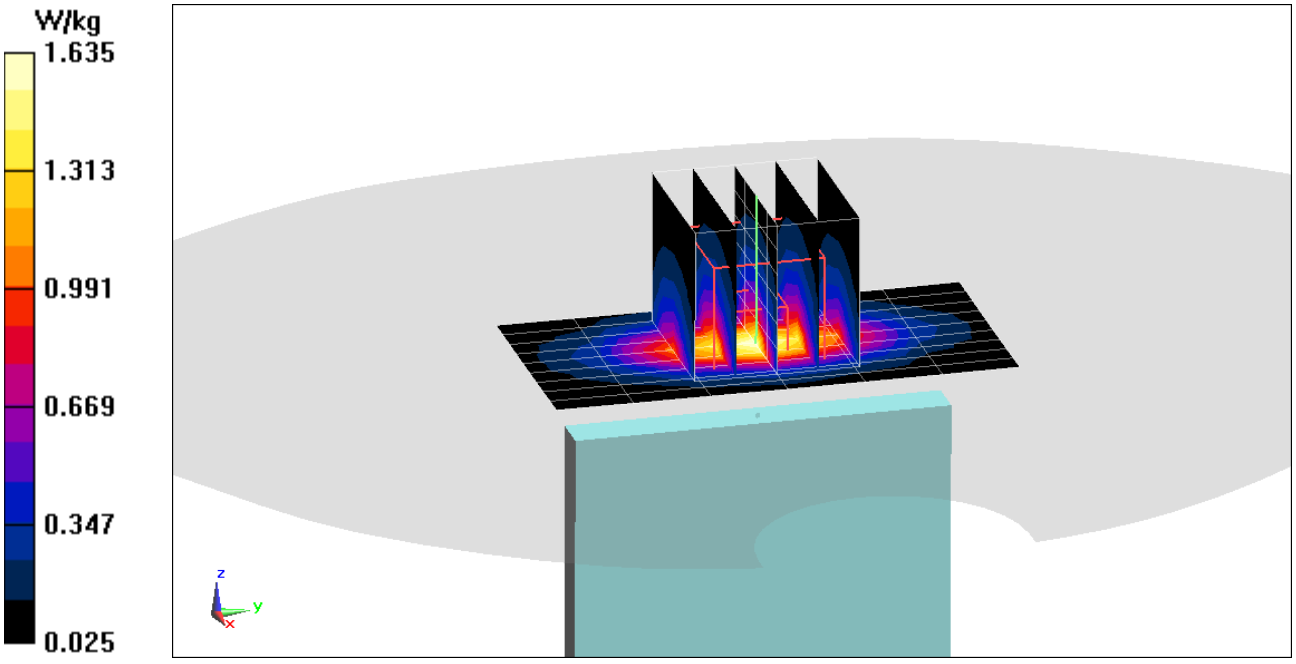
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.551 S/m; ε_r = 52.047; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Body SAR, Bottom Edge, Mid.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 = 28.21 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.09 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

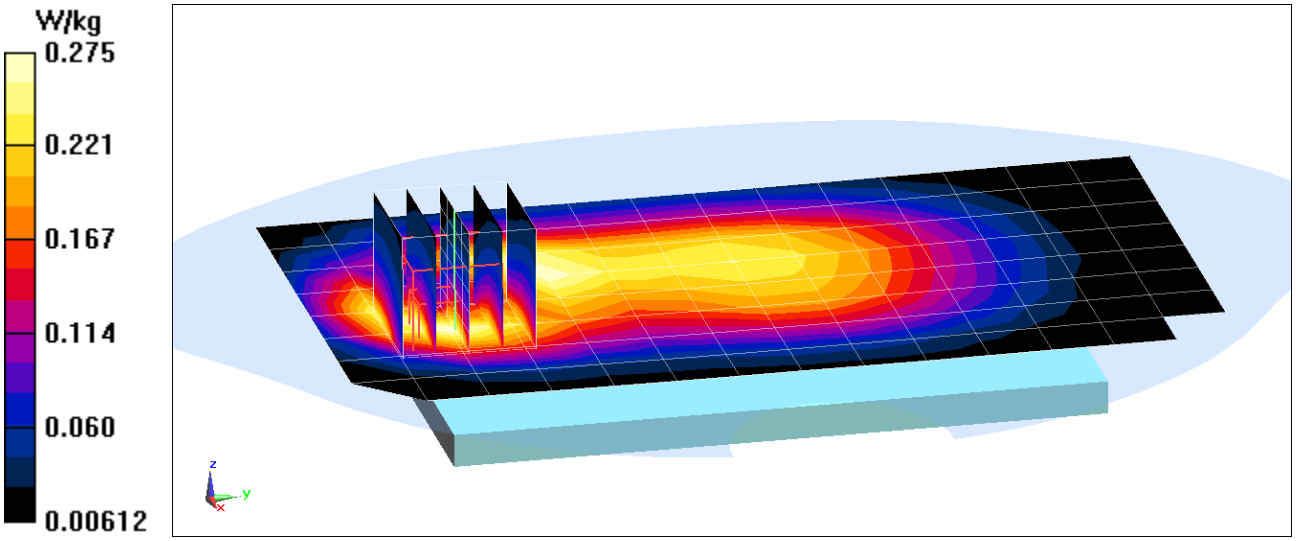
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.982 S/m; ε_r = 55.14; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 820.1 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. CDMA, Rule Part 90S, 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 = 15.26 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.329 W/kg
SAR(1 g) = 0.200 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

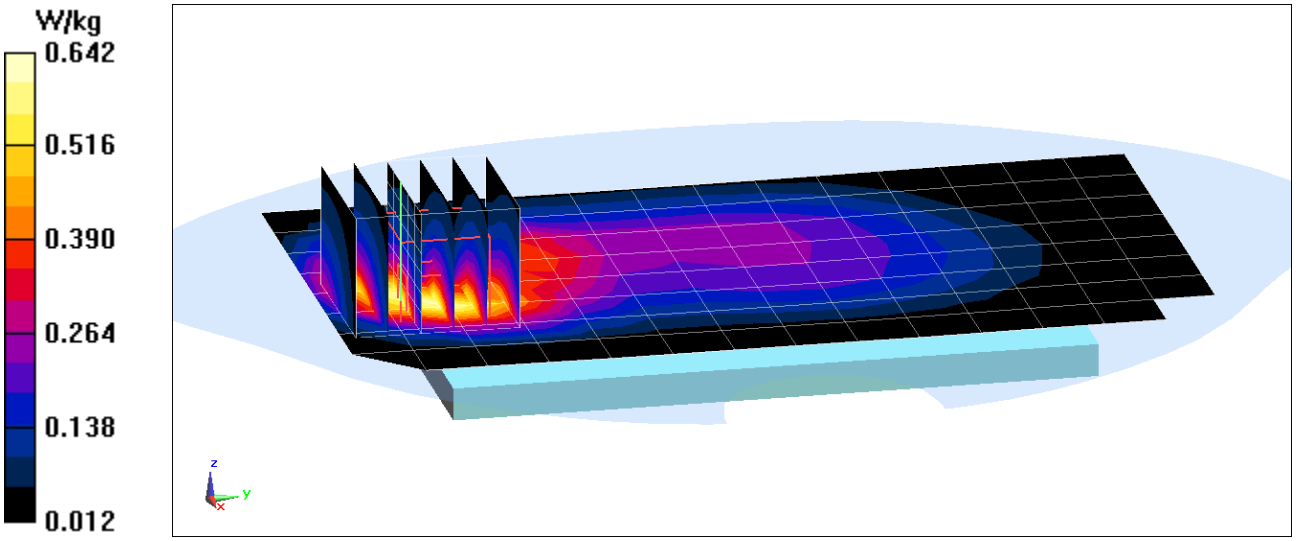
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.982 S/m; ε_r = 55.14; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 820.1 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. EVDO, Rule Part 90S, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.28 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.768 W/kg
SAR(1 g) = 0.457 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

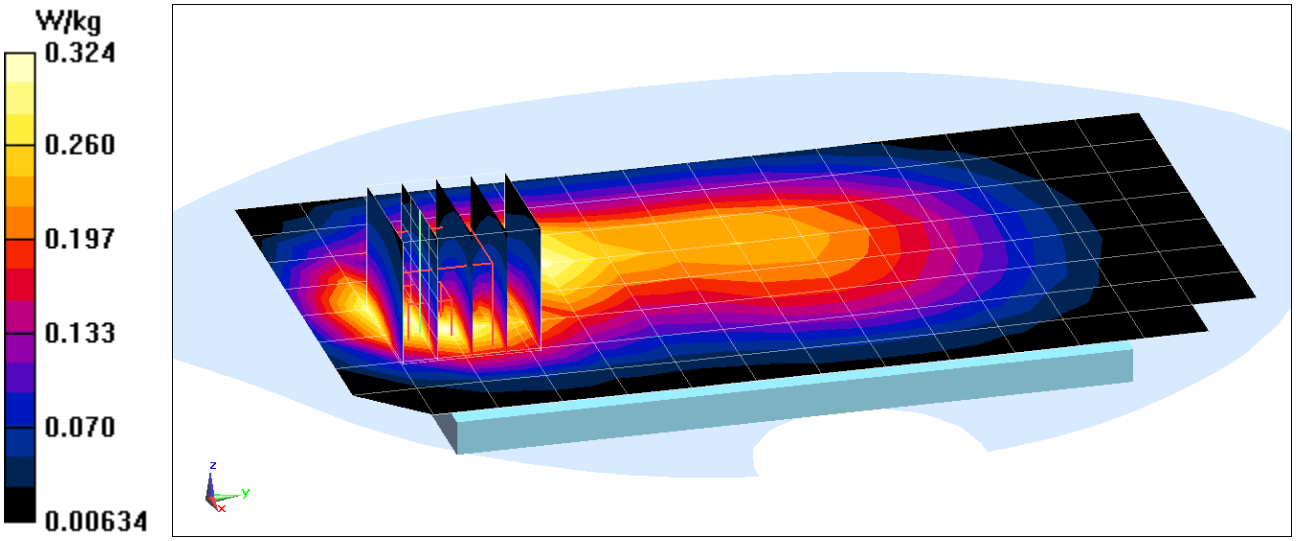
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.999 S/m; ε_r = 54.974; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 836.52 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. CDMA, Rule Part 22H, 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 = 15.77 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.238 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0268M

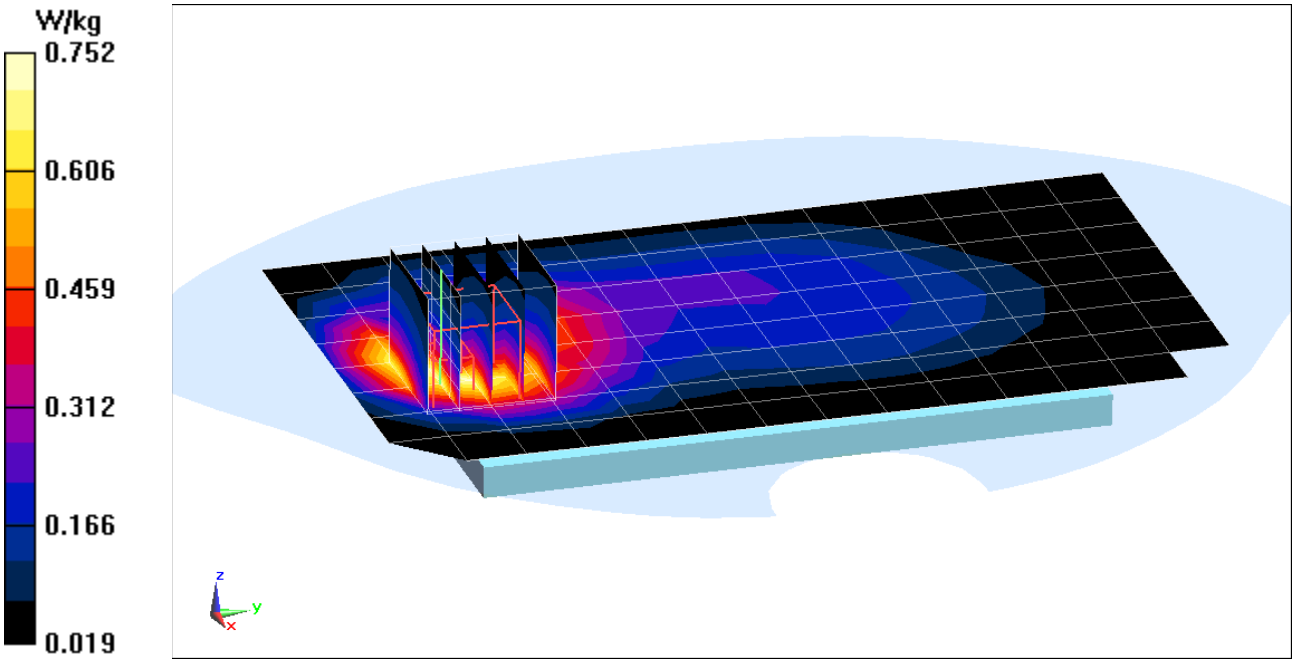
Communication System: UID 0, CDMA; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 848.31 MHz; σ = 1.01 S/m; ε_r = 54.85; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 848.31 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. EVDO, Rule Part 22H, 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 = 23.38 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.887 W/kg
SAR(1 g) = 0.532 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

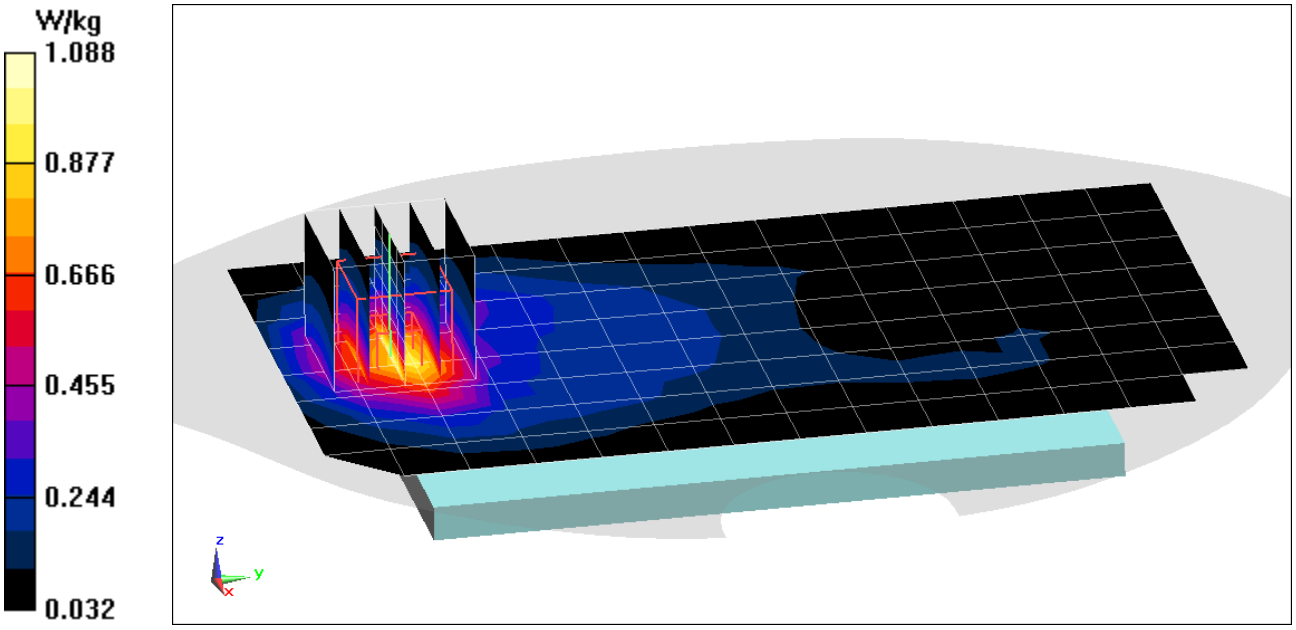
Communication System: UID 0, CDMA; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1851.25 MHz; σ = 1.518 S/m; ε_r = 52.149; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1851.25 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: PCS CDMA, 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 = 23.66 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.775 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

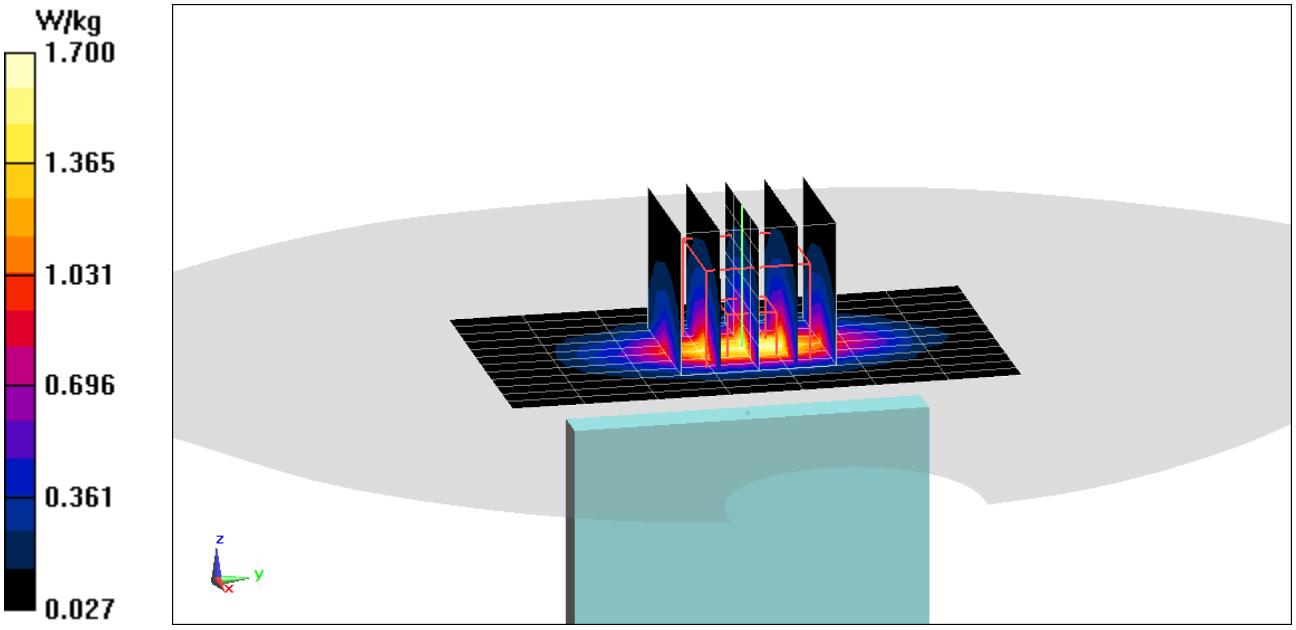
Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.551 S/m; ε_r = 52.047; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (13x8x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.57 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 1.13 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

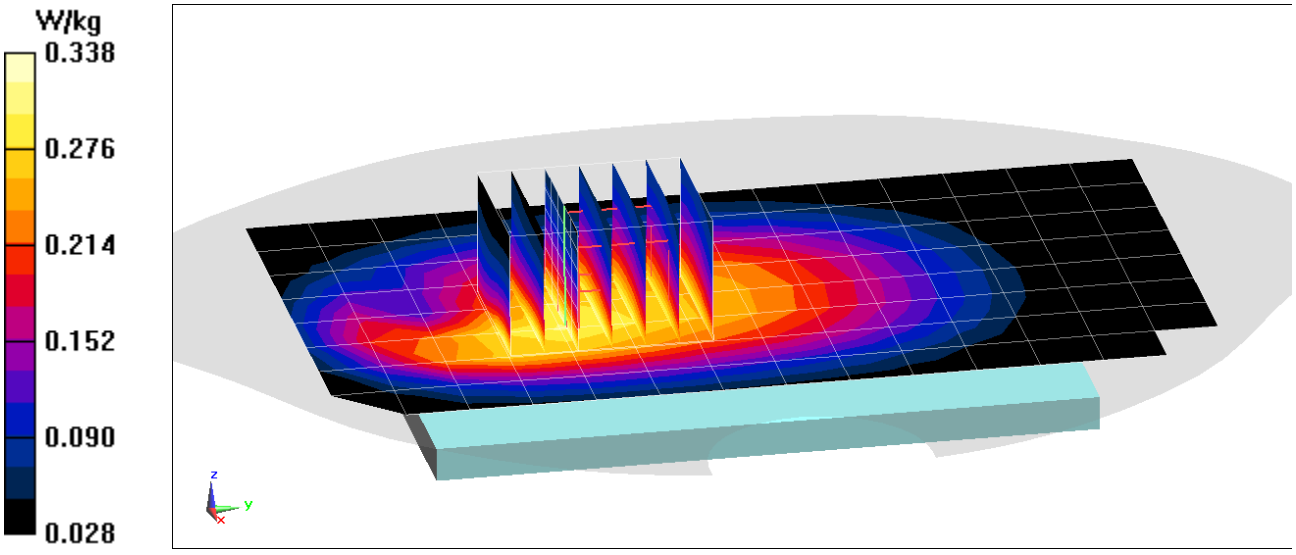
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.927 S/m; ε_r = 54.216; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 680.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.40 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.377 W/kg
SAR(1 g) = 0.270 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

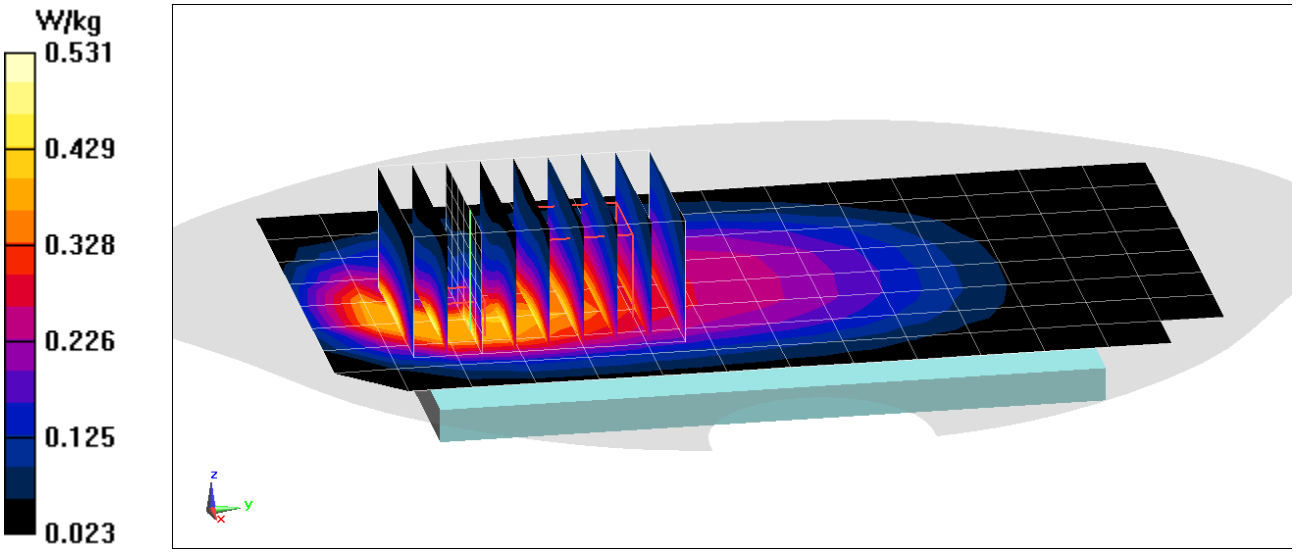
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.927 S/m; ε_r = 54.216; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 680.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.63 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.636 W/kg
SAR(1 g) = 0.372 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

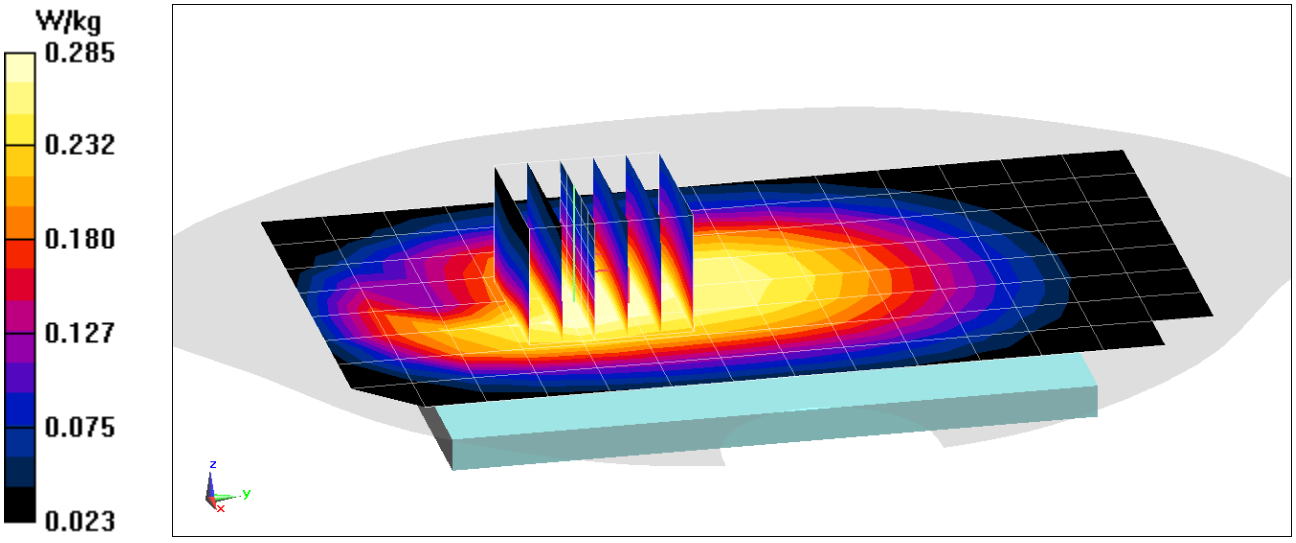
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.938 S/m; ε_r = 54.159; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 707.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.94 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.314 W/kg
SAR(1 g) = 0.235 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

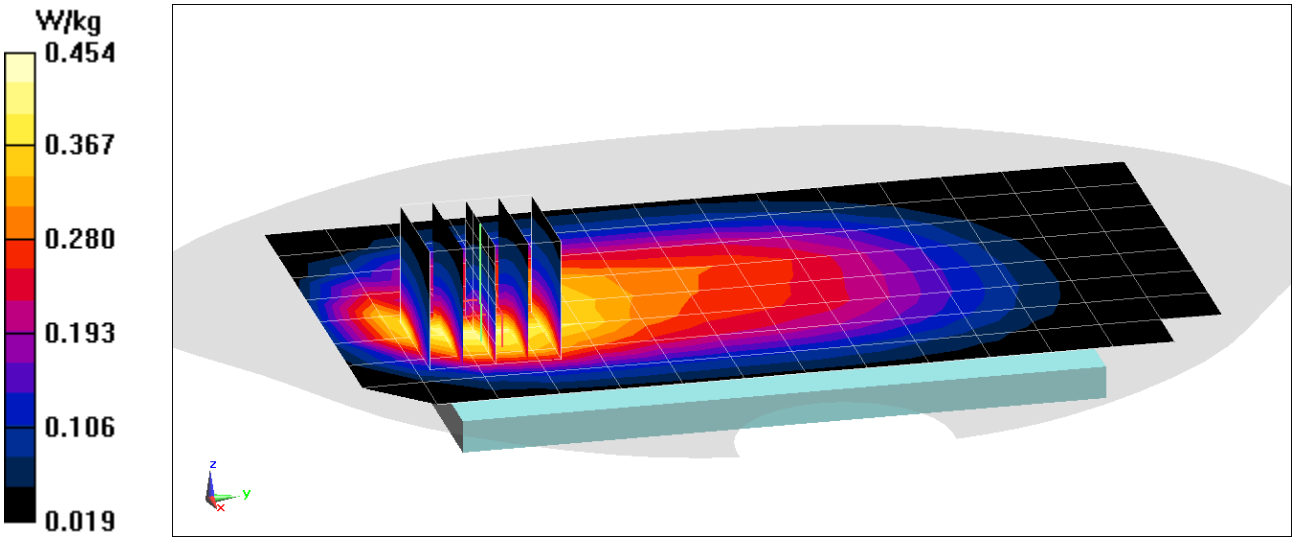
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.938 S/m; ε_r = 54.159; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 707.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 19.07 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.542 W/kg
SAR(1 g) = 0.318 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

