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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:
05/30/18 - 06/20/18
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1806010117-01-R1.A3L

FCC ID: **A3LSMN960U**

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

DUT Type:	Portable Handset
Application Type:	Class II Permissive Change
FCC Rule Part(s):	CFR §2.1093
Model:	SM-N960U
Additional Model(s):	SM-N960U1, SM-N960W, SM-N960XU
Permissive Change(s):	See FCC Change Document

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.27	0.40	0.79	N/A
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.33	0.46	1.06	N/A
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.20	0.30	0.81	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.28	0.47	0.96	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.14	0.68	0.77	3.23
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.15	0.85	1.34	3.27
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.34	0.52	1.70
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.16	0.83	1.31	2.77
PCE	LTE Band 71	665.5 - 695.5 MHz	0.14	0.34	0.50	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.18	0.38	0.64	N/A
PCE	LTE Band 17	706.5 - 713.5 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.28	0.49	0.78	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.21	0.41	0.67	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.25	0.41	0.86	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.28	0.45	1.00	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.13	0.73	0.80	3.25
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.17	0.79	0.96	2.81
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	< 0.1	0.46	0.90	1.86
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.18	0.80	1.39	3.25
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.16	1.03	1.36	3.25
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
DTS	2.4 GHz WLAN	2412 - 2462 MHz	1.29	0.12	0.40	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.20	0.43	N/A	1.84
NII	U-NII-2C	5500 - 5720 MHz	0.27	0.26	N/A	1.26
NII	U-NII-3	5745 - 5825 MHz	0.27	0.27	0.46	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.89	< 0.1	0.14	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.59	1.58	3.79

Note: This revised Test Report (S/N: 1M1806010117-01-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
CDMA/EVDO BC10 (§90S)	Voice/Data	817.90 - 823.10 MHz
CDMA/EVDO BC0 (§22H)	Voice/Data	824.70 - 848.31 MHz
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
PCS CDMA/EVDO	Voice/Data	1851.25 - 1908.75 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 17	Voice/Data	706.5 - 713.5 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 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

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 and under some conditions when the device is being used in close proximity to the user's hand. 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. 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 during 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 PCE 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	**33.5**	**33.5**	**31.5**	**29.5**	**28.5**	**28.0**	**26.0**	**24.0**	**23.0**
	Nominal	**32.5**	**32.5**	**30.5**	**28.5**	**27.5**	**27.0**	**25.0**	**23.0**	**22.0**
GSM/GPRS/EDGE 1900	Maximum	**31.0**	**31.0**	**28.5**	**26.5**	**25.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**30.0**	**30.0**	**27.5**	**25.5**	**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	**25.5**	**24.5**	**24.5**	**24.5**
	Nominal	**24.5**	**23.5**	**23.5**	**23.5**
UMTS Band 2 (1900 MHz)	Maximum	**25.2**	**24.2**	**24.2**	**24.2**
	Nominal	**24.2**	**23.2**	**23.2**	**23.2**

Mode / Band		Modulated Average (dBm)
CDMA/EVDO BC10 (§90S)	Maximum	**26.0**
	Nominal	**25.0**
CDMA/EVDO BC0 (§22H)	Maximum	**26.0**
	Nominal	**25.0**
PCS CDMA/EVDO	Maximum	**25.0**
	Nominal	**24.0**

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Mode / Band		Modulated Average (dBm)
LTE Band 71	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 12	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 17	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 13	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 14	Maximum	**25.5**
	Nominal	**24.5**
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	**25.5**
	Nominal	**24.5**
LTE Band 4 (AWS)	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 25 (PCS)	Maximum	**25.2**
	Nominal	**24.2**
LTE Band 2 (PCS)	Maximum	**25.2**
	Nominal	**24.2**
LTE Band 30	Maximum	**23.5**
	Nominal	**22.5**
LTE Band 7	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 38	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 41 (PC3)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 41 (PC2)	Maximum	**28.2**
	Nominal	**27.2**

1.3.1 Reduced PCE Output Power- Hotspot Mode Activated

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	**27.5**	**25.8**	**23.8**	**22.0**	**26.0**	**25.0**	**23.0**	**21.5**
	Nominal	**26.5**	**24.8**	**22.8**	**21.0**	**25.0**	**24.0**	**22.0**	**20.5**

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Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**20.5**	**20.5**	**20.5**	**20.5**
	Nominal	**19.5**	**19.5**	**19.5**	**19.5**
UMTS Band 2 (1900 MHz)	Maximum	**20.5**	**20.5**	**20.5**	**20.5**
	Nominal	**19.5**	**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	**20.5**
	Nominal	**19.5**
LTE Band 2 (PCS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 30	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 7	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 38	Maximum	**22.5**
	Nominal	**21.5**
LTE Band 41 (PC3)	Maximum	**22.5**
	Nominal	**21.5**
LTE Band 41 (PC2)	Maximum	**22.5**
	Nominal	**21.5**

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1.3.1 Reduced PCE Output Power- Grip Sensor Activated

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	**27.5**	**27.5**	**25.8**	**23.8**	**22.5**	**26.0**	**25.0**	**23.0**	**21.5**
	Nominal	**26.5**	**26.5**	**24.8**	**22.8**	**21.5**	**25.0**	**24.0**	**22.0**	**20.5**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**22.0**	**22.0**	**22.0**	**22.0**
	Nominal	**21.0**	**21.0**	**21.0**	**21.0**
UMTS Band 2 (1900 MHz)	Maximum	**20.5**	**20.5**	**20.5**	**20.5**
	Nominal	**19.5**	**19.5**	**19.5**	**19.5**

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

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Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 4 (AWS)	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 25 (PCS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 2 (PCS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 30	Maximum	**22.5**
	Nominal	**21.5**
LTE Band 7	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 41 (PC3)	Maximum	**24.0**
	Nominal	**23.0**
LTE Band 41 (PC2)	Maximum	**24.0**
	Nominal	**23.0**

1.3.1 Maximum Bluetooth and SISO/MIMO WLAN Output Power

Mode / Band		Modulated Average - Single Tx Chain (dBm)	
		Ch. 1, 11	Ch. 2-10
IEEE 802.11b (2.4 GHz)	Maximum	**21.0**	
	Nominal	**20.0**	
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**	**18.0**
	Nominal	**16.0**	**17.0**
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**	**18.0**
	Nominal	**16.0**	**17.0**

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Mode / Band		Modulated Average - SISO (dBm)						
		20 MHz Bandwidth		40 MHz Bandwidth			80 MHz Bandwidth	
		Ch. 36-64	Ch. 100-165	Ch. 38	Ch. 62	Ch. 46-54, 102-159	Ch. 42-106	Ch. 122-155
IEEE 802.11a (5 GHz)	Maximum	**18.0**	**17.5**					
	Nominal	**17.0**	**16.5**					
IEEE 802.11n (5 GHz)	Maximum	**18.0**	**17.5**	**16.0**	**15.0**	**17.0**		
	Nominal	**17.0**	**16.5**	**15.0**	**14.0**	**16.0**		
IEEE 802.11ac (5 GHz)	Maximum	**18.0**	**17.5**	**16.0**	**15.0**	**17.0**	**15.0**	**16.0**
	Nominal	**17.0**	**16.5**	**15.0**	**14.0**	**16.0**	**14.0**	**15.0**

Mode / Band		Modulated Average - MIMO (dBm)	
		20 MHz Bandwidth	
		Ch. 1, 11	Ch. 2- 10
IEEE 802.11g (2.4 GHz)	Maximum	**20.0**	**21.0**
	Nominal	**19.0**	**20.0**
IEEE 802.11n (2.4 GHz)	Maximum	**20.0**	**21.0**
	Nominal	**19.0**	**20.0**

Mode / Band		Modulated Average - MIMO (dBm)						
		20 MHz Bandwidth		40 MHz Bandwidth			80 MHz Bandwidth	
		Ch. 36-64	Ch. 100-165	Ch. 38	Ch. 62	Ch. 46-54, 102-159	Ch. 42-106	Ch. 122-155
IEEE 802.11a (5 GHz)	Maximum	**21.0**	**20.5**					
	Nominal	**20.0**	**19.5**					
IEEE 802.11n (5 GHz)	Maximum	**21.0**	**20.5**	**19.0**	**18.0**	**20.0**		
	Nominal	**20.0**	**19.5**	**18.0**	**17.0**	**19.0**		
IEEE 802.11ac (5 GHz)	Maximum	**21.0**	**20.5**	**19.0**	**18.0**	**20.0**	**18.0**	**19.0**
	Nominal	**20.0**	**19.5**	**18.0**	**17.0**	**19.0**	**17.0**	**18.0**

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Mode / Band		Modulated Average - Single Tx Chain (dBm)
Bluetooth (1 Mbps)	Maximum	**16.5**
	Nominal	**15.5**
Bluetooth (EDR)	Maximum	**11.0**
	Nominal	**10.0**
Bluetooth LE	Maximum	**10.0**
	Nominal	**9.0**

1.3.2 Reduced SISO and MIMO WLAN Output Power

Mode / Band		Modulated Average - Single Tx Chain (dBm)
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**

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
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**	**14.0**
	Nominal	**13.0**	**13.0**	**13.0**

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Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
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 802.11a (5 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (5 GHz)	Maximum	**17.0**	**17.0**	
	Nominal	**16.0**	**16.0**	
IEEE 802.11ac (5 GHz)	Maximum	**17.0**	**17.0**	**17.0**
	Nominal	**16.0**	**16.0**	**16.0**

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

	# Tx	5 GHz WIFI [dBm]		2.4 GHz WIFI [dBm]		802.11 Modes
		Ant1	Ant2	Ant1	Ant2	
2.4 GHz + 5 GHz	2	A	-	-	B	2.4 GHz: b,g,n 5 GHz: a,n,ac
	2	-	A	B	-	
	2	A	-	B	-	
	2	-	A	-	B	
	3	A	A	B	-	2.4 GHz: b, g, n 5 GHz: n, ac, a (CDD + STBC only)
	3	A	A	-	B	
	3	A	-	B	B	2.4 GHz: n, g (CDD + STBC only) 5 GHz: a, n, ac
	3	-	A	B	B	
	4	A	A	B	B	2.4 GHz: n, g (CDD + STBC only) 5 GHz: n, ac, a (CDD + STBC only)

A = 13 dBm
B = 16 dBm
(Upper tolerance: target + 1.0 dB)

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

	# Tx	5 GHz WIFI [dBm]		2.4 GHz WIFI [dBm]		802.11 Modes
		Ant1	Ant2	Ant1	Ant2	
2.4 GHz + 5 GHz	2	A	-	-	B	2.4 GHz: b,g,n 5 GHz: a,n,ac
	2	-	A	B	-	
	2	A	-	B	-	
	2	-	A	-	B	
	3	A	A	B	-	2.4 GHz: b, g, n 5 GHz: n, ac, a (CDD + STBC only)
	3	A	A	-	B	
	3	A	-	B	B	2.4 GHz: n, g (CDD + STBC only) 5 GHz: a, n, ac
	3	-	A	B	B	
	4	A	A	B	B	2.4 GHz: n, g (CDD + STBC only) 5 GHz: n, ac, a (CDD + STBC only)

A = 12 dBm
B = 13 dBm
(Upper tolerance: target + 1.0 dB)

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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
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
EVDO BC10 (§90S)	Yes	Yes	No	Yes	Yes	Yes
EVDO BC0 (§22H)	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	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 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30 Ant A	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30 Ant B	Yes	Yes	No	Yes	No	Yes
LTE Band 7 Ant A	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7 Ant B	Yes	Yes	No	Yes	No	Yes
LTE Band 41	Yes	Yes	No	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
Bluetooth	Yes	Yes	Yes	No	No	Yes

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

1.5 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.

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1.6 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be transmitting 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 WI-FI MIMO	Yes	Yes	N/A	Yes	
5	1x CDMA voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
6	1x CDMA voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
7	1x CDMA voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
8	GSM voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	
9	GSM voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
10	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
11	GSM voice + 2.4 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
12	GSM voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
13	GSM voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
14	GSM voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	
15	UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
16	UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
17	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
18	UMTS + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
19	UMTS + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
20	UMTS + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
21	UMTS + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
22	LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
23	LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
24	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
25	LTE + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
26	LTE + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
27	LTE + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
28	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	
29	CDMA/EVDO data + 2.4 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
30	CDMA/EVDO data + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
31	CDMA/EVDO data + 2.4 GHz Bluetooth	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
32	CDMA/EVDO data + 2.4 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
33	CDMA/EVDO data + 5 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
34	CDMA/EVDO data + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
35	CDMA/EVDO data + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
36	GPRS/EDGE + 2.4 GHz WI-FI	N/A	N/A	Yes	Yes	
37	GPRS/EDGE + 5 GHz WI-FI	N/A	N/A	Yes	Yes	
38	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
39	GPRS/EDGE + 2.4 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	
40	GPRS/EDGE + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	
41	GPRS/EDGE + 2.4 GHz WI-FI + 5 GHz WI-FI	N/A	N/A	Yes	Yes	
42	GPRS/EDGE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	

1. Bluetooth cannot transmit simultaneously with WLAN.
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.

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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 802.11n/ac. 802.11a/g/n/ac supports CDD and STBC and 802.11n/ac 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.

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 802.11ac with the following features:
a) Up to 80 MHz Bandwidth only
b) No aggregate channel configurations
c) 2 Tx antenna output
d) 256 QAM is supported
e) TDWR and Band gap channels are 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. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

(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.

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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 downlink only LTE CA operations was not needed since the maximum average output power in downlink only LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive. Appendix H contains downlink carrier aggregation power measurements for bands impacted by this permissive change, per FCC guidance.

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

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

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive.

This device supports 64QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225 D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64 QAM is ≤ ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05.

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 uses antenna B for LTE Band 7 and LTE Band 30 standalone operations. During some inter-band downlink carrier aggregation scenarios with Band 7 or Band 30 as the PCC, the transmit operations for these bands are switched to Antenna A. Both antennas were completely evaluated for SAR following FCC KDB procedures for all test positions and exposure conditions for LTE Band 7 and 30. Per FCC Guidance, the device was connected in a radiated downlink carrier aggregation scenario for evaluations of Antenna A. The operational description contains more information about this switching mechanism.

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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)
- Fall 2017 TCB Workshop Notes (ULCA Evaluations)

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 INFORMATION

LTE Information					
FCC ID	**A3LSMN960U**				
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 17 (706.5 - 713.5 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 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 17: 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 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 17: 5 MHz	706.5 (23755)		710 (23790)	713.5 (23825)	
LTE Band 17: 10 MHz	709 (23780)		710 (23790)	711 (23800)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 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 18 (QPSK, 16QAM, 64QAM, 256QAM), UL UE Cat 13 (QPSK, 16QAM, 64QAM)				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
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	LTE Release 14 Information and this device does not support full CA features on 3GPP Release 14. It supports carrier aggregation and 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 14 Features are not supported: Relay, HetNet, Enhanced eICIC, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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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:

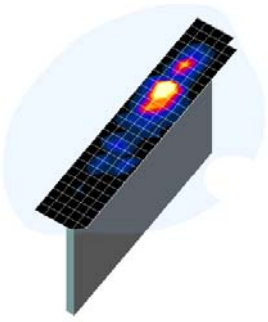

Figure 4-1
Sample SAR Area Scan

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].

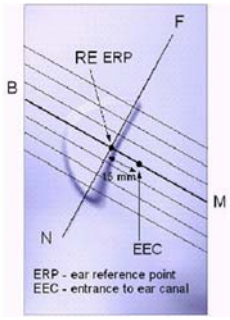

Figure 5-1
Close-Up Side view of ERP

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.

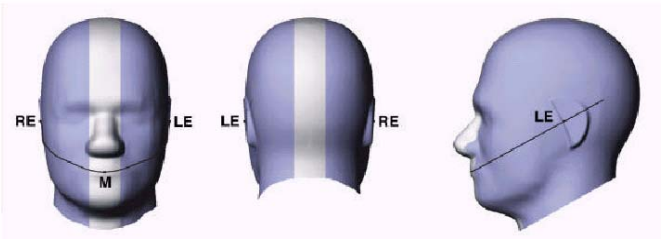

Figure 5-2
Front, back and side view of SAM Twin Phantom

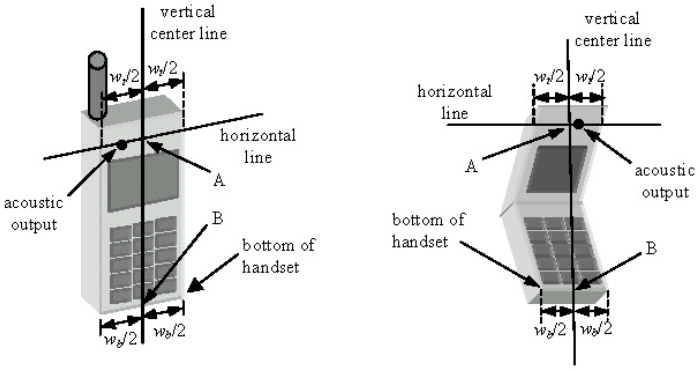

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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.

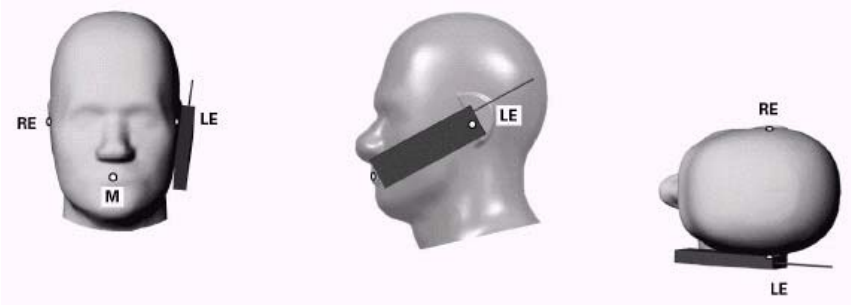

Figure 6-1 Front, Side and Top View of Cheek Position

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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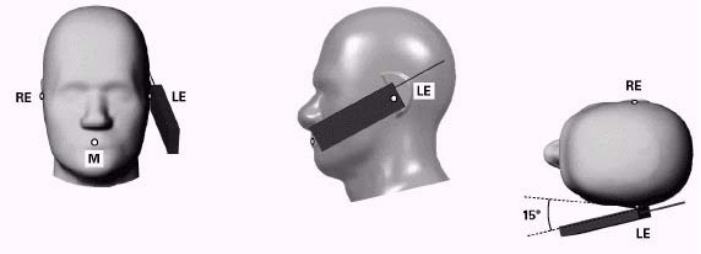

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

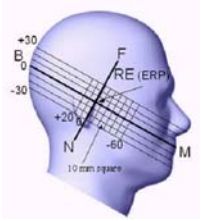

Figure 6-3
Side view w/ relevant markings

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.

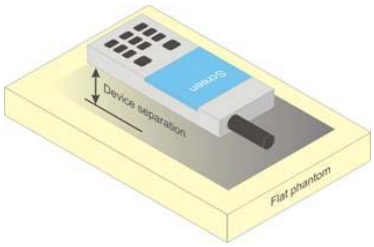

Figure 6-4
Sample Body-Worn Diagram

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 Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce voice and data powers in extremity (hand-held) use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition 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.

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

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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 $\leq$ 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 $\leq$ 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. For every supported combination of downlink only carrier aggregation, 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

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carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.7 SAR Testing with 802.11 Transmitters

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

8.7.1 General Device Setup

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

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

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	25.51	25.51	25.53	25.51	25.50	25.54	25.49
Cellular	1013	22H	824.7	25.15	24.86	25.16	25.16	24.99	24.94	24.89
	384	22H	836.52	25.10	24.83	25.12	25.10	24.91	24.99	24.94
	777	22H	848.31	24.87	24.79	24.98	24.90	24.93	24.86	25.00
PCS	25	24E	1851.25	24.56	24.57	24.57	24.60	24.58	24.57	24.53
	600	24E	1880	24.55	24.46	24.59	24.62	24.42	24.48	24.46
	1175	24E	1908.75	24.47	24.33	24.50	24.52	24.33	24.34	24.32

Table 9-2
Reduced Conducted Powers- 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	20.36	20.09	20.14	20.11
	600	24E	1880	20.16	20.01	19.99	19.97
	1175	24E	1908.75	20.09	19.89	19.95	19.91

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Table 9-3
Reduced Conducted Powers- Grip Sensor 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	20.27	20.21	20.39	20.36	20.09	20.14	20.11
	600	24E	1880	20.08	20.03	20.19	20.16	20.01	19.99	19.97
	1175	24E	1908.75	20.00	19.94	20.11	20.09	19.89	19.95	19.91

Note:
1. 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.
2. 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.

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	33.10	33.06	30.69	28.88	**27.19**	27.30	25.32	23.15	21.31
	190	32.81	32.75	30.58	28.86	**26.89**	26.95	25.25	23.04	21.02
	251	33.13	33.02	30.71	28.89	**27.14**	27.43	25.45	23.14	21.01
GSM 1900	512	30.05	30.10	27.61	25.46	**24.62**	25.67	24.58	22.38	20.27
	661	29.76	29.97	27.49	25.58	**24.43**	25.63	24.51	22.30	20.12
	810	29.78	29.80	27.37	25.13	**24.16**	25.34	24.09	22.12	19.89

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	24.07	24.03	24.67	24.62	**24.18**	18.27	19.30	18.89	18.30
	190	23.78	23.72	24.56	24.60	**23.88**	17.92	19.23	18.78	18.01
	251	24.10	23.99	24.69	24.63	**24.13**	18.40	19.43	18.88	18.00
GSM 1900	512	21.02	21.07	21.59	21.20	**21.61**	16.64	18.56	18.12	17.26
	661	20.73	20.94	21.47	21.32	**21.42**	16.60	18.49	18.04	17.11
	810	20.75	20.77	21.35	20.87	**21.15**	16.31	18.07	17.86	16.88

GSM 850	**Frame Avg.Targets:**	23.47	23.47	24.48	24.24	**24.49**	17.97	18.98	18.74	18.99
GSM 1900		20.97	20.97	21.48	21.24	**21.49**	16.97	18.48	17.74	17.99

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Table 9-5
Reduced Conducted Powers- 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	26.56	24.72	**22.96**	20.80	25.21	23.78	21.74	19.81
	661	26.38	24.52	**22.99**	20.68	24.88	23.54	21.64	20.01
	810	26.25	24.16	**22.76**	20.48	24.77	23.46	21.45	19.75

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	17.53	18.70	**18.70**	17.79	16.18	17.76	17.48	16.80
	661	17.35	18.50	**18.73**	17.67	15.85	17.52	17.38	17.00
	810	17.22	18.14	**18.50**	17.47	15.74	17.44	17.19	16.74
GSM 1900	**Frame Avg.Targets:**	17.47	18.78	**18.54**	17.99	15.97	17.98	17.74	17.49

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Table 9-6
Reduced Conducted Powers- Grip Sensor 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	26.47	26.56	24.72	**22.96**	21.28	25.21	23.78	21.74	19.81
	661	26.37	26.38	24.52	**22.99**	21.18	24.88	23.54	21.64	20.01
	810	26.26	26.25	24.16	**22.76**	21.12	24.77	23.46	21.45	19.75

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	17.44	17.53	18.70	**18.70**	18.27	16.18	17.76	17.48	16.80
	661	17.34	17.35	18.50	**18.73**	18.17	15.85	17.52	17.38	17.00
	810	17.23	17.22	18.14	**18.50**	18.11	15.74	17.44	17.19	16.74
GSM 1900	**Frame Avg.Targets:**	17.47	17.47	18.78	**18.54**	18.49	15.97	17.98	17.74	17.49

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	25.14	25.17	25.14	24.35	24.49	24.46	24.59	24.50	24.28	-
99		12.2 kbps AMR	25.13	25.19	25.16	24.35	24.52	24.48	24.60	24.49	24.25	-
6	HSDPA	Subtest 1	24.09	23.99	23.95	23.53	23.60	23.36	23.78	23.84	23.52	0
6		Subtest 2	24.12	24.01	23.96	23.53	23.60	23.33	23.79	23.84	23.53	0
6		Subtest 3	23.61	23.50	23.45	23.05	23.12	22.89	23.28	23.33	23.02	0.5
6		Subtest 4	23.59	23.51	23.49	23.05	23.10	22.87	23.30	23.33	23.02	0.5
6	HSUPA	Subtest 1	24.12	24.00	23.96	23.52	23.59	23.38	23.79	23.83	23.54	0
6		Subtest 2	22.08	21.98	21.94	21.55	21.61	21.41	21.46	21.85	21.55	2
6		Subtest 3	23.09	22.98	22.96	22.55	22.62	22.39	22.79	22.84	22.57	1
6		Subtest 4	22.08	21.99	21.95	21.53	21.65	21.41	21.79	21.84	21.54	2
6		Subtest 5	24.12	24.02	24.01	23.51	23.61	23.39	23.80	23.84	23.49	0
8	DC-HSDPA	Subtest 1	24.09	23.99	23.95	23.50	23.58	23.37	23.79	23.82	23.50	0
8		Subtest 2	24.12	24.01	24.00	23.49	23.57	23.36	23.76	23.81	23.49	0
8		Subtest 3	23.60	23.48	23.47	23.00	23.08	22.88	23.24	23.33	23.01	0.5
8		Subtest 4	23.62	23.50	23.46	22.99	23.08	22.85	23.26	23.30	22.98	0.5

Table 9-8
Reduced Conducted Powers- 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	19.51	19.59	19.60	19.41	19.42	19.27	-
99		12.2 kbps AMR	19.46	19.55	19.57	19.36	19.39	19.19	-
6	HSDPA	Subtest 1	18.70	18.75	18.97	18.63	18.75	18.45	0
6		Subtest 2	18.71	18.74	18.93	18.64	18.77	18.49	0
6		Subtest 3	18.18	18.25	18.48	18.14	18.28	17.98	0.5
6		Subtest 4	18.18	18.24	18.45	18.12	18.28	17.97	0.5
6	HSUPA	Subtest 1	18.67	18.73	18.97	18.63	18.79	18.50	0
6		Subtest 2	16.71	16.76	16.99	16.64	16.79	16.52	2
6		Subtest 3	17.73	17.78	17.99	17.63	17.79	17.51	1
6		Subtest 4	16.72	16.78	17.00	16.64	16.79	16.50	2
6		Subtest 5	18.71	18.75	18.97	19.13	19.26	18.99	0
8	DC-HSDPA	Subtest 1	18.69	18.71	18.95	18.64	18.77	18.46	0
8		Subtest 2	18.70	18.76	18.98	18.59	18.75	18.47	0
8		Subtest 3	18.21	18.27	18.48	18.09	18.28	17.96	0.5
8		Subtest 4	18.19	18.24	18.44	18.11	18.26	17.94	0.5

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Table 9-9
Reduced Conducted Powers- Grip Sensor 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	20.68	20.81	20.78	19.41	19.42	19.27	-
99		12.2 kbps AMR	20.66	20.76	20.77	19.36	19.39	19.19	-
6	HSDPA	Subtest 1	19.68	19.81	19.82	18.63	18.75	18.45	0
6		Subtest 2	19.72	19.84	19.83	18.64	18.77	18.49	0
6		Subtest 3	19.22	19.34	19.35	18.14	18.28	17.98	0.5
6		Subtest 4	19.19	19.32	19.31	18.12	18.28	17.97	0.5
6	HSUPA	Subtest 1	19.71	19.84	19.85	18.63	18.79	18.50	0
6		Subtest 2	17.73	17.84	17.85	16.64	16.79	16.52	2
6		Subtest 3	18.73	18.83	18.85	17.63	17.79	17.51	1
6		Subtest 4	17.71	17.81	17.84	16.64	16.79	16.50	2
6		Subtest 5	19.70	19.80	19.82	19.13	19.26	18.99	0
8	DC-HSDPA	Subtest 1	19.69	19.82	19.82	18.64	18.77	18.46	0
8		Subtest 2	19.67	19.79	19.81	18.59	18.75	18.47	0
8		Subtest 3	19.17	19.30	19.28	18.09	18.28	17.96	0.5
8		Subtest 4	19.16	19.28	19.29	18.11	18.26	17.94	0.5

DC-HSDPA considerations

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

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

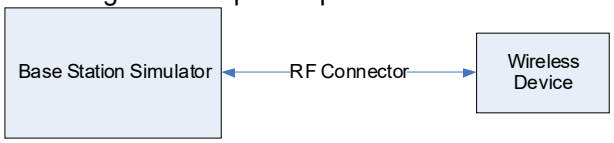

Figure 9-3
Power Measurement Setup

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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	24.99	0	0
	1	50	**25.18**		0
	1	99	25.03		0
	50	0	24.16	0-1	1
	50	25	**24.20**		1
	50	50	24.03		1
	100	0	24.09		1
16QAM	1	0	24.04	0-1	1
	1	50	24.03		1
	1	99	23.92		1
	50	0	22.86	0-2	2
	50	25	22.86		2
	50	50	22.73		2
	100	0	22.80		2
64QAM	1	0	22.93	0-2	2
	1	50	22.90		2
	1	99	22.76		2
	50	0	21.86	0-3	3
	50	25	21.89		3
	50	50	21.75		3
	100	0	21.83		3

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	25.00	0	0
	1	36	25.02		0
	1	74	24.83		0
	36	0	24.27	0-1	1
	36	18	24.10		1
	36	37	23.99		1
	75	0	24.06		1
16QAM	1	0	24.36	0-1	1
	1	36	24.32		1
	1	74	24.18		1
	36	0	23.25	0-2	2
	36	18	23.19		2
	36	37	23.04		2
	75	0	23.13		2
64QAM	1	0	23.26	0-2	2
	1	36	23.32		2
	1	74	23.11		2
	36	0	22.20	0-3	3
	36	18	22.20		3
	36	37	22.07		3
	75	0	22.17		3

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	24.90	25.06	24.92	0	0
	1	25	24.88	24.97	24.90		0
	1	49	24.85	24.89	24.79		0
	25	0	24.07	24.10	23.94	0-1	1
	25	12	24.07	24.08	24.01		1
	25	25	23.97	23.99	23.93		1
	50	0	24.00	24.05	23.86		1
16QAM	1	0	24.10	24.33	24.26	0-1	1
	1	25	24.21	24.33	24.23		1
	1	49	24.16	24.19	24.13		1
	25	0	23.06	23.14	23.03	0-2	2
	25	12	23.12	23.16	23.10		2
	25	25	23.04	23.05	23.03		2
	50	0	23.12	23.12	22.98		2
64QAM	1	0	23.10	23.28	23.20	0-2	2
	1	25	23.12	23.19	23.22		2
	1	49	23.13	23.17	23.12		2
	25	0	22.08	22.18	22.02	0-3	3
	25	12	22.12	22.12	22.10		3
	25	25	22.05	22.06	22.02		3
	50	0	22.11	22.12	21.95		3

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	24.82	25.10	25.00	0	0
	1	12	24.88	24.92	24.89		0
	1	24	24.84	24.95	24.85		0
	12	0	24.04	24.05	24.02	0-1	1
	12	6	24.06	24.06	24.02		1
	12	13	23.92	24.03	23.94		1
	25	0	23.94	24.05	23.99		1
16QAM	1	0	23.96	24.33	24.28	0-1	1
	1	12	24.14	24.28	24.17		1
	1	24	24.14	24.31	24.15		1
	12	0	23.08	23.17	23.06	0-2	2
	12	6	23.05	23.16	23.12		2
	12	13	23.01	23.13	23.04		2
	25	0	22.98	23.13	23.02		2
64QAM	1	0	23.05	23.32	23.24	0-2	2
	1	12	23.15	23.22	23.16		2
	1	24	23.08	23.19	23.08		2
	12	0	22.06	22.18	22.12	0-3	3
	12	6	22.08	22.17	22.11		3
	12	13	22.02	22.08	22.03		3
	25	0	22.02	22.12	22.05		3

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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	**24.63**	0	0
	1	25	24.61		0
	1	49	24.62		0
	25	0	**23.84**	0-1	1
	25	12	23.83		1
	25	25	23.82		1
	50	0	23.81		1
16QAM	1	0	24.01	0-1	1
	1	25	24.10		1
	1	49	24.07		1
	25	0	22.92	0-2	2
	25	12	22.95		2
	25	25	22.90		2
	50	0	22.91		2
64QAM	1	0	22.94	0-2	2
	1	25	23.05		2
	1	49	23.02		2
	25	0	21.94	0-3	3
	25	12	21.95		3
	25	25	21.90		3
	50	0	21.91		3

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	24.65	24.64	24.70	0	0
	1	12	24.72	24.73	24.66		0
	1	24	24.72	24.73	24.65		0
	12	0	23.82	23.83	23.72	0-1	1
	12	6	23.82	23.83	23.76		1
	12	13	23.81	23.80	23.73		1
	25	0	23.79	23.80	23.73		1
16QAM	1	0	23.99	24.02	24.02	0-1	1
	1	12	24.04	24.08	23.99		1
	1	24	24.00	24.05	23.91		1
	12	0	22.88	22.86	22.85	0-2	2
	12	6	22.90	22.93	22.84		2
	12	13	22.88	22.90	22.81		2
	25	0	22.88	22.88	22.80		2
64QAM	1	0	22.91	22.93	22.94	0-2	2
	1	12	22.96	22.99	22.90		2
	1	24	22.94	22.99	22.88		2
	12	0	21.87	21.83	21.82	0-3	3
	12	6	21.87	21.90	21.82		3
	12	13	21.87	21.87	21.79		3
	25	0	21.85	21.86	21.77		3

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	24.61	24.71	24.59	0	0
	1	7	24.68	24.78	24.69		0
	1	14	24.67	24.67	24.60		0
	8	0	23.66	23.72	23.66	0-1	1
	8	4	23.69	23.77	23.67		1
	8	7	23.76	23.75	23.65		1
	15	0	23.77	23.75	23.66		1
16QAM	1	0	23.93	24.03	23.90	0-1	1
	1	7	24.02	24.13	24.00		1
	1	14	23.99	24.05	23.87		1
	8	0	22.76	22.85	22.76	0-2	2
	8	4	22.79	22.88	22.78		2
	8	7	22.86	22.85	22.73		2
	15	0	22.83	22.80	22.70		2
64QAM	1	0	22.87	22.98	22.89	0-2	2
	1	7	22.97	23.07	22.97		2
	1	14	22.96	22.96	22.86		2
	8	0	21.76	21.85	21.75	0-3	3
	8	4	21.80	21.88	21.79		3
	8	7	21.87	21.86	21.74		3
	15	0	21.84	21.84	21.75		3

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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	24.52	24.62	24.51	0	0
	1	2	24.59	24.66	24.57		0
	1	5	24.53	24.61	24.50		0
	3	0	24.56	24.66	24.54		0
	3	2	24.58	24.68	24.56		0
	3	3	24.58	24.65	24.53		0
	6	0	23.62	23.68	23.59	0-1	1
16QAM	1	0	23.90	23.97	23.85	0-1	1
	1	2	23.94	24.06	23.88		1
	1	5	23.86	23.94	23.77		1
	3	0	23.77	23.87	23.74		1
	3	2	23.81	23.91	23.76		1
	3	3	23.77	23.86	23.70		1
	6	0	22.78	22.85	22.74	0-2	2
64QAM	1	0	22.84	22.94	22.82	0-2	2
	1	2	22.90	23.00	22.86		2
	1	5	22.81	22.91	22.77		2
	3	0	22.81	22.87	22.74		2
	3	2	22.83	22.90	22.79		2
	3	3	22.78	22.88	22.75		2
	6	0	21.78	21.83	21.73	0-3	3

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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	24.06	0	0
	1	25	24.17		0
	1	49	**24.29**		0
	25	0	23.24	0-1	1
	25	12	**23.32**		1
	25	25	23.26		1
	50	0	23.30		1
16QAM	1	0	23.29	0-1	1
	1	25	23.50		1
	1	49	23.52		1
	25	0	22.30	0-2	2
	25	12	22.34		2
	25	25	22.32		2
	50	0	22.33		2
64QAM	1	0	22.42	0-2	2
	1	25	22.61		2
	1	49	22.57		2
	25	0	21.32	0-3	3
	25	12	21.44		3
	25	25	21.36		3
	50	0	21.39		3

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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	24.17	0	0
	1	12	24.30		0
	1	24	24.16		0
	12	0	23.32	0-1	1
	12	6	23.31		1
	12	13	23.26		1
	25	0	23.31		1
16QAM	1	0	23.53	0-1	1
	1	12	23.53		1
	1	24	23.49		1
	12	0	22.41	0-2	2
	12	6	22.42		2
	12	13	22.37		2
	25	0	22.36		2
64QAM	1	0	22.35	0-2	2
	1	12	22.41		2
	1	24	22.42		2
	12	0	21.40	0-3	3
	12	6	21.40		3
	12	13	21.38		3
	25	0	21.37		3

Note: LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.4 LTE Band 14

Table 9-20
LTE Band 14 Conducted Powers - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.69	0	0
	1	25	24.80		0
	1	49	**24.81**		0
	25	0	**23.90**	0-1	1
	25	12	23.85		1
	25	25	23.77		1
	50	0	23.82		1
16QAM	1	0	23.79	0-1	1
	1	25	23.77		1
	1	49	23.87		1
	25	0	22.72	0-2	2
	25	12	22.70		2
	25	25	22.60		2
	50	0	22.60		2
64QAM	1	0	22.65	0-2	2
	1	25	22.61		2
	1	49	22.71		2
	25	0	21.64	0-3	3
	25	12	21.71		3
	25	25	21.62		3
	50	0	21.66		3

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Table 9-21
LTE Band 14 Conducted Powers - 5 MHz Bandwidth

LTE Band 14 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **23330 (793.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	24.56	0	0
	1	12	24.53		0
	1	24	24.47		0
	12	0	23.60	0-1	1
	12	6	23.57		1
	12	13	23.51		1
	25	0	23.56		1
16QAM	1	0	23.88	0-1	1
	1	12	23.87		1
	1	24	23.63		1
	12	0	22.67	0-2	2
	12	6	22.71		2
	12	13	22.63		2
	25	0	22.63		2
64QAM	1	0	22.70	0-2	2
	1	12	22.66		2
	1	24	22.65		2
	12	0	21.71	0-3	3
	12	6	21.75		3
	12	13	21.64		3
	25	0	21.62		3

Note: LTE Band 14 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.5 LTE Band 26 (Cell)

Table 9-22
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	**24.59**	0	0
	1	36	24.51		0
	1	74	24.50		0
	36	0	**23.67**	0-1	1
	36	18	23.63		1
	36	37	23.53		1
	75	0	23.56		1
16QAM	1	0	23.72	0-1	1
	1	36	23.71		1
	1	74	23.53		1
	36	0	22.68	0-2	2
	36	18	22.68		2
	36	37	22.62		2
	75	0	22.68		2
64QAM	1	0	23.02	0-2	2
	1	36	22.80		2
	1	74	22.73		2
	36	0	21.72	0-3	3
	36	18	21.77		3
	36	37	21.65		3
	75	0	21.67		3

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 9-23
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	24.81	24.79	24.74	0	0
	1	25	24.75	24.71	24.78		0
	1	49	24.78	24.72	24.69		0
	25	0	23.84	23.80	23.81	0-1	1
	25	12	23.95	23.80	23.86		1
	25	25	23.87	23.73	23.77		1
	50	0	23.94	23.79	23.76		1
16QAM	1	0	24.24	24.13	24.04	0-1	1
	1	25	24.04	24.04	24.03		1
	1	49	24.17	24.06	23.98		1
	25	0	22.95	22.91	22.83	0-2	2
	25	12	23.01	22.89	22.94		2
	25	25	22.95	22.79	22.84		2
	50	0	22.99	22.88	22.80		2
64QAM	1	0	23.12	23.09	23.01	0-2	2
	1	25	23.01	22.96	23.08		2
	1	49	23.08	23.01	22.93		2
	25	0	21.96	21.94	21.87	0-3	3
	25	12	22.03	21.90	21.94		3
	25	25	21.96	21.81	21.87		3
	50	0	22.01	21.87	21.81		3

Table 9-24
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	24.86	24.77	24.78	0	0
	1	12	24.81	24.70	24.71		0
	1	24	24.78	24.81	24.65		0
	12	0	23.87	23.82	23.83	0-1	1
	12	6	23.89	23.82	23.83		1
	12	13	23.84	23.75	23.76		1
	25	0	23.83	23.79	23.82		1
16QAM	1	0	24.22	24.11	24.14	0-1	1
	1	12	24.14	23.98	24.14		1
	1	24	24.09	24.08	23.87		1
	12	0	22.95	22.91	22.91	0-2	2
	12	6	22.96	22.90	22.93		2
	12	13	22.92	22.84	22.87		2
	25	0	22.91	22.85	22.85		2
64QAM	1	0	23.13	23.05	23.11	0-2	2
	1	12	23.05	22.99	23.00		2
	1	24	23.00	23.07	22.94		2
	12	0	22.02	21.89	21.88	0-3	3
	12	6	21.98	21.93	21.89		3
	12	13	21.91	21.83	21.86		3
	25	0	21.92	21.87	21.85		3

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Table 9-25
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	24.85	24.73	24.75	0	0
	1	7	24.91	24.78	24.81		0
	1	14	24.74	24.78	24.55		0
	8	0	23.82	23.76	23.73	0-1	1
	8	4	23.83	23.76	23.79		1
	8	7	23.81	23.73	23.75		1
	15	0	23.86	23.77	23.79		1
16QAM	1	0	24.14	24.06	24.05	0-1	1
	1	7	24.19	24.12	24.15		1
	1	14	24.15	24.11	23.86		1
	8	0	22.98	22.88	22.86	0-2	2
	8	4	22.98	22.88	22.90		2
	8	7	22.96	22.84	22.85		2
	15	0	22.91	22.84	22.80		2
64QAM	1	0	23.11	23.01	23.00	0-2	2
	1	7	23.23	23.08	23.08		2
	1	14	23.04	23.10	22.92		2
	8	0	21.93	21.85	21.86	0-3	3
	8	4	21.99	21.86	21.86		3
	8	7	21.91	21.83	21.83		3
	15	0	21.93	21.83	21.82		3

Table 9-26
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	24.74	24.64	24.65	0	0
	1	2	24.76	24.68	24.72		0
	1	5	24.70	24.61	24.45		0
	3	0	24.79	24.68	24.67		0
	3	2	24.83	24.72	24.67		0
	3	3	24.77	24.66	24.46		0
	6	0	23.80	23.71	23.67	0-1	1
16QAM	1	0	24.06	24.06	23.97	0-1	1
	1	2	24.11	24.06	24.01		1
	1	5	24.06	23.95	23.83		1
	3	0	23.97	23.85	23.83		1
	3	2	24.01	23.89	23.85		1
	3	3	23.95	23.84	23.76		1
	6	0	22.93	22.85	22.82	0-2	2
64QAM	1	0	23.03	22.92	22.93	0-2	2
	1	2	23.11	22.99	22.97		2
	1	5	22.95	22.86	22.85		2
	3	0	22.93	22.86	22.80		2
	3	2	22.97	22.87	22.86		2
	3	3	22.95	22.82	22.80		2
	6	0	21.89	21.77	21.78	0-3	3

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9.4.6 LTE Band 5 (Cell)

Table 9-27
LTE Band 5 (Cell) Conducted Powers - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.55	0	0
	1	25	**24.60**		0
	1	49	24.59		0
	25	0	23.62	0-1	1
	25	12	**23.63**		1
	25	25	23.53		1
	50	0	23.62		1
16QAM	1	0	24.04	0-1	1
	1	25	23.87		1
	1	49	23.82		1
	25	0	22.70	0-2	2
	25	12	22.78		2
	25	25	22.72		2
	50	0	22.69		2
64QAM	1	0	22.64	0-2	2
	1	25	22.66		2
	1	49	22.89		2
	25	0	21.78	0-3	3
	25	12	21.73		3
	25	25	21.66		3
	50	0	21.70		3

Note: LTE Band 5 (Cell) at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-28
LTE Band 5 (Cell) Conducted Powers - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20425 (826.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20625 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.65	24.69	24.44	0	0
	1	12	24.61	24.61	24.38		0
	1	24	24.59	24.56	24.35		0
	12	0	23.70	23.70	23.45	0-1	1
	12	6	23.70	23.69	23.44		1
	12	13	23.68	23.61	23.40		1
	25	0	23.67	23.67	23.42		1
16QAM	1	0	24.02	24.05	23.79	0-1	1
	1	12	24.00	23.98	23.73		1
	1	24	23.98	23.94	23.67		1
	12	0	22.82	22.79	22.58	0-2	2
	12	6	22.82	22.80	22.56		2
	12	13	22.78	22.74	22.51		2
	25	0	22.76	22.72	22.51		2
64QAM	1	0	22.98	22.97	22.73	0-2	2
	1	12	22.95	22.92	22.68		2
	1	24	22.92	22.88	22.63		2
	12	0	21.85	21.84	21.60	0-3	3
	12	6	21.85	21.82	21.61		3
	12	13	21.81	21.78	21.55		3
	25	0	21.80	21.79	21.55		3

Table 9-29
LTE Band 5 (Cell) Conducted Powers - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20415 (825.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20635 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.79	24.71	24.44	0	0
	1	7	24.82	24.77	24.51		0
	1	14	24.66	24.66	24.38		0
	8	0	23.74	23.70	23.44	0-1	1
	8	4	23.73	23.74	23.48		1
	8	7	23.72	23.68	23.42		1
	15	0	23.73	23.70	23.46		1
16QAM	1	0	24.07	24.07	23.77	0-1	1
	1	7	24.16	24.13	23.86		1
	1	14	24.04	24.00	23.70		1
	8	0	22.87	22.82	22.58	0-2	2
	8	4	22.88	22.84	22.60		2
	8	7	22.86	22.85	22.56		2
	15	0	22.84	22.81	22.55		2
64QAM	1	0	23.02	22.99	22.77	0-2	2
	1	7	23.15	23.10	22.84		2
	1	14	23.01	22.95	22.70		2
	8	0	21.85	21.82	21.59	0-3	3
	8	4	21.88	21.84	21.60		3
	8	7	21.85	21.80	21.55		3
	15	0	21.85	21.84	21.59		3

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Table 9-30
LTE Band 5 (Cell) Conducted Powers -1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20407 (824.7 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20643 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.76	24.67	24.36	0	0
	1	2	24.78	24.70	24.42		0
	1	5	24.65	24.61	24.35		0
	3	0	24.69	24.68	24.41		0
	3	2	24.73	24.70	24.44		0
	3	3	24.67	24.68	24.40		0
	6	0	23.71	23.68	23.42	0-1	1
16QAM	1	0	24.03	24.01	23.73	0-1	1
	1	2	24.08	24.06	23.77		1
	1	5	24.03	23.98	23.68		1
	3	0	23.93	23.89	23.61		1
	3	2	23.96	23.91	23.63		1
	3	3	23.92	23.88	23.57		1
	6	0	22.83	22.80	22.55	0-2	2
64QAM	1	0	22.94	22.92	22.64	0-2	2
	1	2	23.02	22.97	22.70		2
	1	5	22.93	22.85	22.61		2
	3	0	22.87	22.84	22.56		2
	3	2	22.91	22.87	22.59		2
	3	3	22.86	22.86	22.55		2
	6	0	21.78	21.76	21.51	0-3	3

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9.4.7 LTE Band 66 (AWS)

Table 9-31
LTE Band 66 (AWS) 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	24.56	**24.69**	24.64	0	0
	1	50	24.32	24.61	24.31		0
	1	99	24.50	24.55	24.20		0
	50	0	23.36	**23.76**	23.61	0-1	1
	50	25	23.30	23.71	23.45		1
	50	50	23.56	23.54	23.37		1
	100	0	23.57	23.67	23.56		1
16QAM	1	0	23.92	24.06	24.01	0-1	1
	1	50	23.23	23.76	23.78		1
	1	99	23.85	23.72	23.62		1
	50	0	22.25	22.74	22.70	0-2	2
	50	25	22.16	22.68	22.64		2
	50	50	22.62	22.57	22.53		2
	100	0	22.38	22.68	22.65		2
64QAM	1	0	22.98	22.94	22.97	0-2	2
	1	50	22.43	22.77	22.75		2
	1	99	22.79	22.68	22.58		2
	50	0	21.39	21.77	21.74	0-3	3
	50	25	21.25	21.69	21.64		3
	50	50	21.60	21.62	21.57		3
	100	0	21.46	21.70	21.66		3

Table 9-32
LTE Band 66 (AWS) 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	24.71	24.68	24.67	0	0
	1	36	24.00	24.49	24.44		0
	1	74	24.39	24.42	24.40		0
	36	0	23.28	23.63	23.57	0-1	1
	36	18	22.99	23.59	23.51		1
	36	37	22.98	23.47	23.44		1
	75	0	23.10	23.58	23.52		1
16QAM	1	0	23.90	24.04	23.98	0-1	1
	1	36	23.23	23.79	23.73		1
	1	74	23.67	23.68	23.65		1
	36	0	22.42	22.71	22.66	0-2	2
	36	18	22.16	22.68	22.62		2
	36	37	22.11	22.60	22.53		2
	75	0	22.23	22.64	22.60		2
64QAM	1	0	22.95	22.96	22.92	0-2	2
	1	36	22.35	22.75	22.69		2
	1	74	22.71	22.72	22.62		2
	36	0	21.54	21.73	21.66	0-3	3
	36	18	21.27	21.68	21.60		3
	36	37	21.15	21.62	21.53		3
	75	0	21.31	21.66	21.61		3

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Table 9-33
LTE Band 66 (AWS) 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	24.60	24.58	24.52	0	0
	1	25	24.12	24.48	24.41		0
	1	49	23.90	24.35	24.36		0
	25	0	23.35	23.59	23.50	0-1	1
	25	12	23.07	23.56	23.47		1
	25	25	22.87	23.43	23.34		1
	50	0	23.03	23.54	23.49		1
16QAM	1	0	23.84	23.88	23.86	0-1	1
	1	25	23.23	23.76	23.65		1
	1	49	23.09	23.65	23.63		1
	25	0	22.49	22.67	22.62	0-2	2
	25	12	22.23	22.63	22.57		2
	25	25	21.97	22.58	22.47		2
	50	0	22.17	22.61	22.55		2
64QAM	1	0	22.87	22.87	22.82	0-2	2
	1	25	22.48	22.74	22.68		2
	1	49	22.20	22.69	22.63		2
	25	0	21.63	21.69	21.62	0-3	3
	25	12	21.38	21.65	21.58		3
	25	25	21.10	21.60	21.52		3
	50	0	21.33	21.64	21.61		3

Table 9-34
LTE Band 66 (AWS) 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	24.57	24.57	24.44	0	0
	1	12	24.49	24.49	24.40		0
	1	24	24.08	24.47	24.40		0
	12	0	23.58	23.54	23.40	0-1	1
	12	6	23.47	23.55	23.41		1
	12	13	23.23	23.51	23.39		1
	25	0	23.39	23.55	23.34		1
16QAM	1	0	23.89	23.84	23.75	0-1	1
	1	12	23.69	23.78	23.62		1
	1	24	23.32	23.73	23.65		1
	12	0	22.70	22.67	22.56	0-2	2
	12	6	22.72	22.68	22.56		2
	12	13	22.72	22.67	22.56		2
	25	0	22.58	22.63	22.50		2
64QAM	1	0	22.86	22.83	22.74	0-2	2
	1	12	22.79	22.76	22.67		2
	1	24	22.48	22.75	22.66		2
	12	0	21.73	21.65	21.60	0-3	3
	12	6	21.72	21.69	21.59		3
	12	13	21.71	21.70	21.60		3
	25	0	21.68	21.64	21.55		3

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Table 9-35
LTE Band 66 (AWS) 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	24.53	24.52	24.36	0	0
	1	7	24.61	24.58	24.49		0
	1	14	24.39	24.48	24.36		0
	8	0	23.55	23.53	23.40	0-1	1
	8	4	23.57	23.54	23.45		1
	8	7	23.48	23.51	23.43		1
	15	0	23.56	23.52	23.39		1
16QAM	1	0	23.79	23.79	23.61	0-1	1
	1	7	23.87	23.85	23.70		1
	1	14	23.64	23.73	23.64		1
	8	0	22.67	22.63	22.51	0-2	2
	8	4	22.68	22.65	22.55		2
	8	7	22.65	22.62	22.54		2
	15	0	22.63	22.59	22.47		2
64QAM	1	0	22.79	22.74	22.67	0-2	2
	1	7	22.87	22.84	22.74		2
	1	14	22.76	22.70	22.62		2
	8	0	21.66	21.62	21.56	0-3	3
	8	4	21.69	21.66	21.56		3
	8	7	21.66	21.62	21.54		3
	15	0	21.65	21.61	21.54		3

Table 9-36
LTE Band 66 (AWS) 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	24.43	24.43	24.29	0	0
	1	2	24.50	24.47	24.38		0
	1	5	24.42	24.40	24.29		0
	3	0	24.46	24.43	24.31		0
	3	2	24.49	24.47	24.35		0
	3	3	24.45	24.40	24.30		0
	6	0	23.48	23.45	23.35	0-1	1
16QAM	1	0	23.73	23.70	23.57	0-1	1
	1	2	23.78	23.75	23.63		1
	1	5	23.67	23.69	23.56		1
	3	0	23.65	23.61	23.51		1
	3	2	23.67	23.63	23.54		1
	3	3	23.63	23.58	23.51		1
	6	0	22.62	22.57	22.50	0-2	2
64QAM	1	0	22.69	22.68	22.57	0-2	2
	1	2	22.74	22.71	22.61		2
	1	5	22.67	22.67	22.55		2
	3	0	22.65	22.61	22.53		2
	3	2	22.70	22.64	22.55		2
	3	3	22.63	22.62	22.52		2
	6	0	21.59	21.56	21.47	0-3	3

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Table 9-37
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth- Hotspot 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	19.52	**19.53**	19.26	0	0
	1	50	19.29	19.43	19.06		0
	1	99	19.35	19.31	19.01		0
	50	0	19.44	**19.53**	19.37	0-1	0
	50	25	19.37	19.41	19.27		0
	50	50	19.45	19.27	19.18		0
	100	0	19.49	19.37	19.29		0
16QAM	1	0	19.76	19.81	19.69	0-1	0
	1	50	19.57	19.57	19.46		0
	1	99	19.64	19.49	19.37		0
	50	0	19.52	19.56	19.43	0-2	0
	50	25	19.47	19.47	19.32		0
	50	50	19.47	19.39	19.25		0
	100	0	19.54	19.48	19.36		0
64QAM	1	0	19.50	19.51	19.39	0-2	0
	1	50	19.43	19.45	19.31		0
	1	99	19.42	19.40	19.23		0
	50	0	19.49	19.52	19.42	0-3	0
	50	25	19.42	19.42	19.32		0
	50	50	19.46	19.36	19.23		0
	100	0	19.54	19.48	19.36		0

Table 9-38
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth- Hotspot 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	19.44	19.47	19.36	0	0
	1	36	19.25	19.27	19.15		0
	1	74	19.25	19.23	19.07		0
	36	0	19.41	19.45	19.32	0-1	0
	36	18	19.35	19.36	19.25		0
	36	37	19.30	19.31	19.19		0
	75	0	19.37	19.38	19.25		0
16QAM	1	0	19.78	19.80	19.69	0-1	0
	1	36	19.61	19.59	19.47		0
	1	74	19.61	19.55	19.42		0
	36	0	19.48	19.53	19.40	0-2	0
	36	18	19.46	19.46	19.35		0
	36	37	19.44	19.42	19.24		0
	75	0	19.44	19.45	19.30		0
64QAM	1	0	19.68	19.72	19.59	0-2	0
	1	36	19.51	19.52	19.36		0
	1	74	19.49	19.46	19.32		0
	36	0	19.46	19.49	19.36	0-3	0
	36	18	19.44	19.45	19.32		0
	36	37	19.39	19.38	19.23		0
	75	0	19.44	19.44	19.30		0

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Table 9-39
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth- Hotspot 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	19.42	19.40	19.23	0	0
	1	25	19.25	19.26	19.13		0
	1	49	19.24	19.22	19.07		0
	25	0	19.36	19.40	19.24	0-1	0
	25	12	19.36	19.36	19.23		0
	25	25	19.33	19.30	19.17		0
	50	0	19.35	19.37	19.22		0
16QAM	1	0	19.67	19.69	19.58	0-1	0
	1	25	19.62	19.60	19.46		0
	1	49	19.62	19.57	19.41		0
	25	0	19.45	19.45	19.35	0-2	0
	25	12	19.42	19.44	19.28		0
	25	25	19.42	19.39	19.25		0
	50	0	19.41	19.41	19.30		0
64QAM	1	0	19.60	19.63	19.49	0-2	0
	1	25	19.51	19.51	19.37		0
	1	49	19.50	19.49	19.32		0
	25	0	19.45	19.47	19.35	0-3	0
	25	12	19.41	19.44	19.29		0
	25	25	19.39	19.39	19.25		0
	50	0	19.44	19.43	19.30		0

Table 9-40
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth- Hotspot 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	19.36	19.34	19.17	0	0
	1	12	19.24	19.25	19.09		0
	1	24	19.24	19.25	19.08		0
	12	0	19.32	19.34	19.18	0-1	0
	12	6	19.35	19.34	19.18		0
	12	13	19.30	19.30	19.13		0
	25	0	19.32	19.33	19.18		0
16QAM	1	0	19.66	19.70	19.51	0-1	0
	1	12	19.61	19.63	19.43		0
	1	24	19.62	19.58	19.41		0
	12	0	19.44	19.45	19.31	0-2	0
	12	6	19.42	19.45	19.30		0
	12	13	19.42	19.45	19.31		0
	25	0	19.39	19.40	19.23		0
64QAM	1	0	19.54	19.57	19.41	0-2	0
	1	12	19.51	19.52	19.35		0
	1	24	19.47	19.47	19.32		0
	12	0	19.42	19.43	19.27	0-3	0
	12	6	19.42	19.44	19.27		0
	12	13	19.42	19.43	19.27		0
	25	0	19.39	19.40	19.24		0

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Table 9-41
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth- Hotspot 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	19.24	19.28	19.09	0	0
	1	7	19.31	19.35	19.19		0
	1	14	19.22	19.24	19.06		0
	8	0	19.29	19.32	19.13	0-1	0
	8	4	19.31	19.32	19.17		0
	8	7	19.26	19.29	19.16		0
	15	0	19.29	19.31	19.14		0
16QAM	1	0	19.59	19.60	19.43	0-1	0
	1	7	19.68	19.70	19.53		0
	1	14	19.59	19.55	19.42		0
	8	0	19.42	19.42	19.26	0-2	0
	8	4	19.44	19.43	19.28		0
	8	7	19.42	19.41	19.25		0
	15	0	19.37	19.35	19.20		0
64QAM	1	0	19.49	19.52	19.35	0-2	0
	1	7	19.61	19.62	19.43		0
	1	14	19.47	19.47	19.30		0
	8	0	19.37	19.39	19.22	0-3	0
	8	4	19.40	19.41	19.24		0
	8	7	19.37	19.39	19.20		0
	15	0	19.37	19.38	19.22		0

Table 9-42
LTE Band 66 (AWS) Reduced Conducted Powers – 1.4 MHz Bandwidth- Hotspot 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	19.25	19.15	19.01	0	0
	1	2	19.30	19.22	19.06		0
	1	5	19.25	19.15	18.97		0
	3	0	19.29	19.20	19.05		0
	3	2	19.32	19.24	19.07		0
	3	3	19.28	19.20	19.04		0
	6	0	19.31	19.22	19.06	0-1	0
16QAM	1	0	19.60	19.55	19.36	0-1	0
	1	2	19.65	19.59	19.42		0
	1	5	19.56	19.49	19.32		0
	3	0	19.46	19.42	19.25		0
	3	2	19.45	19.47	19.29		0
	3	3	19.42	19.41	19.24		0
	6	0	19.44	19.36	19.20	0-2	0
64QAM	1	0	19.39	19.43	19.28	0-2	0
	1	2	19.46	19.50	19.33		0
	1	5	19.40	19.40	19.23		0
	3	0	19.37	19.38	19.22		0
	3	2	19.41	19.42	19.25		0
	3	3	19.35	19.38	19.21		0
	6	0	19.31	19.32	19.14	0-3	0

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Table 9-43
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth- Grip Sensor 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	20.57	**20.87**	20.74	0	0
	1	50	20.31	20.57	20.46		0
	1	99	20.36	20.54	20.40		0
	50	0	20.68	**20.81**	20.62	0-1	0
	50	25	20.61	20.66	20.54		0
	50	50	20.62	20.64	20.47		0
	100	0	20.71	20.72	20.51		0
16QAM	1	0	21.08	21.10	21.02	0-1	0
	1	50	20.84	20.85	20.76		0
	1	99	20.91	20.80	20.65		0
	50	0	20.80	20.83	20.72	0-2	0
	50	25	20.69	20.70	20.62		0
	50	50	20.74	20.66	20.54		0
	100	0	20.80	20.73	20.64		0
64QAM	1	0	20.97	21.01	20.93	0-2	0
	1	50	20.78	20.74	20.65		0
	1	99	20.79	20.68	20.54		0
	50	0	20.79	20.83	20.73	0-3	0
	50	25	20.72	20.74	20.62		0
	50	50	20.75	20.66	20.55		0
	100	0	20.80	20.75	20.63		0

Table 9-44
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth- Grip Sensor 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	20.71	20.73	20.65	0	0
	1	36	20.53	20.55	20.43		0
	1	74	20.52	20.50	20.36		0
	36	0	20.74	20.67	20.60	0-1	0
	36	18	20.71	20.63	20.53		0
	36	37	20.69	20.59	20.45		0
	75	0	20.63	20.64	20.52		0
16QAM	1	0	21.03	21.07	20.96	0-1	0
	1	36	20.81	20.84	20.76		0
	1	74	20.80	20.82	20.70		0
	36	0	20.74	20.79	20.69	0-2	0
	36	18	20.71	20.71	20.60		0
	36	37	20.62	20.65	20.52		0
	75	0	20.67	20.69	20.57		0
64QAM	1	0	20.92	20.98	20.88	0-2	0
	1	36	20.77	20.77	20.65		0
	1	74	20.76	20.74	20.58		0
	36	0	20.77	20.76	20.66	0-3	0
	36	18	20.72	20.71	20.58		0
	36	37	20.65	20.66	20.51		0
	75	0	20.69	20.70	20.59		0

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Table 9-45
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth- Grip Sensor 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	20.65	20.63	20.53	0	0
	1	25	20.52	20.52	20.39		0
	1	49	20.49	20.49	20.35		0
	25	0	20.63	20.68	20.52	0-1	0
	25	12	20.62	20.62	20.51		0
	25	25	20.57	20.58	20.45		0
	50	0	20.59	20.59	20.47		0
16QAM	1	0	20.95	20.98	20.88	0-1	0
	1	25	20.81	20.86	20.76		0
	1	49	20.79	20.82	20.69		0
	25	0	20.70	20.72	20.58	0-2	0
	25	12	20.66	20.69	20.57		0
	25	25	20.63	20.65	20.50		0
	50	0	20.65	20.68	20.56		0
64QAM	1	0	20.85	20.89	20.77	0-2	0
	1	25	20.78	20.78	20.65		0
	1	49	20.76	20.75	20.58		0
	25	0	20.72	20.73	20.59	0-3	0
	25	12	20.69	20.71	20.57		0
	25	25	20.65	20.66	20.49		0
	50	0	20.69	20.69	20.57		0

Table 9-46
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth- Grip Sensor 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	20.58	20.59	20.45	0	0
	1	12	20.50	20.53	20.37		0
	1	24	20.50	20.53	20.38		0
	12	0	20.57	20.60	20.45	0-1	0
	12	6	20.57	20.64	20.45		0
	12	13	20.54	20.59	20.42		0
	25	0	20.60	20.58	20.46		0
16QAM	1	0	20.91	20.96	20.84	0-1	0
	1	12	20.85	20.89	20.75		0
	1	24	20.82	20.83	20.69		0
	12	0	20.69	20.74	20.60	0-2	0
	12	6	20.68	20.74	20.59		0
	12	13	20.68	20.74	20.59		0
	25	0	20.66	20.69	20.54		0
64QAM	1	0	20.84	20.88	20.74	0-2	0
	1	12	20.80	20.82	20.67		0
	1	24	20.78	20.80	20.62		0
	12	0	20.71	20.74	20.59	0-3	0
	12	6	20.70	20.73	20.58		0
	12	13	20.71	20.73	20.59		0
	25	0	20.69	20.70	20.54		0

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Table 9-47
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth- Grip Sensor 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	20.57	20.60	20.44	0	0
	1	7	20.63	20.66	20.49		0
	1	14	20.51	20.52	20.37		0
	8	0	20.56	20.58	20.44	0-1	0
	8	4	20.59	20.62	20.48		0
	8	7	20.56	20.57	20.46		0
	15	0	20.57	20.60	20.46		0
16QAM	1	0	20.86	20.91	20.75	0-1	0
	1	7	20.95	20.98	20.81		0
	1	14	20.86	20.87	20.70		0
	8	0	20.68	20.71	20.56	0-2	0
	8	4	20.71	20.73	20.58		0
	8	7	20.68	20.69	20.56		0
	15	0	20.64	20.67	20.50		0
64QAM	1	0	20.79	20.84	20.66	0-2	0
	1	7	20.90	20.92	20.75		0
	1	14	20.77	20.79	20.62		0
	8	0	20.67	20.71	20.54	0-3	0
	8	4	20.70	20.72	20.56		0
	8	7	20.67	20.67	20.52		0
	15	0	20.67	20.68	20.54		0

Table 9-48
LTE Band 66 (AWS) Reduced Conducted Powers – 1.4 MHz Bandwidth- Grip Sensor 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	20.47	20.49	20.31	0	0
	1	2	20.51	20.53	20.38		0
	1	5	20.42	20.45	20.29		0
	3	0	20.48	20.50	20.35		0
	3	2	20.51	20.52	20.38		0
	3	3	20.48	20.50	20.35		0
	6	0	20.48	20.50	20.37	0-1	0
16QAM	1	0	20.81	20.80	20.66	0-1	0
	1	2	20.84	20.85	20.71		0
	1	5	20.75	20.76	20.60		0
	3	0	20.68	20.69	20.56		0
	3	2	20.72	20.73	20.61		0
	3	3	20.68	20.70	20.55		0
	6	0	20.62	20.66	20.51	0-2	0
64QAM	1	0	20.69	20.72	20.54	0-2	0
	1	2	20.74	20.75	20.59		0
	1	5	20.65	20.70	20.53		0
	3	0	20.65	20.68	20.54		0
	3	2	20.68	20.71	20.55		0
	3	3	20.65	20.68	20.51		0
	6	0	20.59	20.59	20.46	0-3	0

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9.4.8 LTE Band 25 (PCS)

