# SAR TEST REPORT

## No. 2013SAR0019

***For***

**Client : D-Link Corporation**

**Production : EVDO Mobile Hotspot**

**Model Name : DWR-330**

**FCC ID: KA2WR330A1**

**Hardware Version: A1**

**Software Version: v1.00**

**Issued date: 2014-3-18**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

**Test Laboratory:**

ECIT Shanghai, East China Institute of Telecommunications

Add: 7-8F, G Area, No.668, Beijing East Road, Huangpu District, Shanghai, P. R. China

Tel: (+86)-021-63843300, E-Mail: welcome@ecit.org.cn

# Revision Version

| Report Number | Revision | Date | Memo |
|---|---|---|---|
| 2014SAR0019 | 00 | 2014/3/18 | Initial creation of test report |

# CONTENTS

# 1 Test Laboratory

## 1.1 Testing Location

| | |
|---|---|
| Company Name: | ECIT Shanghai, East China Institute of Telecommunications |
| Address: | 7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China |
| Postal Code: | 200001 |
| Telephone: | (+86)-021-63843300 |
| Fax: | (+86)-021-63843301 |

## 1.2 Testing Environment

| | |
|---|---|
| Normal Temperature: | 15-35℃ |
| Relative Humidity: | 20-75% |
| Ambient noise & Reflection: | < 0.012 W/kg |

## 1.3 Project Data

| | |
|---|---|
| Project Leader: | Gong Yujuan |
| Testing Start Date: | 2014-02-27 |
| Testing End Date: | 2014-03-05 |

## 1.4 Signature

**Hu Jiajing**
**(Prepared this test report)**

**Yu Naiping**
**(Reviewed this test report)**

**Zheng Zhongbin**
**Director of the laboratory**
**(Approved this test report)**

# 2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for DWR-330 are as follows ( with expanded uncertainty 22.4%)

**Table 2.1: Max. Reported SAR (1g)**

| Band | Position | Reported SAR 1g (W/Kg) |
|---|---|---|
| CDMA 800 | Body | 1.281 |
| CDMA 1900 | Body | 0.935 |
| Wi-Fi | Body | 0.117 |

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The measurement together with the test system set-up is described in chapter 7 of this test report. A detailed description of the equipment under test can be found in chapter 3 of this test report. The maximum reported SAR value is obtained at the case of **(Table 2.1),** and the values are**: 1.281 W/kg (1g).**

The sample has two antennas. One is main antenna for CDMA, and the other is for WiFi. So simultaneous transmission is CDMA and WiFi.

**Table 2.2: Simultaneous SAR (1g)**

| Simultaneous Transmission SAR(W/Kg) | | | | | |
|---|---|---|---|---|---|
| **Test Position** | | **CDMA 800** | **CDMA 1900** | **WIFI** | **SUM** |
| Body | Phantom Side | **1.281** | 0.542 | **0.117** | **1.398** |
| | Ground Side | **0.838** | 0.613 | **0.063** | 0.901 |
| | Left Side | **0.470** | 0.241 | **0.045** | 0.515 |
| | Right Side | **0.340** | 0.136 | **0.021** | 0.361 |
| | Top Side | 0.024 | **0.612** | **0.0019** | 0.614 |
| | Bottom Side | 0.128 | **0.935** | **0.021** | 0.956 |

According to the above table, the maximum sum of reported SAR values for CDMA and WiFi is **1.398 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

# 3 Client Information

## 3.1 Applicant Information

| | |
|---|---|
| Company Name: | D-Link Corporation |
| Address: | No.289,Sinhu 3rd rd., Neihu District, Taipei City114, Taiwan |
| Telephone: | +886-2-66000123-5821 |
| Postcode: | 114 |

## 3.2 Manufacturer Information

| | |
|---|---|
| Company Name: | D-Link Corporation |
| Address: | No.289,Sinhu 3rd rd., Neihu District, Taipei City114, Taiwan |
| Telephone: | +886-2-66000123-5821 |
| Postcode: | 114 |

# 4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

## 4.1 About EUT

| | |
|---|---|
| Description: | EVDO Mobile Hotspot |
| Model name: | DWR-330 |
| Operation Model(s): | CDMA800/1900,Wifi2450 |
| Tx Frequency: | 824.7-848.3 MHz, 1851.2-1908.7MHz （CDMA）<br>2412-2462 MHz (Wi-Fi) |
| Test device Production information: | Production unit |
| Device type: | Portable device |
| UE category: | 3 |
| Antenna type: | Inner antenna |
| Accessories/Body-worn configurations: | N/A |
| Form factor: | 9.0cm×5.0cm |
| FCC ID: | KA2WR330A1 |

## 4.2 Internal Identification of EUT used during the test

| EUT ID* | SN or IMEI | HW Version | SW Version |
|---|---|---|---|
| N06 | IMEI:-------- | A1 | v1.00 |

*EUT ID: is used to identify the test sample in the lab internally.

## 4.3 Internal Identification of AE used during the test

| AE ID* | Description | Model | SN | Manufacturer |
|---|---|---|---|---|
| AE1 | Battery | BL-13 | XD1312000022 | N/A |

*AE ID: is used to identify the test sample in the lab internally.

# 5 TEST METHODOLOGY

## 5.1 Applicable Limit Regulations

**ANSI C95.1–1992:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

## 5.2 Applicable Measurement Standards

**IC RSS-102 ISSUE4:** Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

**IEEE 1528–2003:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.

**IEEE1528a-2005:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head From Wireless Communications Devices: Measurement Techniques.

**KDB648474 D04 SAR Handsets Multi Xmiter and Ant v01r02:** SAR Evaluation Considerations for Wireless Handsets.

**KDB248227 SAR meas for 802.11abg v01r02:** SAR measurement procedures for 802.112abg transmitters.

**KDB447498 D01 General RF Exposure Guidance v05r01:** Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

**KDB865664 D02 RF Exposure Reporting v01r01:** provides general reporting requirements as well as certain specific information required to support MPE and SAR compliance.

**KDB941225 D01 SAR test for 3G devides v02:** Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE.

**KDB941225 D06 Hotspot Mode SAR v01r01:** SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities.

# 6 Specific Absorption Rate (SAR)

## 6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

## 6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy ($dW$) absorbed by (dissipated in) an incremental mass ($dm$) contained in a volume element ($dv$) of a given density ($\rho$) . The equation description is as below:

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, $\delta T$ is the temperature rise and $\delta t$ is the exposure duration, or related to the electrical field in the tissue by

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

Where: $\sigma$ is the conductivity of the tissue, $\rho$ is the mass density of tissue and $E$ is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

# 7 Tissue Simulating Liquids

## 7.1 Targets for tissue simulating liquid

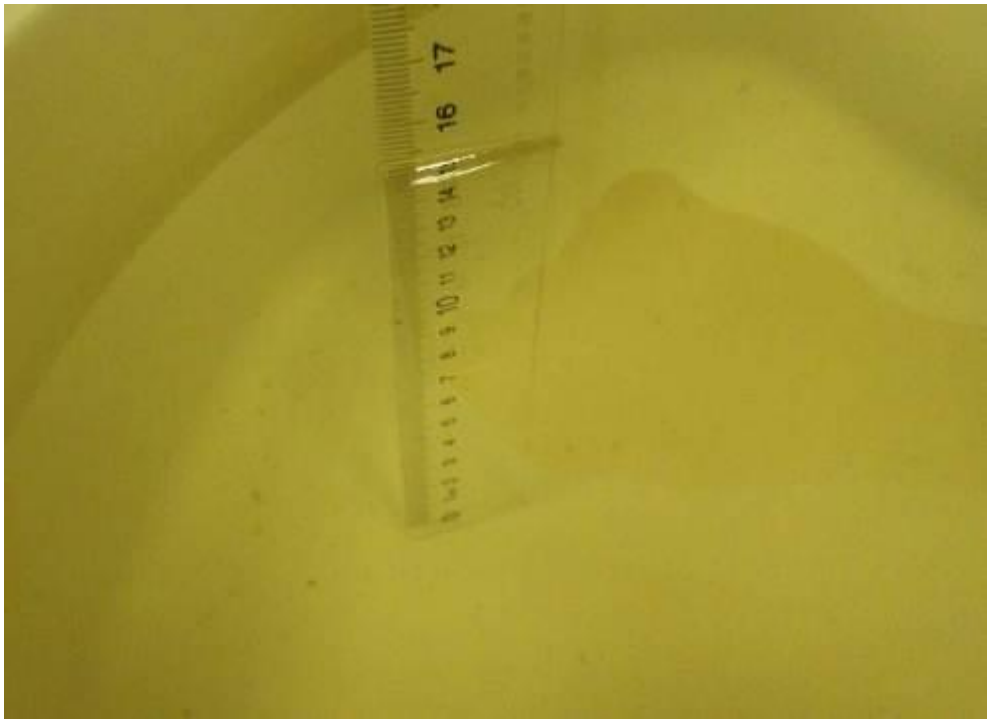
**Table 7.1: Targets for tissue simulating liquid**

| Frequency (MHz) | Liquid Type | Conductivity (σ) | ± 5% Range | Permittivity (ε) | ± 5% Range |
|---|---|---|---|---|---|
| 835 | Body | 0.97 | 0.92～1.02 | 55.2 | 52.4～58.0 |
| 1900 | Body | 1.52 | 1.44～1.60 | 53.3 | 50.6～56.0 |
| 2450 | Body | 1.95 | 1.85～2.05 | 52.7 | 50.1～55.3 |

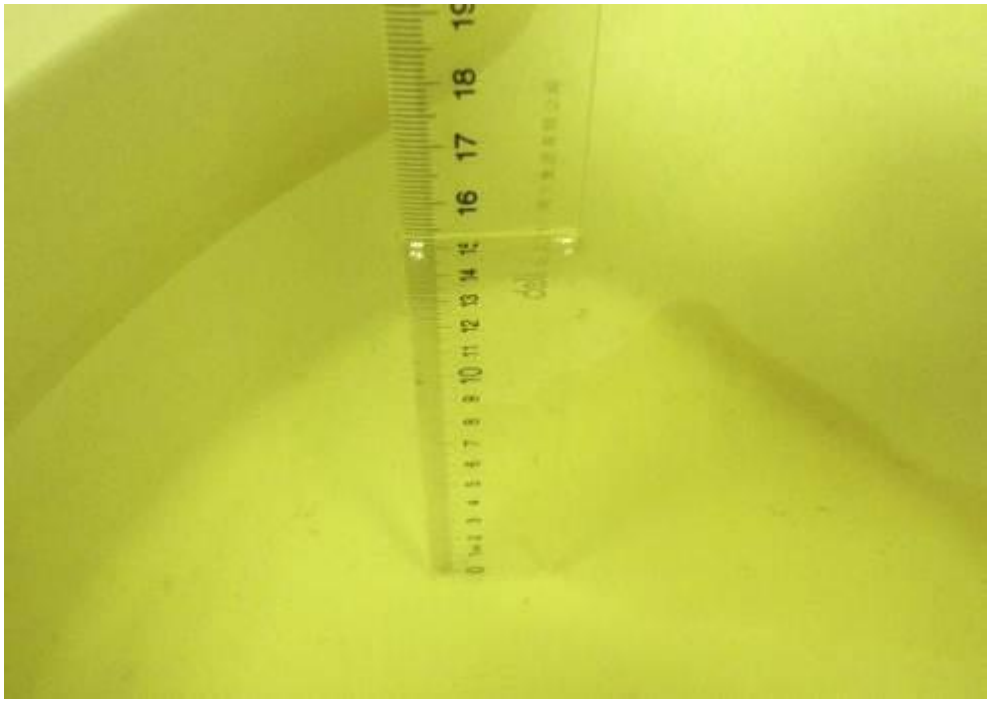
## 7.2 Dielectric Performance

**Table 7.2: Dielectric Performance of Tissue Simulating Liquid**

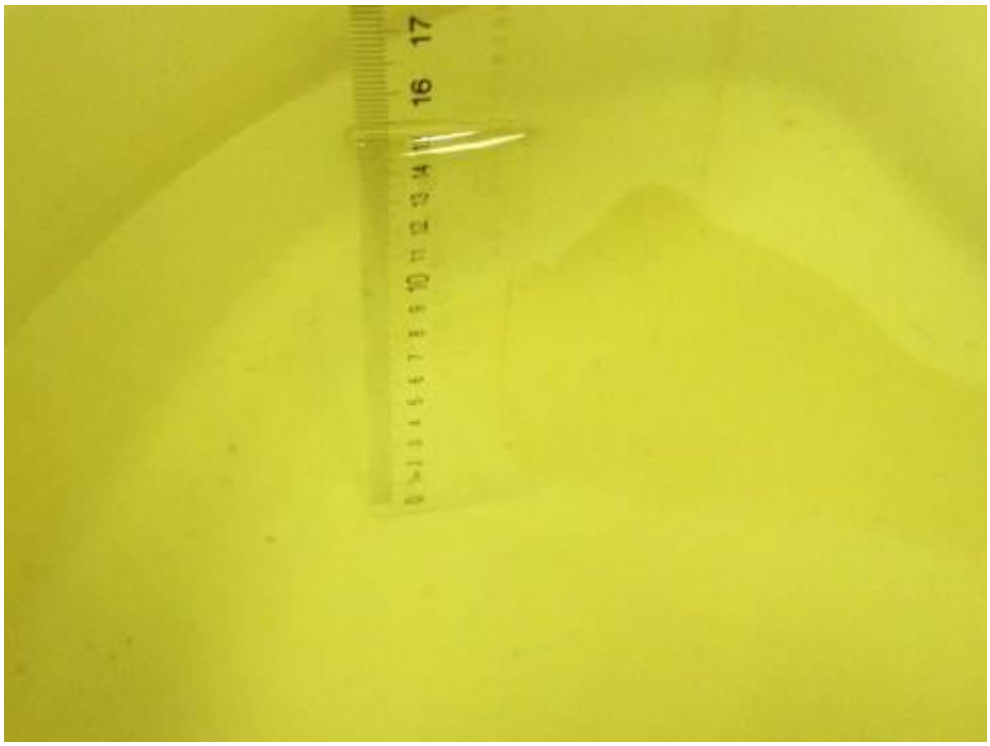
| Measurement Date : 835 MHz Body **Feb 28, 2014** 1900 MHz Body **March 5, 2014** 2450 MHz Body **March 3, 2014** | | | | | | |
|---|---|---|---|---|---|---|
| / | **Type** | **Frequency** | **Permittivity ε** | **Drift (%)** | **Conductivity σ (S/m)** | **Drift (%)** |
| **Measurement value** | Body | 835 MHz | 55.15 | 0.09% | 0.9989 | 2.97% |
| | Body | 1900 MHz | 53.24 | 0.11% | 1.524 | 0.26% |
| | Body | 2450 MHz | 53.95 | 2.37% | 1.918 | 1.64% |