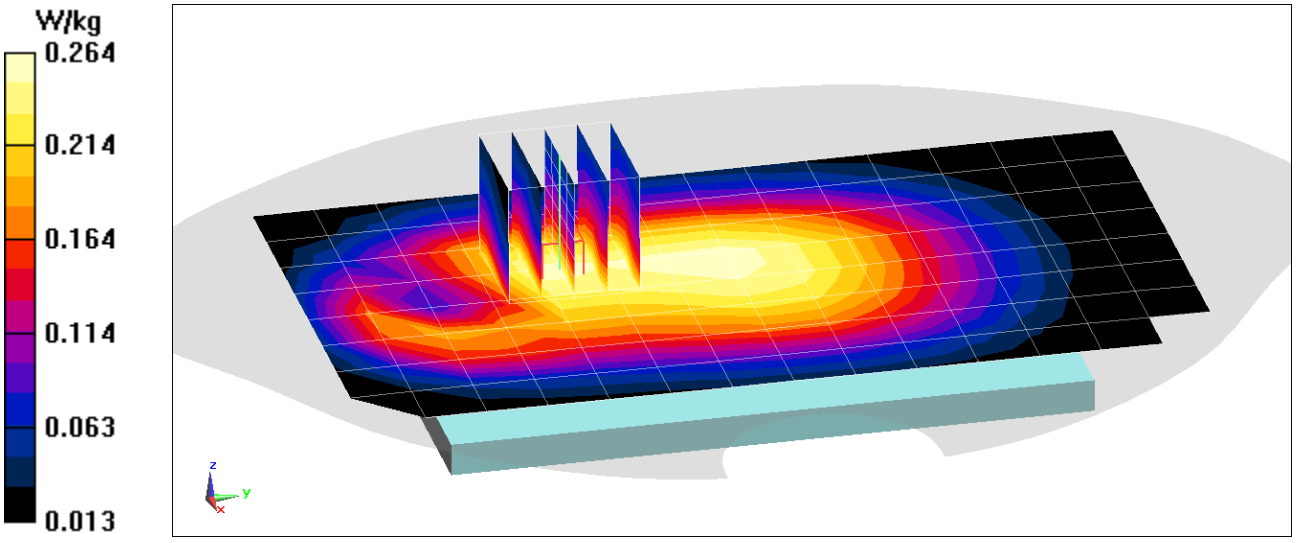
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.967 S/m; ε_r = 53.962; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 782 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 15.27 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.291 W/kg
SAR(1 g) = 0.215 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

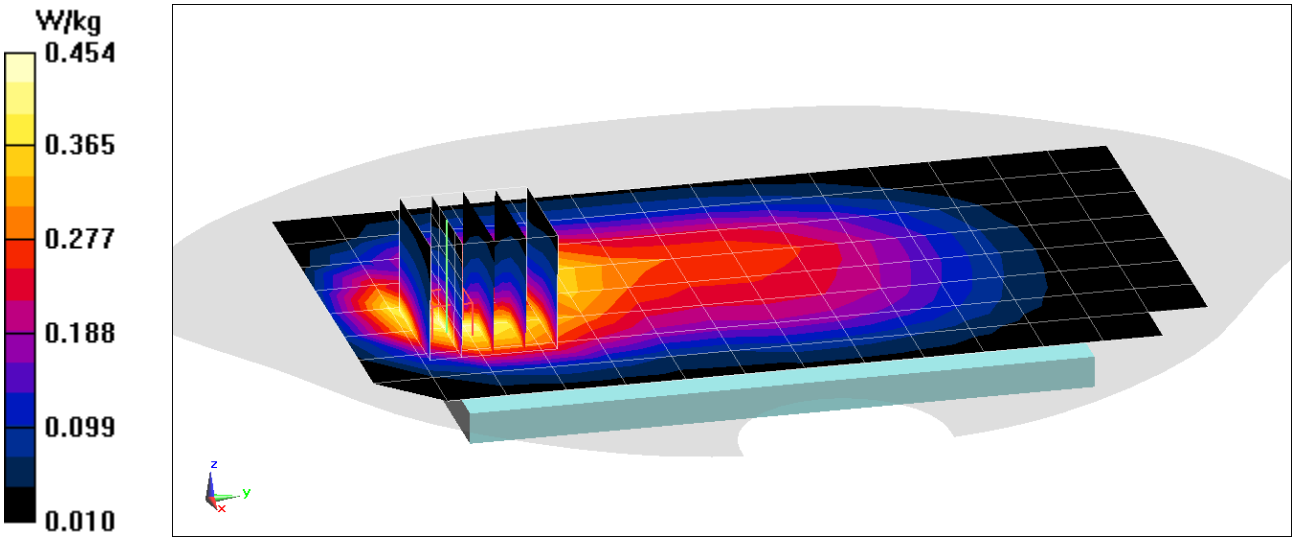
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.967 S/m; ε_r = 53.962; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 782 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 18.37 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.553 W/kg
SAR(1 g) = 0.316 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

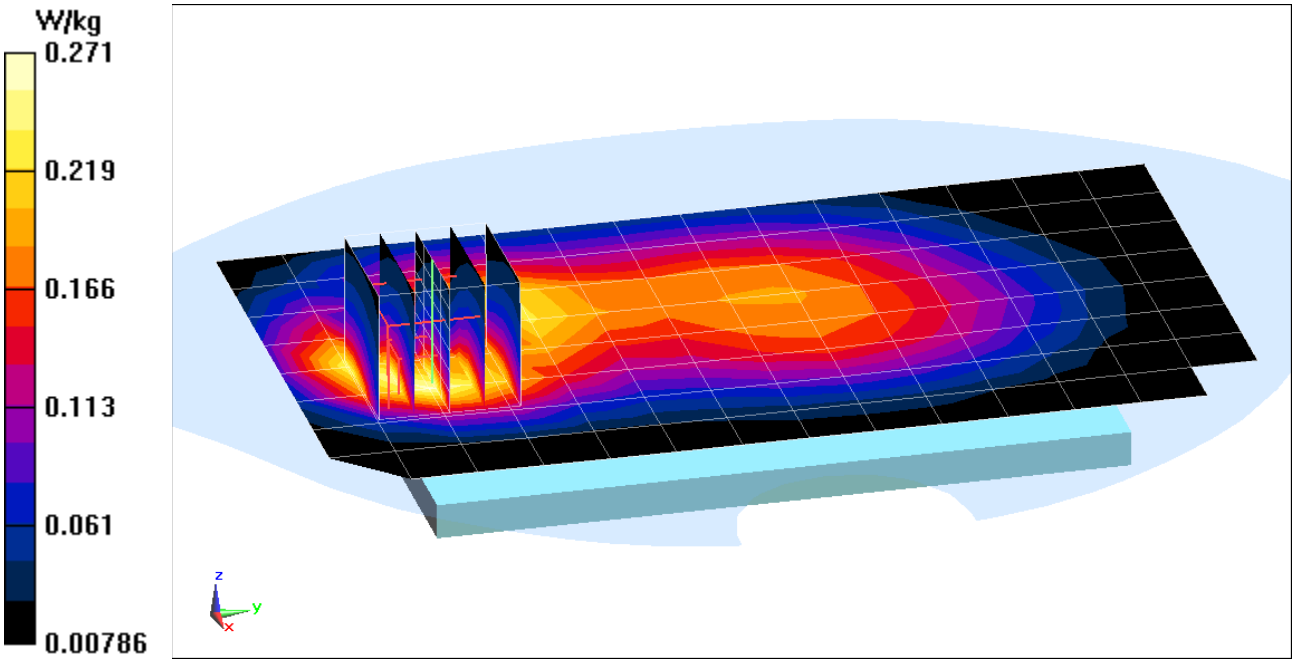
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.977 S/m; ε_r = 54.835; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-25-2019; Ambient Temp: 22.1°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 831.5 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 14.70 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.322 W/kg
SAR(1 g) = 0.202 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0186M

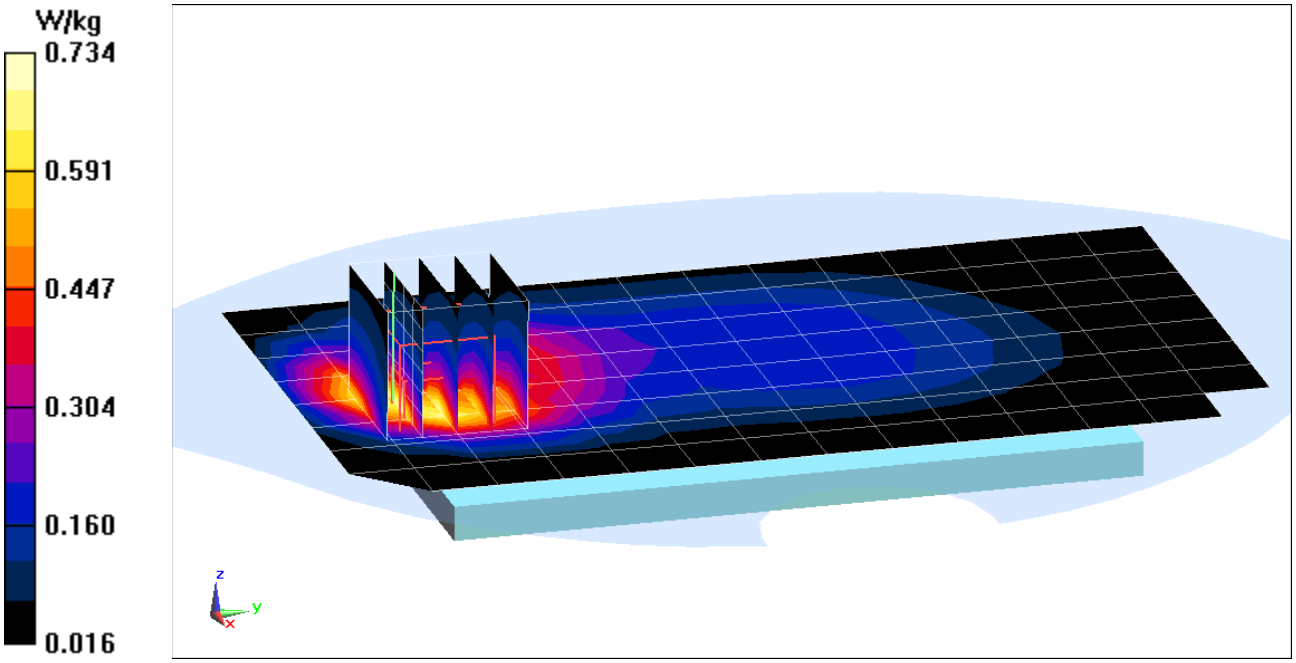
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.977 S/m; ε_r = 54.835; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-25-2019; Ambient Temp: 22.1°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 831.5 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 23.76 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.900 W/kg
SAR(1 g) = 0.519 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

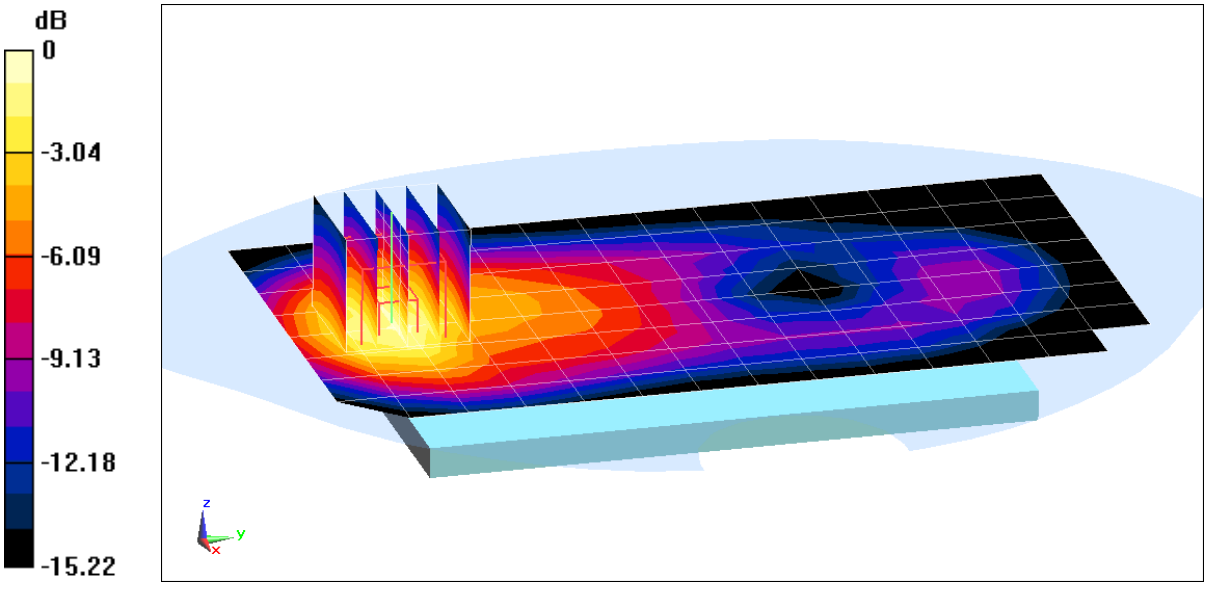
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1745$ MHz; $\sigma = 1.535$ S/m; $\varepsilon_r = 51.64$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-01-2019; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1745 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.87 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.736 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

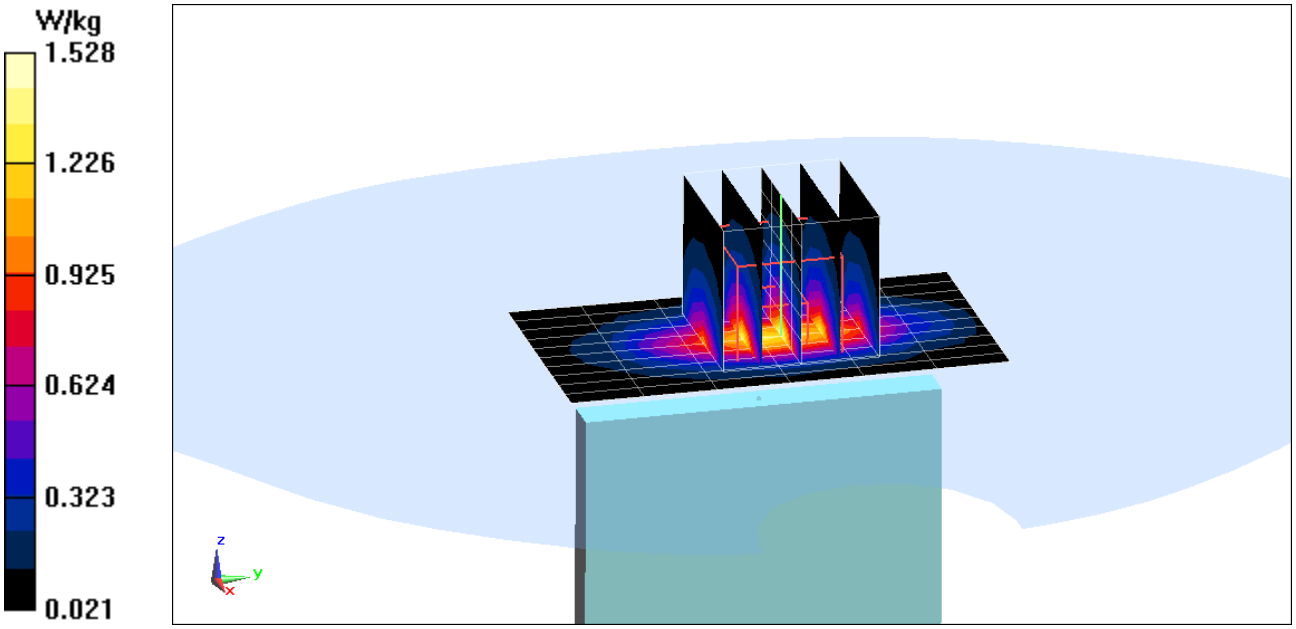
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1745$ MHz; $\sigma = 1.535$ S/m; $\varepsilon_r = 51.64$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1745 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Body SAR, Bottom Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 100 RB, 0 RB Offset

Area Scan (11x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.14 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 1.02 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

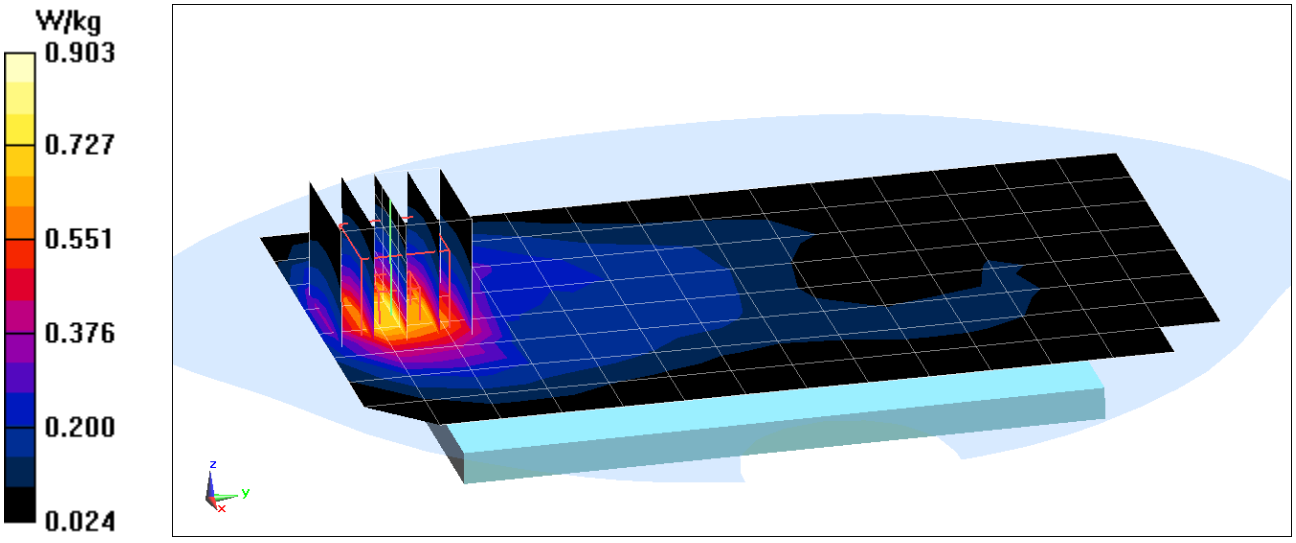
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.54 S/m; ε_r = 52.373; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-20-2019; Ambient Temp: 22.2°C; Tissue Temp:20.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1882.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), 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 = 21.39 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.639 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

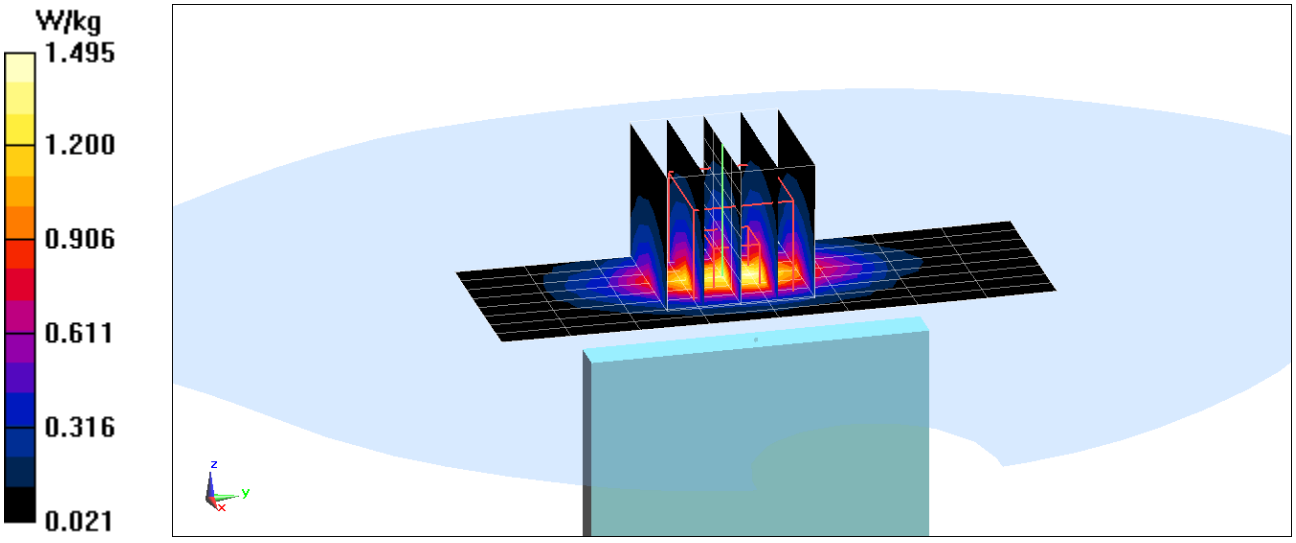
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.54 S/m; ε_r = 52.373; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-20-2019; Ambient Temp: 22.2°C; Tissue Temp:20.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1882.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Body SAR, Bottom Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (9x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.93 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 0.995 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

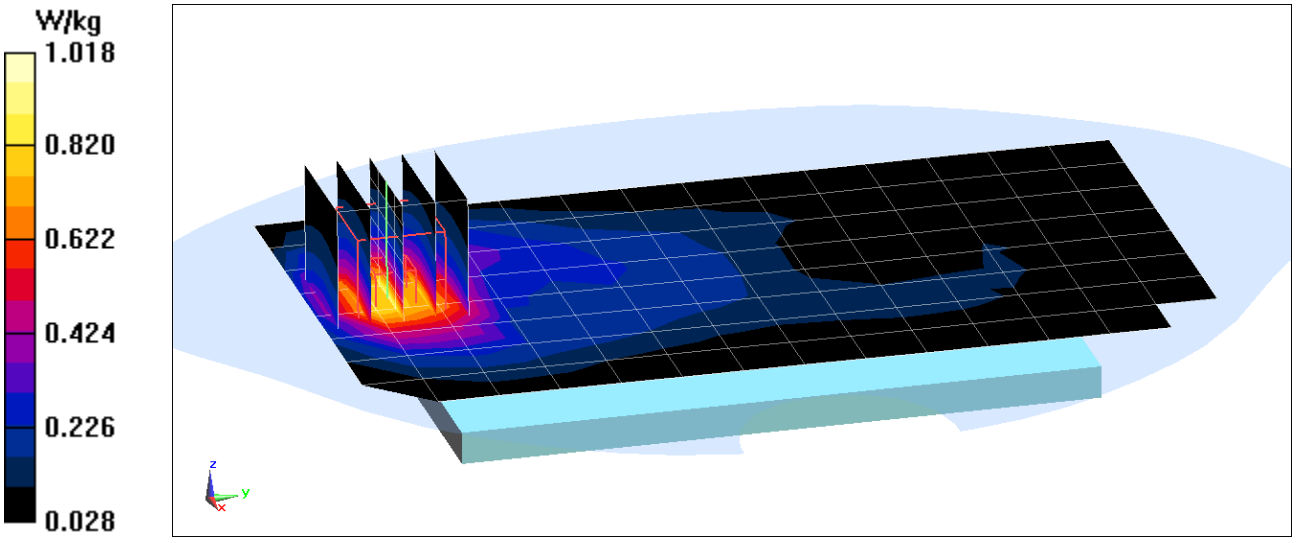
Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.537 S/m; ε_r = 52.383; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-20-2019; Ambient Temp: 22.2°C; Tissue Temp:20.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 2 (PCS), 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 = 22.84 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.730 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

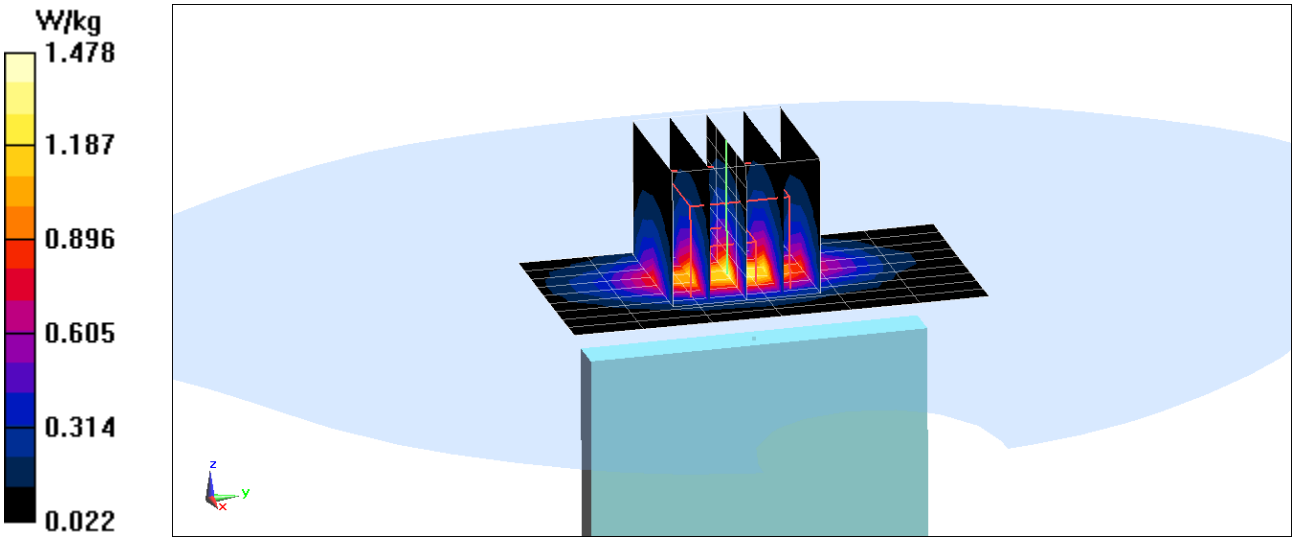
Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.537 S/m; ε_r = 52.383; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-20-2019; Ambient Temp: 22.2°C; Tissue Temp:20.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 2 (PCS), Body SAR, Bottom Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.72 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.977 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

