Report No.: RZA2010-1171

TESTING
No. L2264

# OET 65

# TEST REPORT

| | |
|---|---|
| **Product Name** | Wireless Modem |
| **FCC ID** | EC5805 |
| **Model** | QISEC5805 |
| **Client** | Huawei Technologies Co., Ltd. |

**TA Technology (Shanghai) Co., Ltd.**

# GENERAL SUMMARY

| | | | |
|---|---|---|---|
| **Product Name** | Wireless Modem | **Model** | EC5805 |
| **FCC ID** | QISEC5805 | **Report No.** | RZA2010 -1171 |
| **Client** | Huawei Technologies Co., Ltd. | | |
| **Manufacturer** | Huawei Technologies Co., Ltd. | | |
| **Standard(s)** | **IEEE Std C95.1, 1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz<br><br>**SUPPLEMENT C Edition 01-01 to OET BULLETIN 65 Edition 97-01 June 2001 including DA 02-1438, published June 2002:** Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radio frequency Emissions<br><br>**KDB 447498 D01 (2009-11-13):** Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies<br><br>**KDB 648474 D01 (2008-9):** SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas | | |
| **Conclusion** | This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 7 of this test report are below limits specified in the relevant standards.<br><br>General Judgment: **Pass**<br><br>(Stamp)<br>**Date of issue: August 26th, 2010** | | |
| **Comment** | The test result only responds to the measured sample. | | |

**Approved by** Yang Weizhong **Revised by** Ling Minbao **Performed by** Xue Chaofeng

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# 1. General Information

## 1.1. Notes of the Test Report

**TA Technology (Shanghai) Co., Ltd.** guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

**TA Technology (Shanghai) Co., Ltd.** is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

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## 1.3. Applicant Information

| | |
|---|---|
| Company: | Huawei Technologies Co., Ltd. |
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| Postal Code: | 518129 |
| Country: | P.R. China |
| Contact: | Wu Wenbo |
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## 1.4. Manufacturer Information

| | |
|---|---|
| Company: | Huawei Technologies Co., Ltd. |
| Address: | Bantian, Longgang District |
| City: | Shenzhen |
| Postal Code: | 518129 |
| Country: | P.R. China |
| Telephone: | 0755-28780808 |
| Fax: | 0755-28780808 |

## 1.5. Information of EUT

**General Information**

| | | | |
|---|---|---|---|
| Device Type: | Portable Device | | |
| Exposure Category: | Uncontrolled Environment / General Population | | |
| Product Name: | Wireless Modem | | |
| SN: | H37NAC1070800084 | | |
| Device Operating Configurations: | | | |
| Supporting Mode(s): | CDMA Cellular; (tested)<br>CDMA PCS; (tested)<br>CDMA AWS; (tested)<br>WIFI; (tested) | | |
| Test Modulation: | QPSK | | |
| Operating Frequency Range(s): | Band | Tx (MHz) | Rx (MHz) |
| | CDMA Cellular | 824.7 ~ 848.31 | 869.7 ~ 893.31 |
| | CDMA PCS | 1851.25 ~ 1908.75 | 1931.25 ~ 1988.75 |
| | CDMA AWS | 1711.25 ~ 1752.5 | 2111.25 ~ 2152.5 |
| Test Channel:<br>(Low - Middle - High) | 1013 - 384 - 777 (CDMA Cellular) (tested)<br>25 - 600 - 1175 (CDMA PCS) (tested)<br>25 - 450 - 850 (CDMA AWS) (tested) | | |
| Power Class: | CDMA Cellular: Tested with Power Control All up bits | | |
| | CDMA PCS: Tested with Power Control All up bits | | |
| | CDMA AWS: Tested with Power Control All up bits | | |
| Hardware Version: | WL1EC5805M | | |
| Software Version: | 986.11.261.01.101 | | |
| Antenna Type: | Internal Antenna | | |

**Auxiliary Equipment Details**

**AE1:Battery**

| | |
|---|---|
| Model: | HB5A2H |
| Manufacturer: | Huawei Technologies Co., Ltd. |
| SN: | YACA516HI2071511 |

**AE2:Travel Adapter**

| | |
|---|---|
| Model: | HW-050100E1W |
| Manufacturer: | Huawei Technologies Co., Ltd. |
| SN: | / |

Equipment Under Test (EUT) is a model of Wireless Modem with internal antenna. The tests in the band of CDMA Cellular, CDMA PCS and CDMA AWS are performed in the mode of 1XRTT, Rev.0 and Rev.A.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

## 1.6. The Maximum $SAR_{1g}$ Vaules and Conducted Power of each tested band

| Band | $SAR_{1g}$ (W/kg) | Maximum Conducted Power(dBm) |
|---|---|---|
| | Body | |
| CDMA Cellular | **1.050** | **23.99** |
| CDMA PCS | **1.330** | **23.96** |
| CDMA AWS | **1.400** | **23.99** |
| 802. 11b | **0.007** | **2.89** |

## 1.7. Test Date

The test is performed from August 24, 2010 to August 26, 2010.

# 2. Operational Conditions during Test

## 2.1. General Description of Test Procedures

A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1013, 384 and 777 respectively in the case of CDMA Cellular, to 25, 600 and 1175 respectively in the case of CDMA PCS, to 25, 450 and 850 respectively in the case of CDMA AWS. The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with E5515C, and the EUT is set to maximum output power by E5515C. Using the E5515C Power control is set “All Up Bits” in SAR of CDMA. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30 dB.

## 2.2. Information for the Measurement of CDMA 1x Devices

### 2.2.1. Output Power Verification

Test Parameter setup for maximum RF output power according to section 4.4.5 of 3GPP2

| Parameter | Units | Value |
|---|---|---|
| I or | dBm/1.23MHz | -104 |
| PilotE c /I or | dB | -7 |
| TrafficE c /I or | dB | -7.4 |

For SAR test, the maximum power output is very important and essential; it is identical under the measurement uncertainty. It is proper to use typical Test Mode 3 (FW RC3, RVS RC3, SO55) as the worst case for SAR test.

### 2.2.2. Body SAR Measurement

SAR is measured in RC3 with the EUT configured to transmit at full rate using TDSO/SO32, transmit at full rate on FCH with all other code channels disabled. SAR for multiple code channels (FCH+SCHn) is not required when the maximum average output of each RF channel is less than 0.25dB higher than measured with FCH only.

Body SAR in RC1 is not required because the maximum average output of each channel is less than 0.25 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.

Test communication setup meet as followings:

| | |
|---|---|
| Communication standard between mobile station and base station simulator | 3GPP2 C.S0011-B |
| Radio configuration | RC3（Supporting CDMA 1X） |
| Spreading Rate | SR1 |
| Data Rate | 9600bps |
| Service Options | SO55 （loop back mode） |
| Service Options | SO32 （test data service mode） |
| Multiplex Options | The mobile station does not support this service. |

## 2.3. Information for the Measurement of CDMA 1x EV-DO Release A Devices

### 2.3.1. Output Power Verification for EV-DO

Maximum output power is verified on the High, Middle, Low channel according to procedures in section 3.1.1.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rev.0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A. For Rev. A, maximum output power for both Subtype 0/1 and Subtype 2 Physical Layer configurations should be measured.

### 2.3.2. SAR Measurement

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 153.6kbps 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 307.2kbps 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 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[14].

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.

## 2.4. WIFI Test Configuration

For the 802.11b/g SAR tests, a communication link is set up with the test mode software for WIFI mode test. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 6 and 11 respectively in the case of 2450 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate.

802.11b/g operating modes are tested independently according to the service requirements in each frequency band.802.11b/g modes are tested on channels1,6,11;however,if output power reduction is necessary for channels 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels must be tested instead.

SAR is not required for 802.11g channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels. When the maximum average output channel in each frequency band is not included in the “default test channels”, the maximum channel should be tested instead of an adjacent “default test channels”, these are referred to as the “required test channels” and are illustrated in table 1.

And according to the “3 dB rule” FCC Public Notice, DA 02-1948, June 19.2002 **“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)”**.
Then The Absolute Radio Frequency Channel Number (ARFCN) is firstly allocated to 2437 respectively in the case of 802.11b/g.

**Table 1: “Default Test Channels”**

| Mode | GHz | Channel | Turbo Channel | “Default Test Channels” | | | |
|---|---|---|---|---|---|---|---|
| | | | | 15.247 | | UNII | |
| | | | | 802.11b | 802.11g | | |
| 802.11b/g | 2.412 | 1# | | √ | * | | |
| | 2.437 | 6 | 6 | √ | * | | |
| | 2.462 | 11# | | √ | * | | |

Note: #=when output power is reduced for channel 1 and /or 11to meet restricted band requirements the highest out put channels closet to each of these channels should be tested.

√= “default test channels”

* =possible 802.11g channels with maximum average output 0.25dB>=the “default test channels”

## 2.5. Position of Module

For each channel, the EUT is tested at the following 5 test positions:

- Test Position 1: The back side of the EUT towards the bottom of the flat phantom. The distance is 13 mm from the back side of the EUT to the bottom of the flat phantom. (ANNEX J Picture 7)

- Test Position 2: The front side of the EUT towards the bottom of the flat phantom. The distance is 13 mm from the front side of the EUT to the bottom of the flat phantom. (ANNEX J Picture 8)

- Test Position 3: The top side of the EUT towards the bottom of the flat phantom. The distance is 13 mm from the top side of the EUT to the bottom of the flat phantom. (ANNEX J Picture 9)

- Test Position 4: The left side of the EUT towards the bottom of the flat phantom. The distance is 13 mm from the left side of the EUT to the bottom of the flat phantom. (ANNEX J Picture 10)

- Test Position 5: The right side of the EUT towards the bottom of the flat phantom. The distance is 13 mm from the right side of the EUT to the bottom of the flat phantom. (ANNEX J Picture 11)

- Test Position 6: The bottom side of the EUT towards the bottom of the flat phantom. It is not tested. (ANNEX J Picture 12)

# 3. SAR Measurements System Configuration

## 3.1. SAR Measurement Set-up

The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY4 measurement server.
- The DASY4 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003
- DASY4 software and SEMCAD data evaluation software.
- Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.

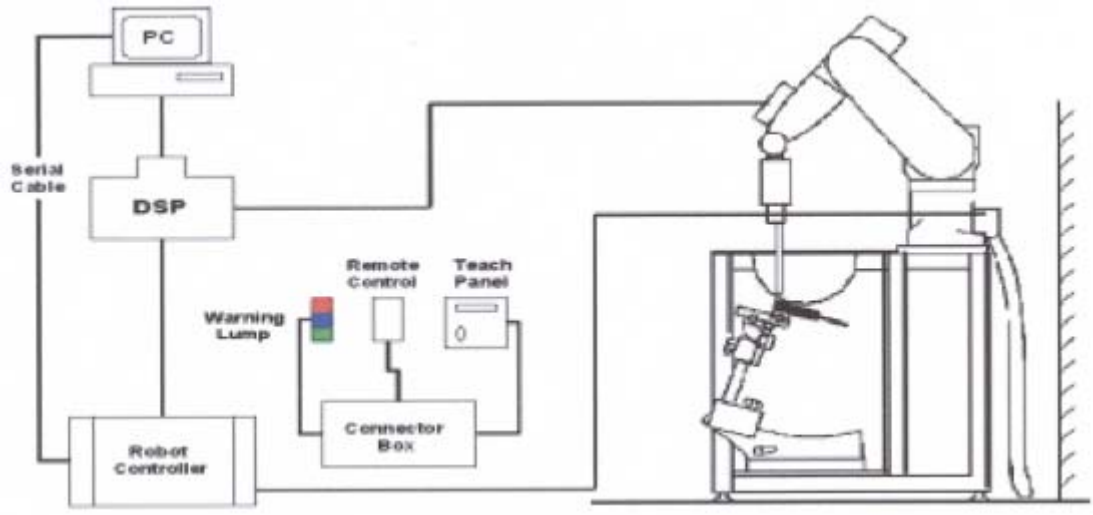


**Figure 1. SAR Lab Test Measurement Set-up**

## 3.2. DASY4 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

### 3.2.1. EX3DV4 Probe Specification

| | |
|---|---|
| Construction | Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration | ISO/IEC 17025 calibration service available |
| Frequency | 10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz) |
| Directivity | ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis) |
| Dynamic Range | 10 μW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 μW/g) |
| Dimensions | Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm |
| Application | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%. |

**Figure 2.EX3DV4 E-field Probe**

**Figure 3. EX3DV4 E-field probe**

### 3.2.2. E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$\mathbf{SAR} = \mathbf{C}\frac{\Delta T}{\Delta t}$$

Where: $\Delta t$ = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

$\Delta T$ = Temperature increase due to RF exposure.

Or

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

Where:

$\sigma$ = Simulated tissue conductivity,

$\rho$ = Tissue density (kg/m3).

## 3.3. Other Test Equipment

### 3.3.1. Device Holder for Transmitters

**Construction:** Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.) It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI4 and SAM v6.0 Phantoms.

**Material:** POM, Acrylic glass, Foam

### 3.3.2. Phantom

The Generic Twin Phantom is constructed of a fiberglass shell integrated in a wooden Figure. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

| | |
|---|---|
| Shell Thickness | 2±0.1 mm |
| Filling Volume | Approx. 20 liters |
| Dimensions | 810 x l000 x 500 mm (H x L x W) |
| Aailable | Special |

**Figure 4.Generic Twin Phantom**

## 3.4. Scanning Procedure

The DASY4 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. ± 5 %.

- The “surface check” measurement tests the optical surface detection system of the DASY4 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

- Area Scan

  The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot.Before starting the area scan a grid

spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged.
After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

- Zoom Scan
  Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x7 points within a cube whose base is centered around the maxima found in the preceding area scan.

- Spatial Peak Detection
  The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses.The DASY4 system allows evaluations that combine measured data and robot positions, such as:
  • maximum search
  • extrapolation
  • boundary correction
  • peak search for averaged SAR
  During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.
  Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space.
  They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation. For a grid using 7x7x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.
- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

## 3.5. Data Storage and Evaluation

### 3.5.1. Data Storage

The DASY4 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

### 3.5.2. Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

| | | |
|---|---|---|
| Probe parameters: | - Sensitivity | Normi, $a_{i0}$, $a_{i1}$, $a_{i2}$ |
| | - Conversion factor | $ConvF_i$ |
| | - Diode compression point | $Dcp_i$ |
| Device parameters: | - Frequency | f |
| | - Crest factor | cf |
| Media parameters: | - Conductivity | |
| | - Density | |

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY4 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.
If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for

peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot c f / d c p_i$$

With $V_i$ = compensated signal of channel i ( i = x, y, z )

$U_i$ = input signal of channel i ( i = x, y, z )

$cf$ = crest factor of exciting field (DASY parameter)

$dcp_i$ = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = ( V_i / Norm_i \cdot ConvF )^{1/2}$

H-field probes: $H_i = ( V_i )^{1/2} \cdot ( a_{i0} + a_{i1} f + a_{i2} f^2 ) / f$

With $V_i$ = compensated signal of channel i (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
[mV/(V/m)$^2$] for E-field Probes

$ConvF$ = sensitivity enhancement in solution

$a_{ij}$ = sensor sensitivity factors for H-field probes

$f$ = carrier frequency [GHz]

$E_i$ = electric field strength of channel i in V/m

$H_i$ = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = ( E_{tot}^2 \cdot \ . ) / (\ \ \cdot 1000)$$

with $SAR$ = local specific absorption rate in mW/g

$E_{tot}$ = total field strength in V/m

$\sigma$ = conductivity in [mho/m] or [Siemens/m]

$\rho$ = equivalent tissue density in g/cm$^3$

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad \boldsymbol{P_{pwe} = H_{tot}^2 \cdot 37.7}$$

with $P_{pwe}$ = equivalent power density of a plane wave in mW/cm$^2$

$\boldsymbol{E_{tot}}$ = total electric field strength in V/m

$\boldsymbol{H_{tot}}$ = total magnetic field strength in A/m

## 3.6. System Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the table 6.

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %).

System check is performed regularly on all frequency bands where tests are performed with the DASY4 system.

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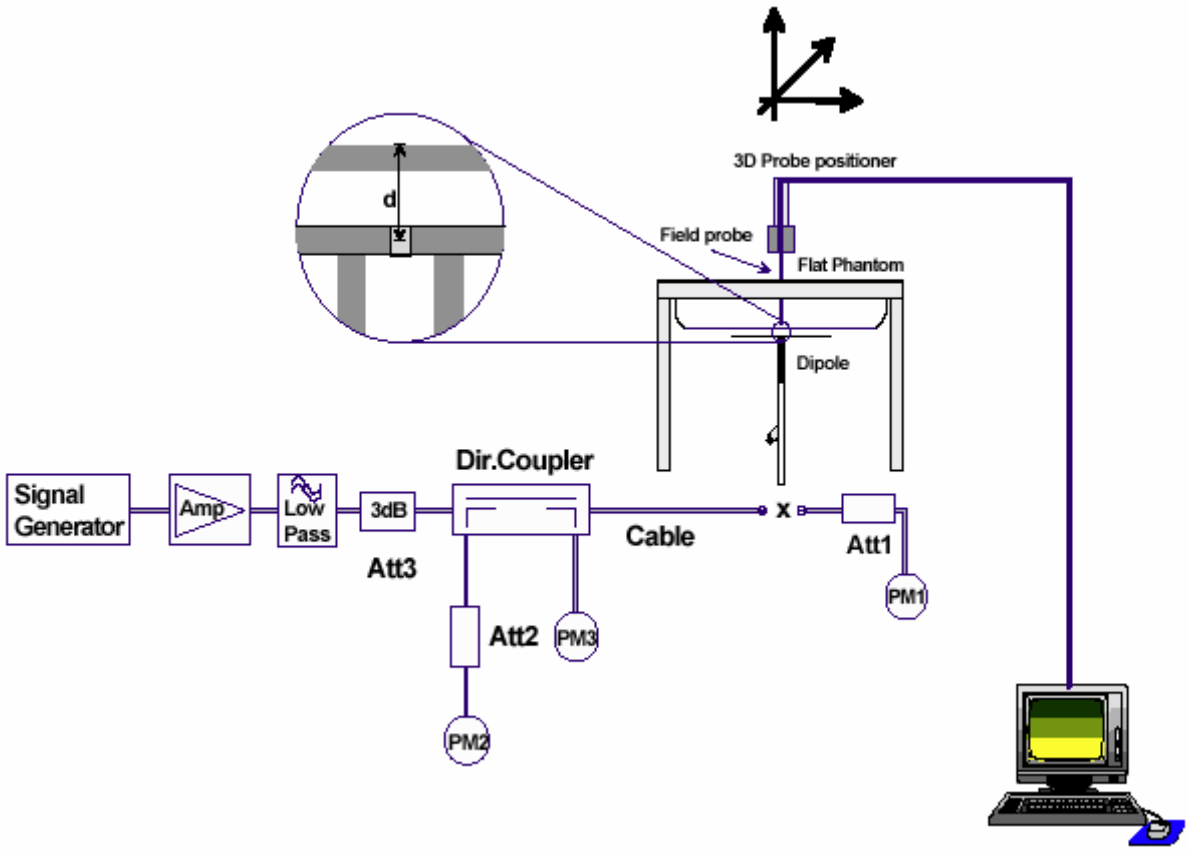



**Figure 5. System Check Set-up**

## 3.7. Equivalent Tissues

The liquid is consisted of water, sugar, salt, Preventol,Glycol and Cellulose. The liquid has previously been proven to be suited for worst-case. The Table 2 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

**Table 2: Composition of the Body Tissue Equivalent Matter**

| MIXTURE% | FREQUENCY(Body) 835MHz |
|---|---|
| Water | 52.5 |
| Sugar | 45 |
| Salt | 1.4 |
| Preventol | 0.1 |
| Cellulose | 1.0 |
| Dielectric Parameters Target Value | f=835MHz ε=55.2 σ=0.97 |

| MIXTURE% | FREQUENCY(Body) 1750MHz |
|---|---|
| Water | 69.91 |
| Glycol | 29.97 |
| Salt | 0.12 |
| Dielectric Parameters Target Value | f=1750MHz ε=53.4 σ=1.49 |

| MIXTURE% | FREQUENCY(Body) 1900MHz |
|---|---|
| Water | 69.91 |
| Glycol | 29.96 |
| Salt | 0.13 |
| Dielectric Parameters Target Value | f=1900MHz ε=53.3 σ=1.52 |

| MIXTURE% | FREQUENCY(Body) 2450MHz |
|---|---|
| Water | 73.2 |
| Glycol | 26.7 |
| Salt | 0.1 |
| Dielectric Parameters Target Value | f=2450MHz ε=52.70 σ=1.95 |

# 4. Laboratory Environment

**Table 3: The Ambient Conditions during Test**

| | |
|---|---|
| Temperature | Min. = 20°C, Max. = 25 °C |
| Relative humidity | Min. = 30%, Max. = 70% |
| Ground system resistance | < 0.5 Ω |
| Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards. | |

# 5. Characteristics of the Test

## 5.1. Applicable Limit Regulations

**IEEE Std C95.1, 1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

## 5.2. Applicable Measurement Standards

**SUPPLEMENT C Edition 01-01 to OET BULLETIN 65 Edition 97-01 June 2001 including DA 02-1438, published June 2002:** Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radio frequency Emissions.

**KDB 447498 D01 (2009-11-13):** Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies

**KDB 648474 D01 (2008-9):** SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas

# 6. Conducted Output Power Measurement

## 6.1. Summary

The DUT is tested using an E5515C communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted power. Conducted output power was measured using an integrated RF connector and attached RF cable. This result contains conducted output power for the EUT.

## 6.2. Conducted Power Results

**Table 4: Conducted Power Measurement Results**

| **CDMA Cellular (RC3)** | **Conducted Power(dBm)** | | |
|---|---|---|---|
| | Channel 1013 | Channel 384 | Channel 777 |
| Before test | 23.96 | 23.93 | 23.99 |
| After test | 23.94 | 23.91 | 23.98 |
| **CDMA Cellular (RC1)** | **Conducted Power(dBm)** | | |
| | Channel 1013 | Channel 384 | Channel 777 |
| Before test | 23.93 | 23.90 | 23.97 |
| After test | 23.92 | 23.91 | 23.96 |
| **CDMA Cellular EVDO (Rev.0)** | **Conducted Power(dBm)** | | |
| | Channel 1013 | Channel 384 | Channel 777 |
| Before test | 23.89 | 23.83 | 23.97 |
| After test | 23.87 | 23.85 | 23.96 |
| **CDMA Cellular EVDO (Rev.A)** | **Conducted Power(dBm)** | | |
| | Channel 1013 | Channel 384 | Channel 777 |
| Before test | 23.86 | 23.82 | 23.95 |
| After test | 23.85 | 23.81 | 23.96 |
| **CDMA PCS (RC3)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 600 | Channel 1175 |
| Before test | 23.83 | 23.87 | 23.96 |
| After test | 23.81 | 23.85 | 23.95 |
| **CDMA PCS (RC1)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 600 | Channel 1175 |
| Before test | 23.82 | 23.84 | 23.93 |
| After test | 23.83 | 23.83 | 23.92 |

| CDMA PCS EVDO (Rev.0) | Conducted Power(dBm) | | |
|---|---|---|---|
| | Channel 25 | Channel 600 | Channel 1175 |
| Before test | 23.93 | 23.91 | 23.96 |
| After test | 23.91 | 23.92 | 23.95 |
| **CDMA PCS EVDO (Rev.A)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 600 | Channel 1175 |
| Before test | 23.90 | 23.87 | 23.92 |
| After test | 23.91 | 23.88 | 23.91 |
| **CDMA AWS (RC3)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 450 | Channel 850 |
| Before test | 23.84 | 23.99 | 23.88 |
| After test | 23.85 | 23.98 | 23.87 |
| **CDMA AWS (RC1)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 450 | Channel 850 |
| Before test | 23.83 | 23.98 | 23.85 |
| After test | 23.82 | 23.97 | 23.84 |
| **CDMA AWS EVDO (Rev.0)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 450 | Channel 850 |
| Before test | 23.94 | 23.99 | 23.98 |
| After test | 23.93 | 23.98 | 23.97 |
| **CDMA AWS EVDO (Rev.A)** | **Conducted Power(dBm)** | | |
| | Channel 25 | Channel 450 | Channel 850 |
| Before test | 23.91 | 23.93 | 23.96 |
| After test | 23.92 | 23.92 | 23.97 |

# 7. Test Results

## 7.1. Dielectric Performance

**Table 5: Dielectric Performance of Body Tissue Simulating Liquid**

| Frequency | Description | Dielectric Parameters | | Temp |
|---|---|---|---|---|
| | | $\varepsilon_r$ | σ(s/m) | ℃ |
| **835MHz (body)** | Target value ±5% window | 55.20<br>52.44 — 57.96 | 0.97<br>0.92 — 1.02 | / |
| | Measurement value 2010-8-25 | 54.82 | 1.00 | 22.5 |
| **1750MHz (body)** | Target value ±5% window | 53.40<br>50.73 — 56.07 | 1.49<br>1.42 — 1.56 | / |
| | Measurement value 2010-8-25 | 52.22 | 1.48 | 21.8 |
| **1900MHz (body)** | Target value ±5% window | 53.30<br>50.64 — 55.97 | 1.52<br>1.44 — 1.60 | / |
| | Measurement value 2010-8-24 | 53.21 | 1.46 | 21.8 |
| **2450MHz (body)** | Target value ±5% window | 52.70<br>50.07 — 55.34 | 1.95<br>1.85 — 2.05 | / |
| | Measurement value 2010-8-26 | 51.83 | 1.92 | 21.9 |

## 7.2. System Check

**Table 6: System Check for Body Tissue Simulating Liquid**

| Frequency | Description | SAR(W/kg) | | Dielectric Parameters | | Temp |
|---|---|---|---|---|---|---|
| | | 10g | 1g | $\varepsilon_r$ | σ(s/m) | ℃ |
| 835MHz | Recommended value ±10% window | 1.63<br>1.47 — 1.79 | 2.49<br>2.24 — 2.74 | 54.6 | 0.98 | / |
| | Measurement value 2010-8-25 | 1.58 | 2.40 | 54.82 | 1.00 | 22.5 |
| 1750 MHz | Recommended value ±10% window | 5.11<br>4.60 — 5.62 | 9.37<br>8.43 — 10.31 | 54.1 | 1.43 | / |
| | Measurement value 2010-8-25 | 4.90 | 9.24 | 52.22 | 1.48 | 21.8 |
| 1900 MHz | Recommended value ±10% window | 5.52<br>4.97 — 6.57 | 10.30<br>9.27 — 11.33 | 53.5 | 1.54 | / |
| | Measurement value 2010-8-24 | 5.32 | 10.12 | 53.21 | 1.46 | 21.8 |
| 2450 MHz | Recommended result ±10% window | 5.97<br>5.37 — 6.57 | 13<br>11.7 — 14.3 | 51.8 | 2.01 | / |
| | Measurement value 2010-8-26 | 6.12 | 13.38 | 51.83 | 1.92 | 21.9 |

Note: 1. The graph results see ANNEX B.

2. Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

## 7.3. Summary of Measurement Results

### 7.3.1. CDMA Cellular (CDMA/EVDO/1xRTT)

**Table 7: SAR Values [CDMA Cellular (CDMA/EVDO/1xRTT)]**

| Limit of SAR | | 10 g Average | 1 g Average | Power Drift | Graph Results |
|---|---|---|---|---|---|
| | | 2.0 W/kg | 1.6 W/kg | ± 0.21 dB | |
| Different Test Position | Channel | Measurement Result(W/kg) | | Power Drift (dB) | |
| | | 10 g Average | 1 g Average | | |
| EVDO (Rev.0) | | | | | |
| Test Position 1 | High | 0.645 | 0.920 | 0.013 | Figure 10 |
| | Middle | 0.714 | 1.050 | 0.064 | Figure 11 |
| | Low | 0.384 | 0.537 | -0.014 | Figure 12 |
| Test Position 2 | High | 0.668 | 0.942 | 0.081 | Figure 13 |
| | Middle | 0.748 | 1.040 | -0.147 | Figure 14 |
| | Low | 0.442 | 0.616 | 0.179 | Figure 15 |
| Test Position 3 | Middle | 0.054 | 0.101 | 0.033 | Figure 16 |
| Test Position 4 | Middle | 0.280 | 0.450 | 0.169 | Figure 17 |
| Test Position 5 | Middle | 0.352 | 0.513 | -0.087 | Figure 18 |
| Worst case position of Rev.0 for Rev.A | | | | | |
| Test Position 1 | Middle | 0.705 | 1.030 | -0.034 | Figure 19 |
| Worst case position of Rev.0 for 1xRTT | | | | | |
| Test Position 1 | Middle | 0.735 | 1.020 | -0.067 | Figure 20 |

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Upper and lower frequencies were measured at the worst position.

3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the $SAR_{1g}$ limit (< 0.8W/kg), testing at the high and low channels is optional.

**Table 8: Extrapolated SAR Values of highest measured SAR [CDMA Cellular (CDMA/EVDO/1xRTT)]**

| Limit of SAR | | Conducted Power | 1g Average | Tune-up procedures Power(dBm) | 1g Average |
|---|---|---|---|---|---|
| | | | 1.6 W/kg | | 1.6 |
| Test Case | | Measurement Result (dBm) | | | Extrapolated Result (W/kg) |
| Different Test Position | Channel | | | | |
| EVDO (Rev.0) | | | | | |
| Test Position 1 | Middle | 23.83 | 1.050 | 24.40 | 1.197 |

### 7.3.2. CDMA PCS (CDMA/EVDO/1xRTT)

**Table 9: SAR Values [CDMA PCS (CDMA/EVDO/1xRTT)]**

| Limit of SAR | | 10 g Average | 1 g Average | Power Drift | Graph Results |
|---|---|---|---|---|---|
| | | 2.0 W/kg | 1.6 W/kg | ± 0.21 dB | |
| Different Test Position | Channel | Measurement Result(W/kg) | | Power Drift (dB) | |
| | | 10 g Average | 1 g Average | | |
| EVDO (Rev.0) | | | | | |
| Test Position 1 | High | 0.591 | 1.090 | -0.039 | Figure 21 |
| | Middle | 0.615(max.cube) | 1.050(max.cube) | 0.131 | Figure 22 |
| | Low | 0.671 | 1.090 | 0.050 | Figure 23 |
| Test Position 2 | High | 0.630 | 1.100 | -0.147 | Figure 24 |
| | Middle | 0.698 | 1.190 | -0.025 | Figure 25 |
| | Low | 0.793 | 1.260 | -0.050 | Figure 26 |
| Test Position 3 | High | 0.630 | 1.170 | -0.010 | Figure 27 |
| | Middle | 0.641 | 1.100 | -0.063 | Figure 28 |
| | Low | 0.630 | 1.140 | -0.051 | Figure 29 |
| Test Position 4 | Middle | 0.072(max.cube) | 0.117(max.cube) | -0.045 | Figure 30 |
| Test Position 5 | Middle | 0.162 | 0.264 | -0.002 | Figure 31 |
| Worst case position of Rev.0 for Rev.A | | | | | |
| Test Position 2 | Low | 0.798 | 1.290 | 0.161 | Figure 32 |
| Worst case position of Rev.0 for 1xRTT | | | | | |
| Test Position 2 | Low | 0.821 | 1.330 | 0.021 | Figure 33 |

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the $SAR_{1g}$ limit (< 0.8W/kg), testing at the high and low channels is optional.
4. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above.

**Table 10: Extrapolated SAR Values of highest measured SAR [CDMA PCS (CDMA/EVDO/1xRTT)]**

| Limit of SAR | | Conducted Power | 1g Average | Tune-up procedures Power(dBm) | 1g Average |
|---|---|---|---|---|---|
| | | | 1.6 W/kg | | 1.6 |
| Test Case | | Measurement Result (dBm) | | | Extrapolated Result (W/kg) |
| Different Test Position | Channel | | | | |
| 1xRTT | | | | | |
| Test Position 2 | Low | 23.83 | 1.330 | 24.40 | 1.517 |

### 7.3.3. CDMA AWS (CDMA/EVDO/1xRTT)

**Table 11: SAR Values [CDMA AWS (CDMA/EVDO/1xRTT)]**

| Limit of SAR | | 10 g Average | 1 g Average | Power Drift | Graph Results |
|---|---|---|---|---|---|
| | | 2.0 W/kg | 1.6 W/kg | ± 0.21 dB | |
| Different Test Position | Channel | Measurement Result(W/kg) | | Power Drift (dB) | |
| | | 10 g Average | 1 g Average | | |
| EVDO (Rev.0) | | | | | |
| Test Position 1 | Middle | 0.464(max.cube) | 0.785(max.cube) | -0.185 | Figure 34 |
| Test Position 2 | High | 0.789(max.cube) | 1.360(max.cube) | 0.174 | Figure 35 |
| | Middle | 0.611(max.cube) | 1.030(max.cube) | -0.015 | Figure 36 |
| | Low | 0.661(max.cube) | 1.070(max.cube) | -0.011 | Figure 37 |
| Test Position 3 | High | 0.610 | 1.090 | -0.130 | Figure 38 |
| | Middle | 0.477 | 0.815 | 0.097 | Figure 39 |
| | Low | 0.519 | 0.931 | 0.090 | Figure 40 |
| Test Position 4 | Middle | 0.091(max.cube) | 0.146(max.cube) | 0.038 | Figure 41 |
| Test Position 5 | Middle | 0.084 | 0.137 | 0.137 | Figure 42 |
| Worst case position of Rev.0 for Rev.A | | | | | |
| Test Position 2 | High | 0.840 | 1.400 | 0.087 | Figure 43 |
| Worst case position of Rev.0 for 1xRTT | | | | | |
| Test Position 2 | High | 0.742 | 1.320 | -0.067 | Figure 44 |

Note: 1.The value with blue color is the maximum SAR Value of test case in each test band.

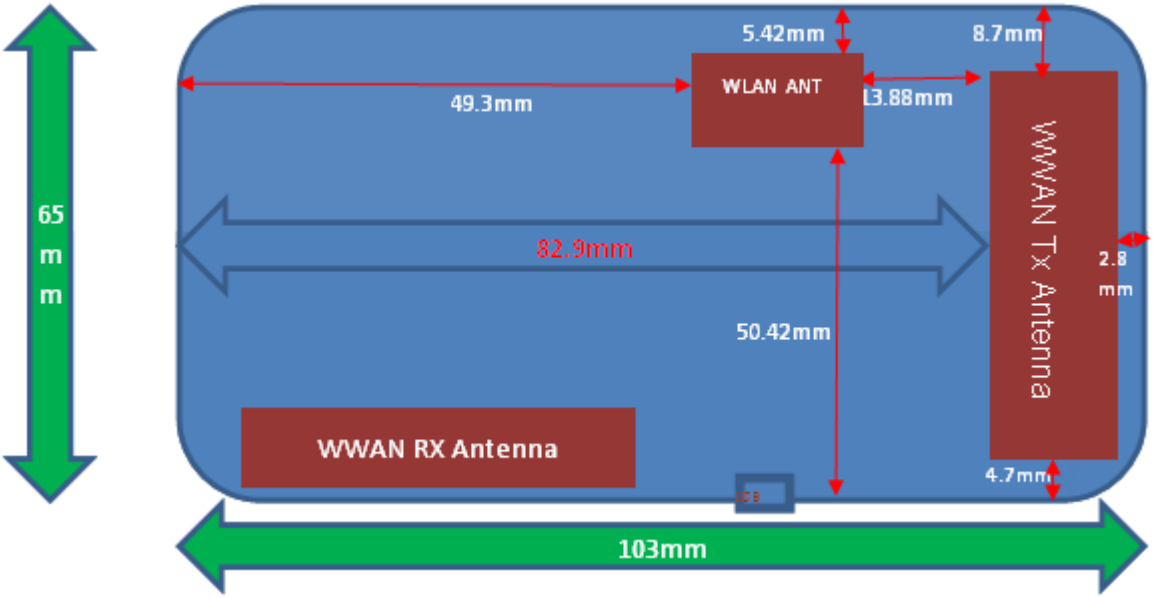
2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the $SAR_{1g}$ limit (< 0.8W/kg), testing at the high and low channels is optional.
4. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above.

**Table 12: Extrapolated SAR Values of highest measured SAR [CDMA AWS (CDMA/EVDO/1xRTT)]**

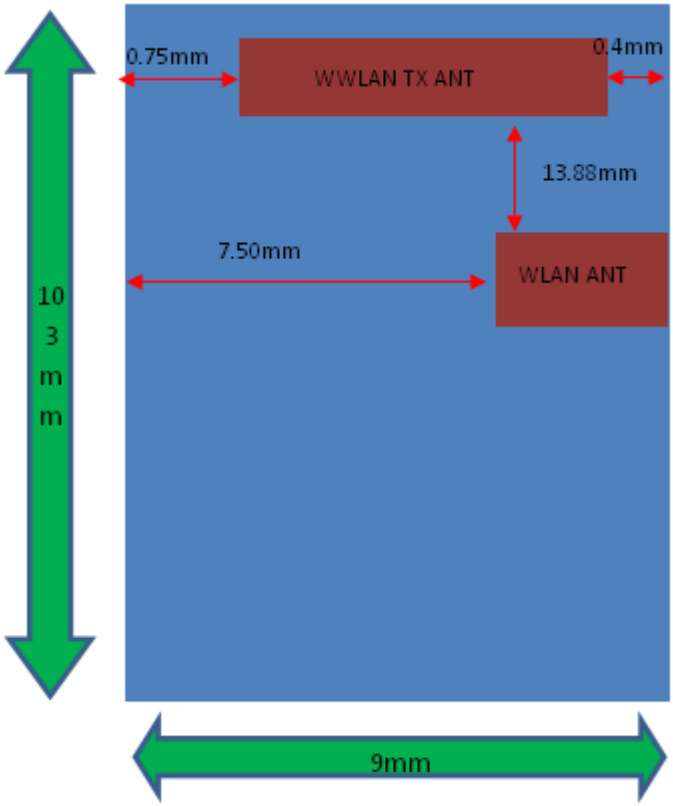
| Limit of SAR | | Conducted Power | 1g Average | Tune-up procedures Power(dBm) | 1g Average |
|---|---|---|---|---|---|
| | | | 1.6 W/kg | | 1.6 |
| Test Case | | Measurement Result (dBm) | | | Extrapolated Result (W/kg) |
| Different Test Position | Channel | | | | |
| EVDO (Rev.A) | | | | | |
| Test Position 2 | High | 23.96 | 1.400 | 24.40 | 1.549 |

### 7.3.4. WIFI Function

The distance between WIFI antenna and main antenna is ≤2.5cm. The location of the antennas inside device is shown below:




Note:The distance between WIFI antenna and bottom is 49.3mm,and main antenna to the bottom is more than 49.3mm.



The output power of WIFI antenna is as following:

| **802.11b** | **Conducted Power (dBm)** | | |
|---|---|---|---|
| | Channel 1 | Channel 6 | Channel 11 |
| 1 | 2.79 | 2.87 | 2.89 |
| 2 | 2.77 | 2.85 | 2.87 |
| 5.5 | 2.75 | 2.83 | 2.86 |
| 11 | 2.70 | 2.82 | 2.83 |
| **802.11g** | **Conducted Power (dBm)** | | |
| | Channel 1 | Channel 6 | Channel 11 |
| 6 | 0.19 | 0.27 | 0.17 |
| 9 | 0.18 | 0.26 | 0.15 |
| 12 | 0.16 | 0.25 | 0.13 |
| 18 | 0.17 | 0.23 | 0.14 |
| 24 | 0.15 | 0.24 | 0.12 |
| 36 | 0.16 | 0.22 | 0.13 |
| 48 | 0.14 | 0.21 | 0.10 |
| 54 | 0.15 | 0.20 | 0.11 |

**Stand-alone SAR**

According to the output power measurement result and the distance between WIFI antenna and main antenna we can draw the conclusion that: stand-alone SAR are required for WIFI, because the maximum SAR values of other antenna(s) is >1.2 W/kg and its antenna is ≤2.5cm from other antenna.

**Table 13: SAR Values (802.11b)**

| Limit of SAR | | 10 g Average | 1 g Average | Power Drift | Graph Results |
|---|---|---|---|---|---|
| | | 2.0 W/kg | 1.6 W/kg | ± 0.21 dB | |
| Different Test Position | Channel | Measurement Result(W/kg) | | Power Drift (dB) | |
| | | 10 g Average | 1g Average | | |
| Test Position 1 | High | 0.003 | 0.007 | 0.081 | Figure 45 |
| Test Position 2 | High | 0.001 | 0.002 | -0.088 | Figure 46 |
| Test Position 3 | High | 0.001 | 0.001 | 0.080 | Figure 47 |
| Test Position 4 | High | 0.002 | 0.006 | -0.081 | Figure 48 |
| Test Position 5 | High | 0.000 | 0.001 | -0.080 | Figure 49 |
| Test Position 6 | High | 0.000 | 0.001 | 0.011 | Figure 50 |

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. SAR is not required for 802.11g channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

**Simultaneous SAR**

About WIFI, because the WIFI antenna is ≤2.5cm from other antenna. (main antenna $SAR_{MAX}$)1.400+ (wifi antenna $SAR_{MAX}$)0.007 = 1.407<1.6, so Simultaneous SAR are not required for wifi.

# 8. Measurement Uncertainty

| No. | source | Type | Uncertainty Value (%) | Probability Distribution | k | $c_i$ | Standard ncertainty $u_i^{'}$ (%) | Degree of freedom $V_{eff}$ or $v_i$ |
|---|---|---|---|---|---|---|---|---|
| 1 | System repetivity | A | 0.5 | N | 1 | 1 | 0.5 | 9 |
| Measurement system | | | | | | | | |
| 2 | probe calibration | B | 5.9 | N | 1 | 1 | 5.9 | ∞ |
| 3 | axial isotropy of the probe | B | 4.7 | R | $\sqrt{3}$ | $\sqrt{0.5}$ | 1.9 | ∞ |
| 4 | Hemispherical isotropy of the probe | B | 9.4 | R | $\sqrt{3}$ | $\sqrt{0.5}$ | 3.9 | ∞ |
| 6 | boundary effect | B | 1.9 | R | $\sqrt{3}$ | 1 | 1.1 | ∞ |
| 7 | probe linearity | B | 4.7 | R | $\sqrt{3}$ | 1 | 2.7 | ∞ |
| 8 | System detection limits | B | 1.0 | R | $\sqrt{3}$ | 1 | 0.6 | ∞ |
| 9 | readout Electronics | B | 1.0 | N | 1 | 1 | 1.0 | ∞ |
| 10 | response time | B | 0 | R | $\sqrt{3}$ | 1 | 0 | ∞ |
| 11 | integration time | B | 4.32 | R | $\sqrt{3}$ | 1 | 2.5 | ∞ |
| 12 | noise | B | 0 | R | $\sqrt{3}$ | 1 | 0 | ∞ |
| 13 | RF Ambient Conditions | B | 3 | R | $\sqrt{3}$ | 1 | 1.73 | ∞ |
| 14 | Probe Positioner Mechanical Tolerance | B | 0.4 | R | $\sqrt{3}$ | 1 | 0.2 | ∞ |
| 15 | Probe Positioning with respect to Phantom Shell | B | 2.9 | R | $\sqrt{3}$ | 1 | 1.7 | ∞ |
| 16 | Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation | B | 3.9 | R | $\sqrt{3}$ | 1 | 2.3 | ∞ |
| Test sample Related | | | | | | | | |
| 17 | -Test Sample Positioning | A | 2.9 | N | 1 | 1 | 2.9 | 5 |
| 18 | -Device Holder Uncertainty | A | 4.1 | N | 1 | 1 | 4.1 | 5 |
| 19 | -Output Power Variation - SAR drift measurement | B | 5.0 | R | $\sqrt{3}$ | 1 | 2.9 | ∞ |
| Physical parameter | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 20 | -phantom | B | 4.0 | R | $\sqrt{3}$ | 1 | 2.3 | ∞ |
| 21 | -liquid conductivity (deviation from target) | B | 5.0 | R | $\sqrt{3}$ | 0.64 | 1.8 | ∞ |
| 22 | -liquid conductivity (measurement uncertainty) | B | 5.0 | N | 1 | 0.64 | 3.2 | ∞ |
| 23 | -liquid permittivity (deviation from target) | B | 5.0 | R | $\sqrt{3}$ | 0.6 | 1.7 | ∞ |
| 24 | -liquid permittivity (measurement uncertainty ) | B | 5.0 | N | 1 | 0.6 | 3.0 | ∞ |
| Combined standard uncertainty | | $u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$ | | | | | 12.0 | |
| Expanded uncertainty (confidence interval of 95 %) | | $u_e = 2u_c$ | | N | | k=2 | 24.0 | |

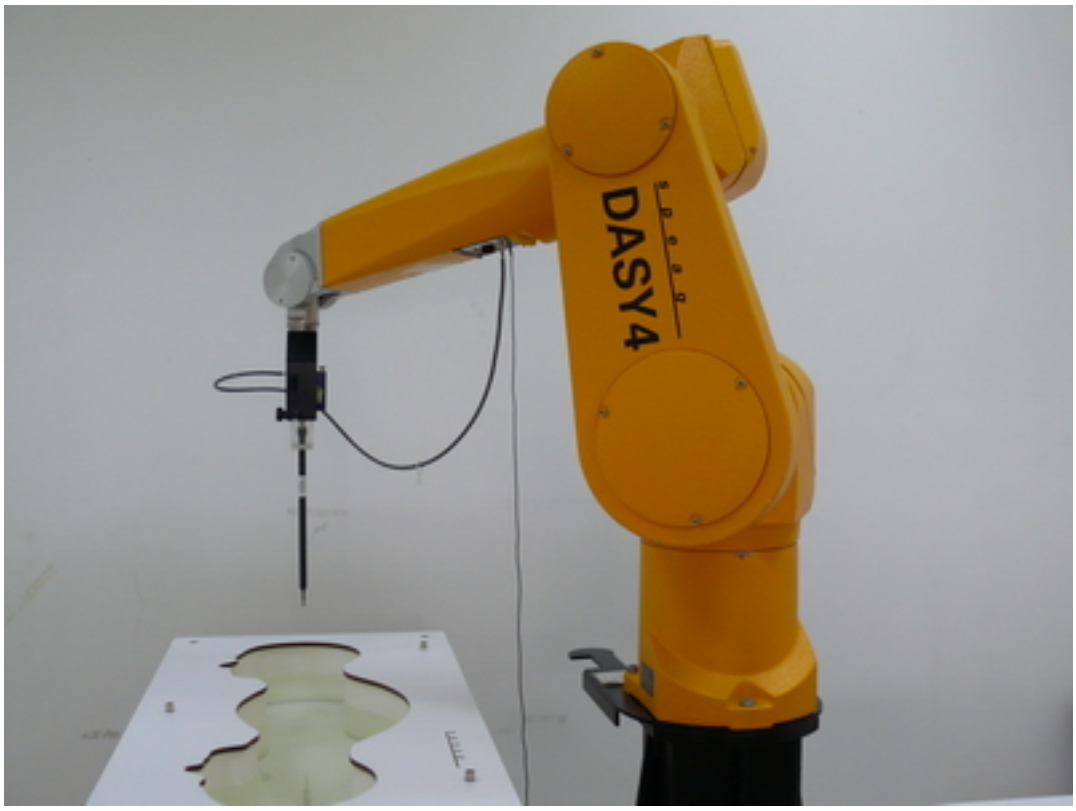
# 9. Main Test Instruments

**Table 14: List of Main Instruments**

| No. | Name | Type | Serial Number | Calibration Date | Valid Period |
|---|---|---|---|---|---|
| 01 | Network analyzer | Agilent 8753E | US37390326 | September 13, 2009 | One year |
| 02 | Dielectric Probe Kit | Agilent 85070E | US44020115 | No Calibration Requested | |
| 03 | Power meter | Agilent E4417A | GB41291714 | March 13, 2010 | One year |
| 04 | Power sensor | Agilent 8481H | MY41091316 | March 26, 2010 | One year |
| 05 | Signal Generator | HP 8341B | 2730A00804 | September 13, 2009 | One year |
| 06 | Amplifier | IXA-020 | 0401 | No Calibration Requested | |
| 07 | BTS | E5515C | MY48360988 | December 4, 2009 | One year |
| 08 | E-field Probe | EX3DV4 | 3661 | December 30, 2009 | One year |
| 09 | DAE | DAE4 | 871 | November 11, 2009 | One year |
| 10 | Validation Kit 835MHz | D835V2 | 4d092 | January 14, 2010 | One year |
| 11 | Validation Kit 1750MHz | D1750V2 | 1033 | May 17, 2010 | One year |
| 12 | Validation Kit 1900MHz | D1900V2 | 5d018 | June 15, 2010 | One year |
| 13 | Validation Kit 2450MHz | D2450V2 | 712 | February 19, 2010 | One year |