**Picture 7-1: Liquid depth in the Flat Phantom (835 MHz Body)**



**Picture 7-2: Liquid depth in the Flat Phantom (1900 MHz Body)**

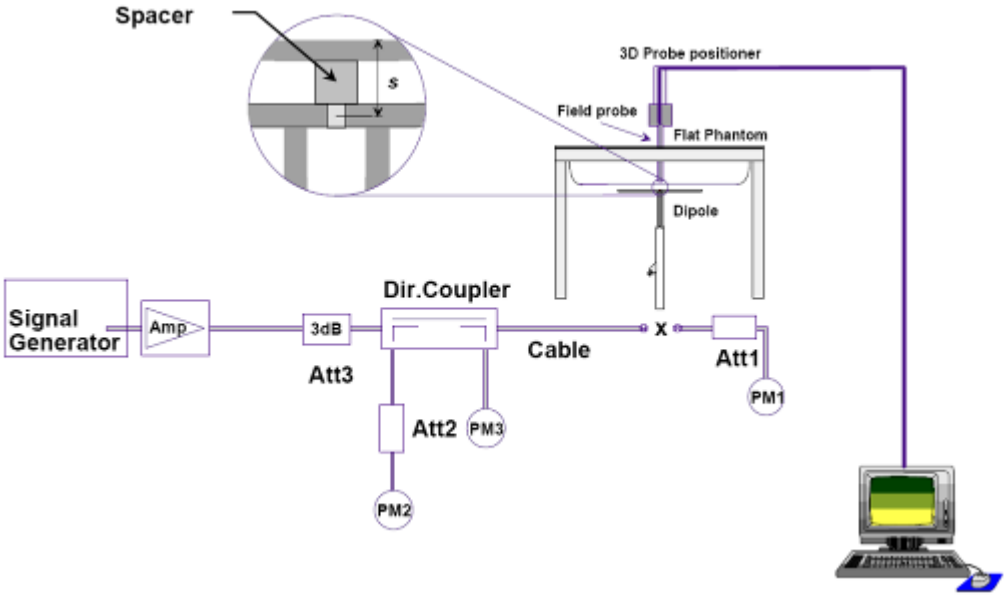


**Picture 7-3: Liquid depth in the Flat Phantom (2450 MHz Body)**

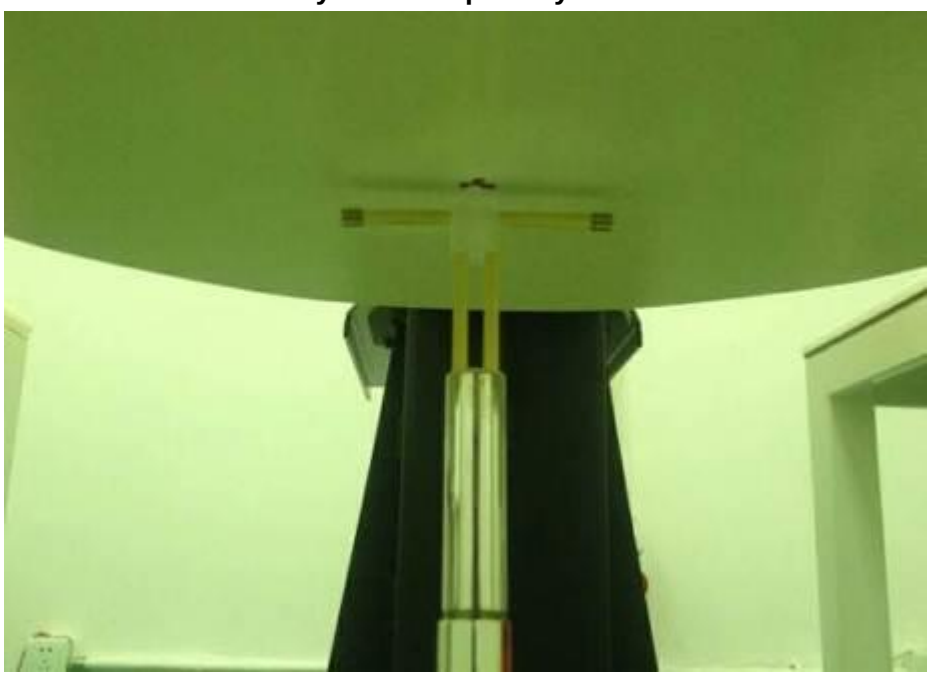
# 8 System verification

## 8.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:




**Picture 8.1 System Setup for System Evaluation**



**Picture 8.2 Photo of Dipole Setup**

## 8.2 System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.

**Table 8.1: System Verification of Body**

| Measurement Date : 835 MHz Body **Feb 28, 2014** 1900 MHz Body **March 5, 2014** 2450 MHz Body **March 3, 2014** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Input power level: 250mW | | | | | | | |
| **Verification results** | **Frequency** | **Target value (W/kg)** | | **Measured value (W/kg)** | | **Deviation** | |
| | | **10 g Average** | **1 g Average** | **10 g Average** | **1 g Average** | **10 g Average** | **1 g Average** |
| | 835 MHz | 6.06 | 9.15 | 6.08 | 9.48 | 0.33% | 3.61% |
| | 1900 MHz | 22.7 | 43.4 | 22.684 | 43.372 | -0.07% | -0.06% |
| | 2450 MHz | 22.2 | 47.7 | 22.52 | 48.84 | 1.44% | 2.39% |

# 9 Measurement Procedures

## 9.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in Picture 11.1.

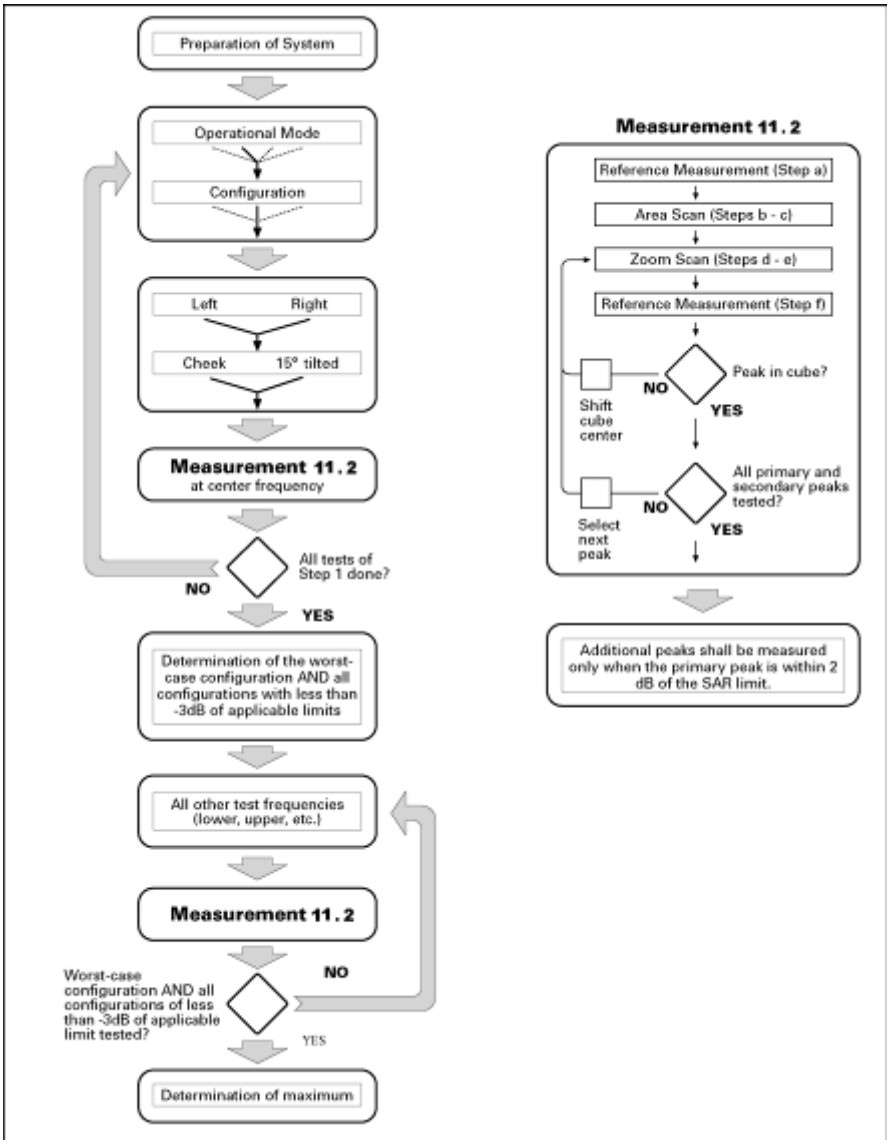
**Step 1**: The tests described in 11.2 shall be performed at the channel that is closest to the centre of the transmit frequency band ( $f_c$ ) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in Chapter 8),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_c$ > 3), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

**Step 2**: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 11.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

**Step 3**: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.




**Picture 9.1 Block diagram of the tests to be performed**

## 9.2 General Measurement Procedure

The following procedure shall be performed for each of the test conditions (see Picture 11.1) described in 11.1:

a) Measure the local SAR at a test point within 8 mm or less in the normal direction from the inner surface of the phantom.

b) Measure the two-dimensional SAR distribution within the phantom (area scan procedure). The boundary of the measurement area shall not be closer than 20 mm from the phantom side walls. The distance between the measurement points should enable the detection of the location of local maximum with an accuracy of better than half the linear dimension of the tissue cube after interpolation. A maximum grip spacing of 20 mm for frequencies below 3 GHz and (60/f [GHz]) mm for frequencies of 3GHz and greater is recommended. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for

frequencies below 3 GHz and δ ln(2)/2 mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. The maximum variation of the sensor-phantom surface shall be ±1 mm for frequencies below 3 GHz and ±0.5 mm for frequencies of 3 GHz and greater. At all measurement points the angle of the probe with respect to the line normal to the surface should be less than 5°. If this cannot be achieved for a measurement distance to the phantom inner surface shorter than the probe diameter, additional uncertainty evaluation is needed.

c) From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that are not within the zoom-scan volume; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR limit. This is consistent with the 2 dB threshold already stated;

d) Measure the three-dimensional SAR distribution at the local maxima locations identified in step c). The horizontal grid step shall be (24/f[GHz] ) mm or less but not more than 8 mm. The minimum zoom size of 30 mm by 30 mm and 30 mm for frequencies below 3 GHz. For higher frequencies, the minimum zoom size of 22 mm by 22 mm and 22 mm. The grip step in the vertical direction shall be ( 8-f[GHz] ) mm or less but not more than 5 mm, if uniform spacing is used. If variable spacing is used in the vertical direction, the maximum spacing between the two closest measured points to the phantom shell shall be (12 / f[GHz]) mm or less but not more than 4 mm, and the spacing between father points shall increase by an incremental factor not exceeding 1.5. When variable spacing is used, extrapolation routines shall be tested with the same spacing as used in measurements. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and δ ln(2)/2 mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. Separate grids shall be centered on each of the local SAR maxima found in step c). Uncertainties due to field distortion between the media boundary and the dielectric enclosure of the probe should also be minimized, which is achieved is the distance between the phantom surface and physical tip of the probe is larger than probe tip diameter. Other methods may utilize correction procedures for these boundary effects that enable high precision measurements closer than half the probe diameter. For all measurement points, the angle of the probe with respect to the flat phantom surface shall be less than 5°. If this cannot be achieved an additional uncertainty evaluation is needed.

e) Use post processing( e.g. interpolation and extrapolation ) procedures to determine the local SAR values at the spatial resolution needed for mass averaging.

## 9.3 CDMA Measurement Procedures for SAR

SAR is measured using FTAP/RTAP and FETAP/RETAP respectively for Rev. 0 and Rev. A devices. 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.

Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. 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 that RF channels in Rev. 0.
Head SAR is required for Ev-Do devices that support operations next to the ear; for example, with VOIP, using Subtype 2 Physical Layer configurations according to the required handset configurations.
For Ev-Do devices that also support 1x RTT voice and/or data operations, SAR is not required for 1x RTT 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, the 'Body SAR Measurements' procedures in the 'CDMA 2000 1x Handsets' section should be applied.

## 9.4 Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. 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 that the results are consistent and reliable.
Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a 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.

