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SAR EVALUATION REPORT

Applicant Name:
LG Electronics MobileComm U.S.A., Inc.
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632
USA

Date of Testing:
09/10/12 - 09/19/12
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
0Y1209051314-R1.ZNF

FCC ID: **ZNFMS870**

APPLICANT: **LG ELECTRONICS MOBILECOMM U.S.A., INC.**

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): MS870, LG-MS870, LGMS870, LG-LW870, LW870, LGLW870

Band & Mode	Tx Frequency	Conducted Power [dBm]	SAR		
			1 gm Head (W/kg)	1 gm Body-Worn (W/kg)	1 gm Hotspot (W/kg)
Cell. CDMA	824.70 - 848.31 MHz	24.70	0.37	0.97	0.97
AWS CDMA/EVDO	1711.25 - 1753.75 MHz	24.11	0.69	1.09	1.09
PCS CDMA/EVDO	1851.25 - 1908.75 MHz	24.10	1.05	1.09	1.09
LTE Band 4 (AWS)	1710.70 - 1754.30 MHz	23.99	0.74	1.06	1.06
LTE Band 2 (PCS)	1850.70 - 1909.30 MHz	23.49	0.91	1.00	1.00
LTE Band 25	1852.50 - 1912.50 MHz	23.61	0.94	0.77	0.77
2.4 GHz WLAN	2412 - 2462 MHz	16.01	0.04	0.07	0.07
Bluetooth	2402 - 2480 MHz	9.99	N/A		
Simultaneous SAR per KDB 690783 D01:			1.19	1.48	1.48

Note: Powers in the above table represent output powers for the SAR test configurations and may not represent the highest output powers for all configurations for each mode.

Note: This revised Test Report (S/N: 0Y1209051314-R1.ZNF) supersedes and replaces the previously issued test report on the same subject EUT for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in FCC/OET Bulletin 65 Supplement C (2001), IEEE 1528-2003 and in applicable Industry Canada Radio Standards Specifications (RSS); 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.

PCTEST certifies that no party to this application has been subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.

Randy Ortanez
President

ACCREDITED
TESTING LABORATORY
CERTIFICATE #2041.01

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Tx Frequency
Cell. CDMA	824.70 - 848.31 MHz
AWS CDMA/EVDO	1711.25 - 1753.75 MHz
PCS CDMA/EVDO	1851.25 - 1908.75 MHz
LTE Band 4 (AWS)	1710.70 - 1754.30 MHz
LTE Band 2 (PCS)	1850.70 - 1909.30 MHz
LTE Band 25	1852.50 - 1912.50 MHz
2.4 GHz WLAN	2412 - 2462 MHz
Bluetooth	2402 - 2480 MHz

1.2 DUT Antenna Locations

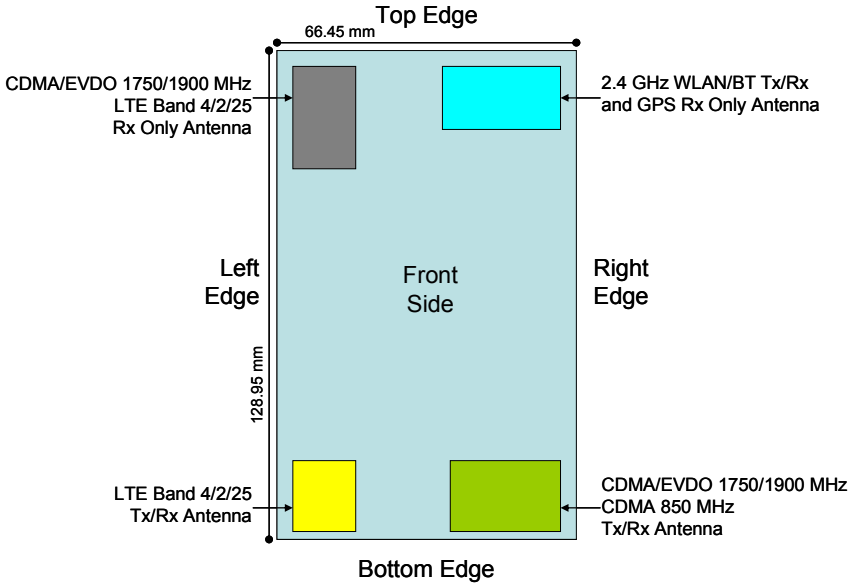

Figure 1-1
DUT Antenna Locations

Table 1-1
Mobile Hotspot Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
Cell. CDMA	Yes	Yes	No	Yes	Yes	No
AWS CDMA/EVDO	Yes	Yes	No	Yes	Yes	No
PCS CDMA/EVDO	Yes	Yes	No	Yes	Yes	No
LTE Band 4 (AWS)	Yes	Yes	No	Yes	No	Yes
LTE Band 2 (PCS)	Yes	Yes	No	Yes	No	Yes
LTE Band 25	Yes	Yes	No	Yes	No	Yes
2.4 GHz WLAN	Yes	Yes	Yes	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for Wireless Router SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06 guidance, page 2. The antenna document shows the distances between the transmit antennas and the edges of the device.

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1.3 Power Reduction for SAR

This device uses power reduction mechanisms for LTE during SVLTE operations (1x-RTT CDMA voice + LTE data) for SAR compliance. See Section 11 for more details.

1.4 Simultaneous Transmission Capabilities

According to KDB 648474, 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 1-2 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.

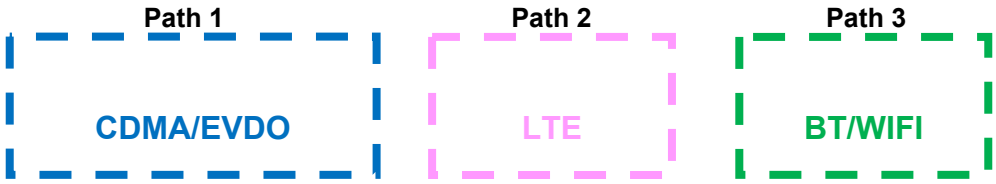

Figure 1-2
Simultaneous Transmission Paths

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

Table 1-2
Simultaneous Transmission Scenarios Supported by EUT

No.	Capable TX Configration	Head SAR	Body SAR	Hotspot SAR	Power Reduction (LTE)	Note
1	CDMA BC0 Voice + WiFi data	Yes	Yes	No	-	
2	CDMA BC1 Voice + WiFi data	Yes	Yes	No	-	
3	CDMA BC15 Voice + WiFi data	Yes	Yes	No	-	
4	CDMA BC0 1X Data + WiFi data	No	No	Yes	-	CDMA Hotspot
5	CDMA BC1 1X Data/EVDO + WiFi data	Yes	Yes	Yes	-	CDMA Hotspot
6	CDMA BC15 1X Data/EVDO+ WiFi data	Yes	Yes	Yes	-	CDMA Hotspot
7	LTE B2 + WiFi data	Yes	Yes	Yes	-	LTE Hotspot
8	LTE B4 + WiFi data	Yes	Yes	Yes	-	LTE Hotspot
9	LTE B25 + WiFi data	Yes	Yes	Yes	-	LTE Hotspot
10	CDMA BC0 Voice + LTE B2	Yes	Yes	No	Yes	SVLTE
11	CDMA BC0 Voice + LTE B4	Yes	Yes	No	Yes	SVLTE
12	CDMA BC0 Voice + LTE B25	Yes	Yes	No	Yes	SVLTE
13	CDMA BC1 Voice + LTE B2	Yes	Yes	No	Yes	SVLTE
14	CDMA BC1 Voice + LTE B4	Yes	Yes	No	Yes	SVLTE
15	CDMA BC1 Voice + LTE B25	Yes	Yes	No	Yes	SVLTE
16	CDMA BC15 Voice + LTE B2	Yes	Yes	No	Yes	SVLTE
17	CDMA BC15 Voice + LTE B4	Yes	Yes	No	Yes	SVLTE
18	CDMA BC15 Voice + LTE B25	Yes	Yes	No	Yes	SVLTE
19	CDMA BC0 Voice + LTE B2 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
20	CDMA BC0 Voice + LTE B4 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
21	CDMA BC0 Voice + LTE B25 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
22	CDMA BC1 Voice + LTE B2+ WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
23	CDMA BC1 Voice + LTE B4+ WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
24	CDMA BC1 Voice + LTE B25+ WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
25	CDMA BC15 Voice + LTE B2 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
26	CDMA BC15 Voice + LTE B4 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)
27	CDMA BC15 Voice + LTE B25 + WLAN	Yes	Yes	Yes	Yes	WIFI Hotspot (SVLTE)

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1.5 SAR Test Exclusions Applied

(A) WIFI/BT

The separation between the CDMA/EVDO antenna and the Bluetooth/WLAN antennas is 87 mm.
The separation between the LTE antenna and the Bluetooth/WLAN antennas is 95.2 mm.
RF Conducted Power of Bluetooth Tx is 9.977 mW (Please refer to the EMC DSS Report for a full set of Bluetooth conducted powers).

2.4 GHz WIFI and Bluetooth share the same antenna path and cannot transmit simultaneously.

Per KDB Publication 648474, **Bluetooth SAR was not required** based on the maximum conducted power, the Bluetooth/WLAN to main antenna separation distance and Body-SAR of the main antenna.

(B) Licensed Transmitter(s)

EVDO is not supported for Cell. CDMA.

LTE SAR for the lower BWs was not tested since the maximum average output power of all channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and LTE SAR for the highest BW was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05.

1.6 Guidance Applied

- FCC OET Bulletin 65 Supplement C [June 2001]
- IEEE 1528-2003
- FCC KDB 941225 (2G/3G/4G and Hotspot)
- FCC KDB 248227 (802.11)
- FCC KDB 648474 (Simultaneous)
- October 2011 TCB/FCC Workshop (1x Advanced)

1.7 Samples used for SAR testing

Several samples were used with identical hardware. Reduced power levels were configured by the manufacturer via software to support SAR test cases. The software used by the manufacturer to configure power levels is only available to the manufacturer.

Mode	1x Cell. CDMA		1x AWS/PCS CDMA		AWS/PCS EVDO
Target Power (dBm)	24.2	17.7	23.7	17.7	23.7
Serial No.	CDMA Max	1x Limit	CDMA Max	1x Limit	EVDO Max

Mode	LTE Band 4		LTE Band 2/25		2.4 GHz WLAN
Target Power (dBm)	23.7	18.2	23.2	18.2	–
Serial No.	LTE Max	LTE Limit	LTE Max	LTE Limit	BT/WLAN

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2 LTE CHECKLIST PER KDB 941225 D05

KDB 941225 Pub LTE Information				
KDB 941225 Section	FCC ID	ZNFMS870		
	Form Factor	Portable Handset		
1)	Frequency Range of each LTE transmission band	Band 4: 1710.7 - 1754.3 MHz		
		Band 2: 1850.7 - 1909.3 MHz		
		Band 25: 1852.5 - 1907.5 MHz		
2)	Channel Bandwidths	Band 4: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz		
		Band 2: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz		
		Band 25: 5 MHz, 10 MHz		
3)	Channel Numbers and Frequencies (MHz)	Low	Mid	High
	Band 4, 1.4 MHz BW	1710.7 MHz (19957)	1732.5 MHz (20175)	1754.3 MHz (20393)
	Band 4, 3 MHz BW	1711.5 MHz (19965)	1732.5 MHz (20175)	1753.5 MHz (20385)
	Band 4, 5 MHz BW	1712.5 MHz (19975)	1732.5 MHz (20175)	1752.5 MHz (20375)
	Band 4, 10 MHz BW	1715.0 MHz (20000)	1732.5 MHz (20175)	1750.0 MHz (20350)
	Band 2, 1.4 MHz BW	1850.7 MHz (18607)	1880.0 MHz (18900)	1909.3 MHz (19193)
	Band 2, 3 MHz BW	1851.5 MHz (18615)	1880.0 MHz (18900)	1908.5 MHz (19185)
	Band 2, 5 MHz BW	1852.5 MHz (18625)	1880.0 MHz (18900)	1907.5 MHz (19175)
	Band 2, 10 MHz BW	1855.0 MHz (18650)	1880.0 MHz (18900)	1905.0 MHz (19150)
	Band 25, 5 MHz BW	1852.5 Mhz (26065)	1882.5 MHz (26365)	1912.5 MHz (26665)
	Band 25, 10 MHz BW	1855.0 MHz (26090)	1882.5 MHz (26365)	1910.0 MHz (26640)
4)(a)	UE Category	UE category 3		
(b)	Modulations Supported in UL	QPSK, 16QAM		
	LTE Transmitter and Antenna Implementation	CDMA/EVDO and LTE have different transmission paths		
5)	Description of LTE Tx and Ant. Implementation	1 Tx/Rx Ant for LTE Band 4/2/25 and 1 Rx only Ant for LTE Band 4/2/25		
6)	LTE Voice available?	No		
	Hotspot with LTE+WIFI	Yes		
	Hotspot with LTE+WIFI active with 1xVoice sessions?	Yes		
7)	LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	See Section 10.2 and Section 11.3		
	A-MPR (Additional MPR) disabled for SAR Testing?	Yes		
8)	Conducted power Table provided for 1RB (low and high offset), 50% RB (centered), 100% RB	Yes		
9-10)	Non-LTE US Wireless Operating Modes/Band	RF Output Power	RF Exposure Configurations	
	CDMA 850 MHz	See page 1		
	CDMA/EVDO 1750 MHz			
	CDMA/EVDO 1900 MHz			
	Bluetooth			
	2.4 GHz WLAN			
11)	Simultaneous Tx Conditions (Voice and Data Configurations)	See section 1.4		
12)	Power Reduction used for SAR Compliance?	Yes		
13)	Describe Power Reduction (LTE Modes)	SVLTE: See Section 11		
14)	SAR Test Plan	See Section 11		
15)	SAR test data	See Section 13		

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3 INTRODUCTION

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 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 [24]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

3.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 3-1).

Equation 3-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho\, dv}\right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/m^3)
E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

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4 SAR MEASUREMENT SETUP

4.1 Automated SAR Measurement System

Measurements are performed using the DASY automated dosimetric SAR assessment system. The DASY is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland and consists of a high precision robotics system (Staubli), robot controller, desktop computer, near-field probe, probe alignment sensor, and the SAM phantom containing the head or body equivalent material. The robot is a six-axis industrial robot, performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). See www.speag.com for more information about the specification of the SAR assessment system.

Figure 4-1
SAR Measurement System

Figure 4-2
Near-Field Probe

Table 4-1
Composition of the Tissue Equivalent Matter

Frequency (MHz)	835	835	1750	1750	1900	1900	2450	2450
Tissue	Head	Body	Head	Body	Head	Body	Head	Body
Ingredients (% by weight)								
Bactericide	0.1	0.1						
DGBE			47	31	44.92	29.44	7.99	26.7
HEC	1	1						
NaCl	1.45	0.94	0.4	0.2	0.18	0.39	0.16	0.1
Sucrose	57	44.9						
Triton X-100							19.97	
Water	40.45	53.06	52.6	68.8	54.9	70.17	71.88	73.2

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5 DOSIMETRIC ASSESSMENT

5.1 Measurement Procedure

The evaluation was performed using the following procedure:

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 interface and the horizontal grid resolution was 15mm and 15mm for frequencies < 3 GHz in the x and y directions respectively. When applicable, for frequencies above 3 GHz, a 10 mm by 10 mm resolution was used.
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 1 gram cube evaluation. SAR at this fixed point was measured and used as a reference value.

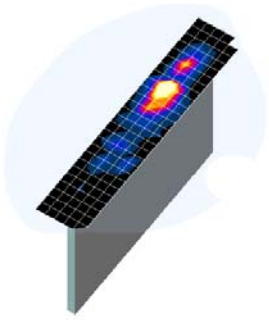

Figure 5-1
Sample SAR Area Scan

3. Based on the area scan data, the peak area of the maximum absorption was determined by spline interpolation. Around this point, a volume of 32mm x 32mm x 30mm (fine resolution volume scan, zoom scan) was assessed by measuring at least 5 x 5 x 7 points. On this 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. The data was extrapolated to the surface of the outer-shell of the phantom. The combined distance extrapolated was the combined distance from the center of the dipoles 2.7mm away from the tip of the probe housing plus the 1.2 mm distance between the surface and the lowest measuring point. 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.

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6 DEFINITION OF REFERENCE POINTS

6.1 EAR REFERENCE POINT

Figure 6-2 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 6-1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front) is perpendicular to the reference plane and passing through the RE (or LE) is called the Reference Pivoting Line (see Figure 6-2). 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].

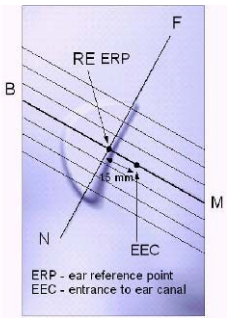

Figure 6-1
Close-Up Side view of ERP

6.2 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 "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Figure 6-3). The "test device reference point" was than located at the same level as the center of the ear reference point. The test device was positioned so that the "vertical centerline" was bisecting the front surface of the handset at it's 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.

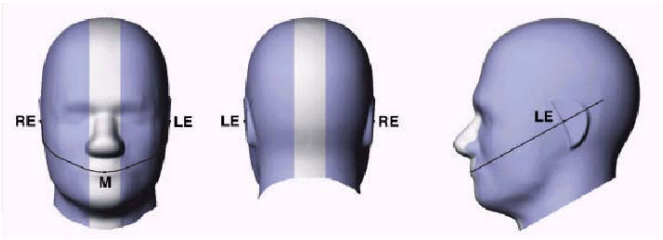

Figure 6-2
Front, back and side view of SAM Twin Phantom

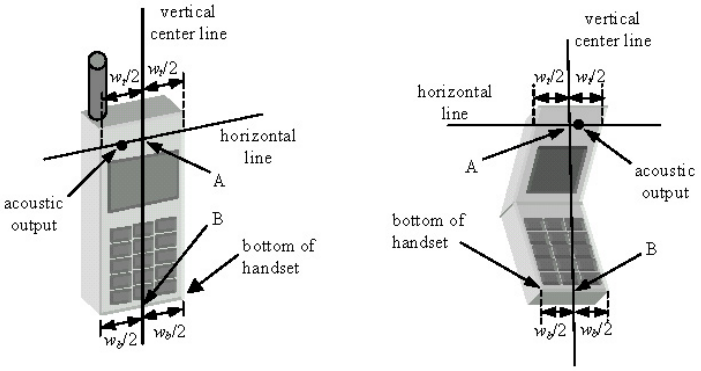

Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

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7 TEST CONFIGURATION POSITIONS FOR HANDSETS

7.1 Device Holder

The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

7.2 Positioning for Cheek/Touch

1. The test device was positioned with the handset 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 7-1), 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.

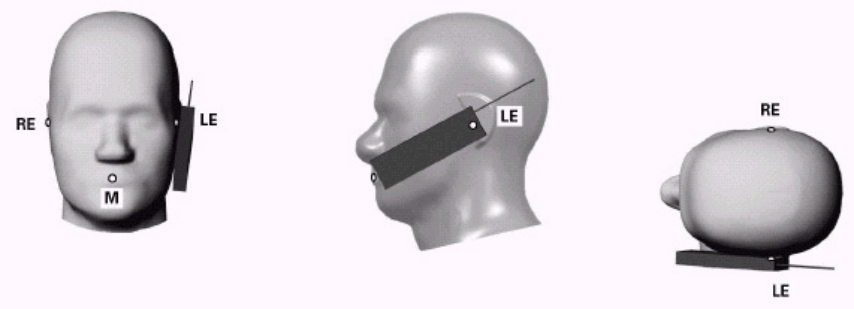

Figure 7-1 Front, Side and Top View of Cheek/Touch Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the ear.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the plane normal to MB-NF including the line MB (reference plane).
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the phone contact with the ear, the handset was rotated about the line NF until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 7-2).

7.3 Positioning for Ear / 15º Tilt

With the test device aligned in the “Cheek/Touch 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 15degree.
2. The phone was then rotated around the horizontal line by 15 degree.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the phone touches 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. 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 7-2).

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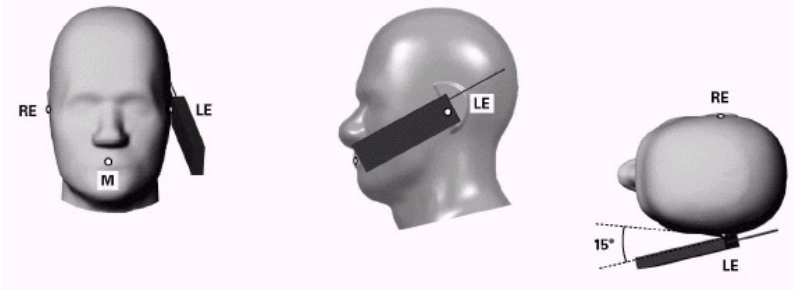

Figure 7-2 Front, Side and Top View of Ear/15º Tilt Position

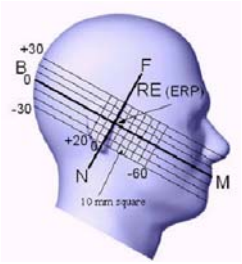

Figure 7-3
Side view w/ relevant markings

Figure 7-4 Body SAR Sample Photo
(Not Actual EUT)

7.4 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.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document publication 648474. The SAR required in these regions of SAM should be measured using a flat phantom. **Rectangular shaped phones** should be positioned with its bottom edge positioned from the flat phantom with the same distance provided by the cheek touching position using SAM. The ear reference point (ERP, as defined for SAM) of the phone should be positioned ½ cm from the flat phantom shell. **Clam-shell phones** should be positioned with the hinge against a smooth edge of the flat phantom where the upper half of the phone is unfolded and extended beyond the phantom side wall. The lower half of the phone is secured in the test device holder at a fixed distance below the flat phantom determined by the minimum separation along the lower edge of the phone in the cheek touching position using SAM. Any case with substantial variation in separation distance along the lower edge of a clam shell is discussed with the FCC for best-to-use methodology.

The latest IEEE 1528 committee developments propose the usage of a tilted phantom when the antenna of the phone is mounted at the bottom or in all cases the peak absorption is in the chin region. Both SAM heads of the TwinSAM-Chin20 are rotated 20 degrees around the NF line. Each head can be removed individually from the table for emptying and cleaning.

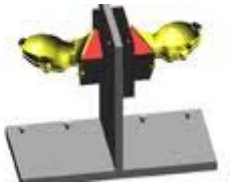

Figure 7-5 Twin SAM Chin20

7.5 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 7-4). A device with a headset output is tested with a headset connected to the device.

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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.

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.

7.6 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive internet connectivity through simultaneous transmission of WIFI in conjunction with a separate licensed transmitter. The FCC has provided guidance in KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, 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. Therefore, SAR must be evaluated for each frequency transmission and mode separately and summed with the WIFI transmitter according to KDB 648474 publication procedures. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

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8 FCC RF EXPOSURE LIMITS

8.1 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.

8.2 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 8-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
SPATIAL PEAK SAR Brain	1.6	8.0
SPATIAL AVERAGE SAR Whole Body	0.08	0.4
SPATIAL PEAK SAR Hands, Feet, Ankles, Wrists	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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9 FCC MEASUREMENT PROCEDURES

Power measurements were performed using a base station simulator under digital average power.

9.1 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.

9.2 SAR Measurement Conditions for CDMA2000

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

9.2.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices" v02, October 2007. Maximum output power is verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in the "All Up" condition.

1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 9-1 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH_0 and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 9-2 was applied.
5. FCHs were configured at full rate for maximum SAR with "All Up" power control bits.

Table 9-1
Parameters for Max. Power for RC1

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

Table 9-2
Parameters for Max. Power for RC3

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

9.2.2 CDMA2000 1x Advanced

This device additionally supports 1x Advanced. Conducted powers were measured using SO75 with RC8 on the uplink and RC11 on the downlink per Oct 2011 TCB Workshop notes. Smart blanking was disabled for all measurements. The EUT was configured with forward power control Mode 000 and reverse power control at 400 bps. Conducted powers were measured on an Agilent 8960 Series 10

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Wireless Communications Test Set, Model E5515C using the CDMA2000 1x Advanced application, Option E1962B-410.

Based on the maximum output power measured for 1x Advanced, SAR would have to be evaluated for 1x advanced if the maximum output for 1x Advanced is more than 0.25 dB higher than the maximum measured for 1x. Also, if the measured SAR in any 1x mode exposure conditions (head, body etc.) is larger than 1.2 W/kg, the highest of those configurations above 1.2 W/kg for each exposure condition in 1x Advanced has to be repeated. All measured SAR in 1x mode higher than 1.5 W/kg must be repeated for 1x Advanced.

9.2.3 Head SAR Measurements

SAR for head exposure configurations is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55. SAR for RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1 using the exposure configuration that results in the highest SAR for that channel in RC3. Head SAR was additionally evaluated for EVDO Rev. A to determine VoIP compliance. See Section 9.2.5 for EVDO Rev. A configuration parameters.

9.2.4 Body SAR Measurements

SAR for body exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. SAR for multiple code channels (FCH + SCH_n) is not required when the maximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only. Otherwise, SAR is measured on the maximum output channel (FCH + SCH_n) with FCH at full rate and SCH_0 enabled at 9600 bps using the exposure configuration that results in the highest SAR for that channel with FCH only. When multiple code channels are enabled, the DUT output may shift by more than 0.5 dB and lead to higher SAR drifts and SCH dropouts. Body SAR was measured using TDSO / SO32 with power control bits in the “All Up”

Body SAR in RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1; with Loopback Service Option SO55, at full rate, using the body exposure configuration that results in the highest SAR for that channel in RC3.

9.2.5 Handsets with EVDO

For handsets with Ev-Do capabilities, when the maximum average output of each channel in Rev. 0 is less than ¼ dB higher than that measured in RC3 (1x RTT), body SAR for EV-DO is not required. Otherwise, SAR for Rev. 0 is measured on the maximum output channel at 153.6 kbps using the body exposure configuration that results in the highest SAR for that channel in RC3. SAR for Rev. A is not required when the maximum average output of each channel is less than that measured in Rev. 0 or less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel for Rev. A using a Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations.

9.2.6 Body SAR Measurements for EVDO Hotspot

Hotspot Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0 per KDB Publication 941225 D01 procedures for “1x Ev-Do data Devices”. SAR for Subtype 2 Physical layer configurations is not required for Rev. A when the maximum average output of each RF channels is less than that measured in Subtype 0/1 Physical layer configurations. Otherwise, SAR is measured on the maximum output channel for Rev. A using the exposure configuration that results in the highest SAR for the RF channels in Rev. 0. The AT is tested with

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a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations. Both FTAP and FETAP are configured with a Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. AT power control should be in "All Bits Up" conditions for TAP/ETAP

SAR is not required for 1x RTT for Ev-Do devices that also support 1x RTT voice and/or data operations, when the maximum average output of each channel is less than 1⁄4 dB higher than that measured in Subtype 0/1 Physical Layer configurations for Rev. 0. Otherwise, CDMA "Body-SAR Measurement" procedures for "CDMA 2000 1x Handsets" were applied.

9.3 SAR Measurement Conditions for LTE

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes following 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.

9.3.1 MPR

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

9.3.2 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05:

a. Per Page 4, 3) A), QPSK with 50% RB is required for the highest bandwidth.
b. Per Page 4, footnote 2, when the maximum output power across high, mid., and low channels is < 0.5 dB, mid channel is tested. Low and high channel SAR tests are not required for QPSK, 50% RB allocation when the SAR is < 0.8 W/kg.
c. Per Page 4, 3) B), QPSK with 1 RB for both channel edges are required for the highest bandwidth.
d. Per Page 4, footnote 6, QPSK 1 RB allocation SAR tests were performed on the highest output power channel for the RB allocation when the average output power of the 1 RB allocation was > 0.5 dB higher than the 50% RB allocation for QPSK. Otherwise, SAR tests are performed on the channel that produced the highest SAR for QPSK with 50% RB. 1 RB low and high offset configurations are considered together for a single channel selection.
e. Per Page 4, 3) B), I), when the SAR for QPSK 1 RB allocation tests is <1.45 W/kg, testing on the other channels is not required.
f. Per Page 4, 4) A), 16QAM with 50% RB is required for the highest bandwidth on the channel with the highest measured SAR for QPSK with 50% RB allocation.
g. Per Page 4, 4) A), I), when the SAR for 16 QAM, 50 % allocation tests is <1.45 W/kg, testing on the other channels is not required.
h. Per Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM. Otherwise, SAR tests are performed on the channel that produced the highest SAR for 16 QAM with 50% RB. 1 RB low and high offset configurations are considered together for a single channel selection.
i. Per Page 5, 4) B), I), when the SAR for 16 QAM 1 RB allocation tests is <1.45 W/kg, testing on the other channels is not required.

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j. Per Page 4, 4), A) I) and Page 5, 4), A)I, 100% RB Allocation is not required to be tested when the SAR is not > 1.45 W/kg for the highest bandwidth.
k. Per Page 5, 5) B) I), smaller bandwidths are not required to be tested when SAR is not > 1.45 W/kg for the highest bandwidth and the maximum average output power of the smaller bandwidths across all channels and configurations is not more than 0.5 dB higher than the higher bandwidths.

9.4 SAR Testing with 802.11 Transmitters

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

9.4.1 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.

9.4.2 Frequency Channel Configurations [27]

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.

If the maximum extrapolated peak SAR of the zoom scan for the highest output channel was less than 1.6 W/kg or 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.

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10 RF CONDUCTED POWERS

10.1 CDMA Conducted Powers

Band	Channel	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC	MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	1013	824.7	24.67	24.68	24.55	24.69	24.66	N/A	N/A
	384	836.52	24.60	24.60	24.49	24.65	24.60	N/A	N/A
	777	848.31	24.67	24.68	24.57	24.69	24.70	N/A	N/A
AWS	25	1711.25	24.07	24.10	23.72	24.01	24.02	23.89	23.55
	450	1732.5	24.04	24.11	23.90	24.15	24.10	24.05	23.66
	875	1753.75	24.02	24.05	23.71	23.97	24.01	23.99	23.54
PCS	25	1851.25	23.95	23.99	23.83	23.96	24.03	24.10	23.85
	600	1880	23.91	24.01	23.92	23.99	24.00	23.99	23.75
	1175	1908.75	24.02	24.06	23.80	24.11	24.10	23.85	23.55

Note: RC1 is only applicable for IS-95 compatibility.

Per KDB Publication 941225 D01:
1. Head SAR was tested with SO55 RC3. SO55 RC1 was not required since the average output power was not more than 0.25 dB than the SO55 RC3 powers.
2. Body-Worn SAR was tested with 1x RTT with TDSO / SO32 FCH Only. Ev-Do and TDSO / SO32 FCH+SCH SAR tests were not required since the average output power was not more than 0.25 dB higher than the TDSO / SO32 FCH only powers.
3. Hotspot SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. Since the average output power of Subtype 2 for Rev. A is less than the Rev. 0 power levels, Rev. A SAR is not required. SAR was additionally tested for 1x RTT hotspot to support simultaneous transmission scenarios.
4. EVDO Rev. A head SAR was additionally evaluated to show compliance for simultaneous transmission scenarios.
5. EVDO is not supported for Cell. CDMA, therefore hotspot was evaluated using TDSO/SO32 FCH Only.

Per October 2011 TCB Workshop:
1. CDMA 1X Advanced technology was not required for SAR since the maximum output powers for 1x Advanced was not more than 0.25 dB higher than the maximum measured powers for 1x and the measured SAR in any 1x mode exposure conditions was not greater than 1.2 W/kg. See Section 9.2.2 for 1x Advanced test set up.

Figure 10-1
Power Measurement Setup

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10.2 LTE Conducted Powers

10.2.1 LTE Band 4 (AWS)

Table 10-1
LTE Band 4 (AWS) Conducted Powers – 1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1710.7	19957	1.4	QPSK	1	0	24.11	0	0
	1710.7	19957	1.4	QPSK	1	5	24.01	0	0
	1710.7	19957	1.4	QPSK	3	2	24.06	0	0
	1710.7	19957	1.4	QPSK	6	0	23.06	1	0-1
	1710.7	19957	1.4	16-QAM	1	0	23.01	1	0-1
	1710.7	19957	1.4	16-QAM	1	5	23.09	1	0-1
	1710.7	19957	1.4	16-QAM	3	2	23.13	1	0-1
	1710.7	19957	1.4	16-QAM	6	0	22.08	2	0-2
Mid	1732.5	20175	1.4	QPSK	1	0	23.91	0	0
	1732.5	20175	1.4	QPSK	1	5	24.01	0	0
	1732.5	20175	1.4	QPSK	3	2	24.04	0	0
	1732.5	20175	1.4	QPSK	6	0	22.88	1	0-1
	1732.5	20175	1.4	16-QAM	1	0	23.08	1	0-1
	1732.5	20175	1.4	16-QAM	1	5	23.18	1	0-1
	1732.5	20175	1.4	16-QAM	3	2	23.16	1	0-1
	1732.5	20175	1.4	16-QAM	6	0	22.00	2	0-2
High	1754.3	20393	1.4	QPSK	1	0	23.99	0	0
	1754.3	20393	1.4	QPSK	1	5	24.02	0	0
	1754.3	20393	1.4	QPSK	3	2	24.03	0	0
	1754.3	20393	1.4	QPSK	6	0	22.97	1	0-1
	1754.3	20393	1.4	16-QAM	1	0	23.02	1	0-1
	1754.3	20393	1.4	16-QAM	1	5	23.10	1	0-1
	1754.3	20393	1.4	16-QAM	3	2	23.09	1	0-1
	1754.3	20393	1.4	16-QAM	6	0	22.02	2	0-2

Table 10-2
LTE Band 4 (AWS) Conducted Powers - 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1711.5	19965	3	QPSK	1	0	23.99	0	0
	1711.5	19965	3	QPSK	1	14	23.95	0	0
	1711.5	19965	3	QPSK	8	4	22.79	1	0-1
	1711.5	19965	3	QPSK	15	0	22.81	1	0-1
	1711.5	19965	3	16-QAM	1	0	22.59	1	0-1
	1711.5	19965	3	16-QAM	1	14	22.79	1	0-1
	1711.5	19965	3	16-QAM	8	4	21.73	2	0-2
	1711.5	19965	3	16-QAM	15	0	21.70	2	0-2
Mid	1732.5	20175	3	QPSK	1	0	23.79	0	0
	1732.5	20175	3	QPSK	1	14	23.86	0	0
	1732.5	20175	3	QPSK	8	4	22.81	1	0-1
	1732.5	20175	3	QPSK	15	0	22.77	1	0-1
	1732.5	20175	3	16-QAM	1	0	22.62	1	0-1
	1732.5	20175	3	16-QAM	1	14	22.67	1	0-1
	1732.5	20175	3	16-QAM	8	4	21.98	2	0-2
	1732.5	20175	3	16-QAM	15	0	21.88	2	0-2
High	1753.5	20385	3	QPSK	1	0	23.81	0	0
	1753.5	20385	3	QPSK	1	14	23.79	0	0
	1753.5	20385	3	QPSK	8	4	23.01	1	0-1
	1753.5	20385	3	QPSK	15	0	22.69	1	0-1
	1753.5	20385	3	16-QAM	1	0	22.71	1	0-1
	1753.5	20385	3	16-QAM	1	14	22.75	1	0-1
	1753.5	20385	3	16-QAM	8	4	21.77	2	0-2
	1753.5	20385	3	16-QAM	15	0	21.80	2	0-2

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Table 10-3
LTE Band 4 (AWS) Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1712.5	19975	5	QPSK	1	0	24.02	0	0
	1712.5	19975	5	QPSK	1	24	23.97	0	0
	1712.5	19975	5	QPSK	12	6	22.71	1	0-1
	1712.5	19975	5	QPSK	25	0	22.82	1	0-1
	1712.5	19975	5	16-QAM	1	0	22.63	1	0-1
	1712.5	19975	5	16-QAM	1	24	22.71	1	0-1
	1712.5	19975	5	16-QAM	12	6	21.67	2	0-2
	1712.5	19975	5	16-QAM	25	0	21.74	2	0-2
Mid	1732.5	20175	5	QPSK	1	0	23.82	0	0
	1732.5	20175	5	QPSK	1	24	23.97	0	0
	1732.5	20175	5	QPSK	12	6	22.80	1	0-1
	1732.5	20175	5	QPSK	25	0	22.81	1	0-1
	1732.5	20175	5	16-QAM	1	0	22.60	1	0-1
	1732.5	20175	5	16-QAM	1	24	22.67	1	0-1
	1732.5	20175	5	16-QAM	12	6	21.97	2	0-2
	1732.5	20175	5	16-QAM	25	0	21.86	2	0-2
High	1752.5	20375	5	QPSK	1	0	23.84	0	0
	1752.5	20375	5	QPSK	1	24	23.75	0	0
	1752.5	20375	5	QPSK	12	6	22.99	1	0-1
	1752.5	20375	5	QPSK	25	0	22.74	1	0-1
	1752.5	20375	5	16-QAM	1	0	22.66	1	0-1
	1752.5	20375	5	16-QAM	1	24	22.74	1	0-1
	1752.5	20375	5	16-QAM	12	6	21.89	2	0-2
	1752.5	20375	5	16-QAM	25	0	21.79	2	0-2

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

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1715	20000	10	QPSK	1	0	23.97	0	0
	1715	20000	10	QPSK	1	49	23.98	0	0
	1715	20000	10	QPSK	25	12	22.87	1	0-1
	1715	20000	10	QPSK	50	0	22.81	1	0-1
	1715	20000	10	16QAM	1	0	**23.01**	1	0-1
	1715	20000	10	16QAM	1	49	**22.91**	1	0-1
	1715	20000	10	16QAM	25	12	21.98	2	0-2
	1715	20000	10	16QAM	50	0	21.99	2	0-2
Mid	1732.5	20175	10	QPSK	1	0	**23.93**	0	0
	1732.5	20175	10	QPSK	1	49	**23.99**	0	0
	1732.5	20175	10	QPSK	25	12	**22.78**	1	0-1
	1732.5	20175	10	QPSK	50	0	22.80	1	0-1
	1732.5	20175	10	16QAM	1	0	22.75	1	0-1
	1732.5	20175	10	16QAM	1	49	22.79	1	0-1
	1732.5	20175	10	16QAM	25	12	**22.04**	2	0-2
	1732.5	20175	10	16QAM	50	0	21.86	2	0-2
High	1750	20350	10	QPSK	1	0	23.71	0	0
	1750	20350	10	QPSK	1	49	23.91	0	0
	1750	20350	10	QPSK	25	12	22.83	1	0-1
	1750	20350	10	QPSK	50	0	22.72	1	0-1
	1750	20350	10	16QAM	1	0	22.52	1	0-1
	1750	20350	10	16QAM	1	49	22.84	1	0-1
	1750	20350	10	16QAM	25	12	22.04	2	0-2
	1750	20350	10	16QAM	50	0	21.94	2	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 10-2
Power Measurement Setup

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10.2.2 LTE Band 2 (PCS)

Table 10-5
LTE Band 2 (PCS) Conducted Powers – 1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1850.7	18607	1.4	QPSK	1	0	23.29	0	0
	1850.7	18607	1.4	QPSK	1	5	23.25	0	0
	1850.7	18607	1.4	QPSK	3	2	23.31	0	0
	1850.7	18607	1.4	QPSK	6	0	22.61	1	0-1
	1850.7	18607	1.4	16-QAM	1	0	22.41	1	0-1
	1850.7	18607	1.4	16-QAM	1	5	22.28	1	0-1
	1850.7	18607	1.4	16-QAM	3	2	22.43	1	0-1
	1850.7	18607	1.4	16-QAM	6	0	21.39	2	0-2
Mid	1880.0	18900	1.4	QPSK	1	0	23.33	0	0
	1880.0	18900	1.4	QPSK	1	5	23.24	0	0
	1880.0	18900	1.4	QPSK	3	2	23.32	0	0
	1880.0	18900	1.4	QPSK	6	0	22.53	1	0-1
	1880.0	18900	1.4	16-QAM	1	0	22.51	1	0-1
	1880.0	18900	1.4	16-QAM	1	5	22.34	1	0-1
	1880.0	18900	1.4	16-QAM	3	2	22.21	1	0-1
	1880.0	18900	1.4	16-QAM	6	0	21.30	2	0-2
High	1909.3	19193	1.4	QPSK	1	0	23.24	0	0
	1909.3	19193	1.4	QPSK	1	5	23.33	0	0
	1909.3	19193	1.4	QPSK	3	2	23.29	0	0
	1909.3	19193	1.4	QPSK	6	0	22.68	1	0-1
	1909.3	19193	1.4	16-QAM	1	0	22.45	1	0-1
	1909.3	19193	1.4	16-QAM	1	5	22.53	1	0-1
	1909.3	19193	1.4	16-QAM	3	2	22.63	1	0-1
	1909.3	19193	1.4	16-QAM	6	0	21.38	2	0-2

Table 10-6
LTE Band 2 (PCS) Conducted Powers - 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1851.5	18615	3	QPSK	1	0	23.28	0	0
	1851.5	18615	3	QPSK	1	14	23.35	0	0
	1851.5	18615	3	QPSK	8	4	22.48	1	0-1
	1851.5	18615	3	QPSK	15	0	22.51	1	0-1
	1851.5	18615	3	16-QAM	1	0	22.40	1	0-1
	1851.5	18615	3	16-QAM	1	14	22.49	1	0-1
	1851.5	18615	3	16-QAM	8	4	21.41	2	0-2
	1851.5	18615	3	16-QAM	15	0	21.36	2	0-2
Mid	1880.0	18900	3	QPSK	1	0	23.44	0	0
	1880.0	18900	3	QPSK	1	14	23.38	0	0
	1880.0	18900	3	QPSK	8	4	22.67	1	0-1
	1880.0	18900	3	QPSK	15	0	22.51	1	0-1
	1880.0	18900	3	16-QAM	1	0	22.45	1	0-1
	1880.0	18900	3	16-QAM	1	14	22.24	1	0-1
	1880.0	18900	3	16-QAM	8	4	21.51	2	0-2
	1880.0	18900	3	16-QAM	15	0	21.49	2	0-2
High	1908.5	19185	3	QPSK	1	0	23.22	0	0
	1908.5	19185	3	QPSK	1	14	23.41	0	0
	1908.5	19185	3	QPSK	8	4	22.41	1	0-1
	1908.5	19185	3	QPSK	15	0	22.63	1	0-1
	1908.5	19185	3	16-QAM	1	0	22.56	1	0-1
	1908.5	19185	3	16-QAM	1	14	22.61	1	0-1
	1908.5	19185	3	16-QAM	8	4	21.48	2	0-2
	1908.5	19185	3	16-QAM	15	0	21.36	2	0-2

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Table 10-7
LTE Band 2 (PCS) Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1852.5	18625	5	QPSK	1	0	23.39	0	0
	1852.5	18625	5	QPSK	1	24	23.48	0	0
	1852.5	18625	5	QPSK	12	6	22.55	1	0-1
	1852.5	18625	5	QPSK	25	0	22.50	1	0-1
	1852.5	18625	5	16-QAM	1	0	22.39	1	0-1
	1852.5	18625	5	16-QAM	1	24	22.51	1	0-1
	1852.5	18625	5	16-QAM	12	6	21.31	2	0-2
	1852.5	18625	5	16-QAM	25	0	21.39	2	0-2
Mid	1880.0	18900	5	QPSK	1	0	23.45	0	0
	1880.0	18900	5	QPSK	1	24	23.44	0	0
	1880.0	18900	5	QPSK	12	6	22.61	1	0-1
	1880.0	18900	5	QPSK	25	0	22.58	1	0-1
	1880.0	18900	5	16-QAM	1	0	22.31	1	0-1
	1880.0	18900	5	16-QAM	1	24	22.21	1	0-1
	1880.0	18900	5	16-QAM	12	6	21.48	2	0-2
	1880.0	18900	5	16-QAM	25	0	21.42	2	0-2
High	1907.5	19175	5	QPSK	1	0	23.24	0	0
	1907.5	19175	5	QPSK	1	24	23.30	0	0
	1907.5	19175	5	QPSK	12	6	22.43	1	0-1
	1907.5	19175	5	QPSK	25	0	22.58	1	0-1
	1907.5	19175	5	16-QAM	1	0	22.26	1	0-1
	1907.5	19175	5	16-QAM	1	24	22.69	1	0-1
	1907.5	19175	5	16-QAM	12	6	21.58	2	0-2
	1907.5	19175	5	16-QAM	25	0	21.55	2	0-2

Table 10-8
LTE Band 2 (PCS) Conducted Powers - 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1855	18650	10	QPSK	1	0	**23.45**	0	0
	1855	18650	10	QPSK	1	49	**23.49**	0	0
	1855	18650	10	QPSK	25	12	22.59	1	0-1
	1855	18650	10	QPSK	50	0	22.47	1	0-1
	1855	18650	10	16QAM	1	0	22.36	1	0-1
	1855	18650	10	16QAM	1	49	22.49	1	0-1
	1855	18650	10	16QAM	25	12	21.58	2	0-2
	1855	18650	10	16QAM	50	0	21.45	2	0-2
Mid	1880.0	18900	10	QPSK	1	0	23.47	0	0
	1880.0	18900	10	QPSK	1	49	23.41	0	0
	1880.0	18900	10	QPSK	25	12	**22.55**	1	0-1
	1880.0	18900	10	QPSK	50	0	22.55	1	0-1
	1880.0	18900	10	16QAM	1	0	22.29	1	0-1
	1880.0	18900	10	16QAM	1	49	22.25	1	0-1
	1880.0	18900	10	16QAM	25	12	**21.57**	2	0-2
	1880.0	18900	10	16QAM	50	0	21.50	2	0-2
High	1905	19150	10	QPSK	1	0	23.28	0	0
	1905	19150	10	QPSK	1	49	23.25	0	0
	1905	19150	10	QPSK	25	12	22.53	1	0-1
	1905	19150	10	QPSK	50	0	22.59	1	0-1
	1905	19150	10	16QAM	1	0	**22.21**	1	0-1
	1905	19150	10	16QAM	1	49	**22.68**	1	0-1
	1905	19150	10	16QAM	25	12	21.58	2	0-2
	1905	19150	10	16QAM	50	0	21.54	2	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 10-3
Power Measurement Setup

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10.2.3 LTE Band 25

Table 10-9
LTE Band 25 Conducted Powers - 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1852.5	26065	5	QPSK	1	0	23.55	0	0
	1852.5	26065	5	QPSK	1	24	23.54	0	0
	1852.5	26065	5	QPSK	12	6	22.67	1	0-1
	1852.5	26065	5	QPSK	25	0	22.54	1	0-1
	1852.5	26065	5	16-QAM	1	0	22.27	1	0-1
	1852.5	26065	5	16-QAM	1	24	22.57	1	0-1
	1852.5	26065	5	16-QAM	12	6	21.36	2	0-2
	1852.5	26065	5	16-QAM	25	0	21.54	2	0-2
Mid	1882.5	26365	5	QPSK	1	0	23.55	0	0
	1882.5	26365	5	QPSK	1	24	23.55	0	0
	1882.5	26365	5	QPSK	12	6	22.59	1	0-1
	1882.5	26365	5	QPSK	25	0	22.61	1	0-1
	1882.5	26365	5	16-QAM	1	0	22.20	1	0-1
	1882.5	26365	5	16-QAM	1	24	22.40	1	0-1
	1882.5	26365	5	16-QAM	12	6	21.65	2	0-2
	1882.5	26365	5	16-QAM	25	0	21.55	2	0-2
High	1912.5	26665	5	QPSK	1	0	23.53	0	0
	1912.5	26665	5	QPSK	1	24	23.46	0	0
	1912.5	26665	5	QPSK	12	6	22.64	1	0-1
	1912.5	26665	5	QPSK	25	0	22.59	1	0-1
	1912.5	26665	5	16-QAM	1	0	22.41	1	0-1
	1912.5	26665	5	16-QAM	1	24	22.58	1	0-1
	1912.5	26665	5	16-QAM	12	6	21.61	2	0-2
	1912.5	26665	5	16-QAM	25	0	21.29	2	0-2

Table 10-10
LTE Band 25 Conducted Powers - 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1855	26090	10	QPSK	1	0	23.57	0	0
	1855	26090	10	QPSK	1	49	23.53	0	0
	1855	26090	10	QPSK	25	12	22.65	1	0-1
	1855	26090	10	QPSK	50	0	22.61	1	0-1
	1855	26090	10	16QAM	1	0	22.22	1	0-1
	1855	26090	10	16QAM	1	49	22.46	1	0-1
	1855	26090	10	16QAM	25	12	21.59	2	0-2
	1855	26090	10	16QAM	50	0	21.58	2	0-2
Mid	1882.5	26365	10	QPSK	1	0	**23.61**	0	0
	1882.5	26365	10	QPSK	1	49	**23.57**	0	0
	1882.5	26365	10	QPSK	25	12	**22.60**	1	0-1
	1882.5	26365	10	QPSK	50	0	22.70	1	0-1
	1882.5	26365	10	16QAM	1	0	22.18	1	0-1
	1882.5	26365	10	16QAM	1	49	22.44	1	0-1
	1882.5	26365	10	16QAM	25	12	**21.66**	2	0-2
	1882.5	26365	10	16QAM	50	0	21.54	2	0-2
High	1910	26640	10	QPSK	1	0	23.57	0	0
	1910	26640	10	QPSK	1	49	23.37	0	0
	1910	26640	10	QPSK	25	12	22.67	1	0-1
	1910	26640	10	QPSK	50	0	22.66	1	0-1
	1910	26640	10	16QAM	1	0	**22.44**	1	0-1
	1910	26640	10	16QAM	1	49	**22.58**	1	0-1
	1910	26640	10	16QAM	25	12	21.61	2	0-2
	1910	26640	10	16QAM	50	0	21.49	2	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 10-4
Power Measurement Setup

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10.3 WLAN Conducted Powers

Table 10-11
IEEE 802.11b Average RF Power

Mode	Freq [MHz]	Channel	Conducted Power [dBm] Data Rate [Mbps]			
			1	**2**	**5.5**	**11**
802.11b	2412	1	15.94	16.00	16.04	16.01
802.11b	2437	6	**16.01**	16.04	16.10	16.05
802.11b	2462	11	15.76	15.80	15.81	15.83

Table 10-12
IEEE 802.11g Average RF Power

Mode	Freq [MHz]	Channel	Conducted Power [dBm] Data Rate [Mbps]							
			6	**9**	**12**	**18**	**24**	**36**	**48**	**54**
802.11g	2412	1	12.75	12.77	12.81	12.86	12.71	12.76	12.78	12.75
802.11g	2437	6	12.84	12.83	12.83	12.82	12.88	12.86	12.82	12.82
802.11g	2462	11	12.50	12.54	12.55	12.56	12.63	12.52	12.60	12.52

Table 10-13
IEEE 802.11n Average RF Power

Mode	Freq [MHz]	Channel	Conducted Power [dBm] Data Rate [Mbps]							
			6.5	13	20	26	39	52	58	65
802.11n	2412	1	11.59	11.64	11.58	11.65	11.58	11.59	11.67	11.62
802.11n	2437	6	11.71	11.72	11.68	11.72	11.64	11.64	11.83	11.74
802.11n	2462	11	11.41	11.39	11.42	11.40	11.36	11.40	11.44	11.35

Justification for reduced test configurations for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes:

- For 2.4 GHz, highest average RF output power channel for the lowest data rate for IEEE 802.11b were selected for SAR evaluation. Other 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.
- When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the 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.
- The data rate and channel for the bolded power above was tested for SAR.

Figure 10-5
Power Measurement Setup

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11 LTE POWER REDUCTION

11.1 Introduction to LTE Power Reduction

This DUT is capable of Simultaneous Voice and LTE (SVLTE) calls, with the voice call supported by a CDMA 1xRTT transmitter and the data connection supported by a LTE transmitter. The transmitters have separate transmit antennas and RF circuitry; however a LTE power reduction scheme is applied during a LTE connection with 1xRTT voice calls. The maximum transmit power of LTE is limited by the CDMA 1x voice power level. When CDMA 1x Voice is operating with high power levels, LTE transmit power is limited. When CDMA 1x Voice power is low, LTE can transmit at maximum power. Target levels of power reduction and CDMA voice triggering levels are provided in Table 11-1.

Table 11-1
SVLTE Power Reduction Scheme

Mode	Voice Avg Power(P) 1x 850/1750/1900 MHz (dBm)	Max. B4 LTE Data Avg Power (dBm)	Max. B2/25 LTE Data Avg Power (dBm)
SVLTE	P < 17.7	23.7	23.2
	P ≥ 17.7	18.2	18.2

11.2 Output Power Verification

Per KDB Publication 941225 D05, 5) B), output powers were measured in SVLTE mode to determine that the power reduction mechanism was operating reliably and consistently. The power reduction was investigated by simultaneously connecting the EUT to both LTE and CDMA base station simulators. LTE output powers were measured through conducted RF connections by first connecting the device in a LTE data call and then a CDMA 1xRTT call. CDMA powers were controlled by setting the CDMA base station simulator to active bits and monitoring the output power while changing the cell output power level.

The power reduction targets and triggering level described in Table 11-1 were confirmed. Please see results in Table 11-2.

