

# FCC SAR Test Report

**APPLICANT** : ZTE CORPORATION  
**EQUIPMENT** : CDMA/LTE 7 inch Tablet  
**BRAND NAME** : ZTE  
**MODEL NAME** : V66  
**FCC ID** : Q78-V66  
**STANDARD** : FCC 47 CFR Part 2 (2.1093)  
IEEE C95.1-1991  
IEEE 1528-2003  
FCC OET Bulletin 65 Supplement C (Edition 01-01)

The product was received on Oct. 18, 2011 and completely tested on Oct. 28, 2011. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:



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Jones Tsai / Manager



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FCC ID : Q78-V66

Page Number : 1 of 46

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## Revision History

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FA190101   | Rev. 01 | Initial issue of report | Oct. 28, 2011 |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |
|            |         |                         |               |

## **1 Statement of Compliance**

The maximum results of Specific Absorption Rate (SAR) found during testing for **ZTE CORPORATION CDMA/LTE 7 inch Tablet, ZTE V66**, are as follows.

### **0 cm SAR test results**

| Band                | Position                          | SAR 1g<br>(W/kg) |
|---------------------|-----------------------------------|------------------|
| CDMA2000 1xRTT BC0  | Body (Bottom Face_0cm Gap)        | 1.07             |
| CDMA2000 1xEVDO BC0 | Body (Bottom Face_0cm Gap)        | 1.16             |
| CDMA2000 1xRTT BC1  | Body (Bottom Face_0cm Gap)        | 1.26             |
| CDMA2000 1xEVDO BC1 | Body (Secondary Portrait_0cm Gap) | 1.44             |
| LTE Band XIII       | Body (Bottom Face_0cm Gap)        | 1.36             |
| WLAN 2.4GHz         | Body (Primary Landscape_0cm Gap)  | 1.03             |
| WLAN 5GHz UNII      | Body (Primary Landscape_0cm Gap)  | 0.503            |

### **Verification of SAR compliance**

| Band                | Position                     | SAR 1g<br>(W/kg) |
|---------------------|------------------------------|------------------|
| CDMA2000 1xRTT BC0  | Body (Bottom Face_0.7cm Gap) | 0.953            |
| CDMA2000 1xEVDO BC0 | Body (Bottom Face_0.9cm Gap) | 0.938            |
| CDMA2000 1xRTT BC1  | Body (Bottom Face_0.7cm Gap) | 1.32             |
| CDMA2000 1xEVDO BC1 | Body (Bottom Face_0.9cm Gap) | 1.31             |
| LTE Band XIII       | Body (Bottom Face_0.9cm Gap) | 0.789            |

The test records with distance 0.7cm and 0.9cm to the phantom are provided for verifying the SAR compliance when user is away from DUT and proximity sensor deactivated. 0.7cm and 0.9cm test results are for confirming operation of the power reduction scheme, and are not applicable for compliance demonstration for the FCC tablet PC SAR test procedures.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003 and FCC OET Bulletin 65 Supplement C (Edition 01-01).

## **2 Administration Data**

### **2.1 Testing Laboratory**

|                           |                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL (KUNSHAN) INC.                                                                             |
| <b>Test Site Location</b> | No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.<br>TEL: +86-0512-5790-0158<br>FAX: +86-0512-5790-0958 |

### **2.2 Applicant**

|                     |                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Company Name</b> | ZTE CORPORATION                                                                                                   |
| <b>Address</b>      | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,<br>Nanshan District, Shenzhen, Guangdong, 518057, P.R.China |

### **2.3 Manufacturer**

|                     |                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Company Name</b> | ZTE CORPORATION                                                                                                   |
| <b>Address</b>      | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,<br>Nanshan District, Shenzhen, Guangdong, 518057, P.R.China |

### **2.4 Application Details**

|                                       |               |
|---------------------------------------|---------------|
| <b>Date of Receipt of Application</b> | Oct. 18, 2011 |
| <b>Date of Start during the Test</b>  | Oct. 26, 2011 |
| <b>Date of End during the Test</b>    | Oct. 28, 2011 |

### 3 General Information

#### 3.1 Description of Device Under Test (DUT)

| Product Feature & Specification |                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DUT Type                        | CDMA/LTE 7 inch Tablet                                                                                                                                                                                                                                                                                                                                                                                |
| Brand Name                      | ZTE                                                                                                                                                                                                                                                                                                                                                                                                   |
| Model Name                      | V66                                                                                                                                                                                                                                                                                                                                                                                                   |
| FCC ID                          | Q78-V66                                                                                                                                                                                                                                                                                                                                                                                               |
| Tx Frequency                    | CDMA2000 BC0 : 824.70 MHz ~ 848.31 MHz<br>CDMA2000 BC1 : 1815.25 MHz ~ 1908.75 MHz<br>LTE Band 13 : 777 MHz ~ 787 MHz<br>802.11b/g/n : 2400 MHz ~ 2483.5 MHz<br>802.11a/n : 5150 MHz ~ 5250 MHz; 5725 MHz ~ 5825 MHz<br>Bluetooth : 2400 MHz ~ 2483.5 MHz                                                                                                                                             |
| Rx Frequency                    | CDMA2000 BC0 : 869.70 MHz ~ 893.31 MHz<br>CDMA2000 BC1 : 1931.25 MHz ~ 1988.75 MHz<br>LTE Band 13 : 746 MHz ~ 756 MHz<br>802.11b/g/n : 2400 MHz ~ 2483.5 MHz<br>802.11a/n : 5150 MHz ~ 5250 MHz; 5725 MHz ~ 5825 MHz<br>Bluetooth : 2400 MHz ~ 2483.5 MHz                                                                                                                                             |
| Maximum Output Power to Antenna | <1xRTT (Diversity Ant.)><br>CDMA2000 BC0 : 23.56 dBm<br>CDMA2000 BC1 : 23.35 dBm<br><1xEV-DO & LTE (Main Ant.)><br>CDMA2000 BC0 : 23.78 dBm<br>CDMA2000 BC1 : 23.57 dBm<br>LTE Band 13 : 23.30 dBm<br><WLAN Antenna><br>802.11b : 13.57 dBm<br>802.11g : 13.67 dBm<br>802.11n (BW 20MHz) (2.4GHz) : 14.56 dBm<br>802.11a : 10.41 dBm<br>802.11n (BW 20MHz) (5GHz) : 10.06 dBm<br>Bluetooth : 2.59 dBm |
| Antenna Type                    | CDMA2000 1xRTT: PIFA Antenna<br>CDMA2000 1xEV-DO & LTE : PIFA Antenna<br>WLAN/Bluetooth : PIFA Antenna                                                                                                                                                                                                                                                                                                |
| HW Version                      | 110601                                                                                                                                                                                                                                                                                                                                                                                                |
| SW Version                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                   |
| Type of Modulation              | CDMA2000 : QPSK<br>LTE : QPSK, 16QAM (Uplink)<br>802.11b : DSSS (BPSK / QPSK / CCK)<br>802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>Bluetooth (1Mbps) : GFSK<br>Bluetooth EDR (2Mbps) : $\pi/4$ -DQPSK<br>Bluetooth EDR (3Mbps) : 8-DPSK                                                                                                                                                       |
| DUT Stage                       | Identical Prototype                                                                                                                                                                                                                                                                                                                                                                                   |

**Remark:**

1. Voice Call not supported
2. The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

**The table below summarized necessary items addressed in KDB 941225 D05 v01.**

The table below summarizes necessary information addressed in FCC E-FILED DoC 1011.

|                                                                                                     |                                                                                   |                                                                                                  |                  |                 |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------|-----------------|
| FCC ID                                                                                              | Q78-V66                                                                           |                                                                                                  |                  |                 |
| DUT Type                                                                                            | CDMA/LTE 7 inch TABLET                                                            |                                                                                                  |                  |                 |
| Operating Frequency Range of each LTE transmission band                                             | Band 13: TX: 777 ~ 787 MHz, RX: 746~ 756 MHz                                      |                                                                                                  |                  |                 |
| Channel Bandwidth                                                                                   | 5MHz, 10MHz                                                                       |                                                                                                  |                  |                 |
| Transmission (H, M, L) channel numbers and frequencies in each LTE band                             | Band 13:                                                                          |                                                                                                  |                  |                 |
|                                                                                                     | Bandwidth 5 MHz                                                                   |                                                                                                  | Bandwidth 10 MHz |                 |
|                                                                                                     | Channel #                                                                         | Frequency (MHz)                                                                                  | Channel #        | Frequency (MHz) |
|                                                                                                     | 23205                                                                             | 779.5                                                                                            | 23230            | 782             |
|                                                                                                     | 23230                                                                             | 782                                                                                              |                  |                 |
|                                                                                                     | 23255                                                                             | 784.5                                                                                            |                  |                 |
| UE category, uplink modulations used                                                                | Category 3, QPSK, and 16QAM                                                       |                                                                                                  |                  |                 |
| LTE transmitter and antenna implementation (stand-alone or sharing hardware components / antennas ) | Main antenna: LTE share the antenna with CDMA2000 1xEV-DO.                        |                                                                                                  |                  |                 |
| LTE Voice / Data requirements                                                                       | Data only                                                                         |                                                                                                  |                  |                 |
| LTE MPR permanently built-in by design                                                              | Yes                                                                               |                                                                                                  |                  |                 |
| LTE A-MPR                                                                                           | Disabled during SAR testing. With CMW500, set NS value to NS_01 to disable A-MPR. |                                                                                                  |                  |                 |
| LTE maximum averaged conducted output power                                                         | LTE Band 13 : 23.30 dBm                                                           |                                                                                                  |                  |                 |
| Other U.S. wireless operating modes / bands                                                         | CDMA2000 1xRTT                                                                    | BC 0: UL:869.7~893.31MHz/DL:824.7~848.31MHz<br>BC 1: UL:1931.25~1988.75MHz/DL:1815.25~1908.75MHz |                  |                 |
|                                                                                                     | CDMA2000 1xEV-DO                                                                  | BC 0: UL:869.7~893.31MHz/DL:824.7~848.31MHz<br>BC 1: UL:1931.25~1988.75MHz/DL:1815.25~1908.75MHz |                  |                 |
|                                                                                                     | WLAN                                                                              | 2.4G: 2400 MHz ~ 2483.5 MHz<br>5G: 5150 MHz ~ 5250 MHz; 5725 MHz ~ 5825 MHz                      |                  |                 |
|                                                                                                     | Bluetooth                                                                         | 2400 MHz ~ 2483.5 MHz                                                                            |                  |                 |
| Simultaneous transmission configurations                                                            | In Section 12.3                                                                   |                                                                                                  |                  |                 |
| Power reduction applied to satisfy SAR compliance                                                   | No                                                                                |                                                                                                  |                  |                 |

### **3.2 Product Photos**

Please refer to Appendix D

### **3.3 Applied Standards**

The Specific Absorption Rate (SAR) testing specification, method and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- IEEE C95.1-1991
- IEEE 1528-2003
- FCC OET Bulletin 65 Supplement C (Edition 01-01)
- FCC KDB 616217 D03 v01
- FCC KDB 941225 D01 v01
- FCC KDB 941225 D05 v01
- FCC KDB 447498 D01 v04
- FCC KDB 248227 D01 v01r02

### **3.4 Device Category and SAR Limits**

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

### **3.5 Test Conditions**

#### **3.5.1 Ambient Condition**

|                            |             |
|----------------------------|-------------|
| <b>Ambient Temperature</b> | 20 to 24 °C |
| <b>Humidity</b>            | < 60 %      |

#### **3.5.2 Test Configuration**

For WWAN SAR testing, the DUT is in CDMA2000 and LTE link mode. The device was controlled by using a base station emulator. Communication between the device and the emulator was established by air link. The distance between the DUT and the antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of DUT. The DUT was set from the emulator to radiate maximum output power during all tests.

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal. This RF signal utilized in SAR measurement has almost 100% duty cycle and its crest factor is 1.

The DUT implements power reduction scheme for SAR compliance, for specific device configuration and orientations, as described below. The complete description of the implementation and functionality is provided in the "SAR Technical Description" exhibit.

**Power reduction applied for each wireless mode and orientation**

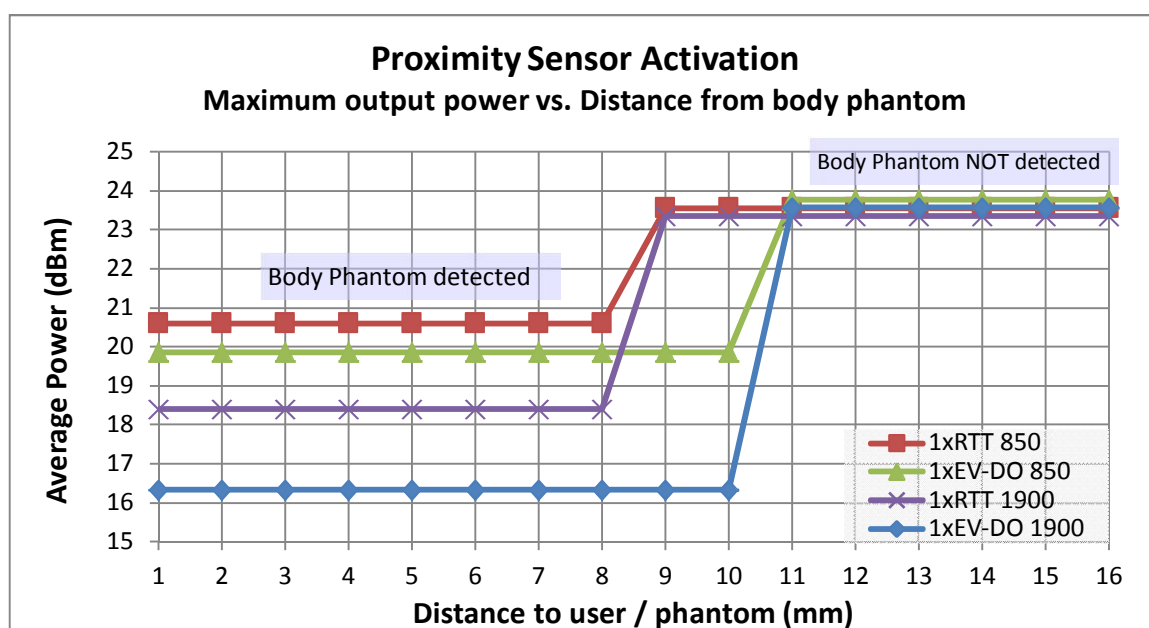
| Display Orientation/<br>wireless mode | 1xRTT<br>850 | 1xRTT<br>1900 | 1xEV-DO<br>850 | 1xEV-DO<br>1900 | LTE<br>Band 13 | WLAN | BT |
|---------------------------------------|--------------|---------------|----------------|-----------------|----------------|------|----|
| Secondary Landscape                   | *            | *             | #              | #               | #              | -    | -  |
| Primary Landscape                     | #            | #             | #              | #               | #              | -    | -  |
| Secondary Portrait                    | #            | #             | *              | *               | *              | -    | -  |
| Primary Portrait                      | *            | *             | #              | #               | #              | -    | -  |

# Reduced maximum limit applied only by activation of proximity sensor.  
 \* Reduced maximum limit applied by default.

**Remark:** WLAN and Bluetooth output power are not reduced for SAR compliance

**Target Power reduction specifications:**

| Mode(s) of Operation   | 1xRTT<br>850 | 1xRTT<br>1900 | 1xEV-DO<br>850 | 1xEV-DO<br>1900 | LTE<br>Band 13 |
|------------------------|--------------|---------------|----------------|-----------------|----------------|
| Target Reduction Level | 3 dB         | 5 dB          | 4 dB           | 7 dB            | 3 dB           |


**Remark:**

1. DUT is Tablet not supporting voice function, and 1xRTT (data transmission) and LTE/Ev-Do cannot transmit simultaneously. It is also described in "Operational Description" exhibit.
2. For CDMA BC0, 1xRTT, CH 384, Full power: 23.56dBm, Reduced power: 20.60dBm. The power reduction level is 2.96dB.
3. For CDMA BC0, 1xEVDO, CH 384 Full power: 23.78dBm, Reduced power: 19.86dBm. The power reduction level is 3.92dB.
4. For CDMA BC1, 1xRTT, CH 25, Full power: 23.35dBm, Reduced power: 18.40dBm. The power reduction level is 4.95dB.
5. For CDMA BC1, 1xEVDO, CH 1175 Full power: 23.57dBm, Reduced power: 16.33dBm. The power reduction level is 7.24dB.