## 9.5 Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 13.2 to Table 13.4 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

# 10 Conducted Output Power

## 10.1 Manufacturing tolerance

**Table 10.1: CDMA 800**

| 1xRTT RC1 SO2 | | | |
|---|---|---|---|
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| 1xRTT RC1 SO55 | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| 1xRTT RC1 SO32+FCH-SCH | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| 1xRTT RC1 SO32+SCH | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| 1xRTT RC3 SO55 | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| 1xRTT RC3 SO32 | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| EVDO Rev.0 RTAP 153.6K | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |
| EVDO Rev.A Subtest2 RETAP | | | |
| Channel | Channel 1013 | Channel 384 | Channel 777 |
| Maximum Target Value (dBm) | 23.0 | 23.0 | 23.0 |

**Table 10.2: CDMA 1900**

| 1xRTT RC1 SO2 | | | |
|---|---|---|---|
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| 1xRTT RC1 SO55 | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| 1xRTT RC1 SO32+FCH-SCH | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| 1xRTT RC1 SO32+SCH | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| 1xRTT RC3 SO55 | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| 1xRTT RC3 SO32 | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| EVDO Rev.0 RTAP 153.6K | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |
| EVDO Rev.A Subtest2 RETAP | | | |
| Channel | Channel 25 | Channel 600 | Channel 1175 |
| Maximum Target Value (dBm) | 22.0 | 22.0 | 22.0 |

**Table 10.3: WiFi**

| WiFi 802.11b | | | |
|---|---|---|---|
| Channel | Channel 1 | Channel 6 | Channel 11 |
| Maximum Target Value (dBm) | 16.0 | 16.0 | 16.0 |
| WiFi 802.11g | | | |
| Channel | Channel 1 | Channel 6 | Channel 11 |
| Maximum Target Value (dBm) | 13.0 | 13.0 | 13.0 |
| WiFi 802.11n | | | |
| Channel | Channel 1 | Channel 6 | Channel 11 |
| Maximum Target Value (dBm) | 13.0 | 13.0 | 13.0 |

## 10.2 CDMA Measurement result

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

**Table 10.4: The conducted power measurement results for CDMA 800**

| Mode | Test case | | | BC0 (800MHz) Channel | | |
|---|---|---|---|---|---|---|
| | No. | FWD RC/TAP | REV RC/TAP | Conducted Power (dBm) | | |
| | | | | 1013 | 384 | 777 |
| 1xRTT | 1 | RC1 | SO2 | 22.05 | 22.45 | 22.34 |
| | 2 | RC1 | SO55 | 22.07 | 22.57 | 22.43 |
| | 3 | RC1 | SO32+FCH-SCH | 22.08 | 22.58 | 22.39 |
| | 4 | RC1 | SO32+SCH | 22.14 | 22.76 | 22.44 |
| | 5 | RC3 | SO55 | 22.14 | 22.77 | 22.43 |
| | 6 | RC3 | SO32 | 22.04 | 22.38 | 22.25 |
| EVDO | 1 | Rev.0 | RTAP 153.6K | 22.13 | 22.68 | 22.43 |
| EVDO | 2 | Rev.A | Subtest2 RETAP | 22.10 | 22.57 | 22.33 |

**Table 10.5: The conducted power measurement results for CDMA 1900**

| Mode | Test case | | | BC1 (1900MHz) Channel | | |
|---|---|---|---|---|---|---|
| | No. | FWD RC/TAP | REV RC/TAP | Conducted Power (dBm) | | |
| | | | | 25 | 600 | 1175 |
| 1xRTT | 1 | RC1 | SO2 | 21.54 | 21.43 | 21.70 |
| | 2 | RC1 | SO55 | 21.54 | 21.61 | 21.80 |
| | 3 | RC1 | SO32+FCH-SCH | 21.54 | 21.42 | 21.67 |
| | 4 | RC1 | SO32+SCH | 21.58 | 21.58 | 21.77 |
| | 5 | RC3 | SO55 | 21.59 | 21.55 | 21.80 |
| | 6 | RC3 | SO32 | 21.53 | 21.49 | 21.79 |
| EVDO | 1 | Rev.0 | RTAP 153.6K | 21.55 | 21.47 | 21.77 |
| EVDO | 2 | Rev.A | Subtest2 RETAP | 21.44 | 21.38 | 21.75 |

**NOTE:** According to the Table of conducted power, SAR measurement is required for EVDO mode Rev. 0.

## 10.3 Wi-Fi Measurement result

The average conducted power for Wi-Fi is as following:

802.11b（dBm）

| Channel\data rate | 1Mbps | 2Mbps | 5.5Mbps | 11Mbps |
|---|---|---|---|---|
| 1 | 14.23 | 14.08 | 14.73 | 15.35 |
| 6 | 14.34 | 14.98 | 14.85 | 15.07 |
| 11 | 14.62 | 14.31 | 14.70 | 15.87 |

802.11g（dBm）

| Channel\data rate | 6Mbps | 9Mbps | 12Mbps | 18Mbps | 24Mbps | 36Mbps | 48Mbps | 54Mbps |
|---|---|---|---|---|---|---|---|---|
| 1 | 11.98 | 10.31 | 10.16 | 10.52 | 11.19 | 11.22 | 11.41 | 11.81 |
| 6 | 12.50 | 11.41 | 11.15 | 11.51 | 11.89 | 11.52 | 12.38 | 12.32 |
| 11 | 12.69 | 11.52 | 12.07 | 11.10 | 12.20 | 11.92 | 12.24 | 12.64 |

20M 802.11n（dBm）

| Channel\data rate | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
|---|---|---|---|---|---|---|---|---|
| 1 | 11.96 | 11.42 | 10.21 | 10.59 | 10.35 | 10.16 | 10.67 | 10.89 |
| 6 | 12.56 | 11.77 | 11.13 | 11.08 | 11.75 | 11.14 | 11.07 | 11.98 |
| 11 | 12.72 | 11.39 | 11.08 | 11.12 | 11.09 | 11.92 | 11.00 | 11.04 |

The peak conducted power for Wi-Fi is as following:

802.11b（dBm）

| Channel\data rate | 1Mbps | 2Mbps | 5.5Mbps | 11Mbps |
|---|---|---|---|---|
| 1 | 18.25 | 18.33 | 18.42 | 18.69 |
| 6 | 18.19 | 18.08 | 18.55 | 18.73 |
| 11 | 18.28 | 18.12 | 18.15 | 18.89 |

802.11g（dBm）

| Channel\data rate | 6Mbps | 9Mbps | 12Mbps | 18Mbps | 24Mbps | 36Mbps | 48Mbps | 54Mbps |
|---|---|---|---|---|---|---|---|---|
| 1 | 19.69 | 18.01 | 18.33 | 18.05 | 18.65 | 19.10 | 19.29 | 18.91 |
| 6 | 17.79 | 16.49 | 16.85 | 16.92 | 17.26 | 17.26 | 17.15 | 17.08 |
| 11 | 17.96 | 17.24 | 17.05 | 16.84 | 16.11 | 16.59 | 17.35 | 17.48 |

802.11n（dBm）

| Channel\data rate | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
|---|---|---|---|---|---|---|---|---|
| 1 | 19.39 | 19.34 | 18.51 | 19.24 | 18.61 | 19.08 | 18.85 | 18.72 |
| 6 | 17.98 | 16.59 | 16.24 | 16.31 | 17.15 | 17.52 | 16.89 | 17.95 |
| 11 | 18.11 | 16.75 | 16.75 | 17.65 | 17.72 | 17.31 | 17.59 | 17.45 |

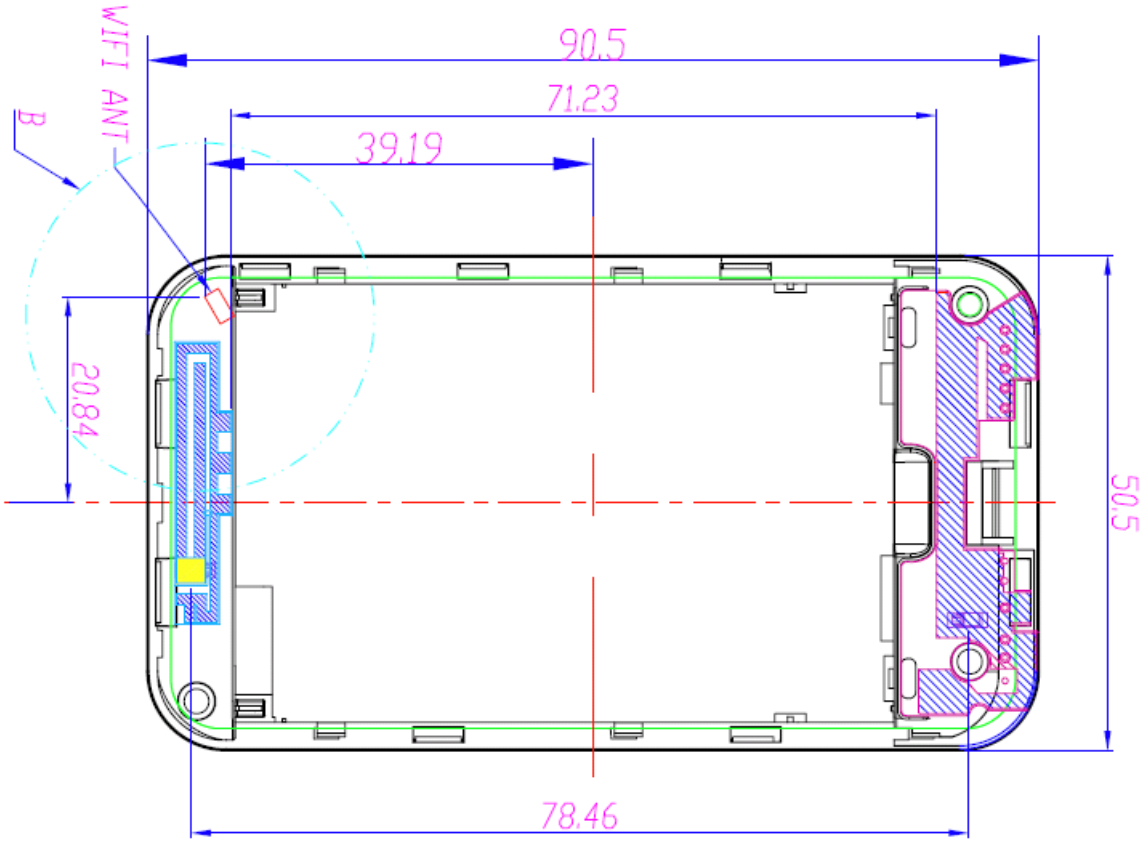
SAR is not required for 802.11g/n channels if the output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels, and for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate. According to the above conducted power, the EUT should be tested for “802.11b, 11Mbps, channel 11”.

# 11 Simultaneous TX SAR Considerations

## 11.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

## 11.2 Transmit Antenna Separation Distances




**Picture 11.1 Antenna Locations**

## 11.3 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

According to the KDB447498 D01, the SAR test exclusion threshold for distance＜5mm is defined by the following equation:

$$\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} * \sqrt{\text{Frequency (GHz)}} \leqslant 3.0$$

Based on the above equation, WiFi SAR was required:

Evaluation=4.97＞3.0

# 12 Evaluation of Simultaneous

**Table 12.1: Summary of Transmitters**

| Band/Mode | F(GHz) | SAR test exclusion threshold (mW) | RF output power (mW) |
|---|---|---|---|
| 2.4GHz WLAN 802.11 b/g | 2.45 | 10 | 15.85 |

**Table12.2 Simultaneous transmission SAR**

| Simultaneous Transmission SAR(W/Kg) | | | | | |
|---|---|---|---|---|---|
| **Test Position** | | **CDMA 800** | **CDMA 1900** | **WIFI** | **SUM** |
| Body | Phantom Side | **1.281** | 0.542 | **0.117** | **1.398** |
| | Ground Side | **0.838** | 0.613 | **0.063** | 0.901 |
| | Left Side | **0.470** | 0.241 | **0.045** | 0.515 |
| | Right Side | **0.340** | 0.136 | **0.021** | 0.361 |
| | Top Side | 0.024 | **0.612** | **0.0019** | 0.614 |
| | Bottom Side | 0.128 | **0.935** | **0.021** | 0.956 |

According to the conducted power measurement result, we can draw the conclusion that: stand-alone SAR for WiFi should be performed. Then, simultaneous transmission SAR for WiFi is considered with measurement results of CDMA and WiFi. According to the above table, the sum of reported SAR values for CDMA and WiFi <1.6W/kg. So the simultaneous transmission SAR is not required for WiFi transmitter.

# 13 SAR Test Result

**Table 13.1: Duty Cycle**

| | Duty Cycle |
|---|---|
| CDMA800/1900 | 1:1 |

**Table 13.2: SAR Values (CDMA800 MHz Band-Body)**

| Frequency | | Service | Test Position | Maximum allowed Power (dBm) | Measured average power (dBm) | Scaling factor | Measured SAR(1g) (W/kg) | Reported SAR(1g) (W/kg) | Power Drift (dB) |
|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch. | | | | | | | | |
| 836.5 | 384 | EVDO | Phantom | 23.00 | 22.78 | 1.052 | 0.657 | 0.691 | 0.03 |
| 836.5 | 384 | EVDO | Ground | 23.00 | 22.78 | 1.052 | 0.797 | 0.838 | 0.10 |
| 836.5 | 384 | EVDO | Left | 23.00 | 22.78 | 1.052 | 0.447 | 0.470 | 0.05 |
| 836.5 | 384 | EVDO | Right | 23.00 | 22.78 | 1.052 | 0.323 | 0.340 | -0.15 |
| 836.5 | 384 | EVDO | Top | 23.00 | 22.78 | 1.052 | 0.023 | 0.024 | 0.15 |
| 836.5 | 384 | EVDO | Bottom | 23.00 | 22.78 | 1.052 | 0.122 | 0.128 | 0.16 |
| 824.7 | 1013 | EVDO | Phantom | 23.00 | 22.53 | 1.114 | 1.150 | 1.281 | 0.04 |
| 848.3 | 777 | EVDO | Phantom | 23.00 | 22.23 | 1.194 | 0.664 | 0.793 | -0.01 |

Note: The distance between the EUT and the phantom bottom is 10mm.