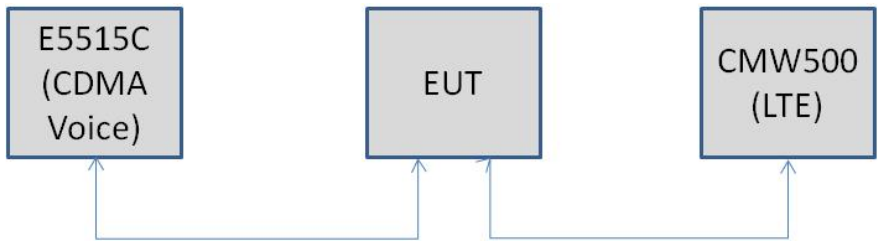

Figure 11-1
SVLTE Conducted Test Setup Diagram

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Table 11-2
SVLTE Power Reduction Verification Results

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.68	18.54	18.68	18.63	18.38	18.46	18.54	18.41
		19	18.32	18.62	18.47	18.58	18.40	18.46	18.49	18.44
		17.7	18.64	18.42	18.56	18.34	18.44	18.68	18.34	18.69
		16	24.07	23.75	23.10	22.86	22.80	22.84	21.78	21.87
		11	24.04	23.70	23.05	23.16	22.88	23.11	21.86	22.13

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.36	18.59	18.66	18.58	18.39	18.54	18.42	18.59
		19	18.43	18.56	18.44	18.67	18.41	18.51	18.61	18.47
		17.7	18.33	18.50	18.69	18.50	18.67	18.70	18.47	18.34
		16	24.17	23.71	22.76	23.11	22.86	23.16	21.72	22.08
		11	24.18	23.76	23.10	23.08	22.72	22.86	21.99	21.80

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.58	18.31	18.64	18.35	18.47	18.64	18.55	18.31
		19	18.36	18.61	18.62	18.40	18.42	18.66	18.67	18.48
		17.7	18.39	18.60	18.30	18.69	18.32	18.44	18.35	18.58
		16	24.09	24.11	22.74	23.03	23.04	22.90	22.19	21.97
		11	24.10	24.08	23.18	23.19	22.76	23.18	22.08	22.02

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.6	18.7	18.7	18.6	18.6	18.6	18.6	18.6
		19	18.6	18.6	18.6	18.6	18.7	18.6	18.6	18.7
		17.7	18.7	18.6	18.5	18.5	18.5	18.5	18.6	18.6
		16	23.6	23.5	22.6	22.6	22.6	22.6	21.5	21.6
		11	23.7	23.6	22.5	22.5	22.6	22.5	21.6	21.5

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.42	18.69	18.44	18.32	18.51	18.64	18.58	18.67
		19	18.67	18.40	18.54	18.66	18.33	18.52	18.62	18.51
		17.7	18.58	18.42	18.47	18.42	18.69	18.64	18.46	18.41
		16	23.69	23.50	22.53	22.35	22.61	22.49	21.40	21.55
		11	23.54	23.47	22.41	22.52	22.33	22.31	21.27	21.47

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.56	18.63	18.39	18.58	18.70	18.42	18.38	18.54
		19	18.56	18.35	18.46	18.61	18.61	18.55	18.55	18.30
		17.7	18.67	18.69	18.40	18.45	18.50	18.46	18.53	18.40
		16	23.24	23.31	22.39	22.68	22.50	22.64	21.45	21.61
		11	23.24	23.21	22.69	22.28	22.62	22.39	21.55	21.22

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.59	18.32	18.60	18.62	18.36	18.43	18.53	18.58
		19	18.49	18.32	18.38	18.48	18.67	18.37	18.59	18.33
		17.7	18.32	18.43	18.59	18.43	18.37	18.52	18.32	18.34
		16	23.64	23.42	22.41	22.66	22.52	22.42	21.70	21.55
		11	23.49	23.61	22.63	22.53	22.22	22.62	21.25	21.43

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1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.51	18.53	18.46	18.54	18.54	18.66	18.35	18.58
		19	18.63	18.63	18.39	18.70	18.56	18.47	18.41	18.31
		17.7	18.38	18.59	18.55	18.69	18.39	18.56	18.60	18.65
		16	23.33	23.68	22.53	22.32	22.27	22.31	21.40	21.45
		11	23.63	23.52	22.39	22.52	22.43	22.27	21.54	21.21

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	1013 (Low)	24.7	18.64	18.54	18.63	18.49	18.33	18.53	18.64	18.42
		19	18.57	18.38	18.69	18.52	18.59	18.41	18.52	18.39
		17.7	18.70	18.43	18.69	18.39	18.40	18.53	18.67	18.49
		16	23.44	23.25	22.63	22.60	22.39	22.51	21.35	21.43
		11	23.24	23.69	22.40	22.55	22.51	22.57	21.23	21.22

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.64	18.39	18.37	18.35	18.58	18.45	18.55	18.59
		19	18.55	18.40	18.47	18.43	18.32	18.44	18.49	18.36
		17.7	18.55	18.53	18.47	18.70	18.45	18.56	18.61	18.66
		16	24.09	24.14	22.82	22.94	23.12	23.03	21.74	21.74
		11	24.11	24.06	22.86	23.19	23.00	23.01	21.82	21.89

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.62	18.51	18.32	18.66	18.41	18.55	18.61	18.65
		19	18.31	18.31	18.42	18.30	18.58	18.54	18.59	18.55
		17.7	18.45	18.42	18.62	18.68	18.54	18.41	18.53	18.48
		16	24.13	24.11	23.14	23.20	23.01	22.78	21.72	22.20
		11	24.17	23.98	23.15	23.19	23.18	23.13	21.70	22.15

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.58	18.43	18.44	18.67	18.55	18.41	18.64	18.67
		19	18.56	18.39	18.66	18.37	18.48	18.47	18.56	18.64
		17.7	18.60	18.58	18.69	18.65	18.48	18.40	18.46	18.47
		16	23.80	24.09	23.04	23.10	22.92	23.16	21.90	22.11
		11	24.11	24.20	23.07	22.98	22.99	22.96	21.74	21.74

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.60	18.63	18.57	18.62	18.68	18.64	18.61	18.55
		19	18.56	18.58	18.56	18.59	18.60	18.63	18.58	18.65
		17.7	18.53	18.55	18.52	18.64	18.59	18.51	18.51	18.53
		16	23.61	23.58	22.58	22.68	22.51	22.60	21.61	21.64
		11	23.69	23.56	22.53	22.53	22.55	22.65	21.59	21.65

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.60	18.63	18.57	18.62	18.68	18.64	18.61	18.55
		19	18.56	18.58	18.56	18.59	18.60	18.63	18.58	18.65
		17.7	18.53	18.55	18.52	18.64	18.59	18.51	18.51	18.53
		16	23.61	23.58	22.40	22.60	22.50	22.50	21.40	21.70
		11	23.50	23.50	22.40	22.50	22.60	22.40	21.60	21.40

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.54	18.50	18.61	18.66	18.42	18.55	18.52	18.38
		19	18.60	18.36	18.67	18.45	18.32	18.50	18.33	18.31
		17.7	18.46	18.65	18.47	18.33	18.52	18.38	18.62	18.55
		16	23.70	23.44	22.49	22.46	22.28	22.46	21.28	21.37
		11	23.36	23.66	22.66	22.70	22.69	22.20	21.30	21.44

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1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.31	18.43	18.42	18.44	18.44	18.49	18.69	18.60
		19	18.65	18.30	18.33	18.55	18.33	18.61	18.38	18.70
		17.7	18.60	18.64	18.46	18.50	18.49	18.64	18.30	18.39
		16	23.37	23.21	22.57	22.37	22.44	22.67	21.67	21.34
		11	23.41	23.31	22.62	22.62	22.50	22.62	21.49	21.58

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.39	18.63	18.42	18.51	18.62	18.61	18.60	18.44
		19	18.44	18.47	18.49	18.36	18.55	18.41	18.46	18.63
		17.7	18.36	18.51	18.55	18.42	18.41	18.63	18.45	18.57
		16	23.30	23.33	22.24	22.41	22.49	22.52	21.65	21.21
		11	23.21	23.34	22.67	22.29	22.69	22.69	21.37	21.66

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	384 (Mid)	24.7	18.56	18.60	18.38	18.40	18.66	18.37	18.56	18.36
		19	18.65	18.32	18.41	18.48	18.50	18.58	18.67	18.69
		17.7	18.33	18.62	18.39	18.60	18.69	18.62	18.32	18.31
		16	23.38	23.45	22.30	22.22	22.65	22.51	21.25	21.41
		11	23.35	23.60	22.65	22.35	22.32	22.25	21.38	21.60

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.58	18.44	18.64	18.48	18.52	18.53	18.39	18.33
		19	18.43	18.69	18.50	18.60	18.52	18.35	18.47	18.57
		17.7	18.34	18.70	18.47	18.51	18.48	18.67	18.57	18.45
		16	23.89	23.88	22.82	23.15	22.97	22.88	22.15	22.01
		11	23.93	24.09	23.12	23.07	22.73	22.77	21.75	21.88

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.62	18.50	18.46	18.67	18.61	18.34	18.65	18.54
		19	18.56	18.41	18.49	18.55	18.52	18.38	18.54	18.50
		17.7	18.38	18.38	18.38	18.60	18.33	18.69	18.60	18.37
		16	23.93	23.92	22.87	22.70	22.91	22.93	21.79	21.83
		11	24.03	23.96	22.83	22.75	23.15	23.03	21.75	21.75

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.59	18.59	18.69	18.58	18.47	18.46	18.56	18.31
		19	18.64	18.50	18.66	18.67	18.51	18.33	18.40	18.36
		17.7	18.63	18.43	18.65	18.56	18.37	18.41	18.65	18.36
		16	23.72	24.09	22.80	23.07	23.04	23.09	22.15	21.85
		11	24.14	23.70	23.07	22.80	22.79	23.14	22.14	22.11

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.60	18.30	18.50	18.40	18.50	18.40	18.30	18.40
		19	18.50	18.70	18.30	18.30	18.40	18.30	18.40	18.40
		17.7	18.30	18.40	18.70	18.60	18.60	18.50	18.54	18.50
		16	23.50	23.40	22.40	22.40	22.40	22.50	21.50	21.60
		11	23.30	23.40	22.30	22.30	22.30	22.40	21.40	21.40

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.58	18.54	18.59	18.59	18.64	18.53	18.61	18.57
		19	18.50	18.60	18.30	18.60	18.67	18.59	18.60	18.56
		17.7	18.60	18.60	18.54	18.57	18.55	18.55	18.54	18.69
		16	23.57	23.51	22.58	22.61	22.55	22.61	21.53	21.53
		11	23.65	23.52	22.53	22.53	22.54	22.57	21.60	21.54

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1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.70	18.30	18.36	18.42	18.58	18.49	18.31	18.69
		19	18.47	18.52	18.49	18.45	18.50	18.46	18.34	18.44
		17.7	18.59	18.46	18.45	18.46	18.31	18.42	18.38	18.48
		16	23.24	23.50	22.65	22.23	22.43	22.38	21.57	21.39
		11	23.51	23.24	22.32	22.41	22.67	22.31	21.23	21.62

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.69	18.30	18.68	18.55	18.46	18.68	18.38	18.34
		19	18.36	18.31	18.58	18.69	18.40	18.54	18.56	18.32
		17.7	18.70	18.54	18.66	18.53	18.64	18.51	18.49	18.45
		16	23.70	23.27	22.56	22.44	22.66	22.40	21.47	21.44
		11	23.59	23.36	22.34	22.37	22.22	22.59	21.69	21.21

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.53	18.62	18.65	18.31	18.52	18.41	18.59	18.55
		19	18.36	18.65	18.55	18.42	18.56	18.69	18.53	18.59
		17.7	18.40	18.43	18.33	18.39	18.59	18.65	18.39	18.36
		16	23.34	23.22	22.69	22.21	22.23	22.54	21.34	21.50
		11	23.57	23.61	22.54	22.62	22.51	22.26	21.65	21.60

1x-RTT CDMA Voice Band	BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
835 MHz	777 (High)	24.7	18.68	18.59	18.59	18.46	18.53	18.38	18.70	18.61
		19	18.53	18.38	18.47	18.46	18.64	18.46	18.57	18.44
		17.7	18.50	18.37	18.38	18.34	18.70	18.41	18.66	18.47
		16	23.51	23.58	22.31	22.41	22.58	22.41	21.37	21.42
		11	23.49	23.59	22.39	22.31	22.51	22.42	21.55	21.38

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.33	18.41	18.66	18.33	18.65	18.48	18.56	18.52
		19	18.43	18.40	18.33	18.40	18.48	18.69	18.49	18.60
		17.7	18.51	18.37	18.69	18.50	18.57	18.34	18.44	18.69
		16	23.81	23.83	22.80	22.84	22.98	23.13	21.78	21.84
		11	24.02	24.20	22.82	22.92	22.90	23.17	22.03	21.92

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.59	18.44	18.40	18.52	18.35	18.46	18.33	18.55
		19	18.55	18.49	18.34	18.58	18.58	18.36	18.57	18.54
		17.7	18.60	18.60	18.59	18.32	18.70	18.66	18.70	18.60
		16	23.96	23.78	22.79	22.95	22.98	22.83	22.15	21.76
		11	23.84	23.78	23.19	22.70	23.17	23.02	22.12	22.04

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.39	18.56	18.40	18.52	18.38	18.56	18.41	18.40
		19	18.46	18.38	18.45	18.57	18.43	18.64	18.63	18.39
		17.7	18.54	18.67	18.61	18.61	18.40	18.55	18.58	18.30
		16	23.76	23.89	22.84	23.06	22.90	22.98	21.79	22.15
		11	23.70	24.04	23.13	22.83	22.78	23.05	21.77	22.02

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.64	18.66	18.68	18.62	18.61	18.60	18.63	18.62
		19	18.60	18.59	18.58	18.62	18.69	18.59	18.56	18.66
		17.7	18.68	18.56	18.52	18.51	18.53	18.51	18.61	18.58
		16	23.61	23.51	22.55	22.55	22.62	22.57	21.54	21.57
		11	23.67	23.63	22.54	22.53	22.62	22.51	21.62	21.54

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1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.36	18.00	18.18	18.03	18.20	18.30	18.25	18.48
		19	18.19	18.01	18.25	18.44	18.22	18.10	18.11	18.10
		17.7	18.27	18.03	18.07	18.43	18.21	18.46	18.06	18.18
		16	23.61	23.51	22.55	22.55	22.62	22.57	21.54	21.57
		11	23.67	23.63	22.54	22.53	22.62	22.51	21.62	21.54

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.65	18.51	18.47	18.60	18.44	18.48	18.30	18.42
		19	18.41	18.33	18.54	18.68	18.52	18.45	18.50	18.59
		17.7	18.69	18.43	18.49	18.56	18.70	18.56	18.55	18.56
		16	23.21	23.37	22.42	22.35	22.41	22.41	21.60	21.29
		11	23.67	23.24	22.21	22.23	22.66	22.68	21.63	21.37

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.49	18.63	18.65	18.35	18.61	18.64	18.65	18.54
		19	18.32	18.55	18.66	18.45	18.38	18.50	18.41	18.57
		17.7	18.67	18.68	18.34	18.67	18.63	18.52	18.64	18.60
		16	23.24	23.48	22.58	22.65	22.31	22.62	21.22	21.37
		11	23.60	23.45	22.27	22.58	22.64	22.64	21.57	21.61

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.57	18.57	18.59	18.61	18.37	18.44	18.52	18.32
		19	18.58	18.52	18.54	18.56	18.61	18.51	18.52	18.51
		17.7	18.53	18.54	18.52	18.51	18.62	18.55	18.31	18.41
		16	23.62	23.60	22.31	22.34	22.46	22.43	21.54	21.28
		11	23.67	23.26	22.53	22.28	22.59	22.49	21.65	21.38

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	25(Low)	24.2	18.39	18.59	18.57	18.50	18.69	18.53	18.30	18.32
		19	18.54	18.58	18.49	18.37	18.45	18.52	18.59	18.48
		17.7	18.51	18.32	18.67	18.46	18.61	18.57	18.60	18.62
		16	23.42	23.59	22.50	22.27	22.40	22.52	21.20	21.21
		11	23.61	23.45	22.43	22.30	22.65	22.59	21.69	21.25

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.60	18.45	18.68	18.32	18.58	18.41	18.36	18.37
		19	18.68	18.67	18.30	18.68	18.38	18.55	18.54	18.45
		17.7	18.67	18.70	18.44	18.46	18.48	18.36	18.60	18.67
		16	24.20	24.12	22.70	22.96	22.80	22.72	21.71	22.18
		11	24.06	23.80	23.08	22.75	22.72	23.09	22.15	21.97

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.68	18.49	18.31	18.58	18.51	18.54	18.40	18.55
		19	18.41	18.31	18.62	18.46	18.56	18.45	18.53	18.46
		17.7	18.62	18.31	18.57	18.55	18.33	18.50	18.56	18.51
		16	23.91	23.83	23.00	22.93	23.06	22.79	21.77	21.92
		11	23.90	23.80	22.97	23.10	22.75	22.87	21.85	22.04

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.46	18.32	18.52	18.65	18.43	18.60	18.37	18.69
		19	18.61	18.40	18.58	18.53	18.62	18.62	18.41	18.63
		17.7	18.35	18.57	18.50	18.39	18.43	18.65	18.60	18.49
		16	24.18	24.06	22.87	23.13	23.12	22.79	22.09	22.08
		11	24.03	23.78	22.96	22.94	22.77	23.05	21.91	21.72

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1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.60	18.63	18.57	18.62	18.68	18.64	18.61	18.55
		19	18.56	18.58	18.56	18.59	18.60	18.63	18.58	18.65
		17.7	18.53	18.55	18.52	18.64	18.59	18.51	18.51	18.53
		16	23.61	23.58	22.58	22.68	22.51	22.60	21.61	21.64
		11	23.69	23.56	22.53	22.53	22.55	22.65	21.59	21.65

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.6	18.6	18.5	18.4	18.3	18.7	18.5	18.5
		19	18.7	18.5	18.6	18.5	18.4	18.6	18.4	18.6
		17.7	18.5	18.4	18.5	18.6	18.5	18.6	18.4	18.5
		16	23.66	23.24	22.45	22.54	22.43	22.47	21.56	21.56
		11	23.42	23.37	22.37	22.62	22.44	22.21	21.54	21.67

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.37	18.52	18.35	18.52	18.52	18.44	18.54	18.64
		19	18.57	18.42	18.44	18.62	18.68	18.55	18.37	18.55
		17.7	18.52	18.49	18.47	18.55	18.46	18.62	18.67	18.58
		16	23.60	23.28	22.21	22.56	22.52	22.59	21.69	21.41
		11	23.62	23.27	22.51	22.61	22.38	22.69	21.65	21.54

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.46	18.42	18.34	18.62	18.37	18.32	18.45	18.53
		19	18.52	18.32	18.43	18.59	18.35	18.52	18.63	18.59
		17.7	18.39	18.47	18.62	18.33	18.51	18.59	18.35	18.47
		16	23.67	23.25	22.26	22.23	22.21	22.65	21.69	21.66
		11	23.28	23.46	22.68	22.48	22.24	22.34	21.24	21.56

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.52	18.39	18.35	18.53	18.62	18.35	18.59	18.48
		19	18.38	18.60	18.57	18.45	18.41	18.53	18.63	18.49
		17.7	18.46	18.51	18.54	18.33	18.53	18.61	18.60	18.59
		16	23.40	23.42	22.52	22.55	22.59	22.41	21.34	21.51
		11	23.29	23.69	22.36	22.30	22.28	22.38	21.23	21.68

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	450 (Mid)	24.2	18.31	18.60	18.65	18.61	18.68	18.53	18.39	18.44
		19	18.56	18.31	18.43	18.36	18.53	18.31	18.31	18.51
		17.7	18.48	18.55	18.51	18.43	18.61	18.30	18.39	18.37
		16	23.36	23.65	22.68	22.47	22.52	22.64	21.67	21.49
		11	23.64	23.48	22.31	22.56	22.52	22.37	21.59	21.41

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.30	18.37	18.38	18.46	18.40	18.65	18.46	18.33
		19	18.49	18.66	18.41	18.56	18.43	18.49	18.36	18.43
		17.7	18.45	18.62	18.59	18.65	18.33	18.62	18.56	18.36
		16	24.10	23.80	22.88	22.91	22.78	22.78	21.72	21.82
		11	24.01	23.90	22.98	23.02	22.81	23.09	21.91	21.85

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.58	18.67	18.60	18.36	18.40	18.60	18.40	18.53
		19	18.65	18.63	18.60	18.43	18.55	18.35	18.47	18.49
		17.7	18.60	18.38	18.38	18.66	18.58	18.63	18.59	18.31
		16	23.97	24.17	22.96	23.19	23.02	23.07	21.86	21.83
		11	23.91	24.14	22.88	22.85	22.86	23.15	21.88	21.85

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1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.55	18.35	18.36	18.35	18.67	18.44	18.51	18.58
		19	18.62	18.46	18.39	18.59	18.67	18.45	18.62	18.38
		17.7	18.54	18.35	18.64	18.32	18.63	18.57	18.55	18.65
		16	23.80	24.07	23.18	23.03	23.00	23.18	21.96	22.06
		11	23.92	23.87	22.99	23.01	23.01	23.02	21.80	22.07

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.58	18.54	18.59	18.59	18.64	18.53	18.61	18.57
		19	18.65	18.64	18.57	18.61	18.67	18.59	18.60	18.56
		17.7	18.60	18.60	18.54	18.57	18.55	18.55	18.54	18.69
		16	23.57	23.51	22.58	22.61	22.55	22.61	21.53	21.53
		11	23.65	23.52	22.58	22.53	22.54	22.57	21.60	21.54

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.5	18.5	18.3	18.4	18.6	18.5	18.4	18.7
		19	18.6	18.6	18.6	18.6	18.6	18.5	18.4	18.6
		17.7	18.4	18.4	18.3	18.3	18.7	18.5	18.5	18.3
		16	23.35	23.38	22.60	22.65	22.36	22.52	21.47	21.37
		11	23.59	23.26	22.69	22.69	22.46	22.61	21.36	21.37

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.61	18.35	18.60	18.42	18.63	18.35	18.34	18.69
		19	18.54	18.67	18.31	18.60	18.67	18.58	18.55	18.40
		17.7	18.61	18.50	18.41	18.37	18.50	18.40	18.42	18.34
		16	23.35	23.47	22.67	22.51	22.57	22.65	21.61	21.54
		11	23.35	23.42	22.56	22.64	22.36	22.37	21.58	21.62

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.56	18.37	18.57	18.31	18.44	18.58	18.40	18.38
		19	18.30	18.55	18.69	18.38	18.56	18.66	18.43	18.46
		17.7	18.31	18.40	18.40	18.67	18.61	18.42	18.64	18.37
		16	23.25	23.67	22.63	22.33	22.33	22.21	21.52	21.62
		11	23.66	23.53	22.60	22.61	22.62	22.23	21.53	21.54

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.55	18.49	18.55	18.60	18.33	18.61	18.63	18.63
		19	18.55	18.49	18.40	18.45	18.69	18.61	18.44	18.58
		17.7	18.46	18.68	18.33	18.58	18.49	18.67	18.35	18.67
		16	23.32	23.22	22.41	22.47	22.40	22.42	21.70	21.57
		11	23.70	23.22	22.38	22.64	22.61	22.42	21.52	21.36

1x-RTT CDMA Voice Band	BC15 1x-RTT CDMA Voice Channel	BC15 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1750 MHz	875 (High)	24.2	18.31	18.54	18.58	18.56	18.64	18.43	18.60	18.63
		19	18.36	18.33	18.30	18.49	18.68	18.46	18.57	18.67
		17.7	18.53	18.53	18.60	18.42	18.69	18.38	18.63	18.33
		16	23.28	23.51	22.37	22.41	22.26	22.67	21.33	21.65
		11	23.35	23.52	22.50	22.55	22.29	22.42	21.29	21.54

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.47	18.65	18.68	18.65	18.46	18.50	18.67	18.35
		19	18.55	18.52	18.69	18.43	18.36	18.35	18.66	18.65
		17.7	18.64	18.44	18.68	18.45	18.53	18.48	18.39	18.54
		16	24.04	23.71	23.01	23.13	23.00	22.85	21.74	21.93
		11	23.78	23.78	22.83	23.18	22.97	22.96	22.17	22.06

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1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.68	18.64	18.48	18.70	18.32	18.33	18.58	18.61
		19	18.65	18.41	18.65	18.48	18.66	18.63	18.64	18.60
		17.7	18.63	18.41	18.46	18.48	18.46	18.54	18.38	18.34
		16	23.99	23.80	22.77	22.89	23.04	22.86	21.83	21.82
		11	24.02	23.93	22.71	22.86	22.89	23.17	22.14	21.81

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.45	18.31	18.52	18.30	18.63	18.50	18.57	18.55
		19	18.37	18.65	18.63	18.37	18.37	18.34	18.70	18.59
		17.7	18.52	18.67	18.38	18.37	18.62	18.34	18.61	18.52
		16	23.82	23.76	22.92	23.08	22.92	22.82	21.97	21.93
		11	24.02	23.73	22.91	22.96	23.14	23.11	21.84	21.90

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.30	18.40	18.50	18.50	18.50	18.50	18.50	18.60
		19	18.66	18.61	18.63	18.60	18.63	18.56	18.61	18.56
		17.7	18.56	18.60	18.51	18.52	18.51	18.43	18.43	18.32
		16	23.68	23.60	22.57	22.65	22.64	22.56	21.63	21.55
		11	23.53	23.66	22.60	22.68	22.66	22.69	21.55	21.65

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.41	18.48	18.59	18.59	18.63	18.55	18.38	18.42
		19	18.47	18.65	18.65	18.43	18.32	18.63	18.66	18.66
		17.7	18.36	18.37	18.40	18.40	18.59	18.33	18.62	18.55
		16	23.52	23.46	22.49	22.59	22.66	22.61	21.27	21.43
		11	23.55	23.26	22.40	22.59	22.36	22.28	21.37	21.58

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.46	18.63	18.49	18.47	18.34	18.55	18.68	18.36
		19	18.52	18.43	18.57	18.52	18.37	18.52	18.65	18.47
		17.7	18.68	18.30	18.65	18.42	18.68	18.67	18.57	18.67
		16	23.31	23.62	22.67	22.38	22.69	22.57	21.21	21.63
		11	23.69	23.47	22.27	22.32	22.53	22.22	21.47	21.60

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.50	18.68	18.67	18.61	18.47	18.60	18.37	18.30
		19	18.36	18.44	18.61	18.59	18.66	18.36	18.42	18.63
		17.7	18.63	18.59	18.68	18.51	18.40	18.44	18.50	18.65
		16	23.60	23.54	22.38	22.57	22.67	22.30	21.55	21.61
		11	23.58	23.67	22.37	22.40	22.49	22.66	21.41	21.54

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.38	18.37	18.52	18.57	18.56	18.45	18.33	18.58
		19	18.42	18.33	18.33	18.41	18.64	18.56	18.50	18.50
		17.7	18.58	18.49	18.46	18.46	18.52	18.38	18.50	18.53
		16	23.35	23.34	22.47	22.46	22.58	22.34	21.67	21.30
		11	23.55	23.42	22.23	22.31	22.60	22.39	21.62	21.25

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	25 (Low)	24.2	18.46	18.42	18.47	18.54	18.39	18.62	18.45	18.62
		19	18.34	18.53	18.61	18.52	18.60	18.53	18.36	18.69
		17.7	18.67	18.59	18.42	18.56	18.38	18.50	18.52	18.37
		16	23.23	23.25	22.38	22.30	22.70	22.46	21.42	21.26
		11	23.49	23.70	22.35	22.30	22.51	22.46	21.23	21.67

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1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.38	18.61	18.54	18.61	18.42	18.37	18.44	18.30
		19	18.55	18.69	18.45	18.56	18.70	18.58	18.48	18.34
		17.7	18.39	18.64	18.42	18.46	18.37	18.54	18.41	18.61
		16	24.09	24.07	23.00	23.01	23.19	22.73	22.19	22.03
		11	24.07	23.97	23.11	23.20	23.09	23.03	22.13	21.78

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.45	18.46	18.67	18.33	18.42	18.60	18.40	18.41
		19	18.47	18.55	18.55	18.46	18.31	18.58	18.61	18.58
		17.7	18.61	18.37	18.58	18.62	18.66	18.57	18.55	18.33
		16	24.00	23.78	23.17	23.14	22.88	22.74	21.94	22.09
		11	23.77	24.12	22.72	22.73	22.89	22.76	21.83	21.91

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.36	18.63	18.35	18.32	18.68	18.63	18.39	18.32
		19	18.47	18.41	18.69	18.52	18.65	18.36	18.48	18.42
		17.7	18.47	18.44	18.39	18.50	18.36	18.50	18.50	18.38
		16	24.01	24.08	23.01	22.77	22.87	23.10	22.20	21.90
		11	23.79	23.87	23.16	23.14	22.72	23.08	22.10	21.81

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.66	18.57	18.59	18.63	18.62	18.58	18.60	18.62
		19	18.60	18.62	18.61	18.57	18.67	18.58	18.58	18.65
		17.7	18.62	18.59	18.62	18.66	18.56	18.64	18.62	18.64
		16	23.59	23.58	22.66	22.57	22.64	22.67	21.56	21.66
		11	23.66	23.65	22.66	22.52	22.63	22.60	21.63	21.53

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.61	18.49	18.54	18.35	18.44	18.60	18.37	18.35
		19	18.59	18.42	18.51	18.30	18.66	18.50	18.47	18.51
		17.7	18.46	18.40	18.48	18.54	18.38	18.38	18.47	18.32
		16	23.41	23.39	22.20	22.27	22.41	22.38	21.55	21.65
		11	23.24	23.51	22.59	22.56	22.31	22.50	21.35	21.55

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.45	18.40	18.53	18.33	18.67	18.49	18.36	18.45
		19	18.36	18.64	18.35	18.55	18.61	18.39	18.58	18.45
		17.7	18.70	18.36	18.44	18.53	18.49	18.61	18.44	18.53
		16	23.67	23.53	22.66	22.48	22.42	22.64	21.62	21.53
		11	23.68	23.34	22.68	22.53	22.60	22.34	21.42	21.26

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.64	18.56	18.31	18.49	18.68	18.66	18.36	18.57
		19	18.50	18.48	18.57	18.39	18.66	18.68	18.57	18.35
		17.7	18.48	18.42	18.34	18.47	18.56	18.57	18.33	18.55
		16	23.31	23.29	22.29	22.43	22.52	22.67	21.22	21.49
		11	23.45	23.39	22.39	22.65	22.30	22.21	21.55	21.62

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.38	18.69	18.60	18.53	18.65	18.58	18.34	18.31
		19	18.58	18.39	18.43	18.33	18.30	18.35	18.31	18.33
		17.7	18.59	18.46	18.65	18.37	18.68	18.31	18.40	18.36
		16	23.50	23.24	22.43	22.21	22.55	22.32	21.68	21.53
		11	23.38	23.43	22.31	22.42	22.23	22.24	21.20	21.24

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1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	600 (Mid)	24.2	18.42	18.46	18.63	18.59	18.69	18.31	18.31	18.54
		19	18.52	18.64	18.42	18.62	18.54	18.63	18.41	18.32
		17.7	18.42	18.67	18.66	18.39	18.58	18.48	18.41	18.40
		16	23.57	23.32	22.42	22.53	22.50	22.38	21.60	21.53
		11	23.54	23.20	22.60	22.45	22.29	22.63	21.57	21.60

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.64	18.38	18.46	18.42	18.41	18.69	18.64	18.56
		19	18.40	18.69	18.31	18.31	18.31	18.70	18.42	18.52
		17.7	18.32	18.55	18.39	18.35	18.52	18.44	18.30	18.63
		16	23.93	23.94	23.17	23.11	22.81	23.05	21.75	21.82
		11	24.10	23.82	22.76	22.99	23.04	23.04	22.07	22.07

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.57	18.42	18.69	18.34	18.40	18.33	18.37	18.67
		19	18.39	18.40	18.47	18.69	18.58	18.65	18.37	18.31
		17.7	18.35	18.53	18.36	18.59	18.66	18.55	18.54	18.65
		16	23.72	23.80	22.84	23.07	23.00	23.13	21.77	21.72
		11	24.10	23.98	23.05	23.10	22.75	23.02	22.09	21.82

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 4 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.34	18.50	18.69	18.36	18.48	18.46	18.31	18.65
		19	18.40	18.64	18.66	18.41	18.68	18.41	18.37	18.33
		17.7	18.48	18.35	18.64	18.35	18.46	18.38	18.46	18.50
		16	24.05	23.76	23.02	23.09	23.06	22.77	22.02	21.80
		11	24.02	23.85	22.88	22.76	22.92	23.16	21.99	21.87

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.23	18.45	18.54	18.44	18.34	18.54	18.53	18.45
		19	18.30	18.54	18.32	18.32	18.67	18.58	18.58	18.65
		17.7	18.62	18.59	18.62	18.66	18.56	18.64	18.62	18.64
		16	23.51	23.52	22.61	22.52	22.61	22.61	21.53	21.64
		11	23.43	23.43	22.41	22.34	22.23	22.43	21.54	21.42

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.34	18.51	18.46	18.70	18.43	18.63	18.59	18.48
		19	18.68	18.56	18.52	18.48	18.43	18.36	18.45	18.40
		17.7	18.44	18.36	18.57	18.59	18.57	18.46	18.58	18.44
		16	23.47	23.39	22.38	22.67	22.45	22.27	21.41	21.28
		11	23.35	23.66	22.57	22.69	22.27	22.62	21.32	21.38

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 2 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.34	18.51	18.46	18.70	18.43	18.63	18.59	18.48
		19	18.68	18.56	18.52	18.48	18.43	18.36	18.45	18.40
		17.7	18.44	18.36	18.57	18.59	18.57	18.46	18.58	18.44
		16	23.47	23.39	22.38	22.67	22.45	22.27	21.41	21.28
		11	23.35	23.66	22.57	22.69	22.27	22.62	21.32	21.38

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Low.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.31	18.49	18.41	18.43	18.42	18.46	18.31	18.32
		19	18.60	18.51	18.68	18.49	18.38	18.64	18.48	18.63
		17.7	18.34	18.33	18.55	18.55	18.68	18.64	18.51	18.44
		16	23.27	23.50	22.32	22.61	22.34	22.33	21.52	21.35
		11	23.44	23.65	22.31	22.24	22.44	22.39	21.62	21.32

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1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 Mid.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.45	18.57	18.67	18.50	18.60	18.50	18.64	18.65
		19	18.52	18.55	18.40	18.52	18.44	18.41	18.50	18.49
		17.7	18.43	18.54	18.52	18.66	18.32	18.53	18.61	18.60
		16	23.61	23.49	22.23	22.25	22.54	22.59	21.40	21.43
		11	23.55	23.53	22.26	22.33	22.40	22.36	21.33	21.56

1x-RTT CDMA Voice Band	BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25 High.ch Conducted Power (dBm)							
			QPSK 1 RB 0 RB Offset	QPSK 1 RB 49 RB Offset	QPSK 25 RB 12 RB Offset	QPSK 50 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 49 RB Offset	16QAM 25 RB 12 RB Offset	16QAM 50 RB 0 RB Offset
1900 MHz	1175 (High)	24.2	18.55	18.35	18.60	18.34	18.40	18.34	18.39	18.40
		19	18.66	18.49	18.41	18.48	18.34	18.54	18.62	18.51
		17.7	18.58	18.48	18.49	18.64	18.37	18.54	18.59	18.52
		16	23.51	23.25	22.45	22.53	22.35	22.30	21.61	21.61
		11	23.27	23.69	22.47	22.53	22.53	22.48	21.46	21.38

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11.3 SVLTE SAR Testing Procedures

Per KDB 941225 D05 5) B), SAR testing was additionally performed at the reduced CDMA and LTE power levels with respect to the simultaneous transmission scenarios. Additional samples were tuned to a fixed reduced power levels to represent the SVLTE condition in a standalone environment. While the power reduction mechanism is activated at the CDMA Voice power level of 17.7 dBm, simultaneous SAR summations of maximum power LTE were evaluated at this reduced fixed CDMA voice power level. SAR was additionally evaluated at reduced power LTE levels to perform simultaneous SAR analysis when CDMA voice is at maximum output power.

11.3.1 Reduced LTE Band 4 Conducted Powers

Table 11-3
Reduced LTE Band 4 Conducted Powers – 1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1710.7	19957	1.4	QPSK	1	0	18.48	0	0
	1710.7	19957	1.4	QPSK	1	5	18.47	0	0
	1710.7	19957	1.4	QPSK	3	2	18.51	0	0
	1710.7	19957	1.4	QPSK	6	0	18.52	0	0-1
	1710.7	19957	1.4	16-QAM	1	0	18.25	0	0-1
	1710.7	19957	1.4	16-QAM	1	5	18.23	0	0-1
	1710.7	19957	1.4	16-QAM	3	2	18.45	0	0-1
	1710.7	19957	1.4	16-QAM	6	0	18.31	0	0-2
Mid	1732.5	20175	1.4	QPSK	1	0	18.37	0	0
	1732.5	20175	1.4	QPSK	1	5	18.41	0	0
	1732.5	20175	1.4	QPSK	3	2	18.38	0	0
	1732.5	20175	1.4	QPSK	6	0	18.37	0	0-1
	1732.5	20175	1.4	16-QAM	1	0	18.07	0	0-1
	1732.5	20175	1.4	16-QAM	1	5	18.18	0	0-1
	1732.5	20175	1.4	16-QAM	3	2	18.36	0	0-1
	1732.5	20175	1.4	16-QAM	6	0	18.22	0	0-2
High	1754.3	20393	1.4	QPSK	1	0	18.68	0	0
	1754.3	20393	1.4	QPSK	1	5	18.61	0	0
	1754.3	20393	1.4	QPSK	3	2	18.65	0	0
	1754.3	20393	1.4	QPSK	6	0	18.64	0	0-1
	1754.3	20393	1.4	16-QAM	1	0	18.42	0	0-1
	1754.3	20393	1.4	16-QAM	1	5	18.37	0	0-1
	1754.3	20393	1.4	16-QAM	3	2	18.55	0	0-1
	1754.3	20393	1.4	16-QAM	6	0	18.53	0	0-2

Table 11-4
Reduced LTE Band 4 Conducted Powers – 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1711.5	19965	3	QPSK	1	0	18.45	0	0
	1711.5	19965	3	QPSK	1	14	18.44	0	0
	1711.5	19965	3	QPSK	8	4	18.46	0	0-1
	1711.5	19965	3	QPSK	15	0	18.39	0	0-1
	1711.5	19965	3	16-QAM	1	0	18.22	0	0-1
	1711.5	19965	3	16-QAM	1	14	18.21	0	0-1
	1711.5	19965	3	16-QAM	8	4	18.23	0	0-2
	1711.5	19965	3	16-QAM	15	0	18.39	0	0-2
Mid	1732.5	20175	3	QPSK	1	0	18.36	0	0
	1732.5	20175	3	QPSK	1	14	18.43	0	0
	1732.5	20175	3	QPSK	8	4	18.38	0	0-1
	1732.5	20175	3	QPSK	15	0	18.30	0	0-1
	1732.5	20175	3	16-QAM	1	0	18.15	0	0-1
	1732.5	20175	3	16-QAM	1	14	18.18	0	0-1
	1732.5	20175	3	16-QAM	8	4	18.08	0	0-2
	1732.5	20175	3	16-QAM	15	0	18.26	0	0-2
High	1753.5	20385	3	QPSK	1	0	18.64	0	0
	1753.5	20385	3	QPSK	1	14	18.62	0	0
	1753.5	20385	3	QPSK	8	4	18.69	0	0-1
	1753.5	20385	3	QPSK	15	0	18.70	0	0-1
	1753.5	20385	3	16-QAM	1	0	18.35	0	0-1
	1753.5	20385	3	16-QAM	1	14	18.36	0	0-1
	1753.5	20385	3	16-QAM	8	4	18.55	0	0-2
	1753.5	20385	3	16-QAM	15	0	18.65	0	0-2

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Table 11-5
Reduced LTE Band 4 Conducted Powers – 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1712.5	19975	5	QPSK	1	0	18.53	0	0
	1712.5	19975	5	QPSK	1	24	18.66	0	0
	1712.5	19975	5	QPSK	12	6	18.48	0	0-1
	1712.5	19975	5	QPSK	25	0	18.37	0	0-1
	1712.5	19975	5	16-QAM	1	0	18.65	0	0-1
	1712.5	19975	5	16-QAM	1	24	18.64	0	0-1
	1712.5	19975	5	16-QAM	12	6	18.47	0	0-2
	1712.5	19975	5	16-QAM	25	0	18.45	0	0-2
Mid	1732.5	20175	5	QPSK	1	0	18.42	0	0
	1732.5	20175	5	QPSK	1	24	18.51	0	0
	1732.5	20175	5	QPSK	12	6	18.34	0	0-1
	1732.5	20175	5	QPSK	25	0	18.32	0	0-1
	1732.5	20175	5	16-QAM	1	0	18.59	0	0-1
	1732.5	20175	5	16-QAM	1	24	18.58	0	0-1
	1732.5	20175	5	16-QAM	12	6	18.36	0	0-2
	1732.5	20175	5	16-QAM	25	0	18.29	0	0-2
High	1752.5	20375	5	QPSK	1	0	18.52	0	0
	1752.5	20375	5	QPSK	1	24	18.62	0	0
	1752.5	20375	5	QPSK	12	6	18.64	0	0-1
	1752.5	20375	5	QPSK	25	0	18.66	0	0-1
	1752.5	20375	5	16-QAM	1	0	18.53	0	0-1
	1752.5	20375	5	16-QAM	1	24	18.64	0	0-1
	1752.5	20375	5	16-QAM	12	6	18.59	0	0-2
	1752.5	20375	5	16-QAM	25	0	18.67	0	0-2

Table 11-6
Reduced LTE Band 4 Conducted Powers – 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1715	20000	10	QPSK	1	0	18.49	0	0
	1715	20000	10	QPSK	1	49	18.57	0	0
	1715	20000	10	QPSK	25	12	18.40	0	0-1
	1715	20000	10	QPSK	50	0	18.39	0	0-1
	1715	20000	10	16QAM	1	0	18.16	0	0-1
	1715	20000	10	16QAM	1	49	18.33	0	0-1
	1715	20000	10	16QAM	25	12	18.39	0	0-2
	1715	20000	10	16QAM	50	0	18.32	0	0-2
Mid	1732.5	20175	10	QPSK	1	0	**18.43**	0	0
	1732.5	20175	10	QPSK	1	49	**18.46**	0	0
	1732.5	20175	10	QPSK	25	12	**18.29**	0	0-1
	1732.5	20175	10	QPSK	50	0	18.20	0	0-1
	1732.5	20175	10	16QAM	1	0	**18.04**	0	0-1
	1732.5	20175	10	16QAM	1	49	**18.06**	0	0-1
	1732.5	20175	10	16QAM	25	12	**18.35**	0	0-2
	1732.5	20175	10	16QAM	50	0	18.22	0	0-2
High	1750	20350	10	QPSK	1	0	18.32	0	0
	1750	20350	10	QPSK	1	49	18.49	0	0
	1750	20350	10	QPSK	25	12	18.52	0	0-1
	1750	20350	10	QPSK	50	0	18.43	0	0-1
	1750	20350	10	16QAM	1	0	18.09	0	0-1
	1750	20350	10	16QAM	1	49	18.16	0	0-1
	1750	20350	10	16QAM	25	12	18.42	0	0-2
	1750	20350	10	16QAM	50	0	18.40	0	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 11-2
Power Measurement Setup

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11.3.2 Reduced LTE Band 2 Conducted Powers

Table 11-7
Reduced LTE Band 2 Conducted Powers – 1.4 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1850.7	18607	1.4	QPSK	1	0	18.53	0	0
	1850.7	18607	1.4	QPSK	1	5	18.56	0	0
	1850.7	18607	1.4	QPSK	3	2	18.62	0	0
	1850.7	18607	1.4	QPSK	6	0	18.64	0	0-1
	1850.7	18607	1.4	16-QAM	1	0	18.20	0	0-1
	1850.7	18607	1.4	16-QAM	1	5	18.28	0	0-1
	1850.7	18607	1.4	16-QAM	3	2	18.54	0	0-1
	1850.7	18607	1.4	16-QAM	6	0	18.34	0	0-2
Mid	1880.0	18900	1.4	QPSK	1	0	18.27	0	0
	1880.0	18900	1.4	QPSK	1	5	18.25	0	0
	1880.0	18900	1.4	QPSK	3	2	18.02	0	0
	1880.0	18900	1.4	QPSK	6	0	17.97	0	0-1
	1880.0	18900	1.4	16-QAM	1	0	17.91	0	0-1
	1880.0	18900	1.4	16-QAM	1	5	17.80	0	0-1
	1880.0	18900	1.4	16-QAM	3	2	18.02	0	0-1
	1880.0	18900	1.4	16-QAM	6	0	17.89	0	0-2
High	1909.3	19193	1.4	QPSK	1	0	18.57	0	0
	1909.3	19193	1.4	QPSK	1	5	18.39	0	0
	1909.3	19193	1.4	QPSK	3	2	18.51	0	0
	1909.3	19193	1.4	QPSK	6	0	18.50	0	0-1
	1909.3	19193	1.4	16-QAM	1	0	18.18	0	0-1
	1909.3	19193	1.4	16-QAM	1	5	18.15	0	0-1
	1909.3	19193	1.4	16-QAM	3	2	18.46	0	0-1
	1909.3	19193	1.4	16-QAM	6	0	18.37	0	0-2

Table 11-8
Reduced LTE Band 2 Conducted Powers – 3 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1851.5	18615	3	QPSK	1	0	18.47	0	0
	1851.5	18615	3	QPSK	1	14	18.31	0	0
	1851.5	18615	3	QPSK	8	4	18.58	0	0-1
	1851.5	18615	3	QPSK	15	0	18.43	0	0-1
	1851.5	18615	3	16-QAM	1	0	18.15	0	0-1
	1851.5	18615	3	16-QAM	1	14	17.96	0	0-1
	1851.5	18615	3	16-QAM	8	4	18.28	0	0-2
	1851.5	18615	3	16-QAM	15	0	18.38	0	0-2
Mid	1880.0	18900	3	QPSK	1	0	18.23	0	0
	1880.0	18900	3	QPSK	1	14	18.28	0	0
	1880.0	18900	3	QPSK	8	4	17.84	0	0-1
	1880.0	18900	3	QPSK	15	0	17.80	0	0-1
	1880.0	18900	3	16-QAM	1	0	17.80	0	0-1
	1880.0	18900	3	16-QAM	1	14	17.78	0	0-1
	1880.0	18900	3	16-QAM	8	4	17.74	0	0-2
	1880.0	18900	3	16-QAM	15	0	17.82	0	0-2
High	1908.5	19185	3	QPSK	1	0	18.62	0	0
	1908.5	19185	3	QPSK	1	14	18.46	0	0
	1908.5	19185	3	QPSK	8	4	18.53	0	0-1
	1908.5	19185	3	QPSK	15	0	18.51	0	0-1
	1908.5	19185	3	16-QAM	1	0	18.31	0	0-1
	1908.5	19185	3	16-QAM	1	14	18.13	0	0-1
	1908.5	19185	3	16-QAM	8	4	18.26	0	0-2
	1908.5	19185	3	16-QAM	15	0	18.41	0	0-2

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Table 11-9
Reduced LTE Band 2 Conducted Powers – 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1852.5	18625	5	QPSK	1	0	18.32	0	0
	1852.5	18625	5	QPSK	1	24	18.21	0	0
	1852.5	18625	5	QPSK	12	6	18.17	0	0-1
	1852.5	18625	5	QPSK	25	0	18.23	0	0-1
	1852.5	18625	5	16-QAM	1	0	17.97	0	0-1
	1852.5	18625	5	16-QAM	1	24	17.84	0	0-1
	1852.5	18625	5	16-QAM	12	6	18.29	0	0-2
	1852.5	18625	5	16-QAM	25	0	18.16	0	0-2
Mid	1880.0	18900	5	QPSK	1	0	18.36	0	0
	1880.0	18900	5	QPSK	1	24	18.32	0	0
	1880.0	18900	5	QPSK	12	6	18.01	0	0-1
	1880.0	18900	5	QPSK	25	0	17.95	0	0-1
	1880.0	18900	5	16-QAM	1	0	18.58	0	0-1
	1880.0	18900	5	16-QAM	1	24	18.60	0	0-1
	1880.0	18900	5	16-QAM	12	6	17.96	0	0-2
	1880.0	18900	5	16-QAM	25	0	17.89	0	0-2
High	1907.5	19175	5	QPSK	1	0	18.42	0	0
	1907.5	19175	5	QPSK	1	24	18.40	0	0
	1907.5	19175	5	QPSK	12	6	18.40	0	0-1
	1907.5	19175	5	QPSK	25	0	18.31	0	0-1
	1907.5	19175	5	16-QAM	1	0	18.19	0	0-1
	1907.5	19175	5	16-QAM	1	24	18.27	0	0-1
	1907.5	19175	5	16-QAM	12	6	18.34	0	0-2
	1907.5	19175	5	16-QAM	25	0	18.28	0	0-2

Table 11-10
Reduced LTE Band 2 Conducted Powers – 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1855	18650	10	QPSK	1	0	18.31	0	0
	1855	18650	10	QPSK	1	49	18.25	0	0
	1855	18650	10	QPSK	25	12	18.07	0	0-1
	1855	18650	10	QPSK	50	0	18.13	0	0-1
	1855	18650	10	16QAM	1	0	18.14	0	0-1
	1855	18650	10	16QAM	1	49	17.88	0	0-1
	1855	18650	10	16QAM	25	12	18.10	0	0-2
	1855	18650	10	16QAM	50	0	18.17	0	0-2
Mid	1880.0	18900	10	QPSK	1	0	**18.56**	0	0
	1880.0	18900	10	QPSK	1	49	**18.33**	0	0
	1880.0	18900	10	QPSK	25	12	**18.01**	0	0-1
	1880.0	18900	10	QPSK	50	0	18.12	0	0-1
	1880.0	18900	10	16QAM	1	0	**18.27**	0	0-1
	1880.0	18900	10	16QAM	1	49	**18.03**	0	0-1
	1880.0	18900	10	16QAM	25	12	**18.02**	0	0-2
	1880.0	18900	10	16QAM	50	0	18.05	0	0-2
High	1905	19150	10	QPSK	1	0	18.45	0	0
	1905	19150	10	QPSK	1	49	18.29	0	0
	1905	19150	10	QPSK	25	12	18.16	0	0-1
	1905	19150	10	QPSK	50	0	18.31	0	0-1
	1905	19150	10	16QAM	1	0	18.44	0	0-1
	1905	19150	10	16QAM	1	49	18.43	0	0-1
	1905	19150	10	16QAM	25	12	18.11	0	0-2
	1905	19150	10	16QAM	50	0	18.26	0	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 11-3
Power Measurement Setup

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11.3.3 Reduced LTE Band 25 Conducted Powers

Table 11-11
Reduced LTE Band 25 Conducted Powers – 5 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1852.5	26065	5	QPSK	1	0	18.68	0	0
	1852.5	26065	5	QPSK	1	24	18.64	0	0
	1852.5	26065	5	QPSK	12	6	18.63	0	0-1
	1852.5	26065	5	QPSK	25	0	18.58	0	0-1
	1852.5	26065	5	16-QAM	1	0	18.46	0	0-1
	1852.5	26065	5	16-QAM	1	24	18.45	0	0-1
	1852.5	26065	5	16-QAM	12	6	18.65	0	0-2
	1852.5	26065	5	16-QAM	25	0	18.43	0	0-2
Mid	1882.5	26365	5	QPSK	1	0	18.45	0	0
	1882.5	26365	5	QPSK	1	24	18.57	0	0
	1882.5	26365	5	QPSK	12	6	18.41	0	0-1
	1882.5	26365	5	QPSK	25	0	18.39	0	0-1
	1882.5	26365	5	16-QAM	1	0	18.66	0	0-1
	1882.5	26365	5	16-QAM	1	24	18.64	0	0-1
	1882.5	26365	5	16-QAM	12	6	18.43	0	0-2
	1882.5	26365	5	16-QAM	25	0	18.29	0	0-2
High	1912.5	26665	5	QPSK	1	0	18.65	0	0
	1912.5	26665	5	QPSK	1	24	18.61	0	0
	1912.5	26665	5	QPSK	12	6	18.67	0	0-1
	1912.5	26665	5	QPSK	25	0	18.59	0	0-1
	1912.5	26665	5	16-QAM	1	0	18.50	0	0-1
	1912.5	26665	5	16-QAM	1	24	18.32	0	0-1
	1912.5	26665	5	16-QAM	12	6	18.68	0	0-2
	1912.5	26665	5	16-QAM	25	0	18.54	0	0-2

Table 11-12
Reduced LTE Band 25 Conducted Powers – 10 MHz Bandwidth

	Frequency [MHz]	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Conducted Power [dBm]	Target MPR [dB]	MPR Allowed per 3GPP [dB]
Low	1855	26090	10	QPSK	1	0	18.61	0	0
	1855	26090	10	QPSK	1	49	18.57	0	0
	1855	26090	10	QPSK	25	12	18.57	0	0-1
	1855	26090	10	QPSK	50	0	18.49	0	0-1
	1855	26090	10	16QAM	1	0	18.26	0	0-1
	1855	26090	10	16QAM	1	49	18.32	0	0-1
	1855	26090	10	16QAM	25	12	18.54	0	0-2
	1855	26090	10	16QAM	50	0	18.45	0	0-2
Mid	1882.5	26365	10	QPSK	1	0	**18.61**	0	0
	1882.5	26365	10	QPSK	1	49	**18.60**	0	0
	1882.5	26365	10	QPSK	25	12	**18.43**	0	0-1
	1882.5	26365	10	QPSK	50	0	18.37	0	0-1
	1882.5	26365	10	16QAM	1	0	**18.36**	0	0-1
	1882.5	26365	10	16QAM	1	49	**18.35**	0	0-1
	1882.5	26365	10	16QAM	25	12	**18.34**	0	0-2
	1882.5	26365	10	16QAM	50	0	18.31	0	0-2
High	1910	26640	10	QPSK	1	0	18.56	0	0
	1910	26640	10	QPSK	1	49	18.62	0	0
	1910	26640	10	QPSK	25	12	18.65	0	0-1
	1910	26640	10	QPSK	50	0	18.62	0	0-1
	1910	26640	10	16QAM	1	0	18.32	0	0-1
	1910	26640	10	16QAM	1	49	18.34	0	0-1
	1910	26640	10	16QAM	25	12	18.59	0	0-2
	1910	26640	10	16QAM	50	0	18.56	0	0-2

LTE Notes:
1. Please reference section 9.3.2 for LTE testing requirements per FCC KDB 941225 D05.
2. The bolded powers were tested for SAR.

Figure 11-4
Power Measurement Setup

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11.3.4 Fixed CDMA Conducted Powers

Table 11-13
Fixed CDMA Conducted Powers

Band	Channel	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]
	F-RC	MHz	RC1	RC3	RC11	FCH+SCH	FCH
Cellular	1013	824.7	17.70	17.70	17.54	17.67	17.66
	384	836.52	17.64	17.68	17.66	17.95	17.73
	777	848.31	17.55	17.75	17.61	17.79	17.75
AWS	25	1711.25	17.59	17.85	17.70	17.85	17.75
	450	1732.5	17.55	17.81	17.75	17.89	17.85
	875	1753.75	17.65	17.76	17.69	17.81	17.79
PCS	25	1851.25	17.77	17.65	17.66	17.67	17.69
	600	1880	17.71	17.75	17.63	17.65	17.68
	1175	1908.75	17.69	17.79	17.73	17.74	18.04

Note: RC1 is only applicable for IS-95 compatibility.

Note: There is no power reduction applied to the CDMA Voice modes, however the device with output powers represented in the table above was tuned down (for SAR Test purposes only) to analyze simultaneous SAR scenarios in the SVLTE condition where LTE is operating at maximum output power in conjunction with a lower CDMA voice level (See Table 11-1).

CDMA 1x Test Notes:

Per KDB Publication 941225 D01:
1. Head SAR was tested with SO55 RC3. SO55 RC1 was not required since the average output power was not more than 0.25 dB than the SO55 RC3 powers.
2. Body-Worn and Hotspot SAR was tested with 1x RTT with TDSO / SO32 FCH Only. TDSO / SO32 FCH+SCH SAR tests were not required since the average output power was not more than 0.25 dB higher than the TDSO / SO32 FCH only powers.

Per October 2011 TCB Workshop
1. CDMA 1X Advanced technology was not required for SAR since the maximum output powers for 1x Advanced was not more than 0.25 dB higher than the maximum measured powers for 1x and the measured SAR in any 1x mode exposure conditions was not greater than 1.2 W/kg. See Section 9.2.2 for 1x Advanced test set up.

