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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:
2/11/19 - 3/10/19
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M1901280020-01-R1.A3L

FCC ID: **A3LSMF900F**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-F900F

Equipment Class	Band & Mode	Tx Frequency	SAR					
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)	1g UMPC Body (W/kg)	10g UMPC Extremity (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.37	0.27	0.50	N/A	0.78	1.72
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.11	0.27	0.73	2.63	1.13	3.11
PCE	UMTS 850	826.40 - 846.60 MHz	0.43	0.27	0.52	N/A	0.43	1.51
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.23	0.69	0.86	2.55	0.79	2.96
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.23	0.45	1.03	3.08	1.38	3.28
PCE	LTE Band 71	665.5 - 695.5 MHz	0.20	0.34	0.71	N/A	0.43	1.31
PCE	LTE Band 12	699.7 - 715.3 MHz	0.25	0.38	0.93	N/A	0.52	1.44
PCE	LTE Band 13	779.5 - 784.5 MHz	0.25	0.27	0.59	N/A	0.70	1.72
PCE	LTE Band 14	790.5 - 795.5 MHz	0.26	0.28	0.57	N/A	0.67	1.62
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.38	0.20	0.64	N/A	0.46	1.49
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.20	0.50	0.87	2.74	0.86	3.29
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.21	0.42	0.91	3.02	1.24	3.29
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.22	0.37	0.78	2.83	1.17	3.29
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.16	0.30	0.91	2.00	1.40	2.73
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.10	0.11	0.84	2.64	1.11	3.24
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A	N/A	N/A
DTS	2.4 GHz WLAN	2412 - 2472 MHz	< 0.1	0.10	0.31	N/A	0.50	3.19
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	< 0.1	0.34	N/A	0.77	0.49	0.77
NII	U-NII-2C	5500 - 5720 MHz	< 0.1	0.54	N/A	0.78	0.74	0.85
NII	U-NII-3	5745 - 5825 MHz	< 0.1	0.15	0.18	N/A	0.26	0.69
DSS/DTS	Bluetooth	2402 - 2480 MHz	< 0.1	< 0.1	< 0.1	N/A	0.14	0.87
Simultaneous SAR per KDB 690783 D01v01r03:			0.69	1.52	1.58	3.85	1.59	3.99

Note: This revised Test Report (S/N: 1M1901280020-01-R1.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.
This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.8 of this report; for North American frequency bands only.
I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.

Randy Ortanez
President

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

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
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 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 - 2472 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
ANT+	Data	2402 - 2480 MHz
MST	Data	555 Hz - 8.33 kHz

1.2 Power Reduction for SAR

This device utilizes a power reduction mechanism for some wireless modes and bands for SAR compliance under portable hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand, 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 and FCC KDB Publication 941225 D07v01r02 were used as a guideline for selecting SAR test distances for this device when being used in phablet and UMPC mini-tablet 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	**34.0**	**34.0**	**33.0**	**31.0**	**28.5**	**28.0**	**26.5**	**24.5**	**23.5**
	Nominal	**33.0**	**33.0**	**32.0**	**30.0**	**27.5**	**27.0**	**25.5**	**23.5**	**22.5**
GSM/GPRS/EDGE 1900	Maximum	**31.5**	**31.5**	**30.5**	**28.0**	**26.0**	**27.0**	**25.5**	**23.5**	**22.5**
	Nominal	**30.5**	**30.5**	**29.5**	**27.0**	**25.0**	**26.0**	**24.5**	**22.5**	**21.5**

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	*3GPP HSDPA*	*3GPP HSUPA*	*3GPP DC-HSDPA*
UMTS Band 5 (850 MHz)	Maximum	**25.5**	**24.5**	**24.5**	**24.5**
	Nominal	**24.5**	**23.5**	**23.5**	**23.5**
UMTS Band 4 (1750 MHz)	Maximum	**25.5**	**24.5**	**24.5**	**24.5**
	Nominal	**24.5**	**23.5**	**23.5**	**23.5**
UMTS Band 2 (1900 MHz)	Maximum	**25.5**	**24.5**	**24.5**	**24.5**
	Nominal	**24.5**	**23.5**	**23.5**	**23.5**

Mode / Band		Modulated Average (dBm)
LTE Band 71	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 12	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 13	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 14	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 26 (Cell)	Maximum	**25.5**
	Nominal	**24.5**
LTE Band 5 (Cell)	Maximum	**25.5**
	Nominal	**24.5**
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	**25.0**
	Nominal	**24.0**
LTE Band 7	Maximum	**24.6**
	Nominal	**23.6**
LTE Band 41	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 38	Maximum	**25.0**
	Nominal	**24.0**

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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*
GPRS/EDGE 1900	Maximum	**29.5**	**28.5**	**26.0**	**24.0**	**27.0**	**25.5**	**23.5**	**22.5**
	Nominal	**28.5**	**27.5**	**25.0**	**23.0**	**26.0**	**24.5**	**22.5**	**21.5**

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	**21.5**	**20.5**	**20.5**	**20.5**
	Nominal	**20.5**	**19.5**	**19.5**	**19.5**

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	**21.0**
	Nominal	**20.0**
LTE Band 2 (PCS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 30	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 7	Maximum	**20.5**
	Nominal	**19.5**
LTE Band 41	Maximum	**23.0**
	Nominal	**22.0**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**

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1.3.3 Reduced 2G/3G/4G Output Power – Grip Sensor 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**	**25.0**	**23.0**	**27.0**	**25.5**	**23.5**	**22.5**
	Nominal	**27.5**	**27.5**	**26.5**	**24.0**	**22.0**	**26.0**	**24.5**	**22.5**	**21.5**

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

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**19.8**
	Nominal	**18.8**
LTE Band 4 (AWS)	Maximum	**19.8**
	Nominal	**18.8**
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	**19.5**
	Nominal	**18.5**
LTE Band 41	Maximum	**21.5**
	Nominal	**20.5**
LTE Band 38	Maximum	**21.0**
	Nominal	**20.0**

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1.3.4 Reduced 2G/3G/4G Output Power – Earjack Active

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

Mode / Band		Modulated Average (dBm)
LTE Band 66 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 4 (AWS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 25 (PCS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 2 (PCS)	Maximum	**21.0**
	Nominal	**20.0**
LTE Band 30	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 7	Maximum	**22.0**
	Nominal	**21.0**
LTE Band 41	Maximum	**25.0**
	Nominal	**24.0**
LTE Band 38	Maximum	**22.0**
	Nominal	**21.0**

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1.3.5 Maximum Bluetooth and SISO/MIMO WLAN Output Power

Mode / Band		Modulated Average - Single Tx Chain Antenna 1 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	20.0						19.0	15.5
	Nominal	19.0						18.0	14.5
IEEE 802.11g (2.4 GHz)	Maximum	16.5	16.0	17.5	18.0	17.5	15.5	12.0	6.5
	Nominal	15.5	15.0	16.5	17.0	16.5	14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5	16.0	17.5	18.0	17.5	15.5	12.0	6.5
	Nominal	15.5	15.0	16.5	17.0	16.5	14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5	14.5	10.0
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5	13.5	9.0

Mode / Band		Modulated Average - Single Tx Chain Antenna 2 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	20.0							18.5
	Nominal	19.0							17.5
IEEE 802.11g (2.4 GHz)	Maximum	16.5	16.0	17.5	18.0	17.5	15.5	12.0	6.5
	Nominal	15.5	15.0	16.5	17.0	16.5	14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5	16.0	17.5	18.0	17.5	15.5	12.0	6.5
	Nominal	15.5	15.0	16.5	17.0	16.5	14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						16.0	13.5
	Nominal	16.0						15.0	12.5

Mode / Band		Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	19.5	19.0	20.5	21.0	20.5	18.5	15.0	9.5
	Nominal	18.5	18.0	19.5	20.0	19.5	17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	19.5	19.0	20.5	21.0	20.5	18.5	15.0	9.5
	Nominal	18.5	18.0	19.5	20.0	19.5	17.5	14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						14.0	
	Nominal	16.0						13.0	

Mode / Band		Modulated Average - Single Tx Chain (dBm)																					
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth				
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	18.0																					
	Nominal	17.0																					
IEEE 802.11n (5 GHz)	Maximum	18.0									15.0	17.0	15.5	15.5	17.0	17.0	17.0	17.0					
	Nominal	17.0									14.0	16.0	14.5	14.5	16.0	16.0	16.0	16.0					
IEEE 802.11ac (5 GHz)	Maximum	18.0									15.0	17.0	15.5	15.5	17.0	17.0	17.0	17.0	13.0	13.0	14.5	16.0	16.0	16.0
	Nominal	17.0									14.0	16.0	14.5	14.5	16.0	16.0	16.0	16.0	12.0	12.0	13.5	15.0	15.0	15.0
IEEE 802.11ax (SU) (5 GHz)	Maximum	16.0									14.0								13.0					
	Nominal	15.0									13.0								12.0					

Mode / Band		Modulated Average - MIMO (dBm)																					
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth				
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	21.0																					
	Nominal	20.0																					
IEEE 802.11n (5 GHz)	Maximum	21.0									18.0	20.0	18.5	18.5	20.0	20.0	20.0	20.0					
	Nominal	20.0									17.0	19.0	17.5	17.5	19.0	19.0	19.0	19.0					
IEEE 802.11ac (5 GHz)	Maximum	21.0									18.0	20.0	18.5	18.5	20.0	20.0	20.0	20.0	13.0	13.0	17.5	19.0	19.0	19.0
	Nominal	20.0									17.0	19.0	17.5	17.5	19.0	19.0	19.0	19.0	12.0	12.0	16.5	18.0	18.0	18.0
IEEE 802.11ax (SU) (5 GHz)	Maximum	16.0									14.0								13.0					
	Nominal	15.0									13.0								12.0					

Mode/Band		Modulated Average (dBm)
Bluetooth	Maximum	16.5
	Nominal	15.5
Bluetooth EDR	Maximum	10.5
	Nominal	9.5
Bluetooth LE 2Mbps	Maximum	7.0
	Nominal	6.0
Bluetooth LE 1Mbps, 125/500kbps	Maximum	5.5
	Nominal	4.5

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

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1.3.6 Reduced WLAN Output Power

Mode / Band		Modulated Average - Single Tx Chain Antenna 1 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0							15.5
	Nominal	16.0							14.5
IEEE 802.11g (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5		10.0
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5		9.0

Mode / Band		Modulated Average - Single Tx Chain Antenna 2 (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0							
	Nominal	16.0							
IEEE 802.11g (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						16.0	13.5
	Nominal	16.0						15.0	12.5

Mode / Band		Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	19.5	19.0	20.0			18.5	15.0	9.5
	Nominal	18.5	18.0	19.0			17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	19.5	19.0	20.0			18.5	15.0	9.5
	Nominal	18.5	18.0	19.0			17.5	14.0	8.5
IEEE 802.11ax (SU) (2.4 GHz)	Maximum	17.0						14.0	
	Nominal	16.0						13.0	

Mode / Band		Modulated Average - Single Tx Chain (dBm)																					
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth				
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	14.0																					
	Nominal	13.0																					
IEEE 802.11n (5 GHz)	Maximum	14.0									14.0												
	Nominal	13.0									13.0												
IEEE 802.11ac (5 GHz)	Maximum	14.0									14.0								13.0		14.0		
	Nominal	13.0									13.0								12.0		13.0		
IEEE 802.11ax (SU) (5 GHz)	Maximum	14.0									14.0								13.0				
	Nominal	13.0									13.0								12.0				

Mode / Band		Modulated Average - MIMO (dBm)																					
		20 MHz Bandwidth									40 MHz Bandwidth								80 MHz Bandwidth				
	Channel	36	40-60	64	100	104-140	144	149	153-161	165	38	46-54	62	102	110-134	142	151	159	42	58	106	122	138	155
IEEE 802.11a (5 GHz)	Maximum	17.0																					
	Nominal	16.0																					
IEEE 802.11n (5 GHz)	Maximum	17.0									17.0												
	Nominal	16.0									16.0												
IEEE 802.11ac (5 GHz)	Maximum	17.0									17.0								13.0		17.0		
	Nominal	16.0									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				

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

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

Mode / Band		Modulated Average - Antenna 1 (dBm)								Modulated Average - Antenna 2 (dBm)								Modulated Average - MIMO (dBm)							
	Channel	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13	1	2	3	4 - 9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	17.0							15.5	17.0								N/A							
	Nominal	16.0							14.5	16.0								N/A							
IEEE 802.11g (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5	16.5	16.0	17.0			15.5	12.0	6.5	19.5	19.0	20.0			18.5	15.0	9.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5	15.5	15.0	16.0			14.5	11.0	5.5	18.5	18.0	19.0			17.5	14.0	8.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5	16.0	17.0			15.5	12.0	6.5	16.5	16.0	17.0			15.5	12.0	6.5	19.5	19.0	20.0			18.5	15.0	9.5
	Nominal	15.5	15.0	16.0			14.5	11.0	5.5	15.5	15.0	16.0			14.5	11.0	5.5	18.5	18.0	19.0			17.5	14.0	8.5
IEEE 802.11ax (SU)	Maximum	13.5	14.5	16.0	17.0	15.5	14.5		10.0	17.0					16.0	13.5		17.0						14.0	
	Nominal	12.5	13.5	15.0	16.0	14.5	13.5		9.0	16.0					15.0	12.5		16.0						13.0	

Mode / Band		Modulated Average - Antenna 1 (dBm)	Modulated Average - Antenna 2 (dBm)	Modulated Average - MIMO (dBm)			
		20 MHz Bandwidth	20 MHz Bandwidth	20 MHz Bandwidth			
	Channel	36 -165	36 -165	36	40-60	64	100 -165
IEEE 802.11a (5 GHz)	Maximum	14.0	14.0	17.0			
	Nominal	13.0	13.0	16.0			
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0	17.0			
	Nominal	13.0	13.0	16.0			
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	17.0			
	Nominal	13.0	13.0	16.0			
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0	14.0	16.0			
	Nominal	13.0	13.0	15.0			

Mode / Band		Modulated Average - Antenna 1 (dBm)					Modulated Average - Antenna 2 (dBm)					Modulated Average - MIMO (dBm)				
		40 MHz Bandwidth					40 MHz Bandwidth					40 MHz Bandwidth				
	Channel	38	46-54	62	102	110-159	38	46-54	62	102	110-159	38	46-54	62	102	110-159
IEEE 802.11n (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ac (5 GHz)	Maximum	14.0					14.0					17.0				
	Nominal	13.0					13.0					16.0				
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0					14.0					14.0				
	Nominal	13.0					13.0					13.0				

Mode / Band		Modulated Average - Antenna 1 (dBm)				Modulated Average - Antenna 2 (dBm)				Modulated Average - MIMO (dBm)			
		80 MHz Bandwidth				80 MHz Bandwidth				80 MHz Bandwidth			
	Channel	42	58	106	122 - 155	42	58	106	122 - 155	42	58	106	122 - 155
IEEE 802.11ac (5 GHz)	Maximum	13.0	13.0	14.0		13.0	13.0	14.0		13.0	13.0	17.0	
	Nominal	12.0	12.0	13.0		12.0	12.0	13.0		12.0	12.0	16.0	
IEEE 802.11ax(SU) (5 GHz)	Maximum	13.0				13.0				13.0			
	Nominal	12.0				12.0				12.0			

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

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

Mode / Band		Modulated Average - Antenna 1 (dBm)									Modulated Average - Antenna 2 (dBm)									Modulated Average - MIMO (dBm)								
	Channel	1	2	3	4 - 9	10	11	12	13		1	2	3	4 - 9	10	11	12	13		1	2	3	4 - 9	10	11	12	13	
IEEE 802.11b (2.4 GHz)	Maximum	14.0									14.0									N/A								
	Nominal	13.0									13.0									N/A								
IEEE 802.11g (2.4 GHz)	Maximum	14.0						12.0	6.5		14.0						12.0	6.5		17.0						15.0	9.5	
	Nominal	13.0						11.0	5.5		13.0						11.0	5.5		16.0						14.0	8.5	
IEEE 802.11n (2.4 GHz)	Maximum	14.0						12.0	6.5		14.0						12.0	6.5		17.0						15.0	9.5	
	Nominal	13.0						11.0	5.5		13.0						11.0	5.5		16.0						14.0	8.5	
IEEE 802.11ax (SU)	Maximum	13.5	14.0						10.0		14.0							13.5		16.0	17.0					14.0		
	Nominal	12.5	13.0						9.0		13.0							12.5		15.0	16.0					13.0		

Mode / Band		Modulated Average - Antenna 1 (dBm)	Modulated Average - Antenna 2 (dBm)	Modulated Average - MIMO (dBm)
		20 MHz Bandwidth	20 MHz Bandwidth	20 MHz Bandwidth
	Channel	36 -165	36 -165	36 / 40-60 / 64 / 100 -165
IEEE 802.11a (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0	14.0	16.0
	Nominal	13.0	13.0	15.0

Mode / Band		Modulated Average - Antenna 1 (dBm)	Modulated Average - Antenna 2 (dBm)	Modulated Average - MIMO (dBm)
		40 MHz Bandwidth	40 MHz Bandwidth	40 MHz Bandwidth
	Channel	38 / 46-54 / 62 / 102 / 110-159	38 / 46-54 / 62 / 102 / 110-159	38 / 46-54 / 62 / 102 / 110-159
IEEE 802.11n (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ac (5 GHz)	Maximum	14.0	14.0	17.0
	Nominal	13.0	13.0	16.0
IEEE 802.11ax(SU) (5 GHz)	Maximum	14.0	14.0	14.0
	Nominal	13.0	13.0	13.0

Mode / Band		Modulated Average - Antenna 1 (dBm)				Modulated Average - Antenna 2 (dBm)				Modulated Average - MIMO (dBm)			
		80 MHz Bandwidth				80 MHz Bandwidth				80 MHz Bandwidth			
	Channel	42	58	106	122 - 155	42	58	106	122 - 155	42	58	106	122 - 155
IEEE 802.11ac (5 GHz)	Maximum	13.0	13.0	14.0		13.0	13.0	14.0		13.0	13.0	17.0	
	Nominal	12.0	12.0	13.0		12.0	12.0	13.0		12.0	12.0	16.0	
IEEE 802.11ax(SU) (5 GHz)	Maximum	13.0				13.0				13.0			
	Nominal	12.0				12.0				12.0			

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

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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 dimention of this device is >160mm and <200mm in closed configuration, it is considered a "Phablet". When it is in open configuration, it is considered a "UMPC Mini-tablet". Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 1-1
Device Edges/Sides for SAR Testing Handset

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	No
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	No
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	No
LTE Band 12	Yes	Yes	No	Yes	Yes	No
LTE Band 13	Yes	Yes	No	Yes	Yes	No
LTE Band 14	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	No
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	Yes	Yes	No	Yes	Yes	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	Yes
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
Bluetooth	Yes	Yes	Yes	No	Yes	No

Table 1-2
Device Edges/Sides for SAR Testing UMPC (Body and Extremity)

Mode	Back	Front	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes	No
GPRS 1900	Yes	Yes	No	Yes	Yes	No
UMTS 850	Yes	Yes	No	Yes	Yes	No
UMTS 1750	Yes	Yes	No	Yes	Yes	No
UMTS 1900	Yes	Yes	No	Yes	Yes	No
LTE Band 71	Yes	Yes	No	Yes	Yes	No
LTE Band 12	Yes	Yes	No	Yes	Yes	No
LTE Band 13	Yes	Yes	No	Yes	Yes	No
LTE Band 14	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	No
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	No
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	No
LTE Band 30	Yes	Yes	No	Yes	Yes	No
LTE Band 7	Yes	Yes	No	Yes	Yes	No
LTE Band 41	Yes	Yes	No	Yes	Yes	No
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
5 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	No
Bluetooth	Yes	Yes	Yes	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR, phablet SAR or UMPC mini-tablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III, FCC KDB Publication 941225 D07v01r02 and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, U-NII-1, U-NII-2A, U-NII-2C operations are disabled.

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1.5 Near Field Communications (NFC) Antenna

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

1.6 Simultaneous Transmission Capabilities

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

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

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Mini Tablet	Notes
1	GSM voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
2	GSM voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
3	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
4	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
5	GSM voice + 2.4 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
6	GSM voice + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
7	GSM voice + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	N/A	Yes	Yes	
8	GSM voice + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	N/A	Yes	Yes	
9	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
10	UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
11	UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
12	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
13	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
14	UMTS + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
15	UMTS + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
16	UMTS + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
17	UMTS + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
18	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
19	LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
20	LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
21	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
22	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
23	LTE + 2.4 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
24	LTE + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
25	LTE + 2.4 GHz WI-FI + 5 GHz WI-FI	Yes	Yes	Yes	Yes	Yes	
26	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes	Yes	Yes	Yes	Yes	
27	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
28	GPRS/EDGE + 2.4 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
29	GPRS/EDGE + 5 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
30	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
31	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
32	GPRS/EDGE + 2.4 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
33	GPRS/EDGE + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
34	GPRS/EDGE + 2.4 GHz WI-FI + 5 GHz WI-FI	N/A	N/A	Yes	Yes	Yes	
35	GPRS/EDGE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	N/A	N/A	Yes	Yes	Yes	
36	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.

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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.

This device supports channel 1-13 for 2.4 GHz WLAN. However, due to the reduced output power for channels 12 and 13, channels 1, 6, and 11 were considered for SAR testing per KDB 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.

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.

(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.

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

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for 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.

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. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information)

This device supports 64QAM on the uplink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64QAM 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 LTE Carrier Aggregation (CA) for LTE Band 66 and LTE B7 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

1.8 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01, D07v01r02 (2G/3G/4G Hotspot and UMPC Mini-Tablet)
- 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)
- 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 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 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 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
UE Category	DL UE Cat 18 (QPSK, 16QAM, 64QAM, 256QAM); UL UE Cat 13 (QPSK, 16QAM, 64QAM)				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR	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 as shown in Section 9 and Appendix H. All other uplink communications are identical to the Release 8 specifications. Uplink communications are done on the PCC unless otherwise specified. The following LTE Release 14 Features are not supported: Relay, HetNet, Enhanced eICIC, WiFi Offloading, 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:

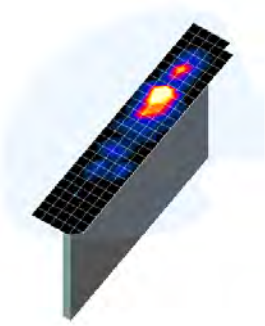

Figure 4-1
Sample SAR Area Scan

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].

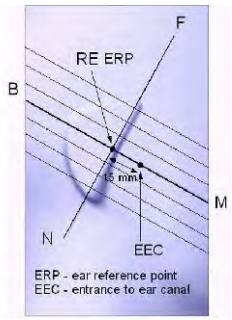

Figure 5-1
Close-Up Side view of ERP

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

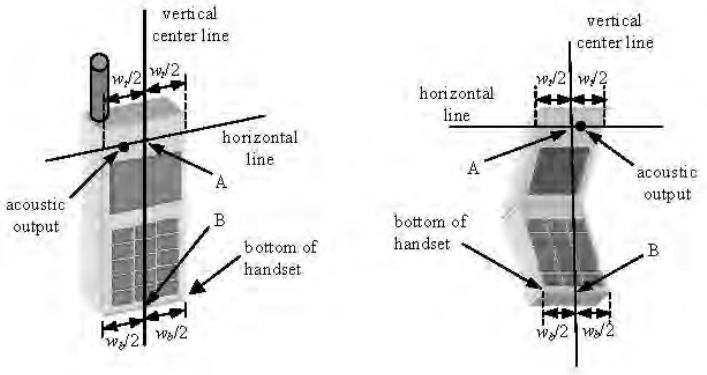

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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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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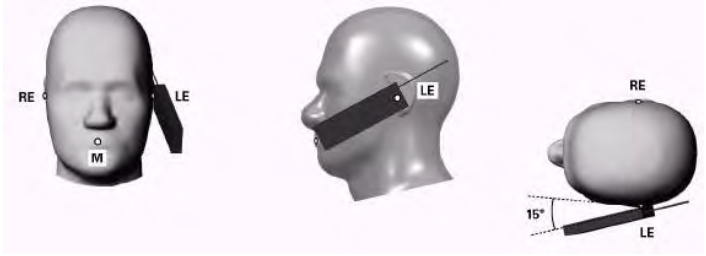

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

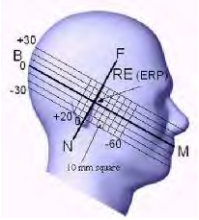

Figure 6-3
Side view w/ relevant markings

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.

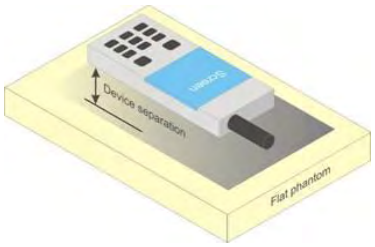

Figure 6-4
Sample Body-Worn Diagram

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 UMPCs or UMPC UMPCs that support voice

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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 UMPC 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 UMPC 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.

6.10 UMPC Mini-Tablet Configurations

Small hand-held tablets and devices of similar form factors that are designed primarily for interactive hand-held use next to or near the body of users require body SAR and extremity SAR evaluation. This type of mini-tablets is normally optimized for mobile web access and multimedia use. UMPC test procedures are applicable to devices with a display and overall diagonal dimension ≤ 20 cm. Devices are to be setup according to KDB publication 941225 D07v01r02 requirements and are configured with maximum output power during SAR assessment for a worst case SAR evaluation.

Per KDB Publication 941225 D07v01r02, UMPC mini-tablet devices must be tested on all surfaces and edges with an antenna <=25 mm from that surface or edge. A test separation distance of 10 mm may be considered for 1g SAR, with the addition of 10g SAR measurement at 0 mm test separation distance for all measured 1g (10mm) SAR configurations to address hand exposure.

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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 UMTS

8.4.1 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.

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8.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

8.4.3 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.

8.4.4 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.

8.4.5 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.

8.4.6 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.

8.5 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).

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8.5.1 Spectrum Plots for RB Configurations

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

8.5.2 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.

8.5.3 A-MPR

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

8.5.4 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.

8.5.5 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.

8.5.6 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

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carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.6 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.

8.6.1 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.

8.6.2 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.

8.6.3 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.

8.6.4 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 UMPC, procedures for initial test position can be applied. Using the transmission

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mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.5 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.

8.6.6 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.

8.6.7 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

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802.11 mode is considered for SAR measurements (See Section 8.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.8 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.

8.6.9 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 GSM Conducted Powers

Table 9-1
Maximum Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	32.98	32.83	32.15	**29.65**	27.63	26.90	25.45	23.20	22.02
	190	33.06	32.88	31.86	**29.88**	28.21	27.08	25.60	23.50	22.58
	251	33.38	33.08	31.81	**29.93**	27.54	27.15	25.45	23.40	22.14
GSM 1900	512	29.94	29.91	**28.82**	26.88	24.83	25.82	24.50	22.37	21.31
	661	29.82	29.79	**28.80**	26.75	24.62	25.61	24.40	22.40	20.98
	810	29.73	29.72	**28.72**	26.71	24.38	25.55	24.05	22.31	20.76

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.95	23.80	26.13	**25.39**	24.62	17.87	19.43	18.94	19.01
	190	24.03	23.85	25.84	**25.62**	25.20	18.05	19.58	19.24	19.57
	251	24.35	24.05	25.79	**25.67**	24.53	18.12	19.43	19.14	19.13
GSM 1900	512	20.91	20.88	**22.80**	22.62	21.82	16.79	18.48	18.11	18.30
	661	20.79	20.76	**22.78**	22.49	21.61	16.58	18.38	18.14	17.97
	810	20.70	20.69	**22.70**	22.45	21.37	16.52	18.03	18.05	17.75
GSM 850	**Frame Avg.Targets:**	23.97	23.97	25.98	**25.74**	24.49	17.97	19.48	19.24	19.49
GSM 1900		21.47	21.47	**23.48**	22.74	21.99	16.97	18.48	18.24	18.49

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Table 9-2
Reduced Conducted Powers- Hotspot Mode Active

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.13	**27.13**	25.59	23.45	26.12	24.42	22.26	21.20
	661	28.07	**27.08**	25.40	22.63	25.83	24.33	22.26	20.91
	810	27.64	**26.91**	24.97	22.09	25.40	23.93	22.33	20.68

Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				*EDGE Data (8-PSK)*			
Band	**Channel**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.10	**21.11**	21.33	20.44	17.09	18.40	18.00	18.19
	661	19.04	**21.06**	21.14	19.62	16.80	18.31	18.00	17.90
	810	18.61	**20.89**	20.71	19.08	16.37	17.91	18.07	17.67
GSM 1900	**Frame Avg.Targets:**	19.47	**21.48**	20.74	19.99	16.97	18.48	18.24	18.49

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Table 9-3
Reduced Conducted Powers- Grip Sensor 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	27.23	27.40	**26.23**	24.78	22.35	25.98	24.20	22.14	21.25
	661	27.22	27.24	**26.33**	24.57	21.74	25.65	24.10	22.37	20.99
	810	27.12	26.89	**26.17**	24.08	22.06	25.85	23.82	22.16	20.63

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	18.20	18.37	**20.21**	20.52	19.34	16.95	18.18	17.88	18.24
	661	18.19	18.21	**20.31**	20.31	18.73	16.62	18.08	18.11	17.98
	810	18.09	17.86	**20.15**	19.82	19.05	16.82	17.80	17.90	17.62
GSM 1900	**Frame Avg.Targets:**	18.47	18.47	**20.48**	19.74	18.99	16.97	18.48	18.24	18.49

Note:

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

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

Figure 9-1
Power Measurement Setup

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9.2 UMTS Conducted Powers

Table 9-4
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	24.17	24.19	24.21	24.14	24.17	24.08	24.35	24.32	24.30	-
99		12.2 kbps AMR	24.25	24.25	24.28	24.12	24.15	24.19	24.24	24.07	24.05	-
6	HSDPA	Subtest 1	23.13	23.28	23.42	23.40	23.49	23.23	23.24	23.26	23.14	0
6		Subtest 2	23.16	23.30	23.44	23.41	23.48	23.22	23.29	23.29	23.14	0
6		Subtest 3	22.64	22.81	22.94	22.90	23.00	22.75	22.80	22.78	22.62	0.5
6		Subtest 4	22.63	22.78	22.94	22.91	22.98	22.72	22.76	22.75	22.61	0.5
6	HSUPA	Subtest 1	23.16	23.31	23.49	23.43	23.48	23.32	23.30	23.32	23.09	0
6		Subtest 2	21.16	21.30	21.45	21.45	21.47	21.33	21.49	21.50	21.39	2
6		Subtest 3	22.14	22.32	22.42	22.41	22.50	22.37	22.31	22.42	22.13	1
6		Subtest 4	21.13	21.29	21.44	21.50	21.44	21.39	21.29	21.32	21.11	2
6		Subtest 5	23.15	23.33	23.48	23.48	23.47	23.41	23.35	23.31	23.13	0
8	DC-HSDPA	Subtest 1	23.11	23.30	23.44	23.33	23.42	23.16	23.22	23.23	23.11	0
8		Subtest 2	23.09	23.29	23.42	23.35	23.42	23.16	23.28	23.25	23.13	0
8		Subtest 3	22.95	22.80	22.90	22.86	22.96	22.71	22.81	22.80	22.63	0.5
8		Subtest 4	22.99	22.82	22.89	22.83	22.90	22.64	22.79	22.77	22.65	0.5

Table 9-5
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	20.18	20.26	19.86	20.59	20.41	20.41	-
99		12.2 kbps AMR	20.19	20.26	19.95	20.61	20.51	20.42	-
6	HSDPA	Subtest 1	19.16	19.23	18.98	19.55	19.56	19.42	0
6		Subtest 2	19.05	19.16	18.92	19.55	19.58	19.41	0
6		Subtest 3	18.52	18.62	18.38	19.07	19.11	18.98	0.5
6		Subtest 4	18.47	18.60	18.36	19.09	19.12	18.97	0.5
6	HSUPA	Subtest 1	18.83	18.89	18.74	19.43	19.45	19.29	0
6		Subtest 2	16.75	16.81	16.61	17.37	17.38	17.26	2
6		Subtest 3	17.73	17.81	17.60	18.36	18.39	18.25	1
6		Subtest 4	16.73	16.82	16.64	17.35	17.40	17.26	2
6		Subtest 5	18.25	18.33	18.12	18.88	18.91	18.78	0
8	DC-HSDPA	Subtest 1	19.07	19.14	18.96	19.57	19.62	19.39	0
8		Subtest 2	19.03	19.13	18.97	19.56	19.63	19.42	0
8		Subtest 3	18.61	18.65	18.38	19.12	19.18	18.99	0.5
8		Subtest 4	18.62	18.69	18.42	19.13	19.20	19.01	0.5

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Table 9-6
Reduced Conducted Powers - Grip Sensor Active

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	19.63	19.80	19.45	19.63	19.68	19.55	-
99		12.2 kbps AMR	19.68	19.80	19.44	19.66	19.54	19.59	-
6	HSDPA	Subtest 1	18.18	18.30	18.05	18.80	18.85	18.70	0
6		Subtest 2	18.20	18.29	18.06	18.79	18.86	18.70	0
6		Subtest 3	17.68	17.79	17.56	18.32	18.35	18.20	0.5
6		Subtest 4	17.70	17.80	17.56	18.33	18.35	18.16	0.5
6	HSUPA	Subtest 1	18.21	18.32	18.11	18.86	18.98	18.79	0
6		Subtest 2	16.23	16.34	16.11	16.99	17.15	16.88	2
6		Subtest 3	17.23	17.39	17.15	17.90	18.09	17.83	1
6		Subtest 4	16.32	16.45	16.21	16.93	17.15	16.85	2
6		Subtest 5	17.75	17.81	17.60	18.45	18.55	18.37	0
8	DC-HSDPA	Subtest 1	18.34	18.41	18.23	18.84	18.89	18.66	0
8		Subtest 2	18.30	18.40	18.24	18.83	18.90	18.69	0
8		Subtest 3	17.88	17.92	17.65	18.39	18.45	18.26	0.5
8		Subtest 4	17.89	17.96	17.69	18.40	18.47	18.28	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 9-2
Power Measurement Setup

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9.3 LTE Conducted Powers

9.3.1 LTE Band 71

Table 9-7
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	**24.62**	0	0
	1	50	24.52		0
	1	99	24.48		0
	50	0	**23.75**	0-1	1
	50	25	23.70		1
	50	50	23.71		1
	100	0	23.68		1
16QAM	1	0	24.20	0-1	1
	1	50	24.10		1
	1	99	23.82		1
	50	0	22.70	0-2	2
	50	25	22.68		2
	50	50	22.67		2
	100	0	22.56		2
64QAM	1	0	22.99	0-2	2
	1	50	22.91		2
	1	99	22.84		2
	50	0	21.78	0-3	3
	50	25	21.79		3
	50	50	21.77		3
	100	0	21.69		3

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

Table 9-8
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	24.43	0	0
	1	36	24.35		0
	1	74	24.41		0
	36	0	23.62	0-1	1
	36	18	23.65		1
	36	37	23.60		1
	75	0	23.62		1
16QAM	1	0	24.07	0-1	1
	1	36	24.09		1
	1	74	24.08		1
	36	0	22.57	0-2	2
	36	18	22.57		2
	36	37	22.58		2
	75	0	22.59		2
64QAM	1	0	22.56	0-2	2
	1	36	22.53		2
	1	74	22.58		2
	36	0	21.62	0-3	3
	36	18	21.64		3
	36	37	21.63		3
	75	0	21.60		3

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

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Table 9-9
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	24.42	24.44	24.18	0	0
	1	25	24.29	24.30	24.29		0
	1	49	24.32	24.43	24.30		0
	25	0	23.40	23.41	23.43	0-1	1
	25	12	23.42	23.42	23.43		1
	25	25	23.39	23.39	23.38		1
	50	0	23.36	23.41	23.40		1
16QAM	1	0	23.60	23.92	23.82	0-1	1
	1	25	23.66	23.87	23.81		1
	1	49	23.58	23.98	23.88		1
	25	0	22.43	22.44	22.49	0-2	2
	25	12	22.41	22.46	22.44		2
	25	25	22.39	22.47	22.46		2
	50	0	22.34	22.39	22.43		2
64QAM	1	0	22.40	22.51	22.34	0-2	2
	1	25	22.34	22.38	22.41		2
	1	49	22.30	22.55	22.36		2
	25	0	21.49	21.46	21.45	0-3	3
	25	12	21.45	21.45	21.42		3
	25	25	21.44	21.43	21.44		3
	50	0	21.39	21.42	21.46		3

Table 9-10
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	24.17	24.11	24.32	0	0
	1	12	24.26	24.27	24.48		0
	1	24	24.25	24.29	24.44		0
	12	0	23.45	23.34	23.38	0-1	1
	12	6	23.46	23.44	23.47		1
	12	13	23.41	23.43	23.50		1
	25	0	23.41	23.47	23.38		1
16QAM	1	0	23.50	23.57	23.72	0-1	1
	1	12	23.59	23.73	23.85		1
	1	24	23.65	23.72	23.80		1
	12	0	22.37	22.36	22.50	0-2	2
	12	6	22.47	22.44	22.58		2
	12	13	22.47	22.48	22.64		2
	25	0	22.50	22.51	22.34		2
64QAM	1	0	22.36	22.46	22.49	0-2	2
	1	12	22.48	22.62	22.58		2
	1	24	22.55	22.63	22.55		2
	12	0	21.41	21.40	21.29	0-3	3
	12	6	21.48	21.52	21.38		3
	12	13	21.50	21.51	21.43		3
	25	0	21.48	21.44	21.35		3

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9.3.2 LTE Band 12

Table 9-11
LTE Band 12 Conducted Powers - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	23.81	0	0
	1	25	**24.26**		0
	1	49	24.12		0
	25	0	**23.48**	0-1	1
	25	12	23.43		1
	25	25	23.31		1
	50	0	23.43		1
16QAM	1	0	23.14	0-1	1
	1	25	23.54		1
	1	49	23.55		1
	25	0	22.48	0-2	2
	25	12	22.40		2
	25	25	22.42		2
	50	0	22.38		2
64QAM	1	0	22.01	0-2	2
	1	25	22.41		2
	1	49	22.51		2
	25	0	21.47	0-3	3
	25	12	21.48		3
	25	25	21.44		3
	50	0	21.45		3

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

Table 9-12
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	23.79	24.36	24.27	0	0
	1	12	23.70	24.50	24.00		0
	1	24	23.93	24.40	23.80		0
	12	0	23.41	23.45	23.39	0-1	1
	12	6	23.53	23.54	23.48		1
	12	13	23.44	23.53	23.45		1
	25	0	23.48	23.52	23.40		1
16QAM	1	0	23.09	23.44	23.64	0-1	1
	1	12	22.81	23.58	23.35		1
	1	24	23.25	23.54	23.07		1
	12	0	22.46	22.48	22.61	0-2	2
	12	6	22.52	22.59	22.70		2
	12	13	22.53	22.55	22.61		2
	25	0	22.56	22.52	22.46		2
64QAM	1	0	21.93	22.65	22.43	0-2	2
	1	12	21.87	22.78	22.09		2
	1	24	22.12	22.71	21.78		2
	12	0	21.49	21.55	21.40	0-3	3
	12	6	21.65	21.64	21.46		3
	12	13	21.57	21.60	21.42		3
	25	0	21.53	21.58	21.48		3

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Table 9-13
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	23.82	24.28	23.83	0	0
	1	7	23.63	24.44	23.65		0
	1	14	23.66	24.36	23.66		0
	8	0	23.41	23.44	23.34	0-1	1
	8	4	23.47	23.51	23.45		1
	8	7	23.46	23.47	23.37		1
	15	0	23.50	23.48	23.42		1
16QAM	1	0	22.99	23.84	23.26	0-1	1
	1	7	22.81	23.83	22.92		1
	1	14	22.62	23.87	22.99		1
	8	0	22.46	22.57	22.48	0-2	2
	8	4	22.54	22.67	22.58		2
	8	7	22.45	22.62	22.50		2
	15	0	22.40	22.50	22.52		2
64QAM	1	0	21.67	22.37	22.17	0-2	2
	1	7	21.62	22.44	21.91		2
	1	14	21.65	22.46	21.92		2
	8	0	21.48	21.50	21.34	0-3	3
	8	4	21.60	21.59	21.44		3
	8	7	21.57	21.58	21.49		3
	15	0	21.62	21.48	21.48		3

Table 9-14
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	23.81	23.99	23.60	0	0
	1	2	23.83	24.03	23.67		0
	1	5	23.66	24.10	23.66		0
	3	0	23.74	23.68	23.67		0
	3	2	23.76	23.72	23.69		0
	3	3	23.69	23.65	23.65		0
	6	0	23.38	23.34	23.34	0-1	1
16QAM	1	0	22.98	22.95	22.95	0-1	1
	1	2	23.03	23.02	23.02		1
	1	5	22.88	23.03	23.03		1
	3	0	22.94	22.92	22.68		1
	3	2	22.94	22.68	22.72		1
	3	3	22.87	22.79	22.68		1
	6	0	22.38	22.36	22.36	0-2	2
64QAM	1	0	21.73	21.58	21.88	0-2	2
	1	2	21.76	21.93	21.94		2
	1	5	21.55	21.91	21.91		2
	3	0	21.82	21.87	21.82		2
	3	2	21.83	21.94	21.87		2
	3	3	21.78	21.86	21.82		2
	6	0	21.47	21.42	21.38	0-3	3

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9.3.3 LTE Band 13

Table 9-15
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	23.91	0	0
	1	25	23.90		0
	1	49	**24.02**		0
	25	0	**23.11**	0-1	1
	25	12	23.08		1
	25	25	23.09		1
	50	0	23.08		1
16QAM	1	0	23.22	0-1	1
	1	25	23.25		1
	1	49	23.32		1
	25	0	22.11	0-2	2
	25	12	22.13		2
	25	25	22.10		2
	50	0	22.09		2
64QAM	1	0	22.30	0-2	2
	1	25	22.16		2
	1	49	22.19		2
	25	0	21.09	0-3	3
	25	12	21.08		3
	25	25	21.06		3
	50	0	21.11		3

Table 9-16
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	23.94	0	0
	1	12	23.88		0
	1	24	23.87		0
	12	0	23.01	0-1	1
	12	6	22.99		1
	12	13	22.98		1
	25	0	22.95		1
16QAM	1	0	23.20	0-1	1
	1	12	23.13		1
	1	24	23.17		1
	12	0	22.13	0-2	2
	12	6	22.14		2
	12	13	22.11		2
	25	0	21.99		2
64QAM	1	0	22.02	0-2	2
	1	12	22.00		2
	1	24	21.93		2
	12	0	20.92	0-3	3
	12	6	20.88		3
	12	13	20.91		3
	25	0	20.95		3

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

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9.3.4 LTE Band 14

Table 9-17
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	**24.23**	0	0
	1	25	24.17		0
	1	49	24.11		0
	25	0	23.28	0-1	1
	25	12	**23.30**		1
	25	25	23.05		1
	50	0	23.19		1
16QAM	1	0	23.45	0-1	1
	1	25	23.04		1
	1	49	23.15		1
	25	0	22.39	0-2	2
	25	12	22.28		2
	25	25	22.07		2
	50	0	22.25		2
64QAM	1	0	22.26	0-2	2
	1	25	22.40		2
	1	49	22.15		2
	25	0	21.36	0-3	3
	25	12	21.38		3
	25	25	21.12		3
	50	0	21.23		3

Table 9-18
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	23.95	0	0
	1	12	23.97		0
	1	24	23.92		0
	12	0	23.09	0-1	1
	12	6	23.18		1
	12	13	23.08		1
	25	0	23.12		1
16QAM	1	0	23.27	0-1	1
	1	12	23.31		1
	1	24	23.25		1
	12	0	22.11	0-2	2
	12	6	22.16		2
	12	13	22.13		2
	25	0	22.19		2
64QAM	1	0	22.17	0-2	2
	1	12	22.20		2
	1	24	22.17		2
	12	0	21.19	0-3	3
	12	6	21.25		3
	12	13	21.15		3
	25	0	21.12		3

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

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9.3.5 LTE Band 26 (Cell)

Table 9-19
LTE Band 26 (Cell) Conducted Powers - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.22**	0	0
	1	36	24.17		0
	1	74	24.16		0
	36	0	23.26	0-1	1
	36	18	23.25		1
	36	37	**23.27**		1
	75	0	23.24		1
16QAM	1	0	23.47	0-1	1
	1	36	23.45		1
	1	74	23.40		1
	36	0	22.27	0-2	2
	36	18	22.26		2
	36	37	22.23		2
	75	0	22.29		2
64QAM	1	0	22.44	0-2	2
	1	36	22.46		2
	1	74	22.42		2
	36	0	21.31	0-3	3
	36	18	21.28		3
	36	37	21.32		3
	75	0	21.19		3

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

Table 9-20
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	23.73	24.36	23.65	0	0
	1	25	23.30	24.28	23.69		0
	1	49	23.93	24.06	23.43		0
	25	0	22.81	23.30	23.00	0-1	1
	25	12	22.48	23.38	23.31		1
	25	25	22.48	23.35	23.14		1
	50	0	22.61	23.34	23.07		1
16QAM	1	0	22.88	23.65	22.96	0-1	1
	1	25	22.51	23.60	22.94		1
	1	49	23.07	23.62	22.50		1
	25	0	21.84	22.37	21.99	0-2	2
	25	12	21.65	22.37	22.31		2
	25	25	21.51	22.36	22.17		2
	50	0	21.60	22.37	22.07		2
64QAM	1	0	21.79	22.30	22.23	0-2	2
	1	25	21.51	22.26	22.26		2
	1	49	22.18	22.32	21.70		2
	25	0	21.01	21.50	21.26	0-3	3
	25	12	20.74	21.63	21.40		3
	25	25	20.75	21.60	21.35		3
	50	0	20.81	21.55	21.30		3

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Table 9-21
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	23.59	24.09	23.73	0	0
	1	12	23.56	24.22	23.71		0
	1	24	23.30	24.26	23.56		0
	12	0	23.07	23.32	23.39	0-1	1
	12	6	22.97	23.39	23.37		1
	12	13	22.60	23.35	22.84		1
	25	0	22.73	23.35	22.99		1
16QAM	1	0	22.93	23.37	22.98	0-1	1
	1	12	22.93	23.50	22.91		1
	1	24	22.63	23.49	22.56		1
	12	0	22.08	22.29	22.31	0-2	2
	12	6	21.94	22.40	22.39		2
	12	13	21.62	22.35	21.90		2
	25	0	21.73	22.35	22.06		2
64QAM	1	0	21.38	22.43	22.36	0-2	2
	1	12	21.46	22.61	22.31		2
	1	24	21.30	22.61	21.74		2
	12	0	21.30	21.48	21.55	0-3	3
	12	6	21.21	21.57	21.56		3
	12	13	20.82	21.57	21.21		3
	25	0	21.05	21.55	21.30		3

Table 9-22
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	23.41	24.18	23.67	0	0
	1	7	23.47	24.26	23.37		0
	1	14	23.37	24.17	23.31		0
	8	0	23.08	23.31	23.25	0-1	1
	8	4	23.09	23.39	22.93		1
	8	7	22.98	23.31	22.62		1
	15	0	23.00	23.34	22.88		1
16QAM	1	0	22.58	23.59	23.30	0-1	1
	1	7	22.67	23.60	23.10		1
	1	14	22.54	23.58	22.64		1
	8	0	22.10	22.39	22.31	0-2	2
	8	4	22.11	22.45	22.14		2
	8	7	21.98	22.45	21.80		2
	15	0	22.06	22.36	22.00		2
64QAM	1	0	21.49	22.59	21.71	0-2	2
	1	7	21.60	22.60	21.63		2
	1	14	21.57	22.58	21.31		2
	8	0	21.33	21.52	21.25	0-3	3
	8	4	21.37	21.61	21.21		3
	8	7	21.27	21.53	20.83		3
	15	0	21.24	21.59	21.28		3

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Table 9-23
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	23.48	24.37	23.34	0	0
	1	2	23.59	24.54	23.22		0
	1	5	23.53	24.48	23.00		0
	3	0	23.51	24.37	23.35		0
	3	2	23.60	24.46	23.24		0
	3	3	23.57	24.40	23.13		0
	6	0	23.16	23.49	22.51	0-1	1
16QAM	1	0	22.54	23.49	22.68	0-1	1
	1	2	22.69	23.61	22.58		1
	1	5	22.67	23.62	22.35		1
	3	0	22.67	23.54	22.39		1
	3	2	22.76	23.69	22.28		1
	3	3	22.71	23.63	22.15		1
	6	0	22.14	22.56	21.61	0-2	2
64QAM	1	0	21.37	22.61	21.69	0-2	2
	1	2	21.54	22.65	21.63		2
	1	5	21.39	22.63	21.41		2
	3	0	21.73	22.71	21.78		2
	3	2	21.85	22.85	21.66		2
	3	3	21.89	22.74	21.55		2
	6	0	21.17	21.37	20.65	0-3	3

9.3.6 LTE Band 66 (AWS)

Table 9-24
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	**24.24**	24.14	24.06	0	0
	1	50	24.06	23.98	23.93		0
	1	99	23.98	24.08	23.94		0
	50	0	**23.33**	23.27	23.23	0-1	1
	50	25	23.28	23.18	23.32		1
	50	50	23.25	23.26	23.18		1
	100	0	23.28	23.22	23.20		1
16QAM	1	0	23.41	23.37	23.31	0-1	1
	1	50	23.49	23.26	23.21		1
	1	99	23.46	23.41	23.27		1
	50	0	22.36	22.23	22.22	0-2	2
	50	25	22.26	22.27	22.21		2
	50	50	22.20	22.18	22.17		2
	100	0	22.27	22.20	22.23		2
64QAM	1	0	22.39	22.27	22.37	0-2	2
	1	50	22.35	22.32	22.18		2
	1	99	22.29	22.33	22.22		2
	50	0	21.33	21.24	21.21	0-3	3
	50	25	21.31	21.15	21.23		3
	50	50	21.30	21.17	21.22		3
	100	0	21.29	21.22	21.22		3

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Table 9-25
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	24.26	24.01	24.45	0	0
	1	36	24.26	24.23	24.39		0
	1	74	24.19	24.12	24.15		0
	36	0	23.55	23.31	23.44	0-1	1
	36	18	23.53	23.48	23.43		1
	36	37	23.45	23.35	23.35		1
	75	0	23.47	23.42	23.42		1
16QAM	1	0	23.39	23.62	23.70	0-1	1
	1	36	23.57	23.78	23.66		1
	1	74	23.52	23.71	23.50		1
	36	0	22.48	22.31	22.48	0-2	2
	36	18	22.50	22.47	22.52		2
	36	37	22.41	22.36	22.38		2
	75	0	22.51	22.46	22.41		2
64QAM	1	0	22.23	22.11	22.61	0-2	2
	1	36	22.46	22.21	22.51		2
	1	74	22.31	22.15	22.52		2
	36	0	21.60	21.35	21.49	0-3	3
	36	18	21.61	21.53	21.49		3
	36	37	21.51	21.41	21.36		3
	75	0	21.52	21.41	21.39		3

Table 9-26
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	24.02	23.96	24.08	0	0
	1	25	24.05	23.93	24.05		0
	1	49	24.02	23.97	24.12		0
	25	0	23.33	23.23	23.23	0-1	1
	25	12	23.32	23.22	23.18		1
	25	25	23.27	23.15	23.19		1
	50	0	23.32	23.18	23.19		1
16QAM	1	0	23.43	23.61	23.65	0-1	1
	1	25	23.35	23.50	23.60		1
	1	49	23.37	23.61	23.66		1
	25	0	22.45	22.30	22.31	0-2	2
	25	12	22.40	22.31	22.29		2
	25	25	22.28	22.27	22.23		2
	50	0	22.27	22.19	22.20		2
64QAM	1	0	22.43	22.05	22.03	0-2	2
	1	25	22.37	21.98	21.95		2
	1	49	22.41	22.04	22.06		2
	25	0	21.36	21.31	21.29	0-3	3
	25	12	21.40	21.29	21.28		3
	25	25	21.36	21.23	21.28		3
	50	0	21.28	21.23	21.24		3

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Table 9-27
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	24.10	24.13	24.15	0	0
	1	12	24.19	24.15	24.22		0
	1	24	24.18	24.17	24.28		0
	12	0	23.31	23.19	23.25	0-1	1
	12	6	23.36	23.26	23.25		1
	12	13	23.33	23.25	23.25		1
	25	0	23.34	23.18	23.19		1
16QAM	1	0	23.35	23.27	23.58	0-1	1
	1	12	23.42	23.27	23.65		1
	1	24	23.43	23.31	23.60		1
	12	0	22.36	22.21	22.41	0-2	2
	12	6	22.37	22.21	22.47		2
	12	13	22.38	22.28	22.47		2
	25	0	22.42	22.20	22.21		2
64QAM	1	0	22.35	22.65	21.94	0-2	2
	1	12	22.42	22.69	22.04		2
	1	24	22.46	22.74	21.97		2
	12	0	21.36	21.35	21.33	0-3	3
	12	6	21.41	21.36	21.36		3
	12	13	21.39	21.38	21.35		3
	25	0	21.33	21.21	21.28		3

Table 9-28
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	24.19	24.23	23.92	0	0
	1	7	24.16	24.20	23.95		0
	1	14	24.20	24.24	24.03		0
	8	0	23.21	23.32	23.00	0-1	1
	8	4	23.32	23.33	23.02		1
	8	7	23.24	23.29	23.05		1
	15	0	23.30	23.30	23.02		1
16QAM	1	0	23.41	23.46	23.04	0-1	1
	1	7	23.45	23.49	23.26		1
	1	14	23.50	23.60	23.24		1
	8	0	22.33	22.38	22.11	0-2	2
	8	4	22.30	22.39	22.06		2
	8	7	22.47	22.39	22.11		2
	15	0	22.30	22.30	22.06		2
64QAM	1	0	22.75	22.38	22.13	0-2	2
	1	7	22.51	22.45	22.32		2
	1	14	22.49	22.50	22.21		2
	8	0	21.35	21.38	21.09	0-3	3
	8	4	21.32	21.34	21.12		3
	8	7	21.37	21.40	21.10		3
	15	0	21.35	21.37	21.07		3

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Table 9-29
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	24.10	23.87	24.01	0	0
	1	2	24.19	23.96	23.99		0
	1	5	24.19	23.95	23.95		0
	3	0	24.12	23.95	23.93		0
	3	2	24.19	24.03	24.07		0
	3	3	24.15	23.91	23.97		0
	6	0	23.20	22.99	23.08	0-1	1
16QAM	1	0	23.41	23.28	23.26	0-1	1
	1	2	23.47	23.26	23.25		1
	1	5	23.37	23.24	23.30		1
	3	0	23.29	23.00	23.08		1
	3	2	23.28	23.09	23.15		1
	3	3	23.32	23.10	23.13		1
	6	0	22.31	22.11	22.12	0-2	2
64QAM	1	0	22.33	22.46	22.30	0-2	2
	1	2	22.43	22.00	22.33		2
	1	5	22.48	22.18	22.04		2
	3	0	22.27	22.08	22.12		2
	3	2	22.39	22.16	22.23		2
	3	3	22.25	22.14	22.18		2
	6	0	21.16	21.04	21.05	0-3	3

Table 9-30
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.86**	19.60	19.70	0	0
	1	50	19.70	19.46	19.54		0
	1	99	19.74	19.63	19.36		0
	50	0	**19.93**	19.78	19.82	0-1	0
	50	25	19.88	19.84	19.83		0
	50	50	19.87	19.78	19.84		0
	100	0	19.77	19.77	19.84		0
16QAM	1	0	19.97	19.98	19.98	0-1	0
	1	50	19.93	19.78	19.91		0
	1	99	19.89	19.86	19.86		0
	50	0	19.91	19.80	19.95	0-2	0
	50	25	19.90	19.76	19.86		0
	50	50	19.81	19.78	19.78		0
	100	0	19.86	19.75	19.83		0
64QAM	1	0	19.99	19.90	19.89	0-2	0
	1	50	19.90	19.82	19.89		0
	1	99	19.97	19.89	19.90		0
	50	0	19.98	19.87	19.85	0-3	0
	50	25	19.95	19.87	19.85		0
	50	50	19.86	19.85	19.79		0
	100	0	19.98	19.76	19.83		0

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Table 9-31
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.74	19.59	19.54	0	0
	1	36	19.68	19.64	19.63		0
	1	74	19.61	19.59	19.52		0
	36	0	19.88	19.79	19.72	0-1	0
	36	18	19.80	19.81	19.72		0
	36	37	19.80	19.66	19.66		0
	75	0	19.85	19.71	19.70		0
16QAM	1	0	20.02	19.88	19.96	0-1	0
	1	36	19.87	19.99	19.88		0
	1	74	19.98	19.95	19.89		0
	36	0	19.86	19.81	19.75	0-2	0
	36	18	19.84	19.76	19.77		0
	36	37	19.79	19.82	19.69		0
	75	0	19.77	19.74	19.72		0
64QAM	1	0	20.04	19.73	19.88	0-2	0
	1	36	20.08	19.98	19.84		0
	1	74	19.81	19.93	19.70		0
	36	0	19.94	19.78	19.85	0-3	0
	36	18	19.88	19.81	19.77		0
	36	37	19.92	19.91	19.79		0
	75	0	19.87	19.71	19.76		0

Table 9-32
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.55	19.46	19.40	0	0
	1	25	19.65	19.43	19.46		0
	1	49	19.75	19.46	19.47		0
	25	0	19.60	19.60	19.64	0-1	0
	25	12	19.71	19.63	19.49		0
	25	25	19.76	19.56	19.47		0
	50	0	19.71	19.57	19.51		0
16QAM	1	0	19.94	19.76	19.71	0-1	0
	1	25	19.70	19.53	19.47		0
	1	49	19.70	19.67	19.80		0
	25	0	19.75	19.66	19.54	0-2	0
	25	12	19.68	19.65	19.59		0
	25	25	19.68	19.59	19.55		0
	50	0	19.74	19.57	19.63		0
64QAM	1	0	19.84	19.69	19.56	0-2	0
	1	25	19.81	19.70	19.25		0
	1	49	19.86	19.87	19.67		0
	25	0	19.74	19.59	19.61	0-3	0
	25	12	19.80	19.62	19.82		0
	25	25	19.71	19.58	19.57		0
	50	0	19.74	19.59	19.65		0

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Table 9-33
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.70	19.45	19.40	0	0
	1	12	19.65	19.48	19.31		0
	1	24	19.66	19.54	19.45		0
	12	0	19.74	19.57	19.55	0-1	0
	12	6	19.78	19.63	19.58		0
	12	13	19.75	19.55	19.58		0
	25	0	19.74	19.61	19.54		0
16QAM	1	0	19.92	19.86	19.66	0-1	0
	1	12	19.98	19.64	19.78		0
	1	24	19.94	19.82	19.81		0
	12	0	19.83	19.60	19.67	0-2	0
	12	6	19.87	19.66	19.68		0
	12	13	19.78	19.68	19.65		0
	25	0	19.80	19.63	19.58		0
64QAM	1	0	19.99	19.79	19.90	0-2	0
	1	12	19.95	19.55	19.79		0
	1	24	19.98	19.84	19.92		0
	12	0	19.82	19.62	19.63	0-3	0
	12	6	19.89	19.77	19.64		0
	12	13	19.84	19.75	19.61		0
	25	0	19.74	19.60	19.54		0

Table 9-34
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.62	19.47	19.39	0	0
	1	7	19.60	19.45	19.49		0
	1	14	19.68	19.50	19.40		0
	8	0	19.72	19.50	19.48	0-1	0
	8	4	19.71	19.65	19.50		0
	8	7	19.73	19.54	19.54		0
	15	0	19.86	19.60	19.55		0
16QAM	1	0	19.92	19.70	19.66	0-1	0
	1	7	19.88	19.71	19.59		0
	1	14	19.95	19.88	19.61		0
	8	0	19.79	19.72	19.56	0-2	0
	8	4	19.79	19.70	19.47		0
	8	7	19.87	19.60	19.63		0
	15	0	19.79	19.61	19.51		0
64QAM	1	0	19.82	19.48	19.71	0-2	0
	1	7	19.84	19.74	19.59		0
	1	14	19.92	19.67	19.66		0
	8	0	19.80	19.82	19.62	0-3	0
	8	4	19.88	19.69	19.49		0
	8	7	19.83	19.61	19.75		0
	15	0	19.76	19.63	19.14		0

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Table 9-35
LTE Band 66 (AWS) Reduced Conducted Powers - 1.4 MHz Bandwidth - Hotspot Mode Active

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.56	19.37	19.33	0	0
	1	2	19.60	19.51	19.47		0
	1	5	19.63	19.39	19.34		0
	3	0	19.58	19.43	19.32		0
	3	2	19.55	19.38	19.39		0
	3	3	19.56	19.37	19.33		0
	6	0	19.69	19.55	19.43	0-1	0
16QAM	1	0	19.83	19.67	19.66	0-1	0
	1	2	19.89	19.93	19.68		0
	1	5	19.63	19.70	19.74		0
	3	0	19.89	19.56	19.49		0
	3	2	19.74	19.60	19.55		0
	3	3	19.71	19.66	19.34		0
	6	0	19.68	19.53	19.44	0-2	0
64QAM	1	0	19.55	19.41	19.64	0-2	0
	1	2	19.70	19.99	19.60		0
	1	5	19.76	19.65	19.88		0
	3	0	19.52	19.52	19.53		0
	3	2	19.68	19.47	19.62		0
	3	3	19.53	19.63	19.48		0
	6	0	19.73	19.50	19.47	0-3	0

Table 9-36
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor 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	**18.84**	18.57	18.63	0	0
	1	50	18.62	18.54	18.50		0
	1	99	18.62	18.58	18.47		0
	50	0	**18.97**	18.73	18.78	0-1	0
	50	25	18.83	18.75	18.75		0
	50	50	18.75	18.71	18.72		0
	100	0	18.72	18.83	18.62		0
16QAM	1	0	18.92	18.76	18.91	0-1	0
	1	50	18.86	18.72	18.51		0
	1	99	18.82	18.76	18.82		0
	50	0	18.81	18.68	18.75	0-2	0
	50	25	18.77	18.71	18.73		0
	50	50	18.72	18.64	18.69		0
	100	0	18.77	18.65	18.71		0
64QAM	1	0	18.72	18.75	18.86	0-2	0
	1	50	18.64	18.73	18.59		0
	1	99	18.58	18.82	18.74		0
	50	0	18.87	18.70	18.77	0-3	0
	50	25	18.82	18.93	18.75		0
	50	50	18.79	18.65	18.76		0
	100	0	18.77	18.64	18.77		0

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Table 9-37
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor 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	18.89	18.77	18.84	0	0
	1	36	18.88	18.88	18.87		0
	1	74	18.82	18.82	18.78		0
	36	0	19.03	18.89	18.97	0-1	0
	36	18	18.97	18.91	18.94		0
	36	37	18.91	18.88	18.93		0
	75	0	18.96	18.96	18.87		0
16QAM	1	0	19.20	19.14	18.95	0-1	0
	1	36	19.23	18.97	19.20		0
	1	74	19.04	19.07	19.08		0
	36	0	19.08	19.02	19.03	0-2	0
	36	18	19.06	18.91	18.98		0
	36	37	19.00	18.90	18.97		0
	75	0	19.04	18.92	18.95		0
64QAM	1	0	19.09	19.08	19.05	0-2	0
	1	36	19.29	19.03	19.08		0
	1	74	19.20	19.20	18.57		0
	36	0	19.06	19.03	19.03	0-3	0
	36	18	19.20	18.94	19.02		0
	36	37	19.02	18.93	19.04		0
	75	0	19.10	18.93	18.94		0

Table 9-38
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor 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	18.95	18.64	18.45	0	0
	1	25	18.79	18.66	18.54		0
	1	49	18.54	18.56	18.57		0
	25	0	18.92	18.72	18.76	0-1	0
	25	12	18.97	18.80	18.80		0
	25	25	18.60	18.78	18.71		0
	50	0	18.67	18.77	18.74		0
16QAM	1	0	18.91	18.89	18.96	0-1	0
	1	25	19.10	18.89	18.82		0
	1	49	19.06	19.04	18.93		0
	25	0	18.89	18.80	18.79	0-2	0
	25	12	18.88	18.82	18.79		0
	25	25	18.83	18.77	18.73		0
	50	0	18.84	18.79	18.73		0
64QAM	1	0	19.02	18.92	18.84	0-2	0
	1	25	18.94	18.88	18.84		0
	1	49	19.14	18.05	19.04		0
	25	0	18.93	18.83	18.75	0-3	0
	25	12	18.90	18.80	18.82		0
	25	25	18.87	18.84	18.75		0
	50	0	18.93	18.84	18.79		0

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Table 9-39
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor 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	18.77	18.55	18.55	0	0
	1	12	18.78	18.60	18.67		0
	1	24	18.83	18.66	18.64		0
	12	0	18.88	18.65	18.63	0-1	0
	12	6	18.94	18.79	18.70		0
	12	13	18.93	18.70	18.73		0
	25	0	18.93	18.73	18.74		0
16QAM	1	0	19.11	18.88	18.86	0-1	0
	1	12	19.05	18.97	18.94		0
	1	24	19.16	18.95	18.96		0
	12	0	18.96	18.75	18.68	0-2	0
	12	6	19.01	18.85	18.79		0
	12	13	18.97	18.76	18.80		0
	25	0	18.93	18.74	18.75		0
64QAM	1	0	19.09	18.80	18.85	0-2	0
	1	12	19.14	18.91	18.89		0
	1	24	19.12	18.93	18.90		0
	12	0	18.95	18.73	18.65	0-3	0
	12	6	19.05	18.77	18.80		0
	12	13	18.99	18.83	18.76		0
	25	0	18.93	18.72	18.77		0

Table 9-40
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor 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	18.77	18.55	18.84	0	0
	1	7	18.76	18.70	18.59		0
	1	14	18.74	18.63	18.65		0
	8	0	18.75	18.57	18.65	0-1	0
	8	4	18.94	18.67	18.69		0
	8	7	18.92	18.65	18.74		0
	15	0	18.91	18.65	18.69		0
16QAM	1	0	18.91	18.85	18.81	0-1	0
	1	7	19.10	18.89	18.86		0
	1	14	18.90	18.83	18.74		0
	8	0	19.12	18.73	18.53	0-2	0
	8	4	19.13	18.74	18.85		0
	8	7	18.90	18.77	18.91		0
	15	0	18.93	18.70	18.72		0
64QAM	1	0	19.16	18.54	18.89	0-2	0
	1	7	19.02	18.69	18.85		0
	1	14	19.10	18.69	19.23		0
	8	0	19.12	18.57	18.71	0-3	0
	8	4	18.87	18.63	18.86		0
	8	7	19.06	18.65	18.78		0
	15	0	18.90	18.66	18.78		0

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Table 9-41
LTE Band 66 (AWS) Reduced Conducted Powers - 1.4 MHz Bandwidth – Grip Sensor 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	18.69	18.59	18.37	0	0
	1	2	18.87	18.70	18.42		0
	1	5	18.74	18.85	18.35		0
	3	0	18.77	18.76	18.40		0
	3	2	18.87	18.69	18.40		0
	3	3	18.73	18.65	18.48		0
	6	0	18.80	18.67	18.52	0-1	0
16QAM	1	0	19.05	18.58	18.42	0-1	0
	1	2	19.21	18.67	18.75		0
	1	5	19.04	18.57	18.50		0
	3	0	18.85	18.75	18.55		0
	3	2	18.90	18.74	18.72		0
	3	3	19.12	18.58	18.61		0
	6	0	18.95	18.81	18.35	0-2	0
64QAM	1	0	19.09	18.76	18.72	0-2	0
	1	2	18.99	18.80	18.50		0
	1	5	18.89	18.92	18.47		0
	3	0	18.85	18.93	18.57		0
	3	2	18.71	18.61	18.45		0
	3	3	19.02	18.88	18.65		0
	6	0	18.70	18.65	18.72	0-3	0

9.3.7 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	**24.10**	23.88	23.81	0	0
	1	50	24.06	23.95	23.82		0
	1	99	24.08	23.87	23.83		0
	50	0	23.13	22.93	22.89	0-1	1
	50	25	23.17	23.03	23.01		1
	50	50	**23.20**	22.80	23.05		1
	100	0	23.18	22.98	22.91		1
16QAM	1	0	23.41	23.16	23.08	0-1	1
	1	50	23.45	23.21	23.11		1
	1	99	23.36	23.24	23.20		1
	50	0	22.11	21.93	21.85	0-2	2
	50	25	22.20	21.98	21.90		2
	50	50	22.19	21.81	21.99		2
	100	0	22.11	21.95	21.89		2
64QAM	1	0	22.33	22.19	22.02	0-2	2
	1	50	22.31	22.21	22.33		2
	1	99	22.37	22.14	22.14		2
	50	0	21.13	20.98	20.88	0-3	3
	50	25	21.18	21.05	20.97		3
	50	50	21.20	20.78	20.95		3
	100	0	21.17	20.97	20.88		3

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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	24.06	24.03	23.99	0	0
	1	36	24.14	23.92	24.03		0
	1	74	24.19	23.97	23.90		0
	36	0	23.08	23.03	23.03	0-1	1
	36	18	23.30	23.16	23.04		1
	36	37	23.27	23.05	23.07		1
	75	0	23.26	23.08	22.98		1
16QAM	1	0	23.35	23.31	23.19	0-1	1
	1	36	23.40	23.20	23.19		1
	1	74	23.47	23.16	23.27		1
	36	0	22.12	22.09	21.96	0-2	2
	36	18	22.26	22.11	22.04		2
	36	37	22.29	22.12	22.07		2
	75	0	22.24	22.08	22.00		2
64QAM	1	0	22.30	22.27	22.16	0-2	2
	1	36	22.41	22.21	22.16		2
	1	74	22.29	22.17	22.14		2
	36	0	21.23	21.11	20.97	0-3	3
	36	18	21.27	21.14	21.06		3
	36	37	21.33	21.16	21.09		3
	75	0	21.19	21.08	21.02		3

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	24.08	24.05	23.72	0	0
	1	25	23.96	23.76	23.76		0
	1	49	23.97	23.92	23.79		0
	25	0	23.10	22.92	22.87	0-1	1
	25	12	23.14	22.96	22.86		1
	25	25	23.15	22.98	22.88		1
	50	0	23.13	22.96	22.86		1
16QAM	1	0	23.21	23.04	22.96	0-1	1
	1	25	23.27	23.22	23.01		1
	1	49	22.93	23.31	23.08		1
	25	0	22.11	21.91	21.78	0-2	2
	25	12	22.04	22.04	21.86		2
	25	25	22.06	21.98	21.87		2
	50	0	22.02	21.93	21.86		2
64QAM	1	0	22.08	22.26	21.66	0-2	2
	1	25	22.13	22.01	21.94		2
	1	49	22.20	21.95	22.07		2
	25	0	21.14	20.92	20.82	0-3	3
	25	12	21.11	20.81	20.90		3
	25	25	21.08	20.94	20.89		3
	50	0	21.07	20.93	20.87		3

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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	23.95	23.84	23.73	0	0
	1	12	24.02	23.91	23.82		0
	1	24	24.10	23.89	23.81		0
	12	0	23.09	22.91	22.88	0-1	1
	12	6	23.15	22.97	22.92		1
	12	13	23.17	22.96	22.90		1
	25	0	23.10	22.91	22.91		1
16QAM	1	0	23.14	23.30	23.02	0-1	1
	1	12	23.26	23.10	22.94		1
	1	24	23.26	23.07	23.11		1
	12	0	22.08	21.92	21.85	0-2	2
	12	6	22.15	22.01	21.95		2
	12	13	22.10	21.99	21.93		2
	25	0	22.07	21.92	21.73		2
64QAM	1	0	22.19	22.13	21.83	0-2	2
	1	12	22.22	22.11	22.06		2
	1	24	22.29	22.09	22.10		2
	12	0	21.09	20.94	20.91	0-3	3
	12	6	21.15	21.00	20.98		3
	12	13	21.14	20.99	20.96		3
	25	0	21.07	20.89	20.94		3

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	23.86	23.80	23.73	0	0
	1	7	23.97	23.81	23.82		0
	1	14	23.99	23.85	23.82		0
	8	0	23.12	22.89	22.83	0-1	1
	8	4	23.09	22.95	22.91		1
	8	7	23.08	22.96	22.92		1
	15	0	23.11	22.95	22.88		1
16QAM	1	0	23.15	22.98	23.09	0-1	1
	1	7	23.23	23.00	23.06		1
	1	14	23.21	23.10	23.13		1
	8	0	22.11	21.98	21.90	0-2	2
	8	4	22.15	22.02	22.01		2
	8	7	22.12	22.00	21.91		2
	15	0	22.07	21.93	21.87		2
64QAM	1	0	22.14	21.84	21.90	0-2	2
	1	7	22.07	21.99	22.18		2
	1	14	22.55	22.15	22.06		2
	8	0	21.11	20.99	20.88	0-3	3
	8	4	21.13	21.05	20.97		3
	8	7	21.08	20.99	20.92		3
	15	0	21.07	20.92	20.89		3

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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	23.89	23.78	23.76	0	0
	1	2	24.01	23.96	23.79		0
	1	5	23.92	24.03	23.72		0
	3	0	23.90	23.76	23.77		0
	3	2	23.93	23.90	23.84		0
	3	3	23.95	23.86	23.70		0
	6	0	23.02	22.89	22.84	0-1	1
16QAM	1	0	23.31	23.01	22.97	0-1	1
	1	2	23.08	23.13	23.03		1
	1	5	23.16	23.05	23.06		1
	3	0	23.05	22.98	22.88		1
	3	2	23.17	23.01	22.96		1
	3	3	23.13	23.01	22.94		1
	6	0	22.19	21.94	21.91	0-2	2
64QAM	1	0	22.42	22.03	22.03	0-2	2
	1	2	22.13	22.31	22.15		2
	1	5	22.19	22.06	21.85		2
	3	0	21.95	21.79	21.93		2
	3	2	22.18	22.06	21.96		2
	3	3	22.17	21.97	22.02		2
	6	0	21.03	20.82	21.05	0-3	3

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	20.43	20.36	20.33	0	0
	1	50	20.45	20.25	20.08		0
	1	99	**20.55**	20.24	20.21		0
	50	0	20.56	20.39	20.32	0-1	0
	50	25	**20.63**	20.43	20.34		0
	50	50	20.59	20.47	20.38		0
	100	0	20.50	20.33	20.32		0
16QAM	1	0	20.65	20.65	20.43	0-1	0
	1	50	20.58	20.78	20.19		0
	1	99	20.72	20.35	20.49		0
	50	0	20.53	20.41	20.31	0-2	0
	50	25	20.60	20.48	20.35		0
	50	50	20.66	20.46	20.38		0
	100	0	20.55	20.43	20.32		0
64QAM	1	0	20.65	20.64	20.44	0-2	0
	1	50	20.72	20.42	20.46		0
	1	99	20.49	20.55	20.51		0
	50	0	20.61	20.46	20.32	0-3	0
	50	25	20.65	20.49	20.40		0
	50	50	20.64	20.53	20.39		0
	100	0	20.61	20.46	20.35		0

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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	20.35	20.23	20.20	0	0
	1	36	20.43	20.11	20.13		0
	1	74	20.48	20.18	20.22		0
	36	0	20.56	20.27	20.39	0-1	0
	36	18	20.56	20.33	20.35		0
	36	37	20.59	20.31	20.35		0
	75	0	20.58	20.32	20.36		0
16QAM	1	0	20.64	20.47	20.50	0-1	0
	1	36	20.61	20.54	20.44		0
	1	74	20.70	20.48	20.43		0
	36	0	20.48	20.35	20.27	0-2	0
	36	18	20.57	20.32	20.33		0
	36	37	20.50	20.36	20.40		0
	75	0	20.57	20.34	20.31		0
64QAM	1	0	20.62	20.51	20.43	0-2	0
	1	36	20.65	20.46	20.40		0
	1	74	20.72	20.45	20.46		0
	36	0	20.57	20.31	20.32	0-3	0
	36	18	20.62	20.42	20.35		0
	36	37	20.64	20.41	20.40		0
	75	0	20.56	20.33	20.35		0

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	20.31	20.09	20.00	0	0
	1	25	20.31	20.06	20.04		0
	1	49	20.30	20.08	20.12		0
	25	0	20.36	20.21	20.16	0-1	0
	25	12	20.49	20.25	20.18		0
	25	25	20.43	20.27	20.20		0
	50	0	20.38	20.27	20.20		0
16QAM	1	0	20.55	20.14	20.18	0-1	0
	1	25	20.47	20.11	20.36		0
	1	49	20.39	20.12	20.36		0
	25	0	20.45	20.22	20.14	0-2	0
	25	12	20.39	20.25	20.18		0
	25	25	20.51	20.27	20.16		0
	50	0	20.38	20.24	20.22		0
64QAM	1	0	20.52	20.20	20.27	0-2	0
	1	25	20.51	20.37	20.47		0
	1	49	20.51	20.42	20.39		0
	25	0	20.41	20.33	20.19	0-3	0
	25	12	20.43	20.28	20.20		0
	25	25	20.41	20.27	20.25		0
	50	0	20.43	20.31	20.23		0