Table 9-49
LTE Band 25 (PCS) 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	24.24	24.26	**24.33**	0	0
	1	50	23.89	24.06	24.14		0
	1	99	23.91	24.10	24.08		0
	50	0	23.23	23.05	**23.24**	0-1	1
	50	25	23.06	22.98	23.15		1
	50	50	23.00	22.90	23.05		1
	100	0	23.02	22.95	23.13		1
16QAM	1	0	23.71	23.60	23.65	0-1	1
	1	50	23.46	23.27	23.46		1
	1	99	23.42	23.33	23.34		1
	50	0	22.37	22.14	22.35	0-2	2
	50	25	22.19	22.09	22.25		2
	50	50	22.12	22.05	22.19		2
	100	0	22.20	22.11	22.27		2
64QAM	1	0	22.77	22.56	22.59	0-2	2
	1	50	22.39	22.22	22.41		2
	1	99	22.35	22.36	22.28		2
	50	0	21.53	21.20	21.37	0-3	3
	50	25	21.25	21.13	21.31		3
	50	50	21.18	21.09	21.22		3
	100	0	21.34	21.13	21.30		3

Table 9-50
LTE Band 25 (PCS) 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	24.23	24.19	24.31	0	0
	1	36	24.11	23.94	24.10		0
	1	74	24.01	23.95	24.05		0
	36	0	23.43	23.05	23.23	0-1	1
	36	18	23.26	23.00	23.14		1
	36	37	23.07	22.94	23.09		1
	75	0	23.12	23.00	23.16		1
16QAM	1	0	23.60	23.35	23.59	0-1	1
	1	36	23.45	23.26	23.39		1
	1	74	23.30	23.23	23.39		1
	36	0	22.39	22.16	22.29	0-2	2
	36	18	22.30	22.07	22.22		2
	36	37	22.12	22.06	22.16		2
	75	0	22.19	22.07	22.22		2
64QAM	1	0	22.53	22.34	22.44	0-2	2
	1	36	22.42	22.20	22.37		2
	1	74	22.23	22.18	22.30		2
	36	0	21.34	21.11	21.29	0-3	3
	36	18	21.30	21.08	21.24		3
	36	37	21.14	21.05	21.15		3
	75	0	21.19	21.10	21.24		3

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Table 9-51
LTE Band 25 (PCS) 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	24.45	24.24	24.20	0	0
	1	25	24.17	23.94	24.06		0
	1	49	24.30	24.14	24.04		0
	25	0	23.27	23.03	23.15	0-1	1
	25	12	23.24	22.99	23.10		1
	25	25	23.18	22.98	23.06		1
	50	0	23.22	22.98	23.13		1
16QAM	1	0	23.77	23.50	23.55	0-1	1
	1	25	23.48	23.31	23.37		1
	1	49	23.63	23.45	23.42		1
	25	0	22.33	22.10	22.22	0-2	2
	25	12	22.32	22.10	22.18		2
	25	25	22.25	22.01	22.13		2
	50	0	22.27	22.08	22.22		2
64QAM	1	0	22.77	22.48	22.42	0-2	2
	1	25	22.40	22.19	22.31		2
	1	49	22.58	22.36	22.32		2
	25	0	21.35	21.11	21.25	0-3	3
	25	12	21.30	21.10	21.20		3
	25	25	21.28	21.07	21.16		3
	50	0	21.32	21.09	21.19		3

Table 9-52
LTE Band 25 (PCS) 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	24.39	24.41	24.33	0	0
	1	12	24.24	24.35	24.28		0
	1	24	24.21	24.34	24.26		0
	12	0	23.37	23.38	23.35	0-1	1
	12	6	23.38	23.40	23.33		1
	12	13	23.30	23.39	23.31		1
	25	0	23.35	23.40	23.32		1
16QAM	1	0	23.63	23.74	23.66	0-1	1
	1	12	23.51	23.62	23.55		1
	1	24	23.53	23.68	23.58		1
	12	0	22.45	22.48	22.45	0-2	2
	12	6	22.44	22.50	22.44		2
	12	13	22.42	22.49	22.40		2
	25	0	22.41	22.48	22.40		2
64QAM	1	0	22.54	22.63	22.55	0-2	2
	1	12	22.49	22.59	22.52		2
	1	24	22.49	22.57	22.52		2
	12	0	21.44	21.49	21.48	0-3	3
	12	6	21.43	21.50	21.48		3
	12	13	21.42	21.50	21.46		3
	25	0	21.41	21.45	21.37		3

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Table 9-53
LTE Band 25 (PCS) 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	24.27	24.37	24.34	0	0
	1	7	24.37	24.46	24.36		0
	1	14	24.23	24.35	24.24		0
	8	0	23.34	23.37	23.32	0-1	1
	8	4	23.33	23.42	23.31		1
	8	7	23.31	23.40	23.30		1
	15	0	23.36	23.40	23.34		1
16QAM	1	0	23.59	23.65	23.55	0-1	1
	1	7	23.64	23.74	23.67		1
	1	14	23.56	23.69	23.57		1
	8	0	22.43	22.50	22.45	0-2	2
	8	4	22.40	22.51	22.44		2
	8	7	22.43	22.52	22.41		2
	15	0	22.38	22.44	22.35		2
64QAM	1	0	22.56	22.61	22.55	0-2	2
	1	7	22.61	22.69	22.61		2
	1	14	22.51	22.58	22.49		2
	8	0	21.44	21.48	21.44	0-3	3
	8	4	21.43	21.46	21.43		3
	8	7	21.43	21.48	21.44		3
	15	0	21.38	21.48	21.37		3

Table 9-54
LTE Band 25 (PCS) 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	24.29	24.44	24.19	0	0
	1	2	24.25	24.43	24.24		0
	1	5	24.17	24.41	24.18		0
	3	0	24.23	24.46	24.20		0
	3	2	24.29	24.49	24.26		0
	3	3	24.20	24.44	24.22		0
	6	0	23.26	23.45	23.24	0-1	1
16QAM	1	0	23.54	23.75	23.53	0-1	1
	1	2	23.56	23.73	23.55		1
	1	5	23.47	23.72	23.52		1
	3	0	23.40	23.62	23.39		1
	3	2	23.48	23.69	23.40		1
	3	3	23.43	23.61	23.39		1
	6	0	22.38	22.59	22.40	0-2	2
64QAM	1	0	22.48	22.66	22.45	0-2	2
	1	2	22.50	22.75	22.51		2
	1	5	22.45	22.65	22.43		2
	3	0	22.63	22.39	22.45		2
	3	2	22.63	22.38	22.42		2
	3	3	22.64	22.38	22.41		2
	6	0	21.33	21.53	21.33	0-3	3

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Table 9-55
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth- Hotspot/Grip Sensor 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	19.34	19.48	**19.51**	0	0
	1	50	19.24	19.29	19.29		0
	1	99	19.19	19.29	19.19		0
	50	0	19.26	19.31	**19.46**	0-1	0
	50	25	19.22	19.20	19.35		0
	50	50	19.14	19.16	19.31		0
	100	0	19.23	19.21	19.37		0
16QAM	1	0	19.44	19.33	19.10	0-1	0
	1	50	19.14	19.12	18.88		0
	1	99	19.15	19.28	18.78		0
	50	0	19.09	19.06	19.06	0-2	0
	50	25	19.08	18.97	18.99		0
	50	50	19.05	18.96	18.91		0
	100	0	19.11	19.01	19.00		0
64QAM	1	0	19.46	19.41	19.35	0-2	0
	1	50	19.01	19.04	19.09		0
	1	99	19.25	19.23	19.07		0
	50	0	19.13	19.06	19.14	0-3	0
	50	25	19.10	19.01	19.06		0
	50	50	19.04	19.01	18.99		0
	100	0	19.12	19.11	19.13		0

Table 9-56
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth- Hotspot/Grip Sensor 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	19.41	19.37	19.46	0	0
	1	36	19.22	19.21	19.25		0
	1	74	19.25	19.22	19.22		0
	36	0	19.39	19.37	19.43	0-1	0
	36	18	19.32	19.33	19.36		0
	36	37	19.34	19.27	19.30		0
	75	0	19.43	19.32	19.33		0
16QAM	1	0	19.26	19.25	19.35	0-1	0
	1	36	19.06	19.10	19.11		0
	1	74	19.11	19.09	19.07		0
	36	0	19.01	18.95	18.97	0-2	0
	36	18	18.93	18.95	18.93		0
	36	37	18.95	18.88	18.90		0
	75	0	19.01	18.90	18.92		0
64QAM	1	0	19.22	19.18	19.28	0-2	0
	1	36	19.02	19.03	19.04		0
	1	74	19.06	19.04	19.02		0
	36	0	19.02	19.00	19.03	0-3	0
	36	18	18.96	18.95	18.97		0
	36	37	19.00	18.93	18.92		0
	75	0	19.05	18.96	18.98		0

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Table 9-57
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth- Hotspot/Grip Sensor 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	19.64	19.59	19.39	0	0
	1	25	19.31	19.27	19.29		0
	1	49	19.48	19.50	19.28		0
	25	0	19.46	19.43	19.39	0-1	0
	25	12	19.42	19.41	19.37		0
	25	25	19.37	19.38	19.32		0
	50	0	19.40	19.39	19.37		0
16QAM	1	0	19.45	19.42	19.23	0-1	0
	1	25	19.12	19.12	19.09		0
	1	49	19.29	19.32	19.11		0
	25	0	19.02	18.99	18.93	0-2	0
	25	12	18.98	18.95	18.92		0
	25	25	18.93	18.95	18.88		0
	50	0	18.95	18.94	18.90		0
64QAM	1	0	19.36	19.33	19.15	0-2	0
	1	25	19.07	19.04	19.02		0
	1	49	19.23	19.23	18.99		0
	25	0	19.04	18.99	18.98	0-3	0
	25	12	19.00	18.98	18.94		0
	25	25	18.95	18.97	18.89		0
	50	0	19.00	19.00	18.95		0

Table 9-58
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth- Hotspot/Grip Sensor 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	19.43	19.32	19.30	0	0
	1	12	19.27	19.26	19.23		0
	1	24	19.27	19.27	19.22		0
	12	0	19.38	19.34	19.27	0-1	0
	12	6	19.37	19.36	19.29		0
	12	13	19.36	19.32	19.27		0
	25	0	19.35	19.32	19.28		0
16QAM	1	0	19.19	19.19	19.09	0-1	0
	1	12	19.11	19.12	19.03		0
	1	24	19.11	19.11	19.07		0
	12	0	19.01	18.95	18.91	0-2	0
	12	6	18.98	18.97	18.91		0
	12	13	18.97	18.93	18.88		0
	25	0	18.95	18.90	18.88		0
64QAM	1	0	19.14	19.09	19.05	0-2	0
	1	12	19.07	19.06	19.04		0
	1	24	19.06	19.06	19.02		0
	12	0	19.01	18.97	18.98	0-3	0
	12	6	19.01	18.98	18.99		0
	12	13	19.01	18.97	18.99		0
	25	0	18.97	18.93	18.89		0

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Table 9-59
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth- Hotspot/Grip Sensor 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	19.39	19.34	19.30	0	0
	1	7	19.44	19.40	19.37		0
	1	14	19.33	19.28	19.25		0
	8	0	19.42	19.39	19.31	0-1	0
	8	4	19.42	19.37	19.32		0
	8	7	19.40	19.35	19.31		0
	15	0	19.36	19.33	19.38		0
16QAM	1	0	19.13	19.14	19.05	0-1	0
	1	7	19.25	19.22	19.15		0
	1	14	19.13	19.14	19.03		0
	8	0	18.98	18.97	18.90	0-2	0
	8	4	19.02	18.97	18.92		0
	8	7	18.96	18.93	18.89		0
	15	0	18.90	18.90	18.84		0
64QAM	1	0	19.09	19.05	19.00	0-2	0
	1	7	19.18	19.15	19.11		0
	1	14	19.05	19.03	18.98		0
	8	0	18.98	18.94	18.94	0-3	0
	8	4	18.97	18.95	18.95		0
	8	7	18.99	18.95	18.96		0
	15	0	18.96	18.94	18.89		0

Table 9-60
LTE Band 25 (PCS) Reduced Conducted Powers – 1.4 MHz Bandwidth- Hotspot/Grip Sensor 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	19.34	19.44	19.37	0	0
	1	2	19.32	19.51	19.24		0
	1	5	19.23	19.45	19.16		0
	3	0	19.30	19.51	19.22		0
	3	2	19.33	19.53	19.25		0
	3	3	19.28	19.49	19.23		0
	6	0	19.31	19.55	19.26	0-1	0
16QAM	1	0	19.13	19.31	19.00	0-1	0
	1	2	19.16	19.37	19.07		0
	1	5	19.08	19.31	19.02		0
	3	0	19.00	19.21	18.92		0
	3	2	19.05	19.27	18.95		0
	3	3	19.02	19.22	18.91		0
	6	0	18.94	19.17	18.87	0-2	0
64QAM	1	0	19.02	19.23	18.92	0-2	0
	1	2	19.08	19.29	19.00		0
	1	5	19.01	19.22	18.92		0
	3	0	19.21	18.94	18.96		0
	3	2	19.22	18.94	18.97		0
	3	3	19.23	18.93	18.97		0
	6	0	18.94	19.13	18.87	0-3	0

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9.4.9 LTE Band 30

Table 9-61
LTE Band 30 Antenna B Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**22.62**	0	0
	1	25	22.43		0
	1	49	22.41		0
	25	0	**21.52**	0-1	1
	25	12	21.50		1
	25	25	21.45		1
	50	0	21.48		1
16QAM	1	0	21.93	0-1	1
	1	25	21.75		1
	1	49	21.73		1
	25	0	20.58	0-2	2
	25	12	20.54		2
	25	25	20.52		2
	50	0	20.51		2
64QAM	1	0	20.82	0-2	2
	1	25	20.67		2
	1	49	20.65		2
	25	0	19.60	0-3	3
	25	12	19.59		3
	25	25	19.53		3
	50	0	19.58		3

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Table 9-62
LTE Band 30 Antenna B Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 30 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	22.47	0	0
	1	12	22.41		0
	1	24	22.39		0
	12	0	21.46	0-1	1
	12	6	21.47		1
	12	13	21.44		1
	25	0	21.45		1
16QAM	1	0	21.80	0-1	1
	1	12	21.74		1
	1	24	21.71		1
	12	0	20.56	0-2	2
	12	6	20.58		2
	12	13	20.51		2
	25	0	20.52		2
64QAM	1	0	20.74	0-2	2
	1	12	20.68		2
	1	24	20.64		2
	12	0	19.59	0-3	3
	12	6	19.60		3
	12	13	19.56		3
	25	0	19.51		3

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-63
LTE Band 30 Antenna B Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot Mode Active

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**20.51**	0	0
	1	25	20.35		0
	1	49	20.27		0
	25	0	**20.46**	0-1	0
	25	12	20.40		0
	25	25	20.36		0
	50	0	20.42		0
16QAM	1	0	20.68	0-1	0
	1	25	20.59		0
	1	49	20.57		0
	25	0	20.54	0-2	0
	25	12	20.48		0
	25	25	20.39		0
	50	0	20.49		0
64QAM	1	0	20.77	0-2	0
	1	25	20.55		0
	1	49	20.61		0
	25	0	20.24	0-3	0.5
	25	12	20.15		0.5
	25	25	20.11		0.5
	50	0	20.19		0.5

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Table 9-64
LTE Band 30 Antenna B Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot Mode Active

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	20.37	0	0
	1	12	20.38		0
	1	24	20.27		0
	12	0	20.43	0-1	0
	12	6	20.45		0
	12	13	20.36		0
	25	0	20.38		0
16QAM	1	0	20.56	0-1	0
	1	12	20.68		0
	1	24	20.56		0
	12	0	20.49	0-2	0
	12	6	20.47		0
	12	13	20.45		0
	25	0	20.42		0
64QAM	1	0	20.61	0-2	0
	1	12	20.62		0
	1	24	20.51		0
	12	0	20.26	0-3	0.5
	12	6	20.24		0.5
	12	13	20.19		0.5
	25	0	20.15		0.5

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-65
LTE Band 30 Antenna B Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor Mode Active

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**21.61**	0	0
	1	25	21.36		0
	1	49	21.30		0
	25	0	**21.42**	0-1	0
	25	12	21.41		0
	25	25	21.34		0
	50	0	21.39		0
16QAM	1	0	21.89	0-1	0
	1	25	21.72		0
	1	49	21.59		0
	25	0	20.73	0-2	1
	25	12	20.72		1
	25	25	20.69		1
	50	0	20.70		1
64QAM	1	0	21.05	0-2	1
	1	25	20.89		1
	1	49	20.77		1
	25	0	19.79	0-3	2
	25	12	19.73		2
	25	25	19.70		2
	50	0	19.72		2

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Table 9-66
LTE Band 30 Antenna B Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor Mode Active

LTE Band 30 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	21.41	0	0
	1	12	21.27		0
	1	24	21.33		0
	12	0	21.45	0-1	0
	12	6	21.43		0
	12	13	21.41		0
	25	0	21.44		0
16QAM	1	0	21.64	0-1	0
	1	12	21.57		0
	1	24	21.55		0
	12	0	20.79	0-2	1
	12	6	20.71		1
	12	13	20.64		1
	25	0	20.59		1
64QAM	1	0	20.85	0-2	1
	1	12	20.89		1
	1	24	20.76		1
	12	0	19.71	0-3	2
	12	6	19.78		2
	12	13	19.69		2
	25	0	19.68		2

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-67
LTE Band 30 Antenna A Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**22.71**	0	0
	1	25	22.65		0
	1	49	22.47		0
	25	0	**21.77**	0-1	1
	25	12	21.73		1
	25	25	21.69		1
	50	0	21.68		1
16QAM	1	0	21.97	0-1	1
	1	25	21.93		1
	1	49	21.84		1
	25	0	20.83	0-2	2
	25	12	20.78		2
	25	25	20.77		2
	50	0	20.76		2
64QAM	1	0	21.07	0-2	2
	1	25	21.03		2
	1	49	20.88		2
	25	0	19.79	0-3	3
	25	12	19.78		3
	25	25	19.73		3
	50	0	19.75		3

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Table 9-68
LTE Band 30 Antenna A Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 30 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	22.73	0	0
	1	12	22.62		0
	1	24	22.56		0
	12	0	21.67	0-1	1
	12	6	21.71		1
	12	13	21.65		1
	25	0	21.69		1
16QAM	1	0	22.07	0-1	1
	1	12	22.04		1
	1	24	21.88		1
	12	0	20.74	0-2	2
	12	6	20.79		2
	12	13	20.77		2
	25	0	20.67		2
64QAM	1	0	21.11	0-2	2
	1	12	21.02		2
	1	24	20.98		2
	12	0	19.83	0-3	3
	12	6	19.88		3
	12	13	19.75		3
	25	0	19.77		3

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-69
LTE Band 30 Antenna A Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot Mode Active

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**20.12**	0	0
	1	25	19.99		0
	1	49	19.98		0
	25	0	**20.09**	0-1	0
	25	12	20.06		0
	25	25	19.98		0
	50	0	20.08		0
16QAM	1	0	20.39	0-1	0
	1	25	20.30		0
	1	49	20.33		0
	25	0	20.15	0-2	0
	25	12	20.16		0
	25	25	20.07		0
	50	0	20.13		0
64QAM	1	0	20.47	0-2	0
	1	25	20.38		0
	1	49	20.39		0
	25	0	20.18	0-3	0.5
	25	12	20.15		0.5
	25	25	20.11		0.5
	50	0	20.15		0.5

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Table 9-70
LTE Band 30 Antenna A Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot Mode Active

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	20.05	0	0
	1	12	19.94		0
	1	24	19.97		0
	12	0	20.00	0-1	0
	12	6	20.03		0
	12	13	19.98		0
	25	0	19.98		0
16QAM	1	0	20.38	0-1	0
	1	12	20.26		0
	1	24	20.30		0
	12	0	20.13	0-2	0
	12	6	20.08		0
	12	13	20.07		0
	25	0	20.13		0
64QAM	1	0	20.39	0-2	0
	1	12	20.31		0
	1	24	20.32		0
	12	0	20.16	0-3	0.5
	12	6	20.16		0.5
	12	13	20.11		0.5
	25	0	20.13		0.5

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-71
LTE Band 30 Antenna A Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor Mode Active

LTE Band 30 10 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **27710** **(2310.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	**21.62**	0	0
	1	25	21.46		0
	1	49	21.44		0
	25	0	**21.58**	0-1	0
	25	12	21.54		0
	25	25	21.43		0
	50	0	21.52		0
16QAM	1	0	21.91	0-1	0
	1	25	21.95		0
	1	49	21.74		0
	25	0	20.66	0-2	1
	25	12	20.60		1
	25	25	20.55		1
	50	0	20.60		1
64QAM	1	0	20.92	0-2	1
	1	25	20.70		1
	1	49	20.64		1
	25	0	19.71	0-3	2
	25	12	19.60		2
	25	25	19.57		2
	50	0	19.63		2

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Table 9-72
LTE Band 30 Antenna A Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor Mode Active

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	21.51	0	0
	1	12	21.39		0
	1	24	21.45		0
	12	0	21.47	0-1	0
	12	6	21.52		0
	12	13	21.41		0
	25	0	21.51		0
16QAM	1	0	21.40	0-1	0
	1	12	21.81		0
	1	24	21.44		0
	12	0	20.55	0-2	1
	12	6	20.60		1
	12	13	20.52		1
	25	0	20.55		1
64QAM	1	0	20.75	0-2	1
	1	12	20.65		1
	1	24	20.60		1
	12	0	19.64	0-3	2
	12	6	19.58		2
	12	13	19.53		2
	25	0	19.59		2

Note: LTE Band 30 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.10 LTE Band 7

Table 9-73
LTE Band 7 Antenna B 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	22.98	22.67	**23.06**	0	0
	1	50	22.76	22.51	22.75		0
	1	99	22.59	22.56	22.72		0
	50	0	21.92	21.70	**21.93**	0-1	1
	50	25	21.82	21.62	21.82		1
	50	50	21.69	21.62	21.75		1
	100	0	21.76	21.63	21.84		1
16QAM	1	0	22.32	22.35	22.37	0-1	1
	1	50	22.45	22.11	22.31		1
	1	99	22.29	21.96	22.10		1
	50	0	21.32	20.97	21.08	0-2	2
	50	25	21.21	20.88	21.02		2
	50	50	20.98	20.80	20.90		2
	100	0	21.20	20.88	20.96		2
64QAM	1	0	21.33	21.29	21.33	0-2	2
	1	50	21.27	21.00	21.06		2
	1	99	21.05	20.99	21.07		2
	50	0	20.30	20.02	20.08	0-3	3
	50	25	20.21	19.92	20.00		3
	50	50	20.03	19.81	19.90		3
	100	0	20.18	19.91	19.99		3

Table 9-74
LTE Band 7 Antenna B 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	23.34	23.04	22.97	0	0
	1	36	23.02	22.73	22.92		0
	1	74	22.95	22.75	22.85		0
	36	0	22.18	21.85	21.95	0-1	1
	36	18	22.13	21.84	21.91		1
	36	37	22.03	21.73	21.92		1
	75	0	22.08	21.80	21.87		1
16QAM	1	0	22.70	22.32	22.29	0-1	1
	1	36	22.31	22.08	22.18		1
	1	74	22.25	22.02	22.19		1
	36	0	21.27	20.92	20.98	0-2	2
	36	18	21.17	20.88	20.95		2
	36	37	21.07	20.78	20.97		2
	75	0	21.18	20.87	20.93		2
64QAM	1	0	21.62	21.29	21.28	0-2	2
	1	36	21.31	20.97	21.16		2
	1	74	21.17	20.98	21.13		2
	36	0	20.25	19.95	20.05	0-3	3
	36	18	20.18	19.87	19.98		3
	36	37	20.11	19.79	19.99		3
	75	0	20.15	19.85	19.95		3

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Table 9-75
LTE Band 7 Antenna B 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	23.28	22.82	22.92	0	0
	1	25	23.18	22.72	22.88		0
	1	49	22.94	22.63	22.83		0
	25	0	22.25	21.84	21.87	0-1	1
	25	12	22.14	21.81	21.98		1
	25	25	22.06	21.75	21.90		1
	50	0	22.09	21.81	21.87		1
16QAM	1	0	22.56	22.16	22.28	0-1	1
	1	25	22.46	22.08	22.21		1
	1	49	22.31	21.99	22.16		1
	25	0	21.33	20.90	20.95	0-2	2
	25	12	21.17	20.91	21.03		2
	25	25	21.15	20.79	20.96		2
	50	0	21.18	20.90	20.92		2
64QAM	1	0	21.52	21.16	21.17	0-2	2
	1	25	21.40	21.03	21.21		2
	1	49	21.26	20.95	21.14		2
	25	0	20.38	19.91	19.98	0-3	3
	25	12	20.21	19.91	20.08		3
	25	25	20.15	19.86	19.99		3
	50	0	20.22	19.90	19.95		3

Table 9-76
LTE Band 7 Antenna B 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	23.20	22.74	22.93	0	0
	1	12	23.20	22.74	22.90		0
	1	24	23.13	22.70	22.87		0
	12	0	22.26	21.84	21.97	0-1	1
	12	6	22.28	21.84	22.00		1
	12	13	22.21	21.76	21.94		1
	25	0	22.22	21.81	21.96		1
16QAM	1	0	22.54	22.13	22.29	0-1	1
	1	12	22.50	22.01	22.24		1
	1	24	22.43	22.03	22.15		1
	12	0	21.33	20.90	21.07	0-2	2
	12	6	21.36	20.93	21.09		2
	12	13	21.31	20.88	21.02		2
	25	0	21.28	20.90	21.01		2
64QAM	1	0	21.50	21.09	21.20	0-2	2
	1	12	21.44	21.04	21.19		2
	1	24	21.39	20.98	21.15		2
	12	0	20.35	19.95	20.07	0-3	3
	12	6	20.32	19.91	20.08		3
	12	13	20.29	19.87	20.04		3
	25	0	20.31	19.89	20.02		3

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Table 9-77
LTE Band 7 Antenna B Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot 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	19.31	19.19	**19.47**	0	0
	1	50	19.09	19.01	19.32		0
	1	99	19.03	18.96	19.41		0
	50	0	19.22	19.06	**19.41**	0-1	0
	50	25	19.17	18.98	19.39		0
	50	50	19.03	18.88	19.32		0
	100	0	19.10	19.00	19.35		0
16QAM	1	0	19.47	19.39	19.39	0-1	0
	1	50	19.46	19.37	19.43		0
	1	99	19.41	19.15	19.44		0
	50	0	19.23	19.16	19.33	0-2	0
	50	25	19.12	19.05	19.41		0
	50	50	19.16	19.02	19.26		0
	100	0	19.16	19.05	19.29		0
64QAM	1	0	19.56	19.27	19.47	0-2	0
	1	50	19.47	19.23	19.36		0
	1	99	19.43	19.16	19.44		0
	50	0	19.31	19.12	19.33	0-3	0
	50	25	19.24	19.05	19.36		0
	50	50	19.19	19.02	19.29		0
	100	0	19.09	19.10	19.32		0

Table 9-78
LTE Band 7 Antenna B Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot 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	19.21	19.07	19.32	0	0
	1	36	19.04	18.90	19.25		0
	1	74	18.90	18.85	19.30		0
	36	0	19.13	19.00	19.22	0-1	0
	36	18	19.12	18.97	19.32		0
	36	37	19.03	18.91	19.27		0
	75	0	19.13	18.97	19.32		0
16QAM	1	0	19.55	19.27	19.31	0-1	0
	1	36	19.24	19.25	19.33		0
	1	74	19.23	19.25	19.49		0
	36	0	19.25	19.10	19.35	0-2	0
	36	18	19.21	19.06	19.38		0
	36	37	19.07	19.00	19.35		0
	75	0	19.18	19.03	19.38		0
64QAM	1	0	19.51	19.22	19.47	0-2	0
	1	36	19.30	19.12	19.36		0
	1	74	19.12	19.06	19.51		0
	36	0	19.23	19.06	19.35	0-3	0
	36	18	19.10	19.03	19.41		0
	36	37	19.11	18.94	19.32		0
	75	0	19.15	18.99	19.38		0

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Table 9-79
LTE Band 7 Antenna B Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot 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	19.28	19.16	19.49	0	0
	1	25	19.18	19.09	19.49		0
	1	49	19.10	19.09	19.46		0
	25	0	19.28	19.16	19.47	0-1	0
	25	12	19.27	19.15	19.51		0
	25	25	19.18	19.08	19.51		0
	50	0	19.25	19.13	19.44		0
16QAM	1	0	19.59	19.49	19.80	0-1	0
	1	25	19.45	19.34	19.79		0
	1	49	19.35	19.44	19.72		0
	25	0	19.38	19.23	19.54	0-2	0
	25	12	19.36	19.22	19.55		0
	25	25	19.24	19.14	19.56		0
	50	0	19.31	19.17	19.51		0
64QAM	1	0	19.52	19.37	19.71	0-2	0
	1	25	19.43	19.29	19.75		0
	1	49	19.33	19.37	19.64		0
	25	0	19.33	19.21	19.58	0-3	0
	25	12	19.31	19.18	19.51		0
	25	25	19.25	19.13	19.59		0
	50	0	19.30	19.17	19.49		0

Table 9-80
LTE Band 7 Antenna B Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot 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	19.27	19.10	19.59	0	0
	1	12	19.24	19.06	19.52		0
	1	24	19.17	19.03	19.45		0
	12	0	19.34	19.17	19.60	0-1	0
	12	6	19.37	19.17	19.63		0
	12	13	19.27	19.13	19.58		0
	25	0	19.30	19.15	19.61		0
16QAM	1	0	19.62	19.47	19.89	0-1	0
	1	12	19.58	19.38	19.77		0
	1	24	19.47	19.31	19.80		0
	12	0	19.41	19.27	19.68	0-2	0
	12	6	19.45	19.29	19.70		0
	12	13	19.37	19.20	19.62		0
	25	0	19.39	19.21	19.63		0
64QAM	1	0	19.54	19.38	19.83	0-2	0
	1	12	19.45	19.35	19.83		0
	1	24	19.36	19.25	19.71		0
	12	0	19.38	19.21	19.71	0-3	0
	12	6	19.38	19.26	19.74		0
	12	13	19.34	19.18	19.67		0
	25	0	19.35	19.18	19.69		0

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Table 9-81
LTE Band 7 Antenna B Reduced Conducted Powers - 20 MHz Bandwidth – Grip Sensor 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	19.38	**19.45**	19.40	0	0
	1	50	19.17	19.21	19.29		0
	1	99	19.00	19.17	19.14		0
	50	0	19.39	**19.40**	19.39	0-1	0
	50	25	19.37	19.26	19.28		0
	50	50	19.18	19.18	19.25		0
	100	0	19.30	19.24	19.21		0
16QAM	1	0	19.61	19.42	19.51	0-1	0
	1	50	19.56	19.48	19.44		0
	1	99	19.49	19.37	19.42		0
	50	0	19.36	19.26	19.26	0-2	0
	50	25	19.32	19.21	19.20		0
	50	50	19.24	19.17	19.24		0
	100	0	19.27	19.22	19.17		0
64QAM	1	0	19.60	19.42	19.48	0-2	0
	1	50	19.46	19.28	19.39		0
	1	99	19.36	19.42	19.40		0
	50	0	19.42	19.48	19.40	0-3	0
	50	25	19.39	19.38	19.43		0
	50	50	19.42	19.41	19.39		0
	100	0	19.49	19.45	19.46		0

Table 9-82
LTE Band 7 Antenna B Reduced Conducted Powers - 15 MHz Bandwidth – Grip Sensor 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	19.39	19.36	19.36	0	0
	1	36	19.29	19.13	19.24		0
	1	74	19.28	19.12	19.24		0
	36	0	19.38	19.26	19.25	0-1	0
	36	18	19.38	19.25	19.37		0
	36	37	19.35	19.23	19.30		0
	75	0	19.35	19.23	19.21		0
16QAM	1	0	19.72	19.59	19.57	0-1	0
	1	36	19.60	19.47	19.55		0
	1	74	19.59	19.47	19.54		0
	36	0	19.45	19.30	19.33	0-2	0
	36	18	19.43	19.32	19.38		0
	36	37	19.40	19.28	19.31		0
	75	0	19.42	19.28	19.25		0
64QAM	1	0	19.66	19.52	19.52	0-2	0
	1	36	19.55	19.38	19.50		0
	1	74	19.55	19.39	19.49		0
	36	0	19.66	19.52	19.52	0-3	0
	36	18	19.55	19.38	19.50		0
	36	37	19.55	19.39	19.49		0
	75	0	19.66	19.55	19.55		0

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Table 9-83
LTE Band 7 Antenna B Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor 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	19.40	19.25	19.36	0	0
	1	25	19.35	19.19	19.30		0
	1	49	19.32	19.17	19.27		0
	25	0	19.41	19.30	19.40	0-1	0
	25	12	19.41	19.27	19.42		0
	25	25	19.36	19.26	19.35		0
	50	0	19.40	19.28	19.39		0
16QAM	1	0	19.68	19.56	19.63	0-1	0
	1	25	19.65	19.54	19.61		0
	1	49	19.66	19.53	19.59		0
	25	0	19.45	19.34	19.45	0-2	0
	25	12	19.45	19.34	19.45		0
	25	25	19.42	19.32	19.38		0
	50	0	19.45	19.30	19.37		0
64QAM	1	0	19.65	19.51	19.61	0-2	0
	1	25	19.63	19.45	19.54		0
	1	49	19.61	19.44	19.53		0
	25	0	19.48	19.33	19.48	0-3	0
	25	12	19.53	19.36	19.46		0
	25	25	19.49	19.31	19.40		0
	50	0	19.51	19.34	19.42		0

Table 9-84
LTE Band 7 Antenna B Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor 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	19.32	19.20	19.31	0	0
	1	12	19.32	19.17	19.27		0
	1	24	19.30	19.14	19.22		0
	12	0	19.38	19.26	19.34	0-1	0
	12	6	19.38	19.24	19.33		0
	12	13	19.37	19.23	19.30		0
	25	0	19.37	19.21	19.29		0
16QAM	1	0	19.64	19.53	19.57	0-1	0
	1	12	19.62	19.49	19.57		0
	1	24	19.59	19.47	19.50		0
	12	0	19.47	19.30	19.41	0-2	0
	12	6	19.49	19.33	19.41		0
	12	13	19.43	19.31	19.40		0
	25	0	19.41	19.27	19.35		0
64QAM	1	0	19.58	19.43	19.51	0-2	0
	1	12	19.58	19.41	19.50		0
	1	24	19.54	19.36	19.45		0
	12	0	19.49	19.29	19.38	0-3	0
	12	6	19.52	19.35	19.45		0
	12	13	19.46	19.31	19.38		0
	25	0	19.45	19.31	19.40		0

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Table 9-85
LTE Band 7 Antenna A 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	**23.40**	23.20	23.18	0	0
	1	50	23.00	22.90	22.93		0
	1	99	22.91	22.89	22.94		0
	50	0	**22.23**	22.03	22.05	0-1	1
	50	25	22.00	21.96	22.02		1
	50	50	22.08	21.84	21.92		1
	100	0	21.97	21.78	22.00		1
16QAM	1	0	22.81	22.60	22.54	0-1	1
	1	50	22.48	22.34	22.33		1
	1	99	22.14	22.17	22.15		1
	50	0	21.29	21.13	21.20	0-2	2
	50	25	21.20	20.92	21.13		2
	50	50	21.05	20.76	21.02		2
	100	0	21.17	20.90	21.10		2
64QAM	1	0	21.73	21.62	21.80	0-2	2
	1	50	21.48	21.19	21.53		2
	1	99	21.27	21.20	21.62		2
	50	0	20.26	20.10	20.50	0-3	3
	50	25	20.17	20.02	20.41		3
	50	50	20.10	19.85	20.40		3
	100	0	20.11	19.95	20.42		3

Table 9-86
LTE Band 7 Antenna A 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	23.16	23.27	23.30	0	0
	1	36	22.75	23.35	23.29		0
	1	74	22.65	23.54	23.13		0
	36	0	21.94	22.34	22.21	0-1	1
	36	18	21.86	22.31	22.15		1
	36	37	21.71	22.35	22.11		1
	75	0	21.81	22.29	22.15		1
16QAM	1	0	22.56	22.69	22.60	0-1	1
	1	36	22.29	22.82	22.56		1
	1	74	21.99	22.95	22.41		1
	36	0	21.08	21.33	21.31	0-2	2
	36	18	20.97	21.41	21.24		2
	36	37	20.82	21.45	21.28		2
	75	0	20.90	21.39	21.13		2
64QAM	1	0	21.35	21.53	21.97	0-2	2
	1	36	21.05	21.53	21.91		2
	1	74	21.00	21.83	21.70		2
	36	0	20.04	20.29	20.70	0-3	3
	36	18	20.00	20.22	20.62		3
	36	37	19.83	20.24	20.63		3
	75	0	19.90	20.21	20.61		3

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Table 9-87
LTE Band 7 Antenna A 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	23.31	23.17	23.20	0	0
	1	25	23.05	23.24	23.22		0
	1	49	22.91	23.29	23.12		0
	25	0	22.15	22.22	22.17	0-1	1
	25	12	22.06	22.23	22.30		1
	25	25	21.97	22.27	22.17		1
	50	0	22.06	22.22	22.12		1
16QAM	1	0	22.73	22.69	22.57	0-1	1
	1	25	22.40	22.57	22.50		1
	1	49	22.34	22.53	22.46		1
	25	0	21.28	21.30	21.24	0-2	2
	25	12	21.18	21.28	21.28		2
	25	25	21.09	21.31	21.22		2
	50	0	21.11	21.32	21.16		2
64QAM	1	0	21.49	21.50	21.88	0-2	2
	1	25	21.25	21.45	21.85		2
	1	49	21.04	21.55	21.67		2
	25	0	20.25	20.29	20.64	0-3	3
	25	12	20.18	20.33	20.74		3
	25	25	20.02	20.19	20.62		3
	50	0	20.13	20.31	20.58		3

Table 9-88
LTE Band 7 Antenna A 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	23.13	23.08	23.24	0	0
	1	12	23.05	23.21	23.16		0
	1	24	22.86	23.21	23.10		0
	12	0	22.10	22.18	22.20	0-1	1
	12	6	22.13	22.24	22.23		1
	12	13	22.00	22.25	22.16		1
	25	0	22.05	22.18	22.16		1
16QAM	1	0	22.48	22.70	22.48	0-1	1
	1	12	22.35	22.55	22.50		1
	1	24	22.33	22.58	22.48		1
	12	0	21.29	21.34	21.34	0-2	2
	12	6	21.19	21.23	21.35		2
	12	13	21.10	21.22	21.26		2
	25	0	21.17	21.25	21.25		2
64QAM	1	0	21.54	21.29	21.77	0-2	2
	1	12	21.30	21.43	21.85		2
	1	24	21.13	21.31	21.81		2
	12	0	20.20	20.25	20.74	0-3	3
	12	6	20.19	20.25	20.72		3
	12	13	20.07	20.21	20.64		3
	25	0	20.13	20.21	20.64		3

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Table 9-89
LTE Band 7 Antenna A Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot 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	**19.32**	19.10	19.13	0	0
	1	50	18.93	18.70	18.97		0
	1	99	18.81	18.72	19.02		0
	50	0	**19.10**	18.92	19.09	0-1	0
	50	25	18.97	18.86	19.04		0
	50	50	18.83	18.70	19.06		0
	100	0	18.95	18.80	19.03		0
16QAM	1	0	19.62	19.40	19.40	0-1	0
	1	50	19.30	19.11	19.20		0
	1	99	19.18	18.95	19.23		0
	50	0	19.25	19.02	19.16	0-2	0
	50	25	19.09	18.95	19.06		0
	50	50	18.95	18.81	19.04		0
	100	0	19.05	18.88	19.07		0
64QAM	1	0	19.65	19.44	19.33	0-2	0
	1	50	19.33	19.16	19.22		0
	1	99	19.29	19.13	19.41		0
	50	0	19.20	19.06	19.09	0-3	0
	50	25	19.15	18.95	19.09		0
	50	50	19.00	18.81	19.03		0
	100	0	19.04	18.93	19.03		0

Table 9-90
LTE Band 7 Antenna A Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot 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	19.07	19.31	19.13	0	0
	1	36	18.92	19.14	18.96		0
	1	74	18.87	19.10	18.86		0
	36	0	18.99	19.10	18.97	0-1	0
	36	18	18.95	19.09	18.91		0
	36	37	18.89	18.91	18.89		0
	75	0	18.95	19.00	18.89		0
16QAM	1	0	19.54	19.61	19.47	0-1	0
	1	36	19.34	19.35	19.35		0
	1	74	19.26	19.40	19.13		0
	36	0	19.13	19.18	19.01	0-2	0
	36	18	19.13	19.17	19.00		0
	36	37	19.02	19.11	18.88		0
	75	0	19.10	19.08	18.92		0
64QAM	1	0	19.29	19.44	19.26	0-2	0
	1	36	19.10	19.17	19.04		0
	1	74	19.00	19.20	18.94		0
	36	0	19.09	19.21	19.00	0-3	0
	36	18	19.06	19.13	19.00		0
	36	37	18.99	18.99	18.92		0
	75	0	19.05	19.13	18.93		0

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Table 9-91
LTE Band 7 Antenna A Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot 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	19.29	19.19	19.29	0	0
	1	25	19.24	19.03	19.23		0
	1	49	19.19	18.94	19.15		0
	25	0	19.32	19.13	19.22	0-1	0
	25	12	19.26	19.12	19.30		0
	25	25	19.21	18.99	19.21		0
	50	0	19.27	19.05	19.16		0
16QAM	1	0	19.69	19.59	19.60	0-1	0
	1	25	19.73	19.52	19.54		0
	1	49	19.58	19.30	19.51		0
	25	0	19.38	19.22	19.27	0-2	0
	25	12	19.39	19.19	19.33		0
	25	25	19.33	19.09	19.21		0
	50	0	19.34	19.20	19.22		0
64QAM	1	0	19.45	19.55	19.56	0-2	0
	1	25	19.34	19.16	19.47		0
	1	49	19.31	19.05	19.40		0
	25	0	19.35	19.21	19.25	0-3	0
	25	12	19.37	19.22	19.32		0
	25	25	19.30	19.10	19.28		0
	50	0	19.34	19.15	19.21		0

Table 9-92
LTE Band 7 Antenna A Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot 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	19.01	19.11	19.29	0	0
	1	12	18.99	19.09	19.22		0
	1	24	18.99	19.03	19.14		0
	12	0	19.07	19.11	19.26	0-1	0
	12	6	19.08	19.10	19.27		0
	12	13	19.00	19.06	19.19		0
	25	0	18.99	19.04	19.24		0
16QAM	1	0	19.30	19.41	19.63	0-1	0
	1	12	19.34	19.53	19.61		0
	1	24	19.43	19.38	19.47		0
	12	0	19.18	19.23	19.34	0-2	0
	12	6	19.17	19.22	19.37		0
	12	13	19.09	19.20	19.24		0
	25	0	19.12	19.15	19.20		0
64QAM	1	0	19.33	19.30	19.28	0-2	0
	1	12	19.28	19.29	19.31		0
	1	24	19.17	19.41	19.39		0
	12	0	19.19	19.17	19.34	0-3	0
	12	6	19.16	19.23	19.34		0
	12	13	19.07	19.20	19.23		0
	25	0	19.11	19.17	19.29		0

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Table 9-93
LTE Band 7 Antenna A Reduced Conducted Powers - 20 MHz Bandwidth – Grip Sensor 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	**19.78**	19.52	19.48	0	0
	1	50	19.37	19.35	19.35		0
	1	99	19.38	19.33	19.38		0
	50	0	**19.61**	19.31	19.32	0-1	0
	50	25	19.46	19.20	19.35		0
	50	50	19.40	19.21	19.32		0
	100	0	19.31	19.19	19.35		0
16QAM	1	0	20.07	19.80	19.68	0-1	0
	1	50	19.72	19.46	19.60		0
	1	99	19.62	19.47	19.66		0
	50	0	19.59	19.43	19.44	0-2	0
	50	25	19.52	19.34	19.45		0
	50	50	19.32	19.19	19.38		0
	100	0	19.37	19.28	19.48		0
64QAM	1	0	20.05	19.80	19.66	0-2	0
	1	50	19.75	19.53	19.57		0
	1	99	19.61	19.52	19.71		0
	50	0	19.69	19.40	19.43	0-3	0
	50	25	19.52	19.37	19.47		0
	50	50	19.39	19.40	19.43		0
	100	0	19.50	19.46	19.42		0

Table 9-94
LTE Band 7 Antenna A Reduced Conducted Powers - 15 MHz Bandwidth – Grip Sensor 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	19.61	19.50	19.57	0	0
	1	36	19.31	19.46	19.53		0
	1	74	19.21	19.53	19.40		0
	36	0	19.40	19.62	19.52	0-1	0
	36	18	19.35	19.61	19.49		0
	36	37	19.26	19.53	19.48		0
	75	0	19.35	19.57	19.42		0
16QAM	1	0	20.00	20.00	19.95	0-1	0
	1	36	19.79	20.03	19.91		0
	1	74	19.67	20.02	19.81		0
	36	0	19.56	19.64	19.59	0-2	0
	36	18	19.47	19.69	19.53		0
	36	37	19.33	19.63	19.54		0
	75	0	19.41	19.60	19.54		0
64QAM	1	0	19.81	19.89	19.89	0-2	0
	1	36	19.51	19.74	19.75		0
	1	74	19.42	19.98	19.64		0
	36	0	19.48	19.68	19.61	0-3	0
	36	18	19.47	19.65	19.59		0
	36	37	19.33	19.61	19.57		0
	75	0	19.43	19.66	19.57		0

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Table 9-95
LTE Band 7 Antenna A Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor 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	19.75	19.57	19.59	0	0
	1	25	19.60	19.48	19.63		0
	1	49	19.45	19.55	19.50		0
	25	0	19.67	19.50	19.63	0-1	0
	25	12	19.61	19.52	19.70		0
	25	25	19.54	19.47	19.56		0
	50	0	19.60	19.48	19.57		0
16QAM	1	0	20.00	19.91	19.70	0-1	0
	1	25	19.95	19.89	19.61		0
	1	49	19.87	19.98	19.55		0
	25	0	19.73	19.60	19.60	0-2	0
	25	12	19.78	19.58	19.65		0
	25	25	19.64	19.55	19.57		0
	50	0	19.67	19.56	19.56		0
64QAM	1	0	19.81	19.77	19.97	0-2	0
	1	25	19.83	19.70	19.82		0
	1	49	19.72	19.85	19.83		0
	25	0	19.70	19.59	19.69	0-3	0
	25	12	19.69	19.60	19.81		0
	25	25	19.68	19.58	19.68		0
	50	0	19.65	19.55	19.64		0

Table 9-96
LTE Band 7 Antenna A Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor 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	19.64	19.51	19.64	0	0
	1	12	19.55	19.48	19.59		0
	1	24	19.51	19.42	19.54		0
	12	0	19.58	19.45	19.63	0-1	0
	12	6	19.61	19.48	19.68		0
	12	13	19.52	19.49	19.60		0
	25	0	19.56	19.47	19.66		0
16QAM	1	0	20.06	19.98	19.31	0-1	0
	1	12	19.85	19.95	20.08		0
	1	24	19.96	19.86	19.97		0
	12	0	19.69	19.64	19.76	0-2	0
	12	6	19.65	19.69	19.74		0
	12	13	19.65	19.64	19.78		0
	25	0	19.63	19.58	19.71		0
64QAM	1	0	19.80	19.71	19.89	0-2	0
	1	12	19.83	19.69	19.87		0
	1	24	19.75	19.70	19.76		0
	12	0	19.72	19.57	19.80	0-3	0
	12	6	19.67	19.66	19.67		0
	12	13	19.64	19.56	19.60		0
	25	0	19.61	19.56	19.63		0

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9.4.11 LTE Band 41

Table 9-97
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	23.58	**23.84**	23.81	23.78	23.76	0	0
	1	50	23.44	23.69	23.69	23.61	23.55		0
	1	99	23.38	23.66	23.58	23.50	23.50		0
	50	0	22.62	**22.91**	22.90	22.71	22.77	0-1	1
	50	25	22.51	22.87	22.84	22.72	22.64		1
	50	50	22.45	22.74	22.70	22.63	22.60		1
	100	0	22.49	22.79	22.81	22.62	22.64		1
16QAM	1	0	22.77	23.02	23.18	23.18	22.97	0-1	1
	1	50	22.50	22.76	22.96	22.90	22.74		1
	1	99	22.41	22.77	22.99	22.83	22.69		1
	50	0	21.63	21.88	22.04	22.03	21.84	0-2	2
	50	25	21.55	21.88	21.97	21.93	21.79		2
	50	50	21.44	21.77	21.98	21.85	21.69		2
	100	0	21.57	21.91	22.10	21.96	21.80		2
64QAM	1	0	21.66	21.89	22.03	22.02	21.82	0-2	2
	1	50	21.36	21.61	21.81	21.76	21.60		2
	1	99	21.24	21.62	21.84	21.66	21.55		2
	50	0	20.63	20.88	21.05	21.04	20.84	0-3	3
	50	25	20.54	20.92	21.00	20.97	20.80		3
	50	50	20.47	20.80	21.01	20.85	20.71		3
	100	0	20.52	20.85	21.08	20.95	20.77		3

Table 9-98
LTE Band 41 PC3 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	23.72	23.97	24.13	24.11	23.92	0	0
	1	36	23.49	23.76	23.96	23.91	23.73		0
	1	74	23.40	23.75	23.86	23.80	23.64		0
	36	0	22.62	22.84	23.02	23.04	22.83	0-1	1
	36	18	22.58	22.93	22.96	22.98	22.82		1
	36	37	22.48	22.85	22.94	22.88	22.73		1
	75	0	22.53	22.86	22.97	22.94	22.75		1
16QAM	1	0	22.87	23.11	23.25	23.27	23.07	0-1	1
	1	36	22.69	22.92	23.09	23.06	22.89		1
	1	74	22.58	22.92	23.03	22.99	22.82		1
	36	0	21.70	21.98	22.14	22.14	21.93	0-2	2
	36	18	21.66	22.01	22.07	22.06	21.89		2
	36	37	21.56	21.93	22.02	21.98	21.84		2
	75	0	21.62	21.96	22.08	22.03	21.90		2
64QAM	1	0	21.70	21.94	22.11	22.11	21.91	0-2	2
	1	36	21.52	21.76	21.95	21.93	21.75		2
	1	74	21.41	21.78	21.91	21.84	21.69		2
	36	0	20.67	20.96	21.08	21.08	20.90	0-3	3
	36	18	20.64	20.99	21.07	21.04	20.88		3
	36	37	20.57	20.92	21.02	20.98	20.80		3
	75	0	20.63	20.99	21.08	21.05	20.91		3

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Table 9-99
LTE Band 41 PC3 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	23.71	23.95	24.11	24.11	23.97	0	0
	1	25	23.61	23.85	24.02	23.99	23.80		0
	1	49	23.48	23.82	23.97	23.89	23.78		0
	25	0	22.64	22.92	23.08	23.08	22.89	0-1	1
	25	12	22.64	22.96	23.07	23.02	22.88		1
	25	25	22.57	22.90	23.02	22.95	22.81		1
	50	0	22.64	22.99	23.06	23.04	22.88		1
16QAM	1	0	22.86	23.11	23.26	23.25	23.08	0-1	1
	1	25	22.77	23.02	23.20	23.15	22.97		1
	1	49	22.68	23.02	23.12	23.07	22.95		1
	25	0	21.68	21.92	22.09	22.08	21.90	0-2	2
	25	12	21.66	22.00	22.09	22.06	21.91		2
	25	25	21.61	21.95	22.02	22.00	21.86		2
	50	0	21.74	22.06	22.19	22.15	21.95		2
64QAM	1	0	21.75	21.96	22.13	22.14	21.93	0-2	2
	1	25	21.63	21.86	22.06	22.03	21.83		2
	1	49	21.55	21.88	22.03	21.95	21.82		2
	25	0	20.86	21.07	21.26	21.23	21.08	0-3	3
	25	12	20.80	21.13	21.25	21.22	21.02		3
	25	25	20.74	21.06	21.18	21.13	20.98		3
	50	0	20.77	21.11	21.19	21.14	20.97		3

Table 9-100
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	23.66	23.85	24.07	24.05	23.86	0	0
	1	12	23.63	23.85	24.01	23.97	23.80		0
	1	24	23.56	23.85	23.96	23.93	23.78		0
	12	0	22.61	22.85	23.03	23.03	22.85	0-1	1
	12	6	22.62	22.86	23.02	23.04	22.86		1
	12	13	22.57	22.95	23.00	22.98	22.78		1
	25	0	22.59	22.95	23.05	23.02	22.84		1
16QAM	1	0	22.80	23.07	23.23	23.20	23.00	0-1	1
	1	12	22.78	23.03	23.20	23.16	22.98		1
	1	24	22.74	23.04	23.19	23.12	22.92		1
	12	0	21.74	22.00	22.15	22.16	21.95	0-2	2
	12	6	21.77	22.02	22.20	22.14	21.99		2
	12	13	21.68	22.05	22.13	22.08	21.92		2
	25	0	21.62	21.98	22.05	22.02	21.87		2
64QAM	1	0	21.68	21.91	22.08	22.07	21.86	0-2	2
	1	12	21.64	21.89	22.09	22.05	21.83		2
	1	24	21.58	21.92	22.05	21.96	21.79		2
	12	0	20.66	20.92	21.08	21.06	20.88	0-3	3
	12	6	20.67	20.90	21.10	21.06	20.88		3
	12	13	20.61	20.94	21.08	21.03	20.84		3
	25	0	20.77	21.12	21.22	21.16	20.99		3

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Table 9-101
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot 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	21.09	21.16	**21.17**	20.97	21.09	0	0
	1	50	20.92	20.77	20.78	20.76	20.82		0
	1	99	20.84	20.66	20.74	20.72	20.69		0
	50	0	21.02	21.15	**21.16**	20.94	20.92	0-1	0
	50	25	20.92	20.91	21.02	20.86	20.83		0
	50	50	20.89	20.84	20.93	20.74	20.79		0
	100	0	20.99	20.92	21.06	20.82	20.84		0
16QAM	1	0	21.11	21.07	21.12	21.03	21.07	0-1	0
	1	50	20.90	20.88	20.92	20.78	20.88		0
	1	99	20.89	20.83	20.92	20.79	20.85		0
	50	0	21.01	21.00	21.03	20.92	20.99	0-2	0
	50	25	20.96	20.96	21.08	20.83	20.93		0
	50	50	20.91	20.88	20.98	20.74	20.86		0
	100	0	20.98	20.98	21.09	20.85	20.95		0
64QAM	1	0	20.97	20.95	21.05	20.94	20.95	0-2	0
	1	50	20.77	20.74	20.81	20.65	20.77		0
	1	99	20.75	20.70	20.83	20.69	20.70		0
	50	0	20.03	20.02	20.05	19.93	20.01	0-3	0.5
	50	25	19.98	19.96	20.09	19.86	19.94		0.5
	50	50	19.94	19.91	20.00	19.77	19.88		0.5
	100	0	19.96	19.95	20.06	19.86	19.92		0.5

Table 9-102
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot 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	20.97	20.98	21.02	20.86	20.92	0	0
	1	36	20.82	20.79	20.83	20.69	20.76		0
	1	74	20.74	20.77	20.80	20.69	20.65		0
	36	0	20.90	20.86	20.93	20.80	20.83	0-1	0
	36	18	20.88	20.85	20.86	20.75	20.82		0
	36	37	20.82	20.81	20.88	20.67	20.75		0
	75	0	20.83	20.80	20.92	20.71	20.80		0
16QAM	1	0	21.07	21.02	21.07	20.96	21.03	0-1	0
	1	36	20.93	20.88	20.90	20.78	20.88		0
	1	74	20.90	20.83	20.91	20.82	20.82		0
	36	0	20.96	20.96	21.00	20.86	20.93	0-2	0
	36	18	20.97	20.93	20.94	20.82	20.87		0
	36	37	20.92	20.86	20.98	20.76	20.84		0
	75	0	20.93	20.91	21.03	20.80	20.89		0
64QAM	1	0	20.93	20.90	21.00	20.87	20.90	0-2	0
	1	36	20.79	20.73	20.83	20.68	20.76		0
	1	74	20.76	20.73	20.83	20.70	20.70		0
	36	0	19.97	19.94	19.97	19.85	19.95	0-3	0.5
	36	18	19.95	19.94	19.95	19.80	19.88		0.5
	36	37	19.88	19.86	19.98	19.73	19.83		0.5
	75	0	19.96	19.93	20.04	19.82	19.93		0.5

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Table 9-103
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot 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	20.91	20.86	20.96	20.81	20.87	0	0
	1	25	20.82	20.77	20.82	20.70	20.74		0
	1	49	20.73	20.75	20.84	20.60	20.68		0
	25	0	20.82	20.82	20.87	20.73	20.78	0-1	0
	25	12	20.87	20.81	20.85	20.73	20.78		0
	25	25	20.76	20.76	20.88	20.66	20.73		0
	50	0	20.82	20.79	20.92	20.70	20.82		0
16QAM	1	0	21.02	20.97	21.00	20.88	20.98	0-1	0
	1	25	20.97	20.89	20.92	20.81	20.88		0
	1	49	20.94	20.84	20.95	20.74	20.84		0
	25	0	20.87	20.85	20.85	20.76	20.84	0-2	0
	25	12	20.90	20.81	20.87	20.75	20.82		0
	25	25	20.84	20.78	20.88	20.67	20.77		0
	50	0	20.96	20.90	21.05	20.81	20.91		0
64QAM	1	0	20.88	20.83	20.94	20.81	20.88	0-2	0
	1	25	20.82	20.79	20.84	20.71	20.76		0
	1	49	20.79	20.74	20.87	20.64	20.75		0
	25	0	20.04	19.98	20.01	19.91	19.99	0-3	0.5
	25	12	20.04	20.01	20.03	19.89	19.97		0.5
	25	25	19.97	19.94	20.07	19.82	19.92		0.5
	50	0	19.94	19.93	20.06	19.83	19.92		0.5

Table 9-104
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot 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	20.84	20.81	20.87	20.73	20.77	0	0
	1	12	20.83	20.79	20.85	20.69	20.74		0
	1	24	20.76	20.74	20.77	20.62	20.68		0
	12	0	20.85	20.78	20.87	20.73	20.76	0-1	0
	12	6	20.86	20.83	20.88	20.74	20.76		0
	12	13	20.81	20.78	20.81	20.67	20.73		0
	25	0	20.80	20.75	20.84	20.68	20.75		0
16QAM	1	0	21.00	20.94	20.97	20.87	20.91	0-1	0
	1	12	20.97	20.89	20.91	20.82	20.89		0
	1	24	20.92	20.86	20.88	20.76	20.85		0
	12	0	20.96	20.93	20.91	20.79	20.87	0-2	0
	12	6	20.97	20.96	20.93	20.81	20.88		0
	12	13	20.94	20.88	20.91	20.77	20.86		0
	25	0	20.85	20.81	20.84	20.70	20.78		0
64QAM	1	0	20.86	20.81	20.91	20.75	20.80	0-2	0
	1	12	20.82	20.77	20.85	20.73	20.78		0
	1	24	20.81	20.74	20.79	20.67	20.72		0
	12	0	19.88	19.82	19.84	19.74	19.80	0-3	0.5
	12	6	19.87	19.83	19.86	19.74	19.81		0.5
	12	13	19.84	19.78	19.81	19.68	19.77		0.5
	25	0	20.01	19.98	19.97	19.87	19.97		0.5

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Table 9-105
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth – Grip Sensor 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	22.49	22.64	22.55	22.50	**22.65**	0	0
	1	50	22.50	22.41	22.26	22.33	22.36		0
	1	99	22.53	22.30	22.29	22.26	22.24		0
	50	0	22.65	22.75	22.47	22.44	**22.79**	0-1	0
	50	25	22.63	22.48	22.46	22.40	22.51		0
	50	50	22.76	22.45	22.35	22.32	22.36		0
	100	0	22.41	22.39	22.54	22.32	22.32		0
16QAM	1	0	22.80	22.70	22.76	22.63	22.71	0-1	0
	1	50	22.57	22.49	22.53	22.45	22.53		0
	1	99	22.53	22.46	22.53	22.37	22.47		0
	50	0	21.74	21.90	22.10	22.09	21.97	0-2	1
	50	25	21.65	21.96	22.04	21.98	21.90		1
	50	50	21.56	21.89	22.10	21.89	21.83		1
	100	0	21.69	22.02	22.16	21.99	21.92		1
64QAM	1	0	21.71	21.95	22.09	22.09	21.91	0-2	1
	1	50	21.44	21.68	21.87	21.79	21.70		1
	1	99	21.33	21.70	21.92	21.79	21.69		1
	50	0	20.77	20.99	21.12	21.10	21.01	0-3	2
	50	25	20.68	21.02	21.08	21.01	20.92		2
	50	50	20.58	20.91	21.10	20.90	20.86		2
	100	0	20.66	20.98	21.13	20.97	20.91		2

Table 9-106
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth – Grip Sensor 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	22.59	22.49	22.54	22.50	22.51	0	0
	1	36	22.41	22.36	22.36	22.29	22.38		0
	1	74	22.32	22.29	22.34	22.20	22.26		0
	36	0	22.51	22.40	22.47	22.39	22.49	0-1	0
	36	18	22.49	22.43	22.41	22.35	22.44		0
	36	37	22.43	22.35	22.44	22.29	22.38		0
	75	0	22.44	22.39	22.48	22.34	22.44		0
16QAM	1	0	22.77	22.65	22.71	22.66	22.70	0-1	0
	1	36	22.60	22.49	22.52	22.45	22.54		0
	1	74	22.54	22.47	22.55	22.39	22.46		0
	36	0	21.72	21.96	22.11	22.07	21.94	0-2	1
	36	18	21.67	21.99	22.02	21.97	21.90		1
	36	37	21.61	21.91	22.01	21.93	21.81		1
	75	0	21.64	21.97	22.04	21.97	21.90		1
64QAM	1	0	21.67	21.92	22.04	22.01	21.89	0-2	1
	1	36	21.50	21.72	21.91	21.83	21.75		1
	1	74	21.40	21.76	21.86	21.84	21.68		1
	36	0	20.72	20.96	21.05	21.02	20.96	0-3	2
	36	18	20.65	21.00	21.06	20.98	20.91		2
	36	37	20.57	20.92	20.98	20.88	20.84		2
	75	0	20.67	21.01	21.07	21.01	20.94		2

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Table 9-107
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor 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	22.53	22.44	22.45	22.40	22.49	0	0
	1	25	22.44	22.34	22.37	22.30	22.37		0
	1	49	22.31	22.21	22.33	22.20	22.30		0
	25	0	22.48	22.38	22.42	22.36	22.42	0-1	0
	25	12	22.46	22.39	22.38	22.33	22.43		0
	25	25	22.39	22.32	22.40	22.25	22.36		0
	50	0	22.47	22.37	22.50	22.33	22.43		0
16QAM	1	0	22.66	22.57	22.65	22.57	22.60	0-1	0
	1	25	22.60	22.51	22.54	22.47	22.53		0
	1	49	22.55	22.43	22.57	22.40	22.50		0
	25	0	21.59	21.80	21.98	21.92	21.83	0-2	1
	25	12	21.60	21.94	21.97	21.91	21.84		1
	25	25	21.55	21.87	21.91	21.83	21.81		1
	50	0	21.67	21.99	22.03	21.98	21.93		1
64QAM	1	0	21.60	21.86	22.01	21.96	21.84	0-2	1
	1	25	21.51	21.75	21.93	21.86	21.75		1
	1	49	21.42	21.78	21.89	21.79	21.72		1
	25	0	20.74	21.00	21.14	21.11	21.01	0-3	2
	25	12	20.73	21.04	21.10	21.07	20.98		2
	25	25	20.68	20.98	21.10	21.00	20.93		2
	50	0	20.70	21.01	21.06	21.02	20.94		2

Table 9-108
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor 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	22.44	22.33	22.36	22.30	22.37	0	0
	1	12	22.43	22.32	22.34	22.27	22.35		0
	1	24	22.36	22.25	22.30	22.21	22.28		0
	12	0	22.44	22.33	22.37	22.31	22.42	0-1	0
	12	6	22.43	22.35	22.40	22.36	22.39		0
	12	13	22.42	22.30	22.32	22.29	22.34		0
	25	0	22.41	22.34	22.35	22.31	22.40		0
16QAM	1	0	22.65	22.51	22.60	22.53	22.52	0-1	0
	1	12	22.59	22.49	22.51	22.46	22.51		0
	1	24	22.55	22.46	22.50	22.43	22.49		0
	12	0	21.69	21.90	22.04	21.99	21.87	0-2	1
	12	6	21.66	21.93	22.08	21.98	21.88		1
	12	13	21.64	21.97	22.00	21.93	21.86		1
	25	0	21.54	21.91	21.95	21.90	21.80		1
64QAM	1	0	21.55	21.78	21.96	21.91	21.79	0-2	1
	1	12	21.53	21.74	21.91	21.85	21.74		1
	1	24	21.48	21.80	21.88	21.80	21.70		1
	12	0	20.60	20.81	20.98	20.95	20.79	0-3	2
	12	6	20.60	20.83	20.98	20.92	20.81		2
	12	13	20.56	20.85	20.95	20.88	20.75		2
	25	0	20.71	21.06	21.12	21.03	20.94		2

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Table 9-109
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	27.11	**27.14**	26.85	26.99	26.92	0	0
	1	50	26.94	26.90	26.83	26.83	26.74		0
	1	99	26.90	26.87	26.75	26.73	26.66		0
	50	0	26.14	**26.15**	26.08	25.94	25.99	0-1	1
	50	25	26.04	26.04	26.00	25.91	25.88		1
	50	50	26.08	25.92	25.93	25.85	25.80		1
	100	0	26.00	25.99	26.01	25.83	25.93		1
16QAM	1	0	26.39	26.62	26.63	26.61	26.43	0-1	1
	1	50	26.13	26.37	26.60	26.55	26.48		1
	1	99	25.99	26.39	26.63	26.57	26.38		1
	50	0	25.26	25.26	25.47	25.41	25.34	0-2	2
	50	25	24.95	25.27	25.40	25.33	25.29		2
	50	50	24.83	25.23	25.40	25.23	25.22		2
	100	0	24.95	25.29	25.50	25.36	25.29		2
64QAM	1	0	25.09	25.34	25.52	25.53	25.23	0-2	2
	1	50	24.84	25.09	25.32	25.26	25.19		2
	1	99	24.73	25.13	25.35	25.27	25.16		2
	50	0	24.03	24.24	24.46	24.44	24.35	0-3	3
	50	25	23.95	24.27	24.39	24.36	24.31		3
	50	50	23.82	24.19	24.41	24.26	24.24		3
	100	0	23.94	24.31	24.48	24.34	24.31		3

