



SAR EVALUATION REPORT

Applicant Name:

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Date of Testing:

09/08/14 - 09/18/14

Test Site/Location:

PCTEST Lab, Columbia, MD, USA

Document Serial No.:

0Y1409111847.A3L

FCC ID:

A3LSMN915T

APPLICANT:

SAMSUNG ELECTRONICS, CO. LTD.

DUT Type:

Portable Handset

Application Type:

Certification

FCC Rule Part(s):

CFR §2.1093

Model(s):

SM-N915T

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1 gm Head (W/kg)	1 gm Body-Worn (W/kg)	1 gm Hotspot (W/kg)	10 gm Extremity (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	< 0.1	0.18	0.36	
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.10	0.22	1.04	
PCE	UMTS 850	826.40 - 846.60 MHz	< 0.1	0.19	0.46	
PCE	UMTS 1750	1712.4 - 1752.5 MHz	0.15	0.36	0.78	
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.16	0.27	1.03	3.36
PCE	LTE Band 12	699.7 - 715.3 MHz	< 0.1	0.19	0.30	
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	< 0.1	0.19	0.56	
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	0.20	0.31	0.76	
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	0.11	0.30	0.95	2.71
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.21	0.16	0.16	
DTS	5.8 GHz WLAN	5745 - 5825 MHz	0.46	0.12	0.12	
NII	5.2 GHz WLAN	5180 - 5240 MHz	0.21	< 0.1		0.30
NII	5.3 GHz WLAN	5260 - 5320 MHz	0.22	< 0.1		0.29
NII	5.5 GHz WLAN	5500 - 5700 MHz	0.59	0.13		0.43
DSS/DTS	Bluetooth	2402 - 2480 MHz	N/A			
Simultaneous SAR per KDB 690783 D01v01r03:			1.07	0.54	1.04	3.36

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.9 of this report; for North American frequency bands only.

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


Randy Ortanez
President



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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 - 1752.5 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 17	Voice/Data	706.5 - 713.5 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz
5.8 GHz WLAN	Voice/Data	5745 - 5825 MHz
5.2 GHz WLAN	Voice/Data	5180 - 5240 MHz
5.3 GHz WLAN	Voice/Data	5260 - 5320 MHz
5.5 GHz WLAN	Voice/Data	5500 - 5700 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
ANT+	Data	2402 - 2480 MHz

1.2 Power Reduction for SAR

The device utilizes power reduction under some portable hotspot conditions for SAR compliance. There is power reduction for UMTS Band4, UMTS Band 2, LTE Band 4, and LTE Band 2. There is no power reduction for GSM/GPRS/EDGE 850, GSM/GPRS/EDGE 1900, UMTS Band 5, LTE Band 12/17, LTE Band 5, and BT/WLAN modes. The reduced powers were confirmed via conducted power measurements at the RF port (See Section 9). Detailed description of the hotspot power reduction mechanism is included in the operational description.

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 D01v05.

1.3.1 Maximum Power

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
GSM/GPRS/EDGE 850	Maximum	33.5	33.5	31.0	29.0	28.0	26.5	25.0	23.0	22.0
	Nominal	33.0	33.0	30.5	28.5	27.5	26.0	24.5	22.5	21.5
GSM/GPRS/EDGE 1900	Maximum	30.5	30.5	28.0	26.0	25.0	25.0	23.0	21.0	20.0
	Nominal	30.0	30.0	27.5	25.5	24.5	24.5	22.5	20.5	19.5

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Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC- HSDPA Rel 8
UMTS Band 5 (850 MHz)	Maximum	24.5	23.0	23.0	23.0
	Nominal	24.0	22.5	22.5	22.5
UMTS Band 4 (1750 MHz)	Maximum	23.5	23.0	23.0	23.0
	Nominal	23.0	22.5	22.5	22.5
UMTS Band 2 (1900 MHz)	Maximum	24.0	23.0	23.0	23.0
	Nominal	23.5	22.5	22.5	22.5

Mode / Band		Modulated Average (dBm)
LTE Band 12	Maximum	25.0
	Nominal	24.5
LTE Band 17	Maximum	25.0
	Nominal	24.5
LTE Band 5 (Cell)	Maximum	24.5
	Nominal	24.0
LTE Band 4 (AWS)	Maximum	23.5
	Nominal	23.0
LTE Band 2 (PCS)	Maximum	24.0
	Nominal	23.5

Mode / Band		Modulated Average (dBm)
IEEE 802.11b (2.4 GHz) - SISO	Maximum	15.5
	Nominal	15.0
IEEE 802.11g (2.4 GHz) - SISO	Maximum	14.5
	Nominal	14.0
IEEE 802.11n (2.4 GHz) - SISO	Maximum	13.5
	Nominal	13.0
IEEE 802.11n (2.4 GHz) - MIMO	Maximum	16.5
	Nominal	16.0
IEEE 802.11a (5 GHz) - SISO	Maximum	12.5
	Nominal	12.0
IEEE 802.11n/ac 20 MHz (5 GHz) - SISO	Maximum	12.5
	Nominal	12.0
IEEE 802.11n/ac 20 MHz (5 GHz) - MIMO	Maximum	15.5
	Nominal	15.0
IEEE 802.11n/ac 40 MHz (5 GHz) - SISO	Maximum	9.5
	Nominal	9.0
IEEE 802.11n/ac 40 MHz (5 GHz) - MIMO	Maximum	12.5
	Nominal	12.0
IEEE 802.11ac 80 MHz (5 GHz) - SISO	Maximum	10.5
	Nominal	10.0
IEEE 802.11ac 80 MHz (5 GHz) - MIMO	Maximum	13.5
	Nominal	13.0
Bluetooth	Maximum	9.0
	Nominal	8.5
Bluetooth LE	Maximum	4.5
	Nominal	4.0

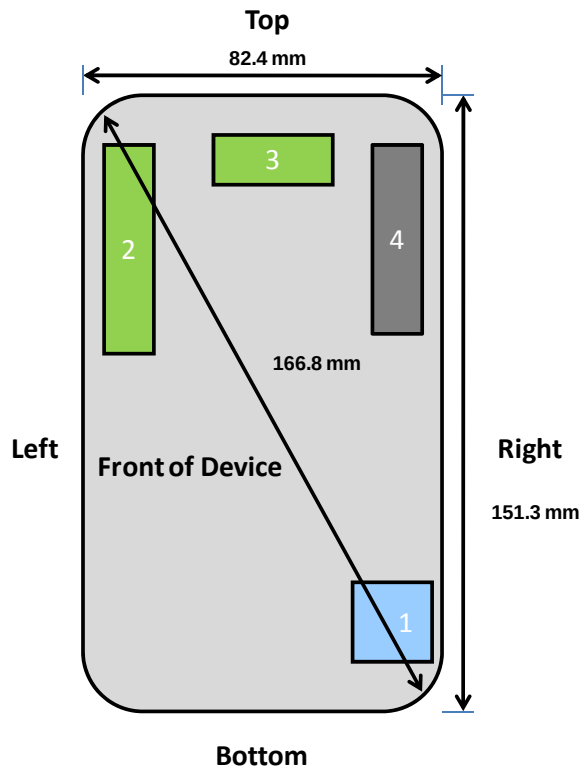
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1.3.2 Reduced Power

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
UMTS Band 4 (1750 MHz)	Maximum	22.0	21.0	21.0	21.0
	Nominal	21.5	20.5	20.5	20.5
UMTS Band 2 (1900 MHz)	Maximum	22.0	21.0	21.0	22.0
	Nominal	21.5	20.5	20.5	21.5

Mode / Band		Modulated Average (dBm)	
LTE Band 4 (AWS)	Maximum	21.5	
	Nominal	21.0	
LTE Band 2 (PCS)	Maximum	21.5	
	Nominal	21.0	

1.4 DUT Antenna Locations



1. Main Antenna
 - 850/1900 MHz GSM/GPRS/EDGE (Tx/Rx)
 - 850/1750/1900 MHz UMTS (Tx/Rx)
 - LTE B2/B4/B5/B12/B17 (Tx/Rx)
2. WIFI Antenna 1
 - 2.4/5 GHz WIFI (Tx/Rx)
3. BT/WIFI Antenna 2, UMTS/LTE Diversity Antenna
 - 2.4/5 GHz WIFI (Tx/Rx)
 - 2.4 GHz BT (Tx/Rx)
 - UMTS/LTE/GPS (Rx only)
4. Sub Antenna
 - UMTS/LTE (Rx only)

Figure 1-1
DUT Antenna Locations

Note:

1. Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC Filing.
2. Since the diagonal dimension of this device is > 160 mm and <200 mm, it is considered a "phablet."

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Table 1-1
Sides for SAR Testing

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
UMTS 1900 Extremity	No	No	No	Yes	No	No
LTE Band 12	Yes	Yes	No	Yes	Yes	No
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	No
LTE Band 4 (AWS)	Yes	Yes	No	Yes	Yes	No
LTE Band 2 (PCS)	Yes	Yes	No	Yes	Yes	No
LTE Band 2 (PCS) Extremity	No	No	No	Yes	No	No
2.4 GHz WLAN Ant 1	Yes	Yes	Yes	No	No	Yes
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	No
5 GHz WLAN MIMO	Yes	Yes	Yes	No	No	Yes

Note: Particular DUT edges were not required to be evaluated for Wireless Router SAR or Extremity SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v01 guidance, page 2 and FCC KDB 648474 D04v01r01. The distances between the transmit antennas and the edges of the device are included in the filing.

1.5 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the specialized battery. The SAR tests were performed with the specialized battery (model: EB-BN915BBU).

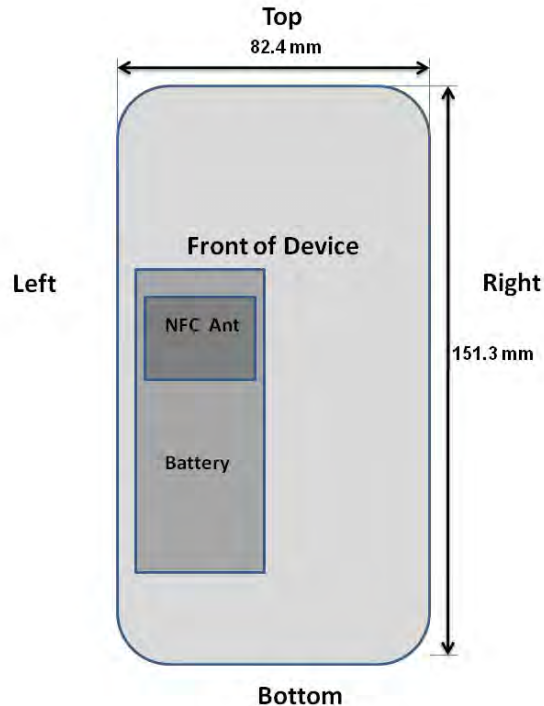


Figure 1-2
NFC Antenna Locations

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1.6 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D05v01, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the DUT are shown in Figure 1-3 and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

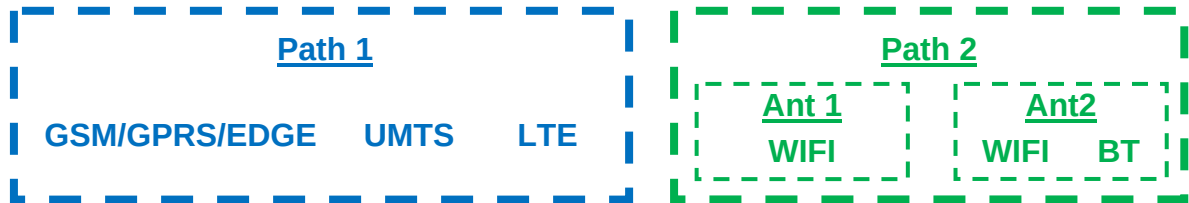


Figure 1-3
Simultaneous Transmission Paths

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v05 3) procedures.

Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Extremity
1	GSM voice + 2.4 GHz Wi-Fi	Yes	Yes	N/A	Yes
2	GSM voice + 5 GHz Wi-Fi	Yes	Yes	N/A	Yes
3	GSM voice + 2.4 GHz Bluetooth	N/A	Yes	N/A	Yes
4	UMTS + 2.4 GHz Wi-Fi	Yes	Yes	Yes	Yes
5	UMTS + 5 GHz Wi-Fi	Yes	Yes	Yes	Yes
6	UMTS + 2.4 GHz Bluetooth	N/A	Yes	N/A	Yes
7	LTE + 2.4 GHz Wi-Fi	Yes	Yes	Yes	Yes
8	LTE + 5 GHz Wi-Fi	Yes	Yes	Yes	Yes
9	LTE + 2.4 GHz Bluetooth	N/A	Yes	N/A	Yes
10	GPRS/EDGE + 2.4 GHz Wi-Fi	N/A	N/A	Yes	Yes
11	GPRS/EDGE + 5 GHz Wi-Fi	N/A	N/A	Yes	Yes

Note:

- 2.4 GHz WLAN, 5 GHz WLAN, and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
- All licensed modes share the same antenna path and cannot transmit simultaneously.
- 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.
- Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
- 5 GHz Wireless Router is only supported for the 5.8 GHz Band by S/W, therefore 5.2-5.7 GHz Bands were not evaluated for wireless router conditions.
- This device supports 2x2 MIMO Tx for WLAN 802.11n/ac. Each WLAN antenna can transmit independently or together when operating with MIMO.
- This device supports VoLTE.

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1.7 SAR Test Exclusions Applied

(A) WIFI/BT

Since Wireless Router operations are not allowed by the chipset firmware using 5.2-5.7 GHz WIFI, only 2.4 GHz and 5.8 GHz WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v01.

Per FCC KDB 447498 D01v05, the 1g SAR exclusion threshold for distances <50mm is defined by the following equation:

$$\frac{\text{Max Power of Channel (mW)}}{\text{Test Separation Dist (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 3.0$$

Based on the maximum conducted power of Bluetooth (rounded to the nearest mW) and the antenna to user separation distance, body-worn Bluetooth SAR was not required; $[(8/15) * \sqrt{2.480}] = 0.8 < 3.0$. Per KDB Publication 447498 D01v05, the maximum power of the channel was rounded to the nearest mW before calculation.

Per FCC KDB 447498 D01v05, the 10g SAR exclusion threshold for distances <50mm is defined by the following equation:

$$\frac{\text{Max Power of Channel (mW)}}{\text{Test Separation Dist (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 7.5$$

Based on the maximum conducted power of Bluetooth (rounded to the nearest mW) and the antenna to user separation distance, extremity Bluetooth SAR was not required; $[(8/5) * \sqrt{2.480}] = 2.5 < 7.5$. Per KDB Publication 447498 D01v05, the maximum power of the channel was rounded to the nearest mW before calculation.

This device supports 20 MHz and 40 MHz Bandwidths for IEEE 802.11n for 5 GHz WIFI only.

This device supports IEEE 802.11ac with the following features:

- a) Up to 80 MHz Bandwidth only
- b) No aggregate channel configurations
- c) 2 Tx antenna output
- d) 256 QAM is supported
- e) No new 5 GHz channels

Per April 2013 TCB Workshop notes, full SAR tests for all SISO IEEE 802.11ac configurations were not required because the average output power was not more than 0.25 dB higher than SISO IEEE 802.11a mode. SISO IEEE 802.11ac was evaluated for the highest SISO IEEE 802.11a position in each 5 GHz band and exposure condition.

Per FCC KDB Publication 648474 D04v01r01, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Extremity 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 5.2 – 5.7 GHz WLAN, extremity SAR tests were performed. Extremity SAR was not evaluated for 2.4 GHz and 5.8 GHz WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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(B) Licensed Transmitter(s)

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

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v02.

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 D05v02.

This device supports both LTE B12 and LTE B17. Since the supported frequency span for LTE B17 falls completely within the supported frequency span for LTE B12, both LTE bands have the same target power, and both LTE bands share the same transmission path, SAR was only assessed for LTE B12.

This device supports inter-band LTE Carrier Aggregation (CA) in the downlink only. All uplink communications are identical to Release 8 specifications. Per FCC Guidance, LTE CA SAR was not needed for testing since the data sent by uplink on uplink physical channels does not change between Rel 8 and Rel 10.

Per FCC KDB Publication 648474 D04v01r01, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR scales to > 1.2 W/kg when scaled to the maximum allowed output power tolerance. Extremity SAR was not evaluated for licensed technologies except for UMTS 1900 and LTE Band 2 since maximum scaled wireless router 1g SAR was < 1.2 W/kg for these modes.

1.8 Wireless Charging Battery Cover

This DUT may be used with a standard battery cover or with an optional wireless charging battery cover. Per FCC KDB Publication 648474 D03, SAR was measured using the standard battery cover and then repeated with the wireless charging battery cover for the configuration with the highest measured SAR for each wireless technology, frequency band, operating mode, and exposure condition. Since reported SAR did not exceed 1.2 W/kg, additional testing with the wireless charging battery cover was not required.

1.9 Guidance Applied

- IEEE 1528-2003
- FCC KDB Publication 941225 D01v02, D02v02r02, D03v01, D05v02r03, D05Av01, D06v01r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v01r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v05r02 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r03, D02v01r01 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D03-D04 (Phablet Procedures, Wireless Charging Cover)
- April 2013 TCB Workshop Notes (IEEE 802.11ac)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)

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1.10 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.

	Head Serial Number	Body-Worn Serial Number	Hotspot Serial Number	Extremity Serial Number
GSM/GPRS/EDGE 850	FCC #3	FCC #3	FCC #3	-
GSM/GPRS/EDGE 1900	FCC #3	FCC #3	FCC #3	-
UMTS 850	FCC #3	FCC #3	FCC #3	-
UMTS 1750	FCC #3	FCC #2	FCC #2	-
UMTS 1900	FCC #3	FCC #4	FCC #2	FCC #4
LTE Band 12	FCC #2	FCC #1	FCC #1	-
LTE Band 5 (Cell)	FCC #1	FCC #1	FCC #1	-
LTE Band 4 (AWS)	FCC #1	FCC #1	FCC #2	-
LTE Band 2 (PCS)	FCC #4	FCC #2	FCC #4	FCC #4
2.4 GHz WLAN	0809-12	0809-09	0809-09	-
5 GHz WLAN	0809-12	0809-14	0809-14	0809-14

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LTE INFORMATION

LTE Information				
FCC ID	A3LSMN915T			
Form Factor	Portable Handset			
Frequency Range of each LTE transmission band	LTE Band 12 (699.7 - 715.3 MHz)			
	LTE Band 17 (706.5 - 713.5 MHz)			
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)			
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)			
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)			
Channel Bandwidths	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz			
	LTE Band 17: 5 MHz, 10 MHz			
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz			
	LTE Band 4 (AWS): 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			
Channel Numbers and Frequencies (MHz)	Low	Mid	High-Mid	
LTE Band 12: 1.4 MHz	699.7 (23017)	707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)	707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)	707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)	707.5 (23095)	711 (23130)	
LTE Band 17: 5 MHz	706.5 (23755)	710 (23790)	713.5 (23825)	
LTE Band 17: 10 MHz	709 (23780)	710 (23790)	711 (23800)	
LTE Band 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 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 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)	
UE Category	4			
Modulations Supported in UL	QPSK, 16QAM			
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	LTE B2 (PCC) + LTE B4 (SCC)	LTE B4 (PCC) + LTE B2 (SCC)	LTE B12 (PCC) + LTE B4 (SCC)	LTE B4 (PCC) + LTE B12 (SCC)
	5MHz (B2) + 5MHz (B4)	5MHz (B4) + 5MHz (B2)	5MHz (B12) + 5MHz (B4)	5MHz (B4) + 5MHz (B12)
	5MHz (B2) + 10MHz (B4)	5MHz (B4) + 10MHz (B2)	5MHz (B12) + 10MHz (B4)	5MHz (B4) + 10MHz (B12)
	10MHz (B2) + 5MHz (B4)	10MHz (B4) + 5MHz (B2)	10MHz (B12) + 5MHz (B4)	10MHz (B4) + 5MHz (B12)
	10MHz (B2) + 10MHz (B4)	10MHz (B4) + 10MHz (B2)	10MHz (B12) + 10MHz (B4)	10MHz (B4) + 10MHz (B12)
LTE Carrier Aggregation Additional Information	This device does not support full CA features on 3GPP Release 10. It supports a maximum of 2 carriers in the downlink with a total maximum bandwidth of 10 MHz of the spectrum. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. Due to carrier capability, only the combinations listed above are supported. The following LTE Release 10 Features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WIFI Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.			

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The FCC and Industry 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/m³)
- 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 D01v01 and IEEE 1528-2013:

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 D01v01 (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 D01v01 (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.

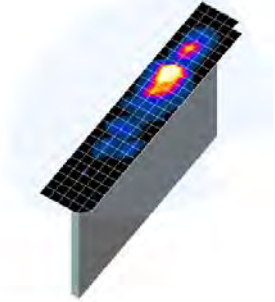


Figure 4-1
Sample SAR Area Scan

Table 4-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01*

Frequency	Maximum Area Scan Resolution (mm) ($\Delta x_{\text{area}}, \Delta y_{\text{area}}$)	Maximum Zoom Scan Resolution (mm) ($\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$)	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
				$\Delta z_{\text{zoom}}(n)$	$\Delta z_{\text{zoom}}(1)^*$	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

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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].

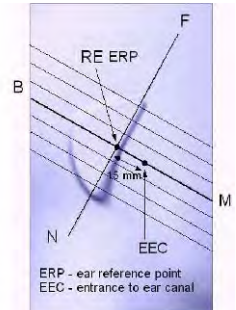


Figure 5-1
Close-Up Side view
of ERP

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 then 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

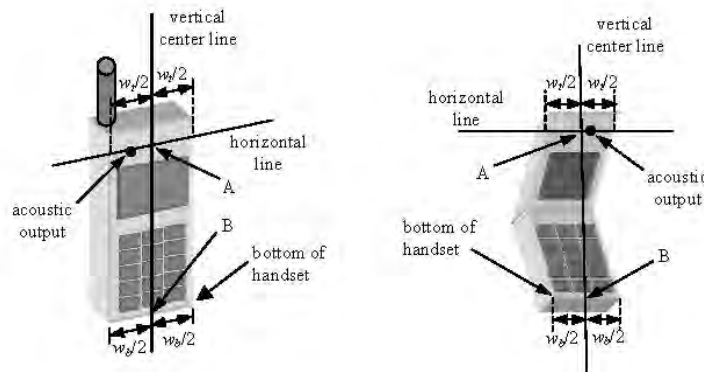


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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TEST CONFIGURATION POSITIONS FOR HANDSETS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$.

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.

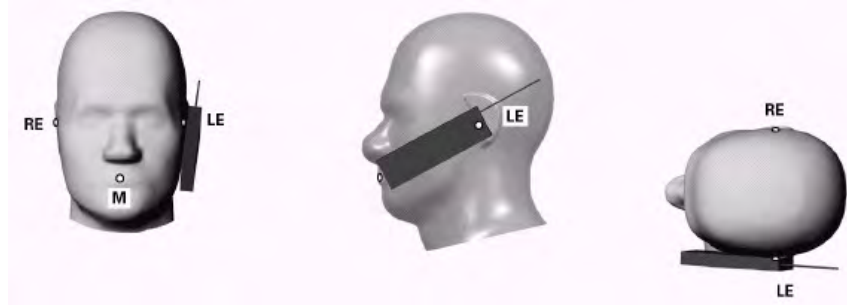


Figure 6-1 Front, Side and Top View of Cheek Position

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 with 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 / 15° 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 15 degrees.
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/15° Tilt Position

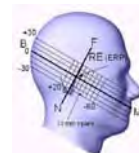


Figure 6-3 Side view w/ relevant markings

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 D04_v01. 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 D04v01, 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 D01v05 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.

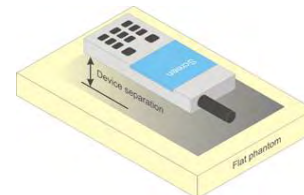


Figure 6-4 Sample Body-Worn Diagram

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 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.

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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 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 44798 D01v05 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC minitables that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04 v01r01DR04 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤ 25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot SAR > 1.2 W/kg when scaled to the maximum allowed output power including tolerance.

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 D06 v01 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) 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 D01v05 publication 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. The device utilizes power reduction under some portable hotspot conditions for SAR compliance.

There is mobile hotspot power reduction for UMTS Bands 4/2, LTE Bands 4/2. There is no power reduction for GSM/GPRS/EDGE 850/1900, UMTS Band 5, LTE Bands 12/17/5 and BT/WLAN modes. The reduced powers were confirmed via conducted power measurements at the RF port (See Section 9). Detailed description of the hotspot power reduction mechanism is included in the operational description.

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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 <i>General Population</i> (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT <i>Occupational</i> (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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Power measurements were performed using a base station simulator under digital average power.

8.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v05, 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 D01v01r02.

8.2 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01 "SAR Measurement Procedures for 3G Devices" v02, October 2007.

The device was 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 were 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 was 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 deviated by more than 5%, the SAR test and drift measurements were repeated.

8.3 SAR Measurement Conditions for UMTS

8.3.1 Output Power Verification

Maximum output power is measured on the High, Middle and Low channels for each applicable transmission band according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1s".

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 (release 5), using the appropriate RMC with TPC (transmit power control) set to all "1s" or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

8.3.2 Head SAR Measurements for Handsets

SAR for head exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all "1s". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than 0.25 dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 AMR with a 3.4 kbps SRB (signaling radio bearer) using the exposure configuration that resulted in the highest SAR for that RF channel in the 12.2 kbps RMC mode.

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8.3.3 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all "1s".

8.3.4 SAR Measurements for Handsets with Rel 5 HSDPA

Body SAR for HSDPA is not required for handsets with HSDPA capabilities when the maximum average output power of each RF channel with HSDPA active is less than 0.25 dB higher than that measured without HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of the SAR limit. Otherwise, SAR is measured for HSDPA, using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration measured in 12.2 kbps RMC without HSDPA, on the maximum output channel with the body exposure configuration that resulted in the highest SAR in 12.2 kbps RMC mode for that RF channel.

The H-set used in FRC for HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HSPDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the applicable H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the FRC for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 2 ms to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors of $\beta_c=9$ and $\beta_d=15$, and power offset parameters of $\Delta_{ACK} = \Delta_{NACK} = 5$ and $\Delta_{CQI}=2$ is used. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the FRC.

Sub-Test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Rightarrow A_{th} = \beta_{th}/\beta_c = 30/15 \Rightarrow \beta_{th} = 30/15 * \beta_c$
Note 2: For the HS-DPCCH power mask requirement test in clause 5.2.C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 8$ ($A_{th} = 30/15$) with $\beta_{th} = 30/15 * \beta_c$, and $\Delta_{CQI} = 7$ ($A_{th} = 24/15$) with $\beta_{th} = 24/15 * \beta_c$.
Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{th}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Figure 8-1
Table C.10.1.4 of TS 234.121-1

8.3.5 SAR Measurements for Handsets with Rel 6 HSUPA

Body SAR for HSUPA is not required when the maximum average output of each RF channel with HSUPA/HSDPA active is less than 0.25 dB higher than as measured without HSUPA/HSDPA using 12.2 kbps RMC and maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of the SAR limit. Otherwise SAR is measured on the maximum output channel for the body exposure configuration produced highest SAR in 12.2 kbps RMC for that RF channel, using the additional procedures under "Release 6 HSPA data devices"

Head SAR for VOIP operations under HSPA is not required when maximum average output of each RF channel with HSPA is less than 0.25 dB higher than as measured using 12.2 kbps RMC. Otherwise SAR is measured using same HSPA configuration as used for body SAR.

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Sub-test	β_1	β_2	β_3 (SF)	β_4/β_3	β_5/β_3	β_6	β_7	β_8	β_9 (SF)	β_{10} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽¹⁾	15/15 ⁽¹⁾	64	11/15 ⁽²⁾	22/15	209/225	1039/225	4	1	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{10} = 47/15$ $\beta_{11} = 47/15$	4	2	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1	1.0	0.0	21	81

Note 1: $\Delta_{A_{DCH}}, \Delta_{A_{DCH}}/2$ and $\Delta_{DCH} = 8 \Rightarrow A_{DCH} = \beta_1/\beta_2 = 30/15 \Rightarrow \beta_1 = 30/15 * \beta_2$.

Note 2: CM = 1 for $\beta_1/\beta_2 = 12/15$, $\beta_1/\beta_2 = 24/15$. For all other combinations of DPDCCH, DPCCH, HS-DPCCH, E-DPDCCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_1/β_2 ratio of 11/15 for the TEC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TEC (TF1, TF1) to $\beta_1 = 10/15$ and $\beta_2 = 15/15$.

Note 4: For subtest 5 the β_1/β_2 ratio of 15/15 for the TEC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TEC (TF1, TF1) to $\beta_1 = 14/15$ and $\beta_2 = 15/15$.

Note 5: Testing UE using E-DPDCCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6: β_{10} can not be set directly; it is set by Absolute Grant Value.

8.3.6 SAR Measurement Conditions for DC-HSDPA

SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion. DC-HSDPA uplink maximum output power measurements using the four Rel. 5 HSDPA subtests in Table C.10.1.4 of TS 234.121-1 is required.

When the maximum average output power of each RF channel with DC-HSDPA active is $\leq 1/4$ dB higher than that measured using 12.2 kbps RMC, or the maximum reported SAR for 12.2 kbps RMC is $\leq 75\%$ of the SAR limit, SAR evaluation for DC-HSDPA is not required

8.4 SAR Measurement Conditions for LTE

LTE modes were tested according to FCC KDB 941225 D05v02 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

8.4.1 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.

8.4.2 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.

8.4.3 A-MPR

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

8.4.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r01:

- Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
 - The required channel and offset combination with the highest maximum output power is required for SAR.
 - 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.

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- 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 $\frac{1}{2}$ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/kg.

8.4.5 Carrier Aggregation

LTE Carrier Aggregation (CA) measurements were made in accordance to 3GPP TS 36.521-1 V10.4.0 (2012-12). 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 the Secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to release 8 specifications on the PCC. Additional output powers were measured using two carriers in the downlink for the release 8 configurations with the highest output power among all channels, RB configurations and bandwidths for each uplink band. Per FCC Guidance, no SAR measurements were required.

8.5 SAR Testing with 802.11 Transmitters

Normal network operating configurations are not suitable for measuring the SAR of 802.11 a/b/g/n/ac transmitters. 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 D01v01r02 for more details.

8.5.1 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. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

8.5.2 Frequency Channel Configurations [24]

For 2.4 GHz, the highest average RF output power channel between the low, mid and high channel at the lowest data rate was selected for SAR evaluation in 802.11b mode. 802.11g/n modes and higher data rates for 802.11b were additionally evaluated for SAR if the output power of the respective mode was 0.25 dB or higher than the powers of the SAR configurations tested in the 802.11b mode.

For 5 GHz, the highest average RF output power channel across the default test channels at the lowest data rate was selected for SAR evaluation in 802.11a. When the adjacent channels are higher in power than the default channels, these "required channels" were considered instead of the default channels for SAR testing. 802.11n modes and higher data rates for 802.11a/n were evaluated only if the respective mode was higher than 0.25 dB or more than the 802.11a mode. 802.11ac SAR was evaluated for highest 802.11a configuration in each 5 GHz band and each exposure condition.

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802.11ac modes were additionally evaluated for SAR if the output power for the respective mode was more than 0.25 dB higher than powers of 802.11a modes.

If the maximum extrapolated peak SAR of the zoom scan for the highest output channel was less than 1.6 W/kg and if the 1g averaged SAR was less than 0.8 W/kg, SAR testing was not required for the other test channels in the band.

8.5.3 MIMO SAR Considerations

Per KDB 248227, SAR for MIMO was measured with both transmitting simultaneously and was evaluated independently of SISO operation. For 2.4 and 5 GHz MIMO, 802.11n 20 MHz Bandwidth was evaluated. Other IEEE 802.11 modes and bandwidths were not investigated for MIMO operations since the maximum allowed output power (including tolerance) was not higher for these modes.

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9 RF CONDUCTED POWERS

9.1 GSM Conducted Powers

		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	32.64	32.58	29.70	27.53	26.36	25.93	23.71	22.01	21.22
	190	32.66	32.59	29.73	27.78	26.55	25.96	23.80	22.15	21.42
	251	32.93	32.88	29.98	28.05	26.69	26.11	24.02	22.35	21.68
GSM 1900	512	29.46	29.44	26.66	25.38	24.73	24.66	22.55	20.21	19.70
	661	29.48	29.42	26.50	25.26	24.59	24.38	22.20	19.91	19.35
	810	29.90	29.86	26.94	25.50	24.98	24.76	22.60	20.38	19.87

		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	23.61	23.55	23.68	23.27	23.35	16.90	17.69	17.75	18.21
	190	23.63	23.56	23.71	23.52	23.54	16.93	17.78	17.89	18.41
	251	23.90	23.85	23.96	23.79	23.68	17.08	18.00	18.09	18.67
GSM 1900	512	20.43	20.41	20.64	21.12	21.72	15.63	16.53	15.95	16.69
	661	20.45	20.39	20.48	21.00	21.58	15.35	16.18	15.65	16.34
	810	20.87	20.83	20.92	21.24	21.97	15.73	16.58	16.12	16.86

GSM 850	Frame Avg.Targets	23.97	23.97	24.48	24.24	24.49	16.97	18.48	18.24	18.49
GSM 1900	Frame Avg.Targets	20.97	20.97	21.48	21.24	21.49	15.47	16.48	16.24	16.49

Note:

- 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.
- 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.
- 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.
- 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: 12 (Max 4 Tx uplink slots)
EDGE Multislot class: 12 (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 9-1
Maximum UMTS Average RF Conducted Powers

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	1862	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	23.80	23.92	23.93	23.20	23.33	22.98	23.20	22.73	23.35	-
99		12.2 kbps AMR	23.77	23.86	23.91	23.25	23.31	23.01	23.19	22.70	23.29	-
6	HSDPA	Subtest 1	22.73	22.75	22.81	22.22	22.28	21.97	22.32	21.87	22.33	0
6		Subtest 2	22.69	22.79	22.71	22.24	22.35	21.95	22.34	21.75	22.45	0
6		Subtest 3	22.18	22.13	22.11	21.77	21.91	21.52	22.37	21.81	22.48	0.5
6		Subtest 4	22.16	22.20	22.22	21.79	21.92	21.44	22.39	21.82	22.50	0.5
6	HSUPA	Subtest 1	22.19	22.00	22.41	21.28	21.37	21.50	21.49	21.00	21.31	0
6		Subtest 2	22.10	22.07	22.36	21.31	21.33	20.97	21.82	21.52	21.80	2
6		Subtest 3	21.41	21.53	21.99	21.58	21.71	21.42	22.02	21.53	22.22	1
6		Subtest 4	21.56	21.75	21.81	21.38	21.50	21.18	21.54	21.02	21.53	2
6		Subtest 5	21.60	21.58	21.68	22.19	22.32	21.93	22.33	21.84	22.43	0
8	DC-HSDPA	Subtest 1	22.76	22.83	22.83	22.38	22.53	22.39	22.48	22.51	22.74	0
8		Subtest 2	22.72	22.85	22.77	22.30	22.60	22.40	22.64	22.50	22.80	0
8		Subtest 3	22.18	22.37	22.28	21.83	22.12	21.99	22.65	22.42	22.72	0.5
8		Subtest 4	22.16	22.32	22.38	21.94	22.29	21.98	22.54	22.43	22.78	0.5

Table 9-2
Reduced UMTS Average RF Conducted Powers (Representing Hotspot Mode)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1862	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	21.56	21.73	21.30	21.60	21.15	21.67	-
99		12.2 kbps AMR	21.58	21.73	21.33	21.53	21.12	21.77	-
6	HSDPA	Subtest 1	20.43	20.41	20.04	20.47	20.06	20.58	0
6		Subtest 2	20.40	20.46	20.06	20.47	20.05	20.56	0
6		Subtest 3	19.94	20.00	19.58	20.46	19.94	20.55	0.5
6		Subtest 4	19.95	19.99	19.55	20.45	19.91	20.55	0.5
6	HSUPA	Subtest 1	20.32	20.34	19.90	20.39	19.30	20.41	0
6		Subtest 2	19.28	19.41	19.00	19.88	19.62	19.90	2
6		Subtest 3	19.27	18.83	18.59	20.47	19.79	20.16	1
6		Subtest 4	19.68	20.02	19.63	20.18	19.61	20.30	2
6		Subtest 5	20.08	20.03	19.60	19.65	19.28	20.19	0
8	DC-HSDPA	Subtest 1	20.79	21.00	20.93	20.94	20.74	21.31	0
8		Subtest 2	20.77	20.92	21.00	20.97	20.76	21.32	0
8		Subtest 3	20.31	20.67	20.66	20.98	20.75	21.38	0.5
8		Subtest 4	20.33	20.68	20.68	20.92	20.77	21.29	0.5

UMTS SAR was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v02. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.

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
- Measured maximum output powers for DC-HSDPA were not greater than 1/4 dB higher than the WCDMA 12.2 kbps RMC maximum output, as a result, SAR is not required for DC-HSDPA
- The DUT supports UE category 24 for HSDPA

It is expected by the manufacturer that MPR for some HSPA and DC-HSDPA 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 12

Table 9-3
LTE Band 12 Conducted Powers - 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Mid	707.5	23095	10	QPSK	1	0	24.27	0	0
	707.5	23095	10	QPSK	1	25	24.35	0	0
	707.5	23095	10	QPSK	1	49	24.31	0	0
	707.5	23095	10	QPSK	25	0	23.20	0-1	1
	707.5	23095	10	QPSK	25	12	23.11	0-1	1
	707.5	23095	10	QPSK	25	25	23.19	0-1	1
	707.5	23095	10	QPSK	50	0	23.15	0-1	1
	707.5	23095	10	16QAM	1	0	23.09	0-1	1
	707.5	23095	10	16QAM	1	25	23.18	0-1	1
	707.5	23095	10	16QAM	1	49	23.24	0-1	1
	707.5	23095	10	16QAM	25	0	22.38	0-2	2
	707.5	23095	10	16QAM	25	12	22.27	0-2	2
	707.5	23095	10	16QAM	25	25	22.28	0-2	2
	707.5	23095	10	16QAM	50	0	22.29	0-2	2

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 9-4
LTE Band 12 Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	701.5	23035	5	QPSK	1	0	24.18	0	0
	701.5	23035	5	QPSK	1	12	23.99	0	0
	701.5	23035	5	QPSK	1	24	24.03	0	0
	701.5	23035	5	QPSK	12	0	23.04	0-1	1
	701.5	23035	5	QPSK	12	6	23.10	0-1	1
	701.5	23035	5	QPSK	12	13	23.09	0-1	1
	701.5	23035	5	QPSK	25	0	23.04	0-1	1
	701.5	23035	5	16-QAM	1	0	23.26	0-1	1
	701.5	23035	5	16-QAM	1	12	23.29	0-1	1
	701.5	23035	5	16-QAM	1	24	23.33	0-1	1
	701.5	23035	5	16-QAM	12	0	22.18	0-2	2
	701.5	23035	5	16-QAM	12	6	22.15	0-2	2
	701.5	23035	5	16-QAM	12	13	22.19	0-2	2
	701.5	23035	5	16-QAM	25	0	22.18	0-2	2
Mid	707.5	23095	5	QPSK	1	0	24.04	0	0
	707.5	23095	5	QPSK	1	12	24.15	0	0
	707.5	23095	5	QPSK	1	24	24.20	0	0
	707.5	23095	5	QPSK	12	0	23.11	0-1	1
	707.5	23095	5	QPSK	12	6	23.12	0-1	1
	707.5	23095	5	QPSK	12	13	23.11	0-1	1
	707.5	23095	5	QPSK	25	0	23.15	0-1	1
	707.5	23095	5	16-QAM	1	0	23.28	0-1	1
	707.5	23095	5	16-QAM	1	12	23.28	0-1	1
	707.5	23095	5	16-QAM	1	24	23.30	0-1	1
	707.5	23095	5	16-QAM	12	0	22.04	0-2	2
	707.5	23095	5	16-QAM	12	6	21.95	0-2	2
	707.5	23095	5	16-QAM	12	13	22.05	0-2	2
	707.5	23095	5	16-QAM	25	0	22.04	0-2	2
High	713.5	23155	5	QPSK	1	0	24.19	0	0
	713.5	23155	5	QPSK	1	12	24.04	0	0
	713.5	23155	5	QPSK	1	24	24.08	0	0
	713.5	23155	5	QPSK	12	0	23.10	0-1	1
	713.5	23155	5	QPSK	12	6	23.16	0-1	1
	713.5	23155	5	QPSK	12	13	23.20	0-1	1
	713.5	23155	5	QPSK	25	0	23.22	0-1	1
	713.5	23155	5	16-QAM	1	0	23.29	0-1	1
	713.5	23155	5	16-QAM	1	12	23.27	0-1	1
	713.5	23155	5	16-QAM	1	24	23.27	0-1	1
	713.5	23155	5	16-QAM	12	0	22.17	0-2	2
	713.5	23155	5	16-QAM	12	6	22.14	0-2	2
	713.5	23155	5	16-QAM	12	13	22.15	0-2	2
	713.5	23155	5	16-QAM	25	0	22.13	0-2	2

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Table 9-5
LTE Band 12 Conducted Powers - 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	700.5	23025	3	QPSK	1	0	24.01	0	0
	700.5	23025	3	QPSK	1	7	23.94	0	0
	700.5	23025	3	QPSK	1	14	23.98	0	0
	700.5	23025	3	QPSK	8	0	23.05	0-1	1
	700.5	23025	3	QPSK	8	4	23.04	0-1	1
	700.5	23025	3	QPSK	8	7	23.15	0-1	1
	700.5	23025	3	QPSK	15	0	23.20	0-1	1
	700.5	23025	3	16-QAM	1	0	23.14	0-1	1
	700.5	23025	3	16-QAM	1	7	23.19	0-1	1
	700.5	23025	3	16-QAM	1	14	23.20	0-1	1
	700.5	23025	3	16-QAM	8	0	22.03	0-2	2
	700.5	23025	3	16-QAM	8	4	21.99	0-2	2
	700.5	23025	3	16-QAM	8	7	21.93	0-2	2
	700.5	23025	3	16-QAM	15	0	21.97	0-2	2
Mid	707.5	23095	3	QPSK	1	0	24.30	0	0
	707.5	23095	3	QPSK	1	7	24.28	0	0
	707.5	23095	3	QPSK	1	14	24.20	0	0
	707.5	23095	3	QPSK	8	0	23.10	0-1	1
	707.5	23095	3	QPSK	8	4	23.04	0-1	1
	707.5	23095	3	QPSK	8	7	23.18	0-1	1
	707.5	23095	3	QPSK	15	0	23.10	0-1	1
	707.5	23095	3	16-QAM	1	0	23.11	0-1	1
	707.5	23095	3	16-QAM	1	7	23.15	0-1	1
	707.5	23095	3	16-QAM	1	14	23.16	0-1	1
	707.5	23095	3	16-QAM	8	0	22.05	0-2	2
	707.5	23095	3	16-QAM	8	4	22.14	0-2	2
	707.5	23095	3	16-QAM	8	7	22.20	0-2	2
	707.5	23095	3	16-QAM	15	0	22.16	0-2	2
High	714.5	23165	3	QPSK	1	0	24.22	0	0
	714.5	23165	3	QPSK	1	7	24.20	0	0
	714.5	23165	3	QPSK	1	14	24.28	0	0
	714.5	23165	3	QPSK	8	0	23.01	0-1	1
	714.5	23165	3	QPSK	8	4	23.05	0-1	1
	714.5	23165	3	QPSK	8	7	22.97	0-1	1
	714.5	23165	3	QPSK	15	0	22.99	0-1	1
	714.5	23165	3	16-QAM	1	0	23.10	0-1	1
	714.5	23165	3	16-QAM	1	7	23.14	0-1	1
	714.5	23165	3	16-QAM	1	14	23.15	0-1	1
	714.5	23165	3	16-QAM	8	0	22.04	0-2	2
	714.5	23165	3	16-QAM	8	4	22.02	0-2	2
	714.5	23165	3	16-QAM	8	7	22.05	0-2	2
	714.5	23165	3	16-QAM	15	0	22.09	0-2	2

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Table 9-6
LTE Band 12 Conducted Powers -1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	699.7	23017	1.4	QPSK	1	0	24.13	0	0
	699.7	23017	1.4	QPSK	1	2	24.18	0	0
	699.7	23017	1.4	QPSK	1	5	24.15	0	0
	699.7	23017	1.4	QPSK	3	0	24.09	0	0
	699.7	23017	1.4	QPSK	3	2	23.94	0	0
	699.7	23017	1.4	QPSK	3	3	24.04	0	0
	699.7	23017	1.4	QPSK	6	0	22.99	0-1	1
	699.7	23017	1.4	16-QAM	1	0	23.05	0-1	1
	699.7	23017	1.4	16-QAM	1	2	23.11	0-1	1
	699.7	23017	1.4	16-QAM	1	5	23.15	0-1	1
	699.7	23017	1.4	16-QAM	3	0	23.13	0-1	1
	699.7	23017	1.4	16-QAM	3	2	23.12	0-1	1
	699.7	23017	1.4	16-QAM	3	3	23.04	0-1	1
	699.7	23017	1.4	16-QAM	6	0	22.06	0-2	2
	707.5	23095	1.4	QPSK	1	0	24.11	0	0
	707.5	23095	1.4	QPSK	1	2	23.99	0	0
Mid	707.5	23095	1.4	QPSK	1	5	24.02	0	0
	707.5	23095	1.4	QPSK	3	0	24.13	0	0
	707.5	23095	1.4	QPSK	3	2	24.05	0	0
	707.5	23095	1.4	QPSK	3	3	23.99	0	0
	707.5	23095	1.4	QPSK	6	0	23.05	0-1	1
	707.5	23095	1.4	16-QAM	1	0	23.14	0-1	1
	707.5	23095	1.4	16-QAM	1	2	23.18	0-1	1
	707.5	23095	1.4	16-QAM	1	5	23.22	0-1	1
	707.5	23095	1.4	16-QAM	3	0	23.30	0-1	1
	707.5	23095	1.4	16-QAM	3	2	23.33	0-1	1
	707.5	23095	1.4	16-QAM	3	3	23.18	0-1	1
	707.5	23095	1.4	16-QAM	6	0	22.24	0-2	2
	715.3	23173	1.4	QPSK	1	0	24.20	0	0
	715.3	23173	1.4	QPSK	1	2	24.04	0	0
	715.3	23173	1.4	QPSK	1	5	24.15	0	0
	715.3	23173	1.4	QPSK	3	0	24.18	0	0
High	715.3	23173	1.4	QPSK	3	2	24.21	0	0
	715.3	23173	1.4	QPSK	3	3	24.10	0	0
	715.3	23173	1.4	QPSK	6	0	23.05	0-1	1
	715.3	23173	1.4	16-QAM	1	0	23.18	0-1	1
	715.3	23173	1.4	16-QAM	1	2	23.10	0-1	1
	715.3	23173	1.4	16-QAM	1	5	23.17	0-1	1
	715.3	23173	1.4	16-QAM	3	0	23.21	0-1	1
	715.3	23173	1.4	16-QAM	3	2	23.12	0-1	1
	715.3	23173	1.4	16-QAM	3	3	23.13	0-1	1
	715.3	23173	1.4	16-QAM	6	0	22.00	0-2	2

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LTE Band 5 (Cell)

Table 9-7

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

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]	Deviation [dB]
Mid	836.5	20525	10	QPSK	1	0	24.22	0	0	0.22
	836.5	20525	10	QPSK	1	25	24.15	0	0	0.15
	836.5	20525	10	QPSK	1	49	24.18	0	0	0.18
	836.5	20525	10	QPSK	25	0	23.05	0-1	1	0.05
	836.5	20525	10	QPSK	25	12	23.07	0-1	1	0.07
	836.5	20525	10	QPSK	25	25	23.07	0-1	1	0.07
	836.5	20525	10	QPSK	50	0	23.02	0-1	1	0.02
	836.5	20525	10	16QAM	1	0	23.23	0-1	1	0.23
	836.5	20525	10	16QAM	1	25	23.21	0-1	1	0.21
	836.5	20525	10	16QAM	1	49	23.20	0-1	1	0.20
	836.5	20525	10	16QAM	25	0	22.15	0-2	2	0.15
	836.5	20525	10	16QAM	25	12	22.16	0-2	2	0.16
	836.5	20525	10	16QAM	25	25	22.22	0-2	2	0.22
	836.5	20525	10	16QAM	50	0	22.14	0-2	2	0.14

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

Table 9-8

LTE Band 5 (Cell) Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	826.5	20425	5	QPSK	1	0	24.28	0	0
	826.5	20425	5	QPSK	1	12	24.13	0	0
	826.5	20425	5	QPSK	1	24	24.28	0	0
	826.5	20425	5	QPSK	12	0	23.21	0-1	1
	826.5	20425	5	QPSK	12	6	23.17	0-1	1
	826.5	20425	5	QPSK	12	13	23.09	0-1	1
	826.5	20425	5	QPSK	25	0	23.01	0-1	1
	826.5	20425	5	16-QAM	1	0	23.04	0-1	1
	826.5	20425	5	16-QAM	1	12	23.17	0-1	1
	826.5	20425	5	16-QAM	1	24	23.04	0-1	1
	826.5	20425	5	16-QAM	12	0	22.24	0-2	2
	826.5	20425	5	16-QAM	12	6	22.13	0-2	2
	826.5	20425	5	16-QAM	12	13	22.16	0-2	2
	826.5	20425	5	16-QAM	25	0	22.15	0-2	2
Mid	836.5	20525	5	QPSK	1	0	24.28	0	0
	836.5	20525	5	QPSK	1	12	24.16	0	0
	836.5	20525	5	QPSK	1	24	24.22	0	0
	836.5	20525	5	QPSK	12	0	23.17	0-1	1
	836.5	20525	5	QPSK	12	6	23.18	0-1	1
	836.5	20525	5	QPSK	12	13	23.16	0-1	1
	836.5	20525	5	QPSK	25	0	23.19	0-1	1
	836.5	20525	5	16-QAM	1	0	23.23	0-1	1
	836.5	20525	5	16-QAM	1	12	23.04	0-1	1
	836.5	20525	5	16-QAM	1	24	23.23	0-1	1
	836.5	20525	5	16-QAM	12	0	22.27	0-2	2
	836.5	20525	5	16-QAM	12	6	22.25	0-2	2
	836.5	20525	5	16-QAM	12	13	22.04	0-2	2
	836.5	20525	5	16-QAM	25	0	22.05	0-2	2
High	846.5	20625	5	QPSK	1	0	24.22	0	0
	846.5	20625	5	QPSK	1	12	24.23	0	0
	846.5	20625	5	QPSK	1	24	24.21	0	0
	846.5	20625	5	QPSK	12	0	23.25	0-1	1
	846.5	20625	5	QPSK	12	6	23.19	0-1	1
	846.5	20625	5	QPSK	12	13	23.25	0-1	1
	846.5	20625	5	QPSK	25	0	23.14	0-1	1
	846.5	20625	5	16-QAM	1	0	23.21	0-1	1
	846.5	20625	5	16-QAM	1	12	23.21	0-1	1
	846.5	20625	5	16-QAM	1	24	23.11	0-1	1
	846.5	20625	5	16-QAM	12	0	22.20	0-2	2
	846.5	20625	5	16-QAM	12	6	22.26	0-2	2
	846.5	20625	5	16-QAM	12	13	22.19	0-2	2
	846.5	20625	5	16-QAM	25	0	22.07	0-2	2

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

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	825.5	20415	3	QPSK	1	0	24.28	0	0
	825.5	20415	3	QPSK	1	7	24.18	0	0
	825.5	20415	3	QPSK	1	14	24.04	0	0
	825.5	20415	3	QPSK	8	0	23.14	0-1	1
	825.5	20415	3	QPSK	8	4	23.21	0-1	1
	825.5	20415	3	QPSK	8	7	23.24	0-1	1
	825.5	20415	3	QPSK	15	0	23.11	0-1	1
	825.5	20415	3	16-QAM	1	0	23.33	0-1	1
	825.5	20415	3	16-QAM	1	7	23.22	0-1	1
	825.5	20415	3	16-QAM	1	14	23.16	0-1	1
	825.5	20415	3	16-QAM	8	0	22.25	0-2	2
	825.5	20415	3	16-QAM	8	4	22.23	0-2	2
	825.5	20415	3	16-QAM	8	7	22.26	0-2	2
	825.5	20415	3	16-QAM	15	0	22.19	0-2	2
Mid	836.5	20525	3	QPSK	1	0	24.26	0	0
	836.5	20525	3	QPSK	1	7	24.12	0	0
	836.5	20525	3	QPSK	1	14	24.16	0	0
	836.5	20525	3	QPSK	8	0	23.04	0-1	1
	836.5	20525	3	QPSK	8	4	23.05	0-1	1
	836.5	20525	3	QPSK	8	7	23.14	0-1	1
	836.5	20525	3	QPSK	15	0	23.05	0-1	1
	836.5	20525	3	16-QAM	1	0	23.14	0-1	1
	836.5	20525	3	16-QAM	1	7	23.24	0-1	1
	836.5	20525	3	16-QAM	1	14	23.28	0-1	1
	836.5	20525	3	16-QAM	8	0	22.10	0-2	2
	836.5	20525	3	16-QAM	8	4	22.18	0-2	2
	836.5	20525	3	16-QAM	8	7	22.14	0-2	2
	836.5	20525	3	16-QAM	15	0	22.13	0-2	2
High	847.5	20635	3	QPSK	1	0	24.20	0	0
	847.5	20635	3	QPSK	1	7	24.10	0	0
	847.5	20635	3	QPSK	1	14	24.14	0	0
	847.5	20635	3	QPSK	8	0	23.14	0-1	1
	847.5	20635	3	QPSK	8	4	23.29	0-1	1
	847.5	20635	3	QPSK	8	7	23.22	0-1	1
	847.5	20635	3	QPSK	15	0	23.22	0-1	1
	847.5	20635	3	16-QAM	1	0	23.21	0-1	1
	847.5	20635	3	16-QAM	1	7	23.28	0-1	1
	847.5	20635	3	16-QAM	1	14	23.13	0-1	1
	847.5	20635	3	16-QAM	8	0	22.12	0-2	2
	847.5	20635	3	16-QAM	8	4	22.02	0-2	2
	847.5	20635	3	16-QAM	8	7	22.18	0-2	2
	847.5	20635	3	16-QAM	15	0	22.23	0-2	2

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Table 9-10
LTE Band 5 (Cell) Conducted Powers -1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	824.7	20407	1.4	QPSK	1	0	24.08	0	0
	824.7	20407	1.4	QPSK	1	2	24.15	0	0
	824.7	20407	1.4	QPSK	1	5	24.13	0	0
	824.7	20407	1.4	QPSK	3	0	24.10	0	0
	824.7	20407	1.4	QPSK	3	2	24.28	0	0
	824.7	20407	1.4	QPSK	3	3	24.14	0	0
	824.7	20407	1.4	QPSK	6	0	23.20	0-1	1
	824.7	20407	1.4	16-QAM	1	0	23.21	0-1	1
	824.7	20407	1.4	16-QAM	1	2	23.27	0-1	1
	824.7	20407	1.4	16-QAM	1	5	23.18	0-1	1
	824.7	20407	1.4	16-QAM	3	0	23.24	0-1	1
	824.7	20407	1.4	16-QAM	3	2	23.10	0-1	1
	824.7	20407	1.4	16-QAM	3	3	23.15	0-1	1
	824.7	20407	1.4	16-QAM	6	0	22.24	0-2	2
	836.5	20525	1.4	QPSK	1	0	24.14	0	0
	836.5	20525	1.4	QPSK	1	2	24.05	0	0
	836.5	20525	1.4	QPSK	1	5	24.05	0	0
Mid	836.5	20525	1.4	QPSK	3	0	24.24	0	0
	836.5	20525	1.4	QPSK	3	2	24.20	0	0
	836.5	20525	1.4	QPSK	3	3	24.22	0	0
	836.5	20525	1.4	QPSK	6	0	23.19	0-1	1
	836.5	20525	1.4	16-QAM	1	0	23.24	0-1	1
	836.5	20525	1.4	16-QAM	1	2	23.22	0-1	1
	836.5	20525	1.4	16-QAM	1	5	23.14	0-1	1
	836.5	20525	1.4	16-QAM	3	0	23.11	0-1	1
	836.5	20525	1.4	16-QAM	3	2	23.13	0-1	1
	836.5	20525	1.4	16-QAM	3	3	23.17	0-1	1
	836.5	20525	1.4	16-QAM	6	0	22.19	0-2	2
	848.3	20643	1.4	QPSK	1	0	24.23	0	0
	848.3	20643	1.4	QPSK	1	2	24.16	0	0
	848.3	20643	1.4	QPSK	1	5	24.21	0	0
	848.3	20643	1.4	QPSK	3	0	24.23	0	0
	848.3	20643	1.4	QPSK	3	2	24.14	0	0
	848.3	20643	1.4	QPSK	3	3	24.08	0	0
	848.3	20643	1.4	QPSK	6	0	23.16	0-1	1
High	848.3	20643	1.4	16-QAM	1	0	23.21	0-1	1
	848.3	20643	1.4	16-QAM	1	2	23.19	0-1	1
	848.3	20643	1.4	16-QAM	1	5	23.20	0-1	1
	848.3	20643	1.4	16-QAM	3	0	23.25	0-1	1
	848.3	20643	1.4	16-QAM	3	2	23.27	0-1	1
	848.3	20643	1.4	16-QAM	3	3	23.12	0-1	1
	848.3	20643	1.4	16-QAM	6	0	22.14	0-2	2