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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	20.31	20.10	19.95	0	0
	1	12	20.31	20.18	20.04		0
	1	24	20.33	20.25	20.03		0
	12	0	20.36	20.16	20.12	0-1	0
	12	6	20.41	20.27	20.23		0
	12	13	20.42	20.31	20.21		0
	25	0	20.42	20.26	20.21		0
16QAM	1	0	20.47	20.48	20.26	0-1	0
	1	12	20.55	20.45	20.34		0
	1	24	20.41	20.34	20.27		0
	12	0	20.37	20.25	20.11	0-2	0
	12	6	20.46	20.37	20.24		0
	12	13	20.47	20.38	20.25		0
	25	0	20.41	20.23	20.20		0
64QAM	1	0	20.48	20.36	20.21	0-2	0
	1	12	20.59	20.44	20.31		0
	1	24	20.57	20.46	20.28		0
	12	0	20.44	20.30	20.21	0-3	0
	12	6	20.48	20.42	20.29		0
	12	13	20.49	20.37	20.28		0
	25	0	20.45	20.30	20.20		0

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	20.22	20.26	19.94	0	0
	1	7	20.25	20.27	20.07		0
	1	14	20.23	20.14	20.08		0
	8	0	20.36	20.18	20.12	0-1	0
	8	4	20.43	20.28	20.21		0
	8	7	20.37	20.26	20.19		0
	15	0	20.46	20.29	20.24		0
16QAM	1	0	20.40	20.29	20.22	0-1	0
	1	7	20.48	20.52	20.07		0
	1	14	20.57	20.42	20.38		0
	8	0	20.46	20.15	20.19	0-2	0
	8	4	20.49	20.33	20.19		0
	8	7	20.43	20.33	20.28		0
	15	0	20.39	20.26	20.19		0
64QAM	1	0	20.33	20.29	20.20	0-2	0
	1	7	20.53	20.50	20.24		0
	1	14	20.49	20.39	20.32		0
	8	0	20.42	20.29	20.25	0-3	0
	8	4	20.51	20.36	20.26		0
	8	7	20.48	20.38	20.27		0
	15	0	20.31	20.27	20.20		0

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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	20.20	20.04	19.95	0	0
	1	2	20.36	20.10	20.08		0
	1	5	20.21	20.06	19.91		0
	3	0	20.23	20.15	20.03		0
	3	2	20.35	20.14	20.06		0
	3	3	20.29	20.03	19.97		0
	6	0	20.43	20.20	20.10	0-1	0
16QAM	1	0	20.67	20.42	20.25	0-1	0
	1	2	20.44	20.39	20.29		0
	1	5	20.38	20.33	20.37		0
	3	0	20.44	20.22	20.13		0
	3	2	20.43	20.26	20.22		0
	3	3	20.42	20.23	20.13		0
	6	0	20.28	20.23	20.16	0-2	0
64QAM	1	0	20.45	20.53	20.29	0-2	0
	1	2	20.53	20.56	20.45		0
	1	5	20.43	20.24	20.33		0
	3	0	20.34	20.28	20.27		0
	3	2	20.52	20.37	20.29		0
	3	3	20.49	20.38	20.32		0
	6	0	20.35	20.20	20.17	0-3	0

Table 9-54
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor 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	20.35	20.16	**20.49**	0	0
	1	50	20.32	20.12	20.07		0
	1	99	20.36	20.14	20.12		0
	50	0	20.40	20.38	20.17	0-1	0
	50	25	20.38	20.34	20.37		0
	50	50	**20.41**	20.32	20.22		0
	100	0	20.29	20.12	20.22		0
16QAM	1	0	20.49	20.50	20.15	0-1	0
	1	50	20.47	20.49	20.08		0
	1	99	20.50	20.45	20.25		0
	50	0	20.44	20.30	20.43	0-2	0
	50	25	20.45	20.37	20.23		0
	50	50	20.48	20.26	20.23		0
	100	0	20.42	20.31	20.20		0
64QAM	1	0	20.48	20.36	20.42	0-2	0
	1	50	20.47	20.47	20.49		0
	1	99	20.48	20.40	20.31		0
	50	0	20.36	20.29	20.22	0-3	0
	50	25	20.46	20.48	20.29		0
	50	50	20.48	20.40	20.29		0
	100	0	20.50	20.39	20.20		0

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Table 9-55
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor 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	20.14	20.12	20.00	0	0
	1	36	20.31	20.08	19.97		0
	1	74	20.31	20.18	20.04		0
	36	0	20.32	20.20	20.05	0-1	0
	36	18	20.39	20.26	20.15		0
	36	37	20.35	20.26	20.18		0
	75	0	20.34	20.22	20.12		0
16QAM	1	0	20.48	20.34	20.28	0-1	0
	1	36	20.43	20.43	20.28		0
	1	74	20.50	20.44	20.47		0
	36	0	20.33	20.19	20.06	0-2	0
	36	18	20.37	20.26	20.13		0
	36	37	20.42	20.26	20.18		0
	75	0	20.38	20.18	20.15		0
64QAM	1	0	20.50	20.39	20.20	0-2	0
	1	36	20.49	20.36	20.22		0
	1	74	20.50	20.38	20.37		0
	36	0	20.36	20.22	20.10	0-3	0
	36	18	20.43	20.35	20.20		0
	36	37	20.46	20.32	20.22		0
	75	0	20.37	20.27	20.12		0

Table 9-56
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor Active

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.13	19.87	20.01	0	0
	1	25	20.06	19.80	19.88		0
	1	49	20.04	19.82	19.84		0
	25	0	20.15	19.95	19.91	0-1	0
	25	12	20.19	19.96	19.96		0
	25	25	20.26	19.99	19.99		0
	50	0	20.27	19.97	19.95		0
16QAM	1	0	20.42	20.05	20.08	0-1	0
	1	25	20.37	20.17	20.19		0
	1	49	20.44	20.17	20.22		0
	25	0	20.19	19.98	19.96	0-2	0
	25	12	20.23	19.96	20.00		0
	25	25	20.27	19.97	20.09		0
	50	0	20.21	19.98	19.88		0
64QAM	1	0	20.38	20.10	20.04	0-2	0
	1	25	20.32	20.14	20.10		0
	1	49	20.33	20.31	20.17		0
	25	0	20.17	19.95	19.98	0-3	0
	25	12	20.22	19.97	19.96		0
	25	25	20.20	20.00	19.99		0
	50	0	20.23	20.03	19.98		0

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Table 9-57
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor 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	20.21	20.10	20.03	0	0
	1	12	20.27	20.17	20.00		0
	1	24	20.31	20.12	19.95		0
	12	0	20.32	20.22	20.04	0-1	0
	12	6	20.39	20.30	20.12		0
	12	13	20.40	20.23	20.12		0
	25	0	20.36	20.22	20.10		0
16QAM	1	0	20.49	20.34	20.21	0-1	0
	1	12	20.50	20.50	20.31		0
	1	24	20.48	20.41	20.25		0
	12	0	20.33	20.27	20.04	0-2	0
	12	6	20.46	20.31	20.22		0
	12	13	20.15	20.28	20.17		0
	25	0	20.37	20.25	20.13		0
64QAM	1	0	20.41	20.39	20.14	0-2	0
	1	12	20.49	20.38	20.29		0
	1	24	20.00	20.43	20.26		0
	12	0	20.36	20.00	20.07	0-3	0
	12	6	20.45	20.33	20.16		0
	12	13	20.42	20.27	20.17		0
	25	0	20.33	20.27	20.06		0

Table 9-58
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth - Grip Sensor 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	20.14	20.07	20.05	0	0
	1	7	20.17	20.11	19.97		0
	1	14	20.23	20.15	19.90		0
	8	0	20.25	20.16	20.00	0-1	0
	8	4	20.37	20.23	20.13		0
	8	7	20.30	20.25	20.07		0
	15	0	20.29	20.25	20.05		0
16QAM	1	0	20.35	20.26	20.16	0-1	0
	1	7	20.49	20.39	20.23		0
	1	14	20.39	20.38	20.20		0
	8	0	20.34	20.28	20.13	0-2	0
	8	4	20.42	20.38	20.10		0
	8	7	20.37	20.37	20.14		0
	15	0	20.29	20.23	20.08		0
64QAM	1	0	20.32	20.30	20.12	0-2	0
	1	7	20.41	20.27	20.15		0
	1	14	20.47	20.35	20.19		0
	8	0	20.26	20.22	20.05	0-3	0
	8	4	20.40	20.31	20.05		0
	8	7	20.35	20.28	20.09		0
	15	0	20.36	20.24	20.05		0

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Table 9-59
LTE Band 25 (PCS) Reduced Conducted Powers – 1.4 MHz Bandwidth - Grip Sensor 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	20.07	20.00	20.02	0	0
	1	2	20.18	20.12	19.97		0
	1	5	20.10	20.03	19.83		0
	3	0	20.11	20.01	19.96		0
	3	2	20.22	20.07	19.88		0
	3	3	20.15	20.09	19.90		0
	6	0	20.18	20.16	19.97	0-1	0
16QAM	1	0	20.36	20.17	20.06	0-1	0
	1	2	20.50	20.33	20.22		0
	1	5	20.45	20.40	20.24		0
	3	0	20.23	20.22	20.01		0
	3	2	20.26	20.22	20.10		0
	3	3	20.41	20.12	20.02		0
	6	0	20.26	20.20	20.02	0-2	0
64QAM	1	0	20.34	20.26	20.11	0-2	0
	1	2	20.50	20.33	20.17		0
	1	5	20.37	20.28	20.09		0
	3	0	20.29	20.17	20.02		0
	3	2	20.32	20.26	20.06		0
	3	3	20.33	20.26	20.08		0
	6	0	20.21	20.34	19.98	0-3	0

9.3.8 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)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	**24.33**	0	0
	1	25	24.20		0
	1	49	24.08		0
	25	0	23.32	0-1	1
	25	12	**23.35**		1
	25	25	23.24		1
	50	0	23.26		1
16QAM	1	0	23.45	0-1	1
	1	25	23.34		1
	1	49	23.05		1
	25	0	22.36	0-2	2
	25	12	22.28		2
	25	25	22.20		2
	50	0	22.28		2
64QAM	1	0	22.37	0-2	2
	1	25	22.26		2
	1	49	22.23		2
	25	0	21.40	0-3	3
	25	12	21.32		3
	25	25	21.24		3
	50	0	21.32		3

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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	24.16	0	0
	1	12	24.09		0
	1	24	23.91		0
	12	0	23.25	0-1	1
	12	6	23.17		1
	12	13	23.08		1
	25	0	23.17		1
16QAM	1	0	23.42	0-1	1
	1	12	23.39		1
	1	24	23.16		1
	12	0	22.24	0-2	2
	12	6	22.20		2
	12	13	22.08		2
	25	0	22.13		2
64QAM	1	0	22.50	0-2	2
	1	12	22.45		2
	1	24	22.13		2
	12	0	21.26	0-3	3
	12	6	21.17		3
	12	13	21.10		3
	25	0	21.14		3

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

Table 9-62
LTE Band 30 Reduced Conducted Powers - 10 MHz Bandwidth – Hotspot Mode/Grip Sensor 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	20.05	0	0
	1	25	**20.33**		0
	1	49	19.91		0
	25	0	20.23	0-1	0
	25	12	**20.29**		0
	25	25	20.20		0
	50	0	20.26		0
16QAM	1	0	20.32	0-1	0
	1	25	20.47		0
	1	49	20.30		0
	25	0	20.36	0-2	0
	25	12	20.23		0
	25	25	20.23		0
	50	0	20.19		0
64QAM	1	0	20.74	0-2	0
	1	25	20.62		0
	1	49	20.25		0
	25	0	20.31	0-3	0
	25	12	20.38		0
	25	25	20.15		0
	50	0	20.30		0

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

LTE Band 30 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	20.20	0	0
	1	12	20.26		0
	1	24	20.06		0
	12	0	20.28	0-1	0
	12	6	20.18		0
	12	13	20.20		0
	25	0	20.26		0
16QAM	1	0	20.48	0-1	0
	1	12	20.52		0
	1	24	20.35		0
	12	0	20.31	0-2	0
	12	6	20.29		0
	12	13	20.25		0
	25	0	20.28		0
64QAM	1	0	20.22	0-2	0
	1	12	20.49		0
	1	24	20.28		0
	12	0	20.30	0-3	0
	12	6	20.26		0
	12	13	20.27		0
	25	0	20.27		0

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

9.3.9 LTE Band 7

Table 9-64
LTE Band 7 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	24.06	24.12	24.07	0	0
	1	50	23.95	23.98	23.60		0
	1	99	**24.17**	23.88	23.83		0
	50	0	**23.22**	22.90	22.97	0-1	1
	50	25	23.20	23.01	22.50		1
	50	50	23.18	23.04	22.56		1
	100	0	23.20	22.98	22.62		1
16QAM	1	0	23.35	23.33	23.32	0-1	1
	1	50	23.41	23.30	22.73		1
	1	99	23.44	23.18	23.14		1
	50	0	22.05	22.06	22.08	0-2	2
	50	25	22.21	22.06	21.83		2
	50	50	22.27	22.01	21.70		2
	100	0	22.22	22.06	21.69		2
64QAM	1	0	22.39	22.24	22.21	0-2	2
	1	50	22.42	22.20	21.91		2
	1	99	22.43	22.26	22.09		2
	50	0	21.17	21.15	21.07	0-3	3
	50	25	21.28	21.12	20.83		3
	50	50	21.31	21.04	20.75		3
	100	0	21.19	21.10	20.85		3

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Table 9-65
LTE Band 7 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	23.99	24.06	23.68	0	0
	1	36	24.03	23.94	23.18		0
	1	74	24.11	23.79	23.70		0
	36	0	22.61	23.15	22.56	0-1	1
	36	18	23.12	23.04	22.53		1
	36	37	23.25	23.04	22.79		1
	75	0	23.16	23.09	22.41		1
16QAM	1	0	23.20	23.50	22.90	0-1	1
	1	36	23.31	23.16	22.61		1
	1	74	23.15	22.74	22.62		1
	36	0	21.78	22.17	21.50	0-2	2
	36	18	22.19	22.15	21.58		2
	36	37	22.25	22.03	21.80		2
	75	0	22.23	22.08	21.42		2
64QAM	1	0	22.29	22.46	22.12	0-2	2
	1	36	22.41	22.24	21.59		2
	1	74	22.50	22.15	22.04		2
	36	0	20.98	21.19	20.86	0-3	3
	36	18	21.23	21.17	20.83		3
	36	37	21.23	21.04	20.85		3
	75	0	21.07	21.08	20.65		3

Table 9-66
LTE Band 7 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	23.79	24.07	23.83	0	0
	1	25	23.86	23.90	23.90		0
	1	49	23.98	23.96	23.96		0
	25	0	22.65	23.07	22.93	0-1	1
	25	12	22.90	23.09	22.87		1
	25	25	22.80	23.07	22.96		1
	50	0	22.65	22.81	22.93		1
16QAM	1	0	23.11	23.32	23.11	0-1	1
	1	25	23.27	23.25	23.27		1
	1	49	23.20	23.27	23.22		1
	25	0	21.95	22.15	21.97	0-2	2
	25	12	22.06	22.12	22.08		2
	25	25	22.02	22.05	22.01		2
	50	0	21.76	22.07	21.85		2
64QAM	1	0	22.15	22.25	22.10	0-2	2
	1	25	22.25	22.18	22.22		2
	1	49	22.17	22.23	22.32		2
	25	0	21.01	21.13	21.00	0-3	3
	25	12	21.06	21.05	21.09		3
	25	25	21.04	21.03	21.04		3
	50	0	21.01	21.07	20.98		3

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Table 9-67
LTE Band 7 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	23.83	23.96	23.36	0	0
	1	12	24.08	24.05	23.47		0
	1	24	24.01	24.00	23.43		0
	12	0	22.91	23.14	22.35	0-1	1
	12	6	22.98	23.15	22.62		1
	12	13	23.00	23.15	22.64		1
	25	0	22.68	22.92	22.37		1
16QAM	1	0	23.11	23.31	22.63	0-1	1
	1	12	23.38	23.20	22.88		1
	1	24	23.17	23.40	22.97		1
	12	0	21.93	22.17	21.64	0-2	2
	12	6	22.09	22.23	21.84		2
	12	13	22.07	22.15	21.76		2
	25	0	21.87	22.12	21.48		2
64QAM	1	0	22.07	22.24	21.49	0-2	2
	1	12	22.16	22.34	21.85		2
	1	24	22.27	22.23	21.79		2
	12	0	20.97	21.14	20.77	0-3	3
	12	6	21.13	21.20	20.81		3
	12	13	21.08	21.18	20.79		3
	25	0	20.98	21.12	20.61		3

Table 9-68
LTE Band 7 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot Mode Active

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.74**	19.66	19.40	0	0
	1	50	19.49	19.59	19.34		0
	1	99	19.55	19.47	19.33		0
	50	0	19.53	19.78	19.53	0-1	0
	50	25	19.57	**19.79**	19.52		0
	50	50	19.65	19.62	19.45		0
	100	0	19.66	19.64	19.52		0
16QAM	1	0	19.92	19.86	19.76	0-1	0
	1	50	19.88	19.81	19.62		0
	1	99	19.94	19.75	19.82		0
	50	0	19.58	19.70	19.56	0-2	0
	50	25	19.71	19.71	19.45		0
	50	50	19.74	19.69	19.50		0
	100	0	19.76	19.66	19.48		0
64QAM	1	0	19.83	19.98	19.84	0-2	0
	1	50	19.90	19.72	19.65		0
	1	99	19.95	19.93	19.65		0
	50	0	19.67	19.79	19.74	0-3	0
	50	25	19.76	19.76	19.58		0
	50	50	19.81	19.74	19.53		0
	100	0	19.75	19.74	19.64		0

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Table 9-69
LTE Band 7 Reduced Conducted Powers - 15 MHz Bandwidth - Hotspot Mode Active

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.92	19.81	19.67	0	0
	1	36	19.90	19.83	19.62		0
	1	74	19.98	19.69	19.64		0
	36	0	19.97	19.76	19.66	0-1	0
	36	18	19.95	19.86	19.62		0
	36	37	19.97	19.76	19.63		0
	75	0	19.97	19.76	19.65		0
16QAM	1	0	20.01	19.76	19.82	0-1	0
	1	36	20.02	19.80	19.80		0
	1	74	20.09	19.70	19.82		0
	36	0	19.92	19.73	19.74	0-2	0
	36	18	19.89	19.82	19.61		0
	36	37	19.93	19.75	19.62		0
	75	0	19.99	19.79	19.57		0
64QAM	1	0	19.62	19.45	19.64	0-2	0
	1	36	19.47	19.57	19.51		0
	1	74	19.59	19.48	19.47		0
	36	0	19.55	19.51	19.44	0-3	0
	36	18	19.56	19.53	19.40		0
	36	37	19.56	19.50	19.29		0
	75	0	19.54	19.46	19.36		0

Table 9-70
LTE Band 7 Reduced Conducted Powers - 10 MHz Bandwidth - Hotspot Mode Active

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.65	19.52	19.53	0	0
	1	25	19.57	19.40	19.57		0
	1	49	19.59	19.36	19.42		0
	25	0	19.53	19.55	19.53	0-1	0
	25	12	19.62	19.63	19.48		0
	25	25	19.63	19.60	19.54		0
	50	0	19.64	19.57	19.54		0
16QAM	1	0	20.10	19.92	19.45	0-1	0
	1	25	20.09	19.62	19.35		0
	1	49	20.08	19.54	19.58		0
	25	0	19.77	19.65	19.51	0-2	0
	25	12	19.79	19.68	19.51		0
	25	25	19.78	19.65	19.52		0
	50	0	19.76	19.61	19.52		0
64QAM	1	0	19.32	19.34	19.24	0-2	0
	1	25	19.40	19.37	19.27		0
	1	49	19.35	19.30	19.33		0
	25	0	19.36	19.44	19.27	0-3	0
	25	12	19.42	19.40	19.28		0
	25	25	19.29	19.38	19.30		0
	50	0	19.29	19.39	19.26		0

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Table 9-71
LTE Band 7 Reduced Conducted Powers - 5 MHz Bandwidth - Hotspot Mode Active

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.70	19.44	19.40	0	0
	1	12	19.73	19.52	19.52		0
	1	24	19.74	19.47	19.57		0
	12	0	19.76	19.61	19.48	0-1	0
	12	6	19.77	19.67	19.47		0
	12	13	19.75	19.70	19.60		0
	25	0	19.73	19.66	19.57		0
16QAM	1	0	20.02	19.48	19.55	0-1	0
	1	12	20.08	19.51	19.59		0
	1	24	20.09	19.49	19.71		0
	12	0	19.98	19.66	19.56	0-2	0
	12	6	19.99	19.71	19.53		0
	12	13	19.98	19.67	19.62		0
	25	0	19.78	19.66	19.63		0
64QAM	1	0	19.34	19.53	19.46	0-2	0
	1	12	19.69	19.42	19.61		0
	1	24	19.47	19.54	19.51		0
	12	0	19.46	19.49	19.53	0-3	0
	12	6	19.45	19.47	19.45		0
	12	13	19.45	19.56	19.32		0
	25	0	19.38	19.48	19.44		0

Table 9-72
LTE Band 7 Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor Mode Active

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.74	18.62	18.56	0	0
	1	50	18.71	18.55	18.43		0
	1	99	**18.78**	18.41	18.48		0
	50	0	18.85	18.81	18.68	0-1	0
	50	25	18.94	18.80	18.58		0
	50	50	**18.97**	18.72	18.51		0
	100	0	18.73	18.60	18.59		0
16QAM	1	0	18.73	18.95	18.92	0-1	0
	1	50	18.82	18.61	18.69		0
	1	99	18.87	18.93	18.89		0
	50	0	18.88	18.83	18.59	0-2	0
	50	25	18.94	18.83	18.59		0
	50	50	18.89	18.69	18.53		0
	100	0	18.96	18.75	18.65		0
64QAM	1	0	18.98	18.81	18.89	0-2	0
	1	50	18.93	18.93	18.70		0
	1	99	18.97	18.75	18.79		0
	50	0	18.92	18.81	18.69	0-3	0
	50	25	18.87	18.82	18.64		0
	50	50	18.99	18.80	18.60		0
	100	0	18.94	18.79	18.62		0

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Table 9-73
LTE Band 7 Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor Mode Active

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.32	18.35	18.18	0	0
	1	36	18.36	18.25	18.02		0
	1	74	18.41	18.18	18.12		0
	36	0	18.41	18.47	18.25	0-1	0
	36	18	18.48	18.45	18.20		0
	36	37	18.52	18.30	18.22		0
	75	0	18.53	18.41	18.23		0
16QAM	1	0	18.59	18.58	18.48	0-1	0
	1	36	18.43	18.64	18.40		0
	1	74	18.84	18.62	18.37		0
	36	0	18.41	18.54	18.25	0-2	0
	36	18	18.48	18.51	18.22		0
	36	37	18.46	18.44	18.23		0
	75	0	18.44	18.41	18.24		0
64QAM	1	0	18.68	18.68	18.45	0-2	0
	1	36	18.61	18.53	18.56		0
	1	74	18.82	18.48	18.42		0
	36	0	18.48	18.47	18.26	0-3	0
	36	18	18.53	18.54	18.26		0
	36	37	18.56	18.34	18.25		0
	75	0	18.48	18.40	18.27		0

Table 9-74
LTE Band 7 Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor Mode Active

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.23	18.18	18.00	0	0
	1	25	18.19	18.13	18.02		0
	1	49	18.18	18.14	18.02		0
	25	0	18.27	18.32	18.11	0-1	0
	25	12	18.38	18.28	18.04		0
	25	25	18.29	18.28	18.03		0
	50	0	18.33	18.26	18.09		0
16QAM	1	0	18.20	18.44	18.25	0-1	0
	1	25	18.53	18.43	18.23		0
	1	49	18.45	18.44	18.20		0
	25	0	18.35	18.33	18.12	0-2	0
	25	12	18.29	18.32	18.11		0
	25	25	18.40	18.30	18.11		0
	50	0	18.29	18.29	18.10		0
64QAM	1	0	18.45	18.48	18.25	0-2	0
	1	25	18.48	18.10	18.31		0
	1	49	18.47	18.38	18.25		0
	25	0	18.34	18.30	18.16	0-3	0
	25	12	18.33	18.31	18.15		0
	25	25	18.42	18.24	18.13		0
	50	0	18.40	18.30	18.14		0

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Table 9-75
LTE Band 7 Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor Mode Active

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.12	18.10	18.00	0	0
	1	12	18.20	18.23	18.14		0
	1	24	18.11	18.15	18.16		0
	12	0	18.21	18.21	18.15	0-1	0
	12	6	18.22	18.24	18.25		0
	12	13	18.23	18.31	18.24		0
	25	0	18.23	18.27	18.21		0
16QAM	1	0	18.40	18.25	18.26	0-1	0
	1	12	18.53	18.35	18.38		0
	1	24	18.41	18.39	18.37		0
	12	0	18.32	18.31	18.12	0-2	0
	12	6	18.37	18.04	18.30		0
	12	13	18.31	18.33	18.30		0
	25	0	18.25	18.27	18.18		0
64QAM	1	0	18.50	18.34	18.33	0-2	0
	1	12	18.40	18.39	18.45		0
	1	24	18.32	18.40	18.42		0
	12	0	18.39	18.16	18.20	0-3	0
	12	6	18.28	18.34	18.28		0
	12	13	18.32	18.35	18.27		0
	25	0	18.28	18.23	18.10		0

9.3.10 LTE Band 41

Table 9-76
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	24.30	24.23	24.18	**24.35**	24.13	0	0
	1	50	24.23	24.20	24.15	24.25	24.17		0
	1	99	24.25	24.20	24.13	24.04	24.29		0
	50	0	23.42	23.37	23.41	**23.52**	23.39	0-1	1
	50	25	23.45	23.43	23.42	23.46	23.45		1
	50	50	23.47	23.35	23.39	23.40	23.47		1
	100	0	23.44	23.38	23.37	23.40	23.45		1
16QAM	1	0	23.37	23.24	23.25	23.39	23.18	0-1	1
	1	50	23.27	23.21	23.15	23.30	23.25		1
	1	99	23.27	23.19	23.14	23.16	23.40		1
	50	0	22.42	22.41	22.38	22.50	22.41	0-2	2
	50	25	22.44	22.40	22.40	22.47	22.45		2
	50	50	22.54	22.27	22.35	22.37	22.49		2
	100	0	22.44	22.40	22.38	22.44	22.43		2
64QAM	1	0	22.60	22.67	22.49	22.58	22.54	0-2	2
	1	50	22.53	22.62	22.56	22.66	22.68		2
	1	99	22.47	22.68	22.54	22.61	22.68		2
	50	0	21.47	21.45	21.42	21.56	21.42	0-3	3
	50	25	21.44	21.44	21.44	21.46	21.49		3
	50	50	21.48	21.42	21.40	21.34	21.59		3
	100	0	21.46	21.39	21.35	21.41	21.43		3

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Table 9-77
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	23.71	23.84	23.81	23.99	23.76	0	0
	1	36	23.60	23.79	23.75	23.85	23.74		0
	1	74	23.66	23.75	23.76	23.75	23.85		0
	36	0	22.81	22.94	22.94	23.07	22.91	0-1	1
	36	18	22.82	23.00	22.99	23.04	22.94		1
	36	37	22.80	22.94	22.97	23.05	22.96		1
	75	0	22.83	22.97	22.95	23.03	22.93		1
16QAM	1	0	22.71	22.86	22.88	22.89	22.80	0-1	1
	1	36	22.63	22.78	22.79	22.77	22.78		1
	1	74	22.67	22.83	22.81	22.77	22.84		1
	36	0	21.71	21.85	21.88	21.97	21.85	0-2	2
	36	18	21.73	21.89	21.90	21.98	21.87		2
	36	37	21.75	21.87	22.01	22.03	21.89		2
	75	0	21.81	21.94	21.98	22.04	21.93		2
64QAM	1	0	22.56	22.62	22.52	22.57	22.62	0-2	2
	1	36	22.48	22.61	22.61	22.73	22.65		2
	1	74	22.55	22.62	22.62	22.61	22.71		2
	36	0	21.43	21.55	21.41	21.74	21.67	0-3	3
	36	18	21.58	21.48	21.50	21.70	21.65		3
	36	37	21.46	21.49	21.53	21.65	21.59		3
	75	0	21.44	21.59	21.47	21.56	21.60		3

Table 9-78
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	23.65	23.68	23.75	23.82	23.75	0	0
	1	25	23.55	23.67	23.62	23.77	23.71		0
	1	49	23.55	23.64	23.64	23.77	23.66		0
	25	0	22.69	22.90	22.86	22.98	22.88	0-1	1
	25	12	22.71	22.92	22.85	22.97	22.87		1
	25	25	22.65	22.90	22.79	22.92	22.81		1
	50	0	22.74	22.93	22.83	22.98	22.85		1
16QAM	1	0	22.65	22.82	22.80	22.90	22.78	0-1	1
	1	25	22.54	22.76	22.70	22.80	22.78		1
	1	49	22.58	22.80	22.69	22.79	22.68		1
	25	0	21.70	21.89	21.89	21.82	21.90	0-2	2
	25	12	21.71	21.92	21.87	22.02	21.88		2
	25	25	21.67	21.81	21.81	21.99	21.83		2
	50	0	21.71	21.95	21.89	21.92	21.89		2
64QAM	1	0	22.49	22.58	22.56	21.60	21.56	0-2	2
	1	25	22.41	22.40	22.58	21.58	21.55		2
	1	49	22.42	22.60	22.50	21.47	21.45		2
	25	0	21.48	21.49	21.49	21.05	20.98	0-3	3
	25	12	21.49	21.45	21.61	21.11	20.89		3
	25	25	21.54	21.50	21.56	21.13	20.89		3
	50	0	21.50	21.49	21.57	21.14	20.98		3

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Table 9-79
LTE Band 41 Max PC3 Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.64	23.97	23.68	23.79	23.91	0	0
	1	12	23.64	23.85	23.78	23.83	23.75		0
	1	24	23.68	23.85	23.74	23.82	23.74		0
	12	0	22.68	22.97	22.80	22.95	22.80	0-1	1
	12	6	22.75	22.98	22.88	22.95	22.85		1
	12	13	22.72	22.97	22.90	22.95	22.87		1
	25	0	22.70	22.95	22.88	22.95	22.83		1
16QAM	1	0	22.61	22.84	22.81	22.86	22.82	0-1	1
	1	12	22.65	22.85	22.78	22.86	22.85		1
	1	24	22.64	22.89	22.82	22.89	22.80		1
	12	0	21.68	21.86	21.71	21.81	21.84	0-2	2
	12	6	21.68	21.85	21.70	21.86	21.74		2
	12	13	21.64	21.87	21.77	21.84	21.76		2
	25	0	21.74	21.99	21.91	21.95	21.83		2
64QAM	1	0	22.43	22.56	22.47	22.36	22.17	0-2	2
	1	12	22.47	22.63	22.51	22.30	22.21		2
	1	24	22.37	22.59	22.46	22.08	22.30		2
	12	0	21.61	21.43	21.44	21.53	21.36	0-3	3
	12	6	21.42	21.41	21.53	21.56	21.23		3
	12	13	21.58	21.57	21.56	21.35	21.33		3
	25	0	21.33	21.39	21.55	21.27	21.47		3

Table 9-80
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth - Hotspot Mode Active

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.65	21.61	21.65	21.74	21.51	0	0
	1	50	21.57	21.64	21.53	21.65	21.56		0
	1	99	21.60	21.58	21.49	21.45	**21.80**		0
	50	0	21.81	21.78	21.77	21.80	21.70	0-1	0
	50	25	21.83	21.79	21.80	21.78	21.82		0
	50	50	21.82	21.74	21.78	21.66	**21.85**		0
	100	0	21.64	21.76	21.60	21.79	21.71		0
16QAM	1	0	21.71	21.73	21.60	21.75	21.57	0-1	0
	1	50	21.58	21.56	21.55	21.63	21.60		0
	1	99	21.68	21.79	21.57	21.45	21.76		0
	50	0	21.88	21.80	21.75	21.90	21.81	0-2	0
	50	25	21.81	21.82	21.86	21.88	21.81		0
	50	50	21.83	21.71	21.75	21.81	21.86		0
	100	0	21.81	21.76	21.80	21.74	21.83		0
64QAM	1	0	21.45	21.50	21.40	21.82	21.45	0-2	0
	1	50	21.38	21.41	21.38	21.50	21.56		0
	1	99	21.42	21.41	21.45	21.45	21.59		0
	50	0	21.38	21.40	21.35	21.10	21.40	0-3	1
	50	25	21.36	21.30	21.36	21.42	21.40		1
	50	50	21.37	21.29	21.35	21.40	21.39		1
	100	0	21.35	21.32	21.34	21.38	21.30		1

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Table 9-81
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	21.44	21.33	21.32	21.46	21.30	0	0
	1	36	21.36	21.31	21.29	21.28	21.28		0
	1	74	21.25	21.24	21.16	21.24	21.42		0
	36	0	21.56	21.49	21.47	21.54	21.43	0-1	0
	36	18	21.54	21.45	21.40	21.49	21.47		0
	36	37	21.53	21.46	21.46	21.41	21.46		0
	75	0	21.62	21.45	21.42	21.51	21.46		0
16QAM	1	0	21.48	21.35	21.39	21.44	21.33	0-1	0
	1	36	21.43	21.40	21.32	21.23	21.25		0
	1	74	21.32	21.30	21.25	21.25	21.36		0
	36	0	21.33	21.42	21.40	21.55	21.37	0-2	0
	36	18	21.45	21.40	21.37	21.33	21.28		0
	36	37	21.46	21.41	21.40	21.29	21.37		0
	75	0	21.46	21.47	21.46	21.43	21.46		0
64QAM	1	0	21.58	21.06	21.12	21.15	21.08	0-2	0
	1	36	21.24	21.27	21.09	21.06	21.17		0
	1	74	21.17	21.06	21.17	21.05	21.14		0
	36	0	21.03	21.01	21.05	21.04	21.02	0-3	1
	36	18	21.15	21.00	21.02	21.03	21.05		1
	36	37	21.12	21.02	21.08	21.02	21.07		1
	75	0	21.14	21.02	21.05	21.05	21.08		1

Table 9-82
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	21.09	21.22	21.26	21.33	21.30	0	0
	1	25	20.98	21.25	21.23	21.38	21.10		0
	1	49	21.06	21.14	21.16	21.29	21.10		0
	25	0	21.20	21.40	21.42	21.52	21.40	0-1	0
	25	12	21.22	21.41	21.40	21.53	21.39		0
	25	25	21.18	21.35	21.34	21.44	21.35		0
	50	0	21.24	21.37	21.41	21.52	21.39		0
16QAM	1	0	21.11	21.26	21.27	21.33	21.32	0-1	0
	1	25	21.09	21.27	21.31	21.32	21.22		0
	1	49	21.06	21.17	21.17	21.19	21.19		0
	25	0	21.22	21.44	21.38	21.53	21.25	0-2	0
	25	12	21.23	21.44	21.37	21.47	21.37		0
	25	25	21.21	21.37	21.32	21.43	21.39		0
	50	0	21.22	21.45	21.37	21.18	21.35		0
64QAM	1	0	21.05	21.09	21.04	21.08	21.06	0-2	0
	1	25	21.09	21.08	21.04	21.03	21.07		0
	1	49	21.05	21.03	21.08	21.11	21.05		0
	25	0	20.75	20.94	20.93	21.01	20.97	0-3	1
	25	12	20.78	20.89	20.92	20.89	20.96		1
	25	25	20.71	21.03	20.87	21.01	20.89		1
	50	0	20.69	20.77	21.00	20.98	20.88		1

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Table 9-83
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	21.07	21.26	21.21	21.40	21.30	0	0
	1	12	21.08	21.26	21.23	21.45	21.26		0
	1	24	21.05	21.27	21.22	21.41	21.24		0
	12	0	21.16	21.37	21.31	21.47	21.35	0-1	0
	12	6	21.19	21.42	21.36	21.48	21.36		0
	12	13	21.15	21.39	21.37	21.52	21.38		0
	25	0	21.19	21.38	21.35	21.53	21.36		0
16QAM	1	0	21.10	21.32	21.22	21.35	21.27	0-1	0
	1	12	21.09	21.30	21.25	21.37	21.31		0
	1	24	21.08	21.30	21.22	21.39	21.28		0
	12	0	21.08	21.29	21.19	21.37	21.32	0-2	0
	12	6	21.11	21.31	21.28	21.36	21.23		0
	12	13	21.12	21.29	21.22	21.39	21.32		0
	25	0	21.16	21.42	21.40	21.53	21.33		0
64QAM	1	0	20.98	21.01	20.93	21.10	21.05	0-2	0
	1	12	20.82	20.98	20.98	21.13	21.02		0
	1	24	20.81	20.99	20.96	21.11	21.06		0
	12	0	20.73	20.95	20.80	21.02	20.84	0-3	1
	12	6	20.74	20.94	20.85	21.01	20.93		1
	12	13	20.69	20.90	20.85	21.01	20.93		1
	25	0	20.75	20.97	20.91	21.08	20.93		1

Table 9-84
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth - Grip Sensor 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	20.17	**20.25**	20.05	20.18	19.95	0	0
	1	50	20.06	20.05	20.04	20.05	20.02		0
	1	99	20.06	20.06	20.02	19.97	20.10		0
	50	0	20.25	20.26	20.25	**20.27**	20.23	0-1	0
	50	25	20.25	20.20	20.15	20.22	20.22		0
	50	50	20.24	20.19	20.22	20.21	20.21		0
	100	0	20.24	20.23	20.14	20.19	20.20		0
16QAM	1	0	20.19	20.23	20.08	20.24	20.07	0-1	0
	1	50	20.07	20.12	20.01	20.13	20.10		0
	1	99	20.07	19.93	20.01	19.87	20.29		0
	50	0	20.30	20.40	20.29	20.39	20.32	0-2	0
	50	25	20.32	20.25	20.28	20.34	20.33		0
	50	50	20.33	20.25	20.27	20.34	20.34		0
	100	0	20.29	20.35	20.26	20.25	20.32		0
64QAM	1	0	19.95	19.98	19.85	20.30	19.80	0-2	0
	1	50	19.80	19.86	19.82	20.05	19.80		0
	1	99	19.80	19.63	19.75	19.90	19.98		0
	50	0	20.35	20.45	20.31	19.64	20.32	0-3	0
	50	25	20.37	20.43	20.27	20.48	20.35		0
	50	50	20.36	20.28	20.31	20.40	20.43		0
	100	0	20.35	20.38	20.22	20.32	20.32		0

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Table 9-85
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth - Grip Sensor 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	19.90	20.08	20.04	20.33	20.03	0	0
	1	36	19.77	20.02	19.93	20.34	19.99		0
	1	74	19.84	19.96	20.01	20.02	20.07		0
	36	0	19.97	20.22	20.18	20.42	20.20	0-1	0
	36	18	20.01	20.21	20.19	20.36	20.16		0
	36	37	19.99	20.17	20.22	20.32	20.22		0
	75	0	19.99	20.18	20.18	20.35	20.21		0
16QAM	1	0	19.94	20.15	20.09	20.30	20.09	0-1	0
	1	36	19.77	20.03	20.02	20.13	19.95		0
	1	74	19.83	19.99	19.98	19.98	20.14		0
	36	0	19.94	20.14	20.12	20.31	20.16	0-2	0
	36	18	19.89	20.14	20.14	20.24	20.12		0
	36	37	19.92	20.07	20.09	20.16	20.18		0
	75	0	20.00	20.18	20.19	20.32	20.21		0
64QAM	1	0	19.64	19.84	19.88	20.05	19.82	0-2	0
	1	36	19.50	19.79	19.78	19.98	19.79		0
	1	74	19.53	19.79	19.74	19.82	19.85		0
	36	0	19.98	20.21	20.19	20.35	20.17	0-3	0
	36	18	19.97	20.23	20.21	20.29	20.21		0
	36	37	19.96	20.17	20.15	20.23	20.20		0
	75	0	20.03	20.26	20.21	20.29	20.24		0

Table 9-86
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth - Grip Sensor 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	19.77	19.97	19.98	20.08	19.92	0	0
	1	25	19.96	20.01	19.93	20.11	19.98		0
	1	49	19.74	19.89	19.82	19.96	19.78		0
	25	0	19.91	20.15	20.12	20.30	20.16	0-1	0
	25	12	19.92	20.17	20.11	20.19	20.12		0
	25	25	19.87	20.11	20.05	20.18	20.05		0
	50	0	19.89	20.11	20.12	20.25	20.11		0
16QAM	1	0	19.78	19.97	20.04	20.08	20.11	0-1	0
	1	25	19.71	20.01	19.96	20.08	20.02		0
	1	49	19.78	19.96	19.98	19.96	19.95		0
	25	0	19.93	20.18	20.18	20.25	20.17	0-2	0
	25	12	19.97	20.13	20.13	20.24	20.16		0
	25	25	19.87	20.12	20.09	20.17	20.08		0
	50	0	19.91	20.18	20.12	20.25	20.09		0
64QAM	1	0	19.63	19.75	20.20	19.95	19.79	0-2	0
	1	25	19.46	19.78	20.03	19.80	19.75		0
	1	49	19.46	19.63	19.87	19.73	19.65		0
	25	0	19.88	20.13	20.17	20.21	20.07	0-3	0
	25	12	19.88	20.13	20.16	20.20	20.09		0
	25	25	19.85	20.08	20.07	20.14	20.03		0
	50	0	19.97	20.20	20.15	20.26	20.16		0

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Table 9-87
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth - Grip Sensor 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	19.80	20.04	20.00	20.09	20.05	0	0
	1	12	19.84	20.04	19.98	20.08	19.99		0
	1	24	19.80	20.03	19.97	20.13	19.99		0
	12	0	19.94	20.11	20.01	20.18	20.12	0-1	0
	12	6	19.94	20.19	20.10	20.19	20.09		0
	12	13	19.90	20.16	20.04	20.23	20.12		0
	25	0	19.94	20.18	20.10	20.26	20.07		0
16QAM	1	0	19.80	20.04	20.02	20.13	20.09	0-1	0
	1	12	19.83	20.06	19.98	20.08	20.03		0
	1	24	19.83	20.06	19.98	20.13	20.06		0
	12	0	19.88	20.06	19.94	20.13	20.02	0-2	0
	12	6	19.82	20.09	20.02	20.12	20.02		0
	12	13	19.83	20.02	19.98	20.11	20.06		0
	25	0	19.90	20.15	20.12	20.23	20.12		0
64QAM	1	0	19.57	19.75	19.82	19.98	19.76	0-2	0
	1	12	19.55	19.78	19.75	19.89	19.79		0
	1	24	19.56	19.77	19.71	19.86	19.76		0
	12	0	19.87	20.10	19.98	20.10	20.01	0-3	0
	12	6	19.85	20.09	20.06	20.18	20.02		0
	12	13	19.86	20.09	20.05	20.15	20.02		0
	25	0	19.92	20.18	20.07	20.17	20.05		0

9.3.11 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-88
LTE Band 66 Uplink Carrier Aggregation Maximum 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_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	1	99	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	1	0	24.19	23.98
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	1	49	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	1	0	24.36	24.02

Table 9-89
LTE Band 7 Uplink Carrier Aggregation Maximum 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_7C	LTE B7	20	20850	2510.0	2850	2630.0	QPSK	1	99	LTE B7	20	21048	2529.8	3048	2649.8	QPSK	1	0	23.80	24.17
CA_7C	LTE B7	20	21100	2535.0	3100	2655.0	QPSK	1	0	LTE B7	20	20902	2515.2	2902	2635.2	QPSK	1	99	24.07	24.12
CA_7C	LTE B7	20	21350	2560.0	3350	2680.0	QPSK	1	0	LTE B7	20	21152	2540.2	3152	2660.2	QPSK	1	99	23.90	24.07

Table 9-90
LTE Band 66 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 (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_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	20.30	19.82
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	19.90	19.64

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Table 9-91
LTE Band 66 Uplink Carrier Aggregation Reduced Conducted Powers - Grip Sensor Active

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	1	99	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	1	0	19.17	18.62
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	18.90	18.58
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	19.05	18.63
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	19.00	18.45
CA_66C	LTE B66	20	132072	1720.0	66536	2120.0	QPSK	50	50	LTE B66	20	132270	1739.8	66734	2139.8	QPSK	50	0	19.31	18.75
CA_66B	LTE B66	10	132022	1715.0	66486	2115.0	QPSK	25	25	LTE B66	10	132121	1724.9	66585	2124.9	QPSK	25	0	18.94	18.60
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	50	0	LTE B66	20	132124	1725.2	66588	2125.2	QPSK	50	50	19.10	18.73
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	25	0	LTE B66	10	132223	1735.1	66687	2135.1	QPSK	25	25	18.99	18.72
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	19.25	18.78
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	18.93	18.76

Table 9-92
LTE Band 7 Uplink Carrier Aggregation Reduced Conducted Powers - Grip Sensor 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_7C	LTE B7	20	21350	2560.0	3350	2680.0	QPSK	50	0	LTE B7	20	21152	2540.2	3152	2660.2	QPSK	50	50	19.18	18.68

Notes:

1. This device supports uplink carrier aggregation for LTE CA_66B, LTE CA_66C, and LTE CA_7C 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.

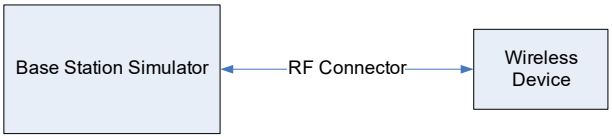

Figure 9-3
Power Measurement Setup

9.4 WLAN Conducted Powers

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

Table 9-93
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	**19.97**	16.21	16.26	13.18
2427	4	N/A	17.66	17.76	16.45
2437	6	19.92	17.91	17.85	16.67
2452	9	N/A	17.47	17.96	16.63
2462	11	19.72	15.10	15.48	14.48

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Table 9-94
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	**19.98**	16.28	16.23	16.54
2427	4	N/A	17.63	17.98	N/A
2437	6	19.95	17.66	17.89	16.60
2452	9	N/A	17.38	17.85	16.98
2462	11	19.75	15.10	15.45	16.91

Table 9-95
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.26	16.23	19.26
2427	4	17.76	17.98	20.88
2437	6	17.85	17.89	20.88
2452	9	**17.96**	**17.85**	20.92
2462	11	15.48	15.45	18.48

Table 9-96
2.4 GHz WLAN Reduced Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	16.79	16.22	16.43	12.71
2422	3	N/A	16.73	16.92	15.56
2427	4	N/A	N/A	N/A	16.82
2437	6	16.68	16.46	16.60	16.72
2452	9	N/A	N/A	N/A	16.32
2457	10	N/A	16.60	16.76	15.02
2462	11	**16.85**	15.10	15.48	14.48

Table 9-97
2.4 GHz WLAN Reduced Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax(SU)
		Average	Average	Average	Average
2412	1	16.68	16.11	16.03	16.81
2422	3	N/A	16.25	16.36	N/A
2437	6	16.55	16.84	16.75	16.93
2457	10	N/A	16.70	16.62	N/A
2462	11	**16.82**	15.10	15.45	16.75

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Table 9-98
2.4 GHz WLAN Reduced Average RF Power – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	16.43	16.03	19.24
2422	3	16.92	16.36	19.66
2437	6	16.60	16.75	19.69
2457	10	**16.76**	**16.62**	19.70
2462	11	15.48	15.45	18.48

Table 9-99
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average	Average
5180	36	17.98	17.94	17.96	15.68
5200	40	17.99	17.98	17.69	15.76
5220	44	17.58	17.99	17.64	15.72
5240	48	17.68	17.68	17.67	15.75
5260	52	17.75	17.76	17.71	15.61
5280	56	17.80	17.90	17.79	15.73
5300	60	17.87	17.89	17.91	15.70
5320	64	**17.91**	17.77	17.76	15.72
5500	100	**17.94**	17.94	17.98	15.64
5600	120	17.74	17.66	17.75	15.82
5620	124	17.68	17.72	17.81	15.79
5720	144	17.83	17.82	17.82	15.72
5745	149	17.94	17.89	17.96	15.97
5785	157	**17.97**	17.91	17.99	15.99
5825	165	17.95	17.93	17.56	15.79

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Table 9-100
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average	Average
5180	36	17.79	17.76	17.73	15.62
5200	40	17.85	17.88	17.94	15.67
5220	44	17.92	17.95	17.97	15.77
5240	48	17.98	17.98	17.99	15.96
5260	52	17.87	17.91	17.89	15.74
5280	56	**17.99**	17.99	17.98	15.83
5300	60	17.68	17.69	17.66	15.98
5320	64	17.65	17.62	17.97	15.94
5500	100	17.84	17.86	17.82	15.71
5600	120	17.68	17.74	17.73	15.89
5620	124	17.76	17.71	17.69	15.92
5720	144	**17.98**	17.96	17.98	15.84
5745	149	17.73	17.66	17.81	15.97
5785	157	**17.86**	17.84	17.78	15.64
5825	165	17.76	17.77	17.76	15.98

Table 9-101
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.94	17.76	20.86
5200	40	17.98	17.88	20.94
5220	44	17.99	17.95	20.98
5240	48	17.68	17.98	20.84
5260	52	17.76	17.91	20.85
5280	56	**17.90**	**17.99**	**20.96**
5300	60	17.89	17.69	20.80
5320	64	17.77	17.62	20.71
5500	100	**17.94**	**17.86**	**20.91**
5600	120	17.66	17.74	20.71
5620	124	17.72	17.71	20.73
5720	144	17.82	17.96	20.90
5745	149	17.89	17.66	20.79
5785	157	**17.91**	**17.84**	**20.89**
5825	165	17.93	17.77	20.86

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Table 9-102
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average
5190	38	13.63	13.63	13.97
5230	46	13.68	13.65	13.60
5270	54	13.76	13.64	13.75
5310	62	**13.87**	13.84	13.71
5510	102	13.59	13.57	13.83
5590	118	13.86	13.87	13.76
5630	126	13.80	13.97	13.77
5710	142	13.90	13.89	13.75
5755	151	13.68	13.69	13.87
5795	159	13.45	13.56	13.90

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax(SU)
		Average	Average
5210	42	12.69	12.46
5290	58	12.87	12.72
5530	106	**12.86**	12.75
5610	122	12.78	12.55
5690	138	12.82	12.72
5775	155	**12.58**	12.83

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Table 9-103
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax(SU)
		Average	Average	Average
5190	38	13.65	13.60	13.95
5230	46	13.74	13.76	13.64
5270	54	13.92	13.55	13.76
5310	62	**13.94**	13.95	13.61
5510	102	13.93	13.88	13.93
5590	118	13.95	13.92	13.95
5630	126	13.67	13.61	13.95
5710	142	13.81	13.72	13.51
5755	151	13.66	13.71	13.86
5795	159	13.53	13.52	13.75

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax(SU)
		Average	Average
5210	42	12.88	12.55
5290	58	12.72	12.57
5530	106	12.80	12.56
5610	122	**12.86**	12.47
5690	138	12.36	12.68
5775	155	**12.85**	12.79

Table 9-104
5 GHz WLAN Reduced Average RF Power – MIMO

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5190	38	13.63	13.65	16.65
5230	46	13.68	13.74	16.72
5270	54	13.76	13.92	16.85
5310	62	**13.87**	**13.94**	**16.92**
5510	102	13.59	13.93	16.77
5590	118	13.86	13.95	16.92
5630	126	13.80	13.67	16.75
5710	142	13.90	13.81	16.87
5755	151	13.68	13.66	16.68
5795	159	13.45	13.53	16.50
5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	9.10	9.96	12.56
5290	58	9.74	9.76	12.76
5530	106	**12.86**	**12.80**	**15.84**
5610	122	12.78	12.86	15.83
5690	138	12.82	12.36	15.61
5775	155	**12.58**	**12.85**	**15.73**

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

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

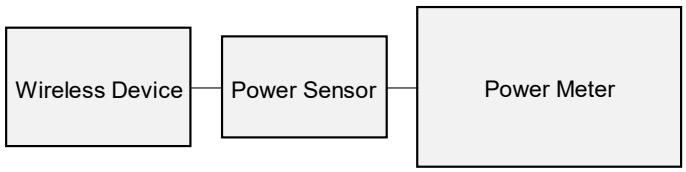

Figure 9-4
Power Measurement Setup

9.5 Bluetooth Conducted Powers

Table 9-105
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	GFSK	0	**16.18**	41.479
2441	1.0	GFSK	39	16.13	40.997
2480	1.0	GFSK	78	14.88	30.781
2402	2.0	π/4-DQPSK	0	9.42	8.742
2441	2.0	π/4-DQPSK	39	9.30	8.509
2480	2.0	π/4-DQPSK	78	8.43	6.964
2402	3.0	8DPSK	0	9.49	8.883
2441	3.0	8DPSK	39	9.39	8.688
2480	3.0	8DPSK	78	8.53	7.136

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

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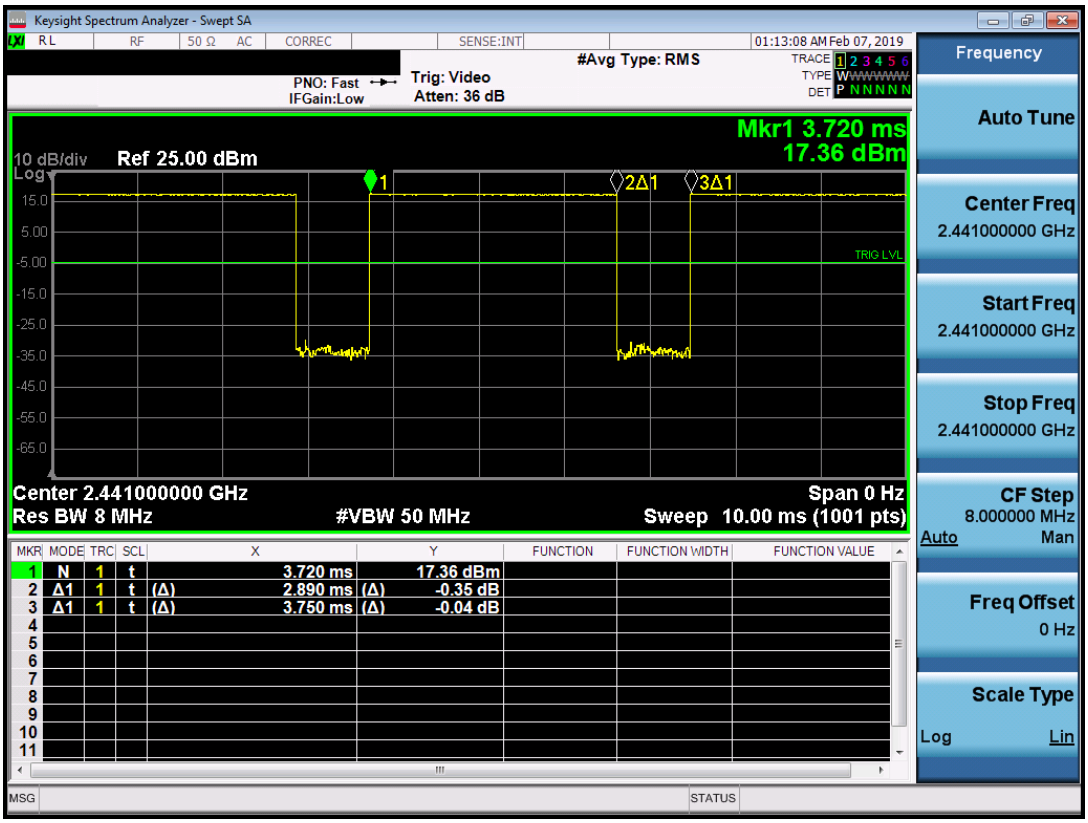

Figure 9-5
Bluetooth Transmission Plot

Equation 9-1
Bluetooth Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.89ms}{3.75ms} * 100\% = 77.10\%$$

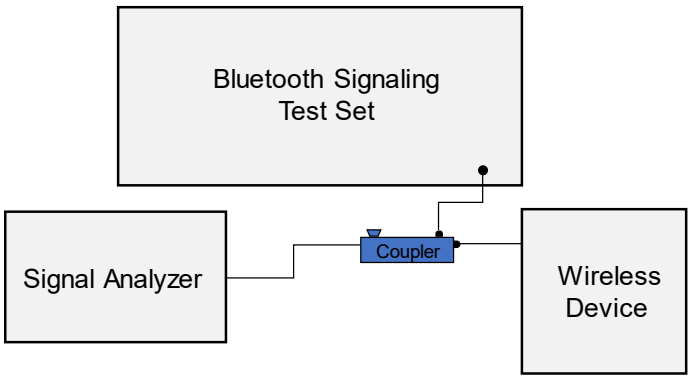

Figure 9-6
Power Measurement Setup

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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
2/14/2019	750H	20.7	680	0.871	42.164	0.888	42.305	-1.91%	-0.33%
			695	0.876	42.098	0.889	42.227	-1.46%	-0.31%
			700	0.881	42.165	0.889	42.201	-0.90%	-0.09%
			710	0.883	42.129	0.890	42.149	-0.79%	-0.05%
			740	0.897	41.952	0.893	41.994	0.45%	-0.10%
			755	0.899	41.906	0.894	41.916	0.56%	-0.02%
			770	0.905	41.925	0.895	41.838	1.12%	0.21%
			785	0.911	41.869	0.896	41.760	1.67%	0.26%
			800	0.917	41.791	0.897	41.682	2.23%	0.26%
2/11/2019	835H	20.3	820	0.875	39.560	0.899	41.578	-2.67%	-4.85%
			835	0.881	39.523	0.900	41.500	-2.11%	-4.76%
			850	0.887	39.481	0.916	41.500	-3.17%	-4.87%
3/4/2019	1750H	21.5	1710	1.361	39.054	1.348	40.142	0.96%	-2.71%
			1750	1.404	38.865	1.371	40.079	2.41%	-3.03%
			1790	1.444	38.659	1.394	40.016	3.59%	-3.39%
2/19/2019	1900H	21.3	1850	1.381	39.530	1.400	40.000	-1.36%	-1.18%
			1880	1.397	39.474	1.400	40.000	-0.21%	-1.32%
			1910	1.416	39.355	1.400	40.000	1.14%	-1.61%
3/2/2019	2450H	21.9	2300	1.747	41.349	1.670	39.500	4.61%	4.68%
			2310	1.760	41.362	1.679	39.480	4.82%	4.77%
			2320	1.766	41.385	1.687	39.460	4.68%	4.88%
2/11/2019	2450H	21.1	2400	1.810	39.292	1.756	39.289	3.08%	0.01%
			2450	1.849	39.238	1.800	39.200	2.72%	0.10%
			2500	1.888	39.156	1.855	39.136	1.78%	0.05%
2/13/2019	2450H	20.3	2400	1.795	38.630	1.756	39.289	2.22%	-1.68%
			2450	1.836	38.552	1.800	39.200	2.00%	-1.65%
			2500	1.873	38.461	1.855	39.136	0.97%	-1.72%
			2550	1.913	38.385	1.909	39.073	0.21%	-1.76%
			2600	1.956	38.305	1.964	39.009	-0.41%	-1.80%
			2650	1.994	38.218	2.018	38.945	-1.19%	-1.87%
02/19/2019	5200H-5800H	21.1	5240	4.565	34.926	4.696	35.940	-2.79%	-2.82%
			5260	4.581	34.840	4.717	35.917	-2.88%	-3.00%
			5300	4.642	34.821	4.758	35.871	-2.44%	-2.93%
			5320	4.653	34.779	4.778	35.849	-2.62%	-2.98%
			5520	4.879	34.437	4.983	35.620	-2.09%	-3.32%
			5540	4.913	34.368	5.004	35.597	-1.82%	-3.45%
			5600	4.978	34.279	5.065	35.529	-1.72%	-3.52%
			5620	5.008	34.245	5.086	35.506	-1.53%	-3.55%
			5745	5.162	34.044	5.214	35.363	-1.00%	-3.73%
			5765	5.194	34.018	5.234	35.340	-0.76%	-3.74%
			5785	5.213	33.965	5.255	35.317	-0.80%	-3.83%

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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
2/18/2019	750B	19.9	680	0.938	53.544	0.958	55.804	-2.09%	-4.05%
			695	0.943	53.515	0.959	55.745	-1.67%	-4.00%
			700	0.944	53.509	0.959	55.726	-1.56%	-3.98%
			710	0.948	53.476	0.960	55.687	-1.25%	-3.97%
			740	0.960	53.381	0.963	55.570	-0.31%	-3.94%
			755	0.966	53.353	0.964	55.512	0.21%	-3.89%
			770	0.972	53.314	0.965	55.453	0.73%	-3.86%
			785	0.977	53.281	0.966	55.395	1.14%	-3.82%
			800	0.983	53.240	0.967	55.336	1.65%	-3.79%
2/21/2019	750B	20.5	740	0.942	53.979	0.963	55.570	-2.18%	-2.86%
			755	0.948	53.962	0.964	55.512	-1.66%	-2.79%
			770	0.954	53.940	0.965	55.453	-1.14%	-2.73%
			785	0.960	53.900	0.966	55.395	-0.62%	-2.70%
			800	0.966	53.857	0.967	55.336	-0.10%	-2.67%
2/25/2019	750B	19.8	680	0.916	54.005	0.958	55.804	-4.38%	-3.22%
			695	0.924	53.972	0.959	55.745	-3.65%	-3.18%
			700	0.927	53.962	0.959	55.726	-3.34%	-3.17%
			710	0.932	53.942	0.960	55.687	-2.92%	-3.13%
			740	0.943	53.874	0.963	55.570	-2.08%	-3.05%
			755	0.947	53.838	0.964	55.512	-1.76%	-3.02%
2/13/2019	835B	21.3	820	0.962	54.334	0.969	55.258	-0.72%	-1.67%
			835	0.978	54.177	0.970	55.200	0.82%	-1.85%
			850	0.994	54.014	0.988	55.154	0.61%	-2.07%
2/18/2019	835B	20.0	820	0.959	53.939	0.969	55.258	-1.03%	-2.39%
			835	0.975	53.775	0.970	55.200	0.52%	-2.58%
			850	0.991	53.611	0.988	55.154	0.30%	-2.80%
2/20/2019	835B	21.2	820	0.943	53.083	0.969	55.258	-2.68%	-3.94%
			835	0.957	52.932	0.970	55.200	-1.34%	-4.11%
			850	0.971	52.769	0.988	55.154	-1.72%	-4.32%
2/20/2019	1750B	21.7	1710	1.410	52.659	1.463	53.537	-3.62%	-1.64%
			1750	1.457	52.518	1.488	53.432	-2.08%	-1.71%
			1790	1.495	52.430	1.514	53.326	-1.25%	-1.68%
2/22/2019	1750B	20.8	1710	1.466	51.675	1.463	53.537	0.21%	-3.48%
			1750	1.508	51.531	1.488	53.432	1.34%	-3.56%
			1790	1.556	51.337	1.514	53.326	2.77%	-3.73%
2/24/2019	1750B	21.9	1710	1.467	51.337	1.463	53.537	0.27%	-4.11%
			1750	1.510	51.247	1.488	53.432	1.48%	-4.09%
			1790	1.550	51.102	1.514	53.326	2.38%	-4.17%
2/26/2019	1750B	22.3	1710	1.463	51.392	1.463	53.537	0.00%	-4.01%
			1750	1.507	51.260	1.488	53.432	1.28%	-4.06%
			1790	1.547	51.084	1.514	53.326	2.18%	-4.20%
3/7/2019	1750B	20.9	1710	1.469	52.268	1.463	53.537	0.41%	-2.37%
			1750	1.513	52.131	1.488	53.432	1.68%	-2.43%
			1790	1.556	51.989	1.514	53.326	2.77%	-2.51%
2/11/2019	1900B	22.2	1850	1.518	53.479	1.520	53.300	-0.13%	0.34%
			1880	1.554	53.356	1.520	53.300	2.24%	0.11%
			1910	1.591	53.218	1.520	53.300	4.67%	-0.15%
2/18/2019	1900B	21.0	1850	1.523	53.394	1.520	53.300	0.20%	0.18%
			1880	1.557	53.283	1.520	53.300	2.43%	-0.03%
			1910	1.592	53.182	1.520	53.300	4.74%	-0.22%
2/24/2019	1900B	22.0	1850	1.497	51.158	1.520	53.300	-1.51%	-4.02%
			1880	1.532	51.019	1.520	53.300	0.79%	-4.28%
			1910	1.573	50.936	1.520	53.300	3.49%	-4.44%
3/2/2019	1900B	23.0	1850	1.512	53.060	1.520	53.300	-0.53%	-0.45%
			1880	1.547	52.956	1.520	53.300	1.78%	-0.65%
			1910	1.581	52.837	1.520	53.300	4.01%	-0.87%
3/5/2019	1900B	20.6	1850	1.508	51.513	1.520	53.300	-0.79%	-3.35%
			1880	1.542	51.397	1.520	53.300	1.45%	-3.57%
			1910	1.576	51.276	1.520	53.300	3.68%	-3.80%

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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
3/6/2019	2450B	21.2	2300	1.892	53.529	1.809	52.900	4.59%	1.19%
			2310	1.901	53.517	1.816	52.887	4.68%	1.19%
			2450	2.034	53.310	1.950	52.700	4.31%	1.16%
			2500	2.082	53.242	2.021	52.636	3.02%	1.15%
			2550	2.133	53.153	2.092	52.573	1.96%	1.10%
			2600	2.183	53.072	2.163	52.509	0.92%	1.07%
			2650	2.233	52.979	2.234	52.445	-0.04%	1.02%
			2700	2.285	52.885	2.305	52.382	-0.87%	0.96%
2/11/2019	2450B	22.8	2400	1.979	52.094	1.902	52.767	4.05%	-1.28%
			2450	2.037	51.969	1.950	52.700	4.46%	-1.39%
			2500	2.094	51.812	2.021	52.636	3.61%	-1.57%
2/13/2019	2450B	22.2	2400	1.973	52.148	1.902	52.767	3.73%	-1.17%
			2450	2.034	52.017	1.950	52.700	4.31%	-1.30%
			2500	2.093	51.855	2.021	52.636	3.56%	-1.48%
2/18/2019	2450B	22.8	2400	1.980	52.672	1.902	52.767	4.10%	-0.18%
			2450	2.035	52.525	1.950	52.700	4.36%	-0.33%
			2500	2.091	52.368	2.021	52.636	3.46%	-0.51%
			2550	2.154	52.224	2.092	52.573	2.96%	-0.66%
			2600	2.216	52.048	2.163	52.509	2.45%	-0.88%
			2650	2.276	51.867	2.234	52.445	1.88%	-1.10%
			2700	2.340	51.720	2.305	52.382	1.52%	-1.26%
3/1/2019	2450B	20.1	2450	2.030	52.040	1.950	52.700	4.10%	-1.25%
			2500	2.072	51.998	2.021	52.636	2.52%	-1.21%
			2550	2.123	51.891	2.092	52.573	1.48%	-1.30%
3/4/2019	2450B	21.0	2450	2.037	54.469	1.950	52.700	4.46%	3.36%
			2500	2.085	54.404	2.021	52.636	3.17%	3.36%
			2550	2.135	54.327	2.092	52.573	2.06%	3.34%
			2600	2.187	54.255	2.163	52.509	1.11%	3.33%
			2650	2.236	54.167	2.234	52.445	0.09%	3.28%
			2700	2.292	54.076	2.305	52.382	-0.56%	3.23%
3/10/2019	2450B	23.6	2450	2.041	50.934	1.950	52.700	4.67%	-3.35%
			2500	2.098	50.788	2.021	52.636	3.81%	-3.51%
			2550	2.158	50.635	2.092	52.573	3.15%	-3.69%
			2600	2.217	50.492	2.163	52.509	2.50%	-3.84%
02/13/2019	5200B-5800B	20.1	5240	5.456	47.804	5.346	48.960	2.06%	-2.36%
			5260	5.479	47.752	5.369	48.933	2.05%	-2.41%
			5280	5.503	47.692	5.393	48.906	2.04%	-2.48%
			5300	5.531	47.697	5.416	48.879	2.12%	-2.42%
			5320	5.557	47.657	5.439	48.851	2.17%	-2.44%
			5500	5.810	47.291	5.650	48.607	2.83%	-2.71%
			5520	5.842	47.228	5.673	48.580	2.98%	-2.78%
			5540	5.879	47.211	5.696	48.553	3.21%	-2.76%
			5560	5.916	47.158	5.720	48.526	3.43%	-2.82%
			5600	5.970	47.126	5.766	48.471	3.54%	-2.77%
			5620	5.990	47.047	5.790	48.444	3.45%	-2.88%
			5700	6.123	46.927	5.883	48.336	4.08%	-2.92%
			5745	6.181	46.818	5.936	48.275	4.13%	-3.02%
			5765	6.211	46.779	5.959	48.248	4.23%	-3.04%
			5785	6.262	46.757	5.982	48.220	4.68%	-3.03%

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)	$Deviation_{1g}$ (%)
G	750	HEAD	02/14/2019	22.9	20.7	0.200	1054	7410	1.710	8.370	8.550	2.15%
G	835	HEAD	02/11/2019	21.1	20.3	0.200	4d133	7410	1.910	9.430	9.550	1.27%
D	1750	HEAD	03/04/2019	22.0	21.5	0.100	1150	7357	3.590	36.500	35.900	-1.64%
G	1900	HEAD	02/19/2019	23.2	21.3	0.100	5d149	7410	3.800	39.300	38.000	-3.31%
E	2300	HEAD	03/02/2019	20.5	20.3	0.100	1064	3589	4.570	47.600	45.700	-3.99%
H	2450	HEAD	02/11/2019	20.9	21.1	0.100	797	7409	5.470	52.700	54.700	3.80%
H	2450	HEAD	02/13/2019	20.9	20.3	0.100	797	7409	5.510	52.700	55.100	4.55%
H	2600	HEAD	02/13/2019	20.9	20.3	0.100	1071	7409	5.480	56.300	54.800	-2.66%
H	5250	HEAD	02/19/2019	21.6	21.1	0.050	1237	7409	3.840	81.300	76.800	-5.54%
H	5600	HEAD	02/19/2019	21.6	21.1	0.050	1237	7409	4.170	85.700	83.400	-2.68%
H	5750	HEAD	02/19/2019	21.6	21.1	0.050	1237	7409	3.750	80.600	75.000	-6.95%

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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)	$Deviation_{1g}$ (%)
E	750	BODY	02/18/2019	21.6	19.9	0.200	1003	3589	1.720	8.580	8.600	0.23%
E	750	BODY	02/21/2019	21.2	20.5	0.200	1003	3589	1.810	8.580	9.050	5.48%
E	750	BODY	02/25/2019	21.8	19.8	0.200	1003	3589	1.730	8.580	8.650	0.82%
D	835	BODY	02/13/2019	21.9	21.3	0.200	4d047	7357	2.050	9.710	10.250	5.56%
D	835	BODY	02/18/2019	21.5	20.0	0.200	4d047	7357	2.050	9.710	10.250	5.56%
D	835	BODY	02/20/2019	21.7	21.2	0.200	4d047	7357	1.960	9.710	9.800	0.93%
G	1750	BODY	02/20/2019	22.6	21.8	0.100	1148	7410	3.780	37.000	37.800	2.16%
G	1750	BODY	02/22/2019	23.2	20.8	0.100	1150	7410	3.820	36.600	38.200	4.37%
G	1750	BODY	02/24/2019	21.3	21.3	0.100	1150	7410	3.800	36.600	38.000	3.83%
G	1750	BODY	03/07/2019	22.6	20.9	0.100	1148	7410	3.830	37.000	38.300	3.51%
J	1900	BODY	02/11/2019	21.4	20.8	0.100	5d149	7488	4.180	39.400	41.800	6.09%
J	1900	BODY	02/18/2019	21.0	21.0	0.100	5d080	7488	4.190	39.200	41.900	6.89%
J	1900	BODY	03/02/2019	21.0	21.2	0.100	5d080	7488	4.080	39.200	40.800	4.08%
J	1900	BODY	03/05/2019	21.7	20.6	0.100	5d149	7488	4.210	39.400	42.100	6.85%
L	2300	BODY	03/06/2019	22.6	21.2	0.100	1064	7308	4.430	46.500	44.300	-4.73%
K	2450	BODY	02/11/2019	21.9	21.1	0.100	981	3319	5.080	50.900	50.800	-0.20%
K	2450	BODY	02/13/2019	22.2	21.2	0.100	981	3319	5.110	50.900	51.100	0.39%
K	2450	BODY	02/18/2019	21.9	22.8	0.100	981	3319	5.100	50.900	51.000	0.20%
L	2450	BODY	03/01/2019	22.8	19.8	0.100	797	7308	4.840	51.100	48.400	-5.28%
L	2450	BODY	03/04/2019	21.9	21.0	0.100	981	7308	4.960	50.900	49.600	-2.55%
K	2600	BODY	02/18/2019	21.9	22.8	0.100	1004	3319	5.510	54.800	55.100	0.55%
L	2600	BODY	03/04/2019	21.9	21.0	0.100	1004	7308	5.170	54.800	51.700	-5.66%
L	5250	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	3.870	77.000	77.400	0.52%
L	5600	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	3.970	79.200	79.400	0.25%
L	5750	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	3.500	76.100	70.000	-8.02%

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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)	$Deviation_{10g}$ (%)
E	750	BODY	02/21/2019	21.2	20.5	0.200	1003	3589	1.190	5.710	5.950	4.20%
E	750	BODY	02/25/2019	21.8	19.8	0.200	1003	3589	1.140	5.710	5.700	-0.18%
D	835	BODY	02/18/2019	21.5	20.0	0.200	4d047	7357	1.350	6.360	6.750	6.13%
D	835	BODY	02/20/2019	21.7	21.2	0.200	4d047	7357	1.290	6.360	6.450	1.42%
G	1750	BODY	02/22/2019	23.2	20.8	0.100	1150	7410	2.010	19.400	20.100	3.61%
G	1750	BODY	02/24/2019	21.3	21.3	0.100	1150	7410	2.000	19.400	20.000	3.09%
G	1750	BODY	02/26/2019	22.4	21.3	0.100	1150	7410	2.080	19.400	20.800	7.22%
G	1750	BODY	03/07/2019	22.6	20.9	0.100	1148	7410	2.020	19.800	20.200	2.02%
J	1900	BODY	02/18/2019	21.0	21.0	0.100	5d080	7488	2.150	20.600	21.500	4.37%
J	1900	BODY	02/24/2019	21.7	21.5	0.100	5d149	7488	2.120	20.700	21.200	2.42%
J	1900	BODY	03/05/2019	21.7	20.6	0.100	5d149	7488	2.150	20.700	21.500	3.86%
L	2300	BODY	03/06/2019	22.6	21.2	0.100	1064	7308	2.120	22.600	21.200	-6.19%
K	2450	BODY	02/13/2019	22.2	21.2	0.100	981	3319	2.350	24.200	23.500	-2.89%
K	2450	BODY	02/18/2019	21.9	22.8	0.100	981	3319	2.340	24.200	23.400	-3.31%
L	2450	BODY	03/04/2019	21.9	21.0	0.100	981	7308	2.280	24.200	22.800	-5.79%
L	2450	BODY	03/06/2019	22.6	21.2	0.100	719	7308	2.200	23.700	22.000	-7.17%
K	2450	BODY	03/10/2019	21.9	23.6	0.100	719	7417	2.210	23.700	22.100	-6.75%
K	2600	BODY	02/18/2019	21.9	22.8	0.100	1004	3319	2.430	24.700	24.300	-1.62%
L	2600	BODY	03/04/2019	21.9	21.0	0.100	1004	7308	2.310	24.700	23.100	-6.48%
L	2600	BODY	03/06/2019	22.6	21.2	0.100	1064	7308	2.470	24.400	24.700	1.23%
K	2600	BODY	03/10/2019	21.9	23.6	0.100	1071	7417	2.290	24.500	22.900	-6.53%
L	5250	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	1.060	21.600	21.200	-1.85%
L	5600	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	1.090	22.200	21.800	-1.80%
L	5750	BODY	02/13/2019	22.6	20.1	0.050	1191	7308	0.981	21.200	19.620	-7.45%