Table 9-110
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	26.91	27.17	27.36	27.33	27.26	0	0
	1	36	26.72	26.96	27.17	27.12	27.08		0
	1	74	26.62	27.00	27.14	27.16	27.03		0
	36	0	25.89	26.10	26.31	26.31	26.20	0-1	1
	36	18	25.82	26.16	26.27	26.24	26.19		1
	36	37	25.74	26.10	26.20	26.16	26.10		1
	75	0	25.79	26.15	26.22	26.20	26.14		1
16QAM	1	0	26.34	26.58	26.77	26.75	26.61	0-1	1
	1	36	26.13	26.37	26.62	26.56	26.46		1
	1	74	26.01	26.42	26.58	26.59	26.39		1
	36	0	25.00	25.18	25.45	25.41	25.29	0-2	2
	36	18	24.92	25.28	25.38	25.36	25.28		2
	36	37	24.86	25.19	25.32	25.26	25.21		2
	75	0	24.91	25.27	25.36	25.33	25.24		2
64QAM	1	0	25.11	25.33	25.54	25.51	25.41	0-2	2
	1	36	24.91	25.18	25.41	25.34	25.27		2
	1	74	24.81	25.21	25.36	25.36	25.22		2
	36	0	23.96	24.21	24.41	24.39	24.33	0-3	3
	36	18	23.95	24.29	24.39	24.36	24.30		3
	36	37	23.85	24.20	24.33	24.27	24.23		3
	75	0	23.91	24.29	24.40	24.33	24.27		3

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Table 9-111
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	26.84	27.08	27.27	27.27	27.24	0	0
	1	25	26.71	26.96	27.19	27.15	27.07		0
	1	49	26.62	26.98	27.11	27.04	27.07		0
	25	0	25.82	26.05	26.28	26.25	26.18	0-1	1
	25	12	25.81	26.18	26.25	26.19	26.15		1
	25	25	25.73	26.09	26.17	26.14	26.11		1
	50	0	25.80	26.15	26.27	26.20	26.16		1
16QAM	1	0	26.24	26.49	26.68	26.65	26.55	0-1	1
	1	25	26.12	26.40	26.64	26.57	26.46		1
	1	49	26.06	26.46	26.57	26.51	26.45		1
	25	0	24.90	25.12	25.34	25.26	25.23	0-2	2
	25	12	24.88	25.22	25.32	25.27	25.17		2
	25	25	24.78	25.16	25.27	25.22	25.13		2
	50	0	24.93	25.29	25.38	25.31	25.25		2
64QAM	1	0	25.01	25.28	25.50	25.46	25.36	0-2	2
	1	25	24.94	25.20	25.40	25.34	25.26		2
	1	49	24.82	25.21	25.36	25.25	25.24		2
	25	0	24.02	24.24	24.47	24.43	24.35	0-3	3
	25	12	24.00	24.36	24.45	24.39	24.36		3
	25	25	23.93	24.30	24.39	24.34	24.31		3
	50	0	23.93	24.27	24.39	24.34	24.30		3

Table 9-112
LTE Band 41 PC2 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	26.98	27.17	27.39	27.39	27.04	0	0
	1	12	26.66	26.91	27.14	27.08	27.05		0
	1	24	26.56	26.95	27.17	27.09	26.98		0
	12	0	25.73	25.95	26.20	26.16	26.10	0-1	1
	12	6	25.76	25.96	26.22	26.16	26.07		1
	12	13	25.72	26.03	26.15	26.11	26.07		1
	25	0	25.74	26.10	26.19	26.15	26.08		1
16QAM	1	0	26.14	26.38	26.62	26.56	26.47	0-1	1
	1	12	26.11	26.34	26.60	26.57	26.44		1
	1	24	26.04	26.39	26.55	26.47	26.40		1
	12	0	24.94	25.14	25.39	25.33	25.26	0-2	2
	12	6	24.91	25.18	25.39	25.34	25.27		2
	12	13	24.86	25.21	25.34	25.30	25.20		2
	25	0	24.80	25.15	25.25	25.21	25.13		2
64QAM	1	0	24.94	25.20	25.41	25.37	25.30	0-2	2
	1	12	24.96	25.18	25.39	25.37	25.28		2
	1	24	24.86	25.22	25.38	25.27	25.24		2
	12	0	23.90	24.13	24.32	24.28	24.17	0-3	3
	12	6	23.89	24.13	24.36	24.30	24.19		3
	12	13	23.85	24.19	24.28	24.22	24.13		3
	25	0	23.98	24.32	24.42	24.38	24.31		3

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Table 9-113
LTE Band 41 PC2 Reduced Conducted Powers - 20 MHz Bandwidth – Hotspot 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	21.05	**21.16**	21.09	21.05	20.94	0	0
	1	50	20.84	20.95	20.86	20.91	20.70		0
	1	99	20.82	20.83	20.83	20.84	20.64		0
	50	0	21.00	**21.10**	20.99	20.98	20.91	0-1	0
	50	25	20.94	20.92	21.08	20.91	20.80		0
	50	50	20.87	20.81	20.91	20.77	20.79		0
	100	0	20.94	20.94	21.03	20.85	20.88		0
16QAM	1	0	21.32	21.29	21.32	21.27	21.31	0-1	0
	1	50	21.15	21.11	21.11	21.03	21.11		0
	1	99	21.12	21.03	21.13	21.03	21.05		0
	50	0	21.01	21.00	21.06	20.91	21.00	0-2	0
	50	25	20.97	20.96	21.06	20.83	20.92		0
	50	50	20.93	20.87	21.00	20.76	20.85		0
	100	0	21.01	20.99	21.10	20.86	20.93		0
64QAM	1	0	21.10	21.03	21.16	21.02	21.03	0-2	0
	1	50	20.89	20.84	20.89	20.75	20.85		0
	1	99	20.83	20.79	20.91	20.78	20.78		0
	50	0	21.15	21.14	21.25	21.21	21.11	0-3	0
	50	25	21.06	21.08	21.18	21.11	21.02		0
	50	50	21.00	21.03	21.25	21.01	20.94		0
	100	0	21.08	21.11	21.26	21.12	21.05		0

Table 9-114
LTE Band 41 PC2 Reduced Conducted Powers - 15 MHz Bandwidth – Hotspot 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	21.00	20.96	21.04	20.89	20.91	0	0
	1	36	20.86	20.79	20.84	20.70	20.76		0
	1	74	20.82	20.74	20.81	20.67	20.66		0
	36	0	20.92	20.87	20.90	20.79	20.83	0-1	0
	36	18	20.89	20.85	20.87	20.76	20.82		0
	36	37	20.83	20.77	20.92	20.68	20.75		0
	75	0	20.84	20.79	20.93	20.70	20.80		0
16QAM	1	0	21.24	21.26	21.28	21.21	21.28	0-1	0
	1	36	21.13	21.10	21.13	21.02	21.15		0
	1	74	21.13	21.05	21.14	21.05	21.07		0
	36	0	21.00	20.97	20.96	20.86	20.94	0-2	0
	36	18	20.98	20.93	20.94	20.83	20.90		0
	36	37	20.93	20.91	21.00	20.75	20.86		0
	75	0	20.96	20.90	21.03	20.79	20.89		0
64QAM	1	0	21.09	21.04	21.15	21.02	21.05	0-2	0
	1	36	20.94	20.92	20.99	20.82	20.93		0
	1	74	20.87	20.88	20.98	20.87	20.85		0
	36	0	21.11	21.04	21.23	21.13	21.04	0-3	0
	36	18	21.06	21.09	21.15	21.08	21.00		0
	36	37	20.98	21.01	21.10	21.02	20.93		0
	75	0	21.05	21.09	21.18	21.08	21.01		0

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Table 9-115
LTE Band 41 PC2 Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot 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	20.90	20.86	20.94	20.78	20.85	0	0
	1	25	20.82	20.77	20.81	20.68	20.71		0
	1	49	20.71	20.70	20.81	20.58	20.68		0
	25	0	20.84	20.83	20.88	20.74	20.78	0-1	0
	25	12	20.84	20.83	20.88	20.73	20.81		0
	25	25	20.80	20.76	20.86	20.65	20.74		0
	50	0	20.86	20.78	20.93	20.71	20.79		0
16QAM	1	0	21.20	21.17	21.20	21.11	21.22	0-1	0
	1	25	21.19	21.12	21.14	21.04	21.13		0
	1	49	21.14	21.04	21.17	20.97	21.09		0
	25	0	20.88	20.84	20.88	20.79	20.85	0-2	0
	25	12	20.91	20.84	20.84	20.76	20.81		0
	25	25	20.83	20.78	20.93	20.67	20.76		0
	50	0	20.95	20.95	21.04	20.79	20.90		0
64QAM	1	0	21.06	20.99	21.06	20.98	21.03	0-2	0
	1	25	20.96	20.95	21.00	20.87	20.93		0
	1	49	20.91	20.88	21.00	20.83	20.89		0
	25	0	21.13	21.11	21.22	21.20	21.09	0-3	0
	25	12	21.12	21.17	21.23	21.15	21.10		0
	25	25	21.08	21.09	21.14	21.09	21.00		0
	50	0	21.06	21.08	21.17	21.08	21.05		0

Table 9-116
LTE Band 41 PC2 Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot 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	20.85	20.80	20.85	20.74	20.74	0	0
	1	12	20.80	20.77	20.80	20.67	20.72		0
	1	24	20.77	20.74	20.80	20.62	20.68		0
	12	0	20.80	20.80	20.84	20.74	20.78	0-1	0
	12	6	20.82	20.84	20.89	20.73	20.77		0
	12	13	20.80	20.77	20.83	20.68	20.75		0
	25	0	20.78	20.77	20.80	20.68	20.75		0
16QAM	1	0	21.22	21.13	21.15	21.06	21.15	0-1	0
	1	12	21.21	21.10	21.13	21.05	21.12		0
	1	24	21.16	21.07	21.08	20.97	21.10		0
	12	0	21.00	20.97	20.98	20.84	20.91	0-2	0
	12	6	21.01	20.97	20.99	20.86	20.93		0
	12	13	20.93	20.91	20.91	20.81	20.89		0
	25	0	20.88	20.82	20.86	20.72	20.80		0
64QAM	1	0	20.98	20.93	20.99	20.90	20.93	0-2	0
	1	12	20.93	20.91	20.93	20.81	20.86		0
	1	24	20.93	21.02	20.91	20.95	20.87		0
	12	0	20.99	20.94	21.05	21.01	20.95	0-3	0
	12	6	20.97	20.92	21.10	21.03	20.87		0
	12	13	20.93	20.95	21.08	20.95	20.90		0
	25	0	21.08	21.10	21.17	21.12	21.00		0

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Table 9-117
LTE Band 41 PC2 Reduced Conducted Powers - 20 MHz Bandwidth – Grip Sensor 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	22.50	22.46	**22.61**	22.45	22.49	0	0
	1	50	22.32	22.25	22.33	22.29	22.23		0
	1	99	22.21	22.13	22.35	22.15	22.19		0
	50	0	**22.53**	22.51	22.44	22.44	22.43	0-1	0
	50	25	22.44	22.45	22.51	22.42	22.38		0
	50	50	22.39	22.32	22.38	22.31	22.27		0
	100	0	22.49	22.47	22.52	22.40	22.35		0
16QAM	1	0	22.99	22.93	23.03	23.01	22.88	0-1	0
	1	50	22.73	22.66	22.83	22.73	22.64		0
	1	99	22.63	22.67	22.89	22.79	22.61		0
	50	0	22.63	22.55	22.68	22.65	22.57	0-2	0
	50	25	22.55	22.58	22.62	22.57	22.48		0
	50	50	22.47	22.47	22.64	22.47	22.44		0
	100	0	22.57	22.57	22.73	22.55	22.52		0
64QAM	1	0	22.68	22.62	22.75	22.74	22.63	0-2	0
	1	50	22.41	22.37	22.50	22.45	22.34		0
	1	99	22.36	22.37	22.58	22.44	22.35		0
	50	0	22.66	22.57	22.72	22.64	22.57	0-3	0
	50	25	22.55	22.57	22.61	22.58	22.49		0
	50	50	22.47	22.48	22.69	22.48	22.45		0
	100	0	22.57	22.58	22.72	22.58	22.52		0

Table 9-118
LTE Band 41 PC2 Reduced Conducted Powers - 15 MHz Bandwidth – Grip Sensor 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	22.85	22.73	22.87	22.91	22.78	0	0
	1	36	22.64	22.56	22.68	22.70	22.63		0
	1	74	22.50	22.48	22.69	22.62	22.60		0
	36	0	22.77	22.64	22.75	22.81	22.75	0-1	0
	36	18	22.67	22.61	22.74	22.76	22.73		0
	36	37	22.59	22.54	22.77	22.70	22.64		0
	75	0	22.48	22.52	22.55	22.50	22.45		0
16QAM	1	0	22.99	22.93	23.08	23.02	22.86	0-1	0
	1	36	22.80	22.73	22.89	22.82	22.74		0
	1	74	22.67	22.77	22.85	22.83	22.66		0
	36	0	22.63	22.60	22.69	22.64	22.58	0-2	0
	36	18	22.59	22.63	22.69	22.63	22.55		0
	36	37	22.54	22.55	22.62	22.54	22.51		0
	75	0	22.59	22.59	22.66	22.60	22.51		0
64QAM	1	0	22.76	22.69	22.80	22.83	22.72	0-2	0
	1	36	22.60	22.50	22.66	22.61	22.56		0
	1	74	22.56	22.55	22.64	22.58	22.50		0
	36	0	22.73	22.63	22.76	22.74	22.67	0-3	0
	36	18	22.66	22.71	22.74	22.66	22.60		0
	36	37	22.57	22.63	22.65	22.59	22.58		0
	75	0	22.68	22.69	22.74	22.67	22.58		0

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Table 9-119
LTE Band 41 PC2 Reduced Conducted Powers - 10 MHz Bandwidth – Grip Sensor 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	22.73	22.65	22.73	22.82	22.76	0	0
	1	25	22.62	22.53	22.64	22.70	22.59		0
	1	49	22.50	22.43	22.68	22.62	22.56		0
	25	0	22.71	22.65	22.72	22.76	22.68	0-1	0
	25	12	22.66	22.60	22.74	22.75	22.70		0
	25	25	22.58	22.52	22.77	22.66	22.63		0
	50	0	22.66	22.60	22.80	22.72	22.71		0
16QAM	1	0	23.04	23.02	23.06	23.09	23.11	0-1	0
	1	25	23.03	22.97	23.09	23.11	23.03		0
	1	49	22.99	22.86	23.04	23.05	23.02		0
	25	0	22.77	22.69	22.82	22.85	22.74	0-2	0
	25	12	22.71	22.65	22.80	22.82	22.73		0
	25	25	22.65	22.57	22.82	22.71	22.65		0
	50	0	22.81	22.69	22.93	22.85	22.84		0
64QAM	1	0	22.88	22.77	22.89	23.00	22.92	0-2	0
	1	25	22.77	22.71	22.83	22.88	22.83		0
	1	49	22.70	22.61	22.86	22.77	22.79		0
	25	0	22.73	22.66	22.78	22.73	22.67	0-3	0
	25	12	22.75	22.76	22.78	22.74	22.68		0
	25	25	22.64	22.69	22.72	22.65	22.61		0
	50	0	22.64	22.65	22.72	22.68	22.58		0

Table 9-120
LTE Band 41 PC2 Reduced Conducted Powers - 5 MHz Bandwidth – Grip Sensor 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	22.65	22.61	22.72	22.76	22.64	0	0
	1	12	22.61	22.54	22.66	22.70	22.59		0
	1	24	22.55	22.52	22.61	22.64	22.58		0
	12	0	22.64	22.58	22.71	22.75	22.65	0-1	0
	12	6	22.67	22.60	22.70	22.73	22.65		0
	12	13	22.60	22.55	22.69	22.67	22.60		0
	25	0	22.64	22.55	22.67	22.71	22.65		0
16QAM	1	0	23.09	22.96	23.00	22.99	23.08	0-1	0
	1	12	23.06	22.95	23.08	23.11	23.01		0
	1	24	22.97	22.92	23.04	23.07	22.98		0
	12	0	22.85	22.77	22.88	22.93	22.83	0-2	0
	12	6	22.81	22.76	22.89	22.92	22.86		0
	12	13	22.77	22.69	22.82	22.88	22.81		0
	25	0	22.70	22.63	22.75	22.77	22.71		0
64QAM	1	0	22.83	22.71	22.88	22.95	22.82	0-2	0
	1	12	22.80	22.73	22.82	22.90	22.78		0
	1	24	22.73	22.68	22.80	22.85	22.76		0
	12	0	22.54	22.49	22.67	22.59	22.48	0-3	0
	12	6	22.59	22.48	22.63	22.57	22.46		0
	12	13	22.50	22.53	22.59	22.52	22.43		0
	25	0	22.67	22.68	22.73	22.66	22.57		0

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9.4.12 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-121
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 (1)	LTE B41	20	40185	2549.5	QPSK	1	0	LTE B41	20	39987	2529.7	QPSK	1	99	23.98	23.84

Table 9-122
LTE Uplink Carrier Aggregation Reduced Conducted Powers – Hotspot Mode Active

Combination	PCC							SCC							Power	
	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 (1)	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	21.04	20.84
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	1	0	LTE B41	20	39987	2529.7	QPSK	1	99	21.09	21.16
CA_41C (1)	LTE B41	20	40620	2593.0	QPSK	1	0	LTE B41	20	40422	2573.2	QPSK	1	99	21.19	21.17
CA_41C (1)	LTE B41	20	41055	2636.5	QPSK	1	0	LTE B41	20	40857	2616.7	QPSK	1	99	21.00	20.97
CA_41C (1)	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	21.06	21.09
CA_41C (1)	LTE B41	20	39750	2506.0	QPSK	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	20.87	20.89
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	50	0	LTE B41	20	39987	2529.7	QPSK	50	50	21.05	21.15
CA_41C (1)	LTE B41	20	40620	2593.0	QPSK	50	0	LTE B41	20	40422	2573.2	QPSK	50	50	20.95	21.16
CA_41C (1)	LTE B41	20	41055	2636.5	QPSK	50	0	LTE B41	20	40857	2616.7	QPSK	50	50	20.86	20.94
CA_41C (1)	LTE B41	20	41490	2680.0	QPSK	50	0	LTE B41	20	41292	2660.2	QPSK	50	50	20.88	20.92

Table 9-123
LTE Uplink Carrier Aggregation Reduced Conducted Powers – Grip Sensor Active

Combination	PCC							SCC							Power	
	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 (1)	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	22.77	22.53
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	1	0	LTE B41	20	39987	2529.7	QPSK	1	99	22.74	22.64
CA_41C (1)	LTE B41	20	40620	2593.0	QPSK	1	0	LTE B41	20	40422	2573.2	QPSK	1	99	22.62	22.55
CA_41C (1)	LTE B41	20	41055	2636.5	QPSK	1	0	LTE B41	20	40857	2616.7	QPSK	1	99	22.56	22.50
CA_41C (1)	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	22.63	22.65
CA_41C (1)	LTE B41	20	39750	2506.0	QPSK	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	22.74	22.76
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	50	0	LTE B41	20	39987	2529.7	QPSK	50	50	22.64	22.75
CA_41C (1)	LTE B41	20	40620	2593.0	QPSK	50	0	LTE B41	20	40422	2573.2	QPSK	50	50	22.67	22.47
CA_41C (1)	LTE B41	20	41055	2636.5	QPSK	50	0	LTE B41	20	40857	2616.7	QPSK	50	50	22.58	22.44
CA_41C (1)	LTE B41	20	41490	2680.0	QPSK	50	0	LTE B41	20	41292	2660.2	QPSK	50	50	22.48	22.79

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.
3. Uplink carrier aggregation is only possible when the device is operating with Power Class 3 for LTE Band 41.

Figure 9-4
Power Measurement Setup

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9.5 WLAN Conducted Powers

Table 9-124
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
		Average	Average	Average
2412	1	20.18	16.80	16.77
2417	2	N/A	17.43	17.41
2437	6	**20.77**	17.42	17.41
2457	10	N/A	17.54	17.51
2462	11	20.15	15.82	15.84

Table 9-125
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
		Average	Average	Average
2412	1	20.19	16.83	16.65
2417	2	N/A	17.37	17.98
2437	6	**20.24**	17.93	17.91
2457	10	N/A	17.82	17.64
2462	11	20.08	15.98	15.74

Table 9-126
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.77	16.65	19.72
2417	2	**17.41**	**17.98**	**20.71**
2437	6	17.41	17.91	20.68
2457	10	17.51	17.64	20.59
2462	11	15.84	15.74	18.80

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Table 9-127
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
		Average	Average	Average
5180	36	17.24	17.14	17.27
5200	40	17.24	17.23	17.24
5220	44	17.28	17.26	17.19
5240	48	17.31	17.29	17.34
5260	52	17.08	17.05	17.04
5280	56	17.04	17.11	17.08
5300	60	**17.15**	17.04	17.06
5320	64	17.15	17.21	17.04
5500	100	16.35	16.29	16.33
5600	120	16.54	16.38	16.42
5620	124	16.36	16.54	16.59
5720	144	**16.62**	16.46	16.54
5745	149	16.65	16.62	16.48
5785	157	**16.70**	16.64	16.69
5825	165	16.68	16.51	16.52

Table 9-128
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
		Average	Average	Average
5180	36	16.87	16.82	16.84
5200	40	16.88	16.79	16.83
5220	44	16.84	16.77	16.81
5240	48	16.83	16.89	16.76
5260	52	**16.95**	16.88	16.84
5280	56	16.92	16.83	16.92
5300	60	16.92	16.91	16.96
5320	64	16.93	16.89	16.76
5500	100	17.13	17.14	17.21
5600	120	17.22	17.23	17.30
5620	124	17.34	17.33	17.20
5720	144	**17.35**	17.29	17.22
5745	149	17.20	17.13	17.10
5785	157	**17.26**	17.21	17.21
5825	165	17.25	17.15	17.16

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Table 9-129
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.14	16.82	19.99
5200	40	17.23	16.79	20.03
5220	44	17.26	16.77	20.03
5240	48	17.29	16.89	20.10
5260	52	17.05	16.88	19.98
5280	56	17.11	16.83	19.98
5300	60	17.04	16.91	19.99
5320	64	**17.21**	**16.89**	**20.06**
5500	100	15.94	16.02	18.99
5600	120	**15.97**	**16.40**	**19.20**
5620	124	16.00	16.23	19.13
5720	144	15.89	16.42	19.17
5745	149	**15.99**	**16.25**	**19.13**
5785	157	15.94	16.24	19.10
5825	165	15.85	16.32	19.10

Table 9-130
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	16.55	16.69
2437	6	16.11	16.86
2462	11	**16.41**	**16.83**

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	13.84	13.59
5290	58	**13.59**	**13.69**
5530	106	13.98	13.53
5610	122	13.93	13.47
5690	138	**13.99**	**13.55**
5775	155	**13.53**	**13.43**

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Table 9-131
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
		Average	Average	Average
2412	1	16.09	16.34	16.55
2437	6	15.97	16.27	16.11
2462	11	**16.37**	16.45	16.41

Table 9-132
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
		Average	Average	Average
2412	1	16.58	16.86	16.69
2437	6	16.65	16.97	16.86
2462	11	**16.89**	16.95	16.83

Table 9-133
2.4 GHz WLAN Reduced Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.55	16.69	19.63
2437	6	16.11	16.86	19.51
2462	11	**16.41**	**16.83**	**19.64**

Table 9-134
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	13.84
5290	58	**13.59**
5530	106	13.98
5610	122	13.93
5690	138	**13.99**
5775	155	**13.53**

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Table 9-135
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	13.59
5290	58	**13.69**
5530	106	13.53
5610	122	13.47
5690	138	**13.55**
5775	155	**13.43**

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

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	**13.56**	**13.95**
2437	6	13.29	13.69
2462	11	13.35	13.98

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.

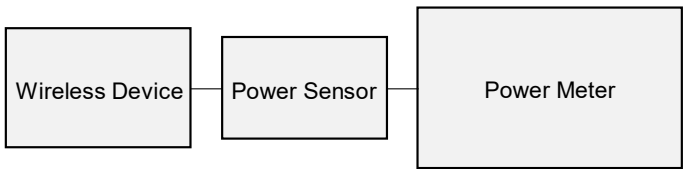

Figure 9-5
Power Measurement Setup

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9.6 Bluetooth Conducted Powers

Table 9-137
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	16.14	41.079
2441	1.0	39	16.47	44.357
2480	1.0	78	**16.50**	44.637
2402	2.0	0	9.56	9.042
2441	2.0	39	9.15	8.226
2480	2.0	78	9.50	8.919
2402	3.0	0	9.99	9.980
2441	3.0	39	9.54	8.991
2480	3.0	78	9.39	8.682

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

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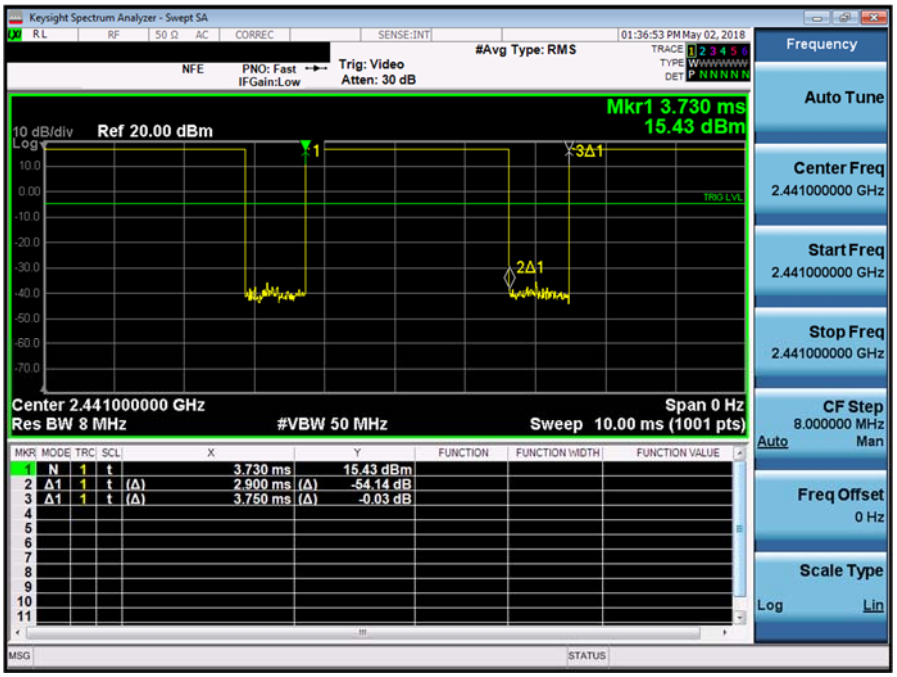

Figure 9-6
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

$$\textbf{\textit{Duty Cycle}} = \frac{\textbf{\textit{Pulse Width}}}{\textbf{\textit{Period}}} * \mathbf{100\%} = \frac{\mathbf{2.9ms}}{\mathbf{3.75ms}} * \mathbf{100\%} = \mathbf{77.3\%}$$

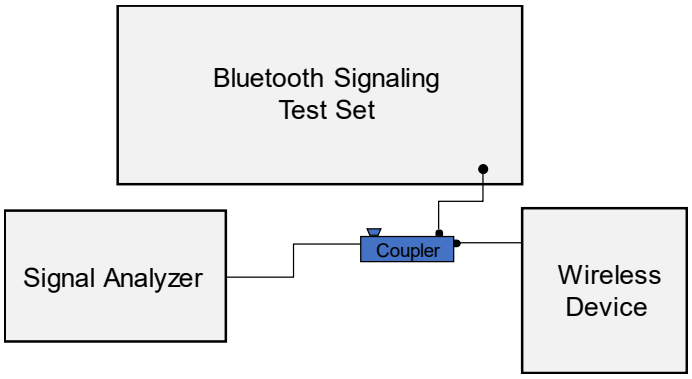

Figure 9-7
Power Measurement Setup

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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
6/7/2018	750H	21.7	680	0.888	42.607	0.888	42.305	0.00%	0.71%
			695	0.893	42.572	0.889	42.227	0.45%	0.82%
			700	0.894	42.561	0.889	42.201	0.56%	0.85%
			710	0.897	42.544	0.890	42.149	0.79%	0.94%
			740	0.907	42.488	0.893	41.994	1.57%	1.18%
			755	0.912	42.449	0.894	41.916	2.01%	1.27%
			770	0.918	42.403	0.895	41.838	2.57%	1.35%
			785	0.924	42.363	0.896	41.760	3.13%	1.44%
			800	0.930	42.309	0.897	41.682	3.68%	1.50%
6/4/2018	835H	21.4	820	0.932	41.782	0.899	41.578	3.67%	0.49%
			835	0.939	41.737	0.900	41.500	4.33%	0.57%
			850	0.944	41.690	0.916	41.500	3.06%	0.46%
6/7/2018	835H	21.7	820	0.936	42.266	0.899	41.578	4.12%	1.65%
			835	0.941	42.241	0.900	41.500	4.56%	1.79%
			850	0.946	42.217	0.916	41.500	3.28%	1.73%
5/31/2018	1750H	21.7	1710	1.326	39.808	1.348	40.142	-1.63%	-0.83%
			1750	1.355	39.787	1.371	40.079	-1.17%	-0.73%
			1790	1.379	39.715	1.394	40.016	-1.08%	-0.75%
6/4/2018	1900H	21.4	1850	1.415	39.886	1.400	40.000	1.07%	-0.28%
			1880	1.435	39.854	1.400	40.000	2.50%	-0.37%
			1910	1.453	39.822	1.400	40.000	3.79%	-0.44%
6/10/2018	1900H	20.7	1850	1.416	40.203	1.400	40.000	1.14%	0.51%
			1880	1.436	40.212	1.400	40.000	2.57%	0.53%
			1910	1.453	40.181	1.400	40.000	3.79%	0.45%
6/1/2018	2450H	21.6	2300	1.708	39.177	1.670	39.500	2.28%	-0.82%
			2310	1.717	39.121	1.679	39.480	2.26%	-0.91%
			2450	1.878	38.593	1.800	39.200	4.33%	-1.55%
			2500	1.932	38.413	1.855	39.136	4.15%	-1.85%
			2550	1.988	38.234	1.909	39.073	4.14%	-2.15%
			2600	2.046	37.984	1.964	39.009	4.18%	-2.63%
6/4/2018	2450H	22.3	2400	1.799	39.731	1.756	39.289	2.45%	1.12%
			2450	1.856	39.555	1.800	39.200	3.11%	0.91%
			2500	1.912	39.359	1.855	39.136	3.07%	0.57%
6/8/2018	2450H	22.5	2400	1.799	39.141	1.756	39.289	2.45%	-0.38%
			2450	1.857	38.946	1.800	39.200	3.17%	-0.65%
			2500	1.912	38.754	1.855	39.136	3.07%	-0.98%
			2550	1.966	38.573	1.909	39.073	2.99%	-1.28%
			2600	2.022	38.380	1.964	39.009	2.95%	-1.61%
6/13/2018	2450H	22.4	2400	1.792	38.400	1.756	39.289	2.05%	-2.26%
			2450	1.843	38.208	1.800	39.200	2.39%	-2.53%
			2500	1.900	38.002	1.855	39.136	2.43%	-2.90%
6/4/2018	5200H-5800H	20.3	5200	4.518	35.787	4.655	35.986	-2.94%	-0.55%
			5220	4.528	35.749	4.676	35.963	-3.17%	-0.60%
			5240	4.553	35.724	4.696	35.940	-3.05%	-0.60%
			5260	4.569	35.686	4.717	35.917	-3.14%	-0.64%
			5280	4.591	35.675	4.737	35.894	-3.08%	-0.61%
			5300	4.614	35.622	4.758	35.871	-3.03%	-0.69%
			5520	4.833	35.339	4.983	35.620	-3.01%	-0.79%
			5540	4.853	35.301	5.004	35.597	-3.02%	-0.83%
			5600	4.915	35.199	5.065	35.529	-2.96%	-0.93%
			5620	4.941	35.190	5.086	35.506	-2.85%	-0.89%
			5680	5.000	35.078	5.147	35.437	-2.86%	-1.01%
			5700	5.019	35.060	5.168	35.414	-2.88%	-1.00%
			5745	5.080	34.994	5.214	35.363	-2.57%	-1.04%
			5765	5.090	34.962	5.234	35.340	-2.75%	-1.07%
			5785	5.113	34.962	5.255	35.317	-2.70%	-1.01%

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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
6/6/2018	750B	20.5	680	0.922	54.227	0.958	55.804	-3.76%	-2.83%
			695	0.930	54.182	0.959	55.745	-3.02%	-2.80%
			700	0.931	54.200	0.959	55.726	-2.92%	-2.74%
			740	0.945	54.091	0.963	55.570	-1.87%	-2.66%
			755	0.949	53.987	0.964	55.512	-1.56%	-2.75%
			770	0.955	53.980	0.965	55.453	-1.04%	-2.66%
			785	0.964	53.977	0.966	55.395	-0.21%	-2.56%
			800	0.970	53.945	0.967	55.336	0.31%	-2.51%
6/8/2018	750B	20.8	700	0.945	53.503	0.959	55.726	-1.46%	-3.99%
			710	0.949	53.484	0.960	55.687	-1.15%	-3.96%
			740	0.960	53.392	0.963	55.570	-0.31%	-3.92%
			755	0.966	53.331	0.964	55.512	0.21%	-3.93%
6/5/2018	835B	21.6	820	0.983	53.943	0.969	55.258	1.44%	-2.38%
			835	0.998	53.823	0.970	55.200	2.89%	-2.49%
			850	1.014	53.693	0.988	55.154	2.63%	-2.65%
6/8/2018	835B	21.0	820	0.991	53.201	0.969	55.258	2.27%	-3.72%
			835	0.997	53.181	0.970	55.200	2.78%	-3.66%
			850	1.003	53.146	0.988	55.154	1.52%	-3.64%
6/11/2018	835B	20.7	820	0.977	53.634	0.969	55.258	0.83%	-2.94%
			835	0.982	53.576	0.970	55.200	1.24%	-2.94%
			850	0.988	53.530	0.988	55.154	0.00%	-2.94%
6/4/2018	1750B	20.0	1710	1.442	52.959	1.463	53.537	-1.44%	-1.08%
			1750	1.470	52.904	1.488	53.432	-1.21%	-0.99%
			1790	1.498	52.855	1.514	53.326	-1.06%	-0.88%
6/1/2018	1900B	22.2	1850	1.487	52.435	1.520	53.300	-2.17%	-1.62%
			1880	1.524	52.340	1.520	53.300	0.26%	-1.80%
			1910	1.558	52.242	1.520	53.300	2.50%	-1.98%
6/4/2018	1900B	22.2	1850	1.501	52.283	1.520	53.300	-1.25%	-1.91%
			1880	1.538	52.204	1.520	53.300	1.18%	-2.06%
			1910	1.571	52.110	1.520	53.300	3.36%	-2.23%
6/6/2018	1900B	21.8	1850	1.519	51.602	1.520	53.300	-0.07%	-3.19%
			1880	1.553	51.512	1.520	53.300	2.17%	-3.35%
			1910	1.589	51.415	1.520	53.300	4.54%	-3.54%
6/11/2018	1900B	22.2	1850	1.504	52.381	1.520	53.300	-1.05%	-1.72%
			1880	1.541	52.341	1.520	53.300	1.38%	-1.80%
			1910	1.572	52.227	1.520	53.300	3.42%	-2.01%
5/30/2018	2450B	22.6	2400	1.945	52.043	1.902	52.767	2.26%	-1.37%
			2450	2.013	51.879	1.950	52.700	3.23%	-1.56%
			2500	2.076	51.685	2.021	52.636	2.72%	-1.81%
6/1/2018	2450B	21.9	2300	1.859	51.953	1.809	52.900	2.76%	-1.79%
			2310	1.867	51.932	1.816	52.887	2.81%	-1.81%
			2320	1.884	51.838	1.826	52.873	3.18%	-1.96%
6/4/2018	2450B	22.1	2400	1.972	52.030	1.902	52.767	3.68%	-1.40%
			2450	2.032	51.912	1.950	52.700	4.21%	-1.50%
			2500	2.090	51.718	2.021	52.636	3.41%	-1.74%
			2550	2.151	51.550	2.092	52.573	2.82%	-1.95%
			2600	2.217	51.425	2.163	52.509	2.50%	-2.06%
			2650	2.274	51.262	2.234	52.445	1.79%	-2.26%
			2700	2.337	51.087	2.305	52.382	1.39%	-2.47%
6/7/2018	2450B	22.9	2400	1.959	51.158	1.902	52.767	3.00%	-3.05%
			2450	2.017	51.039	1.950	52.700	3.44%	-3.15%
			2500	2.076	50.876	2.021	52.636	2.72%	-3.34%
			2550	2.133	50.711	2.092	52.573	1.96%	-3.54%
			2600	2.194	50.566	2.163	52.509	1.43%	-3.70%
			2650	2.252	50.410	2.234	52.445	0.81%	-3.88%
			2700	2.312	50.260	2.305	52.382	0.30%	-4.05%
6/11/2018	2450B	22.5	2400	1.971	51.938	1.902	52.767	3.63%	-1.57%
			2450	2.027	51.814	1.950	52.700	3.95%	-1.68%
			2500	2.087	51.639	2.021	52.636	3.27%	-1.89%
			2550	2.147	51.524	2.092	52.573	2.63%	-2.00%
			2600	2.202	51.343	2.163	52.509	1.80%	-2.22%
			2650	2.266	51.203	2.234	52.445	1.43%	-2.37%
			2700	2.326	51.039	2.305	52.382	0.91%	-2.56%
6/12/2018	2450B	22.5	2300	1.733	52.363	1.809	52.900	-4.20%	-1.02%
			2310	1.746	52.319	1.816	52.887	-3.85%	-1.07%
			2320	1.759	52.280	1.826	52.873	-3.67%	-1.12%
6/13/2018	2450B	23.1	2400	1.979	50.909	1.902	52.767	4.05%	-3.52%
			2450	2.020	50.834	1.950	52.700	3.59%	-3.54%
			2500	2.067	50.742	2.021	52.636	2.28%	-3.60%
6/20/2018	2450B	23.0	2550	2.131	50.556	2.092	52.573	1.86%	-3.84%
			2600	2.190	50.386	2.163	52.509	1.25%	-4.04%
			2650	2.252	50.229	2.234	52.445	0.81%	-4.23%
			2700	2.307	50.062	2.305	52.382	0.09%	-4.43%

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Table 10-3
Measured Body Tissue Properties Continued

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
06/03/2018	5200B-5800B	21.2	5180	5.337	48.396	5.276	49.041	1.16%	-1.32%
			5200	5.391	48.306	5.299	49.014	1.74%	-1.44%
			5220	5.392	48.246	5.323	48.987	1.30%	-1.51%
			5240	5.432	48.240	5.346	48.960	1.61%	-1.47%
			5260	5.454	48.181	5.369	48.933	1.58%	-1.54%
			5280	5.487	48.117	5.393	48.906	1.74%	-1.61%
			5300	5.490	48.115	5.416	48.879	1.37%	-1.56%
			5320	5.504	47.991	5.439	48.851	1.20%	-1.76%
			5500	5.744	47.799	5.650	48.607	1.66%	-1.66%
			5520	5.788	47.711	5.673	48.580	2.03%	-1.79%
			5540	5.800	47.643	5.696	48.553	1.83%	-1.87%
			5560	5.823	47.629	5.720	48.526	1.80%	-1.85%
			5580	5.875	47.612	5.743	48.499	2.30%	-1.83%
			5600	5.877	47.606	5.766	48.471	1.93%	-1.78%
			5620	5.926	47.533	5.790	48.444	2.35%	-1.88%
			5640	5.964	47.527	5.813	48.417	2.60%	-1.84%
			5660	5.984	47.492	5.837	48.390	2.52%	-1.86%
			5680	5.988	47.440	5.860	48.363	2.18%	-1.91%
			5700	6.045	47.404	5.883	48.336	2.75%	-1.93%
			5745	6.109	47.399	5.936	48.275	2.91%	-1.81%
			5765	6.123	47.340	5.959	48.248	2.75%	-1.88%
			5785	6.173	47.245	5.982	48.220	3.19%	-2.02%
			5800	6.184	47.215	6.000	48.200	3.07%	-2.04%
			5805	6.194	47.185	6.006	48.193	3.13%	-2.09%
			5825	6.200	47.172	6.029	48.166	2.84%	-2.06%
06/11/2018	5200B-5800B	21.8	5180	5.435	48.215	5.276	49.041	3.01%	-1.68%
			5200	5.457	48.204	5.299	49.014	2.98%	-1.65%
			5220	5.489	48.153	5.323	48.987	3.12%	-1.70%
			5240	5.511	48.116	5.346	48.960	3.09%	-1.72%
			5260	5.547	48.076	5.369	48.933	3.32%	-1.75%
			5280	5.565	48.054	5.393	48.906	3.19%	-1.74%
			5300	5.583	48.025	5.416	48.879	3.08%	-1.75%
			5320	5.625	47.985	5.439	48.851	3.42%	-1.77%
			5500	5.866	47.663	5.650	48.607	3.82%	-1.94%
			5520	5.883	47.649	5.673	48.580	3.70%	-1.92%
			5540	5.910	47.624	5.696	48.553	3.76%	-1.91%
			5560	5.939	47.606	5.720	48.526	3.83%	-1.90%
			5580	5.984	47.547	5.743	48.499	4.20%	-1.96%
			5600	6.007	47.521	5.766	48.471	4.18%	-1.96%
			5620	6.014	47.501	5.790	48.444	3.87%	-1.95%
			5640	6.057	47.483	5.813	48.417	4.20%	-1.93%
			5660	6.081	47.431	5.837	48.390	4.18%	-1.98%
			5680	6.111	47.352	5.860	48.363	4.28%	-2.09%
			5700	6.135	47.319	5.883	48.336	4.28%	-2.10%
			5745	6.209	47.285	5.936	48.275	4.60%	-2.05%
			5765	6.230	47.245	5.959	48.248	4.55%	-2.08%
			5785	6.261	47.224	5.982	48.220	4.66%	-2.07%
			5800	6.279	47.185	6.000	48.200	4.65%	-2.11%
			5805	6.283	47.162	6.006	48.193	4.61%	-2.14%
			5825	6.318	47.111	6.029	48.166	4.79%	-2.19%

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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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 10-4
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)	$Deviation_{1g}$ (%)
E	750	HEAD	06/07/2018	23.5	21.7	0.200	1161	3213	1.610	8.170	8.050	-1.47%
E	835	HEAD	06/04/2018	21.3	21.2	0.200	4d119	3213	2.010	9.530	10.050	5.46%
E	835	HEAD	06/07/2018	23.5	21.7	0.200	4d119	3213	1.940	9.530	9.700	1.78%
E	1750	HEAD	05/31/2018	24.0	21.7	0.100	1051	3213	3.650	36.500	36.500	0.00%
E	1900	HEAD	06/04/2018	23.3	22.9	0.100	5d141	3213	4.190	39.300	41.900	6.62%
E	1900	HEAD	06/10/2018	21.9	20.2	0.100	5d141	3213	4.060	39.300	40.600	3.31%
G	2300	HEAD	06/01/2018	22.7	21.6	0.100	1008	3332	5.220	49.600	52.200	5.24%
G	2450	HEAD	06/01/2018	22.7	21.6	0.100	882	3332	5.170	52.200	51.700	-0.96%
G	2450	HEAD	06/04/2018	21.7	21.4	0.100	882	3332	5.330	52.200	53.300	2.11%
G	2450	HEAD	06/08/2018	23.1	22.5	0.100	882	3332	5.170	52.200	51.700	-0.96%
G	2450	HEAD	06/13/2018	23.1	21.8	0.100	882	3332	5.250	52.200	52.500	0.57%
G	2600	HEAD	06/01/2018	22.7	21.6	0.100	1004	3332	5.580	55.900	55.800	-0.18%
G	2600	HEAD	06/08/2018	23.1	22.5	0.100	1004	3332	5.460	55.900	54.600	-2.33%
H	5250	HEAD	06/04/2018	20.7	20.3	0.050	1191	3589	3.810	78.900	76.200	-3.42%
H	5600	HEAD	06/04/2018	20.7	20.3	0.050	1191	3589	4.130	83.600	82.600	-1.20%
H	5750	HEAD	06/04/2018	20.7	20.3	0.050	1191	3589	3.860	79.100	77.200	-2.40%
J	750	BODY	06/06/2018	21.0	20.5	0.200	1003	3347	1.690	8.580	8.450	-1.52%
J	750	BODY	06/08/2018	21.0	20.8	0.200	1003	3347	1.730	8.580	8.650	0.82%
G	835	BODY	06/05/2018	23.1	21.7	0.200	4d047	3332	1.970	9.570	9.850	2.93%
J	835	BODY	06/08/2018	21.3	21.0	0.200	4d133	3347	2.020	9.410	10.100	7.33%
J	835	BODY	06/11/2018	21.0	20.7	0.200	4d132	3347	2.000	9.710	10.000	2.99%
J	1750	BODY	06/04/2018	21.0	20.0	0.100	1148	3347	3.740	37.000	37.400	1.08%
I	1900	BODY	06/01/2018	23.8	22.2	0.100	5d148	3287	4.180	39.600	41.800	5.56%
I	1900	BODY	06/04/2018	21.5	21.7	0.100	5d148	3287	4.140	39.600	41.400	4.55%
I	1900	BODY	06/06/2018	23.2	21.5	0.100	5d148	3287	4.230	39.600	42.300	6.82%
I	1900	BODY	06/11/2018	21.3	21.8	0.100	5d148	3287	4.270	39.600	42.700	7.83%
K	2300	BODY	06/01/2018	22.8	21.9	0.100	1008	3319	4.940	47.100	49.400	4.88%
H	2300	BODY	06/12/2018	21.9	22.5	0.100	1008	7410	4.650	47.100	46.500	-1.27%
D	2450	BODY	05/30/2018	22.5	22.6	0.100	719	3318	5.110	50.100	51.100	2.00%
K	2450	BODY	06/04/2018	22.0	21.5	0.100	882	3319	5.200	50.200	52.000	3.59%
K	2450	BODY	06/07/2018	23.8	21.7	0.100	882	3319	5.130	50.200	51.300	2.19%
K	2450	BODY	06/11/2018	22.8	21.8	0.100	882	3319	4.880	50.200	48.800	-2.79%
G	2450	BODY	06/13/2018	22.4	22.9	0.100	882	3332	5.010	50.200	50.100	-0.20%
K	2600	BODY	06/04/2018	22.0	21.5	0.100	1004	3319	5.790	54.800	57.900	5.66%
K	2600	BODY	06/07/2018	23.8	21.7	0.100	1004	3319	5.620	54.800	56.200	2.55%
K	2600	BODY	06/11/2018	22.8	21.8	0.100	1004	3319	5.590	54.800	55.900	2.01%
K	2600	BODY	06/20/2018	23.3	22.2	0.100	1004	3319	5.680	54.800	56.800	3.65%
D	5250	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	3.590	76.900	71.800	-6.63%
D	5250	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	3.560	76.900	71.200	-7.41%
D	5600	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	3.880	78.500	77.600	-1.15%
D	5600	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	4.060	78.500	81.200	3.44%
D	5750	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	3.620	77.100	72.400	-6.10%
D	5750	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	3.720	77.100	74.400	-3.50%

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Table 10-5
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	06/04/2018	21.0	20.0	0.100	1148	3347	2.020	19.800	20.200	2.02%
I	1900	BODY	06/04/2018	21.5	21.7	0.100	5d148	3287	2.140	20.900	21.400	2.39%
I	1900	BODY	06/06/2018	23.2	21.5	0.100	5d148	3287	2.190	20.900	21.900	4.78%
I	1900	BODY	06/11/2018	21.3	21.8	0.100	5d148	3287	2.200	20.900	22.000	5.26%
H	2300	BODY	06/12/2018	21.9	22.5	0.100	1008	7410	2.200	22.700	22.000	-3.08%
K	2450	BODY	06/04/2018	22.0	21.5	0.100	882	3319	2.380	23.600	23.800	0.85%
K	2450	BODY	06/11/2018	22.8	21.8	0.100	882	3319	2.240	23.600	22.400	-5.08%
K	2600	BODY	06/04/2018	22.0	21.5	0.100	1004	3319	2.540	24.700	25.400	2.83%
K	2600	BODY	06/11/2018	22.8	21.8	0.100	1004	3319	2.470	24.700	24.700	0.00%
D	5250	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	1.010	21.500	20.200	-6.05%
D	5250	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	1.010	21.500	20.200	-6.05%
D	5600	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	1.070	22.100	21.400	-3.17%
D	5600	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	1.120	22.100	22.400	1.36%
D	5750	BODY	06/03/2018	21.7	21.2	0.050	1237	7308	0.993	21.400	19.860	-7.20%
D	5750	BODY	06/11/2018	24.0	22.0	0.050	1237	7357	1.020	21.400	20.400	-4.67%

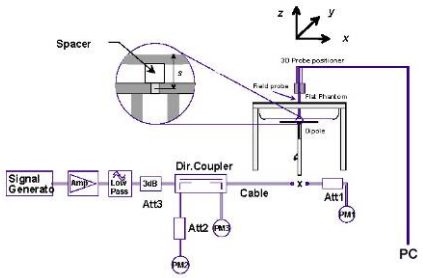

Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
CDMA BC10 (§90S) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/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	26.0	25.51	4	0.02	Right	Cheek	Q7142	1:1	0.240	1.119	0.269	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.51	4	0.00	Right	Tilt	Q7142	1:1	0.120	1.119	0.134	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.51	4	0.08	Left	Cheek	Q7142	1:1	0.195	1.119	0.218	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.51	4	0.10	Left	Tilt	Q7142	1:1	0.125	1.119	0.140	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.49	4	0.01	Right	Cheek	Q7142	1:1	0.241	1.125	0.271	A1
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.49	4	0.05	Right	Tilt	Q7142	1:1	0.116	1.125	0.131	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.49	4	0.02	Left	Cheek	Q7142	1:1	0.159	1.125	0.179	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.49	4	-0.03	Left	Tilt	Q7142	1:1	0.149	1.125	0.168	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
CDMA BC0 (§22H) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/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	26.0	24.83	4	0.02	Right	Cheek	Q7142	1:1	0.250	1.309	**0.327**	A2
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.83	4	-0.02	Right	Tilt	Q7142	1:1	0.141	1.309	0.185	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.83	4	0.00	Left	Cheek	Q7142	1:1	0.198	1.309	0.259	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.83	4	-0.03	Left	Tilt	Q7142	1:1	0.122	1.309	0.160	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.94	4	-0.02	Right	Cheek	Q7142	1:1	0.243	1.276	0.310	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.94	4	0.01	Right	Tilt	Q7142	1:1	0.101	1.276	0.129	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.94	4	0.08	Left	Cheek	Q7142	1:1	0.169	1.276	0.216	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.94	4	0.02	Left	Tilt	Q7142	1:1	0.130	1.276	0.166	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-3
GSM 850 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode/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	33.5	32.81	0.03	Right	Cheek	Q7142	1:8.3	0.166	1.172	0.195	A3
836.60	190	GSM 850	GSM	33.5	32.81	0.01	Right	Tilt	Q7142	1:8.3	0.093	1.172	0.109	
836.60	190	GSM 850	GSM	33.5	32.81	-0.05	Left	Cheek	Q7142	1:8.3	0.125	1.172	0.147	
836.60	190	GSM 850	GSM	33.5	32.81	-0.08	Left	Tilt	Q7142	1:8.3	0.084	1.172	0.098	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-4
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	25.17	4	-0.01	Right	Cheek	Q7142	1:1	0.244	1.156	0.282	A4
836.60	4183	UMTS 850	RMC	25.8	25.17	4	0.01	Right	Tilt	Q7142	1:1	0.136	1.156	0.157	
836.60	4183	UMTS 850	RMC	25.8	25.17	4	0.01	Left	Cheek	Q7142	1:1	0.190	1.156	0.220	
836.60	4183	UMTS 850	RMC	25.8	25.17	4	-0.01	Left	Tilt	Q7142	1:1	0.126	1.156	0.146	
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 11-5
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	25.5	24.49	16	0.11	Right	Cheek	Q7142	1:1	0.079	1.262	0.100	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	0.12	Right	Tilt	Q7142	1:1	0.072	1.262	0.091	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	0.09	Left	Cheek	Q7142	1:1	0.107	1.262	0.135	A5
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	0.17	Left	Tilt	Q7142	1:1	0.073	1.262	0.092	
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
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	24.46	17	0.04	Right	Cheek	T0253	1:1	0.095	1.132	0.108	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.46	17	0.11	Right	Tilt	T0253	1:1	0.054	1.132	0.061	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.46	17	0.05	Left	Cheek	T0253	1:1	0.127	1.132	0.144	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.46	17	0.12	Left	Tilt	T0253	1:1	0.050	1.132	0.057	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.46	17	0.07	Right	Cheek	T0253	1:1	0.102	1.132	0.115	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.46	17	0.06	Right	Tilt	T0253	1:1	0.053	1.132	0.060	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.46	17	0.01	Left	Cheek	T0253	1:1	0.130	1.132	0.147	A6
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.46	17	0.10	Left	Tilt	T0253	1:1	0.046	1.132	0.052	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-7
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	31.0	29.76	0.16	Right	Cheek	T0253	1:8.3	0.031	1.330	0.041	
1880.00	661	GSM 1900	GSM	31.0	29.76	0.14	Right	Tilt	T0253	1:8.3	0.017	1.330	0.023	
1880.00	661	GSM 1900	GSM	31.0	29.76	0.11	Left	Cheek	T0253	1:8.3	0.059	1.330	0.078	A7
1880.00	661	GSM 1900	GSM	31.0	29.76	0.17	Left	Tilt	T0253	1:8.3	0.025	1.330	0.033	
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 11-8
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	25.2	24.50	17	-0.01	Right	Cheek	T0253	1:1	0.093	1.175	0.109	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.03	Right	Tilt	T0253	1:1	0.058	1.175	0.068	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	-0.02	Left	Cheek	T0253	1:1	0.136	1.175	0.160	A8
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.12	Left	Tilt	T0253	1:1	0.054	1.175	0.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-9
LTE Band 71 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	5	0.19	0	Right	Cheek	QPSK	1	50	T0247	1:1	0.117	1.153	0.135	A9
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	5	0.03	1	Right	Cheek	QPSK	50	25	T0247	1:1	0.093	1.148	0.107	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	5	0.04	0	Right	Tilt	QPSK	1	50	T0247	1:1	0.048	1.153	0.055	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	5	0.05	1	Right	Tilt	QPSK	50	25	T0247	1:1	0.038	1.148	0.044	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	5	0.16	0	Left	Cheek	QPSK	1	50	T0247	1:1	0.093	1.153	0.107	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	5	0.01	1	Left	Cheek	QPSK	50	25	T0247	1:1	0.082	1.148	0.094	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	5	-0.12	0	Left	Tilt	QPSK	1	50	T0247	1:1	0.049	1.153	0.056	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	5	-0.01	1	Left	Tilt	QPSK	50	25	T0247	1:1	0.043	1.148	0.049	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-10
LTE Band 12 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.03	0	Right	Cheek	QPSK	1	0	Q7142	1:1	0.136	1.309	0.178	A10
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.00	1	Right	Cheek	QPSK	25	0	Q7142	1:1	0.111	1.247	0.138	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.04	0	Right	Tilt	QPSK	1	0	Q7142	1:1	0.080	1.309	0.105	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.03	1	Right	Tilt	QPSK	25	0	Q7142	1:1	0.063	1.247	0.079	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.01	0	Left	Cheek	QPSK	1	0	Q7142	1:1	0.122	1.309	0.160	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.07	1	Left	Cheek	QPSK	25	0	Q7142	1:1	0.112	1.247	0.140	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.03	0	Left	Tilt	QPSK	1	0	Q7142	1:1	0.097	1.309	0.127	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.00	1	Left	Tilt	QPSK	25	0	Q7142	1:1	0.092	1.247	0.115	
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]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	1	0.00	0	Right	Cheek	QPSK	1	49	Q7142	1:1	0.198	1.416	0.280	A11
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	1	0.00	1	Right	Cheek	QPSK	25	12	Q7142	1:1	0.163	1.406	0.229	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	1	-0.09	0	Right	Tilt	QPSK	1	49	Q7142	1:1	0.096	1.416	0.136	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	1	0.01	1	Right	Tilt	QPSK	25	12	Q7142	1:1	0.081	1.406	0.114	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	1	-0.15	0	Left	Cheek	QPSK	1	49	Q7142	1:1	0.162	1.416	0.229	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	1	0.03	1	Left	Cheek	QPSK	25	12	Q7142	1:1	0.128	1.406	0.180	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	1	0.17	0	Left	Tilt	QPSK	1	49	Q7142	1:1	0.075	1.416	0.106	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	1	0.03	1	Left	Tilt	QPSK	25	12	Q7142	1:1	0.063	1.406	0.089	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-12
LTE Band 14 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	68	-0.02	0	Right	Cheek	QPSK	1	49	Q7142	1:1	0.180	1.172	0.211	A12
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	68	-0.02	1	Right	Cheek	QPSK	25	0	Q7142	1:1	0.173	1.148	0.199	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	68	0.03	0	Right	Tilt	QPSK	1	49	Q7142	1:1	0.090	1.172	0.105	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	68	0.01	1	Right	Tilt	QPSK	25	0	Q7142	1:1	0.089	1.148	0.102	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	68	-0.12	0	Left	Cheek	QPSK	1	49	Q7142	1:1	0.173	1.172	0.203	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	68	-0.01	1	Left	Cheek	QPSK	25	0	Q7142	1:1	0.147	1.148	0.169	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	68	-0.01	0	Left	Tilt	QPSK	1	49	Q7142	1:1	0.099	1.172	0.116	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	68	0.01	1	Left	Tilt	QPSK	25	0	Q7142	1:1	0.083	1.148	0.095	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.03	0	Right	Cheek	QPSK	1	0	Q7142	1:1	0.187	1.321	0.247	A13
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	0.02	1	Right	Cheek	QPSK	36	0	Q7142	1:1	0.158	1.297	0.205	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	-0.09	0	Right	Tilt	QPSK	1	0	Q7142	1:1	0.090	1.321	0.119	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	0.03	1	Right	Tilt	QPSK	36	0	Q7142	1:1	0.072	1.297	0.093	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.10	0	Left	Cheek	QPSK	1	0	Q7142	1:1	0.148	1.321	0.196	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	-0.03	1	Left	Cheek	QPSK	36	0	Q7142	1:1	0.120	1.297	0.156	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.07	0	Left	Tilt	QPSK	1	0	Q7142	1:1	0.129	1.321	0.170	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	0.00	1	Left	Tilt	QPSK	36	0	Q7142	1:1	0.104	1.297	0.135	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.08	0	Right	Cheek	QPSK	1	25	Q7142	1:1	0.210	1.318	0.277	A14
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.04	1	Right	Cheek	QPSK	25	12	Q7142	1:1	0.161	1.309	0.211	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	-0.10	0	Right	Tilt	QPSK	1	25	Q7142	1:1	0.097	1.318	0.128	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.01	1	Right	Tilt	QPSK	25	12	Q7142	1:1	0.074	1.309	0.097	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.00	0	Left	Cheek	QPSK	1	25	Q7142	1:1	0.148	1.318	0.195	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.03	1	Left	Cheek	QPSK	25	12	Q7142	1:1	0.123	1.309	0.161	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.03	0	Left	Tilt	QPSK	1	25	Q7142	1:1	0.115	1.318	0.152	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.01	1	Left	Tilt	QPSK	25	12	Q7142	1:1	0.094	1.309	0.123	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-15
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	0.03	0	Right	Cheek	QPSK	1	0	Q7142	1:1	0.079	1.205	0.095	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.00	1	Right	Cheek	QPSK	50	0	Q7142	1:1	0.063	1.186	0.075	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	0.06	0	Right	Tilt	QPSK	1	0	Q7142	1:1	0.069	1.205	0.083	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.08	1	Right	Tilt	QPSK	50	0	Q7142	1:1	0.062	1.186	0.074	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.01	0	Left	Cheek	QPSK	1	0	Q7142	1:1	0.107	1.205	0.129	A15
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.04	1	Left	Cheek	QPSK	50	0	Q7142	1:1	0.104	1.186	0.123	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.07	0	Left	Tilt	QPSK	1	0	Q7142	1:1	0.087	1.205	0.105	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.08	1	Left	Tilt	QPSK	50	0	Q7142	1:1	0.066	1.186	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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Table 11-16
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	-0.01	0	Right	Cheek	QPSK	1	0	Q7142	1:1	0.103	1.222	0.126	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	-0.01	1	Right	Cheek	QPSK	50	0	Q7142	1:1	0.092	1.247	0.115	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	-0.12	0	Right	Tilt	QPSK	1	0	Q7142	1:1	0.054	1.222	0.066	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.10	1	Right	Tilt	QPSK	50	0	Q7142	1:1	0.047	1.247	0.059	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.07	0	Left	Cheek	QPSK	1	0	Q7142	1:1	0.142	1.222	0.174	A16
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	-0.02	1	Left	Cheek	QPSK	50	0	Q7142	1:1	0.102	1.247	0.127	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.07	0	Left	Tilt	QPSK	1	0	Q7142	1:1	0.049	1.222	0.060	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.15	1	Left	Tilt	QPSK	50	0	Q7142	1:1	0.038	1.247	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 11-17
LTE Band 30 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	0.19	0	Right	Cheek	Ant B	QPSK	1	0	Q7137	1:1	0.069	1.225	0.085	A17
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.02	1	Right	Cheek	Ant B	QPSK	25	0	Q7137	1:1	0.054	1.253	0.068	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	0.04	0	Right	Tilt	Ant B	QPSK	1	0	Q7137	1:1	0.029	1.225	0.036	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.07	1	Right	Tilt	Ant B	QPSK	25	0	Q7137	1:1	0.020	1.253	0.025	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	0.17	0	Left	Cheek	Ant B	QPSK	1	0	Q7137	1:1	0.045	1.225	0.055	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	0.18	1	Left	Cheek	Ant B	QPSK	25	0	Q7137	1:1	0.037	1.253	0.046	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	0.11	0	Left	Tilt	Ant B	QPSK	1	0	Q7137	1:1	0.021	1.225	0.026	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	0.10	1	Left	Tilt	Ant B	QPSK	25	0	Q7137	1:1	0.014	1.253	0.018	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	0.04	0	Right	Cheek	Ant A	QPSK	1	0	Q7137	1:1	0.051	1.199	0.061	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.06	1	Right	Cheek	Ant A	QPSK	25	0	Q7137	1:1	0.035	1.183	0.041	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	0.14	0	Right	Tilt	Ant A	QPSK	1	0	Q7137	1:1	0.013	1.199	0.016	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.11	1	Right	Tilt	Ant A	QPSK	25	0	Q7137	1:1	0.008	1.183	0.009	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	-0.05	0	Left	Cheek	Ant A	QPSK	1	0	Q7137	1:1	0.028	1.199	0.034	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.18	1	Left	Cheek	Ant A	QPSK	25	0	Q7137	1:1	0.020	1.183	0.024	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	0.05	0	Left	Tilt	Ant A	QPSK	1	0	Q7137	1:1	0.033	1.199	0.040	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.17	1	Left	Tilt	Ant A	QPSK	25	0	Q7137	1:1	0.022	1.183	0.026	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-18
LTE Band 7 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	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	24.0	23.06	0.11	0	Right	Cheek	Ant B	QPSK	1	0	T0247	1:1	0.129	1.242	0.160	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.18	1	Right	Cheek	Ant B	QPSK	50	0	T0247	1:1	0.104	1.279	0.133	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	0.15	0	Right	Tilt	Ant B	QPSK	1	0	T0247	1:1	0.043	1.242	0.053	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.08	1	Right	Tilt	Ant B	QPSK	50	0	T0247	1:1	0.036	1.279	0.046	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	0.01	0	Left	Cheek	Ant B	QPSK	1	0	T0247	1:1	0.144	1.242	0.179	A18
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.07	1	Left	Cheek	Ant B	QPSK	50	0	T0247	1:1	0.112	1.279	0.143	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	0.15	0	Left	Tilt	Ant B	QPSK	1	0	T0247	1:1	0.067	1.242	0.083	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.00	1	Left	Tilt	Ant B	QPSK	50	0	T0247	1:1	0.054	1.279	0.069	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	0.12	0	Right	Cheek	Ant A	QPSK	1	0	Q7137	1:1	0.070	1.148	0.080	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.13	1	Right	Cheek	Ant A	QPSK	50	0	Q7137	1:1	0.058	1.194	0.069	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.13	0	Right	Tilt	Ant A	QPSK	1	0	Q7137	1:1	0.033	1.148	0.038	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.11	1	Right	Tilt	Ant A	QPSK	50	0	Q7137	1:1	0.025	1.194	0.030	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.03	0	Left	Cheek	Ant A	QPSK	1	0	Q7137	1:1	0.034	1.148	0.039	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.15	1	Left	Cheek	Ant A	QPSK	50	0	Q7137	1:1	0.026	1.194	0.031	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.12	0	Left	Tilt	Ant A	QPSK	1	0	Q7137	1:1	0.027	1.148	0.031	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.18	1	Left	Tilt	Ant A	QPSK	50	0	Q7137	1:1	0.015	1.194	0.018	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram			

Table 11-19
LTE Band 41 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																		
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	0.15	0	Right	Cheek	QPSK	1	0	Q7143	1:1.58	0.082	1.306	0.107	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.14	1	Right	Cheek	QPSK	50	0	Q7143	1:1.58	0.052	1.285	0.067	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	0.02	0	Right	Tilt	QPSK	1	0	Q7143	1:1.58	0.090	1.306	0.118	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.07	1	Right	Tilt	QPSK	50	0	Q7143	1:1.58	0.065	1.285	0.084	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	28.2	27.14	-0.10	0	Right	Tilt	QPSK	1	0	Q7143	1:2.31	0.127	1.276	0.162	A19
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.98	-0.05	0	Right	Tilt	QPSK	1	0	Q7143	1:1.58	0.089	1.265	0.113	
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20							QPSK	1	99						
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	0.20	0	Left	Cheek	QPSK	1	0	Q7143	1:1.58	0.083	1.306	0.108	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.14	1	Left	Cheek	QPSK	50	0	Q7143	1:1.58	0.062	1.285	0.080	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	0.11	0	Left	Tilt	QPSK	1	0	Q7143	1:1.58	0.055	1.306	0.072	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.09	1	Left	Tilt	QPSK	50	0	Q7143	1:1.58	0.041	1.285	0.053	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram				

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Table 11-20
DTS SISO Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2462	11	802.11b	DSSS	22	17.0	16.37	0.15	Right	Cheek	1	Q7142	1	99.0	0.328	0.283	1.156	1.010	0.330	
2462	11	802.11b	DSSS	22	17.0	16.37	0.19	Right	Tilt	1	Q7142	1	99.0	0.200	-	1.156	1.010	-	
2462	11	802.11b	DSSS	22	17.0	16.37	-0.14	Left	Cheek	1	Q7142	1	99.0	0.121	-	1.156	1.010	-	
2462	11	802.11b	DSSS	22	17.0	16.37	0.13	Left	Tilt	1	Q7142	1	99.0	0.125	-	1.156	1.010	-	
2412	1	802.11b	DSSS	22	17.0	16.58	-0.17	Right	Cheek	2	Q7142	1	99.0	1.550	1.130	1.102	1.010	1.258	
2437	6	802.11b	DSSS	22	17.0	16.65	0.05	Right	Cheek	2	Q7142	1	99.0	1.297	1.180	1.084	1.010	**1.292**	A20
2462	11	802.11b	DSSS	22	17.0	16.89	-0.17	Right	Cheek	2	Q7142	1	99.0	0.916	0.901	1.026	1.010	0.934	
2437	6	802.11b	DSSS	22	17.0	16.65	0.15	Right	Tilt	2	Q7142	1	99.0	0.960	0.921	1.084	1.010	1.008	
2462	11	802.11b	DSSS	22	17.0	16.89	0.03	Right	Tilt	2	Q7142	1	99.0	1.119	0.829	1.026	1.010	0.859	
2462	11	802.11b	DSSS	22	17.0	16.89	-0.18	Left	Cheek	2	Q7142	1	99.0	0.425	0.321	1.026	1.010	0.333	
2462	11	802.11b	DSSS	22	17.0	16.89	-0.04	Left	Tilt	2	Q7142	1	99.0	0.306	-	1.026	1.010	-	
2437	6	802.11b	DSSS	22	17.0	16.65	0.12	Right	Cheek	2	Q7142	1	99.0	1.166	1.050	1.084	1.010	1.150	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram											

Note: Blue entry represents variability measurement.