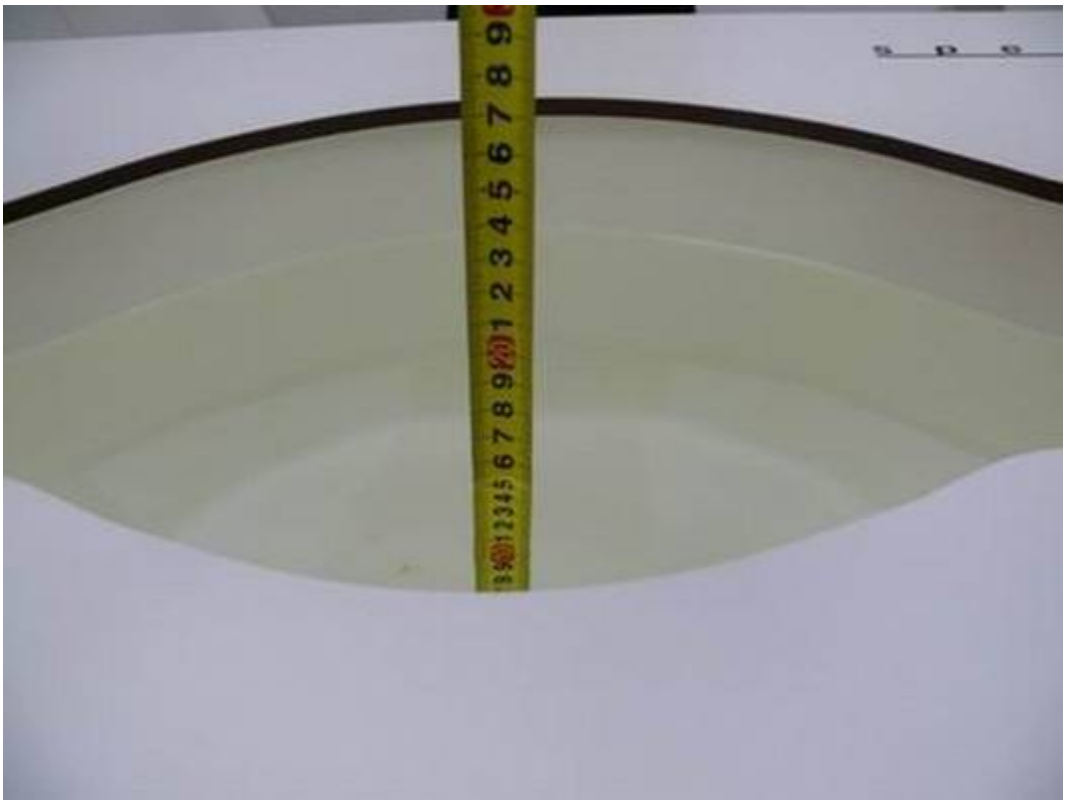
*******END OF REPORT BODY*******

# ANNEX A: Test Layout

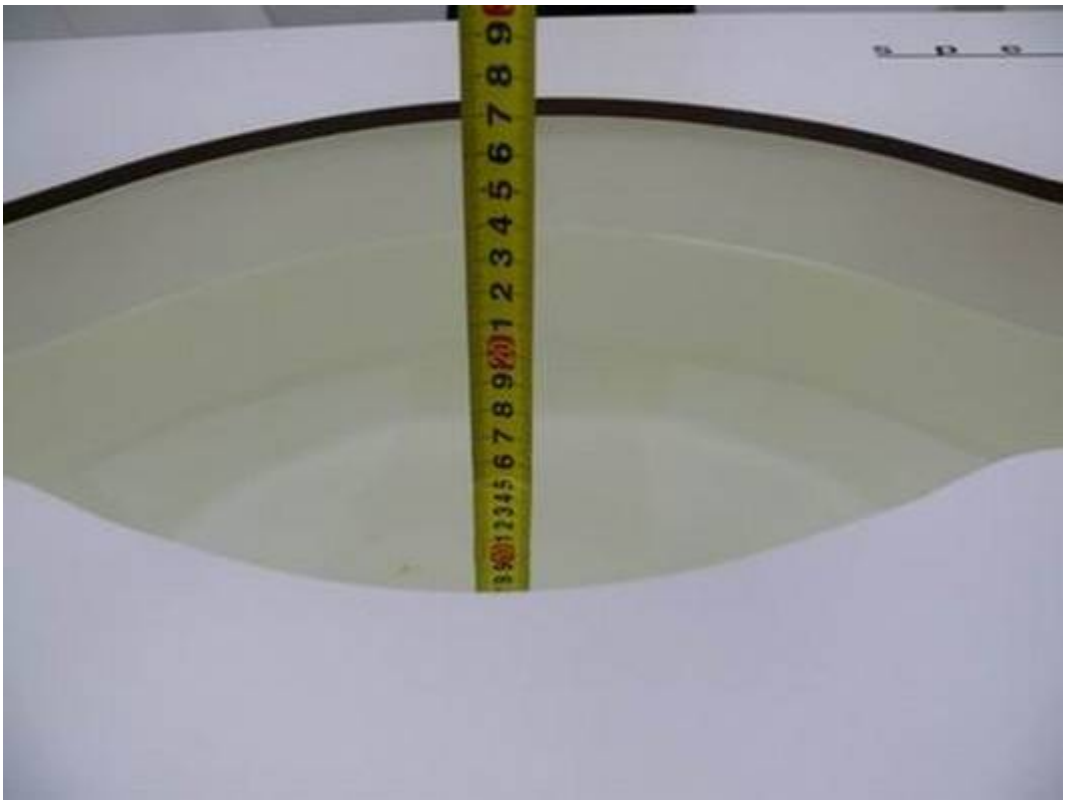



Picture 1: Specific Absorption Rate Test Layout

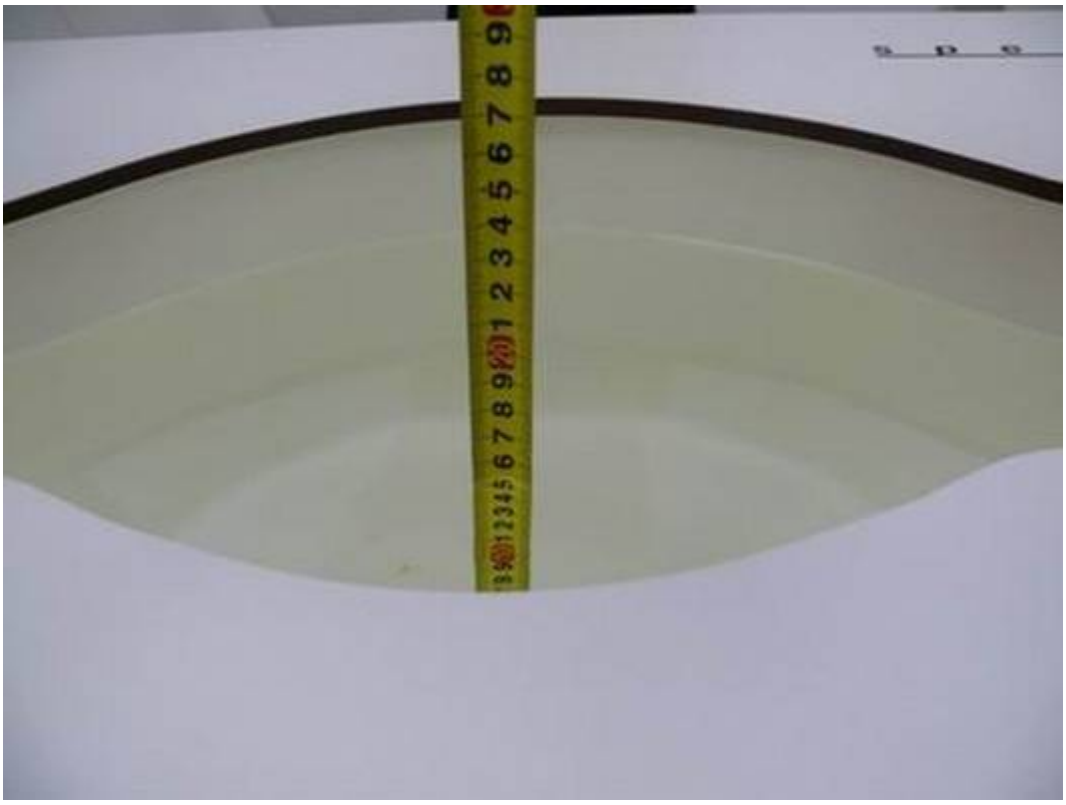
Picture 2: Liquid depth in the Flat Phantom (835 MHz, 15.4cm depth)



Picture 3: Liquid depth in the Flat Phantom (1750 MHz, 15.2cm depth)



Picture 4: Liquid depth in the Flat Phantom (1900 MHz, 15.3cm depth)



Picture 5: Liquid depth in the Flat Phantom (2450 MHz, 15.4cm depth)

# ANNEX B: System Check Results

## System Performance Check at 835 MHz Body TSL

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d092**

Date/Time: 8/25/2010 8:40:49 AM

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; $\sigma$ = 1.00 mho/m; $\varepsilon_r$ = 54.82; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3℃ Liqiud Temperature: 21.5℃

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=15mm, Pin=250mW/Area Scan (101x121x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.93 mW/g

**d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.7 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 3.59 W/kg

**SAR(1 g) = 2.4 mW/g; SAR(10 g) = 1.58 mW/g**

Maximum value of SAR (measured) = 2.92 mW/g

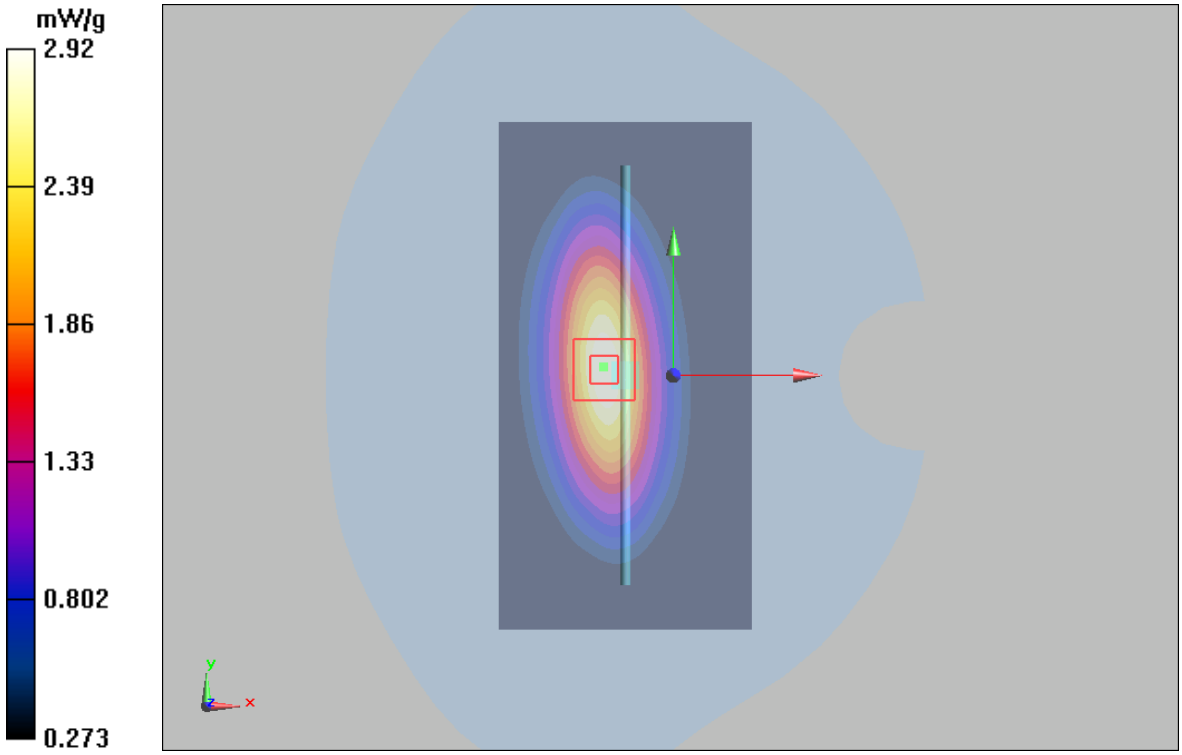



Figure 6 System Performance Check 835MHz 250mW

## System Performance Check at 1750 MHz Body TSL

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1033**

Date/Time: 8/24/2010 6:39:55 PM

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; $\sigma$ = 1.49 mho/m; $\varepsilon_r$ = 52.7; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=10mm, Pin=250mW/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 10.6 mW/g

**d=10mm, Pin=250mW/Area Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 77.7 V/m; Power Drift = 0.097 dB

Peak SAR (extrapolated) = 16.8 W/kg

**SAR(1 g) = 9.24 mW/g; SAR(10 g) = 4.9 mW/g**

Maximum value of SAR (measured) = 10.3 mW/g

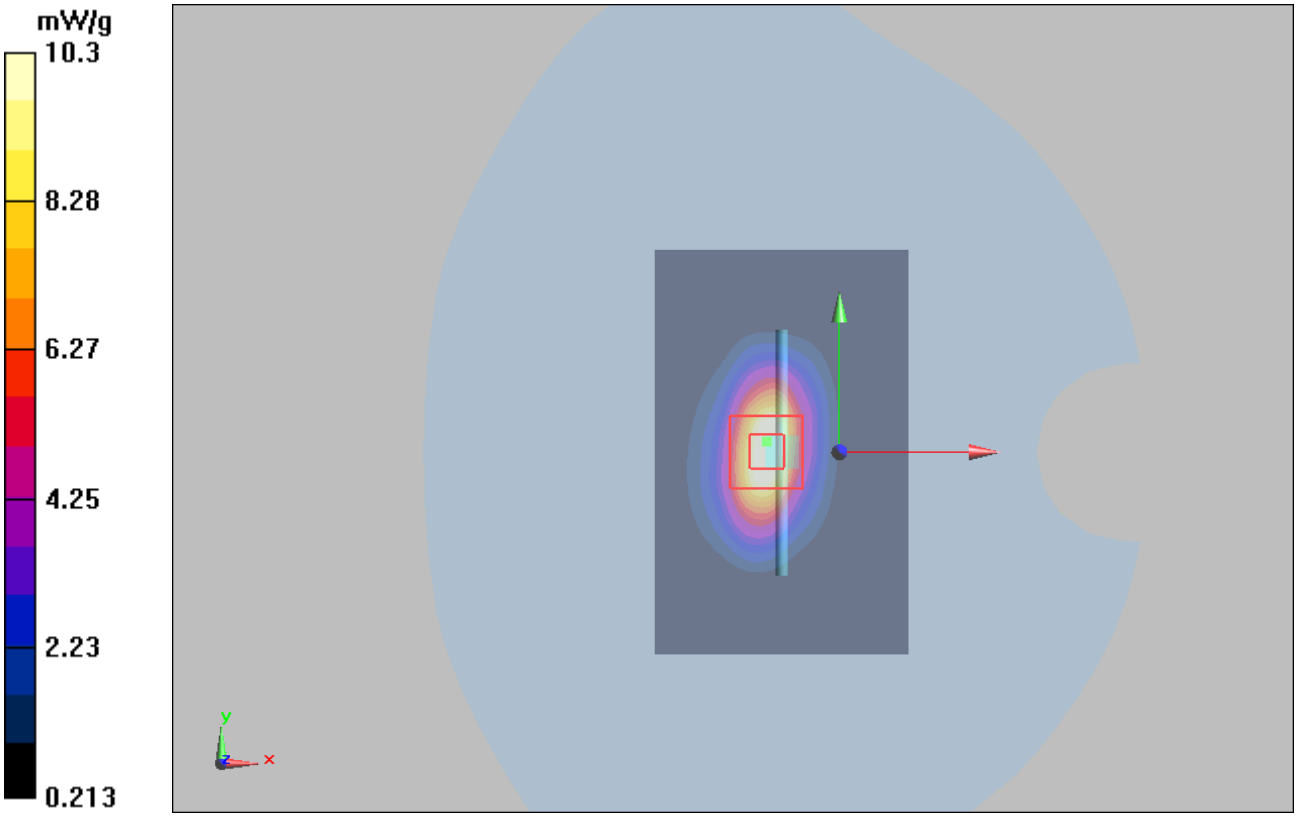



Figure 7 System Performance Check 1750MHz 250mW

## System Performance Check at 1900 MHz Body TSL

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d018**

Date/Time: 8/25/2010 10:18:19 AM

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 53.21; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=10mm, Pin=250mW/Area Scan (41x71x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.5 mW/g

**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 75.9 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 16.8 W/kg

**SAR(1 g) = 10.12 mW/g; SAR(10 g) = 5.32 mW/g**

Maximum value of SAR (measured) = 11 mW/g

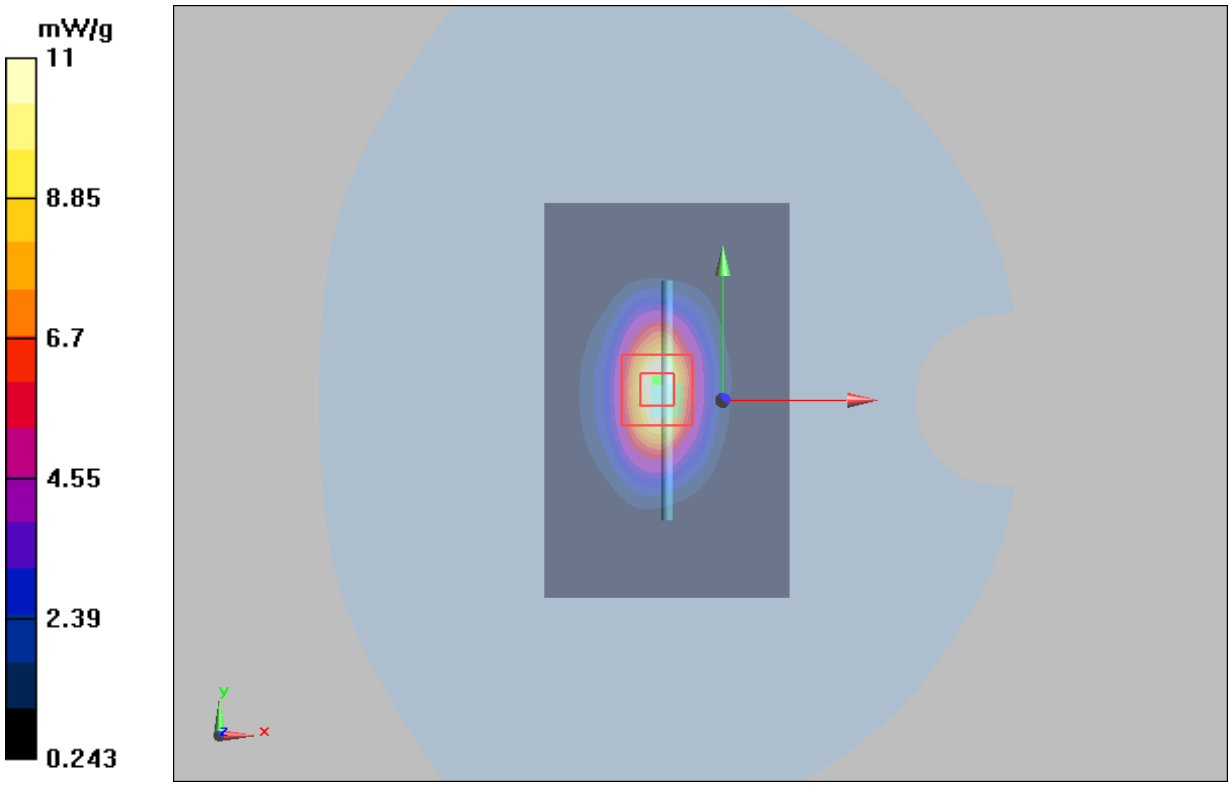



Figure 8 System Performance Check 1900MHz 250mW

## System Performance Check at 2450 MHz Body TSL

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 712**

Date/Time: 8/26/2010 11:38:36 AM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.83; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=10mm, Pin=250mW/Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 21.5 mW/g

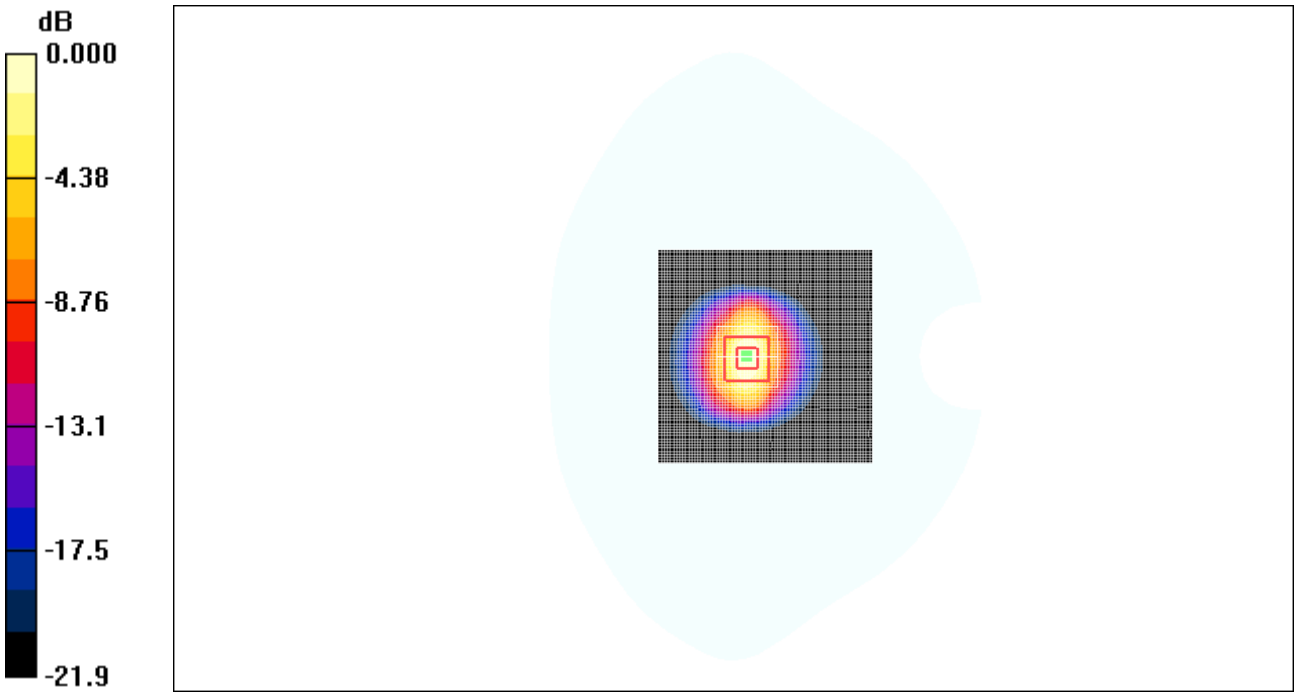
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 71.0 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 28.2 W/kg

**SAR(1 g) = 13.38 mW/g; SAR(10 g) = 6.12 mW/g**

Maximum value of SAR (measured) = 19.8 mW/g




0 dB = 19.8mW/g

Figure 9 System Performance Check 2450MHz 250mW

# ANNEX C: Graph Results

## CDMA Cellular Test Position 1 High

Date/Time: 8/25/2010 6:30:22 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; $\sigma$ = 1.01 mho/m; $\varepsilon_r$ = 54.7; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.00 mW/g

**Test Position 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.1 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 1.54 W/kg
**SAR(1 g) = 0.920 mW/g; SAR(10 g) = 0.645 mW/g**
Maximum value of SAR (measured) = 0.988 mW/g

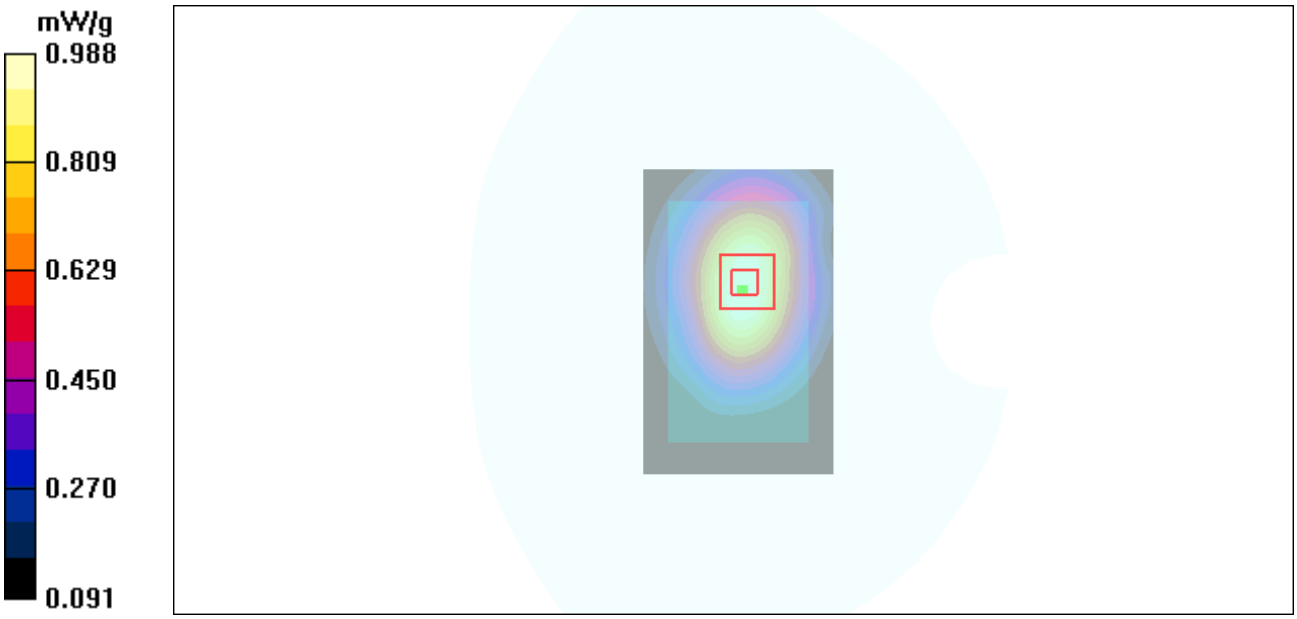


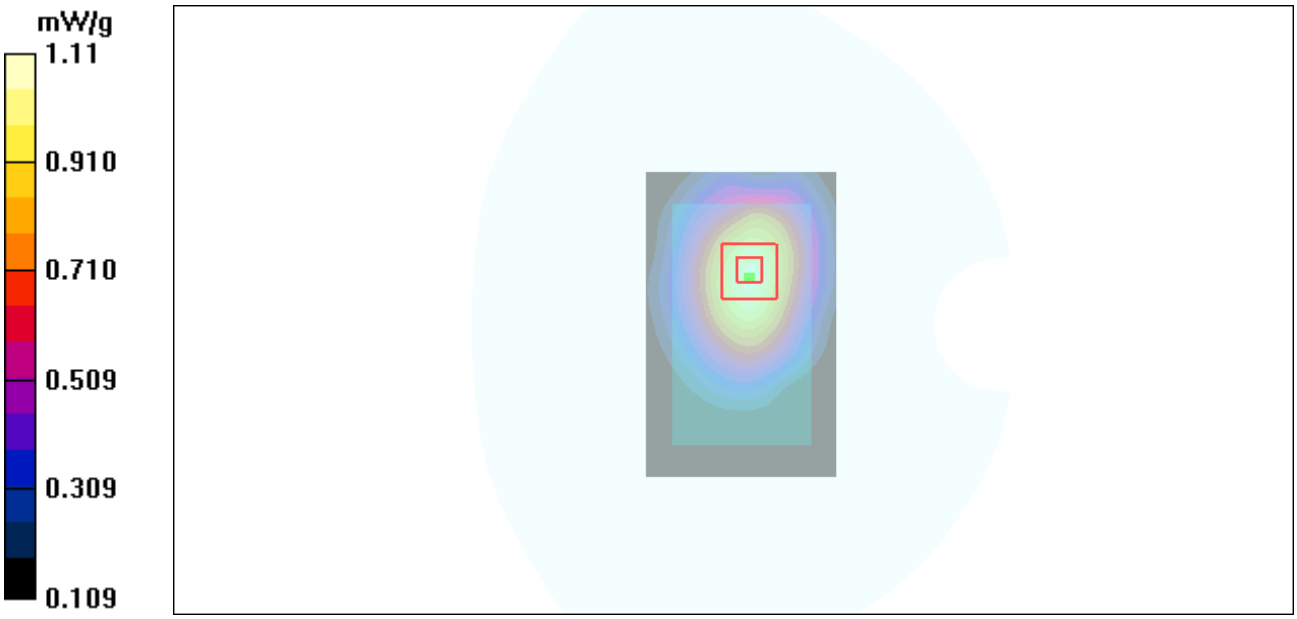

Figure 10 CDMA Cellular Test Position 1 Channel 777

## CDMA Cellular Test Position 1 Middle

Date/Time: 8/25/2010 6:06:39 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.06 mW/g

**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.6 V/m; Power Drift = 0.064 dB
Peak SAR (extrapolated) = 2.11 W/kg
**SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.714 mW/g**
Maximum value of SAR (measured) = 1.11 mW/g