**Table 13.3: SAR Values (CDMA1900 MHz Band-Body)**

| Frequency | | Service | Test Position | Maximum allowed Power (dBm) | Measured average power (dBm) | Scaling factor | Measured SAR(1g) (W/kg) | Reported SAR(1g) (W/kg) | Power Drift (dB) |
|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch. | | | | | | | | |
| 1880 | 600 | EVDO | Phantom | 22.00 | 21.47 | 1.130 | 0.480 | 0.542 | 0.03 |
| 1880 | 600 | EVDO | Ground | 22.00 | 21.47 | 1.130 | 0.543 | 0.613 | 0.10 |
| 1880 | 600 | EVDO | Left | 22.00 | 21.47 | 1.130 | 0.213 | 0.241 | 0.13 |
| 1880 | 600 | EVDO | Right | 22.00 | 21.47 | 1.130 | 0.120 | 0.136 | 0.12 |
| 1880 | 600 | EVDO | Top | 22.00 | 21.47 | 1.130 | 0.542 | 0.612 | -0.02 |
| 1880 | 600 | EVDO | Bottom | 22.00 | 21.47 | 1.130 | 0.681 | 0.769 | -0.08 |
| 1851.25 | 25 | EVDO | Bottom | 22.00 | 21.77 | 1.054 | 0.569 | 0.600 | -0.05 |
| 1908.75 | 1175 | EVDO | Bottom | 22.00 | 21.55 | 1.109 | 0.843 | 0.935 | 0.09 |

Note: The distance between the EUT and the phantom bottom is 10mm.

**Table 13.4: SAR Values (Wi-Fi 802.11b - Body)**

| Frequency | | Test Position | Maximum allowed Power (dBm) | Measured average power (dBm) | Scaling factor | Measured SAR(1g) (W/kg) | Reported SAR(1g) (W/kg) | Power Drift (dB) |
|---|---|---|---|---|---|---|---|---|
| MHz | Ch. | | | | | | | |
| 2412 | 1 | Phantom | 16.00 | 15.87 | 1.03 | 0.114 | 0.117 | -0.11 |
| 2412 | 1 | Ground | 16.00 | 15.87 | 1.03 | 0.061 | 0.063 | 0.14 |
| 2412 | 1 | Left | 16.00 | 15.87 | 1.03 | 0.044 | 0.045 | -0.03 |
| 2412 | 1 | Right | 16.00 | 15.87 | 1.03 | 0.020 | 0.021 | 0.15 |
| 2412 | 1 | Top | 16.00 | 15.87 | 1.03 | 0.0018 | 0.0019 | 0.08 |
| 2412 | 1 | Bottom | 16.00 | 15.87 | 1.03 | 0.020 | 0.021 | 0.09 |

Note1: The distance between the EUT and the phantom bottom is 10mm.

# 14 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

**Table 14.1: SAR Measurement Variability for Head Value (1g)**

| Frequency | | Side | Test Position | Original SAR(1g) (W/kg) | First Reported SAR(1g) (W/kg) | The Ratio |
|---|---|---|---|---|---|---|
| MHz | Ch. | | | | | |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Table 14.2: SAR Measurement Variability for Body Value (1g)**

| Frequency | | Mode | Test Position | Spacing (mm) | Original SAR (W/kg) | First Repeated SAR (W/kg) | The Ratio |
|---|---|---|---|---|---|---|---|
| MHz | Ch. | | | | | | |
| 836.5 | 384 | EVDO | Ground | 10 | 0.797 | 0.794 | 1.00 |
| 824.7 | 1013 | EVDO | Phantom | 10 | 1.150 | 1.150 | 1.00 |
| 1908.75 | 1175 | EVDO | Bottom | 10 | 0.843 | 0.811 | 1.04 |

# 15 Measurement Uncertainty

| Error Description | Unc. value , ±% | Prob. Dist. | Div. | $c_i$ 1g | $c_i$ 10g | Std.Unc. ±%,1g | Std.Unc. ±%,10g | $V_i$ $v_{eff}$ |
|---|---|---|---|---|---|---|---|---|
| **Measurement System** | | | | | | | | |
| Probe Calibration | 6.0 | N | 1 | 1 | 1 | 6.0 | 6.0 | ∞ |
| Axial Isotropy | 0.5 | R | $\sqrt{3}$ | 0.7 | 0.7 | 0.2 | 0.2 | ∞ |
| Hemispherical Isotropy | 2.6 | R | $\sqrt{3}$ | 0.7 | 0.7 | 1.1 | 1.1 | ∞ |
| Boundary Effects | 0.8 | R | $\sqrt{3}$ | 1 | 1 | 0.5 | 0.5 | ∞ |
| Linearity | 0.6 | R | $\sqrt{3}$ | 1 | 1 | 0.3 | 0.3 | ∞ |
| System Detection Limits | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Readout Electronics | 0.7 | N | 1 | 1 | 1 | 0.7 | 0.7 | ∞ |
| Response Time | 0 | R | $\sqrt{3}$ | 1 | 1 | 0 | 0 | ∞ |
| Integration Time | 2.6 | R | $\sqrt{3}$ | 1 | 1 | 1.5 | 1.5 | ∞ |
| RF Ambient Noise | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| RF Ambient Reflections | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| Probe Positioner | 1.5 | R | $\sqrt{3}$ | 1 | 1 | 0.9 | 0.9 | ∞ |
| Probe Positioning | 2.9 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| Max. SAR Eval. | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| **Test Sample Related** | | | | | | | | |
| Device Positioning | 2.9 | N | 1 | 1 | 1 | 2.9 | 2.9 | 145 |
| Device Holder | 3.6 | N | 1 | 1 | 1 | 3.6 | 3.6 | 5 |
| **Diople** | | | | | | | | |
| Power Drift | 5.0 | R | $\sqrt{3}$ | 1 | 1 | 2.9 | 2.9 | ∞ |
| Dipole Positioning | 2.0 | N | 1 | 1 | 1 | 2.0 | 2.0 | ∞ |
| Dipole Input Power | 5.0 | N | 1 | 1 | 1 | 5.0 | 5.0 | ∞ |
| **Phantom and Setup** | | | | | | | | |
| Phantom Uncertainty | 4.0 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| Liquid Conductivity (target) | 5.0 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.8 | 1.2 | ∞ |
| Liquid Conductivity (meas.) | 2.5 | N | 1 | 0.64 | 0.43 | 1.6 | 1.1 | ∞ |
| Liquid Permittivity (target) | 5.0 | R | $\sqrt{3}$ | 0.6 | 0.49 | 1.7 | 1.4 | ∞ |
| Liquid Permittivity | 2.5 | N | 1 | 0.6 | 0.49 | 1.5 | 1.2 | ∞ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (meas.) | | | | | | | | |
| | | | | | | | | |
| **Combined Std Uncertainty** | | | | | | ±11.2% | ±10.9% | 387 |
| **Expanded Std Uncertainty** | | | | | | **±22.4%** | **±21.8%** | |

# 16 Main Test Instrument

**Table 16.1: List of Main Instruments**

| No. | Name | Type | Serial Number | Calibration Date | Valid Period |
|---|---|---|---|---|---|
| 01 | Network analyzer | N5242A | MY51221755 | Aug 07, 2012 | One year |
| 02 | Power meter | NRVD | 102257 | Aug 20, 2012 | One year |
| 03 | Power sensor | NRV-Z5 | 100644,100241 | | |
| 04 | Signal Generator | E4438C | MY49072044 | Aug 07, 2012 | One Year |
| 05 | Amplifier | NTWPA-0086010F | 12023024 | No Calibration Requested | |
| 06 | Coupler | 778D | MY48220551 | Aug 06, 2012 | One year |
| 07 | BTS | E5515C | MY50266468 | Aug 04, 2012 | One year |
| 08 | E-field Probe | ES3DV3 | 3252 | Jul 24, 2012 | One year |
| 09 | E-field Probe | EX3DV4 | 3754 | Aug 17, 2012 | One year |
| 10 | DAE | SPEAG DAE4 | 1244 | Jul 20, 2012 | One year |
| 11 | Dipole Validation Kit | SPEAG D835V2 | 4d112 | Jul 25, 2012 | One year |
| 12 | Dipole Validation Kit | SPEAG D1900V2 | 5d134 | Jul 20, 2012 | One year |
| 13 | Dipole Validation Kit | SPEAG D2450V2 | 858 | Jul 24, 2012 | One year |

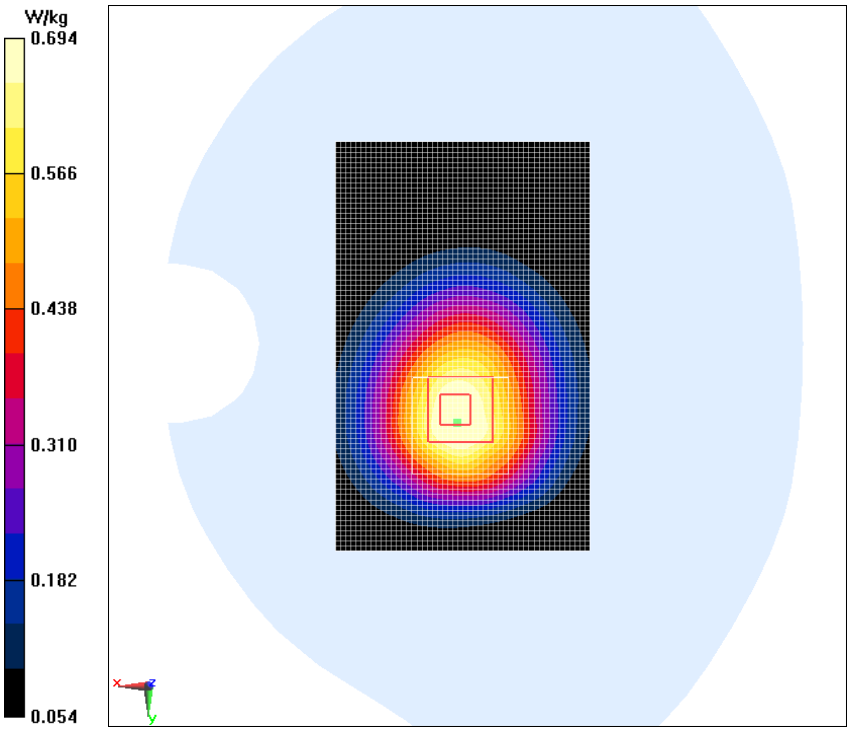
# ANNEX A GRAPH RESULTS

## CDMA 800MHz EVDO Ground Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Ground Mode Middle/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.725 W/kg

**CDMA 800MHz EVDO Ground Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.028 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.861 W/kg
SAR(1 g) = 0.657 W/kg; SAR(10 g) = 0.473 W/kg
Maximum of SAR (measured) = 0.694 W/kg

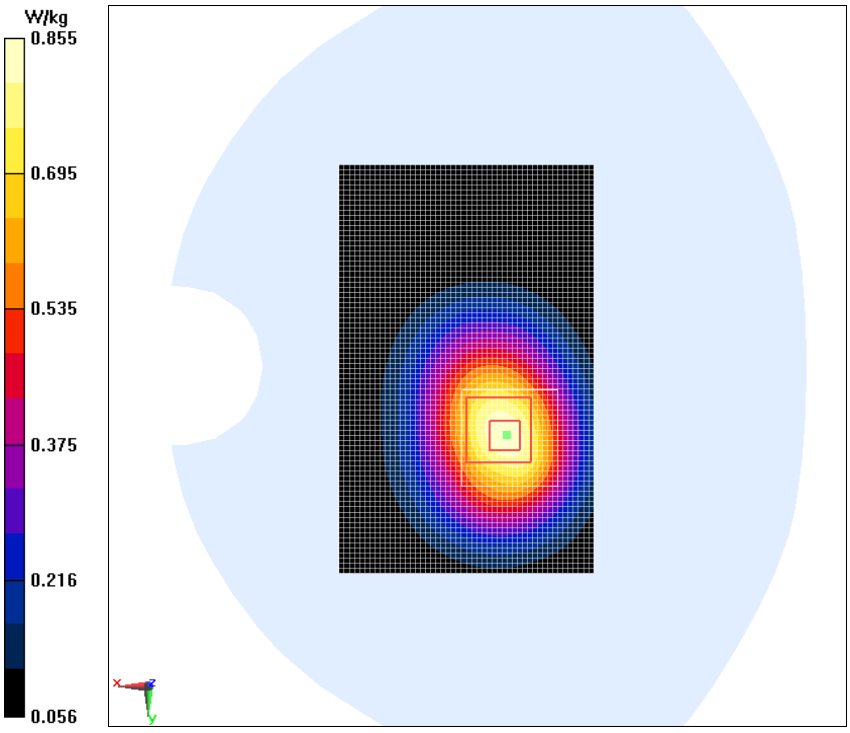


## CDMA 800MHz EVDO Phantom Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Phantom Mode Middle/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.849 W/kg