## **4 Specific Absorption Rate (SAR)**

### **4.1 Introduction**

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

### **4.2 SAR Definition**

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

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

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

SAR measurement can be either related to the temperature elevation in tissue by

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

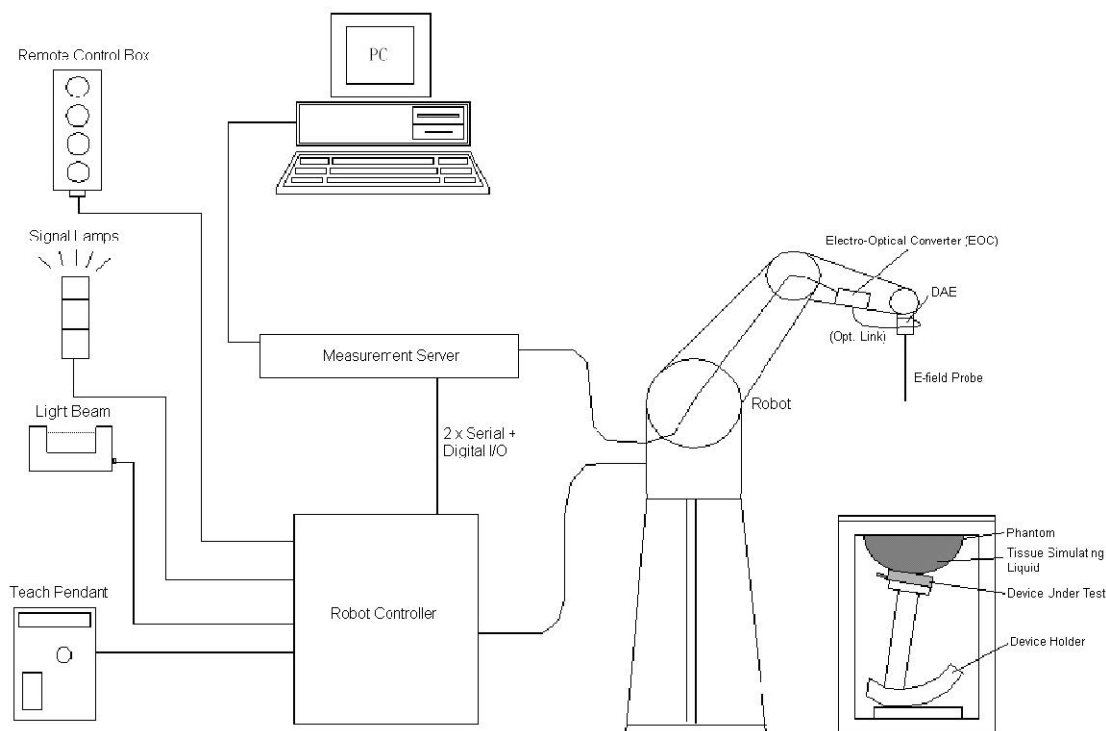
Where: C is the specific heat capacity,  $\delta T$  is the temperature rise and  $\delta t$  is the exposure duration, or related to the electrical field in the tissue by

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

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

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

## 5 SAR Measurement System



**Fig 5.1 SPEAG DASY5 System Configurations**

The DASY5 system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASY5 software
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

Some of the components are described in details in the following sub-sections.

## 5.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

### 5.1.1 E-Field Probe Specification

#### <ET3DV6 Probe >

|                      |                                                                                                                                                                                                                      |                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Construction</b>  | Symmetrical design with triangular core<br>Built-in optical fiber for surface detection system.<br>Built-in shielding against static charges.<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |  |
| <b>Frequency</b>     | 10 MHz to 3 GHz; Linearity: $\pm 0.2$ dB                                                                                                                                                                             |                                                                                      |
| <b>Directivity</b>   | $\pm 0.2$ dB in HSL (rotation around probe axis)<br>$\pm 0.4$ dB in HSL (rotation normal to probe axis)                                                                                                              |                                                                                      |
| <b>Dynamic Range</b> | 5 $\mu$ W/g to 100 mW/g; Linearity: $\pm 0.2$ dB                                                                                                                                                                     |                                                                                      |
| <b>Dimensions</b>    | Overall length: 330 mm (Tip: 16 mm)<br>Tip diameter: 6.8 mm (Body: 12 mm)<br>Distance from probe tip to dipole centers: 2.7 mm                                                                                       |                                                                                      |

**Fig 5.2 Photo of ET3DV6**

#### <EX3DV4 Probe>

|                      |                                                                                                                                                             |                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Construction</b>  | Symmetrical design with triangular core<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |  |
| <b>Frequency</b>     | 10 MHz to 6 GHz; Linearity: $\pm 0.2$ dB                                                                                                                    |                                                                                       |
| <b>Directivity</b>   | $\pm 0.3$ dB in HSL (rotation around probe axis)<br>$\pm 0.5$ dB in tissue material (rotation normal to probe axis)                                         |                                                                                       |
| <b>Dynamic Range</b> | 10 $\mu$ W/g to 100 mW/g; Linearity: $\pm 0.2$ dB<br>(noise: typically $< 1$ $\mu$ W/g)                                                                     |                                                                                       |
| <b>Dimensions</b>    | Overall length: 330 mm (Tip: 20 mm)<br>Tip diameter: 2.5 mm (Body: 12 mm)<br>Typical distance from probe tip to dipole centers: 1 mm                        |                                                                                       |

**Fig 5.3 Photo of EX3DV4**

### **5.1.2 E-Field Probe Calibration**

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than  $\pm 10\%$ . The spherical isotropy shall be evaluated and within  $\pm 0.25$  dB. The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix C of this report.

### **5.2 Data Acquisition Electronics (DAE)**

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



**Fig 5.4 Photo of DAE**

### **5.3 Robot**

The SPEAG DASY system uses the high precision robots (DASY5: TX90XL) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability  $\pm 0.035$  mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)



**Fig 5.5 Photo of DASY5**

## 5.4 Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128 MB), RAM (DASY5: 128 MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.



**Fig 5.1 Photo of Server for DASY5**

## 5.5 Phantom

### <SAM Twin Phantom>

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| <b>Shell Thickness</b>   | 2 ± 0.2 mm;<br>Center ear point: 6 ± 0.2 mm                |
| <b>Filling Volume</b>    | Approx. 25 liters                                          |
| <b>Dimensions</b>        | Length: 1000 mm; Width: 500 mm;<br>Height: adjustable feet |
| <b>Measurement Areas</b> | Left Hand, Right Hand, Flat Phantom                        |

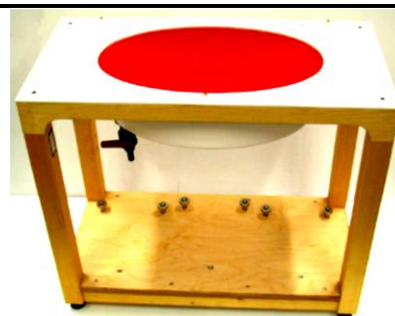


**Fig 5.2 Photo of SAM Phantom**

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

**<ELI4 Phantom>**

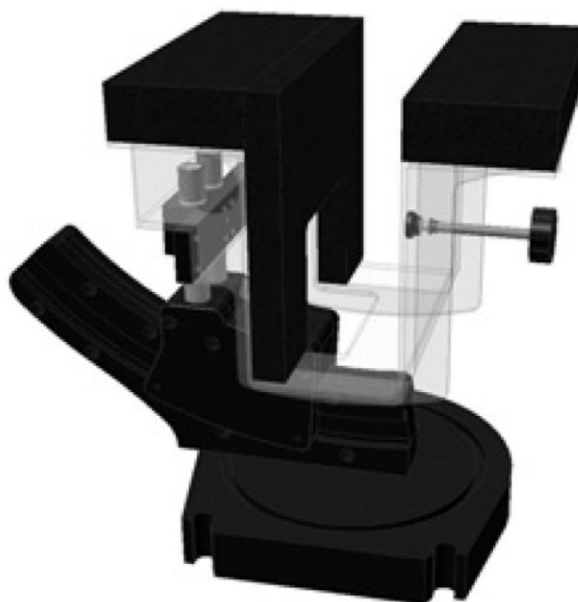
|                        |                                                  |
|------------------------|--------------------------------------------------|
| <b>Shell Thickness</b> | 2 ± 0.2 mm (sagging: <1%)                        |
| <b>Filling Volume</b>  | Approx. 30 liters                                |
| <b>Dimensions</b>      | Major ellipse axis: 600 mm<br>Minor axis: 400 mm |


**Fig 5.3 Photo of ELI4 Phantom**

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

**5.6 Device Holder**
**<Laptop Extension Kit>**

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.


**Fig 5.4 Laptop Extension Kit**

## 5.7 Data Storage and Evaluation

### 5.7.1 Data Storage

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files. The post-processing 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 erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

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

### 5.7.2 Data Evaluation

The DASY post-processing software (SEMCAD) 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 :

|                            |                           |                                                                         |
|----------------------------|---------------------------|-------------------------------------------------------------------------|
| <b>Probe parameters :</b>  | - Sensitivity             | Norm <sub>i</sub> , a <sub>i0</sub> , a <sub>i1</sub> , a <sub>i2</sub> |
|                            | - Conversion factor       | ConvF <sub>i</sub>                                                      |
|                            | - Diode compression point | dcp <sub>i</sub>                                                        |
| <b>Device parameters :</b> | - Frequency               | f                                                                       |
|                            | - Crest factor            | cf                                                                      |
| <b>Media parameters :</b>  | - Conductivity            | σ                                                                       |
|                            | - Density                 | ρ                                                                       |

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 DASY components. In the direct measuring mode of the multi-meter 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 :

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

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 :

$$\text{E-field Probes : } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

$$\text{H-field Probes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

with  $V_i$  = compensated signal of channel i, (i = x, y, z)  
 $\text{Norm}_i$  = sensor sensitivity of channel i, (i = x, y, z),  $\mu\text{V}/(\text{V/m})^2$  for E-field Probes  
 $\text{ConvF}$  = 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) :

$$E_{\text{tot}} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

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

$$\text{SAR} = E_{\text{tot}}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with  $\text{SAR}$  = local specific absorption rate in mW/g  
 $E_{\text{tot}}$  = total field strength in V/m  
 $\sigma$  = conductivity in [mho/m] or [Siemens/m]  
 $\rho$  = equivalent tissue density in  $\text{g/cm}^3$

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

### 5.8 Test Equipment List

| Manufacturer | Name of Equipment               | Type/Model    | Serial Number | Calibration   |               |
|--------------|---------------------------------|---------------|---------------|---------------|---------------|
|              |                                 |               |               | Last Cal.     | Due Date      |
| SPEAG        | Dosimetric E-Field Probe        | ET3DV6        | 1787          | May. 20, 2011 | May. 19, 2012 |
| SPEAG        | Dosimetric E-Field Probe        | EX3DV4        | 3697          | Sep. 02, 2011 | Sep.01, 2012  |
| SPEAG        | Data Acquisition Electronics    | DAE4          | 1210          | Nov. 18, 2010 | Nov. 17, 2011 |
| SPEAG        | 750MHz System Validation Kit    | D750V3        | 1012          | Jun. 11, 2010 | Jun. 10, 2012 |
| SPEAG        | 835MHz System Validation Kit    | D835V2        | 4d091         | Nov. 23, 2009 | Nov. 21, 2011 |
| SPEAG        | 1900MHz System Validation Kit   | D1900V2       | 5d118         | Nov. 24, 2009 | Nov. 22, 2011 |
| SPEAG        | 2450MHz System Validation Kit   | D2450V2       | 840           | Mar. 18, 2010 | Mar. 16, 2012 |
| SPEAG        | 5GHz System Validation Kit      | D5GHzV2       | 1040          | Jun. 21, 2011 | Jun. 20, 2012 |
| SPEAG        | ELI4 Phantom                    | QD OVA 001 BB | 1079          | NCR           | NCR           |
| Agilent      | ENA Series Network Analyzer     | E5071C        | MY46111157    | Apr. 07, 2011 | Apr. 06, 2012 |
| Agilent      | Wireless Communication Test Set | E5515C        | MY50264165    | Mar. 30, 2011 | Mar. 29, 2012 |
| Agilent      | Dielectric Probe Kit            | 85070E        | MY44300475    | NCR           | NCR           |
| Agilent      | Base Station                    | E5515C        | GB47050646    | Aug. 18, 2011 | Aug. 17, 2012 |
| AR           | Amplifier                       | 551G4         | 333096        | NCR           | NCR           |
| R&S          | Spectrum Analyzer               | FSP30         | 101400        | Jun. 02, 2011 | Jun. 01, 2012 |
| R&S          | Signal Generator                | SMR40         | 100455        | Jan. 06, 2011 | Jan. 05, 2012 |

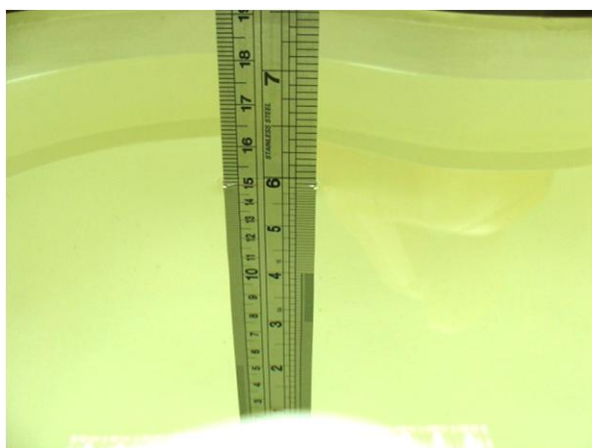
**Table 5.1 Test Equipment List**

**Note:**

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB450824 D02, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D835V2, SN: 4d091, D1900V2, SN: 5d118, D2450V2, SN: 840, can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

## 6 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.2.



**Fig 6.1 Photo of Liquid Height for Head SAR**



**Fig 6.2 Photo of Liquid Height for Body SAR**

The following table gives the recipes for tissue simulating liquid.

| Frequency<br>(MHz) | Water<br>(%) | Sugar<br>(%) | Cellulose<br>(%) | Salt<br>(%) | Preventol<br>(%) | DGBE<br>(%) | Conductivity<br>( $\sigma$ ) | Permittivity<br>( $\epsilon_r$ ) |
|--------------------|--------------|--------------|------------------|-------------|------------------|-------------|------------------------------|----------------------------------|
| <b>For Head</b>    |              |              |                  |             |                  |             |                              |                                  |
| 835                | 40.3         | 57.9         | 0.2              | 1.4         | 0.2              | 0           | 0.90                         | 41.5                             |
| 1800, 1900, 2000   | 55.2         | 0            | 0                | 0.3         | 0                | 44.5        | 1.40                         | 40.0                             |
| 2450               | 55.0         | 0            | 0                | 0           | 0                | 45.0        | 1.80                         | 39.2                             |
| <b>For Body</b>    |              |              |                  |             |                  |             |                              |                                  |
| 835                | 50.8         | 48.2         | 0                | 0.9         | 0.1              | 0           | 0.97                         | 55.2                             |
| 1800, 1900, 2000   | 70.2         | 0            | 0                | 0.4         | 0                | 29.4        | 1.52                         | 53.3                             |
| 2450               | 68.6         | 0            | 0                | 0           | 0                | 31.4        | 1.95                         | 52.7                             |

**Table 6.1 Recipes of Tissue Simulating Liquid**

### Simulating Liquid for 5G, Manufactured by SPEAG

| Ingredients        | (% by weight) |
|--------------------|---------------|
| Water              | 64~78%        |
| Mineral oil        | 11~18%        |
| Emulsifiers        | 9~15%         |
| Additives and Salt | 2~3%          |

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an Agilent 85070D Dielectric Probe Kit and an Agilent Network Analyzer.