Figure 11-5
Power Measurement Setup

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12 SYSTEM VERIFICATION

12.1 Tissue Verification

Table 12-1
Measured 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
9/10/2012	835H	23.5	820	0.888	41.49	0.898	41.571	-1.11%	-0.19%
			835	0.903	41.51	0.900	41.500	0.33%	0.02%
			850	0.915	40.99	0.916	41.500	-0.11%	-1.23%
9/10/2012	1750H	22.7	1710	1.341	38.80	1.348	40.136	-0.52%	-3.33%
			1750	1.391	38.56	1.370	40.100	1.53%	-3.84%
			1790	1.436	38.46	1.394	40.020	3.01%	-3.90%
9/13/2012	1750H	22.2	1710	1.346	38.92	1.348	40.136	-0.15%	-3.03%
			1750	1.386	38.75	1.370	40.100	1.17%	-3.37%
			1790	1.423	38.61	1.394	40.020	2.08%	-3.52%
9/11/2012	1900H	22.4	1850	1.405	41.15	1.400	40.000	0.36%	2.88%
			1880	1.441	41.19	1.400	40.000	2.93%	2.97%
			1910	1.468	40.82	1.400	40.000	4.86%	2.05%
9/17/2012	1900H	22.2	1850	1.366	40.45	1.400	40.000	-2.43%	1.13%
			1880	1.405	40.49	1.400	40.000	0.36%	1.23%
			1910	1.453	40.24	1.400	40.000	3.79%	0.60%
9/19/2012	2450H	23.1	2401	1.845	38.96	1.758	39.298	4.95%	-0.86%
			2450	1.883	38.77	1.800	39.200	4.61%	-1.10%
			2499	1.940	38.55	1.852	39.135	4.75%	-1.49%
9/10/2012	835B	22.2	820	0.941	53.29	0.969	55.284	-2.89%	-3.61%
			835	0.952	53.12	0.970	55.200	-1.86%	-3.77%
			850	0.967	53.09	0.988	55.154	-2.13%	-3.74%
9/10/2012	1750B	22.2	1710	1.437	55.65	1.460	53.540	-1.58%	3.94%
			1750	1.486	55.49	1.490	53.430	-0.27%	3.86%
			1790	1.532	55.37	1.510	53.330	1.46%	3.83%
9/13/2012	1750B	21.3	1710	1.398	54.06	1.460	53.540	-4.25%	0.97%
			1750	1.437	54.44	1.490	53.430	-3.56%	1.89%
			1790	1.458	54.31	1.510	53.330	-3.44%	1.84%
9/12/2012	1900B	21.0	1850	1.524	53.09	1.520	53.300	0.26%	-0.39%
			1880	1.541	52.97	1.520	53.300	1.38%	-0.62%
			1910	1.577	52.96	1.520	53.300	3.75%	-0.64%
9/15/2012	1900B	22.5	1850	1.448	52.39	1.520	53.300	-4.74%	-1.71%
			1880	1.513	52.30	1.520	53.300	-0.46%	-1.88%
			1910	1.565	52.27	1.520	53.300	2.96%	-1.93%
9/18/2012	2450B	21.3	2401	1.975	50.43	1.903	52.765	3.78%	-4.43%
			2450	2.036	50.27	1.950	52.700	4.41%	-4.61%
			2499	2.108	50.22	2.019	52.638	4.41%	-4.59%

The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies (per IEEE 1528 6.6.1.2). The SAR test plots may slightly differ from the table above since the DASY software rounds to three significant digits.

12.2 Measurement Procedure for Tissue verification

1) The network analyzer and probe system was configured and calibrated.
2) The probe was immersed in the sample which was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
3) The complex admittance with respect to the probe aperture was measured
4) The complex relative permittivity ε can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{\left[\ln(b/a)\right]^2}\int_a^b\int_a^b\int_0^\pi \cos\phi'\frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r}d\phi' d\rho' d\rho$$

where *Y* is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

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12.3 Test System Verification

Prior to assessment, the system is verified to ±10% of the manufacturer SAR measurement on the reference dipole at the time of calibration.

Table 12-2
System Verification Results

System Verification TARGET & MEASURED											
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 (%)
835	Head	09/10/2012	23.3	22.9	0.100	4d047	3213	0.927	9.410	9.270	-1.49%
1750	Head	09/10/2012	22.8	22.2	0.100	1008	3209	3.69	36.400	36.900	1.37%
1750	Head	09/13/2012	24.8	23.0	0.100	1008	3209	3.76	36.400	37.600	3.30%
1900	Head	09/11/2012	24.5	22.3	0.100	5d149	3213	4.2	39.300	42.000	6.87%
1900	Head	09/17/2012	20.9	20.5	0.100	5d149	3263	4.23	39.300	42.300	7.63%
2450	Head	09/19/2012	24.0	22.6	0.100	882	3213	5.59	53.500	55.900	4.49%
835	Body	09/10/2012	22.3	22.0	0.100	4d119	3022	0.972	9.560	9.720	1.67%
1750	Body	09/10/2012	22.8	22.3	0.100	1008	3209	3.9	37.400	39.000	4.28%
1750	Body	09/13/2012	24.8	23.0	0.100	1008	3209	3.75	37.400	37.500	0.27%
1900	Body	09/12/2012	24.1	21.6	0.100	5d149	3213	4.16	39.300	41.600	5.85%
1900	Body	09/15/2012	21.1	22.0	0.100	5d149	3287	4.02	39.300	40.200	2.29%
2450	Body	09/18/2012	24.4	22.5	0.100	882	3213	5.36	50.300	53.600	6.56%

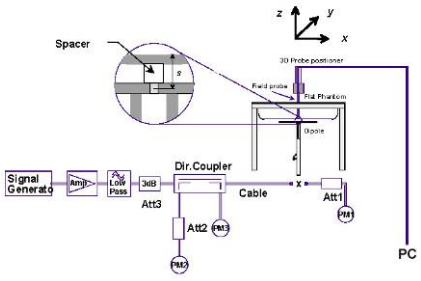

Figure 12-1
System Verification Setup Diagram

Figure 12-2
System Verification Setup Photo

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13 SAR DATA SUMMARY

13.1 Standalone Head SAR Data

Table 13-1
Cell. CDMA Head SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode/Band	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.									(W/kg)
836.52	384	Cell. CDMA	SO55	24.2	24.60	0.09	Right	Cheek	CDMA Max	**0.371**
836.52	384	Cell. CDMA	SO55	24.2	24.60	0.09	Right	Tilt	CDMA Max	0.250
836.52	384	Cell. CDMA	SO55	24.2	24.60	0.05	Left	Cheek	CDMA Max	0.318
836.52	384	Cell. CDMA	SO55	24.2	24.60	-0.01	Left	Tilt	CDMA Max	0.203
836.52	384	Cell. CDMA	SO55	17.7	17.68	0.07	Right	Cheek	1x Limit	0.073
836.52	384	Cell. CDMA	SO55	17.7	17.68	0.00	Right	Tilt	1x Limit	0.043
836.52	384	Cell. CDMA	SO55	17.7	17.68	0.08	Left	Cheek	1x Limit	0.075
836.52	384	Cell. CDMA	SO55	17.7	17.68	0.07	Left	Tilt	1x Limit	0.046
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**							**Head** **1.6 W/kg (mW/g)** averaged over 1 gram			

Table 13-2
AWS CDMA/EVDO Head SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode/Band	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.									(W/kg)
1732.50	450	AWS CDMA	SO55	23.7	24.11	-0.06	Right	Cheek	CDMA Max	**0.689**
1732.50	450	AWS CDMA	SO55	23.7	24.11	0.05	Right	Tilt	CDMA Max	0.368
1732.50	450	AWS CDMA	SO55	23.7	24.11	0.13	Left	Cheek	CDMA Max	0.345
1732.50	450	AWS CDMA	SO55	23.7	24.11	0.14	Left	Tilt	CDMA Max	0.322
1732.50	450	AWS CDMA	SO55	17.7	17.81	0.04	Right	Cheek	1x Limit	0.187
1732.50	450	AWS CDMA	SO55	17.7	17.81	0.02	Right	Tilt	1x Limit	0.094
1732.50	450	AWS CDMA	SO55	17.7	17.81	-0.20	Left	Cheek	1x Limit	0.090
1732.50	450	AWS CDMA	SO55	17.7	17.81	-0.02	Left	Tilt	1x Limit	0.084
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**							**Head** **1.6 W/kg (mW/g)** averaged over 1 gram			

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MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.									(W/kg)
1732.50	450	AWS CDMA	EVDO Rev. A	23.7	23.66	-0.01	Right	Cheek	EVDO Max	**0.610**
1732.50	450	AWS CDMA	EVDO Rev. A	23.7	23.66	-0.08	Right	Tilt	EVDO Max	0.358
1732.50	450	AWS CDMA	EVDO Rev. A	23.7	23.66	-0.05	Left	Cheek	EVDO Max	0.297
1732.50	450	AWS CDMA	EVDO Rev. A	23.7	23.66	-0.11	Left	Tilt	EVDO Max	0.354
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram			

Table 13-3
PCS CDMA/EVDO Head SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.									(W/kg)
1851.25	25	PCS CDMA	SO55	23.7	23.99	-0.01	Right	Cheek	CDMA Max	0.892
1880.00	600	PCS CDMA	SO55	23.7	24.01	0.05	Right	Cheek	CDMA Max	0.982
1908.75	1175	PCS CDMA	SO55	23.7	24.06	0.00	Right	Cheek	CDMA Max	**0.993**
1880.00	600	PCS CDMA	SO55	23.7	24.01	0.04	Right	Tilt	CDMA Max	0.382
1880.00	600	PCS CDMA	SO55	23.7	24.01	0.04	Left	Cheek	CDMA Max	0.464
1880.00	600	PCS CDMA	SO55	23.7	24.01	0.00	Left	Tilt	CDMA Max	0.311
1880.00	600	PCS CDMA	SO55	17.7	17.75	0.04	Right	Cheek	1x Limit	0.207
1880.00	600	PCS CDMA	SO55	17.7	17.75	-0.04	Right	Tilt	1x Limit	0.080
1880.00	600	PCS CDMA	SO55	17.7	17.75	0.02	Left	Cheek	1x Limit	0.088
1880.00	600	PCS CDMA	SO55	17.7	17.75	0.05	Left	Tilt	1x Limit	0.057
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram			

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.									(W/kg)
1851.25	25	PCS CDMA	EVDO Rev. A	23.7	23.85	0.04	Right	Cheek	EVDO Max	0.955
1880.00	600	PCS CDMA	EVDO Rev. A	23.7	23.75	0.07	Right	Cheek	EVDO Max	**1.050**
1908.75	1175	PCS CDMA	EVDO Rev. A	23.7	23.55	-0.07	Right	Cheek	EVDO Max	0.918
1880.00	600	PCS CDMA	EVDO Rev. A	23.7	23.75	0.00	Right	Tilt	EVDO Max	0.444
1880.00	600	PCS CDMA	EVDO Rev. A	23.7	23.75	-0.01	Left	Cheek	EVDO Max	0.514
1880.00	600	PCS CDMA	EVDO Rev. A	23.7	23.75	-0.12	Left	Tilt	EVDO Max	0.388
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 13-4
LTE Band 4 (AWS) Head SAR Results

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	# of RB	RB Offset	Device Serial Number	SAR (1g)
MHz	Ch.														(W/kg)
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	-0.11	1	Right	Cheek	QPSK	25	12	LTE Max	0.213
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.04	0	Right	Cheek	QPSK	1	0	LTE Max	**0.264**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	-0.08	0	Right	Cheek	QPSK	1	49	LTE Max	0.261
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	-0.08	2	Right	Cheek	16 QAM	25	12	LTE Max	0.176
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	-0.02	1	Right	Cheek	16 QAM	1	0	LTE Max	0.166
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.09	1	Right	Cheek	16 QAM	1	49	LTE Max	0.190
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.03	1	Right	Tilt	QPSK	25	12	LTE Max	0.258
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	0.09	0	Right	Tilt	QPSK	1	0	LTE Max	**0.340**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.03	0	Right	Tilt	QPSK	1	49	LTE Max	0.306
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.11	2	Right	Tilt	16 QAM	25	12	LTE Max	0.234
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	-0.16	1	Right	Tilt	16 QAM	1	0	LTE Max	0.213
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	-0.07	1	Right	Tilt	16 QAM	1	49	LTE Max	0.136
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.03	1	Left	Cheek	QPSK	25	12	LTE Max	0.550
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.10	0	Left	Cheek	QPSK	1	0	LTE Max	**0.739**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.06	0	Left	Cheek	QPSK	1	49	LTE Max	0.675
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.09	2	Left	Cheek	16 QAM	25	12	LTE Max	0.468
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	0.04	1	Left	Cheek	16 QAM	1	0	LTE Max	0.425
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	-0.06	1	Left	Cheek	16 QAM	1	49	LTE Max	0.428
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.03	1	Left	Tilt	QPSK	25	12	LTE Max	0.213
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.13	0	Left	Tilt	QPSK	1	0	LTE Max	**0.291**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	-0.09	0	Left	Tilt	QPSK	1	49	LTE Max	0.291
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.13	2	Left	Tilt	16 QAM	25	12	LTE Max	0.194
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	0.02	1	Left	Tilt	16 QAM	1	0	LTE Max	0.180
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.09	1	Left	Tilt	16 QAM	1	49	LTE Max	0.217
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	-0.08	0	Right	Cheek	QPSK	25	12	LTE Limit	0.100
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	-0.13	0	Right	Cheek	QPSK	1	0	LTE Limit	0.095
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	-0.02	0	Right	Cheek	QPSK	1	49	LTE Limit	**0.106**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	-0.16	0	Right	Cheek	16 QAM	25	12	LTE Limit	0.103
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	-0.18	0	Right	Cheek	16 QAM	1	0	LTE Limit	0.090
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.02	0	Right	Cheek	16 QAM	1	49	LTE Limit	0.099
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.13	0	Right	Tilt	QPSK	25	12	LTE Limit	0.105
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	0.03	0	Right	Tilt	QPSK	1	0	LTE Limit	0.103
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	0.11	0	Right	Tilt	QPSK	1	49	LTE Limit	**0.116**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.07	0	Right	Tilt	16 QAM	25	12	LTE Limit	0.114
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.05	0	Right	Tilt	16 QAM	1	0	LTE Limit	0.102
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	-0.14	0	Right	Tilt	16 QAM	1	49	LTE Limit	0.107
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	-0.03	0	Left	Cheek	QPSK	25	12	LTE Limit	0.189
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	0.08	0	Left	Cheek	QPSK	1	0	LTE Limit	0.202
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	0.01	0	Left	Cheek	QPSK	1	49	LTE Limit	**0.210**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.10	0	Left	Cheek	16 QAM	25	12	LTE Limit	0.195
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.00	0	Left	Cheek	16 QAM	1	0	LTE Limit	0.186
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.02	0	Left	Cheek	16 QAM	1	49	LTE Limit	0.105
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.11	0	Left	Tilt	QPSK	25	12	LTE Limit	0.085
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	-0.19	0	Left	Tilt	QPSK	1	0	LTE Limit	0.084
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	0.01	0	Left	Tilt	QPSK	1	49	LTE Limit	0.086
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	-0.11	0	Left	Tilt	16 QAM	25	12	LTE Limit	**0.091**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.14	0	Left	Tilt	16 QAM	1	0	LTE Limit	0.081
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.10	0	Left	Tilt	16 QAM	1	49	LTE Limit	0.083

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

Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus low channel was tested for max power 16QAM 1RB configurations.

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Table 13-5
LTE Band 2 (PCS) Head SAR Results

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	# of RB	RB Offset	Device Serial Number	SAR (1g)
MHz	Ch.														(W/kg)
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	-0.04	1	Right	Cheek	QPSK	25	12	LTE Max	0.372
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	0.05	0	Right	Cheek	QPSK	1	0	LTE Max	0.435
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.14	0	Right	Cheek	QPSK	1	49	LTE Max	**0.474**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	0.00	2	Right	Cheek	16 QAM	25	12	LTE Max	0.294
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	-0.12	1	Right	Cheek	16 QAM	1	0	LTE Max	0.390
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	0.07	1	Right	Cheek	16 QAM	1	49	LTE Max	0.385
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	0.04	1	Right	Tilt	QPSK	25	12	LTE Max	0.346
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	0.01	0	Right	Tilt	QPSK	1	0	LTE Max	0.403
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	-0.13	0	Right	Tilt	QPSK	1	49	LTE Max	**0.475**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	0.05	2	Right	Tilt	16 QAM	25	12	LTE Max	0.271
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	0.14	1	Right	Tilt	16 QAM	1	0	LTE Max	0.350
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	0.10	1	Right	Tilt	16 QAM	1	49	LTE Max	0.367
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	-0.10	1	Left	Cheek	QPSK	25	12	LTE Max	0.715
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	0.06	0	Left	Cheek	QPSK	1	0	LTE Max	0.830
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.01	0	Left	Cheek	QPSK	1	49	LTE Max	**0.909**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	-0.04	2	Left	Cheek	16 QAM	25	12	LTE Max	0.559
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	0.11	1	Left	Cheek	16 QAM	1	0	LTE Max	0.714
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	-0.02	1	Left	Cheek	16 QAM	1	49	LTE Max	0.817
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	0.00	1	Left	Tilt	QPSK	25	12	LTE Max	0.258
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.08	0	Left	Tilt	QPSK	1	0	LTE Max	0.327
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.07	0	Left	Tilt	QPSK	1	49	LTE Max	**0.357**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	0.06	2	Left	Tilt	16 QAM	25	12	LTE Max	0.209
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	0.12	1	Left	Tilt	16 QAM	1	0	LTE Max	0.317
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	0.07	1	Left	Tilt	16 QAM	1	49	LTE Max	0.339
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	-0.02	0	Right	Cheek	QPSK	25	12	LTE Limit	0.145
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	-0.11	0	Right	Cheek	QPSK	1	0	LTE Limit	0.155
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	-0.01	0	Right	Cheek	QPSK	1	49	LTE Limit	**0.157**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	0.03	0	Right	Cheek	16 QAM	25	12	LTE Limit	0.144
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.04	0	Right	Cheek	16 QAM	1	0	LTE Limit	0.152
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	-0.02	0	Right	Cheek	16 QAM	1	49	LTE Limit	0.156
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.03	0	Right	Tilt	QPSK	25	12	LTE Limit	0.117
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	-0.11	0	Right	Tilt	QPSK	1	0	LTE Limit	0.130
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	-0.15	0	Right	Tilt	QPSK	1	49	LTE Limit	**0.136**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	-0.09	0	Right	Tilt	16 QAM	25	12	LTE Limit	0.119
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.01	0	Right	Tilt	16 QAM	1	0	LTE Limit	0.130
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.03	0	Right	Tilt	16 QAM	1	49	LTE Limit	0.134
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.00	0	Left	Cheek	QPSK	25	12	LTE Limit	0.272
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	0.01	0	Left	Cheek	QPSK	1	0	LTE Limit	0.307
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.16	0	Left	Cheek	QPSK	1	49	LTE Limit	0.298
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	0.04	0	Left	Cheek	16 QAM	25	12	LTE Limit	0.271
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.02	0	Left	Cheek	16 QAM	1	0	LTE Limit	**0.327**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.00	0	Left	Cheek	16 QAM	1	49	LTE Limit	0.321
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.01	0	Left	Tilt	QPSK	25	12	LTE Limit	0.102
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	0.03	0	Left	Tilt	QPSK	1	0	LTE Limit	**0.108**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.14	0	Left	Tilt	QPSK	1	49	LTE Limit	0.083
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	-0.05	0	Left	Tilt	16 QAM	25	12	LTE Limit	0.084
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.16	0	Left	Tilt	16 QAM	1	0	LTE Limit	0.094
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.15	0	Left	Tilt	16 QAM	1	49	LTE Limit	0.087
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram						

Per Page 4, footnote 6, QPSK 1 RB allocation SAR tests were performed on the highest output power channel for the RB allocation when the average output power of the 1 RB allocation was > 0.5 dB higher than the 50% RB allocation for QPSK. Otherwise, SAR tests are performed on the channel that produced the highest SAR for QPSK with 50% RB, thus low channel was tested for max power QPSK 1RB configurations.
Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus high channel was tested for max power 16QAM 1RB configurations.

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Table 13-6
LTE Band 25 Head SAR Results

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	SAR (1g)
MHz	Ch.														(W/kg)
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.05	1	Right	Cheek	QPSK	25	12	LTE Max	0.400
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	0.04	0	Right	Cheek	QPSK	1	0	LTE Max	0.515
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.01	0	Right	Cheek	QPSK	1	49	LTE Max	**0.546**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	0.03	2	Right	Cheek	16 QAM	25	12	LTE Max	0.325
1910.00	26640	High	LTE Band 25	10	22.2	22.44	0.09	1	Right	Cheek	16 QAM	1	0	LTE Max	0.405
1910.00	26640	High	LTE Band 25	10	22.2	22.58	-0.04	1	Right	Cheek	16 QAM	1	49	LTE Max	0.392
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.01	1	Right	Tilt	QPSK	25	12	LTE Max	0.380
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.02	0	Right	Tilt	QPSK	1	0	LTE Max	0.441
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.00	0	Right	Tilt	QPSK	1	49	LTE Max	**0.496**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	-0.04	2	Right	Tilt	16 QAM	25	12	LTE Max	0.282
1910.00	26640	High	LTE Band 25	10	22.2	22.44	-0.03	1	Right	Tilt	16 QAM	1	0	LTE Max	0.356
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.06	1	Right	Tilt	16 QAM	1	49	LTE Max	0.367
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.11	1	Left	Cheek	QPSK	25	12	LTE Max	0.685
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.06	0	Left	Cheek	QPSK	1	0	LTE Max	0.798
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	-0.03	0	Left	Cheek	QPSK	1	49	LTE Max	**0.935**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	0.00	2	Left	Cheek	16 QAM	25	12	LTE Max	0.552
1910.00	26640	High	LTE Band 25	10	22.2	22.44	-0.02	1	Left	Cheek	16 QAM	1	0	LTE Max	0.677
1910.00	26640	High	LTE Band 25	10	22.2	22.58	-0.12	1	Left	Cheek	16 QAM	1	49	LTE Max	0.718
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.02	1	Left	Tilt	QPSK	25	12	LTE Max	0.287
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	0.05	0	Left	Tilt	QPSK	1	0	LTE Max	0.315
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.14	0	Left	Tilt	QPSK	1	49	LTE Max	**0.372**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	-0.12	2	Left	Tilt	16 QAM	25	12	LTE Max	0.230
1910.00	26640	High	LTE Band 25	10	22.2	22.44	-0.07	1	Left	Tilt	16 QAM	1	0	LTE Max	0.233
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.11	1	Left	Tilt	16 QAM	1	49	LTE Max	0.259
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.01	0	Right	Cheek	QPSK	25	12	LTE Limit	0.166
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	-0.04	0	Right	Cheek	QPSK	1	0	LTE Limit	**0.175**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	-0.01	0	Right	Cheek	QPSK	1	49	LTE Limit	0.170
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	-0.05	0	Right	Cheek	16 QAM	25	12	LTE Limit	0.167
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	-0.06	0	Right	Cheek	16 QAM	1	0	LTE Limit	0.171
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	-0.01	0	Right	Cheek	16 QAM	1	49	LTE Limit	0.163
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.01	0	Right	Tilt	QPSK	25	12	LTE Limit	0.137
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	0.10	0	Right	Tilt	QPSK	1	0	LTE Limit	0.127
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	0.08	0	Right	Tilt	QPSK	1	49	LTE Limit	**0.149**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	-0.01	0	Right	Tilt	16 QAM	25	12	LTE Limit	0.138
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	-0.02	0	Right	Tilt	16 QAM	1	0	LTE Limit	0.126
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	0.04	0	Right	Tilt	16 QAM	1	49	LTE Limit	0.142
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.10	0	Left	Cheek	QPSK	25	12	LTE Limit	0.225
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	-0.04	0	Left	Cheek	QPSK	1	0	LTE Limit	0.243
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	0.05	0	Left	Cheek	QPSK	1	49	LTE Limit	0.220
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.06	0	Left	Cheek	16 QAM	25	12	LTE Limit	0.229
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.04	0	Left	Cheek	16 QAM	1	0	LTE Limit	0.243
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	-0.06	0	Left	Cheek	16 QAM	1	49	LTE Limit	**0.247**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.03	0	Left	Tilt	QPSK	25	12	LTE Limit	0.085
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	0.08	0	Left	Tilt	QPSK	1	0	LTE Limit	0.090
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	-0.01	0	Left	Tilt	QPSK	1	49	LTE Limit	0.099
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.01	0	Left	Tilt	16 QAM	25	12	LTE Limit	**0.118**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.06	0	Left	Tilt	16 QAM	1	0	LTE Limit	0.089
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	0.03	0	Left	Tilt	16 QAM	1	49	LTE Limit	0.116
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram				

Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus high channel was tested for max power 16QAM 1RB configurations.

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Table 13-7
2.4 GHz WLAN Head SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	SAR (1g)
MHz	Ch.									(W/kg)
2437	6	IEEE 802.11b	DSSS	16.01	0.15	Right	Cheek	BT/WLAN	1	0.017
2437	6	IEEE 802.11b	DSSS	16.01	0.07	Right	Tilt	BT/WLAN	1	0.010
2437	6	IEEE 802.11b	DSSS	16.01	0.05	Left	Cheek	BT/WLAN	1	**0.040**
2437	6	IEEE 802.11b	DSSS	16.01	0.08	Left	Tilt	BT/WLAN	1	0.025
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**Head 1.6 W/kg (mW/g) averaged over 1 gram**				

13.2 Standalone Body-Worn SAR Data

Table 13-8
CDMA Body-Worn SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Side	SAR (1g)
MHz	Ch.									(W/kg)
824.70	1013	Cell. CDMA	TDSO / SO32	24.2	24.66	0.00	1.0 cm	CDMA Max	back	**0.972**
836.52	384	Cell. CDMA	TDSO / SO32	24.2	24.60	-0.02	1.0 cm	CDMA Max	back	0.968
848.31	777	Cell. CDMA	TDSO / SO32	24.2	24.70	-0.04	1.0 cm	CDMA Max	back	0.925
836.52	384	Cell. CDMA	TDSO / SO32	17.7	17.73	0.04	1.0 cm	1x Limit	back	0.191
1711.25	25	AWS CDMA	TDSO / SO32	23.7	24.02	0.07	1.0 cm	CDMA Max	back	1.000
1732.50	450	AWS CDMA	TDSO / SO32	23.7	24.10	-0.02	1.0 cm	CDMA Max	back	0.984
1753.75	875	AWS CDMA	TDSO / SO32	23.7	24.01	0.03	1.0 cm	CDMA Max	back	**1.090**
1732.50	450	AWS CDMA	TDSO / SO32	17.7	17.85	-0.02	1.0 cm	1x Limit	back	0.245
1851.25	25	PCS CDMA	TDSO / SO32	23.7	24.03	0.03	1.0 cm	CDMA Max	back	**1.090**
1880.00	600	PCS CDMA	TDSO / SO32	23.7	24.00	-0.02	1.0 cm	CDMA Max	back	1.040
1908.75	1175	PCS CDMA	TDSO / SO32	23.7	24.10	0.04	1.0 cm	CDMA Max	back	0.969
1880.00	600	PCS CDMA	TDSO / SO32	17.7	17.68	-0.05	1.0 cm	1x Limit	back	0.279
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							**Body 1.6 W/kg (mW/g) averaged over 1 gram**			

Note: When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, CDMA TDSO hotspot data for the back side configuration additionally shows body-worn compliance since 1x-RTT CDMA hotspot was additionally required to be evaluated for SAR to support possible simultaneous transmission scenarios.

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Table 13-9
LTE Body-Worn SAR Results

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	# of RB	RB Offset	Spacing	Side	SAR (1g)
MHz	Ch.														(W/kg)
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.87	0.02	1	LTE Max	QPSK	25	12	1.0 cm	back	0.615
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.01	1	LTE Max	QPSK	25	12	1.0 cm	back	0.817
1750.00	20350	High	LTE Band 4 (AWS)	10	22.7	22.83	0.02	1	LTE Max	QPSK	25	12	1.0 cm	back	0.686
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.01	0	LTE Max	QPSK	1	0	1.0 cm	back	**1.060**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.02	0	LTE Max	QPSK	1	49	1.0 cm	back	1.020
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.07	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.655
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	-0.01	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.617
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.05	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.748
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.04	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.308
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	-0.12	0	LTE Limit	QPSK	1	0	1.0 cm	back	0.275
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	-0.09	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.314
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.03	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.317
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.17	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.302
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.02	0	LTE Limit	16 QAM	1	49	1.0 cm	back	**0.318**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	0.03	1	LTE Max	QPSK	25	12	1.0 cm	back	0.693
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.07	0	LTE Max	QPSK	1	0	1.0 cm	back	0.994
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.01	0	LTE Max	QPSK	1	49	1.0 cm	back	**1.000**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	-0.06	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.546
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	-0.01	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.712
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	-0.02	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.764
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.09	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.241
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	-0.19	0	LTE Limit	QPSK	1	0	1.0 cm	back	**0.298**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.01	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.256
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	0.01	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.244
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.05	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.288
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.03	0	LTE Limit	16 QAM	1	49	1.0 cm	back	0.254
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.03	1	LTE Max	QPSK	25	12	1.0 cm	back	0.594
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.18	0	LTE Max	QPSK	1	0	1.0 cm	back	0.727
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.00	0	LTE Max	QPSK	1	49	1.0 cm	back	**0.773**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	-0.05	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.454
1910.00	26640	High	LTE Band 25	10	22.2	22.44	0.02	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.536
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.13	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.540
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.18	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.280
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	-0.01	0	LTE Limit	QPSK	1	0	1.0 cm	back	0.298
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	0.01	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.300
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.20	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.283
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.01	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.294
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	0.00	0	LTE Limit	16 QAM	1	49	1.0 cm	back	**0.301**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram						

Per Page 4, footnote 6, QPSK 1 RB allocation SAR tests were performed on the highest output power channel for the RB allocation when the average output power of the 1 RB allocation was > 0.5 dB higher than the 50% RB allocation for QPSK. Otherwise, SAR tests are performed on the channel that produced the highest SAR for QPSK with 50% RB, thus low channel was tested for LTE Band 2 max power QPSK 1RB configurations.
Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus low channel was tested for LTE Band 4 max power 16QAM 1RB configurations and high channel was tested for LTE Band 2/25 max power 16QAM 1RB configurations.

Note: When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, LTE hotspot data for the back side configuration additionally shows body-worn compliance.

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Table 13-10
WLAN Body-Worn SAR Results

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	SAR (1g)
MHz	Ch.									(W/kg)
2437	6	IEEE 802.11b	DSSS	16.01	0.06	1.0 cm	BT/WLAN	1	back	0.074
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**Body 1.6 W/kg (mW/g) **averaged over 1 gram				

Note: When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, IEEE 802.11b hotspot data for the back side configuration additionally shows body-worn compliance.

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13.3 Standalone Wireless Router SAR Data

Table 13-11
CDMA/EVDO Hotspot SAR Data

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Side	SAR (1g)
MHz	Ch.									(W/kg)
824.70	1013	Cell. CDMA	TDSO / SO32	24.2	24.66	0.00	1.0 cm	CDMA Max	back	**0.972**
836.52	384	Cell. CDMA	TDSO / SO32	24.2	24.60	-0.02	1.0 cm	CDMA Max	back	0.968
848.31	777	Cell. CDMA	TDSO / SO32	24.2	24.70	-0.04	1.0 cm	CDMA Max	back	0.925
836.52	384	Cell. CDMA	TDSO / SO32	24.2	24.60	0.01	1.0 cm	CDMA Max	front	0.487
836.52	384	Cell. CDMA	TDSO / SO32	24.2	24.60	0.02	1.0 cm	CDMA Max	bottom	0.227
836.52	384	Cell. CDMA	TDSO / SO32	24.2	24.60	-0.01	1.0 cm	CDMA Max	right	0.679
836.52	384	Cell. CDMA	TDSO / SO32	17.7	17.73	0.04	1.0 cm	1x Limit	back	0.191
836.52	384	Cell. CDMA	TDSO / SO32	17.7	17.73	-0.04	1.0 cm	1x Limit	front	0.102
836.52	384	Cell. CDMA	TDSO / SO32	17.7	17.73	0.05	1.0 cm	1x Limit	bottom	0.047
836.52	384	Cell. CDMA	TDSO / SO32	17.7	17.73	0.05	1.0 cm	1x Limit	right	0.109
1711.25	25	AWS CDMA	TDSO / SO32	23.7	24.02	0.07	1.0 cm	CDMA Max	back	1.000
1732.50	450	AWS CDMA	TDSO / SO32	23.7	24.10	-0.02	1.0 cm	CDMA Max	back	0.984
1753.75	875	AWS CDMA	TDSO / SO32	23.7	24.01	0.03	1.0 cm	CDMA Max	back	**1.090**
1711.25	25	AWS CDMA	TDSO / SO32	23.7	24.02	0.07	1.0 cm	CDMA Max	front	0.789
1732.50	450	AWS CDMA	TDSO / SO32	23.7	24.10	0.10	1.0 cm	CDMA Max	front	0.859
1753.75	875	AWS CDMA	TDSO / SO32	23.7	24.01	-0.03	1.0 cm	CDMA Max	front	0.950
1732.50	450	AWS CDMA	TDSO / SO32	23.7	24.10	0.00	1.0 cm	CDMA Max	bottom	0.363
1732.50	450	AWS CDMA	TDSO / SO32	23.7	24.10	0.02	1.0 cm	CDMA Max	right	0.344
1711.25	25	AWS CDMA	EVDO Rev. 0	23.7	23.89	-0.08	1.0 cm	EVDO Max	back	0.973
1732.50	450	AWS CDMA	EVDO Rev. 0	23.7	24.05	0.05	1.0 cm	EVDO Max	back	1.070
1753.75	875	AWS CDMA	EVDO Rev. 0	23.7	23.99	-0.09	1.0 cm	EVDO Max	back	1.090
1711.25	25	AWS CDMA	EVDO Rev. 0	23.7	23.89	0.04	1.0 cm	EVDO Max	front	0.726
1732.50	450	AWS CDMA	EVDO Rev. 0	23.7	24.05	0.04	1.0 cm	EVDO Max	front	0.837
1753.75	875	AWS CDMA	EVDO Rev. 0	23.7	23.99	0.03	1.0 cm	EVDO Max	front	0.875
1732.50	450	AWS CDMA	EVDO Rev. 0	23.7	24.05	-0.03	1.0 cm	EVDO Max	bottom	0.421
1732.50	450	AWS CDMA	EVDO Rev. 0	23.7	24.05	0.00	1.0 cm	EVDO Max	right	0.332
1732.50	450	AWS CDMA	TDSO / SO32	17.7	17.85	-0.02	1.0 cm	1x Limit	back	0.245
1732.50	450	AWS CDMA	TDSO / SO32	17.7	17.85	0.18	1.0 cm	1x Limit	front	0.192
1732.50	450	AWS CDMA	TDSO / SO32	17.7	17.85	0.02	1.0 cm	1x Limit	bottom	0.094
1732.50	450	AWS CDMA	TDSO / SO32	17.7	17.85	0.08	1.0 cm	1x Limit	right	0.085
1851.25	25	PCS CDMA	TDSO / SO32	23.7	24.03	0.03	1.0 cm	CDMA Max	back	**1.090**
1880.00	600	PCS CDMA	TDSO / SO32	23.7	24.00	-0.02	1.0 cm	CDMA Max	back	1.040
1908.75	1175	PCS CDMA	TDSO / SO32	23.7	24.10	0.04	1.0 cm	CDMA Max	back	0.969
1880.00	600	PCS CDMA	TDSO / SO32	23.7	24.00	0.01	1.0 cm	CDMA Max	front	0.717
1880.00	600	PCS CDMA	TDSO / SO32	23.7	24.00	0.07	1.0 cm	CDMA Max	bottom	0.475
1880.00	600	PCS CDMA	TDSO / SO32	23.7	24.00	-0.03	1.0 cm	CDMA Max	right	0.675
1880.00	600	PCS CDMA	EVDO Rev. 0	23.7	23.99	-0.10	1.0 cm	EVDO Max	back	0.661
1880.00	600	PCS CDMA	EVDO Rev. 0	23.7	23.99	-0.14	1.0 cm	EVDO Max	front	0.569
1880.00	600	PCS CDMA	EVDO Rev. 0	23.7	23.99	0.02	1.0 cm	EVDO Max	bottom	0.354
1880.00	600	PCS CDMA	EVDO Rev. 0	23.7	23.99	-0.05	1.0 cm	EVDO Max	right	0.550
1880.00	600	PCS CDMA	TDSO / SO32	17.7	17.68	-0.05	1.0 cm	1x Limit	back	0.279
1880.00	600	PCS CDMA	TDSO / SO32	17.7	17.68	0.07	1.0 cm	1x Limit	front	0.140
1880.00	600	PCS CDMA	TDSO / SO32	17.7	17.68	0.06	1.0 cm	1x Limit	bottom	0.078
1880.00	600	PCS CDMA	TDSO / SO32	17.7	17.68	0.00	1.0 cm	1x Limit	right	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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Table 13-12
LTE Band 4 (AWS) Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	# of RB	RB Offset	Spacing	Side	SAR (1g)
MHz	Ch.														(W/kg)
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.87	0.02	1	LTE Max	QPSK	25	12	1.0 cm	back	0.615
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.01	1	LTE Max	QPSK	25	12	1.0 cm	back	0.817
1750.00	20350	High	LTE Band 4 (AWS)	10	22.7	22.83	0.02	1	LTE Max	QPSK	25	12	1.0 cm	back	0.686
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.01	0	LTE Max	QPSK	1	0	1.0 cm	back	**1.060**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.02	0	LTE Max	QPSK	1	49	1.0 cm	back	1.020
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.07	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.655
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	-0.01	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.617
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.05	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.748
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	-0.01	1	LTE Max	QPSK	25	12	1.0 cm	front	0.558
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	0.00	0	LTE Max	QPSK	1	0	1.0 cm	front	**0.760**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.06	0	LTE Max	QPSK	1	49	1.0 cm	front	0.725
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.00	2	LTE Max	16 QAM	25	12	1.0 cm	front	0.474
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	0.06	1	LTE Max	16 QAM	1	0	1.0 cm	front	0.442
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.13	1	LTE Max	16 QAM	1	49	1.0 cm	front	0.558
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	-0.16	1	LTE Max	QPSK	25	12	1.0 cm	bottom	0.219
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	0.01	0	LTE Max	QPSK	1	0	1.0 cm	bottom	**0.299**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.12	0	LTE Max	QPSK	1	49	1.0 cm	bottom	0.241
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.09	2	LTE Max	16 QAM	25	12	1.0 cm	bottom	0.183
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	-0.06	1	LTE Max	16 QAM	1	0	1.0 cm	bottom	0.150
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	-0.03	1	LTE Max	16 QAM	1	49	1.0 cm	bottom	0.204
1732.50	20175	Mid	LTE Band 4 (AWS)	10	22.7	22.78	0.02	1	LTE Max	QPSK	25	12	1.0 cm	left	0.346
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.93	-0.21	0	LTE Max	QPSK	1	0	1.0 cm	left	**0.449**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	23.7	23.99	0.01	0	LTE Max	QPSK	1	49	1.0 cm	left	0.416
1732.50	20175	Mid	LTE Band 4 (AWS)	10	21.7	22.04	0.01	2	LTE Max	16 QAM	25	12	1.0 cm	left	0.279
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	23.01	0.00	1	LTE Max	16 QAM	1	0	1.0 cm	left	0.264
1715.00	20000	Low	LTE Band 4 (AWS)	10	22.7	22.91	0.01	1	LTE Max	16 QAM	1	49	1.0 cm	left	0.291
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.04	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.308
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	-0.12	0	LTE Limit	QPSK	1	0	1.0 cm	back	0.275
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	-0.09	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.314
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.03	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.317
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.17	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.302
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.02	0	LTE Limit	16 QAM	1	49	1.0 cm	back	**0.318**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.00	0	LTE Limit	QPSK	25	12	1.0 cm	front	0.205
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	-0.12	0	LTE Limit	QPSK	1	0	1.0 cm	front	0.207
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	0.14	0	LTE Limit	QPSK	1	49	1.0 cm	front	**0.217**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.03	0	LTE Limit	16 QAM	25	12	1.0 cm	front	0.204
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.06	0	LTE Limit	16 QAM	1	0	1.0 cm	front	0.197
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.14	0	LTE Limit	16 QAM	1	49	1.0 cm	front	0.209
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	0.04	0	LTE Limit	QPSK	25	12	1.0 cm	bottom	0.091
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	0.16	0	LTE Limit	QPSK	1	0	1.0 cm	bottom	0.095
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	0.21	0	LTE Limit	QPSK	1	49	1.0 cm	bottom	**0.105**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.10	0	LTE Limit	16 QAM	25	12	1.0 cm	bottom	0.093
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	0.12	0	LTE Limit	16 QAM	1	0	1.0 cm	bottom	0.091
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.06	0	LTE Limit	16 QAM	1	49	1.0 cm	bottom	0.096
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.29	-0.04	0	LTE Limit	QPSK	25	12	1.0 cm	left	0.101
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.43	0.11	0	LTE Limit	QPSK	1	0	1.0 cm	left	0.098
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.46	-0.03	0	LTE Limit	QPSK	1	49	1.0 cm	left	**0.112**
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.35	0.17	0	LTE Limit	16 QAM	25	12	1.0 cm	left	0.105
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.04	-0.02	0	LTE Limit	16 QAM	1	0	1.0 cm	left	0.093
1732.50	20175	Mid	LTE Band 4 (AWS)	10	18.2	18.06	0.06	0	LTE Limit	16 QAM	1	49	1.0 cm	left	0.102
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram						

Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus low channel was tested for max power 16QAM 1RB configurations.

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Table 13-13
LTE Band 2 (PCS) Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	# of RB	RB Offset	Spacing	Side	SAR (1g)
MHz	Ch.														(W/kg)
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	0.03	1	LTE Max	QPSK	25	12	1.0 cm	back	0.693
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.07	0	LTE Max	QPSK	1	0	1.0 cm	back	0.994
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.01	0	LTE Max	QPSK	1	49	1.0 cm	back	**1.000**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	-0.06	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.546
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	-0.01	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.712
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	-0.02	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.764
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	-0.03	1	LTE Max	QPSK	25	12	1.0 cm	front	0.600
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.04	0	LTE Max	QPSK	1	0	1.0 cm	front	0.816
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.05	0	LTE Max	QPSK	1	49	1.0 cm	front	**0.858**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	0.02	2	LTE Max	16 QAM	25	12	1.0 cm	front	0.460
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	0.01	1	LTE Max	16 QAM	1	0	1.0 cm	front	0.548
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	0.00	1	LTE Max	16 QAM	1	49	1.0 cm	front	0.673
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	0.15	1	LTE Max	QPSK	25	12	1.0 cm	bottom	0.240
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.08	0	LTE Max	QPSK	1	0	1.0 cm	bottom	0.387
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.10	0	LTE Max	QPSK	1	49	1.0 cm	bottom	**0.421**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	0.04	2	LTE Max	16 QAM	25	12	1.0 cm	bottom	0.191
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	0.04	1	LTE Max	16 QAM	1	0	1.0 cm	bottom	0.201
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	-0.02	1	LTE Max	16 QAM	1	49	1.0 cm	bottom	0.221
1880.00	18900	Mid	LTE Band 2 (PCS)	10	22.2	22.55	-0.01	1	LTE Max	QPSK	25	12	1.0 cm	left	0.519
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.45	-0.07	0	LTE Max	QPSK	1	0	1.0 cm	left	0.595
1855.00	18650	Low	LTE Band 2 (PCS)	10	23.2	23.49	0.06	0	LTE Max	QPSK	1	49	1.0 cm	left	**0.656**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	21.2	21.57	-0.03	2	LTE Max	16 QAM	25	12	1.0 cm	left	0.401
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.21	-0.07	1	LTE Max	16 QAM	1	0	1.0 cm	left	0.498
1905.00	19150	High	LTE Band 2 (PCS)	10	22.2	22.68	-0.04	1	LTE Max	16 QAM	1	49	1.0 cm	left	0.498
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.09	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.241
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	-0.19	0	LTE Limit	QPSK	1	0	1.0 cm	back	**0.298**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.01	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.256
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	0.01	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.244
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.05	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.288
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.03	0	LTE Limit	16 QAM	1	49	1.0 cm	back	0.254
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.04	0	LTE Limit	QPSK	25	12	1.0 cm	front	0.196
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	0.03	0	LTE Limit	QPSK	1	0	1.0 cm	front	0.230
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.19	0	LTE Limit	QPSK	1	49	1.0 cm	front	0.214
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	-0.15	0	LTE Limit	16 QAM	25	12	1.0 cm	front	0.198
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.00	0	LTE Limit	16 QAM	1	0	1.0 cm	front	**0.238**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	0.01	0	LTE Limit	16 QAM	1	49	1.0 cm	front	0.228
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.03	0	LTE Limit	QPSK	25	12	1.0 cm	bottom	0.066
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	0.05	0	LTE Limit	QPSK	1	0	1.0 cm	bottom	0.081
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.14	0	LTE Limit	QPSK	1	49	1.0 cm	bottom	0.072
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	0.02	0	LTE Limit	16 QAM	25	12	1.0 cm	bottom	0.067
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.05	0	LTE Limit	16 QAM	1	0	1.0 cm	bottom	**0.082**
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	-0.02	0	LTE Limit	16 QAM	1	49	1.0 cm	bottom	0.074
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.01	0.05	0	LTE Limit	QPSK	25	12	1.0 cm	left	0.185
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.56	0.05	0	LTE Limit	QPSK	1	0	1.0 cm	left	0.213
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.33	0.05	0	LTE Limit	QPSK	1	49	1.0 cm	left	0.215
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.02	-0.02	0	LTE Limit	16 QAM	25	12	1.0 cm	left	0.185
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.27	0.00	0	LTE Limit	16 QAM	1	0	1.0 cm	left	0.217
1880.00	18900	Mid	LTE Band 2 (PCS)	10	18.2	18.03	-0.04	0	LTE Limit	16 QAM	1	49	1.0 cm	left	**0.219**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram						

Per Page 4, footnote 6, QPSK 1 RB allocation SAR tests were performed on the highest output power channel for the RB allocation when the average output power of the 1 RB allocation was > 0.5 dB higher than the 50% RB allocation for QPSK. Otherwise, SAR tests are performed on the channel that produced the highest SAR for QPSK with 50% RB, thus low channel was tested for max power QPSK 1RB configurations.
Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus high channel was tested for max power 16QAM 1RB configurations.

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Table 13-14
LTE Band 25 Hotspot SAR Data

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Target Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	# of RB	RB Offset	Spacing	Side	SAR (1g)
MHz	Ch.														(W/kg)
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.03	1	LTE Max	QPSK	25	12	1.0 cm	back	0.594
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.18	0	LTE Max	QPSK	1	0	1.0 cm	back	0.727
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.00	0	LTE Max	QPSK	1	49	1.0 cm	back	**0.773**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	-0.05	2	LTE Max	16 QAM	25	12	1.0 cm	back	0.454
1910.00	26640	High	LTE Band 25	10	22.2	22.44	0.02	1	LTE Max	16 QAM	1	0	1.0 cm	back	0.536
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.13	1	LTE Max	16 QAM	1	49	1.0 cm	back	0.540
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	-0.01	1	LTE Max	QPSK	25	12	1.0 cm	front	0.519
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	0.00	0	LTE Max	QPSK	1	0	1.0 cm	front	0.641
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.00	0	LTE Max	QPSK	1	49	1.0 cm	front	**0.676**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	0.03	2	LTE Max	16 QAM	25	12	1.0 cm	front	0.411
1910.00	26640	High	LTE Band 25	10	22.2	22.44	-0.02	1	LTE Max	16 QAM	1	0	1.0 cm	front	0.488
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.21	1	LTE Max	16 QAM	1	49	1.0 cm	front	0.479
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.04	1	LTE Max	QPSK	25	12	1.0 cm	bottom	0.195
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.02	0	LTE Max	QPSK	1	0	1.0 cm	bottom	0.252
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	-0.02	0	LTE Max	QPSK	1	49	1.0 cm	bottom	**0.276**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	0.05	2	LTE Max	16 QAM	25	12	1.0 cm	bottom	0.158
1910.00	26640	High	LTE Band 25	10	22.2	22.44	0.02	1	LTE Max	16 QAM	1	0	1.0 cm	bottom	0.172
1910.00	26640	High	LTE Band 25	10	22.2	22.58	0.07	1	LTE Max	16 QAM	1	49	1.0 cm	bottom	0.165
1882.50	26365	Mid	LTE Band 25	10	22.2	22.60	0.07	1	LTE Max	QPSK	25	12	1.0 cm	left	0.471
1882.50	26365	Mid	LTE Band 25	10	23.2	23.61	-0.02	0	LTE Max	QPSK	1	0	1.0 cm	left	0.575
1882.50	26365	Mid	LTE Band 25	10	23.2	23.57	0.09	0	LTE Max	QPSK	1	49	1.0 cm	left	**0.670**
1882.50	26365	Mid	LTE Band 25	10	21.2	21.66	-0.04	2	LTE Max	16 QAM	25	12	1.0 cm	left	0.375
1910.00	26640	High	LTE Band 25	10	22.2	22.44	-0.06	1	LTE Max	16 QAM	1	0	1.0 cm	left	0.410
1910.00	26640	High	LTE Band 25	10	22.2	22.58	-0.03	1	LTE Max	16 QAM	1	49	1.0 cm	left	0.377
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.18	0	LTE Limit	QPSK	25	12	1.0 cm	back	0.280
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	-0.01	0	LTE Limit	QPSK	1	0	1.0 cm	back	0.298
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	0.01	0	LTE Limit	QPSK	1	49	1.0 cm	back	0.300
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.14	0	LTE Limit	16 QAM	25	12	1.0 cm	back	0.283
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.01	0	LTE Limit	16 QAM	1	0	1.0 cm	back	0.294
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	0.00	0	LTE Limit	16 QAM	1	49	1.0 cm	back	**0.301**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	-0.03	0	LTE Limit	QPSK	25	12	1.0 cm	front	0.207
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	0.03	0	LTE Limit	QPSK	1	0	1.0 cm	front	0.217
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	-0.02	0	LTE Limit	QPSK	1	49	1.0 cm	front	0.221
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.01	0	LTE Limit	16 QAM	25	12	1.0 cm	front	0.210
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.05	0	LTE Limit	16 QAM	1	0	1.0 cm	front	0.216
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	-0.06	0	LTE Limit	16 QAM	1	49	1.0 cm	front	**0.221**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	-0.01	0	LTE Limit	QPSK	25	12	1.0 cm	bottom	0.071
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	0.00	0	LTE Limit	QPSK	1	0	1.0 cm	bottom	0.080
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	-0.14	0	LTE Limit	QPSK	1	49	1.0 cm	bottom	0.080
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	0.19	0	LTE Limit	16 QAM	25	12	1.0 cm	bottom	0.071
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	0.01	0	LTE Limit	16 QAM	1	0	1.0 cm	bottom	0.079
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	-0.03	0	LTE Limit	16 QAM	1	49	1.0 cm	bottom	**0.080**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.43	0.02	0	LTE Limit	QPSK	25	12	1.0 cm	left	0.200
1882.50	26365	Mid	LTE Band 25	10	18.2	18.61	0.05	0	LTE Limit	QPSK	1	0	1.0 cm	left	0.215
1882.50	26365	Mid	LTE Band 25	10	18.2	18.60	-0.02	0	LTE Limit	QPSK	1	49	1.0 cm	left	**0.223**
1882.50	26365	Mid	LTE Band 25	10	18.2	18.34	-0.02	0	LTE Limit	16 QAM	25	12	1.0 cm	left	0.198
1882.50	26365	Mid	LTE Band 25	10	18.2	18.36	-0.20	0	LTE Limit	16 QAM	1	0	1.0 cm	left	0.192
1882.50	26365	Mid	LTE Band 25	10	18.2	18.35	0.13	0	LTE Limit	16 QAM	1	49	1.0 cm	left	0.206
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram						

Per FCC KDB 941225 D05 Page 4, 4) B) and Page 5 footnote 9, 16QAM with 1RB for both channel edges are required for the highest bandwidth on the highest output power channel for the 1 RB allocation when the average output power of the 1 RB allocation is >0.5 dB higher than the 50% allocation for 16 QAM, thus high channel was tested for max power 16QAM 1RB configurations.

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Table 13-15
WLAN Hotspot SAR Data

MEASUREMENT RESULTS										
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	SAR (1g)
MHz	Ch.									(W/kg)
2437	6	IEEE 802.11b	DSSS	16.01	0.06	1.0 cm	BT/WLAN	1	back	**0.074**
2437	6	IEEE 802.11b	DSSS	16.01	0.02	1.0 cm	BT/WLAN	1	front	0.008
2437	6	IEEE 802.11b	DSSS	16.01	0.05	1.0 cm	BT/WLAN	1	top	0.011
2437	6	IEEE 802.11b	DSSS	16.01	-0.13	1.0 cm	BT/WLAN	1	right	0.030
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**Body 1.6 W/kg (mW/g) averaged over 1 gram**				

13.4 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR value with the position set in a typical configuration. Test procedures used were according to FCC/OET Bulletin 65, Supplement C [June 2001].
2. Batteries are fully charged for all readings. The standard battery was used.
3. Tissue parameters and temperatures are listed on the SAR plots.
4. Liquid tissue depth was at least 15.0 cm. To confirm the proper SAR liquid depth, the z-axis plots from the system verifications were included since the system verifications were performed using the same liquid, probe and DAE as the SAR tests in the same time period.
5. 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.
6. Per FCC/OET Bulletin 65 Supplement C and Public Notice DA-02-1438, if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
7. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 10 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.

CDMA Notes:

1. Head SAR for CDMA2000 mode was tested under RC3/SO55 per KDB Publication 941225 D01.
2. Body-Worn SAR was tested with 1x RTT with TDSO / SO32 FCH Only. Ev-Do and TDSO / SO32 FCH+SCH SAR tests were not required since the average output power was not more than 0.25 dB higher than the TDSO / SO32 FCH only powers.
3. CDMA Wireless Router SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0 according to KDB 941225 D01 procedures for data devices. If the average output power of Subtype 2 for Rev. A is less than the Rev. 0 power levels, then Rev. A SAR is not required. Otherwise, SAR is measured on the maximum output channel for Rev. A using the exposure configuration that results in the highest SAR for that RF channel in Rev. 0. 1x-RTT CDMA hotspot was additionally evaluated for SAR to support simultaneous transmissions scenarios.
4. When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, 1x-RTT CDMA hotspot data for the back side configuration additionally shows body-worn compliance.
5. CDMA 1X Advanced technology was not required for SAR since the maximum output powers for 1x Advanced was not more than 0.25 dB higher than the maximum measured powers for 1x and

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the measured SAR in any 1x mode exposure conditions was not greater than 1.2 W/kg. See Section 9.2.2 for 1x Advanced test set up.

6. AWS CDMA SAR was measured with a probe calibrated at 1750 MHz and is valid for measuring SAR from ± 50 MHz. The 1750MHz specific liquid was verified with specific probe calibration factors as required per FCC KDB Publication 450824 D01.
7. EVDO Rev. A was additionally tested for head SAR to show compliance for VoIP.
8. EVDO is not supported for Cell. CDMA, therefore hotspot was evaluated using TDSO/SO32 FCH Only.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Test Considerations for LTE handsets and Data Modems KDB 941225 D05 Publication and are evaluated independently of test position. General test procedures can be found in Section 9.3.2.
2. 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.
4. When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, LTE hotspot data for the back side configuration additionally shows body-worn compliance.
5. LTE Band 4 (AWS) SAR was measured with a probe calibrated at 1750 MHz and is valid for measuring SAR from ± 50 MHz. The 1750MHz specific liquid was verified with specific probe calibration factors as required per FCC KDB Publication 450824 D01.

WLAN Notes:

1. Justification for reduced test configurations for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes for 2.4 GHz WIFI: Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11b. Other 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.
2. WLAN transmission was verified using an uncalibrated spectrum analyzer.
3. When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the 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.
4. When the reported SAR measured for 1 cm air-gap without headset cable is >1.2 W/kg, the highest reported SAR configuration for the mode and band should be repeated with headset attached, per past FCC guidance. Since the measured SAR was not >1.2 W/kg, IEEE 802.11b hotspot data for the back side configuration additionally shows body-worn compliance.