**CDMA 800MHz EVDO Phantom Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.443 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.797 W/kg; SAR(10 g) = 0.539 W/kg
Maximum value of SAR (measured) = 0.855 W/kg

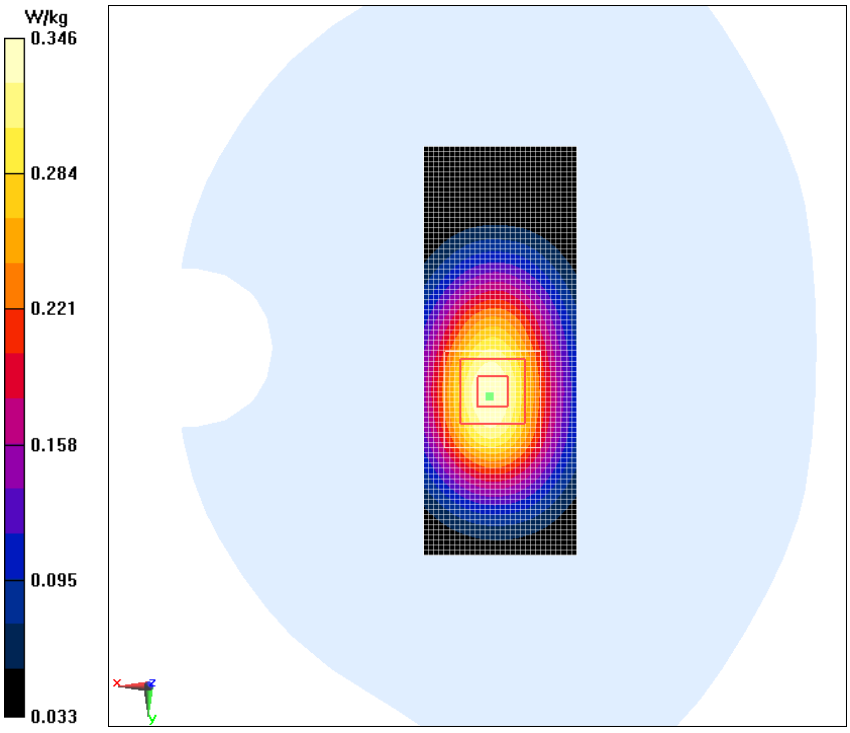


## CDMA 800MHz EVDO Right Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Right Mode Middle/Area Scan (31x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.353 W/kg

**CDMA 800MHz EVDO Right Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.976 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.448 W/kg
SAR(1 g) = 0.323 W/kg; SAR(10 g) = 0.221 W/kg
Maximum value of SAR (measured) = 0.346 W/kg

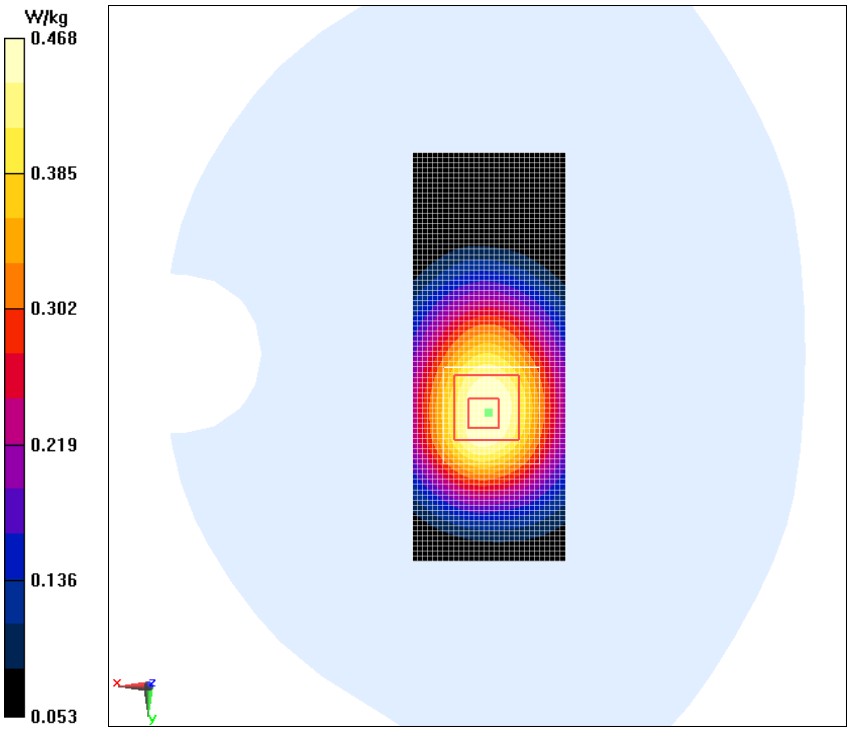


## CDMA 800MHz EVDO Left Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Left Mode Middle/Area Scan (31x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.480 W/kg

**CDMA 800MHz EVDO Left Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.218 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.599 W/kg
SAR(1 g) = 0.447 W/kg; SAR(10 g) = 0.318 W/kg
Maximum value of SAR (measured) = 0.468 W/kg

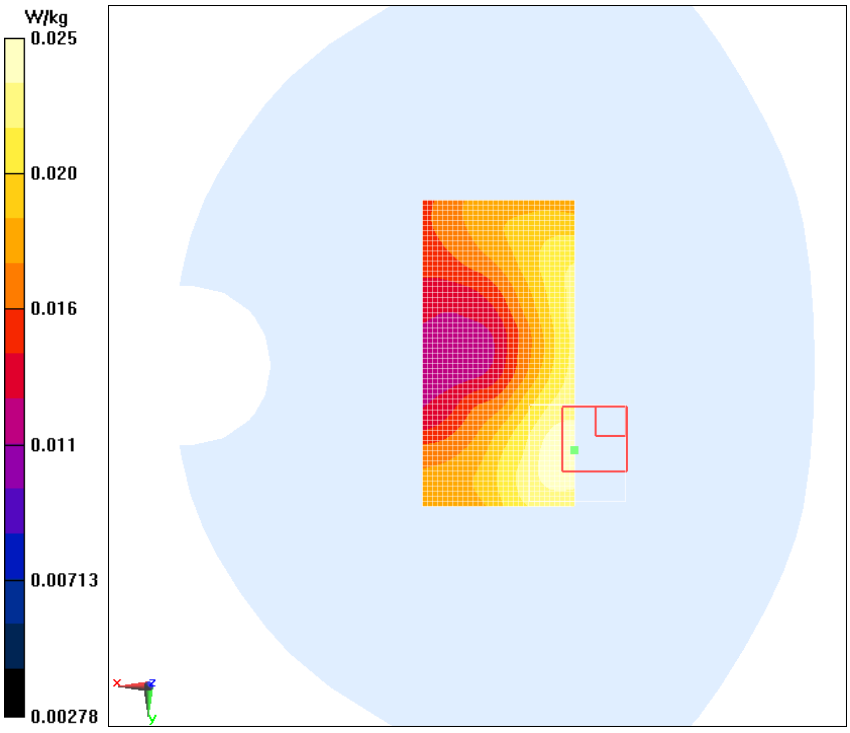


## CDMA 800MHz EVDO Top Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Top Mode Middle/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.0250 W/kg

**CDMA 800MHz EVDO Top Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.786 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.0290 W/kg
SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.017 W/kg
Maximum of SAR (measured) = 0.0245 W/kg

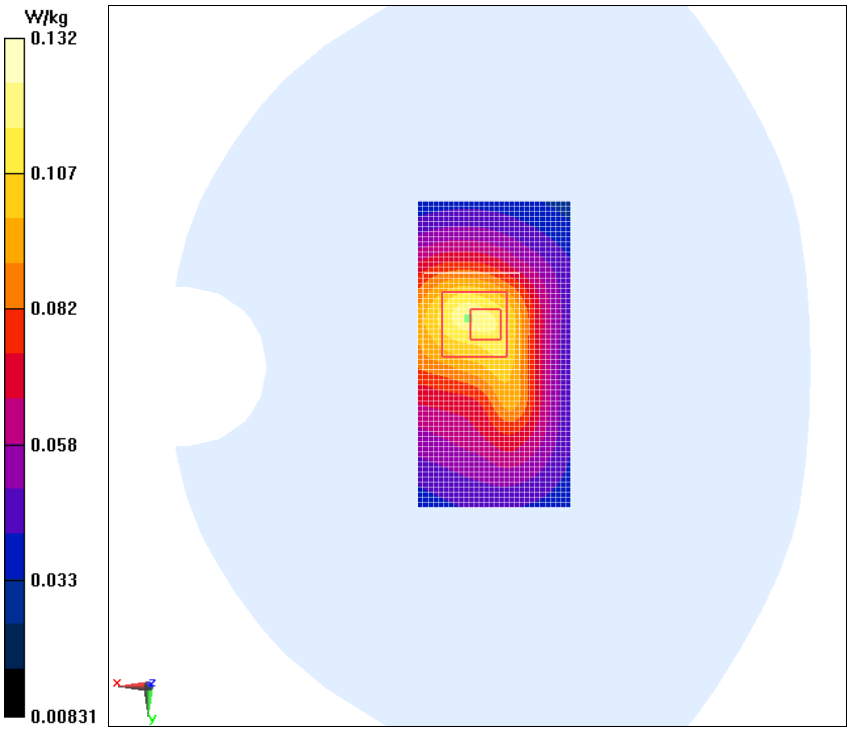


## CDMA 800MHz EVDO Bottom Mode Middle

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Bottom Mode Middle/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.122 W/kg

**CDMA 800MHz EVDO Bottom Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.165 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.197 W/kg
SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.077 W/kg
Maximum value of SAR (measured) = 0.132 W/kg

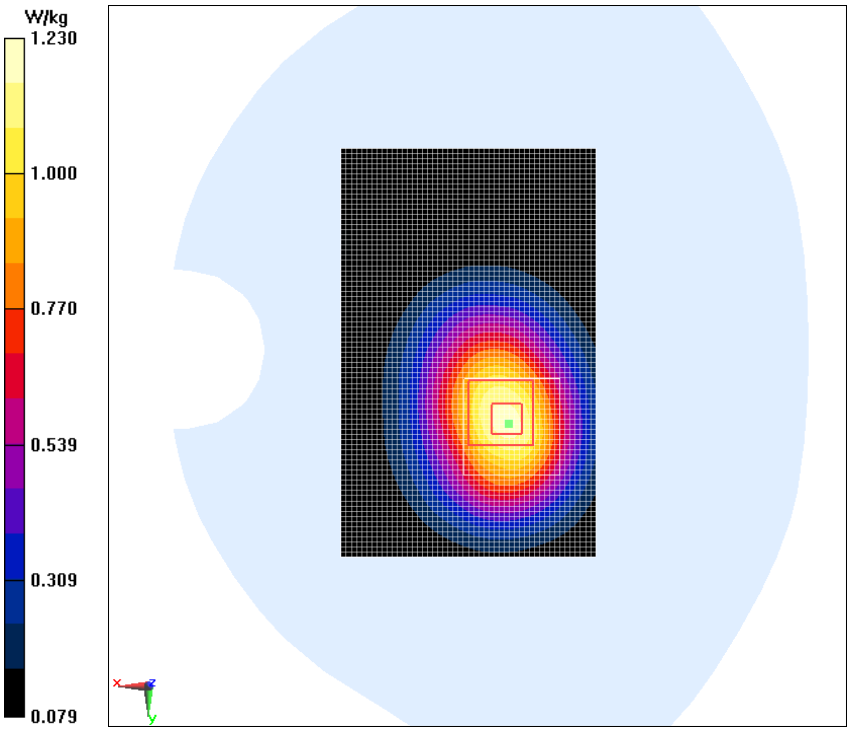


## CDMA 800MHz EVDO Phantom Mode Low

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 825 MHz; $\sigma$ = 0.993 S/m; $\varepsilon_r$ = 55.142; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 824.7 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Phantom Mode Low/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 1.19 W/kg

**CDMA 800MHz EVDO Phantom Mode Low/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.367 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.778 W/kg
Maximum value of SAR (measured) = 1.23 W/kg

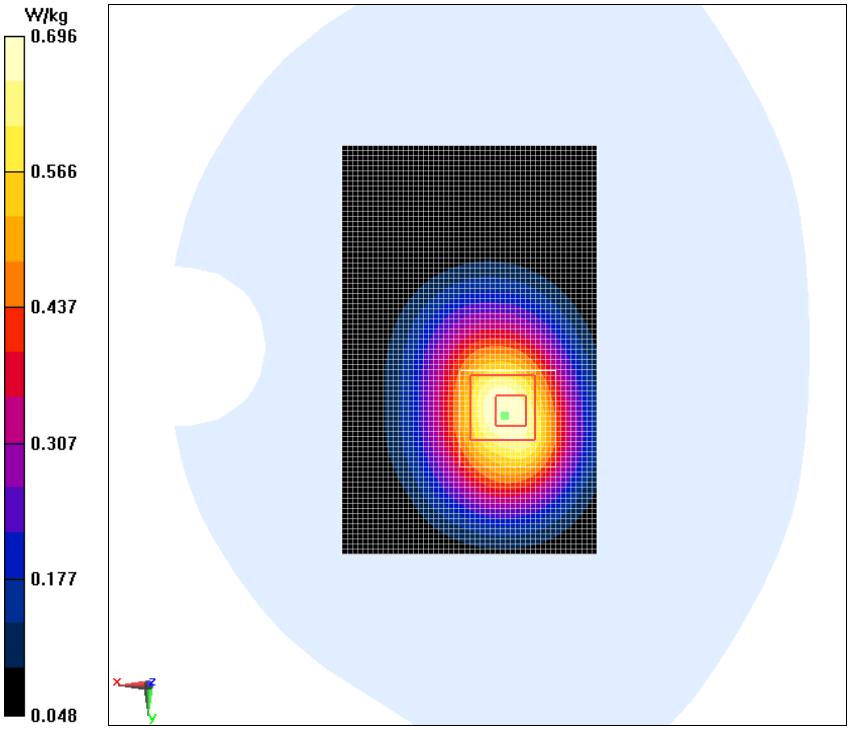


## CDMA 800MHz EVDO Phantom Mode High

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used (interpolated): f = 848.31 MHz; $\sigma$ = 1.014 S/m; $\varepsilon_r$ = 55.207; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 848.31 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Phantom Mode High/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.710 W/kg