The following table shows the measuring results for simulating liquid.

| Freq. (MHz) | Liquid Type | Temp. (°C) | Conductivity ( $\sigma$ ) | Permittivity ( $\epsilon_r$ ) | Conductivity Target ( $\sigma$ ) | Permittivity Target ( $\epsilon_r$ ) | Delta ( $\sigma$ ) (%) | Delta ( $\epsilon_r$ ) (%) | Limit (%) | Date          |
|-------------|-------------|------------|---------------------------|-------------------------------|----------------------------------|--------------------------------------|------------------------|----------------------------|-----------|---------------|
| 750         | Body        | 21.6       | 0.970                     | 54.642                        | 0.96                             | 55.5                                 | 1.04                   | -1.55                      | ±5        | Oct. 28, 2011 |
| 835         | Body        | 21.6       | 0.974                     | 54.204                        | 0.97                             | 55.2                                 | 0.41                   | -1.80                      | ±5        | Oct. 27, 2011 |
| 1900        | Body        | 21.4       | 1.532                     | 52.397                        | 1.52                             | 53.3                                 | 0.79                   | -1.69                      | ±5        | Oct. 26, 2011 |
| 2450        | Body        | 21.3       | 2.002                     | 53.464                        | 1.95                             | 52.7                                 | 2.67                   | 1.45                       | ±5        | Oct. 28, 2011 |
| 5200        | Body        | 21.3       | 5.264                     | 48.303                        | 5.30                             | 49.0                                 | -0.68                  | -1.42                      | ±5        | Oct. 28, 2011 |
| 5800        | Body        | 21.3       | 6.096                     | 46.929                        | 6.00                             | 48.2                                 | 1.60                   | -2.64                      | ±5        | Oct. 28, 2011 |

**Table 6.2 Measuring Results for Simulating Liquid**

| Freq. (MHz) | Liquid Type | Conductivity ( $\sigma$ ) | Permittivity ( $\epsilon_r$ ) | Conductivity Target ( $\sigma$ ) | Permittivity Target ( $\epsilon_r$ ) | Delta ( $\sigma$ ) (%) | Delta ( $\epsilon_r$ ) (%) | Limit (%) | Date          |
|-------------|-------------|---------------------------|-------------------------------|----------------------------------|--------------------------------------|------------------------|----------------------------|-----------|---------------|
| 782         | Body        | 0.996                     | 53.964                        | 0.96                             | 55.4                                 | 3.75                   | -2.59                      | ±5        | Oct. 28, 2011 |
| 824.7       | Body        | 0.964                     | 54.282                        | 0.97                             | 55.2                                 | -0.62                  | -1.66                      | ±5        | Oct. 27, 2011 |
| 836.52      | Body        | 0.976                     | 54.184                        | 0.97                             | 55.2                                 | 0.62                   | -1.84                      | ±5        | Oct. 27, 2011 |
| 848.31      | Body        | 0.987                     | 54.083                        | 0.99                             | 55.2                                 | -0.30                  | -2.02                      | ±5        | Oct. 27, 2011 |
| 1851.25     | Body        | 1.476                     | 52.574                        | 1.51                             | 53.3                                 | -2.25                  | -1.36                      | ±5        | Oct. 26, 2011 |
| 1880        | Body        | 1.509                     | 52.468                        | 1.52                             | 53.3                                 | -0.72                  | -1.56                      | ±5        | Oct. 26, 2011 |
| 1908.75     | Body        | 1.542                     | 52.376                        | 1.52                             | 53.3                                 | 1.45                   | -1.73                      | ±5        | Oct. 26, 2011 |
| 2412        | Body        | 1.933                     | 53.535                        | 1.90                             | 52.7                                 | 1.74                   | 1.58                       | ±5        | Oct. 28, 2011 |
| 2437        | Body        | 1.981                     | 53.535                        | 1.93                             | 52.7                                 | 2.64                   | 1.58                       | ±5        | Oct. 28, 2011 |
| 2462        | Body        | 2.027                     | 53.408                        | 1.97                             | 52.7                                 | 2.89                   | 1.34                       | ±5        | Oct. 28, 2011 |
| 5180        | Body        | 5.235                     | 48.348                        | 5.28                             | 49.0                                 | -0.85                  | -1.33                      | ±5        | Oct. 28, 2011 |
| 5200        | Body        | 5.261                     | 48.346                        | 5.30                             | 49.0                                 | -0.74                  | -1.33                      | ±5        | Oct. 28, 2011 |
| 5220        | Body        | 5.313                     | 48.341                        | 5.32                             | 49.0                                 | -0.13                  | -1.34                      | ±5        | Oct. 28, 2011 |
| 5240        | Body        | 5.330                     | 48.244                        | 5.35                             | 49.0                                 | -0.37                  | -1.54                      | ±5        | Oct. 28, 2011 |
| 5745        | Body        | 6.035                     | 47.138                        | 5.94                             | 48.3                                 | 1.60                   | -2.41                      | ±5        | Oct. 28, 2011 |
| 5765        | Body        | 6.062                     | 47.721                        | 5.94                             | 48.3                                 | 2.05                   | -1.20                      | ±5        | Oct. 28, 2011 |
| 5785        | Body        | 6.081                     | 46.991                        | 5.96                             | 48.2                                 | 2.03                   | -2.51                      | ±5        | Oct. 28, 2011 |
| 5805        | Body        | 6.112                     | 46.933                        | 5.98                             | 48.2                                 | 2.21                   | -2.63                      | ±5        | Oct. 28, 2011 |

**Table 6.3 Low/Middle/High Channel for Liquid Validation**

## **7 Uncertainty Assessment**

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table 7.1

| <b>Uncertainty Distributions</b>   | <b>Normal</b> | <b>Rectangular</b> | <b>Triangular</b> | <b>U-Shape</b> |
|------------------------------------|---------------|--------------------|-------------------|----------------|
| Multi-plying Factor <sup>(a)</sup> | $1/k^{(b)}$   | $1/\sqrt{3}$       | $1/\sqrt{6}$      | $1/\sqrt{2}$   |

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b)  $k$  is the coverage factor

**Table 7.1 Standard Uncertainty for Assumed Distribution**

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is showed in Table 7.2.

| Error Description                    | Uncertainty Value (±%) | Probability Distribution | Divisor | Ci (1g) | Standard Uncertainty (1g) |
|--------------------------------------|------------------------|--------------------------|---------|---------|---------------------------|
| <b>Measurement System</b>            |                        |                          |         |         |                           |
| Probe Calibration                    | 6.0                    | Normal                   | 1       | 1       | ± 6.0 %                   |
| Axial Isotropy                       | 4.7                    | Rectangular              | √3      | 0.7     | ± 1.9 %                   |
| Hemispherical Isotropy               | 9.6                    | Rectangular              | √3      | 0.7     | ± 3.9 %                   |
| Boundary Effects                     | 1.0                    | Rectangular              | √3      | 1       | ± 0.6 %                   |
| Linearity                            | 4.7                    | Rectangular              | √3      | 1       | ± 2.7 %                   |
| System Detection Limits              | 1.0                    | Rectangular              | √3      | 1       | ± 0.6 %                   |
| Readout Electronics                  | 0.3                    | Normal                   | 1       | 1       | ± 0.3 %                   |
| Response Time                        | 0.8                    | Rectangular              | √3      | 1       | ± 0.5 %                   |
| Integration Time                     | 2.6                    | Rectangular              | √3      | 1       | ± 1.5 %                   |
| RF Ambient Noise                     | 3.0                    | Rectangular              | √3      | 1       | ± 1.7 %                   |
| RF Ambient Reflections               | 3.0                    | Rectangular              | √3      | 1       | ± 1.7 %                   |
| Probe Positioner                     | 0.4                    | Rectangular              | √3      | 1       | ± 0.2 %                   |
| Probe Positioning                    | 2.9                    | Rectangular              | √3      | 1       | ± 1.7 %                   |
| Max. SAR Eval.                       | 1.0                    | Rectangular              | √3      | 1       | ± 0.6 %                   |
| <b>Test Sample Related</b>           |                        |                          |         |         |                           |
| Device Positioning                   | 2.9                    | Normal                   | 1       | 1       | ± 2.9 %                   |
| Device Holder                        | 3.6                    | Normal                   | 1       | 1       | ± 3.6 %                   |
| Power Drift                          | 5.0                    | Rectangular              | √3      | 1       | ± 2.9 %                   |
| <b>Phantom and Setup</b>             |                        |                          |         |         |                           |
| Phantom Uncertainty                  | 4.0                    | Rectangular              | √3      | 1       | ± 2.3 %                   |
| Liquid Conductivity (Target)         | 5.0                    | Rectangular              | √3      | 0.64    | ± 1.8 %                   |
| Liquid Conductivity (Meas.)          | 2.5                    | Normal                   | 1       | 0.64    | ± 1.6 %                   |
| Liquid Permittivity (Target)         | 5.0                    | Rectangular              | √3      | 0.6     | ± 1.7 %                   |
| Liquid Permittivity (Meas.)          | 2.5                    | Normal                   | 1       | 0.6     | ± 1.5 %                   |
| <b>Combined Standard Uncertainty</b> |                        |                          |         |         | ± 11.0%                   |
| <b>Coverage Factor for 95 %</b>      |                        |                          |         |         | K = 2                     |
| <b>Expanded Uncertainty</b>          |                        |                          |         |         | ± 22.0 %                  |

**Table 7.2 Uncertainty Budget of DASY for frequency range 300 MHz to 3 GHz**

| Error Description                    | Uncertainty Value (±%) | Probability Distribution | Divisor    | Ci (1g) | Standard Uncertainty (1g) |
|--------------------------------------|------------------------|--------------------------|------------|---------|---------------------------|
| <b>Measurement System</b>            |                        |                          |            |         |                           |
| Probe Calibration                    | 6.55                   | Normal                   | 1          | 1       | ± 6.55 %                  |
| Axial Isotropy                       | 4.7                    | Rectangular              | $\sqrt{3}$ | 0.7     | ± 1.9 %                   |
| Hemispherical Isotropy               | 9.6                    | Rectangular              | $\sqrt{3}$ | 0.7     | ± 3.9 %                   |
| Boundary Effects                     | 2.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 1.2 %                   |
| Linearity                            | 4.7                    | Rectangular              | $\sqrt{3}$ | 1       | ± 2.7 %                   |
| System Detection Limits              | 1.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 0.6 %                   |
| Readout Electronics                  | 0.3                    | Normal                   | 1          | 1       | ± 0.3 %                   |
| Response Time                        | 0.8                    | Rectangular              | $\sqrt{3}$ | 1       | ± 0.5 %                   |
| Integration Time                     | 2.6                    | Rectangular              | $\sqrt{3}$ | 1       | ± 1.5 %                   |
| RF Ambient Noise                     | 3.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 1.7 %                   |
| RF Ambient Reflections               | 3.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 1.7 %                   |
| Probe Positioner                     | 0.8                    | Rectangular              | $\sqrt{3}$ | 1       | ± 0.5 %                   |
| Probe Positioning                    | 9.9                    | Rectangular              | $\sqrt{3}$ | 1       | ± 5.7 %                   |
| Max. SAR Eval.                       | 4.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 2.3 %                   |
| <b>Test Sample Related</b>           |                        |                          |            |         |                           |
| Device Positioning                   | 2.9                    | Normal                   | 1          | 1       | ± 2.9 %                   |
| Device Holder                        | 3.6                    | Normal                   | 1          | 1       | ± 3.6 %                   |
| Power Drift                          | 5.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 2.9 %                   |
| <b>Phantom and Setup</b>             |                        |                          |            |         |                           |
| Phantom Uncertainty                  | 4.0                    | Rectangular              | $\sqrt{3}$ | 1       | ± 2.3 %                   |
| Liquid Conductivity (Target)         | 5.0                    | Rectangular              | $\sqrt{3}$ | 0.64    | ± 1.8 %                   |
| Liquid Conductivity (Meas.)          | 2.5                    | Normal                   | 1          | 0.64    | ± 1.6 %                   |
| Liquid Permittivity (Target)         | 5.0                    | Rectangular              | $\sqrt{3}$ | 0.6     | ± 1.7 %                   |
| Liquid Permittivity (Meas.)          | 2.5                    | Normal                   | 1          | 0.6     | ± 1.5 %                   |
| <b>Combined Standard Uncertainty</b> |                        |                          |            |         | ± 12.8 %                  |
| <b>Coverage Factor for 95 %</b>      |                        |                          |            |         | K = 2                     |
| <b>Expanded Uncertainty</b>          |                        |                          |            |         | ± 25.6 %                  |

**Table 7.3 Uncertainty Budget of DASY for frequency range 3 GHz to 6 GHz**

## 8 SAR Measurement Evaluation

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

### 8.1 Purpose of System Performance check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

### 8.2 System Setup

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

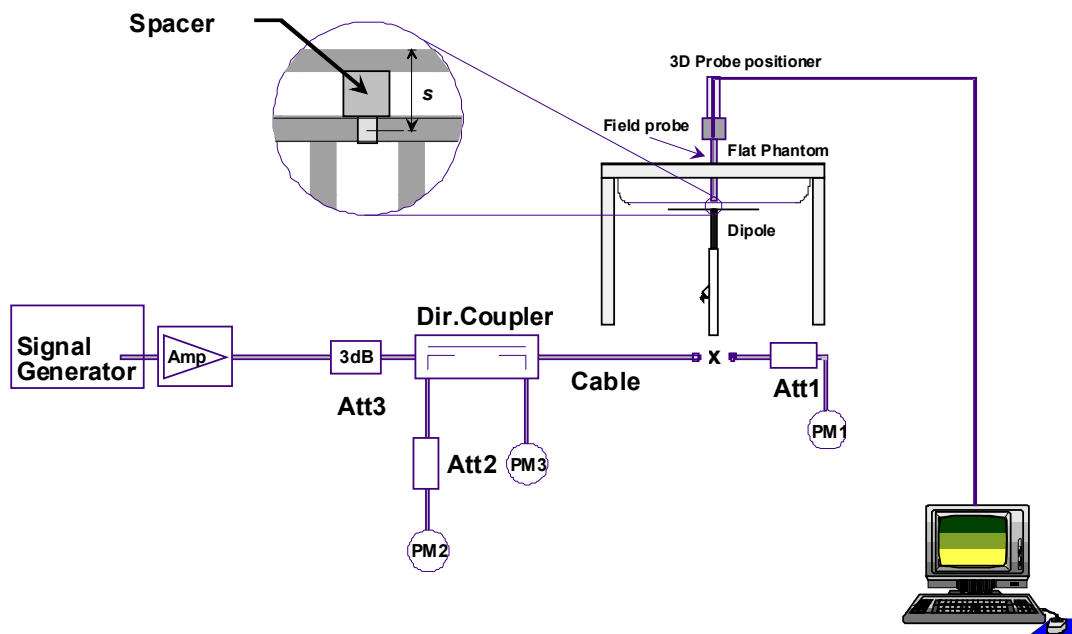
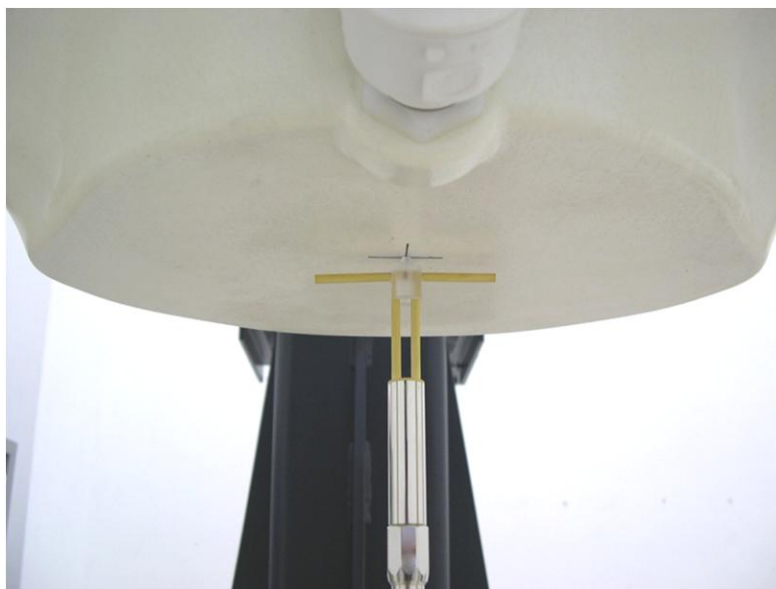


Fig 8.1 System Setup for System Evaluation

1. Signal Generator
2. Amplifier
3. Directional Coupler
4. Power Meter
5. Calibrated Dipole

The output power on dipole port must be calibrated to 24 dBm (250 mW) before dipole is connected.