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9.3.3

LTE Band 4 (AWS)

Table 9-11

LTE Band 4 (AWS) Conducted Powers - 20 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Mid	1732.5	20175	20	QPSK	1	0	23.15	0	0
	1732.5	20175	20	QPSK	1	50	23.06	0	0
	1732.5	20175	20	QPSK	1	99	22.93	0	0
	1732.5	20175	20	QPSK	50	0	22.32	0-1	1
	1732.5	20175	20	QPSK	50	25	22.27	0-1	1
	1732.5	20175	20	QPSK	50	50	22.13	0-1	1
	1732.5	20175	20	QPSK	100	0	22.19	0-1	1
	1732.5	20175	20	16QAM	1	0	22.13	0-1	1
	1732.5	20175	20	16QAM	1	50	22.03	0-1	1
	1732.5	20175	20	16QAM	1	99	21.98	0-1	1
	1732.5	20175	20	16QAM	50	0	21.38	0-2	2
	1732.5	20175	20	16QAM	50	25	21.34	0-2	2
	1732.5	20175	20	16QAM	50	50	21.30	0-2	2
	1732.5	20175	20	16QAM	100	0	21.18	0-2	2

Note: LTE Band 4 (AWS) 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 9-12

LTE Band 4 (AWS) Conducted Powers - 15 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1717.5	20025	15	QPSK	1	0	23.20	0	0
	1717.5	20025	15	QPSK	1	36	23.23	0	0
	1717.5	20025	15	QPSK	1	74	23.42	0	0
	1717.5	20025	15	QPSK	36	0	22.17	0-1	1
	1717.5	20025	15	QPSK	36	18	22.17	0-1	1
	1717.5	20025	15	QPSK	36	37	22.25	0-1	1
	1717.5	20025	15	QPSK	75	0	22.18	0-1	1
	1717.5	20025	15	16QAM	1	0	22.14	0-1	1
	1717.5	20025	15	16QAM	1	36	22.18	0-1	1
	1717.5	20025	15	16QAM	1	74	22.40	0-1	1
	1717.5	20025	15	16QAM	36	0	21.12	0-2	2
	1717.5	20025	15	16QAM	36	18	21.14	0-2	2
	1717.5	20025	15	16QAM	36	37	21.21	0-2	2
	1717.5	20025	15	16QAM	75	0	21.16	0-2	2
Mid	1732.5	20175	15	QPSK	1	0	23.36	0	0
	1732.5	20175	15	QPSK	1	36	23.34	0	0
	1732.5	20175	15	QPSK	1	74	23.19	0	0
	1732.5	20175	15	QPSK	36	0	22.31	0-1	1
	1732.5	20175	15	QPSK	36	18	22.33	0-1	1
	1732.5	20175	15	QPSK	36	37	22.27	0-1	1
	1732.5	20175	15	QPSK	75	0	22.35	0-1	1
	1732.5	20175	15	16QAM	1	0	22.28	0-1	1
	1732.5	20175	15	16QAM	1	36	22.30	0-1	1
	1732.5	20175	15	16QAM	1	74	22.13	0-1	1
	1732.5	20175	15	16QAM	36	0	21.31	0-2	2
	1732.5	20175	15	16QAM	36	18	21.36	0-2	2
	1732.5	20175	15	16QAM	36	37	21.20	0-2	2
	1732.5	20175	15	16QAM	75	0	21.38	0-2	2
High	1747.5	20325	15	QPSK	1	0	23.22	0	0
	1747.5	20325	15	QPSK	1	36	23.02	0	0
	1747.5	20325	15	QPSK	1	74	23.05	0	0
	1747.5	20325	15	QPSK	36	0	22.10	0-1	1
	1747.5	20325	15	QPSK	36	18	21.97	0-1	1
	1747.5	20325	15	QPSK	36	37	21.96	0-1	1
	1747.5	20325	15	QPSK	75	0	22.00	0-1	1
	1747.5	20325	15	16QAM	1	0	22.33	0-1	1
	1747.5	20325	15	16QAM	1	36	22.20	0-1	1
	1747.5	20325	15	16QAM	1	74	22.07	0-1	1
	1747.5	20325	15	16QAM	36	0	21.02	0-2	2
	1747.5	20325	15	16QAM	36	18	20.91	0-2	2
	1747.5	20325	15	16QAM	36	37	20.84	0-2	2
	1747.5	20325	15	16QAM	75	0	20.85	0-2	2

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Table 9-13
LTE Band 4 (AWS) Conducted Powers - 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1715	20000	10	QPSK	1	0	23.22	0	0
	1715	20000	10	QPSK	1	25	23.23	0	0
	1715	20000	10	QPSK	1	49	23.25	0	0
	1715	20000	10	QPSK	25	0	22.16	0-1	1
	1715	20000	10	QPSK	25	12	22.13	0-1	1
	1715	20000	10	QPSK	25	25	22.17	0-1	1
	1715	20000	10	QPSK	50	0	22.16	0-1	1
	1715	20000	10	16QAM	1	0	22.21	0-1	1
	1715	20000	10	16QAM	1	25	22.16	0-1	1
	1715	20000	10	16QAM	1	49	22.23	0-1	1
	1715	20000	10	16QAM	25	0	21.12	0-2	2
	1715	20000	10	16QAM	25	12	21.16	0-2	2
	1715	20000	10	16QAM	25	25	21.18	0-2	2
	1715	20000	10	16QAM	50	0	21.10	0-2	2
Mid	1732.5	20175	10	QPSK	1	0	23.40	0	0
	1732.5	20175	10	QPSK	1	25	23.28	0	0
	1732.5	20175	10	QPSK	1	49	23.31	0	0
	1732.5	20175	10	QPSK	25	0	22.32	0-1	1
	1732.5	20175	10	QPSK	25	12	22.33	0-1	1
	1732.5	20175	10	QPSK	25	25	22.21	0-1	1
	1732.5	20175	10	QPSK	50	0	22.30	0-1	1
	1732.5	20175	10	16QAM	1	0	22.29	0-1	1
	1732.5	20175	10	16QAM	1	25	22.15	0-1	1
	1732.5	20175	10	16QAM	1	49	22.20	0-1	1
	1732.5	20175	10	16QAM	25	0	21.38	0-2	2
	1732.5	20175	10	16QAM	25	12	21.41	0-2	2
	1732.5	20175	10	16QAM	25	25	21.27	0-2	2
	1732.5	20175	10	16QAM	50	0	21.38	0-2	2
High	1750	20350	10	QPSK	1	0	23.04	0	0
	1750	20350	10	QPSK	1	25	22.88	0	0
	1750	20350	10	QPSK	1	49	22.97	0	0
	1750	20350	10	QPSK	25	0	21.91	0-1	1
	1750	20350	10	QPSK	25	12	21.88	0-1	1
	1750	20350	10	QPSK	25	25	21.87	0-1	1
	1750	20350	10	QPSK	50	0	21.90	0-1	1
	1750	20350	10	16QAM	1	0	21.95	0-1	1
	1750	20350	10	16QAM	1	25	21.80	0-1	1
	1750	20350	10	16QAM	1	49	21.87	0-1	1
	1750	20350	10	16QAM	25	0	20.88	0-2	2
	1750	20350	10	16QAM	25	12	20.81	0-2	2
	1750	20350	10	16QAM	25	25	20.78	0-2	2
	1750	20350	10	16QAM	50	0	20.78	0-2	2

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Table 9-14
LTE Band 4 (AWS) Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1712.5	19975	5	QPSK	1	0	22.96	0	0
	1712.5	19975	5	QPSK	1	12	22.97	0	0
	1712.5	19975	5	QPSK	1	24	23.05	0	0
	1712.5	19975	5	QPSK	12	0	22.13	0-1	1
	1712.5	19975	5	QPSK	12	6	22.11	0-1	1
	1712.5	19975	5	QPSK	12	13	22.18	0-1	1
	1712.5	19975	5	QPSK	25	0	22.15	0-1	1
	1712.5	19975	5	16-QAM	1	0	22.09	0-1	1
	1712.5	19975	5	16-QAM	1	12	22.12	0-1	1
	1712.5	19975	5	16-QAM	1	24	22.09	0-1	1
	1712.5	19975	5	16-QAM	12	0	21.01	0-2	2
	1712.5	19975	5	16-QAM	12	6	21.03	0-2	2
	1712.5	19975	5	16-QAM	12	13	21.00	0-2	2
	1712.5	19975	5	16-QAM	25	0	21.11	0-2	2
	1732.5	20175	5	QPSK	1	0	23.38	0	0
	1732.5	20175	5	QPSK	1	12	23.30	0	0
Mid	1732.5	20175	5	QPSK	1	24	23.32	0	0
	1732.5	20175	5	QPSK	12	0	22.32	0-1	1
	1732.5	20175	5	QPSK	12	6	22.35	0-1	1
	1732.5	20175	5	QPSK	12	13	22.22	0-1	1
	1732.5	20175	5	QPSK	25	0	22.34	0-1	1
	1732.5	20175	5	16-QAM	1	0	22.27	0-1	1
	1732.5	20175	5	16-QAM	1	12	22.10	0-1	1
	1732.5	20175	5	16-QAM	1	24	22.16	0-1	1
	1732.5	20175	5	16-QAM	12	0	21.31	0-2	2
	1732.5	20175	5	16-QAM	12	6	21.34	0-2	2
	1732.5	20175	5	16-QAM	12	13	21.27	0-2	2
	1732.5	20175	5	16-QAM	25	0	21.35	0-2	2
	1752.5	20375	5	QPSK	1	0	22.85	0	0
	1752.5	20375	5	QPSK	1	12	22.81	0	0
	1752.5	20375	5	QPSK	1	24	22.85	0	0
High	1752.5	20375	5	QPSK	12	0	21.91	0-1	1
	1752.5	20375	5	QPSK	12	6	21.86	0-1	1
	1752.5	20375	5	QPSK	12	13	21.95	0-1	1
	1752.5	20375	5	QPSK	25	0	21.88	0-1	1
	1752.5	20375	5	16-QAM	1	0	22.01	0-1	1
	1752.5	20375	5	16-QAM	1	12	22.00	0-1	1
	1752.5	20375	5	16-QAM	1	24	22.02	0-1	1
	1752.5	20375	5	16-QAM	12	0	20.75	0-2	2
	1752.5	20375	5	16-QAM	12	6	20.74	0-2	2
	1752.5	20375	5	16-QAM	12	13	20.79	0-2	2
	1752.5	20375	5	16-QAM	25	0	20.79	0-2	2

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Table 9-15

LTE Band 4 (AWS) Conducted Powers - 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1711.5	19965	3	QPSK	1	0	23.25	0	0
	1711.5	19965	3	QPSK	1	7	23.23	0	0
	1711.5	19965	3	QPSK	1	14	23.31	0	0
	1711.5	19965	3	QPSK	8	0	22.10	0-1	1
	1711.5	19965	3	QPSK	8	4	22.15	0-1	1
	1711.5	19965	3	QPSK	8	7	22.12	0-1	1
	1711.5	19965	3	QPSK	15	0	22.19	0-1	1
	1711.5	19965	3	16-QAM	1	0	22.20	0-1	1
	1711.5	19965	3	16-QAM	1	7	22.17	0-1	1
	1711.5	19965	3	16-QAM	1	14	22.18	0-1	1
	1711.5	19965	3	16-QAM	8	0	21.14	0-2	2
	1711.5	19965	3	16-QAM	8	4	21.18	0-2	2
	1711.5	19965	3	16-QAM	8	7	21.17	0-2	2
	1711.5	19965	3	16-QAM	15	0	21.12	0-2	2
	1732.5	20175	3	QPSK	1	0	23.38	0	0
Mid	1732.5	20175	3	QPSK	1	7	23.29	0	0
	1732.5	20175	3	QPSK	1	14	23.31	0	0
	1732.5	20175	3	QPSK	8	0	22.36	0-1	1
	1732.5	20175	3	QPSK	8	4	22.32	0-1	1
	1732.5	20175	3	QPSK	8	7	22.23	0-1	1
	1732.5	20175	3	QPSK	15	0	22.36	0-1	1
	1732.5	20175	3	16-QAM	1	0	22.32	0-1	1
	1732.5	20175	3	16-QAM	1	7	22.13	0-1	1
	1732.5	20175	3	16-QAM	1	14	22.22	0-1	1
	1732.5	20175	3	16-QAM	8	0	21.37	0-2	2
	1732.5	20175	3	16-QAM	8	4	21.36	0-2	2
	1732.5	20175	3	16-QAM	8	7	21.33	0-2	2
	1732.5	20175	3	16-QAM	15	0	21.44	0-2	2
	1753.5	20385	3	QPSK	1	0	22.97	0	0
	1753.5	20385	3	QPSK	1	7	22.95	0	0
High	1753.5	20385	3	QPSK	1	14	23.05	0	0
	1753.5	20385	3	QPSK	8	0	21.86	0-1	1
	1753.5	20385	3	QPSK	8	4	21.86	0-1	1
	1753.5	20385	3	QPSK	8	7	21.93	0-1	1
	1753.5	20385	3	QPSK	15	0	21.91	0-1	1
	1753.5	20385	3	16-QAM	1	0	21.82	0-1	1
	1753.5	20385	3	16-QAM	1	7	21.79	0-1	1
	1753.5	20385	3	16-QAM	1	14	21.86	0-1	1
	1753.5	20385	3	16-QAM	8	0	20.85	0-2	2
	1753.5	20385	3	16-QAM	8	4	20.82	0-2	2
	1753.5	20385	3	16-QAM	8	7	20.84	0-2	2
	1753.5	20385	3	16-QAM	15	0	20.85	0-2	2

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Table 9-16
LTE Band 4 (AWS) Conducted Powers -1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1710.7	19957	1.4	QPSK	1	0	23.24	0	0
	1710.7	19957	1.4	QPSK	1	2	23.20	0	0
	1710.7	19957	1.4	QPSK	1	5	23.27	0	0
	1710.7	19957	1.4	QPSK	3	0	23.15	0	0
	1710.7	19957	1.4	QPSK	3	2	23.11	0	0
	1710.7	19957	1.4	QPSK	3	3	23.18	0	0
	1710.7	19957	1.4	QPSK	6	0	22.17	0-1	1
	1710.7	19957	1.4	16-QAM	1	0	22.16	0-1	1
	1710.7	19957	1.4	16-QAM	1	2	22.13	0-1	1
	1710.7	19957	1.4	16-QAM	1	5	22.21	0-1	1
	1710.7	19957	1.4	16-QAM	3	0	22.06	0-1	1
	1710.7	19957	1.4	16-QAM	3	2	22.02	0-1	1
	1710.7	19957	1.4	16-QAM	3	3	22.05	0-1	1
	1710.7	19957	1.4	16-QAM	6	0	21.07	0-2	2
Mid	1732.5	20175	1.4	QPSK	1	0	23.50	0	0
	1732.5	20175	1.4	QPSK	1	2	23.42	0	0
	1732.5	20175	1.4	QPSK	1	5	23.47	0	0
	1732.5	20175	1.4	QPSK	3	0	23.41	0	0
	1732.5	20175	1.4	QPSK	3	2	23.42	0	0
	1732.5	20175	1.4	QPSK	3	3	23.36	0	0
	1732.5	20175	1.4	QPSK	6	0	22.39	0-1	1
	1732.5	20175	1.4	16-QAM	1	0	22.41	0-1	1
	1732.5	20175	1.4	16-QAM	1	2	22.32	0-1	1
	1732.5	20175	1.4	16-QAM	1	5	22.35	0-1	1
	1732.5	20175	1.4	16-QAM	3	0	22.25	0-1	1
	1732.5	20175	1.4	16-QAM	3	2	22.26	0-1	1
	1732.5	20175	1.4	16-QAM	3	3	22.20	0-1	1
	1732.5	20175	1.4	16-QAM	6	0	21.37	0-2	2
High	1754.3	20393	1.4	QPSK	1	0	22.98	0	0
	1754.3	20393	1.4	QPSK	1	2	22.86	0	0
	1754.3	20393	1.4	QPSK	1	5	22.94	0	0
	1754.3	20393	1.4	QPSK	3	0	22.94	0	0
	1754.3	20393	1.4	QPSK	3	2	22.96	0	0
	1754.3	20393	1.4	QPSK	3	3	22.92	0	0
	1754.3	20393	1.4	QPSK	6	0	21.91	0-1	1
	1754.3	20393	1.4	16-QAM	1	0	21.90	0-1	1
	1754.3	20393	1.4	16-QAM	1	2	21.86	0-1	1
	1754.3	20393	1.4	16-QAM	1	5	21.91	0-1	1
	1754.3	20393	1.4	16-QAM	3	0	21.81	0-1	1
	1754.3	20393	1.4	16-QAM	3	2	21.80	0-1	1
	1754.3	20393	1.4	16-QAM	3	3	21.84	0-1	1
	1754.3	20393	1.4	16-QAM	6	0	20.91	0-2	2

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Table 9-17
LTE Band 4 (AWS) Conducted Powers -20 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Mid	1732.5	20175	20	QPSK	1	0	20.85	0	0
	1732.5	20175	20	QPSK	1	50	20.90	0	0
	1732.5	20175	20	QPSK	1	99	20.80	0	0
	1732.5	20175	20	QPSK	50	0	20.71	0-1	0
	1732.5	20175	20	QPSK	50	25	20.77	0-1	0
	1732.5	20175	20	QPSK	50	50	20.68	0-1	0
	1732.5	20175	20	QPSK	100	0	20.72	0-1	0
	1732.5	20175	20	16QAM	1	0	20.78	0-1	0
	1732.5	20175	20	16QAM	1	50	20.89	0-1	0
	1732.5	20175	20	16QAM	1	99	20.77	0-1	0
	1732.5	20175	20	16QAM	50	0	20.78	0-2	0
	1732.5	20175	20	16QAM	50	25	20.82	0-2	0
	1732.5	20175	20	16QAM	50	50	20.80	0-2	0
	1732.5	20175	20	16QAM	100	0	20.82	0-2	0

Note: LTE Band 4 (AWS) 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 9-18
LTE Band 4 (AWS) Conducted Powers -15 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1717.5	20025	15	QPSK	1	0	20.59	0	0
	1717.5	20025	15	QPSK	1	36	20.63	0	0
	1717.5	20025	15	QPSK	1	74	20.85	0	0
	1717.5	20025	15	QPSK	36	0	20.58	0-1	0
	1717.5	20025	15	QPSK	36	18	20.58	0-1	0
	1717.5	20025	15	QPSK	36	37	20.72	0-1	0
	1717.5	20025	15	QPSK	75	0	20.61	0-1	0
	1717.5	20025	15	16QAM	1	0	20.72	0-1	0
	1717.5	20025	15	16QAM	1	36	20.77	0-1	0
	1717.5	20025	15	16QAM	1	74	20.93	0-1	0
	1717.5	20025	15	16QAM	36	0	20.60	0-2	0
	1717.5	20025	15	16QAM	36	18	20.61	0-2	0
	1717.5	20025	15	16QAM	36	37	20.76	0-2	0
	1717.5	20025	15	16QAM	75	0	20.70	0-2	0
Mid	1732.5	20175	15	QPSK	1	0	20.78	0	0
	1732.5	20175	15	QPSK	1	36	20.79	0	0
	1732.5	20175	15	QPSK	1	74	20.62	0	0
	1732.5	20175	15	QPSK	36	0	20.75	0-1	0
	1732.5	20175	15	QPSK	36	18	20.76	0-1	0
	1732.5	20175	15	QPSK	36	37	20.68	0-1	0
	1732.5	20175	15	QPSK	75	0	20.76	0-1	0
	1732.5	20175	15	16QAM	1	0	20.72	0-1	0
	1732.5	20175	15	16QAM	1	36	20.78	0-1	0
	1732.5	20175	15	16QAM	1	74	20.57	0-1	0
	1732.5	20175	15	16QAM	36	0	20.79	0-2	0
	1732.5	20175	15	16QAM	36	18	20.79	0-2	0
	1732.5	20175	15	16QAM	36	37	20.73	0-2	0
	1732.5	20175	15	16QAM	75	0	20.78	0-2	0
High	1747.5	20325	15	QPSK	1	0	20.65	0	0
	1747.5	20325	15	QPSK	1	36	20.47	0	0
	1747.5	20325	15	QPSK	1	74	20.44	0	0
	1747.5	20325	15	QPSK	36	0	20.52	0-1	0
	1747.5	20325	15	QPSK	36	18	20.45	0-1	0
	1747.5	20325	15	QPSK	36	37	20.34	0-1	0
	1747.5	20325	15	QPSK	75	0	20.44	0-1	0
	1747.5	20325	15	16QAM	1	0	20.74	0-1	0
	1747.5	20325	15	16QAM	1	36	20.58	0-1	0
	1747.5	20325	15	16QAM	1	74	20.60	0-1	0
	1747.5	20325	15	16QAM	36	0	20.51	0-2	0
	1747.5	20325	15	16QAM	36	18	20.39	0-2	0
	1747.5	20325	15	16QAM	36	37	20.38	0-2	0
	1747.5	20325	15	16QAM	75	0	20.40	0-2	0

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Table 9-19
LTE Band 4 (AWS) Conducted Powers -10 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1715	20000	10	QPSK	1	0	20.60	0	0
	1715	20000	10	QPSK	1	25	20.64	0	0
	1715	20000	10	QPSK	1	49	20.69	0	0
	1715	20000	10	QPSK	25	0	20.58	0-1	0
	1715	20000	10	QPSK	25	12	20.60	0-1	0
	1715	20000	10	QPSK	25	25	20.62	0-1	0
	1715	20000	10	QPSK	50	0	20.60	0-1	0
	1715	20000	10	16QAM	1	0	20.63	0-1	0
	1715	20000	10	16QAM	1	25	20.71	0-1	0
	1715	20000	10	16QAM	1	49	20.65	0-1	0
	1715	20000	10	16QAM	25	0	20.60	0-2	0
	1715	20000	10	16QAM	25	12	20.64	0-2	0
	1715	20000	10	16QAM	25	25	20.66	0-2	0
	1715	20000	10	16QAM	50	0	20.60	0-2	0
Mid	1732.5	20175	10	QPSK	1	0	20.87	0	0
	1732.5	20175	10	QPSK	1	25	20.66	0	0
	1732.5	20175	10	QPSK	1	49	20.67	0	0
	1732.5	20175	10	QPSK	25	0	20.72	0-1	0
	1732.5	20175	10	QPSK	25	12	20.75	0-1	0
	1732.5	20175	10	QPSK	25	25	20.69	0-1	0
	1732.5	20175	10	QPSK	50	0	20.77	0-1	0
	1732.5	20175	10	16QAM	1	0	20.73	0-1	0
	1732.5	20175	10	16QAM	1	25	20.65	0-1	0
	1732.5	20175	10	16QAM	1	49	20.65	0-1	0
	1732.5	20175	10	16QAM	25	0	20.81	0-2	0
	1732.5	20175	10	16QAM	25	12	20.80	0-2	0
	1732.5	20175	10	16QAM	25	25	20.71	0-2	0
	1732.5	20175	10	16QAM	50	0	20.78	0-2	0
High	1750	20350	10	QPSK	1	0	20.47	0	0
	1750	20350	10	QPSK	1	25	20.36	0	0
	1750	20350	10	QPSK	1	49	20.40	0	0
	1750	20350	10	QPSK	25	0	20.37	0-1	0
	1750	20350	10	QPSK	25	12	20.34	0-1	0
	1750	20350	10	QPSK	25	25	20.33	0-1	0
	1750	20350	10	QPSK	50	0	20.29	0-1	0
	1750	20350	10	16QAM	1	0	20.43	0-1	0
	1750	20350	10	16QAM	1	25	20.23	0-1	0
	1750	20350	10	16QAM	1	49	20.28	0-1	0
	1750	20350	10	16QAM	25	0	20.38	0-2	0
	1750	20350	10	16QAM	25	12	20.31	0-2	0
	1750	20350	10	16QAM	25	25	20.37	0-2	0
	1750	20350	10	16QAM	50	0	20.26	0-2	0

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Table 9-20
LTE Band 4 (AWS) Conducted Powers -5 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1712.5	19975	5	QPSK	1	0	20.41	0	0
	1712.5	19975	5	QPSK	1	12	20.40	0	0
	1712.5	19975	5	QPSK	1	24	20.43	0	0
	1712.5	19975	5	QPSK	12	0	20.55	0-1	0
	1712.5	19975	5	QPSK	12	6	20.58	0-1	0
	1712.5	19975	5	QPSK	12	13	20.62	0-1	0
	1712.5	19975	5	QPSK	25	0	20.55	0-1	0
	1712.5	19975	5	16-QAM	1	0	20.88	0-1	0
	1712.5	19975	5	16-QAM	1	12	20.93	0-1	0
	1712.5	19975	5	16-QAM	1	24	20.90	0-1	0
	1712.5	19975	5	16-QAM	12	0	20.49	0-2	0
	1712.5	19975	5	16-QAM	12	6	20.48	0-2	0
	1712.5	19975	5	16-QAM	12	13	20.50	0-2	0
	1712.5	19975	5	16-QAM	25	0	20.62	0-2	0
	1732.5	20175	5	QPSK	1	0	20.84	0	0
	1732.5	20175	5	QPSK	1	12	20.72	0	0
Mid	1732.5	20175	5	QPSK	1	24	20.74	0	0
	1732.5	20175	5	QPSK	12	0	20.72	0-1	0
	1732.5	20175	5	QPSK	12	6	20.76	0-1	0
	1732.5	20175	5	QPSK	12	13	20.68	0-1	0
	1732.5	20175	5	QPSK	25	0	20.79	0-1	0
	1732.5	20175	5	16-QAM	1	0	20.70	0-1	0
	1732.5	20175	5	16-QAM	1	12	20.61	0-1	0
	1732.5	20175	5	16-QAM	1	24	20.63	0-1	0
	1732.5	20175	5	16-QAM	12	0	20.78	0-2	0
	1732.5	20175	5	16-QAM	12	6	20.75	0-2	0
	1732.5	20175	5	16-QAM	12	13	20.68	0-2	0
	1732.5	20175	5	16-QAM	25	0	20.76	0-2	0
	1752.5	20375	5	QPSK	1	0	20.31	0	0
	1752.5	20375	5	QPSK	1	12	20.30	0	0
	1752.5	20375	5	QPSK	1	24	20.33	0	0
	1752.5	20375	5	QPSK	12	0	20.33	0-1	0
High	1752.5	20375	5	QPSK	12	6	20.32	0-1	0
	1752.5	20375	5	QPSK	12	13	20.35	0-1	0
	1752.5	20375	5	QPSK	25	0	20.33	0-1	0
	1752.5	20375	5	16-QAM	1	0	20.40	0-1	0
	1752.5	20375	5	16-QAM	1	12	20.45	0-1	0
	1752.5	20375	5	16-QAM	1	24	20.44	0-1	0
	1752.5	20375	5	16-QAM	12	0	20.22	0-2	0
	1752.5	20375	5	16-QAM	12	6	20.20	0-2	0
	1752.5	20375	5	16-QAM	12	13	20.25	0-2	0
	1752.5	20375	5	16-QAM	25	0	20.31	0-2	0

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Table 9-21
LTE Band 4 (AWS) Conducted Powers -3 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1711.5	19965	3	QPSK	1	0	20.63	0	0
	1711.5	19965	3	QPSK	1	7	20.62	0	0
	1711.5	19965	3	QPSK	1	14	20.68	0	0
	1711.5	19965	3	QPSK	8	0	20.55	0-1	0
	1711.5	19965	3	QPSK	8	4	20.56	0-1	0
	1711.5	19965	3	QPSK	8	7	20.56	0-1	0
	1711.5	19965	3	QPSK	15	0	20.62	0-1	0
	1711.5	19965	3	16-QAM	1	0	20.68	0-1	0
	1711.5	19965	3	16-QAM	1	7	20.67	0-1	0
	1711.5	19965	3	16-QAM	1	14	20.71	0-1	0
	1711.5	19965	3	16-QAM	8	0	20.64	0-2	0
	1711.5	19965	3	16-QAM	8	4	20.65	0-2	0
	1711.5	19965	3	16-QAM	8	7	20.66	0-2	0
	1711.5	19965	3	16-QAM	15	0	20.55	0-2	0
	1732.5	20175	3	QPSK	1	0	20.76	0	0
Mid	1732.5	20175	3	QPSK	1	7	20.65	0	0
	1732.5	20175	3	QPSK	1	14	20.68	0	0
	1732.5	20175	3	QPSK	8	0	20.79	0-1	0
	1732.5	20175	3	QPSK	8	4	20.76	0-1	0
	1732.5	20175	3	QPSK	8	7	20.66	0-1	0
	1732.5	20175	3	QPSK	15	0	20.78	0-1	0
	1732.5	20175	3	16-QAM	1	0	20.75	0-1	0
	1732.5	20175	3	16-QAM	1	7	20.61	0-1	0
	1732.5	20175	3	16-QAM	1	14	20.66	0-1	0
	1732.5	20175	3	16-QAM	8	0	20.83	0-2	0
	1732.5	20175	3	16-QAM	8	4	20.81	0-2	0
	1732.5	20175	3	16-QAM	8	7	20.73	0-2	0
	1732.5	20175	3	16-QAM	15	0	20.82	0-2	0
	1753.5	20385	3	QPSK	1	0	20.39	0	0
	1753.5	20385	3	QPSK	1	7	20.37	0	0
High	1753.5	20385	3	QPSK	1	14	20.45	0	0
	1753.5	20385	3	QPSK	8	0	20.31	0-1	0
	1753.5	20385	3	QPSK	8	4	20.31	0-1	0
	1753.5	20385	3	QPSK	8	7	20.38	0-1	0
	1753.5	20385	3	QPSK	15	0	20.36	0-1	0
	1753.5	20385	3	16-QAM	1	0	20.30	0-1	0
	1753.5	20385	3	16-QAM	1	7	20.28	0-1	0
	1753.5	20385	3	16-QAM	1	14	20.36	0-1	0
	1753.5	20385	3	16-QAM	8	0	20.38	0-2	0
	1753.5	20385	3	16-QAM	8	4	20.38	0-2	0
	1753.5	20385	3	16-QAM	8	7	20.36	0-2	0
	1753.5	20385	3	16-QAM	15	0	20.36	0-2	0

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Table 9-22
LTE Band 4 (AWS) Conducted Powers -1.4 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1710.7	19957	1.4	QPSK	1	0	20.65	0	0
	1710.7	19957	1.4	QPSK	1	2	20.62	0	0
	1710.7	19957	1.4	QPSK	1	5	20.65	0	0
	1710.7	19957	1.4	QPSK	3	0	20.55	0	0
	1710.7	19957	1.4	QPSK	3	2	20.57	0	0
	1710.7	19957	1.4	QPSK	3	3	20.64	0	0
	1710.7	19957	1.4	QPSK	6	0	20.64	0-1	0
	1710.7	19957	1.4	16-QAM	1	0	20.69	0-1	0
	1710.7	19957	1.4	16-QAM	1	2	20.63	0-1	0
	1710.7	19957	1.4	16-QAM	1	5	20.73	0-1	0
	1710.7	19957	1.4	16-QAM	3	0	20.53	0-1	0
	1710.7	19957	1.4	16-QAM	3	2	20.50	0-1	0
	1710.7	19957	1.4	16-QAM	3	3	20.52	0-1	0
	1710.7	19957	1.4	16-QAM	6	0	20.57	0-2	0
Mid	1732.5	20175	1.4	QPSK	1	0	20.99	0	0
	1732.5	20175	1.4	QPSK	1	2	20.94	0	0
	1732.5	20175	1.4	QPSK	1	5	20.90	0	0
	1732.5	20175	1.4	QPSK	3	0	20.81	0	0
	1732.5	20175	1.4	QPSK	3	2	20.83	0	0
	1732.5	20175	1.4	QPSK	3	3	20.77	0	0
	1732.5	20175	1.4	QPSK	6	0	20.80	0-1	0
	1732.5	20175	1.4	16-QAM	1	0	20.90	0-1	0
	1732.5	20175	1.4	16-QAM	1	2	20.88	0-1	0
	1732.5	20175	1.4	16-QAM	1	5	20.81	0-1	0
	1732.5	20175	1.4	16-QAM	3	0	20.75	0-1	0
	1732.5	20175	1.4	16-QAM	3	2	20.70	0-1	0
	1732.5	20175	1.4	16-QAM	3	3	20.68	0-1	0
	1732.5	20175	1.4	16-QAM	6	0	20.79	0-2	0
High	1754.3	20393	1.4	QPSK	1	0	20.43	0	0
	1754.3	20393	1.4	QPSK	1	2	20.38	0	0
	1754.3	20393	1.4	QPSK	1	5	20.40	0	0
	1754.3	20393	1.4	QPSK	3	0	20.38	0	0
	1754.3	20393	1.4	QPSK	3	2	20.41	0	0
	1754.3	20393	1.4	QPSK	3	3	20.38	0	0
	1754.3	20393	1.4	QPSK	6	0	20.39	0-1	0
	1754.3	20393	1.4	16-QAM	1	0	20.38	0-1	0
	1754.3	20393	1.4	16-QAM	1	2	20.33	0-1	0
	1754.3	20393	1.4	16-QAM	1	5	20.35	0-1	0
	1754.3	20393	1.4	16-QAM	3	0	20.28	0-1	0
	1754.3	20393	1.4	16-QAM	3	2	20.26	0-1	0
	1754.3	20393	1.4	16-QAM	3	3	20.32	0-1	0
	1754.3	20393	1.4	16-QAM	6	0	20.43	0-2	0

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LTE Band 2 (PCS)

Table 9-23

LTE Band 2 (PCS) Conducted Powers - 20 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1860	18700	20	QPSK	1	0	23.00	0	0
	1860	18700	20	QPSK	1	50	22.92	0	0
	1860	18700	20	QPSK	1	99	22.84	0	0
	1860	18700	20	QPSK	50	0	22.10	0-1	1
	1860	18700	20	QPSK	50	25	22.11	0-1	1
	1860	18700	20	QPSK	50	50	22.06	0-1	1
	1860	18700	20	QPSK	100	0	22.13	0-1	1
	1860	18700	20	16QAM	1	0	21.91	0-1	1
	1860	18700	20	16QAM	1	50	21.90	0-1	1
	1860	18700	20	16QAM	1	99	21.77	0-1	1
	1860	18700	20	16QAM	50	0	21.16	0-2	2
	1860	18700	20	16QAM	50	25	21.11	0-2	2
	1860	18700	20	16QAM	50	50	21.05	0-2	2
	1860	18700	20	16QAM	100	0	21.05	0-2	2
	1880.0	18900	20	QPSK	1	0	22.81	0	0
	1880.0	18900	20	QPSK	1	50	22.84	0	0
Mid	1880.0	18900	20	QPSK	1	99	23.00	0	0
	1880.0	18900	20	QPSK	50	0	22.26	0-1	1
	1880.0	18900	20	QPSK	50	25	21.91	0-1	1
	1880.0	18900	20	QPSK	50	50	21.96	0-1	1
	1880.0	18900	20	QPSK	100	0	21.93	0-1	1
	1880.0	18900	20	16QAM	1	0	22.19	0-1	1
	1880.0	18900	20	16QAM	1	50	22.18	0-1	1
	1880.0	18900	20	16QAM	1	99	22.22	0-1	1
	1880.0	18900	20	16QAM	50	0	21.10	0-2	2
	1880.0	18900	20	16QAM	50	25	20.86	0-2	2
	1880.0	18900	20	16QAM	50	50	20.97	0-2	2
	1880.0	18900	20	16QAM	100	0	20.95	0-2	2
	1900	19100	20	QPSK	1	0	23.09	0	0
	1900	19100	20	QPSK	1	50	23.31	0	0
	1900	19100	20	QPSK	1	99	23.18	0	0
	1900	19100	20	QPSK	50	0	22.18	0-1	1
High	1900	19100	20	QPSK	50	25	22.17	0-1	1
	1900	19100	20	QPSK	50	50	22.24	0-1	1
	1900	19100	20	QPSK	100	0	22.22	0-1	1
	1900	19100	20	16QAM	1	0	22.08	0-1	1
	1900	19100	20	16QAM	1	50	22.33	0-1	1
	1900	19100	20	16QAM	1	99	22.48	0-1	1
	1900	19100	20	16QAM	50	0	21.49	0-2	2
	1900	19100	20	16QAM	50	25	21.32	0-2	2
	1900	19100	20	16QAM	50	50	21.43	0-2	2
	1900	19100	20	16QAM	100	0	21.35	0-2	2

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Table 9-24
LTE Band 2 (PCS) Conducted Powers - 15 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1857.5	18675	15	QPSK	1	0	23.04	0	0
	1857.5	18675	15	QPSK	1	36	22.87	0	0
	1857.5	18675	15	QPSK	1	74	22.78	0	0
	1857.5	18675	15	QPSK	36	0	21.66	0-1	1
	1857.5	18675	15	QPSK	36	18	21.65	0-1	1
	1857.5	18675	15	QPSK	36	37	21.63	0-1	1
	1857.5	18675	15	QPSK	75	0	21.63	0-1	1
	1857.5	18675	15	16QAM	1	0	21.95	0-1	1
	1857.5	18675	15	16QAM	1	36	21.70	0-1	1
	1857.5	18675	15	16QAM	1	74	21.66	0-1	1
	1857.5	18675	15	16QAM	36	0	20.69	0-2	2
	1857.5	18675	15	16QAM	36	18	20.57	0-2	2
	1857.5	18675	15	16QAM	36	37	20.59	0-2	2
	1857.5	18675	15	16QAM	75	0	20.62	0-2	2
Mid	1880.0	18900	15	QPSK	1	0	22.95	0	0
	1880.0	18900	15	QPSK	1	36	22.84	0	0
	1880.0	18900	15	QPSK	1	74	22.94	0	0
	1880.0	18900	15	QPSK	36	0	21.60	0-1	1
	1880.0	18900	15	QPSK	36	18	21.66	0-1	1
	1880.0	18900	15	QPSK	36	37	21.73	0-1	1
	1880.0	18900	15	QPSK	75	0	21.65	0-1	1
	1880.0	18900	15	16QAM	1	0	21.85	0-1	1
	1880.0	18900	15	16QAM	1	36	21.72	0-1	1
	1880.0	18900	15	16QAM	1	74	21.85	0-1	1
	1880.0	18900	15	16QAM	36	0	20.69	0-2	2
	1880.0	18900	15	16QAM	36	18	20.66	0-2	2
	1880.0	18900	15	16QAM	36	37	20.66	0-2	2
	1880.0	18900	15	16QAM	75	0	20.63	0-2	2
High	1902.5	19125	15	QPSK	1	0	23.29	0	0
	1902.5	19125	15	QPSK	1	36	23.26	0	0
	1902.5	19125	15	QPSK	1	74	23.16	0	0
	1902.5	19125	15	QPSK	36	0	22.08	0-1	1
	1902.5	19125	15	QPSK	36	18	22.05	0-1	1
	1902.5	19125	15	QPSK	36	37	22.06	0-1	1
	1902.5	19125	15	QPSK	75	0	21.98	0-1	1
	1902.5	19125	15	16QAM	1	0	22.15	0-1	1
	1902.5	19125	15	16QAM	1	36	22.13	0-1	1
	1902.5	19125	15	16QAM	1	74	22.00	0-1	1
	1902.5	19125	15	16QAM	36	0	21.10	0-2	2
	1902.5	19125	15	16QAM	36	18	21.03	0-2	2
	1902.5	19125	15	16QAM	36	37	21.03	0-2	2
	1902.5	19125	15	16QAM	75	0	21.03	0-2	2

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Table 9-25

LTE Band 2 (PCS) Conducted Powers - 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1855	18650	10	QPSK	1	0	23.04	0	0
	1855	18650	10	QPSK	1	25	22.84	0	0
	1855	18650	10	QPSK	1	49	22.80	0	0
	1855	18650	10	QPSK	25	0	21.76	0-1	1
	1855	18650	10	QPSK	25	12	21.59	0-1	1
	1855	18650	10	QPSK	25	25	21.59	0-1	1
	1855	18650	10	QPSK	50	0	21.58	0-1	1
	1855	18650	10	16QAM	1	0	21.90	0-1	1
	1855	18650	10	16QAM	1	25	21.64	0-1	1
	1855	18650	10	16QAM	1	49	21.60	0-1	1
	1855	18650	10	16QAM	25	0	20.72	0-2	2
	1855	18650	10	16QAM	25	12	20.64	0-2	2
	1855	18650	10	16QAM	25	25	20.62	0-2	2
	1855	18650	10	16QAM	50	0	20.58	0-2	2
Mid	1880.0	18900	10	QPSK	1	0	23.01	0	0
	1880.0	18900	10	QPSK	1	25	22.92	0	0
	1880.0	18900	10	QPSK	1	49	22.98	0	0
	1880.0	18900	10	QPSK	25	0	21.64	0-1	1
	1880.0	18900	10	QPSK	25	12	21.70	0-1	1
	1880.0	18900	10	QPSK	25	25	21.64	0-1	1
	1880.0	18900	10	QPSK	50	0	21.68	0-1	1
	1880.0	18900	10	16QAM	1	0	21.82	0-1	1
	1880.0	18900	10	16QAM	1	25	21.71	0-1	1
	1880.0	18900	10	16QAM	1	49	21.78	0-1	1
	1880.0	18900	10	16QAM	25	0	20.63	0-2	2
	1880.0	18900	10	16QAM	25	12	20.72	0-2	2
	1880.0	18900	10	16QAM	25	25	20.74	0-2	2
	1880.0	18900	10	16QAM	50	0	20.63	0-2	2
High	1905	19150	10	QPSK	1	0	23.30	0	0
	1905	19150	10	QPSK	1	25	23.32	0	0
	1905	19150	10	QPSK	1	49	23.08	0	0
	1905	19150	10	QPSK	25	0	22.04	0-1	1
	1905	19150	10	QPSK	25	12	22.04	0-1	1
	1905	19150	10	QPSK	25	25	21.95	0-1	1
	1905	19150	10	QPSK	50	0	21.97	0-1	1
	1905	19150	10	16QAM	1	0	22.12	0-1	1
	1905	19150	10	16QAM	1	25	22.15	0-1	1
	1905	19150	10	16QAM	1	49	21.98	0-1	1
	1905	19150	10	16QAM	25	0	21.06	0-2	2
	1905	19150	10	16QAM	25	12	21.08	0-2	2
	1905	19150	10	16QAM	25	25	21.04	0-2	2
	1905	19150	10	16QAM	50	0	21.03	0-2	2

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Table 9-26
LTE Band 2 (PCS) Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1852.5	18625	5	QPSK	1	0	23.00	0	0
	1852.5	18625	5	QPSK	1	12	22.97	0	0
	1852.5	18625	5	QPSK	1	24	22.86	0	0
	1852.5	18625	5	QPSK	12	0	21.71	0-1	1
	1852.5	18625	5	QPSK	12	6	21.77	0-1	1
	1852.5	18625	5	QPSK	12	13	21.74	0-1	1
	1852.5	18625	5	QPSK	25	0	21.79	0-1	1
	1852.5	18625	5	16-QAM	1	0	21.84	0-1	1
	1852.5	18625	5	16-QAM	1	12	21.70	0-1	1
	1852.5	18625	5	16-QAM	1	24	21.63	0-1	1
	1852.5	18625	5	16-QAM	12	0	20.64	0-2	2
	1852.5	18625	5	16-QAM	12	6	20.61	0-2	2
	1852.5	18625	5	16-QAM	12	13	20.58	0-2	2
	1852.5	18625	5	16-QAM	25	0	20.69	0-2	2
Mid	1880.0	18900	5	QPSK	1	0	22.98	0	0
	1880.0	18900	5	QPSK	1	12	22.89	0	0
	1880.0	18900	5	QPSK	1	24	22.93	0	0
	1880.0	18900	5	QPSK	12	0	21.59	0-1	1
	1880.0	18900	5	QPSK	12	6	21.60	0-1	1
	1880.0	18900	5	QPSK	12	13	21.63	0-1	1
	1880.0	18900	5	QPSK	25	0	21.65	0-1	1
	1880.0	18900	5	16-QAM	1	0	21.77	0-1	1
	1880.0	18900	5	16-QAM	1	12	21.67	0-1	1
	1880.0	18900	5	16-QAM	1	24	21.76	0-1	1
	1880.0	18900	5	16-QAM	12	0	20.54	0-2	2
	1880.0	18900	5	16-QAM	12	6	20.55	0-2	2
	1880.0	18900	5	16-QAM	12	13	20.58	0-2	2
	1880.0	18900	5	16-QAM	25	0	20.65	0-2	2
High	1907.5	19175	5	QPSK	1	0	23.31	0	0
	1907.5	19175	5	QPSK	1	12	23.22	0	0
	1907.5	19175	5	QPSK	1	24	22.94	0	0
	1907.5	19175	5	QPSK	12	0	21.91	0-1	1
	1907.5	19175	5	QPSK	12	6	21.91	0-1	1
	1907.5	19175	5	QPSK	12	13	21.89	0-1	1
	1907.5	19175	5	QPSK	25	0	21.92	0-1	1
	1907.5	19175	5	16-QAM	1	0	22.10	0-1	1
	1907.5	19175	5	16-QAM	1	12	21.98	0-1	1
	1907.5	19175	5	16-QAM	1	24	21.96	0-1	1
	1907.5	19175	5	16-QAM	12	0	20.93	0-2	2
	1907.5	19175	5	16-QAM	12	6	20.92	0-2	2
	1907.5	19175	5	16-QAM	12	13	20.84	0-2	2
	1907.5	19175	5	16-QAM	25	0	20.98	0-2	2

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Table 9-27
LTE Band 2 (PCS) Conducted Powers - 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1851.5	18615	3	QPSK	1	0	22.97	0	0
	1851.5	18615	3	QPSK	1	7	22.93	0	0
	1851.5	18615	3	QPSK	1	14	22.93	0	0
	1851.5	18615	3	QPSK	8	0	21.75	0-1	1
	1851.5	18615	3	QPSK	8	4	21.69	0-1	1
	1851.5	18615	3	QPSK	8	7	21.93	0-1	1
	1851.5	18615	3	QPSK	15	0	21.74	0-1	1
	1851.5	18615	3	16-QAM	1	0	21.83	0-1	1
	1851.5	18615	3	16-QAM	1	7	21.74	0-1	1
	1851.5	18615	3	16-QAM	1	14	21.75	0-1	1
	1851.5	18615	3	16-QAM	8	0	20.61	0-2	2
	1851.5	18615	3	16-QAM	8	4	20.65	0-2	2
	1851.5	18615	3	16-QAM	8	7	20.61	0-2	2
	1851.5	18615	3	16-QAM	15	0	20.72	0-2	2
Mid	1880.0	18900	3	QPSK	1	0	22.92	0	0
	1880.0	18900	3	QPSK	1	7	22.91	0	0
	1880.0	18900	3	QPSK	1	14	22.91	0	0
	1880.0	18900	3	QPSK	8	0	21.58	0-1	1
	1880.0	18900	3	QPSK	8	4	21.57	0-1	1
	1880.0	18900	3	QPSK	8	7	21.58	0-1	1
	1880.0	18900	3	QPSK	15	0	21.61	0-1	1
	1880.0	18900	3	16-QAM	1	0	21.79	0-1	1
	1880.0	18900	3	16-QAM	1	7	21.68	0-1	1
	1880.0	18900	3	16-QAM	1	14	21.75	0-1	1
	1880.0	18900	3	16-QAM	8	0	20.54	0-2	2
	1880.0	18900	3	16-QAM	8	4	20.54	0-2	2
	1880.0	18900	3	16-QAM	8	7	20.58	0-2	2
	1880.0	18900	3	16-QAM	15	0	20.68	0-2	2
High	1908.5	19185	3	QPSK	1	0	23.21	0	0
	1908.5	19185	3	QPSK	1	7	23.18	0	0
	1908.5	19185	3	QPSK	1	14	22.97	0	0
	1908.5	19185	3	QPSK	8	0	21.90	0-1	1
	1908.5	19185	3	QPSK	8	4	21.85	0-1	1
	1908.5	19185	3	QPSK	8	7	21.89	0-1	1
	1908.5	19185	3	QPSK	15	0	21.91	0-1	1
	1908.5	19185	3	16-QAM	1	0	22.02	0-1	1
	1908.5	19185	3	16-QAM	1	7	22.01	0-1	1
	1908.5	19185	3	16-QAM	1	14	21.91	0-1	1
	1908.5	19185	3	16-QAM	8	0	20.92	0-2	2
	1908.5	19185	3	16-QAM	8	4	20.85	0-2	2
	1908.5	19185	3	16-QAM	8	7	20.83	0-2	2
	1908.5	19185	3	16-QAM	15	0	20.97	0-2	2

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Table 9-28
LTE Band 2 (PCS) Conducted Powers -1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1850.7	18607	1.4	QPSK	1	0	22.94	0	0
	1850.7	18607	1.4	QPSK	1	2	22.92	0	0
	1850.7	18607	1.4	QPSK	1	5	22.88	0	0
	1850.7	18607	1.4	QPSK	3	0	22.84	0	0
	1850.7	18607	1.4	QPSK	3	2	22.82	0	0
	1850.7	18607	1.4	QPSK	3	3	22.78	0	0
	1850.7	18607	1.4	QPSK	6	0	21.76	0-1	1
	1850.7	18607	1.4	16-QAM	1	0	21.82	0-1	1
	1850.7	18607	1.4	16-QAM	1	2	21.77	0-1	1
	1850.7	18607	1.4	16-QAM	1	5	21.85	0-1	1
	1850.7	18607	1.4	16-QAM	3	0	21.72	0-1	1
	1850.7	18607	1.4	16-QAM	3	2	21.69	0-1	1
	1850.7	18607	1.4	16-QAM	3	3	21.70	0-1	1
	1850.7	18607	1.4	16-QAM	6	0	20.66	0-2	2
Mid	1880.0	18900	1.4	QPSK	1	0	22.80	0	0
	1880.0	18900	1.4	QPSK	1	2	22.86	0	0
	1880.0	18900	1.4	QPSK	1	5	22.81	0	0
	1880.0	18900	1.4	QPSK	3	0	22.74	0	0
	1880.0	18900	1.4	QPSK	3	2	22.74	0	0
	1880.0	18900	1.4	QPSK	3	3	22.71	0	0
	1880.0	18900	1.4	QPSK	6	0	21.64	0-1	1
	1880.0	18900	1.4	16-QAM	1	0	21.79	0-1	1
	1880.0	18900	1.4	16-QAM	1	2	21.68	0-1	1
	1880.0	18900	1.4	16-QAM	1	5	21.72	0-1	1
	1880.0	18900	1.4	16-QAM	3	0	21.64	0-1	1
	1880.0	18900	1.4	16-QAM	3	2	21.62	0-1	1
	1880.0	18900	1.4	16-QAM	3	3	21.63	0-1	1
	1880.0	18900	1.4	16-QAM	6	0	20.64	0-2	2
High	1909.3	19193	1.4	QPSK	1	0	23.08	0	0
	1909.3	19193	1.4	QPSK	1	2	23.04	0	0
	1909.3	19193	1.4	QPSK	1	5	22.81	0	0
	1909.3	19193	1.4	QPSK	3	0	22.98	0	0
	1909.3	19193	1.4	QPSK	3	2	22.95	0	0
	1909.3	19193	1.4	QPSK	3	3	22.87	0	0
	1909.3	19193	1.4	QPSK	6	0	22.15	0-1	1
	1909.3	19193	1.4	16-QAM	1	0	22.06	0-1	1
	1909.3	19193	1.4	16-QAM	1	2	21.95	0-1	1
	1909.3	19193	1.4	16-QAM	1	5	22.05	0-1	1
	1909.3	19193	1.4	16-QAM	3	0	21.95	0-1	1
	1909.3	19193	1.4	16-QAM	3	2	21.92	0-1	1
	1909.3	19193	1.4	16-QAM	3	3	21.95	0-1	1
	1909.3	19193	1.4	16-QAM	6	0	20.96	0-2	2

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Table 9-29
LTE Band 2 (PCS) Conducted Powers -20 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1860	18700	20	QPSK	1	0	21.21	0	0
	1860	18700	20	QPSK	1	50	21.02	0	0
	1860	18700	20	QPSK	1	99	20.88	0	0
	1860	18700	20	QPSK	50	0	21.19	0-1	0
	1860	18700	20	QPSK	50	25	21.18	0-1	0
	1860	18700	20	QPSK	50	50	21.09	0-1	0
	1860	18700	20	QPSK	100	0	21.22	0-1	0
	1860	18700	20	16QAM	1	0	21.18	0-1	0
	1860	18700	20	16QAM	1	50	21.09	0-1	0
	1860	18700	20	16QAM	1	99	20.87	0-1	0
	1860	18700	20	16QAM	50	0	21.12	0-2	0
	1860	18700	20	16QAM	50	25	21.09	0-2	0
	1860	18700	20	16QAM	50	50	21.05	0-2	0
	1860	18700	20	16QAM	100	0	21.11	0-2	0
	1880.0	18900	20	QPSK	1	0	21.11	0	0
	1880.0	18900	20	QPSK	1	50	21.01	0	0
Mid	1880.0	18900	20	QPSK	1	99	21.24	0	0
	1880.0	18900	20	QPSK	50	0	21.03	0-1	0
	1880.0	18900	20	QPSK	50	25	21.00	0-1	0
	1880.0	18900	20	QPSK	50	50	21.09	0-1	0
	1880.0	18900	20	QPSK	100	0	21.00	0-1	0
	1880.0	18900	20	16QAM	1	0	21.07	0-1	0
	1880.0	18900	20	16QAM	1	50	20.98	0-1	0
	1880.0	18900	20	16QAM	1	99	21.17	0-1	0
	1880.0	18900	20	16QAM	50	0	20.97	0-2	0
	1880.0	18900	20	16QAM	50	25	20.95	0-2	0
	1880.0	18900	20	16QAM	50	50	21.06	0-2	0
	1880.0	18900	20	16QAM	100	0	20.95	0-2	0
	1900	19100	20	QPSK	1	0	21.11	0	0
	1900	19100	20	QPSK	1	50	21.42	0	0
	1900	19100	20	QPSK	1	99	21.50	0	0
	1900	19100	20	QPSK	50	0	21.35	0-1	0
High	1900	19100	20	QPSK	50	25	21.48	0-1	0
	1900	19100	20	QPSK	50	50	21.50	0-1	0
	1900	19100	20	QPSK	100	0	21.42	0-1	0
	1900	19100	20	16QAM	1	0	21.46	0-1	0
	1900	19100	20	16QAM	1	50	21.48	0-1	0
	1900	19100	20	16QAM	1	99	21.50	0-1	0
	1900	19100	20	16QAM	50	0	21.20	0-2	0
	1900	19100	20	16QAM	50	25	21.34	0-2	0
	1900	19100	20	16QAM	50	50	21.38	0-2	0
	1900	19100	20	16QAM	100	0	21.35	0-2	0