**CDMA 800MHz EVDO Phantom Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.158 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.923 W/kg
SAR(1 g) = 0.664 W/kg; SAR(10 g) = 0.452 W/kg
Maximum value of SAR (measured) = 0.696 W/kg

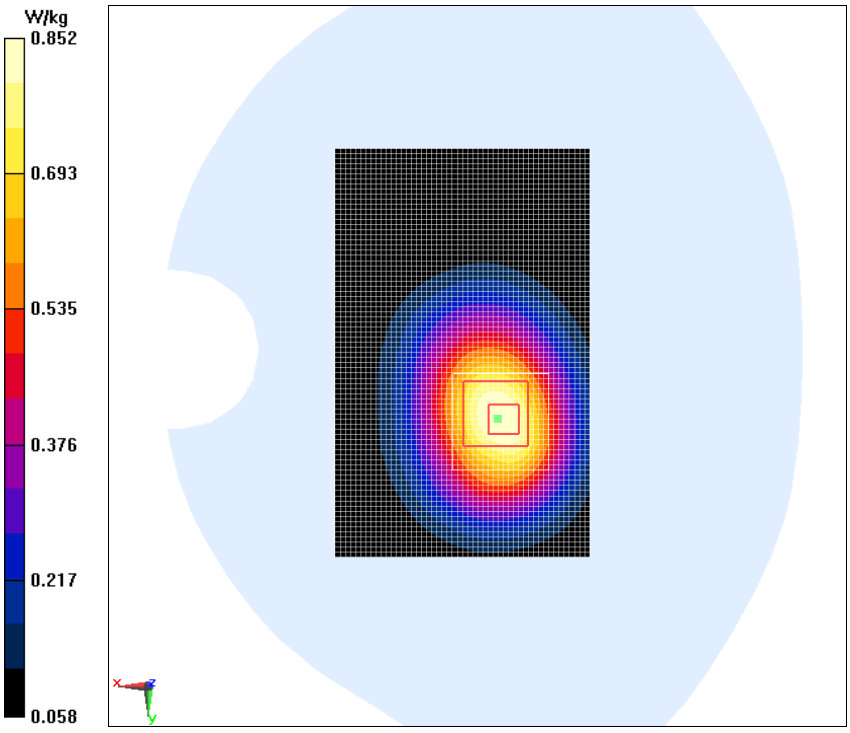


## CDMA 800MHz EVDO Phantom Mode Middle 2

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; $\sigma$ = 1.001 S/m; $\varepsilon_r$ = 55.152; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 836.52 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Phantom Mode Middle 2/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.864 W/kg

**CDMA 800MHz EVDO Phantom Mode Middle 2/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.147 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.535 W/kg
Maximum value of SAR (measured) = 0.852 W/kg

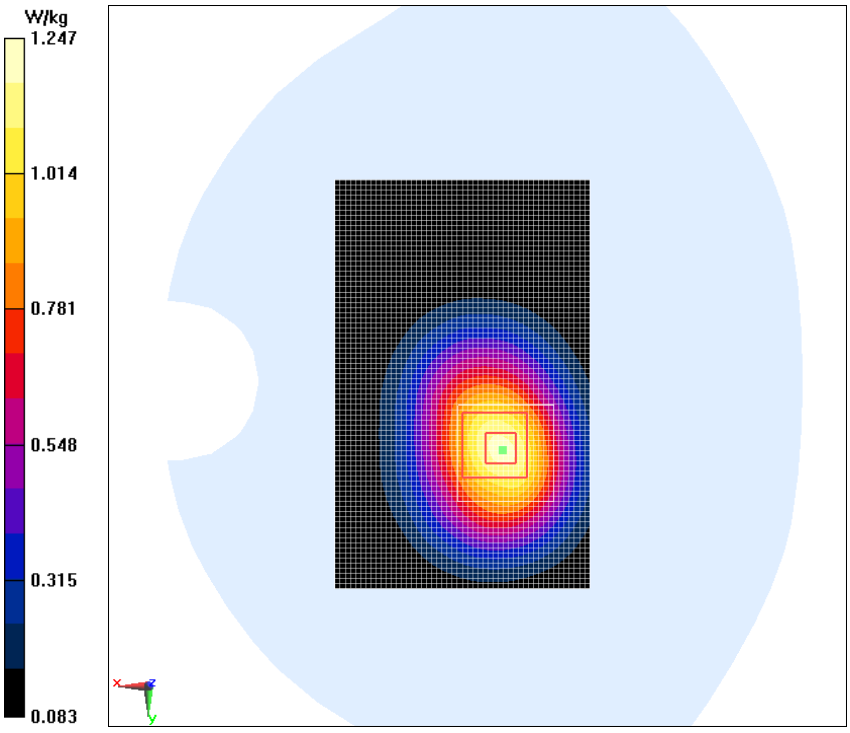


## CDMA 800MHz EVDO Phantom Mode Low 2

Date/Time: 2014/2/28
Electronics: DAE4 Sn1244
Medium: Body 850MHz
Medium parameters used: f = 825 MHz; $\sigma$ = 0.993 S/m; $\varepsilon_r$ = 55.142; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 800MHz; Frequency: 824.7 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(6.14, 6.14, 6.14); Calibrated: 8/5/2013

**CDMA 800MHz EVDO Phantom Mode Low 2/Area Scan (51x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 1.20 W/kg

**CDMA 800MHz EVDO Phantom Mode Low 2/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.388 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.775 W/kg
Maximum value of SAR (measured) = 1.25 W/kg

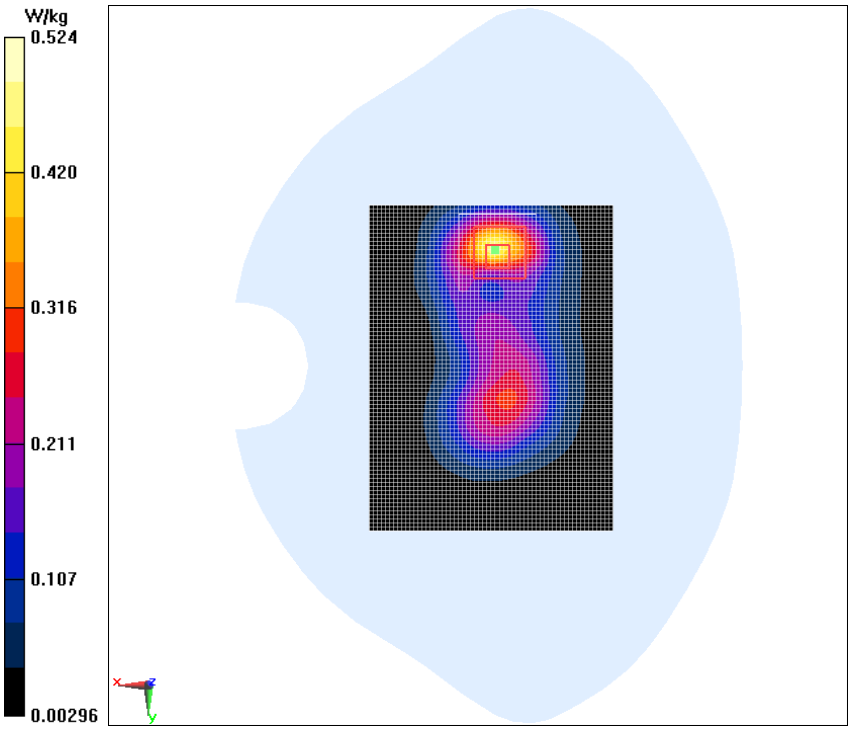


## CDMA 1900MHz EVDO Phantom Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Phantom Mode Middle/Area Scan (61x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.475 W/kg

**CDMA 1900MHz EVDO Phantom Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.098 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.247 W/kg
Maximum value of SAR (measured) = 0.524 W/kg

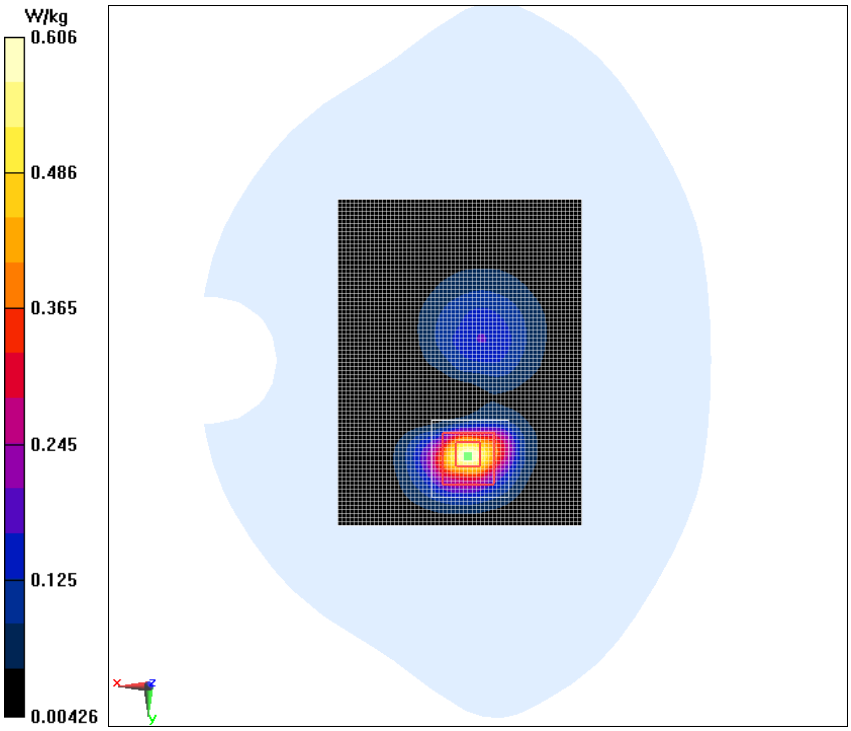


## CDMA 1900MHz EVDO Ground Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Ground Mode Middle/Area Scan (61x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.616 W/kg

**CDMA 1900MHz EVDO Ground Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.827 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.992 W/kg
SAR(1 g) = 0.543 W/kg; SAR(10 g) = 0.265 W/kg
Maximum value of SAR (measured) = 0.606 W/kg

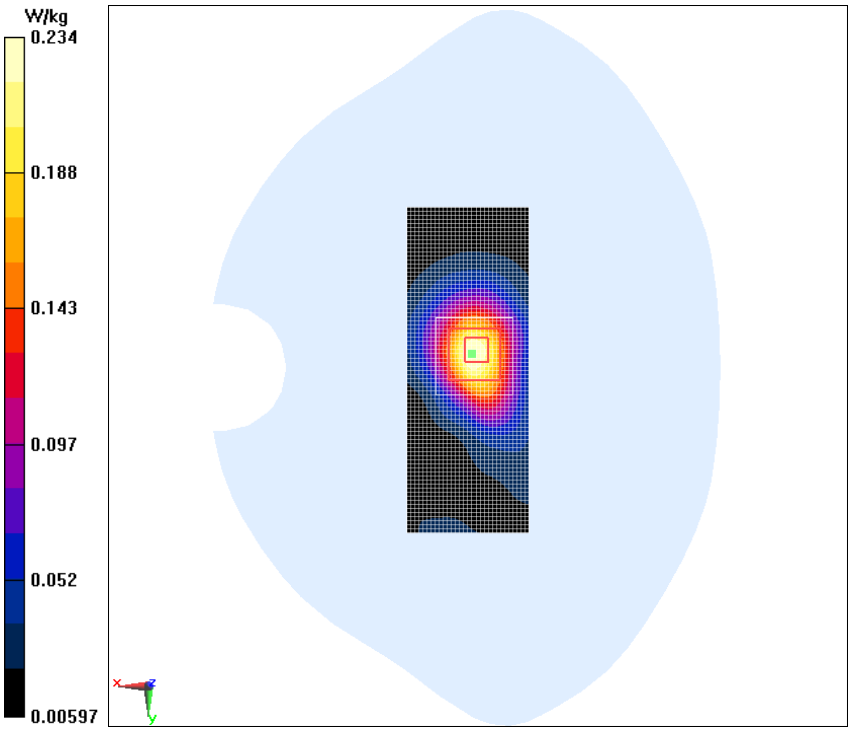


## CDMA 1900MHz EVDO Left Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Left Mode Middle/Area Scan (31x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.243 W/kg

**CDMA 1900MHz EVDO Left Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.288 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.343 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.124 W/kg
Maximum value of SAR (measured) = 0.234 W/kg

