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SAR EVALUATION REPORT

Applicant Name:
LG Electronics MobileComm U.S.A., Inc.
1000 Sylvan Avenue
Englewood Cliffs, NJ 07682
USA

Date of Testing:
07/25/12 – 08/23/12
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
0Y1207241015-R1.ZNF

FCC ID: **ZNFLS860**

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

DUT Type:	Portable Handset
Application Type:	Class II Permissive Change
FCC Rule Part(s):	CFR §2.1093
Model(s):	LS860, LG-LS860, LGLS860
Permissive Change(s):	See FCC Change Document
Original Grant Date:	August 29, 2012

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/EVDO - FCC Rule Part 90S	817.90 - 823.10 MHz	25.12	0.49	0.72	0.75
Cell. CDMA/EVDO - FCC Rule Part 22H	824.70 - 848.31 MHz	25.44	0.44	0.70	0.77
PCS CDMA/EVDO - FCC Rule Part 24E	1851.25 - 1908.75 MHz	25.14	0.92	1.09	1.13
LTE Band 25 (PCS) - FCC Rule Part 24E	1852.5 - 1912.5 MHz	23.32	0.97	0.96	0.96
2.4 GHz WLAN - FCC Rule Part 15C	2412 - 2462 MHz	15.18	0.01	0.05	0.05
Bluetooth - FCC Rule Part 15C	2402 - 2480 MHz	8.16	N/A		
Simultaneous SAR per KDB 690783 D01:			1.31	1.56	1.56

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: 0Y1207241015-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

TABLE OF CONTENTS

1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Tx Frequency
Cell. CDMA/EVDO - FCC Rule Part 90S	817.90 - 823.10 MHz
Cell. CDMA/EVDO - FCC Rule Part 22H	824.70 - 848.31 MHz
PCS CDMA/EVDO - FCC Rule Part 24E	1851.25 - 1908.75 MHz
LTE Band 25 - FCC Rule Part 24E	1852.5 - 1912.5 MHz
2.4 GHz WLAN - FCC Rule Part 15C	2412 - 2462 MHz
Bluetooth - FCC Rule Part 15C	2402 - 2480 MHz
NFC - FCC Rule Part 15C	13.56 MHz

1.2 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the standard battery cover and will be the only battery cover available from the manufacturer for this model. Therefore all SAR tests were performed with the standard battery cover which already integrates the NFC antenna.

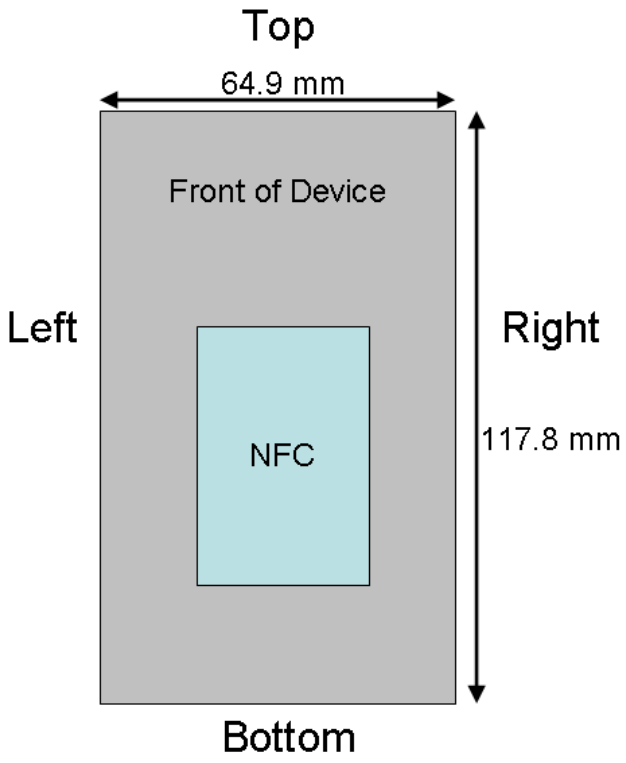

Figure 1-1
NFC Antenna Locations

1.3 DUT Antenna Locations

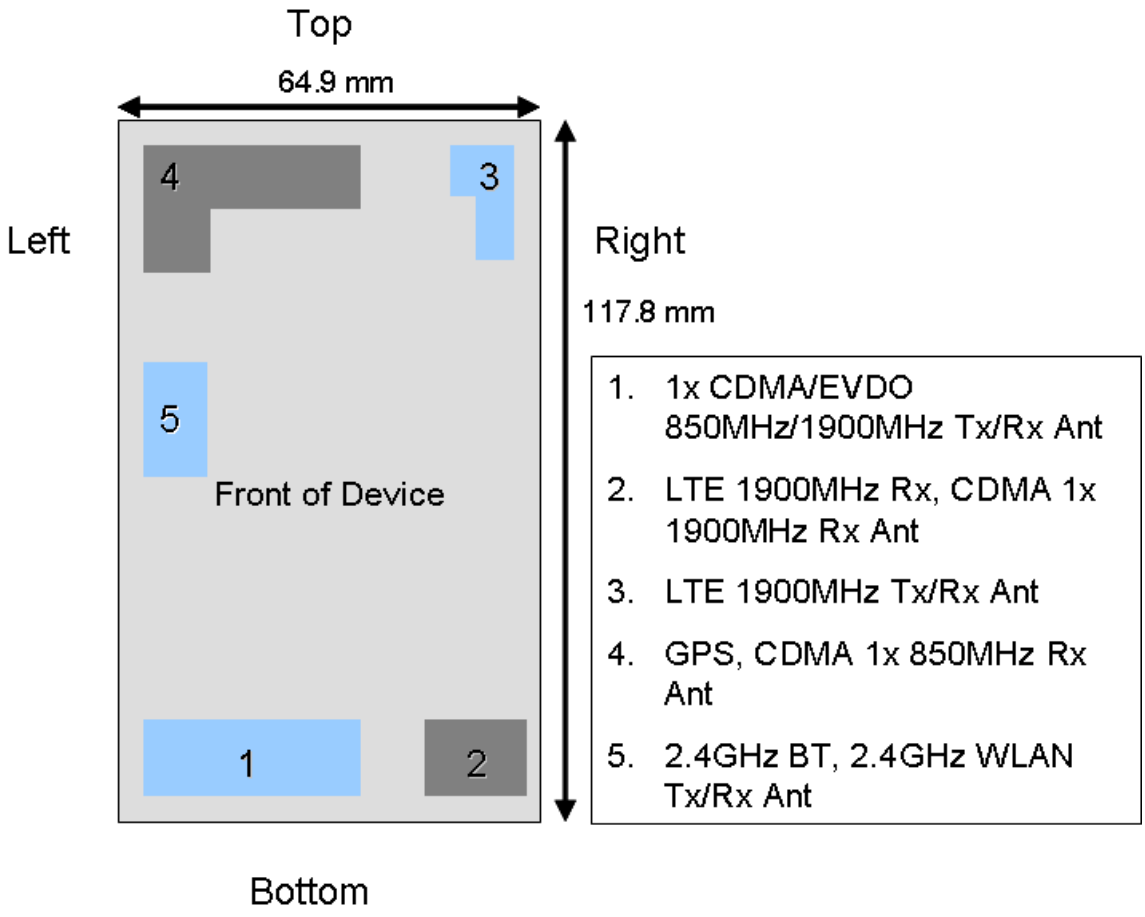

Figure 1-2
Antenna Locations

Table 1-1
Mobile Hotspot Sides for SAR Testing

Mobile Hotspot Sides for SAR Testing						
Mode	Back	Front	Top	Bottom	Right	Left
Cell. CDMA/EVDO – FCC Rule Part 90S	Yes	Yes	No	Yes	No	Yes
Cell. CDMA/EVDO – FCC Rule Part 22H	Yes	Yes	No	Yes	No	Yes
PCS CDMA/EVDO – FCC Rule Part 24E	Yes	Yes	No	Yes	No	Yes
LTE Band 25 (PCS) – FCC Rule Part 24E	Yes	Yes	Yes	No	Yes	No
2.4 GHz WLAN – FCC Rule Part 15C	Yes	Yes	No	No	No	Yes

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.

1.4 Power Reduction for SAR

This device uses power reduction mechanisms for LTE during SVLTE (voice + LTE data) operation for SAR compliance. See Section 11 for more details.

1.5 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 1-3 and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

Figure 1-3
Simultaneous Transmission Paths

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

Table 1-2
Simultaneous Transmission Scenarios

REF.	Capable TX Configration	Power Reduction	Head SAR	Body SAR	Hotspot SAR	Note
1	Cell CDMA (FCC Rule Part 22H) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	No	
2	PCS CDMA (FCC Rule Part 24E) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	No	
3	Cell CDMA (FCC Rule Part 90S) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	No	
4	Cell CDMA (FCC Rule Part 22H) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Yes	CDMA Hotspot
5	PCS CDMA (FCC Rule Part 24E) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Yes	CDMA Hotspot
6	Cell CDMA (FCC Rule Part 90S) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Yes	CDMA Hotspot
7	LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	Yes	LTE Hotspot and VoIP
8	Cell CDMA (FCC Rule Part 22H) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Yes	Yes	No	SVLTE
9	PCS CDMA (FCC Rule Part 24E) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Yes	Yes	No	SVLTE
10	Cell CDMA (FCC Rule Part 90S) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Yes	Yes	No	SVLTE
11	Cell CDMA (FCC Rule Part 22H) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Yes	Yes	Yes	WiFi Hotspot (SVLTE)
12	PCS CDMA (FCC Rule Part 24E) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Yes	Yes	Yes	WiFi Hotspot (SVLTE)
13	Cell CDMA (FCC Rule Part 90S) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Yes	Yes	Yes	WiFi Hotspot (SVLTE)
14	Cell EVDO (FCC Rule Part 22H) + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	Yes	VoIP
15	PCS EVDO (FCC Rule Part 24E) + 2.4 GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	Yes	VoIP
16	Cell EVDO (FCC Rule Part 90S) + 2.4 GHz WiFi (FCC Rule Part 15C) Data	-	Yes	Yes	Yes	VoIP

* Simultaneous transmission between BT and WiFi is not supported.
* Simultaneous transmission between CDMA 1xdata/EVDO and LTE data is not supported.
* SVLTE is supported only. (SVDO is not supported.)
* 1x Advanced capability for Cell CDMA (FCC Rule Part 22H), PCS CDMA (FCC Rule Part 24E) and Cell CDMA (FCC Rule Part 90S) is supported.
* VoIP is supported.
* Maximum output power will be used for SAR compliance. If necessary, power reduction will be used for SAR compliance.

1.6 SAR Test Exclusions Applied

(A) WIFI/BT

RF Conducted Power of Bluetooth Tx is 6.549 mW (Please refer to the EMC DSS Report for a full set of Bluetooth conducted powers).

The separation distance between the CDMA/EVDO antenna and the Bluetooth/WLAN antenna is 49.26 mm. The separation distance between the LTE antenna and the Bluetooth/WLAN antenna is 51.04 mm.

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)

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.

1.7 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)

1.8 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.

Mode/Band:	Cell. CDMA/EVDO - FCC Rule Part 90S		Cell. CDMA/EVDO - FCC Rule Part 22H		PCS CDMA/EVDO - FCC Rule Part 24E	
Target Power (dBm):	25	18	25	18	25	18
Serial Number:	SAR#1	1x Reduced	SAR#1	1x Reduced	SAR#1	1x Reduced

Mode/Band:	LTE Band 25 (PCS) - FCC Rule Part 24E	
Target Power (dBm):	23	19
Serial Number:	150	SAR#4

Mode/Band:	2.4GHz WIFI - FCC Rule Part 15C
Serial Number:	SAR#2

2 LTE CHECKLIST PER KDB 941225 D05

#	Description	Parameter
1	Identify the operating frequency range of each LTE transmission band used by the device	1852.5 to 1912.5 MHz
2	Identify the channel bandwidths used in each frequency band; 1.4, 3, 5, 10, 15, 20 MHz etc	Band 25 : 5MHz , 10MHz
3	Identify the high, middle and low (H, M, L) channel numbers and frequencies in each LTE frequency band	LTE Band 25 1) Low channel - Bandwidth: 5MHz Ch No.: 26065 Frequency: 1852.5MHz - Bandwidth: 10MHz Ch No.: 26090 Frequency: 1855.0MHz 2) Middle channel - Bandwidth: 5MHz Ch No.: 26365 Frequency: 1882.5MHz - Bandwidth: 10MHz Ch No.: 26365 Frequency: 1882.5MHz 3) High channel - Bandwidth: 5MHz Ch No.: 26665 Frequency: 1912.5MHz - Bandwidth: 10MHz Ch No.: 26640 Frequency: 1910.0MHz
4	Specify the UE category and uplink modulations used	UE Category: 3 Uplink modulation: QPSK, 16QAM
5	Descriptions of the LTE transmitter and antenna implementation & identify whether it is a standalone transmitter operating independently of other wireless transmitters in the device or sharing hardware components and/or antenna(s) with other transmitters etc	The LTE and CDMA/EVDO operate on separate antenna paths.
6	Identify the LTE voice/data requirements in each operating mode and exposure condition with respect to head and body test configurations, antenna locations, handset flip-cover or slide positions, antenna diversity conditions etc	* Exposure conditions See Section 1.
7	Identify if Maximum Power Reduction (MPR) is optional or mandatory, i.e. built-in by design: a) only mandatory MPR may be considered during SAR testing, when the maximum output power is permanently limited by the MPR implemented within the UE; and only for the applicable RB (resource block) configurations specified in LTE standards b) A-MPR (additional MPR) must be disabled	MPR is implemented when power reduction is not enabled. For details, please see the conducted power table in Section 10 and Section 11.

8	Include the maximum average conducted output power measured on the required test channels for each channel bandwidth and UL modulation used in each frequency band: a) with 1 RB allocated at the upper edge of a channel b) with 1 RB allocated at the lower edge of a channel c) using 50% RB allocation centered within a channel d) using 100% RB allocation	Please see the conducted power table in Section 10 and Section 11.
9	Identify all other U.S. wireless operating modes (3G, Wi-Fi, WiMax, Bluetooth etc), device/exposure configurations (head and body, antenna and handset flip-cover or slide positions, antenna diversity conditions etc.) and frequency bands used for these modes	* Supported band & Exposure conditions See Page 1.
10	Include the maximum average conducted output power measured for the other wireless modes and frequency bands	Please find the conducted power table in Section 10.
11	Identify the simultaneous transmission conditions for the voice and data configurations supported by all wireless modes, device configurations and frequency bands, for the head and body exposure conditions and device operating configurations (handset flip or cover positions, antenna diversity conditions etc.)	* Simultaneous transmission conditions See Section 1.5.
12	When power reduction is applied to certain wireless modes to satisfy SAR compliance for simultaneous transmission conditions, other equipment certification or operating requirements, include the maximum average conducted output power measured in each power reduction mode applicable to the simultaneous voice/data transmission configurations for such wireless configurations and frequency bands; and also include details of the power reduction implementation and measurement setup	See Section 11.
13	Include descriptions of the test equipment, test software, built-in test firmware etc. required to support testing the device when power reduction is applied to one or more transmitters/antennas for simultaneous voice/data transmission	See Section 11.
14	When appropriate, include a SAR test plan proposal with respect to the above	See Section 11.
15	If applicable, include preliminary SAR test data and/or supporting information in laboratory testing inquiries to address specific issues and concerns or for requesting further test reduction considerations appropriate for the device; for example, simultaneous transmission configurations	See Section 11.

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]

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

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.

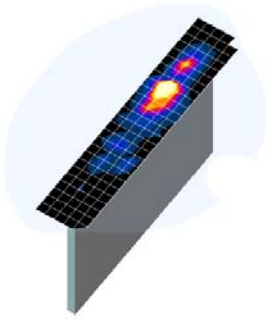

Figure 5-1
Sample SAR Area Scan

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.

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].

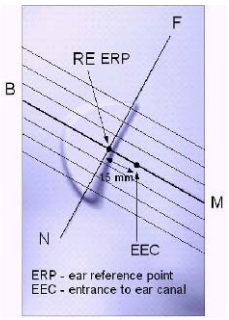

Figure 6-1
Close-Up Side view of ERP

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.

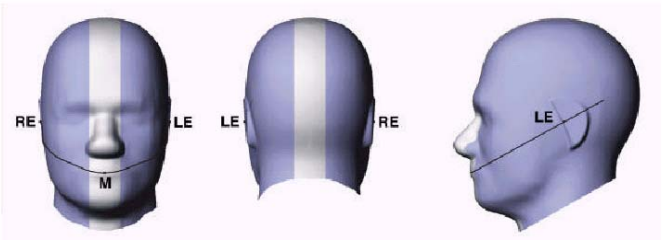

Figure 6-2
Front, back and side view of SAM Twin Phantom

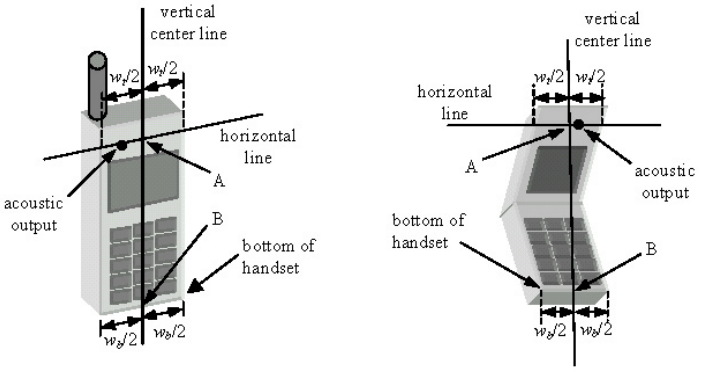

Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

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.

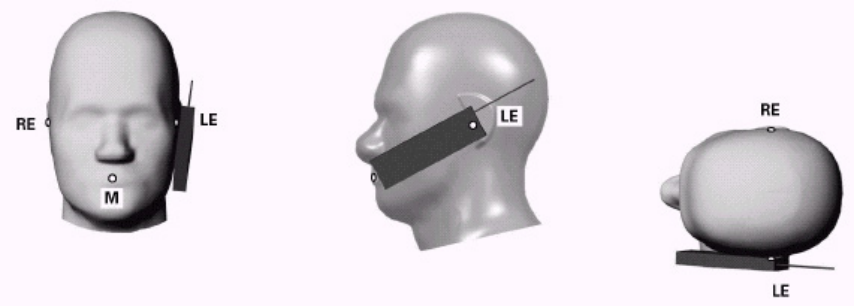

Figure 7-1 Front, Side and Top View of Cheek/Touch Position

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).

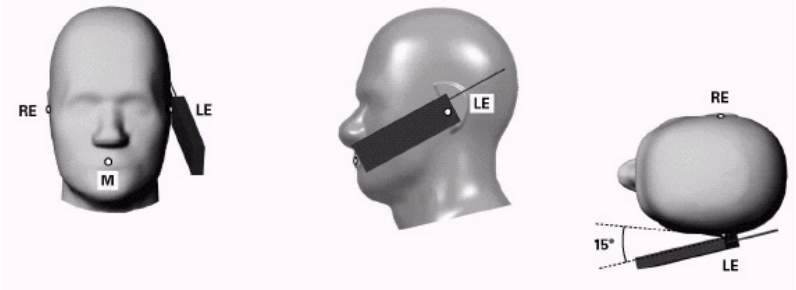

Figure 7-2 Front, Side and Top View of Ear/15º Tilt Position

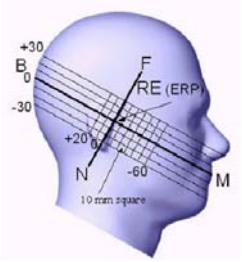

Figure 7-3
Side view w/ relevant markings

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.

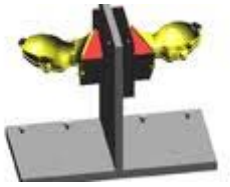

Figure 7-5 Twin SAM Chin20

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.

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.

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.

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

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. A Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots would be configured in the downlink for both Rev. 0 and Rev. A.

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 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 ¼ 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

MPR is implemented for this device by the manufacturer when the transmit power is not limited by the power reduction mechanism. 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. See Section 10.2 and Section 11.3 for MPR targets.

9.3.2 A-MPR

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

9.3.3 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.
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.

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)
Cell. CDMA/EVDO - FCC Rule Part 90S	564	820.1	25.16	25.12	25.19	25.12	25.02	25.03	25.03
Cell. CDMA/EVDO - FCC Rule Part 22H	1013	824.7	25.48	25.32	25.47	25.45	25.32	25.37	25.27
	384	836.52	25.49	25.44	25.50	25.37	25.37	25.37	25.36
	777	848.31	25.45	25.43	25.49	25.16	25.37	25.44	25.40
PCS CDMA/EVDO - FCC Rule Part 24E	25	1851.25	25.18	25.03	25.19	25.10	25.09	25.14	25.12
	600	1880	25.09	25.05	25.18	25.00	25.00	25.09	25.05
	1175	1908.75	25.04	25.08	25.05	24.86	24.88	24.92	24.89

Note: RC1 is only applicable for IS-95 compatibility. For FCC Rule Part 90S, per FCC KDB Publication 447498 6) c), only one channel is required since the device operates within the transmission range of 817.90 – 823.10 MHz.

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 Rev. 0 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. According to FCC KDB 941225, EVDO SAR (Hotspot) is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. When the maximum output power of Rev. A for each channel is greater than the Rev.0 power, Rev. A must additionally be tested using the highest output channel for the configuration that resulted in the highest SAR for Rev.0.
4. CDMA 1x-RTT SAR was additionally required to be evaluated for Hotspot exposure conditions to support simultaneous capabilities per Table 1-2.

1x Advanced Considerations 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.

VoIP Testing per KDB Publication 447498:

1. Head and Body-worn SAR was additionally evaluated for EVDO Rev A to determine SAR compliance for VoIP over EVDO.

Figure 10-1
Power Measurement Setup

10.2 LTE Conducted Powers

10.2.1 LTE Band 25

Table 10-1
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	23.41	0	0
	1852.5	26065	5	QPSK	1	24	23.45	0	0
	1852.5	26065	5	QPSK	12	6	22.36	1	0-1
	1852.5	26065	5	QPSK	25	0	22.39	1	0-1
	1852.5	26065	5	16-QAM	1	0	22.29	1	0-1
	1852.5	26065	5	16-QAM	1	24	22.45	1	0-1
	1852.5	26065	5	16-QAM	12	6	21.40	2	0-2
	1852.5	26065	5	16-QAM	25	0	21.48	2	0-2
Mid	1882.5	26365	5	QPSK	1	0	23.31	0	0
	1882.5	26365	5	QPSK	1	24	23.30	0	0
	1882.5	26365	5	QPSK	12	6	22.39	1	0-1
	1882.5	26365	5	QPSK	25	0	22.43	1	0-1
	1882.5	26365	5	16-QAM	1	0	22.31	1	0-1
	1882.5	26365	5	16-QAM	1	24	22.20	1	0-1
	1882.5	26365	5	16-QAM	12	6	21.49	2	0-2
	1882.5	26365	5	16-QAM	25	0	21.48	2	0-2
High	1912.5	26665	5	QPSK	1	0	23.34	0	0
	1912.5	26665	5	QPSK	1	24	23.21	0	0
	1912.5	26665	5	QPSK	12	6	22.19	1	0-1
	1912.5	26665	5	QPSK	25	0	22.25	1	0-1
	1912.5	26665	5	16-QAM	1	0	22.41	1	0-1
	1912.5	26665	5	16-QAM	1	24	22.34	1	0-1
	1912.5	26665	5	16-QAM	12	6	21.31	2	0-2
	1912.5	26665	5	16-QAM	25	0	21.37	2	0-2

Table 10-2
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	**23.32**	0	0
	1855	26090	10	QPSK	1	49	**23.19**	0	0
	1855	26090	10	QPSK	25	12	22.40	1	0-1
	1855	26090	10	QPSK	50	0	22.27	1	0-1
	1855	26090	10	16QAM	1	0	22.19	1	0-1
	1855	26090	10	16QAM	1	49	22.19	1	0-1
	1855	26090	10	16QAM	25	12	21.34	2	0-2
	1855	26090	10	16QAM	50	0	21.37	2	0-2
Mid	1882.5	26365	10	QPSK	1	0	23.25	0	0
	1882.5	26365	10	QPSK	1	49	23.18	0	0
	1882.5	26365	10	QPSK	25	12	**22.41**	1	0-1
	1882.5	26365	10	QPSK	50	0	22.22	1	0-1
	1882.5	26365	10	16QAM	1	0	**22.48**	1	0-1
	1882.5	26365	10	16QAM	1	49	**22.36**	1	0-1
	1882.5	26365	10	16QAM	25	12	**21.43**	2	0-2
	1882.5	26365	10	16QAM	50	0	21.32	2	0-2
High	1910	26640	10	QPSK	1	0	23.21	0	0
	1910	26640	10	QPSK	1	49	23.22	0	0
	1910	26640	10	QPSK	25	12	22.12	1	0-1
	1910	26640	10	QPSK	50	0	22.25	1	0-1
	1910	26640	10	16QAM	1	0	22.29	1	0-1
	1910	26640	10	16QAM	1	49	22.29	1	0-1
	1910	26640	10	16QAM	25	12	21.34	2	0-2
	1910	26640	10	16QAM	50	0	21.31	2	0-2

10.2.2 Required RB Size and RB Offsets for SAR Testing

General test procedures for LTE can be found in Section 9.3.3. According to FCC KDB 941225 D05:

1. The output power across low, mid, and high channel was less than 0.5 dB for QPSK 50% RB, therefore mid channel was tested for QPSK 50% RB. Low and high channel SAR were required when the SAR value is > 0.8 W/kg.
2. The average output power of QPSK 1 RB configurations was more than 0.5 dB higher than QPSK 50% RB, therefore low channel (highest output power channel) was tested for QPSK 1 RB configurations. Mid and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations. 1 RB low and high offset configurations are considered together for a single channel selection.
3. The average output power of 16 QAM 50% RB was not more than 0.5 dB higher than QPSK, therefore the mid channel (highest SAR measured with QPSK 50% RB) was tested for 16 QAM 50% RB. Low and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations.
4. The average output power of 16 QAM 1 RB configurations was more than 0.5 dB higher than 16 QAM 50% RB, therefore mid channel (highest SAR output Power channel) was tested for 16 QAM 1 RB configurations. Low and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations. 1 RB low and high offset configurations are considered together for a single channel selection.
5. 100% RB Allocation SAR was not required since the 50% RB SAR was not >1.45 W/kg.
6. 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.
7. The bolded powers were tested for SAR.

Figure 10-2
Power Measurement Setup

10.3 WLAN Conducted Powers

Table 10-3
IEEE 802.11b Average RF Power

Freq [MHz]	Channel	Data Rate [Mbps]	Average Power (dBm)
2412	1	1	13.91
		2	13.61
		5.5	13.56
		11	13.65
2437	6	1	15.10
		2	15.35
		5.5	14.09
		11	14.80
2462	11	1	**15.18**
		2	15.15
		5.5	14.27
		11	15.25

Table 10-4
IEEE 802.11g Average RF Power

Freq [MHz]	Channel	Data Rate [Mbps]	Average Power (dBm)
2412	1	6	14.50
		9	12.74
		12	12.67
		18	10.45
		24	14.56
		36	12.81
		48	11.72
		54	13.55
2437	6	6	14.65
		9	14.02
		12	10.68
		18	12.36
		24	14.48
		36	13.15
		48	13.95
		54	13.60
2462	11	6	14.58
		9	14.08
		12	13.20
		18	10.61
		24	14.83
		36	12.83
		48	13.34
		54	13.67

Table 10-5
IEEE 802.11n Average RF Power

Freq [MHz]	Channel	Data Rate [Mbps]	Average Power (dBm)
2412	1	6.5/7.2	11.20
		13/14.40	13.05
		19.5/21.70	12.27
		26/28.90	11.81
		29/43.3	11.88
		52/57.80	10.99
		58.50/65	13.56
		65/72.2	13.41
2437	6	6.5/7.2	10.13
		13/14.40	13.39
		19.5/21.70	12.08
		26/28.90	11.48
		29/43.3	11.49
		52/57.80	12.87
		58.50/65	13.51
		65/72.2	13.64
2462	11	6.5/7.2	12.47
		13/14.40	12.74
		19.5/21.70	10.96
		26/28.90	11.09
		29/43.3	11.44
		52/57.80	12.56
		58.50/65	10.22
		65/72.2	11.48

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 bolded data rate and channel above were tested for SAR.

Figure 10-3
Power Measurement Setup

11 LTE POWER REDUCTION

11.1 Introduction to LTE Power Reduction

This device 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 separate LTE transmitter. A LTE power reduction scheme is applied during a LTE connection operating simultaneously with 1x-RTT voice calls. The maximum transmit power of LTE is limited depending on the CDMA 1x voice power level. When CDMA 1x Voice is operating at a certain range of high power levels, maximum LTE transmit power is limited. When CDMA 1x Voice power is below a certain threshold transmit power level, LTE can transmit at the maximum power. Target levels of power reduction and CDMA voice threshold levels are provided in Table 11-1.

Table 11-1
SVLTE Power Reduction Scheme

Mode	CDMA Current Voice Power for BC0, BC1 & BC 10	LTE Max. Power for B25
SVLTE	P < 18 dBm	23.0 dBm (Limited)
	P ≥ 18 dBm	19.0 dBm (Limited)

11.2 Output Power Verification

Per page 7 of 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 device 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 subsequently a CDMA 1xRTT call. CDMA powers were controlled by setting the CDMA base station simulator to active bits. The LTE output power was monitored while changing the CDMA cell output power level.

The power reduction targets and threshold level described in **Table 11-1** were confirmed. Please see results in Table 11-2 to Table 11-43.

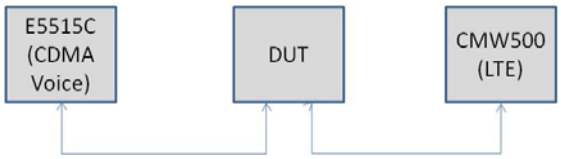

Figure 11-1
SVLTE Conducted Test Setup Diagram

Table 11-2
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1013 (Low)	24	19.56	19.59	19.65	19.57	19.59	19.52	19.57	19.52
	23	19.53	19.68	19.55	19.51	19.56	19.53	19.70	19.52
	22	19.64	19.66	19.63	19.67	19.60	19.54	19.69	19.54
	21	19.56	19.62	19.66	19.64	19.68	19.67	19.60	19.65
	20	19.69	19.63	19.68	19.53	19.56	19.54	19.68	19.68
	19	19.61	19.63	19.54	19.63	19.55	19.59	19.57	19.63
	18	19.65	19.58	19.60	19.54	19.55	19.57	19.57	19.64
	17	23.62	23.59	22.51	22.66	22.67	22.53	21.56	21.62
	16	23.53	23.57	22.68	22.67	22.52	22.54	21.52	21.57
	15	23.66	23.68	22.59	22.55	22.63	22.69	21.63	21.54
	14	23.62	23.60	22.69	22.61	22.54	22.52	21.65	21.67
	13	23.56	23.63	22.59	22.53	22.69	22.66	21.58	21.54
	12	23.56	23.52	22.61	22.62	22.65	22.68	21.62	21.58
	11	23.62	23.53	22.52	22.65	22.69	22.54	21.64	21.56

Table 11-3
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
384 (Mid)	24	19.52	19.69	19.66	19.60	19.64	19.52	19.69	19.62
	23	19.56	19.66	19.58	19.54	19.68	19.55	19.54	19.70
	22	19.53	19.65	19.59	19.70	19.68	19.64	19.52	19.66
	21	19.56	19.57	19.65	19.61	19.53	19.60	19.67	19.53
	20	19.69	19.51	19.55	19.69	19.67	19.62	19.55	19.59
	19	19.56	19.70	19.57	19.58	19.55	19.60	19.63	19.63
	18	19.52	19.61	19.55	19.54	19.66	19.68	19.55	19.61
	17	23.57	23.51	22.68	22.67	22.59	22.53	21.62	21.66
	16	23.60	23.65	22.65	22.59	22.52	22.69	21.58	21.60
	15	23.54	23.53	22.69	22.52	22.51	22.64	21.51	21.52
	14	23.55	23.70	22.62	22.61	22.68	22.58	21.67	21.58
	13	23.60	23.59	22.57	22.63	22.69	22.61	21.67	21.63
	12	23.67	23.58	22.53	22.67	22.66	22.64	21.62	21.67
	11	23.63	23.63	22.52	22.65	22.59	22.67	21.56	21.69

Table 11-4
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
777 (High)	24	19.55	19.67	19.58	19.66	19.59	19.62	19.62	19.66
	23	19.64	19.57	19.57	19.52	19.68	19.59	19.59	19.52
	22	19.63	19.67	19.70	19.52	19.68	19.66	19.65	19.58
	21	19.51	19.64	19.51	19.53	19.69	19.52	19.63	19.55
	20	19.53	19.54	19.60	19.67	19.57	19.56	19.56	19.51
	19	19.69	19.68	19.66	19.64	19.68	19.53	19.61	19.69
	18	19.53	19.55	19.66	19.51	19.70	19.53	19.57	19.63
	17	23.57	23.62	22.59	22.67	22.65	22.61	21.51	21.56
	16	23.67	23.54	22.51	22.65	22.60	22.55	21.58	21.55
	15	23.67	23.60	22.58	22.66	22.55	22.55	21.56	21.58
	14	23.61	23.64	22.69	22.64	22.64	22.70	21.61	21.59
	13	23.59	23.61	22.60	22.52	22.69	22.57	21.56	21.54
	12	23.64	23.68	22.67	22.52	22.68	22.63	21.53	21.59
	11	23.55	23.52	22.63	22.59	22.67	22.58	21.54	21.52

Table 11-5
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
25 (Low)	24	19.59	19.68	19.59	19.65	19.63	19.58	19.61	19.67
	23	19.65	19.59	19.7	19.6	19.52	19.56	19.59	19.68
	22	19.68	19.7	19.67	19.57	19.58	19.66	19.53	19.64
	21	19.67	19.51	19.66	19.67	19.69	19.56	19.61	19.68
	20	19.61	19.53	19.67	19.52	19.65	19.54	19.58	19.67
	19	19.66	19.54	19.63	19.63	19.58	19.68	19.57	19.58
	18	19.64	19.69	19.58	19.52	19.62	19.51	19.64	19.6
	17	23.57	23.64	22.51	22.6	22.52	22.54	21.67	21.53
	16	23.53	23.59	22.53	22.62	22.67	22.67	21.63	21.51
	15	23.58	23.51	22.67	22.55	22.65	22.6	21.63	21.68
	14	23.63	23.54	22.59	22.51	22.63	22.54	21.63	21.66
	13	23.53	23.66	22.67	22.6	22.58	22.64	21.52	21.69
	12	23.64	23.55	22.6	22.55	22.54	22.62	21.64	21.64
	11	23.65	23.57	22.63	22.56	22.61	22.64	21.66	21.62

Table 11-6
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
600 (Mid)	24	19.51	19.61	19.68	19.63	19.69	19.61	19.57	19.70
	23	19.69	19.69	19.57	19.58	19.57	19.59	19.55	19.60
	22	19.61	19.58	19.65	19.58	19.59	19.65	19.52	19.53
	21	19.53	19.52	19.56	19.62	19.68	19.69	19.58	19.58
	20	19.54	19.54	19.65	19.68	19.52	19.58	19.60	19.52
	19	19.54	19.62	19.65	19.54	19.60	19.59	19.56	19.53
	18	19.59	19.55	19.69	19.65	19.66	19.68	19.63	19.69
	17	23.62	23.57	22.59	22.63	22.69	22.69	21.65	21.59
	16	23.59	23.55	22.57	22.62	22.66	22.59	21.67	21.69
	15	23.51	23.62	22.54	22.66	22.62	22.64	21.63	21.66
	14	23.70	23.63	22.52	22.67	22.56	22.68	21.52	21.69
	13	23.53	23.51	22.64	22.64	22.62	22.68	21.54	21.60
	12	23.56	23.52	22.66	22.61	22.59	22.60	21.60	21.57
	11	23.57	23.59	22.54	22.59	22.53	22.57	21.68	21.62

Table 11-7
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1175 (High)	24	19.58	19.53	19.69	19.59	19.69	19.51	19.64	19.70
	23	19.69	19.65	19.60	19.54	19.52	19.62	19.56	19.70
	22	19.53	19.53	19.70	19.53	19.62	19.61	19.54	19.54
	21	19.57	19.56	19.67	19.51	19.69	19.67	19.59	19.58
	20	19.52	19.55	19.64	19.63	19.70	19.57	19.51	19.70
	19	19.62	19.53	19.69	19.68	19.59	19.68	19.63	19.53
	18	19.69	19.64	19.55	19.70	19.51	19.67	19.58	19.55
	17	23.70	23.53	22.61	22.56	22.59	22.53	21.55	21.58
	16	23.70	23.68	22.53	22.65	22.59	22.69	21.59	21.67
	15	23.62	23.60	22.59	22.57	22.69	22.60	21.63	21.62
	14	23.64	23.53	22.65	22.70	22.56	22.59	21.59	21.67
	13	23.57	23.56	22.60	22.61	22.64	22.52	21.63	21.62
	12	23.57	23.62	22.62	22.69	22.65	22.67	21.53	21.57
	11	23.59	23.70	22.54	22.54	22.62	22.65	21.66	21.60

Table 11-8
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, Low Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC10 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26065, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
564 (MID)	24	19.59	19.62	19.52	19.58	19.62	19.53	19.67	19.60
	23	19.56	19.67	19.63	19.60	19.62	19.63	19.63	19.70
	22	19.58	19.62	19.54	19.67	19.70	19.62	19.51	19.57
	21	19.62	19.52	19.55	19.68	19.64	19.64	19.59	19.61
	20	19.55	19.60	19.65	19.52	19.66	19.69	19.56	19.54
	19	19.54	19.57	19.69	19.61	19.51	19.54	19.54	19.51
	18	19.57	19.64	19.63	19.61	19.64	19.64	19.55	19.52
	17	23.64	23.60	22.60	22.65	22.60	22.69	21.68	21.62
	16	23.61	23.65	22.52	22.60	22.57	22.61	21.67	21.67
	15	23.60	23.56	22.60	22.61	22.59	22.63	21.64	21.65
	14	23.63	23.52	22.59	22.64	22.53	22.52	21.70	21.60
	13	23.55	23.62	22.58	22.65	22.57	22.60	21.51	21.65
	12	23.52	23.67	22.55	22.56	22.66	22.54	21.55	21.61
	11	23.56	23.63	22.67	22.63	22.67	22.69	21.58	21.55

Table 11-9
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1013 (Low)	24	19.53	19.55	19.61	19.51	19.59	19.62	19.59	19.68
	23	19.55	19.68	19.58	19.56	19.52	19.58	19.55	19.64
	22	19.57	19.69	19.51	19.53	19.63	19.61	19.63	19.52
	21	19.63	19.59	19.52	19.53	19.51	19.61	19.60	19.52
	20	19.66	19.56	19.70	19.59	19.61	19.64	19.61	19.57
	19	19.56	19.57	19.56	19.68	19.64	19.67	19.58	19.69
	18	19.62	19.56	19.60	19.62	19.64	19.58	19.58	19.63
	17	23.70	23.58	22.57	22.65	22.60	22.65	21.56	21.54
	16	23.63	23.63	22.65	22.60	22.63	22.58	21.63	21.53
	15	23.67	23.68	22.60	22.56	22.70	22.61	21.60	21.52
	14	23.66	23.61	22.64	22.54	22.62	22.65	21.67	21.55
	13	23.67	23.56	22.70	22.62	22.64	22.56	21.57	21.57
	12	23.52	23.66	22.65	22.68	22.69	22.53	21.57	21.66
	11	23.68	23.52	22.61	22.53	22.65	22.56	21.52	21.59