Table 11-21
DTS MIMO Head SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	17.0	16.55	17.0	16.69	-0.05	Right	Cheek	MIMO	Q7143	13	98.6	1.140	1.150	1.109	1.014	1.293	
2437	6	802.11n	OFDM	20	17.0	16.11	17.0	16.86	-0.20	Right	Cheek	MIMO	Q7143	13	98.6	1.053	1.050	1.227	1.014	1.306	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	0.16	Right	Cheek	MIMO	Q7143	13	98.6	1.133	1.080	1.146	1.014	1.255	
2412	1	802.11n	OFDM	20	17.0	16.55	17.0	16.69	0.06	Right	Tilt	MIMO	Q7143	13	98.6	1.104	1.110	1.109	1.014	1.248	
2437	6	802.11n	OFDM	20	17.0	16.11	17.0	16.86	0.11	Right	Tilt	MIMO	Q7143	13	98.6	0.960	1.010	1.227	1.014	1.257	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	-0.01	Right	Tilt	MIMO	Q7143	13	98.6	0.956	0.921	1.146	1.014	1.070	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	-0.13	Left	Cheek	MIMO	Q7143	13	98.6	0.500	0.410	1.146	1.014	0.476	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	0.05	Left	Tilt	MIMO	Q7143	13	98.6	0.447	-	1.146	1.014	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**										**Head** **1.6 W/kg (mW/g)** averaged over 1 gram											

To achieve the 20.00 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.0 dBm.

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Table 11-22
NII SISO Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	14.0	13.59	0.12	Right	Cheek	1	Q7137	29.3	94.6	0.070	-	1.099	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.59	0.10	Right	Tilt	1	Q7137	29.3	94.6	0.102	0.029	1.099	1.057	0.034	
5290	58	802.11ac	OFDM	80	14.0	13.59	0.17	Left	Cheek	1	Q7137	29.3	94.6	0.048	-	1.099	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.59	0.16	Left	Tilt	1	Q7137	29.3	94.6	0.032	-	1.099	1.057	-	
5290	58	802.11ac	OFDM	80	14.0	13.69	0.15	Right	Cheek	2	Q7137	29.3	94.5	0.372	0.175	1.074	1.058	0.199	
5290	58	802.11ac	OFDM	80	14.0	13.69	0.16	Right	Tilt	2	Q7137	29.3	94.5	0.344	-	1.074	1.058	-	
5290	58	802.11ac	OFDM	80	14.0	13.69	0.13	Left	Cheek	2	Q7137	29.3	94.5	0.174	-	1.074	1.058	-	
5290	58	802.11ac	OFDM	80	14.0	13.69	0.10	Left	Tilt	2	Q7137	29.3	94.5	0.177	-	1.074	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	13.99	0.13	Right	Cheek	1	Q7137	29.3	94.6	0.112	-	1.002	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	13.99	0.14	Right	Tilt	1	Q7137	29.3	94.6	0.131	0.052	1.002	1.057	0.055	
5690	138	802.11ac	OFDM	80	14.0	13.99	0.16	Left	Cheek	1	Q7137	29.3	94.6	0.113	-	1.002	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	13.99	0.13	Left	Tilt	1	Q7137	29.3	94.6	0.079	-	1.002	1.057	-	
5690	138	802.11ac	OFDM	80	14.0	13.55	0.16	Right	Cheek	2	Q7137	29.3	94.5	0.462	0.232	1.109	1.058	**0.272**	A21
5690	138	802.11ac	OFDM	80	14.0	13.55	0.16	Right	Tilt	2	Q7137	29.3	94.5	0.339	-	1.109	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	13.55	0.19	Left	Cheek	2	Q7137	29.3	94.5	0.205	-	1.109	1.058	-	
5690	138	802.11ac	OFDM	80	14.0	13.55	-0.18	Left	Tilt	2	Q7137	29.3	94.5	0.159	-	1.109	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.53	0.16	Right	Cheek	1	Q7137	29.3	94.6	0.181	0.061	1.114	1.057	0.072	
5775	155	802.11ac	OFDM	80	14.0	13.53	0.10	Right	Tilt	1	Q7137	29.3	94.6	0.158	-	1.114	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.53	0.15	Left	Cheek	1	Q7137	29.3	94.6	0.102	-	1.114	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.53	0.14	Left	Tilt	1	Q7137	29.3	94.6	0.072	-	1.114	1.057	-	
5775	155	802.11ac	OFDM	80	14.0	13.43	0.14	Right	Cheek	2	Q7137	29.3	94.5	0.402	0.226	1.140	1.058	**0.273**	
5775	155	802.11ac	OFDM	80	14.0	13.43	0.13	Right	Tilt	2	Q7137	29.3	94.5	0.351	-	1.140	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.43	0.18	Left	Cheek	2	Q7137	29.3	94.5	0.196	-	1.140	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.43	0.17	Left	Tilt	2	Q7137	29.3	94.5	0.176	-	1.140	1.058	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-23
DTS MIMO Head 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]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	14.0	13.56	14.0	13.95	0.14	Right	Cheek	MIMO	Q7143	13	98.6	0.973	0.788	1.107	1.014	0.885	
2462	11	802.11n	OFDM	20	14.0	13.35	14.0	13.98	0.11	Right	Cheek	MIMO	Q7143	13	98.6	0.528	0.547	1.161	1.014	0.644	
2412	1	802.11n	OFDM	20	14.0	13.56	14.0	13.95	0.05	Right	Tilt	MIMO	Q7143	13	98.6	0.950	0.891	1.107	1.014	1.000	
2437	6	802.11n	OFDM	20	14.0	13.29	14.0	13.69	-0.13	Right	Tilt	MIMO	Q7143	13	98.6	0.645	0.579	1.178	1.014	0.692	
2462	11	802.11n	OFDM	20	14.0	13.35	14.0	13.98	0.12	Right	Tilt	MIMO	Q7143	13	98.6	0.538	0.521	1.161	1.014	0.613	
2412	1	802.11n	OFDM	20	14.0	13.56	14.0	13.95	-0.12	Left	Cheek	MIMO	Q7143	13	98.6	0.322	0.303	1.107	1.014	0.340	
2412	1	802.11n	OFDM	20	14.0	13.56	14.0	13.95	0.00	Left	Tilt	MIMO	Q7143	13	98.6	0.353	0.291	1.107	1.014	0.327	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

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

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Table 11-24
DSS Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle %	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402.00	0	Bluetooth	FHSS	16.5	16.14	0.04	Right	Cheek	Q7143	1	77.3	0.484	1.086	1.294	0.680	
2441.00	39	Bluetooth	FHSS	16.5	16.47	0.10	Right	Cheek	Q7143	1	77.3	0.682	1.007	1.294	**0.889**	A22
2480.00	78	Bluetooth	FHSS	16.5	16.50	0.21	Right	Cheek	Q7143	1	77.3	0.651	1.000	1.294	0.842	
2480.00	78	Bluetooth	FHSS	16.5	16.50	0.17	Right	Tilt	Q7143	1	77.3	0.548	1.000	1.294	0.709	
2480.00	78	Bluetooth	FHSS	16.5	16.50	0.13	Left	Cheek	Q7143	1	77.3	0.192	1.000	1.294	0.248	
2480.00	78	Bluetooth	FHSS	16.5	16.50	0.14	Left	Tilt	Q7143	1	77.3	0.171	1.000	1.294	0.221	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram								

11.2 Standalone Body-Worn SAR Data

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

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	26.0	25.50	0	0.01	15 mm	Q7137	1:1	back	0.354	1.122	0.397	A23
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	26.0	24.91	0	0.00	15 mm	Q7137	1:1	back	0.354	1.285	0.455	A25
836.60	190	GSM 850	GSM	33.5	32.81	N/A	0.01	15 mm	Q7137	1:8.3	back	0.254	1.172	0.298	A27
836.60	4183	UMTS 850	RMC	25.8	25.17	0	0.03	15 mm	Q7142	1:1	back	0.408	1.156	0.472	A29
1712.40	1312	UMTS 1750	RMC	25.5	24.35	16	0.00	15 mm	Q7137	1:1	back	0.518	1.303	0.675	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	-0.02	15 mm	Q7137	1:1	back	0.519	1.262	0.655	A31
1752.60	1513	UMTS 1750	RMC	25.5	24.46	16	-0.02	15 mm	Q7137	1:1	back	0.455	1.271	0.578	
1851.25	25	PCS CDMA	TDSO / SO32	25.0	24.58	17	0.02	15 mm	T0268	1:1	back	0.652	1.102	0.719	
1880.00	600	PCS CDMA	TDSO / SO32	25.0	24.42	17	0.02	15 mm	T0268	1:1	back	0.744	1.143	0.850	A33
1908.75	1175	PCS CDMA	TDSO / SO32	25.0	24.33	17	0.00	15 mm	T0268	1:1	back	0.725	1.167	0.846	
1880.00	661	GSM 1900	GSM	31.0	29.76	N/A	-0.04	15 mm	T0268	1:8.3	back	0.259	1.330	0.344	A35
1852.40	9262	UMTS 1900	RMC	25.2	24.59	17	0.00	15 mm	T0253	1:1	back	0.640	1.151	0.737	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	-0.01	15 mm	T0253	1:1	back	0.671	1.175	0.788	A37
1907.60	9538	UMTS 1900	RMC	25.2	24.28	17	-0.02	15 mm	T0253	1:1	back	0.670	1.236	0.828	
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 11-26
LTE Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	-0.01	0	Ant A	Q7137	QPSK	1	50	15 mm	back	1:1	0.294	1.153	0.339	A39
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	0.00	1	Ant A	Q7137	QPSK	50	25	15 mm	back	1:1	0.233	1.148	0.267	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.03	0	Ant A	T0253	QPSK	1	0	15 mm	back	1:1	0.293	1.309	0.384	A41
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	-0.03	1	Ant A	T0253	QPSK	25	0	15 mm	back	1:1	0.241	1.247	0.301	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	-0.01	0	Ant A	T0253	QPSK	1	49	15 mm	back	1:1	0.344	1.416	0.487	A43
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	-0.03	1	Ant A	T0253	QPSK	25	12	15 mm	back	1:1	0.265	1.406	0.373	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	-0.01	0	Ant A	Q7137	QPSK	1	49	15 mm	back	1:1	0.346	1.172	0.406	A45
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	-0.01	1	Ant A	Q7137	QPSK	25	0	15 mm	back	1:1	0.290	1.148	0.333	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.01	0	Ant A	Q7137	QPSK	1	0	15 mm	back	1:1	0.308	1.321	0.407	A47
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	-0.01	1	Ant A	Q7137	QPSK	36	0	15 mm	back	1:1	0.259	1.297	0.336	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.01	0	Ant A	Q7137	QPSK	1	25	15 mm	back	1:1	0.341	1.318	0.449	A49
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.01	1	Ant A	Q7137	QPSK	25	12	15 mm	back	1:1	0.277	1.309	0.363	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.5	24.56	16	0.01	0	Ant A	Q7137	QPSK	1	0	15 mm	back	1:1	0.586	1.242	0.728	A51
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	0.00	0	Ant A	Q7137	QPSK	1	0	15 mm	back	1:1	0.556	1.205	0.670	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.5	24.64	16	-0.01	0	Ant A	Q7137	QPSK	1	0	15 mm	back	1:1	0.502	1.219	0.612	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.00	1	Ant A	Q7137	QPSK	50	0	15 mm	back	1:1	0.434	1.186	0.515	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.2	24.24	17	-0.01	0	Ant A	Q7143	QPSK	1	0	15 mm	back	1:1	0.593	1.247	0.739	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	25.2	24.26	17	-0.03	0	Ant A	Q7143	QPSK	1	0	15 mm	back	1:1	0.473	1.242	0.587	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.04	0	Ant A	Q7143	QPSK	1	0	15 mm	back	1:1	0.645	1.222	0.788	A53
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.08	1	Ant A	Q7143	QPSK	50	0	15 mm	back	1:1	0.522	1.247	0.651	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	N/A	0.03	0	Ant B	T0253	QPSK	1	0	15 mm	back	1:1	0.379	1.225	0.464	A55
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	N/A	0.01	1	Ant B	T0253	QPSK	25	0	15 mm	back	1:1	0.292	1.253	0.366	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	N/A	0.02	0	Ant A	T0253	QPSK	1	0	15 mm	back	1:1	0.232	1.199	0.278	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	N/A	-0.04	1	Ant A	T0253	QPSK	25	0	15 mm	back	1:1	0.173	1.183	0.205	
2510.00	20850	Low	LTE Band 7	20	24.0	22.98	N/A	-0.06	0	Ant B	T0247	QPSK	1	0	10 mm	back	1:1	0.525	1.265	0.664	
2535.00	21100	Mid	LTE Band 7	20	24.0	22.67	N/A	-0.03	0	Ant B	T0247	QPSK	1	0	10 mm	back	1:1	0.587	1.358	0.797	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	N/A	-0.02	0	Ant B	T0247	QPSK	1	0	10 mm	back	1:1	0.644	1.242	0.800	A57
2560.00	21350	High	LTE Band 7	20	23.0	21.93	N/A	0.04	1	Ant B	T0247	QPSK	50	0	10 mm	back	1:1	0.515	1.279	0.659	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	N/A	0.03	0	Ant A	T0247	QPSK	1	0	15 mm	back	1:1	0.316	1.148	0.363	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	N/A	0.01	1	Ant A	T0247	QPSK	50	0	15 mm	back	1:1	0.247	1.194	0.295	

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 11-27
LTE Band 41 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	23.58	-0.01	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.393	1.387	0.545	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	-0.07	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.526	1.306	0.687	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	25.0	23.81	-0.02	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.485	1.315	0.638	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	25.0	23.78	0.12	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.387	1.324	0.512	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	25.0	23.76	0.10	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.352	1.330	0.468	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.05	1	Q7137	QPSK	50	0	15 mm	back	1:1.58	0.416	1.285	0.535	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.81	0.02	1	Q7137	QPSK	100	0	15 mm	back	1:1.58	0.367	1.315	0.483	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	28.2	27.14	-0.10	0	Q7137	QPSK	1	0	15 mm	back	1:2.31	0.803	1.276	**1.025**	A59
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.98	-0.13	0	Q7137	QPSK	1	0	15 mm	back	1:1.58	0.570	1.265	0.721	
	SCC	2529.70	39987	Low-Mid		20						QPSK	1	99							

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

Table 11-28
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	21.0	20.77	-0.02	15 mm	1	Q7137	1	back	99.0	0.058	0.052	1.054	1.010	0.055	
2437	6	802.11b	DSSS	22	21.0	20.24	0.05	15 mm	2	Q7137	1	back	99.0	0.112	0.097	1.191	1.010	**0.117**	A61

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 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	17.15	-0.20	15 mm	1	Q7143	6	back	98.7	0.428	0.195	1.216	1.013	0.240	
5260	52	802.11a	OFDM	20	18.0	16.95	0.10	15 mm	2	Q7143	6	back	98.8	0.752	0.331	1.274	1.012	**0.427**	
5720	144	802.11a	OFDM	20	17.5	16.62	0.14	15 mm	1	Q7143	6	back	98.7	0.178	0.068	1.225	1.013	0.084	
5720	144	802.11a	OFDM	20	17.5	17.35	0.12	15 mm	2	Q7143	6	back	98.8	0.578	0.251	1.035	1.012	0.263	
5785	157	802.11a	OFDM	20	17.5	16.70	0.14	15 mm	1	Q7143	6	back	98.7	0.223	0.113	1.202	1.013	0.138	
5785	157	802.11a	OFDM	20	17.5	17.26	0.00	15 mm	2	Q7143	6	back	98.8	0.567	0.250	1.057	1.012	0.267	

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

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Table 11-30
NII MIMO Body-Worn SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
5260	52	802.11n	OFDM	20	18.0	17.05	18.0	16.88	-0.02	15 mm	MIMO	Q7143	13	back	98.6	1.246	0.563	1.294	1.014	0.739	
5300	60	802.11n	OFDM	20	18.0	17.04	18.0	16.91	-0.10	15 mm	MIMO	Q7143	13	back	98.6	1.369	0.598	1.285	1.014	0.779	
5320	64	802.11n	OFDM	20	18.0	17.21	18.0	16.89	0.04	15 mm	MIMO	Q7143	13	back	98.6	1.423	0.616	1.291	1.014	0.806	A63
5600	120	802.11n	OFDM	20	17.5	15.97	17.5	16.40	0.07	15 mm	MIMO	Q7143	13	back	98.6	0.981	0.436	1.422	1.014	0.629	
5745	149	802.11n	OFDM	20	17.5	15.99	17.5	16.25	0.14	15 mm	MIMO	Q7143	13	back	98.6	0.721	0.330	1.416	1.014	0.474	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram													

For channels 52, 56 and 64, to achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm. For channels 120 and 149 to achieve the 20.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.5 dBm.

Table 11-31
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 W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																						
5290	58	802.11ac	OFDM	80	14.0	13.59	14.0	13.69	0.19	15 mm	MIMO	Q7143	58.5	back	94.0	0.349	0.149	1.099	1.064	0.174	
5690	138	802.11ac	OFDM	80	14.0	13.99	14.0	13.55	-0.03	15 mm	MIMO	Q7143	58.5	back	94.0	0.217	0.088	1.109	1.064	0.104	
5775	155	802.11ac	OFDM	80	14.0	13.53	14.0	13.43	0.13	15 mm	MIMO	Q7143	58.5	back	94.0	0.228	0.103	1.140	1.064	0.125	
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 11-32
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) (W/kg)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.															
2480	78	Bluetooth	FHSS	16.5	16.50	-0.06	15 mm	Q7137	1	back	77.3	0.035	1.000	1.294	**0.045**	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 11-33
GPRS/UMTS/CDMA Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.54	0	-0.01	10 mm	Q7137	N/A	1:1	back	0.706	1.112	0.785	A24
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.54	0	0.08	10 mm	Q7137	N/A	1:1	front	0.544	1.112	0.605	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.54	0	-0.06	10 mm	Q7137	N/A	1:1	bottom	0.429	1.112	0.477	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.54	0	-0.05	10 mm	Q7137	N/A	1:1	right	0.373	1.112	0.415	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.54	0	0.02	10 mm	Q7137	N/A	1:1	left	0.088	1.112	0.098	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.94	0	0.13	10 mm	Q7137	N/A	1:1	back	0.725	1.276	0.925	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.99	0	0.03	10 mm	Q7137	N/A	1:1	back	0.771	1.262	0.973	
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.86	0	0.00	10 mm	Q7137	N/A	1:1	back	0.812	1.300	1.056	A26
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.99	0	-0.03	10 mm	Q7137	N/A	1:1	front	0.626	1.262	0.790	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.99	0	0.00	10 mm	Q7137	N/A	1:1	bottom	0.439	1.262	0.554	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.99	0	-0.02	10 mm	Q7137	N/A	1:1	right	0.342	1.262	0.432	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.99	0	-0.10	10 mm	Q7137	N/A	1:1	left	0.093	1.262	0.117	
824.20	128	GSM 850	GPRS	28.5	27.19	N/A	-0.05	10 mm	Q7137	4	1:2.076	back	0.415	1.352	0.561	
836.60	190	GSM 850	GPRS	28.5	26.89	N/A	-0.06	10 mm	Q7137	4	1:2.076	back	0.499	1.449	0.723	
848.80	251	GSM 850	GPRS	28.5	27.14	N/A	-0.02	10 mm	Q7137	4	1:2.076	back	0.590	1.368	0.807	A28
836.60	190	GSM 850	GPRS	28.5	26.89	N/A	-0.03	10 mm	Q7137	4	1:2.076	front	0.376	1.449	0.545	
836.60	190	GSM 850	GPRS	28.5	26.89	N/A	-0.08	10 mm	Q7137	4	1:2.076	bottom	0.284	1.449	0.412	
836.60	190	GSM 850	GPRS	28.5	26.89	N/A	-0.03	10 mm	Q7137	4	1:2.076	right	0.251	1.449	0.364	
836.60	190	GSM 850	GPRS	28.5	26.89	N/A	-0.04	10 mm	Q7137	4	1:2.076	left	0.076	1.449	0.110	
826.40	4132	UMTS 850	RMC	25.8	25.14	0	-0.02	10 mm	Q7142	N/A	1:1	back	0.754	1.164	0.878	
836.60	4183	UMTS 850	RMC	25.8	25.17	0	-0.04	10 mm	Q7142	N/A	1:1	back	0.815	1.156	0.942	
846.60	4233	UMTS 850	RMC	25.8	25.14	0	-0.06	10 mm	Q7142	N/A	1:1	back	0.822	1.164	0.957	A30
836.60	4183	UMTS 850	RMC	25.8	25.17	0	-0.03	10 mm	Q7142	N/A	1:1	front	0.625	1.156	0.723	
836.60	4183	UMTS 850	RMC	25.8	25.17	0	-0.01	10 mm	Q7142	N/A	1:1	bottom	0.373	1.156	0.431	
836.60	4183	UMTS 850	RMC	25.8	25.17	0	0.00	10 mm	Q7142	N/A	1:1	right	0.352	1.156	0.407	
836.60	4183	UMTS 850	RMC	25.8	25.17	0	0.03	10 mm	Q7142	N/A	1:1	left	0.082	1.156	0.095	
846.60	4233	UMTS 850	RMC	25.8	25.14	0	0.11	10 mm	Q7142	N/A	1:1	back	0.820	1.164	0.954	
1732.40	1412	UMTS 1750	RMC	20.5	19.59	16	-0.02	10 mm	Q7140	N/A	1:1	back	0.363	1.233	0.448	
1732.40	1412	UMTS 1750	RMC	20.5	19.59	16	0.00	10 mm	Q7140	N/A	1:1	front	0.310	1.233	0.382	
1712.40	1312	UMTS 1750	RMC	20.5	19.51	16	-0.04	10 mm	Q7140	N/A	1:1	bottom	0.612	1.256	0.769	
1732.40	1412	UMTS 1750	RMC	20.5	19.59	16	-0.04	10 mm	Q7140	N/A	1:1	bottom	0.603	1.233	0.743	
1752.60	1513	UMTS 1750	RMC	20.5	19.60	16	-0.05	10 mm	Q7140	N/A	1:1	bottom	0.617	1.230	0.759	A32
1732.40	1412	UMTS 1750	RMC	20.5	19.59	16	0.00	10 mm	Q7140	N/A	1:1	right	0.061	1.233	0.075	
1732.40	1412	UMTS 1750	RMC	20.5	19.59	16	-0.01	10 mm	Q7140	N/A	1:1	left	0.085	1.233	0.105	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	-0.01	10 mm	Q7140	N/A	1:1	back	0.479	1.262	0.604	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	-0.02	10 mm	Q7140	N/A	1:1	front	0.394	1.262	0.497	
1851.25	25	PCS CDMA	EVDO Rev. 0	21.0	20.14	17	0.00	10 mm	Q7140	N/A	1:1	bottom	0.802	1.219	0.978	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	0.00	10 mm	Q7140	N/A	1:1	bottom	0.885	1.262	1.117	
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	19.95	17	0.02	10 mm	Q7140	N/A	1:1	bottom	1.050	1.274	1.338	A34
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	0.06	10 mm	Q7140	N/A	1:1	right	0.081	1.262	0.102	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	0.02	10 mm	Q7140	N/A	1:1	left	0.079	1.262	0.100	
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	19.95	17	0.10	10 mm	Q7140	N/A	1:1	bottom	1.030	1.274	1.312	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	-0.01	10 mm	Q7140	3	1:2.76	back	0.208	1.205	0.251	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	0.03	10 mm	Q7140	3	1:2.76	front	0.180	1.205	0.217	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	-0.02	10 mm	Q7140	3	1:2.76	bottom	0.435	1.205	0.524	A36
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	0.09	10 mm	Q7140	3	1:2.76	right	0.038	1.205	0.046	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	-0.01	10 mm	Q7140	3	1:2.76	left	0.042	1.205	0.051	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	-0.01	10 mm	Q7138	N/A	1:1	back	0.376	1.282	0.482	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	-0.02	10 mm	Q7138	N/A	1:1	front	0.327	1.282	0.419	
1852.40	9262	UMTS 1900	RMC	20.5	19.41	17	-0.01	10 mm	Q7138	N/A	1:1	bottom	0.735	1.285	0.944	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	0.00	10 mm	Q7138	N/A	1:1	bottom	0.849	1.282	1.088	
1907.60	9538	UMTS 1900	RMC	20.5	19.27	17	-0.01	10 mm	Q7138	N/A	1:1	bottom	0.985	1.327	1.307	A38
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	0.03	10 mm	Q7138	N/A	1:1	right	0.069	1.282	0.088	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	0.01	10 mm	Q7138	N/A	1:1	left	0.089	1.282	0.114	
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 11-34
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	0.01	0	Q7137	QPSK	1	50	10 mm	back	1:1	0.437	1.153	0.504	A40
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	0.00	1	Q7137	QPSK	50	25	10 mm	back	1:1	0.353	1.148	0.405	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	0.01	0	Q7137	QPSK	1	50	10 mm	front	1:1	0.355	1.153	0.409	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	-0.01	1	Q7137	QPSK	50	25	10 mm	front	1:1	0.284	1.148	0.326	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	-0.04	0	Q7137	QPSK	1	50	10 mm	bottom	1:1	0.236	1.153	0.272	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	0.00	1	Q7137	QPSK	50	25	10 mm	bottom	1:1	0.192	1.148	0.220	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	0.00	0	Q7137	QPSK	1	50	10 mm	right	1:1	0.231	1.153	0.266	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	-0.04	1	Q7137	QPSK	50	25	10 mm	right	1:1	0.213	1.148	0.245	
680.50	133297	Mid	LTE Band 71	20	25.8	25.18	2	0.01	0	Q7137	QPSK	1	50	10 mm	left	1:1	0.161	1.153	0.186	
680.50	133297	Mid	LTE Band 71	20	24.8	24.20	2	0.04	1	Q7137	QPSK	50	25	10 mm	left	1:1	0.122	1.148	0.140	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-35
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.04	0	Q7137	QPSK	1	0	10 mm	back	1:1	0.489	1.309	0.640	A42
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	-0.03	1	Q7137	QPSK	25	0	10 mm	back	1:1	0.410	1.247	0.511	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.00	0	Q7137	QPSK	1	0	10 mm	front	1:1	0.348	1.309	0.456	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	-0.02	1	Q7137	QPSK	25	0	10 mm	front	1:1	0.297	1.247	0.370	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	-0.01	0	Q7137	QPSK	1	0	10 mm	bottom	1:1	0.305	1.309	0.399	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.02	1	Q7137	QPSK	25	0	10 mm	bottom	1:1	0.252	1.247	0.314	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	0.05	0	Q7137	QPSK	1	0	10 mm	right	1:1	0.309	1.309	0.404	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	-0.02	1	Q7137	QPSK	25	0	10 mm	right	1:1	0.261	1.247	0.325	
707.50	23095	Mid	LTE Band 12	10	25.8	24.63	68	-0.02	0	Q7137	QPSK	1	0	10 mm	left	1:1	0.096	1.309	0.126	
707.50	23095	Mid	LTE Band 12	10	24.8	23.84	68	0.00	1	Q7137	QPSK	25	0	10 mm	left	1:1	0.091	1.247	0.113	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-36
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	-0.02	0	Q7137	QPSK	1	49	10 mm	back	1:1	0.551	1.416	0.780	A44
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	0.01	1	Q7137	QPSK	25	12	10 mm	back	1:1	0.443	1.406	0.623	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	-0.02	0	Q7137	QPSK	1	49	10 mm	front	1:1	0.431	1.416	0.610	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	-0.02	1	Q7137	QPSK	25	12	10 mm	front	1:1	0.348	1.406	0.489	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	-0.09	0	Q7137	QPSK	1	49	10 mm	bottom	1:1	0.303	1.416	0.429	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	-0.07	1	Q7137	QPSK	25	12	10 mm	bottom	1:1	0.262	1.406	0.368	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	0.03	0	Q7137	QPSK	1	49	10 mm	right	1:1	0.326	1.416	0.462	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	0.04	1	Q7137	QPSK	25	12	10 mm	right	1:1	0.282	1.406	0.396	
782.00	23230	Mid	LTE Band 13	10	25.8	24.29	0	-0.02	0	Q7137	QPSK	1	49	10 mm	left	1:1	0.127	1.416	0.180	
782.00	23230	Mid	LTE Band 13	10	24.8	23.32	0	0.07	1	Q7137	QPSK	25	12	10 mm	left	1:1	0.118	1.406	0.166	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-37
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	-0.10	0	Q7137	QPSK	1	49	10 mm	back	1:1	0.567	1.172	0.665	A46
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	0.00	1	Q7137	QPSK	25	0	10 mm	back	1:1	0.466	1.148	0.535	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	0.04	0	Q7137	QPSK	1	49	10 mm	front	1:1	0.445	1.172	0.522	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	0.02	1	Q7137	QPSK	25	0	10 mm	front	1:1	0.364	1.148	0.418	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	-0.02	0	Q7137	QPSK	1	49	10 mm	bottom	1:1	0.306	1.172	0.359	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	-0.06	1	Q7137	QPSK	25	0	10 mm	bottom	1:1	0.248	1.148	0.285	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	-0.04	0	Q7137	QPSK	1	49	10 mm	right	1:1	0.320	1.172	0.375	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	-0.01	1	Q7137	QPSK	25	0	10 mm	right	1:1	0.276	1.148	0.317	
793.00	23330	Mid	LTE Band 14	10	25.5	24.81	1	-0.13	0	Q7137	QPSK	1	49	10 mm	left	1:1	0.130	1.172	0.152	
793.00	23330	Mid	LTE Band 14	10	24.5	23.90	1	0.08	1	Q7137	QPSK	25	0	10 mm	left	1:1	0.129	1.148	0.148	
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 11-38
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.01	0	Q7137	QPSK	1	0	10 mm	back	1:1	0.653	1.321	0.863	A48
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	0.00	1	Q7137	QPSK	36	0	10 mm	back	1:1	0.535	1.297	0.694	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.56	4	0.00	1	Q7137	QPSK	75	0	10 mm	back	1:1	0.537	1.330	0.714	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.04	0	Q7137	QPSK	1	0	10 mm	front	1:1	0.491	1.321	0.649	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	0.01	1	Q7137	QPSK	36	0	10 mm	front	1:1	0.410	1.297	0.532	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	-0.06	0	Q7137	QPSK	1	0	10 mm	bottom	1:1	0.398	1.321	0.526	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	-0.03	1	Q7137	QPSK	36	0	10 mm	bottom	1:1	0.323	1.297	0.419	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	-0.03	0	Q7137	QPSK	1	0	10 mm	right	1:1	0.330	1.321	0.436	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	-0.04	1	Q7137	QPSK	36	0	10 mm	right	1:1	0.260	1.297	0.337	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.59	4	0.07	0	Q7137	QPSK	1	0	10 mm	left	1:1	0.058	1.321	0.077	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.67	4	-0.05	1	Q7137	QPSK	36	0	10 mm	left	1:1	0.051	1.297	0.066	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-39
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.06	0	Q7137	QPSK	1	25	10 mm	back	1:1	0.758	1.318	0.999	A50
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	-0.02	1	Q7137	QPSK	25	12	10 mm	back	1:1	0.607	1.309	0.795	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.62	4	0.02	1	Q7137	QPSK	50	0	10 mm	back	1:1	0.600	1.312	0.787	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.00	0	Q7137	QPSK	1	25	10 mm	front	1:1	0.580	1.318	0.764	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.01	1	Q7137	QPSK	25	12	10 mm	front	1:1	0.472	1.309	0.618	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	-0.04	0	Q7137	QPSK	1	25	10 mm	bottom	1:1	0.412	1.318	0.543	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	-0.08	1	Q7137	QPSK	25	12	10 mm	bottom	1:1	0.335	1.309	0.439	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.03	0	Q7137	QPSK	1	25	10 mm	right	1:1	0.318	1.318	0.419	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	-0.01	1	Q7137	QPSK	25	12	10 mm	right	1:1	0.264	1.309	0.346	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.60	4	0.04	0	Q7137	QPSK	1	25	10 mm	left	1:1	0.084	1.318	0.111	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.63	4	0.06	1	Q7137	QPSK	25	12	10 mm	left	1:1	0.070	1.309	0.092	
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 11-40
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	0.10	0	Q7140	QPSK	1	0	10 mm	back	1:1	0.328	1.403	0.460	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.02	0	Q7140	QPSK	50	0	10 mm	back	1:1	0.317	1.403	0.445	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.01	0	Q7140	QPSK	1	0	10 mm	front	1:1	0.331	1.403	0.464	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.07	0	Q7140	QPSK	50	0	10 mm	front	1:1	0.329	1.403	0.462	
1720.00	132072	Low	LTE Band 66 (AWS)	20	21.0	19.52	16	-0.07	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.562	1.406	0.790	A52
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.04	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.550	1.403	0.772	
1770.00	132572	High	LTE Band 66 (AWS)	20	21.0	19.26	16	-0.10	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.534	1.493	0.797	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.08	0	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.549	1.403	0.770	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	0.01	0	Q7140	QPSK	1	0	10 mm	right	1:1	0.057	1.403	0.080	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.03	0	Q7140	QPSK	50	0	10 mm	right	1:1	0.057	1.403	0.080	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	0.06	0	Q7140	QPSK	1	0	10 mm	left	1:1	0.088	1.403	0.123	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	21.0	19.53	16	-0.08	0	Q7140	QPSK	50	0	10 mm	left	1:1	0.083	1.403	0.116	
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 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	0.01	0	Q7140	QPSK	1	0	10 mm	back	1:1	0.343	1.256	0.431	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	0.01	0	Q7140	QPSK	50	0	10 mm	back	1:1	0.345	1.271	0.438	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	-0.03	0	Q7140	QPSK	1	0	10 mm	front	1:1	0.283	1.256	0.355	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	0.00	0	Q7140	QPSK	50	0	10 mm	front	1:1	0.284	1.271	0.361	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.34	17	-0.02	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.515	1.306	0.673	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.48	17	-0.02	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.631	1.265	0.798	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	-0.01	0	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.722	1.256	0.907	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.26	17	-0.01	0	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.496	1.330	0.660	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.31	17	-0.01	0	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.614	1.315	0.807	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	-0.04	0	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.728	1.271	0.925	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.37	17	0.00	0	Q7140	QPSK	100	0	10 mm	bottom	1:1	0.741	1.297	0.961	A54
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	0.06	0	Q7140	QPSK	1	0	10 mm	right	1:1	0.058	1.256	0.073	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	-0.06	0	Q7140	QPSK	50	0	10 mm	right	1:1	0.056	1.271	0.071	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	-0.05	0	Q7140	QPSK	1	0	10 mm	left	1:1	0.080	1.256	0.100	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	-0.01	0	Q7140	QPSK	50	0	10 mm	left	1:1	0.077	1.271	0.098	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

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Table 11-42
LTE Band 30 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.51	-0.04	0	Ant B	T0259	QPSK	1	0	10 mm	back	1:1	0.344	1.119	0.385	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.46	-0.02	0	Ant B	T0259	QPSK	25	0	10 mm	back	1:1	0.333	1.132	0.377	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.51	-0.02	0	Ant B	T0259	QPSK	1	0	10 mm	front	1:1	0.299	1.119	0.335	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.46	0.00	0	Ant B	T0259	QPSK	25	0	10 mm	front	1:1	0.288	1.132	0.326	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.51	-0.03	0	Ant B	T0259	QPSK	1	0	10 mm	bottom	1:1	0.741	1.119	0.829	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.46	-0.05	0	Ant B	T0259	QPSK	25	0	10 mm	bottom	1:1	0.732	1.132	0.829	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.42	-0.03	0	Ant B	T0259	QPSK	50	0	10 mm	bottom	1:1	0.786	1.143	0.898	A56
2310.00	27710	Mid	LTE Band 30	10	21.0	20.51	-0.06	0	Ant B	T0259	QPSK	1	0	10 mm	left	1:1	0.085	1.119	0.095	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.46	0.04	0	Ant B	T0259	QPSK	25	0	10 mm	left	1:1	0.078	1.132	0.088	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.12	-0.02	0	Ant A	T0259	QPSK	1	0	10 mm	back	1:1	0.262	1.225	0.321	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.00	0	Ant A	T0259	QPSK	25	0	10 mm	back	1:1	0.274	1.233	0.338	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.12	-0.03	0	Ant A	T0259	QPSK	1	0	10 mm	front	1:1	0.328	1.225	0.402	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	-0.03	0	Ant A	T0259	QPSK	25	0	10 mm	front	1:1	0.338	1.233	0.417	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.12	-0.01	0	Ant A	T0259	QPSK	1	0	10 mm	bottom	1:1	0.728	1.225	0.892	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	-0.01	0	Ant A	T0259	QPSK	25	0	10 mm	bottom	1:1	0.669	1.233	0.825	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.08	0.14	0	Ant A	T0259	QPSK	50	0	10 mm	bottom	1:1	0.725	1.236	0.896	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.12	0.13	0	Ant A	T0259	QPSK	1	0	10 mm	right	1:1	0.049	1.225	0.060	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.01	0	Ant A	T0259	QPSK	25	0	10 mm	right	1:1	0.053	1.233	0.065	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.12	-0.01	0	Ant A	T0259	QPSK	1	0	10 mm	left	1:1	0.046	1.225	0.056	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.16	0	Ant A	T0259	QPSK	25	0	10 mm	left	1:1	0.044	1.233	0.054	
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 11-43
LTE Band 7 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
2560.00	21350	High	LTE Band 7	20	20.5	19.47	0.00	0	Ant B	Q7140	QPSK	1	0	10 mm	back	1:1	0.437	1.268	0.554	
2560.00	21350	High	LTE Band 7	20	20.5	19.41	0.01	0	Ant B	Q7140	QPSK	50	0	10 mm	back	1:1	0.447	1.285	0.574	
2560.00	21350	High	LTE Band 7	20	20.5	19.47	0.00	0	Ant B	Q7140	QPSK	1	0	10 mm	front	1:1	0.381	1.268	0.483	
2560.00	21350	High	LTE Band 7	20	20.5	19.41	0.02	0	Ant B	Q7140	QPSK	50	0	10 mm	front	1:1	0.385	1.285	0.495	
2510.00	20850	Low	LTE Band 7	20	20.5	19.31	0.10	0	Ant B	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.801	1.315	1.053	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.19	0.15	0	Ant B	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.948	1.352	1.282	
2560.00	21350	High	LTE Band 7	20	20.5	19.47	0.12	0	Ant B	Q7140	QPSK	1	0	10 mm	bottom	1:1	1.090	1.268	1.382	A58
2510.00	20850	Low	LTE Band 7	20	20.5	19.22	0.12	0	Ant B	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.823	1.343	1.105	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.06	0.13	0	Ant B	Q7140	QPSK	50	0	10 mm	bottom	1:1	0.968	1.393	1.348	
2560.00	21350	High	LTE Band 7	20	20.5	19.41	0.04	0	Ant B	Q7140	QPSK	50	0	10 mm	bottom	1:1	1.080	1.285	**1.388**	
2560.00	21350	High	LTE Band 7	20	20.5	19.35	0.09	0	Ant B	Q7140	QPSK	100	0	10 mm	bottom	1:1	0.880	1.303	1.147	
2560.00	21350	High	LTE Band 7	20	20.5	19.47	-0.07	0	Ant B	Q7140	QPSK	1	0	10 mm	left	1:1	0.107	1.268	0.136	
2560.00	21350	High	LTE Band 7	20	20.5	19.41	-0.03	0	Ant B	Q7140	QPSK	50	0	10 mm	left	1:1	0.103	1.285	0.132	
2510.00	20850	Low	LTE Band 7	20	20.5	19.32	0.02	0	Ant A	Q7138	QPSK	1	0	10 mm	back	1:1	0.194	1.312	0.255	
2510.00	20850	Low	LTE Band 7	20	20.5	19.10	0.03	0	Ant A	Q7138	QPSK	50	0	10 mm	back	1:1	0.192	1.380	0.265	
2510.00	20850	Low	LTE Band 7	20	20.5	19.32	-0.01	0	Ant A	Q7138	QPSK	1	0	10 mm	front	1:1	0.157	1.312	0.206	
2510.00	20850	Low	LTE Band 7	20	20.5	19.10	0.01	0	Ant A	Q7138	QPSK	50	0	10 mm	front	1:1	0.155	1.380	0.214	
2510.00	20850	Low	LTE Band 7	20	20.5	19.32	-0.02	0	Ant A	Q7138	QPSK	1	0	10 mm	bottom	1:1	0.393	1.312	0.516	
2510.00	20850	Low	LTE Band 7	20	20.5	19.10	-0.15	0	Ant A	Q7138	QPSK	50	0	10 mm	bottom	1:1	0.390	1.380	0.538	
2510.00	20850	Low	LTE Band 7	20	20.5	19.32	0.12	0	Ant A	Q7138	QPSK	1	0	10 mm	right	1:1	0.063	1.312	0.083	
2510.00	20850	Low	LTE Band 7	20	20.5	19.10	0.03	0	Ant A	Q7138	QPSK	50	0	10 mm	right	1:1	0.061	1.380	0.084	
2510.00	20850	Low	LTE Band 7	20	20.5	19.32	0.10	0	Ant A	Q7138	QPSK	1	0	10 mm	left	1:1	0.114	1.312	0.150	
2510.00	20850	Low	LTE Band 7	20	20.5	19.10	-0.11	0	Ant A	Q7138	QPSK	50	0	10 mm	left	1:1	0.106	1.380	0.146	
2560.00	21350	High	LTE Band 7	20	20.5	19.47	-0.06	0	Ant B	Q7140	QPSK	1	0	10 mm	bottom	1:1	0.997	1.268	1.264	
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 11-44
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.09	-0.05	0	Q7140	QPSK	1	0	10 mm	back	1:1.58	0.444	1.384	0.614	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.16	0.00	0	Q7140	QPSK	1	0	10 mm	back	1:1.58	0.542	1.361	0.738	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.17	0.01	0	Q7140	QPSK	1	0	10 mm	back	1:1.58	0.548	1.358	0.744	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	20.97	0.05	0	Q7140	QPSK	1	0	10 mm	back	1:1.58	0.449	1.422	0.638	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	21.09	0.02	0	Q7140	QPSK	1	0	10 mm	back	1:1.58	0.369	1.384	0.511	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.02	-0.05	0	Q7140	QPSK	50	0	10 mm	back	1:1.58	0.457	1.406	0.643	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.15	-0.02	0	Q7140	QPSK	50	0	10 mm	back	1:1.58	0.534	1.365	0.729	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.16	-0.03	0	Q7140	QPSK	50	0	10 mm	back	1:1.58	0.502	1.361	0.683	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	20.94	0.05	0	Q7140	QPSK	50	0	10 mm	back	1:1.58	0.437	1.432	0.626	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	20.92	0.07	0	Q7140	QPSK	50	0	10 mm	back	1:1.58	0.353	1.439	0.508	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.06	0.01	0	Q7140	QPSK	100	0	10 mm	back	1:1.58	0.503	1.393	0.701	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.17	0.00	0	Q7140	QPSK	1	0	10 mm	front	1:1.58	0.353	1.358	0.479	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.16	-0.04	0	Q7140	QPSK	50	0	10 mm	front	1:1.58	0.332	1.361	0.452	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.09	-0.04	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.783	1.384	1.084	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	20.84	-0.07	0	Q7140	QPSK	1	99	10 mm	bottom	1:1.58	0.880	1.466	1.290	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	22.5	21.04	-0.05	0	Q7140	QPSK	1	99	10 mm	bottom	1:1.58	0.918	1.400	1.285	
	SCC	2525.80	39948	Low								QPSK	1	0							
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.16	-0.07	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.962	1.361	1.309	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.09	-0.17	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.980	1.384	1.356	
	SCC	2529.70	39987	Low-Mid								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.17	0.01	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.931	1.358	1.264	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	22.5	21.19	-0.05	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.985	1.352	1.332	A60
	SCC	2573.20	40422	Mid								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	20.97	0.01	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.734	1.422	1.044	
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	22.5	21.00	-0.09	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.794	1.413	1.122	
	SCC	2616.70	40857	Mid-High								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	21.09	0.01	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.578	1.384	0.800	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	22.5	21.06	-0.16	0	Q7140	QPSK	1	0	10 mm	bottom	1:1.58	0.612	1.393	0.853	
	SCC	2660.20	41292	High								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.02	-0.04	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.798	1.406	1.122	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	20.89	-0.18	0	Q7140	QPSK	50	50	10 mm	bottom	1:1.58	0.873	1.449	1.265	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	22.5	20.87	-0.13	0	Q7140	QPSK	50	50	10 mm	bottom	1:1.58	0.796	1.455	1.158	
	SCC	2525.80	39948	Low								QPSK	50	0							
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.15	0.00	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.958	1.365	1.308	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.05	-0.14	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.883	1.396	1.233	
	SCC	2529.70	39987	Low-Mid								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.16	-0.04	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.901	1.361	1.226	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	22.5	20.95	-0.15	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.853	1.429	1.219	
	SCC	2573.20	40422	Mid								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	20.94	-0.01	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.719	1.432	1.030	
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	22.5	20.86	-0.12	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.715	1.459	1.043	
	SCC	2616.70	40857	Mid-High								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	20.92	0.01	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.557	1.439	0.802	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	22.5	20.88	-0.10	0	Q7140	QPSK	50	0	10 mm	bottom	1:1.58	0.585	1.452	0.849	
	SCC	2660.20	41292	High								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.06	-0.05	0	Q7140	QPSK	100	0	10 mm	bottom	1:1.58	0.815	1.393	1.135	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.16	-0.02	0	Q7140	QPSK	1	0	10 mm	bottom	1:2.31	0.709	1.361	0.965	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.17	0.00	0	Q7140	QPSK	1	0	10 mm	left	1:1.58	0.087	1.358	0.118	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.16	-0.11	0	Q7140	QPSK	50	0	10 mm	left	1:1.58	0.084	1.361	0.114	
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 11-45
WLAN Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																		
2437	6	802.11b	DSSS	22	21.0	20.77	0.19	10 mm	1	Q7137	1	back	99.0	0.119	0.116	1.054	1.010	0.123	
2437	6	802.11b	DSSS	22	21.0	20.77	0.12	10 mm	1	Q7137	1	front	99.0	0.080	-	1.054	1.010	-	
2437	6	802.11b	DSSS	22	21.0	20.77	0.05	10 mm	1	Q7137	1	top	99.0	0.170	0.140	1.054	1.010	0.149	
2437	6	802.11b	DSSS	22	21.0	20.77	0.15	10 mm	1	Q7137	1	left	99.0	0.075	-	1.054	1.010	-	
2437	6	802.11b	DSSS	22	21.0	20.24	-0.13	10 mm	2	Q7137	1	back	99.0	0.271	-	1.191	1.010	-	
2437	6	802.11b	DSSS	22	21.0	20.24	0.14	10 mm	2	Q7137	1	front	99.0	0.276	0.219	1.191	1.010	0.263	
2437	6	802.11b	DSSS	22	21.0	20.24	0.02	10 mm	2	Q7137	1	top	99.0	0.397	0.335	1.191	1.010	**0.403**	A62
2437	6	802.11b	DSSS	22	21.0	20.24	-0.03	10 mm	2	Q7137	1	left	99.0	0.170	-	1.191	1.010	-	
5785	157	802.11a	OFDM	20	17.5	16.70	0.00	10 mm	1	Q7143	6	back	98.7	0.426	0.196	1.202	1.013	0.239	
5785	157	802.11a	OFDM	20	17.5	16.70	0.18	10 mm	1	Q7143	6	front	98.7	0.017	-	1.202	1.013	-	
5785	157	802.11a	OFDM	20	17.5	16.70	0.15	10 mm	1	Q7143	6	top	98.7	0.101	-	1.202	1.013	-	
5785	157	802.11a	OFDM	20	17.5	16.70	0.14	10 mm	1	Q7143	6	left	98.7	0.016	-	1.202	1.013	-	
5785	157	802.11a	OFDM	20	17.5	17.26	0.13	10 mm	2	Q7143	6	back	98.8	1.020	0.433	1.057	1.012	**0.463**	
5785	157	802.11a	OFDM	20	17.5	17.26	0.04	10 mm	2	Q7143	6	front	98.8	0.166	-	1.057	1.012	-	
5785	157	802.11a	OFDM	20	17.5	17.26	-0.21	10 mm	2	Q7143	6	top	98.8	0.197	-	1.057	1.012	-	
5785	157	802.11a	OFDM	20	17.5	17.26	0.11	10 mm	2	Q7143	6	left	98.8	0.252	0.098	1.057	1.012	0.105	

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

Table 11-46
NII MIMO Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan W/kg	SAR (1g) (W/kg)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																				
5745	149	802.11n	OFDM	20	17.5	15.99	17.5	16.25	0.04	10 mm	MIMO	Q7143	13	back	98.6	1.120	0.539	1.416	1.014	0.774	
5785	157	802.11n	OFDM	20	17.5	15.94	17.5	16.24	0.03	10 mm	MIMO	Q7143	13	back	98.6	1.670	0.668	1.432	1.014	0.970	
5825	165	802.11n	OFDM	20	17.5	15.85	17.5	16.32	0.01	10 mm	MIMO	Q7143	13	back	98.6	1.846	0.725	1.462	1.014	1.075	A64
5745	149	802.11n	OFDM	20	17.5	15.99	17.5	16.25	0.18	10 mm	MIMO	Q7143	13	front	98.6	0.151	0.052	1.416	1.014	0.075	
5745	149	802.11n	OFDM	20	17.5	15.99	17.5	16.25	0.05	10 mm	MIMO	Q7143	13	top	98.6	0.287	0.119	1.416	1.014	0.171	
5745	149	802.11n	OFDM	20	17.5	15.99	17.5	16.25	0.03	10 mm	MIMO	Q7143	13	left	98.6	0.219	-	1.416	1.014	-	

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

To achieve the 20.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.5 dBm.

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Table 11-47
DTS 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.																					
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	-0.15	10 mm	MIMO	Q7137	13	back	98.6	0.211	-	1.146	1.014	-	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	0.18	10 mm	MIMO	Q7137	13	front	98.6	0.227	-	1.146	1.014	-	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	0.13	10 mm	MIMO	Q7137	13	top	98.6	0.247	0.211	1.146	1.014	0.245	
2462	11	802.11n	OFDM	20	17.0	16.41	17.0	16.83	0.11	10 mm	MIMO	Q7137	13	left	98.6	0.161	-	1.146	1.014	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram								

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

Table 11-48
NII MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan 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	13.53	14.0	13.43	0.11	10 mm	MIMO	Q7143	58.5	back	94.0	0.394	0.158	1.140	1.064	0.192	
5775	155	802.11ac	OFDM	80	14.0	13.53	14.0	13.43	0.05	10 mm	MIMO	Q7143	58.5	front	94.0	0.023	-	1.140	1.064	-	
5775	155	802.11ac	OFDM	80	14.0	13.53	14.0	13.43	0.11	10 mm	MIMO	Q7143	58.5	top	94.0	0.063	-	1.140	1.064	-	
5775	155	802.11ac	OFDM	80	14.0	13.53	14.0	13.43	0.00	10 mm	MIMO	Q7143	58.5	left	94.0	0.087	-	1.140	1.064	-	
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 11-49
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	16.5	16.50	0.10	10 mm	Q7137	1	back	77.3	0.091	1.000	1.294	0.118	
2480	78	Bluetooth	FHSS	16.5	16.50	-0.12	10 mm	Q7137	1	front	77.3	0.111	1.000	1.294	**0.144**	A66
2480	78	Bluetooth	FHSS	16.5	16.50	-0.18	10 mm	Q7137	1	top	77.3	0.097	1.000	1.294	0.126	
2480	78	Bluetooth	FHSS	16.5	16.50	0.12	10 mm	Q7137	1	left	77.3	0.056	1.000	1.294	0.072	
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 11-50
GPRS/UMTS/CDMA Phablet SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	-0.05	7 mm	Q7137	N/A	1:1	back	0.909	1.262	1.147	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	0.13	5 mm	Q7137	N/A	1:1	front	0.980	1.262	1.237	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	-0.02	10 mm	Q7137	N/A	1:1	bottom	1.040	1.262	1.312	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	-0.14	0 mm	Q7137	N/A	1:1	right	0.283	1.262	0.357	
1732.40	1412	UMTS 1750	RMC	25.5	24.49	16	-0.06	0 mm	Q7137	N/A	1:1	left	0.594	1.262	0.750	
1732.40	1412	UMTS 1750	RMC	22.0	20.81	16	-0.04	0 mm	Q7139	N/A	1:1	back	1.390	1.315	1.828	
1732.40	1412	UMTS 1750	RMC	22.0	20.81	16	0.03	0 mm	Q7139	N/A	1:1	front	1.100	1.315	1.447	
1712.40	1312	UMTS 1750	RMC	22.0	20.68	16	-0.06	0 mm	Q7139	N/A	1:1	bottom	2.380	1.355	3.225	A67
1732.40	1412	UMTS 1750	RMC	22.0	20.81	16	-0.05	0 mm	Q7139	N/A	1:1	bottom	2.340	1.315	3.077	
1752.60	1513	UMTS 1750	RMC	22.0	20.78	16	-0.08	0 mm	Q7139	N/A	1:1	bottom	2.380	1.324	3.151	
1712.40	1312	UMTS 1750	RMC	22.0	20.68	16	0.10	0 mm	Q7139	N/A	1:1	bottom	2.330	1.355	3.157	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.48	17	0.02	7 mm	T0268	N/A	1:1	back	0.804	1.127	0.906	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.48	17	-0.02	5 mm	T0268	N/A	1:1	front	1.140	1.127	1.285	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.48	17	0.02	10 mm	T0268	N/A	1:1	bottom	1.340	1.127	1.510	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.48	17	0.00	0 mm	T0268	N/A	1:1	right	0.384	1.127	0.433	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.48	17	0.00	0 mm	T0268	N/A	1:1	left	0.739	1.127	0.833	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	0.00	0 mm	Q7141	N/A	1:1	back	1.470	1.262	1.855	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	-0.01	0 mm	Q7141	N/A	1:1	front	1.290	1.262	1.628	
1851.25	25	PCS CDMA	EVDO Rev. 0	21.0	20.14	17	0.11	0 mm	Q7141	N/A	1:1	bottom	2.370	1.219	2.889	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	19.99	17	-0.03	0 mm	Q7141	N/A	1:1	bottom	2.210	1.262	2.789	
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	19.95	17	0.01	0 mm	Q7141	N/A	1:1	bottom	2.380	1.274	3.032	
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	19.95	17	-0.01	0 mm	Q7141	N/A	1:1	bottom	2.570	1.274	**3.274**	A68
1880.00	661	GSM 1900	GPRS	25.5	24.43	N/A	-0.04	7 mm	T0268	4	1:2.076	back	0.426	1.279	0.545	
1880.00	661	GSM 1900	GPRS	25.5	24.43	N/A	0.03	5 mm	T0268	4	1:2.076	front	0.504	1.279	0.645	
1880.00	661	GSM 1900	GPRS	25.5	24.43	N/A	0.05	10 mm	T0268	4	1:2.076	bottom	0.550	1.279	0.703	
1880.00	661	GSM 1900	GPRS	25.5	24.43	N/A	0.01	0 mm	T0268	4	1:2.076	right	0.159	1.279	0.203	
1880.00	661	GSM 1900	GPRS	25.5	24.43	N/A	-0.06	0 mm	T0268	4	1:2.076	left	0.305	1.279	0.390	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	0.04	0 mm	Q7140	3	1:2.76	back	0.770	1.205	0.928	
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	0.01	0 mm	Q7140	3	1:2.76	front	0.701	1.205	0.845	
1850.20	512	GSM 1900	GPRS	23.8	22.96	N/A	-0.05	0 mm	Q7140	3	1:2.76	bottom	1.400	1.213	1.698	A69
1880.00	661	GSM 1900	GPRS	23.8	22.99	N/A	-0.07	0 mm	Q7140	3	1:2.76	bottom	1.380	1.205	1.663	
1909.80	810	GSM 1900	GPRS	23.8	22.76	N/A	-0.03	0 mm	Q7140	3	1:2.76	bottom	1.270	1.271	1.614	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.00	7 mm	T0253	N/A	1:1	back	1.040	1.175	1.222	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.01	5 mm	T0253	N/A	1:1	front	1.230	1.175	1.445	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	-0.01	10 mm	T0253	N/A	1:1	bottom	1.420	1.175	1.669	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.04	0 mm	T0253	N/A	1:1	right	0.443	1.175	0.521	
1880.00	9400	UMTS 1900	RMC	25.2	24.50	17	0.00	0 mm	T0253	N/A	1:1	left	0.780	1.175	0.917	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	0.00	0 mm	Q7138	N/A	1:1	back	1.280	1.282	1.641	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	-0.01	0 mm	Q7138	N/A	1:1	front	1.100	1.282	1.410	
1852.40	9262	UMTS 1900	RMC	20.5	19.41	17	-0.02	0 mm	Q7138	N/A	1:1	bottom	2.110	1.285	2.711	
1880.00	9400	UMTS 1900	RMC	20.5	19.42	17	-0.01	0 mm	Q7138	N/A	1:1	bottom	2.160	1.282	2.769	A70
1907.60	9538	UMTS 1900	RMC	20.5	19.27	17	0.01	0 mm	Q7138	N/A	1:1	bottom	2.090	1.327	2.773	
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 11-51
LTE Band 66/25 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	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)	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.02	0	Q7137	QPSK	1	0	7 mm	back	1:1	0.941	1.205	1.134	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.01	1	Q7137	QPSK	50	0	7 mm	back	1:1	0.763	1.186	0.905	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.02	0	Q7137	QPSK	1	0	5 mm	front	1:1	0.937	1.205	1.129	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	-0.01	1	Q7137	QPSK	50	0	5 mm	front	1:1	0.754	1.186	0.894	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.06	0	Q7137	QPSK	1	0	10 mm	bottom	1:1	0.925	1.205	1.115	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	-0.06	1	Q7137	QPSK	50	0	10 mm	bottom	1:1	0.745	1.186	0.884	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.07	0	Q7137	QPSK	1	0	0 mm	right	1:1	0.312	1.205	0.376	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	0.06	1	Q7137	QPSK	50	0	0 mm	right	1:1	0.253	1.186	0.300	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.5	24.69	16	-0.07	0	Q7137	QPSK	1	0	0 mm	left	1:1	0.585	1.205	0.705	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.5	23.76	16	-0.06	1	Q7137	QPSK	50	0	0 mm	left	1:1	0.486	1.186	0.576	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.87	16	-0.06	0	Q7139	QPSK	1	0	0 mm	back	1:1	1.270	1.297	1.647	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.81	16	-0.03	0	Q7139	QPSK	50	0	0 mm	back	1:1	1.270	1.315	1.670	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.87	16	0.02	0	Q7139	QPSK	1	0	0 mm	front	1:1	1.130	1.297	1.466	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.81	16	0.07	0	Q7139	QPSK	50	0	0 mm	front	1:1	1.140	1.315	1.499	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.0	20.57	16	-0.07	0	Q7139	QPSK	1	0	0 mm	bottom	1:1	2.340	1.390	3.253	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.87	16	-0.06	0	Q7139	QPSK	1	0	0 mm	bottom	1:1	2.260	1.297	2.931	
1770.00	132572	High	LTE Band 66 (AWS)	20	22.0	20.74	16	-0.05	0	Q7139	QPSK	1	0	0 mm	bottom	1:1	2.260	1.337	3.022	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.0	20.68	16	-0.06	0	Q7139	QPSK	50	0	0 mm	bottom	1:1	2.360	1.355	3.198	A71
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.81	16	-0.06	0	Q7139	QPSK	50	0	0 mm	bottom	1:1	2.310	1.315	3.038	
1770.00	132572	High	LTE Band 66 (AWS)	20	22.0	20.62	16	-0.10	0	Q7139	QPSK	50	0	0 mm	bottom	1:1	2.270	1.374	3.119	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	22.0	20.72	16	-0.06	0	Q7139	QPSK	100	0	0 mm	bottom	1:1	2.260	1.343	3.035	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	-0.03	0	Q7142	QPSK	1	0	7 mm	back	1:1	0.975	1.222	1.191	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.00	1	Q7142	QPSK	50	0	7 mm	back	1:1	0.779	1.247	0.971	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	-0.03	0	Q7142	QPSK	1	0	5 mm	front	1:1	1.180	1.222	1.442	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	-0.01	1	Q7142	QPSK	50	0	5 mm	front	1:1	0.932	1.247	1.162	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.01	0	Q7142	QPSK	1	0	10 mm	bottom	1:1	1.300	1.222	1.589	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	-0.04	1	Q7142	QPSK	50	0	10 mm	bottom	1:1	1.030	1.247	1.284	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.05	0	Q7142	QPSK	1	0	0 mm	right	1:1	0.394	1.222	0.481	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.07	1	Q7142	QPSK	50	0	0 mm	right	1:1	0.308	1.247	0.384	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.2	24.33	17	0.03	0	Q7142	QPSK	1	0	0 mm	left	1:1	0.738	1.222	0.902	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.2	23.24	17	0.02	1	Q7142	QPSK	50	0	0 mm	left	1:1	0.592	1.247	0.738	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	-0.02	0	Q7141	QPSK	1	0	0 mm	back	1:1	1.380	1.256	1.733	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	0.00	0	Q7141	QPSK	50	0	0 mm	back	1:1	1.380	1.271	1.754	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	0.00	0	Q7141	QPSK	1	0	0 mm	front	1:1	1.100	1.256	1.382	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	-0.05	0	Q7141	QPSK	50	0	0 mm	front	1:1	1.100	1.271	1.398	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.34	17	-0.06	0	Q7141	QPSK	1	0	0 mm	bottom	1:1	2.110	1.306	2.756	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.48	17	-0.07	0	Q7141	QPSK	1	0	0 mm	bottom	1:1	2.130	1.265	2.694	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.51	17	0.01	0	Q7141	QPSK	1	0	0 mm	bottom	1:1	2.220	1.256	2.788	A72
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	19.26	17	-0.06	0	Q7141	QPSK	50	0	0 mm	bottom	1:1	2.020	1.330	2.687	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	19.31	17	-0.07	0	Q7141	QPSK	50	0	0 mm	bottom	1:1	2.070	1.315	2.722	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.46	17	0.12	0	Q7141	QPSK	50	0	0 mm	bottom	1:1	2.160	1.271	2.745	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	19.37	17	0.00	0	Q7141	QPSK	100	0	0 mm	bottom	1:1	2.170	1.297	2.814	
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 11-52
LTE Band 30/7 Ant B Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	-0.03	0	Ant B	T0253	QPSK	1	0	7 mm	back	1:1	0.454	1.225	0.556	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.06	1	Ant B	T0253	QPSK	25	0	7 mm	back	1:1	0.355	1.253	0.445	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	-0.04	0	Ant B	T0253	QPSK	1	0	5 mm	front	1:1	0.565	1.225	0.692	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.05	1	Ant B	T0253	QPSK	25	0	5 mm	front	1:1	0.438	1.253	0.549	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	-0.09	0	Ant B	T0253	QPSK	1	0	10 mm	bottom	1:1	0.620	1.225	0.760	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.04	1	Ant B	T0253	QPSK	25	0	10 mm	bottom	1:1	0.550	1.253	0.689	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.62	0.11	0	Ant B	T0253	QPSK	1	0	0 mm	left	1:1	0.396	1.225	0.485	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.52	-0.12	1	Ant B	T0253	QPSK	25	0	0 mm	left	1:1	0.385	1.253	0.482	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.61	-0.04	0	Ant B	Q7141	QPSK	1	0	0 mm	back	1:1	1.360	1.227	1.669	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.42	0.02	0	Ant B	Q7141	QPSK	25	0	0 mm	back	1:1	1.340	1.282	1.718	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.61	-0.07	0	Ant B	Q7141	QPSK	1	0	0 mm	front	1:1	1.090	1.227	1.337	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.42	-0.08	0	Ant B	Q7141	QPSK	25	0	0 mm	front	1:1	1.070	1.282	1.372	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.61	-0.07	0	Ant B	Q7141	QPSK	1	0	0 mm	bottom	1:1	1.470	1.227	1.804	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.42	-0.06	0	Ant B	Q7141	QPSK	25	0	0 mm	bottom	1:1	1.450	1.282	1.859	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	-0.01	0	Ant B	Q7137	QPSK	1	0	7 mm	back	1:1	0.839	1.242	1.042	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.00	1	Ant B	Q7137	QPSK	50	0	7 mm	back	1:1	0.666	1.279	0.852	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	0.06	0	Ant B	Q7137	QPSK	1	0	5 mm	front	1:1	1.290	1.242	1.602	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	0.04	1	Ant B	Q7137	QPSK	50	0	5 mm	front	1:1	1.030	1.279	1.317	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	-0.09	0	Ant B	Q7137	QPSK	1	0	10 mm	bottom	1:1	1.360	1.242	1.689	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	-0.02	1	Ant B	Q7137	QPSK	50	0	10 mm	bottom	1:1	1.070	1.279	1.369	
2560.00	21350	High	LTE Band 7	20	24.0	23.06	-0.16	0	Ant B	Q7137	QPSK	1	0	0 mm	left	1:1	0.893	1.242	1.109	
2560.00	21350	High	LTE Band 7	20	23.0	21.93	-0.12	1	Ant B	Q7137	QPSK	50	0	0 mm	left	1:1	0.716	1.279	0.916	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.45	-0.16	0	Ant B	Q7139	QPSK	1	0	0 mm	back	1:1	1.350	1.429	1.929	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.40	-0.17	0	Ant B	Q7139	QPSK	50	0	0 mm	back	1:1	1.350	1.445	1.951	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.45	0.01	0	Ant B	Q7139	QPSK	1	0	0 mm	front	1:1	1.250	1.429	1.786	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.40	0.12	0	Ant B	Q7139	QPSK	50	0	0 mm	front	1:1	1.250	1.445	1.806	
2510.00	20850	Low	LTE Band 7	20	21.0	19.38	-0.04	0	Ant B	Q7139	QPSK	1	0	0 mm	bottom	1:1	2.240	1.452	3.252	A74
2535.00	21100	Mid	LTE Band 7	20	21.0	19.45	-0.05	0	Ant B	Q7139	QPSK	1	0	0 mm	bottom	1:1	2.050	1.429	2.929	
2560.00	21350	High	LTE Band 7	20	21.0	19.40	0.00	0	Ant B	Q7139	QPSK	1	0	0 mm	bottom	1:1	1.990	1.445	2.876	
2510.00	20850	Low	LTE Band 7	20	21.0	19.39	-0.02	0	Ant B	Q7139	QPSK	50	0	0 mm	bottom	1:1	2.220	1.449	3.217	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.40	-0.02	0	Ant B	Q7139	QPSK	50	0	0 mm	bottom	1:1	2.050	1.445	2.962	
2560.00	21350	High	LTE Band 7	20	21.0	19.39	-0.02	0	Ant B	Q7139	QPSK	50	0	0 mm	bottom	1:1	1.990	1.449	2.884	
2510.00	20850	Low	LTE Band 7	20	21.0	19.30	-0.02	0	Ant B	Q7139	QPSK	100	0	0 mm	bottom	1:1	2.110	1.479	3.121	
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 11-53
LTE Band 30/7 Ant A Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	0.01	0	Ant A	T0253	QPSK	1	0	7 mm	back	1:1	0.366	1.199	0.439	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.01	1	Ant A	T0253	QPSK	25	0	7 mm	back	1:1	0.279	1.183	0.330	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	-0.04	0	Ant A	T0253	QPSK	1	0	5 mm	front	1:1	0.495	1.199	0.594	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	-0.06	1	Ant A	T0253	QPSK	25	0	5 mm	front	1:1	0.381	1.183	0.451	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	-0.02	0	Ant A	T0253	QPSK	1	0	10 mm	bottom	1:1	0.656	1.199	0.787	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	-0.01	1	Ant A	T0253	QPSK	25	0	10 mm	bottom	1:1	0.517	1.183	0.612	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	0.17	0	Ant A	T0253	QPSK	1	0	0 mm	right	1:1	0.054	1.199	0.065	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	0.20	1	Ant A	T0253	QPSK	25	0	0 mm	right	1:1	0.040	1.183	0.047	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.71	-0.10	0	Ant A	T0253	QPSK	1	0	0 mm	left	1:1	0.446	1.199	0.535	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.77	-0.11	1	Ant A	T0253	QPSK	25	0	0 mm	left	1:1	0.341	1.183	0.403	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.62	-0.02	0	Ant A	Q7141	QPSK	1	0	0 mm	back	1:1	1.470	1.225	1.801	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.06	0	Ant A	Q7141	QPSK	25	0	0 mm	back	1:1	1.500	1.236	1.854	A73
2310.00	27710	Mid	LTE Band 30	10	22.5	21.62	-0.16	0	Ant A	Q7141	QPSK	1	0	0 mm	front	1:1	1.100	1.225	1.348	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.12	0	Ant A	Q7141	QPSK	25	0	0 mm	front	1:1	1.100	1.236	1.360	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.62	-0.07	0	Ant A	Q7141	QPSK	1	0	0 mm	bottom	1:1	1.180	1.225	1.446	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.58	-0.04	0	Ant A	Q7141	QPSK	25	0	0 mm	bottom	1:1	1.260	1.236	1.557	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.02	0	Ant A	Q7142	QPSK	1	0	7 mm	back	1:1	0.502	1.148	0.576	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.01	1	Ant A	Q7142	QPSK	50	0	7 mm	back	1:1	0.380	1.194	0.454	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.04	0	Ant A	Q7142	QPSK	1	0	5 mm	front	1:1	0.452	1.148	0.519	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	-0.11	1	Ant A	Q7142	QPSK	50	0	5 mm	front	1:1	0.345	1.194	0.412	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	-0.01	0	Ant A	Q7142	QPSK	1	0	10 mm	bottom	1:1	0.499	1.148	0.573	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	-0.02	1	Ant A	Q7142	QPSK	50	0	10 mm	bottom	1:1	0.384	1.194	0.458	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	0.09	0	Ant A	Q7142	QPSK	1	0	0 mm	right	1:1	0.297	1.148	0.341	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.11	1	Ant A	Q7142	QPSK	50	0	0 mm	right	1:1	0.231	1.194	0.276	
2510.00	20850	Low	LTE Band 7	20	24.0	23.40	0.01	0	Ant A	Q7142	QPSK	1	0	0 mm	left	1:1	0.304	1.148	0.349	
2510.00	20850	Low	LTE Band 7	20	23.0	22.23	0.07	1	Ant A	Q7142	QPSK	50	0	0 mm	left	1:1	0.232	1.194	0.277	
2510.00	20850	Low	LTE Band 7	20	21.0	19.78	0.08	0	Ant A	Q7139	QPSK	1	0	0 mm	back	1:1	0.871	1.324	1.153	
2510.00	20850	Low	LTE Band 7	20	21.0	19.61	0.00	0	Ant A	Q7139	QPSK	50	0	0 mm	back	1:1	0.844	1.377	1.162	
2510.00	20850	Low	LTE Band 7	20	21.0	19.78	-0.01	0	Ant A	Q7139	QPSK	1	0	0 mm	front	1:1	0.692	1.324	0.916	
2510.00	20850	Low	LTE Band 7	20	21.0	19.61	0.05	0	Ant A	Q7139	QPSK	50	0	0 mm	front	1:1	0.668	1.377	0.920	
2510.00	20850	Low	LTE Band 7	20	21.0	19.78	-0.07	0	Ant A	Q7139	QPSK	1	0	0 mm	bottom	1:1	1.040	1.324	1.377	
2510.00	20850	Low	LTE Band 7	20	21.0	19.61	-0.07	0	Ant A	Q7139	QPSK	50	0	0 mm	bottom	1:1	0.998	1.377	1.374	
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 11-54
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
		MHz	Ch.																	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	-0.02	0	T0247	QPSK	1	0	7 mm	back	1:1.58	0.435	1.306	0.568	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	-0.03	1	T0247	QPSK	50	0	7 mm	back	1:1.58	0.347	1.285	0.446	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	-0.09	0	T0247	QPSK	1	0	5 mm	front	1:1.58	0.734	1.306	0.959	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.04	1	T0247	QPSK	50	0	5 mm	front	1:1.58	0.583	1.285	0.749	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	-0.02	0	T0247	QPSK	1	0	10 mm	bottom	1:1.58	0.918	1.306	1.199	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	0.14	1	T0247	QPSK	50	0	10 mm	bottom	1:1.58	0.732	1.285	0.941	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.0	23.84	-0.10	0	T0247	QPSK	1	0	0 mm	left	1:1.58	0.633	1.306	0.827	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.91	-0.17	1	T0247	QPSK	50	0	0 mm	left	1:1.58	0.516	1.285	0.663	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.53	-0.10	0	Q7139	QPSK	1	99	0 mm	back	1:1.58	1.550	1.403	2.175	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.64	-0.18	0	Q7139	QPSK	1	0	0 mm	back	1:1.58	1.470	1.368	2.011	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.55	-0.17	0	Q7139	QPSK	1	0	0 mm	back	1:1.58	1.410	1.396	1.968	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.50	-0.20	0	Q7139	QPSK	1	0	0 mm	back	1:1.58	1.400	1.413	1.978	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.65	-0.21	0	Q7139	QPSK	1	0	0 mm	back	1:1.58	1.560	1.365	2.129	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.76	-0.11	0	Q7139	QPSK	50	50	0 mm	back	1:1.58	1.590	1.330	2.115	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.75	-0.18	0	Q7139	QPSK	50	0	0 mm	back	1:1.58	1.460	1.334	1.948	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.47	-0.19	0	Q7139	QPSK	50	0	0 mm	back	1:1.58	1.410	1.422	2.005	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.44	-0.21	0	Q7139	QPSK	50	0	0 mm	back	1:1.58	1.420	1.432	2.033	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.79	-0.20	0	Q7139	QPSK	50	0	0 mm	back	1:1.58	1.550	1.321	2.048	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.54	-0.18	0	Q7139	QPSK	100	0	0 mm	back	1:1.58	1.400	1.400	1.960	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.53	0.12	0	Q7139	QPSK	1	99	0 mm	front	1:1.58	1.410	1.403	1.978	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.64	0.10	0	Q7139	QPSK	1	0	0 mm	front	1:1.58	1.500	1.368	2.052	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.55	0.11	0	Q7139	QPSK	1	0	0 mm	front	1:1.58	1.500	1.396	2.094	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.50	0.07	0	Q7139	QPSK	1	0	0 mm	front	1:1.58	1.470	1.413	2.077	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.65	0.11	0	Q7139	QPSK	1	0	0 mm	front	1:1.58	1.420	1.365	1.938	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.76	0.10	0	Q7139	QPSK	50	50	0 mm	front	1:1.58	1.430	1.330	1.902	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.75	0.13	0	Q7139	QPSK	50	0	0 mm	front	1:1.58	1.510	1.334	2.014	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.47	0.07	0	Q7139	QPSK	50	0	0 mm	front	1:1.58	1.510	1.422	2.147	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.44	0.12	0	Q7139	QPSK	50	0	0 mm	front	1:1.58	1.460	1.432	2.091	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.79	0.14	0	Q7139	QPSK	50	0	0 mm	front	1:1.58	1.420	1.321	1.876	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.54	0.07	0	Q7139	QPSK	100	0	0 mm	front	1:1.58	1.530	1.400	2.142	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.53	0.14	0	Q7139	QPSK	1	99	0 mm	bottom	1:1.58	2.310	1.403	3.241	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.0	22.77	0.02	0	Q7139	QPSK	1	99	0 mm	bottom	1:1.58	2.370	1.327	3.145	
	SCC	2525.80	39948	Low								QPSK	1	0							
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.64	-0.09	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	2.360	1.368	3.228	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.74	-0.13	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	2.410	1.337	3.222	
	SCC	2529.70	39987	Low-Mid								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.55	-0.10	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	2.150	1.396	3.001	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	24.0	22.62	-0.19	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	2.110	1.374	2.899	
	SCC	2573.20	40422	Mid								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.50	-0.06	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	1.970	1.413	2.784	
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.56	-0.19	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	1.870	1.393	2.605	
	SCC	2616.70	40857	Mid-High								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.65	-0.08	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	1.770	1.365	2.416	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	24.0	22.63	-0.01	0	Q7139	QPSK	1	0	0 mm	bottom	1:1.58	1.840	1.371	2.523	
	SCC	2660.20	41292	High								QPSK	1	99							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.76	0.00	0	Q7139	QPSK	50	50	0 mm	bottom	1:1.58	2.440	1.330	3.245	A75
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.0	22.74	-0.02	0	Q7139	QPSK	50	50	0 mm	bottom	1:1.58	2.340	1.337	3.129	
	SCC	2525.80	39948	Low								QPSK	50	0							
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.75	0.12	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	2.430	1.334	3.242	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.64	-0.01	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	2.290	1.368	3.133	
	SCC	2529.70	39987	Low-Mid								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.47	-0.08	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	2.160	1.422	3.072	
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	24.0	22.67	0.00	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	2.060	1.358	2.797	
	SCC	2573.20	40422	Mid								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.44	0.11	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	1.980	1.432	2.835	
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.58	-0.03	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	1.880	1.387	2.608	
	SCC	2616.70	40857	Mid-High								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.79	-0.09	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	1.760	1.321	2.325	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	24.0	22.48	0.00	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	1.800	1.419	2.554	
	SCC	2660.20	41292	High								QPSK	50	50							
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.54	-0.02	0	Q7139	QPSK	100	0	0 mm	bottom	1:1.58	2.140	1.400	2.996	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.39	0.10	0	Q7139	QPSK	50	50	0 mm	bottom	1:2.31	1.550	1.449	2.246	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.76	-0.03	0	Q7139	QPSK	50	50	0 mm	bottom	1:1.58	2.440	1.330	3.245	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.75	-0.06	0	Q7139	QPSK	50	0	0 mm	bottom	1:1.58	2.370	1.334	3.162	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