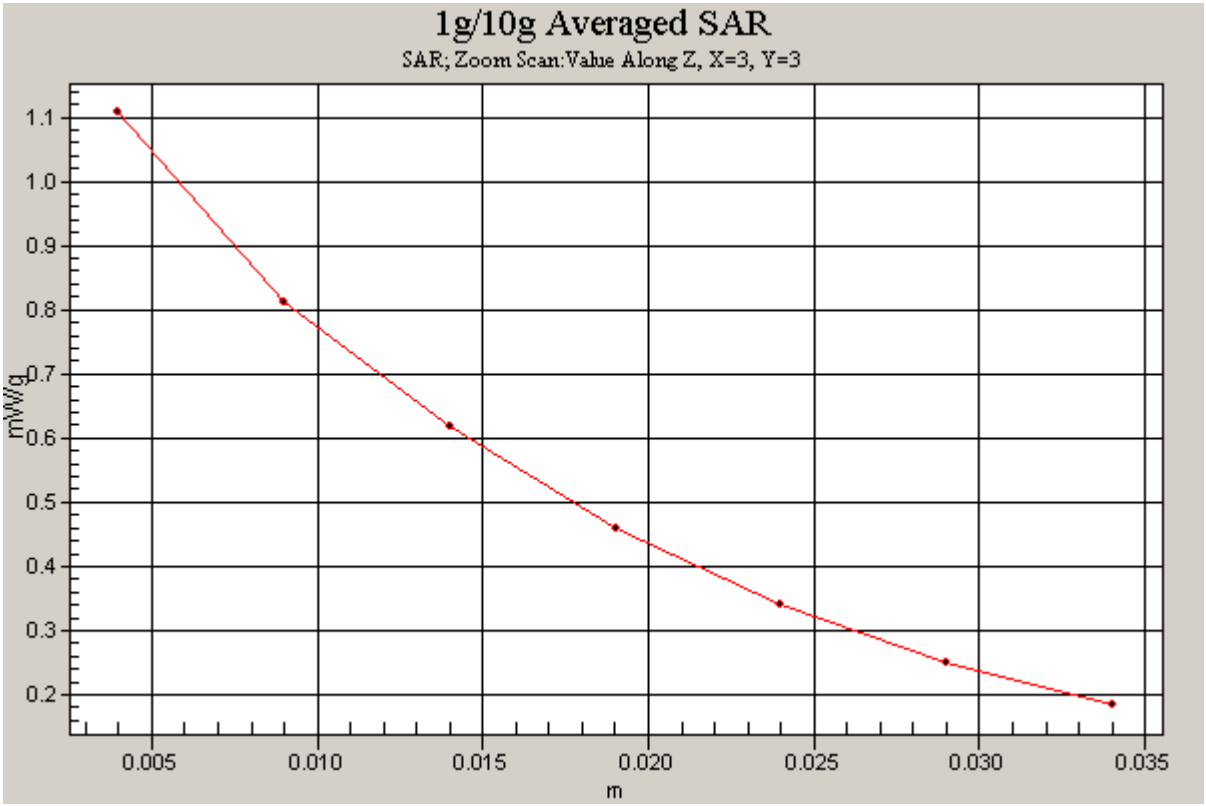



**Figure 11 CDMA Cellular Test Position 1 Channel 384**

## CDMA Cellular Test Position 1 Low

Date/Time: 8/25/2010 6:47:44 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used: f = 825 MHz; $\sigma$ = 0.992 mho/m; $\varepsilon_r$ = 54.9; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.584 mW/g

**Test Position 1 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.1 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.699 W/kg
**SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.384 mW/g**
Maximum value of SAR (measured) = 0.571 mW/g

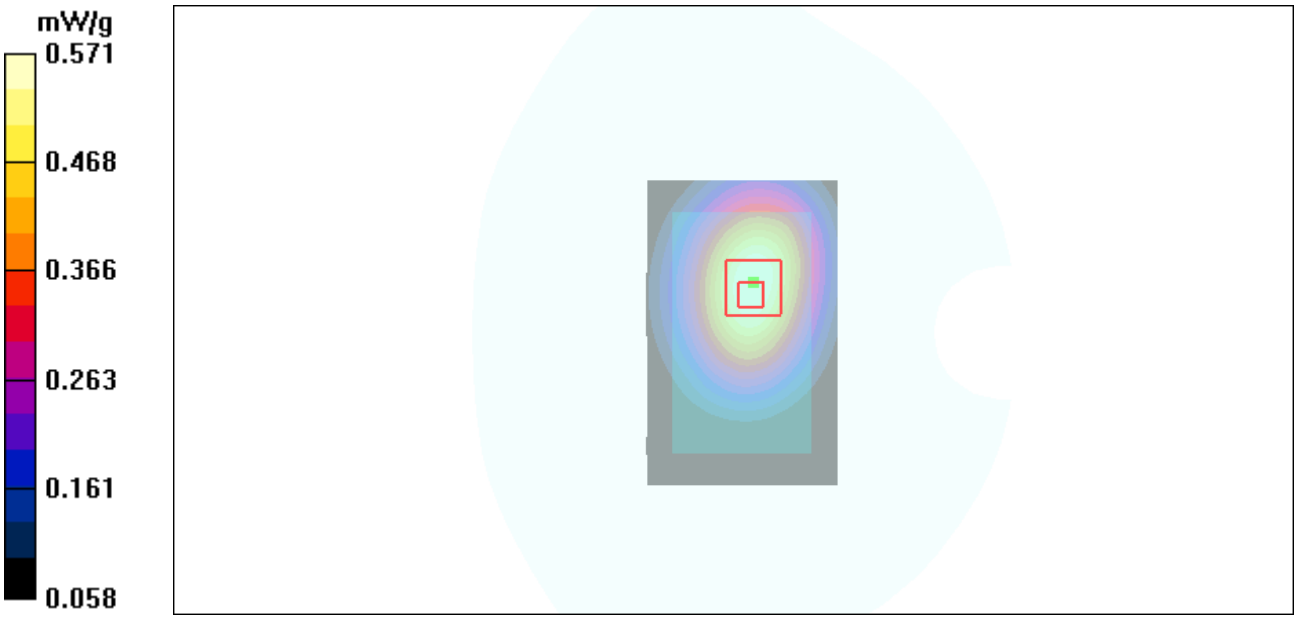



**Figure 12 CDMA Cellular Test Position 1 Channel 1013**

## CDMA Cellular Test Position 2 High

Date/Time: 8/25/2010 7:45:27 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; $\sigma$ = 1.01 mho/m; $\varepsilon_r$ = 54.7; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 2.11 W/kg
**SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.668 mW/g**
Maximum value of SAR (measured) = 1.00 mW/g

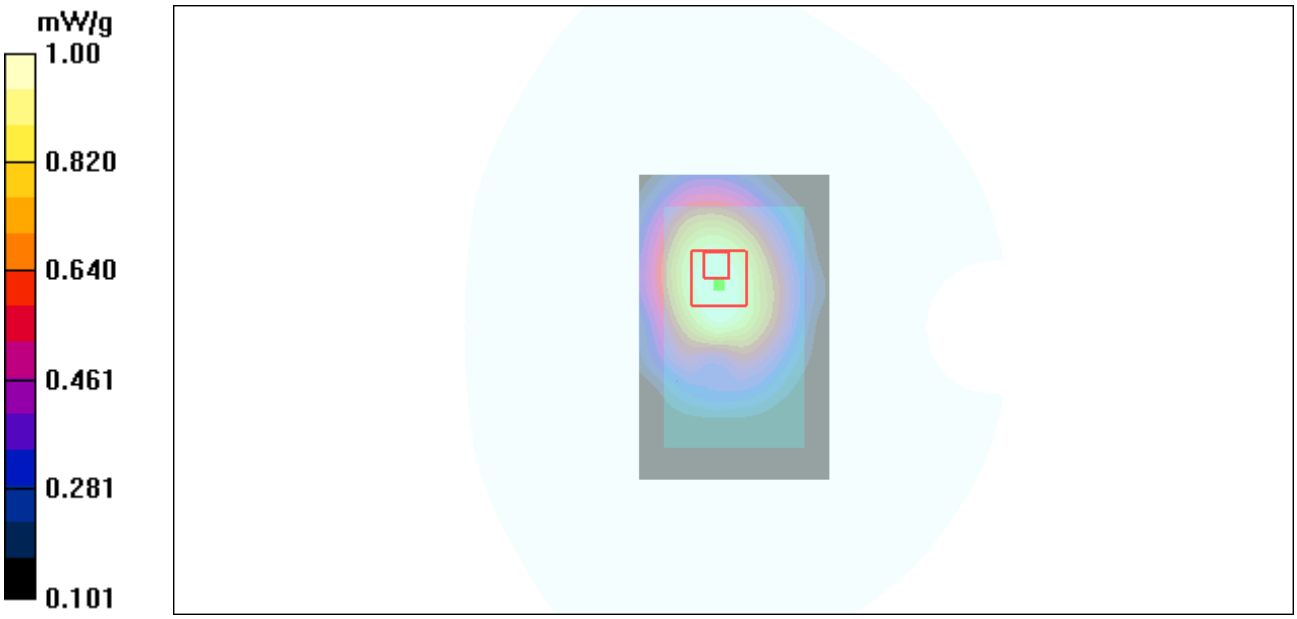



**Figure 13 CDMA Cellular Test Position 2 Channel 777**

**CDMA Cellular Test Position 2 Middle**

Date/Time: 8/25/2010 7:28:07 PM

Communication System: CDMA Cellular EVDO Re.0; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.10 mW/g

**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 31.2 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 1.97 W/kg

**SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.748 mW/g**

Maximum value of SAR (measured) = 1.13 mW/g

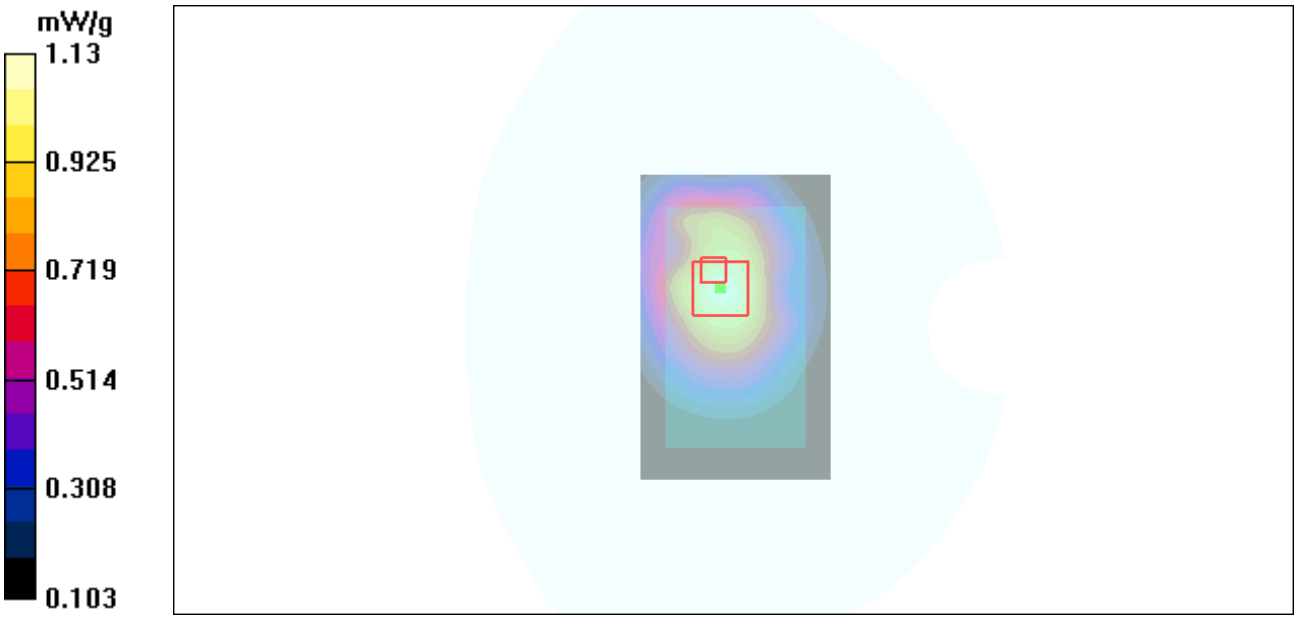



**Figure 14 CDMA Cellular Test Position 2 Channel 384**

## CDMA Cellular Test Position 2 Low

Date/Time: 8/25/2010 8:02:42 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used: f = 825 MHz; $\sigma$ = 0.992 mho/m; $\varepsilon_r$ = 54.9; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.647 mW/g

**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.9 V/m; Power Drift = 0.179 dB
Peak SAR (extrapolated) = 0.974 W/kg
**SAR(1 g) = 0.616 mW/g; SAR(10 g) = 0.442 mW/g**
Maximum value of SAR (measured) = 0.654 mW/g

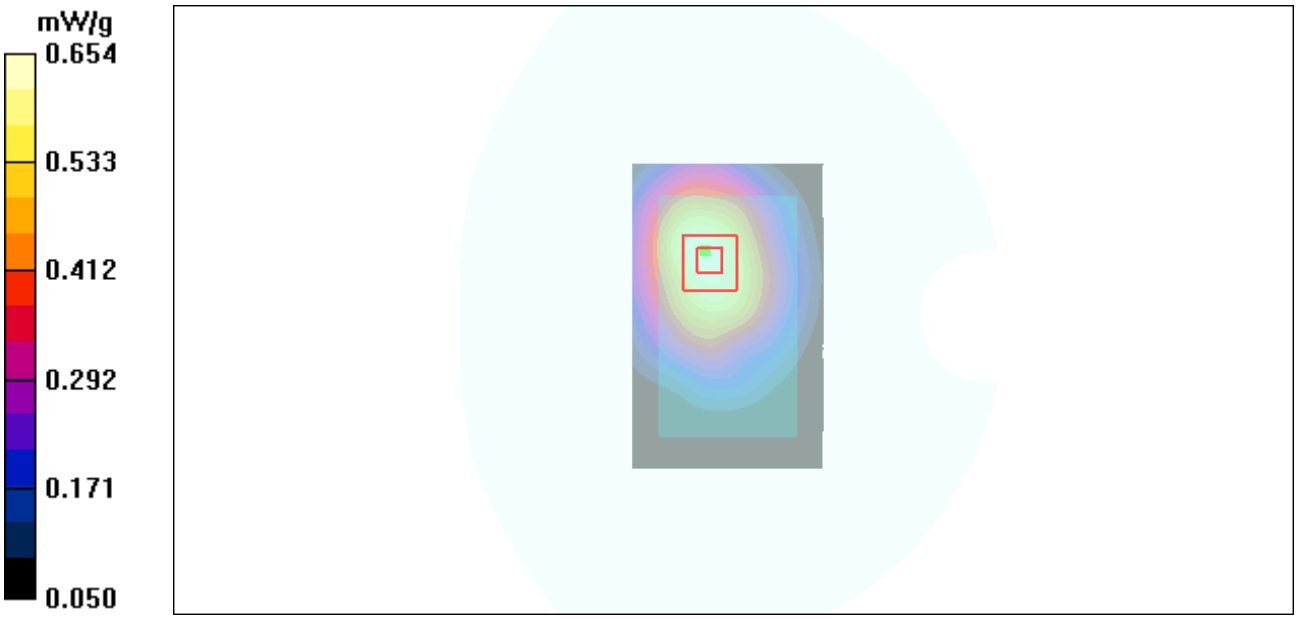



**Figure 15 CDMA Cellular Test Position 2 Channel 1013**

**CDMA Cellular Test Position 3 Middle**

Date/Time: 8/25/2010 9:09:50 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 Middle/Area Scan (41x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.101 mW/g

**Test Position 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.10 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 0.476 W/kg
**SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.054 mW/g**
Maximum value of SAR (measured) = 0.106 mW/g

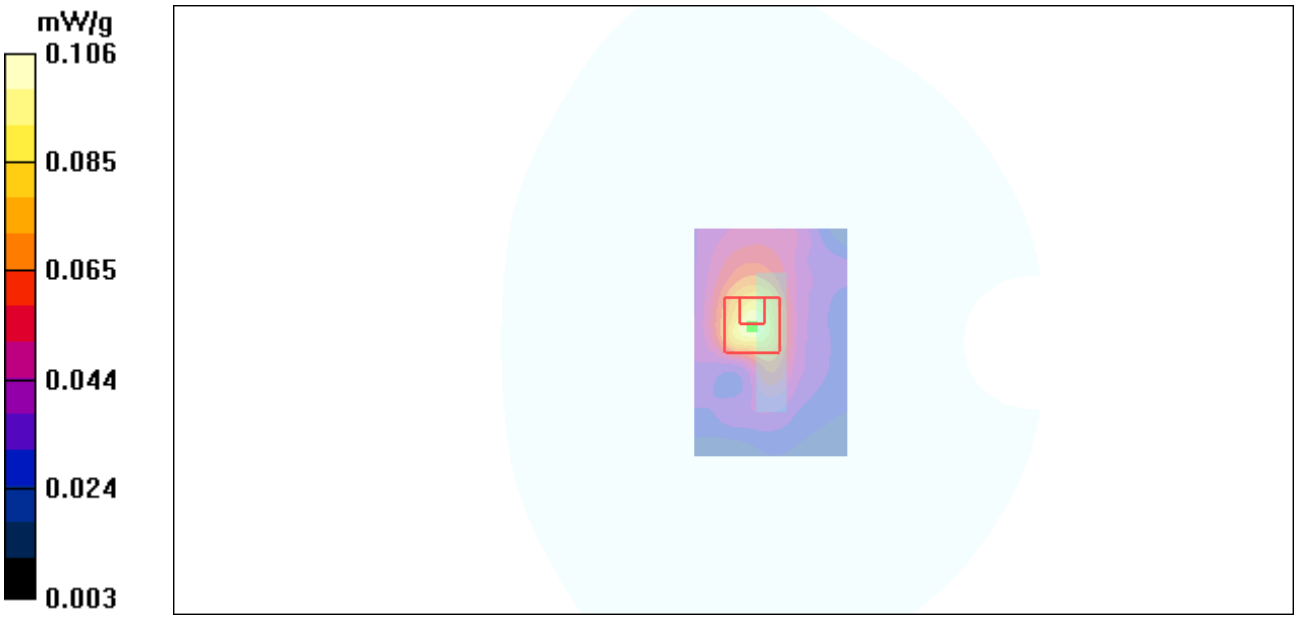



**Figure 16 CDMA Cellular Test Position 3 Channel 384**

**CDMA Cellular Test Position 4 Middle**

Date/Time: 8/25/2010 9:28:37 PM

Communication System: CDMA Cellular EVDO Re.0; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 4 Middle/Area Scan (41x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.439 mW/g

**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.8 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 2.06 W/kg

**SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.280 mW/g**

Maximum value of SAR (measured) = 0.424 mW/g

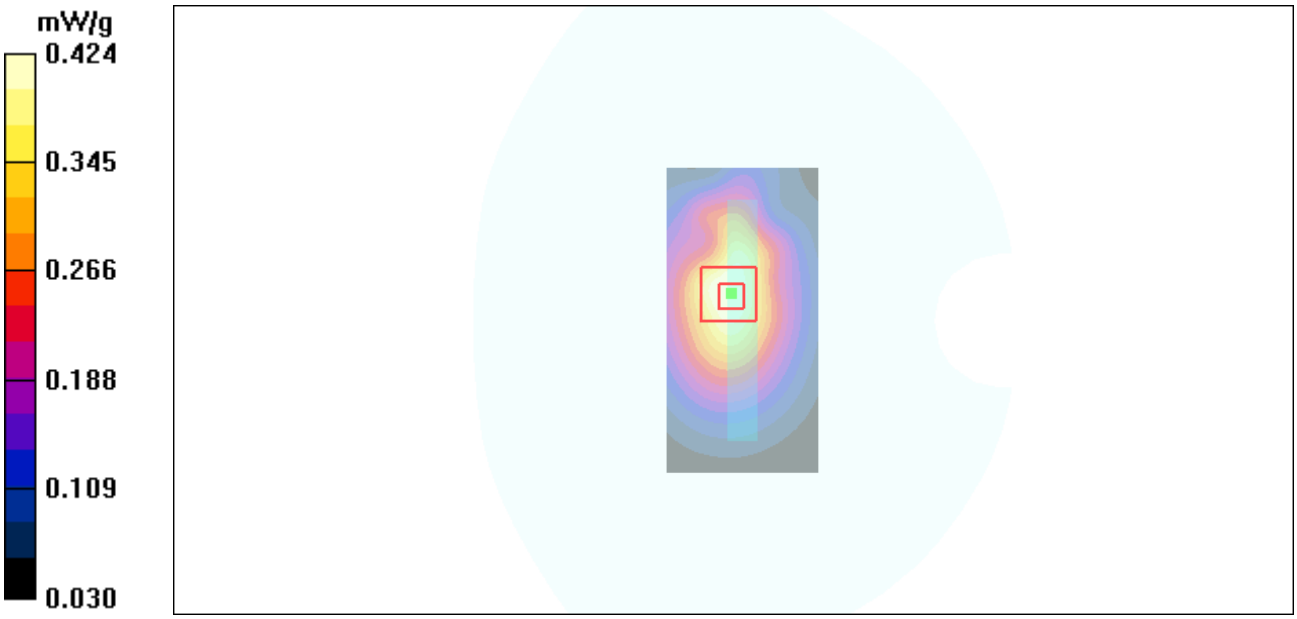



**Figure 17 CDMA Cellular Test Position 4 Channel 384**

**CDMA Cellular Test Position 5 Middle**

Date/Time: 8/25/2010 10:14:50 PM
Communication System: CDMA Cellular EVDO Re.0; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 5 Middle/Area Scan (41x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.556 mW/g

**Test Position 5 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.3 V/m; Power Drift = -0.087 dB
Peak SAR (extrapolated) = 1.48 W/kg
**SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.352 mW/g**
Maximum value of SAR (measured) = 0.546 mW/g

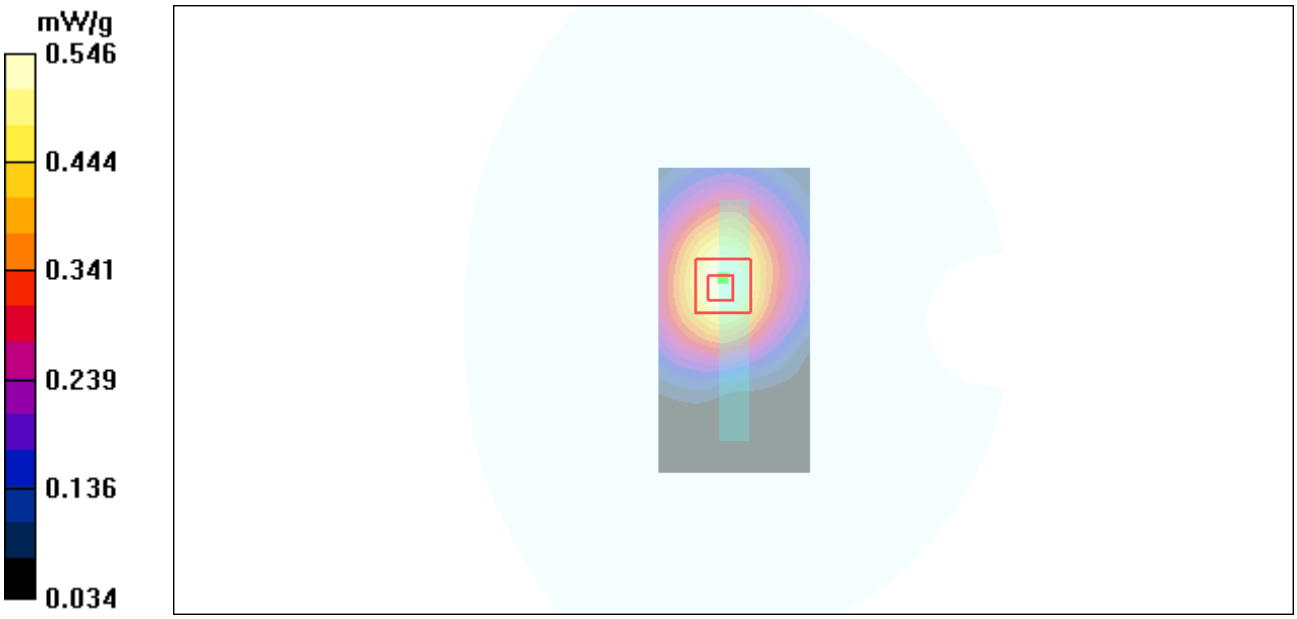



**Figure 18 CDMA Cellular Test Position 5 Channel 384**

**CDMA Cellular Rev.A Test Position 1 Middle**

Date/Time: 8/25/2010 8:28:57 PM
Communication System: CDMA Cellular EVDO Re.A; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.06 mW/g

**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.3 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 2.14 W/kg
**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.705 mW/g**
Maximum value of SAR (measured) = 1.10 mW/g

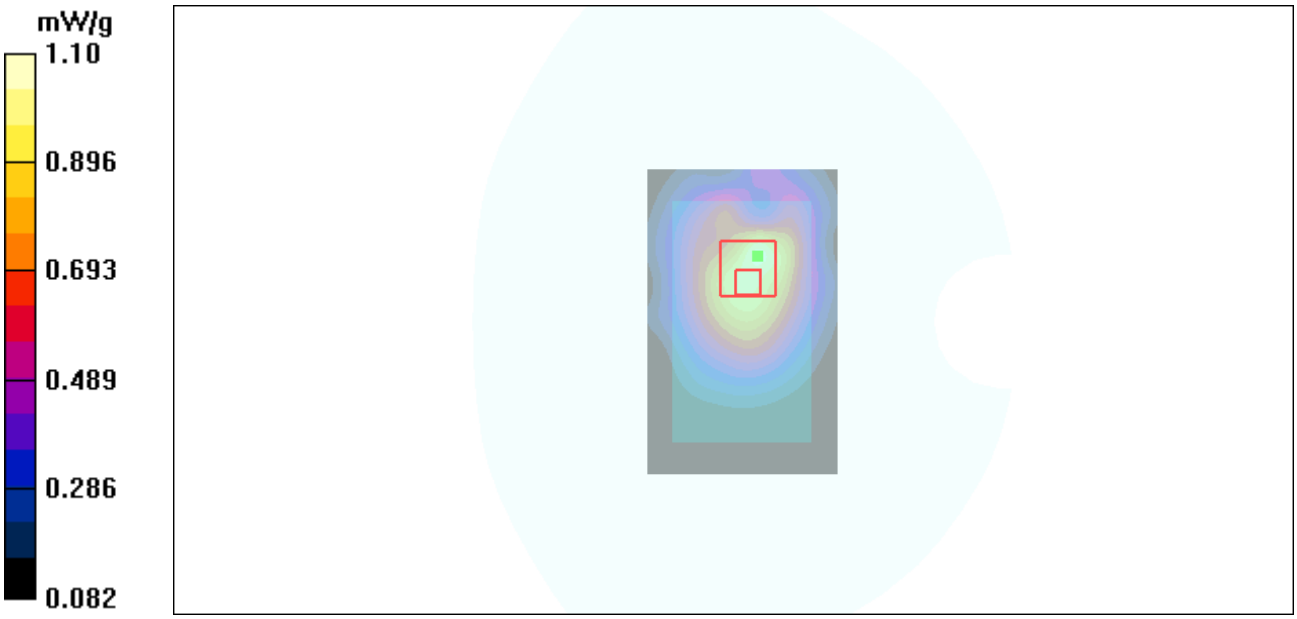



**Figure 19 CDMA Cellular Rev.A Test Position 1 Channel 384**

**CDMA Cellular 1xRTT Test Position 1 Middle**

Date/Time: 8/25/2010 8:47:20 PM

Communication System: CDMA Cellular EVDO 1xRTT; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: f = 837 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.12 mW/g