Table 11-10
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
384 (Mid)	24	19.58	19.60	19.59	19.57	19.54	19.64	19.59	19.55
	23	19.62	19.64	19.70	19.54	19.69	19.68	19.60	19.61
	22	19.60	19.58	19.61	19.53	19.53	19.63	19.52	19.67
	21	19.66	19.67	19.68	19.63	19.61	19.66	19.66	19.69
	20	19.67	19.61	19.67	19.51	19.68	19.58	19.64	19.53
	19	19.56	19.68	19.59	19.62	19.69	19.64	19.65	19.68
	18	19.62	19.69	19.53	19.62	19.67	19.53	19.67	19.57
	17	23.61	23.60	22.67	22.55	22.67	22.58	21.57	21.51
	16	23.63	23.60	22.59	22.65	22.63	22.58	21.53	21.65
	15	23.68	23.58	22.56	22.64	22.60	22.61	21.65	21.62
	14	23.51	23.66	22.65	22.66	22.58	22.69	21.59	21.54
	13	23.51	23.61	22.61	22.66	22.52	22.68	21.61	21.59
	12	23.60	23.54	22.67	22.59	22.60	22.52	21.51	21.57
	11	23.70	23.58	22.65	22.58	22.67	22.67	21.53	21.66

Table 11-11
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
777 (High)	24	19.60	19.61	19.57	19.65	19.60	19.62	19.53	19.65
	23	19.64	19.56	19.60	19.68	19.57	19.68	19.51	19.56
	22	19.53	19.64	19.61	19.52	19.61	19.53	19.55	19.56
	21	19.59	19.58	19.66	19.61	19.53	19.52	19.64	19.53
	20	19.65	19.65	19.59	19.64	19.65	19.55	19.57	19.54
	19	19.52	19.51	19.57	19.67	19.57	19.64	19.64	19.69
	18	19.57	19.63	19.56	19.53	19.67	19.52	19.63	19.69
	17	23.68	23.60	22.55	22.70	22.65	22.54	21.54	21.55
	16	23.70	23.55	22.52	22.64	22.68	22.62	21.65	21.57
	15	23.61	23.56	22.58	22.53	22.56	22.59	21.54	21.54
	14	23.53	23.59	22.64	22.60	22.55	22.66	21.54	21.52
	13	23.58	23.57	22.68	22.63	22.60	22.59	21.59	21.59
	12	23.69	23.64	22.53	22.57	22.69	22.54	21.67	21.60
	11	23.53	23.68	22.66	22.57	22.67	22.61	21.68	21.61

Table 11-12
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
25 (Low)	24	19.59	19.63	19.64	19.52	19.69	19.65	19.63	19.61
	23	19.55	19.63	19.52	19.55	19.61	19.64	19.55	19.56
	22	19.59	19.59	19.61	19.56	19.66	19.57	19.54	19.66
	21	19.61	19.60	19.55	19.52	19.56	19.54	19.53	19.64
	20	19.58	19.63	19.55	19.69	19.66	19.68	19.55	19.70
	19	19.62	19.63	19.61	19.70	19.52	19.69	19.64	19.61
	18	19.64	19.63	19.51	19.62	19.60	19.55	19.57	19.57
	17	23.58	23.52	22.69	22.51	22.57	22.56	21.68	21.66
	16	23.58	23.62	22.55	22.51	22.58	22.55	21.56	21.66
	15	23.62	23.55	22.56	22.57	22.61	22.56	21.69	21.65
	14	23.57	23.53	22.62	22.60	22.67	22.68	21.68	21.54
	13	23.66	23.65	22.65	22.70	22.62	22.59	21.67	21.64
	12	23.52	23.56	22.62	22.65	22.53	22.62	21.68	21.67
	11	23.60	23.62	22.59	22.53	22.60	22.52	21.61	21.51

Table 11-13
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
600 (Mid)	24	19.56	19.54	19.57	19.59	19.68	19.51	19.59	19.63
	23	19.58	19.51	19.66	19.53	19.63	19.68	19.57	19.55
	22	19.60	19.62	19.58	19.58	19.53	19.62	19.56	19.67
	21	19.56	19.68	19.64	19.70	19.55	19.61	19.62	19.62
	20	19.53	19.63	19.60	19.53	19.60	19.61	19.64	19.62
	19	19.64	19.62	19.66	19.69	19.63	19.60	19.57	19.65
	18	19.55	19.67	19.66	19.67	19.57	19.67	19.58	19.69
	17	23.62	23.69	22.66	22.64	22.53	22.53	21.52	21.56
	16	23.60	23.53	22.60	22.59	22.66	22.64	21.69	21.62
	15	23.70	23.53	22.57	22.63	22.60	22.60	21.63	21.62
	14	23.56	23.55	22.68	22.63	22.64	22.62	21.66	21.68
	13	23.69	23.58	22.56	22.54	22.66	22.53	21.68	21.56
	12	23.52	23.65	22.66	22.53	22.51	22.59	21.68	21.68
	11	23.65	23.59	22.62	22.63	22.66	22.67	21.61	21.56

Table 11-14
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1175 (High)	24	19.60	19.60	19.57	19.57	19.67	19.64	19.55	19.57
	23	19.64	19.68	19.59	19.69	19.58	19.68	19.66	19.60
	22	19.52	19.63	19.58	19.65	19.57	19.54	19.69	19.60
	21	19.58	19.70	19.67	19.61	19.64	19.52	19.67	19.69
	20	19.55	19.56	19.64	19.66	19.55	19.58	19.54	19.62
	19	19.56	19.69	19.63	19.55	19.57	19.53	19.52	19.61
	18	19.69	19.59	19.60	19.53	19.55	19.63	19.51	19.53
	17	23.70	23.56	22.65	22.53	22.67	22.57	21.57	21.69
	16	23.68	23.60	22.63	22.52	22.70	22.66	21.69	21.57
	15	23.55	23.54	22.58	22.59	22.64	22.65	21.55	21.53
	14	23.55	23.70	22.57	22.60	22.60	22.61	21.60	21.65
	13	23.70	23.52	22.65	22.59	22.53	22.61	21.56	21.60
	12	23.58	23.55	22.57	22.55	22.51	22.59	21.60	21.57
	11	23.55	23.59	22.55	22.59	22.69	22.68	21.66	21.61

Table 11-15
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, Mid Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
564 (MID)	24	19.62	19.52	19.61	19.61	19.52	19.69	19.68	19.51
	23	19.55	19.63	19.54	19.64	19.64	19.53	19.63	19.59
	22	19.68	19.63	19.57	19.53	19.67	19.70	19.65	19.56
	21	19.69	19.68	19.54	19.69	19.65	19.61	19.57	19.62
	20	19.68	19.60	19.58	19.62	19.67	19.59	19.68	19.65
	19	19.54	19.57	19.60	19.53	19.58	19.55	19.60	19.53
	18	19.64	19.67	19.55	19.58	19.66	19.63	19.65	19.62
	17	23.70	23.64	22.57	22.70	22.69	22.56	21.63	21.64
	16	23.65	23.69	22.65	22.57	22.68	22.69	21.65	21.62
	15	23.54	23.59	22.55	22.54	22.58	22.68	21.65	21.53
	14	23.57	23.69	22.52	22.53	22.67	22.51	21.51	21.53
	13	23.64	23.61	22.55	22.60	22.69	22.64	21.62	21.64
	12	23.58	23.52	22.61	22.68	22.63	22.60	21.52	21.63
	11	23.57	23.54	22.63	22.64	22.63	22.56	21.58	21.55

Table 11-16
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1013 (Low)	24	19.69	19.54	19.52	19.65	19.62	19.65	19.65	19.70
	23	19.67	19.66	19.52	19.51	19.59	19.61	19.59	19.66
	22	19.65	19.70	19.53	19.59	19.61	19.67	19.68	19.62
	21	19.60	19.56	19.58	19.66	19.62	19.63	19.53	19.61
	20	19.51	19.60	19.70	19.54	19.61	19.69	19.53	19.57
	19	19.69	19.61	19.53	19.57	19.60	19.66	19.59	19.53
	18	19.70	19.53	19.57	19.70	19.67	19.54	19.56	19.64
	17	23.58	23.62	22.65	22.66	22.66	22.58	21.58	21.68
	16	23.65	23.65	22.69	22.61	22.58	22.62	21.61	21.69
	15	23.55	23.54	22.55	22.55	22.56	22.62	21.60	21.65
	14	23.62	23.60	22.64	22.68	22.69	22.60	21.61	21.57
	13	23.61	23.57	22.62	22.59	22.60	22.62	21.70	21.67
	12	23.69	23.66	22.56	22.59	22.61	22.63	21.56	21.55
	11	23.67	23.56	22.63	22.51	22.52	22.70	21.66	21.59

Table 11-17
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
384 (Mid)	24	19.67	19.64	19.66	19.56	19.64	19.63	19.68	19.70
	23	19.58	19.65	19.58	19.69	19.59	19.64	19.66	19.67
	22	19.63	19.51	19.56	19.54	19.57	19.54	19.57	19.55
	21	19.61	19.59	19.66	19.53	19.53	19.54	19.68	19.64
	20	19.52	19.60	19.64	19.67	19.68	19.63	19.69	19.62
	19	19.61	19.60	19.67	19.54	19.69	19.51	19.55	19.70
	18	19.62	19.65	19.51	19.63	19.55	19.68	19.68	19.63
	17	23.64	23.57	22.69	22.55	22.61	22.59	21.59	21.68
	16	23.69	23.64	22.56	22.54	22.69	22.52	21.61	21.54
	15	23.57	23.54	22.57	22.55	22.64	22.60	21.58	21.58
	14	23.57	23.64	22.52	22.61	22.63	22.54	21.63	21.69
	13	23.66	23.63	22.68	22.51	22.58	22.69	21.59	21.66
	12	23.68	23.54	22.60	22.69	22.68	22.65	21.53	21.61
	11	23.52	23.57	22.69	22.51	22.62	22.57	21.68	21.67

Table 11-18
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
777 (High)	24	19.69	19.66	19.55	19.70	19.56	19.52	19.69	19.68
	23	19.67	19.66	19.54	19.54	19.52	19.58	19.62	19.63
	22	19.64	19.57	19.56	19.58	19.52	19.58	19.55	19.67
	21	19.68	19.51	19.54	19.67	19.61	19.63	19.65	19.59
	20	19.64	19.58	19.67	19.69	19.59	19.55	19.58	19.61
	19	19.69	19.69	19.55	19.64	19.69	19.63	19.53	19.57
	18	19.58	19.67	19.55	19.64	19.55	19.60	19.62	19.59
	17	23.65	23.52	22.65	22.64	22.57	22.68	21.65	21.65
	16	23.56	23.70	22.58	22.62	22.54	22.56	21.70	21.64
	15	23.67	23.64	22.59	22.52	22.60	22.58	21.55	21.62
	14	23.65	23.70	22.60	22.56	22.62	22.67	21.56	21.62
	13	23.67	23.63	22.59	22.65	22.58	22.65	21.67	21.67
	12	23.69	23.57	22.57	22.58	22.64	22.57	21.70	21.53
	11	23.70	23.54	22.64	22.60	22.64	22.68	21.63	21.69

Table 11-19
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
25 (Low)	24	19.61	19.61	19.59	19.64	19.56	19.67	19.68	19.65
	23	19.63	19.51	19.62	19.58	19.54	19.60	19.53	19.59
	22	19.68	19.55	19.52	19.52	19.64	19.70	19.60	19.66
	21	19.67	19.59	19.66	19.62	19.53	19.52	19.56	19.60
	20	19.63	19.67	19.55	19.64	19.59	19.55	19.54	19.51
	19	19.57	19.57	19.66	19.60	19.66	19.55	19.59	19.54
	18	19.52	19.60	19.61	19.65	19.69	19.55	19.68	19.58
	17	23.52	23.66	22.63	22.56	22.55	22.59	21.69	21.64
	16	23.66	23.65	22.66	22.60	22.60	22.54	21.61	21.61
	15	23.60	23.65	22.65	22.58	22.55	22.56	21.69	21.68
	14	23.65	23.55	22.67	22.59	22.67	22.70	21.56	21.61
	13	23.61	23.65	22.59	22.53	22.55	22.59	21.55	21.60
	12	23.59	23.65	22.57	22.53	22.67	22.54	21.56	21.68
	11	23.57	23.70	22.68	22.57	22.67	22.64	21.55	21.64

Table 11-20
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
600 (Mid)	24	19.58	19.65	19.57	19.55	19.69	19.52	19.54	19.60
	23	19.54	19.69	19.54	19.54	19.66	19.60	19.68	19.59
	22	19.55	19.52	19.60	19.66	19.63	19.66	19.60	19.52
	21	19.70	19.57	19.62	19.54	19.68	19.61	19.64	19.64
	20	19.61	19.64	19.62	19.64	19.55	19.64	19.62	19.60
	19	19.68	19.64	19.67	19.64	19.56	19.55	19.66	19.63
	18	19.56	19.60	19.64	19.55	19.64	19.66	19.57	19.53
	17	23.69	23.57	22.51	22.58	22.65	22.53	21.67	21.56
	16	23.68	23.68	22.67	22.60	22.65	22.69	21.68	21.56
	15	23.57	23.65	22.56	22.70	22.65	22.55	21.59	21.70
	14	23.54	23.68	22.57	22.52	22.62	22.70	21.67	21.56
	13	23.68	23.56	22.68	22.56	22.60	22.57	21.63	21.52
	12	23.60	23.56	22.65	22.62	22.57	22.64	21.66	21.58
	11	23.58	23.58	22.61	22.57	22.62	22.64	21.62	21.66

Table 11-21
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
1175 (High)	24	19.61	19.59	19.62	19.55	19.67	19.56	19.67	19.52
	23	19.67	19.65	19.67	19.61	19.55	19.58	19.69	19.56
	22	19.63	19.65	19.64	19.69	19.65	19.54	19.66	19.55
	21	19.66	19.65	19.54	19.66	19.53	19.58	19.68	19.53
	20	19.66	19.56	19.54	19.57	19.63	19.64	19.51	19.68
	19	19.61	19.65	19.65	19.70	19.67	19.64	19.57	19.60
	18	19.68	19.65	19.56	19.56	19.63	19.60	19.65	19.66
	17	23.65	23.60	22.65	22.64	22.62	22.59	21.55	21.60
	16	23.68	23.52	22.62	22.68	22.57	22.57	21.69	21.64
	15	23.66	23.52	22.67	22.69	22.60	22.68	21.60	21.59
	14	23.55	23.55	22.55	22.65	22.53	22.58	21.62	21.65
	13	23.65	23.58	22.62	22.62	22.65	22.62	21.62	21.64
	12	23.58	23.65	22.59	22.63	22.54	22.52	21.53	21.65
	11	23.61	23.57	22.53	22.57	22.52	22.67	21.58	21.62

Table 11-22
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, High Ch. 5MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC10 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26665, 5MHz Bandwidth, Conducted Power (dBm)							
		QPSK 1 RB 0 RB Offset	QPSK 1 RB 24 RB Offset	QPSK 12 RB 6 RB Offset	QPSK 25 RB 0 RB Offset	16QAM 1 RB 0 RB Offset	16QAM 1 RB 24 RB Offset	16QAM 12 RB 6 RB Offset	16QAM25 RB 0 RB Offset
564 (MID)	24	19.67	19.61	19.68	19.57	19.52	19.53	19.70	19.53
	23	19.63	19.70	19.63	19.58	19.62	19.64	19.52	19.64
	22	19.58	19.67	19.68	19.69	19.64	19.67	19.61	19.68
	21	19.65	19.67	19.51	19.67	19.67	19.66	19.63	19.64
	20	19.67	19.54	19.69	19.67	19.55	19.57	19.52	19.54
	19	19.57	19.60	19.65	19.69	19.68	19.51	19.58	19.68
	18	19.66	19.63	19.65	19.58	19.55	19.67	19.58	19.63
	17	23.68	23.56	22.55	22.63	22.61	22.70	21.65	21.55
	16	23.66	23.70	22.67	22.54	22.68	22.60	21.55	21.65
	15	23.59	23.53	22.63	22.57	22.55	22.63	21.57	21.69
	14	23.57	23.55	22.55	22.54	22.63	22.66	21.63	21.54
	13	23.63	23.62	22.53	22.58	22.70	22.58	21.55	21.54
	12	23.64	23.67	22.67	22.59	22.69	22.56	21.62	21.56
	11	23.69	23.65	22.70	22.66	22.65	22.55	21.58	21.52

Table 11-23
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 10MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
1013 (Low)	24	19.64	19.66	19.68	19.62	19.61	19.60	19.63	19.62
	23	19.59	19.65	19.60	19.55	19.62	19.58	19.53	19.63
	22	19.63	19.69	19.62	19.65	19.65	19.55	19.65	19.64
	21	19.62	19.58	19.54	19.68	19.55	19.54	19.59	19.57
	20	19.55	19.63	19.64	19.55	19.60	19.67	19.66	19.57
	19	19.54	19.56	19.55	19.65	19.65	19.55	19.53	19.65
	18	19.60	19.59	19.58	19.62	19.69	19.59	19.56	19.66
	17	23.68	23.56	22.52	22.51	22.53	22.51	21.61	21.58
	16	23.61	23.51	22.55	22.55	22.62	22.57	21.54	21.57
	15	23.66	23.57	22.55	22.54	22.58	22.59	21.69	21.60
	14	23.65	23.52	22.56	22.68	22.57	22.58	21.59	21.51
	13	23.53	23.65	22.58	22.68	22.63	22.69	21.62	21.59
	12	23.56	23.55	22.61	22.63	22.66	22.63	21.52	21.53
	11	23.67	23.63	22.54	22.53	22.62	22.51	21.62	21.54

Table 11-24
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 10MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
384 (Mid)	24	19.60	19.63	19.57	19.62	19.68	19.64	19.61	19.55
	23	19.58	19.63	19.65	19.56	19.53	19.62	19.65	19.55
	22	19.58	19.67	19.55	19.62	19.59	19.58	19.64	19.63
	21	19.54	19.55	19.64	19.68	19.61	19.65	19.67	19.60
	20	19.67	19.62	19.70	19.65	19.64	19.58	19.65	19.55
	19	19.60	19.59	19.57	19.63	19.69	19.67	19.53	19.63
	18	19.56	19.58	19.56	19.59	19.60	19.63	19.58	19.65
	17	23.53	23.55	22.52	22.64	22.59	22.51	21.51	21.53
	16	23.61	23.58	22.58	22.68	22.51	22.60	21.61	21.64
	15	23.52	23.64	22.59	22.62	22.59	22.69	21.62	21.55
	14	23.57	23.55	22.58	22.52	22.55	22.53	21.62	21.60
	13	23.69	23.57	22.61	22.58	22.63	22.67	21.67	21.63
	12	23.61	23.64	22.59	22.69	22.65	22.51	21.63	21.64
	11	23.69	23.56	22.53	22.53	22.55	22.65	21.59	21.65

Table 11-25
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, Low Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
777 (High)	24	19.58	19.54	19.59	19.59	19.64	19.53	19.61	19.57
	23	19.59	19.68	19.68	19.61	19.66	19.58	19.57	19.59
	22	19.68	19.64	19.57	19.60	19.55	19.69	19.53	19.58
	21	19.55	19.59	19.56	19.54	19.64	19.55	19.67	19.61
	20	19.56	19.59	19.69	19.54	19.62	19.58	19.66	19.59
	19	19.60	19.66	19.56	19.69	19.68	19.56	19.59	19.53
	18	19.65	19.64	19.57	19.61	19.67	19.59	19.60	19.56
	17	23.60	23.60	22.54	22.57	22.55	22.55	21.54	21.69
	16	23.57	23.51	22.58	22.61	22.55	22.61	21.53	21.53
	15	23.60	23.67	22.67	22.66	22.53	22.59	21.68	21.54
	14	23.60	23.65	22.55	22.60	22.61	22.60	21.53	21.56
	13	23.61	23.58	22.62	22.56	22.62	22.62	21.51	21.60
	12	23.62	23.58	22.63	22.69	22.58	22.60	21.54	21.65
	11	23.65	23.52	22.53	22.53	22.54	22.57	21.60	21.54

Table 11-26
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
25 (Low)	24	19.59	19.61	19.55	19.63	19.60	19.54	19.66	19.62
	23	19.67	19.63	19.55	19.64	19.64	19.68	19.63	19.63
	22	19.62	19.57	19.64	19.56	19.68	19.56	19.55	19.60
	21	19.65	19.59	19.59	19.66	19.56	19.57	19.59	19.62
	20	19.64	19.68	19.65	19.62	19.65	19.60	19.58	19.59
	19	19.57	19.62	19.61	19.65	19.60	19.63	19.64	19.64
	18	19.66	19.61	19.63	19.60	19.63	19.56	19.61	19.56
	17	23.56	23.62	22.61	22.55	22.64	22.64	21.66	21.66
	16	23.68	23.60	22.57	22.65	22.64	22.56	21.63	21.55
	15	23.60	23.54	22.55	22.55	22.60	22.59	21.58	21.59
	14	23.62	23.67	22.64	22.67	22.58	22.63	21.53	21.55
	13	23.56	23.52	22.58	22.63	22.59	22.68	21.63	21.60
	12	23.53	23.56	22.68	22.66	22.62	22.60	21.53	21.53
	11	23.53	23.66	22.60	22.68	22.66	22.69	21.55	21.65

Table 11-27
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
600 (Mid)	24	19.66	19.57	19.59	19.63	19.62	19.58	19.60	19.62
	23	19.57	19.64	19.59	19.60	19.60	19.64	19.67	19.57
	22	19.60	19.65	19.55	19.60	19.64	19.65	19.66	19.59
	21	19.62	19.58	19.55	19.66	19.65	19.66	19.62	19.63
	20	19.57	19.66	19.58	19.64	19.55	19.65	19.58	19.59
	19	19.67	19.59	19.62	19.57	19.65	19.62	19.67	19.59
	18	19.60	19.62	19.61	19.57	19.67	19.58	19.58	19.65
	17	23.62	23.59	22.62	22.66	22.56	22.64	21.62	21.64
	16	23.59	23.58	22.66	22.57	22.64	22.67	21.56	21.66
	15	23.66	23.65	22.51	22.67	22.54	22.66	21.64	21.53
	14	23.65	23.67	22.65	22.69	22.67	22.54	21.60	21.58
	13	23.61	23.63	22.57	22.59	22.57	22.66	21.58	21.60
	12	23.66	23.53	22.62	22.57	22.61	22.58	21.62	21.66
	11	23.66	23.65	22.66	22.52	22.63	22.60	21.63	21.53

Table 11-28
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, Low Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
1175 (High)	24	19.55	19.58	19.68	19.56	19.64	19.69	19.63	19.61
	23	19.64	19.58	19.62	19.66	19.66	19.65	19.65	19.58
	22	19.68	19.58	19.61	19.68	19.66	19.56	19.53	19.61
	21	19.65	19.64	19.62	19.64	19.54	19.63	19.63	19.56
	20	19.58	19.59	19.63	19.57	19.54	19.59	19.60	19.54
	19	19.55	19.63	19.56	19.67	19.68	19.64	19.55	19.56
	18	19.55	19.64	19.53	19.57	19.65	19.64	19.58	19.59
	17	23.69	23.60	22.62	22.62	22.63	22.62	21.56	21.60
	16	23.61	23.60	22.65	22.64	22.53	22.65	21.55	21.64
	15	23.64	23.69	22.61	22.59	22.69	22.64	21.53	21.53
	14	23.61	23.55	22.64	22.60	22.51	22.56	21.59	21.64
	13	23.55	23.57	22.64	22.62	22.52	22.63	21.53	21.68
	12	23.57	23.64	22.54	22.54	22.67	22.68	21.56	21.56
	11	23.65	23.57	22.57	22.66	22.56	22.54	21.59	21.65

Table 11-29
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, Low Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC10 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25. Ch. 26090, 10MHz Bandwidth, 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
564 (MID)	24	19.56	19.57	19.61	19.57	19.61	19.60	19.60	19.57
	23	19.56	19.59	19.58	19.56	19.64	19.56	19.62	19.57
	22	19.61	19.57	19.57	19.60	19.56	19.60	19.58	19.56
	21	19.56	19.63	19.56	19.58	19.58	19.60	19.57	19.57
	20	19.54	19.57	19.63	19.64	19.63	19.61	19.54	19.64
	19	19.56	19.57	19.56	19.59	19.61	19.62	19.60	19.59
	18	19.57	19.60	19.59	19.59	19.61	19.57	19.55	19.63
	17	23.55	23.59	22.63	22.60	22.63	22.65	21.64	21.69
	16	23.55	23.61	22.64	22.69	22.67	22.54	21.58	21.55
	15	23.54	23.62	22.60	22.61	22.62	22.54	21.60	21.68
	14	23.61	23.61	22.52	22.63	22.53	22.52	21.63	21.61
	13	23.63	23.68	22.54	22.54	22.64	22.54	21.67	21.67
	12	23.62	23.65	22.57	22.55	22.69	22.63	21.62	21.61
	11	23.55	23.53	22.59	22.55	22.68	22.65	21.54	21.68

Table 11-30
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
1013 (Low)	24	19.61	19.69	19.55	19.59	19.54	19.53	19.67	19.60
	23	19.61	19.70	19.67	19.60	19.69	19.56	19.67	19.61
	22	19.62	19.54	19.56	19.69	19.69	19.57	19.61	19.63
	21	19.62	19.58	19.66	19.70	19.57	19.59	19.63	19.63
	20	19.63	19.66	19.69	19.52	19.53	19.63	19.66	19.62
	19	19.59	19.53	19.57	19.59	19.65	19.63	19.59	19.69
	18	19.52	19.55	19.53	19.55	19.61	19.59	19.63	19.68
	17	23.52	23.58	22.60	22.68	22.65	22.54	21.55	21.68
	16	23.64	23.64	22.65	22.63	22.60	22.53	21.57	21.59
	15	23.58	23.65	22.66	22.56	22.69	22.59	21.56	21.56
	14	23.62	23.64	22.70	22.65	22.66	22.62	21.54	21.55
	13	23.61	23.56	22.61	22.67	22.56	22.68	21.69	21.66
	12	23.55	23.57	22.68	22.61	22.52	22.61	21.67	21.52
	11	23.64	23.65	22.63	22.65	22.70	22.57	21.58	21.62

Table 11-31
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
384 (Mid)	24	19.65	19.69	19.67	19.62	19.63	19.52	19.64	19.62
	23	19.64	19.67	19.59	19.57	19.64	19.68	19.66	19.57
	22	19.58	19.52	19.66	19.55	19.53	19.67	19.66	19.70
	21	19.66	19.64	19.67	19.59	19.68	19.51	19.57	19.59
	20	19.63	19.61	19.55	19.55	19.63	19.52	19.66	19.62
	19	19.63	19.68	19.52	19.57	19.54	19.58	19.61	19.57
	18	19.60	19.69	19.55	19.68	19.55	19.61	19.54	19.66
	17	23.61	23.58	22.59	22.60	22.68	22.67	21.52	21.63
	16	23.55	23.70	22.70	22.57	22.52	22.62	21.68	21.56
	15	23.63	23.51	22.69	22.56	22.68	22.64	21.59	21.60
	14	23.64	23.58	22.57	22.65	22.69	22.61	21.51	21.53
	13	23.59	23.52	22.56	22.68	22.53	22.52	21.54	21.59
	12	23.61	23.67	22.70	22.61	22.60	22.65	21.66	21.52
	11	23.70	23.61	22.57	22.54	22.65	22.52	21.62	21.65

Table 11-32
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
777 (High)	24	19.57	19.56	19.60	19.67	19.66	19.69	19.67	19.70
	23	19.62	19.67	19.68	19.53	19.66	19.59	19.59	19.70
	22	19.61	19.64	19.61	19.62	19.69	19.58	19.63	19.63
	21	19.54	19.65	19.67	19.53	19.63	19.67	19.58	19.68
	20	19.53	19.63	19.64	19.62	19.58	19.60	19.65	19.67
	19	19.60	19.52	19.68	19.65	19.58	19.65	19.62	19.66
	18	19.60	19.60	19.55	19.59	19.55	19.57	19.67	19.68
	17	23.56	23.59	22.69	22.59	22.69	22.54	21.60	21.70
	16	23.66	23.58	22.51	22.60	22.60	22.63	21.56	21.60
	15	23.52	23.52	22.55	22.63	22.65	22.66	21.61	21.67
	14	23.67	23.70	22.53	22.59	22.63	22.69	21.63	21.60
	13	23.53	23.60	22.58	22.69	22.57	22.58	21.56	21.53
	12	23.57	23.60	22.59	22.61	22.68	22.58	21.67	21.65
	11	23.58	23.57	22.64	22.60	22.64	22.69	21.52	21.52

Table 11-33
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
25 (Low)	24	19.57	19.68	19.70	19.65	19.68	19.63	19.56	19.57
	23	19.65	19.68	19.57	19.67	19.57	19.61	19.64	19.60
	22	19.56	19.62	19.54	19.68	19.52	19.60	19.65	19.70
	21	19.54	19.53	19.69	19.70	19.68	19.66	19.55	19.66
	20	19.63	19.67	19.52	19.66	19.69	19.69	19.62	19.52
	19	19.54	19.56	19.63	19.56	19.56	19.57	19.65	19.67
	18	19.68	19.62	19.55	19.53	19.58	19.61	19.63	19.69
	17	23.59	23.68	22.64	22.65	22.57	22.63	21.7	21.69
	16	23.69	23.66	22.67	22.6	22.64	22.62	21.53	21.6
	15	23.61	23.6	22.52	22.52	22.67	22.52	21.68	21.54
	14	23.59	23.68	22.67	22.69	22.53	22.67	21.69	21.67
	13	23.61	23.53	22.59	22.65	22.66	22.61	21.69	21.62
	12	23.58	23.59	22.56	22.61	22.67	22.57	21.55	21.68
	11	23.56	23.62	22.53	22.63	22.68	22.57	21.57	21.67

Table 11-34
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
600 (Mid)	24	19.55	19.64	19.66	19.65	19.69	19.66	19.61	19.53
	23	19.55	19.62	19.53	19.54	19.68	19.60	19.68	19.54
	22	19.56	19.58	19.69	19.56	19.60	19.51	19.69	19.53
	21	19.62	19.64	19.54	19.62	19.56	19.62	19.64	19.68
	20	19.59	19.70	19.54	19.55	19.56	19.69	19.64	19.61
	19	19.70	19.52	19.65	19.62	19.61	19.64	19.68	19.55
	18	19.52	19.52	19.61	19.61	19.69	19.65	19.64	19.59
	17	23.69	23.62	22.68	22.57	22.52	22.64	21.65	21.52
	16	23.52	23.65	22.68	22.56	22.66	22.57	21.66	21.65
	15	23.64	23.54	22.56	22.61	22.51	22.65	21.56	21.62
	14	23.66	23.52	22.52	22.51	22.59	22.64	21.53	21.64
	13	23.7	23.69	22.55	22.53	22.56	22.63	21.58	21.67
	12	23.53	23.67	22.61	22.69	22.58	22.51	21.65	21.64
	11	23.65	23.61	22.56	22.52	22.58	22.57	21.59	21.56

Table 11-35
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
1175 (High)	24	19.69	19.51	19.52	19.52	19.63	19.65	19.57	19.59
	23	19.53	19.52	19.68	19.61	19.55	19.66	19.54	19.69
	22	19.65	19.69	19.54	19.53	19.59	19.70	19.56	19.61
	21	19.55	19.63	19.65	19.57	19.58	19.63	19.53	19.66
	20	19.67	19.58	19.64	19.58	19.61	19.61	19.52	19.59
	19	19.65	19.68	19.58	19.54	19.67	19.65	19.52	19.69
	18	19.55	19.55	19.59	19.64	19.69	19.66	19.64	19.53
	17	23.55	23.53	22.60	22.64	22.61	22.64	21.60	21.51
	16	23.51	23.67	22.63	22.54	22.56	22.58	21.61	21.63
	15	23.54	23.58	22.59	22.51	22.65	22.56	21.52	21.57
	14	23.69	23.69	22.53	22.60	22.66	22.70	21.67	21.57
	13	23.67	23.64	22.66	22.68	22.59	22.60	21.64	21.65
	12	23.55	23.68	22.61	22.64	22.62	22.69	21.61	21.69
	11	23.63	23.52	22.56	22.55	22.69	22.70	21.60	21.59

Table 11-36
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, Mid Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC10 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26365, 10 MHz Bandwidth 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
564 (MID)	24	19.52	19.59	19.56	19.68	19.68	19.66	19.63	19.61
	23	19.61	19.52	19.68	19.58	19.67	19.52	19.55	19.66
	22	19.67	19.69	19.68	19.66	19.64	19.61	19.62	19.58
	21	19.65	19.53	19.53	19.69	19.52	19.65	19.53	19.62
	20	19.54	19.64	19.66	19.68	19.64	19.63	19.65	19.66
	19	19.66	19.62	19.65	19.69	19.58	19.54	19.52	19.56
	18	19.64	19.59	19.64	19.59	19.62	19.62	19.65	19.64
	17	23.66	23.68	22.57	22.53	22.68	22.66	21.67	21.60
	16	23.65	23.55	22.62	22.62	22.63	22.54	21.65	21.52
	15	23.55	23.55	22.66	22.56	22.61	22.69	21.66	21.52
	14	23.51	23.57	22.53	22.58	22.67	22.64	21.52	21.59
	13	23.67	23.65	22.64	22.56	22.68	22.60	21.65	21.52
	12	23.61	23.51	22.69	22.60	22.66	22.62	21.58	21.61
	11	23.69	23.66	22.55	22.65	22.62	22.59	21.61	21.51

Table 11-37
SVLTE Power Reduction Verification Results
Low Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
1013 (Low)	24	19.69	19.59	19.69	19.58	19.60	19.56	19.67	19.59
	23	19.61	19.64	19.53	19.54	19.55	19.66	19.58	19.56
	22	19.62	19.68	19.54	19.62	19.62	19.56	19.65	19.54
	21	19.62	19.58	19.58	19.53	19.55	19.61	19.54	19.57
	20	19.61	19.63	19.69	19.66	19.63	19.67	19.64	19.51
	19	19.52	19.61	19.59	19.53	19.62	19.54	19.53	19.63
	18	19.56	19.62	19.51	19.66	19.68	19.68	19.65	19.55
	17	23.59	23.67	22.52	22.60	22.68	22.60	21.68	21.60
	16	23.54	23.53	22.64	22.63	22.64	22.56	21.57	21.60
	15	23.67	23.66	22.57	22.66	22.54	22.51	21.63	21.60
	14	23.69	23.57	22.67	22.55	22.66	22.65	21.67	21.68
	13	23.52	23.54	22.58	22.55	22.53	22.56	21.64	21.63
	12	23.62	23.61	22.70	22.62	22.51	22.68	21.56	21.60
	11	23.55	23.57	22.59	22.62	22.55	22.57	21.57	21.60

Table 11-38
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
384 (Mid)	24	19.54	19.57	19.66	19.60	19.54	19.64	19.57	19.58
	23	19.55	19.63	19.61	19.66	19.65	19.67	19.63	19.56
	22	19.53	19.59	19.64	19.66	19.59	19.69	19.54	19.68
	21	19.65	19.66	19.54	19.53	19.56	19.60	19.64	19.63
	20	19.69	19.63	19.53	19.51	19.60	19.70	19.68	19.58
	19	19.67	19.52	19.59	19.55	19.54	19.69	19.59	19.53
	18	19.54	19.63	19.66	19.64	19.51	19.54	19.61	19.62
	17	23.63	23.53	22.63	22.63	22.70	22.51	21.67	21.53
	16	23.67	23.53	22.64	22.54	22.69	22.66	21.58	21.51
	15	23.53	23.68	22.54	22.54	22.69	22.53	21.70	21.68
	14	23.63	23.66	22.61	22.56	22.62	22.52	21.66	21.66
	13	23.57	23.51	22.52	22.66	22.63	22.64	21.60	21.52
	12	23.62	23.63	22.54	22.65	22.61	22.68	21.62	21.52
	11	23.52	23.59	22.54	22.60	22.52	22.58	21.51	21.59

Table 11-39
SVLTE Power Reduction Verification Results
High Ch. Cell. CDMA - FCC Rule Part 22H, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC0 1x-RTT CDMA Voice Channel	BC0 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
777 (High)	24	19.62	19.59	19.60	19.52	19.61	19.70	19.64	19.55
	23	19.52	19.61	19.63	19.60	19.65	19.60	19.53	19.54
	22	19.65	19.65	19.70	19.53	19.56	19.52	19.69	19.58
	21	19.61	19.63	19.64	19.65	19.58	19.59	19.54	19.67
	20	19.66	19.57	19.63	19.61	19.69	19.63	19.64	19.54
	19	19.66	19.51	19.61	19.52	19.61	19.51	19.66	19.69
	18	19.58	19.63	19.63	19.61	19.59	19.70	19.54	19.54
	17	23.69	23.63	22.65	22.54	22.60	22.51	21.64	21.58
	16	23.56	23.65	22.64	22.70	22.60	22.53	21.53	21.55
	15	23.69	23.51	22.59	22.62	22.69	22.53	21.61	21.53
	14	23.58	23.66	22.60	22.63	22.57	22.64	21.57	21.57
	13	23.68	23.59	22.61	22.67	22.62	22.52	21.52	21.63
	12	23.67	23.60	22.62	22.67	22.58	22.69	21.61	21.68
	11	23.66	23.58	22.58	22.69	22.65	22.70	21.60	21.61

Table 11-40
SVLTE Power Reduction Verification Results
Low Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
25 (Low)	24	19.63	19.68	19.61	19.63	19.67	19.62	19.69	19.64
	23	19.53	19.54	19.62	19.53	19.51	19.61	19.58	19.59
	22	19.62	19.62	19.64	19.53	19.68	19.68	19.56	19.66
	21	19.59	19.54	19.57	19.69	19.56	19.70	19.65	19.64
	20	19.56	19.59	19.70	19.65	19.62	19.56	19.67	19.65
	19	19.62	19.70	19.57	19.58	19.60	19.55	19.69	19.59
	18	19.58	19.53	19.53	19.61	19.56	19.65	19.67	19.67
	17	23.62	23.62	22.53	22.62	22.65	22.63	21.61	21.62
	16	23.65	23.61	22.65	22.56	22.54	22.68	21.60	21.52
	15	23.67	23.70	22.63	22.64	22.53	22.60	21.60	21.57
	14	23.53	23.65	22.60	22.54	22.63	22.67	21.66	21.62
	13	23.51	23.69	22.55	22.65	22.58	22.65	21.62	21.69
	12	23.63	23.70	22.67	22.58	22.64	22.66	21.54	21.58
	11	23.70	23.62	22.55	22.70	22.56	22.70	21.63	21.62

Table 11-41
SVLTE Power Reduction Verification Results
Mid Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
600 (Mid)	24	19.53	19.54	19.69	19.61	19.55	19.64	19.61	19.58
	23	19.51	19.59	19.55	19.66	19.64	19.68	19.70	19.51
	22	19.56	19.57	19.53	19.66	19.59	19.62	19.52	19.57
	21	19.61	19.61	19.57	19.63	19.61	19.55	19.53	19.68
	20	19.60	19.65	19.54	19.67	19.62	19.64	19.55	19.64
	19	19.64	19.65	19.57	19.61	19.58	19.66	19.64	19.57
	18	19.53	19.65	19.56	19.55	19.68	19.51	19.70	19.53
	17	23.69	23.69	22.58	22.54	22.58	22.53	21.56	21.52
	16	23.69	23.55	22.58	22.65	22.64	22.64	21.60	21.51
	15	23.52	23.52	22.58	22.56	22.67	22.54	21.63	21.59
	14	23.54	23.59	22.52	22.55	22.70	22.54	21.60	21.63
	13	23.56	23.67	22.58	22.67	22.62	22.68	21.58	21.58
	12	23.59	23.58	22.69	22.63	22.59	22.64	21.54	21.54
	11	23.66	23.52	22.69	22.52	22.63	22.52	21.61	21.55

Table 11-42
SVLTE Power Reduction Verification Results
High Ch. PCS CDMA - FCC Rule Part 24E, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC1 1x-RTT CDMA Voice Channel	BC1 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
1175 (High)	24	19.68	19.61	19.56	19.57	19.53	19.55	19.61	19.60
	23	19.69	19.60	19.56	19.54	19.55	19.57	19.61	19.58
	22	19.68	19.68	19.67	19.64	19.65	19.55	19.57	19.55
	21	19.61	19.68	19.66	19.64	19.55	19.62	19.64	19.64
	20	19.56	19.63	19.65	19.55	19.58	19.68	19.62	19.70
	19	19.58	19.57	19.66	19.60	19.67	19.64	19.62	19.57
	18	19.65	19.62	19.63	19.65	19.61	19.53	19.53	19.52
	17	23.57	23.51	22.60	22.59	22.52	22.67	21.55	21.70
	16	23.65	23.59	22.68	22.56	22.68	22.60	21.52	21.60
	15	23.63	23.61	22.62	22.58	22.69	22.55	21.66	21.70
	14	23.55	23.62	22.62	22.59	22.52	22.69	21.67	21.64
	13	23.68	23.63	22.65	22.64	22.52	22.58	21.54	21.58
	12	23.58	23.64	22.61	22.68	22.53	22.63	21.58	21.67
	11	23.61	23.57	22.67	22.61	22.63	22.65	21.67	21.64

Table 11-43
SVLTE Power Reduction Verification Results
Mid Ch. Cell. CDMA - FCC Rule Part 90S, High Ch. 10 MHz BW, LTE Band 25 - FCC Rule Part 24E

BC10 1x-RTT CDMA Voice Channel	BC10 1x-RTT CDMA Voice Tx(dBm)	LTE Band 25, Ch. 26640, 10 MHz Bandwidth 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
564 (MID)	24	19.65	19.57	19.57	19.64	19.55	19.63	19.59	19.66
	23	19.60	19.70	19.58	19.70	19.62	19.64	19.56	19.53
	22	19.66	19.52	19.59	19.70	19.63	19.55	19.53	19.59
	21	19.53	19.64	19.58	19.57	19.68	19.59	19.67	19.67
	20	19.59	19.54	19.70	19.62	19.67	19.55	19.64	19.51
	19	19.53	19.65	19.64	19.64	19.66	19.60	19.57	19.53
	18	19.63	19.53	19.65	19.55	19.59	19.60	19.56	19.55
	17	23.62	23.57	22.66	22.66	22.66	22.60	21.60	21.59
	16	23.62	23.67	22.64	22.66	22.65	22.59	21.62	21.53
	15	23.58	23.56	22.68	22.61	22.58	22.68	21.58	21.60
	14	23.57	23.67	22.57	22.59	22.59	22.65	21.53	21.59
	13	23.53	23.54	22.63	22.64	22.54	22.59	21.54	21.52
	12	23.56	23.66	22.59	22.69	22.68	22.53	21.67	21.58
	11	23.60	23.52	22.65	22.55	22.59	22.64	21.56	21.52

11.3 SVLTE SAR Testing Procedures

SAR testing was additionally performed at the reduced CDMA and LTE power levels with respect to the various SVLTE simultaneous transmission scenarios. Additional samples were tuned to reduced power levels for the purpose of evaluating the simultaneous SAR based on the sum SAR of standalone 1x-RTT CDMA and standalone LTE combinations. While the power reduction mechanism is activated at the CDMA Voice power level of 18 dBm, simultaneous SAR summations were evaluated maximum power LTE. SAR was additionally evaluated at reduced power LTE levels to perform simultaneous SAR analysis when CDMA voice is at maximum output power.