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Table 9-30
LTE Band 2 (PCS) Conducted Powers -15 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1857.5	18675	15	QPSK	1	0	21.11	0	0
	1857.5	18675	15	QPSK	1	36	20.95	0	0
	1857.5	18675	15	QPSK	1	74	20.97	0	0
	1857.5	18675	15	QPSK	36	0	20.96	0-1	0
	1857.5	18675	15	QPSK	36	18	20.93	0-1	0
	1857.5	18675	15	QPSK	36	37	20.94	0-1	0
	1857.5	18675	15	QPSK	75	0	20.96	0-1	0
	1857.5	18675	15	16QAM	1	0	21.22	0-1	0
	1857.5	18675	15	16QAM	1	36	21.04	0-1	0
	1857.5	18675	15	16QAM	1	74	21.07	0-1	0
	1857.5	18675	15	16QAM	36	0	20.90	0-2	0
	1857.5	18675	15	16QAM	36	18	20.88	0-2	0
	1857.5	18675	15	16QAM	36	37	20.87	0-2	0
	1857.5	18675	15	16QAM	75	0	20.87	0-2	0
Mid	1880.0	18900	15	QPSK	1	0	20.99	0	0
	1880.0	18900	15	QPSK	1	36	20.94	0	0
	1880.0	18900	15	QPSK	1	74	21.08	0	0
	1880.0	18900	15	QPSK	36	0	20.96	0-1	0
	1880.0	18900	15	QPSK	36	18	20.93	0-1	0
	1880.0	18900	15	QPSK	36	37	21.04	0-1	0
	1880.0	18900	15	QPSK	75	0	21.05	0-1	0
	1880.0	18900	15	16QAM	1	0	20.76	0-1	0
	1880.0	18900	15	16QAM	1	36	20.71	0-1	0
	1880.0	18900	15	16QAM	1	74	20.87	0-1	0
	1880.0	18900	15	16QAM	36	0	20.80	0-2	0
	1880.0	18900	15	16QAM	36	18	20.85	0-2	0
	1880.0	18900	15	16QAM	36	37	20.87	0-2	0
	1880.0	18900	15	16QAM	75	0	20.87	0-2	0
High	1902.5	19125	15	QPSK	1	0	21.30	0	0
	1902.5	19125	15	QPSK	1	36	21.37	0	0
	1902.5	19125	15	QPSK	1	74	21.26	0	0
	1902.5	19125	15	QPSK	36	0	21.47	0-1	0
	1902.5	19125	15	QPSK	36	18	21.44	0-1	0
	1902.5	19125	15	QPSK	36	37	21.43	0-1	0
	1902.5	19125	15	QPSK	75	0	21.39	0-1	0
	1902.5	19125	15	16QAM	1	0	21.06	0-1	0
	1902.5	19125	15	16QAM	1	36	21.13	0-1	0
	1902.5	19125	15	16QAM	1	74	21.10	0-1	0
	1902.5	19125	15	16QAM	36	0	21.28	0-2	0
	1902.5	19125	15	16QAM	36	18	21.26	0-2	0
	1902.5	19125	15	16QAM	36	37	21.24	0-2	0
	1902.5	19125	15	16QAM	75	0	21.23	0-2	0

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Table 9-31
LTE Band 2 (PCS) Conducted Powers -10 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1855	18650	10	QPSK	1	0	21.13	0	0
	1855	18650	10	QPSK	1	25	20.94	0	0
	1855	18650	10	QPSK	1	49	20.93	0	0
	1855	18650	10	QPSK	25	0	21.07	0-1	0
	1855	18650	10	QPSK	25	12	20.91	0-1	0
	1855	18650	10	QPSK	25	25	20.90	0-1	0
	1855	18650	10	QPSK	50	0	20.97	0-1	0
	1855	18650	10	16QAM	1	0	20.88	0-1	0
	1855	18650	10	16QAM	1	25	20.69	0-1	0
	1855	18650	10	16QAM	1	49	20.70	0-1	0
	1855	18650	10	16QAM	25	0	21.07	0-2	0
	1855	18650	10	16QAM	25	12	20.92	0-2	0
	1855	18650	10	16QAM	25	25	20.90	0-2	0
	1855	18650	10	16QAM	50	0	20.85	0-2	0
	1880.0	18900	10	QPSK	1	0	20.99	0	0
	1880.0	18900	10	QPSK	1	25	20.90	0	0
Mid	1880.0	18900	10	QPSK	1	49	21.05	0	0
	1880.0	18900	10	QPSK	25	0	20.93	0-1	0
	1880.0	18900	10	QPSK	25	12	20.99	0-1	0
	1880.0	18900	10	QPSK	25	25	20.97	0-1	0
	1880.0	18900	10	QPSK	50	0	20.96	0-1	0
	1880.0	18900	10	16QAM	1	0	20.80	0-1	0
	1880.0	18900	10	16QAM	1	25	20.75	0-1	0
	1880.0	18900	10	16QAM	1	49	20.82	0-1	0
	1880.0	18900	10	16QAM	25	0	20.81	0-2	0
	1880.0	18900	10	16QAM	25	12	20.84	0-2	0
	1880.0	18900	10	16QAM	25	25	20.91	0-2	0
	1880.0	18900	10	16QAM	50	0	20.87	0-2	0
	1905	19150	10	QPSK	1	0	21.35	0	0
	1905	19150	10	QPSK	1	25	21.49	0	0
	1905	19150	10	QPSK	1	49	21.37	0	0
High	1905	19150	10	QPSK	25	0	21.34	0-1	0
	1905	19150	10	QPSK	25	12	21.45	0-1	0
	1905	19150	10	QPSK	25	25	21.34	0-1	0
	1905	19150	10	QPSK	50	0	21.36	0-1	0
	1905	19150	10	16QAM	1	0	21.44	0-1	0
	1905	19150	10	16QAM	1	25	21.48	0-1	0
	1905	19150	10	16QAM	1	49	21.43	0-1	0
	1905	19150	10	16QAM	25	0	21.29	0-2	0
	1905	19150	10	16QAM	25	12	21.31	0-2	0
	1905	19150	10	16QAM	25	25	21.23	0-2	0
	1905	19150	10	16QAM	50	0	21.26	0-2	0

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Table 9-32
LTE Band 2 (PCS) Conducted Powers -5 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1852.5	18625	5	QPSK	1	0	21.11	0	0
	1852.5	18625	5	QPSK	1	12	21.02	0	0
	1852.5	18625	5	QPSK	1	24	20.95	0	0
	1852.5	18625	5	QPSK	12	0	21.11	0-1	0
	1852.5	18625	5	QPSK	12	6	21.09	0-1	0
	1852.5	18625	5	QPSK	12	13	21.04	0-1	0
	1852.5	18625	5	QPSK	25	0	21.08	0-1	0
	1852.5	18625	5	16-QAM	1	0	21.44	0-1	0
	1852.5	18625	5	16-QAM	1	12	21.36	0-1	0
	1852.5	18625	5	16-QAM	1	24	21.32	0-1	0
	1852.5	18625	5	16-QAM	12	0	20.98	0-2	0
	1852.5	18625	5	16-QAM	12	6	20.95	0-2	0
	1852.5	18625	5	16-QAM	12	13	21.00	0-2	0
	1852.5	18625	5	16-QAM	25	0	20.94	0-2	0
	1880.0	18900	5	QPSK	1	0	21.12	0	0
	1880.0	18900	5	QPSK	1	12	21.00	0	0
Mid	1880.0	18900	5	QPSK	1	24	21.08	0	0
	1880.0	18900	5	QPSK	12	0	20.97	0-1	0
	1880.0	18900	5	QPSK	12	6	20.94	0-1	0
	1880.0	18900	5	QPSK	12	13	21.01	0-1	0
	1880.0	18900	5	QPSK	25	0	20.95	0-1	0
	1880.0	18900	5	16-QAM	1	0	20.93	0-1	0
	1880.0	18900	5	16-QAM	1	12	20.67	0-1	0
	1880.0	18900	5	16-QAM	1	24	20.78	0-1	0
	1880.0	18900	5	16-QAM	12	0	20.87	0-2	0
	1880.0	18900	5	16-QAM	12	6	20.86	0-2	0
	1880.0	18900	5	16-QAM	12	13	20.90	0-2	0
	1880.0	18900	5	16-QAM	25	0	20.94	0-2	0
	1907.5	19175	5	QPSK	1	0	21.25	0	0
	1907.5	19175	5	QPSK	1	12	21.16	0	0
	1907.5	19175	5	QPSK	1	24	21.21	0	0
High	1907.5	19175	5	QPSK	12	0	21.38	0-1	0
	1907.5	19175	5	QPSK	12	6	21.36	0-1	0
	1907.5	19175	5	QPSK	12	13	21.37	0-1	0
	1907.5	19175	5	QPSK	25	0	21.34	0-1	0
	1907.5	19175	5	16-QAM	1	0	21.38	0-1	0
	1907.5	19175	5	16-QAM	1	12	21.30	0-1	0
	1907.5	19175	5	16-QAM	1	24	21.26	0-1	0
	1907.5	19175	5	16-QAM	12	0	21.22	0-2	0
	1907.5	19175	5	16-QAM	12	6	21.19	0-2	0
	1907.5	19175	5	16-QAM	12	13	21.22	0-2	0
	1907.5	19175	5	16-QAM	25	0	21.20	0-2	0

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Table 9-33
LTE Band 2 (PCS) Conducted Powers -3 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1851.5	18615	3	QPSK	1	0	21.17	0	0
	1851.5	18615	3	QPSK	1	7	21.11	0	0
	1851.5	18615	3	QPSK	1	14	21.15	0	0
	1851.5	18615	3	QPSK	8	0	21.06	0-1	0
	1851.5	18615	3	QPSK	8	4	21.06	0-1	0
	1851.5	18615	3	QPSK	8	7	21.08	0-1	0
	1851.5	18615	3	QPSK	15	0	21.07	0-1	0
	1851.5	18615	3	16-QAM	1	0	20.93	0-1	0
	1851.5	18615	3	16-QAM	1	7	20.82	0-1	0
	1851.5	18615	3	16-QAM	1	14	20.86	0-1	0
	1851.5	18615	3	16-QAM	8	0	20.94	0-2	0
	1851.5	18615	3	16-QAM	8	4	20.93	0-2	0
	1851.5	18615	3	16-QAM	8	7	20.94	0-2	0
	1851.5	18615	3	16-QAM	15	0	20.95	0-2	0
	1880.0	18900	3	QPSK	1	0	20.92	0	0
Mid	1880.0	18900	3	QPSK	1	7	20.90	0	0
	1880.0	18900	3	QPSK	1	14	20.93	0	0
	1880.0	18900	3	QPSK	8	0	20.93	0-1	0
	1880.0	18900	3	QPSK	8	4	20.95	0-1	0
	1880.0	18900	3	QPSK	8	7	20.95	0-1	0
	1880.0	18900	3	QPSK	15	0	20.92	0-1	0
	1880.0	18900	3	16-QAM	1	0	20.74	0-1	0
	1880.0	18900	3	16-QAM	1	7	20.68	0-1	0
	1880.0	18900	3	16-QAM	1	14	20.78	0-1	0
	1880.0	18900	3	16-QAM	8	0	20.86	0-2	0
	1880.0	18900	3	16-QAM	8	4	20.83	0-2	0
	1880.0	18900	3	16-QAM	8	7	20.85	0-2	0
	1880.0	18900	3	16-QAM	15	0	20.89	0-2	0
	1908.5	19185	3	QPSK	1	0	21.45	0	0
	1908.5	19185	3	QPSK	1	7	21.37	0	0
High	1908.5	19185	3	QPSK	1	14	21.43	0	0
	1908.5	19185	3	QPSK	8	0	21.29	0-1	0
	1908.5	19185	3	QPSK	8	4	21.27	0-1	0
	1908.5	19185	3	QPSK	8	7	21.34	0-1	0
	1908.5	19185	3	QPSK	15	0	21.36	0-1	0
	1908.5	19185	3	16-QAM	1	0	21.49	0-1	0
	1908.5	19185	3	16-QAM	1	7	21.48	0-1	0
	1908.5	19185	3	16-QAM	1	14	21.50	0-1	0
	1908.5	19185	3	16-QAM	8	0	21.22	0-2	0
	1908.5	19185	3	16-QAM	8	4	21.19	0-2	0
	1908.5	19185	3	16-QAM	8	7	21.21	0-2	0
	1908.5	19185	3	16-QAM	15	0	21.23	0-2	0

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Table 9-34
LTE Band 2 (PCS) Conducted Powers -1.4 MHz Bandwidth
(Representing Hotspot Mode)

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
Low	1850.7	18607	1.4	QPSK	1	0	21.15	0	0
	1850.7	18607	1.4	QPSK	1	2	21.08	0	0
	1850.7	18607	1.4	QPSK	1	5	21.07	0	0
	1850.7	18607	1.4	QPSK	3	0	21.12	0	0
	1850.7	18607	1.4	QPSK	3	2	21.11	0	0
	1850.7	18607	1.4	QPSK	3	3	21.12	0	0
	1850.7	18607	1.4	QPSK	6	0	21.11	0-1	0
	1850.7	18607	1.4	16-QAM	1	0	20.92	0-1	0
	1850.7	18607	1.4	16-QAM	1	2	20.88	0-1	0
	1850.7	18607	1.4	16-QAM	1	5	20.99	0-1	0
	1850.7	18607	1.4	16-QAM	3	0	21.26	0-1	0
	1850.7	18607	1.4	16-QAM	3	2	21.21	0-1	0
	1850.7	18607	1.4	16-QAM	3	3	21.22	0-1	0
	1850.7	18607	1.4	16-QAM	6	0	21.10	0-2	0
	1880.0	18900	1.4	QPSK	1	0	21.17	0	0
	1880.0	18900	1.4	QPSK	1	2	21.09	0	0
Mid	1880.0	18900	1.4	QPSK	1	5	21.17	0	0
	1880.0	18900	1.4	QPSK	3	0	21.02	0	0
	1880.0	18900	1.4	QPSK	3	2	20.99	0	0
	1880.0	18900	1.4	QPSK	3	3	21.00	0	0
	1880.0	18900	1.4	QPSK	6	0	21.01	0-1	0
	1880.0	18900	1.4	16-QAM	1	0	21.06	0-1	0
	1880.0	18900	1.4	16-QAM	1	2	21.00	0-1	0
	1880.0	18900	1.4	16-QAM	1	5	21.05	0-1	0
	1880.0	18900	1.4	16-QAM	3	0	20.88	0-1	0
	1880.0	18900	1.4	16-QAM	3	2	20.86	0-1	0
	1880.0	18900	1.4	16-QAM	3	3	20.91	0-1	0
	1880.0	18900	1.4	16-QAM	6	0	20.93	0-2	0
	1909.3	19193	1.4	QPSK	1	0	21.43	0	0
	1909.3	19193	1.4	QPSK	1	2	21.35	0	0
	1909.3	19193	1.4	QPSK	1	5	21.39	0	0
	1909.3	19193	1.4	QPSK	3	0	21.32	0	0
High	1909.3	19193	1.4	QPSK	3	2	21.30	0	0
	1909.3	19193	1.4	QPSK	3	3	21.33	0	0
	1909.3	19193	1.4	QPSK	6	0	21.30	0-1	0
	1909.3	19193	1.4	16-QAM	1	0	21.50	0-1	0
	1909.3	19193	1.4	16-QAM	1	2	21.47	0-1	0
	1909.3	19193	1.4	16-QAM	1	5	21.49	0-1	0
	1909.3	19193	1.4	16-QAM	3	0	21.33	0-1	0
	1909.3	19193	1.4	16-QAM	3	2	21.24	0-1	0
	1909.3	19193	1.4	16-QAM	3	3	21.29	0-1	0
	1909.3	19193	1.4	16-QAM	6	0	21.05	0-2	0

9.3.5 LTE Carrier Aggregation Conducted Powers

Table 9-35

Maximum LTE Carrier Aggregation Conducted Powers: Band 2 (PCC) + Band 4 (SCC) 10 MHz BW

Band 2 (PCC) + Band 4 (SCC), 10 MHz				
1905 MHz / ch.19150 + 2132.5 MHz / ch. 2175	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	25	23.20	23.32

Table 9-36

Reduced LTE Carrier Aggregation Conducted Powers: Band 2 (PCC) + Band 4 (SCC) 10 MHz BW

Band 2 (PCC) + Band 4 (SCC), 10 MHz				
1905 MHz / ch.19150 + 2132.5 MHz / ch. 2175	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	25	21.35	21.49

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Table 9-37

Maximum LTE Carrier Aggregation Conducted Powers: Band 4 (PCC) + Band 2 (SCC) 10 MHz BW

Band 4 (PCC) + Band 2 (SCC), 10 MHz				
1732.5 MHz / ch.20175 + 1960 MHz / ch. 900	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	0	23.16	23.40

Table 9-38

Reduced LTE Carrier Aggregation Conducted Powers: Band 4 (PCC) + Band 2 (SCC) 10 MHz BW

Band 4 (PCC) + Band 2 (SCC), 10 MHz				
1732.5 MHz / ch.20175 + 1960 MHz / ch. 900	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	0	20.61	20.87

Table 9-39

Maximum LTE Carrier Aggregation Conducted Powers: Band 4 (PCC) + Band 12 (SCC) 10 MHz BW

Band 4 (PCC) + Band 12 (SCC), 10 MHz				
1732.5 MHz / ch.20175 + 737.5 MHz / ch. 5095	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	0	23.18	23.40

Table 9-40

Reduced LTE Carrier Aggregation Conducted Powers: Band 4 (PCC) + Band 12 (SCC) 10 MHz BW

Band 4 (PCC) + Band 12 (SCC), 10 MHz				
1732.5 MHz / ch.20175 + 737.5 MHz / ch. 5095	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	0	20.60	20.87

Table 9-41

Maximum LTE Carrier Aggregation Conducted Powers: Band 12 (PCC) + Band 4 (SCC) 10 MHz BW

Band 12 (PCC) + Band 4 (SCC), 10 MHz				
707.7 MHz / ch.23095 + 2123.5 MHz / ch. 2175	PCC UL # RB	PCC UL RB Offset	LTE Rel 10 Tx.Power (dBm)	LTE Rel 8 Tx.Power (dBm)
	1	25	24.31	24.35

Note:

1. The device does not support all Rel. 10 Carrier Aggregation features due to modem chipset limitation.
2. The device only supports downlink Carrier Aggregation. Uplink Carrier Aggregation is not supported. Power measurements were performed with two DL carriers for the Release 8 configuration that had the highest output power (across all bandwidths, channels and RB Configurations) for each band
3. This device only supports inter-band CA (B2+B4, B4+B2, B4+B12, B12+B4) with a maximum of 10 MHz of spectrum.
4. All control and acknowledge data is sent on uplink channels that operate identical to release 8 specifications.

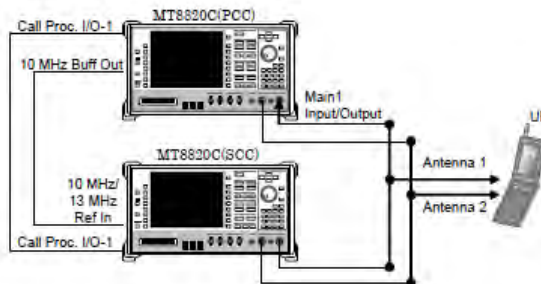


Figure 9-3
Power Measurement Setup

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9.4 WLAN/Bluetooth Conducted Powers

Table 9-42
SISO IEEE 802.11b Average RF Power- Antenna 1

Mode	Freq [MHz]	Channel	802.11b Conducted Power [dBm]			
			Data Rate [Mbps]			
			1	2	5.5	11
802.11b	2412	1*	14.75	15.09	15.12	15.13
802.11b	2437	6*	14.88	15.25	15.27	15.24
802.11b	2462	11*	15.19	15.39	15.43	15.42

Table 9-43
SISO IEEE 802.11b Average RF Power- Antenna 2

Mode	Freq [MHz]	Channel	802.11b Conducted Power [dBm]			
			Data Rate [Mbps]			
			1	2	5.5	11
802.11b	2412	1*	14.04	14.20	14.19	14.17
802.11b	2437	6*	14.71	14.92	14.82	14.87
802.11b	2462	11*	14.72	14.82	14.87	14.93

Table 9-44
SISO IEEE 802.11g Average RF Power- Antenna 1

Mode	Freq [MHz]	Channel	802.11g Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11g	2412	1	14.20	14.23	14.20	14.14	14.31	14.24	14.17	14.03
802.11g	2437	6	14.41	14.49	14.41	14.37	14.48	14.42	14.33	14.18
802.11g	2462	11	14.41	14.41	14.45	14.27	14.48	14.41	14.43	14.19

Table 9-45
SISO IEEE 802.11g Average RF Power- Antenna 2

Mode	Freq [MHz]	Channel	802.11g Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11g	2412	1	14.03	13.94	14.05	13.93	14.12	14.05	14.29	14.08
802.11g	2437	6	14.39	14.31	14.40	14.29	14.43	14.42	14.49	14.44
802.11g	2462	11	13.62	13.58	13.66	13.51	13.62	13.61	13.87	13.66

Table 9-46
SISO IEEE 802.11n Average RF Power- Antenna 1

Mode	Freq [MHz]	Channel	802.11n (2.4GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	2412	1	12.91	12.96	13.01	13.18	13.17	13.27	13.31	13.33
802.11n	2437	6	13.09	13.11	13.23	13.37	13.29	13.43	13.49	13.47
802.11n	2462	11	13.26	13.27	13.33	13.48	13.47	13.47	13.49	13.46

Table 9-47
SISO IEEE 802.11n Average RF Power- Antenna 2

Mode	Freq [MHz]	Channel	802.11n (2.4GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	2412	1	12.77	12.81	12.83	13.08	13.04	13.26	13.18	13.19
802.11n	2437	6	13.34	13.47	13.36	13.43	13.47	13.49	13.47	13.48
802.11n	2462	11	13.24	13.29	13.29	13.47	13.42	13.45	13.49	13.40

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Table 9-48
MIMO IEEE 802.11n Average RF Power

802.11n (2.4 GHz) Conducted Power [dBm]			
Mode	Freq [MHz]	Channel	Data Rate [Mbps]
			13
802.11n	2412	1*	15.85
802.11n	2437	6*	16.23
802.11n	2462	11*	16.26

Table 9-49
SISO IEEE 802.11a Average RF Power-Antenna 1

Mode	Freq [MHz]	Channel	802.11a Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5180	36*	11.98	11.91	11.98	11.89	12.08	12.05	12.16	11.94
802.11a	5200	40	12.11	12.05	12.12	11.95	12.25	12.21	12.26	12.04
802.11a	5220	44	12.16	12.13	12.21	12.04	12.23	12.25	12.37	12.13
802.11a	5240	48*	12.40	12.30	12.39	12.33	12.42	12.44	12.49	12.30
802.11a	5260	52*	11.96	11.92	11.91	11.84	12.17	12.09	12.14	12.07
802.11a	5280	56	12.21	12.16	12.17	12.00	12.39	12.33	12.43	12.32
802.11a	5300	60	12.38	12.41	12.34	12.22	12.45	12.48	12.49	12.46
802.11a	5320	64*	12.32	12.30	12.28	12.14	12.46	12.49	12.49	12.46
802.11a	5500	100	12.07	12.06	12.09	12.06	12.29	12.17	12.28	12.06
802.11a	5520	104*	12.01	12.05	11.98	12.03	12.26	12.05	12.30	12.05
802.11a	5540	108	11.98	11.90	12.03	11.92	12.22	12.13	12.27	12.02
802.11a	5560	112	12.01	12.00	12.06	11.99	12.25	12.09	12.29	12.03
802.11a	5580	116*	12.03	12.06	12.08	12.01	12.28	12.17	12.19	11.98
802.11a	5600	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5620	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5640	128	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5660	132	11.71	11.71	11.68	11.68	11.88	11.79	11.91	11.69
802.11a	5680	136*	11.57	11.60	11.63	11.59	11.80	11.72	11.81	11.59
802.11a	5700	140	11.67	11.62	11.69	11.62	11.92	11.82	11.89	11.62
802.11a	5745	149*	12.03	12.08	12.01	11.98	12.16	12.11	12.27	11.97
802.11a	5765	153	11.95	11.97	11.93	11.89	12.08	12.07	12.16	11.88
802.11a	5785	157*	11.92	11.99	11.93	11.90	11.97	12.01	12.17	11.84
802.11a	5805	161	11.84	11.91	11.78	11.83	12.05	11.97	12.04	11.87
802.11a	5825	165*	11.87	11.93	11.88	11.81	11.99	11.92	12.02	11.79

Per FCC KDB Publication 443999 and RSS-210 A9.2(3), transmission on channels which overlap the 5600-5650 MHz is prohibited as a client. This device does not transmit any beacons or initiate any transmissions in 5.3 and 5.5 GHz Band.

(*) – indicates default channels per KDB Publication 248227 D01v01r02. When the adjacent channels are higher in power then the default channels, these “required channels” are considered for SAR testing instead of the default channels.

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Table 9-50
SISO IEEE 802.11a Average RF Power-Antenna 2

Mode	Freq [MHz]	Channel	802.11a Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5180	36*	12.13	12.23	12.19	12.08	12.34	12.29	12.37	12.29
802.11a	5200	40	12.09	12.24	12.17	12.04	12.23	12.30	12.37	12.31
802.11a	5220	44	12.01	12.15	12.05	11.89	12.18	12.19	12.26	12.22
802.11a	5240	48*	11.95	12.06	12.02	11.91	12.17	12.11	12.20	12.11
802.11a	5260	52*	11.62	11.61	11.64	11.61	11.83	11.69	11.86	11.73
802.11a	5280	56	11.59	11.65	11.55	11.50	11.80	11.65	11.84	11.64
802.11a	5300	60	11.41	11.41	11.43	11.35	11.64	11.46	11.56	11.53
802.11a	5320	64*	11.40	11.38	11.36	11.34	11.65	11.47	11.56	11.58
802.11a	5500	100	11.65	11.72	11.64	11.64	11.88	11.87	12.08	11.83
802.11a	5520	104*	11.79	11.85	11.77	11.81	12.01	12.01	12.26	11.91
802.11a	5540	108	11.73	11.77	11.69	11.77	11.95	11.96	12.22	11.90
802.11a	5560	112	11.74	11.80	11.78	11.69	11.94	11.88	12.21	11.93
802.11a	5580	116*	11.82	11.88	11.86	11.83	12.13	11.98	12.29	12.05
802.11a	5600	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5620	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5640	128	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11a	5660	132	12.01	12.08	11.99	11.95	12.23	12.26	12.30	12.20
802.11a	5680	136*	12.04	12.11	12.00	12.01	12.21	12.28	12.27	12.25
802.11a	5700	140	12.06	12.09	12.10	12.02	12.29	12.22	12.29	12.25
802.11a	5745	149*	12.11	11.91	12.03	11.95	12.21	12.09	12.35	12.06
802.11a	5765	153	12.04	11.90	11.89	11.93	12.20	12.02	12.27	12.06
802.11a	5785	157*	12.21	12.01	12.21	12.04	12.25	12.16	12.47	12.12
802.11a	5805	161	12.26	12.02	12.18	12.07	12.43	12.26	12.46	12.20
802.11a	5825	165*	12.33	12.14	12.18	12.18	12.49	12.30	12.49	12.23

Per FCC KDB Publication 443999 and RSS-210 A9.2(3), transmission on channels which overlap the 5600-5650 MHz is prohibited as a client. This device does not transmit any beacons or initiate any transmissions in 5.3 and 5.5 GHz Band.

(*) – indicates default channels per KDB Publication 248227 D01v01r02. When the adjacent channels are higher in power then the default channels, these “required channels” are considered for SAR testing instead of the default channels.

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Table 9-51
SISO IEEE 802.11n Average RF Power – 20 MHz Bandwidth- Antenna 1

Mode	Freq [MHz]	Channel	20MHz BW 802.11n (5GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	5180	36	11.83	11.77	11.85	12.31	12.37	12.27	12.31	12.32
802.11n	5200	40	11.85	11.84	11.86	12.32	12.33	12.32	12.36	12.25
802.11n	5220	44	12.02	11.91	12.09	12.49	12.46	12.47	12.47	12.43
802.11n	5240	48	12.09	11.99	12.11	12.47	12.47	12.48	12.44	12.49
802.11n	5260	52	12.08	12.06	12.11	12.35	12.41	12.46	12.45	12.48
802.11n	5280	56	12.09	12.07	12.12	12.29	12.35	12.48	12.41	12.46
802.11n	5300	60	12.04	12.00	12.01	12.35	12.35	12.49	12.40	12.41
802.11n	5320	64	12.16	12.21	12.22	12.44	12.49	12.49	12.44	12.47
802.11n	5500	100	11.85	11.78	11.77	12.11	12.07	12.06	12.05	12.03
802.11n	5520	104	11.92	11.81	11.82	12.22	12.13	12.09	12.07	12.09
802.11n	5540	108	12.14	12.06	12.08	12.27	12.28	12.30	12.29	12.24
802.11n	5560	112	12.15	12.08	12.09	12.29	12.26	12.30	12.28	12.28
802.11n	5580	116	12.09	12.07	12.00	12.28	12.22	12.31	12.29	12.31
802.11n	5600	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5620	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5640	128	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5660	132	12.27	12.16	12.22	12.24	12.30	12.28	12.29	12.19
802.11n	5680	136	12.29	12.24	12.16	12.26	12.31	12.31	12.30	12.28
802.11n	5700	140	12.31	12.17	12.16	12.29	12.29	12.27	12.26	12.30
802.11n	5745	149	11.99	11.33	11.29	11.58	11.53	11.58	11.47	11.10
802.11n	5765	153	11.86	11.23	11.19	11.44	11.34	11.49	11.34	11.02
802.11n	5785	157	11.78	11.19	11.04	11.37	11.31	11.38	11.24	10.94
802.11n	5805	161	11.74	11.12	11.05	11.30	11.31	11.37	11.23	10.91
802.11n	5825	165	11.81	11.21	11.17	11.44	11.36	11.46	11.24	10.90

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Table 9-52
SISO IEEE 802.11n Average RF Power – 20 MHz Bandwidth- Antenna 2

Mode	Freq [MHz]	Channel	20MHz BW 802.11n (5GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	5180	36	12.04	12.11	12.04	12.31	12.22	12.25	12.33	12.37
802.11n	5200	40	11.97	12.01	12.01	12.21	12.16	12.11	12.33	12.26
802.11n	5220	44	12.03	12.10	12.10	12.24	12.18	12.24	12.26	12.37
802.11n	5240	48	11.81	11.84	11.80	12.01	12.07	12.06	12.09	12.11
802.11n	5260	52	11.51	11.42	11.64	11.65	11.73	11.74	11.71	11.77
802.11n	5280	56	11.41	11.32	11.45	11.52	11.55	11.70	11.61	11.66
802.11n	5300	60	11.38	11.34	11.45	11.53	11.57	11.63	11.61	11.65
802.11n	5320	64	11.29	11.26	11.42	11.43	11.52	11.46	11.50	11.59
802.11n	5500	100	11.62	11.56	11.48	11.74	11.77	11.83	11.87	11.93
802.11n	5520	104	11.63	11.56	11.48	11.70	11.74	11.83	11.90	12.01
802.11n	5540	108	11.67	11.65	11.59	11.86	11.77	11.93	11.92	11.96
802.11n	5560	112	11.57	11.47	11.43	11.72	11.70	11.80	11.78	11.89
802.11n	5580	116	11.67	11.62	11.49	11.79	11.89	11.95	11.92	11.98
802.11n	5600	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5620	124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5640	128	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5660	132	11.81	11.74	11.66	11.96	11.89	11.99	12.10	12.08
802.11n	5680	136	11.89	11.81	11.73	11.92	12.06	12.11	12.12	12.19
802.11n	5700	140	11.93	11.86	11.84	12.05	12.09	12.09	12.12	12.18
802.11n	5745	149	11.96	12.08	11.94	12.11	12.19	12.22	12.31	12.17
802.11n	5765	153	11.92	12.05	11.90	12.05	12.13	12.18	12.23	12.14
802.11n	5785	157	12.02	12.15	11.92	12.17	12.23	12.27	12.42	12.18
802.11n	5805	161	12.17	12.33	12.12	12.39	12.39	12.45	12.49	12.35
802.11n	5825	165	12.22	12.36	12.24	12.31	12.38	12.44	12.44	12.47

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Table 9-53
MIMO IEEE 802.11n Average RF Power – 20 MHz Bandwidth

802.11n (5 GHz) Conducted Power [dBm]			
Mode	Freq [MHz]	Channel	Data Rate
			13
802.11n	5180	36*	14.95
802.11n	5200	40	14.92
802.11n	5220	44	15.04
802.11n	5240	48*	14.96
802.11n	5260	52*	14.81
802.11n	5280	56	14.77
802.11n	5300	60	14.73
802.11n	5320	64*	14.76
802.11n	5500	100	14.75
802.11n	5520	104*	14.79
802.11n	5540	108	14.92
802.11n	5560	112	14.88
802.11n	5580	116*	14.90
802.11n	5600	120	N/A
802.11n	5620	124	N/A
802.11n	5640	128	N/A
802.11n	5660	132	15.06
802.11n	5680	136*	15.10
802.11n	5700	140	15.13
802.11n	5745	149*	14.93
802.11n	5765	153	14.90
802.11n	5785	157*	14.91
802.11n	5805	161	14.97
802.11n	5825	165*	15.03

Table 9-54
SISO IEEE 802.11n Average RF Power – 40 MHz Bandwidth- Antenna 1

Mode	Freq [MHz]	Channel	40MHz BW 802.11n (5GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			13.5	27	40.5	54	81	108	121.5	135
802.11n	5190	38	8.85	8.69	8.91	8.95	8.96	9.03	9.08	8.91
802.11n	5230	46	9.01	8.78	9.04	9.09	9.19	9.20	9.22	9.09
802.11n	5270	54	9.17	9.22	9.14	9.03	8.85	9.16	9.39	9.38
802.11n	5310	62	9.42	9.47	9.46	9.27	9.08	9.44	9.42	9.48
802.11n	5510	102	9.19	9.17	9.13	9.17	9.46	9.32	9.15	9.33
802.11n	5550	110	8.91	8.81	8.91	8.91	9.21	9.01	8.87	9.04
802.11n	5590	118	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5630	126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5670	134	8.83	8.79	8.72	8.79	9.07	9.00	8.84	8.98
802.11n	5755	151	8.73	8.63	8.67	8.89	8.83	8.82	8.84	8.81
802.11n	5795	159	8.67	8.48	8.57	8.78	8.78	8.78	8.76	8.78

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Table 9-55
SISO IEEE 802.11n Average RF Power – 40 MHz Bandwidth- Antenna 2

Mode	Freq [MHz]	Channel	40MHz BW 802.11n (5GHz) Conducted Power [dBm]							
			Data Rate [Mbps]							
			13.5	27	40.5	54	81	108	121.5	135
802.11n	5190	38	8.78	9.30	8.27	9.02	8.26	8.40	8.38	8.26
802.11n	5230	46	8.53	8.99	8.66	8.09	8.79	8.62	9.04	8.90
802.11n	5270	54	8.93	9.27	8.77	8.61	9.24	8.72	8.80	8.72
802.11n	5310	62	8.99	8.74	9.18	8.53	9.30	8.49	9.45	9.26
802.11n	5510	102	9.17	9.38	9.49	9.46	9.08	9.44	9.45	9.06
802.11n	5550	110	9.29	9.27	9.40	9.46	9.06	9.46	9.46	9.42
802.11n	5590	118	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5630	126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
802.11n	5670	134	9.47	9.48	9.31	9.49	9.47	9.14	9.13	9.44
802.11n	5755	151	8.58	8.98	8.51	8.97	8.44	8.74	8.06	8.51
802.11n	5795	159	8.64	8.71	8.36	8.62	8.67	8.16	8.79	8.30

Table 9-56
MIMO IEEE 802.11n Average RF Power – 40 MHz Bandwidth

802.11n (5 GHz) Conducted Power [dBm]			
Mode	Freq [MHz]	Channel	Data Rate [Mbps]
			27
802.11n	5190	38	11.83
802.11n	5230	46	11.79
802.11n	5270	54	12.06
802.11n	5310	62	12.22
802.11n	5510	102	12.19
802.11n	5550	110	12.11
802.11n	5670	134	12.17
802.11n	5755	151	11.67
802.11n	5795	159	11.67

Table 9-57
SISO IEEE 802.11ac Average RF Power – 80 MHz Bandwidth- Antenna 1

Mode	Freq [MHz]	Channel	80MHz BW 802.11ac (5GHz) Conducted Power [dBm]									
			Data Rate [Mbps]									
			29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390
802.11ac	5210	42	10.18	10.21	10.21	10.40	10.16	10.19	10.25	10.30	10.35	10.28
802.11ac	5290	58	9.69	9.74	9.78	9.83	9.72	9.77	9.83	9.86	9.88	9.79
802.11ac	5530	106	10.31	10.24	10.33	10.31	10.37	10.42	10.49	10.29	10.38	10.44
802.11ac	5775	155	9.89	9.86	9.94	10.11	10.03	9.93	10.03	10.11	9.84	9.91

Table 9-58
SISO IEEE 802.11ac Average RF Power – 80 MHz Bandwidth- Antenna 2

Mode	Freq [MHz]	Channel	80MHz BW 802.11ac (5GHz) Conducted Power [dBm]									
			Data Rate [Mbps]									
			29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390
802.11ac	5210	42	10.15	10.28	10.09	9.92	9.96	10.33	9.91	9.95	9.90	10.30
802.11ac	5290	58	9.67	9.81	9.44	9.31	9.38	9.79	9.84	9.50	9.30	9.89
802.11ac	5530	106	9.73	9.77	9.50	9.46	9.71	9.69	9.42	9.39	9.45	9.38
802.11ac	5775	155	10.06	10.21	10.22	9.93	10.17	10.21	9.71	9.98	9.87	9.71

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Table 9-59
MIMO IEEE 802.11ac Average RF Power – 80 MHz Bandwidth

802.11ac (5 GHz) Conducted Power [dBm]			
Mode	Freq [MHz]	Channel	Data Rate [Mbps]
			58.5
802.11ac	5210	42	13.18
802.11ac	5290	58	12.69
802.11ac	5530	106	13.04
802.11ac	5775	155	12.99

Justification for reduced test configurations for WIFI channels per KDB Publication 248227 D01v01r02 and October 2012/April 2013 FCC/TCB Meeting Notes:

- For 2.4 GHz SISO operations, highest average RF output power channel for the lowest data rate for IEEE 802.11b were selected for SAR evaluation. Other IEEE 802.11 SISO modes (including 802.11g/n) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11b mode.
- For 5 GHz SISO operations, highest average RF output power channel for the lowest data rate for IEEE 802.11a were selected for SAR evaluation. Other IEEE 802.11 SISO modes (including 802.11n 20 MHz and 40 MHz) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11a mode.
- Full SAR tests for all SISO IEEE 802.11ac configurations were not required because the average output power was not more than 0.25 dB higher than IEEE 802.11a mode. IEEE 802.11ac in SISO mode was evaluated for the highest IEEE 802.11a position in each 5 GHz band and exposure condition.
- When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the reported 1g averaged SAR is <0.8 W/kg, SAR testing on other channels is not required. Otherwise, the other default (or corresponding required) test channels were additionally tested using the lowest data rate.
- Per KDB 662911 D01v02r01, the individual spectra for each 2x2 MIMO WIFI Antenna were summed mathematically in linear power units for the MIMO output power measurements.
- For 2.4 GHz MIMO, 802.11n was evaluated.
- For 5 GHz MIMO, 20 MHz BW 802.11n was evaluated. Additional evaluations for 40 MHz bandwidth 802.11n and 802.11ac were not required since the maximum allowed output power was not higher than 802.11n 20 MHz Bandwidth.
- The bolded data rate and channel above were tested for SAR.

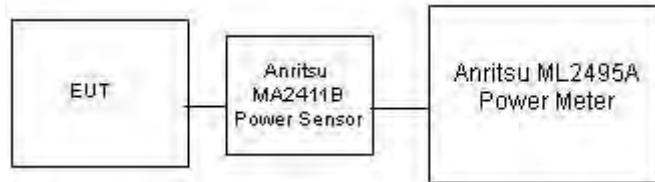


Figure 9-4
Power Measurement Setup for Bandwidths < 50 MHz

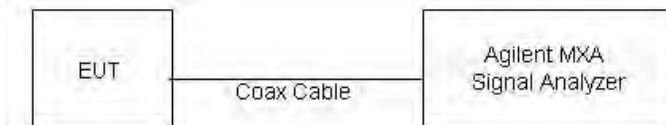


Figure 9-5
Power Measurement Setup for Bandwidths > 50 MHz

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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
9/10/2014	750H	23.0	695	0.865	41.586	0.889	42.227	-2.70%	-1.52%
			710	0.880	41.391	0.890	42.149	-1.12%	-1.80%
			725	0.893	41.190	0.891	42.071	0.22%	-2.09%
			740	0.906	40.947	0.893	41.994	1.46%	-2.49%
			755	0.920	40.724	0.894	41.916	2.91%	-2.84%
9/15/2014	835H	22.5	820	0.911	41.766	0.899	41.578	1.33%	0.45%
			835	0.925	41.591	0.900	41.500	2.78%	0.22%
			850	0.939	41.408	0.916	41.500	2.51%	-0.22%
9/17/2014	835H	22.1	820	0.898	42.442	0.899	41.578	-0.11%	2.08%
			835	0.912	42.248	0.900	41.500	1.33%	1.80%
			850	0.927	42.065	0.916	41.500	1.20%	1.36%
9/10/2014	1750H	22.9	1710	1.316	40.230	1.348	40.142	-2.37%	0.22%
			1750	1.355	40.019	1.371	40.079	-1.17%	-0.15%
			1790	1.399	39.886	1.394	40.016	0.36%	-0.32%
9/11/2014	1900H	23.1	1850	1.343	39.461	1.400	40.000	-4.07%	-1.35%
			1880	1.374	39.311	1.400	40.000	-1.86%	-1.72%
			1910	1.408	39.201	1.400	40.000	0.57%	-2.00%
9/18/2014	1900H	22.7	1850	1.385	39.160	1.400	40.000	-1.07%	-2.10%
			1880	1.416	39.045	1.400	40.000	1.14%	-2.39%
			1910	1.448	38.895	1.400	40.000	3.43%	-2.76%
9/15/2014	2450H	23.4	2401	1.756	39.846	1.756	39.287	0.00%	1.42%
			2450	1.815	39.696	1.800	39.200	0.83%	1.27%
			2499	1.866	39.504	1.853	39.138	0.70%	0.94%
			5180	4.601	35.664	4.635	36.009	-0.73%	-0.96%
09/15/2014	5200H-5800H	21.9	5200	4.616	35.605	4.655	35.986	-0.84%	-1.06%
			5220	4.649	35.550	4.676	35.963	-0.58%	-1.15%
			5240	4.672	35.546	4.696	35.940	-0.51%	-1.10%
			5260	4.697	35.545	4.717	35.917	-0.42%	-1.04%
			5280	4.705	35.527	4.737	35.894	-0.68%	-1.02%
			5300	4.718	35.464	4.758	35.871	-0.84%	-1.13%
			5320	4.745	35.419	4.778	35.849	-0.69%	-1.20%
			5500	4.930	35.172	4.963	35.643	-0.66%	-1.32%
			5520	4.945	35.181	4.983	35.620	-0.76%	-1.23%
			5540	4.959	35.148	5.004	35.597	-0.90%	-1.26%
			5560	4.974	35.120	5.024	35.574	-1.00%	-1.28%
			5580	4.993	35.065	5.045	35.551	-1.03%	-1.37%
			5600	5.028	35.015	5.065	35.529	-0.73%	-1.45%
			5620	5.060	34.986	5.086	35.506	-0.51%	-1.46%
			5640	5.082	35.017	5.106	35.483	-0.47%	-1.31%
			5660	5.086	34.984	5.127	35.460	-0.80%	-1.34%
			5680	5.098	34.917	5.147	35.437	-0.95%	-1.47%
			5700	5.122	34.879	5.168	35.414	-0.89%	-1.51%
			5745	5.199	34.834	5.214	35.363	-0.29%	-1.50%
			5765	5.201	34.824	5.234	35.340	-0.63%	-1.46%
			5785	5.214	34.821	5.255	35.317	-0.78%	-1.40%
			5800	5.218	34.764	5.270	35.300	-0.99%	-1.52%
			5805	5.226	34.753	5.275	35.294	-0.93%	-1.53%
			5825	5.256	34.705	5.296	35.275	-0.76%	-1.62%

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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
9/11/2014	750B	23.3	695	0.926	54.797	0.959	55.745	-3.44%	-1.70%
			710	0.941	54.602	0.960	55.687	-1.98%	-1.95%
			725	0.955	54.479	0.961	55.629	-0.62%	-2.07%
			740	0.970	54.364	0.963	55.570	0.73%	-2.17%
			755	0.986	54.241	0.964	55.512	2.28%	-2.29%
9/17/2014	750B	22.4	695	0.921	54.366	0.959	55.745	-3.96%	-2.47%
			710	0.936	54.206	0.960	55.687	-2.50%	-2.66%
			725	0.949	54.067	0.961	55.629	-1.25%	-2.81%
			740	0.962	53.869	0.963	55.570	-0.10%	-3.06%
			755	0.976	53.716	0.964	55.512	1.24%	-3.24%
9/8/2014	835B	23.5	820	1.001	54.348	0.969	55.258	3.30%	-1.65%
			835	1.015	54.216	0.970	55.200	4.64%	-1.78%
			850	1.030	54.054	0.988	55.154	4.25%	-1.99%
9/15/2014	835B	22.5	820	0.992	53.401	0.969	55.258	2.37%	-3.36%
			835	1.007	53.246	0.970	55.200	3.81%	-3.64%
			850	1.022	53.060	0.988	55.154	3.44%	-3.80%
9/10/2014	1750B	23.6	1710	1.410	51.503	1.463	53.537	-3.62%	-3.80%
			1750	1.453	51.319	1.488	53.432	-2.35%	-3.95%
			1790	1.505	51.206	1.514	53.326	-0.59%	-3.98%
9/15/2014	1750B	22.2	1710	1.436	52.451	1.463	53.537	-1.85%	-2.03%
			1750	1.479	52.229	1.488	53.432	-0.60%	-2.25%
			1790	1.526	52.112	1.514	53.326	0.79%	-2.28%
9/15/2014	1900B	21.7	1850	1.498	51.386	1.520	53.300	-1.45%	-3.59%
			1880	1.533	51.280	1.520	53.300	0.86%	-3.79%
			1910	1.569	51.155	1.520	53.300	3.22%	-4.02%
9/18/2014	1900B	23.3	1850	1.500	51.882	1.520	53.300	-1.32%	-2.66%
			1880	1.537	51.766	1.520	53.300	1.12%	-2.88%
			1910	1.568	51.650	1.520	53.300	3.16%	-3.10%
9/9/2014	2450B	22.8	2401	1.895	50.955	1.903	52.765	-0.42%	-3.43%
			2450	1.966	50.772	1.950	52.700	0.82%	-3.66%
			2499	2.029	50.594	2.019	52.638	0.50%	-3.88%
09/09/2014	5200B-5800B	23.3	5180	5.120	48.059	5.276	49.041	-2.96%	-2.00%
			5200	5.137	48.028	5.299	49.014	-3.06%	-2.01%
			5220	5.179	47.907	5.323	48.987	-2.71%	-2.20%
			5240	5.217	47.897	5.346	48.960	-2.41%	-2.17%
			5260	5.248	47.886	5.369	48.933	-2.25%	-2.14%
			5280	5.267	47.866	5.393	48.906	-2.34%	-2.13%
			5300	5.288	47.796	5.416	48.879	-2.36%	-2.22%
			5320	5.328	47.702	5.439	48.851	-2.04%	-2.35%
			5500	5.585	47.304	5.650	48.607	-1.15%	-2.68%
			5520	5.628	47.252	5.673	48.580	-0.79%	-2.73%
			5540	5.647	47.226	5.696	48.553	-0.86%	-2.73%
			5560	5.687	47.172	5.720	48.526	-0.58%	-2.79%
			5580	5.703	47.102	5.743	48.499	-0.70%	-2.88%
			5600	5.743	47.072	5.766	48.471	-0.40%	-2.89%
			5620	5.786	47.033	5.790	48.444	-0.07%	-2.91%
			5640	5.807	47.019	5.813	48.417	-0.10%	-2.89%
			5660	5.841	46.945	5.837	48.390	0.07%	-2.99%
			5680	5.860	46.904	5.860	48.363	0.00%	-3.02%
			5700	5.894	46.838	5.883	48.336	0.19%	-3.10%
			5745	5.971	46.743	5.936	48.275	0.59%	-3.17%
			5765	6.004	46.724	5.959	48.248	0.76%	-3.16%
			5785	6.022	46.693	5.982	48.220	0.67%	-3.17%
			5800	6.026	46.631	6.000	48.200	0.43%	-3.26%
			5805	6.039	46.602	6.006	48.193	0.55%	-3.30%
			5825	6.077	46.581	6.029	48.166	0.80%	-3.29%

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 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 $\pm 10\%$ of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in Appendix E.

Table 10-3
System Verification Results – 1g SAR

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date:	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Dipole SN	Probe SN	Measured SAR _{1g} (W/kg)	1 W Target SAR _{1g} (W/kg)	1 W Normalized SAR _{1g} (W/kg)	Deviation _{1g} (%)
D	750	HEAD	09/10/2014	24.5	23.0	0.100	1003	3263	0.839	8.370	8.390	0.24%
D	835	HEAD	09/15/2014	23.4	22.5	0.100	4d119	3263	0.961	9.220	9.610	4.23%
C	835	HEAD	09/17/2014	24.2	22.1	0.100	4d132	3213	0.984	9.270	9.840	6.15%
G	1750	HEAD	09/10/2014	21.3	22.4	0.100	1008	3258	3.400	36.900	34.000	-7.86%
K	1900	HEAD	09/11/2014	23.9	23.2	0.100	5d141	3287	3.950	40.100	39.500	-1.50%
B	1900	HEAD	09/18/2014	24.8	22.7	0.100	5d148	3318	4.000	40.700	40.000	-1.72%
G	2450	HEAD	09/15/2014	24.4	23.6	0.100	797	3258	5.360	51.800	53.600	3.47%
E	5200	HEAD	09/15/2014	22.7	22.1	0.100	1057	3914	7.640	78.000	76.400	-2.05%
E	5300	HEAD	09/15/2014	22.7	22.1	0.100	1057	3914	7.980	83.000	79.800	-3.86%
E	5500	HEAD	09/15/2014	22.8	22.1	0.100	1057	3914	8.110	84.300	81.100	-3.80%
E	5600	HEAD	09/15/2014	22.8	22.2	0.100	1057	3914	8.320	83.500	83.200	-0.36%
E	5800	HEAD	09/15/2014	22.8	22.1	0.100	1057	3914	7.350	79.300	73.500	-7.31%
G	750	BODY	09/11/2014	23.3	22.9	0.100	1003	3258	0.865	8.770	8.650	-1.37%
I	750	BODY	09/17/2014	23.9	22.4	0.100	1003	3209	0.920	8.770	9.200	4.90%
D	835	BODY	09/08/2014	23.8	23.5	0.100	4d119	3263	0.974	9.340	9.740	4.28%
D	835	BODY	09/15/2014	22.4	22.5	0.100	4d119	3263	0.960	9.340	9.600	2.78%
K	1750	BODY	09/10/2014	23.0	23.6	0.100	1008	3287	3.810	37.600	38.100	1.33%
H	1750	BODY	09/15/2014	22.1	22.2	0.100	1008	3319	3.810	37.600	38.100	1.33%
J	1900	BODY	09/15/2014	22.0	21.7	0.100	5d141	3022	4.250	40.600	42.500	4.68%
J	1900	BODY	09/18/2014	24.5	23.4	0.100	5d141	3022	4.360	40.600	43.600	7.39%
G	2450	BODY	09/09/2014	22.2	23.2	0.100	797	3258	5.130	49.400	51.300	3.85%
I	5200	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	7.960	75.300	79.600	5.71%
I	5300	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	8.130	77.400	81.300	5.04%
I	5500	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	7.390	79.100	73.900	-6.57%
I	5600	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	7.710	80.200	77.100	-3.87%
I	5800	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	7.110	74.300	71.100	-4.31%

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Table 10-4
System Verification Results – 10g SAR

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date:	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Dipole SN	Probe SN	Measured SAR _{10g} (W/kg)	1 W Target SAR _{10g} (W/kg)	1 W Normalized SAR _{10g} (W/kg)	Deviation _{10g} (%)
J	1900	BODY	09/18/2014	24.5	23.4	0.100	5d141	3022	2.320	21.600	23.200	7.41%
I	5200	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	2.240	21.000	22.400	6.67%
I	5300	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	2.270	21.500	22.700	5.58%
I	5500	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	2.060	22.000	20.600	-6.36%
I	5600	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	2.140	22.200	21.400	-3.60%
I	5800	BODY	09/09/2014	24.1	23.3	0.100	1057	3589	1.960	20.400	19.600	-3.92%

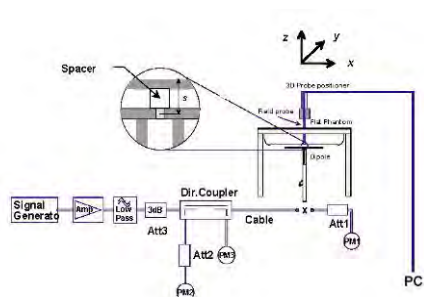


Figure 10-1
System Verification Setup Diagram



Figure 10-2
System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Cover Type	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.5	32.66	0.12	Right	Cheek	Standard	FCC #3	1:8.3	0.045	1.213	0.055	
836.60	190	GSM 850	GSM	33.5	32.66	0.14	Right	Tilt	Standard	FCC #3	1:8.3	0.021	1.213	0.025	
836.60	190	GSM 850	GSM	33.5	32.66	0.16	Left	Cheek	Standard	FCC #3	1:8.3	0.057	1.213	0.069	
836.60	190	GSM 850	GSM	33.5	32.66	0.01	Left	Cheek	Wireless Charging	FCC #3	1:8.3	0.062	1.213	0.075	A1
836.60	190	GSM 850	GSM	33.5	32.66	0.15	Left	Tilt	Standard	FCC #3	1:8.3	0.019	1.213	0.023	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
GSM 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Cover Type	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GSM	30.5	29.48	0.17	Right	Cheek	Standard	FCC #3	1:8.3	0.074	1.265	0.094	
1880.00	661	GSM 1900	GSM	30.5	29.48	0.07	Right	Tilt	Standard	FCC #3	1:8.3	0.037	1.265	0.047	
1880.00	661	GSM 1900	GSM	30.5	29.48	-0.16	Left	Cheek	Standard	FCC #3	1:8.3	0.075	1.265	0.095	A2
1880.00	661	GSM 1900	GSM	30.5	29.48	0.18	Left	Cheek	Wireless Charging	FCC #3	1:8.3	0.060	1.265	0.076	
1880.00	661	GSM 1900	GSM	30.5	29.48	-0.19	Left	Tilt	Standard	FCC #3	1:8.3	0.026	1.265	0.033	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Cover Type	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.10	Right	Cheek	Standard	FCC #3	1:1	0.064	1.143	0.073	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.16	Right	Tilt	Standard	FCC #3	1:1	0.027	1.143	0.031	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.17	Left	Cheek	Standard	FCC #3	1:1	0.072	1.143	0.082	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.01	Left	Cheek	Wireless Charging	FCC #3	1:1	0.072	1.143	0.082	A3
836.60	4183	UMTS 850	RMC	24.5	23.92	0.18	Left	Tilt	Standard	FCC #3	1:1	0.038	1.143	0.043	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Cover Type	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g) (W/kg)	Plot #
MHz	Ch.											(W/kg)			
1732.40	1412	UMTS 1750	RMC	23.5	23.33	-0.15	Right	Cheek	Standard	FCC #3	1:1	0.122	1.040	0.127	
1732.40	1412	UMTS 1750	RMC	23.5	23.33	-0.01	Right	Tilt	Standard	FCC #3	1:1	0.064	1.040	0.067	
1732.40	1412	UMTS 1750	RMC	23.5	23.33	-0.02	Left	Cheek	Standard	FCC #3	1:1	0.147	1.040	0.153	A4
1732.40	1412	UMTS 1750	RMC	23.5	23.33	0.14	Left	Cheek	Wireless Charging	FCC #3	1:1	0.128	1.040	0.133	
1732.40	1412	UMTS 1750	RMC	23.5	23.33	0.08	Left	Tilt	Standard	FCC #3	1:1	0.088	1.040	0.092	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-5
UMTS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode/Band	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Cover Type	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.05	Right	Cheek	Standard	FCC #3	1:1	0.131	1.161	0.152	
1907.60	9538	UMTS 1900	RMC	24.0	23.35	0.02	Right	Tilt	Standard	FCC #3	1:1	0.066	1.161	0.077	
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.16	Left	Cheek	Standard	FCC #3	1:1	0.138	1.161	0.160	A5
1907.60	9538	UMTS 1900	RMC	24.0	23.35	0.05	Left	Cheek	Wireless Charging	FCC #3	1:1	0.091	1.161	0.106	
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.02	Left	Tilt	Standard	FCC #3	1:1	0.050	1.161	0.058	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-6
LTE Band 12 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Md	LTE Band 12	10	Standard	25.0	24.35	0.06	0	Right	Cheek	QPSK	1	25	FCC #2	1:1	0.063	1.161	0.073	
707.50	23095	Md	LTE Band 12	10	Standard	24.0	23.20	0.11	1	Right	Cheek	QPSK	25	0	FCC #2	1:1	0.052	1.202	0.063	
707.50	23095	Md	LTE Band 12	10	Standard	25.0	24.35	0.09	0	Right	Tilt	QPSK	1	25	FCC #2	1:1	0.034	1.161	0.039	
707.50	23095	Md	LTE Band 12	10	Standard	24.0	23.20	0.12	1	Right	Tilt	QPSK	25	0	FCC #2	1:1	0.028	1.202	0.034	
707.50	23095	Md	LTE Band 12	10	Standard	25.0	24.35	0.10	0	Left	Cheek	QPSK	1	25	FCC #2	1:1	0.075	1.161	0.087	A6
707.50	23095	Md	LTE Band 12	10	Wireless Charging	25.0	24.35	0.12	0	Left	Cheek	QPSK	1	25	FCC #2	1:1	0.068	1.161	0.079	
707.50	23095	Md	LTE Band 12	10	Standard	24.0	23.20	0.00	1	Left	Cheek	QPSK	25	0	FCC #2	1:1	0.059	1.202	0.071	
707.50	23095	Md	LTE Band 12	10	Standard	25.0	24.35	0.14	0	Left	Tilt	QPSK	1	25	FCC #2	1:1	0.039	1.161	0.045	
707.50	23095	Md	LTE Band 12	10	Standard	24.0	23.20	0.14	1	Left	Tilt	QPSK	25	0	FCC #2	1:1	0.030	1.202	0.036	
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 5 (Cell) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #
MHz	Ch.	(W/kg)															(W/kg)	(W/kg)		
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.13	0	Right	Cheek	QPSK	1	0	FCC #1	1:1	0.067	1.067	0.071	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.21	1	Right	Cheek	QPSK	25	12	FCC #1	1:1	0.053	1.104	0.059	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.19	0	Right	Tilt	QPSK	1	0	FCC #1	1:1	0.033	1.067	0.035	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.11	1	Right	Tilt	QPSK	25	12	FCC #1	1:1	0.026	1.104	0.029	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.06	0	Left	Cheek	QPSK	1	0	FCC #1	1:1	0.072	1.067	0.077	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Wireless Charging	24.5	24.22	0.04	0	Left	Cheek	QPSK	1	0	FCC #1	1:1	0.079	1.067	0.084	A7
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.15	1	Left	Cheek	QPSK	25	12	FCC #1	1:1	0.054	1.104	0.060	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.17	0	Left	Tilt	QPSK	1	0	FCC #1	1:1	0.028	1.067	0.030	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.13	1	Left	Tilt	QPSK	25	12	FCC #1	1:1	0.021	1.104	0.023	
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 4 (AWS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	23.5	23.15	0.01	0	Right	Cheek	QPSK	1	0	FCC #1	1:1	0.184	1.084	0.199	A8
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Wireless Charging	23.5	23.15	-0.20	0	Right	Cheek	QPSK	1	0	FCC #1	1:1	0.142	1.084	0.154	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	22.5	22.32	0.16	1	Right	Cheek	QPSK	50	0	FCC #1	1:1	0.162	1.042	0.169	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	23.5	23.15	-0.02	0	Right	Tilt	QPSK	1	0	FCC #1	1:1	0.067	1.084	0.073	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	22.5	22.32	0.08	1	Right	Tilt	QPSK	50	0	FCC #1	1:1	0.065	1.042	0.068	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	23.5	23.15	0.04	0	Left	Cheek	QPSK	1	0	FCC #1	1:1	0.154	1.084	0.167	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	22.5	22.32	0.12	1	Left	Cheek	QPSK	50	0	FCC #1	1:1	0.118	1.042	0.123	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	23.5	23.15	0.14	0	Left	Tilt	QPSK	1	0	FCC #1	1:1	0.077	1.084	0.083	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	22.5	22.32	0.01	1	Left	Tilt	QPSK	50	0	FCC #1	1:1	0.070	1.042	0.073	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-9
LTE Band 2 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	0.12	0	Right	Cheek	QPSK	1	50	FCC #4	1:1	0.090	1.172	0.105	A9
1900.00	19100	High	LTE Band 2 (PCS)	20	Wireless Charging	24.0	23.31	0.06	0	Right	Cheek	QPSK	1	50	FCC #4	1:1	0.088	1.172	0.103	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	0.13	1	Right	Cheek	QPSK	50	0	FCC #4	1:1	0.081	1.186	0.096	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	-0.04	0	Right	Tilt	QPSK	1	50	FCC #4	1:1	0.046	1.172	0.054	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	0.00	1	Right	Tilt	QPSK	50	0	FCC #4	1:1	0.040	1.186	0.047	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	0.00	0	Left	Cheek	QPSK	1	50	FCC #4	1:1	0.079	1.172	0.093	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	-0.06	1	Left	Cheek	QPSK	50	0	FCC #4	1:1	0.076	1.186	0.090	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	0.16	0	Left	Tilt	QPSK	1	50	FCC #4	1:1	0.075	1.172	0.088	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	0.03	1	Left	Tilt	QPSK	50	0	FCC #4	1:1	0.074	1.186	0.088	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram										