**Fig 8.2 Photo of Dipole Setup**

### **8.3 Validation Results**

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 %. Table 8.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

| Measurement Date | Liquid Type | Frequency (MHz) | Targeted SAR <sub>1g</sub> (W/kg) | Measured SAR <sub>1g</sub> (W/kg) | Normalized SAR <sub>1g</sub> (W/kg) | Deviation (%) |
|------------------|-------------|-----------------|-----------------------------------|-----------------------------------|-------------------------------------|---------------|
| Oct. 28, 2011    | Body        | 750             | 8.860                             | 2.230                             | 8.92                                | 0.68          |
| Oct. 27, 2011    | Body        | 835             | 9.800                             | 2.390                             | 9.56                                | -2.45         |
| Oct. 26, 2011    | Body        | 1900            | 39.600                            | 10.600                            | 42.40                               | 7.07          |
| Oct. 28, 2011    | Body        | 2450            | 52.100                            | 13.500                            | 54.00                               | 3.65          |
| Oct. 28, 2011    | Body        | 5200            | 76.000                            | 20.600                            | 82.40                               | 8.42          |
| Oct. 28, 2011    | Body        | 5800            | 75.400                            | 19.600                            | 78.40                               | 3.98          |

**Table 8.1 Target and Measurement SAR after Normalized**

## **9 DUT Testing Position**

This DUT was tested in five different positions. They are bottom face of tablet PC, Primary Landscape, Primary Portrait, Secondary Landscape, and Secondary Portrait, in these positions, the surface of DUT is touching with phantom 0 cm or 0.7 cm or 0.9 cm gap. Please refer to Appendix E for the test setup photos.

## **10 Measurement Procedures**

The measurement procedures are as follows:

- (a) For WWAN function, link DUT with base station emulator in highest power channel
- (b) Set base station emulator to allow DUT to radiate maximum output power
- (c) For WLAN function, using engineering software to transmit RF power continuously (continuous Tx) in the highest power channel
- (d) Measure output power through RF cable and power meter
- (e) Place the DUT in the positions described in the last section
- (f) Set scan area, grid size and other setting on the DASY software
- (g) Taking data for the testing channel on each testing position
- (h) Find out the largest SAR result on these testing positions of each band
- (i) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

### **10.1 Spatial Peak SAR Evaluation**

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

### **10.2 Area & Zoom Scan Procedures**

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

### **10.3 Volume Scan Procedures**

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in stand-alone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the DUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

#### **10.4 SAR Averaged Methods**

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

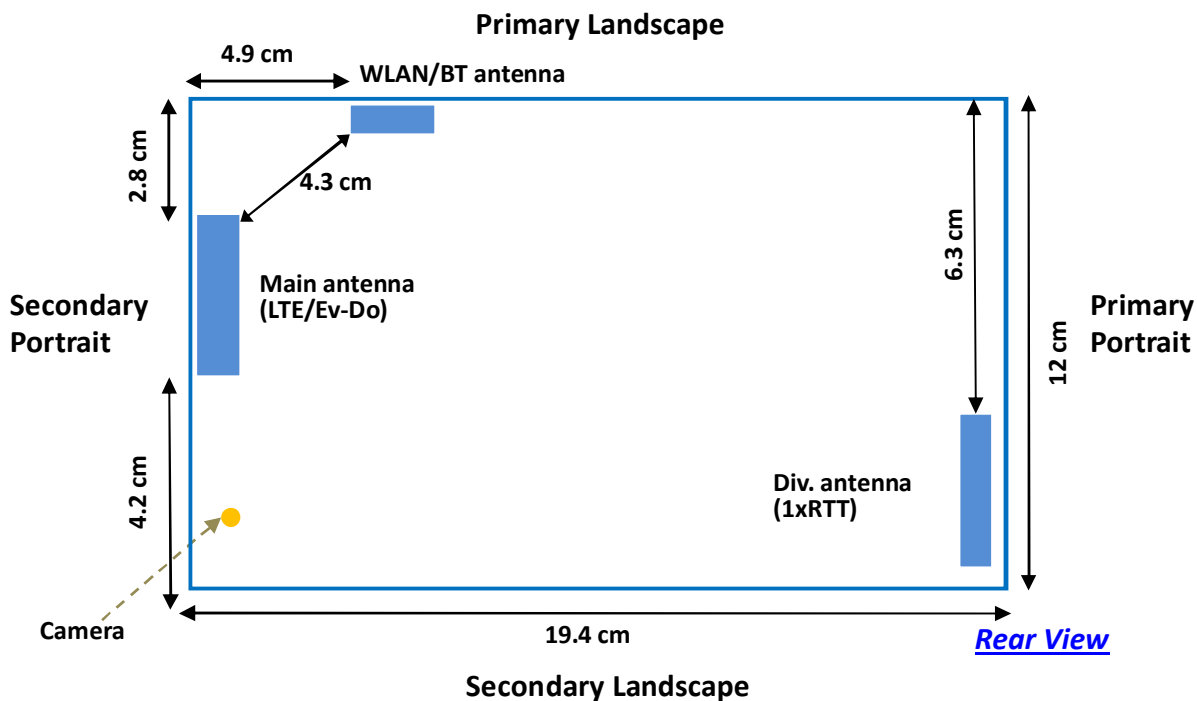
Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

#### **10.5 Power Drift Monitoring**

All SAR testing is under the DUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of DUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

## 11 SAR Test Configuration

### 11.1 Exposure Position Consideration



|                          |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|
| <b>Main antenna</b>      | CDMA2000 1xEV-DO BC0 (Tx/Rx)<br>CDMA2000 1xEV-DO BC1 (Tx/Rx)<br>LTE band 13 (Tx/Rx) |
| <b>Diversity antenna</b> | CDMA2000 1xRTT BC0 (Tx/Rx)<br>CDMA2000 1xRTT BC1 (Tx/Rx)                            |
| <b>WLAN/BT antenna</b>   | WIFI 2.4G 802.11 b/g/n<br>WIFI 5G 802.11 a/n<br>Bluetooth                           |

| Sides for SAR tests; Tablet ( > 20cm diagonal) |             |            |                   |                     |                  |                    |
|------------------------------------------------|-------------|------------|-------------------|---------------------|------------------|--------------------|
| Exposure Position                              | Bottom Face | Front Face | Primary Landscape | Secondary Landscape | Primary Portrait | Secondary Portrait |
| CDMA 1xEV-DO                                   | 0mm, 9mm    | x          | 0mm               | 0mm                 | x                | 0mm                |
| LTE                                            | 0mm, 9mm    | x          | 0mm               | 0mm                 | x                | 0mm                |
| CDMA 1xRTT                                     | 0mm, 7mm    | x          | x                 | 0mm                 | 0mm              | x                  |
| WLAN 2.4GHz 11b/g/n                            | 0mm         | x          | 0mm               | x                   | x                | 0mm                |
| WLAN 5GHz 11a/n                                | 0mm         | x          | 0mm               | x                   | x                | 0mm                |

**Note:**

1. DUT diagonal is >20cm, per KDB 447498, Tablet SAR should be tested at separation distance 0mm.
2. Per KDB 447498, LTE and CDMA 1xEV-DO SAR should be evaluated at Bottom Face. LTE and CDMA 1xEV-DO SAR should also be evaluated at Primary-Landscape/Secondary-Landscape/Secondary-Portrait positions due to the Main antenna to the user at those exposure positions is < 5cm. Per KDB 447498, Front Face and Primary-Portrait (antenna to the user >5cm) positions SAR is excluded.
3. Per KDB 447498, CDMA 1xRTT SAR should be evaluated at Bottom Face. CDMA 1xRTT SAR should also be evaluated at Secondary-Landscape/Primary-Portrait positions due to the Diversity antenna to the user at those exposure positions is < 5cm. Per KDB 447498, Front Face/Secondary-Portrait/Primary-Landscape (antenna to the user >5cm) positions SAR is excluded.
4. Per KDB 447498, WLAN SAR should be evaluated at Bottom Face. WLAN SAR should also be evaluated at Primary-Landscape position due to the WLAN antenna to the user at those exposure positions is < 5cm. Per KDB 447498, Front Face and Primary-Portrait/Secondary-Landscape/Secondary-Portrait (antenna to the user >5cm) positions SAR is excluded.
5. Per KDB 447498, since Bluetooth average power is less than 60/f (13.8dBm), standalone SAR is excluded.

## 11.2 Simultaneous Transmission Consideration

| Simultaneous Transmission                                                       |             |            |                     |                   |                  |                    |
|---------------------------------------------------------------------------------|-------------|------------|---------------------|-------------------|------------------|--------------------|
| Exposure Position                                                               | Bottom Face | Front Face | Secondary Landscape | Primary Landscape | Primary Portrait | Secondary Portrait |
| <b>CDMA 1xRTT</b><br>- With power reduction enable by P-sensor at Bottom Face   | 0mm         | x          | x                   | x                 | x                | x                  |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | x                 | x                | x                  |
| <b>CDMA 1xRTT</b><br>- With Full Power                                          | 7mm         | x          | x                   | x                 | x                | x                  |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | x                 | x                | x                  |
| <b>CDMA 1xEV-DO</b><br>- With power reduction enable by P-sensor at Bottom Face | 0mm         | x          | x                   | 0mm               | x                | 0mm                |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | 0mm               | x                | 0mm                |
| <b>CDMA 1xEV-DO</b><br>- With Full Power                                        | 9mm         | x          | x                   | x                 | x                | x                  |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | x                 | x                | x                  |
| <b>LTE</b><br>- With power reduction enable by P-sensor at Bottom Face          | 0mm         | x          | x                   | 0mm               | x                | 0mm                |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | 0mm               | x                | 0mm                |
| <b>LTE</b><br>- With Full Power                                                 | 9mm         | x          | x                   | x                 | x                | x                  |
| <b>WLAN 2.4GHz / 5GHz</b>                                                       | 0mm         | x          | x                   | x                 | x                | x                  |

**Note:**

1. DUT is Tablet not supporting voice function, and 1xRTT (data transmission) and LTE/Ev-Do cannot transmit simultaneously. It is also described in "Operational Description" exhibit.
2. For simultaneous SAR evaluation (Main Ant. + WLAN Ant.) at Bottom Face, 9mm distance, since WLAN SAR value 0mm will be worse than 9mm data; therefore 0mm WLAN SAR data is used here.
3. For simultaneous SAR evaluation (Diversity Ant. + WLAN Ant.) at Bottom Face, 7mm distance, since WLAN SAR value 0mm will be worse than 7mm data; therefore 0mm WLAN SAR data is used here.
4. Per KDB 648474, Bluetooth power is < Pref (10.8dBm) and the distance to WWAN antenna is > 2.5cm, therefore simultaneous SAR consideration can be excluded.

## 12 SAR Test Results

### 12.1 Conducted Power (Unit: dBm)

#### <CDMA2000 1xRTT (Diversity Ant.)>

| Full Power 1xRTT (Diversity Ant.) |              |        |        |              |         |         |
|-----------------------------------|--------------|--------|--------|--------------|---------|---------|
| Band                              | CDMA2000 BC0 |        |        | CDMA2000 BC1 |         |         |
| Channel                           | 1013         | 384    | 777    | 25           | 600     | 1175    |
| Frequency (MHz)                   | 824.70       | 836.52 | 848.31 | 1851.25      | 1880.00 | 1908.75 |
| 1xRTT RC3+SO32(FCH)               | 23.56        | 23.55  | 23.53  | 23.34        | 23.28   | 23.31   |
| 1xRTT RC3+SO32(FCH+SCH)           | 23.49        | 23.54  | 23.53  | 23.33        | 23.29   | 23.29   |

| Reduced Power 1xRTT (Diversity Ant.) |                    |                |                    |                |                    |                |                    |                |                    |                |                    |                |
|--------------------------------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|
| Band                                 | CDMA2000 BC0       |                |                    |                |                    |                | CDMA2000 BC1       |                |                    |                |                    |                |
| Channel                              | 1013               |                | 384                |                | 777                |                | 25                 |                | 600                |                | 1175               |                |
| Frequency (MHz)                      | 824.70             |                | 836.52             |                | 848.31             |                | 1851.25            |                | 1880.00            |                | 1908.75            |                |
|                                      | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) |
| 1xRTT RC3+SO32(FCH)                  | 20.56              | 3.00           | 20.61              | 2.94           | 20.60              | 2.93           | 18.39              | 4.95           | 18.36              | 4.92           | 18.24              | 5.07           |
| 1xRTT RC3+SO32(FCH+SCH)              | 20.57              | 2.92           | 20.58              | 2.96           | 20.59              | 2.94           | 18.39              | 4.94           | 18.35              | 4.94           | 18.21              | 5.08           |

| 1xRTT (Diversity Ant.) Reduction Level |              |        |        |                       |              |         |         |                       |
|----------------------------------------|--------------|--------|--------|-----------------------|--------------|---------|---------|-----------------------|
| Band                                   | CDMA2000 BC0 |        |        | Target Reduction (dB) | CDMA2000 BC1 |         |         | Target Reduction (dB) |
| Channel                                | 1013         | 384    | 777    |                       | 25           | 600     | 1175    |                       |
| Frequency (MHz)                        | 824.70       | 836.52 | 848.31 |                       | 1851.25      | 1880.00 | 1908.75 |                       |
| 1xRTT RC3+SO32(FCH)                    | 3.00         | 2.94   | 2.93   | 3.00                  | 4.95         | 4.92    | 5.07    | 5.00                  |
| 1xRTT RC3+SO32(FCH+SCH)                | 2.92         | 2.96   | 2.94   | 3.00                  | 4.94         | 4.94    | 5.08    | 5.00                  |

#### Note:

- The target power reduction mechanism is listed in sec. 3.5.2. The deviation from the specification is due to the tolerance in the measurement.
- Per KDB 941225 D01, 1xRTT (data transmission) SAR should be tested with SO32 FCH setting; (FCH+SCH) SAR can be excluded if output power is less than 1/4dB higher than FCH setting.