Hotspot Notes:

1. Top Edge and Left Edge for the CDMA transmitter was not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 guidance (see Section 1.2).
2. Top Edge and Right Edge for the LTE transmitter was not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 guidance (see Section 1.2).
3. Bottom Edge and Left Edge for the WLAN transmitter was not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 (see Section 1.2).
4. During SAR Testing for the Wireless Router conditions per KDB 941225 D06, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 7.6.)

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14 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

14.1 Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" FCC KDB Publication 648474 are applicable to handsets with built-in unlicensed transmitters such as 802.11b/g/n and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

14.2 FCC Power Tables & Conditions

	2.45	5.15 - 5.35	5.47 - 5.85	GHz
P_{Ref}	12	6	5	mW
Device output power should be rounded to the nearest mW to compare with values specified in this table.				

Figure 14-1
Output Power Thresholds for Unlicensed Transmitters

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	Routine evaluation required	SAR not required: Unlicensed only ○ when stand-alone 1-g SAR is not required and antenna is ≥ 5 cm from other antennas Licensed & Unlicensed ○ when the sum of the 1-g SAR is < 1.6 W/kg for all simultaneous transmitting antennas ○ when SAR to peak location separation ratio of simultaneous transmitting antenna pair is < 0.3 SAR required: Licensed & Unlicensed antenna pairs with SAR to peak location separation ratio ≥ 0.3; test is only required for the configuration that results in the highest SAR in stand-alone configuration for each wireless mode and exposure condition Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply
Unlicensed Transmitters	When there is no simultaneous transmission – ○ output ≤ 60/f: SAR not required ○ output > 60/f: stand-alone SAR required When there is simultaneous transmission – Stand-alone SAR not required when ○ output ≤ 2·P_{Ref} and antenna is ≥ 5.0 cm from other antennas ○ output ≤ P_{Ref} and antenna is ≥ 2.5 cm from other antennas ○ output ≤ P_{Ref} and antenna is < 2.5 cm from other antennas, each with either output power ≤ P_{Ref} or 1-g SAR < 1.2 W/kg Otherwise stand-alone SAR is required When stand-alone SAR is required ○ test SAR on highest output channel for each wireless mode and exposure condition ○ if SAR for highest output channel is > 50% of SAR limit, evaluate all channels according to normal procedures	

Figure 14-2
SAR Evaluation Requirements for Multiple Transmitter Handsets

According to Figure 14-1 and Figure 14-2, simultaneous transmission analysis of SAR may be required for this device for the licensed and unlicensed transmitters. Possible simultaneous transmissions for this device indicated in Table 1-2 were numerically summed using stand-alone SAR data and are shown in the following tables.

Per KDB Publication 648474, standalone Bluetooth SAR tests were not required. Standalone SAR tests for WLAN were required. See Section 1.5(A) for more information.

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14.3 Head SAR Simultaneous Transmission Analysis

Table 14-1
Simultaneous Transmission Scenario (Held to Ear)

Simult Tx	Configuration	Cell. CDMA SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.371	0.017	**0.388**
	Right Tilt	0.250	0.010	0.260
	Left Cheek	0.318	0.040	0.358
	Left Tilt	0.203	0.025	0.228

Simult Tx	Configuration	AWS CDMA SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.689	0.017	**0.706**
	Right Tilt	0.368	0.010	0.378
	Left Cheek	0.345	0.040	0.385
	Left Tilt	0.322	0.025	0.347

Simult Tx	Configuration	PCS CDMA SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.993	0.017	**1.010**
	Right Tilt	0.382	0.010	0.392
	Left Cheek	0.464	0.040	0.504
	Left Tilt	0.311	0.025	0.336

Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.264	0.017	0.281
	Right Tilt	0.340	0.010	0.350
	Left Cheek	0.739	0.040	**0.779**
	Left Tilt	0.291	0.025	0.316

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.474	0.017	0.491
	Right Tilt	0.475	0.010	0.485
	Left Cheek	0.909	0.040	**0.949**
	Left Tilt	0.357	0.025	0.382

Simult Tx	Configuration	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.546	0.017	0.563
	Right Tilt	0.496	0.010	0.506
	Left Cheek	0.935	0.040	**0.975**
	Left Tilt	0.372	0.025	0.397

Simult Tx	Configuration	AWS EVDO Rev. A SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	0.610	0.017	0.627
	Right Tilt	0.358	0.010	0.368
	Left Cheek	0.297	0.040	0.337
	Left Tilt	0.354	0.025	0.379

Simult Tx	Configuration	PCS EVDO Rev. A SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Head SAR	Right Cheek	1.050	0.017	1.067
	Right Tilt	0.444	0.010	0.454
	Left Cheek	0.514	0.040	0.554
	Left Tilt	0.388	0.025	0.413

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14.4 Body-Worn Simultaneous Transmission Analysis

Table 14-2
Simultaneous Transmission Scenario (Body-Worn at 1.0 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Back Side	Cell. CDMA	0.972	0.074	1.046
Back Side	AWS CDMA	1.090	0.074	1.164
Back Side	PCS CDMA	1.090	0.074	1.164
Back Side	LTE Band 4 (AWS)	1.060	0.074	1.134
Back Side	LTE Band 2 (PCS)	1.000	0.074	1.074
Back Side	LTE Band 25	0.773	0.074	0.847

Note: Per KDB 941225, when the maximum output power of each channel in EVDO is less than 0.25 dB higher than measured in TDSO, body SAR for EVDO is not required. Therefore, 1x-RTT CDMA body-worn SAR summations additionally show compliance for EVDO Rev. A VoIP body-worn simultaneous transmission scenarios.

14.5 Hotspot SAR Simultaneous Transmission Analysis

Table 14-3
Simultaneous Transmission Scenario (Hotspot at 1.0 cm)

Simult Tx	Configuration	Cell. CDMA SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.972	0.074	**1.046**
	Front	0.487	0.008	0.495
	Top	-	0.011	0.011
	Bottom	0.227	-	0.227
	Right	0.679	0.030	0.709
	Left	-	-	0.000

Simult Tx	Configuration	AWS EVDO SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	1.090	0.074	**1.164**
	Front	0.875	0.008	0.883
	Top	-	0.011	0.011
	Bottom	0.421	-	0.421
	Right	0.332	0.030	0.362
	Left	-	-	0.000

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.661	0.074	**0.735**
	Front	0.569	0.008	0.577
	Top	-	0.011	0.011
	Bottom	0.354	-	0.354
	Right	0.550	0.030	0.580
	Left	-	-	0.000

Simult Tx	Configuration	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	1.060	0.074	**1.134**
	Front	0.760	0.008	0.768
	Top	-	0.011	0.011
	Bottom	0.299	-	0.299
	Right	-	0.030	0.030
	Left	0.449	-	0.449

Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	1.000	0.074	**1.074**
	Front	0.858	0.008	0.866
	Top	-	0.011	0.011
	Bottom	0.421	-	0.421
	Right	-	0.030	0.030
	Left	0.656	-	0.656

Simult Tx	Configuration	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
Body SAR	Back	0.773	0.074	**0.847**
	Front	0.676	0.008	0.684
	Top	-	0.011	0.011
	Bottom	0.276	-	0.276
	Right	-	0.030	0.030
	Left	0.670	-	0.670

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14.6 SVLTE Simultaneous Transmission Scenario Analysis

Table 14-4
Simultaneous Transmission Scenario (Held to Ear)

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
11, 20	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-1	Table 13-4	Table 13-7		
		Right Cheek	0.371	0.106	0.017	0.477	0.494
		Right Tilt	0.250	0.116	0.010	0.366	0.376
		Left Cheek	0.318	0.210	0.040	0.528	0.568
		Left Tilt	0.203	0.091	0.025	0.294	0.319
	P < 17.7	Target Power (dBm)	17.7	23.7	-		
		Reference	Table 13-1	Table 13-4	Table 13-7		
		Right Cheek	0.073	0.264	0.017	0.337	0.354
		Right Tilt	0.043	0.340	0.010	0.383	0.393
		Left Cheek	0.075	0.739	0.040	0.814	**0.854**
		Left Tilt	0.046	0.291	0.025	0.337	0.362

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
10, 19	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-1	Table 13-5	Table 13-7		
		Right Cheek	0.371	0.157	0.017	0.528	0.545
		Right Tilt	0.250	0.136	0.010	0.386	0.396
		Left Cheek	0.318	0.327	0.040	0.645	0.685
		Left Tilt	0.203	0.108	0.025	0.311	0.336
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-1	Table 13-5	Table 13-7		
		Right Cheek	0.073	0.474	0.017	0.547	0.564
		Right Tilt	0.043	0.475	0.010	0.518	0.528
		Left Cheek	0.075	0.909	0.040	0.984	**1.024**
		Left Tilt	0.046	0.357	0.025	0.403	0.428

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
12, 21	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-1	Table 13-6	Table 13-7		
		Right Cheek	0.371	0.175	0.017	0.546	0.563
		Right Tilt	0.250	0.149	0.010	0.399	0.409
		Left Cheek	0.318	0.247	0.040	0.565	0.605
		Left Tilt	0.203	0.118	0.025	0.321	0.346
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-1	Table 13-6	Table 13-7		
		Right Cheek	0.073	0.546	0.017	0.619	0.636
		Right Tilt	0.043	0.496	0.010	0.539	0.549
		Left Cheek	0.075	0.935	0.040	1.010	**1.050**
		Left Tilt	0.046	0.372	0.025	0.418	0.443

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
17, 26	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-2	Table 13-4	Table 13-7		
		Right Cheek	0.689	0.106	0.017	0.795	0.812
		Right Tilt	0.368	0.116	0.010	0.484	0.494
		Left Cheek	0.345	0.210	0.040	0.555	0.595
		Left Tilt	0.322	0.091	0.025	0.413	0.438
	P < 17.7	Target Power (dBm)	17.7	23.7	-		
		Reference	Table 13-2	Table 13-4	Table 13-7		
		Right Cheek	0.187	0.264	0.017	0.451	0.468
		Right Tilt	0.094	0.340	0.010	0.434	0.444
		Left Cheek	0.090	0.739	0.040	0.829	**0.869**
		Left Tilt	0.084	0.291	0.025	0.375	0.400

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
16, 25	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-2	Table 13-5	Table 13-7		
		Right Cheek	0.689	0.157	0.017	0.846	0.863
		Right Tilt	0.368	0.136	0.010	0.504	0.514
		Left Cheek	0.345	0.327	0.040	0.672	0.712
		Left Tilt	0.322	0.108	0.025	0.430	0.455
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-2	Table 13-5	Table 13-7		
		Right Cheek	0.187	0.474	0.017	0.661	0.678
		Right Tilt	0.094	0.475	0.010	0.569	0.579
		Left Cheek	0.090	0.909	0.040	0.999	**1.039**
		Left Tilt	0.084	0.357	0.025	0.441	0.466

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
18, 27	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-2	Table 13-6	Table 13-7		
		Right Cheek	0.689	0.175	0.017	0.864	0.881
		Right Tilt	0.368	0.149	0.010	0.517	0.527
		Left Cheek	0.345	0.247	0.040	0.592	0.632
		Left Tilt	0.322	0.118	0.025	0.440	0.465
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-2	Table 13-6	Table 13-7		
		Right Cheek	0.187	0.546	0.017	0.733	0.750
		Right Tilt	0.094	0.496	0.010	0.590	0.600
		Left Cheek	0.090	0.935	0.040	1.025	**1.065**
		Left Tilt	0.084	0.372	0.025	0.456	0.481

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
14, 23	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-3	Table 13-4	Table 13-7		
		Right Cheek	0.993	0.106	0.017	1.099	**1.116**
		Right Tilt	0.382	0.116	0.010	0.498	0.508
		Left Cheek	0.464	0.210	0.040	0.674	0.714
		Left Tilt	0.311	0.091	0.025	0.402	0.427
	P < 17.7	Target Power (dBm)	17.7	23.7	-		
		Reference	Table 13-3	Table 13-4	Table 13-7		
		Right Cheek	0.207	0.264	0.017	0.471	0.488
		Right Tilt	0.080	0.340	0.010	0.420	0.430
		Left Cheek	0.088	0.739	0.040	0.827	0.867
		Left Tilt	0.057	0.291	0.025	0.348	0.373

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
13, 22	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-3	Table 13-5	Table 13-7		
		Right Cheek	0.993	0.157	0.017	1.150	**1.167**
		Right Tilt	0.382	0.136	0.010	0.518	0.528
		Left Cheek	0.464	0.327	0.040	0.791	0.831
		Left Tilt	0.311	0.108	0.025	0.419	0.444
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-3	Table 13-5	Table 13-7		
		Right Cheek	0.207	0.474	0.017	0.681	0.698
		Right Tilt	0.080	0.475	0.010	0.555	0.565
		Left Cheek	0.088	0.909	0.040	0.997	1.037
		Left Tilt	0.057	0.357	0.025	0.414	0.439

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
15, 24	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-3	Table 13-6	Table 13-7		
		Right Cheek	0.993	0.175	0.017	1.168	**1.185**
		Right Tilt	0.382	0.149	0.010	0.531	0.541
		Left Cheek	0.464	0.247	0.040	0.711	0.751
		Left Tilt	0.311	0.118	0.025	0.429	0.454
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-3	Table 13-6	Table 13-7		
		Right Cheek	0.207	0.546	0.017	0.753	0.770
		Right Tilt	0.080	0.496	0.010	0.576	0.586
		Left Cheek	0.088	0.935	0.040	1.023	1.063
		Left Tilt	0.057	0.372	0.025	0.429	0.454

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Table 14-5
Simultaneous Transmission Scenario (Body-Worn at 1.0 cm)

Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
11, 20	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.972	0.318	0.074	1.290	**1.364**
	P < 17.7	Target Power (dBm)	17.7	23.7	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.191	1.060	0.074	1.251	1.325

Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
14, 17, 23, 26	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	1.090	0.318	0.074	1.408	**1.482**
		PCS CDMA	1.090	0.318	0.074	1.408	1.482
	P < 17.7	Target Power (dBm)	17.7	23.7	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	0.245	1.060	0.074	1.305	1.379
		PCS CDMA	0.279	1.060	0.074	1.339	1.413

Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
10, 19	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.972	0.298	0.074	1.270	**1.344**
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.191	1.000	0.074	1.191	1.265

Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
13, 16, 22, 25	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	1.090	0.298	0.074	1.388	**1.462**
		PCS CDMA	1.090	0.298	0.074	1.388	1.462
	P < 17.7	Target Power (dBm)	17-7	23.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	0.245	1.000	0.074	1.245	1.319
		PCS CDMA	0.279	1.000	0.074	1.279	1.353

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Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
12, 21	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.972	0.301	0.074	1.273	**1.347**
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		Cell. CDMA	0.191	0.773	0.074	0.964	1.038

Simult. Tx Ref	CDMA Power Level (dBm)	Mode	CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
15 ,18, 24, 27	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	1.090	0.301	0.074	1.391	**1.465**
		PCS CDMA	1.090	0.301	0.074	1.391	1.465
	P < 17.7	Target Power (dBm)	17.7	23.2	-		
		Reference	Table 13-8	Table 13-9	Table 13-10		
		AWS CDMA	0.245	0.773	0.074	1.018	1.092
		PCS CDMA	0.279	0.773	0.074	1.052	1.126

Table 14-6
Simultaneous Transmission Scenario (Hotspot at 1.0 cm)

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
20	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	0.972	0.318	0.074	**1.364**
		Front	0.487	0.217	0.008	0.712
		Top	-	-	0.011	0.011
		Bottom	0.227	0.105	-	0.332
		Right	0.679	-	0.030	0.709
		Left	-	0.112	-	0.112
	P < 17.7	Target Power (dBm)	17.7	23.7	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	0.191	1.060	0.074	1.325
		Front	0.102	0.760	0.008	0.870
		Top	-	-	0.011	0.011
		Bottom	0.047	0.299	-	0.346
		Right	0.109	-	0.030	0.139
		Left	-	0.449	-	0.449

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
19	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	0.972	0.298	0.074	**1.344**
		Front	0.487	0.238	0.008	0.733
		Top	-	-	0.011	0.011
		Bottom	0.227	0.082	-	0.309
		Right	0.679	-	0.030	0.709
		Left	-	0.219	-	0.219
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	0.191	1.000	0.074	1.265
		Front	0.102	0.858	0.008	0.968
		Top	-	-	0.011	0.011
		Bottom	0.047	0.421	-	0.468
		Right	0.109	-	0.030	0.139
		Left	-	0.656	-	0.656

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
21	P ≥ 17.7	Target Power (dBm)	24.2	18.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	0.972	0.301	0.074	**1.347**
		Front	0.487	0.221	0.008	0.716
		Top	-	-	0.011	0.011
		Bottom	0.227	0.080	-	0.307
		Right	0.679	-	0.030	0.709
		Left	-	0.223	-	0.223
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	0.191	0.773	0.074	1.038
		Front	0.102	0.676	0.008	0.786
		Top	-	-	0.011	0.011
		Bottom	0.047	0.276	-	0.323
		Right	0.109	-	0.030	0.139
		Left	-	0.670	-	0.670

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
26	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	1.090	0.318	0.074	**1.482**
		Front	0.950	0.217	0.008	1.175
		Top	-	-	0.011	0.011
		Bottom	0.363	0.105	-	0.468
		Right	0.344	-	0.030	0.374
		Left	-	0.112	-	0.112
	P < 17.7	Target Power (dBm)	17.7	23.7	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	0.245	1.060	0.074	1.379
		Front	0.192	0.760	0.008	0.960
		Top	-	-	0.011	0.011
		Bottom	0.094	0.299	-	0.393
		Right	0.085	-	0.030	0.115
		Left	-	0.449	-	0.449

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
25	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	1.090	0.298	0.074	**1.462**
		Front	0.950	0.238	0.008	1.196
		Top	-	-	0.011	0.011
		Bottom	0.363	0.082	-	0.445
		Right	0.344	-	0.030	0.374
		Left	-	0.219	-	0.219
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	0.245	1.000	0.074	1.319
		Front	0.192	0.858	0.008	1.058
		Top	-	-	0.011	0.011
		Bottom	0.094	0.421	-	0.515
		Right	0.085	-	0.030	0.115
		Left	-	0.656	-	0.656

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	AWS CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
27	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	1.090	0.301	0.074	**1.465**
		Front	0.950	0.221	0.008	1.179
		Top	-	-	0.011	0.011
		Bottom	0.363	0.080	-	0.443
		Right	0.344	-	0.030	0.374
		Left	-	0.223	-	0.223
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	0.245	0.773	0.074	1.092
		Front	0.192	0.676	0.008	0.876
		Top	-	-	0.011	0.011
		Bottom	0.094	0.276	-	0.370
		Right	0.085	-	0.030	0.115
		Left	-	0.670	-	0.670

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 4 (AWS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
23	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	1.090	0.318	0.074	**1.482**
		Front	0.717	0.217	0.008	0.942
		Top	-	-	0.011	0.011
		Bottom	0.475	0.105	-	0.580
		Right	0.675	-	0.030	0.705
		Left	-	0.112	-	0.112
	P < 17.7	Target Power (dBm)	17.7	23.7	-	
		Reference	Table 13-11	Table 13-12	Table 13-15	
		Back	0.279	1.060	0.074	1.413
		Front	0.140	0.760	0.008	0.908
		Top	-	-	0.011	0.011
		Bottom	0.078	0.299	-	0.377
		Right	0.125	-	0.030	0.155
		Left	-	0.449	-	0.449

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Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
22	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	1.090	0.298	0.074	**1.462**
		Front	0.717	0.238	0.008	0.963
		Top	-	-	0.011	0.011
		Bottom	0.475	0.082	-	0.557
		Right	0.675	-	0.030	0.705
		Left	-	0.219	-	0.219
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-13	Table 13-15	
		Back	0.279	1.000	0.074	1.353
		Front	0.140	0.858	0.008	1.006
		Top	-	-	0.011	0.011
		Bottom	0.078	0.421	-	0.499
		Right	0.125	-	0.030	0.155
		Left	-	0.656	-	0.656

Simult Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA SAR (W/kg)	LTE Band 25 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant	1	2	3	1+2+3
24	P ≥ 17.7	Target Power (dBm)	23.7	18.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	1.090	0.301	0.074	**1.465**
		Front	0.717	0.221	0.008	0.946
		Top	-	-	0.011	0.011
		Bottom	0.475	0.080	-	0.555
		Right	0.675	-	0.030	0.705
		Left	-	0.223	-	0.223
	P < 17.7	Target Power (dBm)	17.7	23.2	-	
		Reference	Table 13-11	Table 13-14	Table 13-15	
		Back	0.279	0.773	0.074	1.126
		Front	0.140	0.676	0.008	0.824
		Top	-	-	0.011	0.011
		Bottom	0.078	0.276	-	0.354
		Right	0.125	-	0.030	0.155
		Left	-	0.670	-	0.670

Note: Per FCC KDB Publication 941225 D06, edges with antennas more than 2.5 cm away are not required to be evaluated for SAR ("-").

14.7 Simultaneous Transmission Conclusion

The above numerical summed SAR was below the SAR limit and remains compliant when scaled up to maximum power levels. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit. No volumetric SAR summation is required per FCC KDB Publication 648474.

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	8648D	(9kHz-4GHz) Signal Generator	10/10/2011	Annual	10/10/2012	3613A00315
Agilent	8753E	(30kHz-6GHz) Network Analyzer	4/4/2012	Annual	4/4/2013	JP38020182
Agilent	E8257D	(250kHz-20GHz) Signal Generator	4/5/2012	Annual	4/5/2013	MY45470194
Agilent	8648D	Signal Generator	4/3/2012	Annual	4/3/2013	3629U00687
Agilent	E5515C	Wireless Communications Test Set	2/14/2012	Annual	2/14/2013	GB43304447
Agilent	E5515C	Wireless Communications Tester	4/4/2012	Annual	4/4/2013	US41140256
Agilent	8753E	(30kHz-6GHz) Network Analyzer	4/3/2012	Annual	4/3/2013	US37390350
Agilent	85070E	Dielectric Probe Kit	3/8/2012	Annual	3/8/2013	MY44300633
Agilent	E5515C	Wireless Communications Test Set	2/9/2012	Annual	2/9/2013	GB43460554
Agilent	85047A	S-Parameter Test Set	N/A	N/A	N/A	2904A00579
Amplifier Research	5S1G4	5W, 800MHz-4.2GHz	CBT	N/A	CBT	21910
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	5318
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	5442
Anritsu	ML2438A	Power Meter	2/14/2012	Annual	2/14/2013	1190013
Anritsu	ML2438A	Power Meter	2/14/2012	Annual	2/14/2013	98150041
Anritsu	ML2438A	Power Meter	10/13/2011	Annual	10/13/2012	1070030
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	5821
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	8013
Anritsu	MT8820C	Radio Communication Tester	11/11/2011	Annual	11/11/2012	6200901190
Anritsu	MA24106A	USB Power Sensor	8/22/2012	Annual	8/22/2013	1231538
Anritsu	MA24106A	USB Power Sensor	8/22/2012	Annual	8/22/2013	1231535
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
Control Company	61220-416	Long-Stem Thermometer	7/1/2011	Biennial	7/1/2013	111642941
Control Company	36934-158	Wall-Mounted Thermometer	1/4/2012	Biennial	1/4/2014	122014497
Control Company	61220-416	Long-Stem Thermometer	10/12/2011	Biennial	10/12/2013	111860844
Gigatronics	80701A	(0.05-18GHz) Power Sensor	10/12/2011	Annual	10/12/2012	1833460
Gigatronics	8651A	Universal Power Meter	10/12/2011	Annual	10/12/2012	8650319
Intelligent Weigh	PD-3000	Electronic Balance	3/27/2012	Annual	3/27/2013	11081534
Intelligent Weighing	PD-3000	Electronic Balance	6/29/2012	Annual	6/29/2013	120405017
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
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	5/22/2012	Annual	5/22/2013	109892
Rohde & Schwarz	NRVD	Dual Channel Power Meter	4/8/2011	Biennial	4/8/2013	101695
Rohde & Schwarz	SMIQ03B	Signal Generator	4/5/2012	Annual	4/5/2013	DE27259
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	10/7/2011	Biennial	10/7/2013	103962
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	11/30/2011	Annual	11/30/2012	101699
Seekonk	NC-100	Torque Wrench (8" lb)	11/29/2011	Triennial	11/29/2014	21053
SPEAG	D1765V2	1765 MHz SAR Dipole	5/18/2012	Annual	5/18/2013	1008
SPEAG	D835V2	835 MHz SAR Dipole	1/25/2012	Annual	1/25/2013	4d047
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/19/2012	Annual	4/19/2013	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/20/2012	Annual	2/20/2013	649
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/12/2012	Annual	4/12/2013	1333
SPEAG	ES3DV2	SAR Probe	8/28/2012	Annual	8/28/2013	3022
SPEAG	ES3DV3	SAR Probe	4/24/2012	Annual	4/24/2013	3213
SPEAG	ES3DV3	SAR Probe	3/16/2012	Annual	3/16/2013	3209
SPEAG	ES3DV3	SAR Probe	5/18/2012	Annual	5/18/2013	3263
SPEAG	D835V2	835 MHz SAR Dipole	4/20/2012	Annual	4/20/2013	4d119
SPEAG	D2450V2	2450 MHz SAR Dipole	2/7/2012	Annual	2/7/2013	882
SPEAG	D1900V2	1900 MHz SAR Dipole	2/22/2012	Annual	2/22/2013	5d149
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/24/2012	Annual	8/24/2013	1322
SPEAG	ES3DV3	SAR Probe	2/7/2012	Annual	2/7/2013	3287
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/7/2012	Annual	5/7/2013	1334
SPEAG	DAK-3.5	Dielectic Assessment Kit	6/19/2012	Annual	6/19/2013	1070
Tektronix	RSA-6114A	Real Time Spectrum Analyzer	4/5/2012	Annual	4/5/2013	B010177
VWR	36934-158	Wall-Mounted Thermometer	1/21/2011	Biennial	1/21/2013	111286445
VWR	62344-925	Mini-Thermometer	10/24/2011	Biennial	10/24/2013	111886441

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

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16 MEASUREMENT UNCERTAINTIES

a	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	299
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				24.2	23.5	

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

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17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and 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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APPENDIX A: SAR TEST DATA

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PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

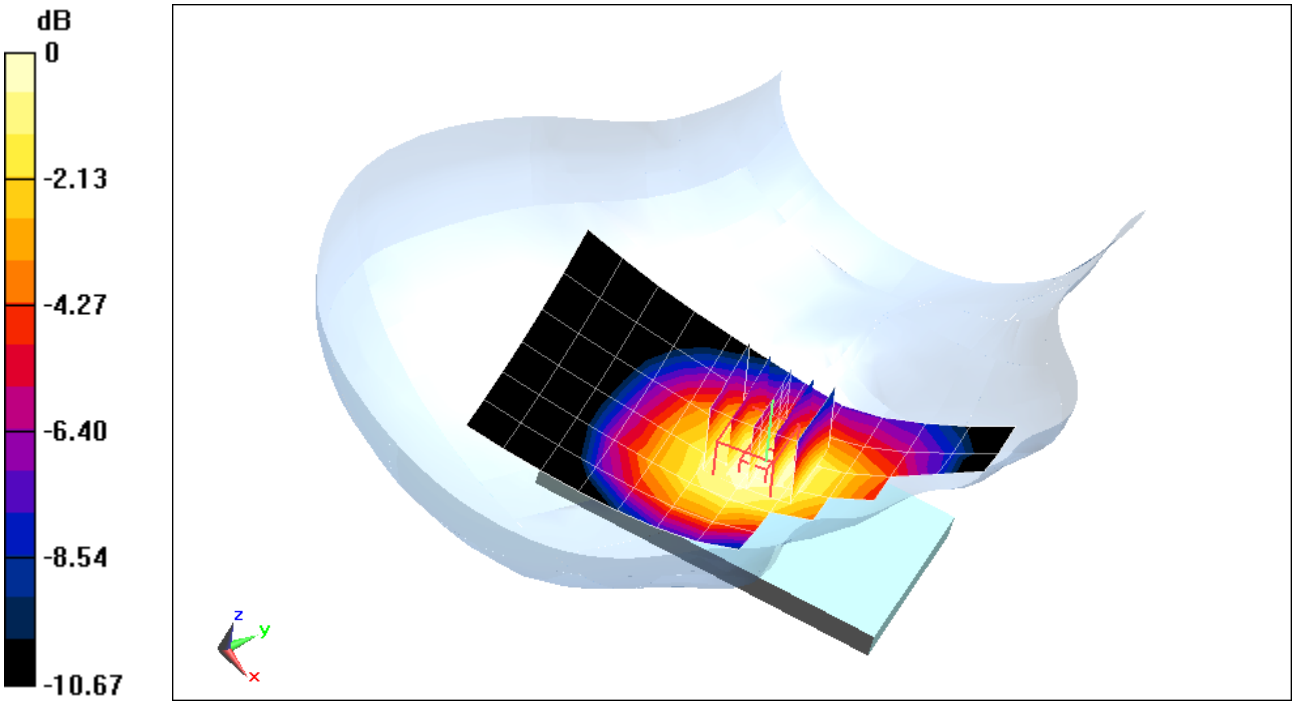
Communication System: CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.904 mho/m; ε_r = 41.457; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: Cell. CDMA, Right Head, Cheek, Mid.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.820 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.4680 W/kg
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.281 mW/g



0 dB = 0.390mW/g = -8.18 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

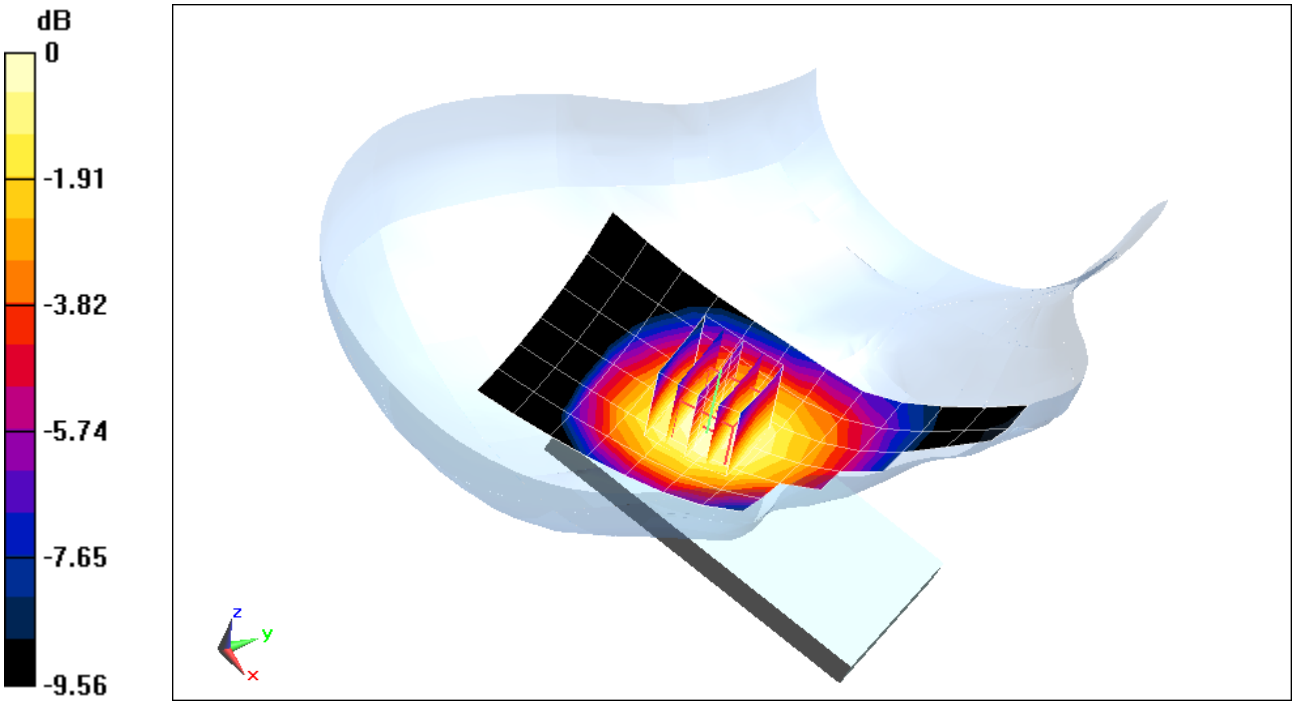
Communication System: CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.904 mho/m; ε_r = 41.457; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: Cell. CDMA, Right Head, Tilt, Mid.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.834 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.2990 W/kg
SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.192 mW/g



0 dB = 0.260mW/g = -11.70 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

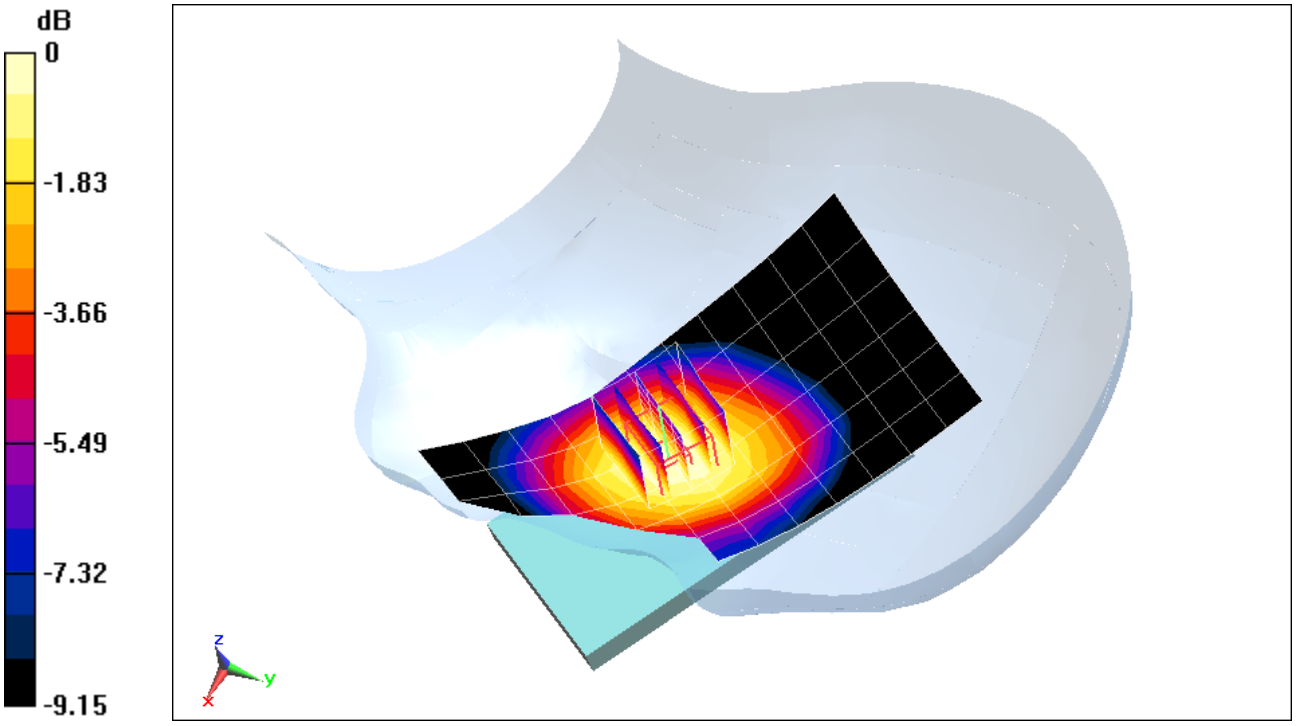
Communication System: CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.904 mho/m; ε_r = 41.457; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.047 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.3770 W/kg
SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.245 mW/g



0 dB = 0.330mW/g = -9.63 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

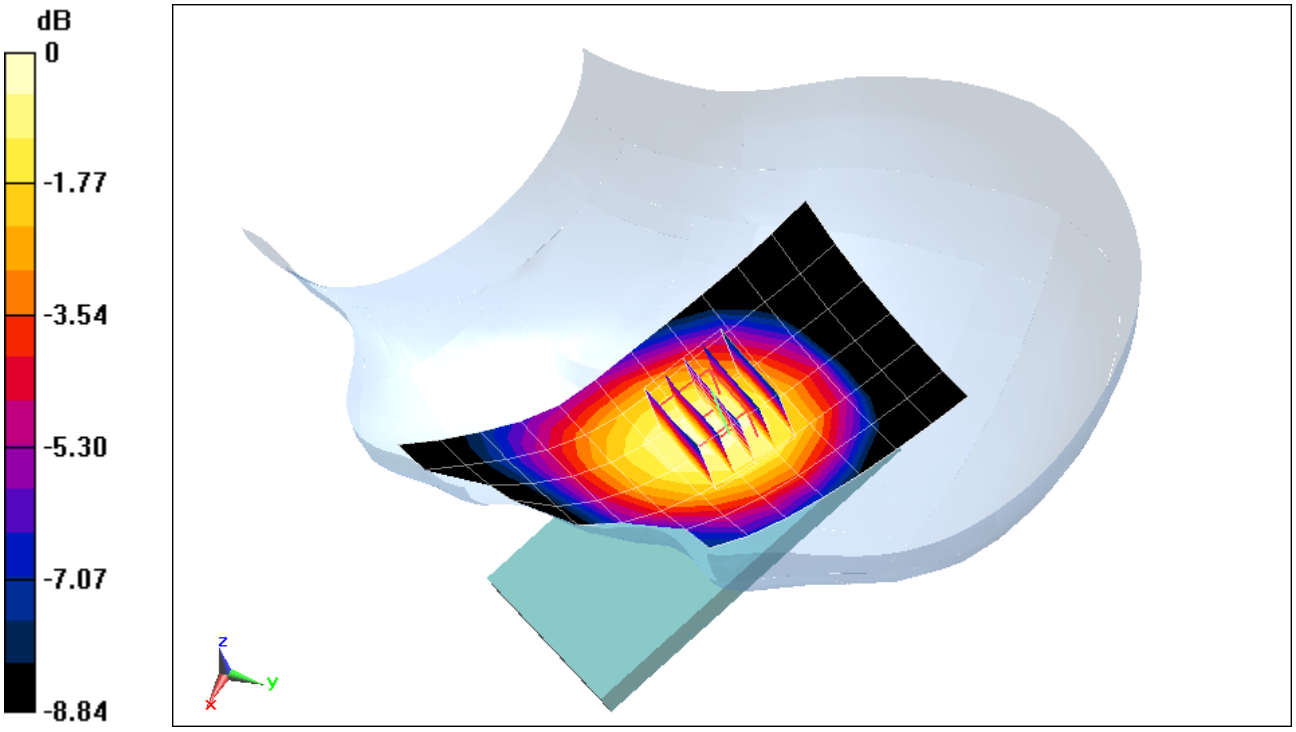
Communication System: CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.904 mho/m; ε_r = 41.457; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: Cell. CDMA, Left Head, Tilt, Mid.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.649 V/m; Power Drift = -0.0075 dB
Peak SAR (extrapolated) = 0.2470 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.156 mW/g



0 dB = 0.220mW/g = -13.15 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

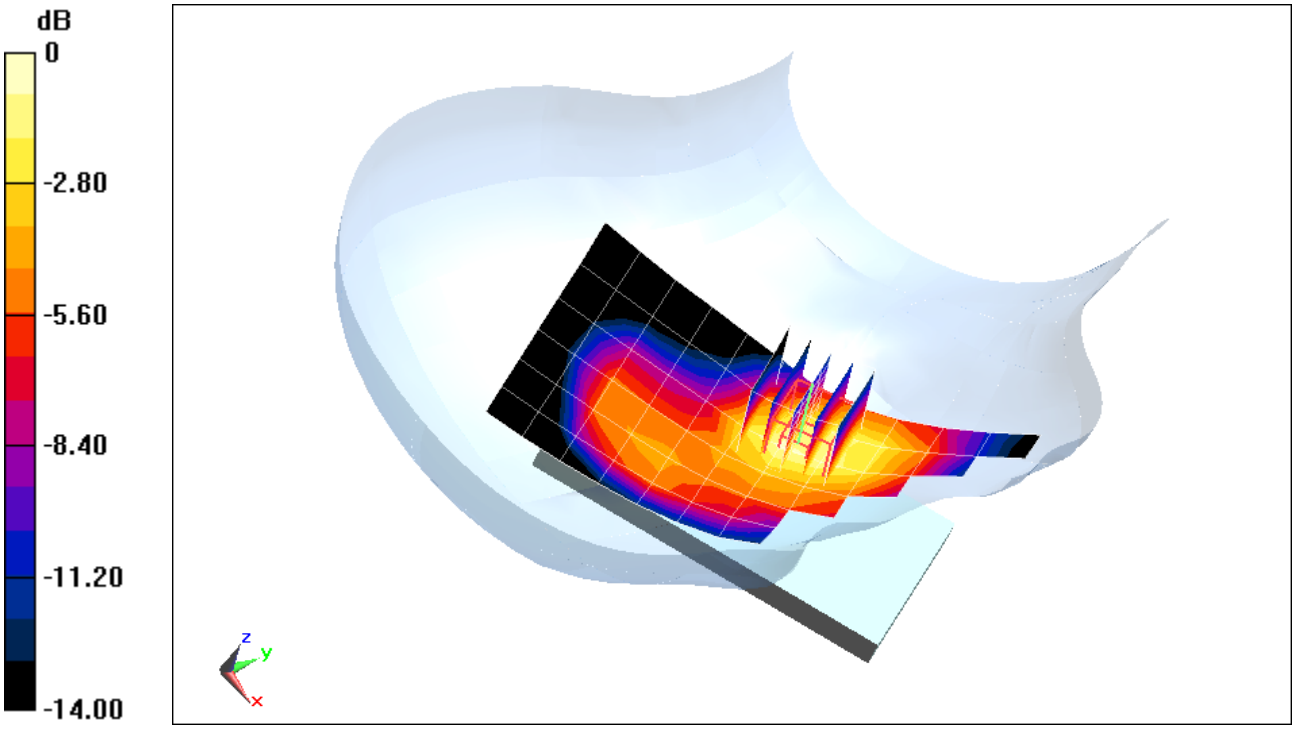
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.369$ mho/m; $\varepsilon_r = 38.665$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS CDMA, Right Head, Cheek, Mid.ch

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.623 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.0610 W/kg
SAR(1 g) = 0.689 mW/g; SAR(10 g) = 0.419 mW/g



0 dB = 0.770mW/g = -2.27 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

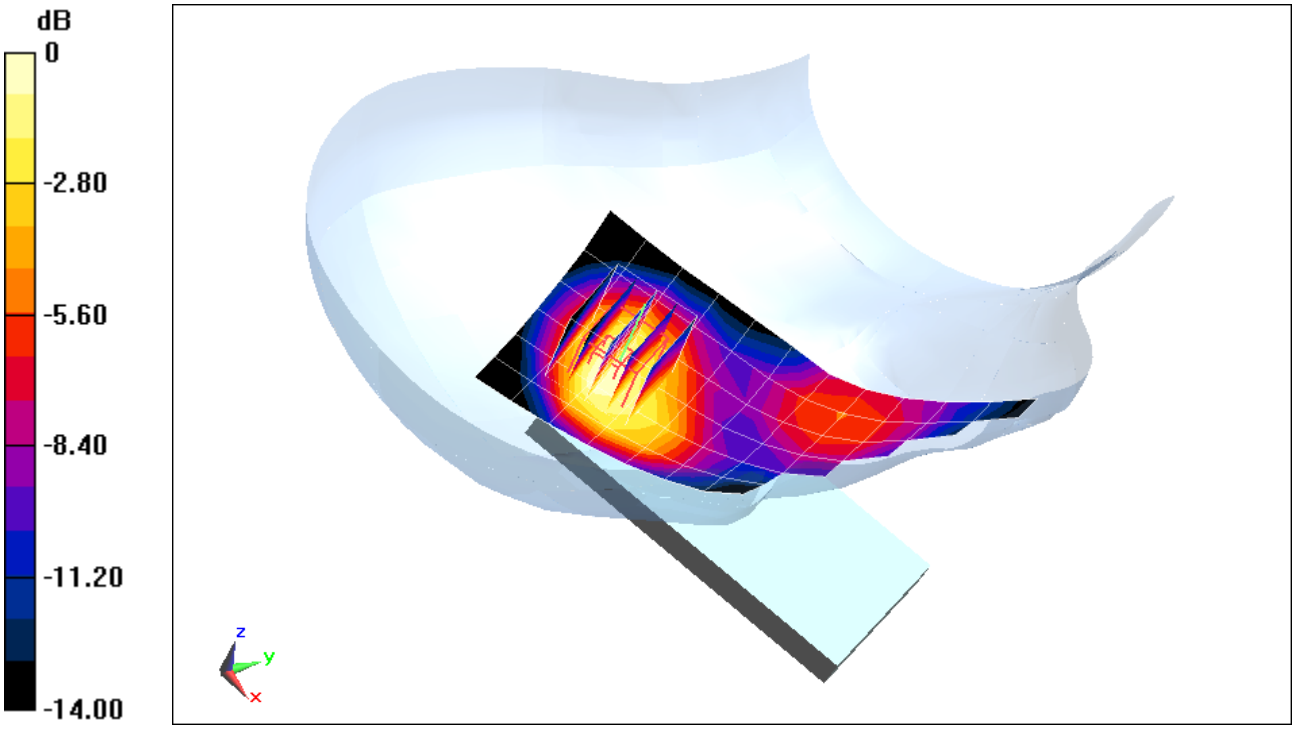
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.369$ mho/m; $\varepsilon_r = 38.665$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS CDMA, Right Head, Tilt, Mid.ch

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.731 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.5850 W/kg
SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.222 mW/g



0 dB = 0.390mW/g = -8.18 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

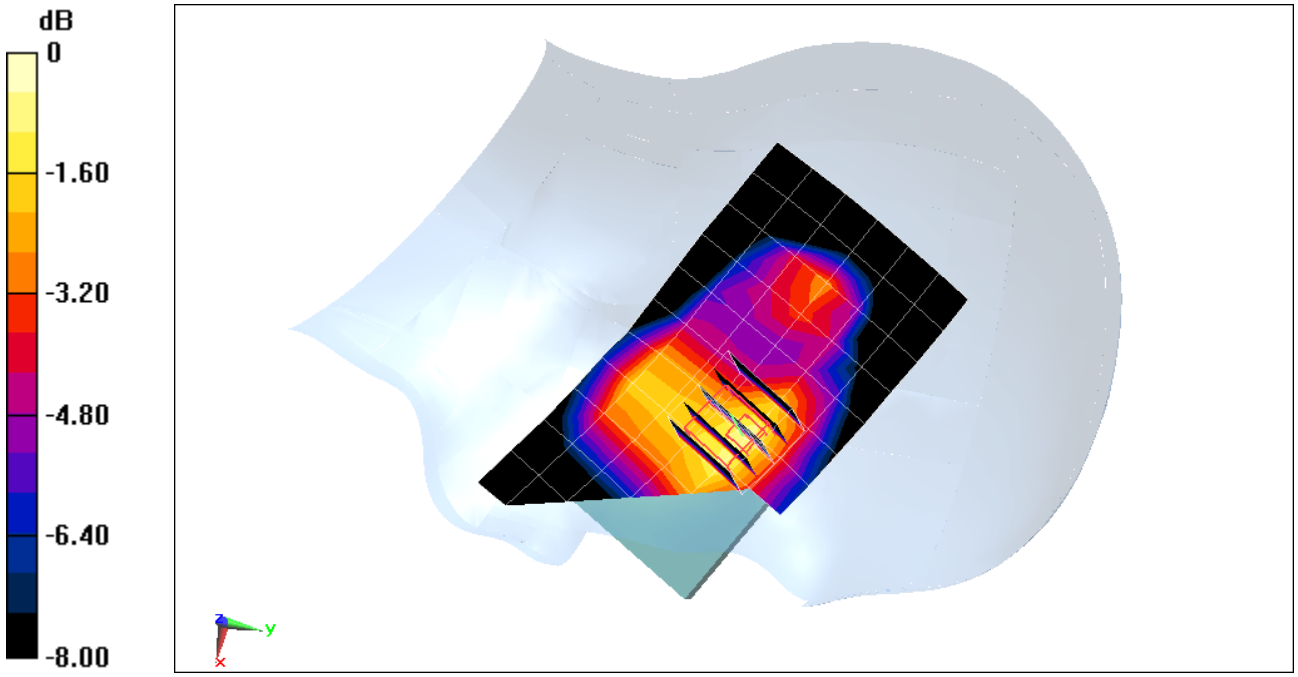
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.369$ mho/m; $\varepsilon_r = 38.665$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.540 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.5180 W/kg
SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.220 mW/g



0 dB = 0.380mW/g = -8.40 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

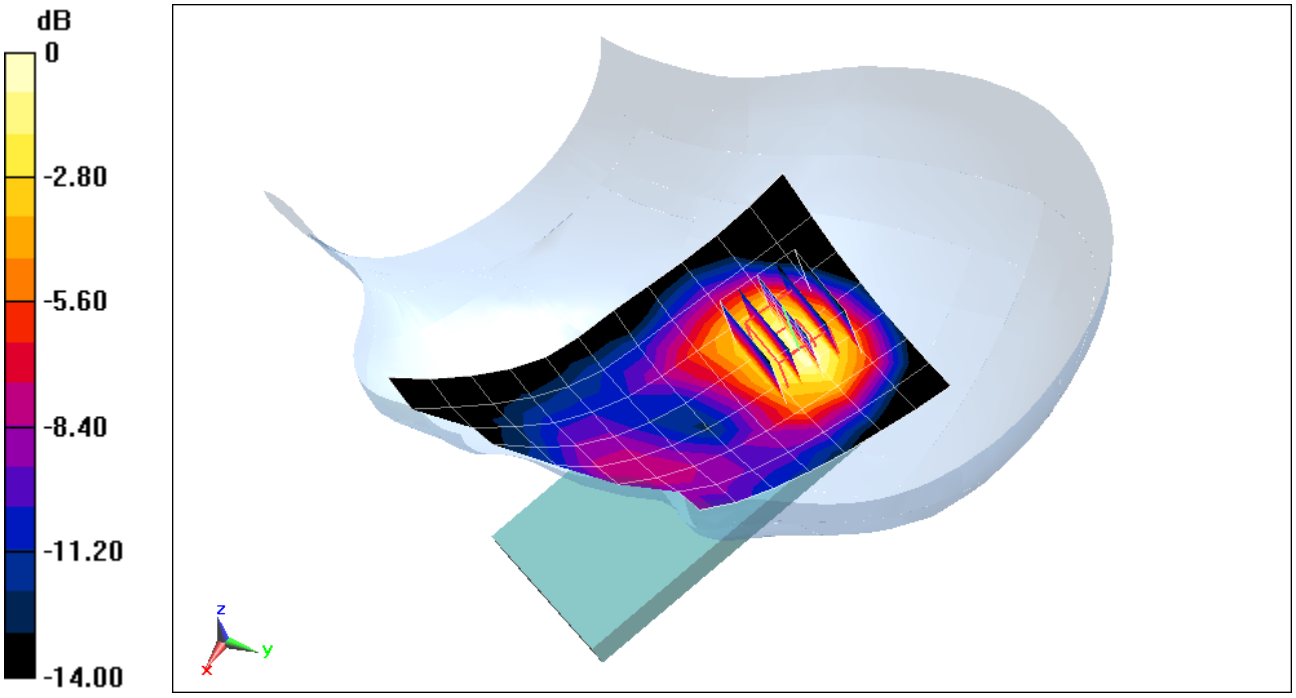
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.368$ mho/m; $\varepsilon_r = 38.824$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS EVDO Rev.A, Left Head, Tilt, Mid.ch

Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.702 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.5550 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.211 mW/g



0 dB = 0.390mW/g = -8.18 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

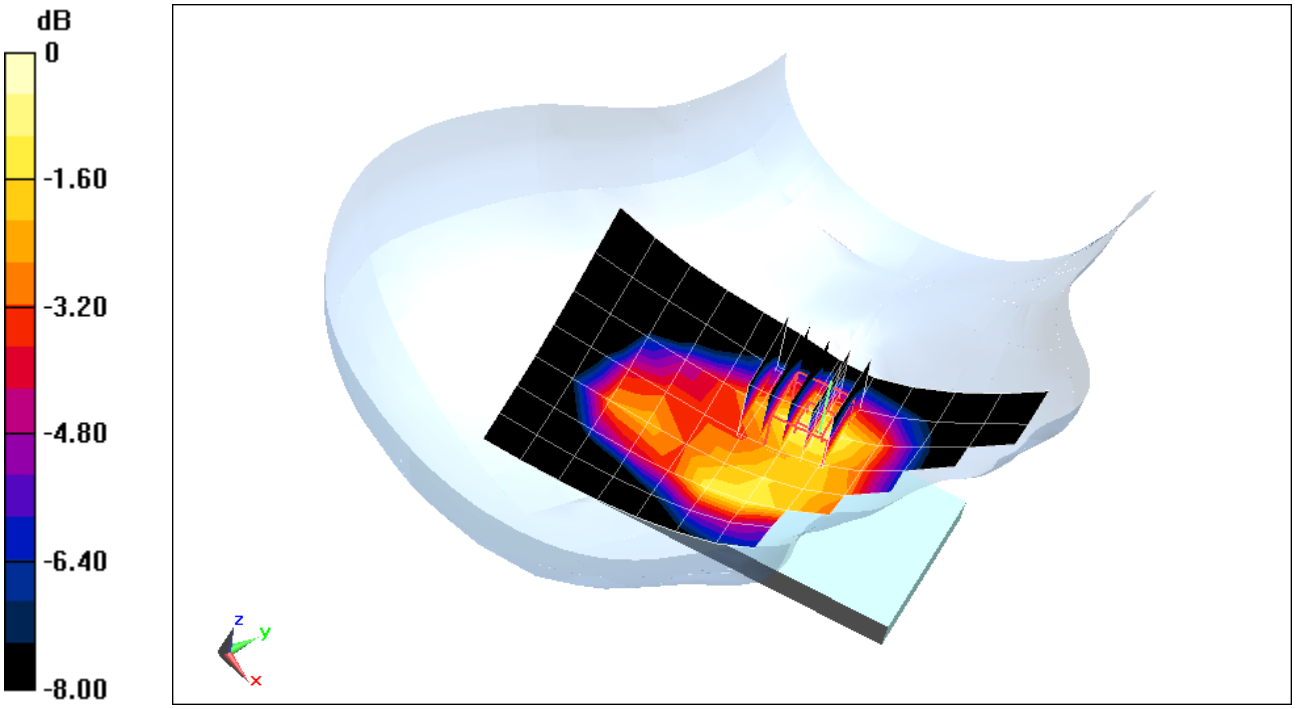
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.5 MHz; σ = 1.369 mho/m; ε_r = 38.665; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.236 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.3890 W/kg
SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.179 mW/g