**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.3 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 1.34 W/kg

**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.735 mW/g**

Maximum value of SAR (measured) = 1.08 mW/g

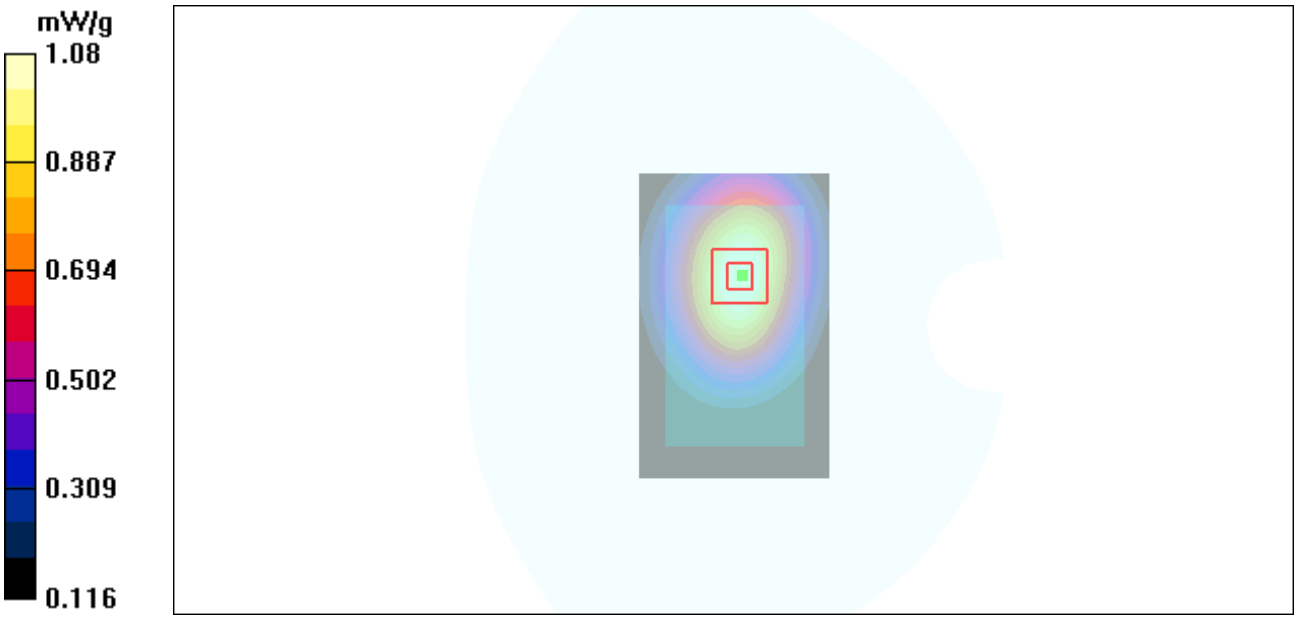



**Figure 20 CDMA Cellular 1xRTT Test Position 1 Channel 384**

**CDMA PCS Test Position 1 High**

Date/Time: 8/25/2010 12:42:29 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; $\sigma$ = 1.57 mho/m; $\varepsilon_r$ = 53; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.14 mW/g

**Test Position 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.2 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 3.38 W/kg
**SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.591 mW/g**
Maximum value of SAR (measured) = 1.10 mW/g

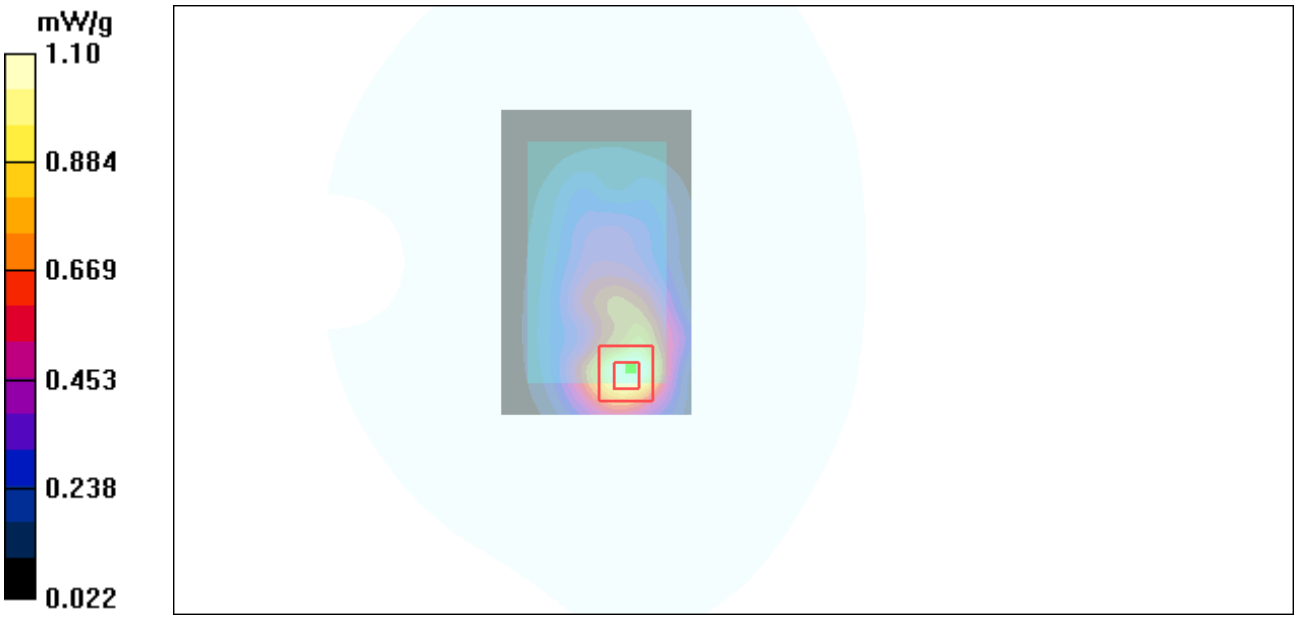



**Figure 21 CDMA PCS Test Position 1 Channel 1175**

**CDMA PCS Test Position 1 Middle**

Date/Time: 8/25/2010 1:03:28 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.54 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.16 mW/g
**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.8 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 1.97 W/kg
**SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.615 mW/g**
Maximum value of SAR (measured) = 1.11 mW/g

**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.8 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 1.52 W/kg
**SAR(1 g) = 0.879 mW/g; SAR(10 g) = 0.540 mW/g**
Maximum value of SAR (measured) = 0.974 mW/g

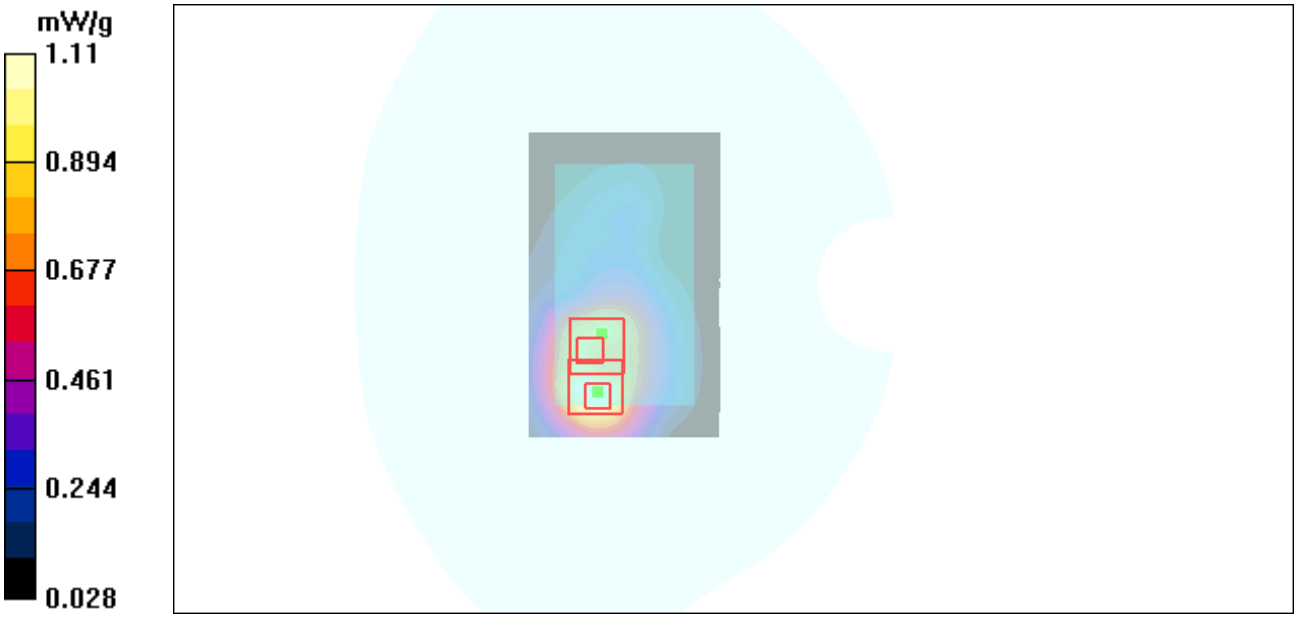



**Figure 22 CDMA PCS Test Position 1 Channel 600**

**CDMA PCS Test Position 1 Low**

Date/Time: 8/25/2010 11:46:48 AM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1852 MHz; $\sigma$ = 1.51 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.28 mW/g

**Test Position 1 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.7 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 1.95 W/kg
**SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.671 mW/g**
Maximum value of SAR (measured) = 1.21 mW/g

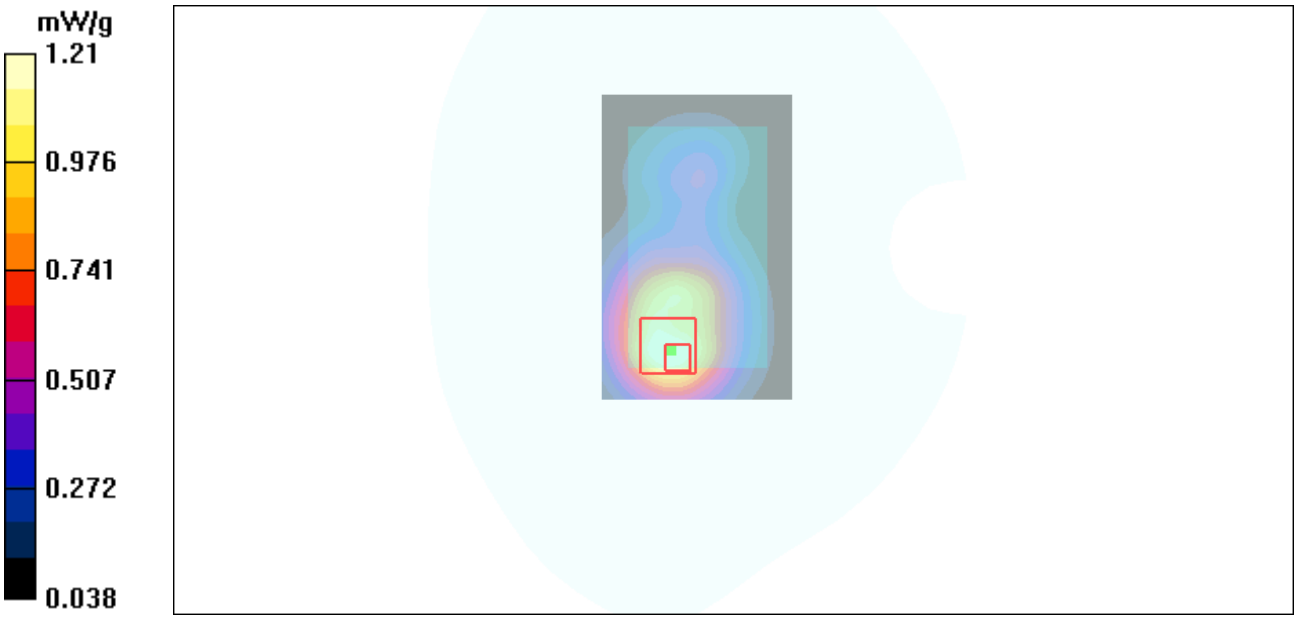



**Figure 23 CDMA PCS Test Position 1 Channel 25**

**CDMA PCS Test Position 2 High**

Date/Time: 8/25/2010 2:10:27 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; $\sigma$ = 1.57 mho/m; $\varepsilon_r$ = 53; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.37 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = -0.147 dB
Peak SAR (extrapolated) = 1.89 W/kg
**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.630 mW/g**
Maximum value of SAR (measured) = 1.28 mW/g

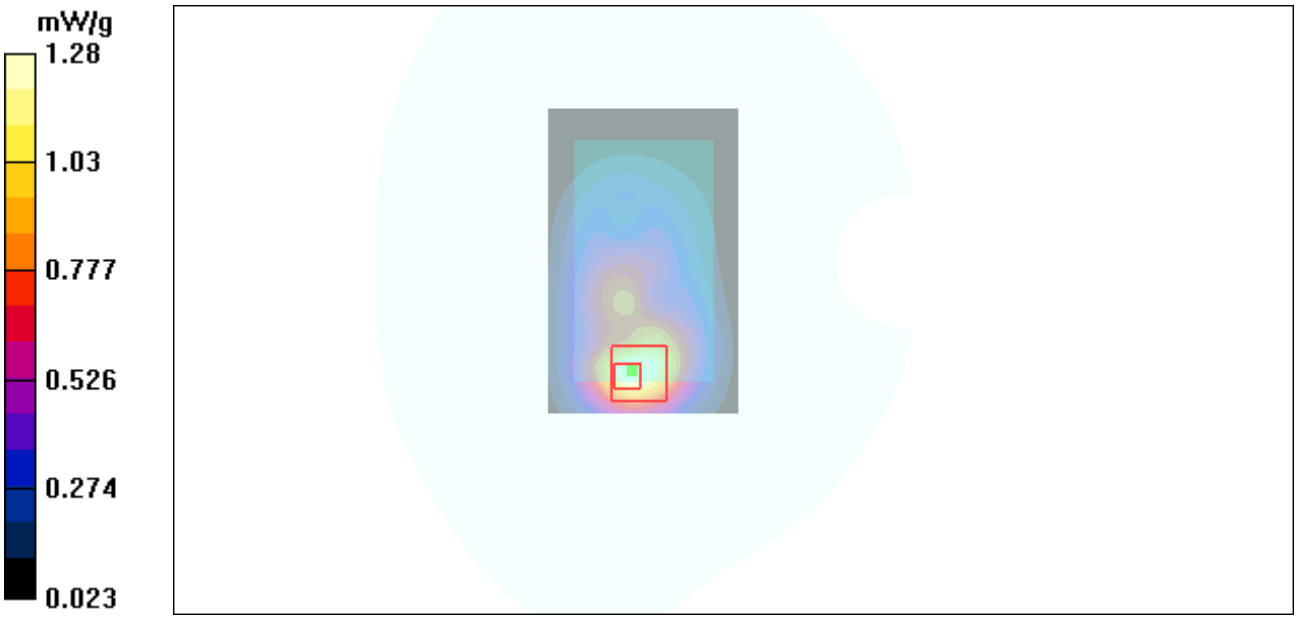



**Figure 24 CDMA PCS Test Position 2 Channel 1175**

**CDMA PCS Test Position 2 Middle**

Date/Time: 8/25/2010 1:48:45 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.54 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.37 mW/g

**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.7 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 2.37 W/kg
**SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.698 mW/g**
Maximum value of SAR (measured) = 1.31 mW/g

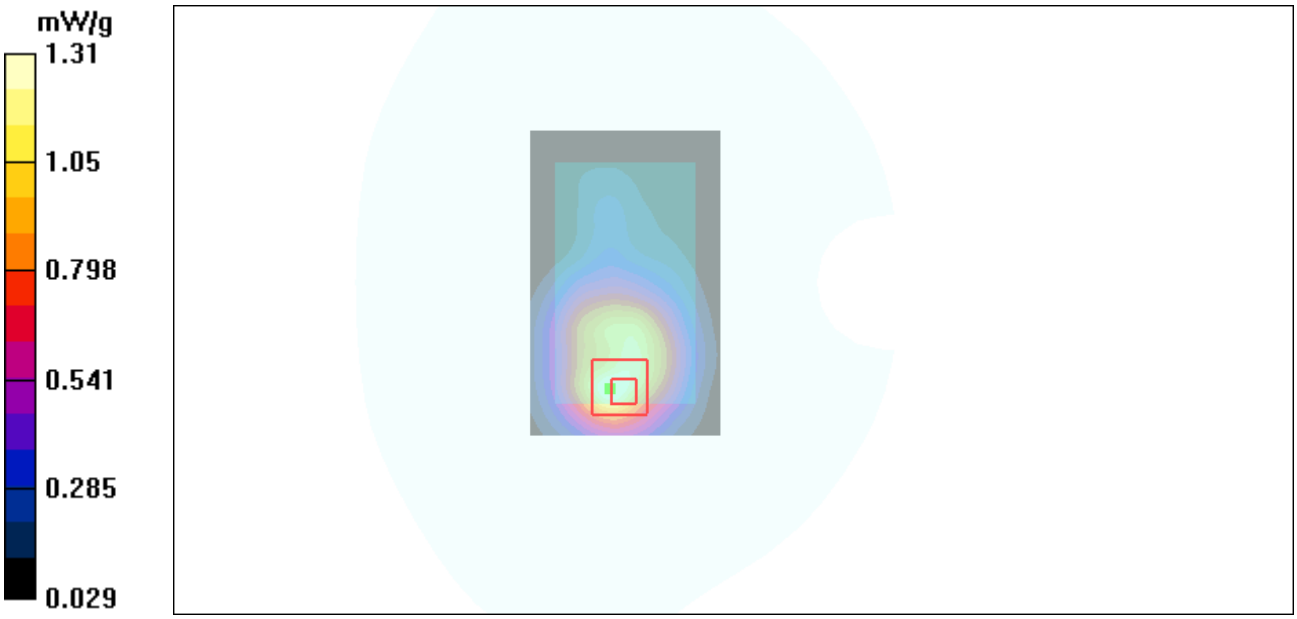



**Figure 25 CDMA PCS Test Position 2 Channel 600**

**CDMA PCS Test Position 2 Low**

Date/Time: 8/25/2010 2:27:59 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1852 MHz; $\sigma$ = 1.51 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.43 mW/g

**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.2 V/m; Power Drift = -0.050 dB
Peak SAR (extrapolated) = 2.77 W/kg
**SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.793 mW/g**
Maximum value of SAR (measured) = 1.40 mW/g

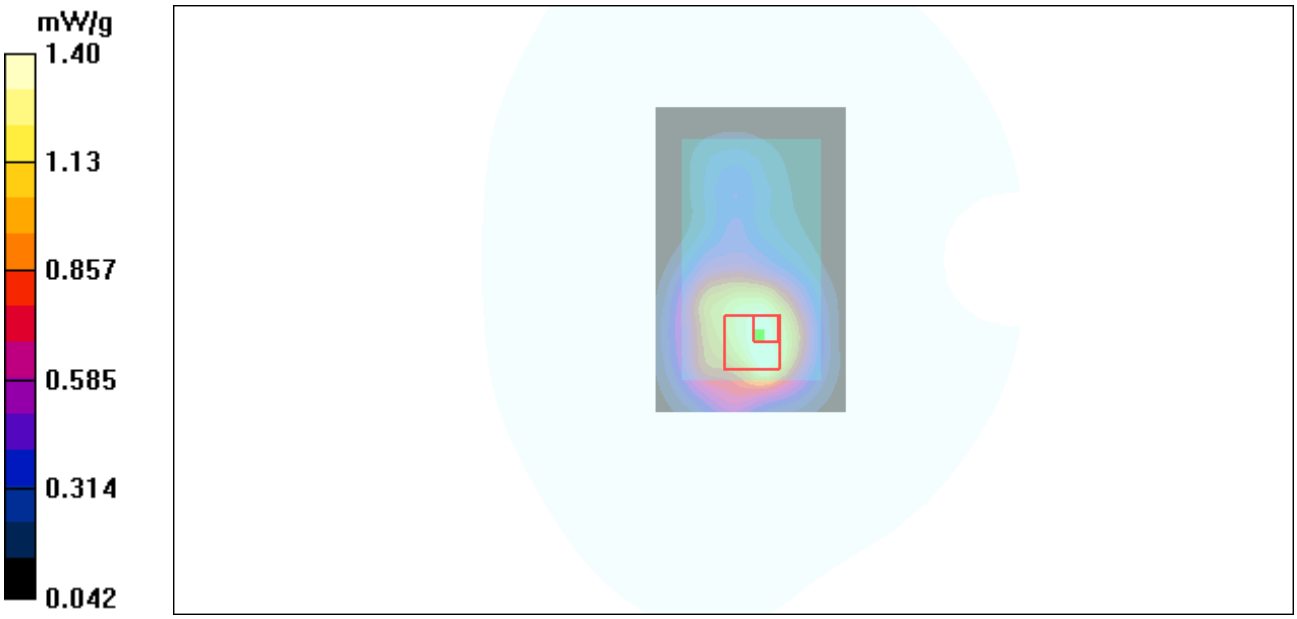



**Figure 26 CDMA PCS Test Position 2 Channel 25**

**CDMA PCS Test Position 3 High**

Date/Time: 8/25/2010 4:33:17 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; $\sigma$ = 1.57 mho/m; $\varepsilon_r$ = 53; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 High/Area Scan (31x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.30 mW/g

**Test Position 3 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.5 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 1.93 W/kg
**SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.630 mW/g**
Maximum value of SAR (measured) = 1.32 mW/g

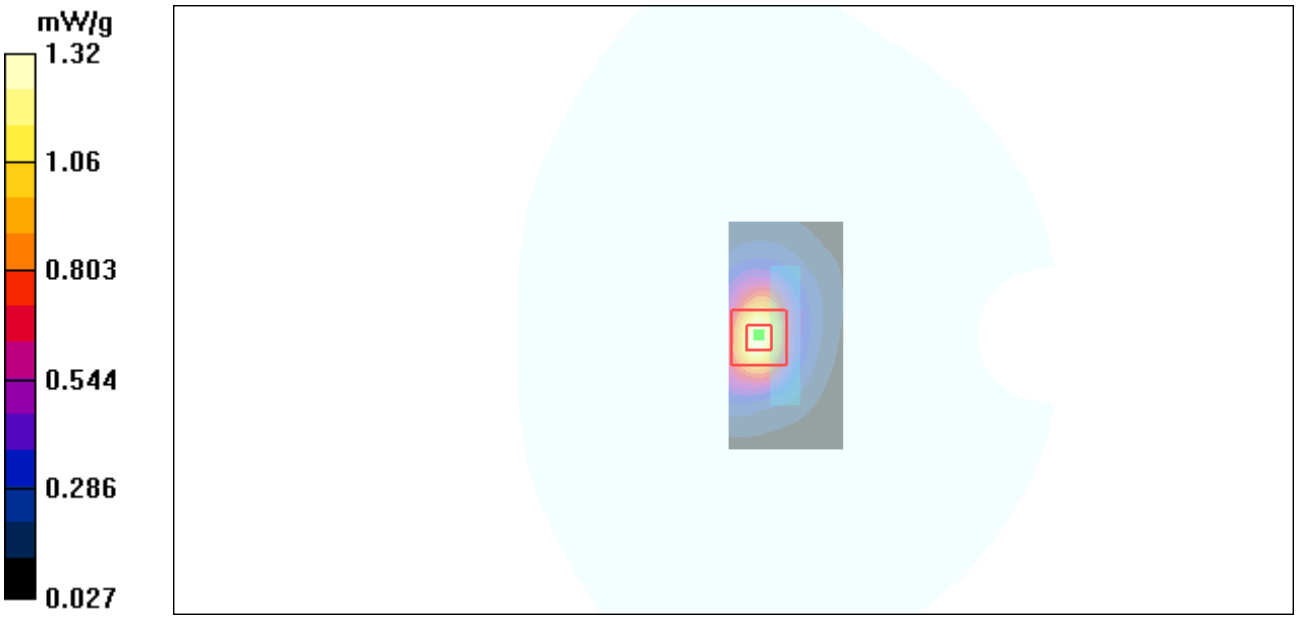



**Figure 27 CDMA PCS Test Position 3 Channel 1175**

**CDMA PCS Test Position 3 Middle**

Date/Time: 8/25/2010 4:01:42 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.54 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 Middle/Area Scan (31x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.36 mW/g

**Test Position 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.5 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 1.88 W/kg
**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.641 mW/g**
Maximum value of SAR (measured) = 1.28 mW/g

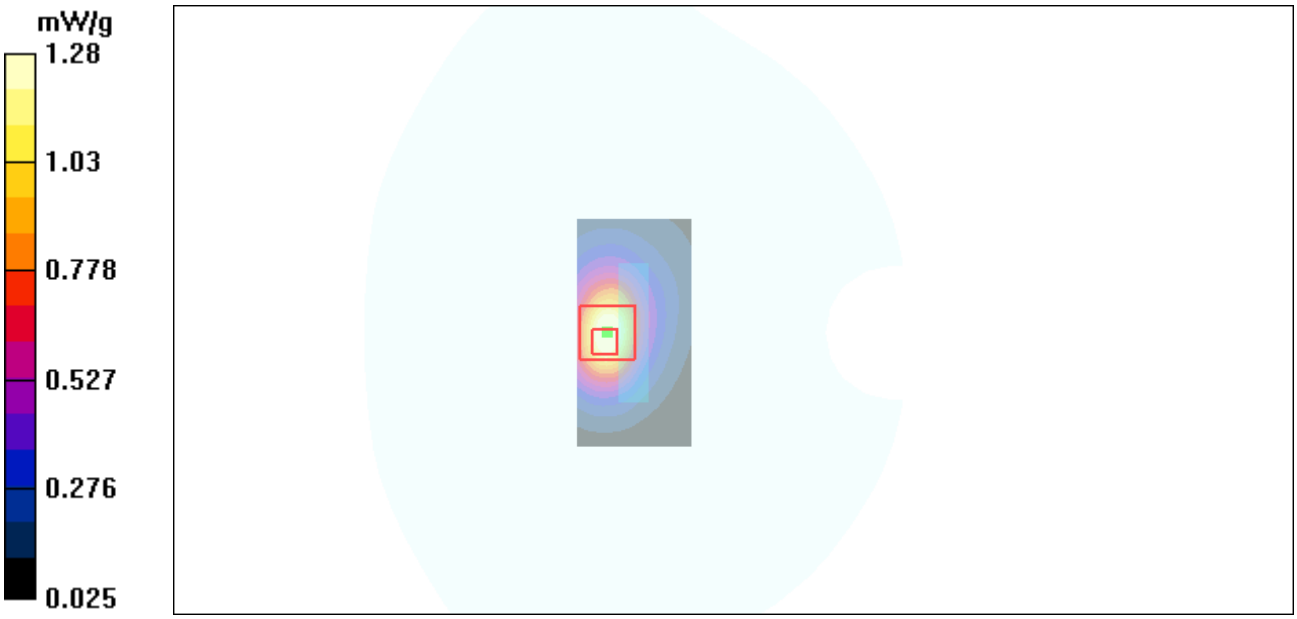



**Figure 28 CDMA PCS Test Position 3 Channel 600**

**CDMA PCS Test Position 3 Low**

Date/Time: 8/25/2010 4:18:16 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1852 MHz; $\sigma$ = 1.51 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 Low/Area Scan (31x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.28 mW/g