Note: Blue entry represents variability measurement.

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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	17.15	0.10	0 mm	1	Q7143	6	back	98.7	17.366	1.130	1.216	1.013	1.392	
5300	60	802.11a	OFDM	20	18.0	17.15	0.12	0 mm	1	Q7143	6	front	98.7	0.525	-	1.216	1.013	-	
5300	60	802.11a	OFDM	20	18.0	17.15	0.08	0 mm	1	Q7143	6	top	98.7	1.203	0.101	1.216	1.013	0.124	
5300	60	802.11a	OFDM	20	18.0	17.15	0.00	0 mm	1	Q7143	6	left	98.7	0.241	-	1.216	1.013	-	
5260	52	802.11a	OFDM	20	18.0	16.95	0.00	0 mm	2	Q7143	6	back	98.8	12.999	1.340	1.274	1.012	1.728	
5300	60	802.11a	OFDM	20	18.0	16.92	0.21	0 mm	2	Q7143	6	back	98.8	15.216	1.420	1.282	1.012	**1.842**	
5320	64	802.11a	OFDM	20	18.0	16.93	0.18	0 mm	2	Q7143	6	back	98.8	10.717	1.240	1.279	1.012	1.605	
5260	52	802.11a	OFDM	20	18.0	16.95	0.10	0 mm	2	Q7143	6	front	98.8	2.684	0.446	1.274	1.012	0.575	
5260	52	802.11a	OFDM	20	18.0	16.95	0.13	0 mm	2	Q7143	6	top	98.8	2.325	-	1.274	1.012	-	
5260	52	802.11a	OFDM	20	18.0	16.95	0.10	0 mm	2	Q7143	6	left	98.8	1.129	-	1.274	1.012	-	
5720	144	802.11a	OFDM	20	17.5	16.62	-0.16	0 mm	1	Q7143	6	back	98.7	12.175	0.684	1.225	1.013	0.849	
5720	144	802.11a	OFDM	20	17.5	16.62	0.10	0 mm	1	Q7143	6	front	98.7	0.306	-	1.225	1.013	-	
5720	144	802.11a	OFDM	20	17.5	16.62	0.00	0 mm	1	Q7143	6	top	98.7	1.456	-	1.225	1.013	-	
5720	144	802.11a	OFDM	20	17.5	16.62	0.02	0 mm	1	Q7143	6	left	98.7	0.035	-	1.225	1.013	-	
5720	144	802.11a	OFDM	20	17.5	17.35	0.02	0 mm	2	Q7143	6	back	98.8	10.909	1.200	1.035	1.012	1.257	
5720	144	802.11a	OFDM	20	17.5	17.35	0.11	0 mm	2	Q7143	6	front	98.8	4.739	-	1.035	1.012	-	
5720	144	802.11a	OFDM	20	17.5	17.35	0.11	0 mm	2	Q7143	6	top	98.8	5.431	0.429	1.035	1.012	0.449	
5720	144	802.11a	OFDM	20	17.5	17.35	0.00	0 mm	2	Q7143	6	left	98.8	1.528	-	1.035	1.012	-	

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)	
5300	60	802.11n	OFDM	20	18.0	17.04	18.0	16.91	-0.10	0 mm	MIMO	Q7143	13	back	98.6	34.434	1.750	1.247	1.014	2.280	
5320	64	802.11n	OFDM	20	18.0	17.21	18.0	16.89	0.17	0 mm	MIMO	Q7143	13	back	98.6	33.785	1.680	1.199	1.014	2.199	
5320	64	802.11n	OFDM	20	18.0	17.21	18.0	16.89	0.11	0 mm	MIMO	Q7143	13	front	98.6	5.089	0.523	1.199	1.014	0.685	
5320	64	802.11n	OFDM	20	18.0	17.21	18.0	16.89	0.15	0 mm	MIMO	Q7143	13	top	98.6	4.581	-	1.199	1.014	-	
5320	64	802.11n	OFDM	20	18.0	17.21	18.0	16.89	0.10	0 mm	MIMO	Q7143	13	left	98.6	1.369	0.186	1.199	1.014	0.243	
5500	100	802.11n	OFDM	20	17.5	15.94	17.5	16.02	0.18	0 mm	MIMO	Q7143	13	back	98.6	13.072	2.160	1.432	1.014	3.136	A76
5600	120	802.11n	OFDM	20	17.5	15.97	17.5	16.40	0.19	0 mm	MIMO	Q7143	13	back	98.6	38.109	2.150	1.422	1.014	3.100	
5720	144	802.11n	OFDM	20	17.5	15.89	17.5	16.42	0.19	0 mm	MIMO	Q7143	13	back	98.6	28.792	1.780	1.449	1.014	2.615	
5600	120	802.11n	OFDM	20	17.5	15.97	17.5	16.40	0.21	0 mm	MIMO	Q7143	13	front	98.6	8.909	0.847	1.422	1.014	1.221	
5600	120	802.11n	OFDM	20	17.5	15.97	17.5	16.40	0.18	0 mm	MIMO	Q7143	13	top	98.6	3.819	-	1.422	1.014	-	
5600	120	802.11n	OFDM	20	17.5	15.97	17.5	16.40	0.00	0 mm	MIMO	Q7143	13	left	98.6	1.816	0.236	1.422	1.014	0.340	
5500	100	802.11n	OFDM	20	17.5	15.94	17.5	16.02	-0.09	0 mm	MIMO	Q7143	13	back	98.6	31.900	2.050	1.432	1.014	2.977	

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

Note:
Blue entry represents variability measurement.
For channels 60 and 64, to achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm. For channels 100,120, and 144, to achieve the 20.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17.5 dBm.

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11.5 SAR Test Notes

General Notes:

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

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

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CDMA Notes:

1. Head SAR for CDMA2000 mode was tested under RC3/SO55 per FCC KDB Publication 941225 D01v03r01.
2. Body-Worn SAR was tested with 1x RTT with TDSO / SO32 FCH Only. EVDO Rev0 and RevA and TDSO / SO32 FCH+SCH SAR tests were not required per the 3G SAR Test Reduction Procedure in FCC KDB Publication 941225 D01v03r01.
3. CDMA Wireless Router SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0 according to KDB 941225 D01v03r01 procedures for data devices. Wireless Router SAR tests for Subtype 2 of Rev.A and 1x RTT configurations were not required per the 3G SAR Test Reduction Policy in KDB Publication 941225 D01v03r01.
4. Head SAR was additionally evaluated using EVDO Rev. A to determine compliance for VoIP operations.
5. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.
6. CDMA 1X Advanced technology was not required for SAR since the maximum allowed output powers for 1X Advanced was not more than 0.25 dB higher than the maximum powers for 1X.

UMTS Notes:

1. UMTS mode 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.
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.

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7. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 14 for linearity results.
8. For LTE Band 41, per Fall 2017 TCB Workshop Notes, 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. When the reported 1g SAR was >1.2 W/kg or the reported 10g SAR was > 3.0 W/kg, all required test channels were additionally evaluated.
9. For LTE Band 7 and LTE Band 30 Antenna A operations, the device was connected in a radiated downlink carrier aggregation scenario per FCC Guidance. Combination CA_2A-7A was used for LTE Band 7 Antenna A and CA_2A-30A for LTE Band 30 Antenna A.

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 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 10-g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 9.6 for the time domain plot and calculation for the duty factor of the device.
2. Head and hotspot Bluetooth SAR were evaluated for BT BR tethering applications.

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12 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.

(*) 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 condition was used for simultaneous transmission analysis.

Per FCC KDB Publication 648474 D04 Handset SAR v01r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR (“-“).

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12.3 Head SAR Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Head SAR	CDMA/EVDO BC10 (§90S)	0.271	0.330	1.292	0.601	1.563
	CDMA/EVDO BC0 (§22H)	0.327	0.330	1.292	0.657	See Table Below
	GSM 850	0.195	0.330	1.292	0.525	1.487
	UMTS 850	0.282	0.330	1.292	0.612	**1.574**
	UMTS 1750	0.135	0.330	1.292	0.465	1.427
	PCS CDMA/EVDO	0.147	0.330	1.292	0.477	1.439
	GSM 1900	0.078	0.330	1.292	0.408	1.370
	UMTS 1900	0.160	0.330	1.292	0.490	1.452
	LTE Band 71	0.135	0.330	1.292	0.465	1.427
	LTE Band 12	0.178	0.330	1.292	0.508	1.470
	LTE Band 13	0.280	0.330	1.292	0.610	1.572
	LTE Band 14	0.211	0.330	1.292	0.541	1.503
	LTE Band 26 (Cell)	0.247	0.330	1.292	0.577	1.539
	LTE Band 5 (Cell)	0.277	0.330	1.292	0.607	1.569
	LTE Band 66 (AWS)	0.129	0.330	1.292	0.459	1.421
	LTE Band 25 (PCS)	0.174	0.330	1.292	0.504	1.466
	LTE Band 30	0.085	0.330	1.292	0.415	1.377
	LTE Band 7	0.179	0.330	1.292	0.509	1.471
	LTE Band 41	0.162	0.330	1.292	0.492	1.454

Simult Tx	Configuration	CDMA BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Head SAR	Right Cheek	0.327	1.292	See Note 1	0.03
	Right Tilt	0.185	1.008	1.193	N/A
	Left Cheek	0.259	0.333	0.592	N/A
	Left Tilt	0.160	1.292*	**1.452**	N/A

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Head SAR	Right Cheek	0.310	1.292	See Note 1	0.03
	Right Tilt	0.129	1.008	1.137	N/A
	Left Cheek	0.216	0.333	0.549	N/A
	Left Tilt	0.166	1.292*	**1.458**	N/A

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S)	0.271	1.306	1.577
	CDMA/EVDO BC0 (§22H)	0.327	1.306	See Table Below
	GSM 850	0.195	1.306	1.501
	UMTS 850	0.282	1.306	**1.588**
	UMTS 1750	0.135	1.306	1.441
	PCS CDMA/EVDO	0.147	1.306	1.453
	GSM 1900	0.078	1.306	1.384
	UMTS 1900	0.160	1.306	1.466
	LTE Band 71	0.135	1.306	1.441
	LTE Band 12	0.178	1.306	1.484
	LTE Band 13	0.280	1.306	1.586
	LTE Band 14	0.211	1.306	1.517
	LTE Band 26 (Cell)	0.247	1.306	1.553
	LTE Band 5 (Cell)	0.277	1.306	1.583
	LTE Band 66 (AWS)	0.129	1.306	1.435
	LTE Band 25 (PCS)	0.174	1.306	1.480
	LTE Band 30	0.085	1.306	1.391
	LTE Band 7	0.179	1.306	1.485
	LTE Band 41	0.162	1.306	1.468

Simult Tx	Configuration	CDMA BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Head SAR	Right Cheek	0.327	1.306	See Note 1	0.03
	Right Tilt	0.185	1.257	1.442	N/A
	Left Cheek	0.259	0.476	0.735	N/A
	Left Tilt	0.160	1.306*	**1.466**	N/A

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Head SAR	Right Cheek	0.310	1.306	See Note 1	0.03
	Right Tilt	0.129	1.257	1.386	N/A
	Left Cheek	0.216	0.476	0.692	N/A
	Left Tilt	0.166	1.306*	**1.472**	N/A

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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	CDMA/EVDO BC10 (§90S)	0.271	0.072	0.273	0.343	0.544	0.616
	CDMA/EVDO BC0 (§22H)	0.327	0.072	0.273	0.399	0.600	**0.672**
	GSM 850	0.195	0.072	0.273	0.267	0.468	0.540
	UMTS 850	0.282	0.072	0.273	0.354	0.555	0.627
	UMTS 1750	0.135	0.072	0.273	0.207	0.408	0.480
	PCS CDMA/EVDO	0.147	0.072	0.273	0.219	0.420	0.492
	GSM 1900	0.078	0.072	0.273	0.150	0.351	0.423
	UMTS 1900	0.160	0.072	0.273	0.232	0.433	0.505
	LTE Band 71	0.135	0.072	0.273	0.207	0.408	0.480
	LTE Band 12	0.178	0.072	0.273	0.250	0.451	0.523
	LTE Band 13	0.280	0.072	0.273	0.352	0.553	0.625
	LTE Band 14	0.211	0.072	0.273	0.283	0.484	0.556
	LTE Band 26 (Cell)	0.247	0.072	0.273	0.319	0.520	0.592
	LTE Band 5 (Cell)	0.277	0.072	0.273	0.349	0.550	0.622
	LTE Band 66 (AWS)	0.129	0.072	0.273	0.201	0.402	0.474
	LTE Band 25 (PCS)	0.174	0.072	0.273	0.246	0.447	0.519
	LTE Band 30	0.085	0.072	0.273	0.157	0.358	0.430
	LTE Band 7	0.179	0.072	0.273	0.251	0.452	0.524
	LTE Band 41	0.162	0.072	0.273	0.234	0.435	0.507

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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 MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	CDMA/EVDO BC10 (§90S)	0.271	1.000	0.072	0.273	See Table Below
	CDMA/EVDO BC0 (§22H)	0.327	1.000	0.072	0.273	See Table Below
	GSM 850	0.195	1.000	0.072	0.273	1.540
	UMTS 850	0.282	1.000	0.072	0.273	See Table Below
	UMTS 1750	0.135	1.000	0.072	0.273	1.480
	PCS CDMA/EVDO	0.147	1.000	0.072	0.273	1.492
	GSM 1900	0.078	1.000	0.072	0.273	1.423
	UMTS 1900	0.160	1.000	0.072	0.273	1.505
	LTE Band 71	0.135	1.000	0.072	0.273	1.480
	LTE Band 12	0.178	1.000	0.072	0.273	1.523
	LTE Band 13	0.280	1.000	0.072	0.273	See Table Below
	LTE Band 14	0.211	1.000	0.072	0.273	1.556
	LTE Band 26 (Cell)	0.247	1.000	0.072	0.273	**1.592**
	LTE Band 5 (Cell)	0.277	1.000	0.072	0.273	See Table Below
	LTE Band 66 (AWS)	0.129	1.000	0.072	0.273	1.474
	LTE Band 25 (PCS)	0.174	1.000	0.072	0.273	1.519
	LTE Band 30	0.085	1.000	0.072	0.273	1.430
	LTE Band 7	0.179	1.000	0.072	0.273	1.524
	LTE Band 41	0.162	1.000	0.072	0.273	1.507

Simult Tx	Configuration	CDMA BC10 (§90S) SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.269	0.885	0.072	0.273	**1.499**
	Right Tilt	0.134	1.000	0.055	0.273*	1.462
	Left Cheek	0.218	0.340	0.072*	0.273*	0.903
	Left Tilt	0.140	0.327	0.072*	0.273*	0.812

Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.271	0.885	0.072	0.273	**1.501**
	Right Tilt	0.131	1.000	0.055	0.273*	1.459
	Left Cheek	0.179	0.340	0.072*	0.273*	0.864
	Left Tilt	0.168	0.327	0.072*	0.273*	0.840

Simult Tx	Configuration	CDMA BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.327	0.885	0.072	0.273	**1.557**
	Right Tilt	0.185	1.000	0.055	0.273*	1.513
	Left Cheek	0.259	0.340	0.072*	0.273*	0.944
	Left Tilt	0.160	0.327	0.072*	0.273*	0.832

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.310	0.885	0.072	0.273	**1.540**
	Right Tilt	0.129	1.000	0.055	0.273*	1.457
	Left Cheek	0.216	0.340	0.072*	0.273*	0.901
	Left Tilt	0.166	0.327	0.072*	0.273*	0.838

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Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.282	0.885	0.072	0.273	**1.512**
	Right Tilt	0.157	1.000	0.055	0.273*	1.485
	Left Cheek	0.220	0.340	0.072*	0.273*	0.905
	Left Tilt	0.146	0.327	0.072*	0.273*	0.818

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.280	0.885	0.072	0.273	**1.510**
	Right Tilt	0.136	1.000	0.055	0.273*	1.464
	Left Cheek	0.229	0.340	0.072*	0.273*	0.914
	Left Tilt	0.106	0.327	0.072*	0.273*	0.778

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO at 16 dBm SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.277	0.885	0.072	0.273	**1.507**
	Right Tilt	0.128	1.000	0.055	0.273*	1.456
	Left Cheek	0.195	0.340	0.072*	0.273*	0.880
	Left Tilt	0.152	0.327	0.072*	0.273*	0.824

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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	CDMA/EVDO BC10 (§90S)	0.271	0.889	1.160
	CDMA/EVDO BC0 (§22H)	0.327	0.889	**1.216**
	GSM 850	0.195	0.889	1.084
	UMTS 850	0.282	0.889	1.171
	UMTS 1750	0.135	0.889	1.024
	PCS CDMA/EVDO	0.147	0.889	1.036
	GSM 1900	0.078	0.889	0.967
	UMTS 1900	0.160	0.889	1.049
	LTE Band 71	0.135	0.889	1.024
	LTE Band 12	0.178	0.889	1.067
	LTE Band 13	0.280	0.889	1.169
	LTE Band 14	0.211	0.889	1.100
	LTE Band 26 (Cell)	0.247	0.889	1.136
	LTE Band 5 (Cell)	0.277	0.889	1.166
	LTE Band 66 (AWS)	0.129	0.889	1.018
	LTE Band 25 (PCS)	0.174	0.889	1.063
	LTE Band 30	0.085	0.889	0.974
	LTE Band 7	0.179	0.889	1.068
	LTE Band 41	0.162	0.889	1.051

Note 1 - No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.7 for detailed SPLS ratio analysis.

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12.4 Body-Worn Simultaneous Transmission Analysis

Table 12-5
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	CDMA BC10 (§90S)	0.397	0.055	0.117	0.452	0.514	0.569
	CDMA BC0 (§22H)	0.455	0.055	0.117	0.510	0.572	0.627
	GSM 850	0.298	0.055	0.117	0.353	0.415	0.470
	UMTS 850	0.472	0.055	0.117	0.527	0.589	0.644
	UMTS 1750	0.675	0.055	0.117	0.730	0.792	0.847
	PCS CDMA	0.850	0.055	0.117	0.905	0.967	1.022
	GSM 1900	0.344	0.055	0.117	0.399	0.461	0.516
	UMTS 1900	0.828	0.055	0.117	0.883	0.945	1.000
	LTE Band 71	0.339	0.055	0.117	0.394	0.456	0.511
	LTE Band 12	0.384	0.055	0.117	0.439	0.501	0.556
	LTE Band 13	0.487	0.055	0.117	0.542	0.604	0.659
	LTE Band 14	0.406	0.055	0.117	0.461	0.523	0.578
	LTE Band 26 (Cell)	0.407	0.055	0.117	0.462	0.524	0.579
	LTE Band 5 (Cell)	0.449	0.055	0.117	0.504	0.566	0.621
	LTE Band 66 (AWS)	0.728	0.055	0.117	0.783	0.845	0.900
	LTE Band 25 (PCS)	0.788	0.055	0.117	0.843	0.905	0.960
	LTE Band 30	0.464	0.055	0.117	0.519	0.581	0.636
	LTE Band 7	0.800	0.055	0.117	0.855	0.917	0.972
	LTE Band 41	1.025	0.055	0.117	1.080	1.142	**1.197**

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Table 12-6
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
Body-Worn	CDMA BC10 (§90S)	0.397	0.240	0.427	0.637	0.824
	CDMA BC0 (§22H)	0.455	0.240	0.427	0.695	0.882
	GSM 850	0.298	0.240	0.427	0.538	0.725
	UMTS 850	0.472	0.240	0.427	0.712	0.899
	UMTS 1750	0.675	0.240	0.427	0.915	1.102
	PCS CDMA	0.850	0.240	0.427	1.090	1.277
	GSM 1900	0.344	0.240	0.427	0.584	0.771
	UMTS 1900	0.828	0.240	0.427	1.068	1.255
	LTE Band 71	0.339	0.240	0.427	0.579	0.766
	LTE Band 12	0.384	0.240	0.427	0.624	0.811
	LTE Band 13	0.487	0.240	0.427	0.727	0.914
	LTE Band 14	0.406	0.240	0.427	0.646	0.833
	LTE Band 26 (Cell)	0.407	0.240	0.427	0.647	0.834
	LTE Band 5 (Cell)	0.449	0.240	0.427	0.689	0.876
	LTE Band 66 (AWS)	0.728	0.240	0.427	0.968	1.155
	LTE Band 25 (PCS)	0.788	0.240	0.427	1.028	1.215
	LTE Band 30	0.464	0.240	0.427	0.704	0.891
	LTE Band 7	0.800	0.240	0.427	1.040	1.227
	LTE Band 41	1.025	0.240	0.427	1.265	**1.452**

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Body-Worn	CDMA BC10 (§90S)	0.397	0.806	1.203	N/A
	CDMA BC0 (§22H)	0.455	0.806	1.261	N/A
	GSM 850	0.298	0.806	1.104	N/A
	UMTS 850	0.472	0.806	1.278	N/A
	UMTS 1750	0.675	0.806	1.481	N/A
	PCS CDMA	0.850	0.806	See Note 1	0.01
	GSM 1900	0.344	0.806	1.150	N/A
	UMTS 1900	0.828	0.806	See Note 1	0.01
	LTE Band 71	0.339	0.806	1.145	N/A
	LTE Band 12	0.384	0.806	1.190	N/A
	LTE Band 13	0.487	0.806	1.293	N/A
	LTE Band 14	0.406	0.806	1.212	N/A
	LTE Band 26 (Cell)	0.407	0.806	1.213	N/A
	LTE Band 5 (Cell)	0.449	0.806	1.255	N/A
	LTE Band 66 (AWS)	0.728	0.806	1.534	N/A
	LTE Band 25 (PCS)	0.788	0.806	**1.594**	N/A
	LTE Band 30	0.464	0.806	1.270	N/A
	LTE Band 7	0.800	0.806	See Table Below	N/A
	LTE Band 41	1.025	0.806	See Note 1	0.02

Simult Tx	Configuration	LTE Band 7 Ant A	5GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-worn	Back	0.363	0.806	1.169

Simult Tx	Configuration	LTE Band 7 Ant B	5GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Body-worn	Back	0.800	0.806	See Note 1	0.01

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Table 12-7
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	CDMA BC10 (§90S)	0.397	0.055	0.117	0.174	0.743
	CDMA BC0 (§22H)	0.455	0.055	0.117	0.174	0.801
	GSM 850	0.298	0.055	0.117	0.174	0.644
	UMTS 850	0.472	0.055	0.117	0.174	0.818
	UMTS 1750	0.675	0.055	0.117	0.174	1.021
	PCS CDMA	0.850	0.055	0.117	0.174	1.196
	GSM 1900	0.344	0.055	0.117	0.174	0.690
	UMTS 1900	0.828	0.055	0.117	0.174	1.174
	LTE Band 71	0.339	0.055	0.117	0.174	0.685
	LTE Band 12	0.384	0.055	0.117	0.174	0.730
	LTE Band 13	0.487	0.055	0.117	0.174	0.833
	LTE Band 14	0.406	0.055	0.117	0.174	0.752
	LTE Band 26 (Cell)	0.407	0.055	0.117	0.174	0.753
	LTE Band 5 (Cell)	0.449	0.055	0.117	0.174	0.795
	LTE Band 66 (AWS)	0.728	0.055	0.117	0.174	1.074
	LTE Band 25 (PCS)	0.788	0.055	0.117	0.174	1.134
	LTE Band 30	0.464	0.055	0.117	0.174	0.810
	LTE Band 7	0.800	0.055	0.117	0.174	1.146
	LTE Band 41	1.025	0.055	0.117	0.174	**1.371**

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Table 12-8
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	CDMA BC10 (§90S)	0.397	0.045	0.442
	CDMA BC0 (§22H)	0.455	0.045	0.500
	GSM 850	0.298	0.045	0.343
	UMTS 850	0.472	0.045	0.517
	UMTS 1750	0.675	0.045	0.720
	PCS CDMA	0.850	0.045	0.895
	GSM 1900	0.344	0.045	0.389
	UMTS 1900	0.828	0.045	0.873
	LTE Band 71	0.339	0.045	0.384
	LTE Band 12	0.384	0.045	0.429
	LTE Band 13	0.487	0.045	0.532
	LTE Band 14	0.406	0.045	0.451
	LTE Band 26 (Cell)	0.407	0.045	0.452
	LTE Band 5 (Cell)	0.449	0.045	0.494
	LTE Band 66 (AWS)	0.728	0.045	0.773
	LTE Band 25 (PCS)	0.788	0.045	0.833
	LTE Band 30	0.464	0.045	0.509
	LTE Band 7	0.800	0.045	0.845
	LTE Band 41	1.025	0.045	**1.070**

Note 1 - No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.7 for detailed SPLS ratio analysis.

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12.5 Hotspot SAR Simultaneous Transmission Analysis

Table 12-9
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	EVDO BC10 (§90S)	0.785	0.149	0.403	0.934	1.188	1.337
	EVDO BC0 (§22H)	1.056	0.149	0.403	See Table Below	See Table Below	See Table Below
	GPRS 850	0.807	0.149	0.403	0.956	1.210	1.359
	UMTS 850	0.957	0.149	0.403	1.106	1.360	1.509
	UMTS 1750	0.769	0.149	0.403	0.918	1.172	1.321
	PCS EVDO	1.338	0.149	0.403	See Table Below	See Table Below	See Table Below
	GPRS 1900	0.524	0.149	0.403	0.673	0.927	1.076
	UMTS 1900	1.307	0.149	0.403	See Table Below	See Table Below	See Table Below
	LTE Band 71	0.504	0.149	0.403	0.653	0.907	1.056
	LTE Band 12	0.640	0.149	0.403	0.789	1.043	1.192
	LTE Band 13	0.780	0.149	0.403	0.929	1.183	1.332
	LTE Band 14	0.665	0.149	0.403	0.814	1.068	1.217
	LTE Band 26 (Cell)	0.863	0.149	0.403	1.012	1.266	1.415
	LTE Band 5 (Cell)	0.999	0.149	0.403	1.148	1.402	**1.551**
	LTE Band 66 (AWS)	0.797	0.149	0.403	0.946	1.200	1.349
	LTE Band 25 (PCS)	0.961	0.149	0.403	1.110	1.364	1.513
	LTE Band 30	0.898	0.149	0.403	1.047	1.301	1.450
	LTE Band 7	1.388	0.149	0.403	See Table Below	See Table Below	See Table Below
	LTE Band 41	1.356	0.149	0.403	See Table Below	See Table Below	See Table Below

Simult Tx	Configuration	EVDO BC0 (§22H) 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	1.056	0.123	0.403*	1.179	1.459	**1.582**
	Front	0.790	0.149*	0.263	0.939	1.053	1.202
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	0.554	-	-	0.554	0.554	0.554
	Right	0.432	-	-	0.432	0.432	0.432
	Left	0.117	0.149*	0.403*	0.266	0.520	0.669

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)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.604	0.123	0.403*	0.727	1.007	1.130
	Front	0.497	0.149*	0.263	0.646	0.760	0.909
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	1.338	-	-	**1.338**	**1.338**	**1.338**
	Right	0.102	-	-	0.102	0.102	0.102
	Left	0.100	0.149*	0.403*	0.249	0.503	0.652

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	1+3	1+2+3
Hotspot SAR	Back	0.482	0.123	0.403*	0.605	0.885	1.008
	Front	0.419	0.149*	0.263	0.568	0.682	0.831
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	1.307	-	-	**1.307**	**1.307**	**1.307**
	Right	0.088	-	-	0.088	0.088	0.088
	Left	0.114	0.149*	0.403*	0.263	0.517	0.666

Simult Tx	Configuration	LTE Band 7 Ant A 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	0.265	0.123	0.403*	0.388	0.668	**0.791**
	Front	0.214	0.149*	0.263	0.363	0.477	0.626
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	0.538	-	-	0.538	0.538	0.538
	Right	0.084	-	-	0.084	0.084	0.084
	Left	0.150	0.149*	0.403*	0.299	0.553	0.702

Simult Tx	Configuration	LTE Band 7 Ant B 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	0.574	0.123	0.403*	0.697	0.977	1.100
	Front	0.495	0.149*	0.263	0.644	0.758	0.907
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	1.388	-	-	**1.388**	**1.388**	**1.388**
	Right	-	-	-	-	-	-
	Left	0.136	0.149*	0.403*	0.285	0.539	0.688

Simult Tx	Configuration	LTE Band 41 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	0.744	0.123	0.403*	0.867	1.147	1.270
	Front	0.479	0.149*	0.263	0.628	0.742	0.891
	Top	-	0.149	0.403	0.149	0.403	0.552
	Bottom	1.356	-	-	**1.356**	**1.356**	**1.356**
	Right	-	-	-	-	-	-
	Left	0.118	0.149*	0.403*	0.267	0.521	0.670

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Table 12-10
Simultaneous Transmission Scenario with 5 GHz WLAN SISO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.785	0.239	1.024
	EVDO BC0 (§22H)	1.056	0.239	1.295
	GPRS 850	0.807	0.239	1.046
	UMTS 850	0.957	0.239	1.196
	UMTS 1750	0.769	0.239	1.008
	PCS EVDO	1.338	0.239	**1.577**
	GPRS 1900	0.524	0.239	0.763
	UMTS 1900	1.307	0.239	1.546
	LTE Band 71	0.504	0.239	0.743
	LTE Band 12	0.640	0.239	0.879
	LTE Band 13	0.780	0.239	1.019
	LTE Band 14	0.665	0.239	0.904
	LTE Band 26 (Cell)	0.863	0.239	1.102
	LTE Band 5 (Cell)	0.999	0.239	1.238
	LTE Band 66 (AWS)	0.797	0.239	1.036
	LTE Band 25 (PCS)	0.961	0.239	1.200
	LTE Band 30	0.898	0.239	1.137
	LTE Band 7	1.388	0.239	See Table Below
	LTE Band 41	1.356	0.239	See Table Below

Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.265	0.239	0.504
	Front	0.214	0.239*	0.453
	Top	-	0.239*	0.239
	Bottom	0.538	-	**0.538**
	Right	0.084	-	0.084
	Left	0.150	0.239*	0.389

Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.574	0.239	0.813
	Front	0.495	0.239*	0.734
	Top	-	0.239*	0.239
	Bottom	1.388	-	**1.388**
	Right	-	-	0.000
	Left	0.136	0.239*	0.375

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.744	0.239	0.983
	Front	0.479	0.239*	0.718
	Top	-	0.239*	0.239
	Bottom	1.356	-	**1.356**
	Right	-	-	0.000
	Left	0.118	0.239*	0.357

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.785	0.463	1.248
	EVDO BC0 (§22H)	1.056	0.463	**1.519**
	GPRS 850	0.807	0.463	1.270
	UMTS 850	0.957	0.463	1.420
	UMTS 1750	0.769	0.463	1.232
	PCS EVDO	1.338	0.463	See Table Below
	GPRS 1900	0.524	0.463	0.987
	UMTS 1900	1.307	0.463	See Table Below
	LTE Band 71	0.504	0.463	0.967
	LTE Band 12	0.640	0.463	1.103
	LTE Band 13	0.780	0.463	1.243
	LTE Band 14	0.665	0.463	1.128
	LTE Band 26 (Cell)	0.863	0.463	1.326
	LTE Band 5 (Cell)	0.999	0.463	1.462
	LTE Band 66 (AWS)	0.797	0.463	1.260
	LTE Band 25 (PCS)	0.961	0.463	1.424
	LTE Band 30	0.898	0.463	1.361
	LTE Band 7	1.388	0.463	See Table Below
	LTE Band 41	1.356	0.463	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.604	0.463	1.067
	Front	0.497	0.463*	0.960
	Top	-	0.463*	0.463
	Bottom	1.338	-	**1.338**
	Right	0.102	-	0.102
	Left	0.100	0.105	0.205

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.482	0.463	0.945
	Front	0.419	0.463*	0.882
	Top	-	0.463*	0.463
	Bottom	1.307	-	**1.307**
	Right	0.088	-	0.088
	Left	0.114	0.105	0.219

Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.265	0.463	**0.728**
	Front	0.214	0.463*	0.677
	Top	-	0.463*	0.463
	Bottom	0.538	-	0.538
	Right	0.084	-	0.084
	Left	0.150	0.105	0.255

Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.574	0.463	1.037
	Front	0.495	0.463*	0.958
	Top	-	0.463*	0.463
	Bottom	1.388	-	**1.388**
	Right	-	-	0.000
	Left	0.136	0.105	0.241

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.744	0.463	1.207
	Front	0.479	0.463*	0.942
	Top	-	0.463*	0.463
	Bottom	1.356	-	**1.356**
	Right	-	-	0.000
	Left	0.118	0.105	0.223

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Table 12-11
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.785	1.075	See Table Below
	EVDO BC0 (§22H)	1.056	1.075	See Table Below
	GPRS 850	0.807	1.075	See Table Below
	UMTS 850	0.957	1.075	See Table Below
	UMTS 1750	0.769	1.075	See Table Below
	PCS EVDO	1.338	1.075	See Table Below
	GPRS 1900	0.524	1.075	See Table Below
	UMTS 1900	1.307	1.075	See Table Below
	LTE Band 71	0.504	1.075	**1.579**
	LTE Band 12	0.640	1.075	See Table Below
	LTE Band 13	0.780	1.075	See Table Below
	LTE Band 14	0.665	1.075	See Table Below
	LTE Band 26 (Cell)	0.863	1.075	See Table Below
	LTE Band 5 (Cell)	0.999	1.075	See Table Below
	LTE Band 66 (AWS)	0.797	1.075	See Table Below
	LTE Band 25 (PCS)	0.961	1.075	See Table Below
	LTE Band 30	0.898	1.075	See Table Below
	LTE Band 7	1.388	1.075	See Table Below
	LTE Band 41	1.356	1.075	See Table Below

Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.785	1.075	See Note 1	0.02
	Front	0.605	0.075	0.680	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.477	-	0.477	N/A
	Right	0.415	-	0.415	N/A
	Left	0.098	1.075*	**1.173**	N/A

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	1.056	1.075	See Note 1	0.02
	Front	0.790	0.075	0.865	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.554	-	0.554	N/A
	Right	0.432	-	0.432	N/A
	Left	0.117	1.075*	**1.192**	N/A

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.807	1.075	See Note 1	0.02
	Front	0.545	0.075	0.620	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.412	-	0.412	N/A
	Right	0.364	-	0.364	N/A
	Left	0.110	1.075*	**1.185**	N/A

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.957	1.075	See Note 1	0.02
	Front	0.723	0.075	0.798	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.431	-	0.431	N/A
	Right	0.407	-	0.407	N/A
	Left	0.095	1.075*	**1.170**	N/A

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Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.448	1.075	**1.523**
	Front	0.382	0.075	0.457
	Top	-	0.171	0.171
	Bottom	0.769	-	0.769
	Right	0.075	-	0.075
	Left	0.105	1.075*	1.180

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
Hotspot SAR	Back	0.604	1.075	See Note 1	0.01
	Front	0.497	0.075	0.572	N/A
	Top	-	0.171	0.171	N/A
	Bottom	1.338	-	**1.338**	N/A
	Right	0.102	-	0.102	N/A
	Left	0.100	1.075*	1.175	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.251	1.075	**1.326**
	Front	0.217	0.075	0.292
	Top	-	0.171	0.171
	Bottom	0.524	-	0.524
	Right	0.046	-	0.046
	Left	0.051	1.075*	1.126

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.482	1.075	**1.557**
	Front	0.419	0.075	0.494
	Top	-	0.171	0.171
	Bottom	1.307	-	1.307
	Right	0.088	-	0.088
	Left	0.114	1.075*	1.189

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.640	1.075	See Note 1	0.01
	Front	0.456	0.075	0.531	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.399	-	0.399	N/A
	Right	0.404	-	0.404	N/A
	Left	0.126	1.075*	**1.201**	N/A

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.780	1.075	See Note 1	0.02
	Front	0.610	0.075	0.685	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.429	-	0.429	N/A
	Right	0.462	-	0.462	N/A
	Left	0.180	1.075*	**1.255**	N/A

Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.665	1.075	See Note 1	0.01
	Front	0.522	0.075	0.597	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.359	-	0.359	N/A
	Right	0.375	-	0.375	N/A
	Left	0.152	1.075*	**1.227**	N/A

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.863	1.075	See Note 1	0.02
	Front	0.649	0.075	0.724	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.526	-	0.526	N/A
	Right	0.436	-	0.436	N/A
	Left	0.077	1.075*	**1.152**	N/A

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.999	1.075	See Note 1	0.02
	Front	0.764	0.075	0.839	N/A
	Top	-	0.171	0.171	N/A
	Bottom	0.543	-	0.543	N/A
	Right	0.419	-	0.419	N/A
	Left	0.111	1.075*	**1.186**	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.460	1.075	**1.535**
	Front	0.464	0.075	0.539
	Top	-	0.171	0.171
	Bottom	0.797	-	0.797
	Right	0.080	-	0.080
	Left	0.123	1.075*	1.198

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.438	1.075	**1.513**
	Front	0.361	0.075	0.436
	Top	-	0.171	0.171
	Bottom	0.961	-	0.961
	Right	0.073	-	0.073
	Left	0.100	1.075*	1.175

Simult Tx	Configuration	LTE Band 30 Ant A SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.338	1.075	**1.413**
	Front	0.417	0.075	0.492
	Top	-	0.171	0.171
	Bottom	0.896	-	0.896
	Right	0.065	-	0.065
	Left	0.056	1.075*	1.131

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Simult Tx	Configuration	LTE Band 30 Ant B SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.385	1.075	**1.460**
	Front	0.335	0.075	0.410
	Top	-	0.171	0.171
	Bottom	0.898	-	0.898
	Right	-	-	-
	Left	0.095	1.075*	1.170

Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.265	1.075	**1.340**
	Front	0.214	0.075	0.289
	Top	-	0.171	0.171
	Bottom	0.538	-	0.538
	Right	0.084	-	0.084
	Left	0.150	1.075*	1.225

Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.574	1.075	See Note 1	0.01
	Front	0.495	0.075	0.570	N/A
	Top	-	0.171	0.171	N/A
	Bottom	1.388	-	**1.388**	N/A
	Right	-	-	-	N/A
	Left	0.136	1.075*	1.211	N/A

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
Hotspot SAR	Back	0.744	1.075	See Note 1	0.02
	Front	0.479	0.075	0.554	N/A
	Top	-	0.171	0.171	N/A
	Bottom	1.356	-	**1.356**	N/A
	Right	-	-	-	N/A
	Left	0.118	1.075*	1.193	N/A

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	EVDO BC10 (§90S)	0.785	0.245	0.192	1.222
	EVDO BC0 (§22H)	1.056	0.245	0.192	**1.493**
	GPRS 850	0.807	0.245	0.192	1.244
	UMTS 850	0.957	0.245	0.192	1.394
	UMTS 1750	0.769	0.245	0.192	1.206
	PCS EVDO	1.338	0.245	0.192	See Table Below
	GPRS 1900	0.524	0.245	0.192	0.961
	UMTS 1900	1.307	0.245	0.192	See Table Below
	LTE Band 71	0.504	0.245	0.192	0.941
	LTE Band 12	0.640	0.245	0.192	1.077
	LTE Band 13	0.780	0.245	0.192	1.217
	LTE Band 14	0.665	0.245	0.192	1.102
	LTE Band 26 (Cell)	0.863	0.245	0.192	1.300
	LTE Band 5 (Cell)	0.999	0.245	0.192	1.436
	LTE Band 66 (AWS)	0.797	0.245	0.192	1.234
	LTE Band 25 (PCS)	0.961	0.245	0.192	1.398
	LTE Band 30	0.898	0.245	0.192	1.335
	LTE Band 7	1.388	0.245	0.192	See Table Below
	LTE Band 41	1.356	0.245	0.192	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.604	0.245*	0.192	0.849	0.796	1.041
	Front	0.497	0.245*	0.192*	0.742	0.689	0.934
	Top	-	0.245	0.192*	0.245	0.192	0.437
	Bottom	1.338	-	-	**1.338**	**1.338**	**1.338**
	Right	0.102	-	-	0.102	0.102	0.102
	Left	0.100	0.245*	0.192*	0.345	0.292	0.537

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.482	0.245*	0.192	0.727	0.674	0.919
	Front	0.419	0.245*	0.192*	0.664	0.611	0.856
	Top	-	0.245	0.192*	0.245	0.192	0.437
	Bottom	1.307	-	-	**1.307**	**1.307**	**1.307**
	Right	0.088	-	-	0.088	0.088	0.088
	Left	0.114	0.245*	0.192*	0.359	0.306	0.551

Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.265	0.245*	0.192	0.510	0.457	**0.702**
	Front	0.214	0.245*	0.192*	0.459	0.406	0.651
	Top	-	0.245	0.192*	0.245	0.192	0.437
	Bottom	0.538	-	-	0.538	0.538	0.538
	Right	0.084	-	-	0.084	0.084	0.084
	Left	0.150	0.245*	0.192*	0.395	0.342	0.587

Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.574	0.245*	0.192	0.819	0.766	1.011
	Front	0.495	0.245*	0.192*	0.740	0.687	0.932
	Top	-	0.245	0.192*	0.245	0.192	0.437
	Bottom	1.388	-	-	**1.388**	**1.388**	**1.388**
	Right	-	-	-	0.000	0.000	0.000
	Left	0.136	0.245*	0.192*	0.381	0.328	0.573

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	Back	0.744	0.245*	0.192	0.989	0.936	1.181
	Front	0.479	0.245*	0.192*	0.724	0.671	0.916
	Top	-	0.245	0.192*	0.245	0.192	0.437
	Bottom	1.356	-	-	**1.356**	**1.356**	**1.356**
	Right	-	-	-	0.000	0.000	0.000
	Left	0.118	0.245*	0.192*	0.363	0.310	0.555

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Table 12-13
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	EVDO BC10 (§90S)	0.785	0.144	0.929
	EVDO BC0 (§22H)	1.056	0.144	1.200
	GPRS 850	0.807	0.144	0.951
	UMTS 850	0.957	0.144	1.101
	UMTS 1750	0.769	0.144	0.913
	PCS EVDO	1.338	0.144	1.482
	GPRS 1900	0.524	0.144	0.668
	UMTS 1900	1.307	0.144	1.451
	LTE Band 71	0.504	0.144	0.648
	LTE Band 12	0.640	0.144	0.784
	LTE Band 13	0.780	0.144	0.924
	LTE Band 14	0.665	0.144	0.809
	LTE Band 26 (Cell)	0.863	0.144	1.007
	LTE Band 5 (Cell)	0.999	0.144	1.143
	LTE Band 66 (AWS)	0.797	0.144	0.941
	LTE Band 25 (PCS)	0.961	0.144	1.105
	LTE Band 30	0.898	0.144	1.042
	LTE Band 7	1.388	0.144	**1.532**
	LTE Band 41	1.356	0.144	1.500

Note 1 - No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.7 for detailed SPLS ratio analysis.

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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 12-14
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)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	UMTS 1750	3.225	1.392	See Table Below
	PCS EVDO	3.274	1.392	See Table Below
	GPRS 1900	1.698	1.392	3.090
	UMTS 1900	2.773	1.392	See Table Below
	LTE Band 66 (AWS)	3.253	1.392	See Table Below
	LTE Band 25 (PCS)	2.814	1.392	See Table Below
	LTE Band 30	1.859	1.392	**3.251**
	LTE Band 7	3.252	1.392	See Table Below
	LTE Band 41	3.245	1.392	See Table Below

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.828	1.392	3.220	Phablet SAR	Back	1.855	1.392	3.247
	Front	1.447	1.392*	2.839		Front	1.628	1.392*	3.020
	Top	-	0.124	0.124		Top	-	0.124	0.124
	Bottom	3.225	-	**3.225**		Bottom	3.274	-	**3.274**
	Right	0.357	-	0.357		Right	0.433	-	0.433
	Left	0.750	1.392*	2.142		Left	0.833	1.392*	2.225

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.641	1.392	**3.033**	Phablet SAR	Back	1.670	1.392	3.062
	Front	1.445	1.392*	2.837		Front	1.499	1.392*	2.891
	Top	-	0.124	0.124		Top	-	0.124	0.124
	Bottom	2.773	-	2.773		Bottom	3.253	-	**3.253**
	Right	0.521	-	0.521		Right	0.376	-	0.376
	Left	0.917	1.392*	2.309		Left	0.705	1.392*	2.097

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Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.754	1.392	**3.146**	Phablet SAR	Back	1.162	1.392	**2.554**
	Front	1.442	1.392*	2.834		Front	0.920	1.392*	2.312
	Top	-	0.124	0.124		Top	-	0.124	0.124
	Bottom	2.814	-	2.814		Bottom	1.377	-	1.377
	Right	0.481	-	0.481		Right	0.341	-	0.341
	Left	0.902	1.392*	2.294		Left	0.349	1.392*	1.741
Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.951	1.392	**3.343**	Phablet SAR	Back	2.175	1.392	**3.567**
	Front	1.806	1.392*	3.198		Front	2.147	1.392*	3.539
	Top	-	0.124	0.124		Top	-	0.124	0.124
	Bottom	3.252	-	3.252		Bottom	3.245	-	3.245
	Right	-	-	0.000		Right	-	-	-
	Left	1.109	1.392*	2.501		Left	0.827	1.392*	2.219

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	UMTS 1750	3.225	1.842	See Table Below
	PCS EVDO	3.274	1.842	See Table Below
	GPRS 1900	1.698	1.842	3.540
	UMTS 1900	2.773	1.842	See Table Below
	LTE Band 66 (AWS)	3.253	1.842	See Table Below
	LTE Band 25 (PCS)	2.814	1.842	See Table Below
	LTE Band 30	1.859	1.842	**3.701**
	LTE Band 7	3.252	1.842	See Table Below
	LTE Band 41	3.245	1.842	See Table Below

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.828	1.842	**3.670**	Phablet SAR	Back	1.855	1.842	**3.697**
	Front	1.447	0.575	2.022		Front	1.628	0.575	2.203
	Top	-	0.449	0.449		Top	-	0.449	0.449
	Bottom	3.225	-	3.225		Bottom	3.274	-	3.274
	Right	0.357	-	0.357		Right	0.433	-	0.433
	Left	0.750	1.842*	2.592		Left	0.833	1.842*	2.675

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.641	1.842	**3.483**	Phablet SAR	Back	1.670	1.842	**3.512**
	Front	1.445	0.575	2.020		Front	1.499	0.575	2.074
	Top	-	0.449	0.449		Top	-	0.449	0.449
	Bottom	2.773	-	2.773		Bottom	3.253	-	3.253
	Right	0.521	-	0.521		Right	0.376	-	0.376
	Left	0.917	1.842*	2.759		Left	0.705	1.842*	2.547

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Phablet SAR	Back	1.754	1.842	**3.596**	Phablet SAR	Back	1.162	1.842	**3.004**
	Front	1.442	0.575	2.017		Front	0.920	0.575	1.495
	Top	-	0.449	0.449		Top	-	0.449	0.449
	Bottom	2.814	-	2.814		Bottom	1.377	-	1.377
	Right	0.481	-	0.481		Right	0.341	-	0.341
	Left	0.902	1.842*	2.744		Left	0.349	1.842*	2.191

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Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.951	1.842	**3.793**
	Front	1.806	0.575	2.381
	Top	-	0.449	0.449
	Bottom	3.252	-	3.252
	Right	-	-	0.000
	Left	1.109	1.842*	2.951

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	2.175	1.842	See Note 1	0.06
	Front	2.147	0.575	2.722	N/A
	Top	-	0.449	0.449	N/A
	Bottom	3.245	-	**3.245**	N/A
	Right	-	-	-	N/A
	Left	0.827	1.842*	2.669	N/A

Table 12-15
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Phablet)

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.828	3.136	See Note 1	0.07
	Front	1.447	1.221	2.668	N/A
	Top	-	3.136*	3.136	N/A
	Bottom	3.225	-	**3.225**	N/A
	Right	0.357	-	0.357	N/A
	Left	0.750	0.340	1.090	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	1.855	3.136	See Note 1	0.07
	Front	1.628	1.221	2.849	N/A
	Top	-	3.136*	3.136	N/A
	Bottom	3.274	-	**3.274**	N/A
	Right	0.433	-	0.433	N/A
	Left	0.833	0.340	1.173	N/A

Simult Tx	Configuration	GSM 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	0.928	3.136	See Note 1	0.06
	Front	0.845	1.221	2.066	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	1.698	-	1.698	N/A
	Right	0.203	-	0.203	N/A
	Left	0.390	0.340	0.730	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.641	3.136	See Note 1	0.07
	Front	1.445	1.221	2.666	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	2.773	-	2.773	N/A
	Right	0.521	-	0.521	N/A
	Left	0.917	0.340	1.257	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	1.670	3.136	See Note 1	0.07
	Front	1.499	1.221	2.720	N/A
	Top	-	3.136*	3.136	N/A
	Bottom	3.253	-	**3.253**	N/A
	Right	0.376	-	0.376	N/A
	Left	0.705	0.340	1.045	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	1.754	3.136	See Note 1	0.07
	Front	1.442	1.221	2.663	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	2.814	-	2.814	N/A
	Right	0.481	-	0.481	N/A
	Left	0.902	0.340	1.242	N/A

Simult Tx	Configuration	LTE Band 30 Ant A SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.854	3.136	See Note 1	0.08
	Front	1.360	1.221	2.581	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	1.557	-	1.557	N/A
	Right	0.065	-	0.065	N/A
	Left	0.535	0.340	0.875	N/A

Simult Tx	Configuration	LTE Band 30 Ant B SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.718	3.136	See Note 1	0.07
	Front	1.372	1.221	2.593	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	1.859	-	1.859	N/A
	Right	-	-	0.000	N/A
	Left	0.485	0.340	0.825	N/A

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Simult Tx	Configuration	LTE Band 7 Ant A SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.162	3.136	See Note 1	0.06
	Front	0.920	1.221	2.141	N/A
	Top	-	3.136*	**3.136**	N/A
	Bottom	1.377	-	1.377	N/A
	Right	0.341	-	0.341	N/A
	Left	0.349	0.340	0.689	N/A

Simult Tx	Configuration	LTE Band 7 Ant B SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	1.951	3.136	See Note 1	0.08
	Front	1.806	1.221	3.027	N/A
	Top	-	3.136*	3.136	N/A
	Bottom	3.252	-	**3.252**	N/A
	Right	-	-	0.000	N/A
	Left	1.109	0.340	1.449	N/A

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	2.175	3.136	See Note 1	0.09
	Front	2.147	1.221	**3.368**	N/A
	Top	-	3.136*	3.136	N/A
	Bottom	3.245	-	3.245	N/A
	Right	-	-	-	N/A
	Left	0.827	0.340	1.167	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 1.6 W/kg for 1g and 4 W/kg for 10g, the SAR sum to peak locations can be analyzed to determine SAR distribution overlaps. When the SAR peak to location ratio (shown below) for each pair of antennas is ≤ 0.04 for 1g and ≤0.10 for 10g, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

$$\text{Distance}_{Tx1-Tx2} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2} \text{ (Head)}$$

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

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

12.7.1 Right Cheek SPLSR Evaluation and Analysis

Table 12-16
Peak SAR Locations for Right Cheek

Mode/Band	x (mm)	y (mm)	z (mm)	Reported SAR (W/kg)
2.4 GHz WLAN Ant 2	16.12	-328.94	-171.96	1.292
2.4 GHz WLAN MIMO	16.30	-334.30	-171.61	1.306
CDMA BC0 (§22H)	41.03	-257.69	-173.32	0.327
EVDO BC0 (§22H)	41.03	-257.69	-173.38	0.31

Table 12-17
Right Cheek 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}	$(a+b)^{1.5}/D_{a-b}$	
2.4 GHz WLAN Ant 2	CDMA BC0 (§22H)	1.292	0.327	1.619	75.49	0.03	1
2.4 GHz WLAN Ant 2	EVDO BC0 (§22H)	1.292	0.31	1.602	75.49	0.03	2
2.4 GHz WLAN MIMO	CDMA BC0 (§22H)	1.306	0.327	1.633	80.52	0.03	3
2.4 GHz WLAN MIMO	EVDO BC0 (§22H)	1.306	0.31	1.616	80.52	0.03	4

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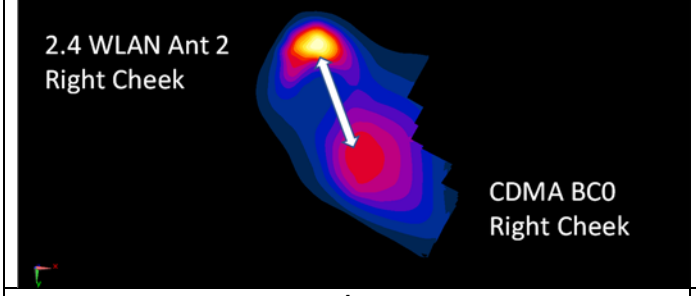
Table 12-18
Right Cheek SAR to Peak Location Separation Ratio Plots



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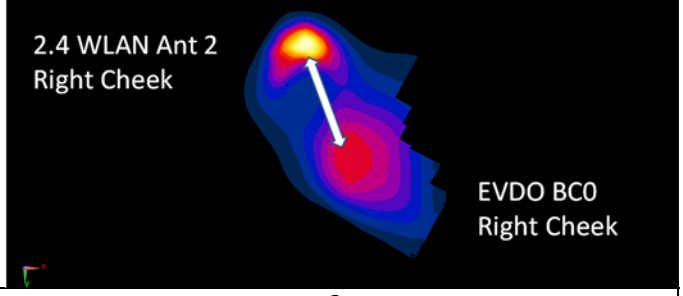