**<CDMA2000 1xEV-DO (Main Ant.)>**

| Full Power 1xEV-DO (Main Ant.) |              |        |        |              |         |         |
|--------------------------------|--------------|--------|--------|--------------|---------|---------|
| Band                           | CDMA2000 BC0 |        |        | CDMA2000 BC1 |         |         |
| Channel                        | 1013         | 384    | 777    | 25           | 600     | 1175    |
| Frequency (MHz)                | 824.70       | 836.52 | 848.31 | 1851.25      | 1880.00 | 1908.75 |
| 1xEVDO RTAP 153.6              | 23.62        | 23.78  | 23.65  | 23.35        | 23.44   | 23.57   |
| 1xEVDO RETAP 4096              | 23.63        | 23.77  | 23.66  | 23.34        | 23.42   | 23.57   |

| Reduced Power 1xEV-DO (Main Ant.) |                    |                |                    |                |                    |                |                    |                |                    |                |                    |                |
|-----------------------------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|
| Band                              | CDMA2000 BC0       |                |                    |                |                    |                | CDMA2000 BC1       |                |                    |                |                    |                |
| Channel                           | 1013               |                | 384                |                | 777                |                | 25                 |                | 600                |                | 1175               |                |
| Frequency (MHz)                   | 824.70             |                | 836.52             |                | 848.31             |                | 1851.25            |                | 1880.00            |                | 1908.75            |                |
|                                   | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) | Output Power (dBm) | Reduction (dB) |
| 1xEVDO RTAP 153.6                 | 19.56              | 4.06           | 19.86              | 3.92           | 19.85              | 3.80           | 16.20              | 7.15           | 16.27              | 7.17           | 16.33              | 7.24           |
| 1xEVDO RETAP 4096                 | 19.55              | 4.08           | 19.84              | 3.93           | 19.84              | 3.82           | 16.25              | 7.09           | 16.31              | 7.11           | 16.35              | 7.22           |

| 1xEV-DO (Main Ant.) Reduction Level |              |        |        |                       |              |         |         |                       |
|-------------------------------------|--------------|--------|--------|-----------------------|--------------|---------|---------|-----------------------|
| Band                                | CDMA2000 BC0 |        |        | Target Reduction (dB) | CDMA2000 BC1 |         |         | Target Reduction (dB) |
| Channel                             | 1013         | 384    | 777    |                       | 25           | 600     | 1175    |                       |
| Frequency (MHz)                     | 824.70       | 836.52 | 848.31 |                       | 1851.25      | 1880.00 | 1908.75 |                       |
| 1xEV-DO RTAP 153.6                  | 4.06         | 3.92   | 3.80   | 4.00                  | 7.15         | 7.17    | 7.24    | 7.00                  |
| 1xEV-DO RETAP 4096                  | 4.08         | 3.93   | 3.82   | 4.00                  | 7.09         | 7.11    | 7.22    | 7.00                  |

**Note:**

- The target power reduction mechanism is listed in sec. 3.5.2. The deviation from the specification is due to the tolerance in the measurement.
- Per KDB 941225 D01, Ev-Do SAR should be tested with RTAP 153.6kbps setting; RETAP 4096-bits SAR can be excluded if output power is not more than 1/4dB higher than RTAP 153.6kbps.

**<LTE Band 13 (Main Ant.) >**

| Full Power LTE Band XIII (Main Ant.) |                       |          |         |           |        |                             |                 |                 |
|--------------------------------------|-----------------------|----------|---------|-----------|--------|-----------------------------|-----------------|-----------------|
| Freq. [MHz]                          | Uplink Channel Number | BW [MHz] | RB Size | RB Offset | Mod    | Maximum Average Power [dBm] | Target MPR (dB) | MPR Result (dB) |
| 779.5                                | 23205                 | 5        | 1       | 0         | QPSK   | 23.15                       | 0               | 0.00            |
| 779.5                                | 23205                 | 5        | 1       | 24        | QPSK   | 22.83                       | 0               | 0.32            |
| 779.5                                | 23205                 | 5        | 12      | 6         | QPSK   | 22.67                       | 1               | 0.48            |
| 779.5                                | 23205                 | 5        | 25      | 0         | QPSK   | 22.61                       | 1               | 0.54            |
| 779.5                                | 23205                 | 5        | 1       | 0         | 16-QAM | 22.80                       | 0.5             | 0.35            |
| 779.5                                | 23205                 | 5        | 1       | 24        | 16-QAM | 22.51                       | 0.5             | 0.64            |
| 779.5                                | 23205                 | 5        | 12      | 6         | 16-QAM | 22.64                       | 0.5             | 0.51            |
| 779.5                                | 23205                 | 5        | 25      | 0         | 16-QAM | 22.95                       | 0.5             | 0.20            |
| 782                                  | 23230                 | 5        | 1       | 0         | QPSK   | 23.07                       | 0               | 0.00            |
| 782                                  | 23230                 | 5        | 1       | 24        | QPSK   | 22.83                       | 0               | 0.24            |
| 782                                  | 23230                 | 5        | 12      | 6         | QPSK   | 22.56                       | 1               | 0.51            |
| 782                                  | 23230                 | 5        | 25      | 0         | QPSK   | 22.61                       | 1               | 0.46            |
| 782                                  | 23230                 | 5        | 1       | 0         | 16-QAM | 23.06                       | 0.5             | 0.01            |
| 782                                  | 23230                 | 5        | 1       | 24        | 16-QAM | 22.92                       | 0.5             | 0.15            |
| 782                                  | 23230                 | 5        | 12      | 6         | 16-QAM | 22.54                       | 0.5             | 0.53            |
| 782                                  | 23230                 | 5        | 25      | 0         | 16-QAM | 22.81                       | 0.5             | 0.26            |
| 784.5                                | 23255                 | 5        | 1       | 0         | QPSK   | 22.79                       | 0               | 0.41            |
| 784.5                                | 23255                 | 5        | 1       | 24        | QPSK   | 23.20                       | 0               | 0.00            |
| 784.5                                | 23255                 | 5        | 12      | 6         | QPSK   | 22.61                       | 1               | 0.59            |
| 784.5                                | 23255                 | 5        | 25      | 0         | QPSK   | 22.63                       | 1               | 0.57            |
| 784.5                                | 23255                 | 5        | 1       | 0         | 16-QAM | 22.88                       | 0.5             | 0.32            |
| 784.5                                | 23255                 | 5        | 1       | 24        | 16-QAM | 23.15                       | 0.5             | 0.05            |
| 784.5                                | 23255                 | 5        | 12      | 6         | 16-QAM | 22.64                       | 0.5             | 0.56            |
| 784.5                                | 23255                 | 5        | 25      | 0         | 16-QAM | 22.94                       | 0.5             | 0.26            |
| 782                                  | 23230                 | 10       | 1       | 0         | QPSK   | 23.30                       | 0               | 0.00            |
| 782                                  | 23230                 | 10       | 1       | 49        | QPSK   | 23.08                       | 0               | 0.22            |
| 782                                  | 23230                 | 10       | 25      | 13        | QPSK   | 22.53                       | 1               | 0.77            |
| 782                                  | 23230                 | 10       | 50      | 0         | QPSK   | 22.41                       | 1               | 0.89            |
| 782                                  | 23230                 | 10       | 1       | 0         | 16-QAM | 23.05                       | 0.5             | 0.25            |
| 782                                  | 23230                 | 10       | 1       | 49        | 16-QAM | 22.70                       | 0.5             | 0.60            |
| 782                                  | 23230                 | 10       | 25      | 13        | 16-QAM | 22.71                       | 1               | 0.59            |
| 782                                  | 23230                 | 10       | 50      | 0         | 16-QAM | 22.26                       | 1               | 1.04            |

| Reduced Power LTE Band XIII (Main Ant.) |                       |          |         |           |        |                             |                 |                 |                                          |
|-----------------------------------------|-----------------------|----------|---------|-----------|--------|-----------------------------|-----------------|-----------------|------------------------------------------|
| Freq. [MHz]                             | Uplink Channel Number | BW [MHz] | RB Size | RB Offset | Mod    | Maximum Average Power [dBm] | Target MPR (dB) | MPR Result (dB) | Power Reduction by Proximity Sensor (dB) |
| 779.5                                   | 23205                 | 5        | 1       | 0         | QPSK   | 20.2                        | 0               | 0               | 2.95                                     |
| 779.5                                   | 23205                 | 5        | 1       | 24        | QPSK   | 19.82                       | 0               | 0.38            | 3.01                                     |
| 779.5                                   | 23205                 | 5        | 12      | 6         | QPSK   | 19.66                       | 1               | 0.54            | 3.01                                     |
| 779.5                                   | 23205                 | 5        | 25      | 0         | QPSK   | 19.79                       | 1               | 0.41            | 2.82                                     |
| 779.5                                   | 23205                 | 5        | 1       | 0         | 16-QAM | 20.2                        | 0.5             | 0               | 2.6                                      |
| 779.5                                   | 23205                 | 5        | 1       | 24        | 16-QAM | 19.51                       | 0.5             | 0.69            | 3                                        |
| 779.5                                   | 23205                 | 5        | 12      | 6         | 16-QAM | 19.64                       | 0.5             | 0.56            | 3                                        |
| 779.5                                   | 23205                 | 5        | 25      | 0         | 16-QAM | 20.02                       | 0.5             | 0.18            | 2.93                                     |
| 782                                     | 23230                 | 5        | 1       | 0         | QPSK   | 20.12                       | 0               | 0               | 2.95                                     |
| 782                                     | 23230                 | 5        | 1       | 24        | QPSK   | 19.79                       | 0               | 0.33            | 3.04                                     |
| 782                                     | 23230                 | 5        | 12      | 6         | QPSK   | 19.62                       | 1               | 0.5             | 2.94                                     |

|       |       |    |    |    |        |       |     |      |      |
|-------|-------|----|----|----|--------|-------|-----|------|------|
| 782   | 23230 | 5  | 25 | 0  | QPSK   | 19.61 | 1   | 0.51 | 3    |
| 782   | 23230 | 5  | 1  | 0  | 16-QAM | 20.07 | 0.5 | 0.05 | 2.99 |
| 782   | 23230 | 5  | 1  | 24 | 16-QAM | 19.92 | 0.5 | 0.2  | 3    |
| 782   | 23230 | 5  | 12 | 6  | 16-QAM | 19.61 | 0.5 | 0.51 | 2.93 |
| 782   | 23230 | 5  | 25 | 0  | 16-QAM | 19.89 | 0.5 | 0.23 | 2.92 |
| 784.5 | 23255 | 5  | 1  | 0  | QPSK   | 19.82 | 0   | 0.38 | 2.97 |
| 784.5 | 23255 | 5  | 1  | 24 | QPSK   | 20.2  | 0   | 0    | 3    |
| 784.5 | 23255 | 5  | 12 | 6  | QPSK   | 19.59 | 1   | 0.61 | 3.02 |
| 784.5 | 23255 | 5  | 25 | 0  | QPSK   | 19.65 | 1   | 0.55 | 2.98 |
| 784.5 | 23255 | 5  | 1  | 0  | 16-QAM | 19.82 | 0.5 | 0.38 | 3.06 |
| 784.5 | 23255 | 5  | 1  | 24 | 16-QAM | 20.16 | 0.5 | 0.04 | 2.99 |
| 784.5 | 23255 | 5  | 12 | 6  | 16-QAM | 19.59 | 0.5 | 0.57 | 3.05 |
| 784.5 | 23255 | 5  | 25 | 0  | 16-QAM | 19.94 | 0.5 | 0.26 | 3    |
| 782   | 23230 | 10 | 1  | 0  | QPSK   | 20.36 | 0   | 0    | 2.94 |
| 782   | 23230 | 10 | 1  | 49 | QPSK   | 20.05 | 0   | 0.31 | 3.03 |
| 782   | 23230 | 10 | 25 | 13 | QPSK   | 19.65 | 1   | 0.71 | 2.88 |
| 782   | 23230 | 10 | 50 | 0  | QPSK   | 19.47 | 1   | 0.89 | 2.94 |
| 782   | 23230 | 10 | 1  | 0  | 16-QAM | 20.32 | 0.5 | 0.04 | 2.73 |
| 782   | 23230 | 10 | 1  | 49 | 16-QAM | 20.25 | 0.5 | 0.11 | 2.45 |
| 782   | 23230 | 10 | 25 | 13 | 16-QAM | 19.78 | 1   | 0.58 | 2.93 |
| 782   | 23230 | 10 | 50 | 0  | 16-QAM | 19.52 | 1   | 0.84 | 2.74 |

**Note:**

1. Choose the widest bandwidth configuration (i.e., 10MHz) to test SAR and determine further SAR exclusion.
2. The Target of LTE power reduction value is 3dB, which is listed in sec. 3.5.2. The deviation from the specification is due to the tolerance in the measurement.

**LTE Target MPR level**

The device implements maximum power reduction per 3GPP 36.101 requirements where the MPR target is as below table. The MPR settings are implemented configured into firmware and cannot be disabled by the end user or LTE carrier network.

| Modulation | Channel bandwidth / Transmission bandwidth configuration [RB] |        | MPR Target (dB) |     | 3GPP MPR (dB) |
|------------|---------------------------------------------------------------|--------|-----------------|-----|---------------|
|            | 5 MHz                                                         | 10 MHz | 5M              | 10M |               |
| QPSK       | > 8                                                           | > 12   | 1               | 1   | ≤ 1           |
| 16 QAM     | ≤ 8                                                           | ≤ 12   | 0.5             | 0.5 | ≤ 1           |
| 16 QAM     | > 8                                                           | > 12   | 0.5             | 1   | ≤ 2           |

**Note:**

1. The measurement result showed some difference from the target MPR level, due to expected 0.5dB measurement tolerance.
2. During proximity sensor activated and power reduction enabled, the LTE output power, with MPR enabled, is reduced 3dB further for SAR compliance.