Table 11-44
Reduced LTE 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	19.54	0	0
	1852.5	26065	5	QPSK	1	24	19.59	0	0
	1852.5	26065	5	QPSK	12	6	19.63	0	0-1
	1852.5	26065	5	QPSK	25	0	19.48	0	0-1
	1852.5	26065	5	16-QAM	1	0	19.26	0	0-1
	1852.5	26065	5	16-QAM	1	24	19.29	0	0-1
	1852.5	26065	5	16-QAM	12	6	19.54	0	0-2
	1852.5	26065	5	16-QAM	25	0	19.46	0	0-2
Mid	1882.5	26365	5	QPSK	1	0	19.58	0	0
	1882.5	26365	5	QPSK	1	24	19.67	0	0
	1882.5	26365	5	QPSK	12	6	19.60	0	0-1
	1882.5	26365	5	QPSK	25	0	19.62	0	0-1
	1882.5	26365	5	16-QAM	1	0	19.36	0	0-1
	1882.5	26365	5	16-QAM	1	24	19.33	0	0-1
	1882.5	26365	5	16-QAM	12	6	19.56	0	0-2
	1882.5	26365	5	16-QAM	25	0	19.54	0	0-2
High	1912.5	26665	5	QPSK	1	0	19.73	0	0
	1912.5	26665	5	QPSK	1	24	19.40	0	0
	1912.5	26665	5	QPSK	12	6	19.67	0	0-1
	1912.5	26665	5	QPSK	25	0	19.59	0	0-1
	1912.5	26665	5	16-QAM	1	0	19.23	0	0-1
	1912.5	26665	5	16-QAM	1	24	19.18	0	0-1
	1912.5	26665	5	16-QAM	12	6	19.50	0	0-2
	1912.5	26665	5	16-QAM	25	0	19.56	0	0-2

Table 11-45
Reduced LTE 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	19.52	0	0
	1855	26090	10	QPSK	1	49	19.54	0	0
	1855	26090	10	QPSK	25	12	19.51	0	0-1
	1855	26090	10	QPSK	50	0	19.46	0	0-1
	1855	26090	10	16QAM	1	0	19.47	0	0-1
	1855	26090	10	16QAM	1	49	19.56	0	0-1
	1855	26090	10	16QAM	25	12	19.47	0	0-2
	1855	26090	10	16QAM	50	0	19.41	0	0-2
Mid	1882.5	26365	10	QPSK	1	0	**19.59**	0	0
	1882.5	26365	10	QPSK	1	49	**19.56**	0	0
	1882.5	26365	10	QPSK	25	12	**19.66**	0	0-1
	1882.5	26365	10	QPSK	50	0	19.58	0	0-1
	1882.5	26365	10	16QAM	1	0	**19.64**	0	0-1
	1882.5	26365	10	16QAM	1	49	**19.62**	0	0-1
	1882.5	26365	10	16QAM	25	12	**19.59**	0	0-2
	1882.5	26365	10	16QAM	50	0	19.51	0	0-2
High	1910	26640	10	QPSK	1	0	19.65	0	0
	1910	26640	10	QPSK	1	49	19.60	0	0
	1910	26640	10	QPSK	25	12	19.64	0	0-1
	1910	26640	10	QPSK	50	0	19.64	0	0-1
	1910	26640	10	16QAM	1	0	19.55	0	0-1
	1910	26640	10	16QAM	1	49	19.57	0	0-1
	1910	26640	10	16QAM	25	12	19.52	0	0-2
	1910	26640	10	16QAM	50	0	19.57	0	0-2

General test procedures for LTE can be found in Section 9.3.3. According to FCC KDB 941225 D05:

1. The output power across low, mid, and high channel was less than 0.5 dB for QPSK 50% RB, therefore mid channel was tested for QPSK 50% RB. Low and high channel SAR were not required since the SAR values for all configurations were less than 0.8 W/kg.
2. The average output power of QPSK 1 RB configurations was not more than 0.5 dB higher than QPSK 50% RB, therefore mid channel (highest SAR measured with QPSK 50% RB) was tested for QPSK 1 RB configurations. Low and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations. 1 RB low and high offset configurations are considered together for a single channel selection.
3. The average output power of 16 QAM 50% RB was not more than 0.5 dB higher than QPSK, therefore the mid channel (highest SAR measured with QPSK 50% RB) was tested for 16 QAM 50% RB. Low and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations.
4. The average output power of 16 QAM 1 RB configurations was not more than 0.5 dB higher than 16 QAM 50% RB, therefore mid channel (highest SAR measured with 16 QAM 50% RB) was tested for 16 QAM 1 RB configurations. Low and high channel SAR tests were not required since the SAR was <1.45 W/kg for all configurations. 1 RB low and high offset configurations are considered together for a single channel selection.
5. 100% RB Allocation SAR was not required since the 50% RB SAR was not >1.45 W/kg.
6. 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.
7. The bolded powers were tested for SAR.

Table 11-46
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 - FCC Rule Part 90S	564	820.1	18.60	18.53	18.47	18.48	18.58
Cellular - FCC Rule Part 22H	1013	824.7	18.54	18.40	18.53	18.55	18.49
	384	836.52	18.54	18.50	18.59	18.56	18.44
	777	848.31	18.55	18.55	18.56	18.60	18.65
PCS - FCC Rule Part 24E	25	1851.25	18.54	18.50	18.47	18.51	18.53
	600	1880	18.59	18.46	18.49	18.50	18.48
	1175	1908.75	18.60	18.44	18.46	18.51	18.51

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.

1x Advanced Considerations per October 2011 TCB Workshop:
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.

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
07/30/2012	835H	23.4	820	0.874	41.65	0.898	41.571	-2.67%	0.19%
			835	0.878	41.58	0.900	41.500	-2.44%	0.19%
			850	0.887	41.48	0.916	41.500	-3.17%	-0.05%
08/20/2012	835H	22.9	820	0.868	40.78	0.898	41.571	-3.34%	-1.90%
			835	0.881	40.72	0.900	41.500	-2.11%	-1.88%
			850	0.892	40.54	0.916	41.500	-2.62%	-2.31%
07/30/2012	1900H	21.4	1850	1.357	38.60	1.400	40.000	-3.07%	-3.50%
			1880	1.393	38.69	1.400	40.000	-0.50%	-3.28%
			1910	1.431	38.41	1.400	40.000	2.21%	-3.98%
08/23/2012	1900H	22.5	1850	1.373	41.19	1.400	40.000	-1.93%	2.97%
			1880	1.419	41.00	1.400	40.000	1.36%	2.50%
			1910	1.455	40.90	1.400	40.000	3.93%	2.25%
07/26/2012	2450H	22.3	2401	1.832	40.65	1.758	39.298	4.21%	3.44%
			2450	1.885	40.29	1.800	39.200	4.72%	2.78%
			2499	1.939	40.15	1.852	39.135	4.70%	2.59%
07/30/2012	835B	22.9	820	0.960	55.08	0.969	55.284	-0.93%	-0.37%
			835	0.971	54.86	0.970	55.200	0.10%	-0.62%
			850	0.983	54.84	0.988	55.154	-0.51%	-0.57%
07/26/2012	1900B	24.1	1850	1.446	53.48	1.520	53.300	-4.87%	0.34%
			1880	1.477	53.37	1.520	53.300	-2.83%	0.13%
			1910	1.510	53.29	1.520	53.300	-0.66%	-0.02%
07/31/2012	1900B	21.1	1850	1.491	51.81	1.520	53.300	-1.91%	-2.80%
			1880	1.558	51.88	1.520	53.300	2.50%	-2.66%
			1910	1.571	51.74	1.520	53.300	3.36%	-2.93%
07/25/2012	2450B	22.2	2401	1.877	50.38	1.903	52.765	-1.37%	-4.52%
			2450	1.957	50.28	1.950	52.700	0.36%	-4.59%
			2499	2.001	50.30	2.019	52.638	-0.89%	-4.44%

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 $j = \sqrt{-1}$.

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	07/30/2012	24.8	23.4	0.100	4d119	3258	0.939	9.420	9.390	-0.32%
835	Head	08/20/2012	23.5	22.8	0.100	4d047	3287	0.994	9.410	9.940	5.63%
1900	Head	07/30/2012	21.1	21.2	0.100	5d149	3287	4.11	39.300	41.100	4.58%
1900	Head	08/23/2012	23.9	22.7	0.100	5d149	3287	4.18	39.300	41.800	6.36%
2450	Head	07/26/2012	20.8	21.0	0.100	882	3287	5.34	53.500	53.400	-0.19%
835	Body	07/30/2012	24.1	23.4	0.100	4d119	3258	0.974	9.560	9.740	1.88%
1900	Body	07/26/2012	24.9	24.5	0.100	502	3209	4.14	38.900	41.400	6.43%
1900	Body	07/31/2012	21.9	21.1	0.100	5d149	3287	4.13	39.300	41.300	5.09%
2450	Body	07/25/2012	20.6	20.3	0.040	882	3288	2.02	50.300	50.500	0.40%

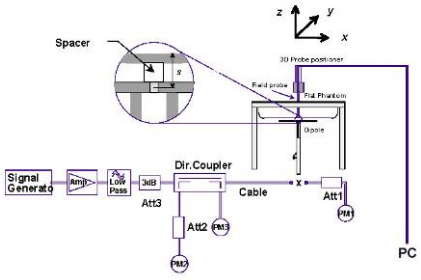

Figure 12-1
System Verification Setup Diagram

Figure 12-2
System Verification Setup Photo

13 SAR DATA SUMMARY

13.1 Standalone Head SAR Data

Table 13-1
Cell. CDMA - FCC Rule Part 90S Head SAR Results

MEASUREMENT RESULTS											
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.										(W/kg)
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	25.12	0.05	24.5	+0.7 / -1.5	Right	Cheek	SAR#1	0.306
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	25.12	-0.05	24.5	+0.7 / -1.5	Right	Tilt	SAR#1	0.256
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	25.12	0.03	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	0.424
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	25.12	0.13	24.5	+0.7 / -1.5	Left	Tilt	SAR#1	0.279
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. A	25.03	-0.07	24.5	+0.7 / -1.5	Right	Cheek	SAR#1	0.329
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. A	25.03	-0.14	24.5	+0.7 / -1.5	Right	Tilt	SAR#1	0.264
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. A	25.03	0.14	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	**0.494**
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. A	25.03	-0.05	24.5	+0.7 / -1.5	Left	Tilt	SAR#1	0.263
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	18.53	0.10	18	+0.7 / -1.5	Right	Cheek	1x Reduced	0.064
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	18.53	0.05	18	+0.7 / -1.5	Right	Tilt	1x Reduced	0.054
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	18.53	0.05	18	+0.7 / -1.5	Left	Cheek	1x Reduced	0.082
820.10	564	Cell. CDMA - FCC Rule Part 90S	SO55	18.53	0.08	18	+0.7 / -1.5	Left	Tilt	1x Reduced	0.062
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
Cell. CDMA - FCC Rule Part 22H Head SAR Results

MEASUREMENT RESULTS											
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.										(W/kg)
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	25.44	0.04	24.8	+0.7 / -1.5	Right	Cheek	SAR#1	0.313
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	25.44	-0.08	24.8	+0.7 / -1.5	Right	Tilt	SAR#1	0.268
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	25.44	0.07	24.8	+0.7 / -1.5	Left	Cheek	SAR#1	0.422
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	25.44	0.03	24.8	+0.7 / -1.5	Left	Tilt	SAR#1	0.273
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. A	25.36	-0.01	24.8	+0.7 / -1.5	Right	Cheek	SAR#1	0.325
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. A	25.36	0.08	24.8	+0.7 / -1.5	Right	Tilt	SAR#1	0.291
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. A	25.36	0.04	24.8	+0.7 / -1.5	Left	Cheek	SAR#1	**0.443**
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. A	25.36	0.15	24.8	+0.7 / -1.5	Left	Tilt	SAR#1	0.267
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	18.50	-0.17	18	+0.7 / -1.5	Right	Cheek	1x Reduced	0.063
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	18.50	0.00	18	+0.7 / -1.5	Right	Tilt	1x Reduced	0.054
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	18.50	0.02	18	+0.7 / -1.5	Left	Cheek	1x Reduced	0.087
836.52	384	Cell. CDMA - FCC Rule Part 22H	SO55	18.50	0.03	18	+0.7 / -1.5	Left	Tilt	1x Reduced	0.059
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 - FCC Rule Part 24E Head SAR Results

MEASUREMENT RESULTS											
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Side	Test Position	Device Serial Number	SAR (1g)
MHz	Ch.										(W/kg)
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	25.05	-0.09	24.5	+0.7 / -1.5	Right	Cheek	SAR#1	0.492
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	25.05	0.01	24.5	+0.7 / -1.5	Right	Tilt	SAR#1	0.271
1851.25	25	PCS CDMA - FCC Rule Part 24E	SO55	25.03	-0.07	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	0.817
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	25.05	-0.03	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	**0.919**
1908.75	1175	PCS CDMA - FCC Rule Part 24E	SO55	25.08	0.12	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	0.894
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	25.05	0.14	24.5	+0.7 / -1.5	Left	Tilt	SAR#1	0.278
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.05	-0.13	24.5	+0.7 / -1.5	Right	Cheek	SAR#1	0.351
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.05	0.03	24.5	+0.7 / -1.5	Right	Tilt	SAR#1	0.274
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.05	-0.05	24.5	+0.7 / -1.5	Left	Cheek	SAR#1	0.750
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.05	0.15	24.5	+0.7 / -1.5	Left	Tilt	SAR#1	0.242
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	18.46	-0.01	18	+0.7 / -1.5	Right	Cheek	1x Reduced	0.113
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	18.46	-0.03	18	+0.7 / -1.5	Right	Tilt	1x Reduced	0.056
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	18.46	-0.02	18	+0.7 / -1.5	Left	Cheek	1x Reduced	0.186
1880.00	600	PCS CDMA - FCC Rule Part 24E	SO55	18.46	-0.03	18	+0.7 / -1.5	Left	Tilt	1x Reduced	0.058
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**Head 1.6 W/kg (mW/g) averaged over 1 gram**			

Table 13-4
LTE Band 25 Head SAR Results – Maximum Power

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	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)
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.05	1	Right	Cheek	QPSK	25	12	150	0.618
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	0.08	0	Right	Cheek	QPSK	1	0	150	0.641
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.11	0	Right	Cheek	QPSK	1	49	150	**0.662**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.04	2	Right	Cheek	16 QAM	25	12	150	0.521
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	0.08	1	Right	Cheek	16 QAM	1	0	150	0.632
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	0.08	1	Right	Cheek	16 QAM	1	49	150	0.581
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.03	1	Right	Tilt	QPSK	25	12	150	0.761
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.03	0	Right	Tilt	QPSK	1	0	150	**0.774**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	0.01	0	Right	Tilt	QPSK	1	49	150	0.736
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.01	2	Right	Tilt	16 QAM	25	12	150	0.639
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	0.04	1	Right	Tilt	16 QAM	1	0	150	0.753
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	0.03	1	Right	Tilt	16 QAM	1	49	150	0.661
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.40	0.06	1	Left	Cheek	QPSK	25	12	150	0.785
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.02	1	Left	Cheek	QPSK	25	12	150	0.917
1910.00	26640	High	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.12	0.00	1	Left	Cheek	QPSK	25	12	150	0.860
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.04	0	Left	Cheek	QPSK	1	0	150	**0.966**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.06	0	Left	Cheek	QPSK	1	49	150	0.932
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.02	2	Left	Cheek	16 QAM	25	12	150	0.762
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.03	1	Left	Cheek	16 QAM	1	0	150	0.893
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.02	1	Left	Cheek	16 QAM	1	49	150	0.857
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.12	1	Left	Tilt	QPSK	25	12	150	0.741
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.04	0	Left	Tilt	QPSK	1	0	150	**0.809**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.08	0	Left	Tilt	QPSK	1	49	150	0.762
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	-0.04	2	Left	Tilt	16 QAM	25	12	150	0.607
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.08	1	Left	Tilt	16 QAM	1	0	150	0.729
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.06	1	Left	Tilt	16 QAM	1	49	150	0.669
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 13-5
LTE Band 25 Head SAR Results – Reduced Power

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	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)
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.66	0.03	0	Right	Cheek	QPSK	25	12	SAR#4	0.332
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.04	0	Right	Cheek	QPSK	1	0	SAR#4	**0.336**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.56	-0.02	0	Right	Cheek	QPSK	1	49	SAR#4	0.315
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.21	0	Right	Cheek	16 QAM	25	12	SAR#4	0.326
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.64	-0.02	0	Right	Cheek	16 QAM	1	0	SAR#4	0.335
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.62	-0.02	0	Right	Cheek	16 QAM	1	49	SAR#4	0.312
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.66	-0.13	0	Right	Tilt	QPSK	25	12	SAR#4	0.384
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	0.03	0	Right	Tilt	QPSK	1	0	SAR#4	**0.396**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.56	0.00	0	Right	Tilt	QPSK	1	49	SAR#4	0.350
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.02	0	Right	Tilt	16 QAM	25	12	SAR#4	0.383
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.64	0.06	0	Right	Tilt	16 QAM	1	0	SAR#4	0.393
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.62	0.01	0	Right	Tilt	16 QAM	1	49	SAR#4	0.348
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.66	0.04	0	Left	Cheek	QPSK	25	12	SAR#4	0.386
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.04	0	Left	Cheek	QPSK	1	0	SAR#4	**0.388**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.56	0.06	0	Left	Cheek	QPSK	1	49	SAR#4	0.366
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.02	0	Left	Cheek	16 QAM	25	12	SAR#4	0.386
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.64	0.03	0	Left	Cheek	16 QAM	1	0	SAR#4	0.388
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.62	-0.03	0	Left	Cheek	16 QAM	1	49	SAR#4	0.365
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.66	0.00	0	Left	Tilt	QPSK	25	12	SAR#4	0.406
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.04	0	Left	Tilt	QPSK	1	0	SAR#4	**0.412**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.56	0.00	0	Left	Tilt	QPSK	1	49	SAR#4	0.365
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.01	0	Left	Tilt	16 QAM	25	12	SAR#4	0.393
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.64	0.17	0	Left	Tilt	16 QAM	1	0	SAR#4	0.404
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	+0.7 / -1.5	19.62	0.03	0	Left	Tilt	16 QAM	1	49	SAR#4	0.364
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 13-6
2.4 GHz WLAN - FCC Rule Part 15C 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)
2462	11	IEEE 802.11b - FCC Rule Part 15C	DSSS	15.18	0.06	Right	Cheek	SAR#2	1	**0.008**
2462	11	IEEE 802.11b - FCC Rule Part 15C	DSSS	15.18	0.06	Right	Tilt	SAR#2	1	0.004
2462	11	IEEE 802.11b - FCC Rule Part 15C	DSSS	15.18	0.19	Left	Cheek	SAR#2	1	0.004
2462	11	IEEE 802.11b - FCC Rule Part 15C	DSSS	15.18	0.09	Left	Tilt	SAR#2	1	0.005
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 13-7
CDMA/EVDO Body-Worn SAR Results

MEASUREMENT RESULTS											
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Spacing	Device Serial Number	Side	SAR (1g)
MHz	Ch.										(W/kg)
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	25.02	-0.05	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	**0.717**
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. A	25.03	0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	0.710
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	18.58	-0.01	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.173
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	25.37	-0.07	24.8	+0.7 / -1.5	1.0 cm	SAR#1	back	0.653
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. A	25.36	0.18	24.8	+0.7 / -1.5	1.0 cm	SAR#1	back	**0.695**
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	18.44	-0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.207
1851.25	25	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.09	-0.03	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.070
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.00	-0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	**1.090**
1908.75	1175	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	24.88	0.01	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.080
1851.25	25	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.12	0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.090
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	25.05	-0.04	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.050
1908.75	1175	PCS CDMA - FCC Rule Part 24E	EVDO Rev. A	24.89	-0.04	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	0.999
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	18.48	-0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.245
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:

1. Per FCC Guidance, when the measured Hotspot SAR is less than <1.2 W/kg for the same device orientation and device transmission configurations, separate body-worn accessory data taken with a headset cable is not required. Therefore, for CDMA 1x – RTT mode hotspot back side SAR data was considered to determine body-worn SAR compliance. CDMA 1x-RTT SAR was required to be evaluated for Hotspot exposure conditions to support simultaneous capabilities per Table 1-2.
2. EVDO Rev. A body-worn tests were performed with headphones.

Table 13-8
LTE Body-Worn SAR Results

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	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 (PCS) FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.21	1	150	QPSK	25	12	1.0 cm	back	0.784
1855.00	26090	Low	LTE Band 25 (PCS) FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.20	0	150	QPSK	1	0	1.0 cm	back	**0.956**
1855.00	26090	Low	LTE Band 25 (PCS) FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.12	0	150	QPSK	1	49	1.0 cm	back	0.844
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	-0.02	2	150	16 QAM	25	12	1.0 cm	back	0.646
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.21	1	150	16 QAM	1	0	1.0 cm	back	0.785
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.21	1	150	16 QAM	1	49	1.0 cm	back	0.684
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.66	0.09	0	SAR#4	QPSK	25	12	1.0 cm	back	0.397
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	-0.03	0	SAR#4	QPSK	1	0	1.0 cm	back	**0.417**
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.56	0.07	0	SAR#4	QPSK	1	49	1.0 cm	back	0.352
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.59	0.05	0	SAR#4	16 QAM	25	12	1.0 cm	back	0.391
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.64	0.08	0	SAR#4	16 QAM	1	0	1.0 cm	back	0.392
1882.50	26365	Mid	LTE Band 25 (PCS) FCC Rule Part 24E	10	19	+0.7 / -1.5	19.62	0.07	0	SAR#4	16 QAM	1	49	1.0 cm	back	0.337
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: Per FCC Guidance, when the measured Hotspot SAR is less than <1.2 W/kg for the same device orientation and device transmission configurations, separate body-worn accessory data taken with a headset cable is not required. Therefore, for LTE mode hotspot back side SAR data was considered to determine body-worn SAR compliance.

Table 13-9
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)
2462	11	IEEE 802.11b	DSSS	15.18	0.02	1.0 cm	SAR#2	1	back	0.051
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: Per FCC Guidance, when the measured Hotspot SAR is less than <1.2 W/kg for the same device orientation and device transmission configurations, separate body-worn accessory data taken with a headset cable is not required. Therefore, hotspot back side SAR data was considered to determine body-worn SAR compliance.

13.3 Standalone Wireless Router SAR Data

Table 13-10
EVDO Hotspot SAR Data

MEASUREMENT RESULTS											
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Spacing	Device Serial Number	Side	SAR (1g)
MHz	Ch.										(W/kg)
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. 0	25.03	0.00	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	**0.740**
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. 0	25.03	0.00	24.5	+0.7 / -1.5	1.0 cm	SAR#1	front	0.412
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. 0	25.03	-0.05	24.5	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.365
820.10	564	Cell. CDMA - FCC Rule Part 90S	EVDO Rev. 0	25.03	-0.19	24.5	+0.7 / -1.5	1.0 cm	SAR#1	left	0.636
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. 0	25.37	-0.15	24.8	+0.7 / -1.5	1.0 cm	SAR#1	back	**0.769**
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. 0	25.37	-0.03	24.8	+0.7 / -1.5	1.0 cm	SAR#1	front	0.414
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. 0	25.37	0.03	24.8	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.406
836.52	384	Cell. CDMA - FCC Rule Part 22H	EVDO Rev. 0	25.37	0.00	24.8	+0.7 / -1.5	1.0 cm	SAR#1	left	0.733
1851.25	25	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	25.14	-0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	**1.130**
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	25.09	-0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.050
1908.75	1175	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	24.92	-0.01	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.040
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	25.09	-0.05	24.5	+0.7 / -1.5	1.0 cm	SAR#1	front	0.630
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	25.09	-0.07	24.5	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.729
1880.00	600	PCS CDMA - FCC Rule Part 24E	EVDO Rev. 0	25.09	0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	left	0.294
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**Body 1.6 W/kg (mW/g) averaged over 1 gram**			

Table 13-11
1x – RTT CDMA Hotspot SAR Data

MEASUREMENT RESULTS											
FREQUENCY		Mode	Service	Conducted Power [dBm]	Power Drift [dB]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	Spacing	Device Serial Number	Side	SAR (1g)
MHz	Ch.										(W/kg)
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	25.02	-0.05	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	0.717
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	25.02	0.07	24.5	+0.7 / -1.5	1.0 cm	SAR#1	front	0.431
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	25.02	-0.03	24.5	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.363
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	25.02	-0.04	24.5	+0.7 / -1.5	1.0 cm	SAR#1	left	**0.750**
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	18.58	-0.01	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.173
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	18.58	0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	front	0.091
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	18.58	-0.03	18	+0.7 / -1.5	1.0 cm	1x Reduced	bottom	0.082
820.10	564	Cell. CDMA - FCC Rule Part 90S	TDSO / SO32	18.58	-0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	left	0.148
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	25.37	-0.07	24.8	+0.7 / -1.5	1.0 cm	SAR#1	back	0.653
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	25.37	0.17	24.8	+0.7 / -1.5	1.0 cm	SAR#1	front	0.450
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	25.37	-0.18	24.8	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.444
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	25.37	-0.02	24.8	+0.7 / -1.5	1.0 cm	SAR#1	left	**0.714**
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	18.44	-0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.207
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	18.44	0.05	18	+0.7 / -1.5	1.0 cm	1x Reduced	front	0.106
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	18.44	-0.03	18	+0.7 / -1.5	1.0 cm	1x Reduced	bottom	0.100
836.52	384	Cell. CDMA - FCC Rule Part 22H	TDSO / SO32	18.44	0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	left	0.163
1851.25	25	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.09	-0.03	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.070
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.00	-0.02	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	**1.090**
1908.75	1175	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	24.88	0.01	24.5	+0.7 / -1.5	1.0 cm	SAR#1	back	1.080
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.00	0.00	24.5	+0.7 / -1.5	1.0 cm	SAR#1	front	0.652
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.00	-0.07	24.5	+0.7 / -1.5	1.0 cm	SAR#1	bottom	0.786
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	25.00	-0.18	24.5	+0.7 / -1.5	1.0 cm	SAR#1	left	0.298
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	18.48	-0.04	18	+0.7 / -1.5	1.0 cm	1x Reduced	back	0.245
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	18.48	-0.02	18	+0.7 / -1.5	1.0 cm	1x Reduced	front	0.157
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	18.48	-0.03	18	+0.7 / -1.5	1.0 cm	1x Reduced	bottom	0.215
1880.00	600	PCS CDMA - FCC Rule Part 24E	TDSO / SO32	18.48	0.07	18	+0.7 / -1.5	1.0 cm	1x Reduced	left	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			

Table 13-12
LTE Band 25 Hotspot SAR Data – Maximum Power

MEASUREMENT RESULTS																	
FREQUENCY			Mode	Bandwidth [MHz]	Target Conducted Power [dBm]	Conducted Power Tolerance [dB]	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 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.21	1	150	QPSK	25	12	1.0 cm	back	0.784
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.20	0	150	QPSK	1	0	1.0 cm	back	**0.956**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.12	0	150	QPSK	1	49	1.0 cm	back	0.844
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	-0.02	2	150	16 QAM	25	12	1.0 cm	back	0.646
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.21	1	150	16 QAM	1	0	1.0 cm	back	0.785
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.21	1	150	16 QAM	1	49	1.0 cm	back	0.684
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	0.04	1	150	QPSK	25	12	1.0 cm	front	**0.413**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	0.17	0	150	QPSK	1	0	1.0 cm	front	0.399
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.01	0	150	QPSK	1	49	1.0 cm	front	0.398
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.06	2	150	16 QAM	25	12	1.0 cm	front	0.331
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.01	1	150	16 QAM	1	0	1.0 cm	front	0.392
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	0.18	1	150	16 QAM	1	49	1.0 cm	front	0.377
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	-0.10	1	150	QPSK	25	12	1.0 cm	top	0.381
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.12	0	150	QPSK	1	0	1.0 cm	top	0.354
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	-0.08	0	150	QPSK	1	49	1.0 cm	top	0.330
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.02	2	150	16 QAM	25	12	1.0 cm	top	0.317
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.08	1	150	16 QAM	1	0	1.0 cm	top	**0.385**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.04	1	150	16 QAM	1	49	1.0 cm	top	0.313
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.41	0.17	1	150	QPSK	25	12	1.0 cm	right	0.383
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.32	-0.16	0	150	QPSK	1	0	1.0 cm	right	**0.385**
1855.00	26090	Low	LTE Band 25 (PCS) - FCC Rule Part 24E	10	23	+0.7 / -1.5	23.19	0.01	0	150	QPSK	1	49	1.0 cm	right	0.382
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	21	+0.7 / -1.5	21.43	0.07	2	150	16 QAM	25	12	1.0 cm	right	0.312
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.48	-0.04	1	150	16 QAM	1	0	1.0 cm	right	0.364
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	22	+0.7 / -1.5	22.36	-0.05	1	150	16 QAM	1	49	1.0 cm	right	0.346
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 13-13
LTE Band 25 Hotspot SAR Data – Reduced Power

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Target Conducted Power [dBm]	Conducted Power [dBm]	Conducted Power Tolerance [dB]	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 (PCS) - FCC Rule Part 24E	10	19	19.66	+0.7 / -1.5	0.09	0	SAR#4	QPSK	25	12	1.0 cm	back	0.397
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.03	0	SAR#4	QPSK	1	0	1.0 cm	back	**0.417**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.56	+0.7 / -1.5	0.07	0	SAR#4	QPSK	1	49	1.0 cm	back	0.352
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	0.05	0	SAR#4	16 QAM	25	12	1.0 cm	back	0.391
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.64	+0.7 / -1.5	0.08	0	SAR#4	16 QAM	1	0	1.0 cm	back	0.392
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.62	+0.7 / -1.5	0.07	0	SAR#4	16 QAM	1	49	1.0 cm	back	0.337
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.66	+0.7 / -1.5	-0.05	0	SAR#4	QPSK	25	12	1.0 cm	front	0.185
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.04	0	SAR#4	QPSK	1	0	1.0 cm	front	**0.190**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.56	+0.7 / -1.5	-0.05	0	SAR#4	QPSK	1	49	1.0 cm	front	0.179
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.05	0	SAR#4	16 QAM	25	12	1.0 cm	front	0.184
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.64	+0.7 / -1.5	-0.05	0	SAR#4	16 QAM	1	0	1.0 cm	front	0.175
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.62	+0.7 / -1.5	-0.01	0	SAR#4	16 QAM	1	49	1.0 cm	front	0.178
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.66	+0.7 / -1.5	-0.06	0	SAR#4	QPSK	25	12	1.0 cm	top	0.231
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.06	0	SAR#4	QPSK	1	0	1.0 cm	top	**0.250**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.56	+0.7 / -1.5	-0.05	0	SAR#4	QPSK	1	49	1.0 cm	top	0.212
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.07	0	SAR#4	16 QAM	25	12	1.0 cm	top	0.231
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.64	+0.7 / -1.5	-0.05	0	SAR#4	16 QAM	1	0	1.0 cm	top	0.236
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.62	+0.7 / -1.5	-0.06	0	SAR#4	16 QAM	1	49	1.0 cm	top	0.200
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.66	+0.7 / -1.5	0.14	0	SAR#4	QPSK	25	12	1.0 cm	right	0.212
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	0.05	0	SAR#4	QPSK	1	0	1.0 cm	right	**0.218**
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.56	+0.7 / -1.5	0.02	0	SAR#4	QPSK	1	49	1.0 cm	right	0.191
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.59	+0.7 / -1.5	-0.01	0	SAR#4	16 QAM	25	12	1.0 cm	right	0.199
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.64	+0.7 / -1.5	0.05	0	SAR#4	16 QAM	1	0	1.0 cm	right	0.193
1882.50	26365	Mid	LTE Band 25 (PCS) - FCC Rule Part 24E	10	19	19.62	+0.7 / -1.5	-0.01	0	SAR#4	16 QAM	1	49	1.0 cm	right	0.181
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 13-14
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)
2462	11	2.4 GHz WLAN - FCC Rule Part 15C	DSSS	15.18	0.02	1.0 cm	SAR#2	1	back	**0.051**
2462	11	2.4 GHz WLAN - FCC Rule Part 15C	DSSS	15.18	-0.04	1.0 cm	SAR#2	1	front	0.003
2462	11	2.4 GHz WLAN - FCC Rule Part 15C	DSSS	15.18	0.00	1.0 cm	SAR#2	1	left	0.000
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. Per FCC Guidance, when the measured Hotspot SAR is less than <1.2 W/kg for the same device orientation and device transmission configurations, separate body-worn accessory data taken with a headset cable is not required. Therefore, the CDMA 1x RTT, WLAN and LTE hotspot data for the back side configuration additionally shows body-worn compliance at a separation distance of 10 mm 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. EVDO Rev 0 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.
4. CDMA 1x-RTT SAR was additionally evaluated for Hotspot exposure conditions to support simultaneous capabilities per Table 1-2.
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 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. Head and body-worn SAR was additionally evaluated for EVDO Rev. A to determine VoIP compliance.

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 were evaluated independently for each position. General test procedures can be found in Section 9.3.3.
2. MPR is implemented for this device by the manufacturer when the transmit power is not limited by the power reduction mechanism. 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.

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.

Hotspot Notes:

1. Top and Right Edges for CDMA/EVDO transmitter were not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 guidance (see Section 1.3).
2. Bottom and Left Edges for the LTE transmitter were not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 (see Section 1.3).
3. Top, Bottom, and Right Edges for WLAN transmitter were not tested since the antenna distance from the edge was greater than 2.5 cm per FCC KDB Publication 941225 D06 (see Section 1.3).
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.)

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
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	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

Figure 14-2
SAR Evaluation Requirements for Multiple Transmitter Handsets

14.3 Simultaneous Transmission Analysis

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 14-1 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 1.6(A) for more information.

