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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:
12/03/18 - 01/21/19
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1812260232-01-R2.A3L

FCC ID: **A3LSMG975U**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-G975U
Additional Model(s): SM-G975U1, SM-G975W, SM-G975XU

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.23	0.18	0.76	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.25	0.87	3.00
PCE	UMTS 850	826.40 - 846.60 MHz	0.38	0.37	1.10	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.27	0.95	0.81	3.23
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.19	0.92	1.29	3.28
PCE	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.35	0.27	0.61	N/A
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.41	0.38	0.81	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.20	0.85	1.17	2.85
PCE	LTE Band 71	665.5 - 695.5 MHz	0.14	0.26	0.34	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.20	0.32	0.46	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.23	0.32	0.50	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.33	0.43	0.66	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.33	0.32	0.72	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.33	0.45	0.71	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.27	0.62	0.80	2.96
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	0.18	0.84	1.02	2.91
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	< 0.1	0.44	0.77	1.35
PCE	LTE Band 7	2502.5 - 2567.5 MHz	< 0.1	0.45	0.85	2.50
CBE	LTE Band 48	3552.5 - 3697.5 MHz	< 0.1	0.20	0.16	0.85
PCE	LTE Band 41	2498.5 - 2687.5 MHz	< 0.1	0.67	0.77	3.21
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	0.14	< 0.1	0.11	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.27	0.37	N/A	2.44
NII	U-NII-2C	5500 - 5720 MHz	0.25	0.47	N/A	2.48
NII	U-NII-3	5745 - 5825 MHz	0.26	0.49	0.93	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	1.11	0.10	0.20	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.57	1.59	3.99

Note: This revised Test Report (S/N: 1M1812260232-01-R2.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.
Note: This test report addresses compliance data for material 2. Please see test report ID 1M1810250197-01-R3.A3L for compliance data for material 1.
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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APPENDIX B: SAR DIPOLE VERIFICATION PLOTS

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
CDMA/EVDO BC10 (§90S)	Voice/Data	817.90 - 823.10 MHz
CDMA/EVDO BC0 (§22H)	Voice/Data	824.70 - 848.31 MHz
PCS CDMA/EVDO	Voice/Data	1851.25 - 1908.75 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
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, under some conditions when the device is being used in close proximity to the user's hand, and when headphones are inserted. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device when being used in phablet use conditions. 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 2G/3G/4G 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**	**32.5**	**30.5**	**28.5**	**28.0**	**26.0**	**24.0**	**23.0**
	Nominal	**32.5**	**32.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**23.0**	**22.0**
GSM/GPRS/EDGE 1900	Maximum	**30.5**	**30.5**	**29.5**	**27.5**	**25.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**29.5**	**29.5**	**28.5**	**26.5**	**24.5**	**26.0**	**24.0**	**22.0**	**21.0**

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

Mode / Band		Modulated Average (dBm)
CDMA/EVDO BC10 (§90S)	Maximum	**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	**25.5**
	Nominal	**24.5**
LTE Band 12	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 13	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 14	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 26 (Cell)	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 5 (Cell)	Maximum	**25.8**
	Nominal	**24.8**
LTE Band 66 (AWS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 4 (AWS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 25 (PCS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 2 (PCS)	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 30	Maximum	**23.5**
	Nominal	**22.5**
LTE Band 7	Maximum	**24.5**
	Nominal	**23.5**
LTE Band 48	Maximum	**24.5**
	Nominal	**23.5**
LTE Band 41 (PC3)	Maximum	**25.3**
	Nominal	**24.3**
LTE Band 41 (PC2)	Maximum	**28.3**
	Nominal	**27.3**
LTE Band 38	Maximum	**24.0**
	Nominal	**23.0**

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

Mode / Band		Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slots	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 1900	Maximum	**28.5**	**27.5**	**25.5**	**23.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**27.5**	**26.5**	**24.5**	**22.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**21.0**	**20.0**	**20.0**	**20.0**
	Nominal	**20.0**	**19.0**	**19.0**	**19.0**
UMTS Band 2 (1900 MHz)	Maximum	**20.5**	**19.5**	**19.5**	**19.5**
	Nominal	**19.5**	**18.5**	**18.5**	**18.5**

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

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Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 4 (AWS)	Maximum	**20.5**
	Nominal	**19.5**
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	**21.0**
	Nominal	**20.0**
LTE Band 48	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 41 (PC3)	Maximum	**22.5**
	Nominal	**21.5**
LTE Band 41 (PC2)	Maximum	**22.5**
	Nominal	**21.5**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**

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

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*	*1 TX Slots*	*2 TX Slots*	*3 TX Slots*	*4 TX Slots*
GSM/GPRS/EDGE 1900	Maximum	**28.5**	**28.5**	**27.5**	**25.5**	**23.5**	**27.0**	**25.0**	**23.0**	**22.0**
	Nominal	**27.5**	**27.5**	**26.5**	**24.5**	**22.5**	**26.0**	**24.0**	**22.0**	**21.0**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 4 (1750 MHz)	Maximum	**22.0**	**21.0**	**21.0**	**21.0**
	Nominal	**21.0**	**20.0**	**20.0**	**20.0**
UMTS Band 2 (1900 MHz)	Maximum	**21.5**	**20.5**	**20.5**	**20.5**
	Nominal	**20.5**	**19.5**	**19.5**	**19.5**

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

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 4 (AWS)	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 25 (PCS)	Maximum	**21.5**
	Nominal	**20.5**
LTE Band 2 (PCS)	Maximum	**21.5**
	Nominal	**20.5**
LTE Band 30	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 7	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 48	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**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**

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1.3.4 Maximum Bluetooth and SISO/MIMO WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

Mode / Band		Modulated Average - Single Tx Chain - Ant 1 (dBm)		
Channels		1	2-10	11
IEEE 802.11b (2.4 GHz)	Maximum	**20.0**		
	Nominal	**19.0**		
IEEE 802.11g (2.4 GHz)	Maximum	**18.0**		**17.0**
	Nominal	**17.0**		**16.0**
IEEE 802.11n (2.4 GHz)	Maximum	**18.0**		**17.0**
	Nominal	**17.0**		**16.0**
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

Mode / Band		Modulated Average - Single Tx Chain (dBm) - Ant 2		
Channels		1	2-10	11
IEEE 802.11b (2.4 GHz)	Maximum	**19.0**		
	Nominal	**18.0**		
IEEE 802.11g (2.4 GHz)	Maximum	**18.0**		
	Nominal	**17.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**18.0**		
	Nominal	**17.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

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Mode / Band		Modulated Average - Single Tx Chain - Ant 1 (dBm)						
		20 MHz Bandwidth			40 MHz Bandwidth		80 MHz Bandwidth	
	Channel	36	64	40-60, 100-165	38, 62	46-54, 102-159	42-106	122-155
IEEE 802.11a (5 GHz)	Maximum	**15.5**	**16.5**	**18.0**				
	Nominal	**14.5**	**15.5**	**17.0**				
IEEE 802.11n (5 GHz)	Maximum	**15.5**	**16.5**	**18.0**	**13.0**	**17.0**		
	Nominal	**14.5**	**15.5**	**17.0**	**12.0**	**16.0**		
IEEE 802.11ac (5 GHz)	Maximum	**15.5**	**16.5**	**18.0**	**13.0**	**17.0**	**13.0**	**16.0**
	Nominal	**14.5**	**15.5**	**17.0**	**12.0**	**16.0**	**12.0**	**15.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**			**14.0**		**13.0**	
	Nominal	**15.0**			**13.0**		**12.0**	

Mode / Band		Modulated Average - Single Tx Chain - Ant 2 (dBm)						
		20 MHz Bandwidth			40 MHz Bandwidth		80 MHz Bandwidth	
	Channel	36	64	40-60, 100-165	38, 62	46-54, 102-159	42-106	122-155
IEEE 802.11a (5 GHz)	Maximum	**15.5**	**16.5**	**18.0**				
	Nominal	**14.5**	**15.5**	**17.0**				
IEEE 802.11n (5 GHz)	Maximum	**15.5**	**17.0**	**18.0**	**13.0**	**17.0**		
	Nominal	**14.5**	**16.0**	**17.0**	**12.0**	**16.0**		
IEEE 802.11ac (5 GHz)	Maximum	**15.5**	**17.0**	**18.0**	**13.0**	**17.0**	**13.0**	**16.0**
	Nominal	**14.5**	**16.0**	**17.0**	**12.0**	**16.0**	**12.0**	**15.0**
IEEE 802.11ax SU (5 GHz)	Maximum	**16.0**			**14.0**		**13.0**	
	Nominal	**15.0**			**13.0**		**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
Channels		1	2-10	11
IEEE 802.11g (2.4 GHz)	Maximum	**21.0**		**20.5**
	Nominal	**20.0**		**19.5**
IEEE 802.11n (2.4 GHz)	Maximum	**21.0**		**20.0**
	Nominal	**20.0**		**19.0**
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

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

Mode / Band		Modulated Average - Single Tx Chain (dBm)
Bluetooth	Maximum	**18.5**
	Nominal	**17.5**
Bluetooth LE	Maximum	**11.5**
	Nominal	**10.5**
Bluetooth EDR	Maximum	**12.5**
	Nominal	**11.5**

1.3.5 Reduced SISO and MIMO WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
Channels		1	2-10	11
IEEE 802.11b (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

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Mode / Band		Modulated Average - Single Tx Chain (dBm)				
		20 MHz Bandwidth	40 MHz Bandwidth		80 MHz Bandwidth	
	Channel	36-165	38, 62	46-54, 102-159	42-106	122-155
IEEE 802.11a (5 GHz)	Maximum	14.0				
	Nominal	13.0				
IEEE 802.11n (5 GHz)	Maximum	14.0	13.0	14.0		
	Nominal	13.0	12.0	13.0		
IEEE 802.11ac (5 GHz)	Maximum	14.0	13.0	14.0	13.0	14.0
	Nominal	13.0	12.0	13.0	12.0	13.0
IEEE 802.11ax SU (5 GHz)	Maximum	14.0	14.0		13.0	
	Nominal	13.0	13.0		12.0	

Mode / Band		Modulated Average - MIMO (dBm)		
Channels		1	2-10	11
IEEE 802.11g (2.4 GHz)	Maximum	20.0		
	Nominal	19.0		
IEEE 802.11n (2.4 GHz)	Maximum	20.0		
	Nominal	19.0		
IEEE 802.11ax SU (2.4 GHz)	Maximum	16.0	17.0	15.0
	Nominal	15.0	16.0	14.0

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

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

Note: Targets for 802.11ax RU operations can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
Channels		1	2-10	11
IEEE 802.11b (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

Mode / Band		Modulated Average - Single Tx Chain (dBm)						
		20 MHz Bandwidth			40 MHz Bandwidth		80 MHz Bandwidth	
	Channel	36	64	40-60, 100-165	38, 62	46-54, 102-159	42-106	122-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**						
	Nominal	**13.0**						
IEEE 802.11n (5 GHz)	Maximum	**14.0**			**13.0**	**14.0**		
	Nominal	**13.0**			**12.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**			**13.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**			**12.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax (5 GHz)	Maximum	**14.0**			**14.0**		**13.0**	
	Nominal	**13.0**			**13.0**		**12.0**	

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Mode / Band		Modulated Average - MIMO (dBm)		
Channels		1	2-10	11
IEEE 802.11g (2.4 GHz)	Maximum	**20.0**		
	Nominal	**19.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**20.0**		
	Nominal	**19.0**		
IEEE 802.11ax SU (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

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

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

Note: Targets for 802.11ax RU operations can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

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

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Mode / Band		Modulated Average - Single Tx Chain (dBm)				
		20 MHz Bandwidth	40 MHz Bandwidth		80 MHz Bandwidth	
	Channel	36-165	38, 62	46-54, 102-159	42-106	122-155
IEEE 802.11a (5 GHz)	Maximum	**14.0**				
	Nominal	**13.0**				
IEEE 802.11n (5 GHz)	Maximum	**14.0**	**13.0**	**14.0**		
	Nominal	**13.0**	**12.0**	**13.0**		
IEEE 802.11ac (5 GHz)	Maximum	**14.0**	**13.0**	**14.0**	**13.0**	**14.0**
	Nominal	**13.0**	**12.0**	**13.0**	**12.0**	**13.0**
IEEE 802.11ax (5 GHz)	Maximum	**14.0**	**14.0**		**13.0**	
	Nominal	**13.0**	**13.0**		**12.0**	

Mode / Band		Modulated Average - MIMO (dBm)		
Channels		1	2-10	11
IEEE 802.11g (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11n (2.4 GHz)	Maximum	**17.0**		
	Nominal	**16.0**		
IEEE 802.11ax (2.4 GHz)	Maximum	**16.0**	**17.0**	**15.0**
	Nominal	**15.0**	**16.0**	**14.0**

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

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1.4 DUT Antenna Locations

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

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
EVDO BC10 (§90S)	Yes	Yes	No	Yes	Yes	Yes
EVDO BC0 (§22H)	Yes	Yes	No	Yes	Yes	Yes
PCS EVDO	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30	Yes	Yes	No	Yes	Yes	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 48	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 operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

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

Table 1-2
Simultaneous Transmission Scenarios

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

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1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII2A, and U-NII2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VOLTE.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering.

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.

Per FCC Guidance, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode. The 802.11ax RU SAR testing exclusion analysis can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

This device supports IEEE 802.11ax with the following features:

a) Up to 80 MHz Bandwidth only for 5 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) No aggregate channel configurations
d) 2 Tx antenna output
e) Up to 1024 QAM is supported
f) TDWR and Band gap channels are supported for 5 GHz
g) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for Bluetooth, 2.4 GHz WLAN, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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(B) Licensed Transmitter(s)

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

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

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

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

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for 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. The downlink carrier aggregation exclusion analysis can be found in Appendix H for test report S/N: 1M1810250197-01-R3.A3L for material 1.

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

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop 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 and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is $\leq \frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is $\leq$ 1.45W/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).

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This device supports LTE Carrier Aggregation (CA) for LTE Band 5, LTE Band 66, and LTE B41 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

This device uses antenna B for LTE Band 7 standalone operations. During some inter-band downlink carrier aggregation scenarios with Band 7 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. 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.

1.8 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO, LTE Band 41 Power Class 2/3)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)

1.9 Device Serial Numbers

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

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2 LTE INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71 (665.5 - 695.5 MHz)				
	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
UE Category	DL UE Cat 20 (QPSK, 16QAM, 64QAM, 256QAM), UL UE Cat 18 (QPSK, 16QAM, 64QAM, 256QAM)				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 14. It supports carrier aggregation, downlink MIMO, LAA features as shown in Section 9 and Appendix H of test report SN: 1M1810250197-01-R3.A3L. 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:

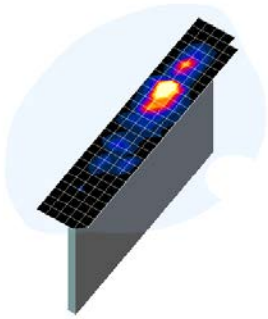

Figure 4-1
Sample SAR Area Scan

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].

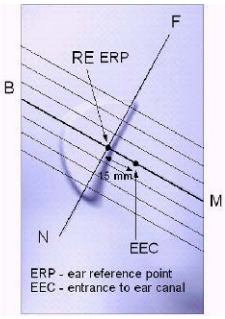

Figure 5-1
Close-Up Side view of ERP

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.

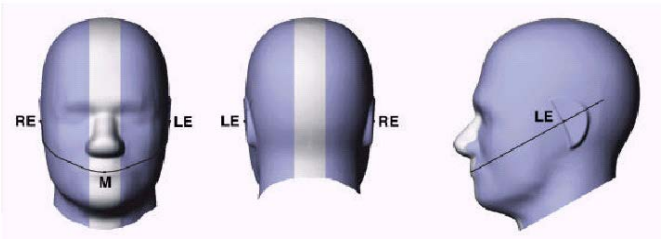

Figure 5-2
Front, back and side view of SAM Twin Phantom

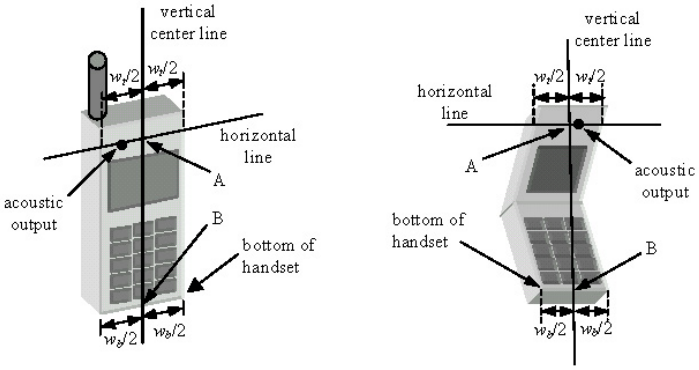

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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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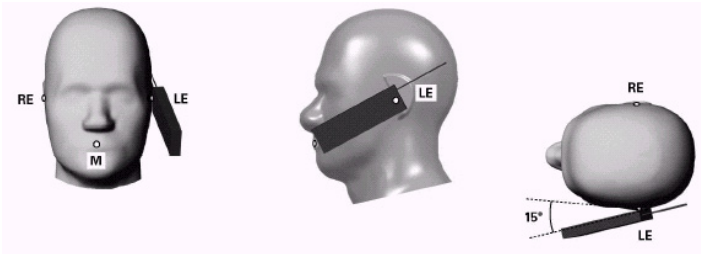

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

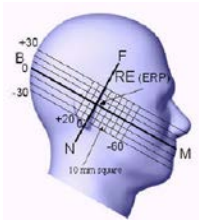

Figure 6-3
Side view w/ relevant markings

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.

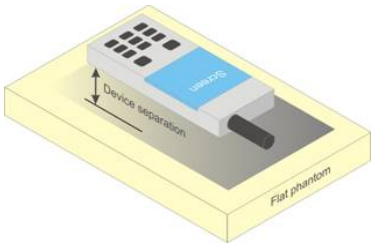

Figure 6-4
Sample Body-Worn Diagram

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 Proximity Sensor Considerations

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

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

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

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7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

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

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

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

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8 FCC MEASUREMENT PROCEDURES

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

8.1 Measured and Reported SAR

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

8.2 3G SAR Test Reduction Procedure

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

8.3 Procedures Used to Establish RF Signal for SAR

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

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

8.4 SAR Measurement Conditions for CDMA2000

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

8.4.1 Output Power Verification

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

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

Table 8-1
Parameters for Max. Power for RC1

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

Table 8-2
Parameters for Max. Power for RC3

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

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

8.4.2 Head SAR Measurements

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

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

8.4.3 Body-worn SAR Measurements

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

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

8.4.4 Body-worn SAR Measurements for EVDO Devices

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

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

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

8.4.5 Body SAR Measurements for EVDO Hotspot

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

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

8.4.6 CDMA2000 1x Advanced

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

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

8.5 SAR Measurement Conditions for UMTS

8.5.1 Output Power Verification

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

8.5.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the

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primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

8.5.3 Body SAR Measurements

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

8.5.4 SAR Measurements with Rel 5 HSDPA

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

8.5.5 SAR Measurements with Rel 6 HSUPA

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

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

8.5.6 SAR Measurement Conditions for DC-HSDPA

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

8.6 SAR Measurement Conditions for LTE

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

8.6.1 Spectrum Plots for RB Configurations

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

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8.6.2 MPR

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

8.6.3 A-MPR

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

8.6.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

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

8.6.5 TDD

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

8.6.6 Downlink Only Carrier Aggregation

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output

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

8.7 SAR Testing with 802.11 Transmitters

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

8.7.1 General Device Setup

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

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

8.7.2 U-NII-1 and U-NII-2A

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

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

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

8.7.4 Initial Test Position Procedure

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

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positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.5 2.4 GHz SAR Test Requirements

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

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

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

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

8.7.6 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. Per FCC Guidance, 802.11ax was considered a higher order 802.11 mode when compared to a/b/g/n/ac to apply KDB Publication 248227 Guidance. 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

				Loopback			Data			
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	25.12	25.13	25.09	25.13	25.17	25.22	25.19
Cellular	1013	22H	824.7	25.27	25.27	25.22	25.26	25.29	25.29	25.30
	384	22H	836.52	25.24	25.24	25.19	25.22	25.24	25.26	25.27
	777	22H	848.31	25.29	25.17	25.16	25.16	25.18	25.17	25.16
PCS	25	24E	1851.25	24.26	24.24	24.21	24.21	24.19	24.26	24.29
	600	24E	1880	24.43	24.44	24.41	24.40	24.39	24.50	24.51
	1175	24E	1908.75	24.12	24.16	24.10	24.12	24.13	24.19	24.18

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	19.10	19.10	19.22	19.19
	600	24E	1880	19.32	19.33	19.46	19.44
	1175	24E	1908.75	19.08	19.09	19.15	19.12

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Table 9-3
Reduced Conducted Powers- Grip Sensor and/or Earjack Mode Active

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	20.12	20.10	20.05	20.08	20.06	20.14	20.18
	600	24E	1880	20.37	20.40	20.35	20.32	20.33	20.43	20.46
	1175	24E	1908.75	20.09	20.11	20.04	20.05	20.04	20.12	20.15

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	33.21	33.07	31.67	**29.41**	27.32	26.25	25.21	22.91	22.05
	190	33.16	32.94	31.52	**29.80**	27.99	26.71	25.62	23.04	22.23
	251	32.87	32.69	31.79	**29.69**	27.64	26.18	25.17	22.90	21.73
GSM 1900	512	29.61	29.51	27.88	**25.58**	23.51	25.32	23.88	21.74	20.48
	661	29.24	29.27	27.91	**25.60**	23.50	25.76	23.93	22.03	20.97
	810	29.70	29.61	27.64	**26.05**	23.50	25.12	23.47	21.66	20.42

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	24.18	24.04	25.65	**25.15**	24.31	17.22	19.19	18.65	19.04
	190	24.13	23.91	25.50	**25.54**	24.98	17.68	19.60	18.78	19.22
	251	23.84	23.66	25.77	**25.43**	24.63	17.15	19.15	18.64	18.72
GSM 1900	512	20.58	20.48	21.86	**21.32**	20.50	16.29	17.86	17.48	17.47
	661	20.21	20.24	21.89	**21.34**	20.49	16.73	17.91	17.77	17.96
	810	20.67	20.58	21.62	**21.79**	20.49	16.09	17.45	17.40	17.41

GSM 850	**Frame Avg.Targets:**	23.47	23.47	25.48	**25.24**	24.49	17.97	18.98	18.74	18.99
GSM 1900		20.47	20.47	22.48	**22.24**	21.49	16.97	17.98	17.74	17.99

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Table 9-5
Reduced Conducted Powers- Hotspot/Grip Sensor and/or Earjack Mode Active

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	27.32	27.24	26.24	**24.12**	22.25	25.32	23.88	21.74	20.48
	661	27.53	27.38	26.50	**24.39**	22.40	25.76	23.93	22.03	20.97
	810	27.28	27.24	26.11	**24.38**	22.17	25.12	23.47	21.66	20.42

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	18.29	18.21	20.22	**19.86**	19.24	16.29	17.86	17.48	17.47
	661	18.50	18.35	20.48	**20.13**	19.39	16.73	17.91	17.77	17.96
	810	18.25	18.21	20.09	**20.12**	19.16	16.09	17.45	17.40	17.41
GSM 1900	**Frame Avg.Targets:**	18.47	18.47	20.48	**20.24**	19.49	16.97	17.98	17.74	17.99

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 9-6
Maximum Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.97	24.89	24.77	24.40	24.29	24.27	24.20	24.21	23.93	-
99		12.2 kbps AMR	25.01	24.88	24.79	24.39	24.29	24.30	24.20	24.37	24.04	-
6	HSDPA	Subtest 1	23.81	23.72	23.60	23.23	23.11	23.07	22.96	23.15	22.86	0
6		Subtest 2	23.82	23.73	23.59	23.25	23.13	23.07	23.00	23.17	22.86	0
6		Subtest 3	23.32	23.24	23.09	22.73	22.56	22.58	22.47	22.67	22.37	0.5
6		Subtest 4	23.32	23.18	23.08	22.71	22.61	22.56	22.43	22.64	22.34	0.5
6	HSUPA	Subtest 1	23.84	23.74	23.62	23.28	23.13	23.10	22.91	23.14	22.91	0
6		Subtest 2	21.86	21.72	21.60	21.23	21.12	21.03	20.94	21.13	20.81	2
6		Subtest 3	22.82	22.73	22.62	22.26	22.14	22.07	21.86	22.03	21.73	1
6		Subtest 4	21.85	21.73	21.61	21.25	21.12	21.06	20.99	21.14	20.86	2
6		Subtest 5	23.86	23.76	23.64	23.30	23.17	23.16	23.01	23.22	22.91	0
8	DC-HSDPA	Subtest 1	23.89	23.85	23.70	23.32	23.22	23.24	23.35	23.27	23.08	0
8		Subtest 2	23.89	23.78	23.70	23.34	23.22	23.25	23.35	23.25	23.07	0
8		Subtest 3	23.38	23.34	23.21	22.84	22.73	22.74	22.81	22.76	22.57	0.5
8		Subtest 4	23.42	23.35	23.19	22.75	22.64	22.71	22.81	22.72	22.53	0.5

Table 9-7
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	20.26	20.21	20.17	20.10	20.28	19.98	-
99		12.2 kbps AMR	20.21	20.16	20.15	20.15	20.34	20.01	-
6	HSDPA	Subtest 1	19.29	19.25	19.20	19.01	19.18	18.82	0
6		Subtest 2	19.26	19.23	19.16	19.05	19.17	18.80	0
6		Subtest 3	18.75	18.72	18.67	18.49	18.67	18.23	0.5
6		Subtest 4	18.75	18.69	18.68	18.46	18.64	18.24	0.5
6	HSUPA	Subtest 1	19.35	19.28	19.25	19.11	19.25	18.87	0
6		Subtest 2	17.29	17.21	17.16	17.02	17.22	16.80	2
6		Subtest 3	18.27	18.20	18.20	18.01	18.23	17.84	1
6		Subtest 4	17.27	17.30	17.18	17.01	17.20	16.78	2
6		Subtest 5	19.29	19.27	19.22	19.08	19.19	18.82	0
8	DC-HSDPA	Subtest 1	19.20	19.16	19.09	18.97	19.14	18.76	0
8		Subtest 2	19.00	18.92	18.74	18.80	18.94	18.44	0
8		Subtest 3	18.75	18.67	18.61	18.47	18.63	18.32	0.5
8		Subtest 4	18.73	18.68	18.62	18.44	18.60	18.34	0.5

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Table 9-8
Reduced Conducted Powers - Grip Sensor and/or Earjack 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	21.31	21.24	21.22	21.12	21.29	21.00	-
99		12.2 kbps AMR	21.34	21.29	21.23	21.16	21.36	21.11	-
6	HSDPA	Subtest 1	20.25	20.24	20.18	19.97	20.11	19.81	0
6		Subtest 2	20.27	20.20	20.19	19.97	20.15	19.78	0
6		Subtest 3	19.80	19.70	19.76	19.52	19.67	19.31	0.5
6		Subtest 4	19.84	19.75	19.72	19.50	19.68	19.26	0.5
6	HSUPA	Subtest 1	20.27	20.19	20.17	20.07	20.28	19.89	0
6		Subtest 2	18.23	18.15	18.14	18.09	18.23	17.92	2
6		Subtest 3	19.25	19.17	19.12	19.08	19.30	18.91	1
6		Subtest 4	18.24	18.16	18.12	18.06	18.23	17.85	2
6		Subtest 5	20.32	20.24	20.21	20.05	20.23	19.84	0
8	DC-HSDPA	Subtest 1	20.32	20.24	20.22	20.07	20.22	19.79	0
8		Subtest 2	20.34	20.23	20.21	20.04	20.19	19.81	0
8		Subtest 3	19.84	19.74	19.67	19.59	19.73	19.31	0.5
8		Subtest 4	19.85	19.74	19.70	19.57	19.73	19.31	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 9-9
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	**24.97**	0	0
	1	50	24.70		0
	1	99	24.50		0
	50	0	**24.06**	0-1	1
	50	25	23.88		1
	50	50	23.75		1
	100	0	23.89		1
16QAM	1	0	24.31	0-1	1
	1	50	24.01		1
	1	99	23.78		1
	50	0	23.04	0-2	2
	50	25	22.87		2
	50	50	22.74		2
	100	0	22.88		2
64QAM	1	0	23.28	0-2	2
	1	50	22.96		2
	1	99	22.73		2
	50	0	22.03	0-3	3
	50	25	21.89		3
	50	50	21.75		3
	100	0	21.85		3
256QAM	1	0	20.19	0-5	5
	1	50	19.87		5
	1	99	19.61		5
	50	0	20.03		5
	50	25	19.84		5
	50	50	19.72		5
	100	0	19.84		5

Note: LTE Band 71 at 20 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 9-10
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	24.94	0	0
	1	36	24.85		0
	1	74	24.73		0
	36	0	23.99	0-1	1
	36	18	24.00		1
	36	37	23.89		1
	75	0	23.98		1
16QAM	1	0	24.23	0-1	1
	1	36	24.11		1
	1	74	24.06		1
	36	0	22.95	0-2	2
	36	18	23.00		2
	36	37	22.86		2
	75	0	22.94		2
64QAM	1	0	23.28	0-2	2
	1	36	23.11		2
	1	74	23.03		2
	36	0	22.01	0-3	3
	36	18	21.97		3
	36	37	21.86		3
	75	0	21.95		3
256QAM	1	0	20.15	0-5	5
	1	36	19.97		5
	1	74	19.90		5
	36	0	19.91		5
	36	18	19.92		5
	36	37	19.84		5
	75	0	19.93		5

Note: LTE Band 71 at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-11
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	24.65	24.69	24.70	0	0
	1	25	24.62	24.72	24.61		0
	1	49	24.54	24.56	24.49		0
	25	0	23.84	23.87	23.79	0-1	1
	25	12	23.78	23.82	23.75		1
	25	25	23.70	23.74	23.68		1
	50	0	23.76	23.82	23.71		1
16QAM	1	0	23.99	23.94	24.00	0-1	1
	1	25	23.88	23.99	23.91		1
	1	49	23.81	23.80	23.74		1
	25	0	22.82	22.82	22.76	0-2	2
	25	12	22.77	22.78	22.70		2
	25	25	22.66	22.67	22.66		2
	50	0	22.73	22.77	22.70		2
64QAM	1	0	22.91	23.01	22.97	0-2	2
	1	25	22.88	22.92	22.90		2
	1	49	22.82	22.82	22.77		2
	25	0	21.81	21.83	21.76	0-3	3
	25	12	21.77	21.77	21.69		3
	25	25	21.71	21.72	21.62		3
	50	0	21.73	21.80	21.71		3
256QAM	1	0	19.77	19.88	19.83	0-5	5
	1	25	19.79	19.86	19.69		5
	1	49	19.72	19.65	19.64		5
	25	0	19.76	19.80	19.73		5
	25	12	19.74	19.78	19.67		5
	25	25	19.65	19.69	19.56		5
	50	0	19.66	19.75	19.72		5

Table 9-12
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	24.50	24.58	24.53	0	0
	1	12	24.31	24.42	24.41		0
	1	24	24.36	24.51	24.59		0
	12	0	23.84	23.83	23.77	0-1	1
	12	6	23.81	23.83	23.79		1
	12	13	23.79	23.80	23.68		1
	25	0	23.88	23.81	23.75		1
16QAM	1	0	23.90	23.92	23.79	0-1	1
	1	12	23.81	23.86	23.80		1
	1	24	23.69	23.64	23.49		1
	12	0	22.88	22.90	22.76	0-2	2
	12	6	22.79	22.84	22.71		2
	12	13	22.73	22.79	22.71		2
	25	0	22.78	22.81	22.70		2
64QAM	1	0	22.90	22.88	22.62	0-2	2
	1	12	22.71	22.76	22.49		2
	1	24	22.77	22.67	22.55		2
	12	0	21.86	21.86	21.87	0-3	3
	12	6	21.82	21.80	21.69		3
	12	13	21.73	21.79	21.74		3
	25	0	21.81	21.83	21.75		3
256QAM	1	0	19.63	19.77	19.82	0-5	5
	1	12	19.59	19.82	19.87		5
	1	24	19.60	19.93	19.66		5
	12	0	19.71	19.82	19.67		5
	12	6	19.68	19.74	19.72		5
	12	13	19.65	19.72	19.66		5
	25	0	19.71	19.75	19.70		5

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9.4.2 LTE Band 12

Table 9-13
LTE Band 12 Conducted Powers - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channe 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.46**	0	0
	1	25	24.30		0
	1	49	24.30		0
	25	0	**23.61**	0-1	1
	25	12	23.54		1
	25	25	23.48		1
	50	0	23.55		1
16QAM	1	0	23.85	0-1	1
	1	25	23.83		1
	1	49	23.69		1
	25	0	22.53	0-2	2
	25	12	22.58		2
	25	25	22.34		2
	50	0	22.48		2
64QAM	1	0	22.82	0-2	2
	1	25	22.78		2
	1	49	22.66		2
	25	0	21.61	0-3	3
	25	12	21.47		3
	25	25	21.45		3
	50	0	21.52		3
256QAM	1	0	19.43	0-5	5
	1	25	19.55		5
	1	49	19.38		5
	25	0	19.61		5
	25	12	19.50		5
	25	25	19.43		5
	50	0	19.47		5

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 9-14
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	24.48	24.35	24.48	0	0
	1	12	24.09	24.21	24.40		0
	1	24	24.19	24.33	24.19		0
	12	0	23.84	23.60	23.72	0-1	1
	12	6	23.77	23.61	23.68		1
	12	13	23.71	23.57	23.69		1
	25	0	23.82	23.46	23.71		1
16QAM	1	0	23.76	23.64	23.85	0-1	1
	1	12	23.45	23.62	23.84		1
	1	24	23.42	23.69	23.55		1
	12	0	22.76	22.68	22.76	0-2	2
	12	6	22.70	22.63	22.71		2
	12	13	22.64	22.54	22.69		2
	25	0	22.71	22.65	22.72		2
64QAM	1	0	22.43	22.58	22.60	0-2	2
	1	12	22.31	22.47	22.60		2
	1	24	22.35	22.36	22.62		2
	12	0	21.74	21.67	21.77	0-3	3
	12	6	21.76	21.68	21.79		3
	12	13	21.73	21.59	21.50		3
	25	0	21.70	21.62	21.71		3
256QAM	1	0	19.47	19.58	19.77	0-5	5
	1	12	19.70	19.67	19.72		5
	1	24	19.50	19.53	19.52		5
	12	0	19.68	19.54	19.61		5
	12	6	19.70	19.60	19.66		5
	12	13	19.69	19.52	19.63		5
	25	0	19.70	19.57	19.62		5

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Table 9-15
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	24.50	24.58	24.53	0	0
	1	7	24.69	24.49	24.55		0
	1	14	24.65	24.47	24.24		0
	8	0	23.72	23.50	23.67	0-1	1
	8	4	23.74	23.58	23.70		1
	8	7	23.64	23.47	23.50		1
	15	0	23.70	23.59	23.67		1
16QAM	1	0	23.82	23.68	23.64	0-1	1
	1	7	23.79	23.79	23.62		1
	1	14	23.77	23.72	23.50		1
	8	0	22.83	22.51	22.65	0-2	2
	8	4	22.83	22.68	22.70		2
	8	7	22.62	22.53	22.69		2
	15	0	22.70	22.61	22.68		2
64QAM	1	0	22.60	22.78	22.62	0-2	2
	1	7	22.64	22.76	22.64		2
	1	14	22.73	22.64	22.70		2
	8	0	21.69	21.52	21.65	0-3	3
	8	4	21.73	21.56	21.63		3
	8	7	21.63	21.54	21.60		3
	15	0	21.81	21.67	21.69		3
256QAM	1	0	19.67	19.62	19.71	0-5	5
	1	7	19.71	19.70	19.77		5
	1	14	19.69	19.61	19.66		5
	8	0	19.73	19.57	19.59		5
	8	4	19.74	19.53	19.57		5
	8	7	19.62	19.47	19.49		5
	15	0	19.73	19.59	19.65		5

Table 9-16
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	24.41	24.43	24.39	0	0
	1	2	24.44	24.25	24.36		0
	1	5	24.32	24.33	24.12		0
	3	0	24.25	24.29	24.33		0
	3	2	24.44	24.42	24.20		0
	3	3	24.52	24.43	24.14		0
	6	0	23.65	23.36	23.47	0-1	1
16QAM	1	0	23.63	23.62	23.71	0-1	1
	1	2	23.55	23.65	23.69		1
	1	5	23.61	23.61	23.48		1
	3	0	23.67	23.50	23.40		1
	3	2	23.66	23.44	23.39		1
	3	3	23.66	23.39	23.35		1
	6	0	22.56	22.51	22.52	0-2	2
64QAM	1	0	22.64	22.58	22.49	0-2	2
	1	2	22.60	22.46	22.54		2
	1	5	22.45	22.51	22.47		2
	3	0	22.51	22.38	22.55		2
	3	2	22.46	22.41	22.57		2
	3	3	22.54	22.40	22.48		2
	6	0	21.53	21.42	21.49	0-3	3
256QAM	1	0	19.50	19.53	19.60	0-5	5
	1	2	19.62	19.51	19.61		5
	1	5	19.49	19.57	19.66		5
	3	0	19.38	19.39	19.44		5
	3	2	19.58	19.50	19.52		5
	3	3	19.42	19.39	19.50		5
	6	0	19.46	19.35	19.57		5

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9.4.3 LTE Band 13

Table 9-17
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	**24.53**	0	0
	1	25	24.35		0
	1	49	24.22		0
	25	0	**23.57**	0-1	1
	25	12	23.48		1
	25	25	23.41		1
	50	0	23.50		1
16QAM	1	0	23.75	0-1	1
	1	25	23.65		1
	1	49	23.51		1
	25	0	22.48	0-2	2
	25	12	22.45		2
	25	25	22.34		2
	50	0	22.42		2
64QAM	1	0	22.70	0-2	2
	1	25	22.59		2
	1	49	22.46		2
	25	0	21.50	0-3	3
	25	12	21.46		3
	25	25	21.38		3
	50	0	21.43		3
256QAM	1	0	19.63	0-5	5
	1	25	19.52		5
	1	49	19.41		5
	25	0	19.43		5
	25	12	19.40		5
	25	25	19.28		5
	50	0	19.37		5

Table 9-18
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	24.33	0	0
	1	12	24.22		0
	1	24	24.26		0
	12	0	23.28	0-1	1
	12	6	23.23		1
	12	13	23.23		1
	25	0	23.37		1
16QAM	1	0	23.47	0-1	1
	1	12	23.38		1
	1	24	23.45		1
	12	0	22.20	0-2	2
	12	6	22.19		2
	12	13	22.11		2
	25	0	22.13		2
64QAM	1	0	22.36	0-2	2
	1	12	22.35		2
	1	24	22.14		2
	12	0	21.18	0-3	3
	12	6	21.17		3
	12	13	21.12		3
	25	0	21.09		3
256QAM	1	0	19.24	0-5	5
	1	12	19.23		5
	1	24	19.19		5
	12	0	19.20		5
	12	6	19.09		5
	12	13	19.04		5
	25	0	19.00		5

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

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9.4.4 LTE Band 14

Table 9-19
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	24.53	0	0
	1	25	24.45		0
	1	49	**24.62**		0
	25	0	**23.74**	0-1	1
	25	12	23.71		1
	25	25	23.64		1
	50	0	23.72		1
16QAM	1	0	23.55	0-1	1
	1	25	23.84		1
	1	49	23.82		1
	25	0	22.75	0-2	2
	25	12	22.66		2
	25	25	22.54		2
	50	0	22.75		2
64QAM	1	0	22.51	0-2	2
	1	25	22.71		2
	1	49	22.84		2
	25	0	21.73	0-3	3
	25	12	21.65		3
	25	25	21.60		3
	50	0	21.77		3
256QAM	1	0	19.87	0-5	5
	1	25	19.80		5
	1	49	19.69		5
	25	0	19.73		5
	25	12	19.77		5
	25	25	19.62		5
	50	0	19.76		5

Table 9-20
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	24.53	0	0
	1	12	24.55		0
	1	24	24.49		0
	12	0	23.78	0-1	1
	12	6	23.70		1
	12	13	23.64		1
	25	0	23.58		1
16QAM	1	0	23.25	0-1	1
	1	12	23.46		1
	1	24	23.65		1
	12	0	22.24	0-2	2
	12	6	22.54		2
	12	13	22.63		2
	25	0	22.36		2
64QAM	1	0	22.41	0-2	2
	1	12	22.48		2
	1	24	22.50		2
	12	0	21.38	0-3	3
	12	6	21.45		3
	12	13	21.54		3
	25	0	21.55		3
256QAM	1	0	19.61	0-5	5
	1	12	19.42		5
	1	24	19.29		5
	12	0	19.22		5
	12	6	19.26		5
	12	13	19.29		5
	25	0	19.35		5

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

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9.4.5 LTE Band 26 (Cell)

Table 9-21
LTE Band 26 (Cell) Conducted Powers - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channe 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.71**	0	0
	1	36	24.57		0
	1	74	24.53		0
	36	0	**23.92**	0-1	1
	36	18	23.82		1
	36	37	23.72		1
	75	0	23.80		1
16QAM	1	0	24.09	0-1	1
	1	36	24.02		1
	1	74	23.84		1
	36	0	22.83	0-2	2
	36	18	22.79		2
	36	37	22.68		2
	75	0	22.76		2
64QAM	1	0	23.00	0-2	2
	1	36	22.90		2
	1	74	22.76		2
	36	0	21.82	0-3	3
	36	18	21.83		3
	36	37	21.67		3
	75	0	21.78		3
256QAM	1	0	19.91	0-5	5
	1	36	19.89		5
	1	74	19.72		5
	36	0	19.76		5
	36	18	19.74		5
	36	37	19.63		5
	75	0	19.72		5

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 9-22
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	24.74	24.67	24.98	0	0
	1	25	24.71	24.65	25.04		0
	1	49	24.60	24.65	24.93		0
	25	0	23.85	23.83	24.14	0-1	1
	25	12	23.80	23.80	24.12		1
	25	25	23.77	23.71	24.07		1
	50	0	23.81	23.78	24.09		1
16QAM	1	0	24.05	24.04	24.38	0-1	1
	1	25	24.00	23.97	24.32		1
	1	49	23.88	23.92	24.17		1
	25	0	22.85	22.80	23.13	0-2	2
	25	12	22.82	22.75	23.09		2
	25	25	22.71	22.69	23.00		2
	50	0	22.75	22.75	23.10		2
64QAM	1	0	23.02	23.01	23.35	0-2	2
	1	25	22.97	22.92	23.22		2
	1	49	22.83	22.85	23.23		2
	25	0	21.84	21.83	22.10	0-3	3
	25	12	21.78	21.73	22.07		3
	25	25	21.70	21.69	22.03		3
	50	0	21.79	21.77	22.09		3
256QAM	1	0	19.94	19.92	20.25	0-5	5
	1	25	19.90	19.82	20.13		5
	1	49	19.65	19.80	20.09		5
	25	0	19.80	19.84	20.11		5
	25	12	19.76	19.72	20.08		5
	25	25	19.60	19.68	20.03		5
	50	0	19.67	19.71	20.10		5

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Table 9-23
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	24.76	24.85	24.75	0	0
	1	12	24.73	24.79	24.69		0
	1	24	24.52	24.55	24.56		0
	12	0	23.89	23.84	23.81	0-1	1
	12	6	23.90	23.85	23.80		1
	12	13	23.84	23.75	23.79		1
	25	0	23.85	23.83	23.82		1
16QAM	1	0	23.88	23.95	23.88	0-1	1
	1	12	23.91	23.90	23.91		1
	1	24	24.07	23.99	23.95		1
	12	0	23.02	22.93	23.10	0-2	2
	12	6	22.95	22.97	23.06		2
	12	13	23.01	22.49	23.05		2
	25	0	23.02	22.86	23.07		2
64QAM	1	0	23.02	22.82	22.38	0-2	2
	1	12	22.43	22.70	22.27		2
	1	24	22.83	22.47	22.35		2
	12	0	21.97	21.83	21.98	0-3	3
	12	6	21.92	21.51	21.93		3
	12	13	21.80	21.86	21.92		3
	25	0	21.90	21.87	22.00		3
256QAM	1	0	19.97	19.81	19.95	0-5	5
	1	12	19.87	19.87	19.90		5
	1	24	19.83	19.90	19.87		5
	12	0	19.81	19.88	19.83		5
	12	6	19.78	19.83	19.83		5
	12	13	19.83	19.91	20.01		5
	25	0	19.88	19.82	20.00		5

Table 9-24
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	24.56	24.64	24.67	0	0
	1	7	24.48	24.41	24.73		0
	1	14	24.26	24.22	24.71		0
	8	0	23.72	23.75	23.94	0-1	1
	8	4	23.66	23.70	23.82		1
	8	7	23.59	23.69	23.82		1
	15	0	23.75	23.82	24.02		1
16QAM	1	0	23.81	23.70	24.08	0-1	1
	1	7	24.01	23.61	23.98		1
	1	14	23.98	23.91	23.92		1
	8	0	22.83	22.75	22.97	0-2	2
	8	4	22.85	22.76	23.01		2
	8	7	22.75	22.78	22.98		2
	15	0	22.90	22.84	23.01		2
64QAM	1	0	22.95	22.96	23.00	0-2	2
	1	7	22.96	22.76	22.91		2
	1	14	22.86	22.76	22.90		2
	8	0	21.69	21.66	22.03	0-3	3
	8	4	21.76	21.74	21.94		3
	8	7	21.70	21.58	21.90		3
	15	0	21.79	21.78	22.00		3
256QAM	1	0	19.80	20.00	20.14	0-5	5
	1	7	19.73	19.66	19.97		5
	1	14	19.77	19.94	19.80		5
	8	0	19.59	19.61	19.92		5
	8	4	19.79	19.71	19.95		5
	8	7	19.65	19.55	19.88		5
	15	0	19.60	19.77	19.94		5

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Table 9-25
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	24.75	24.82	0	0
	1	2	24.55	24.78	24.77		0
	1	5	24.84	24.74	24.87		0
	3	0	24.32	24.35	24.73		0
	3	2	24.24	24.60	24.76		0
	3	3	24.50	24.50	24.82		0
	6	0	23.78	23.74	23.84	0-1	1
16QAM	1	0	23.82	23.68	23.88	0-1	1
	1	2	23.94	23.56	23.95		1
	1	5	23.95	23.80	23.80		1
	3	0	23.59	23.70	23.96		1
	3	2	23.72	23.85	23.97		1
	3	3	23.53	23.69	23.95		1
	6	0	22.75	22.80	22.88	0-2	2
64QAM	1	0	22.82	22.83	22.74	0-2	2
	1	2	22.95	22.89	22.69		2
	1	5	22.95	22.82	22.50		2
	3	0	22.72	22.79	22.85		2
	3	2	22.85	22.89	23.00		2
	3	3	22.60	22.90	22.98		2
	6	0	21.63	21.81	21.82	0-3	3
256QAM	1	0	19.89	19.85	20.00	0-5	5
	1	2	19.98	19.70	19.98		5
	1	5	19.80	19.59	19.88		5
	3	0	19.76	19.44	19.69		5
	3	2	19.90	19.80	19.78		5
	3	3	19.92	19.71	19.80		5
	6	0	19.56	19.66	19.78		5

9.4.6 LTE Band 5 (Cell)

Table 9-26
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	24.82	0	0
	1	25	24.77		0
	1	49	**24.83**		0
	25	0	**23.98**	0-1	1
	25	12	23.91		1
	25	25	23.88		1
	50	0	23.93		1
16QAM	1	0	24.12	0-1	1
	1	25	24.09		1
	1	49	24.07		1
	25	0	22.92	0-2	2
	25	12	22.92		2
	25	25	22.82		2
	50	0	22.91		2
64QAM	1	0	23.09	0-2	2
	1	25	23.06		2
	1	49	23.05		2
	25	0	21.94	0-3	3
	25	12	21.89		3
	25	25	21.81		3
	50	0	21.97		3
256QAM	1	0	20.01	0-5	5
	1	25	19.98		5
	1	49	19.91		5
	25	0	19.96		5
	25	12	19.85		5
	25	25	19.83		5
	50	0	19.87		5

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

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Table 9-27
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	24.69	24.75	24.85	0	0
	1	12	24.63	24.70	24.72		0
	1	24	24.42	24.68	24.68		0
	12	0	24.06	24.08	24.25	0-1	1
	12	6	23.96	24.05	24.13		1
	12	13	24.05	23.98	24.08		1
	25	0	24.04	24.00	24.15		1
16QAM	1	0	23.79	23.95	24.21	0-1	1
	1	12	23.84	23.77	24.09		1
	1	24	23.85	23.68	23.98		1
	12	0	23.05	22.80	23.31	0-2	2
	12	6	22.97	23.02	23.12		2
	12	13	22.89	22.99	23.02		2
	25	0	23.00	23.00	23.14		2
64QAM	1	0	22.79	22.99	23.33	0-2	2
	1	12	22.65	22.63	23.21		2
	1	24	22.54	22.87	23.25		2
	12	0	22.02	21.83	22.29	0-3	3
	12	6	21.97	21.88	22.18		3
	12	13	21.95	21.98	22.26		3
	25	0	22.02	22.00	22.27		3
256QAM	1	0	19.71	20.02	19.95	0-5	5
	1	12	19.65	19.98	19.73		5
	1	24	19.69	19.89	19.88		5
	12	0	19.68	19.95	19.92		5
	12	6	19.81	19.99	19.61		5
	12	13	19.75	20.12	19.77		5
	25	0	19.60	20.01	19.80		5

Table 9-28
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	24.92	24.82	24.52	0	0
	1	7	24.70	24.88	24.68		0
	1	14	24.84	25.01	24.43		0
	8	0	23.98	24.03	24.14	0-1	1
	8	4	24.00	23.82	24.19		1
	8	7	23.89	23.91	24.13		1
	15	0	23.98	23.87	24.20		1
16QAM	1	0	23.83	23.95	24.28	0-1	1
	1	7	23.88	24.05	23.98		1
	1	14	24.00	23.95	23.76		1
	8	0	23.11	23.08	23.23	0-2	2
	8	4	23.03	23.12	23.25		2
	8	7	22.98	22.98	23.27		2
	15	0	22.95	22.94	23.12		2
64QAM	1	0	22.89	22.82	23.22	0-2	2
	1	7	22.79	22.85	23.21		2
	1	14	22.89	22.98	23.25		2
	8	0	22.01	21.92	22.23	0-3	3
	8	4	22.03	22.00	22.11		3
	8	7	21.95	21.78	22.16		3
	15	0	22.03	21.96	22.18		3
256QAM	1	0	19.98	19.98	20.23	0-5	5
	1	7	19.86	19.75	20.16		5
	1	14	19.76	19.87	20.22		5
	8	0	19.78	19.90	20.20		5
	8	4	19.84	19.91	20.18		5
	8	7	19.88	19.97	20.12		5
	15	0	19.95	20.00	20.15		5

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Table 9-29
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	24.78	24.73	24.82	0	0
	1	2	24.72	24.85	24.91		0
	1	5	24.83	24.69	24.73		0
	3	0	24.60	24.84	24.90		0
	3	2	24.72	24.88	25.00		0
	3	3	24.69	24.96	24.98		0
	6	0	24.12	23.98	24.03	0-1	1
16QAM	1	0	23.88	24.12	24.23	0-1	1
	1	2	23.63	24.22	24.20		1
	1	5	23.78	24.18	24.06		1
	3	0	23.77	23.84	23.98		1
	3	2	23.79	23.89	24.00		1
	3	3	23.82	23.75	24.02		1
	6	0	22.82	22.97	22.98	0-2	2
64QAM	1	0	22.73	23.18	23.12	0-2	2
	1	2	22.72	23.20	23.01		2
	1	5	22.78	23.22	23.07		2
	3	0	22.74	22.81	23.08		2
	3	2	22.95	22.78	23.09		2
	3	3	22.91	22.84	23.04		2
	6	0	21.86	21.85	21.98	0-3	3
256QAM	1	0	19.65	20.13	20.12	0-5	5
	1	2	19.45	20.12	20.33		5
	1	5	19.43	20.16	20.32		5
	3	0	19.70	19.95	20.00		5
	3	2	19.78	19.98	19.98		5
	3	3	19.72	19.99	19.95		5
	6	0	19.73	19.88	19.94		5

9.4.7 LTE Band 66 (AWS)

Table 9-30
LTE Band 66 (AWS) Max Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.56	23.58	24.52	0	0
	1	50	24.28	**24.54**	24.44		0
	1	99	23.62	23.57	24.52		0
	50	0	23.30	23.43	23.31	0-1	1
	50	25	23.33	**23.57**	23.56		1
	50	50	23.11	23.43	23.22		1
	100	0	23.14	23.39	23.27		1
16QAM	1	0	22.60	22.97	23.62	0-1	1
	1	50	23.52	23.56	23.61		1
	1	99	22.92	23.09	23.63		1
	50	0	22.20	22.47	22.37	0-2	2
	50	25	22.40	22.57	22.47		2
	50	50	22.22	22.42	22.28		2
	100	0	22.21	22.43	22.28		2
64QAM	1	0	21.60	22.00	22.64	0-2	2
	1	50	22.54	22.56	22.55		2
	1	99	21.93	22.07	22.61		2
	50	0	21.20	21.48	21.31	0-3	3
	50	25	21.41	21.57	21.52		3
	50	50	21.21	21.42	21.27		3
	100	0	21.20	21.43	21.27		3
256QAM	1	0	18.55	18.62	19.74	0-5	5
	1	50	19.28	19.50	19.75		5
	1	99	19.08	18.74	19.70		5
	50	0	19.10	19.35	19.08		5
	50	25	19.10	19.53	19.22		5
	50	50	18.99	19.14	19.06		5
	100	0	18.97	19.25	19.25		5

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Table 9-31
LTE Band 66 (AWS) Max Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.64	23.52	23.82	0	0
	1	36	24.14	24.21	24.31		0
	1	74	23.61	23.50	23.81		0
	36	0	23.21	23.40	23.40	0-1	1
	36	18	23.34	23.46	23.49		1
	36	37	23.23	23.43	23.36		1
	75	0	23.27	23.46	23.38		1
16QAM	1	0	22.72	22.99	23.65	0-1	1
	1	36	23.48	23.40	23.57		1
	1	74	23.02	23.01	23.64		1
	36	0	22.25	22.47	22.39	0-2	2
	36	18	22.37	22.48	22.54		2
	36	37	22.28	22.42	22.37		2
	75	0	22.24	22.44	22.39		2
64QAM	1	0	21.89	22.19	22.60	0-2	2
	1	36	22.48	22.49	22.58		2
	1	74	22.02	22.14	22.64		2
	36	0	21.26	21.49	21.43	0-3	3
	36	18	21.41	21.49	21.54		3
	36	37	21.31	21.44	21.43		3
	75	0	21.25	21.44	21.39		3
256QAM	1	0	18.73	18.87	19.45	0-5	5
	1	36	19.45	19.41	19.55		5
	1	74	18.90	18.92	19.44		5
	36	0	19.10	19.37	19.09		5
	36	18	19.14	19.42	19.25		5
	36	37	19.07	19.21	19.13		5
	75	0	19.02	19.22	19.24		5

Table 9-32
LTE Band 66 (AWS) Max Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.37	23.08	23.50	0	0
	1	25	24.03	24.00	24.13		0
	1	49	23.51	23.13	23.49		0
	25	0	22.88	22.86	23.05	0-1	1
	25	12	23.13	23.06	23.26		1
	25	25	22.91	22.84	23.05		1
	50	0	22.95	22.87	23.10		1
16QAM	1	0	22.63	22.52	22.76	0-1	1
	1	25	23.34	23.04	23.46		1
	1	49	22.74	22.54	22.75		1
	25	0	21.94	21.84	22.08	0-2	2
	25	12	22.17	22.05	22.29		2
	25	25	21.92	21.82	22.07		2
	50	0	21.94	21.86	22.07		2
64QAM	1	0	21.58	21.56	21.74	0-2	2
	1	25	22.33	22.04	22.49		2
	1	49	21.73	21.52	21.76		2
	25	0	20.93	20.88	21.09	0-3	3
	25	12	21.14	21.02	21.30		3
	25	25	20.94	20.83	21.08		3
	50	0	20.96	20.85	21.08		3
256QAM	1	0	18.47	18.24	19.19	0-5	5
	1	25	19.13	19.04	19.43		5
	1	49	18.64	18.46	19.30		5
	25	0	19.05	18.91	19.17		5
	25	12	19.10	19.00	19.21		5
	25	25	19.00	18.86	19.16		5
	50	0	18.89	18.90	19.10		5

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Table 9-33
LTE Band 66 (AWS) Max Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.66	23.56	23.82	0	0
	1	12	23.97	24.36	24.15		0
	1	24	23.78	23.60	23.79		0
	12	0	23.04	23.42	23.21	0-1	1
	12	6	23.21	23.48	23.35		1
	12	13	23.13	23.41	23.23		1
	25	0	23.14	23.46	23.27		1
16QAM	1	0	22.72	23.03	23.30	0-1	1
	1	12	23.33	23.54	23.50		1
	1	24	23.17	23.20	23.22		1
	12	0	22.12	22.50	22.29	0-2	2
	12	6	22.11	22.48	22.34		2
	12	13	22.10	22.50	22.30		2
	25	0	22.14	22.42	22.29		2
64QAM	1	0	21.82	22.12	22.24	0-2	2
	1	12	22.25	22.50	22.48		2
	1	24	22.03	22.24	22.20		2
	12	0	21.15	21.51	21.31	0-3	3
	12	6	21.12	21.50	21.33		3
	12	13	21.10	21.48	21.31		3
	25	0	21.16	21.44	21.29		3
256QAM	1	0	18.74	18.81	19.38	0-5	5
	1	12	19.10	19.49	19.46		5
	1	24	18.90	18.83	19.26		5
	12	0	19.05	19.34	19.08		5
	12	6	18.97	19.40	19.19		5
	12	13	19.07	19.32	19.14		5
	25	0	18.85	19.45	19.02		5

Table 9-34
LTE Band 66 (AWS) Max Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.60	23.57	23.72	0	0
	1	7	24.01	24.21	24.18		0
	1	14	23.57	23.60	23.63		0
	8	0	22.98	23.40	23.27	0-1	1
	8	4	23.10	23.39	23.33		1
	8	7	23.12	23.39	23.20		1
	15	0	23.21	23.52	23.34		1
16QAM	1	0	23.00	23.36	23.46	0-1	1
	1	7	23.28	23.54	23.47		1
	1	14	23.28	23.49	23.51		1
	8	0	22.20	22.51	22.36	0-2	2
	8	4	22.26	22.53	22.39		2
	8	7	22.23	22.56	22.27		2
	15	0	22.17	22.48	22.32		2
64QAM	1	0	22.02	22.37	22.45	0-2	2
	1	7	22.29	22.50	22.44		2
	1	14	22.16	22.38	22.45		2
	8	0	21.14	21.51	21.33	0-3	3
	8	4	21.22	21.53	21.40		3
	8	7	21.20	21.56	21.35		3
	15	0	21.19	21.48	21.25		3
256QAM	1	0	18.81	18.90	19.25	0-5	5
	1	7	19.17	19.41	19.47		5
	1	14	19.06	18.99	19.42		5
	8	0	19.20	19.45	19.13		5
	8	4	19.25	19.52	19.15		5
	8	7	19.27	19.29	19.17		5
	15	0	19.12	19.30	19.06		5

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Table 9-35
LTE Band 66 (AWS) Max Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.64	23.56	23.82	0	0
	1	2	23.90	24.34	24.13		0
	1	5	23.82	23.66	23.82		0
	3	0	23.85	24.23	24.07		0
	3	2	23.94	24.37	24.15		0
	3	3	23.89	24.33	24.10		0
	6	0	23.11	23.42	23.27	0-1	1
16QAM	1	0	22.76	23.21	23.38	0-1	1
	1	2	23.29	23.56	23.45		1
	1	5	23.12	23.30	23.37		1
	3	0	23.21	23.52	23.31		1
	3	2	23.18	23.40	23.34		1
	3	3	23.19	23.55	23.34		1
	6	0	22.18	22.50	22.32	0-2	2
64QAM	1	0	21.77	22.19	22.38	0-2	2
	1	2	22.23	22.45	22.47		2
	1	5	22.00	22.20	22.39		2
	3	0	22.18	22.53	22.36		2
	3	2	22.23	22.55	22.43		2
	3	3	22.14	22.55	22.34		2
	6	0	21.12	21.43	21.30	0-3	3
256QAM	1	0	18.90	18.97	19.21	0-5	5
	1	2	19.05	19.42	19.50		5
	1	5	18.96	19.03	19.32		5
	3	0	19.11	19.45	19.25		5
	3	2	19.25	19.31	19.17		5
	3	3	19.17	19.45	19.14		5
	6	0	19.06	19.37	19.02		5

Table 9-36
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.81	18.96	**19.64**	0	0
	1	50	19.34	19.48	19.36		0
	1	99	18.76	18.91	19.47		0
	50	0	19.26	19.54	19.31	0-1	0
	50	25	19.32	19.69	**19.72**		0
	50	50	19.34	19.53	19.30		0
	100	0	19.28	19.49	19.40		0
16QAM	1	0	18.71	19.07	19.73	0-1	0
	1	50	19.67	19.87	19.69		0
	1	99	19.03	19.21	19.76		0
	50	0	19.29	19.60	19.46	0-2	0
	50	25	19.43	19.65	19.63		0
	50	50	19.29	19.52	19.41		0
	100	0	19.30	19.54	19.44		0
64QAM	1	0	18.79	19.02	19.65	0-2	0
	1	50	19.36	19.68	19.52		0
	1	99	18.92	19.15	19.65		0
	50	0	19.33	19.61	19.53	0-3	0
	50	25	19.52	19.80	19.68		0
	50	50	19.33	19.58	19.44		0
	100	0	19.33	19.60	19.44		0
256QAM	1	0	18.70	18.63	19.49	0-5	0.5
	1	50	18.78	18.81	19.44		0.5
	1	99	18.59	18.79	19.44		0.5
	50	0	18.81	19.01	19.27		0.5
	50	25	19.01	19.12	19.44		0.5
	50	50	18.85	18.97	19.23		0.5
	100	0	18.88	18.85	19.21		0.5

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Table 9-37
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.94	19.28	18.97	0	0
	1	36	19.35	19.62	19.44		0
	1	74	19.03	19.23	19.00		0
	36	0	19.33	19.67	19.52	0-1	0
	36	18	19.46	19.80	19.67		0
	36	37	19.36	19.67	19.52		0
	75	0	19.39	19.67	19.54		0
16QAM	1	0	18.95	19.27	19.82	0-1	0
	1	36	19.64	19.96	19.76		0
	1	74	19.29	19.42	19.81		0
	36	0	19.38	19.68	19.54	0-2	0
	36	18	19.50	19.77	19.67		0
	36	37	19.38	19.68	19.52		0
	75	0	19.40	19.68	19.51		0
64QAM	1	0	19.00	19.40	19.75	0-2	0
	1	36	19.59	19.92	19.75		0
	1	74	19.28	19.38	19.75		0
	36	0	19.37	19.65	19.56	0-3	0
	36	18	19.52	19.83	19.66		0
	36	37	19.42	19.70	19.53		0
	75	0	19.36	19.69	19.51		0
256QAM	1	0	18.96	18.83	19.26	0-5	0.5
	1	36	19.10	19.32	19.02		0.5
	1	74	18.88	19.02	19.10		0.5
	36	0	19.05	19.35	19.05		0.5
	36	18	19.05	19.33	19.05		0.5
	36	37	19.00	19.25	19.00		0.5
	75	0	19.03	19.30	18.98		0.5

Table 9-38
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.73	18.95	18.53	0	0
	1	25	19.15	19.39	19.29		0
	1	49	18.62	18.97	18.61		0
	25	0	18.89	19.33	19.17	0-1	0
	25	12	19.18	19.53	19.40		0
	25	25	19.21	19.31	19.15		0
	50	0	19.04	19.26	19.11		0
16QAM	1	0	18.68	19.10	18.96	0-1	0
	1	25	19.52	19.59	19.38		0
	1	49	18.82	19.01	18.89		0
	25	0	19.10	19.41	19.05	0-2	0
	25	12	19.33	19.64	19.28		0
	25	25	19.10	19.40	19.00		0
	50	0	19.10	19.42	19.04		0
64QAM	1	0	18.68	19.13	18.78	0-2	0
	1	25	19.48	19.53	19.47		0
	1	49	18.89	19.10	18.88		0
	25	0	19.09	19.45	19.27	0-3	0
	25	12	19.28	19.67	19.29		0
	25	25	19.12	19.42	19.23		0
	50	0	19.12	19.45	19.28		0
256QAM	1	0	19.00	19.35	18.96	0-5	0.5
	1	25	19.04	19.21	18.87		0.5
	1	49	18.97	19.23	18.81		0.5
	25	0	18.85	19.18	18.83		0.5
	25	12	18.90	19.17	18.78		0.5
	25	25	18.86	19.12	18.75		0.5
	50	0	18.85	19.10	18.73		0.5

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Table 9-39
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.92	19.23	18.96	0	0
	1	12	19.25	19.58	19.37		0
	1	24	19.03	19.31	18.87		0
	12	0	19.20	19.59	19.47	0-1	0
	12	6	19.36	19.68	19.54		0
	12	13	19.31	19.59	19.45		0
	25	0	19.32	19.62	19.47		0
16QAM	1	0	19.01	19.29	19.17	0-1	0
	1	12	19.43	19.82	19.68		0
	1	24	19.29	19.58	19.32		0
	12	0	19.35	19.62	19.47	0-2	0
	12	6	19.24	19.64	19.51		0
	12	13	19.28	19.65	19.44		0
	25	0	19.28	19.61	19.46		0
64QAM	1	0	18.90	19.28	19.50	0-2	0
	1	12	19.45	19.85	19.67		0
	1	24	19.11	19.35	19.42		0
	12	0	19.32	19.66	19.54	0-3	0
	12	6	19.28	19.67	19.53		0
	12	13	19.27	19.64	19.53		0
	25	0	19.35	19.56	19.49		0
256QAM	1	0	18.80	18.84	19.24	0-5	0.5
	1	12	19.13	19.07	19.18		0.5
	1	24	18.74	18.90	19.20		0.5
	12	0	19.02	19.19	18.78		0.5
	12	6	19.05	19.16	18.82		0.5
	12	13	19.03	19.11	18.69		0.5
	25	0	19.04	19.12	18.88		0.5

Table 9-40
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.01	19.23	18.89	0	0
	1	7	19.20	19.54	19.30		0
	1	14	18.88	19.26	18.93		0
	8	0	19.26	19.65	19.46	0-1	0
	8	4	19.36	19.72	19.50		0
	8	7	19.32	19.67	19.47		0
	15	0	19.34	19.68	19.11		0
16QAM	1	0	18.97	19.21	19.40	0-1	0
	1	7	19.43	19.89	19.59		0
	1	14	19.30	19.42	19.46		0
	8	0	19.29	19.69	19.52	0-2	0
	8	4	19.39	19.70	19.58		0
	8	7	19.38	19.73	19.51		0
	15	0	19.33	19.64	19.49		0
64QAM	1	0	19.00	19.46	19.19	0-2	0
	1	7	19.43	19.83	19.63		0
	1	14	19.28	19.50	19.16		0
	8	0	19.31	19.70	19.57	0-3	0
	8	4	19.38	19.74	19.60		0
	8	7	19.37	19.75	19.56		0
	15	0	19.38	19.67	19.54		0
256QAM	1	0	18.94	18.91	19.23	0-5	0.5
	1	7	19.01	19.22	19.00		0.5
	1	14	18.83	19.00	19.07		0.5
	8	0	18.95	19.18	18.76		0.5
	8	4	18.96	19.15	18.75		0.5
	8	7	18.93	19.12	18.70		0.5
	15	0	18.98	19.12	18.77		0.5

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Table 9-41
LTE Band 66 (AWS) Reduced Conducted Powers - 1.4 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.90	19.34	18.76	0	0
	1	2	19.06	19.46	19.24		0
	1	5	18.97	19.29	18.91		0
	3	0	19.01	19.38	19.19		0
	3	2	19.08	19.52	19.29		0
	3	3	19.08	19.43	19.25		0
	6	0	19.26	19.55	19.39	0-1	0
16QAM	1	0	18.98	19.45	19.33	0-1	0
	1	2	19.43	19.85	19.59		0
	1	5	19.38	19.51	19.38		0
	3	0	19.30	19.61	19.45		0
	3	2	19.29	19.74	19.47		0
	3	3	19.28	19.71	19.44		0
	6	0	19.29	19.62	19.49	0-2	0
64QAM	1	0	18.89	19.30	19.21	0-2	0
	1	2	19.39	19.78	19.60		0
	1	5	19.21	19.39	19.20		0
	3	0	19.28	19.70	19.48		0
	3	2	19.40	19.78	19.56		0
	3	3	19.30	19.74	19.54		0
	6	0	19.25	19.60	19.41	0-3	0
256QAM	1	0	19.00	18.90	19.21	0-5	0.5
	1	2	19.00	19.00	19.15		0.5
	1	5	18.72	18.92	19.14		0.5
	3	0	18.92	19.20	18.72		0.5
	3	2	19.05	19.20	18.84		0.5
	3	3	18.97	19.12	18.75		0.5
	6	0	18.85	19.02	18.70		0.5