**<WLAN 2.4G>**

| Mode    | Channel | Frequency (MHz) | Average power (dBm) |       |       |       |
|---------|---------|-----------------|---------------------|-------|-------|-------|
|         |         |                 | Data Rate (bps)     |       |       |       |
|         |         |                 | 1M                  | 2M    | 5.5M  | 11M   |
| 802.11b | CH 01   | 2412 MHz        | 13.57               | 13.52 | 13.51 | 13.34 |
|         | CH 06   | 2437 MHz        | 13.54               | 13.51 | 13.41 | 13.11 |
|         | CH 11   | 2462 MHz        | 13.12               | 13.14 | 13.02 | 12.98 |

| Mode    | Channel | Frequency (MHz) | Average power (dBm) |       |       |       |       |       |       |       |
|---------|---------|-----------------|---------------------|-------|-------|-------|-------|-------|-------|-------|
|         |         |                 | Data Rate (bps)     |       |       |       |       |       |       |       |
|         |         |                 | 6M                  | 9M    | 12M   | 18M   | 24M   | 36M   | 48M   | 54M   |
| 802.11g | CH 01   | 2412 MHz        | 13.67               | 13.59 | 13.51 | 13.37 | 13.11 | 12.82 | 12.53 | 12.36 |
|         | CH 06   | 2437 MHz        | 13.45               | 13.38 | 13.29 | 13.15 | 12.93 | 12.65 | 12.25 | 12.18 |
|         | CH 11   | 2462 MHz        | 13.25               | 13.17 | 13.06 | 12.92 | 12.71 | 12.43 | 12.15 | 12.01 |

| Mode           | Channel | Frequency (MHz) | Average power (dBm) |       |       |       |       |       |       |       |
|----------------|---------|-----------------|---------------------|-------|-------|-------|-------|-------|-------|-------|
|                |         |                 | Data Rate (bps)     |       |       |       |       |       |       |       |
|                |         |                 | MCS0                | MCS1  | MCS2  | MCS3  | MCS4  | MCS5  | MCS6  | MCS7  |
| 802.11n<br>20M | CH 01   | 2412 MHz        | 14.56               | 14.45 | 14.17 | 14.08 | 13.85 | 13.46 | 13.36 | 13.28 |
|                | CH 06   | 2437 MHz        | 14.46               | 14.36 | 14.13 | 13.87 | 13.54 | 13.34 | 13.18 | 13.02 |
|                | CH 11   | 2462 MHz        | 14.25               | 14.03 | 13.86 | 13.51 | 13.35 | 13.15 | 13.05 | 12.81 |

**Note:**

1. Per 2010/10 TCB workshop and KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion
2. Since 11n power is 1/4dB higher than 11b, 11n SAR will be verified.

**<WLAN 5G>**

| Mode    | Channel | Frequency (MHz) | Average power (dBm) |      |       |      |      |      |      |      |
|---------|---------|-----------------|---------------------|------|-------|------|------|------|------|------|
|         |         |                 | Data Rate (bps)     |      |       |      |      |      |      |      |
|         |         |                 | 6M                  | 9M   | 12M   | 18M  | 24M  | 36M  | 48M  | 54M  |
| 802.11a | CH 036  | 5180 MHz        | 10.41               | 9.97 | 10.00 | 9.55 | 9.53 | 9.29 | 9.26 | 9.36 |
|         | CH 040  | 5200 MHz        | 10.04               | 9.83 | 9.96  | 9.33 | 9.45 | 9.08 | 9.04 | 9.01 |
|         | CH 044  | 5220 MHz        | 9.82                | 9.69 | 9.67  | 9.19 | 9.13 | 8.93 | 8.93 | 8.85 |
|         | CH 048  | 5240 MHz        | 9.69                | 9.45 | 9.22  | 9.17 | 9.13 | 8.90 | 8.70 | 8.73 |
|         | CH 149  | 5745 MHz        | 9.90                | 8.48 | 8.44  | 8.25 | 8.20 | 7.89 | 7.70 | 7.74 |
|         | CH 153  | 5765 MHz        | 8.97                | 8.90 | 8.67  | 8.65 | 8.58 | 8.21 | 8.10 | 8.05 |
|         | CH 157  | 5785 MHz        | 9.19                | 9.17 | 9.24  | 8.90 | 8.83 | 8.61 | 8.41 | 8.29 |
|         | CH 161  | 5805 MHz        | 9.33                | 9.27 | 9.25  | 8.89 | 8.66 | 8.56 | 8.39 | 8.37 |

| Mode           | Channel | Frequency (MHz) | Average power (dBm) |       |      |      |      |      |      |      |
|----------------|---------|-----------------|---------------------|-------|------|------|------|------|------|------|
|                |         |                 | Data Rate (bps)     |       |      |      |      |      |      |      |
|                |         |                 | MCS0                | MCS1  | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
| 802.11n<br>20M | CH 036  | 5180 MHz        | 10.06               | 10.03 | 9.94 | 9.59 | 9.49 | 9.57 | 9.40 | 9.25 |
|                | CH 040  | 5200 MHz        | 9.65                | 9.56  | 9.65 | 9.53 | 9.32 | 9.29 | 9.22 | 9.13 |
|                | CH 044  | 5220 MHz        | 9.34                | 9.57  | 9.49 | 9.45 | 9.23 | 9.19 | 9.13 | 9.13 |
|                | CH 048  | 5240 MHz        | 9.50                | 9.42  | 9.39 | 9.37 | 9.12 | 9.04 | 9.02 | 8.86 |
|                | CH 149  | 5745 MHz        | 9.12                | 8.04  | 7.00 | 6.63 | 6.43 | 6.43 | 6.40 | 6.35 |
|                | CH 153  | 5765 MHz        | 8.40                | 8.56  | 7.19 | 7.13 | 7.10 | 6.85 | 6.82 | 6.84 |
|                | CH 157  | 5785 MHz        | 9.10                | 8.73  | 7.61 | 7.59 | 7.42 | 7.19 | 7.19 | 7.19 |
|                | CH 161  | 5805 MHz        | 9.31                | 8.63  | 7.71 | 7.58 | 7.66 | 7.29 | 7.36 | 7.22 |

**Note:**

1. Per 2010/10 TCB workshop and KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion. Therefore CH36 and CH149 are chosen first for SAR testing.
2. Since 5GHz 11n power is less than 1/4dB higher than 11a, 11n SAR will be excluded.

**<Bluetooth>**

| Channel | Frequency (MHz) | Average power (dBm) |      |      |       |       |       |       |       |       |
|---------|-----------------|---------------------|------|------|-------|-------|-------|-------|-------|-------|
|         |                 | Data Rate           |      |      |       |       |       |       |       |       |
|         |                 | DH1                 | DH3  | DH5  | 2DH1  | 2DH3  | 2DH5  | 3DH1  | 3DH3  | 3DH5  |
| CH 00   | 2402 MHz        | 1.65                | 1.70 | 1.70 | -0.67 | -0.51 | -0.51 | -0.58 | -0.49 | -0.48 |
| CH 39   | 2441 MHz        | 2.53                | 2.55 | 2.58 | 0.10  | 0.28  | 0.31  | 0.21  | 0.30  | 0.30  |
| CH 78   | 2480 MHz        | 2.55                | 2.57 | 2.59 | 0.09  | 0.26  | 0.26  | 0.12  | 0.27  | 0.27  |

**Note:** Per KDB 447498, since Bluetooth average power is less than 60/f (13.8dBm), SAR is excluded.

## 12.2 Test Records for Body SAR Test

### <CDMA2000 1xRTT>

| Plot No. | Band         | Mode     | Test Position       | Gap (cm) | Ch.  | Conducted Power | Power Drift (dB) | Ear-phone | SAR <sub>1g</sub> (W/kg) |
|----------|--------------|----------|---------------------|----------|------|-----------------|------------------|-----------|--------------------------|
| 20       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0        | 384  | 20.61           | -0.07            | V         | 1.07                     |
| 21       | CDMA2000 BC0 | RC3 SO32 | Primary Portrait    | 0        | 384  | 20.61           | 0.1              | V         | 0.787                    |
| 22       | CDMA2000 BC0 | RC3 SO32 | Secondary Landscape | 0        | 384  | 20.61           | 0.07             | V         | 0.455                    |
| 23       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0        | 1013 | 20.56           | 0.14             | V         | 0.967                    |
| 24       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0        | 777  | 20.60           | 0.11             | V         | 0.999                    |
| 25       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0.7      | 384  | 23.55           | -0.03            | V         | 0.953                    |
| 26       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0.7      | 1013 | 23.56           | 0.01             | V         | 0.945                    |
| 27       | CDMA2000 BC0 | RC3 SO32 | Bottom Face         | 0.7      | 777  | 23.53           | -0.07            | V         | 0.833                    |
| 1        | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0        | 25   | 18.39           | 0.14             | V         | 1.24                     |
| 2        | CDMA2000 BC1 | RC3 SO32 | Primary Portrait    | 0        | 25   | 18.39           | 0.13             | V         | 0.976                    |
| 3        | CDMA2000 BC1 | RC3 SO32 | Secondary Landscape | 0        | 25   | 18.39           | 0.14             | V         | 0.711                    |
| 4        | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0        | 600  | 18.36           | 0.1              | V         | 1.26                     |
| 5        | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0        | 1175 | 18.24           | 0.11             | V         | 0.965                    |
| 6        | CDMA2000 BC1 | RC3 SO32 | Primary Portrait    | 0        | 600  | 18.39           | 0.03             | V         | 0.882                    |
| 7        | CDMA2000 BC1 | RC3 SO32 | Primary Portrait    | 0        | 1175 | 18.24           | 0.08             | V         | 0.697                    |
| 8        | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0.7      | 25   | 23.34           | 0.06             | V         | 1.24                     |
| 9        | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0.7      | 600  | 23.28           | 0.14             | V         | 1.32                     |
| 10       | CDMA2000 BC1 | RC3 SO32 | Bottom Face         | 0.7      | 1175 | 23.31           | 0.11             | V         | 1.01                     |

**Note:**

- 0.7cm test results are for confirming operation of the power reduction scheme, and are not applicable for compliance demonstration for the FCC tablet PC SAR test procedures. The specific SW utility is used to disable the proximity sensor for 0.4cm SAR testing. The SW is not available for end users.
- During SAR testing for positions other than Bottom Face, proximity sensor power reduction is disabled to avoid any unexpected trigger. The specific SW utility is used to disable the proximity sensor for 0.7cm SAR testing. The SW is not available for end users.
- Per KDB 447498, if the highest output channel SAR for each exposure position  $\leq 0.8$  W/kg other channels SAR tests are not necessary.

**<CDMA2000 1xEV-DO>**

| Plot No. | Band         | Mode      | Test Position       | Gap (cm) | Ch.  | Conducted Power | Power Drift (dB) | Ear-phone | SAR <sub>1g</sub> (W/kg) |
|----------|--------------|-----------|---------------------|----------|------|-----------------|------------------|-----------|--------------------------|
| 28       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0        | 384  | 19.86           | -0.08            | V         | 1.16                     |
| 29       | CDMA2000 BC0 | RTAP153.6 | Secondary Portrait  | 0        | 384  | 19.86           | 0.1              | -         | 1.11                     |
| 30       | CDMA2000 BC0 | RTAP153.6 | Secondary Landscape | 0        | 384  | 23.78           | 0.11             | V         | 0.123                    |
| 31       | CDMA2000 BC0 | RTAP153.6 | Primary Landscape   | 0        | 384  | 23.78           | 0.07             | V         | 0.255                    |
| 32       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0        | 1013 | 19.56           | 0.06             | V         | 1.11                     |
| 33       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0        | 777  | 19.85           | 0.06             | V         | 1                        |
| 34       | CDMA2000 BC0 | RTAP153.6 | Secondary Portrait  | 0        | 1013 | 19.56           | 0.02             | -         | 1.02                     |
| 35       | CDMA2000 BC0 | RTAP153.6 | Secondary Portrait  | 0        | 777  | 19.85           | 0.11             | -         | 0.987                    |
| 36       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0.9      | 384  | 23.78           | -0.09            | V         | 0.938                    |
| 37       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0.9      | 1013 | 23.62           | -0.01            | V         | 0.854                    |
| 38       | CDMA2000 BC0 | RTAP153.6 | Bottom Face         | 0.9      | 777  | 23.65           | -0.05            | V         | 0.81                     |
| 11       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0        | 1175 | 16.33           | 0.1              | V         | 0.984                    |
| 12       | CDMA2000 BC1 | RTAP153.6 | Secondary Portrait  | 0        | 1175 | 16.33           | 0.11             | -         | 1.35                     |
| 13       | CDMA2000 BC1 | RTAP153.6 | Secondary Landscape | 0        | 1175 | 23.57           | 0.02             | V         | 0.17                     |
| 14       | CDMA2000 BC1 | RTAP153.6 | Primary Landscape   | 0        | 1175 | 23.57           | 0.05             | V         | 0.113                    |
| 15       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0.9      | 1175 | 23.57           | 0.06             | V         | 0.95                     |
| 16       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0        | 25   | 16.20           | -0.08            | V         | 1.08                     |
| 17       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0        | 600  | 16.27           | 0.1              | V         | 1.08                     |
| 18       | CDMA2000 BC1 | RTAP153.6 | Secondary Portrait  | 0        | 25   | 16.20           | 0.06             | -         | 1.44                     |
| 19       | CDMA2000 BC1 | RTAP153.6 | Secondary Portrait  | 0        | 600  | 16.27           | 0.1              | -         | 1.43                     |
| 84       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0.9      | 25   | 23.35           | 0.02             | V         | 1.31                     |
| 85       | CDMA2000 BC1 | RTAP153.6 | Bottom Face         | 0.9      | 600  | 23.44           | 0.09             | V         | 1.11                     |

**Note:**

- 0.9cm test results are for confirming operation of the power reduction scheme, and are not applicable for compliance demonstration for the FCC tablet PC SAR test procedures. The specific SW utility is used to disable the proximity sensor for 0.4cm SAR testing. The SW is not available for end users.
- During SAR testing for positions other than Bottom Face, proximity sensor power reduction is disabled to avoid any unexpected trigger. The specific SW utility is used to disable the proximity sensor for 0.9cm SAR testing. The SW is not available for end users.
- Per KDB 447498, if the highest output channel SAR for each exposure position  $\leq 0.8$  W/kg other channels SAR tests are not necessary.