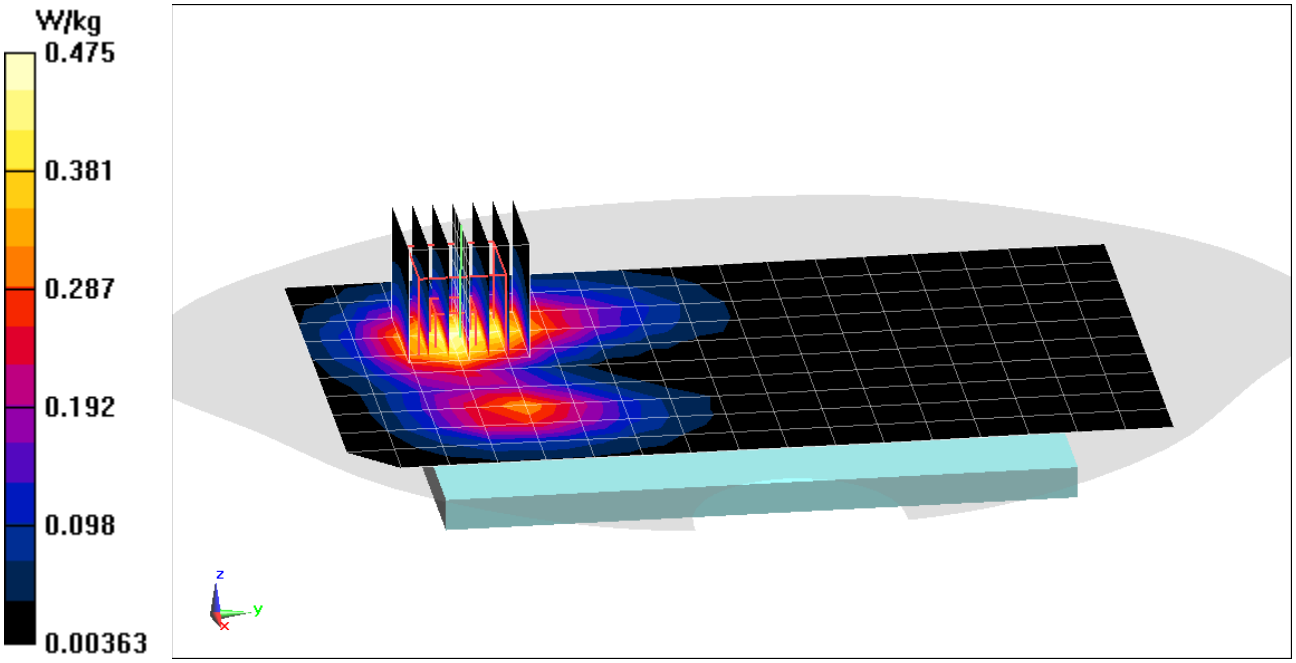
Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2560 MHz; σ = 2.176 S/m; ε_r = 50.681; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2560 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.34 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.586 W/kg
SAR(1 g) = 0.311 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

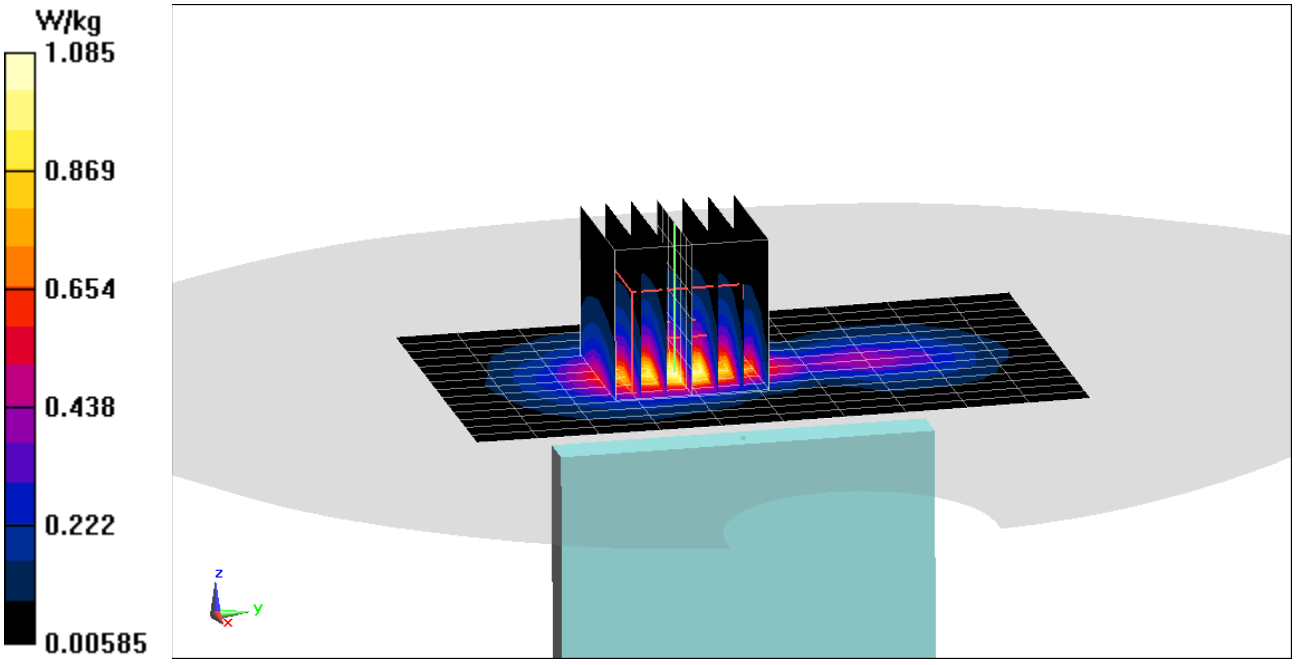
Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2560 MHz; σ = 2.176 S/m; ε_r = 50.681; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2560 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 100 RB, 0 RB Offset

Area Scan (15x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.46 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.662 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

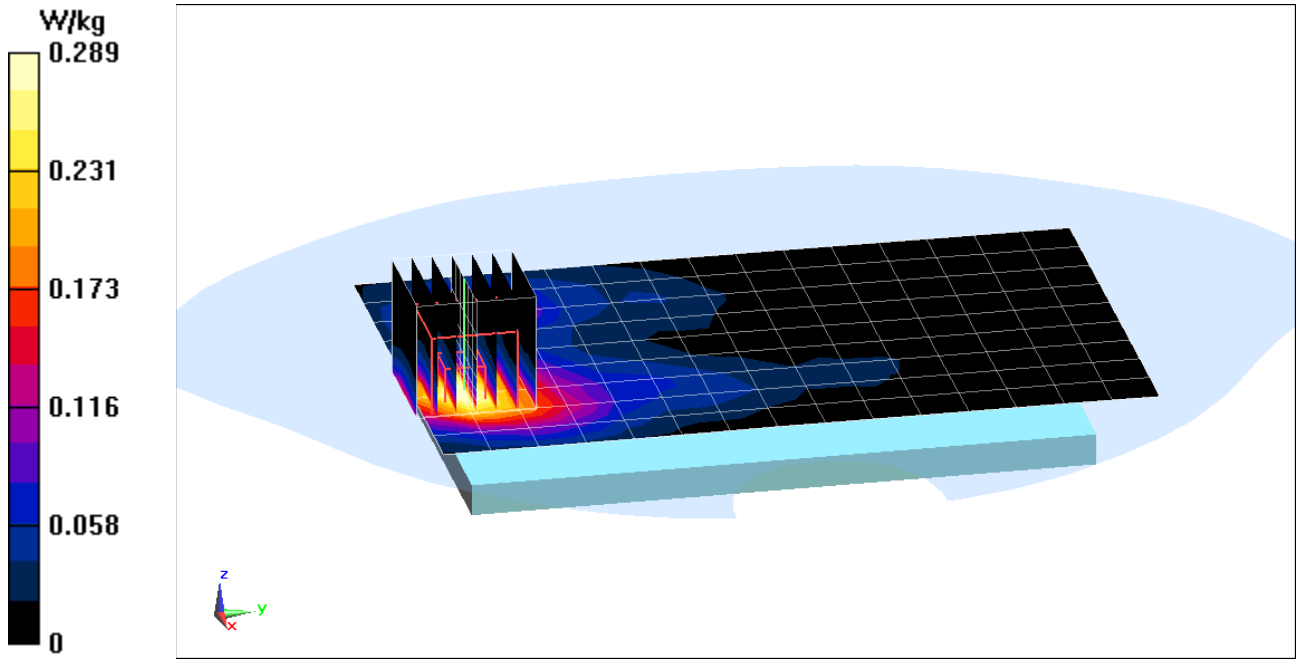
Communication System: UID 0, LTE Band 48; Frequency: 3560 MHz; Duty Cycle: 1:1.58
Medium: 3500-3700 Body Medium parameters used (interpolated):
f = 3560 MHz; σ = 3.461 S/m; ε_r = 49.624; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-01-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.21, 6.21, 6.21) @ 3560 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 48, Body SAR, Back side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 7.103 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.159 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

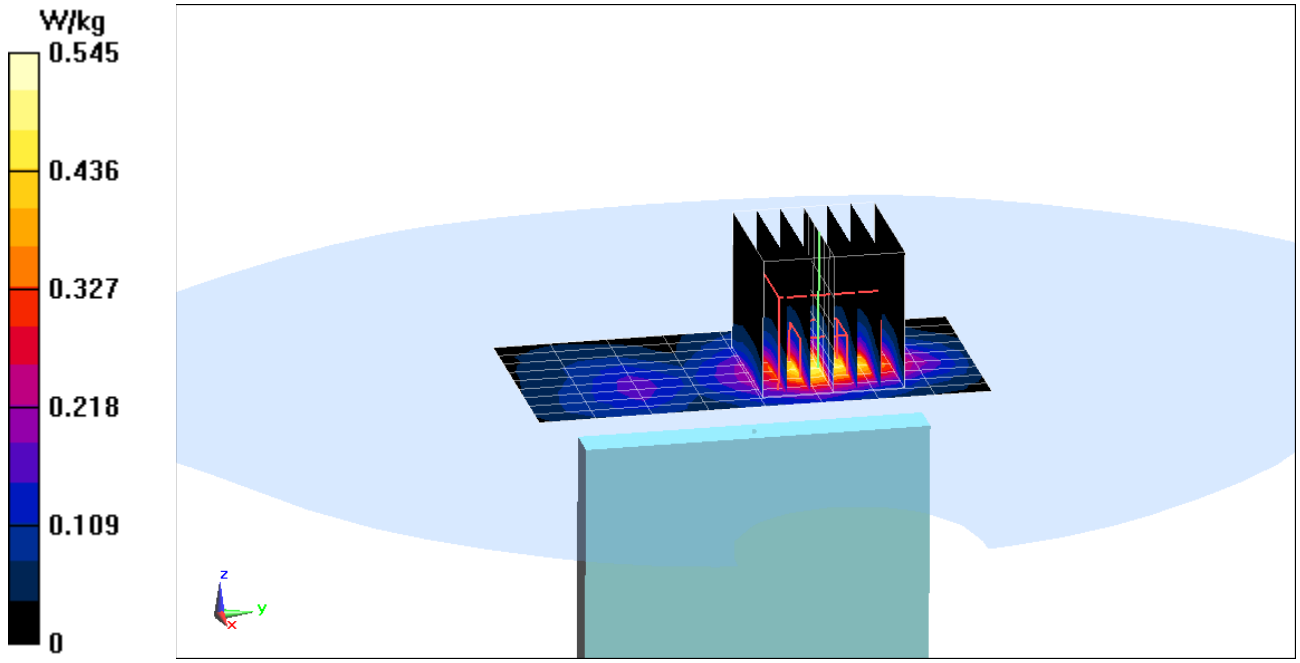
Communication System: UID 0, LTE Band 48; Frequency: 3690 MHz; Duty Cycle: 1:1.58
Medium: 3500-3700 Body Medium parameters used (interpolated):
f = 3690 MHz; σ = 3.6 S/m; ε_r = 49.423; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.13, 6.13, 6.13) @ 3690 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 48, Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (10x9x1): 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 = 9.112 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.836 W/kg
SAR(1 g) = 0.275 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0244M

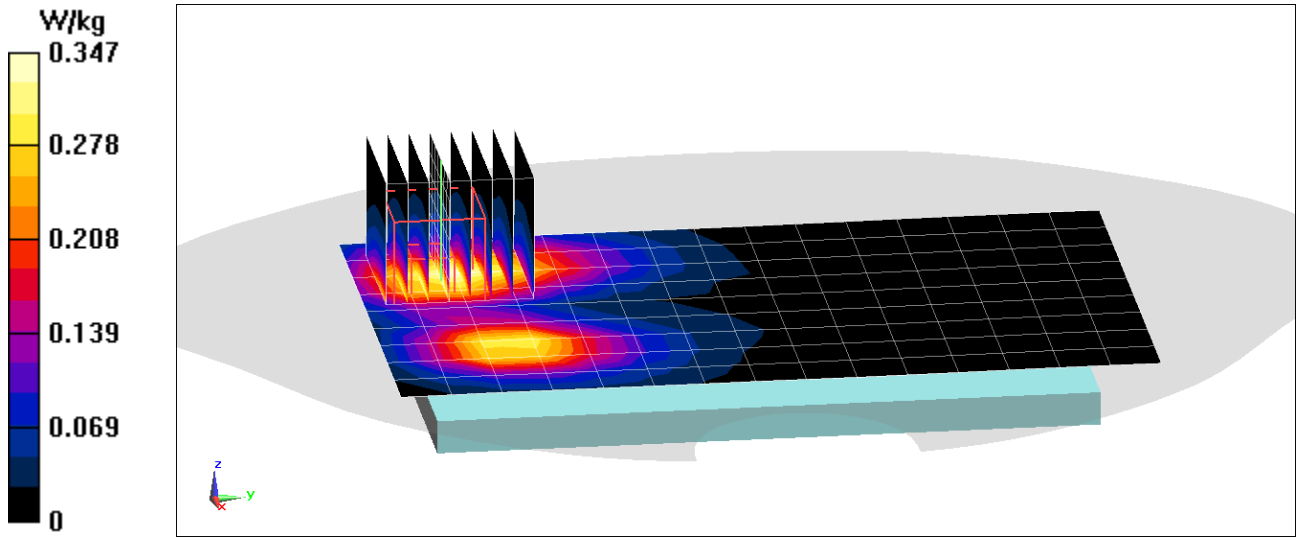
Communication System: UID 0, _LTE Band 41 (Class 2); Frequency: 2636.5 MHz; Duty Cycle: 1:2.31
Medium: 2450 Body Medium parameters used (interpolated):
f = 2636.5 MHz; σ = 2.248 S/m; ε_r = 50.815; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2636.5 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41 (PC2), ULCA, Body SAR, Back side,
PCC: 20 MHz Bandwidth, QPSK, Ch. 41055, 1 RB, 0 RB Offset
SCC: 20 MHz Bandwidth, QPSK, Ch. 40857, 1 RB, 99 RB Offset

Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.37 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.366 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0244M

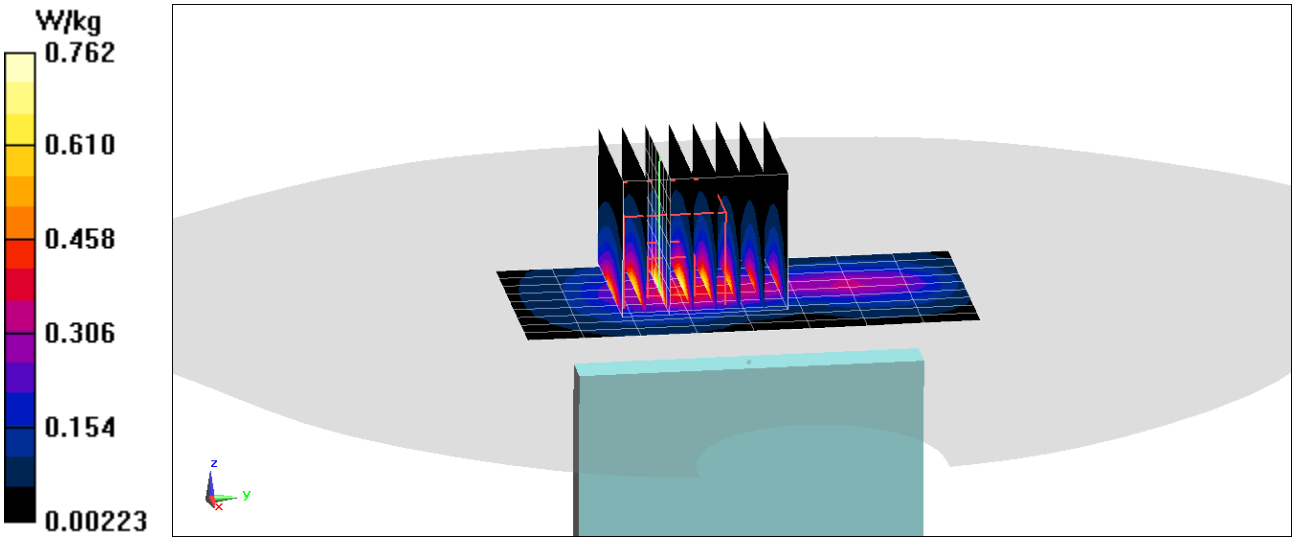
Communication System: UID 0, LTE Band 41; Frequency: 2593 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2593$ MHz; $\sigma = 2.197$ S/m; $\varepsilon_r = 50.951$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2593 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41 (PC3), ULCA, Body SAR, Bottom Edge,
PCC: 20 MHz Bandwidth, QPSK, Ch. 40620, 50 RB, 0 RB Offset
SCC: 20 MHz Bandwidth, QPSK, Ch. 40422, 50 RB, 50 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.67 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.950 W/kg
SAR(1 g) = 0.488 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0894M

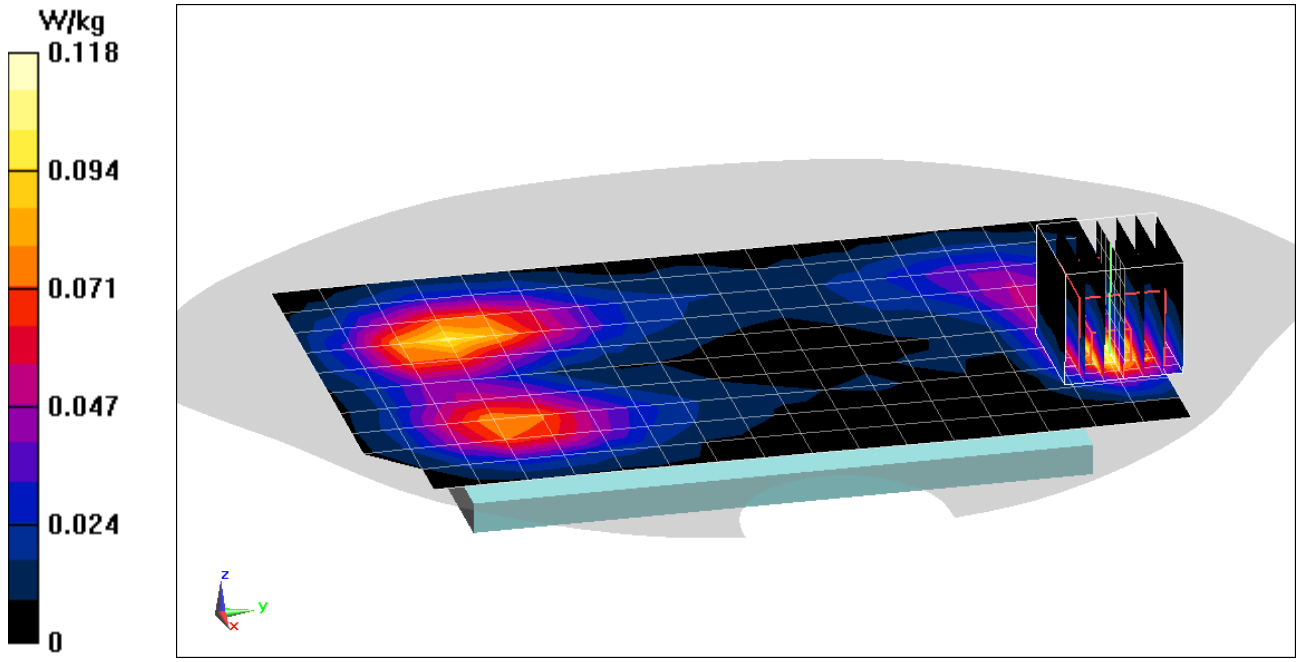
Communication System: UID 0, _n41; Frequency: 2577.33 MHz; Duty Cycle: 1:4.37
Medium: 2450 Body Medium parameters used (interpolated):
f = 2577.33 MHz; σ = 2.197 S/m; ε_r = 50.73; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-29-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2577.33 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: EN-DC DC_(n)41AA, Body SAR, Back side
NR Band n41: 100 MHz Bandwidth, CP-OFDM-QPSK, Ch. 515460, 1 RB, 271 RB Offset
LTE Band 41: 20 MHz Bandwidth, QPSK, Ch. 41021, 1 RB, 50 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 = 6.136 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.073 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0894M

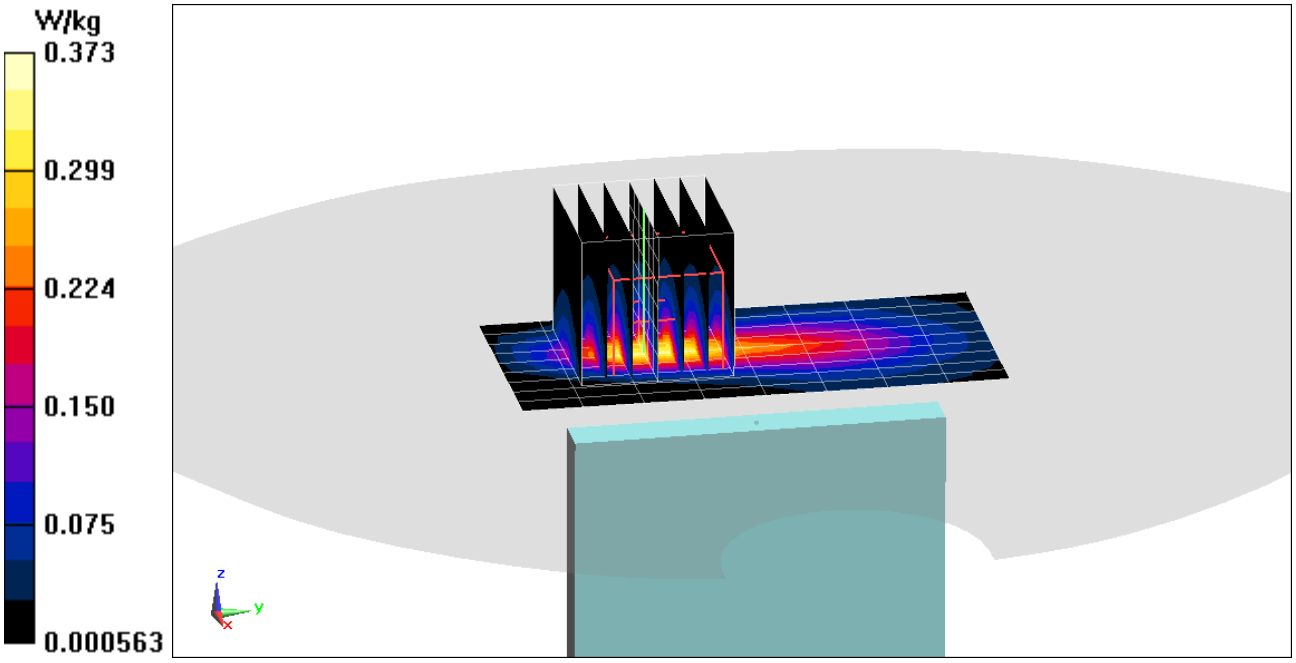
Communication System: UID 0, _n41; Frequency: 2577.33 MHz; Duty Cycle: 1:4.37
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2577.33$ MHz; $\sigma = 2.197$ S/m; $\varepsilon_r = 50.73$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-29-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2577.33 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: EN-DC DC_(n)41AA, Body SAR, Top Edge
NR Band n41: 100 MHz Bandwidth, CP-OFDM-QPSK, Ch. 515460, 1 RB, 271 RB Offset
LTE Band 41: 20 MHz Bandwidth, QPSK, Ch. 41021, 1 RB, 50 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.63 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.476 W/kg
SAR(1 g) = 0.214 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0181M

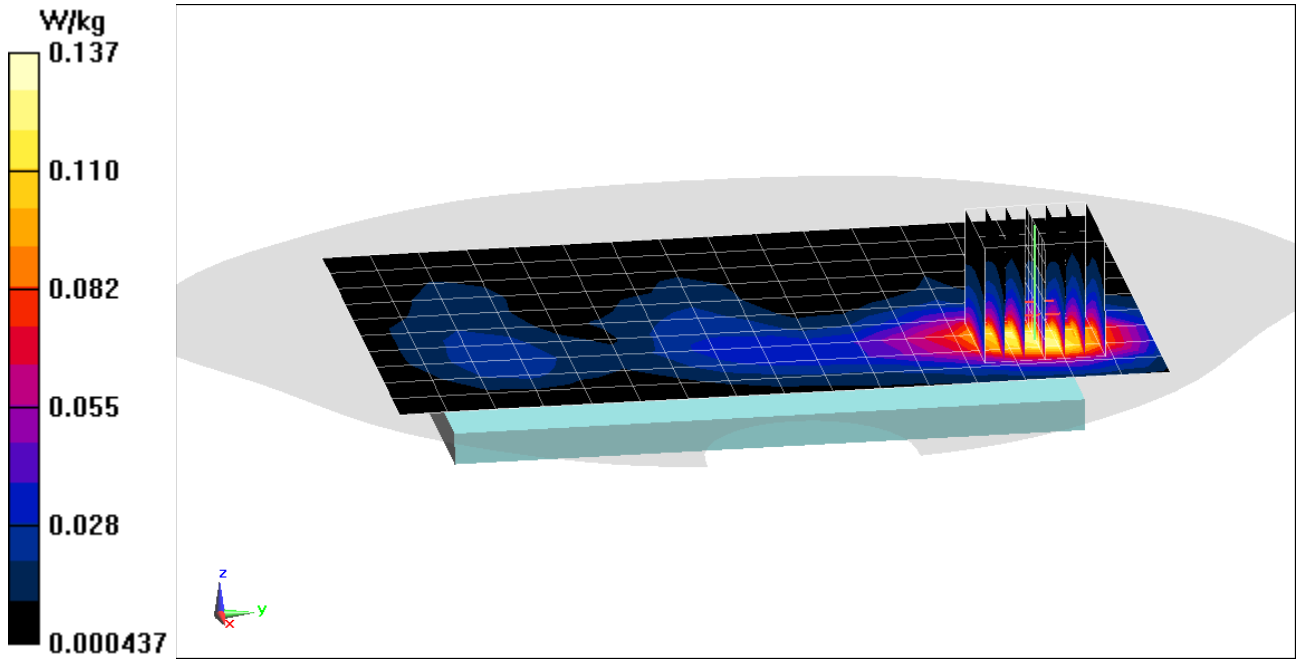
Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.028 S/m; ε_r = 50.611; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04-03-2019; Ambient Temp: 24.4°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2437 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Body SAR, Ch 6, 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 = 7.083 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.089 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0181M