9.4.8 LTE Band 25 (PCS)

Table 9-42
LTE Band 25 (PCS) Max 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	**24.34**	24.24	24.03	0	0
	1	50	24.17	24.17	23.92		0
	1	99	24.33	24.16	24.07		0
	50	0	**23.44**	23.43	23.32	0-1	1
	50	25	23.36	23.37	23.22		1
	50	50	23.34	23.33	23.17		1
	100	0	23.38	23.37	23.21		1
16QAM	1	0	23.77	23.54	23.47	0-1	1
	1	50	23.54	23.44	23.40		1
	1	99	23.64	23.24	23.36		1
	50	0	22.38	22.47	22.27	0-2	2
	50	25	22.33	22.36	22.18		2
	50	50	22.27	22.30	22.23		2
	100	0	22.36	22.35	22.23		2
64QAM	1	0	22.70	22.38	22.36	0-2	2
	1	50	22.39	22.30	22.10		2
	1	99	22.57	22.28	22.19		2
	50	0	21.40	21.34	21.24	0-3	3
	50	25	21.32	21.30	21.17		3
	50	50	21.34	21.26	21.12		3
	100	0	21.30	21.31	21.19		3
256QAM	1	0	19.50	19.37	19.33	0-5	5
	1	50	19.14	19.45	19.04		5
	1	99	19.40	19.20	19.33		5
	50	0	19.18	19.28	19.14		5
	50	25	19.44	19.22	19.10		5
	50	50	19.13	19.21	19.07		5
	100	0	19.27	19.30	19.09		5

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Table 9-43
LTE Band 25 (PCS) Max 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	24.28	24.30	24.14	0	0
	1	36	24.19	24.25	24.03		0
	1	74	24.23	24.26	24.12		0
	36	0	23.52	23.54	23.33	0-1	1
	36	18	23.50	23.55	23.33		1
	36	37	23.50	23.50	23.32		1
	75	0	23.55	23.56	23.34		1
16QAM	1	0	23.80	23.80	23.56	0-1	1
	1	36	23.64	23.69	23.40		1
	1	74	23.73	23.71	23.45		1
	36	0	22.59	22.59	22.38	0-2	2
	36	18	22.60	22.58	22.35		2
	36	37	22.52	22.56	22.34		2
	75	0	22.51	22.58	22.36		2
64QAM	1	0	22.82	22.81	22.56	0-2	2
	1	36	22.68	22.69	22.41		2
	1	74	22.65	22.65	22.47		2
	36	0	21.60	21.61	21.40	0-3	3
	36	18	21.63	21.62	21.39		3
	36	37	21.54	21.56	21.34		3
	75	0	21.55	21.56	21.35		3
256QAM	1	0	19.24	19.33	19.32	0-5	5
	1	36	19.35	19.35	19.27		5
	1	74	19.38	19.38	19.29		5
	36	0	19.46	19.45	19.28		5
	36	18	19.32	19.44	19.25		5
	36	37	19.38	19.41	19.20		5
	75	0	19.37	19.32	19.24		5

Table 9-44
LTE Band 25 (PCS) Max 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	24.24	24.25	23.87	0	0
	1	25	24.24	24.26	23.87		0
	1	49	24.19	24.22	23.91		0
	25	0	23.30	23.36	23.03	0-1	1
	25	12	23.32	23.35	23.02		1
	25	25	23.31	23.29	23.02		1
	50	0	23.34	23.35	23.12		1
16QAM	1	0	23.51	23.50	23.27	0-1	1
	1	25	23.52	23.52	23.29		1
	1	49	23.50	23.46	23.28		1
	25	0	22.35	22.34	22.11	0-2	2
	25	12	22.37	22.37	22.10		2
	25	25	22.33	22.32	22.09		2
	50	0	22.32	22.38	22.10		2
64QAM	1	0	22.65	22.57	22.31	0-2	2
	1	25	22.46	22.51	22.29		2
	1	49	22.51	22.49	22.26		2
	25	0	21.37	21.37	21.13	0-3	3
	25	12	21.37	21.38	21.12		3
	25	25	21.33	21.33	21.11		3
	50	0	21.33	21.36	21.15		3
256QAM	1	0	19.38	19.26	19.22	0-5	5
	1	25	19.35	19.38	19.35		5
	1	49	19.34	19.26	19.40		5
	25	0	19.34	19.21	19.08		5
	25	12	19.27	19.31	19.15		5
	25	25	19.21	19.29	19.04		5
	50	0	19.19	19.22	19.02		5

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Table 9-45
LTE Band 25 (PCS) Max 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	24.26	24.01	23.92	0	0
	1	12	24.33	24.07	23.64		0
	1	24	24.28	24.18	23.65		0
	12	0	23.47	23.55	23.26	0-1	1
	12	6	23.51	23.50	23.30		1
	12	13	23.47	23.43	23.28		1
	25	0	23.52	23.52	23.27		1
16QAM	1	0	23.67	23.21	23.21	0-1	1
	1	12	23.35	23.42	23.04		1
	1	24	23.34	23.38	23.26		1
	12	0	22.57	22.52	22.28	0-2	2
	12	6	22.61	22.58	22.38		2
	12	13	22.47	22.49	22.27		2
	25	0	22.53	22.45	22.24		2
64QAM	1	0	22.48	22.73	22.53	0-2	2
	1	12	22.29	22.54	22.32		2
	1	24	22.45	22.46	22.28		2
	12	0	21.52	21.53	21.29	0-3	3
	12	6	21.59	21.52	21.29		3
	12	13	21.61	21.49	21.36		3
	25	0	21.43	21.56	21.25		3
256QAM	1	0	19.40	19.42	19.25	0-5	5
	1	12	19.34	19.24	19.34		5
	1	24	19.22	19.33	19.21		5
	12	0	19.28	19.36	19.17		5
	12	6	19.34	19.38	19.18		5
	12	13	19.31	19.24	19.13		5
	25	0	19.29	19.20	19.13		5

Table 9-46
LTE Band 25 (PCS) Max Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.97	24.15	23.93	0	0
	1	7	24.05	23.92	24.07		0
	1	14	24.43	24.46	23.72		0
	8	0	23.37	23.39	23.27	0-1	1
	8	4	23.32	23.37	23.19		1
	8	7	23.30	23.34	23.13		1
	15	0	23.52	23.49	23.20		1
16QAM	1	0	23.65	23.59	23.16	0-1	1
	1	7	23.35	23.34	23.03		1
	1	14	23.69	23.61	23.21		1
	8	0	22.63	22.51	22.25	0-2	2
	8	4	22.58	22.61	22.30		2
	8	7	22.44	22.48	22.19		2
	15	0	22.44	22.46	22.26		2
64QAM	1	0	22.75	22.39	22.37	0-2	2
	1	7	22.68	22.64	22.40		2
	1	14	22.61	22.65	22.24		2
	8	0	21.46	21.60	21.30	0-3	3
	8	4	21.52	21.62	21.29		3
	8	7	21.58	21.54	21.34		3
	15	0	21.51	21.44	21.31		3
256QAM	1	0	19.25	19.44	19.12	0-5	5
	1	7	19.18	19.16	19.37		5
	1	14	19.36	19.38	19.32		5
	8	0	19.38	19.34	19.24		5
	8	4	19.27	19.37	19.22		5
	8	7	19.14	19.15	19.24		5
	15	0	19.45	19.27	19.12		5

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Table 9-47
LTE Band 25 (PCS) Max Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.98	24.31	24.03	0	0
	1	2	24.08	24.10	24.05		0
	1	5	23.98	24.39	24.19		0
	3	0	24.05	23.97	23.87		0
	3	2	24.15	24.10	23.82		0
	3	3	24.12	24.10	23.83		0
	6	0	23.44	23.34	22.97	0-1	1
16QAM	1	0	23.72	23.73	23.32	0-1	1
	1	2	23.70	23.70	23.49		1
	1	5	23.67	23.57	23.48		1
	3	0	23.24	23.09	23.12		1
	3	2	23.27	23.36	23.35		1
	3	3	23.46	23.23	23.26		1
	6	0	22.46	22.30	22.09	0-2	2
64QAM	1	0	22.75	22.65	22.46	0-2	2
	1	2	22.68	22.65	22.49		2
	1	5	22.67	22.49	22.33		2
	3	0	22.22	22.15	22.01		2
	3	2	22.20	22.38	21.94		2
	3	3	22.30	22.20	22.10		2
	6	0	21.38	21.34	20.97	0-3	3
256QAM	1	0	19.24	19.21	19.42	0-5	5
	1	2	19.21	19.34	19.35		5
	1	5	19.21	19.41	19.22		5
	3	0	19.17	19.31	19.15		5
	3	2	19.42	19.18	19.21		5
	3	3	19.27	19.34	19.44		5
	6	0	19.25	19.28	19.25		5

Table 9-48
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.24	**20.35**	20.22	0	0
	1	50	20.03	20.20	20.00		0
	1	99	20.12	20.19	20.01		0
	50	0	20.26	**20.45**	20.25	0-1	0
	50	25	20.20	20.42	20.20		0
	50	50	20.24	20.35	20.18		0
	100	0	20.21	20.34	20.21		0
16QAM	1	0	20.43	20.47	20.37	0-1	0
	1	50	20.30	20.43	20.31		0
	1	99	20.50	20.49	20.37		0
	50	0	20.24	20.46	20.28	0-2	0
	50	25	20.20	20.40	20.20		0
	50	50	20.16	20.37	20.17		0
	100	0	20.23	20.44	20.25		0
64QAM	1	0	20.44	20.45	20.46	0-2	0
	1	50	20.29	20.44	20.32		0
	1	99	20.41	20.44	20.28		0
	50	0	20.30	20.40	20.33	0-3	0
	50	25	20.24	20.45	20.22		0
	50	50	20.21	20.43	20.22		0
	100	0	20.22	20.46	20.31		0
256QAM	1	0	19.50	19.47	19.45	0-5	0.5
	1	50	19.48	19.41	19.29		0.5
	1	99	19.46	19.46	19.27		0.5
	50	0	19.44	19.43	19.32		0.5
	50	25	19.38	19.45	19.22		0.5
	50	50	19.36	19.31	19.19		0.5
	100	0	19.40	19.47	19.22		0.5

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Table 9-49
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.10	20.25	20.19	0	0
	1	36	19.96	20.21	20.05		0
	1	74	20.04	20.25	20.11		0
	36	0	19.93	20.41	20.15	0-1	0
	36	18	19.93	20.42	20.14		0
	36	37	19.88	20.36	20.13		0
	75	0	19.93	20.42	20.18		0
16QAM	1	0	20.11	20.43	20.19	0-1	0
	1	36	20.02	20.50	20.13		0
	1	74	20.11	20.41	20.16		0
	36	0	19.94	20.41	20.17	0-2	0
	36	18	19.91	20.40	20.21		0
	36	37	19.87	20.36	20.13		0
	75	0	19.96	20.44	20.16		0
64QAM	1	0	20.35	20.49	20.35	0-2	0
	1	36	20.18	20.44	20.23		0
	1	74	20.27	20.48	20.21		0
	36	0	20.29	20.43	20.14	0-3	0
	36	18	20.12	20.43	20.17		0
	36	37	20.13	20.46	20.06		0
	75	0	20.11	20.49	20.14		0
256QAM	1	0	19.25	19.44	19.26	0-5	0.5
	1	36	19.12	19.49	19.12		0.5
	1	74	19.17	19.46	19.16		0.5
	36	0	19.05	19.44	19.05		0.5
	36	18	19.03	19.50	19.10		0.5
	36	37	19.09	19.42	19.02		0.5
	75	0	19.12	19.47	19.06		0.5

Table 9-50
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.70	20.08	19.82	0	0
	1	25	19.57	20.11	19.72		0
	1	49	19.59	20.14	19.86		0
	25	0	19.65	20.19	19.95	0-1	0
	25	12	19.68	20.20	19.94		0
	25	25	19.66	20.17	19.96		0
	50	0	19.71	20.19	19.92		0
16QAM	1	0	20.09	20.38	20.21	0-1	0
	1	25	19.93	20.41	20.11		0
	1	49	19.92	20.43	20.20		0
	25	0	19.73	20.31	20.03	0-2	0
	25	12	19.74	20.28	20.04		0
	25	25	19.72	20.27	20.00		0
	50	0	19.73	20.21	19.98		0
64QAM	1	0	20.22	20.48	20.41	0-2	0
	1	25	20.19	20.50	20.38		0
	1	49	20.41	20.41	20.40		0
	25	0	20.07	20.46	20.20	0-3	0
	25	12	20.01	20.42	20.17		0
	25	25	20.02	20.45	20.23		0
	50	0	20.08	20.41	20.29		0
256QAM	1	0	19.36	19.43	19.37	0-5	0.5
	1	25	19.37	19.46	19.29		0.5
	1	49	19.26	19.45	19.31		0.5
	25	0	19.19	19.46	19.16		0.5
	25	12	19.27	19.41	19.18		0.5
	25	25	19.14	19.47	19.22		0.5
	50	0	19.22	19.49	19.23		0.5

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Table 9-51
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.87	20.24	19.91	0	0
	1	12	19.59	20.00	19.60		0
	1	24	19.95	20.17	19.98		0
	12	0	19.74	20.18	19.99	0-1	0
	12	6	19.71	20.26	20.02		0
	12	13	19.72	20.19	20.03		0
	25	0	19.83	20.21	19.94		0
16QAM	1	0	19.79	19.96	20.36	0-1	0
	1	12	19.63	19.88	20.08		0
	1	24	19.86	20.08	20.32		0
	12	0	20.04	20.31	20.01	0-2	0
	12	6	20.01	20.29	19.84		0
	12	13	19.98	20.33	19.99		0
	25	0	19.94	20.26	20.10		0
64QAM	1	0	20.31	20.46	20.08	0-2	0
	1	12	20.18	20.37	20.03		0
	1	24	20.27	20.50	19.98		0
	12	0	20.04	20.34	20.23	0-3	0
	12	6	20.13	20.32	20.26		0
	12	13	20.12	20.28	20.19		0
	25	0	20.08	20.29	20.21		0
256QAM	1	0	19.29	19.20	19.14	0-5	0.5
	1	12	19.33	19.27	19.26		0.5
	1	24	19.22	19.42	19.21		0.5
	12	0	19.30	19.25	19.27		0.5
	12	6	19.33	19.24	19.27		0.5
	12	13	19.37	19.25	19.22		0.5
	25	0	19.18	19.26	19.20		0.5

Table 9-52
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.82	20.23	19.93	0	0
	1	7	19.91	20.06	19.78		0
	1	14	19.74	19.98	19.96		0
	8	0	19.74	20.05	19.88	0-1	0
	8	4	19.83	20.06	19.95		0
	8	7	19.67	20.13	19.74		0
	15	0	19.85	20.18	19.82		0
16QAM	1	0	19.88	20.37	20.33	0-1	0
	1	7	19.70	20.39	19.85		0
	1	14	19.86	20.28	19.99		0
	8	0	19.83	20.31	19.92	0-2	0
	8	4	19.86	20.23	20.03		0
	8	7	19.76	20.28	19.96		0
	15	0	19.79	20.24	19.99		0
64QAM	1	0	20.01	20.16	20.03	0-2	0
	1	7	19.62	20.08	19.97		0
	1	14	19.78	20.37	20.08		0
	8	0	19.88	20.20	19.97	0-3	0
	8	4	19.90	20.13	20.06		0
	8	7	19.73	20.07	19.89		0
	15	0	19.86	20.19	19.99		0
256QAM	1	0	18.91	19.09	19.07	0-5	0.5
	1	7	18.77	18.94	18.94		0.5
	1	14	18.86	19.17	18.95		0.5
	8	0	18.97	19.12	19.00		0.5
	8	4	18.90	19.21	19.01		0.5
	8	7	18.82	19.02	18.84		0.5
	15	0	18.91	19.15	19.02		0.5

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Table 9-53
LTE Band 25 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth - Hotspot Mode Active

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.69	20.23	19.85	0	0
	1	2	19.48	20.19	19.62		0
	1	5	19.70	20.06	19.71		0
	3	0	19.37	19.86	19.45		0
	3	2	19.32	19.78	19.68		0
	3	3	19.41	19.91	19.74		0
	6	0	19.48	20.12	19.83	0-1	0
16QAM	1	0	20.11	20.29	19.90	0-1	0
	1	2	19.94	20.44	19.83		0
	1	5	20.03	20.32	19.93		0
	3	0	19.68	19.84	19.77		0
	3	2	19.67	19.93	19.89		0
	3	3	19.58	20.00	19.82		0
	6	0	19.69	19.95	19.91	0-2	0
64QAM	1	0	19.72	20.48	19.99	0-2	0
	1	2	19.80	20.23	20.15		0
	1	5	19.71	20.30	19.92		0
	3	0	19.58	19.97	19.80		0
	3	2	19.58	19.94	19.88		0
	3	3	19.49	20.08	19.87		0
	6	0	19.64	19.95	19.79	0-3	0
256QAM	1	0	19.09	19.09	18.94	0-5	0.5
	1	2	18.91	19.28	19.08		0.5
	1	5	19.02	19.21	19.04		0.5
	3	0	18.98	19.01	18.69		0.5
	3	2	18.86	19.02	18.72		0.5
	3	3	18.83	19.04	18.83		0.5
	6	0	18.81	19.06	18.71		0.5

Table 9-54
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	21.21	**21.42**	21.30	0	0
	1	50	21.07	21.31	21.06		0
	1	99	21.14	21.29	21.09		0
	50	0	21.39	**21.48**	21.41	0-1	0
	50	25	21.32	21.47	21.34		0
	50	50	21.29	21.46	21.33		0
	100	0	21.36	21.41	21.35		0
16QAM	1	0	21.47	21.29	21.50	0-1	0
	1	50	21.32	21.19	21.38		0
	1	99	21.46	21.18	21.45		0
	50	0	21.33	21.43	21.31	0-2	0
	50	25	21.25	21.38	21.26		0
	50	50	21.21	21.37	21.20		0
	100	0	21.24	21.31	21.28		0
64QAM	1	0	21.42	21.47	21.48	0-2	0
	1	50	21.35	21.46	21.33		0
	1	99	21.46	21.40	21.35		0
	50	0	21.31	21.47	21.32	0-3	0
	50	25	21.27	21.46	21.25		0
	50	50	21.26	21.42	21.20		0
	100	0	21.28	21.43	21.29		0
256QAM	1	0	19.50	19.47	19.39	0-5	1.5
	1	50	19.43	19.41	19.22		1.5
	1	99	19.46	19.38	19.24		1.5
	50	0	19.50	19.45	19.36		1.5
	50	25	19.42	19.40	19.20		1.5
	50	50	19.44	19.37	19.17		1.5
	100	0	19.43	19.40	19.22		1.5

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Table 9-55
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.93	21.31	21.20	0	0
	1	36	21.11	21.38	21.14		0
	1	74	20.91	21.39	21.20		0
	36	0	21.00	21.38	21.28	0-1	0
	36	18	21.15	21.47	21.39		0
	36	37	20.98	21.44	21.29		0
	75	0	21.02	21.48	21.30		0
16QAM	1	0	20.97	21.33	21.34	0-1	0
	1	36	21.07	21.41	21.28		0
	1	74	20.90	21.42	21.37		0
	36	0	20.87	21.32	21.10	0-2	0
	36	18	20.94	21.43	21.24		0
	36	37	20.83	21.28	21.14		0
	75	0	20.84	21.30	21.12		0
64QAM	1	0	20.98	21.34	21.45	0-2	0
	1	36	21.12	21.47	21.31		0
	1	74	20.95	21.42	21.43		0
	36	0	20.90	21.37	21.16	0-3	0
	36	18	21.02	21.48	21.29		0
	36	37	20.88	21.35	21.22		0
	75	0	20.83	21.34	21.15		0
256QAM	1	0	19.35	19.47	19.37	0-5	1.5
	1	36	19.42	19.42	19.21		1.5
	1	74	19.23	19.33	19.42		1.5
	36	0	19.37	19.42	19.23		1.5
	36	18	19.31	19.43	19.30		1.5
	36	37	19.28	19.40	19.27		1.5
	75	0	19.36	19.31	19.20		1.5

Table 9-56
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	21.03	21.37	21.09	0	0
	1	25	20.77	21.20	21.10		0
	1	49	20.98	21.46	21.09		0
	25	0	20.91	21.37	21.13	0-1	0
	25	12	21.08	21.49	21.37		0
	25	25	20.84	21.32	21.12		0
	50	0	20.96	21.41	21.20		0
16QAM	1	0	21.14	21.42	21.26	0-1	0
	1	25	21.08	21.47	21.19		0
	1	49	21.25	21.46	21.30		0
	25	0	20.72	21.12	20.92	0-2	0
	25	12	20.90	21.30	21.12		0
	25	25	20.59	21.08	20.89		0
	50	0	20.97	21.19	20.97		0
64QAM	1	0	21.34	21.26	21.28	0-2	0
	1	25	21.15	21.43	21.13		0
	1	49	21.25	21.37	21.25		0
	25	0	20.91	21.15	20.92	0-3	0
	25	12	21.13	21.35	21.14		0
	25	25	20.96	21.12	20.90		0
	50	0	20.97	21.16	20.90		0
256QAM	1	0	19.24	19.17	19.23	0-5	1.5
	1	25	19.34	19.27	19.41		1.5
	1	49	19.43	19.08	19.37		1.5
	25	0	19.02	19.15	19.11		1.5
	25	12	19.21	19.31	19.04		1.5
	25	25	19.00	19.13	19.09		1.5
	50	0	19.03	19.07	19.01		1.5

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Table 9-57
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.91	21.34	21.31	0	0
	1	12	21.16	21.48	21.31		0
	1	24	20.92	21.28	21.27		0
	12	0	21.00	21.37	21.27	0-1	0
	12	6	21.10	21.47	21.33		0
	12	13	21.00	21.41	21.25		0
	25	0	21.07	21.48	21.28		0
16QAM	1	0	20.90	21.27	21.34	0-1	0
	1	12	21.15	21.50	21.33		0
	1	24	20.87	21.26	21.24		0
	12	0	20.99	21.34	21.17	0-2	0
	12	6	21.06	21.46	21.25		0
	12	13	20.92	21.30	21.21		0
	25	0	20.92	21.32	21.15		0
64QAM	1	0	20.96	21.28	21.30	0-2	0
	1	12	21.14	21.48	21.30		0
	1	24	20.88	21.27	21.23		0
	12	0	21.01	21.32	21.25	0-3	0
	12	6	21.04	21.28	21.24		0
	12	13	21.03	21.30	21.25		0
	25	0	20.97	21.32	21.16		0
256QAM	1	0	19.25	19.36	19.30	0-5	1.5
	1	12	19.19	19.28	19.29		1.5
	1	24	19.20	19.41	19.09		1.5
	12	0	19.02	19.23	19.13		1.5
	12	6	19.15	19.39	19.22		1.5
	12	13	19.18	19.22	19.21		1.5
	25	0	19.04	19.19	19.18		1.5

Table 9-58
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.97	21.32	21.09	0	0
	1	7	21.01	21.43	21.13		0
	1	14	20.98	21.39	21.08		0
	8	0	21.06	21.44	21.32	0-1	0
	8	4	21.12	21.48	21.35		0
	8	7	21.14	21.47	21.32		0
	15	0	21.03	21.43	21.26		0
16QAM	1	0	21.07	21.37	21.28	0-1	0
	1	7	21.10	21.49	21.40		0
	1	14	21.02	21.38	21.32		0
	8	0	20.97	21.36	21.23	0-2	0
	8	4	21.05	21.44	21.28		0
	8	7	20.96	21.47	21.21		0
	15	0	21.03	21.40	21.25		0
64QAM	1	0	21.12	21.43	21.28	0-2	0
	1	7	21.11	21.50	21.32		0
	1	14	21.03	21.50	21.29		0
	8	0	21.04	21.31	21.23	0-3	0
	8	4	21.03	21.36	21.24		0
	8	7	21.05	21.34	21.24		0
	15	0	21.00	21.36	21.22		0
256QAM	1	0	19.21	19.31	19.28	0-5	1.5
	1	7	19.19	19.33	19.32		1.5
	1	14	19.35	19.38	19.11		1.5
	8	0	19.17	19.42	19.13		1.5
	8	4	19.21	19.31	19.23		1.5
	8	7	19.11	19.38	19.12		1.5
	15	0	19.15	19.37	19.19		1.5

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Table 9-59
LTE Band 25 (PCS) Reduced Conducted Powers – 1.4 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.96	21.34	21.18	0	0
	1	2	21.01	21.46	21.25		0
	1	5	20.97	21.42	21.17		0
	3	0	20.99	21.33	21.16		0
	3	2	21.01	21.45	21.24		0
	3	3	20.97	21.43	21.20		0
	6	0	21.14	21.49	21.33	0-1	0
16QAM	1	0	20.96	21.39	21.25	0-1	0
	1	2	21.01	21.50	21.27		0
	1	5	21.02	21.41	21.19		0
	3	0	20.92	21.21	21.09		0
	3	2	20.95	21.39	21.14		0
	3	3	20.87	21.31	21.09		0
	6	0	20.88	21.27	21.10	0-2	0
64QAM	1	0	20.97	21.33	21.22	0-2	0
	1	2	21.07	21.48	21.25		0
	1	5	21.00	21.41	21.15		0
	3	0	20.94	21.29	21.20		0
	3	2	20.90	21.35	20.96		0
	3	3	20.91	21.34	20.92		0
	6	0	20.84	21.20	21.03	0-3	0
256QAM	1	0	19.29	19.36	19.19	0-5	1.5
	1	2	19.35	19.47	19.26		1.5
	1	5	19.31	19.32	19.33		1.5
	3	0	19.14	19.29	19.12		1.5
	3	2	19.29	19.36	19.29		1.5
	3	3	19.25	19.43	19.20		1.5
	6	0	19.11	19.25	19.11		1.5

9.4.9 LTE Band 30

Table 9-60
LTE Band 30 Max 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	**22.50**	0	0
	1	25	22.17		0
	1	49	22.16		0
	25	0	**21.43**	0-1	1
	25	12	21.36		1
	25	25	21.10		1
	50	0	21.22		1
16QAM	1	0	21.42	0-1	1
	1	25	21.13		1
	1	49	20.99		1
	25	0	20.40	0-2	2
	25	12	20.44		2
	25	25	20.13		2
	50	0	20.20		2
64QAM	1	0	20.67	0-2	2
	1	25	20.47		2
	1	49	20.25		2
	25	0	19.40	0-3	3
	25	12	19.51		3
	25	25	19.16		3
	50	0	19.26		3
256QAM	1	0	17.78	0-5	5
	1	25	17.59		5
	1	49	17.68		5
	25	0	17.40		5
	25	12	17.59		5
	25	25	17.32		5
	50	0	17.38		5

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Table 9-61
LTE Band 30 Max 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	22.32	0	0
	1	12	22.62		0
	1	24	22.41		0
	12	0	21.67	0-1	1
	12	6	21.77		1
	12	13	21.75		1
	25	0	21.69		1
16QAM	1	0	21.72	0-1	1
	1	12	21.93		1
	1	24	21.73		1
	12	0	20.71	0-2	2
	12	6	20.79		2
	12	13	20.76		2
	25	0	20.66		2
64QAM	1	0	20.72	0-2	2
	1	12	20.91		2
	1	24	20.70		2
	12	0	19.77	0-3	3
	12	6	19.70		3
	12	13	19.69		3
	25	0	19.63		3
256QAM	1	0	17.59	0-5	5
	1	12	17.77		5
	1	24	17.53		5
	12	0	17.52		5
	12	6	17.64		5
	12	13	17.60		5
	25	0	17.52		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.

Table 9-62
LTE Band 30 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack 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	**20.09**	0	0
	1	25	19.73		0
	1	49	19.97		0
	25	0	**20.15**	0-1	0
	25	12	20.10		0
	25	25	20.00		0
	50	0	20.07		0
16QAM	1	0	20.39	0-1	0
	1	25	20.15		0
	1	49	20.30		0
	25	0	20.13	0-2	0
	25	12	20.12		0
	25	25	20.06		0
	50	0	20.03		0
64QAM	1	0	20.43	0-2	0
	1	25	20.22		0
	1	49	20.29		0
	25	0	20.20	0-3	0.5
	25	12	20.14		0.5
	25	25	20.13		0.5
	50	0	20.15		0.5
256QAM	1	0	18.21	0-5	2.5
	1	25	18.23		2.5
	1	49	18.22		2.5
	25	0	18.21		2.5
	25	12	18.22		2.5
	25	25	18.17		2.5
	50	0	18.20		2.5

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Table 9-63
LTE Band 30 Reduced Conducted Powers - 5 MHz Bandwidth – Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channe 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	19.90	0	0
	1	12	19.99		0
	1	24	19.92		0
	12	0	20.10	0-1	0
	12	6	20.06		0
	12	13	20.08		0
	25	0	20.02		0
16QAM	1	0	20.14	0-1	0
	1	12	20.23		0
	1	24	20.23		0
	12	0	20.11	0-2	0
	12	6	20.04		0
	12	13	20.00		0
	25	0	20.06		0
64QAM	1	0	20.33	0-2	0
	1	12	20.25		0
	1	24	20.16		0
	12	0	20.07	0-3	0.5
	12	6	20.13		0.5
	12	13	20.17		0.5
	25	0	20.05		0.5
256QAM	1	0	18.25	0-5	2.5
	1	12	18.04		2.5
	1	24	18.36		2.5
	12	0	18.00		2.5
	12	6	18.17		2.5
	12	13	18.10		2.5
	25	0	18.05		2.5

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.

9.4.10 LTE Band 7

Table 9-64
LTE Band 7 Ant A Max 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	23.51	23.47	**23.76**	0	0
	1	50	23.57	23.26	23.23		0
	1	99	23.53	23.46	23.49		0
	50	0	22.45	22.28	**22.96**	0-1	1
	50	25	22.52	22.49	22.67		1
	50	50	22.28	22.22	22.65		1
	100	0	22.43	22.38	22.76		1
16QAM	1	0	22.93	22.75	23.03	0-1	1
	1	50	22.97	22.80	22.50		1
	1	99	22.96	22.86	22.81		1
	50	0	21.52	21.27	22.04	0-2	2
	50	25	21.61	21.48	21.88		2
	50	50	21.26	21.30	21.75		2
	100	0	21.37	21.27	22.00		2
64QAM	1	0	22.01	21.73	21.97	0-2	2
	1	50	21.76	21.71	21.46		2
	1	99	21.70	21.86	21.87		2
	50	0	20.40	20.29	21.00	0-3	3
	50	25	20.54	20.46	20.99		3
	50	50	20.22	20.30	20.85		3
	100	0	20.31	20.22	20.85		3
256QAM	1	0	18.86	18.67	19.19	0-5	5
	1	50	18.55	18.54	19.20		5
	1	99	18.37	18.67	19.21		5
	50	0	18.30	18.18	18.82		5
	50	25	18.42	18.35	19.03		5
	50	50	18.10	18.11	18.84		5
	100	0	18.10	18.23	18.83		5

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Table 9-65
LTE Band 7 Ant A Max 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	23.49	23.27	23.58	0	0
	1	36	23.39	23.24	23.25		0
	1	74	23.34	23.38	23.48		0
	36	0	22.42	22.26	22.71	0-1	1
	36	18	22.51	22.37	22.63		1
	36	37	22.30	22.25	22.78		1
	75	0	22.29	22.16	22.51		1
16QAM	1	0	22.97	22.77	23.05	0-1	1
	1	36	22.95	22.26	22.39		1
	1	74	22.80	22.89	23.03		1
	36	0	21.42	21.22	21.86	0-2	2
	36	18	21.45	21.31	21.79		2
	36	37	21.25	21.20	21.82		2
	75	0	21.31	21.16	21.72		2
64QAM	1	0	21.79	21.56	22.18	0-2	2
	1	36	21.81	21.59	21.56		2
	1	74	21.70	21.69	22.10		2
	36	0	20.38	20.18	20.83	0-3	3
	36	18	20.45	20.28	20.81		3
	36	37	20.23	20.16	20.76		3
	75	0	20.22	20.16	20.72		3
256QAM	1	0	18.70	18.49	19.17	0-5	5
	1	36	18.55	18.38	19.06		5
	1	74	18.51	18.57	19.22		5
	36	0	18.23	18.04	18.94		5
	36	18	18.33	18.17	19.07		5
	36	37	18.16	18.06	18.89		5
	75	0	18.19	18.08	18.94		5

Table 9-66
LTE Band 7 Ant A Max 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	23.23	23.31	23.37	0	0
	1	25	23.21	23.34	23.32		0
	1	49	23.22	22.98	23.55		0
	25	0	22.08	22.15	22.59	0-1	1
	25	12	22.26	22.40	22.80		1
	25	25	21.93	22.18	22.95		1
	50	0	22.06	22.21	22.82		1
16QAM	1	0	22.72	22.82	22.43	0-1	1
	1	25	22.64	22.78	22.85		1
	1	49	22.53	22.60	22.88		1
	25	0	21.12	21.23	21.76	0-2	2
	25	12	21.23	21.41	22.12		2
	25	25	21.03	21.12	21.95		2
	50	0	21.00	21.15	21.93		2
64QAM	1	0	21.54	21.71	21.96	0-2	2
	1	25	21.45	21.65	21.89		2
	1	49	21.41	21.41	22.08		2
	25	0	20.04	20.12	20.98	0-3	3
	25	12	20.18	20.63	21.21		3
	25	25	20.23	20.09	20.87		3
	50	0	20.01	20.15	20.94		3
256QAM	1	0	18.47	18.56	18.86	0-5	5
	1	25	18.43	18.42	18.80		5
	1	49	18.33	18.22	18.93		5
	25	0	18.00	18.06	18.75		5
	25	12	18.07	18.26	18.83		5
	25	25	18.02	18.05	18.59		5
	50	0	18.01	18.07	18.62		5

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Table 9-67
LTE Band 7 Ant A Max 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	23.35	23.12	23.39	0	0
	1	12	23.36	23.35	23.49		0
	1	24	23.37	23.17	23.50		0
	12	0	22.44	22.39	23.18	0-1	1
	12	6	22.55	22.48	23.32		1
	12	13	22.43	22.43	23.18		1
	25	0	22.41	22.40	22.98		1
16QAM	1	0	22.72	22.63	22.65	0-1	1
	1	12	22.85	22.88	22.94		1
	1	24	22.87	22.75	22.92		1
	12	0	21.87	21.48	22.33	0-2	2
	12	6	21.58	21.55	22.33		2
	12	13	21.40	21.42	22.23		2
	25	0	21.41	21.37	22.16		2
64QAM	1	0	21.72	21.41	21.59	0-2	2
	1	12	21.68	21.80	22.02		2
	1	24	21.68	21.53	21.92		2
	12	0	20.55	20.37	21.17	0-3	3
	12	6	20.53	20.53	21.29		3
	12	13	20.36	20.44	21.17		3
	25	0	20.32	20.31	21.07		3
256QAM	1	0	18.55	18.25	19.18	0-5	5
	1	12	18.57	18.52	19.22		5
	1	24	18.55	18.33	19.18		5
	12	0	18.31	18.22	18.96		5
	12	6	18.40	18.35	19.10		5
	12	13	18.24	18.24	18.98		5
	25	0	18.29	18.25	18.84		5

Table 9-68
LTE Band 7 Ant A Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.89	19.75	20.08	0	0
	1	50	19.61	19.51	19.86		0
	1	99	19.71	19.71	**20.25**		0
	50	0	19.93	19.85	**20.35**	0-1	0
	50	25	19.90	19.81	20.32		0
	50	50	19.83	19.92	20.25		0
	100	0	19.82	19.84	20.24		0
16QAM	1	0	20.21	20.16	20.65	0-1	0
	1	50	20.11	19.86	20.50		0
	1	99	20.19	20.17	20.64		0
	50	0	19.96	19.85	20.28	0-2	0
	50	25	19.87	19.77	20.38		0
	50	50	19.86	19.78	20.29		0
	100	0	19.88	19.81	20.35		0
64QAM	1	0	20.24	20.10	20.60	0-2	0
	1	50	19.97	19.87	20.38		0
	1	99	20.06	20.17	20.63		0
	50	0	20.04	19.84	20.31	0-3	0
	50	25	19.95	19.83	20.38		0
	50	50	19.90	19.82	20.35		0
	100	0	19.91	19.80	20.39		0
256QAM	1	0	18.07	18.05	18.42	0-5	1.5
	1	50	17.77	17.95	18.22		1.5
	1	99	18.01	18.15	18.47		1.5
	50	0	17.90	17.81	18.17		1.5
	50	25	17.82	17.80	18.17		1.5
	50	50	17.79	17.71	18.20		1.5
	100	0	17.84	17.72	18.21		1.5

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Table 9-69
LTE Band 7 Ant A Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.20	19.51	19.53	0	0
	1	36	19.31	19.43	19.88		0
	1	74	19.35	19.54	19.95		0
	36	0	19.35	19.47	20.00	0-1	0
	36	18	19.46	19.56	20.07		0
	36	37	19.32	19.42	19.88		0
	75	0	19.33	19.41	19.92		0
16QAM	1	0	19.88	20.02	20.52	0-1	0
	1	36	19.89	19.99	20.41		0
	1	74	19.95	20.02	20.51		0
	36	0	19.40	19.50	20.05	0-2	0
	36	18	19.50	19.59	20.08		0
	36	37	19.38	19.50	19.92		0
	75	0	19.37	19.37	19.93		0
64QAM	1	0	19.71	19.89	20.28	0-2	0
	1	36	19.95	19.88	20.27		0
	1	74	19.83	20.05	20.26		0
	36	0	19.36	19.55	19.97	0-3	0
	36	18	19.63	19.62	20.11		0
	36	37	19.42	19.48	19.95		0
	75	0	19.41	19.48	19.92		0
256QAM	1	0	18.17	18.26	18.53	0-5	1.5
	1	36	18.15	18.32	18.48		1.5
	1	74	18.14	18.34	18.44		1.5
	36	0	17.85	17.91	18.43		1.5
	36	18	17.97	18.06	18.40		1.5
	36	37	17.83	17.97	18.35		1.5
	75	0	17.84	17.89	18.37		1.5

Table 9-70
LTE Band 7 Ant A Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.34	19.25	19.63	0	0
	1	25	19.05	19.21	19.55		0
	1	49	19.17	19.07	19.63		0
	25	0	19.06	19.12	19.67	0-1	0
	25	12	19.30	19.31	19.87		0
	25	25	19.04	19.11	19.55		0
	50	0	19.05	19.15	19.65		0
16QAM	1	0	19.63	19.75	20.36	0-1	0
	1	25	19.66	19.60	20.22		0
	1	49	19.70	19.64	20.25		0
	25	0	19.12	19.17	19.69	0-2	0
	25	12	19.31	19.39	19.91		0
	25	25	19.11	19.18	19.64		0
	50	0	19.12	19.16	19.65		0
64QAM	1	0	19.64	19.69	20.15	0-2	0
	1	25	19.60	19.62	20.18		0
	1	49	19.62	19.37	20.17		0
	25	0	19.14	19.23	19.76	0-3	0
	25	12	19.31	19.41	19.80		0
	25	25	19.05	19.20	19.65		0
	50	0	19.18	19.20	19.73		0
256QAM	1	0	18.04	18.05	18.19	0-5	1.5
	1	25	17.97	18.05	18.28		1.5
	1	49	17.99	17.85	18.15		1.5
	25	0	17.55	17.65	18.17		1.5
	25	12	17.73	17.87	18.28		1.5
	25	25	17.46	17.67	18.07		1.5
	50	0	17.59	17.62	18.16		1.5

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Table 9-71
LTE Band 7 Ant A Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.18	19.02	19.63	0	0
	1	12	19.21	19.33	19.73		0
	1	24	19.22	19.03	19.72		0
	12	0	19.29	19.35	19.84	0-1	0
	12	6	19.37	19.44	20.03		0
	12	13	19.29	19.44	19.85		0
	25	0	19.25	19.37	19.80		0
16QAM	1	0	19.67	19.51	20.31	0-1	0
	1	12	19.72	19.79	20.41		0
	1	24	19.69	19.70	20.33		0
	12	0	19.39	19.44	19.86	0-2	0
	12	6	19.56	19.54	20.11		0
	12	13	19.32	19.51	19.89		0
	25	0	19.31	19.45	19.86		0
64QAM	1	0	19.57	19.52	20.25	0-2	0
	1	12	19.21	19.78	20.32		0
	1	24	19.65	19.53	20.32		0
	12	0	19.39	19.44	19.98	0-3	0
	12	6	19.46	19.56	20.17		0
	12	13	19.30	19.47	19.96		0
	25	0	19.30	19.48	19.87		0
256QAM	1	0	18.03	17.92	18.60	0-5	1.5
	1	12	18.04	18.01	18.44		1.5
	1	24	18.01	17.73	18.53		1.5
	12	0	17.79	17.82	18.34		1.5
	12	6	17.87	17.96	18.51		1.5
	12	13	17.78	17.83	18.38		1.5
	25	0	17.88	17.86	18.33		1.5

Table 9-72
LTE Band 7 Ant B Max 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	23.64	23.38	23.15	0	0
	1	50	23.69	23.09	23.22		0
	1	99	**23.77**	23.04	23.50		0
	50	0	22.72	22.13	22.24	0-1	1
	50	25	22.65	22.22	22.37		1
	50	50	**22.85**	21.92	22.17		1
	100	0	22.63	21.96	22.18		1
16QAM	1	0	23.20	22.67	22.67	0-1	1
	1	50	23.09	22.40	22.51		1
	1	99	22.90	22.40	22.76		1
	50	0	21.69	21.15	21.26	0-2	2
	50	25	21.79	21.15	21.36		2
	50	50	21.53	20.88	21.17		2
	100	0	21.58	20.96	21.14		2
64QAM	1	0	22.16	21.57	21.57	0-2	2
	1	50	21.98	21.28	21.47		2
	1	99	21.88	21.25	21.71		2
	50	0	20.68	20.04	20.19	0-3	3
	50	25	20.78	20.09	20.31		3
	50	50	20.55	19.88	20.08		3
	100	0	20.55	19.89	20.11		3
256QAM	1	0	18.92	18.47	18.40	0-5	5
	1	50	18.78	18.11	18.20		5
	1	99	18.65	18.09	18.46		5
	50	0	18.49	17.91	18.05		5
	50	25	18.65	18.03	18.15		5
	50	50	18.35	17.75	17.96		5
	100	0	18.44	17.87	17.99		5

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Table 9-73
LTE Band 7 Ant B Max 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	23.62	23.15	23.27	0	0
	1	36	23.58	23.05	23.20		0
	1	74	23.45	23.11	23.24		0
	36	0	22.60	22.11	22.22	0-1	1
	36	18	22.68	22.17	22.26		1
	36	37	22.54	21.97	22.25		1
	75	0	22.51	21.93	22.27		1
16QAM	1	0	22.97	22.26	22.45	0-1	1
	1	36	22.86	22.34	22.54		1
	1	74	22.77	22.47	22.60		1
	36	0	21.47	21.04	21.29	0-2	2
	36	18	21.64	21.15	21.33		2
	36	37	21.53	20.83	21.23		2
	75	0	21.52	20.89	21.20		2
64QAM	1	0	21.94	21.26	21.49	0-2	2
	1	36	21.75	21.15	21.53		2
	1	74	21.70	21.19	21.57		2
	36	0	20.61	19.96	20.25	0-3	3
	36	18	20.65	20.10	20.24		3
	36	37	20.43	19.86	20.18		3
	75	0	20.46	19.98	20.07		3
256QAM	1	0	18.70	18.28	18.31	0-5	5
	1	36	18.55	17.95	18.04		5
	1	74	18.44	18.02	18.27		5
	36	0	18.32	17.84	18.03		5
	36	18	18.32	17.92	18.17		5
	36	37	18.26	17.87	18.05		5
	75	0	18.28	17.80	18.04		5

Table 9-74
LTE Band 7 Ant B Max 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	23.60	23.19	23.27	0	0
	1	25	23.67	23.27	23.43		0
	1	49	23.79	23.11	23.55		0
	25	0	22.78	22.22	22.52	0-1	1
	25	12	22.83	22.46	22.69		1
	25	25	22.75	22.12	22.51		1
	50	0	23.08	22.18	22.52		1
16QAM	1	0	23.25	22.67	22.81	0-1	1
	1	25	23.12	22.54	22.85		1
	1	49	23.10	22.27	22.48		1
	25	0	21.82	21.65	21.51	0-2	2
	25	12	21.95	21.33	21.71		2
	25	25	21.69	21.07	21.46		2
	50	0	21.73	21.13	21.42		2
64QAM	1	0	21.73	21.08	21.75	0-2	2
	1	25	21.50	20.98	21.68		2
	1	49	21.75	20.93	21.92		2
	25	0	20.38	20.15	20.39	0-3	3
	25	12	20.45	20.26	20.58		3
	25	25	20.39	19.95	20.38		3
	50	0	20.35	20.07	20.38		3
256QAM	1	0	18.76	18.56	18.64	0-5	5
	1	25	18.89	18.03	18.41		5
	1	49	18.57	18.02	18.63		5
	25	0	18.56	18.13	18.30		5
	25	12	18.83	17.94	18.50		5
	25	25	18.56	17.98	18.32		5
	50	0	18.57	18.03	18.31		5

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Table 9-75
LTE Band 7 Ant B Max 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	23.74	23.22	23.22	0	0
	1	12	23.86	23.35	23.22		0
	1	24	23.89	23.15	23.34		0
	12	0	23.04	22.39	22.61	0-1	1
	12	6	23.12	22.46	22.54		1
	12	13	22.96	22.35	22.59		1
	25	0	22.95	22.35	22.60		1
16QAM	1	0	23.32	22.52	22.98	0-1	1
	1	12	23.48	22.74	22.93		1
	1	24	23.29	22.62	23.12		1
	12	0	22.14	21.50	21.82	0-2	2
	12	6	22.16	21.52	21.64		2
	12	13	21.90	21.45	21.73		2
	25	0	21.92	21.40	21.66		2
64QAM	1	0	22.42	21.60	21.93	0-2	2
	1	12	22.30	21.82	21.95		2
	1	24	22.12	21.36	21.92		2
	12	0	21.11	20.47	20.71	0-3	3
	12	6	21.08	20.47	20.76		3
	12	13	20.97	20.38	20.78		3
	25	0	20.87	20.42	20.66		3
256QAM	1	0	18.95	18.39	18.71	0-5	5
	1	12	19.23	18.47	18.60		5
	1	24	18.97	17.87	18.87		5
	12	0	18.91	18.39	18.51		5
	12	6	18.99	18.37	18.67		5
	12	13	18.71	18.24	18.56		5
	25	0	18.78	18.22	18.55		5

Table 9-76
LTE Band 7 Ant B Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**20.32**	20.05	19.99	0	0
	1	50	19.82	19.58	19.71		0
	1	99	20.13	19.82	20.01		0
	50	0	20.40	20.14	20.22	0-1	0
	50	25	20.40	20.10	20.16		0
	50	50	**20.47**	20.07	20.13		0
	100	0	20.31	20.09	20.17		0
16QAM	1	0	20.62	20.43	20.32	0-1	0
	1	50	20.60	20.38	20.37		0
	1	99	20.58	20.21	20.19		0
	50	0	20.49	20.19	20.26	0-2	0
	50	25	20.50	20.15	20.19		0
	50	50	20.50	20.02	20.14		0
	100	0	20.43	20.12	20.17		0
64QAM	1	0	20.61	20.40	20.37	0-2	0
	1	50	20.15	19.95	19.95		0
	1	99	20.49	20.15	20.34		0
	50	0	20.53	20.22	20.35	0-3	0
	50	25	20.50	20.17	20.22		0
	50	50	20.57	20.09	20.16		0
	100	0	20.49	20.15	20.22		0
256QAM	1	0	18.48	18.31	18.34	0-5	1.5
	1	50	18.22	17.93	17.91		1.5
	1	99	18.45	18.06	18.25		1.5
	50	0	18.44	18.11	18.19		1.5
	50	25	18.46	18.14	18.15		1.5
	50	50	18.42	18.08	18.04		1.5
	100	0	18.51	18.06	18.09		1.5

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Table 9-77
LTE Band 7 Ant B Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.45	20.05	20.19	0	0
	1	36	20.42	19.95	20.27		0
	1	74	20.39	20.06	20.43		0
	36	0	20.44	19.97	20.27	0-1	0
	36	18	20.60	20.12	20.39		0
	36	37	20.50	20.00	20.33		0
	75	0	20.49	20.02	20.30		0
16QAM	1	0	20.78	20.49	20.58	0-1	0
	1	36	20.61	20.37	20.60		0
	1	74	20.56	20.49	20.78		0
	36	0	20.54	20.04	20.24	0-2	0
	36	18	20.68	20.17	20.45		0
	36	37	20.56	20.06	20.36		0
	75	0	20.54	20.01	20.32		0
64QAM	1	0	20.46	20.47	20.53	0-2	0
	1	36	20.78	20.34	20.61		0
	1	74	20.82	20.47	20.70		0
	36	0	20.54	20.06	20.34	0-3	0
	36	18	20.68	20.21	20.41		0
	36	37	20.56	20.09	20.43		0
	75	0	20.42	20.06	20.37		0
256QAM	1	0	18.65	18.38	18.47	0-5	1.5
	1	36	18.61	18.25	18.55		1.5
	1	74	18.53	18.34	18.73		1.5
	36	0	18.46	18.10	18.46		1.5
	36	18	18.56	18.22	18.59		1.5
	36	37	18.43	18.09	18.48		1.5
	75	0	18.45	18.16	18.44		1.5

Table 9-78
LTE Band 7 Ant B Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.27	19.80	20.04	0	0
	1	25	20.23	19.77	19.98		0
	1	49	20.26	19.50	20.15		0
	25	0	20.15	19.66	19.96	0-1	0
	25	12	20.36	19.87	20.16		0
	25	25	20.13	19.64	19.98		0
	50	0	20.19	19.67	19.99		0
16QAM	1	0	20.67	20.10	20.39	0-1	0
	1	25	20.60	20.05	20.35		0
	1	49	20.64	19.83	20.58		0
	25	0	20.21	19.70	20.00	0-2	0
	25	12	20.42	19.90	20.01		0
	25	25	20.17	19.66	20.02		0
	50	0	20.19	19.68	20.00		0
64QAM	1	0	20.53	20.05	20.37	0-2	0
	1	25	20.54	20.04	20.36		0
	1	49	20.22	19.82	20.55		0
	25	0	19.98	19.68	19.99	0-3	0
	25	12	20.40	19.90	20.20		0
	25	25	20.18	19.66	20.03		0
	50	0	20.23	19.71	20.04		0
256QAM	1	0	18.46	18.14	18.31	0-5	1.5
	1	25	18.20	18.12	18.46		1.5
	1	49	18.50	17.91	18.59		1.5
	25	0	18.24	17.86	18.22		1.5
	25	12	18.48	18.05	18.42		1.5
	25	25	18.24	17.85	18.21		1.5
	50	0	18.21	17.83	18.10		1.5

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Table 9-79
LTE Band 7 Ant B Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.30	19.55	20.09	0	0
	1	12	20.33	19.78	20.18		0
	1	24	20.22	19.58	20.20		0
	12	0	20.40	19.86	20.21	0-1	0
	12	6	20.50	19.93	20.36		0
	12	13	20.33	19.87	20.25		0
	25	0	20.36	19.87	20.22		0
16QAM	1	0	20.80	19.97	20.52	0-1	0
	1	12	20.72	20.19	20.62		0
	1	24	20.63	20.00	20.63		0
	12	0	20.52	20.03	20.32	0-2	0
	12	6	20.61	20.02	20.47		0
	12	13	20.42	19.93	20.38		0
	25	0	20.40	19.89	20.28		0
64QAM	1	0	20.74	19.98	20.49	0-2	0
	1	12	20.73	20.14	20.60		0
	1	24	20.53	19.94	20.62		0
	12	0	20.53	19.94	20.32	0-3	0
	12	6	20.62	20.03	20.46		0
	12	13	20.44	19.92	20.39		0
	25	0	20.41	19.91	20.26		0
256QAM	1	0	18.37	18.08	18.40	0-5	1.5
	1	12	18.45	18.22	18.50		1.5
	1	24	18.37	17.86	18.59		1.5
	12	0	18.43	18.10	18.47		1.5
	12	6	18.51	18.05	18.58		1.5
	12	13	18.38	18.11	18.46		1.5
	25	0	18.40	18.09	18.45		1.5

9.4.11 LTE Band 48

Table 9-80
LTE Band 48 Max Conducted Powers - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.54	23.66	23.55	**23.74**	0	0
	1	50	23.51	23.48	23.48	23.63		0
	1	99	23.58	23.52	23.64	23.71		0
	50	0	22.79	22.84	22.78	**22.97**	0-1	1
	50	25	22.82	22.76	22.80	22.94		1
	50	50	22.83	22.73	22.82	22.94		1
	100	0	22.81	22.80	22.79	22.92		1
16QAM	1	0	22.74	22.72	22.62	22.83	0-1	1
	1	50	22.69	22.53	22.53	22.69		1
	1	99	22.77	22.59	22.72	22.82		1
	50	0	21.93	21.83	21.77	21.97	0-2	2
	50	25	21.92	21.78	21.78	21.96		2
	50	50	21.92	21.75	21.82	21.96		2
	100	0	21.96	21.80	21.79	21.98		2
64QAM	1	0	21.51	21.49	21.34	21.56	0-2	2
	1	50	21.46	21.26	21.24	21.41		2
	1	99	21.53	21.33	21.42	21.52		2
	50	0	21.01	20.88	20.83	21.03	0-3	3
	50	25	21.00	20.82	20.84	21.01		3
	50	50	20.99	20.79	20.87	20.99		3
	100	0	20.96	20.79	20.79	20.99		3
256QAM	1	0	18.72	18.68	18.52	18.77	0-5	5
	1	50	18.68	18.49	18.51	18.63		5
	1	99	18.77	18.54	18.62	18.74		5
	50	0	19.05	18.90	18.83	19.04		5
	50	25	19.04	18.86	18.84	19.02		5
	50	50	19.04	18.85	18.88	19.01		5
	100	0	19.03	18.85	18.81	19.00		5

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Table 9-81
LTE Band 48 Max Conducted Powers - 15 MHz Bandwidth

LTE Band 48 15 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55315 (3557.5 MHz)	Low-Mid Channel 55765 (3602.5 MHz)	Mid-High Channel 56215 (3647.5 MHz)	High Channel 56665 (3692.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.49	23.33	23.43	23.47	0	0
	1	36	23.53	23.41	23.34	23.48		0
	1	74	23.66	23.50	23.45	23.60		0
	36	0	22.81	22.57	22.52	22.81	0-1	1
	36	18	22.83	22.70	22.57	22.88		1
	36	37	22.67	22.51	22.71	22.86		1
	75	0	22.91	22.60	22.58	22.94		1
16QAM	1	0	22.62	22.49	22.29	22.82	0-1	1
	1	36	22.65	23.12	22.34	22.44		1
	1	74	22.72	22.52	22.40	22.66		1
	36	0	21.59	21.68	21.36	21.63	0-2	2
	36	18	21.61	21.62	21.45	21.83		2
	36	37	21.63	21.71	21.57	21.66		2
	75	0	21.82	21.57	21.66	21.79		2
64QAM	1	0	21.29	21.18	21.17	21.40	0-2	2
	1	36	21.30	21.19	21.18	21.31		2
	1	74	21.44	21.30	21.20	21.45		2
	36	0	20.85	20.76	20.18	20.79	0-3	3
	36	18	20.85	20.77	20.71	20.90		3
	36	37	20.86	20.68	20.69	20.71		3
	75	0	20.86	20.77	20.60	20.91		3
256QAM	1	0	18.61	18.33	18.33	18.58	0-5	5
	1	36	18.46	18.45	18.35	18.49		5
	1	74	18.51	18.45	18.46	18.51		5
	36	0	18.65	18.58	18.63	18.89		5
	36	18	18.68	18.74	18.77	18.72		5
	36	37	18.70	18.62	18.56	18.93		5
	75	0	18.88	18.81	18.75	18.93		5

Table 9-82
LTE Band 48 Max Conducted Powers - 10 MHz Bandwidth

LTE Band 48 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55290 (3555.0 MHz)	Low-Mid Channel 55757 (3601.7 MHz)	Mid-High Channel 56223 (3648.3 MHz)	High Channel 56690 (3695.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.37	23.32	23.07	23.65	0	0
	1	25	23.44	23.38	23.08	23.53		0
	1	49	23.38	23.30	23.22	23.65		0
	25	0	22.63	22.57	22.51	22.73	0-1	1
	25	12	22.64	22.58	22.33	22.82		1
	25	25	22.65	22.56	22.42	22.72		1
	50	0	22.74	22.56	22.44	22.81		1
16QAM	1	0	22.44	22.40	22.24	22.74	0-1	1
	1	25	22.51	22.49	22.33	22.71		1
	1	49	22.45	22.39	22.24	22.74		1
	25	0	21.63	21.56	21.38	21.80	0-2	2
	25	12	21.62	21.55	21.39	21.80		2
	25	25	21.59	21.53	21.38	21.78		2
	50	0	21.61	21.56	21.41	21.85		2
64QAM	1	0	21.17	21.12	20.95	21.50	0-2	2
	1	25	21.21	21.18	21.06	21.43		2
	1	49	21.18	21.11	20.97	21.45		2
	25	0	20.59	20.52	20.39	20.78	0-3	3
	25	12	20.58	20.50	20.38	20.49		3
	25	25	20.54	20.47	20.37	20.76		3
	50	0	20.66	20.56	20.47	20.88		3
256QAM	1	0	18.31	18.25	18.13	18.72	0-5	5
	1	25	18.38	18.34	18.20	18.63		5
	1	49	18.33	18.25	18.12	18.77		5
	25	0	18.61	18.54	18.41	18.85		5
	25	12	18.62	18.62	18.41	18.87		5
	25	25	18.59	18.55	18.39	18.83		5
	50	0	18.57	18.60	18.43	18.91		5

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Table 9-83
LTE Band 48 Max Conducted Powers - 5 MHz Bandwidth

LTE Band 48 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55265 (3552.5 MHz)	Low-Mid Channel 55748 (3600.8 MHz)	Mid-High Channel 56232 (3649.2 MHz)	High Channel 56715 (3697.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	23.40	23.31	23.39	23.63	0	0
	1	12	23.44	23.39	23.42	23.76		0
	1	24	23.42	23.38	23.38	23.56		0
	12	0	22.59	22.55	22.52	22.79	0-1	1
	12	6	22.66	22.56	22.53	22.81		1
	12	13	22.61	22.57	22.51	22.81		1
	25	0	22.65	22.60	22.49	22.83		1
16QAM	1	0	22.52	22.44	22.46	22.70	0-1	1
	1	12	22.53	22.47	22.48	22.70		1
	1	24	22.51	22.43	22.44	22.64		1
	12	0	21.50	21.46	21.42	21.68	0-2	2
	12	6	21.53	21.49	21.46	21.72		2
	12	13	21.51	21.44	21.43	21.70		2
	25	0	21.77	21.57	21.57	21.77		2
64QAM	1	0	21.23	21.15	21.18	21.42	0-2	2
	1	12	21.26	21.19	21.21	21.44		2
	1	24	21.24	21.18	21.19	21.36		2
	12	0	20.54	20.49	20.50	20.72	0-3	3
	12	6	20.56	20.52	20.52	20.76		3
	12	13	20.54	20.36	20.48	20.63		3
	25	0	20.60	20.53	20.56	20.75		3
256QAM	1	0	18.37	18.31	18.37	18.62	0-5	5
	1	12	18.38	18.36	18.41	18.64		5
	1	24	18.38	18.28	18.36	18.56		5
	12	0	18.65	18.62	18.66	18.55		5
	12	6	18.70	18.63	18.71	18.89		5
	12	13	18.67	18.64	18.67	18.91		5
	25	0	18.59	18.56	18.63	18.85		5

Table 9-84
LTE Band 48 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.41	20.21	20.00	20.22	0	0
	1	50	20.34	20.08	19.93	20.13		0
	1	99	**20.52**	20.08	20.03	20.20		0
	50	0	20.50	20.42	20.20	20.43	0-1	0
	50	25	20.49	20.37	20.21	20.42		0
	50	50	**20.53**	20.35	20.20	20.41		0
	100	0	20.51	20.38	20.22	20.44		0
16QAM	1	0	20.41	20.36	20.13	20.36	0-1	0
	1	50	20.32	20.22	20.05	20.24		0
	1	99	20.43	20.25	20.15	20.34		0
	50	0	20.49	20.44	20.25	20.44	0-2	0
	50	25	20.51	20.39	20.22	20.46		0
	50	50	20.48	20.35	20.24	20.45		0
	100	0	20.54	20.42	20.25	20.45		0
64QAM	1	0	20.09	20.12	19.83	20.04	0-2	0
	1	50	20.03	19.96	19.75	19.93		0
	1	99	20.11	19.96	19.84	20.02		0
	50	0	20.54	20.47	20.28	20.47	0-3	0
	50	25	20.55	20.45	20.27	20.48		0
	50	50	20.54	20.43	20.25	20.47		0
	100	0	20.53	20.41	20.22	20.42		0
256QAM	1	0	18.26	18.28	18.01	18.22	0-5	1.5
	1	50	18.21	18.12	17.93	18.16		1.5
	1	99	18.28	18.11	18.04	18.20		1.5
	50	0	18.56	18.49	18.27	18.50		1.5
	50	25	18.56	18.47	18.31	18.50		1.5
	50	50	18.57	18.41	18.29	18.49		1.5
	100	0	18.50	18.41	18.26	18.45		1.5

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Table 9-85
LTE Band 48 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 48 15 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55315 (3557.5 MHz)	Low-Mid Channel 55765 (3602.5 MHz)	Mid-High Channel 56215 (3647.5 MHz)	High Channel 56665 (3692.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.35	20.15	20.02	20.33	0	0
	1	36	20.35	20.10	20.02	20.34		0
	1	74	20.41	20.14	20.07	20.39		0
	36	0	20.29	20.15	20.05	20.35	0-1	0
	36	18	20.44	20.27	20.19	20.49		0
	36	37	20.37	20.16	20.10	20.43		0
	75	0	20.38	20.22	20.15	20.45		0
16QAM	1	0	20.48	20.32	20.15	20.53	0-1	0
	1	36	20.47	20.30	20.14	20.56		0
	1	74	20.59	20.36	20.25	20.65		0
	36	0	20.30	20.16	20.11	20.32	0-2	0
	36	18	20.44	20.27	20.27	20.46		0
	36	37	20.39	20.18	20.17	20.42		0
	75	0	20.36	20.19	20.07	20.40		0
64QAM	1	0	20.15	20.18	20.09	20.06	0-2	0
	1	36	20.19	20.17	20.05	20.09		0
	1	74	20.31	20.27	20.04	20.24		0
	36	0	20.46	20.32	20.20	20.33	0-3	0
	36	18	20.40	20.43	20.23	20.47		0
	36	37	20.50	20.31	20.21	20.38		0
	75	0	20.35	20.18	20.12	20.28		0
256QAM	1	0	18.17	18.27	18.01	18.21	0-5	1.5
	1	36	18.21	18.25	18.07	18.29		1.5
	1	74	18.23	18.36	18.12	18.35		1.5
	36	0	18.21	18.37	18.31	18.38		1.5
	36	18	18.34	18.50	18.40	18.52		1.5
	36	37	18.35	18.47	18.29	18.44		1.5
	75	0	18.24	18.48	18.37	18.49		1.5

Table 9-86
LTE Band 48 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 48 10 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55290 (3555.0 MHz)	Low-Mid Channel 55773 (3601.7 MHz)	Mid-High Channel 56207 (3648.3 MHz)	High Channel 56690 (3695.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.25	20.04	20.07	20.02	0	0
	1	25	20.28	20.34	19.95	20.34		0
	1	49	20.32	20.02	20.14	20.00		0
	25	0	20.42	20.27	19.87	20.30	0-1	0
	25	12	20.64	20.53	20.15	20.41		0
	25	25	20.46	20.26	19.92	20.43		0
	50	0	20.44	20.32	19.90	20.43		0
16QAM	1	0	20.67	20.10	20.00	20.12	0-1	0
	1	25	20.64	20.42	20.25	20.51		0
	1	49	20.66	20.17	20.02	20.27		0
	25	0	20.37	20.24	20.03	20.56	0-2	0
	25	12	20.61	20.43	20.04	20.48		0
	25	25	20.40	20.20	19.97	20.48		0
	50	0	20.47	20.33	20.11	20.38		0
64QAM	1	0	20.29	20.06	20.12	20.14	0-2	0
	1	25	20.24	20.20	20.03	20.38		0
	1	49	20.36	20.08	20.14	20.10		0
	25	0	20.47	20.34	20.14	20.39	0-3	0
	25	12	20.72	20.53	20.15	20.46		0
	25	25	20.50	20.35	19.96	20.31		0
	50	0	20.51	20.36	19.96	20.34		0
256QAM	1	0	18.26	18.10	18.21	18.17	0-5	1.5
	1	25	18.22	18.27	18.13	18.33		1.5
	1	49	18.36	18.07	18.32	18.15		1.5
	25	0	18.25	18.31	18.18	18.43		1.5
	25	12	18.33	18.43	18.47	18.51		1.5
	25	25	18.29	18.24	18.36	18.47		1.5
	50	0	18.22	18.45	18.35	18.46		1.5

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Table 9-87
LTE Band 48 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot/Grip Sensor and/or Earjack Mode Active

LTE Band 48 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55265 (3552.5 MHz)	Low-Mid Channel 55773 (3600.8 MHz)	Mid-High Channel 56207 (3649.2 MHz)	High Channel 56715 (3697.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.24	20.01	20.12	20.04	0	0
	1	12	20.42	20.17	20.29	20.24		0
	1	24	20.36	20.02	20.07	20.11		0
	12	0	20.62	20.21	20.13	20.34	0-1	0
	12	6	20.73	20.41	20.33	20.37		0
	12	13	20.56	20.23	20.25	20.29		0
	25	0	20.62	20.32	20.14	20.27		0
16QAM	1	0	20.62	20.18	20.20	20.41	0-1	0
	1	12	20.78	20.53	20.47	20.52		0
	1	24	20.64	20.29	20.23	20.36		0
	12	0	20.57	20.26	20.22	20.49	0-2	0
	12	6	20.59	20.36	20.29	20.40		0
	12	13	20.59	20.25	20.19	20.48		0
	25	0	20.65	20.35	20.25	20.27		0
64QAM	1	0	20.41	20.06	20.05	20.46	0-2	0
	1	12	20.54	20.22	20.32	20.21		0
	1	24	20.38	20.02	20.11	20.41		0
	12	0	20.58	20.37	20.15	20.41	0-3	0
	12	6	20.71	20.39	20.36	20.44		0
	12	13	20.52	20.38	20.27	20.43		0
	25	0	20.60	20.29	20.18	20.37		0
256QAM	1	0	18.32	18.09	18.12	18.26	0-5	1.5
	1	12	18.59	18.37	18.32	18.48		1.5
	1	24	18.44	18.09	18.09	18.23		1.5
	12	0	18.63	18.32	18.26	18.40		1.5
	12	6	18.83	18.42	18.46	18.52		1.5
	12	13	18.73	18.30	18.36	18.42		1.5
	25	0	18.56	18.24	18.29	18.34		1.5

9.4.12 LTE Band 41

Table 9-88
LTE Band 41 Max PC3 Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.97	**24.00**	23.93	23.81	23.88	0	0
	1	50	23.65	23.80	23.68	23.75	23.66		0
	1	99	23.95	23.94	23.62	23.69	23.58		0
	50	0	23.22	**23.28**	23.05	23.13	23.07	0-1	1
	50	25	23.17	23.23	22.97	23.06	22.99		1
	50	50	23.15	23.18	22.91	23.00	22.90		1
	100	0	23.19	23.21	22.97	23.08	22.98		1
16QAM	1	0	23.03	23.06	22.96	23.03	23.02	0-1	1
	1	50	22.68	22.82	22.68	22.74	22.74		1
	1	99	22.96	22.95	22.66	22.71	22.72		1
	50	0	22.19	22.25	22.03	22.12	22.05	0-2	2
	50	25	22.16	22.20	21.98	22.06	21.97		2
	50	50	22.16	22.15	21.91	22.01	21.88		2
	100	0	22.16	22.22	21.99	22.08	22.00		2
64QAM	1	0	21.74	21.75	21.69	21.73	21.71	0-2	2
	1	50	21.35	21.51	21.46	21.50	21.45		2
	1	99	21.67	21.64	21.34	21.45	21.45		2
	50	0	21.21	21.27	21.05	21.14	21.08	0-3	3
	50	25	21.17	21.22	20.99	21.08	20.98		3
	50	50	21.15	21.17	20.93	21.01	20.89		3
	100	0	21.13	21.19	20.95	21.05	20.94		3
256QAM	1	0	18.83	19.00	18.85	18.91	18.92	0-5	5
	1	50	18.56	18.69	18.58	18.60	18.64		5
	1	99	18.79	18.87	18.49	18.55	18.61		5
	50	0	19.16	19.27	19.03	19.13	19.04		5
	50	25	19.13	19.19	19.00	19.06	18.97		5
	50	50	19.08	19.16	18.91	18.98	18.86		5
	100	0	19.09	19.17	18.93	19.03	18.94		5