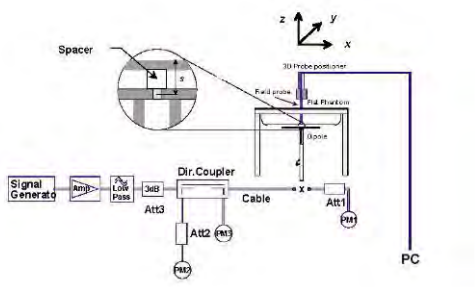

Figure 10-1
System Verification Setup Diagram

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 Handset Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	# of Time Slots	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	34.0	33.06	-0.02	Right	Cheek	1390M	1	1:8.3	0.297	1.242	0.369	A1
836.60	190	GSM 850	GSM	34.0	33.06	0.16	Right	Tilt	1390M	1	1:8.3	0.142	1.242	0.176	
836.60	190	GSM 850	GSM	34.0	33.06	0.13	Left	Cheek	1390M	1	1:8.3	0.158	1.242	0.196	
836.60	190	GSM 850	GSM	34.0	33.06	0.13	Left	Tilt	1390M	1	1:8.3	0.111	1.242	0.138	
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 Handset Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	# of Time Slots	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GSM	31.5	29.82	0.12	Right	Cheek	1345M	1	1:8.3	0.044	1.472	0.065	
1880.00	661	GSM 1900	GSM	31.5	29.82	0.04	Right	Tilt	1345M	1	1:8.3	0.054	1.472	0.079	
1880.00	661	GSM 1900	GSM	31.5	29.82	-0.02	Left	Cheek	1345M	1	1:8.3	0.075	1.472	0.110	A2
1880.00	661	GSM 1900	GSM	31.5	29.82	0.10	Left	Tilt	1345M	1	1:8.3	0.044	1.472	0.065	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-3
UMTS 850 Handset 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	# of Time Slots	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.01	Right	Cheek	1390M	N/A	1:1	0.319	1.352	**0.431**	A3
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.04	Right	Tilt	1390M	N/A	1:1	0.163	1.352	0.220	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.07	Left	Cheek	1390M	N/A	1:1	0.233	1.352	0.315	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.01	Left	Tilt	1390M	N/A	1:1	0.135	1.352	0.183	
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 Handset 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)	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	0.13	Right	Cheek	1404M	1:1	0.103	1.358	0.140	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	0.12	Right	Tilt	1404M	1:1	0.097	1.358	0.132	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	0.09	Left	Cheek	1404M	1:1	0.166	1.358	0.225	A4
1732.40	1412	UMTS 1750	RMC	25.5	24.17	0.02	Left	Tilt	1404M	1:1	0.091	1.358	0.124	
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 Handset 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	9400	UMTS 1900	RMC	25.5	24.32	0.02	Right	Cheek	1345M	1:1	0.137	1.312	0.180	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	0.06	Right	Tilt	1345M	1:1	0.123	1.312	0.161	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	-0.12	Left	Cheek	1345M	1:1	0.175	1.312	0.230	A5
1880.00	9400	UMTS 1900	RMC	25.5	24.32	0.17	Left	Tilt	1345M	1:1	0.099	1.312	0.130	
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
LTE Band 71 Handset 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	24.62	40	0.13	0	Right	Cheek	QPSK	1	0	1345M	1:1	0.165	1.225	0.202	A6
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	40	0.03	1	Right	Cheek	QPSK	50	0	1345M	1:1	0.141	1.189	0.168	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	40	-0.02	0	Right	Tilt	QPSK	1	0	1345M	1:1	0.086	1.225	0.105	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	40	0.01	1	Right	Tilt	QPSK	50	0	1345M	1:1	0.073	1.189	0.087	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	40	-0.03	0	Left	Cheek	QPSK	1	0	1345M	1:1	0.127	1.225	0.156	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	40	0.13	1	Left	Cheek	QPSK	50	0	1345M	1:1	0.111	1.189	0.132	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	40	-0.04	0	Left	Tilt	QPSK	1	0	1345M	1:1	0.069	1.225	0.085	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	40	0.01	1	Left	Tilt	QPSK	50	0	1345M	1:1	0.069	1.189	0.082	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 11-7
LTE Band 12 Handset 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	25.5	24.26	33	-0.03	0	Right	Cheek	QPSK	1	25	1345M	1:1	0.190	1.330	0.253	A7
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	33	-0.07	1	Right	Cheek	QPSK	25	0	1345M	1:1	0.160	1.265	0.202	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	33	0.03	0	Right	Tilt	QPSK	1	25	1345M	1:1	0.121	1.330	0.161	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	33	0.05	1	Right	Tilt	QPSK	25	0	1345M	1:1	0.107	1.265	0.135	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	33	0.01	0	Left	Cheek	QPSK	1	25	1345M	1:1	0.153	1.330	0.203	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	33	0.08	1	Left	Cheek	QPSK	25	0	1345M	1:1	0.134	1.265	0.170	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	33	0.03	0	Left	Tilt	QPSK	1	25	1345M	1:1	0.106	1.330	0.141	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	33	0.04	1	Left	Tilt	QPSK	25	0	1345M	1:1	0.092	1.265	0.116	

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

Table 11-8
LTE Band 13 Handset 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	25.5	24.02	32	0.13	0	Right	Cheek	QPSK	1	49	1345M	1:1	0.175	1.406	0.246	A8
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	32	0.07	1	Right	Cheek	QPSK	25	0	1345M	1:1	0.169	1.377	0.233	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	32	-0.10	0	Right	Tilt	QPSK	1	49	1345M	1:1	0.123	1.406	0.173	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	32	0.09	1	Right	Tilt	QPSK	25	0	1345M	1:1	0.098	1.377	0.135	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	32	-0.03	0	Left	Cheek	QPSK	1	49	1345M	1:1	0.146	1.406	0.205	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	32	-0.10	1	Left	Cheek	QPSK	25	0	1345M	1:1	0.126	1.377	0.174	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	32	-0.02	0	Left	Tilt	QPSK	1	49	1345M	1:1	0.092	1.406	0.129	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	32	0.05	1	Left	Tilt	QPSK	25	0	1345M	1:1	0.086	1.377	0.118	

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

Table 11-9
LTE Band 14 Handset Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Ant State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.16	0	Right	Cheek	QPSK	1	0	1345M	1:1	0.193	1.340	0.259	A9
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.03	1	Right	Cheek	QPSK	25	12	1345M	1:1	0.168	1.318	0.221	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.14	0	Right	Tilt	QPSK	1	0	1345M	1:1	0.135	1.340	0.181	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.01	1	Right	Tilt	QPSK	25	12	1345M	1:1	0.112	1.318	0.148	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.14	0	Left	Cheek	QPSK	1	0	1345M	1:1	0.147	1.340	0.197	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.01	1	Left	Cheek	QPSK	25	12	1345M	1:1	0.131	1.318	0.173	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.06	0	Left	Tilt	QPSK	1	0	1345M	1:1	0.105	1.340	0.141	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.15	1	Left	Tilt	QPSK	25	12	1345M	1:1	0.092	1.318	0.121	

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

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Table 11-10
LTE Band 26 (Cell) Handset 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	25.5	24.22	0	0.13	0	Right	Cheek	QPSK	1	0	1390M	1:1	0.285	1.343	0.383	A10
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.05	1	Right	Cheek	QPSK	36	37	1390M	1:1	0.240	1.327	0.318	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.13	0	Right	Tilt	QPSK	1	0	1390M	1:1	0.133	1.343	0.179	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.03	1	Right	Tilt	QPSK	36	37	1390M	1:1	0.106	1.327	0.141	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.12	0	Left	Cheek	QPSK	1	0	1390M	1:1	0.213	1.343	0.286	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.01	1	Left	Cheek	QPSK	36	37	1390M	1:1	0.186	1.327	0.247	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.07	0	Left	Tilt	QPSK	1	0	1390M	1:1	0.117	1.343	0.157	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.04	1	Left	Tilt	QPSK	36	37	1390M	1:1	0.092	1.327	0.122	
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 66 (AWS) Handset Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.08	0	Right	Cheek	QPSK	1	0	1404M	1:1	0.091	1.191	0.108	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.06	1	Right	Cheek	QPSK	50	0	1404M	1:1	0.083	1.167	0.097	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.11	0	Right	Tilt	QPSK	1	0	1404M	1:1	0.135	1.191	0.161	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.05	1	Right	Tilt	QPSK	50	0	1404M	1:1	0.110	1.167	0.128	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.05	0	Left	Cheek	QPSK	1	0	1404M	1:1	0.164	1.191	0.195	A11
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	23.98	-0.01	0	Left	Cheek	QPSK	1	99	1404M	1:1	0.146	1.265	0.185	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	25.0	24.02	0.10	0	Left	Cheek	QPSK	1	49	1404M	1:1	0.138	1.253	0.173	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.07	1	Left	Cheek	QPSK	50	0	1404M	1:1	0.136	1.167	0.159	
CA_66C 2 CC Uplink	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.19	0.04	0	Left	Cheek	QPSK	1	99	1404M	1:1	0.158	1.205	0.190	
	SCC	1739.80	132270	Low	LTE Band 66 (AWS)	20								1	0						
CA_66B 2 CC Uplink	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	25.0	24.36	-0.01	0	Left	Cheek	QPSK	1	49	1404M	1:1	0.150	1.159	0.174	
	SCC	1724.90	132121	Low	LTE Band 66 (AWS)	10								1	0						
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.09	0	Left	Tilt	QPSK	1	0	1404M	1:1	0.162	1.191	0.193	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.09	1	Left	Tilt	QPSK	50	0	1404M	1:1	0.128	1.167	0.149	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-12
LTE Band 25 (PCS) Handset 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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.03	0	Right	Cheek	QPSK	1	0	1345M	1:1	0.115	1.230	0.141	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.06	1	Right	Cheek	QPSK	50	50	1345M	1:1	0.087	1.202	0.105	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.03	0	Right	Tilt	QPSK	1	0	1345M	1:1	0.143	1.230	0.176	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.03	1	Right	Tilt	QPSK	50	50	1345M	1:1	0.111	1.202	0.133	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.08	0	Left	Cheek	QPSK	1	0	1345M	1:1	0.170	1.230	0.209	A12
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.00	1	Left	Cheek	QPSK	50	50	1345M	1:1	0.152	1.202	0.183	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.07	0	Left	Tilt	QPSK	1	0	1345M	1:1	0.133	1.230	0.164	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.17	1	Left	Tilt	QPSK	50	50	1345M	1:1	0.096	1.202	0.115	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-13
LTE Band 30 Handset Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.10	0	Right	Cheek	QPSK	1	0	1359M	1:1	0.119	1.167	0.139	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.01	1	Right	Cheek	QPSK	25	12	1359M	1:1	0.093	1.161	0.108	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.16	0	Right	Tilt	QPSK	1	0	1359M	1:1	0.080	1.167	0.093	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.05	1	Right	Tilt	QPSK	25	12	1359M	1:1	0.069	1.161	0.080	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.06	0	Left	Cheek	QPSK	1	0	1359M	1:1	0.187	1.167	0.218	A13
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.02	1	Left	Cheek	QPSK	25	12	1359M	1:1	0.166	1.161	0.193	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.03	0	Left	Tilt	QPSK	1	0	1359M	1:1	0.055	1.167	0.064	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.08	1	Left	Tilt	QPSK	25	12	1359M	1:1	0.036	1.161	0.042	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-14
LTE Band 7 Handset Head SAR

MEASUREMENT RESULTS																					
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.09	0	Right	Cheek	QPSK	1	99	1358M	1:1	0.132	1.104	0.146	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.12	1	Right	Cheek	QPSK	50	0	1358M	1:1	0.105	1.091	0.115	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	0.04	0	Right	Tilt	QPSK	1	99	1358M	1:1	0.070	1.104	0.077	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.06	1	Right	Tilt	QPSK	50	0	1358M	1:1	0.058	1.091	0.063	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	0.04	0	Left	Cheek	QPSK	1	99	1358M	1:1	0.144	1.104	0.159	A14
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.03	1	Left	Cheek	QPSK	50	0	1358M	1:1	0.111	1.091	0.121	
2 CC Uplink	PCC	2510.00	20850	Low	LTE Band 7	20	24.6	23.80	-0.06	0	Left	Cheek	QPSK	1	99	1358M	1:1	0.135	1.202	0.162	
	SCC	2529.80	21048	Low	LTE Band 7	20								1	0						
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.04	0	Left	Tilt	QPSK	1	99	1358M	1:1	0.093	1.104	0.103	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.07	1	Left	Tilt	QPSK	50	0	1358M	1:1	0.064	1.091	0.070	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-15
LTE Band 41 Handset 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)	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.14	0	Right	Cheek	QPSK	1	0	1358M	1:1.58	0.047	1.161	0.055	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.09	1	Right	Cheek	QPSK	50	0	1358M	1:1.58	0.039	1.117	0.044	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.07	0	Right	Tilt	QPSK	1	0	1358M	1:1.58	0.031	1.161	0.036	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.15	1	Right	Tilt	QPSK	50	0	1358M	1:1.58	0.025	1.117	0.028	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.04	0	Left	Cheek	QPSK	1	0	1358M	1:1.58	0.082	1.161	0.095	A15
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.08	1	Left	Cheek	QPSK	50	0	1358M	1:1.58	0.059	1.117	0.066	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.05	0	Left	Tilt	QPSK	1	0	1358M	1:1.58	0.062	1.161	0.072	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.01	1	Left	Tilt	QPSK	50	0	1358M	1:1.58	0.045	1.117	0.050	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-16
DTS Handset Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2462	11	802.11b	DSSS	22	17.0	16.85	0.12	Right	Cheek	1	1385M	1	99.9	0.070	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.85	0.07	Right	Tilt	1	1385M	1	99.9	0.085	0.050	1.035	1.001	0.052	
2462	11	802.11b	DSSS	22	17.0	16.85	-0.11	Left	Cheek	1	1385M	1	99.9	0.044	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.85	0.03	Left	Tilt	1	1385M	1	99.9	0.052	-	1.035	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.06	Right	Cheek	2	1385M	1	99.9	0.141	-	1.042	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.03	Right	Tilt	2	1385M	1	99.9	0.161	0.089	1.042	1.001	**0.093**	A16
2462	11	802.11b	DSSS	22	17.0	16.82	-0.06	Left	Cheek	2	1385M	1	99.9	0.069	-	1.042	1.001	-	
2462	11	802.11b	DSSS	22	17.0	16.82	0.00	Left	Tilt	2	1385M	1	99.9	0.083	-	1.042	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											

Table 11-17
NII Handset Head SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.87	0.09	Right	Cheek	1	1365M	13.5	97.2	0.123	0.058	1.030	1.028	**0.061**	A17
5310	62	802.11n	OFDM	40	14.0	13.87	0.07	Right	Tilt	1	1365M	13.5	97.2	0.073	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	0.09	Left	Cheek	1	1365M	13.5	97.2	0.116	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	-0.09	Left	Tilt	1	1365M	13.5	97.2	0.082	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.04	Right	Cheek	2	1365M	13.5	97.2	0.086	-	1.014	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.11	Right	Tilt	2	1365M	13.5	97.2	0.174	0.054	1.014	1.029	0.056	
5310	62	802.11n	OFDM	40	14.0	13.94	-0.04	Left	Cheek	2	1365M	13.5	97.2	0.079	-	1.014	1.029	-	
5310	62	802.11n	OFDM	40	14.0	13.94	0.05	Left	Tilt	2	1365M	13.5	97.2	0.118	-	1.014	1.029	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	0.00	Right	Cheek	1	1365M	29.3	94.5	0.032	-	1.300	1.058	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	0.10	Right	Tilt	1	1365M	29.3	94.5	0.039	0.018	1.300	1.058	0.025	
5530	106	802.11ac	OFDM	80	14.0	12.86	-0.03	Left	Cheek	1	1365M	29.3	94.5	0.020	-	1.300	1.058	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	0.08	Left	Tilt	1	1365M	29.3	94.5	0.033	-	1.300	1.058	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.07	Right	Cheek	2	1365M	29.3	96.2	0.042	-	1.300	1.040	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.06	Right	Tilt	2	1365M	29.3	96.2	0.084	-	1.300	1.040	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	-0.03	Left	Cheek	2	1365M	29.3	96.2	0.043	-	1.300	1.040	-	
5610	122	802.11ac	OFDM	80	14.0	12.86	0.08	Left	Tilt	2	1365M	29.3	96.2	0.090	0.027	1.300	1.040	0.037	
5775	155	802.11ac	OFDM	80	14.0	12.58	-0.18	Right	Cheek	1	1365M	29.3	94.5	0.068	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	0.06	Right	Tilt	1	1365M	29.3	94.5	0.073	0.026	1.387	1.058	0.038	
5775	155	802.11ac	OFDM	80	14.0	12.58	-0.02	Left	Cheek	1	1365M	29.3	94.5	0.060	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	0.09	Left	Tilt	1	1365M	29.3	94.5	0.072	-	1.387	1.058	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.15	Right	Cheek	2	1365M	29.3	96.2	0.039	-	1.303	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.07	Right	Tilt	2	1365M	29.3	96.2	0.074	0.024	1.303	1.040	0.033	
5775	155	802.11ac	OFDM	80	14.0	12.85	-0.06	Left	Cheek	2	1365M	29.3	96.2	0.050	-	1.303	1.040	-	
5775	155	802.11ac	OFDM	80	14.0	12.85	0.05	Left	Tilt	2	1365M	29.3	96.2	0.071	-	1.303	1.040	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**Head** **1.6 W/kg (mW/g)** averaged over 1 gram											

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Table 11-18
DSS Handset Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.14	Right	Cheek	1358B	1	77.1	0.043	1.076	1.297	0.060	
2402.00	0	Bluetooth	FHSS	16.5	16.18	-0.03	Right	Tilt	1358B	1	77.1	0.055	1.076	1.297	**0.077**	A18
2402.00	0	Bluetooth	FHSS	16.5	16.18	0.18	Left	Cheek	1358B	1	77.1	0.023	1.076	1.297	0.032	
2402.00	0	Bluetooth	FHSS	16.5	16.18	-0.14	Left	Tilt	1358B	1	77.1	0.036	1.076	1.297	0.050	
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 11-19
GSM/UMTS Handset 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	# of Time Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	34.0	33.06	N/A	0.02	15 mm	1365M	1	1:8.3	back	0.218	1.242	0.271	A19
1880.00	661	GSM 1900	GSM	31.5	29.82	N/A	0.05	15 mm	1404M	1	1:8.3	back	0.182	1.472	0.268	A21
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.01	15 mm	1366M	N/A	1:1	back	0.198	1.352	0.268	A23
1712.40	1312	UMTS 1750	RMC	25.5	24.14	N/A	-0.01	15 mm	1362M	N/A	1:1	back	0.427	1.368	0.584	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	0.01	15 mm	1362M	N/A	1:1	back	0.511	1.358	**0.694**	A25
1752.60	1513	UMTS 1750	RMC	25.5	24.08	N/A	0.02	15 mm	1362M	N/A	1:1	back	0.481	1.387	0.667	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.11	15 mm	1389M	N/A	1:1	back	0.343	1.312	0.450	A27
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 11-20
LTE Handset Body-Worn 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	24.62	34	0.08	0	1360M	QPSK	1	0	15 mm	back	1:1	0.280	1.225	0.343	A29
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	0.04	1	1360M	QPSK	50	0	15 mm	back	1:1	0.228	1.189	0.271	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.03	0	1360M	QPSK	1	25	15 mm	back	1:1	0.283	1.330	0.376	A31
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.00	1	1360M	QPSK	25	0	15 mm	back	1:1	0.232	1.265	0.293	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.04	0	1389M	QPSK	1	49	15 mm	back	1:1	0.195	1.406	0.274	A33
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	0.03	1	1389M	QPSK	25	0	15 mm	back	1:1	0.168	1.377	0.231	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.03	0	1389M	QPSK	1	0	15 mm	back	1:1	0.212	1.340	0.284	A35
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.07	1	1389M	QPSK	25	12	15 mm	back	1:1	0.168	1.318	0.221	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.05	0	1366M	QPSK	1	0	15 mm	back	1:1	0.147	1.343	0.197	A37
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.04	1	1366M	QPSK	36	37	15 mm	back	1:1	0.126	1.327	0.167	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	N/A	-0.03	0	1362M	QPSK	1	0	15 mm	back	1:1	0.421	1.191	0.501	A39
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	N/A	0.04	1	1362M	QPSK	50	0	15 mm	back	1:1	0.334	1.167	0.390	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	N/A	0.01	0	1389M	QPSK	1	0	15 mm	back	1:1	0.339	1.230	0.417	A41
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	N/A	-0.06	1	1389M	QPSK	50	50	15 mm	back	1:1	0.271	1.202	0.326	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	N/A	0.07	0	1404M	QPSK	1	0	15 mm	back	1:1	0.318	1.167	0.371	A43
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	N/A	0.03	1	1404M	QPSK	25	12	15 mm	back	1:1	0.264	1.161	0.307	
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	N/A	-0.10	0	1404M	QPSK	1	99	15 mm	back	1:1	0.274	1.104	0.302	A45
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	N/A	-0.01	1	1404M	QPSK	50	0	15 mm	back	1:1	0.179	1.091	0.195	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	N/A	0.06	0	1404M	QPSK	1	0	15 mm	back	1:1.58	0.093	1.161	0.108	A47
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	N/A	0.10	1	1404M	QPSK	50	0	15 mm	back	1:1.58	0.071	1.117	0.079	

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 11-21
DTS Handset Body-Worn SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.16	15 mm	1	1385M	1	back	99.9	0.127	0.102	1.007	1.001	**0.103**	A49
2412	1	802.11b	DSSS	22	20.0	19.98	0.03	15 mm	2	1385M	1	back	99.9	0.114	0.090	1.005	1.001	0.091	

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 11-22
NII Handset Body-Worn SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
5320	64	802.11a	OFDM	20	18.0	17.91	0.11	15 mm	1	1360M	6	back	98.8	0.723	0.330	1.021	1.013	0.341	
5280	56	802.11a	OFDM	20	18.0	17.99	0.16	15 mm	2	1360M	6	back	98.7	0.173	0.083	1.002	1.013	0.084	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.08	15 mm	1	1360M	6	back	98.8	1.236	0.530	1.014	1.013	**0.544**	A51
5720	144	802.11a	OFDM	20	18.0	17.98	0.07	15 mm	2	1360M	6	back	98.7	0.109	0.045	1.005	1.013	0.046	
5785	157	802.11a	OFDM	20	18.0	17.97	0.06	15 mm	1	1360M	6	back	98.8	0.357	0.149	1.007	1.013	0.152	
5785	157	802.11a	OFDM	20	18.0	17.86	0.03	15 mm	2	1360M	6	back	98.7	0.080	0.023	1.033	1.013	0.024	

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 11-23
DSS Handset Body-Worn SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.05	15 mm	1385M	1	back	77.1	0.010	1.076	1.297	**0.014**	A53
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							**Body 1.6 W/kg (mW/g) averaged over 1 gram**									

11.3 Standalone Hotspot SAR Data

Table 11-24
GPRS Handset Hotspot SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.04	10 mm	1365M	3	1:2.76	back	0.356	1.294	0.461	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.08	10 mm	1365M	3	1:2.76	front	0.248	1.294	0.321	
836.60	190	GSM 850	GPRS	31.0	29.88	0.10	10 mm	1365M	3	1:2.76	bottom	0.308	1.294	0.399	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.02	10 mm	1365M	3	1:2.76	right	0.388	1.294	0.502	A20
1880.00	661	GSM 1900	GPRS	28.5	27.08	-0.02	10 mm	1404M	2	1:4.15	back	0.441	1.387	0.612	
1880.00	661	GSM 1900	GPRS	28.5	27.08	0.05	10 mm	1404M	2	1:4.15	front	0.172	1.387	0.239	
1850.20	512	GSM 1900	GPRS	28.5	27.13	-0.05	10 mm	1404M	2	1:4.15	bottom	0.445	1.371	0.610	
1880.00	661	GSM 1900	GPRS	28.5	27.08	-0.12	10 mm	1404M	2	1:4.15	bottom	0.500	1.387	0.694	
1909.80	810	GSM 1900	GPRS	28.5	26.91	0.07	10 mm	1404M	2	1:4.15	bottom	0.507	1.442	0.731	A22
1880.00	661	GSM 1900	GPRS	28.5	27.08	-0.07	10 mm	1404M	2	1:4.15	right	0.138	1.387	0.191	
1880.00	661	GSM 1900	GPRS	28.5	27.08	0.01	10 mm	1404M	2	1:4.15	left	0.108	1.387	0.150	
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 11-25
UMTS Handset 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)	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.09	10 mm	1366M	1:1	back	0.367	1.352	0.496	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.02	10 mm	1366M	1:1	front	0.223	1.352	0.301	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.02	10 mm	1366M	1:1	bottom	0.283	1.352	0.383	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.05	10 mm	1366M	1:1	right	0.382	1.352	0.516	A24
1732.40	1412	UMTS 1750	RMC	21.0	20.26	N/A	0.00	10 mm	1407M	1:1	back	0.352	1.186	0.417	
1732.40	1412	UMTS 1750	RMC	21.0	20.26	N/A	-0.03	10 mm	1407M	1:1	front	0.151	1.186	0.179	
1712.40	1312	UMTS 1750	RMC	21.0	20.18	N/A	-0.02	10 mm	1407M	1:1	bottom	0.547	1.208	0.661	
1732.40	1412	UMTS 1750	RMC	21.0	20.26	N/A	-0.04	10 mm	1407M	1:1	bottom	0.615	1.186	0.729	
1752.60	1513	UMTS 1750	RMC	21.0	19.86	N/A	0.01	10 mm	1407M	1:1	bottom	0.662	1.300	0.861	A26
1732.40	1412	UMTS 1750	RMC	21.0	20.26	N/A	-0.01	10 mm	1407M	1:1	right	0.106	1.186	0.126	
1732.40	1412	UMTS 1750	RMC	21.0	20.26	N/A	-0.10	10 mm	1407M	1:1	left	0.092	1.186	0.109	
1880.00	9400	UMTS 1900	RMC	21.5	20.41	N/A	-0.03	10 mm	1389M	1:1	back	0.336	1.285	0.432	
1880.00	9400	UMTS 1900	RMC	21.5	20.41	N/A	0.01	10 mm	1389M	1:1	front	0.169	1.285	0.217	
1852.40	9262	UMTS 1900	RMC	21.5	20.59	N/A	-0.03	10 mm	1389M	1:1	bottom	0.671	1.233	0.827	
1880.00	9400	UMTS 1900	RMC	21.5	20.41	N/A	-0.06	10 mm	1389M	1:1	bottom	0.748	1.285	0.961	
1907.60	9538	UMTS 1900	RMC	21.5	20.41	N/A	-0.06	10 mm	1389M	1:1	bottom	0.804	1.285	**1.033**	A28
1880.00	9400	UMTS 1900	RMC	21.5	20.41	N/A	0.00	10 mm	1389M	1:1	right	0.159	1.285	0.204	
1880.00	9400	UMTS 1900	RMC	21.5	20.41	N/A	0.01	10 mm	1389M	1:1	left	0.104	1.285	0.134	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**												**Body** **1.6 W/kg (mW/g)** averaged over 1 gram			

Table 11-26
LTE Band 71 Handset 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	24.62	34	0.09	0	1360M	QPSK	1	0	10 mm	back	1:1	0.295	1.225	0.361	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	0.00	1	1360M	QPSK	50	0	10 mm	back	1:1	0.242	1.189	0.288	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.05	0	1360M	QPSK	1	0	10 mm	front	1:1	0.240	1.225	0.294	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.02	1	1360M	QPSK	50	0	10 mm	front	1:1	0.204	1.189	0.243	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.13	0	1360M	QPSK	1	0	10 mm	bottom	1:1	0.155	1.225	0.190	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	0.00	1	1360M	QPSK	50	0	10 mm	bottom	1:1	0.128	1.189	0.152	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.08	0	1360M	QPSK	1	0	10 mm	right	1:1	0.582	1.225	0.713	A30
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.02	1	1360M	QPSK	50	0	10 mm	right	1:1	0.485	1.189	0.577	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**															**Body** **1.6 W/kg (mW/g)** averaged over 1 gram					

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Table 11-27
LTE Band 12 Handset 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.18	0	1360M	QPSK	1	25	10 mm	back	1:1	0.290	1.330	0.386	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.00	1	1360M	QPSK	25	0	10 mm	back	1:1	0.238	1.265	0.301	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.11	0	1360M	QPSK	1	25	10 mm	front	1:1	0.260	1.330	0.346	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.00	1	1360M	QPSK	25	0	10 mm	front	1:1	0.211	1.265	0.267	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.11	0	1360M	QPSK	1	25	10 mm	bottom	1:1	0.203	1.330	0.270	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.03	1	1360M	QPSK	25	0	10 mm	bottom	1:1	0.165	1.265	0.209	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.12	0	1360M	QPSK	1	25	10 mm	right	1:1	0.698	1.330	0.928	A32
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.03	1	1360M	QPSK	25	0	10 mm	right	1:1	0.588	1.265	0.744	
707.50	23095	Mid	LTE Band 12	10	24.5	23.43	32	-0.02	1	1360M	QPSK	50	0	10 mm	right	1:1	0.571	1.279	0.730	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram			

Table 11-28
LTE Band 13 Handset 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.06	0	1389M	QPSK	1	49	10 mm	back	1:1	0.311	1.406	0.437	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.10	1	1389M	QPSK	25	0	10 mm	back	1:1	0.270	1.377	0.372	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	0.01	0	1389M	QPSK	1	49	10 mm	front	1:1	0.204	1.406	0.287	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.03	1	1389M	QPSK	25	0	10 mm	front	1:1	0.176	1.377	0.242	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.05	0	1389M	QPSK	1	49	10 mm	bottom	1:1	0.214	1.406	0.301	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.05	1	1389M	QPSK	25	0	10 mm	bottom	1:1	0.182	1.377	0.251	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	0.07	0	1389M	QPSK	1	49	10 mm	right	1:1	0.416	1.406	0.585	A34
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.02	1	1389M	QPSK	25	0	10 mm	right	1:1	0.360	1.377	0.496	
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 14 Handset 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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.05	0	1389M	QPSK	1	0	10 mm	back	1:1	0.313	1.340	0.419	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.05	1	1389M	QPSK	25	12	10 mm	back	1:1	0.255	1.318	0.336	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.11	0	1389M	QPSK	1	0	10 mm	front	1:1	0.228	1.340	0.306	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.02	1	1389M	QPSK	25	12	10 mm	front	1:1	0.188	1.318	0.248	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.07	0	1389M	QPSK	1	0	10 mm	bottom	1:1	0.169	1.340	0.226	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.02	1	1389M	QPSK	25	12	10 mm	bottom	1:1	0.146	1.318	0.192	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.01	0	1389M	QPSK	1	0	10 mm	right	1:1	0.427	1.340	0.572	A36
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.00	1	1389M	QPSK	25	12	10 mm	right	1:1	0.349	1.318	0.460	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram			

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Table 11-30
LTE Band 26 (Cell) Handset Hotspot SAR

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.14	0	1366M	QPSK	1	0	10 mm	back	1:1	0.315	1.343	0.423	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.13	1	1366M	QPSK	36	37	10 mm	back	1:1	0.277	1.327	0.368	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	0.01	0	1366M	QPSK	1	0	10 mm	front	1:1	0.158	1.343	0.212	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.00	1	1366M	QPSK	36	37	10 mm	front	1:1	0.145	1.327	0.192	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.04	0	1366M	QPSK	1	0	10 mm	bottom	1:1	0.202	1.343	0.271	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.04	1	1366M	QPSK	36	37	10 mm	bottom	1:1	0.189	1.327	0.251	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	0.02	0	1366M	QPSK	1	0	10 mm	right	1:1	0.479	1.343	0.643	A38
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.01	1	1366M	QPSK	36	37	10 mm	right	1:1	0.378	1.327	0.502	

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

Table 11-31
LTE Band 66 (AWS) Handset Hotspot SAR

MEASUREMENT RESULTS																					
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																		
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.86	0.01	0	1362M	QPSK	1	0	10 mm	back	1:1	0.282	1.159	0.327	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.93	-0.04	0	1362M	QPSK	50	0	10 mm	back	1:1	0.289	1.140	0.329	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.86	-0.10	0	1362M	QPSK	1	0	10 mm	front	1:1	0.157	1.159	0.182	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.93	-0.01	0	1362M	QPSK	50	0	10 mm	front	1:1	0.165	1.140	0.188	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.86	-0.02	0	1362M	QPSK	1	0	10 mm	bottom	1:1	0.548	1.159	0.635	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.93	-0.09	0	1362M	QPSK	50	0	10 mm	bottom	1:1	0.601	1.140	0.685	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.5	19.84	-0.12	0	1362M	QPSK	50	25	10 mm	bottom	1:1	0.703	1.164	0.818	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.82	-0.07	0	1362M	QPSK	50	0	10 mm	bottom	1:1	0.709	1.169	0.829	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.84	-0.11	0	1362M	QPSK	50	50	10 mm	bottom	1:1	0.740	1.164	0.861	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	19.64	-0.06	0	1362M	QPSK	25	0	10 mm	bottom	1:1	0.704	1.219	0.858	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	19.84	-0.11	0	1362M	QPSK	100	0	10 mm	bottom	1:1	0.738	1.164	0.859	
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	20.30	-0.03	0	1362M	QPSK	50	0	10 mm	bottom	1:1	0.830	1.047	0.869	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20							50	50							
CA_66B 2 CC Uplink	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	20.5	19.90	-0.05	0	1362M	QPSK	25	0	10 mm	bottom	1:1	0.738	1.148	0.847	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10							25	25							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.86	-0.14	0	1362M	QPSK	1	0	10 mm	right	1:1	0.093	1.159	0.108	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.93	-0.02	0	1362M	QPSK	50	0	10 mm	right	1:1	0.102	1.140	0.116	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.86	-0.02	0	1362M	QPSK	1	0	10 mm	left	1:1	0.076	1.159	0.088	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	20.5	19.93	-0.06	0	1362M	QPSK	50	0	10 mm	left	1:1	0.078	1.140	0.089	
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	20.5	20.30	-0.09	0	1362M	QPSK	50	0	10 mm	bottom	1:1	0.831	1.047	0.870	A40
	SCC	1750.20	132374	High	LTE Band 66 (AWS)								50	50							

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

Note: Blue Entry represents variability measurement

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Table 11-32
LTE Band 25 (PCS) Handset 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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.55	-0.08	0	1389M	QPSK	1	99	10 mm	back	1:1	0.285	1.109	0.316	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.63	0.02	0	1389M	QPSK	50	25	10 mm	back	1:1	0.282	1.089	0.307	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.55	-0.03	0	1389M	QPSK	1	99	10 mm	front	1:1	0.169	1.109	0.187	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.63	0.03	0	1389M	QPSK	50	25	10 mm	front	1:1	0.147	1.089	0.160	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.55	-0.13	0	1389M	QPSK	1	99	10 mm	bottom	1:1	0.696	1.109	0.772	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.0	20.36	-0.17	0	1389M	QPSK	1	0	10 mm	bottom	1:1	0.732	1.159	0.848	
1905.00	26590	High	LTE Band 25 (PCS)	20	21.0	20.33	-0.09	0	1389M	QPSK	1	0	10 mm	bottom	1:1	0.776	1.167	0.906	A42
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.63	-0.07	0	1389M	QPSK	50	25	10 mm	bottom	1:1	0.685	1.089	0.746	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.50	-0.17	0	1389M	QPSK	100	0	10 mm	bottom	1:1	0.679	1.122	0.762	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.55	-0.08	0	1389M	QPSK	1	99	10 mm	right	1:1	0.138	1.109	0.153	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.63	0.01	0	1389M	QPSK	50	25	10 mm	right	1:1	0.119	1.089	0.130	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.55	0.07	0	1389M	QPSK	1	99	10 mm	left	1:1	0.084	1.109	0.093	
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.0	20.63	0.05	0	1389M	QPSK	50	25	10 mm	left	1:1	0.082	1.089	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						

Table 11-33
LTE Band 30 Handset 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	20.33	0.07	0	1404M	QPSK	1	25	10 mm	back	1:1	0.257	1.167	0.300	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	0.04	0	1404M	QPSK	25	12	10 mm	back	1:1	0.269	1.178	0.317	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	0.05	0	1404M	QPSK	1	25	10 mm	front	1:1	0.263	1.167	0.307	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	0.01	0	1404M	QPSK	25	12	10 mm	front	1:1	0.276	1.178	0.325	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	-0.05	0	1404M	QPSK	1	25	10 mm	bottom	1:1	0.648	1.167	0.756	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.03	0	1404M	QPSK	25	12	10 mm	bottom	1:1	0.665	1.178	0.783	A44
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	0.02	0	1404M	QPSK	1	25	10 mm	right	1:1	0.037	1.167	0.043	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	0.11	0	1404M	QPSK	25	12	10 mm	right	1:1	0.040	1.178	0.047	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	0.07	0	1404M	QPSK	1	25	10 mm	left	1:1	0.048	1.167	0.056	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.04	0	1404M	QPSK	25	12	10 mm	left	1:1	0.050	1.178	0.059	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

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Table 11-34
LTE Band 7 Handset Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	-0.03	0	1390M	QPSK	1	0	10 mm	back	1:1	0.149	1.191	0.177	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.79	0.05	0	1390M	QPSK	50	25	10 mm	back	1:1	0.151	1.178	0.178	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	0.01	0	1390M	QPSK	1	0	10 mm	front	1:1	0.294	1.191	0.350	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.79	-0.06	0	1390M	QPSK	50	25	10 mm	front	1:1	0.237	1.178	0.279	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	-0.08	0	1390M	QPSK	1	0	10 mm	bottom	1:1	0.762	1.191	0.908	A46
2535.00	21100	Mid	LTE Band 7	20	20.5	19.66	-0.07	0	1390M	QPSK	1	0	10 mm	bottom	1:1	0.658	1.213	0.798	
2560.00	21350	High	LTE Band 7	20	20.5	19.40	-0.15	0	1390M	QPSK	1	0	10 mm	bottom	1:1	0.647	1.288	0.833	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.79	-0.14	0	1390M	QPSK	50	25	10 mm	bottom	1:1	0.648	1.178	0.763	
2510.00	20850	Low	LTE Band 7	20	20.5	19.66	0.07	0	1390M	QPSK	100	0	10 mm	bottom	1:1	0.726	1.213	0.881	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	0.02	0	1390M	QPSK	1	0	10 mm	right	1:1	0.053	1.191	0.063	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.79	0.15	0	1390M	QPSK	50	25	10 mm	right	1:1	0.057	1.178	0.067	
2510.00	20850	Low	LTE Band 7	20	20.5	19.74	0.02	0	1390M	QPSK	1	0	10 mm	left	1:1	0.070	1.191	0.083	
2535.00	21100	Mid	LTE Band 7	20	20.5	19.79	-0.04	0	1390M	QPSK	50	25	10 mm	left	1:1	0.068	1.178	0.080	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram			

Table 11-35
LTE Band 41 Handset 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)	
2680.00	41490	High	LTE Band 41	20	23.0	21.80	-0.09	0	1404M	QPSK	1	99	10 mm	back	1:1.58	0.120	1.318	0.158	
2680.00	41490	High	LTE Band 41	20	23.0	21.85	-0.06	0	1404M	QPSK	50	50	10 mm	back	1:1.58	0.117	1.303	0.152	
2680.00	41490	High	LTE Band 41	20	23.0	21.80	0.00	0	1404M	QPSK	1	99	10 mm	front	1:1.58	0.164	1.318	0.216	
2680.00	41490	High	LTE Band 41	20	23.0	21.85	-0.02	0	1404M	QPSK	50	50	10 mm	front	1:1.58	0.166	1.303	0.216	
2506.00	39750	Low	LTE Band 41	20	23.0	21.65	0.00	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.615	1.365	0.839	
2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.64	0.14	0	1404M	QPSK	1	50	10 mm	bottom	1:1.58	0.500	1.368	0.684	
2593.00	40620	Mid	LTE Band 41	20	23.0	21.65	0.08	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.513	1.365	0.700	
2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.74	0.02	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.551	1.337	0.737	
2680.00	41490	High	LTE Band 41	20	23.0	21.80	-0.11	0	1404M	QPSK	1	99	10 mm	bottom	1:1.58	0.550	1.318	0.725	
2506.00	39750	Low	LTE Band 41	20	23.0	21.83	0.19	0	1404M	QPSK	50	25	10 mm	bottom	1:1.58	0.619	1.309	0.810	A48
2549.50	40185	Low-Mid	LTE Band 41	20	23.0	21.79	0.13	0	1404M	QPSK	50	25	10 mm	bottom	1:1.58	0.518	1.321	0.684	
2593.00	40620	Mid	LTE Band 41	20	23.0	21.80	0.08	0	1404M	QPSK	50	25	10 mm	bottom	1:1.58	0.523	1.318	0.689	
2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.80	-0.05	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.555	1.318	0.731	
2680.00	41490	High	LTE Band 41	20	23.0	21.85	-0.10	0	1404M	QPSK	50	50	10 mm	bottom	1:1.58	0.538	1.303	0.701	
2636.50	41055	Mid-High	LTE Band 41	20	23.0	21.79	0.01	0	1404M	QPSK	100	0	10 mm	bottom	1:1.58	0.534	1.321	0.705	
2680.00	41490	High	LTE Band 41	20	23.0	21.80	-0.04	0	1404M	QPSK	1	99	10 mm	right	1:1.58	0.067	1.318	0.088	
2680.00	41490	High	LTE Band 41	20	23.0	21.85	0.03	0	1404M	QPSK	50	50	10 mm	right	1:1.58	0.064	1.303	0.083	
2680.00	41490	High	LTE Band 41	20	23.0	21.80	-0.02	0	1404M	QPSK	1	99	10 mm	left	1:1.58	0.046	1.318	0.061	
2680.00	41490	High	LTE Band 41	20	23.0	21.85	0.10	0	1404M	QPSK	50	50	10 mm	left	1:1.58	0.046	1.303	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 11-36
WLAN Handset 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)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.02	10 mm	1	1385M	1	back	99.9	0.294	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	0.06	10 mm	1	1385M	1	front	99.9	0.059	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.97	-0.13	10 mm	1	1385M	1	top	99.9	0.328	0.231	1.007	1.001	0.233	
2412	1	802.11b	DSSS	22	20.0	19.97	0.12	10 mm	1	1385M	1	right	99.9	0.279	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.04	10 mm	2	1385M	1	back	99.9	0.428	0.308	1.005	1.001	**0.310**	A50
2412	1	802.11b	DSSS	22	20.0	19.98	-0.09	10 mm	2	1385M	1	front	99.9	0.069	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.04	10 mm	2	1385M	1	top	99.9	0.237	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	-0.02	10 mm	2	1385M	1	left	99.9	0.114	-	1.005	1.001	-	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.05	10 mm	1	1360M	6	back	98.8	0.499	0.178	1.007	1.013	**0.182**	A52
5785	157	802.11a	OFDM	20	18.0	17.97	0.04	10 mm	1	1360M	6	front	98.8	0.057	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.05	10 mm	1	1360M	6	top	98.8	0.091	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.00	10 mm	1	1360M	6	right	98.8	0.147	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.04	10 mm	2	1360M	6	back	98.7	0.118	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.09	10 mm	2	1360M	6	front	98.7	0.028	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.12	10 mm	2	1360M	6	top	98.7	0.271	0.098	1.033	1.013	0.103	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.09	10 mm	2	1360M	6	left	98.7	0.042	-	1.033	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

Table 11-37
DSS Handset 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)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.06	10 mm	1385M	1	back	77.1	0.027	1.076	1.297	**0.038**	A54
2402	0	Bluetooth	FHSS	16.5	16.18	0.04	10 mm	1385M	1	front	77.1	0.004	1.076	1.297	0.006	
2402	0	Bluetooth	FHSS	16.5	16.18	0.19	10 mm	1385M	1	top	77.1	0.020	1.076	1.297	0.028	
2402	0	Bluetooth	FHSS	16.5	16.18	0.13	10 mm	1385M	1	right	77.1	0.020	1.076	1.297	0.028	

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

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11.4 Standalone Phablet SAR Data

Table 11-38
GPRS/UMTS Handset 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	30.5	28.80	-0.09	7 mm	1404M	2	1:4.15	back	0.492	1.479	0.728	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.03	0 mm	1404M	2	1:4.15	front	0.707	1.479	1.046	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.12	11 mm	1404M	2	1:4.15	bottom	0.561	1.479	0.830	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.04	0 mm	1404M	2	1:4.15	right	0.493	1.479	0.729	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.03	0 mm	1404M	2	1:4.15	left	0.203	1.479	0.300	
1880.00	661	GSM 1900	GPRS	27.5	26.33	-0.01	0 mm	1404M	2	1:4.15	back	1.190	1.309	1.558	
1850.20	512	GSM 1900	GPRS	27.5	26.23	-0.19	0 mm	1404M	2	1:4.15	bottom	1.910	1.340	2.559	
1880.00	661	GSM 1900	GPRS	27.5	26.33	-0.19	0 mm	1404M	2	1:4.15	bottom	2.010	1.309	2.631	A55
1909.80	810	GSM 1900	GPRS	27.5	26.17	-0.16	0 mm	1404M	2	1:4.15	bottom	1.560	1.358	2.118	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	-0.03	7 mm	1362M	N/A	1:1	back	0.751	1.358	1.020	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	-0.03	0 mm	1362M	N/A	1:1	front	0.970	1.358	1.317	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	-0.04	11 mm	1362M	N/A	1:1	bottom	0.867	1.358	1.177	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	-0.06	0 mm	1362M	N/A	1:1	right	0.723	1.358	0.982	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	0.07	0 mm	1362M	N/A	1:1	left	0.319	1.358	0.433	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	-0.06	0 mm	1407M	N/A	1:1	back	0.989	1.175	1.162	
1712.40	1312	UMTS 1750	RMC	20.5	19.63	-0.14	0 mm	1407M	N/A	1:1	bottom	2.060	1.222	2.517	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	-0.16	0 mm	1407M	N/A	1:1	bottom	2.160	1.175	2.538	A56
1752.60	1513	UMTS 1750	RMC	20.5	19.45	0.14	0 mm	1407M	N/A	1:1	bottom	2.000	1.274	2.548	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	-0.07	7 mm	1404M	N/A	1:1	back	0.655	1.312	0.859	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	-0.13	0 mm	1404M	N/A	1:1	front	0.914	1.312	1.199	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	-0.05	11 mm	1404M	N/A	1:1	bottom	0.723	1.312	0.949	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	0.16	0 mm	1404M	N/A	1:1	right	0.585	1.312	0.768	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	0.00	0 mm	1404M	N/A	1:1	left	0.256	1.312	0.336	
1880.00	9400	UMTS 1900	RMC	21.0	19.68	-0.09	0 mm	1404M	N/A	1:1	back	1.170	1.355	1.585	
1852.40	9262	UMTS 1900	RMC	21.0	19.63	-0.13	0 mm	1404M	N/A	1:1	bottom	2.040	1.371	2.797	
1880.00	9400	UMTS 1900	RMC	21.0	19.68	-0.09	0 mm	1404M	N/A	1:1	bottom	2.270	1.355	**3.076**	A57
1907.60	9538	UMTS 1900	RMC	21.0	19.55	-0.11	0 mm	1404M	N/A	1:1	bottom	2.160	1.396	3.015	
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 11-39
LTE Band 66 (AWS) Handset 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.10	0	1362M	QPSK	1	0	7 mm	back	1:1	0.795	1.191	0.947	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.07	1	1362M	QPSK	50	0	7 mm	back	1:1	0.673	1.167	0.785	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.05	0	1362M	QPSK	1	0	0 mm	front	1:1	1.070	1.191	1.274	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	-0.07	1	1362M	QPSK	50	0	0 mm	front	1:1	0.883	1.167	1.030	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.02	0	1362M	QPSK	1	0	11 mm	bottom	1:1	0.792	1.191	0.943	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	-0.03	1	1362M	QPSK	50	0	11 mm	bottom	1:1	0.710	1.167	0.829	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.07	0	1362M	QPSK	1	0	0 mm	right	1:1	0.784	1.191	0.934	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	-0.06	1	1362M	QPSK	50	0	0 mm	right	1:1	0.669	1.167	0.781	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.05	0	1362M	QPSK	1	0	0 mm	left	1:1	0.392	1.191	0.467	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.07	1	1362M	QPSK	50	0	0 mm	left	1:1	0.329	1.167	0.384	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	-0.09	0	1362M	QPSK	1	0	0 mm	back	1:1	0.893	1.247	1.114	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	0.00	0	1362M	QPSK	50	0	0 mm	back	1:1	0.945	1.211	1.144	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	-0.09	0	1362M	QPSK	1	0	0 mm	bottom	1:1	2.020	1.247	2.519	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.58	-0.16	0	1362M	QPSK	1	99	0 mm	bottom	1:1	2.040	1.324	2.701	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	18.63	-0.11	0	1362M	QPSK	1	0	0 mm	bottom	1:1	2.050	1.309	2.683	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	-0.10	0	1362M	QPSK	50	0	0 mm	bottom	1:1	2.110	1.211	2.555	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.75	-0.07	0	1362M	QPSK	50	25	0 mm	bottom	1:1	2.150	1.274	2.739	A58
1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	18.78	-0.08	0	1362M	QPSK	50	0	0 mm	bottom	1:1	2.130	1.265	2.694	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.83	-0.15	0	1362M	QPSK	100	0	0 mm	bottom	1:1	2.130	1.250	2.663	
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 11-40
LTE Band 25 (PCS) Handset 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.01	0	1362M	QPSK	1	0	7 mm	back	1:1	1.050	1.230	1.292	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.08	1	1362M	QPSK	50	50	7 mm	back	1:1	0.863	1.202	1.037	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.01	0	1362M	QPSK	1	0	0 mm	front	1:1	1.050	1.230	1.292	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.04	1	1362M	QPSK	50	50	0 mm	front	1:1	0.931	1.202	1.119	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.09	0	1362M	QPSK	1	0	11 mm	bottom	1:1	0.867	1.230	1.066	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.08	1	1362M	QPSK	50	50	11 mm	bottom	1:1	0.730	1.202	0.877	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.01	0	1362M	QPSK	1	0	0 mm	right	1:1	0.618	1.230	0.760	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.03	1	1362M	QPSK	50	50	0 mm	right	1:1	0.543	1.202	0.653	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.04	0	1362M	QPSK	1	0	0 mm	left	1:1	0.334	1.230	0.411	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.04	1	1362M	QPSK	50	50	0 mm	left	1:1	0.303	1.202	0.364	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	0.02	0	1362M	QPSK	1	0	0 mm	back	1:1	1.550	1.002	1.553	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	0.00	0	1362M	QPSK	50	50	0 mm	back	1:1	1.540	1.021	1.572	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.36	-0.19	0	1362M	QPSK	1	99	0 mm	bottom	1:1	2.700	1.033	2.789	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.16	-0.02	0	1362M	QPSK	1	0	0 mm	bottom	1:1	2.790	1.081	3.016	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	-0.14	0	1362M	QPSK	1	0	0 mm	bottom	1:1	2.820	1.002	2.826	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	-0.12	0	1362M	QPSK	50	50	0 mm	bottom	1:1	2.750	1.021	2.808	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.38	-0.16	0	1362M	QPSK	50	0	0 mm	bottom	1:1	2.900	1.028	2.981	A59
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.37	-0.18	0	1362M	QPSK	50	25	0 mm	bottom	1:1	2.860	1.030	2.946	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.29	-0.18	0	1362M	QPSK	100	0	0 mm	bottom	1:1	2.740	1.050	2.877	
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 11-41
LTE Band 30 Handset 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.02	0	1404M	QPSK	1	0	7 mm	back	1:1	0.475	1.167	0.554	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.03	1	1404M	QPSK	25	12	7 mm	back	1:1	0.408	1.161	0.474	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.06	0	1404M	QPSK	1	0	0 mm	front	1:1	1.640	1.167	1.914	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.07	1	1404M	QPSK	25	12	0 mm	front	1:1	1.370	1.161	1.591	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.07	0	1404M	QPSK	1	0	11 mm	bottom	1:1	0.635	1.167	0.741	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.02	1	1404M	QPSK	25	12	11 mm	bottom	1:1	0.529	1.161	0.614	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.03	0	1404M	QPSK	1	0	0 mm	right	1:1	0.385	1.167	0.449	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.08	1	1404M	QPSK	25	12	0 mm	right	1:1	0.313	1.161	0.363	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.03	0	1404M	QPSK	1	0	0 mm	left	1:1	0.374	1.167	0.436	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.14	1	1404M	QPSK	25	12	0 mm	left	1:1	0.314	1.161	0.365	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	0.15	0	1404M	QPSK	1	25	0 mm	back	1:1	0.841	1.167	0.981	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.05	0	1404M	QPSK	25	12	0 mm	back	1:1	0.868	1.178	1.023	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	-0.10	0	1404M	QPSK	1	25	0 mm	bottom	1:1	2.260	1.167	2.637	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.05	0	1404M	QPSK	25	12	0 mm	bottom	1:1	2.400	1.178	2.827	A60
2310.00	27710	Mid	LTE Band 30	10	21.0	20.26	-0.05	0	1404M	QPSK	50	0	0 mm	bottom	1:1	2.370	1.186	2.811	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-42
LTE Band 7 Handset 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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																		
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.02	0	1404M	QPSK	1	99	7 mm	back	1:1	0.425	1.104	0.469	
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.11	1	1404M	QPSK	50	0	7 mm	back	1:1	0.272	1.091	0.297	
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.02	0	1404M	QPSK	1	99	0 mm	front	1:1	1.810	1.104	1.998	A61
2535.00	21100	Mid	LTE Band 7	20	24.6	24.12	0.09	0	1404M	QPSK	1	0	0 mm	front	1:1	1.720	1.117	1.921	
2560.00	21350	High	LTE Band 7	20	24.6	24.07	0.00	0	1404M	QPSK	1	0	0 mm	front	1:1	1.500	1.130	1.695	
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.00	1	1404M	QPSK	50	0	0 mm	front	1:1	1.290	1.091	1.407	
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.10	0	1404M	QPSK	1	99	11 mm	bottom	1:1	0.777	1.104	0.858	
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.11	1	1404M	QPSK	50	0	11 mm	bottom	1:1	0.529	1.091	0.577	
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.04	0	1404M	QPSK	1	99	0 mm	right	1:1	0.633	1.104	0.699	
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.07	1	1404M	QPSK	50	0	0 mm	right	1:1	0.423	1.091	0.461	
2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.07	0	1404M	QPSK	1	99	0 mm	left	1:1	0.717	1.104	0.792	
2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.15	1	1404M	QPSK	50	0	0 mm	left	1:1	0.518	1.091	0.565	
2510.00	20850	Low	LTE Band 7	20	19.5	18.78	-0.06	0	1404M	QPSK	1	99	0 mm	back	1:1	0.559	1.180	0.660	
2510.00	20850	Low	LTE Band 7	20	19.5	18.97	0.00	0	1404M	QPSK	50	50	0 mm	back	1:1	0.527	1.130	0.596	
2510.00	20850	Low	LTE Band 7	20	19.5	18.78	-0.01	0	1404M	QPSK	1	99	0 mm	bottom	1:1	1.680	1.180	1.982	
2510.00	20850	Low	LTE Band 7	20	19.5	18.97	-0.01	0	1404M	QPSK	50	50	0 mm	bottom	1:1	1.740	1.130	1.966	
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 11-43
LTE Band 41 Handset 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)	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.06	0	1404M	QPSK	1	0	7 mm	back	1:1.58	0.138	1.161	0.160	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.08	1	1404M	QPSK	50	0	7 mm	back	1:1.58	0.113	1.117	0.126	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.12	0	1404M	QPSK	1	0	0 mm	front	1:1.58	1.120	1.161	1.300	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.02	1	1404M	QPSK	50	0	0 mm	front	1:1.58	0.908	1.117	1.014	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.07	0	1404M	QPSK	1	0	11 mm	bottom	1:1.58	0.350	1.161	0.406	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.12	1	1404M	QPSK	50	0	11 mm	bottom	1:1.58	0.292	1.117	0.326	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.05	0	1404M	QPSK	1	0	0 mm	right	1:1.58	0.488	1.161	0.567	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.03	1	1404M	QPSK	50	0	0 mm	right	1:1.58	0.396	1.117	0.442	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.19	0	1404M	QPSK	1	0	0 mm	left	1:1.58	0.254	1.161	0.295	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.18	1	1404M	QPSK	50	0	0 mm	left	1:1.58	0.193	1.117	0.216	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	-0.06	0	1404M	QPSK	1	0	0 mm	back	1:1.58	0.477	1.334	0.636	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	0.12	0	1404M	QPSK	50	0	0 mm	back	1:1.58	0.451	1.327	0.598	
2506.00	39750	Low	LTE Band 41	20	21.5	20.17	0.07	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	1.290	1.358	1.752	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	0.05	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	1.320	1.334	1.761	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.05	0.05	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	1.420	1.396	1.982	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.18	0.00	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	1.640	1.355	2.222	
2680.00	41490	High	LTE Band 41	20	21.5	20.10	-0.06	0	1404M	QPSK	1	99	0 mm	bottom	1:1.58	1.910	1.380	2.636	A62
2506.00	39750	Low	LTE Band 41	20	21.5	20.25	0.10	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	1.330	1.334	1.774	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.26	0.15	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	1.390	1.330	1.849	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.25	0.11	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	1.500	1.334	2.001	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	0.04	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	1.740	1.327	2.309	
2680.00	41490	High	LTE Band 41	20	21.5	20.23	-0.04	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	1.870	1.340	2.506	
2506.00	39750	Low	LTE Band 41	20	21.5	20.24	0.09	0	1404M	QPSK	100	0	0 mm	bottom	1:1.58	1.350	1.337	1.805	
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 11-44
WLAN Handset 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)	
5320	64	802.11a	OFDM	20	18.0	17.91	0.06	0 mm	1	1360M	6	back	98.8	8.601	0.663	1.021	1.013	0.686	
5320	64	802.11a	OFDM	20	18.0	17.91	0.00	0 mm	1	1360M	6	front	98.8	0.248	-	1.021	1.013	-	
5320	64	802.11a	OFDM	20	18.0	17.91	0.07	0 mm	1	1360M	6	top	98.8	2.309	-	1.021	1.013	-	
5320	64	802.11a	OFDM	20	18.0	17.91	0.09	0 mm	1	1360M	6	right	98.8	1.248	-	1.021	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.13	0 mm	2	1360M	6	back	98.7	1.477	0.214	1.002	1.013	0.217	
5280	56	802.11a	OFDM	20	18.0	17.99	0.09	0 mm	2	1360M	6	front	98.7	0.466	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.06	0 mm	2	1360M	6	top	98.7	7.719	0.754	1.002	1.013	0.765	
5280	56	802.11a	OFDM	20	18.0	17.99	0.09	0 mm	2	1360M	6	left	98.7	0.581	-	1.002	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	0.03	0 mm	1	1360M	6	back	98.8	5.536	0.756	1.014	1.013	**0.777**	A63
5500	100	802.11a	OFDM	20	18.0	17.94	0.09	0 mm	1	1360M	6	front	98.8	0.197	-	1.014	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.03	0 mm	1	1360M	6	top	98.8	4.564	-	1.014	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	0.09	0 mm	1	1360M	6	right	98.8	0.838	-	1.014	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	0.00	0 mm	2	1360M	6	back	98.7	1.653	0.200	1.005	1.013	0.204	
5720	144	802.11a	OFDM	20	18.0	17.98	0.09	0 mm	2	1360M	6	front	98.7	0.259	-	1.005	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	0.05	0 mm	2	1360M	6	top	98.7	4.671	0.601	1.005	1.013	0.612	
5720	144	802.11a	OFDM	20	18.0	17.98	0.09	0 mm	2	1360M	6	left	98.7	0.424	-	1.005	1.013	-	
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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11.5 Standalone UMPC Body SAR Data

Table 11-45
GPRS UMPC Body 1g 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 (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
824.20	128	GSM 850	GPRS	31.0	29.65	0.17	10 mm	1385M	3	1:2.76	back	0.519	1.365	0.708	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.11	10 mm	1385M	3	1:2.76	back	0.606	1.294	0.784	A64
848.80	251	GSM 850	GPRS	31.0	29.93	-0.11	10 mm	1385M	3	1:2.76	back	0.589	1.279	0.753	
836.60	190	GSM 850	GPRS	31.0	29.88	0.03	10 mm	1385M	3	1:2.76	front	0.419	1.294	0.542	
836.60	190	GSM 850	GPRS	31.0	29.88	0.19	10 mm	1385M	3	1:2.76	bottom	0.294	1.294	0.380	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.04	10 mm	1385M	3	1:2.76	right	0.293	1.294	0.379	
1850.20	512	GSM 1900	GPRS	30.5	28.82	0.18	10 mm	1362M	2	1:4.15	back	0.485	1.472	0.714	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.04	10 mm	1362M	2	1:4.15	back	0.590	1.479	0.873	
1909.80	810	GSM 1900	GPRS	30.5	28.72	0.10	10 mm	1362M	2	1:4.15	back	0.538	1.507	0.811	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.06	10 mm	1362M	2	1:4.15	front	0.448	1.479	0.663	
1850.20	512	GSM 1900	GPRS	30.5	28.82	-0.02	13 mm	1362M	2	1:4.15	bottom	0.536	1.472	0.789	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.10	13 mm	1362M	2	1:4.15	bottom	0.764	1.479	1.130	A65
1909.80	810	GSM 1900	GPRS	30.5	28.72	-0.13	13 mm	1362M	2	1:4.15	bottom	0.750	1.507	1.130	
1880.00	661	GSM 1900	GPRS	27.5	26.33	-0.11	10 mm	1362M	2	1:4.15	bottom	0.568	1.309	0.744	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.17	10 mm	1362M	2	1:4.15	right	0.161	1.479	0.238	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-46
UMTS UMPC Body 1g 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	4183	UMTS 850	RMC	25.5	24.19	0	-0.07	10 mm	1366M	1:1	back	0.315	1.352	0.426	A66
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.00	10 mm	1366M	1:1	front	0.305	1.352	0.412	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.00	10 mm	1366M	1:1	bottom	0.256	1.352	0.346	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.02	10 mm	1366M	1:1	right	0.251	1.352	0.339	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	-0.06	10 mm	1362M	1:1	back	0.554	1.358	0.752	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	0.00	10 mm	1362M	1:1	front	0.557	1.358	0.756	
1712.40	1312	UMTS 1750	RMC	25.5	24.14	N/A	-0.04	13 mm	1362M	1:1	bottom	0.576	1.368	0.788	A67
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	-0.08	13 mm	1362M	1:1	bottom	0.562	1.358	0.763	
1752.60	1513	UMTS 1750	RMC	25.5	24.08	N/A	0.04	13 mm	1362M	1:1	bottom	0.557	1.387	0.773	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	N/A	-0.09	10 mm	1407M	1:1	bottom	0.368	1.175	0.432	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	0.01	10 mm	1362M	1:1	right	0.259	1.358	0.352	
1852.40	9262	UMTS 1900	RMC	25.5	24.35	N/A	0.09	10 mm	1362M	1:1	back	0.583	1.303	0.760	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.01	10 mm	1362M	1:1	back	0.664	1.312	0.871	
1907.60	9538	UMTS 1900	RMC	25.5	24.30	N/A	0.00	10 mm	1362M	1:1	back	0.689	1.318	0.908	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.05	10 mm	1362M	1:1	front	0.567	1.312	0.744	
1852.40	9262	UMTS 1900	RMC	25.5	24.35	N/A	-0.07	13 mm	1362M	1:1	bottom	0.802	1.303	1.045	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.03	13 mm	1362M	1:1	bottom	0.923	1.312	1.211	
1907.60	9538	UMTS 1900	RMC	25.5	24.30	N/A	-0.11	13 mm	1362M	1:1	bottom	1.050	1.318	1.384	A68
1880.00	9400	UMTS 1900	RMC	21.0	19.68	N/A	-0.02	10 mm	1362M	1:1	bottom	0.544	1.355	0.737	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.03	10 mm	1362M	1:1	right	0.216	1.312	0.283	
1907.60	9538	UMTS 1900	RMC	25.5	24.30	N/A	-0.02	13 mm	1362M	1:1	bottom	0.995	1.318	1.311	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram			

Note: Blue entry represents variability measurement

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Table 11-47
LTE Band 71 UMPC Body 1g SAR Data

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	24.62	34	-0.16	0	1358M	QPSK	1	0	10 mm	back	1:1	0.253	1.225	0.310	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.06	1	1358M	QPSK	50	0	10 mm	back	1:1	0.212	1.189	0.252	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	0.01	0	1358M	QPSK	1	0	10 mm	front	1:1	0.257	1.225	0.315	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	0.02	1	1358M	QPSK	50	0	10 mm	front	1:1	0.218	1.189	0.259	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	0.03	0	1358M	QPSK	1	0	10 mm	bottom	1:1	0.166	1.225	0.203	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.05	1	1358M	QPSK	50	0	10 mm	bottom	1:1	0.144	1.189	0.171	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	0.03	0	1358M	QPSK	1	0	10 mm	right	1:1	0.347	1.225	0.425	A69
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.01	1	1358M	QPSK	50	0	10 mm	right	1:1	0.290	1.189	0.345	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-48
LTE Band 12 UMPC Body 1g SAR Data

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	25.5	24.26	32	0.06	0	1358M	QPSK	1	25	10 mm	back	1:1	0.314	1.330	0.418	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.04	1	1358M	QPSK	25	0	10 mm	back	1:1	0.266	1.265	0.336	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.02	0	1358M	QPSK	1	25	10 mm	front	1:1	0.330	1.330	0.439	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.02	1	1358M	QPSK	25	0	10 mm	front	1:1	0.278	1.265	0.352	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.08	0	1358M	QPSK	1	25	10 mm	bottom	1:1	0.228	1.330	0.303	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.04	1	1358M	QPSK	25	0	10 mm	bottom	1:1	0.193	1.265	0.244	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	0.00	0	1358M	QPSK	1	25	10 mm	right	1:1	0.392	1.330	0.521	A70
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.00	1	1358M	QPSK	25	0	10 mm	right	1:1	0.344	1.265	0.435	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-49
LTE Band 13 UMPC Body 1g SAR Data

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	25.5	24.02	78	-0.13	0	1389M	QPSK	1	49	10 mm	back	1:1	0.495	1.406	0.696	A71
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.07	1	1389M	QPSK	25	0	10 mm	back	1:1	0.395	1.377	0.544	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.09	0	1389M	QPSK	1	49	10 mm	front	1:1	0.434	1.406	0.610	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	0.00	1	1389M	QPSK	25	0	10 mm	front	1:1	0.350	1.377	0.482	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.04	0	1389M	QPSK	1	49	10 mm	bottom	1:1	0.310	1.406	0.436	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	0.02	1	1389M	QPSK	25	0	10 mm	bottom	1:1	0.233	1.377	0.321	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.05	0	1389M	QPSK	1	49	10 mm	right	1:1	0.268	1.406	0.377	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.03	1	1389M	QPSK	25	0	10 mm	right	1:1	0.219	1.377	0.302	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

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Table 11-50
LTE Band 14 UMPC Body 1g SAR Data

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.11	0	1389M	QPSK	1	0	10 mm	back	1:1	0.496	1.340	0.665	A72
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.11	1	1389M	QPSK	25	12	10 mm	back	1:1	0.416	1.318	0.548	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.00	0	1389M	QPSK	1	0	10 mm	front	1:1	0.460	1.340	0.616	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.00	1	1389M	QPSK	25	12	10 mm	front	1:1	0.366	1.318	0.482	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.03	0	1389M	QPSK	1	0	10 mm	bottom	1:1	0.309	1.340	0.414	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.03	1	1389M	QPSK	25	12	10 mm	bottom	1:1	0.242	1.318	0.319	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.09	0	1389M	QPSK	1	0	10 mm	right	1:1	0.262	1.340	0.351	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.05	1	1389M	QPSK	25	12	10 mm	right	1:1	0.228	1.318	0.301	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-51
LTE Band 26 (Cell) UMPC Body 1g SAR Data

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.09	0	1366M	QPSK	1	0	10 mm	back	1:1	0.341	1.343	0.458	A73
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.11	1	1366M	QPSK	36	37	10 mm	back	1:1	0.299	1.327	0.397	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	0.00	0	1366M	QPSK	1	0	10 mm	front	1:1	0.324	1.343	0.435	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.03	1	1366M	QPSK	36	37	10 mm	front	1:1	0.286	1.327	0.380	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	0.02	0	1366M	QPSK	1	0	10 mm	bottom	1:1	0.243	1.343	0.326	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.01	1	1366M	QPSK	36	37	10 mm	bottom	1:1	0.221	1.327	0.293	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.04	0	1366M	QPSK	1	0	10 mm	right	1:1	0.241	1.343	0.324	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.02	1	1366M	QPSK	36	37	10 mm	right	1:1	0.234	1.327	0.311	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-52
LTE Band 66 (AWS) UMPC Body 1g SAR Data

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) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																		
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.01	0	1362M	QPSK	1	0	10 mm	back	1:1	0.644	1.191	0.767	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.05	1	1362M	QPSK	50	0	10 mm	back	1:1	0.535	1.167	0.624	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.06	0	1362M	QPSK	1	0	10 mm	front	1:1	0.514	1.191	0.612	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.06	1	1362M	QPSK	50	0	10 mm	front	1:1	0.434	1.167	0.506	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.03	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.646	1.191	0.769	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.0	24.14	0.03	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.627	1.219	0.764	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.0	24.06	0.04	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.693	1.242	0.861	A74
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.03	1	1362M	QPSK	50	0	13 mm	bottom	1:1	0.532	1.167	0.621	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.28	0.01	1	1362M	QPSK	100	0	13 mm	bottom	1:1	0.525	1.180	0.620	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.02	0	1362M	QPSK	1	0	10 mm	right	1:1	0.250	1.191	0.298	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	-0.03	1	1362M	QPSK	50	0	10 mm	right	1:1	0.209	1.167	0.244	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	0.00	0	1407M	QPSK	1	0	10 mm	bottom	1:1	0.346	1.247	0.431	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	0.00	0	1407M	QPSK	50	0	10 mm	bottom	1:1	0.349	1.211	0.423	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 11-53
LTE Band 25 (PCS) UMPC Body 1g SAR Data

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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.17	0	1362M	QPSK	1	0	10 mm	back	1:1	0.528	1.230	0.649	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.01	1	1362M	QPSK	50	50	10 mm	back	1:1	0.486	1.202	0.584	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.14	0	1362M	QPSK	1	0	10 mm	front	1:1	0.575	1.230	0.707	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.07	1	1362M	QPSK	50	50	10 mm	front	1:1	0.510	1.202	0.613	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.09	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.759	1.230	0.934	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	25.0	23.95	0.03	0	1362M	QPSK	1	50	13 mm	bottom	1:1	0.973	1.274	1.240	A75
1905.00	26590	High	LTE Band 25 (PCS)	20	25.0	23.83	0.12	0	1362M	QPSK	1	99	13 mm	bottom	1:1	0.853	1.309	1.117	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.07	1	1362M	QPSK	50	50	13 mm	bottom	1:1	0.680	1.202	0.817	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.0	23.03	0.05	1	1362M	QPSK	50	25	13 mm	bottom	1:1	0.776	1.250	0.970	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.0	23.05	-0.01	1	1362M	QPSK	50	50	13 mm	bottom	1:1	0.780	1.245	0.971	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.18	0.03	1	1362M	QPSK	100	0	13 mm	bottom	1:1	0.673	1.208	0.813	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.15	0	1362M	QPSK	1	0	10 mm	right	1:1	0.170	1.230	0.209	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.05	1	1362M	QPSK	50	50	10 mm	right	1:1	0.151	1.202	0.182	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	-0.04	0	1362M	QPSK	1	0	10 mm	bottom	1:1	0.744	1.002	0.745	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	-0.02	0	1362M	QPSK	50	50	10 mm	bottom	1:1	0.657	1.021	0.671	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-54
LTE Band 30 UMPC Body 1g SAR Data

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	25.0	24.33	-0.11	0	1404M	QPSK	1	0	10 mm	back	1:1	0.817	1.167	0.953	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.05	1	1404M	QPSK	25	12	10 mm	back	1:1	0.670	1.161	0.778	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.26	-0.03	1	1404M	QPSK	50	0	10 mm	back	1:1	0.662	1.186	0.785	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.09	0	1404M	QPSK	1	0	10 mm	front	1:1	0.767	1.167	0.895	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.02	1	1404M	QPSK	25	12	10 mm	front	1:1	0.629	1.161	0.730	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.26	0.09	1	1404M	QPSK	50	0	10 mm	front	1:1	0.635	1.186	0.753	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.11	0	1404M	QPSK	1	0	13 mm	bottom	1:1	0.998	1.167	1.165	A76
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.03	1	1404M	QPSK	25	12	13 mm	bottom	1:1	0.828	1.161	0.961	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.26	-0.02	1	1404M	QPSK	50	0	13 mm	bottom	1:1	0.820	1.186	0.973	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.03	0	1404M	QPSK	1	0	10 mm	right	1:1	0.214	1.167	0.250	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.03	1	1404M	QPSK	25	12	10 mm	right	1:1	0.178	1.161	0.207	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	-0.04	0	1404M	QPSK	1	25	10 mm	bottom	1:1	0.676	1.167	0.789	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.03	0	1404M	QPSK	25	12	10 mm	bottom	1:1	0.717	1.178	0.845	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.26	-0.03	0	1404M	QPSK	50	0	10 mm	bottom	1:1	0.725	1.186	0.860	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.15	0	1404M	QPSK	1	0	13 mm	bottom	1:1	0.955	1.167	1.114	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue Entry represents variability measurement

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Table 11-55
LTE Band 7 UMPC Body 1g SAR Data

MEASUREMENT RESULTS																						
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																		
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.02	0	1382M	QPSK	1	99	10 mm	back	1:1	0.944	1.104	1.042	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	24.6	24.12	0.06	0	1382M	QPSK	1	0	10 mm	back	1:1	0.968	1.117	1.081	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	24.6	24.07	0.00	0	1382M	QPSK	1	0	10 mm	back	1:1	0.945	1.130	1.068	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.03	1	1382M	QPSK	50	0	10 mm	back	1:1	0.519	1.091	0.566	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.20	0.05	1	1382M	QPSK	100	0	10 mm	back	1:1	0.582	1.096	0.638	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.08	0	1382M	QPSK	1	99	10 mm	front	1:1	0.991	1.104	1.094	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	24.6	24.12	-0.03	0	1382M	QPSK	1	0	10 mm	front	1:1	1.070	1.117	1.195	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	24.6	24.07	0.01	0	1382M	QPSK	1	0	10 mm	front	1:1	1.060	1.130	1.198	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.02	1	1382M	QPSK	50	0	10 mm	front	1:1	0.558	1.091	0.609	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.20	-0.02	1	1382M	QPSK	100	0	10 mm	front	1:1	0.616	1.096	0.675	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.05	0	1382M	QPSK	1	99	13 mm	bottom	1:1	1.100	1.104	1.214	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	24.6	24.12	-0.01	0	1382M	QPSK	1	0	13 mm	bottom	1:1	1.190	1.117	1.329	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	24.6	24.07	-0.03	0	1382M	QPSK	1	0	13 mm	bottom	1:1	1.230	1.130	1.390	A77
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.02	1	1382M	QPSK	50	0	13 mm	bottom	1:1	0.639	1.091	0.697	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.20	-0.01	1	1382M	QPSK	100	0	13 mm	bottom	1:1	0.726	1.096	0.796	
2 CC Uplink	PCC	2510.00	20850	Low	LTE Band 7	20	24.6	23.80	0.01	0	1382M	QPSK	1	99	13 mm	bottom	1:1	0.992	1.202	1.192	
	SCC	2529.80	21048	Low	LTE Band 7	20							1	0							
2 CC Uplink	PCC	2535.00	21100	Mid	LTE Band 7	20	24.6	24.07	-0.06	0	1382M	QPSK	1	0	13 mm	bottom	1:1	1.230	1.130	1.390	
	SCC	2515.20	20902	Mid	LTE Band 7	20							1	99							
2 CC Uplink	PCC	2560.00	21350	High	LTE Band 7	20	24.6	23.90	-0.03	0	1382M	QPSK	1	0	13 mm	bottom	1:1	1.190	1.175	**1.398**	
	SCC	2540.20	21152	High	LTE Band 7	20							1	99							
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	0.02	0	1382M	QPSK	1	99	10 mm	right	1:1	0.415	1.104	0.458	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	0.06	1	1382M	QPSK	50	0	10 mm	right	1:1	0.227	1.091	0.248	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.78	-0.03	0	1407M	QPSK	1	99	10 mm	bottom	1:1	0.431	1.180	0.509	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.97	-0.06	0	1407M	QPSK	50	50	10 mm	bottom	1:1	0.428	1.130	0.484	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.07	0	1382M	QPSK	1	99	13 mm	bottom	1:1	1.140	1.104	1.259	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	24.6	24.07	0.06	0	1382M	QPSK	1	0	13 mm	bottom	1:1	1.200	1.130	1.356	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entries represent variability measurements

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Table 11-56
LTE Band 41 UMPC Body 1g SAR Data