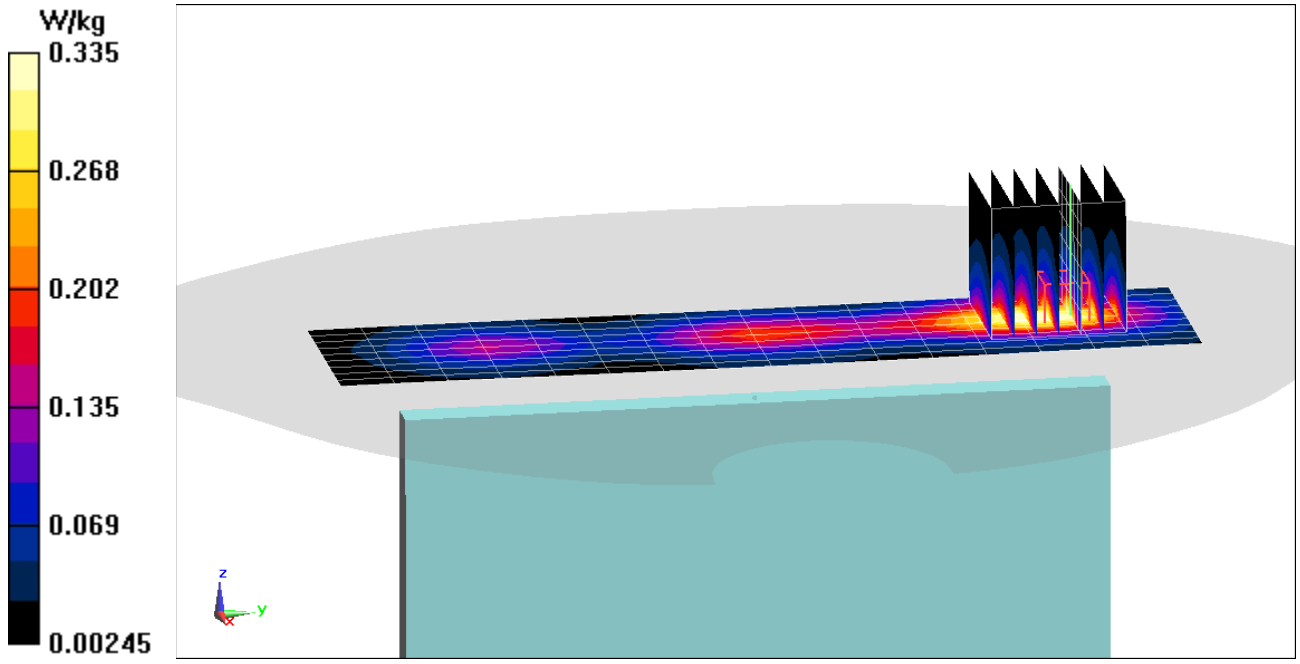
Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.028 S/m; ε_r = 50.611; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-03-2019; Ambient Temp: 24.4°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2437 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, Body SAR, Ch 6, 1 Mbps, Left Edge

Area Scan (10x17x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.138 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.422 W/kg
SAR(1 g) = 0.205 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0221M

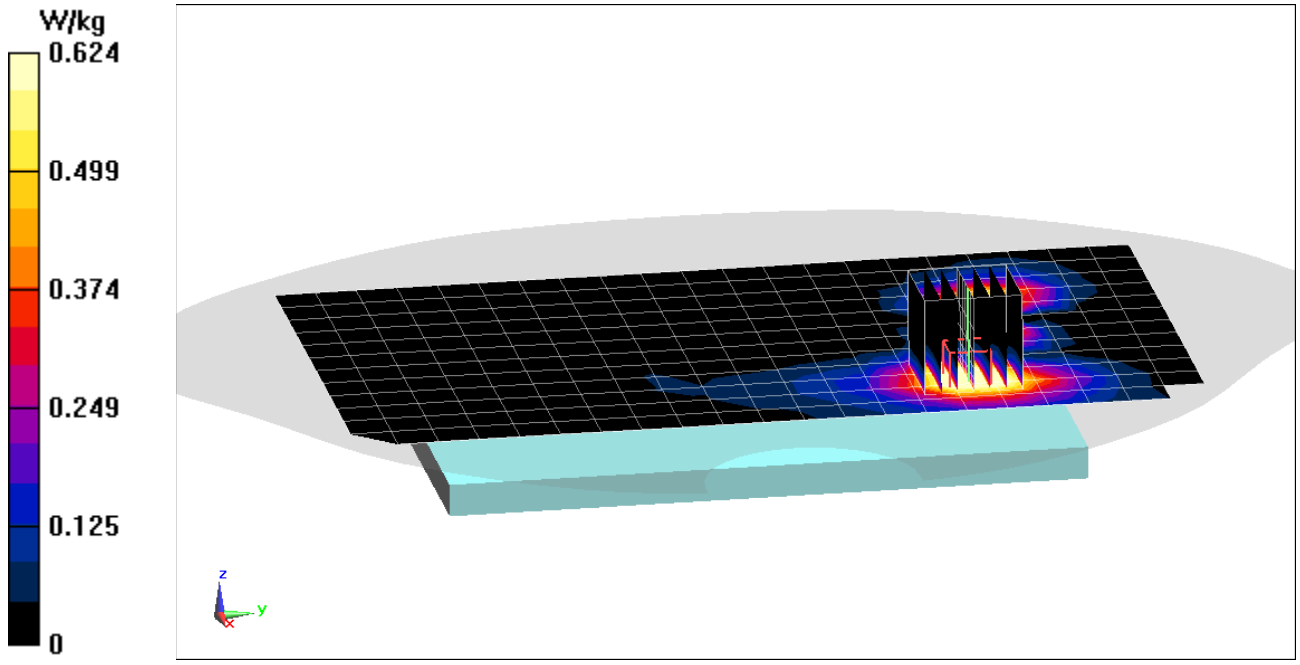
Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5GHz Body Medium parameters used:
f = 5785 MHz; σ = 6.246 S/m; ε_r = 47.904; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-18-2019; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5785 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, Antenna 2, UNII-3, 20 MHz Bandwidth, Body SAR, Ch 157, 6 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 6.398 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.254 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0221M

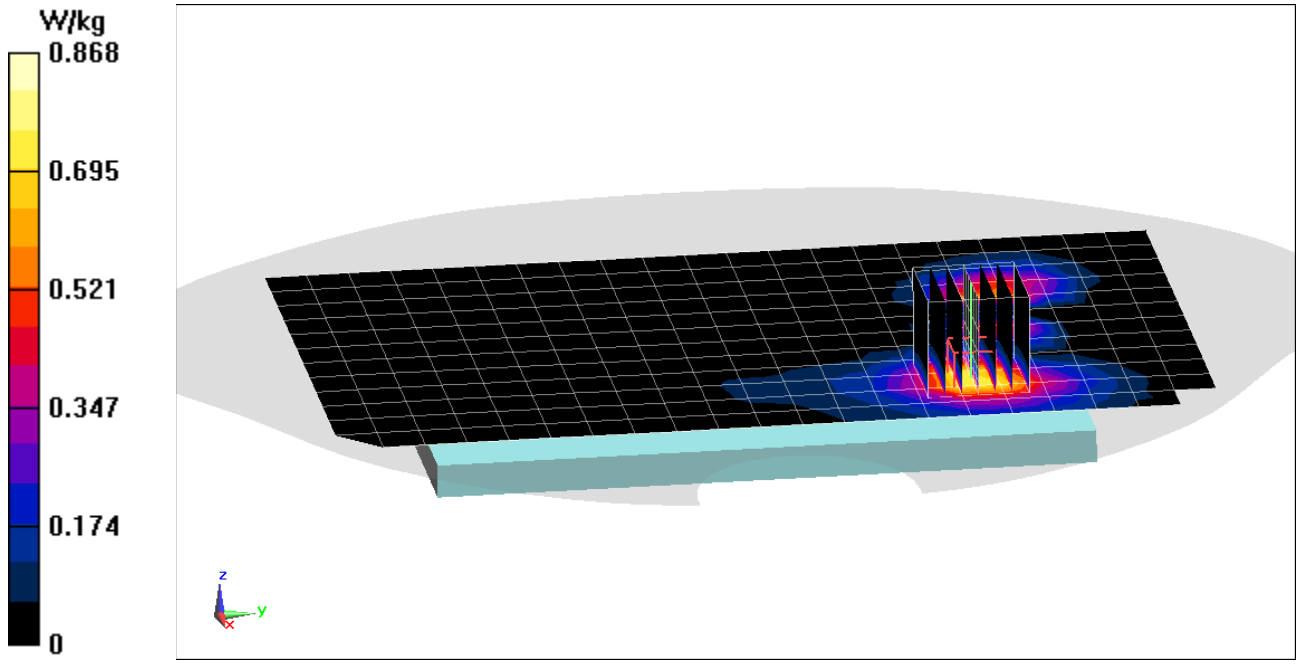
Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5GHz Body Medium parameters used:
f = 5785 MHz; σ = 6.246 S/m; ε_r = 47.904; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-18-2019; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5785 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, Antenna 2, UNII-3, 20 MHz Bandwidth, Body SAR, Ch 157, 6 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 6.661 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.352 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

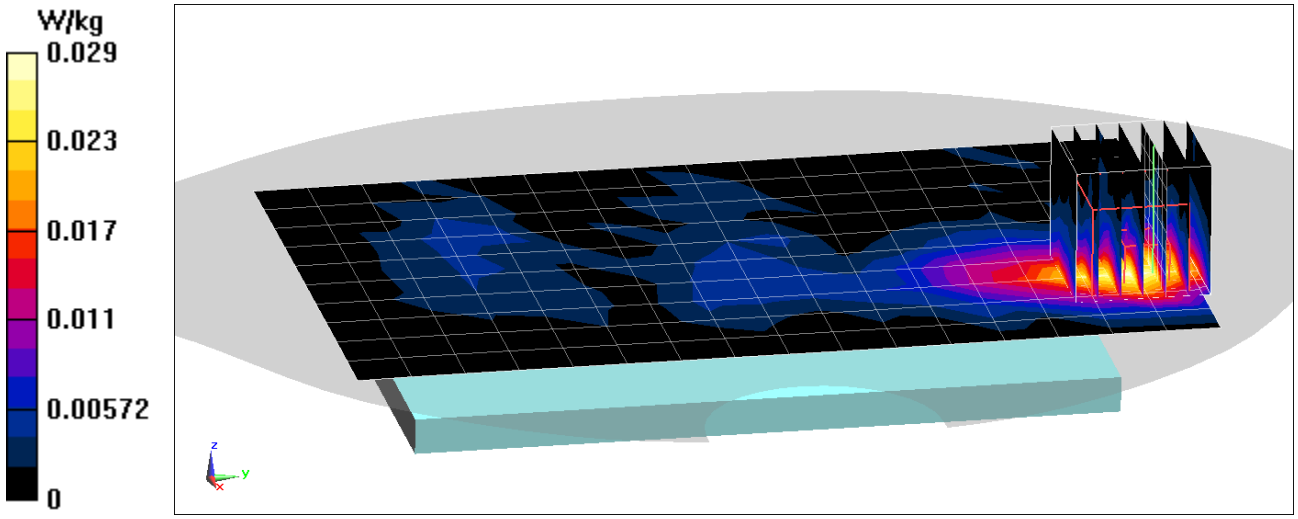
Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
f = 2480 MHz; σ = 2.065 S/m; ε_r = 51.278; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2480 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 78, 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 = 2.987 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.0360 W/kg
SAR(1 g) = 0.019 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

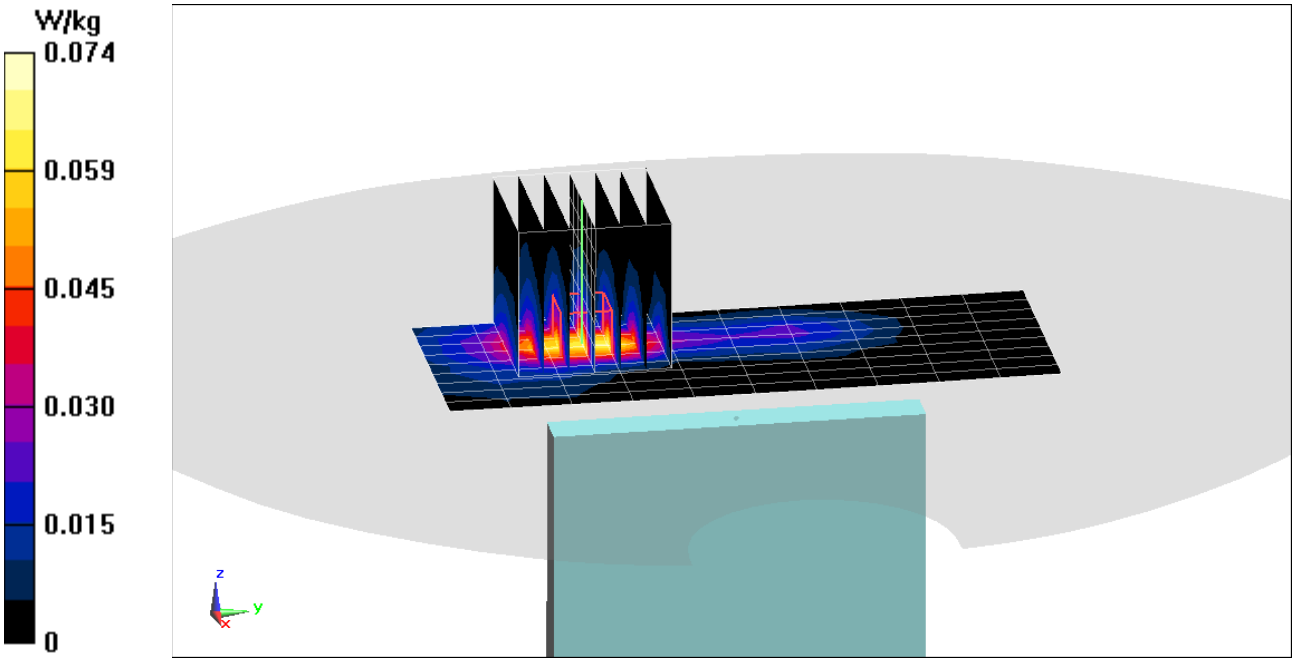
Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body Medium parameters used (interpolated):
f = 2480 MHz; σ = 2.065 S/m; ε_r = 51.278; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2480 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 78, 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 = 4.970 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.0920 W/kg
SAR(1 g) = 0.043 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

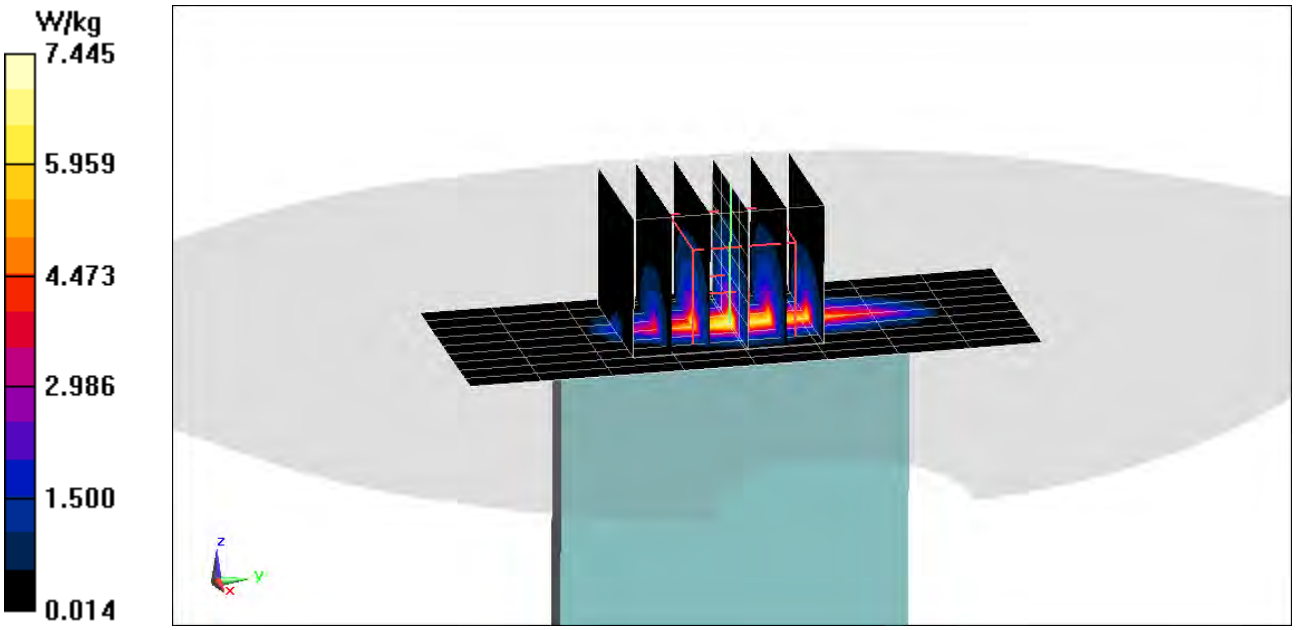
Communication System: UID 0, _GSM GPRS; 3 Tx slots; Frequency: 1850.2 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used (interpolated):
f = 1850.2 MHz; σ = 1.517 S/m; ε_r = 52.152; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1850.2 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Phablet SAR, Bottom Edge, Low.ch, 3 Tx Slots

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.79 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 9.12 W/kg
SAR(10 g) = 1.84 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

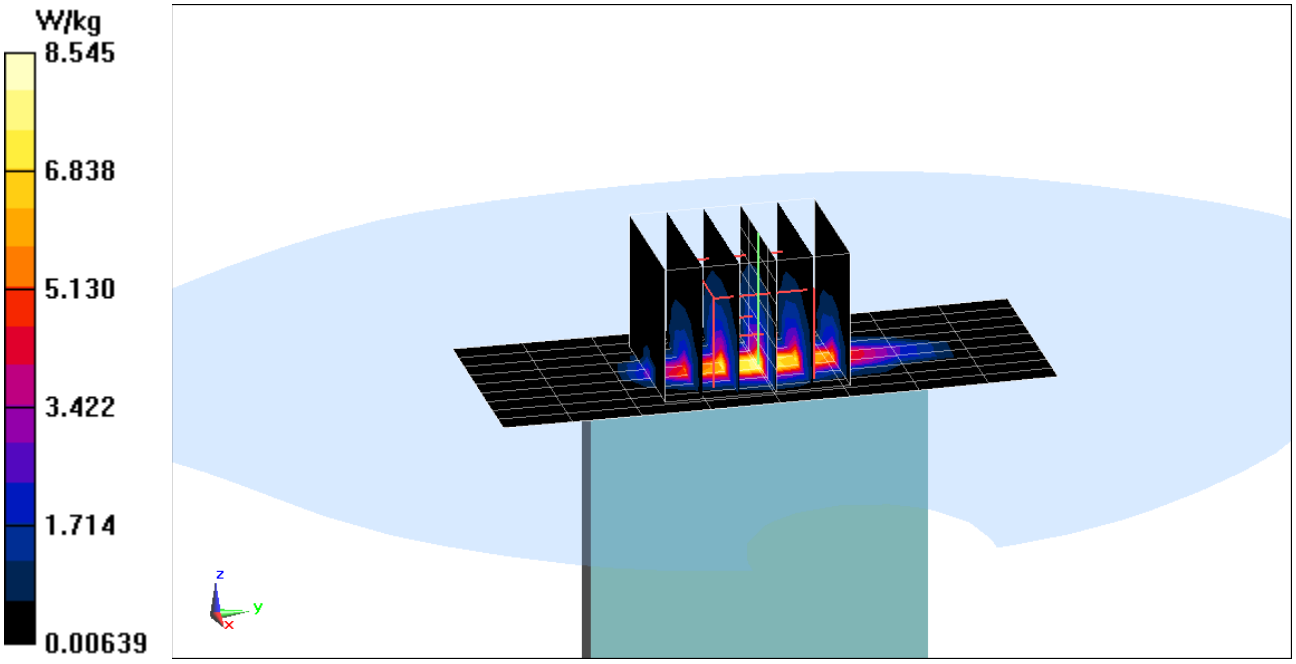
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.521 S/m; ε_r = 51.697; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-01-2019; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1732.4 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Phablet SAR, Bottom Edge, Mid.ch

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.36 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(10 g) = 2.11 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

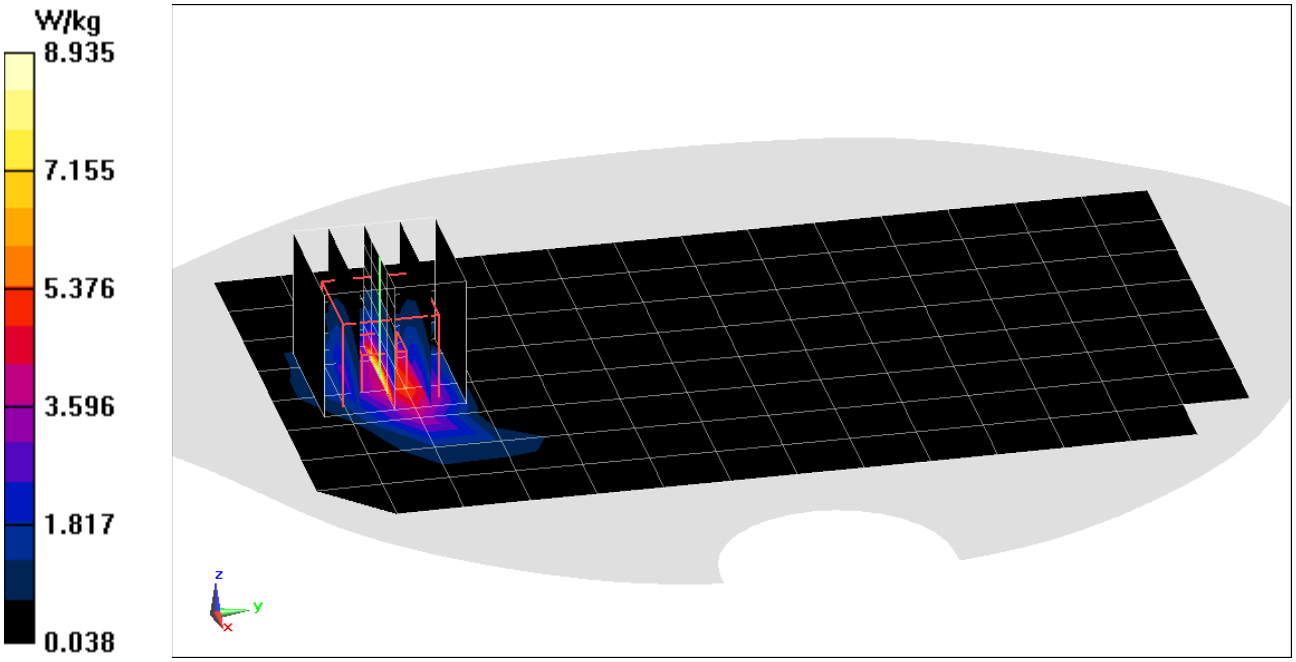
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.55 S/m; ε_r = 51.572; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 4-1-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front 30 degreee; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Phablet 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 = 60.22 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(10 g) = 2.12 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0267M

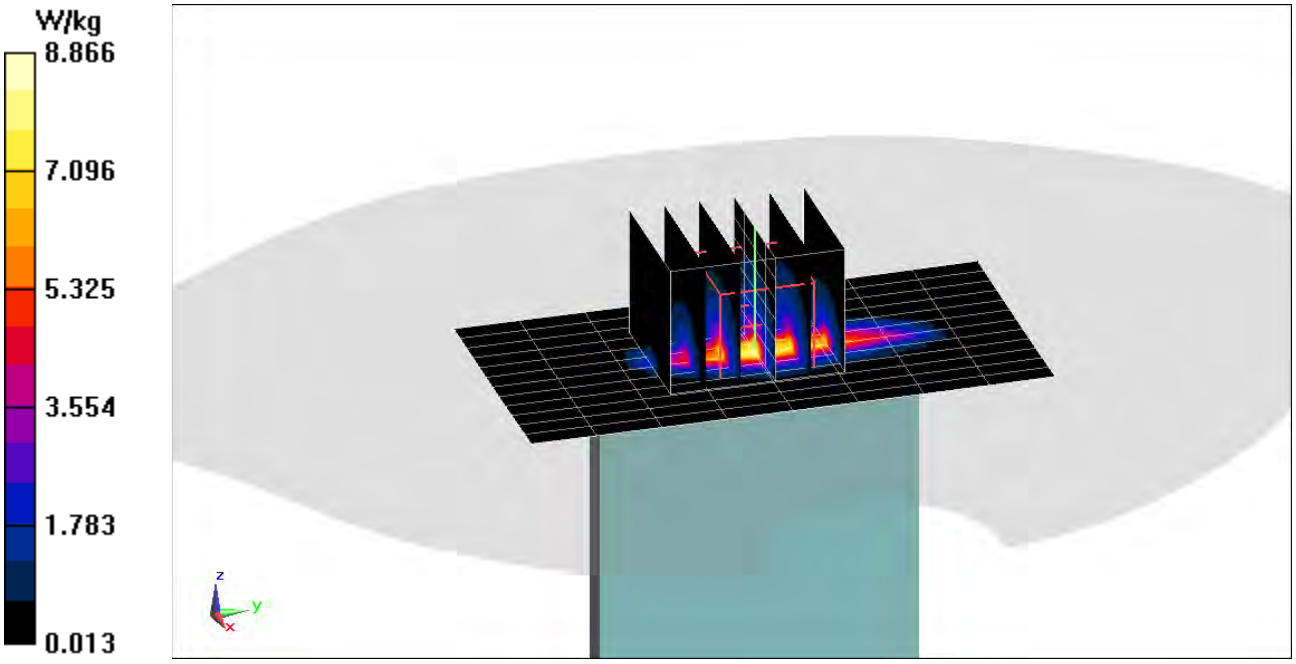
Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.551 S/m; ε_r = 52.047; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: PCS EVDO, Phablet SAR, Bottom Edge, Mid.ch

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.75 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 10.9 W/kg
SAR(10 g) = 2.11 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

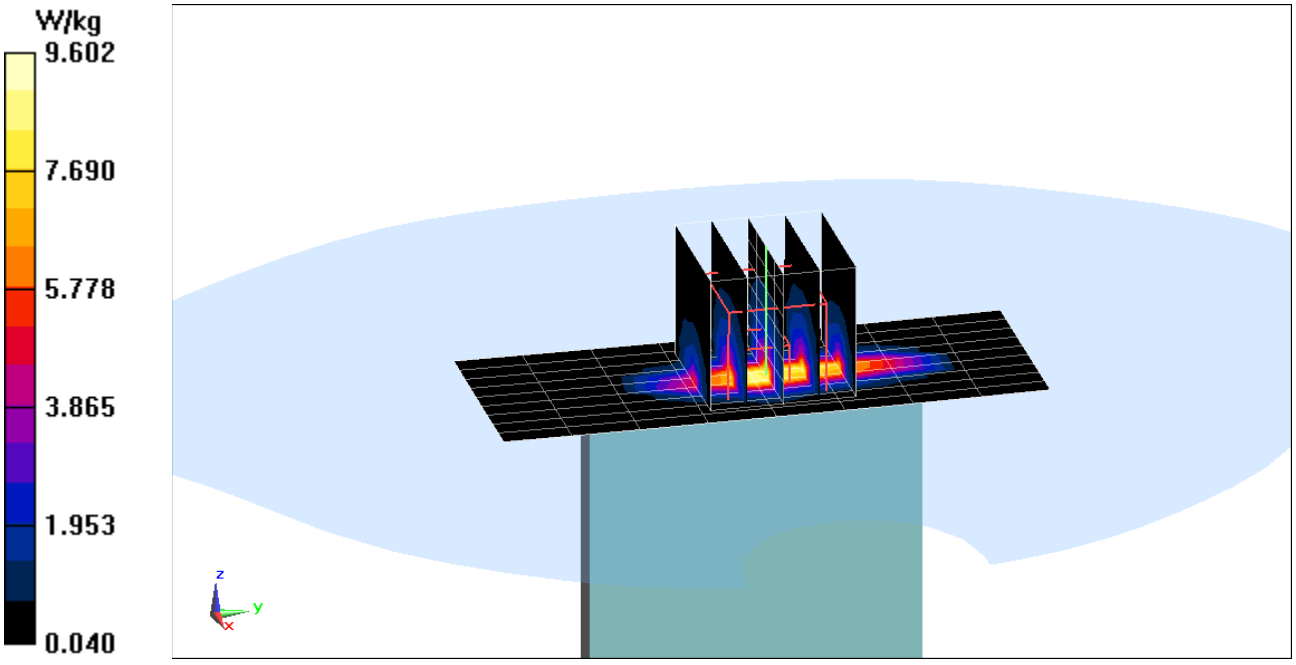
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1745$ MHz; $\sigma = 1.518$ S/m; $\varepsilon_r = 51.522$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-04-2019; Ambient Temp: 20.8°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1745 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Phablet SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 64.07 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 11.6 W/kg
SAR(10 g) = 2.35 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