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**Table 11-10
DTS Head SAR**

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Cover Type	Device Serial Number	Data Rate (Mbps)	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.00	Right	Cheek	1	Standard	0809-12	1	1:1	0.021	1.074	0.023	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.15	Right	Tilt	1	Standard	0809-12	1	1:1	0.013	1.074	0.014	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.12	Left	Cheek	1	Standard	0809-12	1	1:1	0.008	1.074	0.009	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.17	Left	Tilt	1	Standard	0809-12	1	1:1	0.007	1.074	0.008	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.01	Right	Cheek	2	Standard	0809-12	1	1:1	0.178	1.197	0.213	A10
2462	11	IEEE 802.11b	DSSS	15.5	14.72	-0.14	Right	Cheek	2	Wireless Charging	0809-12	1	1:1	0.129	1.197	0.154	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.13	Right	Tilt	2	Standard	0809-12	1	1:1	0.055	1.197	0.066	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.20	Left	Cheek	2	Standard	0809-12	1	1:1	0.041	1.197	0.049	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.15	Left	Tilt	2	Standard	0809-12	1	1:1	0.029	1.197	0.035	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.15	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.162	1.057	0.171	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.00	Right	Cheek	MIMO	Wireless Charging	0809-12	13	1:1	0.097	1.057	0.103	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.15	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.035	1.057	0.037	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.16	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.028	1.057	0.030	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.13	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.016	1.057	0.017	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.00	Right	Cheek	1	Standard	0809-12	6	1:1	0.000	1.114	0.000	
5775	155	IEEE 802.11ac	OFDM	10.5	9.89	0.00	Right	Cheek	1	Standard	0809-12	29.3	1:1	0.000	1.151	0.000	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.00	Right	Tilt	1	Standard	0809-12	6	1:1	0.000	1.114	0.000	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.00	Left	Cheek	1	Standard	0809-12	6	1:1	0.000	1.114	0.000	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.00	Left	Tilt	1	Standard	0809-12	6	1:1	0.000	1.114	0.000	
5745	149	IEEE 802.11a	OFDM	12.5	12.11	0.06	Right	Cheek	2	Standard	0809-12	6	1:1	0.415	1.094	0.454	
5805	161	IEEE 802.11a	OFDM	12.5	12.26	0.02	Right	Cheek	2	Standard	0809-12	6	1:1	0.437	1.057	0.462	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.13	Right	Cheek	2	Standard	0809-12	6	1:1	0.401	1.040	0.417	
5775	155	IEEE 802.11ac	OFDM	10.5	10.06	0.07	Right	Cheek	2	Standard	0809-12	29.3	1:1	0.223	1.107	0.247	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.08	Right	Tilt	2	Standard	0809-12	6	1:1	0.225	1.040	0.234	
5745	149	IEEE 802.11a	OFDM	12.5	12.11	0.12	Left	Cheek	2	Standard	0809-12	6	1:1	0.334	1.094	0.365	
5805	161	IEEE 802.11a	OFDM	12.5	12.26	0.08	Left	Cheek	2	Standard	0809-12	6	1:1	0.340	1.057	0.359	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.07	Left	Cheek	2	Standard	0809-12	6	1:1	0.324	1.040	0.337	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	-0.06	Left	Tilt	2	Standard	0809-12	6	1:1	0.174	1.040	0.181	
5745	149	IEEE 802.11n	OFDM	15.5	14.93	0.06	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.555	1.140	0.633	
5805	161	IEEE 802.11n	OFDM	15.5	14.97	0.05	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.535	1.130	0.605	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.08	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.548	1.114	0.610	
5745	149	IEEE 802.11n	OFDM	15.5	14.93	-0.08	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.354	1.140	0.404	
5805	161	IEEE 802.11n	OFDM	15.5	14.97	0.04	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.329	1.130	0.372	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.01	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.317	1.114	0.353	
5745	149	IEEE 802.11n	OFDM	15.5	14.93	0.09	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.625	1.140	0.713	
5745	149	IEEE 802.11n	OFDM	15.5	14.93	-0.01	Left	Cheek	MIMO	Wireless Charging	0809-12	13	1:1	0.793	1.140	0.904	A11
5805	161	IEEE 802.11n	OFDM	15.5	14.97	0.13	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.597	1.130	0.675	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.12	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.586	1.114	0.653	
5745	149	IEEE 802.11n	OFDM	15.5	14.93	0.13	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.366	1.140	0.417	
5805	161	IEEE 802.11n	OFDM	15.5	14.97	0.07	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.344	1.130	0.389	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.01	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.327	1.114	0.364	
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 11-11
NII Head SAR**

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Cover Type	Device Serial Number	Data Rate (Mbps)	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	-0.07	Right	Cheek	1	Standard	0809-12	6	1:1	0.002	1.023	0.002	
5210	42	IEEE 802.11ac	OFDM	10.5	10.18	0.00	Right	Cheek	1	Standard	0809-12	29.3	1:1	0.000	1.076	0.000	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.00	Right	Tilt	1	Standard	0809-12	6	1:1	0.000	1.023	0.000	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.00	Left	Cheek	1	Standard	0809-12	6	1:1	0.000	1.023	0.000	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.00	Left	Tilt	1	Standard	0809-12	6	1:1	0.000	1.023	0.000	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.00	Right	Cheek	1	Standard	0809-12	6	1:1	0.000	1.028	0.000	
5290	58	IEEE 802.11ac	OFDM	10.5	9.69	0.00	Right	Cheek	1	Standard	0809-12	29.3	1:1	0.000	1.205	0.000	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.00	Right	Tilt	1	Standard	0809-12	6	1:1	0.000	1.028	0.000	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.00	Left	Cheek	1	Standard	0809-12	6	1:1	0.000	1.028	0.000	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.00	Left	Tilt	1	Standard	0809-12	6	1:1	0.000	1.028	0.000	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.00	Right	Cheek	1	Standard	0809-12	6	1:1	0.000	1.104	0.000	
5530	106	IEEE 802.11ac	OFDM	10.5	10.31	0.00	Right	Cheek	1	Standard	0809-12	29.3	1:1	0.000	1.045	0.000	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.00	Right	Tilt	1	Standard	0809-12	6	1:1	0.000	1.104	0.000	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.00	Left	Cheek	1	Standard	0809-12	6	1:1	0.000	1.104	0.000	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.00	Left	Tilt	1	Standard	0809-12	6	1:1	0.000	1.104	0.000	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	-0.04	Right	Cheek	2	Standard	0809-12	6	1:1	0.189	1.089	0.206	
5210	42	IEEE 802.11ac	OFDM	10.5	10.15	-0.01	Right	Cheek	2	Standard	0809-12	29.3	1:1	0.109	1.084	0.118	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.07	Right	Tilt	2	Standard	0809-12	6	1:1	0.140	1.089	0.152	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.02	Left	Cheek	2	Standard	0809-12	6	1:1	0.159	1.089	0.173	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.08	Left	Tilt	2	Standard	0809-12	6	1:1	0.100	1.089	0.109	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	0.20	Right	Cheek	2	Standard	0809-12	6	1:1	0.181	1.225	0.222	
5290	58	IEEE 802.11ac	OFDM	10.5	9.67	0.12	Right	Cheek	2	Standard	0809-12	29.3	1:1	0.090	1.211	0.109	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	0.12	Right	Tilt	2	Standard	0809-12	6	1:1	0.118	1.225	0.145	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	0.12	Left	Cheek	2	Standard	0809-12	6	1:1	0.144	1.225	0.176	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	0.06	Left	Tilt	2	Standard	0809-12	6	1:1	0.089	1.225	0.109	
5520	104	IEEE 802.11a	OFDM	12.5	11.79	-0.01	Right	Cheek	2	Standard	0809-12	6	1:1	0.242	1.178	0.285	
5580	116	IEEE 802.11a	OFDM	12.5	11.82	0.17	Right	Cheek	2	Standard	0809-12	6	1:1	0.330	1.169	0.386	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.03	Right	Cheek	2	Standard	0809-12	6	1:1	0.456	1.107	0.505	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.21	Right	Cheek	2	Wireless Charging	0809-12	6	1:1	0.536	1.107	0.593	A12
5530	106	IEEE 802.11ac	OFDM	10.5	9.73	0.02	Right	Cheek	2	Standard	0809-12	29.3	1:1	0.133	1.194	0.159	
5520	104	IEEE 802.11a	OFDM	12.5	11.79	0.04	Right	Tilt	2	Standard	0809-12	6	1:1	0.170	1.178	0.200	
5580	116	IEEE 802.11a	OFDM	12.5	11.82	0.17	Right	Tilt	2	Standard	0809-12	6	1:1	0.206	1.169	0.241	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	-0.07	Right	Tilt	2	Standard	0809-12	6	1:1	0.299	1.107	0.331	
5520	104	IEEE 802.11a	OFDM	12.5	11.79	-0.10	Left	Cheek	2	Standard	0809-12	6	1:1	0.253	1.178	0.298	
5580	116	IEEE 802.11a	OFDM	12.5	11.82	0.16	Left	Cheek	2	Standard	0809-12	6	1:1	0.299	1.169	0.350	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.06	Left	Cheek	2	Standard	0809-12	6	1:1	0.402	1.107	0.445	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.08	Left	Tilt	2	Standard	0809-12	6	1:1	0.236	1.107	0.261	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.09	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.244	1.112	0.271	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	-0.04	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.167	1.112	0.186	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.01	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.208	1.112	0.231	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.02	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.147	1.112	0.163	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.04	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.217	1.172	0.254	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	-0.04	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.147	1.172	0.172	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.12	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.202	1.172	0.237	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.06	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.132	1.172	0.155	
5540	108	IEEE 802.11n	OFDM	15.5	14.92	-0.17	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.333	1.143	0.381	
5580	116	IEEE 802.11n	OFDM	15.5	14.90	0.09	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.370	1.148	0.425	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.13	Right	Cheek	MIMO	Standard	0809-12	13	1:1	0.497	1.089	0.541	
5540	108	IEEE 802.11n	OFDM	15.5	14.92	0.02	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.217	1.143	0.248	
5580	116	IEEE 802.11n	OFDM	15.5	14.90	-0.08	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.242	1.148	0.278	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.09	Right	Tilt	MIMO	Standard	0809-12	13	1:1	0.312	1.089	0.340	
5540	108	IEEE 802.11n	OFDM	15.5	14.92	0.07	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.349	1.143	0.399	
5580	116	IEEE 802.11n	OFDM	15.5	14.90	0.16	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.373	1.148	0.428	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.06	Left	Cheek	MIMO	Standard	0809-12	13	1:1	0.504	1.089	0.549	
5540	108	IEEE 802.11n	OFDM	15.5	14.92	-0.04	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.193	1.143	0.221	
5580	116	IEEE 802.11n	OFDM	15.5	14.90	0.02	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.229	1.148	0.263	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.04	Left	Tilt	MIMO	Standard	0809-12	13	1:1	0.308	1.089	0.335	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram									

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11.2 Standalone Body-Worn SAR Data

Table 11-12
GSM/UMTS Body-Worn SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Cover Type	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.5	32.66	0.02	15 mm	Standard	FCC #3	1	1:8.3	back	0.149	1.213	0.181	A13
836.60	190	GSM 850	GSM	33.5	32.66	-0.02	15 mm	Wireless Charging	FCC #3	1	1:8.3	back	0.126	1.213	0.153	
1880.00	661	GSM 1900	GSM	30.5	29.48	-0.01	15 mm	Standard	FCC #3	1	1:8.3	back	0.162	1.265	0.205	
1880.00	661	GSM 1900	GSM	30.5	29.48	-0.01	15 mm	Wireless Charging	FCC #3	1	1:8.3	back	0.170	1.265	0.215	A15
836.60	4183	UMTS 850	RMC	24.5	23.92	0.00	15 mm	Standard	FCC #3	N/A	1:1	back	0.153	1.143	0.175	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.10	15 mm	Wireless Charging	FCC #3	N/A	1:1	back	0.163	1.143	0.186	A17
1732.40	1412	UMTS 1750	RMC	23.5	23.33	-0.03	15 mm	Standard	FCC #2	N/A	1:1	back	0.346	1.040	0.360	A19
1732.40	1412	UMTS 1750	RMC	23.5	23.33	-0.10	15 mm	Wireless Charging	FCC #2	N/A	1:1	back	0.262	1.040	0.272	
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.02	15 mm	Standard	FCC #4	N/A	1:1	back	0.228	1.161	0.265	A21
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.05	15 mm	Wireless Charging	FCC #4	N/A	1:1	back	0.219	1.161	0.254	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-13
LTE Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
707.50	23095	Mid	LTE Band 12	10	Standard	25.0	24.35	0.04	0	FCC #1	QPSK	1	25	15 mm	back	1:1	0.150	1.161	0.174	A23
707.50	23095	Mid	LTE Band 12	10	Wireless Charging	25.0	24.35	-0.02	0	FCC #1	QPSK	1	25	15 mm	back	1:1	0.163	1.161	0.189	
707.50	23095	Mid	LTE Band 12	10	Standard	24.0	23.20	-0.01	1	FCC #1	QPSK	25	0	15 mm	back	1:1	0.108	1.202	0.130	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.00	0	FCC #1	QPSK	1	0	15 mm	back	1:1	0.181	1.067	0.193	A25
836.50	20525	Mid	LTE Band 5 (Cell)	10	Wireless Charging	24.5	24.22	-0.02	0	FCC #1	QPSK	1	0	15 mm	back	1:1	0.179	1.067	0.191	A27
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.04	1	FCC #1	QPSK	25	12	15 mm	back	1:1	0.143	1.104	0.158	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	23.5	23.15	0.01	0	FCC #1	QPSK	1	0	15 mm	back	1:1	0.288	1.084	0.312	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Wireless Charging	23.5	23.15	-0.01	0	FCC #1	QPSK	1	0	15 mm	back	1:1	0.286	1.084	0.310	A29
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	22.5	22.32	0.20	1	FCC #1	QPSK	50	0	15 mm	back	1:1	0.244	1.042	0.254	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	-0.02	0	FCC #2	QPSK	1	50	15 mm	back	1:1	0.258	1.172	0.302	
1900.00	19100	High	LTE Band 2 (PCS)	20	Wireless Charging	24.0	23.31	-0.05	0	FCC #2	QPSK	1	50	15 mm	back	1:1	0.238	1.172	0.279	A29
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	0.06	1	FCC #2	QPSK	50	0	15 mm	back	1:1	0.222	1.186	0.263	
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 11-14
DTS Body-Worn SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Cover Type	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.09	10 mm	1	Standard	0809-09	1	back	1:1	0.153	1.074	0.164	A31
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.05	10 mm	1	Wireless Charging	0809-09	1	back	1:1	0.141	1.074	0.151	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.11	10 mm	2	Standard	0809-09	1	back	1:1	0.100	1.197	0.120	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.16	10 mm	MIMO	Standard	0809-09	13	back	1:1	0.153	1.057	0.162	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.10	10 mm	MIMO	Wireless Charging	0809-09	13	back	1:1	0.119	1.057	0.126	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.05	10 mm	1	Standard	0809-14	6	back	1:1	0.043	1.114	0.048	
5775	155	IEEE 802.11ac	OFDM	10.5	9.89	0.03	10 mm	1	Standard	0809-14	29.3	back	1:1	0.025	1.151	0.029	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.05	10 mm	2	Standard	0809-14	6	back	1:1	0.111	1.040	0.115	
5775	155	IEEE 802.11ac	OFDM	10.5	10.06	-0.18	10 mm	2	Standard	0809-14	29.3	back	1:1	0.066	1.107	0.073	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.04	10 mm	MIMO	Standard	0809-14	13	back	1:1	0.157	1.114	0.175	A32
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.01	10 mm	MIMO	Wireless Charging	0809-14	13	back	1:1	0.140	1.114	0.156	
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 11-15
NII Body-Worn SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Cover Type	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.06	10 mm	1	Standard	0809-14	6	back	1:1	0.044	1.023	0.045	
5210	42	IEEE 802.11ac	OFDM	10.5	10.18	0.09	10 mm	1	Standard	0809-14	29.3	back	1:1	0.024	1.076	0.026	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.03	10 mm	1	Standard	0809-14	6	back	1:1	0.060	1.028	0.062	
5290	58	IEEE 802.11ac	OFDM	10.5	9.69	0.04	10 mm	1	Standard	0809-14	29.3	back	1:1	0.027	1.205	0.033	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.08	10 mm	1	Standard	0809-14	6	back	1:1	0.080	1.104	0.088	
5530	106	IEEE 802.11ac	OFDM	10.5	10.31	0.03	10 mm	1	Standard	0809-14	29.3	back	1:1	0.047	1.045	0.049	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.04	10 mm	2	Standard	0809-14	6	back	1:1	0.064	1.089	0.070	
5210	42	IEEE 802.11ac	OFDM	10.5	10.15	0.01	10 mm	2	Standard	0809-14	29.3	back	1:1	0.036	1.084	0.039	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	0.01	10 mm	2	Standard	0809-14	6	back	1:1	0.052	1.225	0.064	
5290	58	IEEE 802.11ac	OFDM	10.5	9.67	0.05	10 mm	2	Standard	0809-14	29.3	back	1:1	0.028	1.211	0.034	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.03	10 mm	2	Standard	0809-14	6	back	1:1	0.118	1.107	0.131	A33
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.04	10 mm	2	Wireless Charging	0809-14	6	back	1:1	0.110	1.107	0.122	
5530	106	IEEE 802.11ac	OFDM	10.5	9.73	0.09	10 mm	2	Standard	0809-14	29.3	back	1:1	0.039	1.194	0.047	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.07	10 mm	MIMO	Standard	0809-14	13	back	1:1	0.072	1.112	0.080	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.02	10 mm	MIMO	Standard	0809-14	13	back	1:1	0.069	1.172	0.081	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.06	10 mm	MIMO	Standard	0809-14	13	back	1:1	0.115	1.089	0.125	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram										

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11.3 Standalone Wireless Router SAR Data

Table 11-16
GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Cover Type	Device Serial Number	# of GPRS Slots	Duty Cycle	Side	SAR (1g)	Scaling Factor	Scaled SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	190	GSM 850	GPRS	28.0	26.55	-0.12	10 mm	Standard	FCC #3	4	1:2.076	back	0.177	1.396	0.247	
836.60	190	GSM 850	GPRS	28.0	26.55	0.02	10 mm	Standard	FCC #3	4	1:2.076	front	0.185	1.396	0.258	
836.60	190	GSM 850	GPRS	28.0	26.55	-0.06	10 mm	Wireless Charging	FCC #3	4	1:2.076	front	0.257	1.396	0.359	A14
836.60	190	GSM 850	GPRS	28.0	26.55	0.06	10 mm	Standard	FCC #3	4	1:2.076	bottom	0.142	1.396	0.198	
836.60	190	GSM 850	GPRS	28.0	26.55	-0.05	10 mm	Standard	FCC #3	4	1:2.076	right	0.057	1.396	0.080	
1880.00	661	GSM 1900	GPRS	25.0	24.59	0.03	10 mm	Standard	FCC #3	4	1:2.076	back	0.380	1.099	0.418	
1850.20	512	GSM 1900	GPRS	25.0	24.73	-0.03	10 mm	Standard	FCC #3	4	1:2.076	front	0.796	1.064	0.847	
1880.00	661	GSM 1900	GPRS	25.0	24.59	-0.01	10 mm	Standard	FCC #3	4	1:2.076	front	0.735	1.099	0.808	
1909.80	810	GSM 1900	GPRS	25.0	24.98	0.01	10 mm	Standard	FCC #3	4	1:2.076	front	0.843	1.005	0.847	
1850.20	512	GSM 1900	GPRS	25.0	24.73	-0.05	10 mm	Standard	FCC #3	4	1:2.076	bottom	0.872	1.064	0.928	
1880.00	661	GSM 1900	GPRS	25.0	24.59	0.08	10 mm	Standard	FCC #3	4	1:2.076	bottom	0.801	1.099	0.880	
1909.80	810	GSM 1900	GPRS	25.0	24.98	-0.10	10 mm	Standard	FCC #3	4	1:2.076	bottom	0.990	1.005	0.995	
1909.80	810	GSM 1900	GPRS	25.0	24.98	-0.09	10 mm	Wireless Charging	FCC #3	4	1:2.076	bottom	1.030	1.005	1.035	A16
1880.00	661	GSM 1900	GPRS	25.0	24.59	0.15	10 mm	Standard	FCC #3	4	1:2.076	right	0.096	1.099	0.106	
1909.80	810	GSM 1900	GPRS	25.0	24.98	0.04	10 mm	Wireless Charging	FCC #3	4	1:2.076	bottom	1.020	1.005	1.025	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.11	10 mm	Standard	FCC #3	N/A	1:1	back	0.275	1.143	0.314	
836.60	4183	UMTS 850	RMC	24.5	23.92	0.01	10 mm	Standard	FCC #3	N/A	1:1	front	0.282	1.143	0.322	
836.60	4183	UMTS 850	RMC	24.5	23.92	-0.03	10 mm	Wireless Charging	FCC #3	N/A	1:1	front	0.398	1.143	0.455	A18
836.60	4183	UMTS 850	RMC	24.5	23.92	0.11	10 mm	Standard	FCC #3	N/A	1:1	bottom	0.199	1.143	0.227	
836.60	4183	UMTS 850	RMC	24.5	23.92	-0.06	10 mm	Standard	FCC #3	N/A	1:1	right	0.097	1.143	0.111	
1732.40	1412	UMTS 1750	RMC	22.0	21.73	-0.02	10 mm	Standard	FCC #2	N/A	1:1	back	0.423	1.064	0.450	
1732.40	1412	UMTS 1750	RMC	22.0	21.73	0.00	10 mm	Standard	FCC #2	N/A	1:1	front	0.733	1.064	0.780	A20
1732.40	1412	UMTS 1750	RMC	22.0	21.73	-0.01	10 mm	Wireless Charging	FCC #2	N/A	1:1	front	0.612	1.064	0.651	
1732.40	1412	UMTS 1750	RMC	22.0	21.73	-0.03	10 mm	Standard	FCC #2	N/A	1:1	bottom	0.707	1.064	0.752	
1732.40	1412	UMTS 1750	RMC	22.0	21.73	0.01	10 mm	Standard	FCC #2	N/A	1:1	right	0.091	1.064	0.097	
1907.60	9538	UMTS 1900	RMC	22.0	21.67	0.00	10 mm	Standard	FCC #2	N/A	1:1	back	0.383	1.079	0.413	
1907.60	9538	UMTS 1900	RMC	22.0	21.67	0.08	10 mm	Standard	FCC #2	N/A	1:1	front	0.657	1.079	0.709	
1852.40	9262	UMTS 1900	RMC	22.0	21.60	0.13	10 mm	Standard	FCC #2	N/A	1:1	bottom	0.942	1.096	1.032	A22
1852.40	9262	UMTS 1900	RMC	22.0	21.60	0.20	10 mm	Wireless Charging	FCC #2	N/A	1:1	bottom	0.831	1.096	0.911	
1880.00	9400	UMTS 1900	RMC	22.0	21.15	0.15	10 mm	Standard	FCC #2	N/A	1:1	bottom	0.819	1.216	0.996	
1907.60	9538	UMTS 1900	RMC	22.0	21.67	0.05	10 mm	Standard	FCC #2	N/A	1:1	bottom	0.879	1.079	0.948	
1907.60	9538	UMTS 1900	RMC	22.0	21.67	0.03	10 mm	Standard	FCC #2	N/A	1:1	right	0.121	1.079	0.131	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT							Body									
Spatial Peak							1.6 W/kg (mW/g)									
Uncontrolled Exposure/General Population							averaged over 1 gram									

Blue entry represents variability data.

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Table 11-17
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
707.50	23095	Mid	LTE Band 12	10	Standard	25.0	24.35	0.02	0	FCC #1	QPSK	1	25	10 mm	back	1:1	0.236	1.161	0.274	
707.50	23095	Mid	LTE Band 12	10	Standard	24.0	23.20	0.08	1	FCC #1	QPSK	25	0	10 mm	back	1:1	0.156	1.202	0.188	
707.50	23095	Mid	LTE Band 12	10	Standard	25.0	24.35	-0.06	0	FCC #1	QPSK	1	25	10 mm	front	1:1	0.260	1.161	0.302	A24
707.50	23095	Mid	LTE Band 12	10	Wireless Charging	25.0	24.35	0.03	0	FCC #1	QPSK	1	25	10 mm	front	1:1	0.181	1.161	0.210	
707.50	23095	Mid	LTE Band 12	10	Standard	24.0	23.20	0.08	1	FCC #1	QPSK	25	0	10 mm	front	1:1	0.175	1.202	0.210	
707.50	23095	Mid	LTE Band 12	10	Standard	25.0	24.35	-0.04	0	FCC #1	QPSK	1	25	10 mm	bottom	1:1	0.126	1.161	0.146	
707.50	23095	Mid	LTE Band 12	10	Standard	24.0	23.20	0.05	1	FCC #1	QPSK	25	0	10 mm	bottom	1:1	0.096	1.202	0.115	
707.50	23095	Mid	LTE Band 12	10	Standard	25.0	24.35	0.14	0	FCC #1	QPSK	1	25	10 mm	right	1:1	0.081	1.161	0.094	
707.50	23095	Mid	LTE Band 12	10	Standard	24.0	23.20	0.13	1	FCC #1	QPSK	25	0	10 mm	right	1:1	0.047	1.202	0.056	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak										Body 1.6 W/kg (mW/g) averaged over 1 gram										
Uncontrolled Exposure/General Population																				

Table 11-18
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	-0.04	0	FCC #1	QPSK	1	0	10 mm	back	1:1	0.292	1.067	0.312	A26
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.00	1	FCC #1	QPSK	25	12	10 mm	back	1:1	0.232	1.104	0.256	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	-0.03	0	FCC #1	QPSK	1	0	10 mm	front	1:1	0.412	1.067	0.440	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Wireless Charging	24.5	24.22	0.04	0	FCC #1	QPSK	1	0	10 mm	front	1:1	0.521	1.067	0.556	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	-0.01	1	FCC #1	QPSK	25	12	10 mm	front	1:1	0.322	1.104	0.355	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.03	0	FCC #1	QPSK	1	0	10 mm	bottom	1:1	0.244	1.067	0.260	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	-0.03	1	FCC #1	QPSK	25	12	10 mm	bottom	1:1	0.192	1.104	0.212	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	24.5	24.22	0.02	0	FCC #1	QPSK	1	0	10 mm	right	1:1	0.111	1.067	0.118	
836.50	20525	Mid	LTE Band 5 (Cell)	10	Standard	23.5	23.07	0.02	1	FCC #1	QPSK	25	12	10 mm	right	1:1	0.092	1.104	0.102	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body								
Spatial Peak												1.6 W/kg (mW/g)								
Uncontrolled Exposure/General Population												averaged over 1 gram								

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Table 11-19
LTE Band 4 (AWS) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.90	0.02	0	FCC #2	QPSK	1	50	10 mm	back	1:1	0.325	1.148	0.373	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.77	-0.01	0	FCC #2	QPSK	50	25	10 mm	back	1:1	0.320	1.183	0.379	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.90	0.00	0	FCC #2	QPSK	1	50	10 mm	front	1:1	0.567	1.148	0.651	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.77	0.00	0	FCC #2	QPSK	50	25	10 mm	front	1:1	0.553	1.183	0.654	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.90	-0.04	0	FCC #2	QPSK	1	50	10 mm	bottom	1:1	0.659	1.148	0.757	A28
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Wireless Charging	21.5	20.90	-0.01	0	FCC #2	QPSK	1	50	10 mm	bottom	1:1	0.646	1.148	0.742	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.77	-0.02	0	FCC #2	QPSK	50	25	10 mm	bottom	1:1	0.610	1.183	0.722	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.90	-0.01	0	FCC #2	QPSK	1	50	10 mm	right	1:1	0.097	1.148	0.111	
1732.50	20175	Mid	LTE Band 4 (AWS)	20	Standard	21.5	20.77	-0.01	0	FCC #2	QPSK	50	25	10 mm	right	1:1	0.094	1.183	0.111	
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 11-20
LTE Band 2 (PCS) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	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	Scaled SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	0.01	0	FCC #4	QPSK	1	99	10 mm	back	1:1	0.264	1.000	0.264	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	0.01	0	FCC #4	QPSK	50	50	10 mm	back	1:1	0.275	1.000	0.275	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	-0.01	0	FCC #4	QPSK	1	99	10 mm	front	1:1	0.488	1.000	0.488	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	0.02	0	FCC #4	QPSK	50	50	10 mm	front	1:1	0.505	1.000	0.505	
1860.00	18700	Low	LTE Band 2 (PCS)	20	Standard	21.5	21.21	-0.01	0	FCC #4	QPSK	1	0	10 mm	bottom	1:1	0.820	1.069	0.877	
1880.00	18900	Md	LTE Band 2 (PCS)	20	Standard	21.5	21.24	-0.02	0	FCC #4	QPSK	1	99	10 mm	bottom	1:1	0.770	1.062	0.818	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	0.05	0	FCC #4	QPSK	1	99	10 mm	bottom	1:1	0.809	1.000	0.809	
1860.00	18700	Low	LTE Band 2 (PCS)	20	Standard	21.5	21.19	0.00	0	FCC #4	QPSK	50	0	10 mm	bottom	1:1	0.792	1.074	0.851	
1880.00	18900	Md	LTE Band 2 (PCS)	20	Standard	21.5	21.09	-0.01	0	FCC #4	QPSK	50	50	10 mm	bottom	1:1	0.739	1.099	0.812	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	-0.02	0	FCC #4	QPSK	50	50	10 mm	bottom	1:1	0.819	1.000	0.819	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.42	0.21	0	FCC #4	QPSK	100	0	10 mm	bottom	1:1	0.933	1.019	0.951	A30
1900.00	19100	High	LTE Band 2 (PCS)	20	Wireless Charging	21.5	21.42	-0.02	0	FCC #4	QPSK	100	0	10 mm	bottom	1:1	0.919	1.019	0.936	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	0.01	0	FCC #4	QPSK	1	99	10 mm	right	1:1	0.131	1.000	0.131	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	21.5	21.50	-0.01	0	FCC #4	QPSK	50	50	10 mm	right	1:1	0.109	1.000	0.109	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body											
Spatial Peak									1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population									averaged over 1 gram											

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Table 11-21
WLAN Hotspot SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Cover Type	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle	SAR (1g)	Scaling Factor	Scaled SAR (1g) (W/kg)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.09	10 mm	1	Standard	0809-09	1	back	1:1	0.153	1.074	0.164	A31
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.05	10 mm	1	Wireless Charging	0809-09	1	back	1:1	0.141	1.074	0.151	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.04	10 mm	1	Standard	0809-09	1	front	1:1	0.006	1.074	0.006	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	-0.08	10 mm	1	Standard	0809-09	1	top	1:1	0.010	1.074	0.011	
2462	11	IEEE 802.11b	DSSS	15.5	15.19	0.13	10 mm	1	Standard	0809-09	1	left	1:1	0.039	1.074	0.042	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.11	10 mm	2	Standard	0809-09	1	back	1:1	0.100	1.197	0.120	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.08	10 mm	2	Standard	0809-09	1	front	1:1	0.017	1.197	0.020	
2462	11	IEEE 802.11b	DSSS	15.5	14.72	0.03	10 mm	2	Standard	0809-09	1	top	1:1	0.011	1.197	0.013	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.16	10 mm	MIMO	Standard	0809-09	13	back	1:1	0.153	1.057	0.162	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.10	10 mm	MIMO	Wireless Charging	0809-09	13	back	1:1	0.119	1.057	0.126	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.02	10 mm	MIMO	Standard	0809-09	13	front	1:1	0.010	1.057	0.011	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.01	10 mm	MIMO	Standard	0809-09	13	top	1:1	0.022	1.057	0.023	
2462	11	IEEE 802.11n	OFDM	16.5	16.26	0.02	10 mm	MIMO	Standard	0809-09	13	left	1:1	0.037	1.057	0.039	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.05	10 mm	1	Standard	0809-14	6	back	1:1	0.043	1.114	0.048	
5775	155	IEEE 802.11ac	OFDM	10.5	9.89	0.03	10 mm	1	Standard	0809-14	29.3	back	1:1	0.025	1.151	0.029	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.00	10 mm	1	Standard	0809-14	6	front	1:1	0.004	1.114	0.004	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.09	10 mm	1	Standard	0809-14	6	top	1:1	0.015	1.114	0.017	
5745	149	IEEE 802.11a	OFDM	12.5	12.03	0.02	10 mm	1	Standard	0809-14	6	left	1:1	0.005	1.114	0.006	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.05	10 mm	2	Standard	0809-14	6	back	1:1	0.111	1.040	0.115	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	-0.18	10 mm	2	Wireless Charging	0809-14	6	back	1:1	0.097	1.040	0.101	
5775	155	IEEE 802.11ac	OFDM	10.5	10.06	0.11	10 mm	2	Standard	0809-14	29.3	back	1:1	0.066	1.107	0.073	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.02	10 mm	2	Standard	0809-14	6	front	1:1	0.028	1.040	0.029	
5825	165	IEEE 802.11a	OFDM	12.5	12.33	0.08	10 mm	2	Standard	0809-14	6	top	1:1	0.063	1.040	0.066	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.04	10 mm	MIMO	Standard	0809-14	13	back	1:1	0.157	1.114	0.175	A32
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.10	10 mm	MIMO	Wireless Charging	0809-14	13	back	1:1	0.140	1.114	0.156	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.07	10 mm	MIMO	Standard	0809-14	13	front	1:1	0.047	1.114	0.052	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.18	10 mm	MIMO	Standard	0809-14	13	top	1:1	0.110	1.114	0.123	
5825	165	IEEE 802.11n	OFDM	15.5	15.03	0.08	10 mm	MIMO	Standard	0809-14	13	left	1:1	0.060	1.114	0.067	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram										

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11.4 Standalone Extremity SAR Data

Table 11-22
UMTS 1900 Extremity SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Battery Type	Device Serial Number	Duty Cycle	Side	SAR (10g)	Scaling Factor	Scaled SAR (10g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1852.40	9262	UMTS 1900	RMC	24.0	23.20	-0.15	0 mm	Standard	FCC #4	1:1	bottom	2.110	1.202	2.536	
1880.00	9400	UMTS 1900	RMC	24.0	22.73	-0.05	0 mm	Standard	FCC #4	1:1	bottom	2.510	1.340	3.363	A34
1907.60	9538	UMTS 1900	RMC	24.0	23.35	-0.14	0 mm	Standard	FCC #4	1:1	bottom	2.190	1.161	2.543	
1880.00	9400	UMTS 1900	RMC	24.0	22.73	-0.15	0 mm	Wireless Charging	FCC #4	1:1	bottom	1.830	1.340	2.452	
1880.00	9400	UMTS 1900	RMC	24.0	22.73	0.15	0 mm	Standard	FCC #4	1:1	bottom	2.250	1.340	3.015	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Hand 4.0 W/kg (mW/g) averaged over 10 grams								

Please note that the following 10g SAR data was measured for configurations where 1g hotspot SAR scaled up to the maximum output power tolerances exceeded a 1g SAR level of 1.2 W/kg. Blue entry represents variability data.

Table 11-23
LTE Band 2 (PCS) Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Battery Type	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	Scaled SAR (10g)	Plot	
MHz	Ch.															(W/kg)		(W/kg)		
1860.00	18700	Low	LTE Band 2 (PCS)	20	Standard	24.0	23.00	0.01	0	FCC #4	QPSK	1	0	0 mm	bottom	1:1	2.150	1.259	2.707	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	24.0	23.00	0.01	0	FCC #4	QPSK	1	99	0 mm	bottom	1:1	2.000	1.259	2.518	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	24.0	23.31	0.02	0	FCC #4	QPSK	1	50	0 mm	bottom	1:1	2.200	1.172	2.578	
1900.00	19100	High	LTE Band 2 (PCS)	20	Wireless Charging	24.0	23.31	0.14	0	FCC #4	QPSK	1	50	0 mm	bottom	1:1	2.210	1.172	2.590	A35
1880.00	18900	Mid	LTE Band 2 (PCS)	20	Standard	23.0	22.26	0.14	1	FCC #4	QPSK	50	0	0 mm	bottom	1:1	1.430	1.186	1.696	
1900.00	19100	High	LTE Band 2 (PCS)	20	Standard	23.0	22.22	0.16	1	FCC #4	QPSK	100	0	0 mm	bottom	1:1	1.640	1.197	1.963	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Hand 4.0 W/kg (mW/g) averaged over 10 grams											

Please note that the following 10g SAR data was measured for configurations where 1g hotspot SAR scaled up to the maximum output power tolerances exceeded a 1g SAR level of 1.2 W/kg.

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Table 11-24
NII Extremity SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Battery Type	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle	SAR (10g)	Scaling Factor	Scaled SAR (10g) (W/kg)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.19	0 mm	1	Standard	0809-14	6	back	1:1	0.136	1.023	0.139	
5210	42	IEEE 802.11ac	OFDM	10.5	10.18	0.16	0 mm	1	Standard	0809-14	29.3	back	1:1	0.081	1.076	0.087	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	-0.10	0 mm	1	Standard	0809-14	6	front	1:1	0.006	1.023	0.006	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.13	0 mm	1	Standard	0809-14	6	top	1:1	0.002	1.023	0.002	
5240	48	IEEE 802.11a	OFDM	12.5	12.40	0.12	0 mm	1	Standard	0809-14	6	left	1:1	0.009	1.023	0.009	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.18	0 mm	1	Standard	0809-14	6	back	1:1	0.150	1.028	0.154	
5290	58	IEEE 802.11ac	OFDM	10.5	9.69	0.11	0 mm	1	Standard	0809-14	29.3	back	1:1	0.074	1.205	0.089	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.14	0 mm	1	Standard	0809-14	6	front	1:1	0.020	1.028	0.021	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	-0.20	0 mm	1	Standard	0809-14	6	top	1:1	0.000	1.028	0.000	
5300	60	IEEE 802.11a	OFDM	12.5	12.38	0.14	0 mm	1	Standard	0809-14	6	left	1:1	0.011	1.028	0.011	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.15	0 mm	1	Standard	0809-14	6	back	1:1	0.172	1.104	0.190	
5530	106	IEEE 802.11ac	OFDM	10.5	10.31	0.09	0 mm	1	Standard	0809-14	29.3	back	1:1	0.011	1.045	0.011	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.17	0 mm	1	Standard	0809-14	6	front	1:1	0.006	1.104	0.007	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.00	0 mm	1	Standard	0809-14	6	top	1:1	0.000	1.104	0.000	
5500	100	IEEE 802.11a	OFDM	12.5	12.07	0.19	0 mm	1	Standard	0809-14	6	left	1:1	0.016	1.104	0.018	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.01	0 mm	2	Standard	0809-14	6	back	1:1	0.279	1.089	0.304	
5210	42	IEEE 802.11ac	OFDM	10.5	10.15	0.00	0 mm	2	Standard	0809-14	29.3	back	1:1	0.095	1.084	0.103	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	0.15	0 mm	2	Standard	0809-14	6	front	1:1	0.081	1.089	0.088	
5180	36	IEEE 802.11a	OFDM	12.5	12.13	-0.15	0 mm	2	Standard	0809-14	6	top	1:1	0.068	1.089	0.074	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	-0.14	0 mm	2	Standard	0809-14	6	back	1:1	0.240	1.225	0.294	
5290	58	IEEE 802.11ac	OFDM	10.5	9.67	0.18	0 mm	2	Standard	0809-14	29.3	back	1:1	0.106	1.211	0.128	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	-0.05	0 mm	2	Standard	0809-14	6	front	1:1	0.116	1.225	0.142	
5260	52	IEEE 802.11a	OFDM	12.5	11.62	-0.03	0 mm	2	Standard	0809-14	6	top	1:1	0.052	1.225	0.064	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	-0.08	0 mm	2	Standard	0809-14	6	back	1:1	0.334	1.107	0.370	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.05	0 mm	2	Wireless Charging	0809-14	6	back	1:1	0.386	1.107	0.427	
5530	106	IEEE 802.11ac	OFDM	10.5	9.73	0.08	0 mm	2	Standard	0809-14	29.3	back	1:1	0.145	1.194	0.173	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	0.14	0 mm	2	Standard	0809-14	6	front	1:1	0.210	1.107	0.232	
5700	140	IEEE 802.11a	OFDM	12.5	12.06	-0.13	0 mm	2	Standard	0809-14	6	top	1:1	0.180	1.107	0.199	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.11	0 mm	MIMO	Standard	0809-14	13	back	1:1	0.375	1.112	0.417	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.16	0 mm	MIMO	Standard	0809-14	13	front	1:1	0.125	1.112	0.139	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	-0.08	0 mm	MIMO	Standard	0809-14	13	top	1:1	0.069	1.112	0.077	
5220	44	IEEE 802.11n	OFDM	15.5	15.04	0.12	0 mm	MIMO	Standard	0809-14	13	left	1:1	0.025	1.112	0.028	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.20	0 mm	MIMO	Standard	0809-14	13	back	1:1	0.347	1.172	0.407	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.15	0 mm	MIMO	Standard	0809-14	13	front	1:1	0.130	1.172	0.152	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	-0.09	0 mm	MIMO	Standard	0809-14	13	top	1:1	0.066	1.172	0.077	
5260	52	IEEE 802.11n	OFDM	15.5	14.81	0.13	0 mm	MIMO	Standard	0809-14	13	left	1:1	0.028	1.172	0.033	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.15	0 mm	MIMO	Standard	0809-14	13	back	1:1	0.404	1.089	0.440	A36
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.09	0 mm	MIMO	Wireless Charging	0809-14	13	back	1:1	0.350	1.089	0.381	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.12	0 mm	MIMO	Standard	0809-14	13	front	1:1	0.214	1.089	0.233	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	-0.02	0 mm	MIMO	Standard	0809-14	13	top	1:1	0.221	1.089	0.241	
5700	140	IEEE 802.11n	OFDM	15.5	15.13	0.01	0 mm	MIMO	Standard	0809-14	13	left	1:1	0.035	1.089	0.038	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Hand 4.0 W/kg (mW/g) averaged over 10 grams										

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11.5 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2003, and FCC KDB Publication 447498 D01v05.
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 D01v05.
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. A test separation distance of 10 mm for body-worn SAR was also used for 2.4/5 GHz WLAN, as it is more conservative.
7. Per FCC KDB Publication 648474 D04v01, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01 v01, variability SAR tests were performed when the measured 1 gram SAR results for a frequency band were greater than 0.8 W/kg and the measured 10 gram SAR results for a frequency band were greater than 2.0 W/kg. Please see Section 13 for more information.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v01, 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. This device utilizes power reduction for UMTS Bands 4/2 and LTE Bands 4/2 under some portable hotspot conditions for SAR compliance. Therefore, these wireless router configurations were tested at reduced output power levels.
11. Per FCC KDB Publication 648474 D04v01r01, this device is considered a "phablet" since the diagonal dimension is > 160 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg when scaled to maximum output power.
12. Per FCC KDB Publication 648474 D03, SAR was measured using the standard battery cover and then repeated with the wireless charging battery cover for the configuration with the highest measured SAR for each wireless technology, frequency band, operating mode, and exposure condition. Since reported SAR did not exceed 1.2 W/kg, additional testing with the wireless charging battery cover was not required.

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 D03v01 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 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output

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power variation across the required test channels is $> \frac{1}{2}$ 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 D01v02. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.
2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg 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 $> \frac{1}{2}$ dB, instead of the middle channel, the highest output power channel was used.
3. This device applies power reduction for UMTS Bands 4 and 2 when Hotspot is ON. Therefore, UMTS Bands 4 and 2 were evaluated at hotspot reduced power levels. There is no power reduction applied to UMTS Band 5.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r01. The general test procedures used for testing can be found in Section 8.4.4.
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 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 Guidance, LTE CA SAR was not needed for testing since the data sent by uplink on the uplink physical channels does not change between Rel. 8 and Rel. 10.
5. This device applies power reduction for LTE Bands 4 and 2 modes when Hotspot is ON. Therefore, LTE Bands 4 and 2 modes were evaluated at hotspot reduced power levels. There is no power reduction applied to LTE Bands 12,17 and 5.

WLAN/BT Notes:

1. Justification for reduced test configurations for WIFI channels per KDB Publication 248227 D01v01r02 and October 2012 FCC/TCB Meeting Notes for 2.4 GHz WIFI SISO operations: Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11b. Other SISO IEEE 802.11 modes (including 802.11g/n) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11b mode. Some additional IEEE 802.11n SAR tests for the highest measured SAR positions were included in this report, per manufacturer request.
2. Justification for reduced test configurations for WIFI channels per KDB Publication 248227 D01v01r02 and October 2012 FCC/TCB Meeting Notes for SISO 5 GHz WIFI operations: Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11a. Other IEEE SISO 802.11 modes (including 802.11n 20 MHz and 40 MHz bandwidths) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11a mode. Some additional IEEE 802.11n and IEEE 802.11ac SAR tests for the highest measured SAR positions were included in this report, per manufacturer request.
3. Per April 2013 TCB Workshop notes, full SISO SAR tests for all IEEE 802.11ac configurations were not required because the average output power was not more than 0.25 dB higher than

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- IEEE 802.11a mode. IEEE 802.11ac SISO was evaluated for the highest IEEE 802.11a position in each 5 GHz band and exposure condition.
4. When Hotspot is enabled, 5.2-5.7 GHz bands are disabled. Therefore no 5.2-5.7 GHz WIFI Wireless Router SAR Data was required.
 5. Per KDB 248227, SAR for MIMO was measured with both transmitting simultaneously and was evaluated in dependently of SISO operation. For 2.4 GHz MIMO, 802.11n was evaluated. For 5 GHz MIMO, 802.11n 20 MHz BW was evaluated.
 6. WIFI transmission was verified using an uncalibrated spectrum analyzer.
 7. When the maximum extrapolated peak 1g SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the reported 1g averaged SAR is <0.8 W/kg, 1g SAR testing on other default channels was required. Testing on other default channels was not required for 10 g Extremity SAR, since the reported 10g averaged SAR is <2.0 W/kg.

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12 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v05 are applicable to handsets with built-in unlicensed transmitters such as 802.11a/b/g/n/ac 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 447498 D01v05 IV.C.1.iii and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is ≤ 1.6 W/kg. When standalone SAR is not required to be measured, per FCC KDB 447498 D01v05 4.3.2 2), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$\text{Estimated SAR} = \frac{\sqrt{f(\text{GHz})}}{7.5} * \frac{(\text{Max Power of channel, mW})}{\text{Min. Separation Distance, mm}}$$

Table 12-1
Estimated SAR

Mode	Frequency	Maximum Allowed Power	Separation Distance (Body)	Estimated SAR (Body)
	[MHz]	[dBm]	[mm]	[W/kg]
Bluetooth	2480	9.00	15	0.112

Note: Held-to ear configurations are not applicable to Bluetooth operations and therefore were not considered for simultaneous transmission. Per KDB Publication 447498 D01v05, the maximum power of the channel was rounded to the nearest mW before calculation.

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12.3 Head SAR Simultaneous Transmission Analysis

Table 12-2
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 1 (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.023	0.078	Head SAR	Right Cheek	0.094	0.023	0.117
	Right Tilt	0.025	0.014	0.039		Right Tilt	0.047	0.014	0.061
	Left Cheek	0.075	0.009	0.084		Left Cheek	0.095	0.009	0.104
	Left Tilt	0.023	0.008	0.031		Left Tilt	0.033	0.008	0.041
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.023	0.096	Head SAR	Right Cheek	0.127	0.023	0.150
	Right Tilt	0.031	0.014	0.045		Right Tilt	0.067	0.014	0.081
	Left Cheek	0.082	0.009	0.091		Left Cheek	0.153	0.009	0.162
	Left Tilt	0.043	0.008	0.051		Left Tilt	0.092	0.008	0.100
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.023	0.175	Head SAR	Right Cheek	0.073	0.023	0.096
	Right Tilt	0.077	0.014	0.091		Right Tilt	0.039	0.014	0.053
	Left Cheek	0.160	0.009	0.169		Left Cheek	0.087	0.009	0.096
	Left Tilt	0.058	0.008	0.066		Left Tilt	0.045	0.008	0.053
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.023	0.094	Head SAR	Right Cheek	0.199	0.023	0.222
	Right Tilt	0.035	0.014	0.049		Right Tilt	0.073	0.014	0.087
	Left Cheek	0.084	0.009	0.093		Left Cheek	0.167	0.009	0.176
	Left Tilt	0.030	0.008	0.038		Left Tilt	0.083	0.008	0.091
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)					
Head SAR	Right Cheek	0.105	0.023	0.128					
	Right Tilt	0.054	0.014	0.068					
	Left Cheek	0.093	0.009	0.102					
	Left Tilt	0.088	0.008	0.096					

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Table 12-3
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 2 (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.213	0.268	Head SAR	Right Cheek	0.094	0.213	0.307
	Right Tilt	0.025	0.066	0.091		Right Tilt	0.047	0.066	0.113
	Left Cheek	0.075	0.049	0.124		Left Cheek	0.095	0.049	0.144
	Left Tilt	0.023	0.035	0.058		Left Tilt	0.033	0.035	0.068
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.213	0.286	Head SAR	Right Cheek	0.127	0.213	0.340
	Right Tilt	0.031	0.066	0.097		Right Tilt	0.067	0.066	0.133
	Left Cheek	0.082	0.049	0.131		Left Cheek	0.153	0.049	0.202
	Left Tilt	0.043	0.035	0.078		Left Tilt	0.092	0.035	0.127
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.213	0.365	Head SAR	Right Cheek	0.073	0.213	0.286
	Right Tilt	0.077	0.066	0.143		Right Tilt	0.039	0.066	0.105
	Left Cheek	0.160	0.049	0.209		Left Cheek	0.087	0.049	0.136
	Left Tilt	0.058	0.035	0.093		Left Tilt	0.045	0.035	0.080
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.213	0.284	Head SAR	Right Cheek	0.199	0.213	0.412
	Right Tilt	0.035	0.066	0.101		Right Tilt	0.073	0.066	0.139
	Left Cheek	0.084	0.049	0.133		Left Cheek	0.167	0.049	0.216
	Left Tilt	0.030	0.035	0.065		Left Tilt	0.083	0.035	0.118
	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)					
Head SAR	Right Cheek	0.105	0.213	0.318					
	Right Tilt	0.054	0.066	0.120					
	Left Cheek	0.093	0.049	0.142					
	Left Tilt	0.088	0.035	0.123					

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Table 12-4
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.171	0.226	Head SAR	Right Cheek	0.094	0.171	0.265
	Right Tilt	0.025	0.037	0.062		Right Tilt	0.047	0.037	0.084
	Left Cheek	0.075	0.030	0.105		Left Cheek	0.095	0.030	0.125
	Left Tilt	0.023	0.017	0.040		Left Tilt	0.033	0.017	0.050
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.171	0.244	Head SAR	Right Cheek	0.127	0.171	0.298
	Right Tilt	0.031	0.037	0.068		Right Tilt	0.067	0.037	0.104
	Left Cheek	0.082	0.030	0.112		Left Cheek	0.153	0.030	0.183
	Left Tilt	0.043	0.017	0.060		Left Tilt	0.092	0.017	0.109
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.171	0.323	Head SAR	Right Cheek	0.073	0.171	0.244
	Right Tilt	0.077	0.037	0.114		Right Tilt	0.039	0.037	0.076
	Left Cheek	0.160	0.030	0.190		Left Cheek	0.087	0.030	0.117
	Left Tilt	0.058	0.017	0.075		Left Tilt	0.045	0.017	0.062
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.171	0.242	Head SAR	Right Cheek	0.199	0.171	0.370
	Right Tilt	0.035	0.037	0.072		Right Tilt	0.073	0.037	0.110
	Left Cheek	0.084	0.030	0.114		Left Cheek	0.167	0.030	0.197
	Left Tilt	0.030	0.017	0.047		Left Tilt	0.083	0.017	0.100
	Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)				
	Head SAR	Right Cheek	0.105	0.171	0.276				
		Right Tilt	0.054	0.037	0.091				
		Left Cheek	0.093	0.030	0.123				
		Left Tilt	0.088	0.017	0.105				

Table 12-5
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 1 (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.002	0.057	Head SAR	Right Cheek	0.094	0.002	0.096
	Right Tilt	0.025	0.000	0.025		Right Tilt	0.047	0.000	0.047
	Left Cheek	0.075	0.000	0.075		Left Cheek	0.095	0.000	0.095
	Left Tilt	0.023	0.000	0.023		Left Tilt	0.033	0.000	0.033
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.002	0.075	Head SAR	Right Cheek	0.127	0.002	0.129
	Right Tilt	0.031	0.000	0.031		Right Tilt	0.067	0.000	0.067
	Left Cheek	0.082	0.000	0.082		Left Cheek	0.153	0.000	0.153
	Left Tilt	0.043	0.000	0.043		Left Tilt	0.092	0.000	0.092
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.002	0.154	Head SAR	Right Cheek	0.073	0.002	0.075
	Right Tilt	0.077	0.000	0.077		Right Tilt	0.039	0.000	0.039
	Left Cheek	0.160	0.000	0.160		Left Cheek	0.087	0.000	0.087
	Left Tilt	0.058	0.000	0.058		Left Tilt	0.045	0.000	0.045
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.002	0.073	Head SAR	Right Cheek	0.199	0.002	0.201
	Right Tilt	0.035	0.000	0.035		Right Tilt	0.073	0.000	0.073
	Left Cheek	0.084	0.000	0.084		Left Cheek	0.167	0.000	0.167
	Left Tilt	0.030	0.000	0.030		Left Tilt	0.083	0.000	0.083
		Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)			
		Head SAR	Right Cheek	0.105	0.002	0.107			
			Right Tilt	0.054	0.000	0.054			
			Left Cheek	0.093	0.000	0.093			
			Left Tilt	0.088	0.000	0.088			

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Table 12-6
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 2 (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.593	0.648	Head SAR	Right Cheek	0.094	0.593	0.687
	Right Tilt	0.025	0.331	0.356		Right Tilt	0.047	0.331	0.378
	Left Cheek	0.075	0.445	0.520		Left Cheek	0.095	0.445	0.540
	Left Tilt	0.023	0.261	0.284		Left Tilt	0.033	0.261	0.294
Simult Tx	Configuration	UMTS 850 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 2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.593	0.666	Head SAR	Right Cheek	0.127	0.593	0.720
	Right Tilt	0.031	0.331	0.362		Right Tilt	0.067	0.331	0.398
	Left Cheek	0.082	0.445	0.527		Left Cheek	0.153	0.445	0.598
	Left Tilt	0.043	0.261	0.304		Left Tilt	0.092	0.261	0.353
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.593	0.745	Head SAR	Right Cheek	0.073	0.593	0.666
	Right Tilt	0.077	0.331	0.408		Right Tilt	0.039	0.331	0.370
	Left Cheek	0.160	0.445	0.605		Left Cheek	0.087	0.445	0.532
	Left Tilt	0.058	0.261	0.319		Left Tilt	0.045	0.261	0.306
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.593	0.664	Head SAR	Right Cheek	0.199	0.593	0.792
	Right Tilt	0.035	0.331	0.366		Right Tilt	0.073	0.331	0.404
	Left Cheek	0.084	0.445	0.529		Left Cheek	0.167	0.445	0.612
	Left Tilt	0.030	0.261	0.291		Left Tilt	0.083	0.261	0.344
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)					
Head SAR	Right Cheek	0.105	0.593	0.698					
	Right Tilt	0.054	0.331	0.385					
	Left Cheek	0.093	0.445	0.538					
	Left Tilt	0.088	0.261	0.349					

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Table 12-7
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Held to Ear)

Simult Tx	Configuration	GSM 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GSM 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.055	0.633	0.688	Head SAR	Right Cheek	0.094	0.633	0.727
	Right Tilt	0.025	0.404	0.429		Right Tilt	0.047	0.404	0.451
	Left Cheek	0.075	0.904	0.979		Left Cheek	0.095	0.904	0.999
	Left Tilt	0.023	0.417	0.440		Left Tilt	0.033	0.417	0.450
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.073	0.633	0.706	Head SAR	Right Cheek	0.127	0.633	0.760
	Right Tilt	0.031	0.404	0.435		Right Tilt	0.067	0.404	0.471
	Left Cheek	0.082	0.904	0.986		Left Cheek	0.153	0.904	1.057
	Left Tilt	0.043	0.417	0.460		Left Tilt	0.092	0.417	0.509
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.152	0.633	0.785	Head SAR	Right Cheek	0.073	0.633	0.706
	Right Tilt	0.077	0.404	0.481		Right Tilt	0.039	0.404	0.443
	Left Cheek	0.160	0.904	1.064		Left Cheek	0.087	0.904	0.991
	Left Tilt	0.058	0.417	0.475		Left Tilt	0.045	0.417	0.462
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.071	0.633	0.704	Head SAR	Right Cheek	0.199	0.633	0.832
	Right Tilt	0.035	0.404	0.439		Right Tilt	0.073	0.404	0.477
	Left Cheek	0.084	0.904	0.988		Left Cheek	0.167	0.904	1.071
	Left Tilt	0.030	0.417	0.447		Left Tilt	0.083	0.417	0.500

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.105	0.633	0.738
	Right Tilt	0.054	0.404	0.458
	Left Cheek	0.093	0.904	0.997
	Left Tilt	0.088	0.417	0.505

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12.4 Body-Worn Simultaneous Transmission Analysis

- For SAR summations for body-worn back side at 15 mm, WLAN SAR values for 1.0 cm were used since the 1.0 cm test distance for WLAN was more conservative. "<" denotes that the 1.0 cm WLAN SAR values were used for summation purposes.