MEASUREMENT RESULTS

FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2506.00	39750	Low	LTE Band 41	20	25.0	24.30	-0.01	0	1404M	QPSK	1	0	10 mm	back	1:1.58	0.705	1.175	0.828	
2549.50	40185	Low-Mid	LTE Band 41	20	25.0	24.23	-0.01	0	1404M	QPSK	1	0	10 mm	back	1:1.58	0.724	1.194	0.864	
2593.00	40620	Mid	LTE Band 41	20	25.0	24.18	0.00	0	1404M	QPSK	1	0	10 mm	back	1:1.58	0.770	1.208	0.930	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.01	0	1404M	QPSK	1	0	10 mm	back	1:1.58	0.794	1.161	0.922	
2680.00	41490	High	LTE Band 41	20	25.0	24.29	-0.14	0	1404M	QPSK	1	99	10 mm	back	1:1.58	0.791	1.178	0.932	
2506.00	39750	Low	LTE Band 41	20	24.0	23.47	-0.02	1	1404M	QPSK	50	50	10 mm	back	1:1.58	0.578	1.130	0.653	
2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.43	0.00	1	1404M	QPSK	50	25	10 mm	back	1:1.58	0.597	1.140	0.681	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.42	-0.15	1	1404M	QPSK	50	25	10 mm	back	1:1.58	0.653	1.143	0.746	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.05	1	1404M	QPSK	50	0	10 mm	back	1:1.58	0.642	1.117	0.717	
2680.00	41490	High	LTE Band 41	20	24.0	23.47	-0.10	1	1404M	QPSK	50	50	10 mm	back	1:1.58	0.647	1.130	0.731	
2680.00	41490	High	LTE Band 41	20	24.0	23.45	-0.13	1	1404M	QPSK	100	0	10 mm	back	1:1.58	0.642	1.135	0.729	
2506.00	39750	Low	LTE Band 41	20	25.0	24.30	0.04	0	1404M	QPSK	1	0	10 mm	front	1:1.58	0.638	1.175	0.750	
2549.50	40185	Low-Mid	LTE Band 41	20	25.0	24.23	0.06	0	1404M	QPSK	1	0	10 mm	front	1:1.58	0.702	1.194	0.838	
2593.00	40620	Mid	LTE Band 41	20	25.0	24.18	0.07	0	1404M	QPSK	1	0	10 mm	front	1:1.58	0.756	1.208	0.913	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.01	0	1404M	QPSK	1	0	10 mm	front	1:1.58	0.714	1.161	0.829	
2680.00	41490	High	LTE Band 41	20	25.0	24.29	0.04	0	1404M	QPSK	1	99	10 mm	front	1:1.58	0.764	1.178	0.900	
2506.00	39750	Low	LTE Band 41	20	24.0	23.47	0.11	1	1404M	QPSK	50	50	10 mm	front	1:1.58	0.562	1.130	0.635	
2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.43	0.10	1	1404M	QPSK	50	25	10 mm	front	1:1.58	0.583	1.140	0.665	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.42	0.07	1	1404M	QPSK	50	25	10 mm	front	1:1.58	0.612	1.143	0.700	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.02	1	1404M	QPSK	50	0	10 mm	front	1:1.58	0.572	1.117	0.639	
2680.00	41490	High	LTE Band 41	20	24.0	23.47	-0.01	1	1404M	QPSK	50	50	10 mm	front	1:1.58	0.608	1.130	0.687	
2680.00	41490	High	LTE Band 41	20	24.0	23.45	0.04	1	1404M	QPSK	100	0	10 mm	front	1:1.58	0.605	1.135	0.687	
2506.00	39750	Low	LTE Band 41	20	25.0	24.30	-0.03	0	1404M	QPSK	1	0	13 mm	bottom	1:1.58	0.810	1.175	0.952	
2549.50	40185	Low-Mid	LTE Band 41	20	25.0	24.23	0.02	0	1404M	QPSK	1	0	13 mm	bottom	1:1.58	0.822	1.194	0.981	
2593.00	40620	Mid	LTE Band 41	20	25.0	24.18	-0.05	0	1404M	QPSK	1	0	13 mm	bottom	1:1.58	0.857	1.208	1.035	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.00	0	1404M	QPSK	1	0	13 mm	bottom	1:1.58	0.901	1.161	1.046	
2680.00	41490	High	LTE Band 41	20	25.0	24.29	0.03	0	1404M	QPSK	1	99	13 mm	bottom	1:1.58	0.942	1.178	1.110	A78
2506.00	39750	Low	LTE Band 41	20	24.0	23.47	-0.03	1	1404M	QPSK	50	50	13 mm	bottom	1:1.58	0.657	1.130	0.742	
2549.50	40185	Low-Mid	LTE Band 41	20	24.0	23.43	-0.04	1	1404M	QPSK	50	25	13 mm	bottom	1:1.58	0.677	1.140	0.772	
2593.00	40620	Mid	LTE Band 41	20	24.0	23.42	-0.04	1	1404M	QPSK	50	25	13 mm	bottom	1:1.58	0.714	1.143	0.816	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.02	1	1404M	QPSK	50	0	13 mm	bottom	1:1.58	0.725	1.117	0.810	
2680.00	41490	High	LTE Band 41	20	24.0	23.47	-0.01	1	1404M	QPSK	50	50	13 mm	bottom	1:1.58	0.756	1.130	0.854	
2680.00	41490	High	LTE Band 41	20	24.0	23.45	0.00	1	1404M	QPSK	100	0	13 mm	bottom	1:1.58	0.739	1.135	0.839	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.07	0	1404M	QPSK	1	0	10 mm	right	1:1.58	0.381	1.161	0.442	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.08	1	1404M	QPSK	50	0	10 mm	right	1:1.58	0.321	1.117	0.359	
2506.00	39750	Low	LTE Band 41	20	21.5	20.17	-0.09	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.499	1.358	0.678	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	-0.07	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.502	1.334	0.670	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.05	-0.06	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.517	1.396	0.722	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.18	-0.05	0	1404M	QPSK	1	0	10 mm	bottom	1:1.58	0.559	1.355	0.757	
2680.00	41490	High	LTE Band 41	20	21.5	20.10	-0.06	0	1404M	QPSK	1	99	10 mm	bottom	1:1.58	0.596	1.380	0.822	
2506.00	39750	Low	LTE Band 41	20	21.5	20.25	-0.09	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.512	1.334	0.683	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.26	-0.05	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.517	1.330	0.688	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.25	-0.06	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.542	1.334	0.723	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	-0.02	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.568	1.327	0.754	
2680.00	41490	High	LTE Band 41	20	21.5	20.23	-0.02	0	1404M	QPSK	50	0	10 mm	bottom	1:1.58	0.573	1.340	0.768	
2506.00	39750	Low	LTE Band 41	20	21.5	20.24	-0.06	0	1404M	QPSK	100	0	10 mm	bottom	1:1.58	0.498	1.337	0.666	

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

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Table 11-57
DTS SISO UMPC Body 1g SAR Data

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)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.10	10 mm	1	1385M	1	back	99.9	0.550	0.387	1.007	1.001	0.390	
2412	1	802.11b	DSSS	22	20.0	19.97	0.03	10 mm	1	1385M	1	front	99.9	0.493	0.418	1.007	1.001	0.421	
2412	1	802.11b	DSSS	22	20.0	19.97	0.04	10 mm	1	1385M	1	top	99.9	0.635	0.493	1.007	1.001	**0.497**	A79
2412	1	802.11b	DSSS	22	20.0	19.97	0.17	10 mm	1	1385M	1	right	99.9	0.451	-	1.007	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.04	10 mm	2	1385M	1	back	99.9	0.229	0.207	1.005	1.001	0.208	
2412	1	802.11b	DSSS	22	20.0	19.98	0.09	10 mm	2	1385M	1	front	99.9	0.124	-	1.005	1.001	-	
2412	1	802.11b	DSSS	22	20.0	19.98	0.12	10 mm	2	1385M	1	top	99.9	0.218	-	1.005	1.001	-	

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

Table 11-58
DTS MIMO UMPC Body 1g SAR Data

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)	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.02	10 mm	MIMO	1360M	13	back	98.7	0.465	0.294	1.035	1.013	0.308	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.10	10 mm	MIMO	1360M	13	front	98.7	0.461	0.298	1.035	1.013	0.312	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.02	10 mm	MIMO	1360M	13	top	98.7	0.603	0.407	1.035	1.013	0.427	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.03	10 mm	MIMO	1360M	13	right	98.7	0.313	-	1.035	1.013	-	

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

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

Table 11-59
DTS MIMO UMPC Body 1g SAR Data 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)	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	-0.01	10 mm	MIMO	1360M	13	back	98.7	0.317	0.208	1.091	1.013	0.230	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	-0.07	10 mm	MIMO	1360M	13	front	98.7	0.353	0.206	1.091	1.013	0.228	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	-0.02	10 mm	MIMO	1360M	13	top	98.7	0.419	0.256	1.091	1.013	0.283	
2457	10	802.11n	OFDM	20	17.0	16.76	17.0	16.62	0.00	10 mm	MIMO	1360M	13	right	98.7	0.191	-	1.091	1.013	-	

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

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

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Table 11-60
NII SISO UMPC Body 1g SAR Data

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)	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.03	10 mm	1	1360M	6	back	98.8	1.026	0.475	1.021	1.013	0.491	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.17	10 mm	1	1360M	6	front	98.8	0.182	-	1.021	1.013	-	
5320	64	802.11a	OFDM	20	18.0	17.91	0.09	10 mm	1	1360M	6	top	98.8	0.346	0.161	1.021	1.013	0.167	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.08	10 mm	1	1360M	6	right	98.8	0.085	-	1.021	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.04	10 mm	2	1360M	6	back	98.7	0.211	0.101	1.002	1.013	0.103	
5280	56	802.11a	OFDM	20	18.0	17.99	0.09	10 mm	2	1360M	6	front	98.7	0.186	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.00	10 mm	2	1360M	6	top	98.7	0.363	0.146	1.002	1.013	0.148	
5500	100	802.11a	OFDM	20	18.0	17.94	0.01	10 mm	1	1360M	6	back	98.8	1.692	0.722	1.014	1.013	**0.742**	A80
5600	120	802.11a	OFDM	20	18.0	17.74	-0.05	10 mm	1	1360M	6	back	98.8	1.142	0.548	1.062	1.013	0.590	
5720	144	802.11a	OFDM	20	18.0	17.83	0.15	10 mm	1	1360M	6	back	98.8	0.541	0.265	1.040	1.013	0.279	
5500	100	802.11a	OFDM	20	18.0	17.94	0.06	10 mm	1	1360M	6	front	98.8	0.446	0.167	1.014	1.013	0.172	
5500	100	802.11a	OFDM	20	18.0	17.94	0.07	10 mm	1	1360M	6	top	98.8	0.422	-	1.014	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.03	10 mm	1	1360M	6	right	98.8	0.075	-	1.014	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.08	10 mm	2	1360M	6	back	98.7	0.135	0.060	1.005	1.013	0.061	
5720	144	802.11a	OFDM	20	18.0	17.98	0.09	10 mm	2	1360M	6	front	98.7	0.227	-	1.005	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	0.03	10 mm	2	1360M	6	top	98.7	0.561	0.221	1.005	1.013	0.225	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.13	10 mm	1	1360M	6	back	98.8	0.527	0.252	1.007	1.013	0.257	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.13	10 mm	1	1360M	6	front	98.8	0.360	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.17	10 mm	1	1360M	6	top	98.8	0.196	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.07	10 mm	1	1360M	6	right	98.8	0.133	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.07	10 mm	2	1360M	6	back	98.7	0.110	0.046	1.033	1.013	0.048	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.03	10 mm	2	1360M	6	front	98.7	0.154	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.06	10 mm	2	1360M	6	top	98.7	0.436	0.181	1.033	1.013	0.189	

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

Table 11-61
NII MIMO UMPC Body 1g SAR Data

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)	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.02	10 mm	MIMO	1360M	13	back	98.6	0.774	0.399	1.023	1.014	0.414	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	0.07	10 mm	MIMO	1360M	13	front	98.6	0.237	0.094	1.023	1.014	0.098	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.16	10 mm	MIMO	1360M	13	top	98.6	0.428	0.172	1.023	1.014	0.178	
5280	56	802.11n	OFDM	20	18.0	17.90	18.0	17.99	-0.16	10 mm	MIMO	1360M	13	right	98.6	0.117	-	1.023	1.014	-	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.05	10 mm	MIMO	1360M	13	back	98.6	1.297	0.640	1.033	1.014	0.670	
5620	124	802.11n	OFDM	20	18.0	17.72	18.0	17.71	-0.04	10 mm	MIMO	1360M	13	back	98.6	0.888	0.413	1.069	1.014	0.448	
5720	144	802.11n	OFDM	20	18.0	17.82	18.0	17.96	0.14	10 mm	MIMO	1360M	13	back	98.6	0.606	0.277	1.042	1.014	0.293	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	0.04	10 mm	MIMO	1360M	13	front	98.6	0.450	0.163	1.033	1.014	0.171	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.08	10 mm	MIMO	1360M	13	top	98.6	0.644	0.283	1.033	1.014	0.296	
5500	100	802.11n	OFDM	20	18.0	17.94	18.0	17.86	-0.03	10 mm	MIMO	1360M	13	right	98.6	0.139	-	1.033	1.014	-	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	0.09	10 mm	MIMO	1360M	13	back	98.6	0.741	-	1.038	1.014	-	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	0.16	10 mm	MIMO	1360M	13	front	98.6	0.535	0.206	1.038	1.014	0.217	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	-0.17	10 mm	MIMO	1360M	13	top	98.6	0.853	0.333	1.038	1.014	0.350	
5785	157	802.11n	OFDM	20	18.0	17.91	18.0	17.84	0.06	10 mm	MIMO	1360M	13	right	98.6	0.153	-	1.038	1.014	-	

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

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

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Table 11-62
NII MIMO UMPC Body 1g SAR Data 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)	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.12	10 mm	MIMO	1360M	27	back	97.3	0.435	0.195	1.030	1.028	0.206	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.11	10 mm	MIMO	1360M	27	front	97.3	0.098	0.045	1.030	1.028	0.048	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.08	10 mm	MIMO	1360M	27	top	97.3	0.214	-	1.030	1.028	-	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.00	10 mm	MIMO	1360M	27	right	97.3	0.051	-	1.030	1.028	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.09	10 mm	MIMO	1360M	58.5	back	90.7	0.484	0.188	1.318	1.102	0.273	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.02	10 mm	MIMO	1360M	58.5	front	90.7	0.165	0.057	1.318	1.102	0.083	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.00	10 mm	MIMO	1360M	58.5	top	90.7	0.225	-	1.318	1.102	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.09	10 mm	MIMO	1360M	58.5	right	90.7	0.040	-	1.318	1.102	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.03	10 mm	MIMO	1360M	58.5	back	90.7	0.165	-	1.387	1.102	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.07	10 mm	MIMO	1360M	58.5	front	90.7	0.138	0.044	1.387	1.102	0.067	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.00	10 mm	MIMO	1360M	58.5	top	90.7	0.213	0.075	1.387	1.102	0.115	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.00	10 mm	MIMO	1360M	58.5	right	90.7	0.032	-	1.387	1.102	-	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	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 11-63
DSS UMPC Body 1g SAR Data

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)	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.09	10 mm	1385M	1	back	77.1	0.060	1.076	1.297	0.084	
2402	0	Bluetooth	FHSS	16.5	16.18	0.01	10 mm	1385M	1	front	77.1	0.069	1.076	1.297	0.096	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.02	10 mm	1385M	1	top	77.1	0.100	1.076	1.297	**0.140**	A81
2402	0	Bluetooth	FHSS	16.5	16.18	0.00	10 mm	1385M	1	right	77.1	0.055	1.076	1.297	0.077	

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

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11.6 Standalone UMPC Extremity SAR Data

Table 11-64
GPRS UMPC Extremity 10g 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)	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.05	0 mm	1385M	3	1:2.76	back	1.170	1.294	1.514	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.13	0 mm	1385M	3	1:2.76	front	0.986	1.294	1.276	
824.20	128	GSM 850	GPRS	31.0	29.65	0.04	0 mm	1385M	3	1:2.76	bottom	0.892	1.365	1.218	
836.60	190	GSM 850	GPRS	31.0	29.88	0.12	0 mm	1385M	3	1:2.76	bottom	1.330	1.294	1.721	A82
848.80	251	GSM 850	GPRS	31.0	29.93	-0.10	0 mm	1385M	3	1:2.76	bottom	0.946	1.279	1.210	
836.60	190	GSM 850	GPRS	31.0	29.88	-0.09	0 mm	1385M	3	1:2.76	right	0.870	1.294	1.126	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.08	8 mm	1362M	2	1:4.15	back	0.480	1.479	0.710	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.01	8 mm	1362M	2	1:4.15	front	0.402	1.479	0.595	
1880.00	661	GSM 1900	GPRS	30.5	28.80	-0.10	13 mm	1362M	2	1:4.15	bottom	0.402	1.479	0.595	
1880.00	661	GSM 1900	GPRS	30.5	28.80	0.02	0 mm	1362M	2	1:4.15	right	0.468	1.479	0.692	
1880.00	661	GSM 1900	GPRS	27.5	26.33	0.06	0 mm	1362M	2	1:4.15	back	1.130	1.309	1.479	
1880.00	661	GSM 1900	GPRS	27.5	26.33	-0.03	0 mm	1362M	2	1:4.15	front	0.997	1.309	1.305	
1850.20	512	GSM 1900	GPRS	27.5	26.23	-0.17	0 mm	1362M	2	1:4.15	bottom	1.940	1.340	2.600	
1880.00	661	GSM 1900	GPRS	27.5	26.33	-0.06	0 mm	1362M	2	1:4.15	bottom	2.350	1.309	3.076	A83
1909.80	810	GSM 1900	GPRS	27.5	26.17	-0.05	0 mm	1362M	2	1:4.15	bottom	2.290	1.358	3.110	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams					

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Table 11-65
UMTS UMPC Extremity 10g 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)	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.06	0 mm	1366M	1:1	back	0.744	1.352	1.006	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.03	0 mm	1366M	1:1	front	0.746	1.352	1.009	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	-0.04	0 mm	1366M	1:1	bottom	0.457	1.352	0.618	
826.40	4132	UMTS 850	RMC	25.5	24.17	0	-0.02	0 mm	1366M	1:1	right	1.110	1.358	1.507	
836.60	4183	UMTS 850	RMC	25.5	24.19	0	0.06	0 mm	1366M	1:1	right	1.110	1.352	1.501	A84
846.60	4233	UMTS 850	RMC	25.5	24.21	0	-0.19	0 mm	1366M	1:1	right	1.050	1.346	1.413	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	-0.01	8 mm	1362M	1:1	back	0.399	1.358	0.542	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	0.02	8 mm	1362M	1:1	front	0.438	1.358	0.595	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	-0.08	13 mm	1362M	1:1	bottom	0.294	1.358	0.399	
1732.40	1412	UMTS 1750	RMC	25.5	24.17	N/A	-0.10	0 mm	1362M	1:1	right	0.509	1.358	0.691	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	N/A	-0.08	0 mm	1407M	1:1	back	1.060	1.175	1.246	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	N/A	0.04	0 mm	1407M	1:1	front	1.170	1.175	1.375	
1712.40	1312	UMTS 1750	RMC	20.5	19.63	N/A	-0.05	0 mm	1407M	1:1	bottom	2.200	1.222	2.688	
1732.40	1412	UMTS 1750	RMC	20.5	19.80	N/A	-0.05	0 mm	1407M	1:1	bottom	2.380	1.175	2.797	A85
1752.60	1513	UMTS 1750	RMC	20.5	19.45	N/A	-0.06	0 mm	1407M	1:1	bottom	2.320	1.274	2.956	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	0.08	8 mm	1362M	1:1	back	0.472	1.312	0.619	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.04	8 mm	1362M	1:1	front	0.477	1.312	0.626	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.03	13 mm	1362M	1:1	bottom	0.487	1.312	0.639	
1880.00	9400	UMTS 1900	RMC	25.5	24.32	N/A	-0.08	0 mm	1362M	1:1	right	0.579	1.312	0.760	
1880.00	9400	UMTS 1900	RMC	21.0	19.68	N/A	-0.03	0 mm	1362M	1:1	back	1.190	1.355	1.612	
1880.00	9400	UMTS 1900	RMC	21.0	19.68	N/A	-0.01	0 mm	1362M	1:1	front	1.210	1.355	1.640	
1852.40	9262	UMTS 1900	RMC	21.0	19.63	N/A	-0.02	0 mm	1362M	1:1	bottom	2.270	1.371	3.112	
1880.00	9400	UMTS 1900	RMC	21.0	19.68	N/A	0.00	0 mm	1362M	1:1	bottom	2.420	1.355	3.279	A86
1907.60	9538	UMTS 1900	RMC	21.0	19.55	N/A	-0.05	0 mm	1362M	1:1	bottom	2.350	1.396	3.281	

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

Table 11-66
LTE Band 71 UMPC Extremity 10g SAR Data

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)	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.09	0	1358M	QPSK	1	0	0 mm	back	1:1	0.688	1.225	0.843	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.15	1	1358M	QPSK	50	0	0 mm	back	1:1	0.667	1.189	0.793	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	0.00	0	1358M	QPSK	1	0	0 mm	front	1:1	1.070	1.225	1.311	A87
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	0.01	1	1358M	QPSK	50	0	0 mm	front	1:1	0.895	1.189	1.064	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.06	0	1358M	QPSK	1	0	0 mm	bottom	1:1	0.829	1.225	1.016	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.09	1	1358M	QPSK	50	0	0 mm	bottom	1:1	0.710	1.189	0.844	
680.50	133297	Mid	LTE Band 71	20	25.5	24.62	34	-0.10	0	1358M	QPSK	1	0	0 mm	right	1:1	1.040	1.225	1.274	
680.50	133297	Mid	LTE Band 71	20	24.5	23.75	34	-0.05	1	1358M	QPSK	50	0	0 mm	right	1:1	0.832	1.189	0.989	

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

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Table 11-67
LTE Band 12 UMPC Extremity 10g SAR Data

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)	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	-0.16	0	1358M	QPSK	1	25	0 mm	back	1:1	0.924	1.330	1.229	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.13	1	1358M	QPSK	25	0	0 mm	back	1:1	0.781	1.265	0.988	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	-0.06	0	1358M	QPSK	1	25	0 mm	front	1:1	1.080	1.330	1.436	A88
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	0.03	1	1358M	QPSK	25	0	0 mm	front	1:1	0.946	1.265	1.197	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	-0.07	0	1358M	QPSK	1	25	0 mm	bottom	1:1	0.916	1.330	1.218	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.09	1	1358M	QPSK	25	0	0 mm	bottom	1:1	0.758	1.265	0.959	
707.50	23095	Mid	LTE Band 12	10	25.5	24.26	32	-0.08	0	1358M	QPSK	1	25	0 mm	right	1:1	0.867	1.330	1.153	
707.50	23095	Mid	LTE Band 12	10	24.5	23.48	32	-0.11	1	1358M	QPSK	25	0	0 mm	right	1:1	0.723	1.265	0.915	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-68
LTE Band 13 UMPC Extremity 10g SAR Data

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)	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.13	0	1389M	QPSK	1	49	0 mm	back	1:1	1.130	1.406	1.589	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.12	1	1389M	QPSK	25	0	0 mm	back	1:1	0.933	1.377	1.285	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	0.00	0	1389M	QPSK	1	49	0 mm	front	1:1	1.220	1.406	1.715	A89
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.07	1	1389M	QPSK	25	0	0 mm	front	1:1	1.040	1.377	1.432	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.18	0	1389M	QPSK	1	49	0 mm	bottom	1:1	0.699	1.406	0.983	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.12	1	1389M	QPSK	25	0	0 mm	bottom	1:1	0.572	1.377	0.788	
782.00	23230	Mid	LTE Band 13	10	25.5	24.02	78	-0.17	0	1389M	QPSK	1	49	0 mm	right	1:1	0.872	1.406	1.226	
782.00	23230	Mid	LTE Band 13	10	24.5	23.11	78	-0.07	1	1389M	QPSK	25	0	0 mm	right	1:1	0.708	1.377	0.975	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-69
LTE Band 14 UMPC Extremity 10g SAR Data

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)	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.02	0	1389M	QPSK	1	0	0 mm	back	1:1	1.110	1.340	1.487	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.04	1	1389M	QPSK	25	12	0 mm	back	1:1	0.893	1.318	1.177	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.01	0	1389M	QPSK	1	0	0 mm	front	1:1	1.210	1.340	1.621	A90
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.01	1	1389M	QPSK	25	12	0 mm	front	1:1	0.975	1.318	1.285	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	0.07	0	1389M	QPSK	1	0	0 mm	bottom	1:1	0.700	1.340	0.938	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	0.11	1	1389M	QPSK	25	12	0 mm	bottom	1:1	0.567	1.318	0.747	
793.00	23330	Mid	LTE Band 14	10	25.5	24.23	32	-0.07	0	1389M	QPSK	1	0	0 mm	right	1:1	0.904	1.340	1.211	
793.00	23330	Mid	LTE Band 14	10	24.5	23.30	32	-0.13	1	1389M	QPSK	25	12	0 mm	right	1:1	0.731	1.318	0.963	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-70
LTE Band 26 (Cell) UMPC Extremity 10g SAR Data

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) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.03	0	1366M	QPSK	1	0	0 mm	back	1:1	0.742	1.343	0.997	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.04	1	1366M	QPSK	36	37	0 mm	back	1:1	0.677	1.327	0.898	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.01	0	1366M	QPSK	1	0	0 mm	front	1:1	0.675	1.343	0.907	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	0.01	1	1366M	QPSK	36	37	0 mm	front	1:1	0.635	1.327	0.843	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.07	0	1366M	QPSK	1	0	0 mm	bottom	1:1	0.473	1.343	0.635	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.08	1	1366M	QPSK	36	37	0 mm	bottom	1:1	0.417	1.327	0.553	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.5	24.22	0	-0.04	0	1366M	QPSK	1	0	0 mm	right	1:1	1.110	1.343	1.491	A91
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.5	23.27	0	-0.07	1	1366M	QPSK	36	37	0 mm	right	1:1	0.928	1.327	1.231	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-71
LTE Band 66 (AWS) UMPC Extremity 10g SAR Data

MEASUREMENT RESULTS																							
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.02	0	1362M	QPSK	1	0	8 mm	back	1:1	0.505	1.191	0.601	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.01	1	1362M	QPSK	50	0	8 mm	back	1:1	0.421	1.167	0.491	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	0.03	0	1362M	QPSK	1	0	8 mm	front	1:1	0.419	1.191	0.499	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.03	1	1362M	QPSK	50	0	8 mm	front	1:1	0.352	1.167	0.411	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.03	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.340	1.191	0.405	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	0.03	1	1362M	QPSK	50	0	13 mm	bottom	1:1	0.279	1.167	0.326	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	25.0	24.24	-0.02	0	1362M	QPSK	1	0	0 mm	right	1:1	0.582	1.191	0.693	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	24.0	23.33	-0.03	1	1362M	QPSK	50	0	0 mm	right	1:1	0.486	1.167	0.567	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	-0.08	0	1407M	QPSK	1	0	0 mm	back	1:1	1.050	1.247	1.309	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	-0.01	0	1407M	QPSK	50	0	0 mm	back	1:1	1.040	1.211	1.259	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	0.11	0	1407M	QPSK	1	0	0 mm	front	1:1	1.070	1.247	1.334	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	0.12	0	1407M	QPSK	50	0	0 mm	front	1:1	1.080	1.211	1.308	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.84	0.02	0	1407M	QPSK	1	0	0 mm	bottom	1:1	2.150	1.247	2.681	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.62	-0.17	0	1407M	QPSK	1	99	0 mm	bottom	1:1	1.930	1.312	2.532	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.58	-0.01	0	1407M	QPSK	1	99	0 mm	bottom	1:1	2.250	1.324	2.979	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	18.63	0.02	0	1407M	QPSK	1	0	0 mm	bottom	1:1	2.440	1.309	3.194	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	19.8	18.45	-0.18	0	1407M	QPSK	1	0	0 mm	bottom	1:1	2.080	1.365	2.839	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.97	0.02	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.220	1.211	2.688	
1 CC Uplink	N/A	1715.00	132022	Low	LTE Band 66 (AWS)	10	19.8	18.60	-0.19	0	1407M	QPSK	25	25	0 mm	bottom	1:1	1.870	1.318	2.465	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	18.75	-0.17	0	1407M	QPSK	50	50	0 mm	bottom	1:1	1.980	1.274	2.523	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.73	-0.20	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.160	1.279	2.763	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.75	0.00	0	1407M	QPSK	50	25	0 mm	bottom	1:1	2.430	1.274	3.096	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	19.8	18.72	-0.14	0	1407M	QPSK	25	0	0 mm	bottom	1:1	2.080	1.282	2.667	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	18.78	0.05	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.550	1.265	3.226	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	19.8	18.76	-0.02	0	1407M	QPSK	25	0	0 mm	bottom	1:1	2.440	1.271	3.101	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.83	0.01	0	1407M	QPSK	100	0	0 mm	bottom	1:1	2.310	1.250	2.888	
CA_66C 2 CC Uplink	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	19.17	-0.16	0	1407M	QPSK	1	99	0 mm	bottom	1:1	2.210	1.156	2.555	
	SCC	1739.80	132270	Low	LTE Band 66 (AWS)	20							1	0							
CA_66C 2 CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	18.90	-0.18	0	1407M	QPSK	1	99	0 mm	bottom	1:1	2.370	1.230	2.915	
	SCC	1764.80	132520	Mid	LTE Band 66 (AWS)	20							1	0							
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	19.05	-0.20	0	1407M	QPSK	1	0	0 mm	bottom	1:1	2.560	1.189	3.044	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20							1	99							
CA_66B 2 CC Uplink	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	19.8	19.00	-0.15	0	1407M	QPSK	1	0	0 mm	bottom	1:1	2.440	1.202	2.933	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10							1	49							
CA_66C 2 CC Uplink	PCC	1720.00	132072	Low	LTE Band 66 (AWS)	20	19.8	19.31	-0.12	0	1407M	QPSK	50	50	0 mm	bottom	1:1	2.280	1.119	2.551	
	SCC	1739.80	132270	Low	LTE Band 66 (AWS)	20							50	0							
CA_66B 2 CC Uplink	PCC	1715.00	132022	Low	LTE Band 66 (AWS)	10	19.8	18.94	-0.11	0	1407M	QPSK	25	25	0 mm	bottom	1:1	2.030	1.219	2.475	
	SCC	1724.90	132121	Low	LTE Band 66 (AWS)	10							25	0							
CA_66C 2 CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.8	19.10	-0.19	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.440	1.175	2.867	
	SCC	1725.20	132124	Mid	LTE Band 66 (AWS)	20							50	50							
CA_66B 2 CC Uplink	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	19.8	18.99	-0.13	0	1407M	QPSK	25	0	0 mm	bottom	1:1	2.310	1.205	2.784	
	SCC	1735.10	132223	Mid	LTE Band 66 (AWS)	10							25	25							
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	19.25	-0.09	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.900	1.135	**3.292**	A92
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20							50	50							
CA_66B 2 CC Uplink	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	19.8	18.93	-0.02	0	1407M	QPSK	25	0	0 mm	bottom	1:1	2.660	1.222	3.251	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10							25	25							
CA_66C 2 CC Uplink	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	19.8	19.25	0.06	0	1407M	QPSK	50	0	0 mm	bottom	1:1	2.900	1.135	**3.292**	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20							50	50							
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Note: Blue Entry represents variability measurement

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Table 11-72
LTE Band 25 (PCS) UMPC Extremity 10g SAR Data

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)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.13	0	1362M	QPSK	1	0	8 mm	back	1:1	0.540	1.230	0.664	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.12	1	1362M	QPSK	50	50	8 mm	back	1:1	0.460	1.202	0.553	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.07	0	1362M	QPSK	1	0	8 mm	front	1:1	0.418	1.230	0.514	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	0.01	1	1362M	QPSK	50	50	8 mm	front	1:1	0.371	1.202	0.446	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	0.05	0	1362M	QPSK	1	0	13 mm	bottom	1:1	0.406	1.230	0.499	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.10	1	1362M	QPSK	50	50	13 mm	bottom	1:1	0.367	1.202	0.441	
1860.00	26140	Low	LTE Band 25 (PCS)	20	25.0	24.10	-0.16	0	1362M	QPSK	1	0	0 mm	right	1:1	0.535	1.230	0.658	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.0	23.20	-0.09	1	1362M	QPSK	50	50	0 mm	right	1:1	0.480	1.202	0.577	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	0.06	0	1362M	QPSK	1	0	0 mm	back	1:1	1.500	1.002	1.503	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	0.10	0	1362M	QPSK	50	50	0 mm	back	1:1	1.580	1.021	1.613	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	-0.08	0	1362M	QPSK	1	0	0 mm	front	1:1	1.490	1.002	1.493	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	-0.10	0	1362M	QPSK	50	50	0 mm	front	1:1	1.500	1.021	1.532	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.36	-0.18	0	1362M	QPSK	1	99	0 mm	bottom	1:1	2.930	1.033	3.027	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.16	-0.14	0	1362M	QPSK	1	0	0 mm	bottom	1:1	2.990	1.081	3.232	
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.49	-0.19	0	1362M	QPSK	1	0	0 mm	bottom	1:1	3.000	1.002	3.006	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.41	-0.19	0	1362M	QPSK	50	50	0 mm	bottom	1:1	3.080	1.021	3.145	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.38	-0.16	0	1362M	QPSK	50	0	0 mm	bottom	1:1	3.200	1.028	**3.290**	A93
1905.00	26590	High	LTE Band 25 (PCS)	20	20.5	20.37	-0.12	0	1362M	QPSK	50	25	0 mm	bottom	1:1	3.170	1.030	3.265	
1860.00	26140	Low	LTE Band 25 (PCS)	20	20.5	20.29	-0.18	0	1362M	QPSK	100	0	0 mm	bottom	1:1	3.070	1.050	3.224	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	20.5	20.38	-0.05	0	1362M	QPSK	50	0	0 mm	bottom	1:1	3.200	1.028	**3.290**	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams						

Note: Blue Entry represents variability measurement

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Table 11-73
LTE Band 30 UMPC Extremity 10g SAR Data

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	25.0	24.33	0.04	0	1404M	QPSK	1	0	8 mm	back	1:1	0.481	1.167	0.561	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.01	1	1404M	QPSK	25	12	8 mm	back	1:1	0.399	1.161	0.463	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.02	0	1404M	QPSK	1	0	8 mm	front	1:1	0.421	1.167	0.491	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.00	1	1404M	QPSK	25	12	8 mm	front	1:1	0.346	1.161	0.402	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	-0.11	0	1404M	QPSK	1	0	13 mm	bottom	1:1	0.506	1.167	0.591	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	-0.03	1	1404M	QPSK	25	12	13 mm	bottom	1:1	0.417	1.161	0.484	
2310.00	27710	Mid	LTE Band 30	10	25.0	24.33	0.04	0	1404M	QPSK	1	0	0 mm	right	1:1	0.498	1.167	0.581	
2310.00	27710	Mid	LTE Band 30	10	24.0	23.35	0.01	1	1404M	QPSK	25	12	0 mm	right	1:1	0.419	1.161	0.486	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	-0.10	0	1404M	QPSK	1	25	0 mm	back	1:1	0.770	1.167	0.899	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.06	0	1404M	QPSK	25	12	0 mm	back	1:1	0.807	1.178	0.951	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	0.15	0	1404M	QPSK	1	25	0 mm	front	1:1	0.982	1.167	1.146	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	-0.03	0	1404M	QPSK	25	12	0 mm	front	1:1	1.040	1.178	1.225	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.33	-0.12	0	1404M	QPSK	1	25	0 mm	bottom	1:1	2.780	1.167	3.244	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	0.03	0	1404M	QPSK	25	12	0 mm	bottom	1:1	2.790	1.178	**3.287**	A94
2310.00	27710	Mid	LTE Band 30	10	21.0	20.26	0.04	0	1404M	QPSK	50	0	0 mm	bottom	1:1	2.750	1.186	3.262	
2310.00	27710	Mid	LTE Band 30	10	21.0	20.29	0.04	0	1404M	QPSK	25	12	0 mm	bottom	1:1	2.780	1.178	3.275	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**																**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams			

Note: Blue Entry represents variability measurement

Table 11-74
LTE Band 7 UMPC Extremity 10g SAR Data

MEASUREMENT RESULTS																						
1 CC Uplink/ 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	0.02	0	1404M	QPSK	1	99	8 mm	back	1:1	0.646	1.104	0.713	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.02	1	1404M	QPSK	50	0	8 mm	back	1:1	0.377	1.091	0.411	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.03	0	1404M	QPSK	1	99	8 mm	front	1:1	0.577	1.104	0.637	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.09	1	1404M	QPSK	50	0	8 mm	front	1:1	0.347	1.091	0.379	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.05	0	1404M	QPSK	1	99	13 mm	bottom	1:1	0.537	1.104	0.593	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.02	1	1404M	QPSK	50	0	13 mm	bottom	1:1	0.312	1.091	0.340	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	24.6	24.17	-0.11	0	1404M	QPSK	1	99	0 mm	right	1:1	0.820	1.104	0.905	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	23.6	23.22	-0.09	1	1404M	QPSK	50	0	0 mm	right	1:1	0.483	1.091	0.527	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.78	-0.04	0	1385M	QPSK	1	99	0 mm	back	1:1	0.497	1.180	0.586	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.97	-0.02	0	1385M	QPSK	50	50	0 mm	back	1:1	0.482	1.130	0.545	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.78	0.02	0	1385M	QPSK	1	99	0 mm	front	1:1	0.888	1.180	1.048	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.97	0.04	0	1385M	QPSK	50	50	0 mm	front	1:1	0.891	1.130	1.007	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.78	-0.06	0	1385M	QPSK	1	99	0 mm	bottom	1:1	1.850	1.180	2.183	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	19.5	18.62	0.03	0	1385M	QPSK	1	0	0 mm	bottom	1:1	1.840	1.225	2.254	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	19.5	18.56	0.09	0	1385M	QPSK	1	0	0 mm	bottom	1:1	2.010	1.242	2.496	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.97	-0.04	0	1385M	QPSK	50	50	0 mm	bottom	1:1	1.890	1.130	2.136	
1 CC Uplink	N/A	2535.00	21100	Mid	LTE Band 7	20	19.5	18.81	0.03	0	1385M	QPSK	50	0	0 mm	bottom	1:1	1.930	1.172	2.262	
1 CC Uplink	N/A	2560.00	21350	High	LTE Band 7	20	19.5	18.68	0.07	0	1385M	QPSK	50	0	0 mm	bottom	1:1	2.180	1.208	2.633	
1 CC Uplink	N/A	2510.00	20850	Low	LTE Band 7	20	19.5	18.73	0.03	0	1385M	QPSK	100	0	0 mm	bottom	1:1	1.790	1.194	2.137	
2 CC Uplink	PCC	2560.00	21350	High	LTE Band 7	20	19.5	19.18	0.01	0	1385M	QPSK	50	0	0 mm	bottom	1:1	2.540	1.076	2.733	A95
	SCC	2540.20	21152	High	LTE Band 7	20							50	50							
2 CC Uplink	PCC	2560.00	21350	High	LTE Band 7	20	19.5	19.18	0.01	0	1385M	QPSK	50	0	0 mm	bottom	1:1	2.510	1.076	2.701	
	SCC	2540.20	21152	High	LTE Band 7	20							50	50							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**																	**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams						

Note: Blue Entry represents variability measurement

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Table 11-75
LTE Band 41 UMPC Extremity 10g SAR Data

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)	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.02	0	1404M	QPSK	1	0	8 mm	back	1:1.58	0.475	1.161	0.551	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	0.05	1	1404M	QPSK	50	0	8 mm	back	1:1.58	0.382	1.117	0.427	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.04	0	1404M	QPSK	1	0	8 mm	front	1:1.58	0.508	1.161	0.590	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.07	1	1404M	QPSK	50	0	8 mm	front	1:1.58	0.411	1.117	0.459	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	0.00	0	1404M	QPSK	1	0	13 mm	bottom	1:1.58	0.424	1.161	0.492	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.02	1	1404M	QPSK	50	0	13 mm	bottom	1:1.58	0.339	1.117	0.379	
2636.50	41055	Mid-High	LTE Band 41	20	25.0	24.35	-0.14	0	1404M	QPSK	1	0	0 mm	right	1:1.58	1.140	1.161	1.324	
2636.50	41055	Mid-High	LTE Band 41	20	24.0	23.52	-0.12	1	1404M	QPSK	50	0	0 mm	right	1:1.58	0.964	1.117	1.077	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	0.10	0	1404M	QPSK	1	0	0 mm	back	1:1.58	0.895	1.334	1.194	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	0.12	0	1404M	QPSK	50	0	0 mm	back	1:1.58	1.020	1.327	1.354	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	0.01	0	1404M	QPSK	1	0	0 mm	front	1:1.58	1.030	1.334	1.374	
2506.00	39750	Low	LTE Band 41	20	21.5	20.25	-0.09	0	1404M	QPSK	50	0	0 mm	front	1:1.58	0.843	1.334	1.125	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.26	-0.08	0	1404M	QPSK	50	0	0 mm	front	1:1.58	0.878	1.330	1.168	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.25	-0.06	0	1404M	QPSK	50	0	0 mm	front	1:1.58	0.905	1.334	1.207	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	0.09	0	1404M	QPSK	50	0	0 mm	front	1:1.58	1.160	1.327	1.539	
2680.00	41490	High	LTE Band 41	20	21.5	20.23	-0.06	0	1404M	QPSK	50	0	0 mm	front	1:1.58	0.945	1.340	1.266	
2506.00	39750	Low	LTE Band 41	20	21.5	20.24	-0.03	0	1404M	QPSK	100	0	0 mm	front	1:1.58	0.835	1.337	1.116	
2506.00	39750	Low	LTE Band 41	20	21.5	20.17	0.14	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	1.970	1.358	2.675	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.25	-0.07	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	2.050	1.334	2.735	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.05	0.05	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	2.080	1.396	2.904	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.18	0.03	0	1404M	QPSK	1	0	0 mm	bottom	1:1.58	2.260	1.355	3.062	
2680.00	41490	High	LTE Band 41	20	21.5	20.10	0.09	0	1404M	QPSK	1	99	0 mm	bottom	1:1.58	2.350	1.380	3.243	
2506.00	39750	Low	LTE Band 41	20	21.5	20.25	0.02	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	2.050	1.334	2.735	
2549.50	40185	Low-Mid	LTE Band 41	20	21.5	20.26	-0.03	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	2.130	1.330	2.833	
2593.00	40620	Mid	LTE Band 41	20	21.5	20.25	0.07	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	2.210	1.334	2.948	
2636.50	41055	Mid-High	LTE Band 41	20	21.5	20.27	0.03	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	2.350	1.327	3.118	
2680.00	41490	High	LTE Band 41	20	21.5	20.23	0.03	0	1404M	QPSK	50	0	0 mm	bottom	1:1.58	2.390	1.340	3.203	A96
2506.00	39750	Low	LTE Band 41	20	21.5	20.24	-0.09	0	1404M	QPSK	100	0	0 mm	bottom	1:1.58	2.060	1.337	2.754	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

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Table 11-76
DTS SISO UMPC Extremity 10g SAR Data

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)	
2412	1	802.11b	DSSS	22	20.0	19.97	0.12	0 mm	1	1385M	1	back	99.9	5.682	1.750	1.007	1.001	1.764	
2412	1	802.11b	DSSS	22	20.0	19.97	0.19	0 mm	1	1385M	1	front	99.9	8.954	3.160	1.007	1.001	**3.185**	A97
2437	6	802.11b	DSSS	22	20.0	19.92	0.06	0 mm	1	1385M	1	front	99.9	6.868	2.150	1.019	1.001	2.193	
2462	11	802.11b	DSSS	22	20.0	19.72	-0.03	0 mm	1	1385M	1	front	99.9	5.925	1.850	1.067	1.001	1.976	
2412	1	802.11b	DSSS	22	20.0	19.97	0.04	0 mm	1	1385M	1	top	99.9	9.698	2.380	1.007	1.001	2.399	
2437	6	802.11b	DSSS	22	20.0	19.92	-0.06	0 mm	1	1385M	1	top	99.9	5.429	1.550	1.019	1.001	1.581	
2462	11	802.11b	DSSS	22	20.0	19.72	-0.07	0 mm	1	1385M	1	top	99.9	3.837	1.120	1.067	1.001	1.196	
2412	1	802.11b	DSSS	22	20.0	19.97	0.09	0 mm	1	1385M	1	right	99.9	3.846	0.853	1.007	1.001	0.860	
2412	1	802.11b	DSSS	22	20.0	19.98	0.05	0 mm	2	1385M	1	back	99.9	3.788	1.110	1.005	1.001	1.117	
2412	1	802.11b	DSSS	22	20.0	19.98	0.04	0 mm	2	1385M	1	front	99.9	1.513	0.522	1.005	1.001	0.525	
2412	1	802.11b	DSSS	22	20.0	19.98	0.02	0 mm	2	1385M	1	top	99.9	3.866	0.777	1.005	1.001	0.782	
2412	1	802.11b	DSSS	22	20.0	19.97	0.08	0 mm	1	1385M	1	front	99.9	5.063	3.030	1.007	1.001	3.054	

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

Note: Blue Entry represents variability measurement

Table 11-77
DTS MIMO UMPC Extremity 10g SAR Data

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)	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.03	0 mm	MIMO	1360M	13	back	98.7	3.433	0.983	1.035	1.013	1.031	
2427	4	802.11n	OFDM	20	18.0	17.76	18.0	17.98	0.08	0 mm	MIMO	1360M	13	front	98.7	5.477	1.120	1.057	1.013	1.199	
2437	6	802.11n	OFDM	20	18.0	17.85	18.0	17.89	0.09	0 mm	MIMO	1360M	13	front	98.7	4.466	0.924	1.035	1.013	0.969	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.03	0 mm	MIMO	1360M	13	front	98.7	7.764	1.580	1.035	1.013	1.657	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	-0.04	0 mm	MIMO	1360M	13	top	98.7	6.469	1.460	1.035	1.013	1.531	
2452	9	802.11n	OFDM	20	18.0	17.96	18.0	17.85	0.03	0 mm	MIMO	1360M	13	right	98.7	2.922	0.499	1.035	1.013	0.523	

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

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

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Table 11-78
NII UMPC Extremity 10g SAR Data

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)	
5320	64	802.11a	OFDM	20	18.0	17.91	0.04	0 mm	1	1360M	6	back	98.8	4.766	0.747	1.021	1.013	0.773	
5320	64	802.11a	OFDM	20	18.0	17.91	0.00	0 mm	1	1360M	6	front	98.8	2.671	0.357	1.021	1.013	0.369	
5320	64	802.11a	OFDM	20	18.0	17.91	0.13	0 mm	1	1360M	6	top	98.8	4.142	-	1.021	1.013	-	
5320	64	802.11a	OFDM	20	18.0	17.91	-0.02	0 mm	1	1360M	6	right	98.8	1.167	-	1.021	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	-0.13	0 mm	2	1360M	6	back	98.7	3.858	0.430	1.002	1.013	0.436	
5280	56	802.11a	OFDM	20	18.0	17.99	0.00	0 mm	2	1360M	6	front	98.7	3.423	-	1.002	1.013	-	
5280	56	802.11a	OFDM	20	18.0	17.99	0.00	0 mm	2	1360M	6	top	98.7	9.498	0.621	1.002	1.013	0.630	
5500	100	802.11a	OFDM	20	18.0	17.94	0.01	0 mm	1	1360M	6	back	98.8	6.745	0.827	1.014	1.013	**0.849**	A98
5500	100	802.11a	OFDM	20	18.0	17.94	0.09	0 mm	1	1360M	6	front	98.8	3.752	0.537	1.014	1.013	0.552	
5500	100	802.11a	OFDM	20	18.0	17.94	0.08	0 mm	1	1360M	6	top	98.8	5.582	-	1.014	1.013	-	
5500	100	802.11a	OFDM	20	18.0	17.94	-0.13	0 mm	1	1360M	6	right	98.8	0.762	-	1.014	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.04	0 mm	2	1360M	6	back	98.7	1.512	0.268	1.005	1.013	0.273	
5720	144	802.11a	OFDM	20	18.0	17.98	0.00	0 mm	2	1360M	6	front	98.7	3.042	-	1.005	1.013	-	
5720	144	802.11a	OFDM	20	18.0	17.98	-0.03	0 mm	2	1360M	6	top	98.7	10.844	0.635	1.005	1.013	0.646	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.04	0 mm	1	1360M	6	back	98.8	5.604	0.675	1.007	1.013	0.689	
5785	157	802.11a	OFDM	20	18.0	17.97	-0.02	0 mm	1	1360M	6	front	98.8	4.588	0.571	1.007	1.013	0.582	
5785	157	802.11a	OFDM	20	18.0	17.97	0.04	0 mm	1	1360M	6	top	98.8	2.786	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.97	0.09	0 mm	1	1360M	6	right	98.8	0.814	-	1.007	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	0.07	0 mm	2	1360M	6	back	98.7	1.349	0.235	1.033	1.013	0.246	
5785	157	802.11a	OFDM	20	18.0	17.86	0.02	0 mm	2	1360M	6	front	98.7	2.307	-	1.033	1.013	-	
5785	157	802.11a	OFDM	20	18.0	17.86	-0.18	0 mm	2	1360M	6	top	98.7	9.326	0.555	1.033	1.013	0.581	

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

Table 11-79
NII MIMO UMPC Extremity 10g SAR Data 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 (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.09	0 mm	MIMO	1360M	27	back	97.3	2.020	0.366	1.030	1.028	0.388	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	-0.06	0 mm	MIMO	1360M	27	front	97.3	2.266	0.210	1.030	1.028	0.222	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.08	0 mm	MIMO	1360M	27	top	97.3	4.522	0.378	1.030	1.028	0.400	
5310	62	802.11n	OFDM	40	14.0	13.87	14.0	13.94	0.09	0 mm	MIMO	1360M	27	right	97.3	0.613	-	1.030	1.028	-	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.11	0 mm	MIMO	1360M	58.5	back	90.7	2.273	0.341	1.318	1.102	0.495	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	-0.06	0 mm	MIMO	1360M	58.5	front	90.7	2.473	0.212	1.318	1.102	0.308	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.05	0 mm	MIMO	1360M	58.5	top	90.7	4.253	0.402	1.318	1.102	0.584	
5530	106	802.11ac	OFDM	80	14.0	12.86	14.0	12.80	0.09	0 mm	MIMO	1360M	58.5	right	90.7	0.376	-	1.318	1.102	-	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.08	0 mm	MIMO	1360M	58.5	back	90.7	2.265	0.289	1.387	1.102	0.442	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.05	0 mm	MIMO	1360M	58.5	front	90.7	2.156	0.220	1.387	1.102	0.336	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	-0.04	0 mm	MIMO	1360M	58.5	top	90.7	3.879	0.277	1.387	1.102	0.423	
5775	155	802.11ac	OFDM	80	14.0	12.58	14.0	12.85	0.06	0 mm	MIMO	1360M	58.5	right	90.7	0.305	-	1.387	1.102	-	

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

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.

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Table 11-80
DSS UMPC Extremity 10g SAR Data

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 (10g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2402	0	Bluetooth	FHSS	16.5	16.18	0.04	0 mm	1385M	1	back	77.1	0.349	1.076	1.297	0.487	
2402	0	Bluetooth	FHSS	16.5	16.18	0.05	0 mm	1385M	1	front	77.1	0.623	1.076	1.297	**0.869**	A99
2402	0	Bluetooth	FHSS	16.5	16.18	-0.15	0 mm	1385M	1	top	77.1	0.519	1.076	1.297	0.724	
2402	0	Bluetooth	FHSS	16.5	16.18	-0.03	0 mm	1385M	1	right	77.1	0.168	1.076	1.297	0.234	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**								**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams								

11.7 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 for 1g SAR and 2.0 W/kg for 10g SAR. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
8. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 14 for supplemental data.
12. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.3. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
13. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
14. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).

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15. Per FCC KDB Publication 941225 D07v01r02, this device is considered a "UMPC mini-tablet" when it is in open configuration. UMPC body 1g SAR test are required on all surfaces and edges with an antenna <=25 mm from that surface or edge at a test separation distance of 10mm. Therefore, to address hand exposure, UMPC extremity 10g SAR tests are required at a test separation distance of 0mm for all measured 1g (10 mm) SAR configurations.

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.

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 8.5.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

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7. For LTE Band 66, and LTE Band 7, 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.

WLAN Notes:

1. For held-to-ear, and hotspot, phablet, and UMPC mini-tablet 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 8.6.5 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 8.6.6 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 9.5 for the time domain plot and calculation for the duty factor of the device.
2. Head and hotspot Bluetooth SAR were evaluated for BT BDR 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 ("-").

12.3 Head SAR Simultaneous Transmission Analysis: 1g Handset

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	0.369	0.052	0.093	0.421	0.462	0.514
	GSM 1900	0.110	0.052	0.093	0.162	0.203	0.255
	UMTS 850	0.431	0.052	0.093	0.483	0.524	**0.576**
	UMTS 1750	0.225	0.052	0.093	0.277	0.318	0.370
	UMTS 1900	0.230	0.052	0.093	0.282	0.323	0.375
	LTE Band 71	0.202	0.052	0.093	0.254	0.295	0.347
	LTE Band 12	0.253	0.052	0.093	0.305	0.346	0.398
	LTE Band 13	0.246	0.052	0.093	0.298	0.339	0.391
	LTE Band 14	0.259	0.052	0.093	0.311	0.352	0.404
	LTE Band 26 (Cell)	0.383	0.052	0.093	0.435	0.476	0.528
	LTE Band 66 (AWS)	0.195	0.052	0.093	0.247	0.288	0.340
	LTE Band 25 (PCS)	0.209	0.052	0.093	0.261	0.302	0.354
	LTE Band 30	0.218	0.052	0.093	0.270	0.311	0.363
	LTE Band 7	0.162	0.052	0.093	0.214	0.255	0.307
	LTE Band 41	0.095	0.052	0.093	0.147	0.188	0.240

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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	0.369	0.061	0.056	0.430	0.425	0.486
	GSM 1900	0.110	0.061	0.056	0.171	0.166	0.227
	UMTS 850	0.431	0.061	0.056	0.492	0.487	**0.548**
	UMTS 1750	0.225	0.061	0.056	0.286	0.281	0.342
	UMTS 1900	0.230	0.061	0.056	0.291	0.286	0.347
	LTE Band 71	0.202	0.061	0.056	0.263	0.258	0.319
	LTE Band 12	0.253	0.061	0.056	0.314	0.309	0.370
	LTE Band 13	0.246	0.061	0.056	0.307	0.302	0.363
	LTE Band 14	0.259	0.061	0.056	0.320	0.315	0.376
	LTE Band 26 (Cell)	0.383	0.061	0.056	0.444	0.439	0.500
	LTE Band 66 (AWS)	0.195	0.061	0.056	0.256	0.251	0.312
	LTE Band 25 (PCS)	0.209	0.061	0.056	0.270	0.265	0.326
	LTE Band 30	0.218	0.061	0.056	0.279	0.274	0.335
	LTE Band 7	0.162	0.061	0.056	0.223	0.218	0.279
	LTE Band 41	0.095	0.061	0.056	0.156	0.151	0.212

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	0.369	0.052	0.093	0.061	0.056	0.631
	GSM 1900	0.110	0.052	0.093	0.061	0.056	0.372
	UMTS 850	0.431	0.052	0.093	0.061	0.056	**0.693**
	UMTS 1750	0.225	0.052	0.093	0.061	0.056	0.487
	UMTS 1900	0.230	0.052	0.093	0.061	0.056	0.492
	LTE Band 71	0.202	0.052	0.093	0.061	0.056	0.464
	LTE Band 12	0.253	0.052	0.093	0.061	0.056	0.515
	LTE Band 13	0.246	0.052	0.093	0.061	0.056	0.508
	LTE Band 14	0.259	0.052	0.093	0.061	0.056	0.521
	LTE Band 26 (Cell)	0.383	0.052	0.093	0.061	0.056	0.645
	LTE Band 66 (AWS)	0.195	0.052	0.093	0.061	0.056	0.457
	LTE Band 25 (PCS)	0.209	0.052	0.093	0.061	0.056	0.471
	LTE Band 30	0.218	0.052	0.093	0.061	0.056	0.480
	LTE Band 7	0.162	0.052	0.093	0.061	0.056	0.424
	LTE Band 41	0.095	0.052	0.093	0.061	0.056	0.357

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Table 12-4
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)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
Head SAR	GSM 850	0.369	0.077	0.061	0.056	0.446	0.507	0.502	0.563
	GSM 1900	0.110	0.077	0.061	0.056	0.187	0.248	0.243	0.304
	UMTS 850	0.431	0.077	0.061	0.056	0.508	0.569	0.564	**0.625**
	UMTS 1750	0.225	0.077	0.061	0.056	0.302	0.363	0.358	0.419
	UMTS 1900	0.230	0.077	0.061	0.056	0.307	0.368	0.363	0.424
	LTE Band 71	0.202	0.077	0.061	0.056	0.279	0.340	0.335	0.396
	LTE Band 12	0.253	0.077	0.061	0.056	0.330	0.391	0.386	0.447
	LTE Band 13	0.246	0.077	0.061	0.056	0.323	0.384	0.379	0.440
	LTE Band 14	0.259	0.077	0.061	0.056	0.336	0.397	0.392	0.453
	LTE Band 26 (Cell)	0.383	0.077	0.061	0.056	0.460	0.521	0.516	0.577
	LTE Band 66 (AWS)	0.195	0.077	0.061	0.056	0.272	0.333	0.328	0.389
	LTE Band 25 (PCS)	0.209	0.077	0.061	0.056	0.286	0.347	0.342	0.403
	LTE Band 30	0.218	0.077	0.061	0.056	0.295	0.356	0.351	0.412
	LTE Band 7	0.162	0.077	0.061	0.056	0.239	0.300	0.295	0.356
	LTE Band 41	0.095	0.077	0.061	0.056	0.172	0.233	0.228	0.289

12.4 Body-Worn Simultaneous Transmission Analysis: 1g Handset

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.271	0.103	0.091	0.374	0.362	0.465
	GSM 1900	0.268	0.103	0.091	0.371	0.359	0.462
	UMTS 850	0.268	0.103	0.091	0.371	0.359	0.462
	UMTS 1750	0.694	0.103	0.091	0.797	0.785	**0.888**
	UMTS 1900	0.450	0.103	0.091	0.553	0.541	0.644
	LTE Band 71	0.343	0.103	0.091	0.446	0.434	0.537
	LTE Band 12	0.376	0.103	0.091	0.479	0.467	0.570
	LTE Band 13	0.274	0.103	0.091	0.377	0.365	0.468
	LTE Band 14	0.284	0.103	0.091	0.387	0.375	0.478
	LTE Band 26 (Cell)	0.197	0.103	0.091	0.300	0.288	0.391
	LTE Band 66 (AWS)	0.501	0.103	0.091	0.604	0.592	0.695
	LTE Band 25 (PCS)	0.417	0.103	0.091	0.520	0.508	0.611
	LTE Band 30	0.371	0.103	0.091	0.474	0.462	0.565
	LTE Band 7	0.302	0.103	0.091	0.405	0.393	0.496
	LTE Band 41	0.108	0.103	0.091	0.211	0.199	0.302

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Table 12-6
Simultaneous Transmission Scenario with 5 GHz WLAN (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Body-Worn	GSM 850	0.271	0.544	0.084	0.815	0.355	0.899
	GSM 1900	0.268	0.544	0.084	0.812	0.352	0.896
	UMTS 850	0.268	0.544	0.084	0.812	0.352	0.896
	UMTS 1750	0.694	0.544	0.084	1.238	0.778	**1.322**
	UMTS 1900	0.450	0.544	0.084	0.994	0.534	1.078
	LTE Band 71	0.343	0.544	0.084	0.887	0.427	0.971
	LTE Band 12	0.376	0.544	0.084	0.920	0.460	1.004
	LTE Band 13	0.274	0.544	0.084	0.818	0.358	0.902
	LTE Band 14	0.284	0.544	0.084	0.828	0.368	0.912
	LTE Band 26 (Cell)	0.197	0.544	0.084	0.741	0.281	0.825
	LTE Band 66 (AWS)	0.501	0.544	0.084	1.045	0.585	1.129
	LTE Band 25 (PCS)	0.417	0.544	0.084	0.961	0.501	1.045
	LTE Band 30	0.371	0.544	0.084	0.915	0.455	0.999
	LTE Band 7	0.302	0.544	0.084	0.846	0.386	0.930
	LTE Band 41	0.108	0.544	0.084	0.652	0.192	0.736

Table 12-7
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN 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
Body-Worn	GSM 850	0.271	0.103	0.091	0.544	0.084	1.093
	GSM 1900	0.268	0.103	0.091	0.544	0.084	1.090
	UMTS 850	0.268	0.103	0.091	0.544	0.084	1.090
	UMTS 1750	0.694	0.103	0.091	0.544	0.084	**1.516**
	UMTS 1900	0.450	0.103	0.091	0.544	0.084	1.272
	LTE Band 71	0.343	0.103	0.091	0.544	0.084	1.165
	LTE Band 12	0.376	0.103	0.091	0.544	0.084	1.198
	LTE Band 13	0.274	0.103	0.091	0.544	0.084	1.096
	LTE Band 14	0.284	0.103	0.091	0.544	0.084	1.106
	LTE Band 26 (Cell)	0.197	0.103	0.091	0.544	0.084	1.019
	LTE Band 66 (AWS)	0.501	0.103	0.091	0.544	0.084	1.323
	LTE Band 25 (PCS)	0.417	0.103	0.091	0.544	0.084	1.239
	LTE Band 30	0.371	0.103	0.091	0.544	0.084	1.193
	LTE Band 7	0.302	0.103	0.091	0.544	0.084	1.124
	LTE Band 41	0.108	0.103	0.091	0.544	0.084	0.930

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Table 12-8
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)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
Body-Worn	GSM 850	0.271	0.014	0.544	0.084	0.285	0.829	0.369	0.913
	GSM 1900	0.268	0.014	0.544	0.084	0.282	0.826	0.366	0.910
	UMTS 850	0.268	0.014	0.544	0.084	0.282	0.826	0.366	0.910
	UMTS 1750	0.694	0.014	0.544	0.084	0.708	1.252	0.792	**1.336**
	UMTS 1900	0.450	0.014	0.544	0.084	0.464	1.008	0.548	1.092
	LTE Band 71	0.343	0.014	0.544	0.084	0.357	0.901	0.441	0.985
	LTE Band 12	0.376	0.014	0.544	0.084	0.390	0.934	0.474	1.018
	LTE Band 13	0.274	0.014	0.544	0.084	0.288	0.832	0.372	0.916
	LTE Band 14	0.284	0.014	0.544	0.084	0.298	0.842	0.382	0.926
	LTE Band 26 (Cell)	0.197	0.014	0.544	0.084	0.211	0.755	0.295	0.839
	LTE Band 66 (AWS)	0.501	0.014	0.544	0.084	0.515	1.059	0.599	1.143
	LTE Band 25 (PCS)	0.417	0.014	0.544	0.084	0.431	0.975	0.515	1.059
	LTE Band 30	0.371	0.014	0.544	0.084	0.385	0.929	0.469	1.013
	LTE Band 7	0.302	0.014	0.544	0.084	0.316	0.860	0.400	0.944
	LTE Band 41	0.108	0.014	0.544	0.084	0.122	0.666	0.206	0.750

12.5 Hotspot SAR Simultaneous Transmission Analysis: 1g Handset

Table 12-9
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.502	0.233	0.310	0.735	0.812	1.045
	GPRS 1900	0.731	0.233	0.310	0.964	1.041	1.274
	UMTS 850	0.516	0.233	0.310	0.749	0.826	1.059
	UMTS 1750	0.861	0.233	0.310	1.094	1.171	1.404
	UMTS 1900	1.033	0.233	0.310	1.266	1.343	**1.576**
	LTE Band 71	0.713	0.233	0.310	0.946	1.023	1.256
	LTE Band 12	0.928	0.233	0.310	1.161	1.238	1.471
	LTE Band 13	0.585	0.233	0.310	0.818	0.895	1.128
	LTE Band 14	0.572	0.233	0.310	0.805	0.882	1.115
	LTE Band 26 (Cell)	0.643	0.233	0.310	0.876	0.953	1.186
	LTE Band 66 (AWS)	0.870	0.233	0.310	1.103	1.180	1.413
	LTE Band 25 (PCS)	0.906	0.233	0.310	1.139	1.216	1.449
	LTE Band 30	0.783	0.233	0.310	1.016	1.093	1.326
	LTE Band 7	0.908	0.233	0.310	1.141	1.218	1.451
	LTE Band 41	0.839	0.233	0.310	1.072	1.149	1.382

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Hotspot SAR	GPRS 850	0.502	0.182	0.103	0.684	0.605	0.787
	GPRS 1900	0.731	0.182	0.103	0.913	0.834	1.016
	UMTS 850	0.516	0.182	0.103	0.698	0.619	0.801
	UMTS 1750	0.861	0.182	0.103	1.043	0.964	1.146
	UMTS 1900	1.033	0.182	0.103	1.215	1.136	**1.318**
	LTE Band 71	0.713	0.182	0.103	0.895	0.816	0.998
	LTE Band 12	0.928	0.182	0.103	1.110	1.031	1.213
	LTE Band 13	0.585	0.182	0.103	0.767	0.688	0.870
	LTE Band 14	0.572	0.182	0.103	0.754	0.675	0.857
	LTE Band 26 (Cell)	0.643	0.182	0.103	0.825	0.746	0.928
	LTE Band 66 (AWS)	0.870	0.182	0.103	1.052	0.973	1.155
	LTE Band 25 (PCS)	0.906	0.182	0.103	1.088	1.009	1.191
	LTE Band 30	0.783	0.182	0.103	0.965	0.886	1.068
	LTE Band 7	0.908	0.182	0.103	1.090	1.011	1.193
	LTE Band 41	0.839	0.182	0.103	1.021	0.942	1.124

Table 12-11
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN 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
Hotspot SAR	GPRS 850	0.502	0.233	0.310	0.182	0.103	1.330
	GPRS 1900	0.731	0.233	0.310	0.182	0.103	**1.559**
	UMTS 850	0.516	0.233	0.310	0.182	0.103	1.344
	UMTS 1750	0.861	0.233	0.310	0.182	0.103	See Table Below
	UMTS 1900	1.033	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 71	0.713	0.233	0.310	0.182	0.103	1.541
	LTE Band 12	0.928	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 13	0.585	0.233	0.310	0.182	0.103	1.413
	LTE Band 14	0.572	0.233	0.310	0.182	0.103	1.400
	LTE Band 26 (Cell)	0.643	0.233	0.310	0.182	0.103	1.471
	LTE Band 66 (AWS)	0.870	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 25 (PCS)	0.906	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 30	0.783	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 7	0.908	0.233	0.310	0.182	0.103	See Table Below
	LTE Band 41	0.839	0.233	0.310	0.182	0.103	See Table Below

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Simult Tx	Configuration	UMTS 1750 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)	Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN 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			1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.417	0.233*	0.310	0.182	0.103*	**1.245**	Hotspot SAR	Back	0.432	0.233*	0.310	0.182	0.103*	**1.260**
	Front	0.179	0.233*	0.310*	0.182*	0.103*	1.007		Front	0.217	0.233*	0.310*	0.182*	0.103*	1.045
	Top	-	0.233	0.310*	0.182*	0.103	0.828		Top	-	0.233	0.310*	0.182*	0.103	0.828
	Bottom	0.861	-	-	-	-	0.861		Bottom	1.033	-	-	-	-	1.033
	Right	0.126	0.233*	-	0.182*	-	0.541		Right	0.204	0.233*	-	0.182*	-	0.619
	Left	0.109	-	0.310*	-	0.103*	0.522		Left	0.134	-	0.310*	-	0.103*	0.547
Simult Tx	Configuration	LTE Band 12 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)	Simult Tx	Configuration	LTE Band 66 (AWS) 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			1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.386	0.233*	0.310	0.182	0.103*	1.214	Hotspot SAR	Back	0.329	0.233*	0.310	0.182	0.103*	**1.157**
	Front	0.346	0.233*	0.310*	0.182*	0.103*	1.174		Front	0.188	0.233*	0.310*	0.182*	0.103*	1.016
	Top	-	0.233	0.310*	0.182*	0.103	0.828		Top	-	0.233	0.310*	0.182*	0.103	0.828
	Bottom	0.270	-	-	-	-	0.270		Bottom	0.870	-	-	-	-	0.870
	Right	0.928	0.233*	-	0.182*	-	**1.343**		Right	0.116	0.233*	-	0.182*	-	0.531
	Left	-	-	0.310*	-	0.103*	0.413		Left	0.089	-	0.310*	-	0.103*	0.502
Simult Tx	Configuration	LTE Band 25 (PCS) 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)	Simult Tx	Configuration	LTE Band 30 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			1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.316	0.233*	0.310	0.182	0.103*	**1.144**	Hotspot SAR	Back	0.317	0.233*	0.310	0.182	0.103*	1.145
	Front	0.187	0.233*	0.310*	0.182*	0.103*	1.015		Front	0.325	0.233*	0.310*	0.182*	0.103*	**1.153**
	Top	-	0.233	0.310*	0.182*	0.103	0.828		Top	-	0.233	0.310*	0.182*	0.103	0.828
	Bottom	0.906	-	-	-	-	0.906		Bottom	0.783	-	-	-	-	0.783
	Right	0.153	0.233*	-	0.182*	-	0.568		Right	0.047	0.233*	-	0.182*	-	0.462
	Left	0.093	-	0.310*	-	0.103*	0.506		Left	0.059	-	0.310*	-	0.103*	0.472
Simult Tx	Configuration	LTE Band 7 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)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	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			1	2	3	4	5	1+2+3+4+5
Hotspot SAR	Back	0.178	0.233*	0.310	0.182	0.103*	1.006	Hotspot SAR	Back	0.158	0.233*	0.310	0.182	0.103*	0.986
	Front	0.350	0.233*	0.310*	0.182*	0.103*	**1.178**		Front	0.216	0.233*	0.310*	0.182*	0.103*	**1.044**
	Top	-	0.233	0.310*	0.182*	0.103	0.828		Top	-	0.233	0.310*	0.182*	0.103	0.828
	Bottom	0.908	-	-	-	-	0.908		Bottom	0.839	-	-	-	-	0.839
	Right	0.067	0.233*	-	0.182*	-	0.482		Right	0.088	0.233*	-	0.182*	-	0.503
	Left	0.083	-	0.310*	-	0.103*	0.496		Left	0.061	-	0.310*	-	0.103*	0.474

Table 12-12
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)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
Hotspot SAR	GPRS 850	0.502	0.038	0.182	0.103	0.540	0.722	0.787	0.825
	GPRS 1900	0.731	0.038	0.182	0.103	0.769	0.951	1.016	1.054
	UMTS 850	0.516	0.038	0.182	0.103	0.554	0.736	0.801	0.839
	UMTS 1750	0.861	0.038	0.182	0.103	0.899	1.081	1.146	1.184
	UMTS 1900	1.033	0.038	0.182	0.103	1.071	1.253	1.318	**1.356**
	LTE Band 71	0.713	0.038	0.182	0.103	0.751	0.933	0.998	1.036
	LTE Band 12	0.928	0.038	0.182	0.103	0.966	1.148	1.213	1.251
	LTE Band 13	0.585	0.038	0.182	0.103	0.623	0.805	0.870	0.908
	LTE Band 14	0.572	0.038	0.182	0.103	0.610	0.792	0.857	0.895
	LTE Band 26 (Cell)	0.643	0.038	0.182	0.103	0.681	0.863	0.928	0.966
	LTE Band 66 (AWS)	0.870	0.038	0.182	0.103	0.908	1.090	1.155	1.193
	LTE Band 25 (PCS)	0.906	0.038	0.182	0.103	0.944	1.126	1.191	1.229
	LTE Band 30	0.783	0.038	0.182	0.103	0.821	1.003	1.068	1.106
	LTE Band 7	0.908	0.038	0.182	0.103	0.946	1.128	1.193	1.231
	LTE Band 41	0.839	0.038	0.182	0.103	0.877	1.059	1.124	1.162

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12.6 Phablet Simultaneous Transmission Analysis: 10g Handset

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 12-13
Simultaneous Transmission Scenario with 5 GHz WLAN (Phablet)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
Phablet SAR	GPRS 1900	2.631	0.777	0.765	3.408	3.396	See Table Below
	UMTS 1750	2.548	0.777	0.765	3.325	3.313	See Table Below
	UMTS 1900	3.076	0.777	0.765	**3.853**	3.841	See Table Below
	LTE Band 66 (AWS)	2.739	0.777	0.765	3.516	3.504	See Table Below
	LTE Band 25 (PCS)	3.016	0.777	0.765	3.793	3.781	See Table Below
	LTE Band 30	2.827	0.777	0.765	3.604	3.592	See Table Below
	LTE Band 7	1.998	0.777	0.765	2.775	2.763	3.540
	LTE Band 41	2.636	0.777	0.765	3.413	3.401	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Phablet SAR	Back	1.558	0.777	0.217	2.552	Phablet SAR	Back	1.162	0.777	0.217	2.156
	Front	1.046	0.777*	0.765*	2.588		Front	1.317	0.777*	0.765*	**2.859**
	Top	-	0.777*	0.765	1.542		Top	-	0.777*	0.765	1.542
	Bottom	2.631	-	-	**2.631**		Bottom	2.548	-	-	2.548
	Right	0.729	0.777*	-	1.506		Right	0.982	0.777*	-	1.759
	Left	0.300	-	0.765*	1.065		Left	0.433	-	0.765*	1.198

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Phablet SAR	Back	1.585	0.777	0.217	2.579	Phablet SAR	Back	1.144	0.777	0.217	2.138
	Front	1.199	0.777*	0.765*	2.741		Front	1.274	0.777*	0.765*	**2.816**
	Top	-	0.777*	0.765	1.542		Top	-	0.777*	0.765	1.542
	Bottom	3.076	-	-	**3.076**		Bottom	2.739	-	-	2.739
	Right	0.768	0.777*	-	1.545		Right	0.934	0.777*	-	1.711
	Left	0.336	-	0.765*	1.101		Left	0.467	-	0.765*	1.232

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Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Phablet SAR	Back	1.572	0.777	0.217	2.566	Phablet SAR	Back	1.023	0.777	0.217	2.017
	Front	1.292	0.777*	0.765*	2.834		Front	1.914	0.777*	0.765*	**3.456**
	Top	-	0.777*	0.765	1.542		Top	-	0.777*	0.765	1.542
	Bottom	3.016	-	-	**3.016**		Bottom	2.827	-	-	2.827
	Right	0.760	0.777*	-	1.537		Right	0.449	0.777*	-	1.226
	Left	0.411	-	0.765*	1.176		Left	0.436	-	0.765*	1.201

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Phablet SAR	Back	0.636	0.777	0.217	1.630
	Front	1.300	0.777*	0.765*	**2.842**
	Top	-	0.777*	0.765	1.542
	Bottom	2.636	-	-	2.636
	Right	0.567	0.777*	-	1.344
	Left	0.295	-	0.765*	1.060

12.7 Body Simultaneous Transmission Analysis: 1g UMPC Body

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

Table 12-14
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Body)

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
UMPC Body SAR 1g	GPRS 850	0.784	0.497	0.208	1.281	0.992
	GPRS 1900	1.130	0.497	0.208	See Table Below	1.338
	UMTS 850	0.426	0.497	0.208	0.923	0.634
	UMTS 1750	0.788	0.497	0.208	1.285	0.996
	UMTS 1900	1.384	0.497	0.208	See Table Below	**1.592**
	LTE Band 71	0.425	0.497	0.208	0.922	0.633
	LTE Band 12	0.521	0.497	0.208	1.018	0.729
	LTE Band 13	0.696	0.497	0.208	1.193	0.904
	LTE Band 14	0.665	0.497	0.208	1.162	0.873
	LTE Band 26 (Cell)	0.458	0.497	0.208	0.955	0.666
	LTE Band 66 (AWS)	0.861	0.497	0.208	1.358	1.069
	LTE Band 25 (PCS)	1.240	0.497	0.208	See Table Below	1.448
	LTE Band 30	1.165	0.497	0.208	See Table Below	1.373
	LTE Band 7	1.398	0.497	0.208	See Table Below	See Table Below
	LTE Band 41	1.110	0.497	0.208	See Table Below	1.318

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Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR 1g	Back	0.873	0.390	0.208	**1.263**	1.081
	Front	0.663	0.421	0.208*	1.084	0.871
	Top	-	0.497	0.208*	0.497	0.208
	Bottom	1.130	-	-	1.130	1.130
	Right	0.238	0.497*	-	0.735	0.238

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR 1g	Back	0.908	0.390	0.208	1.298	1.116
	Front	0.744	0.421	0.208*	1.165	0.952
	Top	-	0.497	0.208*	0.497	0.208
	Bottom	1.384	-	-	**1.384**	**1.384**
	Right	0.283	0.497*	-	0.780	0.283

Simult Tx	Configuration	LTE Band 25 (PCS) 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
UMPC Body SAR 1g	Back	0.649	0.390	0.208	1.039	0.857
	Front	0.707	0.421	0.208*	1.128	0.915
	Top	-	0.497	0.208*	0.497	0.208
	Bottom	1.240	-	-	**1.240**	**1.240**
	Right	0.209	0.497*	-	0.706	0.209

Simult Tx	Configuration	LTE Band 30 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
UMPC Body SAR 1g	Back	0.953	0.390	0.208	**1.343**	1.161
	Front	0.895	0.421	0.208*	1.316	1.103
	Top	-	0.497	0.208*	0.497	0.208
	Bottom	1.165	-	-	1.165	1.165
	Right	0.250	0.497*	-	0.747	0.250

Simult Tx	Configuration	LTE Band 7 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)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	1.081	0.390	0.208	1.471	1.289	N/A
	Front	1.198	0.421	0.208*	See Note 1	1.406	0.01
	Top	-	0.497	0.208*	0.497	0.208	N/A
	Bottom	1.398	-	-	1.398	1.398	N/A
	Right	0.458	0.497*	-	0.955	0.458	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR 1g	Back	0.932	0.390	0.208	1.322	1.140
	Front	0.913	0.421	0.208*	**1.334**	1.121
	Top	-	0.497	0.208*	0.497	0.208
	Bottom	1.110	-	-	1.110	1.110
	Right	0.442	0.497*	-	0.939	0.442

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	GPRS 850	0.784	0.427	1.211
	GPRS 1900	1.130	0.427	1.557
	UMTS 850	0.426	0.427	0.853
	UMTS 1750	0.788	0.427	1.215
	UMTS 1900	1.384	0.427	See Table Below
	LTE Band 71	0.425	0.427	0.852
	LTE Band 12	0.521	0.427	0.948
	LTE Band 13	0.696	0.427	1.123
	LTE Band 14	0.665	0.427	1.092
	LTE Band 26 (Cell)	0.458	0.427	0.885
	LTE Band 66 (AWS)	0.861	0.427	1.288
	LTE Band 25 (PCS)	1.240	0.427	See Table Below
	LTE Band 30	1.165	0.427	**1.592**
	LTE Band 7	1.398	0.427	See Table Below
	LTE Band 41	1.110	0.427	1.537

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	0.908	0.308	1.216
	Front	0.744	0.312	1.056
	Top	-	0.427	0.427
	Bottom	1.384	-	**1.384**
	Right	0.283	0.427*	0.710

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	0.649	0.308	0.957
	Front	0.707	0.312	1.019
	Top	-	0.427	0.427
	Bottom	1.240	-	**1.240**
	Right	0.209	0.427*	0.636

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	1.081	0.308	1.389
	Front	1.198	0.312	**1.510**
	Top	-	0.427	0.427
	Bottom	1.398	-	1.398
	Right	0.458	0.427*	0.885

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Table 12-15
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Body)