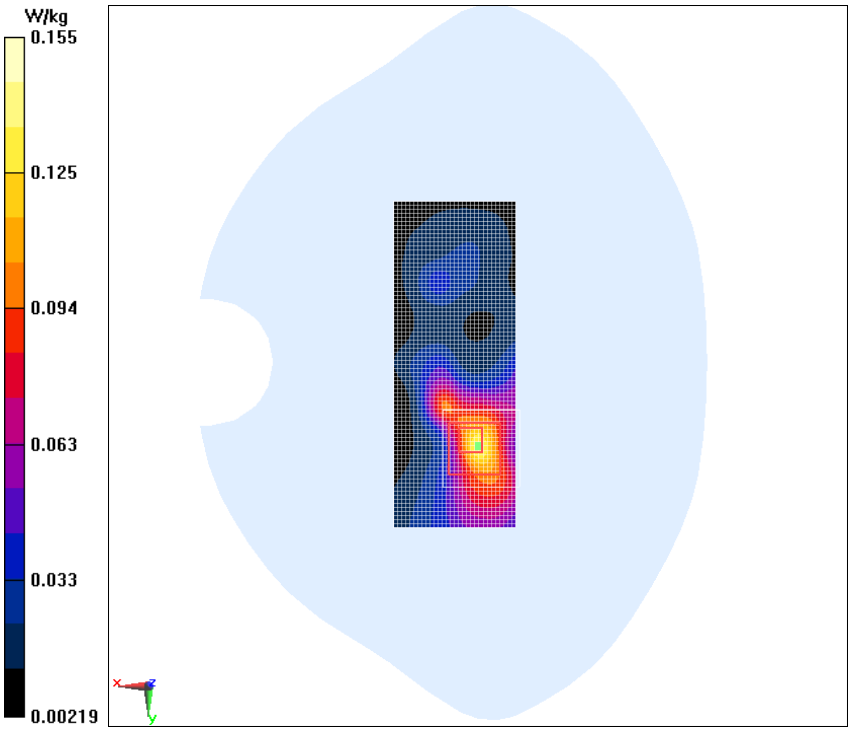


## CDMA 1900MHz EVDO Right Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Right Mode Middle/Area Scan (31x81x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.136 W/kg

**CDMA 1900MHz EVDO Right Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.470 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.314 W/kg
SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.068 W/kg
Maximum value of SAR (measured) = 0.155 W/kg

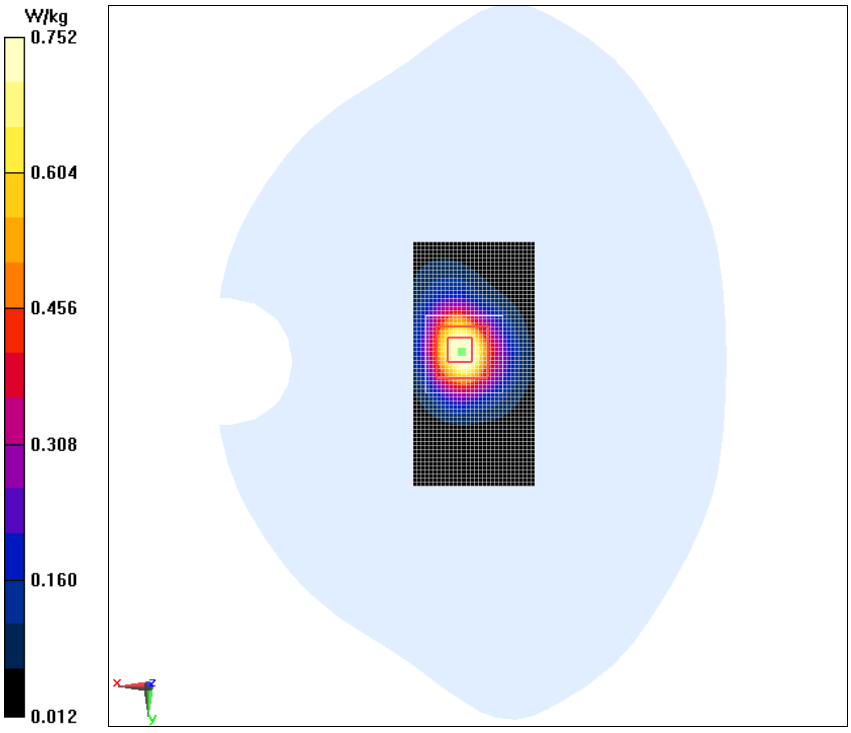


## CDMA 1900MHz EVDO Bottom Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Bottom Mode Middle/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.849 W/kg

**CDMA 1900MHz EVDO Bottom Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.568 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.681 W/kg; SAR(10 g) = 0.366 W/kg
Maximum value of SAR (measured) = 0.752 W/kg

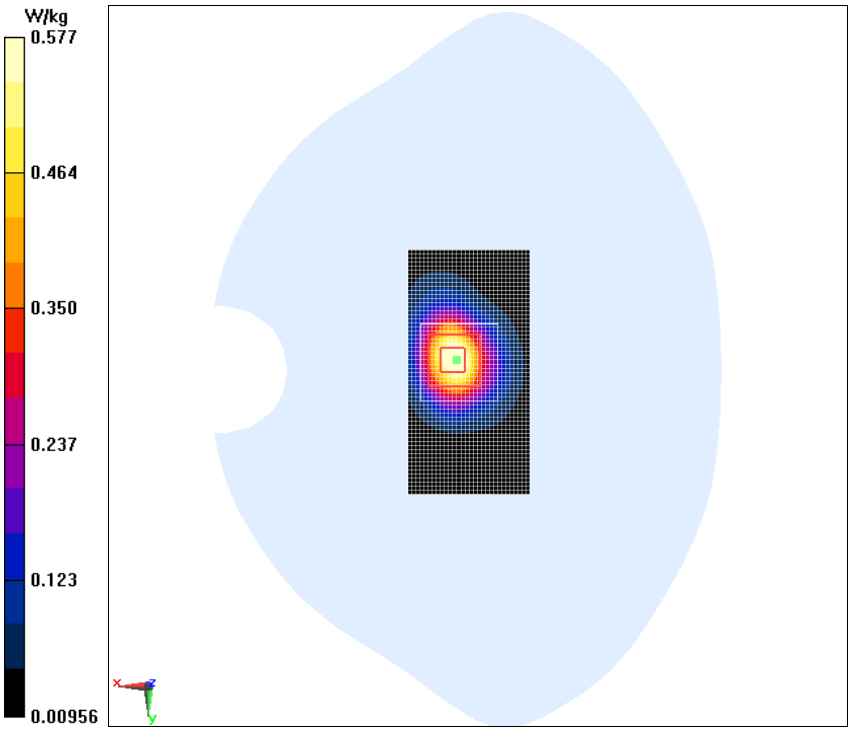


## CDMA 1900MHz EVDO Top Mode Middle

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.504 S/m; $\varepsilon_r$ = 53.319; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Top Mode Middle/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.641 W/kg

**CDMA 1900MHz EVDO Top Mode Middle/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.759 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.905 W/kg
SAR(1 g) = 0.542 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 0.577 W/kg

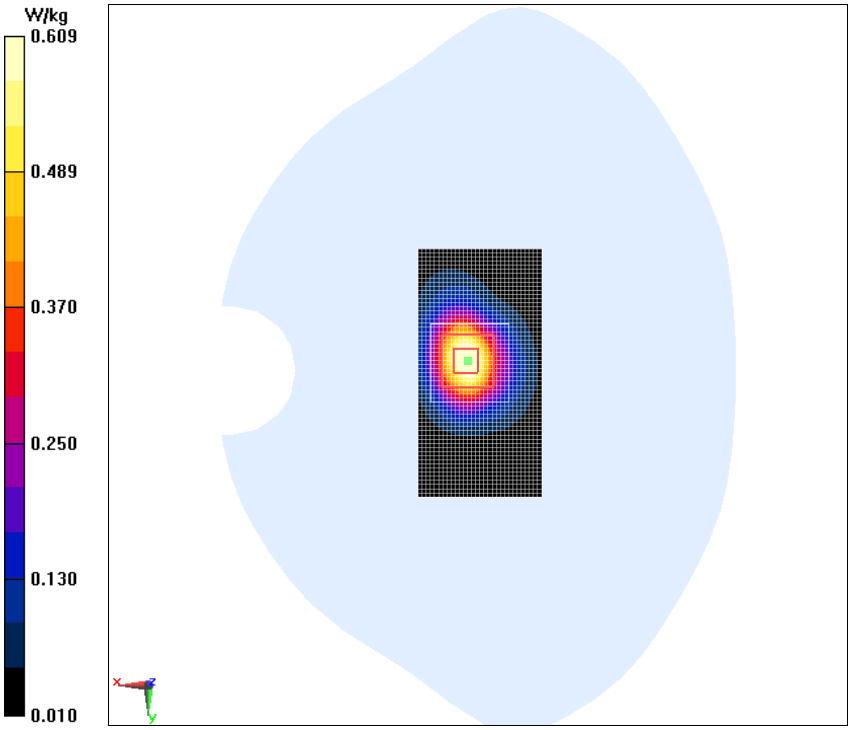


## CDMA 1900MHz EVDO Bottom Mode Low

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1851.25 MHz; $\sigma$ = 1.476 S/m; $\varepsilon_r$ = 53.434; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Bottom Mode Low/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.683 W/kg

**CDMA 1900MHz EVDO Bottom Mode Low/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.596 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.569 W/kg; SAR(10 g) = 0.305 W/kg
Maximum value of SAR (measured) = 0.609 W/kg

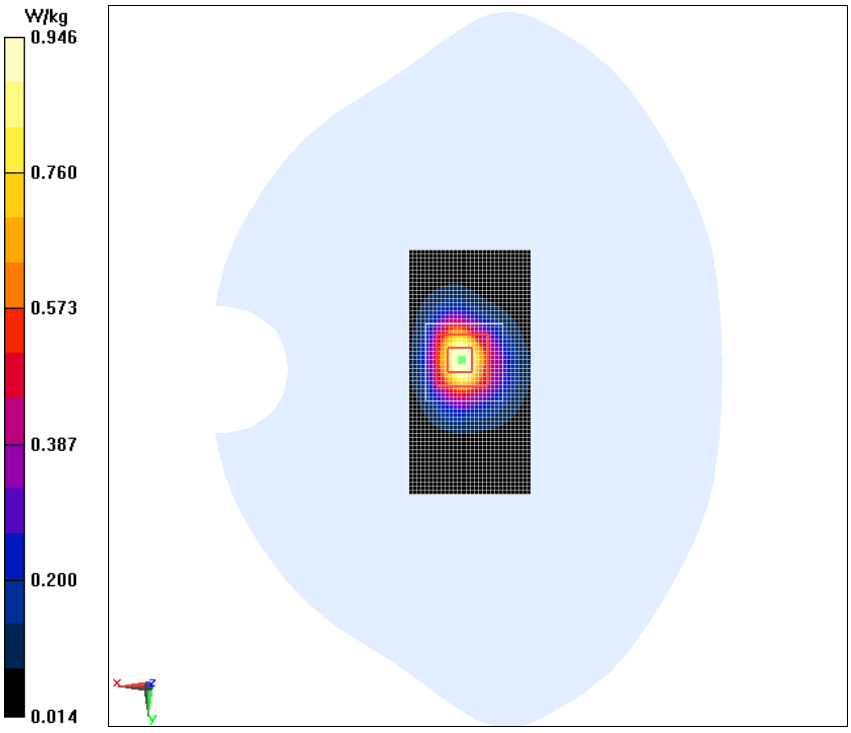


## CDMA 1900MHz EVDO Bottom Mode High

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1909 MHz; $\sigma$ = 1.533 S/m; $\varepsilon_r$ = 53.193; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Bottom Mode High/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 1.05 W/kg

**CDMA 1900MHz EVDO Bottom Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.490 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.843 W/kg; SAR(10 g) = 0.448 W/kg
Maximum value of SAR (measured) = 0.946 W/kg

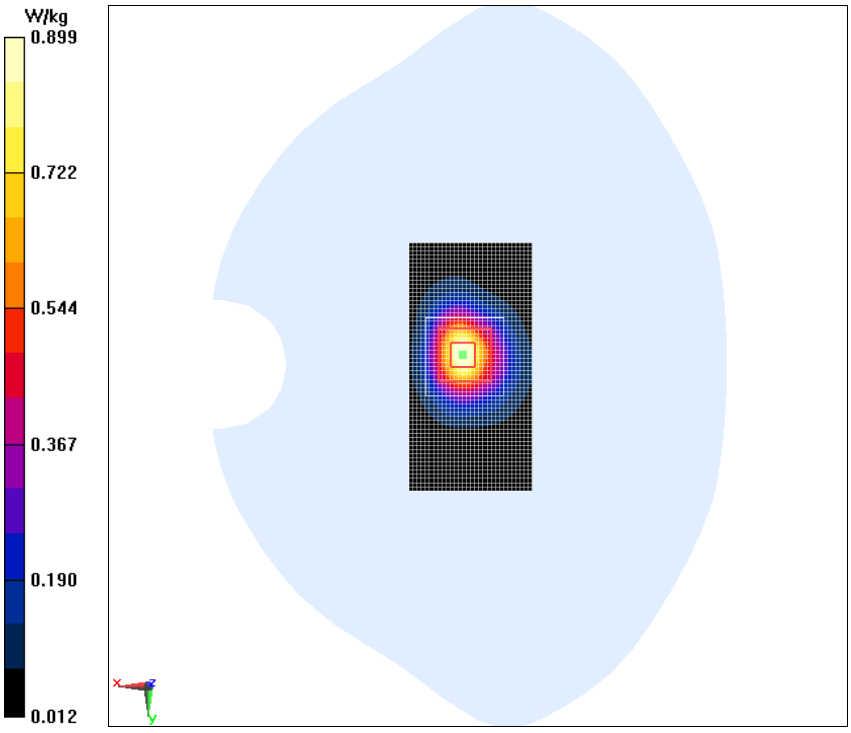


## CDMA 1900MHz EVDO Bottom Mode High 2

Date/Time: 2014/3/5
Electronics: DAE4 Sn1244
Medium: Body 1900MHz
Medium parameters used: f = 1909 MHz; $\sigma$ = 1.533 S/m; $\varepsilon_r$ = 53.193; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System: CDMA 1900MHz; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Probe: ES3DV3 - SN3252ConvF(5.03, 5.03, 5.03); Calibrated: 7/26/2013