Table 14-1
Simultaneous Transmission Scenario

REF.	Capable TX Configration	Power Reduction	Head SAR	Body SAR	Hotspot SAR	Note
1	Cell CDMA (FCC Rule Part 22H) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	No	
2	PCS CDMA (FCC Rule Part 24E) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	No	
3	Cell CDMA (FCC Rule Part 90S) Voice + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	No	
4	Cell CDMA (FCC Rule Part 22H) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Table 14-4	CDMA Hotspot
5	PCS CDMA (FCC Rule Part 24E) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Table 14-4	CDMA Hotspot
6	Cell CDMA (FCC Rule Part 90S) 1x Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	No	No	Table 14-4	CDMA Hotspot
7	LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	Table 14-4	LTE Hotspot and VoIP
8	Cell CDMA (FCC Rule Part 22H) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Table 14-5	Table 14-6	No	SVLTE
9	PCS CDMA (FCC Rule Part 24E) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Table 14-5	Table 14-6	No	SVLTE
10	Cell CDMA (FCC Rule Part 90S) Voice + LTE B25 (FCC Rule Part 24E) Data	LTE	Table 14-5	Table 14-6	No	SVLTE
11	Cell CDMA (FCC Rule Part 22H) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Table 14-5	Table 14-6	Table 14-7	WiFi Hotspot (SVLTE)
12	PCS CDMA (FCC Rule Part 24E) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Table 14-5	Table 14-6	Table 14-7	WiFi Hotspot (SVLTE)
13	Cell CDMA (FCC Rule Part 90S) Voice + LTE B25 (FCC Rule Part 24E) Data + 2.4GHz WiFi (FCC Rule Part 15C) Data	LTE	Table 14-5	Table 14-6	Table 14-7	WiFi Hotspot (SVLTE)
14	Cell EVDO (FCC Rule Part 22H) + 2.4GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	Table 14-4	VoIP
15	PCS EVDO (FCC Rule Part 24E) + 2.4 GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	Table 14-4	VoIP
16	Cell EVDO (FCC Rule Part 90S) + 2.4 GHz WiFi (FCC Rule Part 15C) Data	-	Table 14-2	Table 14-3	Table 14-4	VoIP

* Simultaneous transmission between BT and WiFi is not supported.
* Simultaneous transmission between CDMA 1xdata/EVDO and LTE data is not supported.
* SVLTE is supported only. (SVDO is not supported.)
* 1x Advanced capability for Cell CDMA (FCC Rule Part 22H), PCS CDMA (FCC Rule Part 24E) and Cell CDMA (FCC Rule Part 90S) is supported.
* VoIP is supported.
* Maximum output power will be used for SAR compliance. If necessary, power reduction will be used for SAR compliance.

14.4 Voice + WIFI Simultaneous Transmission Analysis

Table 14-2
Simultaneous Transmission Scenario (Held to ear)

Table 14-1 Simult. Tx Ref	Configuration	Cell. CDMA - FCC Rule Part 90S SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
3	Target Power [dBm]	24.5	-	
	Reference	Table 13 - 1	Table 13 - 6	
	Right Cheek	0.306	0.008	0.314
	Right Tilt	0.256	0.004	0.260
	Left Cheek	0.424	0.004	**0.428**
	Left Tilt	0.279	0.005	0.284

Table 14-1 Simult. Tx Ref	Configuration	Cell. CDMA - FCC Rule Part 22H SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
1	Target Power [dBm]	24.8	-	
	Reference	Table 13 - 2	Table 13 - 6	
	Right Cheek	0.313	0.008	0.321
	Right Tilt	0.268	0.004	0.272
	Left Cheek	0.422	0.004	**0.426**
	Left Tilt	0.273	0.005	0.278

Table 14-1 Simult. Tx Ref	Configuration	PCS CDMA - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
2	Target Power [dBm]	24.5	-	
	Reference	Table 13 - 3	Table 13 - 6	
	Right Cheek	0.492	0.008	0.500
	Right Tilt	0.271	0.004	0.275
	Left Cheek	0.919	0.004	**0.923**
	Left Tilt	0.278	0.005	0.283

Table 14-1 Simult. Tx Ref	Configuration	Cell. EVDO Rev. A - FCC Rule Part 90S SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
16	Target Power [dBm]	24.5	-	
	Reference	Table 13 - 1	Table 13 - 6	
	Right Cheek	0.329	0.008	0.337
	Right Tilt	0.264	0.004	0.268
	Left Cheek	0.494	0.004	**0.498**
	Left Tilt	0.263	0.005	0.268

Table 14-1 Simult. Tx Ref	Configuration	Cell. EVDO Rev. A - FCC Rule Part 22H SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
14	Target Power [dBm]	24.8	-	
	Reference	Table 13 - 2	Table 13 - 6	
	Right Cheek	0.325	0.008	0.333
	Right Tilt	0.291	0.004	0.295
	Left Cheek	0.443	0.004	**0.447**
	Left Tilt	0.267	0.005	0.272

Table 14-1 Simult. Tx Ref	Configuration	PCS EVDO Rev. A - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
15	Target Power [dBm]	24.5	-	
	Reference	Table 13 - 3	Table 13 - 6	
	Right Cheek	0.351	0.008	0.359
	Right Tilt	0.274	0.004	0.278
	Left Cheek	0.750	0.004	**0.754**
	Left Tilt	0.242	0.005	0.247

Table 14-1 Simult. Tx Ref	Configuration	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
7	Target Power [dBm]	23	-	
	Reference	Table 13 - 4	Table 13 - 6	
	Right Cheek	0.662	0.008	0.670
	Right Tilt	0.774	0.004	0.778
	Left Cheek	0.966	0.004	**0.970**
	Left Tilt	0.809	0.005	0.814

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

Table 14-1 Simult. Tx Ref	Configuration	Mode		CDMA SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
			Target Power [dBm]	Table 13 - 7	Table 13 - 9	
3	Back Side	Cell. CDMA - FCC Rule Part 90S	24.5	0.717	0.051	0.768
1	Back Side	Cell. CDMA - FCC Rule Part 22H	24.8	0.653	0.051	0.746
2	Back Side	PCS CDMA - FCC Rule Part 24E	24.5	1.090	0.051	**1.141**

Table 14-1 Simult. Tx Ref	Configuration	Mode		EVDO Rev. A SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
			Target Power [dBm]	Table 13-7	Table 13 - 9	
16	Back Side	Cell. EVDO Rev. A - FCC Rule Part 90S	24.5	0.710	0.051	0.761
14	Back Side	Cell. EVDO Rev. A - FCC Rule Part 22H	24.8	0.695	0.051	0.746
15	Back Side	PCS EVDO Rev. A - FCC Rule Part 24E	24.5	1.090	0.051	**1.141**

Table 14-1 Simult. Tx Ref	Configuration		LTE Band 25 SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
		Target Power [dBm]	Table 13 - 8	Table 13 - 9	
7	Back Side	23	0.956	0.051	1.007

14.5 Hotspot SAR Simultaneous Transmission Analysis

Table 14-4
Simultaneous Transmission Scenario (Hotspot at 1.0 cm)

Table 14-1 Simult. Tx Ref	Configuration	Cell. EVDO Rev. 0 - FCC Rule Part 90S SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	Table 14-1 Simult. Tx Ref	Configuration	Cell. EVDO Rev. 0 - FCC Rule Part 22H SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
	Target Power [dBm]	24.5	-			Target Power [dBm]	24.8	-	
	Reference	Table 13 - 10	Table 13 - 14			Reference	Table 13 - 10	Table 13 - 14	
16	Back	0.740	0.051	**0.791**	14	Back	0.769	0.051	**0.820**
	Front	0.412	0.003	0.415		Front	0.414	0.003	0.417
	Top	-	-	0.000		Top	-	-	0.000
	Bottom	0.365	-	0.365		Bottom	0.406	-	0.406
	Right	-	-	0.000		Right	-	-	0.000
	Left	0.636	0.000	0.636		Left	0.733	0.000	0.733

Table 14-1 Simult. Tx Ref	Configuration	PCS EVDO Rev. 0 - FCC Rule Part 924E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	Table 14-1 Simult. Tx Ref	Configuration	LTE Band 25 (PCS) - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
	Target Power [dBm]	24.5	-			Target Power [dBm]	23	-	
	Reference	Table 13 - 10	Table 13 - 14			Reference	Table 13-12	Table 13 - 14	
15	Back	1.130	0.051	**1.181**	7	Back	0.956	0.051	**1.007**
	Front	0.630	0.003	0.633		Front	0.413	0.003	0.416
	Top	-	-	0.000		Top	0.385	-	0.385
	Bottom	0.729	-	0.729		Bottom	-	-	0.000
	Right	-	-	0.000		Right	0.385	-	0.385
	Left	0.294	0.000	0.294		Left	-	0.000	0.000

14.6 SVLTE Simultaneous Transmission Scenario Analysis

Table 14-5
Simultaneous Transmission Scenario (Held to ear)

Table 14-1 Simult. Tx Ref	CDMA Power Level [dBm]	Configuration	Cell. CDMA - FCC Rule Part 90S SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
10, 13	P ≥ 18	Target Power [dBm]	24.5	19	-		
		Reference	Table 13 - 1	Table 13 - 5	Table 13 - 6		
		Right Cheek	0.306	0.336	0.008	0.642	0.650
		Right Tilt	0.256	0.396	0.004	0.652	0.656
		Left Cheek	0.424	0.388	0.004	0.812	0.816
		Left Tilt	0.279	0.412	0.005	0.691	0.696
	P < 18	Target Power [dBm]	18	23	-		
		Reference	Table 13 - 1	Table 13 - 4	Table 13 - 6		
		Right Cheek	0.064	0.662	0.008	0.726	0.734
		Right Tilt	0.054	0.774	0.004	0.828	0.832
		Left Cheek	0.082	0.966	0.004	1.048	**1.052**
		Left Tilt	0.062	0.809	0.005	0.871	0.876
Table 14-1 Simult. Tx Ref	CDMA Power Level [dBm]	Configuration	Cell. CDMA - FCC Rule Part 22H SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
8, 11	P ≥ 18	Target Power [dBm]	24.8	19	-		
		Reference	Table 13 - 2	Table 13 - 5	Table 13 - 6		
		Right Cheek	0.313	0.336	0.008	0.649	0.657
		Right Tilt	0.268	0.396	0.004	0.664	0.668
		Left Cheek	0.422	0.388	0.004	0.810	0.814
		Left Tilt	0.273	0.412	0.005	0.685	0.690
	P < 18	Target Power [dBm]	18	23	-		
		Reference	Table 13 - 2	Table 13 - 4	Table 13 - 6		
		Right Cheek	0.063	0.662	0.008	0.725	0.733
		Right Tilt	0.054	0.774	0.004	0.828	0.832
		Left Cheek	0.087	0.966	0.004	1.053	**1.057**
		Left Tilt	0.059	0.809	0.005	0.868	0.873
Table 14-1 Simult. Tx Ref	CDMA Power Level [dBm]	Configuration	PCS CDMA - FCC Rule Part 24E SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	1	2	3	1+2	1+2+3
9, 12	P ≥ 18	Target Power [dBm]	24.5	19	-		
		Reference	Table 13 - 3	Table 13 - 5	Table 13 - 6		
		Right Cheek	0.492	0.336	0.008	0.828	0.836
		Right Tilt	0.271	0.396	0.004	0.667	0.671
		Left Cheek	0.919	0.388	0.004	1.307	**1.311**
		Left Tilt	0.278	0.412	0.005	0.690	0.695
	P < 18	Target Power [dBm]	18	23	-		
		Reference	Table 13 - 3	Table 13 - 4	Table 13 - 6		
		Right Cheek	0.113	0.662	0.008	0.775	0.783
		Right Tilt	0.056	0.774	0.004	0.830	0.834
		Left Cheek	0.186	0.966	0.004	1.152	1.156
		Left Tilt	0.058	0.809	0.005	0.867	0.872

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

Table 14-1 Simult. Tx Ref	CDMA Power Level [dBm]	Mode		CDMA SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)	
		Tx Ant	Target Power [dBm]	1	2	3		
		Reference		Table 13 - 7	Table 13 - 8	Table 13 -9	1+2	1+2+3
10, 13	P ≥ 18	Cell. CDMA - FCC Rule Part 90S	24.5	0.717	0.417	0.051	1.134	1.185
8, 11		Cell. CDMA - FCC Rule Part 22H	24.8	0.653	0.417	0.051	1.070	1.121
9, 12		PCS CDMA - FCC Rule Part 24E	24.5	1.090	0.417	0.051	1.507	**1.558**
		Reference	Target Power [dBm]	Table 13 - 7	Table 13 - 8	Table 13 -9		
10, 13	P < 18	Cell. CDMA - FCC Rule Part 90S	18	0.173	0.956	0.051	1.129	1.180
8, 11		Cell. CDMA - FCC Rule Part 22H	18	0.207	0.956	0.051	1.163	1.214
9, 12		PCS CDMA - FCC Rule Part 24E	18	0.245	0.956	0.051	1.201	1.252

Table 14-7
Simultaneous Transmission Scenario (Hotspot at 1.0 cm)

Table 14-1 Simult. Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA - FCC Rule Part 90S SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant.	1	2	3	
13	P ≥ 18	Target Power [dBm]	24.5	19	-	
		Reference	Table 13 - 11	Table 13 - 13	Table 13 -14	1+2+3
		Back	0.717	0.417	0.051	**1.185**
		Front	0.431	0.190	0.003	0.624
		Top	-	0.250	-	0.250
		Bottom	0.363	-	-	0.363
		Right	-	0.218	-	0.218
		Left	0.750	-	0.000	0.750
	P < 18	Target Power [dBm]	18	23	-	
		Reference	Table 13 - 11	Table 13 - 12	Table 13 -14	
		Back	0.173	0.956	0.051	1.180
		Front	0.091	0.413	0.003	0.507
		Top	-	0.385	-	0.385
		Bottom	0.082	-	-	0.082
		Right	-	0.385	-	0.385
		Left	0.148	-	0.000	0.148

Table 14-1 Simult. Tx Ref	CDMA Power Level (dBm)	Configuration	Cell. CDMA - FCC Rule Part 22H SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant.	1	2	3	
11	P ≥ 18	Target Power [dBm]	24.8	19	-	
		Reference	Table 13 - 11	Table 13 - 13	Table 13 -14	1+2+3
		Back	0.653	0.417	0.051	1.121
		Front	0.450	0.190	0.003	0.643
		Top	-	0.250	-	0.250
		Bottom	0.444	-	-	0.444
		Right	-	0.218	-	0.218
		Left	0.714	-	0.000	0.714
	P < 18	Target Power [dBm]	18	23	-	
		Reference	Table 13 - 11	Table 13 - 12	Table 13 -14	
		Back	0.207	0.956	0.051	**1.214**
		Front	0.106	0.413	0.003	0.522
		Top	-	0.385	-	0.385
		Bottom	0.100	-	-	0.100
		Right	-	0.385	-	0.385
		Left	0.163	-	0.000	0.163

Table 14-1 Simult. Tx Ref	CDMA Power Level (dBm)	Configuration	PCS CDMA - FCC Rule Part 24E SAR (W/kg)	LTE Band 25 - FCC Rule Part 24E SAR (W/kg)	2.4 GHz WLAN - FCC Rule Part 15C SAR (W/kg)	Σ SAR (W/kg)
		Tx Ant.	1	2	3	
12	P ≥ 18	Target Power [dBm]	24.5	19	-	
		Reference	Table 13 - 11	Table 13 - 13	Table 13 -14	1+2+3
		Back	1.090	0.417	0.051	**1.558**
		Front	0.652	0.190	0.003	0.845
		Top	-	0.250	-	0.250
		Bottom	0.786	-	-	0.786
		Right	-	0.218	-	0.218
		Left	0.298	-	0.000	0.298
	P < 18	Target Power [dBm]	18	23	-	
		Reference	Table 13 - 11	Table 13 - 12	Table 13 -14	
		Back	0.245	0.956	0.051	1.252
		Front	0.157	0.413	0.003	0.573
		Top	-	0.385	-	0.385
		Bottom	0.215	-	-	0.215
		Right	-	0.385	-	0.385
		Left	0.074	-	0.000	0.074

14.7 Simultaneous Transmission Conclusion

The above numerical summed SAR was below the SAR limit. 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.

15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8648D	(9kHz-4GHz) Signal Generator	10/10/2011	Annual	10/10/2012	3613A00315
Agilent	E5515C	Wireless Communications Test Set	2/12/2012	Annual	2/12/2013	GB45360985
Agilent	E5515C	Wireless Communications Test Set	2/14/2012	Annual	2/14/2013	GB43304447
Agilent	E5515C	Wireless Communications Test Set	2/14/2012	Annual	2/14/2013	GB43163447
Agilent	85070E	Dielectric Probe Kit	3/8/2012	Annual	3/8/2013	MY44300633
Agilent	8648D	Signal Generator	4/3/2012	Annual	4/3/2013	3629U00687
Agilent	8753E	(30kHz-6GHz) Network Analyzer	4/3/2012	Annual	4/3/2013	US37390350
Agilent	8753E	(30kHz-6GHz) Network Analyzer	4/4/2012	Annual	4/4/2013	JP38020182
Agilent	E5515C	Wireless Communications Tester	4/4/2012	Annual	4/4/2013	US41140256
Agilent	E8257D	(250kHz-20GHz) Signal Generator	4/5/2012	Annual	4/5/2013	MY45470194
Agilent	85047A	S-Parameter Test Set	N/A			2904A00579
Amplifier Research	5S1G4	5W, 800MHz-4.2GHz	CBT	N/A	CBT	21910
Anritsu	MT8820C	Radio Communication Tester	11/11/2011	Annual	11/11/2012	6200901190
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	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	5821
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	8013
Anritsu	MA2481A	Power Sensor	2/14/2012	Annual	2/14/2013	2400
Anritsu	MA2481A	Power Sensor	4/5/2012	Annual	4/5/2013	5605
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	10/12/2011	Biennial	10/12/2013	111860775
Control Company	61220-416	Long-Stem Thermometer	10/12/2011	Biennial	10/12/2013	111860844
Control Company	36934-158	Wall-Mounted Thermometer	1/4/2012	Biennial	1/4/2014	122014497
Control Company	36934-158	Wall-Mounted Thermometer	1/4/2012	Biennial	1/4/2014	122014488
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	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
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	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	11/30/2011	Annual	11/30/2012	101699
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	3/5/2012	Annual	3/5/2013	102060
Rohde & Schwarz	SMIQ03B	Signal Generator	4/5/2012	Annual	4/5/2013	DE27259
Rohde & Schwarz	NRVD	Dual Channel Power Meter	4/8/2011	Biennial	4/8/2013	101695
Rohde & Schwarz	CMU200	Base Station Simulator	5/22/2012	Annual	5/22/2013	109892
Seekonk	NC-100	Torque Wrench (8" lb)	3/5/2012	Triennial	3/5/2015	N/A
Seekonk	NC-100	Torque Wrench (8" lb)	3/5/2012	Triennial	3/5/2015	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/18/2012	Annual	1/18/2013	1272
SPEAG	ES3DV3	SAR Probe	2/7/2012	Annual	2/7/2013	3288
SPEAG	D2450V2	2450 MHz SAR Dipole	2/7/2012	Annual	2/7/2013	882
SPEAG	ES3DV3	SAR Probe	2/7/2012	Annual	2/7/2013	3287
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2012	Annual	2/15/2013	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/20/2012	Annual	2/20/2013	649
SPEAG	ES3DV3	SAR Probe	2/21/2012	Annual	2/21/2013	3258
SPEAG	D1900V2	1900 MHz SAR Dipole	2/22/2012	Annual	2/22/2013	502
SPEAG	D1900V2	1900 MHz SAR Dipole	2/22/2012	Annual	2/22/2013	5d149
SPEAG	ES3DV3	SAR Probe	3/16/2012	Annual	3/16/2013	3209
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/12/2012	Annual	4/12/2013	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/19/2012	Annual	4/19/2013	665
SPEAG	D835V2	835 MHz SAR Dipole	1/25/2012	Annual	1/25/2013	4d047
SPEAG	D835V2	835 MHz SAR Dipole	4/20/2012	Annual	4/20/2013	4d119
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	62344-925	Mini-Thermometer	10/24/2011	Biennial	10/24/2013	111886414
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.

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

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

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

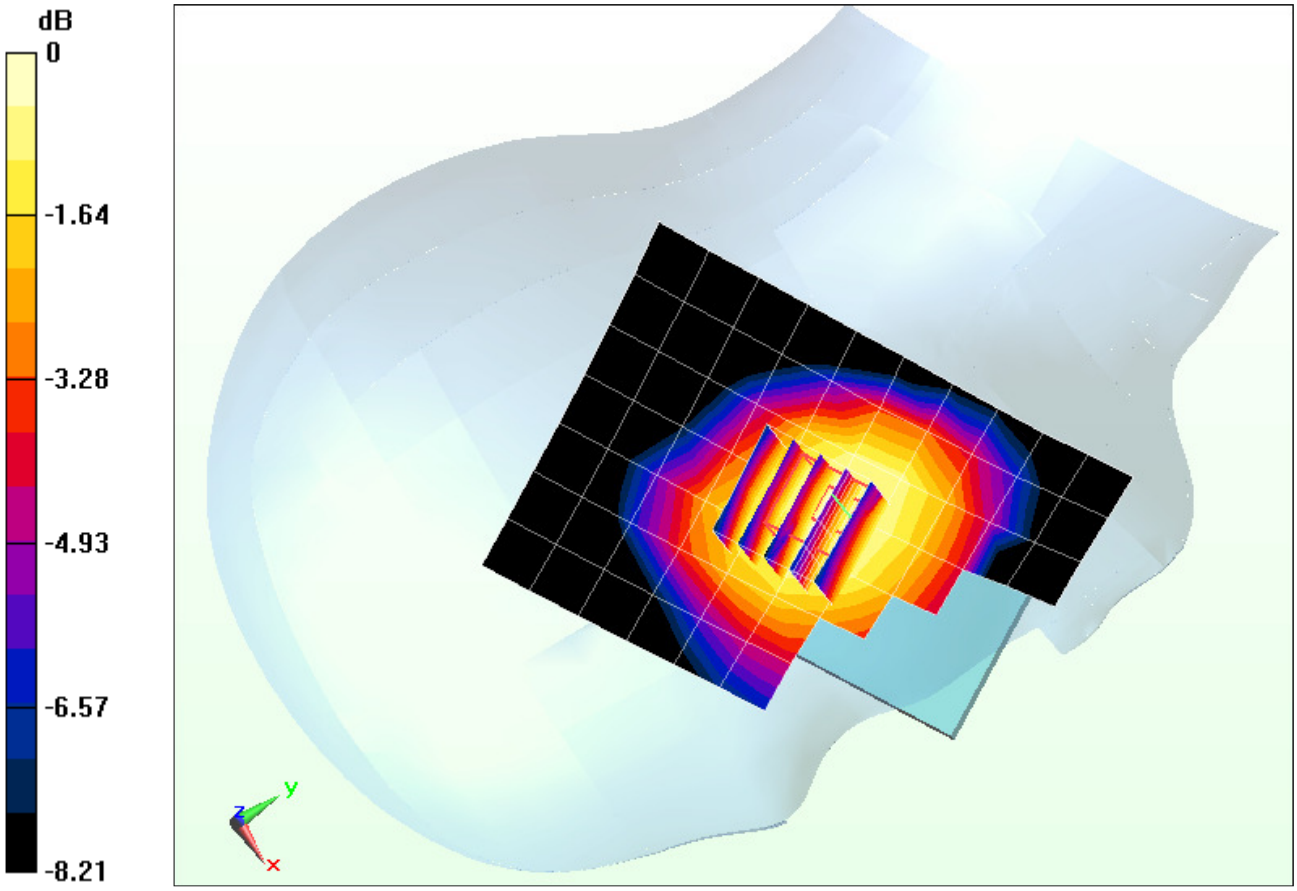
Communication System: CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.868 mho/m; ε_r = 40.78; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 90S, Right Head, Cheek, Mid.ch

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.035 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.390 mW/g
SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.255 mW/g



0 dB = 0.341 mW/g = -9.34 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

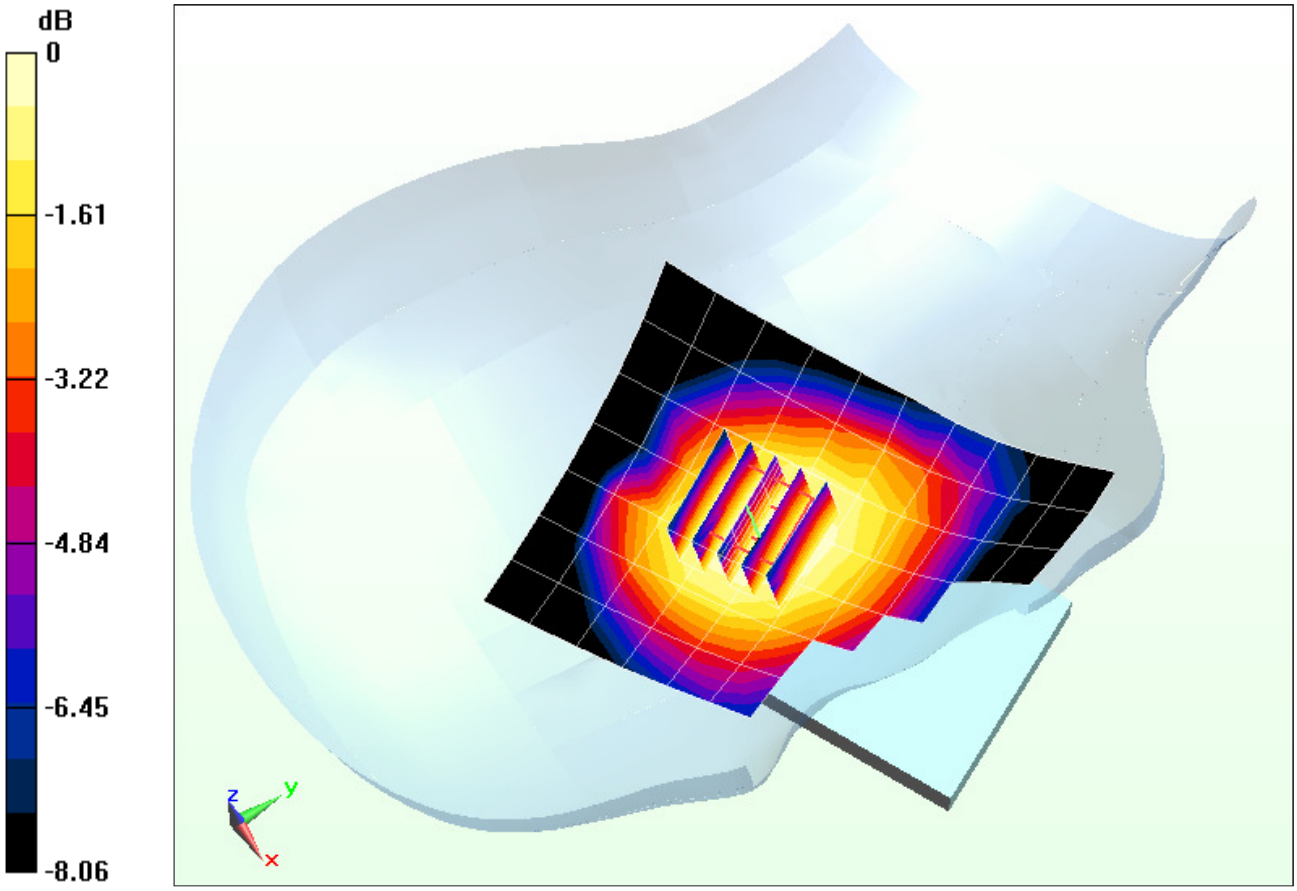
Communication System: CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.868 mho/m; ε_r = 40.78; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 90S, Right Head, Tilt, Mid.ch

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.971 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.316 mW/g
SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.206 mW/g



0 dB = 0.275 mW/g = -11.21 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

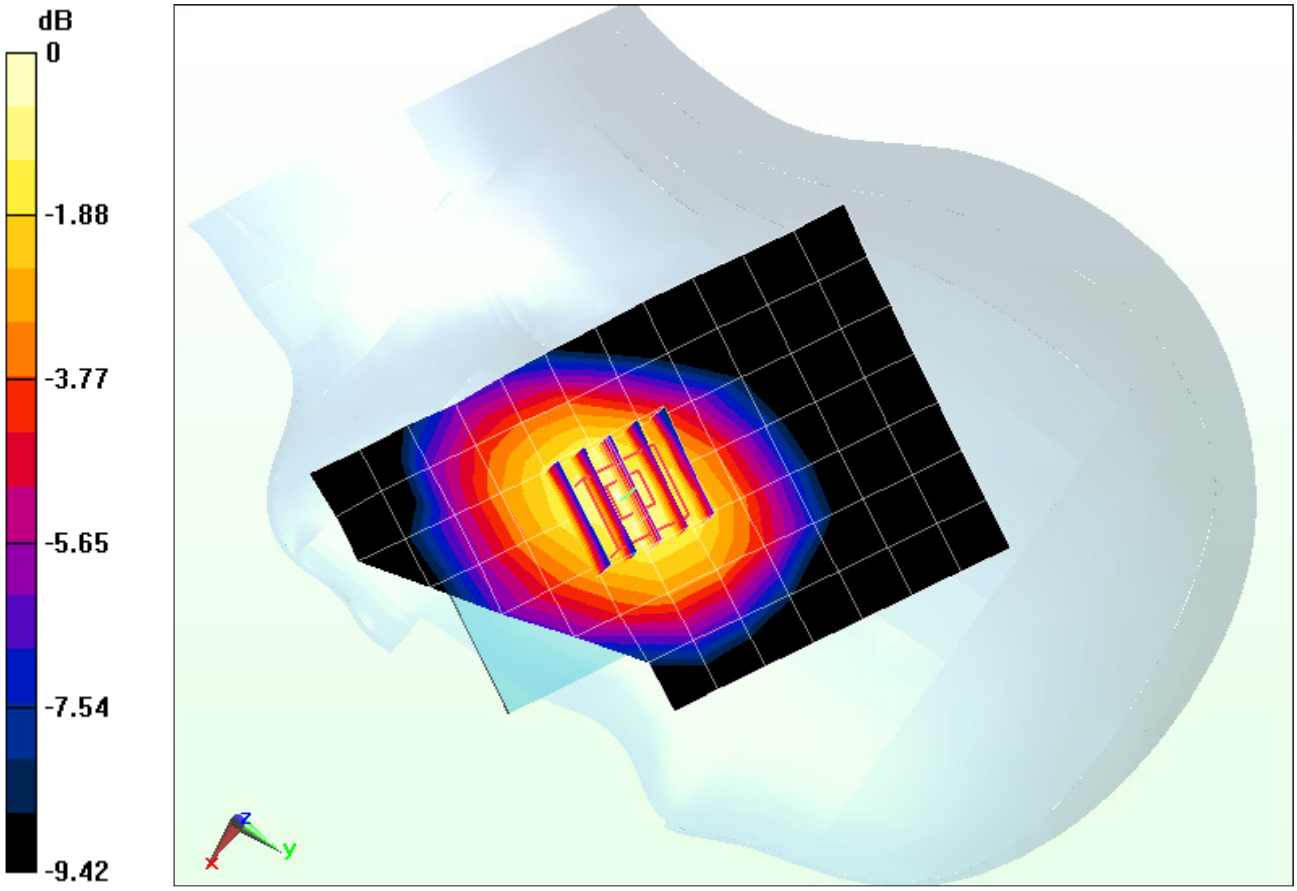
Communication System: CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.868 mho/m; ε_r = 40.78; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 90S, Left Head, Cheek, Mid.ch

Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.476 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.610 mW/g
SAR(1 g) = 0.494 mW/g; SAR(10 g) = 0.374 mW/g



0 dB = 0.520 mW/g = -5.68 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

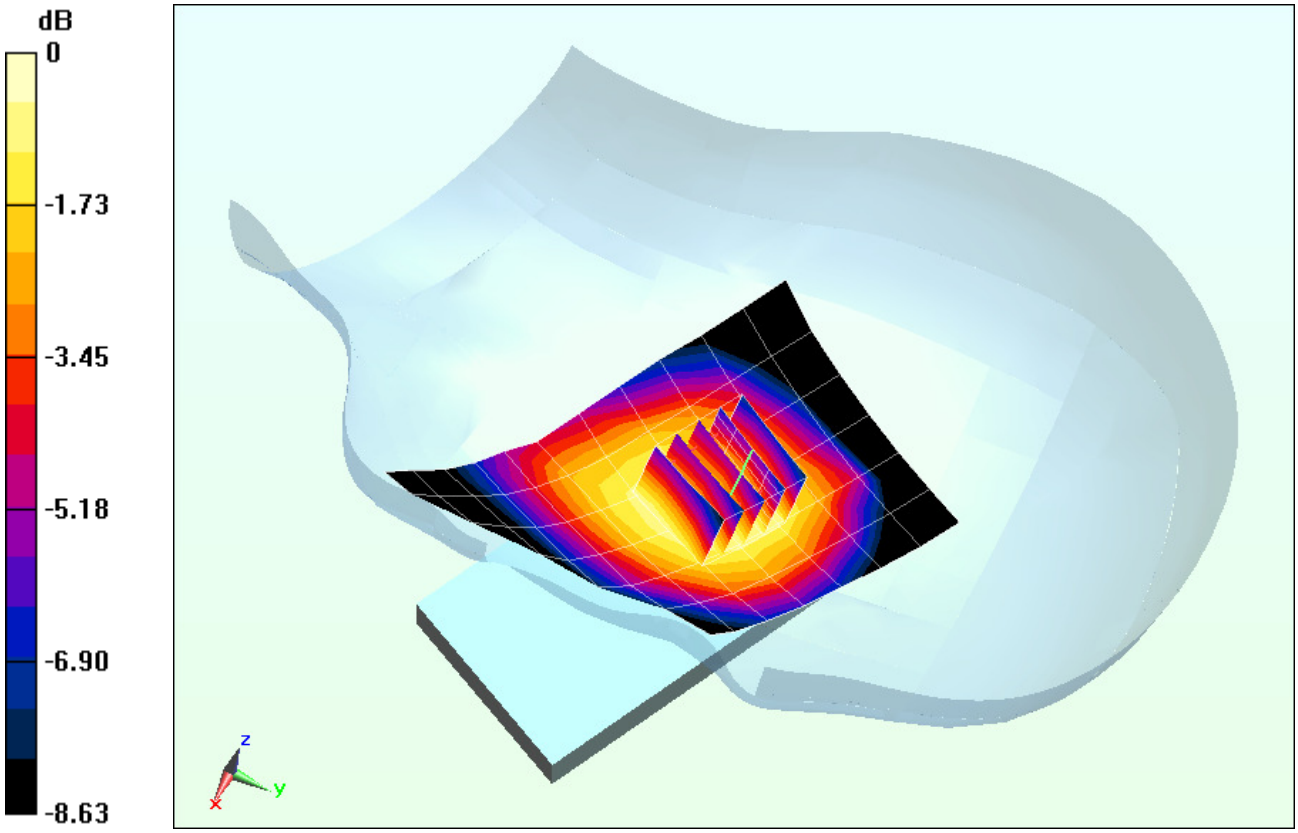
Communication System: Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
$f = 820.1$ MHz; $\sigma = 0.874$ mho/m; $\varepsilon_r = 41.65$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 07-30-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.01, 6.01, 6.01); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1403
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA - FCC Rule Part 90S, Left 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 = 18.720 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.335 mW/g
SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.218 mW/g



0 dB = 0.293 mW/g = -10.66 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

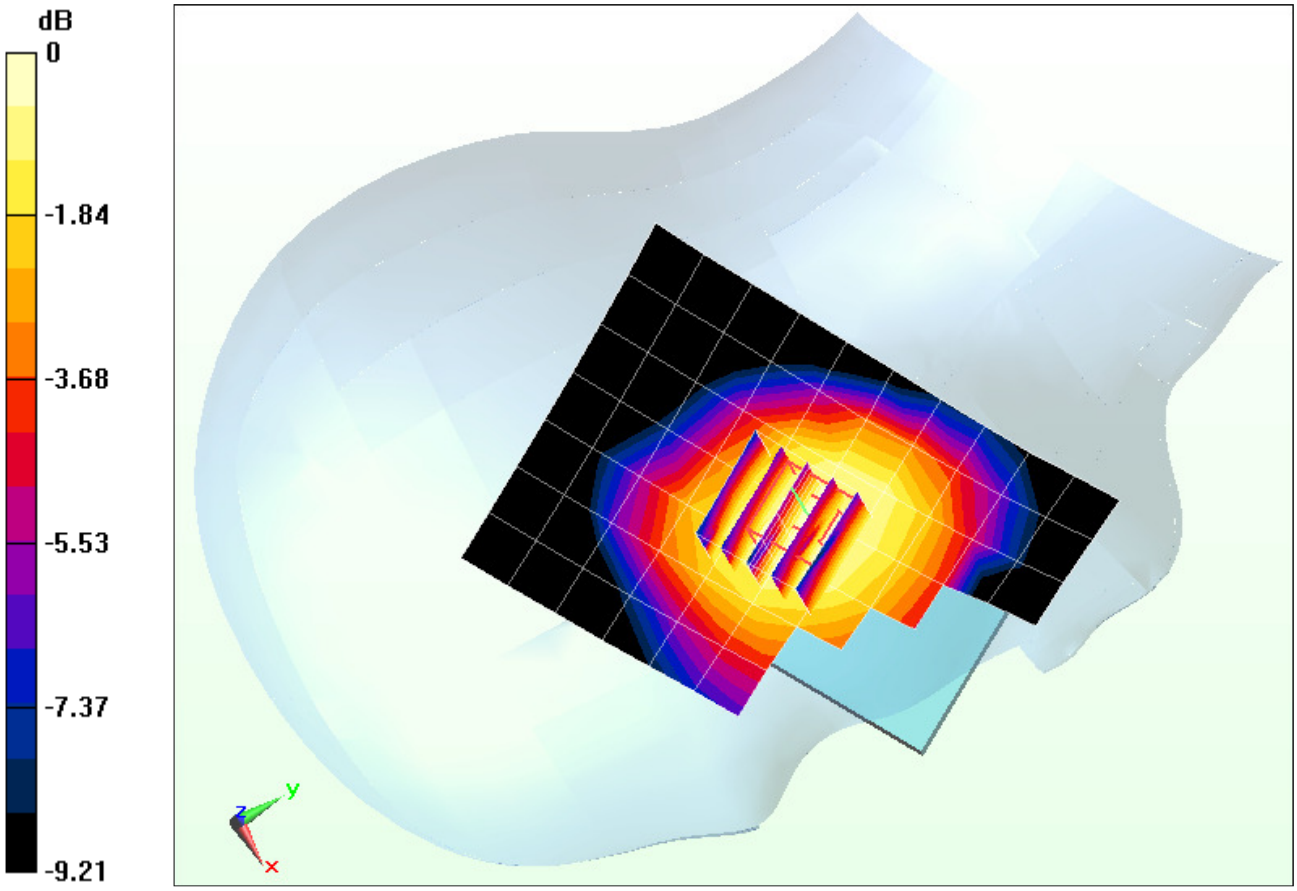
Communication System: CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.882 mho/m; ε_r = 40.702; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 22H, Right Head, Cheek, Mid.ch

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.097 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.387 mW/g
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.250 mW/g