0 dB = 0.280mW/g = -11.06 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

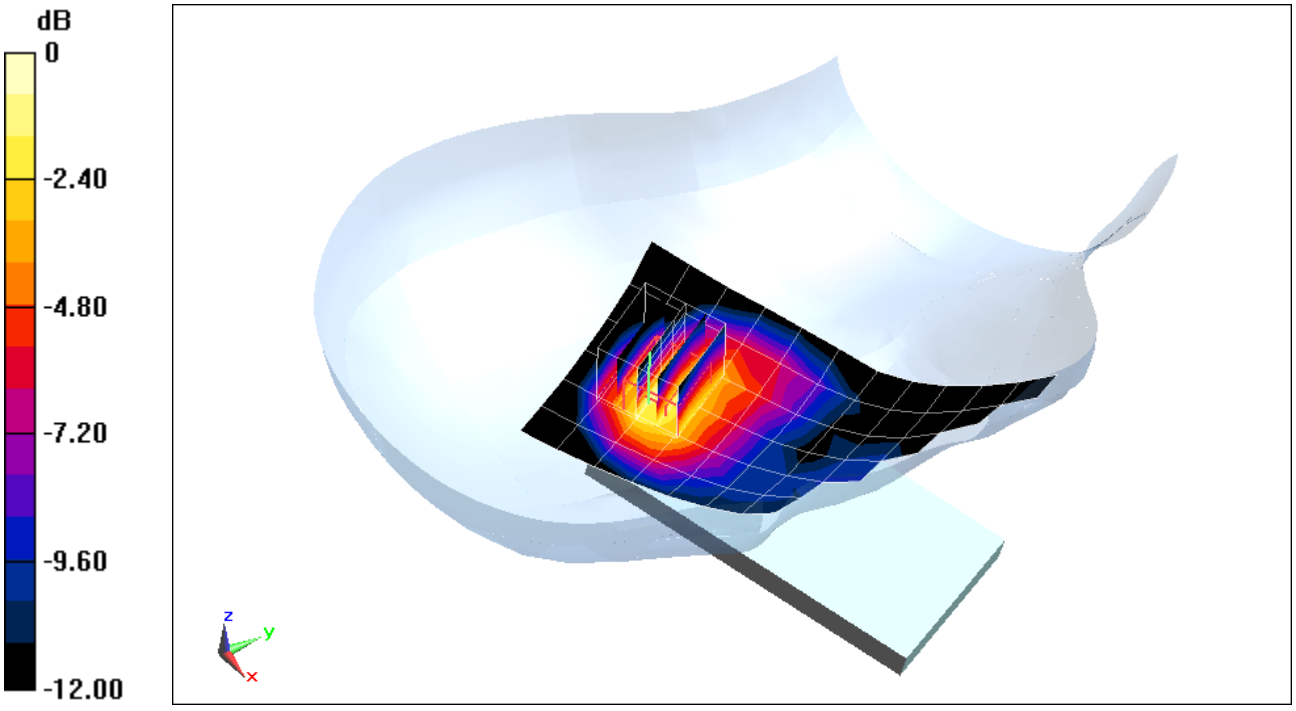
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.5 MHz; σ = 1.369 mho/m; ε_r = 38.665; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Right Head, Tilt, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.259 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.5400 W/kg
SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.205 mW/g



0 dB = 0.360mW/g = -8.87 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

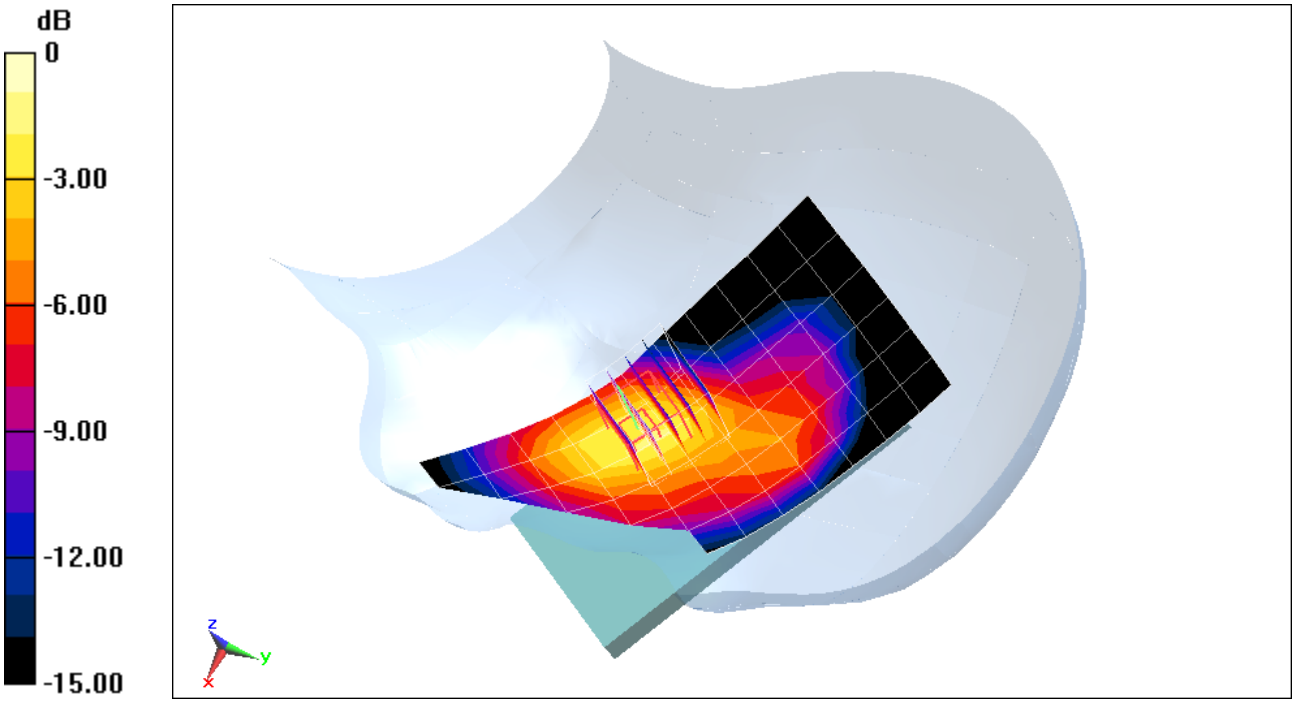
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.5 MHz; σ = 1.369 mho/m; ε_r = 38.665; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Left Head, Cheek, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.481 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.1420 W/kg
SAR(1 g) = 0.739 mW/g; SAR(10 g) = 0.449 mW/g



0 dB = 0.790mW/g = -2.05 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

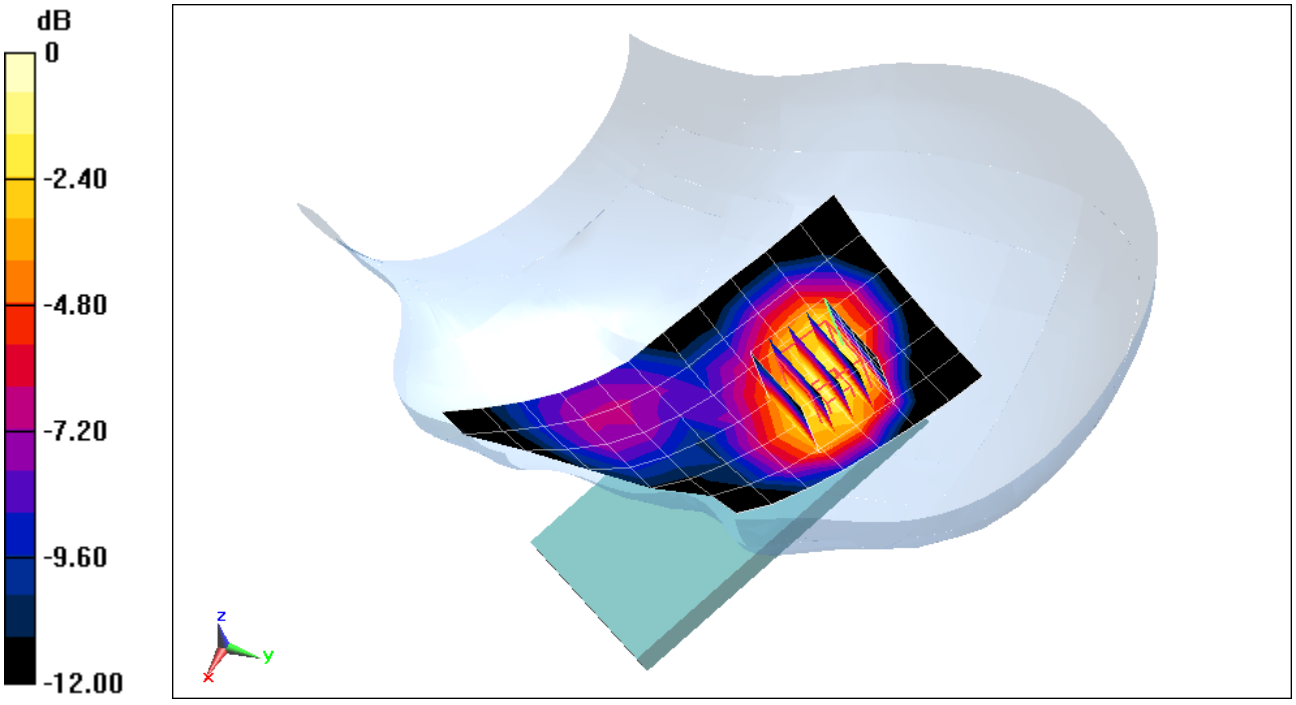
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.5 MHz; σ = 1.369 mho/m; ε_r = 38.665; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Left Head, Tilt, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.194 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.4530 W/kg
SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.198 mW/g



0 dB = 0.320mW/g = -9.90 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

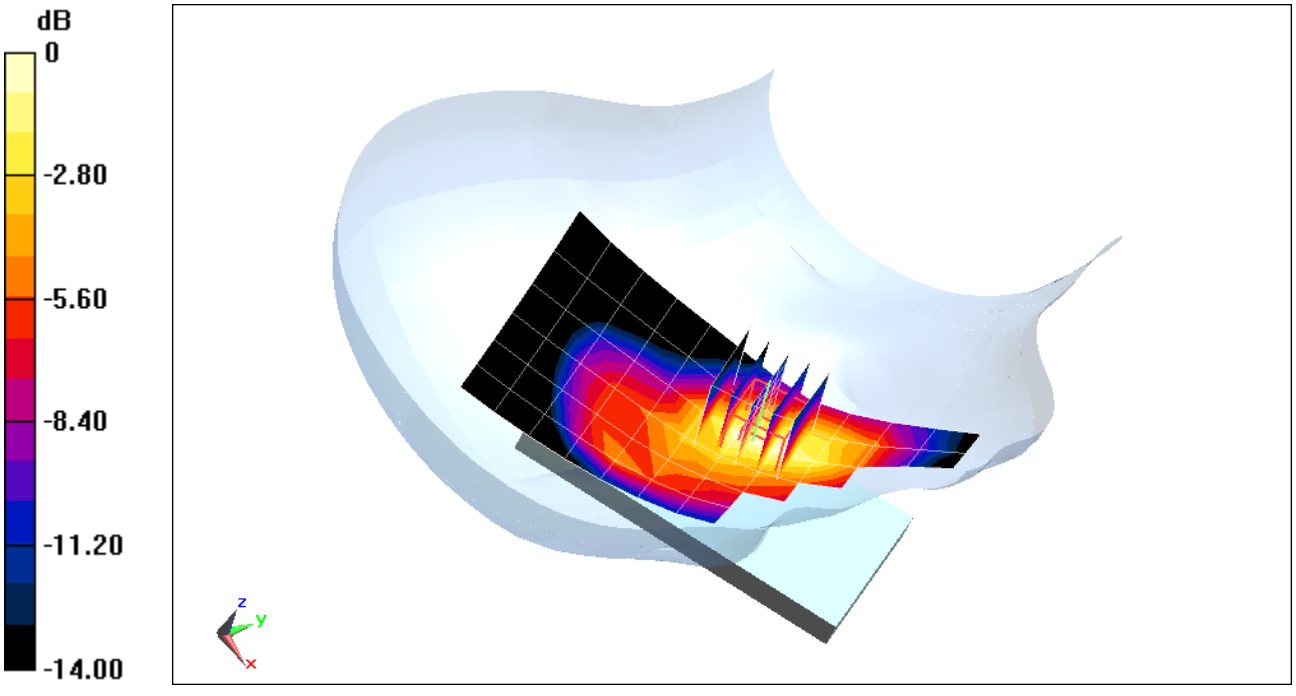
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.441 mho/m; ε_r = 41.19; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.180 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.6740 W/kg
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.618 mW/g



0 dB = 1.130mW/g = 1.06 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

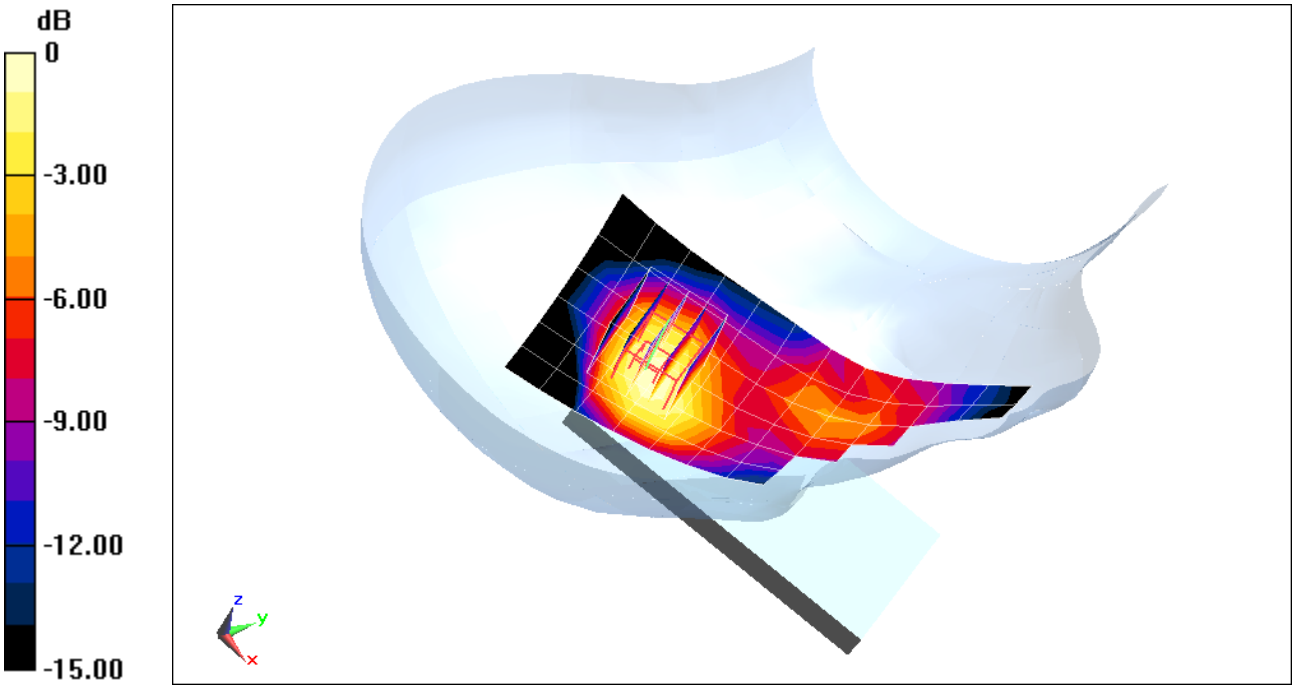
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.441 mho/m; ε_r = 41.19; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: PCS EVDO Rev. A, Right Head, Tilt, Mid.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.303 V/m; Power Drift = -0.0011 dB
Peak SAR (extrapolated) = 0.8730 W/kg
SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.269 mW/g



0 dB = 0.490mW/g = -6.20 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

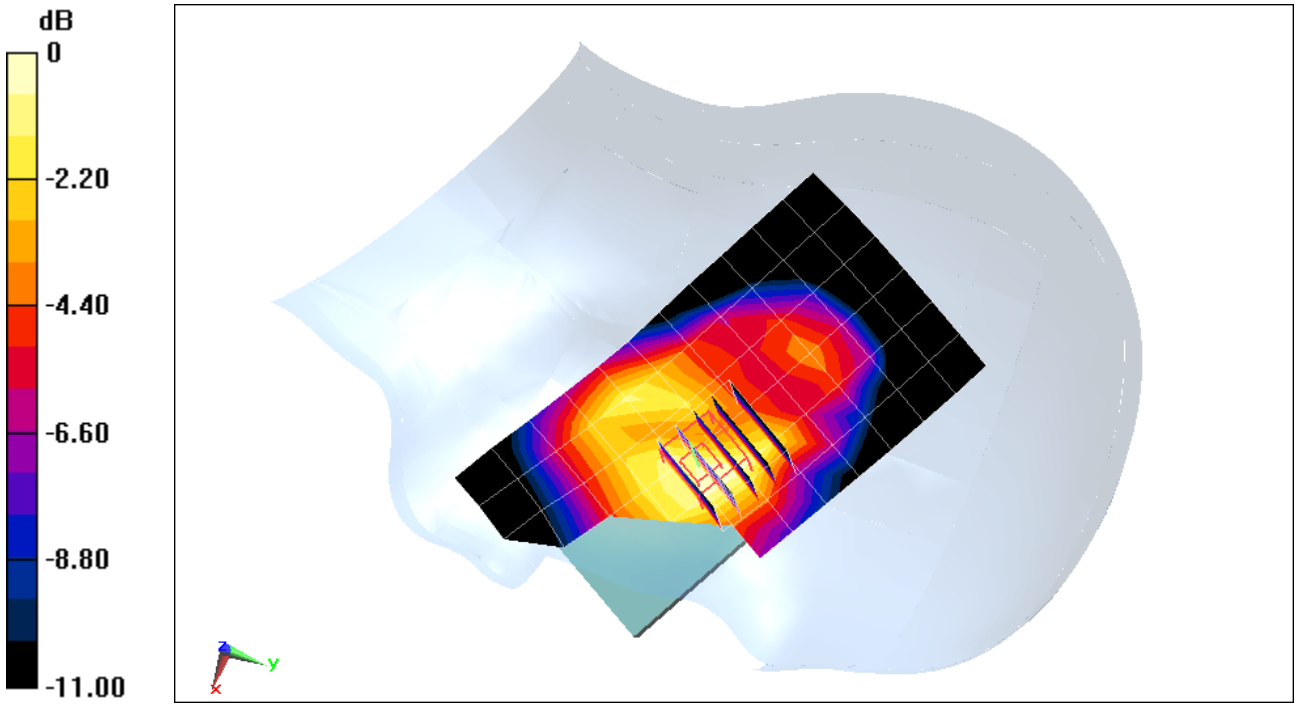
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.441 mho/m; ε_r = 41.19; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.285 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.7440 W/kg
SAR(1 g) = 0.514 mW/g; SAR(10 g) = 0.344 mW/g



0 dB = 0.550mW/g = -5.19 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

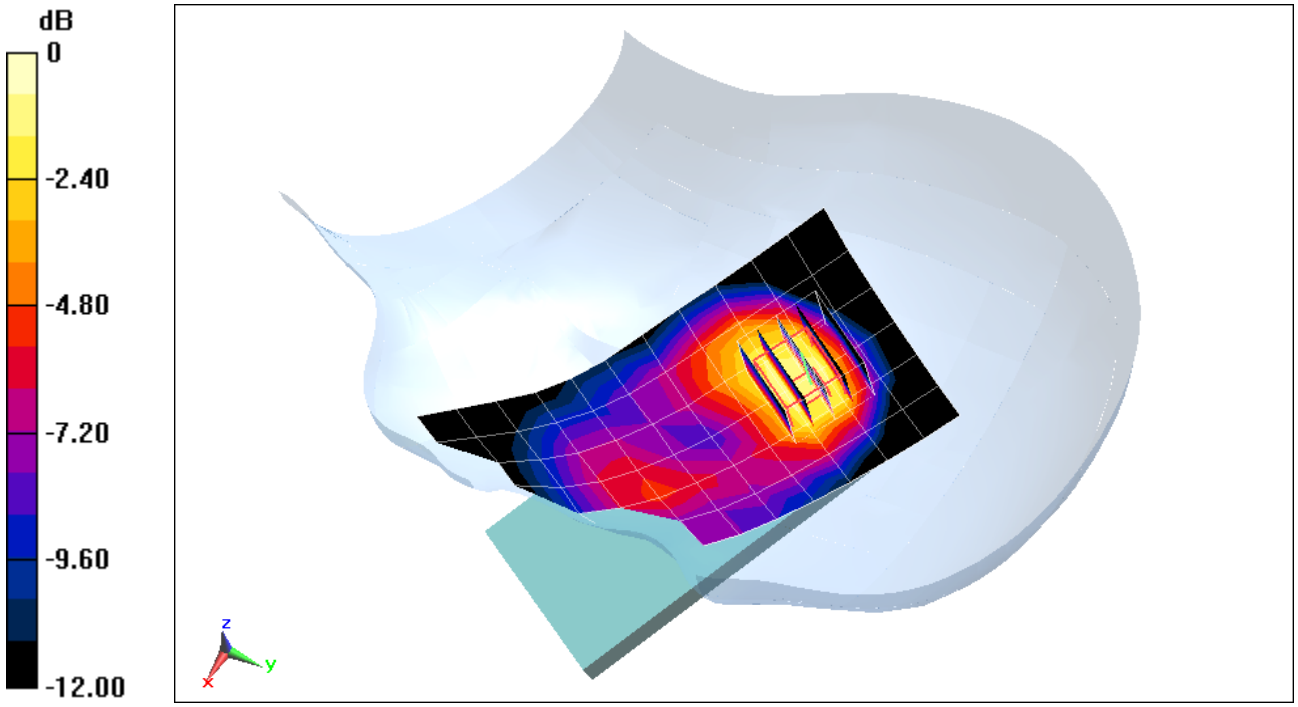
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.441 mho/m; ε_r = 41.19; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.363 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.6430 W/kg
SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.216 mW/g



0 dB = 0.450mW/g = -6.94 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

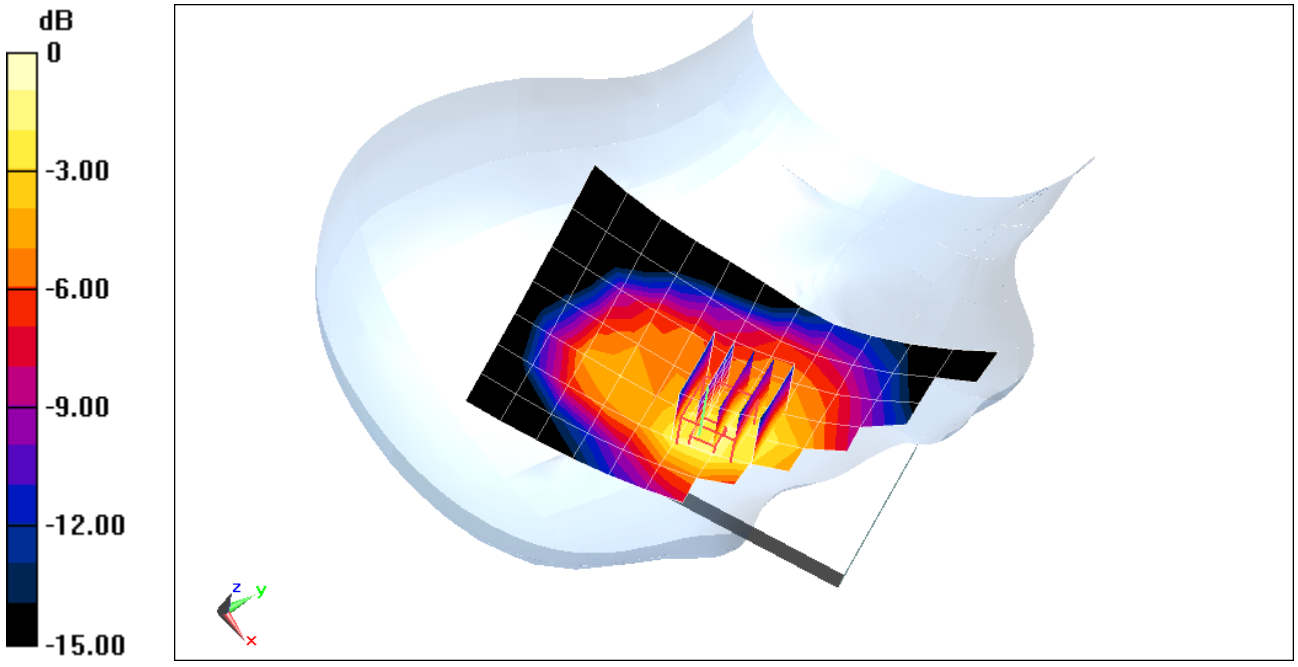
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used: (interpolated):
f = 1855 MHz; σ = 1.373 mho/m; ε_r = 40.457; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Right Head, Cheek, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.968 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.7260 W/kg
SAR(1 g) = 0.474 mW/g; SAR(10 g) = 0.295 mW/g



0 dB = 0.510mW/g = -5.85 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

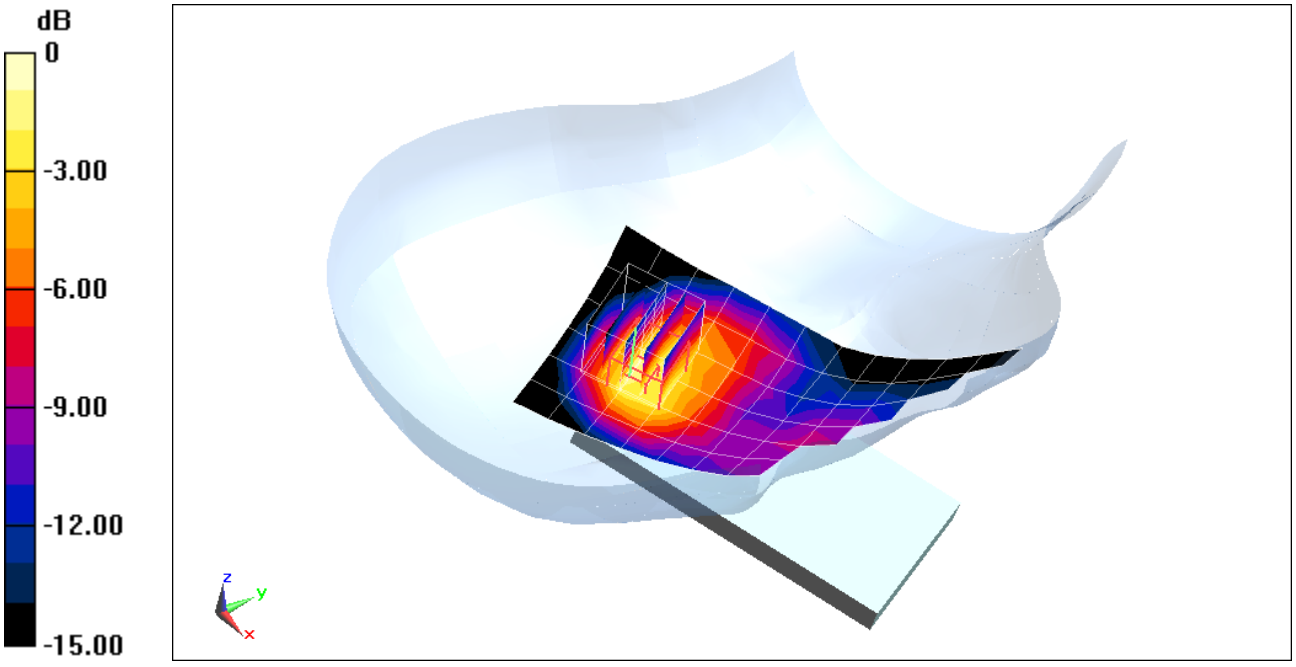
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used: (interpolated):
f = 1855 MHz; σ = 1.373 mho/m; ε_r = 40.457; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Right Head, Tilt, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.816 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.7760 W/kg
SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.278 mW/g



0 dB = 0.500mW/g = -6.02 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

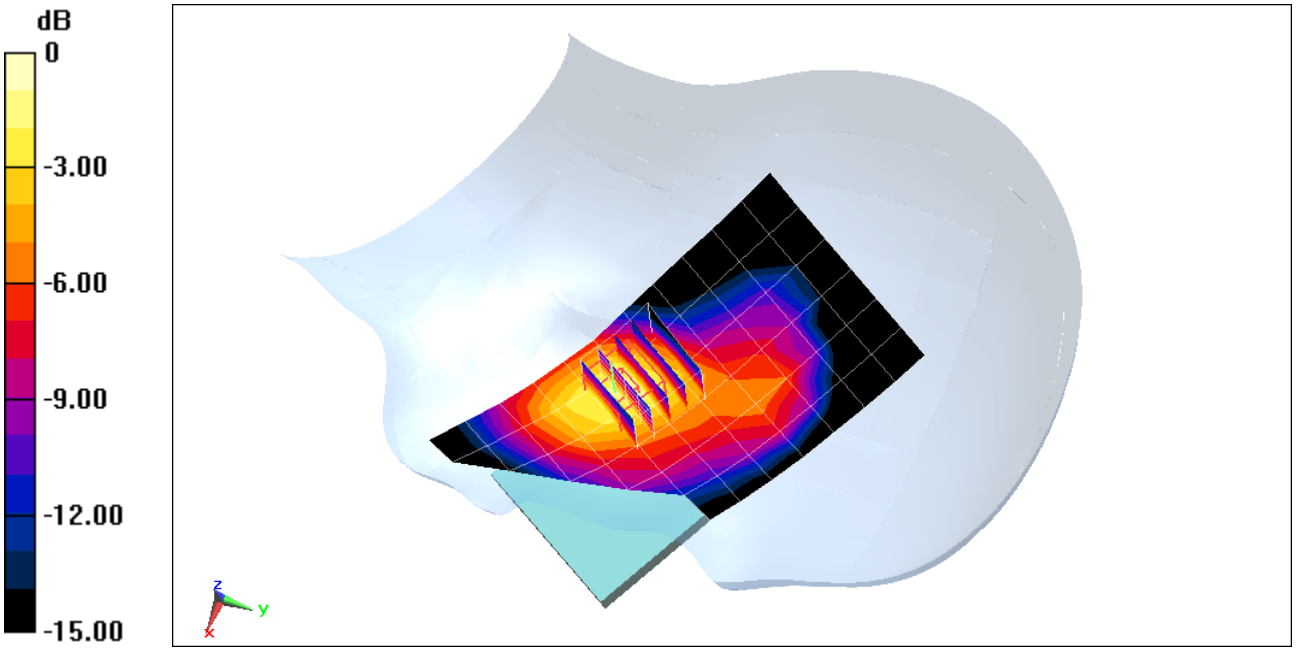
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used: (interpolated):
f = 1855 MHz; σ = 1.373 mho/m; ε_r = 40.457; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Left Head, Cheek, Low.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.319 V/m; Power Drift = 0.0076 dB
Peak SAR (extrapolated) = 1.4220 W/kg
SAR(1 g) = 0.909 mW/g; SAR(10 g) = 0.553 mW/g



0 dB = 0.990mW/g = -0.09 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

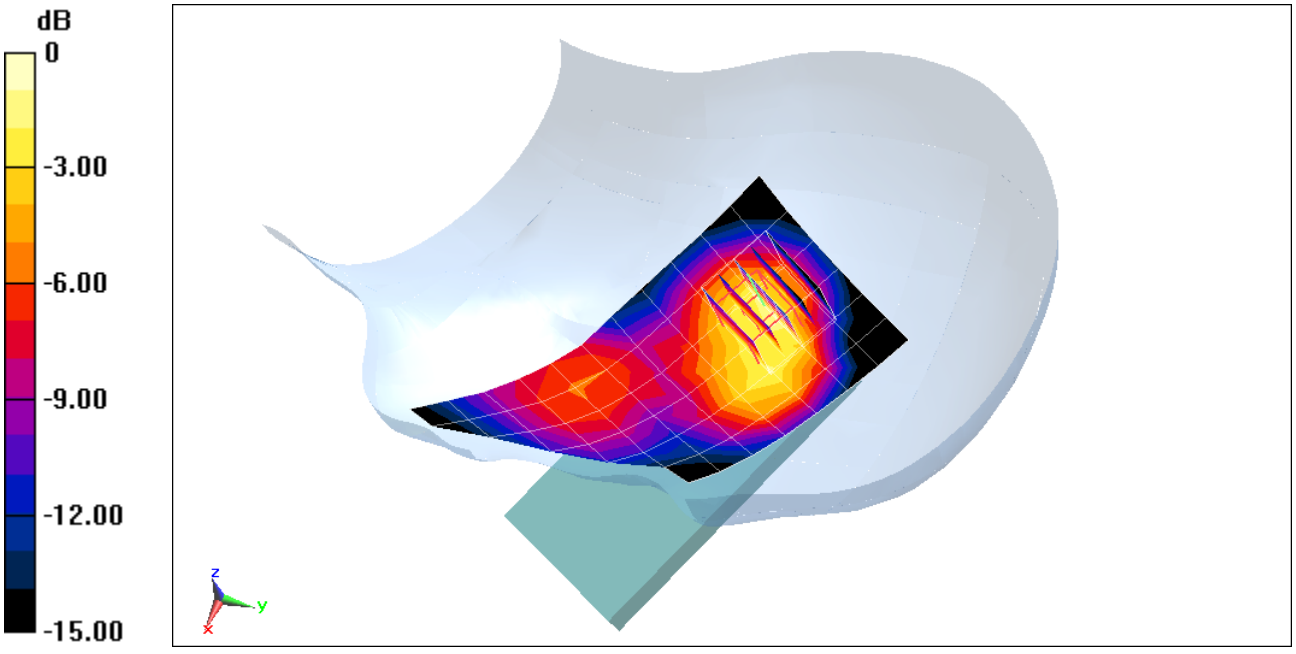
Communication System: LTE PCS 10 Mhz, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used: (interpolated):
$f = 1855$ MHz; $\sigma = 1.373$ mho/m; $\varepsilon_r = 40.457$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Left Head, Tilt, Low.ch, QPSK
10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.477 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.5620 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.221 mW/g



0 dB = 0.380mW/g = -8.40 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

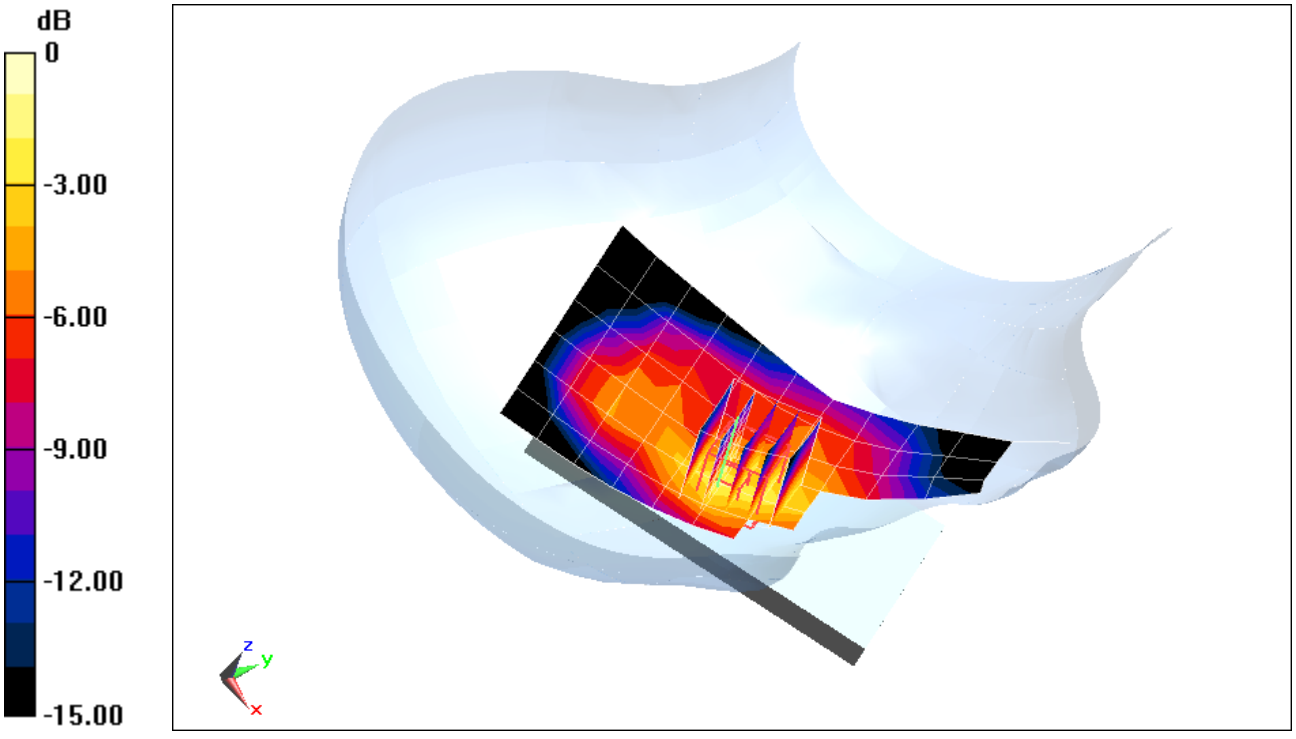
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.409 mho/m; ε_r = 40.469; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Right Head, Cheek, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.653 V/m; Power Drift = 0.0074 dB
Peak SAR (extrapolated) = 0.8510 W/kg
SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.339 mW/g



0 dB = 0.590mW/g = -4.58 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

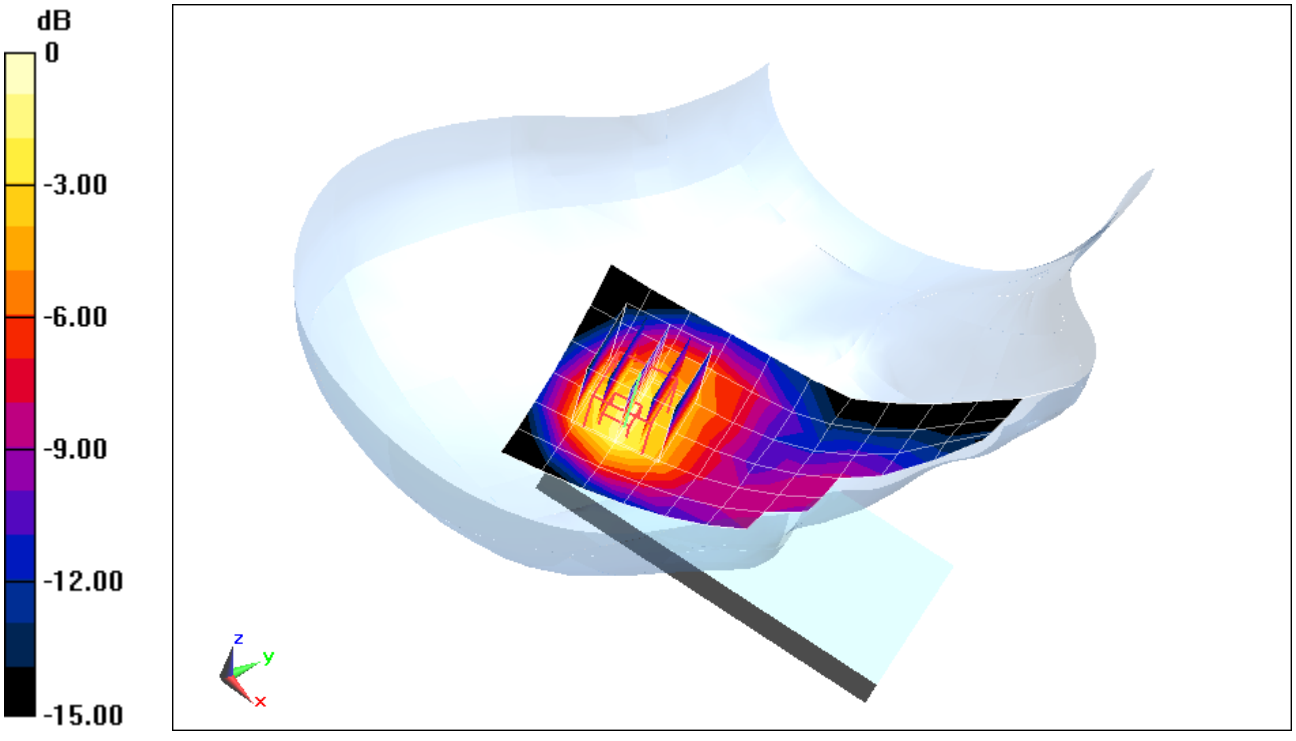
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.409 mho/m; ε_r = 40.469; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Right Head, Tilt, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.674 V/m; Power Drift = 0.0048 dB
Peak SAR (extrapolated) = 0.8090 W/kg
SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.292 mW/g



0 dB = 0.530mW/g = -5.51 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

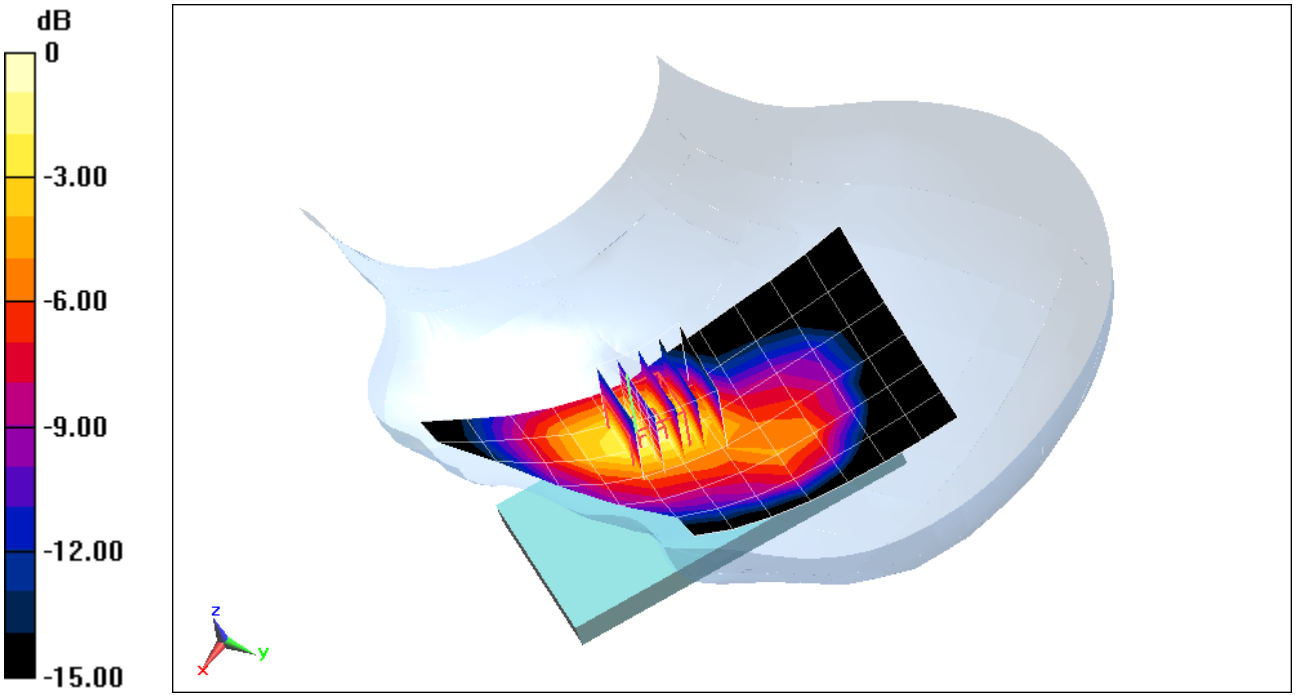
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.409 mho/m; ε_r = 40.469; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Left Head, Cheek, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.588 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.4700 W/kg
SAR(1 g) = 0.935 mW/g; SAR(10 g) = 0.565 mW/g



0 dB = 0.980mW/g = -0.18 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

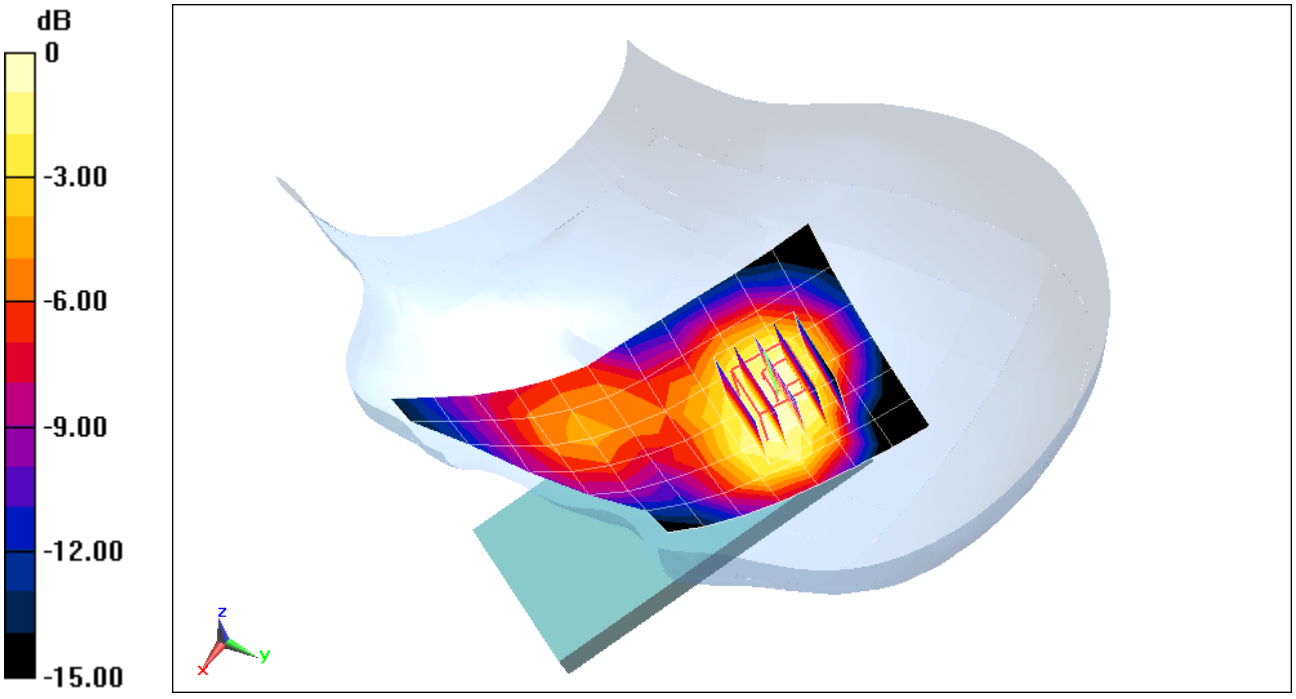
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.409 mho/m; ε_r = 40.469; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Left Head, Tilt, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.187 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.5860 W/kg
SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.235 mW/g



0 dB = 0.390mW/g = -8.18 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

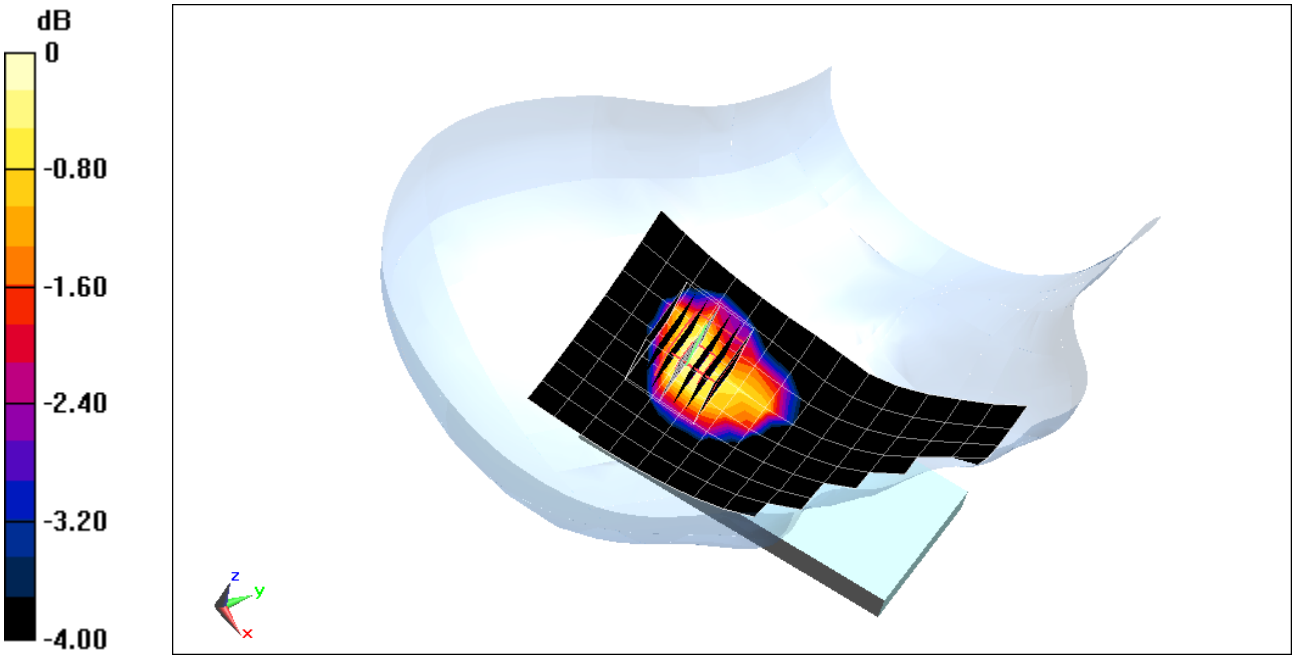
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.873 mho/m; ε_r = 38.82; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Right Head, Cheek, Ch 06, 1 Mbps

Area Scan (9x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.098 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.0290 W/kg
SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.00921 mW/g



0 dB = 0.020mW/g = -33.98 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

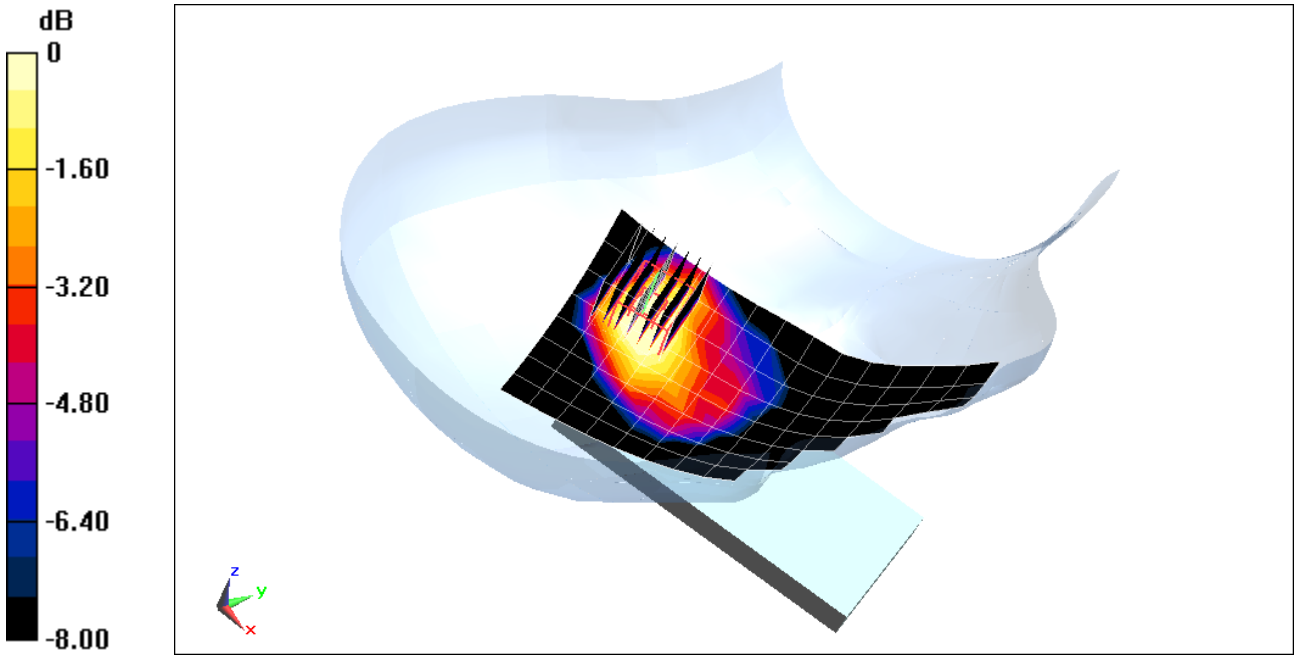
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.873 mho/m; ε_r = 38.82; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Right Head, Tilt, Ch 06, 1 Mbps

Area Scan (9x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.481 V/m; Power Drift = 0.066 dB
Peak SAR (extrapolated) = 0.0210 W/kg
SAR(1 g) = 0.010 mW/g; SAR(10 g) = 0.00493 mW/g



0 dB = 0.010mW/g = -40.00 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

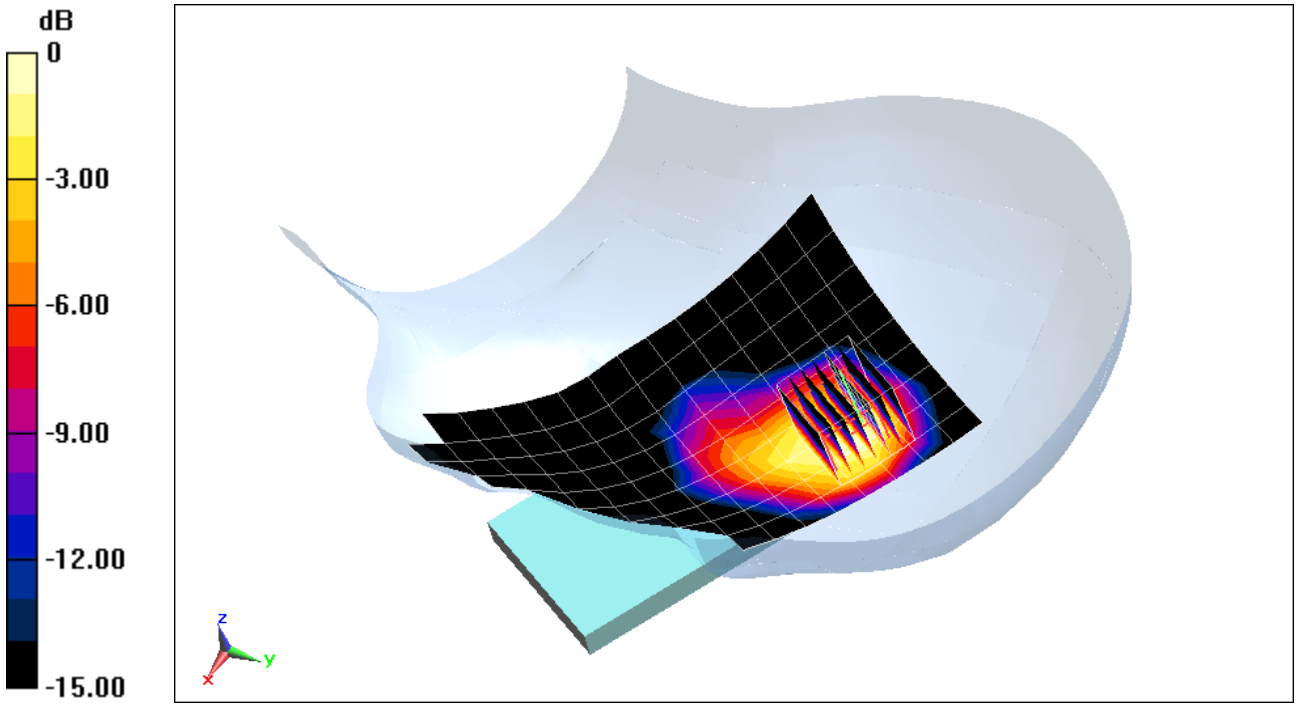
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.873 mho/m; ε_r = 38.82; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Left Head, Cheek, Ch 06, 1 Mbps

Area Scan (10x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.747 V/m; Power Drift = 0.046 dB
Peak SAR (extrapolated) = 0.0890 W/kg
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.021 mW/g