**Test Position 3 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.9 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 1.91 W/kg
**SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.630 mW/g**
Maximum value of SAR (measured) = 1.27 mW/g

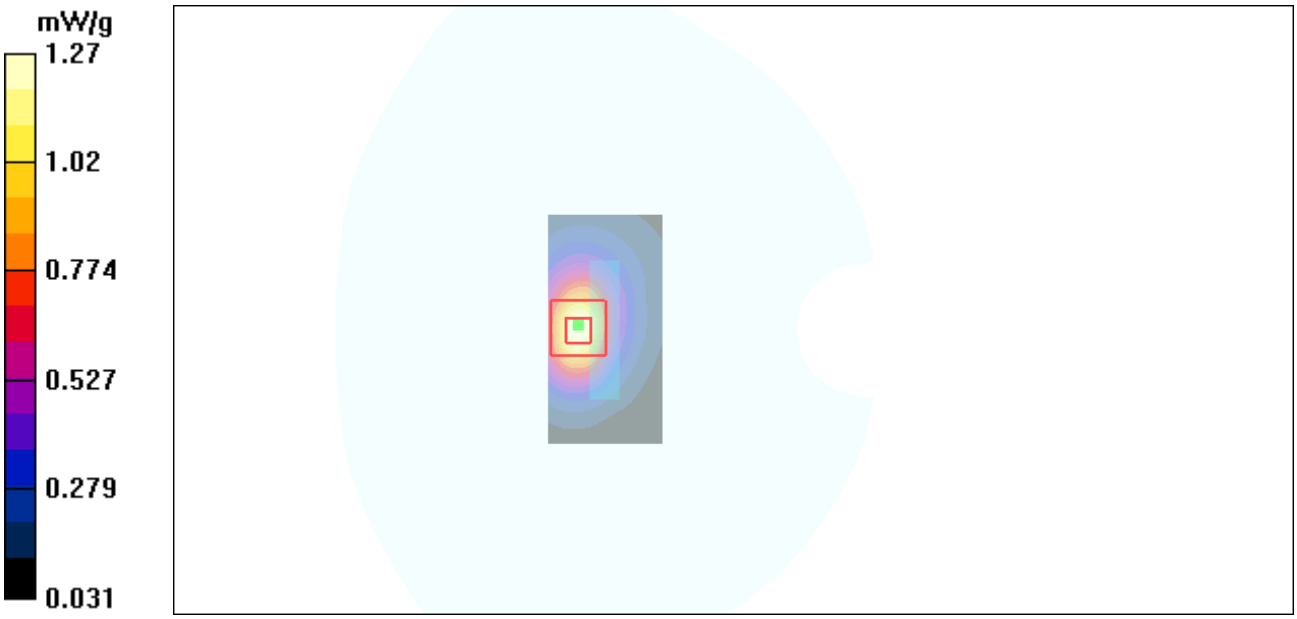



**Figure 29 CDMA PCS Test Position 3 Channel 25**

**CDMA PCS Test Position 4 Middle**

Date/Time: 8/25/2010 3:07:43 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.54 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 4 Middle/Area Scan (31x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.137 mW/g
**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.01 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.223 W/kg
**SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.072 mW/g**
Maximum value of SAR (measured) = 0.126 mW/g

**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.01 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.276 W/kg
**SAR(1 g) = 0.122 mW/g; SAR(10 g) = 0.073 mW/g**
Maximum value of SAR (measured) = 0.131 mW/g

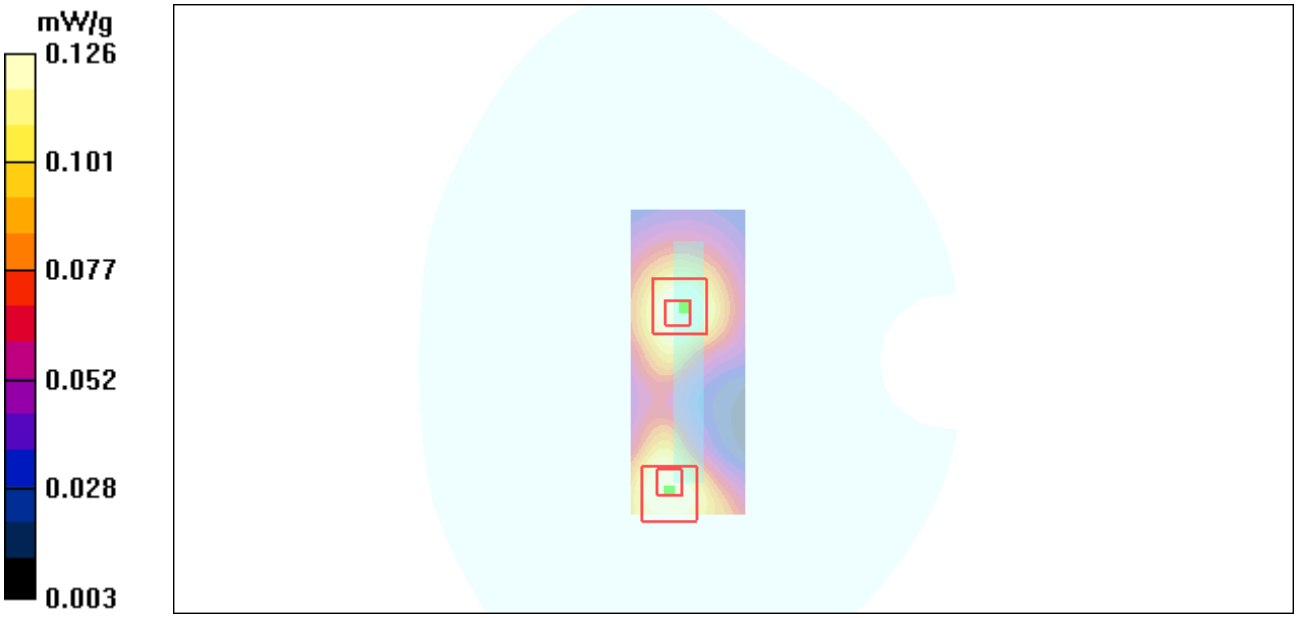



**Figure 30 CDMA PCS Test Position 4 Channel 600**

**CDMA PCS Test Position 5 Middle**

Date/Time: 8/25/2010 3:42:19 PM
Communication System: CDMA PCS EVDO Rev.0; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.54 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 5 Middle/Area Scan (31x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.304 mW/g

**Test Position 5 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.43 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.509 W/kg
**SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.162 mW/g**
Maximum value of SAR (measured) = 0.291 mW/g

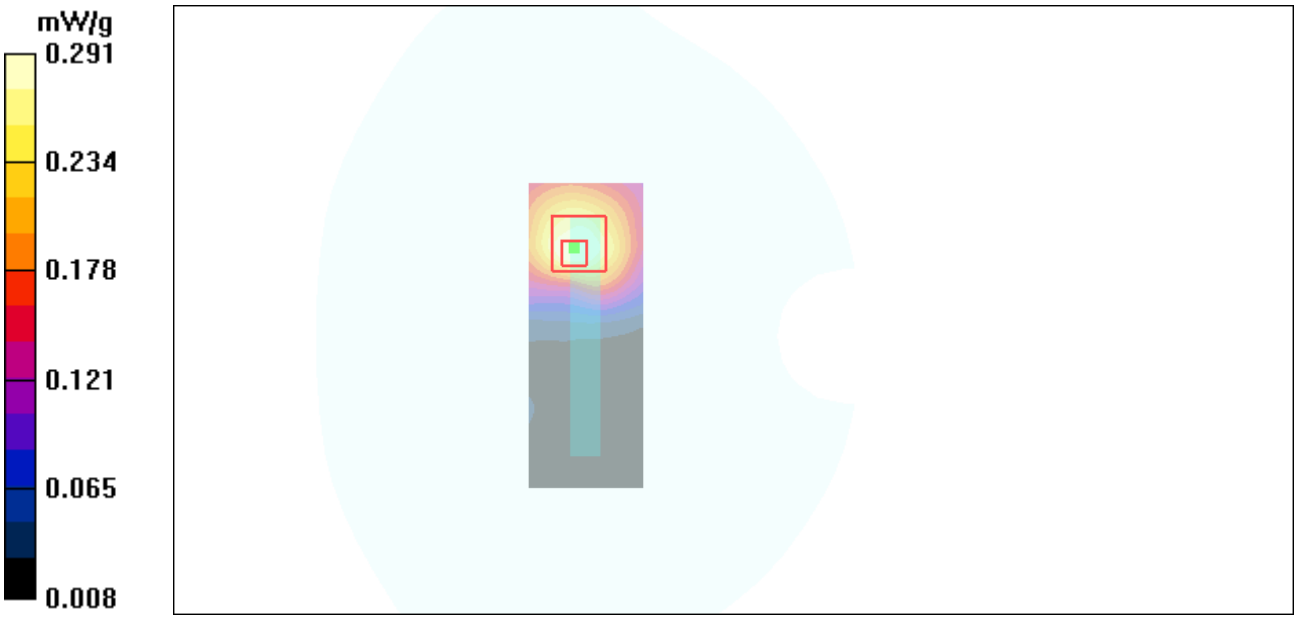



**Figure 31 CDMA PCS Test Position 5 Channel 600**

### CDMA PCS Rev.A Test Position 2 Low

Date/Time: 8/25/2010 5:00:59 PM
Communication System: CDMA PCS EVDO Rev.A; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1852 MHz; $\sigma$ = 1.51 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/$m^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.50 mW/g

**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.4 V/m; Power Drift = 0.161 dB
Peak SAR (extrapolated) = 2.59 W/kg
**SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.798 mW/g**
Maximum value of SAR (measured) = 1.41 mW/g

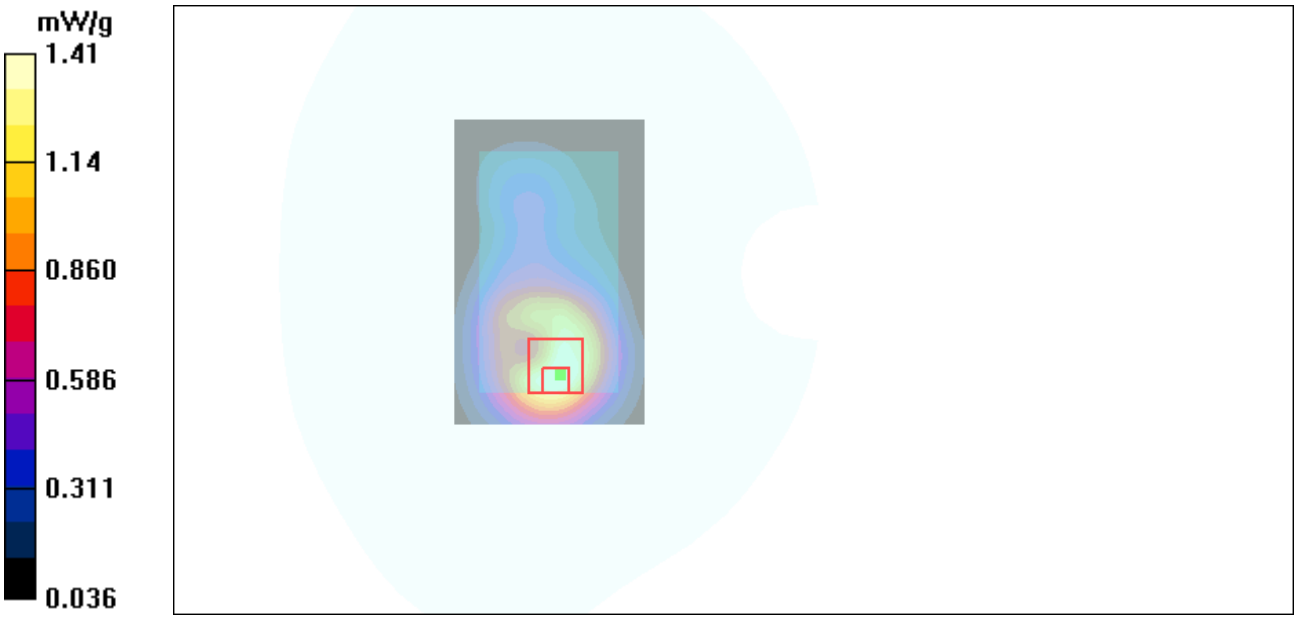


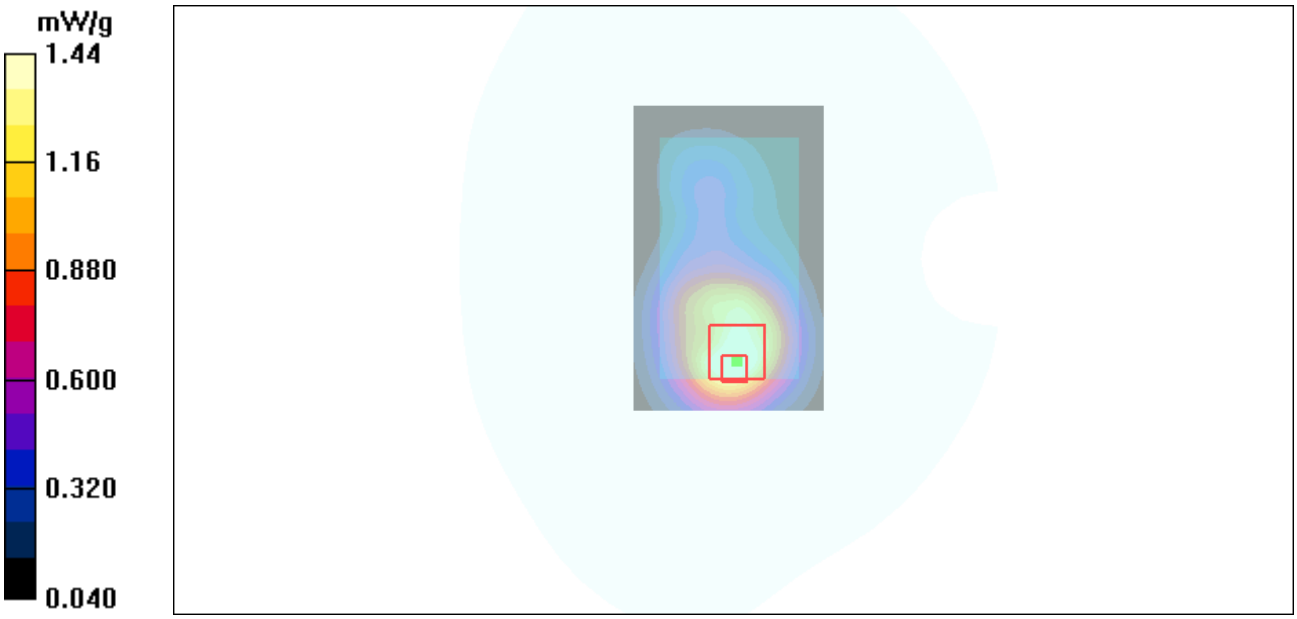

**Figure 32 CDMA PCS Rev.A Test Position 2 Channel 25**

## CDMA PCS 1xRTT Test Position 2 Low

Date/Time: 8/25/2010 5:24:05 PM
Communication System: CDMA PCS EVDO 1xRTT; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1852 MHz; $\sigma$ = 1.51 mho/m; $\varepsilon_r$ = 53.1; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.58 mW/g

**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 2.16 W/kg
**SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.821 mW/g**
Maximum value of SAR (measured) = 1.44 mW/g



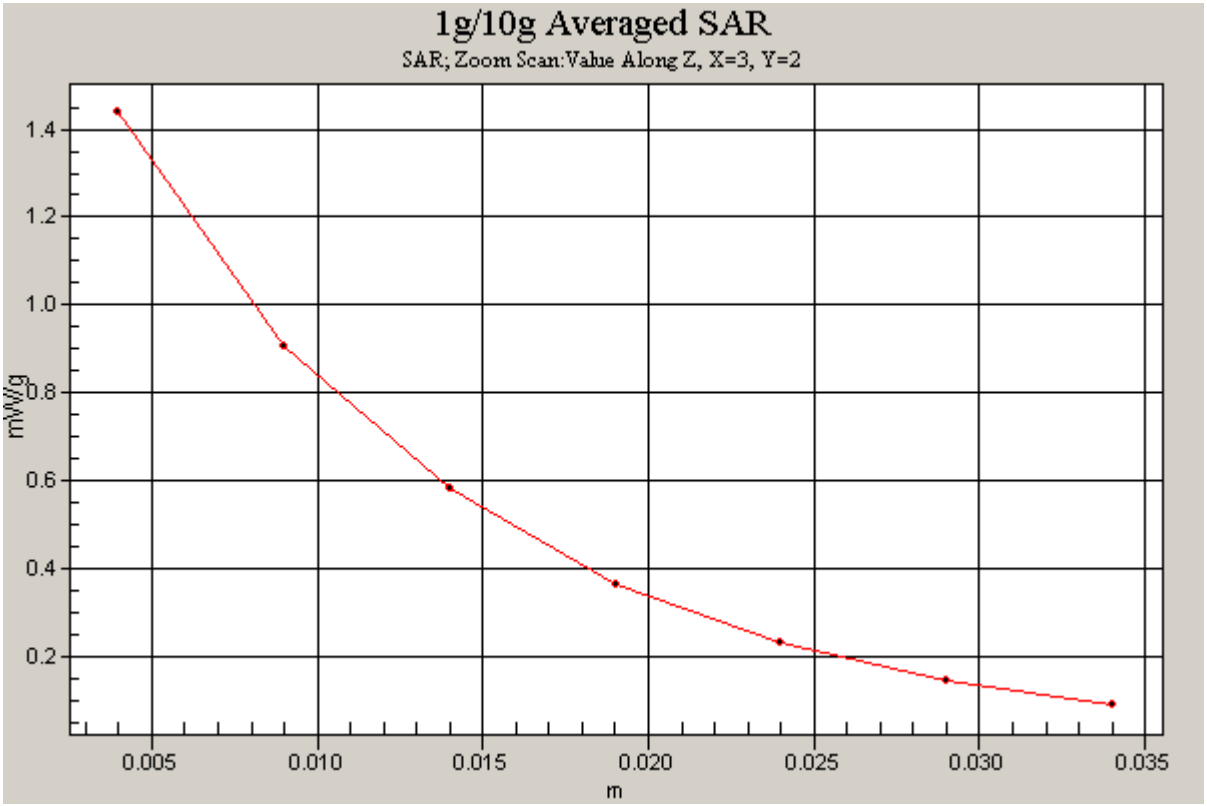



**Figure 33 CDMA PCS 1xRTT Test Position 2 Channel 25**

**CDMA AWS Test Position 1 Middle**

Date/Time: 8/24/2010 8:09:55 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.810 mW/g
**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = -0.185 dB
Peak SAR (extrapolated) = 1.38 W/kg
**SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.432 mW/g**
Maximum value of SAR (measured) = 0.847 mW/g

**Test Position 1 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = -0.185 dB
Peak SAR (extrapolated) = 1.35 W/kg
**SAR(1 g) = 0.785 mW/g; SAR(10 g) = 0.464 mW/g**
Maximum value of SAR (measured) = 0.852 mW/g

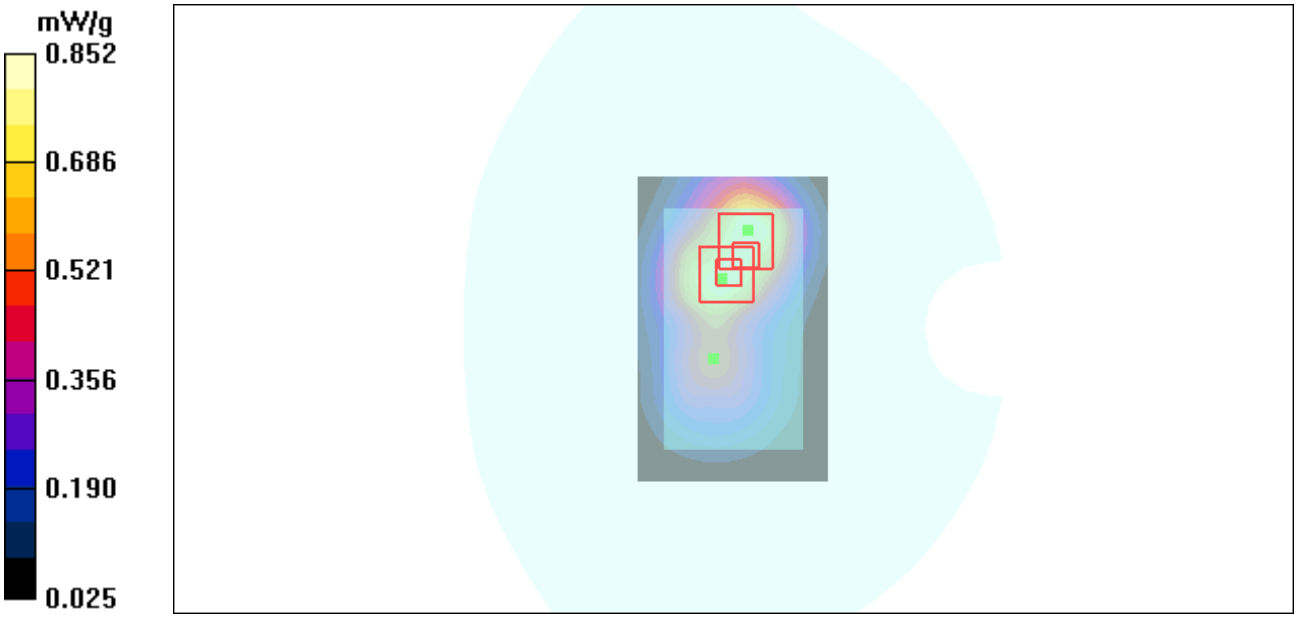



**Figure 34 CDMA AWS Test Position 1 Channel 450**

**CDMA AWS Test Position 2 High**

Date/Time: 8/24/2010 10:09:22 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1752.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.5 MHz; $\sigma$ = 1.48 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.37 mW/g
**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.8 V/m; Power Drift = 0.174 dB
Peak SAR (extrapolated) = 2.85 W/kg
**SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.789 mW/g**
Maximum value of SAR (measured) = 1.44 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.8 V/m; Power Drift = 0.174 dB
Peak SAR (extrapolated) = 2.27 W/kg
**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.688 mW/g**
Maximum value of SAR (measured) = 1.41 mW/g

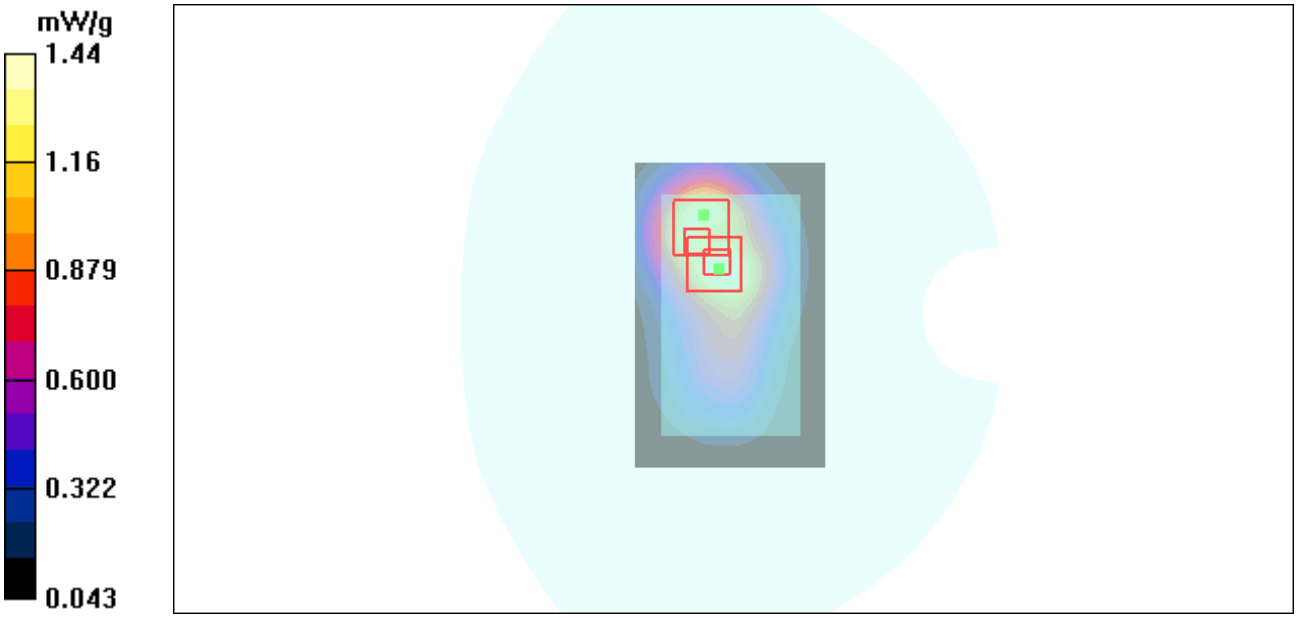



**Figure 35 CDMA AWS Test Position 2 Channel 850**

**CDMA AWS Test Position 2 Middle**

Date/Time: 8/24/2010 8:40:42 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Middle/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.04 mW/g
**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.3 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.75 W/kg
**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.611 mW/g**
Maximum value of SAR (measured) = 1.13 mW/g

**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.3 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.86 W/kg
**SAR(1 g) = 0.914 mW/g; SAR(10 g) = 0.527 mW/g**
Maximum value of SAR (measured) = 1.14 mW/g