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
UMPC Body SAR 1g	GPRS 850	0.784	0.742	0.225	1.526	1.009
	GPRS 1900	1.130	0.742	0.225	See Table Below	1.355
	UMTS 850	0.426	0.742	0.225	1.168	0.651
	UMTS 1750	0.788	0.742	0.225	**1.530**	1.013
	UMTS 1900	1.384	0.742	0.225	See Table Below	See Table Below
	LTE Band 71	0.425	0.742	0.225	1.167	0.650
	LTE Band 12	0.521	0.742	0.225	1.263	0.746
	LTE Band 13	0.696	0.742	0.225	1.438	0.921
	LTE Band 14	0.665	0.742	0.225	1.407	0.890
	LTE Band 26 (Cell)	0.458	0.742	0.225	1.200	0.683
	LTE Band 66 (AWS)	0.861	0.742	0.225	See Table Below	1.086
	LTE Band 25 (PCS)	1.240	0.742	0.225	See Table Below	1.465
	LTE Band 30	1.165	0.742	0.225	See Table Below	1.390
	LTE Band 7	1.398	0.742	0.225	See Table Below	See Table Below
	LTE Band 41	1.110	0.742	0.225	See Table Below	1.335

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	0.873	0.742	0.103	See Note 1	0.976	0.01
	Front	0.663	0.172	0.225*	0.835	0.888	N/A
	Top	-	0.167	0.225	0.167	0.225	N/A
	Bottom	1.130	-	-	**1.130**	**1.130**	N/A
	Right	0.238	0.742*	-	0.980	0.238	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	0.908	0.742	0.103	See Note 1	1.011	0.01
	Front	0.744	0.172	0.225*	0.916	0.969	N/A
	Top	-	0.167	0.225	0.167	0.225	N/A
	Bottom	1.384	-	-	**1.384**	**1.384**	N/A
	Right	0.283	0.742*	-	1.025	0.283	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR 1g	Back	0.767	0.742	0.103	**1.509**	0.870
	Front	0.612	0.172	0.225*	0.784	0.837
	Top	-	0.167	0.225	0.167	0.225
	Bottom	0.861	-	-	0.861	0.861
	Right	0.298	0.742*	-	1.040	0.298

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR 1g	Back	0.649	0.742	0.103	**1.391**	0.752
	Front	0.707	0.172	0.225*	0.879	0.932
	Top	-	0.167	0.225	0.167	0.225
	Bottom	1.240	-	-	1.240	1.240
	Right	0.209	0.742*	-	0.951	0.209

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	0.953	0.742	0.103	See Note 1	1.056	0.01
	Front	0.895	0.172	0.225*	1.067	1.120	N/A
	Top	-	0.167	0.225	0.167	0.225	N/A
	Bottom	1.165	-	-	**1.165**	**1.165**	N/A
	Right	0.250	0.742*	-	0.992	0.250	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	1.081	0.742	0.103	See Note 1	1.184	0.02
	Front	1.198	0.172	0.225*	1.370	**1.423**	N/A
	Top	-	0.167	0.225	0.167	0.225	N/A
	Bottom	1.398	-	-	1.398	1.398	N/A
	Right	0.458	0.742*	-	1.200	0.458	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		SPLSR
		1	2	3	1+2	1+3	1+2
UMPC Body SAR 1g	Back	0.932	0.742	0.103	See Note 1	1.035	0.01
	Front	0.913	0.172	0.225*	1.085	1.138	N/A
	Top	-	0.167	0.225	0.167	0.225	N/A
	Bottom	1.110	-	-	1.110	1.110	N/A
	Right	0.442	0.742*	-	**1.184**	0.442	N/A

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Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	GPRS 850	0.784	0.670	1.454
	GPRS 1900	1.130	0.670	See Table Below
	UMTS 850	0.426	0.670	1.096
	UMTS 1750	0.788	0.670	1.458
	UMTS 1900	1.384	0.670	See Table Below
	LTE Band 71	0.425	0.670	1.095
	LTE Band 12	0.521	0.670	1.191
	LTE Band 13	0.696	0.670	1.366
	LTE Band 14	0.665	0.670	1.335
	LTE Band 26 (Cell)	0.458	0.670	1.128
	LTE Band 66 (AWS)	0.861	0.670	1.531
	LTE Band 25 (PCS)	1.240	0.670	See Table Below
	LTE Band 30	1.165	0.670	See Table Below
	LTE Band 7	1.398	0.670	See Table Below
	LTE Band 41	1.110	0.670	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	0.873	0.670	**1.543**
	Front	0.663	0.217	0.880
	Top	-	0.350	0.350
	Bottom	1.130	-	1.130
	Right	0.238	0.670*	0.908

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	0.908	0.670	**1.578**
	Front	0.744	0.217	0.961
	Top	-	0.350	0.350
	Bottom	1.384	-	1.384
	Right	0.283	0.670*	0.953

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR 1g	Back	0.649	0.670	**1.319**
	Front	0.707	0.217	0.924
	Top	-	0.350	0.350
	Bottom	1.240	-	1.240
	Right	0.209	0.670*	0.879

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Body SAR 1g	Back	0.953	0.670	See Note 1	0.01
	Front	0.895	0.217	1.112	N/A
	Top	-	0.350	0.350	N/A
	Bottom	1.165	-	1.165	N/A
	Right	0.250	0.670*	0.920	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Body SAR 1g	Back	1.081	0.670	See Note 1	0.01
	Front	1.198	0.217	1.415	N/A
	Top	-	0.350	0.350	N/A
	Bottom	1.398	-	1.398	N/A
	Right	0.458	0.670*	1.128	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR
		1	2	1+2	1+2
UMPC Body SAR 1g	Back	0.932	0.670	See Note 1	0.01
	Front	0.913	0.217	1.130	N/A
	Top	-	0.350	0.350	N/A
	Bottom	1.110	-	1.110	N/A
	Right	0.442	0.670*	1.112	N/A

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Table 12-16
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Body)

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
UMPC Body SAR 1g	GPRS 850	0.784	0.283	0.273	1.340
	GPRS 1900	1.130	0.283	0.273	See Table Below
	UMTS 850	0.426	0.283	0.273	0.982
	UMTS 1750	0.788	0.283	0.273	1.344
	UMTS 1900	1.384	0.283	0.273	See Table Below
	LTE Band 71	0.425	0.283	0.273	0.981
	LTE Band 12	0.521	0.283	0.273	1.077
	LTE Band 13	0.696	0.283	0.273	1.252
	LTE Band 14	0.665	0.283	0.273	1.221
	LTE Band 26 (Cell)	0.458	0.283	0.273	1.014
	LTE Band 66 (AWS)	0.861	0.283	0.273	**1.417**
	LTE Band 25 (PCS)	1.240	0.283	0.273	See Table Below
	LTE Band 30	1.165	0.283	0.273	See Table Below
	LTE Band 7	1.398	0.283	0.273	See Table Below
	LTE Band 41	1.110	0.283	0.273	See Table Below

Simult Tx	Configuration	GPRS 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)	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+3+4			1	2	3	1+3+4
UMPC Body SAR 1g	Back	0.873	0.230	0.273	**1.376**	UMPC Body SAR 1g	Back	0.908	0.230	0.273	**1.411**
	Front	0.663	0.228	0.083	0.974		Front	0.744	0.228	0.083	1.055
	Top	-	0.283	0.115	0.398		Top	-	0.283	0.115	0.398
	Bottom	1.130	-	-	1.130		Bottom	1.384	-	-	1.384
	Right	0.238	0.283*	0.273*	0.794		Right	0.283	0.283*	0.273*	0.839

Simult Tx	Configuration	LTE Band 25 (PCS) 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)	Simult Tx	Configuration	LTE Band 30 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+3+4			1	2	3	1+3+4
UMPC Body SAR 1g	Back	0.649	0.230	0.273	1.152	UMPC Body SAR 1g	Back	0.953	0.230	0.273	**1.456**
	Front	0.707	0.228	0.083	1.018		Front	0.895	0.228	0.083	1.206
	Top	-	0.283	0.115	0.398		Top	-	0.283	0.115	0.398
	Bottom	1.240	-	-	**1.240**		Bottom	1.165	-	-	1.165
	Right	0.209	0.283*	0.273*	0.765		Right	0.250	0.283*	0.273*	0.806

Simult Tx	Configuration	LTE Band 7 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)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO at 19 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+3+4			1	2	3	1+3+4
UMPC Body SAR 1g	Back	1.081	0.230	0.273	**1.584**	UMPC Body SAR 1g	Back	0.932	0.230	0.273	**1.435**
	Front	1.198	0.228	0.083	1.509		Front	0.913	0.228	0.083	1.224
	Top	-	0.283	0.115	0.398		Top	-	0.283	0.115	0.398
	Bottom	1.398	-	-	1.398		Bottom	1.110	-	-	1.110
	Right	0.458	0.283*	0.273*	1.014		Right	0.442	0.283*	0.273*	0.998

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Table 12-17
Simultaneous Transmission Scenario with Bluetooth and 5GHz WLAN (UMPC Body)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
UMPC Body SAR 1g	GPRS 850	0.784	0.140	0.742	0.225	0.924	See Table Below	1.149
	GPRS 1900	1.130	0.140	0.742	0.225	1.270	See Table Below	1.495
	UMTS 850	0.426	0.140	0.742	0.225	0.566	1.308	0.791
	UMTS 1750	0.788	0.140	0.742	0.225	0.928	See Table Below	1.153
	UMTS 1900	1.384	0.140	0.742	0.225	1.524	See Table Below	See Table Below
	LTE Band 71	0.425	0.140	0.742	0.225	0.565	1.307	0.790
	LTE Band 12	0.521	0.140	0.742	0.225	0.661	1.403	0.886
	LTE Band 13	0.696	0.140	0.742	0.225	0.836	**1.578**	1.061
	LTE Band 14	0.665	0.140	0.742	0.225	0.805	1.547	1.030
	LTE Band 26 (Cell)	0.458	0.140	0.742	0.225	0.598	1.340	0.823
	LTE Band 66 (AWS)	0.861	0.140	0.742	0.225	1.001	See Table Below	1.226
	LTE Band 25 (PCS)	1.240	0.140	0.742	0.225	1.380	See Table Below	See Table Below
	LTE Band 30	1.165	0.140	0.742	0.225	1.305	See Table Below	1.530
	LTE Band 7	1.398	0.140	0.742	0.225	See Table Below	See Table Below	See Table Below
	LTE Band 41	1.110	0.140	0.742	0.225	1.250	See Table Below	1.475

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.784	0.084	0.742	0.103	0.868	See note 1	0.971	0.01	0.01	0.02
	Front	0.542	0.096	0.172	0.225*	0.638	0.810	0.863	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	0.380	-	-	-	0.380	0.380	0.380	N/A	N/A	N/A
	Right	0.379	0.077	0.742*	-	0.456	**1.198**	0.456	N/A	N/A	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.873	0.084	0.742	0.103	0.957	See note 1	1.060	0.01	0.01	0.02
	Front	0.663	0.096	0.172	0.225*	0.759	0.931	0.984	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	1.130	-	-	-	**1.130**	**1.130**	**1.130**	N/A	N/A	N/A
	Right	0.238	0.077	0.742*	-	0.315	1.057	0.315	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
UMPC Body SAR 1g	Back	0.752	0.084	0.742	0.103	0.836	**1.578**	0.939
	Front	0.756	0.096	0.172	0.225*	0.852	1.024	1.077
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365
	Bottom	0.788	-	-	-	0.788	0.788	0.788
	Right	0.352	0.077	0.742*	-	0.429	1.171	0.429

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.908	0.084	0.742	0.103	0.992	See note 1	1.095	0.01	0.01	0.02
	Front	0.744	0.096	0.172	0.225*	0.840	1.012	1.065	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	1.384	-	-	-	**1.384**	**1.384**	**1.384**	N/A	N/A	N/A
	Right	0.283	0.077	0.742*	-	0.360	1.102	0.360	N/A	N/A	N/A

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Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
UMPC Body SAR 1g	Back	0.767	0.084	0.742	0.103	0.851	**1.593**	0.954
	Front	0.612	0.096	0.172	0.225*	0.708	0.880	0.933
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365
	Bottom	0.861	-	-	-	0.861	0.861	0.861
	Right	0.298	0.077	0.742*	-	0.375	1.117	0.375

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	4	1+2	1+2+3	1+2+4
UMPC Body SAR 1g	Back	0.649	0.084	0.742	0.103	0.733	**1.475**	0.836
	Front	0.707	0.096	0.172	0.225*	0.803	0.975	1.028
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365
	Bottom	1.240	-	-	-	1.240	1.240	1.240
	Right	0.209	0.077	0.742*	-	0.286	1.028	0.286

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.953	0.084	0.742	0.103	1.037	See note 1	1.140	0.01	0.01	0.02
	Front	0.895	0.096	0.172	0.225*	0.991	1.163	**1.216**	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	1.165	-	-	-	1.165	1.165	1.165	N/A	N/A	N/A
	Right	0.250	0.077	0.742*	-	0.327	1.069	0.327	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	1.081	0.084	0.742	0.103	1.165	See note 1	1.268	0.01	0.02	0.02
	Front	1.198	0.096	0.172	0.225*	1.294	1.466	**1.519**	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	1.398	-	-	-	1.398	1.398	1.398	N/A	N/A	N/A
	Right	0.458	0.077	0.742*	-	0.535	1.277	0.535	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	4	1+2	1+2+3	1+2+4	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.932	0.084	0.742	0.103	1.016	See note 1	1.119	0.01	0.01	0.02
	Front	0.913	0.096	0.172	0.225*	1.009	1.181	1.234	N/A	N/A	N/A
	Top	-	0.140	0.167	0.225	0.140	0.307	0.365	N/A	N/A	N/A
	Bottom	1.110	-	-	-	1.110	1.110	1.110	N/A	N/A	N/A
	Right	0.442	0.077	0.742*	-	0.519	**1.261**	0.519	N/A	N/A	N/A

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR 1g	GPRS 850	0.784	0.140	0.670	**1.594**
	GPRS 1900	1.130	0.140	0.670	See Table Below
	UMTS 850	0.426	0.140	0.670	1.236
	UMTS 1750	0.788	0.140	0.670	See Table Below
	UMTS 1900	1.384	0.140	0.670	See Table Below
	LTE Band 71	0.425	0.140	0.670	1.235
	LTE Band 12	0.521	0.140	0.670	1.331
	LTE Band 13	0.696	0.140	0.670	1.506
	LTE Band 14	0.665	0.140	0.670	1.475
	LTE Band 26 (Cell)	0.458	0.140	0.670	1.268
	LTE Band 66 (AWS)	0.861	0.140	0.670	See Table Below
	LTE Band 25 (PCS)	1.240	0.140	0.670	See Table Below
	LTE Band 30	1.165	0.140	0.670	See Table Below
	LTE Band 7	1.398	0.140	0.670	See Table Below
	LTE Band 41	1.110	0.140	0.670	See Table Below

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Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3
UMPC Body SAR 1g	Back	0.873	0.084	0.670	See note 1	0.01	0.01	0.02	UMPC Body SAR 1g	Back	0.752	0.084	0.670	**1.506**
	Front	0.663	0.096	0.217	0.976	N/A	N/A	N/A		Front	0.756	0.096	0.217	1.069
	Top	-	0.140	0.350	0.490	N/A	N/A	N/A		Top	-	0.140	0.350	0.490
	Bottom	1.130	-	-	**1.130**	N/A	N/A	N/A		Bottom	0.788	-	-	0.788
	Right	0.238	0.077	0.670*	0.985	N/A	N/A	N/A		Right	0.352	0.077	0.670*	1.099

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3
UMPC Body SAR 1g	Back	0.908	0.084	0.670	See note 1	0.01	0.01	0.02	UMPC Body SAR 1g	Back	0.767	0.084	0.670	**1.521**
	Front	0.744	0.096	0.217	1.057	N/A	N/A	N/A		Front	0.612	0.096	0.217	0.925
	Top	-	0.140	0.350	0.490	N/A	N/A	N/A		Top	-	0.140	0.350	0.490
	Bottom	1.384	-	-	**1.384**	N/A	N/A	N/A		Bottom	0.861	-	-	0.861
	Right	0.283	0.077	0.670*	1.030	N/A	N/A	N/A		Right	0.298	0.077	0.670*	1.045

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3			1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.649	0.084	0.670	**1.403**	UMPC Body SAR 1g	Back	0.953	0.084	0.670	See note 1	0.01	0.01	0.02
	Front	0.707	0.096	0.217	1.020		Front	0.895	0.096	0.217	**1.208**	N/A	N/A	N/A
	Top	-	0.140	0.350	0.490		Top	-	0.140	0.350	0.490	N/A	N/A	N/A
	Bottom	1.240	-	-	1.240		Bottom	1.165	-	-	1.165	N/A	N/A	N/A
	Right	0.209	0.077	0.670*	0.956		Right	0.250	0.077	0.670*	0.997	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR 1g	Back	1.081	0.084	0.670	See note 1	0.01	0.01	0.02
	Front	1.198	0.096	0.217	**1.511**	N/A	N/A	N/A
	Top	-	0.140	0.350	0.490	N/A	N/A	N/A
	Bottom	1.398	-	-	1.398	N/A	N/A	N/A
	Right	0.458	0.077	0.670*	1.205	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
UMPC Body SAR 1g	Back	0.932	0.084	0.670	See note 1	0.01	0.01	0.02
	Front	0.913	0.096	0.217	**1.226**	N/A	N/A	N/A
	Top	-	0.140	0.350	0.490	N/A	N/A	N/A
	Bottom	1.110	-	-	1.110	N/A	N/A	N/A
	Right	0.442	0.077	0.670*	1.189	N/A	N/A	N/A

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12.8 Body Simultaneous Transmission Analysis: 10g UMPC Extremity

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 12-18
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Extremity)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.514	1.764	1.117	1.031	**3.278**	2.631	2.545	N/A
	Front	1.276	3.185	0.525	1.657	See Note 1	1.801	2.933	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	1.721	-	-	-	1.721	1.721	1.721	N/A
	Right	1.126	0.860	-	0.523	1.986	1.126	1.649	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.479	1.764	1.117	1.031	**3.243**	2.596	2.510	N/A
	Front	1.305	3.185	0.525	1.657	See Note 1	1.830	2.962	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.110	-	-	-	3.110	3.110	3.110	N/A
	Right	0.692	0.860	-	0.523	1.552	0.692	1.215	N/A

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.006	1.764	1.117	1.031	**2.770**	2.123	2.037	N/A
	Front	1.009	3.185	0.525	1.657	See Note 1	1.534	2.666	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	0.618	-	-	-	0.618	0.618	0.618	N/A
	Right	1.507	0.860	-	0.523	2.367	1.507	2.030	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.246	1.764	1.117	1.031	3.010	2.363	2.277	N/A
	Front	1.375	3.185	0.525	1.657	See Note 1	1.900	**3.032**	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	2.956	-	-	-	2.956	2.956	2.956	N/A
	Right	0.691	0.860	-	0.523	1.551	0.691	1.214	N/A

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Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.612	1.764	1.117	1.031	**3.376**	2.729	2.643	N/A
	Front	1.640	3.185	0.525	1.657	See Note 1	2.165	3.297	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.281	-	-	-	3.281	3.281	3.281	N/A
	Right	0.760	0.860	-	0.523	1.620	0.760	1.283	N/A

Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	0.843	1.764	1.117	1.031	2.607	1.960	1.874	N/A
	Front	1.311	3.185	0.525	1.657	See Note 1	1.836	**2.968**	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	1.016	-	-	-	1.016	1.016	1.016	N/A
	Right	1.274	0.860	-	0.523	2.134	1.274	1.797	N/A

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.229	1.764	1.117	1.031	2.993	2.346	2.260	N/A
	Front	1.436	3.185	0.525	1.657	See Note 1	1.961	**3.093**	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	1.218	-	-	-	1.218	1.218	1.218	N/A
	Right	1.153	0.860	-	0.523	2.013	1.153	1.676	N/A

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.589	1.764	1.117	1.031	3.353	2.706	2.620	N/A
	Front	1.715	3.185	0.525	1.657	See Note 1	2.240	**3.372**	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	0.983	-	-	-	0.983	0.983	0.983	N/A
	Right	1.226	0.860	-	0.523	2.086	1.226	1.749	N/A

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Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.487	1.764	1.117	1.031	3.251	2.604	2.518	N/A
	Front	1.621	3.185	0.525	1.657	See Note 1	2.146	**3.278**	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	0.938	-	-	-	0.938	0.938	0.938	N/A
	Right	1.211	0.860	-	0.523	2.071	1.211	1.734	N/A

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	0.997	1.764	1.117	1.031	**2.761**	2.114	2.028	N/A
	Front	0.907	3.185	0.525	1.657	See Note 1	1.432	2.564	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	0.635	-	-	-	0.635	0.635	0.635	N/A
	Right	1.491	0.860	-	0.523	2.351	1.491	2.014	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.309	1.764	1.117	1.031	3.073	2.426	2.340	N/A
	Front	1.334	3.185	0.525	1.657	See Note 1	1.859	2.991	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.292	-	-	-	**3.292**	**3.292**	**3.292**	N/A
	Right	0.693	0.860	-	0.523	1.553	0.693	1.216	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.613	1.764	1.117	1.031	**3.377**	2.730	2.644	N/A
	Front	1.532	3.185	0.525	1.657	See Note 1	2.057	3.189	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.290	-	-	-	3.290	3.290	3.290	N/A
	Right	0.658	0.860	-	0.523	1.518	0.658	1.181	N/A

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Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	0.951	1.764	1.117	1.031	2.715	2.068	1.982	N/A
	Front	1.225	3.185	0.525	1.657	See Note 1	1.750	2.882	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.287	-	-	-	**3.287**	**3.287**	**3.287**	N/A
	Right	0.581	0.860	-	0.523	1.441	0.581	1.104	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	0.713	1.764	1.117	1.031	2.477	1.830	1.744	N/A
	Front	1.048	3.185	0.525	1.657	See Note 1	1.573	2.705	0.06
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	2.733	-	-	-	**2.733**	**2.733**	**2.733**	N/A
	Right	0.905	0.860	-	0.523	1.765	0.905	1.428	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	Σ SAR (W/kg)			SPLSR
		1	2	3	4	1+2	1+3	1+4	1+2
UMPC Extremity 10g SAR	Back	1.354	1.764	1.117	1.031	3.118	2.471	2.385	N/A
	Front	1.539	3.185	0.525	1.657	See Note 1	2.064	3.196	0.07
	Top	-	2.399	0.782	1.531	2.399	0.782	1.531	N/A
	Bottom	3.243	-	-	-	**3.243**	**3.243**	**3.243**	N/A
	Right	1.324	0.860	-	0.523	2.184	1.324	1.847	N/A

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Table 12-19
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Extremity)

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
UMPC Extremity 10g SAR	GPRS 850	1.721	0.849	0.646	2.570	2.367	3.216
	GPRS 1900	3.110	0.849	0.646	**3.959**	3.756	See Table Below
	UMTS 850	1.507	0.849	0.646	2.356	2.153	3.002
	UMTS 1750	2.956	0.849	0.646	3.805	3.602	See Table Below
	UMTS 1900	3.281	0.849	0.646	See Table Below	3.927	See Table Below
	LTE Band 71	1.311	0.849	0.646	2.160	1.957	2.806
	LTE Band 12	1.436	0.849	0.646	2.285	2.082	2.931
	LTE Band 13	1.715	0.849	0.646	2.564	2.361	3.210
	LTE Band 14	1.621	0.849	0.646	2.470	2.267	3.116
	LTE Band 26 (Cell)	1.491	0.849	0.646	2.340	2.137	2.986
	LTE Band 66 (AWS)	3.292	0.849	0.646	See Table Below	3.938	See Table Below
	LTE Band 25 (PCS)	3.290	0.849	0.646	See Table Below	3.936	See Table Below
	LTE Band 30	3.287	0.849	0.646	See Table Below	3.933	See Table Below
	LTE Band 7	2.733	0.849	0.646	3.582	3.379	See Table Below
	LTE Band 41	3.243	0.849	0.646	See Table Below	3.889	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	1.479	0.849	0.436	2.328	1.915	2.764
	Front	1.305	0.582	0.646*	1.887	1.951	2.533
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.110	-	-	**3.110**	**3.110**	**3.110**
	Right	0.692	0.849*	-	1.541	0.692	1.541

Simult Tx	Configuration	UMTS 1750 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
UMPC Extremity 10g SAR	Back	1.246	0.849	0.436	2.095	1.682	2.531
	Front	1.375	0.582	0.646*	1.957	2.021	2.603
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	2.956	-	-	**2.956**	**2.956**	**2.956**
	Right	0.691	0.849*	-	1.540	0.691	1.540

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	1.612	0.849	0.436	2.461	2.048	2.897
	Front	1.640	0.582	0.646*	2.222	2.286	2.868
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.281	-	-	**3.281**	**3.281**	**3.281**
	Right	0.760	0.849*	-	1.609	0.760	1.609

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	1.309	0.849	0.436	2.158	1.745	2.594
	Front	1.334	0.582	0.646*	1.916	1.980	2.562
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.292	-	-	**3.292**	**3.292**	**3.292**
	Right	0.693	0.849*	-	1.542	0.693	1.542

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	1.613	0.849	0.436	2.462	2.049	2.898
	Front	1.532	0.582	0.646*	2.114	2.178	2.760
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.290	-	-	**3.290**	**3.290**	**3.290**
	Right	0.658	0.849*	-	1.507	0.658	1.507

Simult Tx	Configuration	LTE Band 30 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
UMPC Extremity 10g SAR	Back	0.951	0.849	0.436	1.800	1.387	2.236
	Front	1.225	0.582	0.646*	1.807	1.871	2.453
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.287	-	-	**3.287**	**3.287**	**3.287**
	Right	0.581	0.849*	-	1.430	0.581	1.430

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	0.713	0.849	0.436	1.562	1.149	1.998
	Front	1.048	0.582	0.646*	1.630	1.694	2.276
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	2.733	-	-	**2.733**	**2.733**	**2.733**
	Right	0.905	0.849*	-	1.754	0.905	1.754

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)		
		1	2	3	1+2	1+3	1+2+3
UMPC Extremity 10g SAR	Back	1.354	0.849	0.436	2.203	1.790	2.639
	Front	1.539	0.582	0.646*	2.121	2.185	2.767
	Top	-	0.849*	0.646	0.849	0.646	1.495
	Bottom	3.243	-	-	**3.243**	**3.243**	**3.243**
	Right	1.324	0.849*	-	2.173	1.324	2.173

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Table 12-20
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity 10g SAR	GPRS 850	1.721	1.657	0.584	**3.962**
	GPRS 1900	3.110	1.657	0.584	See Table Below
	UMTS 850	1.507	1.657	0.584	3.748
	UMTS 1750	2.956	1.657	0.584	See Table Below
	UMTS 1900	3.281	1.657	0.584	See Table Below
	LTE Band 71	1.311	1.657	0.584	3.552
	LTE Band 12	1.436	1.657	0.584	3.677
	LTE Band 13	1.715	1.657	0.584	3.956
	LTE Band 14	1.621	1.657	0.584	3.862
	LTE Band 26 (Cell)	1.491	1.657	0.584	3.732
	LTE Band 66 (AWS)	3.292	1.657	0.584	See Table Below
	LTE Band 25 (PCS)	3.290	1.657	0.584	See Table Below
	LTE Band 30	3.287	1.657	0.584	See Table Below
	LTE Band 7	2.733	1.657	0.584	See Table Below
	LTE Band 41	3.243	1.657	0.584	See Table Below

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	1.479	1.031	0.495	3.005
	Front	1.305	1.657	0.336	**3.298**
	Top	-	1.531	0.584	2.115
	Bottom	3.110	-	-	3.110
	Right	0.692	0.523	0.584*	1.710

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	1.246	1.031	0.495	2.772
	Front	1.375	1.657	0.336	**3.368**
	Top	-	1.531	0.584	2.115
	Bottom	2.956	-	-	2.956
	Right	0.691	0.523	0.584*	1.709

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	1.612	1.031	0.495	3.138
	Front	1.640	1.657	0.336	**3.633**
	Top	-	1.531	0.584	2.115
	Bottom	3.281	-	-	3.281
	Right	0.760	0.523	0.584*	1.778

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	1.309	1.031	0.495	2.835
	Front	1.334	1.657	0.336	**3.327**
	Top	-	1.531	0.584	2.115
	Bottom	3.292	-	-	3.292
	Right	0.693	0.523	0.584*	1.711

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Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	1.613	1.031	0.495	3.139	UMPC Extremity 10g SAR	Back	0.951	1.031	0.495	2.477
	Front	1.532	1.657	0.336	**3.525**		Front	1.225	1.657	0.336	3.218
	Top	-	1.531	0.584	2.115		Top	-	1.531	0.584	2.115
	Bottom	3.290	-	-	3.290		Bottom	3.287	-	-	**3.287**
	Right	0.658	0.523	0.584*	1.676		Right	0.581	0.523	0.584*	1.599
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO at 20 dBm SAR (W/kg)	5 GHz WLAN MIMO at 16 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
UMPC Extremity 10g SAR	Back	0.713	1.031	0.495	2.239	UMPC Extremity 10g SAR	Back	1.354	1.031	0.495	2.880
	Front	1.048	1.657	0.336	**3.041**		Front	1.539	1.657	0.336	**3.532**
	Top	-	1.531	0.584	2.115		Top	-	1.531	0.584	2.115
	Bottom	2.733	-	-	2.733		Bottom	3.243	-	-	3.243
	Right	0.905	0.523	0.584*	1.923		Right	1.324	0.523	0.584*	2.342

Table 12-21
Simultaneous Transmission Scenario with Bluetooth and 5GHz WLAN (UMPC Extremity)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	GPRS 850	1.721	0.869	0.849	0.646	2.590	3.439	3.236	See Table Below
	GPRS 1900	3.110	0.869	0.849	0.646	3.979	See Table Below	See Table Below	See Table Below
	UMTS 850	1.507	0.869	0.849	0.646	2.376	3.225	3.022	3.871
	UMTS 1750	2.956	0.869	0.849	0.646	3.825	See Table Below	See Table Below	See Table Below
	UMTS 1900	3.281	0.869	0.849	0.646	See Table Below	See Table Below	See Table Below	See Table Below
	LTE Band 71	1.311	0.869	0.849	0.646	2.180	3.029	2.826	3.675
	LTE Band 12	1.436	0.869	0.849	0.646	2.305	3.154	2.951	3.800
	LTE Band 13	1.715	0.869	0.849	0.646	2.584	3.433	3.230	See Table Below
	LTE Band 14	1.621	0.869	0.849	0.646	2.490	3.339	3.136	**3.985**
	LTE Band 26 (Cell)	1.491	0.869	0.849	0.646	2.360	3.209	3.006	3.855
	LTE Band 66 (AWS)	3.292	0.869	0.849	0.646	See Table Below	See Table Below	See Table Below	See Table Below
	LTE Band 25 (PCS)	3.290	0.869	0.849	0.646	See Table Below	See Table Below	See Table Below	See Table Below
	LTE Band 30	3.287	0.869	0.849	0.646	See Table Below	See Table Below	See Table Below	See Table Below
	LTE Band 7	2.733	0.869	0.849	0.646	3.602	See Table Below	See Table Below	See Table Below
	LTE Band 41	3.243	0.869	0.849	0.646	See Table Below	See Table Below	See Table Below	See Table Below

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.514	0.487	0.849	0.436	2.001	2.850	2.437	3.286
	Front	1.276	0.869	0.582	0.646*	2.145	2.727	2.791	**3.373**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	1.721	-	-	-	1.721	1.721	1.721	1.721
	Right	1.126	0.234	0.849*	-	1.360	2.209	1.360	2.209

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Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.479	0.487	0.849	0.436	1.966	2.815	2.402	3.251
	Front	1.305	0.869	0.582	0.646*	2.174	2.756	2.820	**3.402**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.110	-	-	-	3.110	3.110	3.110	3.110
	Right	0.692	0.234	0.849*	-	0.926	1.775	0.926	1.775

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.246	0.487	0.849	0.436	1.733	2.582	2.169	3.018
	Front	1.375	0.869	0.582	0.646*	2.244	2.826	2.890	**3.472**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	2.956	-	-	-	2.956	2.956	2.956	2.956
	Right	0.691	0.234	0.849*	-	0.925	1.774	0.925	1.774

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.612	0.487	0.849	0.436	2.099	2.948	2.535	3.384
	Front	1.640	0.869	0.582	0.646*	2.509	3.091	3.155	**3.737**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.281	-	-	-	3.281	3.281	3.281	3.281
	Right	0.760	0.234	0.849*	-	0.994	1.843	0.994	1.843

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.589	0.487	0.849	0.436	2.076	2.925	2.512	3.361
	Front	1.715	0.869	0.582	0.646*	2.584	3.166	3.230	**3.812**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	0.983	-	-	-	0.983	0.983	0.983	0.983
	Right	1.226	0.234	0.849*	-	1.460	2.309	1.460	2.309

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.309	0.487	0.849	0.436	1.796	2.645	2.232	3.081
	Front	1.334	0.869	0.582	0.646*	2.203	2.785	2.849	**3.431**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.292	-	-	-	3.292	3.292	3.292	3.292
	Right	0.693	0.234	0.849*	-	0.927	1.776	0.927	1.776

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Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.613	0.487	0.849	0.436	2.100	2.949	2.536	3.385
	Front	1.532	0.869	0.582	0.646*	2.401	2.983	3.047	**3.629**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.290	-	-	-	3.290	3.290	3.290	3.290
	Right	0.658	0.234	0.849*	-	0.892	1.741	0.892	1.741

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	0.951	0.487	0.849	0.436	1.438	2.287	1.874	2.723
	Front	1.225	0.869	0.582	0.646*	2.094	2.676	2.740	**3.322**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.287	-	-	-	3.287	3.287	3.287	3.287
	Right	0.581	0.234	0.849*	-	0.815	1.664	0.815	1.664

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	0.713	0.487	0.849	0.436	1.200	2.049	1.636	2.485
	Front	1.048	0.869	0.582	0.646*	1.917	2.499	2.563	**3.145**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	2.733	-	-	-	2.733	2.733	2.733	2.733
	Right	0.905	0.234	0.849*	-	1.139	1.988	1.139	1.988

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			
		1	2	3	4	1+2	1+2+3	1+2+4	1+2+3+4
UMPC Extremity 10g SAR	Back	1.354	0.487	0.849	0.436	1.841	2.690	2.277	3.126
	Front	1.539	0.869	0.582	0.646*	2.408	2.990	3.054	**3.636**
	Top	-	0.724	0.849*	0.646	0.724	1.573	1.370	2.219
	Bottom	3.243	-	-	-	3.243	3.243	3.243	3.243
	Right	1.324	0.234	0.849*	-	1.558	2.407	1.558	2.407

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12.9 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.

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

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

12.9.1 UMPC Body Front Side at 10mm SPLSR Evaluation and Analysis

Table 12-22
Peak SAR Locations for UMPC Body Front Side at 10mm

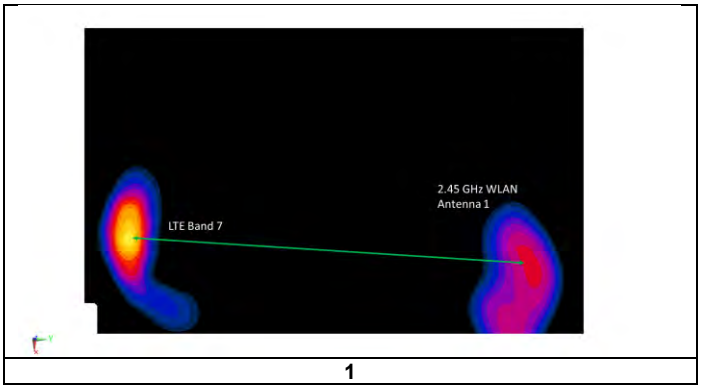
Mode/Band	x (mm)	y (mm)
2.4 GHz WLAN Ant 1	26.00	65.40
LTE Band 7	-3.40	-81.00

Table 12-23
UMPC Body Front Side at 10mm SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
2.4 GHz WLAN Ant 1	LTE Band 7	0.421	1.198	1.619	149.32	0.01	1

12.9.2 UMPC Body Front Side at 10mm SAR to Peak Location Separation Ratio Plots

Table 12-24



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12.9.3 UMPC Body Back Side at 10mm SPLSR Evaluation and Analysis

Table 12-25
Peak SAR Locations for UMPC Body Back Side at 10mm

Mode/Band	x (mm)	y (mm)
5 GHz WLAN Ant 1	-46.00	74.00
5 GHz WLAN MIMO	-44.00	78.00
2.4 GHz Bluetooth	-81.40	66.00
GPRS 850	-59.00	-76.50
GPRS 1900	-41.50	-80.00
UMTS 1900	-49.50	-80.00
LTE Band 30	-52.60	-82.80
LTE Band 7	-50.20	-78.60
LTE Band 41	-50.10	-80.40

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Table 12-26
UMPC Body Back Side at 10mm 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	GPRS 1900	0.742	0.873	1.615	154.07	0.01	3
5 GHz WLAN Ant 1	UMTS 1900	0.742	0.908	1.650	154.04	0.01	4
5 GHz WLAN Ant 1	LTE Band 30	0.742	0.953	1.695	156.94	0.01	5
5 GHz WLAN Ant 1	LTE Band 7	0.742	1.081	1.823	152.66	0.02	6
5 GHz WLAN Ant 1	LTE Band 41	0.742	0.932	1.674	154.45	0.01	7
5 GHz WLAN MIMO	LTE Band 30	0.670	0.953	1.623	161.03	0.01	10
5 GHz WLAN MIMO	LTE Band 7	0.670	1.081	1.751	156.72	0.01	11
5 GHz WLAN MIMO	LTE Band 41	0.670	0.932	1.602	158.52	0.01	12
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	2
5 GHz WLAN Ant 1	GPRS 850	0.742	0.784	1.526	151.06	0.01	
2.4 GHz Bluetooth	GPRS 850	0.084	0.784	0.868	144.25	0.01	
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	3
5 GHz WLAN Ant 1	GPRS 1900	0.742	0.873	1.615	154.07	0.01	
2.4 GHz Bluetooth	GPRS 1900	0.084	0.873	0.957	151.35	0.01	
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	4
5 GHz WLAN Ant 1	UMTS 1900	0.742	0.908	1.650	154.04	0.01	
2.4 GHz Bluetooth	UMTS 1900	0.084	0.908	0.992	149.44	0.01	
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	5
5 GHz WLAN Ant 1	LTE Band 30	0.742	0.953	1.695	156.94	0.01	
2.4 GHz Bluetooth	LTE Band 30	0.084	0.953	1.037	151.56	0.01	
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	6
5 GHz WLAN Ant 1	LTE Band 7	0.742	1.081	1.823	152.66	0.02	
2.4 GHz Bluetooth	LTE Band 7	0.084	1.081	1.165	147.93	0.01	
5 GHz WLAN Ant 1	2.4 GHz Bluetooth	0.742	0.084	0.826	36.29	0.02	7
5 GHz WLAN Ant 1	LTE Band 41	0.742	0.932	1.674	154.45	0.01	
2.4 GHz Bluetooth	LTE Band 41	0.084	0.932	1.016	149.71	0.01	
5 GHz WLAN MIMO	2.4 GHz Bluetooth	0.670	0.084	0.754	39.28	0.02	8
5 GHz WLAN MIMO	GPRS 1900	0.670	0.873	1.543	158.02	0.01	
2.4 GHz Bluetooth	GPRS 1900	0.084	0.873	0.957	151.35	0.01	
5 GHz WLAN MIMO	2.4 GHz Bluetooth	0.670	0.084	0.754	39.28	0.02	9
5 GHz WLAN MIMO	UMTS 1900	0.670	0.908	1.578	158.10	0.01	
2.4 GHz Bluetooth	UMTS 1900	0.084	0.908	0.992	149.44	0.01	
5 GHz WLAN MIMO	2.4 GHz Bluetooth	0.670	0.084	0.754	39.28	0.02	10
5 GHz WLAN MIMO	LTE Band 30	0.670	0.953	1.623	161.03	0.01	
2.4 GHz Bluetooth	LTE Band 30	0.084	0.953	1.037	151.56	0.01	
5 GHz WLAN MIMO	2.4 GHz Bluetooth	0.670	0.084	0.754	39.28	0.02	11
5 GHz WLAN MIMO	LTE Band 7	0.670	1.081	1.751	156.72	0.01	
2.4 GHz Bluetooth	LTE Band 7	0.084	1.081	1.165	147.93	0.01	
5 GHz WLAN MIMO	2.4 GHz Bluetooth	0.670	0.084	0.754	39.28	0.02	12
5 GHz WLAN MIMO	LTE Band 41	0.670	0.932	1.602	158.52	0.01	
2.4 GHz Bluetooth	LTE Band 41	0.084	0.932	1.016	149.71	0.01	

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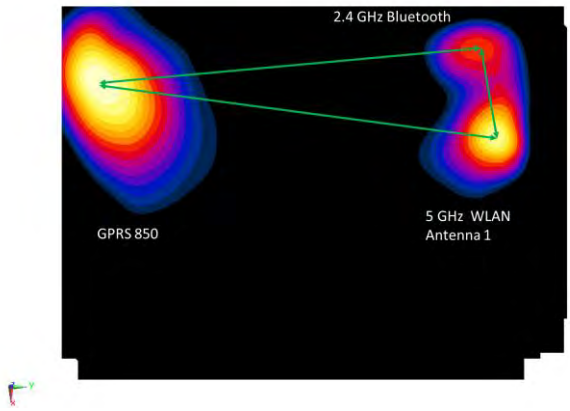
12.9.4 UMPC Body Back Side at 10mm SAR to Peak Location Separation Ratio Plots

Table 12-27



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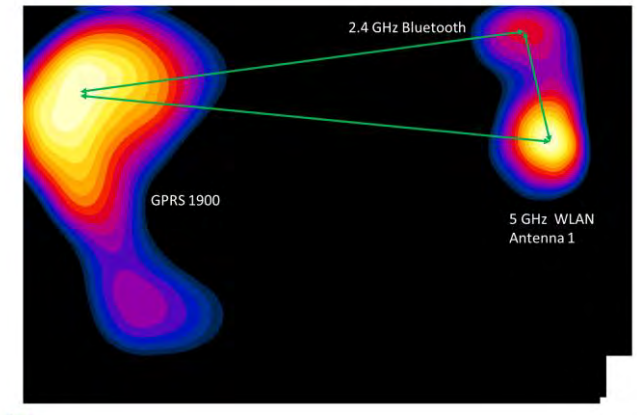

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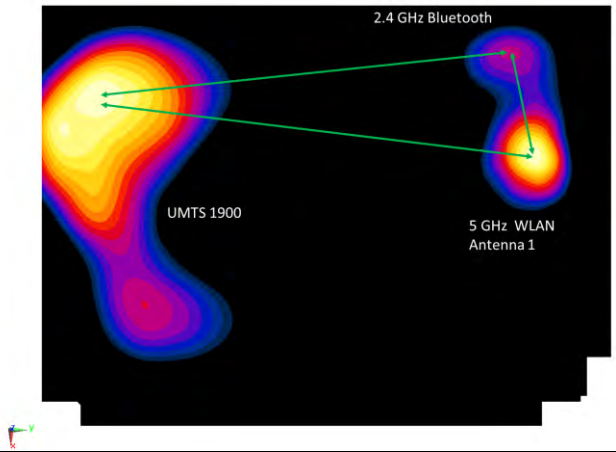

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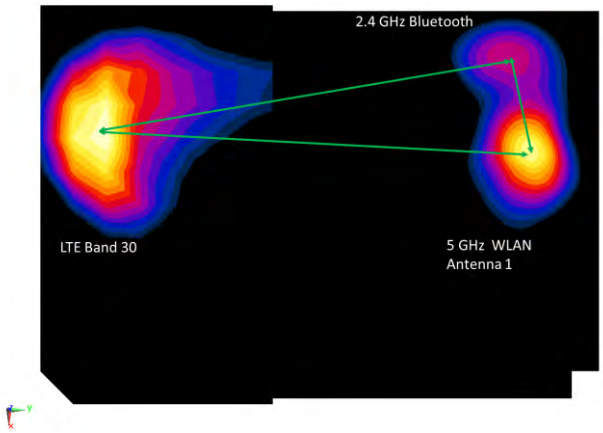

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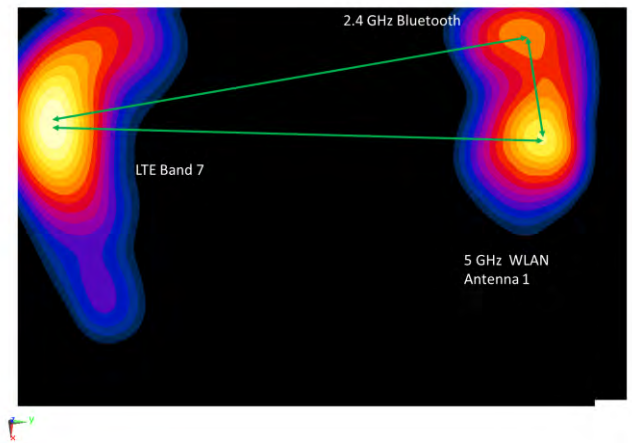

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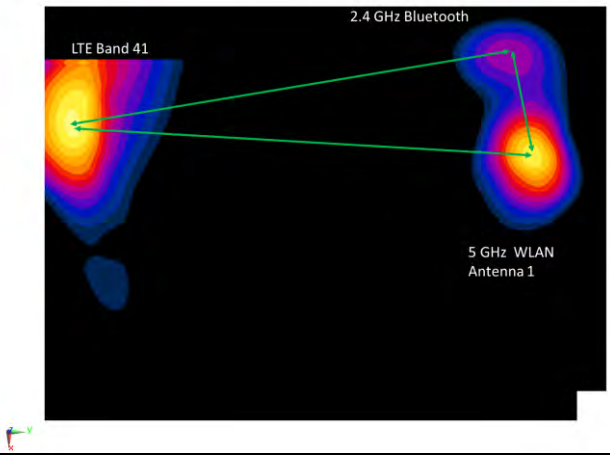

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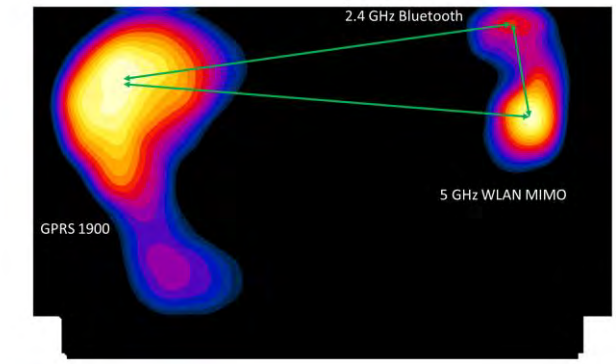

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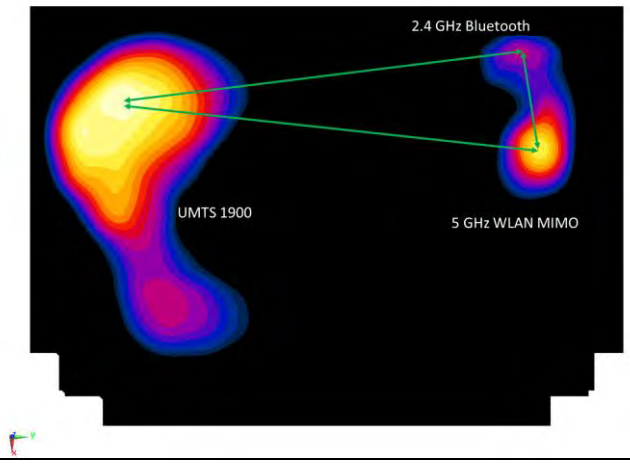

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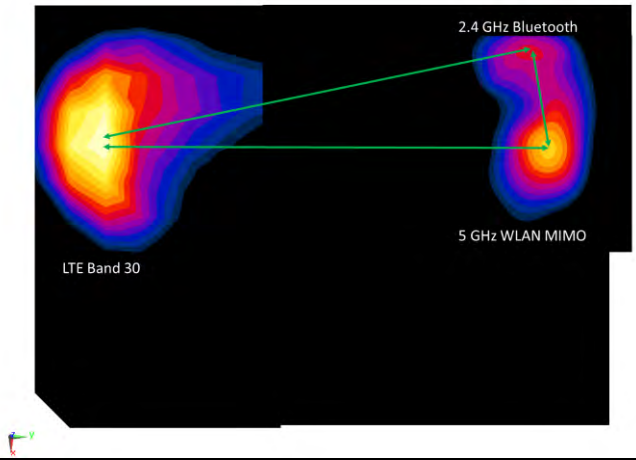

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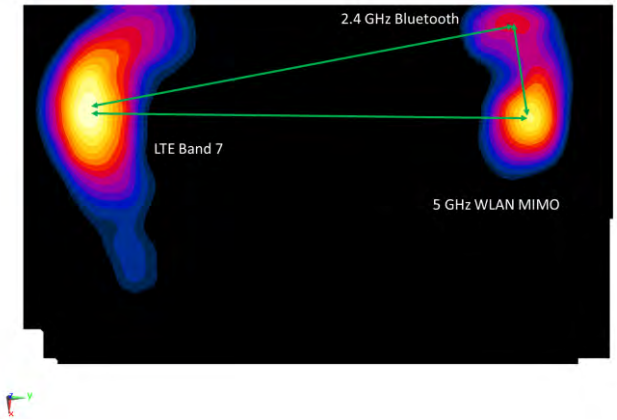

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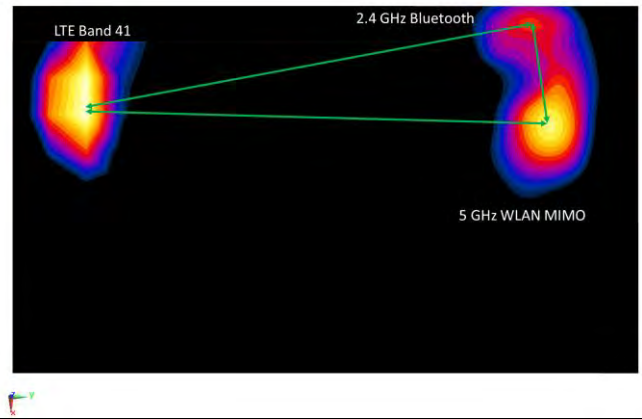

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12.9.5 UMPC Extremity Front Side at 0mm SPLSR Evaluation and Analysis

Table 12-28
Peak SAR Locations for UMPC Extremity Front Side at 0mm

Mode/Band	x (mm)	y (mm)
2.4 GHz WLAN Ant 1	28.00	69.40
GPRS 850	34.50	-71.50
GPRS 1900	11.50	-75.00
UMTS 850	36.00	-71.50
UMTS 1750	5.00	-84.00
UMTS 1900	13.00	-76.50
LTE Band 71	36.00	-77.00
LTE Band 12	36.00	-77.00
LTE Band 13	36.00	-77.00
LTE Band 14	36.00	-77.00
LTE Band 26 (Cell)	38.50	-75.00
LTE Band 66 (AWS)	6.50	-87.00
LTE Band 25 (PCS)	10.00	-69.50
LTE Band 30	-0.20	-81.60
LTE Band 7	-1.00	-79.20
LTE Band 41	-1.00	-80.40

Table 12-29
UMPC Extremity Front Side at 0mm SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
2.4 GHz WLAN Ant 1	GPRS 850	3.185	1.276	4.461	141.05	0.07	13
2.4 GHz WLAN Ant 1	GPRS 1900	3.185	1.305	4.490	145.34	0.07	14
2.4 GHz WLAN Ant 1	UMTS 850	3.185	1.009	4.194	141.13	0.06	15
2.4 GHz WLAN Ant 1	UMTS 1750	3.185	1.375	4.560	155.11	0.06	16
2.4 GHz WLAN Ant 1	UMTS 1900	3.185	1.640	4.825	146.67	0.07	17
2.4 GHz WLAN Ant 1	LTE Band 71	3.185	1.311	4.496	146.62	0.07	18
2.4 GHz WLAN Ant 1	LTE Band 12	3.185	1.436	4.621	146.62	0.07	19
2.4 GHz WLAN Ant 1	LTE Band 13	3.185	1.715	4.900	146.62	0.07	20
2.4 GHz WLAN Ant 1	LTE Band 14	3.185	1.621	4.806	146.62	0.07	21
2.4 GHz WLAN Ant 1	LTE Band 26 (Cell)	3.185	0.907	4.092	144.78	0.06	22
2.4 GHz WLAN Ant 1	LTE Band 66 (AWS)	3.185	1.334	4.519	157.87	0.06	23
2.4 GHz WLAN Ant 1	LTE Band 25 (PCS)	3.185	1.532	4.717	140.06	0.07	24
2.4 GHz WLAN Ant 1	LTE Band 30	3.185	1.225	4.410	153.61	0.06	25
2.4 GHz WLAN Ant 1	LTE Band 7	3.185	1.048	4.233	151.40	0.06	26
2.4 GHz WLAN Ant 1	LTE Band 41	3.185	1.539	4.724	152.58	0.07	27

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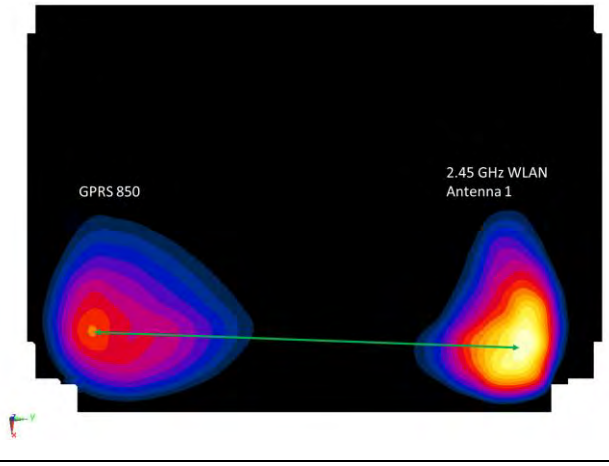
Table 12-30
UMPC Extremity Front Side at 0mm SAR to Peak Location Separation Ratio Plots



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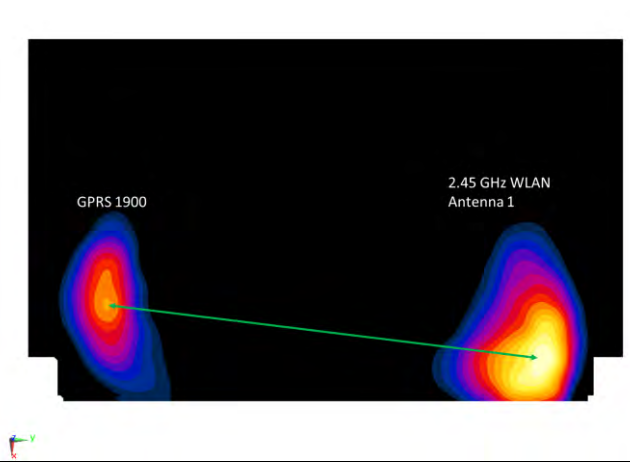

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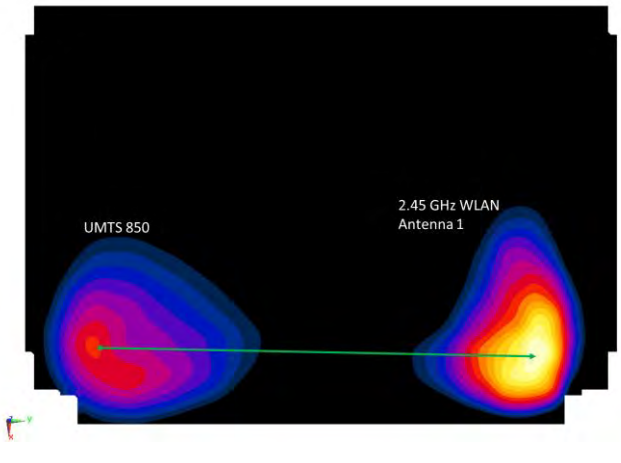

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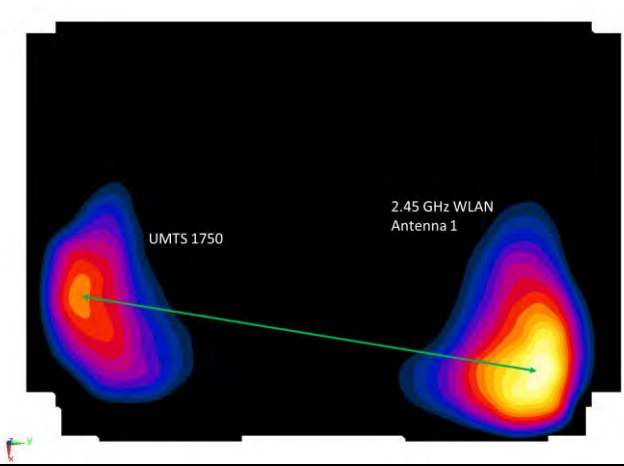

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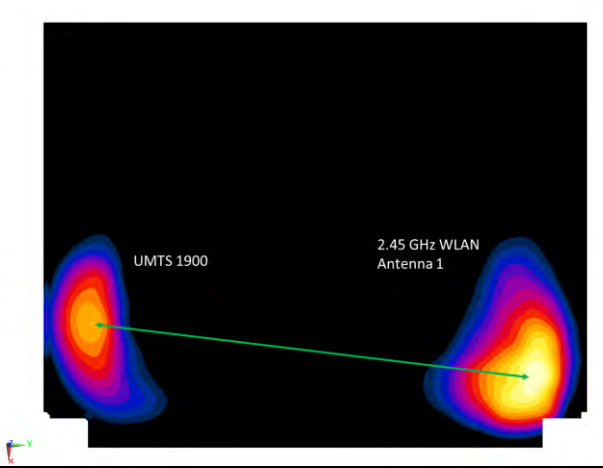

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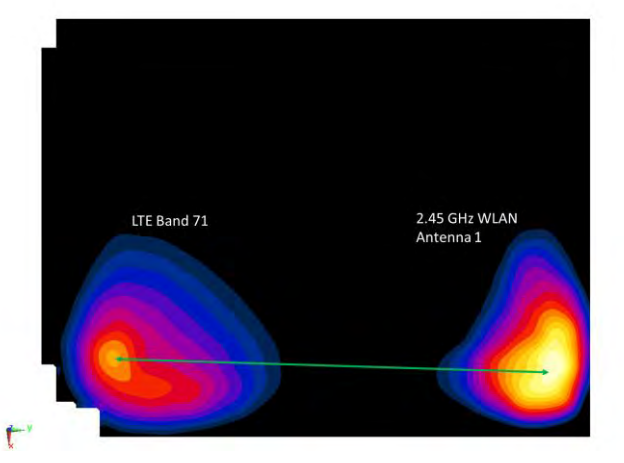

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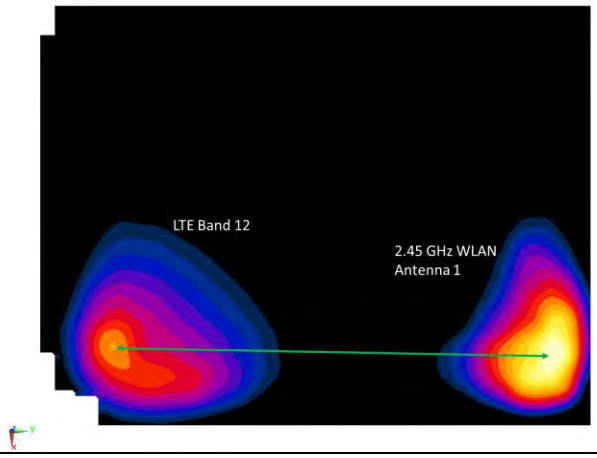

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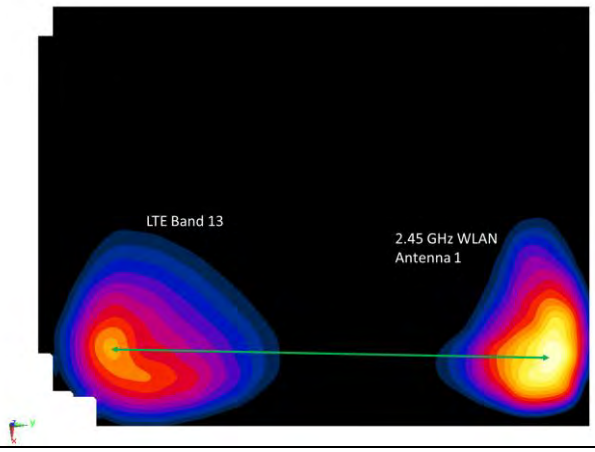

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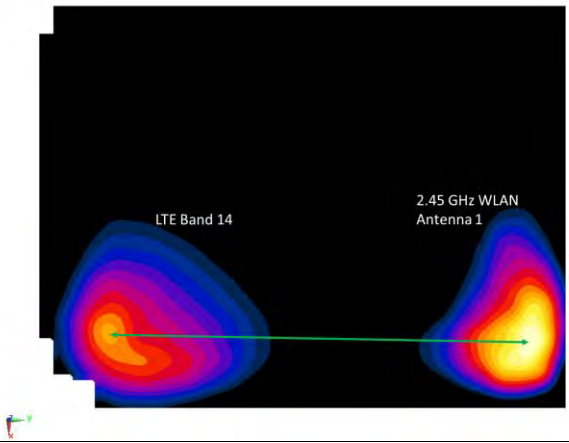

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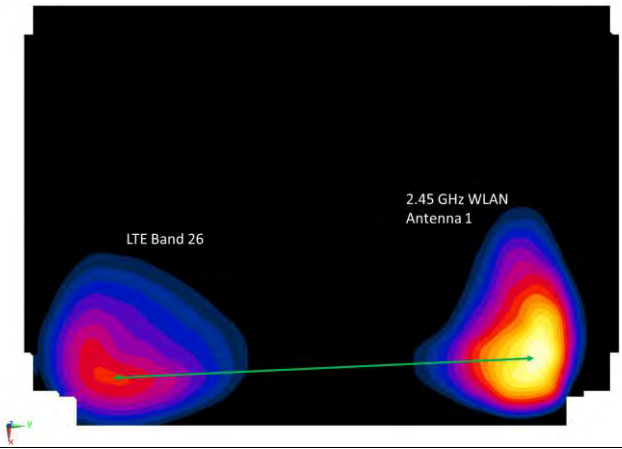

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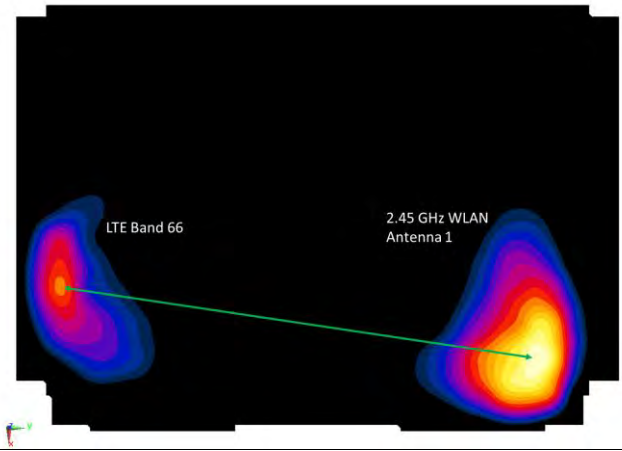

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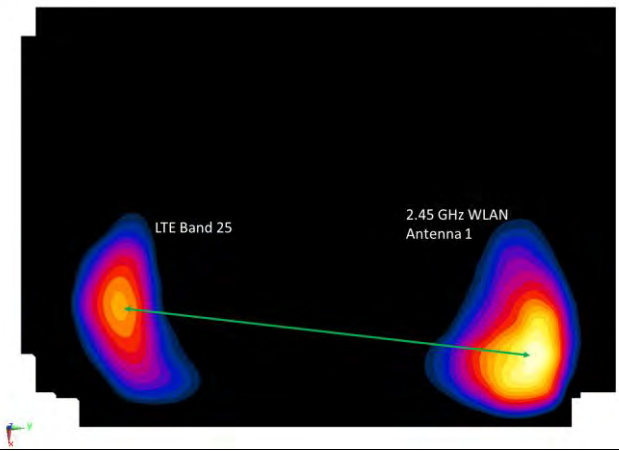

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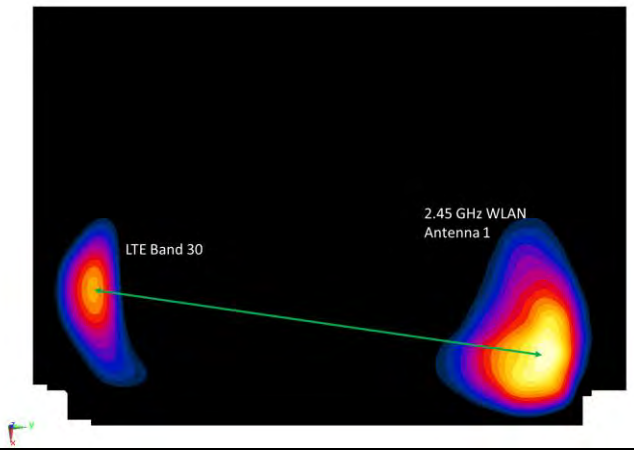

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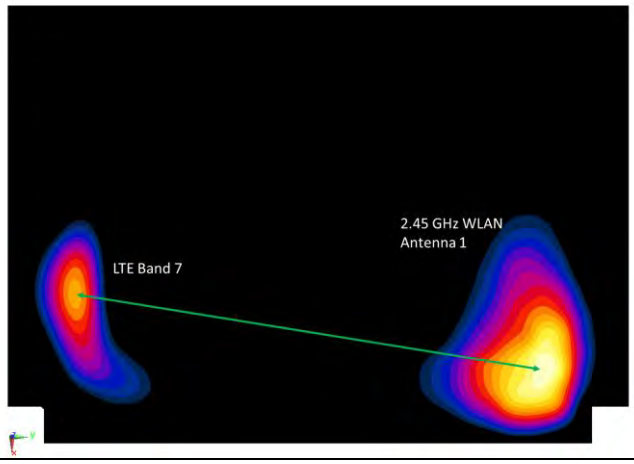

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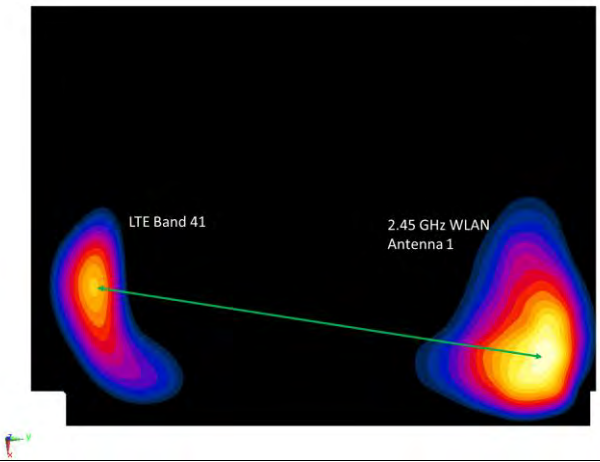

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12.10 Simultaneous Transmission Conclusion

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

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13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

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

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

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

Table 13-1
Body SAR Measurement Variability Results 1g

BODY VARIABILITY RESULTS															
Band	Component Carrier	FREQUENCY		DUT Mode	Mode	Service	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
		MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1900	N/A	1907.60	9538	UMPC	UMTS 1900	RMC	bottom	13 mm	1.050	0.995	1.06	N/A	N/A	N/A	N/A
1750	PCC	1770.00	132572	Handset	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	bottom	10 mm	0.830	0.831	1.00	N/A	N/A	N/A	N/A
	SCC	1750.20	132374			QPSK, 50 RB, 50 RB Offset						N/A	N/A	N/A	N/A
2300	N/A	2310.00	27710	UMPC	LTE Band 30, 10 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	bottom	13 mm	0.998	0.955	1.05	N/A	N/A	N/A	N/A
2450	N/A	2510.00	20850	UMPC	LTE Band 7, 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	bottom	13 mm	1.100	1.140	1.04	N/A	N/A	N/A	N/A
2600	N/A	2560.00	21350	UMPC	LTE Band 7, 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	bottom	13 mm	1.230	1.200	1.03	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
Body SAR Measurement Variability Results 10g

EXTREMITY VARIABILITY RESULTS																
Band	Component Carrier	FREQUENCY		Dut Mode	Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
		MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	PCC	1770.00	132572	UMPC	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	2.900	2.900	1.00	N/A	N/A	N/A	N/A
	SCC	1750.20	132374			QPSK, 50 RB, 50 RB Offset										
1900	N/A	1882.50	26365	UMPC	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	3.200	3.200	1.00	N/A	N/A	N/A	N/A
2300	N/A	2310.00	27710	UMPC	LTE Band 30, 10 MHz Bandwidth	QPSK, 25 RB, 12 RB Offset	N/A	bottom	0 mm	2.790	2.780	1.00	N/A	N/A	N/A	N/A
2600	PCC	2560.00	21350	UMPC	LTE Band 7, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	bottom	0 mm	2.540	2.510	1.01	N/A	N/A	N/A	N/A
	SCC	2540.20	21152			QPSK, 50 RB, 50 RB Offset	N/A									
2450	N/A	2412.00	1	UMPC	802.11b, 22 MHz Bandwidth	DSSS , ANT 1	1	front	0 mm	3.160	3.030	1.04	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Extremity 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 80 tuner states were divided among the aggregate band, mode and exposure combinations so that each combination was evaluated for at least 20 tuner states and also so that at least 3 single point SAR measurements were made for every available tuner state. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 80 states.