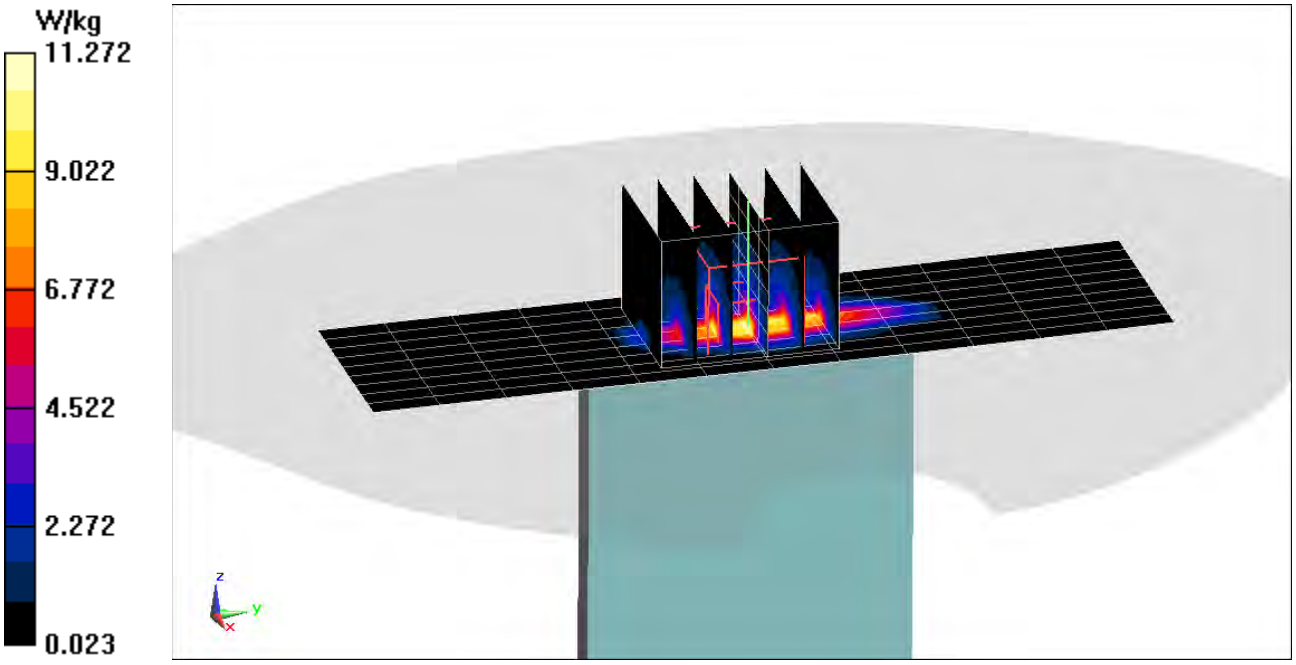
Communication System: UID 0, _LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.574 S/m; ε_r = 52.123; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-03-2019; Ambient Temp: 22.2°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1905 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Phablet SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 66.37 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 14.5 W/kg
SAR(10 g) = 2.73 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0228M

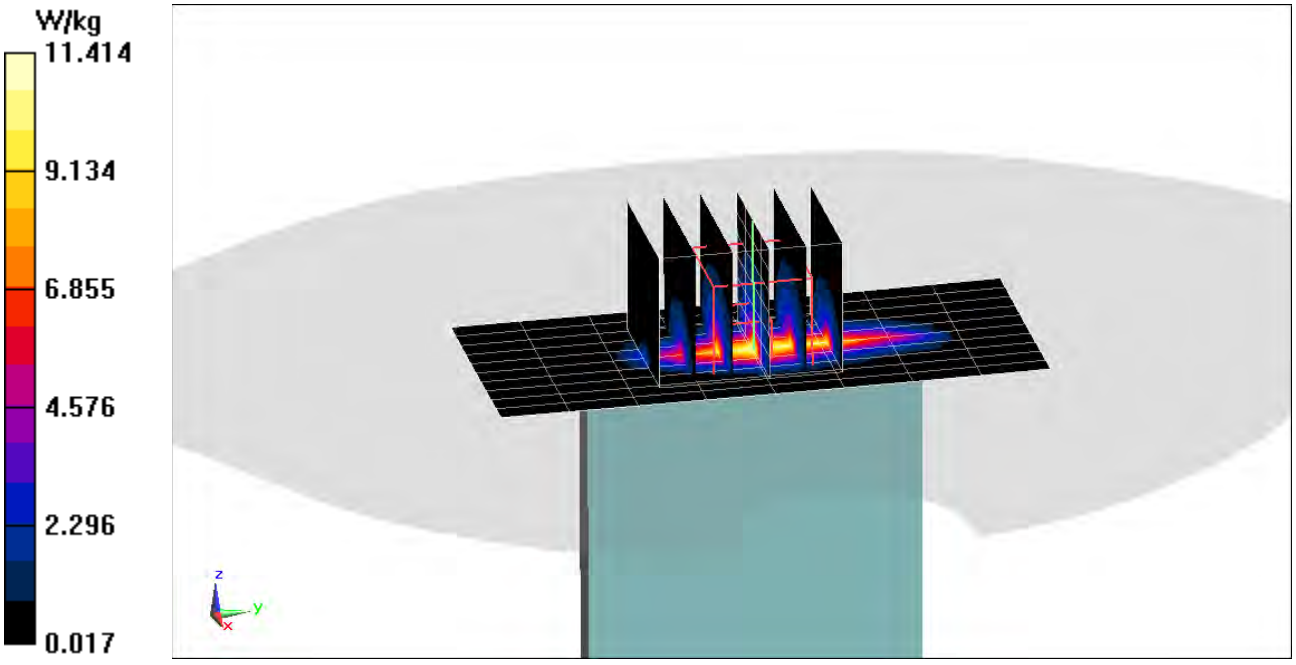
Communication System: UID 0, _LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1860 MHz; σ = 1.529 S/m; ε_r = 51.638; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-01-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1860 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

**Model: LTE Band 2 (PCS), Phablet SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset**

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 65.68 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 14.0 W/kg
SAR(10 g) = 2.71 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

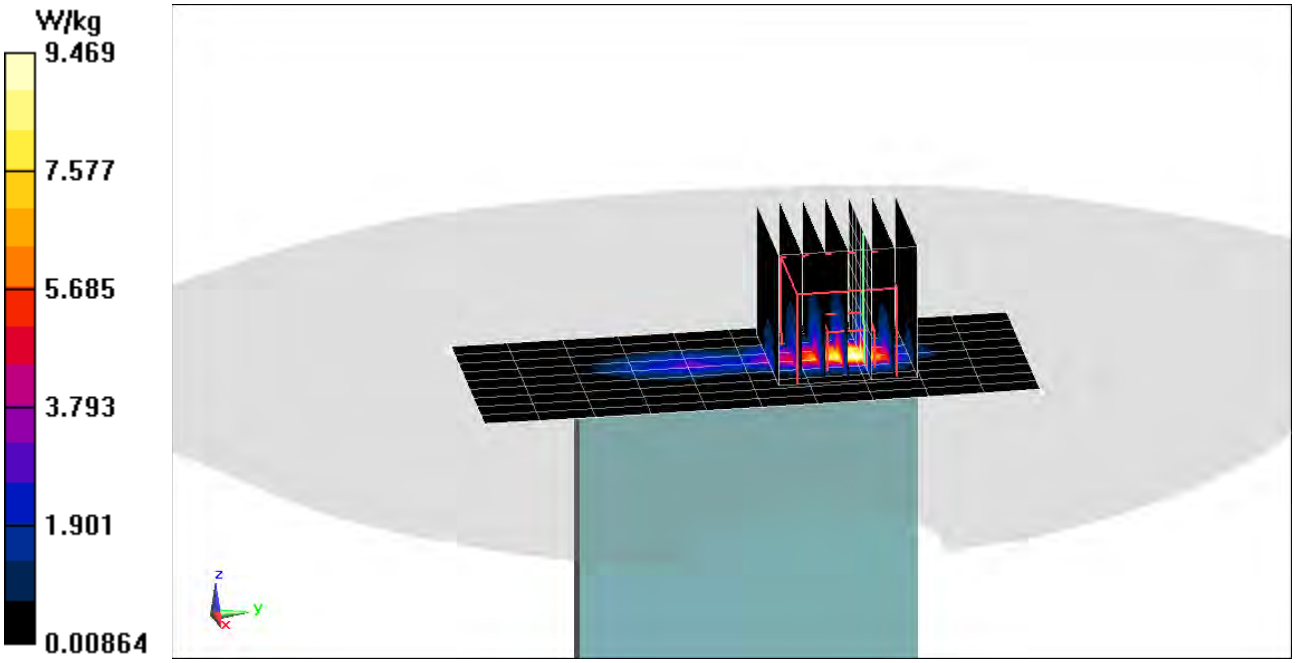
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2510$ MHz; $\sigma = 2.11$ S/m; $\varepsilon_r = 51.858$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-08-2019; Ambient Temp: 23.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2510 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Phablet SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.15 V/m; Power Drift = -0.21 dB
Peak SAR (extrapolated) = 16.4 W/kg
SAR(10 g) = 1.53 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0291M

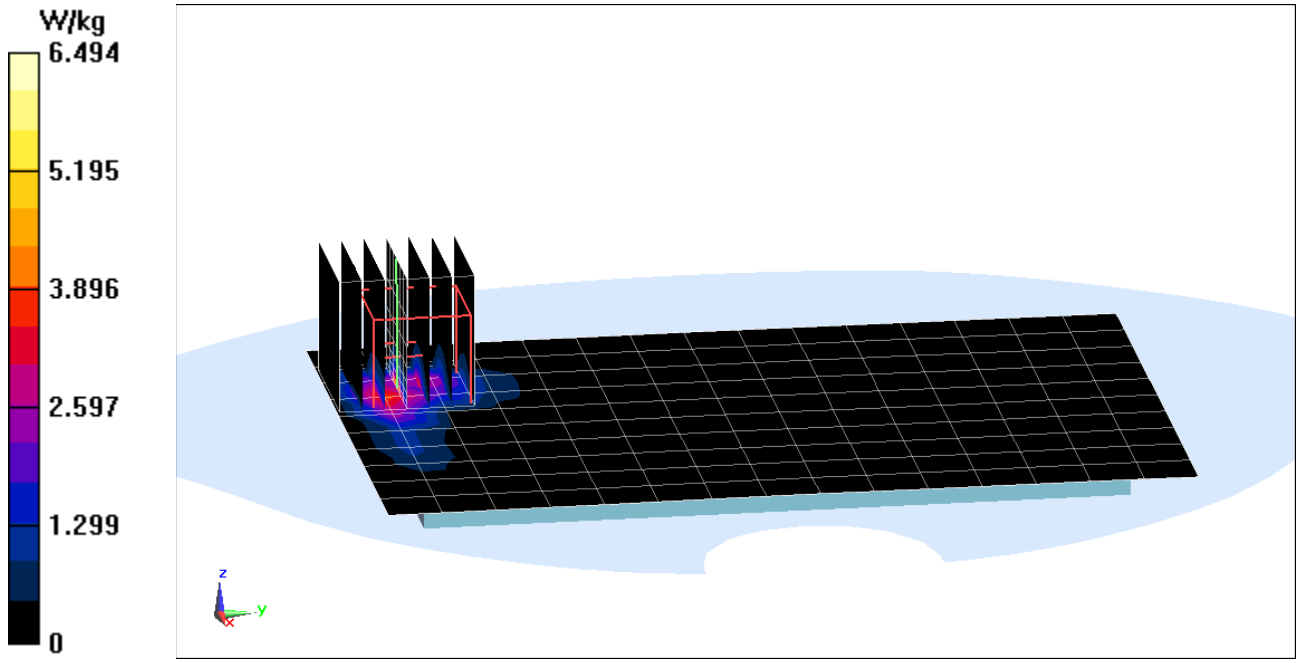
Communication System: UID 0, LTE Band 48; Frequency: 3690 MHz; Duty Cycle: 1:1.58
Medium: 3500-3700 Body Medium parameters used (interpolated):
f = 3690 MHz; σ = 3.6 S/m; ε_r = 49.423; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-01-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.13, 6.13, 6.13) @ 3690 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 48, Phablet SAR, Front side, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (11x16x1): 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 = 26.47 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 12.6 W/kg
SAR(10 g) = 0.733 W/kg



DUT: A3LSMG977T; Type: Portable Handset; Serial: 0244M

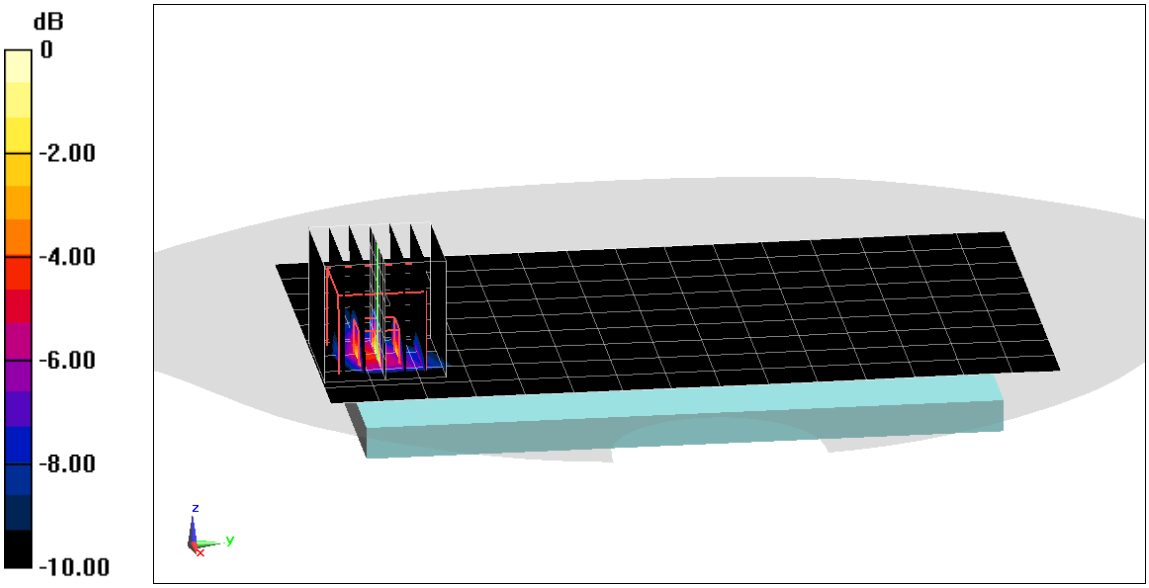
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
$f = 2680$ MHz; $\sigma = 2.32$ S/m; $\varepsilon_r = 51.334$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 04-08-2019; Ambient Temp: 23.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2680 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41 (PC3), ULCA, Phablet SAR, Back side,
PCC: 20 MHz Bandwidth, QPSK, Ch. 41490, 1 RB, 0 RB Offset
SCC: 20 MHz Bandwidth, QPSK, Ch. 41292, 1 RB, 99 RB Offset

Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.50 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 15.7 W/kg
SAR(10 g) = 1.95 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

DUT: A3LSMG977T; Type: Portable Handset; Serial: 0221M

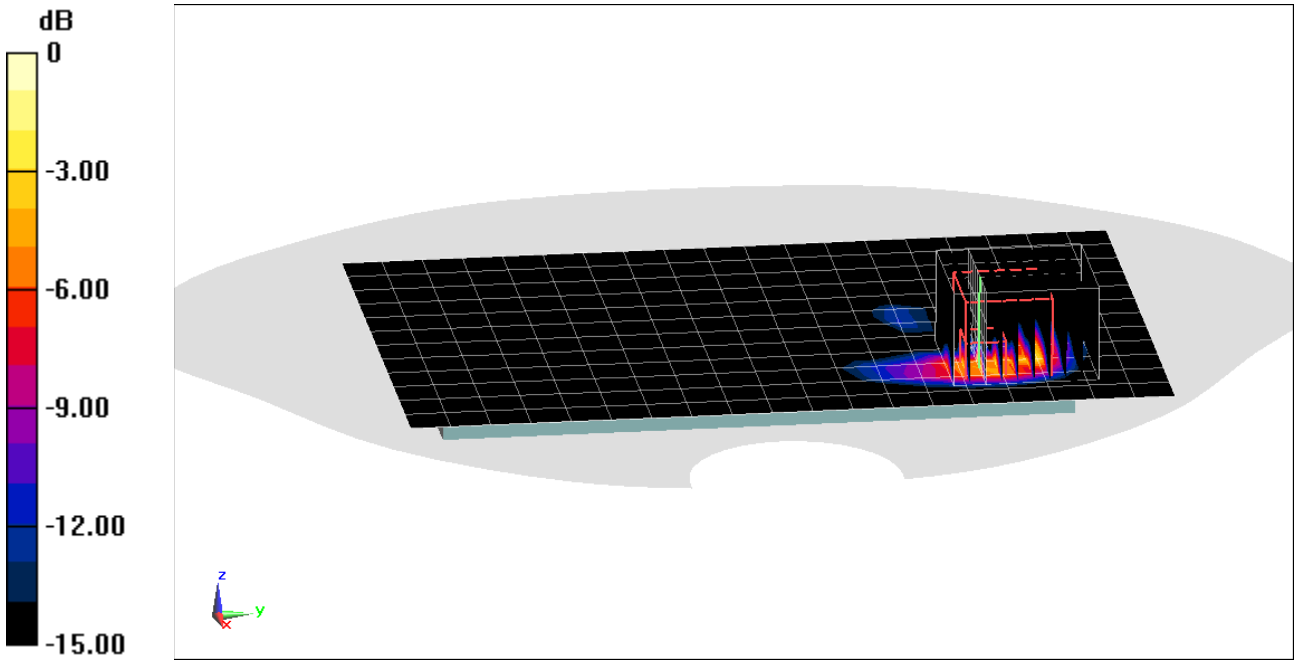
Communication System: UID 0, 802.11n 5.2-5.8 GHz Band; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5GHz Body Medium parameters used:
f = 5600 MHz; σ = 5.951 S/m; ε_r = 48.289; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-18-2019; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5600 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11n, MIMO, U-NII-2C, 20 MHz Bandwidth, Phablet SAR, Ch 120, 13 Mbps, Back Side

Area Scan (13x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (9x10x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 26.62 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 54.6 W/kg
SAR(10 g) = 2.26 W/kg



0 dB = 28.0 W/kg = 14.47 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

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DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

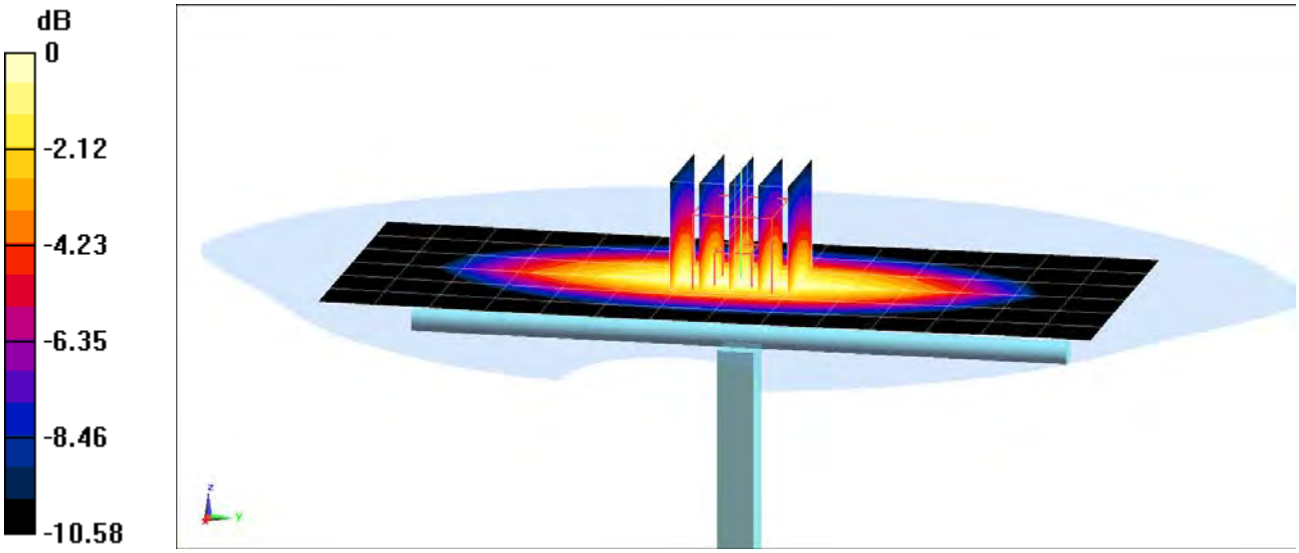
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used (interpolated):
f = 750 MHz; σ = 0.893 S/m; ε_r = 42.036; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-14-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7409; ConvF(9.91, 9.91, 9.91) @ 750 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.56 W/kg
SAR(1 g) = 1.68 W/kg
Deviation(1 g) = 1.45%



0 dB = 2.25 W/kg = 3.52 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

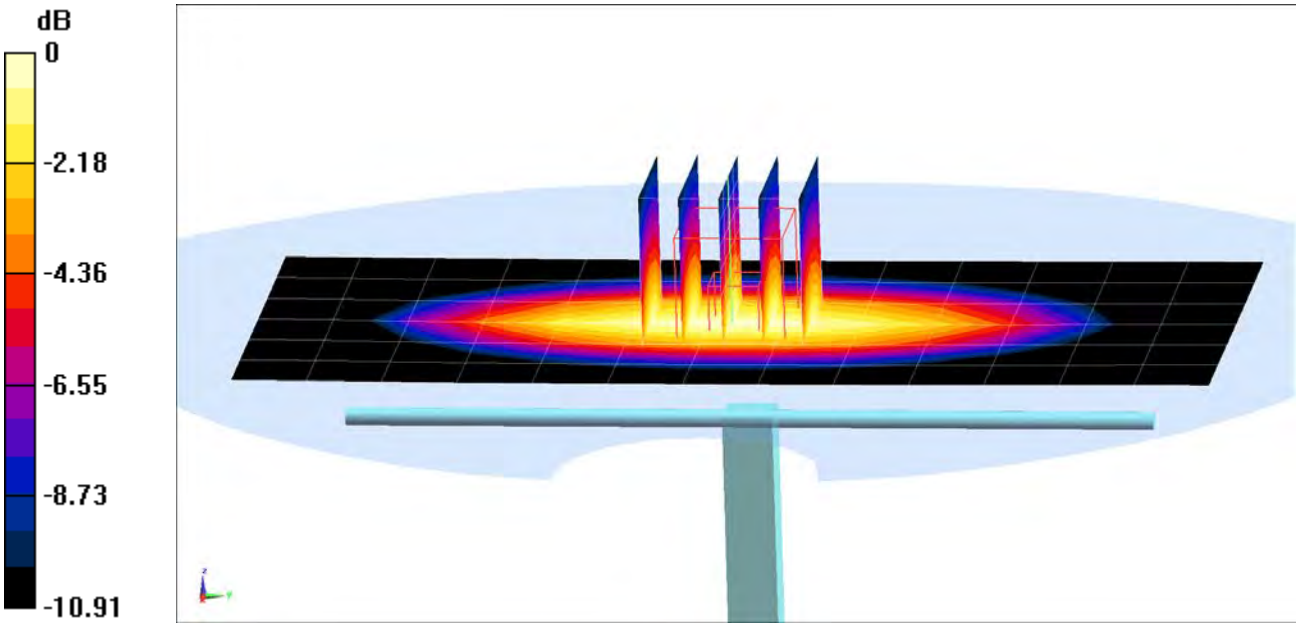
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.922 S/m; ε_r = 43.058; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-27-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.11, 10.11, 10.11) @ 835 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.84 W/kg
SAR(1 g) = 1.92 W/kg
Deviation(1 g) = 1.80%



0 dB = 2.55 W/kg = 4.07 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

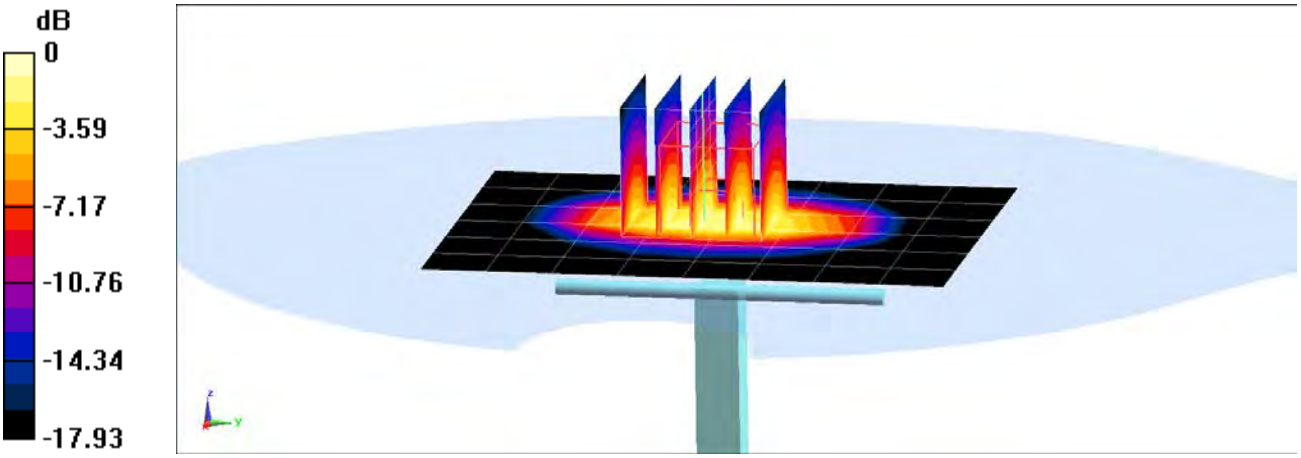
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.356 S/m; ε_r = 38.434; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-24-2019; Ambient Temp: 21.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN3589; ConvF(7.31, 7.31, 7.31) @ 1750 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.89 W/kg
SAR(1 g) = 3.63 W/kg
Deviation(1 g) = -0.55%