Table 12-8
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 1 (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.164	< 0.345
Back Side	GSM 1900	0.215	< 0.164	< 0.379
Back Side	UMTS 850	0.186	< 0.164	< 0.350
Back Side	UMTS 1750	0.360	< 0.164	< 0.524
Back Side	UMTS 1900	0.265	< 0.164	< 0.429
Back Side	LTE Band 12	0.189	< 0.164	< 0.353
Back Side	LTE Band 5 (Cell)	0.193	< 0.164	< 0.357
Back Side	LTE Band 4 (AWS)	0.312	< 0.164	< 0.476
Back Side	LTE Band 2 (PCS)	0.302	< 0.164	< 0.466

Table 12-9
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 2 (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.12	< 0.301
Back Side	GSM 1900	0.215	< 0.12	< 0.335
Back Side	UMTS 850	0.186	< 0.12	< 0.306
Back Side	UMTS 1750	0.360	< 0.12	< 0.480
Back Side	UMTS 1900	0.265	< 0.12	< 0.385
Back Side	LTE Band 12	0.189	< 0.12	< 0.309
Back Side	LTE Band 5 (Cell)	0.193	< 0.12	< 0.313
Back Side	LTE Band 4 (AWS)	0.312	< 0.12	< 0.432
Back Side	LTE Band 2 (PCS)	0.302	< 0.12	< 0.422

Table 12-10
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.162	< 0.343
Back Side	GSM 1900	0.215	< 0.162	< 0.377
Back Side	UMTS 850	0.186	< 0.162	< 0.348
Back Side	UMTS 1750	0.360	< 0.162	< 0.522
Back Side	UMTS 1900	0.265	< 0.162	< 0.427
Back Side	LTE Band 12	0.189	< 0.162	< 0.351
Back Side	LTE Band 5 (Cell)	0.193	< 0.162	< 0.355
Back Side	LTE Band 4 (AWS)	0.312	< 0.162	< 0.474
Back Side	LTE Band 2 (PCS)	0.302	< 0.162	< 0.464

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Table 12-11
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 1 (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.088	< 0.269
Back Side	GSM 1900	0.215	< 0.088	< 0.303
Back Side	UMTS 850	0.186	< 0.088	< 0.274
Back Side	UMTS 1750	0.360	< 0.088	< 0.448
Back Side	UMTS 1900	0.265	< 0.088	< 0.353
Back Side	LTE Band 12	0.189	< 0.088	< 0.277
Back Side	LTE Band 5 (Cell)	0.193	< 0.088	< 0.281
Back Side	LTE Band 4 (AWS)	0.312	< 0.088	< 0.400
Back Side	LTE Band 2 (PCS)	0.302	< 0.088	< 0.390

Table 12-12
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 2 (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.131	< 0.312
Back Side	GSM 1900	0.215	< 0.131	< 0.346
Back Side	UMTS 850	0.186	< 0.131	< 0.317
Back Side	UMTS 1750	0.360	< 0.131	< 0.491
Back Side	UMTS 1900	0.265	< 0.131	< 0.396
Back Side	LTE Band 12	0.189	< 0.131	< 0.320
Back Side	LTE Band 5 (Cell)	0.193	< 0.131	< 0.324
Back Side	LTE Band 4 (AWS)	0.312	< 0.131	< 0.443
Back Side	LTE Band 2 (PCS)	0.302	< 0.131	< 0.433

Table 12-13
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	< 0.175	< 0.356
Back Side	GSM 1900	0.215	< 0.175	< 0.390
Back Side	UMTS 850	0.186	< 0.175	< 0.361
Back Side	UMTS 1750	0.360	< 0.175	< 0.535
Back Side	UMTS 1900	0.265	< 0.175	< 0.440
Back Side	LTE Band 12	0.189	< 0.175	< 0.364
Back Side	LTE Band 5 (Cell)	0.193	< 0.175	< 0.368
Back Side	LTE Band 4 (AWS)	0.312	< 0.175	< 0.487
Back Side	LTE Band 2 (PCS)	0.302	< 0.175	< 0.477

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Table 12-14
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	Bluetooth SAR (W/kg)	Σ SAR (W/kg)
Back Side	GSM 850	0.181	0.112	0.293
Back Side	GSM 1900	0.215	0.112	0.327
Back Side	UMTS 850	0.186	0.112	0.298
Back Side	UMTS 1750	0.360	0.112	0.472
Back Side	UMTS 1900	0.265	0.112	0.377
Back Side	LTE Band 12	0.189	0.112	0.301
Back Side	LTE Band 5 (Cell)	0.193	0.112	0.305
Back Side	LTE Band 4 (AWS)	0.312	0.112	0.424
Back Side	LTE Band 2 (PCS)	0.302	0.112	0.414

Note: Bluetooth SAR was not required to be measured per FCC KDB 447498. Estimated SAR results were used in the above table to determine simultaneous transmission SAR test exclusion.

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12.5 Hotspot SAR Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR (“-”).

Table 12-15
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 1 (Hotspot at 1.0 cm)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.164	0.411	Body SAR	Back	0.418	0.164	0.582
	Front	0.359	0.006	0.365		Front	0.847	0.006	0.853
	Top	-	0.011	0.011		Top	-	0.011	0.011
	Bottom	0.198	-	0.198		Bottom	1035	-	1035
	Right	0.080	-	0.080		Right	0.106	-	0.106
	Left	-	0.042	0.042		Left	-	0.042	0.042
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.164	0.478	Body SAR	Back	0.450	0.164	0.614
	Front	0.455	0.006	0.461		Front	0.780	0.006	0.786
	Top	-	0.011	0.011		Top	-	0.011	0.011
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
	Left	-	0.042	0.042		Left	-	0.042	0.042
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.164	0.577	Body SAR	Back	0.274	0.164	0.438
	Front	0.709	0.006	0.715		Front	0.302	0.006	0.308
	Top	-	0.011	0.011		Top	-	0.011	0.011
	Bottom	1032	-	1032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
	Left	-	0.042	0.042		Left	-	0.042	0.042

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.164	0.476	Body SAR	Back	0.379	0.164	0.543
	Front	0.556	0.006	0.562		Front	0.654	0.006	0.660
	Top	-	0.011	0.011		Top	-	0.011	0.011
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111
	Left	-	0.042	0.042		Left	-	0.042	0.042

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.275	0.164	0.439
	Front	0.505	0.006	0.511
	Top	-	0.011	0.011
	Bottom	0.951	-	0.951
	Right	0.131	-	0.131
	Left	-	0.042	0.042

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Table 12-16
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 2 (Hotspot at 1.0 cm)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.120	0.367	Body SAR	Back	0.418	0.120	0.538
	Front	0.359	0.020	0.379		Front	0.847	0.020	0.867
	Top	-	0.013	0.013		Top	-	0.013	0.013
	Bottom	0.198	-	0.198		Bottom	1035	-	1035
	Right	0.080	-	0.080		Right	0.106	-	0.106
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.120	0.434	Body SAR	Back	0.450	0.120	0.570
	Front	0.455	0.020	0.475		Front	0.780	0.020	0.800
	Top	-	0.013	0.013		Top	-	0.013	0.013
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.120	0.533	Body SAR	Back	0.274	0.120	0.394
	Front	0.709	0.020	0.729		Front	0.302	0.020	0.322
	Top	-	0.013	0.013		Top	-	0.013	0.013
	Bottom	1032	-	1032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.120	0.432	Body SAR	Back	0.379	0.120	0.499
	Front	0.556	0.020	0.576		Front	0.654	0.020	0.674
	Top	-	0.013	0.013		Top	-	0.013	0.013
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.275	0.120	0.395
	Front	0.505	0.020	0.525
	Top	-	0.013	0.013
	Bottom	0.951	-	0.951
	Right	0.131	-	0.131

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Table 12-17
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Hotspot at 1.0 cm)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.162	0.409	Body SAR	Back	0.418	0.162	0.580
	Front	0.359	0.011	0.370		Front	0.847	0.011	0.858
	Top	-	0.023	0.023		Top	-	0.023	0.023
	Bottom	0.198	-	0.198		Bottom	1.035	-	1.035
	Right	0.080	-	0.080		Right	0.106	-	0.106
	Left	-	0.039	0.039		Left	-	0.039	0.039
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.162	0.476	Body SAR	Back	0.450	0.162	0.612
	Front	0.455	0.011	0.466		Front	0.780	0.011	0.791
	Top	-	0.023	0.023		Top	-	0.023	0.023
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
	Left	-	0.039	0.039		Left	-	0.039	0.039
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.162	0.575	Body SAR	Back	0.274	0.162	0.436
	Front	0.709	0.011	0.720		Front	0.302	0.011	0.313
	Top	-	0.023	0.023		Top	-	0.023	0.023
	Bottom	1.032	-	1.032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
	Left	-	0.039	0.039		Left	-	0.039	0.039
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.162	0.474	Body SAR	Back	0.379	0.162	0.541
	Front	0.556	0.011	0.567		Front	0.654	0.011	0.665
	Top	-	0.023	0.023		Top	-	0.023	0.023
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111
	Left	-	0.039	0.039		Left	-	0.039	0.039

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.275	0.162	0.437
	Front	0.505	0.011	0.516
	Top	-	0.023	0.023
	Bottom	0.951	-	0.951
	Right	0.131	-	0.131
	Left	-	0.039	0.039

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Table 12-18
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 1 (Hotspot at 1.0 cm)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.048	0.295	Body SAR	Back	0.418	0.048	0.466
	Front	0.359	0.004	0.363		Front	0.847	0.004	0.851
	Top	-	0.017	0.017		Top	-	0.017	0.017
	Bottom	0.198	-	0.198		Bottom	1.035	-	1.035
	Right	0.080	-	0.080		Right	0.106	-	0.106
	Left	-	0.006	0.006		Left	-	0.006	0.006

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.048	0.362	Body SAR	Back	0.450	0.048	0.498
	Front	0.455	0.004	0.459		Front	0.780	0.004	0.784
	Top	-	0.017	0.017		Top	-	0.017	0.017
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
	Left	-	0.006	0.006		Left	-	0.006	0.006

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.048	0.461	Body SAR	Back	0.274	0.048	0.322
	Front	0.709	0.004	0.713		Front	0.302	0.004	0.306
	Top	-	0.017	0.017		Top	-	0.017	0.017
	Bottom	1.032	-	1.032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
	Left	-	0.006	0.006		Left	-	0.006	0.006

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.048	0.360	Body SAR	Back	0.379	0.048	0.427
	Front	0.556	0.004	0.560		Front	0.654	0.004	0.658
	Top	-	0.017	0.017		Top	-	0.017	0.017
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111
	Left	-	0.006	0.006		Left	-	0.006	0.006

		Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant1 SAR (W/kg)	Σ SAR (W/kg)	
		Body SAR	Back	0.275	0.048	0.323	
			Front	0.505	0.004	0.509	
			Top	-	0.017	0.017	
			Bottom	0.951	-	0.951	
			Right	0.131	-	0.131	
			Left	-	0.006	0.006	

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Table 12-19
Simultaneous Transmission Scenario with 5 GHz WLAN Ant 2 (Hotspot at 1.0 cm)

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.115	0.362	Body SAR	Back	0.418	0.115	0.533
	Front	0.359	0.029	0.388		Front	0.847	0.029	0.876
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	0.198	-	0.198		Bottom	1035	-	1035
	Right	0.080	-	0.080		Right	0.106	-	0.106
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.115	0.429	Body SAR	Back	0.450	0.115	0.565
	Front	0.455	0.029	0.484		Front	0.780	0.029	0.809
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.115	0.528	Body SAR	Back	0.274	0.115	0.389
	Front	0.709	0.029	0.738		Front	0.302	0.029	0.331
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	1032	-	1032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.115	0.427	Body SAR	Back	0.379	0.115	0.494
	Front	0.556	0.029	0.585		Front	0.654	0.029	0.683
	Top	-	0.066	0.066		Top	-	0.066	0.066
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111
		Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant2 SAR (W/kg)	Σ SAR (W/kg)			
		Body SAR	Back	0.275	0.115	0.390			
			Front	0.505	0.029	0.534			
			Top	-	0.066	0.066			
			Bottom	0.951	-	0.951			
			Right	0.131	-	0.131			

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

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.247	0.175	0.422	Body SAR	Back	0.418	0.175	0.593
	Front	0.359	0.052	0.411		Front	0.847	0.052	0.899
	Top	-	0.123	0.123		Top	-	0.123	0.123
	Bottom	0.198	-	0.198		Bottom	1.035	-	1.035
	Right	0.080	-	0.080		Right	0.106	-	0.106
	Left	-	0.067	0.067		Left	-	0.067	0.067
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.314	0.175	0.489	Body SAR	Back	0.450	0.175	0.625
	Front	0.455	0.052	0.507		Front	0.780	0.052	0.832
	Top	-	0.123	0.123		Top	-	0.123	0.123
	Bottom	0.227	-	0.227		Bottom	0.752	-	0.752
	Right	0.111	-	0.111		Right	0.097	-	0.097
	Left	-	0.067	0.067		Left	-	0.067	0.067
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.413	0.175	0.588	Body SAR	Back	0.274	0.175	0.449
	Front	0.709	0.052	0.761		Front	0.302	0.052	0.354
	Top	-	0.123	0.123		Top	-	0.123	0.123
	Bottom	1.032	-	1.032		Bottom	0.146	-	0.146
	Right	0.131	-	0.131		Right	0.094	-	0.094
	Left	-	0.067	0.067		Left	-	0.067	0.067
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.312	0.175	0.487	Body SAR	Back	0.379	0.175	0.554
	Front	0.556	0.052	0.608		Front	0.654	0.052	0.706
	Top	-	0.123	0.123		Top	-	0.123	0.123
	Bottom	0.260	-	0.260		Bottom	0.757	-	0.757
	Right	0.118	-	0.118		Right	0.111	-	0.111
	Left	-	0.067	0.067		Left	-	0.067	0.067
		Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)			
		Body SAR	Back	0.275	0.175	0.450			
			Front	0.505	0.052	0.557			
			Top	-	0.123	0.123			
			Bottom	0.951	-	0.951			
			Right	0.131	-	0.131			
			Left	-	0.067	0.067			

12.6 Extremity SAR Simultaneous Transmission Analysis

Per FCC KDB Publication 941225 D06v01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR (“-”).

Table 12-21
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth (Extremity at 0.0 cm)

Configuration	Mode	3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	Σ SAR (W/kg)
Bottom Edge	UMTS 1900	3.363	-	3.363
Bottom Edge	LTE Band 2 (PCS)	2.707	-	2.707

Table 12-22
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Extremity at 0.0 cm)

Configuration	Mode	3G/4G SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Bottom Edge	UMTS 1900	3.363	-	3.363
Bottom Edge	LTE Band 2 (PCS)	2.707	-	2.707

Table 12-23
Simultaneous Transmission Scenario with 5 GHz WLAN (Extremity at 0.0 cm)

Configuration	Mode	3G/4G SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Bottom Edge	UMTS 1900	3.363	-	3.363
Bottom Edge	LTE Band 2 (PCS)	2.707	-	2.707

For configurations and operating modes not required for extremity exposure conditions per FCC KDB 648474, no further analysis was required to determine that possible simultaneous scenarios would not exceed the SAR limit.

12.7 Simultaneous Transmission Conclusion

The above numerical summed SAR results for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v05 and IEEE 1528-2013 Section 6.3.4.1.2.

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13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01, 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 ($\sim 10\%$ from the 1-g 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) 10 g Extremity SAR measurement variability analysis applies a factor of 2.5 to the procedures outlined above.

Table 13-1
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	# of Time Slots	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	1909.80	810	GSM 1900	GPRS	4	bottom	10 mm	1.030	1.020	1.01	N/A	N/A	N/A	N/A
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 13-2
Hand SAR Measurement Variability Results

BODY VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1900	1880.00	9400	UMTS 1900	RMC	bottom	0 mm	2.510	2.250	1.12	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Hand 4.0 W/kg (mW/g) averaged over 10 grams						

13.2 Measurement Uncertainty

The measured 1g SAR was < 1.5 W/kg and 10g SAR was < 3.75 W/kg for all frequency bands. Therefore, per KDB Publication 865664 D01v01, the extended measurement uncertainty analysis per IEEE 1528-2003 was not required.

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14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8648D	(9kHz-4GHz) Signal Generator	4/15/2014	Annual	4/15/2015	3629U00687
Agilent	8753ES	S-Parameter Network Analyzer	5/22/2014	Annual	5/22/2015	US39170118
Agilent	E4438C	ESG Vector Signal Generator	4/25/2014	Annual	4/25/2015	MY42082385
Agilent	E5515C	Wireless Communications Test Set	3/28/2014	Annual	3/28/2015	GB42230325
Agilent	E8257D	(250kHz-20GHz) Signal Generator	4/15/2014	Annual	4/15/2015	MY45470194
Agilent	N5182A	MXG Vector Signal Generator	4/15/2014	Annual	4/15/2015	MY47420651
Agilent	N9020A	MXA Signal Analyzer	10/29/2013	Annual	10/29/2014	US46470561
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA24106A	USB Power Sensor	5/14/2014	Annual	5/14/2015	1231535
Anritsu	MA24106A	USB Power Sensor	5/14/2014	Annual	5/14/2015	1231538
Anritsu	MA2411B	Pulse Power Sensor	11/14/2013	Annual	11/14/2014	1126066
Anritsu	MA2411B	Pulse Power Sensor	3/25/2014	Annual	3/25/2015	1207470
Anritsu	MA2481A	Power Sensor	10/30/2013	Annual	10/30/2014	5605
Anritsu	ML2495A	Power Meter	10/31/2013	Annual	10/31/2014	1039008
Anritsu	MT8820C	Radio Communication Analyzer	12/12/2013	Annual	12/12/2014	6200901190
Anritsu	MT8820C	Radio Communication Analyzer	5/6/2014	Annual	5/6/2015	6201144419
Anritsu	MT8820C	Radio Communication Analyzer	12/12/2013	Annual	12/12/2014	6201300731
COMTECH	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M155A00-009
COMTECH	AR85729-5/57598	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	36934-158	Wall-Mounted Thermometer	4/29/2014	Biennial	4/29/2016	122014488
Fisher Scientific	15-077-960	Digital Thermometer	11/6/2012	Biennial	11/6/2014	122640025
Fisher Scientific	15-078J	Long Stem Thermometer	10/30/2012	Biennial	10/30/2014	122626059
Gigatronics	80701A	(0.05-18GHz) Power Sensor	10/30/2013	Annual	10/30/2014	1833460
Gigatronics	8651A	Universal Power Meter	10/30/2013	Annual	10/30/2014	8650319
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	5/8/2014	Biennial	5/8/2016	13264162
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	6/6/2014	Annual	6/6/2015	109892
Rohde & Schwarz	CMU200	Base Station Simulator	4/24/2014	Annual	4/24/2015	836371/0079
Rohde & Schwarz	CMW500	Radio Communication Tester	7/22/2014	Annual	7/22/2015	116743
Rohde & Schwarz	CMW500	Radio Communication Tester	2/20/2014	Annual	2/20/2015	128633
Seekonk	NC-100	Torque Wrench	3/18/2014	Biennial	3/18/2016	22313
SPEAG	D1765V2	1765 MHz SAR Dipole	5/7/2014	Annual	5/7/2015	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	4/9/2014	Annual	4/9/2015	5d141
SPEAG	D1900V2	1900 MHz SAR Dipole	2/27/2014	Annual	2/27/2015	5d148
SPEAG	D2450V2	2450 MHz SAR Dipole	1/21/2014	Annual	1/21/2015	797
SPEAG	D5GHZV2	5 GHz SAR Dipole	1/27/2014	Annual	1/27/2015	1057
SPEAG	D750V3	750 MHz Dipole	1/20/2014	Annual	1/20/2015	1003
SPEAG	D835V2	835 MHz SAR Dipole	4/7/2014	Annual	4/7/2015	4d119
SPEAG	D835V2	835 MHz SAR Dipole	7/10/2014	Annual	7/10/2015	4d132
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/26/2014	Annual	2/26/2015	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/14/2014	Annual	5/14/2015	859
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/22/2014	Annual	1/22/2015	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/12/2014	Annual	8/12/2015	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/19/2013	Annual	11/19/2014	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/17/2014	Annual	3/17/2015	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/11/2014	Annual	4/11/2015	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/18/2013	Annual	11/18/2014	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/19/2013	Annual	11/19/2014	1408
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/6/2014	Annual	5/6/2015	1070
SPEAG	ES3DV2	SAR Probe	8/19/2014	Annual	8/19/2015	3022
SPEAG	ES3DV3	SAR Probe	3/19/2014	Annual	3/19/2015	3209
SPEAG	ES3DV3	SAR Probe	4/11/2014	Annual	4/11/2015	3213
SPEAG	ES3DV3	SAR Probe	2/25/2014	Annual	2/25/2015	3258
SPEAG	ES3DV3	SAR Probe	5/15/2014	Annual	5/15/2015	3263
SPEAG	ES3DV3	SAR Probe	11/20/2013	Annual	11/20/2014	3287
SPEAG	ES3DV3	SAR Probe	3/19/2014	Annual	3/19/2015	3318
SPEAG	ES3DV3	SAR Probe	4/17/2014	Annual	4/17/2015	3319
SPEAG	EX3DV4	SAR Probe	1/29/2014	Annual	1/29/2015	3589
SPEAG	EX3DV4	SAR Probe	10/23/2013	Annual	10/23/2014	3914
VWR	36934-158	Wall-Mounted Thermometer	4/29/2014	Biennial	4/29/2016	111859323

Note:

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

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15 MEASUREMENT UNCERTAINTIES

Applicable for frequencies less than 3000 MHz.

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System									
Probe Calibration	E.2.1	6.0	N	1	1.0	1.0	6.0	6.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	1.0	1.0	1.3	1.3	∞
Boundary Effect	E.2.3	0.4	N	1	1.0	1.0	0.4	0.4	∞
Linearity	E.2.4	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	E.2.5	5.1	N	1	1.0	1.0	5.1	5.1	∞
Readout Electronics	E.2.6	1.0	N	1	1.0	1.0	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	E.6.3	2.9	R	1.73	1.0	1.0	1.7	1.7	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1.0	1.0	0.6	0.6	∞
Test Sample Related									
Test Sample Positioning	E.4.2	6.0	N	1	1.0	1.0	6.0	6.0	287
Device Holder Uncertainty	E.4.1	3.32	R	1.73	1.0	1.0	1.9	1.9	∞
Output Power Variation - SAR drift measurement	6.6.2	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	3.8	N	1	0.64	0.43	2.4	1.6	6
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Liquid Permittivity - measurement uncertainty	E.3.3	4.5	N	1	0.60	0.49	2.7	2.2	6
Combined Standard Uncertainty (k=1)							RSS	12.1	11.7
Expanded Uncertainty							k=2	24.2	23.5
(95% CONFIDENCE LEVEL)									

The above measurement uncertainties are according to IEEE Std. 1528-2003

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Applicable for frequencies up to 6 GHz.

a	b	c	d	e= f(d,k)	f	g	h = c x i/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System									
Probe Calibration	E.2.1	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	1.0	1.0	1.3	1.3	∞
Boundary E Effect	E.2.3	0.4	N	1	1.0	1.0	0.4	0.4	∞
Linearity	E.2.4	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	E.2.5	5.1	N	1	1.0	1.0	5.1	5.1	∞
Readout E lectronics	E.2.6	1.0	N	1	1.0	1.0	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	E.6.3	2.9	R	1.73	1.0	1.0	1.7	1.7	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1.0	1.0	0.6	0.6	∞
Test Sample Related									
Test Sample Positioning	E.4.2	6.0	N	1	1.0	1.0	6.0	6.0	287
Device Holder Uncertainty	E.4.1	3.32	R	1.73	1.0	1.0	1.9	1.9	∞
Output Power Variation - SAR drift measurement	6.6.2	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	3.8	N	1	0.64	0.43	2.4	1.6	6
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Liquid Permittivity - measurement uncertainty	E.3.3	4.5	N	1	0.60	0.49	2.7	2.2	6
Combined Standard Uncertainty (k=1)							RSS	12.4	12.0
Expanded Uncertainty (95% CONFIDENCE LEVEL)							k=2	24.7	24.0

The above measurement uncertainties are according to IEEE Std. 1528-2003

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16 CONCLUSION

16.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Industry 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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17 REFERENCES

- [1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.
- [2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.
- [3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.
- [4] ANSI/IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: IEEE, December 2002.
- [5] IEEE Standards Coordinating Committee 39 –Standards Coordinating Committee 34 – IEEE Std. 1528-2003, Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head Due to Wireless Communications Devices: Measurement Techniques.
- [6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for RadioFrequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.
- [7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.
- [8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. -124.
- [9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.
- [10] Schmid & Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.
- [11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct. 1996, pp. 1865-1873.
- [12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [13] G. Hartsgrrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bioelectromagnetics, Canada: 1987, pp. 29-36.
- [14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.
- [15] W. Gander, Computermathematick, Birkhaeuser, Basel, 1992.
- [16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.
- [17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.

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- [18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10kHz-300GHz, Jan. 1995.
- [19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hochschule Zürich, Dosimetric Evaluation of the Cellular Phone.
- [20] IEC 62209-1, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz), Feb. 2005.
- [21] Industry Canada RSS-102 Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) Issue 4, March 2010.
- [22] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2009
- [23] FCC SAR Test Procedures for 2G-3G Devices, Mobile Hotspot and UMPC Devices KDB Publications 941225, D01-D07
- [24] SAR Measurement procedures for IEEE 802.11a/b/g KDB Publication 248227 D01v01r02
- [25] FCC SAR Considerations for Handsets with Multiple Transmitters and Antennas, KDB Publications 648474 D02-D04
- [26] FCC SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers, FCC KDB Publication 616217 D04
- [27] FCC SAR Measurement and Reporting Requirements for 100MHz – 6 GHz, KDB Publications 865664 D01-D02
- [28] FCC General RF Exposure Guidance and SAR Procedures for Dongles, KDB Publication 447498, D01-D02
- [29] Anexo à Resolução No. 533, de 10 de Setembro de 2009.
- [30] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), Mar. 2010.

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APPENDIX A: SAR TEST DATA

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: 835 Head Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 0.914 \text{ S/m}$; $\epsilon_r = 42.228$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-17-2014; Ambient Temp: 24.2°C; Tissue Temp: 22.1°C

Probe: ES3DV3 - SN3213; ConvF(6.37, 6.37, 6.37); Calibrated: 4/11/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 11/18/2013

Phantom: Sub TWIN SAM; Type: QD000P40CC; Serial: TP-1357

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: GSM 850, Left Head, Cheek, Mid.ch, Wireless Charging Cover

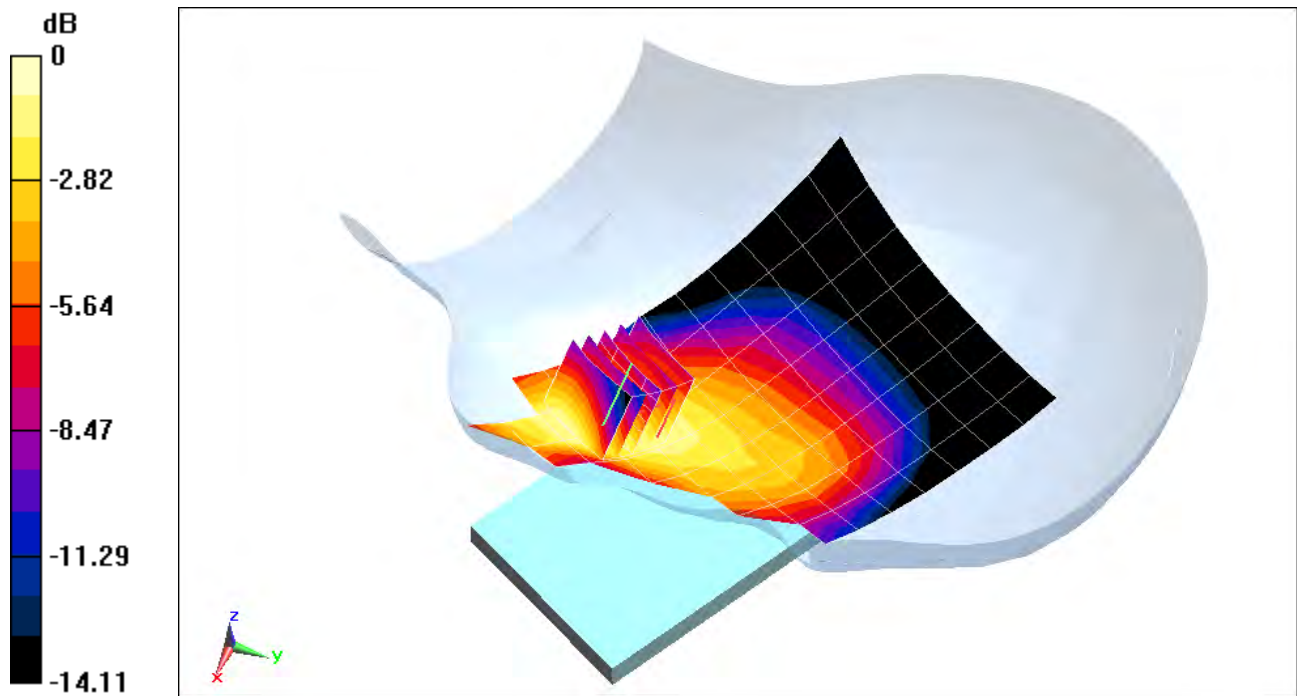
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.523 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0820 W/kg

SAR(1 g) = 0.062 W/kg



0 dB = 0.0705 W/kg = -11.52 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#3

Communication System: UID 0, GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: 1900 Head Medium parameters used:

$f = 1880 \text{ MHz}$; $\sigma = 1.374 \text{ S/m}$; $\epsilon_r = 39.311$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-11-2014; Ambient Temp: 23.9°C; Tissue Temp: 23.2°C

Probe: ES3DV3 - SN3287; ConvF(5.08, 5.08, 5.08); Calibrated: 11/20/2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 11/19/2013

Phantom: SAM with CRP v4.0; Type: QD000P40CD; Serial: TP:1797

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

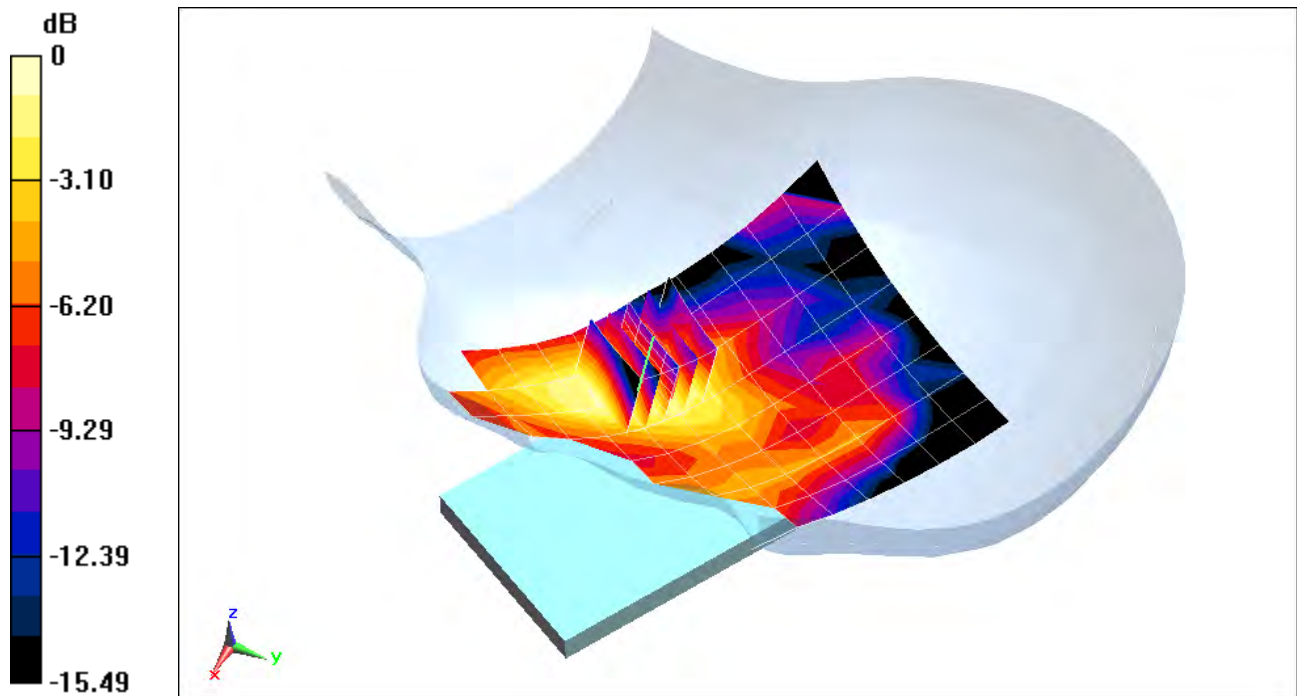
Area Scan (9x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.628 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.107 W/kg

SAR(1 g) = 0.075 W/kg



0 dB = 0.0858 W/kg = -10.67 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 0.926 \text{ S/m}$; $\epsilon_r = 41.571$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-15-2014; Ambient Temp: 23.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.23, 6.23, 6.23); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 850, Left Head, Cheek, Mid.ch, Wireless Charging Cover

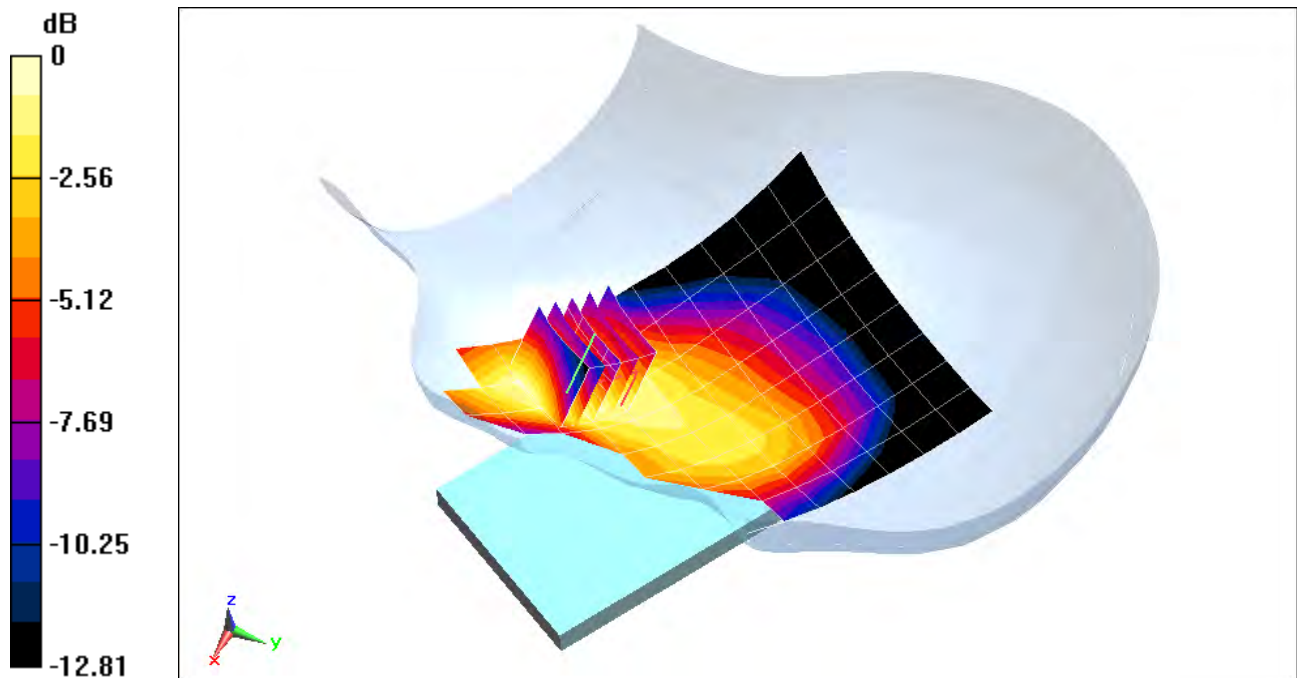
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.000 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0940 W/kg

SAR(1 g) = 0.072 W/kg



0 dB = 0.0809 W/kg = -10.92 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#3

Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: 1750 Head Medium parameters used (interpolated):

$f = 1732.4 \text{ MHz}$; $\sigma = 1.338 \text{ S/m}$; $\epsilon_r = 40.112$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-10-2014; Ambient Temp: 21.3°C; Tissue Temp: 22.4°C

Probe: ES3DV3 - SN3258; ConvF(5.19, 5.19, 5.19); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: SAM Front; Type: SAM; Serial: 1686

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: AWS UMTS, Left Head, Cheek, Mid.ch, Standard Cover

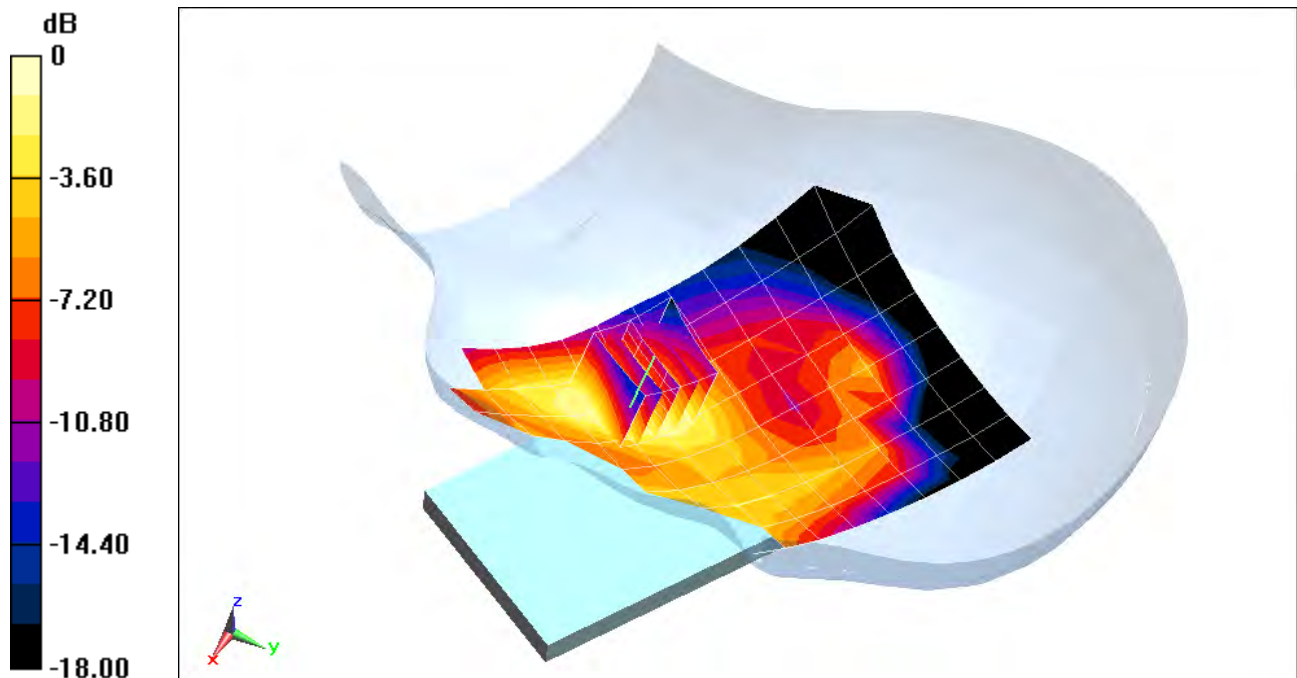
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.40 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.147 W/kg



0 dB = 0.173 W/kg = -7.62 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#3

Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: 1900 Head Medium parameters used:

$f = 1907.6 \text{ MHz}$; $\sigma = 1.405 \text{ S/m}$; $\epsilon_r = 39.21$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-11-2014; Ambient Temp: 23.9°C; Tissue Temp: 23.2°C

Probe: ES3DV3 - SN3287; ConvF(5.08, 5.08, 5.08); Calibrated: 11/20/2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 11/19/2013

Phantom: SAM with CRP v4.0; Type: QD000P40CD; Serial: TP:1797

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 1900, Left Head, Cheek, High.ch, Standard Cover

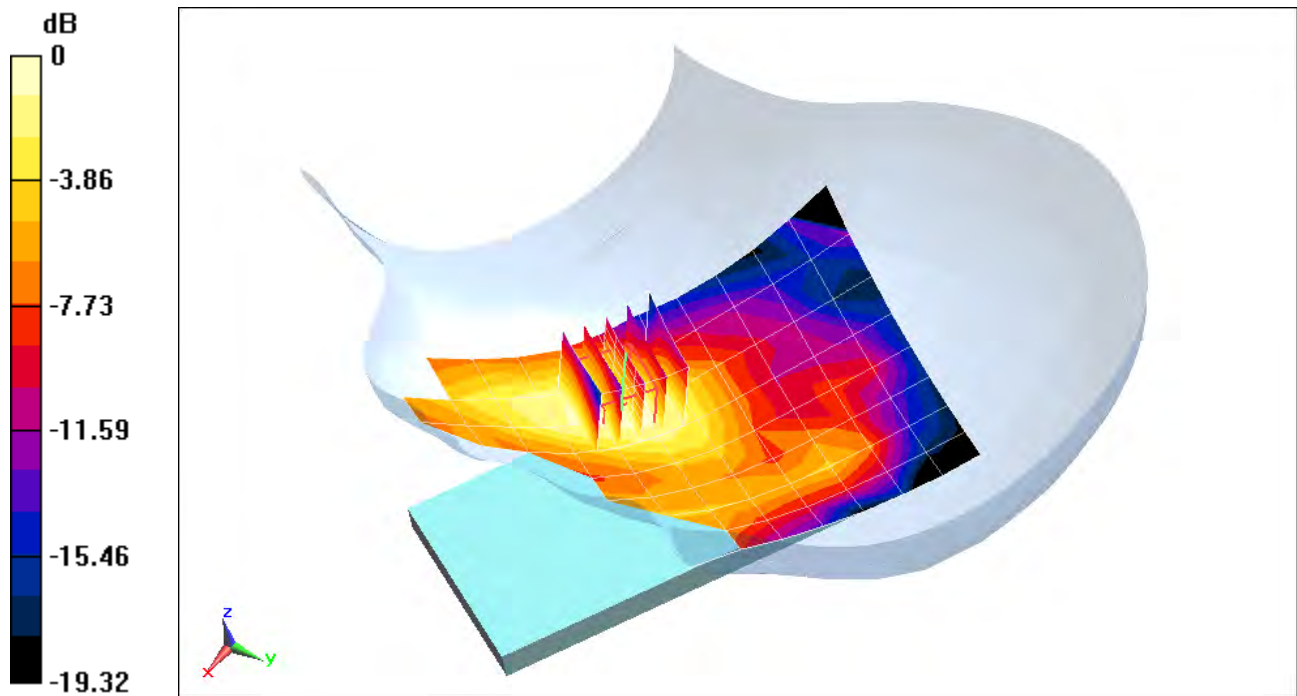
Area Scan (9x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.27 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.197 W/kg

SAR(1 g) = 0.138 W/kg



0 dB = 0.155 W/kg = -8.10 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #2

Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium: 750 Head Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.877 \text{ S/m}$; $\epsilon_r = 41.423$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-10-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3263; ConvF(6.42, 6.42, 6.42); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 12, Left Head, Cheek, Mid.ch, Standard Cover

10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

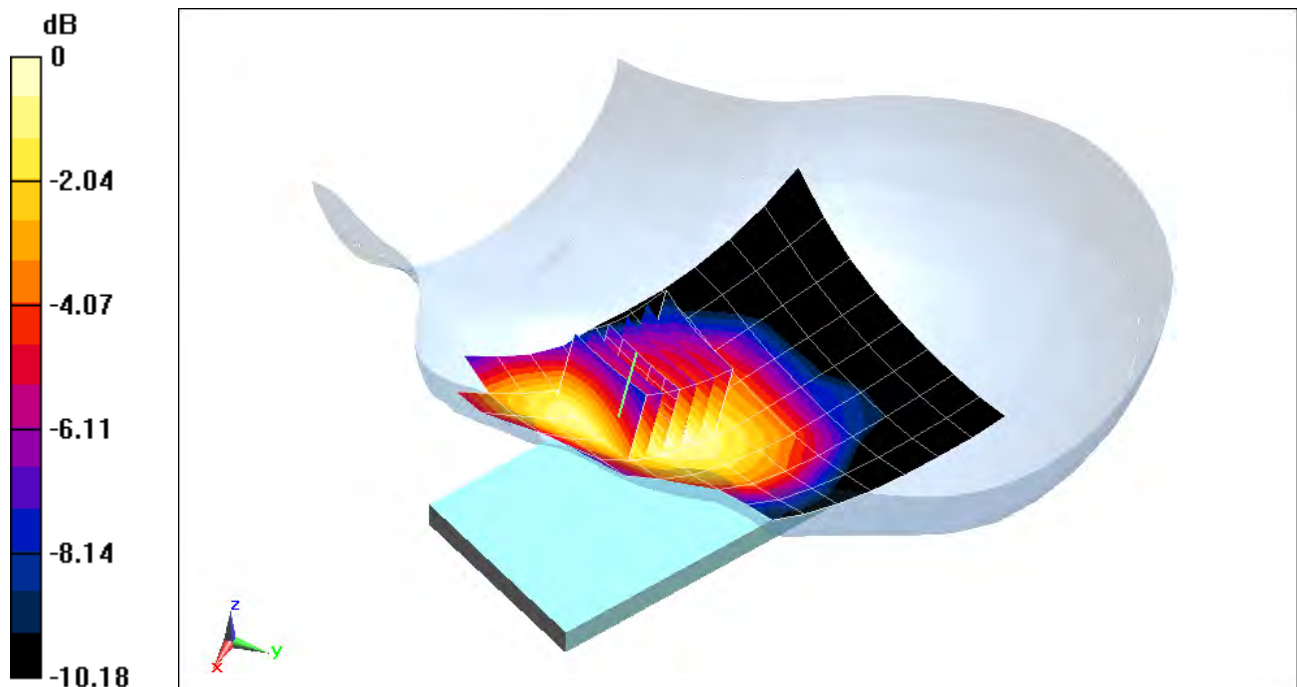
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.672 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.0960 W/kg

SAR(1 g) = 0.075 W/kg



0 dB = 0.0825 W/kg = -10.84 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #1

Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used (interpolated):

$f = 836.5 \text{ MHz}$; $\sigma = 0.926 \text{ S/m}$; $\epsilon_r = 41.573$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-15-2014; Ambient Temp: 23.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.23, 6.23, 6.23); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 5 (Cell), Left Head, Cheek, Mid.ch, Wireless Charging Cover
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

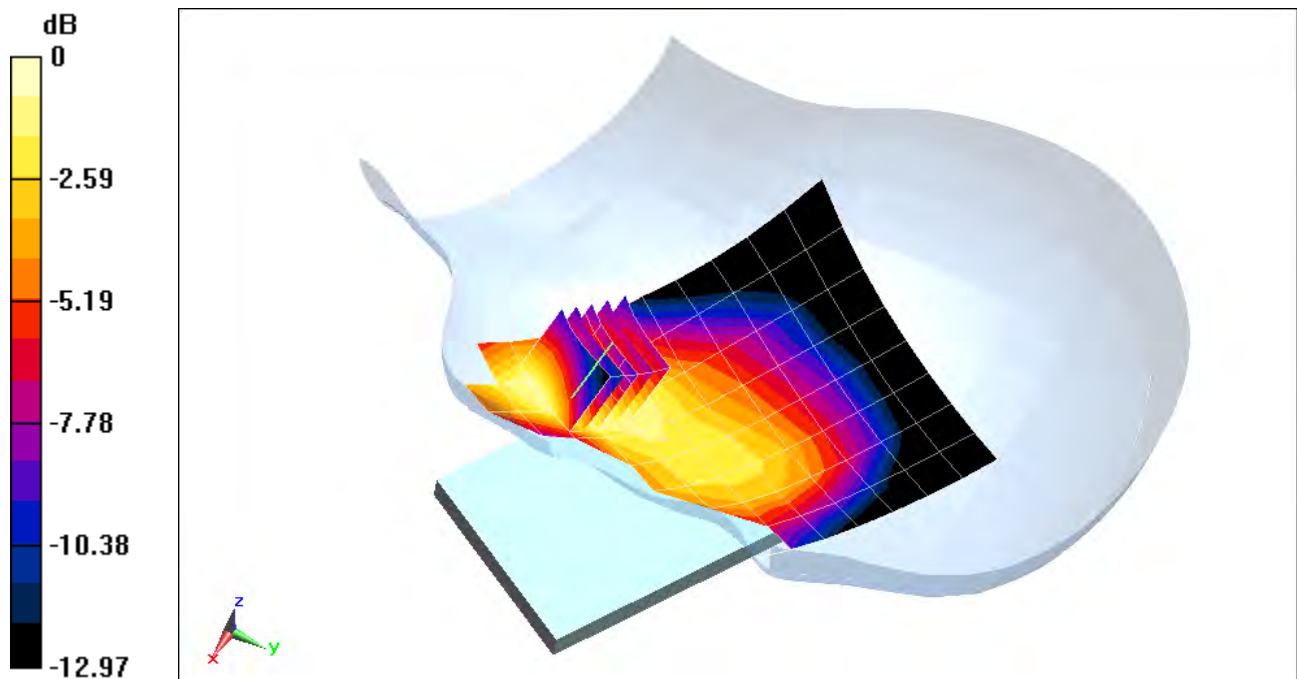
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.776 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.079 W/kg



0 dB = 0.0896 W/kg = -10.48 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#1

Communication System: UID 0, LTE Band 4 (AWS); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: 1750 Head Medium parameters used (interpolated):

$f = 1732.5 \text{ MHz}$; $\sigma = 1.338 \text{ S/m}$; $\epsilon_r = 40.111$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Test Date: 09-10-2014; Ambient Temp: 21.3°C; Tissue Temp: 22.4°C

Probe: ES3DV3 - SN3258; ConvF(5.19, 5.19, 5.19); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: SAM Front; Type: SAM; Serial: 1686

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 4 (AWS), Right Head, Cheek, Mid.ch, Standard Cover
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

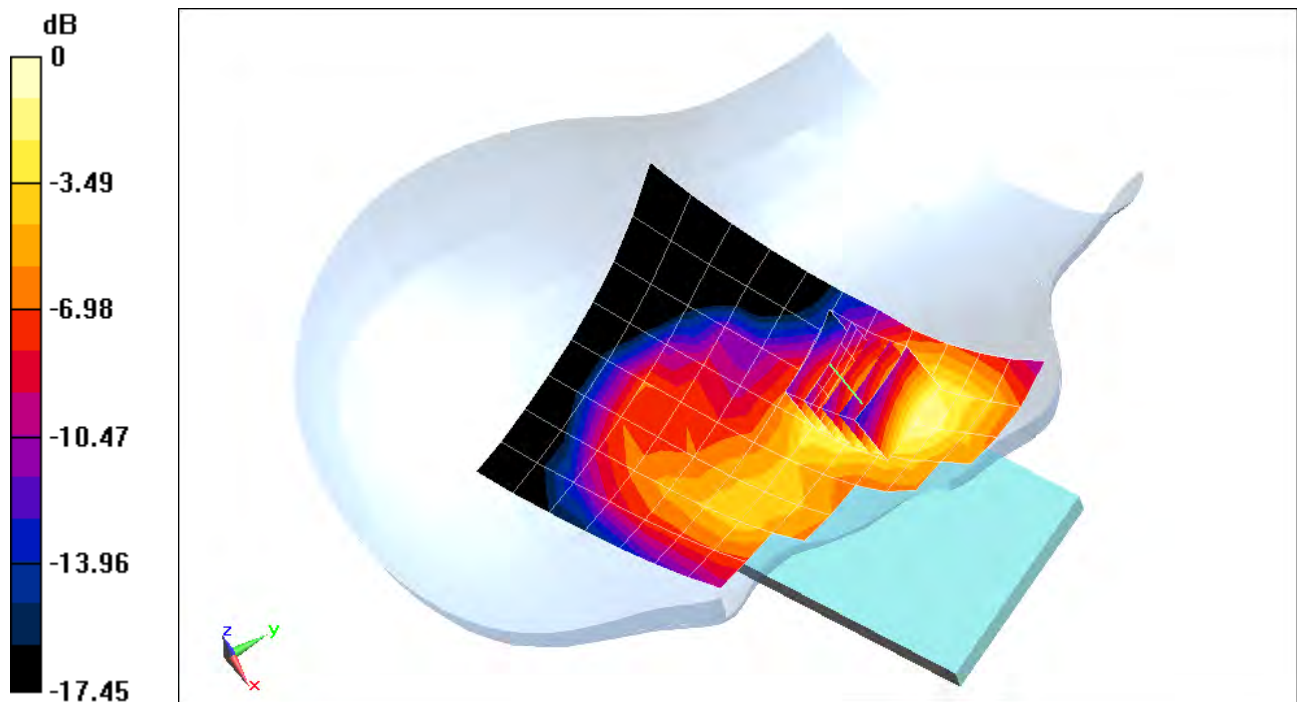
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.83 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.280 W/kg