Per FCC Guidance, several bands/modes were combined to be treated as a single aggregate band. 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/LTE Supplemental Head SAR Data

Supplemental Head SAR Data											
UMTS 850		LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 14		LTE Band 26	
RMC		QPSK, 20MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15MHz 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
Frequency (MHz)	836.60	Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	831.50
Channel	4183	Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	26865
Measured 1g SAR (W/kg)	0.319	Measured 1g SAR (W/kg)	0.165	Measured 1g SAR (W/kg)	0.190	Measured 1g SAR (W/kg)	0.175	Measured 1g SAR (W/kg)	0.193	Measured 1g SAR (W/kg)	0.285
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.387	Auto-tune (State 40)	0.236	Auto-tune (State 33)	0.249	Auto-tune (State 32)	0.255	Auto-tune (State 32)	0.275	Auto-tune (State 0)	0.42
Default (State 0)	0.388	Default (State 32)	0.200	Default (State 32)	0.245	Default (State 32)	0.258	Default (State 32)	0.272	Default (State 0)	0.406
State 0	0.388	State 0	0.163	State 4	0.108	State 0	0.193	State 0	0.211	State 0	0.406
State 1	0.387	State 4	0.113	State 7	0.085	State 2	0.143	State 3	0.147	State 2	0.354
State 4	0.311	State 8	0.090	State 9	0.067	State 9	0.085	State 5	0.137	State 5	0.342
State 7	0.276	State 14	0.025	State 13	0.025	State 15	0.017	State 7	0.117	State 9	0.282
State 9	0.235	State 16	0.069	State 17	0.074	State 16	0.116	State 11	0.060	State 12	0.178
State 12	0.134	State 18	0.045	State 20	0.052	State 17	0.118	State 12	0.042	State 14	0.126
State 13	0.112	State 19	0.042	State 23	0.041	State 19	0.079	State 15	0.017	State 17	0.155
State 17	0.203	State 25	0.024	State 25	0.032	State 21	0.074	State 16	0.129	State 22	0.093
State 19	0.133	State 28	0.010	State 27	0.019	State 27	0.030	State 19	0.086	State 25	0.073
State 20	0.129	State 30	0.005	State 29	0.009	State 29	0.017	State 23	0.067	State 26	0.061
State 23	0.103	State 32	0.200	State 33	0.243	State 30	0.013	State 24	0.063	State 28	0.038
State 26	0.065	State 35	0.221	State 36	0.199	State 32	0.258	State 26	0.041	State 34	0.401
State 30	0.022	State 38	0.225	State 40	0.172	State 37	0.182	State 32	0.272	State 38	0.360
State 34	0.378	State 40	0.227	State 42	0.130	State 39	0.158	State 36	0.195	State 40	0.335
State 37	0.383	State 41	0.210	State 44	0.085	State 42	0.105	State 39	0.163	State 42	0.251
State 39	0.354	State 45	0.107	State 46	0.055	State 43	0.085	State 41	0.131	State 44	0.156
State 41	0.305	State 46	0.081	State 49	0.153	State 45	0.053	State 45	0.052	State 46	0.094
State 43	0.221	State 47	0.056	State 51	0.115	State 47	0.028	State 49	0.198	State 49	0.324
State 48	0.331	State 50	0.142	State 54	0.099	State 48	0.188	State 52	0.133	State 53	0.263
State 52	0.256	State 56	0.114	State 57	0.075	State 55	0.109	State 55	0.109	State 57	0.209
State 56	0.213	State 59	0.071	State 61	0.029	State 57	0.080	State 57	0.086	State 60	0.127
State 60	0.099	State 62	0.037	State 62	0.022	State 63	0.016	State 61	0.032	State 62	0.087
State 67	0.327	State 67	0.205	State 67	0.151	State 66	0.256	State 66	0.273	State 66	0.391
State 68	0.383	State 68	0.195	State 68	0.145	State 69	0.122	State 69	0.133	State 69	0.161
State 71	0.331	State 72	0.193	State 72	0.145	State 72	0.201	State 73	0.132	State 73	0.162
State 75	0.332	State 76	0.188	State 76	0.145	State 76	0.199	State 77	0.131	State 77	0.163

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Table 14-2
UMTS/LTE Supplemental Body SAR Data

Supplemental Body SAR Data											
UMTS 850		LTE Band 71		LTE Band 12		LTE Band 13		LTE Band 14		LTE Band 26	
RMC		QPSK, 20MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 25 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 49 RB Offsets		QPSK, 10MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 15MHz Bandwidth, 1 RB, 0 RB Offsets	
Test Position	Right Edge Handset Configuration	Test Position	Right Edge Handset Configuration	Test Position	Right Edge Handset Configuration	Test Position	Back Side UMPC Body Configuration	Test Position	Back Side UMPC Body Configuration	Test Position	Right Edge Handset Configuration
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.60	Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00	Frequency (MHz)	831.50
Channel	4183	Channel	133297	Channel	23095	Channel	23230	Channel	23330	Channel	26865
Measured 1g SAR (W/kg)	0.382	Measured 1g SAR (W/kg)	0.582	Measured 1g SAR (W/kg)	0.698	Measured 1g SAR (W/kg)	0.495	Measured 1g SAR (W/kg)	0.496	Measured 1g SAR (W/kg)	0.479
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.688	Auto-tune (State 34)	0.719	Auto-tune (State 32)	0.855	Auto-tune (State 78)	0.744	Auto-tune (State 32)	0.737	Auto-tune (State 0)	0.641
Default (State 0)	0.684	Default (State 32)	0.741	Default (State 32)	0.821	Default (State 32)	0.774	Default (State 32)	0.719	Default (State 0)	0.646
State 0	0.684	State 2	0.431	State 3	0.475	State 0	0.593	State 1	0.539	State 0	0.646
State 1	0.683	State 7	0.330	State 5	0.456	State 1	0.593	State 5	0.382	State 2	0.592
State 3	0.593	State 8	0.310	State 8	0.382	State 5	0.434	State 8	0.324	State 4	0.579
State 6	0.545	State 14	0.082	State 10	0.275	State 6	0.402	State 10	0.235	State 6	0.548
State 7	0.526	State 15	0.058	State 14	0.101	State 11	0.226	State 15	0.072	State 9	0.478
State 10	0.398	State 18	0.194	State 17	0.377	State 13	0.146	State 19	0.178	State 12	0.299
State 11	0.339	State 24	0.134	State 20	0.273	State 18	0.212	State 21	0.168	State 15	0.150
State 13	0.222	State 27	0.069	State 21	0.261	State 22	0.171	State 24	0.135	State 17	0.289
State 16	0.373	State 31	0.020	State 24	0.211	State 27	0.082	State 27	0.072	State 18	0.216
State 21	0.240	State 33	0.739	State 26	0.140	State 29	0.049	State 29	0.043	State 22	0.180
State 24	0.195	State 34	0.753	State 30	0.048	State 35	0.687	State 32	0.719	State 23	0.172
State 25	0.162	State 36	0.686	State 32	0.821	State 38	0.631	State 34	0.649	State 29	0.063
State 28	0.079	State 39	0.612	State 33	0.838	State 40	0.599	State 37	0.619	State 31	0.036
State 31	0.034	State 41	0.524	State 36	0.706	State 41	0.534	State 40	0.039	State 39	0.445
State 33	0.675	State 44	0.289	State 38	0.652	State 45	0.271	State 43	0.025	State 42	0.309
State 35	0.652	State 46	0.183	State 40	0.612	State 47	0.157	State 44	0.020	State 45	0.149
State 36	0.643	State 51	0.435	State 44	0.289	State 50	0.429	State 48	0.487	State 49	0.544
State 44	0.242	State 54	0.380	State 50	0.516	State 58	0.243	State 49	0.490	State 52	0.465
State 51	0.487	State 57	0.290	State 51	0.502	State 59	0.202	State 54	0.318	State 53	0.454
State 53	0.471	State 58	0.241	State 55	0.421	State 60	0.154	State 56	0.292	State 55	0.419
State 56	0.410	State 59	0.200	State 62	0.106	State 61	0.127	State 60	0.135	State 58	0.319
State 59	0.257	State 62	0.095	State 63	0.074	State 64	0.577	State 61	0.112	State 61	0.187
State 65	0.376	State 65	0.277	State 65	0.372	State 71	0.523	State 64	0.037	State 63	0.109
State 70	0.681	State 70	0.744	State 70	0.831	State 74	0.759	State 71	0.034	State 64	0.638
State 73	0.377	State 74	0.743	State 74	0.833	State 78	0.773	State 75	0.034	State 75	0.535
State 77	0.375	State 78	0.745	State 78	0.839	State 79	0.530	State 79	0.034	State 79	0.536

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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	CBT	N/A	CBT	3051A00187
Agilent	8753ES	S-Parameter Network Analyzer	7/30/2018	Annual	7/30/2019	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Agilent	E4432B	ESG-D Series Signal Generator	4/19/2018	Annual	4/19/2019	US40053896
Agilent	E4438C	ESG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY45091346
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	12/18/2018	Annual	12/18/2019	GB42230325
Agilent	E5515C	Wireless Communications Test Set	2/7/2018	Triennial	2/7/2021	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N5182A	MXG Vector Signal Generator	11/28/2018	Annual	11/28/2019	MY47420603
Agilent	N5182A-506	MXG Vector Signal Generator	6/19/2018	Annual	6/19/2019	MY48180366
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433978
Anritsu	MA24106A	USB Power Sensor	8/20/2018	Annual	8/20/2019	1520504
Anritsu	MA24106A	USB Power Sensor	7/16/2018	Annual	7/16/2019	1520505
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1126066
Anritsu	MA2411B	Pulse Power Sensor	11/20/2018	Annual	11/20/2019	1339008
Anritsu	ML2496A	Power Meter	6/19/2018	Annual	6/19/2019	1306009
Anritsu	ML2496A	Power Meter	5/21/2018	Annual	5/21/2019	1351001
Anritsu	MT8821C	Radio Communication Analyzer	7/24/2018	Annual	7/24/2019	6201664756
Anritsu	MT8821C	Radio Communication Analyzer	1/25/2019	Annual	1/25/2020	6261895213
Anritsu	MT8862A	Wireless Connectivity Test Set	7/3/2018	Annual	7/3/2019	6261782395
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647802
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647811
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330174
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766777
Intelligent Weigh	PD-3000	Electronic Balance	CBT	N/A	CBT	11081534
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mitutoyo	CD-6"CSX	Digital Caliper	4/18/2018	Biennial	4/18/2020	13264165
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	5/23/2018	Biennial	5/23/2020	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE5011-1	Torque Wrench	7/19/2017	Biennial	7/19/2019	N/A
Rohde & Schwarz	CMW500	Radio Communication tester	8/3/2018	Annual	8/3/2019	140144
Rohde & Schwarz	CMW500	Radio Communication Tester	11/5/2018	Annual	11/5/2019	140148
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/30/2019	Annual	1/30/2020	162125
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/30/2018	Annual	10/30/2019	164948
SPEAG	D1750V2	1750 MHz SAR Dipole	5/9/2017	Biennial	5/9/2019	1148
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Annual	10/22/2019	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	5d080
SPEAG	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	6/7/2017	Biennial	6/7/2019	1064
SPEAG	D2600V2	2600 MHz SAR Dipole	9/13/2016	Triennial	9/13/2019	1071
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	Biennial	1/15/2020	1003
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	4d047
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Annual	10/19/2019	4d133
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2019	Annual	2/13/2020	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
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	8/22/2018	Annual	8/22/2019	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/15/2019	Annual	1/15/2020	1530
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	3/13/2018	Annual	3/13/2019	3319
SPEAG	EX3DV4	SAR Probe	1/25/2019	Annual	1/25/2020	3589
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	6/25/2018	Annual	6/25/2019	7409
SPEAG	EX3DV4	SAR Probe	7/20/2018	Annual	7/20/2019	7410
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	7417
SPEAG	EX3DV4	SAR Probe	1/24/2019	Annual	1/24/2020	7488

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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DUT: A3LSMF900F; Type: Portable Handset; Serial: 1390M

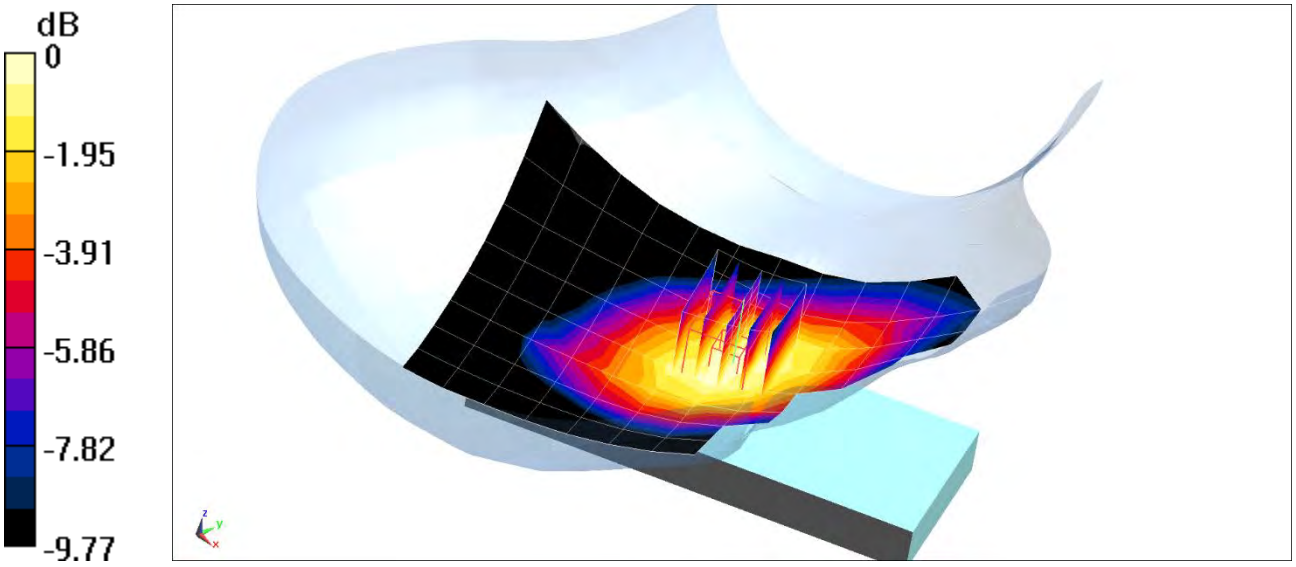
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Head Medium parameters used (interpolated):
$f = 836.6$ MHz; $\sigma = 0.882$ S/m; $\varepsilon_r = 39.519$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 02-11-2019; Ambient Temp: 21.1°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(9.81, 9.81, 9.81) @ 836.6 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: 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 = 18.87 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.397 W/kg
SAR(1 g) = 0.297 W/kg



0 dB = 0.358 W/kg = -4.46 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

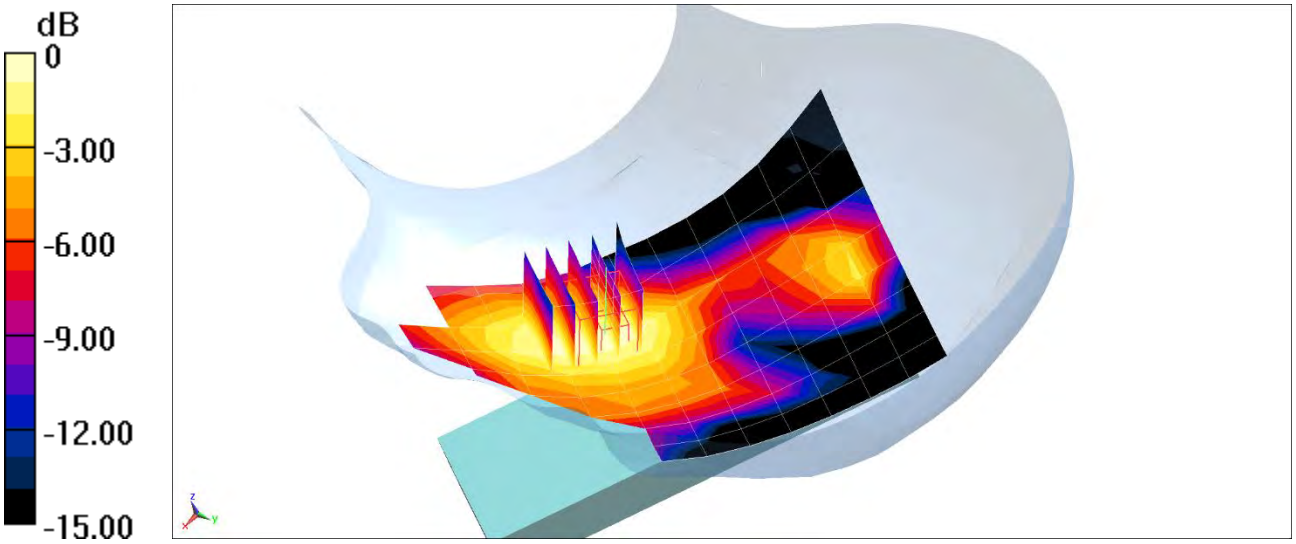
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.474; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 02-19-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.674 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.115 W/kg
SAR(1 g) = 0.075 W/kg



0 dB = 0.100 W/kg = -10.00 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1390M

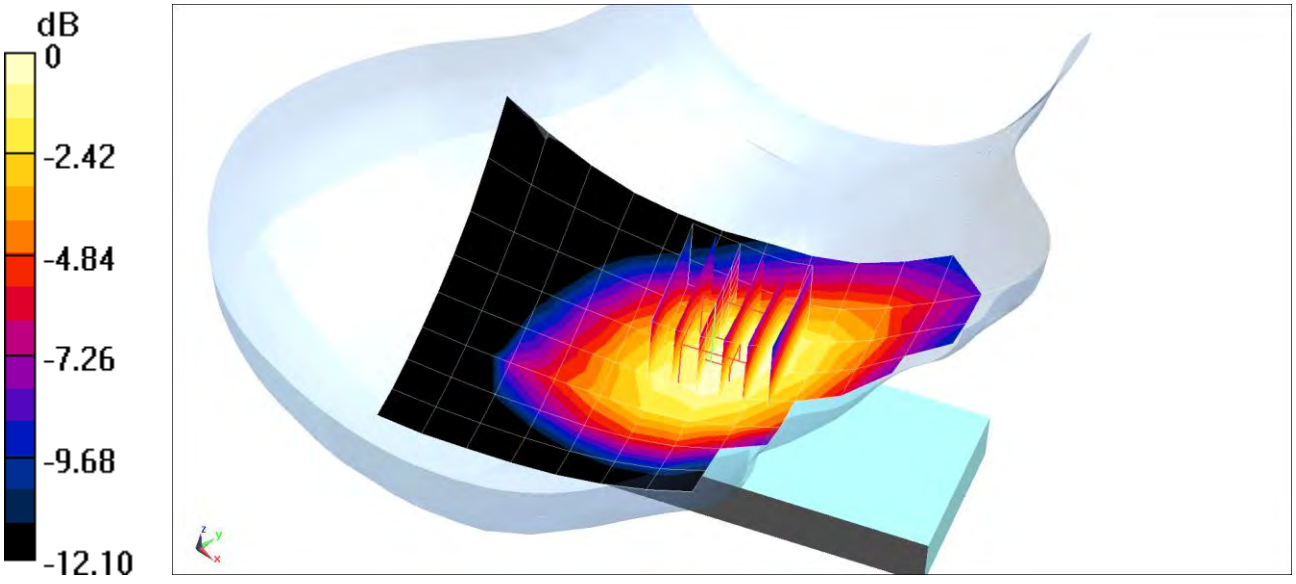
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.882 S/m; ε_r = 39.519; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-11-2019; Ambient Temp: 21.1°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(9.81, 9.81, 9.81) @ 836.6 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: UMTS 850, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.37 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.425 W/kg
SAR(1 g) = 0.319 W/kg



0 dB = 0.388 W/kg = -4.11 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

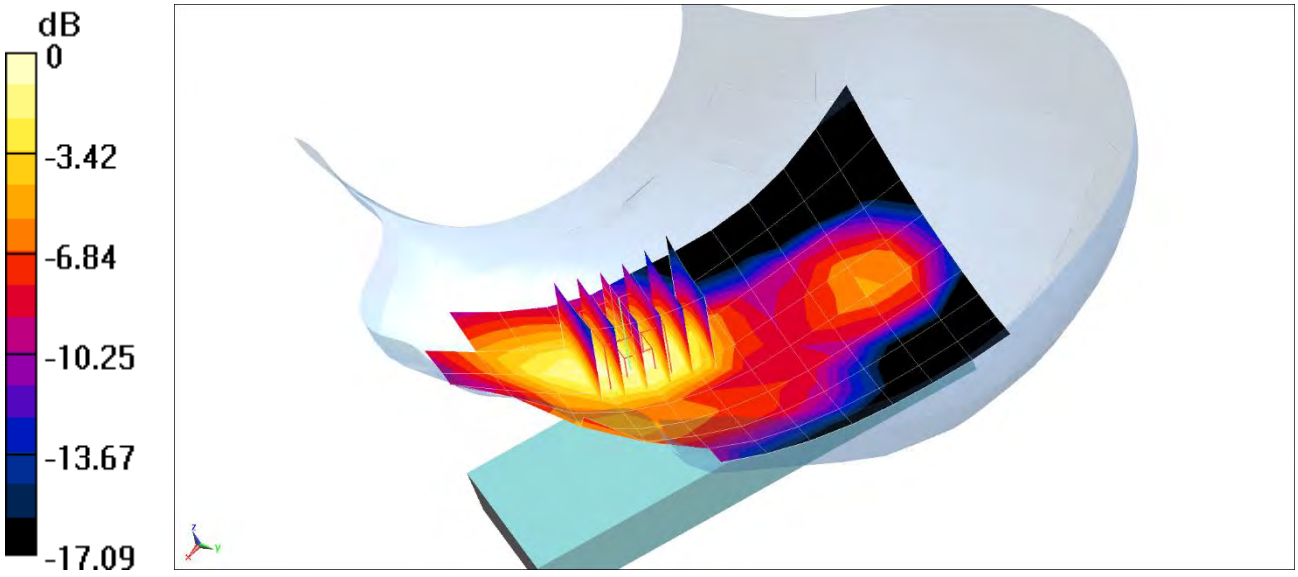
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head; Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.385 S/m; ε_r = 38.948; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-04-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(8.8, 8.8, 8.8) @ 1732.4 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.16 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.166 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

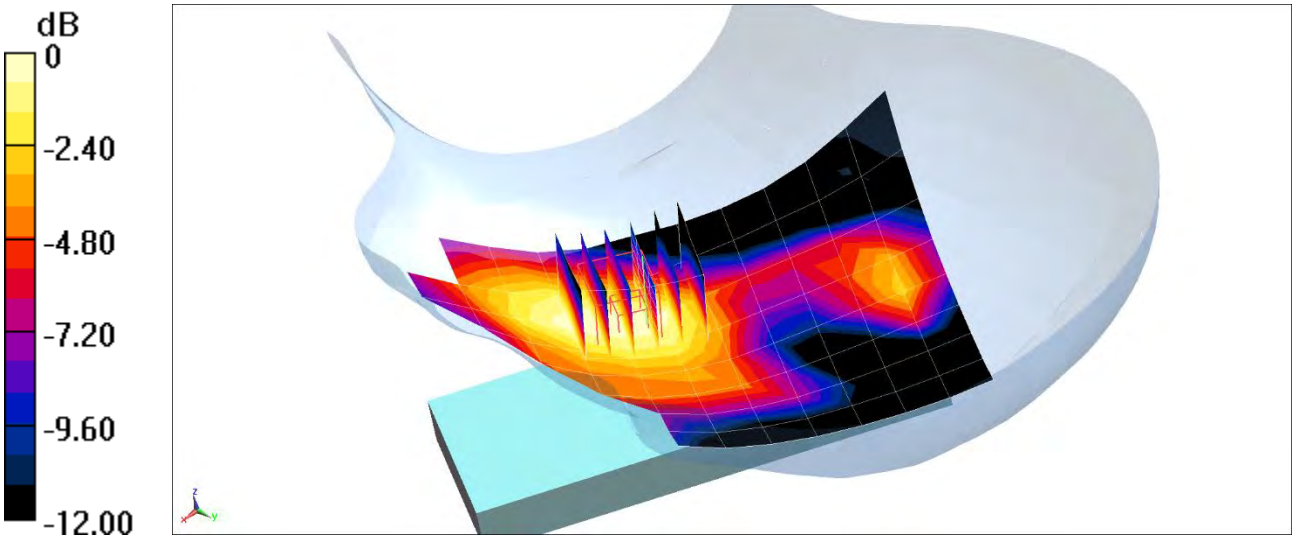
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.397 S/m; ε_r = 39.474; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 02-19-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.64 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.262 W/kg
SAR(1 g) = 0.175 W/kg



0 dB = 0.220 W/kg = -6.58 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

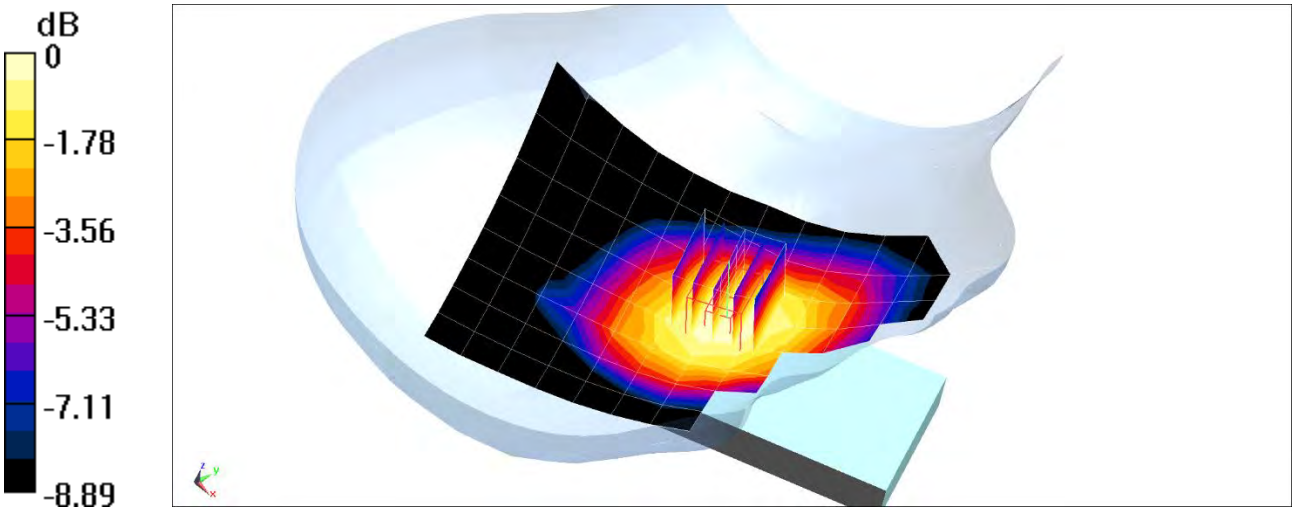
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.871 S/m; ε_r = 42.162; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-14-2019; Ambient Temp: 22.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7410; ConvF(10.13, 10.13, 10.13) @ 680.5 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 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 = 14.37 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.209 W/kg
SAR(1 g) = 0.165 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

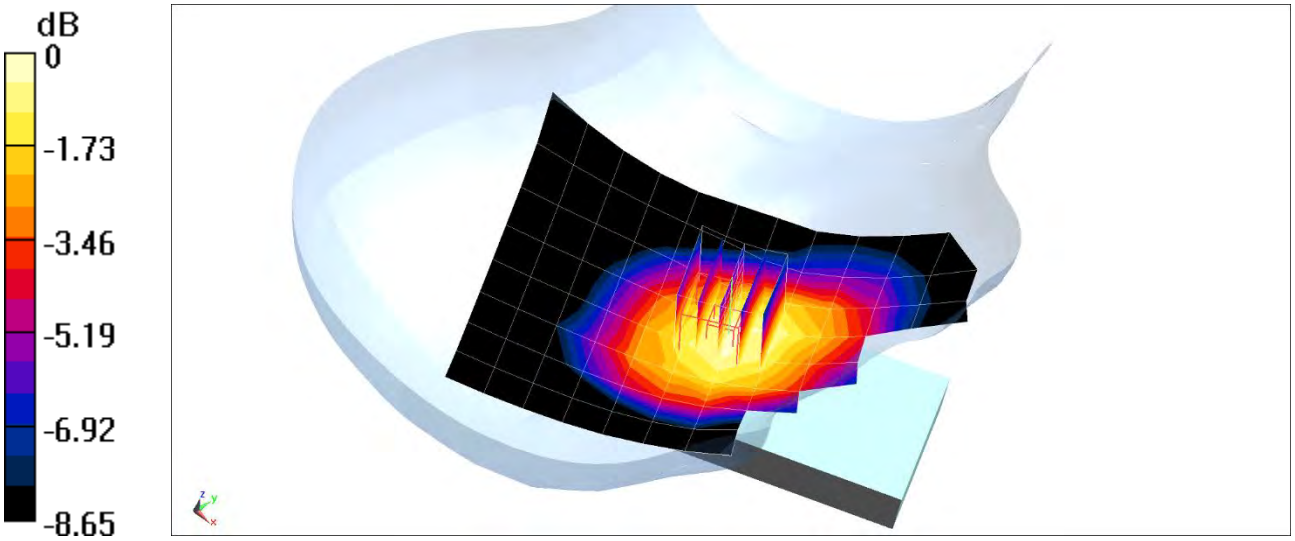
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.883 S/m; ε_r = 42.138; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-14-2019; Ambient Temp: 22.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7410; ConvF(10.13, 10.13, 10.13) @ 707.5 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 12, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.44 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.242 W/kg
SAR(1 g) = 0.190 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

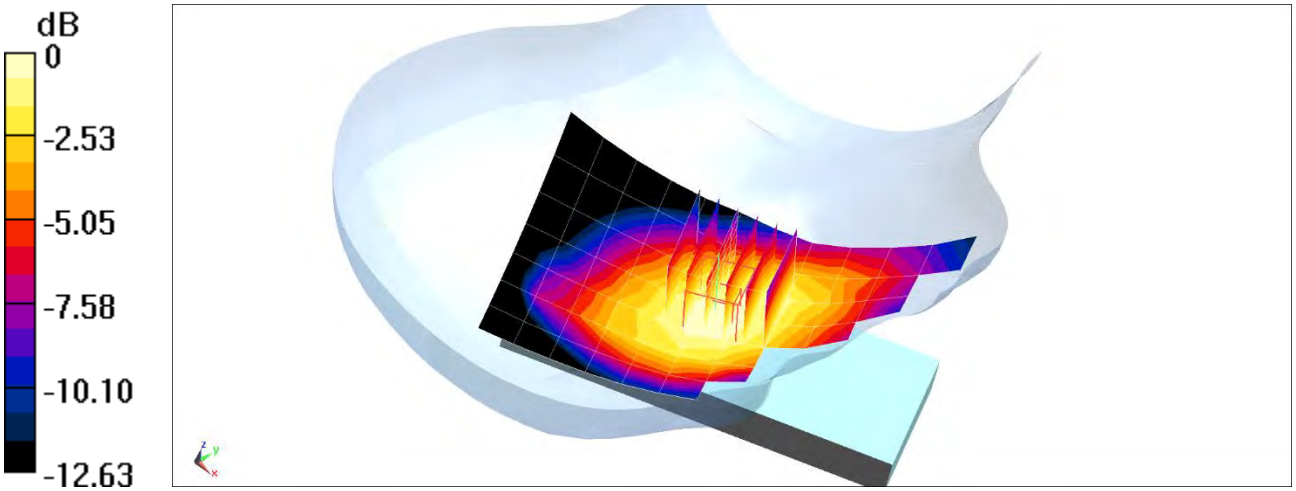
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 782 MHz; σ = 0.91 S/m; ε_r = 41.88; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-14-2019; Ambient Temp: 22.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7410; ConvF(10.13, 10.13, 10.13) @ 782 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 13, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset

Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.37 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.226 W/kg
SAR(1 g) = 0.175 W/kg



0 dB = 0.209 W/kg = -6.80 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

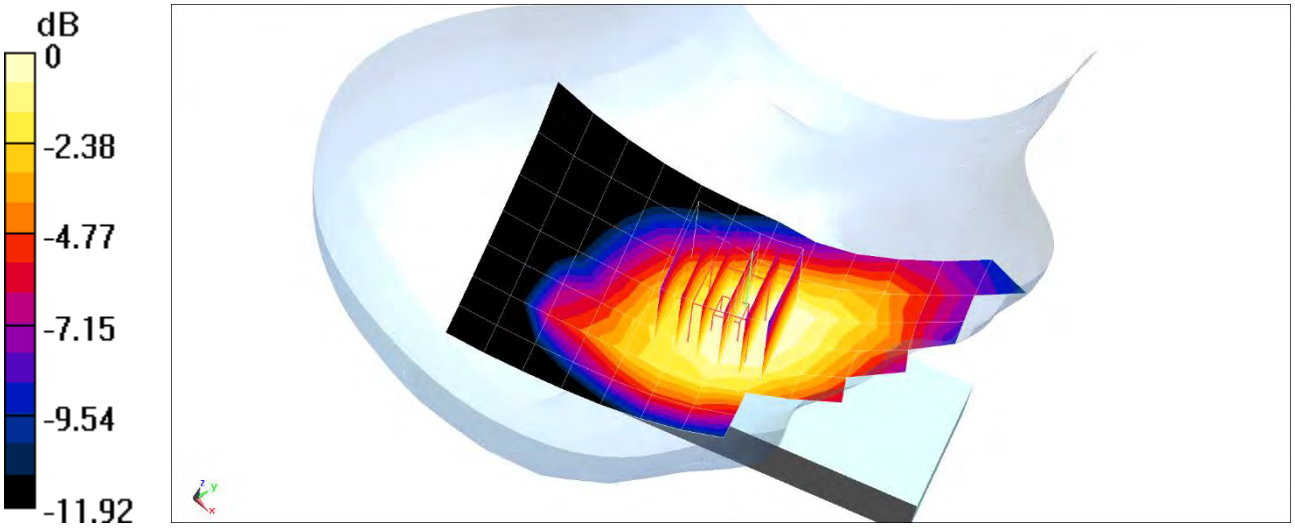
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 793 MHz; σ = 0.914 S/m; ε_r = 41.827; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-14-2019; Ambient Temp: 22.9°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7410; ConvF(10.13, 10.13, 10.13) @ 793 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 14, Right Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.60 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.193 W/kg



0 dB = 0.228 W/kg = -6.42 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1390M

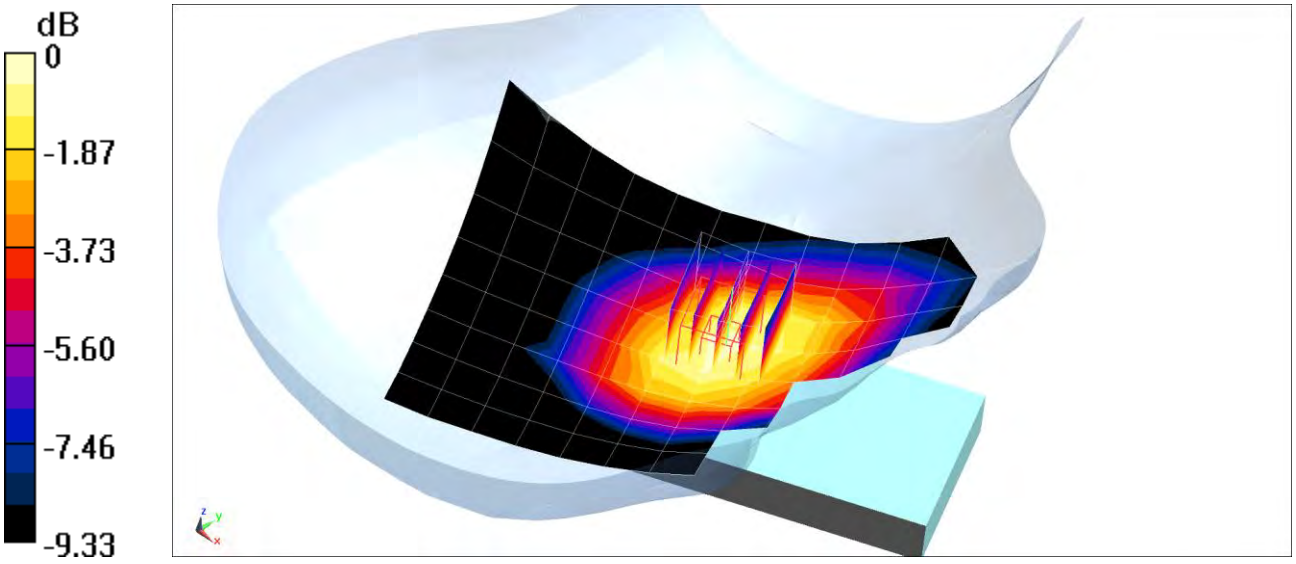
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.88 S/m; ε_r = 39.532; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-11-2019; Ambient Temp: 21.1°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(9.81, 9.81, 9.81) @ 831.5 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 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 = 18.99 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.285 W/kg



0 dB = 0.343 W/kg = -4.65 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

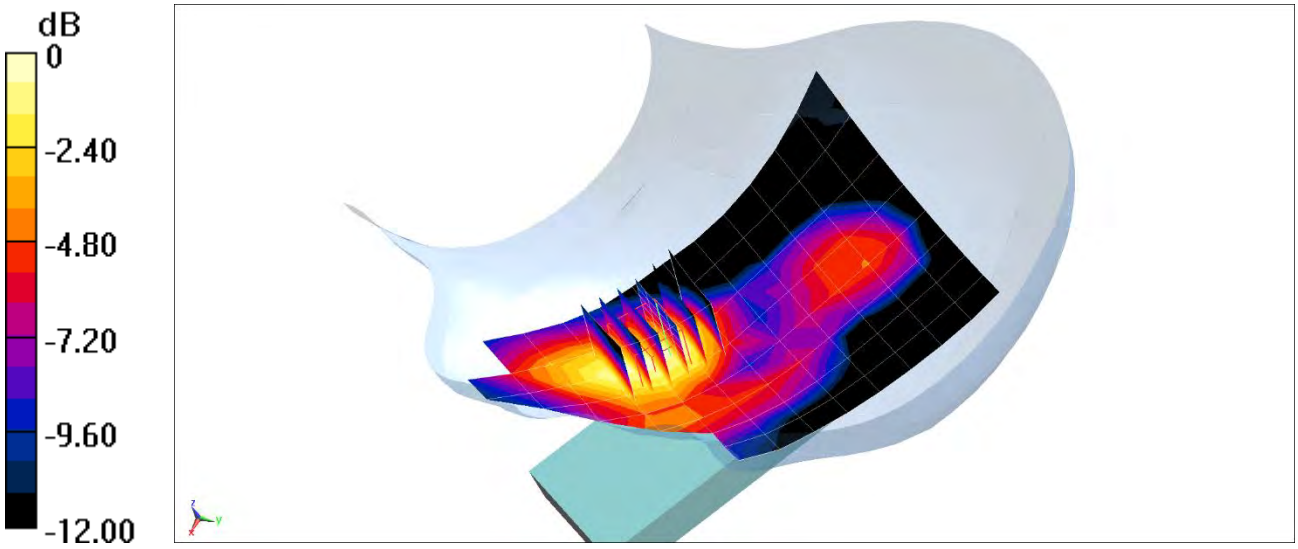
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Head; Medium parameters used (interpolated):
f = 1720 MHz; σ = 1.372 S/m; ε_r = 39.007; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-04-2019; Ambient Temp: 22.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7357; ConvF(8.8, 8.8, 8.8) @ 1720 MHz; Calibrated: 4/18/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/11/2018
Phantom: Left For Head SAM with CRP v5.0; Type: QD000P40CD; Serial: TP:1687
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Left Head, Cheek, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.93 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.254 W/kg
SAR(1 g) = 0.164 W/kg



0 dB = 0.220 W/kg = -6.58 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1345M

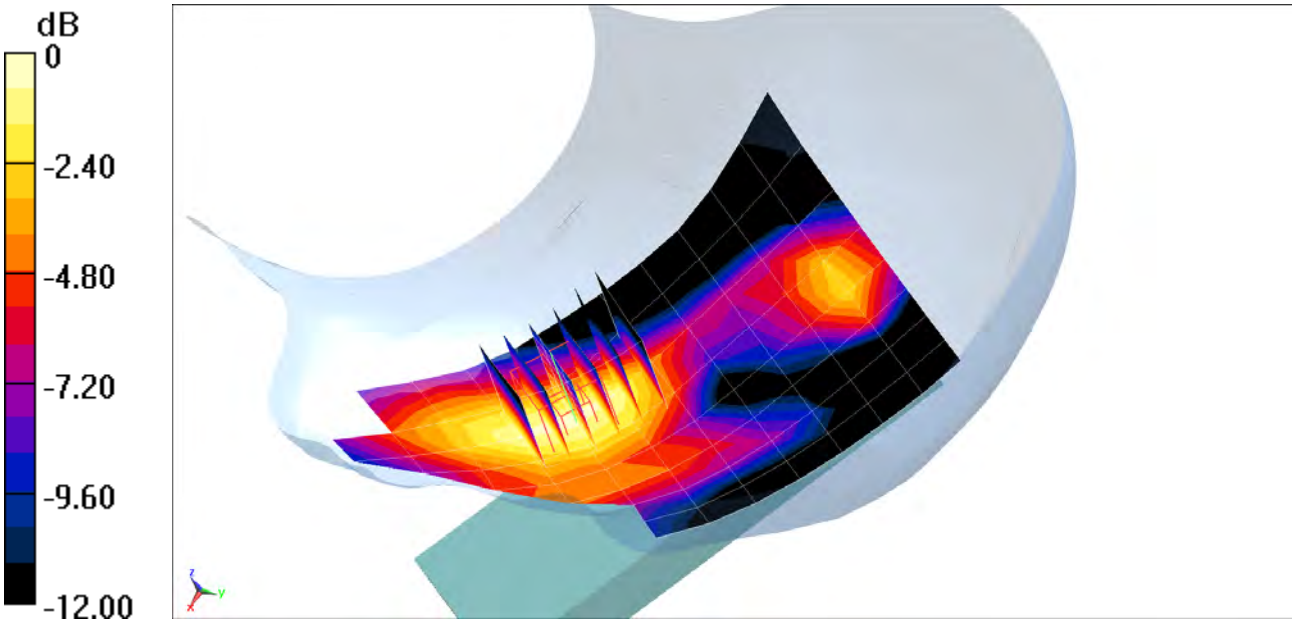
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1860 MHz; σ = 1.386 S/m; ε_r = 39.511; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 02-19-2019; Ambient Temp: 23.2°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.16, 8.16, 8.16) @ 1860 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Front; Type: SAM; Serial: 1686
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), 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 (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.90 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.254 W/kg
SAR(1 g) = 0.170 W/kg



0 dB = 0.223 W/kg = -6.52 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1359M

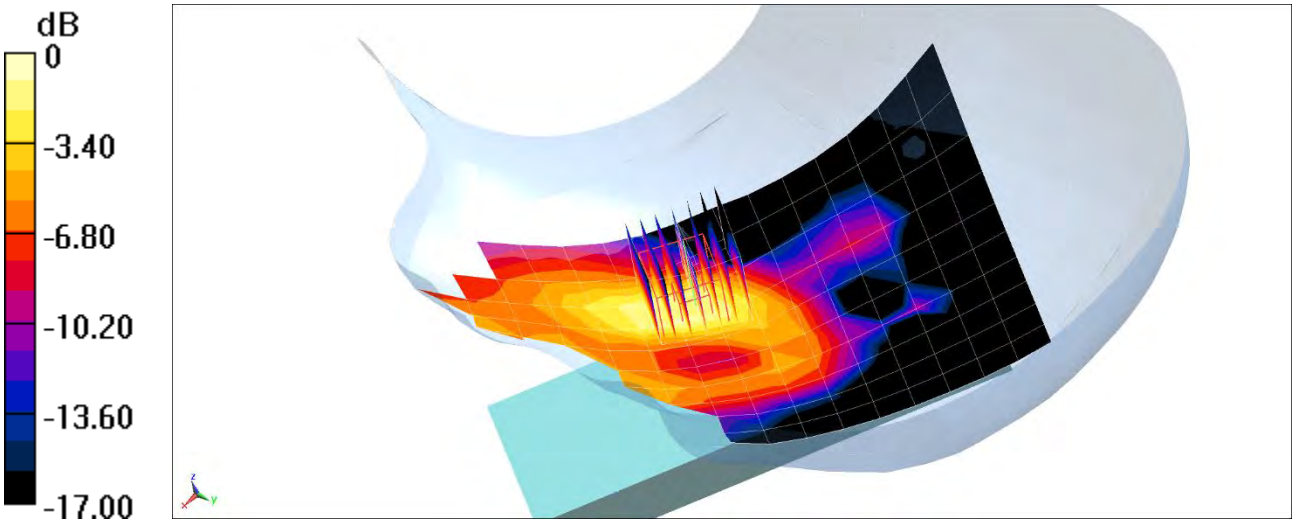
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used:
f = 2310 MHz; σ = 1.76 S/m; ε_r = 41.362; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 03-02-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN3589; ConvF(6.77, 6.77, 6.77) @ 2310 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.56 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.187 W/kg



0 dB = 0.289 W/kg = -5.39 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

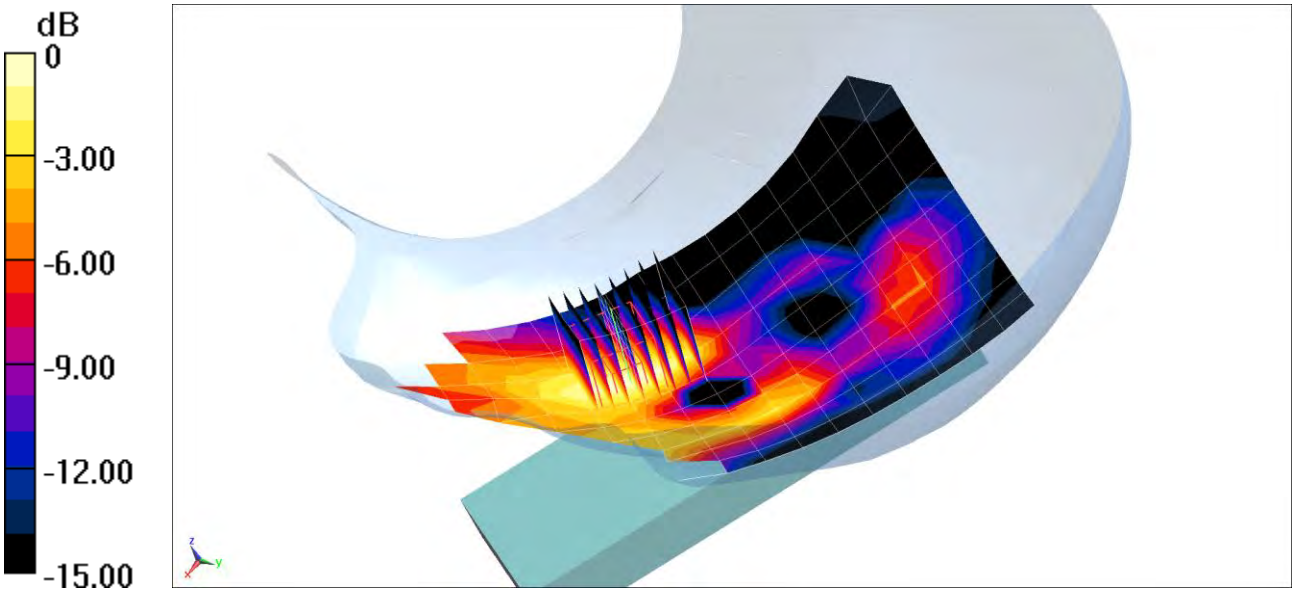
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450MHz Head Medium parameters used (interpolated):
$f = 2510$ MHz; $\sigma = 1.881$ S/m; $\varepsilon_r = 38.446$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 02-13-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7409; ConvF(7.23, 7.23, 7.23) @ 2510 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 7, Left Head, Cheek, Low.ch, QPSK,
20 MHz Bandwidth, 1 RB, 99 RB Offset

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.732 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.144 W/kg



0 dB = 0.224 W/kg = -6.50 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

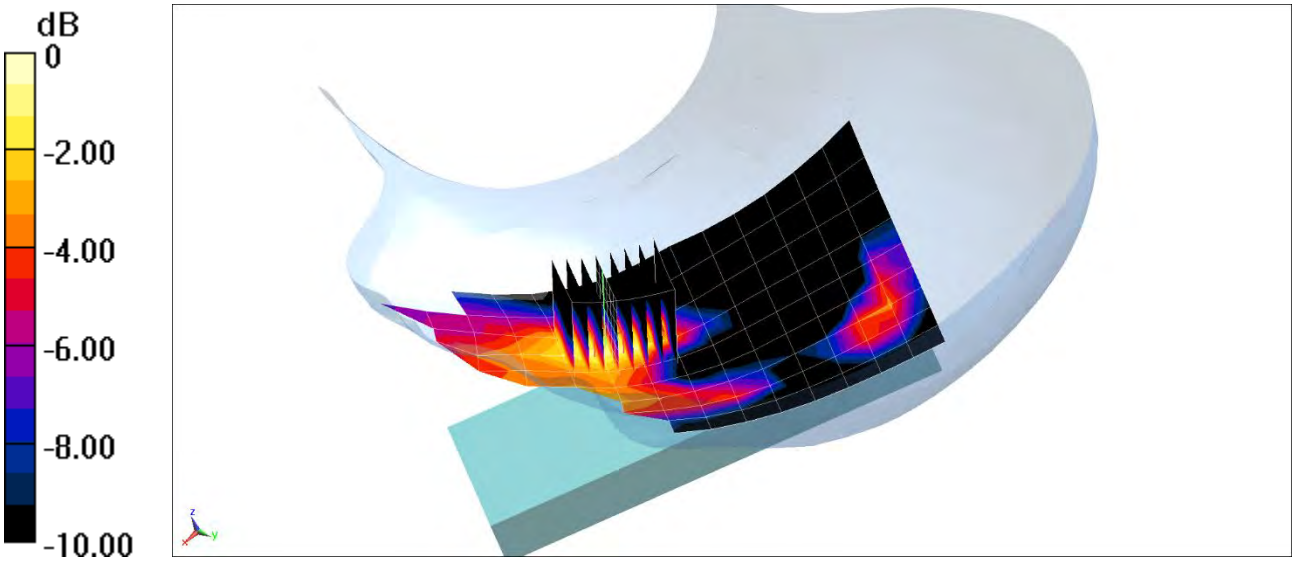
Communication System: UID 0, LTE Band 41; Frequency: 2636.5 MHz; Duty Cycle: 1:1.58
Medium: 2450MHz Head Medium parameters used (interpolated):
f = 2636.5 MHz; σ = 1.984 S/m; ε_r = 38.241; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 02-13-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7409; ConvF(6.98, 6.98, 6.98) @ 2636.5 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 41, Left Head, Cheek, Mid-High.ch, QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset

Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.447 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.167 W/kg
SAR(1 g) = 0.082 W/kg



0 dB = 0.133 W/kg = -8.76 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

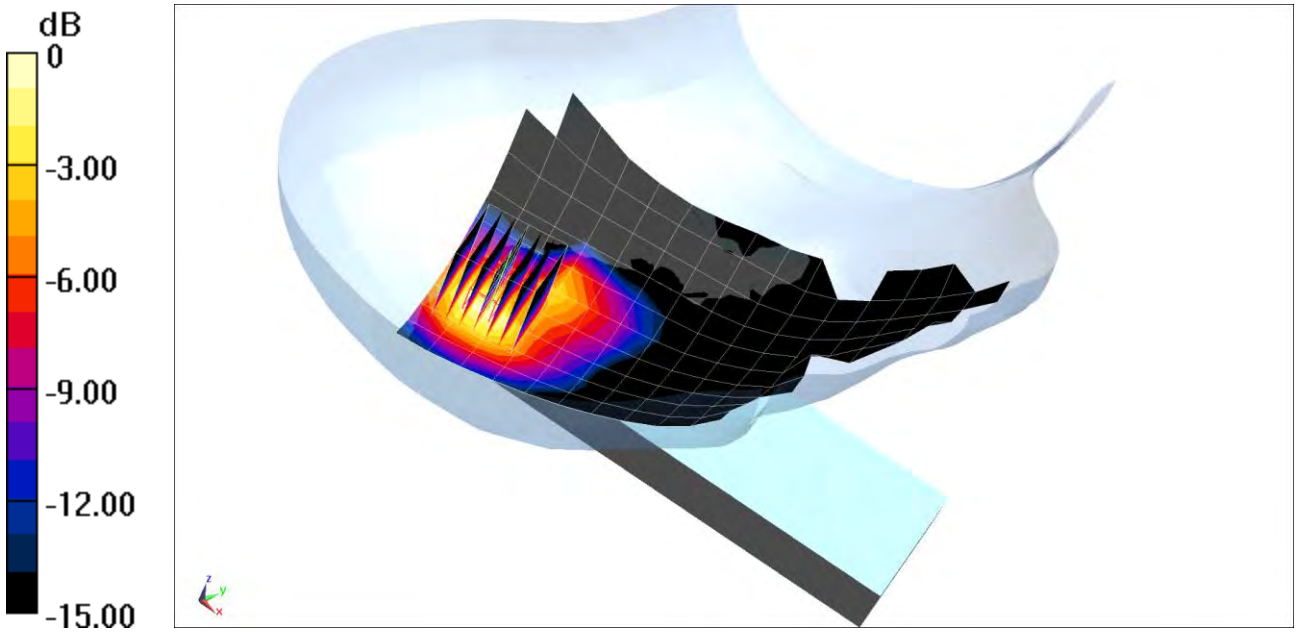
Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450MHz Head Medium parameters used (interpolated):
$f = 2462$ MHz; $\sigma = 1.858$ S/m; $\varepsilon_r = 39.218$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 02-11-2019; Ambient Temp: 20.9°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7409; ConvF(7.23, 7.23, 7.23) @ 2462 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: IEEE 802.11b, 22 MHz Bandwidth, Antenna 2, Right Head, Tilt, Ch 11, 1 Mbps

Area Scan (11x11x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.865 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.208 W/kg
SAR(1 g) = 0.089 W/kg



0 dB = 0.145 W/kg = -8.39 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1365M

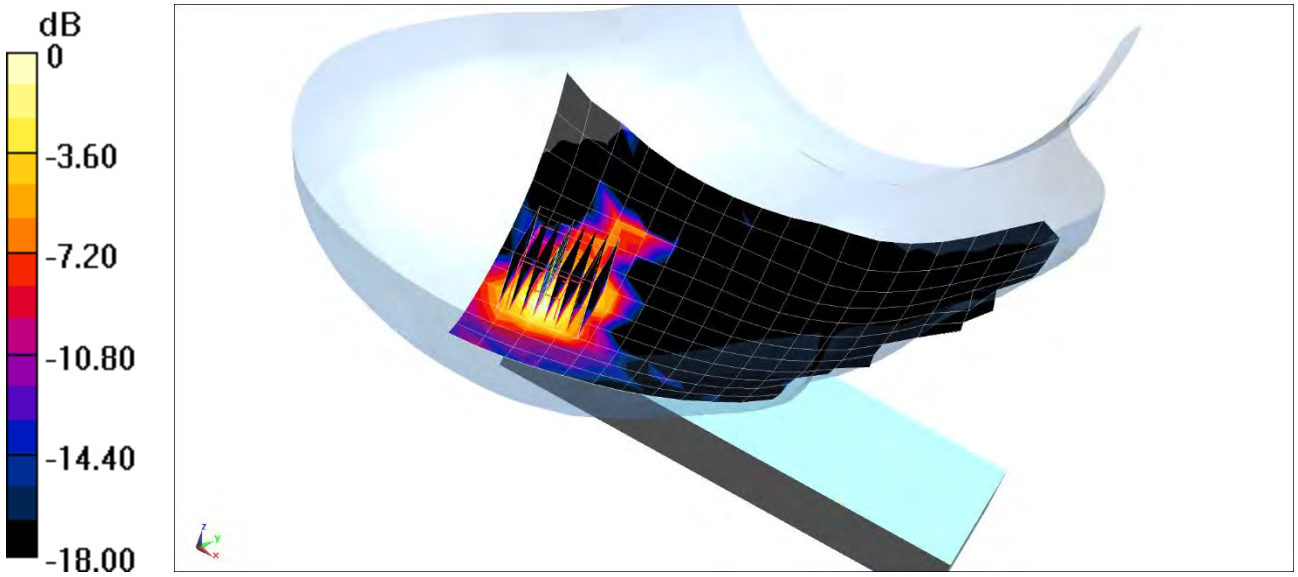
Communication System: UID 0, IEEE 802.11n 5.2-5.8 GHz Band; Frequency: 5310 MHz; Duty Cycle: 1:1
Medium: 5GHz Head; Medium parameters used (interpolated):
f = 5310 MHz; σ = 4.648 S/m; ε_r = 34.8; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-19-2019; Ambient Temp: 21.6°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7409; ConvF(5.2, 5.2, 5.2) @ 5310 MHz; Calibrated: 6/25/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2018
Phantom: SAM with CRP (Left); Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (13x25x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 2.162 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.294 W/kg
SAR(1 g) = 0.058 W/kg



0 dB = 0.151 W/kg = -8.21 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358B

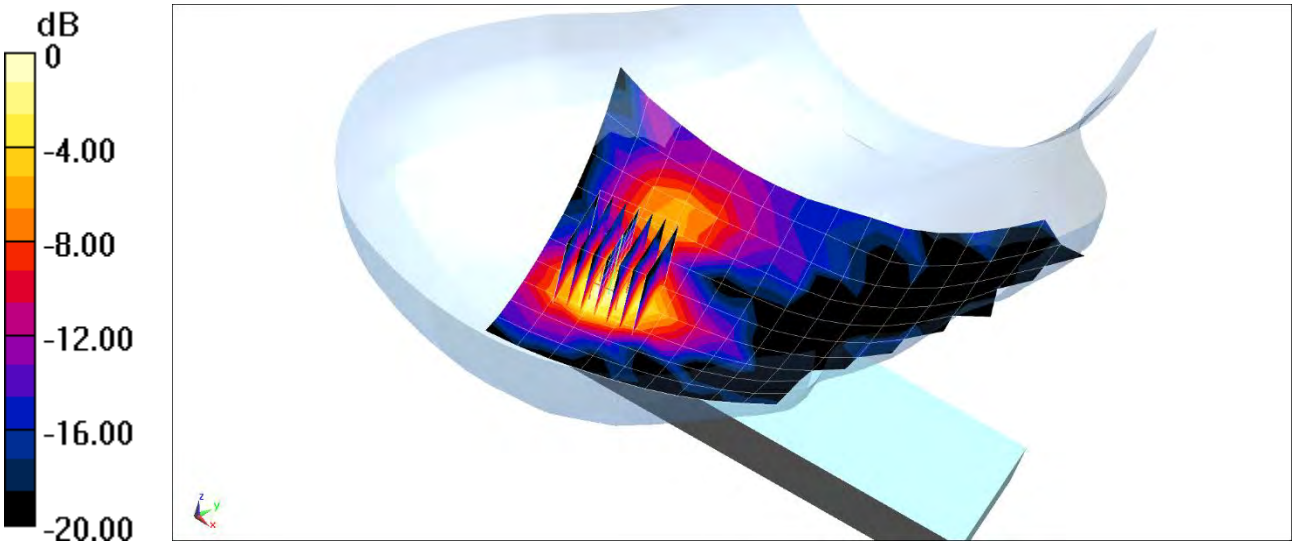
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450MHz Head; Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.797 S/m; ε_r = 38.627; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 02-13-2019; Ambient Temp: 20.9°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7409; ConvF(7.23, 7.23, 7.23) @ 2402 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: Bluetooth, Right Head, Tilt, Ch 0, 1 Mbps

Area Scan (11x19x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.116 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.118 W/kg
SAR(1 g) = 0.055 W/kg



0 dB = 0.0949 W/kg = -10.23 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1365M

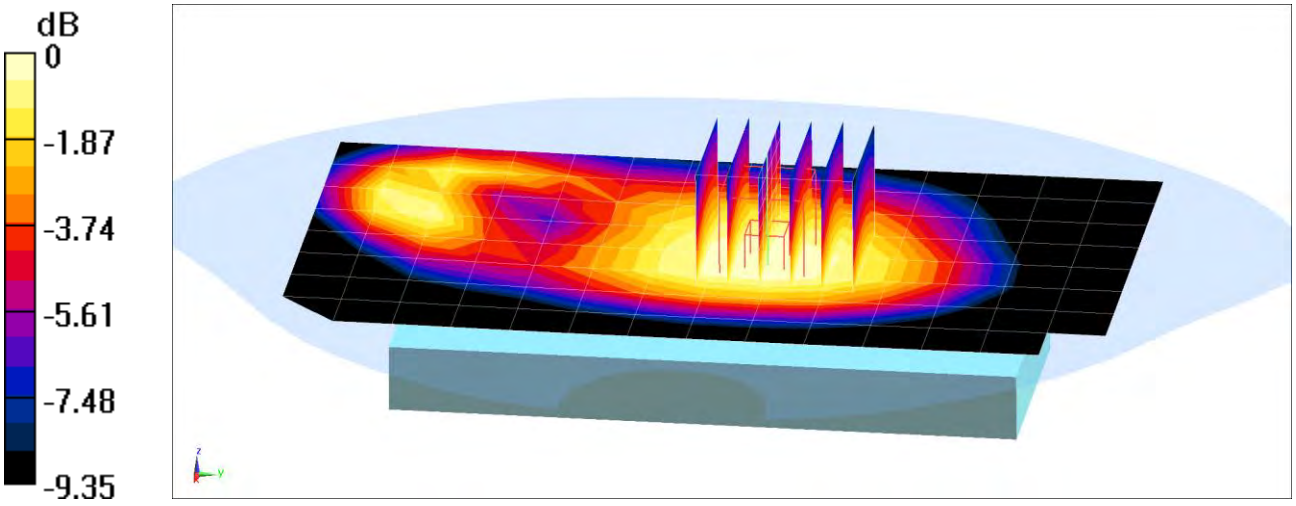
Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.98 S/m; ε_r = 54.16; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.15 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.218 W/kg



0 dB = 0.266 W/kg = -5.75 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1365M

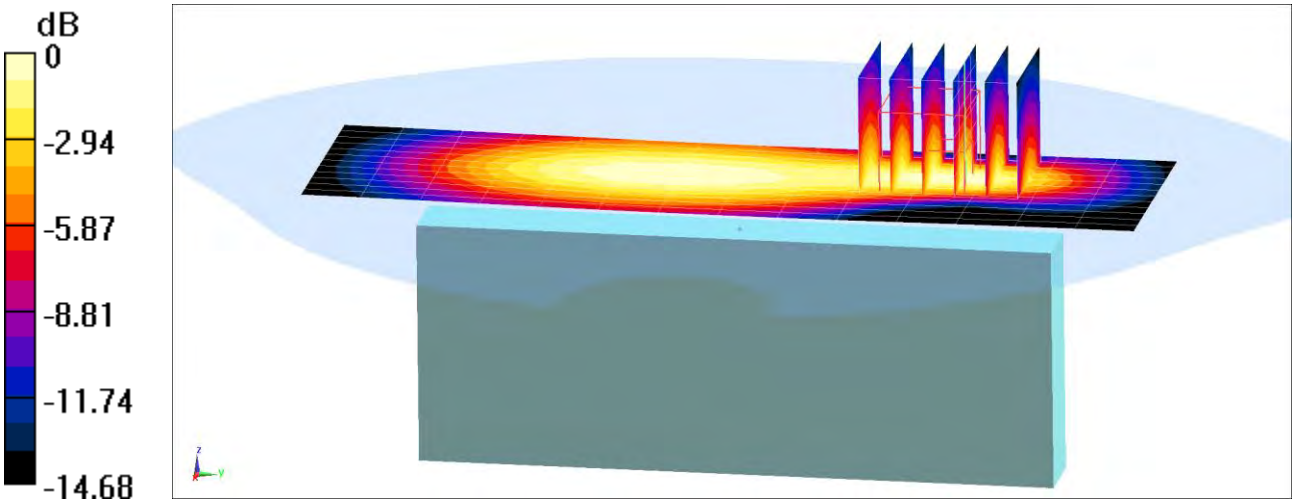
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.98 S/m; ε_r = 54.16; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

Mode: GPRS 850, Body SAR, Right Edge, Mid.ch, 3 Tx Slots

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.71 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.692 W/kg
SAR(1 g) = 0.388 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

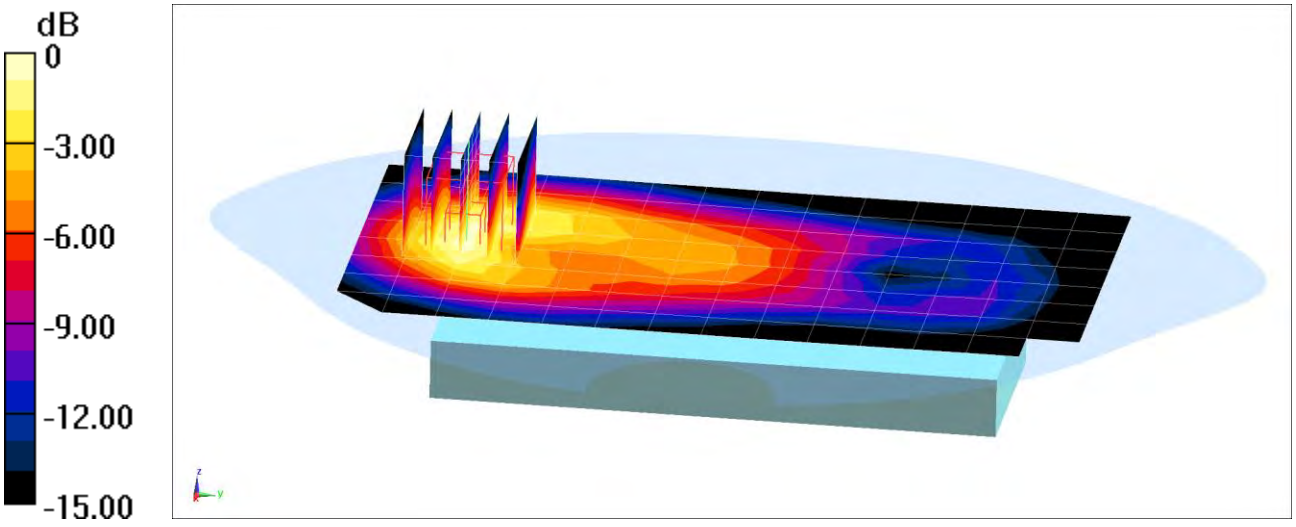
Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 53.283; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-18-2019; Ambient Temp: 21.0°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GSM 1900, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.24 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.182 W/kg



0 dB = 0.260 W/kg = -5.85 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

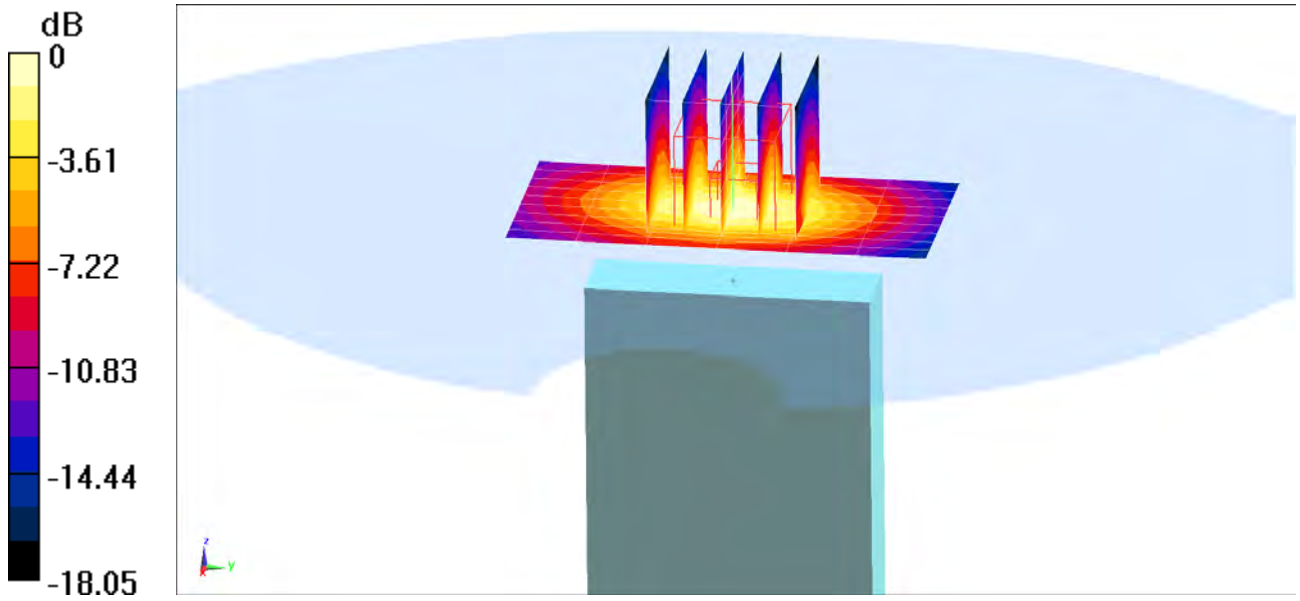
Communication System: UID 0, GSM GPRS; 2 Tx slots; Frequency: 1909.8 MHz; Duty Cycle: 1:4.15
Medium: 1900 Body Medium parameters used:
f = 1910 MHz; σ = 1.592 S/m; ε_r = 53.182; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.0°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1909.8 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Body SAR, Bottom Edge, High.ch, 2 Tx Slots

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.55 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.886 W/kg
SAR(1 g) = 0.507 W/kg



0 dB = 0.750 W/kg = -1.25 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

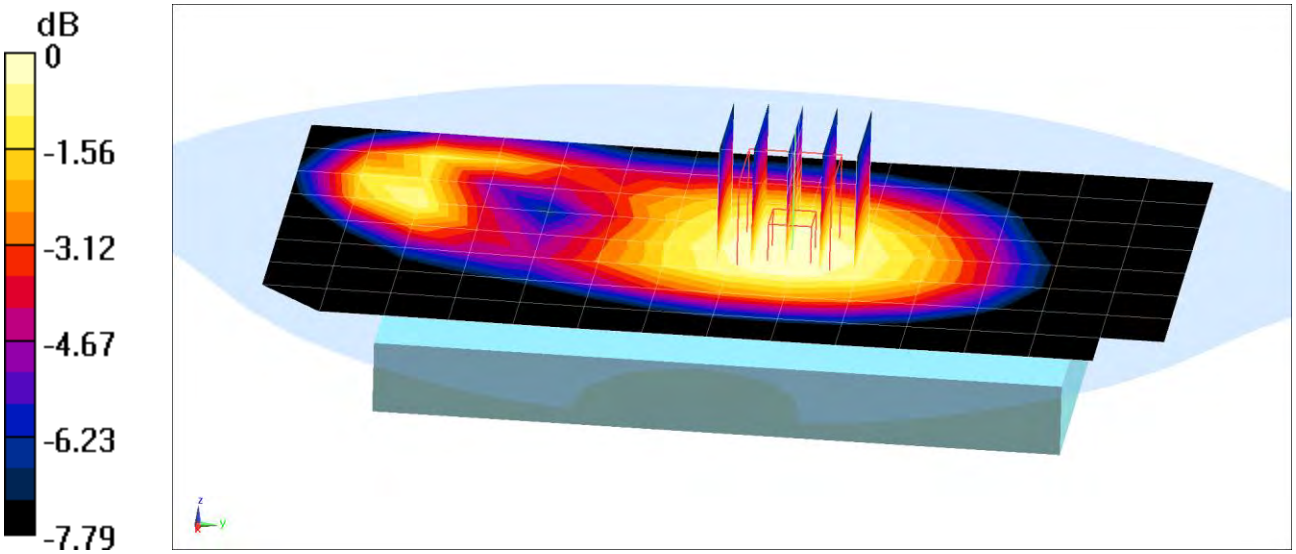
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.98 S/m; ε_r = 54.16; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.48 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.259 W/kg
SAR(1 g) = 0.198 W/kg



0 dB = 0.238 W/kg = -6.23 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

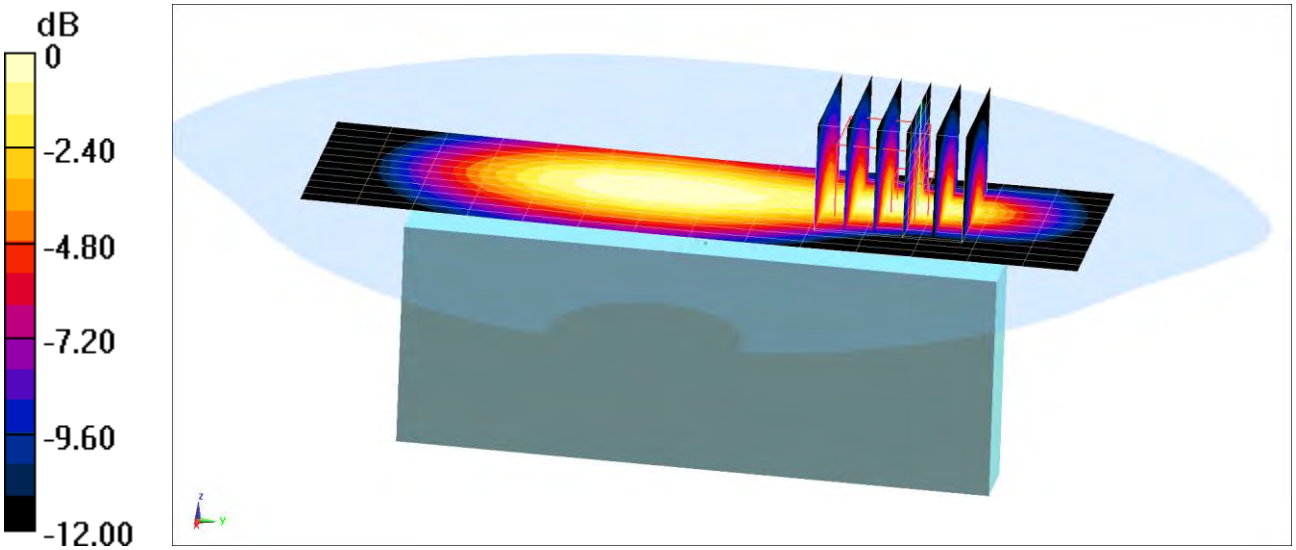
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.98 S/m; ε_r = 54.16; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

Mode: UMTS 850, Body SAR, Right Edge, Mid.ch

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.65 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.684 W/kg
SAR(1 g) = 0.382 W/kg



0 dB = 0.567 W/kg = -2.46 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

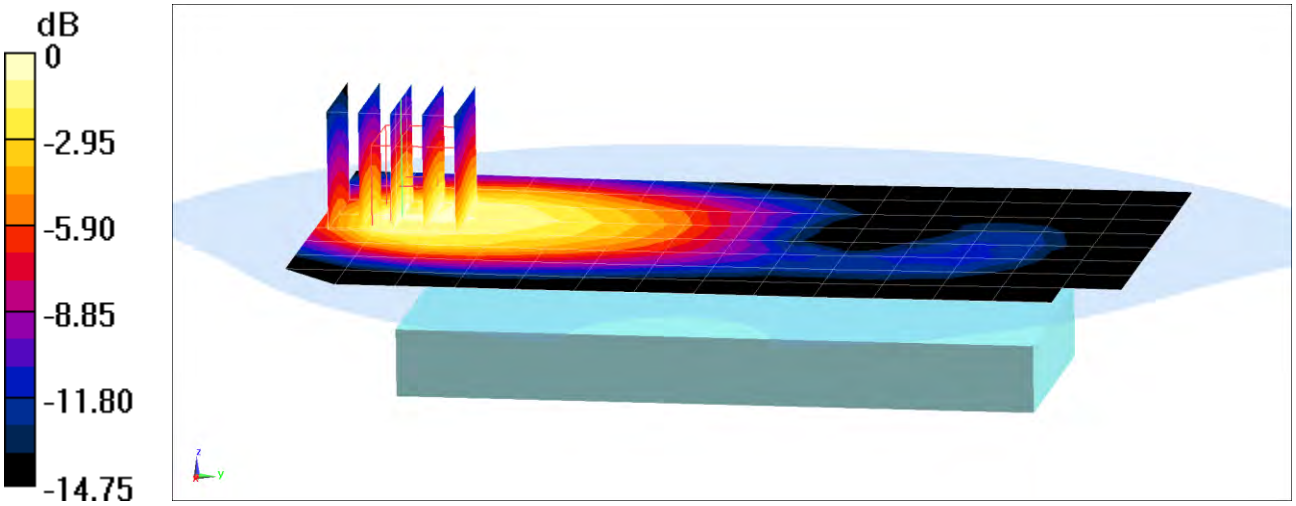
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.49 S/m; ε_r = 51.594; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-22-2019; Ambient Temp:23.2°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1732.4 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.30 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.802 W/kg
SAR(1 g) = 0.511 W/kg



0 dB = 0.691 W/kg = -1.61 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1407M

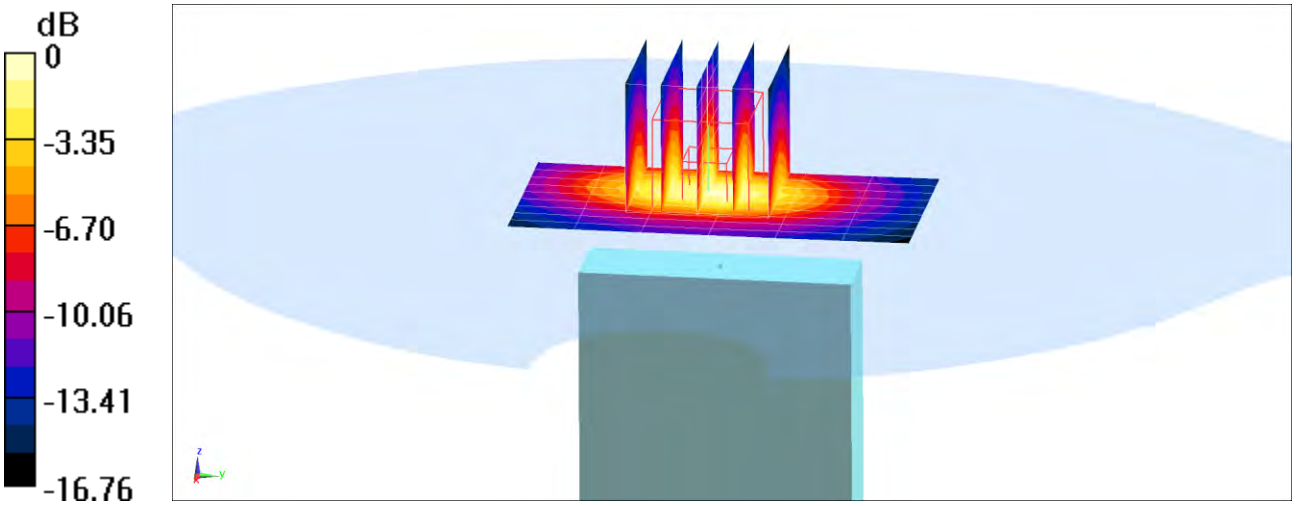
Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.511 S/m; ε_r = 51.518; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-22-2019; Ambient Temp:23.2°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1752.6 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.26 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.662 W/kg



0 dB = 0.988 W/kg = -0.05 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

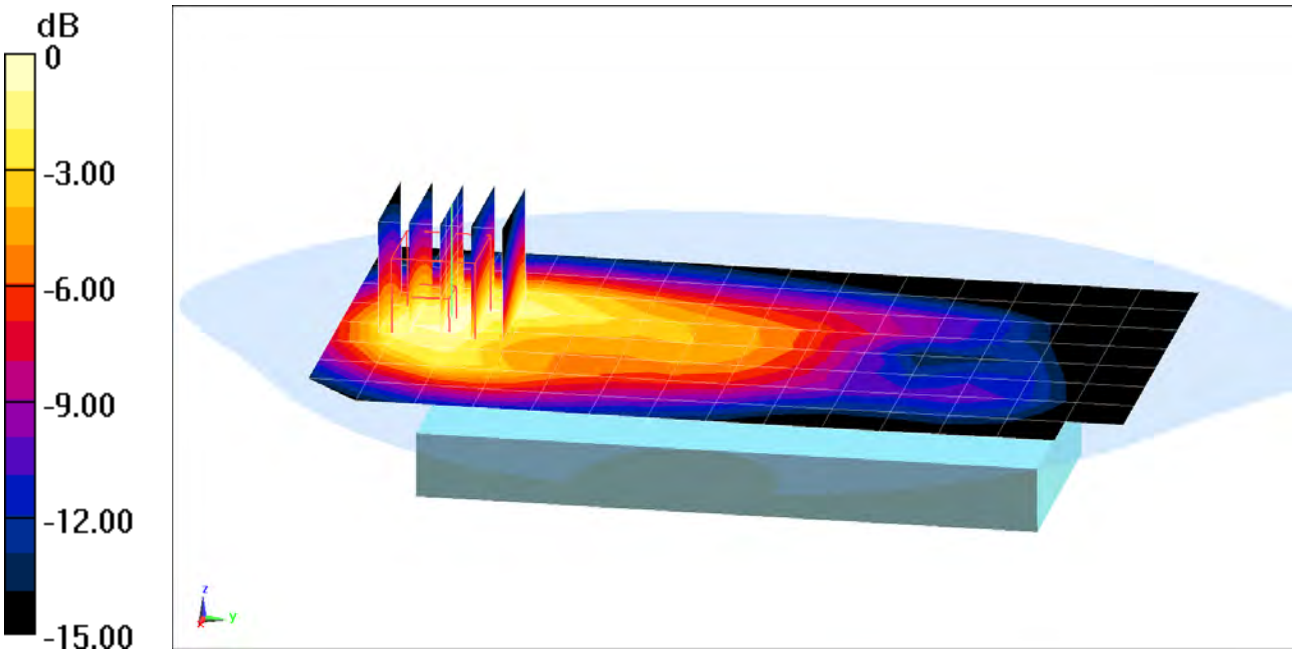
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.554 S/m; ε_r = 53.356; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-11-2019; Ambient Temp: 21.4°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Body SAR, Back side, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.28 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.566 W/kg
SAR(1 g) = 0.343 W/kg



0 dB = 0.474 W/kg = -3.24 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

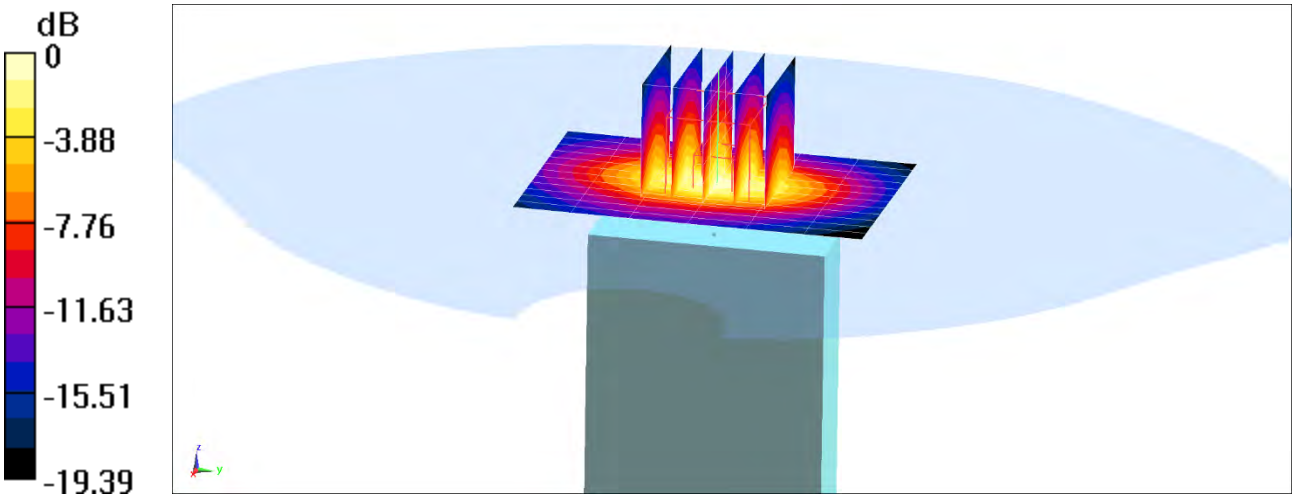
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.588 S/m; ε_r = 53.229; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-11-2019; Ambient Temp: 21.4°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1907.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (13x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.94 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.804 W/kg