0 dB = 0.342 mW/g = -9.32 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

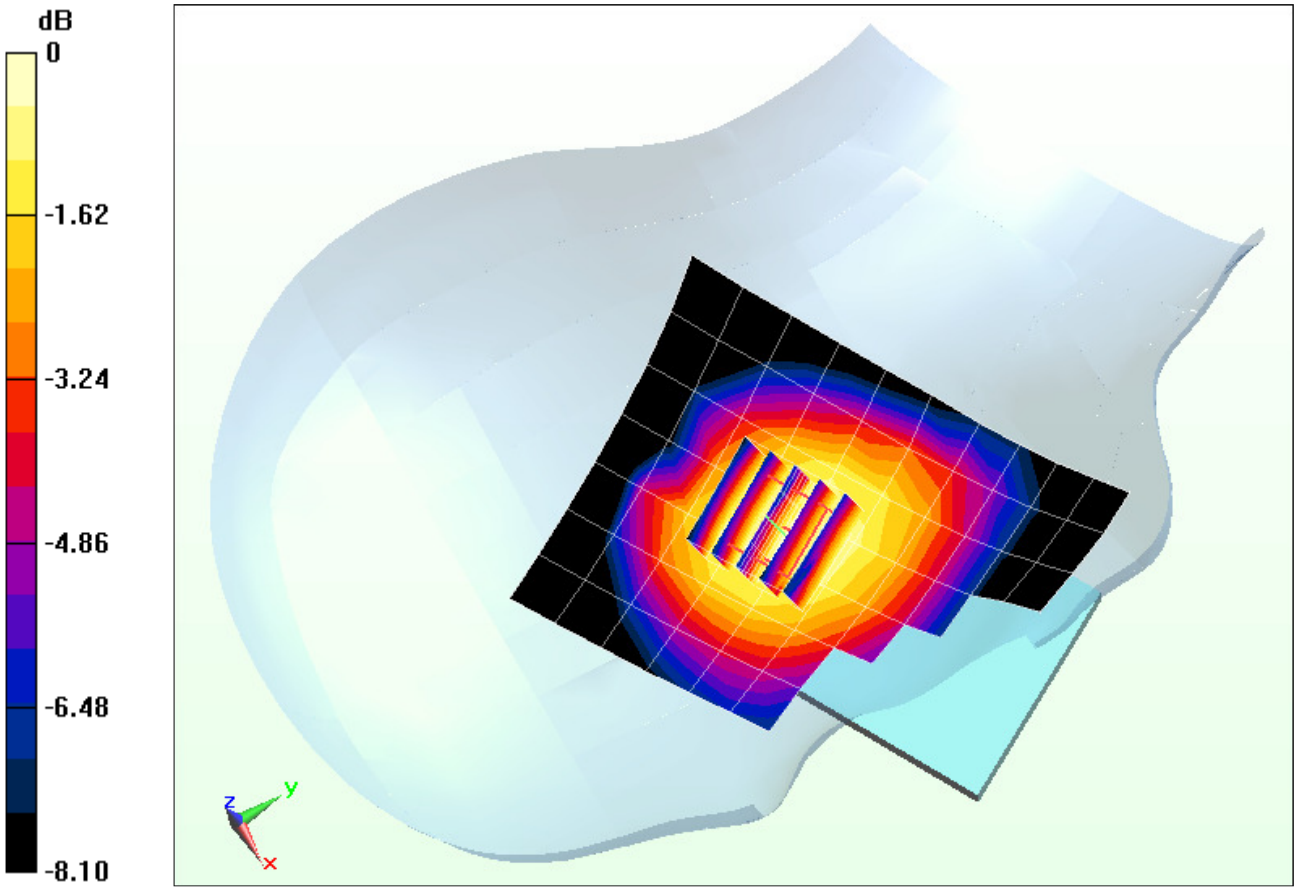
Communication System: CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.882 mho/m; ε_r = 40.702; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 22H, Right Head, Tilt, Mid.ch

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.399 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.539 mW/g
SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.222 mW/g



0 dB = 0.309 mW/g = -10.20 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

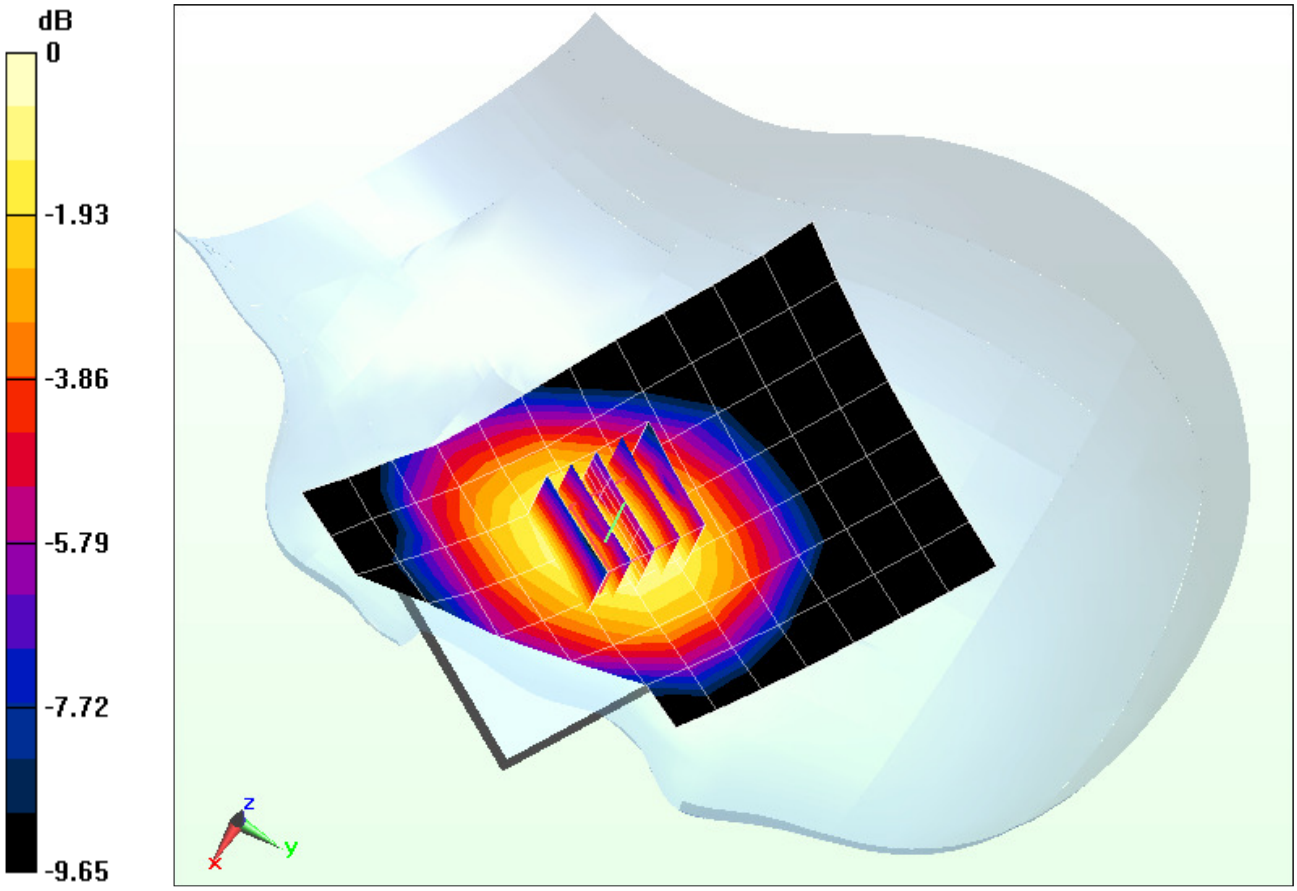
Communication System: CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.882 mho/m; ε_r = 40.702; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: Cell. EVDO Rev. A - FCC Rule Part 22H, Left Head, Cheek, Mid.ch

Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.320 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.558 mW/g
SAR(1 g) = 0.443 mW/g; SAR(10 g) = 0.332 mW/g



0 dB = 0.466 mW/g = -6.63 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

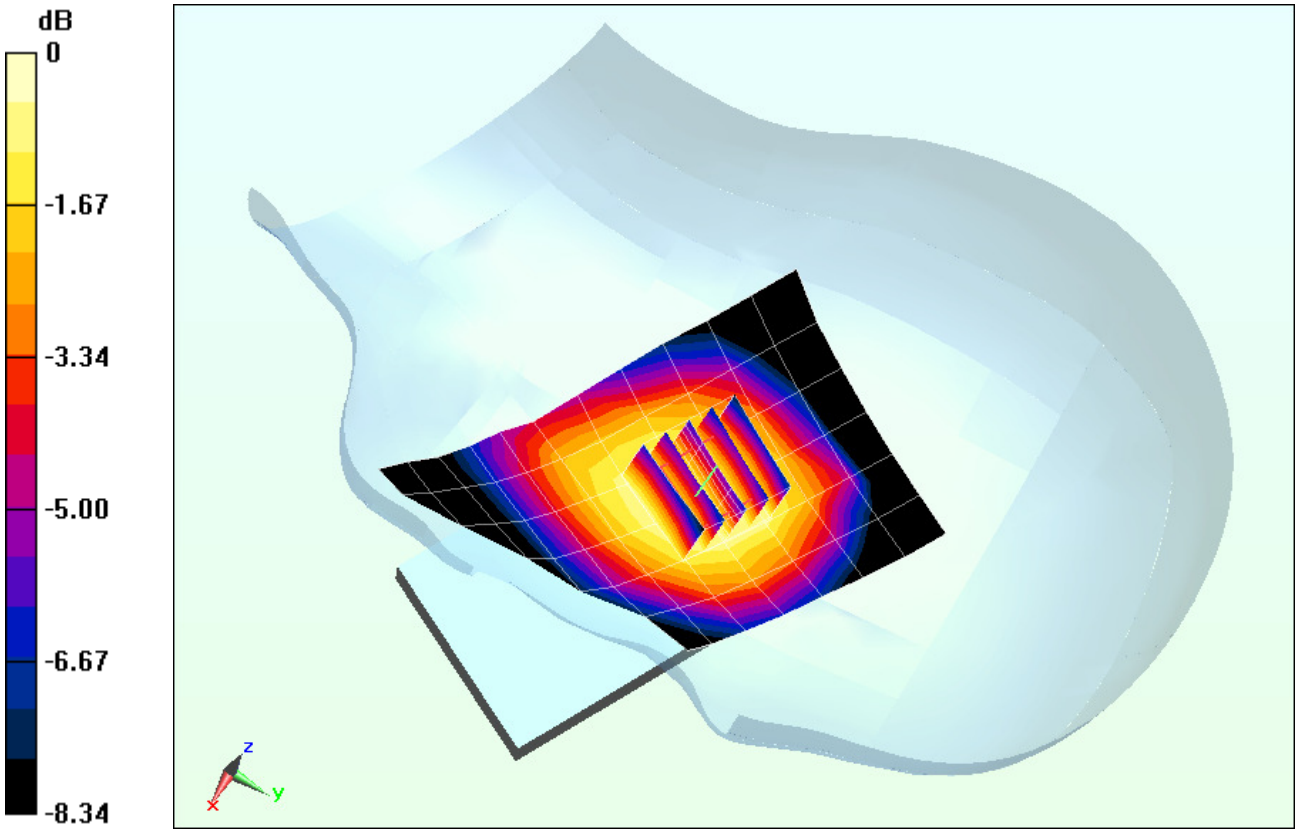
Communication System: Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used (interpolated):
$f = 836.52$ MHz; $\sigma = 0.879$ mho/m; $\varepsilon_r = 41.57$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 07-30-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.01, 6.01, 6.01); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1403
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: Cellular CDMA - FCC Rule Part 22H, Left 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 = 18.931 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.327 mW/g
SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.214 mW/g



0 dB = 0.286 mW/g = -10.87 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

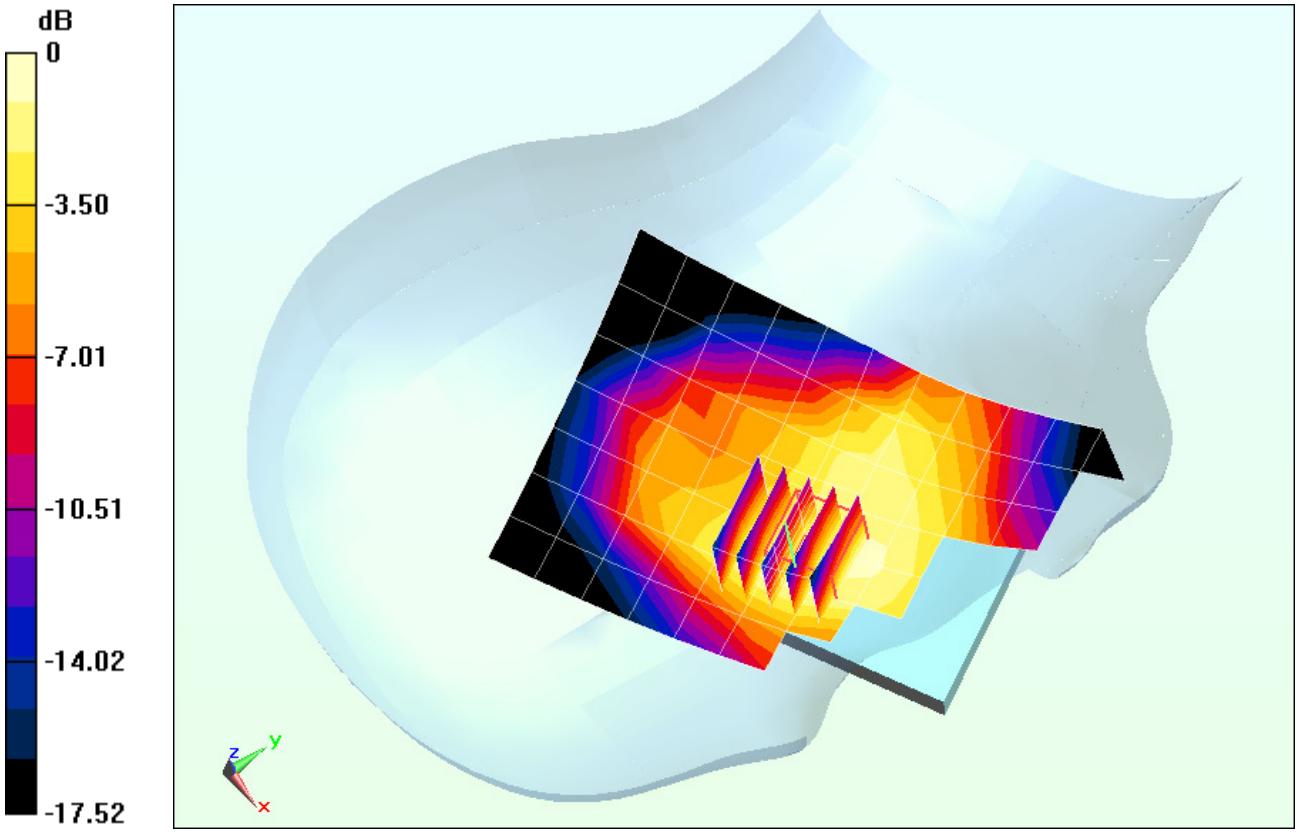
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.393 mho/m; ε_r = 38.69; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: PCS CDMA - FCC Rule Part 24E, Right Head, Cheek, Mid.ch

Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.210 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.746 mW/g
SAR(1 g) = 0.492 mW/g; SAR(10 g) = 0.316 mW/g



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

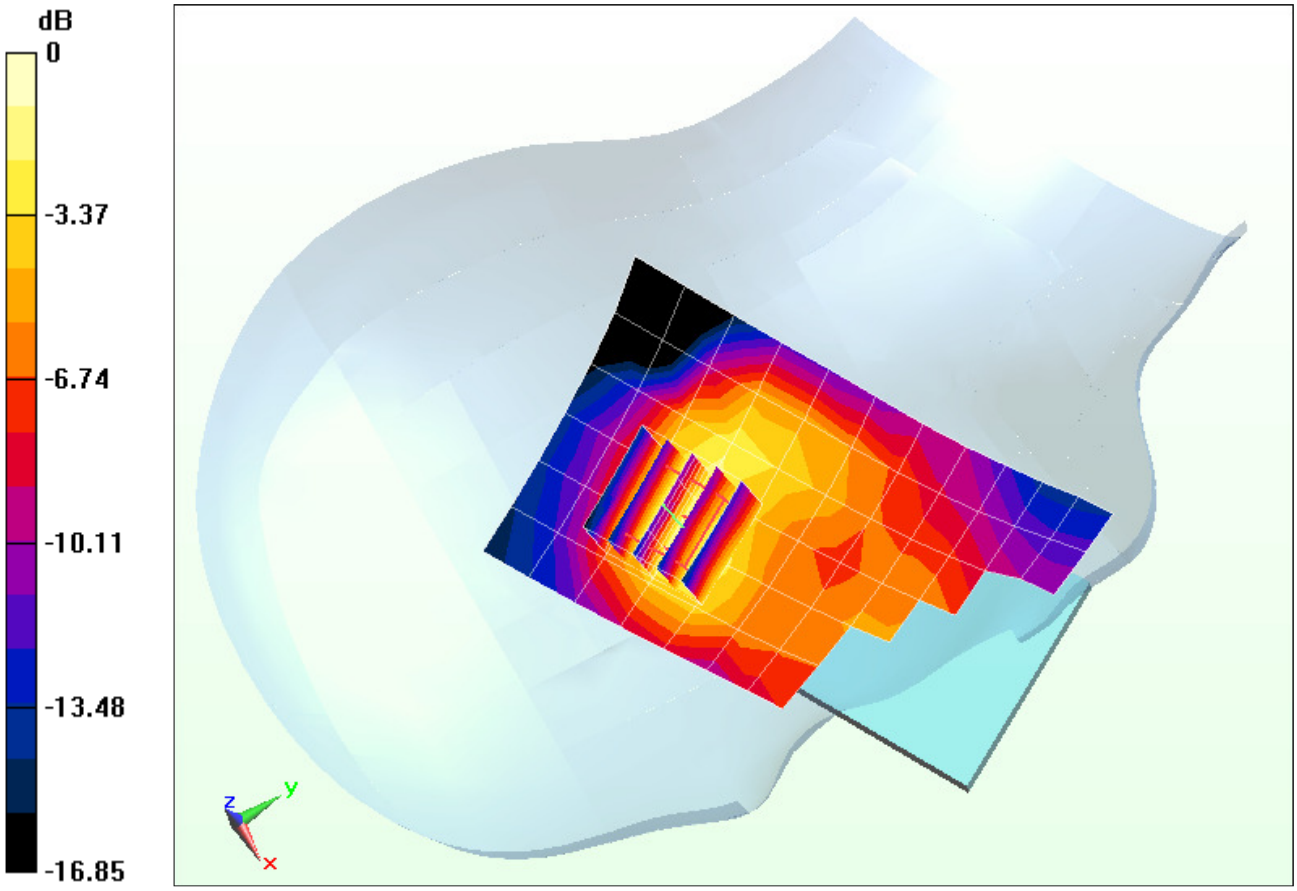
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.419 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 08-23-2012; Ambient Temp: 23.9°C; Tissue Temp: 22.7°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); 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: PCS EVDO Rev. A - FCC Rule Part 24E, 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 = 14.556 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.461 mW/g
SAR(1 g) = 0.274 mW/g; SAR(10 g) = 0.155 mW/g



0 dB = 0.300 mW/g = -10.46 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

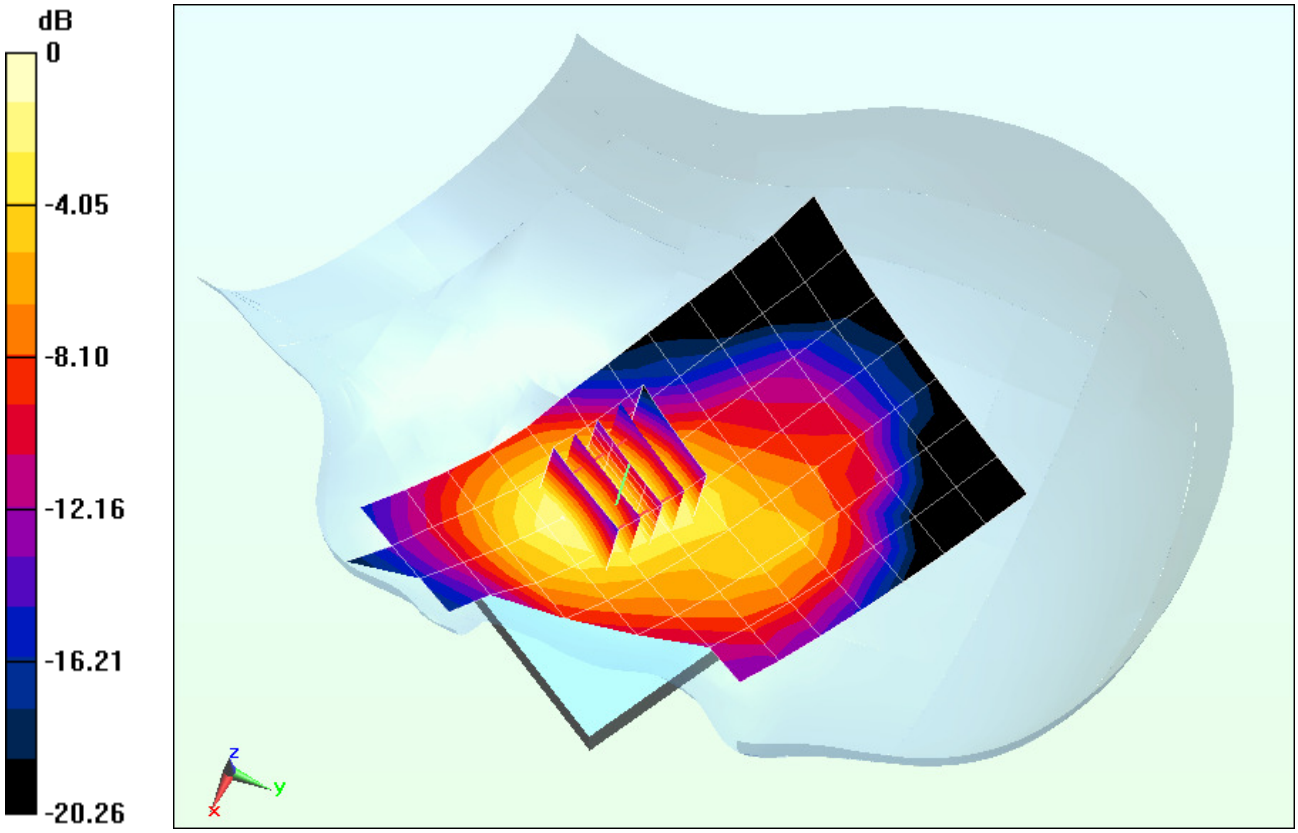
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.393 mho/m; ε_r = 38.69; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: PCS CDMA - FCC Rule Part 24E, Left Head, Cheek, 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 = 26.578 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.419 mW/g
SAR(1 g) = 0.919 mW/g; SAR(10 g) = 0.556 mW/g



0 dB = 1.01 mW/g = 0.09 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

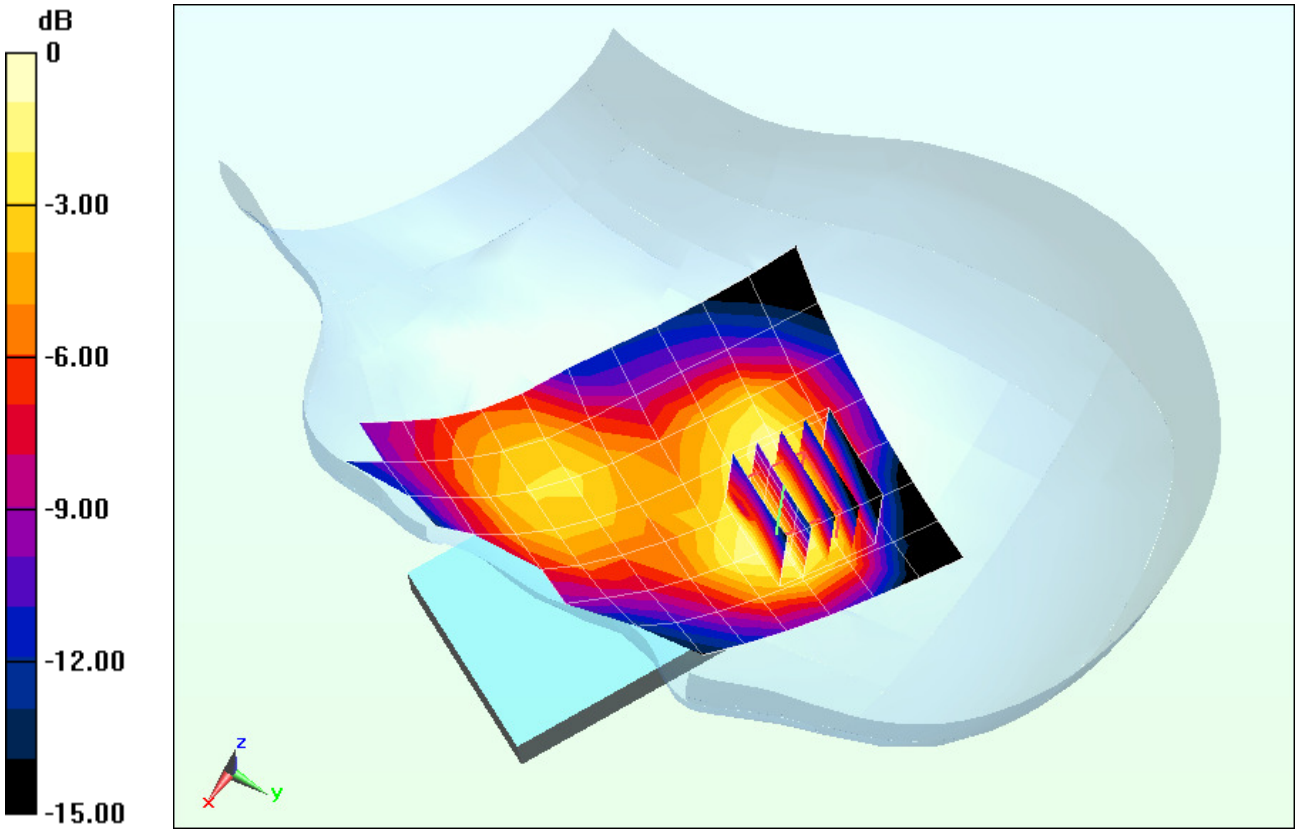
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1880 MHz; σ = 1.393 mho/m; ε_r = 38.69; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: PCS CDMA - FCC Rule Part 24E, Left Head, Tilt, Mid.ch

Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.736 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.416 mW/g
SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.174 mW/g



0 dB = 0.303 mW/g = -10.37 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

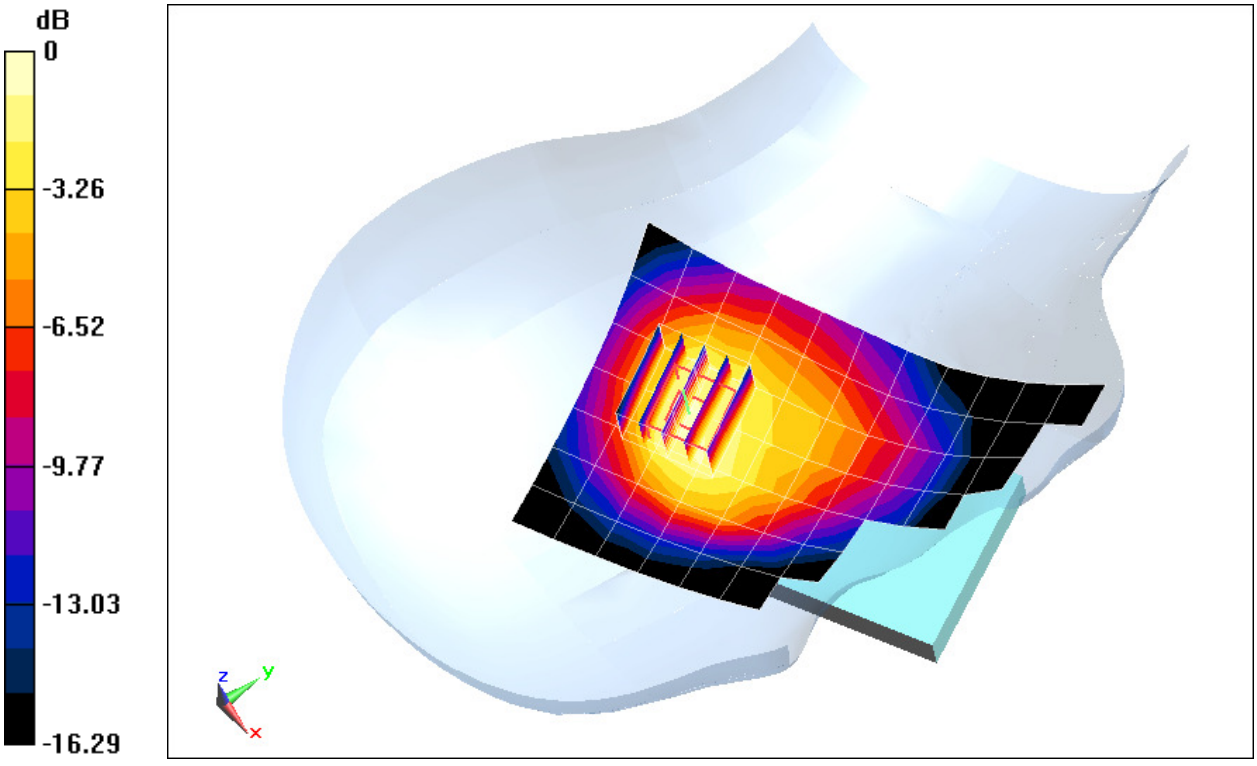
Communication System: LTE Band 25 (PCS); Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.363 mho/m; ε_r = 38.615; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, 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 = 24.407 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.996 mW/g
SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.412 mW/g



0 dB = 0.723 mW/g = -2.82 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

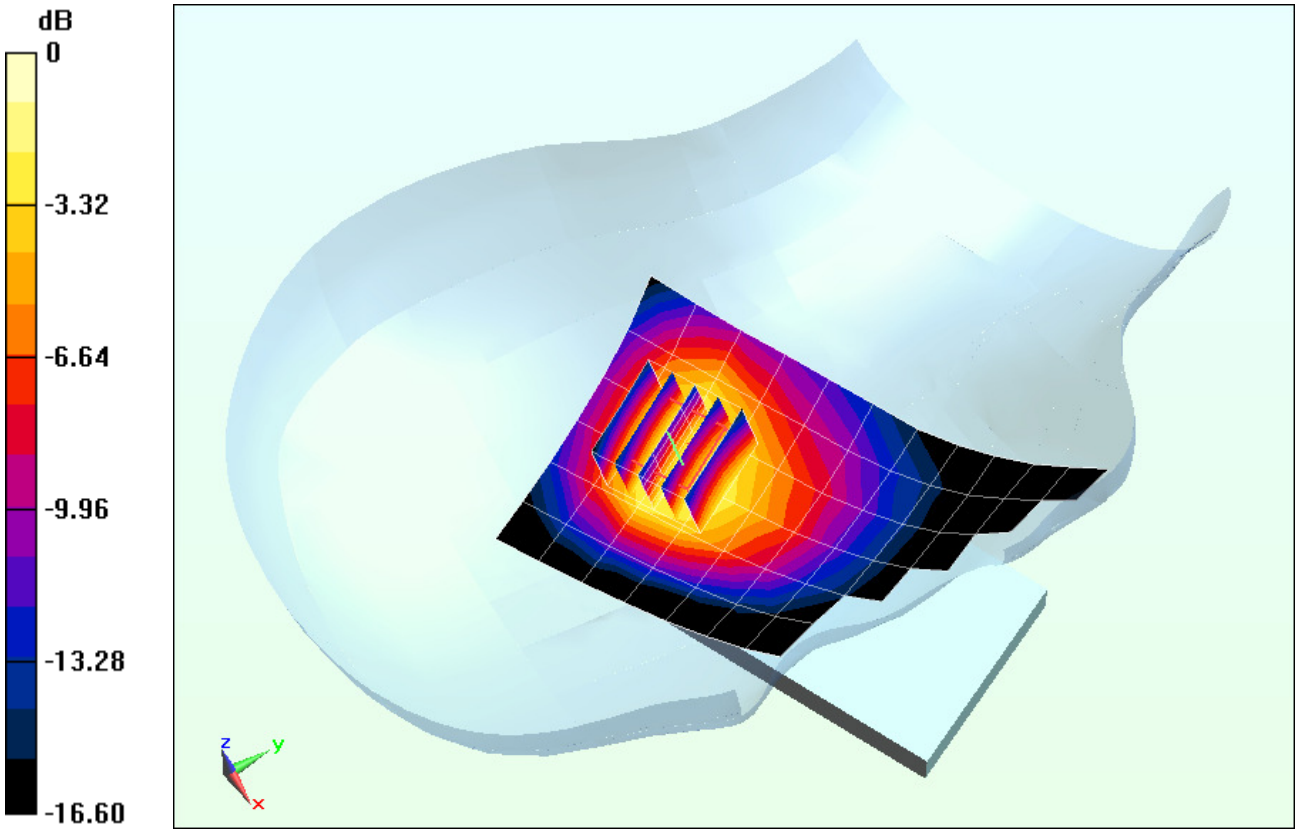
Communication System: LTE Band 25 (PCS); Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.363 mho/m; ε_r = 38.615; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Right Head, Tilt, Low.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 = 26.307 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.221 mW/g
SAR(1 g) = 0.774 mW/g; SAR(10 g) = 0.462 mW/g



0 dB = 0.844 mW/g = -1.47 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

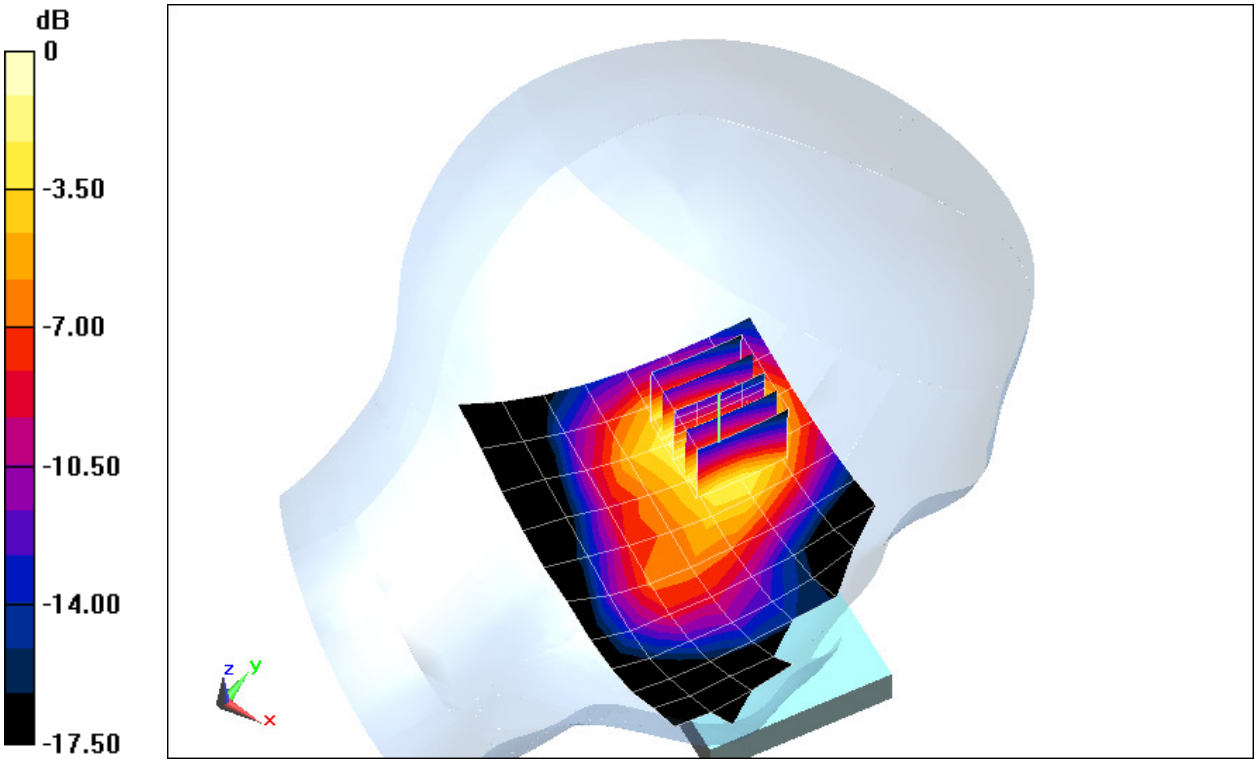
Communication System: LTE Band 25 (PCS); Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.363 mho/m; ε_r = 38.615; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Left Head, Cheek, Low.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 = 29.284 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 1.675 mW/g
SAR(1 g) = 0.966 mW/g; SAR(10 g) = 0.565 mW/g



0 dB = 1.05 mW/g = 0.42 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

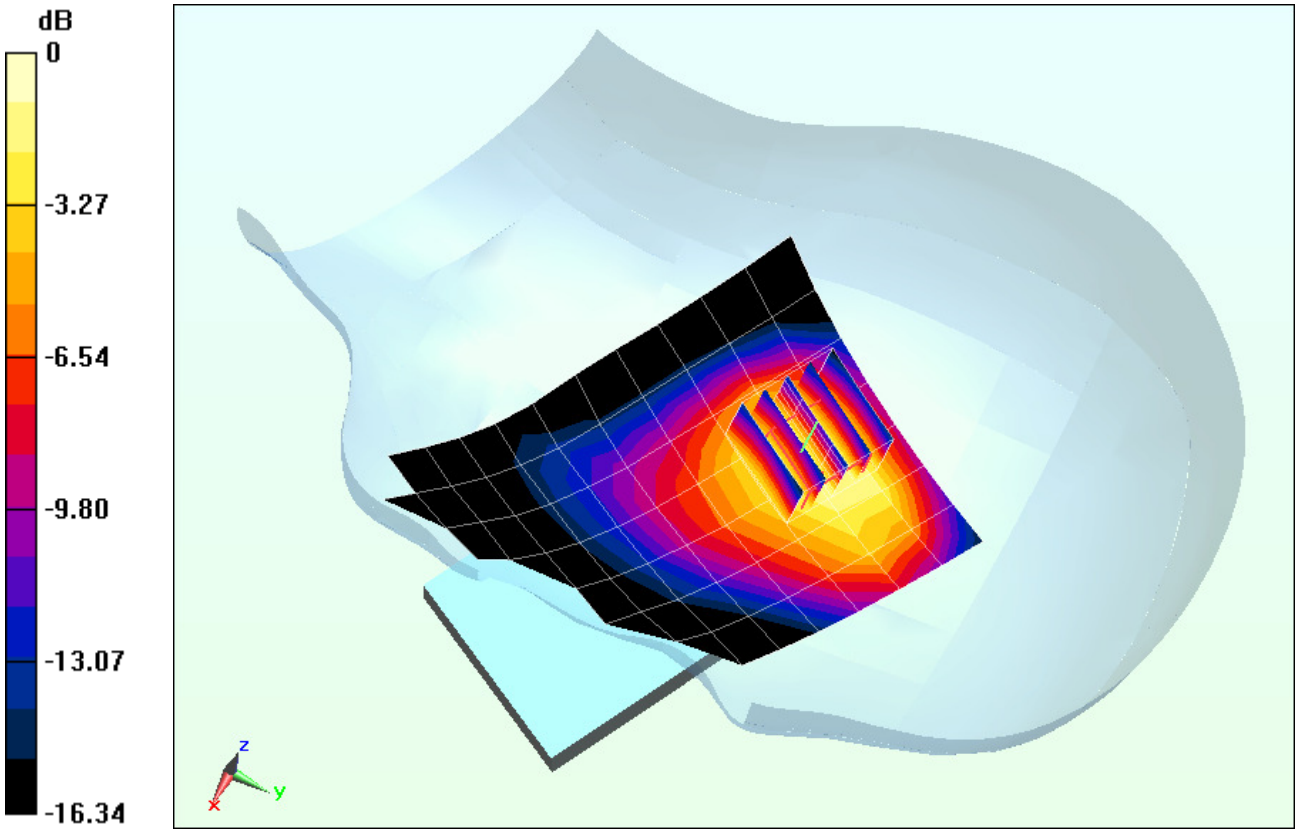
Communication System: LTE Band 25 (PCS); Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
$f = 1855$ MHz; $\sigma = 1.363$ mho/m; $\varepsilon_r = 38.615$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Left Head, Tilt, Low.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 = 27.270 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.251 mW/g
SAR(1 g) = 0.809 mW/g; SAR(10 g) = 0.484 mW/g