0 dB = 0.050mW/g = -26.02 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

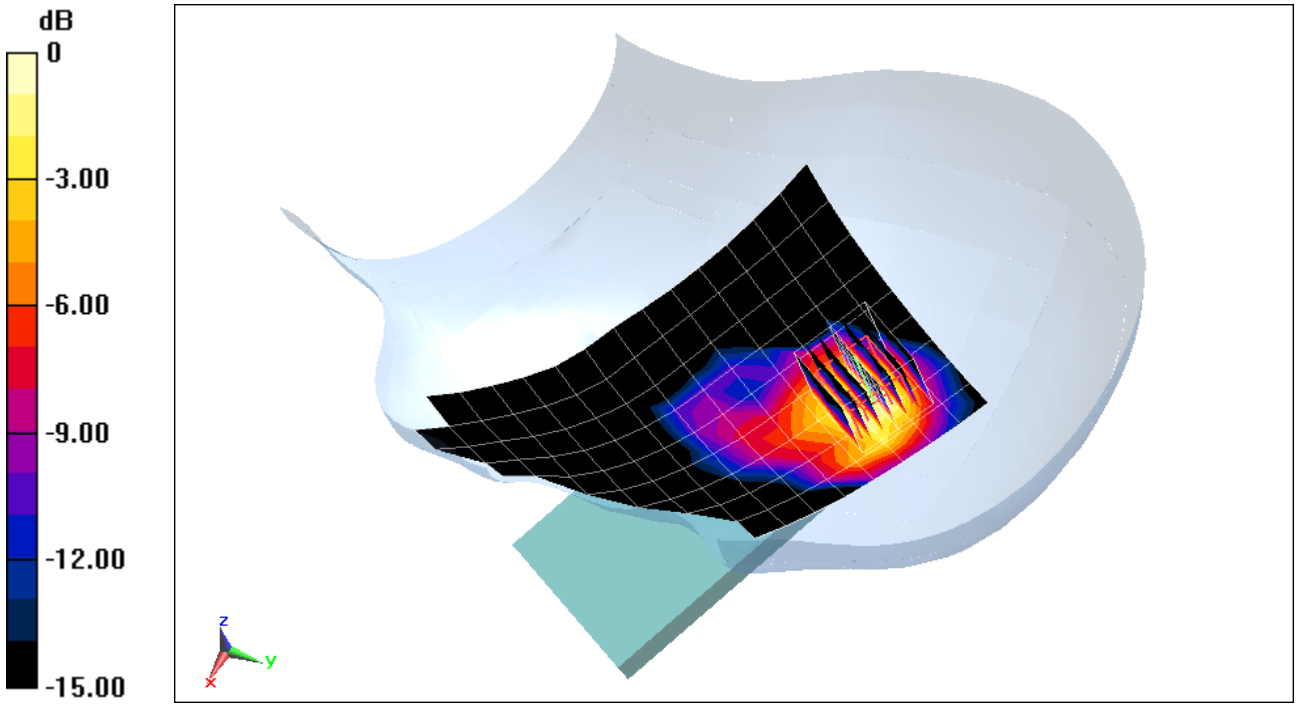
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.873 mho/m; ε_r = 38.82; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Left Head, Tilt, Ch 06, 1 Mbps

Area Scan (10x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.728 V/m; Power Drift = 0.075 dB
Peak SAR (extrapolated) = 0.0560 W/kg
SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.012 mW/g



0 dB = 0.030mW/g = -30.46 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

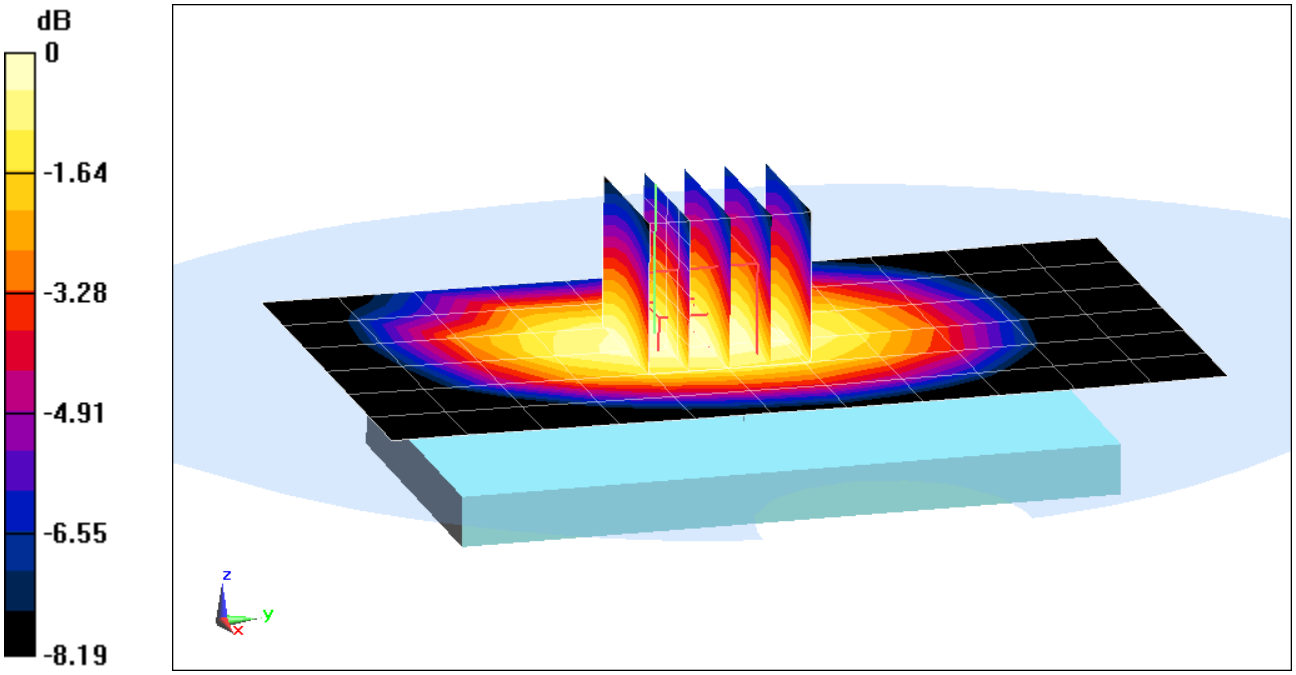
Communication System: Cellular CDMA; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 824.7$ MHz; $\sigma = 0.944$ mho/m; $\varepsilon_r = 53.237$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA, Body SAR, Back side, Low.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.356 V/m; Power Drift = 0.00084 dB
Peak SAR (extrapolated) = 1.1790 W/kg
SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.743 mW/g



0 dB = 1.010mW/g = 0.09 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

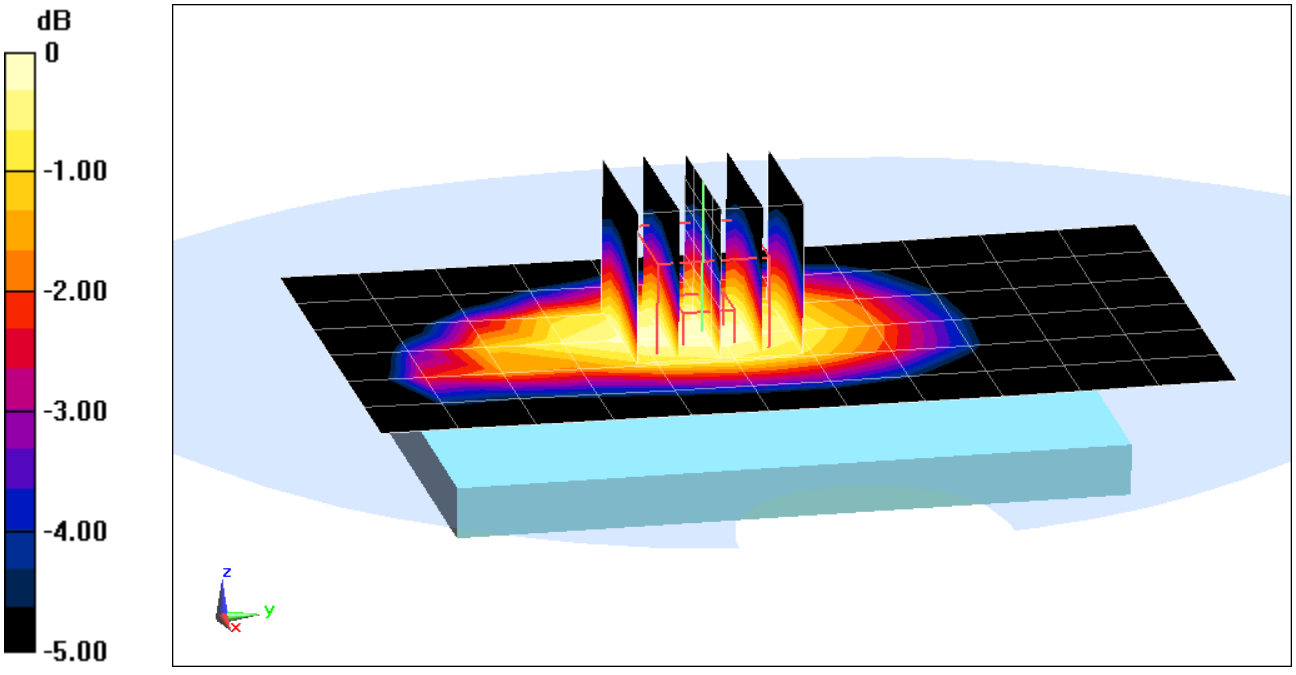
Communication System: Cellular CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.954 mho/m; ε_r = 53.117; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA, Body SAR, Front side, Mid.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.354 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.5860 W/kg
SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.379 mW/g



0 dB = 0.510mW/g = -5.85 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

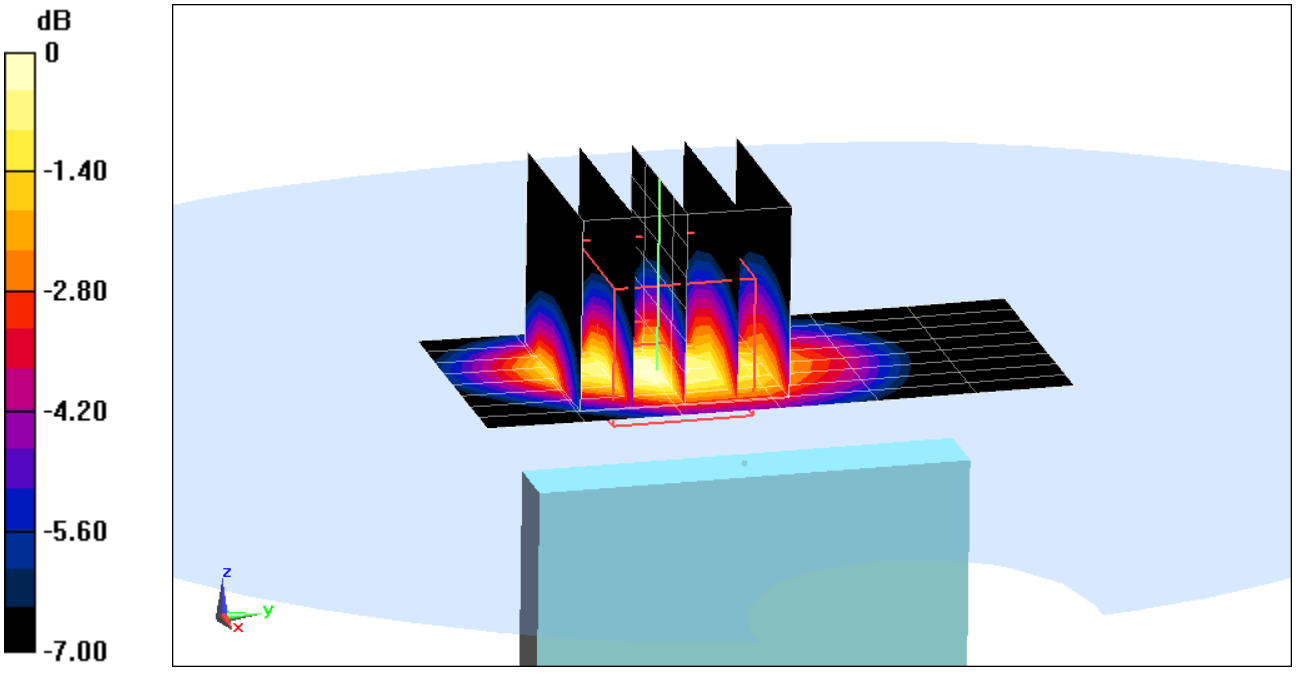
Communication System: Cellular CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.52$ MHz; $\sigma = 0.954$ mho/m; $\varepsilon_r = 53.117$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA, Body SAR, Bottom Edge, Mid.ch

Area Scan (9x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.642 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.3930 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.134 mW/g



0 dB = 0.250mW/g = -12.04 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

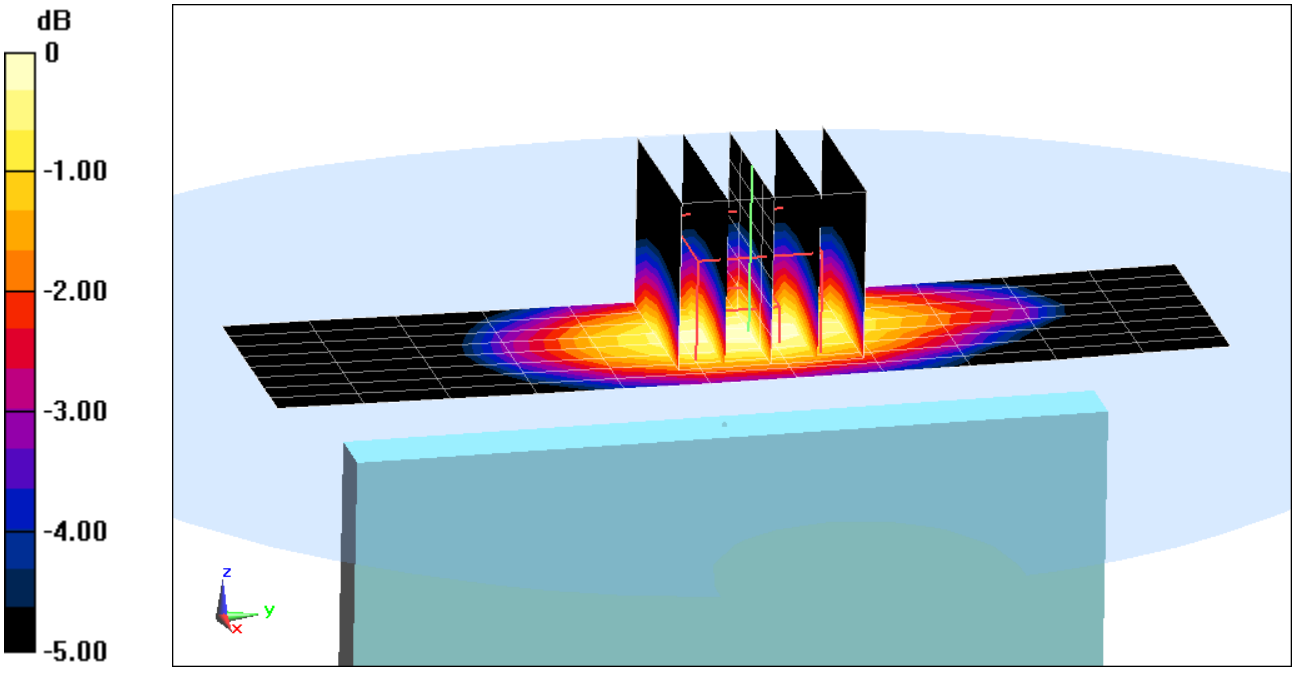
Communication System: Cellular CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.52$ MHz; $\sigma = 0.954$ mho/m; $\varepsilon_r = 53.117$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA, Body SAR, Right Edge, Mid.ch

Area Scan (9x12x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.436 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.9230 W/kg
SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.477 mW/g



0 dB = 0.730mW/g = -2.73 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

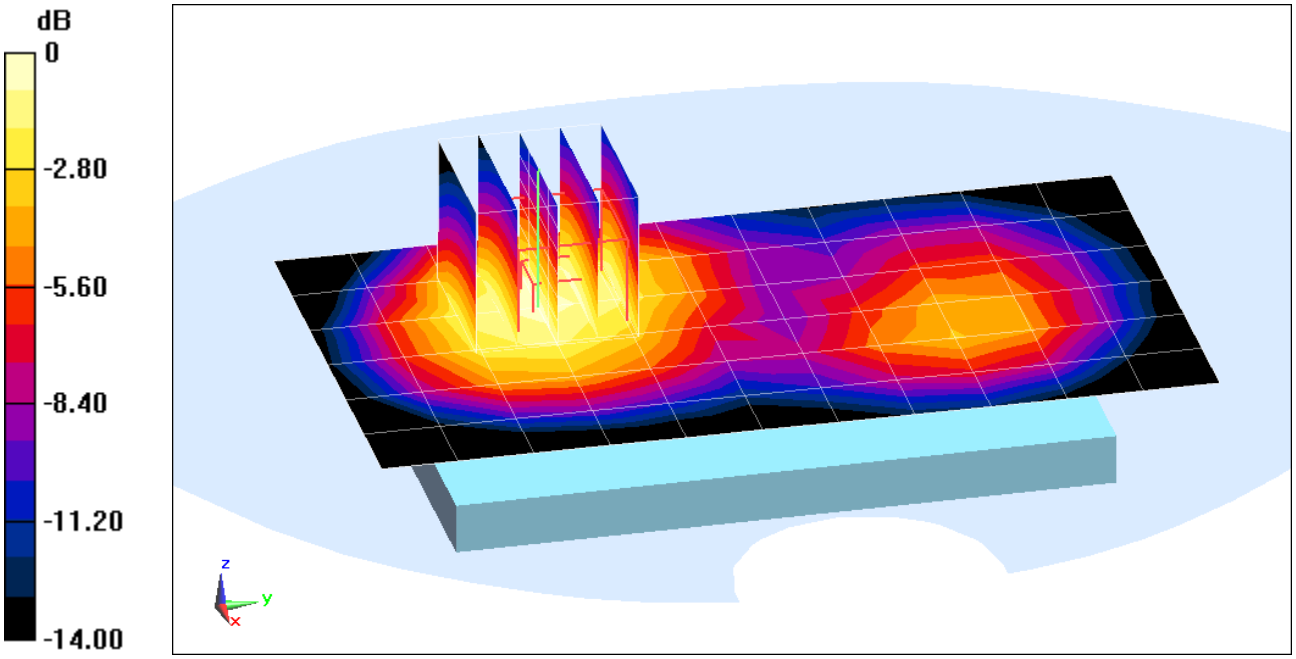
Communication System: AWS CDMA; Frequency: 1753.75 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1753.75$ MHz; $\sigma = 1.49$ mho/m; $\varepsilon_r = 55.479$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS CDMA, Body SAR, Back side, High.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.782 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.6370 W/kg
SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.702 mW/g



0 dB = 1.130mW/g = 1.06 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

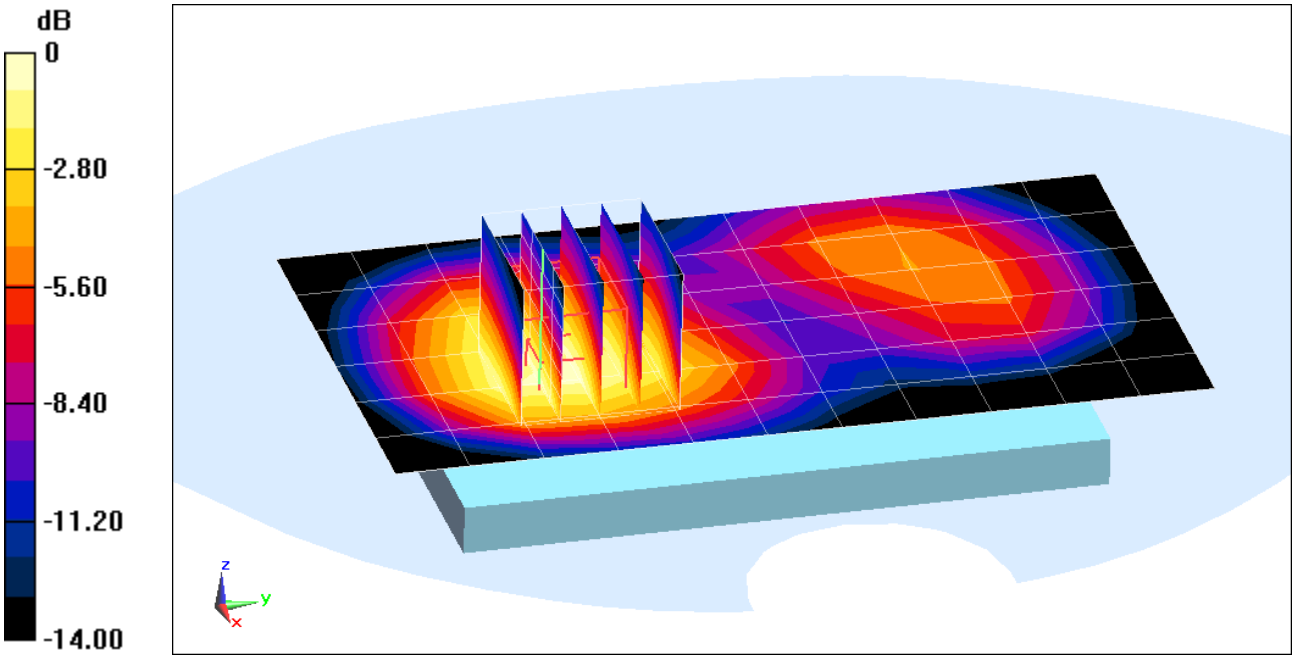
Communication System: AWS CDMA; Frequency: 1753.75 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1753.75$ MHz; $\sigma = 1.49$ mho/m; $\varepsilon_r = 55.479$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS CDMA, Body SAR, Front side, High.ch

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.942 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.4780 W/kg
SAR(1 g) = 0.950 mW/g; SAR(10 g) = 0.607 mW/g



0 dB = 1.000mW/g = 0 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: EVDO Max

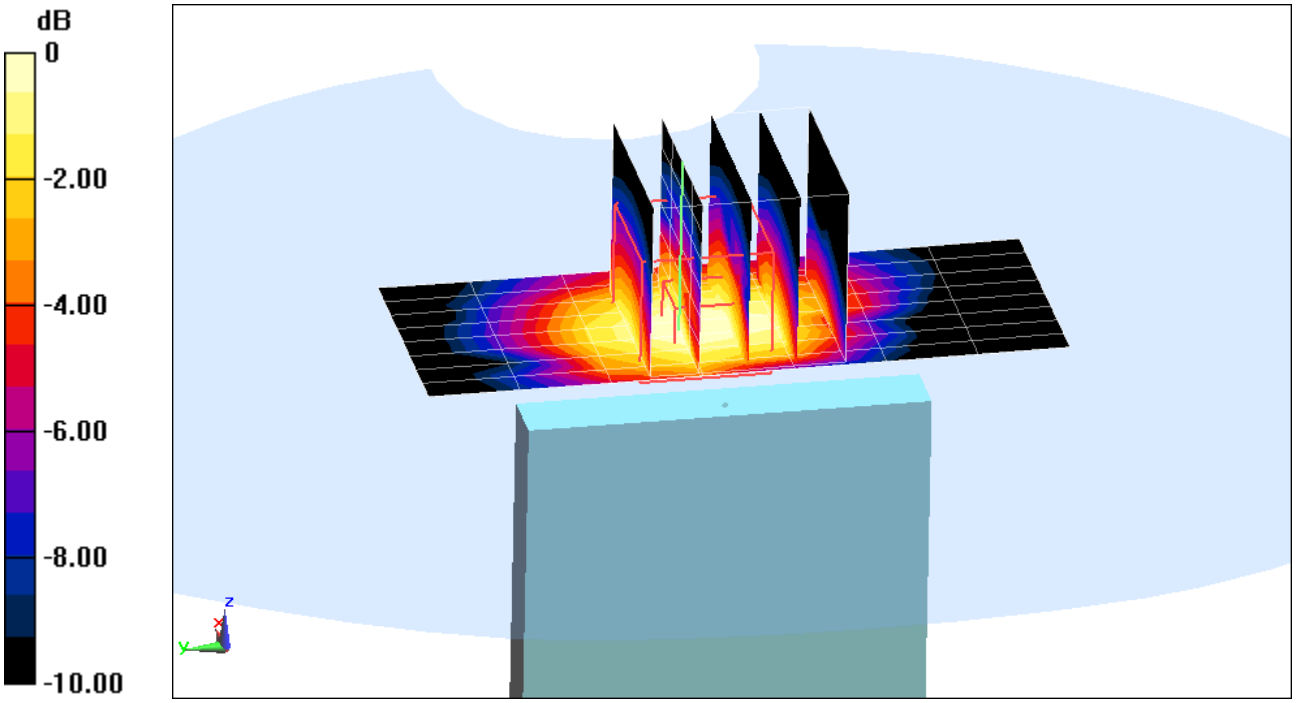
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.42$ mho/m; $\varepsilon_r = 54.274$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS EVDO Rev. 0, Body SAR, Bottom Edge, Mid.ch

Area Scan (9x8x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.222 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.7820 W/kg
SAR(1 g) = 0.421 mW/g; SAR(10 g) = 0.251 mW/g



0 dB = 0.440mW/g = -7.13 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

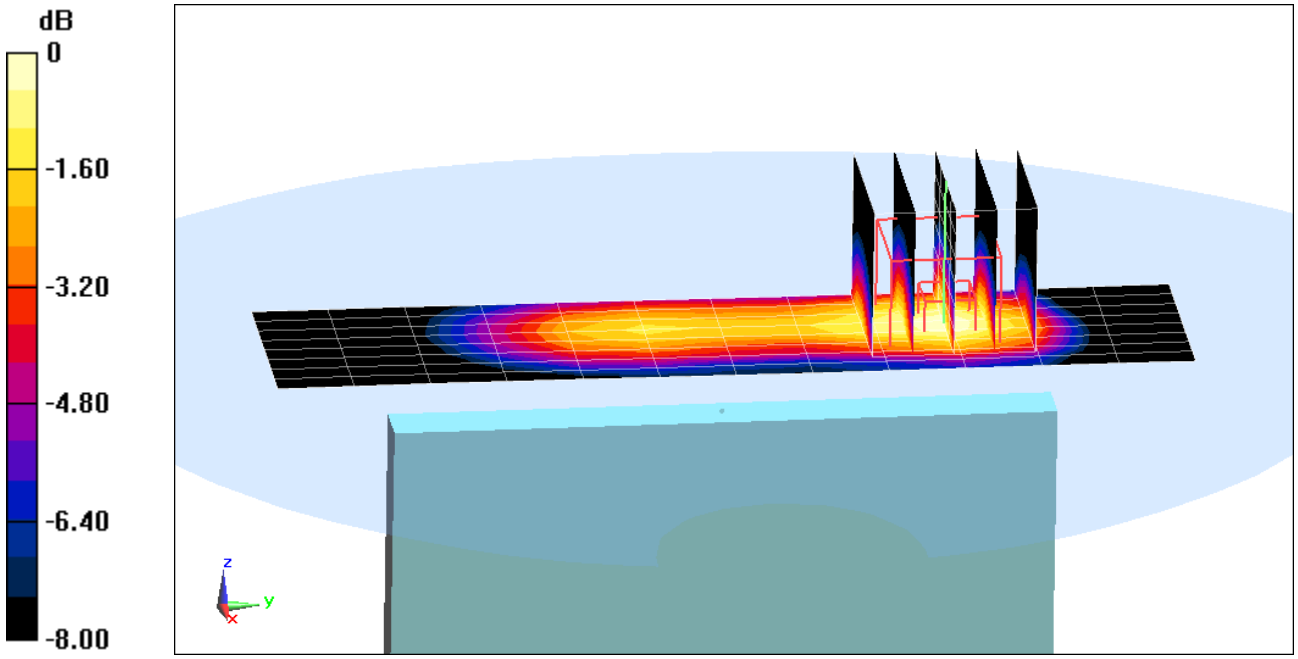
Communication System: AWS CDMA; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.465$ mho/m; $\varepsilon_r = 55.56$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: AWS CDMA, Body SAR, Right Edge, Mid.ch

Area Scan (9x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.222 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.5580 W/kg
SAR(1 g) = 0.344 mW/g; SAR(10 g) = 0.202 mW/g



0 dB = 0.370mW/g = -8.64 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

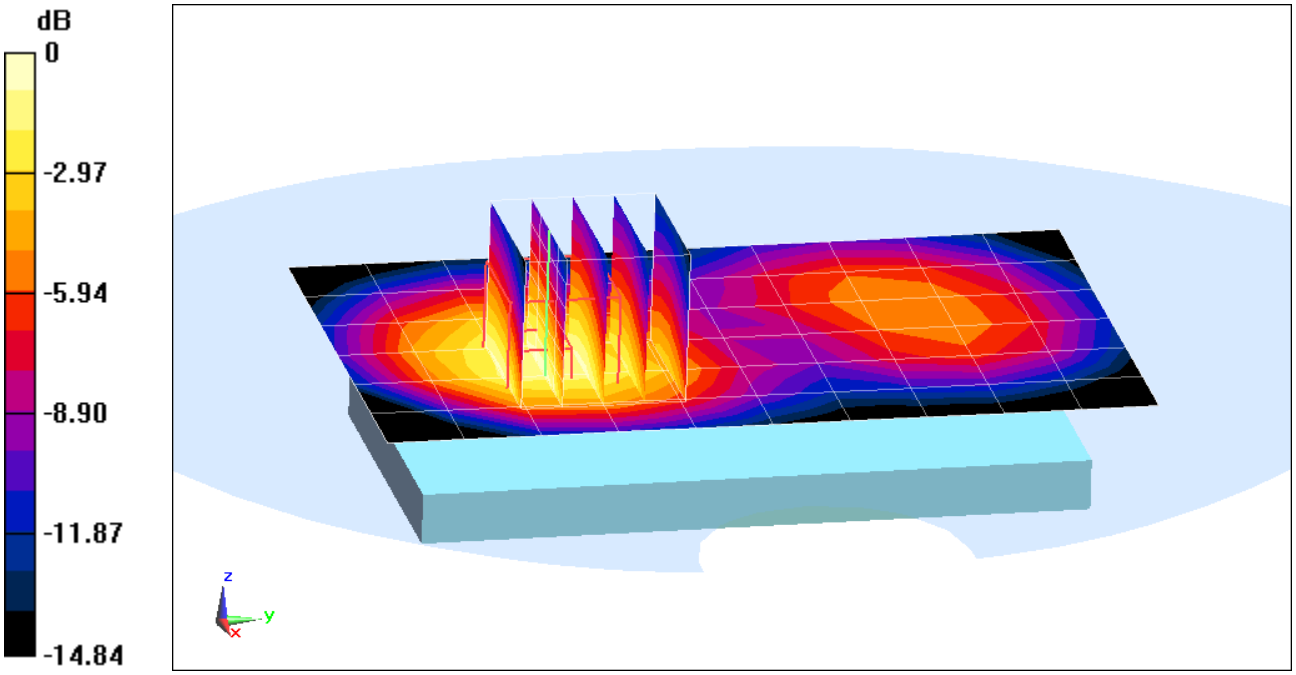
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1732.5 MHz; σ = 1.465 mho/m; ε_r = 55.56; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.385 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.5830 W/kg
SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.678 mW/g



0 dB = 1.130mW/g = 1.06 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

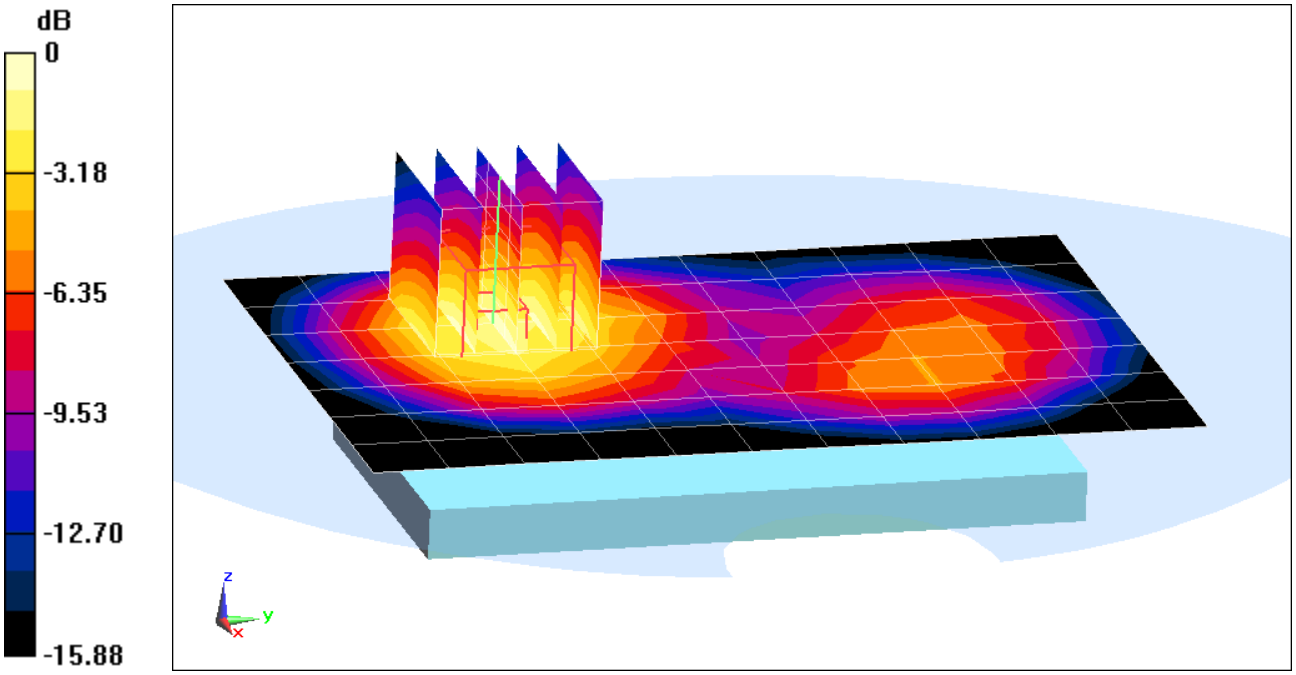
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.465$ mho/m; $\varepsilon_r = 55.56$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Body SAR, Front side, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.624 V/m; Power Drift = 0.0013 dB
Peak SAR (extrapolated) = 1.1420 W/kg
SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.492 mW/g



0 dB = 0.810mW/g = -1.83 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

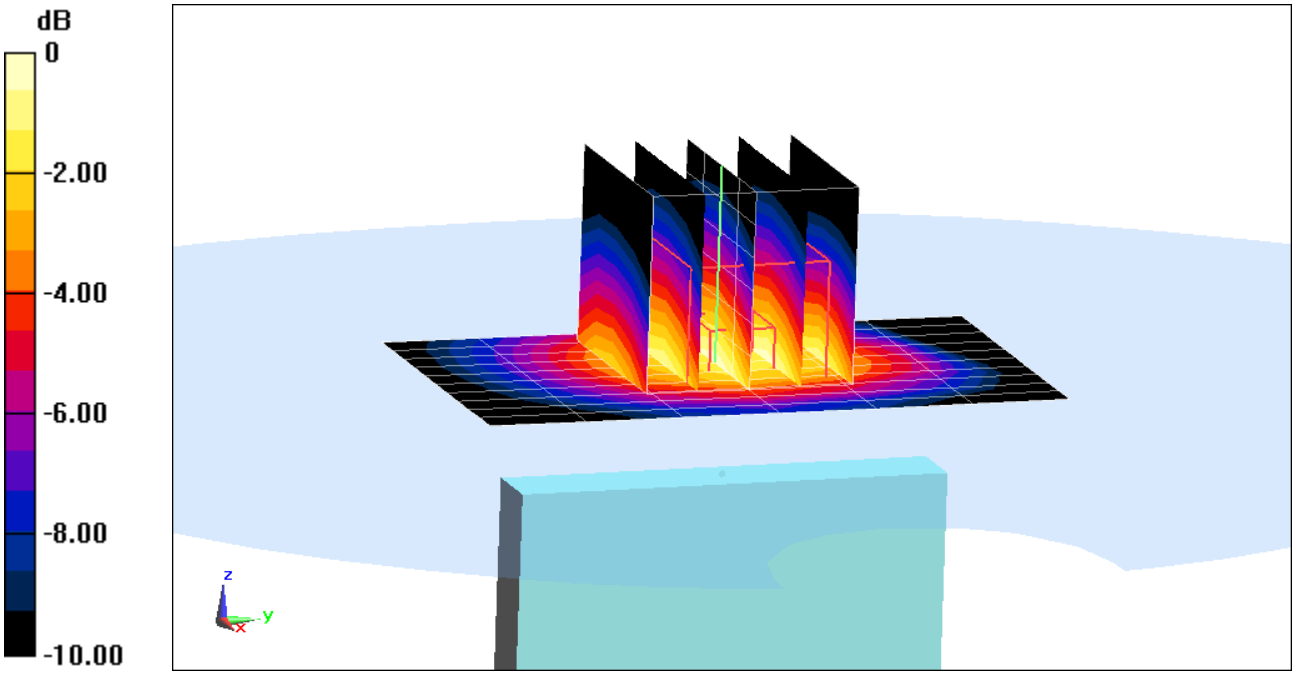
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.465$ mho/m; $\varepsilon_r = 55.56$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Body SAR, Bottom Edge, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (11x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.971 V/m; Power Drift = 0.0084 dB
Peak SAR (extrapolated) = 0.4550 W/kg
SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.186 mW/g



0 dB = 0.320mW/g = -9.90 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

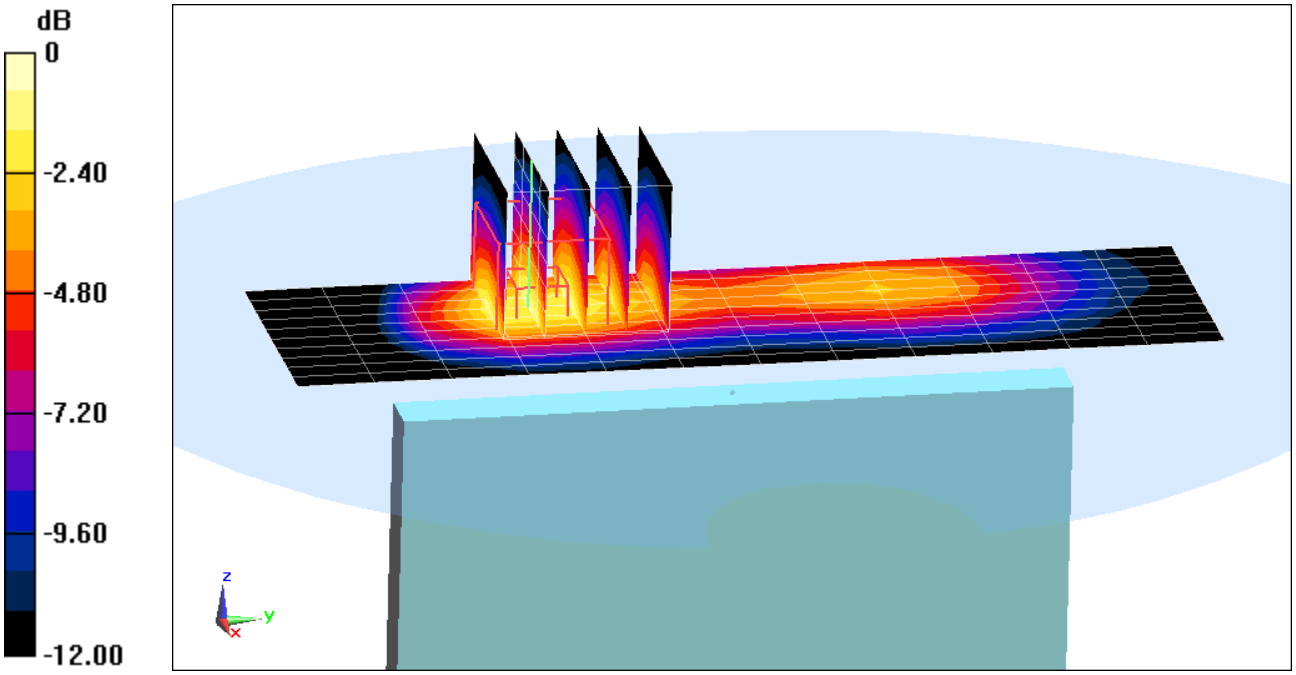
Communication System: LTE RF; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
$f = 1732.5$ MHz; $\sigma = 1.465$ mho/m; $\varepsilon_r = 55.56$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 4 (AWS), Body SAR, Left Edge, Mid.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.036 V/m; Power Drift = -0.21 dB
Peak SAR (extrapolated) = 0.7210 W/kg
SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.263 mW/g



0 dB = 0.500mW/g = -6.02 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

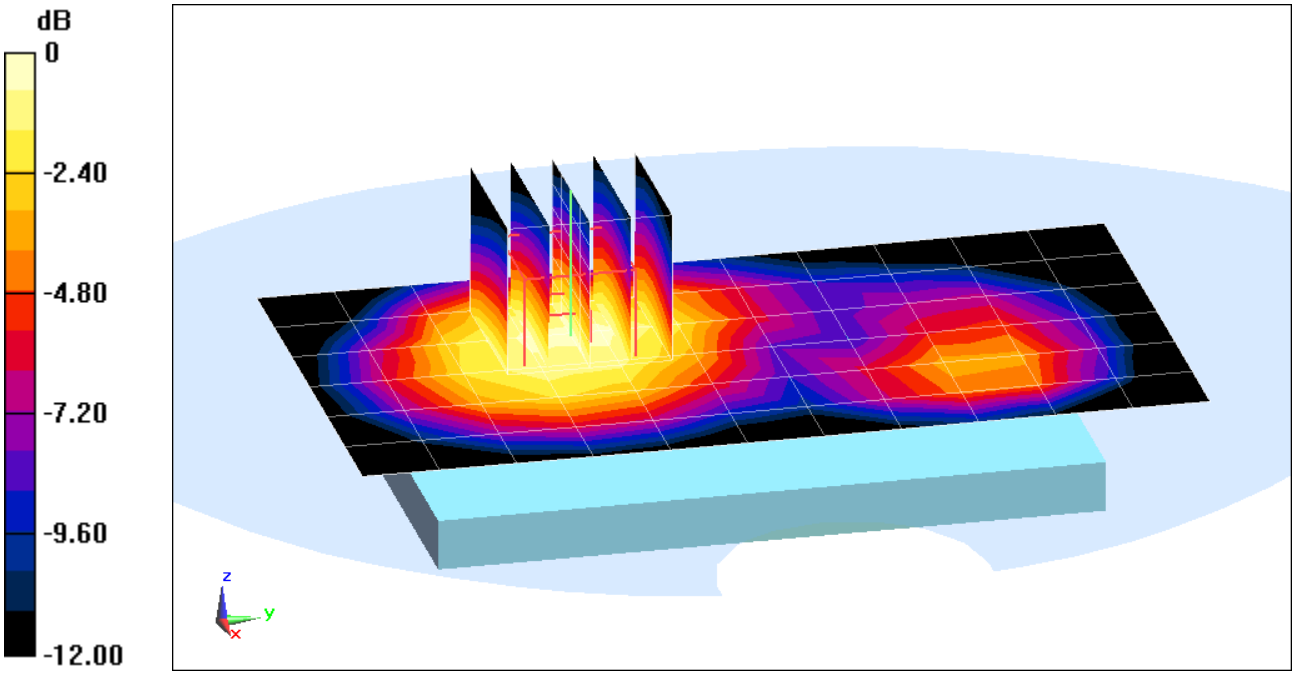
Communication System: CDMA; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used: (interpolated):
$f = 1851.25$ MHz; $\sigma = 1.525$ mho/m; $\varepsilon_r = 53.085$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.171 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.6570 W/kg
SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.695 mW/g



0 dB = 1.160mW/g = 1.29 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

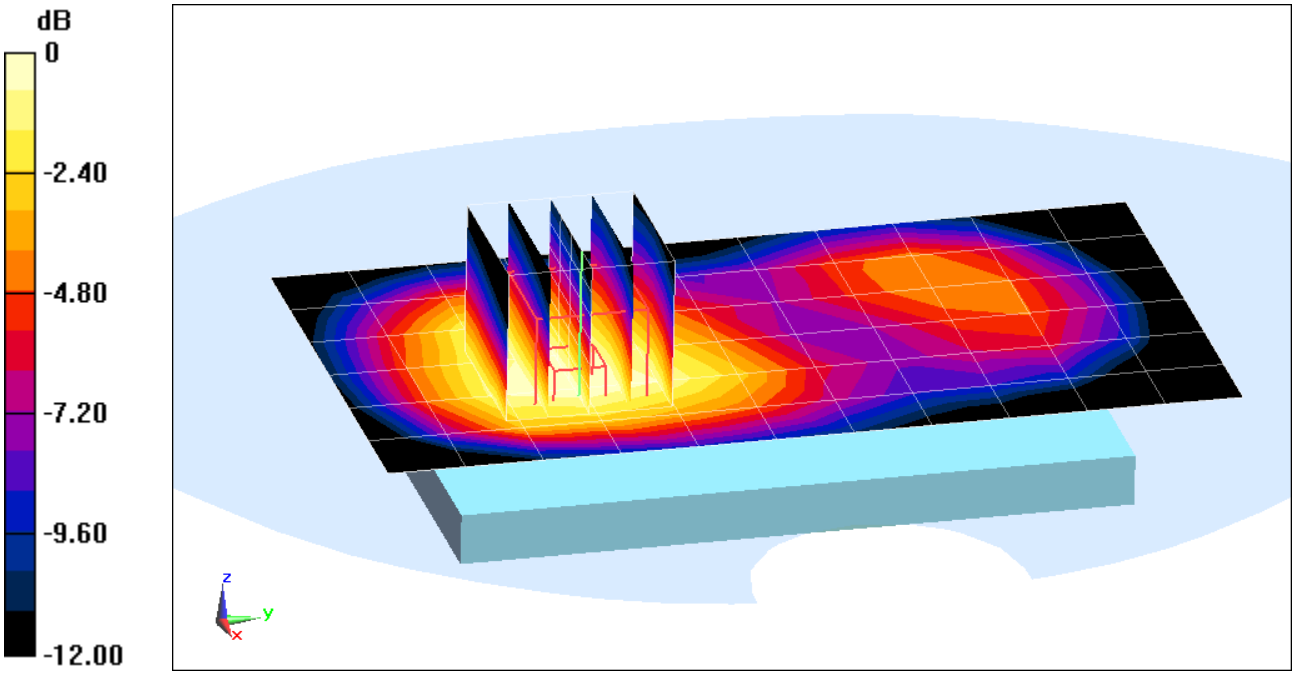
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.541 mho/m; ε_r = 52.97; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.869 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.1590 W/kg
SAR(1 g) = 0.717 mW/g; SAR(10 g) = 0.460 mW/g



0 dB = 0.760mW/g = -2.38 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

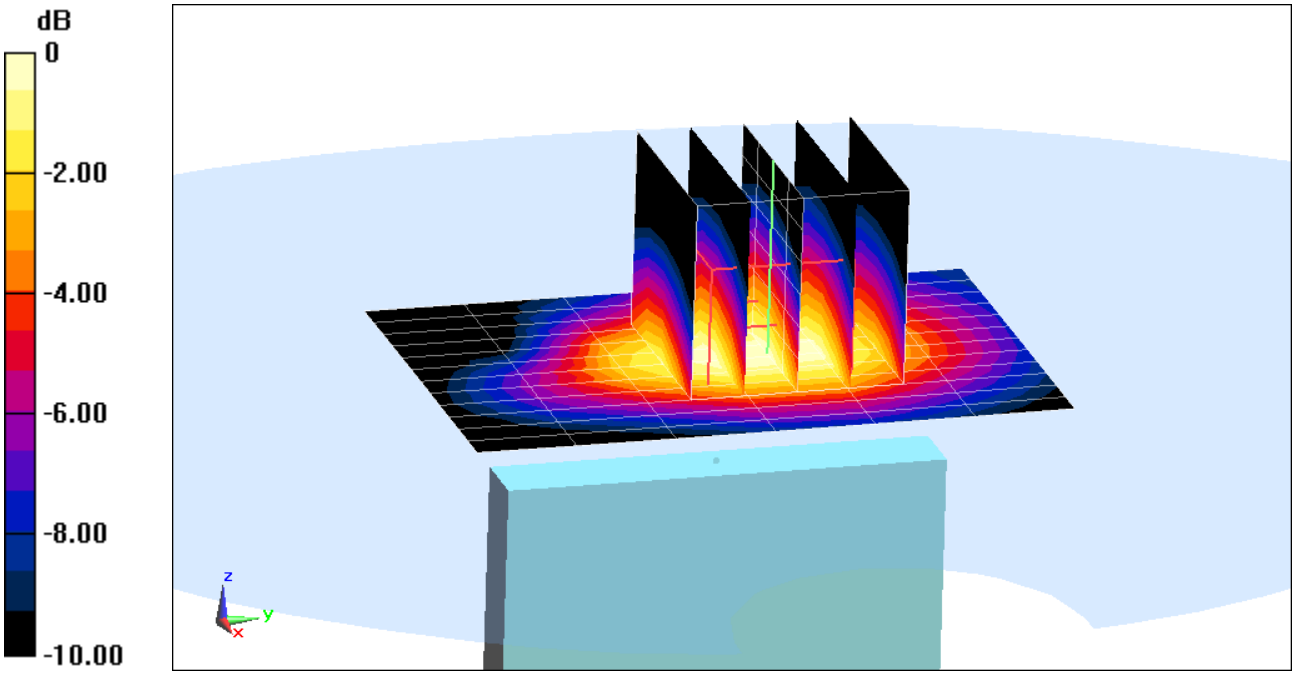
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.541 mho/m; ε_r = 52.97; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Area Scan (13x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.148 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.7680 W/kg
SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.282 mW/g



0 dB = 0.510mW/g = -5.85 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: CDMA Max

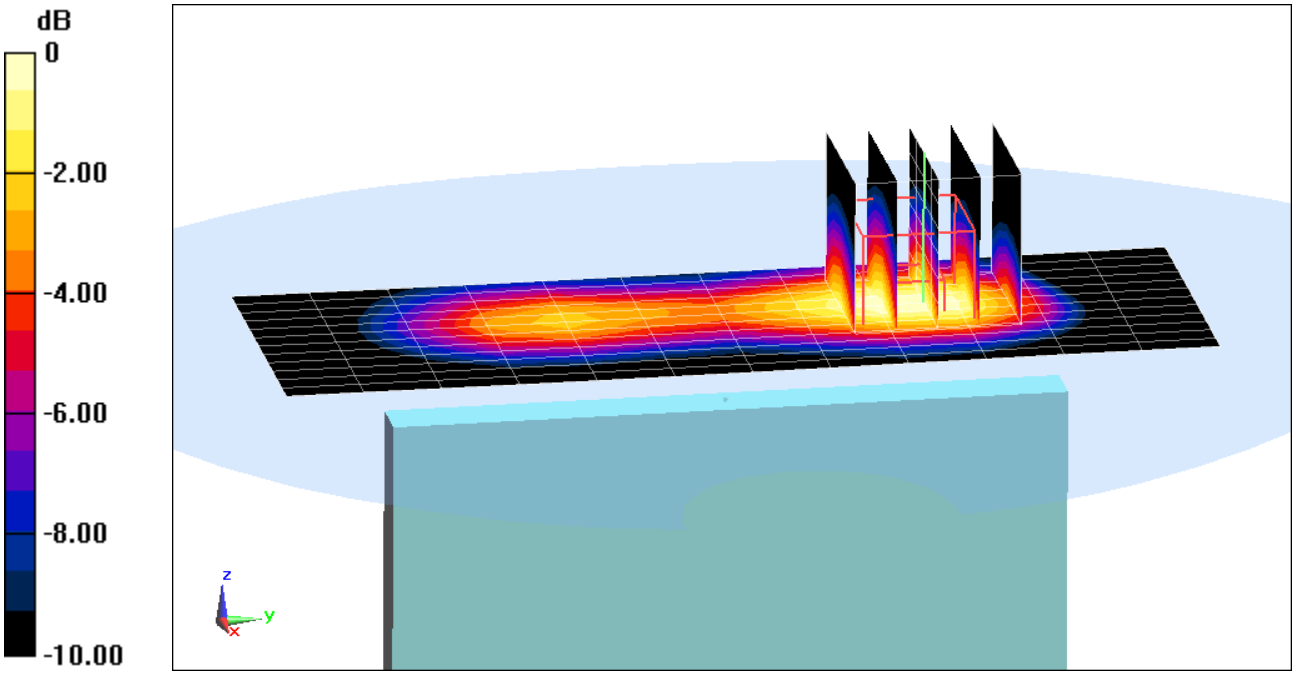
Communication System: CDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.541 mho/m; ε_r = 52.97; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: PCS CDMA, Body SAR, Right Edge, Mid.ch

Area Scan (13x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.360 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.0840 W/kg
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.382 mW/g



0 dB = 0.710mW/g = -2.97 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

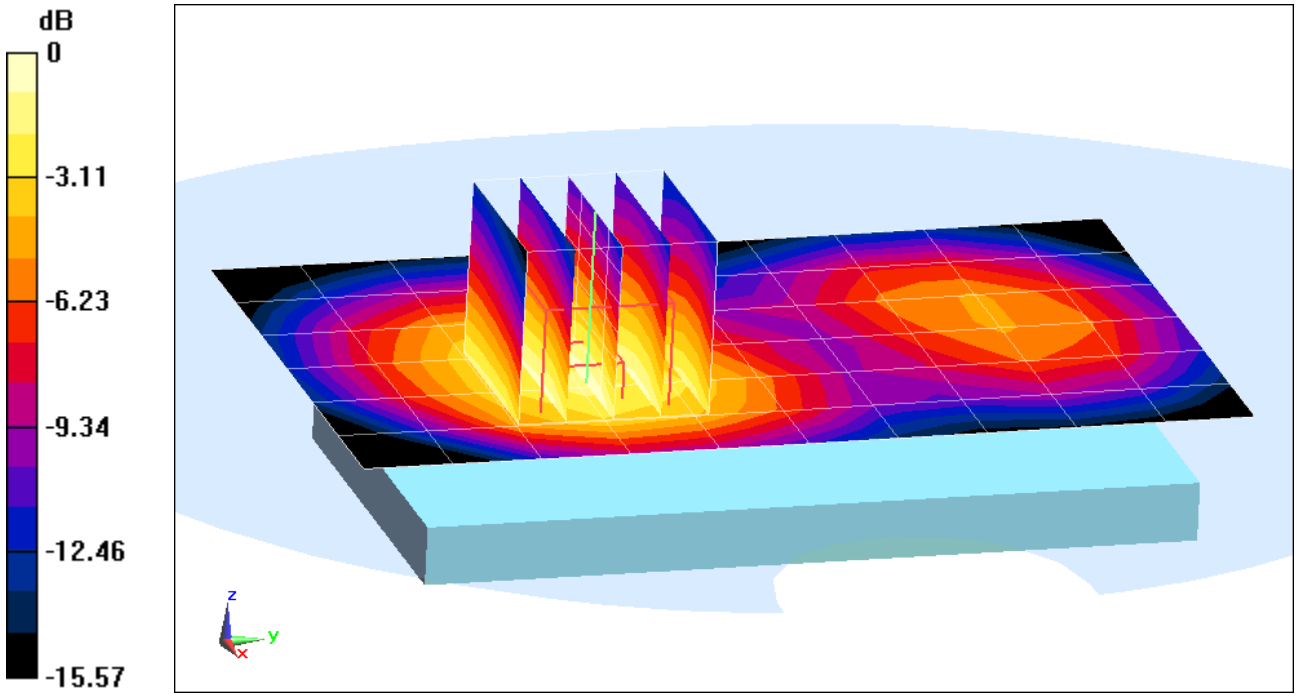
Communication System: LTE Band 2; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used: (interpolated):
f = 1855 MHz; σ = 1.527 mho/m; ε_r = 53.07; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Body SAR, Back side, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.938 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.4830 W/kg
SAR(1 g) = 1.000 mW/g; SAR(10 g) = 0.637 mW/g