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Table 9-89
LTE Band 41 Max PC3 Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	24.00	24.11	23.81	24.04	23.91	0	0
	1	36	23.94	24.03	23.64	23.85	23.73		0
	1	74	23.97	24.03	23.66	23.84	23.74		0
	36	0	23.14	23.22	23.00	23.13	23.12	0-1	1
	36	18	23.14	23.20	22.95	23.11	23.06		1
	36	37	23.12	23.15	22.89	23.04	22.99		1
	75	0	23.23	23.21	23.01	23.14	23.08		1
16QAM	1	0	23.18	23.16	22.98	23.15	23.12	0-1	1
	1	36	23.14	23.02	22.81	22.84	22.96		1
	1	74	23.17	23.02	22.80	22.87	22.95		1
	36	0	22.15	22.22	21.98	22.11	22.06	0-2	2
	36	18	22.15	22.18	21.95	22.09	22.03		2
	36	37	22.15	22.12	21.90	22.02	21.96		2
	75	0	22.22	22.20	21.98	22.12	22.04		2
64QAM	1	0	21.82	21.95	21.35	21.58	21.97	0-2	2
	1	36	21.73	21.81	21.20	21.42	21.42		2
	1	74	21.75	21.91	21.23	21.45	21.42		2
	36	0	21.11	21.14	20.91	21.04	21.01	0-3	3
	36	18	21.12	21.12	20.88	21.02	20.97		3
	36	37	21.08	21.06	20.81	20.96	20.92		3
	75	0	21.22	21.19	20.94	21.08	21.03		3
256QAM	1	0	18.92	19.06	19.09	19.00	18.96	0-5	5
	1	36	19.05	19.04	18.93	18.70	18.75		5
	1	74	19.05	19.02	18.95	18.73	18.80		5
	36	0	19.37	19.28	19.12	19.11	19.05		5
	36	18	19.39	19.26	19.19	19.10	19.07		5
	36	37	19.35	19.25	19.10	19.09	19.05		5
	75	0	19.42	19.30	19.15	19.15	19.07		5

Table 9-90
LTE Band 41 Max PC3 Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.89	24.07	23.82	23.88	23.96	0	0
	1	25	23.58	23.99	23.87	23.90	23.88		0
	1	49	23.87	23.90	23.78	23.76	23.78		0
	25	0	23.21	23.27	23.21	23.16	23.09	0-1	1
	25	12	23.22	23.24	23.19	23.12	23.08		1
	25	25	23.20	23.19	23.13	23.09	23.04		1
	50	0	23.30	23.32	23.27	23.21	23.15		1
16QAM	1	0	23.20	23.35	23.18	23.18	23.13	0-1	1
	1	25	22.92	23.07	22.99	22.91	22.93		1
	1	49	23.17	23.23	23.07	23.07	23.03		1
	25	0	22.21	22.21	22.16	22.09	22.04	0-2	2
	25	12	22.19	22.20	22.14	22.07	22.00		2
	25	25	22.17	22.13	22.09	22.03	21.95		2
	50	0	22.28	22.28	22.24	22.17	22.11		2
64QAM	1	0	21.84	21.96	21.85	21.79	21.75	0-2	2
	1	25	21.48	21.85	21.77	21.68	21.72		2
	1	49	21.82	21.81	21.72	21.63	21.63		2
	25	0	21.28	21.32	21.26	21.20	21.12	0-3	3
	25	12	21.29	21.29	21.24	21.18	21.11		3
	25	25	21.28	21.23	21.19	21.14	21.07		3
	50	0	21.26	21.28	21.20	21.16	21.09		3
256QAM	1	0	18.87	18.76	18.56	18.60	18.69	0-5	5
	1	25	18.66	18.92	18.70	18.61	18.56		5
	1	49	18.93	18.83	18.62	18.53	18.60		5
	25	0	19.22	19.14	19.06	18.92	18.84		5
	25	12	19.22	19.13	19.04	18.88	18.83		5
	25	25	19.21	19.09	18.98	18.87	18.78		5
	50	0	19.33	19.17	19.07	18.98	18.88		5

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Table 9-91
LTE Band 41 Max PC3 Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.99	24.04	23.83	23.86	23.83	0	0
	1	12	23.99	24.04	23.80	23.93	23.90		0
	1	24	24.00	23.88	23.76	23.88	23.85		0
	12	0	23.01	23.12	22.88	23.01	22.94	0-1	1
	12	6	23.07	23.16	22.93	23.08	22.96		1
	12	13	23.04	23.03	22.88	23.03	22.96		1
	25	0	23.27	23.21	23.01	23.16	23.04		1
16QAM	1	0	23.06	23.14	22.99	22.97	23.03	0-1	1
	1	12	23.05	23.17	22.89	23.09	23.09		1
	1	24	23.08	23.08	22.85	22.96	22.94		1
	12	0	22.08	22.18	21.95	22.04	22.01	0-2	2
	12	6	22.15	22.21	21.97	22.15	22.02		2
	12	13	22.12	22.09	21.93	22.07	22.04		2
	25	0	22.15	22.10	21.91	22.06	21.93		2
64QAM	1	0	21.89	21.86	21.61	21.65	21.70	0-2	2
	1	12	21.84	21.89	21.55	21.66	21.70		2
	1	24	21.83	21.79	21.55	21.67	21.66		2
	12	0	21.26	21.29	21.03	21.10	21.06	0-3	3
	12	6	21.30	21.30	21.06	21.18	21.08		3
	12	13	21.25	21.17	20.99	21.13	21.09		3
	25	0	21.28	21.22	21.06	21.17	21.06		3
256QAM	1	0	18.86	18.92	18.90	18.46	18.53	0-5	5
	1	12	18.90	18.96	18.92	18.58	18.67		5
	1	24	18.98	18.82	18.83	18.53	18.61		5
	12	0	19.25	19.15	19.17	18.90	18.84		5
	12	6	19.32	19.20	19.19	19.20	18.88		5
	12	13	19.27	19.06	19.13	18.97	18.92		5
	25	0	19.26	19.04	19.12	18.65	18.79		5

Table 9-92
LTE Band 41 Max PC2 Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	26.83	26.62	26.39	26.48	26.36	0	0
	1	50	26.56	26.44	26.42	**26.92**	26.74		0
	1	99	26.84	26.52	26.31	26.41	26.38		0
	50	0	25.84	25.85	25.45	26.16	25.99	0-1	1
	50	25	26.04	25.82	25.54	**26.31**	26.15		1
	50	50	26.02	25.75	25.39	26.04	25.89		1
	100	0	25.91	25.80	25.35	26.11	25.97		1
16QAM	1	0	26.11	25.94	25.07	25.85	25.77	0-1	1
	1	50	25.70	25.52	25.61	26.41	26.23		1
	1	99	26.03	25.81	24.96	25.57	25.46		1
	50	0	25.02	24.89	24.38	25.18	25.05	0-2	2
	50	25	25.00	24.82	24.51	25.32	25.15		2
	50	50	24.96	24.76	24.27	25.07	24.85		2
	100	0	25.00	24.83	24.34	25.13	24.97		2
64QAM	1	0	24.90	24.75	24.34	25.08	24.91	0-2	2
	1	50	24.51	24.34	24.79	25.41	25.28		2
	1	99	24.84	24.61	24.22	24.78	24.73		2
	50	0	24.02	23.89	23.41	24.21	24.06	0-3	3
	50	25	23.96	23.85	23.52	24.35	24.19		3
	50	50	23.93	23.83	23.25	24.08	23.90		3
	100	0	23.92	23.90	23.28	24.09	23.93		3
256QAM	1	0	21.90	21.95	20.90	21.58	21.55	0-5	5
	1	50	21.87	21.52	21.40	22.13	22.11		5
	1	99	21.73	21.73	20.80	21.49	21.37		5
	50	0	21.95	21.96	21.42	22.20	22.02		5
	50	25	21.95	21.90	21.56	22.29	22.16		5
	50	50	21.93	21.83	21.29	22.07	21.91		5
	100	0	21.90	21.82	21.32	22.09	21.89		5

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Table 9-93
LTE Band 41 Max PC2 Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	27.04	26.72	26.12	26.64	26.50	0	0
	1	36	26.87	26.49	26.44	26.91	26.83		0
	1	74	27.13	26.68	26.04	26.46	26.41		0
	36	0	26.12	25.97	25.42	26.25	26.12	0-1	1
	36	18	26.34	25.98	25.53	26.34	26.19		1
	36	37	26.27	25.91	25.35	26.19	26.05		1
	75	0	26.29	25.93	25.40	26.22	26.07		1
16QAM	1	0	26.34	26.20	25.35	26.14	26.08	0-1	1
	1	36	25.91	25.80	25.59	26.42	26.35		1
	1	74	26.40	26.01	25.11	25.96	25.88		1
	36	0	25.26	24.95	24.28	25.22	25.03	0-2	2
	36	18	25.26	24.84	24.45	25.28	25.13		2
	36	37	25.21	24.77	24.29	25.12	24.96		2
	75	0	25.30	24.88	24.37	25.21	25.04		2
64QAM	1	0	25.18	24.95	24.58	25.26	25.21	0-2	2
	1	36	24.75	24.87	24.82	25.43	25.39		2
	1	74	24.87	24.78	24.36	25.16	25.11		2
	36	0	24.28	23.85	23.40	24.28	24.10	0-3	3
	36	18	24.28	23.88	23.48	24.33	24.17		3
	36	37	24.25	23.84	23.35	24.11	23.99		3
	75	0	24.26	23.90	23.37	24.23	23.97		3
256QAM	1	0	22.18	21.98	21.16	21.87	21.83	0-5	5
	1	36	22.16	21.83	21.41	22.13	22.07		5
	1	74	22.23	21.80	20.91	21.66	21.58		5
	36	0	22.25	21.94	21.43	22.21	22.02		5
	36	18	22.28	21.90	21.51	22.27	22.11		5
	36	37	22.22	21.85	21.23	22.12	21.90		5
	75	0	22.05	21.90	21.37	22.15	21.95		5

Table 9-94
LTE Band 41 Max PC2 Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	26.88	26.38	25.93	26.25	26.22	0	0
	1	25	26.71	26.49	26.25	26.79	26.65		0
	1	49	26.90	26.50	25.86	26.16	26.05		0
	25	0	26.14	25.72	25.14	25.90	25.71	0-1	1
	25	12	26.12	25.68	25.30	26.12	25.90		1
	25	25	26.13	25.65	25.06	25.88	25.67		1
	50	0	26.16	25.69	25.11	25.93	25.73		1
16QAM	1	0	26.23	25.90	24.89	25.60	25.47	0-1	1
	1	25	26.00	25.84	25.49	26.16	26.02		1
	1	49	26.21	25.75	24.93	25.47	25.28		1
	25	0	25.16	24.76	24.12	24.94	24.78	0-2	2
	25	12	25.15	24.68	24.33	25.14	24.94		2
	25	25	25.13	24.66	24.06	24.90	24.69		2
	50	0	25.12	24.71	24.11	24.91	24.71		2
64QAM	1	0	25.01	24.69	24.03	24.83	24.72	0-2	2
	1	25	24.80	24.79	24.59	25.16	25.05		2
	1	49	24.98	24.58	23.89	24.66	24.55		2
	25	0	24.06	24.22	23.12	23.96	23.75	0-3	3
	25	12	24.07	23.65	23.30	24.12	23.94		3
	25	25	24.07	23.62	23.06	23.89	23.93		3
	50	0	24.14	23.74	23.10	23.92	23.72		3
256QAM	1	0	21.97	21.73	20.87	21.32	21.23	0-5	5
	1	25	21.73	21.61	21.24	22.00	21.91		5
	1	49	21.92	21.58	20.82	21.16	21.06		5
	25	0	22.05	21.59	21.09	21.85	21.67		5
	25	12	22.03	21.69	21.27	22.04	21.87		5
	25	25	22.05	21.66	21.03	21.78	21.60		5
	50	0	22.04	21.70	21.12	21.91	21.70		5

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Table 9-95
LTE Band 41 Max PC2 Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	26.80	26.27	26.05	26.54	26.43	0	0
	1	12	26.82	26.50	26.37	26.79	26.70		0
	1	24	26.89	26.21	26.12	26.57	26.45		0
	12	0	25.98	25.57	25.40	26.02	25.91	0-1	1
	12	6	26.07	25.63	25.44	26.17	25.96		1
	12	13	25.97	25.48	25.32	26.03	25.95		1
	25	0	25.98	25.51	25.35	26.05	25.87		1
16QAM	1	0	26.10	25.62	25.34	26.01	25.98	0-1	1
	1	12	26.13	25.79	25.55	26.28	26.23		1
	1	24	26.16	25.50	25.29	26.00	25.99		1
	12	0	24.91	24.51	24.25	24.95	24.89	0-2	2
	12	6	25.02	24.61	24.33	25.09	24.96		2
	12	13	24.88	24.43	24.22	24.95	24.87		2
	25	0	24.95	24.50	24.32	25.07	24.94		2
64QAM	1	0	24.93	24.35	24.60	25.31	25.25	0-2	2
	1	12	24.91	24.57	24.78	25.52	25.41		2
	1	24	24.94	24.24	24.55	25.32	25.24		2
	12	0	23.95	23.56	23.33	24.03	23.94	0-3	3
	12	6	24.00	23.57	23.41	24.23	24.00		3
	12	13	23.88	23.45	23.29	24.14	23.96		3
	25	0	23.96	23.42	23.37	24.18	23.94		3
256QAM	1	0	21.89	21.40	20.99	21.71	21.73	0-5	5
	1	12	21.87	21.60	21.20	21.97	21.99		5
	1	24	21.85	21.30	20.93	21.73	21.70		5
	12	0	21.98	21.62	21.29	22.01	21.93		5
	12	6	21.99	21.72	21.35	22.13	22.00		5
	12	13	22.03	21.51	21.25	21.99	21.94		5
	25	0	21.93	21.50	21.24	21.98	21.80		5

Table 9-96
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.51	**21.65**	20.81	20.87	20.68	0	0
	1	50	21.41	21.45	21.33	21.26	21.22		0
	1	99	21.45	21.48	20.71	20.76	20.63		0
	50	0	21.48	21.49	21.35	21.29	21.24	0-1	0
	50	25	21.38	**21.64**	21.48	21.22	21.41		0
	50	50	21.50	21.41	21.25	21.32	21.10		0
	100	0	21.42	21.44	21.33	21.45	21.24		0
16QAM	1	0	21.64	21.63	20.84	20.99	20.68	0-1	0
	1	50	21.52	21.55	21.35	21.31	21.15		0
	1	99	21.57	21.54	20.70	20.91	20.62		0
	50	0	21.61	21.59	21.40	21.42	21.21	0-2	0
	50	25	21.77	21.74	21.54	21.49	21.31		0
	50	50	21.52	21.46	21.30	21.29	21.05		0
	100	0	21.57	21.55	21.35	21.38	21.12		0
64QAM	1	0	21.87	21.92	21.11	21.05	20.95	0-2	0
	1	50	21.75	21.82	21.57	21.52	21.45		0
	1	99	21.78	21.82	20.76	20.82	20.64		0
	50	0	21.11	21.13	20.69	20.74	20.60	0-3	0.5
	50	25	21.29	21.24	20.70	20.76	20.62		0.5
	50	50	21.07	21.01	20.62	20.62	20.57		0.5
	100	0	21.06	21.02	20.68	20.66	20.61		0.5
256QAM	1	0	19.01	19.03	18.25	18.18	18.09	0-5	2.5
	1	50	18.88	18.94	18.65	18.68	18.59		2.5
	1	99	18.92	18.92	18.13	18.05	17.98		2.5
	50	0	19.11	19.10	18.69	18.74	18.59		2.5
	50	25	19.28	19.21	18.70	18.76	18.62		2.5
	50	50	19.02	19.01	18.56	18.75	18.56		2.5
	100	0	19.03	18.99	18.59	18.75	18.55		2.5

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Table 9-97
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.55	21.28	21.08	21.11	20.95	0	0
	1	36	21.52	21.52	21.33	21.32	21.16		0
	1	74	21.54	21.10	20.85	20.87	20.65		0
	36	0	21.63	21.62	21.41	21.48	21.26	0-1	0
	36	18	21.73	21.72	21.52	21.53	21.33		0
	36	37	21.61	21.54	21.35	21.37	21.13		0
	75	0	21.62	21.61	21.43	21.43	21.20		0
16QAM	1	0	21.68	21.38	21.16	21.13	21.01	0-1	0
	1	36	21.57	21.62	21.37	21.34	21.20		0
	1	74	21.60	21.18	20.92	20.87	20.74		0
	36	0	21.59	21.58	21.38	21.41	21.19	0-2	0
	36	18	21.69	21.66	21.45	21.49	21.26		0
	36	37	21.55	21.55	21.31	21.31	21.09		0
	75	0	21.64	21.64	21.43	21.46	21.22		0
64QAM	1	0	21.91	21.57	21.41	21.37	21.25	0-2	0
	1	36	21.79	21.83	21.60	21.55	21.48		0
	1	74	21.82	21.41	21.16	21.11	21.01		0
	36	0	21.16	21.15	20.96	21.00	20.73	0-3	0.5
	36	18	21.25	21.24	21.03	21.05	20.83		0.5
	36	37	21.12	21.10	20.87	20.90	20.67		0.5
	75	0	21.18	21.13	20.95	20.96	20.74		0.5
256QAM	1	0	19.04	18.73	18.56	18.52	18.42	0-5	2.5
	1	36	18.98	18.97	18.75	18.73	18.60		2.5
	1	74	18.96	18.57	18.31	18.27	18.15		2.5
	36	0	19.12	19.12	18.96	18.99	18.77		2.5
	36	18	19.23	19.23	19.02	19.03	18.81		2.5
	36	37	19.14	19.02	18.90	18.89	18.64		2.5
	75	0	19.13	19.12	18.93	18.94	18.70		2.5

Table 9-98
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.38	20.89	20.47	20.57	20.46	0	0
	1	25	21.35	21.48	21.28	21.26	20.98		0
	1	49	21.40	20.76	20.35	20.46	20.28		0
	25	0	21.34	21.34	21.15	21.18	20.93	0-1	0
	25	12	21.53	21.53	21.33	21.32	21.12		0
	25	25	21.29	21.26	21.06	21.07	20.85		0
	50	0	21.37	21.33	21.15	21.17	20.94		0
16QAM	1	0	21.44	20.77	20.64	20.61	20.47	0-1	0
	1	25	21.34	21.51	21.26	21.26	21.10		0
	1	49	21.41	20.82	20.48	20.45	20.28		0
	25	0	21.38	21.36	21.18	21.20	20.96	0-2	0
	25	12	21.57	21.54	21.35	21.36	21.13		0
	25	25	21.32	21.32	21.09	21.11	20.91		0
	50	0	21.38	21.37	21.16	21.21	20.97		0
64QAM	1	0	21.70	21.04	20.89	20.77	20.74	0-2	0
	1	25	21.60	21.73	21.29	21.26	21.26		0
	1	49	21.66	20.92	20.73	20.62	20.58		0
	25	0	20.93	20.87	20.68	20.69	20.50	0-3	0.5
	25	12	21.10	21.07	20.82	20.68	20.68		0.5
	25	25	20.85	20.81	20.61	20.64	20.44		0.5
	50	0	20.91	20.88	20.69	20.69	20.48		0.5
256QAM	1	0	18.85	18.24	17.99	18.03	17.90	0-5	2.5
	1	25	18.73	18.89	18.70	18.63	18.52		2.5
	1	49	18.82	18.30	17.95	17.89	17.79		2.5
	25	0	18.86	18.85	18.66	18.72	18.46		2.5
	25	12	19.04	19.04	18.85	18.85	18.64		2.5
	25	25	18.82	18.79	18.58	18.62	18.38		2.5
	50	0	18.93	18.87	18.69	18.71	18.49		2.5

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Table 9-99
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.10	20.65	20.90	20.85	21.00	0	0
	1	12	21.10	20.84	21.12	21.03	21.27		0
	1	24	21.09	20.56	20.85	20.80	21.00		0
	12	0	21.22	20.84	21.16	21.03	21.23	0-1	0
	12	6	21.30	20.95	21.24	21.15	21.28		0
	12	13	21.20	20.75	21.15	21.03	21.22		0
	25	0	21.24	20.80	21.19	21.06	21.17		0
16QAM	1	0	21.40	20.96	21.19	21.02	21.24	0-1	0
	1	12	21.40	21.14	21.36	21.27	21.47		0
	1	24	21.36	20.86	21.16	21.06	21.25		0
	12	0	21.23	20.85	21.14	21.00	21.14	0-2	0
	12	6	21.30	20.91	21.22	21.14	21.10		0
	12	13	21.20	20.75	21.10	21.02	21.18		0
	25	0	21.30	20.86	21.23	21.12	21.15		0
64QAM	1	0	21.22	20.72	20.97	20.79	20.89	0-2	0
	1	12	21.20	20.95	21.16	21.06	21.17		0
	1	24	21.19	20.66	20.92	20.84	20.93		0
	12	0	20.75	20.36	21.18	20.52	20.57	0-3	0.5
	12	6	20.85	20.47	21.23	20.67	20.64		0.5
	12	13	20.74	20.30	21.17	20.52	20.57		0.5
	25	0	20.78	20.32	21.20	20.60	20.58		0.5
256QAM	1	0	18.77	18.30	18.50	18.35	18.47	0-5	2.5
	1	12	18.73	18.50	18.66	18.57	18.71		2.5
	1	24	18.72	18.20	18.40	18.34	18.47		2.5
	12	0	18.83	18.47	18.70	18.65	18.62		2.5
	12	6	18.90	18.56	18.77	18.75	18.73		2.5
	12	13	18.82	18.40	18.65	18.66	18.68		2.5
	25	0	18.79	18.35	18.58	18.62	18.54		2.5

Table 9-100
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.41	**21.42**	20.51	20.63	20.55	0	0
	1	50	21.30	21.33	21.06	20.99	20.85		0
	1	99	21.33	21.26	20.50	20.53	20.50		0
	50	0	21.35	21.36	21.14	21.18	20.93	0-1	0
	50	25	21.28	**21.55**	21.28	21.21	21.06		0
	50	50	21.52	21.25	21.04	21.27	20.77		0
	100	0	21.30	21.28	21.07	21.06	20.85		0
16QAM	1	0	21.58	21.64	20.84	20.69	20.61	0-1	0
	1	50	21.51	21.58	21.32	21.25	21.15		0
	1	99	21.57	21.55	20.51	20.48	20.51		0
	50	0	21.34	21.38	21.14	21.11	20.95	0-2	0
	50	25	21.52	21.52	21.27	21.28	21.09		0
	50	50	21.32	21.27	21.01	20.96	20.78		0
	100	0	21.30	21.33	21.09	21.08	20.89		0
64QAM	1	0	21.84	21.89	21.06	20.93	20.90	0-2	0
	1	50	21.77	21.84	21.49	21.47	21.46		0
	1	99	21.78	21.79	20.73	20.60	20.66		0
	50	0	21.40	21.41	21.20	21.15	20.97	0-3	0
	50	25	21.54	21.56	21.31	21.31	21.09		0
	50	50	21.34	21.29	21.04	21.05	20.83		0
	100	0	21.32	21.28	21.06	21.07	20.85		0
256QAM	1	0	21.44	21.43	20.63	20.59	20.51	0-5	0
	1	50	21.31	21.38	21.16	21.12	21.07		0
	1	99	21.36	21.33	20.49	20.50	20.50		0
	50	0	21.38	21.38	21.21	21.36	21.02		0
	50	25	21.54	21.55	21.30	21.39	21.16		0
	50	50	21.32	21.27	21.07	21.10	20.86		0
	100	0	21.28	21.30	21.09	21.11	20.91		0

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Table 9-101
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.23	20.92	20.76	20.76	20.62	0	0
	1	36	21.17	21.23	21.03	21.01	20.89		0
	1	74	21.19	20.79	20.57	20.55	20.47		0
	36	0	21.35	21.33	21.18	21.16	20.90	0-1	0
	36	18	21.44	21.46	21.27	21.26	21.07		0
	36	37	21.32	21.30	21.10	21.10	20.92		0
	75	0	21.30	21.35	21.16	21.14	21.00		0
16QAM	1	0	21.49	21.23	21.11	21.03	20.92	0-1	0
	1	36	21.41	21.49	21.32	21.27	21.16		0
	1	74	21.48	21.10	20.85	20.75	20.69		0
	36	0	21.30	21.34	21.18	21.08	20.97	0-2	0
	36	18	21.38	21.40	21.22	21.21	21.01		0
	36	37	21.28	21.25	21.10	21.06	20.85		0
	75	0	21.31	21.34	21.14	21.12	20.94		0
64QAM	1	0	21.72	21.46	21.35	21.21	21.19	0-2	0
	1	36	21.68	21.61	21.56	21.49	21.46		0
	1	74	21.72	21.39	21.11	21.01	20.99		0
	36	0	21.31	21.41	21.20	21.24	21.00	0-3	0
	36	18	21.44	21.47	21.30	21.28	21.10		0
	36	37	21.36	21.32	21.13	21.13	20.94		0
	75	0	21.33	21.37	21.16	21.18	20.98		0
256QAM	1	0	21.35	21.08	20.91	20.87	20.80	0-5	0
	1	36	21.27	21.37	21.14	21.14	21.08		0
	1	74	21.32	20.95	20.70	20.65	20.61		0
	36	0	21.31	21.37	21.19	21.23	21.01		0
	36	18	21.44	21.45	21.27	21.28	21.13		0
	36	37	21.32	21.33	21.13	21.15	20.95		0
	75	0	21.34	21.36	21.18	21.20	20.98		0

Table 9-102
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.04	20.53	20.32	20.42	20.07	0	0
	1	25	21.03	21.15	20.93	20.93	20.72		0
	1	49	21.00	20.51	20.26	20.36	20.05		0
	25	0	21.05	21.11	20.86	20.85	20.70	0-1	0
	25	12	21.22	21.23	21.06	21.04	20.84		0
	25	25	20.93	21.02	20.80	20.79	20.60		0
	50	0	21.05	21.08	20.88	20.87	20.66		0
16QAM	1	0	21.31	20.72	20.52	20.49	20.38	0-1	0
	1	25	21.30	21.44	21.20	21.19	20.83		0
	1	49	21.27	20.61	20.36	20.34	20.19		0
	25	0	21.08	21.15	20.91	20.84	20.71	0-2	0
	25	12	21.26	21.28	21.09	21.07	20.87		0
	25	25	21.05	21.07	20.87	20.96	20.65		0
	50	0	21.06	21.09	20.86	20.92	20.66		0
64QAM	1	0	21.54	21.00	20.80	20.72	20.67	0-2	0
	1	25	21.51	21.51	21.25	21.32	21.01		0
	1	49	21.50	20.88	20.62	20.56	20.53		0
	25	0	21.09	21.12	20.93	20.99	20.73	0-3	0
	25	12	21.29	21.31	21.12	21.10	20.91		0
	25	25	21.06	21.08	20.88	20.89	20.67		0
	50	0	21.04	21.10	20.91	20.91	20.70		0
256QAM	1	0	21.16	20.57	20.56	20.52	20.23	0-5	0
	1	25	21.13	21.29	21.10	21.01	20.91		0
	1	49	21.11	20.51	20.49	20.38	20.10		0
	25	0	21.09	21.14	20.92	20.97	20.71		0
	25	12	21.25	21.30	21.14	21.09	20.89		0
	25	25	21.03	21.09	20.87	20.84	20.64		0
	50	0	21.08	21.14	20.97	20.95	20.71		0

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Table 9-103
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 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.12	20.97	20.84	20.76	20.56	0	0
	1	12	21.14	21.18	21.02	21.02	20.82		0
	1	24	21.15	20.89	20.78	20.76	20.58		0
	12	0	21.23	21.29	21.07	21.01	20.84	0-1	0
	12	6	21.32	21.36	21.14	21.14	20.91		0
	12	13	21.22	21.20	21.04	21.05	20.86		0
	25	0	21.26	21.24	21.13	21.08	20.84		0
16QAM	1	0	21.31	21.35	21.09	20.97	20.88	0-1	0
	1	12	21.43	21.52	21.27	21.23	21.11		0
	1	24	21.36	21.24	21.05	21.01	20.89		0
	12	0	21.21	21.27	21.06	21.02	20.80	0-2	0
	12	6	21.33	21.34	21.14	21.13	20.86		0
	12	13	21.23	21.28	21.03	21.00	20.84		0
	25	0	21.31	21.29	21.13	21.12	20.87		0
64QAM	1	0	21.61	21.58	21.33	21.21	21.14	0-2	0
	1	12	21.58	21.76	21.51	21.42	21.39		0
	1	24	21.63	21.48	21.30	21.23	21.17		0
	12	0	21.24	21.33	21.11	21.11	20.86	0-3	0
	12	6	21.39	21.39	21.18	21.18	20.91		0
	12	13	21.30	21.25	21.09	21.05	20.88		0
	25	0	21.35	21.30	21.16	21.15	20.89		0
256QAM	1	0	21.28	21.19	20.94	20.81	20.73	0-5	0
	1	12	21.32	21.38	21.12	21.06	20.97		0
	1	24	21.23	21.09	20.87	20.81	20.73		0
	12	0	21.38	21.43	21.22	21.14	20.96		0
	12	6	21.46	21.54	21.30	21.27	21.09		0
	12	13	21.37	21.33	21.19	21.19	20.98		0
	25	0	21.34	21.31	21.15	21.15	20.88		0

Table 9-104
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	**22.60**	22.37	22.42	22.42	22.00	0	0
	1	50	22.56	22.23	22.24	22.31	22.15		0
	1	99	22.54	22.20	22.21	22.30	22.00		0
	50	0	22.76	22.27	22.30	22.35	22.15	0-1	0
	50	25	22.79	22.25	22.28	22.30	22.07		0
	50	50	**22.80**	22.25	22.22	22.19	22.14		0
	100	0	22.59	22.23	22.24	22.25	22.12		0
16QAM	1	0	22.65	22.15	21.95	22.47	22.11	0-1	0
	1	50	22.53	22.05	22.02	22.48	22.14		0
	1	99	22.53	22.05	21.92	22.48	22.37		0
	50	0	21.95	21.49	21.25	21.55	21.34	0-2	1
	50	25	22.00	21.44	21.36	21.58	21.46		1
	50	50	21.97	21.41	21.23	21.49	21.51		1
	100	0	22.14	21.42	21.35	21.56	21.36		1
64QAM	1	0	21.56	21.08	21.02	21.57	21.28	0-2	1
	1	50	21.50	20.92	21.02	21.51	21.45		1
	1	99	21.43	20.96	21.06	21.46	21.62		1
	50	0	20.97	20.48	20.34	20.47	20.29	0-3	2
	50	25	21.08	20.51	20.54	20.50	20.35		2
	50	50	20.96	20.40	20.42	20.44	20.51		2
	100	0	21.06	20.38	20.33	20.52	20.46		2
256QAM	1	0	18.76	18.20	18.22	18.27	17.94	0-5	4
	1	50	18.75	18.06	18.18	17.95	17.95		4
	1	99	18.64	18.08	18.03	17.80	18.15		4
	50	0	18.98	18.40	18.51	18.46	18.25		4
	50	25	18.97	18.37	18.49	18.37	18.33		4
	50	50	19.02	18.34	18.45	18.42	18.35		4
	100	0	18.87	18.34	18.41	18.31	18.26		4

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Table 9-105
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.69	22.18	22.23	22.36	22.08	0	0
	1	36	22.60	22.14	22.21	22.37	22.20		0
	1	74	22.66	22.10	22.19	22.22	22.28		0
	36	0	22.74	22.47	22.39	22.45	22.36	0-1	0
	36	18	22.77	22.38	22.43	22.50	22.41		0
	36	37	22.80	22.33	22.41	22.43	22.40		0
	75	0	22.81	22.37	22.43	22.50	22.41		0
16QAM	1	0	22.69	22.30	22.32	22.41	22.30	0-1	0
	1	36	22.61	22.18	22.25	22.23	22.30		0
	1	74	22.60	22.16	22.23	22.15	22.42		0
	36	0	21.68	21.30	21.37	21.44	21.33	0-2	1
	36	18	21.72	21.31	21.35	21.41	21.34		1
	36	37	21.67	21.22	21.35	21.34	21.33		1
	75	0	21.80	21.36	21.41	21.41	21.39		1
64QAM	1	0	21.38	20.97	21.05	21.15	21.01	0-2	1
	1	36	21.30	20.92	21.00	21.09	21.03		1
	1	74	21.45	20.87	21.01	20.89	21.10		1
	36	0	20.73	20.33	20.41	20.45	20.34	0-3	2
	36	18	20.87	20.36	20.42	20.50	20.39		2
	36	37	20.75	20.35	20.38	20.39	20.37		2
	75	0	20.79	20.36	20.42	20.48	20.39		2
256QAM	1	0	18.58	18.18	18.21	18.32	18.15	0-5	4
	1	36	18.43	18.06	18.13	18.22	18.19		4
	1	74	18.49	18.02	18.10	18.06	18.33		4
	36	0	18.72	18.32	18.38	18.49	18.34		4
	36	18	18.83	18.33	18.40	18.49	18.36		4
	36	37	18.74	18.25	18.40	18.39	18.36		4
	75	0	18.77	18.35	18.40	18.46	18.35		4

Table 9-106
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.48	22.02	22.18	22.12	22.11	0	0
	1	25	22.47	22.08	22.20	22.10	22.08		0
	1	49	22.46	21.99	22.12	22.06	22.03		0
	25	0	22.70	22.31	22.30	22.36	22.29	0-1	0
	25	12	22.75	22.32	22.35	22.35	22.25		0
	25	25	22.68	22.27	22.28	22.31	22.21		0
	50	0	22.74	22.35	22.40	22.41	22.29		0
16QAM	1	0	22.70	22.16	22.26	22.27	22.23	0-1	0
	1	25	22.56	22.19	22.17	22.21	22.05		0
	1	49	22.65	22.10	22.14	22.21	22.15		0
	25	0	21.74	21.33	21.35	21.48	21.24	0-2	1
	25	12	21.73	21.31	21.33	21.36	21.27		1
	25	25	21.68	21.23	21.36	21.36	21.22		1
	50	0	21.73	21.34	21.32	21.40	21.28		1
64QAM	1	0	21.42	20.94	20.94	20.98	20.87	0-2	1
	1	25	21.30	20.85	20.88	20.98	20.84		1
	1	49	21.33	20.83	20.86	20.83	20.78		1
	25	0	20.68	20.26	20.29	20.35	20.27	0-3	2
	25	12	20.69	20.28	20.27	20.33	20.26		2
	25	25	20.61	20.37	20.24	20.27	20.18		2
	50	0	20.76	20.31	20.34	20.43	20.31		2
256QAM	1	0	18.45	18.07	18.59	18.09	18.15	0-5	4
	1	25	18.41	18.04	18.06	18.05	18.03		4
	1	49	18.39	17.98	18.01	18.01	18.01		4
	25	0	18.70	18.31	18.35	18.38	18.30		4
	25	12	18.72	18.29	18.38	18.35	18.26		4
	25	25	18.65	18.27	18.30	18.32	18.21		4
	50	0	18.89	18.34	18.39	18.41	18.31		4

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Table 9-107
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.67	22.26	22.38	22.25	22.17	0	0
	1	12	22.64	22.12	22.33	22.29	22.12		0
	1	24	22.63	22.26	22.30	22.27	22.13		0
	12	0	22.74	22.35	22.34	22.32	22.28	0-1	0
	12	6	22.80	22.30	22.43	22.32	22.29		0
	12	13	22.74	22.28	22.40	22.40	22.28		0
	25	0	22.77	22.34	22.42	22.41	22.29		0
16QAM	1	0	22.73	22.33	22.32	22.31	22.23	0-1	0
	1	12	22.71	22.27	22.35	22.28	22.23		0
	1	24	22.69	22.25	22.32	22.33	22.22		0
	12	0	21.66	21.23	21.25	21.37	21.22	0-2	1
	12	6	21.70	21.17	21.31	21.34	21.18		1
	12	13	21.65	21.21	21.30	21.34	21.19		1
	25	0	21.78	21.32	21.42	21.30	21.30		1
64QAM	1	0	21.39	20.98	20.99	21.00	20.96	0-2	1
	1	12	21.40	20.94	21.01	21.01	20.95		1
	1	24	21.38	20.92	21.02	21.00	20.96		1
	12	0	20.67	20.24	20.29	20.25	20.21	0-3	2
	12	6	20.71	20.25	20.33	20.30	20.22		2
	12	13	20.63	20.19	20.31	20.24	20.21		2
	25	0	20.72	20.29	20.34	20.34	20.28		2
256QAM	1	0	18.51	18.27	18.24	18.21	18.30	0-5	4
	1	12	18.24	18.22	18.23	18.24	18.23		4
	1	24	18.50	18.23	18.22	18.22	18.16		4
	12	0	18.81	18.46	18.43	18.59	18.44		4
	12	6	18.85	18.48	18.52	18.52	18.48		4
	12	13	18.83	18.44	18.50	18.50	18.45		4
	25	0	18.77	18.43	18.39	18.49	18.41		4

Table 9-108
LTE Band 41 PC2 Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	**22.68**	22.32	22.26	22.25	22.01	0	0
	1	50	22.65	22.17	22.22	22.17	22.06		0
	1	99	22.61	22.14	22.13	22.13	22.17		0
	50	0	22.90	22.44	22.54	22.44	22.26	0-1	0
	50	25	**22.92**	22.44	22.51	22.32	22.23		0
	50	50	22.88	22.34	22.47	22.31	22.39		0
	100	0	22.65	22.31	22.48	22.35	22.26		0
16QAM	1	0	22.85	22.39	22.46	22.21	22.33	0-1	0
	1	50	22.74	22.31	22.41	22.35	22.38		0
	1	99	22.75	22.32	22.35	22.34	22.54		0
	50	0	22.72	22.31	22.38	22.32	22.27	0-2	0
	50	25	22.76	22.31	22.38	22.31	22.36		0
	50	50	22.75	22.26	22.36	22.29	22.40		0
	100	0	22.75	22.28	22.39	22.27	22.39		0
64QAM	1	0	22.70	22.30	22.24	22.20	22.14	0-2	0
	1	50	22.60	22.14	22.23	22.21	22.25		0
	1	99	22.56	22.12	22.13	22.13	22.24		0
	50	0	22.82	22.36	22.44	22.36	22.33	0-3	0
	50	25	22.78	22.40	22.39	22.35	22.40		0
	50	50	22.73	22.30	22.41	22.21	22.39		0
	100	0	22.78	22.29	22.39	22.29	22.31		0
256QAM	1	0	21.59	21.34	21.37	21.35	21.50	0-5	1
	1	50	21.63	21.27	21.28	21.26	21.58		1
	1	99	21.64	21.22	21.17	21.29	21.66		1
	50	0	21.83	21.49	21.53	21.57	21.67		1
	50	25	21.88	21.47	21.50	21.54	21.74		1
	50	50	21.96	21.44	21.48	21.45	21.74		1
	100	0	21.75	21.42	21.44	21.46	21.66		1

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Table 9-109
LTE Band 41 PC2 Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.56	22.17	22.15	22.23	22.03	0	0
	1	36	22.50	22.13	22.17	22.25	22.09		0
	1	74	22.52	22.04	22.13	22.06	22.12		0
	36	0	22.68	22.29	22.31	22.46	22.28	0-1	0
	36	18	22.48	22.31	22.35	22.37	22.36		0
	36	37	22.75	22.23	22.38	22.35	22.38		0
	75	0	22.70	22.28	22.35	22.39	22.29		0
16QAM	1	0	22.83	22.37	22.44	22.48	22.37	0-1	0
	1	36	22.71	22.36	22.42	22.36	22.41		0
	1	74	22.67	22.32	22.36	22.24	22.53		0
	36	0	22.55	22.20	22.28	22.43	22.39	0-2	0
	36	18	22.65	22.22	22.29	22.32	22.32		0
	36	37	22.67	22.17	22.23	22.17	22.49		0
	75	0	22.72	22.17	22.33	22.35	22.22		0
64QAM	1	0	22.67	22.23	22.27	22.29	22.25	0-2	0
	1	36	22.56	22.26	22.22	22.19	22.27		0
	1	74	22.69	22.17	22.13	22.07	22.34		0
	36	0	22.73	22.32	22.34	22.30	22.25	0-3	0
	36	18	22.75	22.29	22.36	22.40	22.51		0
	36	37	22.74	22.27	22.36	22.33	22.26		0
	75	0	22.75	22.29	22.39	22.36	22.30		0
256QAM	1	0	21.70	21.32	21.35	21.66	21.55	0-5	1
	1	36	21.60	21.27	21.29	21.51	21.55		1
	1	74	21.67	21.22	21.14	21.40	21.66		1
	36	0	21.77	21.44	21.42	21.72	21.61		1
	36	18	21.80	21.48	21.45	21.71	21.64		1
	36	37	21.93	21.38	21.42	21.64	21.66		1
	75	0	21.80	21.41	21.44	21.69	21.66		1

Table 9-110
LTE Band 41 PC2 Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.41	22.03	22.06	22.06	21.98	0	0
	1	25	22.49	22.00	22.02	22.04	21.95		0
	1	49	22.31	21.96	22.07	21.96	21.86		0
	25	0	22.64	22.22	22.25	22.37	22.17	0-1	0
	25	12	22.65	22.28	22.19	22.25	22.19		0
	25	25	22.57	22.20	22.32	22.14	22.13		0
	50	0	22.48	22.15	22.27	22.29	22.18		0
16QAM	1	0	22.65	22.30	22.30	22.35	22.30	0-1	0
	1	25	22.67	22.23	22.27	22.30	22.24		0
	1	49	22.66	22.22	22.21	22.63	22.22		0
	25	0	22.70	22.24	22.26	22.27	22.23	0-2	0
	25	12	22.64	22.19	22.19	22.27	22.21		0
	25	25	22.64	22.21	22.26	22.32	22.28		0
	50	0	22.67	22.19	22.25	22.24	22.21		0
64QAM	1	0	22.55	22.12	22.15	22.29	22.11	0-2	0
	1	25	22.42	22.08	22.06	22.15	22.08		0
	1	49	22.41	22.06	22.04	22.17	22.04		0
	25	0	22.57	22.24	22.24	22.04	22.13	0-3	0
	25	12	22.60	22.19	22.23	22.27	22.17		0
	25	25	22.58	22.13	22.18	22.24	22.29		0
	50	0	22.68	22.26	22.30	22.20	22.23		0
256QAM	1	0	21.61	21.30	21.24	21.43	21.47	0-5	1
	1	25	21.56	21.25	21.19	21.41	21.42		1
	1	49	21.55	21.21	21.12	21.37	21.35		1
	25	0	21.69	21.42	21.35	21.34	21.52		1
	25	12	21.77	21.34	21.33	21.57	21.54		1
	25	25	21.68	21.31	21.28	21.58	21.49		1
	50	0	21.73	21.42	21.36	21.54	21.57		1

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Table 9-111
LTE Band 41 PC2 Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor and/or Earjack Mode Active

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	22.45	22.12	22.02	22.09	22.05	0	0
	1	12	22.45	22.08	22.08	22.13	22.04		0
	1	24	22.43	22.11	22.09	22.14	22.06		0
	12	0	22.57	22.18	22.18	22.18	22.14	0-1	0
	12	6	22.62	22.14	22.26	22.23	22.15		0
	12	13	22.51	22.17	22.20	22.26	22.14		0
	25	0	22.61	22.21	22.24	22.24	22.17		0
16QAM	1	0	22.70	22.40	22.31	22.34	22.36	0-1	0
	1	12	22.73	22.30	22.35	22.38	22.30		0
	1	24	22.74	22.32	22.31	22.40	22.28		0
	12	0	22.59	22.14	22.13	22.14	22.10	0-2	0
	12	6	22.64	22.15	22.21	22.28	22.21		0
	12	13	22.61	22.10	22.18	22.23	22.13		0
	25	0	22.67	22.22	22.26	22.30	22.24		0
64QAM	1	0	22.50	22.18	22.12	22.07	22.15	0-2	0
	1	12	22.57	22.15	22.15	22.10	22.12		0
	1	24	22.53	22.12	22.21	22.11	22.09		0
	12	0	22.65	22.18	22.15	22.25	22.13	0-3	0
	12	6	22.61	22.13	22.25	22.25	22.16		0
	12	13	22.60	22.11	22.25	22.26	22.14		0
	25	0	22.61	22.22	22.24	22.25	22.16		0
256QAM	1	0	21.66	21.39	21.28	21.45	21.52	0-5	1
	1	12	21.60	21.34	21.28	21.47	21.53		1
	1	24	21.60	21.30	21.26	21.46	21.50		1
	12	0	21.76	21.44	21.36	21.59	21.60		1
	12	6	21.82	21.43	21.43	21.69	21.65		1
	12	13	21.73	21.40	21.40	21.66	21.61		1
	25	0	21.76	21.42	21.35	21.62	21.56		1

9.4.13 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-112
LTE Uplink Carrier Aggregation Max Conducted Powers

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	1	49	LTE B5	5	20597	843.7	2597	888.7	QPSK	1	0	24.65	24.83

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power Post-mod (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	1	99	24.20	23.58
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	0	LTE B66	10	132223	1735.1	66687	2135.1	QPSK	1	49	24.02	23.08

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	1	0	LTE B41	20	39987	2529.7	QPSK	1	99	25.07	24.00
CA_41C (1)	LTE B41 PC2	20	40185	2549.5	QPSK	1	0	LTE B41 PC2	20	39987	2529.7	QPSK	1	99	27.70	26.62

Table 9-113
LTE Uplink Carrier Aggregation Reduced Conducted Powers - Hotspot Mode Active

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132572	1770	67036	2170	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	20.20	19.31
CA_66B	LTE B66	10	132622	1775	67086	2175	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	20.02	19.17

	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	39750	2506.0	QPSK	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	22.50	21.50
CA_41C (1)	LTE B41 PC2	20	39750	2506.0	QPSK	50	50	LTE B41 PC2	20	39948	2525.8	QPSK	50	0	22.47	21.52

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Table 9-114
LTE Uplink Carrier Aggregation Reduced Conducted Powers - Grip Sensor and/or Earjack Mode Active

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132572	1770	67036	2170	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	20.20	19.31
CA_66B	LTE B66	10	132622	1775	67086	2175	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	20.02	19.17

	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	39750	2506.0	QPSK	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	23.64	22.80
CA_41C (1)	LTE B41	20	40185	2549.5	QPSK	50	0	LTE B41	20	39987	2529.7	QPSK	50	50	23.74	22.27
CA_41C (1)	LTE B41	20	40620	2593.0	QPSK	50	0	LTE B41	20	40422	2573.2	QPSK	50	50	23.45	22.30
CA_41C (1)	LTE B41	20	41055	2636.5	QPSK	50	0	LTE B41	20	40857	2616.7	QPSK	50	50	23.31	22.35
CA_41C (1)	LTE B41	20	41490	2680.0	QPSK	50	0	LTE B41	20	41292	2660.2	QPSK	50	50	23.29	22.15
CA_41C (1)	LTE B41 PC2	20	40620	2593	QPSK	50	0	LTE B41 PC2	20	40422	2573.2	QPSK	50	50	23.22	22.54

Notes:

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

Figure 9-4
Power Measurement Setup

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9.5 WLAN Conducted Powers

Note: Targets for 802.11ax RU operations can be found in Appendix I for test report S/N: 1M1810250197-01-R3.A3L for material 1.

Table 9-115
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	19.47	17.91	17.81	15.82
2437	6	**19.65**	17.51	17.36	16.97
2462	11	19.63	16.71	16.74	14.70

Table 9-116
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	18.85	17.82	17.76	15.67
2437	6	**18.89**	17.56	17.65	16.91
2462	11	18.79	17.55	17.46	14.68

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Table 9-117
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	15.21	15.47	15.45	15.75
5200	40	17.59	17.84	17.83	15.79
5220	44	17.56	17.79	17.80	15.69
5240	48	17.61	17.76	17.91	15.77
5260	52	17.67	17.56	17.53	15.61
5280	56	17.81	17.61	17.63	15.75
5300	60	**17.97**	17.74	17.67	15.87
5320	64	16.20	16.39	16.37	15.83
5500	100	17.57	17.73	17.93	15.81
5600	120	17.65	17.94	17.89	15.96
5620	124	**17.89**	17.88	17.86	15.98
5720	144	17.82	17.98	17.98	15.99
5745	149	**17.93**	17.84	17.89	15.89
5785	157	17.52	17.97	17.97	15.97
5825	165	17.84	17.84	17.81	15.78

Table 9-118
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	15.24	15.24	15.30	15.56
5200	40	17.46	17.57	17.56	15.78
5220	44	17.63	17.70	17.68	15.95
5240	48	17.70	17.76	17.70	15.51
5260	52	17.64	17.68	17.77	15.62
5280	56	**17.91**	17.64	17.64	15.60
5300	60	17.90	17.60	17.61	15.90
5320	64	16.10	16.41	16.58	15.81
5500	100	17.56	17.61	17.68	15.98
5600	120	17.78	17.81	17.81	15.96
5620	124	17.67	17.78	17.72	15.99
5720	144	**17.79**	17.75	17.88	15.60
5745	149	**17.77**	17.76	17.71	15.58
5785	157	17.42	17.84	17.75	15.84
5825	165	17.40	17.35	17.89	15.71

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Table 9-119
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	**Channel**	**ANT1**	**ANT2**	**MIMO**
5180	36	12.06	11.84	14.96
5200	40	17.84	17.57	20.72
5220	44	17.79	17.70	20.76
5240	48	17.76	17.76	20.77
5260	52	17.56	17.68	20.63
5280	56	17.61	17.64	20.64
5300	60	**17.74**	**17.60**	**20.68**
5320	64	13.11	12.58	15.86
5500	100	17.73	17.61	20.68
5600	120	**17.94**	**17.81**	**20.89**
5620	124	17.88	17.78	20.84
5720	144	17.98	17.75	20.88
5745	149	17.84	17.76	20.81
5785	157	**17.97**	**17.84**	**20.92**
5825	165	17.84	17.35	20.61

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Table 9-120
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	MIMO
2412	1	**16.70**	**16.60**	**19.66**
2437	6	16.66	16.48	19.58
2462	11	16.65	16.50	19.59

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5190	38	9.95	9.59	12.78
5230	46	13.51	13.74	16.64
5270	54	**13.90**	**13.61**	**16.77**
5310	62	9.94	9.83	12.90
5510	102	13.66	13.69	16.69
5590	118	13.58	13.76	16.68
5630	126	13.72	13.81	16.78
5710	142	13.80	13.70	16.76
5755	151	13.78	13.62	16.71
5795	159	13.74	13.55	16.66
5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	9.85	9.85	12.86
5290	58	9.96	9.81	12.90
5530	106	9.90	9.53	12.73
5610	122	**13.92**	**13.99**	**16.97**
5690	138	13.89	13.79	16.85
5775	155	**13.97**	**13.44**	**16.72**

Table 9-121
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	**16.96**	16.85	16.70
2437	6	16.81	16.95	16.66
2462	11	16.69	16.97	16.65

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Table 9-122
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	16.50	16.75	16.60
2437	6	16.57	16.53	16.48
2462	11	**16.92**	16.65	16.50

Table 9-123
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax
		Average	Average	Average
5190	38	12.61	12.64	13.81
5230	46	13.51	13.63	13.91
5270	54	**13.90**	13.57	13.58
5310	62	12.92	12.91	13.61
5510	102	13.66	13.55	13.86
5590	118	13.58	13.62	13.88
5630	126	13.72	13.76	13.96
5710	142	13.80	13.81	13.60
5755	151	13.78	13.85	13.67
5795	159	13.74	13.68	13.51

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	12.90
5290	58	12.71
5530	106	12.83
5610	122	**13.92**
5690	138	13.89
5775	155	**13.97**

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Table 9-124
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax
		Average	Average	Average
5190	38	12.72	12.54	13.54
5230	46	13.74	13.96	13.56
5270	54	**13.61**	13.70	13.43
5310	62	12.70	12.83	13.51
5510	102	13.69	13.93	13.81
5590	118	13.76	13.48	13.76
5630	126	13.81	13.59	13.88
5710	142	13.70	13.40	13.66
5755	151	13.62	13.61	13.90
5795	159	13.55	13.26	13.45

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	12.64
5290	58	12.62
5530	106	12.98
5610	122	**13.99**
5690	138	13.79
5775	155	**13.44**

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Table 9-125
5 GHz WLAN Reduced Average RF Power – MIMO

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	**Channel**	**ANT1**	**ANT2**	**MIMO**
5190	38	9.95	9.59	12.78
5230	46	13.51	13.74	16.64
5270	54	**13.90**	**13.61**	**16.77**
5310	62	9.94	9.83	12.90
5510	102	13.66	13.69	16.69
5590	118	13.58	13.76	16.68
5630	126	13.72	13.81	16.78
5710	142	13.80	13.70	16.76
5755	151	13.78	13.62	16.71
5795	159	13.74	13.55	16.66
5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	**Channel**	**ANT1**	**ANT2**	**MIMO**
5210	42	9.85	9.85	12.86
5290	58	9.96	9.81	12.90
5530	106	9.90	9.53	12.73
5610	122	**13.92**	**13.99**	**16.97**
5690	138	13.89	13.79	16.85
5775	155	**13.97**	**13.44**	**16.72**

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.

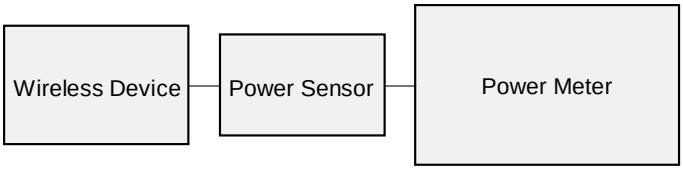

Figure 9-5
Power Measurement Setup

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9.6 Bluetooth Conducted Powers

Table 9-126
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	17.69	58.700
2441	1.0	39	**18.37**	68.701
2480	1.0	78	17.48	55.928
2402	2.0	0	11.17	13.081
2441	2.0	39	11.98	15.762
2480	2.0	78	10.10	10.231
2402	3.0	0	11.30	13.493
2441	3.0	39	12.15	16.417
2480	3.0	78	10.20	10.466

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

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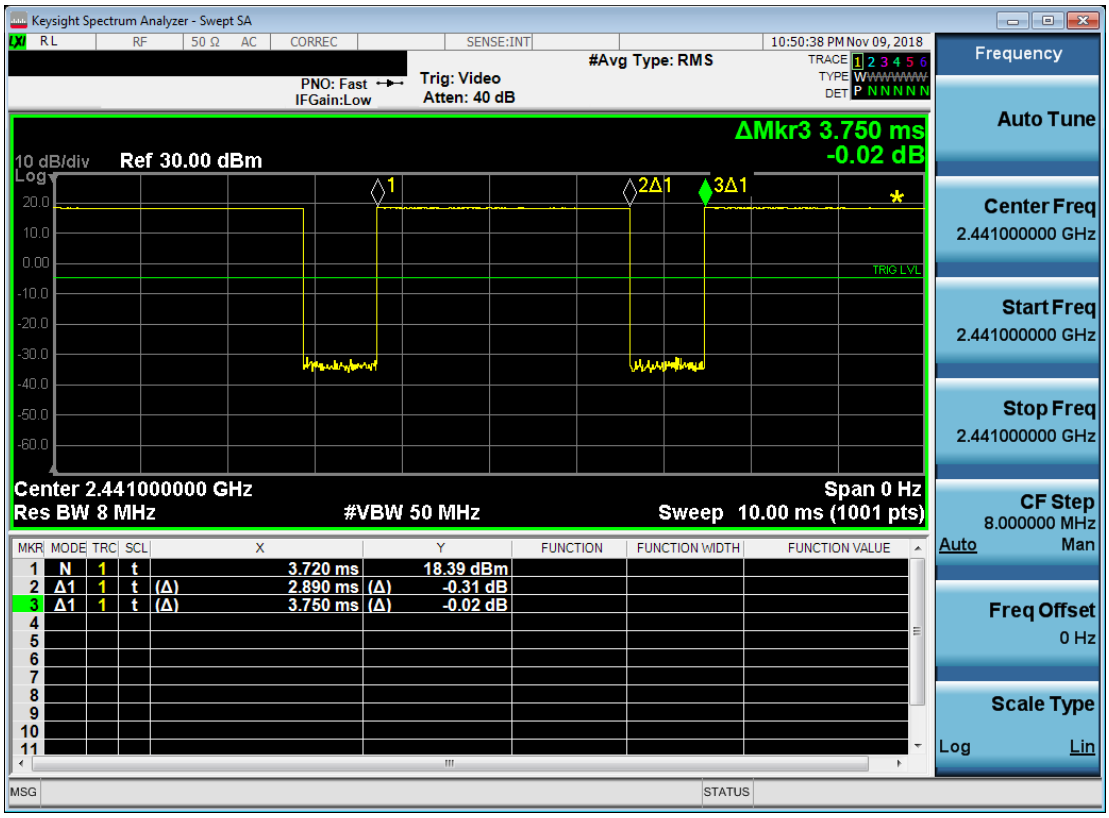

Figure 9-6
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

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

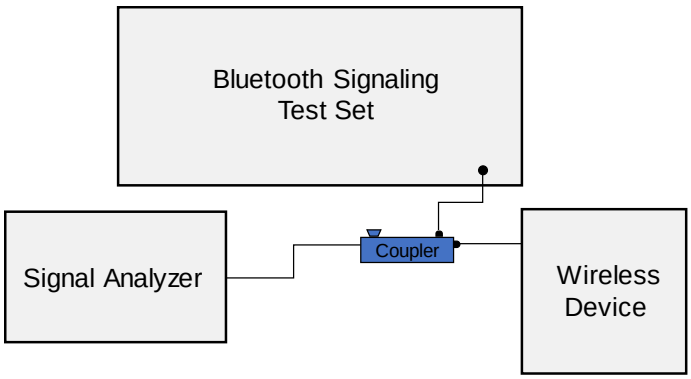

Figure 9-7
Power Measurement Setup

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10 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
12/19/2018	750H	19.8	680	0.853	42.604	0.888	42.305	-3.94%	0.71%
			695	0.858	42.538	0.889	42.227	-3.49%	0.74%
			700	0.860	42.519	0.889	42.201	-3.26%	0.75%
			710	0.863	42.476	0.890	42.149	-3.03%	0.78%
			720	0.867	42.434	0.891	42.097	-2.69%	0.80%
			725	0.869	42.415	0.891	42.071	-2.47%	0.82%
			740	0.874	42.354	0.893	41.994	-2.13%	0.86%
			755	0.880	42.310	0.894	41.916	-1.57%	0.94%
			770	0.886	42.279	0.895	41.838	-1.01%	1.05%
			785	0.891	42.245	0.896	41.760	-0.56%	1.16%
			800	0.896	42.207	0.897	41.682	-0.11%	1.26%
12/17/2018	835H	20.1	820	0.885	40.227	0.899	41.578	-1.56%	-3.25%
			835	0.890	40.179	0.900	41.500	-1.11%	-3.18%
			850	0.895	40.133	0.916	41.500	-2.29%	-3.29%
12/24/2018	835H	20.6	820	0.884	40.725	0.899	41.578	-1.67%	-2.05%
			835	0.899	40.516	0.900	41.500	-0.11%	-2.37%
			850	0.914	40.317	0.916	41.500	-0.22%	-2.85%
12/14/2018	1750H	20.3	1710	1.347	39.519	1.348	40.142	-0.07%	-1.55%
			1750	1.374	39.460	1.371	40.079	0.22%	-1.54%
			1790	1.398	39.390	1.394	40.016	0.29%	-1.56%
12/19/2018	1900H	21.5	1850	1.389	40.286	1.400	40.000	-0.79%	0.72%
			1880	1.419	40.172	1.400	40.000	1.36%	0.43%
			1910	1.450	40.036	1.400	40.000	3.57%	0.09%
12/12/2018	2300H - 2600H	22.8	2300	1.685	38.984	1.670	39.500	0.90%	-1.31%
			2310	1.704	38.954	1.679	39.480	1.49%	-1.33%
			2320	1.713	38.920	1.687	39.460	1.54%	-1.37%
			2400	1.797	38.648	1.756	39.289	2.33%	-1.63%
			2450	1.859	38.469	1.800	39.200	3.28%	-1.86%
			2500	1.909	38.227	1.855	39.136	2.91%	-2.32%
			2550	1.968	38.094	1.909	39.073	3.09%	-2.51%
			2600	2.022	37.860	1.964	39.009	2.95%	-2.95%
			2650	2.076	37.695	2.018	38.945	2.87%	-3.21%
			2700	2.132	37.455	2.073	38.882	2.85%	-3.67%
12/3/2018	2450H	22.7	2400	1.799	39.034	1.756	39.289	2.45%	-0.65%
			2450	1.855	38.862	1.800	39.200	3.06%	-0.86%
			2500	1.909	38.651	1.855	39.136	2.91%	-1.24%
12/17/2018	2450H	22.7	2400	1.805	38.467	1.756	39.289	2.79%	-2.09%
			2450	1.862	38.272	1.800	39.200	3.44%	-2.37%
			2500	1.914	38.094	1.855	39.136	3.18%	-2.66%
1/7/2019	2450H	20.8	2400	1.791	40.178	1.756	39.289	1.99%	2.26%
			2450	1.829	40.103	1.800	39.200	1.61%	2.30%
			2500	1.869	40.009	1.855	39.136	0.75%	2.23%
			2550	1.907	39.929	1.909	39.073	-0.10%	2.19%
			2600	1.945	39.842	1.964	39.009	-0.97%	2.14%
			2650	1.986	39.745	2.018	38.945	-1.59%	2.05%
			2700	2.027	39.695	2.073	38.882	-2.22%	2.09%
1/9/2019	2450H	21.0	2400	1.828	40.510	1.756	39.289	4.10%	3.11%
			2450	1.869	40.474	1.800	39.200	3.83%	3.25%
			2500	1.909	40.396	1.855	39.136	2.91%	3.22%
12/14/2018	3700H	20.2	3645	3.037	37.176	3.061	37.763	-0.78%	-1.55%
			3685	3.075	37.133	3.102	37.717	-0.87%	-1.55%
			3725	3.101	37.069	3.143	37.671	-1.34%	-1.60%
12/26/2018	5200H-5800H	20.2	5220	4.563	35.361	4.676	35.963	-2.42%	-1.67%
			5240	4.582	35.294	4.696	35.940	-2.43%	-1.80%
			5260	4.604	35.320	4.717	35.917	-2.40%	-1.66%
			5280	4.629	35.233	4.737	35.894	-2.28%	-1.84%
			5600	4.957	34.816	5.065	35.529	-2.13%	-2.01%
			5620	4.977	34.798	5.086	35.506	-2.14%	-1.99%
			5745	5.105	34.613	5.214	35.363	-2.09%	-2.12%
			5765	5.131	34.588	5.234	35.340	-1.97%	-2.13%
			5785	5.161	34.572	5.255	35.317	-1.79%	-2.11%
01/07/2019	5200H-5800H	20.6	5220	4.534	35.365	4.676	35.963	-3.04%	-1.66%
			5240	4.553	35.330	4.696	35.940	-3.05%	-1.70%
			5260	4.575	35.295	4.717	35.917	-3.01%	-1.73%
			5280	4.602	35.239	4.737	35.894	-2.85%	-1.82%

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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
12/12/2018	750B	20.2	680	0.930	54.889	0.958	55.804	-2.92%	-1.64%
			695	0.934	54.856	0.959	55.745	-2.61%	-1.59%
			700	0.936	54.839	0.959	55.726	-2.40%	-1.59%
			710	0.940	54.819	0.960	55.687	-2.08%	-1.56%
			720	0.943	54.794	0.961	55.648	-1.87%	-1.53%
			725	0.945	54.779	0.961	55.629	-1.66%	-1.53%
			740	0.952	54.738	0.963	55.570	-1.14%	-1.50%
			755	0.958	54.693	0.964	55.512	-0.62%	-1.48%
			770	0.964	54.659	0.965	55.453	-0.10%	-1.43%
			785	0.969	54.616	0.966	55.395	0.31%	-1.41%
			800	0.974	54.579	0.967	55.336	0.72%	-1.37%
12/11/2018	835B	20.6	820	0.968	54.697	0.969	55.258	-0.10%	-1.02%
			835	0.974	54.661	0.970	55.200	0.41%	-0.98%
			850	0.980	54.621	0.988	55.154	-0.81%	-0.97%
12/17/2018	835B	20.5	820	0.990	52.657	0.969	55.258	2.17%	-4.71%
			835	0.995	52.605	0.970	55.200	2.58%	-4.70%
			850	1.001	52.547	0.988	55.154	1.32%	-4.73%
12/26/2018	835B	19.1	820	0.959	53.645	0.969	55.258	-1.03%	-2.92%
			835	0.965	53.598	0.970	55.200	-0.52%	-2.90%
			850	0.972	53.536	0.988	55.154	-1.62%	-2.93%
12/16/2018	1750B	20.5	1710	1.450	51.698	1.463	53.537	-0.89%	-3.44%
			1750	1.477	51.590	1.488	53.432	-0.74%	-3.45%
			1790	1.501	51.530	1.514	53.326	-0.86%	-3.37%
12/19/2018	1750B	21.0	1710	1.484	51.461	1.463	53.537	1.44%	-3.88%
			1750	1.530	51.337	1.488	53.432	2.82%	-3.92%
			1790	1.573	51.172	1.514	53.326	3.90%	-4.04%
1/21/2019	1750B	20.9	1710	1.461	51.904	1.463	53.537	-0.14%	-3.05%
			1750	1.488	51.840	1.488	53.432	0.00%	-2.98%
			1790	1.513	51.791	1.514	53.326	-0.07%	-2.88%
12/12/2018	1900B	23.0	1850	1.496	51.280	1.520	53.300	-1.58%	-3.79%
			1880	1.529	51.157	1.520	53.300	0.59%	-4.02%
			1910	1.570	51.100	1.520	53.300	3.29%	-4.13%
12/17/2018	1900B	21.3	1850	1.518	53.609	1.520	53.300	-0.13%	0.58%
			1880	1.552	53.508	1.520	53.300	2.11%	0.39%
			1910	1.587	53.377	1.520	53.300	4.41%	0.14%
1/10/2019	1900B	22.5	1850	1.513	53.481	1.520	53.300	-0.46%	0.34%
			1880	1.550	53.385	1.520	53.300	1.97%	0.16%
			1910	1.588	53.273	1.520	53.300	4.47%	-0.05%
12/12/2018	2300B	23.0	2300	1.867	52.137	1.809	52.900	3.21%	-1.44%
			2310	1.879	52.114	1.816	52.887	3.47%	-1.46%
			2320	1.890	52.088	1.826	52.873	3.50%	-1.48%
12/17/2018	2300B	22.3	2300	1.849	53.207	1.809	52.900	2.21%	0.58%
			2310	1.861	53.184	1.816	52.887	2.48%	0.56%
			2320	1.873	53.156	1.826	52.873	2.57%	0.54%
12/9/2018	2450B	22.8	2400	1.940	52.349	1.902	52.767	2.00%	-0.79%
			2450	1.994	52.216	1.950	52.700	2.26%	-0.92%
			2500	2.053	52.077	2.021	52.636	1.58%	-1.06%
12/17/2018	2450B-2600B	22.3	2400	1.962	52.941	1.902	52.767	3.15%	0.33%
			2450	2.021	52.821	1.950	52.700	3.64%	0.23%
			2500	2.081	52.641	2.021	52.636	2.97%	0.01%
			2550	2.135	52.517	2.092	52.573	2.06%	-0.11%
			2600	2.194	52.324	2.163	52.509	1.43%	-0.35%
			2650	2.255	52.195	2.234	52.445	0.94%	-0.48%
			2700	2.323	52.002	2.305	52.382	0.78%	-0.73%
12/20/2018	2450B	24.5	2400	1.994	50.921	1.902	52.767	4.84%	-3.50%
			2450	2.040	50.852	1.950	52.700	4.62%	-3.51%
			2500	2.080	50.774	2.021	52.636	2.92%	-3.54%
12/26/2018	2450B-2600B	22.7	2400	1.982	51.672	1.902	52.767	4.21%	-2.08%
			2450	2.041	51.540	1.950	52.700	4.67%	-2.20%
			2500	2.096	51.398	2.021	52.636	3.71%	-2.35%
			2550	2.159	51.266	2.092	52.573	3.20%	-2.49%
			2600	2.216	51.124	2.163	52.509	2.45%	-2.64%
			2650	2.279	50.996	2.234	52.445	2.01%	-2.76%
			2700	2.339	50.818	2.305	52.382	1.48%	-2.99%
1/7/2019	2500B	23.5	2500	2.099	52.702	2.021	52.636	3.86%	0.13%
			2550	2.156	52.545	2.092	52.573	3.06%	-0.05%
			2600	2.220	52.401	2.163	52.509	2.64%	-0.21%
			2600	2.220	52.401	2.163	52.509	2.64%	-0.21%
			2650	2.278	52.240	2.234	52.445	1.97%	-0.39%
			2700	2.341	52.107	2.305	52.382	1.56%	-0.52%
1/9/2019	2450B	22.9	2400	1.988	52.322	1.902	52.767	4.52%	-0.84%
			2450	2.033	52.283	1.950	52.700	4.26%	-0.79%
			2500	2.082	52.153	2.021	52.636	3.02%	-0.92%
12/14/2018	2600B	22.6	2550	2.141	50.488	2.092	52.573	2.34%	-3.97%
			2600	2.203	50.349	2.163	52.509	1.85%	-4.11%
			2650	2.264	50.192	2.234	52.445	1.34%	-4.30%
			2700	2.324	50.036	2.305	52.382	0.82%	-4.48%
12/14/2018	3500B - 3700B	20.6	3500	3.197	49.995	3.314	51.321	-3.53%	-2.58%
			3550	3.254	49.881	3.372	51.254	-3.50%	-2.68%
			3600	3.312	49.784	3.431	51.186	-3.47%	-2.74%
			3645	3.362	49.693	3.483	51.125	-3.47%	-2.80%
			3685	3.419	49.617	3.530	51.070	-3.14%	-2.85%
			3725	3.458	49.541	3.577	51.016	-3.33%	-2.89%