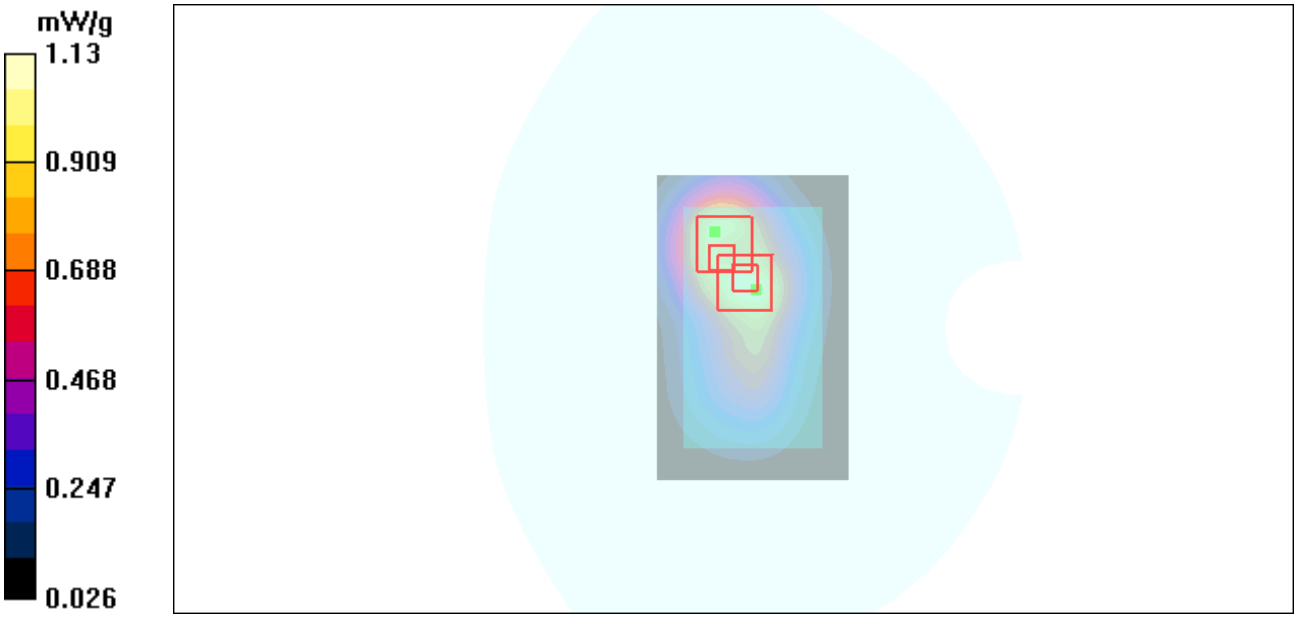



**Figure 36 CDMA AWS Test Position 2 Channel 450**

**CDMA AWS Test Position 2 Low**

Date/Time: 8/24/2010 9:09:27 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1711.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1712 MHz; $\sigma$ = 1.45 mho/m; $\varepsilon_r$ = 52.4; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 Low/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.15 mW/g
**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.3 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 1.96 W/kg
**SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.661 mW/g**
Maximum value of SAR (measured) = 1.16 mW/g

**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.3 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 1.99 W/kg
**SAR(1 g) = 0.841 mW/g; SAR(10 g) = 0.514 mW/g**
Maximum value of SAR (measured) = 1.08 mW/g

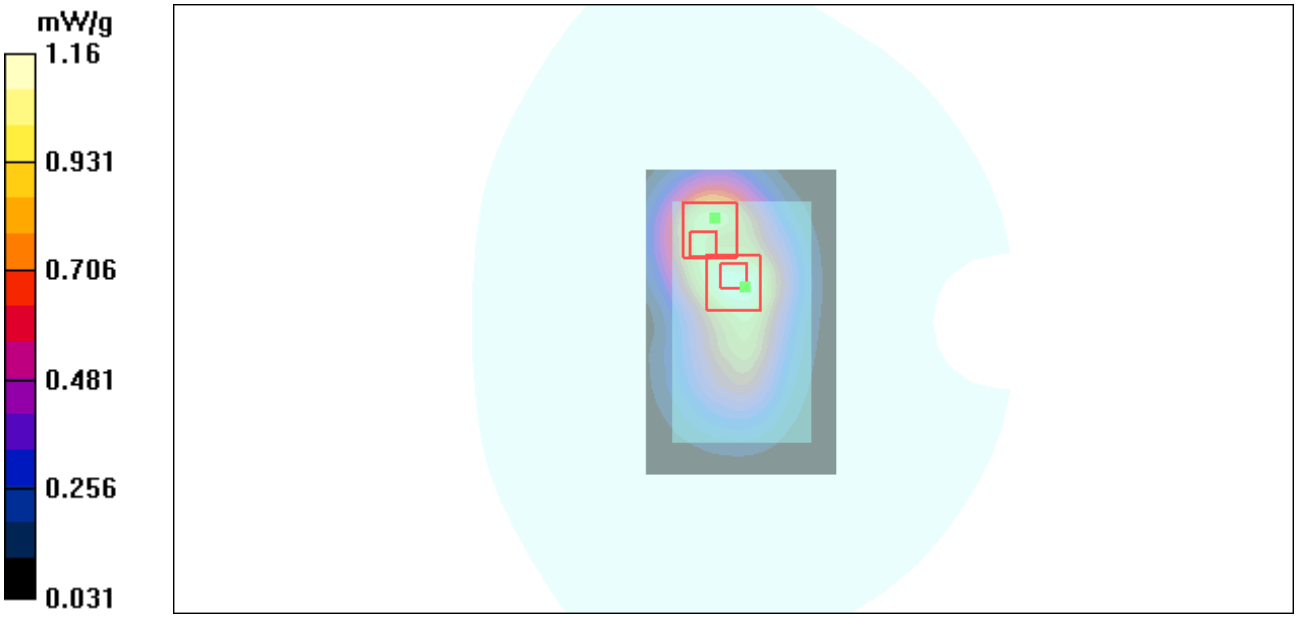



**Figure 37 CDMA AWS Test Position 2 Channel 25**

**CDMA AWS Test Position 3 High**

Date/Time: 8/24/2010 1:17:01 AM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1752.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.5 MHz; $\sigma$ = 1.48 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 High/Area Scan (41x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.28 mW/g

**Test Position 3 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.2 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 1.79 W/kg
**SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.610 mW/g**
Maximum value of SAR (measured) = 1.20 mW/g

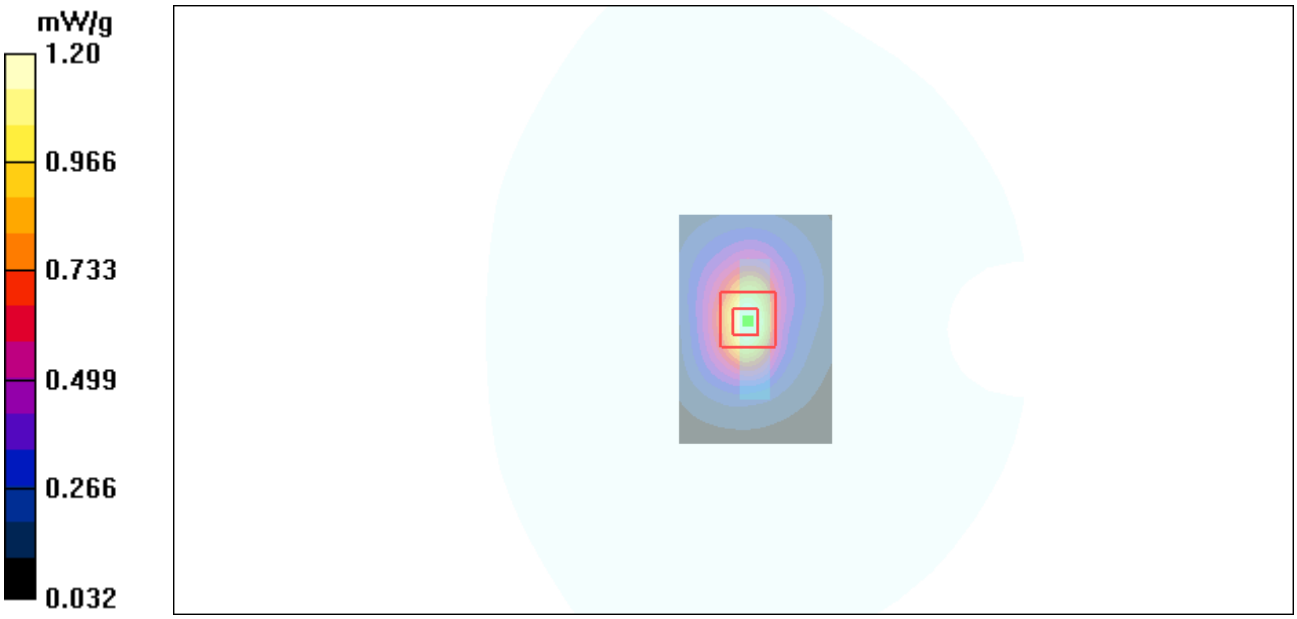



**Figure 38 CDMA AWS Test Position 3 Channel 850**

**CDMA AWS Test Position 3 Middle**

Date/Time: 8/24/2010 11:52:23 PM

Communication System: CDMA AWS EVDO Rev.0; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/$m^3$

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 Middle/Area Scan (41x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.996 mW/g

**Test Position 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.0 V/m; Power Drift = 0.097 dB

Peak SAR (extrapolated) = 1.38 W/kg

**SAR(1 g) = 0.815 mW/g; SAR(10 g) = 0.477 mW/g**

Maximum value of SAR (measured) = 0.958 mW/g

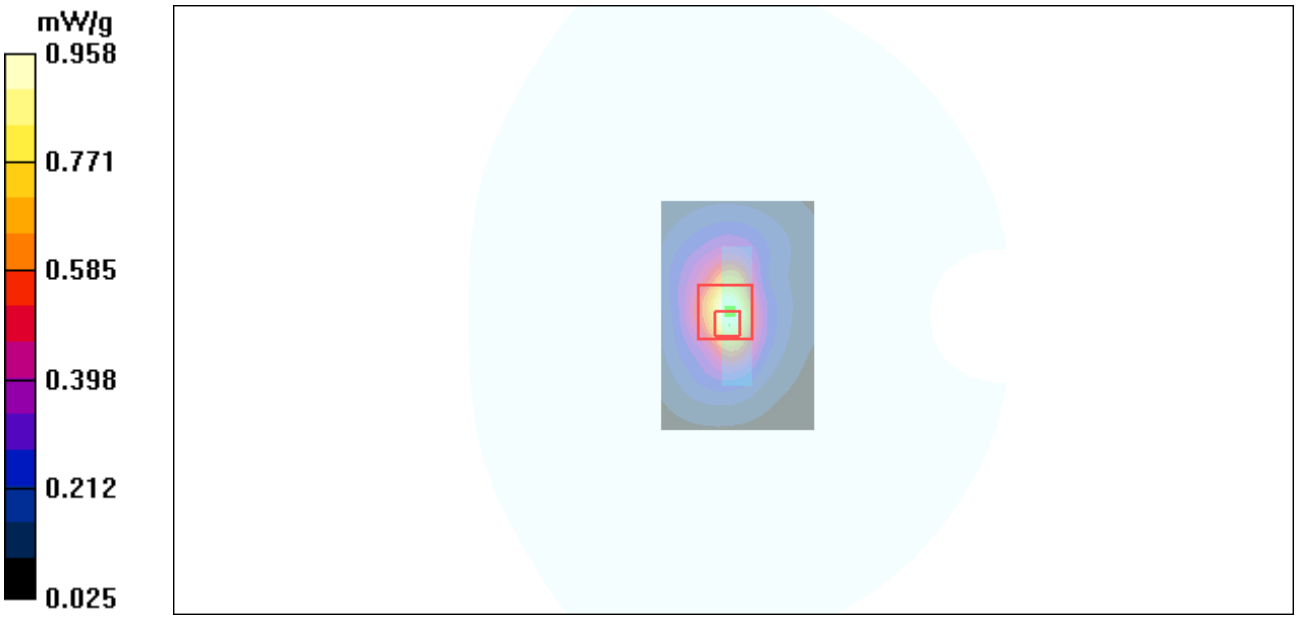



**Figure 39 CDMA AWS Test Position 3 Channel 450**

**CDMA AWS Test Position 3 Low**

Date/Time: 8/24/2010 1:36:58 AM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1711.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1712 MHz; $\sigma$ = 1.45 mho/m; $\varepsilon_r$ = 52.4; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 Low/Area Scan (41x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.05 mW/g

**Test Position 3 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.7 V/m; Power Drift = 0.090 dB
Peak SAR (extrapolated) = 1.54 W/kg
**SAR(1 g) = 0.931 mW/g; SAR(10 g) = 0.519 mW/g**
Maximum value of SAR (measured) = 1.03 mW/g

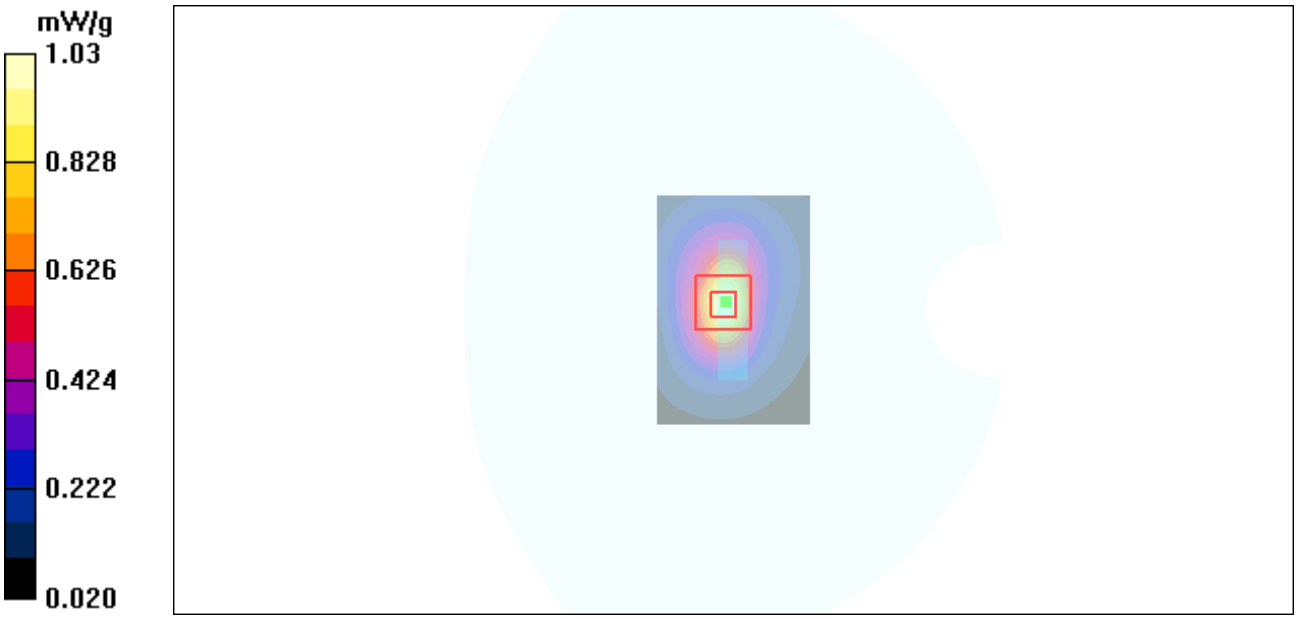



**Figure 40 CDMA AWS Test Position 3 Channel 25**

**CDMA AWS Test Position 4 Middle**

Date/Time: 8/24/2010 10:48:49 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 4 Middle/Area Scan (41x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.155 mW/g
**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.93 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.235 W/kg
**SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.091 mW/g**
Maximum value of SAR (measured) = 0.159 mW/g

**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.93 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.227 W/kg
**SAR(1 g) = 0.142 mW/g; SAR(10 g) = 0.087 mW/g**
Maximum value of SAR (measured) = 0.154 mW/g

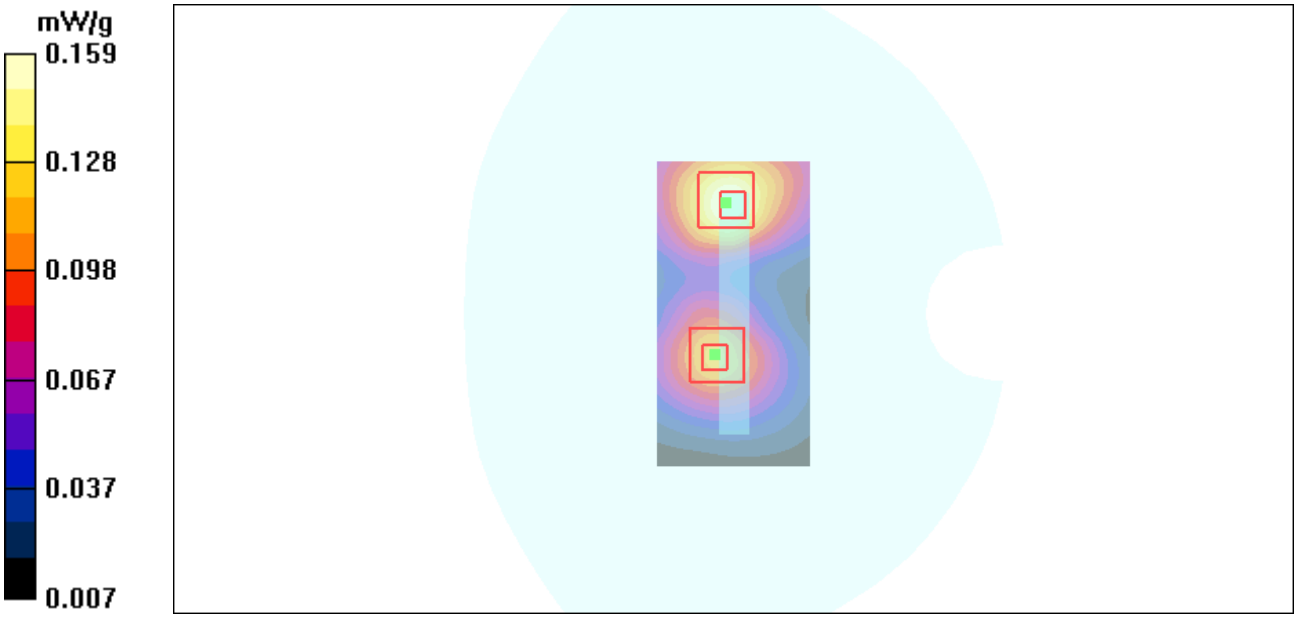



**Figure 41 CDMA AWS Test Position 4 Channel 450**

**CDMA AWS Test Position 5 Middle**

Date/Time: 8/24/2010 11:18:58 PM
Communication System: CDMA AWS EVDO Rev.0; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma$ = 1.46 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 5 Middle/Area Scan (41x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.151 mW/g
**Test Position 5 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.01 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 0.230 W/kg
**SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.084 mW/g**
Maximum value of SAR (measured) = 0.151 mW/g

**Test Position 5 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.01 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 0.164 W/kg
**SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.066 mW/g**
Maximum value of SAR (measured) = 0.110 mW/g

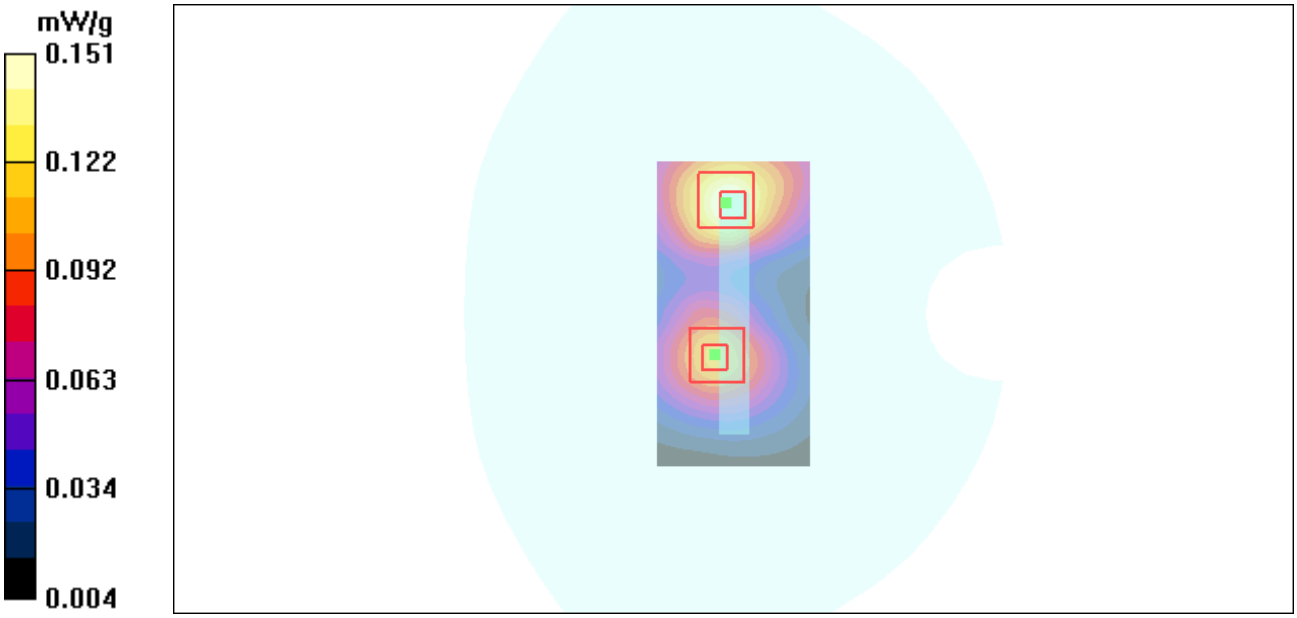


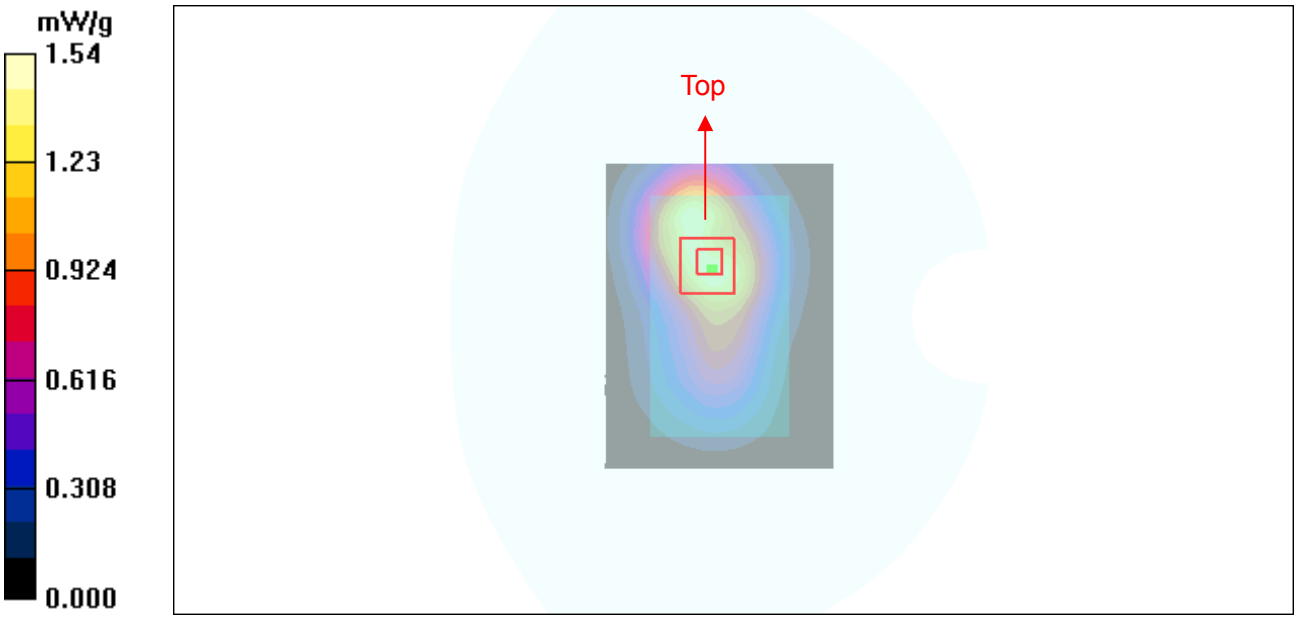

**Figure 42 CDMA AWS Test Position 5 Channel 450**

**CDMA AWS Rev.A Test Position 2 High**

Date/Time: 8/25/2010 12:49:16 AM
Communication System: CDMA AWS EVDO Rev.A; Frequency: 1752.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.5 MHz; $\sigma$ = 1.48 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.43 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.9 V/m; Power Drift = 0.087 dB
Peak SAR (extrapolated) = 2.47 W/kg
**SAR(1 g) = 1.4 mW/g; SAR(10 g) = 0.840 mW/g**
Maximum value of SAR (measured) = 1.54 mW/g