0 dB = 5.64 W/kg = 7.51 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

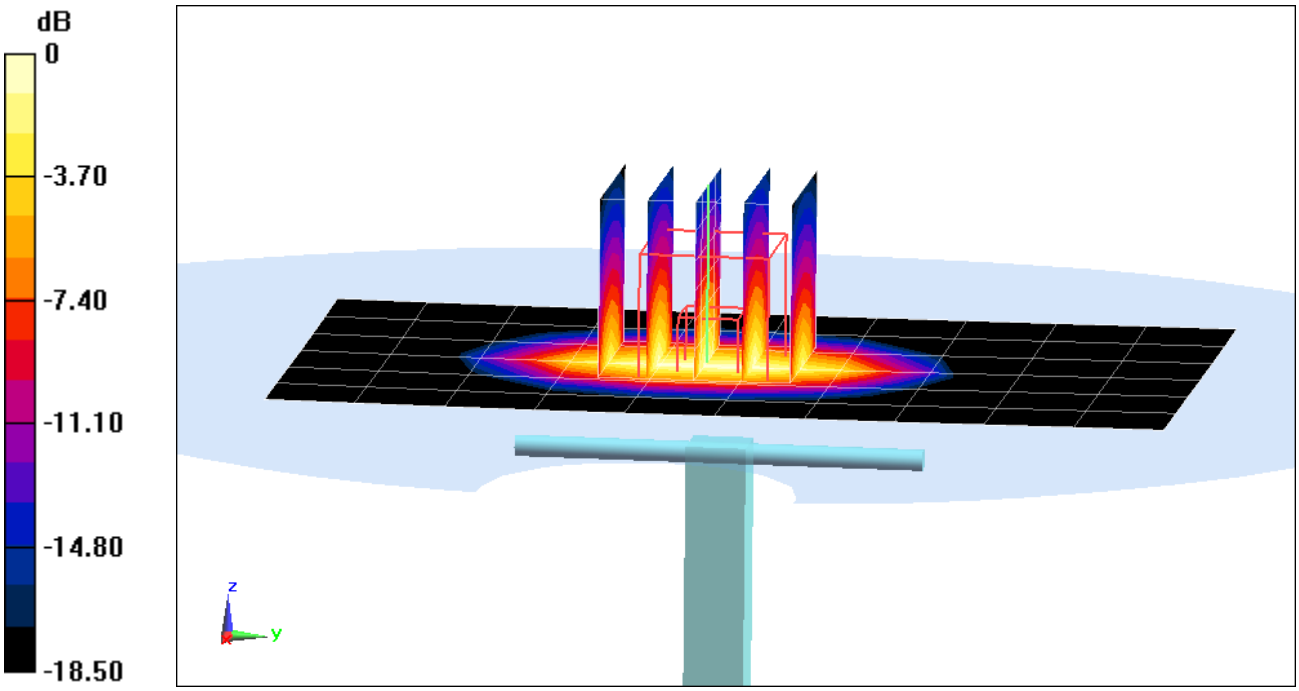
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.428 S/m; ε_r = 38.763; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-18-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM 30 with CRP v5.0 right; Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 8.24 W/kg
SAR(1 g) = 4.2 W/kg
Deviation(1 g) = 5.53%



0 dB = 6.76 W/kg = 8.30 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

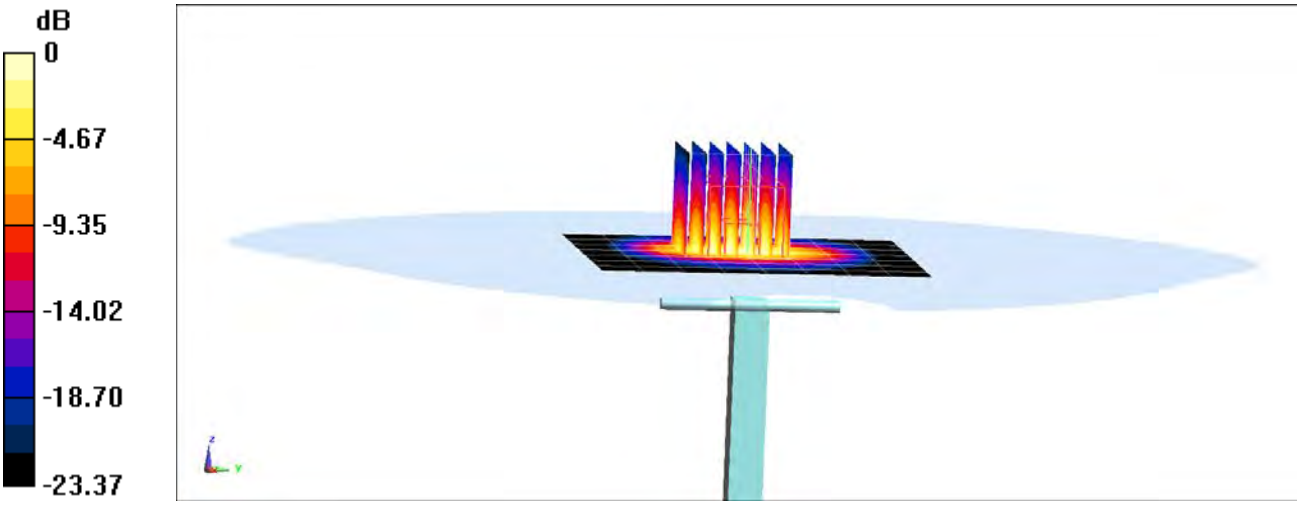
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.837 S/m; ε_r = 38.691; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-18-2019; Ambient Temp: 24.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2450 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.5 W/kg
SAR(1 g) = 5.35 W/kg
Deviation(1 g) = 1.52%



0 dB = 9.03 W/kg = 9.56 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

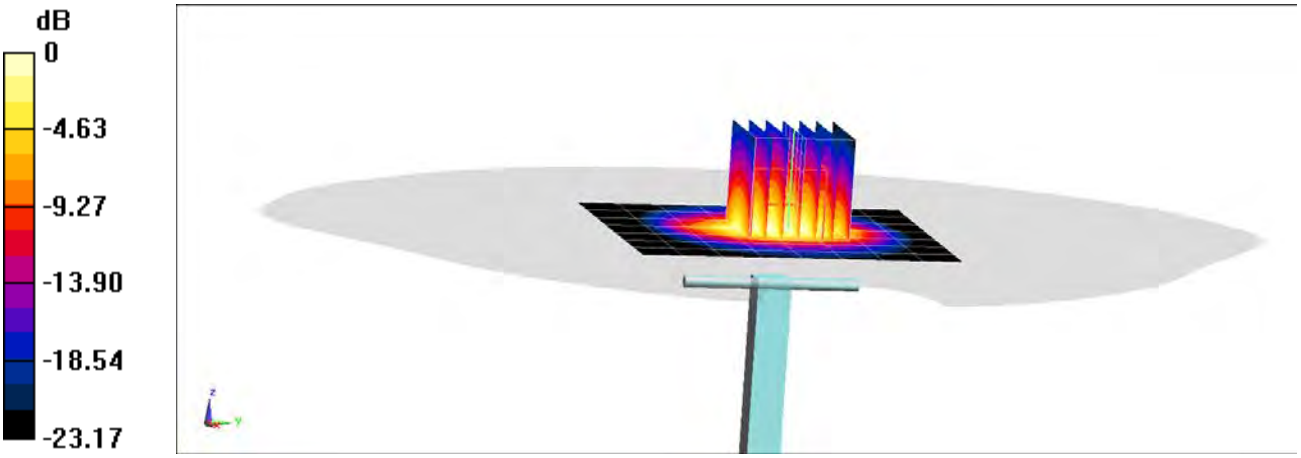
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Medium parameters used:
f = 2450 MHz; σ = 1.809 S/m; ε_r = 38.338; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-26-2019; Ambient Temp: 24.3°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3589; ConvF(6.46, 6.46, 6.46) @ 2450 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 5.29 W/kg
Deviation(1 g) = 1.15%



0 dB = 8.92 W/kg = 9.50 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1071

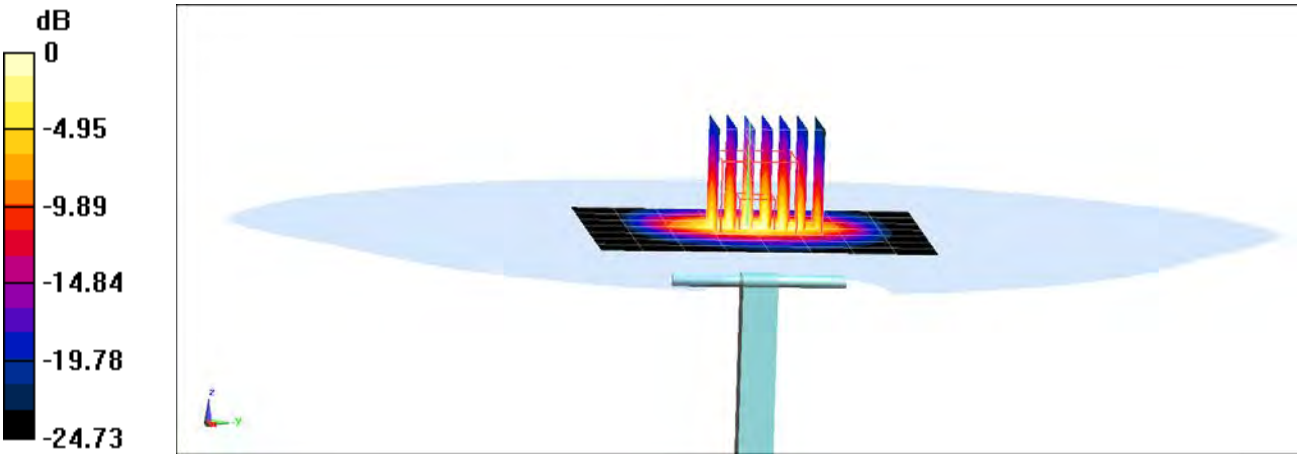
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.948 S/m; ε_r = 37.934; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-21-2019; Ambient Temp: 23.1°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2600 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.6 W/kg
SAR(1 g) = 5.74 W/kg
Deviation(1 g) = 1.95%



0 dB = 9.81 W/kg = 9.92 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1126

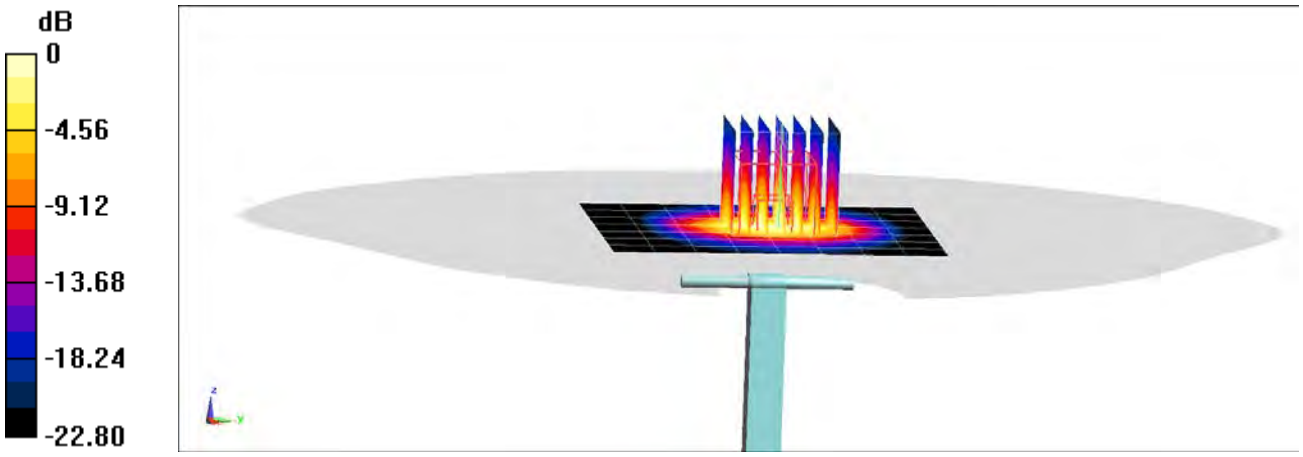
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.929 S/m; ε_r = 37.566; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-03-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2600 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 5.22 W/kg
Deviation(1 g) = -4.22%



0 dB = 8.89 W/kg = 9.49 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

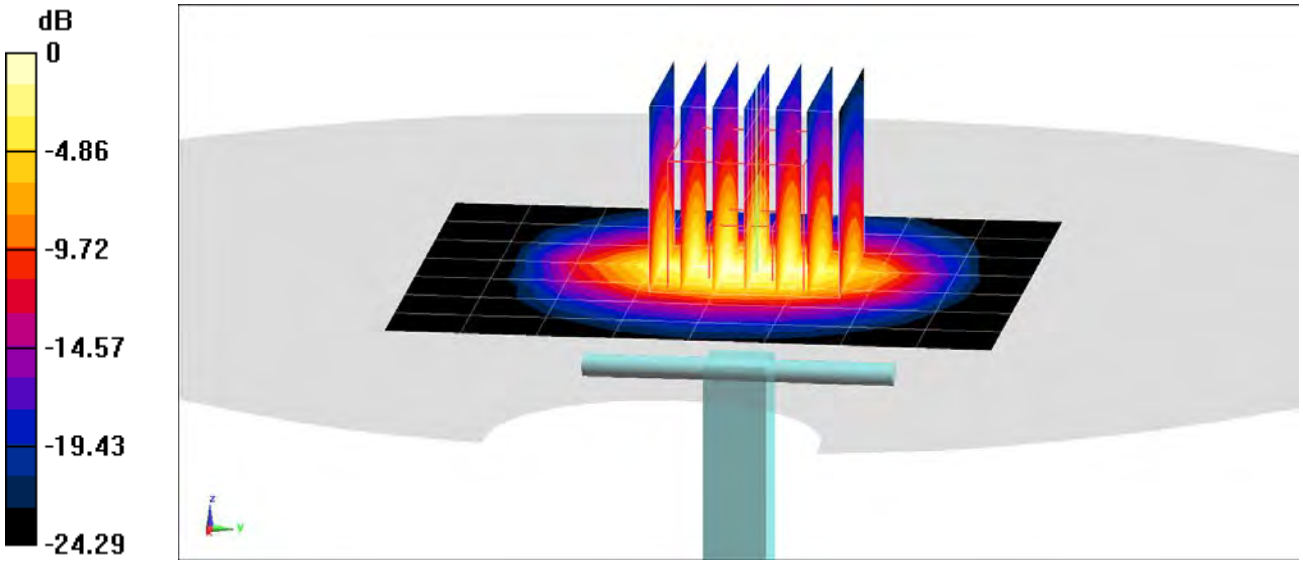
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.905 S/m; ε_r = 38.595; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-29-2019; Ambient Temp: 24.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN3589; ConvF(6.25, 6.25, 6.25) @ 2600 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.77 W/kg
Deviation(1 g) = 1.23%



0 dB = 9.91 W/kg = 9.96 dBW/kg

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DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1059

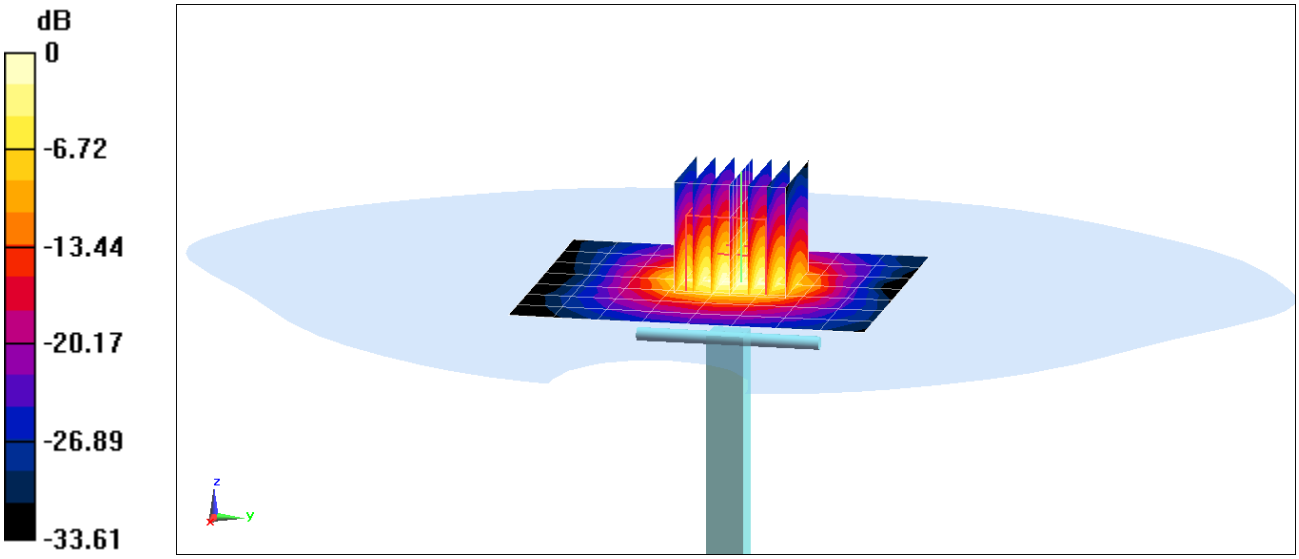
Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: 3500-3700 Head; Medium parameters used:
f = 3500 MHz; σ = 2.774 S/m; ε_r = 38.807; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-29-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN3949; ConvF(7.36, 7.36, 7.36) @ 3500 MHz; Calibrated: 8/24/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

3500 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 6.29 W/kg
Deviation(1 g) = -2.63%



0 dB = 12.3 W/kg = 10.90 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

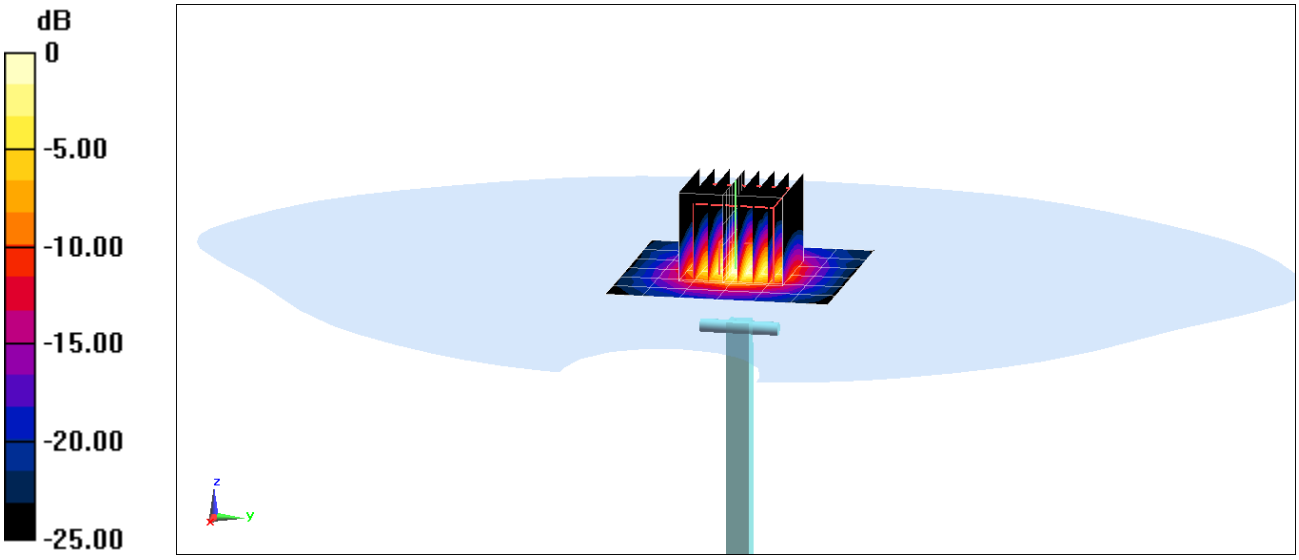
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used (interpolated):
f = 5250 MHz; σ = 4.599 S/m; ε_r = 35.598; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-08-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7409; ConvF(5.2, 5.2, 5.2) @ 5250 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 3.73 W/kg
Deviation(1 g) = -5.81%



0 dB = 9.08 W/kg = 9.58 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

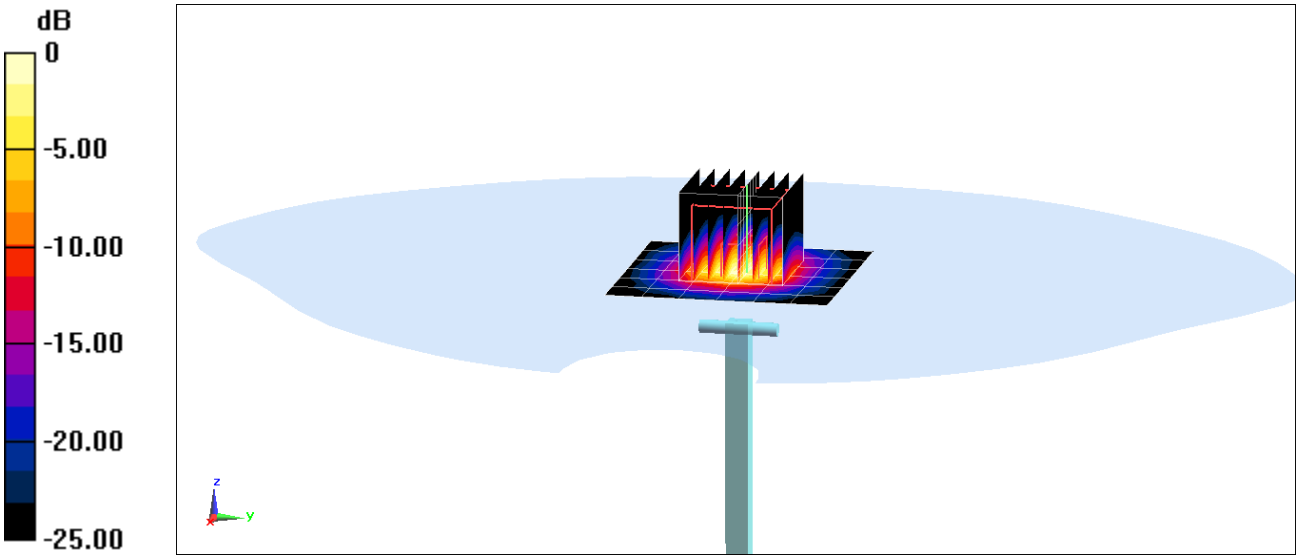
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used:
f = 5600 MHz; σ = 4.994 S/m; ε_r = 34.982; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-08-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7409; ConvF(4.77, 4.77, 4.77) @ 5600 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 4.05 W/kg
Deviation(1 g) = -3.69%



0 dB = 10.3 W/kg = 10.13 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

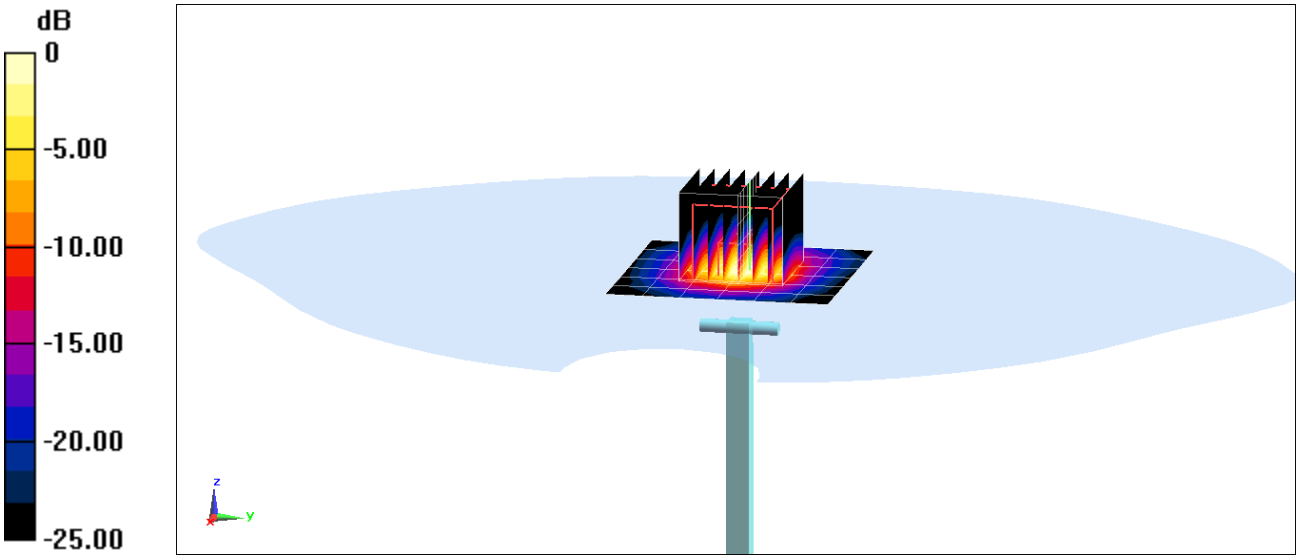
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used (interpolated):
f = 5750 MHz; σ = 5.171 S/m; ε_r = 34.716; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-08-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7409; ConvF(4.82, 4.82, 4.82) @ 5750 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 3.76 W/kg
Deviation(1 g) = -6.58%



0 dB = 9.09 W/kg = 9.59 dBW/kg

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

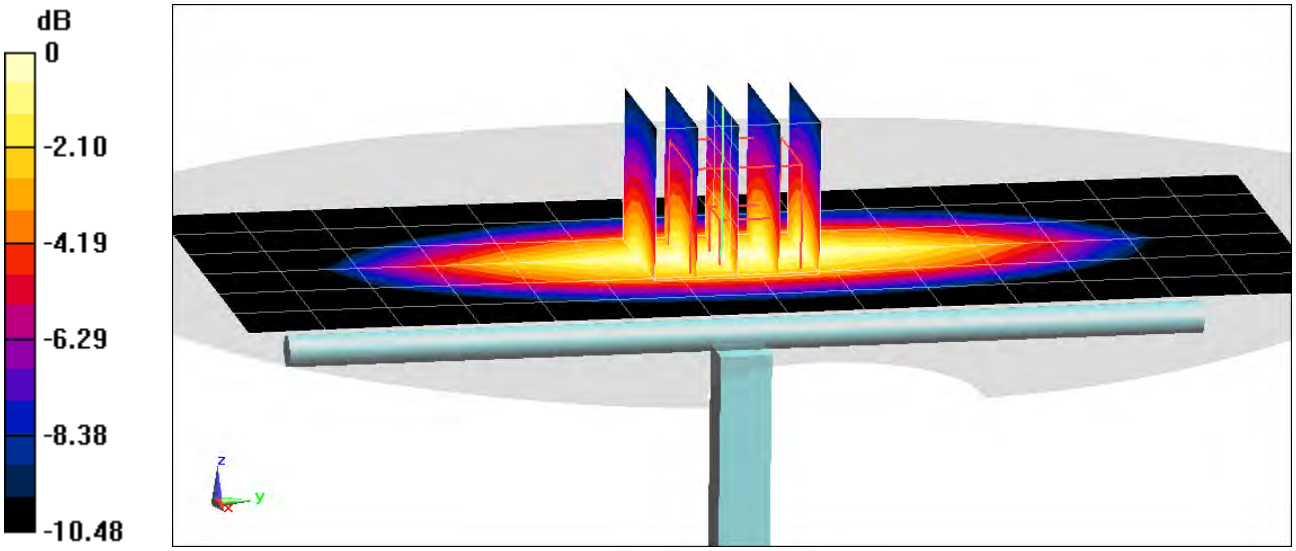
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 750 MHz; σ = 0.955 S/m; ε_r = 54.041; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date:03-14-2019; Ambient Temp: 24.2°C; Tissue Temp:20.7°C

Probe: EX3DV4 - SN7308; ConvF(10.38, 10.38, 10.38) @ 750 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