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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
12/11/2018	5200B-5800B	21.9	5220	5.421	47.635	5.323	48.987	1.84%	-2.76%
			5240	5.449	47.571	5.346	48.960	1.93%	-2.84%
			5260	5.484	47.511	5.369	48.933	2.14%	-2.91%
			5280	5.509	47.511	5.393	48.906	2.15%	-2.85%
			5300	5.545	47.449	5.416	48.879	2.38%	-2.93%
			5320	5.561	47.428	5.439	48.851	2.24%	-2.91%
			5500	5.845	47.058	5.650	48.607	3.45%	-3.19%
			5600	5.965	46.889	5.766	48.471	3.45%	-3.26%
			5620	6.001	46.827	5.790	48.444	3.64%	-3.34%
			5700	6.135	46.663	5.883	48.336	4.28%	-3.46%
			5745	6.205	46.587	5.936	48.275	4.53%	-3.50%
			5765	6.251	46.576	5.959	48.248	4.90%	-3.47%
12/17/2018	5200B-5800B	22.3	5220	5.375	47.898	5.323	48.987	0.98%	-2.22%
			5240	5.410	47.871	5.346	48.960	1.20%	-2.22%
			5260	5.416	47.835	5.369	48.933	0.88%	-2.24%
			5280	5.465	47.761	5.393	48.906	1.34%	-2.34%
			5300	5.502	47.755	5.416	48.879	1.59%	-2.30%
			5600	5.910	47.181	5.766	48.471	2.50%	-2.66%
			5620	5.940	47.144	5.790	48.444	2.59%	-2.68%
			5700	6.070	46.976	5.883	48.336	3.18%	-2.81%
			5745	6.137	46.835	5.936	48.275	3.39%	-2.98%
			5765	6.168	46.829	5.959	48.248	3.51%	-2.94%
			5785	6.190	46.823	5.982	48.220	3.48%	-2.90%
			5825	6.267	46.663	6.029	48.166	3.95%	-3.12%
01/08/2019	5200B-5800B	22.8	5220	5.308	47.829	5.323	48.987	-0.28%	-2.36%
			5240	5.339	47.785	5.346	48.960	-0.13%	-2.40%
			5260	5.362	47.737	5.369	48.933	-0.13%	-2.44%
			5280	5.397	47.680	5.393	48.906	0.07%	-2.51%
			5600	5.854	47.165	5.766	48.471	1.53%	-2.69%
			5700	5.990	46.925	5.883	48.336	1.82%	-2.92%
			5745	6.073	46.860	5.936	48.275	2.31%	-2.93%
			5765	6.102	46.863	5.959	48.248	2.40%	-2.87%
			5825	6.184	46.671	6.029	48.166	2.57%	-3.10%

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

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10.2 Test System Verification

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

Table 10-4
System Verification Results – 1g Head

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
M	750	HEAD	12/19/2018	21.3	19.8	0.200	1054	3287	1.730	8.370	8.650	3.35%
M	835	HEAD	12/17/2018	22.3	20.1	0.200	4d132	3287	1.910	9.360	9.550	2.03%
G	835	HEAD	12/24/2018	21.5	20.6	0.200	4d047	7410	1.980	9.470	9.900	4.54%
M	1750	HEAD	12/14/2018	21.7	20.3	0.100	1150	3287	3.780	36.500	37.800	3.56%
H	1900	HEAD	12/19/2018	21.6	21.5	0.100	5d080	7409	4.110	39.800	41.100	3.27%
G	2300	HEAD	12/12/2018	22.2	21.9	0.100	1064	7410	4.990	47.600	49.900	4.83%
G	2450	HEAD	12/03/2018	22.0	21.3	0.100	981	7410	5.530	52.300	55.300	5.74%
G	2450	HEAD	12/12/2018	22.2	21.9	0.100	981	7410	5.250	52.300	52.500	0.38%
G	2450	HEAD	12/17/2018	21.9	22.0	0.100	981	7410	5.250	52.300	52.500	0.38%
G	2450	HEAD	01/07/2019	21.7	20.8	0.100	981	7410	5.210	52.300	52.100	-0.38%
G	2450	HEAD	01/09/2019	22.4	20.8	0.100	797	7410	5.450	52.700	54.500	3.42%
G	2600	HEAD	12/12/2018	22.2	21.9	0.100	1004	7410	5.800	55.900	58.000	3.76%
G	2600	HEAD	01/07/2019	21.7	20.8	0.100	1004	7410	5.590	55.900	55.900	0.00%
H	3700	HEAD	12/14/2018	21.1	20.2	0.100	1002	3949	7.070	67.900	70.700	4.12%
H	5250	HEAD	12/26/2018	20.5	20.2	0.050	1057	7409	3.870	79.200	77.400	-2.27%
H	5250	HEAD	01/07/2019	21.2	20.6	0.050	1191	7409	3.650	78.900	73.000	-7.48%
H	5600	HEAD	12/26/2018	20.5	20.2	0.050	1057	7409	4.090	84.100	81.800	-2.73%
H	5750	HEAD	12/26/2018	20.5	20.2	0.050	1057	7409	3.790	80.500	75.800	-5.84%

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Table 10-5
System Verification Results – 1g Body

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
L	750	BODY	12/12/2018	21.8	20.2	0.200	1003	7308	1.650	8.580	8.250	-3.85%
I	835	BODY	12/11/2018	22.3	21.0	0.200	4d132	7406	1.980	9.710	9.900	1.96%
J	835	BODY	12/17/2018	20.1	20.5	0.200	4d047	3347	1.970	9.710	9.850	1.44%
J	835	BODY	12/26/2018	19.9	19.1	0.200	4d133	3347	1.960	9.750	9.800	0.51%
L	1750	BODY	12/16/2018	21.7	20.5	0.100	1150	7308	3.800	36.600	38.000	3.83%
D	1750	BODY	12/19/2018	22.7	21.0	0.100	1150	7357	3.780	36.600	37.800	3.28%
E	1900	BODY	12/12/2018	23.6	22.0	0.100	5d080	3332	4.200	39.200	42.000	7.14%
E	1900	BODY	12/17/2018	21.6	21.3	0.100	5d149	3332	3.840	39.400	38.400	-2.54%
M	1900	BODY	01/10/2019	23.0	20.8	0.100	5d148	3287	4.260	39.600	42.600	7.58%
K	2300	BODY	12/12/2018	22.7	22.8	0.100	1064	3319	5.010	46.500	50.100	7.74%
K	2450	BODY	12/09/2018	21.8	22.8	0.100	719	3319	5.370	50.100	53.700	7.19%
K	2450	BODY	12/17/2018	23.2	22.3	0.100	797	3319	4.950	51.100	49.500	-3.13%
J	2450	BODY	12/20/2018	19.7	22.6	0.100	719	3347	5.230	50.100	52.300	4.39%
I	2450	BODY	01/09/2019	23.4	21.0	0.100	797	7406	5.270	51.100	52.700	3.13%
K	2600	BODY	12/14/2018	22.3	20.7	0.100	1126	3319	5.400	54.100	54.000	-0.18%
K	2600	BODY	12/17/2018	23.2	22.3	0.100	1071	3319	5.350	54.200	53.500	-1.29%
K	2600	BODY	01/07/2019	22.6	21.6	0.100	1071	3319	5.520	54.200	55.200	1.85%
L	3500	BODY	12/14/2018	22.2	20.6	0.100	1055	3914	6.060	64.600	60.600	-6.19%
L	3700	BODY	12/14/2018	22.2	20.6	0.100	1002	3914	6.260	65.000	62.600	-3.69%
L	5250	BODY	12/17/2018	23.0	20.6	0.050	1237	7308	3.630	75.600	72.600	-3.97%
L	5600	BODY	12/17/2018	23.0	20.6	0.050	1237	7308	3.830	78.500	76.600	-2.42%
L	5750	BODY	12/17/2018	23.0	20.6	0.050	1237	7308	3.490	75.900	69.800	-8.04%
D	5750	BODY	01/08/2019	23.0	22.8	0.050	1191	7357	3.600	76.100	72.000	-5.39%

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Table 10-6
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)	$Deviation_{10g}$ (%)
D	1750	BODY	12/19/2018	22.7	21.0	0.100	1150	7357	1.990	19.400	19.900	2.58%
J	1750	BODY	01/21/2019	21.5	20.9	0.100	1008	3347	1.920	19.900	19.200	-3.52%
E	1900	BODY	12/12/2018	23.6	22.0	0.100	5d080	3332	2.170	20.600	21.700	5.34%
E	1900	BODY	12/17/2018	21.6	21.3	0.100	5d149	3332	1.980	20.700	19.800	-4.35%
M	1900	BODY	01/10/2019	23.0	20.8	0.100	5d148	3287	2.180	20.900	21.800	4.31%
K	2300	BODY	12/17/2018	23.2	22.3	0.100	1064	3319	2.370	22.600	23.700	4.87%
K	2450	BODY	12/17/2018	23.2	22.3	0.100	797	3319	2.280	24.200	22.800	-5.79%
K	2450	BODY	12/26/2018	23.2	22.7	0.100	797	3319	2.430	24.200	24.300	0.41%
I	2450	BODY	01/09/2019	23.4	21.0	0.100	797	7406	2.440	24.200	24.400	0.83%
K	2600	BODY	12/17/2018	23.2	22.3	0.100	1071	3319	2.360	24.500	23.600	-3.67%
K	2600	BODY	12/26/2018	23.2	22.7	0.100	1071	3319	2.420	24.500	24.200	-1.22%
L	3500	BODY	12/14/2018	22.2	20.6	0.100	1055	3914	2.260	24.100	22.600	-6.22%
L	3700	BODY	12/14/2018	22.2	20.6	0.100	1002	3914	2.250	23.100	22.500	-2.60%
D	5250	BODY	12/11/2018	23.3	21.1	0.050	1191	7357	1.140	21.600	22.800	5.56%
D	5250	BODY	01/08/2019	23.0	22.8	0.050	1191	7357	1.010	21.600	20.200	-6.48%
D	5600	BODY	12/11/2018	23.3	21.1	0.050	1191	7357	1.200	22.200	24.000	8.11%
D	5600	BODY	01/08/2019	23.0	22.8	0.050	1191	7357	1.140	22.200	22.800	2.70%
D	5750	BODY	12/11/2018	23.3	21.1	0.050	1191	7357	1.120	21.200	22.400	5.66%
D	5750	BODY	01/08/2019	23.0	22.8	0.050	1191	7357	0.995	21.200	19.900	-6.13%

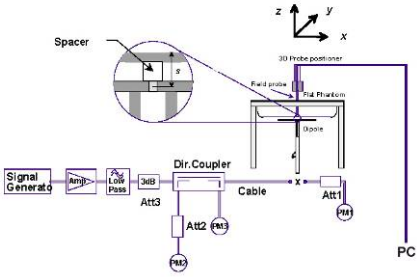

Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.5	33.16	0.14	Right	Cheek	0727M	1:8.3	0.209	1.081	0.226	A1
836.60	190	GSM 850	GSM	33.5	33.16	-0.02	Right	Tilt	0727M	1:8.3	0.103	1.081	0.111	
836.60	190	GSM 850	GSM	33.5	33.16	0.10	Left	Cheek	0727M	1:8.3	0.146	1.081	0.158	
836.60	190	GSM 850	GSM	33.5	33.16	0.04	Left	Tilt	0727M	1:8.3	0.093	1.081	0.101	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
GSM 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GSM	30.5	29.24	0.08	Right	Cheek	0666M	1:8.3	0.038	1.337	0.051	
1880.00	661	GSM 1900	GSM	30.5	29.24	-0.13	Right	Tilt	0666M	1:8.3	0.022	1.337	0.029	
1880.00	661	GSM 1900	GSM	30.5	29.24	0.18	Left	Cheek	0666M	1:8.3	0.048	1.337	0.064	A2
1880.00	661	GSM 1900	GSM	30.5	29.24	0.13	Left	Tilt	0666M	1:8.3	0.011	1.337	0.015	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.06	Right	Cheek	0727M	1:1	0.309	1.233	0.381	A3
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.00	Right	Tilt	0727M	1:1	0.149	1.233	0.184	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	-0.02	Left	Cheek	0727M	1:1	0.196	1.233	0.242	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.04	Left	Tilt	0727M	1:1	0.118	1.233	0.145	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	32	0.10	Right	Cheek	0727M	1:1	0.166	1.178	0.196	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	32	0.07	Right	Tilt	0727M	1:1	0.137	1.178	0.161	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	32	0.12	Left	Cheek	0727M	1:1	0.226	1.178	0.266	A4
1732.40	1412	UMTS 1750	RMC	25.0	24.29	32	-0.14	Left	Tilt	0727M	1:1	0.079	1.178	0.093	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-5
UMTS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.03	Right	Cheek	0666M	1:1	0.116	1.199	0.139	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.09	Right	Tilt	0666M	1:1	0.072	1.199	0.086	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.03	Left	Cheek	0666M	1:1	0.157	1.199	0.188	A5
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.15	Left	Tilt	0666M	1:1	0.039	1.199	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 11-6
CDMA BC10 (§90S) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.13	19	-0.06	Right	Cheek	0727M	1:1	0.290	1.222	0.354	A6
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.13	19	-0.17	Right	Tilt	0727M	1:1	0.145	1.222	0.177	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.13	19	0.02	Left	Cheek	0727M	1:1	0.217	1.222	0.265	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	25.13	19	0.04	Left	Tilt	0727M	1:1	0.143	1.222	0.175	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.19	19	-0.21	Right	Cheek	0666M	1:1	0.172	1.205	0.207	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.19	19	0.13	Right	Tilt	0666M	1:1	0.077	1.205	0.093	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.19	19	0.20	Left	Cheek	0666M	1:1	0.128	1.205	0.154	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	25.19	19	-0.04	Left	Tilt	0666M	1:1	0.066	1.205	0.080	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-7
CDMA BC0 (§22H) Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	25.24	19	0.01	Right	Cheek	0727M	1:1	0.347	1.191	**0.413**	A7
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	25.24	19	0.02	Right	Tilt	0727M	1:1	0.173	1.191	0.206	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	25.24	19	0.00	Left	Cheek	0727M	1:1	0.217	1.191	0.258	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	25.24	19	0.12	Left	Tilt	0727M	1:1	0.134	1.191	0.160	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	25.27	19	-0.05	Right	Cheek	0666M	1:1	0.278	1.183	0.329	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	25.27	19	-0.10	Right	Tilt	0666M	1:1	0.112	1.183	0.132	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	25.27	19	-0.03	Left	Cheek	0666M	1:1	0.187	1.183	0.221	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	25.27	19	-0.12	Left	Tilt	0666M	1:1	0.083	1.183	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 11-8
PCS CDMA Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.44	32	-0.02	Right	Cheek	0666M	1:1	0.119	1.138	0.135	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.44	32	0.08	Right	Tilt	0666M	1:1	0.075	1.138	0.085	
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.44	32	0.09	Left	Cheek	0666M	1:1	0.173	1.138	0.197	A8
1880.00	600	PCS CDMA	RC3 / SO55	25.0	24.44	32	0.13	Left	Tilt	0666M	1:1	0.030	1.138	0.034	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.51	32	0.11	Right	Cheek	0666M	1:1	0.118	1.119	0.132	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.51	32	-0.04	Right	Tilt	0666M	1:1	0.082	1.119	0.092	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.51	32	0.12	Left	Cheek	0666M	1:1	0.161	1.119	0.180	
1880.00	600	PCS CDMA	EVDO Rev. A	25.0	24.51	32	0.08	Left	Tilt	0666M	1:1	0.038	1.119	0.043	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**Head 1.6 W/kg (mW/g) averaged over 1 gram**							

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Table 11-9
LTE Band 71 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	25.5	24.97	9	0.00	0	Right	Cheek	QPSK	1	0	0762M	1:1	0.123	1.130	0.139	A9
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.04	1	Right	Cheek	QPSK	50	0	0762M	1:1	0.105	1.107	0.116	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	0.12	0	Right	Tilt	QPSK	1	0	0762M	1:1	0.068	1.130	0.077	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.07	1	Right	Tilt	QPSK	50	0	0762M	1:1	0.057	1.107	0.063	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	-0.08	0	Left	Cheek	QPSK	1	0	0762M	1:1	0.113	1.130	0.128	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.02	1	Left	Cheek	QPSK	50	0	0762M	1:1	0.096	1.107	0.106	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	-0.17	0	Left	Tilt	QPSK	1	0	0762M	1:1	0.068	1.130	0.077	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	-0.05	1	Left	Tilt	QPSK	50	0	0762M	1:1	0.058	1.107	0.064	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-10
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	24.46	51	-0.02	0	Right	Cheek	QPSK	1	0	0762M	1:1	0.144	1.361	0.196	A10
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	51	-0.01	1	Right	Cheek	QPSK	25	0	0762M	1:1	0.126	1.315	0.166	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	51	-0.14	0	Right	Tilt	QPSK	1	0	0762M	1:1	0.086	1.361	0.117	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	51	0.02	1	Right	Tilt	QPSK	25	0	0762M	1:1	0.070	1.315	0.092	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	51	0.03	0	Left	Cheek	QPSK	1	0	0762M	1:1	0.136	1.361	0.185	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	51	0.05	1	Left	Cheek	QPSK	25	0	0762M	1:1	0.109	1.315	0.143	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	51	-0.02	0	Left	Tilt	QPSK	1	0	0762M	1:1	0.081	1.361	0.110	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	51	0.14	1	Left	Tilt	QPSK	25	0	0762M	1:1	0.064	1.315	0.084	
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	24.53	6	-0.10	0	Right	Cheek	QPSK	1	0	0762M	1:1	0.168	1.340	0.225	A11
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.05	1	Right	Cheek	QPSK	25	0	0762M	1:1	0.154	1.327	0.204	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.00	0	Right	Tilt	QPSK	1	0	0762M	1:1	0.094	1.340	0.126	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	0.00	1	Right	Tilt	QPSK	25	0	0762M	1:1	0.091	1.327	0.121	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.07	0	Left	Cheek	QPSK	1	0	0762M	1:1	0.122	1.340	0.163	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.01	1	Left	Cheek	QPSK	25	0	0762M	1:1	0.114	1.327	0.151	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.13	0	Left	Tilt	QPSK	1	0	0762M	1:1	0.077	1.340	0.103	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	0.01	1	Left	Tilt	QPSK	25	0	0762M	1:1	0.070	1.327	0.093	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-12
LTE Band 14 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	25.8	24.62	52	0.08	0	Right	Cheek	QPSK	1	49	0762M	1:1	0.253	1.312	0.332	A12
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	52	0.01	1	Right	Cheek	QPSK	25	0	0762M	1:1	0.187	1.276	0.239	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	52	0.01	0	Right	Tilt	QPSK	1	49	0762M	1:1	0.134	1.312	0.176	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	52	-0.07	1	Right	Tilt	QPSK	25	0	0762M	1:1	0.092	1.276	0.117	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	52	0.02	0	Left	Cheek	QPSK	1	49	0762M	1:1	0.164	1.312	0.215	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	52	-0.04	1	Left	Cheek	QPSK	25	0	0762M	1:1	0.136	1.276	0.174	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	52	-0.04	0	Left	Tilt	QPSK	1	49	0762M	1:1	0.096	1.312	0.126	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	52	0.02	1	Left	Tilt	QPSK	25	0	0762M	1:1	0.073	1.276	0.093	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	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	24.71	11	-0.02	0	Right	Cheek	QPSK	1	0	0762M	1:1	0.255	1.285	0.328	A13
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	11	0.03	1	Right	Cheek	QPSK	36	0	0762M	1:1	0.202	1.225	0.247	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	11	-0.01	0	Right	Tilt	QPSK	1	0	0762M	1:1	0.100	1.285	0.129	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	11	0.05	1	Right	Tilt	QPSK	36	0	0762M	1:1	0.080	1.225	0.098	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	11	-0.05	0	Left	Cheek	QPSK	1	0	0762M	1:1	0.175	1.285	0.225	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	11	0.02	1	Left	Cheek	QPSK	36	0	0762M	1:1	0.148	1.225	0.181	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	11	0.06	0	Left	Tilt	QPSK	1	0	0762M	1:1	0.090	1.285	0.116	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	11	0.04	1	Left	Tilt	QPSK	36	0	0762M	1:1	0.075	1.225	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 11-14
LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	21	-0.12	0	Right	Cheek	QPSK	1	49	0762M	1:1	0.257	1.250	0.321	A14
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	21	0.03	1	Right	Cheek	QPSK	25	0	0762M	1:1	0.206	1.208	0.249	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.65	21	0.01	0	Right	Cheek	QPSK	1	49	0762M	1:1	0.254	1.303	0.331	
	SCC	843.70	20597	Mid	LTE Band 5 (Cell)	5									1	0						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	21	0.06	0	Right	Tilt	QPSK	1	49	0762M	1:1	0.120	1.250	0.150	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	21	0.03	1	Right	Tilt	QPSK	25	0	0762M	1:1	0.085	1.208	0.103	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	21	0.00	0	Left	Cheek	QPSK	1	49	0762M	1:1	0.208	1.250	0.260	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	21	0.04	1	Left	Cheek	QPSK	25	0	0762M	1:1	0.141	1.208	0.170	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	21	-0.01	0	Left	Tilt	QPSK	1	49	0762M	1:1	0.106	1.250	0.133	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	21	0.08	1	Left	Tilt	QPSK	25	0	0762M	1:1	0.065	1.208	0.079	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

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

MEASUREMENT RESULTS																						
1 CC Uplink	Component Carrier	FREQUENCY MHz	FREQUENCY Ch.		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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	33	0.06	0	Right	Cheek	QPSK	1	50	0589M	1:1	0.076	1.112	0.085	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	33	0.00	1	Right	Cheek	QPSK	50	25	0589M	1:1	0.063	1.104	0.070	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	33	-0.07	0	Right	Tilt	QPSK	1	50	0589M	1:1	0.080	1.112	0.089	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	33	-0.01	1	Right	Tilt	QPSK	50	25	0589M	1:1	0.066	1.104	0.073	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	33	0.04	0	Left	Cheek	QPSK	1	50	0589M	1:1	0.182	1.112	0.202	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	23.58	33	0.01	0	Left	Cheek	QPSK	1	0	0589M	1:1	0.174	1.387	0.241	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	25.0	23.08	33	-0.01	0	Left	Cheek	QPSK	1	0	0589M	1:1	0.173	1.556	0.269	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	33	0.07	1	Left	Cheek	QPSK	50	25	0589M	1:1	0.119	1.104	0.131	
CA_66C 2 CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.20	33	0.07	0	Left	Cheek	QPSK	1	0	0589M	1:1	0.191	1.202	0.230	
	SCC	1725.20	132124	Mid	LTE Band 66 (AWS)	20									1	99						
CA_66B 2 CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	25.0	24.02	33	-0.01	0	Left	Cheek	QPSK	1	0	0589M	1:1	0.207	1.253	0.259	A15
	SCC	1735.10	132223	Mid	LTE Band 66 (AWS)	10									1	49						
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	33	0.09	0	Left	Tilt	QPSK	1	50	0589M	1:1	0.092	1.112	0.102	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	33	0.01	1	Left	Tilt	QPSK	50	25	0589M	1:1	0.077	1.104	0.085	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-16
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY MHz	FREQUENCY Ch.		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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.13	0	Right	Cheek	QPSK	1	0	0732M	1:1	0.097	1.164	0.113	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.00	1	Right	Cheek	QPSK	50	0	0732M	1:1	0.074	1.138	0.084	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.04	0	Right	Tilt	QPSK	1	0	0732M	1:1	0.098	1.164	0.114	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.01	1	Right	Tilt	QPSK	50	0	0732M	1:1	0.069	1.138	0.079	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.08	0	Left	Cheek	QPSK	1	0	0732M	1:1	0.157	1.164	0.183	A16
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.08	1	Left	Cheek	QPSK	50	0	0732M	1:1	0.131	1.138	0.149	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.04	0	Left	Tilt	QPSK	1	0	0732M	1:1	0.050	1.164	0.058	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.14	1	Left	Tilt	QPSK	50	0	0732M	1:1	0.043	1.138	0.049	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-17
LTE Band 30 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY MHz	FREQUENCY Ch.		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 #
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	0.12	0	Right	Cheek	QPSK	1	0	0701M	1:1	0.031	1.259	0.039	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	0.14	1	Right	Cheek	QPSK	25	0	0701M	1:1	0.020	1.279	0.026	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	0.16	0	Right	Tilt	QPSK	1	0	0701M	1:1	0.051	1.259	0.064	A17
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	0.12	1	Right	Tilt	QPSK	25	0	0701M	1:1	0.023	1.279	0.029	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	0.14	0	Left	Cheek	QPSK	1	0	0701M	1:1	0.033	1.259	0.042	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	0.17	1	Left	Cheek	QPSK	25	0	0701M	1:1	0.017	1.279	0.022	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	0.13	0	Left	Tilt	QPSK	1	0	0701M	1:1	0.028	1.259	0.035	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.01	1	Left	Tilt	QPSK	25	0	0701M	1:1	0.018	1.279	0.023	
									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)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	0.16	0	Right	Cheek	Ant B	QPSK	1	99	0701M	1:1	0.068	1.183	0.080	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	0.12	1	Right	Cheek	Ant B	QPSK	50	50	0701M	1:1	0.039	1.161	0.045	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	-0.12	0	Right	Tilt	Ant B	QPSK	1	99	0701M	1:1	0.075	1.183	0.089	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	0.13	1	Right	Tilt	Ant B	QPSK	50	50	0701M	1:1	0.045	1.161	0.052	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	-0.02	0	Left	Cheek	Ant B	QPSK	1	99	0701M	1:1	0.076	1.183	0.090	A18
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	0.13	1	Left	Cheek	Ant B	QPSK	50	50	0701M	1:1	0.043	1.161	0.050	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	0.15	0	Left	Tilt	Ant B	QPSK	1	99	0701M	1:1	0.043	1.183	0.051	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	0.16	1	Left	Tilt	Ant B	QPSK	50	50	0701M	1:1	0.023	1.161	0.027	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.05	0	Right	Cheek	Ant A	QPSK	1	0	0701M	1:1	0.050	1.186	0.059	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.07	1	Right	Cheek	Ant A	QPSK	50	0	0701M	1:1	0.032	1.132	0.036	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.15	0	Right	Tilt	Ant A	QPSK	1	0	0701M	1:1	0.035	1.186	0.042	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.17	1	Right	Tilt	Ant A	QPSK	50	0	0701M	1:1	0.021	1.132	0.024	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.14	0	Left	Cheek	Ant A	QPSK	1	0	0701M	1:1	0.030	1.186	0.036	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.18	1	Left	Cheek	Ant A	QPSK	50	0	0701M	1:1	0.015	1.132	0.017	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.18	0	Left	Tilt	Ant A	QPSK	1	0	0701M	1:1	0.030	1.186	0.036	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.10	1	Left	Tilt	Ant A	QPSK	50	0	0701M	1:1	0.015	1.132	0.017	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-19
LTE Band 48 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.18	0	Right	Cheek	QPSK	1	0	0701M	1:1.58	0.034	1.191	0.040	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.12	1	Right	Cheek	QPSK	50	0	0701M	1:1.58	0.013	1.130	0.015	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.16	0	Right	Tilt	QPSK	1	0	0701M	1:1.58	0.029	1.191	0.035	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.18	1	Right	Tilt	QPSK	50	0	0701M	1:1.58	0.016	1.130	0.018	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.16	0	Left	Cheek	QPSK	1	0	0701M	1:1.58	0.061	1.191	**0.073**	A19
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.17	1	Left	Cheek	QPSK	50	0	0701M	1:1.58	0.034	1.130	0.038	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.15	0	Left	Tilt	QPSK	1	0	0701M	1:1.58	0.020	1.191	0.024	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.10	1	Left	Tilt	QPSK	50	0	0701M	1:1.58	0.013	1.130	0.015	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-20
LTE Band 41 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.13	0	Right	Cheek	QPSK	1	0	0695M	1:1.58	0.039	1.349	0.053	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.15	1	Right	Cheek	QPSK	50	0	0695M	1:1.58	0.022	1.265	0.028	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.13	0	Right	Tilt	QPSK	1	0	0695M	1:1.58	0.045	1.349	0.061	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.14	1	Right	Tilt	QPSK	50	0	0695M	1:1.58	0.043	1.265	0.054	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	28.3	26.62	0.08	0	Right	Tilt	QPSK	1	0	0695M	1:2.31	0.054	1.472	0.079	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	25.07	0.12	0	Right	Tilt	QPSK	1	0	0695M	1:1.58	0.051	1.054	0.054	
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20								1	99						
2 CC Uplink - Power Class 2	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	28.3	27.70	0.18	0	Right	Tilt	QPSK	1	0	0840M	1:2.31	0.070	1.148	0.080	A20
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20								1	99						
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.17	0	Left	Cheek	QPSK	1	0	0695M	1:1.58	0.037	1.349	0.050	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.17	1	Left	Cheek	QPSK	50	0	0695M	1:1.58	0.023	1.265	0.029	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.15	0	Left	Tilt	QPSK	1	0	0695M	1:1.58	0.028	1.349	0.038	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.18	1	Left	Tilt	QPSK	50	0	0695M	1:1.58	0.016	1.265	0.020	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-21
DTS Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	17.0	16.96	0.16	Right	Cheek	1	0274M	1	99.9	0.136	0.136	1.009	1.001	**0.137**	
2412	1	802.11b	DSSS	22	17.0	16.96	0.19	Right	Tilt	1	0274M	1	99.9	0.132	-	1.009	1.001	-	
2412	1	802.11b	DSSS	22	17.0	16.96	-0.14	Left	Cheek	1	0274M	1	99.9	0.048	-	1.009	1.001	-	
2412	1	802.11b	DSSS	22	17.0	16.96	0.18	Left	Tilt	1	0274M	1	99.9	0.041	-	1.009	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.92	0.15	Right	Cheek	2	0274M	1	99.9	0.137	-	1.019	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.92	0.19	Right	Tilt	2	0274M	1	99.9	0.151	0.137	1.019	1.001	**0.140**	A22
2462	11	802.11b	DSSS	22	17.0	16.92	0.13	Left	Cheek	2	0274M	1	99.9	0.101	-	1.019	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.92	0.13	Left	Tilt	2	0274M	1	99.9	0.143	-	1.019	1.001	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-22
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)	
5270	54	802.11n	OFDM	40	14.0	13.90	0.11	Right	Cheek	1	0274M	13.5	97.4	0.644	0.235	1.023	1.027	0.247	
5270	54	802.11n	OFDM	40	14.0	13.90	0.13	Right	Tilt	1	0274M	13.5	97.4	0.685	0.253	1.023	1.027	**0.266**	
5270	54	802.11n	OFDM	40	14.0	13.90	0.12	Left	Cheek	1	0274M	13.5	97.4	0.244	-	1.023	1.027	-	
5270	54	802.11n	OFDM	40	14.0	13.90	0.16	Left	Tilt	1	0274M	13.5	97.4	0.327	-	1.023	1.027	-	
5270	54	802.11n	OFDM	40	14.0	13.61	0.12	Right	Cheek	2	0274M	13.5	97.3	0.040	0.011	1.094	1.028	0.012	
5270	54	802.11n	OFDM	40	14.0	13.61	0.19	Right	Tilt	2	0274M	13.5	97.3	0.049	-	1.094	1.028	-	
5270	54	802.11n	OFDM	40	14.0	13.61	0.12	Left	Cheek	2	0274M	13.5	97.3	0.045	-	1.094	1.028	-	
5270	54	802.11n	OFDM	40	14.0	13.61	0.19	Left	Tilt	2	0274M	13.5	97.3	0.050	0.020	1.094	1.028	0.022	
5610	122	802.11ac	OFDM	80	14.0	13.92	-0.17	Right	Cheek	1	0274M	29.3	94.4	0.521	0.199	1.019	1.059	0.215	
5610	122	802.11ac	OFDM	80	14.0	13.92	0.19	Right	Tilt	1	0274M	29.3	94.4	0.663	0.230	1.019	1.059	0.248	
5610	122	802.11ac	OFDM	80	14.0	13.92	0.13	Left	Cheek	1	0274M	29.3	94.4	0.256	-	1.019	1.059	-	
5610	122	802.11ac	OFDM	80	14.0	13.92	0.20	Left	Tilt	1	0274M	29.3	94.4	0.307	-	1.019	1.059	-	
5610	122	802.11ac	OFDM	80	14.0	13.99	0.13	Right	Cheek	2	0274M	29.3	94.5	0.081	0.026	1.002	1.058	0.028	
5610	122	802.11ac	OFDM	80	14.0	13.99	0.14	Right	Tilt	2	0274M	29.3	94.5	0.086	0.028	1.002	1.058	0.030	
5610	122	802.11ac	OFDM	80	14.0	13.99	0.14	Left	Cheek	2	0274M	29.3	94.5	0.040	-	1.002	1.058	-	
5610	122	802.11ac	OFDM	80	14.0	13.99	0.19	Left	Tilt	2	0274M	29.3	94.5	0.053	-	1.002	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	0.14	Right	Cheek	1	0274M	29.3	94.4	0.584	0.229	1.007	1.059	0.244	
5775	155	802.11ac	OFDM	80	14.0	13.97	0.14	Right	Tilt	1	0274M	29.3	94.4	0.724	0.241	1.007	1.059	0.257	
5775	155	802.11ac	OFDM	80	14.0	13.97	-0.15	Left	Cheek	1	0274M	29.3	94.4	0.283	-	1.007	1.059	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	0.14	Left	Tilt	1	0274M	29.3	94.4	0.361	-	1.007	1.059	-	
5775	155	802.11ac	OFDM	80	14.0	13.44	0.16	Right	Cheek	2	0274M	29.3	94.5	0.096	0.042	1.138	1.058	0.051	
5775	155	802.11ac	OFDM	80	14.0	13.44	0.12	Right	Tilt	2	0274M	29.3	94.5	0.124	0.048	1.138	1.058	0.058	
5775	155	802.11ac	OFDM	80	14.0	13.44	0.13	Left	Cheek	2	0274M	29.3	94.5	0.066	-	1.138	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	13.44	0.19	Left	Tilt	2	0274M	29.3	94.5	0.067	-	1.138	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
NII MIMO Head SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5270	54	802.11n	OFDM	40	14.0	13.90	14.0	13.61	0.12	Right	Cheek	MIMO	0274M	27	98.1	0.607	0.234	1.094	1.019	0.261	
5270	54	802.11n	OFDM	40	14.0	13.90	14.0	13.61	0.09	Right	Tilt	MIMO	0274M	27	98.1	0.706	0.262	1.094	1.019	0.292	A23
5270	54	802.11n	OFDM	40	14.0	13.90	14.0	13.61	0.13	Left	Cheek	MIMO	0274M	27	98.1	0.293	-	1.094	1.019	-	
5270	54	802.11n	OFDM	40	14.0	13.90	14.0	13.61	0.09	Left	Tilt	MIMO	0274M	27	98.1	0.320	-	1.094	1.019	-	
5610	122	802.11ac	OFDM	80	14.0	13.92	14.0	13.99	0.14	Right	Cheek	MIMO	0274M	58.5	98.0	0.501	0.212	1.019	1.020	0.220	
5610	122	802.11ac	OFDM	80	14.0	13.92	14.0	13.99	0.06	Right	Tilt	MIMO	0274M	58.5	98.0	0.677	0.240	1.019	1.020	0.249	
5610	122	802.11ac	OFDM	80	14.0	13.92	14.0	13.99	0.07	Left	Cheek	MIMO	0274M	58.5	98.0	0.297	-	1.019	1.020	-	
5610	122	802.11ac	OFDM	80	14.0	13.92	14.0	13.99	0.13	Left	Tilt	MIMO	0274M	58.5	98.0	0.371	-	1.019	1.020	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.12	Right	Cheek	MIMO	0274M	58.5	98.0	0.554	0.205	1.138	1.020	0.238	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	-0.10	Right	Tilt	MIMO	0274M	58.5	98.0	0.705	0.227	1.138	1.020	0.263	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.15	Left	Cheek	MIMO	0274M	58.5	98.0	0.309	-	1.138	1.020	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.06	Left	Tilt	MIMO	0274M	58.5	98.0	0.377	-	1.138	1.020	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										**Head 1.6 W/kg (mW/g) averaged over 1 gram**											

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Table 11-24
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	18.5	17.69	-0.04	Right	Cheek	0274M	1	77.1	0.499	1.205	1.297	0.780	
2441.00	39	Bluetooth	FHSS	18.5	18.37	-0.13	Right	Cheek	0274M	1	77.1	0.716	1.030	1.297	0.957	A21
2480.00	78	Bluetooth	FHSS	18.5	17.48	0.17	Right	Cheek	0274M	1	77.1	0.675	1.265	1.297	**1.107**	
2402.00	0	Bluetooth	FHSS	18.5	17.69	0.05	Right	Tilt	0274M	1	77.1	0.500	1.205	1.297	0.781	
2441.00	39	Bluetooth	FHSS	18.5	18.37	0.00	Right	Tilt	0274M	1	77.1	0.651	1.030	1.297	0.870	
2480.00	78	Bluetooth	FHSS	18.5	17.48	-0.08	Right	Tilt	0274M	1	77.1	0.520	1.265	1.297	0.853	
2441.00	39	Bluetooth	FHSS	18.5	18.37	0.08	Left	Cheek	0274M	1	77.1	0.149	1.030	1.297	0.199	
2441.00	39	Bluetooth	FHSS	18.5	18.37	0.10	Left	Tilt	0274M	1	77.1	0.169	1.030	1.297	0.226	
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)	
836.60	190	GSM 850	GSM	33.5	33.16	N/A	-0.07	15 mm	0770M	1:1	back	0.163	1.081	0.176	A24
1880.00	661	GSM 1900	GSM	30.5	29.24	N/A	0.00	15 mm	0666M	1:1	back	0.190	1.337	0.254	A26
836.60	4183	UMTS 850	RMC	25.8	24.89	2	-0.03	15 mm	0770M	1:1	back	0.301	1.233	0.371	A28
1712.40	1312	UMTS 1750	RMC	25.0	24.40	39	0.02	15 mm	0695M	1:1	back	0.628	1.148	0.721	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	0.00	15 mm	0695M	1:1	back	0.804	1.178	**0.947**	A30
1752.60	1513	UMTS 1750	RMC	25.0	24.27	39	-0.01	15 mm	0695M	1:1	back	0.782	1.183	0.925	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	-0.05	15 mm	0695M	1:1	back	0.742	1.178	0.874	
1852.40	9262	UMTS 1900	RMC	25.0	24.20	32	0.03	15 mm	0666M	1:1	back	0.718	1.202	0.863	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.05	15 mm	0666M	1:1	back	0.768	1.199	0.921	A32
1907.60	9538	UMTS 1900	RMC	25.0	23.93	32	0.01	15 mm	0666M	1:1	back	0.717	1.279	0.917	
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	26.0	25.17	8	0.19	15 mm	0770M	1:1	back	0.225	1.211	0.272	A34
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	26.0	25.24	8	-0.01	15 mm	0770M	1:1	back	0.317	1.191	0.378	A36
1851.25	25	PCS CDMA	TDSO / SO32	25.0	24.19	32	0.06	15 mm	0732M	1:1	back	0.701	1.205	0.845	
1880.00	600	PCS CDMA	TDSO / SO32	25.0	24.39	32	-0.08	15 mm	0732M	1:1	back	0.728	1.151	0.838	A38
1908.75	1175	PCS CDMA	TDSO / SO32	25.0	24.13	32	0.03	15 mm	0732M	1:1	back	0.660	1.222	0.807	
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 11-26
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	25.5	24.97	9	0.08	0	N/A	0762M	QPSK	1	0	15 mm	back	1:1	0.228	1.130	0.258	A40
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.02	1	N/A	0762M	QPSK	50	0	15 mm	back	1:1	0.190	1.107	0.210	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	0	-0.01	0	N/A	0762M	QPSK	1	0	15 mm	back	1:1	0.235	1.361	0.320	A42
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.07	1	N/A	0762M	QPSK	25	0	15 mm	back	1:1	0.192	1.315	0.252	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	-0.01	0	N/A	0762M	QPSK	1	0	15 mm	back	1:1	0.238	1.340	0.319	A44
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.01	1	N/A	0762M	QPSK	25	0	15 mm	back	1:1	0.214	1.327	0.284	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	18	-0.02	0	N/A	0762M	QPSK	1	49	15 mm	back	1:1	0.330	1.312	0.433	A46
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	-0.03	1	N/A	0762M	QPSK	25	0	15 mm	back	1:1	0.244	1.276	0.311	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	10	-0.18	0	N/A	0762M	QPSK	1	0	15 mm	back	1:1	0.249	1.285	0.320	A48
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	-0.01	1	N/A	0762M	QPSK	36	0	15 mm	back	1:1	0.221	1.225	0.271	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.01	0	N/A	0732M	QPSK	1	0	15 mm	back	1:1	0.630	1.164	0.733	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	25.0	24.24	32	0.06	0	N/A	0732M	QPSK	1	0	15 mm	back	1:1	0.629	1.191	0.749	
1905.00	26590	High	LTE Band 25 (PCS)	20	25.0	24.07	32	0.00	0	N/A	0732M	QPSK	1	99	15 mm	back	1:1	0.674	1.239	0.835	A54
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.03	1	N/A	0732M	QPSK	50	0	15 mm	back	1:1	0.502	1.138	0.571	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.38	32	-0.03	1	N/A	0732M	QPSK	100	0	15 mm	back	1:1	0.570	1.153	0.657	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	N/A	-0.01	0	N/A	0252M	QPSK	1	0	15 mm	back	1:1	0.346	1.259	0.436	A56
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	N/A	-0.05	1	N/A	0252M	QPSK	25	0	15 mm	back	1:1	0.219	1.279	0.280	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	N/A	0.03	0	Ant B	0252M	QPSK	1	99	15 mm	back	1:1	0.291	1.183	0.344	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	N/A	0.10	1	Ant B	0252M	QPSK	50	50	15 mm	back	1:1	0.179	1.161	0.208	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	N/A	-0.08	0	Ant A	0252M	QPSK	1	0	15 mm	back	1:1	0.381	1.186	0.452	A58
2560.00	21350	High	LTE Band 7	20	23.5	22.96	N/A	-0.01	1	Ant A	0252M	QPSK	50	0	15 mm	back	1:1	0.242	1.132	0.274	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	N/A	-0.12	0	N/A	0695M	QPSK	1	0	15 mm	back	1:1.58	0.164	1.191	0.195	A60
3690.00	56640	High	LTE Band 48	20	23.5	22.97	N/A	0.08	1	N/A	0695M	QPSK	50	0	15 mm	back	1:1.58	0.107	1.130	0.121	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-27
LTE Band 5 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	-0.01	0	0762M	QPSK	1	49	15 mm	back	1:1	0.339	1.250	0.424	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	0.00	1	0762M	QPSK	25	0	15 mm	back	1:1	0.218	1.208	0.263	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.65	2	0.15	0	0762M	QPSK	1	49	15 mm	back	1:1	0.342	1.303	0.446	A50
	SCC	843.70	20597	Mid	LTE Band 5 (Cell)	5									0	15 mm						
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-28
LTE Band 66 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink	Component Carrier	FREQUENCY MHz	FREQUENCY Ch.		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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	-0.04	0	0589M	QPSK	1	50	15 mm	back	1:1	0.466	1.112	0.518	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	23.58	39	0.15	0	0589M	QPSK	1	0	15 mm	back	1:1	0.432	1.387	0.599	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	25.0	23.08	39	0.15	0	0589M	QPSK	1	0	15 mm	back	1:1	0.400	1.556	0.622	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	-0.05	1	0589M	QPSK	50	25	15 mm	back	1:1	0.302	1.104	0.333	
CA_66C 2CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.20	39	-0.19	0	0589M	QPSK	1	0	15 mm	back	1:1	0.478	1.202	0.575	
	SCC	1725.20	132124	Mid	LTE Band 66 (AWS)	20									99	15 mm						
CA_66B 2CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	25.0	24.02	39	-0.14	0	0589M	QPSK	1	0	15 mm	back	1:1	0.493	1.253	0.618	A52
	SCC	1735.10	132223	Mid	LTE Band 66 (AWS)	10									49	15 mm						
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-29
LTE Band 41 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY MHz	FREQUENCY Ch.		Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	-0.14	0	0744M	QPSK	1	0	15 mm	back	1:1.58	0.365	1.349	0.492	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.05	1	0744M	QPSK	50	0	15 mm	back	1:1.58	0.278	1.265	0.352	
1 CC Uplink - Power Class 2	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	28.3	26.62	0.00	0	0744M	QPSK	1	0	15 mm	back	1:2.31	0.441	1.472	0.649	
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	25.07	0.08	0	0744M	QPSK	1	0	15 mm	back	1:1.58	0.487	1.054	0.513	
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20							1	99							
2 CC Uplink - Power Class 2	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	28.3	27.70	-0.03	0	0840M	QPSK	1	0	15 mm	back	1:2.31	0.580	1.148	0.666	A62
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20							1	99							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-30
DTS Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY MHz	FREQUENCY Ch.	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 #
2437	6	802.11b	DSSS	22	20.0	19.65	0.13	15 mm	1	0274M	1	back	99.9	0.049	0.038	1.084	1.001	0.041	
2437	6	802.11b	DSSS	22	19.0	18.89	0.00	15 mm	2	0274M	1	back	99.9	0.064	0.051	1.026	1.001	**0.052**	A66
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-31
NII Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY MHz	FREQUENCY Ch.	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 #
5300	60	802.11a	OFDM	20	18.0	17.97	0.11	15 mm	1	0627M	6	back	98.8	0.249	0.103	1.007	1.012	0.105	
5280	56	802.11a	OFDM	20	18.0	17.91	0.18	15 mm	2	0627M	6	back	98.9	0.775	0.357	1.021	1.011	0.369	
5620	124	802.11a	OFDM	20	18.0	17.89	0.13	15 mm	1	0627M	6	back	98.8	0.382	0.155	1.026	1.012	0.161	
5720	144	802.11a	OFDM	20	18.0	17.79	0.15	15 mm	2	0627M	6	back	98.9	0.964	0.445	1.050	1.011	0.472	
5745	149	802.11a	OFDM	20	18.0	17.93	0.06	15 mm	1	0627M	6	back	98.8	0.381	0.151	1.016	1.012	0.155	
5745	149	802.11a	OFDM	20	18.0	17.77	-0.16	15 mm	2	0627M	6	back	98.9	1.043	0.460	1.054	1.011	**0.490**	
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 11-32
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.																				
5300	60	802.11n	OFDM	20	18.0	17.74	18.0	17.60	-0.03	15 mm	MIMO	0627M	13	back	98.7	0.928	0.424	1.096	1.013	0.471	
5600	120	802.11n	OFDM	20	18.0	17.94	18.0	17.81	0.13	15 mm	MIMO	0627M	13	back	98.7	1.119	0.513	1.045	1.013	0.543	
5745	149	802.11n	OFDM	20	18.0	17.84	18.0	17.76	0.11	15 mm	MIMO	0627M	13	back	98.7	1.215	0.564	1.057	1.013	0.604	
5785	157	802.11n	OFDM	20	18.0	17.97	18.0	17.84	0.01	15 mm	MIMO	0627M	13	back	98.7	1.486	0.677	1.038	1.013	0.712	
5825	165	802.11n	OFDM	20	18.0	17.84	18.0	17.35	0.04	15 mm	MIMO	0627M	13	back	98.7	1.673	0.771	1.161	1.013	0.907	A68
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 60, 120, 149, 157, and 165, to achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

Table 11-33
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.																				
5270	54	802.11n	OFDM	40	14.0	13.90	14.0	13.61	-0.15	15 mm	MIMO	0627M	27	back	98.1	0.342	0.187	1.094	1.019	0.208	
5610	122	802.11ac	OFDM	80	14.0	13.92	14.0	13.99	0.10	15 mm	MIMO	0627M	58.5	back	98.0	0.437	0.266	1.019	1.020	0.276	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.16	15 mm	MIMO	0627M	58.5	back	98.0	0.503	0.295	1.138	1.020	0.342	
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 11-34
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.															
2441	39	Bluetooth	FHSS	18.5	18.37	-0.15	15 mm	0274M	1	back	77.1	0.072	1.030	1.297	**0.096**	A64
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 11-35
GPRS/UMTS 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)	
824.20	128	GSM 850	GPRS	30.5	29.41	N/A	-0.19	10 mm	0770M	3	1:2.76	back	0.497	1.285	0.639	
836.60	190	GSM 850	GPRS	30.5	29.80	N/A	-0.12	10 mm	0770M	3	1:2.76	back	0.534	1.175	0.627	
848.80	251	GSM 850	GPRS	30.5	29.69	N/A	-0.04	10 mm	0770M	3	1:2.76	back	0.633	1.205	0.763	A25
836.60	190	GSM 850	GPRS	30.5	29.80	N/A	-0.12	10 mm	0770M	3	1:2.76	front	0.443	1.175	0.521	
836.60	190	GSM 850	GPRS	30.5	29.80	N/A	-0.02	10 mm	0770M	3	1:2.76	bottom	0.344	1.175	0.404	
836.60	190	GSM 850	GPRS	30.5	29.80	N/A	-0.10	10 mm	0770M	3	1:2.76	right	0.219	1.175	0.257	
836.60	190	GSM 850	GPRS	30.5	29.80	N/A	-0.09	10 mm	0770M	3	1:2.76	left	0.097	1.175	0.114	
1880.00	661	GSM 1900	GPRS	25.5	24.39	N/A	-0.05	10 mm	0666M	3	1:2.76	back	0.286	1.291	0.369	
1880.00	661	GSM 1900	GPRS	25.5	24.39	N/A	0.03	10 mm	0666M	3	1:2.76	front	0.253	1.291	0.327	
1850.20	512	GSM 1900	GPRS	25.5	24.12	N/A	-0.05	10 mm	0666M	3	1:2.76	bottom	0.593	1.374	0.815	
1880.00	661	GSM 1900	GPRS	25.5	24.39	N/A	-0.08	10 mm	0666M	3	1:2.76	bottom	0.548	1.291	0.707	
1909.80	810	GSM 1900	GPRS	25.5	24.38	N/A	-0.08	10 mm	0666M	3	1:2.76	bottom	0.675	1.294	0.873	A27
1880.00	661	GSM 1900	GPRS	25.5	24.39	N/A	0.00	10 mm	0666M	3	1:2.76	right	0.053	1.291	0.068	
1880.00	661	GSM 1900	GPRS	25.5	24.39	N/A	-0.03	10 mm	0666M	3	1:2.76	left	0.053	1.291	0.068	
826.40	4132	UMTS 850	RMC	25.8	24.97	2	0.01	10 mm	0770M	N/A	1:1	back	0.740	1.211	0.896	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	-0.02	10 mm	0770M	N/A	1:1	back	0.748	1.233	0.922	
846.60	4233	UMTS 850	RMC	25.8	24.77	2	-0.01	10 mm	0770M	N/A	1:1	back	0.865	1.268	1.097	A29
836.60	4183	UMTS 850	RMC	25.8	24.89	2	-0.01	10 mm	0770M	N/A	1:1	front	0.530	1.233	0.653	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.00	10 mm	0770M	N/A	1:1	bottom	0.454	1.233	0.560	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.00	10 mm	0770M	N/A	1:1	right	0.352	1.233	0.434	
836.60	4183	UMTS 850	RMC	25.8	24.89	2	0.02	10 mm	0770M	N/A	1:1	left	0.177	1.233	0.218	
846.60	4233	UMTS 850	RMC	25.8	24.77	2	-0.03	10 mm	0770M	N/A	1:1	back	0.772	1.268	0.979	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	39	0.02	10 mm	0695M	N/A	1:1	back	0.598	1.199	0.717	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	39	0.02	10 mm	0695M	N/A	1:1	front	0.403	1.199	0.483	
1712.40	1312	UMTS 1750	RMC	21.0	20.26	39	0.00	10 mm	0695M	N/A	1:1	bottom	0.591	1.186	0.701	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	39	0.02	10 mm	0695M	N/A	1:1	bottom	0.675	1.199	0.809	A31
1752.60	1513	UMTS 1750	RMC	21.0	20.17	39	-0.02	10 mm	0695M	N/A	1:1	bottom	0.648	1.211	0.785	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	39	-0.10	10 mm	0695M	N/A	1:1	right	0.066	1.199	0.079	
1732.40	1412	UMTS 1750	RMC	21.0	20.21	39	0.00	10 mm	0695M	N/A	1:1	left	0.111	1.199	0.133	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	-0.06	10 mm	0666M	N/A	1:1	back	0.658	1.052	0.692	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	0.02	10 mm	0666M	N/A	1:1	front	0.592	1.052	0.623	
1852.40	9262	UMTS 1900	RMC	20.5	20.10	32	0.04	10 mm	0666M	N/A	1:1	bottom	1.020	1.096	1.118	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	0.02	10 mm	0666M	N/A	1:1	bottom	1.160	1.052	1.220	A33
1907.60	9538	UMTS 1900	RMC	20.5	19.98	32	0.04	10 mm	0666M	N/A	1:1	bottom	1.140	1.127	**1.285**	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	-0.02	10 mm	0666M	N/A	1:1	right	0.089	1.052	0.094	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	-0.06	10 mm	0666M	N/A	1:1	left	0.075	1.052	0.079	
1880.00	9400	UMTS 1900	RMC	20.5	20.28	32	0.01	10 mm	0666M	N/A	1:1	bottom	1.050	1.052	1.105	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**Body 1.6 W/kg (mW/g)** averaged over 1 gram								

Note: Blue entries represent variability measurements.

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Table 11-36
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	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	25.22	8	0.03	10 mm	0666M	1:1	back	0.508	1.197	0.608	A35
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.22	8	-0.04	10 mm	0666M	1:1	front	0.388	1.197	0.464	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.22	8	-0.09	10 mm	0666M	1:1	bottom	0.349	1.197	0.418	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.22	8	-0.07	10 mm	0666M	1:1	right	0.196	1.197	0.235	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	25.22	8	0.02	10 mm	0666M	1:1	left	0.113	1.197	0.135	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.29	8	-0.03	10 mm	0666M	1:1	back	0.536	1.178	0.631	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.26	8	-0.02	10 mm	0666M	1:1	back	0.576	1.186	0.683	
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.17	8	-0.01	10 mm	0666M	1:1	back	0.672	1.211	0.814	A37
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.26	8	-0.03	10 mm	0666M	1:1	front	0.433	1.186	0.514	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.26	8	-0.10	10 mm	0666M	1:1	bottom	0.360	1.186	0.427	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.26	8	-0.02	10 mm	0666M	1:1	right	0.314	1.186	0.372	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	25.26	8	-0.09	10 mm	0666M	1:1	left	0.142	1.186	0.168	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.46	32	0.01	10 mm	0666M	1:1	back	0.441	1.132	0.499	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.46	32	0.01	10 mm	0666M	1:1	front	0.467	1.132	0.529	
1851.25	25	PCS CDMA	EVDO Rev. 0	20.0	19.22	32	-0.03	10 mm	0666M	1:1	bottom	0.826	1.197	0.989	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.46	32	-0.03	10 mm	0666M	1:1	bottom	0.929	1.132	1.052	
1908.75	1175	PCS CDMA	EVDO Rev. 0	20.0	19.15	32	-0.03	10 mm	0666M	1:1	bottom	0.961	1.216	1.169	A39
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.46	32	0.21	10 mm	0666M	1:1	right	0.088	1.132	0.100	
1880.00	600	PCS CDMA	EVDO Rev. 0	20.0	19.46	32	-0.04	10 mm	0666M	1:1	left	0.084	1.132	0.095	
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 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	25.5	24.97	9	-0.04	0	0762M	QPSK	1	0	10 mm	back	1:1	0.301	1.130	0.340	A41
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.01	1	0762M	QPSK	50	0	10 mm	back	1:1	0.243	1.107	0.269	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	0.08	0	0762M	QPSK	1	0	10 mm	front	1:1	0.259	1.130	0.293	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.06	1	0762M	QPSK	50	0	10 mm	front	1:1	0.214	1.107	0.237	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	-0.02	0	0762M	QPSK	1	0	10 mm	bottom	1:1	0.158	1.130	0.179	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	-0.04	1	0762M	QPSK	50	0	10 mm	bottom	1:1	0.129	1.107	0.143	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	0.02	0	0762M	QPSK	1	0	10 mm	right	1:1	0.197	1.130	0.223	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	-0.03	1	0762M	QPSK	50	0	10 mm	right	1:1	0.167	1.107	0.185	
680.50	133297	Mid	LTE Band 71	20	25.5	24.97	9	0.10	0	0762M	QPSK	1	0	10 mm	left	1:1	0.157	1.130	0.177	
680.50	133297	Mid	LTE Band 71	20	24.5	24.06	9	0.01	1	0762M	QPSK	50	0	10 mm	left	1:1	0.132	1.107	0.146	
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 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	24.46	0	-0.07	0	0762M	QPSK	1	0	10 mm	back	1:1	0.335	1.361	0.456	A43
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.03	1	0762M	QPSK	25	0	10 mm	back	1:1	0.285	1.315	0.375	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	0	0.01	0	0762M	QPSK	1	0	10 mm	front	1:1	0.273	1.361	0.372	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.01	1	0762M	QPSK	25	0	10 mm	front	1:1	0.226	1.315	0.297	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	0	-0.02	0	0762M	QPSK	1	0	10 mm	bottom	1:1	0.186	1.361	0.253	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.11	1	0762M	QPSK	25	0	10 mm	bottom	1:1	0.155	1.315	0.204	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	0	0.08	0	0762M	QPSK	1	0	10 mm	right	1:1	0.223	1.361	0.304	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.01	1	0762M	QPSK	25	0	10 mm	right	1:1	0.197	1.315	0.259	
707.50	23095	Mid	LTE Band 12	10	25.8	24.46	0	-0.02	0	0762M	QPSK	1	0	10 mm	left	1:1	0.166	1.361	0.226	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.03	1	0762M	QPSK	25	0	10 mm	left	1:1	0.129	1.315	0.170	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-39
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	24.53	6	-0.06	0	0762M	QPSK	1	0	10 mm	back	1:1	0.375	1.340	0.503	A45
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.04	1	0762M	QPSK	25	0	10 mm	back	1:1	0.336	1.327	0.446	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.01	0	0762M	QPSK	1	0	10 mm	front	1:1	0.304	1.340	0.407	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	0.01	1	0762M	QPSK	25	0	10 mm	front	1:1	0.278	1.327	0.369	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	-0.04	0	0762M	QPSK	1	0	10 mm	bottom	1:1	0.251	1.340	0.336	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.02	1	0762M	QPSK	25	0	10 mm	bottom	1:1	0.239	1.327	0.317	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.00	0	0762M	QPSK	1	0	10 mm	right	1:1	0.307	1.340	0.411	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	-0.04	1	0762M	QPSK	25	0	10 mm	right	1:1	0.264	1.327	0.350	
782.00	23230	Mid	LTE Band 13	10	25.8	24.53	6	0.10	0	0762M	QPSK	1	0	10 mm	left	1:1	0.193	1.340	0.259	
782.00	23230	Mid	LTE Band 13	10	24.8	23.57	6	0.04	1	0762M	QPSK	25	0	10 mm	left	1:1	0.158	1.327	0.210	
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 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	25.8	24.62	18	0.02	0	0762M	QPSK	1	49	10 mm	back	1:1	0.504	1.312	0.661	A47
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	-0.02	1	0762M	QPSK	25	0	10 mm	back	1:1	0.410	1.276	0.523	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	18	0.00	0	0762M	QPSK	1	49	10 mm	front	1:1	0.463	1.312	0.607	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	0.03	1	0762M	QPSK	25	0	10 mm	front	1:1	0.359	1.276	0.458	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	18	-0.04	0	0762M	QPSK	1	49	10 mm	bottom	1:1	0.347	1.312	0.455	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	-0.05	1	0762M	QPSK	25	0	10 mm	bottom	1:1	0.271	1.276	0.346	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	18	-0.02	0	0762M	QPSK	1	49	10 mm	right	1:1	0.377	1.312	0.495	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	0.02	1	0762M	QPSK	25	0	10 mm	right	1:1	0.264	1.276	0.337	
793.00	23330	Mid	LTE Band 14	10	25.8	24.62	18	0.02	0	0762M	QPSK	1	49	10 mm	left	1:1	0.210	1.312	0.276	
793.00	23330	Mid	LTE Band 14	10	24.8	23.74	18	-0.01	1	0762M	QPSK	25	0	10 mm	left	1:1	0.153	1.276	0.195	
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 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	24.71	10	0.00	0	0762M	QPSK	1	0	10 mm	back	1:1	0.560	1.285	0.720	A49
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	0.00	1	0762M	QPSK	36	0	10 mm	back	1:1	0.489	1.225	0.599	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	10	0.00	0	0762M	QPSK	1	0	10 mm	front	1:1	0.436	1.285	0.560	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	0.00	1	0762M	QPSK	36	0	10 mm	front	1:1	0.379	1.225	0.464	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	10	-0.02	0	0762M	QPSK	1	0	10 mm	bottom	1:1	0.361	1.285	0.464	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	0.01	1	0762M	QPSK	36	0	10 mm	bottom	1:1	0.316	1.225	0.387	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	10	0.01	0	0762M	QPSK	1	0	10 mm	right	1:1	0.289	1.285	0.371	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	0.00	1	0762M	QPSK	36	0	10 mm	right	1:1	0.255	1.225	0.312	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.71	10	-0.01	0	0762M	QPSK	1	0	10 mm	left	1:1	0.147	1.285	0.189	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.92	10	0.04	1	0762M	QPSK	36	0	10 mm	left	1:1	0.119	1.225	0.146	
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 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	-0.03	0	0762M	QPSK	1	49	10 mm	back	1:1	0.555	1.250	0.694	A51
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	0.04	1	0762M	QPSK	25	0	10 mm	back	1:1	0.482	1.208	0.582	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.65	2	-0.12	0	0762M	QPSK	1	49	10 mm	back	1:1	0.545	1.303	0.710	
	SCC	843.70	20597	Mid	LTE Band 5 (Cell)	5								1	0							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	0.00	0	0762M	QPSK	1	49	10 mm	front	1:1	0.523	1.250	0.654	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	0.00	1	0762M	QPSK	25	0	10 mm	front	1:1	0.394	1.208	0.476	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	0.00	0	0762M	QPSK	1	49	10 mm	bottom	1:1	0.398	1.250	0.498	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	-0.05	1	0762M	QPSK	25	0	10 mm	bottom	1:1	0.299	1.208	0.361	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	-0.10	0	0762M	QPSK	1	49	10 mm	right	1:1	0.319	1.250	0.399	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	-0.01	1	0762M	QPSK	25	0	10 mm	right	1:1	0.226	1.208	0.273	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.83	2	0.01	0	0762M	QPSK	1	49	10 mm	left	1:1	0.119	1.250	0.149	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.98	2	-0.03	1	0762M	QPSK	25	0	10 mm	left	1:1	0.102	1.208	0.123	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-43
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	0.01	0	0589M	QPSK	1	0	10 mm	back	1:1	0.367	1.219	0.447	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	-0.09	0	0589M	QPSK	50	25	10 mm	back	1:1	0.396	1.197	0.474	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	0.16	0	0589M	QPSK	1	0	10 mm	front	1:1	0.295	1.219	0.360	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	0.12	0	0589M	QPSK	50	25	10 mm	front	1:1	0.313	1.197	0.375	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	-0.01	0	0589M	QPSK	1	0	10 mm	bottom	1:1	0.532	1.219	0.649	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.34	39	-0.06	0	0589M	QPSK	50	50	10 mm	bottom	1:1	0.445	1.306	0.581	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.5	19.69	39	-0.03	0	0589M	QPSK	50	25	10 mm	bottom	1:1	0.495	1.205	0.596	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.31	39	-0.02	0	0589M	QPSK	50	0	10 mm	bottom	1:1	0.576	1.315	0.757	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	0.01	0	0589M	QPSK	50	25	10 mm	bottom	1:1	0.585	1.197	0.700	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	19.17	39	-0.01	0	0589M	QPSK	25	0	10 mm	bottom	1:1	0.584	1.358	0.793	
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	20.20	39	-0.06	0	0589M	QPSK	50	0	10 mm	bottom	1:1	0.722	1.072	0.774	A53
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20									50							
CA_66B 2 CC Uplink	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	20.02	39	-0.08	0	0589M	QPSK	25	0	10 mm	bottom	1:1	0.712	1.117	0.795	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10									25							
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	0.18	0	0589M	QPSK	1	0	10 mm	right	1:1	0.042	1.219	0.051	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	-0.13	0	0589M	QPSK	50	25	10 mm	right	1:1	0.046	1.197	0.055	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	0.17	0	0589M	QPSK	1	0	10 mm	left	1:1	0.093	1.219	0.113	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	0.17	0	0589M	QPSK	50	25	10 mm	left	1:1	0.104	1.197	0.124	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-44
LTE Band 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)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.35	32	-0.01	0	0732M	QPSK	1	0	10 mm	back	1:1	0.507	1.035	0.525	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.45	32	0.00	0	0732M	QPSK	50	0	10 mm	back	1:1	0.525	1.012	0.531	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.35	32	0.00	0	0732M	QPSK	1	0	10 mm	front	1:1	0.474	1.035	0.491	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.45	32	0.02	0	0732M	QPSK	50	0	10 mm	front	1:1	0.487	1.012	0.493	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.24	32	-0.05	0	0732M	QPSK	1	0	10 mm	bottom	1:1	0.873	1.062	0.927	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.35	32	-0.05	0	0732M	QPSK	1	0	10 mm	bottom	1:1	0.876	1.035	0.907	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.22	32	-0.06	0	0732M	QPSK	1	0	10 mm	bottom	1:1	0.958	1.067	1.022	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.26	32	-0.05	0	0732M	QPSK	50	0	10 mm	bottom	1:1	0.903	1.057	0.954	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.45	32	-0.02	0	0732M	QPSK	50	0	10 mm	bottom	1:1	0.899	1.012	0.910	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.25	32	-0.04	0	0732M	QPSK	50	0	10 mm	bottom	1:1	0.959	1.059	1.016	A55
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.34	32	-0.02	0	0732M	QPSK	100	0	10 mm	bottom	1:1	0.910	1.038	0.945	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.35	32	0.02	0	0732M	QPSK	1	0	10 mm	right	1:1	0.080	1.035	0.083	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.45	32	-0.01	0	0732M	QPSK	50	0	10 mm	right	1:1	0.080	1.012	0.081	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.35	32	0.07	0	0732M	QPSK	1	0	10 mm	left	1:1	0.084	1.035	0.087	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.45	32	0.04	0	0732M	QPSK	50	0	10 mm	left	1:1	0.089	1.012	0.090	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-45
LTE Band 30 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.04	0	0252M	QPSK	1	0	10 mm	back	1:1	0.389	1.233	0.480	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	-0.01	0	0252M	QPSK	25	0	10 mm	back	1:1	0.397	1.216	0.483	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.07	0	0252M	QPSK	1	0	10 mm	front	1:1	0.232	1.233	0.286	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	0.02	0	0252M	QPSK	25	0	10 mm	front	1:1	0.242	1.216	0.294	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	-0.03	0	0252M	QPSK	1	0	10 mm	bottom	1:1	0.615	1.233	0.758	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	-0.03	0	0252M	QPSK	25	0	10 mm	bottom	1:1	0.629	1.216	0.765	A57
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.16	0	0252M	QPSK	1	0	10 mm	right	1:1	0.035	1.233	0.043	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	0.05	0	0252M	QPSK	25	0	10 mm	right	1:1	0.033	1.216	0.040	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.12	0	0252M	QPSK	1	0	10 mm	left	1:1	0.049	1.233	0.060	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	0.13	0	0252M	QPSK	25	0	10 mm	left	1:1	0.055	1.216	0.067	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-46
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)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	-0.07	0	Ant B	0252M	QPSK	1	0	10 mm	back	1:1	0.256	1.169	0.299	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	-0.01	0	Ant B	0252M	QPSK	50	50	10 mm	back	1:1	0.273	1.130	0.308	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	0.03	0	Ant B	0252M	QPSK	1	0	10 mm	front	1:1	0.143	1.169	0.167	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	0.02	0	Ant B	0252M	QPSK	50	50	10 mm	front	1:1	0.157	1.130	0.177	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	0.03	0	Ant B	0252M	QPSK	1	0	10 mm	bottom	1:1	0.292	1.169	0.341	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	0.07	0	Ant B	0252M	QPSK	50	50	10 mm	bottom	1:1	0.321	1.130	0.363	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	-0.06	0	Ant B	0252M	QPSK	1	0	10 mm	left	1:1	0.138	1.169	0.161	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	-0.02	0	Ant B	0252M	QPSK	50	50	10 mm	left	1:1	0.144	1.130	0.163	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	-0.01	0	Ant A	0252M	QPSK	1	99	10 mm	back	1:1	0.408	1.189	0.485	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	-0.03	0	Ant A	0252M	QPSK	50	0	10 mm	back	1:1	0.421	1.161	0.489	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	0.03	0	Ant A	0252M	QPSK	1	99	10 mm	front	1:1	0.268	1.189	0.319	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	0.08	0	Ant A	0252M	QPSK	50	0	10 mm	front	1:1	0.282	1.161	0.327	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	-0.06	0	Ant A	0252M	QPSK	1	99	10 mm	bottom	1:1	0.619	1.189	0.736	
2510.00	20850	Low	LTE Band 7	20	21.0	19.93	-0.06	0	Ant A	0252M	QPSK	50	0	10 mm	bottom	1:1	0.661	1.279	0.845	
2535.00	21100	Mid	LTE Band 7	20	21.0	19.92	-0.04	0	Ant A	0252M	QPSK	50	50	10 mm	bottom	1:1	0.622	1.282	0.797	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	-0.06	0	Ant A	0252M	QPSK	50	0	10 mm	bottom	1:1	0.647	1.161	0.751	
2560.00	21350	High	LTE Band 7	20	21.0	20.24	-0.06	0	Ant A	0252M	QPSK	100	0	10 mm	bottom	1:1	0.673	1.191	0.802	A59
2560.00	21350	High	LTE Band 7	20	21.0	20.25	0.17	0	Ant A	0252M	QPSK	1	99	10 mm	right	1:1	0.074	1.189	0.088	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	-0.02	0	Ant A	0252M	QPSK	50	0	10 mm	right	1:1	0.081	1.161	0.094	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	0.19	0	Ant A	0252M	QPSK	1	99	10 mm	left	1:1	0.010	1.189	0.012	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	0.18	0	Ant A	0252M	QPSK	50	0	10 mm	left	1:1	0.010	1.161	0.012	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-47
LTE Band 48 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.05	0	0695M	QPSK	1	99	10 mm	back	1:1.58	0.115	1.117	0.128	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	0.12	0	0695M	QPSK	50	50	10 mm	back	1:1.58	0.124	1.114	0.138	
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.12	0	0695M	QPSK	1	99	10 mm	front	1:1.58	0.058	1.117	0.065	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	0.10	0	0695M	QPSK	50	50	10 mm	front	1:1.58	0.062	1.114	0.069	
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.08	0	0695M	QPSK	1	99	10 mm	bottom	1:1.58	0.141	1.117	0.157	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	0.19	0	0695M	QPSK	50	50	10 mm	bottom	1:1.58	0.146	1.114	**0.163**	A61
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.18	0	0695M	QPSK	1	99	10 mm	left	1:1.58	0.051	1.117	0.057	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	0.12	0	0695M	QPSK	50	50	10 mm	left	1:1.58	0.054	1.114	0.060	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-48
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.65	0.03	0	0744M	QPSK	1	0	10 mm	back	1:1.58	0.209	1.216	0.254	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.64	0.03	0	0744M	QPSK	50	25	10 mm	back	1:1.58	0.206	1.219	0.251	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.65	-0.01	0	0744M	QPSK	1	0	10 mm	front	1:1.58	0.129	1.216	0.157	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.64	0.01	0	0744M	QPSK	50	25	10 mm	front	1:1.58	0.125	1.219	0.152	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.51	-0.01	0	0744M	QPSK	1	0	10 mm	bottom	1:1.58	0.592	1.256	0.744	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.65	-0.01	0	0744M	QPSK	1	0	10 mm	bottom	1:1.58	0.592	1.216	0.720	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.33	0.03	0	0744M	QPSK	1	50	10 mm	bottom	1:1.58	0.409	1.309	0.535	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	21.26	0.12	0	0744M	QPSK	1	50	10 mm	bottom	1:1.58	0.380	1.330	0.505	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	21.22	0.13	0	0744M	QPSK	1	50	10 mm	bottom	1:1.58	0.325	1.343	0.436	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.50	0.13	0	0744M	QPSK	50	50	10 mm	bottom	1:1.58	0.597	1.259	0.752	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.64	0.13	0	0744M	QPSK	50	25	10 mm	bottom	1:1.58	0.540	1.219	0.658	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	22.5	21.48	-0.02	0	0744M	QPSK	50	25	10 mm	bottom	1:1.58	0.421	1.265	0.533	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	21.32	0.13	0	0744M	QPSK	50	50	10 mm	bottom	1:1.58	0.400	1.312	0.525	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	22.5	21.41	0.13	0	0744M	QPSK	50	25	10 mm	bottom	1:1.58	0.332	1.285	0.427	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	22.5	21.45	0.00	0	0744M	QPSK	100	0	10 mm	bottom	1:1.58	0.586	1.274	0.747	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	22.5	21.52	0.13	0	0744M	QPSK	50	50	10 mm	bottom	1:2.31	0.387	1.253	0.485	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	22.5	22.50	0.13	0	0744M	QPSK	50	50	10 mm	bottom	1:1.58	0.768	1.000	0.768	A63
	SCC	2525.80	39948	Low	LTE Band 41	20							50	0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	22.5	22.47	0.10	0	0480M	QPSK	50	50	10 mm	bottom	1:2.31	0.529	1.007	0.533	
	SCC	2525.80	39948	Low	LTE Band 41	20							50	0							
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.65	-0.09	0	0744M	QPSK	1	0	10 mm	left	1:1.58	0.066	1.216	0.080	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	22.5	21.64	-0.14	0	0744M	QPSK	50	25	10 mm	left	1:1.58	0.073	1.219	0.089	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-49
WLAN Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	20.0	19.65	0.12	10 mm	1	0274M	1	back	99.9	0.093	0.082	1.084	1.001	0.089	
2437	6	802.11b	DSSS	22	20.0	19.65	0.14	10 mm	1	0274M	1	front	99.9	0.060	-	1.084	1.001	-	
2437	6	802.11b	DSSS	22	20.0	19.65	-0.15	10 mm	1	0274M	1	top	99.9	0.075	-	1.084	1.001	-	
2437	6	802.11b	DSSS	22	20.0	19.65	0.05	10 mm	1	0274M	1	left	99.9	0.091	-	1.084	1.001	-	
2437	6	802.11b	DSSS	22	19.0	18.89	-0.10	10 mm	2	0274M	1	back	99.9	0.099	0.055	1.026	1.001	0.056	
2437	6	802.11b	DSSS	22	19.0	18.89	0.18	10 mm	2	0274M	1	front	99.9	0.017	-	1.026	1.001	-	
2437	6	802.11b	DSSS	22	19.0	18.89	0.04	10 mm	2	0274M	1	top	99.9	0.131	0.107	1.026	1.001	**0.110**	A67
2437	6	802.11b	DSSS	22	19.0	18.89	0.12	10 mm	2	0274M	1	left	99.9	0.002	-	1.026	1.001	-	
5745	149	802.11a	OFDM	20	18.0	17.93	-0.11	10 mm	1	0627M	6	back	98.8	0.636	0.263	1.016	1.012	0.270	
5745	149	802.11a	OFDM	20	18.0	17.93	-0.13	10 mm	1	0627M	6	front	98.8	0.146	-	1.016	1.012	-	
5745	149	802.11a	OFDM	20	18.0	17.93	-0.12	10 mm	1	0627M	6	top	98.8	0.389	-	1.016	1.012	-	
5745	149	802.11a	OFDM	20	18.0	17.93	0.19	10 mm	1	0627M	6	left	98.8	0.500	-	1.016	1.012	-	
5745	149	802.11a	OFDM	20	18.0	17.77	0.17	10 mm	2	0627M	6	back	98.9	1.549	0.686	1.054	1.011	0.731	
5785	157	802.11a	OFDM	20	18.0	17.42	-0.02	10 mm	2	0627M	6	back	98.9	1.539	0.680	1.143	1.011	0.786	
5825	165	802.11a	OFDM	20	18.0	17.40	0.16	10 mm	2	0627M	6	back	98.9	1.834	0.801	1.148	1.011	**0.930**	
5745	149	802.11a	OFDM	20	18.0	17.77	0.19	10 mm	2	0627M	6	front	98.9	0.044	0.017	1.054	1.011	0.018	
5745	149	802.11a	OFDM	20	18.0	17.77	-0.13	10 mm	2	0627M	6	top	98.9	0.290	-	1.054	1.011	-	
5745	149	802.11a	OFDM	20	18.0	17.77	0.12	10 mm	2	0627M	6	left	98.9	0.363	0.171	1.054	1.011	0.182	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-50
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	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5745	149	802.11n	OFDM	20	18.0	17.84	18.0	17.76	-0.11	10 mm	MIMO	0627M	13	back	98.7	1.699	0.815	1.057	1.013	0.873	
5785	157	802.11n	OFDM	20	18.0	17.97	18.0	17.84	0.00	10 mm	MIMO	0627M	13	back	98.7	2.167	0.965	1.038	1.013	1.015	
5825	165	802.11n	OFDM	20	18.0	17.84	18.0	17.35	-0.03	10 mm	MIMO	0627M	13	back	98.7	2.626	1.110	1.161	1.013	1.305	A69
5785	157	802.11n	OFDM	20	18.0	17.97	18.0	17.84	0.14	10 mm	MIMO	0627M	13	front	98.7	0.192	0.068	1.038	1.013	0.072	
5785	157	802.11n	OFDM	20	18.0	17.97	18.0	17.84	0.20	10 mm	MIMO	0627M	13	top	98.7	0.827	-	1.038	1.013	-	
5785	157	802.11n	OFDM	20	18.0	17.97	18.0	17.84	-0.13	10 mm	MIMO	0627M	13	left	98.7	1.018	0.433	1.038	1.013	0.455	
5825	165	802.11n	OFDM	20	18.0	17.84	18.0	17.35	0.01	10 mm	MIMO	0627M	13	back	98.7	2.542	1.100	1.161	1.013	1.294	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