SAR(1 g) = 0.184 W/kg



0 dB = 0.214 W/kg = -6.70 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#4

Communication System: UID 0, LTE Band 2 (PCS) (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Head Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.437 \text{ S/m}$; $\epsilon_r = 38.945$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Test Date: 09-18-2014; Ambient Temp: 24.8°C; Tissue Temp: 22.7°C

Probe: ES3DV3 - SN3318; ConvF(5.33, 5.33, 5.33); Calibrated: 3/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 6/19/2014

Phantom: Main Twin Sam; Type: QD000P40CC; Serial: TP:1375

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 2 (PCS), Right Head, Cheek, High.ch, Standard Cover
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

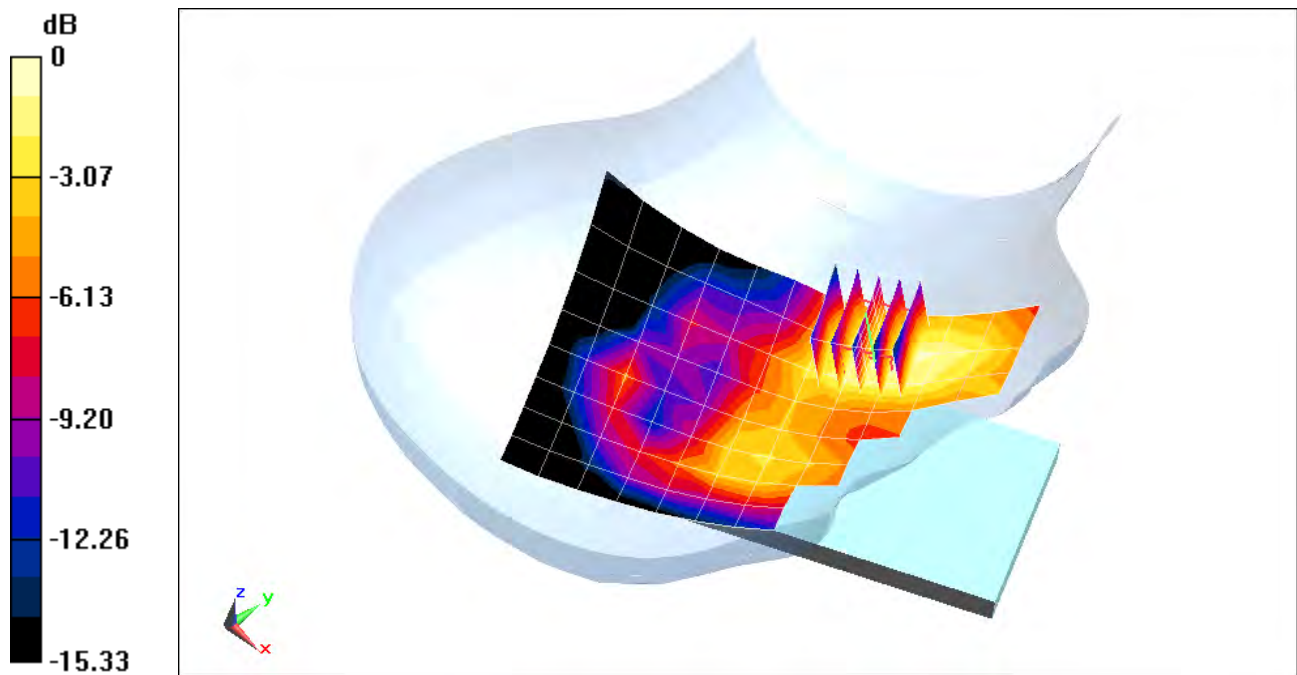
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.693 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.133 W/kg

SAR(1 g) = 0.090 W/kg



0 dB = 0.104 W/kg = -9.83 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-12

Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Head Medium parameters used (interpolated):

$f = 2462 \text{ MHz}$; $\sigma = 1.827 \text{ S/m}$; $\epsilon_r = 39.649$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Test Date: 09-15-2014; Ambient Temp: 24.4°C; Tissue Temp: 23.6°C

Probe: ES3DV3 - SN3258; ConvF(4.52, 4.52, 4.52); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: SAM Front; Type: SAM; Serial: 1686

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

IEEE 802.11b, Antenna 2, Right Head, Cheek, Ch 11, 1 Mbps Standard Cover

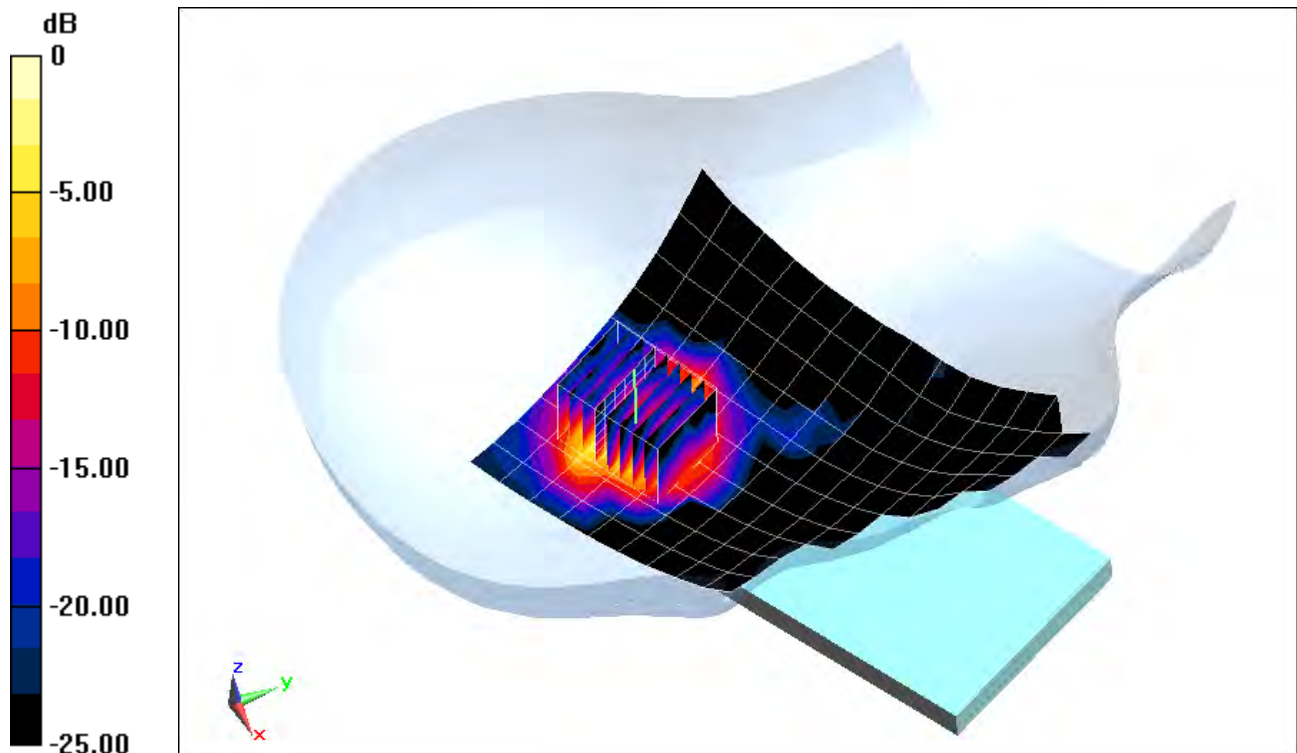
Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.146 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.465 W/kg

SAR(1 g) = 0.178 W/kg



0 dB = 0.235 W/kg = -6.29 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-12

Communication System: UID 0, IEEE 802.11n (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5745 \text{ MHz}$; $\sigma = 5.199 \text{ S/m}$; $\epsilon_r = 34.834$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 09-15-2014; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(4.52, 4.52, 4.52); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: IEEE 802.11n, MIMO, 5.8 GHz, Left Head, Cheek, Ch 149, 13 Mbps
Wireless Charging Cover**

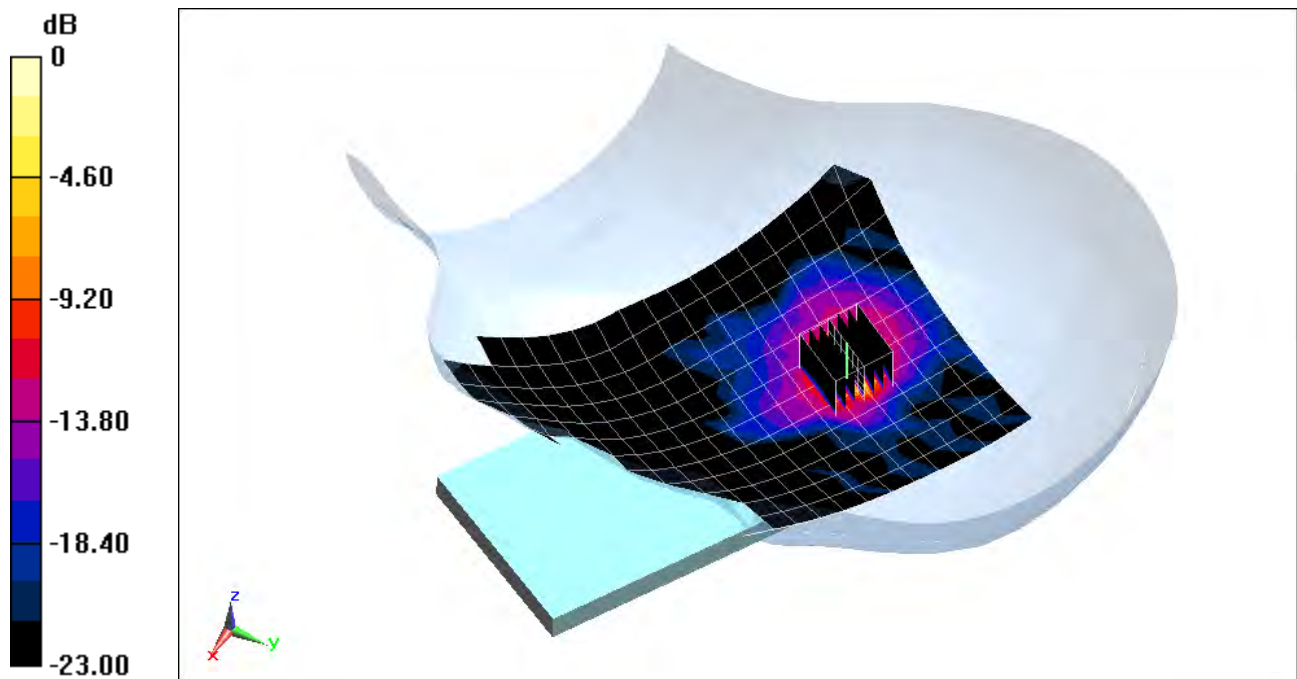
Area Scan (13x22x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 14.49 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 4.89 W/kg

SAR(1 g) = 0.793 W/kg



0 dB = 2.30 W/kg = 3.62 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-12

Communication System: UID 0, IEEE 802.11a (0); Frequency: 5700 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5700 \text{ MHz}$; $\sigma = 5.122 \text{ S/m}$; $\epsilon_r = 34.879$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Test Date: 09-15-2014; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN3914; ConvF(4.37, 4.37, 4.37); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: IEEE 802.11a, Antenna 2, 5.5 GHz, Right Head, Cheek, Ch 140, 6 Mbps
Wireless Charging Cover**

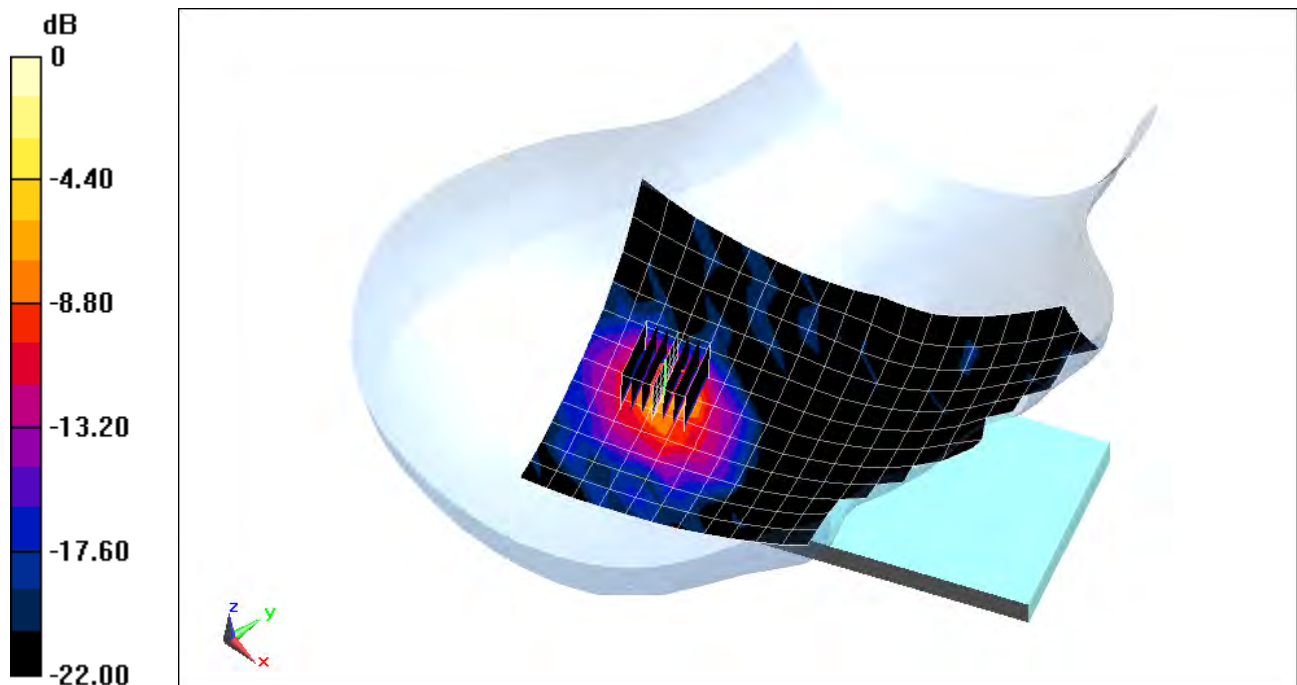
Area Scan (13x22x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 9.765 V/m; Power Drift = 0.21 dB

Peak SAR (extrapolated) = 3.15 W/kg

SAR(1 g) = 0.536 W/kg



0 dB = 1.51 W/kg = 1.79 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 1.017 \text{ S/m}$; $\epsilon_r = 54.199$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-08-2014; Ambient Temp: 23.8°C; Tissue Temp: 23.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

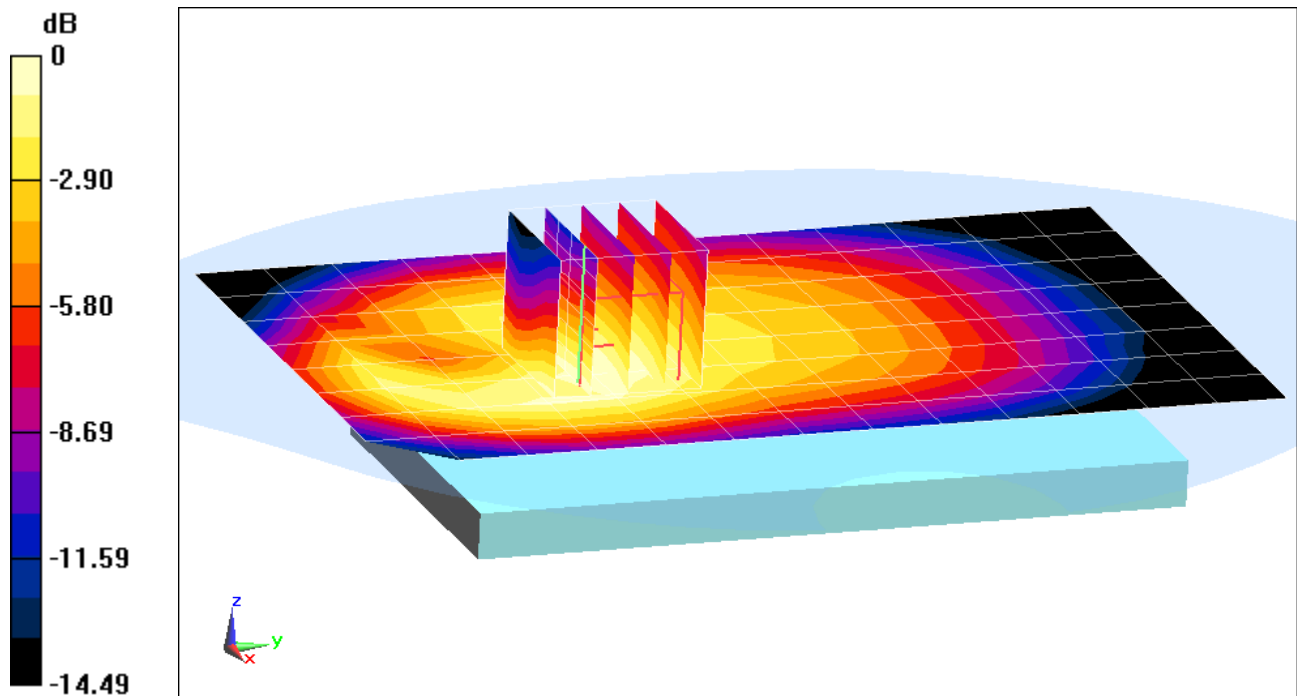
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.67 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.149 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, GSM GPRS; 4 Tx slots (0); Frequency: 836.6 MHz; Duty Cycle: 1:2.076

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 1.009 \text{ S/m}$; $\epsilon_r = 53.226$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: GPRS 850, Body SAR, Front side, Mid.ch, 4 Tx Slots, Wireless Charging Cover

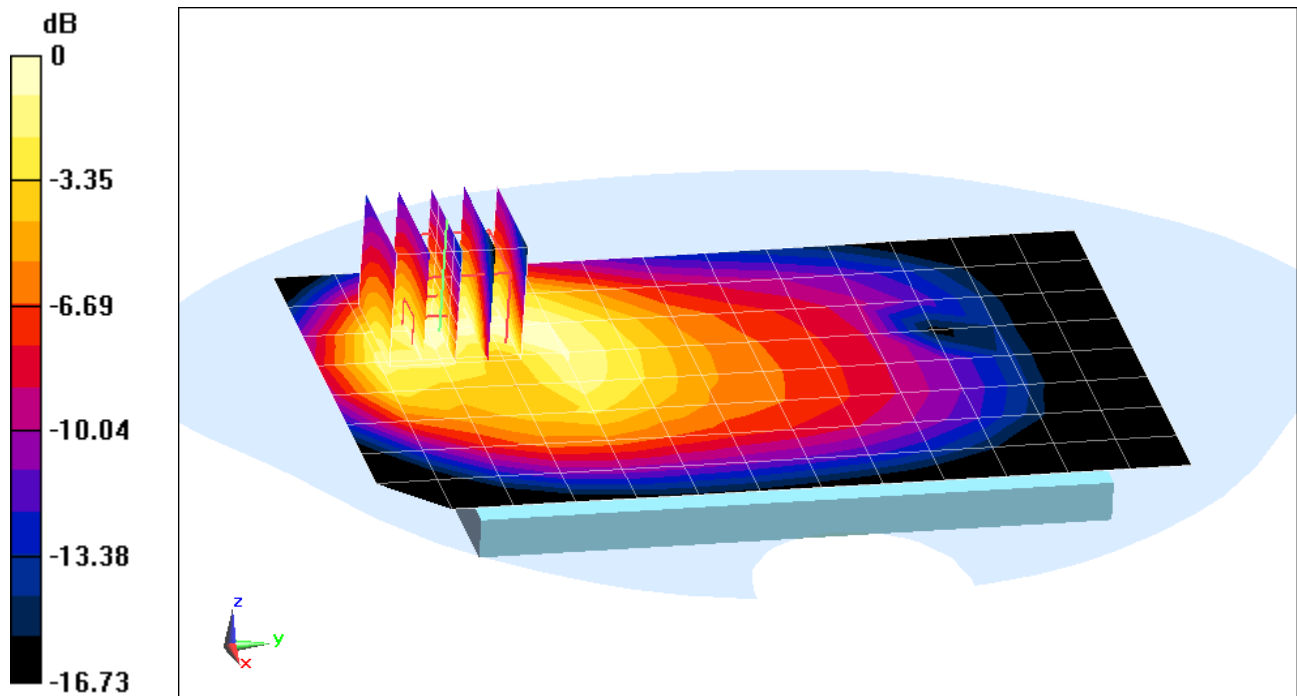
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.81 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.443 W/kg

SAR(1 g) = 0.257 W/kg



0 dB = 0.308 W/kg = -5.11 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#3

Communication System: UID 0, GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: 1900 Body Medium parameters used:

$f = 1880 \text{ MHz}$; $\sigma = 1.537 \text{ S/m}$; $\epsilon_r = 51.766$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

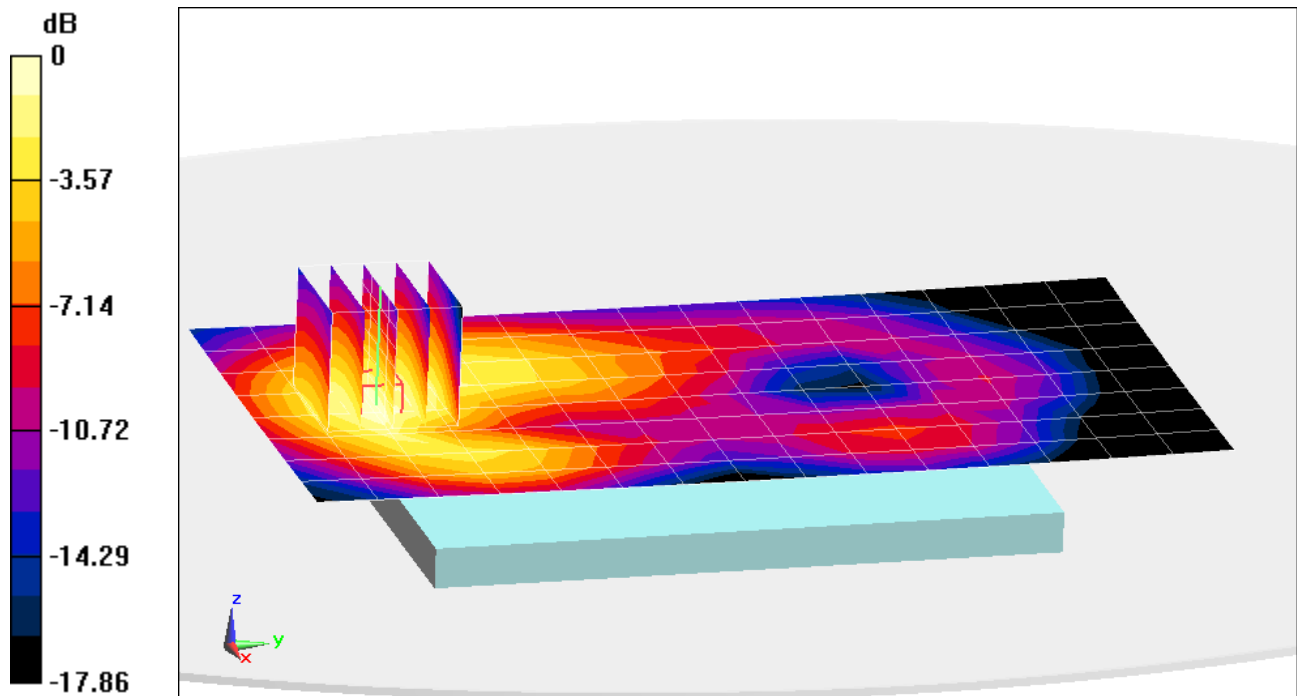
Area Scan (9x16x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.19 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.254 W/kg

SAR(1 g) = 0.170 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#3

Communication System: UID 0, GSM GPRS; 4 Tx slots (0); Frequency: 1909.8 MHz; Duty Cycle: 1:2.076

Medium: 1900 Body Medium parameters used:

$f = 1910 \text{ MHz}$; $\sigma = 1.568 \text{ S/m}$; $\epsilon_r = 51.65$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: GPRS 1900, Body SAR, Bottom Edge, High.ch, 4 Tx Slots, Wireless Charging Cover

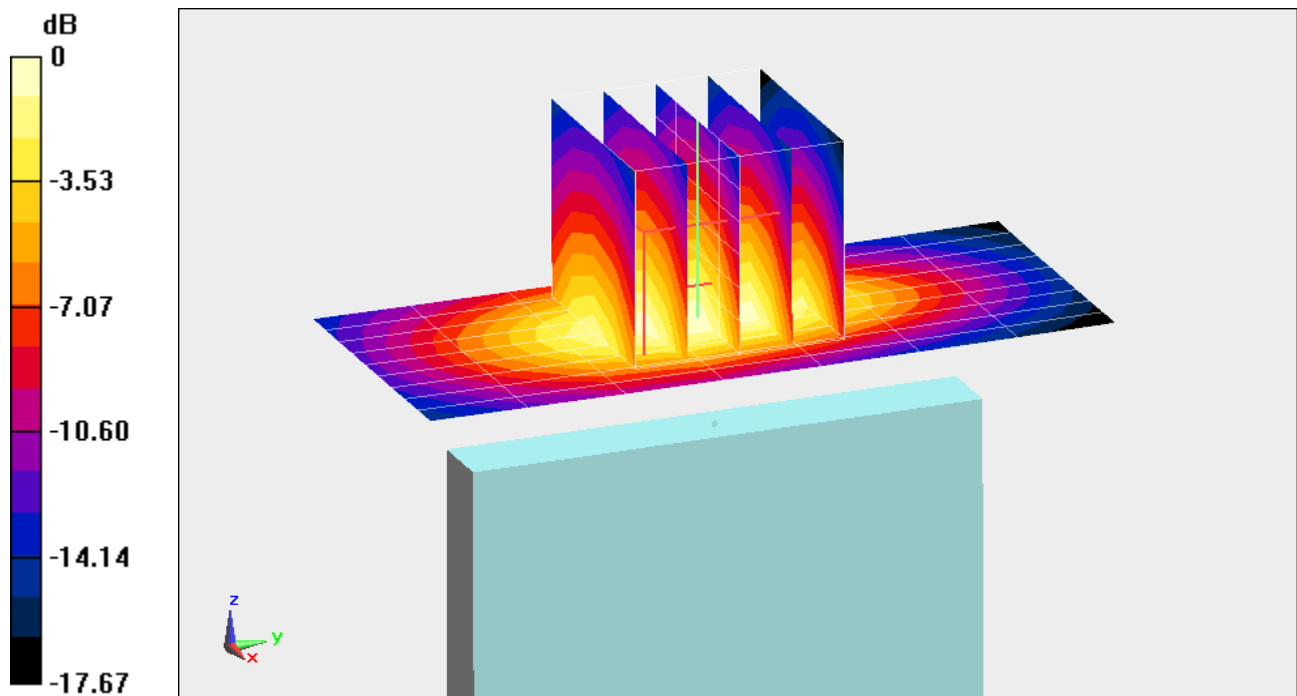
Area Scan (10x8x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.50 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 1.03 W/kg



0 dB = 1.26 W/kg = 1.00 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 1.009 \text{ S/m}$; $\epsilon_r = 53.226$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-15-2014; Ambient Temp: 22.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

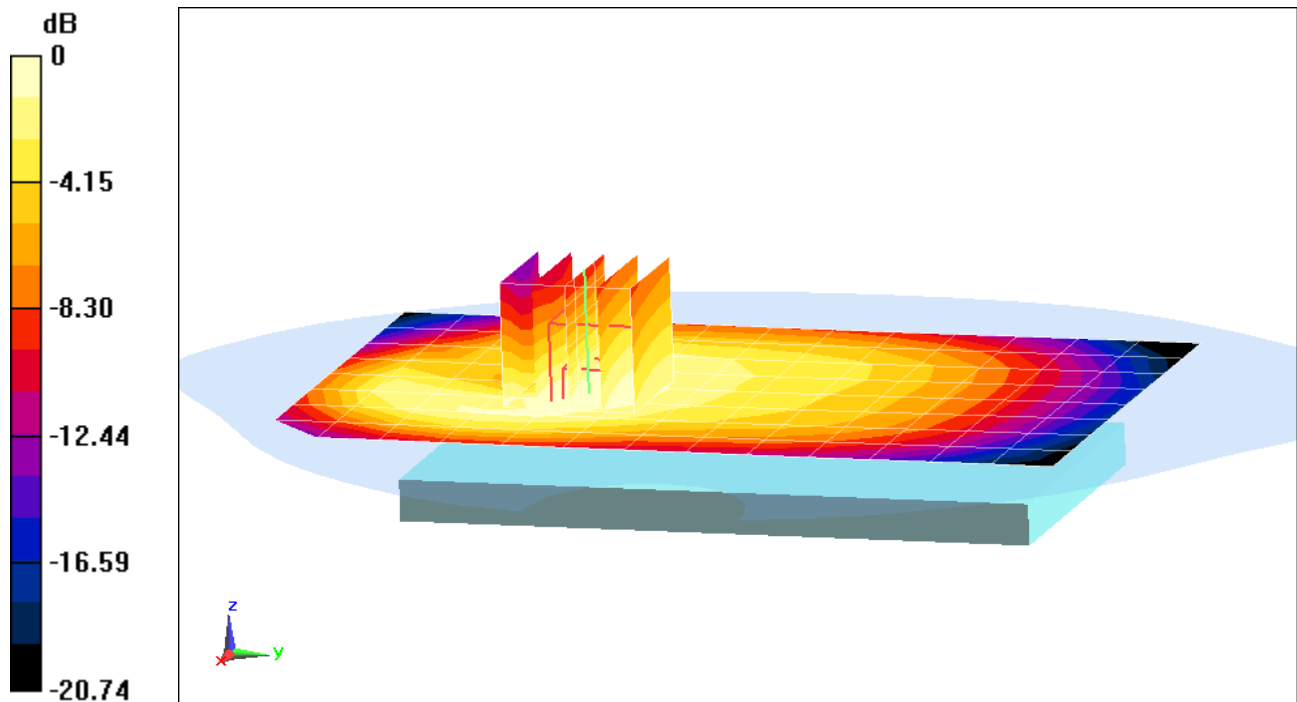
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.91 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.228 W/kg

SAR(1 g) = 0.163 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #3

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 1.009 \text{ S/m}$; $\epsilon_r = 53.226$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 850, Body SAR, Front side, Mid.ch, Wireless Charging Cover

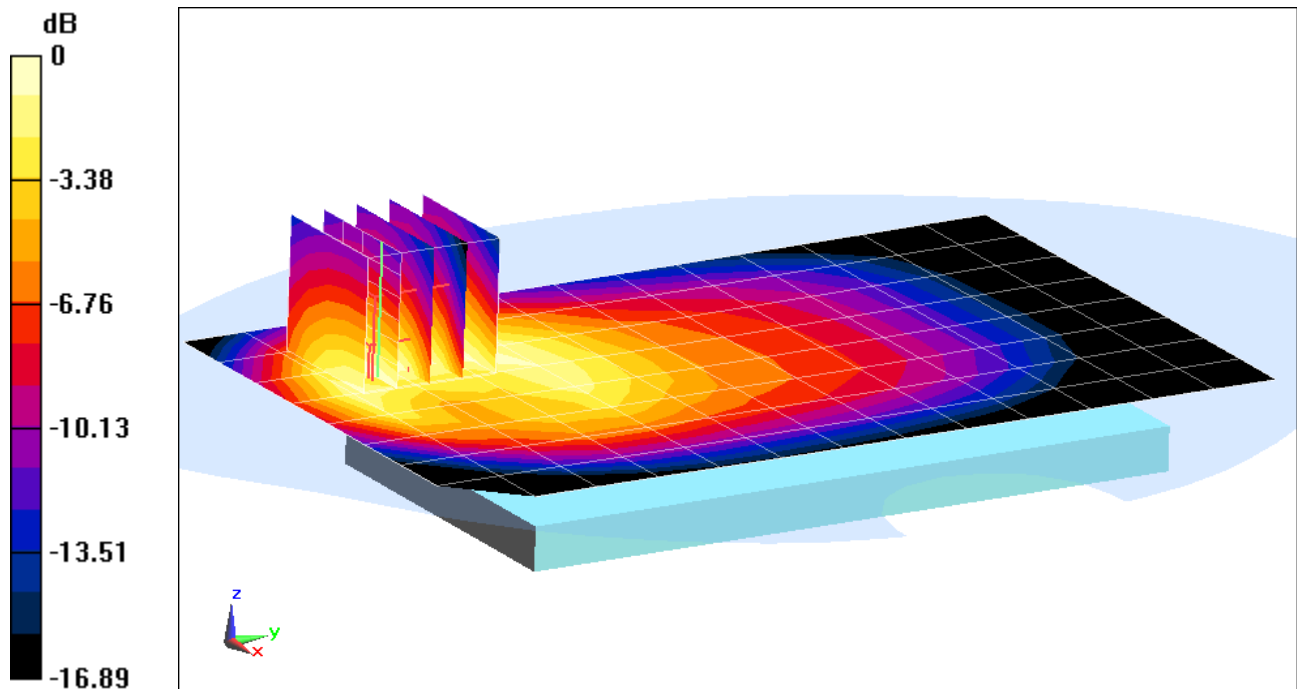
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.04 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.684 W/kg

SAR(1 g) = 0.398 W/kg



0 dB = 0.479 W/kg = -3.20 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#2

Communication System: UID 0, UMTS (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1732.4 \text{ MHz}$; $\sigma = 1.46 \text{ S/m}$; $\epsilon_r = 52.327$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-15-2014; Ambient Temp: 22.1°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3319; ConvF(4.85, 4.85, 4.85); Calibrated: 4/17/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 4/11/2014

Phantom: SAM; Type: QD000P40CD; Serial: TP:1758

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: AWS UMTS, Body SAR, Back side, Mid.ch, Standard Cover

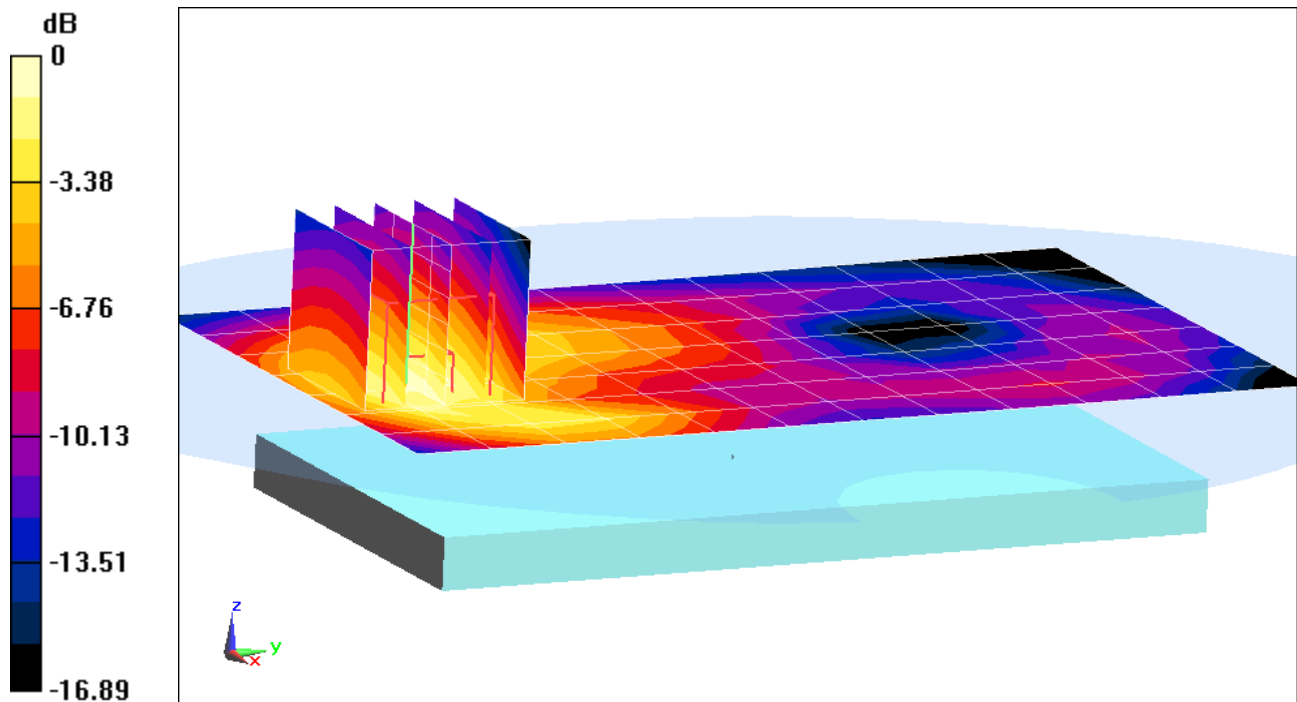
Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.23 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.525 W/kg

SAR(1 g) = 0.346 W/kg



0 dB = 0.411 W/kg = -3.86 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#2

Communication System: UID 0, UMTS (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1732.4 \text{ MHz}$; $\sigma = 1.46 \text{ S/m}$; $\epsilon_r = 52.327$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.1°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3319; ConvF(4.85, 4.85, 4.85); Calibrated: 4/17/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 4/11/2014

Phantom: SAM; Type: QD000P40CD; Serial: TP:1758

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: AWS UMTS, Body SAR, Front side, Mid.ch, Standard Cover

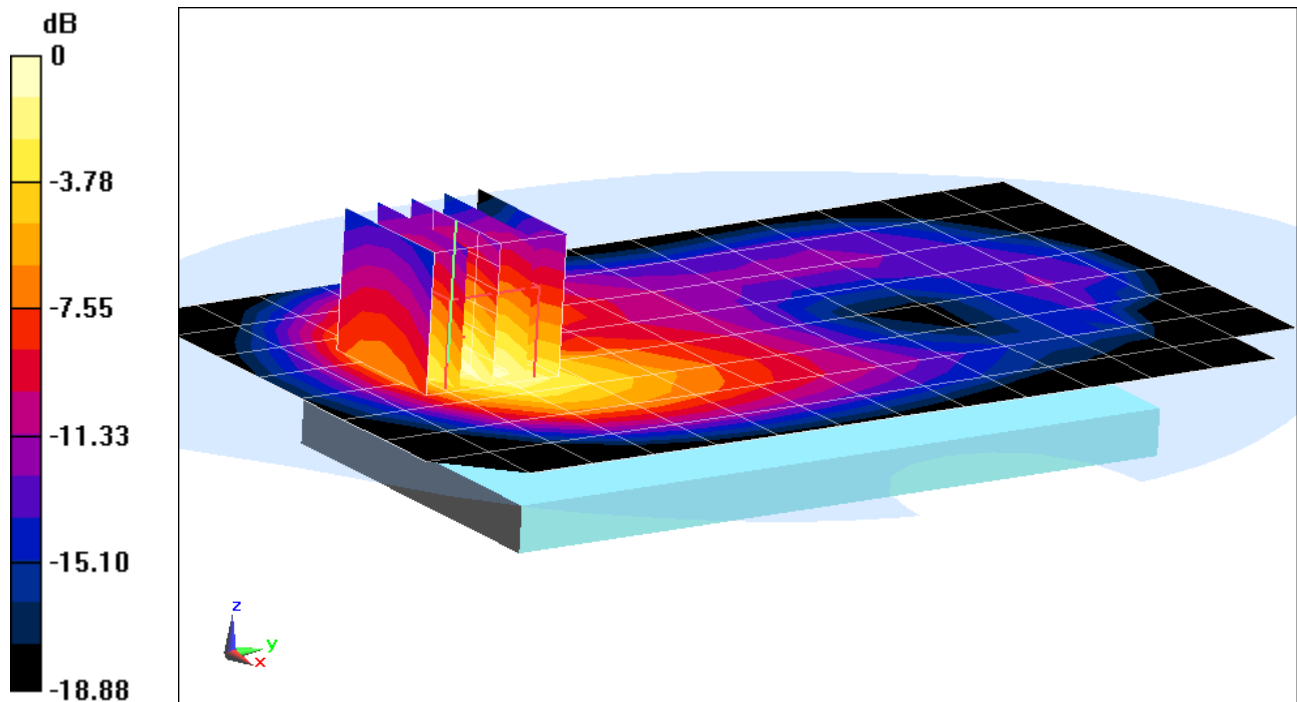
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.80 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.733 W/kg



0 dB = 0.897 W/kg = -0.47 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#4

Communication System: UID 0, UMTS (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1907.6 \text{ MHz}$; $\sigma = 1.566 \text{ S/m}$; $\epsilon_r = 51.659$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space 1.5 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 1900, Body SAR, Back side, High.ch, Standard Cover

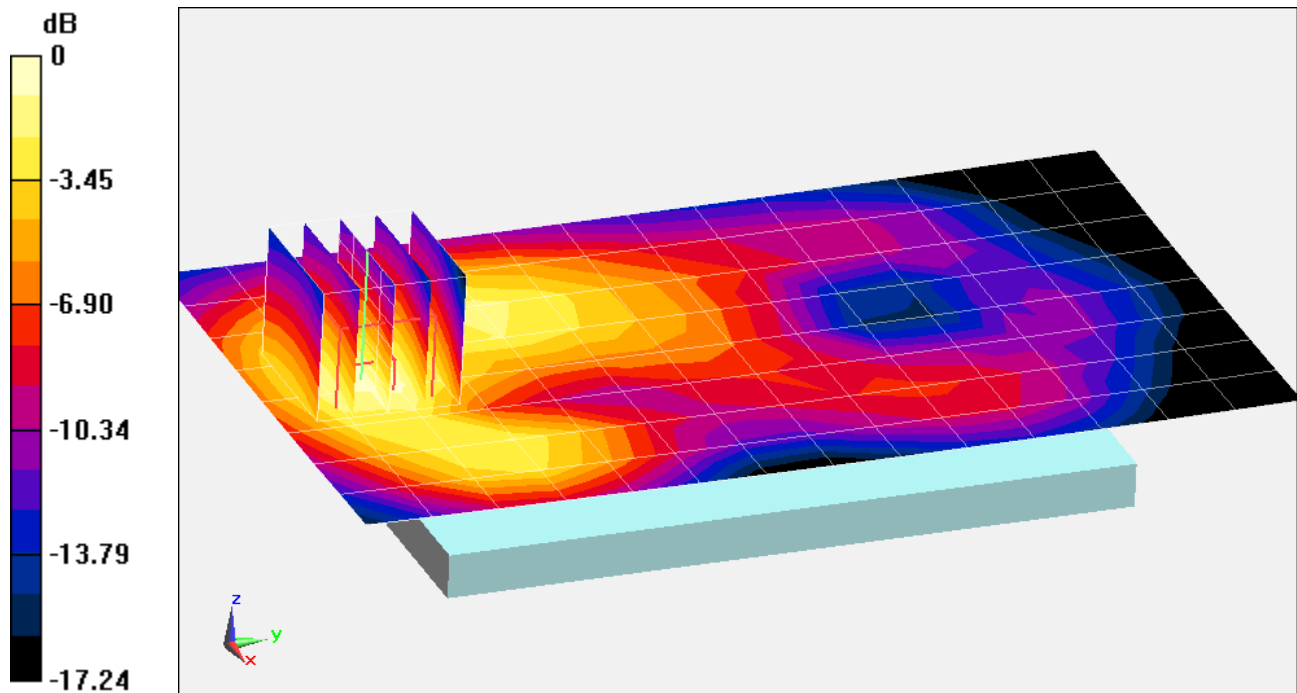
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.08 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.350 W/kg

SAR(1 g) = 0.228 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#2

Communication System: UID 0, UMTS (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1852.4 \text{ MHz}$; $\sigma = 1.501 \text{ S/m}$; $\epsilon_r = 51.378$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.0°C; Tissue Temp: 21.7°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 1900, Body SAR, Bottom Edge, Low.ch, Standard Cover

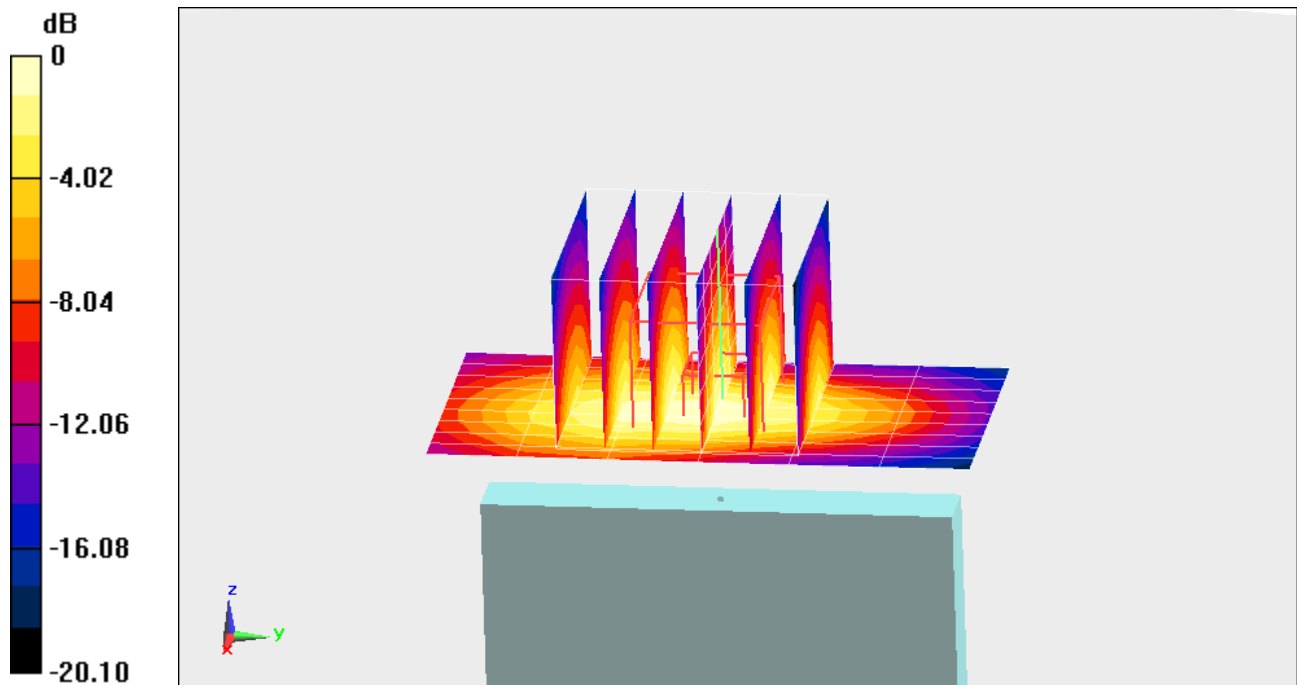
Area Scan (10x7x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.51 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.942 W/kg



0 dB = 1.13 W/kg = 0.53 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #1

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.934 \text{ S/m}$; $\epsilon_r = 54.233$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-17-2014; Ambient Temp: 23.9°C; Tissue Temp: 22.4°C

Probe: ES3DV3 - SN3209; ConvF(6.16, 6.16, 6.16); Calibrated: 3/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM front; Type: QD000P40CD; Serial: TP:1759

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

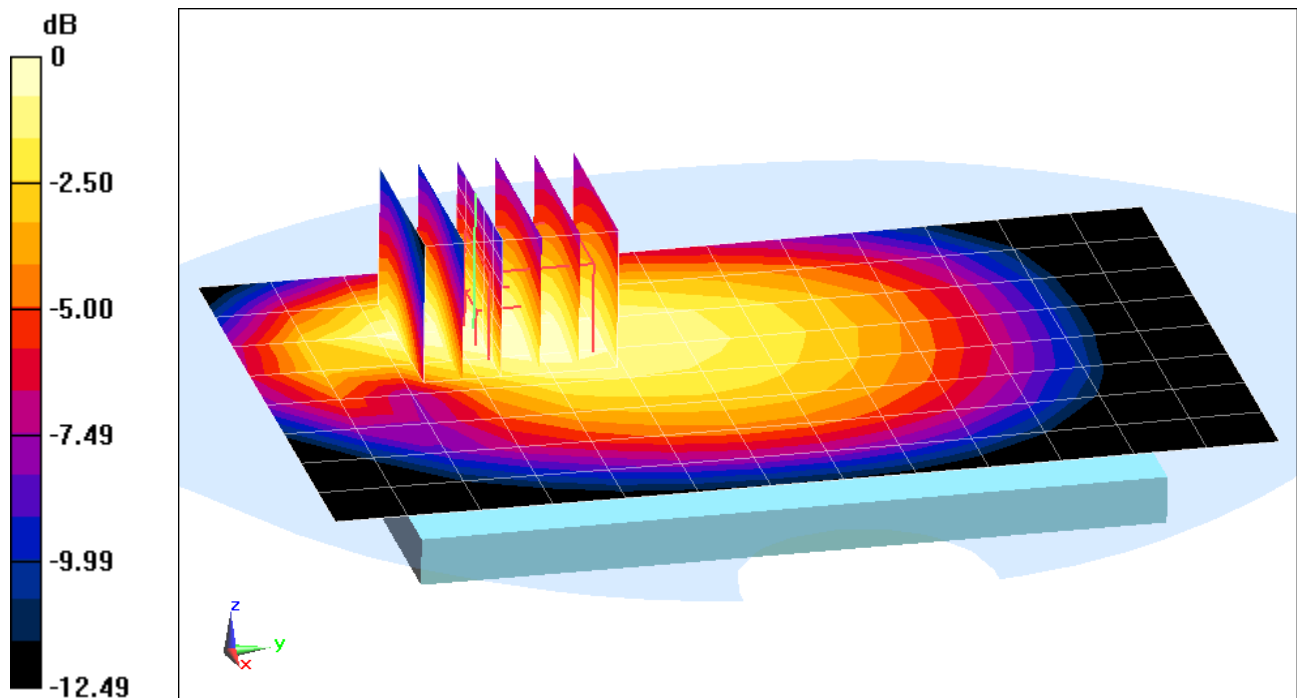
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.68 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.216 W/kg

SAR(1 g) = 0.163 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#1

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium: 740 Body Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.938 \text{ S/m}$; $\epsilon_r = 54.634$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-11-2014; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3258; ConvF(6.15, 6.15, 6.15); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP-1158

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 12, Body SAR, Front Side, Mid.ch, Standard Cover
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset

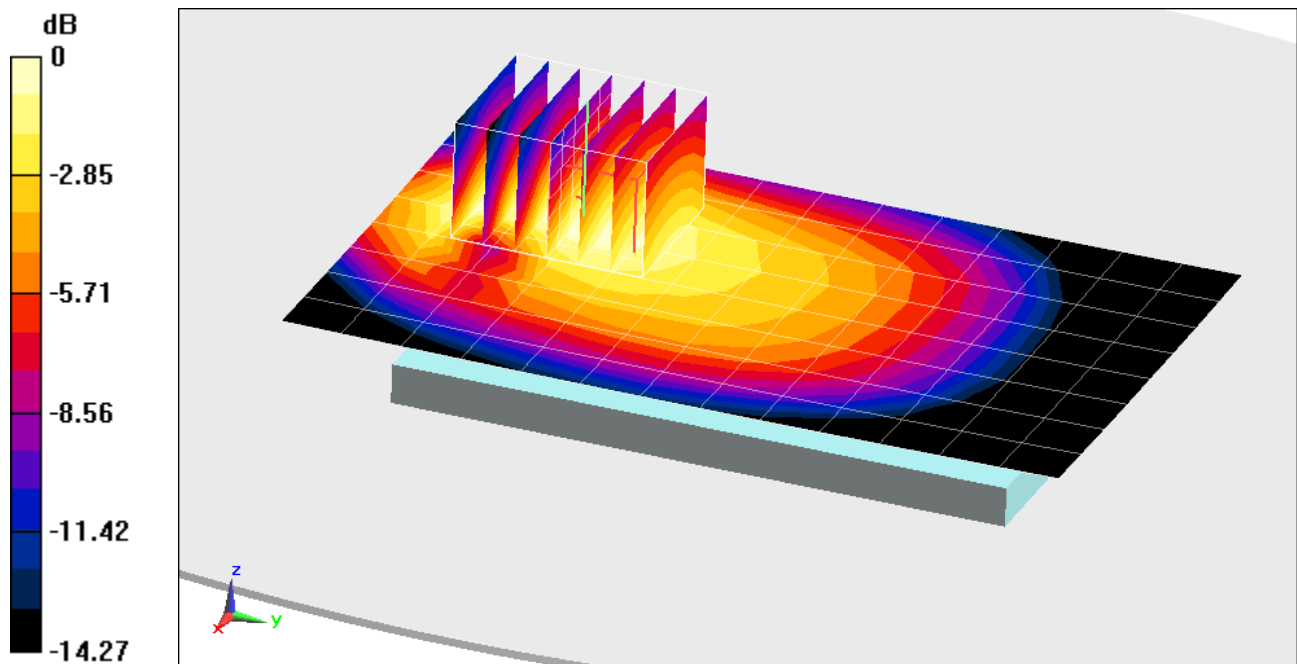
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x7x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.98 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.376 W/kg

SAR(1 g) = 0.260 W/kg



0 dB = 0.298 W/kg = -5.26 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#1

Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.5 \text{ MHz}$; $\sigma = 1.017 \text{ S/m}$; $\epsilon_r = 54.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-08-2014; Ambient Temp: 23.8°C; Tissue Temp: 23.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 5 (Cell.), Body SAR, Back side, Mid.ch, Standard Cover
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

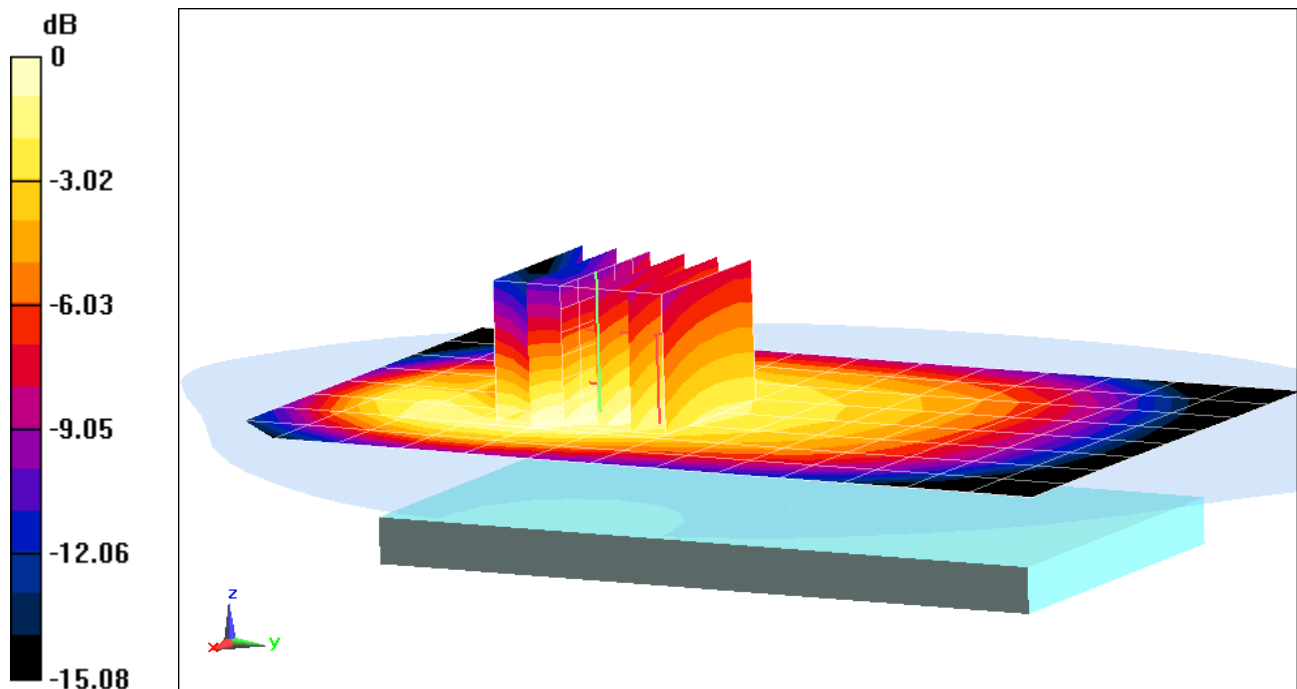
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.96 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.181 W/kg