**CDMA 1900MHz EVDO Bottom Mode High 2/Area Scan (31x61x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.971 W/kg

**CDMA 1900MHz EVDO Bottom Mode High 2/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.706 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.430 W/kg
Maximum value of SAR (measured) = 0.899 W/kg

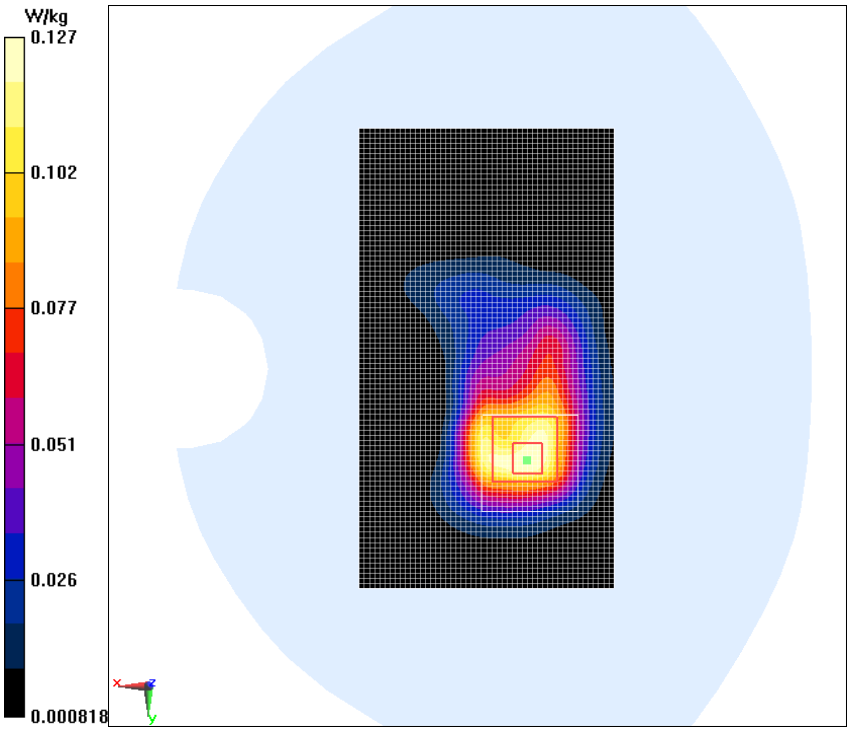


## WiFi 802.11b Phantom Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 8/9/2013

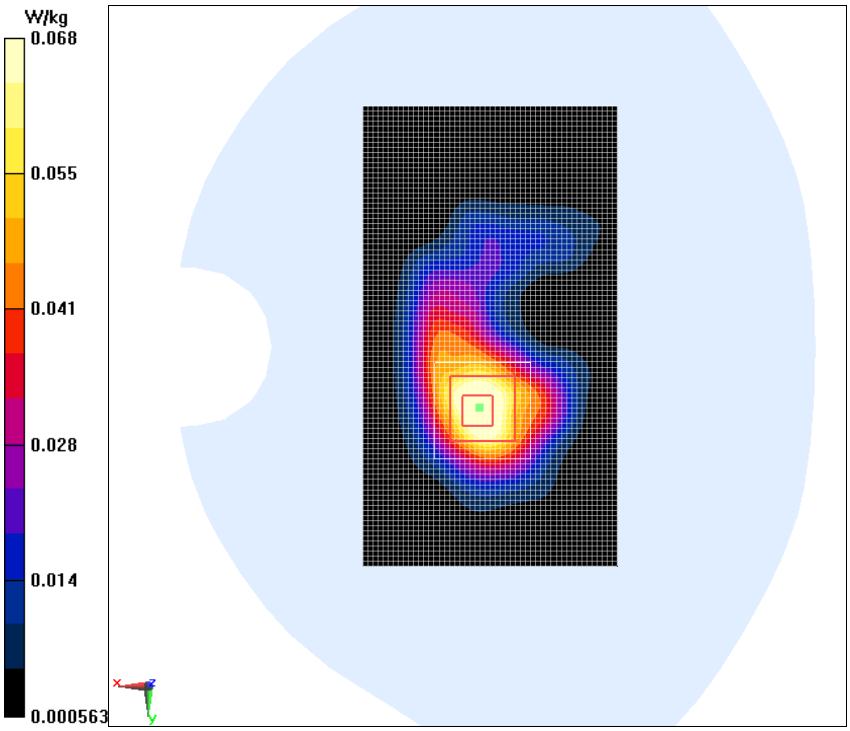
**WiFi 802.11b Phantom Mode High/Area Scan (51x91x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.129 W/kg

**WiFi 802.11b Phantom Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.196 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.214 W/kg
SAR(1 g) = 0.114 W/kg; SAR(10 g) = 0.059 W/kg
Maximum value of SAR (measured) = 0.127 W/kg



## WiFi 802.11b Ground Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 8/9/2013
**WiFi 802.11b Ground Mode High/Area Scan (51x91x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.0806 W/kg
**WiFi 802.11b Ground Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.980 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.107 W/kg
SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.033 W/kg
Maximum value of SAR (measured) = 0.0680 W/kg

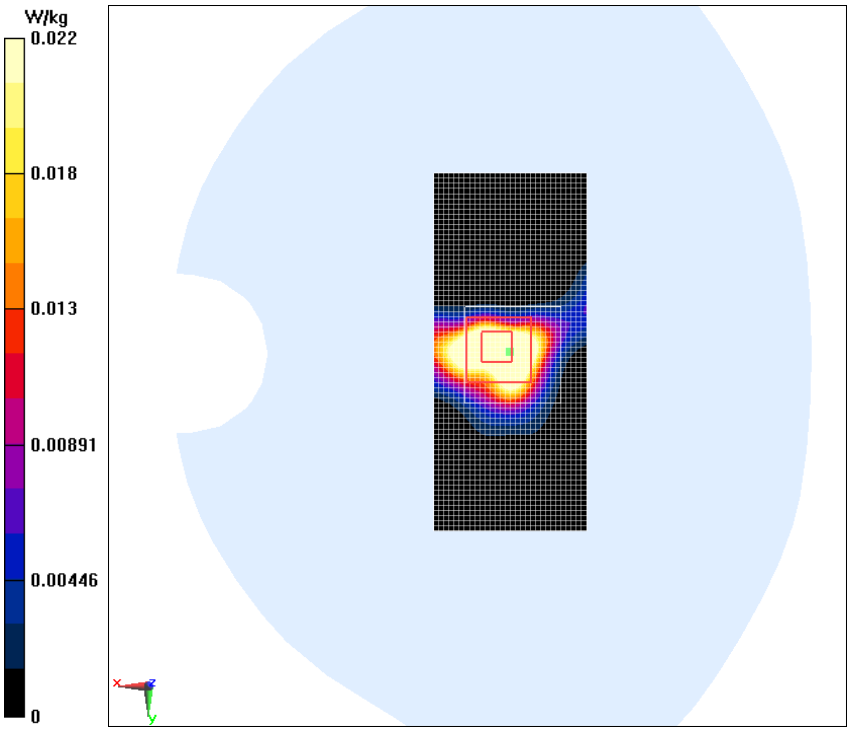


## WiFi 802.11b Bottom Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 8/9/2013

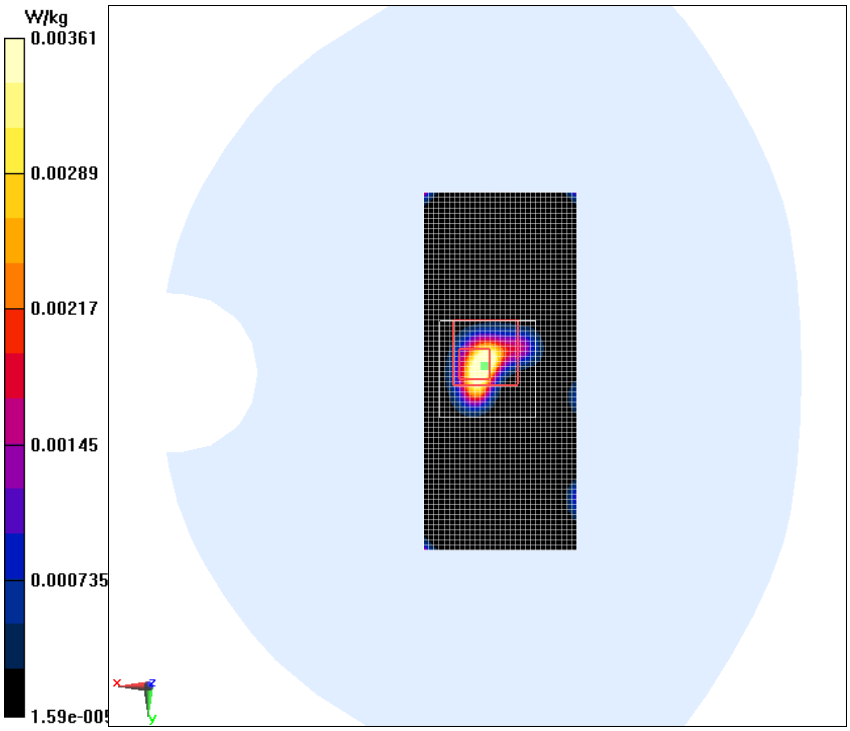
**WiFi 802.11b Bottom Mode High/Area Scan (31x71x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.0513 W/kg

**WiFi 802.11b Bottom Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.588 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.0340 W/kg
SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.010 W/kg
Maximum value of SAR (measured) = 0.0223 W/kg



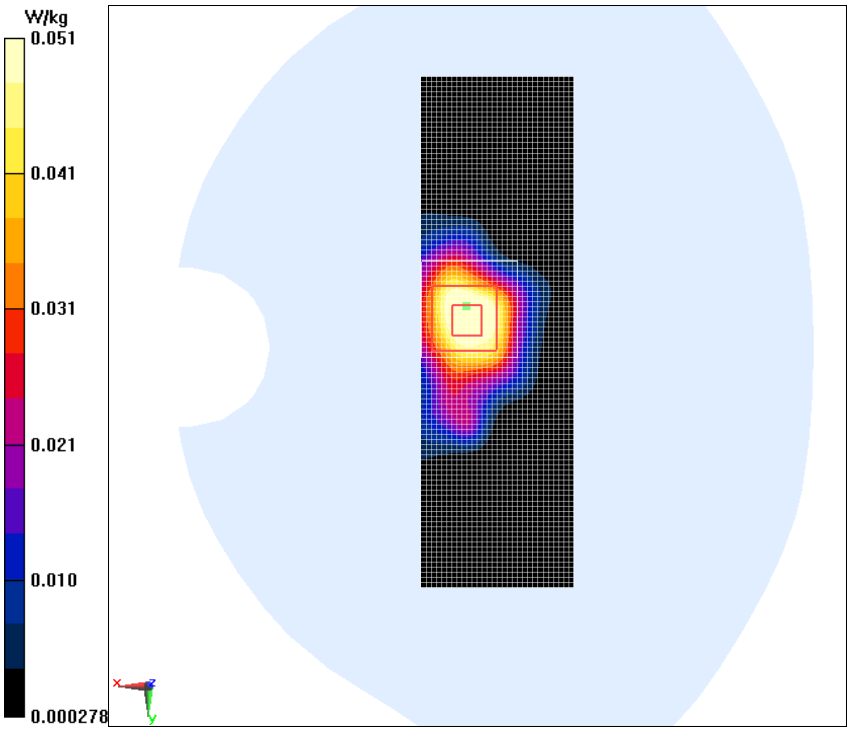
## WiFi 802.11b Top Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 8/9/2013
**WiFi 802.11b Top Mode High/Area Scan (31x71x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.00463 W/kg
**WiFi 802.11b Top Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.048 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.0110 W/kg
SAR(1 g) = 0.0018 W/kg; SAR(10 g) = 0.000742 W/kg
Maximum of SAR (measured) = 0.00361 W/kg



## WiFi 802.11b Left Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 7/22/2013
**WiFi 802.11b Left Mode High/Area Scan (31x101x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.0587 W/kg
**WiFi 802.11b Left Mode High/Zoom Scan 2 (5x5x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.342 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.0620 W/kg
SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.023 W/kg
Maximum value of SAR (measured) = 0.0509 W/kg



## WiFi 802.11b Right Mode High

Date/Time: 2014/3/3
Electronics: DAE4 Sn1244
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.931 S/m; $\varepsilon r$ = 53.916; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.5 ℃ Liquid Temperature:22.5 ℃
Communication System:WiFi 2450MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3754ConvF(6.66, 6.66, 6.66); Calibrated: 7/22/2013
**WiFi 802.11b Right Mode High/Area Scan (31x111x1):**
Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (Measurement) = 0.0222 W/kg
**WiFi 802.11b Right Mode High/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.431 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.0950 W/kg
SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.00725 W/kg
Maximum of SAR (measured) = 0.0162 W/kg