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

Note: Blue entry represents variability measurement.

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Table 11-51
2.4 GHz MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	17.0	16.70	17.0	16.60	0.12	10 mm	MIMO	0274M	13	back	98.7	0.045	0.041	1.096	1.013	0.046	
2412	1	802.11n	OFDM	20	17.0	16.70	17.0	16.60	0.12	10 mm	MIMO	0274M	13	front	98.7	0.035	-	1.096	1.013	-	
2412	1	802.11n	OFDM	20	17.0	16.70	17.0	16.60	0.14	10 mm	MIMO	0274M	13	top	98.7	0.041	-	1.096	1.013	-	
2412	1	802.11n	OFDM	20	17.0	16.70	17.0	16.60	0.13	10 mm	MIMO	0274M	13	left	98.7	0.041	-	1.096	1.013	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

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

Table 11-52
NII MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.12	10 mm	MIMO	0627M	58.5	back	98.0	0.728	0.365	1.138	1.020	0.424	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	0.06	10 mm	MIMO	0627M	58.5	front	98.0	0.109	-	1.138	1.020	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	-0.12	10 mm	MIMO	0627M	58.5	top	98.0	0.232	-	1.138	1.020	-	
5775	155	802.11ac	OFDM	80	14.0	13.97	14.0	13.44	-0.12	10 mm	MIMO	0627M	58.5	left	98.0	0.343	0.179	1.138	1.020	0.208	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

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

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Table 11-53
DSS Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	18.5	18.37	0.04	10 mm	0274M	1	back	77.1	0.152	1.030	1.297	**0.203**	A65
2441	39	Bluetooth	FHSS	18.5	18.37	-0.02	10 mm	0274M	1	front	77.1	0.092	1.030	1.297	0.123	
2441	39	Bluetooth	FHSS	18.5	18.37	-0.08	10 mm	0274M	1	top	77.1	0.109	1.030	1.297	0.146	
2441	39	Bluetooth	FHSS	18.5	18.37	-0.10	10 mm	0274M	1	left	77.1	0.151	1.030	1.297	**0.202**	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							**Body 1.6 W/kg (mW/g) averaged over 1 gram**									

11.4 Standalone Phablet SAR Data

Table 11-54
GPRS Phablet SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GPRS	27.5	25.60	-0.07	7 mm	0666M	3	1:2.76	back	0.319	1.549	0.494	
1880.00	661	GSM 1900	GPRS	27.5	25.60	0.04	5 mm	0666M	3	1:2.76	front	0.417	1.549	0.646	
1880.00	661	GSM 1900	GPRS	27.5	25.60	0.12	9 mm	0666M	3	1:2.76	bottom	0.451	1.549	0.699	
1880.00	661	GSM 1900	GPRS	27.5	25.60	0.05	0 mm	0666M	3	1:2.76	right	0.135	1.549	0.209	
1880.00	661	GSM 1900	GPRS	27.5	25.60	-0.09	0 mm	0666M	3	1:2.76	left	0.210	1.549	0.325	
1880.00	661	GSM 1900	GPRS	25.5	24.39	-0.12	0 mm	0666M	3	1:2.76	back	1.150	1.291	1.485	
1880.00	661	GSM 1900	GPRS	25.5	24.39	0.00	0 mm	0666M	3	1:2.76	front	1.040	1.291	1.343	
1850.20	512	GSM 1900	GPRS	25.5	24.12	-0.06	0 mm	0666M	3	1:2.76	bottom	2.130	1.374	2.927	
1880.00	661	GSM 1900	GPRS	25.5	24.39	0.12	0 mm	0666M	3	1:2.76	bottom	2.160	1.291	2.789	
1909.80	810	GSM 1900	GPRS	25.5	24.38	-0.02	0 mm	0666M	3	1:2.76	bottom	2.320	1.294	3.002	A70
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							**Phablet 4.0 W/kg (mW/g) averaged over 10 grams**								

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Table 11-55
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	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	-0.01	7 mm	0695M	1:1	back	0.869	1.178	1.024	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	-0.02	5 mm	0695M	1:1	front	1.540	1.178	1.814	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	0.02	9 mm	0695M	1:1	bottom	1.160	1.178	1.366	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	-0.02	0 mm	0695M	1:1	right	0.332	1.178	0.391	
1732.40	1412	UMTS 1750	RMC	25.0	24.29	39	0.00	0 mm	0695M	1:1	left	0.542	1.178	0.638	
1732.40	1412	UMTS 1750	RMC	22.0	21.24	39	-0.02	0 mm	0695M	1:1	back	1.640	1.191	1.953	
1732.40	1412	UMTS 1750	RMC	22.0	21.24	39	0.04	0 mm	0695M	1:1	front	1.200	1.191	1.429	
1712.40	1312	UMTS 1750	RMC	22.0	21.31	39	-0.05	0 mm	0695M	1:1	bottom	2.220	1.172	2.602	
1732.40	1412	UMTS 1750	RMC	22.0	21.24	39	-0.02	0 mm	0695M	1:1	bottom	2.710	1.191	3.228	A71
1752.60	1513	UMTS 1750	RMC	22.0	21.22	39	-0.06	0 mm	0695M	1:1	bottom	2.340	1.197	2.801	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	-0.07	7 mm	0666M	1:1	back	1.000	1.199	1.199	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	-0.01	5 mm	0666M	1:1	front	1.210	1.199	1.451	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	-0.06	9 mm	0666M	1:1	bottom	1.430	1.199	1.715	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	0.00	0 mm	0666M	1:1	right	0.529	1.199	0.634	
1880.00	9400	UMTS 1900	RMC	25.0	24.21	32	-0.10	0 mm	0666M	1:1	left	0.622	1.199	0.746	
1880.00	9400	UMTS 1900	RMC	21.5	21.29	32	0.00	0 mm	0666M	1:1	back	1.900	1.050	1.995	
1880.00	9400	UMTS 1900	RMC	21.5	21.29	32	0.01	0 mm	0666M	1:1	front	1.700	1.050	1.785	
1852.40	9262	UMTS 1900	RMC	21.5	21.12	32	0.13	0 mm	0666M	1:1	bottom	3.010	1.091	**3.284**	
1880.00	9400	UMTS 1900	RMC	21.5	21.29	32	-0.02	0 mm	0666M	1:1	bottom	3.050	1.050	3.203	A72
1907.60	9538	UMTS 1900	RMC	21.5	21.00	32	0.19	0 mm	0666M	1:1	bottom	2.910	1.122	3.265	
1880.00	9400	UMTS 1900	RMC	21.5	21.29	32	-0.02	0 mm	0666M	1:1	bottom	3.020	1.050	3.171	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.50	32	0.02	7 mm	0666M	1:1	back	0.802	1.122	0.900	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.50	32	0.02	5 mm	0666M	1:1	front	1.000	1.122	1.122	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.50	32	-0.13	9 mm	0666M	1:1	bottom	1.160	1.122	1.302	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.50	32	-0.03	0 mm	0666M	1:1	right	0.329	1.122	0.369	
1880.00	600	PCS CDMA	EVDO Rev. 0	25.0	24.50	32	-0.11	0 mm	0666M	1:1	left	0.492	1.122	0.552	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.43	32	-0.01	0 mm	0666M	1:1	back	1.330	1.140	1.516	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.43	32	-0.05	0 mm	0666M	1:1	front	1.350	1.140	1.539	
1851.25	25	PCS CDMA	EVDO Rev. 0	21.0	20.14	32	-0.10	0 mm	0666M	1:1	bottom	2.330	1.219	2.840	
1880.00	600	PCS CDMA	EVDO Rev. 0	21.0	20.43	32	-0.05	0 mm	0666M	1:1	bottom	2.350	1.140	2.679	A73
1908.75	1175	PCS CDMA	EVDO Rev. 0	21.0	20.12	32	-0.14	0 mm	0666M	1:1	bottom	2.330	1.225	2.854	
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 11-56
LTE Band 66 Phablet SAR

MEASUREMENT RESULTS																							
1 CC Uplink	Component Carrier	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)	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	-0.02	0	0589M	QPSK	1	50	7 mm	back	1:1	0.786	1.112	0.874	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	-0.06	1	0589M	QPSK	50	25	7 mm	back	1:1	0.526	1.104	0.581	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	0.01	0	0589M	QPSK	1	50	5 mm	front	1:1	0.789	1.112	0.877	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	-0.01	1	0589M	QPSK	50	25	5 mm	front	1:1	0.524	1.104	0.578	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	-0.17	0	0589M	QPSK	1	50	9 mm	bottom	1:1	0.808	1.112	0.898	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	0.02	1	0589M	QPSK	50	25	9 mm	bottom	1:1	0.525	1.104	0.580	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	0.10	0	0589M	QPSK	1	50	0 mm	right	1:1	0.205	1.112	0.228	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	0.12	1	0589M	QPSK	50	25	0 mm	right	1:1	0.135	1.104	0.149	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.54	39	0.14	0	0589M	QPSK	1	50	0 mm	left	1:1	0.415	1.112	0.461	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.0	23.57	39	0.13	1	0589M	QPSK	50	25	0 mm	left	1:1	0.278	1.104	0.307	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	-0.02	0	0589M	QPSK	1	0	0 mm	back	1:1	1.160	1.219	1.414	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	-0.02	0	0589M	QPSK	50	25	0 mm	back	1:1	1.260	1.197	1.508	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	0.03	0	0589M	QPSK	1	0	0 mm	front	1:1	0.968	1.219	1.180	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	0.08	0	0589M	QPSK	50	25	0 mm	front	1:1	1.050	1.197	1.257	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.34	39	0.09	0	0589M	QPSK	1	50	0 mm	bottom	1:1	1.650	1.306	2.155	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.5	19.48	39	0.05	0	0589M	QPSK	1	50	0 mm	bottom	1:1	1.740	1.265	2.201	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.64	39	-0.20	0	0589M	QPSK	1	0	0 mm	bottom	1:1	1.870	1.219	2.280	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.34	39	-0.13	0	0589M	QPSK	50	50	0 mm	bottom	1:1	1.700	1.306	2.220	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.5	19.69	39	-0.13	0	0589M	QPSK	50	25	0 mm	bottom	1:1	1.800	1.205	2.169	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.31	39	-0.04	0	0589M	QPSK	50	0	0 mm	bottom	1:1	2.140	1.315	2.814	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.72	39	0.05	0	0589M	QPSK	50	25	0 mm	bottom	1:1	2.060	1.197	2.466	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	19.17	39	0.03	0	0589M	QPSK	25	0	0 mm	bottom	1:1	2.130	1.358	2.893	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.5	19.49	39	0.03	0	0589M	QPSK	100	0	0 mm	bottom	1:1	1.820	1.262	2.297	
CA_66C 2CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	20.20	39	0.00	0	0589M	QPSK	50	0	0 mm	bottom	1:1	2.740	1.072	2.937	A74
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20									50							
CA_66B 2CC Uplink	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	20.02	39	-0.03	0	0589M	QPSK	25	0	0 mm	bottom	1:1	2.650	1.117	**2.960**	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10									25							
CA_66C 2CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	20.20	39	0.00	0	0589M	QPSK	50	0	0 mm	bottom	1:1	2.700	1.072	2.894	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20									50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

Note: Blue entry represents variability measurement.

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Table 11-57
LTE Band 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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	-0.04	0	0732M	QPSK	1	0	7 mm	back	1:1	1.050	1.164	1.222	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	-0.05	1	0732M	QPSK	50	0	7 mm	back	1:1	0.845	1.138	0.962	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.00	0	0732M	QPSK	1	0	5 mm	front	1:1	1.260	1.164	1.467	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	0.00	1	0732M	QPSK	50	0	5 mm	front	1:1	1.020	1.138	1.161	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	0.00	0	0732M	QPSK	1	0	9 mm	bottom	1:1	1.340	1.164	1.560	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	-0.01	1	0732M	QPSK	50	0	9 mm	bottom	1:1	1.070	1.138	1.218	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	-0.01	0	0732M	QPSK	1	0	0 mm	right	1:1	0.443	1.164	0.516	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	-0.01	1	0732M	QPSK	50	0	0 mm	right	1:1	0.357	1.138	0.406	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.34	32	-0.12	0	0732M	QPSK	1	0	0 mm	left	1:1	0.563	1.164	0.655	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.44	32	-0.18	1	0732M	QPSK	50	0	0 mm	left	1:1	0.462	1.138	0.526	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.42	32	-0.07	0	0732M	QPSK	1	0	0 mm	back	1:1	1.860	1.019	1.895	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.48	32	-0.04	0	0732M	QPSK	50	0	0 mm	back	1:1	1.930	1.005	1.940	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.42	32	0.03	0	0732M	QPSK	1	0	0 mm	front	1:1	1.530	1.019	1.559	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.48	32	0.07	0	0732M	QPSK	50	0	0 mm	front	1:1	1.530	1.005	1.538	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	21.21	32	-0.03	0	0732M	QPSK	1	0	0 mm	bottom	1:1	2.720	1.069	2.908	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.42	32	0.01	0	0732M	QPSK	1	0	0 mm	bottom	1:1	2.680	1.019	2.731	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	21.30	32	-0.03	0	0732M	QPSK	1	0	0 mm	bottom	1:1	2.690	1.047	2.816	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.5	21.39	32	-0.05	0	0732M	QPSK	50	0	0 mm	bottom	1:1	2.750	1.026	2.822	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.48	32	-0.05	0	0732M	QPSK	50	0	0 mm	bottom	1:1	2.800	1.005	2.814	A75
1905.00	26590	High	LTE Band 25 (PCS)	20	21.5	21.41	32	-0.03	0	0732M	QPSK	50	0	0 mm	bottom	1:1	2.700	1.021	2.757	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.5	21.41	32	-0.15	0	0732M	QPSK	100	0	0 mm	bottom	1:1	2.760	1.021	2.818	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

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Table 11-58
LTE Band 30 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	-0.04	0	0252M	QPSK	1	0	7 mm	back	1:1	0.558	1.259	0.703	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.03	1	0252M	QPSK	25	0	7 mm	back	1:1	0.356	1.279	0.455	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	-0.04	0	0252M	QPSK	1	0	5 mm	front	1:1	0.413	1.259	0.520	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.06	1	0252M	QPSK	25	0	5 mm	front	1:1	0.309	1.279	0.395	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	-0.02	0	0252M	QPSK	1	0	9 mm	bottom	1:1	0.688	1.259	0.866	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.05	1	0252M	QPSK	25	0	9 mm	bottom	1:1	0.442	1.279	0.565	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	-0.06	0	0252M	QPSK	1	0	0 mm	right	1:1	0.171	1.259	0.215	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.07	1	0252M	QPSK	25	0	0 mm	right	1:1	0.103	1.279	0.132	
2310.00	27710	Mid	LTE Band 30	10	23.5	22.50	-0.12	0	0252M	QPSK	1	0	0 mm	left	1:1	0.305	1.259	0.384	
2310.00	27710	Mid	LTE Band 30	10	22.5	21.43	-0.12	1	0252M	QPSK	25	0	0 mm	left	1:1	0.202	1.279	0.258	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	-0.05	0	0252M	QPSK	1	0	0 mm	back	1:1	1.050	1.233	1.295	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	-0.03	0	0252M	QPSK	25	0	0 mm	back	1:1	1.110	1.216	1.350	A76
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	0.00	0	0252M	QPSK	1	0	0 mm	front	1:1	0.469	1.233	0.578	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	0.07	0	0252M	QPSK	25	0	0 mm	front	1:1	0.497	1.216	0.604	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.09	-0.01	0	0252M	QPSK	1	0	0 mm	bottom	1:1	0.996	1.233	1.228	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.15	-0.03	0	0252M	QPSK	25	0	0 mm	bottom	1:1	1.070	1.216	1.301	
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 11-59
LTE Band 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)	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	-0.06	0	Ant A	0252M	QPSK	1	0	7 mm	back	1:1	0.830	1.186	0.984	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.10	1	Ant A	0252M	QPSK	50	0	7 mm	back	1:1	0.607	1.132	0.687	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.07	0	Ant A	0252M	QPSK	1	0	5 mm	front	1:1	0.771	1.186	0.914	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.11	1	Ant A	0252M	QPSK	50	0	5 mm	front	1:1	0.491	1.132	0.556	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.12	0	Ant A	0252M	QPSK	1	0	9 mm	bottom	1:1	0.828	1.186	0.982	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	0.12	1	Ant A	0252M	QPSK	50	0	9 mm	bottom	1:1	0.520	1.132	0.589	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	-0.12	0	Ant A	0252M	QPSK	1	0	0 mm	right	1:1	0.460	1.186	0.546	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	-0.13	1	Ant A	0252M	QPSK	50	0	0 mm	right	1:1	0.298	1.132	0.337	
2560.00	21350	High	LTE Band 7	20	24.5	23.76	0.01	0	Ant A	0252M	QPSK	1	0	0 mm	left	1:1	0.110	1.186	0.130	
2560.00	21350	High	LTE Band 7	20	23.5	22.96	-0.14	1	Ant A	0252M	QPSK	50	0	0 mm	left	1:1	0.071	1.132	0.080	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	0.09	0	Ant A	0252M	QPSK	1	99	0 mm	back	1:1	1.060	1.189	1.260	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	0.05	0	Ant A	0252M	QPSK	50	0	0 mm	back	1:1	1.140	1.161	1.324	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	-0.06	0	Ant A	0252M	QPSK	1	99	0 mm	front	1:1	0.735	1.189	0.874	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	-0.09	0	Ant A	0252M	QPSK	50	0	0 mm	front	1:1	0.777	1.161	0.902	
2560.00	21350	High	LTE Band 7	20	21.0	20.25	-0.07	0	Ant A	0252M	QPSK	1	99	0 mm	bottom	1:1	1.020	1.189	1.213	
2560.00	21350	High	LTE Band 7	20	21.0	20.35	-0.13	0	Ant A	0252M	QPSK	50	0	0 mm	bottom	1:1	1.270	1.161	1.474	
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 11-60
LTE Band 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)	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	-0.11	0	Ant B	0252M	QPSK	1	99	7 mm	back	1:1	0.629	1.183	0.744	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	-0.20	1	Ant B	0252M	QPSK	50	50	7 mm	back	1:1	0.398	1.161	0.462	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	0.12	0	Ant B	0252M	QPSK	1	99	5 mm	front	1:1	0.437	1.183	0.517	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	-0.14	1	Ant B	0252M	QPSK	50	50	5 mm	front	1:1	0.266	1.161	0.309	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	-0.04	0	Ant B	0252M	QPSK	1	99	9 mm	bottom	1:1	0.463	1.183	0.548	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	-0.06	1	Ant B	0252M	QPSK	50	50	9 mm	bottom	1:1	0.283	1.161	0.329	
2510.00	20850	Low	LTE Band 7	20	24.5	23.77	-0.11	0	Ant B	0252M	QPSK	1	99	0 mm	left	1:1	1.100	1.183	1.301	
2510.00	20850	Low	LTE Band 7	20	23.5	22.85	-0.12	1	Ant B	0252M	QPSK	50	50	0 mm	left	1:1	0.678	1.161	0.787	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	-0.14	0	Ant B	0252M	QPSK	1	0	0 mm	back	1:1	2.060	1.169	2.408	
2535.00	21100	Mid	LTE Band 7	20	21.0	20.05	-0.13	0	Ant B	0252M	QPSK	1	0	0 mm	back	1:1	1.980	1.245	2.465	
2560.00	21350	High	LTE Band 7	20	21.0	20.01	-0.13	0	Ant B	0252M	QPSK	1	99	0 mm	back	1:1	1.850	1.256	2.324	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	-0.13	0	Ant B	0252M	QPSK	50	50	0 mm	back	1:1	2.130	1.130	2.407	A77
2535.00	21100	Mid	LTE Band 7	20	21.0	20.14	-0.13	0	Ant B	0252M	QPSK	50	0	0 mm	back	1:1	2.050	1.219	2.499	
2560.00	21350	High	LTE Band 7	20	21.0	20.22	-0.13	0	Ant B	0252M	QPSK	50	0	0 mm	back	1:1	1.970	1.197	2.358	
2510.00	20850	Low	LTE Band 7	20	21.0	20.31	-0.13	0	Ant B	0252M	QPSK	100	0	0 mm	back	1:1	2.050	1.172	2.403	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	0.05	0	Ant B	0252M	QPSK	1	0	0 mm	front	1:1	0.927	1.169	1.084	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	0.04	0	Ant B	0252M	QPSK	50	50	0 mm	front	1:1	0.982	1.130	1.110	
2510.00	20850	Low	LTE Band 7	20	21.0	20.32	-0.10	0	Ant B	0252M	QPSK	1	0	0 mm	bottom	1:1	1.620	1.169	1.894	
2510.00	20850	Low	LTE Band 7	20	21.0	20.47	-0.15	0	Ant B	0252M	QPSK	50	50	0 mm	bottom	1:1	1.680	1.130	1.898	
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 11-61
LTE Band 48 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	-0.01	0	0695M	QPSK	1	0	7 mm	back	1:1.58	0.275	1.191	0.328	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.00	1	0695M	QPSK	50	0	7 mm	back	1:1.58	0.177	1.130	0.200	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.03	0	0695M	QPSK	1	0	5 mm	front	1:1.58	0.100	1.191	0.119	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	0.00	1	0695M	QPSK	50	0	5 mm	front	1:1.58	0.063	1.130	0.071	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.01	0	0695M	QPSK	1	0	9 mm	bottom	1:1.58	0.172	1.191	0.205	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	-0.04	1	0695M	QPSK	50	0	9 mm	bottom	1:1.58	0.112	1.130	0.127	
3690.00	56640	High	LTE Band 48	20	24.5	23.74	0.04	0	0695M	QPSK	1	0	0 mm	left	1:1.58	0.300	1.191	0.357	
3690.00	56640	High	LTE Band 48	20	23.5	22.97	-0.08	1	0695M	QPSK	50	0	0 mm	left	1:1.58	0.198	1.130	0.224	
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.02	0	0695M	QPSK	1	99	0 mm	back	1:1.58	0.735	1.117	0.821	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	0.07	0	0695M	QPSK	50	50	0 mm	back	1:1.58	0.765	1.114	**0.852**	A78
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	0.01	0	0695M	QPSK	1	99	0 mm	front	1:1.58	0.334	1.117	0.373	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	-0.01	0	0695M	QPSK	50	50	0 mm	front	1:1.58	0.353	1.114	0.393	
3560.00	55340	Low	LTE Band 48	20	21.0	20.52	-0.02	0	0695M	QPSK	1	99	0 mm	bottom	1:1.58	0.632	1.117	0.706	
3560.00	55340	Low	LTE Band 48	20	21.0	20.53	-0.06	0	0695M	QPSK	50	50	0 mm	bottom	1:1.58	0.674	1.114	0.751	
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 11-62
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.														(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.03	0	0744M	QPSK	1	0	7 mm	back	1:1.58	0.563	1.349	0.759	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.02	1	0744M	QPSK	50	0	7 mm	back	1:1.58	0.452	1.265	0.572	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.11	0	0744M	QPSK	1	0	5 mm	front	1:1.58	0.484	1.349	0.653	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	0.06	1	0744M	QPSK	50	0	5 mm	front	1:1.58	0.387	1.265	0.490	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	0.02	0	0744M	QPSK	1	0	9 mm	bottom	1:1.58	0.646	1.349	0.871	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	-0.03	1	0744M	QPSK	50	0	9 mm	bottom	1:1.58	0.518	1.265	0.655	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	25.3	24.00	-0.12	0	0744M	QPSK	1	0	0 mm	left	1:1.58	0.506	1.349	0.683	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.3	23.28	-0.02	1	0744M	QPSK	50	0	0 mm	left	1:1.58	0.398	1.265	0.503	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.60	-0.04	0	0744M	QPSK	1	0	0 mm	back	1:1.58	2.060	1.380	2.843	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.37	-0.12	0	0744M	QPSK	1	0	0 mm	back	1:1.58	1.630	1.455	2.372	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.42	0.14	0	0744M	QPSK	1	0	0 mm	back	1:1.58	2.080	1.439	2.993	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.42	-0.18	0	0744M	QPSK	1	0	0 mm	back	1:1.58	1.730	1.439	2.489	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	-0.11	0	0744M	QPSK	1	50	0 mm	back	1:1.58	1.700	1.531	2.603	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.80	-0.03	0	0744M	QPSK	50	50	0 mm	back	1:1.58	2.100	1.318	2.768	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.27	-0.13	0	0744M	QPSK	50	0	0 mm	back	1:1.58	1.630	1.489	2.427	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.30	0.16	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.170	1.479	3.209	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.35	-0.15	0	0744M	QPSK	50	0	0 mm	back	1:1.58	1.860	1.462	2.719	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	-0.09	0	0744M	QPSK	50	0	0 mm	back	1:1.58	1.800	1.531	2.756	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.59	-0.02	0	0744M	QPSK	100	0	0 mm	back	1:1.58	2.090	1.384	2.893	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.54	0.04	0	0744M	QPSK	50	0	0 mm	back	1:2.31	1.480	1.400	2.072	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.0	23.64	-0.13	0	0744M	QPSK	50	50	0 mm	back	1:1.58	2.630	1.086	2.856	
	SCC	2525.80	39948	Low	LTE Band 41	20								0							
2 CC Uplink - Power Class 3	PCC	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.74	-0.12	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.380	1.062	2.528	
	SCC	2529.70	39987	Low-Mid	LTE Band 41	20								50							
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	24.0	23.45	0.13	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.800	1.135	3.178	
	SCC	2573.20	40422	Mid	LTE Band 41	20								50							
2 CC Uplink - Power Class 3	PCC	2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.31	0.05	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.310	1.172	2.707	
	SCC	2616.70	40857	Mid-High	LTE Band 41	20								50							
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	24.0	23.29	-0.03	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.350	1.178	2.768	
	SCC	2660.20	41292	High	LTE Band 41	20								50							
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	24.0	23.22	-0.14	0	0744M	QPSK	50	0	0 mm	back	1:2.31	1.650	1.197	1.975	
	SCC	2573.20	40422	Mid	LTE Band 41	20								50							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.60	0.15	0	0744M	QPSK	1	0	0 mm	front	1:1.58	1.130	1.380	1.559	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.37	0.07	0	0744M	QPSK	1	0	0 mm	front	1:1.58	0.945	1.455	1.375	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.42	-0.01	0	0744M	QPSK	1	0	0 mm	front	1:1.58	1.050	1.439	1.511	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.42	0.06	0	0744M	QPSK	1	0	0 mm	front	1:1.58	0.957	1.439	1.377	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	0.16	0	0744M	QPSK	1	50	0 mm	front	1:1.58	0.866	1.531	1.326	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.80	0.11	0	0744M	QPSK	50	50	0 mm	front	1:1.58	1.190	1.318	1.568	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.27	0.12	0	0744M	QPSK	50	0	0 mm	front	1:1.58	0.960	1.489	1.429	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.30	0.18	0	0744M	QPSK	50	0	0 mm	front	1:1.58	1.080	1.479	1.597	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.35	0.09	0	0744M	QPSK	50	0	0 mm	front	1:1.58	0.969	1.462	1.417	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	0.12	0	0744M	QPSK	50	0	0 mm	front	1:1.58	0.905	1.531	1.386	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.59	0.03	0	0744M	QPSK	100	0	0 mm	front	1:1.58	1.060	1.384	1.467	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.60	-0.07	0	0744M	QPSK	1	0	0 mm	bottom	1:1.58	1.540	1.380	2.125	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.37	-0.11	0	0744M	QPSK	1	0	0 mm	bottom	1:1.58	1.300	1.455	1.892	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.42	-0.04	0	0744M	QPSK	1	0	0 mm	bottom	1:1.58	1.380	1.439	1.986	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.42	-0.05	0	0744M	QPSK	1	0	0 mm	bottom	1:1.58	1.320	1.439	1.899	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	-0.03	0	0744M	QPSK	1	50	0 mm	bottom	1:1.58	1.320	1.531	2.021	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.80	-0.07	0	0744M	QPSK	50	50	0 mm	bottom	1:1.58	1.590	1.318	2.096	
1 CC Uplink - Power Class 3	N/A	2549.50	40185	Low-Mid	LTE Band 41	20	24.0	22.27	-0.06	0	0744M	QPSK	50	0	0 mm	bottom	1:1.58	1.330	1.489	1.980	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	24.0	22.30	-0.04	0	0744M	QPSK	50	0	0 mm	bottom	1:1.58	1.450	1.479	2.145	
1 CC Uplink - Power Class 3	N/A	2636.50	41055	Mid-High	LTE Band 41	20	24.0	22.35	-0.06	0	0744M	QPSK	50	0	0 mm	bottom	1:1.58	1.430	1.462	2.091	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.0	22.15	-0.03	0	0744M	QPSK	50	0	0 mm	bottom	1:1.58	1.400	1.531	2.143	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	22.59	-0.05	0	0744M	QPSK	100	0	0 mm	bottom	1:1.58	1.560	1.384	2.159	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	24.0	23.64	0.03	0	0744M	QPSK	50	50	0 mm	back	1:1.58	2.550	1.086	2.769	
	SCC	2525.80	39948	Low	LTE Band 41	20								0							
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	24.0	23.45	0.15	0	0744M	QPSK	50	0	0 mm	back	1:1.58	2.820	1.135	3.201	A79
	SCC	2573.20	40422	Mid	LTE Band 41	20								50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams								

Note: Blue entries represents variability measurements.

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Table 11-63
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	17.97	0.06	0 mm	1	0627M	6	back	98.8	5.399	-	1.007	1.012	-	
5300	60	802.11a	OFDM	20	18.0	17.97	-0.19	0 mm	1	0627M	6	front	98.8	4.789	0.402	1.007	1.012	0.410	
5300	60	802.11a	OFDM	20	18.0	17.97	-0.06	0 mm	1	0627M	6	top	98.8	7.406	-	1.007	1.012	-	
5300	60	802.11a	OFDM	20	18.0	17.97	-0.11	0 mm	1	0627M	6	left	98.8	7.992	0.789	1.007	1.012	0.804	
5260	52	802.11a	OFDM	20	18.0	17.64	-0.12	0 mm	2	0627M	6	back	98.9	10.649	2.220	1.086	1.011	2.437	
5280	56	802.11a	OFDM	20	18.0	17.91	0.12	0 mm	2	0627M	6	back	98.9	19.411	2.320	1.021	1.011	2.395	
5300	60	802.11a	OFDM	20	18.0	17.90	0.13	0 mm	2	0627M	6	back	98.9	10.332	2.260	1.023	1.011	2.337	
5320	64	802.11a	OFDM	20	16.5	16.10	0.09	0 mm	2	0627M	6	back	98.9	15.175	1.680	1.096	1.011	1.862	
5280	56	802.11a	OFDM	20	18.0	17.91	0.00	0 mm	2	0627M	6	front	98.9	0.286	0.023	1.021	1.011	0.024	
5280	56	802.11a	OFDM	20	18.0	17.91	0.15	0 mm	2	0627M	6	top	98.9	0.492	-	1.021	1.011	-	
5280	56	802.11a	OFDM	20	18.0	17.91	-0.20	0 mm	2	0627M	6	left	98.9	1.940	0.268	1.021	1.011	0.277	
5620	124	802.11a	OFDM	20	18.0	17.89	0.12	0 mm	1	0627M	6	back	98.8	6.266	0.875	1.026	1.012	0.909	
5620	124	802.11a	OFDM	20	18.0	17.89	-0.12	0 mm	1	0627M	6	front	98.8	3.863	0.325	1.026	1.012	0.337	
5620	124	802.11a	OFDM	20	18.0	17.89	0.15	0 mm	1	0627M	6	top	98.8	6.001	-	1.026	1.012	-	
5620	124	802.11a	OFDM	20	18.0	17.89	-0.17	0 mm	1	0627M	6	left	98.8	9.901	0.968	1.026	1.012	1.005	
5500	100	802.11a	OFDM	20	18.0	17.56	-0.14	0 mm	2	0627M	6	back	98.9	37.766	1.840	1.107	1.011	2.059	
5600	120	802.11a	OFDM	20	18.0	17.78	0.17	0 mm	2	0627M	6	back	98.9	39.512	2.230	1.052	1.011	2.372	
5720	144	802.11a	OFDM	20	18.0	17.79	-0.08	0 mm	2	0627M	6	back	98.9	32.349	2.340	1.050	1.011	**2.484**	A80
5720	144	802.11a	OFDM	20	18.0	17.79	-0.19	0 mm	2	0627M	6	front	98.9	0.462	0.056	1.050	1.011	0.059	
5720	144	802.11a	OFDM	20	18.0	17.79	0.14	0 mm	2	0627M	6	top	98.9	0.661	-	1.050	1.011	-	
5720	144	802.11a	OFDM	20	18.0	17.79	0.16	0 mm	2	0627M	6	left	98.9	2.583	0.290	1.050	1.011	0.308	
5280	56	802.11a	OFDM	20	18.0	17.91	0.00	0 mm	2	0627M	6	back	98.9	21.336	2.230	1.021	1.011	2.302	
5600	120	802.11a	OFDM	20	18.0	17.78	-0.04	0 mm	2	0627M	6	back	98.9	31.857	1.980	1.052	1.011	2.106	
5720	144	802.11a	OFDM	20	18.0	17.79	-0.06	0 mm	2	0627M	6	back	98.9	23.231	2.090	1.050	1.011	2.219	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

Note: Blue entry represents variability measurement.

Table 11-64
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	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	17.74	18.0	17.60	-0.01	0 mm	MIMO	0627M	13	back	98.7	18.575	1.800	1.096	1.013	1.998	
5300	60	802.11n	OFDM	20	18.0	17.74	18.0	17.60	0.00	0 mm	MIMO	0627M	13	front	98.7	3.942	0.325	1.096	1.013	0.361	
5300	60	802.11n	OFDM	20	18.0	17.74	18.0	17.60	-0.13	0 mm	MIMO	0627M	13	top	98.7	6.539	-	1.096	1.013	-	
5300	60	802.11n	OFDM	20	18.0	17.74	18.0	17.60	0.13	0 mm	MIMO	0627M	13	left	98.7	8.864	0.929	1.096	1.013	1.031	
5600	120	802.11n	OFDM	20	18.0	17.94	18.0	17.81	-0.01	0 mm	MIMO	0627M	13	back	98.7	15.223	1.660	1.045	1.013	1.757	
5600	120	802.11n	OFDM	20	18.0	17.94	18.0	17.81	-0.16	0 mm	MIMO	0627M	13	front	98.7	4.675	-	1.045	1.013	-	
5600	120	802.11n	OFDM	20	18.0	17.94	18.0	17.81	-0.13	0 mm	MIMO	0627M	13	top	98.7	5.879	-	1.045	1.013	-	
5600	120	802.11n	OFDM	20	18.0	17.94	18.0	17.81	-0.13	0 mm	MIMO	0627M	13	left	98.7	10.708	0.946	1.045	1.013	1.001	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 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 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 12 for variability analysis.
8. 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 13 for more details).
9. 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.
10. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 13 for supplemental data.
11. 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.
12. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
13. 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.

CDMA Notes:

1. Head SAR for CDMA2000 mode was tested under RC3/SO55 per FCC KDB Publication 941225 D01v03r01.

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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 or LTE Band 48 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. 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

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duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 13 for linearity results.

8. For LTE Band 5, LTE Band 66, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.
9. For LTE Band 7 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.
10. This device supports ULCA active with Power Class 2. Highest SAR test configuration for each exposure condition in Power Class 3 with ULCA active was repeated with Power Class 2 with ULCA active.

WLAN Notes:

1. For held-to-ear, and hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.7.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.7.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously.
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	1+2+3
Head SAR	GSM 850	0.226	0.137	0.140	0.363	0.366	0.503
	GSM 1900	0.064	0.137	0.140	0.201	0.204	0.341
	UMTS 850	0.381	0.137	0.140	0.518	0.521	0.658
	UMTS 1750	0.266	0.137	0.140	0.403	0.406	0.543
	UMTS 1900	0.188	0.137	0.140	0.325	0.328	0.465
	CDMA/EVDO BC10 (§90S)	0.354	0.137	0.140	0.491	0.494	0.631
	CDMA/EVDO BC0 (§22H)	0.413	0.137	0.140	0.550	0.553	**0.690**
	PCS CDMA/EVDO	0.197	0.137	0.140	0.334	0.337	0.474
	LTE Band 71	0.139	0.137	0.140	0.276	0.279	0.416
	LTE Band 12	0.196	0.137	0.140	0.333	0.336	0.473
	LTE Band 13	0.225	0.137	0.140	0.362	0.365	0.502
	LTE Band 14	0.332	0.137	0.140	0.469	0.472	0.609
	LTE Band 26 (Cell)	0.328	0.137	0.140	0.465	0.468	0.605
	LTE Band 5 (Cell)	0.331	0.137	0.140	0.468	0.471	0.608
	LTE Band 66 (AWS)	0.269	0.137	0.140	0.406	0.409	0.546
	LTE Band 25 (PCS)	0.183	0.137	0.140	0.320	0.323	0.460
	LTE Band 30	0.064	0.137	0.140	0.201	0.204	0.341
	LTE Band 7	0.090	0.137	0.140	0.227	0.230	0.367
	LTE Band 48	0.073	0.137	0.140	0.210	0.213	0.350
	LTE Band 41	0.080	0.137	0.140	0.217	0.220	0.357

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Head SAR	GSM 850	0.226	0.266	0.058	0.492	0.284	0.550
	GSM 1900	0.064	0.266	0.058	0.330	0.122	0.388
	UMTS 850	0.381	0.266	0.058	0.647	0.439	0.705
	UMTS 1750	0.266	0.266	0.058	0.532	0.324	0.590
	UMTS 1900	0.188	0.266	0.058	0.454	0.246	0.512
	CDMA/EVDO BC10 (§90S)	0.354	0.266	0.058	0.620	0.412	0.678
	CDMA/EVDO BC0 (§22H)	0.413	0.266	0.058	0.679	0.471	**0.737**
	PCS CDMA/EVDO	0.197	0.266	0.058	0.463	0.255	0.521
	LTE Band 71	0.139	0.266	0.058	0.405	0.197	0.463
	LTE Band 12	0.196	0.266	0.058	0.462	0.254	0.520
	LTE Band 13	0.225	0.266	0.058	0.491	0.283	0.549
	LTE Band 14	0.332	0.266	0.058	0.598	0.390	0.656
	LTE Band 26 (Cell)	0.328	0.266	0.058	0.594	0.386	0.652
	LTE Band 5 (Cell)	0.331	0.266	0.058	0.597	0.389	0.655
	LTE Band 66 (AWS)	0.269	0.266	0.058	0.535	0.327	0.593
	LTE Band 25 (PCS)	0.183	0.266	0.058	0.449	0.241	0.507
	LTE Band 30	0.064	0.266	0.058	0.330	0.122	0.388
	LTE Band 7	0.090	0.266	0.058	0.356	0.148	0.414
	LTE Band 48	0.073	0.266	0.058	0.339	0.131	0.397
	LTE Band 41	0.080	0.266	0.058	0.346	0.138	0.404

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	5	1+2+3+4+5
Head SAR	GSM 850	0.226	0.137	0.140	0.266	0.058	0.827
	GSM 1900	0.064	0.137	0.140	0.266	0.058	0.665
	UMTS 850	0.381	0.137	0.140	0.266	0.058	0.982
	UMTS 1750	0.266	0.137	0.140	0.266	0.058	0.867
	UMTS 1900	0.188	0.137	0.140	0.266	0.058	0.789
	CDMA/EVDO BC10 (§90S)	0.354	0.137	0.140	0.266	0.058	0.955
	CDMA/EVDO BC0 (§22H)	0.413	0.137	0.140	0.266	0.058	**1.014**
	PCS CDMA/EVDO	0.197	0.137	0.140	0.266	0.058	0.798
	LTE Band 71	0.139	0.137	0.140	0.266	0.058	0.740
	LTE Band 12	0.196	0.137	0.140	0.266	0.058	0.797
	LTE Band 13	0.225	0.137	0.140	0.266	0.058	0.826
	LTE Band 14	0.332	0.137	0.140	0.266	0.058	0.933
	LTE Band 26 (Cell)	0.328	0.137	0.140	0.266	0.058	0.929
	LTE Band 5 (Cell)	0.331	0.137	0.140	0.266	0.058	0.932
	LTE Band 66 (AWS)	0.269	0.137	0.140	0.266	0.058	0.870
	LTE Band 25 (PCS)	0.183	0.137	0.140	0.266	0.058	0.784
	LTE Band 30	0.064	0.137	0.140	0.266	0.058	0.665
	LTE Band 7	0.090	0.137	0.140	0.266	0.058	0.691
	LTE Band 48	0.073	0.137	0.140	0.266	0.058	0.674
	LTE Band 41	0.080	0.137	0.140	0.266	0.058	0.681

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	GSM 850	0.226	1.107	1.333
	GSM 1900	0.064	1.107	1.171
	UMTS 850	0.381	1.107	1.488
	UMTS 1750	0.266	1.107	1.373
	UMTS 1900	0.188	1.107	1.295
	CDMA/EVDO BC10 (§90S)	0.354	1.107	1.461
	CDMA/EVDO BC0 (§22H)	0.413	1.107	**1.520**
	PCS CDMA/EVDO	0.197	1.107	1.304
	LTE Band 71	0.139	1.107	1.246
	LTE Band 12	0.196	1.107	1.303
	LTE Band 13	0.225	1.107	1.332
	LTE Band 14	0.332	1.107	1.439
	LTE Band 26 (Cell)	0.328	1.107	1.435
	LTE Band 5 (Cell)	0.331	1.107	1.438
	LTE Band 66 (AWS)	0.269	1.107	1.376
	LTE Band 25 (PCS)	0.183	1.107	1.290
	LTE Band 30	0.064	1.107	1.171
	LTE Band 7	0.090	1.107	1.197
	LTE Band 48	0.073	1.107	1.180
	LTE Band 41	0.080	1.107	1.187

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	GSM 850	0.226	1.107	0.266	See Table Below
	GSM 1900	0.064	1.107	0.266	1.437
	UMTS 850	0.381	1.107	0.266	See Table Below
	UMTS 1750	0.266	1.107	0.266	See Table Below
	UMTS 1900	0.188	1.107	0.266	1.561
	CDMA/EVDO BC10 (§90S)	0.354	1.107	0.266	See Table Below
	CDMA/EVDO BC0 (§22H)	0.413	1.107	0.266	See Table Below
	PCS CDMA/EVDO	0.197	1.107	0.266	**1.570**
	LTE Band 71	0.139	1.107	0.266	1.512
	LTE Band 12	0.196	1.107	0.266	1.569
	LTE Band 13	0.225	1.107	0.266	See Table Below
	LTE Band 14	0.332	1.107	0.266	See Table Below
	LTE Band 26 (Cell)	0.328	1.107	0.266	See Table Below
	LTE Band 5 (Cell)	0.331	1.107	0.266	See Table Below
	LTE Band 66 (AWS)	0.269	1.107	0.266	See Table Below
	LTE Band 25 (PCS)	0.183	1.107	0.266	1.556
	LTE Band 30	0.064	1.107	0.266	1.437
	LTE Band 7	0.090	1.107	0.266	1.463
	LTE Band 48	0.073	1.107	0.266	1.446
	LTE Band 41	0.080	1.107	0.266	1.453

Simult Tx	Configuration	GSM 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.226	1.107	0.247	**1.580**
	Right Tilt	0.111	0.870	0.266	1.247
	Left Cheek	0.158	0.199	0.266*	0.623
	Left Tilt	0.101	0.226	0.266*	0.593

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.381	1.107	0.247	See note 1
	Right Tilt	0.184	0.870	0.266	1.320
	Left Cheek	0.242	0.199	0.266*	0.707
	Left Tilt	0.145	0.226	0.266*	0.637

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.196	1.107	0.247	**1.550**
	Right Tilt	0.161	0.870	0.266	1.297
	Left Cheek	0.266	0.199	0.266*	0.731
	Left Tilt	0.093	0.226	0.266*	0.585

Simult Tx	Configuration	CDMA BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.354	1.107	0.247	See Note 1
	Right Tilt	0.177	0.870	0.266	**1.313**
	Left Cheek	0.265	0.199	0.266*	0.730
	Left Tilt	0.175	0.226	0.266*	0.667

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Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.207	1.107	0.247	**1.561**
	Right Tilt	0.093	0.870	0.266	1.229
	Left Cheek	0.154	0.199	0.266*	0.619
	Left Tilt	0.080	0.226	0.266*	0.572

Simult Tx	Configuration	CDMA BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.413	1.107	0.247	See Note 1
	Right Tilt	0.206	0.870	0.266	**1.342**
	Left Cheek	0.258	0.199	0.266*	0.723
	Left Tilt	0.160	0.226	0.266*	0.652

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.329	1.107	0.247	See Note 1
	Right Tilt	0.132	0.870	0.266	**1.268**
	Left Cheek	0.221	0.199	0.266*	0.686
	Left Tilt	0.098	0.226	0.266*	0.590

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.225	1.107	0.247	**1.579**
	Right Tilt	0.126	0.870	0.266	1.262
	Left Cheek	0.163	0.199	0.266*	0.628
	Left Tilt	0.103	0.226	0.266*	0.595

Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.332	1.107	0.247	See Note 1
	Right Tilt	0.176	0.870	0.266	**1.312**
	Left Cheek	0.215	0.199	0.266*	0.680
	Left Tilt	0.126	0.226	0.266*	0.618

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.328	1.107	0.247	See Note 1
	Right Tilt	0.129	0.870	0.266	**1.265**
	Left Cheek	0.225	0.199	0.266*	0.690
	Left Tilt	0.116	0.226	0.266*	0.608

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.331	1.107	0.247	See Note 1
	Right Tilt	0.150	0.870	0.266	**1.286**
	Left Cheek	0.260	0.199	0.266*	0.725
	Left Tilt	0.133	0.226	0.266*	0.625

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.085	1.107	0.247	**1.439**
	Right Tilt	0.089	0.870	0.266	1.225
	Left Cheek	0.269	0.199	0.266*	0.734
	Left Tilt	0.102	0.226	0.266*	0.594

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	GSM 850	0.226	1.107	0.058	1.391
	GSM 1900	0.064	1.107	0.058	1.229
	UMTS 850	0.381	1.107	0.058	1.546
	UMTS 1750	0.266	1.107	0.058	1.431
	UMTS 1900	0.188	1.107	0.058	1.353
	CDMA/EVDO BC10 (§90S)	0.354	1.107	0.058	1.519
	CDMA/EVDO BC0 (§22H)	0.413	1.107	0.058	**1.578**
	PCS CDMA/EVDO	0.197	1.107	0.058	1.362
	LTE Band 71	0.139	1.107	0.058	1.304
	LTE Band 12	0.196	1.107	0.058	1.361
	LTE Band 13	0.225	1.107	0.058	1.390
	LTE Band 14	0.332	1.107	0.058	1.497
	LTE Band 26 (Cell)	0.328	1.107	0.058	1.493
	LTE Band 5 (Cell)	0.331	1.107	0.058	1.496
	LTE Band 66 (AWS)	0.269	1.107	0.058	1.434
	LTE Band 25 (PCS)	0.183	1.107	0.058	1.348
	LTE Band 30	0.064	1.107	0.058	1.229
	LTE Band 7	0.090	1.107	0.058	1.255
	LTE Band 48	0.073	1.107	0.058	1.238
	LTE Band 41	0.080	1.107	0.058	1.245

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	GSM 850	0.226	1.107	0.292	See Table Below
	GSM 1900	0.064	1.107	0.292	1.463
	UMTS 850	0.381	1.107	0.292	See Table Below
	UMTS 1750	0.266	1.107	0.292	See Table Below
	UMTS 1900	0.188	1.107	0.292	**1.587**
	CDMA/EVDO BC10 (§90S)	0.354	1.107	0.292	See Table Below
	CDMA/EVDO BC0 (§22H)	0.413	1.107	0.292	See Table Below
	PCS CDMA/EVDO	0.197	1.107	0.292	See Table Below
	LTE Band 71	0.139	1.107	0.292	1.538
	LTE Band 12	0.196	1.107	0.292	See Table Below
	LTE Band 13	0.225	1.107	0.292	See Table Below
	LTE Band 14	0.332	1.107	0.292	See Table Below
	LTE Band 26 (Cell)	0.328	1.107	0.292	See Table Below
	LTE Band 5 (Cell)	0.331	1.107	0.292	See Table Below
	LTE Band 66 (AWS)	0.269	1.107	0.292	See Table Below
	LTE Band 25 (PCS)	0.183	1.107	0.292	1.582
	LTE Band 30	0.064	1.107	0.292	1.463
	LTE Band 7	0.090	1.107	0.292	1.489
	LTE Band 48	0.073	1.107	0.292	1.472
	LTE Band 41	0.080	1.107	0.292	1.479

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Simult Tx	Configuration	GSM 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.226	1.107	0.261	**1.594**
	Right Tilt	0.111	0.870	0.292	1.273
	Left Cheek	0.158	0.199	0.292*	0.649
	Left Tilt	0.101	0.226	0.292*	0.619

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.381	1.107	0.261	See Note 1
	Right Tilt	0.184	0.870	0.292	**1.346**
	Left Cheek	0.242	0.199	0.292*	0.733
	Left Tilt	0.145	0.226	0.292*	0.663

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.196	1.107	0.261	**1.564**
	Right Tilt	0.161	0.870	0.292	1.323
	Left Cheek	0.266	0.199	0.292*	0.757
	Left Tilt	0.093	0.226	0.292*	0.611

Simult Tx	Configuration	CDMA BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.354	1.107	0.261	See Note 1
	Right Tilt	0.177	0.870	0.292	1.339
	Left Cheek	0.265	0.199	0.292*	0.756
	Left Tilt	0.175	0.226	0.292*	0.693

Simult Tx	Configuration	CDMA BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.413	1.107	0.261	See Note 1
	Right Tilt	0.206	0.870	0.292	**1.368**
	Left Cheek	0.258	0.199	0.292*	0.749
	Left Tilt	0.160	0.226	0.292*	0.678

Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.207	1.107	0.261	**1.575**
	Right Tilt	0.093	0.870	0.292	1.255
	Left Cheek	0.154	0.199	0.292*	0.645
	Left Tilt	0.080	0.226	0.292*	0.598

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.329	1.107	0.261	See Note 1
	Right Tilt	0.132	0.870	0.292	1.294
	Left Cheek	0.221	0.199	0.292*	0.712
	Left Tilt	0.098	0.226	0.292*	0.616

Simult Tx	Configuration	PCS CDMA SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.135	1.107	0.261	**1.503**
	Right Tilt	0.085	0.870	0.292	1.247
	Left Cheek	0.197	0.199	0.292*	0.688
	Left Tilt	0.034	0.226	0.292*	0.552

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.132	1.107	0.261	**1.500**
	Right Tilt	0.092	0.870	0.292	1.254
	Left Cheek	0.180	0.199	0.292*	0.671
	Left Tilt	0.043	0.226	0.292*	0.561

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.196	1.107	0.261	**1.564**
	Right Tilt	0.117	0.870	0.292	1.279
	Left Cheek	0.185	0.199	0.292*	0.676
	Left Tilt	0.110	0.226	0.292*	0.628

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.225	1.107	0.261	**1.593**
	Right Tilt	0.126	0.870	0.292	1.288
	Left Cheek	0.163	0.199	0.292*	0.654
	Left Tilt	0.103	0.226	0.292*	0.621

Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.332	1.107	0.261	See Note 1
	Right Tilt	0.176	0.870	0.292	1.338
	Left Cheek	0.215	0.199	0.292*	0.706
	Left Tilt	0.126	0.226	0.292*	0.644

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Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.328	1.107	0.261	See Note 1
	Right Tilt	0.129	0.870	0.292	1.291
	Left Cheek	0.225	0.199	0.292*	0.716
	Left Tilt	0.116	0.226	0.292*	0.634

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.331	1.107	0.261	See Note 1
	Right Tilt	0.150	0.870	0.292	1.312
	Left Cheek	0.260	0.199	0.292*	0.751
	Left Tilt	0.133	0.226	0.292*	0.651

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.085	1.107	0.261	**1.453**
	Right Tilt	0.089	0.870	0.292	1.251
	Left Cheek	0.269	0.199	0.292*	0.760
	Left Tilt	0.102	0.226	0.292*	0.620

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 12.9.2 for detailed SPLS ratio analysis.

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12.4 Body-Worn Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.176	0.041	0.052	0.217	0.228	0.269
	GSM 1900	0.254	0.041	0.052	0.295	0.306	0.347
	UMTS 850	0.371	0.041	0.052	0.412	0.423	0.464
	UMTS 1750	0.947	0.041	0.052	0.988	0.999	**1.040**
	UMTS 1900	0.921	0.041	0.052	0.962	0.973	1.014
	CDMA BC10 (§90S)	0.272	0.041	0.052	0.313	0.324	0.365
	CDMA BC0 (§22H)	0.378	0.041	0.052	0.419	0.430	0.471
	PCS CDMA	0.845	0.041	0.052	0.886	0.897	0.938
	LTE Band 71	0.258	0.041	0.052	0.299	0.310	0.351
	LTE Band 12	0.320	0.041	0.052	0.361	0.372	0.413
	LTE Band 13	0.319	0.041	0.052	0.360	0.371	0.412
	LTE Band 14	0.433	0.041	0.052	0.474	0.485	0.526
	LTE Band 26 (Cell)	0.320	0.041	0.052	0.361	0.372	0.413
	LTE Band 5 (Cell)	0.446	0.041	0.052	0.487	0.498	0.539
	LTE Band 66 (AWS)	0.622	0.041	0.052	0.663	0.674	0.715
	LTE Band 25 (PCS)	0.835	0.041	0.052	0.876	0.887	0.928
	LTE Band 30	0.436	0.041	0.052	0.477	0.488	0.529
	LTE Band 7	0.452	0.041	0.052	0.493	0.504	0.545
	LTE Band 48	0.195	0.041	0.052	0.236	0.247	0.288
	LTE Band 41	0.666	0.041	0.052	0.707	0.718	0.759

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Body-Worn	GSM 850	0.176	0.161	0.490	0.337	0.666
	GSM 1900	0.254	0.161	0.490	0.415	0.744
	UMTS 850	0.371	0.161	0.490	0.532	0.861
	UMTS 1750	0.947	0.161	0.490	1.108	**1.437**
	UMTS 1900	0.921	0.161	0.490	1.082	1.411
	CDMA BC10 (§90S)	0.272	0.161	0.490	0.433	0.762
	CDMA BC0 (§22H)	0.378	0.161	0.490	0.539	0.868
	PCS CDMA	0.845	0.161	0.490	1.006	1.335
	LTE Band 71	0.258	0.161	0.490	0.419	0.748
	LTE Band 12	0.320	0.161	0.490	0.481	0.810
	LTE Band 13	0.319	0.161	0.490	0.480	0.809
	LTE Band 14	0.433	0.161	0.490	0.594	0.923
	LTE Band 26 (Cell)	0.320	0.161	0.490	0.481	0.810
	LTE Band 5 (Cell)	0.446	0.161	0.490	0.607	0.936
	LTE Band 66 (AWS)	0.622	0.161	0.490	0.783	1.112
	LTE Band 25 (PCS)	0.835	0.161	0.490	0.996	1.325
	LTE Band 30	0.436	0.161	0.490	0.597	0.926
	LTE Band 7	0.452	0.161	0.490	0.613	0.942
	LTE Band 48	0.195	0.161	0.490	0.356	0.685
	LTE Band 41	0.666	0.161	0.490	0.827	1.156

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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	GSM 850	0.176	0.907	1.083	N/A
	GSM 1900	0.254	0.907	1.161	N/A
	UMTS 850	0.371	0.907	1.278	N/A
	UMTS 1750	0.947	0.907	See Note 1	0.02
	UMTS 1900	0.921	0.907	See Note 1	0.02
	CDMA BC10 (§90S)	0.272	0.907	1.179	N/A
	CDMA BC0 (§22H)	0.378	0.907	1.285	N/A
	PCS CDMA	0.845	0.907	See Note 1	0.02
	LTE Band 71	0.258	0.907	1.165	N/A
	LTE Band 12	0.320	0.907	1.227	N/A
	LTE Band 13	0.319	0.907	1.226	N/A
	LTE Band 14	0.433	0.907	1.340	N/A
	LTE Band 26 (Cell)	0.320	0.907	1.227	N/A
	LTE Band 5 (Cell)	0.446	0.907	1.353	N/A
	LTE Band 66 (AWS)	0.622	0.907	1.529	N/A
	LTE Band 25 (PCS)	0.835	0.907	See Note 1	0.02
	LTE Band 30	0.436	0.907	1.343	N/A
	LTE Band 7	0.452	0.907	1.359	N/A
	LTE Band 48	0.195	0.907	1.102	N/A
	LTE Band 41	0.666	0.907	**1.573**	N/A

Note 1: No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the distribution pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.8 for detailed SPLS ratio analysis.