0 dB = 0.868 mW/g = -1.23 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

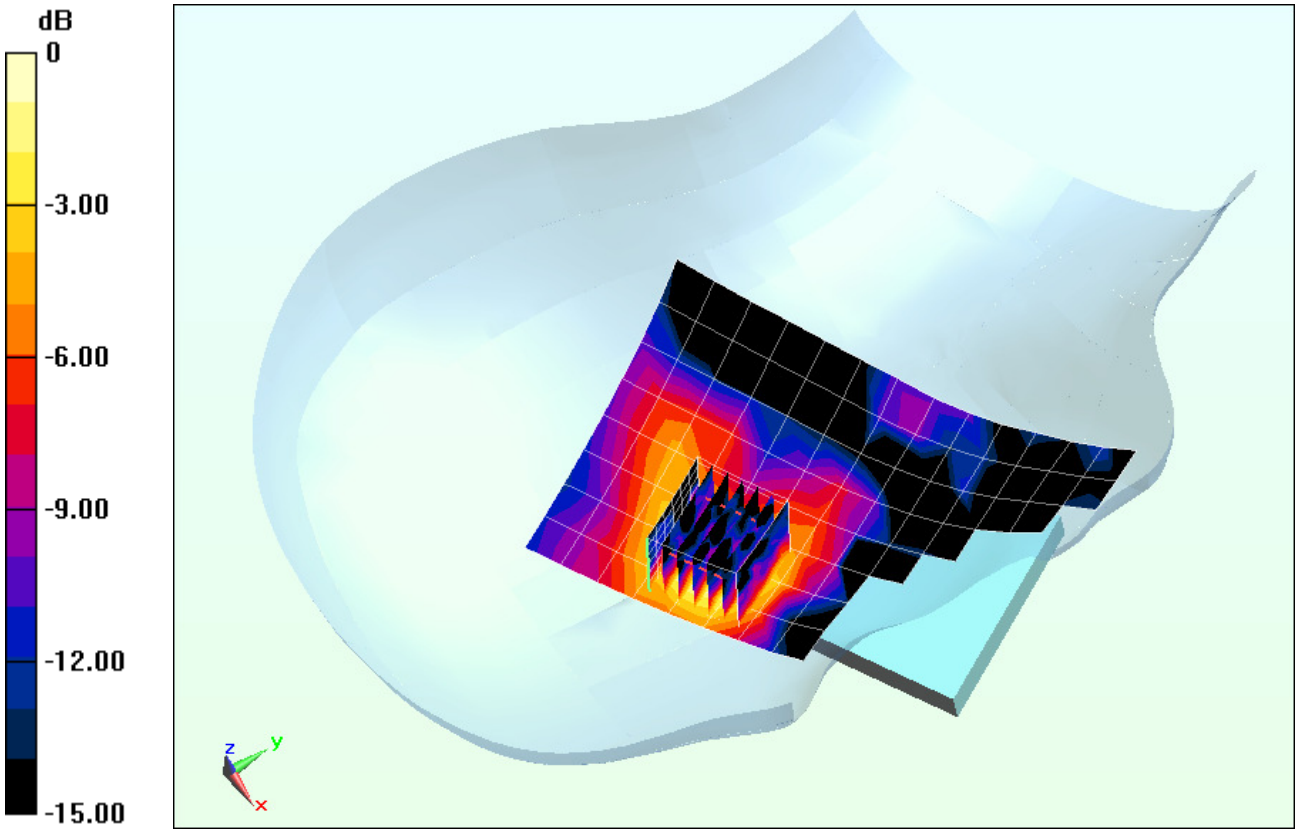
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.898 mho/m; ε_r = 40.256; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Right Head, Cheek, Ch 11, 1 Mbps

Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.986 V/m; Power Drift = 0.059 dB
Peak SAR (extrapolated) = 0.020 mW/g
SAR(1 g) = 0.00804 mW/g; SAR(10 g) = 0.0038 mW/g



0 dB = 0.0104 mW/g = -39.66 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

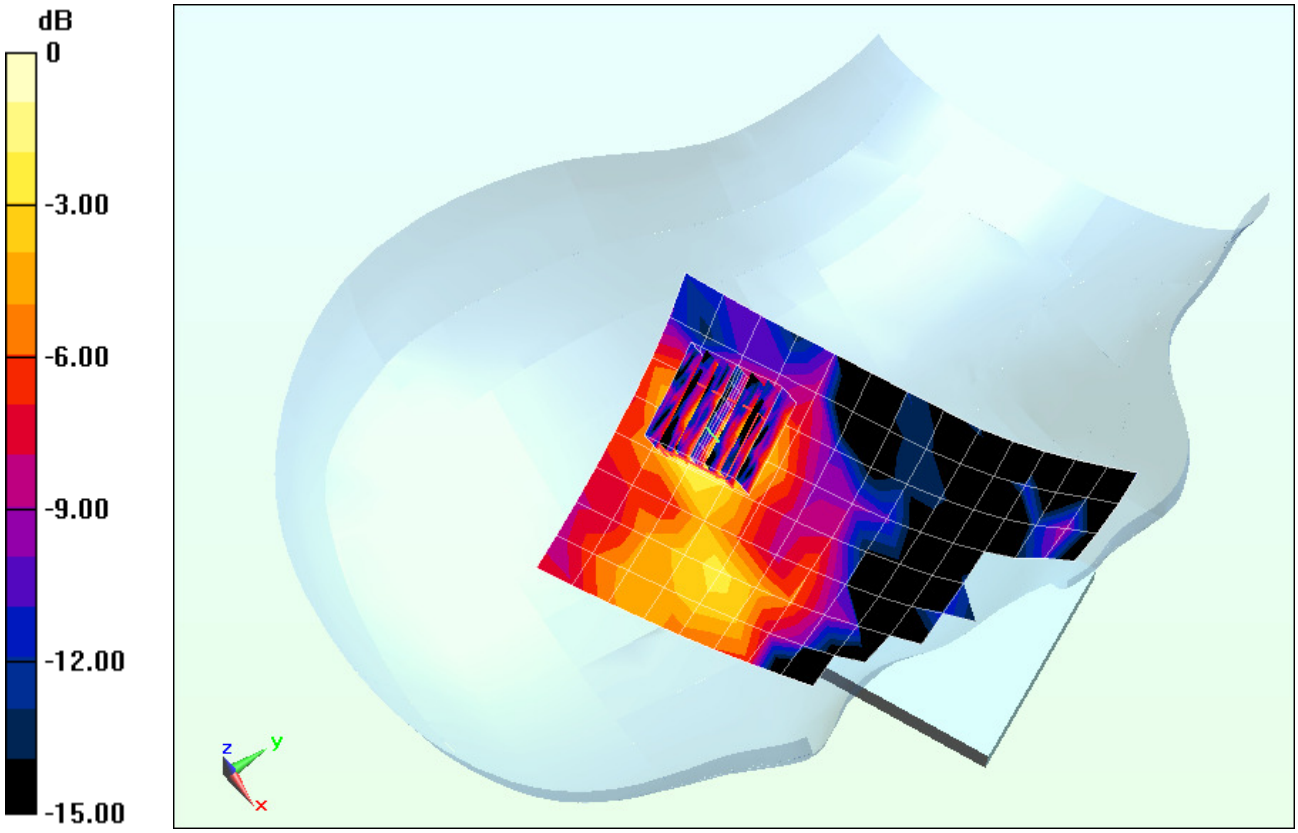
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.898 mho/m; ε_r = 40.256; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Right Head, Tilt, Ch 11, 1 Mbps

Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.371 V/m; Power Drift = 0.059 dB
Peak SAR (extrapolated) = 0.00778 mW/g
SAR(1 g) = 0.00431 mW/g; SAR(10 g) = 0.00179 mW/g



0 dB = 0.00576 mW/g = -44.79 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

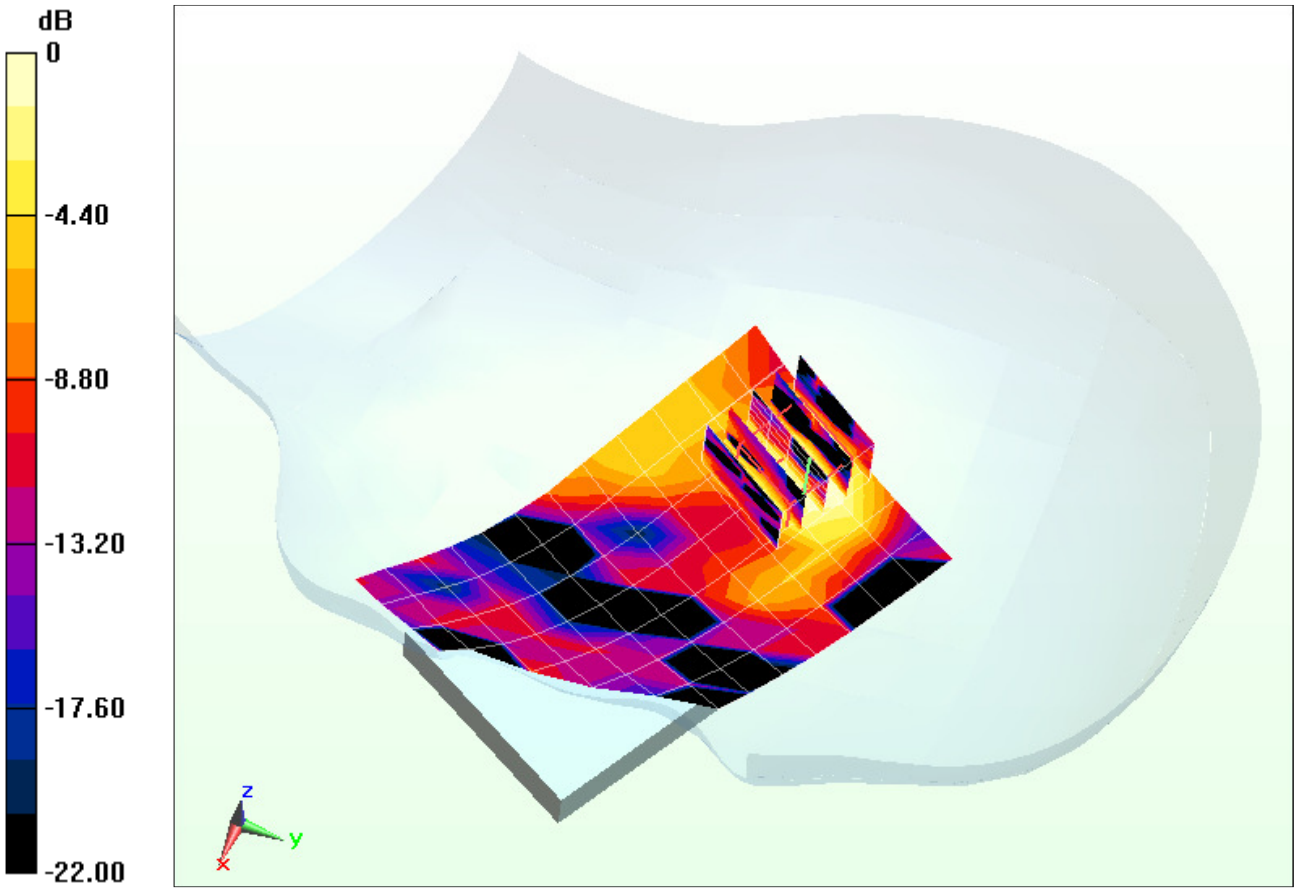
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.898 mho/m; ε_r = 40.256; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Left Head, Cheek, Ch 11, 1 Mbps

Area Scan (8x13x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.773 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.0098 mW/g
SAR(1 g) = 0.00433 mW/g; SAR(10 g) = 0.00162 mW/g



0 dB = 0.00593 mW/g = -44.54 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

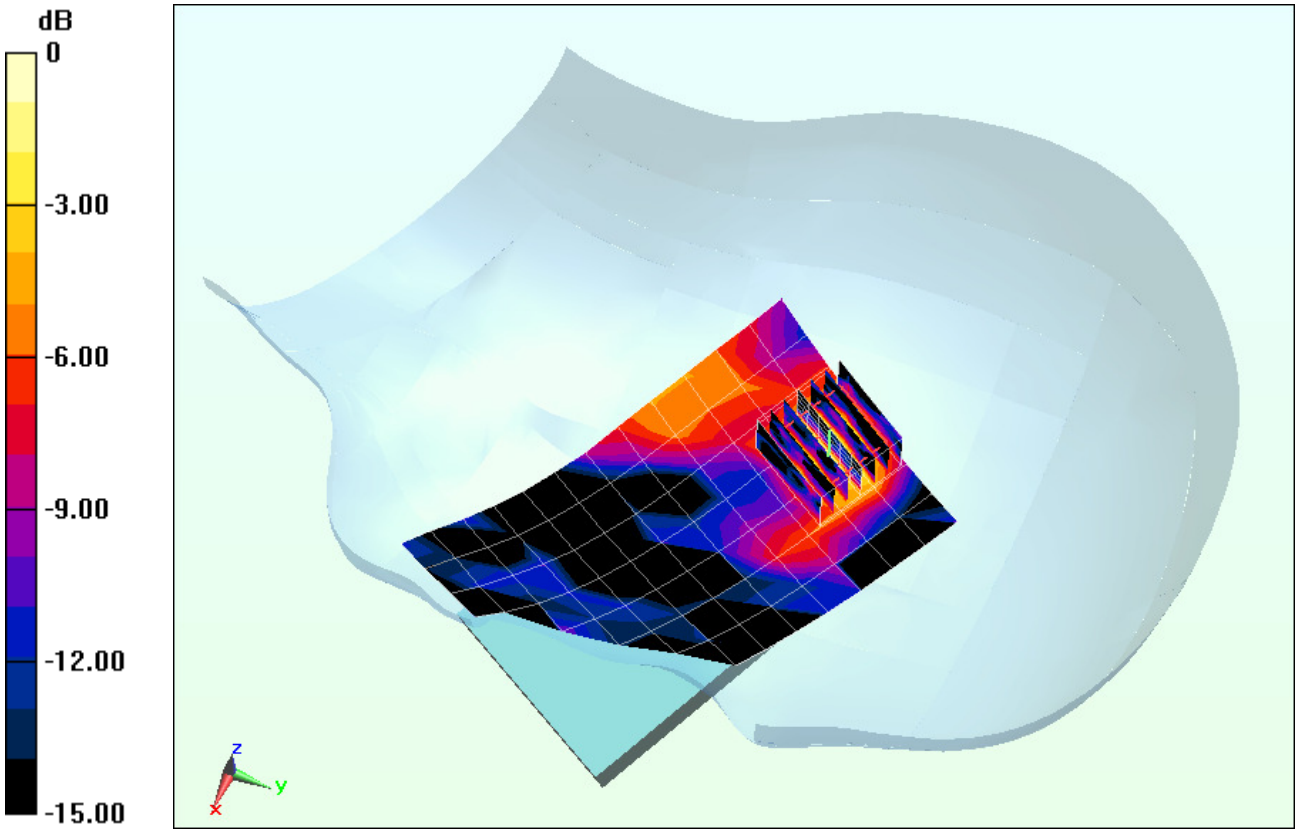
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.898 mho/m; ε_r = 40.256; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Left Head, Tilt, Ch 11, 1 Mbps

Area Scan (8x13x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.682 V/m; Power Drift = 0.094 dB
Peak SAR (extrapolated) = 0.015 mW/g
SAR(1 g) = 0.00504 mW/g; SAR(10 g) = 0.00188 mW/g



0 dB = 0.00647 mW/g = -43.78 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

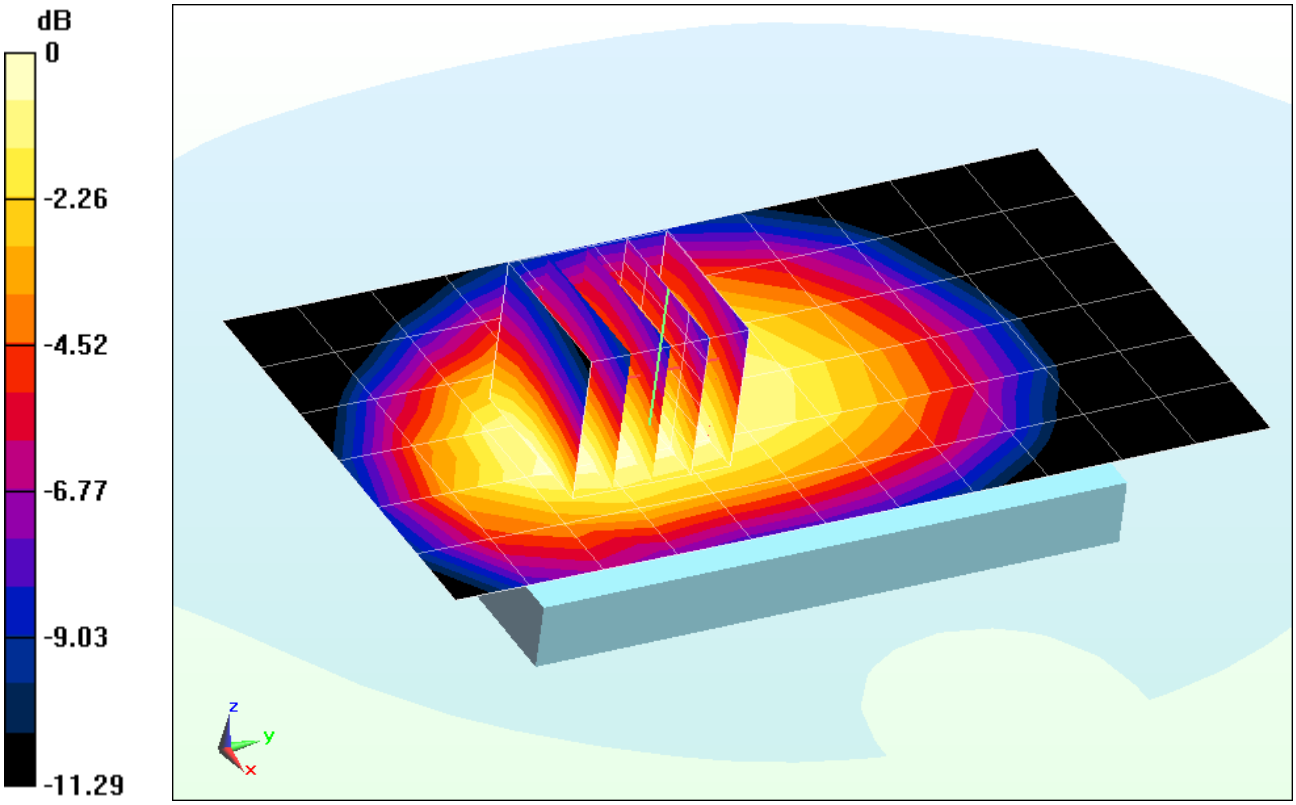
Communication System: Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.96 mho/m; ε_r = 55.079; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 EVDO Rev. 0 - FCC Rule Part 90S, Body SAR, Back 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 = 30.009 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.999 mW/g
SAR(1 g) = 0.740 mW/g; SAR(10 g) = 0.553 mW/g



0 dB = 0.773 mW/g = -2.24 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

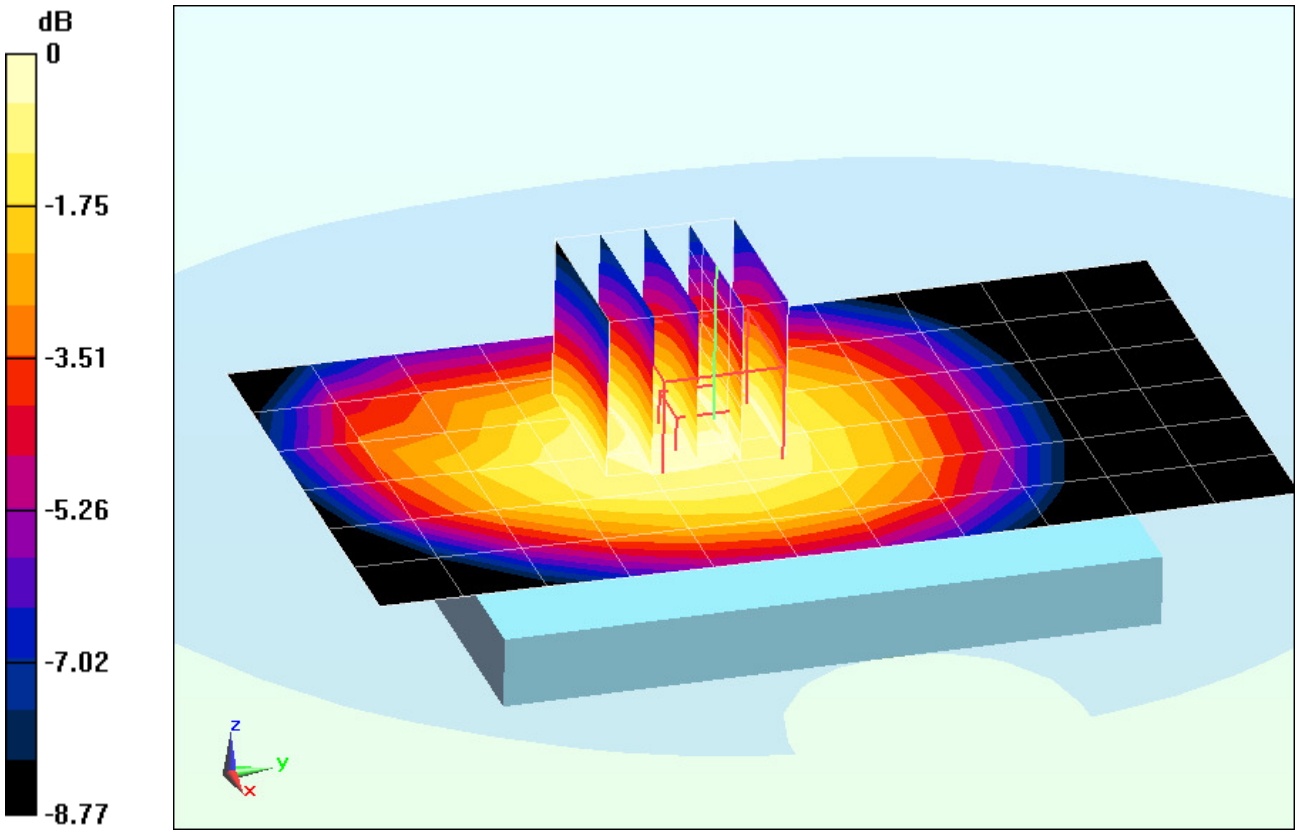
Communication System: Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.96 mho/m; ε_r = 55.079; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 TDSO - FCC Rule Part 90S, 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 = 22.370 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.528 mW/g
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.335 mW/g



0 dB = 0.448 mW/g = -6.97 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

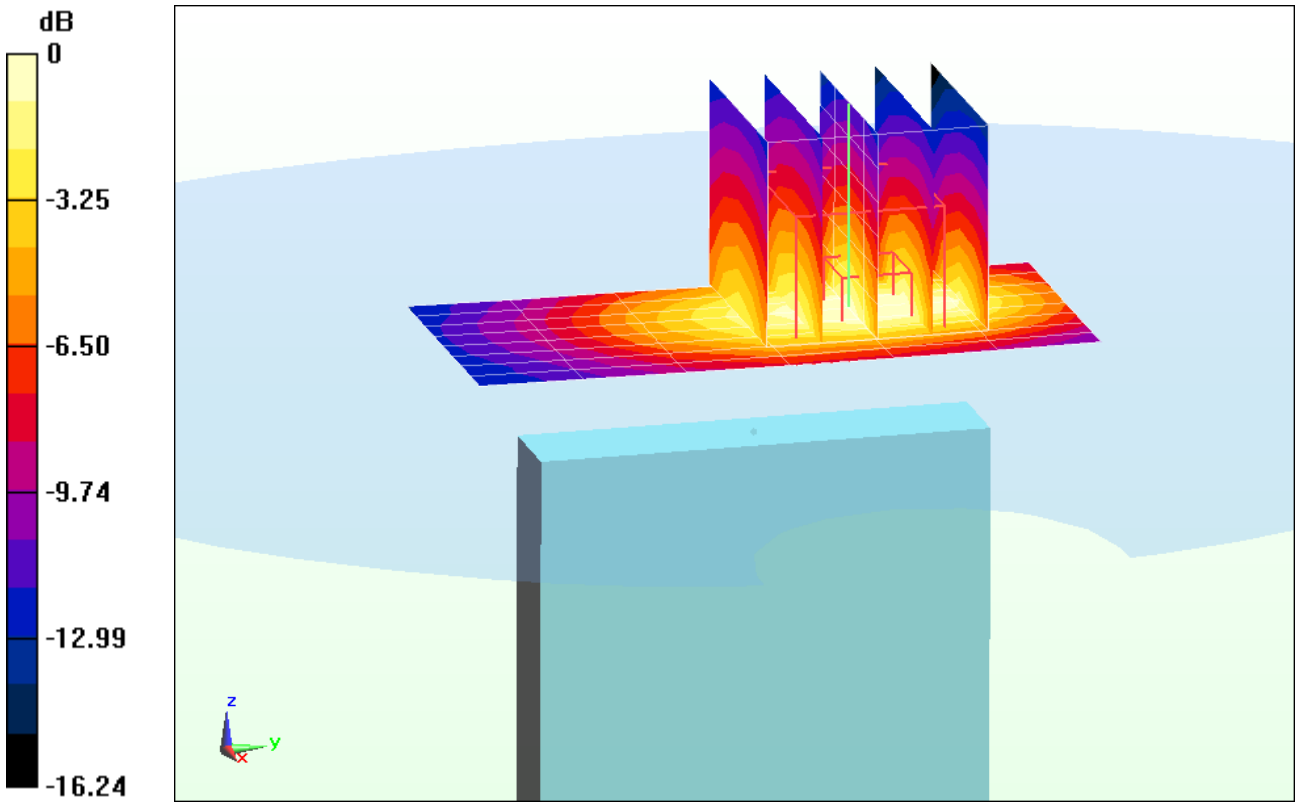
Communication System: Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
$f = 820.1$ MHz; $\sigma = 0.96$ mho/m; $\varepsilon_r = 55.079$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 EVDO Rev. 0 - FCC Rule Part 90S, 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 = 22.991 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.687 mW/g
SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.195 mW/g



0 dB = 0.410 mW/g = -7.74 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

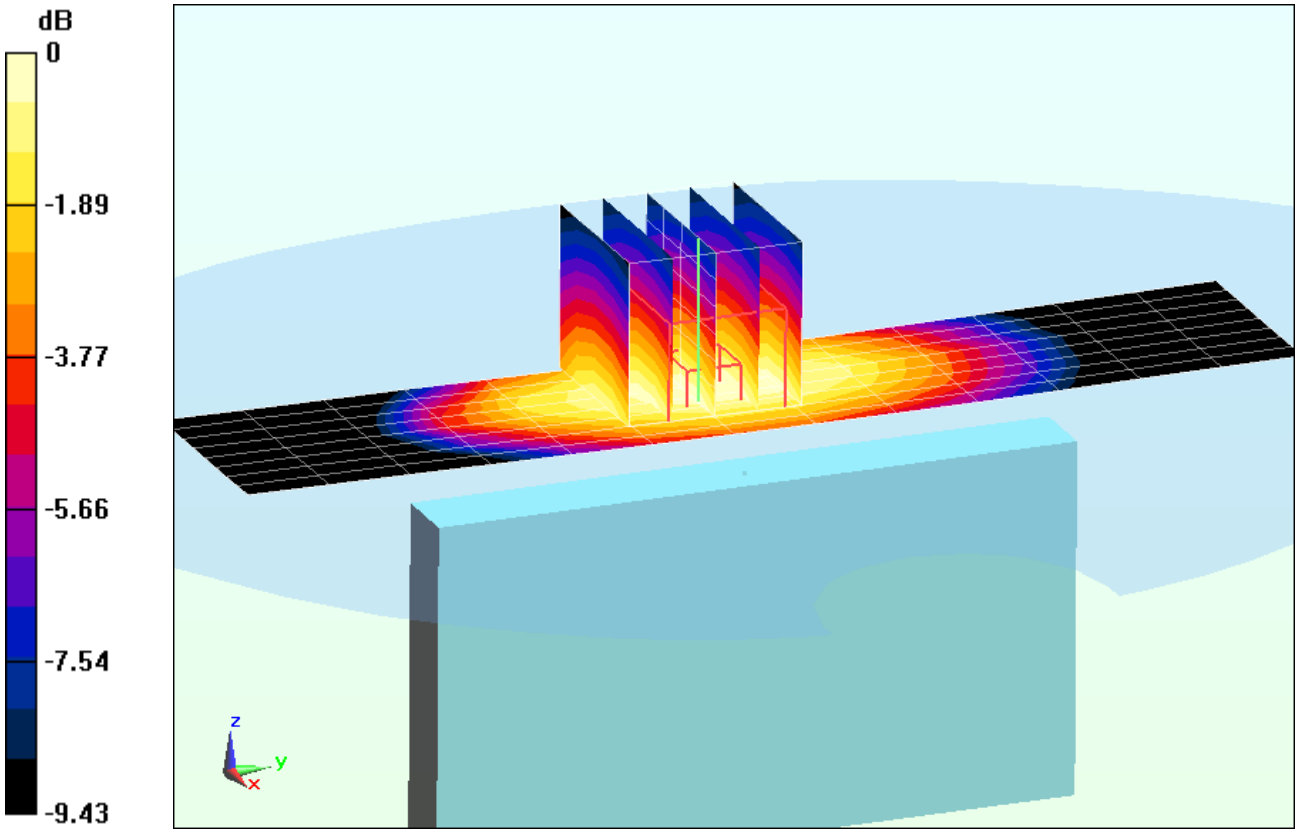
Communication System: Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 820.1 MHz; σ = 0.96 mho/m; ε_r = 55.079; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 TDSO - FCC Rule Part 90S, Body SAR, Left Edge, Mid.ch

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.964 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 1.028 mW/g
SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.524 mW/g



0 dB = 0.777 mW/g = -2.19 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

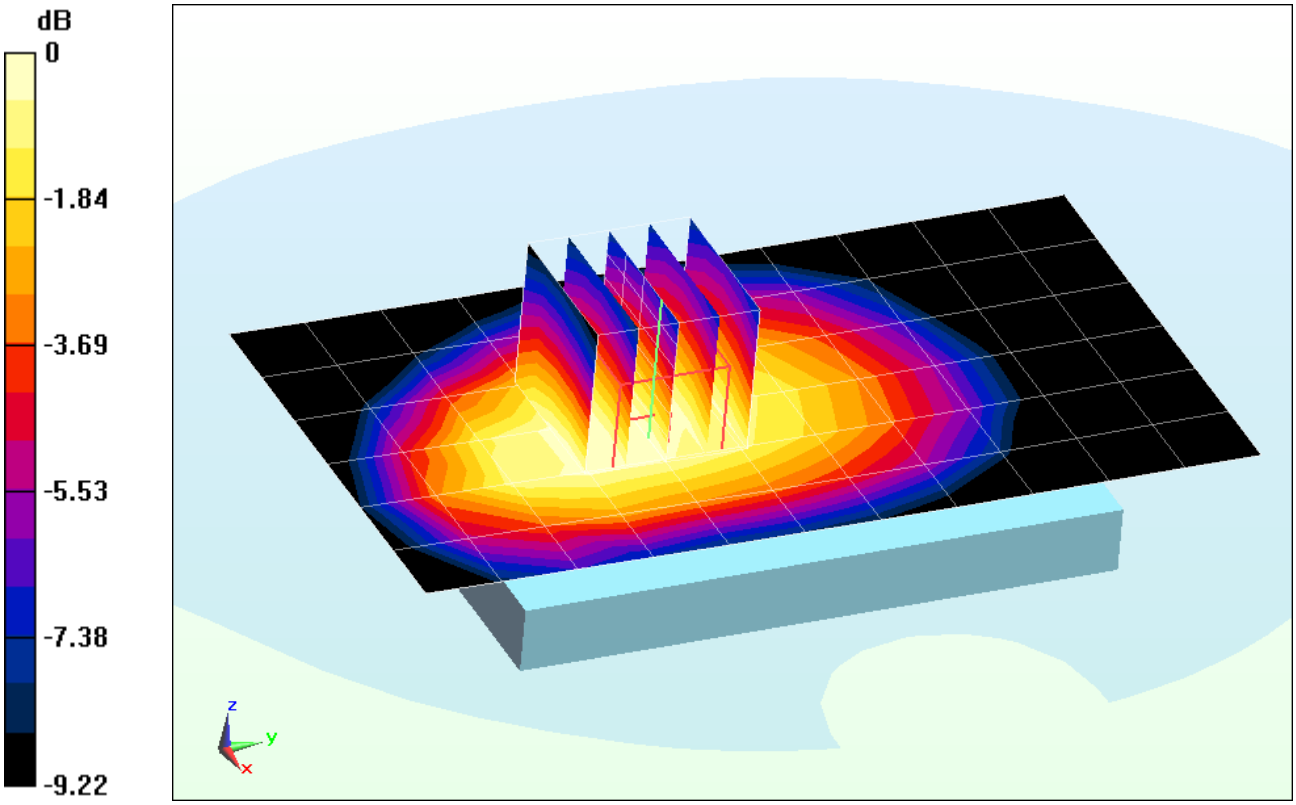
Communication System: Cellular CDMA; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.972 mho/m; ε_r = 54.858; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 EVDO Rev. 0 - FCC Rule Part 22H, Body SAR, Back 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 = 31.013 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.970 mW/g
SAR(1 g) = 0.769 mW/g; SAR(10 g) = 0.580 mW/g



0 dB = 0.803 mW/g = -1.91 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

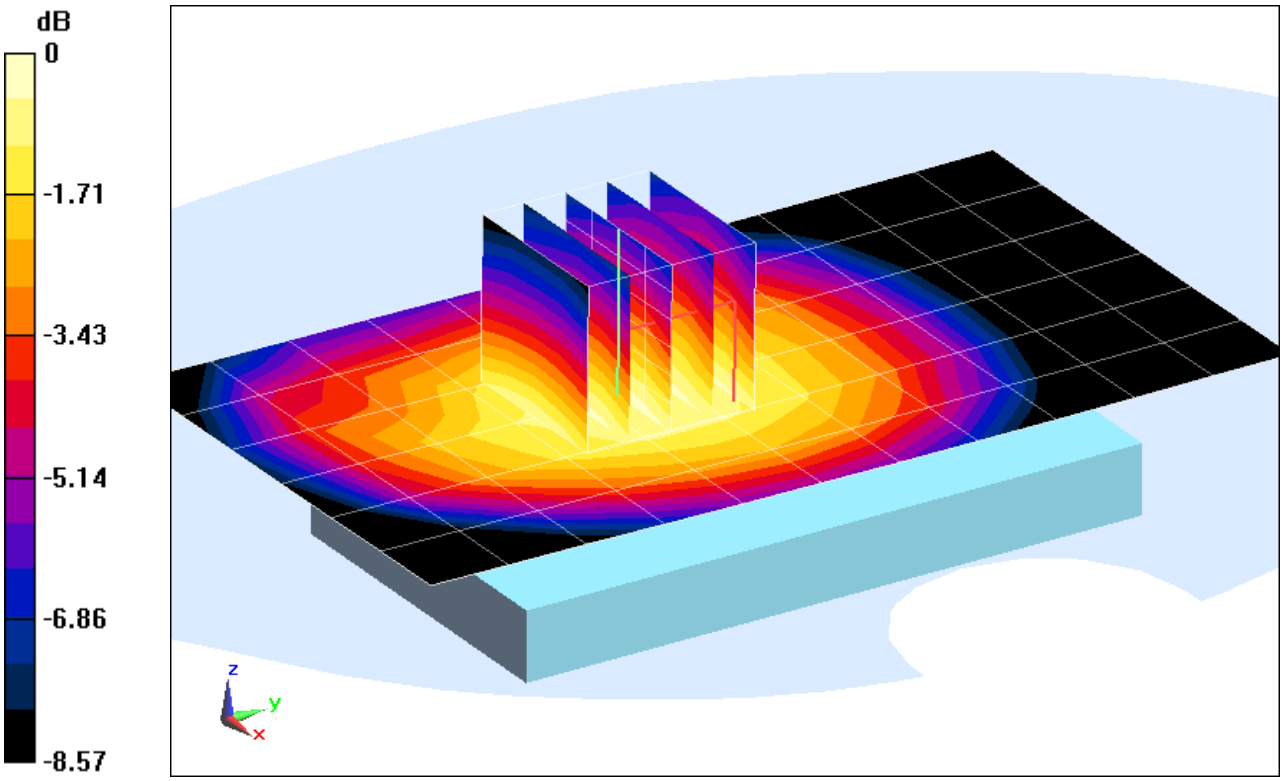
Communication System: Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.972 mho/m; ε_r = 54.858; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 TDSO - FCC Rule Part 22H, 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 = 22.594 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.550 mW/g
SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.348 mW/g