0 dB = 0.205 W/kg = -6.88 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #1

Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.5 \text{ MHz}$; $\sigma = 1.009 \text{ S/m}$; $\epsilon_r = 53.227$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: LTE Band 5 (Cell.), Body SAR, Front side, Mid.ch, Wireless Charging Cover
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

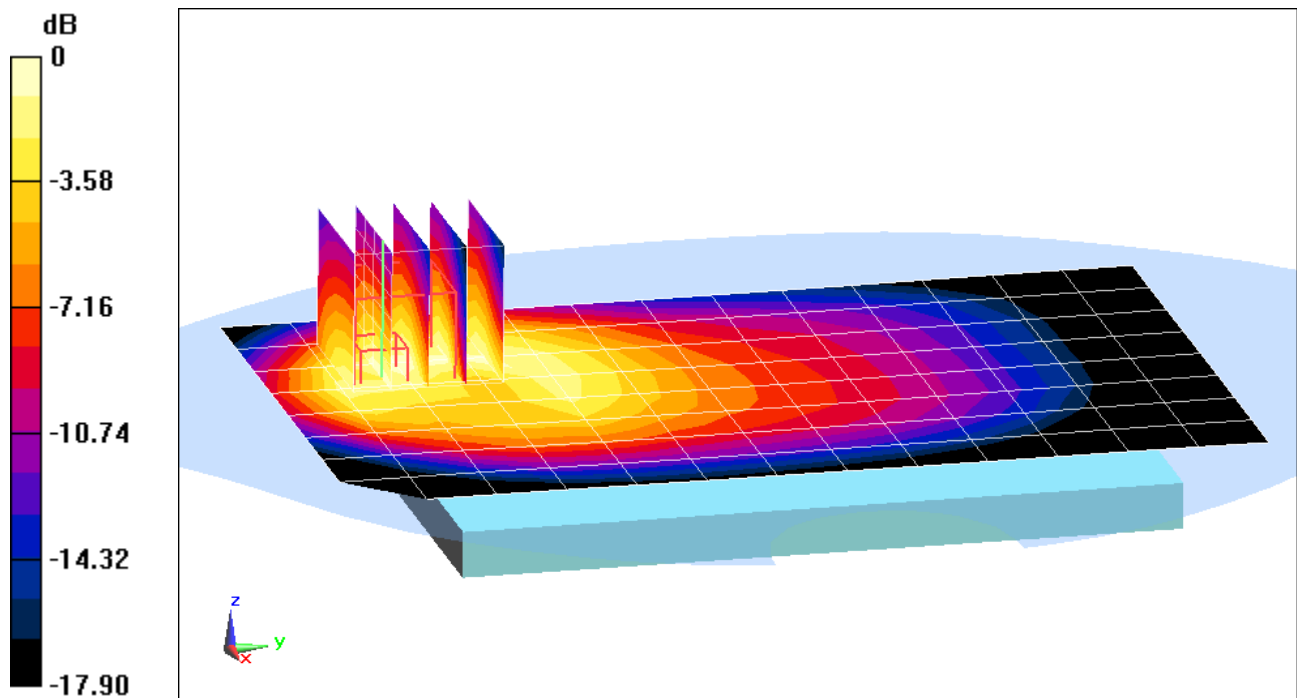
Area Scan (9x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.61 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.521 W/kg



0 dB = 0.643 W/kg = -1.92 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#1

Communication System: UID 0, LTE Band 4 (AWS); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1732.5 \text{ MHz}$; $\sigma = 1.434 \text{ S/m}$; $\epsilon_r = 51.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2014; Ambient Temp: 23.0°C; Tissue Temp: 23.6°C

Probe: ES3DV3 - SN3287; ConvF(4.93, 4.93, 4.93); Calibrated: 11/20/2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 11/19/2013

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1229

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 4 (AWS), Body SAR, Back side, Mid.ch, Standard Cover
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

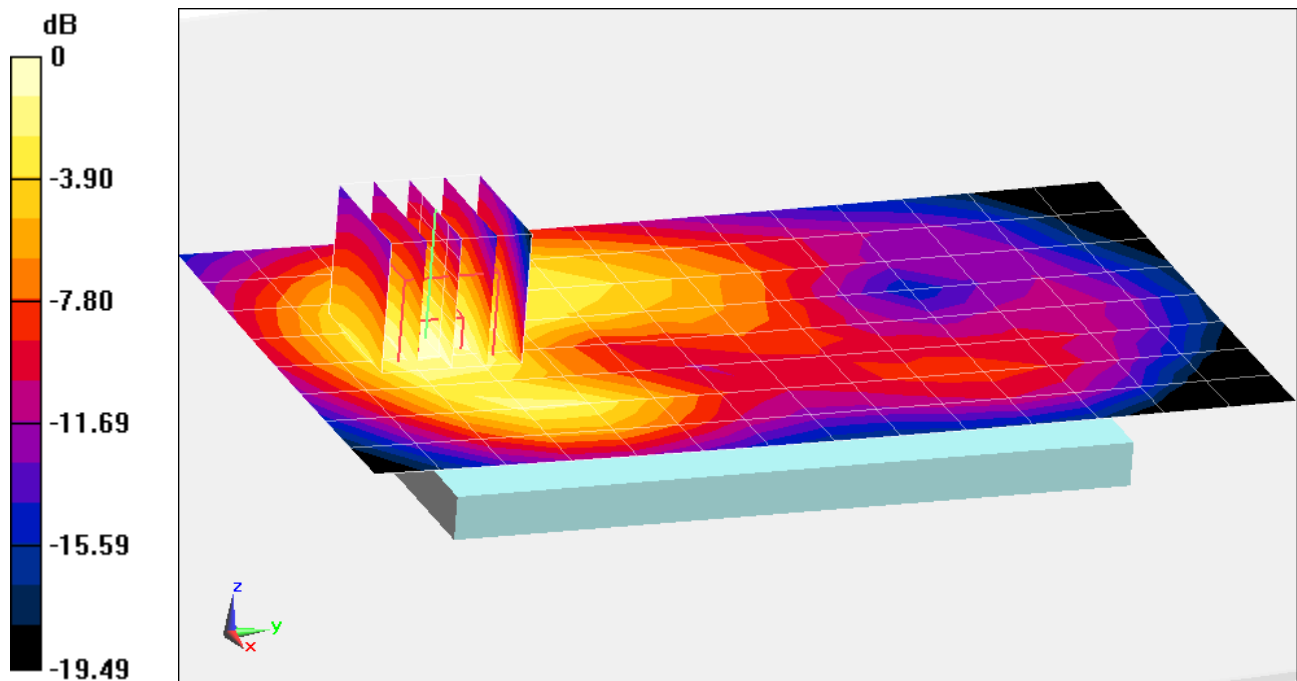
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.26 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.442 W/kg

SAR(1 g) = 0.288 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #2

Communication System: UID 0, LTE Band 4 (AWS) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1732.5 \text{ MHz}$; $\sigma = 1.46 \text{ S/m}$; $\epsilon_r = 52.326$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.1°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3319; ConvF(4.85, 4.85, 4.85); Calibrated: 4/17/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 4/11/2014

Phantom: SAM; Type: QD000P40CD; Serial: TP:1758

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: LTE Band 4 (AWS), Body SAR, Bottom Edge, Mid.ch, Standard Cover
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

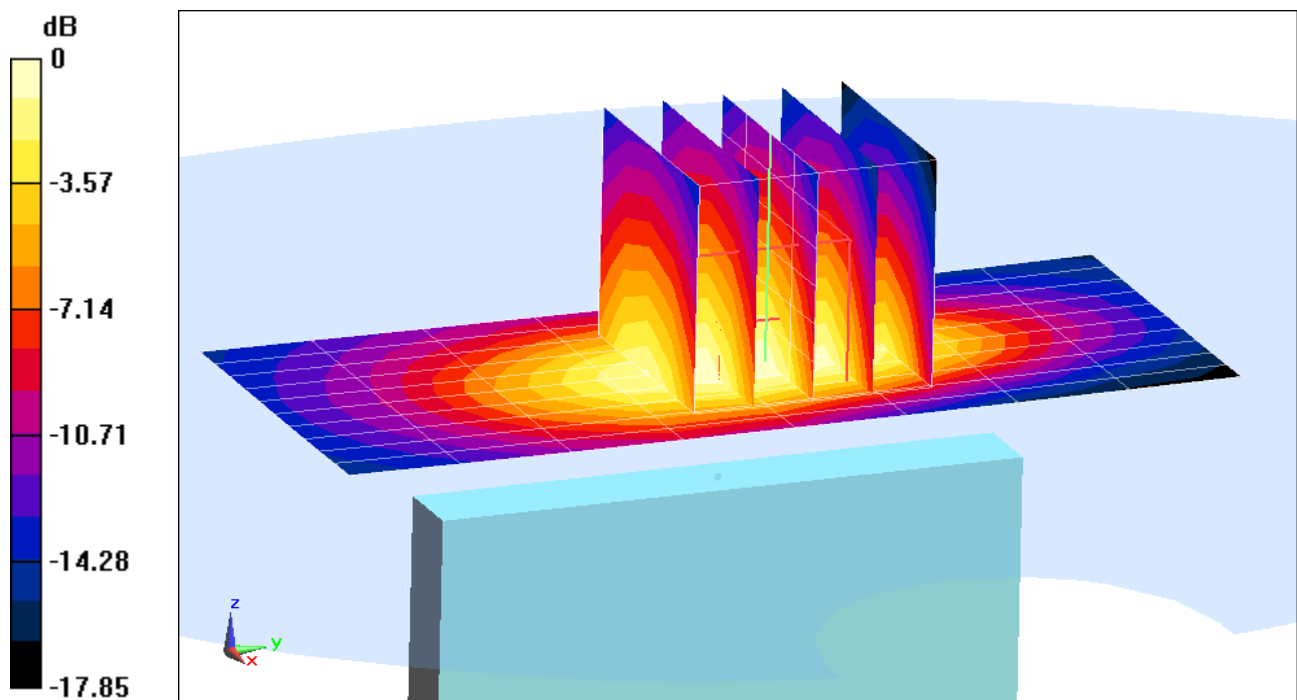
Area Scan (11x9x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.02 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.659 W/kg



0 dB = 0.798 W/kg = -0.98 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #2

Communication System: UID 0, LTE Band 2 (PCS) (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.558 \text{ S/m}$; $\epsilon_r = 51.689$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 2 (PCS), Body SAR, Back side, High.ch, Standard Cover
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

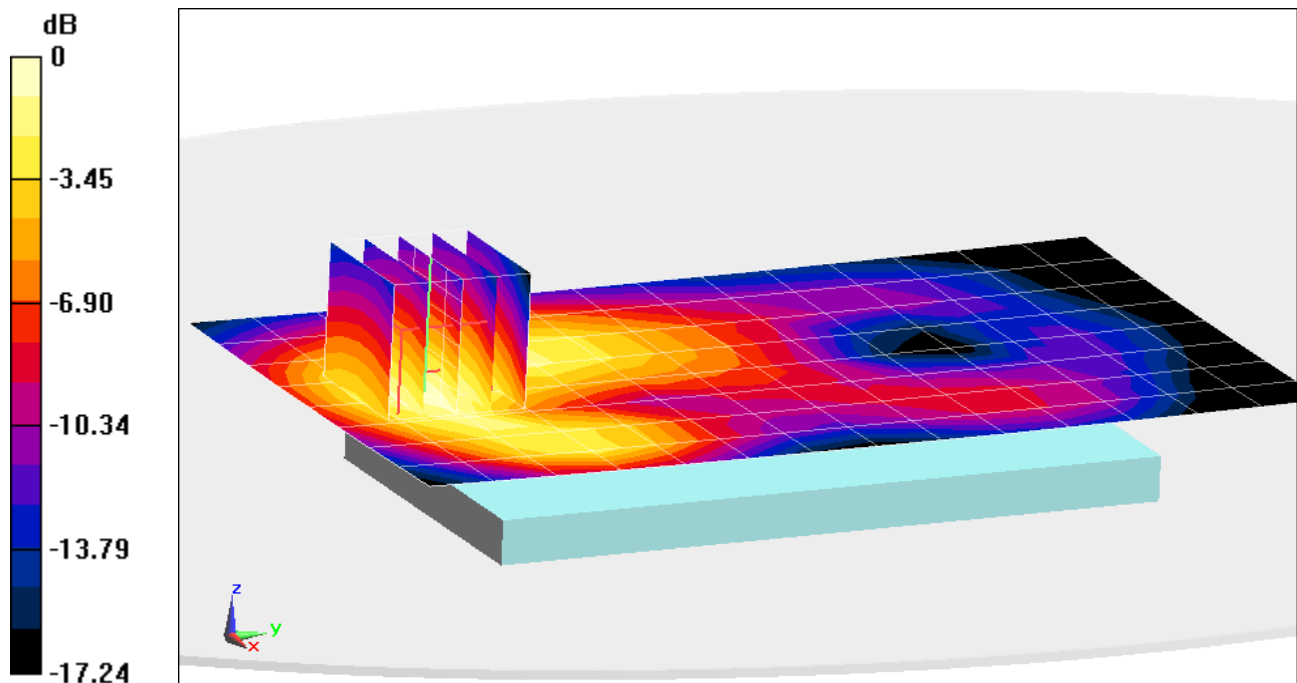
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.83 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.396 W/kg

SAR(1 g) = 0.258 W/kg



0 dB = 0.307 W/kg = -5.13 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC #4

Communication System: UID 0, LTE Band 2 (PCS)(0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.558 \text{ S/m}$; $\epsilon_r = 51.689$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 2 (PCS), Body SAR, Bottom Edge, High.ch, Standard Cover
20 MHz Bandwidth, QPSK, 100 RB, 0 RB Offset

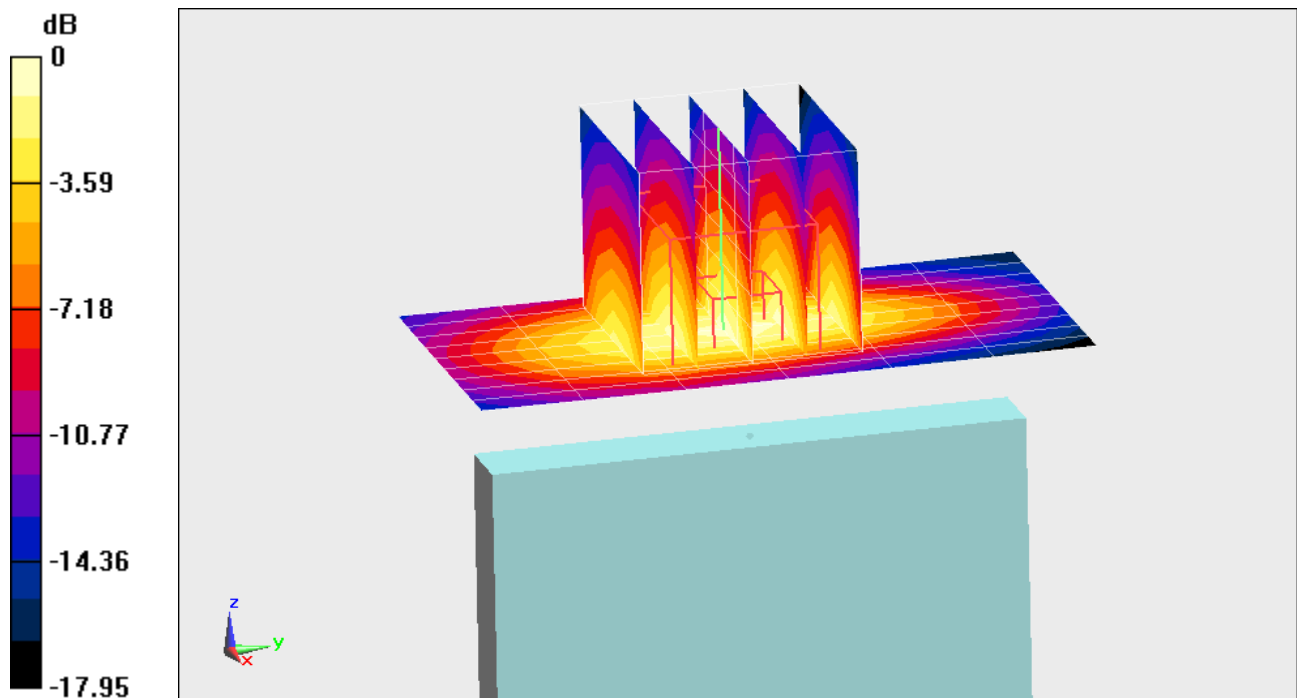
Area Scan (10x7x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.42 V/m; Power Drift = 0.21 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.933 W/kg



0 dB = 1.13 W/kg = 0.53 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-09

Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Body Medium parameters used (interpolated):

$f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 50.728$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 22.2°C; Tissue Temp: 23.2°C

Probe: ES3DV3 - SN3258; ConvF(4.14, 4.14, 4.14); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP-1158

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: IEEE 802.11b, Antenna 1, Body SAR, Ch 11, 1 Mbps, Back Side
Standard Cover**

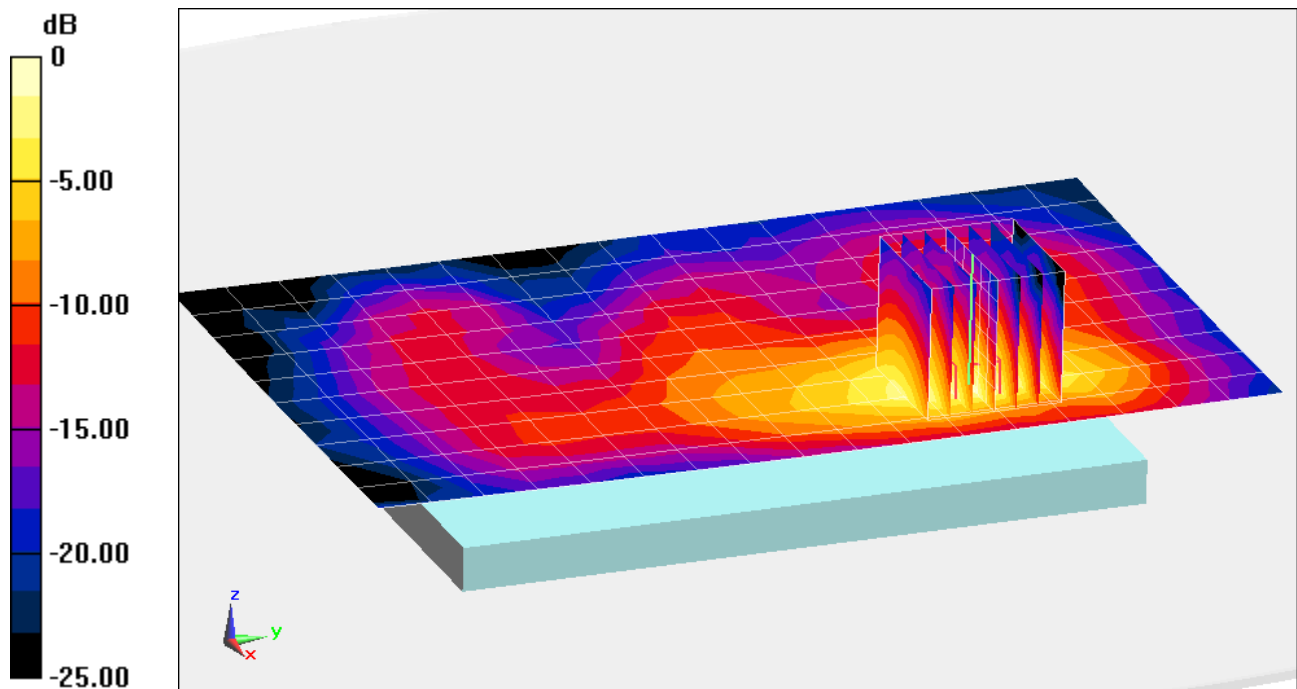
Area Scan (11x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.570 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.336 W/kg

SAR(1 g) = 0.153 W/kg



0 dB = 0.206 W/kg = -6.86 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-14

Communication System: UID 0, IEEE 802.11n (0); Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5825 \text{ MHz}$; $\sigma = 6.077 \text{ S/m}$; $\epsilon_r = 46.581$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.97, 3.97, 3.97); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Mode: IEEE 802.11n, MIMO, 5.8 GHz, Body SAR, Ch 165, 13 Mbps, Back Side
Standard Cover**

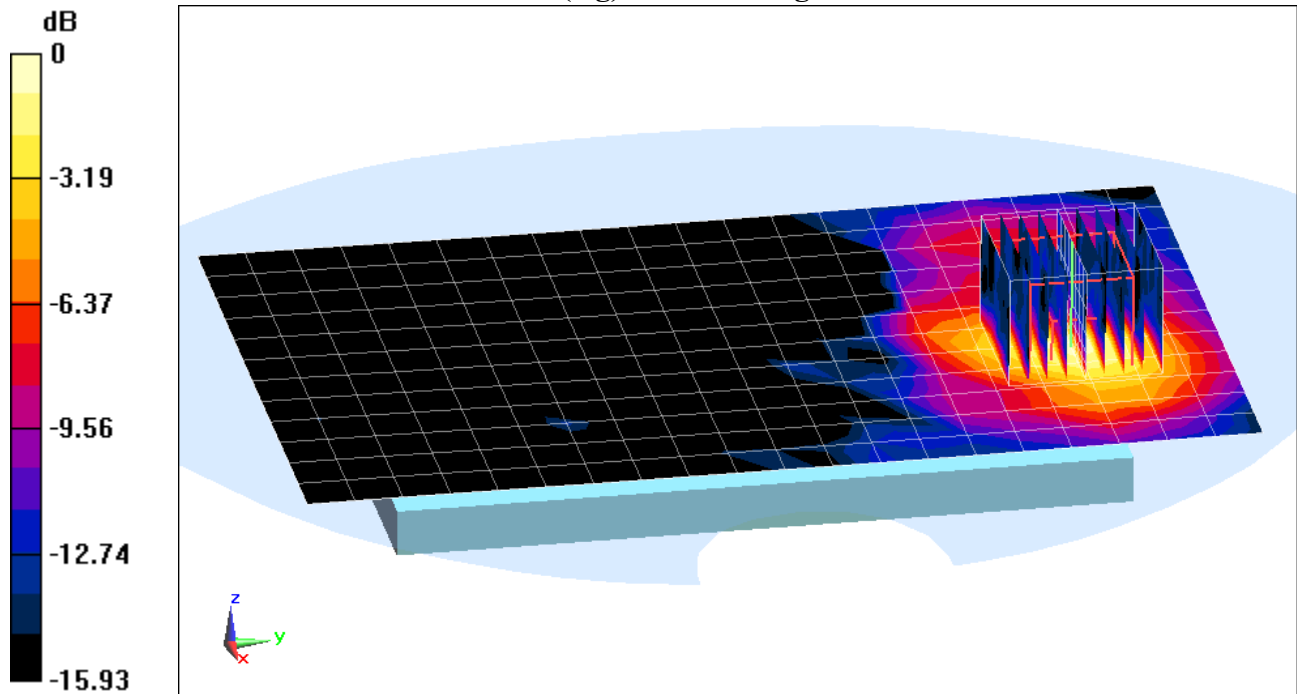
Area Scan (13x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (9x9x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 4.854 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.706 W/kg

SAR(1 g) = 0.157 W/kg



0 dB = 0.359 W/kg = -4.45 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-14

Communication System: UID 0, IEEE 802.11a (0); Frequency: 5700 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5700 \text{ MHz}$; $\sigma = 5.894 \text{ S/m}$; $\epsilon_r = 46.838$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.81, 3.81, 3.81); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: IEEE 802.11a, Antenna 2, 5.5 GHz, Body SAR, Ch 140, 6 Mbps, Back Side, Standard Cover

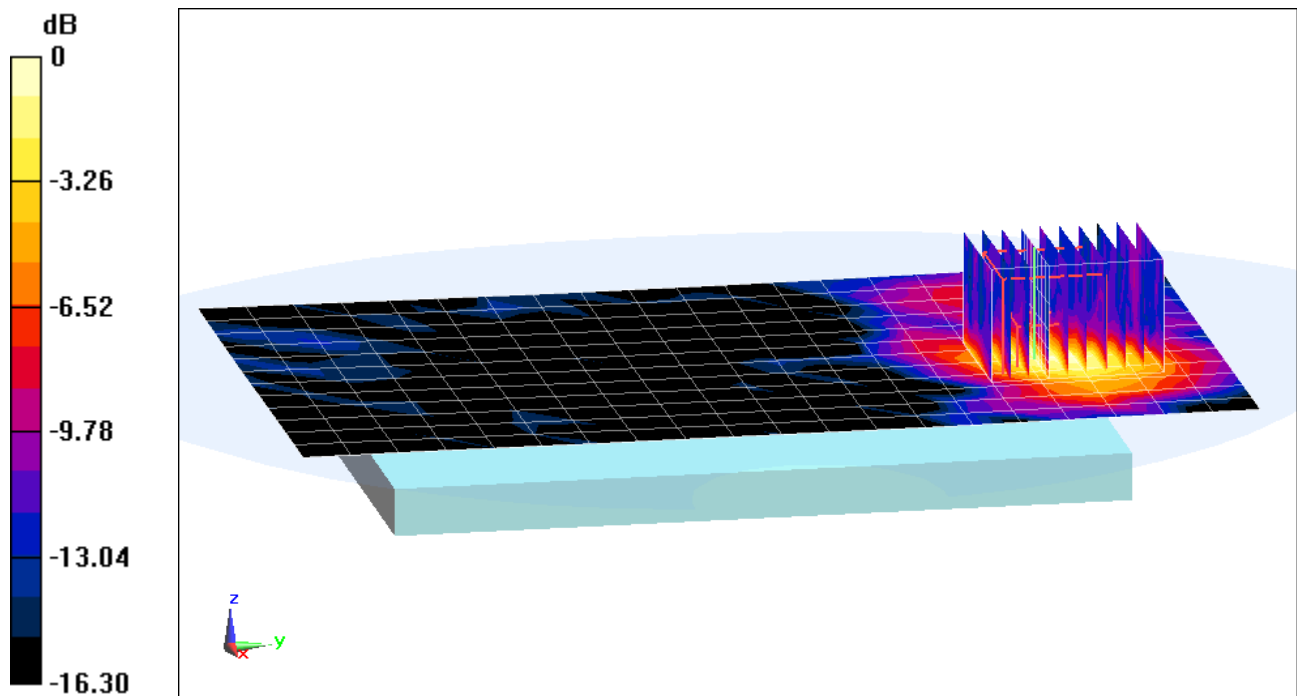
Area Scan (13x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (9x10x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 3.917 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.118 W/kg



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#4

Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used:

$f = 1880 \text{ MHz}$; $\sigma = 1.537 \text{ S/m}$; $\epsilon_r = 51.766$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: UMTS 1900, Hand SAR, Bottom Edge, Mid.ch, Standard Cover

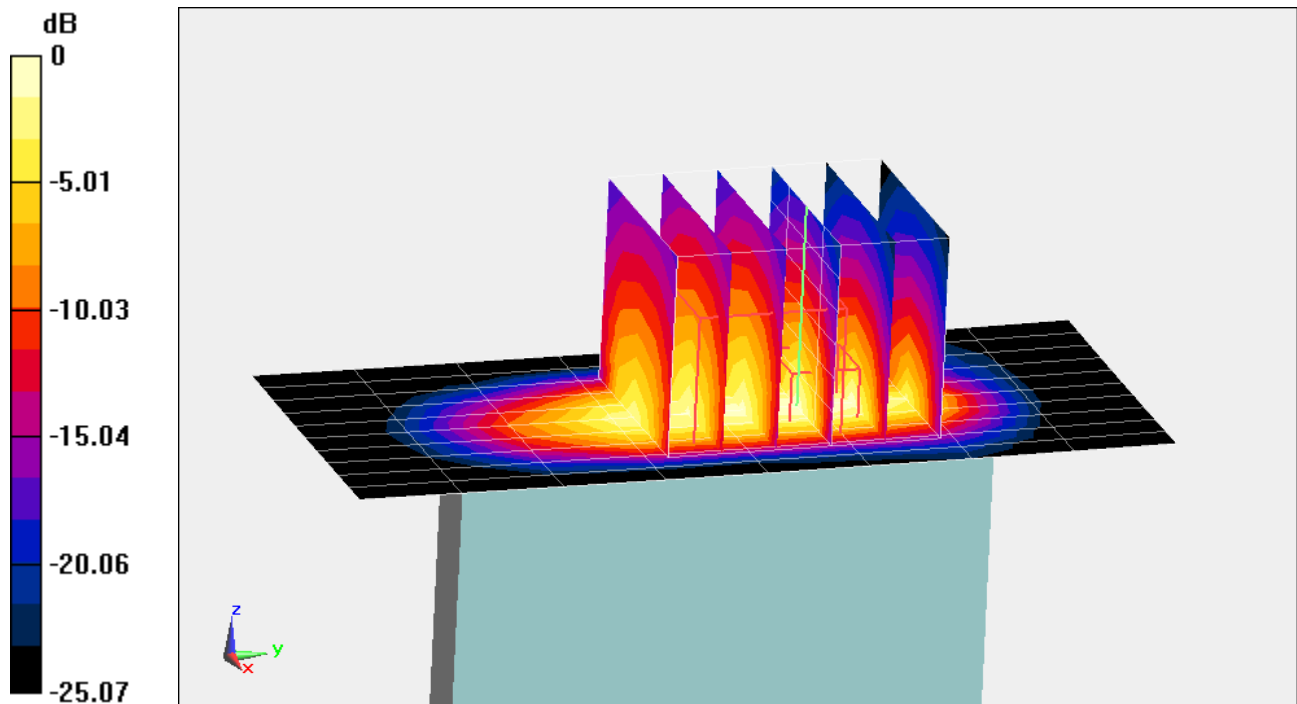
Area Scan (11x9x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 71.24 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 14.5 W/kg

SAR(10 g) = 2.51 W/kg



0 dB = 8.63 W/kg = 9.36 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: FCC#4

Communication System: UID 0, LTE Band 2 (PCS) (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.558 \text{ S/m}$; $\epsilon_r = 51.689$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: LTE Band 2 (PCS), Hand SAR, Bottom Edge, High.ch, Wireless Charging Cover
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

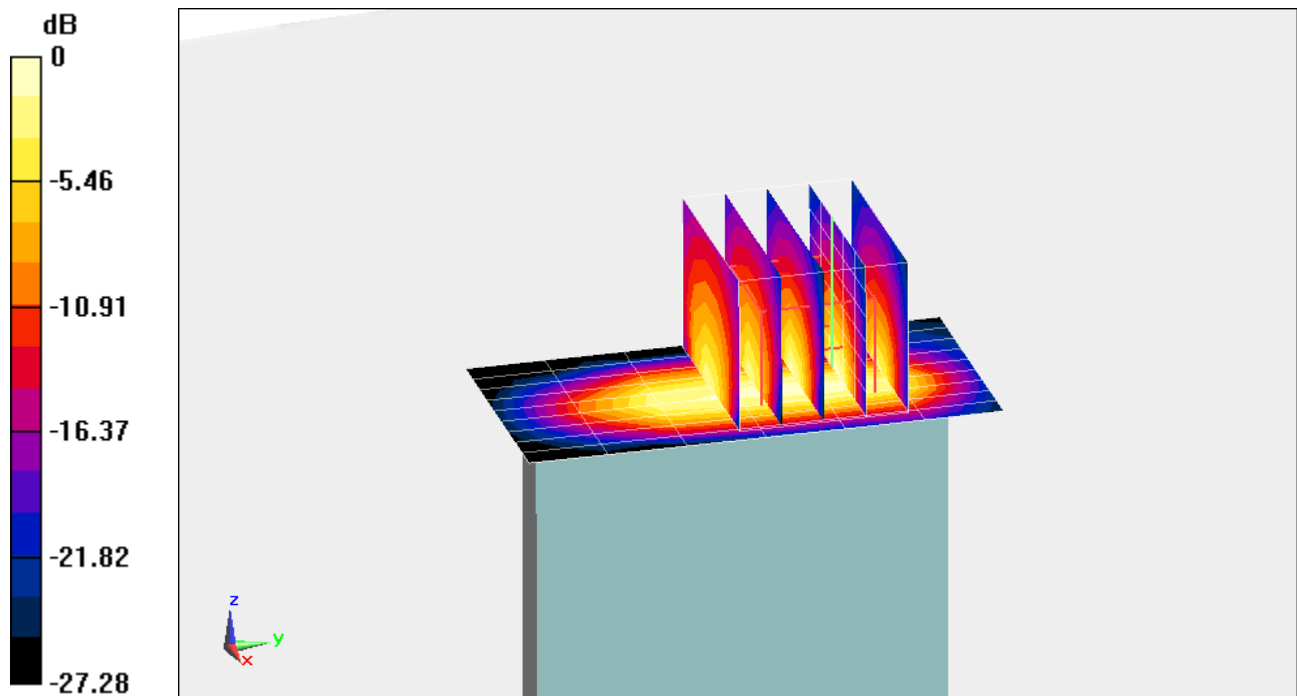
Area Scan (10x7x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 46.81 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 14.7 W/kg

SAR(10 g) = 2.21 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMN915T; Type: Portable Handset; Serial: 0809-14

Communication System: UID 0, IEEE 802.11n (0); Frequency: 5700 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5700 \text{ MHz}$; $\sigma = 5.894 \text{ S/m}$; $\epsilon_r = 46.838$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; space: 0.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.81, 3.81, 3.81); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Mode: IEEE 802.11n, MIMO, 5.5 GHz, Hand SAR, Ch 140, 13 Mbps, Back Side, Standard Cover

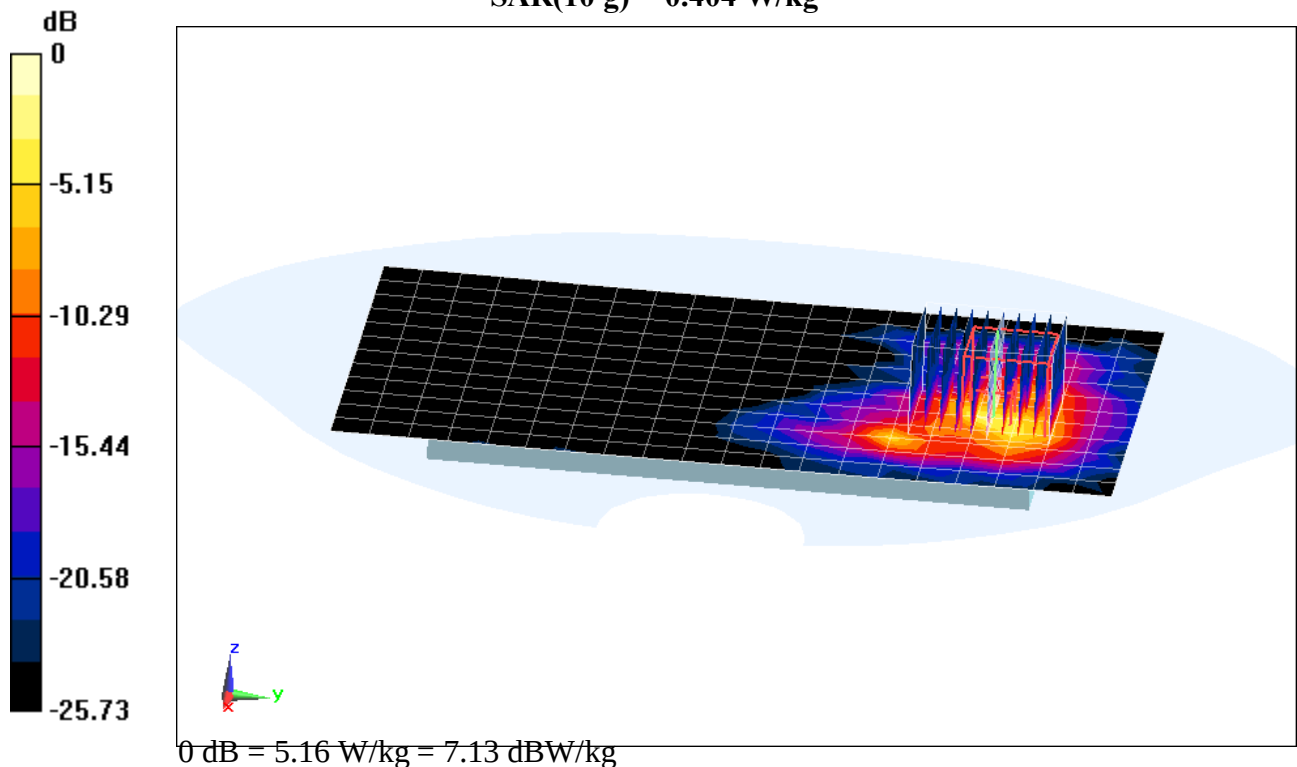
Area Scan (13x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (9x10x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 12.78 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 13.7 W/kg

SAR(10 g) = 0.404 W/kg



APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Head Medium parameters used (interpolated):

$f = 750 \text{ MHz}$; $\sigma = 0.915 \text{ S/m}$; $\epsilon_r = 40.798$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3263; ConvF(6.42, 6.42, 6.42); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

750 MHz System Verification

Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

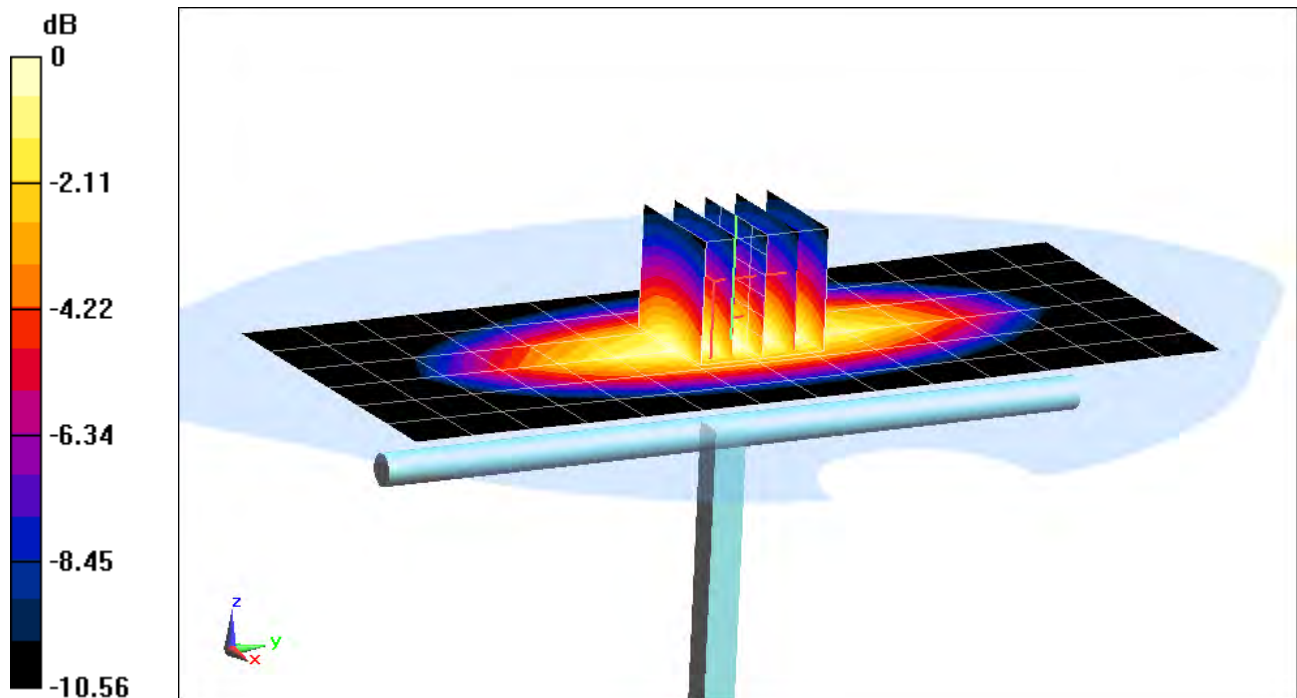
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.839 W/kg

Deviation = 0.24%



0 dB = 0.985 W/kg = -0.07 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d119

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.925 \text{ S/m}$; $\epsilon_r = 41.591$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-15-2014; Ambient Temp: 23.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3263; ConvF(6.23, 6.23, 6.23); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

835 MHz System Verification

Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

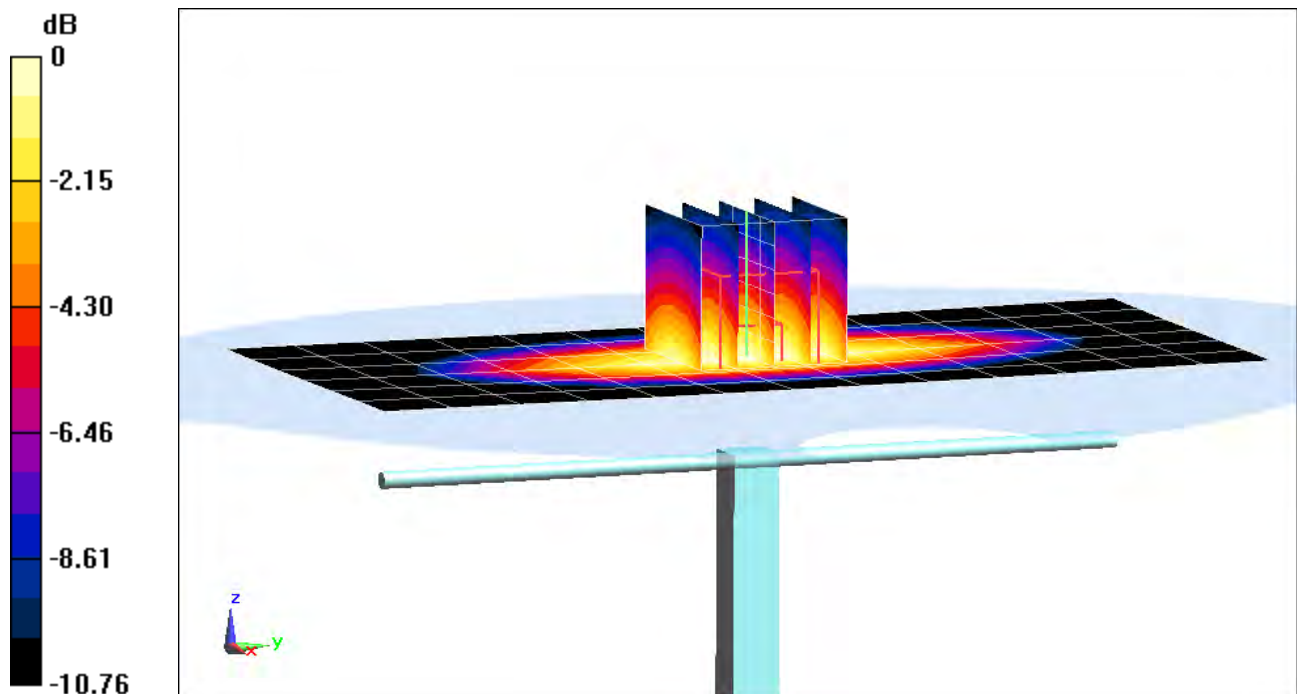
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.961 W/kg

Deviation = 4.23%



0 dB = 1.13 W/kg = 0.53 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 835 MHz; Type: D835V2; Serial: 4d132

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.912 \text{ S/m}$; $\epsilon_r = 42.248$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-17-2014; Ambient Temp: 24.2°C; Tissue Temp: 22.1°C

Probe: ES3DV3 - SN3213; ConvF(6.37, 6.37, 6.37); Calibrated: 4/11/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 11/18/2013

Phantom: Sub TWIN SAM; Type: QD000P40CC; Serial: TP-1357

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

835 MHz System Verification

Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

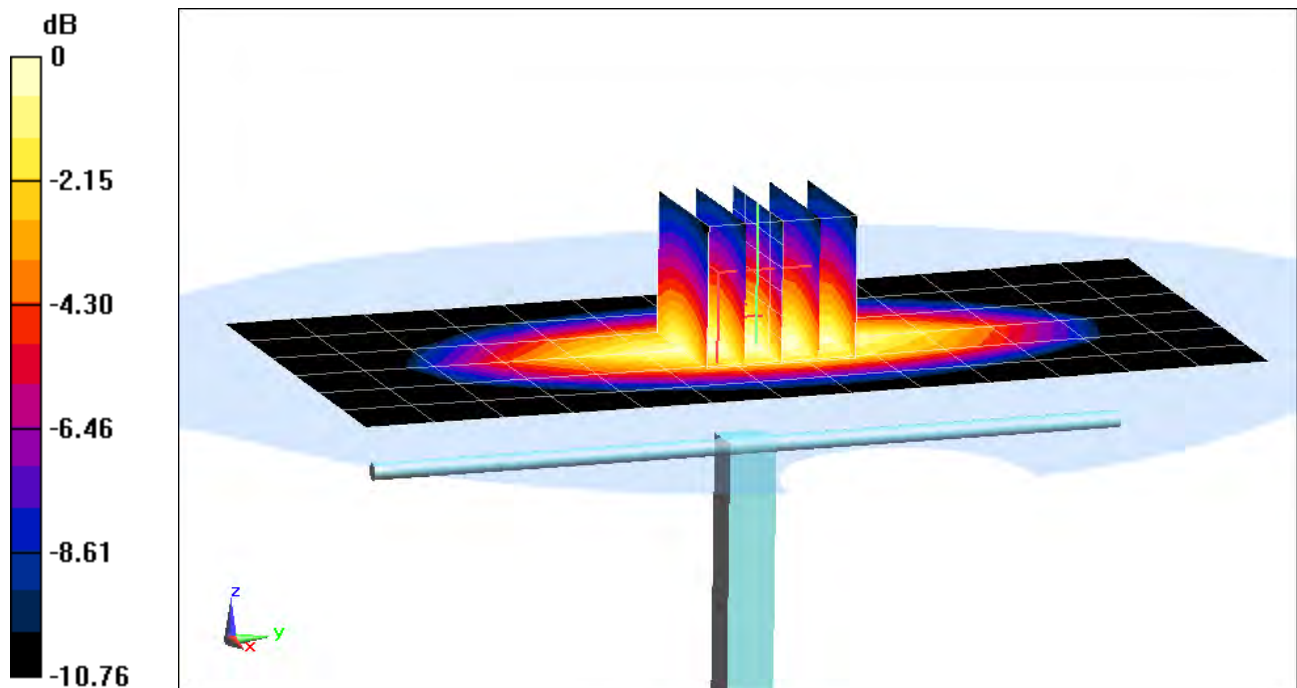
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.984 W/kg

Deviation = 6.15%



0 dB = 1.14 W/kg = 0.57 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1765 MHz; Type: D1765V2; Serial: 1008

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Head Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.355 \text{ S/m}$; $\epsilon_r = 40.019$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2014; Ambient Temp: 21.3°C; Tissue Temp: 22.4°C

Probe: ES3DV3 - SN3258; ConvF(5.19, 5.19, 5.19); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: SAM Front; Type: SAM; Serial: 1686

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1750 MHz System Verification

Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

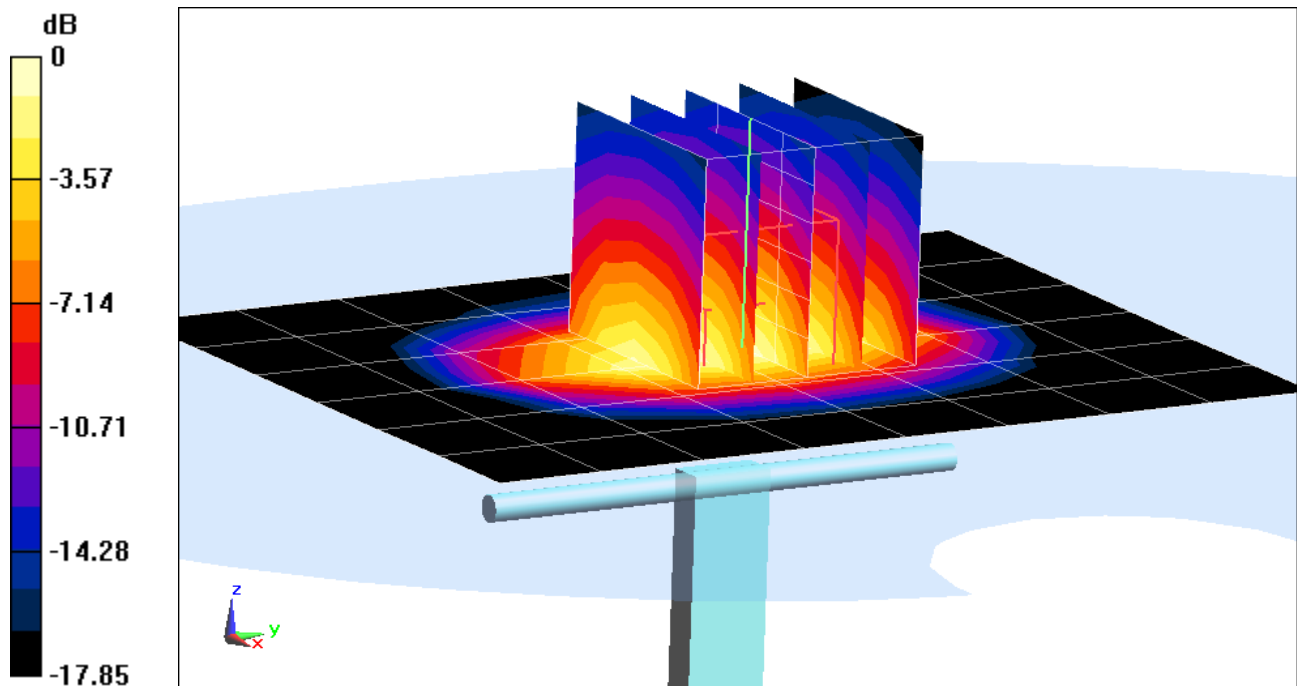
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 6.23 W/kg

SAR(1 g) = 3.4 W/kg

Deviation = -7.86%



0 dB = 4.24 W/kg = 6.27 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d141

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Head Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.397 \text{ S/m}$; $\epsilon_r = 39.238$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-11-2014; Ambient Temp: 23.9°C; Tissue Temp: 23.2°C

Probe: ES3DV3 - SN3287; ConvF(5.08, 5.08, 5.08); Calibrated: 11/20/2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 11/19/2013

Phantom: SAM with CRP v4.0; Type: QD000P40CD; Serial: TP:1797

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1900 MHz System Verification

Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

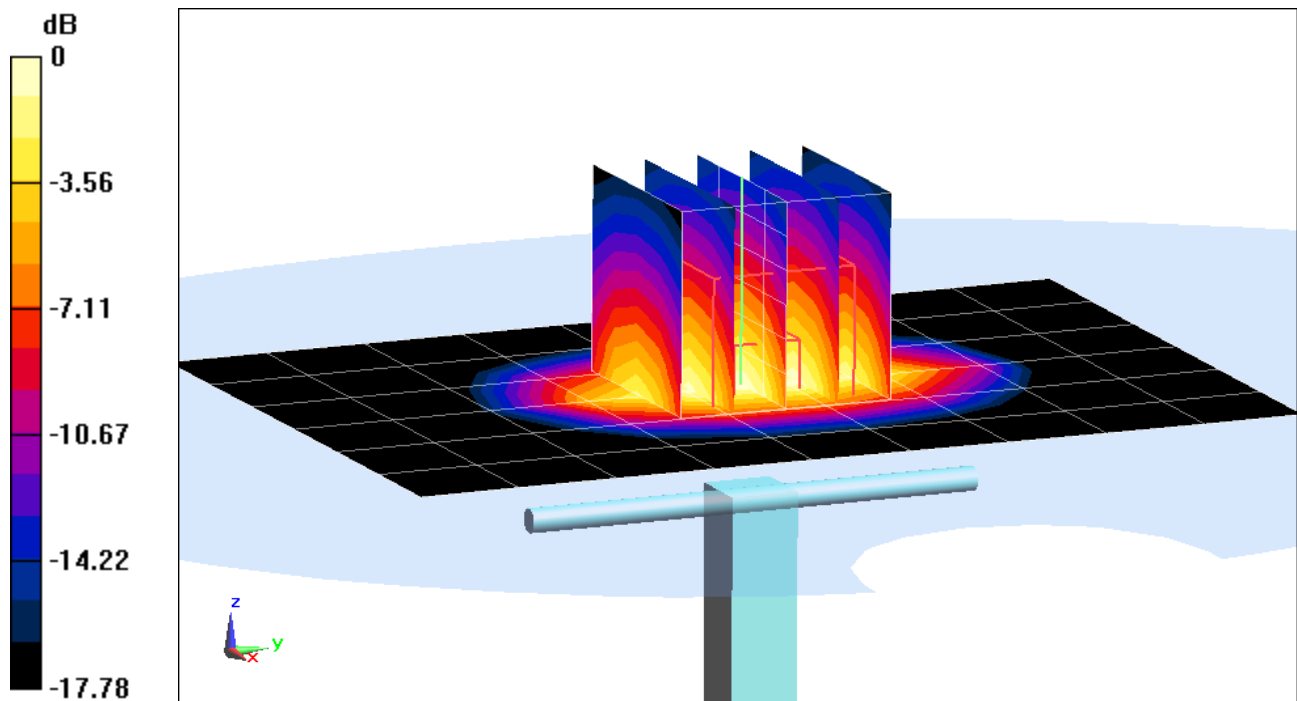
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 7.11 W/kg

SAR(1 g) = 3.95 W/kg

Deviation = -1.50%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: 5d148

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Head Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.437 \text{ S/m}$; $\epsilon_r = 38.945$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.8°C; Tissue Temp: 22.7°C

Probe: ES3DV3 - SN3318; ConvF(5.33, 5.33, 5.33); Calibrated: 3/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 6/19/2014

Phantom: Main Twin Sam; Type: QD000P40CC; Serial: TP:1375

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1900 MHz System Verification

Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

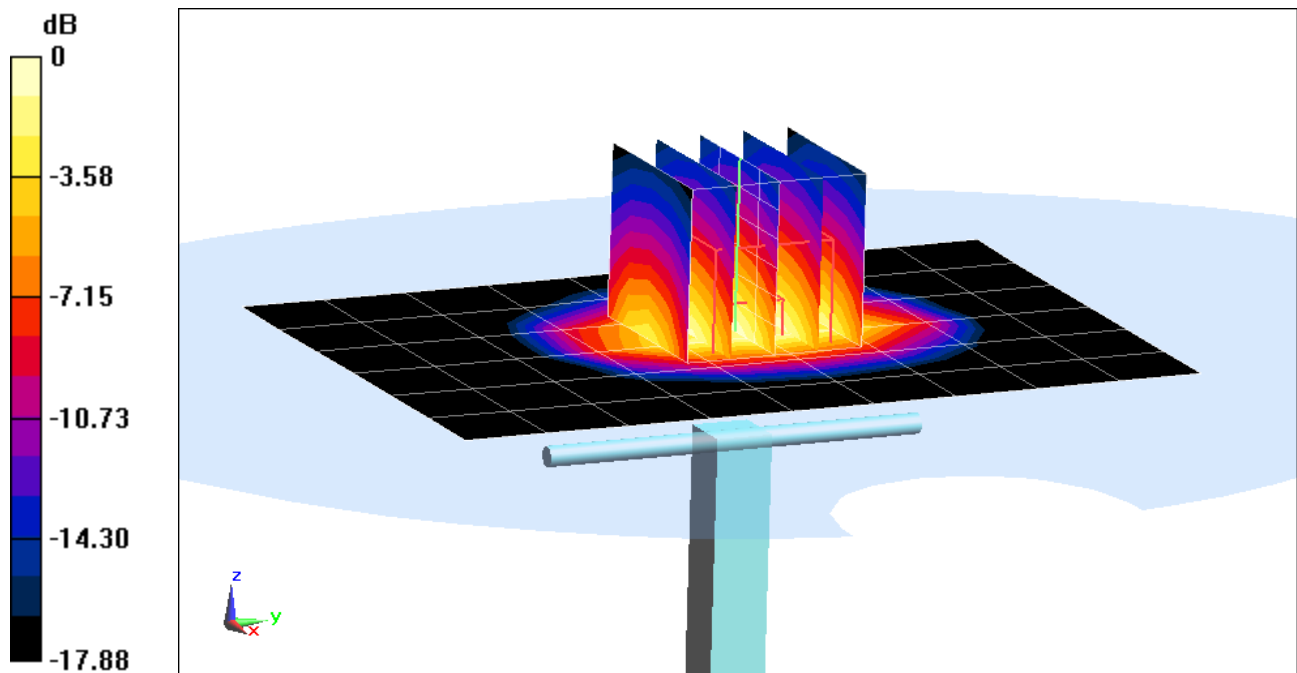
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 7.43 W/kg