750 MHz System Verification at 23.0 dBm (200 mW)|

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.48 W/kg
SAR(1 g) = 1.63 W/kg
Deviation(1 g) = -3.32%



0 dB = 2.18 W/kg = 3.38 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

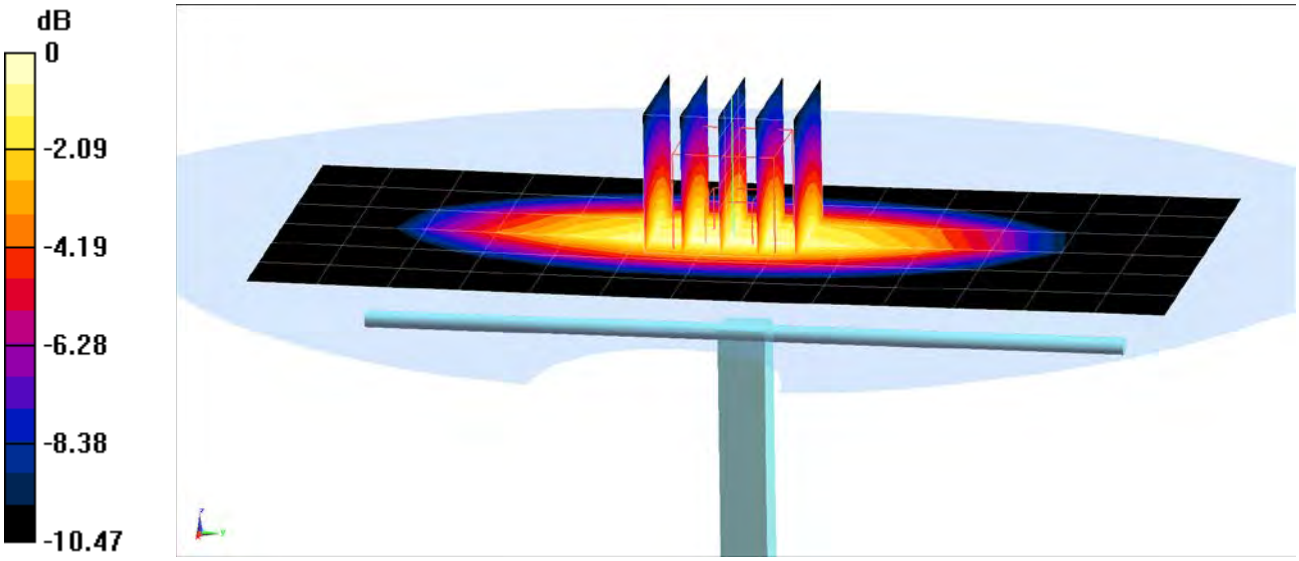
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.998 S/m; ε_r = 54.99; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 835 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.06 W/kg
SAR(1 g) = 2.03 W/kg
Deviation(1 g) = 4.10%



0 dB = 2.72 W/kg = 4.35 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

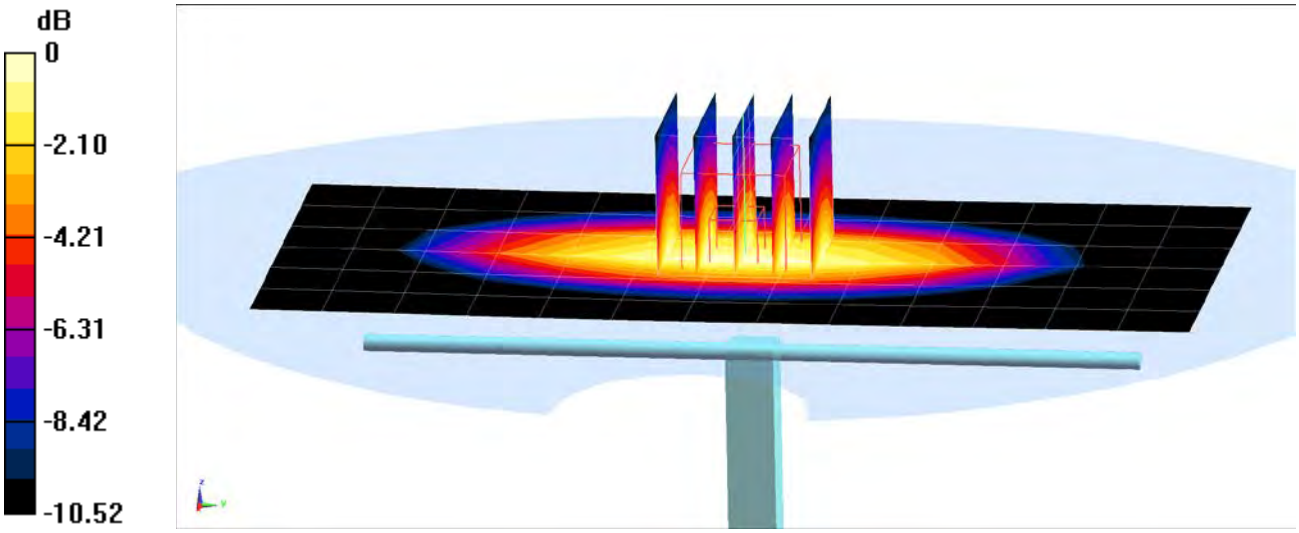
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.98 S/m; ε_r = 54.807; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-25-2019; Ambient Temp: 22.1°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7357; ConvF(10.17, 10.17, 10.17) @ 835 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.81 W/kg
SAR(1 g) = 1.88 W/kg
Deviation(1 g) = -3.59%



0 dB = 2.49 W/kg = 3.96 dBW/kg

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DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

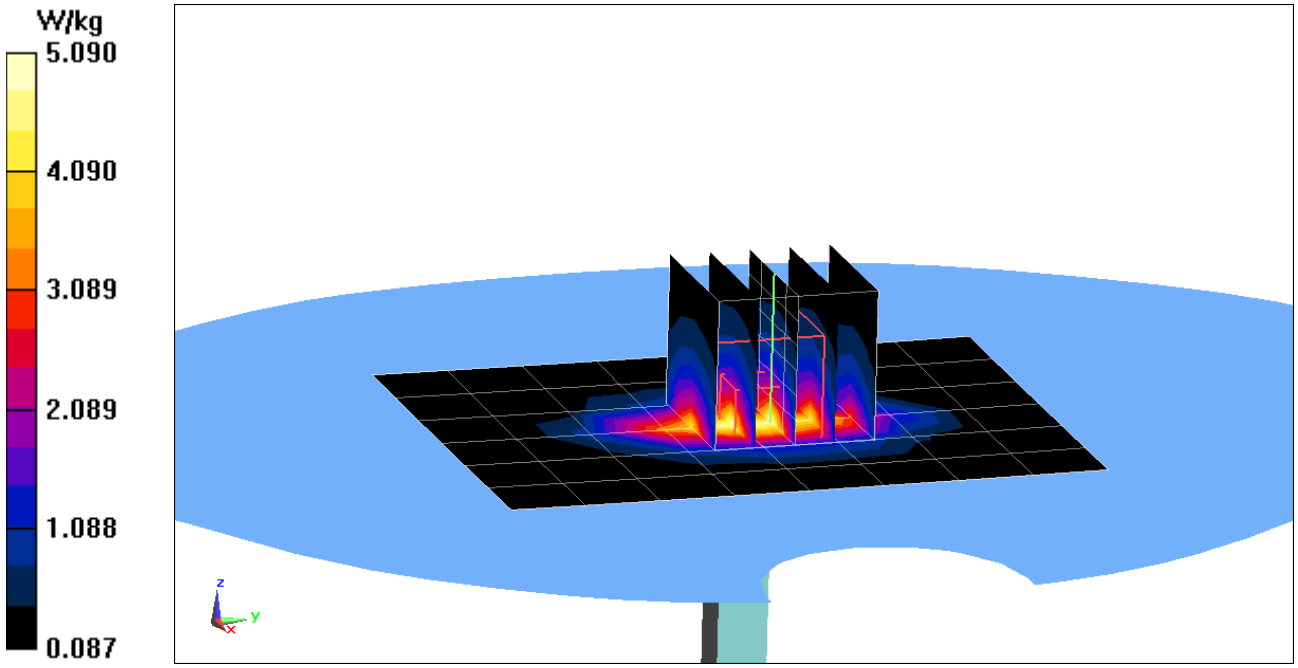
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.54 S/m; ε_r = 51.617; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1750 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.13 W/kg
SAR(1 g) = 3.39 W/kg; SAR(10 g) = 1.82 W/kg
Deviation(1 g) = -8.38%; Deviation(10 g) = -8.08%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

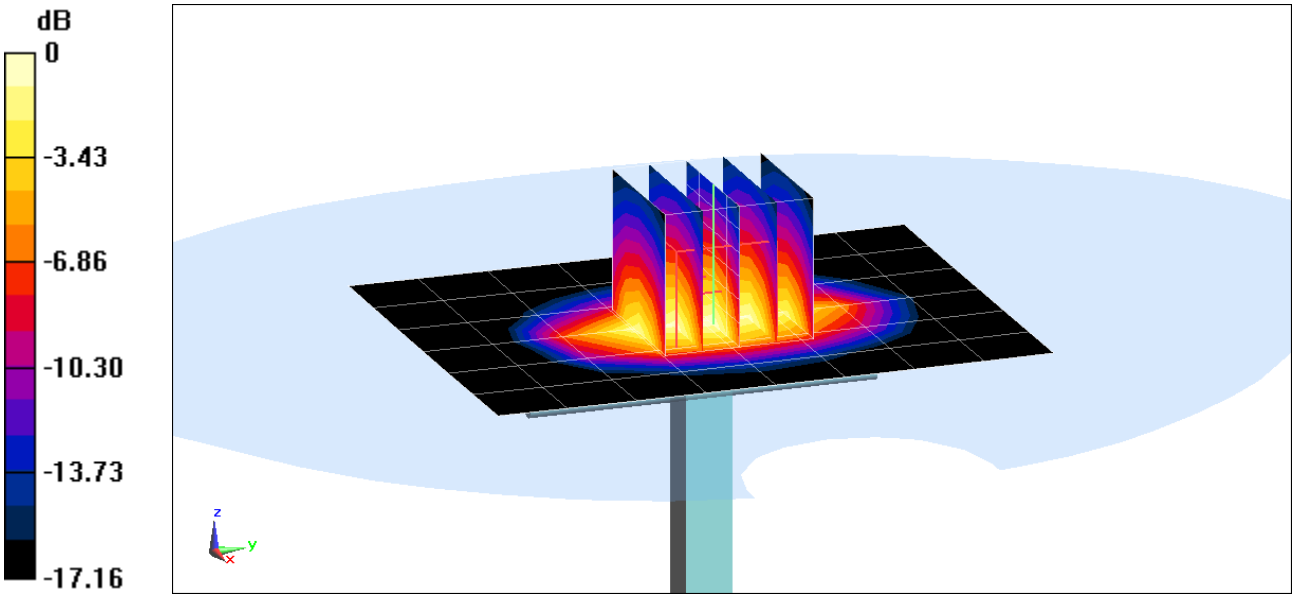
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.524 S/m; ε_r = 51.502; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-04-2019; Ambient Temp: 20.8°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN7488; ConvF(8.68, 8.68, 8.68) @ 1750 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.73 V/m; Power Drift = -0.27 dB
Peak SAR (extrapolated) = 6.64 W/kg
SAR(10 g) = 1.99 W/kg
Deviation(10 g) = 0.51%



0 dB = 5.62 W/kg = 7.50 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

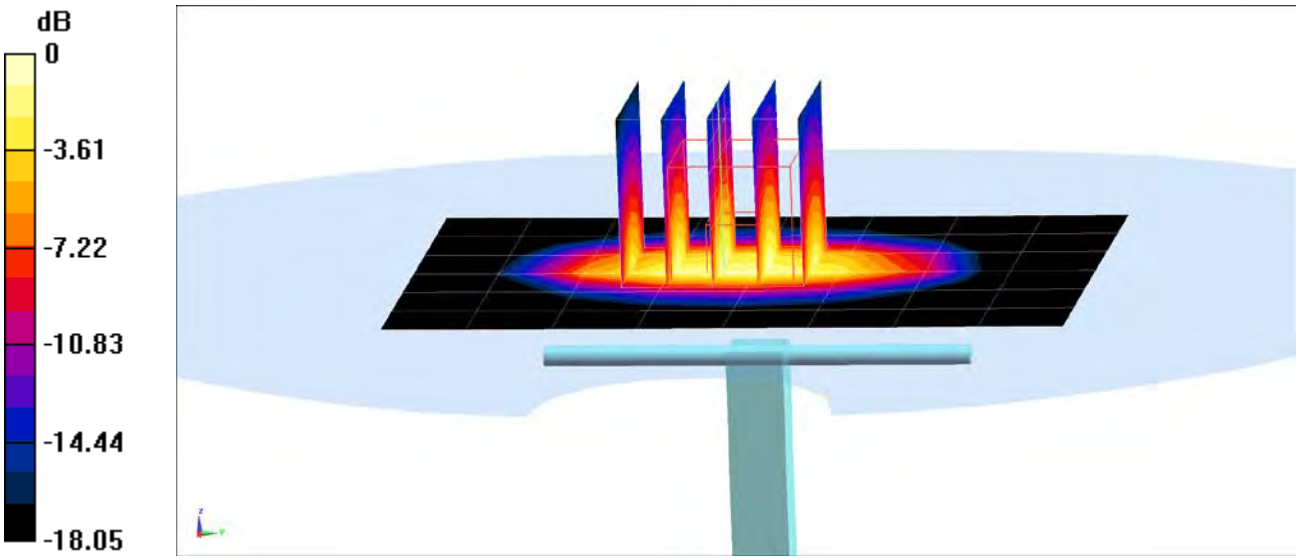
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.529 S/m; ε_r = 51.886; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-29-2019; Ambient Temp: 20.7°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3914; ConvF(7.89, 7.89, 7.89) @ 1750 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/14/2019
Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.13 W/kg
SAR(1 g) = 3.84 W/kg
Deviation(1 g) = 3.78%



0 dB = 5.93 W/kg = 7.73 dBW/kg

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DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

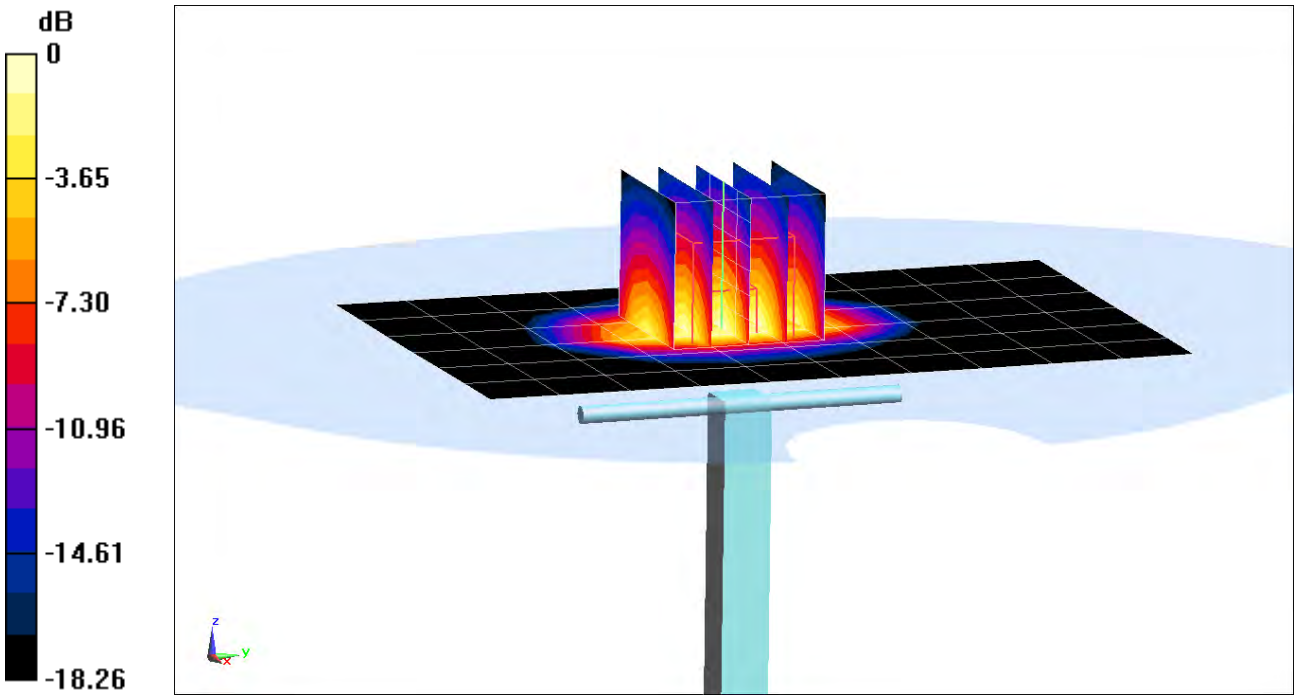
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.559 S/m; ε_r = 52.302; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-20-2019; Ambient Temp: 22.2°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.78 W/kg
SAR(1 g) = 4.2 W/kg
Deviation(1 g) = 7.14%



0 dB = 6.54 W/kg = 8.16 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

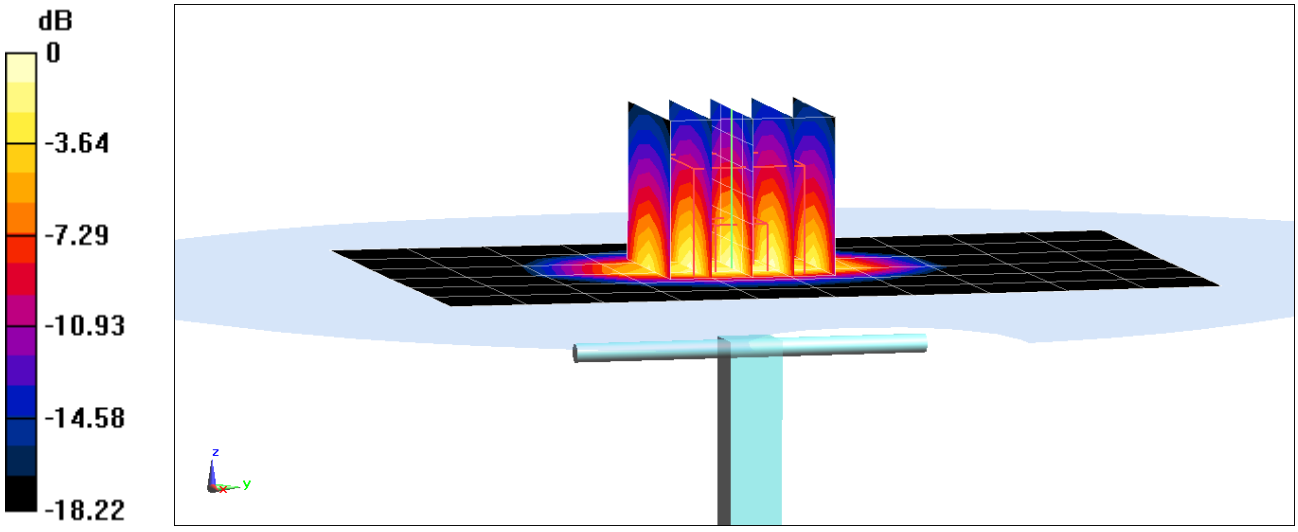
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.572 S/m; ε_r = 52.718; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-25-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.57 W/kg
SAR(1 g) = 4.17 W/kg
Deviation(1 g) = 6.38%



0 dB = 6.45 W/kg = 8.10 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

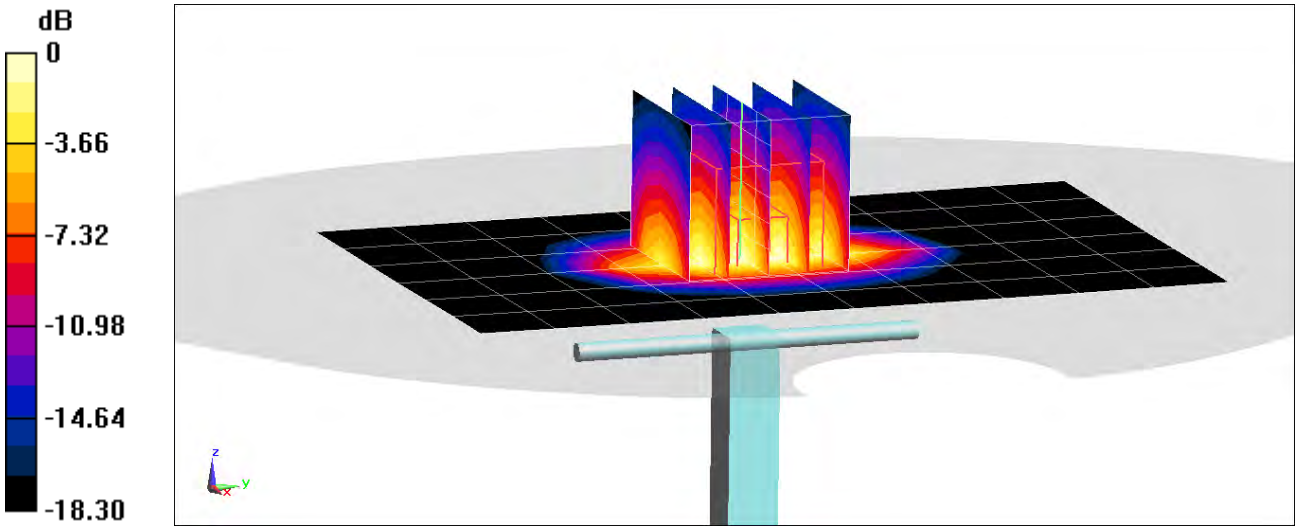
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.574 S/m; ε_r = 51.98; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-27-2019; Ambient Temp: 22.4°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.76 W/kg
SAR(1 g) = 4.22 W/kg; SAR(10 g) = 2.18 W/kg
Deviation(1 g) = 7.65%; Deviation(10 g) = 5.83%



0 dB = 6.52 W/kg = 8.14 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

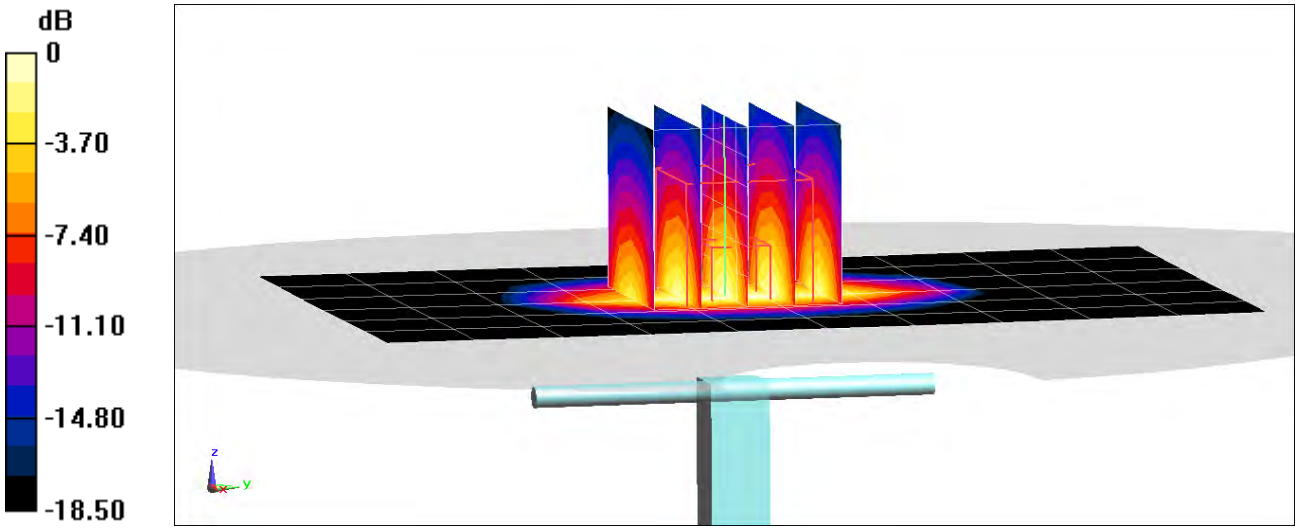
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.573 S/m; ε_r = 51.511; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.62 W/kg
SAR(10 g) = 2.14 W/kg
Deviation(10 g) = 3.88%



0 dB = 6.42 W/kg = 8.08 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

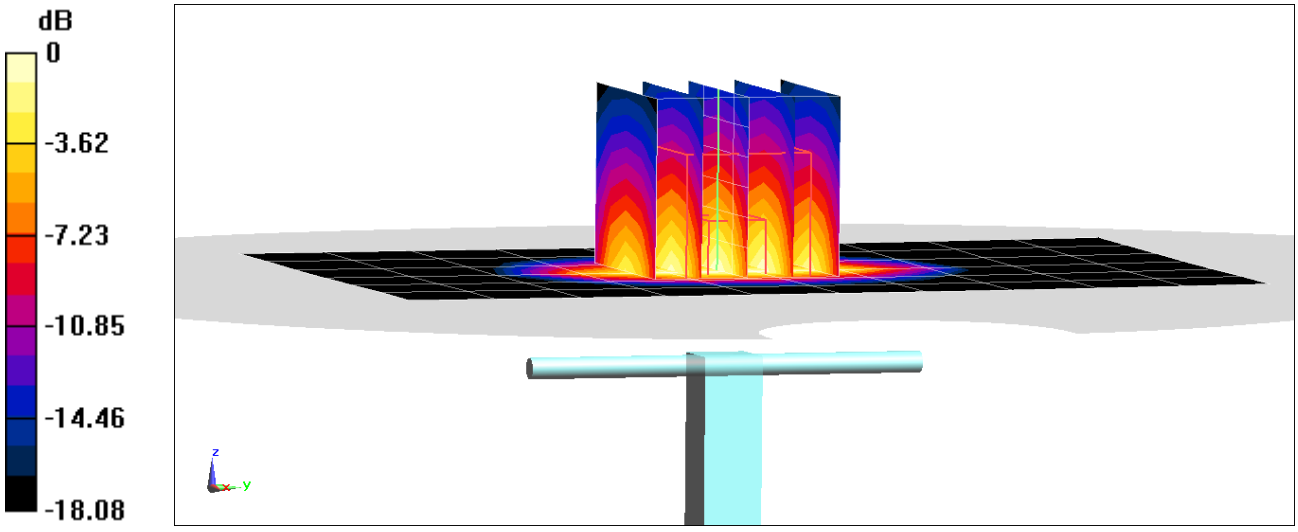
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.569 S/m; ε_r = 52.137; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-03-2019; Ambient Temp: 22.2°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.67 W/kg
SAR(10 g) = 2.18 W/kg
Deviation(10 g) = 5.83%