0 dB = 1.24 W/kg = 0.93 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

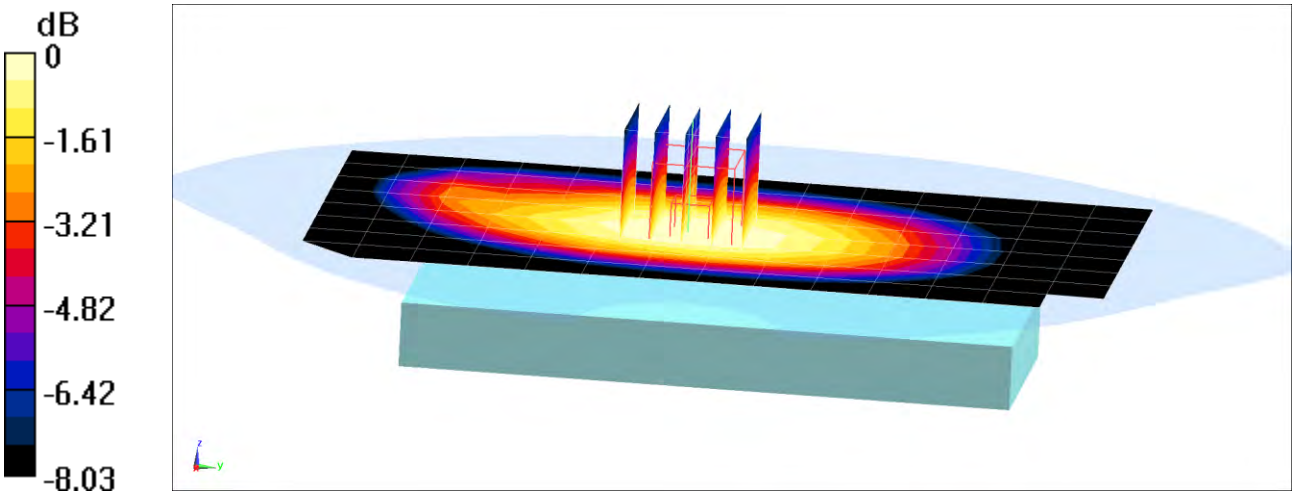
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.938 S/m; ε_r = 53.543; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 680.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.47 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.377 W/kg
SAR(1 g) = 0.280 W/kg



0 dB = 0.342 W/kg = -4.66 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

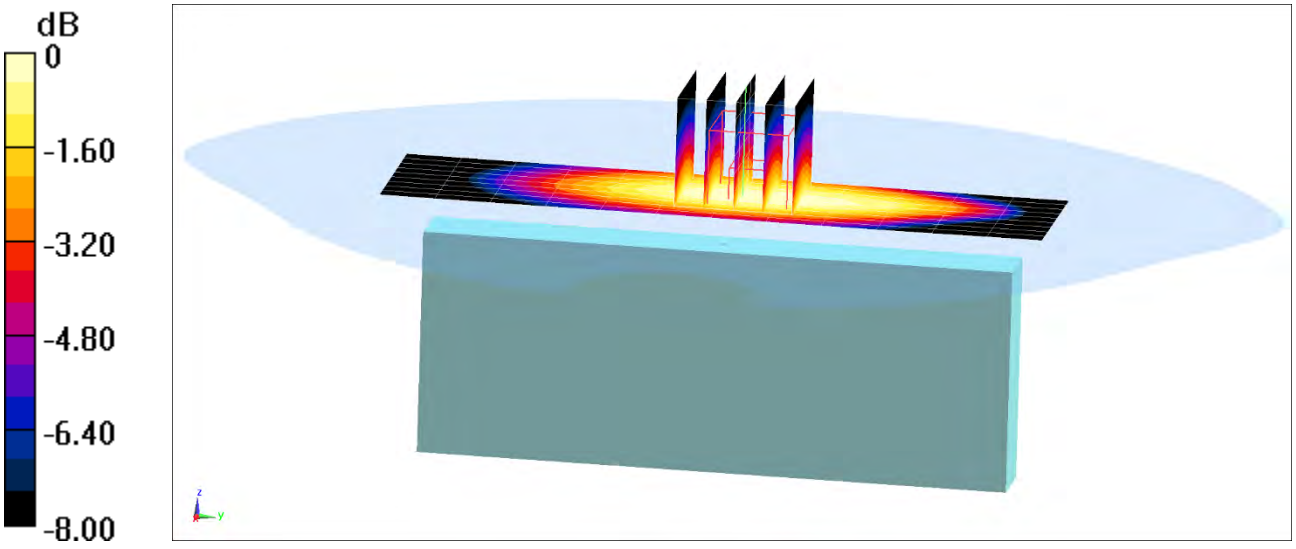
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.938 S/m; ε_r = 53.543; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 680.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, Body SAR, Right Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.60 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.894 W/kg
SAR(1 g) = 0.582 W/kg



0 dB = 0.777 W/kg = -1.10 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

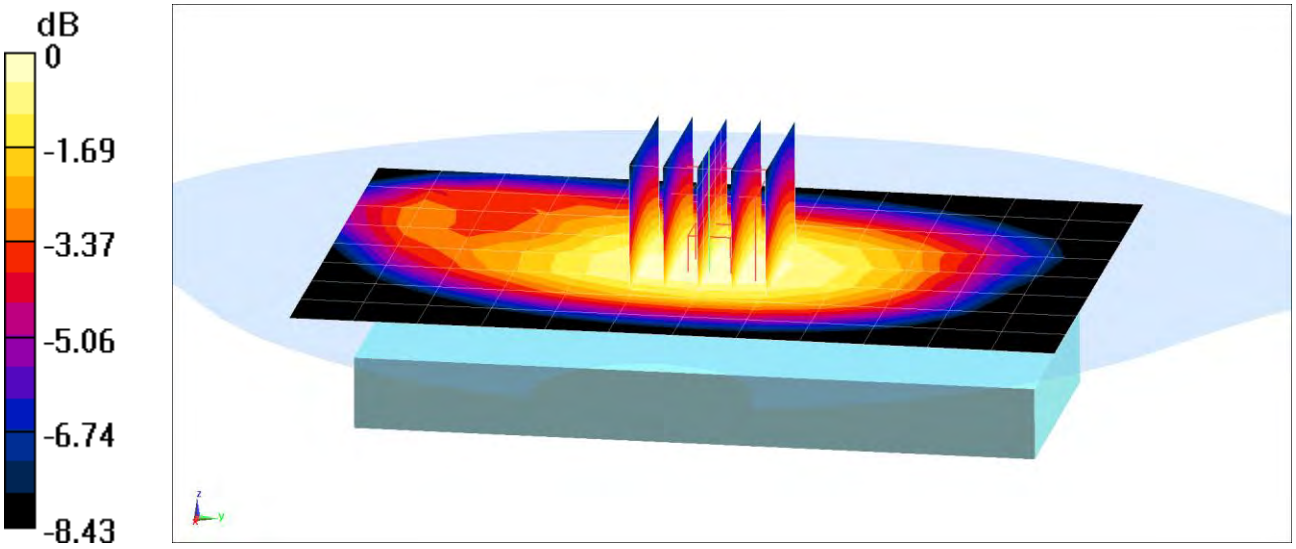
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.947 S/m; ε_r = 53.484; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 707.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.38 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.283 W/kg



0 dB = 0.345 W/kg = -4.62 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

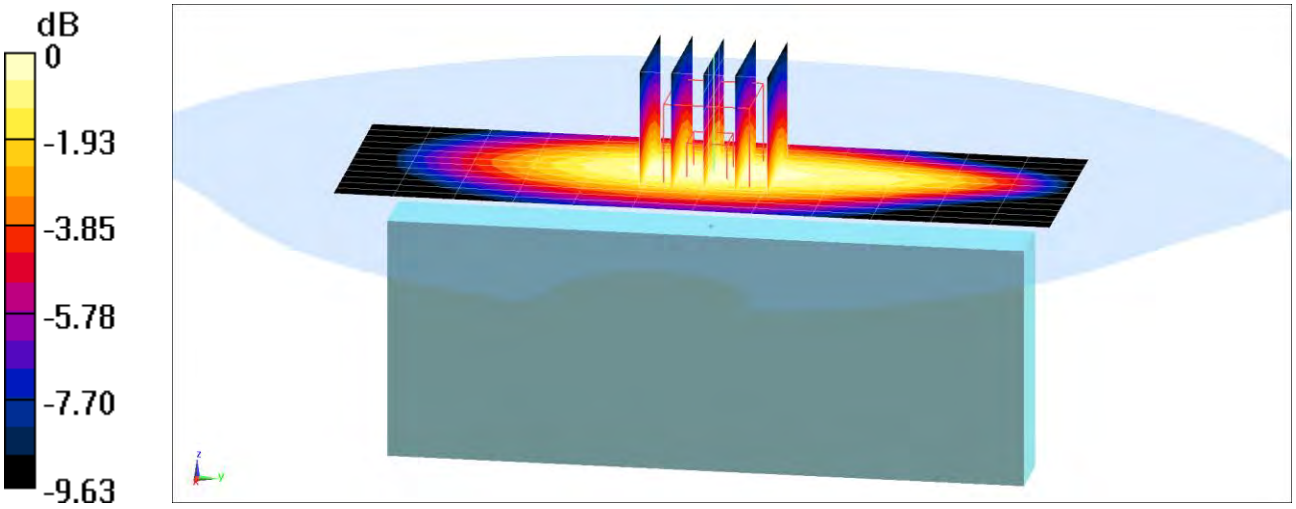
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.947 S/m; ε_r = 53.484; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 707.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, Body SAR, Right Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (13x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.35 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.698 W/kg



0 dB = 0.929 W/kg = -0.32 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

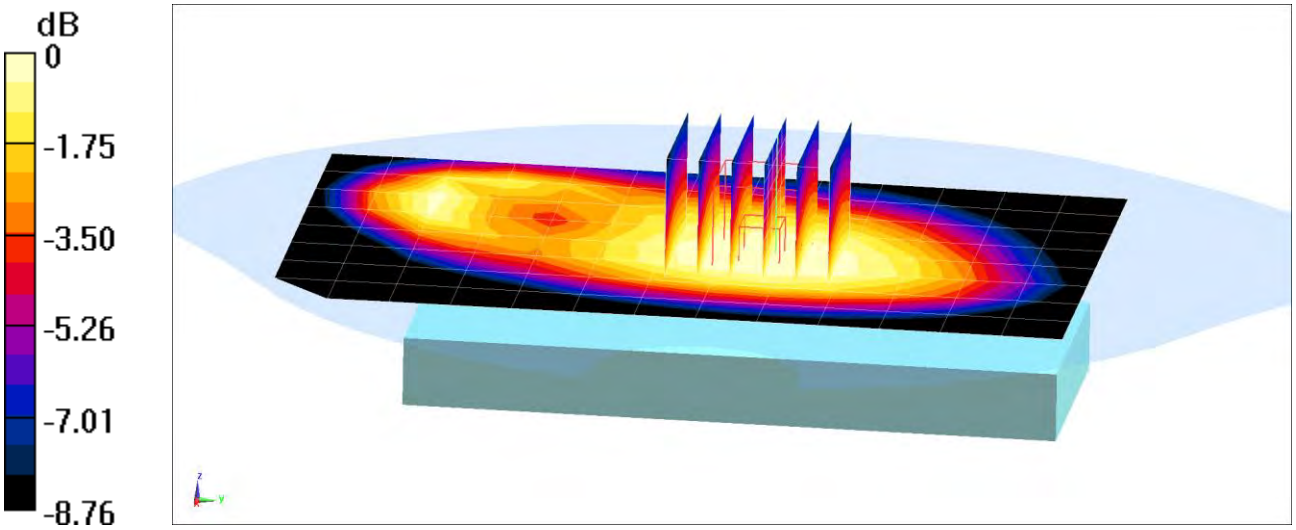
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.976 S/m; ε_r = 53.288; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 782 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.30 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.195 W/kg



0 dB = 0.238 W/kg = -6.23 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

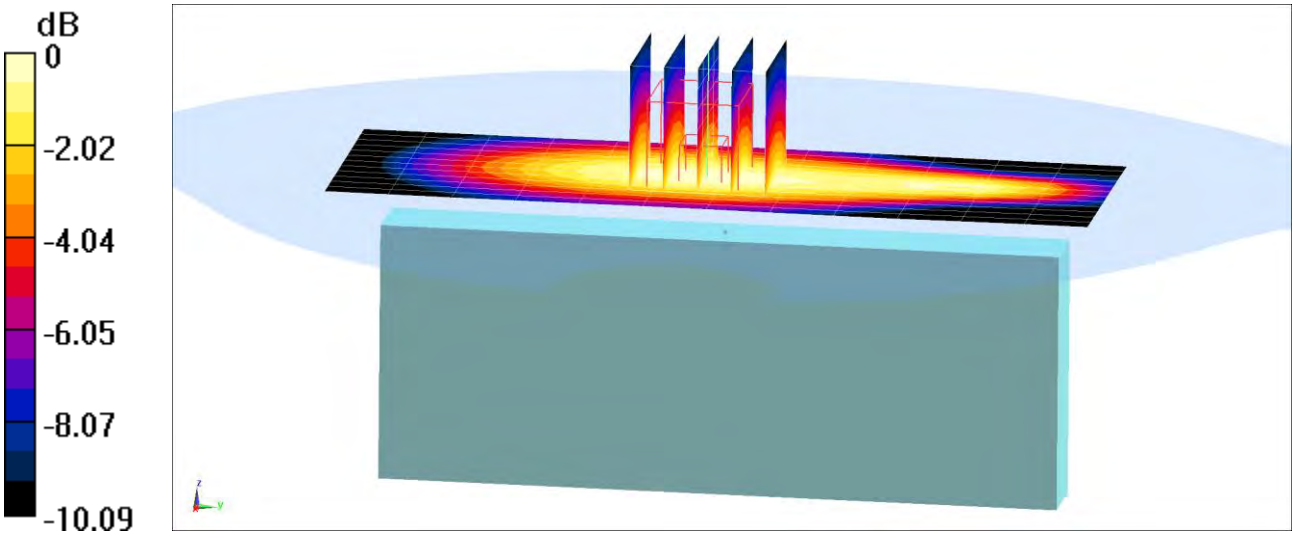
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.976 S/m; ε_r = 53.288; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 782 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (13x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.98 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.644 W/kg
SAR(1 g) = 0.416 W/kg



0 dB = 0.561 W/kg = -2.51 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

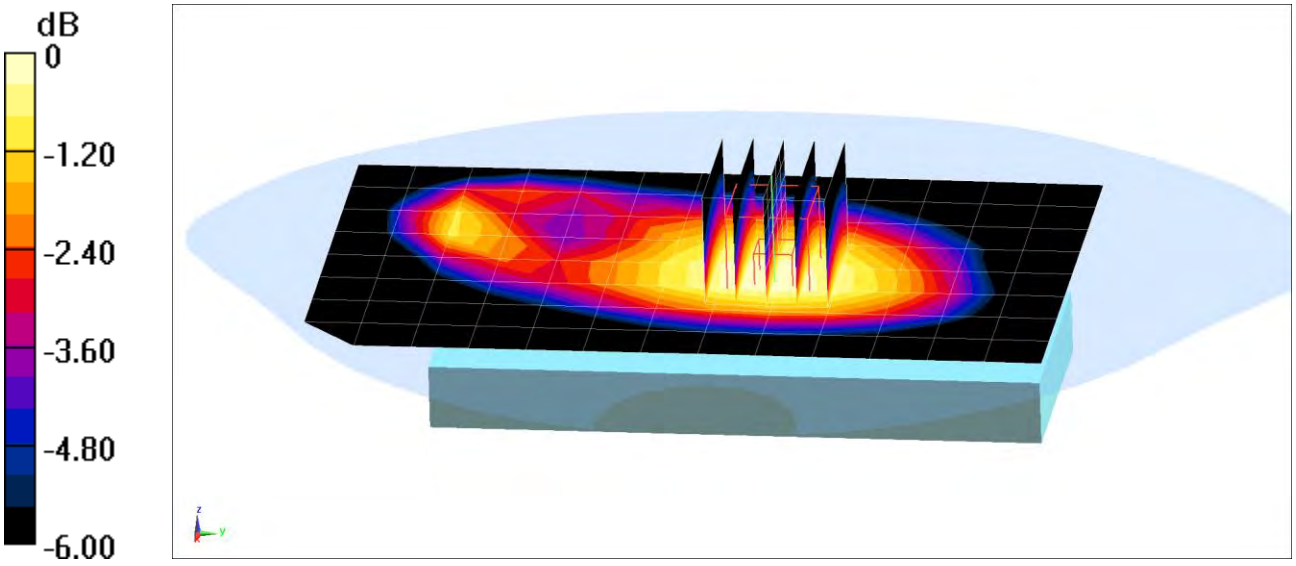
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 793 MHz; σ = 0.98 S/m; ε_r = 53.259; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 793 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 14, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.85 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.293 W/kg
SAR(1 g) = 0.212 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

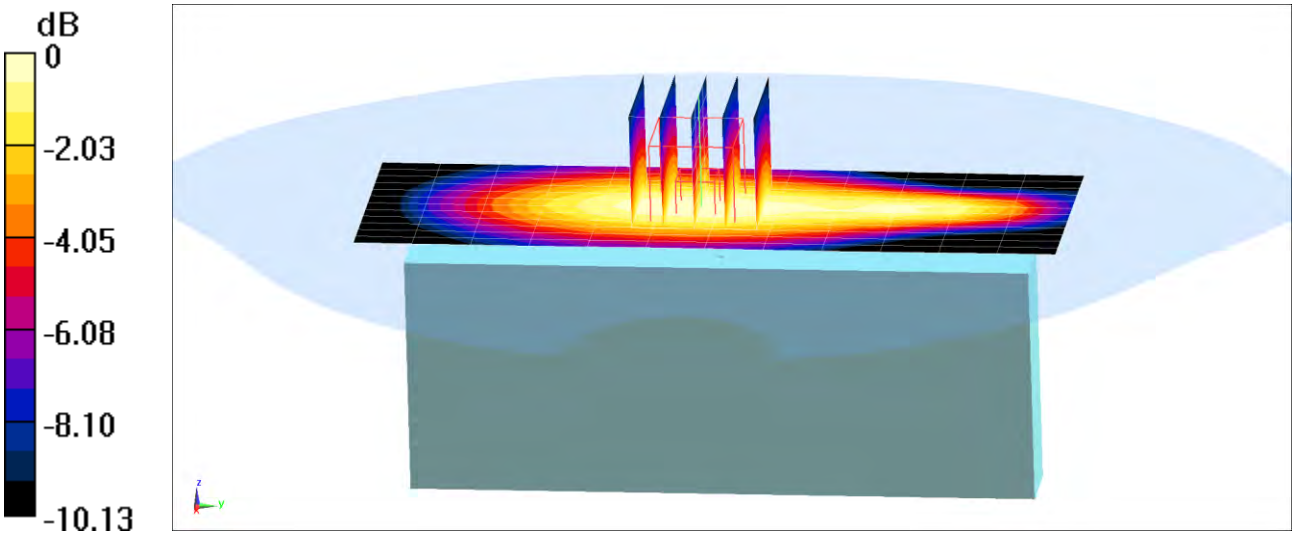
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 793 MHz; σ = 0.98 S/m; ε_r = 53.259; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.6°C; Tissue Temp: 19.9°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 793 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 14, Body SAR, Right Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.28 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.651 W/kg
SAR(1 g) = 0.427 W/kg



0 dB = 0.569 W/kg = -2.45 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

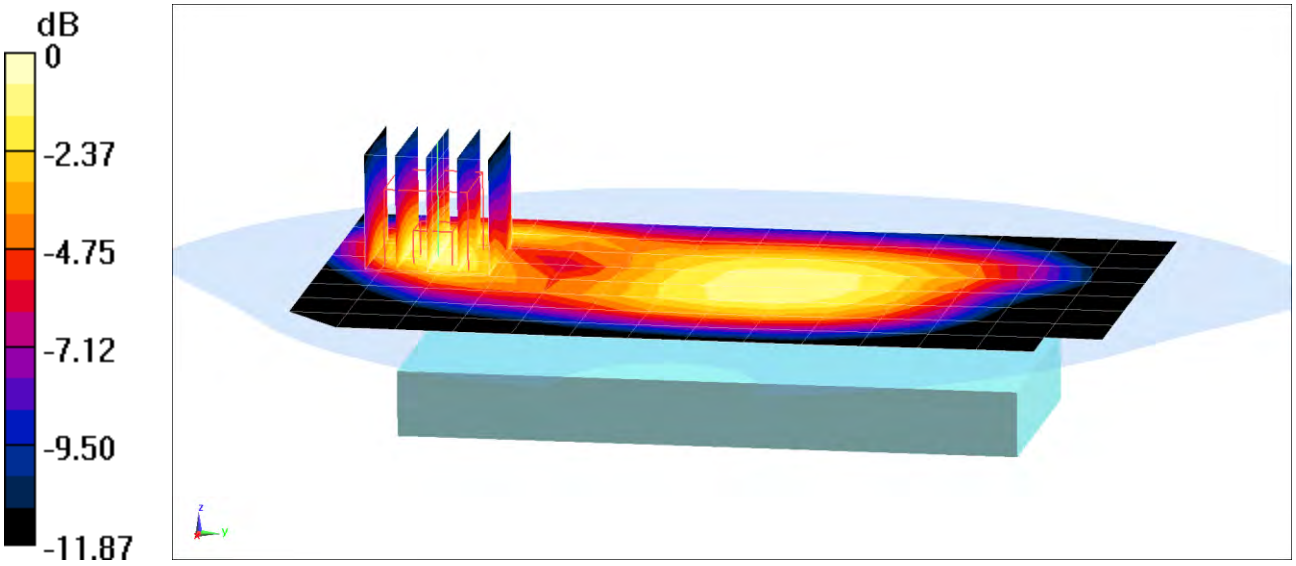
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.974 S/m; ε_r = 54.214; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.69 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.147 W/kg



0 dB = 0.204 W/kg = -6.90 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

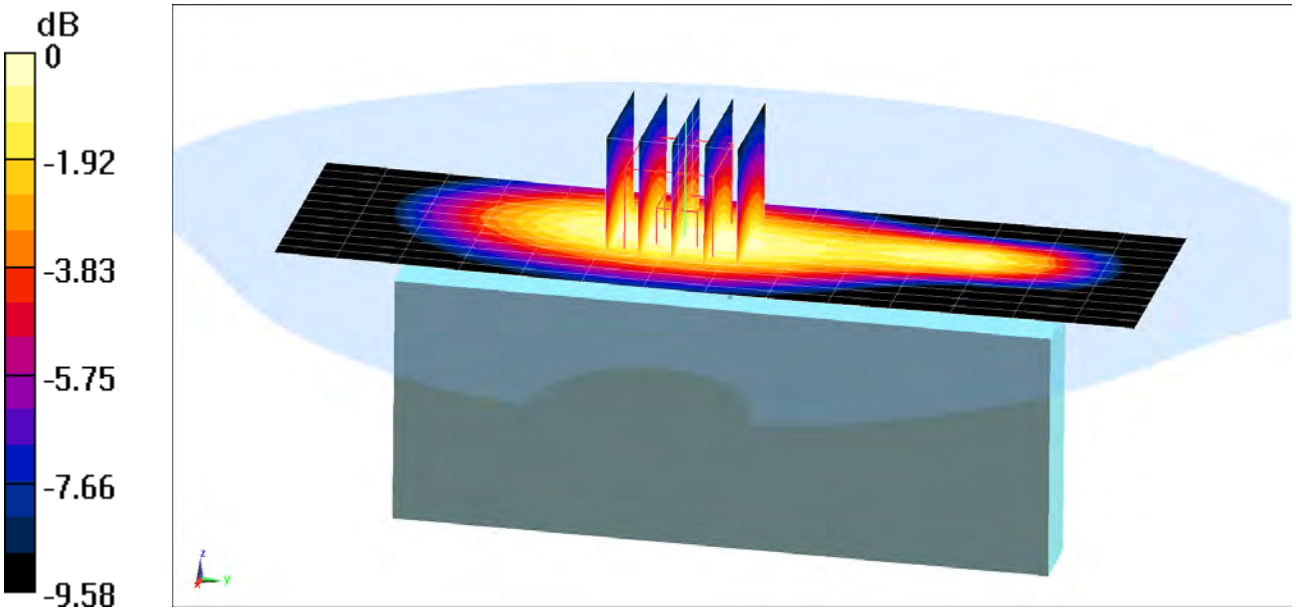
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.974 S/m; ε_r = 54.214; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.3°C

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

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

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.82 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.479 W/kg



0 dB = 0.623 W/kg = -2.06 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

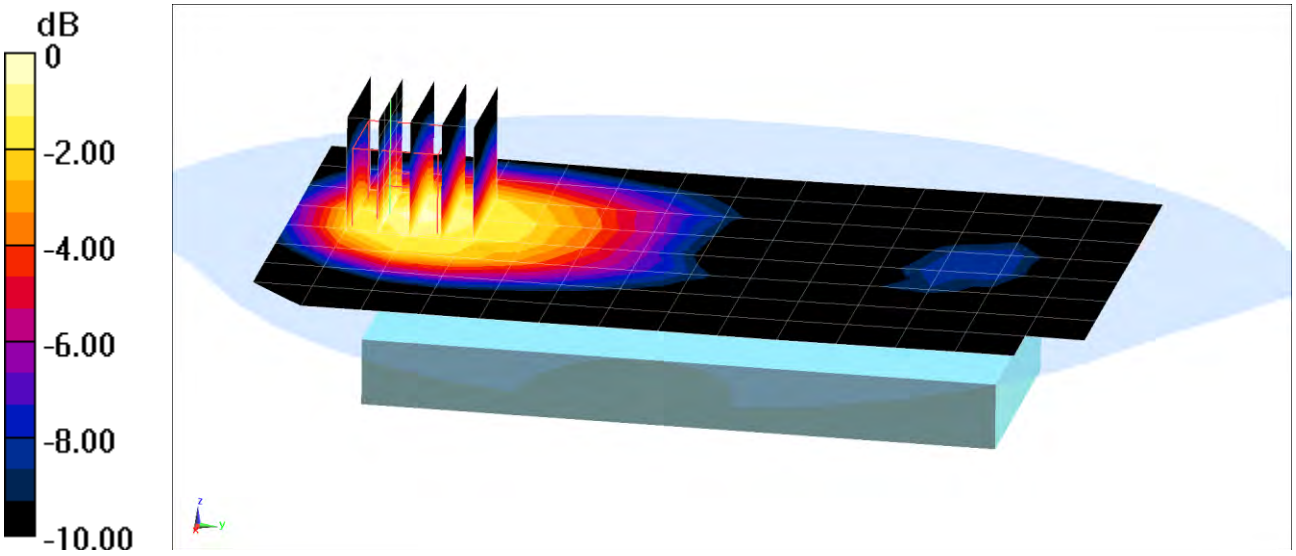
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1720 MHz; σ = 1.422 S/m; ε_r = 52.624; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 2-20-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1720 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Body SAR, Back side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.03 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.666 W/kg
SAR(1 g) = 0.421 W/kg



0 dB = 0.575 W/kg = -2.40 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

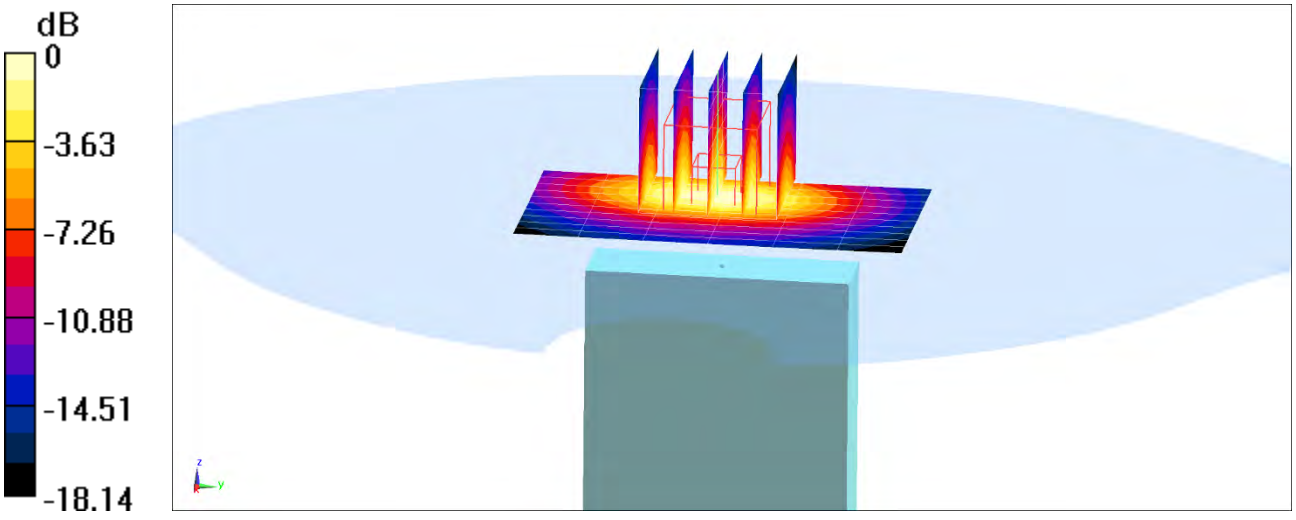
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1770 MHz; σ = 1.535 S/m; ε_r = 52.06; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-07-2019; Ambient Temp: 22.6°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1770 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), ULCA CA_66C, Body SAR, Bottom Edge,
PCC: 20 MHz Bandwidth, QPSK, Ch. 132572, 50 RB, 0 RB Offset
SCC: 20 MHz Bandwidth, QPSK, Ch. 132374, 50 RB, 50 RB Offset

Area Scan (11x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.87 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.831 W/kg



0 dB = 1.25 W/kg = 0.97 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

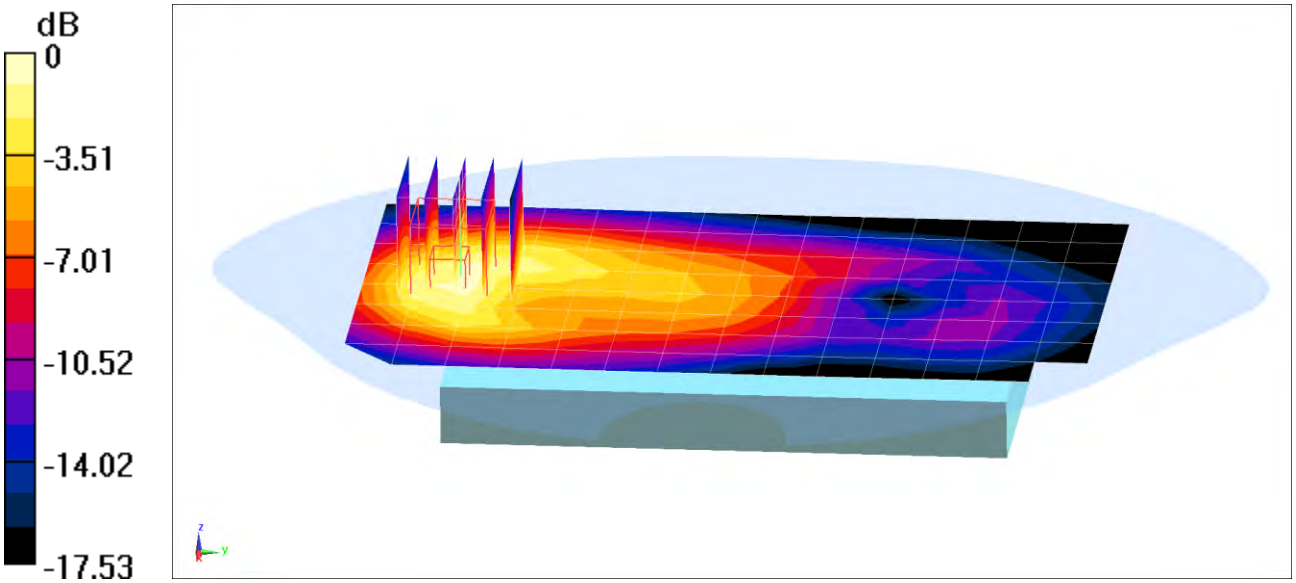
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1860 MHz; σ = 1.53 S/m; ε_r = 53.438; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-11-2019; Ambient Temp: 21.4°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1860 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Body SAR, Back side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.39 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.557 W/kg
SAR(1 g) = 0.339 W/kg



0 dB = 0.476 W/kg = -3.22 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

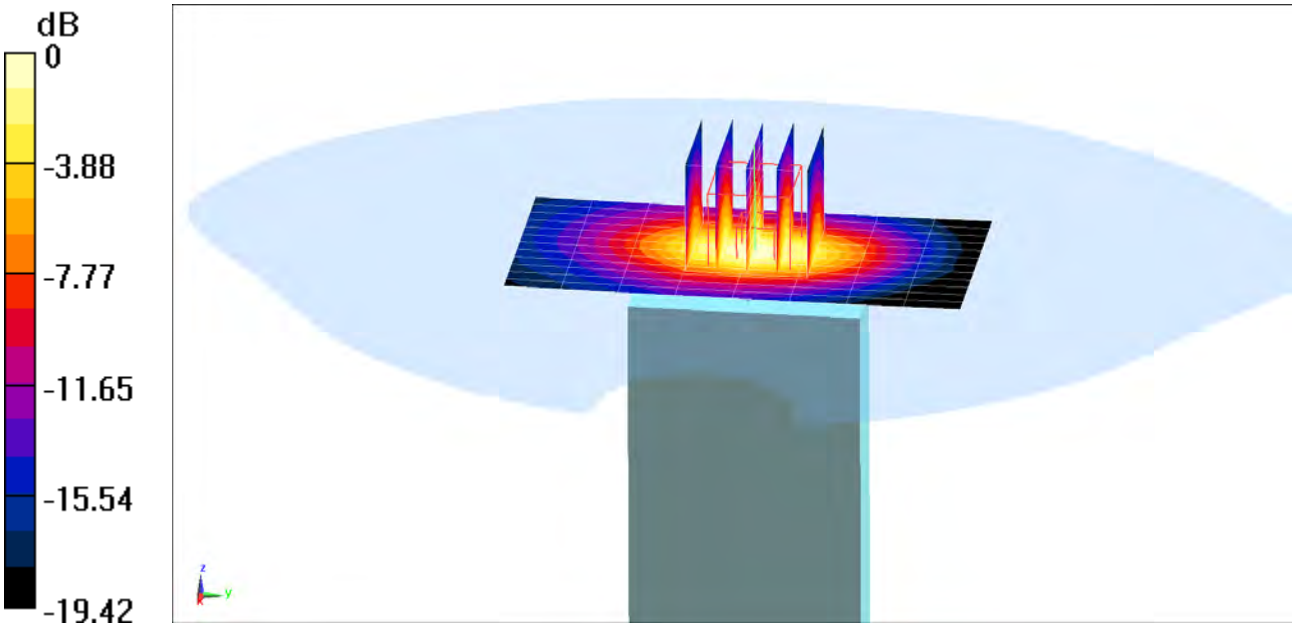
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1905 MHz; σ = 1.585 S/m; ε_r = 53.241; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-11-2019; Ambient Temp: 21.4°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1905 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.58 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.776 W/kg



0 dB = 1.19 W/kg = 0.76 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

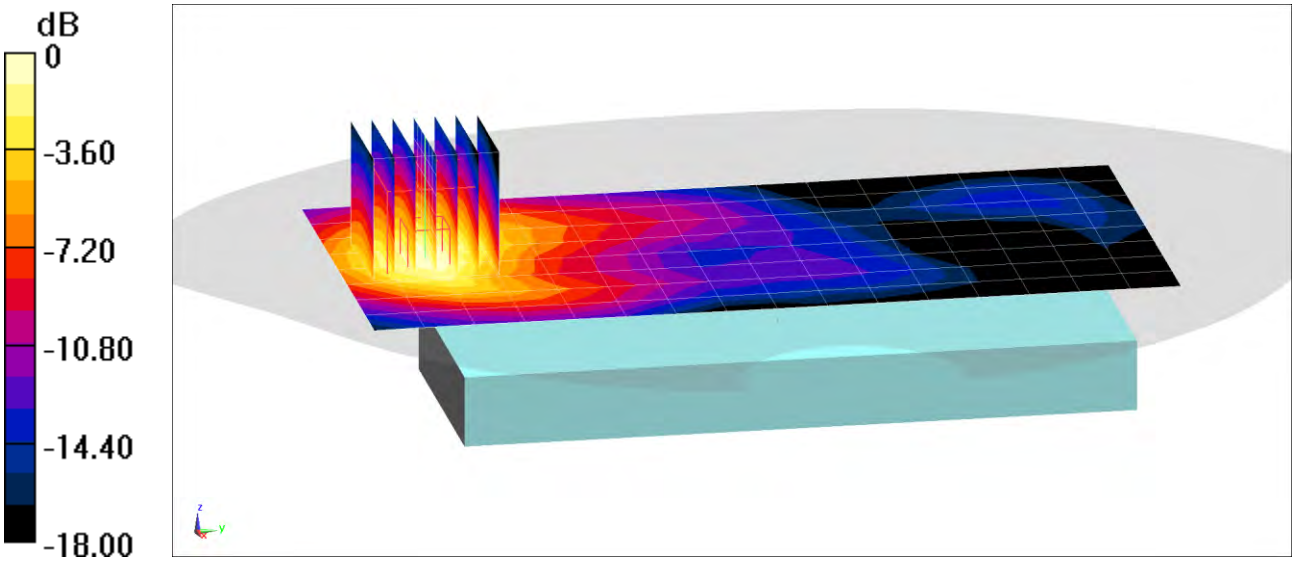
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used:
f = 2310 MHz; σ = 1.901 S/m; ε_r = 53.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-06-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(7.73, 7.73, 7.73) @ 2310 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 30, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.65 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.579 W/kg
SAR(1 g) = 0.318 W/kg



0 dB = 0.485 W/kg = -3.14 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

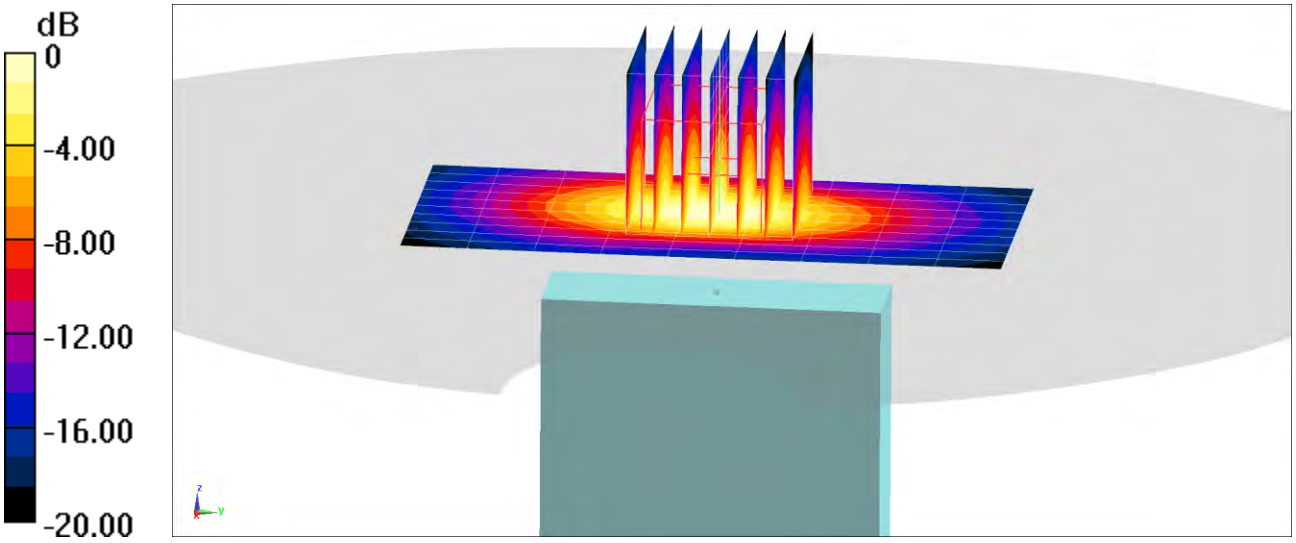
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used:
f = 2310 MHz; σ = 1.901 S/m; ε_r = 53.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-06-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(7.73, 7.73, 7.73) @ 2310 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 30, Body SAR, Bottom Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.10 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.665 W/kg



0 dB = 1.05 W/kg = 0.21 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

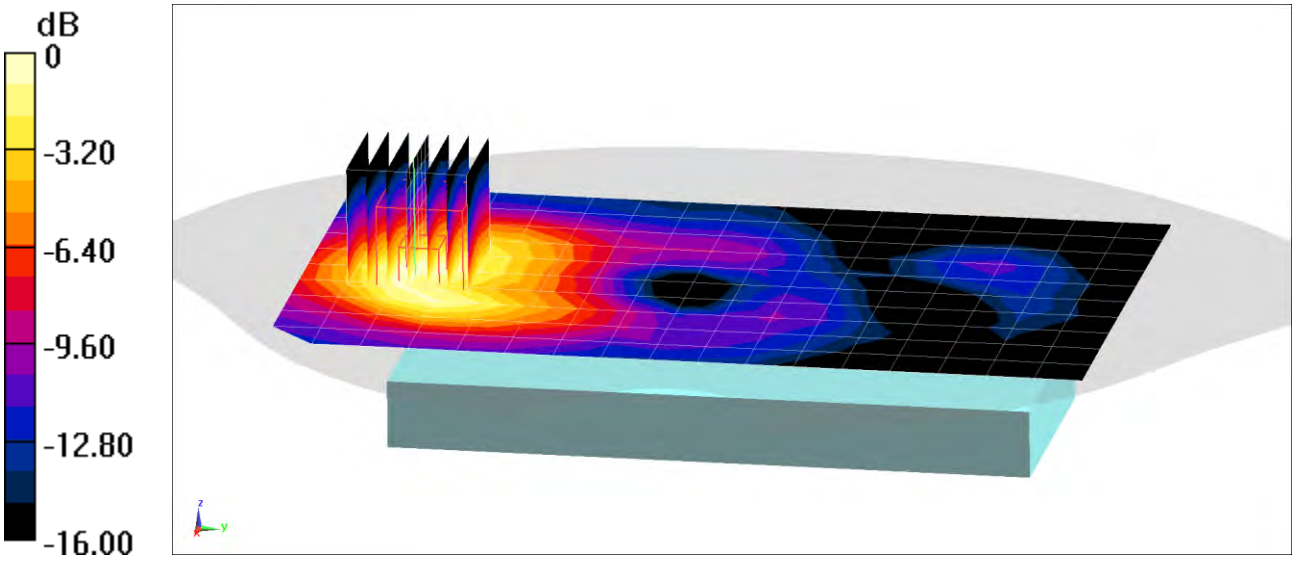
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2510 MHz; σ = 2.082 S/m; ε_r = 51.977; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-01-2019; Ambient Temp: 22.8°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2510 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.66 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.530 W/kg
SAR(1 g) = 0.274 W/kg



0 dB = 0.424 W/kg = -3.73 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1390M

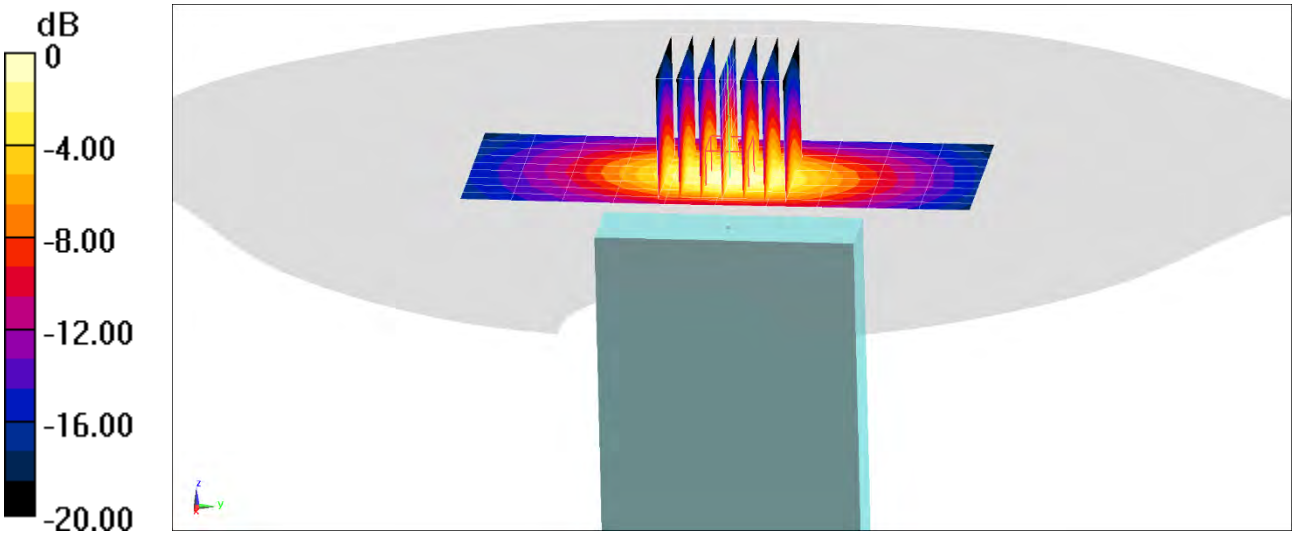
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2510 MHz; σ = 2.095 S/m; ε_r = 54.389; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-04-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2510 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Body SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.12 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.762 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

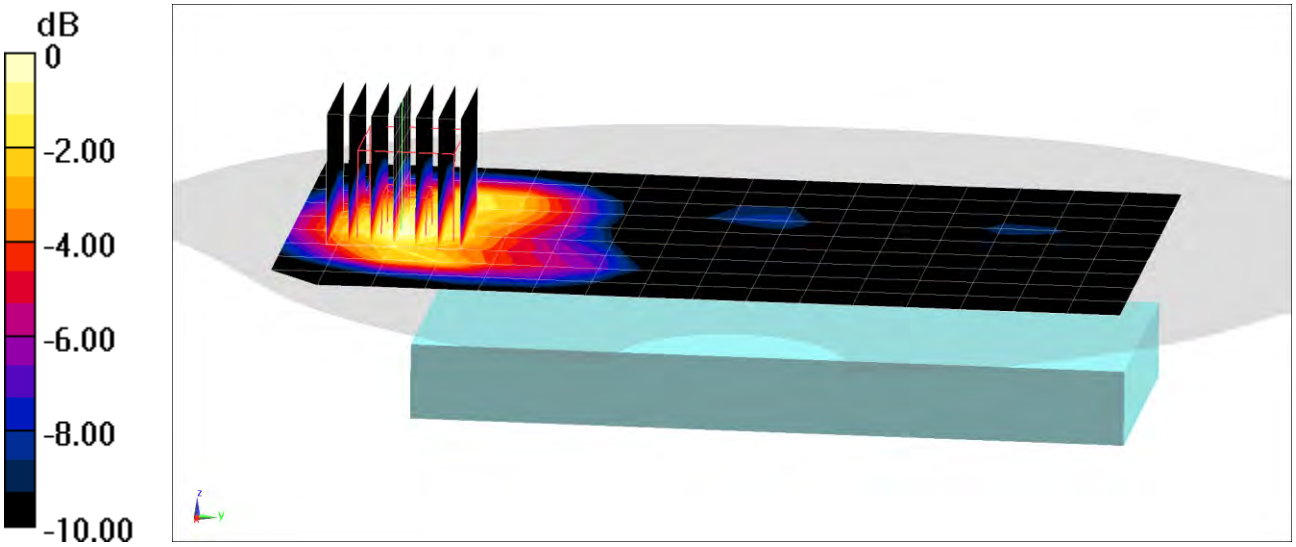
Communication System: UID 0, LTE Band 41; Frequency: 2636.5 MHz; Duty Cycle: 1:1.58
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2636.5 MHz; σ = 2.223 S/m; ε_r = 54.191; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 03-04-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2636.5 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Body SAR, Back side, Mid-High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.740 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.184 W/kg
SAR(1 g) = 0.093 W/kg



0 dB = 0.149 W/kg = -8.27 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

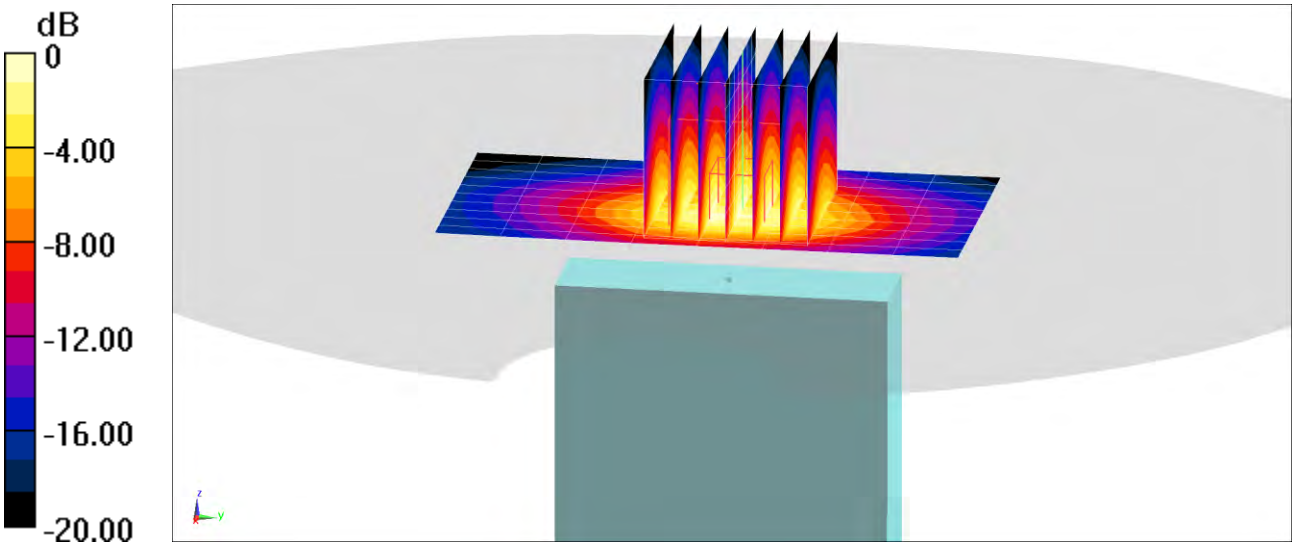
Communication System: UID 0, LTE Band 41; Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.091 S/m; ε_r = 54.395; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 03-04-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2506 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Band 41, Body SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.60 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.619 W/kg



0 dB = 0.966 W/kg = -0.15 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

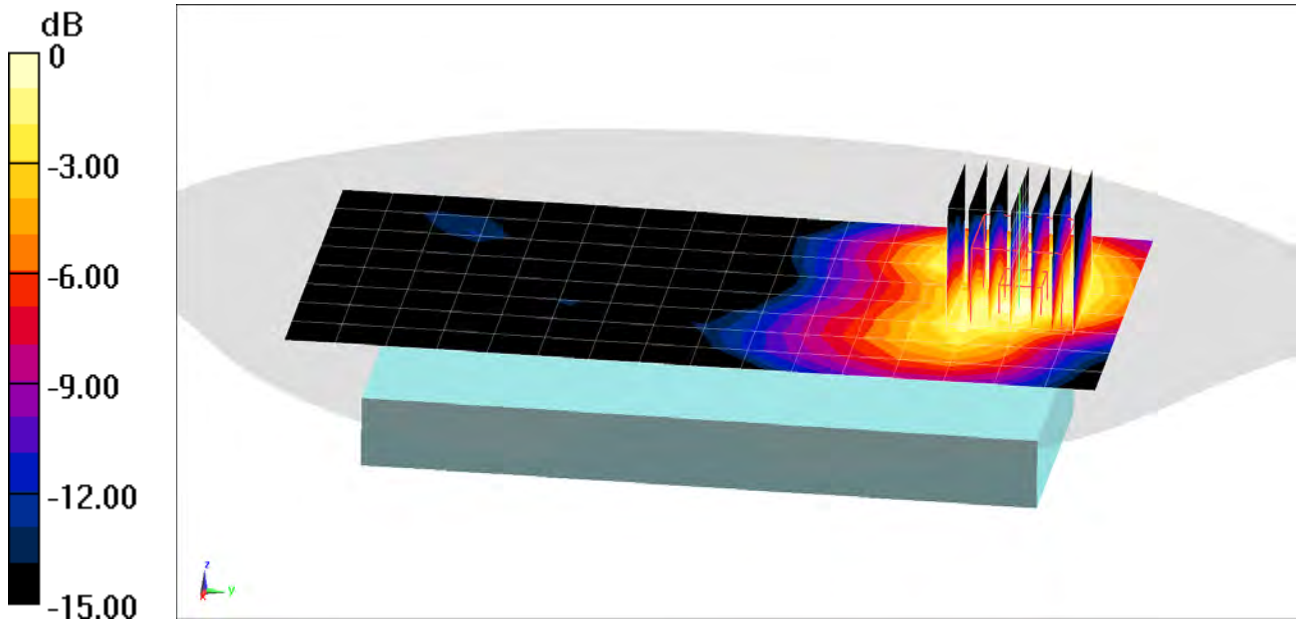
Communication System: UID 0, IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.993 S/m; ε_r = 52.064; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-11-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.1°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2412 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, 22 MHz Bandwidth, Antenna 1, Body SAR, Ch 01, 1 Mbps, Back Side

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.687 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.102 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

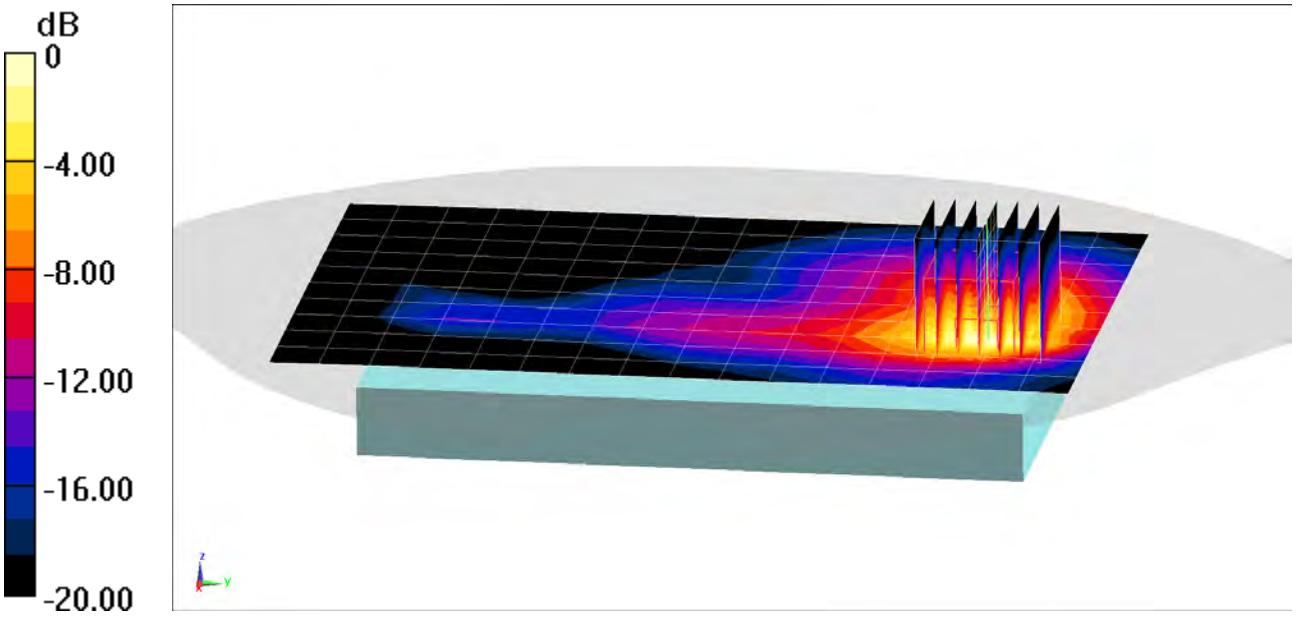
Communication System: UID 0, IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.993 S/m; ε_r = 52.064; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-11-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.1°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2412 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, 22 MHz Bandwidth, Antenna 2, Body SAR, Ch 01, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.434 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.703 W/kg
SAR(1 g) = 0.308 W/kg



0 dB = 0.424 W/kg = -3.73 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

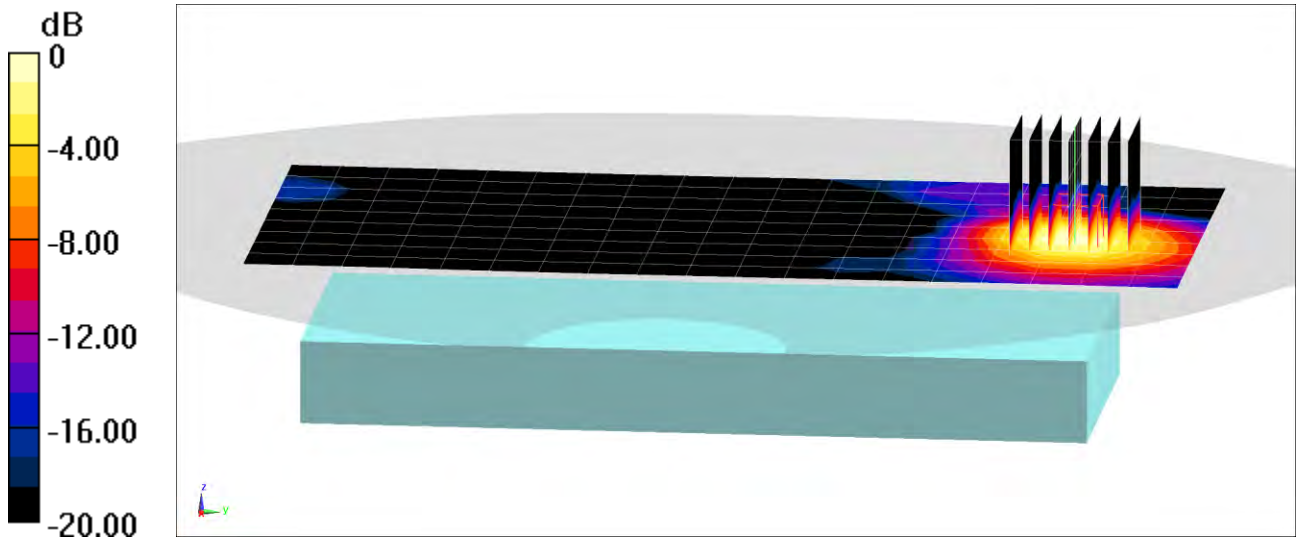
Communication System: UID 0, IEEE 802.11a 5.2-5.8 GHz Band; Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5500 MHz; σ = 5.81 S/m; ε_r = 47.291; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-13-2019; Ambient Temp: 22.6°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5500 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, UNII-2C, 20 MHz Bandwidth, Antenna 1, Body SAR, Ch 100, 6 Mbps, Back Side

Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 10.03 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.98 W/kg
SAR(1 g) = 0.530 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

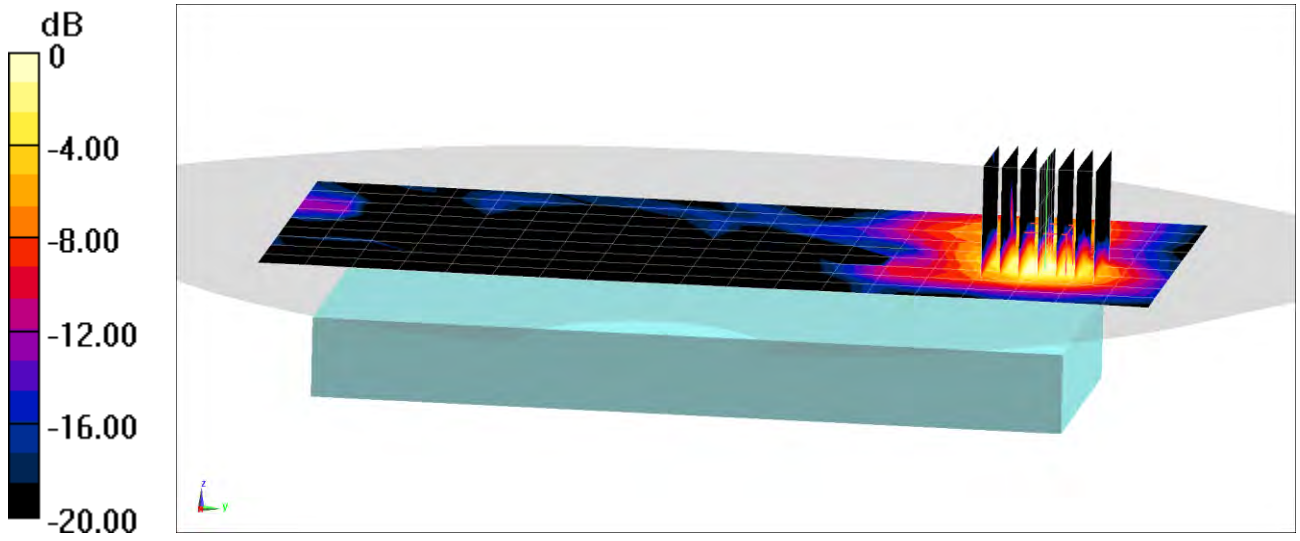
Communication System: UID 0, IEEE 802.11a 5.2-5.8 GHz Band; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body Medium parameters used:
f = 5785 MHz; σ = 6.262 S/m; ε_r = 46.757; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 22.6°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5785 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, UNII-3, 20 MHz Bandwidth, Antenna 1,
Body SAR, Ch 157, 6 Mbps, Back Side

Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 6.420 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.178 W/kg



0 dB = 0.586 W/kg = -2.32 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

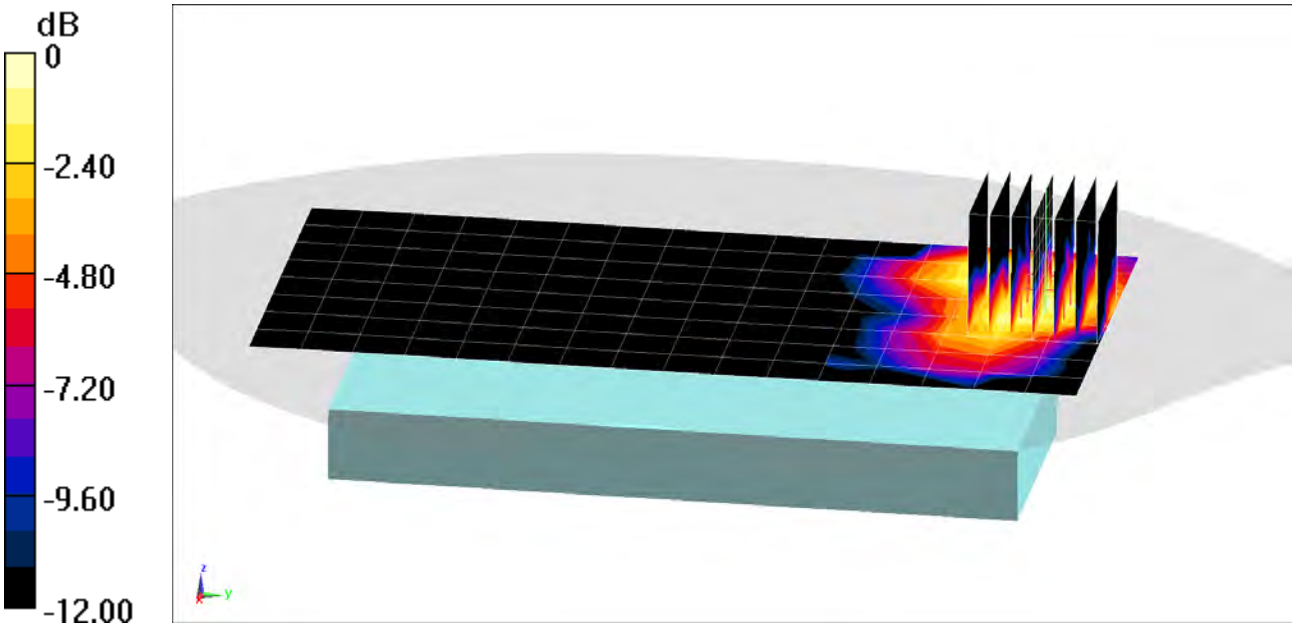
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.981 S/m; ε_r = 52.089; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 02-11-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.1°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2402 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 0, 1 Mbps, Back Side

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.361 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.0190 W/kg
SAR(1 g) = 0.010 W/kg



0 dB = 0.0136 W/kg = -18.66 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

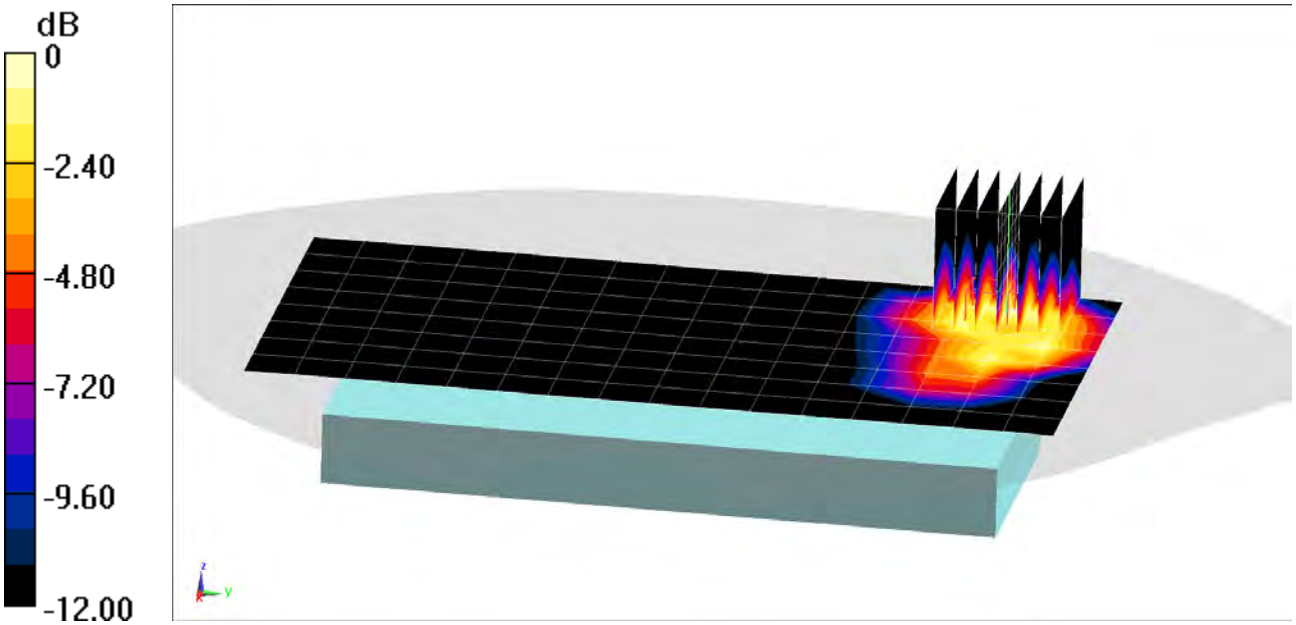
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.981 S/m; ε_r = 52.089; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-11-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.1°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2402 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 0, 1 Mbps, Back Side

Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.986 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.0640 W/kg
SAR(1 g) = 0.027 W/kg



0 dB = 0.0365 W/kg = -14.38 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

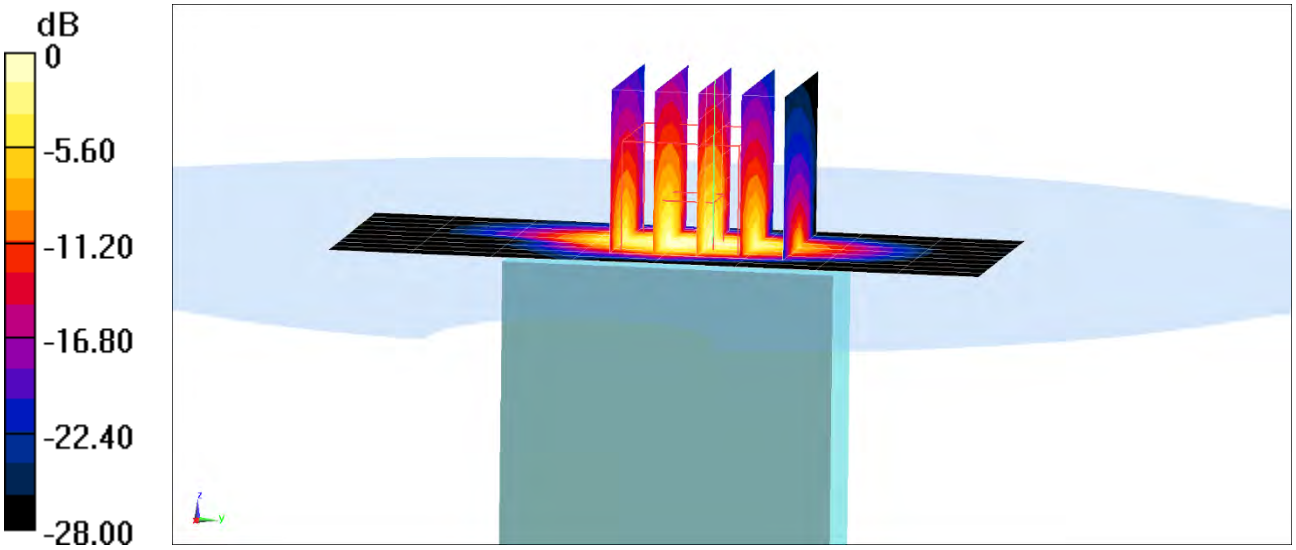
Communication System: UID 0, GSM GPRS; 2 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:4.15
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.557 S/m; ε_r = 53.283; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.0°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Phablet SAR, Bottom Edge, Mid.ch, 2 Tx Slots

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.62 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 11.5 W/kg
SAR(10 g) = 2.01 W/kg



0 dB = 8.50 W/kg = 9.29 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1407M

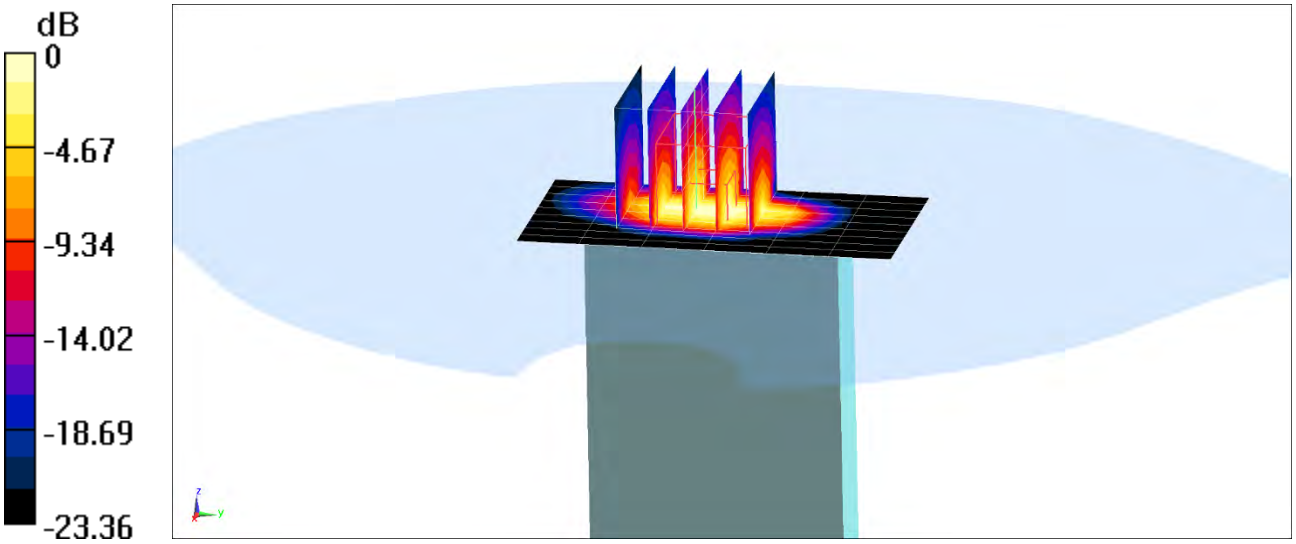
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.49 S/m; ε_r = 51.594; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-22-2019; Ambient Temp:23.2°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1732.4 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Phablet SAR, Bottom Edge, Mid.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.36 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 11.1 W/kg
SAR(10 g) = 2.16 W/kg



0 dB = 8.58 W/kg = 9.33 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

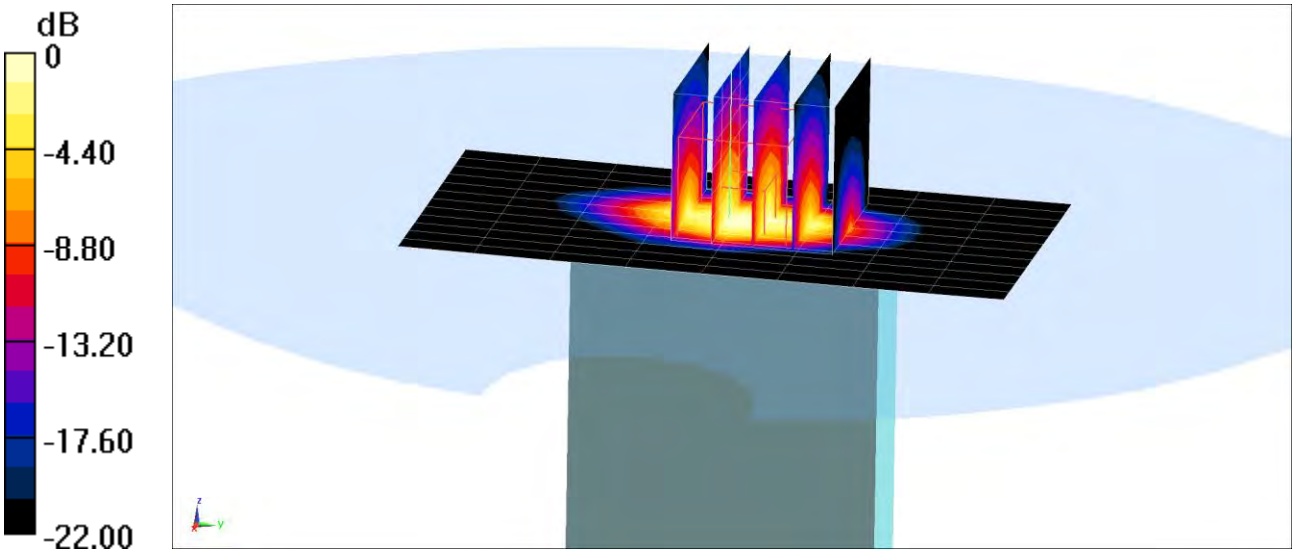
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.532 S/m; ε_r = 51.019; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-24-2019; Ambient Temp: 21.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Phablet SAR, Bottom Edge, Mid.ch

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.42 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 12.4 W/kg
SAR(10 g) = 2.27 W/kg



0 dB = 9.27 W/kg = 9.67 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

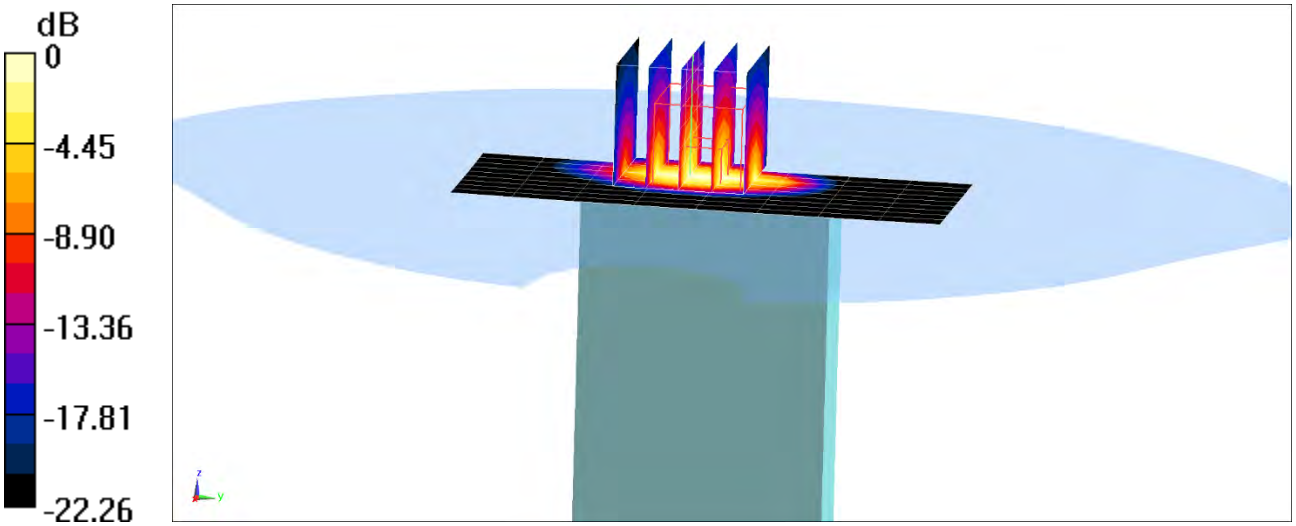
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1745 MHz; σ = 1.505 S/m; ε_r = 51.258; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-24-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1745 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), Phablet SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.80 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 11.5 W/kg
SAR(10 g) = 2.15 W/kg



0 dB = 8.96 W/kg = 9.52 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

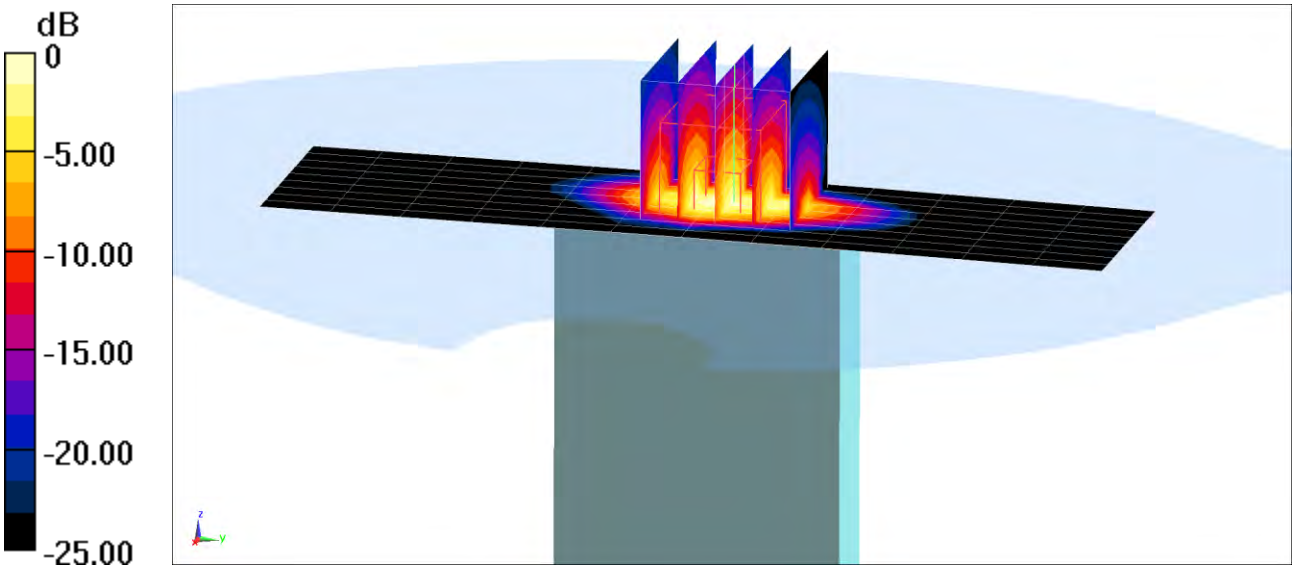
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.56 S/m; ε_r = 53.275; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.0°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1882.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), Phablet SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 70.42 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(10 g) = 2.9 W/kg