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Table 12-8
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body-Worn	GSM 850	0.176	0.041	0.052	0.342	0.611
	GSM 1900	0.254	0.041	0.052	0.342	0.689
	UMTS 850	0.371	0.041	0.052	0.342	0.806
	UMTS 1750	0.947	0.041	0.052	0.342	**1.382**
	UMTS 1900	0.921	0.041	0.052	0.342	1.356
	CDMA BC10 (§90S)	0.272	0.041	0.052	0.342	0.707
	CDMA BC0 (§22H)	0.378	0.041	0.052	0.342	0.813
	PCS CDMA	0.845	0.041	0.052	0.342	1.280
	LTE Band 71	0.258	0.041	0.052	0.342	0.693
	LTE Band 12	0.320	0.041	0.052	0.342	0.755
	LTE Band 13	0.319	0.041	0.052	0.342	0.754
	LTE Band 14	0.433	0.041	0.052	0.342	0.868
	LTE Band 26 (Cell)	0.320	0.041	0.052	0.342	0.755
	LTE Band 5 (Cell)	0.446	0.041	0.052	0.342	0.881
	LTE Band 66 (AWS)	0.622	0.041	0.052	0.342	1.057
	LTE Band 25 (PCS)	0.835	0.041	0.052	0.342	1.270
	LTE Band 30	0.436	0.041	0.052	0.342	0.871
	LTE Band 7	0.452	0.041	0.052	0.342	0.887
	LTE Band 48	0.195	0.041	0.052	0.342	0.630
	LTE Band 41	0.666	0.041	0.052	0.342	1.101

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	GSM 850	0.176	0.096	0.272
	GSM 1900	0.254	0.096	0.350
	UMTS 850	0.371	0.096	0.467
	UMTS 1750	0.947	0.096	**1.043**
	UMTS 1900	0.921	0.096	1.017
	CDMA BC10 (§90S)	0.272	0.096	0.368
	CDMA BC0 (§22H)	0.378	0.096	0.474
	PCS CDMA	0.845	0.096	0.941
	LTE Band 71	0.258	0.096	0.354
	LTE Band 12	0.320	0.096	0.416
	LTE Band 13	0.319	0.096	0.415
	LTE Band 14	0.433	0.096	0.529
	LTE Band 26 (Cell)	0.320	0.096	0.416
	LTE Band 5 (Cell)	0.446	0.096	0.542
	LTE Band 66 (AWS)	0.622	0.096	0.718
	LTE Band 25 (PCS)	0.835	0.096	0.931
	LTE Band 30	0.436	0.096	0.532
	LTE Band 7	0.452	0.096	0.548
	LTE Band 48	0.195	0.096	0.291
	LTE Band 41	0.666	0.096	0.762

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body-Worn	GSM 850	0.176	0.096	0.161	0.433
	GSM 1900	0.254	0.096	0.161	0.511
	UMTS 850	0.371	0.096	0.161	0.628
	UMTS 1750	0.947	0.096	0.161	**1.204**
	UMTS 1900	0.921	0.096	0.161	1.178
	CDMA BC10 (§90S)	0.272	0.096	0.161	0.529
	CDMA BC0 (§22H)	0.378	0.096	0.161	0.635
	PCS CDMA	0.845	0.096	0.161	1.102
	LTE Band 71	0.258	0.096	0.161	0.515
	LTE Band 12	0.320	0.096	0.161	0.577
	LTE Band 13	0.319	0.096	0.161	0.576
	LTE Band 14	0.433	0.096	0.161	0.690
	LTE Band 26 (Cell)	0.320	0.096	0.161	0.577
	LTE Band 5 (Cell)	0.446	0.096	0.161	0.703
	LTE Band 66 (AWS)	0.622	0.096	0.161	0.879
	LTE Band 25 (PCS)	0.835	0.096	0.161	1.092
	LTE Band 30	0.436	0.096	0.161	0.693
	LTE Band 7	0.452	0.096	0.161	0.709
	LTE Band 48	0.195	0.096	0.161	0.452
	LTE Band 41	0.666	0.096	0.161	0.923

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body-Worn	GSM 850	0.176	0.096	0.490	0.762
	GSM 1900	0.254	0.096	0.490	0.840
	UMTS 850	0.371	0.096	0.490	0.957
	UMTS 1750	0.947	0.096	0.490	**1.533**
	UMTS 1900	0.921	0.096	0.490	1.507
	CDMA BC10 (§90S)	0.272	0.096	0.490	0.858
	CDMA BC0 (§22H)	0.378	0.096	0.490	0.964
	PCS CDMA	0.845	0.096	0.490	1.431
	LTE Band 71	0.258	0.096	0.490	0.844
	LTE Band 12	0.320	0.096	0.490	0.906
	LTE Band 13	0.319	0.096	0.490	0.905
	LTE Band 14	0.433	0.096	0.490	1.019
	LTE Band 26 (Cell)	0.320	0.096	0.490	0.906
	LTE Band 5 (Cell)	0.446	0.096	0.490	1.032
	LTE Band 66 (AWS)	0.622	0.096	0.490	1.208
	LTE Band 25 (PCS)	0.835	0.096	0.490	1.421
	LTE Band 30	0.436	0.096	0.490	1.022
	LTE Band 7	0.452	0.096	0.490	1.038
	LTE Band 48	0.195	0.096	0.490	0.781
	LTE Band 41	0.666	0.096	0.490	1.252

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body-Worn	GSM 850	0.176	0.096	0.907	1.179
	GSM 1900	0.254	0.096	0.907	1.257
	UMTS 850	0.371	0.096	0.907	1.374
	UMTS 1750	0.947	0.096	0.907	See Note 1
	UMTS 1900	0.921	0.096	0.907	See Note 1
	CDMA BC10 (§90S)	0.272	0.096	0.907	1.275
	CDMA BC0 (§22H)	0.378	0.096	0.907	1.381
	PCS CDMA	0.845	0.096	0.907	See Note 1
	LTE Band 71	0.258	0.096	0.907	1.261
	LTE Band 12	0.320	0.096	0.907	1.323
	LTE Band 13	0.319	0.096	0.907	1.322
	LTE Band 14	0.433	0.096	0.907	1.436
	LTE Band 26 (Cell)	0.320	0.096	0.907	1.323
	LTE Band 5 (Cell)	0.446	0.096	0.907	1.449
	LTE Band 66 (AWS)	0.622	0.096	0.907	See Note 1
	LTE Band 25 (PCS)	0.835	0.096	0.907	See Note 1
	LTE Band 30	0.436	0.096	0.907	1.439
	LTE Band 7	0.452	0.096	0.907	**1.455**
	LTE Band 48	0.195	0.096	0.907	1.198
	LTE Band 41	0.666	0.096	0.907	See Note 1

Note 1 - No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the distribution pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.9.3 for detailed SPLS ratio analysis.

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12.5 Hotspot SAR Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.763	0.089	0.110	0.852	0.873	0.962
	GPRS 1900	0.873	0.089	0.110	0.962	0.983	1.072
	UMTS 850	1.097	0.089	0.110	1.186	1.207	1.296
	UMTS 1750	0.809	0.089	0.110	0.898	0.919	1.008
	UMTS 1900	1.285	0.089	0.110	1.374	1.395	**1.484**
	EVDO BC10 (§90S)	0.608	0.089	0.110	0.697	0.718	0.807
	EVDO BC0 (§22H)	0.814	0.089	0.110	0.903	0.924	1.013
	PCS EVDO	1.169	0.089	0.110	1.258	1.279	1.368
	LTE Band 71	0.340	0.089	0.110	0.429	0.450	0.539
	LTE Band 12	0.456	0.089	0.110	0.545	0.566	0.655
	LTE Band 13	0.503	0.089	0.110	0.592	0.613	0.702
	LTE Band 14	0.661	0.089	0.110	0.750	0.771	0.860
	LTE Band 26 (Cell)	0.720	0.089	0.110	0.809	0.830	0.919
	LTE Band 5 (Cell)	0.710	0.089	0.110	0.799	0.820	0.909
	LTE Band 66 (AWS)	0.795	0.089	0.110	0.884	0.905	0.994
	LTE Band 25 (PCS)	1.022	0.089	0.110	1.111	1.132	1.221
	LTE Band 30	0.765	0.089	0.110	0.854	0.875	0.964
	LTE Band 7	0.845	0.089	0.110	0.934	0.955	1.044
	LTE Band 48	0.163	0.089	0.110	0.252	0.273	0.362
	LTE Band 41	0.768	0.089	0.110	0.857	0.878	0.967

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	GPRS 850	0.763	0.270	1.033
	GPRS 1900	0.873	0.270	1.143
	UMTS 850	1.097	0.270	1.367
	UMTS 1750	0.809	0.270	1.079
	UMTS 1900	1.285	0.270	**1.555**
	EVDO BC10 (§90S)	0.608	0.270	0.878
	EVDO BC0 (§22H)	0.814	0.270	1.084
	PCS EVDO	1.169	0.270	1.439
	LTE Band 71	0.340	0.270	0.610
	LTE Band 12	0.456	0.270	0.726
	LTE Band 13	0.503	0.270	0.773
	LTE Band 14	0.661	0.270	0.931
	LTE Band 26 (Cell)	0.720	0.270	0.990
	LTE Band 5 (Cell)	0.710	0.270	0.980
	LTE Band 66 (AWS)	0.795	0.270	1.065
	LTE Band 25 (PCS)	1.022	0.270	1.292
	LTE Band 30	0.765	0.270	1.035
	LTE Band 7	0.845	0.270	1.115
	LTE Band 48	0.163	0.270	0.433
	LTE Band 41	0.768	0.270	1.038

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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	GPRS 850	0.763	0.930	See Table Below
	GPRS 1900	0.873	0.930	See Table Below
	UMTS 850	1.097	0.930	See Table Below
	UMTS 1750	0.809	0.930	See Table Below
	UMTS 1900	1.285	0.930	See Table Below
	EVDO BC10 (§90S)	0.608	0.930	1.538
	EVDO BC0 (§22H)	0.814	0.930	See Table Below
	PCS EVDO	1.169	0.930	See Table Below
	LTE Band 71	0.340	0.930	1.270
	LTE Band 12	0.456	0.930	1.386
	LTE Band 13	0.503	0.930	1.433
	LTE Band 14	0.661	0.930	**1.591**
	LTE Band 26 (Cell)	0.720	0.930	See Table Below
	LTE Band 5 (Cell)	0.710	0.930	See Table Below
	LTE Band 66 (AWS)	0.795	0.930	See Table Below
	LTE Band 25 (PCS)	1.022	0.930	See Table Below
	LTE Band 30	0.765	0.930	See Table Below
	LTE Band 7	0.845	0.930	See Table Below
	LTE Band 48	0.163	0.930	1.093
	LTE Band 41	0.768	0.930	See Table Below

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.763	0.930	See Note 1	0.02
	Front	0.521	0.018	0.539	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.404	-	0.404	N/A
	Right	0.257	-	0.257	N/A
	Left	0.114	0.182	0.296	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.369	0.930	1.299
	Front	0.327	0.018	0.345
	Top	-	0.930*	0.930
	Bottom	0.873	-	0.873
	Right	0.068	-	0.068
	Left	0.068	0.182	0.250

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	1.097	0.930	See Note 1	0.02
	Front	0.653	0.018	0.671	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.560	-	0.560	N/A
	Right	0.434	-	0.434	N/A
	Left	0.218	0.182	0.400	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.717	0.930	See Note 1	0.02
	Front	0.483	0.018	0.501	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.809	-	0.809	N/A
	Right	0.079	-	0.079	N/A
	Left	0.133	0.182	0.315	N/A

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Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.692	0.930	See Note 1	0.01
	Front	0.623	0.018	0.641	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	1.285	-	1.285	N/A
	Right	0.094	-	0.094	N/A
	Left	0.079	0.182	0.261	N/A

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.814	0.930	See Note 1	0.02
	Front	0.514	0.018	0.532	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.427	-	0.427	N/A
	Right	0.372	-	0.372	N/A
	Left	0.168	0.182	0.350	N/A

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	0.499	0.930	1.429
	Front	0.529	0.018	0.547
	Top	-	0.930*	0.930
	Bottom	1.169	-	1.169
	Right	0.100	-	0.100
	Left	0.095	0.182	0.277

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.720	0.930	See Note 1	0.02
	Front	0.560	0.018	0.578	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.464	-	0.464	N/A
	Right	0.371	-	0.371	N/A
	Left	0.189	0.182	0.371	N/A

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.710	0.930	See Note 1	0.02
	Front	0.654	0.018	0.672	N/A
	Top	-	0.930*	0.930	N/A
	Bottom	0.498	-	0.498	N/A
	Right	0.399	-	0.399	N/A
	Left	0.149	0.182	0.331	N/A

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
Hotspot SAR	Back	0.474	0.930	1.404
	Front	0.375	0.018	0.393
	Top	-	0.930*	0.930
	Bottom	0.795	-	0.795
	Right	0.055	-	0.055
	Left	0.124	0.182	0.306

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.531	0.930	1.461
	Front	0.493	0.018	0.511
	Top	-	0.930*	0.930
	Bottom	1.022	-	1.022
	Right	0.083	-	0.083
	Left	0.090	0.182	0.272

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.483	0.930	1.413
	Front	0.294	0.018	0.312
	Top	-	0.930*	0.930
	Bottom	0.765	-	0.765
	Right	0.043	-	0.043
	Left	0.067	0.182	0.249

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant B	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.308	0.930	1.238
	Front	0.177	0.018	0.195
	Top	-	0.930*	0.930
	Bottom	0.363	-	0.363
	Right	-	-	-
	Left	0.163	0.182	0.345

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant A	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.489	0.930	1.419
	Front	0.327	0.018	0.345
	Top	-	0.930*	0.930
	Bottom	0.845	-	0.845
	Right	0.094	-	0.094
	Left	0.012	0.182	0.194

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	0.254	0.930	1.184
	Front	0.157	0.018	0.175
	Top	-	0.930*	0.930
	Bottom	0.768	-	0.768
	Right	-	-	0.000
	Left	0.089	0.182	0.271

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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	GPRS 850	0.763	1.305	See Table Below
	GPRS 1900	0.873	1.305	See Table Below
	UMTS 850	1.097	1.305	See Table Below
	UMTS 1750	0.809	1.305	See Table Below
	UMTS 1900	1.285	1.305	See Table Below
	EVDO BC10 (§90S)	0.608	1.305	See Table Below
	EVDO BC0 (§22H)	0.814	1.305	See Table Below
	PCS EVDO	1.169	1.305	See Table Below
	LTE Band 71	0.340	1.305	See Table Below
	LTE Band 12	0.456	1.305	See Table Below
	LTE Band 13	0.503	1.305	See Table Below
	LTE Band 14	0.661	1.305	See Table Below
	LTE Band 26 (Cell)	0.720	1.305	See Table Below
	LTE Band 5 (Cell)	0.710	1.305	See Table Below
	LTE Band 66 (AWS)	0.795	1.305	See Table Below
	LTE Band 25 (PCS)	1.022	1.305	See Table Below
	LTE Band 30	0.765	1.305	See Table Below
	LTE Band 7	0.845	1.305	See Table Below
	LTE Band 48	0.163	1.305	**1.468**
	LTE Band 41	0.768	1.305	See Table Below

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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	0.763	1.305	See Note 1	0.02
	Front	0.521	0.072	0.593	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.404	-	0.404	N/A
	Right	0.257	-	0.257	N/A
	Left	0.114	0.455	0.569	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.369	1.305	See Note 1	0.02
	Front	0.327	0.072	0.399	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.873	-	0.873	N/A
	Right	0.068	-	0.068	N/A
	Left	0.068	0.455	0.523	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	1.097	1.305	See Note 1	0.03
	Front	0.653	0.072	0.725	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.560	-	0.560	N/A
	Right	0.434	-	0.434	N/A
	Left	0.218	0.455	0.673	N/A

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
Hotspot SAR	Back	0.717	1.305	See Note 1	0.02
	Front	0.483	0.072	0.555	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.809	-	0.809	N/A
	Right	0.079	-	0.079	N/A
	Left	0.133	0.455	0.588	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
Hotspot SAR	Back	0.692	1.305	See Note 1	0.02
	Front	0.623	0.072	0.695	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	1.285	-	1.285	N/A
	Right	0.094	-	0.094	N/A
	Left	0.079	0.455	0.534	N/A

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	0.608	1.305	See Note 1	0.02
	Front	0.464	0.072	0.536	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.418	-	0.418	N/A
	Right	0.235	-	0.235	N/A
	Left	0.135	0.455	0.590	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	0.814	1.305	See Note 1	0.02
	Front	0.514	0.072	0.586	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.427	-	0.427	N/A
	Right	0.372	-	0.372	N/A
	Left	0.168	0.455	0.623	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
Hotspot SAR	Back	0.499	1.305	See Note 1	0.02
	Front	0.529	0.072	0.601	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	1.169	-	1.169	N/A
	Right	0.100	-	0.100	N/A
	Left	0.095	0.455	0.550	N/A

Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.340	1.305	See Note 1	0.02
	Front	0.293	0.072	0.365	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.179	-	0.179	N/A
	Right	0.223	-	0.223	N/A
	Left	0.177	0.455	0.632	N/A

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	0.456	1.305	See Note 1	0.02
	Front	0.372	0.072	0.444	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.253	-	0.253	N/A
	Right	0.304	-	0.304	N/A
	Left	0.226	0.455	0.681	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	0.503	1.305	See Note 1	0.02
	Front	0.407	0.072	0.479	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.336	-	0.336	N/A
	Right	0.411	-	0.411	N/A
	Left	0.259	0.455	0.714	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	0.661	1.305	See Note 1	0.02
	Front	0.607	0.072	0.679	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.455	-	0.455	N/A
	Right	0.495	-	0.495	N/A
	Left	0.276	0.455	0.731	N/A

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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	0.720	1.305	See Note 1	0.02
	Front	0.560	0.072	0.632	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.464	-	0.464	N/A
	Right	0.371	-	0.371	N/A
	Left	0.189	0.455	0.644	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	0.710	1.305	See Note 1	0.02
	Front	0.654	0.072	0.726	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.498	-	0.498	N/A
	Right	0.399	-	0.399	N/A
	Left	0.149	0.455	0.604	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
Hotspot SAR	Back	0.474	1.305	See Note 1	0.02
	Front	0.375	0.072	0.447	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.795	-	0.795	N/A
	Right	0.055	-	0.055	N/A
	Left	0.124	0.455	0.579	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
Hotspot SAR	Back	0.531	1.305	See Note 1	0.02
	Front	0.493	0.072	0.565	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	1.022	-	1.022	N/A
	Right	0.083	-	0.083	N/A
	Left	0.090	0.455	0.545	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant B	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.308	1.305	See Note 1	0.02
	Front	0.177	0.072	0.249	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.363	-	0.363	N/A
	Right	-	-	-	N/A
	Left	0.163	0.455	0.618	N/A

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.483	1.305	See Note 1	0.02
	Front	0.294	0.072	0.366	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.765	-	0.765	N/A
	Right	0.043	-	0.043	N/A
	Left	0.067	0.455	0.522	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant A	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Hotspot SAR	Back	0.489	1.305	See Note 1	0.02
	Front	0.327	0.072	0.399	N/A
	Top	-	1.305*	1.305	N/A
	Bottom	0.845	-	0.845	N/A
	Right	0.094	-	0.094	N/A
	Left	0.012	0.455	0.467	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.254	1.305	1.559
	Front	0.157	0.072	0.229
	Top	-	1.305*	1.305
	Bottom	0.768	-	0.768
	Right	-	-	0.000
	Left	0.089	0.455	0.544

Note 1: No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the distribution pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.8 for detailed SPLS ratio analysis.

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN 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	GPRS 850	0.763	0.046	0.424	1.233
	GPRS 1900	0.873	0.046	0.424	1.343
	UMTS 850	1.097	0.046	0.424	**1.567**
	UMTS 1750	0.809	0.046	0.424	1.279
	UMTS 1900	1.285	0.046	0.424	See Table Below
	EVDO BC10 (§90S)	0.608	0.046	0.424	1.078
	EVDO BC0 (§22H)	0.814	0.046	0.424	1.284
	PCS EVDO	1.169	0.046	0.424	See Table Below
	LTE Band 71	0.340	0.046	0.424	0.810
	LTE Band 12	0.456	0.046	0.424	0.926
	LTE Band 13	0.503	0.046	0.424	0.973
	LTE Band 14	0.661	0.046	0.424	1.131
	LTE Band 26 (Cell)	0.720	0.046	0.424	1.190
	LTE Band 5 (Cell)	0.710	0.046	0.424	1.180
	LTE Band 66 (AWS)	0.795	0.046	0.424	1.265
	LTE Band 25 (PCS)	1.022	0.046	0.424	1.492
	LTE Band 30	0.765	0.046	0.424	1.235
	LTE Band 7	0.845	0.046	0.424	1.315
	LTE Band 48	0.163	0.046	0.424	0.633
	LTE Band 41	0.768	0.046	0.424	1.238

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+3
Hotspot SAR	Back	0.692	0.046	0.424	1.162
	Front	0.623	0.046*	0.424*	1.093
	Top	-	0.046*	0.424*	0.470
	Bottom	1.285	-	-	**1.285**
	Right	0.094	-	-	0.094
	Left	0.079	0.046*	0.208	0.333

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+3
Hotspot SAR	Back	0.499	0.046	0.424	0.969
	Front	0.529	0.046*	0.424*	0.999
	Top	-	0.046*	0.424*	0.470
	Bottom	1.169	-	-	**1.169**
	Right	0.100	-	-	0.100
	Left	0.095	0.046*	0.208	0.349

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	GPRS 850	0.763	0.203	0.966
	GPRS 1900	0.873	0.203	1.076
	UMTS 850	1.097	0.203	1.300
	UMTS 1750	0.809	0.203	1.012
	UMTS 1900	1.285	0.203	**1.488**
	EVDO BC10 (§90S)	0.608	0.203	0.811
	EVDO BC0 (§22H)	0.814	0.203	1.017
	PCS EVDO	1.169	0.203	1.372
	LTE Band 71	0.340	0.203	0.543
	LTE Band 12	0.456	0.203	0.659
	LTE Band 13	0.503	0.203	0.706
	LTE Band 14	0.661	0.203	0.864
	LTE Band 26 (Cell)	0.720	0.203	0.923
	LTE Band 5 (Cell)	0.710	0.203	0.913
	LTE Band 66 (AWS)	0.795	0.203	0.998
	LTE Band 25 (PCS)	1.022	0.203	1.225
	LTE Band 30	0.765	0.203	0.968
	LTE Band 7	0.845	0.203	1.048
	LTE Band 48	0.163	0.203	0.366
	LTE Band 41	0.768	0.203	0.971

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12.6 Hotspot SAR Simultaneous Transmission Analysis for Main Band, Bluetooth, and 5GHz WLAN

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	GPRS 850	0.763	0.203	0.270	1.236
	GPRS 1900	0.873	0.203	0.270	1.346
	UMTS 850	1.097	0.203	0.270	**1.570**
	UMTS 1750	0.809	0.203	0.270	1.282
	UMTS 1900	1.285	0.203	0.270	See Table Below
	EVDO BC10 (§90S)	0.608	0.203	0.270	1.081
	EVDO BC0 (§22H)	0.814	0.203	0.270	1.287
	PCS EVDO	1.169	0.203	0.270	See Table Below
	LTE Band 71	0.340	0.203	0.270	0.813
	LTE Band 12	0.456	0.203	0.270	0.929
	LTE Band 13	0.503	0.203	0.270	0.976
	LTE Band 14	0.661	0.203	0.270	1.134
	LTE Band 26 (Cell)	0.720	0.203	0.270	1.193
	LTE Band 5 (Cell)	0.710	0.203	0.270	1.183
	LTE Band 66 (AWS)	0.795	0.203	0.270	1.268
	LTE Band 25 (PCS)	1.022	0.203	0.270	1.495
	LTE Band 30	0.765	0.203	0.270	1.238
	LTE Band 7	0.845	0.203	0.270	1.318
	LTE Band 48	0.163	0.203	0.270	0.636
	LTE Band 41	0.768	0.203	0.270	1.241

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.692	0.203	0.270	1.165
	Front	0.623	0.123	0.270*	1.016
	Top	-	0.146	0.270*	0.416
	Bottom	1.285	-	-	**1.285**
	Right	0.094	-	-	0.094
	Left	0.079	0.202	0.270*	0.551

Simult Tx	Configuration	PCS CDMA SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.499	0.203	0.270	0.972
	Front	0.529	0.123	0.270*	0.922
	Top	-	0.146	0.270*	0.416
	Bottom	1.169	-	-	**1.169**
	Right	0.100	-	-	0.100
	Left	0.095	0.202	0.270*	0.567

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	GPRS 850	0.763	0.203	0.930	See Table Below
	GPRS 1900	0.873	0.203	0.930	See Table Below
	UMTS 850	1.097	0.203	0.930	See Table Below
	UMTS 1750	0.809	0.203	0.930	See Table Below
	UMTS 1900	1.285	0.203	0.930	See Table Below
	EVDO BC10 (§90S)	0.608	0.203	0.930	See Table Below
	EVDO BC0 (§22H)	0.814	0.203	0.930	See Table Below
	PCS EVDO	1.169	0.203	0.930	See Table Below
	LTE Band 71	0.340	0.203	0.930	1.473
	LTE Band 12	0.456	0.203	0.930	**1.589**
	LTE Band 13	0.503	0.203	0.930	See Table Below
	LTE Band 14	0.661	0.203	0.930	See Table Below
	LTE Band 26 (Cell)	0.720	0.203	0.930	See Table Below
	LTE Band 5 (Cell)	0.710	0.203	0.930	See Table Below
	LTE Band 66 (AWS)	0.795	0.203	0.930	See Table Below
	LTE Band 25 (PCS)	1.022	0.203	0.930	See Table Below
	LTE Band 30	0.765	0.203	0.930	See Table Below
	LTE Band 7	0.845	0.203	0.930	See Table Below
	LTE Band 48	0.163	0.203	0.930	1.296
	LTE Band 41	0.768	0.203	0.930	See Table Below

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.763	0.203	0.930	See Note 1
	Front	0.521	0.123	0.018	0.662
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.404	-	-	0.404
	Right	0.257	-	-	0.257
	Left	0.114	0.202	0.182	0.498

Simult Tx	Configuration	GSM 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.369	0.203	0.930	**1.502**
	Front	0.327	0.123	0.018	0.468
	Top	-	0.146	0.930*	1.076
	Bottom	0.873	-	-	0.873
	Right	0.068	-	-	0.068
	Left	0.068	0.202	0.182	0.452

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Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	1.097	0.203	0.930	See Note 1
	Front	0.653	0.123	0.018	0.794
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.560	-	-	0.560
	Right	0.434	-	-	0.434
	Left	0.218	0.202	0.182	0.602

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.717	0.203	0.930	See Note 1
	Front	0.483	0.123	0.018	0.624
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.809	-	-	0.809
	Right	0.079	-	-	0.079
	Left	0.133	0.202	0.182	0.517

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.692	0.203	0.930	See Note 1
	Front	0.623	0.123	0.018	0.764
	Top	-	0.146	0.930*	1.076
	Bottom	1.285	-	-	**1.285**
	Right	0.094	-	-	0.094
	Left	0.079	0.202	0.182	0.463

Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.608	0.203	0.930	See Note 1
	Front	0.464	0.123	0.018	0.605
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.418	-	-	0.418
	Right	0.235	-	-	0.235
	Left	0.135	0.202	0.182	0.519

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.814	0.203	0.930	See Note 1
	Front	0.514	0.123	0.018	0.655
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.427	-	-	0.427
	Right	0.372	-	-	0.372
	Left	0.168	0.202	0.182	0.552

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.499	0.203	0.930	See Note 1
	Front	0.529	0.123	0.018	0.670
	Top	-	0.146	0.930*	**1.076**
	Bottom	1.169	-	-	1.169
	Right	0.100	-	-	0.100
	Left	0.095	0.202	0.182	0.479

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.503	0.203	0.930	See Note 1
	Front	0.407	0.123	0.018	0.548
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.336	-	-	0.336
	Right	0.411	-	-	0.411
	Left	0.259	0.202	0.182	0.643

Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.661	0.203	0.930	See Note 1
	Front	0.607	0.123	0.018	0.748
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.455	-	-	0.455
	Right	0.495	-	-	0.495
	Left	0.276	0.202	0.182	0.660

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.720	0.203	0.930	See Note 1
	Front	0.560	0.123	0.018	0.701
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.464	-	-	0.464
	Right	0.371	-	-	0.371
	Left	0.189	0.202	0.182	0.573

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.710	0.203	0.930	See Note 1
	Front	0.654	0.123	0.018	0.795
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.498	-	-	0.498
	Right	0.399	-	-	0.399
	Left	0.149	0.202	0.182	0.533

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Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.474	0.203	0.930	See Note 1
	Front	0.375	0.123	0.018	0.516
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.795	-	-	0.795
	Right	0.055	-	-	0.055
	Left	0.124	0.202	0.182	0.508

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.531	0.203	0.930	See Note 1
	Front	0.493	0.123	0.018	0.634
	Top	-	0.146	0.930*	**1.076**
	Bottom	1.022	-	-	1.022
	Right	0.083	-	-	0.083
	Left	0.090	0.202	0.182	0.474

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.483	0.203	0.930	See Note 1
	Front	0.294	0.123	0.018	0.435
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.765	-	-	0.765
	Right	0.043	-	-	0.043
	Left	0.067	0.202	0.182	0.451

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant B	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.308	0.203	0.930	See Note 1
	Front	0.177	0.123	0.018	0.318
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.363	-	-	0.363
	Right	-	-	-	-
	Left	0.163	0.202	0.182	0.547

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.489	0.203	0.930	See Note 1
	Front	0.327	0.123	0.018	0.468
	Top	-	0.146	0.930*	**1.076**
	Bottom	0.845	-	-	0.845
	Right	0.094	-	-	0.094
	Left	0.012	0.202	0.182	0.396

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.254	0.203	0.930	**1.387**
	Front	0.157	0.123	0.018	0.298
	Top	-	0.146	0.930*	1.076
	Bottom	0.786	-	-	0.786
	Right	-	-	-	-
	Left	0.089	0.202	0.182	0.473

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	GPRS 850	0.763	0.203	1.305	See Table Below
	GPRS 1900	0.873	0.203	1.305	See Table Below
	UMTS 850	1.097	0.203	1.305	See Table Below
	UMTS 1750	0.809	0.203	1.305	See Table Below
	UMTS 1900	1.285	0.203	1.305	See Table Below
	EVDO BC10 (§90S)	0.608	0.203	1.305	See Table Below
	EVDO BC0 (§22H)	0.814	0.203	1.305	See Table Below
	PCS EVDO	1.169	0.203	1.305	See Table Below
	LTE Band 71	0.340	0.203	1.305	See Table Below
	LTE Band 12	0.456	0.203	1.305	See Table Below
	LTE Band 13	0.503	0.203	1.305	See Table Below
	LTE Band 14	0.661	0.203	1.305	See Table Below
	LTE Band 26 (Cell)	0.720	0.203	1.305	See Table Below
	LTE Band 5 (Cell)	0.710	0.203	1.305	See Table Below
	LTE Band 66 (AWS)	0.795	0.203	1.305	See Table Below
	LTE Band 25 (PCS)	1.022	0.203	1.305	See Table Below
	LTE Band 30	0.765	0.203	1.305	See Table Below
	LTE Band 7	0.845	0.203	1.305	See Table Below
	LTE Band 48	0.163	0.203	1.305	See Table Below
	LTE Band 41	0.768	0.203	1.305	See Table Below

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Simult Tx	Configuration	GPRS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.763	0.203	1.305	See Note 1
	Front	0.521	0.123	0.072	0.716
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.404	-	-	0.404
	Right	0.257	-	-	0.257
	Left	0.114	0.202	0.455	0.771

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.369	0.203	1.305	See Note 1
	Front	0.327	0.123	0.072	0.522
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.873	-	-	0.873
	Right	0.068	-	-	0.068
	Left	0.068	0.202	0.455	0.725

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	1.097	0.203	1.305	See Note 1
	Front	0.653	0.123	0.072	0.848
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.560	-	-	0.560
	Right	0.434	-	-	0.434
	Left	0.218	0.202	0.455	0.875

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.717	0.203	1.305	See Note 1
	Front	0.483	0.123	0.072	0.678
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.809	-	-	0.809
	Right	0.079	-	-	0.079
	Left	0.133	0.202	0.455	0.790

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.692	0.203	1.305	See Note 1
	Front	0.623	0.123	0.072	0.818
	Top	-	0.146	1.305*	**1.451**
	Bottom	1.285	-	-	1.285
	Right	0.094	-	-	0.094
	Left	0.079	0.202	0.455	0.736

Simult Tx	Configuration	EVDO BC10 (§90S) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.608	0.203	1.305	See Note 1
	Front	0.464	0.123	0.072	0.659
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.418	-	-	0.418
	Right	0.235	-	-	0.235
	Left	0.135	0.202	0.455	0.792

Simult Tx	Configuration	EVDO BC0 (§22H) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.814	0.203	1.305	See Note 1
	Front	0.514	0.123	0.072	0.709
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.427	-	-	0.427
	Right	0.372	-	-	0.372
	Left	0.168	0.202	0.455	0.825

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.499	0.203	1.305	See Note 1
	Front	0.529	0.123	0.072	0.724
	Top	-	0.146	1.305*	**1.451**
	Bottom	1.169	-	-	1.169
	Right	0.100	-	-	0.100
	Left	0.095	0.202	0.455	0.752

Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.340	0.203	1.305	See Note 1
	Front	0.293	0.123	0.072	0.488
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.179	-	-	0.179
	Right	0.223	-	-	0.223
	Left	0.177	0.202	0.455	0.834

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.456	0.203	1.305	See Note 1
	Front	0.372	0.123	0.072	0.567
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.253	-	-	0.253
	Right	0.304	-	-	0.304
	Left	0.226	0.202	0.455	0.883

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Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.503	0.203	1.305	See Note 1
	Front	0.407	0.123	0.072	0.602
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.336	-	-	0.336
	Right	0.411	-	-	0.411
	Left	0.259	0.202	0.455	0.916

Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.661	0.203	1.305	See Note 1
	Front	0.607	0.123	0.072	0.802
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.455	-	-	0.455
	Right	0.495	-	-	0.495
	Left	0.276	0.202	0.455	0.933

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.720	0.203	1.305	See Note 1
	Front	0.560	0.123	0.072	0.755
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.464	-	-	0.464
	Right	0.371	-	-	0.371
	Left	0.189	0.202	0.455	0.846

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.710	0.203	1.305	See Note 1
	Front	0.654	0.123	0.072	0.849
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.498	-	-	0.498
	Right	0.399	-	-	0.399
	Left	0.149	0.202	0.455	0.806

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.474	0.203	1.305	See Note 1
	Front	0.375	0.123	0.072	0.570
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.795	-	-	0.795
	Right	0.055	-	-	0.055
	Left	0.124	0.202	0.455	0.781

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.531	0.203	1.305	See Note 1
	Front	0.493	0.123	0.072	0.688
	Top	-	0.146	1.305*	**1.451**
	Bottom	1.022	-	-	1.022
	Right	0.083	-	-	0.083
	Left	0.090	0.202	0.455	0.747

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.483	0.203	1.305	See Note 1
	Front	0.294	0.123	0.072	0.489
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.765	-	-	0.765
	Right	0.043	-	-	0.043
	Left	0.067	0.202	0.455	0.724

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.489	0.203	1.305	See Note 1
	Front	0.327	0.123	0.072	0.522
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.845	-	-	0.845
	Right	0.094	-	-	0.094
	Left	0.012	0.202	0.455	0.669

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Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant B	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.308	0.203	1.305	See Note 1
	Front	0.177	0.123	0.072	0.372
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.363	-	-	0.363
	Right	-	-	-	-
	Left	0.163	0.202	0.455	0.820

Simult Tx	Configuration	LTE Band 48 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.138	0.203	1.305	See Note 1
	Front	0.069	0.123	0.072	0.264
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.163	-	-	0.163
	Right	-	-	-	-
	Left	0.060	0.202	0.455	0.717

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.254	0.203	1.305	See Note 1
	Front	0.157	0.123	0.072	0.352
	Top	-	0.146	1.305*	**1.451**
	Bottom	0.768	-	-	0.768
	Right	-	-	-	-
	Left	0.089	0.202	0.455	0.746

Note 1 - No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the distribution pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.9.4 for detailed SPLS ratio analysis.

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12.7 Phablet Simultaneous Transmission Analysis

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

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

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	GPRS 1900	3.002	1.005	See Table Below
	UMTS 1750	3.228	1.005	See Table Below
	UMTS 1900	3.284	1.005	See Table Below
	PCS EVDO	2.854	1.005	3.859
	LTE Band 66 (AWS)	2.960	1.005	**3.965**
	LTE Band 25 (PCS)	2.908	1.005	3.913
	LTE Band 30	1.350	1.005	2.355
	LTE Band 7	2.499	1.005	3.504
	LTE Band 48	0.852	1.005	1.857
	LTE Band 41	3.209	1.005	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.485	0.909	2.394
	Front	1.343	0.410	1.753
	Top	-	1.005*	1.005
	Bottom	3.002	-	**3.002**
	Right	0.209	-	0.209
	Left	0.325	1.005	1.330

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.953	0.909	2.862
	Front	1.814	0.410	2.224
	Top	-	1.005*	1.005
	Bottom	3.228	-	**3.228**
	Right	0.391	-	0.391
	Left	0.638	1.005	1.643

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.995	0.909	2.904
	Front	1.785	0.410	2.195
	Top	-	1.005*	1.005
	Bottom	3.284	-	**3.284**
	Right	0.634	-	0.634
	Left	0.746	1.005	1.751

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
Phablet SAR	Back	3.209	0.909	See Note 1	0.06
	Front	1.597	0.410	2.007	N/A
	Top	-	1.005*	1.005	N/A
	Bottom	2.159	-	**2.159**	N/A
	Right	-	-	0.000	N/A
	Left	0.683	1.005	1.688	N/A

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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	GPRS 1900	3.002	2.484	See Table Below
	UMTS 1750	3.228	2.484	See Table Below
	UMTS 1900	3.284	2.484	See Table Below
	PCS EVDO	2.854	2.484	See Table Below
	LTE Band 66 (AWS)	2.960	2.484	See Table Below
	LTE Band 25 (PCS)	2.908	2.484	See Table Below
	LTE Band 30	1.350	2.484	**3.834**
	LTE Band 7	2.499	2.484	See Table Below
	LTE Band 48	0.852	2.484	3.336
	LTE Band 41	3.209	2.484	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.485	2.484	**3.969**
	Front	1.343	0.059	1.402
	Top	-	2.484*	2.484
	Bottom	3.002	-	3.002
	Right	0.209	-	0.209
	Left	0.325	0.308	0.633

Simult Tx	Configuration	UMTS 1750 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	1.953	2.484	See Note 1	0.07
	Front	1.814	0.059	1.873	N/A
	Top	-	2.484*	2.484	N/A
	Bottom	3.228	-	**3.228**	N/A
	Right	0.391	-	0.391	N/A
	Left	0.638	0.308	0.946	N/A

Simult Tx	Configuration	UMTS 1900 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	1.995	2.484	See Note 1	0.07
	Front	1.785	0.059	1.844	N/A
	Top	-	2.484*	2.484	N/A
	Bottom	3.284	-	**3.284**	N/A
	Right	0.634	-	0.634	N/A
	Left	0.746	0.308	1.054	N/A

Simult Tx	Configuration	PCS EVDO 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	1.516	2.484	See Note 1	0.05
	Front	1.539	0.059	1.598	N/A
	Top	-	2.484*	2.484	N/A
	Bottom	2.854	-	**2.854**	N/A
	Right	0.369	-	0.369	N/A
	Left	0.552	0.308	0.860	N/A

Simult Tx	Configuration	LTE Band 66 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.508	2.484	**3.992**
	Front	1.257	0.059	1.316
	Top	-	2.484*	2.484
	Bottom	2.960	-	2.960
	Right	0.228	-	0.228
	Left	0.461	0.308	0.769

Simult Tx	Configuration	LTE Band 25 (PCS) 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	1.940	2.484	See Note 1	0.07
	Front	1.559	0.059	1.618	N/A
	Top	-	2.484*	2.484	N/A
	Bottom	2.908	-	**2.908**	N/A
	Right	0.516	-	0.516	N/A
	Left	0.655	0.308	0.963	N/A

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Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant A	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.324	2.484	**3.808**
	Front	0.902	0.059	0.961
	Top	-	2.484*	2.484
	Bottom	1.474	-	1.474
	Right	0.546	-	0.546
	Left	0.130	0.308	0.438

Simult Tx	Configuration	LTE Band 7 Ant B 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	2.499	2.484	See Note 1	0.08
	Front	1.110	0.059	1.169	N/A
	Top	-	2.484*	**2.484**	N/A
	Bottom	1.898	-	1.898	N/A
	Right	-	-	-	N/A
	Left	1.301	0.308	1.609	N/A

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	3.209	2.484	See Note 1	0.10
	Front	1.597	0.059	1.656	N/A
	Top	-	2.484*	**2.484**	N/A
	Bottom	2.159	-	2.159	N/A
	Right	-	-	-	N/A
	Left	0.683	0.308	0.991	N/A

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	GPRS 1900	3.002	1.998	See Table Below
	UMTS 1750	3.228	1.998	See Table Below
	UMTS 1900	3.284	1.998	See Table Below
	PCS EVDO	2.854	1.998	See Table Below
	LTE Band 66 (AWS)	2.960	1.998	See Table Below
	LTE Band 25 (PCS)	2.908	1.998	See Table Below
	LTE Band 30	1.350	1.998	**3.348**
	LTE Band 7	2.499	1.998	See Table Below
	LTE Band 48	0.852	1.998	2.850
	LTE Band 41	3.209	1.998	See Table Below

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Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.485	1.998	**3.483**
	Front	1.343	0.361	1.704
	Top	-	1.998*	1.998
	Bottom	3.002	-	3.002
	Right	0.209	-	0.209
	Left	0.325	1.031	1.356

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.953	1.998	**3.951**
	Front	1.814	0.361	2.175
	Top	-	1.998*	1.998
	Bottom	3.228	-	3.228
	Right	0.391	-	0.391
	Left	0.638	1.031	1.669

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.995	1.998	**3.993**
	Front	1.785	0.361	2.146
	Top	-	1.998*	1.998
	Bottom	3.284	-	3.284
	Right	0.634	-	0.634
	Left	0.746	1.031	1.777

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.516	1.998	**3.514**
	Front	1.539	0.361	1.900
	Top	-	1.998*	1.998
	Bottom	2.854	-	2.854
	Right	0.369	-	0.369
	Left	0.552	1.031	1.583

Simult Tx	Configuration	LTE Band 66 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.508	1.998	**3.506**
	Front	1.257	0.361	1.618
	Top	-	1.998*	1.998
	Bottom	2.960	-	2.960
	Right	0.228	-	0.228
	Left	0.461	1.031	1.492

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
Phablet SAR	Back	1.940	1.998	**3.938**
	Front	1.559	0.361	1.920
	Top	-	1.998*	1.998
	Bottom	2.908	-	2.908
	Right	0.516	-	0.516
	Left	0.655	1.031	1.686

Simult Tx	Configuration	LTE Band 7 SAR (W/kg) Ant A	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.324	1.998	**3.322**
	Front	0.902	0.361	1.263
	Top	-	1.998*	1.998
	Bottom	1.474	-	1.474
	Right	0.546	-	0.546
	Left	0.130	1.031	1.161

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	2.499	1.998	See Note 1	0.07
	Front	1.110	0.361	1.471	N/A
	Top	-	1.998*	1.998	N/A
	Bottom	1.898	-	1.898	N/A
	Right	-	-	-	N/A
	Left	1.301	1.031	**2.332**	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	3.209	1.998	See Note 1	0.09
	Front	1.597	0.361	1.958	N/A
	Top	-	1.998*	1.998	N/A
	Bottom	2.159	-	**2.159**	N/A
	Right	-	-	-	N/A
	Left	0.683	1.031	1.714	N/A

Note 1 - No evaluation was performed to determine the aggregate 10g SAR for these configurations as the SPLS ratio between the distribution pairs was not greater than 0.10 per FCC KDB 447498 D01v06. See Section 12.8 for detailed SPLS ratio analysis.

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12.8 SPLSR Evaluation and Analysis

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

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

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

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

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

12.8.1 Body Worn Back Side SPLSR Evaluation and Analysis

Table 12-18
Peak SAR Locations for Body worn Back Side

Mode/Band	x (mm)	y (mm)
5 GHz WLAN MIMO	8.00	66.00
UMTS 1750	-28.00	-76.50
UMTS 1900	-23.00	-85.50
PCS CDMA	-27.50	-81.00
LTE Band 25 (PCS)	-26.00	-79.50

Table 12-19
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	UMTS 1750	0.907	0.947	1.854	146.98	0.02	1
5 GHz WLAN MIMO	UMTS 1900	0.907	0.921	1.828	154.64	0.02	2
5 GHz WLAN MIMO	PCS CDMA	0.907	0.845	1.752	151.23	0.02	3
5 GHz WLAN MIMO	LTE Band 25 (PCS)	0.907	0.835	1.742	149.42	0.02	4

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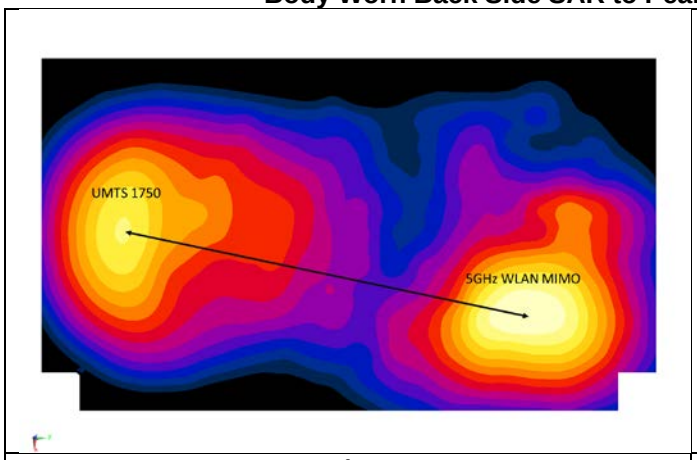
Table 12-20
Body Worn Back Side SAR to Peak Location Separation Ratio Plots



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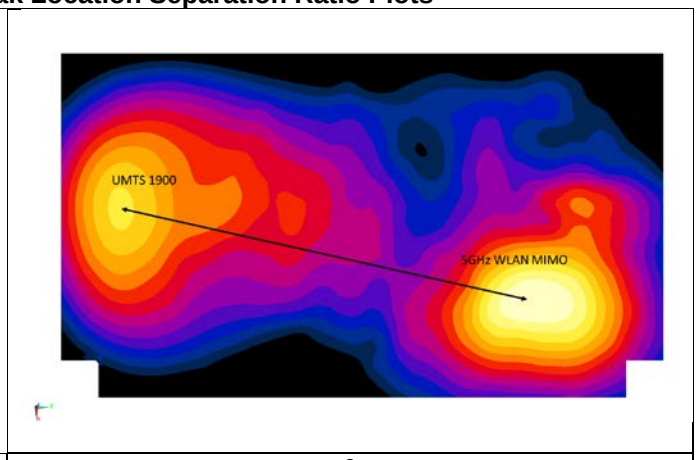

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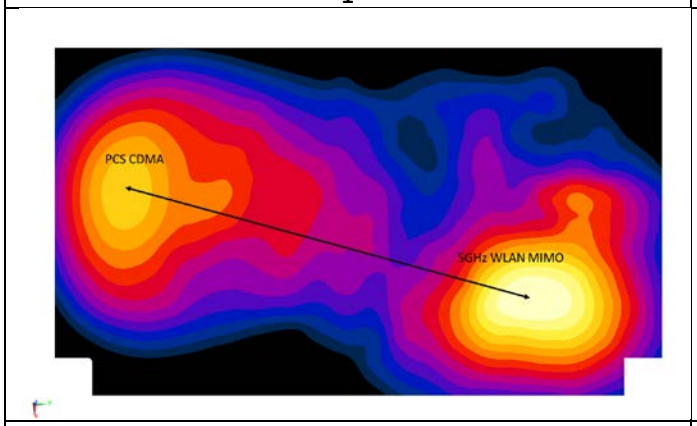

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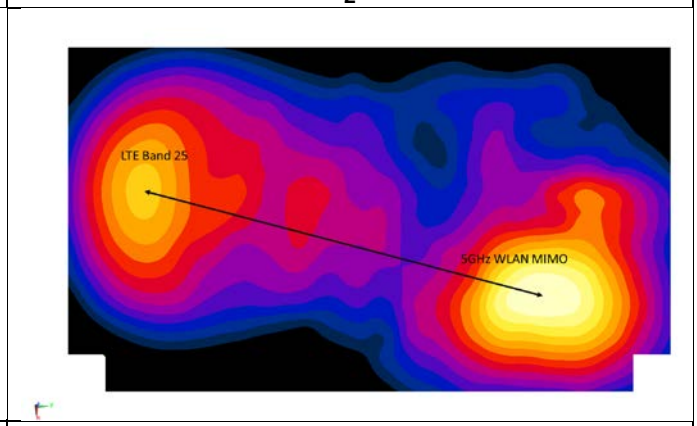

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12.8.2 Hotspot Back Side SPLSR Evaluation and Analysis

Table 12-21
Hotspot Locations for Hotspot Back Side

Mode/Band	x (mm)	y (mm)
5 GHz WLAN Ant 2	13.00	56.00
5 GHz WLAN MIMO	6.00	59.00
GPRS 850	-11.50	-80.00
GPRS 1900	-27.50	-75.00
UMTS 850	-18.00	-80.00
UMTS 1750	-28.00	-76.50
UMTS 1900	-26.00	-79.50
EVDO BC10 (§90S)	-13.00	-72.00
EVDO BC0 (§22H)	-13.00	-78.50
PCS EVDO	-27.50	-84.00
LTE Band 71	-4.00	-69.00
LTE Band 12	-4.00	-77.00
LTE Band 13	-7.00	-80.00
LTE Band 14	-24.50	-80.00
LTE Band 26 (Cell)	-21.00	-80.00
LTE Band 5 (Cell)	-16.50	-73.50
LTE Band 66	-21.50	-78.00
LTE Band 25 (PCS)	-26.00	-75.00
LTE Band 30	-34.60	-73.20
LTE Band 7 Ant B	8.60	-69.00
LTE Band 7 Ant A	-40.60	-79.80

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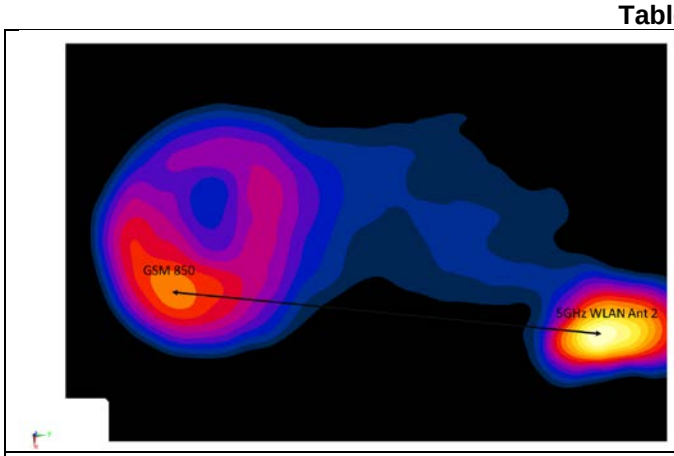
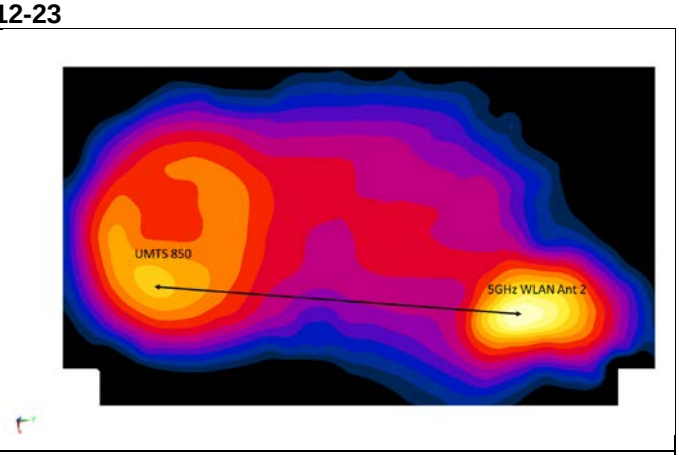
Table 12-22
Hotspot Back Side SAR to Peak Location Separation Ratio Calculations

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 Ant 2	GPRS 850	0.930	0.763	1.693	138.19	0.02	5
5 GHz WLAN Ant 2	UMTS 850	0.930	1.097	2.027	139.49	0.02	6
5 GHz WLAN Ant 2	UMTS 1750	0.930	0.717	1.647	138.70	0.02	7
5 GHz WLAN Ant 2	UMTS 1900	0.930	0.692	1.622	141.00	0.01	8
5 GHz WLAN Ant 2	EVDO BC0 (§22H)	0.930	0.814	1.744	136.99	0.02	9
5 GHz WLAN Ant 2	LTE Band 26 (Cell)	0.930	0.720	1.650	140.19	0.02	10
5 GHz WLAN Ant 2	LTE Band 5 (Cell)	0.930	0.710	1.640	132.82	0.02	11
5 GHz WLAN MIMO	GPRS 850	1.305	0.763	2.068	140.10	0.02	12
5 GHz WLAN MIMO	GPRS 1900	1.305	0.369	1.674	138.12	0.02	13
5 GHz WLAN MIMO	UMTS 850	1.305	1.097	2.402	141.06	0.03	14
5 GHz WLAN MIMO	UMTS 1750	1.305	0.717	2.022	139.70	0.02	15
5 GHz WLAN MIMO	UMTS 1900	1.305	0.692	1.997	142.15	0.02	16
5 GHz WLAN MIMO	EVDO BC10 (§90S)	1.305	0.608	1.913	132.37	0.02	17
5 GHz WLAN MIMO	EVDO BC0 (§22H)	1.305	0.814	2.119	138.81	0.02	18
5 GHz WLAN MIMO	PCS EVDO	1.305	0.499	1.804	146.87	0.02	19
5 GHz WLAN MIMO	LTE Band 71	1.305	0.340	1.645	128.39	0.02	20
5 GHz WLAN MIMO	LTE Band 12	1.305	0.456	1.761	136.37	0.02	21
5 GHz WLAN MIMO	LTE Band 13	1.305	0.503	1.808	139.61	0.02	22
5 GHz WLAN MIMO	LTE Band 14	1.305	0.661	1.966	142.31	0.02	23
5 GHz WLAN MIMO	LTE Band 26 (Cell)	1.305	0.720	2.025	141.60	0.02	24
5 GHz WLAN MIMO	LTE Band 5 (Cell)	1.305	0.710	2.015	134.40	0.02	25
5 GHz WLAN MIMO	LTE Band 66	1.305	0.474	1.779	139.73	0.02	26
5 GHz WLAN MIMO	LTE Band 25 (PCS)	1.305	0.531	1.836	137.77	0.02	27
5 GHz WLAN MIMO	LTE Band 30	1.305	0.483	1.788	138.29	0.02	28
5 GHz WLAN MIMO	LTE Band 7 Ant A	1.305	0.489	1.794	146.41	0.02	29
5 GHz WLAN MIMO	LTE Band 7 Ant B	1.305	0.308	1.613	128.03	0.02	30

12.8.3 Hotspot Back Side SAR to Peak Location Separation Ratio Plots

Table 12-23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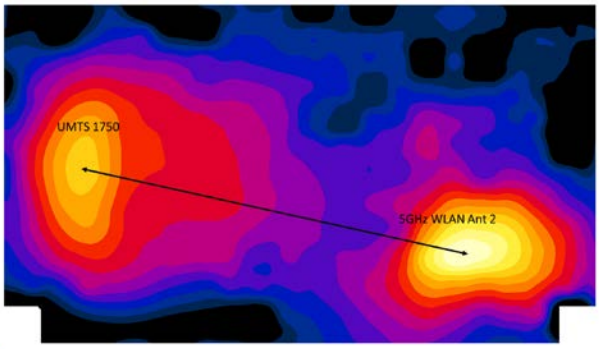

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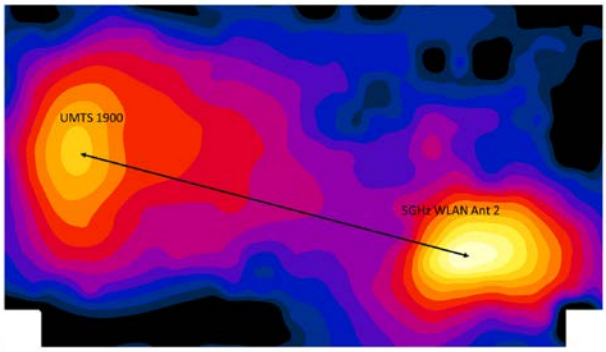

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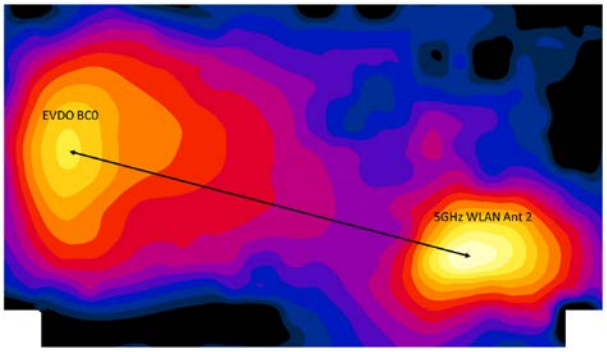

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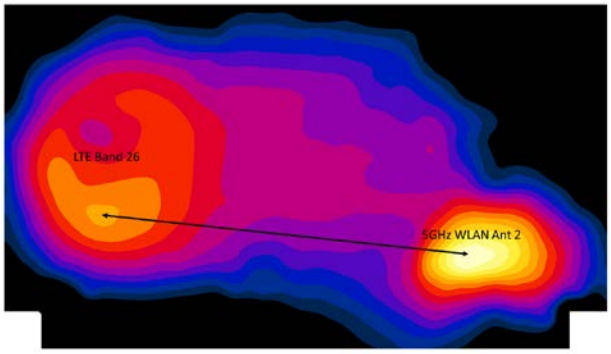

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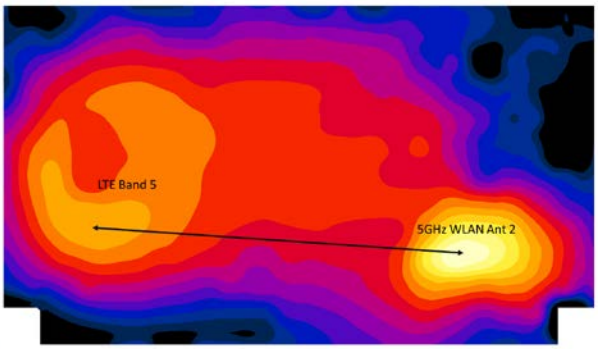

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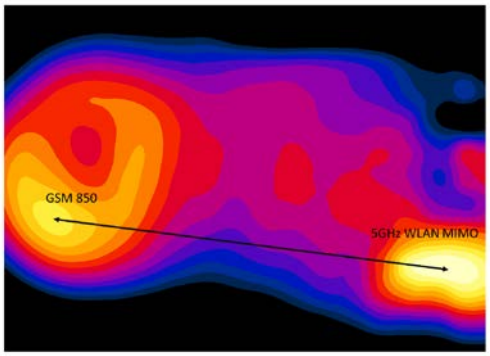

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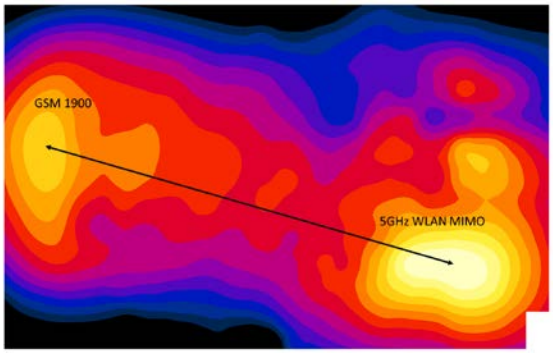

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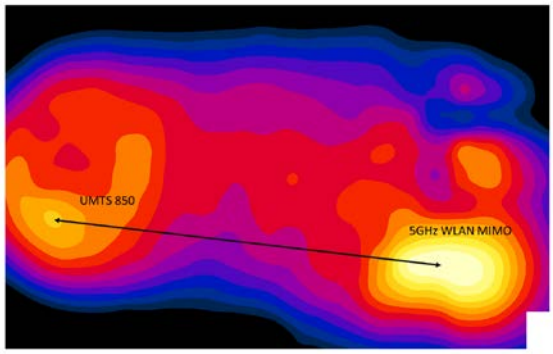

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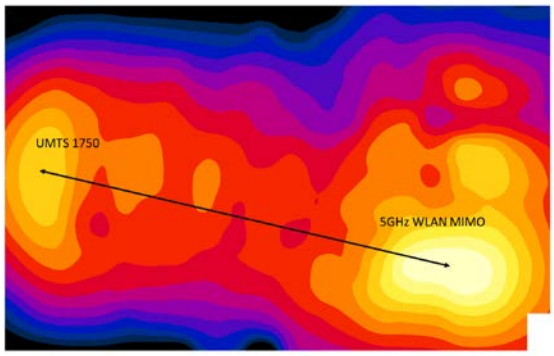

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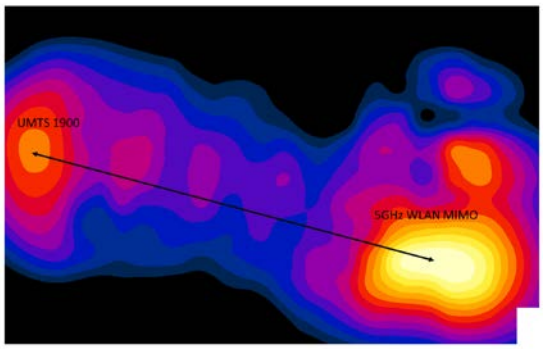

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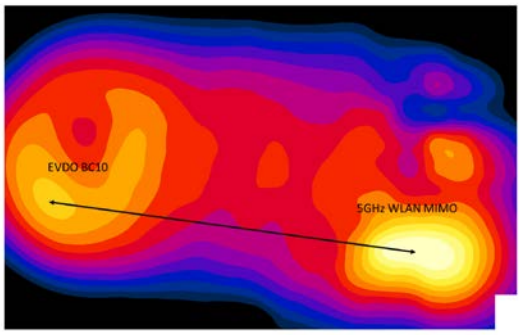

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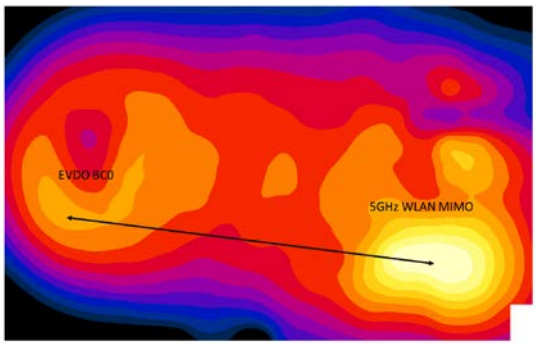

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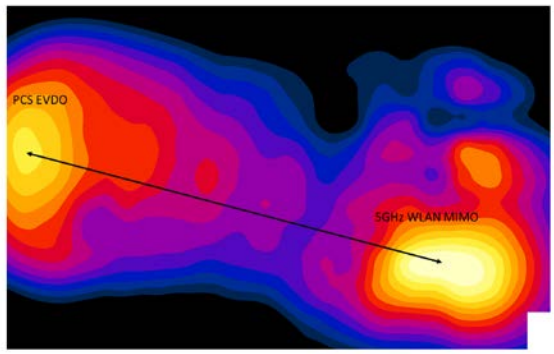

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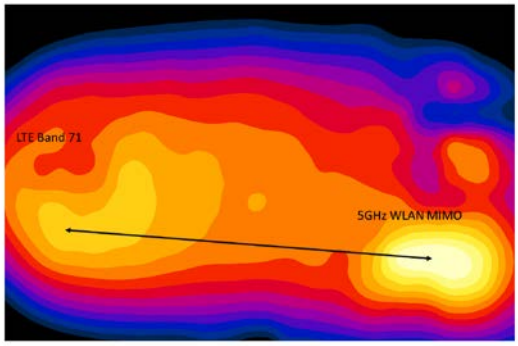

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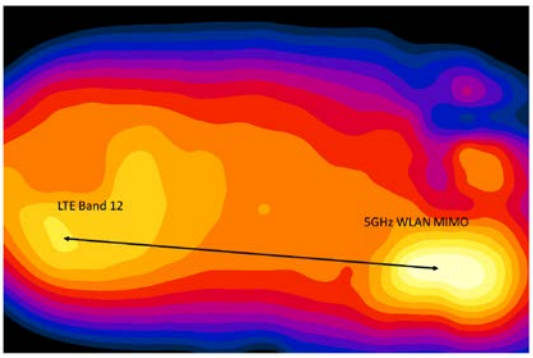

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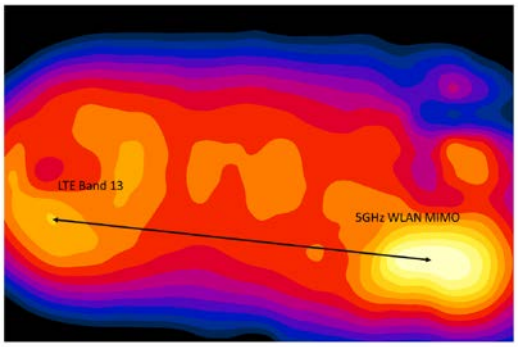

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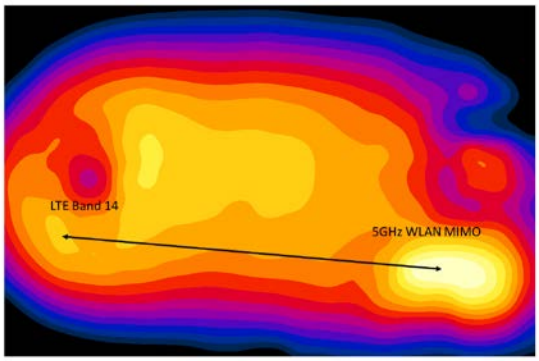

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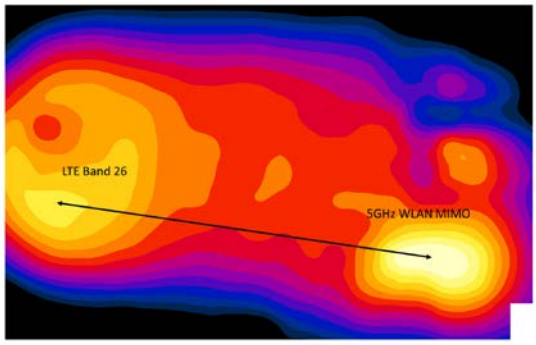

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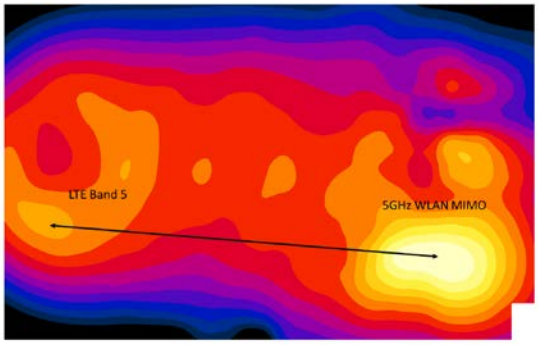

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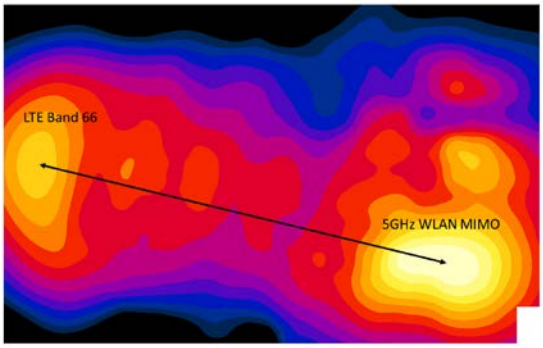

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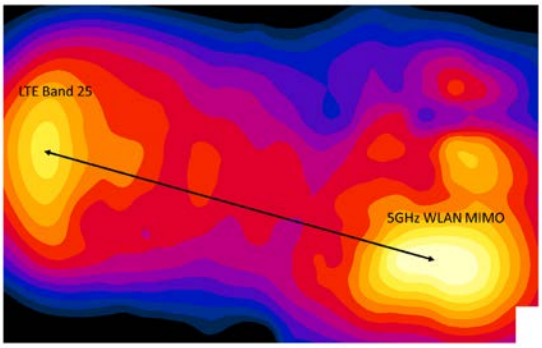

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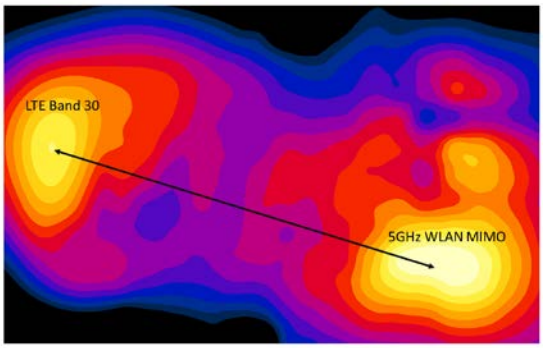

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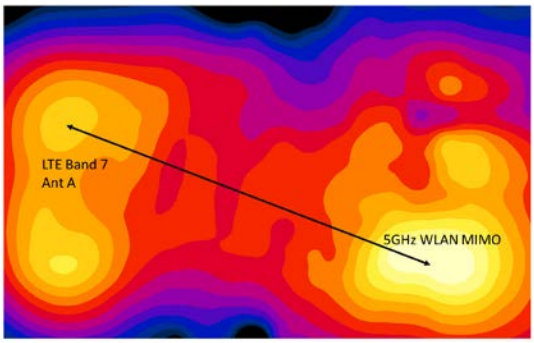

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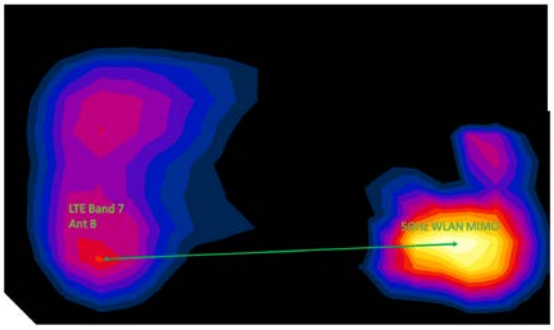

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12.8.4 Phablet Back Side SPLSR Evaluation and Analysis

Table 12-24
Peak SAR Locations for Phablet Back Side

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
5 GHz WLAN Ant 1	15.00	75.00	0.909
5 GHz WLAN Ant 2	13.00	58.00	2.484
5 GHz WLAN MIMO	12.00	55.00	1.998
UMTS 1750	-19.00	-81.00	1.953
UMTS 1900	-29.00	-76.50	1.995
PCS EVDO	-34.00	-81.00	1.516
LTE Band 25 (PCS)	-24.50	-76.50	1.940
LTE Band 7 Ant B	5.20	-73.20	2.499
LTE Band 41	-0.10	-71.00	3.209

Table 12-25
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 1	LTE Band 41	0.909	3.209	4.118	146.78	0.06	31
5 GHz WLAN Ant 2	UMTS 1750	2.484	1.953	4.437	142.64	0.07	32
5 GHz WLAN Ant 2	UMTS 1900	2.484	1.995	4.479	140.91	0.07	33
5 GHz WLAN Ant 2	PCS EVDO	2.484	1.516	4.000	146.73	0.05	34
5 GHz WLAN Ant 2	LTE Band 25 (PCS)	2.484	1.94	4.424	139.63	0.07	35
5 GHz WLAN Ant 2	LTE Band 7 Ant B	2.484	2.499	4.983	131.43	0.08	36
5 GHz WLAN Ant 2	LTE Band 41	2.484	3.209	5.693	129.66	0.10	37
5 GHz WLAN MIMO	LTE Band 7 Ant B	1.998	2.499	4.497	128.38	0.07	38
5 GHz WLAN MIMO	LTE Band 41	1.998	3.209	5.207	126.58	0.09	39

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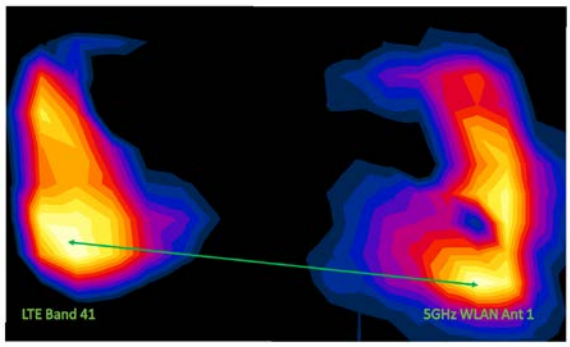
Table 12-26
Phablet Back Side SAR to Peak Location Separation Ratio Plots



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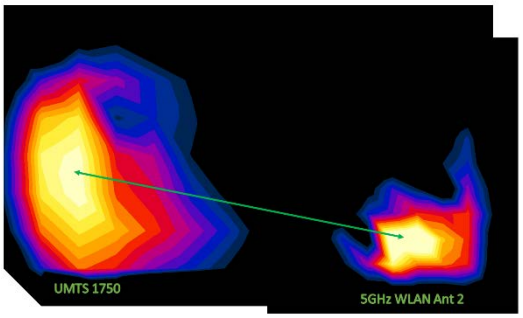

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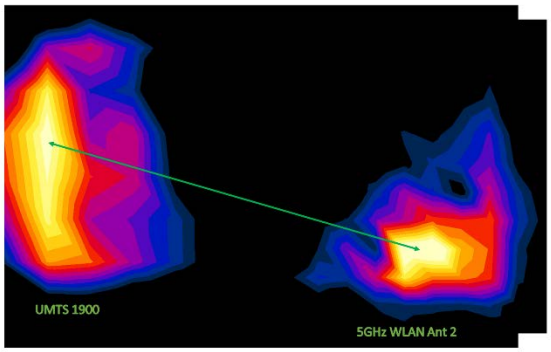

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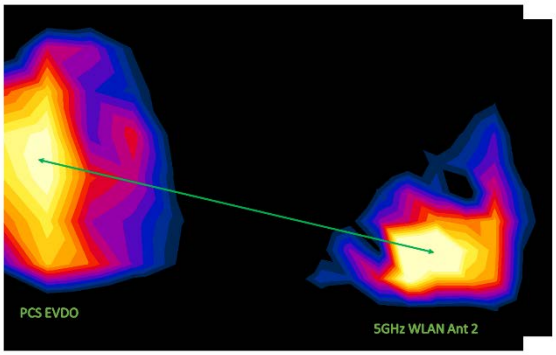

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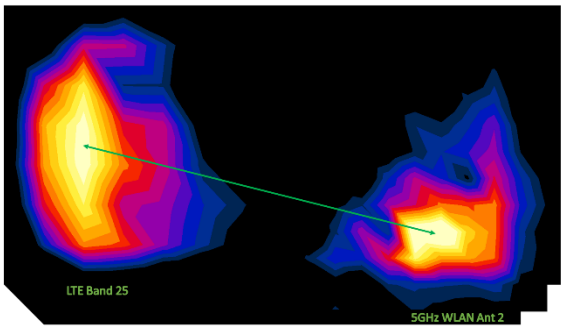

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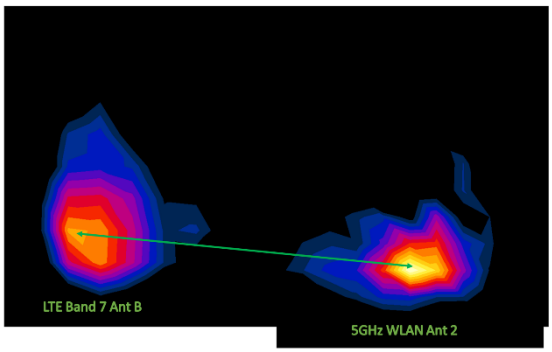

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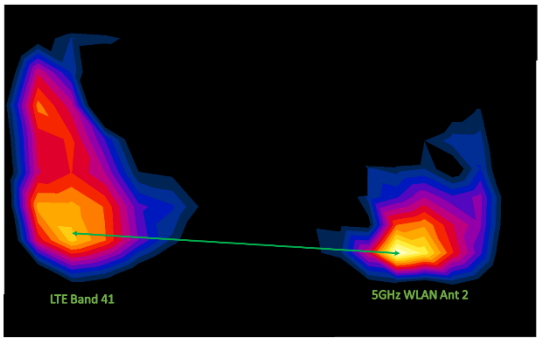	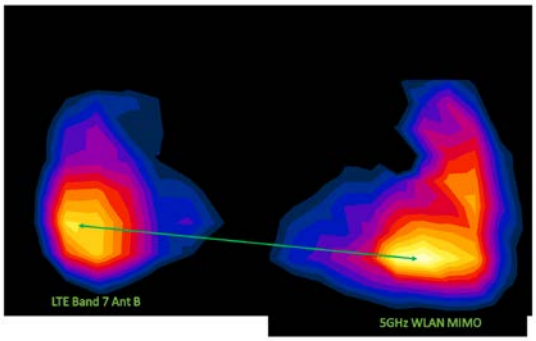
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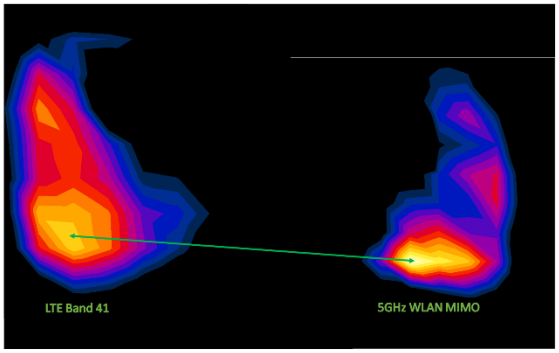	
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12.9 Additional Simultaneous SAR Evaluation and Analysis for Main Band, Bluetooth and 5 GHz WLAN Operations

Per KDB Publication 865664, when the sum of the transmitters potentially operating simultaneously is greater than the 1.6 W/kg or 4.0 W/kg and the sum to peak SAR location separation ratio between any pair of transmitters is more than 0.04 for 1g or 0.1 for 10g, SAR tests are required for simultaneous transmission to determine the aggregate 1g or 10g SAR. When required, each transmitter is tested for simultaneous transmission in the configuration, channel and operating mode that resulted in the highest SAR during the stand-alone evaluation.