0 dB = 1.070mW/g = 0.59 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

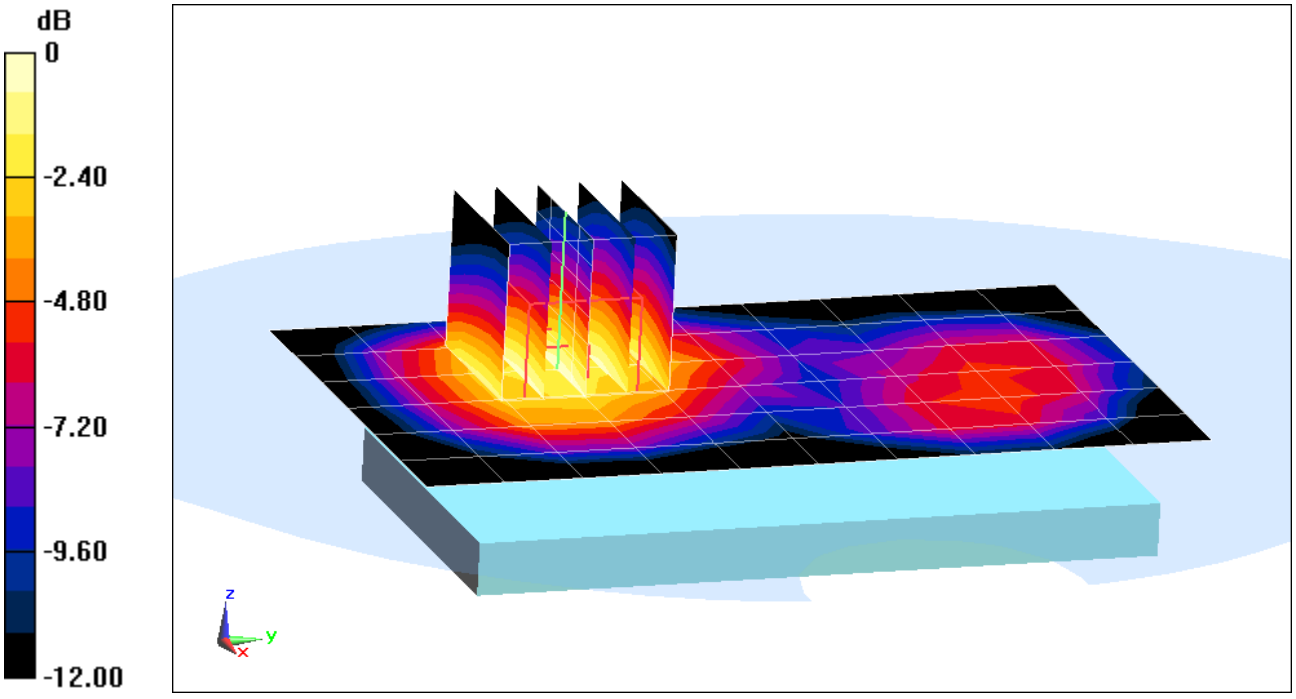
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.527 mho/m; ε_r = 53.07; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Body SAR, Front side, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.950 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.2930 W/kg
SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.558 mW/g



0 dB = 0.920mW/g = -0.72 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

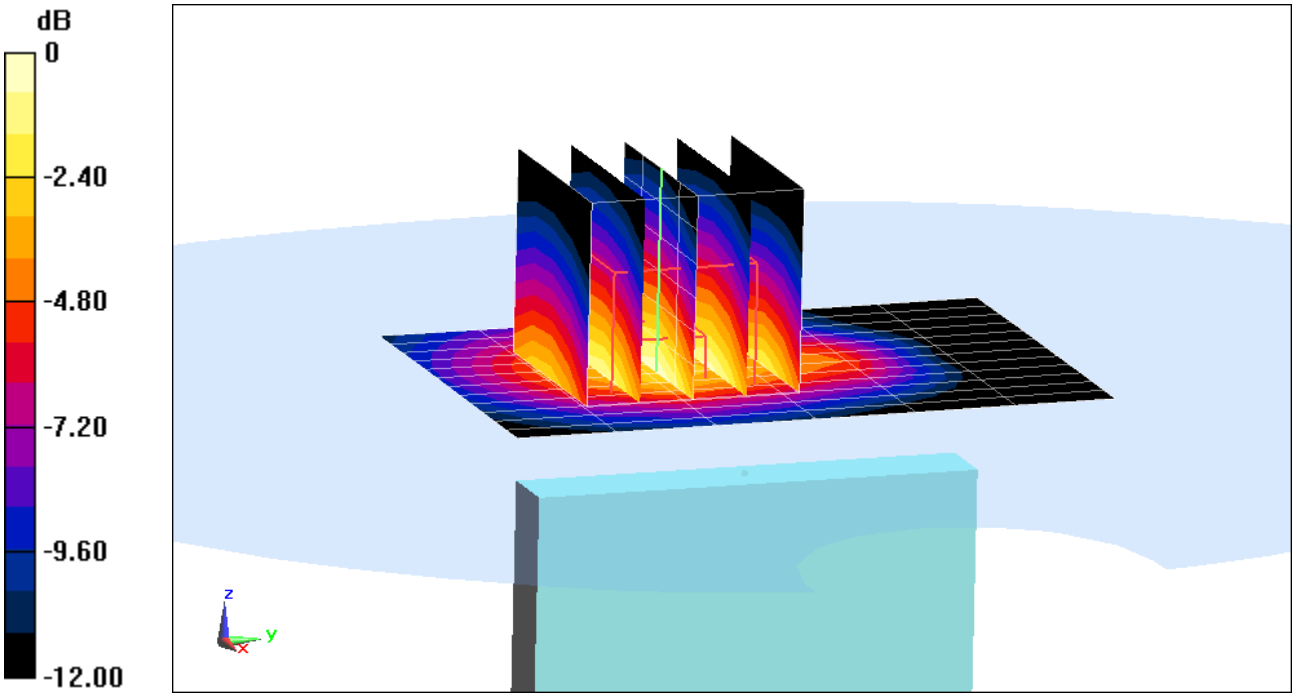
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.527 mho/m; ε_r = 53.07; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Body SAR, Bottom Edge, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (13x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.529 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.6750 W/kg
SAR(1 g) = 0.421 mW/g; SAR(10 g) = 0.251 mW/g



0 dB = 0.460mW/g = -6.74 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE Max

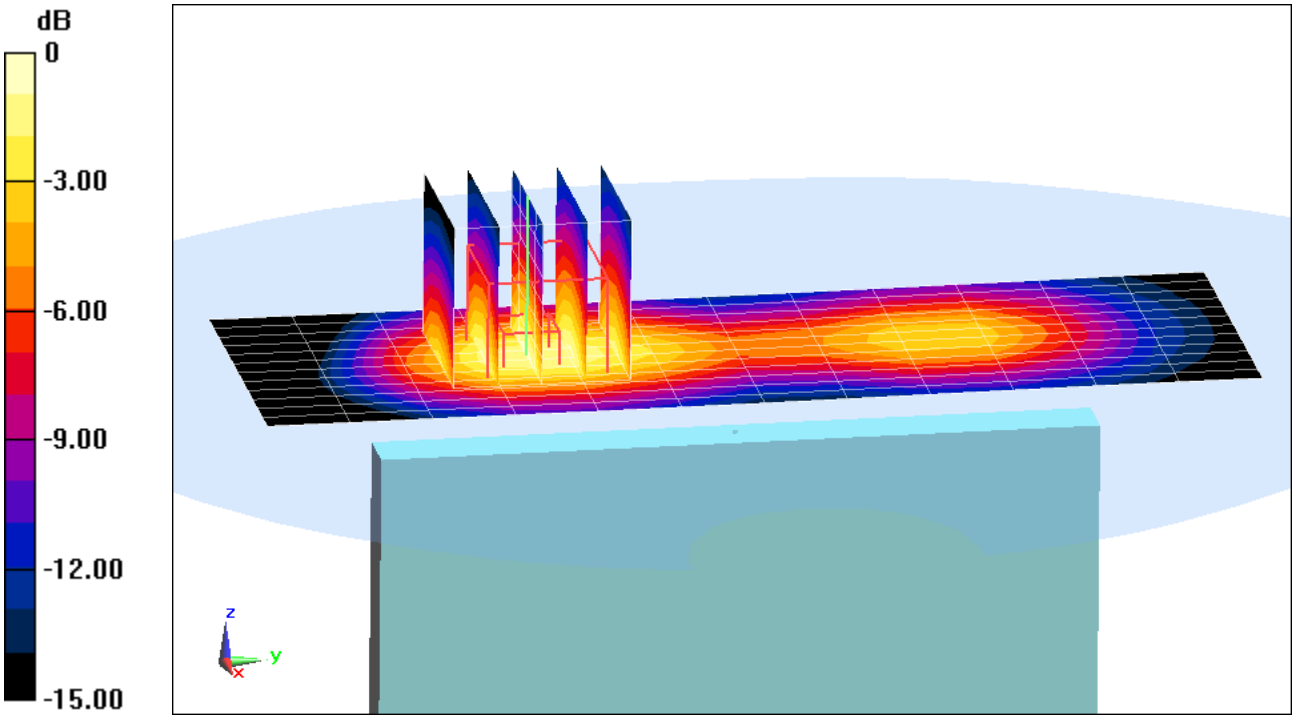
Communication System: LTE Band 2, Frequency: 1855 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.527 mho/m; ε_r = 53.07; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 2 (PCS), Body SAR, Left Edge, Low.ch
10 MHz Bandwidth, QPSK, 1 RB, RB Offset 49

Area Scan (13x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.030 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.0670 W/kg
SAR(1 g) = 0.656 mW/g; SAR(10 g) = 0.384 mW/g



0 dB = 0.720mW/g = -2.85 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

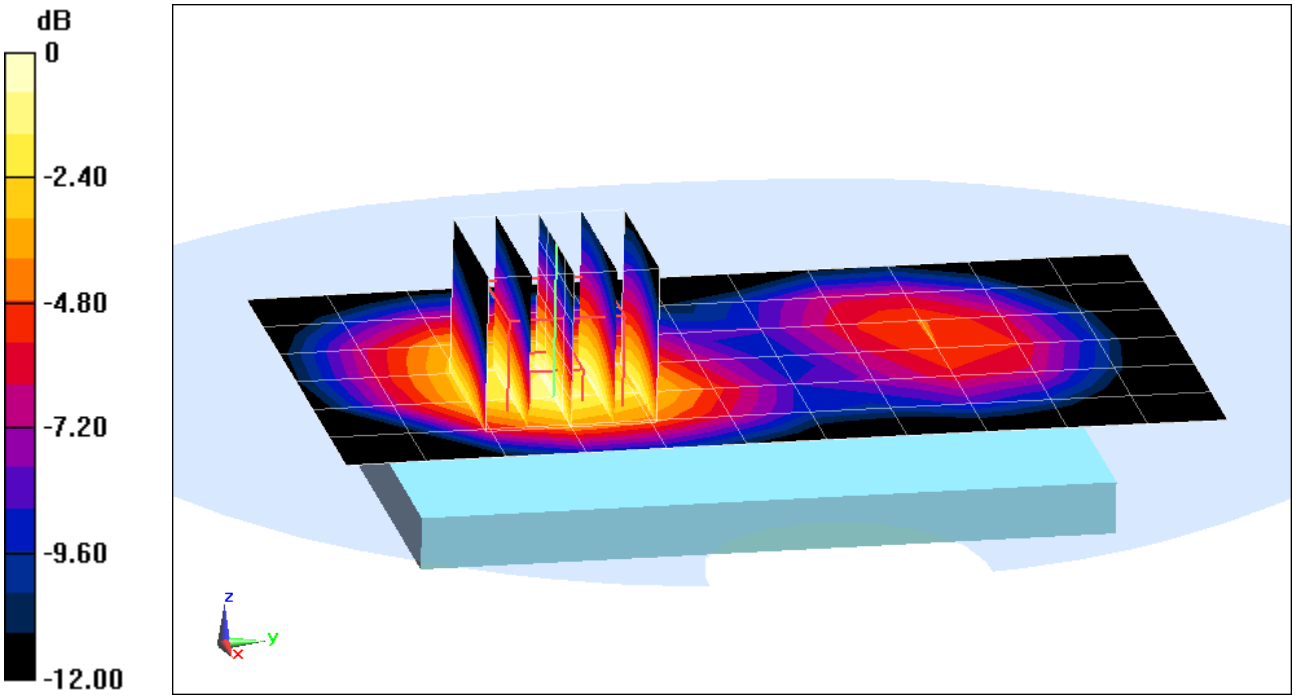
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.517 mho/m; ε_r = 52.297; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Body SAR, Back side, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.093 V/m; Power Drift = -0.0023 dB
Peak SAR (extrapolated) = 1.1520 W/kg
SAR(1 g) = 0.773 mW/g; SAR(10 g) = 0.494 mW/g



0 dB = 0.820mW/g = -1.72 dB mW/g

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DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

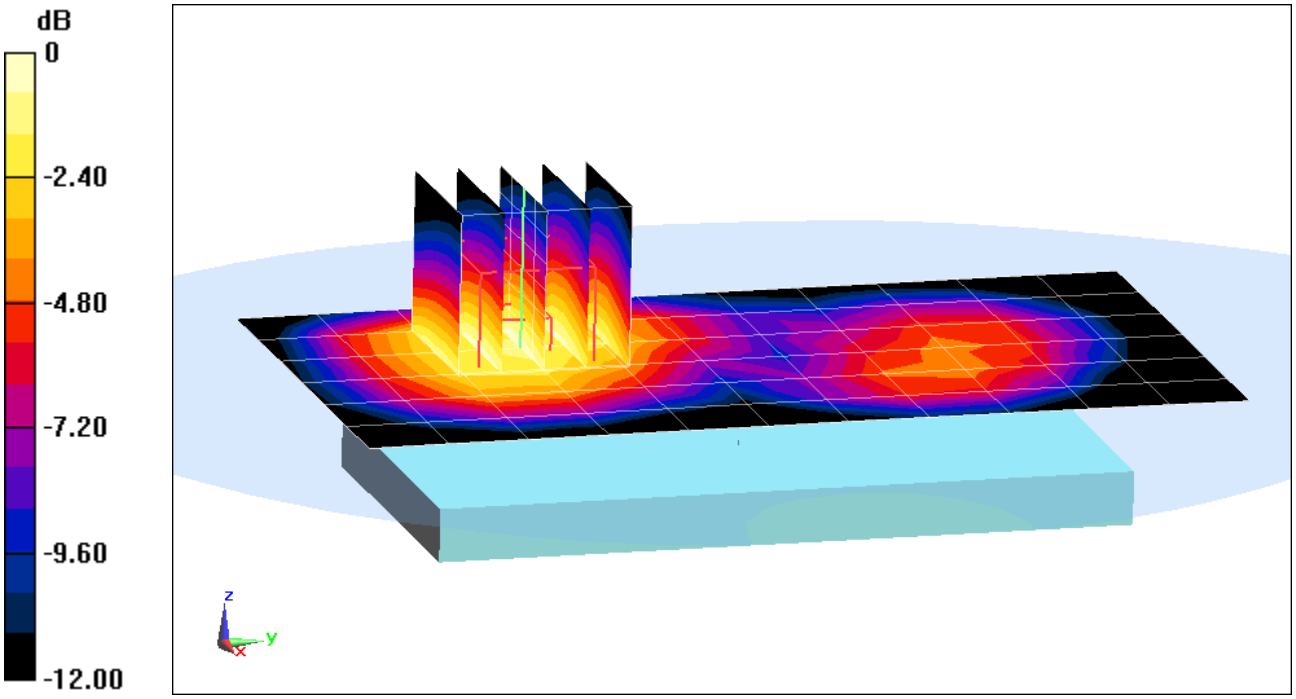
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.517 mho/m; ε_r = 52.297; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Body SAR, Front side, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.278 V/m; Power Drift = -0.00047 dB
Peak SAR (extrapolated) = 1.0190 W/kg
SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.435 mW/g



0 dB = 0.720mW/g = -2.85 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

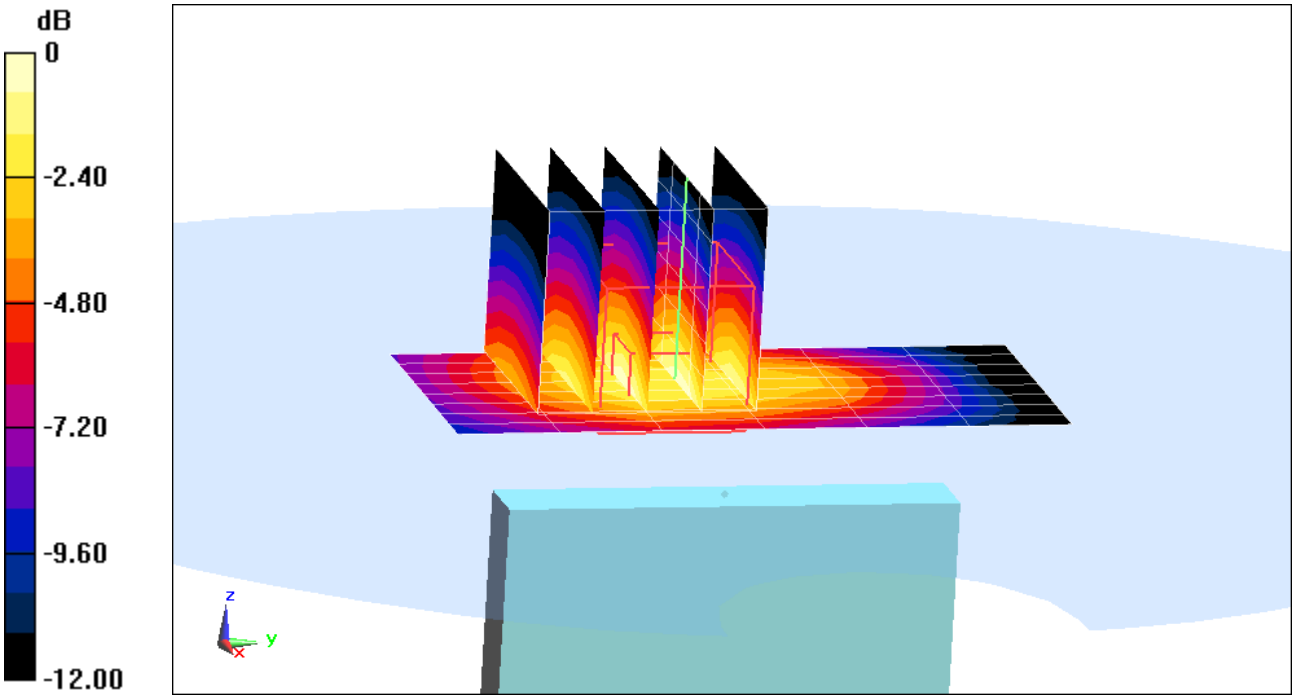
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
$f = 1882.5$ MHz; $\sigma = 1.517$ mho/m; $\varepsilon_r = 52.297$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Body SAR, Bottom Edge, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (9x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.205 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.4370 W/kg
SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.165 mW/g



0 dB = 0.290mW/g = -10.75 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: LTE MAX

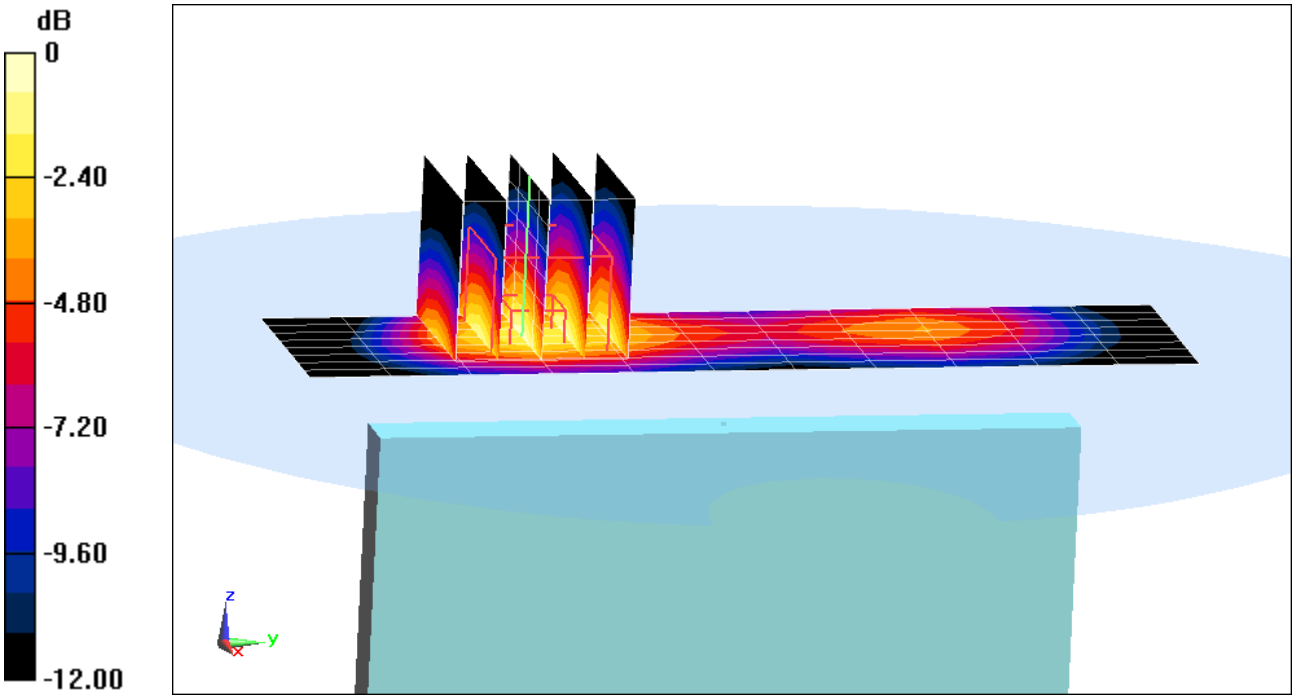
Communication System: LTE Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.517 mho/m; ε_r = 52.297; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25, Body SAR, Left Edge, Mid.ch
QPSK, 10 MHz Bandwidth, 1 RB, RB Offset 49

Area Scan (9x12x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.412 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.0800 W/kg
SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.393 mW/g



0 dB = 0.730mW/g = -2.73 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

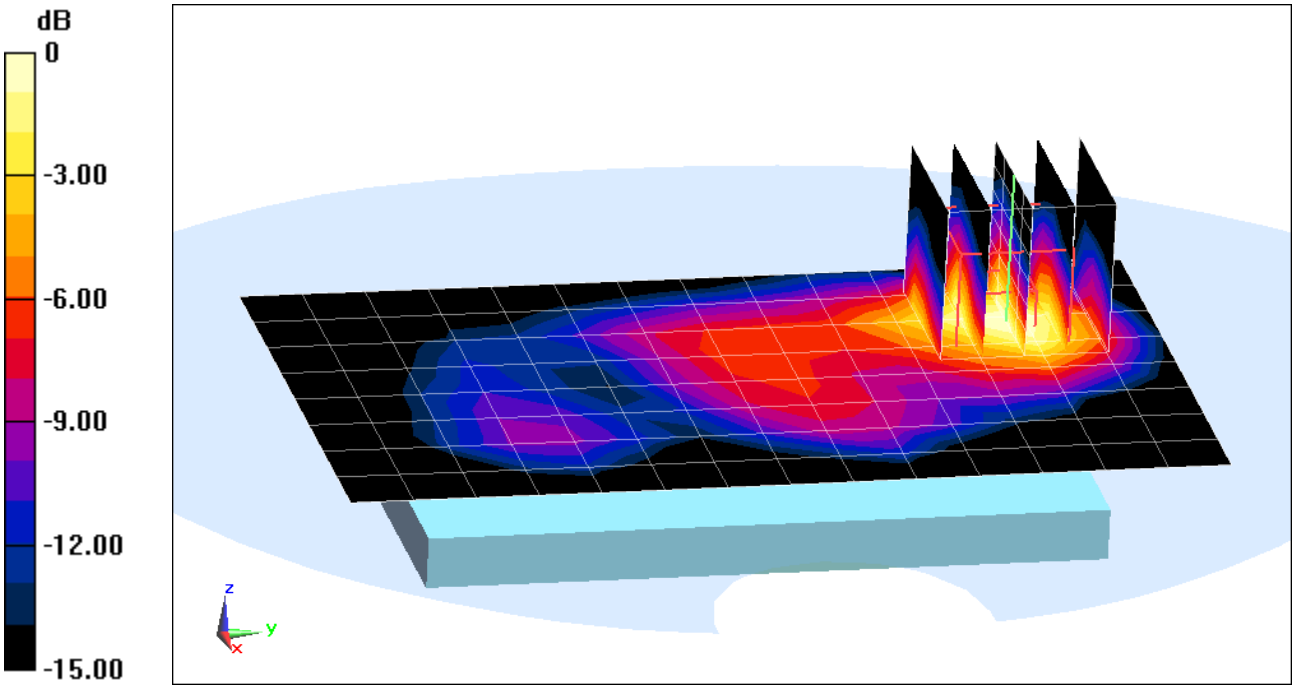
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.02 mho/m; ε_r = 50.312; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Body SAR, Ch 06, 1 Mbps, Back Side

Area Scan (9x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.270 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.1650 W/kg
SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.035 mW/g



0 dB = 0.090mW/g = -20.92 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

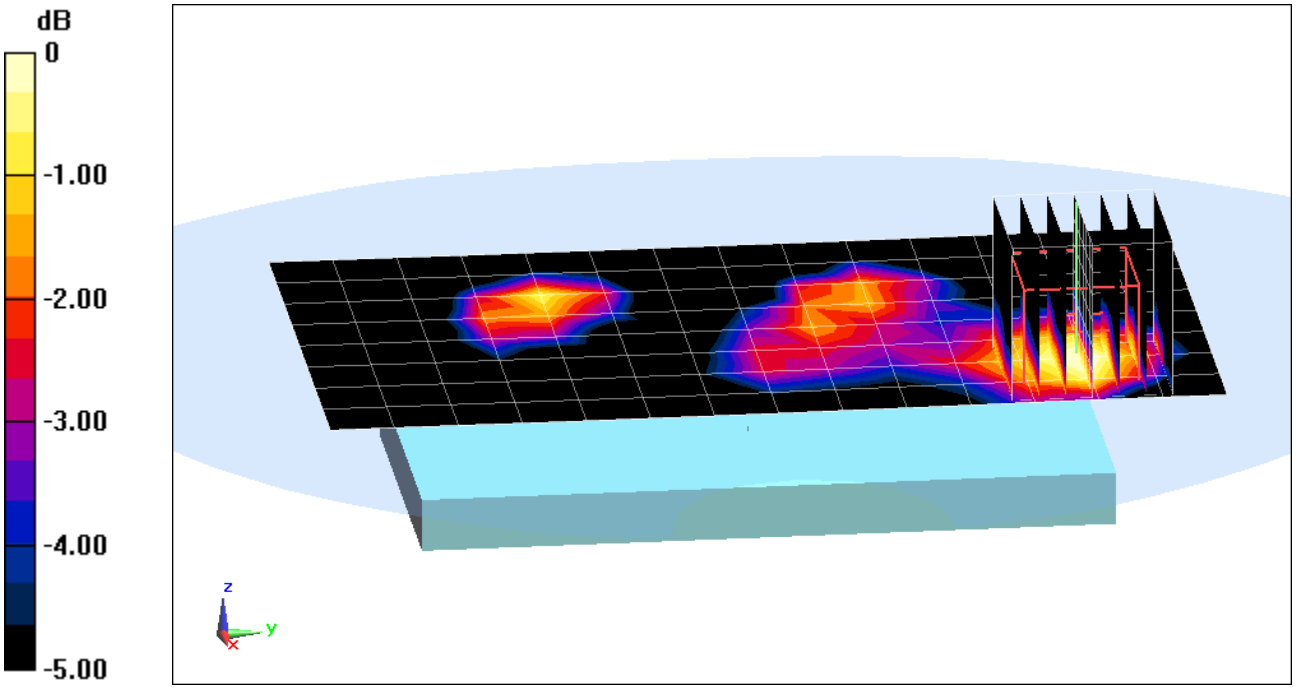
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.02 mho/m; ε_r = 50.312; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Body SAR, Ch 06, 1 Mbps, Front Side

Area Scan (9x15x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.131 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.0170 W/kg
SAR(1 g) = 0.00818 mW/g; SAR(10 g) = 0.00389 mW/g



0 dB = 0.010mW/g = -40.00 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

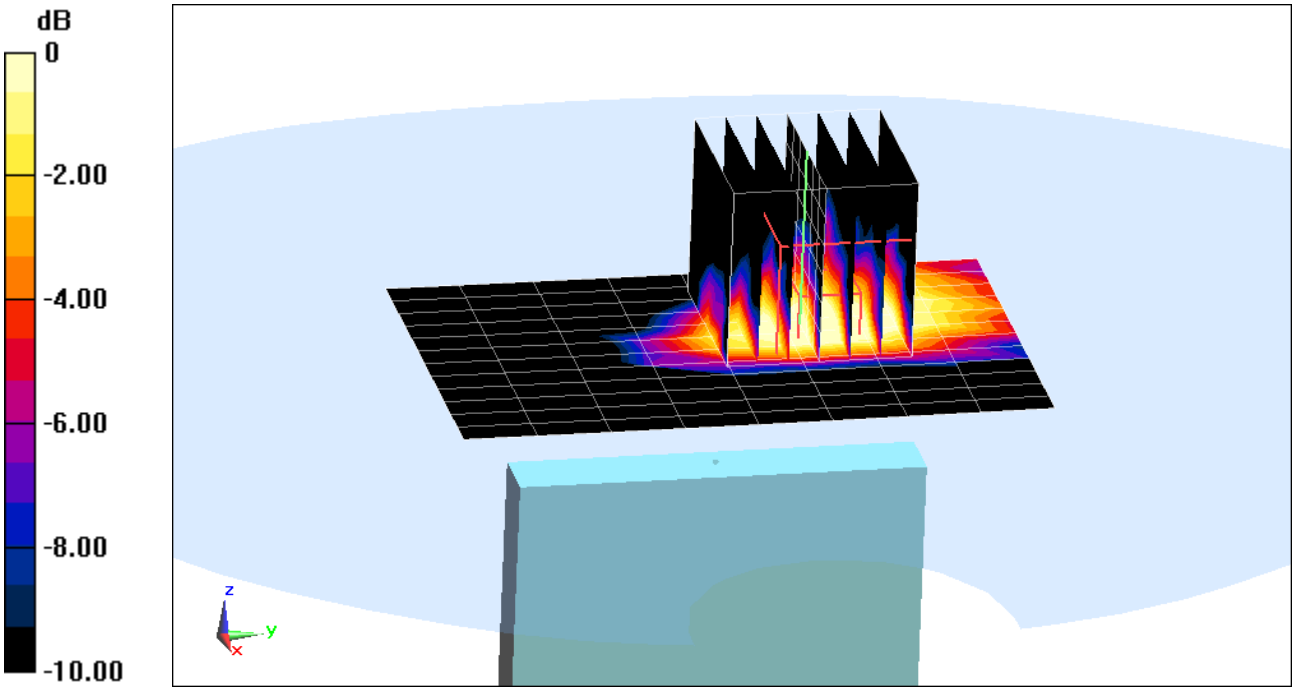
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.02 mho/m; ε_r = 50.312; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Body SAR, Ch 06, 1 Mbps, Top Edge

Area Scan (13x9x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.410 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 0.0250 W/kg
SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00488 mW/g



0 dB = 0.010mW/g = -40.00 dB mW/g

DUT: ZNFMS870; Type: Portable Handset; Serial: BT/WLAN

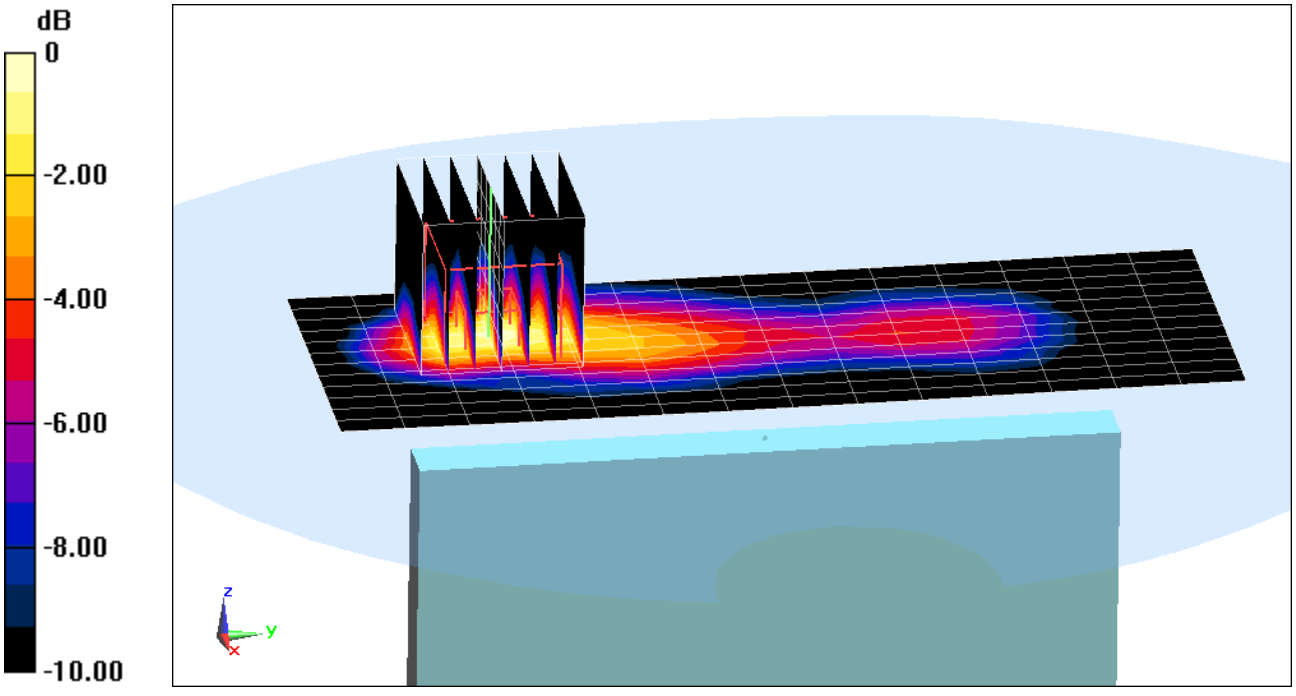
Communication System: IEEE 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2437 MHz; σ = 2.02 mho/m; ε_r = 50.312; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b, Body SAR, Ch 06, 1 Mbps, Right Edge

Area Scan (13x15x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.112 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.0640 W/kg
SAR(1 g) = 0.030 mW/g; SAR(10 g) = 0.014 mW/g



0 dB = 0.040mW/g = -27.96 dB mW/g

APPENDIX B: SYSTEM VERIFICATION

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PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 835 MHz; Type: D835V2; Serial: 4d047

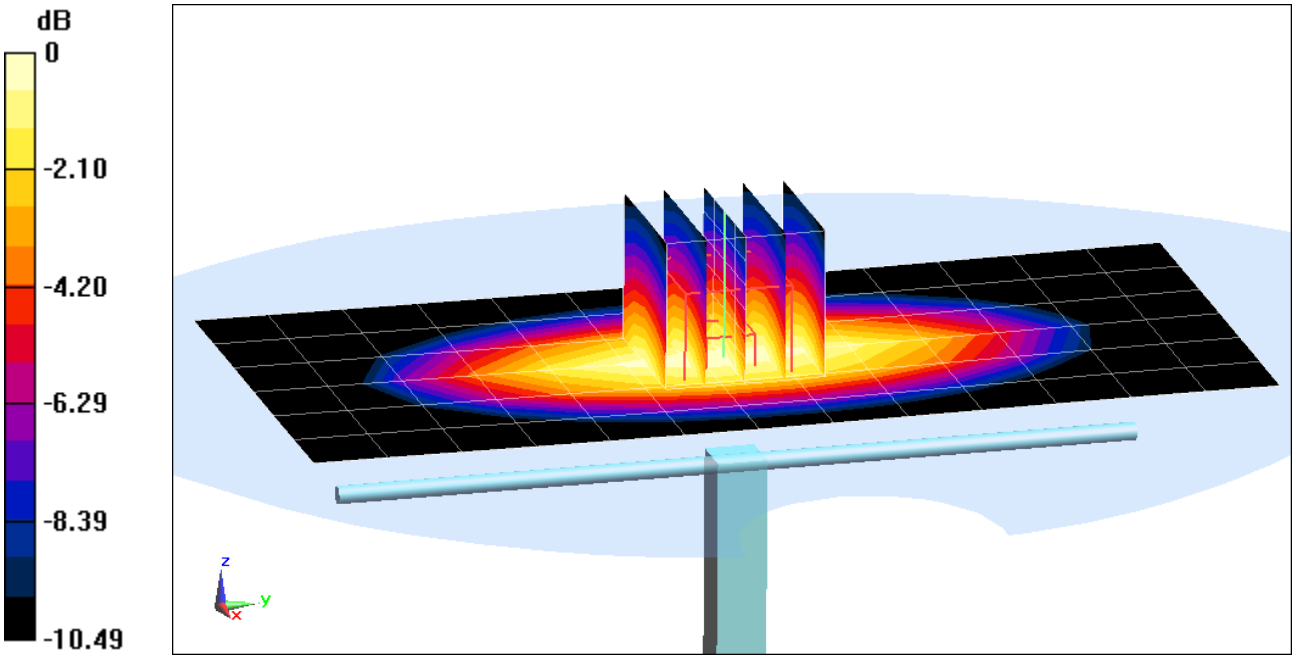
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.903 mho/m; ε_r = 41.51; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

835 MHz System Verification

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 1.3660 W/kg
SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.608 mW/g
Deviation = -1.49 %



0 dB = 1.000mW/g = 0 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 835 MHz; Type: D835V2; Serial: 4d047

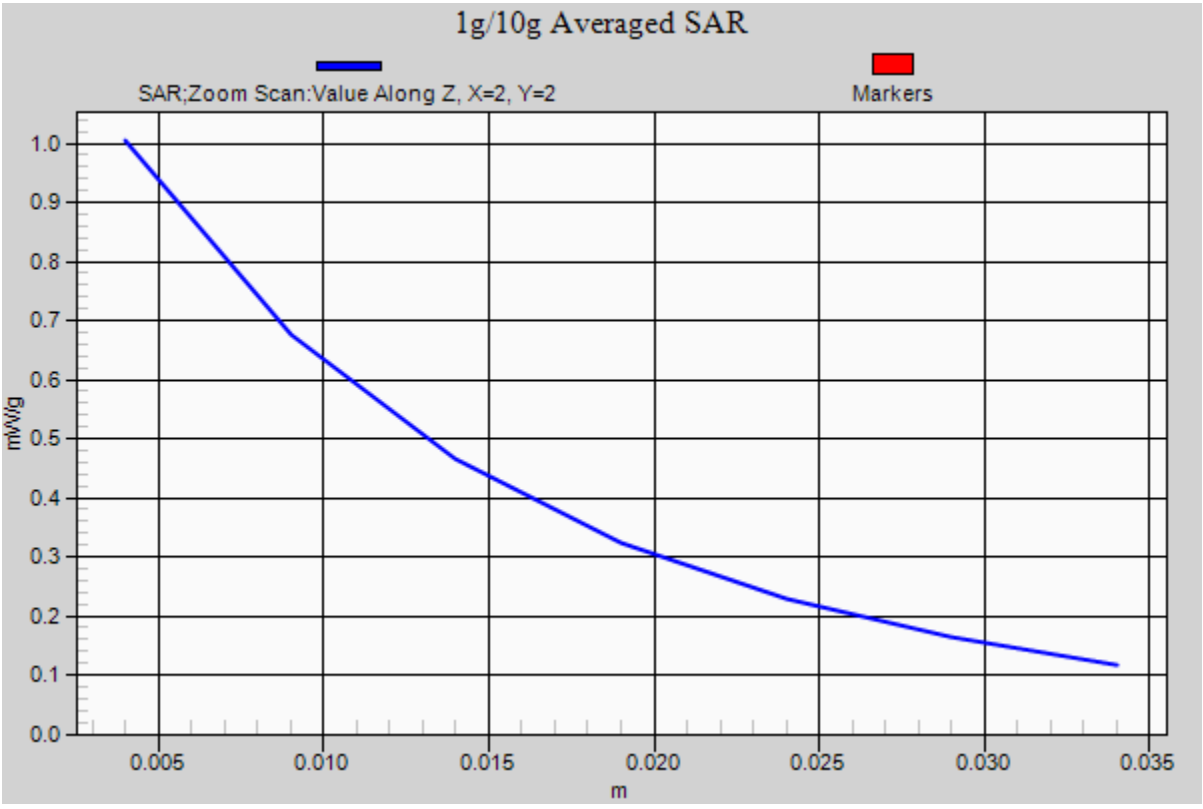
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.903 mho/m; ε_r = 41.51; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2012; Ambient Temp: 23.3°C; Tissue Temp: 22.9°C

Probe: ES3DV3 - SN3213; ConvF(6.07, 6.07, 6.07); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

835 MHz System Verification

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 1.3660 W/kg
SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.608 mW/g
Deviation = -1.49 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

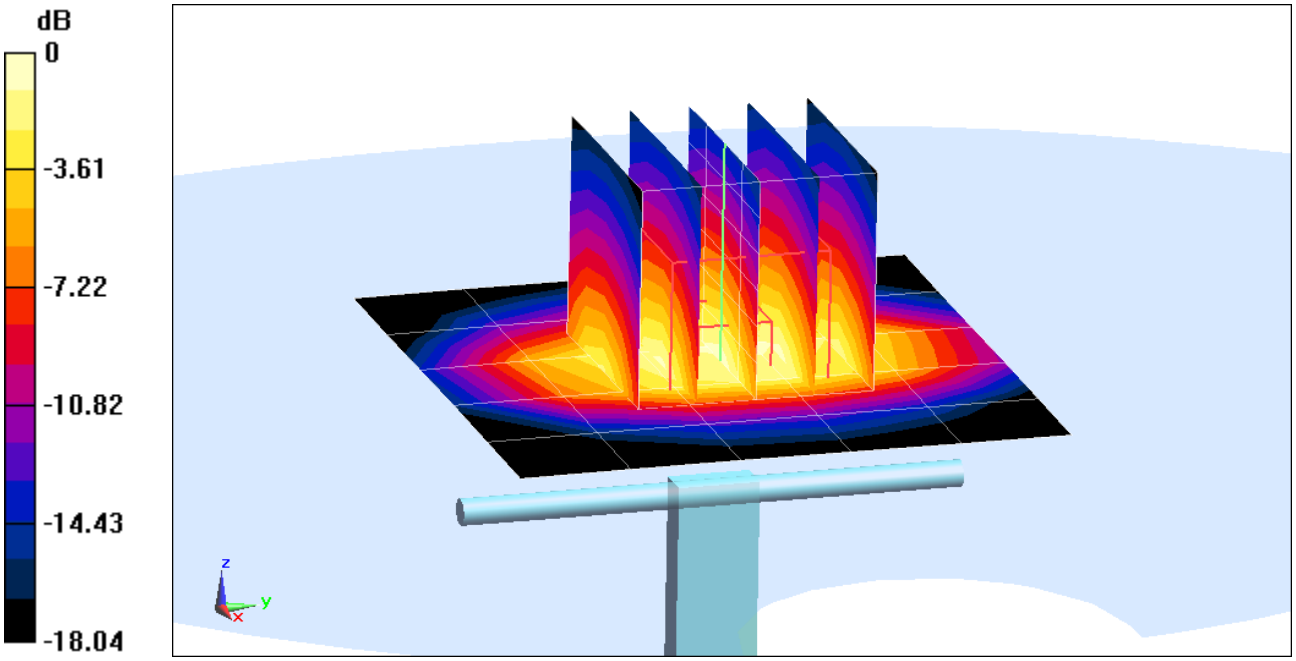
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.391 mho/m; ε_r = 38.56; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.8880 W/kg
SAR(1 g) = 3.69 mW/g; SAR(10 g) = 1.9 mW/g
Deviation = 1.37 %



0 dB = 4.130mW/g = 12.32 dB mW/g

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

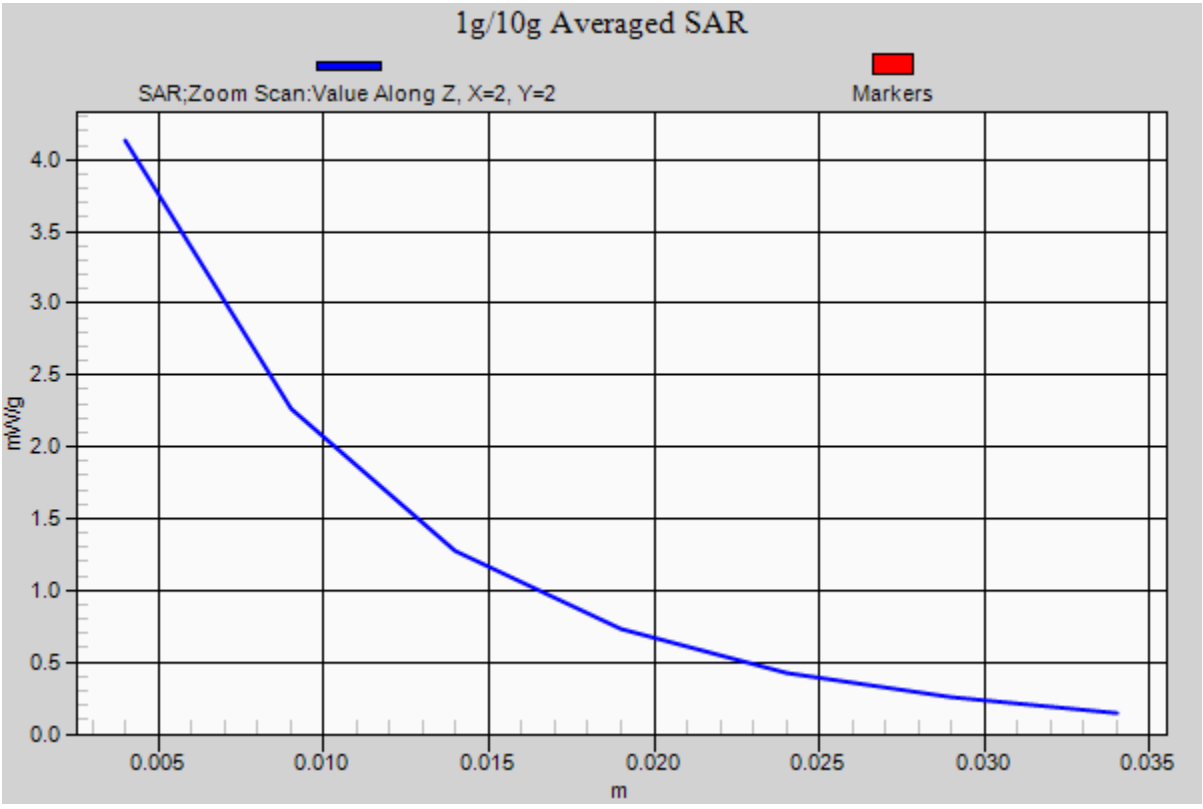
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.391 mho/m; ε_r = 38.56; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.2°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.8880 W/kg
SAR(1 g) = 3.69 mW/g; SAR(10 g) = 1.9 mW/g
Deviation = 1.37 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

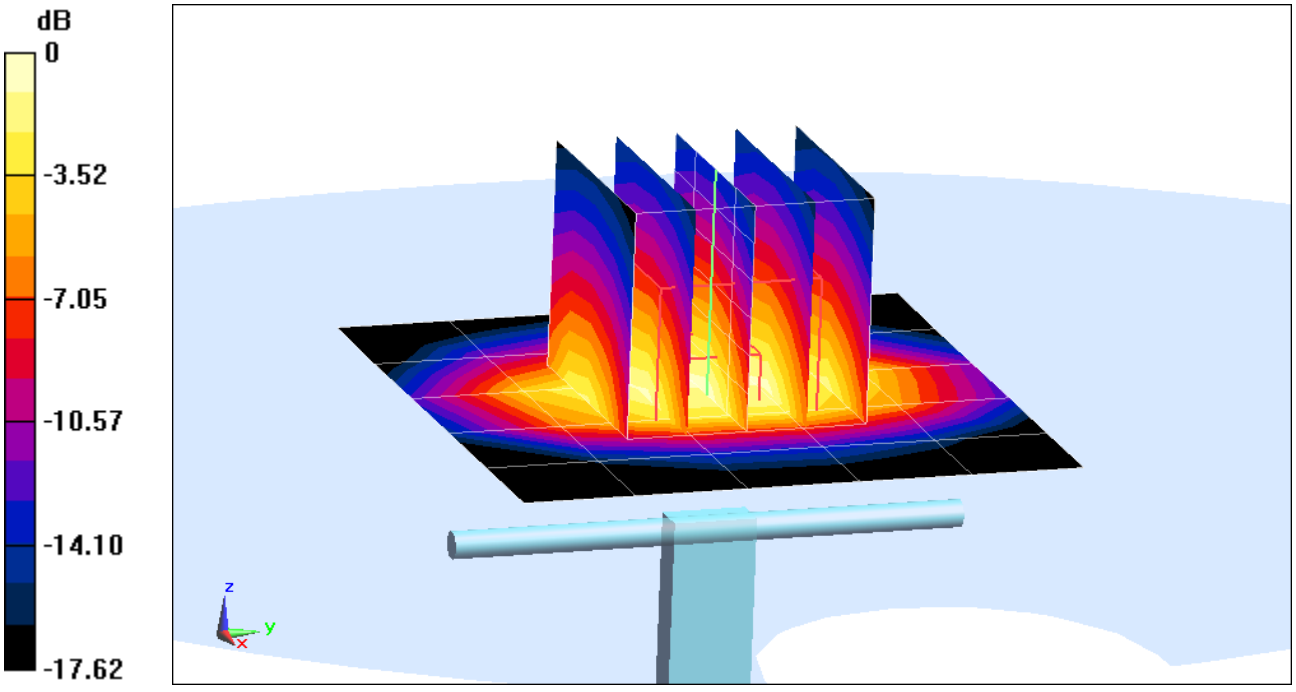
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.386 mho/m; ε_r = 38.75; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.9310 W/kg
SAR(1 g) = 3.76 mW/g; SAR(10 g) = 1.94 mW/g
Deviation = 3.30 %



0 dB = 4.160mW/g = 12.38 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

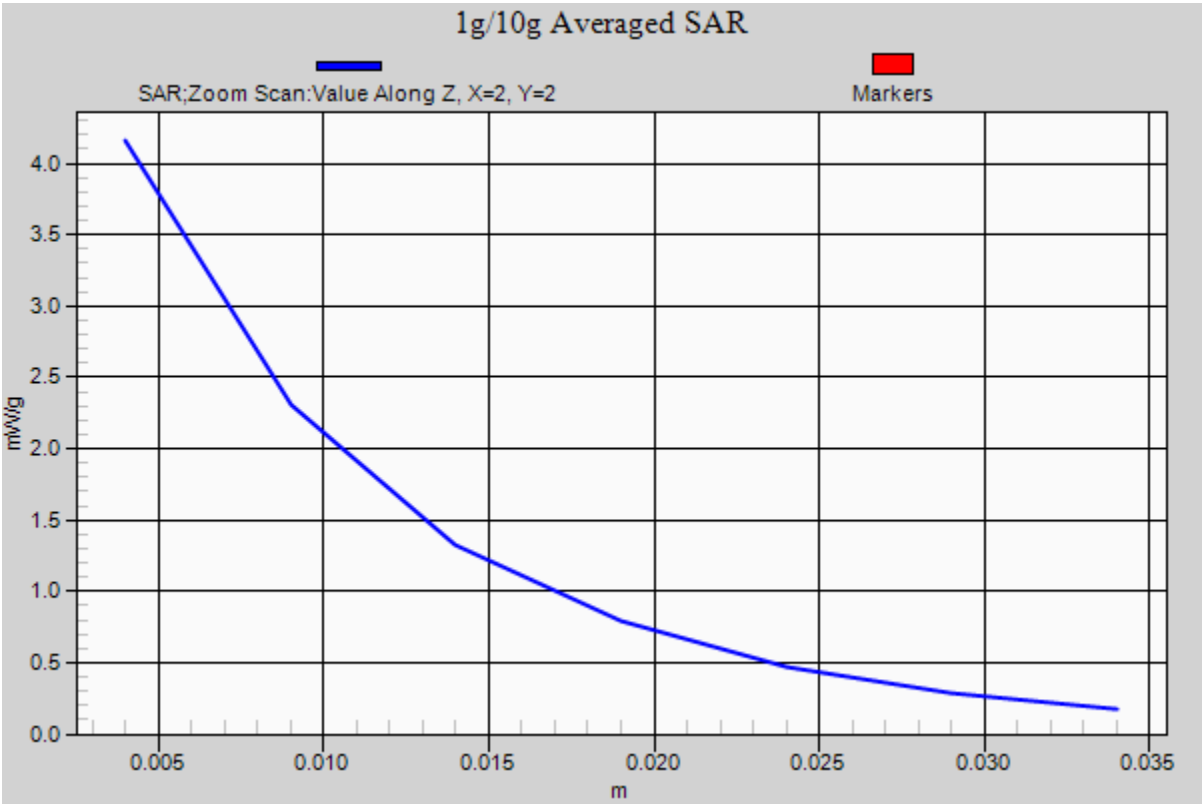
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.386 mho/m; ε_r = 38.75; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(5.26, 5.26, 5.26); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM with CRP; Type: SAM; Serial: TP1375
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.9310 W/kg
SAR(1 g) = 3.76 mW/g; SAR(10 g) = 1.94 mW/g
Deviation = 3.30 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