0 dB = 0.475 mW/g = -6.47 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

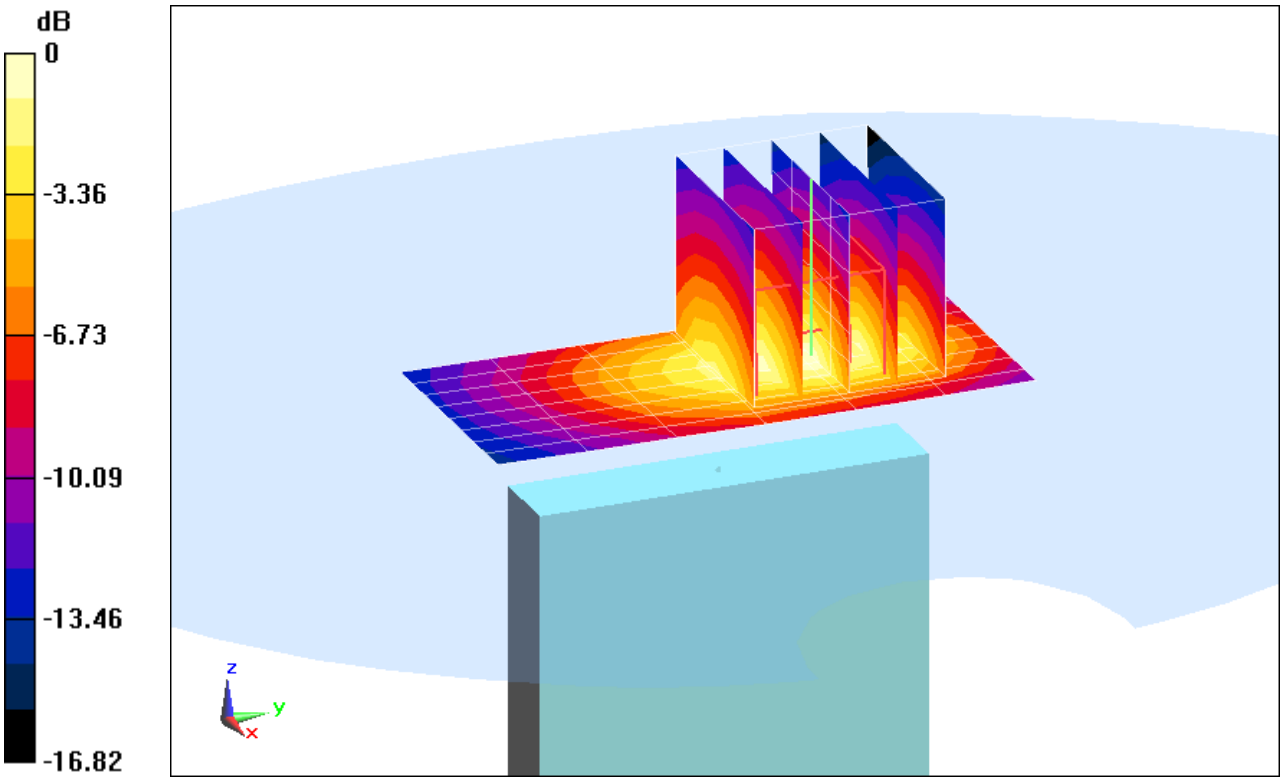
Communication System: Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.972 mho/m; ε_r = 54.858; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 TDSO - FCC Rule Part 22H, 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 = 24.473 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.847 mW/g
SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.236 mW/g



0 dB = 0.508 mW/g = -5.88 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

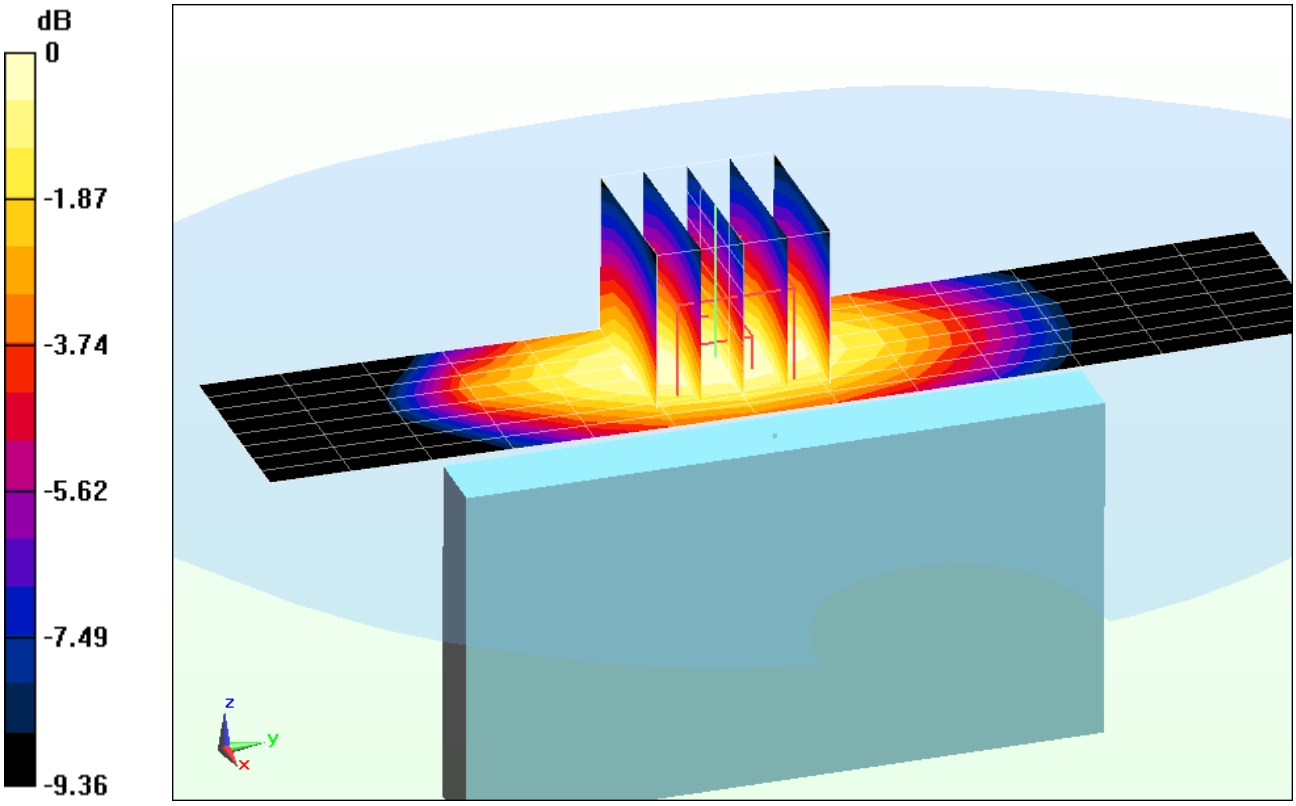
Communication System: Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.972 mho/m; ε_r = 54.858; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 24.1°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.06, 6.06, 6.06); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
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 EVDO Rev. 0 - FCC Rule Part 22H, Body SAR, Left Edge, Mid.ch

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.220 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.002 mW/g
SAR(1 g) = 0.733 mW/g; SAR(10 g) = 0.510 mW/g



0 dB = 0.783 mW/g = -2.12 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

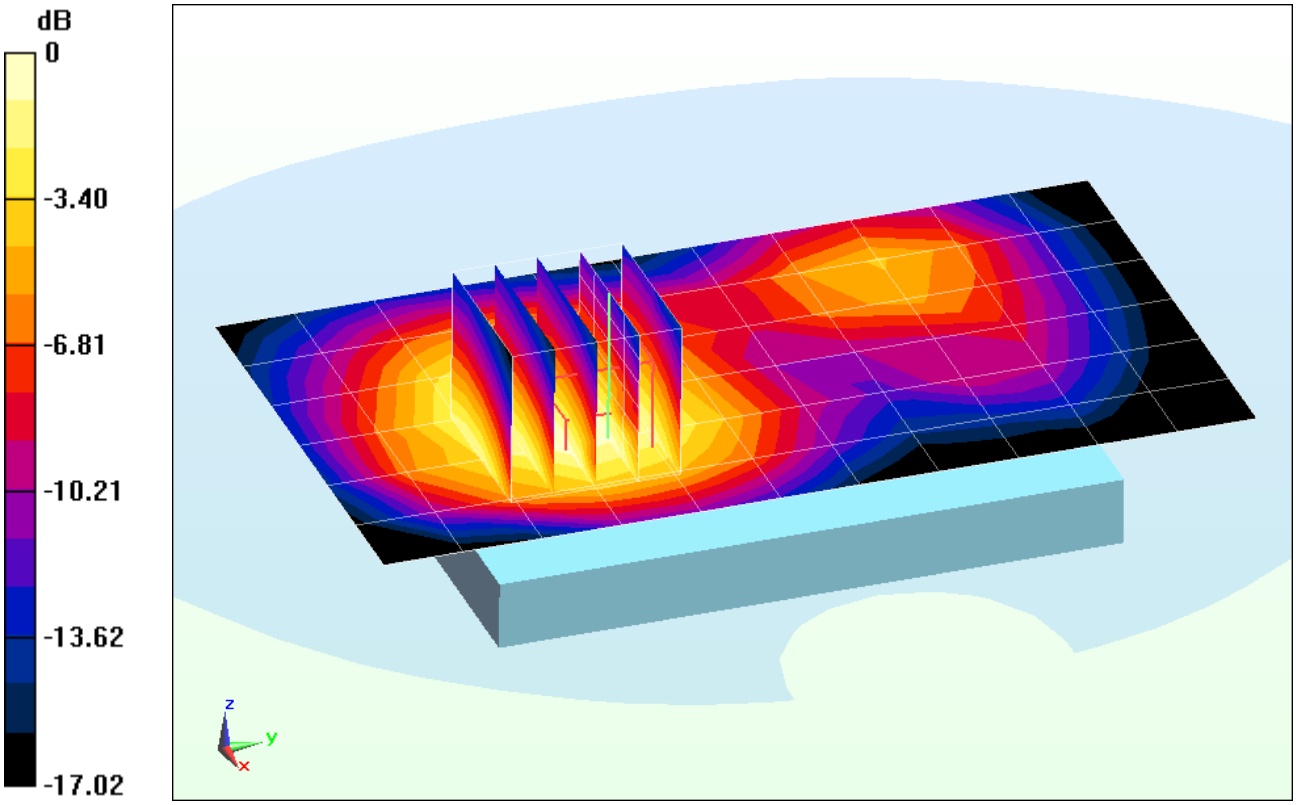
Communication System: CDMA; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1851.25 MHz; σ = 1.494 mho/m; ε_r = 51.813; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-31-2012; Ambient Temp: 21.9°C; Tissue Temp: 21.1°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: PCS EVDO Rev. 0 - FCC Rule Part 24E, 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 = 28.875 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.805 mW/g
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.679 mW/g



0 dB = 1.19 mW/g = 1.51 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

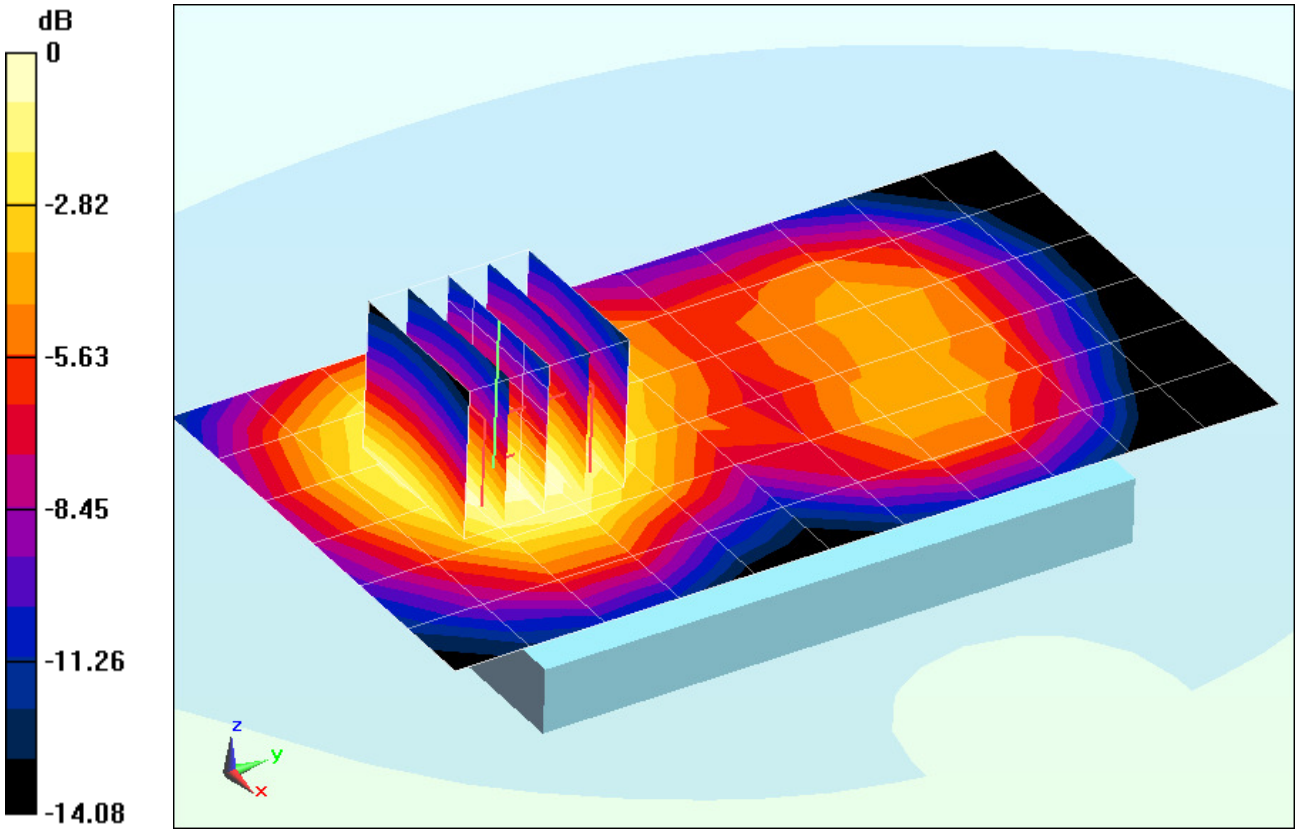
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.558 mho/m; ε_r = 51.88; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-31-2012; Ambient Temp: 21.9°C; Tissue Temp: 21.1°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: PCS CDMA - FCC Rule Part 24E, 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 = 21.244 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.970 mW/g
SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.428 mW/g



0 dB = 0.697 mW/g = -3.14 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

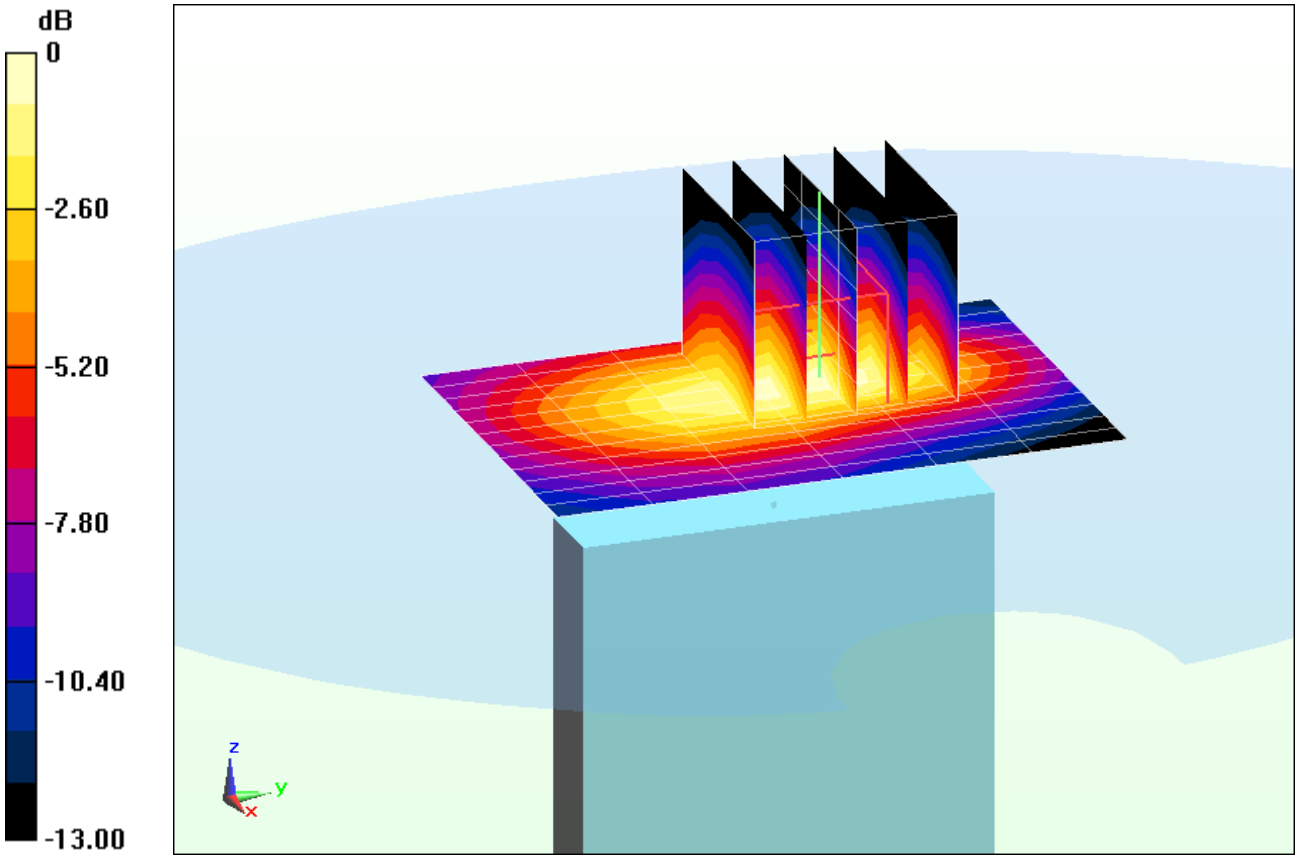
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.558 mho/m; ε_r = 51.88; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-31-2012; Ambient Temp: 21.9°C; Tissue Temp: 21.1°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: PCS CDMA - FCC Rule Part 24E, 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 = 23.564 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.362 mW/g
SAR(1 g) = 0.786 mW/g; SAR(10 g) = 0.436 mW/g



0 dB = 0.892 mW/g = -0.99 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#1

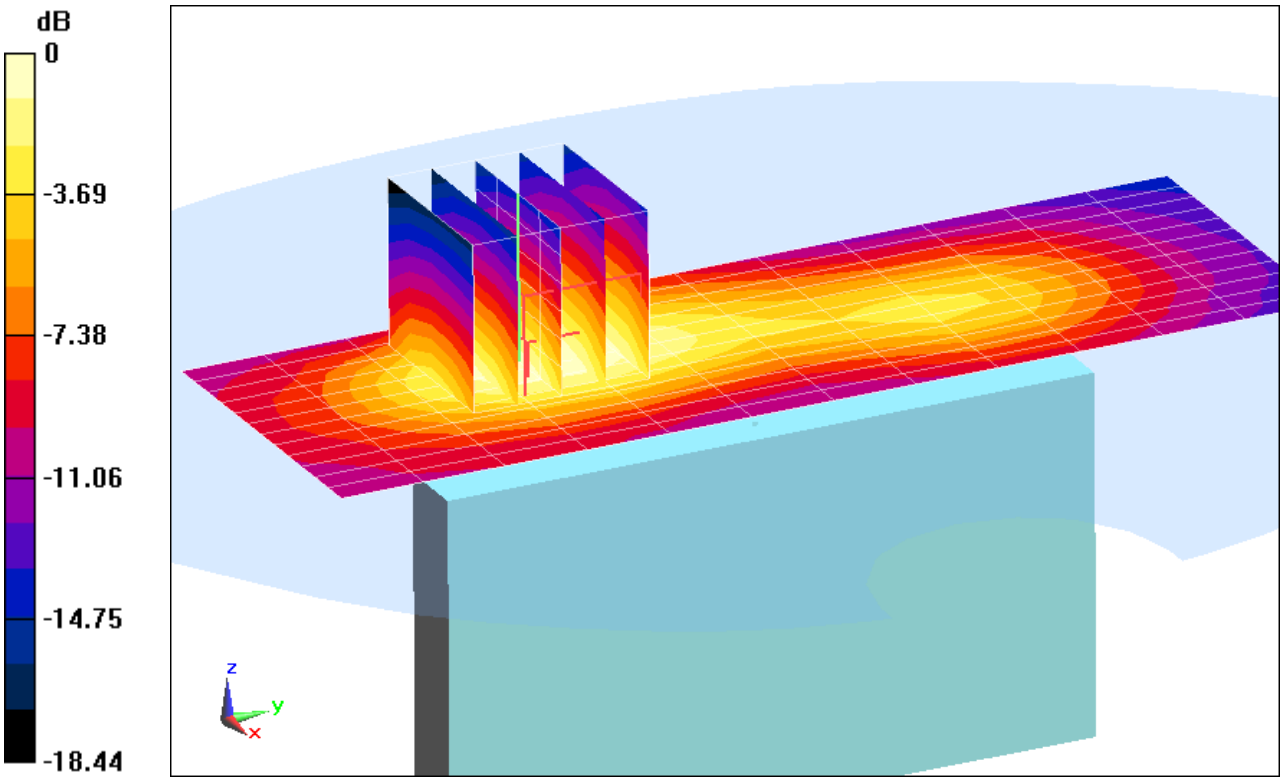
Communication System: CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1880 MHz; σ = 1.558 mho/m; ε_r = 51.88; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-31-2012; Ambient Temp: 21.9°C; Tissue Temp: 21.1°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: PCS CDMA - FCC Rule Part 24E, Body SAR, Left 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 = 14.733 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.525 mW/g
SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.168 mW/g



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

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

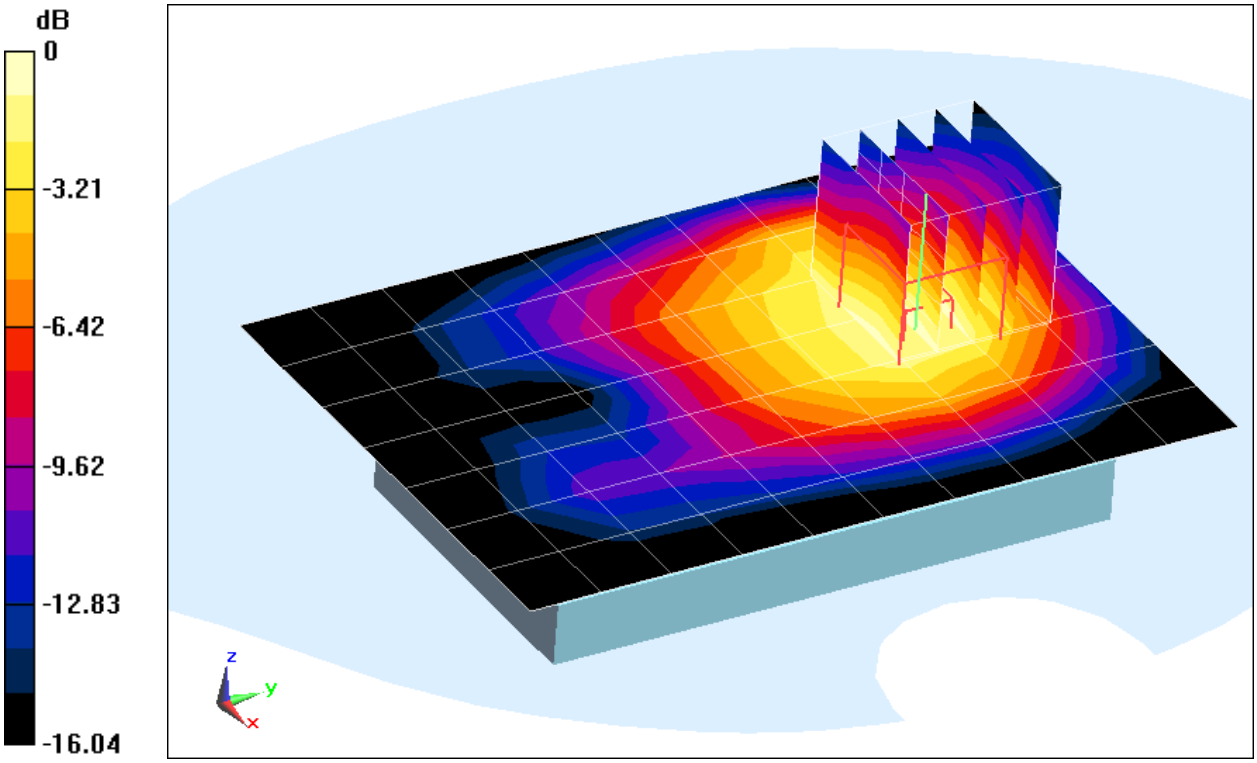
Communication System: LTE BAND 25; Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.451 mho/m; ε_r = 53.462; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 24.9°C; Tissue Temp: 24.5°C

Probe: ES3DV3 - SN3209; ConvF(4.63, 4.63, 4.63); Calibrated: 3/16/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 2/15/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1357
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Body SAR, Back side, Low.ch, 10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.128 V/m; Power Drift = -0.20 dB
Peak SAR (extrapolated) = 1.391 mW/g
SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.609 mW/g



0 dB = 1.01 mW/g = 0.09 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

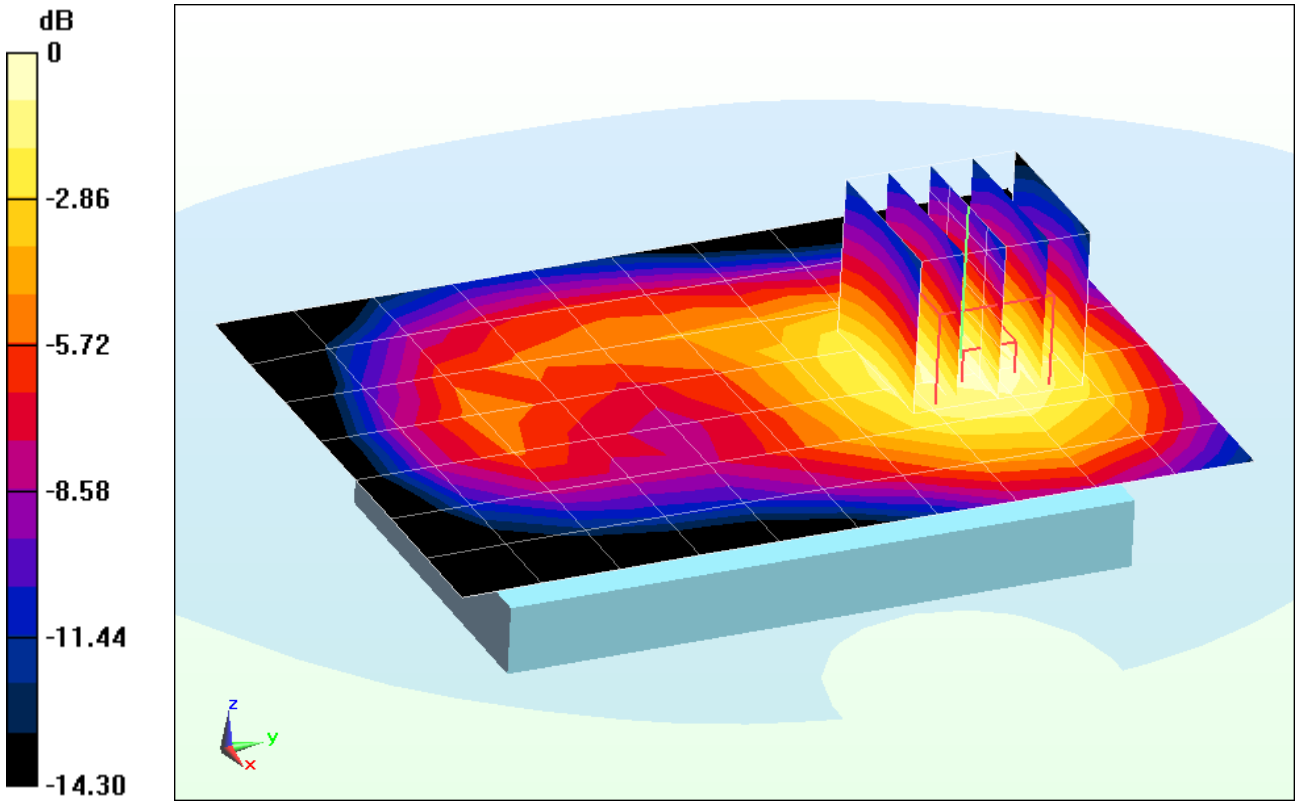
Communication System: LTE BAND 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.48 mho/m; ε_r = 53.363; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 24.9°C; Tissue Temp: 24.5°C

Probe: ES3DV3 - SN3209; ConvF(4.63, 4.63, 4.63); Calibrated: 3/16/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 2/15/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1357
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Body SAR, Front side, Mid.ch, 10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.600 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.610 mW/g
SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.267 mW/g



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

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

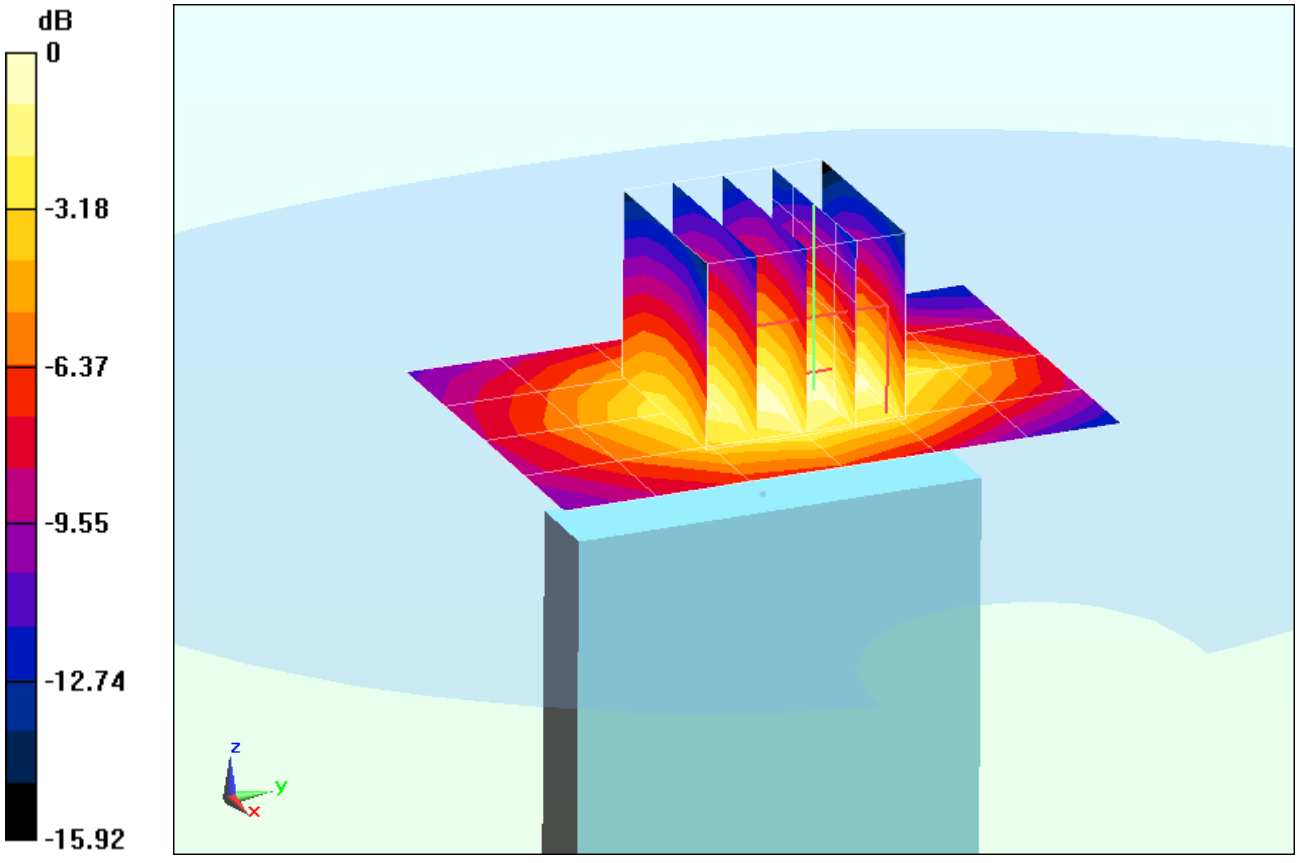
Communication System: LTE BAND 25; Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
$f = 1882.5$ MHz; $\sigma = 1.48$ mho/m; $\varepsilon_r = 53.363$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 24.9°C; Tissue Temp: 24.5°C

Probe: ES3DV3 - SN3209; ConvF(4.63, 4.63, 4.63); Calibrated: 3/16/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 2/15/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1357
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Body SAR, Top Edge, Mid.ch, 10 MHz Bandwidth, 16 QAM, 1 RB, RB Offset 0

Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.883 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.604 mW/g
SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.234 mW/g



0 dB = 0.416 mW/g = -7.62 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: 150

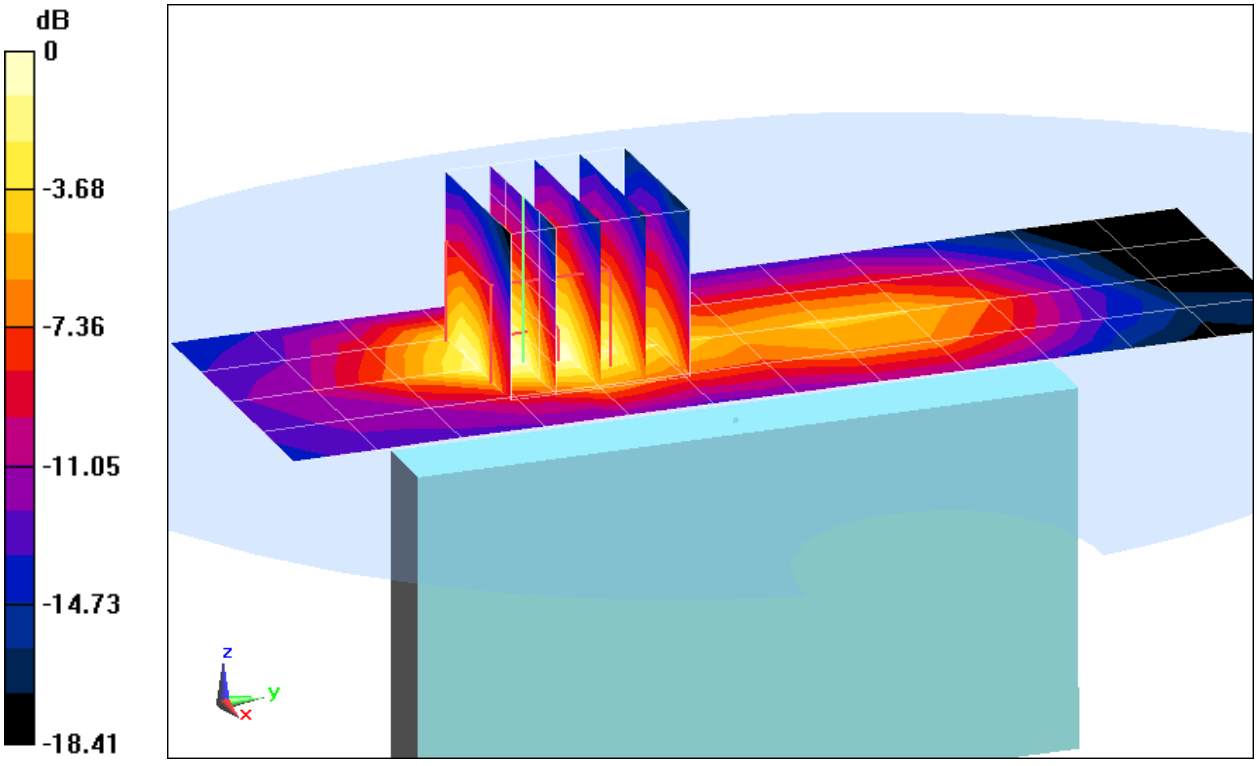
Communication System: LTE BAND 25; Frequency: 1855 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1855 MHz; σ = 1.451 mho/m; ε_r = 53.462; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 24.9°C; Tissue Temp: 24.5°C

Probe: ES3DV3 - SN3209; ConvF(4.63, 4.63, 4.63); Calibrated: 3/16/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 2/15/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1357
Measurement SW: DASY4, Version 4.7 (80);SEMCAD X Version 14.6.5 (6469)

Mode: LTE Band 25 (PCS) - FCC Rule Part 24E, Body SAR, Right Edge, Low.ch, 10 MHz Bandwidth, QPSK, 1 RB, RB Offset 0

Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.537 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.699 mW/g
SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.197 mW/g



0 dB = 0.395 mW/g = -8.07 dB mW/g

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

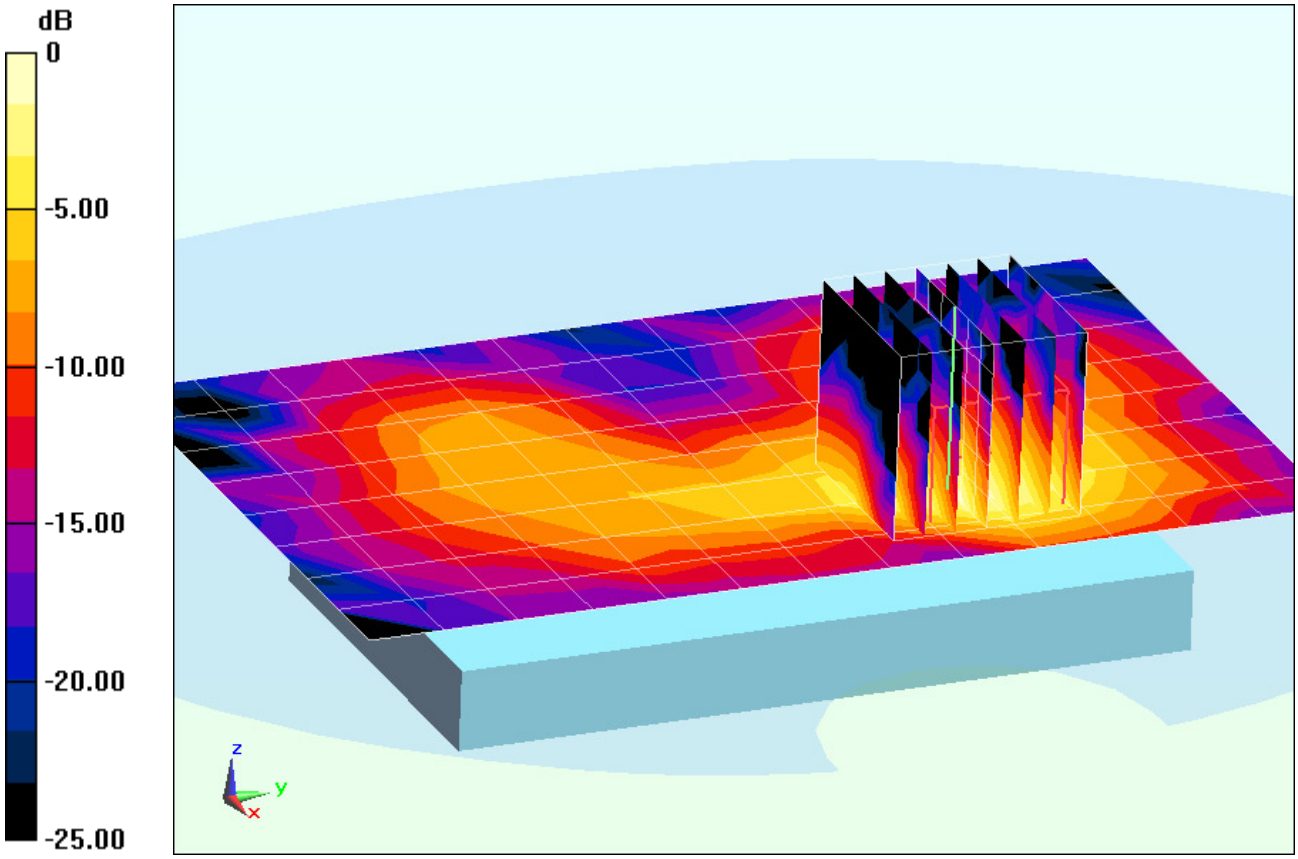
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.968 mho/m; ε_r = 50.285; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-25-2012; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: ES3DV3 - SN3288; ConvF(4.47, 4.47, 4.47); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: TP:-1648
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Body SAR, Ch 11, 1 Mbps, Back Side

Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.331 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.122 mW/g
SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.023 mW/g



0 dB = 0.0657 mW/g = -23.65 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

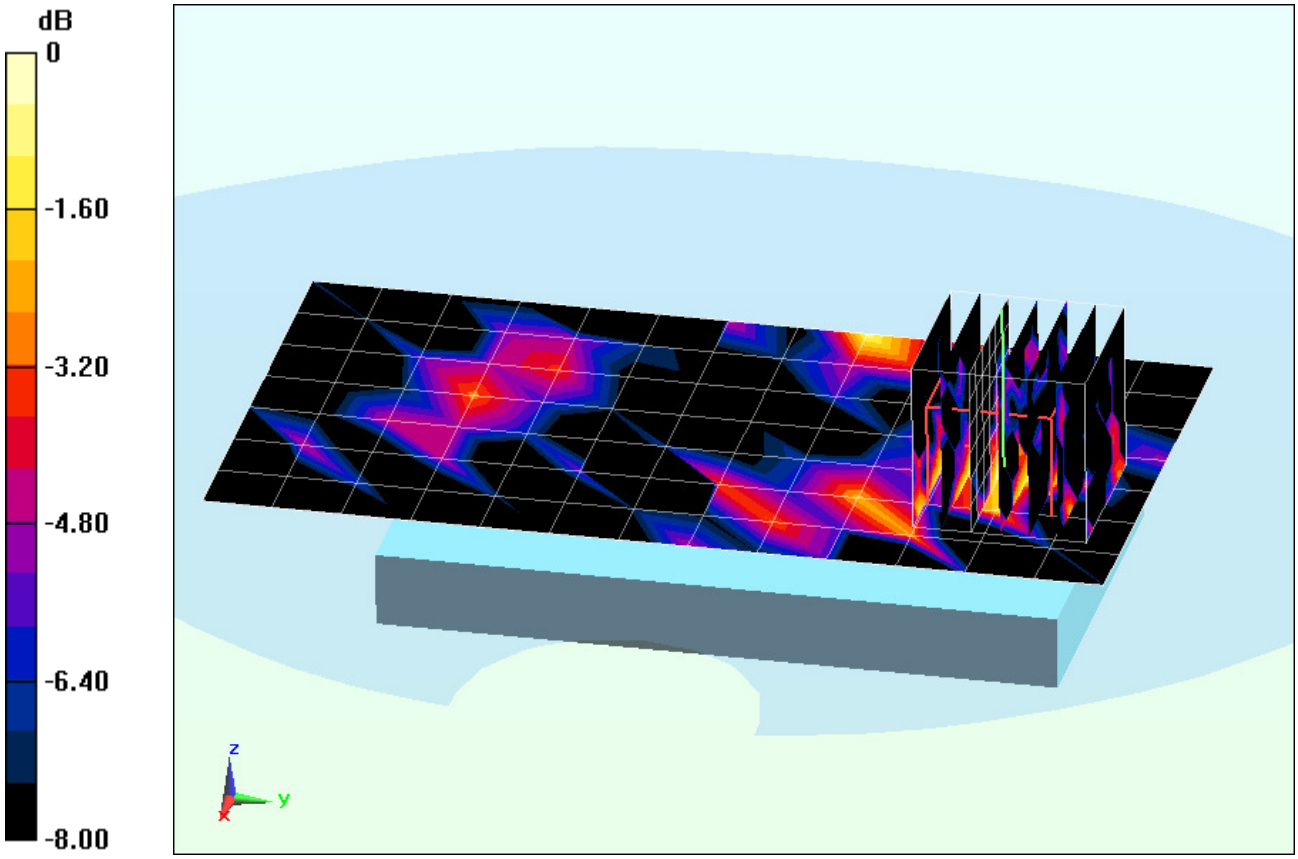
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.968 mho/m; ε_r = 50.285; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-25-2012; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: ES3DV3 - SN3288; ConvF(4.47, 4.47, 4.47); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: TP:-1648
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Body SAR, Ch 11, 1 Mbps, Front Side

Area Scan (8x14x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.286 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.020 mW/g
SAR(1 g) = 0.0031 mW/g; SAR(10 g) = 0.000582 mW/g



0 dB = 0.00544 mW/g = -45.29 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

DUT: ZNFLS860; Type: Portable Handset; Serial: SAR#2

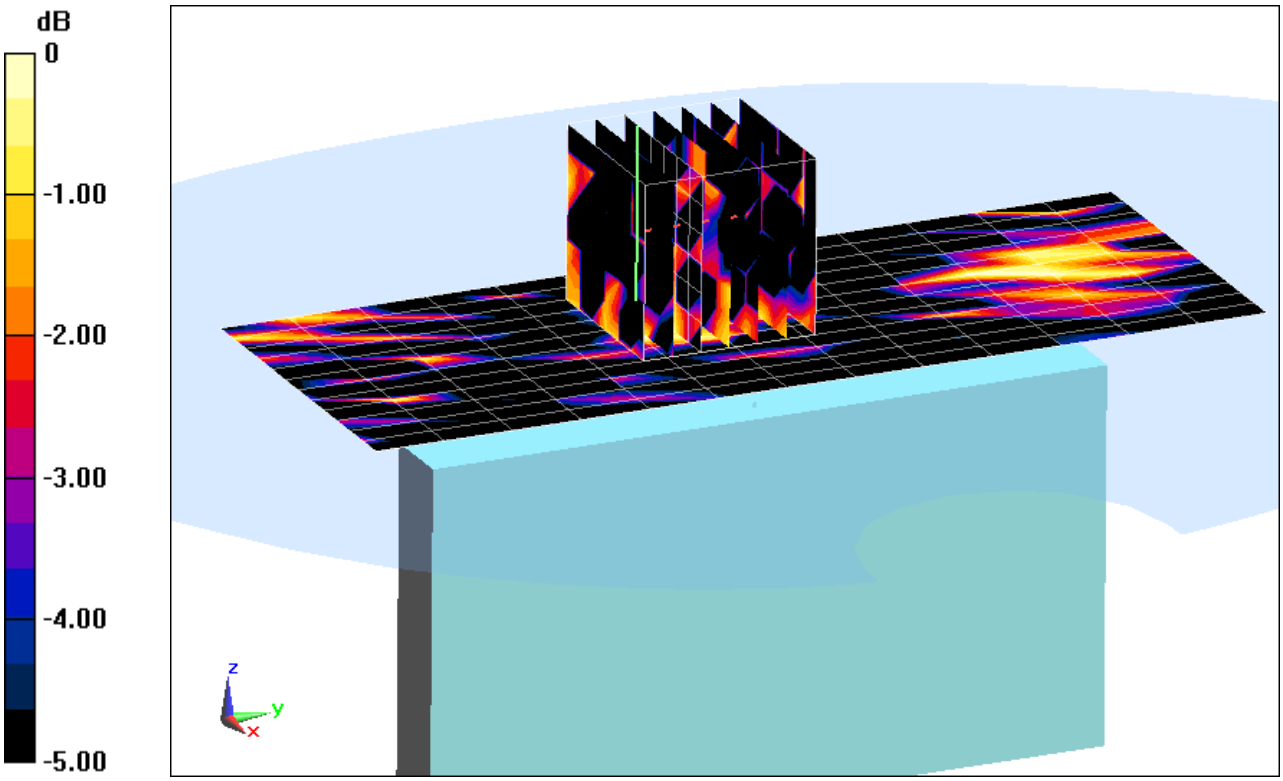
Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.968 mho/m; ε_r = 50.285; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-25-2012; Ambient Temp: 20.6°C; Tissue Temp: 20.3°C

Probe: ES3DV3 - SN3288; ConvF(4.47, 4.47, 4.47); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 4/12/2012
Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: TP:-1648
Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.6.5 (6469)

Mode: IEEE 802.11b - FCC Rule Part 15C, Body SAR, Ch 11, 1 Mbps, Left Edge

Area Scan (13x14x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.825 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.00468 mW/g
SAR(1 g) = 0.000493 mW/g; SAR(10 g) = 6.65e-005 mW/g



0 dB = 0.00254 mW/g = -51.90 dB mW/g

APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

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

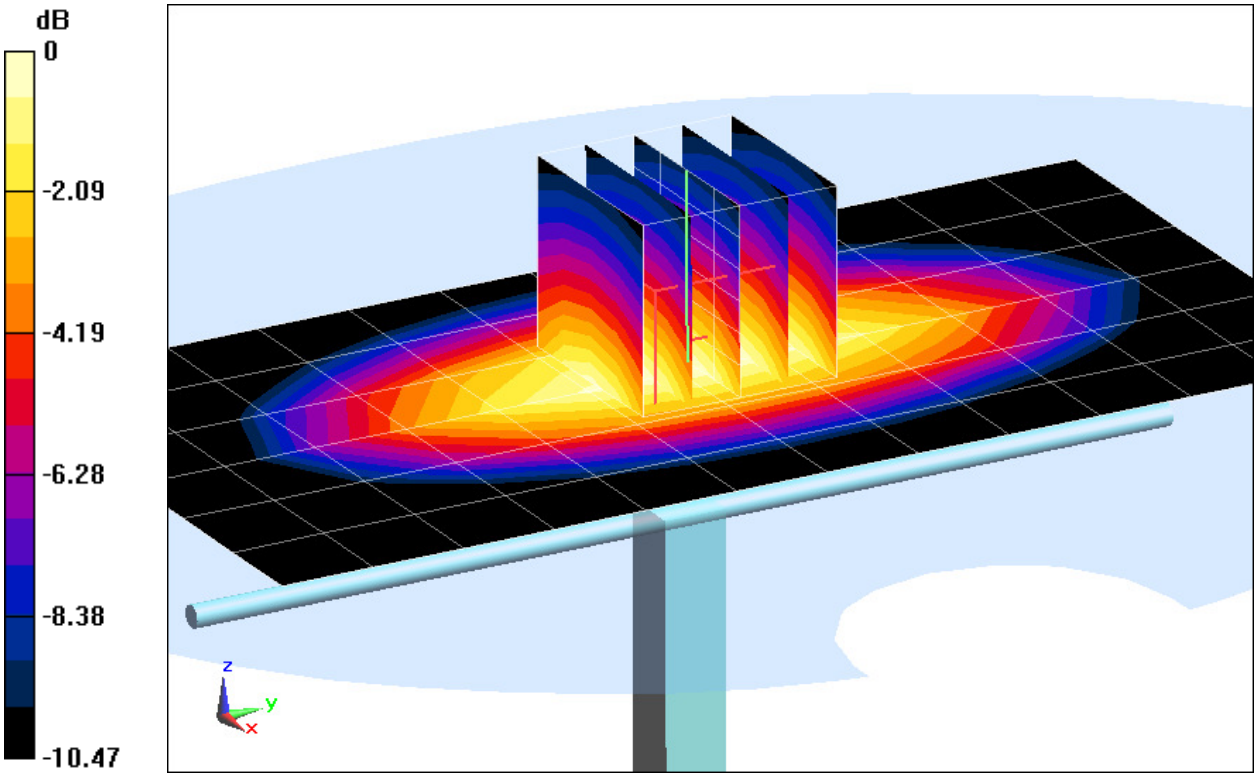
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used:
f = 835 MHz; σ = 0.878 mho/m; ε_r = 41.58; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-30-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.01, 6.01, 6.01); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1403
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) = 1.383 mW/g
SAR(1 g) = 0.939 mW/g; SAR(10 g) = 0.615 mW/g
Deviation = -0.32%



0 dB = 1.02 mW/g = 0.17 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

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

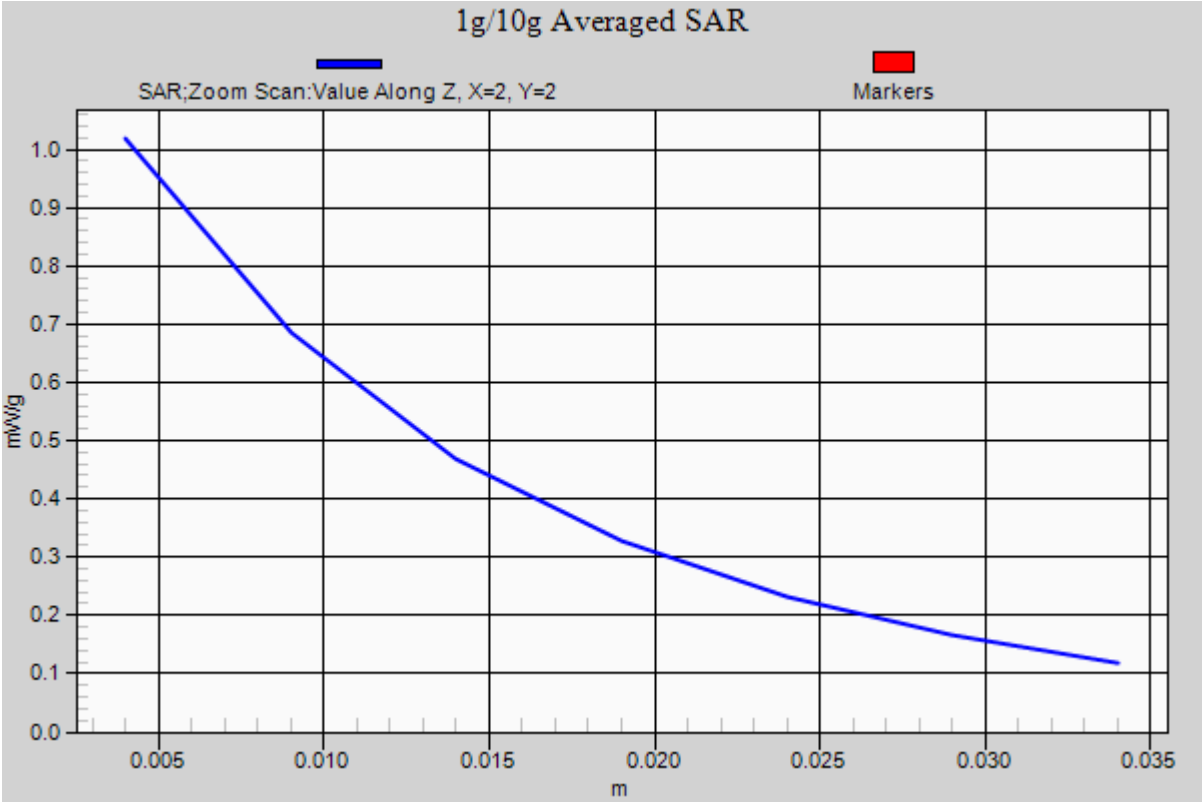
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used:
f = 835 MHz; σ = 0.878 mho/m; ε_r = 41.58; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-30-2012; Ambient Temp: 24.8°C; Tissue Temp: 23.4°C

Probe: ES3DV3 - SN3258; ConvF(6.01, 6.01, 6.01); Calibrated: 2/21/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1272; Calibrated: 1/18/2012
Phantom: SAM Sub; Type: SAM 4.0; Serial: TP-1403
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) = 1.383 mW/g
SAR(1 g) = 0.939 mW/g; SAR(10 g) = 0.615 mW/g
Deviation = -0.32%



PCTEST ENGINEERING LABORATORY, INC.

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

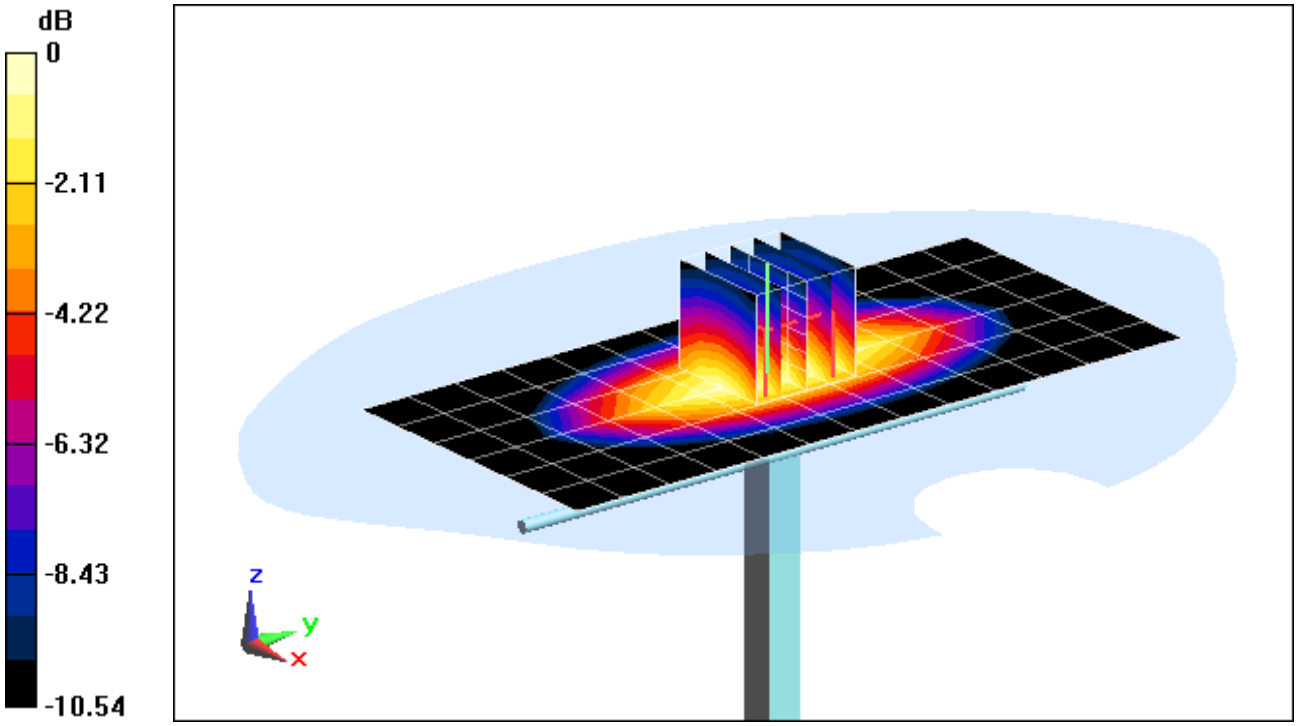
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.881 mho/m; ε_r = 40.72; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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) = 1.469 mW/g
SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.650 mW/g
Deviation: 5.63%



0 dB = 1.07 mW/g = 0.59 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

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

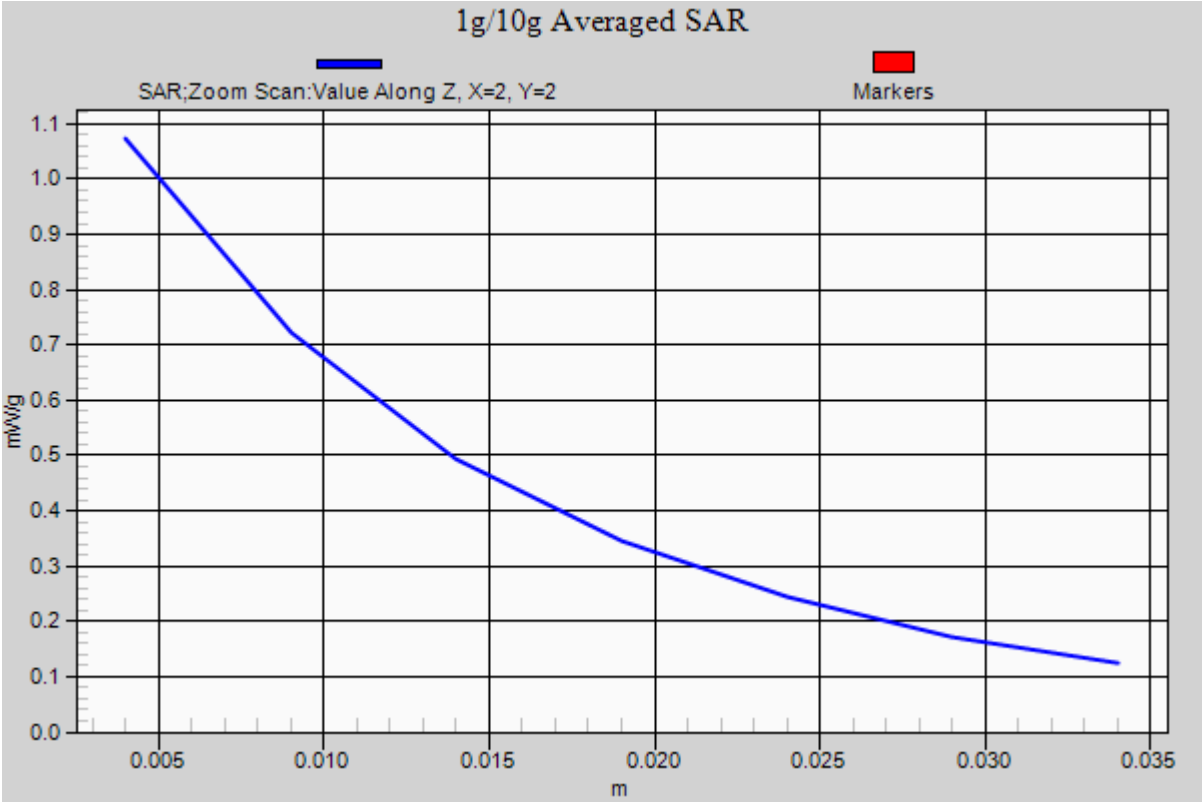
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.881 mho/m; ε_r = 40.72; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08-20-2012; Ambient Temp: 23.5°C; Tissue Temp: 22.8°C

Probe: ES3DV3 - SN3287; ConvF(6.06, 6.06, 6.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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) = 1.469 mW/g
SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.650 mW/g
Deviation: 5.63%



PCTEST ENGINEERING LABORATORY, INC.

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

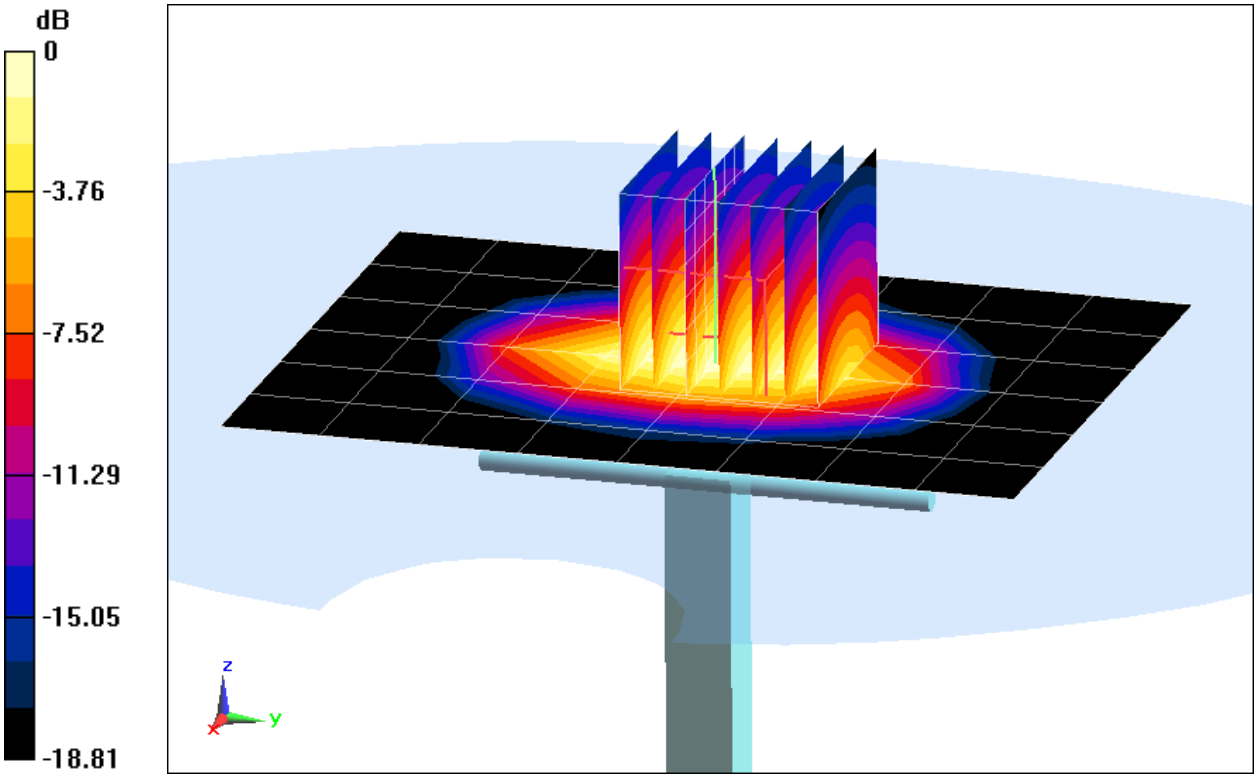
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.418 mho/m; ε_r = 38.503; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.759 mW/g
SAR(1 g) = 4.11 mW/g; SAR(10 g) = 2.12 mW/g
Deviation = 4.58%



0 dB = 4.61 mW/g = 13.27 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

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

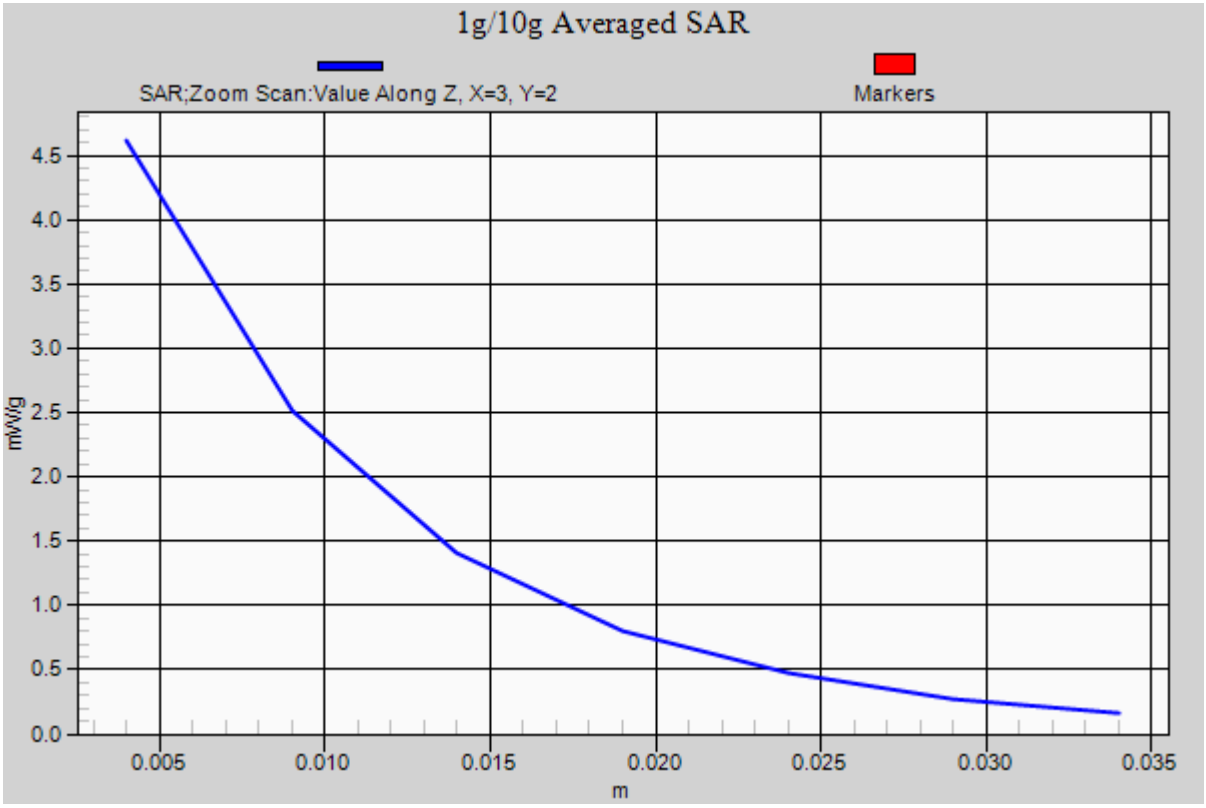
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.418 mho/m; ε_r = 38.503; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-30-2012; Ambient Temp: 21.1°C; Tissue Temp: 21.2°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); Calibrated: 2/7/2012;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn649; Calibrated: 2/20/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Input Power = 20.0 dBm (100 mW)
Peak SAR (extrapolated) = 7.759 mW/g
SAR(1 g) = 4.11 mW/g; SAR(10 g) = 2.12 mW/g
Deviation = 4.58%



PCTEST ENGINEERING LABORATORY, INC.

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

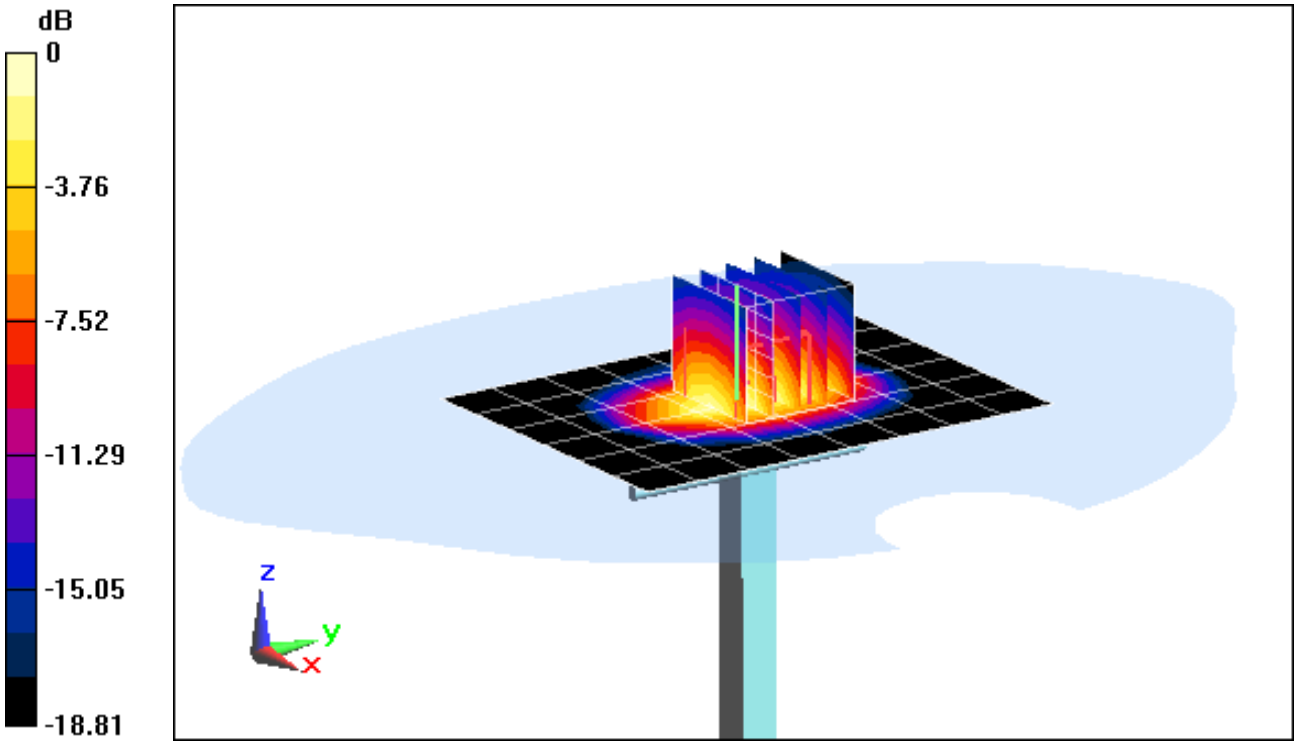
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.443 mho/m; ε_r = 40.933; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08-23-2012; Ambient Temp: 23.9°C; Tissue Temp: 22.7°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); 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) = 7.789 mW/g
SAR(1 g) = 4.18 mW/g; SAR(10 g) = 2.17 mW/g
Deviation: 6.36%



0 dB = 4.64 mW/g = 13.33 dB mW/g

PCTEST ENGINEERING LABORATORY, INC.

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

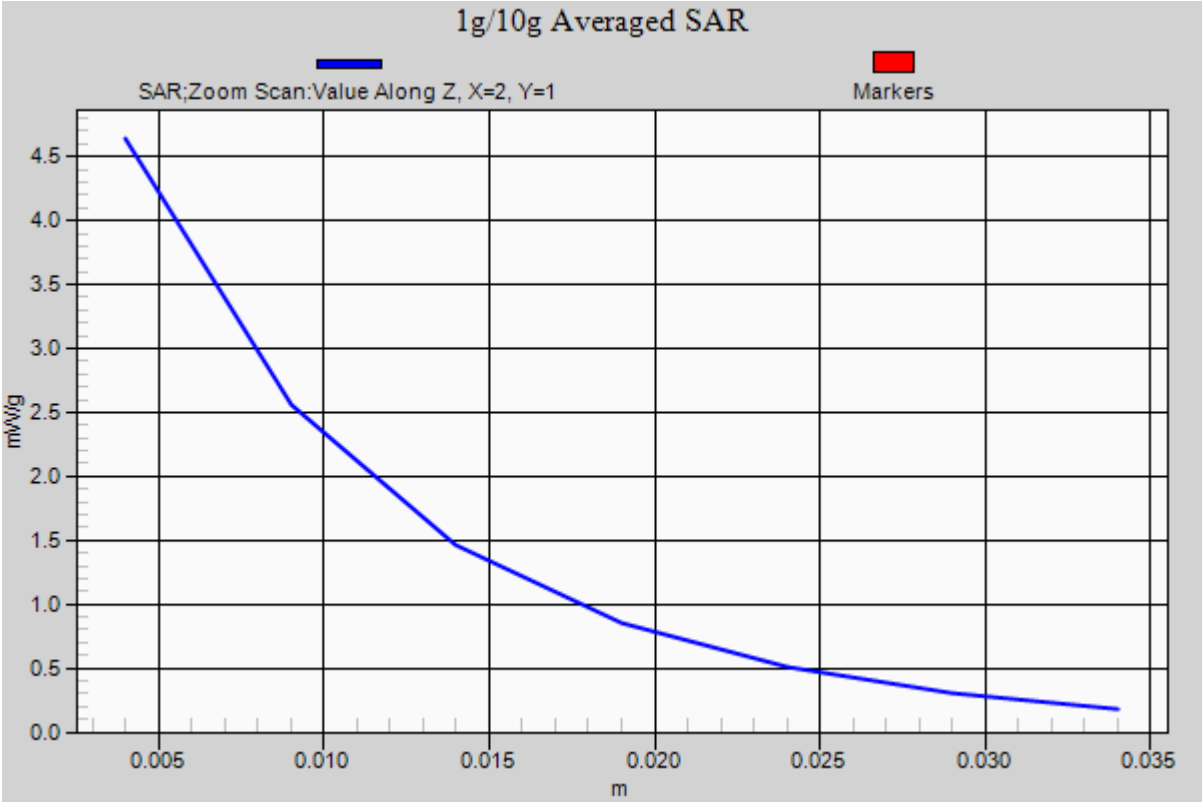
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1900 MHz; σ = 1.443 mho/m; ε_r = 40.933; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08-23-2012; Ambient Temp: 23.9°C; Tissue Temp: 22.7°C

Probe: ES3DV3 - SN3287; ConvF(5.06, 5.06, 5.06); 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) = 7.789 mW/g
SAR(1 g) = 4.18 mW/g; SAR(10 g) = 2.17 mW/g
Deviation: 6.36%



PCTEST ENGINEERING LABORATORY, INC.

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

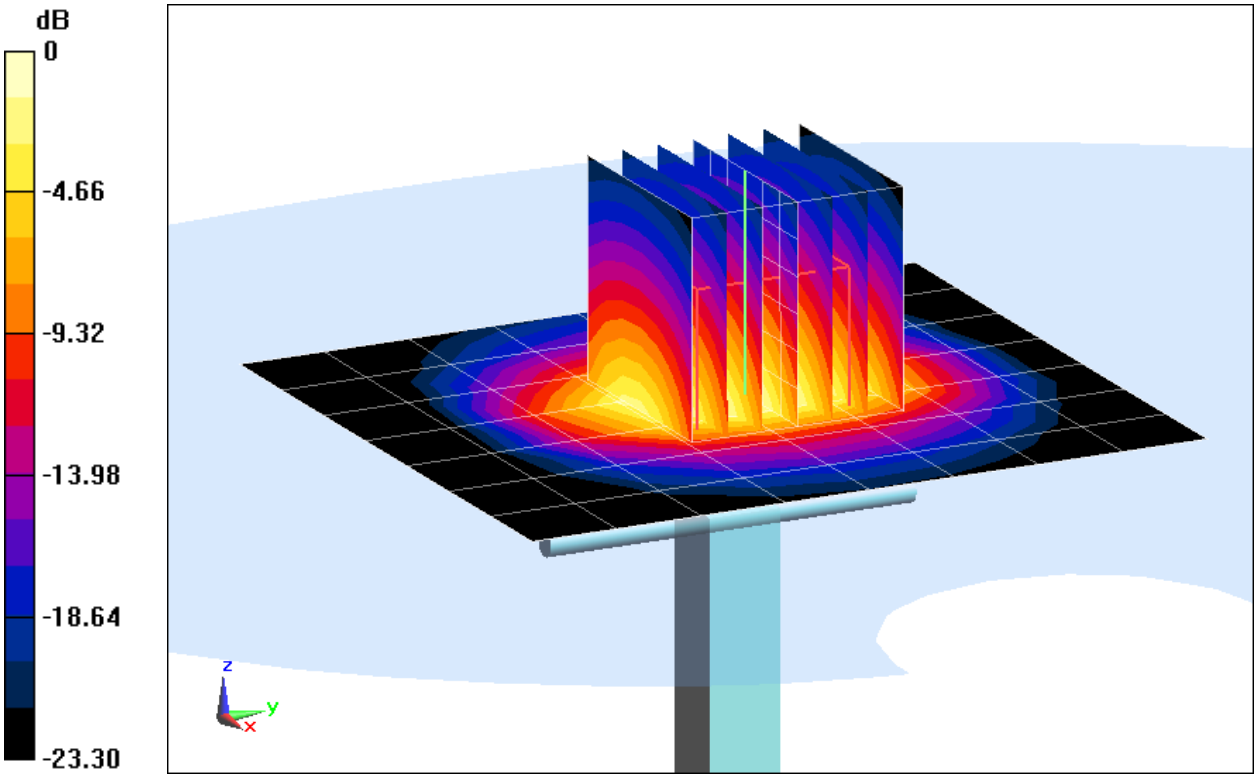
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head; Medium parameters used:
f = 2450 MHz; σ = 1.885 mho/m; ε_r = 40.29; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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) = 11.335 mW/g
SAR(1 g) = 5.34 mW/g; SAR(10 g) = 2.43 mW/g
Deviation = -0.19%



0 dB = 7.03 mW/g = 16.94 dB mW/g

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 = 1.885 mho/m; ε_r = 40.29; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-26-2012; Ambient Temp: 20.8°C; Tissue Temp: 21.0°C

Probe: ES3DV3 - SN3287; ConvF(4.44, 4.44, 4.44); Calibrated: 2/7/2012;
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE4 Sn665; Calibrated: 4/19/2012
Phantom: SAM v5.0 Left; Type: QD000P40CD; Serial: TP: 1687
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) = 11.335 mW/g
SAR(1 g) = 5.34 mW/g; SAR(10 g) = 2.43 mW/g
Deviation = -0.19%