**<LTE Band XIII>**

| Plot No. | Band                 | Mode          | BW (MHz) | RB Size   | RB Offset | Test Position       | Gap (cm)   | Ch.          | Conducted Power | Power Drift (dB) | Ear-phone | SAR <sub>1g</sub> (W/kg) |
|----------|----------------------|---------------|----------|-----------|-----------|---------------------|------------|--------------|-----------------|------------------|-----------|--------------------------|
| 39       | LTE BAND XIII        | QPSK          | 10       | 25        | 13        | Bottom Face         | 0          | 23230        | 19.65           | -0.04            | V         | 1.21                     |
| 40       | LTE BAND XIII        | QPSK          | 10       | 1         | 0         | Bottom Face         | 0          | 23230        | 20.36           | 0.01             | V         | 1.29                     |
| 41       | LTE BAND XIII        | QPSK          | 10       | 1         | 49        | Bottom Face         | 0          | 23230        | 20.05           | 0.01             | V         | 1.21                     |
| 42       | <b>LTE BAND XIII</b> | <b>16-QAM</b> | 10       | <b>25</b> | <b>13</b> | <b>Bottom Face</b>  | <b>0</b>   | <b>23230</b> | <b>19.78</b>    | <b>0.1</b>       | <b>V</b>  | <b>1.36</b>              |
| 43       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 0         | Bottom Face         | 0          | 23230        | 20.32           | 0.06             | V         | 1.31                     |
| 44       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 49        | Bottom Face         | 0          | 23230        | 20.25           | -0.0039          | V         | 1.22                     |
| 45       | LTE BAND XIII        | QPSK          | 10       | 25        | 13        | Secondary Portrait  | 0          | 23230        | 19.65           | -0.06            | -         | 0.968                    |
| 46       | LTE BAND XIII        | QPSK          | 10       | 1         | 0         | Secondary Portrait  | 0          | 23230        | 20.36           | -0.05            | -         | 1.18                     |
| 47       | LTE BAND XIII        | QPSK          | 10       | 1         | 49        | Secondary Portrait  | 0          | 23230        | 20.05           | -0.01            | -         | 1.04                     |
| 48       | LTE BAND XIII        | 16-QAM        | 10       | 25        | 13        | Secondary Portrait  | 0          | 23230        | 19.78           | -0.03            | -         | 1.01                     |
| 49       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 0         | Secondary Portrait  | 0          | 23230        | 20.32           | -0.02            | -         | 1.21                     |
| 50       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 49        | Secondary Portrait  | 0          | 23230        | 20.25           | 0.00055          | -         | 1.04                     |
| 51       | LTE BAND XIII        | QPSK          | 10       | 25        | 13        | Secondary Landscape | 0          | 23230        | 22.53           | 0.01             | V         | 0.08                     |
| 52       | LTE BAND XIII        | QPSK          | 10       | 1         | 0         | Secondary Landscape | 0          | 23230        | 23.30           | 0.03             | V         | 0.076                    |
| 53       | LTE BAND XIII        | QPSK          | 10       | 1         | 49        | Secondary Landscape | 0          | 23230        | 23.08           | 0.03             | V         | 0.078                    |
| 54       | LTE BAND XIII        | 16-QAM        | 10       | 25        | 13        | Secondary Landscape | 0          | 23230        | 22.71           | 0.03             | V         | 0.08                     |
| 55       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 0         | Secondary Landscape | 0          | 23230        | 23.05           | 0.05             | V         | 0.072                    |
| 56       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 49        | Secondary Landscape | 0          | 23230        | 22.70           | 0.08             | V         | 0.075                    |
| 57       | LTE BAND XIII        | QPSK          | 10       | 25        | 13        | Primary Landscape   | 0          | 23230        | 22.53           | 0.15             | V         | 0.24                     |
| 58       | LTE BAND XIII        | QPSK          | 10       | 1         | 0         | Primary Landscape   | 0          | 23230        | 23.30           | 0.04             | V         | 0.254                    |
| 59       | LTE BAND XIII        | QPSK          | 10       | 1         | 49        | Primary Landscape   | 0          | 23230        | 23.08           | -0.09            | V         | 0.243                    |
| 60       | LTE BAND XIII        | 16-QAM        | 10       | 25        | 13        | Primary Landscape   | 0          | 23230        | 22.71           | -0.06            | V         | 0.213                    |
| 61       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 0         | Primary Landscape   | 0          | 23230        | 23.05           | 0.05             | V         | 0.198                    |
| 62       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 49        | Primary Landscape   | 0          | 23230        | 22.70           | 0.12             | V         | 0.218                    |
| 63       | LTE BAND XIII        | QPSK          | 10       | 25        | 13        | Bottom Face         | 0.9        | 23230        | 22.53           | -0.08            | V         | 0.751                    |
| 64       | LTE BAND XIII        | QPSK          | 10       | 1         | 0         | Bottom Face         | 0.9        | 23230        | 23.30           | -0.05            | V         | 0.746                    |
| 65       | LTE BAND XIII        | QPSK          | 10       | 1         | 49        | Bottom Face         | 0.9        | 23230        | 23.08           | -0.14            | V         | 0.74                     |
| 66       | LTE BAND XIII        | 16-QAM        | 10       | 25        | 13        | Bottom Face         | 0.9        | 23230        | 22.71           | -0.0093          | V         | 0.778                    |
| 67       | LTE BAND XIII        | 16-QAM        | 10       | 1         | 0         | Bottom Face         | 0.9        | 23230        | 23.05           | 0.04             | V         | 0.742                    |
| 68       | <b>LTE BAND XIII</b> | <b>16-QAM</b> | 10       | <b>1</b>  | <b>49</b> | <b>Bottom Face</b>  | <b>0.9</b> | <b>23230</b> | <b>22.70</b>    | <b>-0.04</b>     | <b>V</b>  | <b>0.789</b>             |

**Note:**

- 0.9cm test results are for confirming operation of the power reduction scheme, and are not applicable for compliance demonstration for the FCC tablet PC SAR test procedures. The specific SW utility is used to disable the proximity sensor for 0.4cm SAR testing. The SW is not available for end users.
- During SAR testing for positions other than Bottom Face, proximity sensor power reduction is disabled to avoid any unexpected trigger. The specific SW utility is used to disable the proximity sensor for 0.9cm SAR testing. The SW is not available for end users.
- Per KDB 941225 D05, for LTE, if the smaller bandwidth output power is within +/- ½dB of the largest bandwidth, and the maximum SAR of the largest bandwidth is ≤ 1.45 W/kg, SAR for smaller bandwidth can be excluded.
- Per KDB 941225 D05, for LTE, if 50%-RB QPSK SAR ≤ 1.45 W/kg, 100%-RB QPSK SAR can be excluded; if 50%-RB 16QAM SAR ≤ 1.45 W/kg, 100%-RB 16QAM SAR can be excluded.
- Per KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

**<WLAN>**

| Plot No. | Band    | Mode | Test Position      | Gap (cm) | Ch. | Conducted Power | Power Drift (dB) | Earphone | Data Rate | Power Rate | SAR <sub>1g</sub> (W/kg) |
|----------|---------|------|--------------------|----------|-----|-----------------|------------------|----------|-----------|------------|--------------------------|
| 75       | 802.11b | -    | Bottom Face        | 0        | 1   | 13.57           | 0.08             | V        | 1M        | 18         | 0.333                    |
| 76       | 802.11b | -    | Secondary Portrait | 0        | 1   | 13.57           | 0.06             | -        | 1M        | 18         | 0.049                    |
| 77       | 802.11b | -    | Primary Landscape  | 0        | 1   | 13.57           | 0.09             | V        | 1M        | 18         | 0.899                    |
| 78       | 802.11b | -    | Primary Landscape  | 0        | 6   | 13.54           | -0.02            | V        | 1M        | 18         | 0.661                    |
| 79       | 802.11b | -    | Primary Landscape  | 0        | 11  | 13.12           | 0.03             | V        | 1M        | 18         | 0.884                    |
| 80       | 802.11n | -    | Primary Landscape  | 0        | 1   | 14.56           | 0.04             | V        | MCS0      | 18         | 1.03                     |
| 81       | 802.11n | -    | Primary Landscape  | 0        | 6   | 14.46           | 0.11             | V        | MCS0      | 18         | 0.825                    |
| 82       | 802.11n | -    | Primary Landscape  | 0        | 11  | 14.25           | 0.05             | V        | MCS0      | 18         | 0.981                    |
| 83       | 802.11n | -    | Bottom Face        | 0        | 1   | 14.56           | 0.06             | V        | MCS0      | 18         | 0.362                    |
| 69       | 802.11a | -    | Bottom Face        | 0        | 36  | 10.41           | 0.03             | V        | 6M        | 12         | 0.105                    |
| 70       | 802.11a | -    | Secondary Portrait | 0        | 36  | 10.41           | 0.01             | -        | 6M        | 12         | N/A                      |
| 71       | 802.11a | -    | Primary Landscape  | 0        | 36  | 10.41           | 0.01             | V        | 6M        | 12         | 0.503                    |
| 72       | 802.11a | -    | Bottom Face        | 0        | 149 | 9.90            | 0.14             | V        | 6M        | 12         | 0.00277                  |
| 73       | 802.11a | -    | Secondary Portrait | 0        | 149 | 9.90            | 0.07             | -        | 6M        | 12         | 0.00322                  |
| 74       | 802.11a | -    | Primary Landscape  | 0        | 149 | 9.90            | -0.1             | V        | 6M        | 12         | 0.249                    |

**Note:**

- Per KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- Plot #70, the WLAN antenna is 4.9cm to the secondary portrait position, and 5GHz SAR is too low to be detected by SAR measurement system.

### 12.3 Simultaneous Transmission Analysis

#### <Diversity Ant + WLAN with 0cm separation gap>

| Position            | 1xRTT<br>BC0 | 1xRTT<br>BC1 | 802.11b/g/n  | 802.11a/n | Max. SAR<br>Summation | SPSLR       | Volume<br>Scan |
|---------------------|--------------|--------------|--------------|-----------|-----------------------|-------------|----------------|
| Bottom Face         | 1.07         | <b>1.26</b>  | <b>0.362</b> | 0.105     | 1.62                  | <b>0.10</b> | No             |
| Secondary Landscape | 0.455        | <b>0.711</b> | 0            | 0         | 0.71                  | N/A         | No             |
| Secondary Portrait  | 0            | 0            | <b>0.049</b> | 0.00322   | 0.05                  | N/A         | No             |
| Primary Landscape   | 0            | 0            | <b>1.03</b>  | 0.503     | 1.03                  | N/A         | No             |
| Primary Portrait    | 0.787        | <b>0.976</b> | 0            | 0         | 0.98                  | N/A         | No             |

#### <Main Ant + WLAN with 0cm separation gap>

| Position            | 1xEV-DO<br>BC0 | 1xEV-DO<br>BC1 | LTE         | 802.11b/g/n  | 802.11a/n | Max. SAR<br>Summation | SPSLR       | Volume<br>Scan |
|---------------------|----------------|----------------|-------------|--------------|-----------|-----------------------|-------------|----------------|
| Bottom Face         | 1.16           | 1.08           | <b>1.36</b> | <b>0.362</b> | 0.105     | 1.72                  | <b>0.23</b> | No             |
| Secondary Landscape | 0.123          | <b>0.17</b>    | 0.08        | 0            | 0         | 0.17                  | N/A         | No             |
| Secondary Portrait  | 1.11           | <b>1.44</b>    | 1.21        | <b>0.049</b> | 0.00322   | 1.49                  | N/A         | No             |
| Primary Landscape   | <b>0.255</b>   | 0.113          | 0.254       | <b>1.03</b>  | 0.503     | 1.29                  | N/A         | No             |
| Primary Portrait    | 0              | 0              | 0           | 0            | 0         | 0                     | N/A         | No             |

#### <Diversity Ant with 0.7cm separation gap + WLAN with 0cm separation gap>

| Position    | 1xRTT<br>BC0 | 1xRTT<br>BC1 | 802.11b/g/n  | 802.11a/n | Max. SAR<br>Summation | SPSLR       | Volume<br>Scan |
|-------------|--------------|--------------|--------------|-----------|-----------------------|-------------|----------------|
| Bottom Face | 0.953        | <b>1.32</b>  | <b>0.362</b> | 0.105     | 1.68                  | <b>0.10</b> | No             |

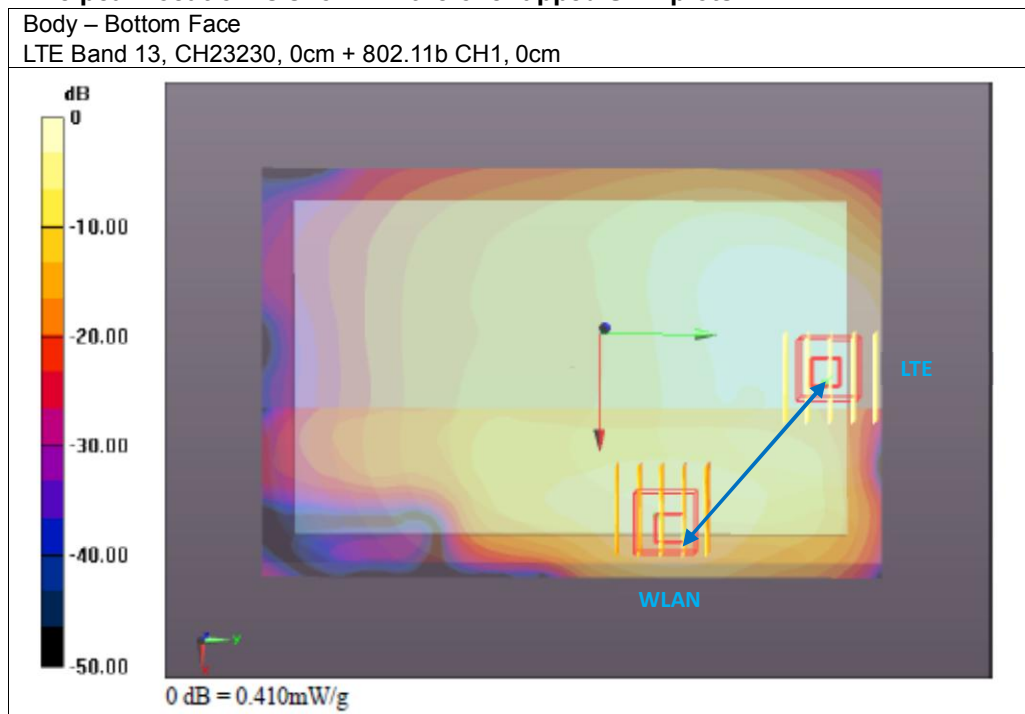
#### <Main Ant 0.9cm separation gap + WLAN with 0cm separation gap>

| Position    | 1xEV-DO<br>BC0 | 1xEV-DO<br>BC1 | LTE   | 802.11b/g/n  | 802.11a/n | Max. SAR<br>Summation | SPSLR       | Volume<br>Scan |
|-------------|----------------|----------------|-------|--------------|-----------|-----------------------|-------------|----------------|
| Bottom Face | 0.938          | <b>1.31</b>    | 0.789 | <b>0.362</b> | 0.105     | 1.67                  | <b>0.22</b> | No             |

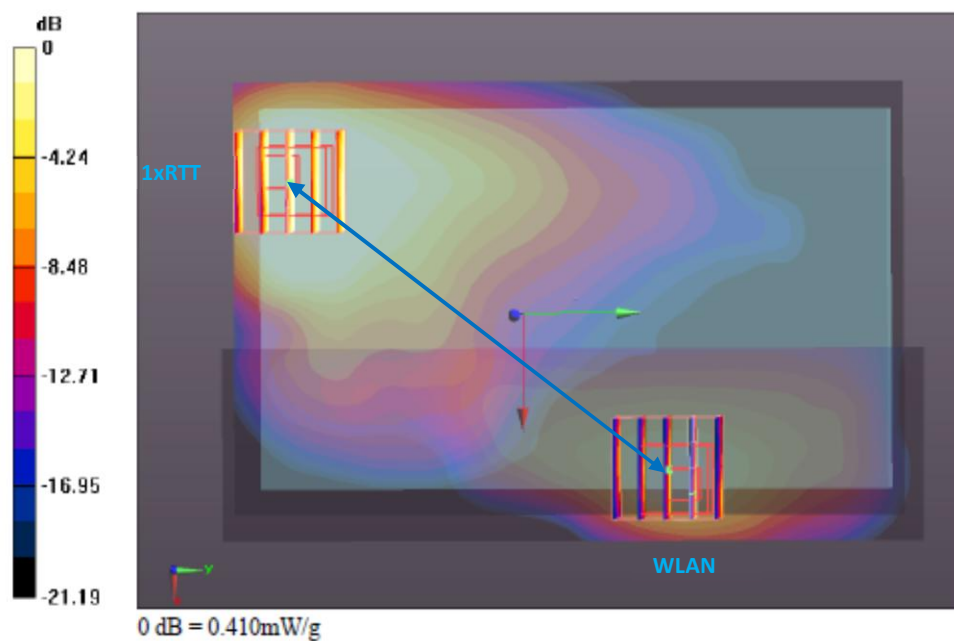
#### Note:

1. If 1g-SAR scalar summation < 1.6W/kg, simultaneous SAR measurement is not necessary.
2. SPLSR < 0.3, therefore volume scan is not necessary; referring to KDB 447498.
3. 0.7cm and 0.9cm test results are for confirming operation of the power reduction scheme, and are not applicable for compliance demonstration for the FCC tablet PC SAR test procedures.
4. WLAN SAR data at 0mm is applied here, and it will represent more conservative situation than WLAN SAR data at 0.7cm/0.9cm.