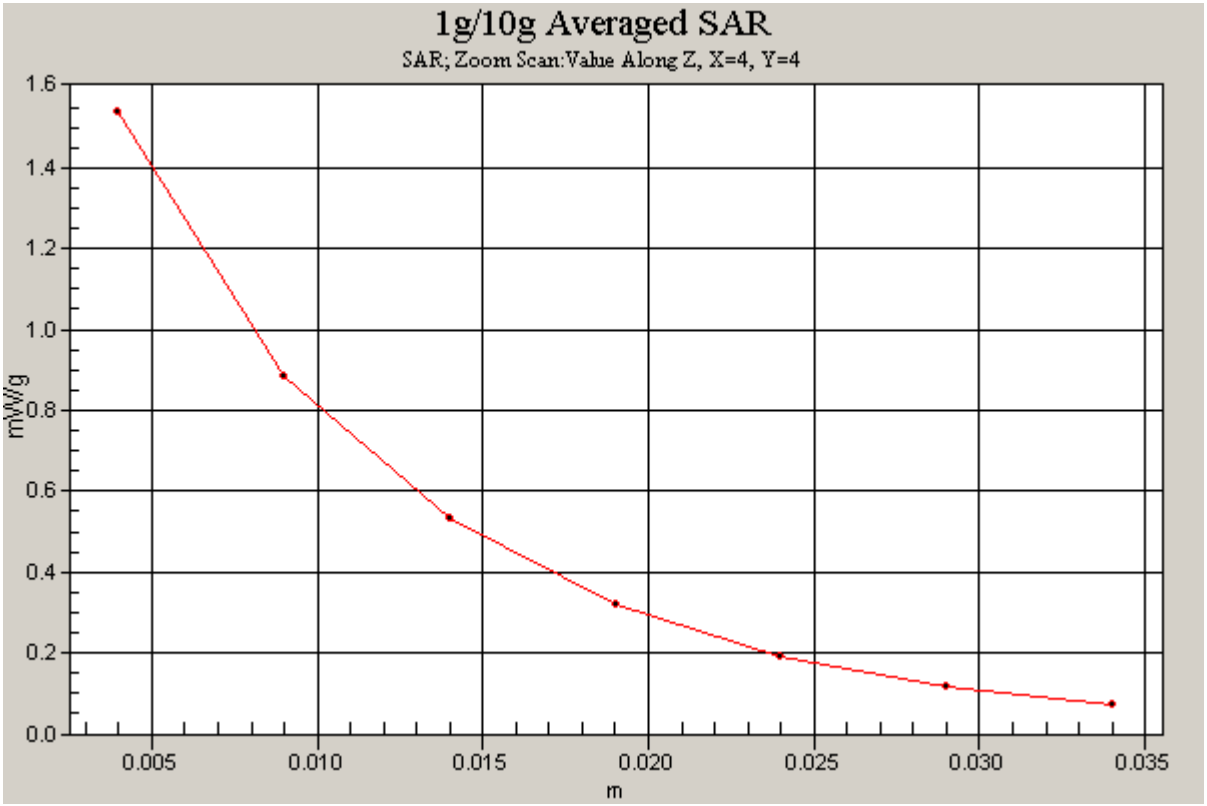



**Figure 43 CDMA AWS Rev.A Test Position 2 Channel 850**

**CDMA AWS 1xRTT Test Position 2 High**

Date/Time: 8/25/2010 12:30:57 AM
Communication System: CDMA AWS EVDO 1XRTT; Frequency: 1752.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.5 MHz; $\sigma$ = 1.48 mho/m; $\varepsilon_r$ = 52.2; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.93, 7.93, 7.93); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.44 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.4 V/m; Power Drift = -0.067 dB
Peak SAR (extrapolated) = 2.41 W/kg
**SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.742 mW/g**
Maximum value of SAR (measured) = 1.55 mW/g

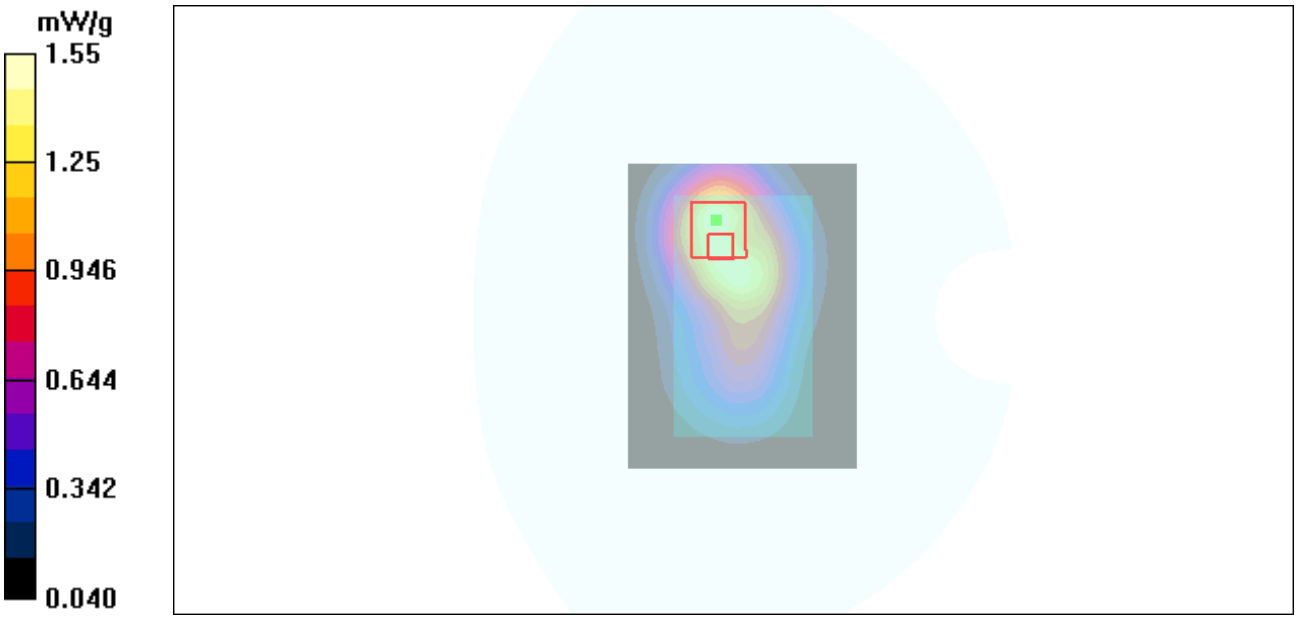


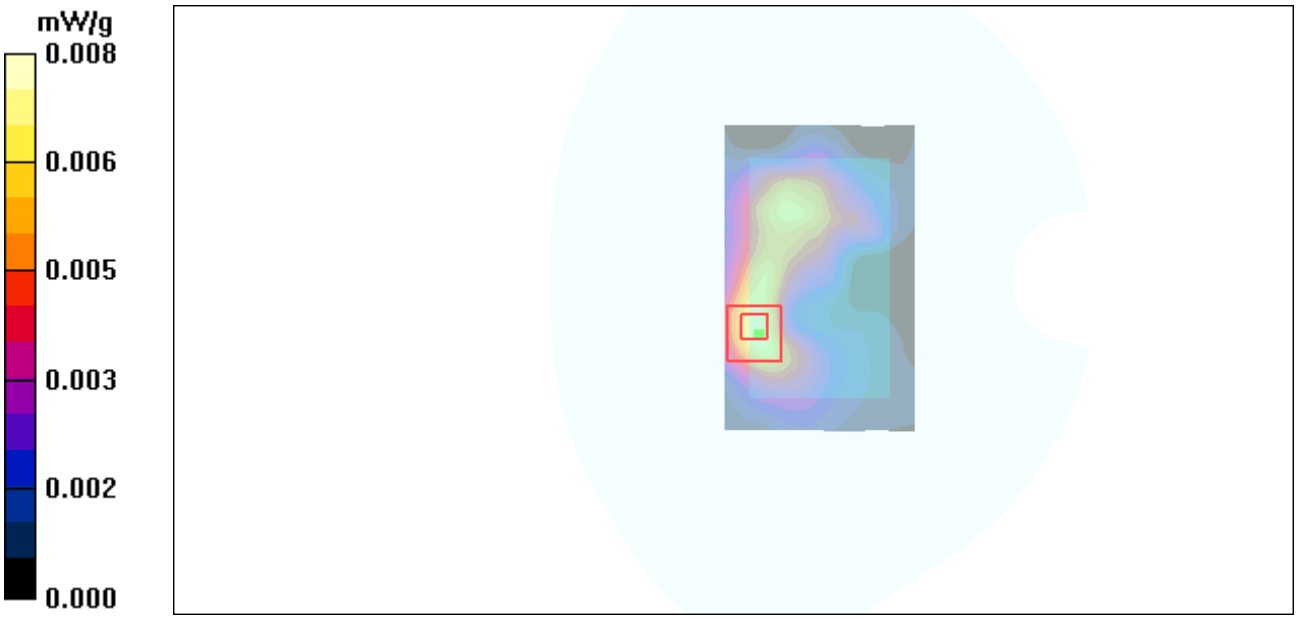

**Figure 44 CDMA AWS 1xRTT Test Position 2 Channel 850**

### 802.11b Test Position 1 High

Date/Time: 8/26/2010 1:03:24 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 1 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.007 mW/g

**Test Position 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.15 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 0.019 W/kg
**SAR(1 g) = 0.007 mW/g; SAR(10 g) = 0.003 mW/g**
Maximum value of SAR (measured) = 0.008 mW/g



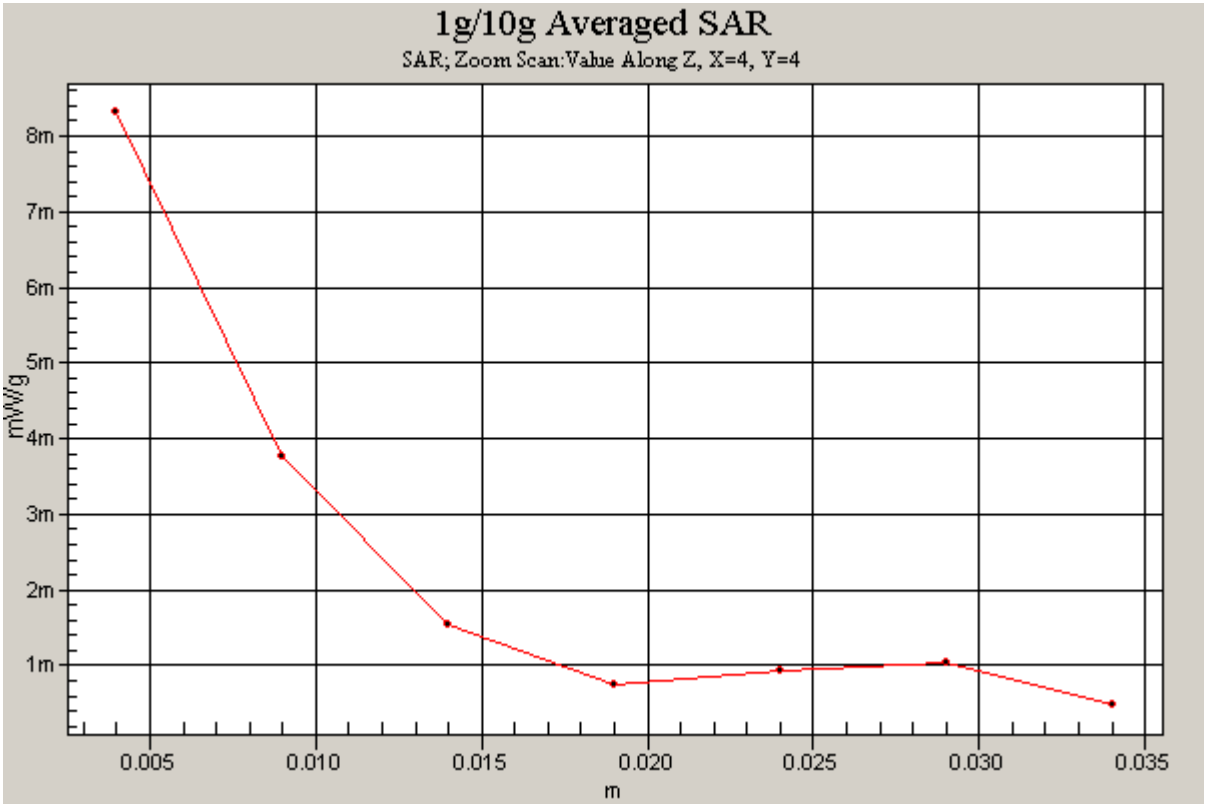



**Figure 45 802.11b Test Position 1 Channel 11**

### 802.11b Test Position 2 High

Date/Time: 8/26/2010 1:24:00 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 2 High/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.003 mW/g

**Test Position 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.533 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 0.005 W/kg
**SAR(1 g) = 0.002 mW/g; SAR(10 g) = 0.001 mW/g**
Maximum value of SAR (measured) = 0.003 mW/g

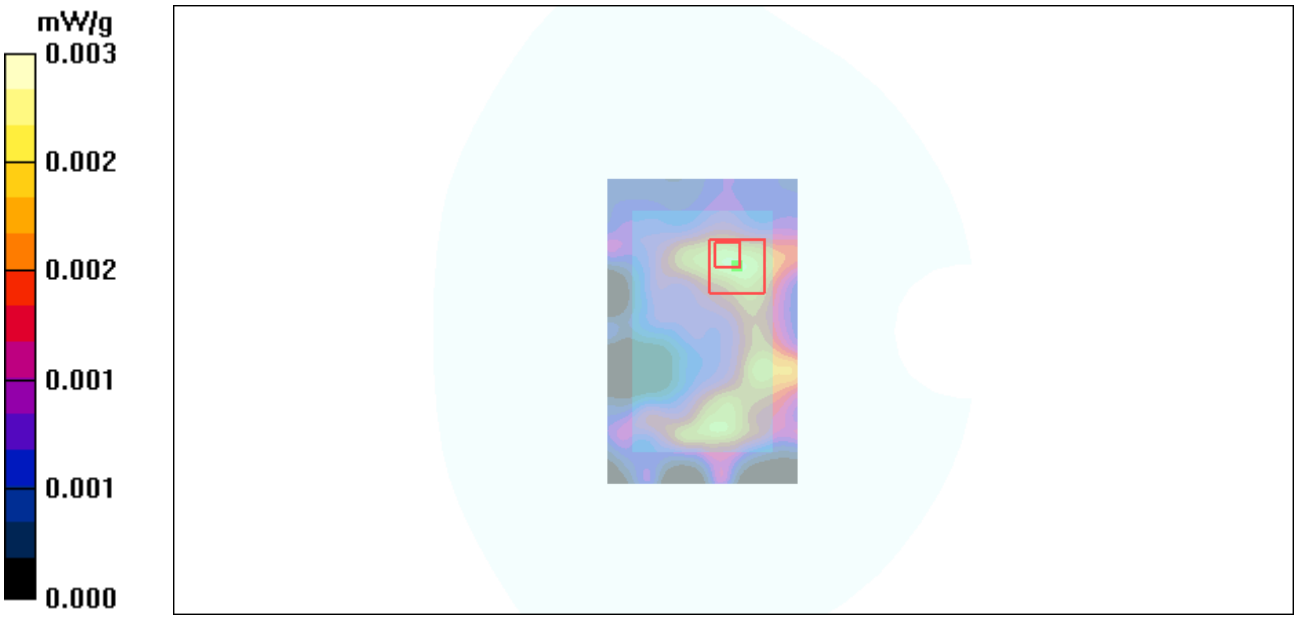



**Figure 46 802.11b Test Position 2 Channel 11**

### 802.11b Test Position 3 High

Date/Time: 8/26/2010 2:06:50 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 3 High/Area Scan (31x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.002 mW/g

**Test Position 3 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.729 V/m; Power Drift = 0.080 dB
Peak SAR (extrapolated) = 0.005 W/kg
**SAR(1 g) = 0.001 mW/g; SAR(10 g) = 0.001 mW/g**
Maximum value of SAR (measured) = 0.001 mW/g

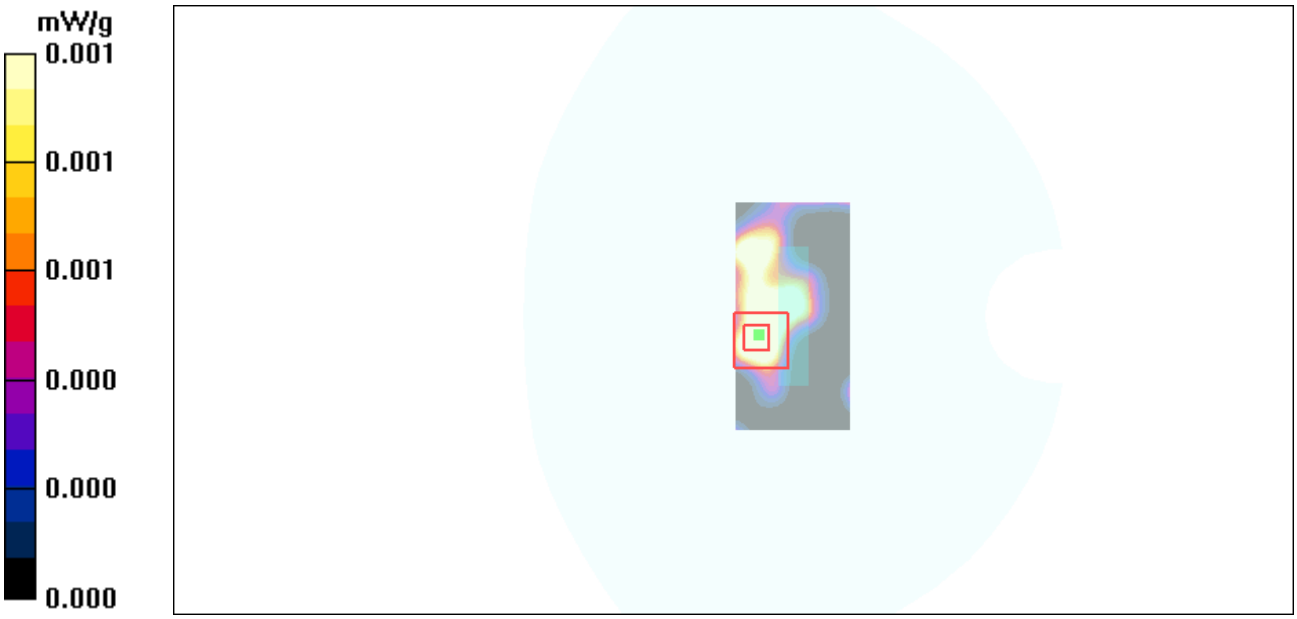



**Figure 47 802.11b Test Position 3 Channel 11**

### 802.11b Test Position 4 High

Date/Time: 8/26/2010 1:42:54 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 4 High/Area Scan (31x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.007 mW/g

**Test Position 4 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.40 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 0.027 W/kg
**SAR(1 g) = 0.006 mW/g; SAR(10 g) = 0.002 mW/g**
Maximum value of SAR (measured) = 0.005 mW/g

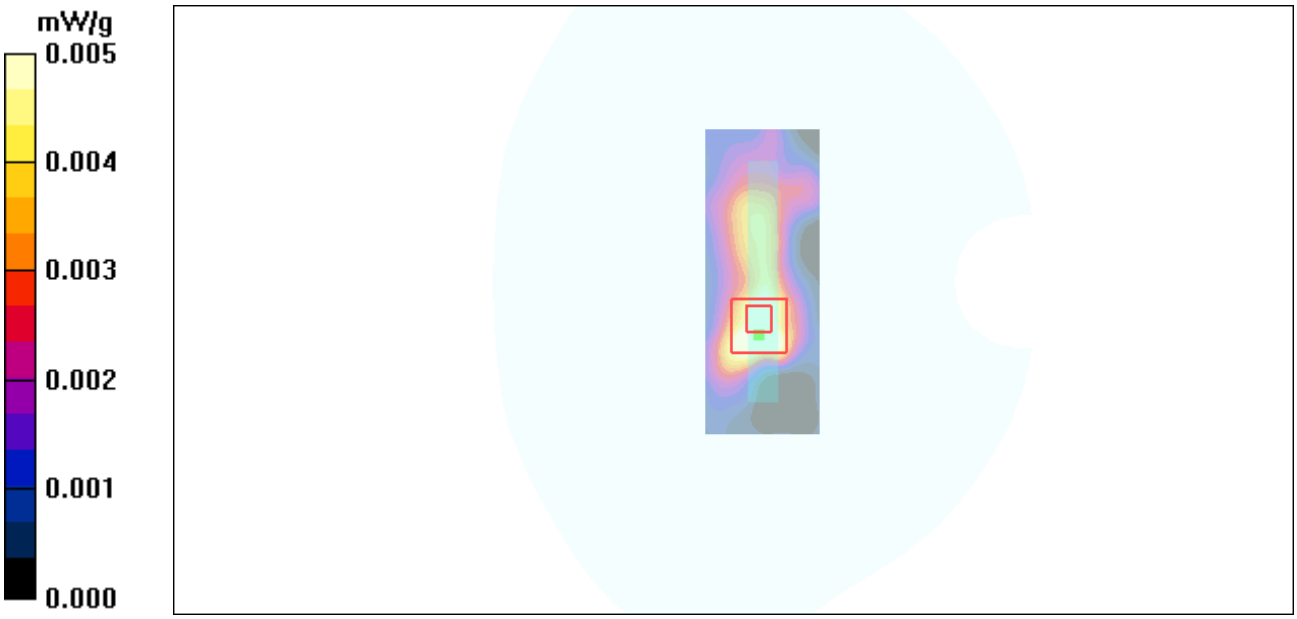



**Figure 48 802.11b Test Position 4 Channel 11**

### 802.11b Test Position 5 High

Date/Time: 8/26/2010 2:40:48 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 5 High/Area Scan (31x81x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.002 mW/g

**Test Position 5 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.496 V/m; Power Drift = -0.080 dB
Peak SAR (extrapolated) = 0.004 W/kg
**SAR(1 g) = 0.001 mW/g; SAR(10 g) = 0.000 mW/g**
Maximum value of SAR (measured) = 0.001 mW/g

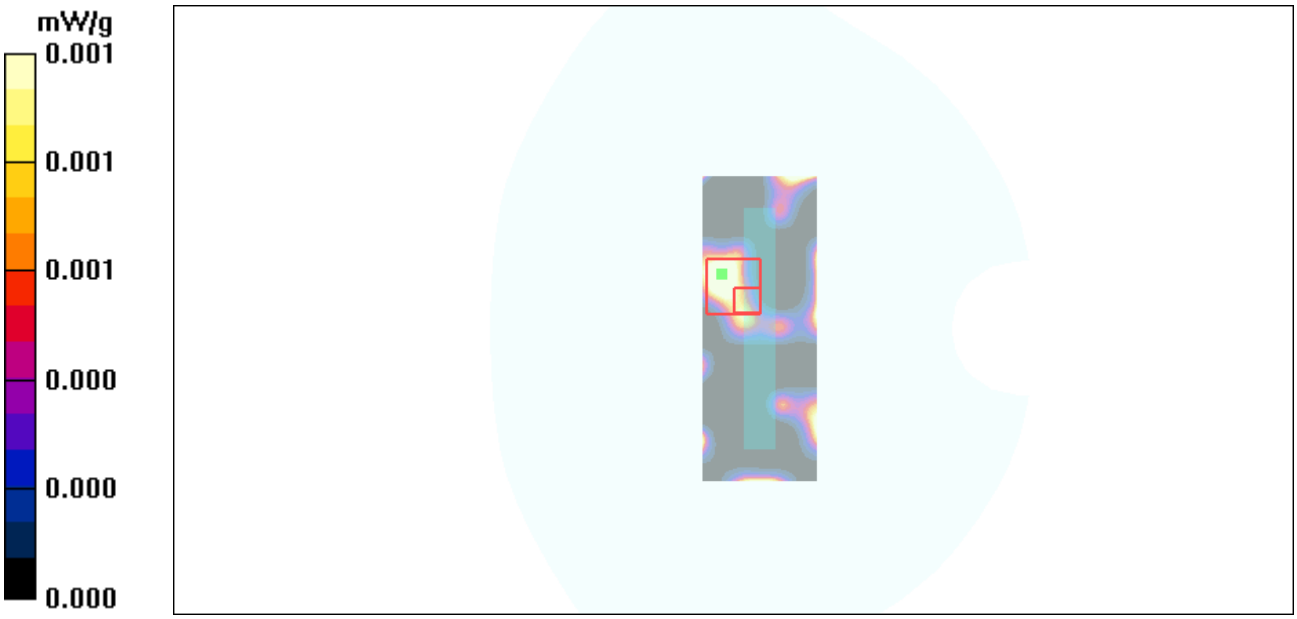



**Figure 49 802.11b Test Position 5 Channel 11**

### 802.11b Test Position 6 High

Date/Time: 8/26/2010 2:24:28 PM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
Phantom: SAM000 T01; Type: SAM V4.0; Serial: TP-1246
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Test Position 6 High/Area Scan (31x61x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.002 mW/g

**Test Position 6 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.615 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.004 W/kg
**SAR(1 g) = 0.001 mW/g; SAR(10 g) = 0.000 mW/g**
Maximum value of SAR (measured) = 0.001 mW/g

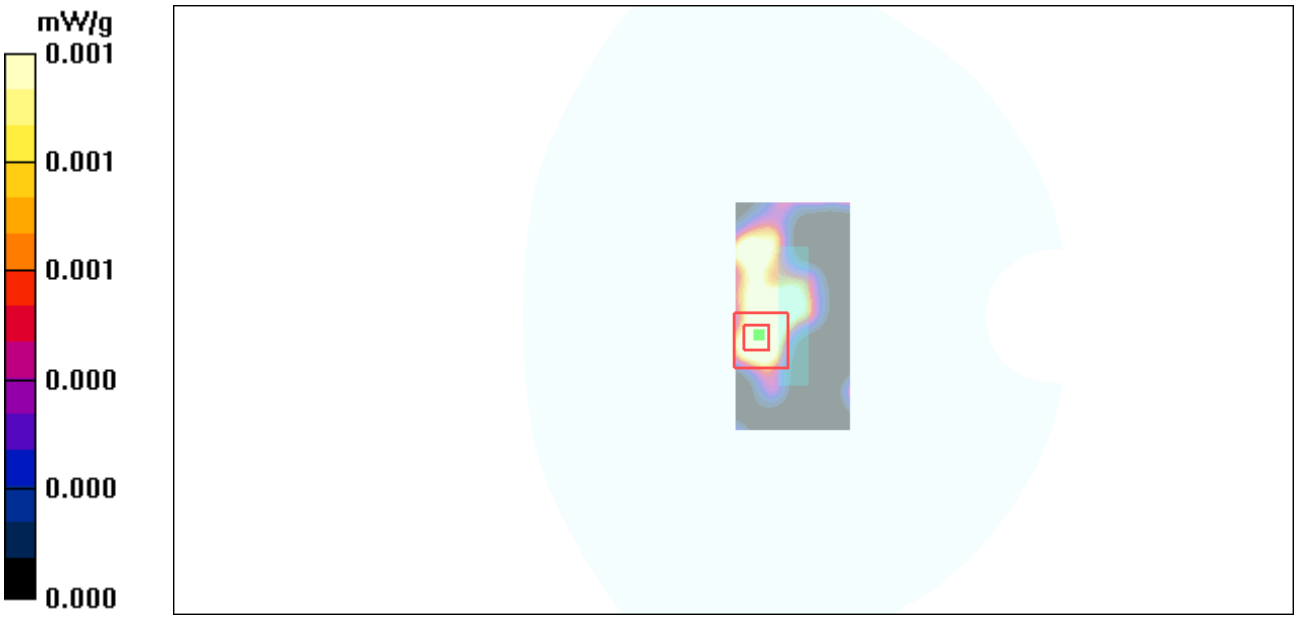



**Figure 50 802.11b Test Position 6 Channel 11**