The Bluetooth and 5 GHz WLAN transmitters are spatially separated from the 2G/3G/4G antenna. Therefore, simultaneous transmission SAR evaluations (Volumetric SAR Evaluations) were performed for the transmitters with the overlapping distributions - Bluetooth and 5 GHz WIFI. The SPLSR procedures in FCC KDB Publication 447498 was applied to the 2G/3G/4G transmitter and the aggregate Bluetooth and 5 GHz WLAN distribution to determine simultaneous SAR compliance.

12.9.1 Volumetric SAR Evaluation and Analysis for Main Band, Bluetooth, and 5GHz WLAN Simultaneous Transmission

Table 12-27
Simultaneous Transmission SAR Analysis

Band/Mode	Configuration	Frequency [MHz]	Measured Standalone 1g SAR [W/kg]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 2) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Duty Cycle (%)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Volumetric 1g SAR [W/kg]	Scaled Volumetric 1g SAR [W/kg]	Volumetric SAR Plot Number
Bluetooth	Right Cheek, Ch. 78, 1 Mbps	2480	0.675	17.48	18.5	N/A	N/A	77.1	1.265	1.297	0.694	1.139	A81
5 GHz WLAN Ant 1	Right Cheek, IEEE 802.11n, 40 MHz, Ch. 54, 13.5 Mbps	5270	0.235	13.90	14.0	N/A	N/A	97.4	1.023	1.027	0.212	0.223	A82
5 GHz WLAN MIMO	Right Cheek, IEEE 802.11n, 40Mhz Ch. 54, 27 Mbps	5270	0.234	13.90	14.0	13.61	14.0	98.1	1.094	1.019	0.223	0.249	A83
Bluetooth	Back Side, Ch. 39, 1 Mbps, 15 mm	2441	0.072	18.37	18.5	N/A	N/A	77.1	1.030	1.297	0.065	0.086	A84
5 GHz WLAN MIMO	Back Side, IEEE 802.11n, 20 MHz, Ch. 165, 13 Mbps, 15 mm	5825	0.771	17.84	18.0	17.35	18	98.7	1.161	1.013	0.676	0.795	A85
Bluetooth	Back Side, Ch. 39, 1 Mbps, 10 mm	2441	0.152	18.37	18.5	N/A	N/A	77.1	1.030	1.297	0.126	0.168	A86
5 GHz WLAN Ant 2	Back Side, IEEE 802.11a, 20 MHz, Ch. 165, 6 Mbps, 10 mm	5825	0.801	17.40	18.0	N/A	N/A	98.9	1.148	1.011	0.781	0.906	A87
5 GHz WLAN MIMO	Back Side, IEEE 802.11n, 20 MHz, Ch. 165, 13 Mbps, 10 mm	5825	1.11	17.84	18.0	17.35	18	98.7	1.161	1.013	1.02	1.200	A88

Simultaneous Transmission Bands/Modes		Configuration		Scaled Multi-Band SAR (W/kg)	Simultaneous SAR Plot Number
Bluetooth	5 GHz WLAN Ant 1	Head	Right Cheek	1.21	A89
Bluetooth	5 GHz WLAN MIMO	Head	Right Cheek	1.20	A90
Bluetooth	5 GHz WLAN MIMO	Body worn	Back at 15 mm	0.863	A91
Bluetooth	5 GHz WLAN Ant 2	Hotspot	Back at 10 mm	1.09	A92
Bluetooth	5 GHz WLAN MIMO	Hotspot	Back at 10 mm	1.37	A93

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Note:
1. All volumetric zoom scans were performed with DASY52 SAR system version 52.10. Post processor SEMCAD X Versions 14.6.12 (7450) multiband combiner requires enlarged zoom scans to overlap but does not require measurement point resolutions within the volumes to be identical for interpolation and superposition.
2. Each antenna was evaluated independently using the channel/configuration that produced the highest measured SAR when the standalone SAR was tested.
3. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v05. The simultaneous transmission SAR results of the individual transmitters were scaled using SEMCAD X during processing.
4. The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation. "

12.9.2 Head SPLSR Evaluation and Analysis for Main Band, Bluetooth, and 5GHz WLAN Simultaneous Transmission

Table 12-28
Peak SAR Locations for Head Right cheek

Mode/Band	x (mm)	y (mm)	z (mm)	Reported SAR (W/kg)
5GHz Ant 1 and 2.4 GHz Bluetooth	13.50	-337.00	-175.00	1.21
5GHz MIMO and 2.4 GHz Bluetooth	8.00	-335.00	-175.00	1.20
CDMA BC0 (§22H)	42.30	-255.00	-172.00	0.413

Table 12-29
Head 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}	$(a+b)^{1.5}/D_{a-b}$	
5GHz Ant 1 and 2.4 GHz Bluetooth	CDMA BC0 (§22H)	1.21	0.413	1.623	86.96	0.02	40
5GHz MIMO and 2.4 GHz Bluetooth	CDMA BC0 (§22H)	1.2	0.413	1.613	87.09	0.02	41

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

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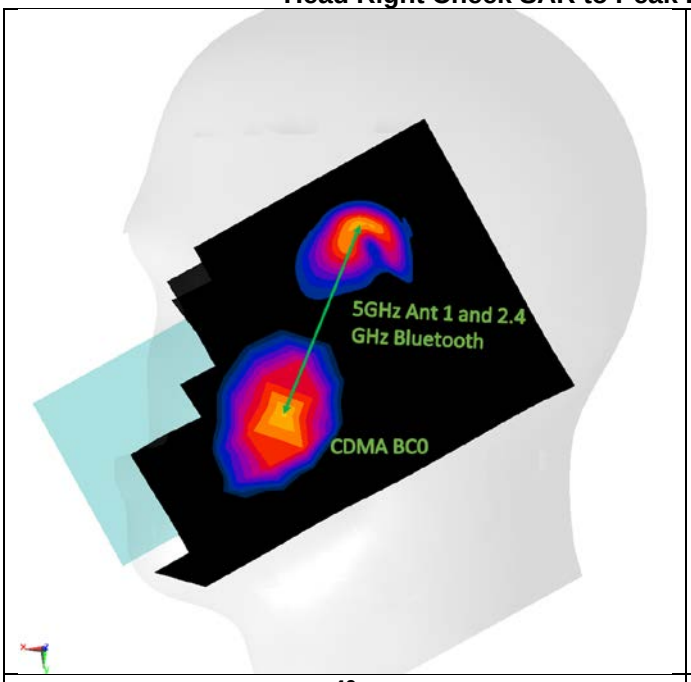
Table 12-30
Head Right Cheek SAR to Peak Location Separation Ratio Plots



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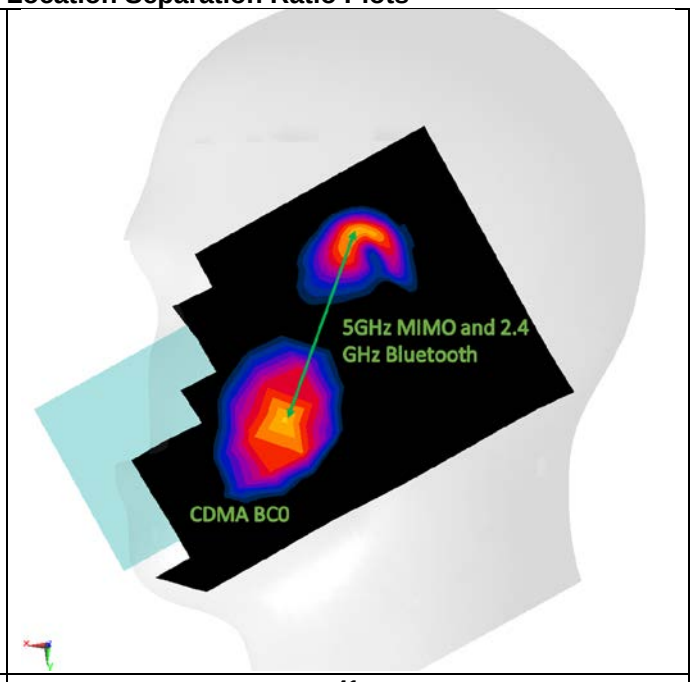

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Table 12-31
Head Right Cheek Simultaneous Transmission SAR Analysis

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)
Ant "a"	Ant "b"	a	b	a+b
5GHz Ant 1 and 2.4 GHz Bluetooth	UMTS 850	1.21	0.381	1.591
5GHz Ant 1 and 2.4 GHz Bluetooth	CDMA BC10 (§90S)	1.21	0.354	1.564
5GHz Ant 1 and 2.4 GHz Bluetooth	EVDO BC10 (§90S)	1.21	0.207	1.417
5GHz Ant 1 and 2.4 GHz Bluetooth	EVDO BC0 (§22H)	1.21	0.329	1.539
5GHz Ant 1 and 2.4 GHz Bluetooth	LTE Band 14	1.21	0.332	1.542
5GHz Ant 1 and 2.4 GHz Bluetooth	LTE Band 26	1.21	0.328	1.538
5GHz Ant 1 and 2.4 GHz Bluetooth	LTE Band 5	1.21	0.331	1.541
5GHz MIMO and 2.4 GHz Bluetooth	UMTS 850	1.2	0.381	1.581
5GHz MIMO and 2.4 GHz Bluetooth	CDMA BC10 (§90S)	1.2	0.354	1.554
5GHz MIMO and 2.4 GHz Bluetooth	EVDO BC0 (§22H)	1.2	0.329	1.529
5GHz MIMO and 2.4 GHz Bluetooth	LTE Band 14	1.2	0.332	1.532
5GHz MIMO and 2.4 GHz Bluetooth	LTE Band 26	1.2	0.328	1.528
5GHz MIMO and 2.4 GHz Bluetooth	LTE Band 5	1.2	0.331	1.531

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

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12.9.3 Body worn SPLSR Evaluation and Analysis for Main Band, Bluetooth, and 5GHz WLAN Simultaneous Transmission

Table 12-32
Peak SAR Locations for Body worn back side

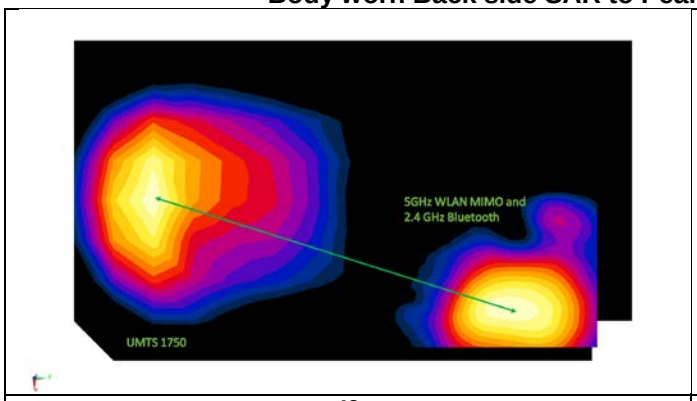
Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
5GHz WLAN MIMO 2.4 GHz Bluetooth	15.00	60.00	0.863
UMTS 1750	-28.00	-76.50	0.947
UMTS 1900	-23.00	-85.50	0.921
PCS CDMA	-27.50	-81.00	0.845
LTE Band 25 (PCS)	-26.00	-79.50	0.835

Table 12-33
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}	$(a+b)^{1.5}/D_{a-b}$	
5GHz WLAN MIMO 2.4 GHz Bluetooth	UMTS 1750	0.863	0.947	1.810	143.11	0.02	42
5GHz WLAN MIMO 2.4 GHz Bluetooth	UMTS 1900	0.863	0.921	1.784	150.38	0.02	43
5GHz WLAN MIMO 2.4 GHz Bluetooth	PCS CDMA	0.863	0.845	1.708	147.27	0.02	44
5GHz WLAN MIMO 2.4 GHz Bluetooth	LTE Band 25 (PCS)	0.863	0.835	1.698	145.40	0.02	45

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

Table 12-34
Body worn Back side SAR to Peak Location Separation Ratio Plots



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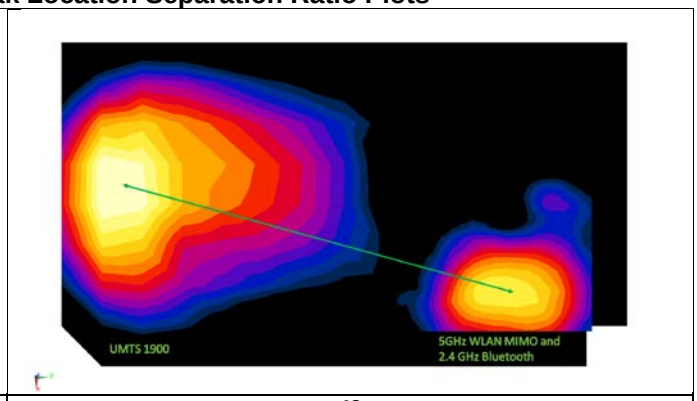

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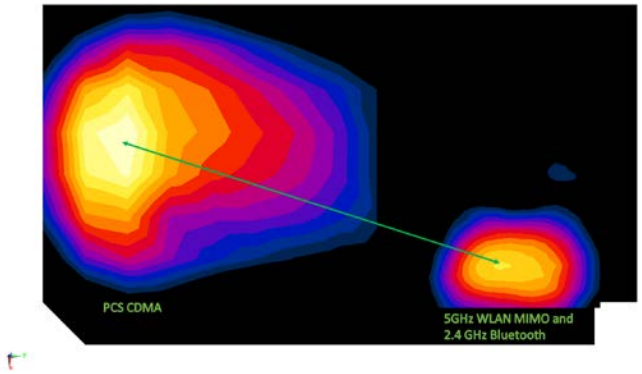	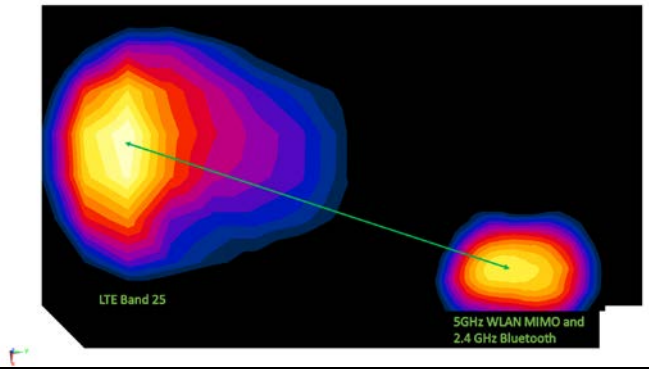
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Table 12-35
Body worn Back Side Simultaneous Transmission SAR Analysis

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)
Ant "a"	Ant "b"	a	b	a+b
5GHz WLAN MIMO 2.4 GHz Bluetooth	LTE Band 66	0.863	0.622	1.485
5GHz WLAN MIMO 2.4 GHz Bluetooth	LTE Band 41	0.863	0.666	1.529

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

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12.9.4 Hotspot SPLSR Evaluation and Analysis for Main Band, Bluetooth, and 5GHz WLAN Simultaneous Transmission

Table 12-36
Peak SAR Locations for Hotspot Back side

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	11.00	56.00	1.09
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	15.00	56.00	1.37
GPRS 850	-11.50	-80.00	0.763
GPRS 1900	-27.50	-75.00	0.369
UMTS 850	-18.00	-80.00	1.097
UMTS 1750	-28.00	-76.50	0.717
UMTS 1900	-26.00	-79.50	0.692
EVDO BC10 (§90S)	-13.00	-72.00	0.608
EVDO BC0 (§22H)	-13.00	-78.50	0.814
PCS EVDO	-27.50	-84.00	0.499
LTE Band 71	-4.00	-69.00	0.340
LTE Band 12	-4.00	-77.00	0.456
LTE Band 13	-7.00	-80.00	0.503
LTE Band 14	-24.50	-80.00	0.661
LTE Band 26 (Cell)	-21.00	-80.00	0.720
LTE Band 5 (Cell)	-16.50	-73.50	0.710
LTE Band 66	-21.50	-78.00	0.474
LTE Band 25 (PCS)	-26.00	-75.00	0.531
LTE Band 30	-34.60	-73.20	0.483
LTE Band 7 Ant B	8.60	-69.00	0.308
LTE Band 7 Ant A	-40.60	-79.80	0.489
LTE Band 41	-41.80	-76.80	0.254

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Table 12-37
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 Ant 2 and 2.4 GHz Bluetooth	GPRS 850	1.09	0.763	1.853	137.85	0.02	46
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	UMTS 850	1.09	1.097	2.187	139.06	0.02	47
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	UMTS 1750	1.09	0.717	1.807	138.12	0.02	48
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	UMTS 1900	1.09	0.692	1.782	140.46	0.02	49
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	EVDO BC10 (§90S)	1.09	0.608	1.698	130.23	0.02	50
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	EVDO BC0 (§22H)	1.09	0.814	1.904	136.62	0.02	51
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 14	1.09	0.661	1.751	140.56	0.02	52
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 26 (Cell)	1.09	0.72	1.810	139.71	0.02	53
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 5 (Cell)	1.09	0.71	1.800	132.39	0.02	54
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 25 (PCS)	1.09	0.531	1.621	136.12	0.02	55
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	GPRS 850	1.37	0.763	2.133	138.56	0.02	56
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	GPRS 1900	1.37	0.369	1.739	137.72	0.02	57
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	UMTS 850	1.37	1.097	2.467	139.95	0.03	58
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	UMTS 1750	1.37	0.717	2.087	139.30	0.02	59
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	UMTS 1900	1.37	0.692	2.062	141.57	0.02	60
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	EVDO BC10 (§90S)	1.37	0.608	1.978	131.03	0.02	61
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	EVDO BC0 (§22H)	1.37	0.814	2.184	137.38	0.02	62
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	PCS EVDO	1.37	0.499	1.869	146.31	0.02	63
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 71	1.37	0.34	1.710	126.44	0.02	64
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 12	1.37	0.456	1.826	134.35	0.02	65
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 13	1.37	0.503	1.873	137.77	0.02	66
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 14	1.37	0.661	2.031	141.62	0.02	67
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 26 (Cell)	1.37	0.72	2.090	140.68	0.02	68
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 5 (Cell)	1.37	0.71	2.080	133.28	0.02	69
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 66	1.37	0.474	1.844	138.88	0.02	70
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 25 (PCS)	1.37	0.531	1.901	137.27	0.02	71
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 30	1.37	0.483	1.853	138.39	0.02	72
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 7 Ant B	1.37	0.308	1.678	125.16	0.02	73
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 7 Ant A	1.37	0.489	1.859	146.74	0.02	74
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 41	1.37	0.254	1.624	144.44	0.01	75

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

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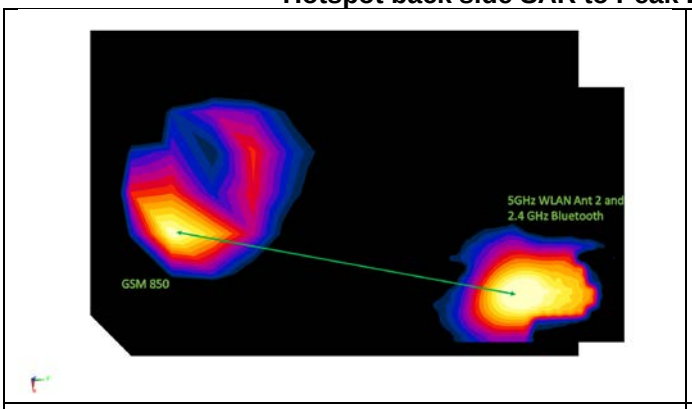
Table 12-38
Hotspot back side SAR to Peak Location Separation Ratio Plots



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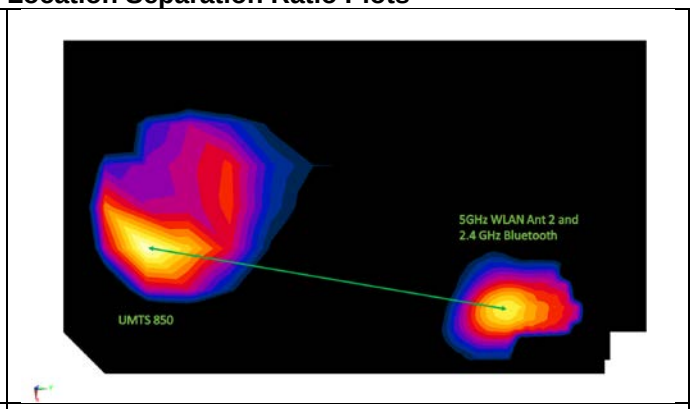

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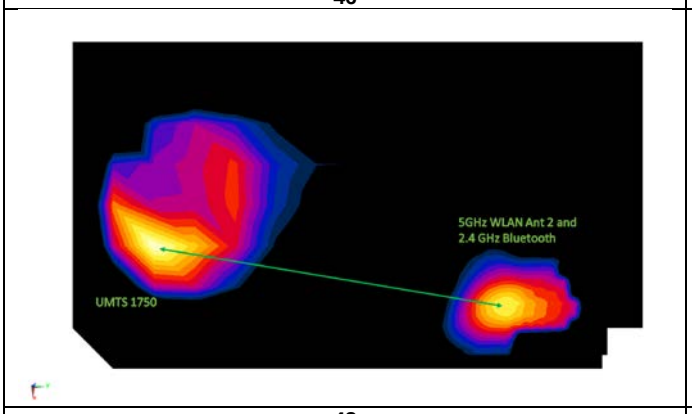

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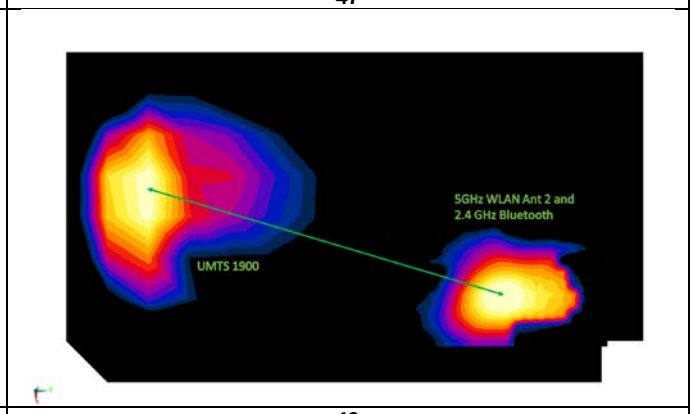

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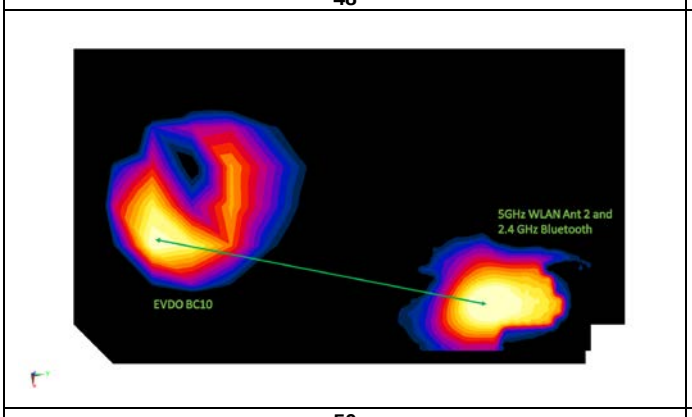

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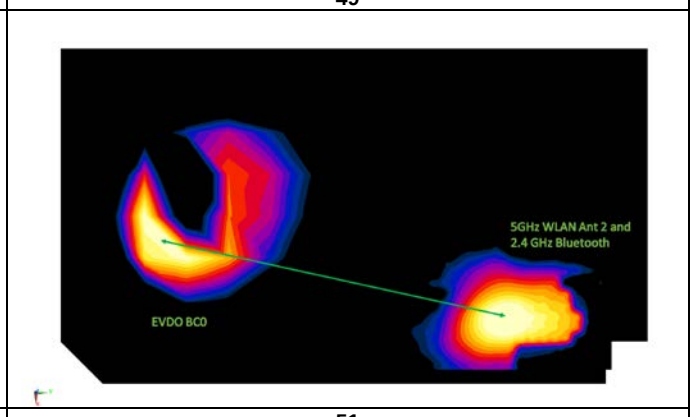

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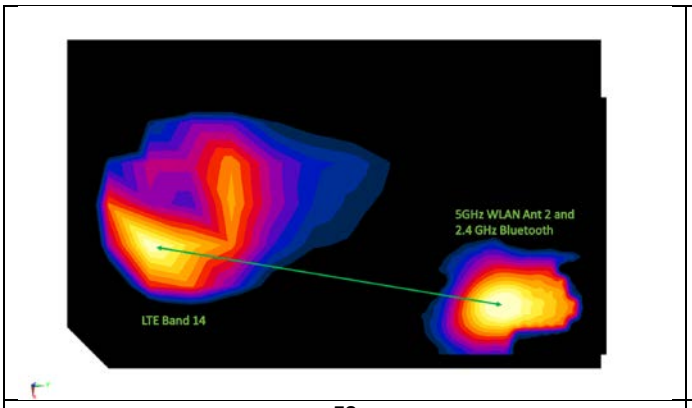

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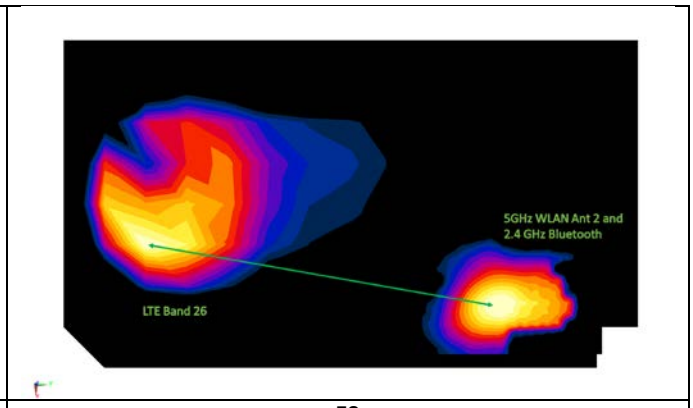

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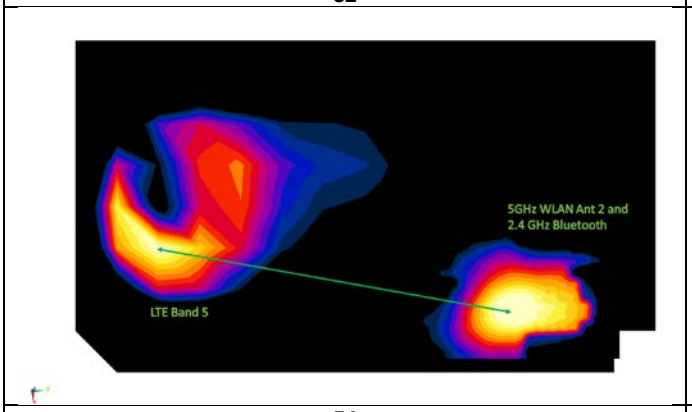

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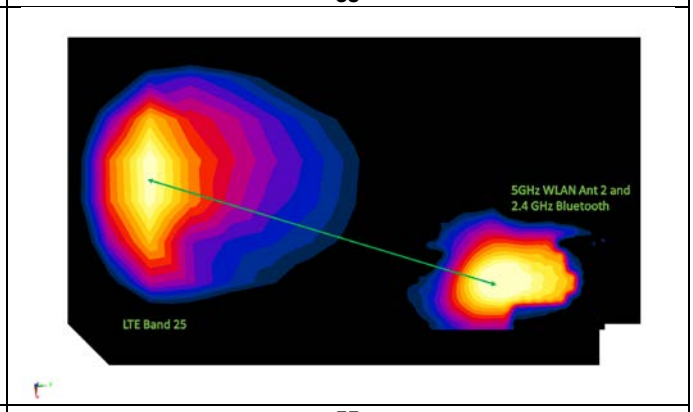

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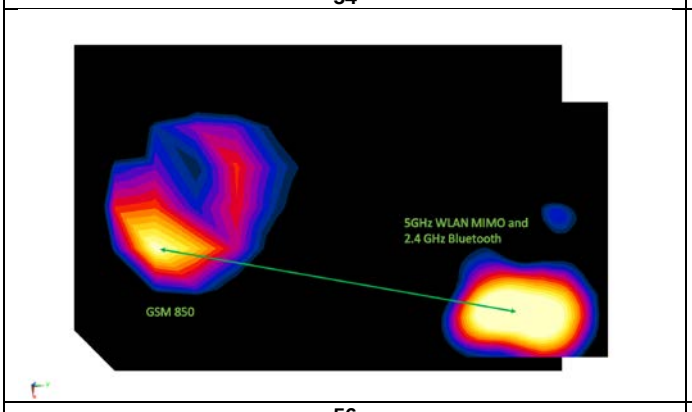

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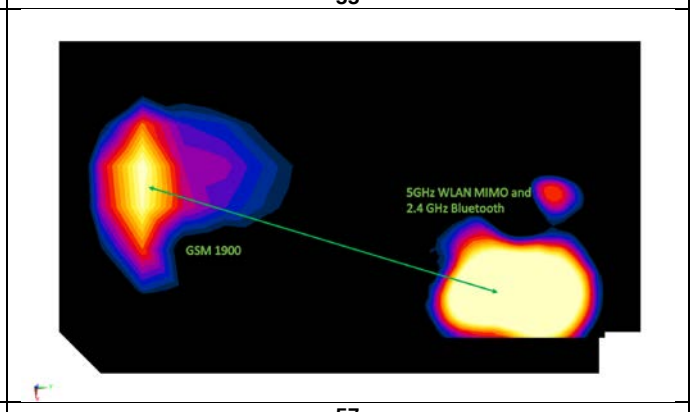

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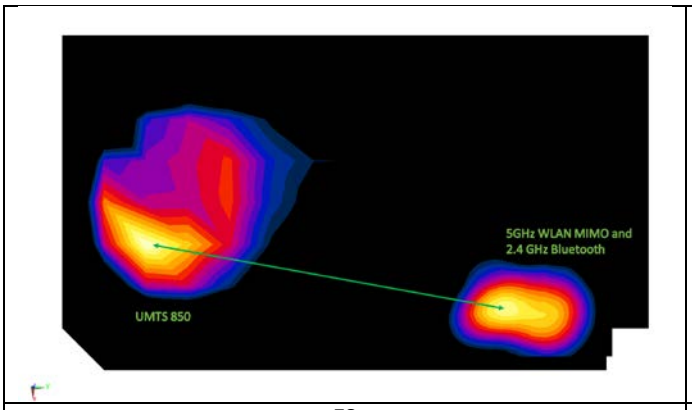

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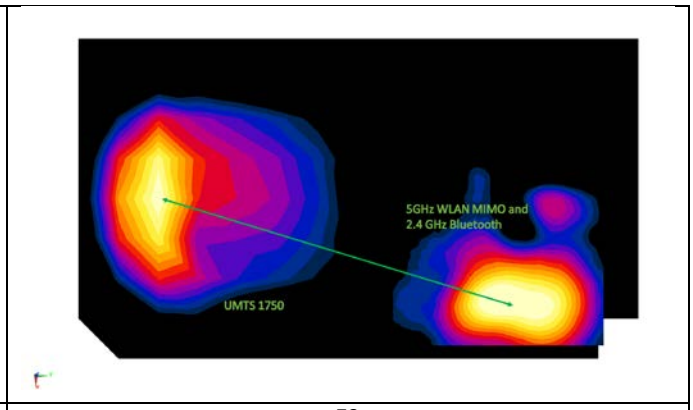

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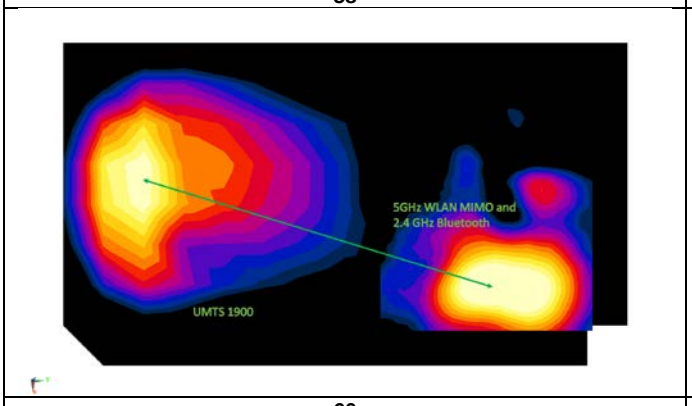

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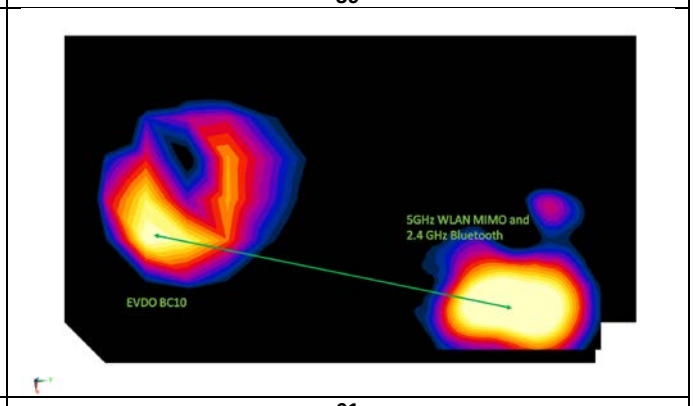

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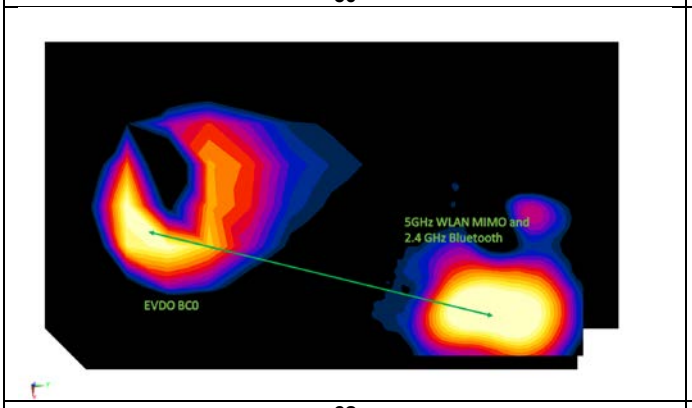

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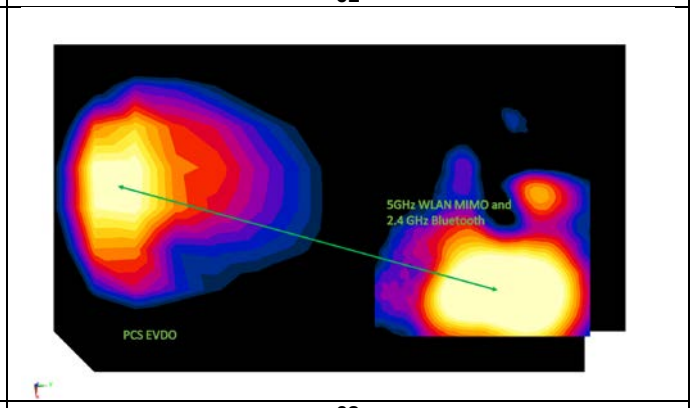

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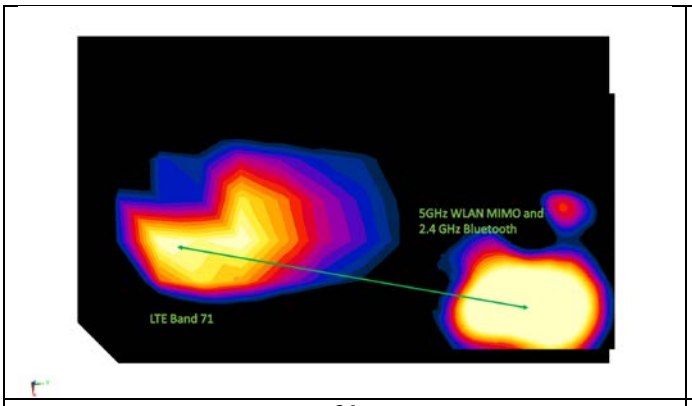

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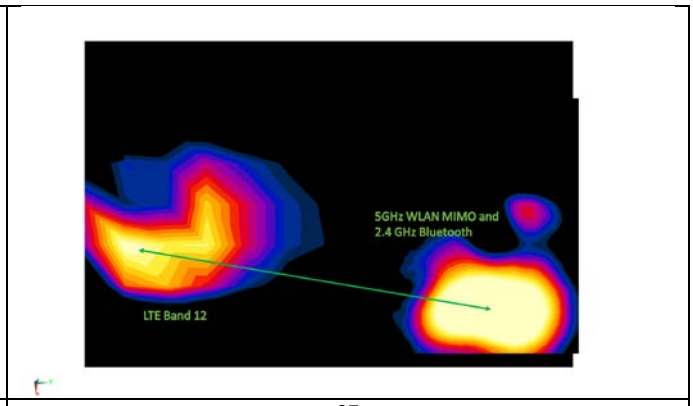

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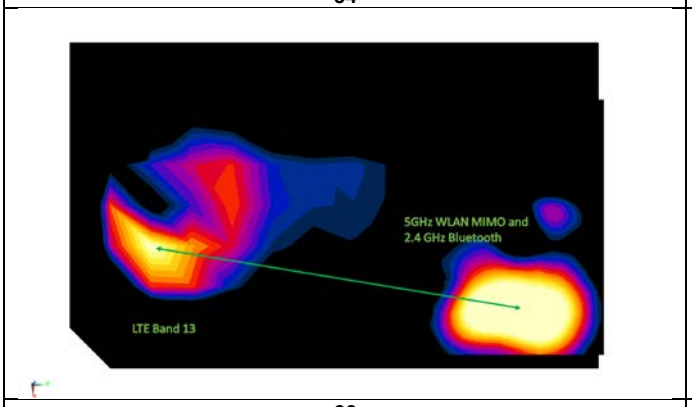

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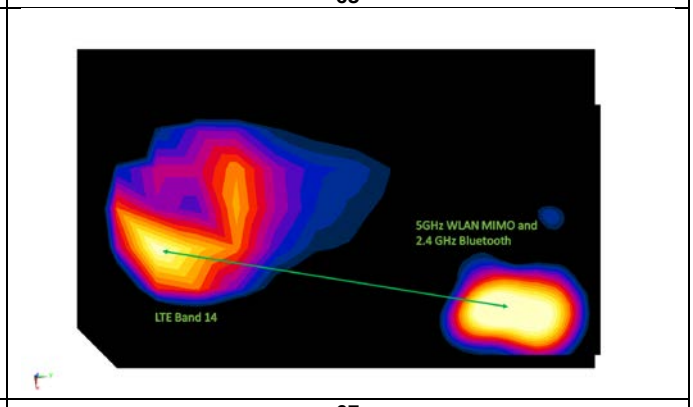

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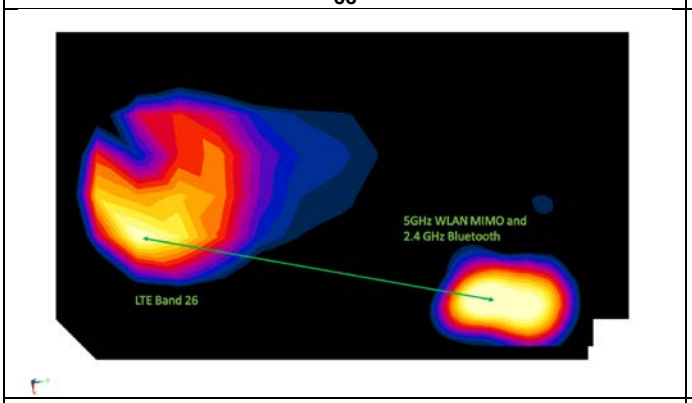

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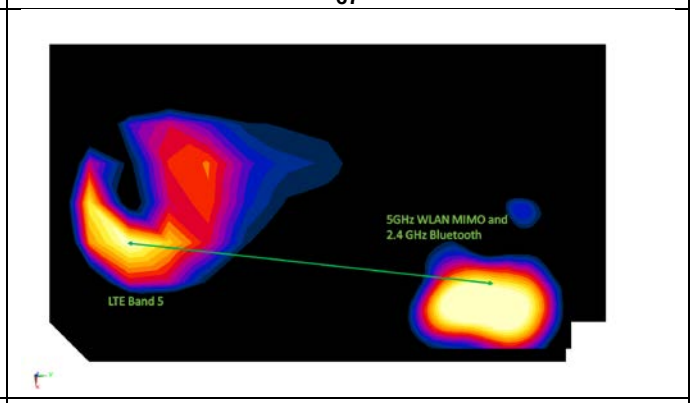

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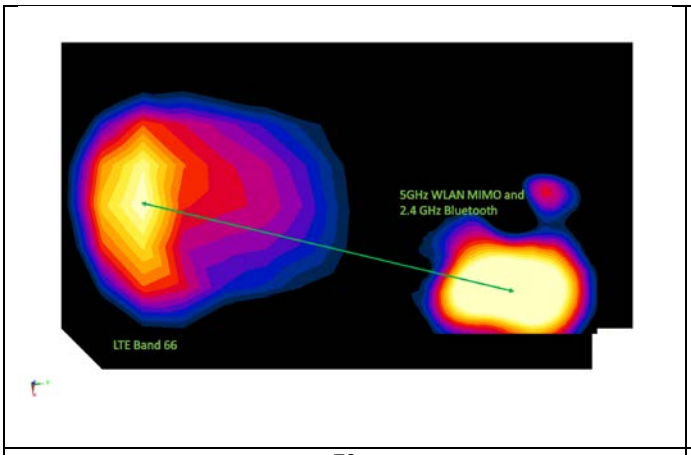

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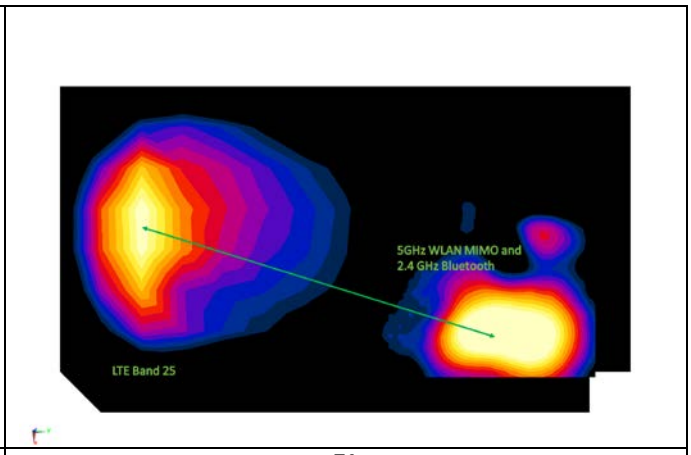

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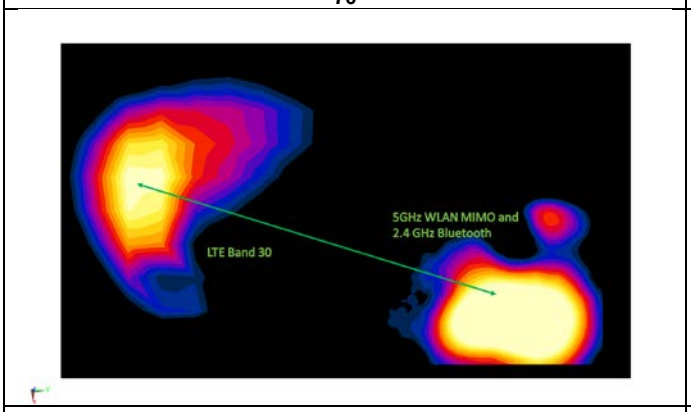

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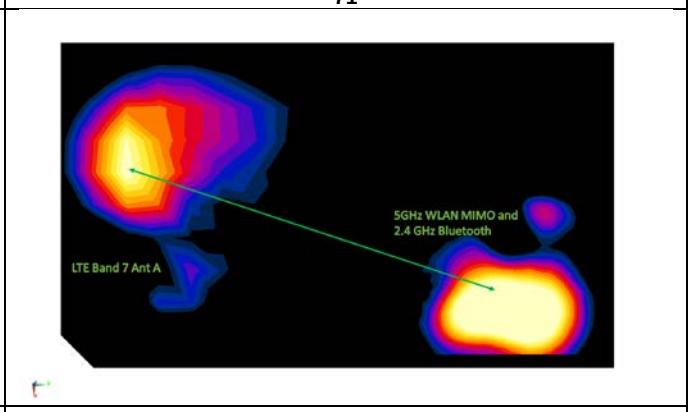

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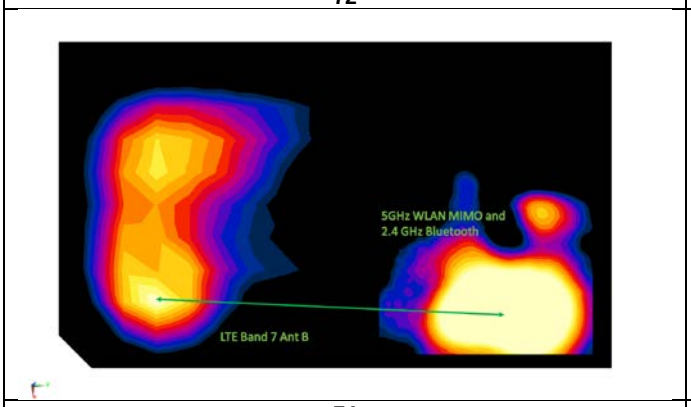

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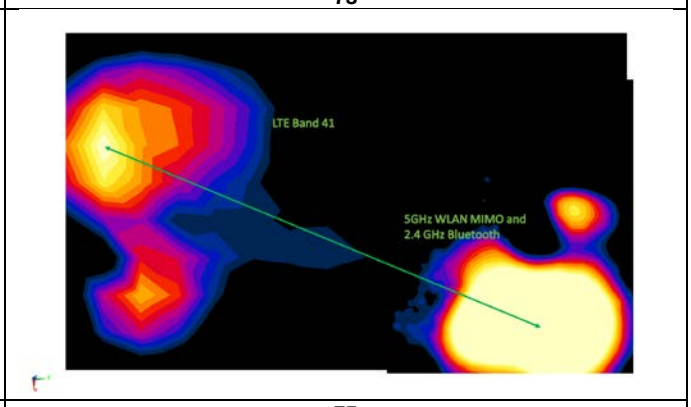

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Table 12-39
Hotspot Back Side Simultaneous Transmission SAR Analysis

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)
Ant "a"	Ant "b"	a	b	a+b
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	PCS EVDO	1.09	0.499	1.589
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 13	1.09	0.503	1.593
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 66	1.09	0.474	1.564
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 30	1.09	0.483	1.573
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 7 Ant B	1.09	0.308	1.398
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 7 Ant A	1.09	0.489	1.579
5 GHz WLAN Ant 2 and 2.4 GHz Bluetooth	LTE Band 30	1.09	0.483	1.573
5 GHz WLAN MIMO and 2.4 GHz Bluetooth	LTE Band 48	1.37	0.138	1.508

The Bluetooth and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

12.10 Simultaneous Transmission Conclusion

The above analysis for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit per FCC KDB Publication 447498 D01v06 and IEEE 1528-2013 Section 6.3.4.1.2.

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13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg
5) When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Table 13-1
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
835	846.60	4233	UMTS 850	RMC	N/A	back	10 mm	0.865	0.772	1.12	N/A	N/A	N/A	N/A
1750	1732.40	1412	UMTS 1750	RMC	N/A	back	15 mm	0.804	0.742	1.08	N/A	N/A	N/A	N/A
1900	1880.00	9400	UMTS 1900	RMC	N/A	bottom	10 mm	1.160	1.050	1.10	N/A	N/A	N/A	N/A
5750	5825.00	165	802.11n, 20 MHz Bandwidth	OFDM , MIMO	13	back	10 mm	1.110	1.100	1.01	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 13-2
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1900	1880.00	9400	UMTS 1900	RMC	N/A	bottom	0 mm	3.050	3.020	1.01	N/A	N/A	N/A	N/A
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth, CA_66C ULCA	PCC: QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	2.740	2.700	1.01	N/A	N/A	N/A	N/A
	1750.20	132374		SCC: QPSK 50, 50 RB Offset										
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth ULCA	PCC: QPSK, 50 RB, 50 RB Offset	N/A	back	0 mm	2.630	2.550	1.03	N/A	N/A	N/A	N/A
	2525.80	39948		SCC: QPSK, 50 RB, 0 RB Offset										
2600	2593.00	40620	LTE Band 41, 20 MHz Bandwidth ULCA	PCC: QPSK, 50 RB, 0 RB Offset	N/A	back	0 mm	2.800	2.820	1.01	N/A	N/A	N/A	N/A
	2573.20	40422		SCC: QPSK, 50 RB, 50 RB Offset										
5250	5280.00	56	802.11a, 20 MHz Bandwidth	OFDM , ANT 2	6	back	0 mm	2.320	2.230	1.04	N/A	N/A	N/A	N/A
5600	5600.00	120	802.11a, 20 MHz Bandwidth	OFDM , ANT 2	6	back	0 mm	2.230	1.980	1.13	N/A	N/A	N/A	N/A
5750	5720.00	144	802.11a, 20 MHz Bandwidth	OFDM , ANT 2	6	back	0 mm	2.340	2.090	1.12	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 on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 60 tuner states were divided among the aggregate band, mode and exposure combinations 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 60 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. Additionally, LTE bands 12 and 13 were considered as an aggregated band to select single point measurement configurations. The wireless configuration and exposure condition combinations were divided evenly among the two bands (i.e., the number of required single point measurements (at least 20) apply to the aggregated band). All other bands were treated independently.

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

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Table 14-1
UMTS/CDMA Supplemental Head SAR Data

Supplemental Head SAR Data									
UMTS Band 5		UMTS Band 4		UMTS Band 2		CDMA BC0		CDMA BC1	
RMC		RMC		RMC		RC3/SO55		RC3/SO55	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	836.6	Frequency (MHz)	1732.4	Frequency (MHz)	1880	Frequency (MHz)	836.52	Frequency (MHz)	1880
Channel	4183	Channel	1412	Channel	9400	Channel	384	Channel	600
Measured 1g SAR (W/kg)	0.309	Measured 1g SAR (W/kg)	0.226	Measured 1g SAR (W/kg)	0.157	Measured 1g SAR (W/kg)	0.347	Measured 1g SAR (W/kg)	0.173
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)	0.396	Auto-tune (State 32)	0.262	Auto-tune (State 32)	0.226	Auto-tune (State 19)	0.399	Auto-tune (State 32)	0.238
Default (State 0)	0.388	Default (State 0)	0.169	Default (State 0)	0.181	Default (State 0)	0.377	Default (State 0)	0.188
State 0	0.388	State 4	0.147	State 0	0.181	State 3	0.392	State 0	0.188
State 1	0.382	State 7	0.138	State 4	0.150	State 9	0.302	State 2	0.160
State 2	0.398	State 8	0.140	State 6	0.139	State 11	0.196	State 5	0.153
State 5	0.320	State 10	0.114	State 7	0.134	State 13	0.108	State 7	0.141
State 10	0.183	State 11	0.102	State 9	0.123	State 16	0.385	State 11	0.100
State 16	0.392	State 13	0.073	State 11	0.098	State 19	0.400	State 12	0.082
State 18	0.337	State 14	0.060	State 17	0.162	State 22	0.372	State 17	0.168
State 22	0.279	State 17	0.138	State 23	0.113	State 23	0.355	State 18	0.141
State 25	0.210	State 24	0.108	State 24	0.118	State 25	0.280	State 22	0.123
State 27	0.140	State 27	0.077	State 26	0.092	State 29	0.102	State 25	0.108
State 28	0.099	State 30	0.044	State 29	0.055	State 32	0.138	State 27	0.084
State 29	0.079	State 32	0.251	State 32	0.221	State 39	0.188	State 31	0.033
State 33	0.136	State 39	0.252	State 33	0.218	State 41	0.132	State 32	0.232
State 37	0.168	State 42	0.035	State 36	0.208	State 44	0.049	State 34	0.227
State 40	0.126	State 45	0.174	State 38	0.200	State 46	0.025	State 36	0.219
State 42	0.074	State 48	0.164	State 41	0.179	State 47	0.015	State 37	0.213
State 47	0.013	State 51	0.177	State 44	0.114	State 51	0.388	State 43	0.144
State 51	0.383	State 54	0.179	State 45	0.097	State 54	0.382	State 45	0.099
State 52	0.386	State 55	0.140	State 50	0.171	State 56	0.137	State 55	0.159
State 53	0.135	State 58	0.140	State 56	0.192	State 57	0.387	State 58	0.165

Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data															
LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 14		LTE Band 26		LTE Band 5		LTE Band 66		LTE Band 25	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offsets		QPSK, 20 MHz 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	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.5	Frequency (MHz)	707.5	Frequency (MHz)	782	Frequency (MHz)	793	Frequency (MHz)	831.5	Frequency (MHz)	836.5	Frequency (MHz)	1745	Frequency (MHz)	1860
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	26865	Channel	20525	Channel	132322	Channel	26140
Measured 1g SAR (W/kg)	0.123	Measured 1g SAR (W/kg)	0.144	Measured 1g SAR (W/kg)	0.168	Measured 1g SAR (W/kg)	0.253	Measured 1g SAR (W/kg)	0.255	Measured 1g SAR (W/kg)	0.257	Measured 1g SAR (W/kg)	0.182	Measured 1g SAR (W/kg)	0.157
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 9)	0.139	Auto-tune (State 51)	0.163	Auto-tune (State 6)	0.184	Auto-tune (State 52)	0.294	Auto-tune (State 11)	0.282	Auto-tune (State 21)	0.310	Auto-tune (State 33)	0.223	Auto-tune (State 32)	0.195
Default (State 0)	0.086	Default (State 0)	0.162	Default (State 0)	0.166	Default (State 0)	0.274	Default (State 0)	0.200	Default (State 0)	0.301	Default (State 0)	0.176	Default (State 0)	0.179
State 0	0.086	State 2	0.160	State 0	0.166	State 3	0.274	State 5	0.246	State 3	0.293	State 1	0.178	State 1	0.178
State 1	0.086	State 10	0.124	State 1	0.162	State 4	0.271	State 8	0.265	State 6	0.324	State 4	0.151	State 3	0.157
State 2	0.111	State 12	0.087	State 6	0.184	State 9	0.214	State 9	0.277	State 10	0.320	State 5	0.150	State 5	0.153
State 5	0.119	State 14	0.058	State 20	0.177	State 11	0.153	State 11	0.283	State 13	0.265	State 6	0.140	State 10	0.118
State 8	0.128	State 27	0.092	State 24	0.170	State 12	0.113	State 12	0.249	State 19	0.309	State 11	0.101	State 12	0.085
State 9	0.137	State 40	0.017	State 34	0.039	State 14	0.068	State 14	0.172	State 21	0.311	State 15	0.044	State 14	0.059
State 15	0.030	State 45	0.002	State 39	0.037	State 24	0.227	State 21	0.242	State 23	0.313	State 16	0.154	State 20	0.137
State 16	0.085	State 46	0.001	State 50	0.025	State 26	0.168	State 25	0.252	State 24	0.293	State 19	0.131	State 23	0.123
State 21	0.111	State 51	0.164	State 56	0.025	State 29	0.081	State 28	0.219	State 26	0.243	State 20	0.129	State 28	0.070
State 22	0.118	State 59	0.027	State 57	0.162	State 34	0.093	State 30	0.159	State 30	0.110	State 21	0.125	State 32	0.196
State 25	0.125					State 36	0.095	State 31	0.114	State 31	0.078	State 25	0.102	State 35	0.194
State 28	0.099					State 38	0.094	State 36	0.045	State 35	0.073	State 29	0.055	State 40	0.182
State 29	0.083					State 41	0.078	State 39	0.045	State 38	0.077	State 31	0.032	State 41	0.172
State 32	0.007					State 44	0.024	State 41	0.031	State 42	0.042	State 32	0.226	State 44	0.125
State 33	0.007					State 48	0.024	State 45	0.005	State 44	0.017	State 33	0.229	State 46	0.089
State 37	0.007					State 52	0.295	State 47	0.001	State 48	0.288	State 37	0.228	State 48	0.140
State 51	0.085					State 53	0.290	State 50	0.027	State 52	0.305	State 40	0.220	State 49	0.126
State 52	0.088					State 54	0.069	State 53	0.028	State 55	0.306	State 43	0.188	State 52	0.155
State 53	0.007					State 56	0.292	State 54	0.190	State 56	0.048	State 49	0.138	State 54	0.159
State 57	0.084					State 57	0.071	State 56	0.028	State 59	0.049	State 58	0.160	State 59	0.192

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Table 14-3
UMTS/CDMA Supplemental Body SAR Data

Supplemental Body SAR Data	
UMTS Band 2	
RMC	
Test Position	Bottom Edge
Spacing	10 mm
Frequency (MHz)	1907.6
Channel	9538
Measured 1g SAR (W/kg)	1.140
Average Value of Time Sweep (W/kg)	
Auto-tune (State 32)	1.347
Default (State 0)	1.218
State 0	1.218
State 1	1.226
State 2	1.115
State 3	1.093
State 4	1.080
State 5	1.071
State 6	1.022
State 7	0.996
State 8	1.012
State 9	0.926
State 10	0.859
State 11	0.765
State 12	0.646
State 13	0.57
State 14	0.473
State 15	0.364
State 16	1.098
State 17	1.112
State 18	0.985
State 19	0.958
State 20	0.943
State 21	0.932
State 22	0.882
State 23	0.855
State 24	0.870
State 25	0.787
State 26	0.719
State 27	0.628
State 28	0.519
State 29	0.445
State 30	0.364
State 31	0.275
State 32	1.349
State 33	1.304
State 34	1.359
State 35	1.356
State 36	1.355
State 37	1.344
State 38	1.347
State 39	1.337
State 40	1.345
State 41	1.312
State 42	1.266
State 43	1.193
State 44	1.058
State 45	0.945
State 46	0.796
State 47	0.609
State 48	0.995
State 49	0.864
State 50	1.069
State 51	1.185
State 52	1.060
State 53	1.287
State 54	1.137
State 55	1.014
State 56	1.158
State 57	1.202
State 58	1.077
State 59	1.305

Supplemental Body SAR Data							
UMTS Band 5		UMTS Band 4		CDMA BC0		CDMA BC1	
RMC		RMC		EVDO Rev. 0		EVDO Rev. 0	
Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Bottom Edge
Spacing	10 mm	Spacing	15 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	846.6	Frequency (MHz)	1732.4	Frequency (MHz)	848.31	Frequency (MHz)	1908.75
Channel	4233	Channel	1412	Channel	777	Channel	1175
Measured 1g SAR (W/kg)	0.865	Measured 1g SAR (W/kg)	0.804	Measured 1g SAR (W/kg)	0.672	Measured 1g SAR (W/kg)	0.961
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)	1.164	Auto-tune (State 39)	1.132	Auto-tune (State 8)	1.004	Auto-tune (State 32)	1.093
Default (State 0)	0.966	Default (State 0)	0.817	Default (State 0)	0.923	Default (State 0)	0.965
State 2	1.199	State 0	0.817	State 0	0.923	State 3	0.971
State 4	1.196	State 1	0.823	State 1	0.913	State 6	0.806
State 7	1.171	State 3	0.696	State 7	0.973	State 8	0.799
State 10	1.022	State 7	0.627	State 8	0.981	State 12	0.507
State 11	0.908	State 9	0.577	State 12	0.633	State 13	0.441
State 19	1.194	State 12	0.397	State 13	0.525	State 16	0.858
State 20	1.189	State 16	0.693	State 17	0.847	State 17	0.873
State 21	1.181	State 17	0.704	State 19	0.978	State 20	0.747
State 24	1.128	State 18	0.597	State 22	0.958	State 23	0.678
State 27	0.837	State 23	0.513	State 28	0.563	State 26	0.568
State 31	0.293	State 27	0.367	State 33	0.169	State 31	0.215
State 34	0.251	State 29	0.263	State 34	0.239	State 32	1.076
State 36	0.262	State 36	1.117	State 35	0.246	State 39	1.071
State 43	0.169	State 39	1.117	State 40	0.222	State 43	0.957
State 46	0.058	State 41	1.108	State 45	0.045	State 45	0.762
State 47	0.035	State 48	0.744	State 46	0.031	State 47	0.496
State 49	1.152	State 49	0.625	State 48	0.904	State 52	0.844
State 52	1.163	State 52	0.686	State 50	0.167	State 55	0.809
State 55	1.155	State 56	0.979	State 55	0.945	State 57	0.965
State 58	1.166	State 59	1.059	State 57	0.914	State 58	0.859

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Table 14-4
LTE Supplemental Body SAR Data

Supplemental Body SAR Data	
LTE Band 25	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offsets	
Test Position	Bottom Edge
Spacing	10 mm
Frequency (MHz)	1905
Channel	26590
Measured 1g SAR (W/kg)	0.958
Average Value of Time Sweep (W/kg)	
Auto-tune (State 32)	1.305
Default (State 0)	1.119
State 0	1.119
State 1	1.131
State 2	1.019
State 3	1.004
State 4	0.988
State 5	0.979
State 6	0.933
State 7	0.912
State 8	0.921
State 9	0.846
State 10	0.780
State 11	0.694
State 12	0.590
State 13	0.516
State 14	0.429
State 15	0.330
State 16	1.007
State 17	1.016
State 18	0.892
State 19	0.869
State 20	0.861
State 21	0.850
State 22	0.803
State 23	0.760
State 24	0.787
State 25	0.712
State 26	0.649
State 27	0.573
State 28	0.473
State 29	0.409
State 30	0.336
State 31	0.255
State 32	1.307
State 33	1.227
State 34	1.271
State 35	1.289
State 36	1.286
State 37	1.282
State 38	1.268
State 39	1.268
State 40	1.271
State 41	1.228
State 42	1.193
State 43	1.118
State 44	0.995
State 45	0.890
State 46	0.741
State 47	0.574
State 48	0.911
State 49	0.805
State 50	1.023
State 51	1.089
State 52	0.977
State 53	1.228
State 54	1.046
State 55	0.937
State 56	1.109
State 57	1.102
State 58	0.987
State 59	1.250

Supplemental Body SAR Data													
LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 14		LTE Band 26		LTE Band 5		LTE Band 66	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 20 MHz Bandwidth, 50 RB, 25 RB Offsets	
Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	Test Position	Back Side	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)	680.5	Frequency (MHz)	707.5	Frequency (MHz)	782	Frequency (MHz)	793	Frequency (MHz)	836.5	Frequency (MHz)	836.5	Frequency (MHz)	1770
Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	26865	Channel	20525	Channel	132572
Measured 1g SAR (W/kg)	0.301	Measured 1g SAR (W/kg)	0.335	Measured 1g SAR (W/kg)	0.375	Measured 1g SAR (W/kg)	0.504	Measured 1g SAR (W/kg)	0.560	Measured 1g SAR (W/kg)	0.555	Measured 1g SAR (W/kg)	0.585
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 9)	0.425	Auto-tune (State 0)	0.519	Auto-tune (State 6)	0.619	Auto-tune (State 18)	0.836	Auto-tune (State 10)	0.958	Auto-tune (State 2)	0.933	Auto-tune (State 39)	0.965
Default (State 0)	0.298	Default (State 0)	0.535	Default (State 0)	0.53	Default (State 0)	0.835	Default (State 0)	0.614	Default (State 0)	0.807	Default (State 0)	0.796
State 2	0.380	State 0	0.535	State 0	0.530	State 0	0.835	State 0	0.614	State 0	0.807	State 2	0.719
State 8	0.429	State 1	0.533	State 6	0.612	State 2	0.830	State 1	0.602	State 2	0.880	State 4	0.663
State 9	0.438	State 6	0.477	State 11	0.525	State 3	0.821	State 6	0.806	State 9	0.852	State 8	0.612
State 17	0.309	State 13	0.193	State 19	0.589	State 5	0.807	State 7	0.822	State 14	0.359	State 13	0.346
State 19	0.375	State 15	0.105	State 21	0.591	State 8	0.738	State 10	0.894	State 15	0.247	State 14	0.293
State 20	0.379	State 21	0.460	State 26	0.522	State 10	0.570	State 13	0.640	State 16	0.858	State 19	0.568
State 28	0.292	State 23	0.417	State 30	0.256	State 14	0.211	State 17	0.647	State 22	0.859	State 20	0.560
State 33	0.028	State 31	0.092	State 35	0.129	State 18	0.822	State 18	0.748	State 24	0.839	State 22	0.523
State 34	0.028	State 38	0.072	State 49	0.546	State 21	0.782	State 22	0.790	State 26	0.712	State 28	0.310
State 36	0.027	State 43	0.018	State 54	0.519	State 25	0.621	State 23	0.797	State 29	0.419	State 33	0.868
State 40	0.022					State 30	0.192	State 27	0.784	State 34	0.199	State 34	0.916
State 43	0.007					State 33	0.202	State 30	0.482	State 38	0.212	State 39	0.950
State 44	0.003					State 37	0.263	State 37	0.148	State 40	0.189	State 40	0.910
State 47	0.000					State 39	0.259	State 38	0.142	State 41	0.154	State 42	0.867
State 49	0.309					State 42	0.167	State 41	0.095	State 44	0.046	State 47	0.422
State 51	0.300					State 44	0.070	State 42	0.068	State 48	0.805	State 49	0.582
State 53	0.027					State 48	0.821	State 45	0.020	State 50	0.138	State 51	0.749
State 54	0.299					State 50	0.200	State 49	0.639	State 53	0.139	State 53	0.859
State 58	0.312					State 54	0.820	State 50	0.095	State 56	0.138	State 55	0.644
State 59	0.027					State 57	0.828	State 55	0.643	State 57	0.815	State 59	0.859

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

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

LTE Band 41 SAR testing with power class 2 at the highest power and available duty factor was additionally performed for the power class 3 configuration with the highest SAR for each exposure condition.