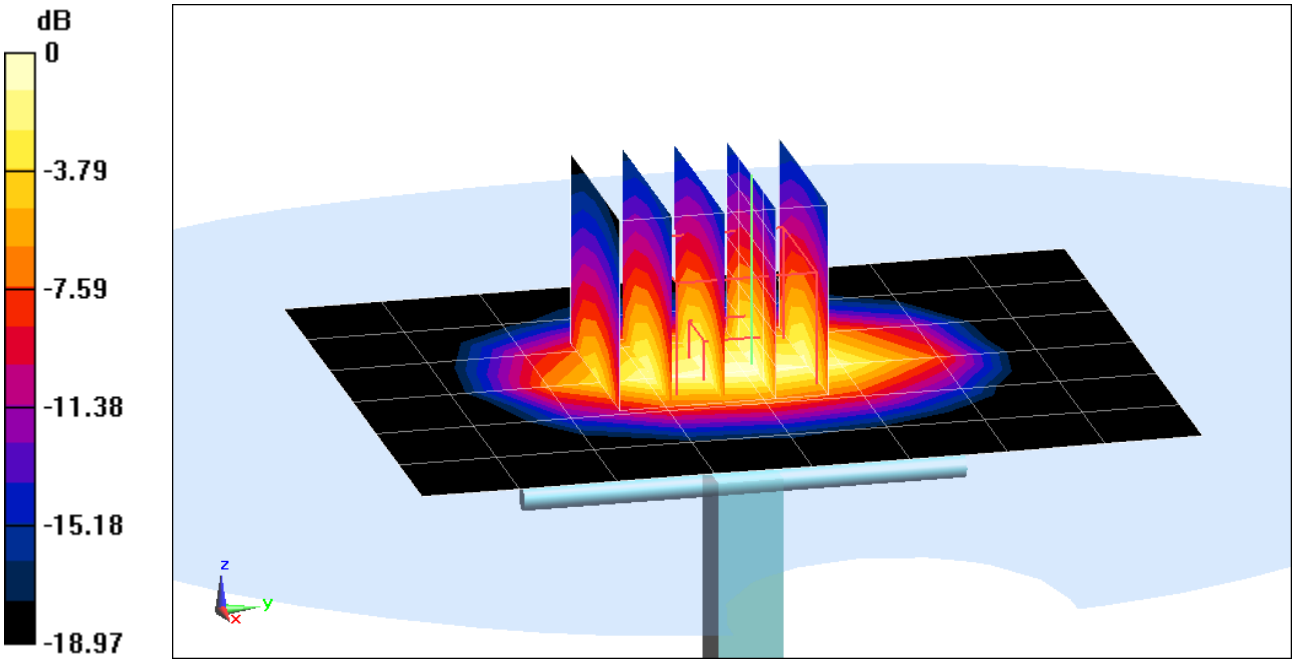
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.459 mho/m; ε_r = 40.943; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.9210 W/kg
SAR(1 g) = 4.2 mW/g; SAR(10 g) = 2.16 mW/g
Deviation = 6.87 %



0 dB = 4.670mW/g = 13.39 dB mW/g

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

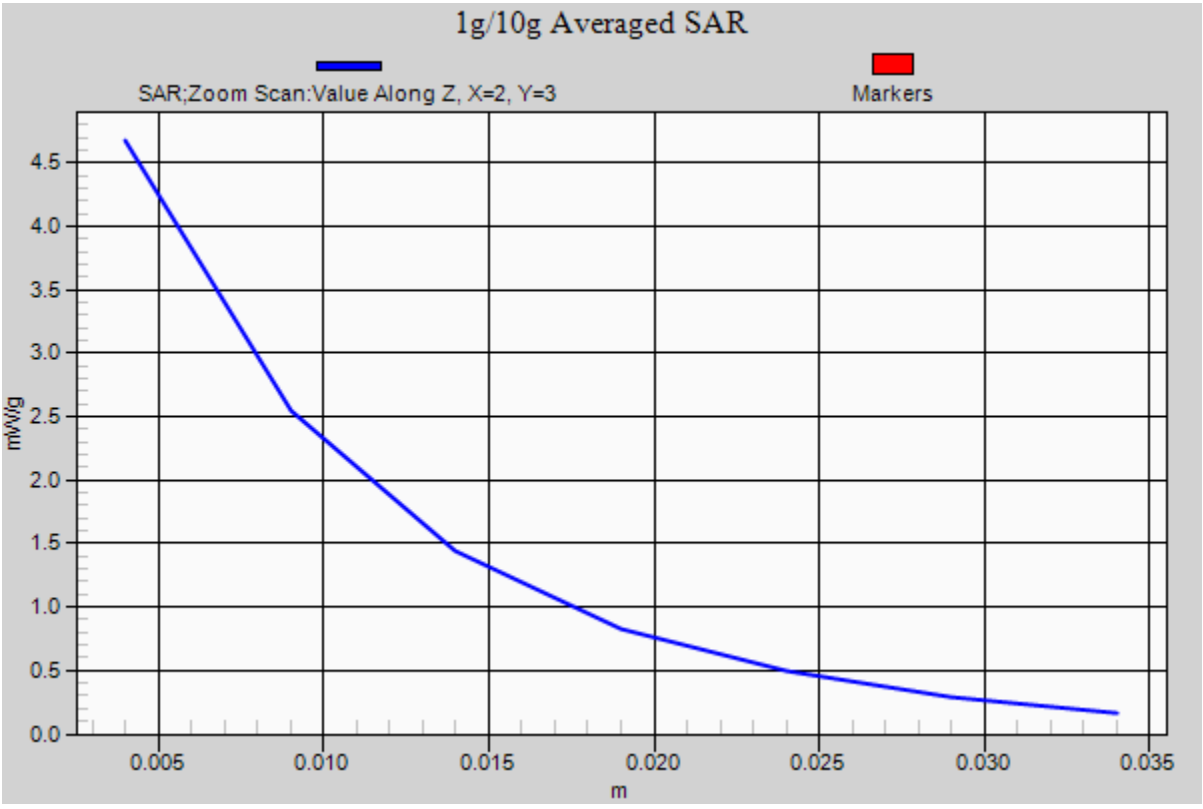
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.459 mho/m; ε_r = 40.943; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-11-2012; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3213; ConvF(5.02, 5.02, 5.02); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Right; Type: QD000P40CD; Serial: 1686
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.9210 W/kg
SAR(1 g) = 4.2 mW/g; SAR(10 g) = 2.16 mW/g
Deviation = 6.87 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

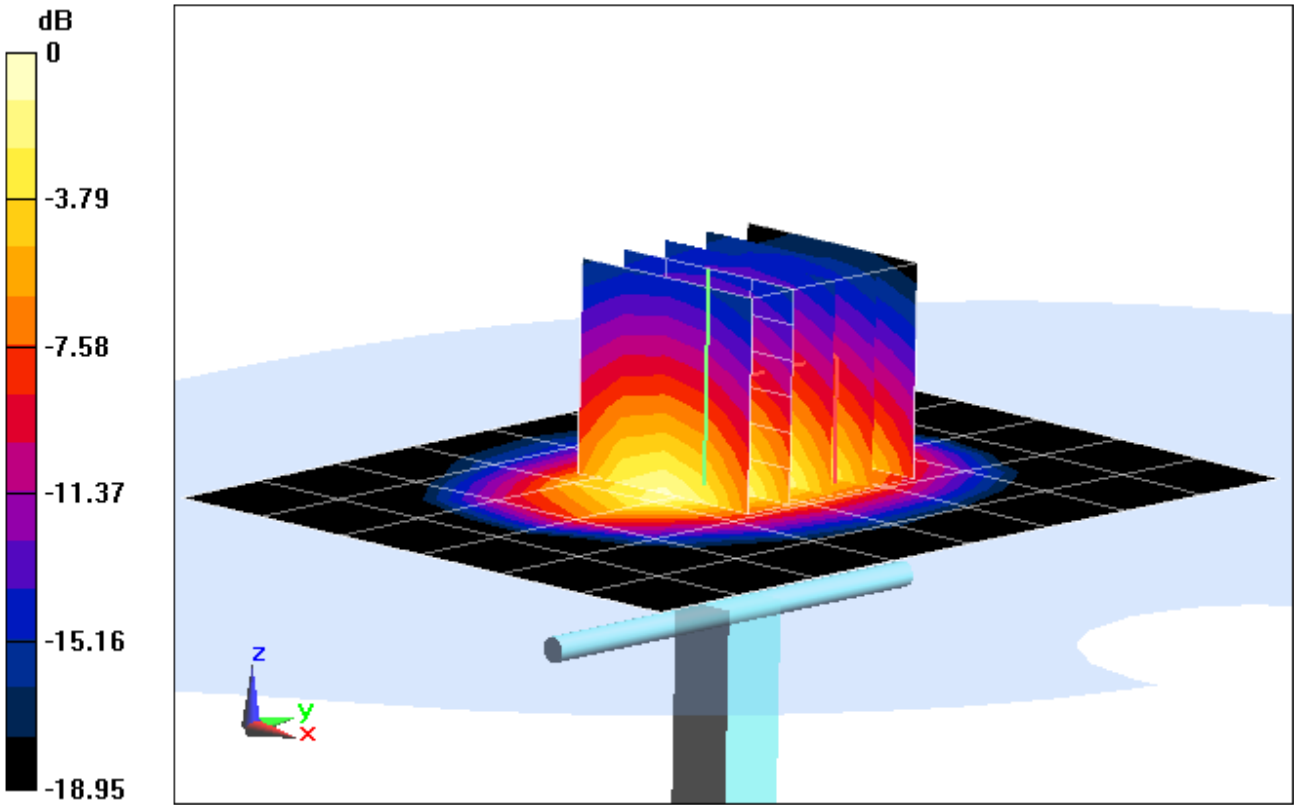
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.437 mho/m; ε_r = 40.323; ρ = 1000 kg/m^3
Phantom section: Flat Section: Space: 1.0 cm

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.931 mW/g
SAR(1 g) = 4.23 mW/g; SAR(10 g) = 2.19 mW/g
Deviation = 7.63 %



0 dB = 4.68 mW/g = 13.40 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

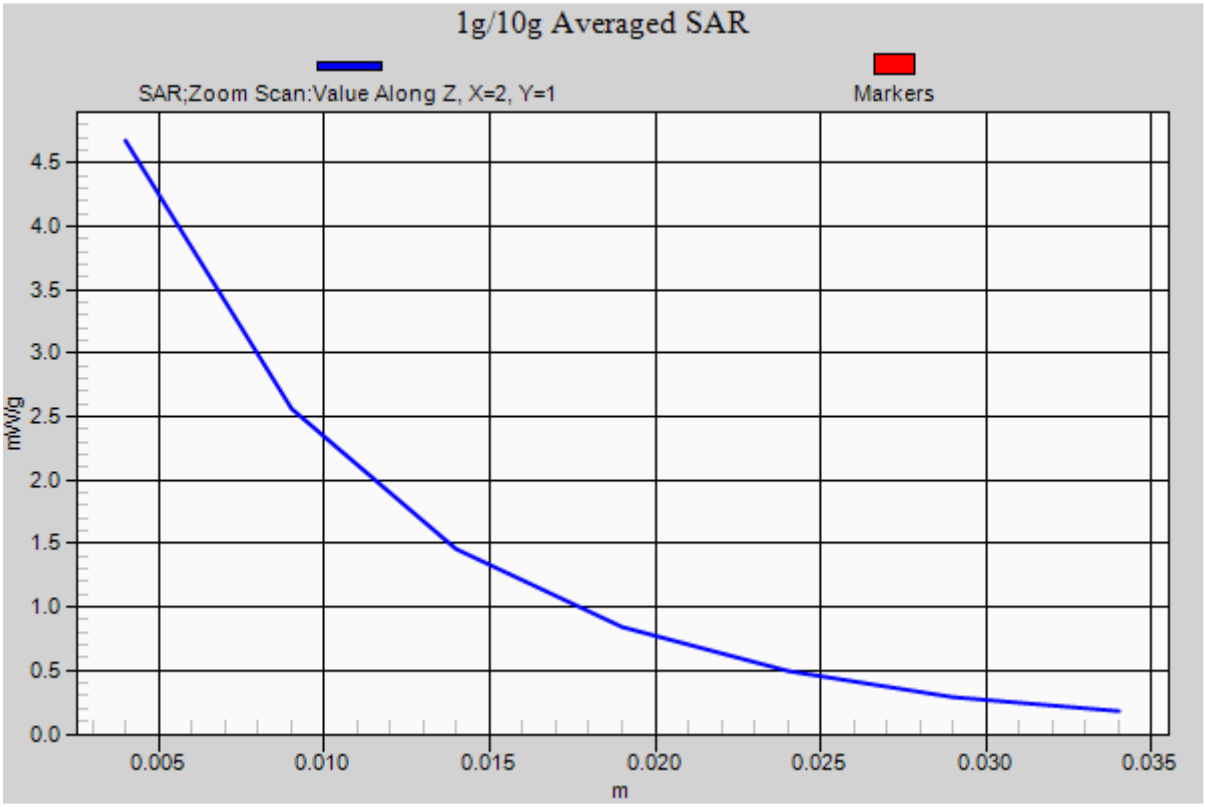
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.437 mho/m; ε_r = 40.323; ρ = 1000 kg/m^3
Phantom section: Flat Section: Space: 1.0 cm

Test Date: 09-17-2012; Ambient Temp: 20.9°C; Tissue Temp: 20.5°C

Probe: ES3DV3 - SN3263; ConvF(5.09, 5.09, 5.09); Calibrated: 5/18/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM V5.0 Right; Type: QD000P40CD; Serial: 1647
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.931 mW/g
SAR(1 g) = 4.23 mW/g; SAR(10 g) = 2.19 mW/g
Deviation = 7.63 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 882

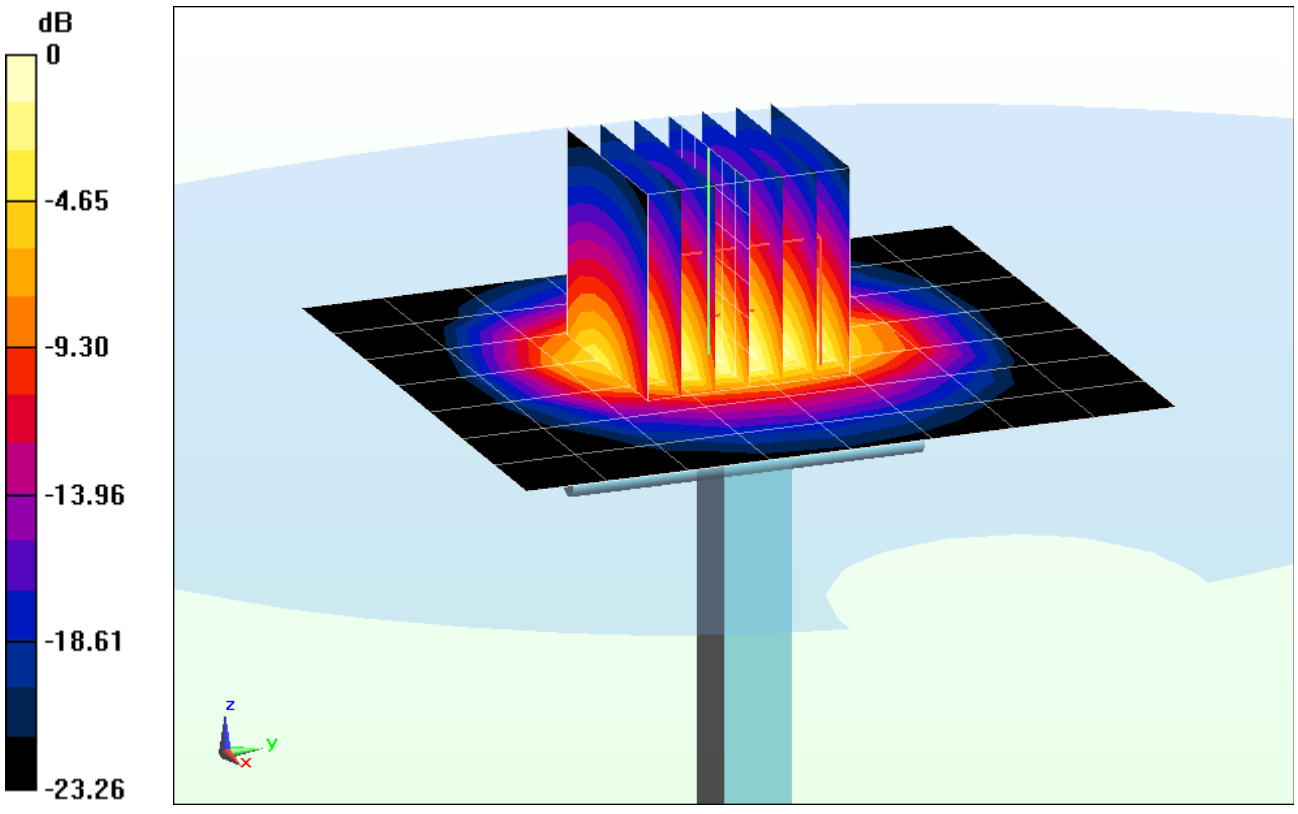
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used:
f = 2450 MHz; σ = 1.883 mho/m; ε_r = 38.77; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 11.973 mW/g
SAR(1 g) = 5.59 mW/g; SAR(10 g) = 2.55 mW/g
Deviation = 4.49%



0 dB = 7.28 mW/g = 17.24 dB mW/g

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 882

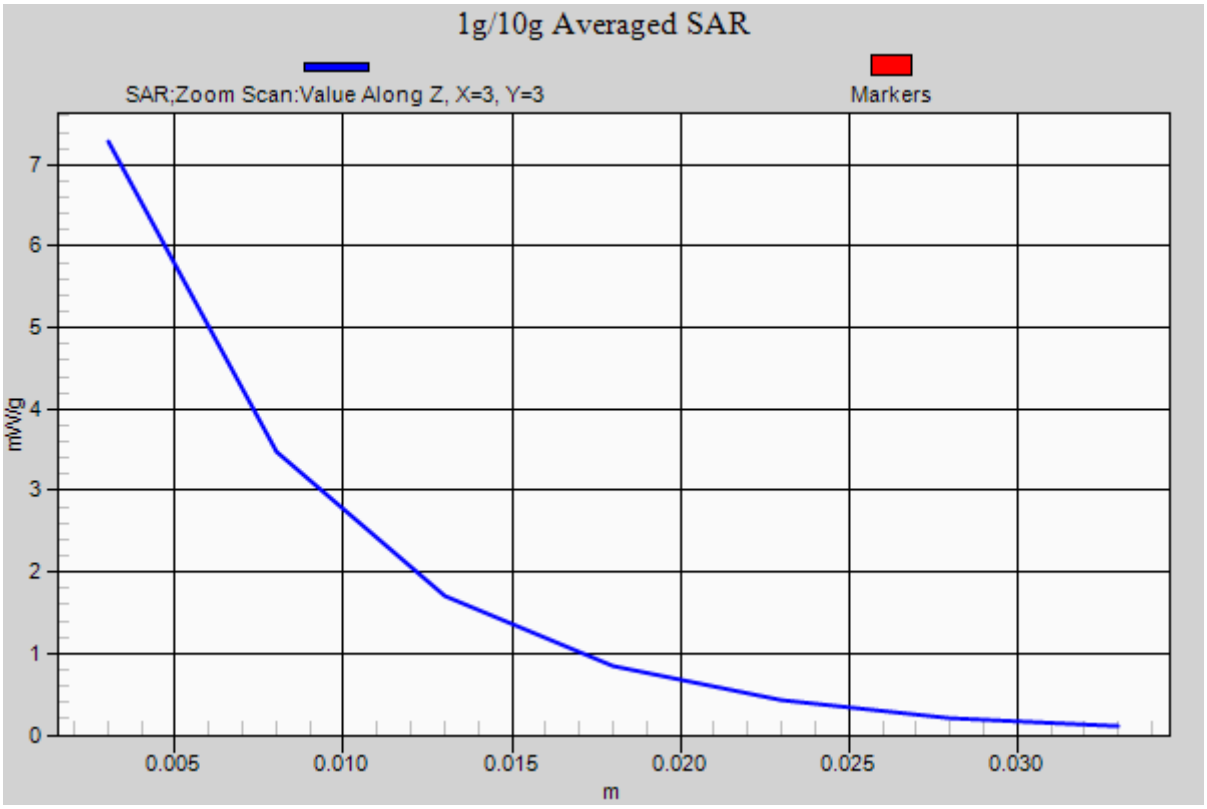
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used:
f = 2450 MHz; σ = 1.883 mho/m; ε_r = 38.77; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-19-2012; Ambient Temp: 24.0°C; Tissue Temp: 22.6°C

Probe: ES3DV3 - SN3213; ConvF(4.43, 4.43, 4.43); Calibrated: 4/24/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 11.973 mW/g
SAR(1 g) = 5.59 mW/g; SAR(10 g) = 2.55 mW/g
Deviation = 4.49%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d119

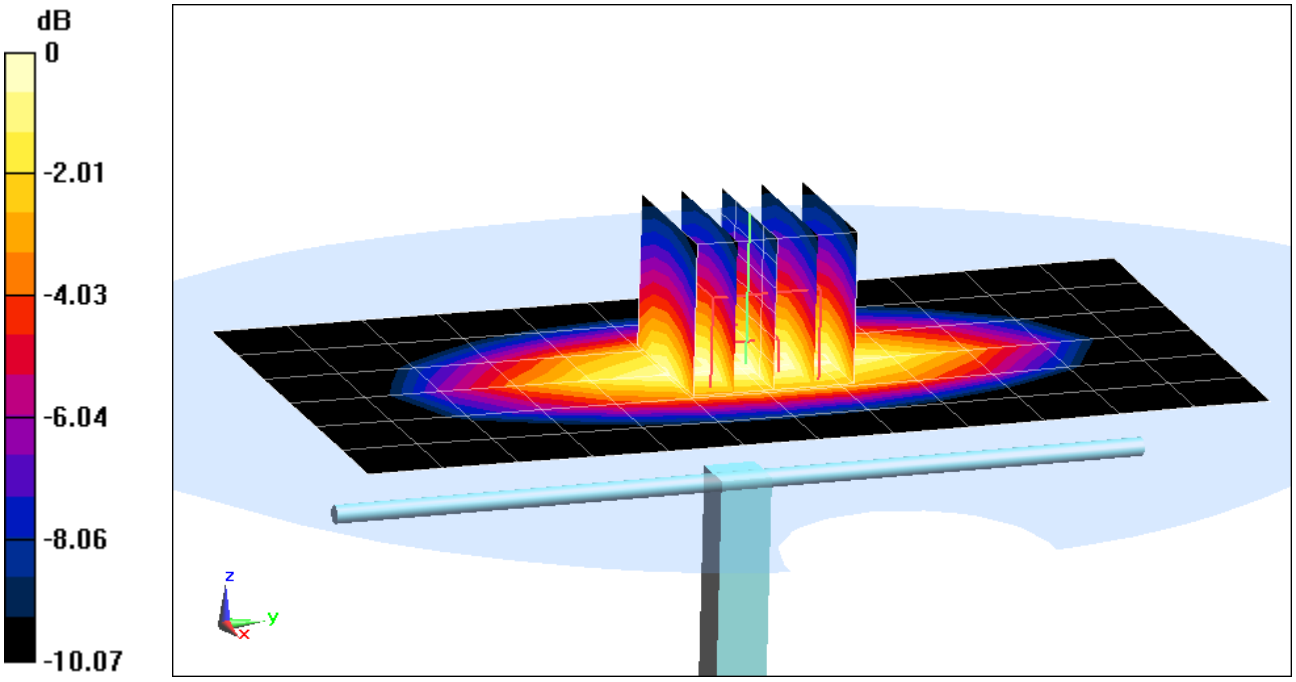
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.952 mho/m; ε_r = 53.12; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

835MHz System Verification

Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 1.4030 W/kg
SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.645 mW/g
Deviation = 1.67 %



0 dB = 1.050mW/g = 0.42 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d119

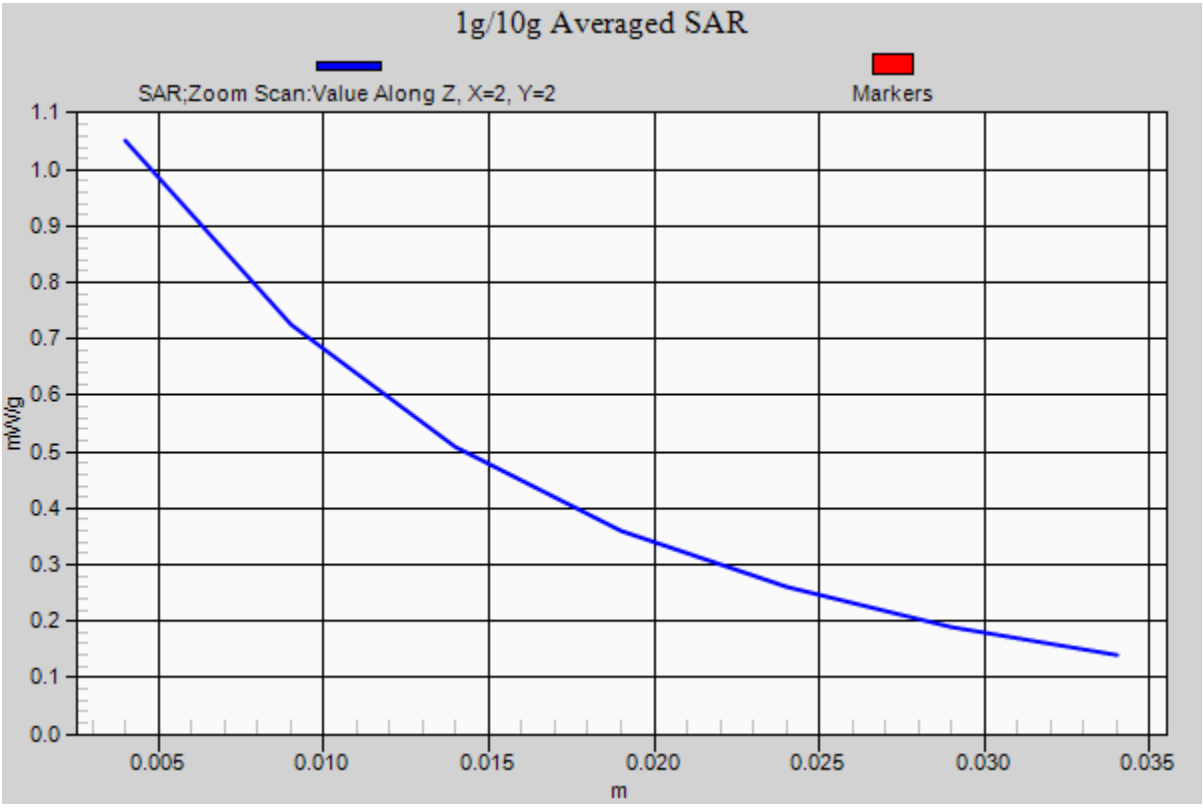
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.952 mho/m; ε_r = 53.12; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09-10-2012; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: ES3DV2 - SN3022; ConvF(6.02, 6.02, 6.02); Calibrated: 8/28/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 8/24/2012
Phantom: SAM Main; Type: SAM 4.0; Serial: TP-1406
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

835MHz System Verification

Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 1.4030 W/kg
SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.645 mW/g
Deviation = 1.67 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

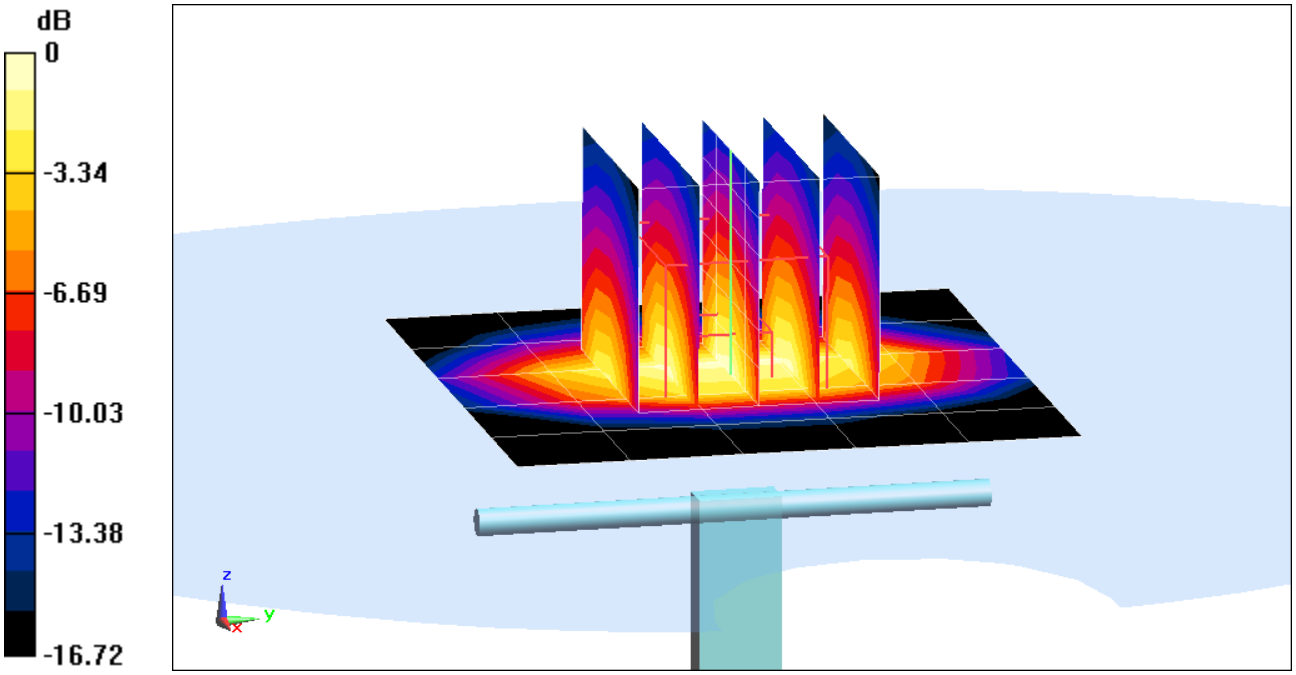
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.486 mho/m; ε_r = 55.49; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.0320 W/kg
SAR(1 g) = 3.9 mW/g; SAR(10 g) = 2.03 mW/g
Deviation = 4.28 %



0 dB = 4.230mW/g = 12.53 dB mW/g

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

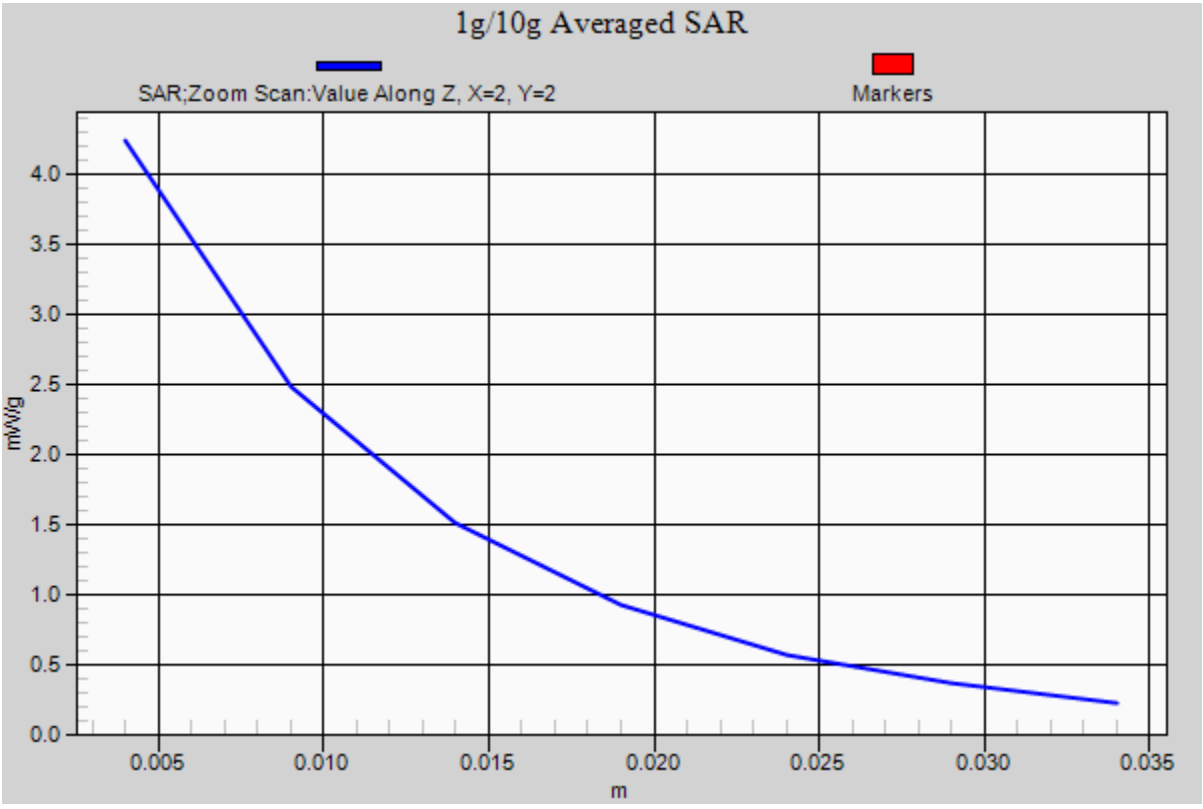
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.486 mho/m; ε_r = 55.49; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-10-2012; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.0320 W/kg
SAR(1 g) = 3.9 mW/g; SAR(10 g) = 2.03 mW/g
Deviation = 4.28 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

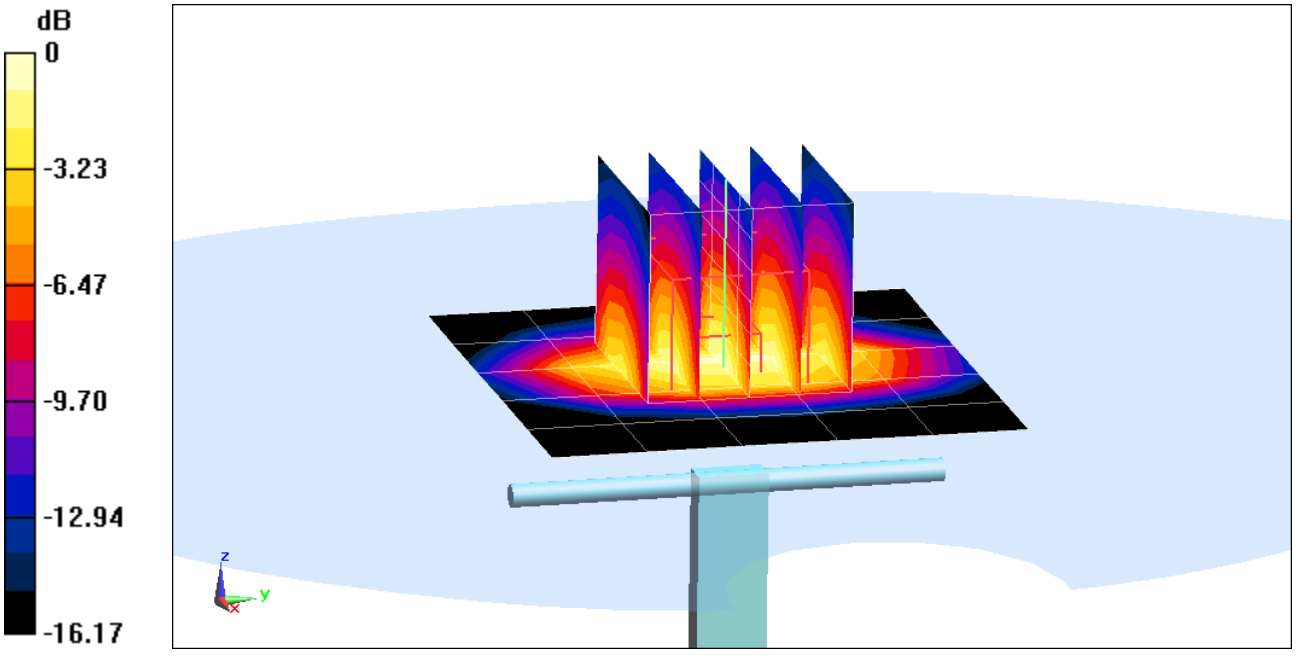
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.437 mho/m; ε_r = 54.44; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.6250 W/kg
SAR(1 g) = 3.75 mW/g; SAR(10 g) = 1.99 mW/g
Deviation = 0.27 %



0 dB = 4.210mW/g = 12.49 dB mW/g

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

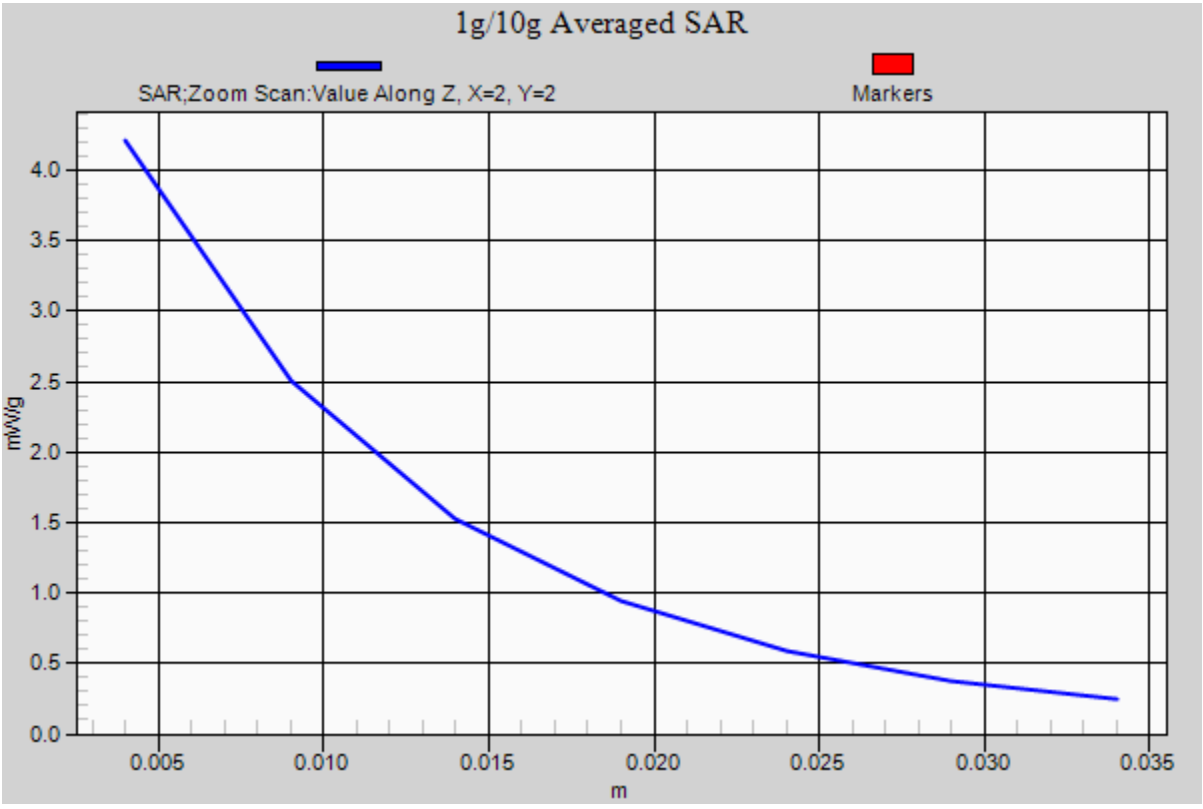
Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.437 mho/m; ε_r = 54.44; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-13-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.0°C

Probe: ES3DV3 - SN3209; ConvF(4.83, 4.83, 4.83); Calibrated: 3/16/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM Sub Dasy B; Type: SAM 5.0; Serial: TP-1626
Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

1750 MHz System Verification

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 6.6250 W/kg
SAR(1 g) = 3.75 mW/g; SAR(10 g) = 1.99 mW/g
Deviation = 0.27 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

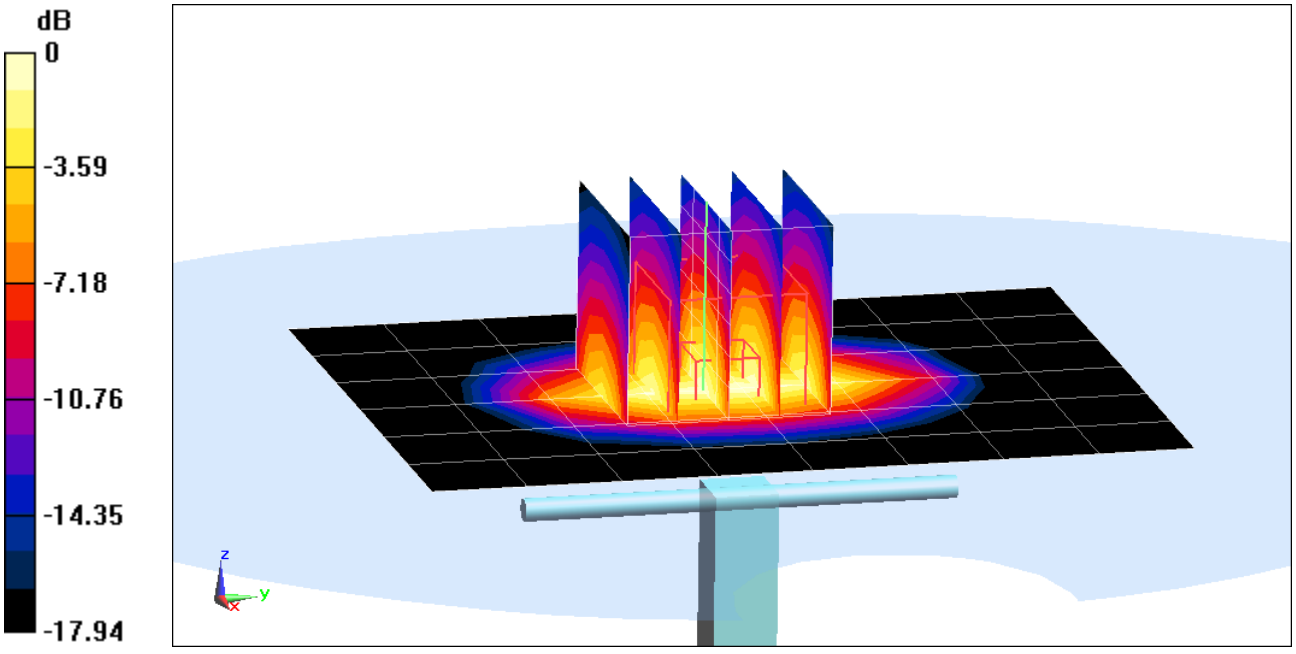
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.565 mho/m; ε_r = 52.963; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.5400 W/kg
SAR(1 g) = 4.16 mW/g; SAR(10 g) = 2.17 mW/g
Deviation = 5.85 %



0 dB = 4.630mW/g = 13.31 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

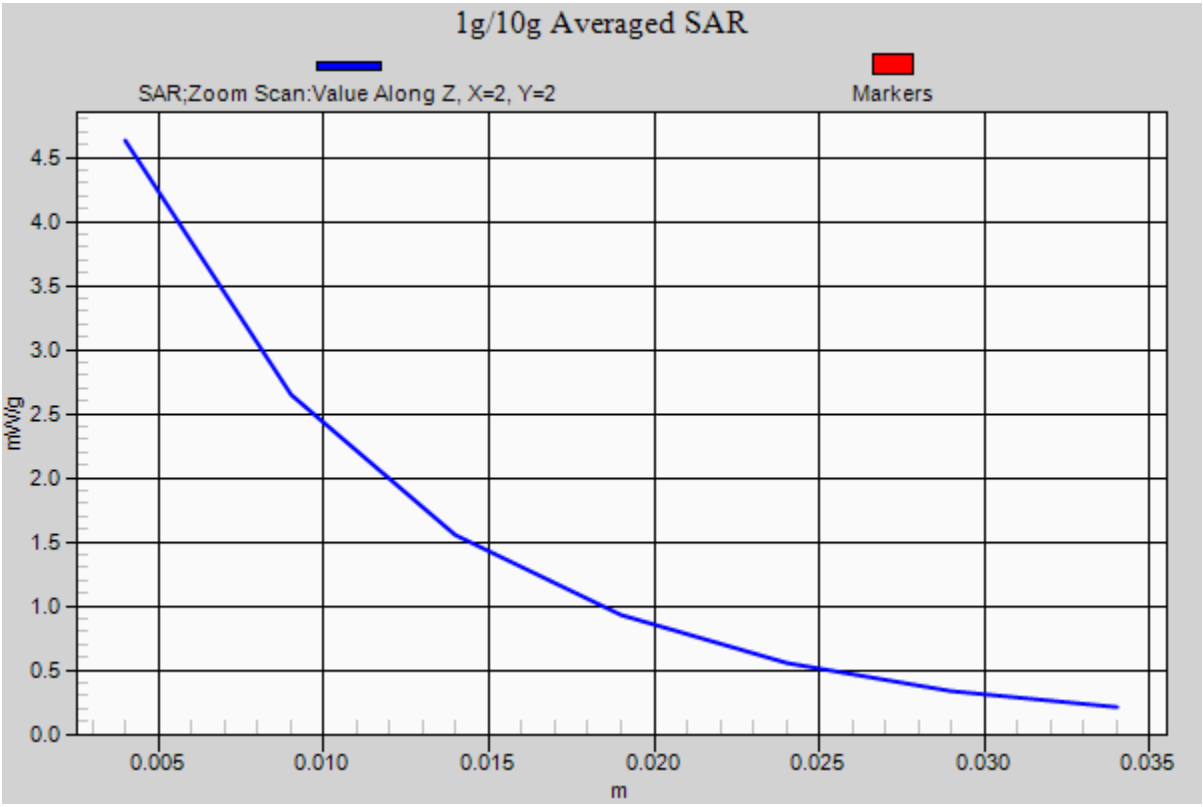
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.565 mho/m; ε_r = 52.963; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-12-2012; Ambient Temp: 24.1°C; Tissue Temp: 21.6°C

Probe: ES3DV3 - SN3213; ConvF(4.5, 4.5, 4.5); Calibrated: 4/24/2012
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.5400 W/kg
SAR(1 g) = 4.16 mW/g; SAR(10 g) = 2.17 mW/g
Deviation = 5.85 %



PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

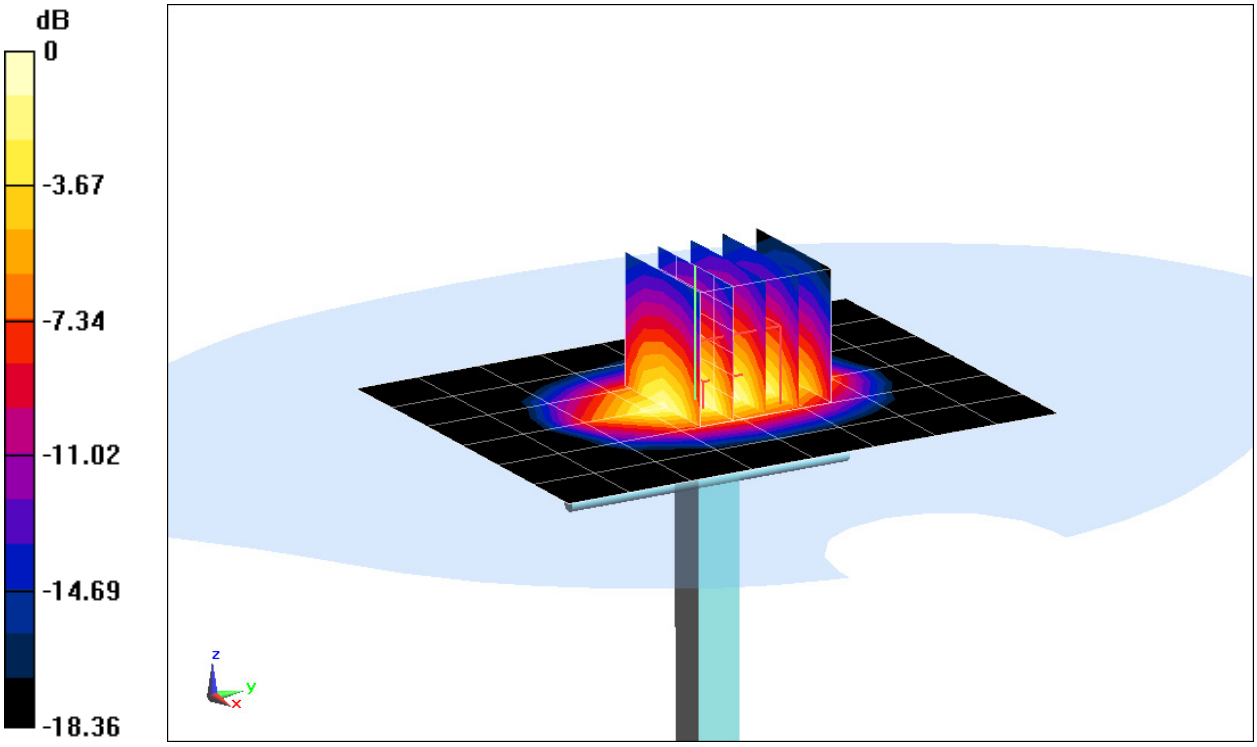
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.548 mho/m; ε_r = 52.28; ρ = 1000 kg/m^3
Phantom section: Flat Section : Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power: 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.153 mW/g
SAR(1 g) = 4.02 mW/g; SAR(10 g) = 2.1 mW/g
Deviation: 2.29%



0 dB = 4.47 mW/g = 13.01 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: SAR Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

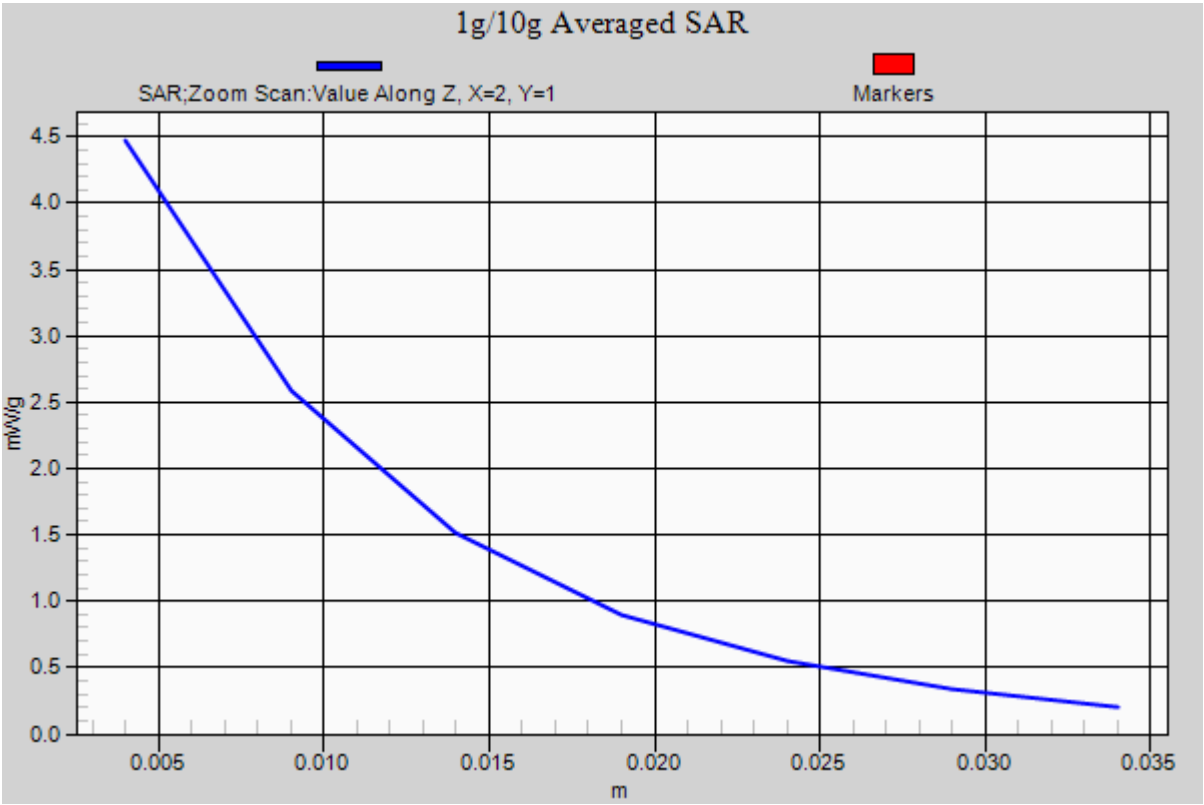
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.548 mho/m; ε_r = 52.28; ρ = 1000 kg/m^3
Phantom section: Flat Section : Space: 1.0 cm

Test Date: 09-15-2012; Ambient Temp: 21.1°C; Tissue Temp: 22.0°C

Probe: ES3DV3 - SN3287; ConvF(4.76, 4.76, 4.76); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 front; Type: QD000P40CD; Serial: TP-1646
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

1900 MHz System Verification

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Input Power: 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.153 mW/g
SAR(1 g) = 4.02 mW/g; SAR(10 g) = 2.1 mW/g
Deviation: 2.29%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 882

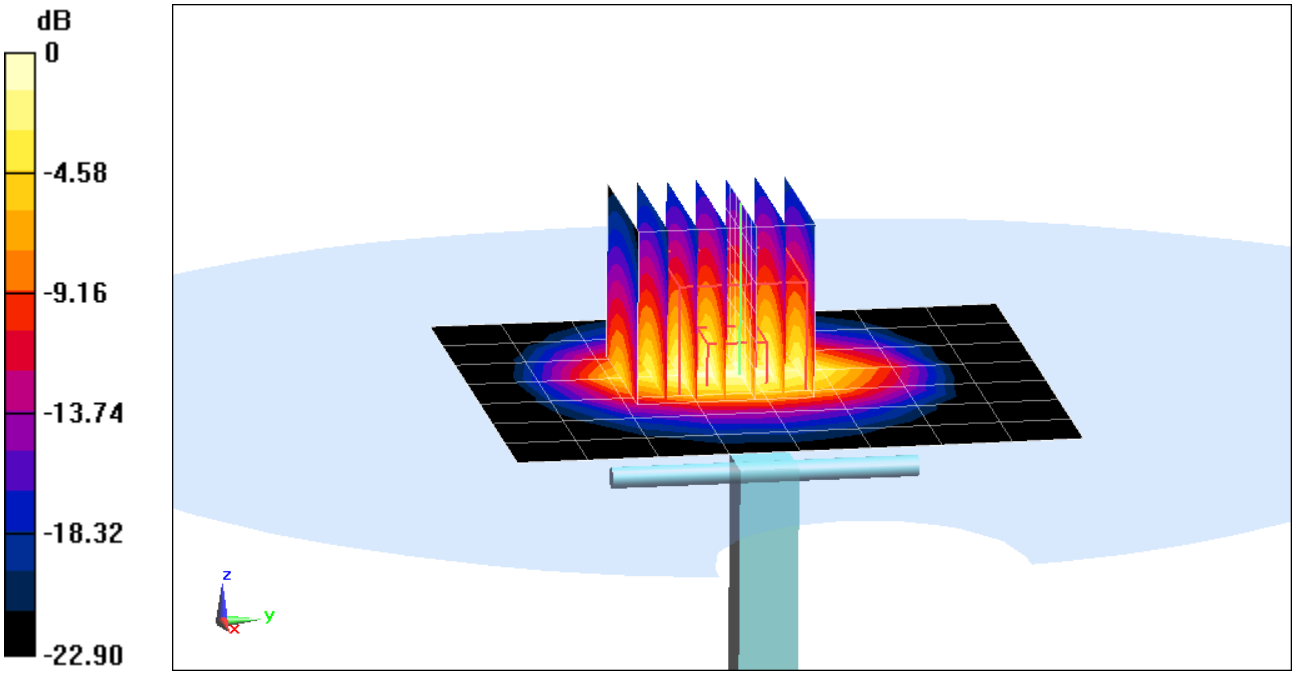
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.036 mho/m; ε_r = 50.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 11.5620 W/kg
SAR(1 g) = 5.36 mW/g; SAR(10 g) = 2.47 mW/g
Deviation = 6.56 %



0 dB = 7.120mW/g = 17.05 dB mW/g

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 882

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.036 mho/m; ε_r = 50.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09-18-2012; Ambient Temp: 24.4°C; Tissue Temp: 22.5°C

Probe: ES3DV3 - SN3213; ConvF(4.11, 4.11, 4.11); Calibrated: 4/24/2012
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 5/7/2012
Phantom: SAM Front; Type: SAM; Serial: 1715
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

2450 MHz System Verification

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 11.5620 W/kg
SAR(1 g) = 5.36 mW/g; SAR(10 g) = 2.47 mW/g
Deviation = 6.56 %