0 dB = 12.7 W/kg = 11.04 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

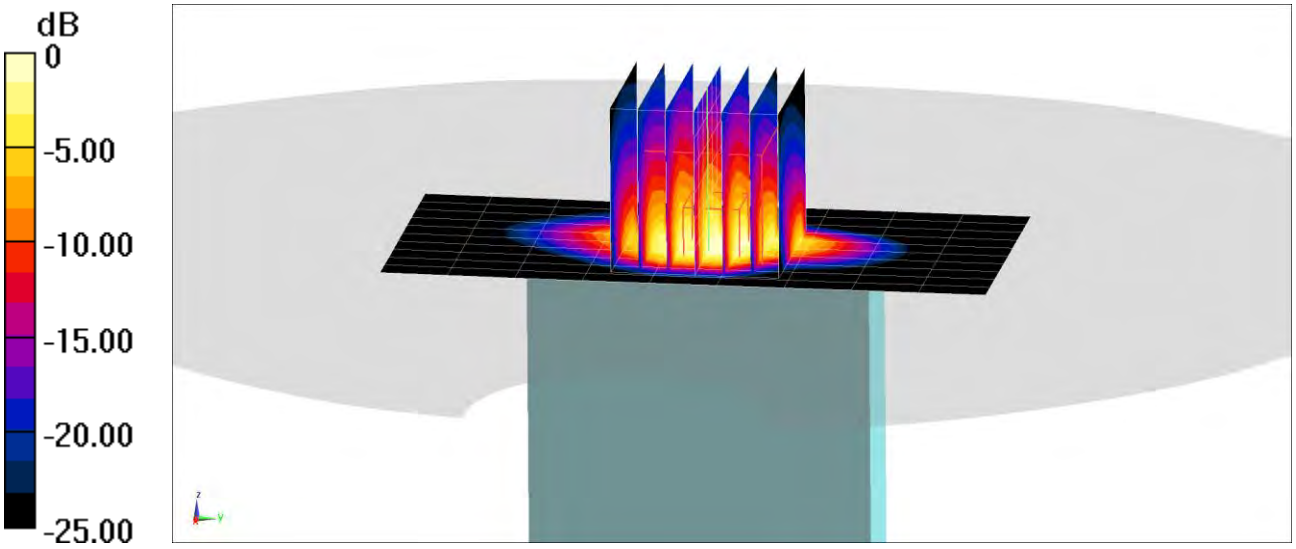
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used:
f = 2310 MHz; σ = 1.901 S/m; ε_r = 53.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-06-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(7.73, 7.73, 7.73) @ 2310 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 30, Phablet SAR, Bottom Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 61.19 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 13.8 W/kg
SAR(10 g) = 2.4 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

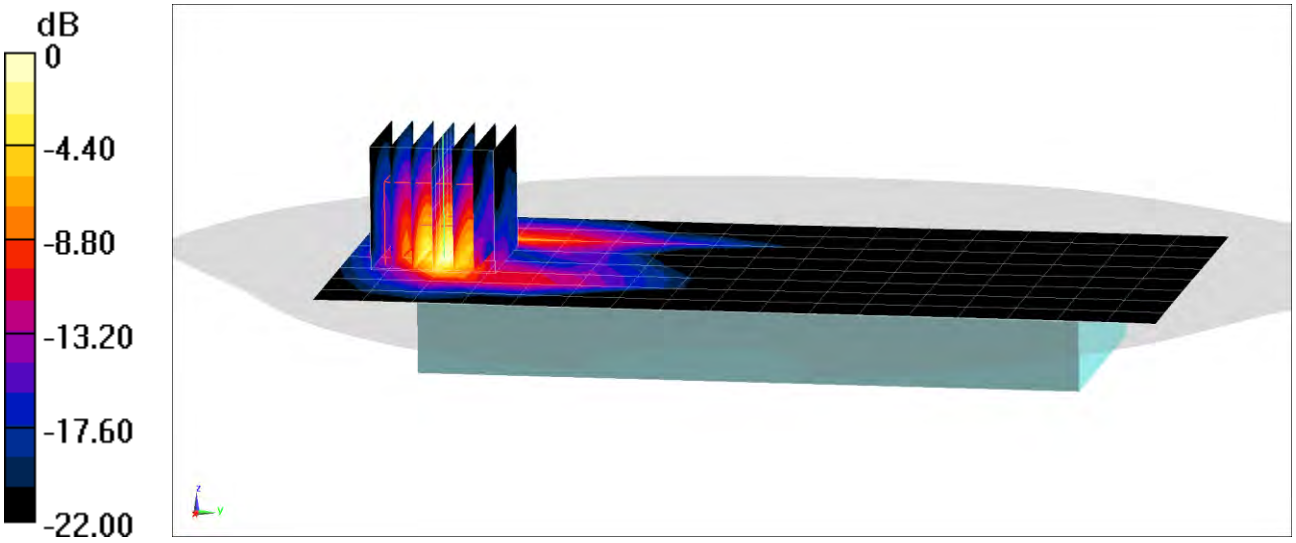
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2510 MHz; σ = 2.095 S/m; ε_r = 54.389; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-04-2019; Ambient Temp: 21.9°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2510 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, Phablet SAR, Front side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.97 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 14.3 W/kg
SAR(10 g) = 1.81 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

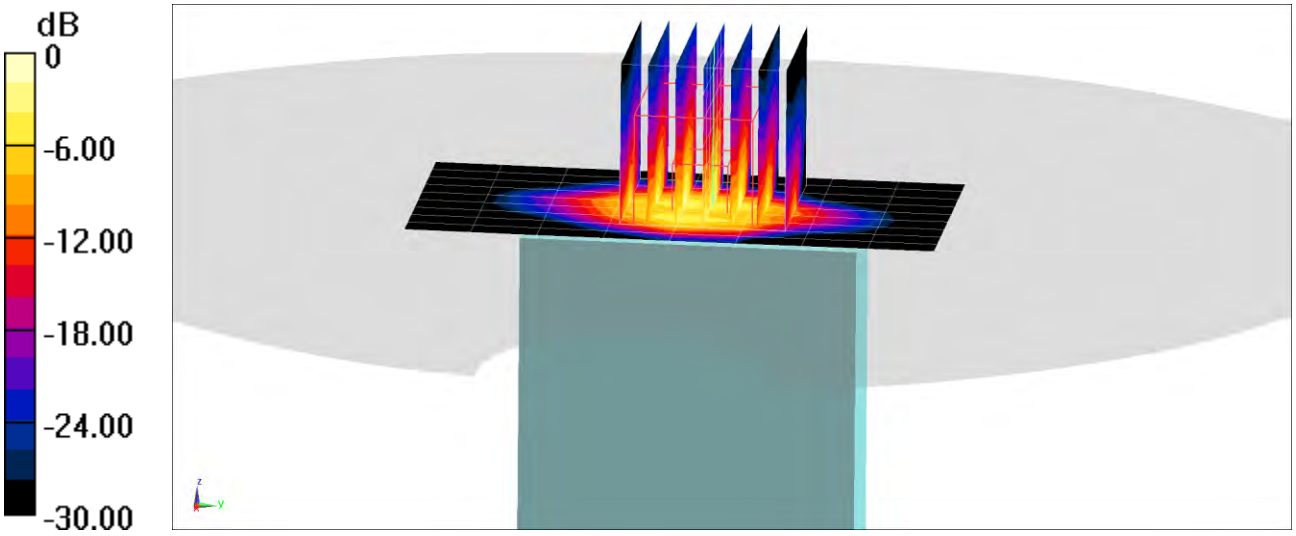
Communication System: UID 0, LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 MHz Body; Medium parameters used (interpolated):
f = 2680 MHz; σ = 2.264 S/m; ε_r = 52.923; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-06-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2680 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, Phablet SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.84 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 19.9 W/kg
SAR(10 g) = 1.91 W/kg



0 dB = 14.8 W/kg = 11.70 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

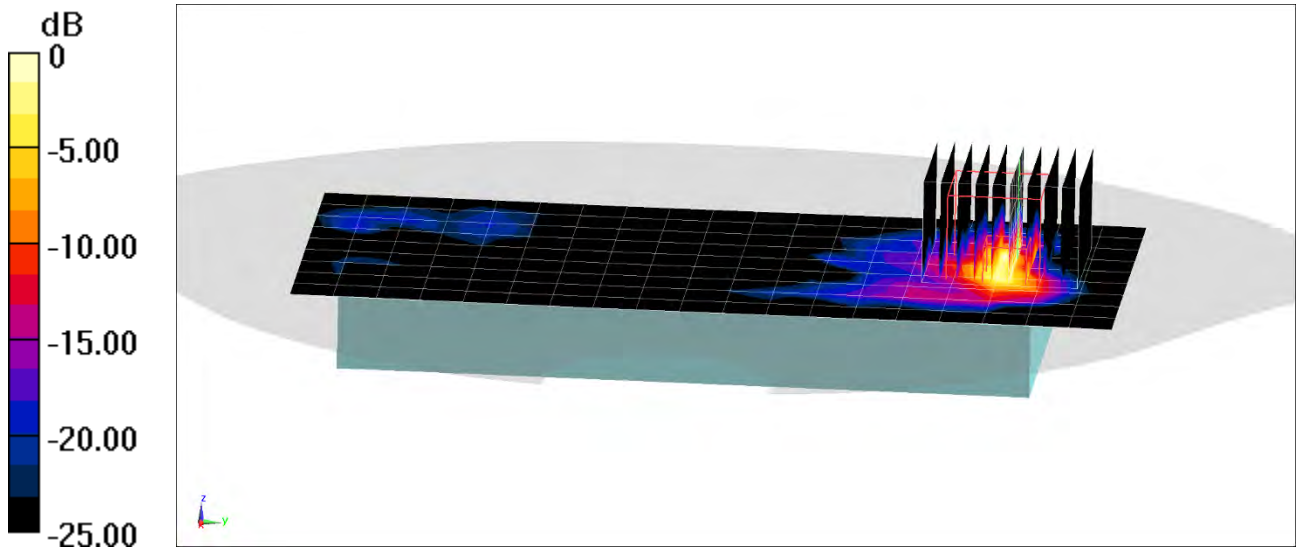
Communication System: UID 0, IEEE 802.11a 5.2-5.8 GHz Band; Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body; Medium parameters used:
f = 5500 MHz; σ = 5.81 S/m; ε_r = 47.291; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-13-2019; Ambient Temp: 22.6°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5500 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, Antenna 1, U-NII-2C, 20 MHz Bandwidth, Phablet SAR, Ch 100, 6 Mbps, Back Side

Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (10x10x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 23.44 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 22.0 W/kg
SAR(10 g) = 0.756 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

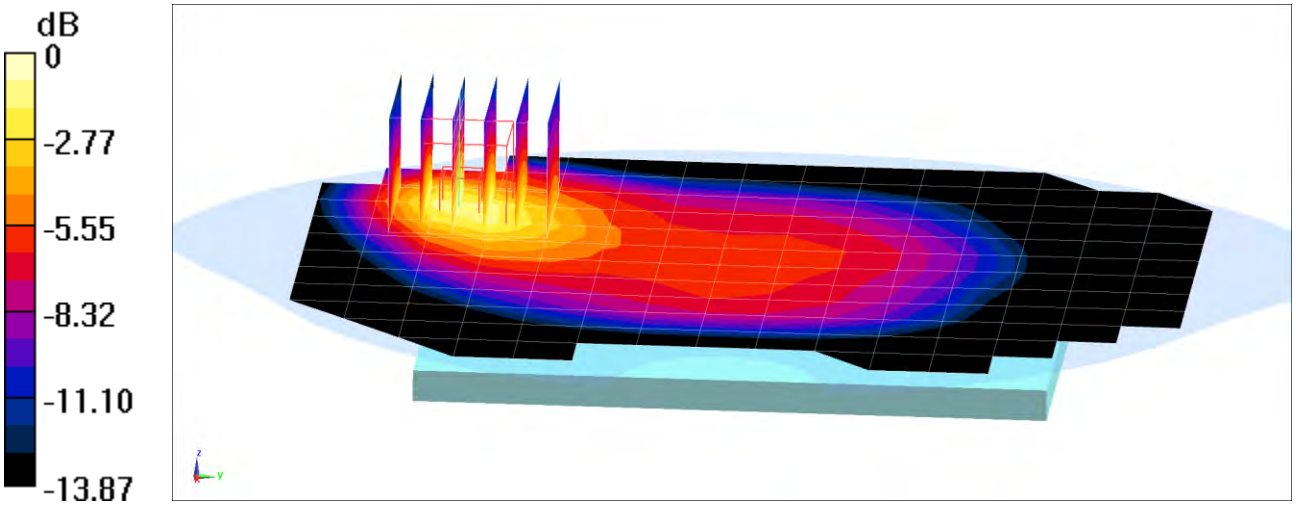
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.958 S/m; ε_r = 52.915; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-20-2019; Ambient Temp: 21.7°C; Tissue Temp: 21.2°C

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

Mode: GPRS 850, UMPC Body SAR, Back side, Mid.ch, 3 Tx Slots

Area Scan (13x16x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.28 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.998 W/kg
SAR(1 g) = 0.606 W/kg



0 dB = 0.841 W/kg = -0.75 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

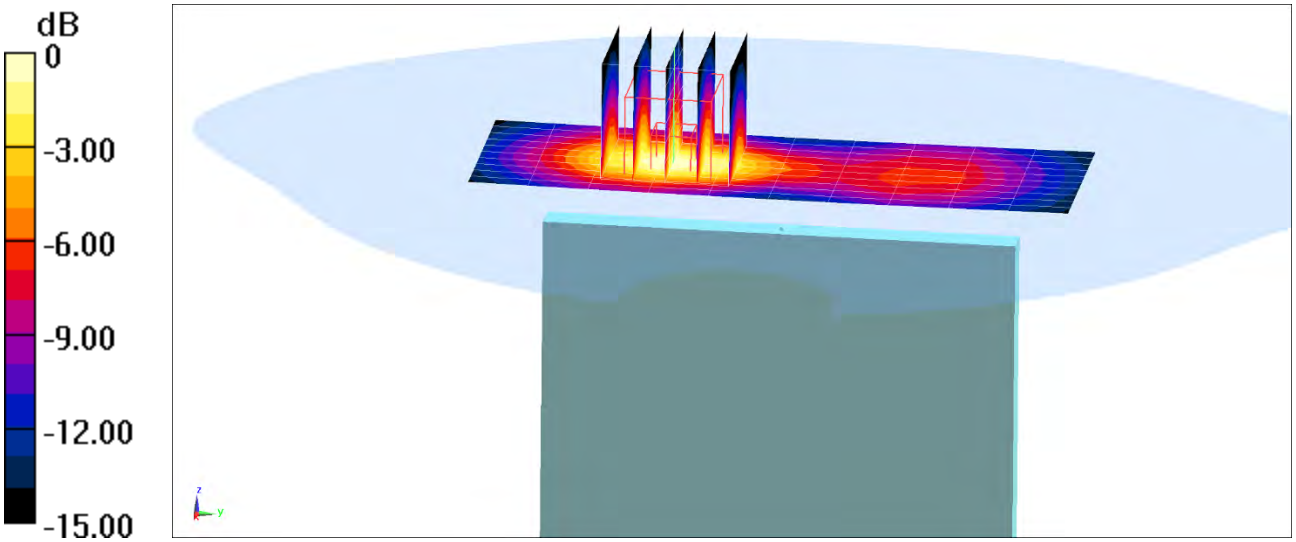
Communication System: UID 0, GSM GPRS; 2 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:4.15
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.542 S/m; ε_r = 51.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 03-05-2019; Ambient Temp: 21.7°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, UMPC Body SAR, Bottom Edge, Mid.ch, 2 Tx Slots

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.81 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.764 W/kg



0 dB = 1.15 W/kg = 0.61 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

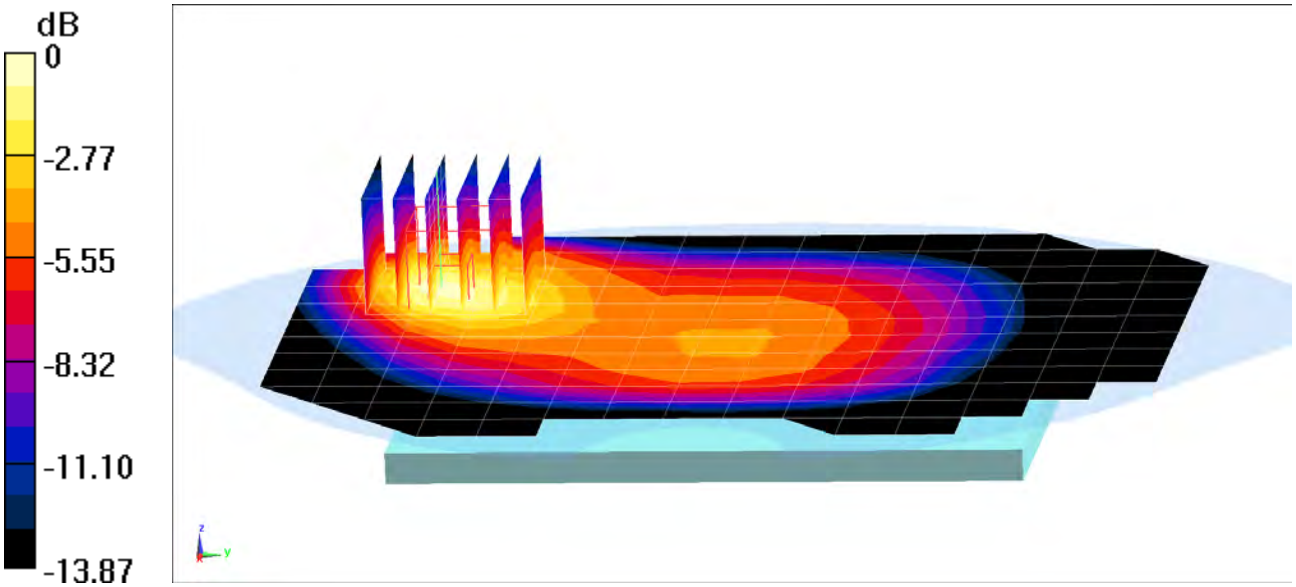
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.977 S/m; ε_r = 53.758; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.5°C; Tissue Temp: 20.0°C

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

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

Area Scan (13x16x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.24 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.525 W/kg
SAR(1 g) = 0.315 W/kg



0 dB = 0.437 W/kg = -3.60 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

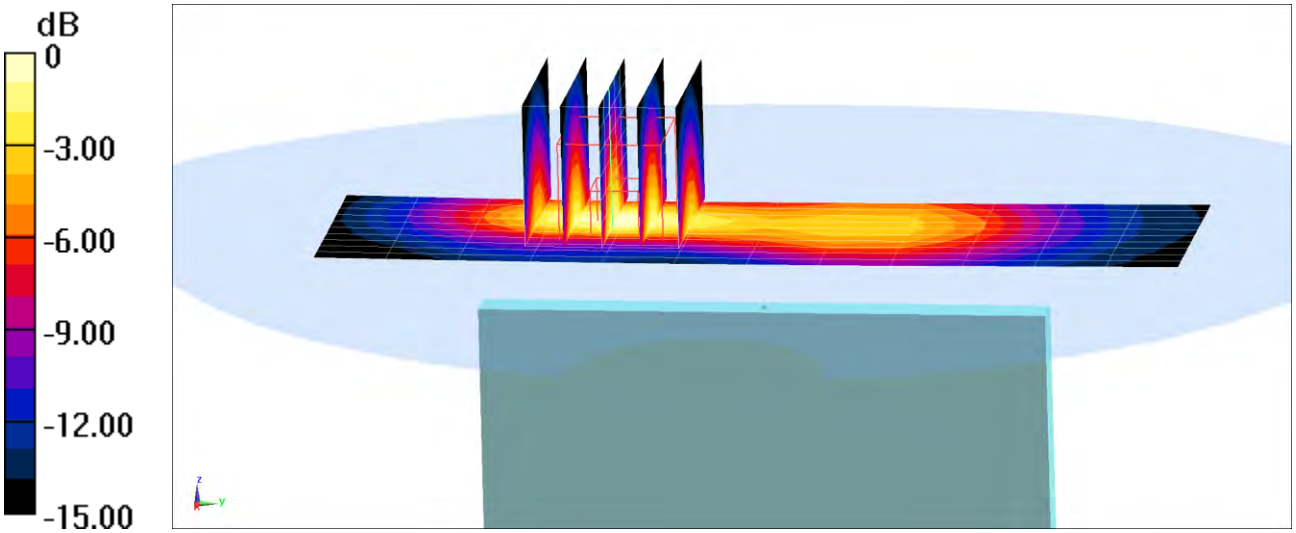
Communication System: UID 0, UMTS; Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1712.4 MHz; σ = 1.469 S/m; ε_r = 51.666; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 02-22-2019; Ambient Temp:23.2°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1712.4 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, UMPC Body SAR, Bottom Edge, Low.ch

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.68 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.989 W/kg
SAR(1 g) = 0.576 W/kg



0 dB = 0.816 W/kg = -0.88 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

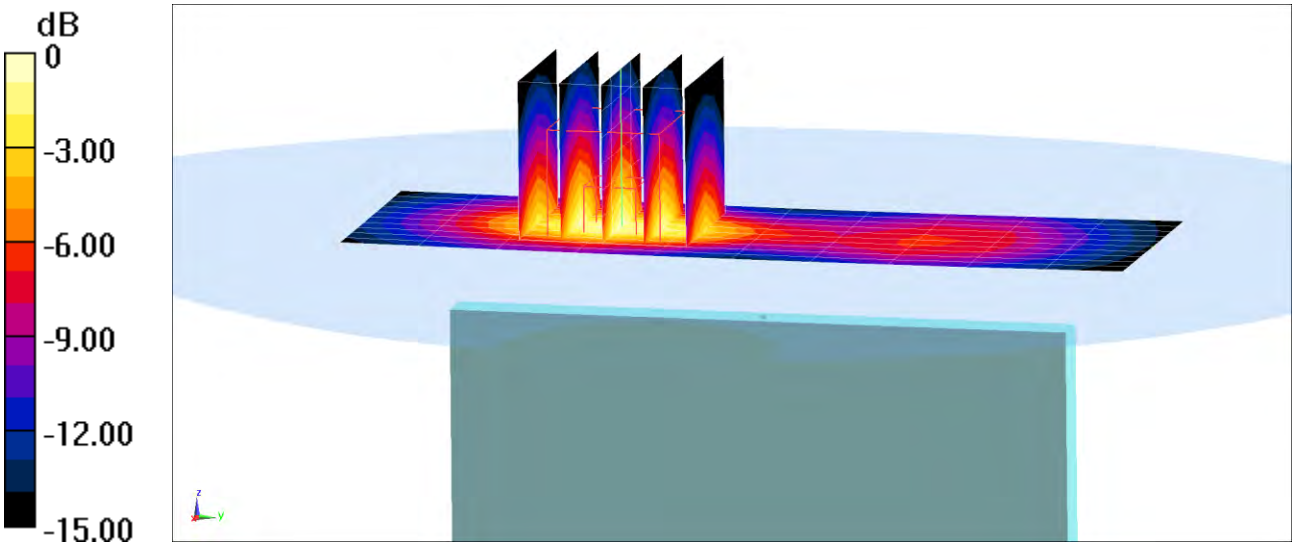
Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.573 S/m; ε_r = 51.286; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 03-05-2019; Ambient Temp: 21.7°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1907.6 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.52 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 1.05 W/kg



0 dB = 1.57 W/kg = 1.96 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

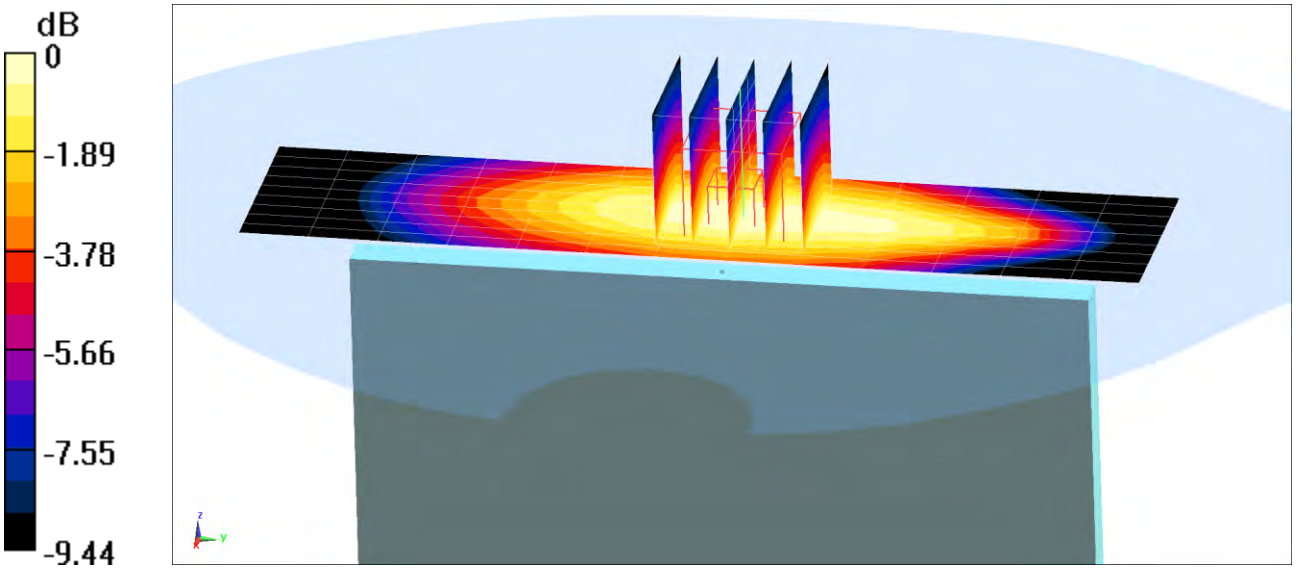
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.916 S/m; ε_r = 54.004; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-25-2019; Ambient Temp: 21.8°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 680.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, UMPC Body SAR, Right Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.82 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.526 W/kg
SAR(1 g) = 0.347 W/kg



0 dB = 0.459 W/kg = -3.38 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

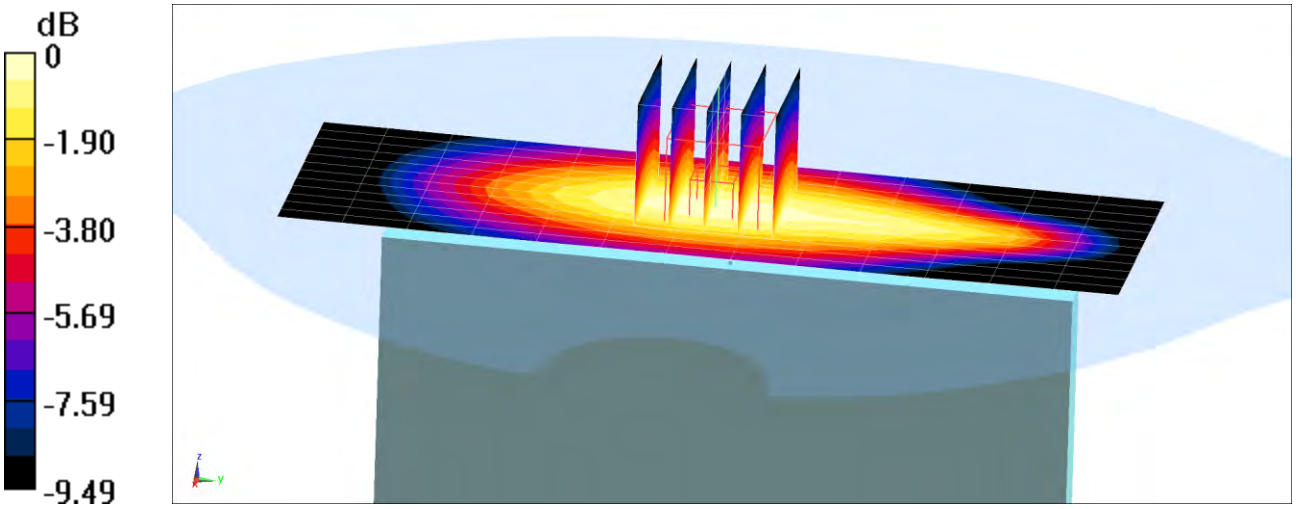
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 53.947; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-25-2019; Ambient Temp: 21.8°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 707.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, UMPC Body SAR, Right Edge, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (13x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.86 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.593 W/kg
SAR(1 g) = 0.392 W/kg



0 dB = 0.519 W/kg = -2.85 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

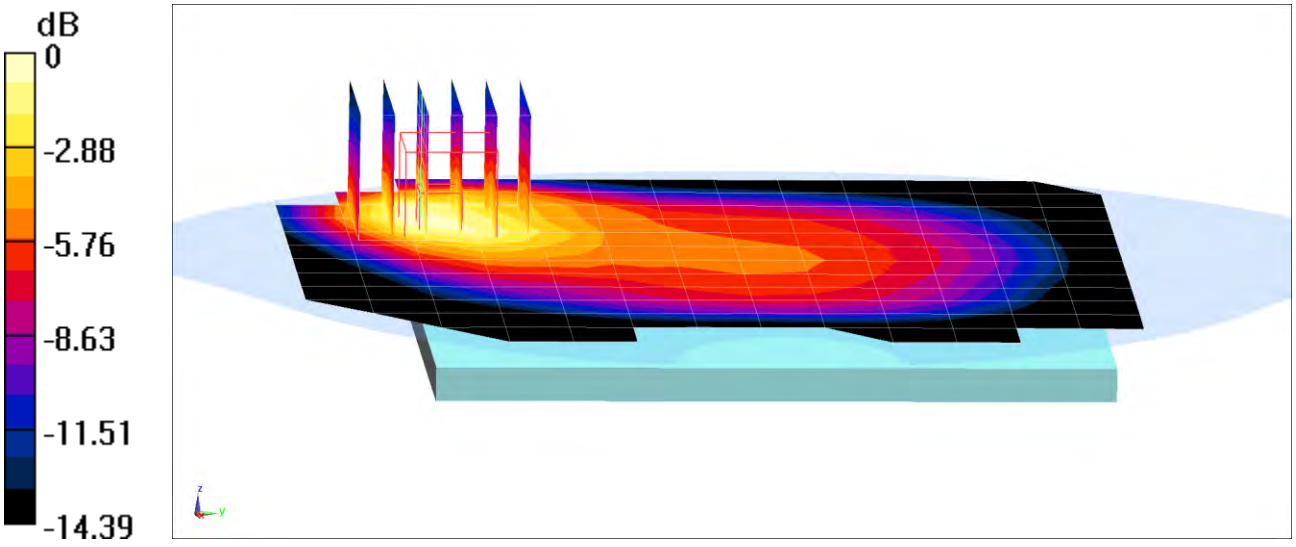
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 782 MHz; σ = 0.959 S/m; ε_r = 53.908; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-21-2019; Ambient Temp: 21.2°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 782 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

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

Area Scan (13x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.87 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.873 W/kg
SAR(1 g) = 0.495 W/kg;



0 dB = 0.706 W/kg = -1.51 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1389M

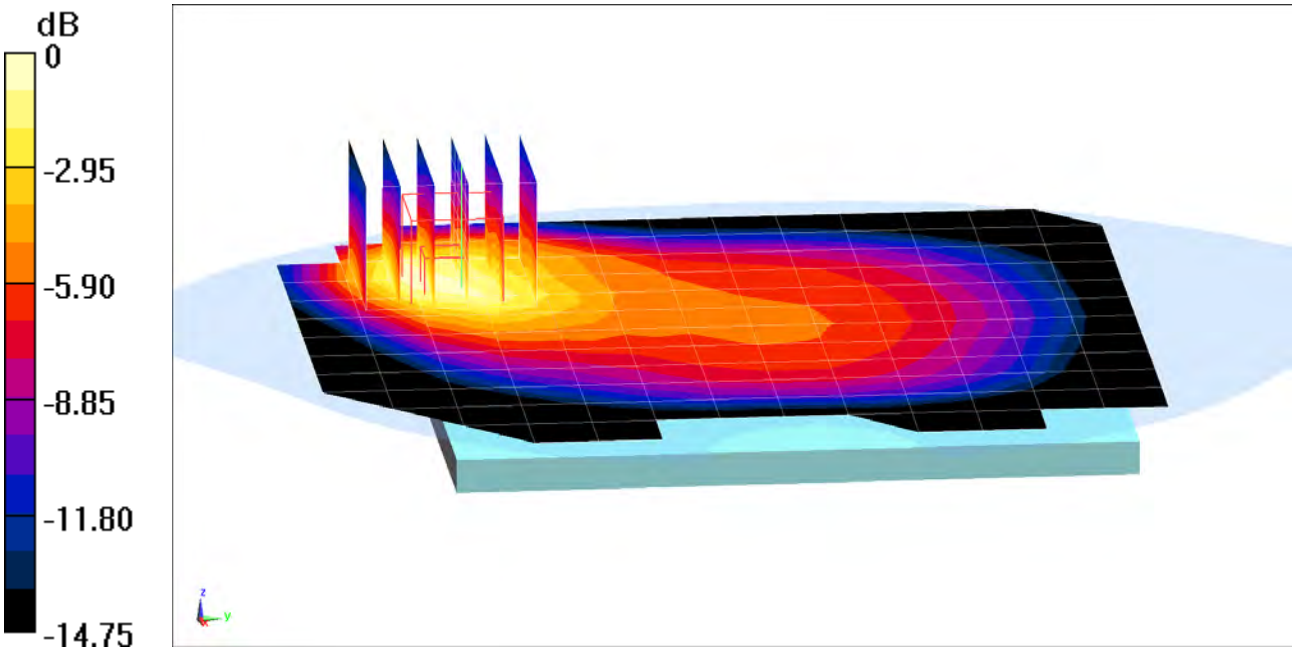
Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 793 MHz; σ = 0.963 S/m; ε_r = 53.877; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-21-2019; Ambient Temp: 21.2°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 793 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 14, UMPC Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.73 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.880 W/kg
SAR(1 g) = 0.496 W/kg



0 dB = 0.708 W/kg = -1.50 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

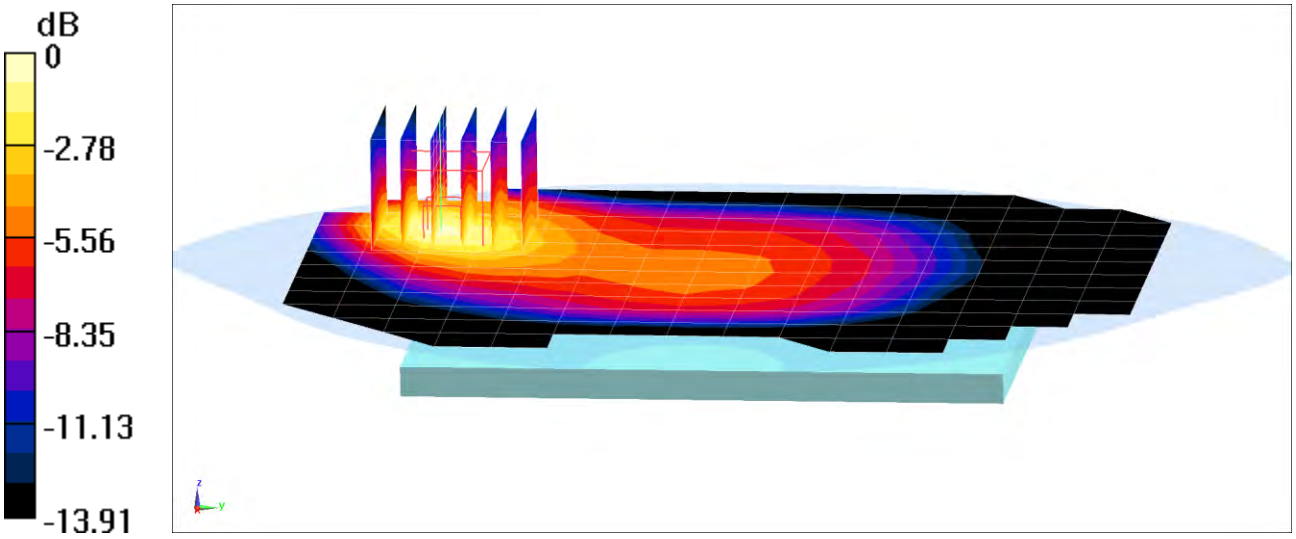
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.954 S/m; ε_r = 52.967; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-20-2019; Ambient Temp: 21.7°C; Tissue Temp: 21.2°C

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

Mode: LTE Band 26 (Cell.), UMPC Body SAR, Back side, Mid.ch, 15 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x16x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.46 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.579 W/kg
SAR(1 g) = 0.341 W/kg



0 dB = 0.486 W/kg = -3.13 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

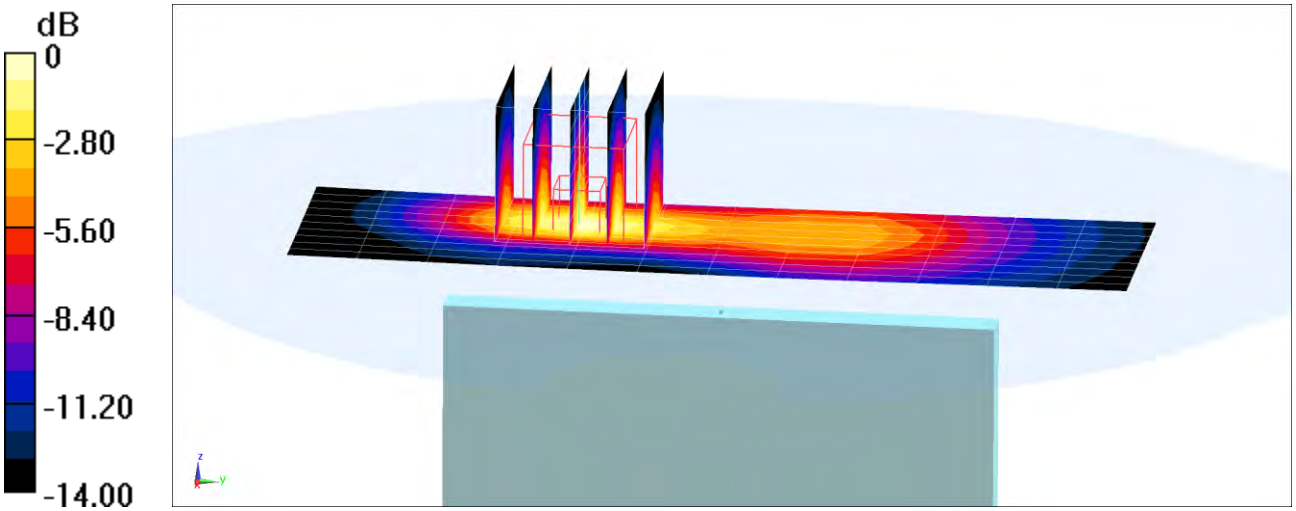
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1770 MHz; σ = 1.53 S/m; ε_r = 51.175; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 02-24-2019; Ambient Temp: 21.3°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1770 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 66 (AWS), UMPC Body SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.63 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.693 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

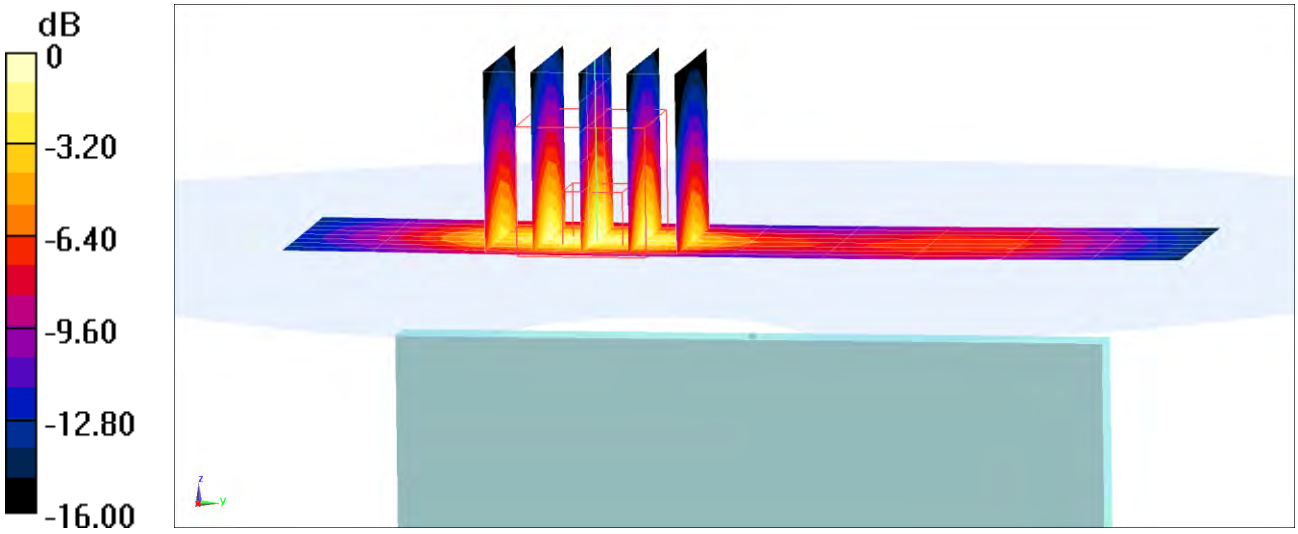
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.55 S/m; ε_r = 52.946; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 03-02-2019; Ambient Temp:21.0°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1882.5 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 25 (PCS), UMPC Body SAR, Bottom Edge, Mid.ch, 20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (9x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.59 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.973 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

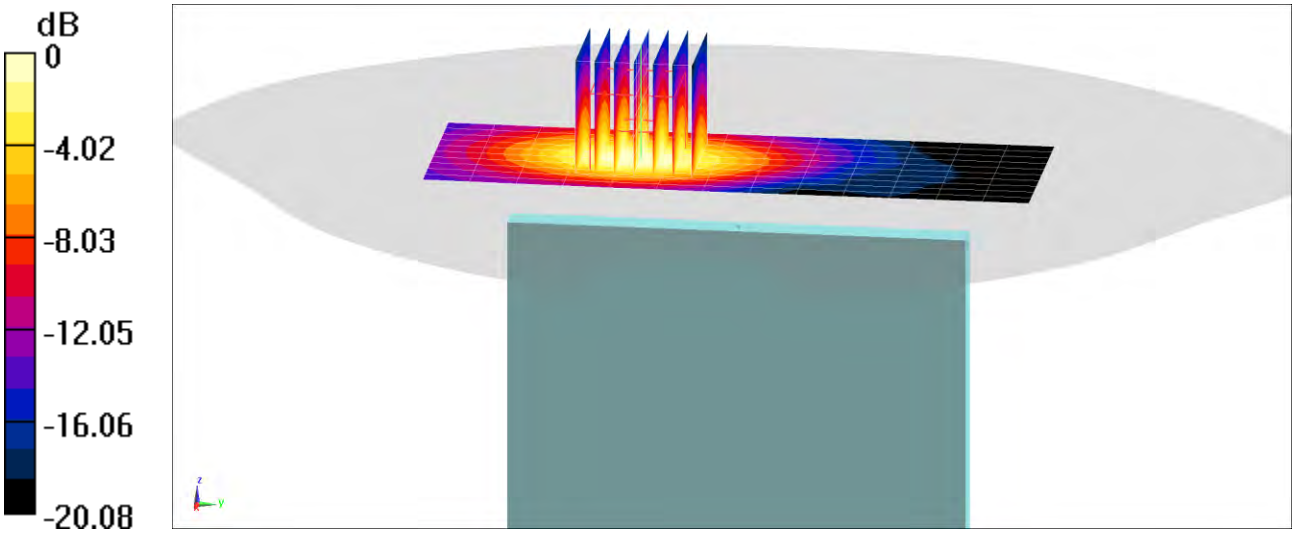
Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 MHz Body; Medium parameters used:
f = 2310 MHz; σ = 1.901 S/m; ε_r = 53.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 03-06-2019; Ambient Temp: 22.6°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(7.73, 7.73, 7.73) @ 2310 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 30, UMPC Body SAR, Bottom Edge, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x14x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.57 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 0.998 W/kg



0 dB = 1.56 W/kg = 1.93 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1382M

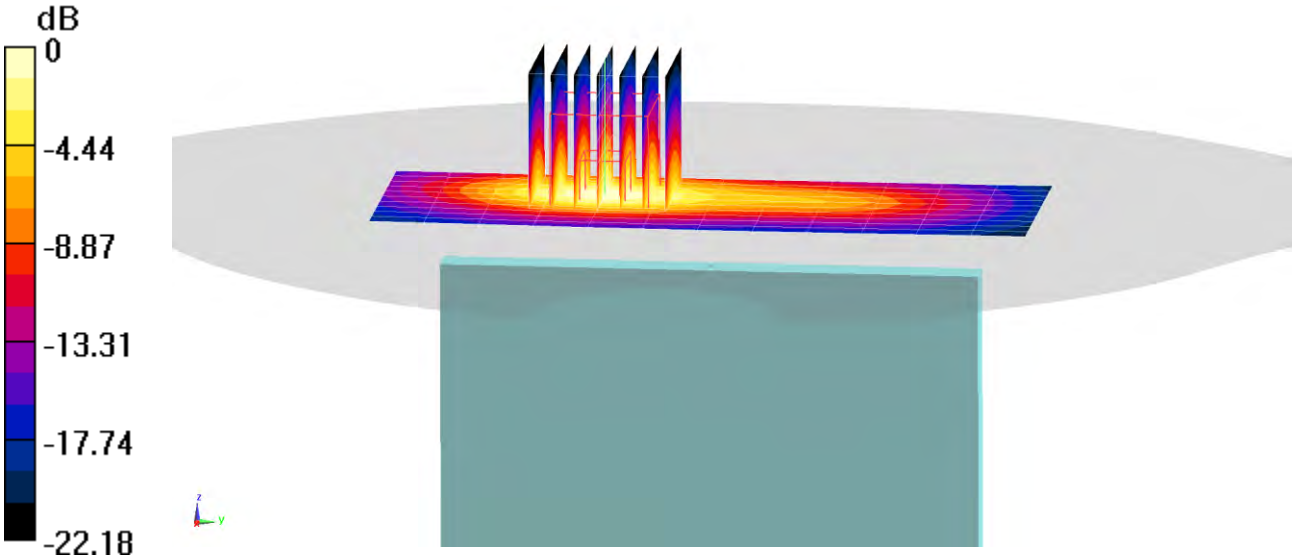
Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2560 MHz; σ = 2.166 S/m; ε_r = 52.189; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 02-18-2019; Ambient Temp: 21.9°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3319; ConvF(4.33, 4.33, 4.33) @ 2560 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 7, UMPC Body SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.62 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.47 W/kg
SAR(1 g) = 1.23 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1404M

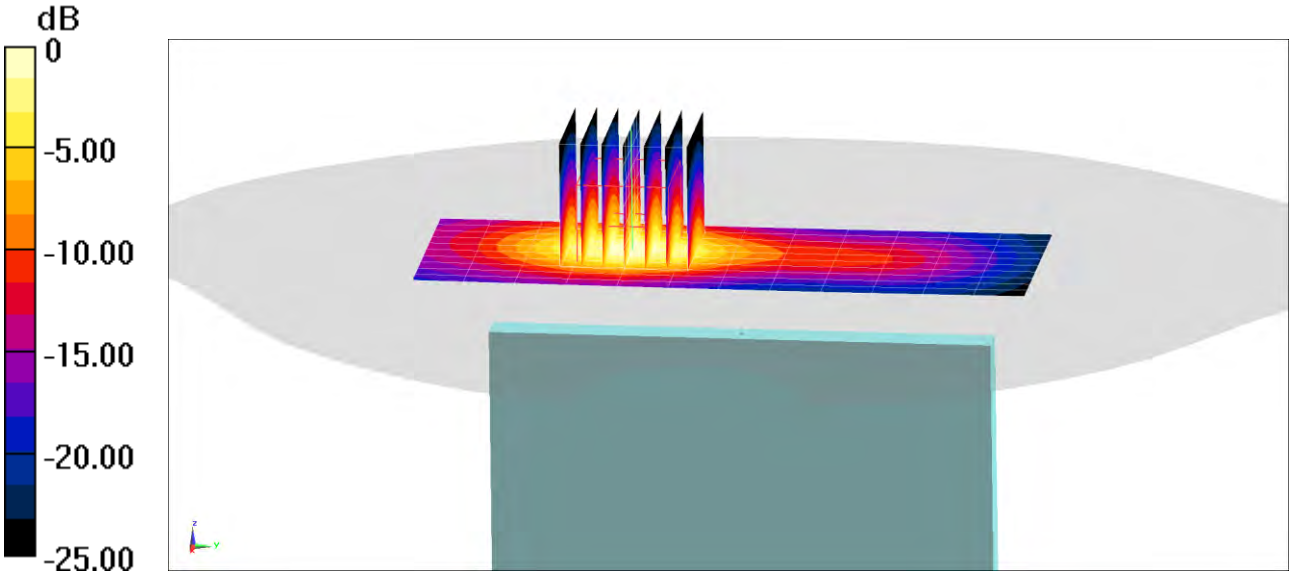
Communication System: UID 0, LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2680 MHz; σ = 2.314 S/m; ε_r = 51.779; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.3 cm

Test Date: 02-18-2019; Ambient Temp: 21.9°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3319; ConvF(4.33, 4.33, 4.33) @ 2680 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 41, UMPC Body SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.84 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 0.942 W/kg



0 dB = 1.24 W/kg = 0.93 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

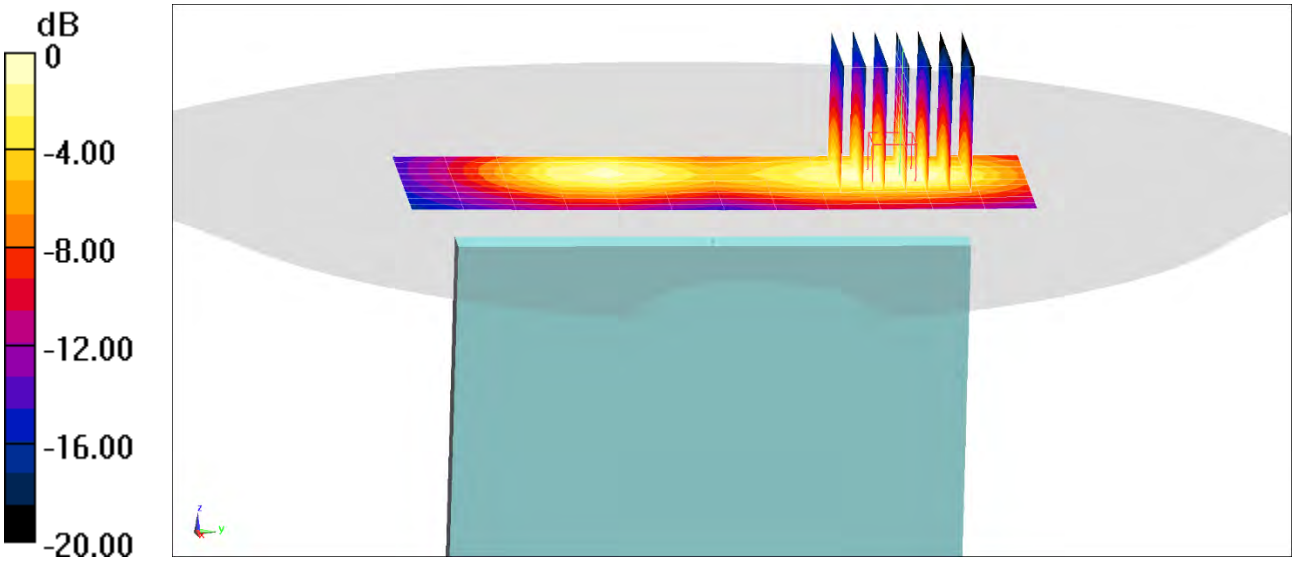
Communication System: UID 0, IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.988 S/m; ε_r = 52.117; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2412 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11b, Antenna 1, 22 MHz Bandwidth, UMPC Body SAR, Ch 01, 1 Mbps, Top Edge

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.592 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.954 W/kg
SAR(1 g) = 0.493 W/kg



0 dB = 0.892 W/kg = -0.50 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1360M

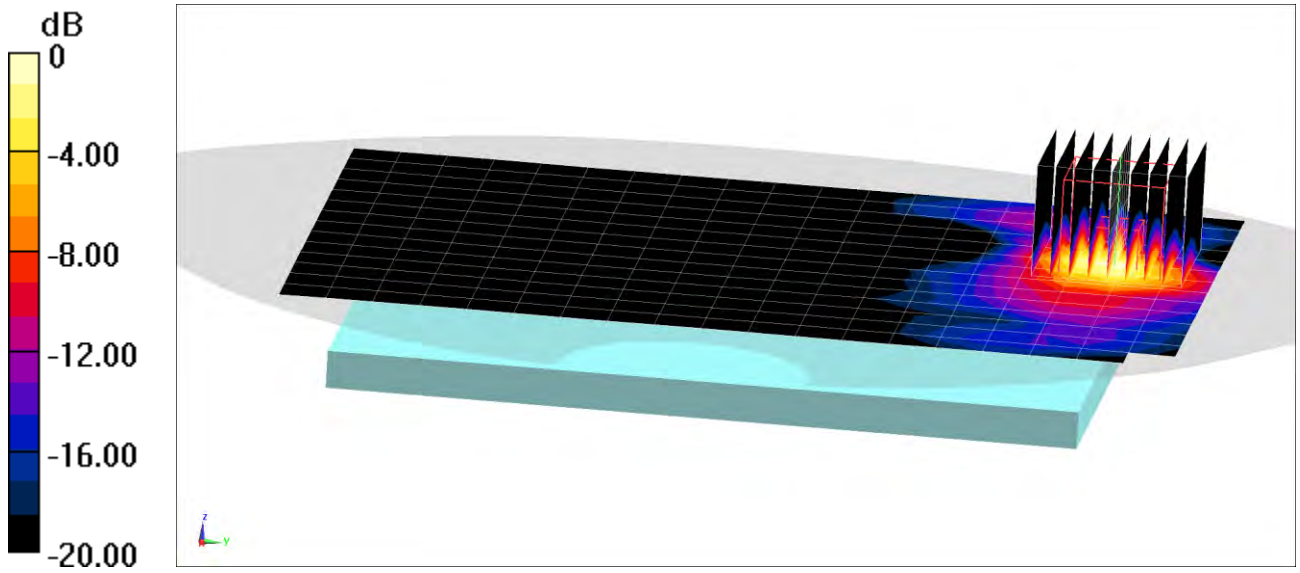
Communication System: UID 0, IEEE 802.11a 5.2-5.8 GHz Band; Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: 5 GHz Body; Medium parameters used:
f = 5500 MHz; σ = 5.81 S/m; ε_r = 47.291; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 22.6°C; Tissue Temp: 20.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5500 MHz; Calibrated: 8/23/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 10/3/2018
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: IEEE 802.11a, Antenna 1, U-NII-2C, 20 MHz Bandwidth, UMPC Body SAR, Ch 100, 6 Mbps, Back Side

Area Scan (15x20x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (10x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 11.61 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.83 W/kg
SAR(1 g) = 0.722 W/kg



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

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

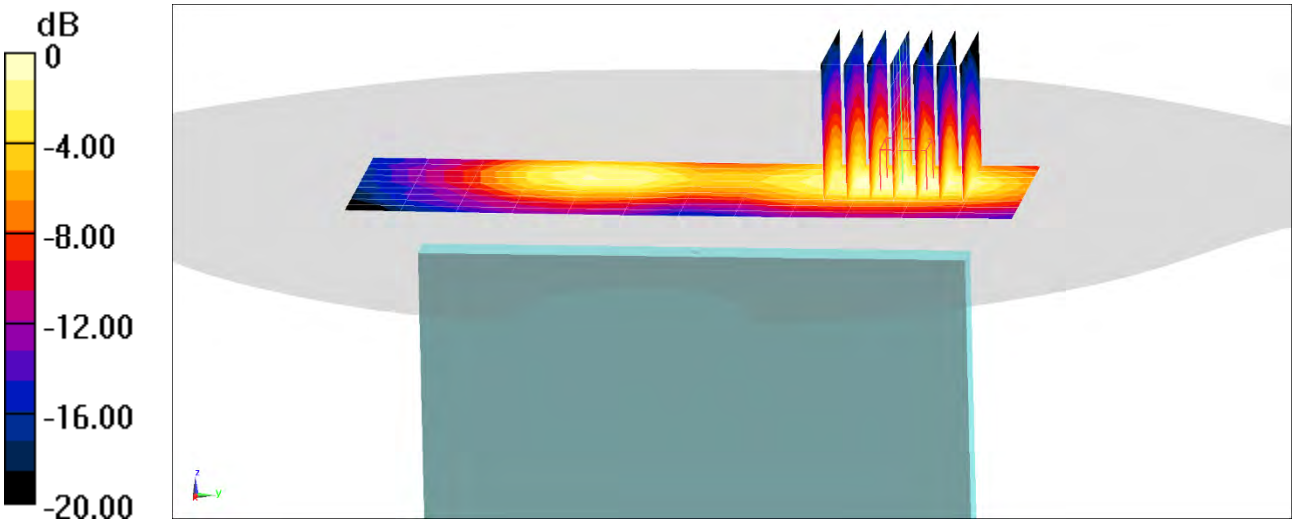
Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.975 S/m; ε_r = 52.143; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 02-13-2019; Ambient Temp: 22.2°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3319; ConvF(4.51, 4.51, 4.51) @ 2402 MHz; Calibrated: 3/13/2018
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/7/2018
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, UMPC Body SAR, Ch 0, 1 Mbps, Top Edge

Area Scan (10x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.770 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.197 W/kg
SAR(1 g) = 0.100 W/kg



0 dB = 0.155 W/kg = -8.10 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1385M

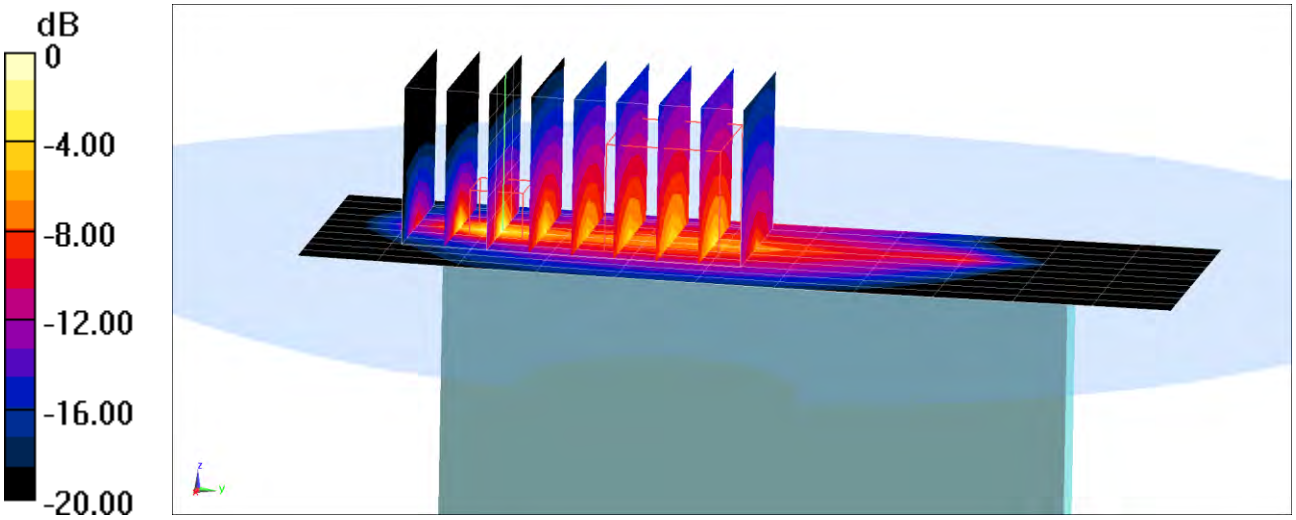
Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.76
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.958 S/m; ε_r = 52.915; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-20-2019; Ambient Temp: 21.7°C; Tissue Temp: 21.2°C

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

Mode: GPRS 850, UMPC Extremity SAR, Bottom Edge, Mid.ch, 3 Tx Slots

Area Scan (11x12x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x9x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 38.16 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 11.7 W/kg
SAR(10 g) = 1.33 W/kg



0 dB = 8.17 W/kg = 9.12 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

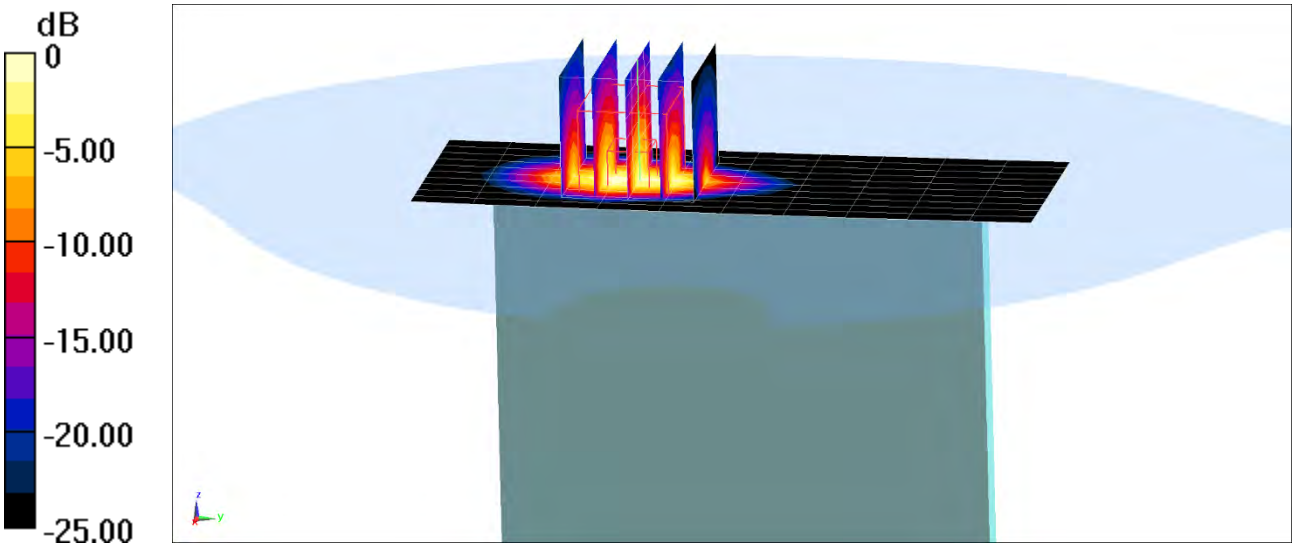
Communication System: UID 0, GSM GPRS; 2 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:4.15
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.542 S/m; ε_r = 51.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-05-2019; Ambient Temp: 21.7°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, UMPC Extremity SAR, Bottom Edge, Mid.ch, 2 Tx Slots

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 69.50 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 14.7 W/kg
SAR(10 g) = 2.35 W/kg



0 dB = 12.1 W/kg = 10.83 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1366M

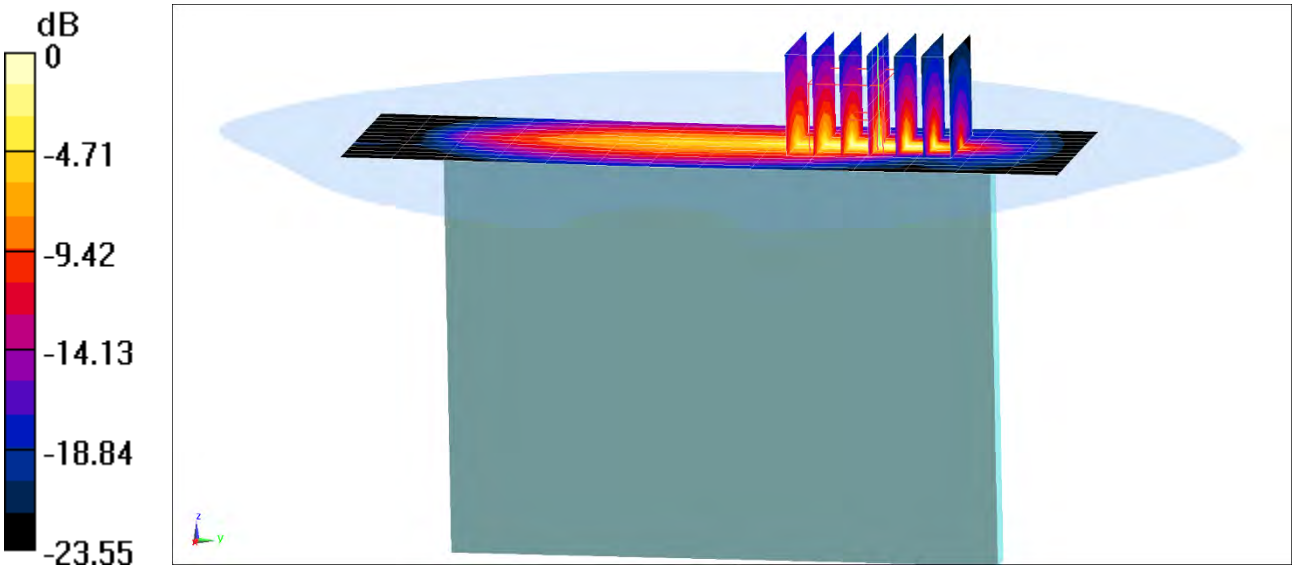
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.977 S/m; ε_r = 53.758; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-18-2019; Ambient Temp: 21.5°C; Tissue Temp: 20.0°C

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

Mode: UMTS 850, UMPC Extremity SAR, Right Edge, Mid.ch

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.38 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 11.8 W/kg
SAR(10 g) = 1.11 W/kg



0 dB = 7.76 W/kg = 8.90 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1407M

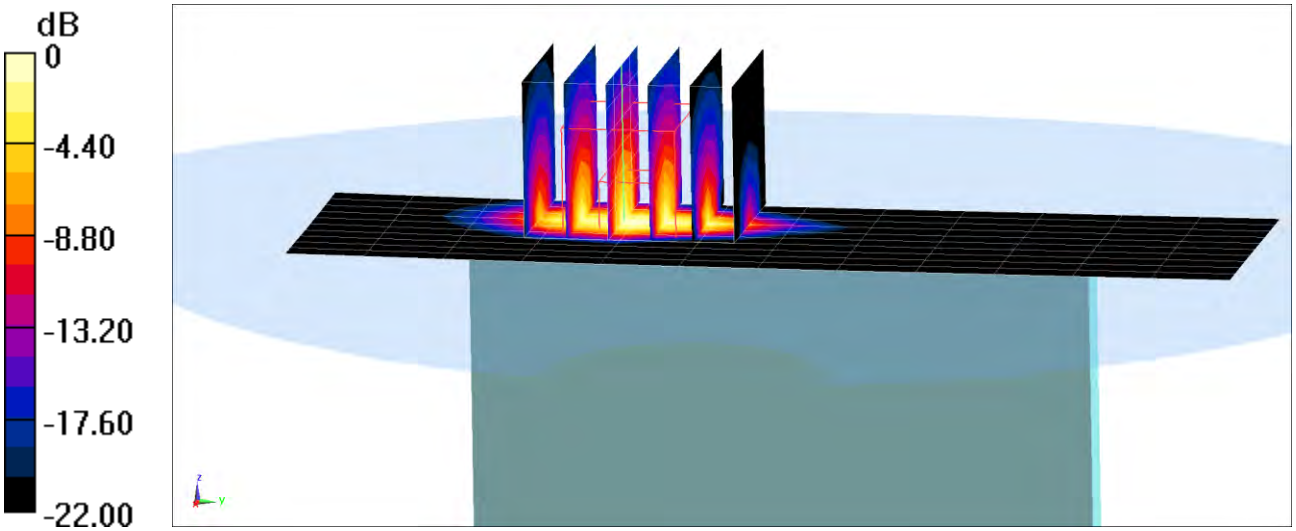
Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.49 S/m; ε_r = 51.594; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-22-2019; Ambient Temp:23.2°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7410; ConvF(8.06, 8.06, 8.06) @ 1732.4 MHz; Calibrated: 7/20/2018
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2018
Phantom: SAM Left; Type: QD000P40CA; Serial: TP:82355
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, UMPC Extremity SAR, Bottom Edge, Mid.ch

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 64.39 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 14.0 W/kg
SAR(10 g) = 2.38 W/kg



0 dB = 11.5 W/kg = 10.61 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1362M

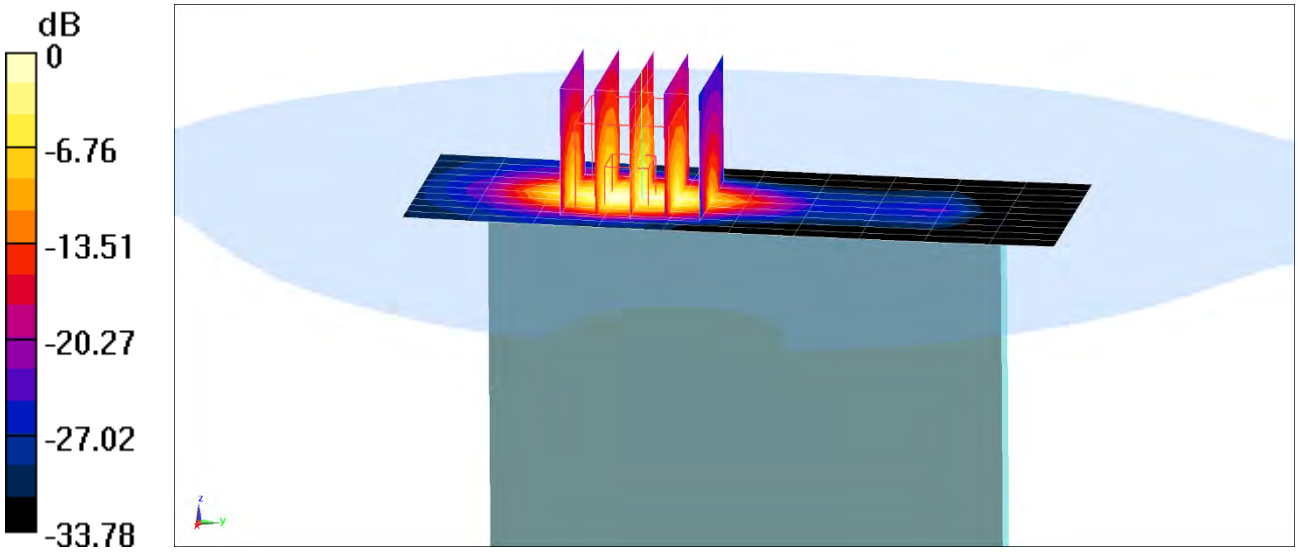
Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.542 S/m; ε_r = 51.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 03-05-2019; Ambient Temp: 21.7°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 1/24/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/15/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, UMPC Extremity SAR, Bottom Edge, Mid.ch

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 70.72 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 15.9 W/kg
SAR(10 g) = 2.42 W/kg



0 dB = 12.9 W/kg = 11.11 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

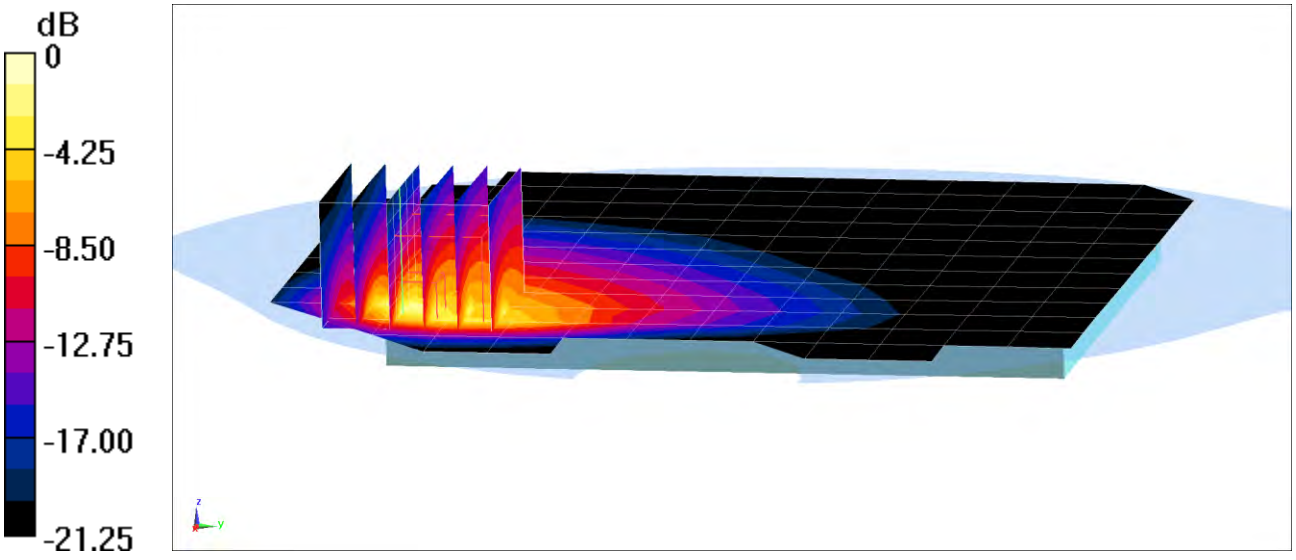
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.916 S/m; ε_r = 54.004; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-25-2019; Ambient Temp: 21.8°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 680.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 71, UMPC Extremity SAR, Front side, Mid.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (13x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 43.24 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 8.10 W/kg
SAR(10 g) = 1.07 W/kg



0 dB = 5.37 W/kg = 7.30 dBW/kg

DUT: A3LSMF900F; Type: Portable Handset; Serial: 1358M

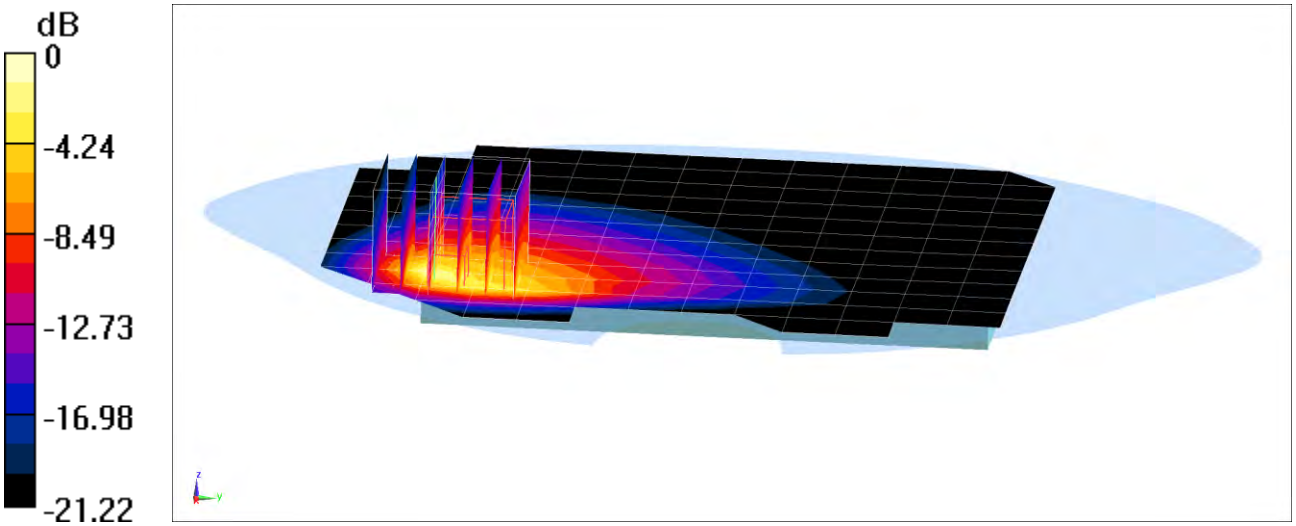
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.931 S/m; ε_r = 53.947; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 02-25-2019; Ambient Temp: 21.8°C; Tissue Temp: 19.8°C

Probe: EX3DV4 - SN3589; ConvF(8.34, 8.34, 8.34) @ 707.5 MHz; Calibrated: 1/25/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1450; Calibrated: 8/22/2018
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648
Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: LTE Band 12, UMPC Extremity SAR, Front side, Mid.ch, 10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

Area Scan (13x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.88 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 7.83 W/kg
SAR(10 g) = 1.08 W/kg



0 dB = 5.18 W/kg = 7.14 dBW/kg