0 dB = 6.49 W/kg = 8.12 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

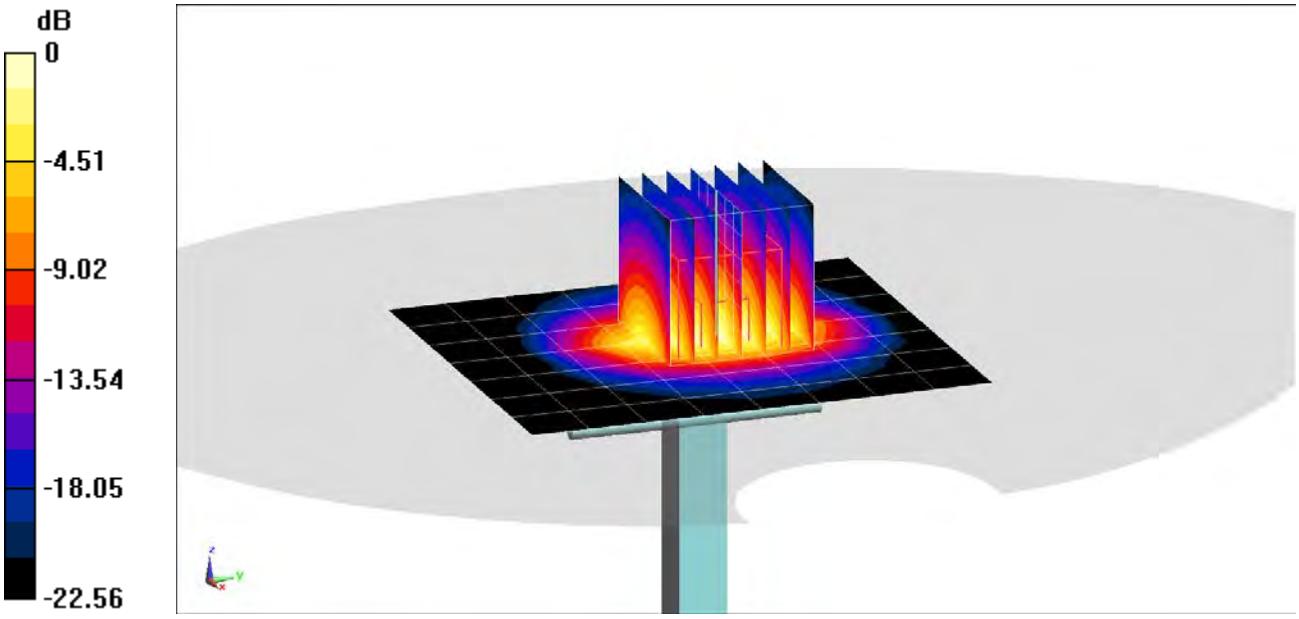
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2450 MHz; σ = 2.031 S/m; ε_r = 51.366; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2450 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 5.17 W/kg
Deviation(1 g) = 3.19%



0 dB = 8.73 W/kg = 9.41 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

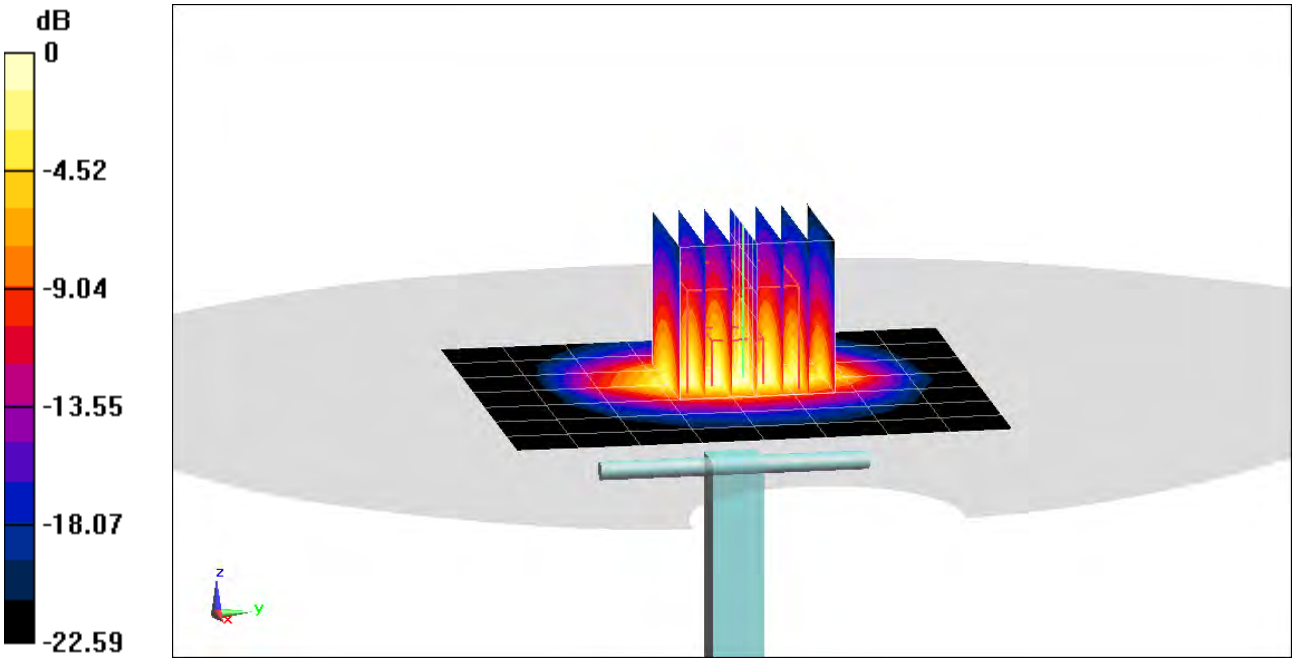
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.043 S/m; ε_r = 50.575; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-03-2019; Ambient Temp: 24.4°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2450 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 5.16 W/kg
Deviation(1 g) = 1.38%



0 dB = 8.64 W/kg = 9.37 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

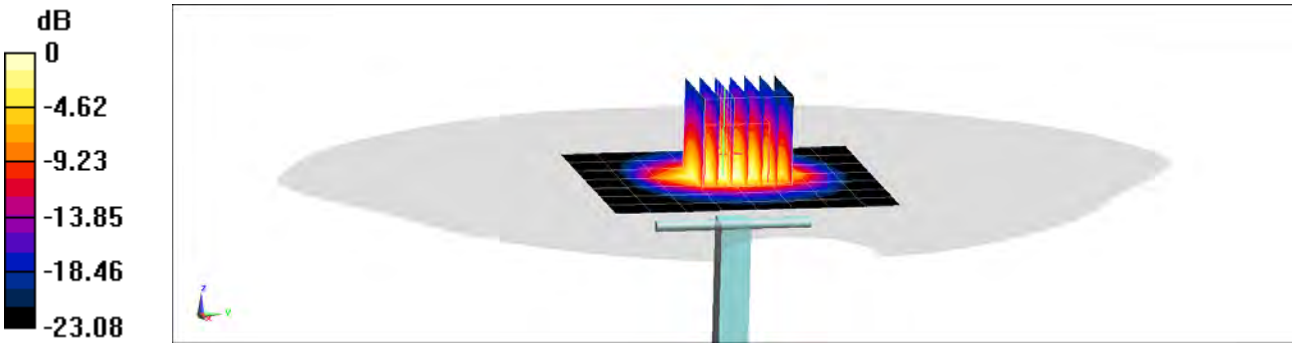
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2450 MHz; σ = 2.043 S/m; ε_r = 51.006; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2450 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.25 W/kg
Deviation(1 g) = 2.74%



0 dB = 8.80 W/kg = 9.44 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

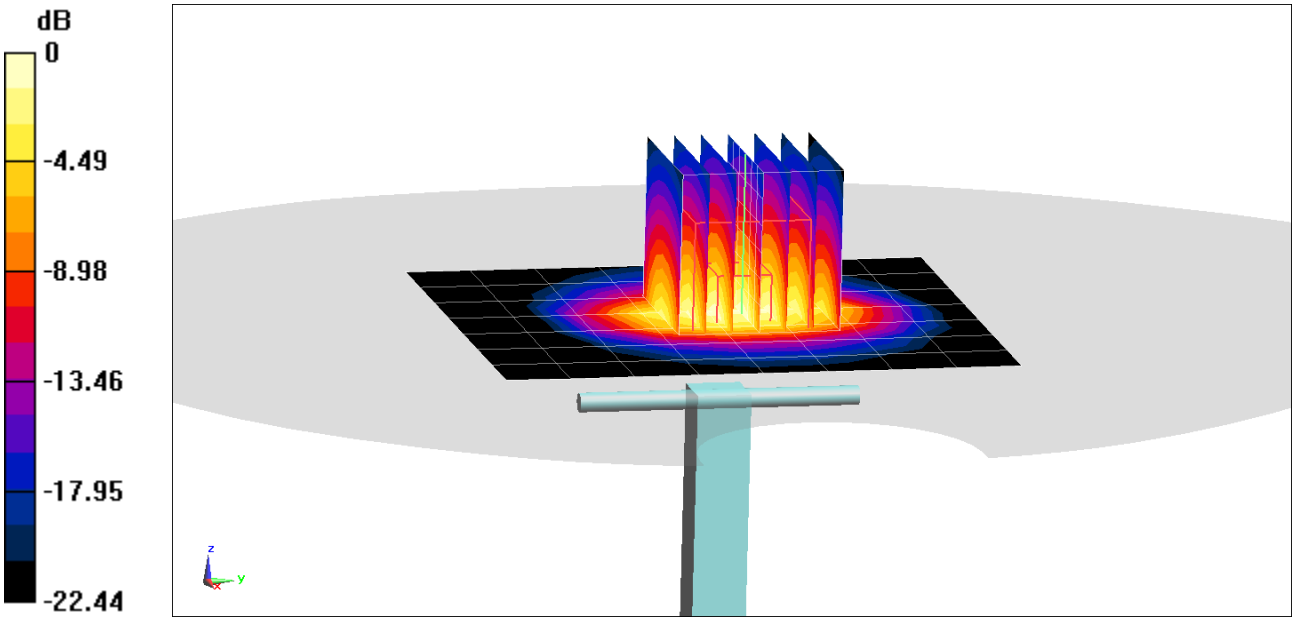
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2450 MHz; σ = 2.04 S/m; ε_r = 52.022; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-08-2019; Ambient Temp: 23.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2450 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.4 W/kg
SAR(10 g) = 2.32 W/kg
Deviation(10 g) = -4.13%



0 dB = 8.46 W/kg = 9.27 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

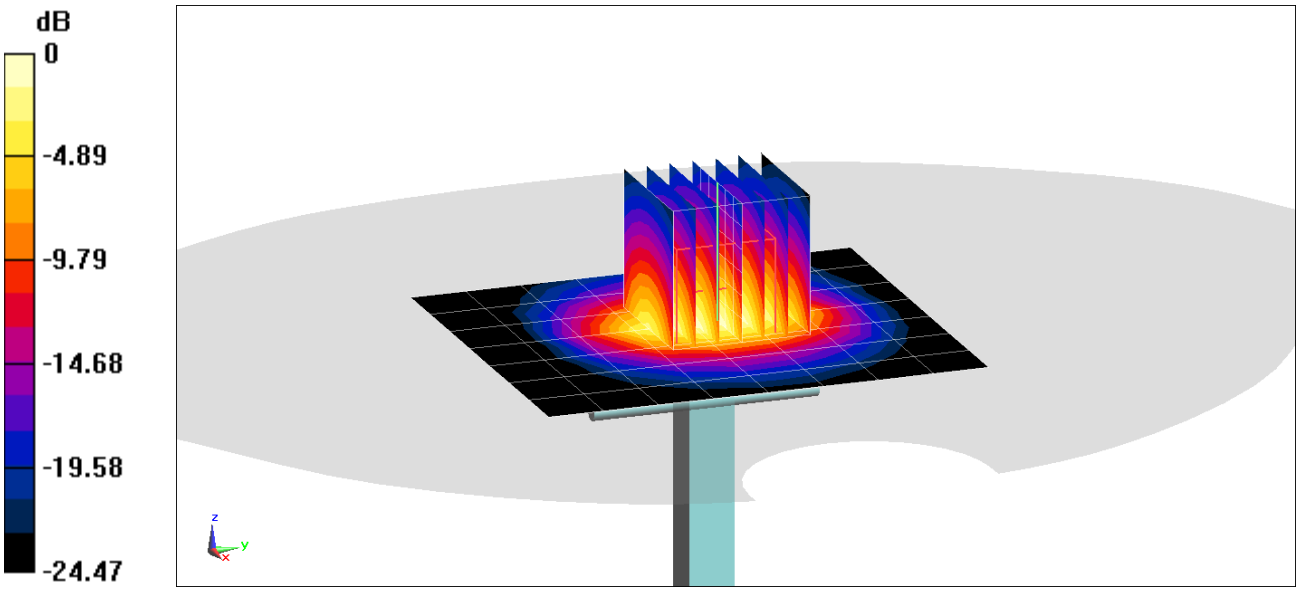
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2600 MHz; σ = 2.205 S/m; ε_r = 50.931; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-13-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2600 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.8 W/kg
SAR(1 g) = 5.43 W/kg
Deviation(1 g) = -0.91%



0 dB = 9.35 W/kg = 9.71 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1071

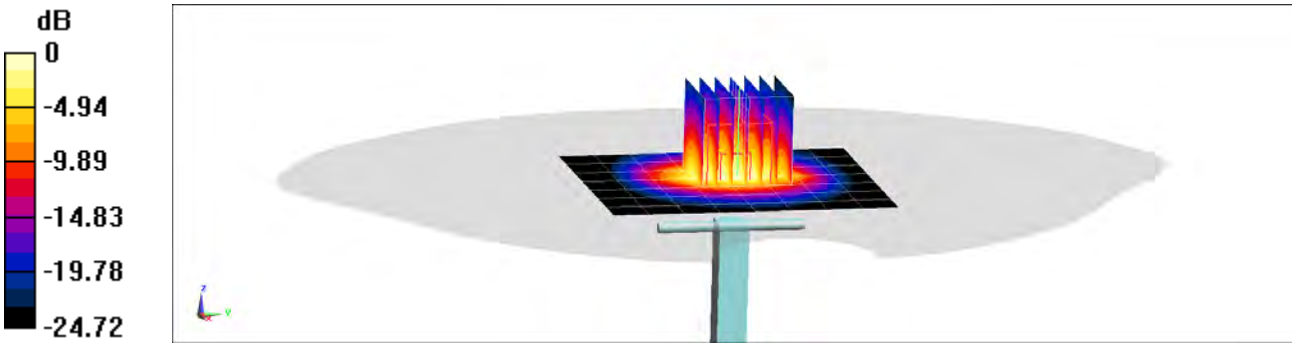
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2600 MHz; σ = 2.225 S/m; ε_r = 50.567; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-05-2019; Ambient Temp: 22.7°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2600 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.6 W/kg
SAR(1 g) = 5.65 W/kg
Deviation(1 g) = 4.24%



0 dB = 9.77 W/kg = 9.90 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1126

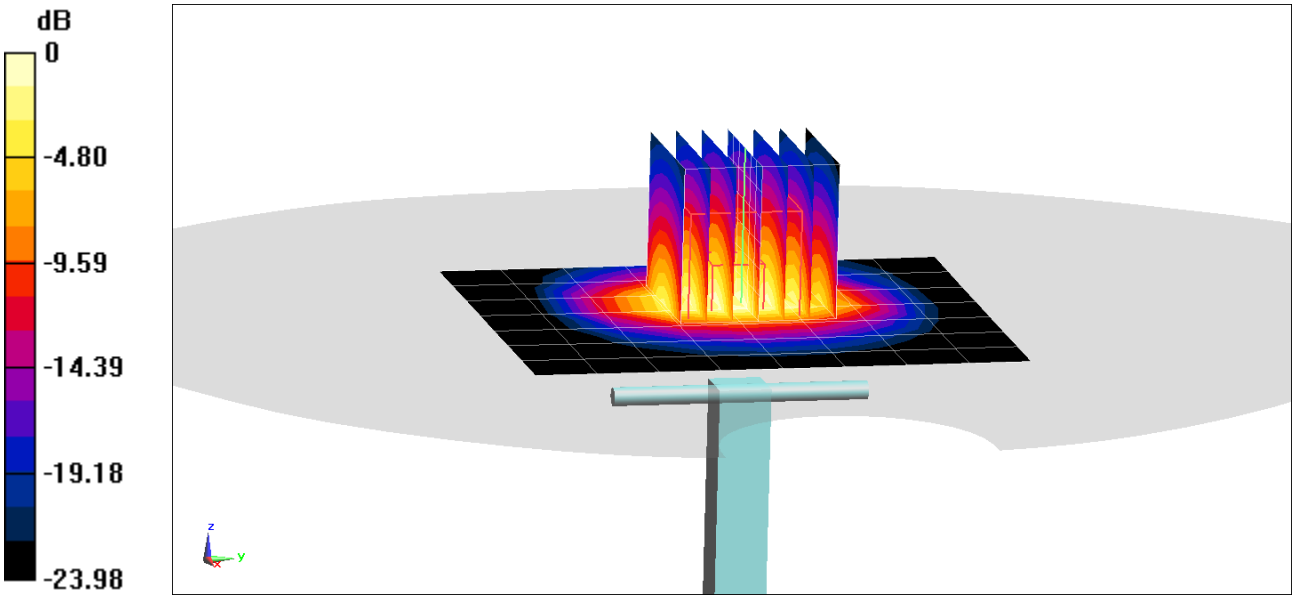
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2600 MHz; σ = 2.221 S/m; ε_r = 51.594; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-08-2019; Ambient Temp: 23.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2600 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.6 W/kg
SAR(10 g) = 2.36 W/kg
Deviation(10 g) = -3.28%



0 dB = 9.24 W/kg = 9.66 dBW/kg

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DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1071

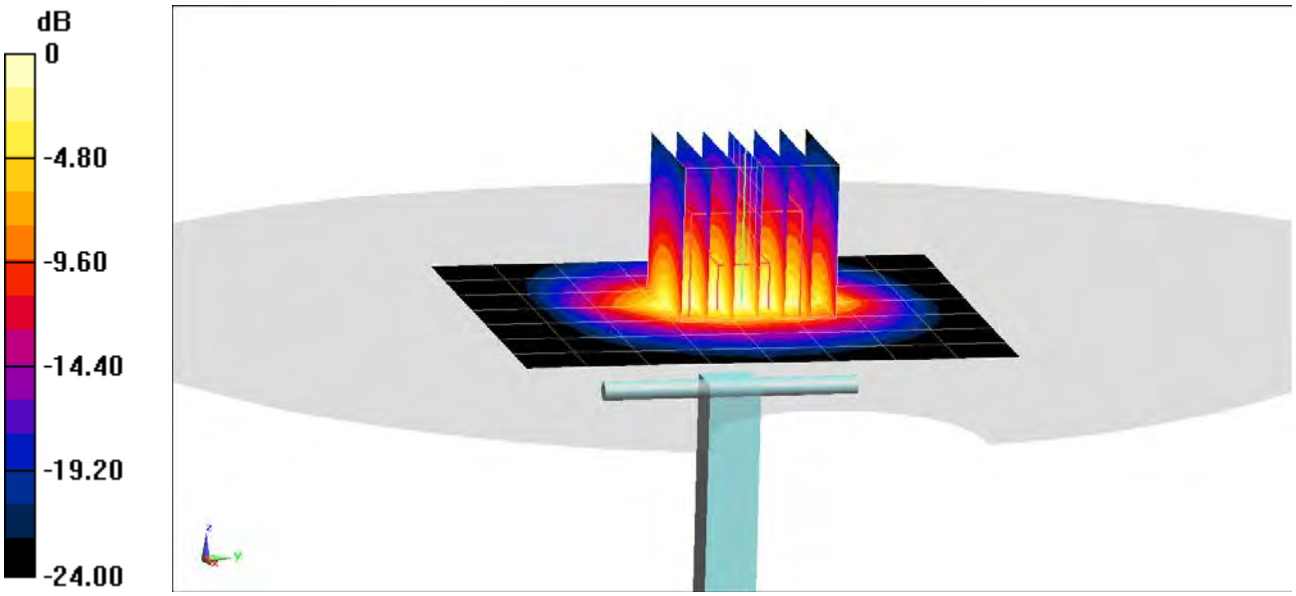
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2600 MHz; σ = 2.225 S/m; ε_r = 50.654; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-29-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7417; ConvF(7.37, 7.37, 7.37) @ 2600 MHz; Calibrated: 2/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 2/13/2019
Phantom: Right Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1797
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.5 W/kg
SAR(1 g) = 5.29 W/kg
Deviation(1 g) = -2.40%



0 dB = 9.14 W/kg = 9.61 dBW/kg

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1055

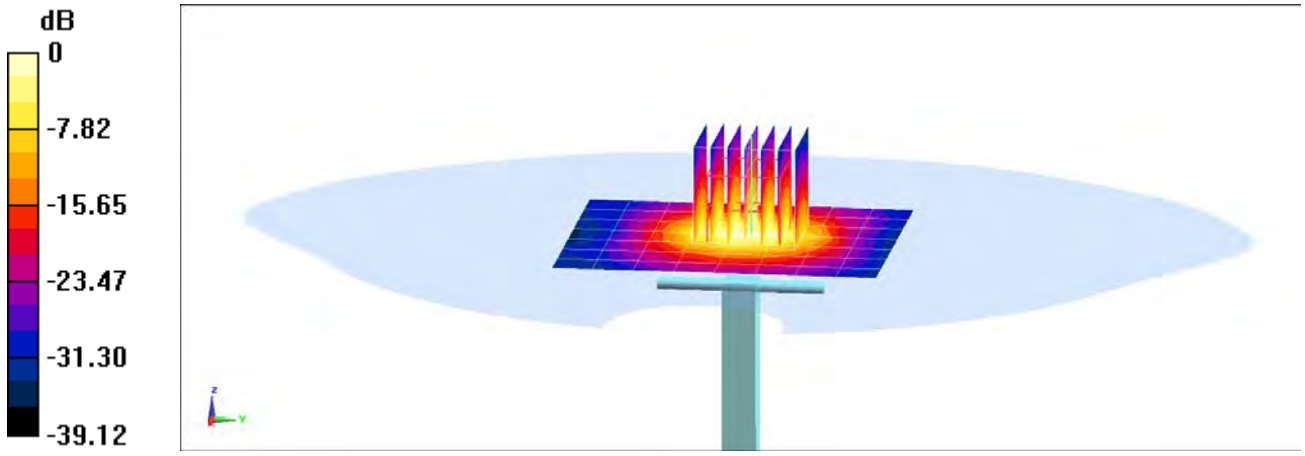
Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: 3500-3700 Body Medium parameters used:
f = 3500 MHz; σ = 3.4 S/m; ε_r = 49.725; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.21, 6.21, 6.21) @ 3500 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

3500 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.9 W/kg
SAR(1 g) = 6.15 W/kg; SAR(10 g) = 2.27 W/kg
Deviation(1 g) = -4.80%; Deviation(10 g) = -5.81%



0 dB = 12.5 W/kg = 10.97 dBW/kg

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1002

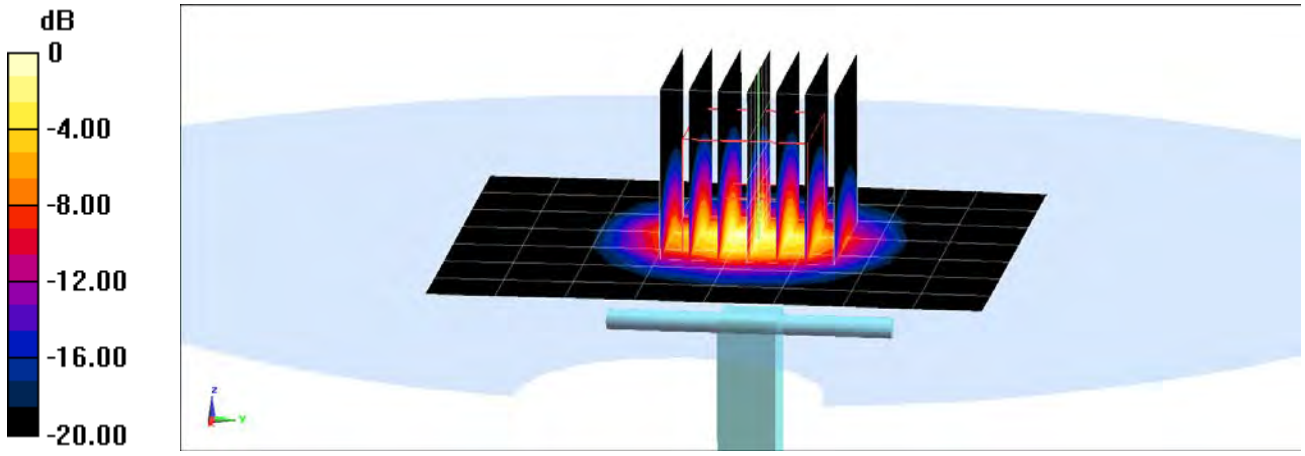
Communication System: UID 0, CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium: 3500-3700 Body Medium parameters used (interpolated):
f = 3700 MHz; σ = 3.611 S/m; ε_r = 49.411; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04-01-2019; Ambient Temp: 24.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.13, 6.13, 6.13) @ 3700 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

3700 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 20.1 W/kg
SAR(1 g) = 6.31 W/kg; SAR(10 g) = 2.24 W/kg
Deviation(1 g) = -2.92%; Deviation(10 g) = -3.03%



0 dB = 13.2 W/kg = 11.21 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

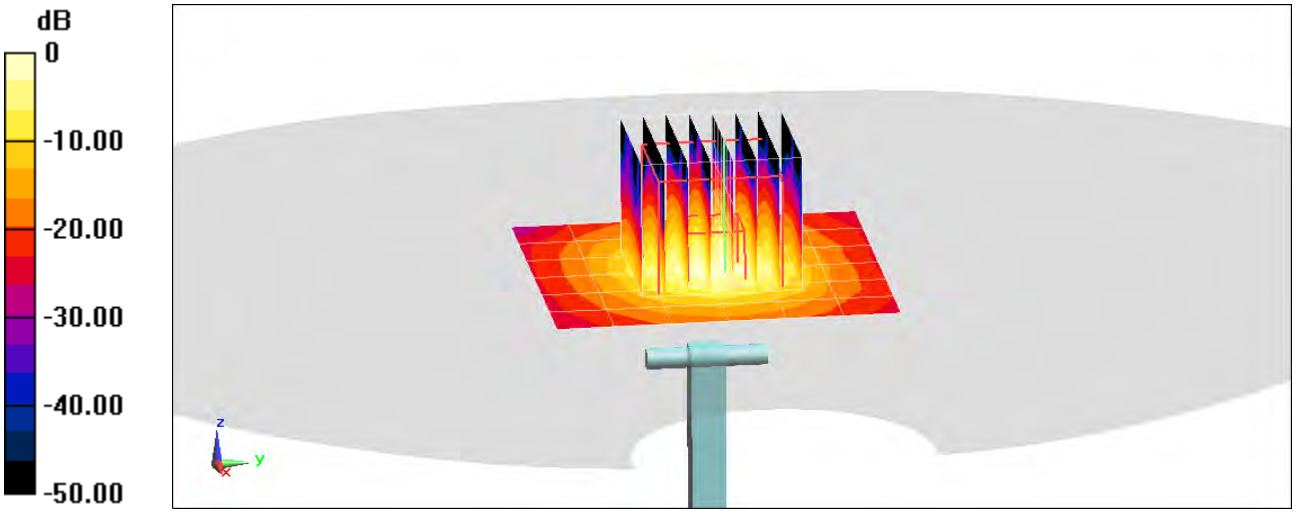
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5GHz Body Medium parameters used (interpolated):
f = 5250 MHz; σ = 5.436 S/m; ε_r = 48.939; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-18-2019; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN7308; ConvF(4.48, 4.48, 4.48) @ 5250 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 14.8 W/kg
SAR(1 g) = 3.6 W/kg; SAR(10 g) = 1.000 W/kg
Deviation(1 g) = -6.49%; Deviation(10 g) = -7.41%



0 dB = 8.54 W/kg = 9.31 dBW/kg