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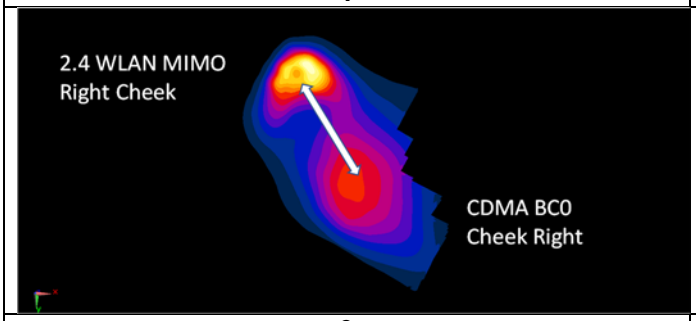

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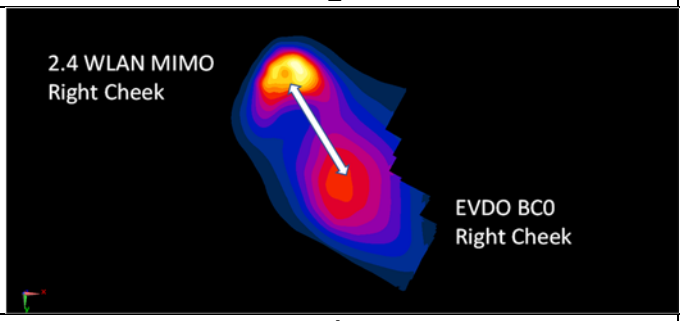

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12.7.2 Body-worn SPLSR Evaluation and Analysis

Table 12-19
Peak SAR Locations for Body-worn Back Side

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
5 GHz WLAN MIMO	2.00	72.00	0.806
PCS CDMA	-29.50	-87.00	0.85
UMTS 1900	-28.00	-79.50	0.828
LTE Band 7 Ant B	-40.60	-77.40	0.8
LTE Band 41	-40.70	-78.60	1.025

Table 12-20
Body-worn 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	PCS CDMA	0.806	0.85	1.656	162.09	0.01	1
5 GHz WLAN MIMO	UMTS 1900	0.806	0.828	1.634	154.44	0.01	2
5 GHz WLAN MIMO	LTE Band 7 Ant B	0.806	0.8	1.606	155.35	0.01	3
5 GHz WLAN MIMO	LTE Band 41	0.806	1.025	1.831	156.54	0.02	4

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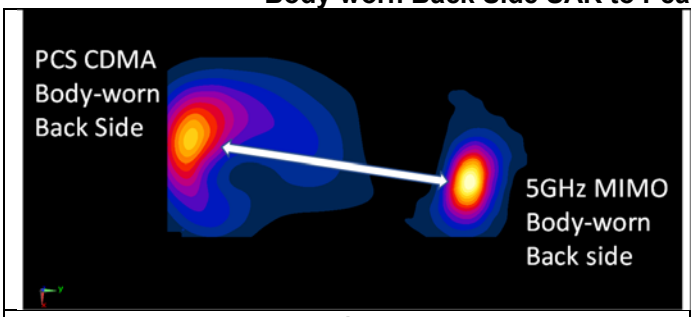
Table 12-21
Body-worn Back Side SAR to Peak Location Separation Ratio Plots



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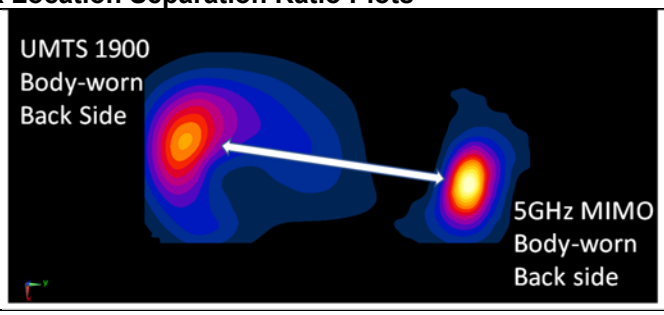

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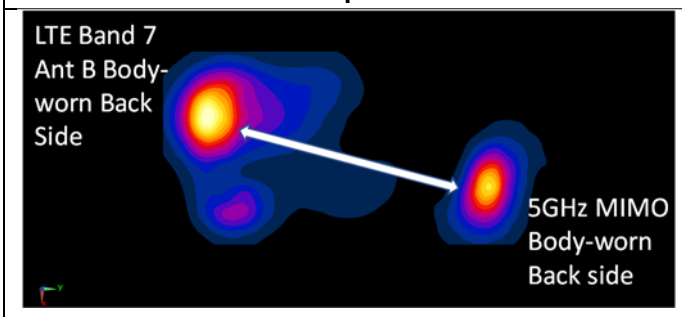

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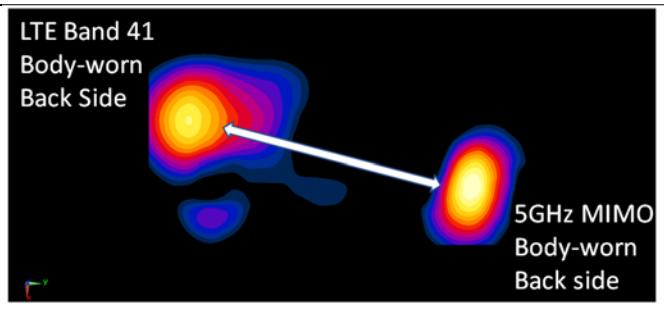

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12.7.3 Hotspot Back Side SPLSR Evaluation and Analysis

Table 12-22
Peak SAR Locations for Hotspot Back Side

	x (mm)	y (mm)	Reported SAR (W/kg)
5 GHz WLAN MIMO	3.00	71.00	1.075
EVDO BC10 (§90S)	-18.00	-81.50	0.785
EVDO BC0 (§22H)	-18.00	-81.60	1.056
GPRS 850	-19.50	-81.50	0.807
UMTS 850	-11.50	-80.00	0.957
PCS EVDO	-26.50	-85.50	0.604
LTE Band 12	-16.50	-81.50	0.64
LTE Band 13	-15.00	-80.00	0.78
LTE Band 14	-16.50	-81.50	0.665
LTE Band 26 (Cell)	-18.00	-81.50	0.863
LTE Band 5 (Cell)	-18.00	-80.00	0.999
LTE Band 7 Ant B	-38.20	-76.20	0.574
LTE Band 41	-39.50	-76.20	0.744

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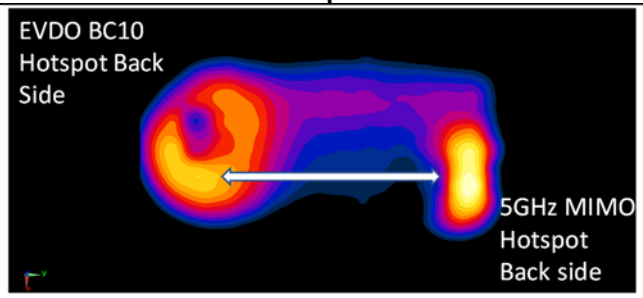
Table 12-23
Hotspot Back Side SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
5 GHz WLAN MIMO	EVDO BC10 (§90S)	1.075	0.785	1.860	153.94	0.02	1
5 GHz WLAN MIMO	EVDO BC0 (§22H)	1.075	1.056	2.131	154.04	0.02	2
5 GHz WLAN MIMO	GPRS 850	1.075	0.807	1.882	154.15	0.02	3
5 GHz WLAN MIMO	UMTS 850	1.075	0.957	2.032	151.69	0.02	4
5 GHz WLAN MIMO	PCS EVDO	1.075	0.604	1.679	159.26	0.01	5
5 GHz WLAN MIMO	LTE Band 12	1.075	0.64	1.715	153.74	0.01	6
5 GHz WLAN MIMO	LTE Band 13	1.075	0.78	1.855	152.07	0.02	7
5 GHz WLAN MIMO	LTE Band 14	1.075	0.665	1.740	153.74	0.01	8
5 GHz WLAN MIMO	LTE Band 26 (Cell)	1.075	0.863	1.938	153.94	0.02	9
5 GHz WLAN MIMO	LTE Band 5 (Cell)	1.075	0.999	2.074	152.45	0.02	10
5 GHz WLAN MIMO	LTE Band 7 Ant B	1.075	0.574	1.649	152.86	0.01	11
5 GHz WLAN MIMO	LTE Band 41	1.075	0.744	1.819	153.21	0.02	12

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



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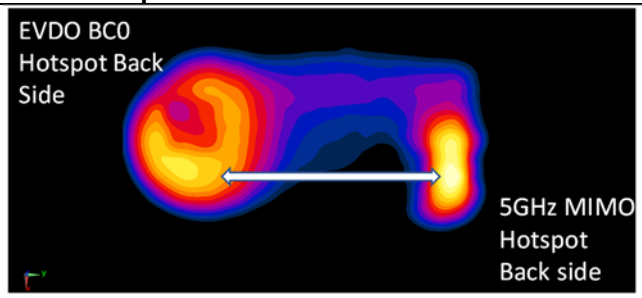

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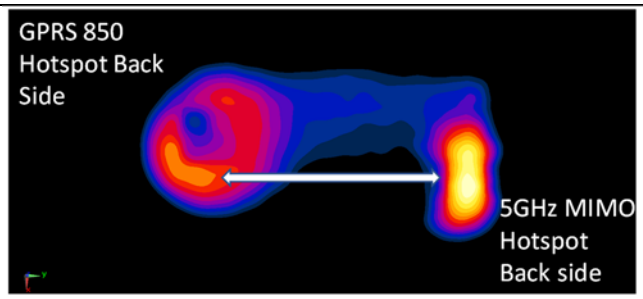

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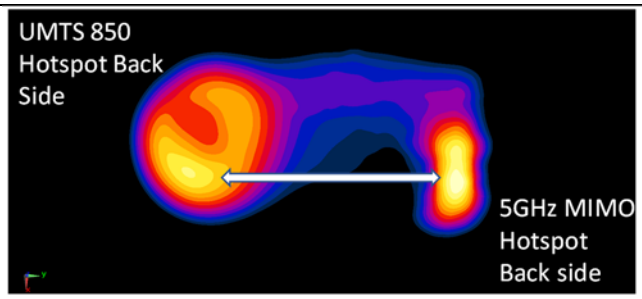

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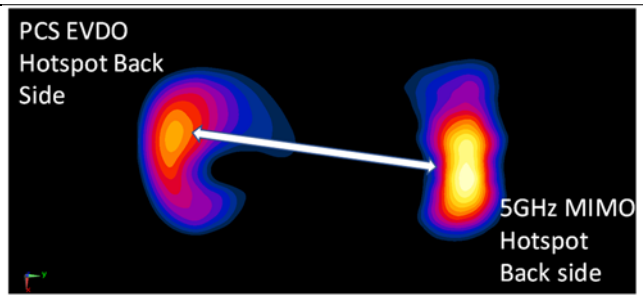

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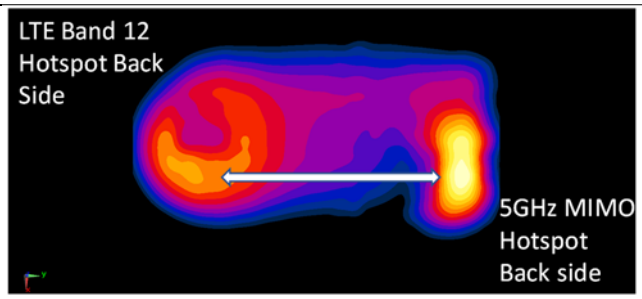

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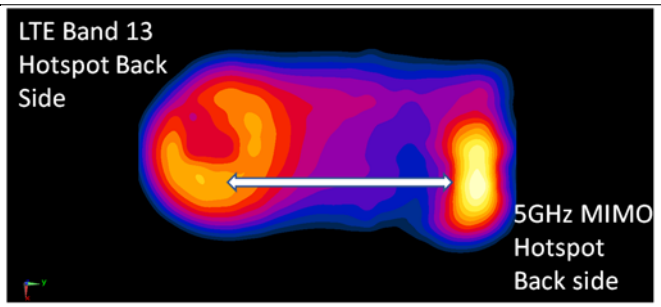

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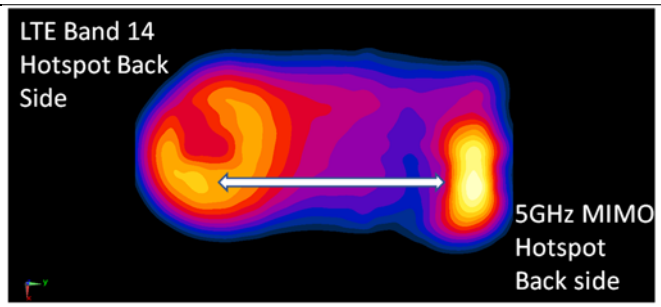

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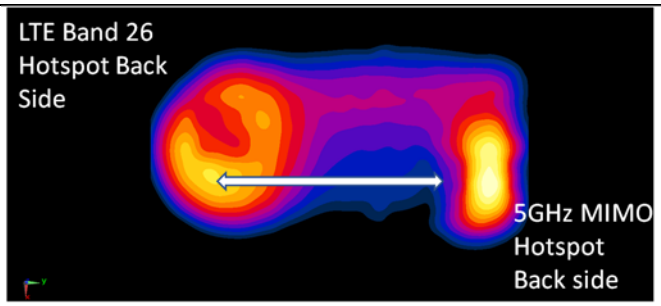

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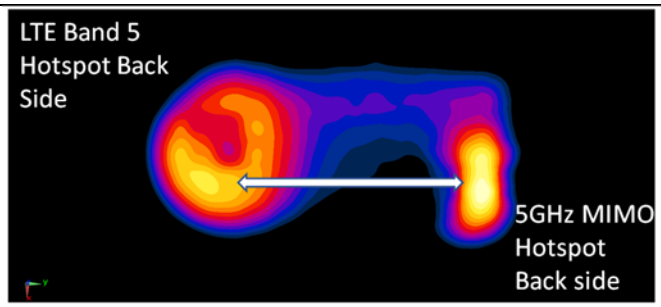

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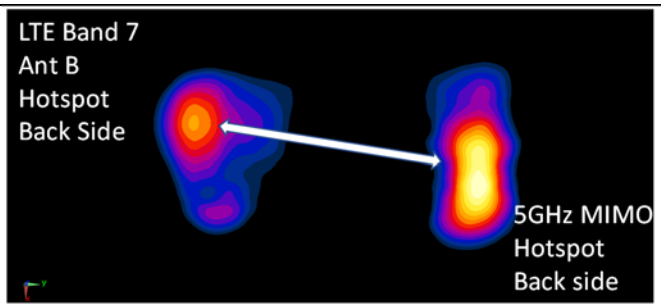

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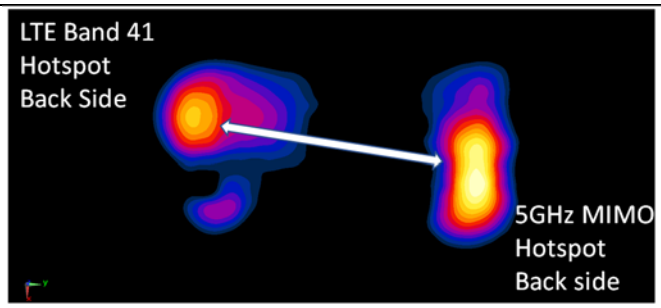

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12.7.4 Phablet Side SPLSR Evaluation and Analysis

Table 12-25
Peak SAR Locations for Phablet Back Side

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
5 GHz WLAN Ant 2	1.00	71.00	1.842
5 GHz WLAN MIMO	-1.00	67.00	3.136
UMTS 1750	-23.00	-79.50	1.828
PCS EVDO	-20.50	-82.50	1.855
GRPS 1900	-30.00	-76.50	0.928
UMTS 1900	-20.50	-79.50	1.641
LTE Band 66 (AWS)	-31.00	-81.00	1.670
LTE Band 25 (PCS)	-22.00	-81.00	1.754
LTE Band 30 Ant B	9.40	-78.20	1.718
LTE Band 30 Ant A	0.80	-73.20	1.854
LTE Band 7 Ant B	-1.00	-75.60	1.951
LTE Band 7 Ant A	-7.00	-76.80	1.162
LTE Band 41	1.40	-73.40	2.175

Table 12-26
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 Ant 2	LTE Band 41	1.842	2.175	4.017	144.40	0.06	1
5 GHz WLAN MIMO	UMTS 1750	3.136	1.828	4.964	148.14	0.07	2
5 GHz WLAN MIMO	PCS EVDO	3.136	1.855	4.991	150.77	0.07	3
5 GHz WLAN MIMO	GRPS 1900	3.136	0.928	4.064	146.40	0.06	4
5 GHz WLAN MIMO	UMTS 1900	3.136	1.641	4.777	147.79	0.07	5
5 GHz WLAN MIMO	LTE Band 66 (AWS)	3.136	1.67	4.806	151.01	0.07	6
5 GHz WLAN MIMO	LTE Band 25 (PCS)	3.136	1.754	4.890	149.48	0.07	7
5 GHz WLAN MIMO	LTE Band 30 Ant B	3.136	1.718	4.854	145.57	0.07	8
5 GHz WLAN MIMO	LTE Band 30 Ant A	3.136	1.854	4.990	140.21	0.08	9
5 GHz WLAN MIMO	LTE Band 7 Ant B	3.136	1.951	5.087	142.60	0.08	10
5 GHz WLAN MIMO	LTE Band 7 Ant A	3.136	1.162	4.298	143.93	0.06	11
5 GHz WLAN MIMO	LTE Band 41	3.136	2.175	5.311	140.42	0.09	12

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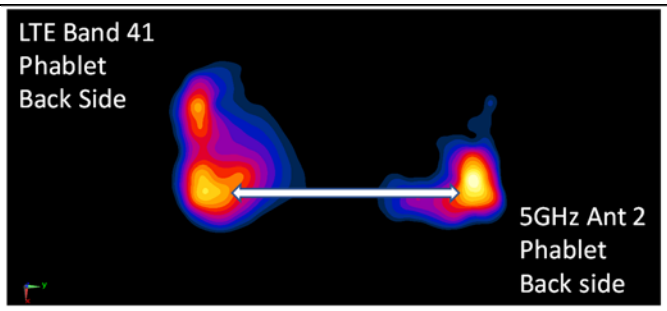
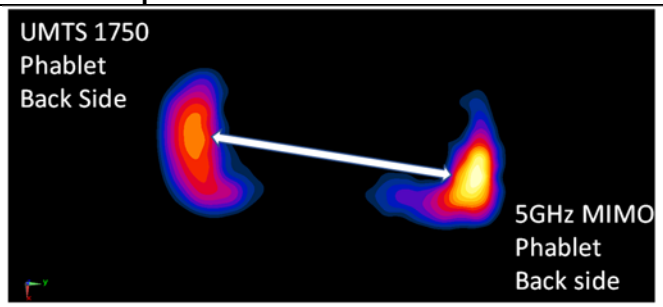
Table 12-27
Phablet Back Side SAR to Peak Location Separation Ratio Plots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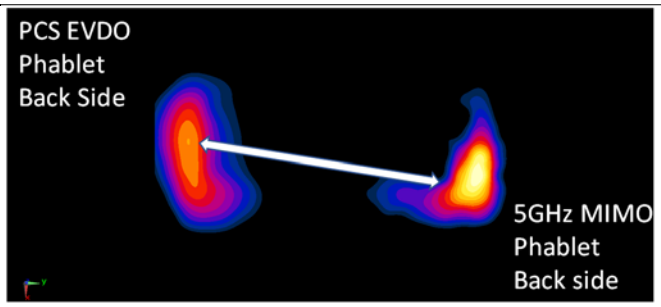	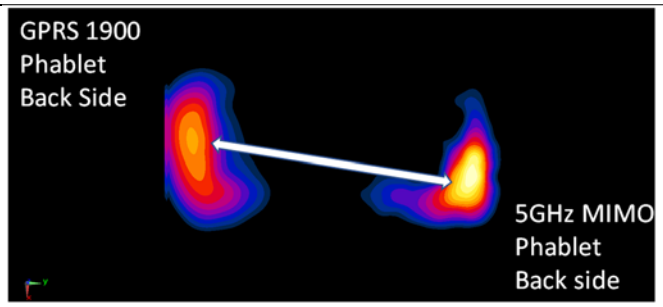
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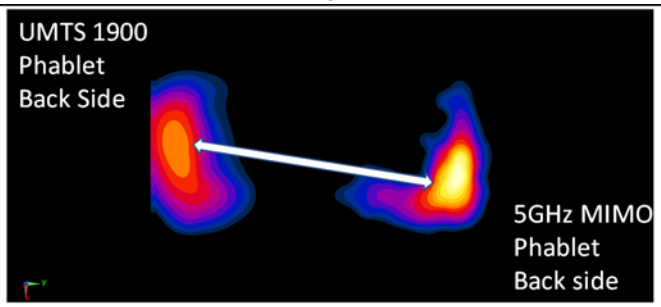	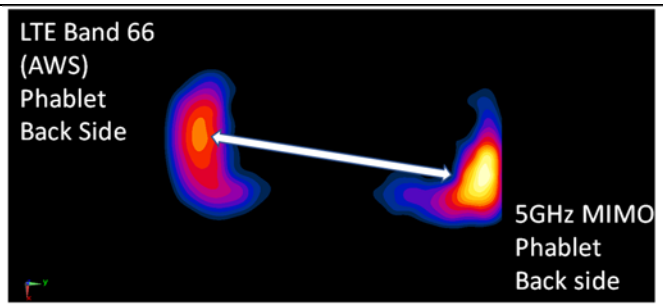
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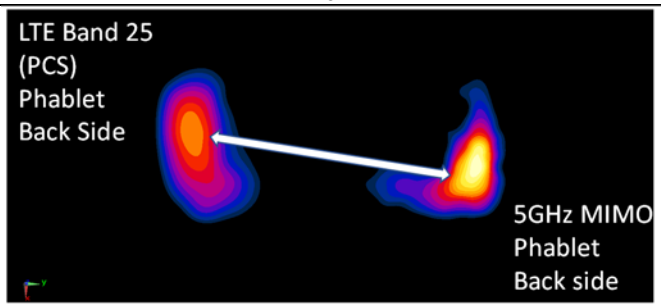	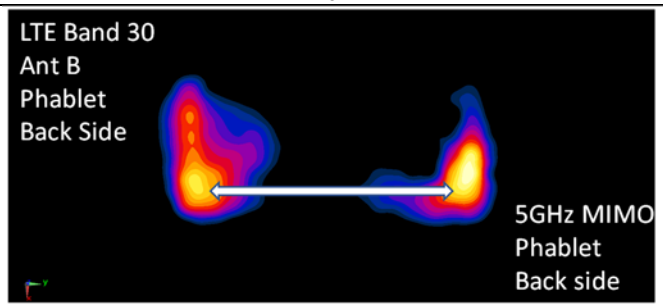
7	8

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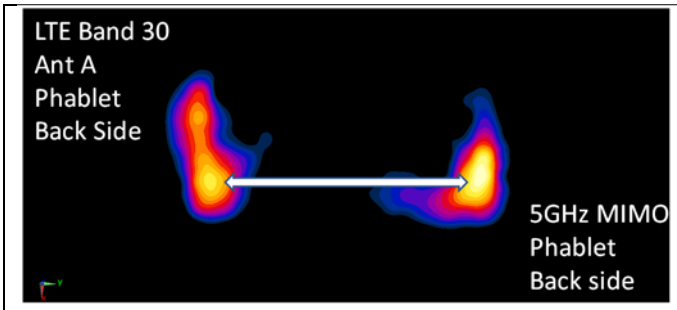

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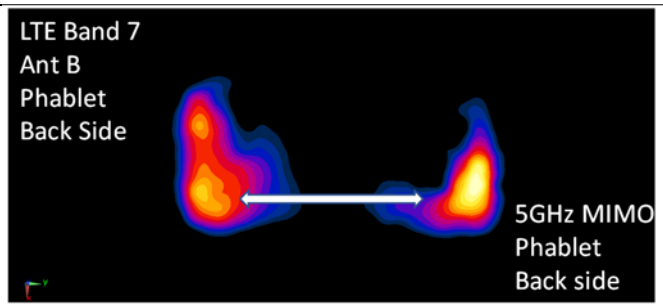

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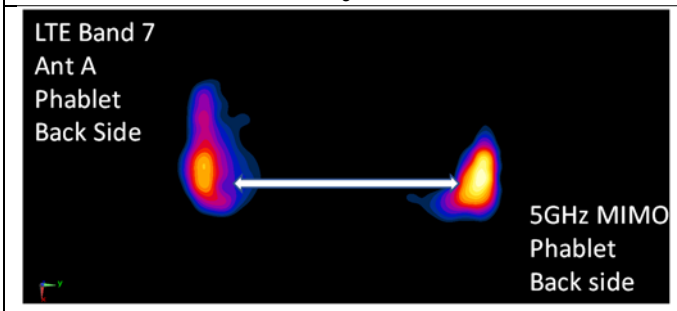
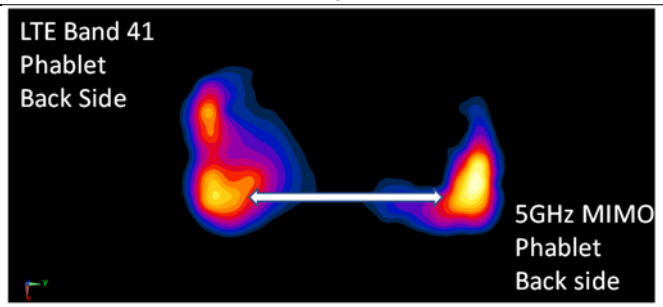


11



12

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 preformed 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
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS														
Band	FREQUENCY		Mode/Band	Service	Side	Test Position	Data Rate (Mbps)	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)	
2450	2437.00	6	802.11b, 22 MHz Bandwidth	DSSS , ANT 2	Right	Cheek	1	1.180	1.050	1.12	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 13-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
835	846.60	4233	UMTS 850	RMC	back	10 mm	0.822	0.820	1.00	N/A	N/A	N/A	N/A
1900	1908.75	1175	PCS CDMA	EVDO Rev. 0	bottom	10 mm	1.050	1.030	1.02	N/A	N/A	N/A	N/A
2600	2560.00	21350	LTE Band 7, 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	bottom	10 mm	1.090	0.997	1.09	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 13-3
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	1712.40	1312	UMTS 1750	RMC	N/A	bottom	0 mm	2.380	2.330	1.02	N/A	N/A	N/A	N/A
1900	1908.75	1175	PCS CDMA	EVDO Rev. 0	N/A	bottom	0 mm	2.380	2.570	1.08	N/A	N/A	N/A	N/A
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 50 RB Offset	N/A	bottom	0 mm	2.440	2.440	1.00	N/A	N/A	N/A	N/A
2600	2549.50	40185	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	2.430	2.370	1.03	N/A	N/A	N/A	N/A
5600	5500.00	100	802.11n, 20 MHz Bandwidth	OFDM, MIMO	13	back	0 mm	2.160	2.050	1.05	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Phablet** **4.0 W/kg (mW/g)** averaged over 10 grams						

13.2 Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g and <3.75 W/kg for 10g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

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14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 Tuner Testing

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 to the antenna characteristics, other than impedance matching.

To evaluate all of 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 CDMA BC0 and BC10, the highest reported SAR configuration per exposure condition was considered for point SAR measurements. For the LTE Band 5 and 26 pair, the highest reported SAR configuration per exposure condition was evaluated. Additionally, LTE bands 12/17 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 three 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		CDMA BC1	
RMC		RMC		RMC		RC3/SO55		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)	0.244	Measured 1g SAR (W/kg)	0.107	Measured 1g SAR (W/kg)	0.136	Measured 1g SAR (W/kg)	0.250	Measured 1g SAR (W/kg)	0.130
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)	0.273	Auto-tune (State 16)	0.133	Auto-tune (State 17)	0.173	Auto-tune (State 4)	0.284	Auto-tune (State 17)	0.174
Default (State 0)	0.272	Default (State 16)	0.134	Default (State 16)	0.172	Default (State 0)	0.271	Default (State 16)	0.165
State 0	0.272	State 4	0.083	State 4	0.125	State 0	0.271	State 1	0.144
State 4	0.277	State 7	0.074	State 6	0.115	State 2	0.276	State 2	0.127
State 5	0.276	State 8	0.075	State 7	0.111	State 4	0.276	State 5	0.120
State 17	0.108	State 10	0.060	State 9	0.101	State 9	0.247	State 7	0.110
State 18	0.121	State 11	0.052	State 16	0.172	State 11	0.203	State 11	0.076
State 21	0.121	State 13	0.037	State 17	0.173	State 17	0.108	State 12	0.060
State 22	0.120	State 16	0.134	State 24	0.141	State 22	0.117	State 16	0.165
State 25	0.106	State 17	0.132	State 26	0.118	State 23	0.117	State 17	0.165
State 27	0.076	State 24	0.119	State 29	0.076	State 29	0.039	State 18	0.149
State 28	0.055	State 27	0.099	State 33	0.034	State 32	0.226	State 22	0.138
State 29	0.042	State 30	0.069	State 42	0.020	State 35	0.195	State 25	0.126
State 33	0.226	State 36	0.015	State 44	0.012	State 40	0.169	State 31	0.044
State 35	0.199	State 42	0.009	State 47	0.004	State 47	0.029	State 32	0.036
State 40	0.173	State 45	0.004	State 52	0.050	State 49	0.150	State 36	0.028
State 43	0.110	State 48	0.040	State 54	0.045	State 55	0.163	State 43	0.015
State 48	0.152	State 52	0.030	State 57	0.040	State 57	0.152	State 49	0.059
State 53	0.168	State 55	0.026	State 61	0.018	State 60	0.089	State 50	0.053
State 63	0.029	State 58	0.020	State 66	0.025	State 62	0.045	State 53	0.049
State 68	0.273	State 64	0.089	State 67	0.046	State 63	0.027	State 59	0.028
State 69	0.108	State 68	0.100	State 70	0.036	State 68	0.267	State 64	0.121
State 71	0.151	State 70	0.020	State 72	0.140	State 75	0.149	State 71	0.061
State 74	0.225	State 73	0.131	State 75	0.051	State 76	0.269	State 77	0.172
State 76	0.273	State 76	0.100	State 78	0.037	State 78	0.226	State 78	0.036

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Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data														
LTE Band 71		LTE Band 14		LTE Band 12		LTE Band 13		LTE Band 5		LTE Band 66		LTE Band 25	
QPSK, 20MHz Bandwidth, 1 RB, 50 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 20MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20MHz Bandwidth, 1 RB, 0 RB Offsets	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.50	Frequency (MHz)	793.00	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1905.00
Channel	133297	Channel	23330	Channel	23095	Channel	23230	Channel	20525	Channel	132322	Channel	26590
Measured 1g SAR (W/kg)	0.117	Measured 1g SAR (W/kg)	0.180	Measured 1g SAR (W/kg)	0.136	Measured 1g SAR (W/kg)	0.198	Measured 1g SAR (W/kg)	0.210	Measured 1g SAR (W/kg)	0.107	Measured 1g SAR (W/kg)	0.142
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 5)	0.149	Auto-tune (State 68)	0.227	Auto-tune (State 68)	0.164	Auto-tune (State 1)	0.206	Auto-tune (State 4)	0.227	Auto-tune (State 16)	0.173	Auto-tune (State 17)	0.184
Default (State 2)	0.157	Default (State 0)	0.229	Default (State 0)	0.158	Default (State 0)	0.214	Default (State 0)	0.214	Default (State 16)	0.162	Default (State 16)	0.186
State 0	0.152	State 0	0.229	State 0	0.158	State 0	0.214	State 0	0.214	State 0	0.123	State 3	0.137
State 2	0.157	State 3	0.217	State 2	0.153	State 1	0.214	State 3	0.215	State 1	0.124	State 5	0.132
State 5	0.152	State 4	0.211	State 10	0.102	State 20	0.128	State 4	0.214	State 4	0.103	State 10	0.095
State 8	0.145	State 6	0.202	State 12	0.062	State 24	0.125	State 6	0.209	State 5	0.098	State 12	0.064
State 9	0.132	State 9	0.172	State 14	0.035	State 32	0.172	State 10	0.179	State 6	0.095	State 14	0.042
State 15	0.025	State 14	0.055	State 22	0.078	State 40	0.130	State 13	0.097	State 11	0.063	State 16	0.186
State 17	0.043	State 24	0.157	State 34	0.111	State 48	0.141	State 19	0.099	State 15	0.026	State 17	0.185
State 21	0.066	State 26	0.123	State 40	0.083	State 50	0.158	State 23	0.095	State 16	0.162	State 23	0.148
State 22	0.065	State 27	0.102	State 62	0.015	State 55	0.154	State 24	0.093	State 17	0.163	State 28	0.089
State 25	0.050	State 29	0.057	State 68	0.158	State 67	0.139	State 26	0.074	State 19	0.151	State 34	0.032
State 28	0.011	State 33	0.182	State 70	0.139	State 75	0.139	State 30	0.020	State 20	0.152	State 35	0.029
State 29	0.007	State 42	0.103	State 79	0.071	State 76	0.214	State 31	0.011	State 21	0.150	State 38	0.025
State 33	0.151	State 44	0.060					State 37	0.150	State 25	0.136	State 41	0.022
State 40	0.087	State 47	0.023					State 38	0.143	State 31	0.065	State 46	0.005
State 43	0.042	State 52	0.183					State 41	0.119	State 37	0.015	State 51	0.051
State 48	0.057	State 54	0.180					State 44	0.056	State 43	0.008	State 60	0.020
State 49	0.056	State 57	0.162					State 51	0.135	State 49	0.043	State 62	0.010
State 53	0.084	State 66	0.183					State 54	0.134	State 53	0.034	State 64	0.123
State 68	0.151	State 68	0.225					State 58	0.111	State 56	0.032	State 65	0.147
State 69	0.044	State 70	0.185					State 65	0.086	State 59	0.020	State 66	0.024
State 71	0.057	State 72	0.225					State 69	0.087	State 65	0.149	State 69	0.181
State 74	0.150	State 75	0.175					State 76	0.214	State 71	0.044	State 74	0.025
State 76	0.149	State 76	0.226					State 79	0.121	State 77	0.166	State 79	0.063

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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		CDMA BC1	
RMC		RMC		RMC		EVDO Rev. 0		EVDO Rev. 0	
Test Position	Back Side	Test Position	Bottom Edge	Test Position	Bottom Edge	Test Position	Back Side	Test Position	Bottom Edge
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	846.60	Frequency (MHz)	1712.40	Frequency (MHz)	1907.60	Frequency (MHz)	848.31	Frequency (MHz)	1908.75
Channel	4233	Channel	1312	Channel	9538	Channel	777	Channel	1175
Measured 1g SAR (W/kg)	0.822	Measured 1g SAR (W/kg)	0.612	Measured 1g SAR (W/kg)	0.985	Measured 1g SAR (W/kg)	0.812	Measured 1g SAR (W/kg)	1.050
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	1.072	Auto-tune (State 16)	0.809	Auto-tune (State 17)	1.125	Auto-tune (State 0)	1.062	Auto-tune (State 17)	1.371
Default (State 0)	1.047	Default (State 16)	0.811	Default (State 16)	1.110	Default (State 0)	1.057	Default (State 16)	1.373
State 0	1.047	State 3	0.536	State 1	0.974	State 0	1.057	State 0	1.191
State 2	1.063	State 7	0.485	State 5	0.792	State 4	1.029	State 1	1.202
State 4	1.051	State 9	0.448	State 10	0.585	State 7	0.967	State 2	1.038
State 7	0.999	State 12	0.318	State 15	0.202	State 8	0.955	State 3	1.006
State 14	0.360	State 16	0.811	State 16	1.110	State 12	0.426	State 4	0.988
State 24	0.495	State 17	0.802	State 17	1.117	State 13	0.337	State 5	0.979
State 27	0.318	State 18	0.809	State 18	1.019	State 28	0.180	State 6	0.916
State 31	0.088	State 23	0.787	State 21	0.976	State 32	0.985	State 7	0.882
State 34	0.924	State 27	0.730	State 25	0.841	State 33	0.978	State 8	0.903
State 42	0.627	State 29	0.640	State 30	0.419	State 34	0.890	State 9	0.806
State 45	0.345	State 35	0.102	State 32	0.206	State 39	0.769	State 10	0.728
State 47	0.186	State 41	0.078	State 36	0.164	State 45	0.238	State 11	0.628
State 49	0.660	State 43	0.057	State 39	0.137	State 46	0.179	State 12	0.507
State 50	0.707	State 45	0.036	State 42	0.117	State 56	0.662	State 13	0.430
State 52	0.699	State 51	0.204	State 48	0.355	State 61	0.201	State 14	0.344
State 59	0.452	State 52	0.199	State 51	0.289	State 62	0.143	State 15	0.254
State 62	0.204	State 55	0.174	State 53	0.279	State 64	1.051	State 16	1.373
State 65	0.498	State 57	0.159	State 58	0.198	State 67	0.690	State 17	1.376
State 70	0.996	State 69	0.793	State 60	0.125	State 70	0.983	State 18	1.261
State 73	0.500	State 73	0.773	State 67	0.248	State 73	0.540	State 19	1.239
State 77	0.506	State 75	0.231	State 72	0.891	State 74	0.976	State 20	1.223
State 78	0.998	State 78	0.127	State 77	1.103	State 76	1.065	State 21	1.212
								State 22	1.151
								State 23	1.125
								State 24	1.141
								State 25	1.048
								State 26	0.970
								State 27	0.863
								State 28	0.724
								State 29	0.630
								State 30	0.521
								State 31	0.397
								State 32	0.255
								State 33	0.232
								State 34	0.221
								State 35	0.210
								State 36	0.203
								State 37	0.202
								State 38	0.180
								State 39	0.169
								State 40	0.192
								State 41	0.161
								State 42	0.145
								State 43	0.117
								State 44	0.088
								State 45	0.070
								State 46	0.052
								State 47	0.035
								State 48	0.440
								State 49	0.415
								State 50	0.375
								State 51	0.358
								State 52	0.349
								State 53	0.345
								State 54	0.313
								State 55	0.296
								State 56	0.322
								State 57	0.274
								State 58	0.246
								State 59	0.202
								State 60	0.155
								State 61	0.126
								State 62	0.096
								State 63	0.066
								State 64	0.921
								State 65	1.109
								State 66	0.172
								State 67	0.308
								State 68	1.168
								State 69	1.348
								State 70	0.249
								State 71	0.431
								State 72	1.114
								State 73	1.287
								State 74	0.180
								State 75	0.341
								State 76	1.188
								State 77	1.370
								State 78	0.252
								State 79	0.436

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Table 14-4
LTE Supplemental Body SAR Data

Supplemental Body SAR Data														
LTE Band 71		LTE Band 14		LTE Band 12		LTE Band 13		LTE Band 5		LTE Band 66		LTE Band 25	
QPSK, 20MHz Bandwidth, 1 RB, 50 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 20MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20MHz Bandwidth, 100 RB, 0 RB Offsets	
Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Bottom Edge	Test Position	Bottom Edge
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	793.00	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	836.50	Frequency (MHz)	1770.00	Frequency (MHz)	1905.00
Channel	133297	Channel	23330	Channel	23095	Channel	23230	Channel	20525	Channel	132572	Channel	26590
Measured 1g SAR (W/kg)	0.437	Measured 1g SAR (W/kg)	0.567	Measured 1g SAR (W/kg)	0.489	Measured 1g SAR (W/kg)	0.551	Measured 1g SAR (W/kg)	0.758	Measured 1g SAR (W/kg)	0.534	Measured 1g SAR (W/kg)	0.741
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 2)	0.573	Auto-tune (State 1)	0.741	Auto-tune (State 68)	0.646	Auto-tune (State 0)	0.707	Auto-tune (State 4)	0.994	Auto-tune (State 16)	0.774	Auto-tune (State 17)	1.058
Default (State 2)	0.585	Default (State 0)	0.727	Default (State 0)	0.634	Default (State 0)	0.709	Default (State 0)	0.980	Default (State 16)	0.776	Default (State 16)	1.051
State 2	0.585	State 0	0.727	State 0	0.634	State 0	0.709	State 0	0.980	State 1	0.597	State 1	0.924
State 8	0.544	State 1	0.730	State 1	0.631	State 6	0.671	State 4	0.991	State 2	0.522	State 11	0.479
State 9	0.497	State 2	0.718	State 15	0.119	State 11	0.465	State 8	0.950	State 8	0.465	State 13	0.327
State 16	0.189	State 3	0.706	State 23	0.294	State 13	0.300	State 9	0.895	State 14	0.219	State 16	1.051
State 19	0.265	State 5	0.695	State 31	0.026	State 19	0.360	State 15	0.221	State 16	0.776	State 17	1.052
State 20	0.268	State 10	0.505	State 39	0.411	State 21	0.359	State 17	0.406	State 17	0.778	State 19	0.948
State 22	0.263	State 18	0.459	State 47	0.060	State 26	0.262	State 18	0.441	State 19	0.776	State 26	0.746
State 28	0.058	State 25	0.385	State 50	0.374	State 44	0.212	State 20	0.436	State 20	0.779	State 30	0.402
State 34	0.483	State 30	0.113	State 54	0.379	State 51	0.460	State 29	0.139	State 22	0.769	State 33	0.179
State 37	0.448	State 36	0.567	State 59	0.214	State 61	0.175	State 32	0.872	State 28	0.659	State 35	0.162
State 38	0.411	State 37	0.559	State 66	0.584	State 72	0.688	State 36	0.749	State 36	0.094	State 37	0.156
State 40	0.378	State 38	0.521	State 68	0.633	State 78	0.611	State 46	0.177	State 37	0.093	State 39	0.131
State 46	0.078	State 39	0.502					State 47	0.123	State 38	0.084	State 44	0.067
State 56	0.325	State 42	0.367					State 50	0.607	State 41	0.074	State 49	0.322
State 65	0.189	State 45	0.184					State 56	0.576	State 46	0.026	State 54	0.242
State 66	0.570	State 48	0.514					State 57	0.528	State 56	0.173	State 55	0.229
State 68	0.574	State 53	0.542					State 60	0.294	State 63	0.045	State 58	0.190
State 71	0.243	State 58	0.406					State 64	0.973	State 65	0.719	State 61	0.097
State 74	0.571	State 60	0.252					State 67	0.550	State 68	0.588	State 63	0.051
State 76	0.573	State 64	0.720					State 75	0.553	State 71	0.234	State 65	0.853
State 77	0.192	State 67	0.502					State 76	0.983	State 74	0.105	State 72	0.854
State 79	0.243	State 76	0.725					State 78	0.871	State 79	0.236	State 77	1.048

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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. Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as < 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	28.2
Measured Output Power (dBm)	23.84	27.14
Measured SAR (W/kg)	0.09	0.127
Measured Power (mW)	242.1	517.61
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power (mW)	153.25	224.12
% deviation from expected linearity		**-3.51%**

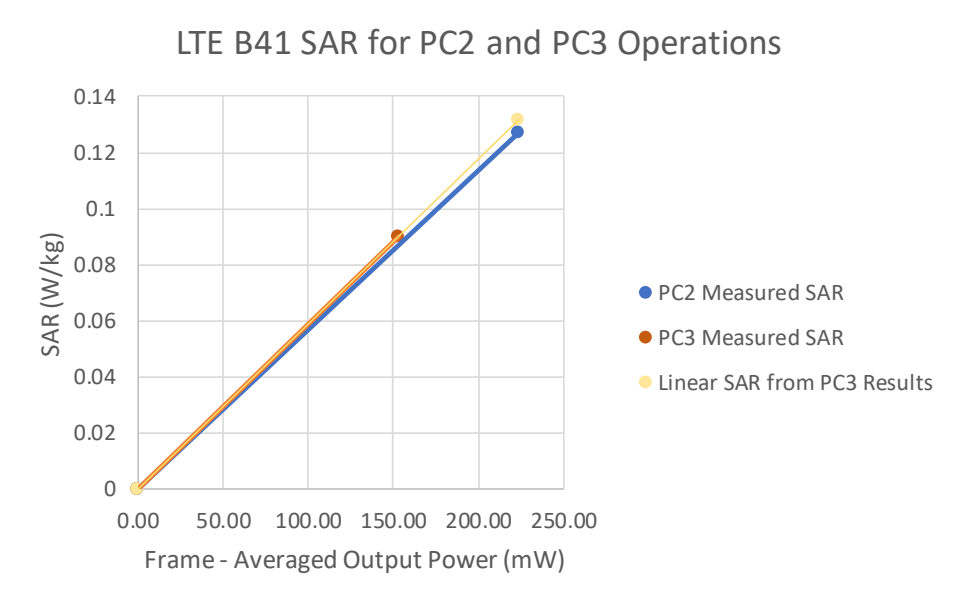

Figure 14-1
LTE Band 41 Head Linearity

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Table 14-6
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25	28.2
Measured Output Power (dBm)	23.84	27.14
Measured SAR (W/kg)	0.526	0.803
Measured Power (mW)	242.1	517.61
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power (mW)	153.25	224.12
% deviation from expected linearity		**4.39%**

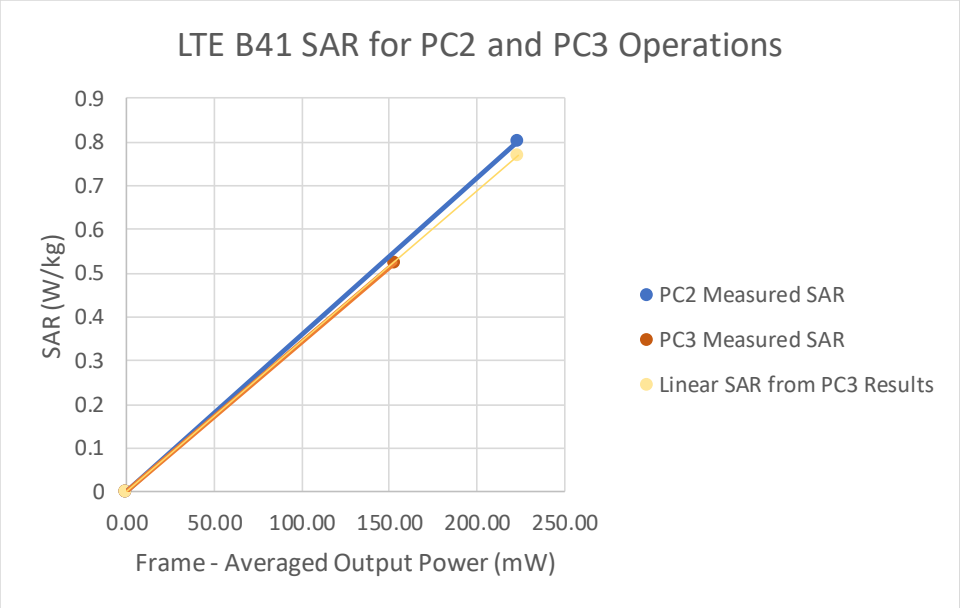

Figure 14-2
LTE Band 41 Body-Worn Linearity

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Table 14-7
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.5	22.5
Measured Output Power (dBm)	21.16	21.16
Measured SAR (W/kg)	0.962	0.709
Measured Power (mW)	130.62	130.62
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power (mW)	82.68	56.56
% deviation from expected linearity		**7.74%**

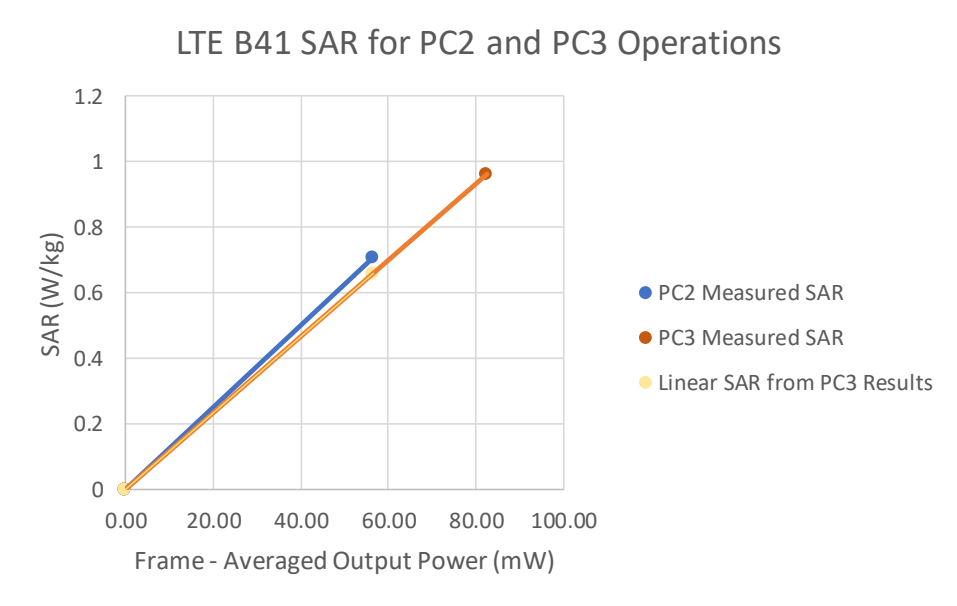

Figure 14-3
LTE Band 41 Hotspot Linearity

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Table 14-8
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24	24
Measured Output Power (dBm)	22.76	22.39
Measured SAR (W/kg)	2.44	1.55
Measured Power (mW)	188.8	173.38
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power (mW)	119.51	75.07
% deviation from expected linearity		**1.12%**

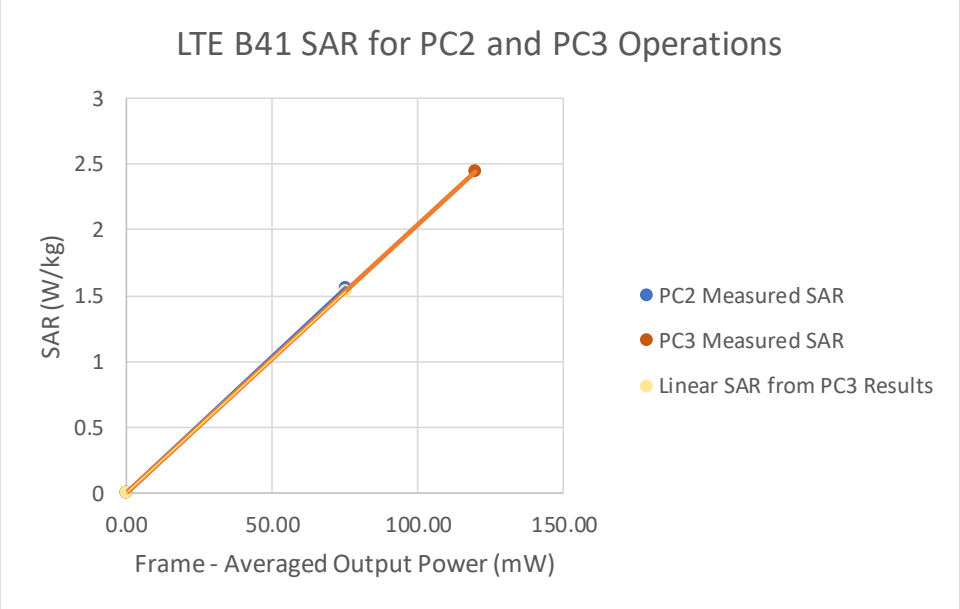

Figure 14-4
LTE Band 41 Phablet Linearity

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/17/2017	Annual	8/17/2018	MY40003841
Agilent	8753ES	S-Parameter Network Analyzer	9/14/2017	Annual	9/14/2018	US39170118
Agilent	E4438C	ESG Vector Signal Generator	3/21/2017	Biennial	3/21/2019	MY45090700
Agilent	E5515C	Wireless Communications Test Set	1/29/2016	Triennial	1/29/2019	GB46310798
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	11/15/2017	Annual	11/15/2018	GB42230325
Agilent	E5515C	Wireless Communications Test Set	1/24/2018	Annual	1/24/2019	GB44400860
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Agilent	N5182A	MXG Vector Signal Generator	1/24/2018	Annual	1/24/2019	MY47420651
Agilent	N9020A	MXA Signal Analyzer	1/24/2018	Annual	1/24/2019	US46470561
Amplifier Research	150A100C	DC Amplifier	CBT	N/A	CBT	348812
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA24106A	USB Power Sensor	3/12/2018	Annual	3/12/2019	1344555
Anritsu	MA24106A	USB Power Sensor	4/18/2018	Annual	4/18/2019	1344556
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/22/2017	Annual	10/22/2018	941001
Anritsu	MT8820C	Radio Communication Analyzer	1/5/2018	Annual	1/5/2019	6201144418
Anritsu	MT8821C	Radio Communication Analyzer	7/25/2017	Annual	7/25/2018	6201664756
Anritsu	MT8821C	Radio Communication Analyzer	11/17/2017	Annual	11/17/2018	6201381794
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	1/8/2018	Annual	1/8/2019	160473909
Control Company	4352	Ultra Long Stem Thermometer	1/8/2018	Annual	1/8/2019	160508097
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini Circuits	PWR-4GHS	USB Power Sensor	1/20/2018	Annual	1/20/2019	11710030063
Mini Circuits	PWR-4GHS	USB Power Sensor	1/22/2018	Annual	1/22/2019	11710030062
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
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	CMU200	Base Station Simulator	5/18/2018	Annual	5/18/2019	109892
Rohde & Schwarz	CMW500	Radio Communication Tester	11/3/2017	Annual	11/3/2018	100976
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/20/2017	Annual	7/20/2018	132885
Seekonk	NC-100	Torque Wrench (8" lb)	8/30/2016	Biennial	8/30/2018	N/A
Seekonk	NC-100	Torque Wrench	12/28/2017	Annual	12/28/2018	N/A
Seekonk	NC-100	Torque Wrench 5/16", 8" lbs	1/22/2018	Annual	1/22/2019	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/12/2017	Annual	9/12/2018	1091
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/9/2018	Annual	2/9/2019	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/9/2017	Annual	8/9/2018	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/13/2017	Annual	7/13/2018	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/9/2017	Annual	11/9/2018	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2017	Annual	6/21/2018	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/7/2018	Annual	3/7/2019	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/14/2017	Annual	6/14/2018	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/11/2018	Annual	4/11/2019	1407
SPEAG	ES3DV3	SAR Probe	2/13/2018	Annual	2/13/2019	3213
SPEAG	ES3DV3	SAR Probe	8/14/2017	Annual	8/14/2018	3332
SPEAG	EX3DV4	SAR Probe	1/16/2018	Annual	1/16/2019	3589
SPEAG	ES3DV3	SAR Probe	3/27/2018	Annual	3/27/2019	3347
SPEAG	ES3DV3	SAR Probe	9/18/2017	Annual	9/18/2018	3287
SPEAG	ES3DV3	SAR Probe	3/13/2018	Annual	3/13/2019	3319
SPEAG	EX3DV4	SAR Probe	7/17/2017	Annual	7/17/2018	7410
SPEAG	ES3DV3	SAR Probe	9/22/2017	Annual	9/22/2018	3318
SPEAG	EX3DV4	SAR Probe	8/16/2017	Annual	8/16/2018	7308
SPEAG	EX3DV4	SAR Probe	4/18/2018	Annual	4/18/2019	7357
SPEAG	D750V3	750 MHz SAR Dipole	7/13/2016	Biennial	7/13/2018	1161
SPEAG	D835V2	835 MHz SAR Dipole	4/10/2018	Annual	4/10/2019	4d119
SPEAG	D1750V2	1750 MHz SAR Dipole	4/19/2018	Annual	4/19/2019	1051
SPEAG	D1900V2	1900 MHz SAR Dipole	4/12/2018	Annual	4/12/2019	5d141
SPEAG	D2300V2	2300 MHz SAR Dipole	2/7/2018	Annual	2/7/2019	1008
SPEAG	D2450V2	2450 MHz SAR Dipole	2/7/2018	Annual	2/7/2019	882
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Annual	4/11/2019	1004
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/21/2016	Biennial	9/21/2018	1191
SPEAG	D750V3	750 MHz SAR Dipole	1/15/2018	Annual	1/15/2019	1003
SPEAG	D835V2	835 MHz SAR Dipole	7/13/2016	Biennial	7/13/2018	4d047
SPEAG	D835V2	835 MHz SAR Dipole	7/11/2017	Annual	7/11/2018	4d133
SPEAG	D835V2	835 MHz SAR Dipole	1/15/2018	Annual	1/15/2019	4d132
SPEAG	D1750V2	1750 MHz SAR Dipole	5/9/2017	Biennial	5/9/2019	1148
SPEAG	D1900V2	1900 MHz SAR Dipole	2/7/2018	Annual	2/7/2019	5d148
SPEAG	D2450V2	2450 MHz SAR Dipole	8/17/2017	Annual	8/17/2018	719
SPEAG	D5GHzV2	5 GHz SAR Dipole	8/15/2017	Annual	8/15/2018	1237

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. All equipment was used solely within its calibration period.

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16 MEASUREMENT UNCERTAINTIES

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

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17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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APPENDIX A: SAR TEST DATA

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PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

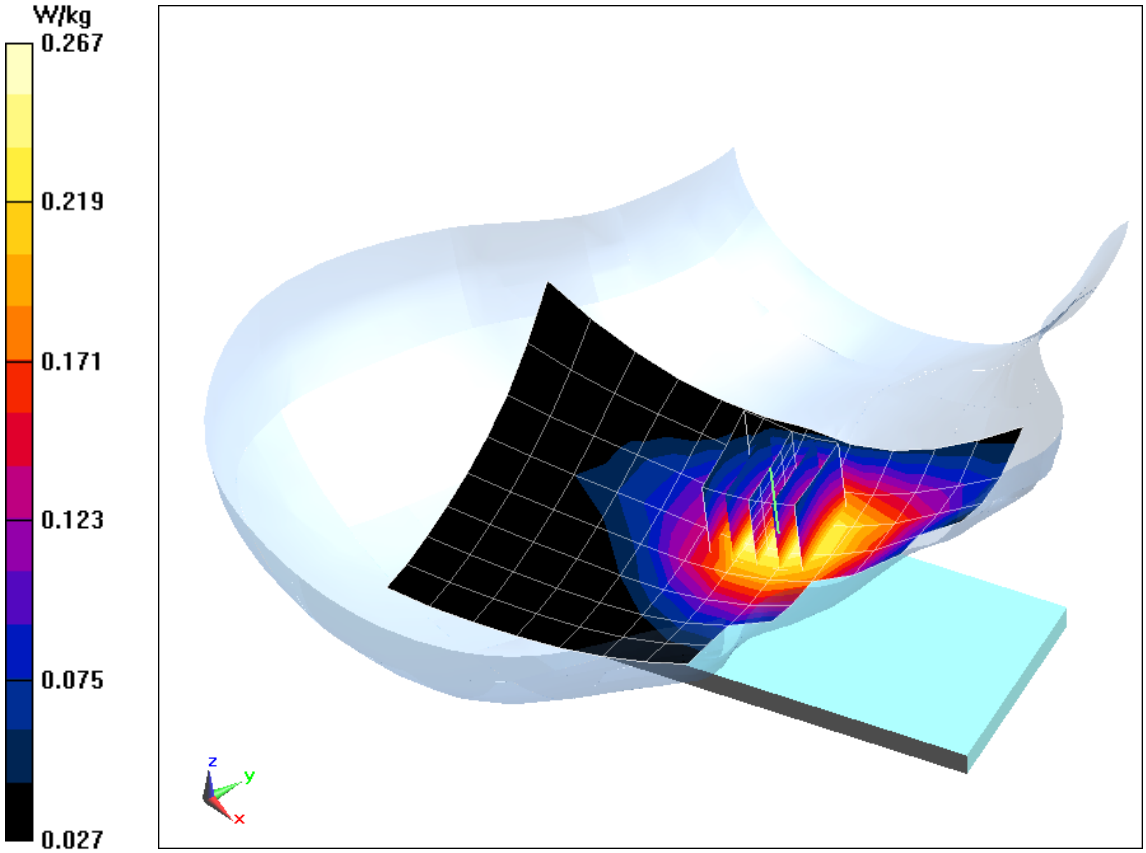
Communication System: UID 0, Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 820.1$ MHz; $\sigma = 0.936$ S/m; $\varepsilon_r = 42.266$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: Cell. EVDO Rev. A, 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 = 16.73 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.314 W/kg
SAR(1 g) = 0.241 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

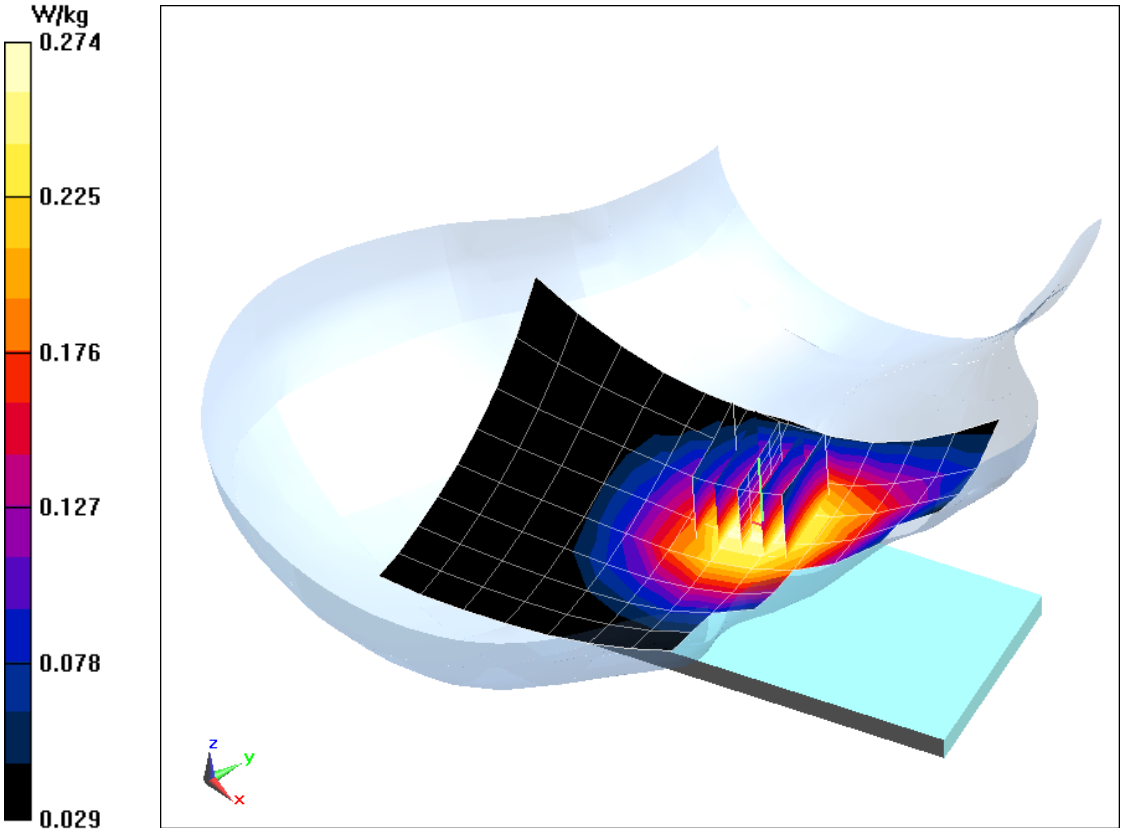
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.942 S/m; ε_r = 42.239; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: Cell. CDMA, Rule Part 22H, 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 = 16.86 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.317 W/kg
SAR(1 g) = 0.250 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

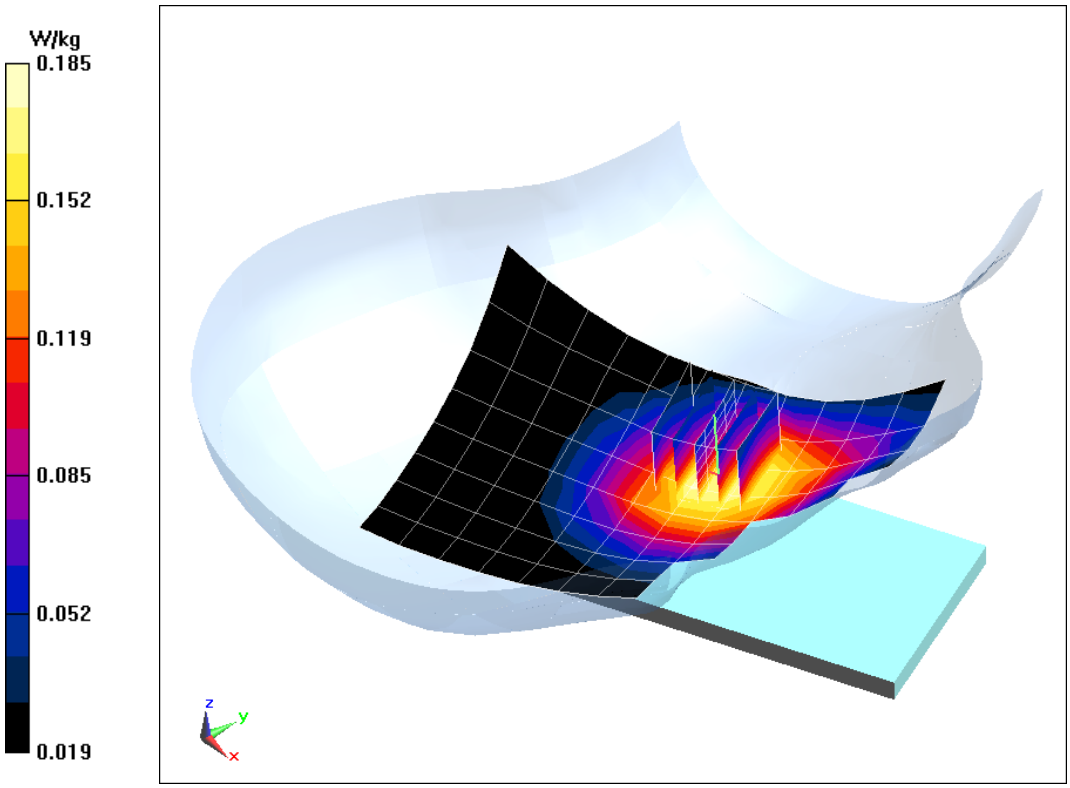
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.94$ S/m; $\varepsilon_r = 41.732$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-04-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.84 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.215 W/kg
SAR(1 g) = 0.166 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