SAR(1 g) = 4 W/kg

Deviation = -1.72%



0 dB = 4.46 W/kg = 6.49 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 Head Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 1.815 \text{ S/m}$; $\epsilon_r = 39.696$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 24.4°C; Tissue Temp: 23.6°C

Probe: ES3DV3 - SN3258; ConvF(4.52, 4.52, 4.52); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: SAM Front; Type: SAM; Serial: 1686

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

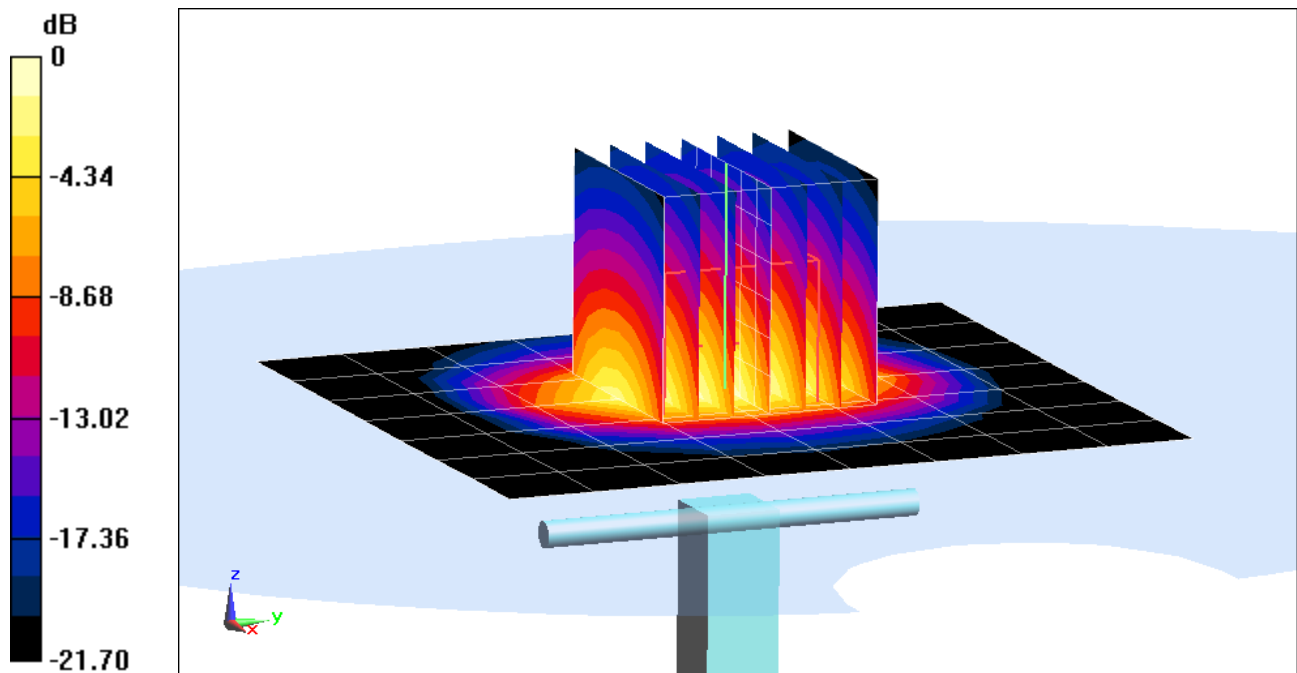
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.36 W/kg

Deviation = 3.47%



0 dB = 6.97 W/kg = 8.43 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5200 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5200 \text{ MHz}$; $\sigma = 4.616 \text{ S/m}$; $\epsilon_r = 35.605$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.7°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(4.99, 4.99, 4.99); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5200 MHz System Verification

Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

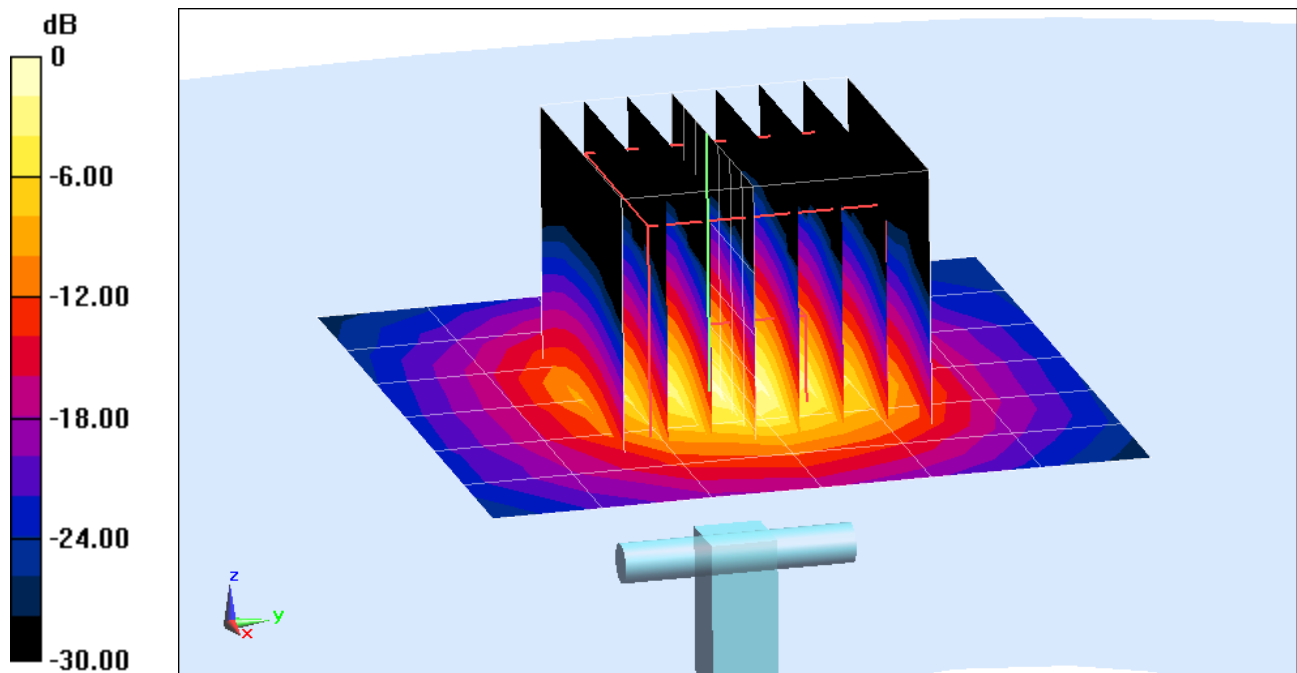
Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 32.3 W/kg

SAR(1 g) = 7.64 W/kg

Deviation = -2.05%



0 dB = 17.6 W/kg = 12.46 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5300 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5300 \text{ MHz}$; $\sigma = 4.718 \text{ S/m}$; $\epsilon_r = 35.464$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.7°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(4.82, 4.82, 4.82); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5300 MHz System Verification

Area Scan (7x8x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

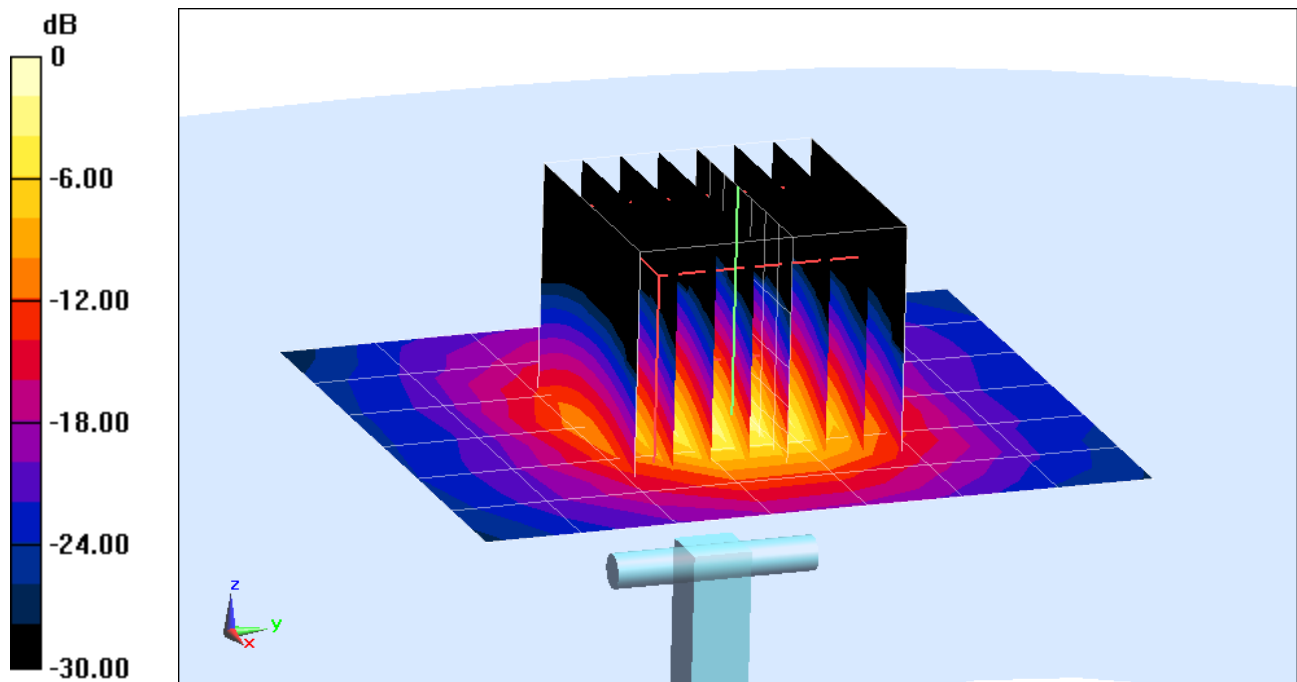
Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 34.8 W/kg

SAR(1 g) = 7.98 W/kg

Deviation = -3.86%



0 dB = 18.7 W/kg = 12.72 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5500 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5500 \text{ MHz}$; $\sigma = 4.93 \text{ S/m}$; $\epsilon_r = 35.172$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(4.55, 4.55, 4.55); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5500 MHz System Verification

Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

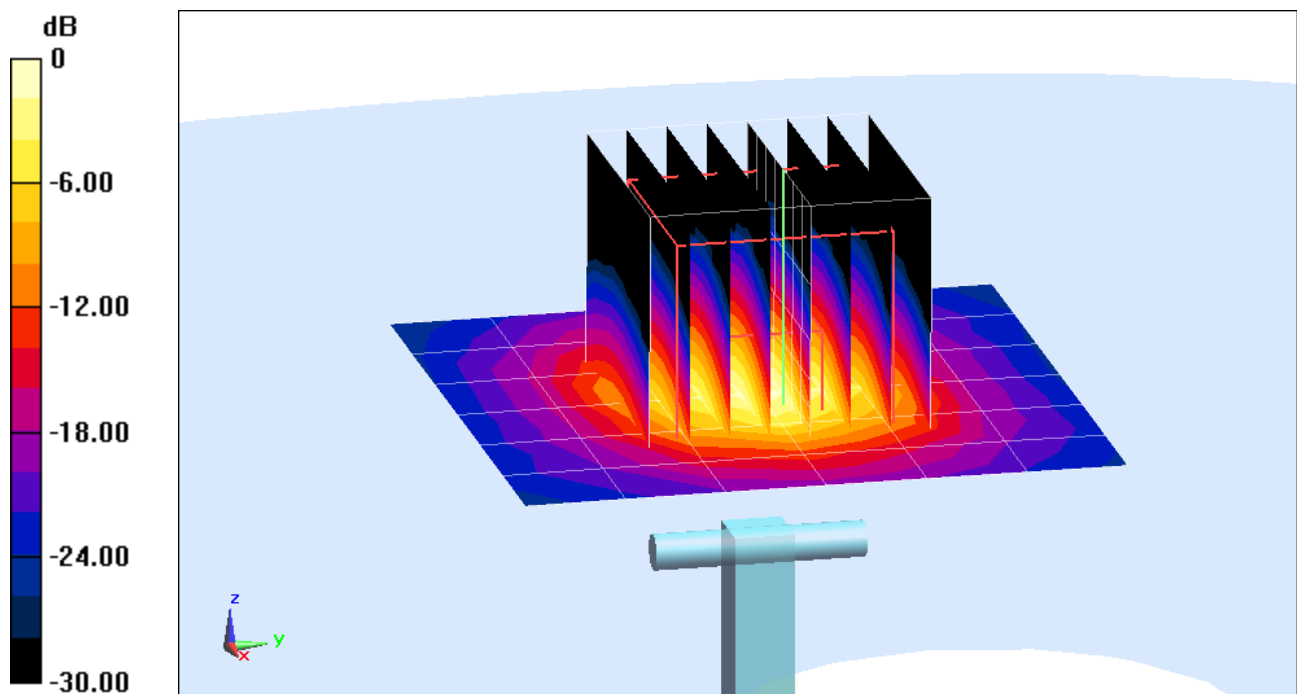
Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 36.5 W/kg

SAR(1 g) = 8.11 W/kg

Deviation = -3.80%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5600 \text{ MHz}$; $\sigma = 5.028 \text{ S/m}$; $\epsilon_r = 35.015$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN3914; ConvF(4.37, 4.37, 4.37); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5600 MHz System Verification

Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

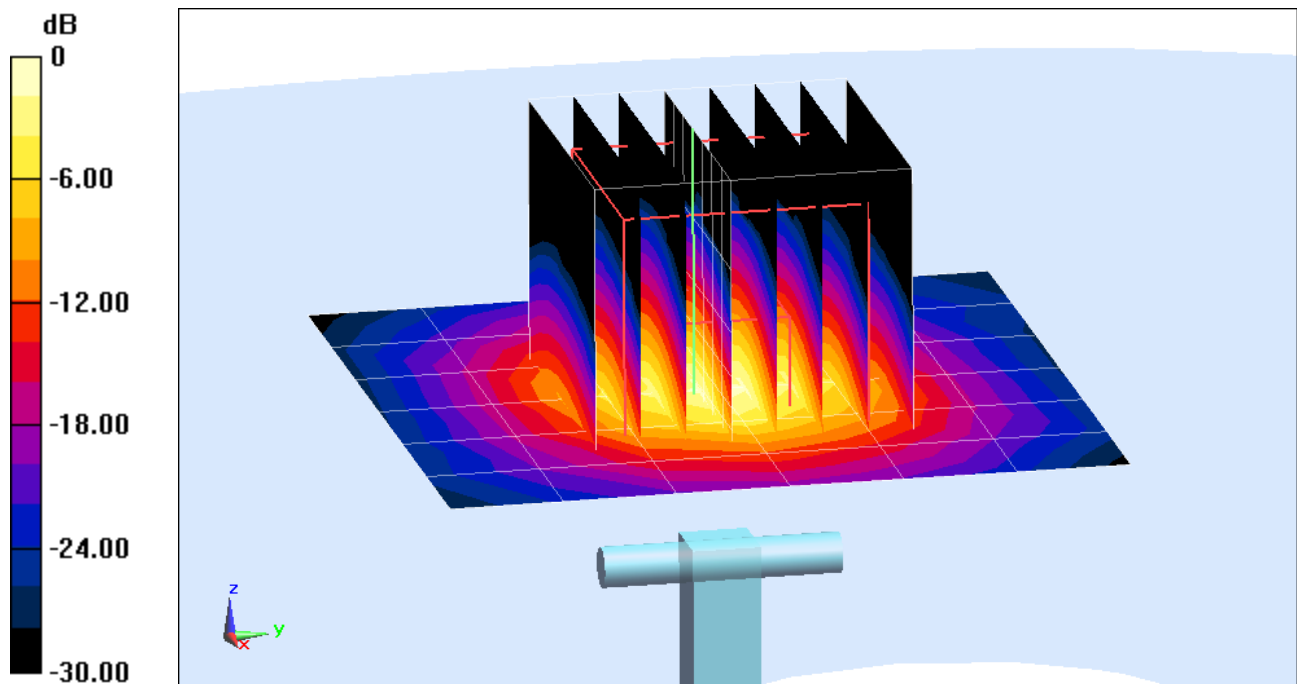
Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 37.6 W/kg

SAR(1 g) = 8.32 W/kg

Deviation = -0.36%



0 dB = 20.2 W/kg = 13.05 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5800 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5 GHz Head Medium parameters used:

$f = 5800 \text{ MHz}$; $\sigma = 5.218 \text{ S/m}$; $\epsilon_r = 34.764$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(4.52, 4.52, 4.52); Calibrated: 10/23/2013;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 11/19/2013

Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5800 MHz System Verification

Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

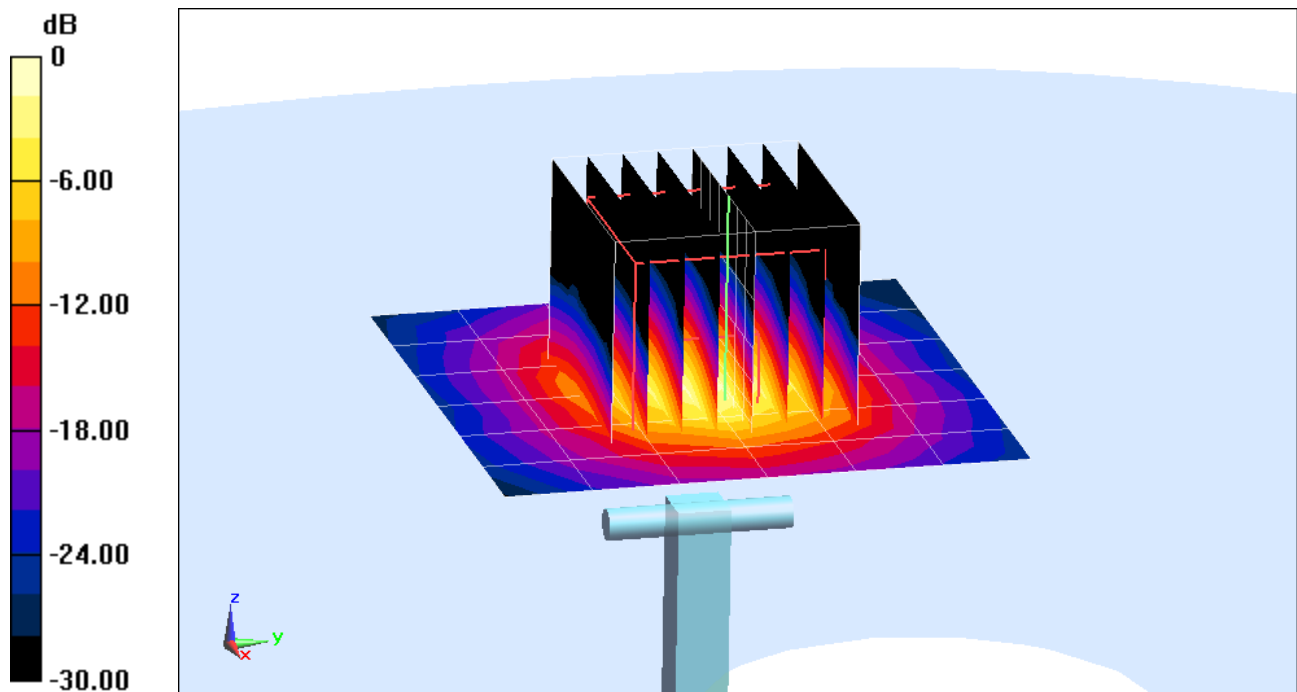
Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 34.9 W/kg

SAR(1 g) = 7.35 W/kg

Deviation = -7.31%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 750 \text{ MHz}$; $\sigma = 0.981 \text{ S/m}$; $\epsilon_r = 54.282$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-11-2014; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3258; ConvF(6.15, 6.15, 6.15); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP-1158

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

750 MHz System Verification

Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

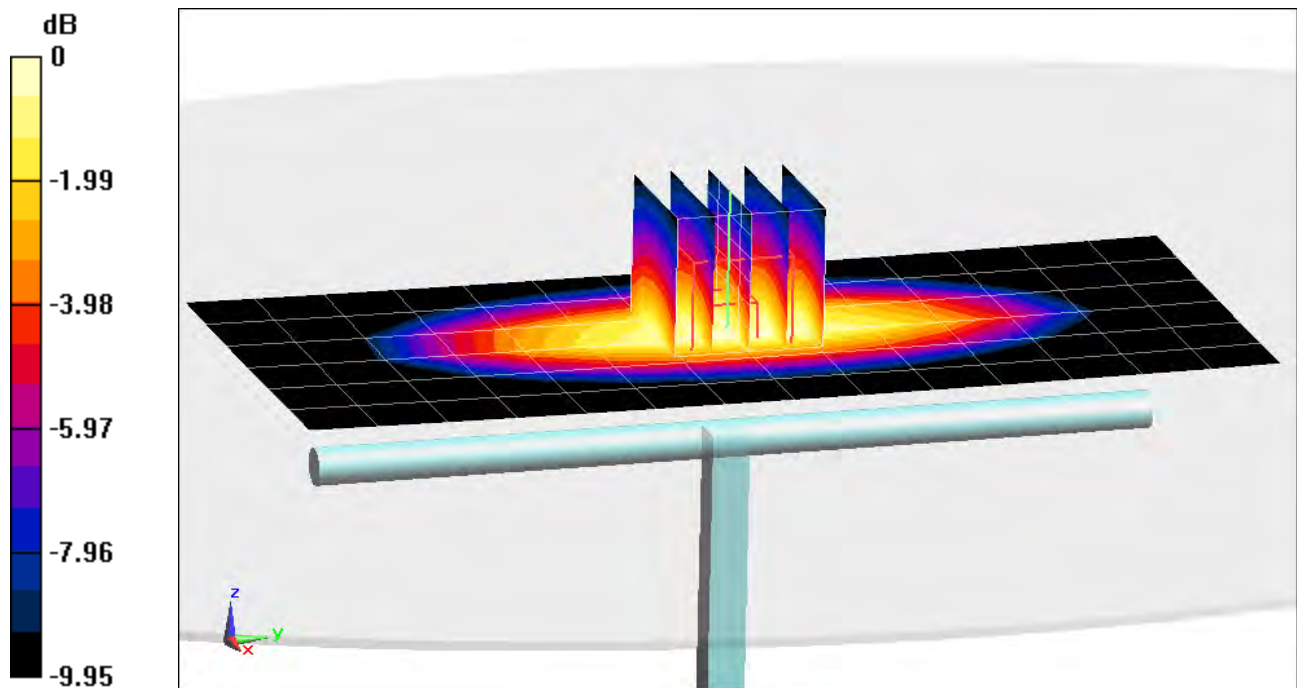
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.865 W/kg

Deviation = -1.37%



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 750 MHz; Type: D750V3; Serial: 1003

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 750 \text{ MHz}$; $\sigma = 0.971 \text{ S/m}$; $\epsilon_r = 53.767$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-17-2014; Ambient Temp: 23.9°C; Tissue Temp: 22.4°C

Probe: ES3DV3 - SN3209; ConvF(6.16, 6.16, 6.16); Calibrated: 3/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM front; Type: QD000P40CD; Serial: TP:1759

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

750 MHz System Verification

Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

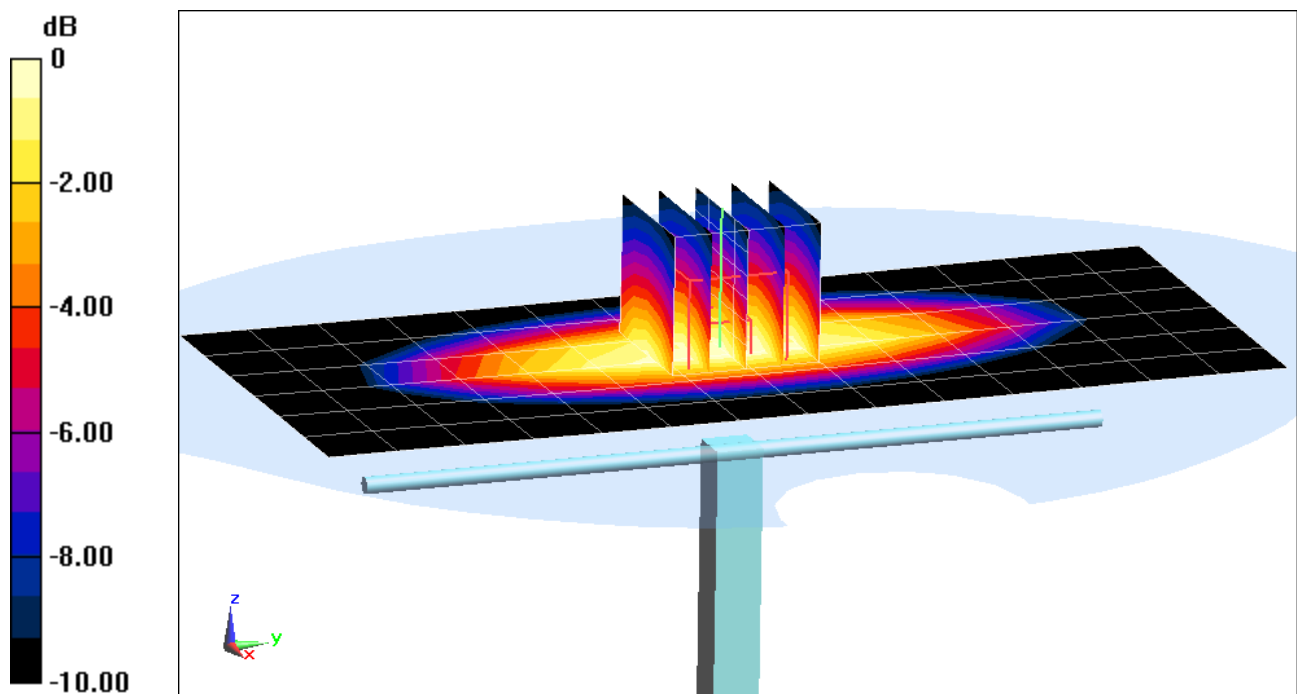
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.920 W/kg

Deviation = 4.90%



0 dB = 1.07 W/kg = 0.29 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d119

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 1.015 \text{ S/m}$; $\epsilon_r = 54.216$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-08-2014; Ambient Temp: 23.8°C; Tissue Temp: 23.5°C

Probe: ES3DV3 - SN3263; ConvF(6.16, 6.16, 6.16); Calibrated: 5/15/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 5/14/2014

Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

835 MHz System Verification

Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

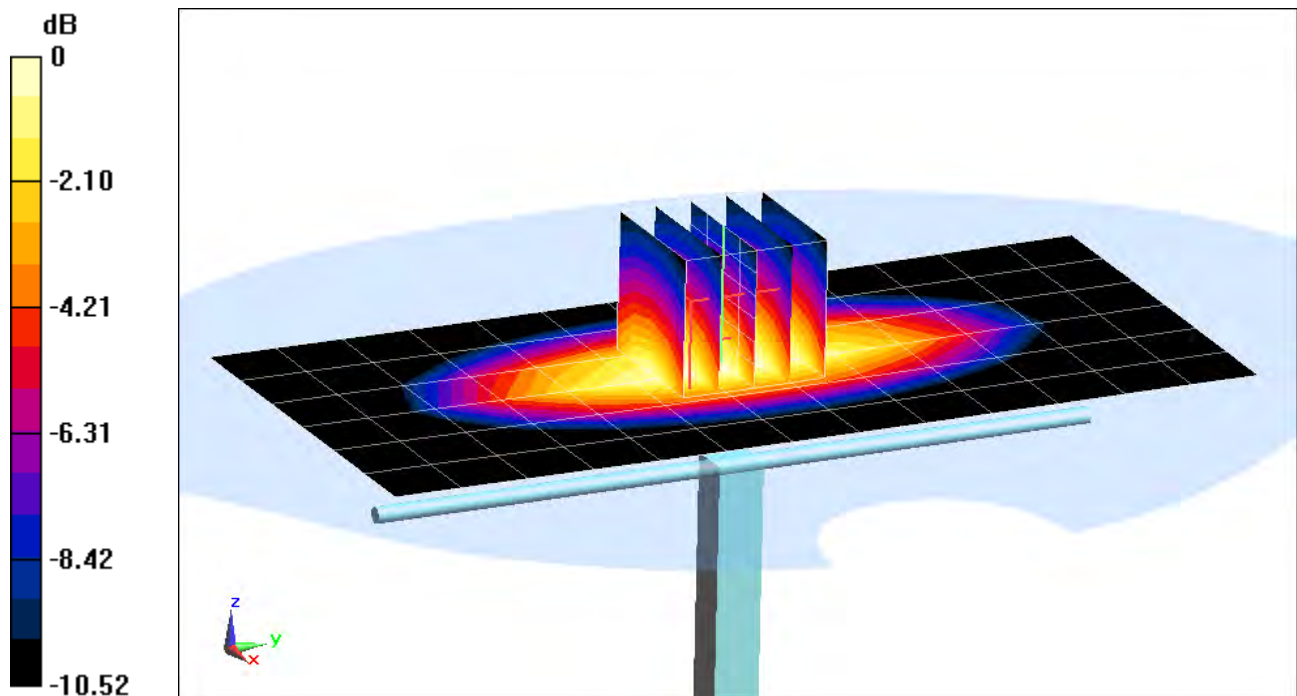
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.974 W/kg

Deviation = 4.28%



0 dB = 1.14 W/kg = 0.57 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1765 MHz; Type: D1765V2; Serial: 1008

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.453 \text{ S/m}$; $\epsilon_r = 51.319$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2014; Ambient Temp: 23.0°C; Tissue Temp: 23.6°C

Probe: ES3DV3 - SN3287; ConvF(4.93, 4.93, 4.93); Calibrated: 11/20/2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 11/19/2013

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1229

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1750 MHz System Verification

Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

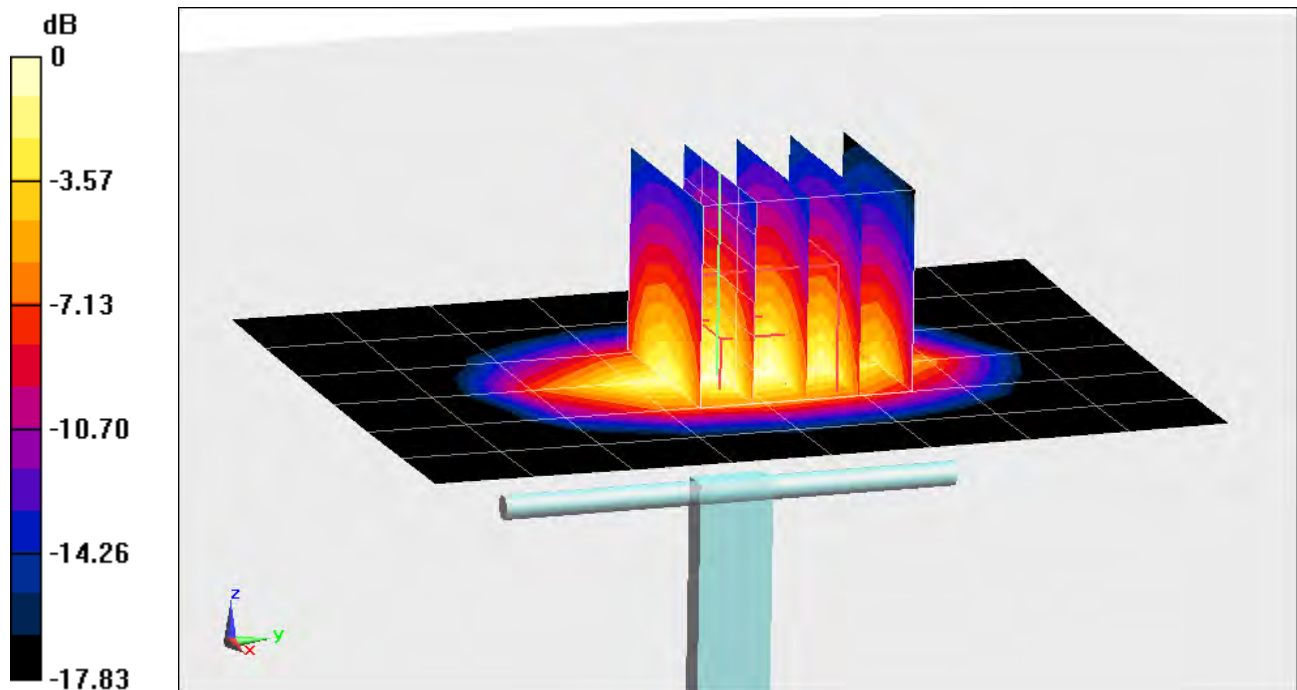
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 6.65 W/kg

SAR(1 g) = 3.81 W/kg

Deviation = 1.33%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.479 \text{ S/m}$; $\epsilon_r = 52.229$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2014; Ambient Temp: 22.1°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3319; ConvF(4.85, 4.85, 4.85); Calibrated: 4/17/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 4/11/2014

Phantom: SAM; Type: QD000P40CD; Serial: TP:1758

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1750 MHz System Verification

Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

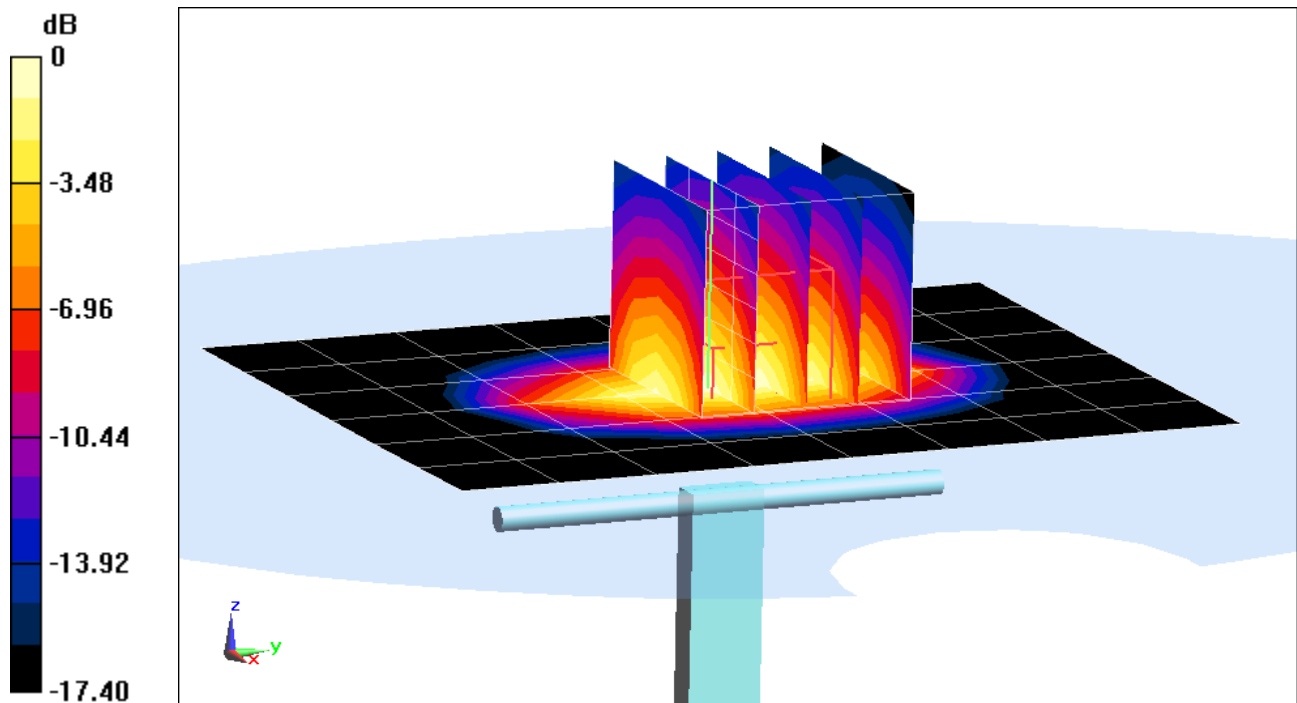
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 6.62 W/kg

SAR(1 g) = 3.81 W/kg

Deviation = 1.33%



0 dB = 4.73 W/kg = 6.75 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d141

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.558 \text{ S/m}$; $\epsilon_r = 51.689$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2014; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: ES3DV2 - SN3022; ConvF(4.49, 4.49, 4.49); Calibrated: 8/19/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 8/12/2014

Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1226

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

1900 MHz System Verification

Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

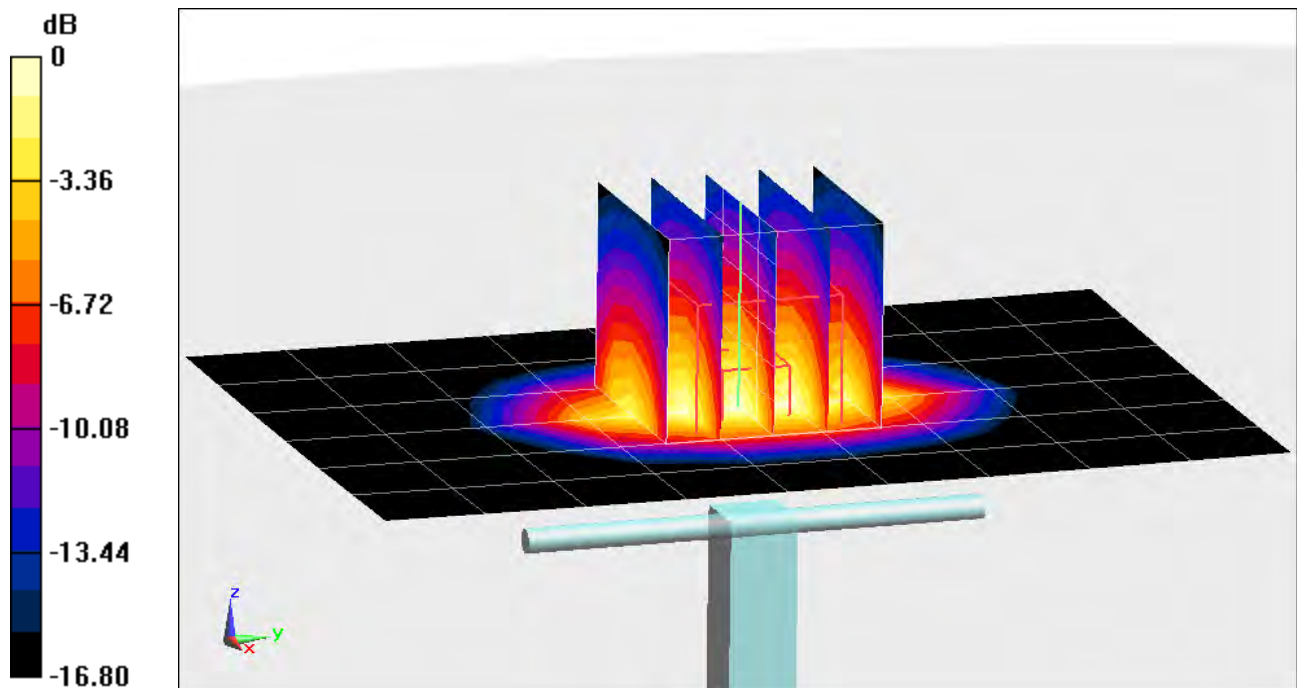
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 7.46 W/kg

SAR(1 g) = 4.36 W/kg; SAR(10 g) = 2.32 W/kg

Deviation (1 g) = 7.39%; Deviation (10 g) = 7.41%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 1.966 \text{ S/m}$; $\epsilon_r = 50.772$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 22.2°C; Tissue Temp: 23.2°C

Probe: ES3DV3 - SN3258; ConvF(4.14, 4.14, 4.14); Calibrated: 2/25/2014;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/26/2014

Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP-1158

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

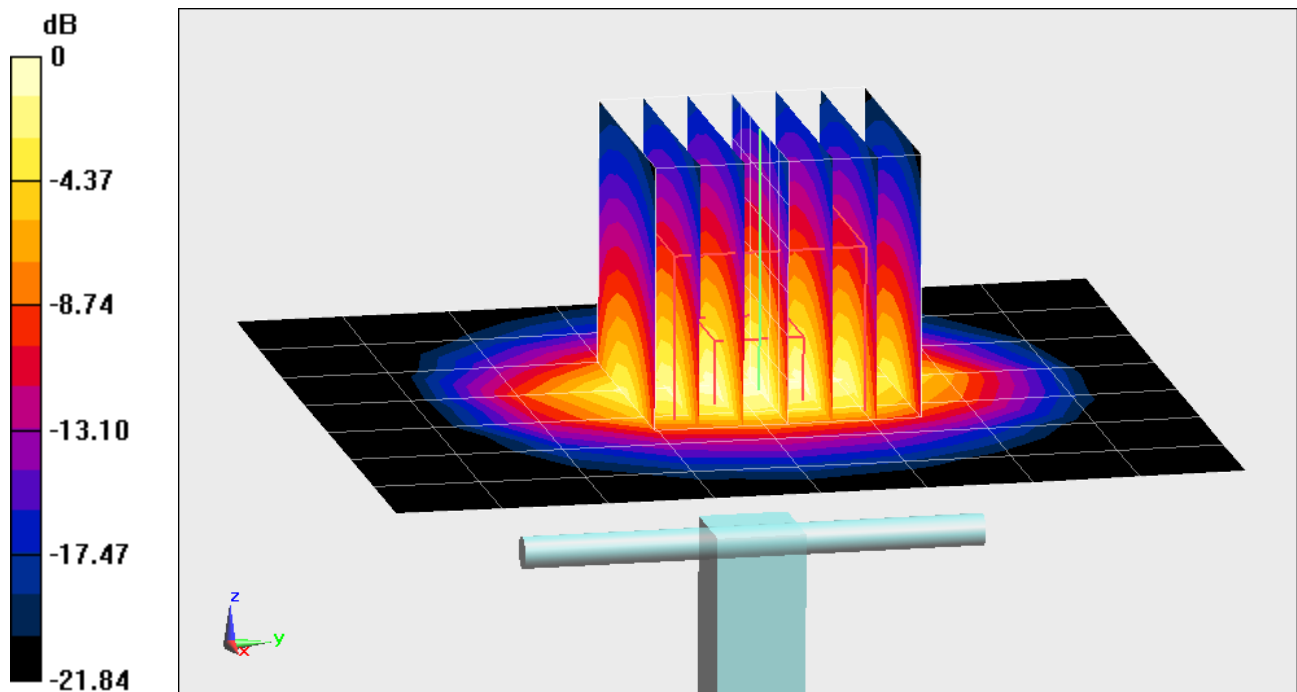
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 10.8 W/kg

SAR(1 g) = 5.13 W/kg

Deviation = 3.85%



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 5200 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5200 \text{ MHz}$; $\sigma = 5.137 \text{ S/m}$; $\epsilon_r = 48.028$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(4.19, 4.19, 4.19); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5200 MHz System Verification

Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm

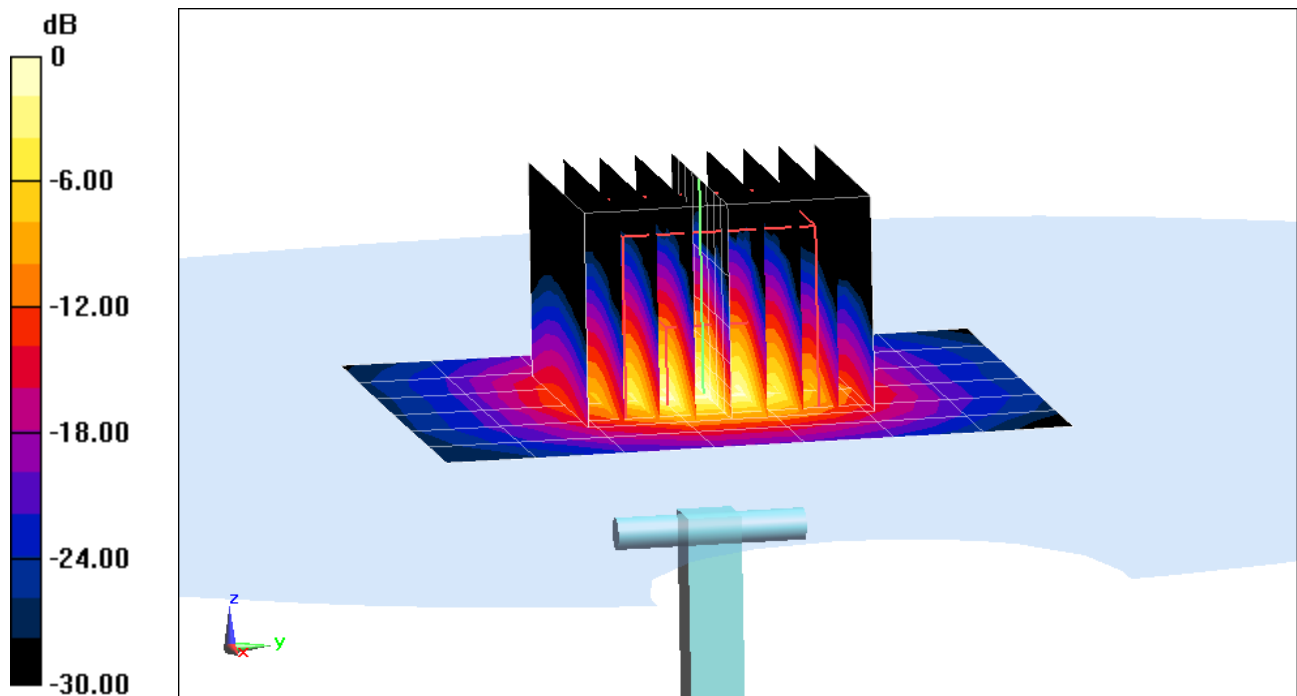
Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 33.6 W/kg

SAR(1 g) = 7.96 W/kg; SAR(10 g) = 2.24 W/kg

Deviation(1 g) = 5.71%; Deviation(10 g) = 6.67%



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 5300 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5300 \text{ MHz}$; $\sigma = 5.288 \text{ S/m}$; $\epsilon_r = 47.796$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.98, 3.98, 3.98); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5300 MHz System Verification

Area Scan (7x8x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

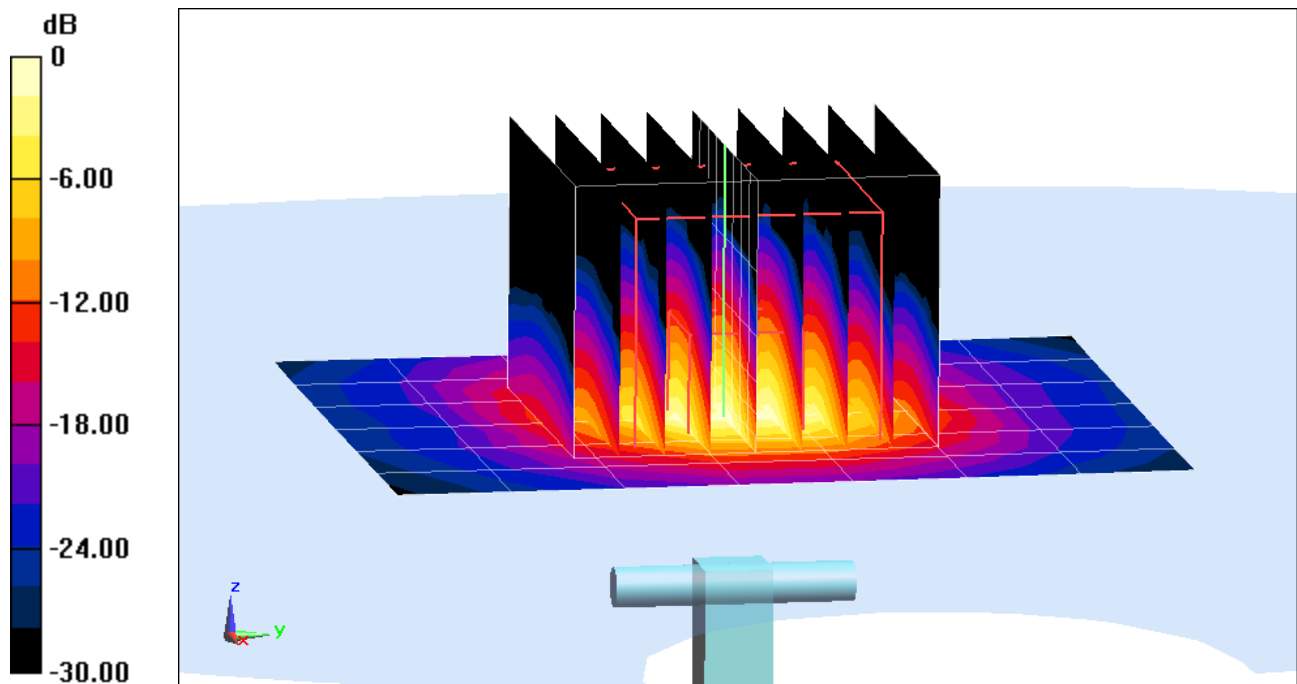
Zoom Scan (9x9x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 35.8 W/kg

SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.27 W/kg

Deviation(1 g) = 5.04%; Deviation(10 g) = 5.58%



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 5500 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5500 \text{ MHz}$; $\sigma = 5.585 \text{ S/m}$; $\epsilon_r = 47.304$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.76, 3.76, 3.76); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5500 MHz System Verification

Area Scan (7x8x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

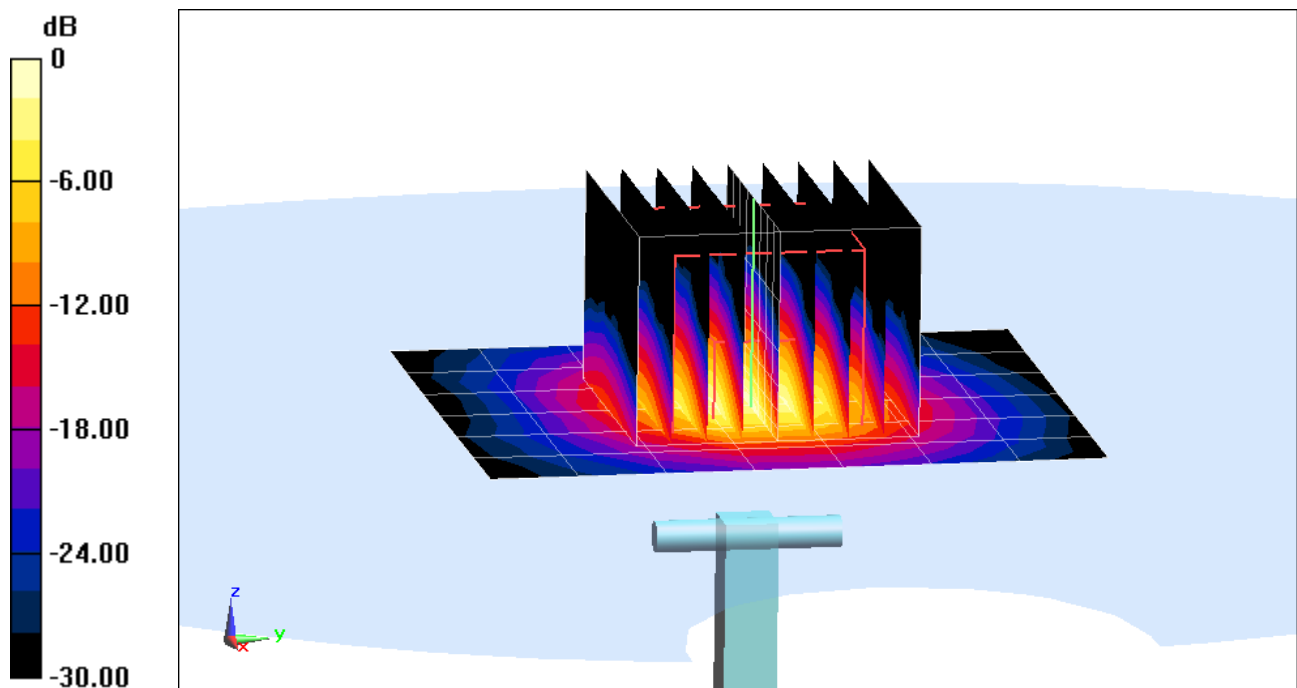
Zoom Scan (9x9x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 33.2 W/kg

SAR(1 g) = 7.39 W/kg; SAR(10 g) = 2.06 W/kg

Deviation (1 g) = -6.57%; Deviation(10 g) = -6.36%



0 dB = 19.1 W/kg = 12.81 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 5600 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5600 \text{ MHz}$; $\sigma = 5.743 \text{ S/m}$; $\epsilon_r = 47.072$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.81, 3.81, 3.81); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5600 MHz System Verification

Area Scan (7x8x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

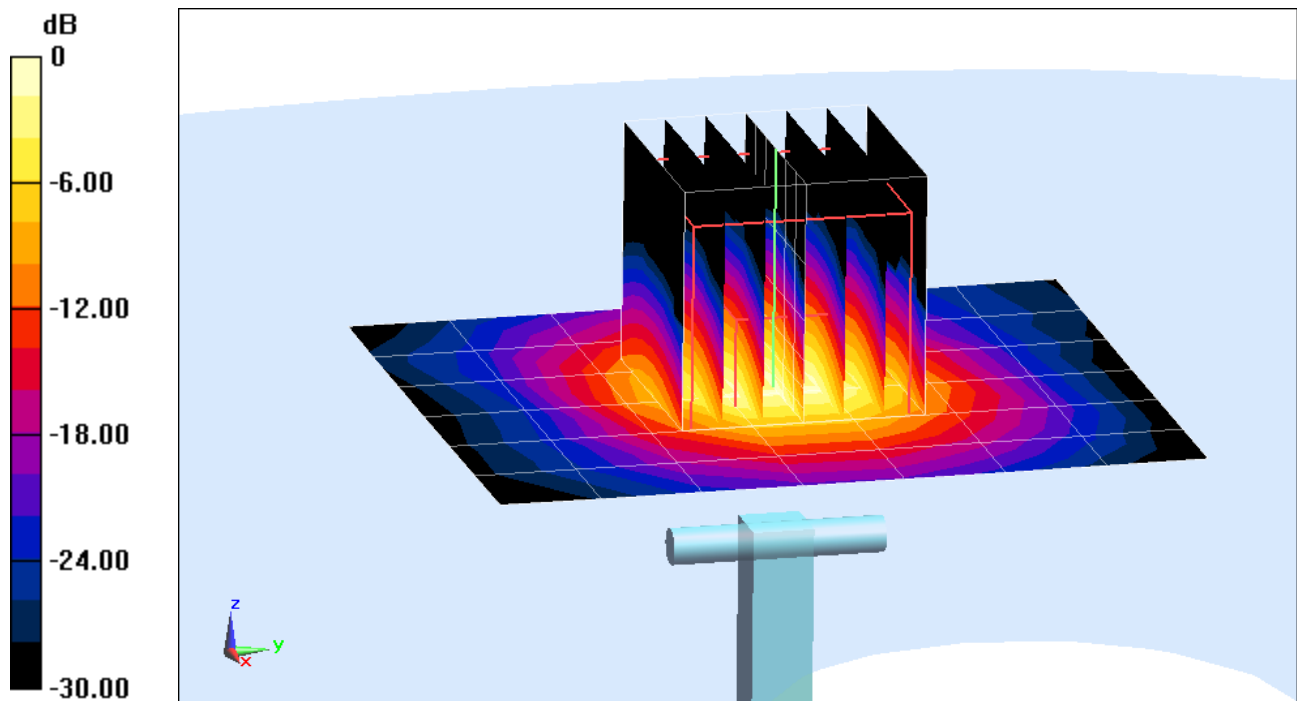
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 38.8 W/kg

SAR(1 g) = 7.71 W/kg; SAR(10 g) = 2.14 W/kg

Deviation(1 g) = -3.87%; Deviation(10 g) = -3.60%



0 dB = 20.7 W/kg = 13.16 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 5800 MHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5 GHz Body Medium parameters used:

$f = 5800 \text{ MHz}$; $\sigma = 6.026 \text{ S/m}$; $\epsilon_r = 46.631$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-09-2014; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(3.97, 3.97, 3.97); Calibrated: 1/29/2014;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 3/17/2014

Phantom: SAM Right; Type: SAM; Serial: 1757

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

5800 MHz System Verification

Area Scan (7x8x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Input Power = 20 dBm (100 mW)

Peak SAR (extrapolated) = 34.5 W/kg

SAR(1 g) = 7.11 W/kg; SAR(10 g) = 1.96 W/kg

Deviation(1 g) = -4.31%; Deviation(10 g) = -3.92%