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Table 14-5
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.3	28.3
Measured Output Power (dBm)	24.00	26.62
Measured SAR (W/kg)	0.045	0.054
Measured Power (mW)	251.19	459.20
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	159.00	198.83
% deviation from expected linearity		-4.04%

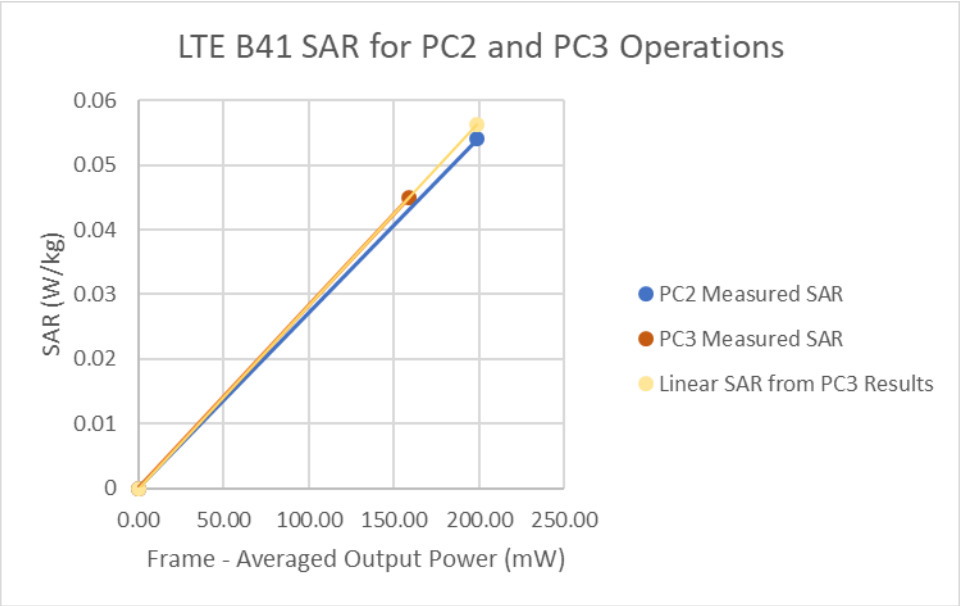

Table 14-6
LTE Band 41 Head Linearity

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Table 14-7
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3 ULCA	LTE Band 41 PC2 ULCA
Maximum Allowed Output Power (dBm)	25.3	28.3
Measured Output Power (dBm)	25.07	27.7
Measured SAR (W/kg)	0.0508	0.0699
Measured Power (mW)	321.37	588.84
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	203.42	254.97
% deviation from expected linearity		9.78%

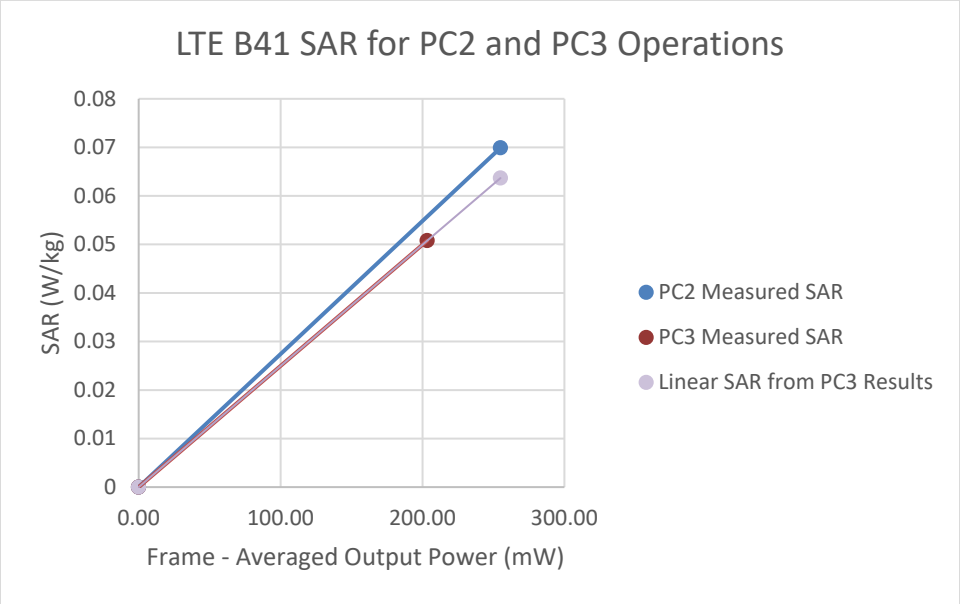

Table 14-8
LTE Band 41 ULCA Head Linearity

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

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.3	28.3
Measured Output Power (dBm)	24.00	26.62
Measured SAR (W/kg)	0.365	0.441
Measured Power (mW)	251.19	459.20
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	159.00	198.83
% deviation from expected linearity		-3.38%

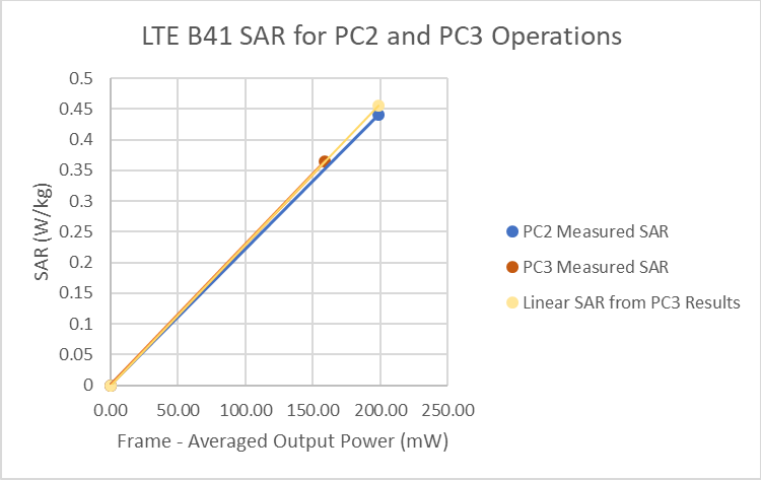

Table 14-10
LTE Band 41 Body-Worn Linearity

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Table 14-11
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3 ULCA	LTE Band 41 PC2 ULCA
Maximum Allowed Output Power (dBm)	25.3	28.3
Measured Output Power (dBm)	25.07	27.7
Measured SAR (W/kg)	0.487	0.58
Measured Power (mW)	321.37	588.84
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	203.42	254.97
% deviation from expected linearity		-4.98%

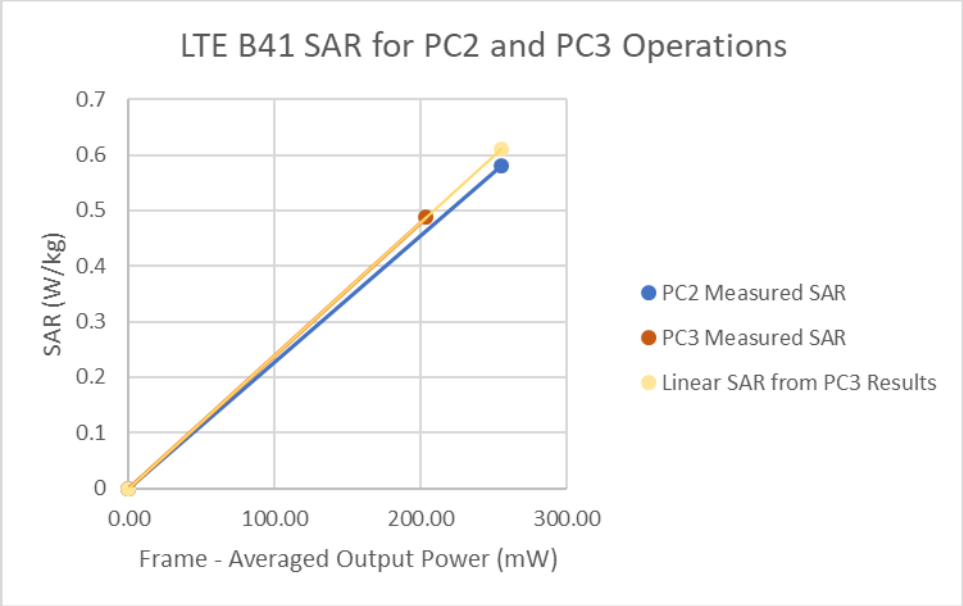

Table 14-12
LTE Band 41 ULCA Body-Worn Linearity

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Table 14-13
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)	21.50	21.52
Measured SAR (W/kg)	0.597	0.387
Measured Power (mW)	141.25	141.91
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	89.41	61.45
% deviation from expected linearity		-5.67%

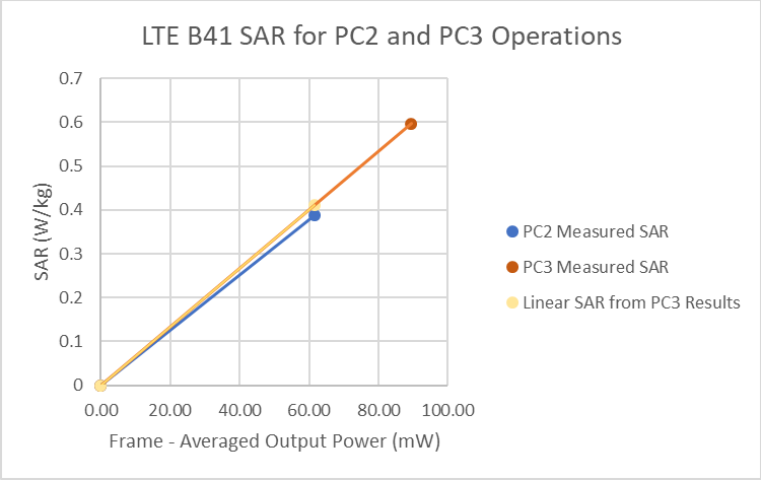

Table 14-14
LTE Band 41 Hotspot Linearity

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Table 14-15
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3 ULCA	LTE Band 41 PC2 ULCA
Maximum Allowed Output Power (dBm)	22.5	22.5
Measured Output Power (dBm)	22.5	22.47
Measured SAR (W/kg)	0.768	0.529
Measured Power (mW)	177.83	176.60
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	112.57	76.47
% deviation from expected linearity		1.39%

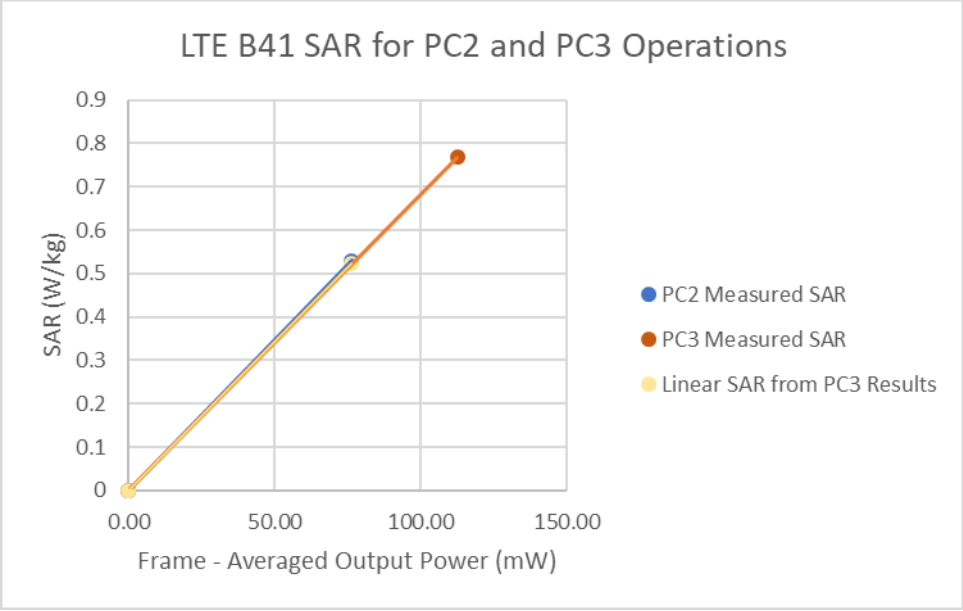

Table 14-16
LTE Band 41 ULCA Hotspot Linearity

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Table 14-17
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)	22.3	22.54
Measured SAR (W/kg)	2.17	1.48
Measured Power (mW)	169.82	179.47
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	107.50	77.71
% deviation from expected linearity		-5.66%

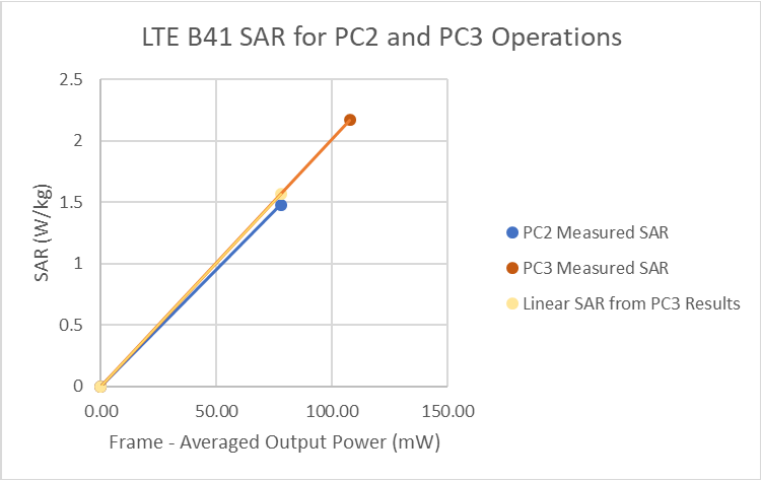

Table 14-18
LTE Band 41 Phablet Linearity

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Table 14-19
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3 ULCA	LTE Band 41 PC2 ULCA
Maximum Allowed Output Power (dBm)	24	24
Measured Output Power (dBm)	23.45	23.22
Measured SAR (W/kg)	2.8	1.65
Measured Power (mW)	221.31	209.89
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	140.09	90.88
% deviation from expected linearity		-9.17%

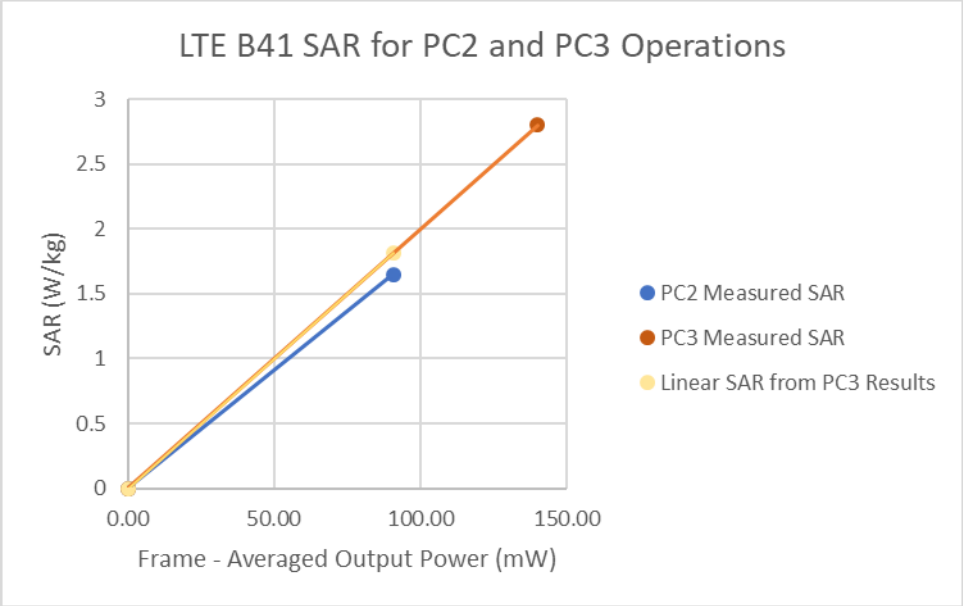

Table 14-20
LTE Band 41 ULCA Phablet Linearity

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	E4438C	ESG Vector Signal Generator	3/24/2017	Biennial	3/24/2019	MY42082385
Agilent	E4432B	ESG-D Series Signal Generator	4/19/2018	Annual	4/19/2019	US40053896
Agilent	N9020A	MXA Signal Analyzer	1/24/2018	Annual	1/24/2019	US46470561
Agilent	N5182A	MXG Vector Signal Generator	11/28/2018	Annual	11/28/2019	MY47420603
Agilent	N5182A-506	MXG Vector Signal Generator	6/19/2018	Annual	6/19/2019	MY48180366
Agilent	8753ES	S-Parameter Network Analyzer	7/30/2018	Annual	7/30/2019	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Agilent	E5515C	Wireless Communications Test Set	5/22/2018	Biennial	5/22/2020	GB43193563
Agilent	E5515C	Wireless Communications Test Set	2/7/2018	Triennial	2/7/2021	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Anritsu	ML2496A	Power Meter	6/19/2018	Annual	6/19/2019	1306009
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1126066
Anritsu	MT8821C	Radio Communication Analyzer	11/6/2018	Annual	11/6/2019	6200901190
Anritsu	MT8821C	Radio Communication Analyzer	7/26/2018	Annual	7/26/2019	6201144418
Anritsu	MT8821C	Radio Communication Analyzer	7/24/2018	Annual	7/24/2019	6201664756
Anritsu	MA24106A	USB Power Sensor	6/5/2018	Annual	6/5/2019	1231535
Anritsu	MA24106A	USB Power Sensor	6/5/2018	Annual	6/5/2019	1231538
Anritsu	MA24106A	USB Power Sensor	6/5/2018	Annual	6/5/2019	1244515
Anritsu	MA24106A	USB Power Sensor	6/21/2018	Annual	6/21/2019	1244524
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647802
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647811
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330127
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330131
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
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
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mitutoyo	CD-6"CSX	Digital Caliper	4/18/2018	Biennial	4/18/2020	13264165
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	4/18/2018	Annual	4/18/2019	1445
Pasternack	PE5011-1	Torque Wrench	7/19/2017	Biennial	7/19/2019	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	6/8/2018	Annual	6/8/2019	112347
Rohde & Schwarz	CMW500	Radio Communication Tester	11/5/2018	Annual	11/5/2019	140148
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	5/29/2018	Annual	5/29/2019	161662
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Annual	10/22/2019	1150
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Annual	5/23/2019	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	2/7/2018	Annual	2/7/2019	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d149
SPEAG	D2300V2	2300 MHz SAR Dipole	11/8/2017	Biennial	11/8/2019	1064
SPEAG	D2450V2	2450 MHz SAR Dipole	8/17/2017	Biennial	8/17/2019	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Biennial	9/11/2019	797
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Annual	8/16/2019	981
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Annual	4/11/2019	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	9/13/2016	Triennial	9/13/2019	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	8/13/2018	Annual	8/13/2019	1126
SPEAG	D3500V20	3500 MHz SAR Dipole	8/15/2018	Annual	8/15/2019	1055
SPEAG	D3700V2	3700 MHz SAR Dipole	9/13/2018	Annual	9/13/2019	1002
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Annual	1/16/2019	1057
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/21/2016	Triennial	9/21/2019	1191
SPEAG	D5GHzV2	5 GHz SAR Dipole	8/10/2018	Annual	8/10/2019	1237
SPEAG	D750V3	750 MHz Dipole	3/7/2017	Biennial	3/7/2019	1054
SPEAG	D750V3	750 MHz SAR Dipole	1/15/2018	Annual	1/15/2019	1003
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	4d047
SPEAG	D835V2	835 MHz SAR Dipole	1/15/2018	Annual	1/15/2019	4d132
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	4d133
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2018	Annual	2/15/2019	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/22/2018	Annual	5/22/2019	859
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/9/2018	Annual	2/9/2019	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/18/2018	Annual	10/18/2019	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/7/2018	Annual	3/7/2019	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/11/2018	Annual	4/11/2019	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	ES3DV3	SAR Probe	10/22/2018	Annual	10/22/2019	3287
SPEAG	ES3DV3	SAR Probe	3/13/2018	Annual	3/13/2019	3319
SPEAG	ES3DV3	SAR Probe	8/22/2018	Annual	8/22/2019	3332
SPEAG	ES3DV3	SAR Probe	3/27/2018	Annual	3/27/2019	3347
SPEAG	EX3DV4	SAR Probe	2/14/2018	Annual	2/14/2019	3914
SPEAG	EX3DV4	SAR Probe	8/24/2018	Annual	8/24/2019	3949
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	4/18/2018	Annual	4/18/2019	7357
SPEAG	EX3DV4	SAR Probe	5/22/2018	Annual	5/22/2019	7406
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409
SPEAG	EX3DV4	SAR Probe	7/20/2018	Annual	7/20/2019	7410

Note: 1. Each Equipment item was used solely within its respective calibration period.
2. CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

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16 MEASUREMENT UNCERTAINTIES

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

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17 CONCLUSION

17.1 Measurement Conclusion

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

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

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APPENDIX A: SAR TEST DATA

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PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0727M

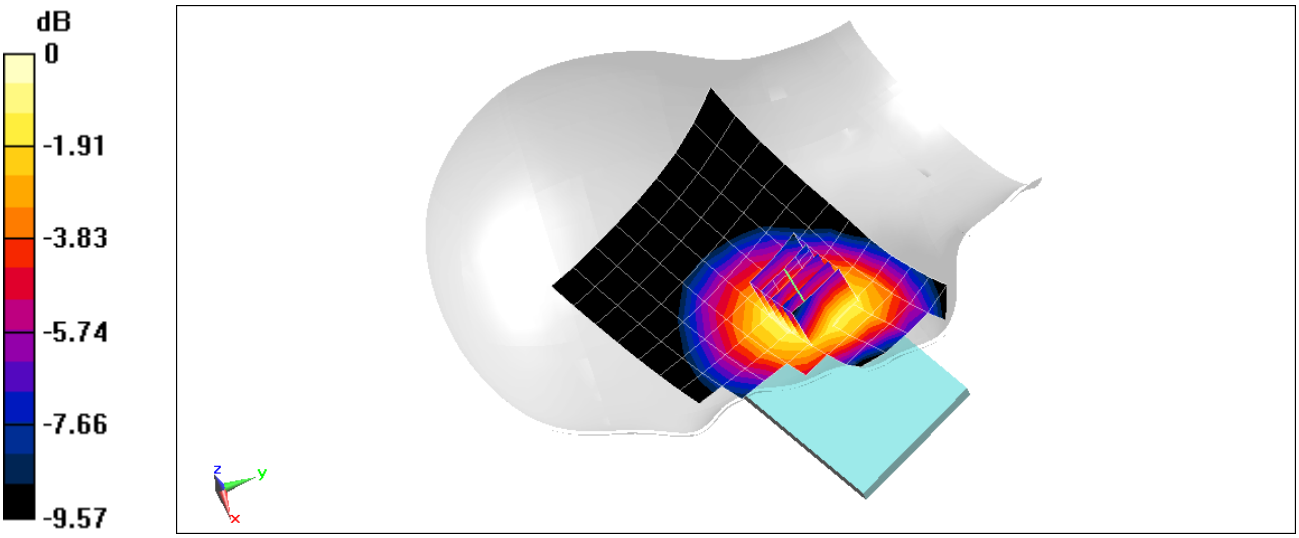
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.891 S/m; ε_r = 40.174; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-17-2018; Ambient Temp: 22.3°C; Tissue Temp: 20.1°C

Probe: ES3DV3 - SN3287; ConvF(6.61, 6.61, 6.61) @ 836.6 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.39 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.269 W/kg
SAR(1 g) = 0.209 W/kg



0 dB = 0.239 W/kg = -6.22 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0666M

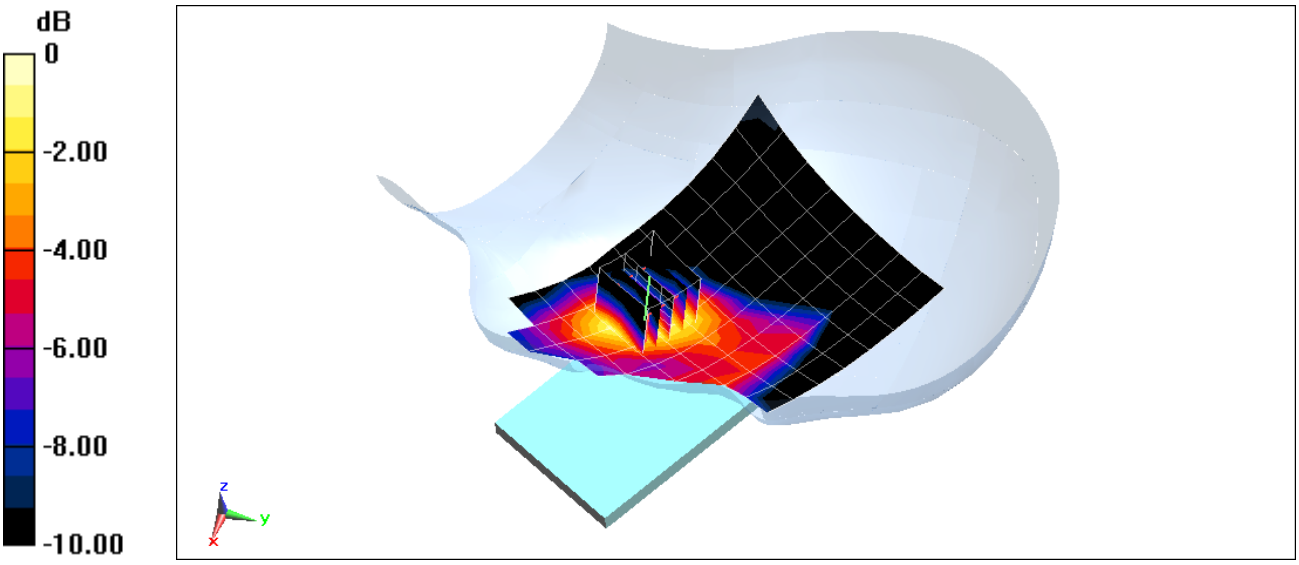
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.419 S/m; ε_r = 40.172; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-19-2018; Ambient Temp: 21.6°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP (Left); Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.962 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.0760 W/kg
SAR(1 g) = 0.048 W/kg



0 dB = 0.0642 W/kg = -11.92 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0727M

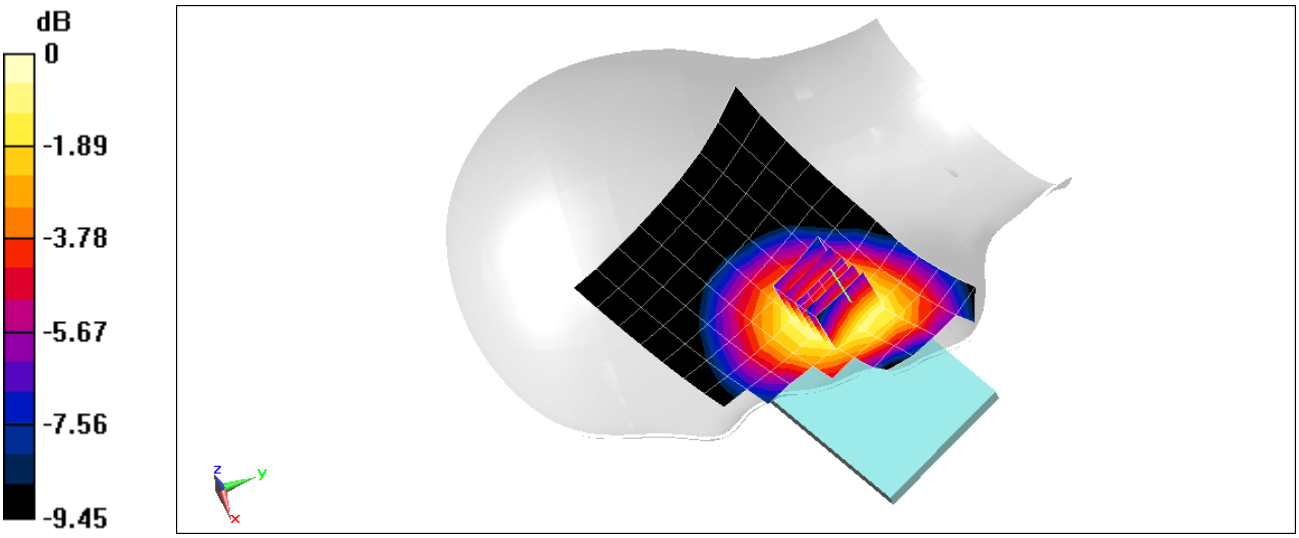
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.891 S/m; ε_r = 40.174; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-17-2018; Ambient Temp: 22.3°C; Tissue Temp: 20.1°C

Probe: ES3DV3 - SN3287; ConvF(6.61, 6.61, 6.61) @ 836.6 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.94 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.389 W/kg
SAR(1 g) = 0.309 W/kg



0 dB = 0.335 W/kg = -4.75 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0727M

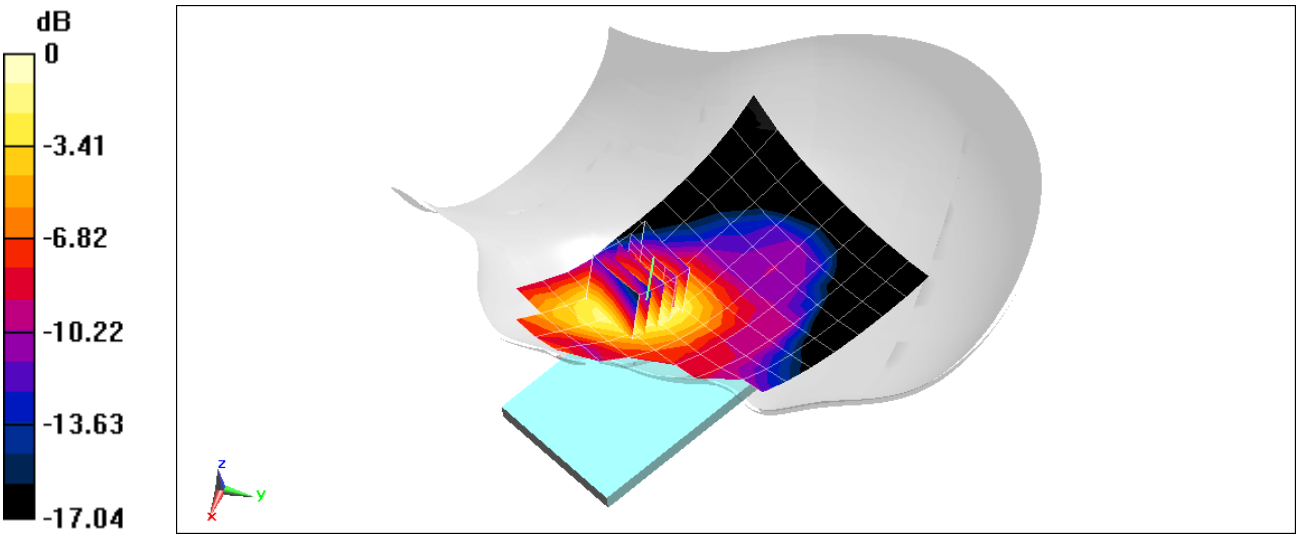
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.362 S/m; ε_r = 39.486; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-14-2018; Ambient Temp: 21.7°C; Tissue Temp: 20.3°C

Probe: ES3DV3 - SN3287; ConvF(5.48, 5.48, 5.48) @ 1732.4 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.8240 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.338 W/kg
SAR(1 g) = 0.226 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0666M

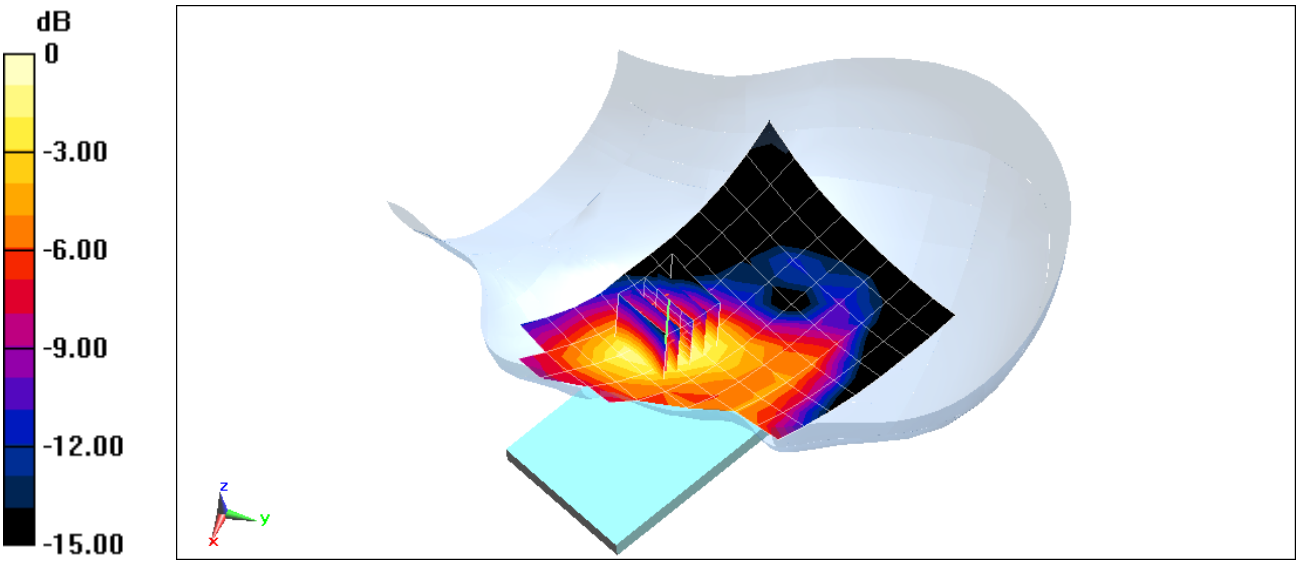
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.419 S/m; ε_r = 40.172; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-19-2018; Ambient Temp: 21.6°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP (Left); Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.00 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.250 W/kg
SAR(1 g) = 0.157 W/kg



0 dB = 0.216 W/kg = -6.66 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0727M

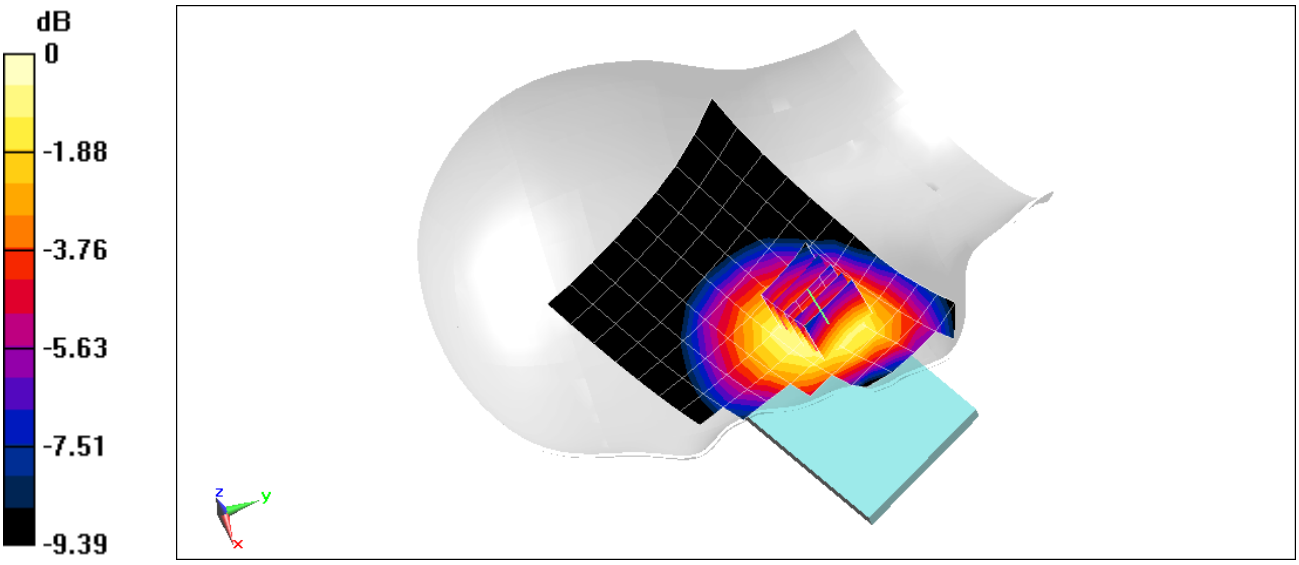
Communication System: UID 0, Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.885 S/m; ε_r = 40.227; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-17-2018; Ambient Temp: 22.3°C; Tissue Temp: 20.1°C

Probe: ES3DV3 - SN3287; ConvF(6.61, 6.61, 6.61) @ 820.1 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Cell. CDMA, Rule Part 90S, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.62 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.363 W/kg
SAR(1 g) = 0.290 W/kg



0 dB = 0.316 W/kg = -5.00 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0727M

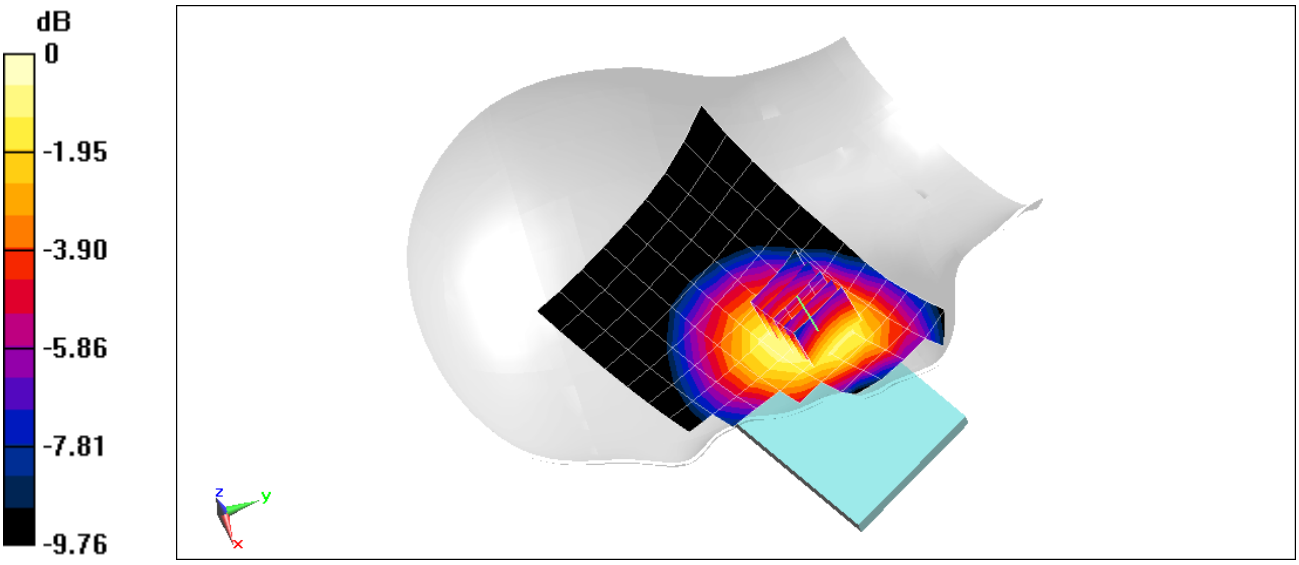
Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.891 S/m; ε_r = 40.174; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-17-2018; Ambient Temp: 22.3°C; Tissue Temp: 20.1°C

Probe: ES3DV3 - SN3287; ConvF(6.61, 6.61, 6.61) @ 836.52 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 = 20.17 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.441 W/kg
SAR(1 g) = 0.347 W/kg



0 dB = 0.378 W/kg = -4.23 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0666M

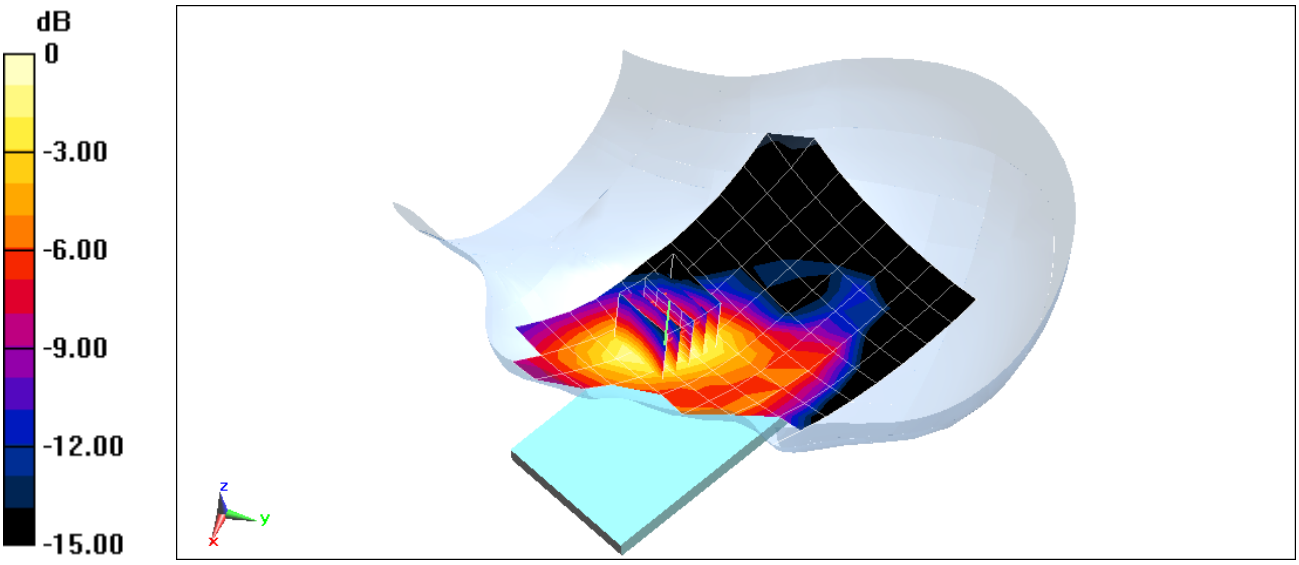
Communication System: UID 0, PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.419 S/m; ε_r = 40.172; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-19-2018; Ambient Temp: 21.6°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1880 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP (Left); Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: PCS CDMA, Left Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.45 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.277 W/kg
SAR(1 g) = 0.173 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

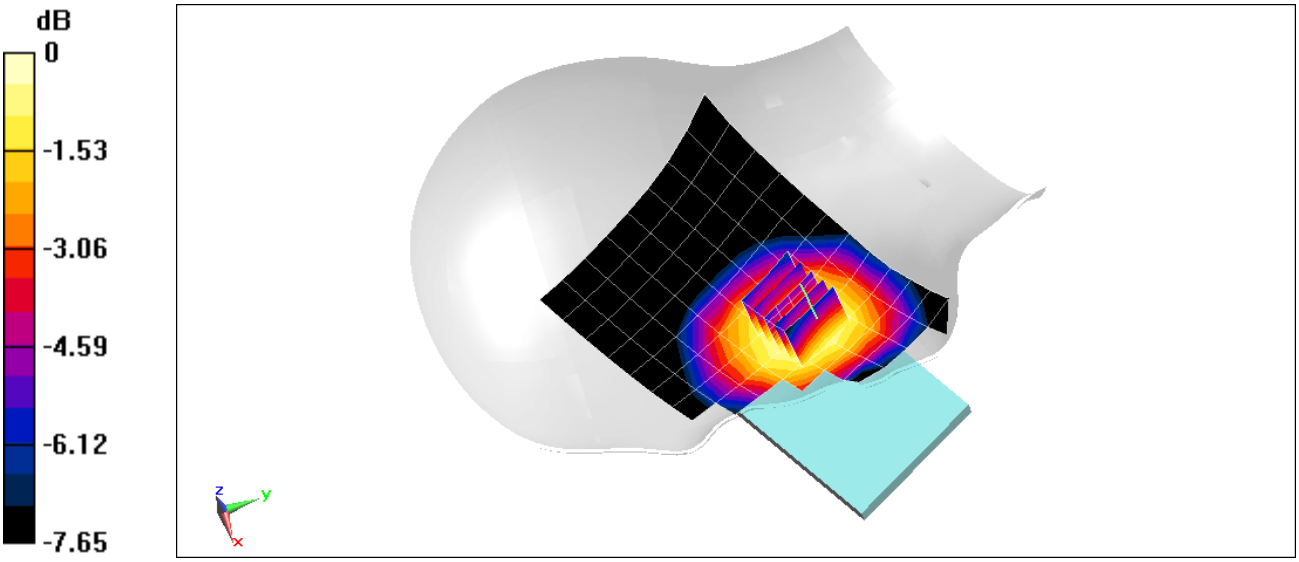
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.853 S/m; ε_r = 42.602; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-19-2018; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: ES3DV3 - SN3287; ConvF(6.76, 6.76, 6.76) @ 680.5 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Right Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.69 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.147 W/kg
SAR(1 g) = 0.123 W/kg



0 dB = 0.132 W/kg = -8.79 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

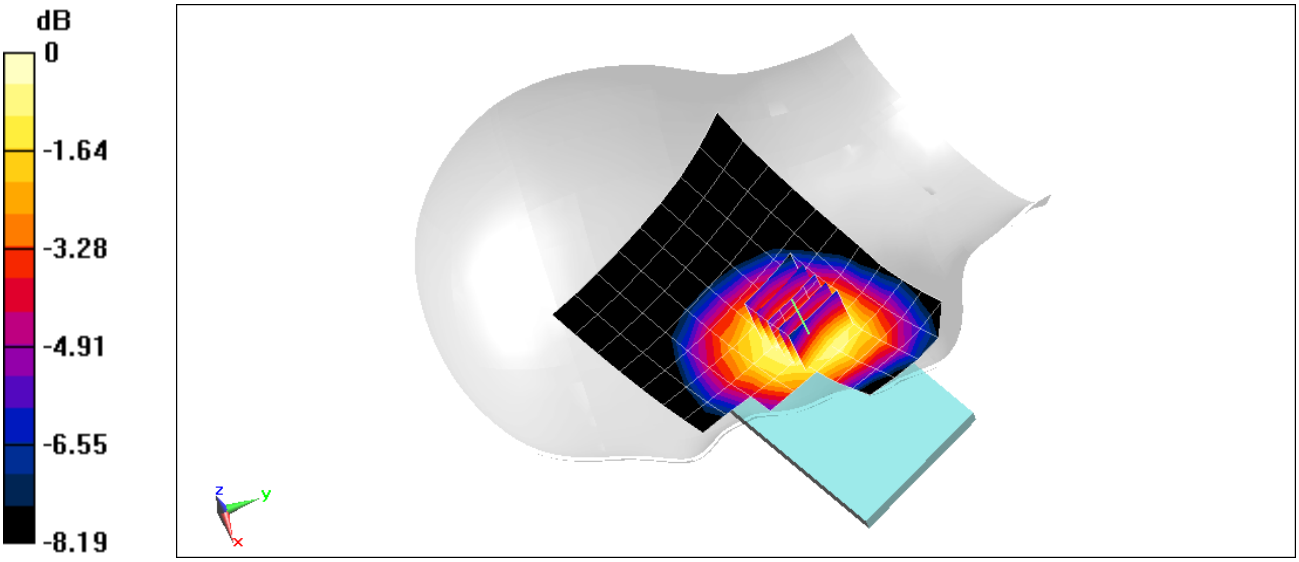
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.862 S/m; ε_r = 42.487; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-19-2018; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: ES3DV3 - SN3287; ConvF(6.76, 6.76, 6.76) @ 707.5 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.82 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.144 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

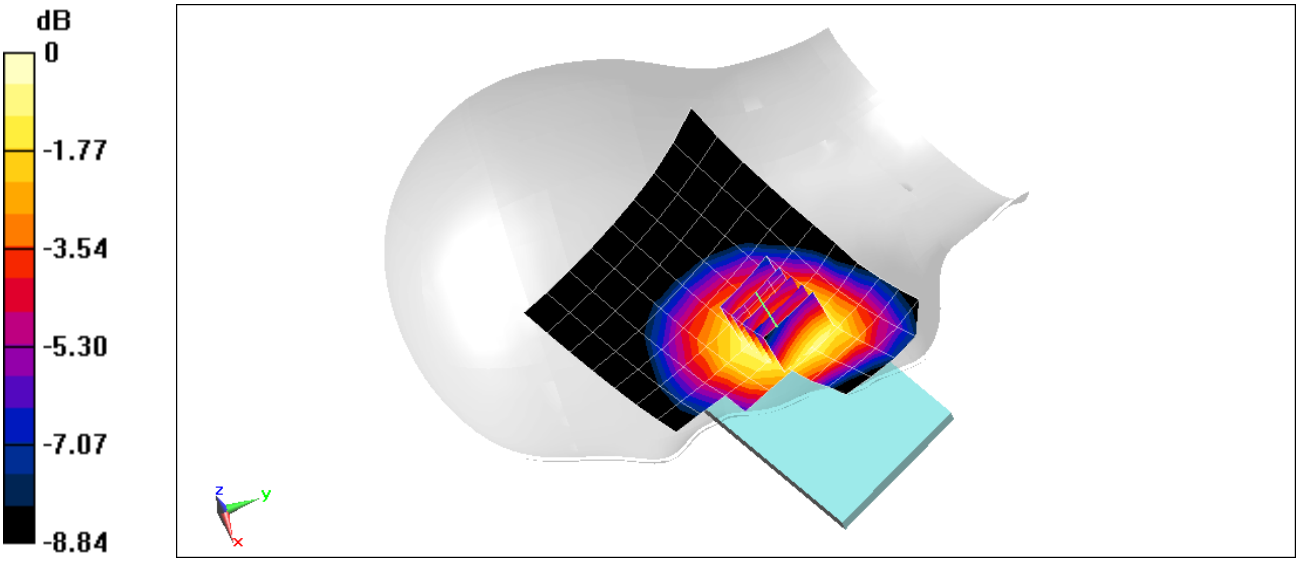
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.89 S/m; ε_r = 42.252; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-19-2018; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: ES3DV3 - SN3287; ConvF(6.76, 6.76, 6.76) @ 782 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.53 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.168 W/kg



0 dB = 0.182 W/kg = -7.40 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

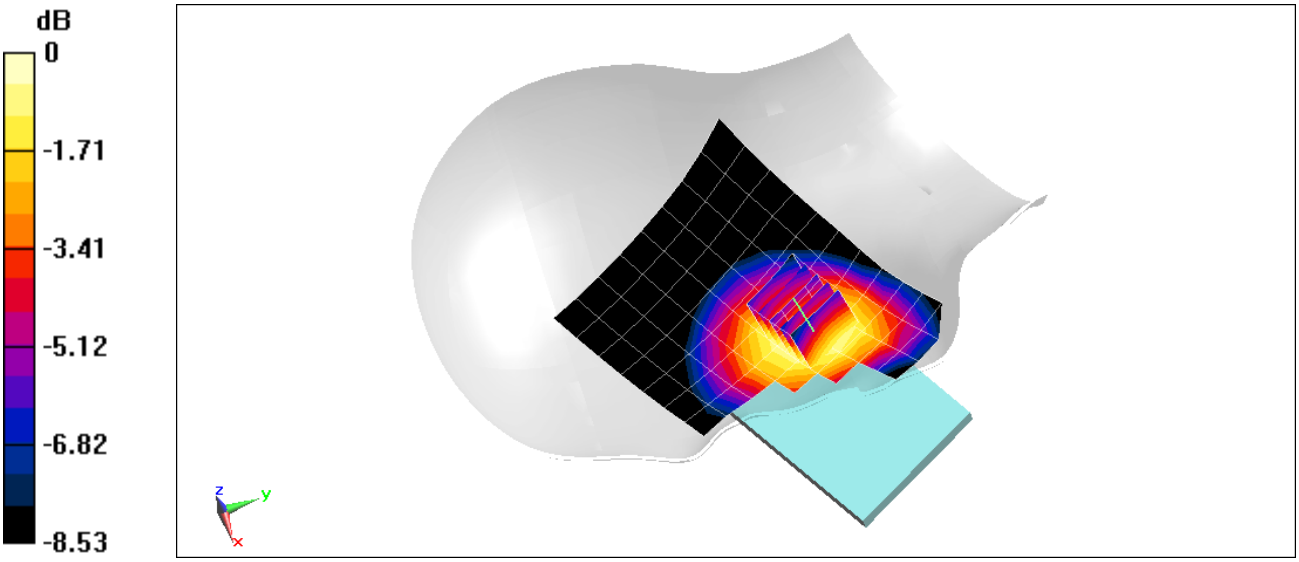
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 793 MHz; σ = 0.894 S/m; ε_r = 42.225; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-19-2018; Ambient Temp: 21.3°C; Tissue Temp: 19.8°C

Probe: ES3DV3 - SN3287; ConvF(6.76, 6.76, 6.76) @ 793 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.73 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.314 W/kg
SAR(1 g) = 0.253 W/kg



0 dB = 0.274 W/kg = -5.62 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

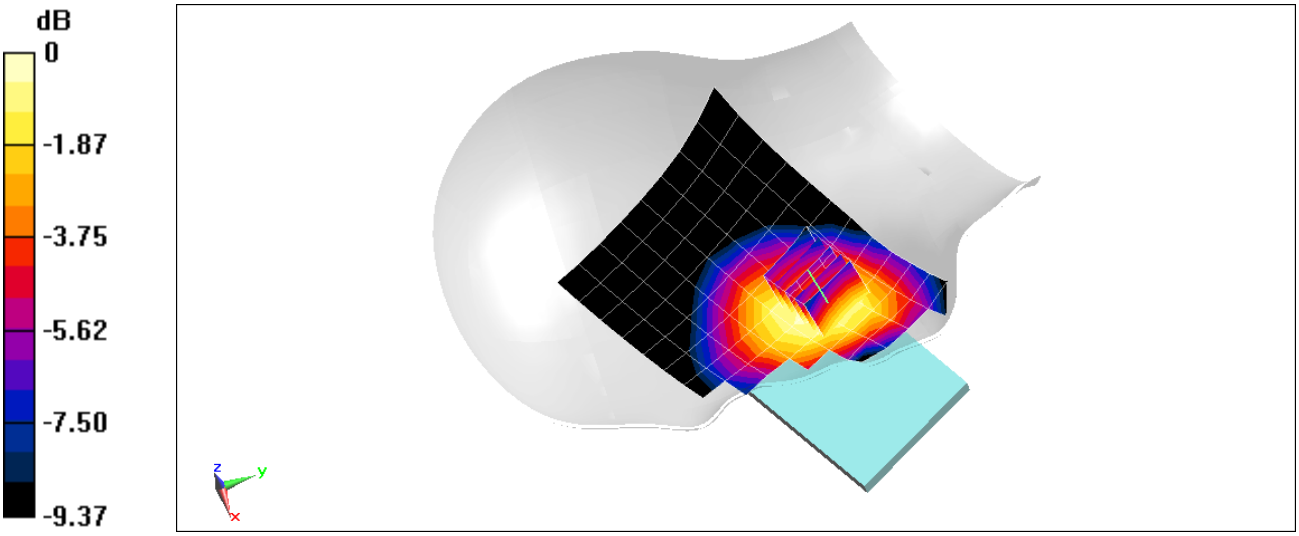
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.889 S/m; ε_r = 40.19; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-17-2018; Ambient Temp: 22.3°C; Tissue Temp: 20.1°C

Probe: ES3DV3 - SN3287; ConvF(6.61, 6.61, 6.61) @ 831.5 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 26 (Cell.), Right Head, Cheek, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.14 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.323 W/kg
SAR(1 g) = 0.255 W/kg



0 dB = 0.278 W/kg = -5.56 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0762M

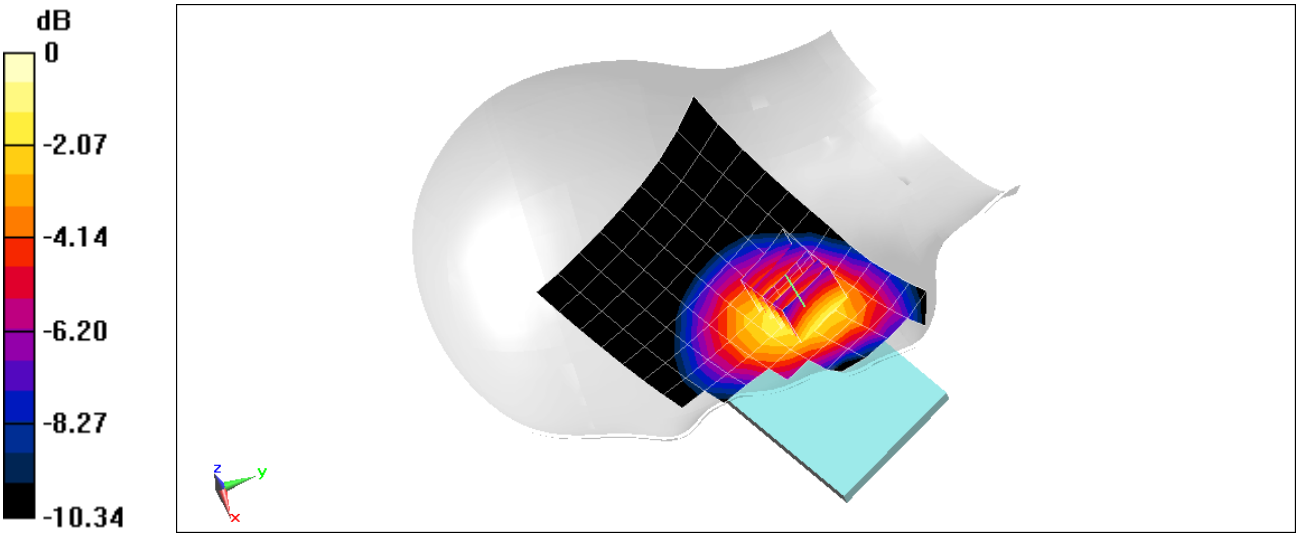
Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.9 S/m; ε_r = 40.496; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 12-24-2018; Ambient Temp: 21.5°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7410; ConvF(9.81, 9.81, 9.81) @ 836.5 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 5 (Cell.), Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.76 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.322 W/kg
SAR(1 g) = 0.257 W/kg



0 dB = 0.299 W/kg = -5.24 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0589M

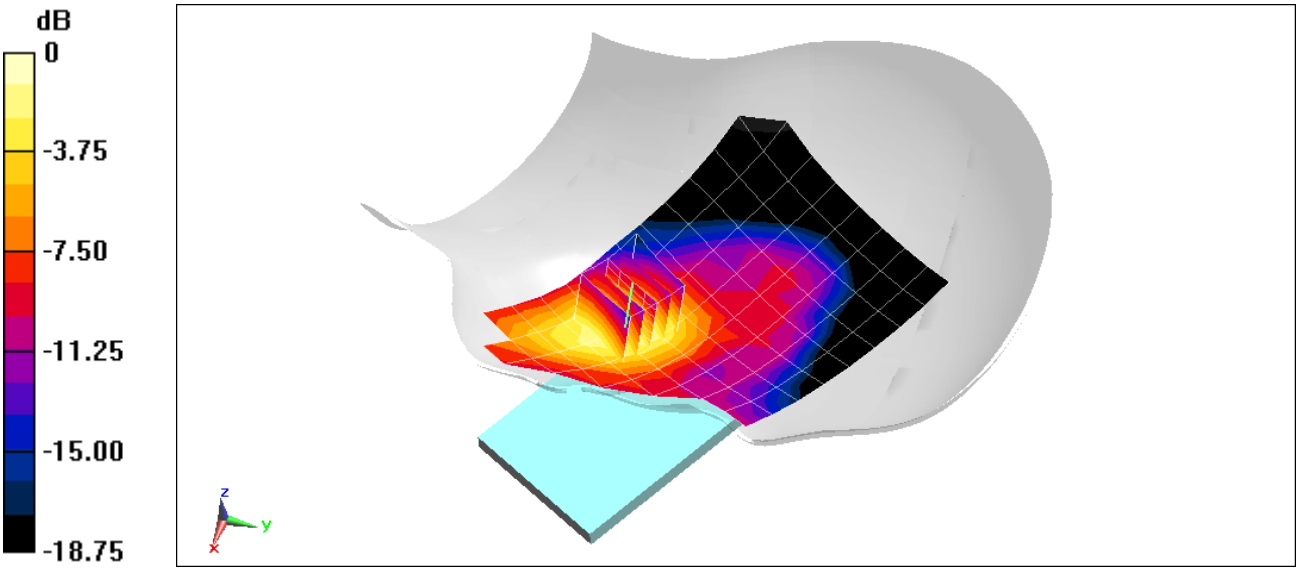
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1745 MHz; σ = 1.371 S/m; ε_r = 39.467; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-14-2018; Ambient Temp: 21.7°C; Tissue Temp: 20.3°C

Probe: ES3DV3 - SN3287; ConvF(5.48, 5.48, 5.48) @ 1745 MHz; Calibrated: 10/22/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 10/18/2018
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS) ULCA, Left Head, Cheek,
PCC: 10 MHz Bandwidth, QPSK, Ch. 132322, 1 RB, 0 RB Offset
SCC: 10 MHz Bandwidth, QPSK, Ch. 132223, 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 = 13.63 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.316 W/kg
SAR(1 g) = 0.207 W/kg



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

DUT: A3LSMG975U; Type: Portable Handset; Serial: 0732M

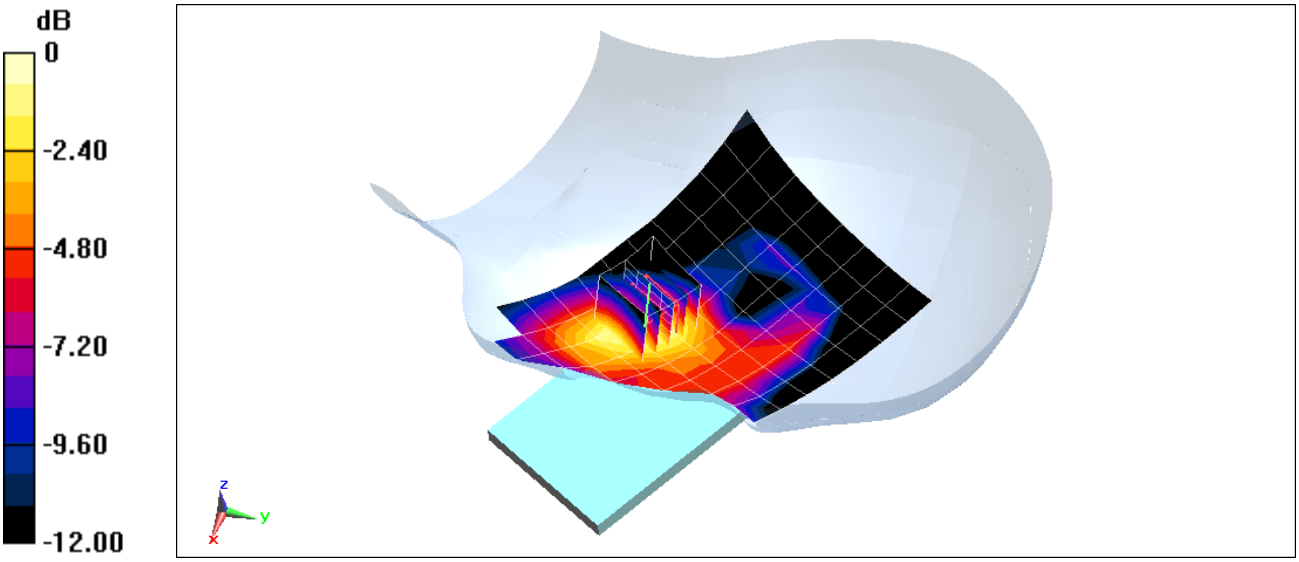
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1860 MHz; σ = 1.399 S/m; ε_r = 40.248; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 12-19-2018; Ambient Temp: 21.6°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7409; ConvF(8.05, 8.05, 8.05) @ 1860 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP (Left); Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.52 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.247 W/kg
SAR(1 g) = 0.157 W/kg



0 dB = 0.207 W/kg = -6.84 dBW/kg