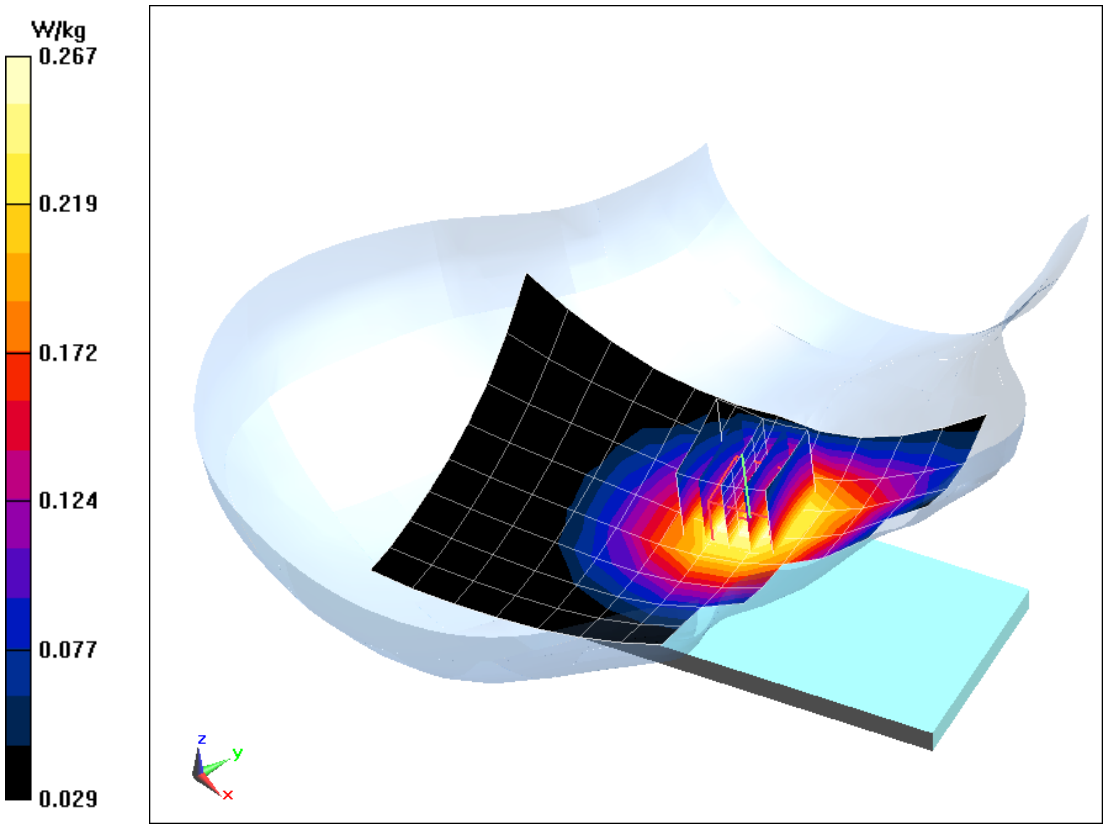
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.942$ S/m; $\varepsilon_r = 42.238$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.72 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.306 W/kg
SAR(1 g) = 0.244 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

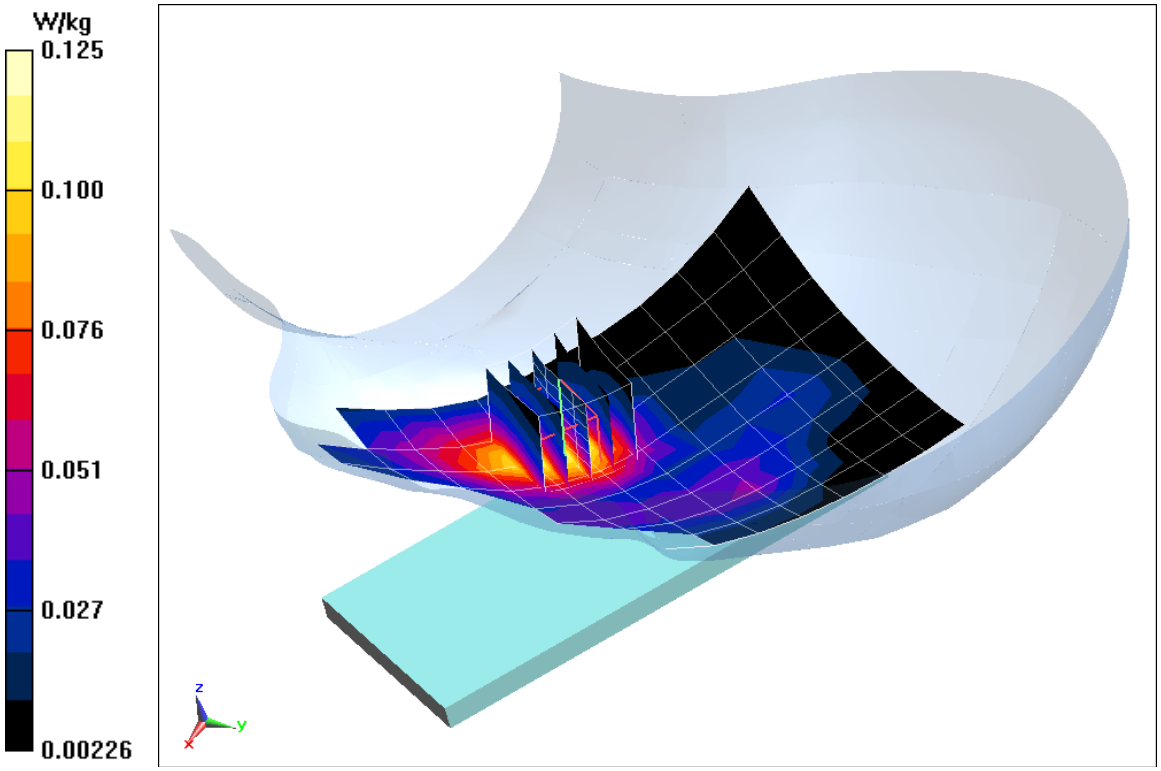
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.342 S/m; ε_r = 39.796; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05-31-2018; Ambient Temp: 24.0°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(5.45, 5.45, 5.45); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.423 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.162 W/kg
SAR(1 g) = 0.107 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

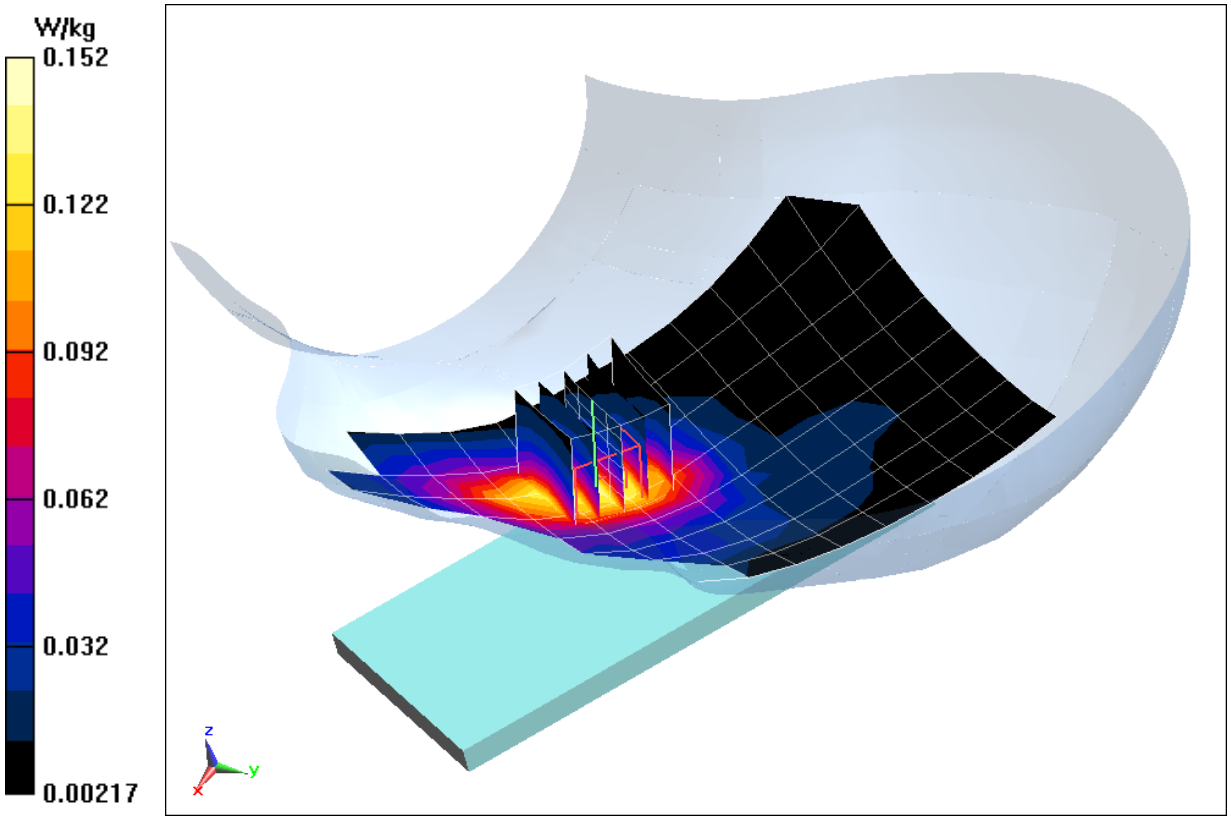
Communication System: UID 0, PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.436 S/m; ε_r = 40.212; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06-10-2018; Ambient Temp: 21.9°C; Tissue Temp: 20.2°C

Probe: ES3DV3 - SN3213; ConvF(5.3, 5.3, 5.3); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.02 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.130 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

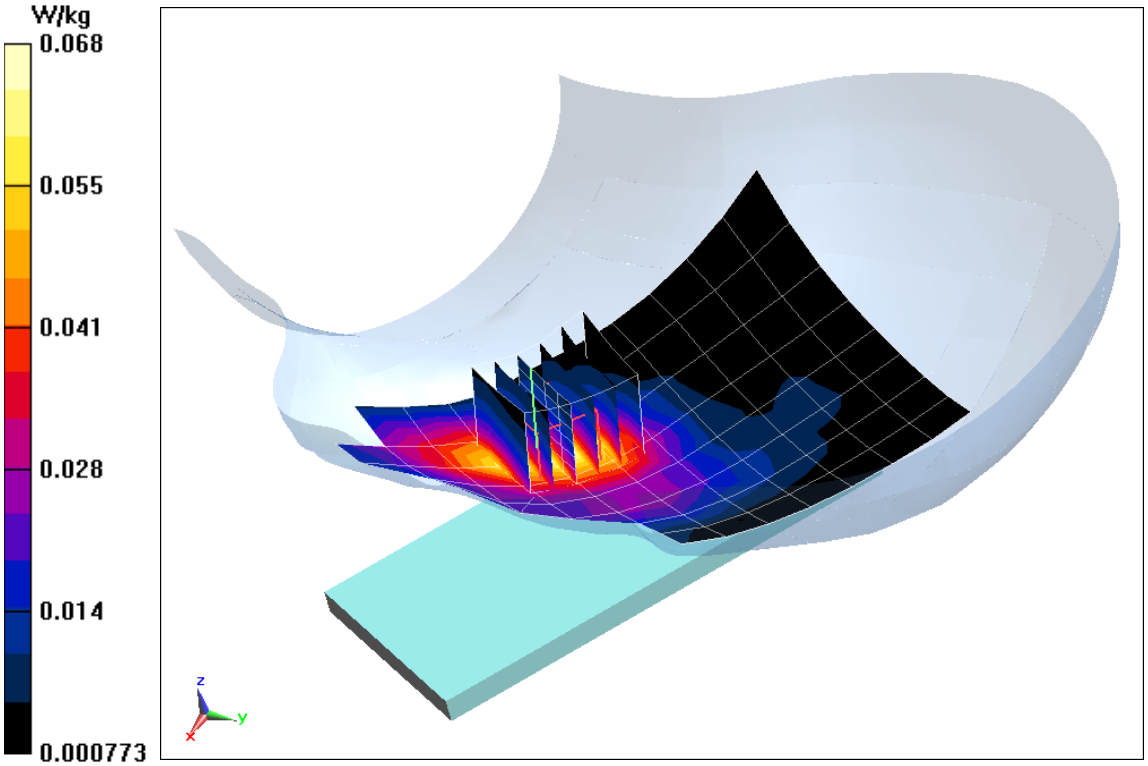
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.436 S/m; ε_r = 40.212; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06-10-2018; Ambient Temp: 21.9°C; Tissue Temp: 20.2°C

Probe: ES3DV3 - SN3213; ConvF(5.3, 5.3, 5.3); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.503 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.0930 W/kg
SAR(1 g) = 0.059 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

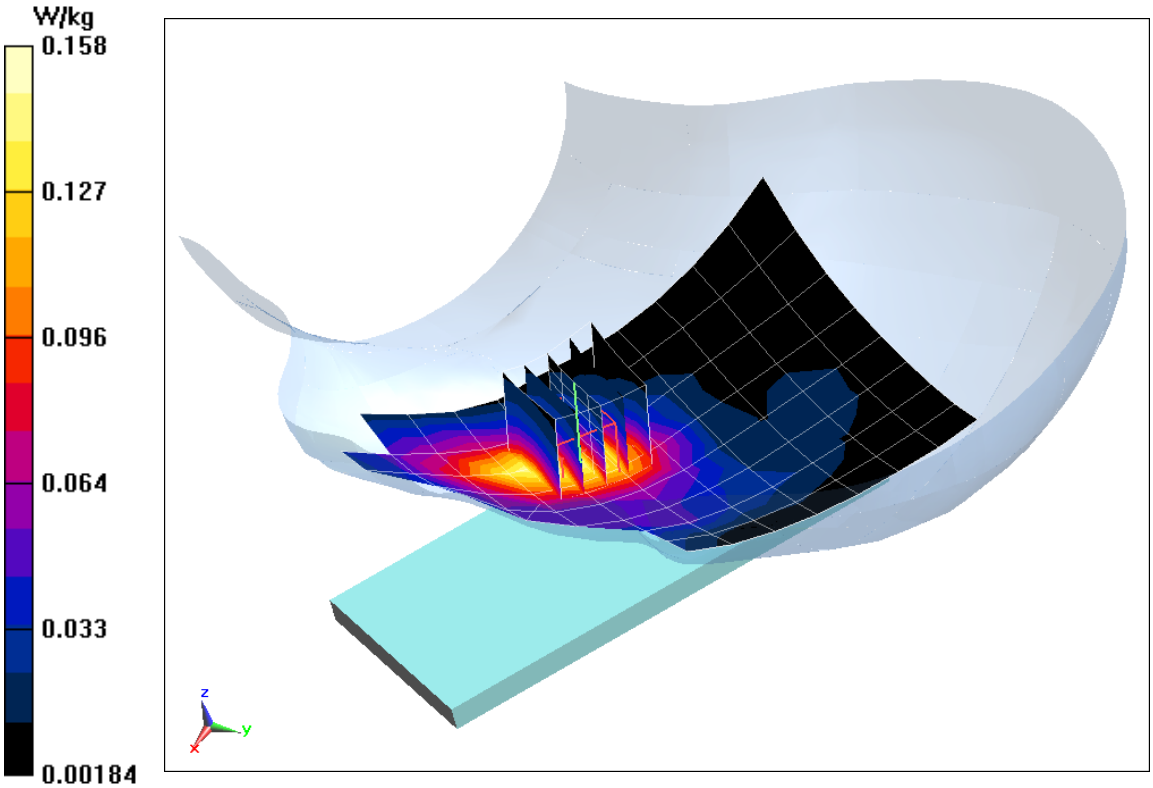
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.436 S/m; ε_r = 40.212; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06-10-2018; Ambient Temp: 21.9°C; Tissue Temp: 20.2°C

Probe: ES3DV3 - SN3213; ConvF(5.3, 5.3, 5.3); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 10.27 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.211 W/kg
SAR(1 g) = 0.136 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0247

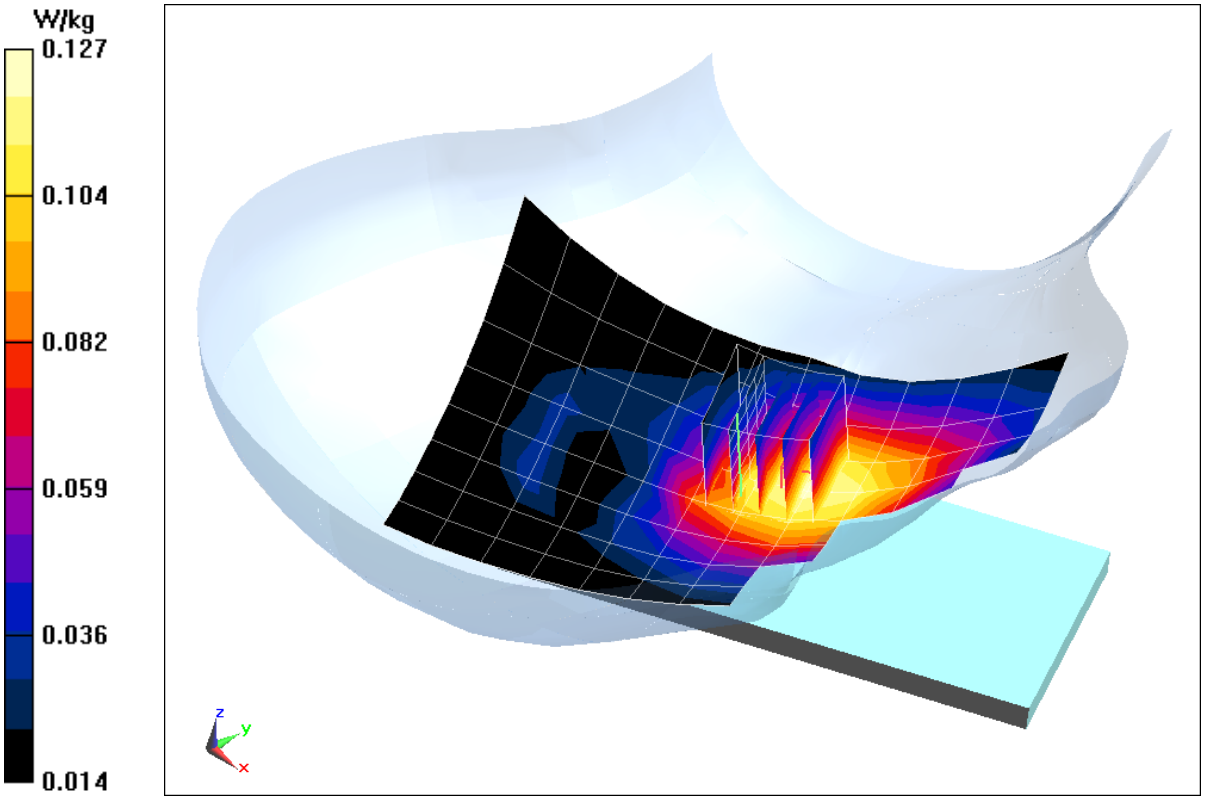
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
$f = 680.5$ MHz; $\sigma = 0.888$ S/m; $\varepsilon_r = 42.606$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.75, 6.75, 6.75); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.87 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.151 W/kg
SAR(1 g) = 0.117 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

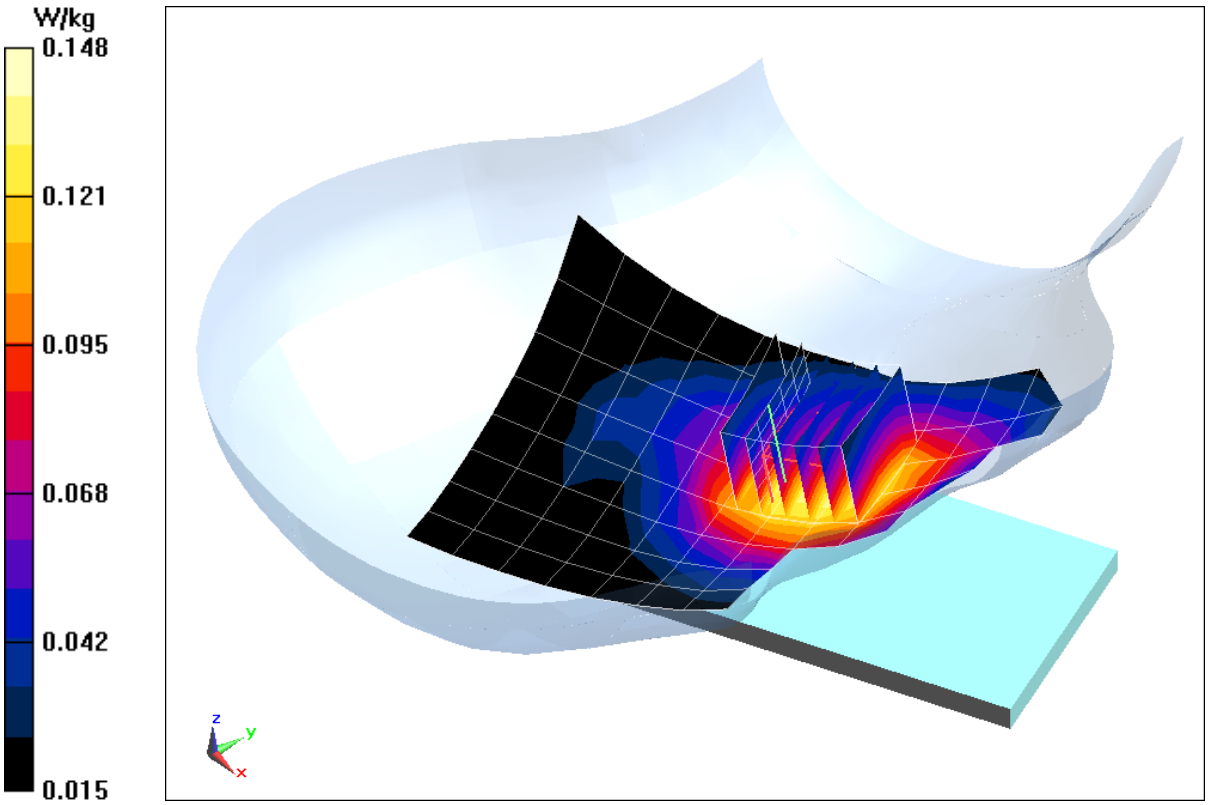
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.896 S/m; ε_r = 42.548; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.75, 6.75, 6.75); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.23 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.173 W/kg
SAR(1 g) = 0.136 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

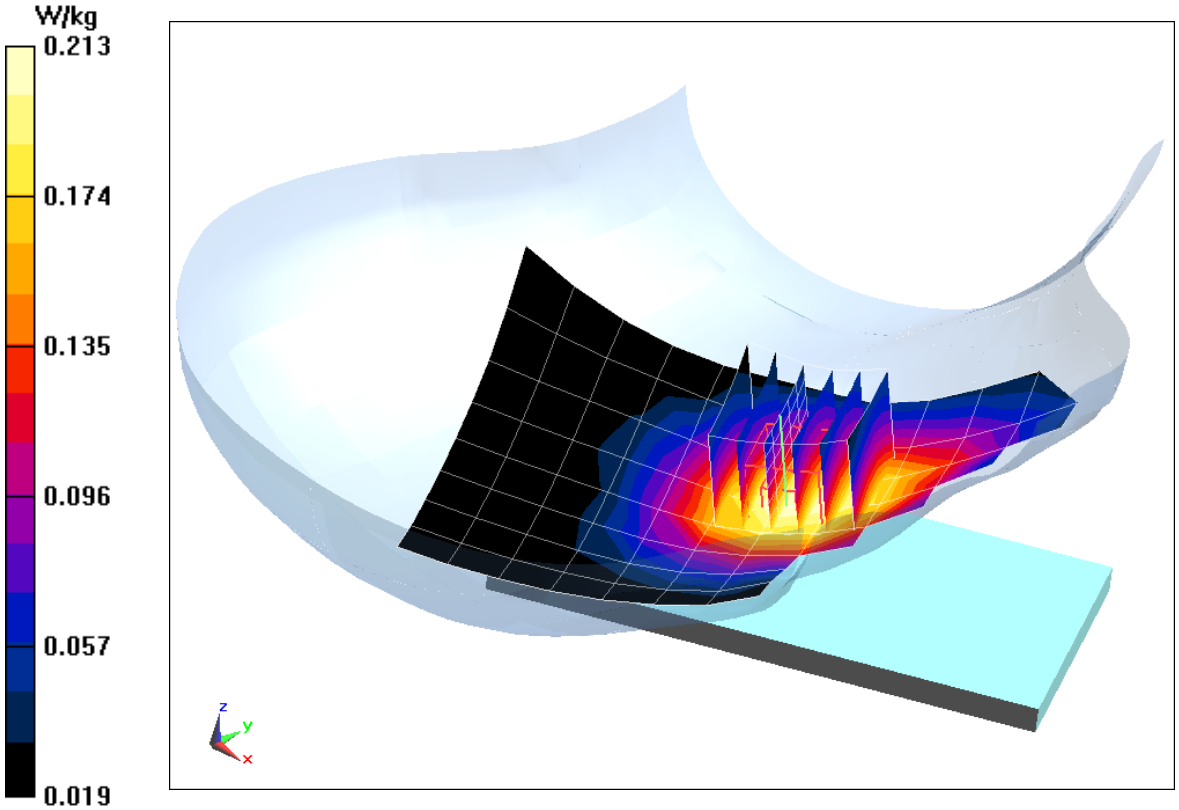
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.923 S/m; ε_r = 42.371; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.75, 6.75, 6.75); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.71 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.247 W/kg
SAR(1 g) = 0.198 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

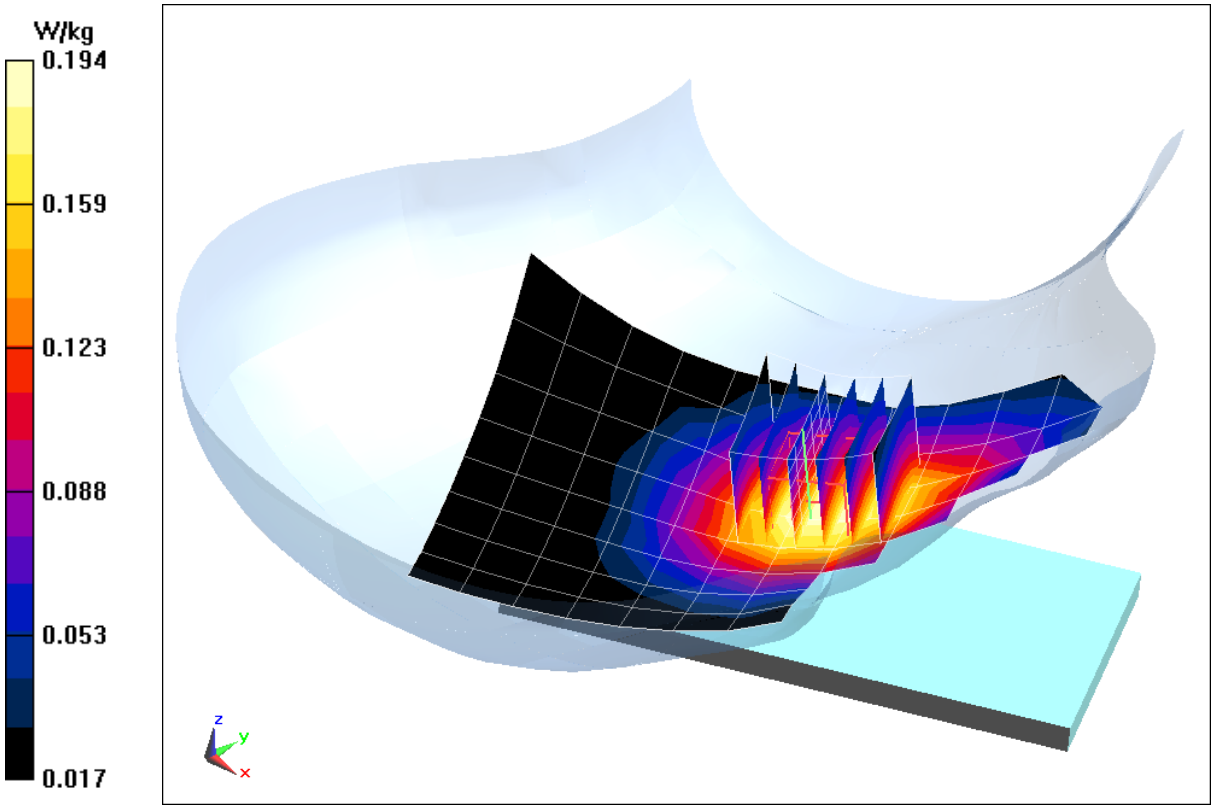
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 793 MHz; σ = 0.927 S/m; ε_r = 42.334; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-07-2018; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(6.75, 6.75, 6.75); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 14, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.00 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.180 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

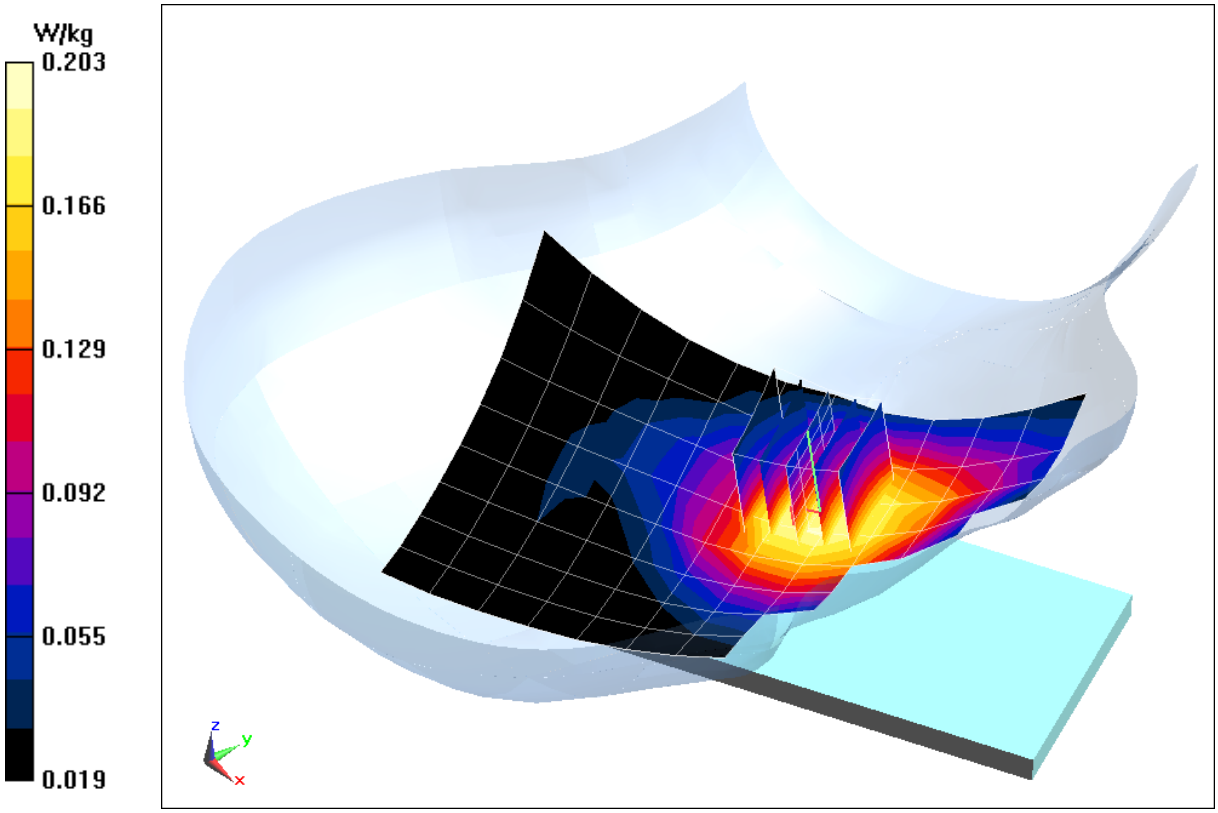
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 831.5$ MHz; $\sigma = 0.937$ S/m; $\varepsilon_r = 41.747$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-04-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.17 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.236 W/kg
SAR(1 g) = 0.187 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

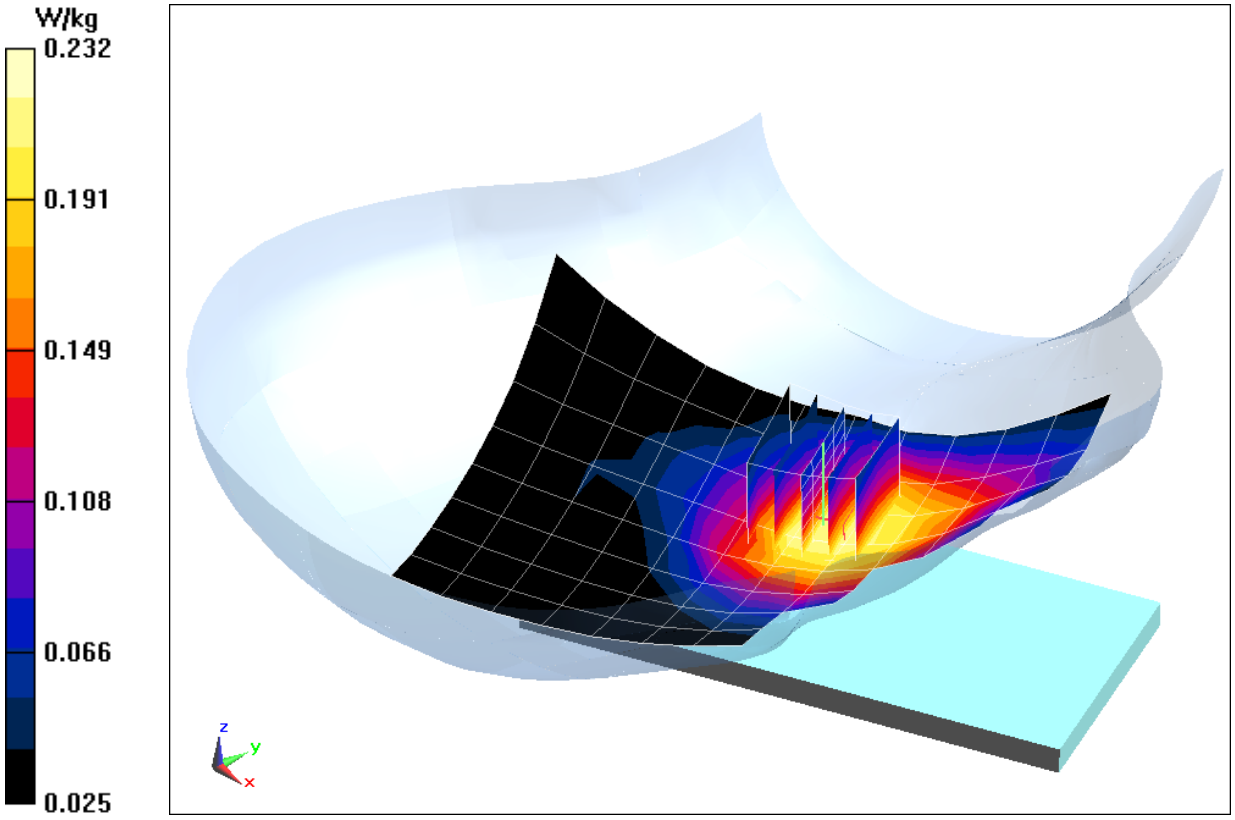
Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.5$ MHz; $\sigma = 0.94$ S/m; $\varepsilon_r = 41.732$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-04-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3213; ConvF(6.42, 6.42, 6.42); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 5 (Cell.), Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 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 = 16.20 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.269 W/kg
SAR(1 g) = 0.210 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

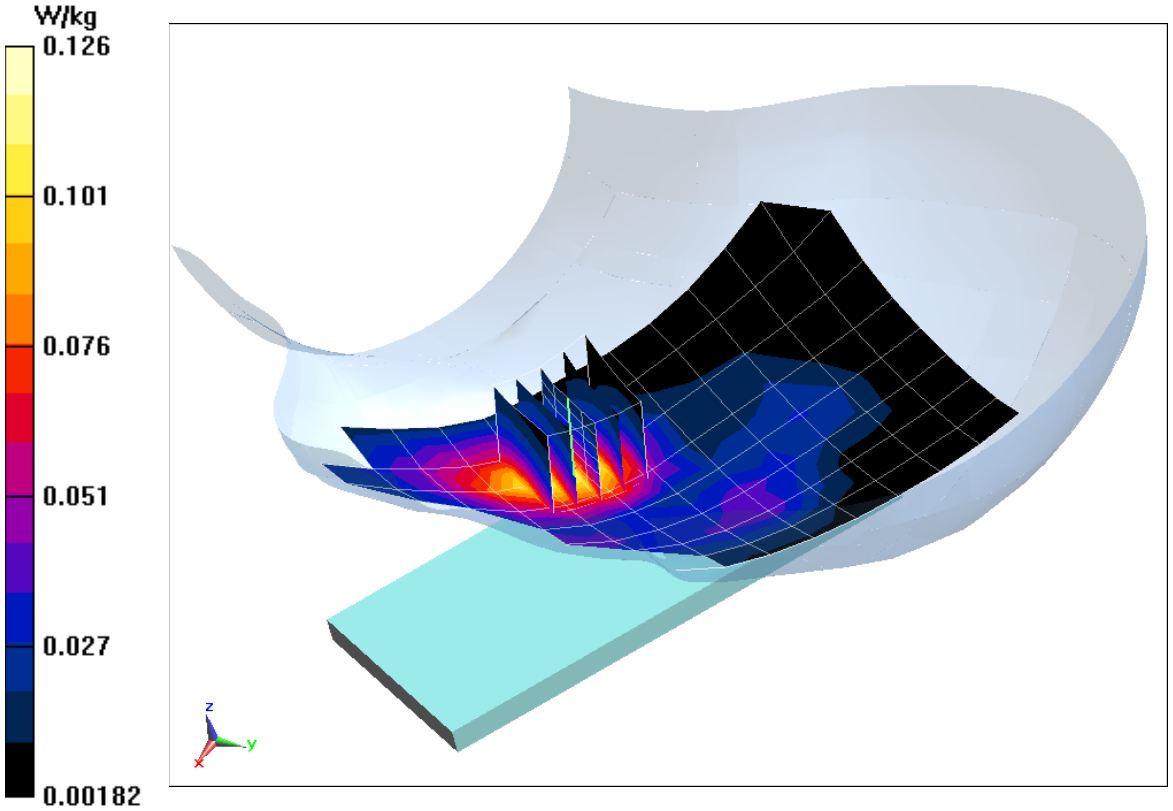
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1745$ MHz; $\sigma = 1.351$ S/m; $\varepsilon_r = 39.79$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05-31-2018; Ambient Temp: 24.0°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3213; ConvF(5.45, 5.45, 5.45); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 66 (AWS), 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 = 9.986 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.160 W/kg
SAR(1 g) = 0.107 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

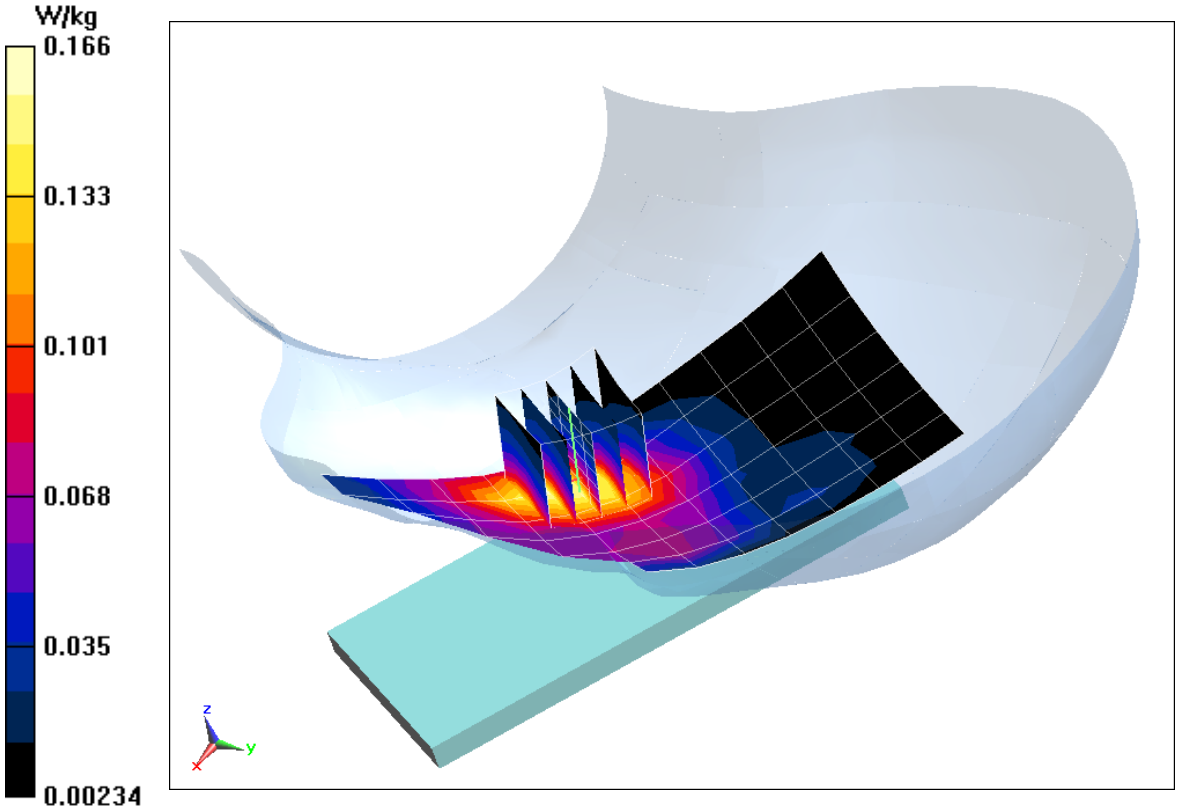
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.45 S/m; ε_r = 39.827; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06-04-2018; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(5.3, 5.3, 5.3); Calibrated: 2/13/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 2/9/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 25 (PCS), Left Head, Cheek, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.98 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.142 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

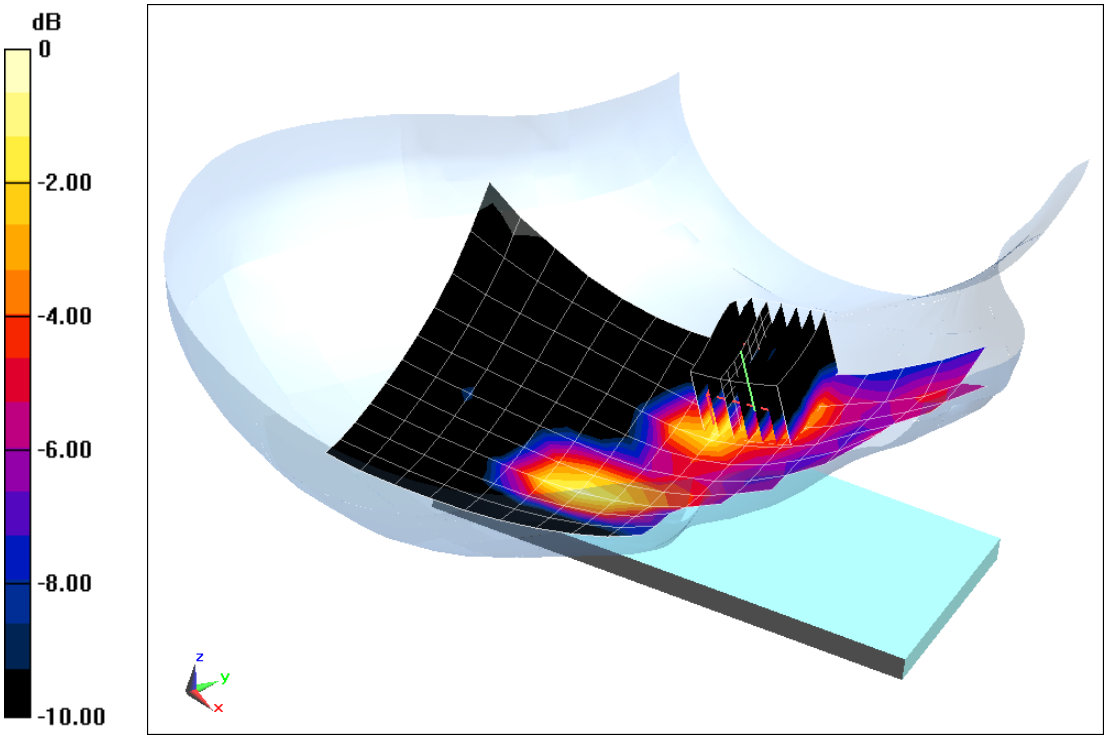
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2310 MHz; σ = 1.717 S/m; ε_r = 39.121; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-01-2018; Ambient Temp: 22.7°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3332; ConvF(4.99, 4.99, 4.99); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 30 Ant B, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.705 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.128 W/kg
SAR(1 g) = 0.069 W/kg



0 dB = 0.0901 W/kg = -10.45 dBW/kg

DUT: A3LSMN960U; Type: Portable Handset; Serial: T0247

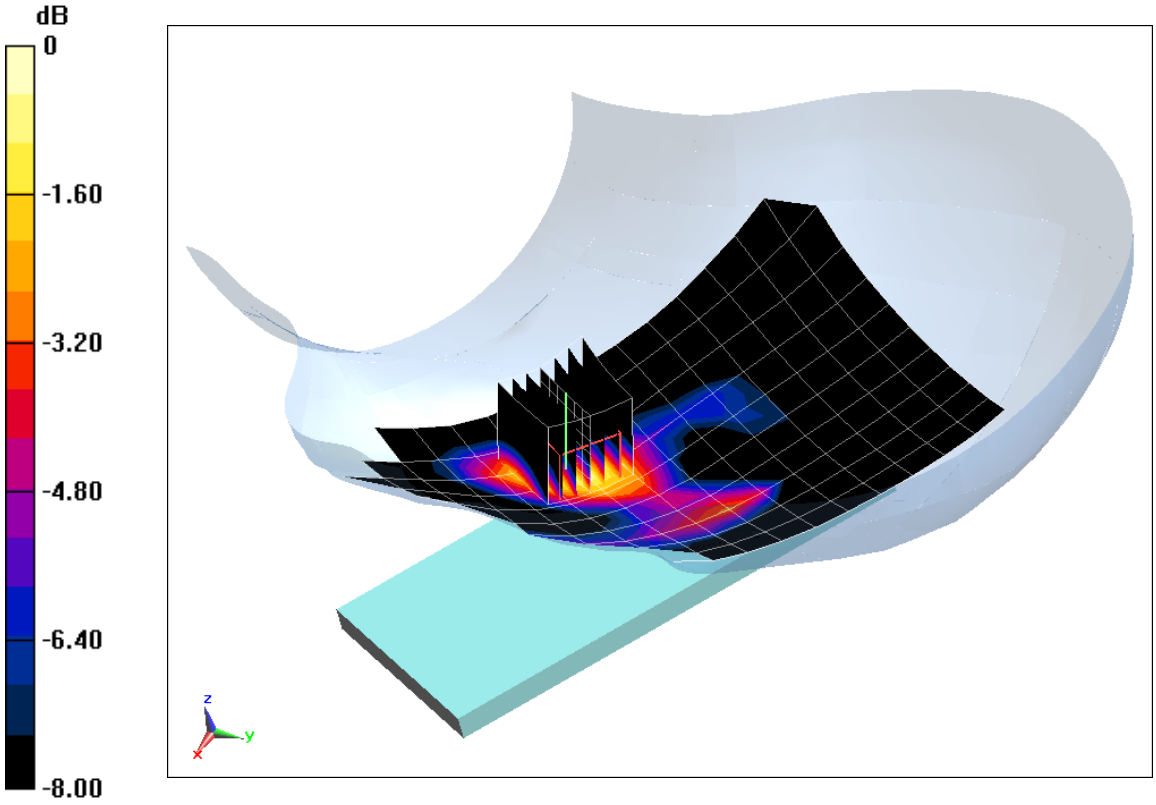
Communication System: UID 0, _LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
$f = 2560$ MHz; $\sigma = 1.977$ S/m; $\varepsilon_r = 38.534$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 06-08-2018; Ambient Temp: 23.1°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3332; ConvF(4.56, 4.56, 4.56); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 7 Ant B, Left Head, Cheek, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.826 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.266 W/kg
SAR(1 g) = 0.144 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7143

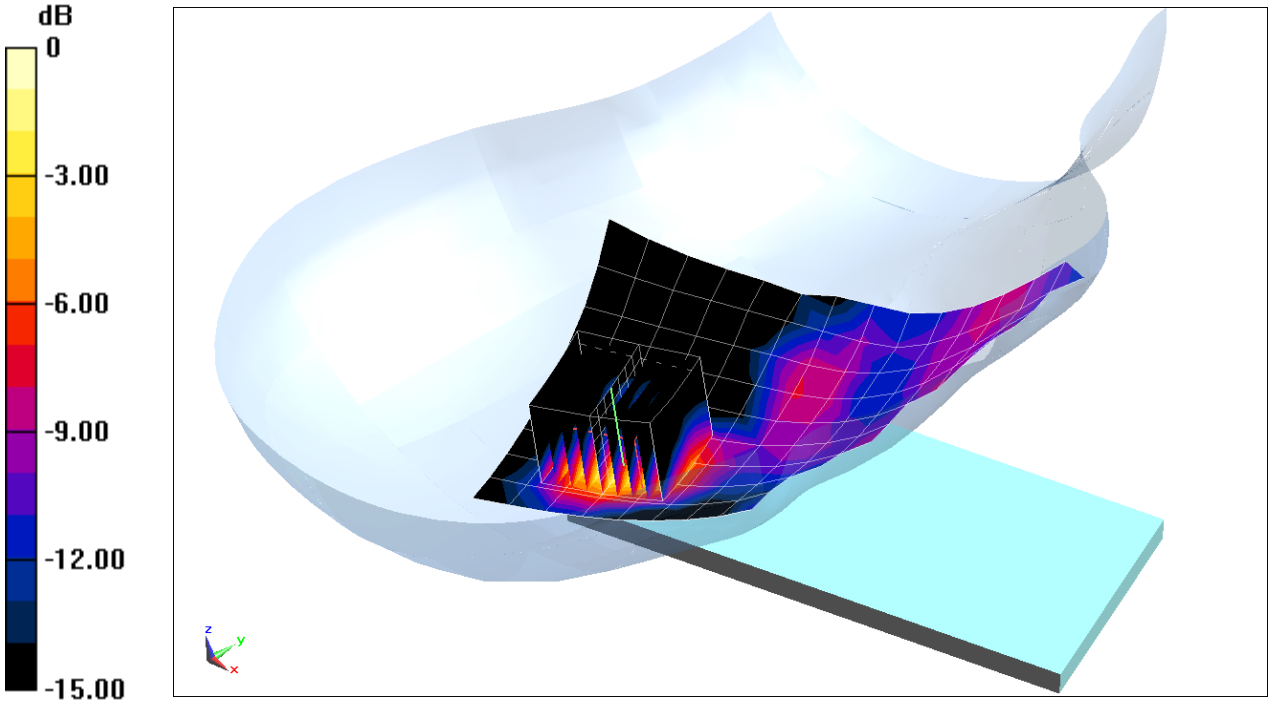
Communication System: UID 0, _LTE Band 41 (Class 2); Frequency: 2549.5 MHz; Duty Cycle: 1:2.31
Medium: 2450 Head Medium parameters used:
$f = 2550$ MHz; $\sigma = 1.988$ S/m; $\varepsilon_r = 38.234$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-01-2018; Ambient Temp: 22.7°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3332; ConvF(4.56, 4.56, 4.56); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 41 PC2, Right Head, Tilt, Low-Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.273 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.127 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

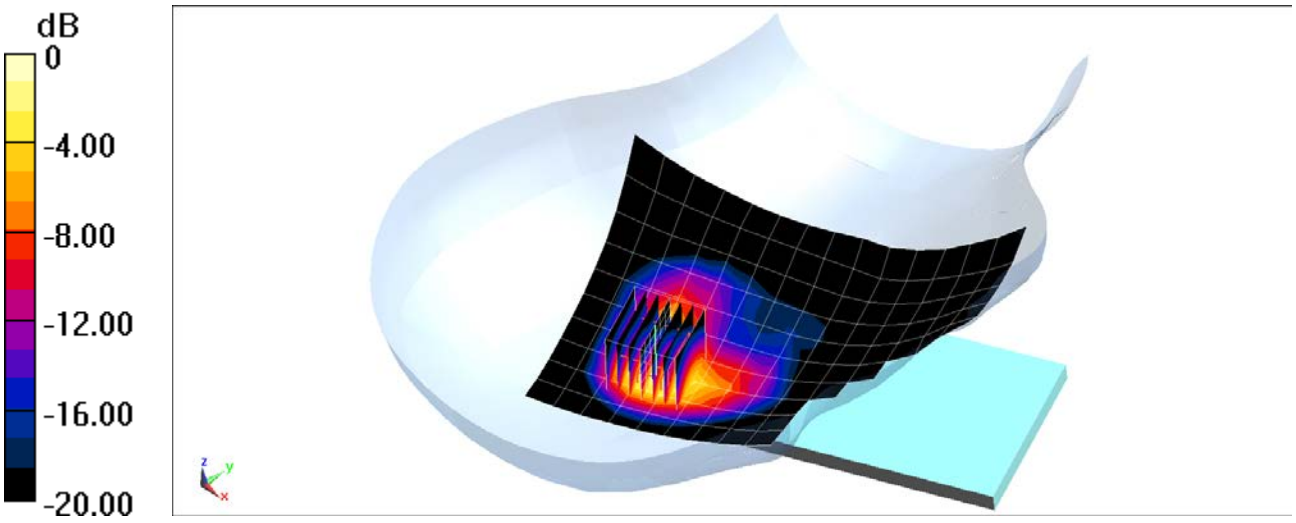
Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
$f = 2437$ MHz; $\sigma = 1.841$ S/m; $\varepsilon_r = 39.601$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 06-04-2018; Ambient Temp: 21.7°C; Tissue Temp: 21.4°C

Probe: ES3DV3 - SN3332; ConvF(4.68, 4.68, 4.68); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: IEEE 802.11b Ant 2, 22 MHz Bandwidth, Right Head, Cheek, 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 = 16.76 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.80 W/kg
SAR(1 g) = 1.18 W/kg



0 dB = 1.63 W/kg = 2.12 dBW/kg

DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

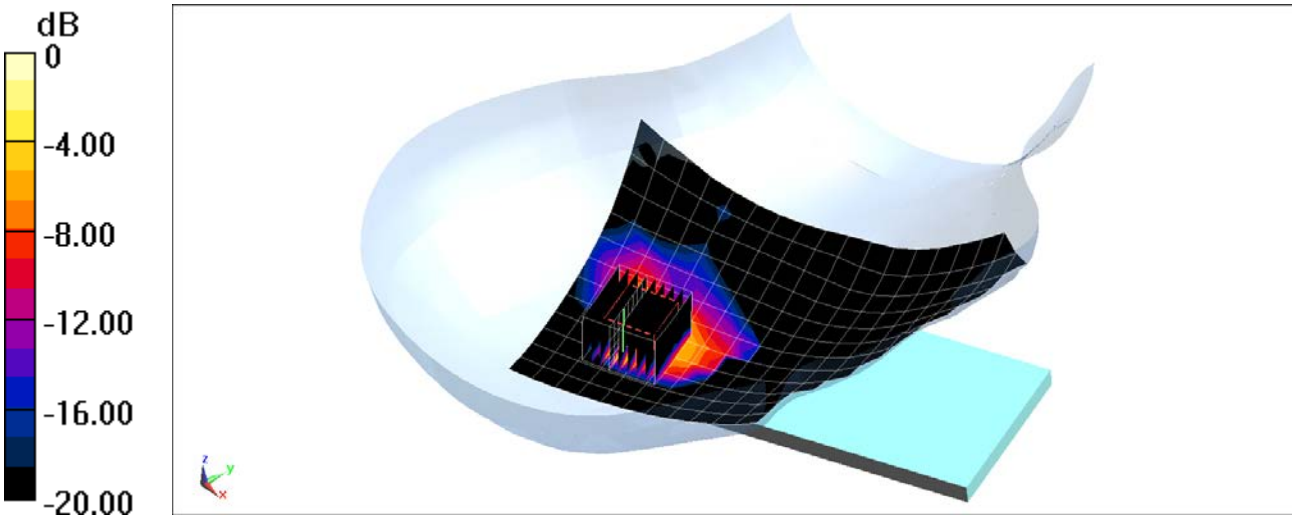
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5690 MHz; Duty Cycle: 1:1
Medium: 5GHz Head Medium parameters used (interpolated):
f = 5690 MHz; σ = 5.009 S/m; ε_r = 35.069; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 6-4-2018; Ambient Temp: 20.7°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN3589; ConvF(4.42, 4.42, 4.42); Calibrated: 1/16/2018;
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/13/2017
Phantom: SAM with CRP v5.0 (Right); Type: QD000P40CD; Serial: TP:1759
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: IEEE 802.11ac, U-NII-2C Ant 2, 80 MHz Bandwidth, Right Head, Cheek, Ch 138, 29.3 Mbps

Area Scan (13x21x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 1.627 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 3.32 W/kg
SAR(1 g) = 0.232 W/kg



0 dB = 0.657 W/kg = -1.82 dBW/kg

DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7143

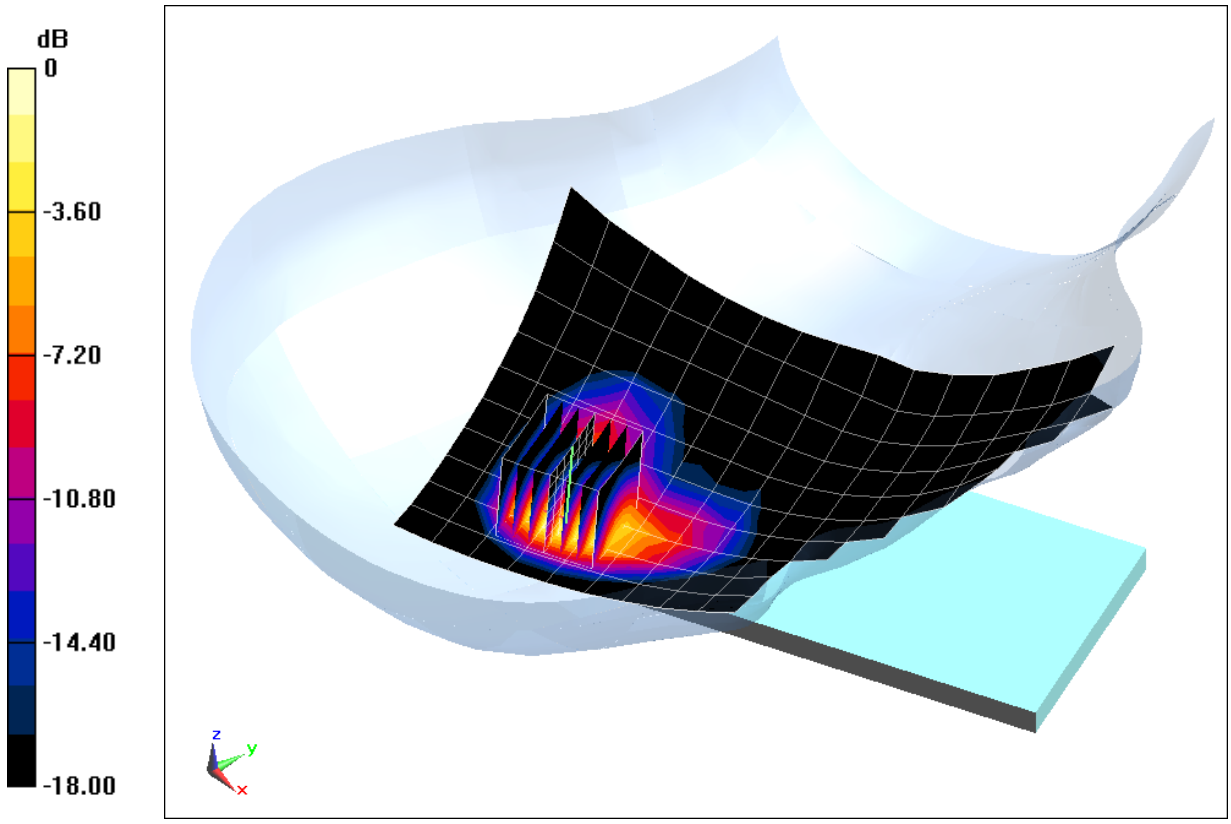
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.294
Medium: 2450 Head Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.847 S/m; ε_r = 38.981; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06-08-2018; Ambient Temp: 23.1°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3332; ConvF(4.68, 4.68, 4.68); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: Bluetooth, Right Head, Cheek, Ch 39, 1 Mbps

Area Scan (11x19x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.49 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 0.682 W/kg



0 dB = 0.949 W/kg = -0.23 dBW/kg

DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

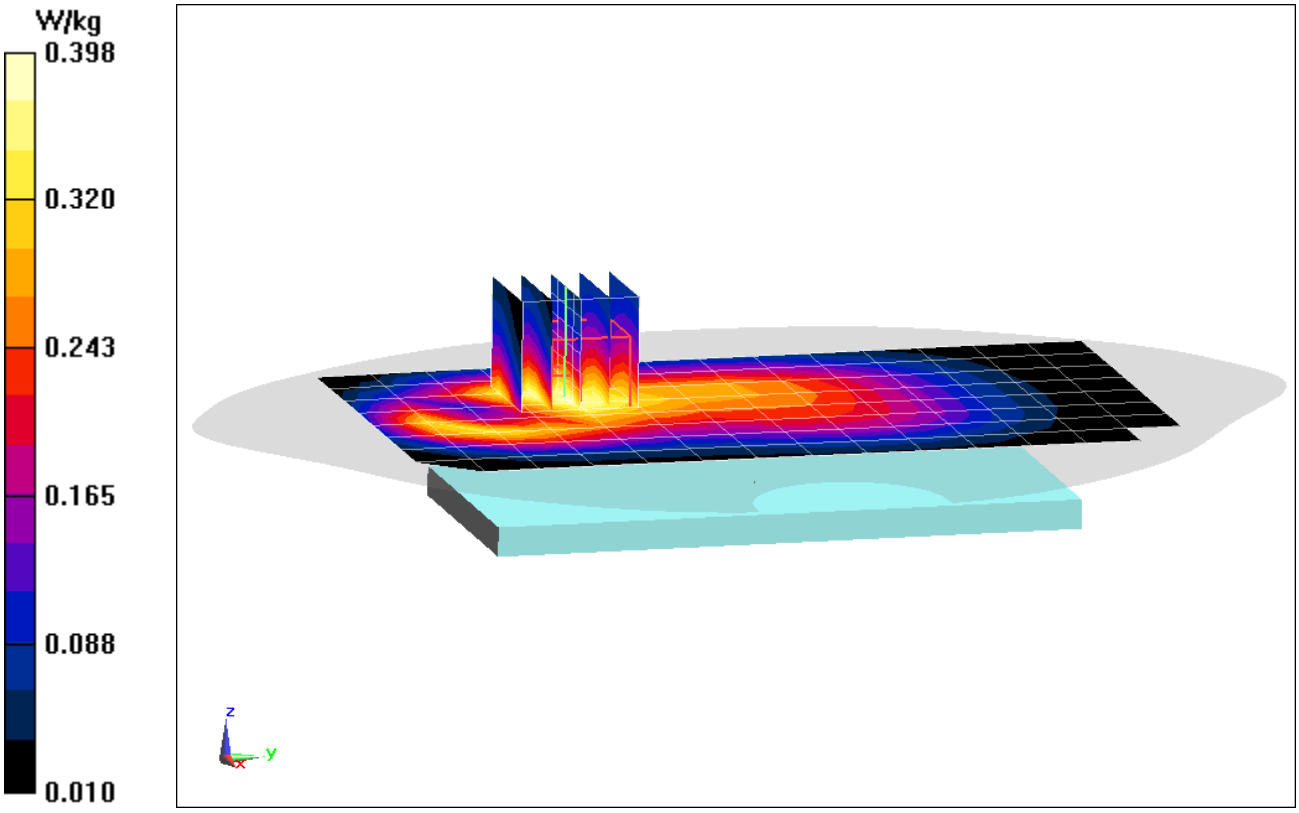
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.991 S/m; ε_r = 53.201; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 19.36 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.482 W/kg
SAR(1 g) = 0.354 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

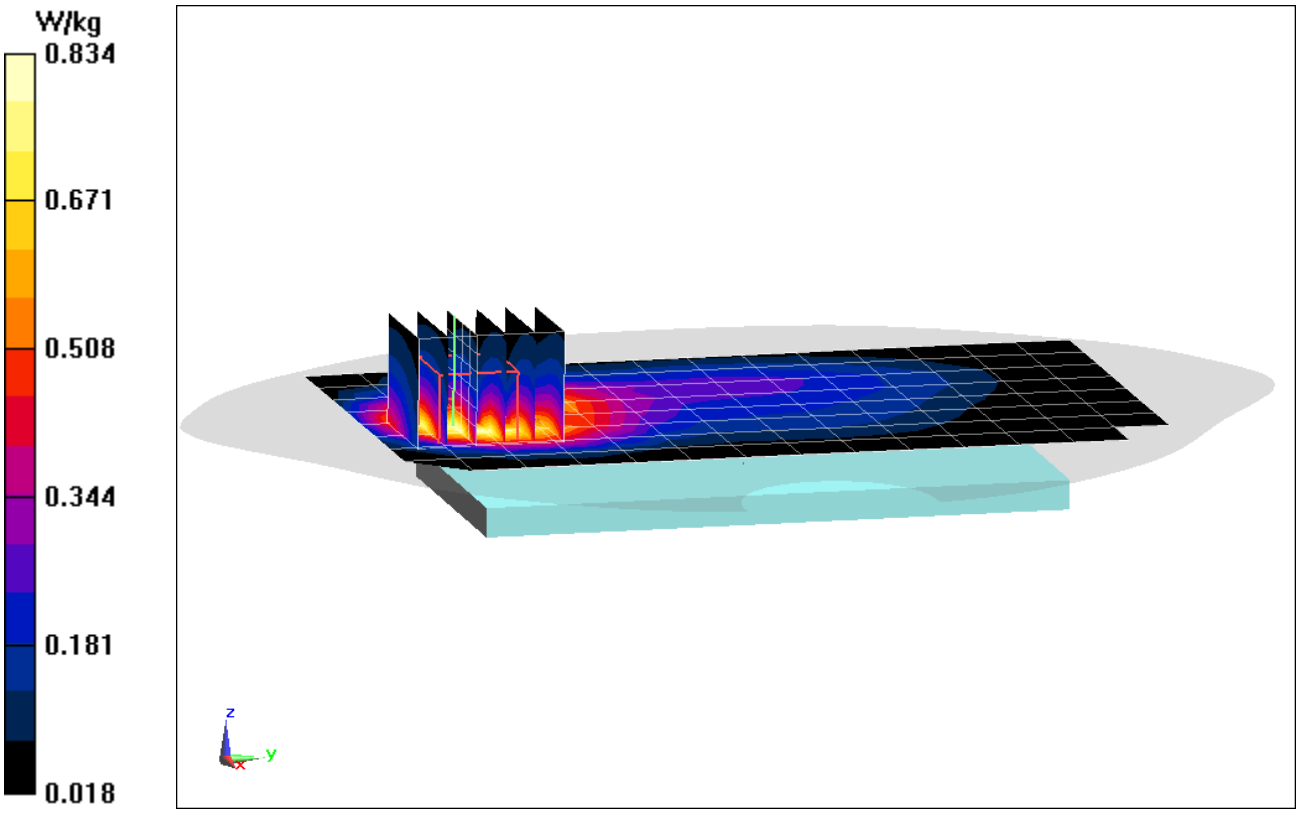
Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.991 S/m; ε_r = 53.201; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: Cell. EVDO Rev. 0 Rule Part 90S, 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 = 27.45 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.706 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

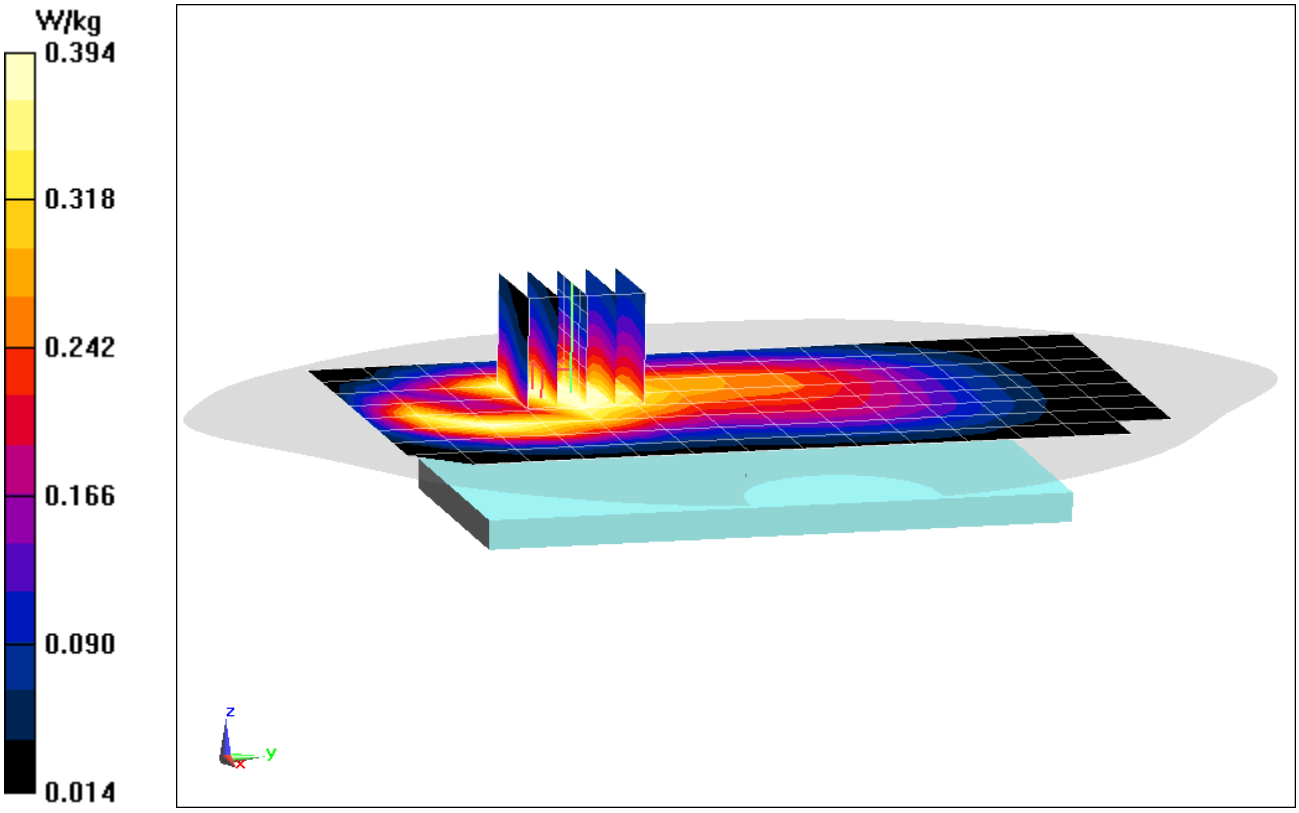
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.998 S/m; ε_r = 53.177; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 20.75 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.488 W/kg
SAR(1 g) = 0.354 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

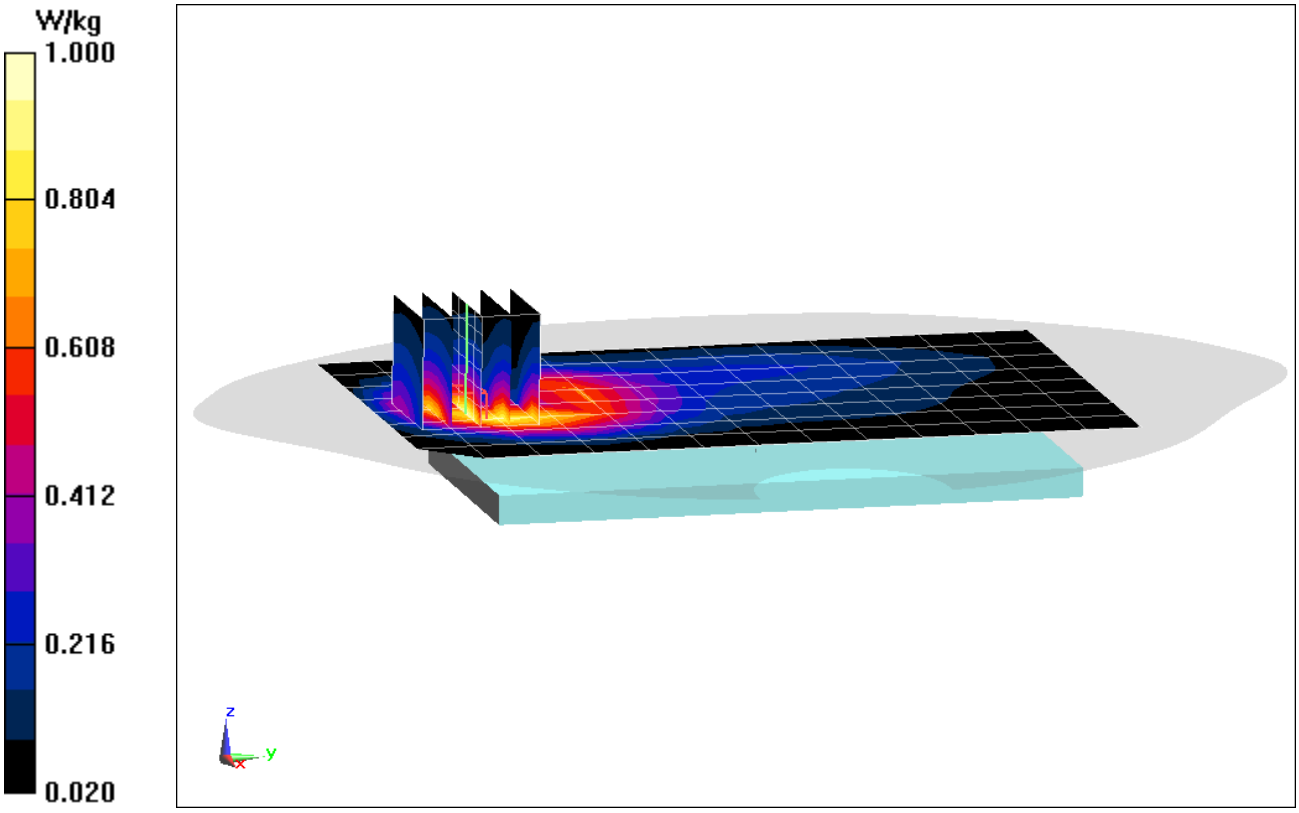
Communication System: UID 0, CDMA; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 848.31 MHz; σ = 1.002 S/m; ε_r = 53.15; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: Cell. EVDO Rev. 0 Rule Part 22H, Body SAR, Back side, High.ch

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.28 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.812 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

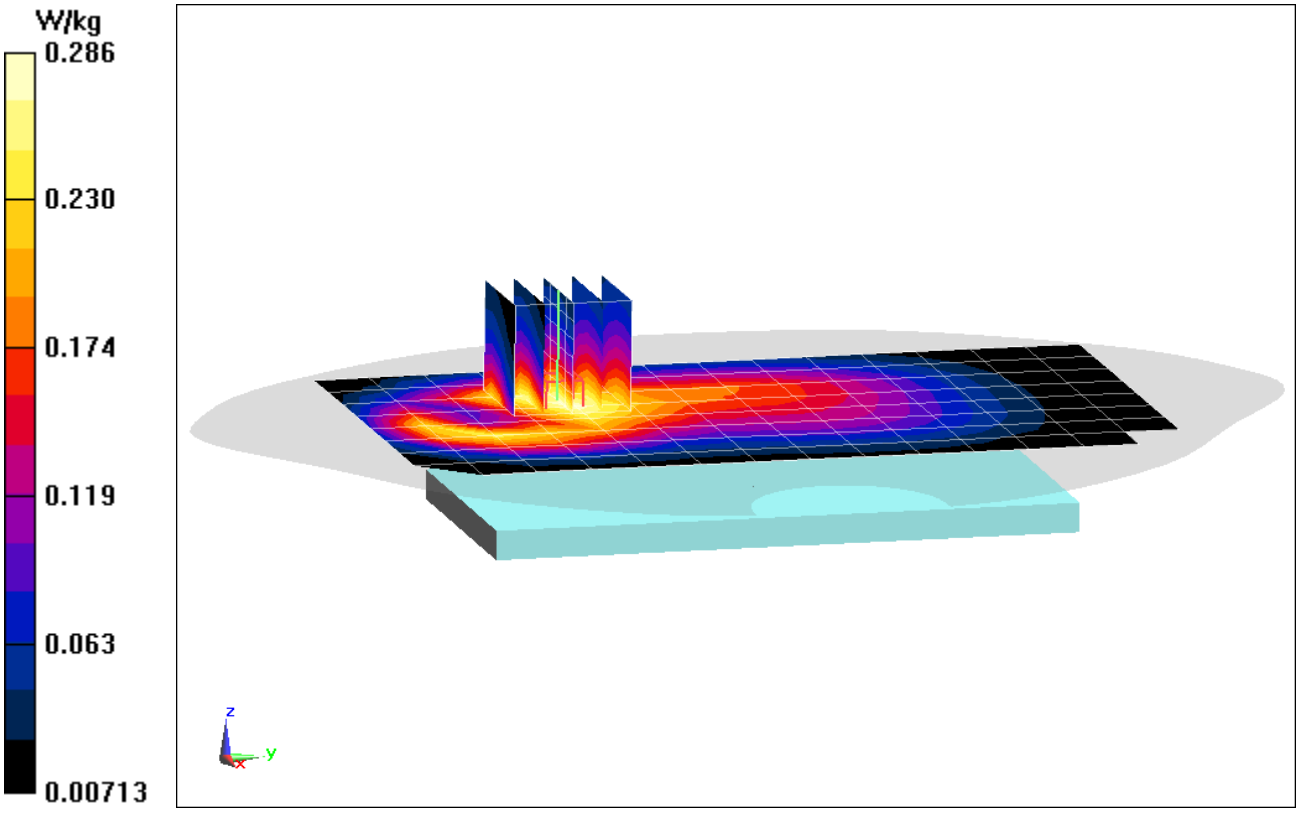
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.998 S/m; ε_r = 53.177; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 16.60 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.349 W/kg
SAR(1 g) = 0.254 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

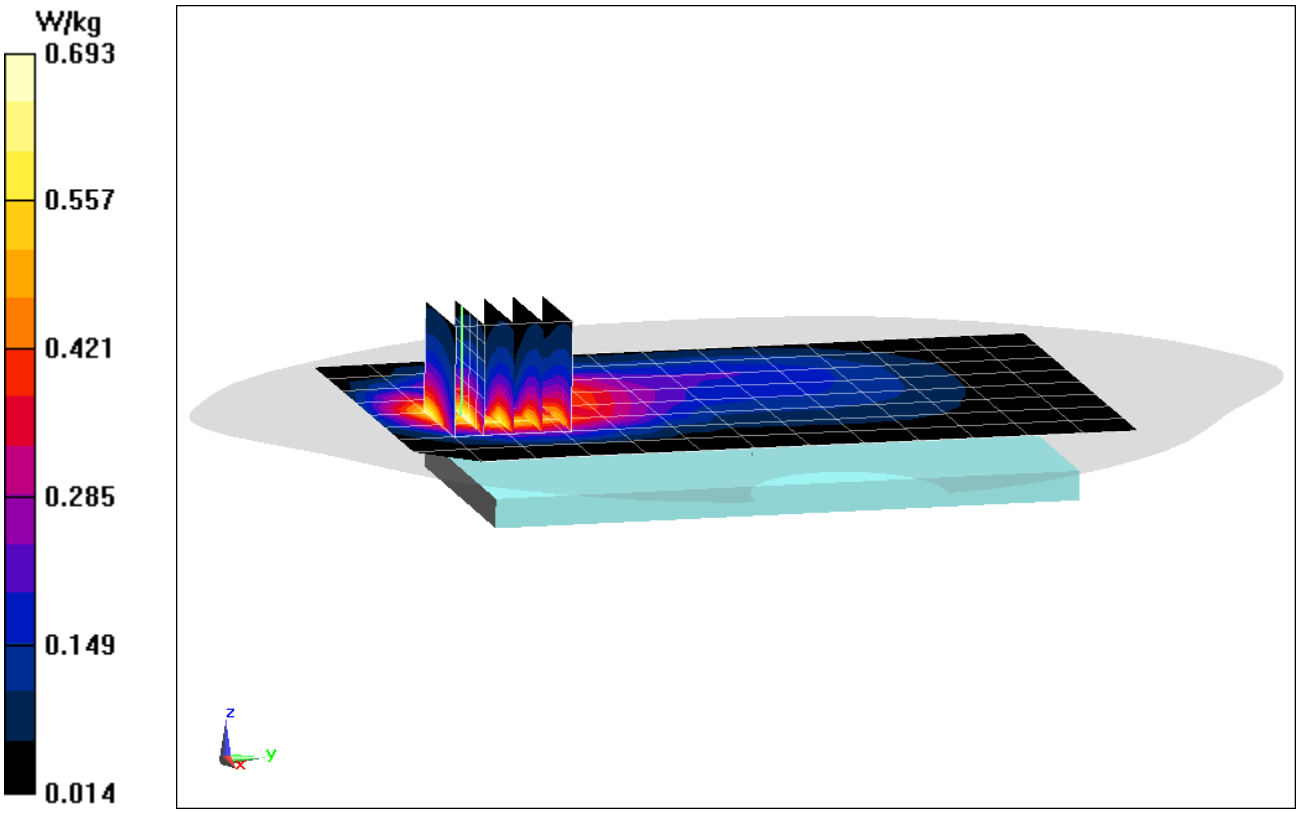
Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 848.8 MHz; Duty Cycle: 1:2.076
Medium: 835 Body Medium parameters used (interpolated):
$f = 848.8$ MHz; $\sigma = 1.003$ S/m; $\varepsilon_r = 53.149$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-08-2018; Ambient Temp: 21.3°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3347; ConvF(6.37, 6.37, 6.37); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: GPRS 850, Body SAR, Back side, High.ch, 4 Tx Slots

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.05 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.590 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

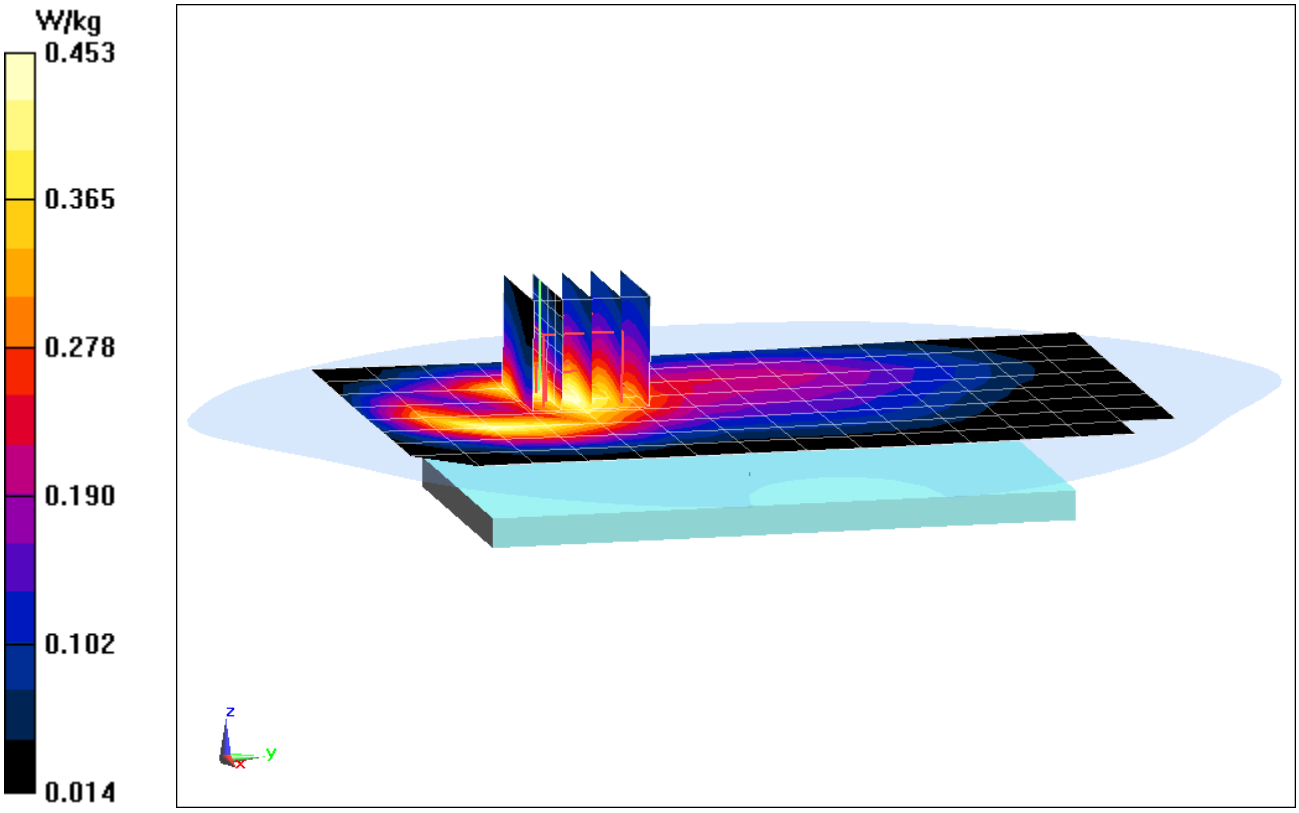
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 1$ S/m; $\varepsilon_r = 53.809$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-05-2018; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3332; ConvF(6.47, 6.47, 6.47); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.90 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.564 W/kg
SAR(1 g) = 0.408 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7142

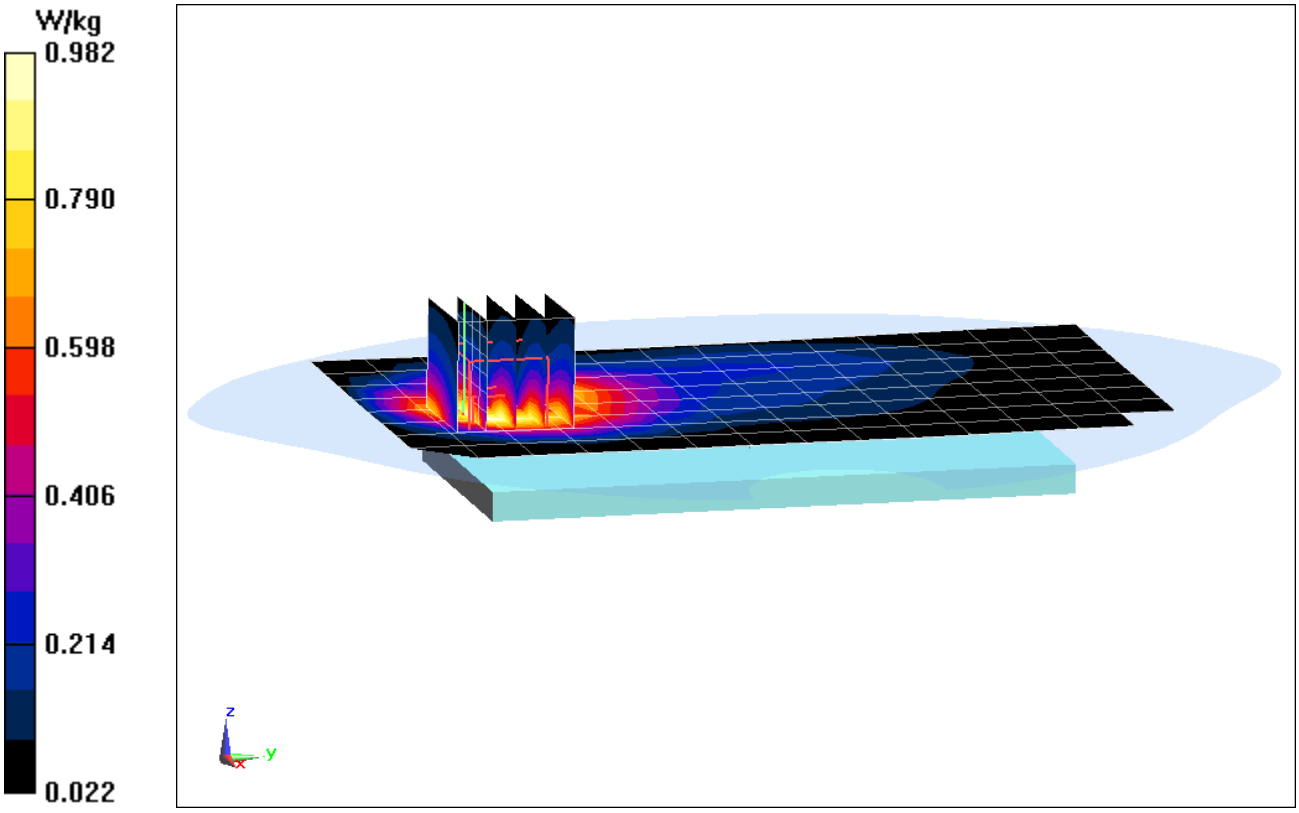
Communication System: UID 0, UMTS; Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 846.6 MHz; σ = 1.01 S/m; ε_r = 53.722; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-05-2018; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3332; ConvF(6.47, 6.47, 6.47); Calibrated: 8/14/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 8/9/2017
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: UMTS 850, 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 = 29.93 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.822 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

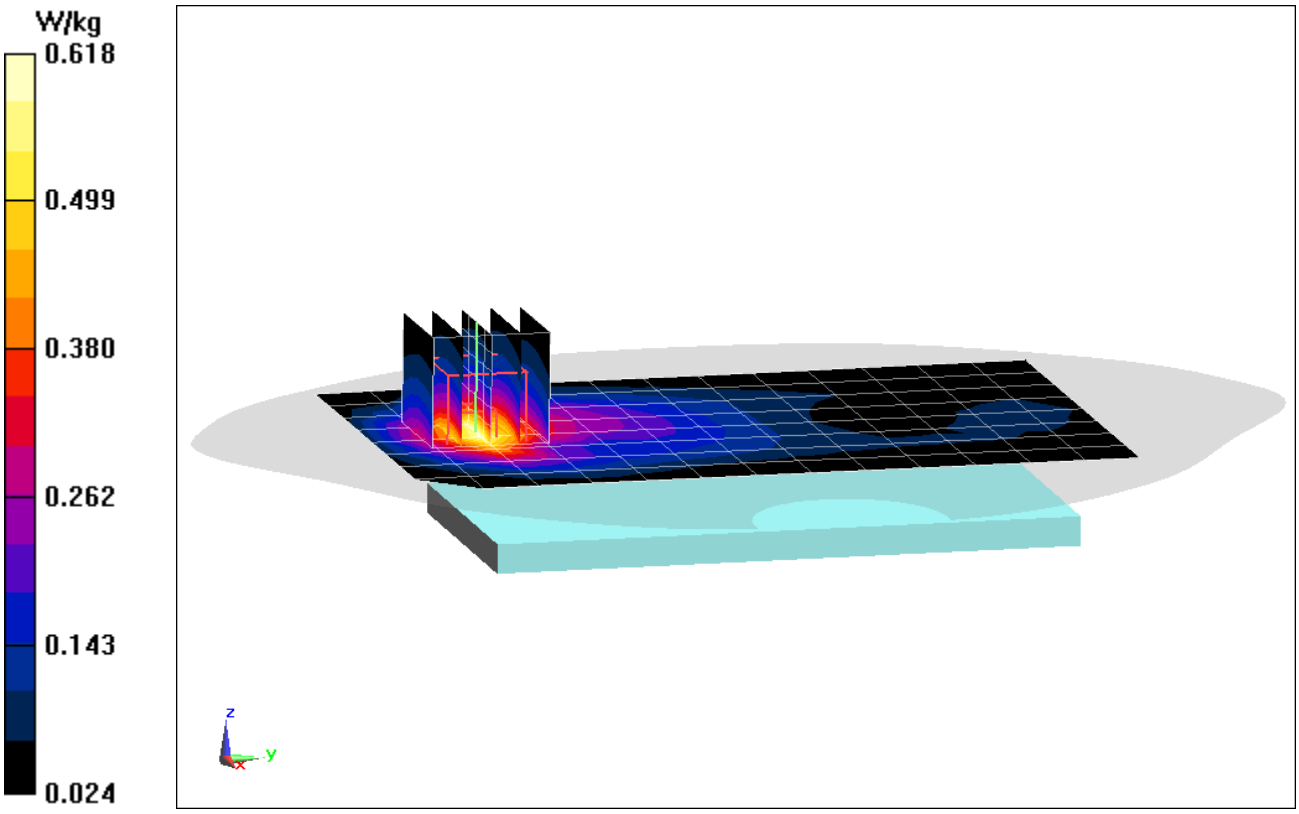
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.458 S/m; ε_r = 52.928; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-04-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.0°C

Probe: ES3DV3 - SN3347; ConvF(5.17, 5.17, 5.17); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: UMTS 1750, Body SAR, Back side, Mid.ch

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.08 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.788 W/kg
SAR(1 g) = 0.519 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7140

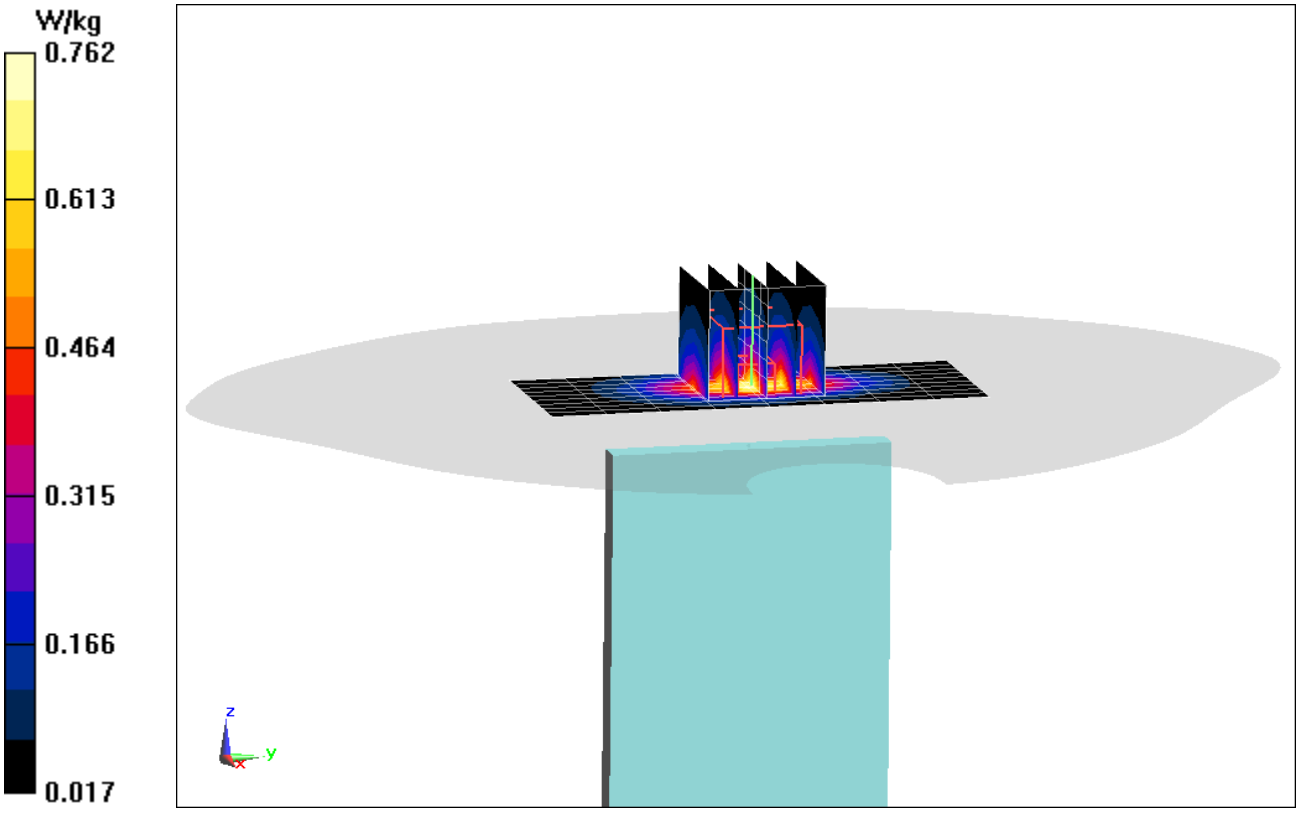
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.472 S/m; ε_r = 52.901; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-04-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.0°C

Probe: ES3DV3 - SN3347; ConvF(5.17, 5.17, 5.17); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 22.15 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.617 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0268

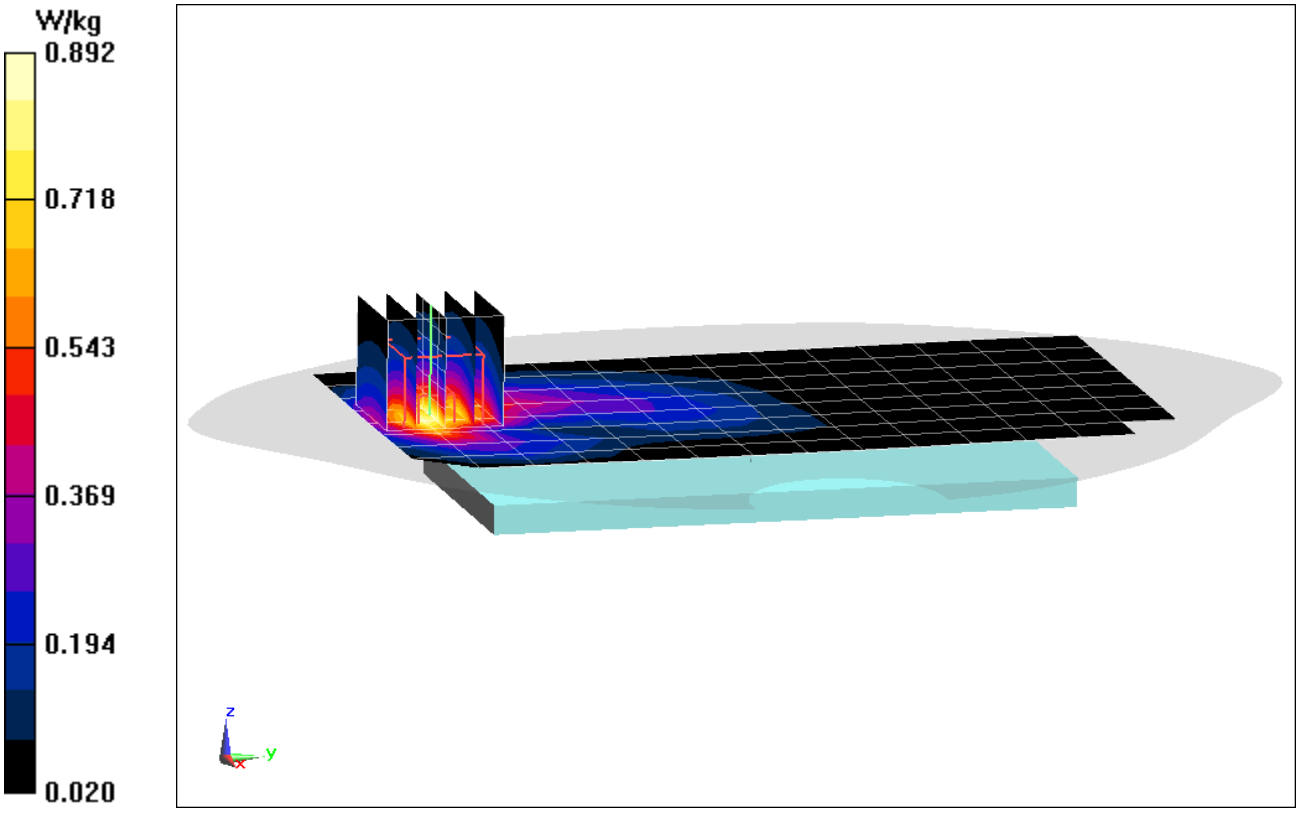
Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.553 S/m; ε_r = 51.512; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2018; Ambient Temp: 23.2°C; Tissue Temp: 21.5°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.25 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.744 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7140

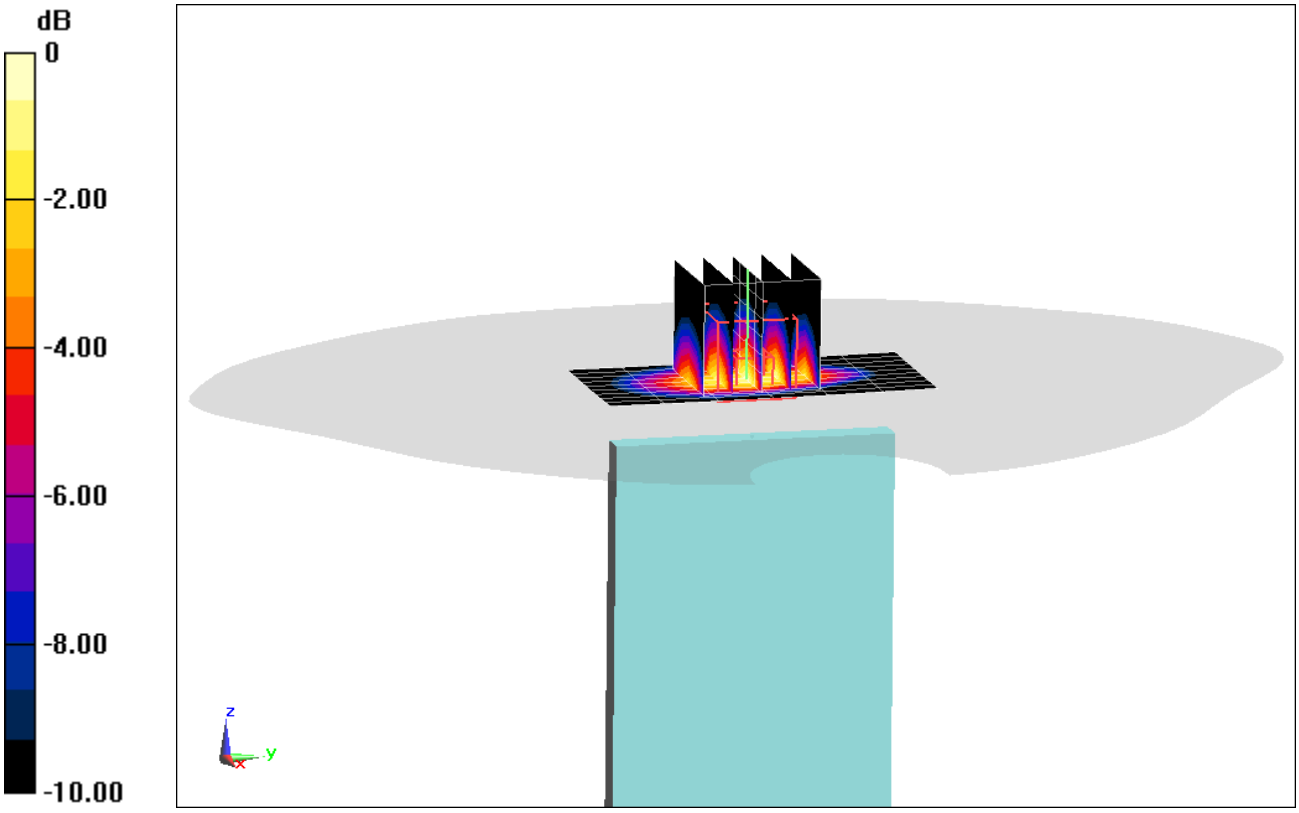
Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.57 S/m; ε_r = 52.114; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-04-2018; Ambient Temp: 21.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: PCS EVDO Rev.0, Body SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.90 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 1.05 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0268

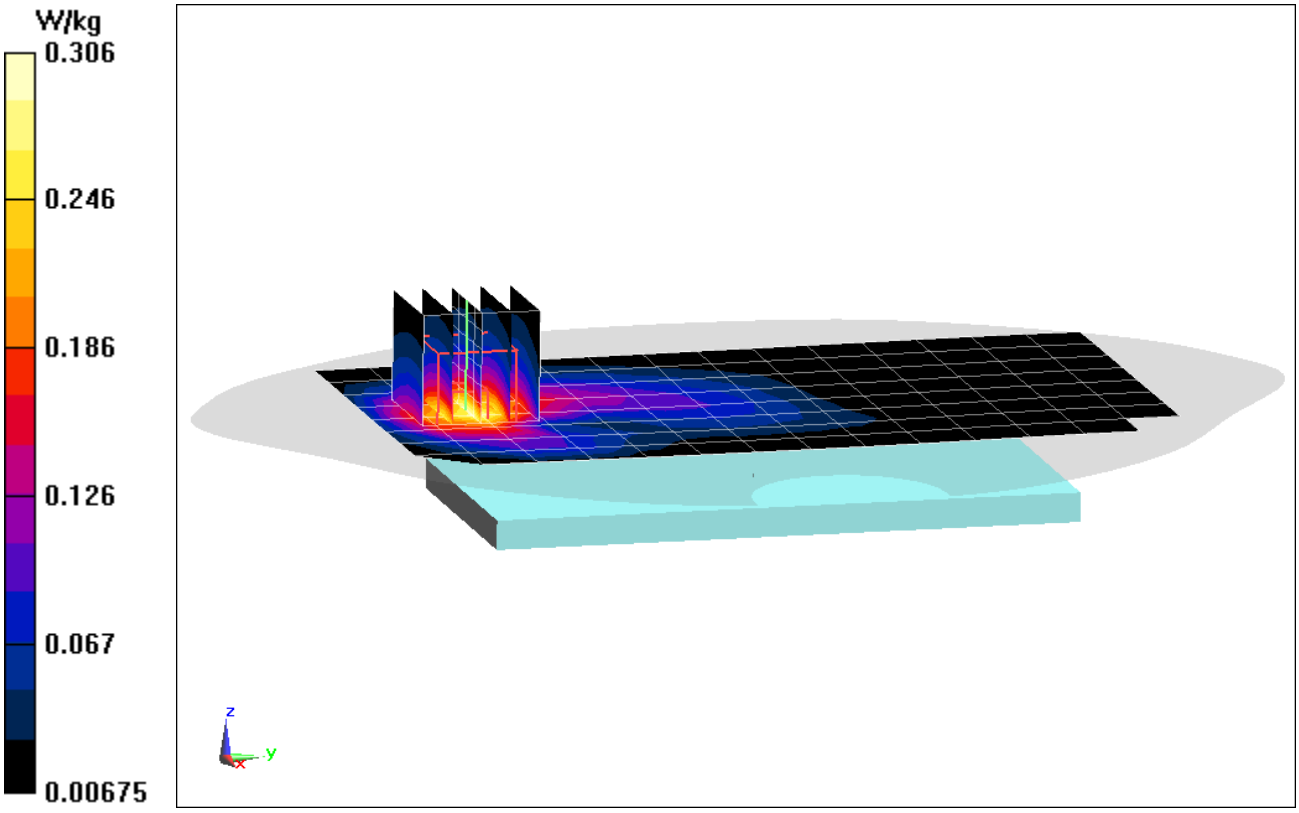
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.553 S/m; ε_r = 51.512; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2018; Ambient Temp: 23.2°C; Tissue Temp: 21.5°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 = 13.71 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.259 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7140

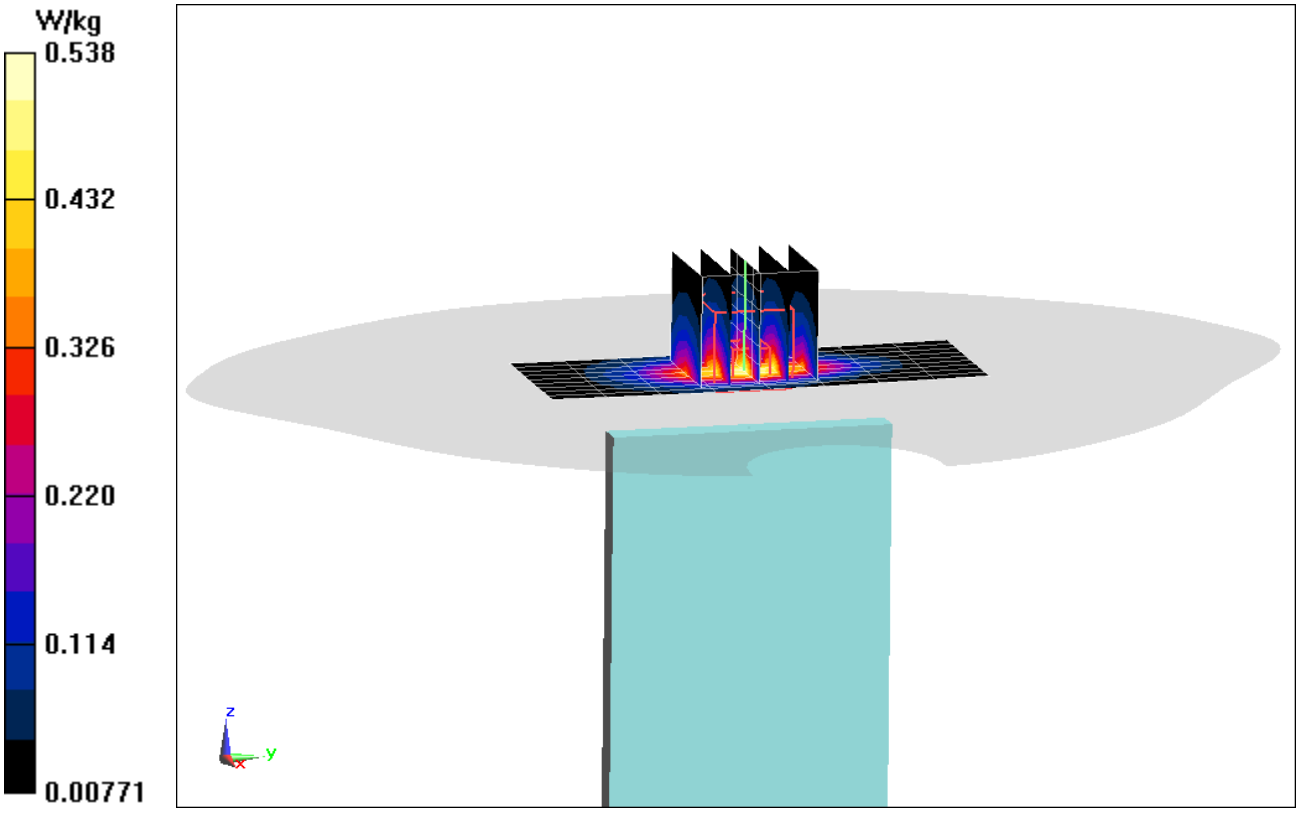
Communication System: UID 0, _GSM GPRS; 3 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.538 S/m; ε_r = 52.204; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-04-2018; Ambient Temp: 21.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: GPRS 1900, Body SAR, Bottom Edge, Mid.ch, 3 Tx Slots

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.24 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.728 W/kg
SAR(1 g) = 0.435 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

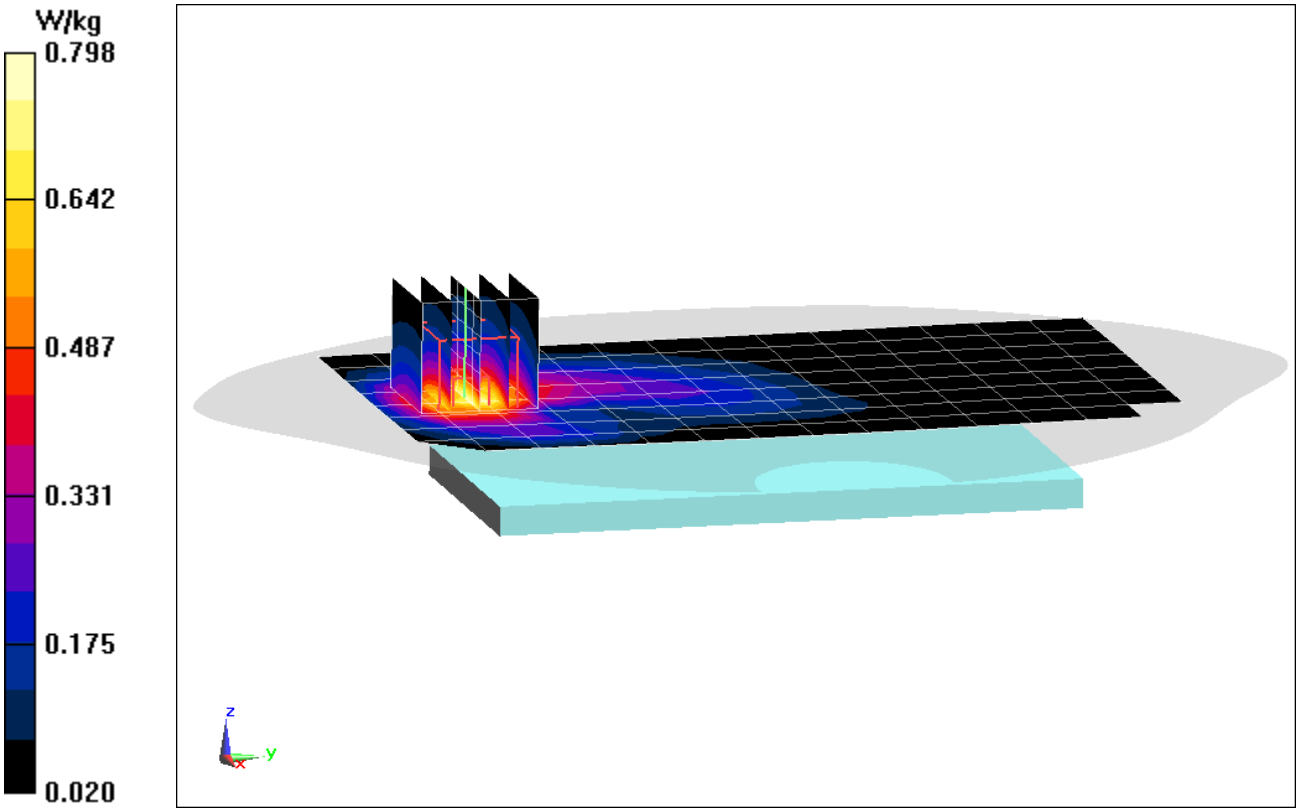
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.553 S/m; ε_r = 51.512; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2018; Ambient Temp: 23.2°C; Tissue Temp: 21.5°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: UMTS 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 = 22.16 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.671 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7138

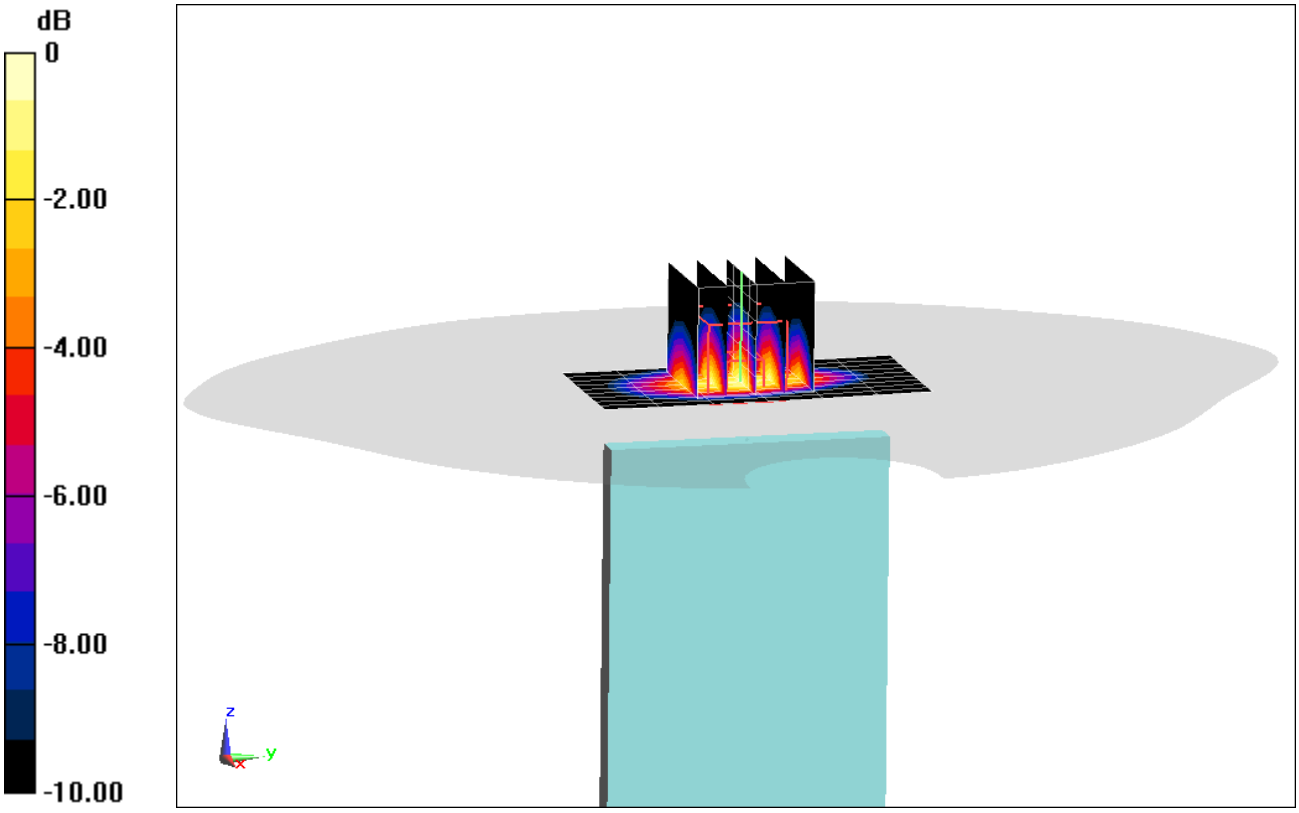
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.568 S/m; ε_r = 52.118; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-04-2018; Ambient Temp: 21.5°C; Tissue Temp: 21.7°C

Probe: ES3DV3 - SN3287; ConvF(5, 5, 5); Calibrated: 9/18/2017;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 6/21/2017
Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1167
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: UMTS 1900, Body SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.08 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.985 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

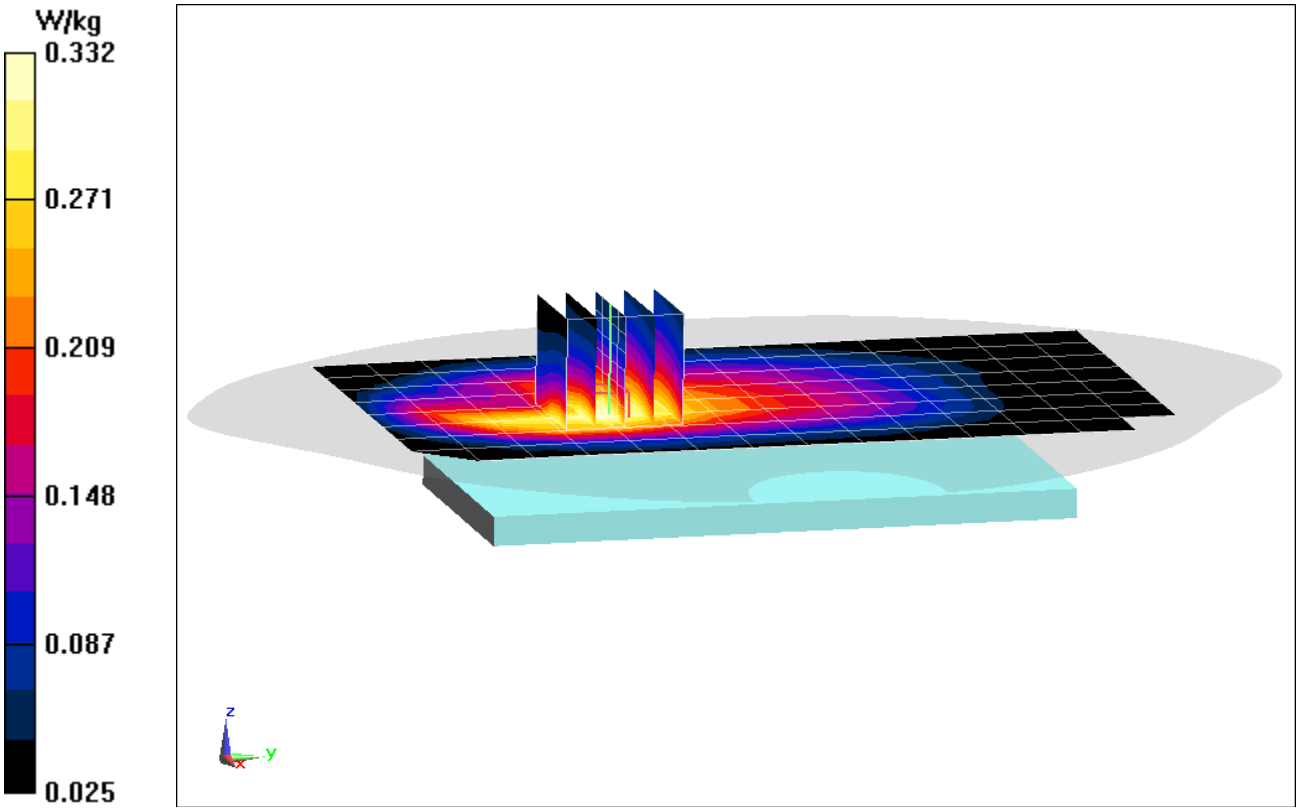
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.922 S/m; ε_r = 54.225; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.65 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.407 W/kg
SAR(1 g) = 0.294 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

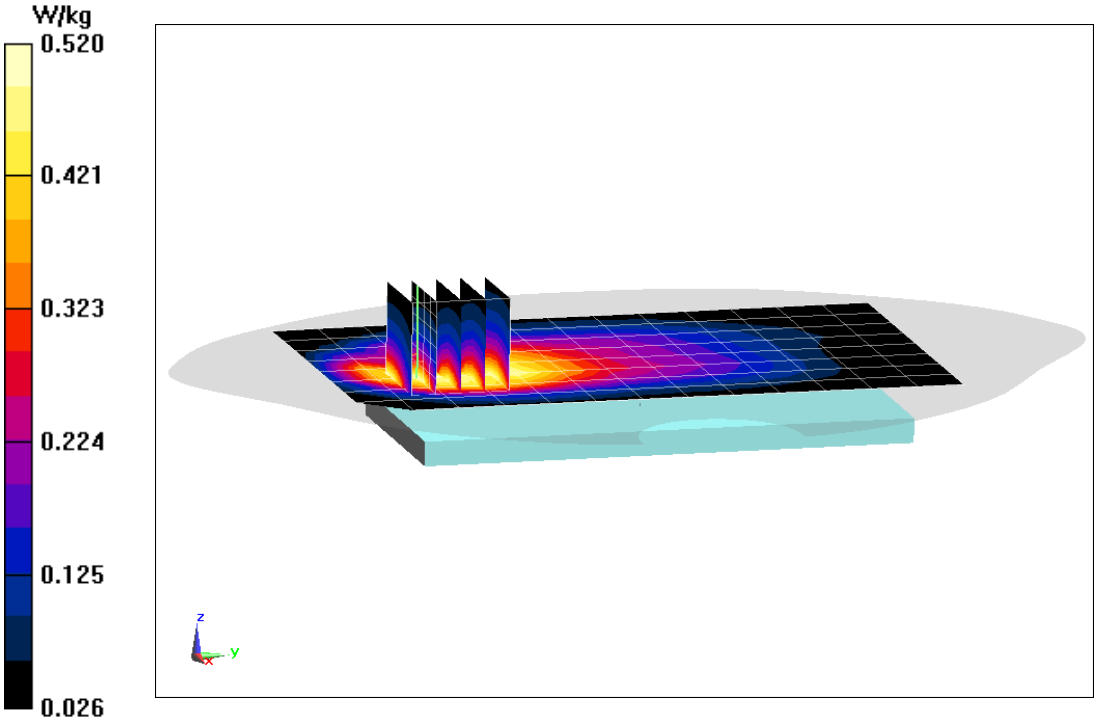
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.922 S/m; ε_r = 54.225; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-06-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.73 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.728 W/kg
SAR(1 g) = 0.437 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

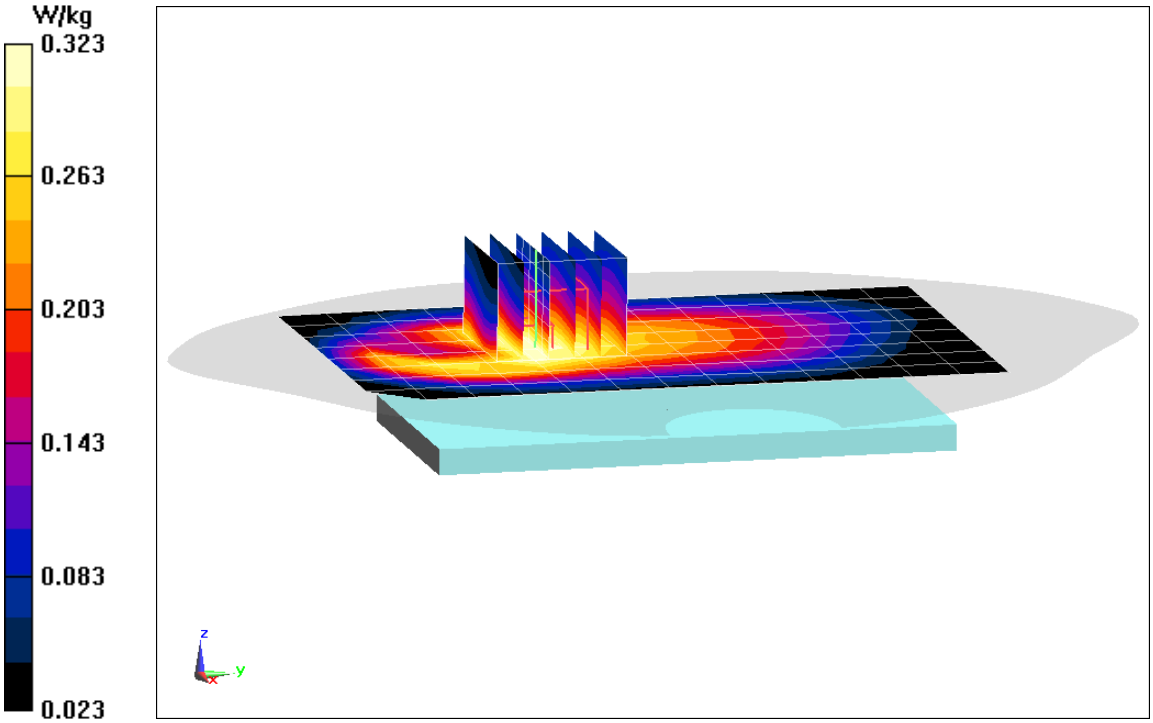
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.948 S/m; ε_r = 53.489; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-08-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.8°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.19 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.381 W/kg
SAR(1 g) = 0.293 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

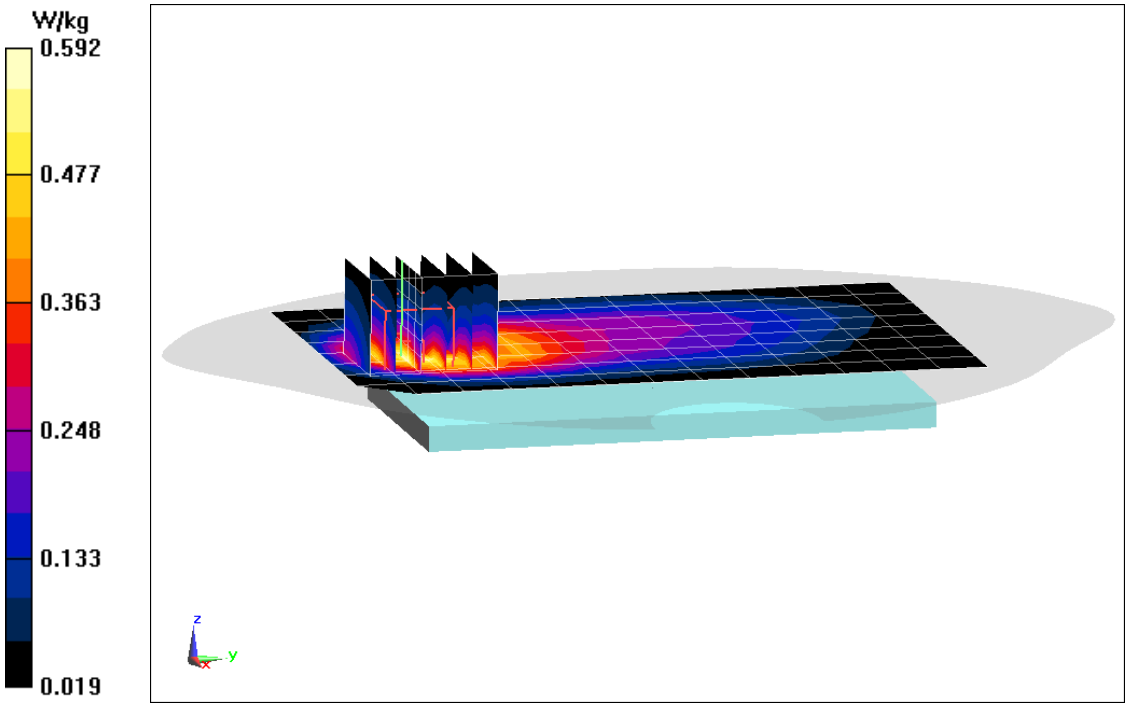
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.948 S/m; ε_r = 53.489; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-08-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.8°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.74 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.853 W/kg
SAR(1 g) = 0.489 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: T0253

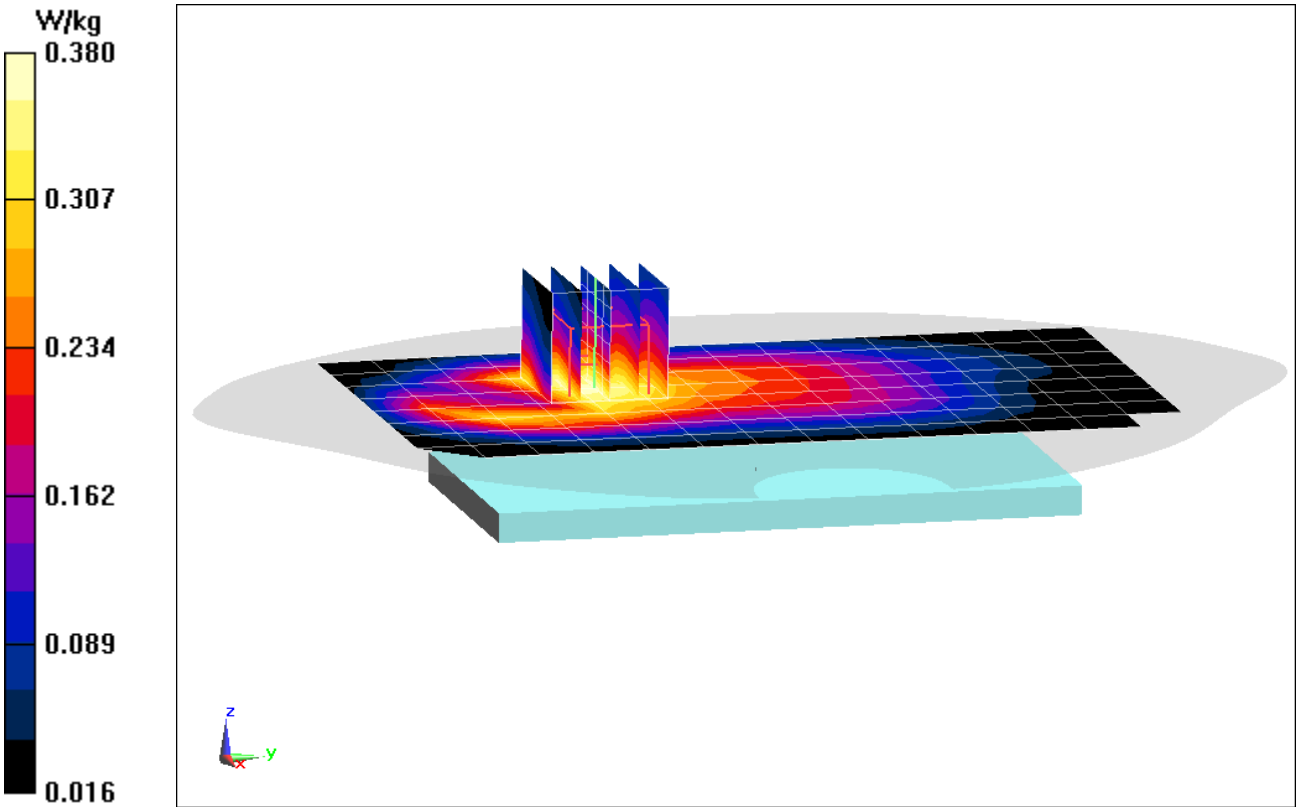
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.962 S/m; ε_r = 53.978; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-06-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 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 = 19.59 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.450 W/kg
SAR(1 g) = 0.344 W/kg



DUT: A3LSMN960U; Type: Portable Handset; Serial: Q7137

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 = 0.962 S/m; ε_r = 53.978; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-06-2018; Ambient Temp: 21.0°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3347; ConvF(6.59, 6.59, 6.59); Calibrated: 3/27/2018;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 11/9/2017
Phantom: Twin-SAM V5.0 Right; Type: QD 000 P40 CD; Serial: 1800
Measurement SW: DASY52, Version 52.10;SEMCAD X Version 14.6.10 (7417)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.44 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.932 W/kg
SAR(1 g) = 0.551 W/kg