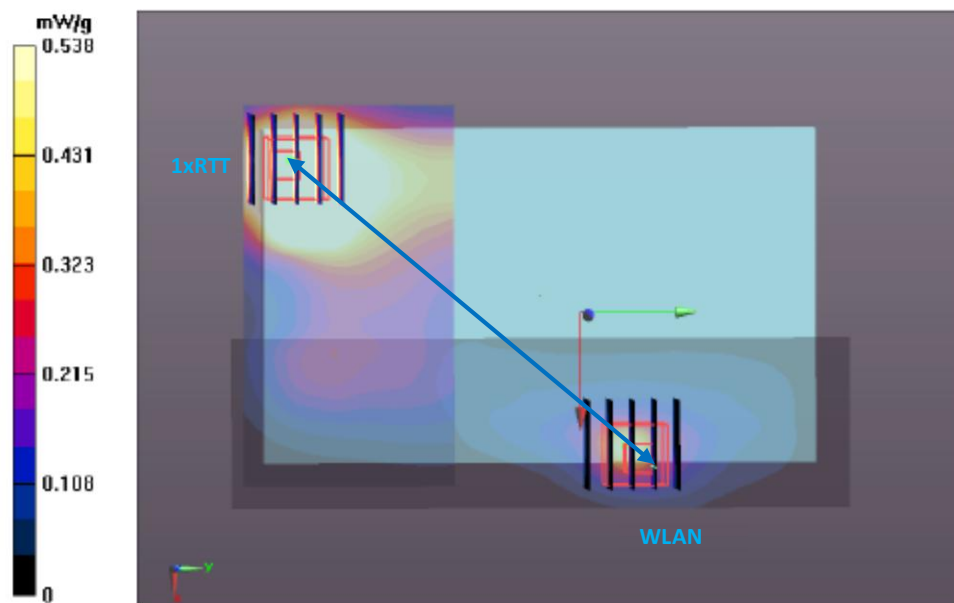
| Body        | Plot | Band                         | Gap<br>cm | SAR (W/kg) | SAR peak location (m) |         |        | Ant Pair | Peak<br>distance<br>(cm) | Pair SAR<br>sum<br>(W/kg) | SPLSR |
|-------------|------|------------------------------|-----------|------------|-----------------------|---------|--------|----------|--------------------------|---------------------------|-------|
|             |      |                              |           |            | X                     | Y       | Z      |          |                          |                           |       |
| Bottom Face | 42   | LTE Band 13<br>Channel 23230 | 0 cm      | 1.36       | 0.005                 | 0.091   | -0.177 | Main     | 7.6                      | 1.72                      | 0.23  |
|             | 83   | 802.11b, CH 1                | 0 cm      | 0.362      | 0.06                  | 0.039   | -0.174 | WLAN     |                          |                           |       |
| Bottom Face | 4    | 1xRTT BC1<br>Channel 600     | 0 cm      | 1.26       | -0.0375               | -0.087  | -0.176 | Div.     | 15.9                     | 1.62                      | 0.10  |
|             | 83   | 802.11b, CH 1                | 0 cm      | 0.362      | 0.06                  | 0.039   | -0.174 | WLAN     |                          |                           |       |
| Bottom Face | 9    | 1xRTT BC1<br>Channel 600     | 0.7 cm    | 1.32       | -0.0495               | -0.0885 | -0.176 | Div.     | 16.8                     | 1.68                      | 0.10  |
|             | 83   | 802.11b, CH 1                | 0 cm      | 0.362      | 0.06                  | 0.039   | -0.174 | WLAN     |                          |                           |       |
| Bottom Face | 84   | 1xEVDO BC1<br>Channel 25     | 0.9 cm    | 1.31       | 0.009                 | 0.0955  | -0.174 | Main     | 7.6                      | 1.67                      | 0.22  |
|             | 83   | 802.11b, CH 1                | 0 cm      | 0.362      | 0.06                  | 0.039   | -0.174 | WLAN     |                          |                           |       |

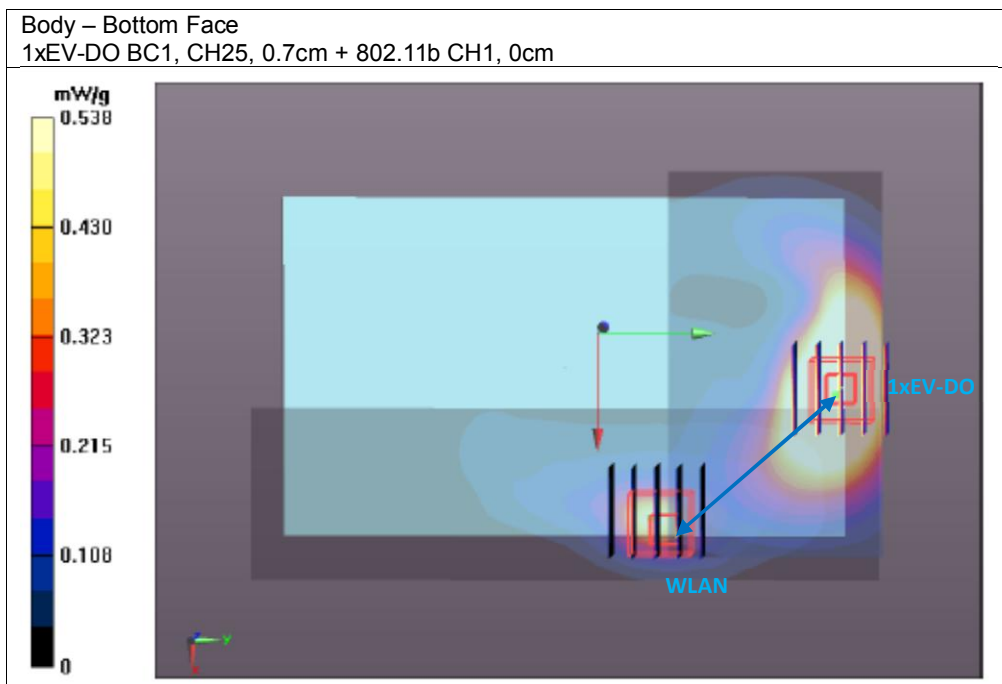
**<The peak location is shown in the overlapped SAR plots>**


Body – Bottom Face  
1xRTT BC1,CH600 0cm + 802.11b CH1, 0cm



Body – Bottom Face  
1xRTT BC1, CH600, 0.7cm + 802.11b CH1, 0cm





**Note:**

1. SPLSR < 0.3, so volume scan is not necessary; referring to KDB 447498

**Test Engineer :** Suhe Yin and Sage Lu



## **13 References**

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] IEEE Std. C95.1-1991, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", 1991
- [3] IEEE Std. 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- [4] FCC OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", June 2001
- [5] SPEAG DASY System Handbook
- [6] FCC KDB 248227 D01 v01r02, "SAR Measurement Procedures for 802.11 a/b/g Transmitters", May 2007
- [7] FCC KDB 447498 D01 v04, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", November 2009
- [8] FCC KDB 616217 D03 v01, "SAR Evaluation Considerations for Laptop/Notebook/Netbook and Tablet Computers", November 2009
- [9] FCC KDB 941225 D01 v02, "SAR Measurement Procedures for 3G Devices – CDMA 2000 / Ev-Do / WCDMA / HSDPA / HSPA", October 2007
- [10] FCC KDB 941225 D05 v01, "SAR Test Considerations for LTE Handsets and Data Modems", December 2010



## ***Appendix A. Plots of System Performance Check***

The plots are shown as follows.



## ***Appendix B. Plots of SAR Measurement***

The plots are shown as follows.



## ***Appendix C.     DASY Calibration Certificate***

The DASY calibration certificates are shown as follows.

## **System Check\_Body\_750MHz\_111028**

### **DUT: Dipole 750 MHz**

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 54.642$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

#### **DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $2.487 \text{ mW/g}$

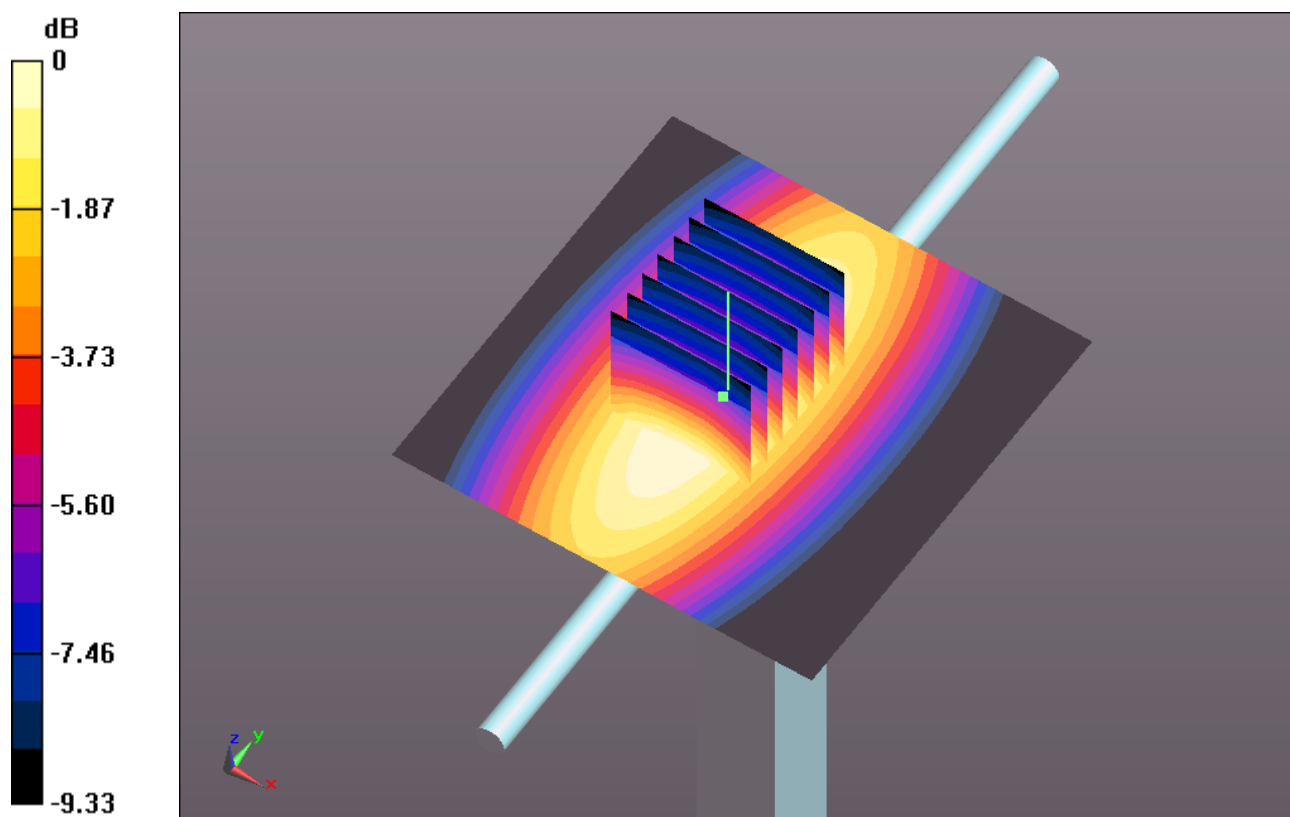
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $50.003 \text{ V/m}$ ; Power Drift =  $0.08 \text{ dB}$

Peak SAR (extrapolated) =  $3.013 \text{ W/kg}$

**SAR(1 g) =  $2.23 \text{ mW/g}$ ; SAR(10 g) =  $1.52 \text{ mW/g}$**

Maximum value of SAR (measured) =  $2.379 \text{ mW/g}$



0 dB = 2.380mW/g

## **System Check\_Body\_835MHz\_111027**

### **DUT: Dipole 835 MHz**

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

Medium: MSL\_835\_111027 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.974 \text{ mho/m}$ ;  $\epsilon_r = 54.204$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

#### **DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $2.593 \text{ mW/g}$

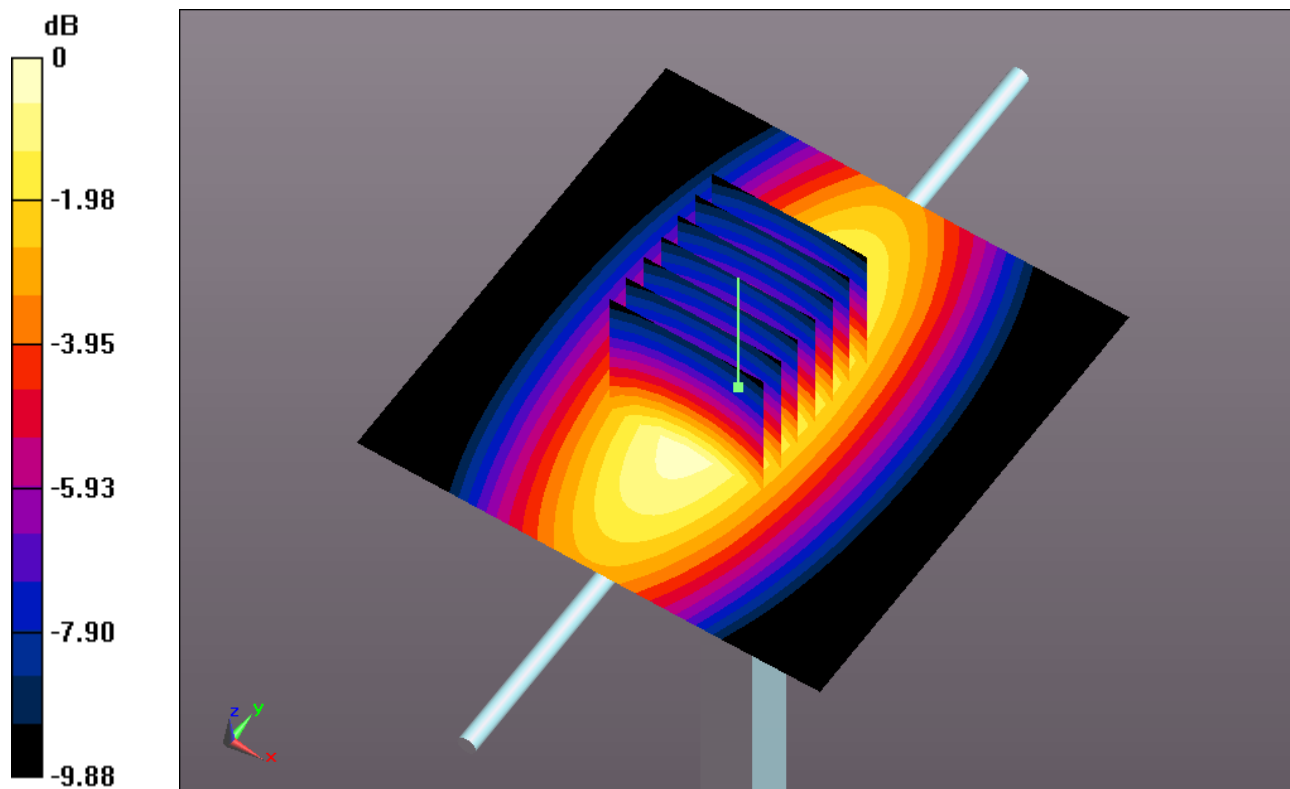
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $54.004 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $3.310 \text{ W/kg}$

**SAR(1 g) =  $2.39 \text{ mW/g}$ ; SAR(10 g) =  $1.6 \text{ mW/g}$**

Maximum value of SAR (measured) =  $2.595 \text{ mW/g}$



0 dB = 2.590mW/g

## **System Check\_Body\_1900MHz\_111026**

### **DUT: Dipole 1900 MHz**

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

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.532$  mho/m;  $\epsilon_r =$

52.397;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

#### **DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.670 mW/g

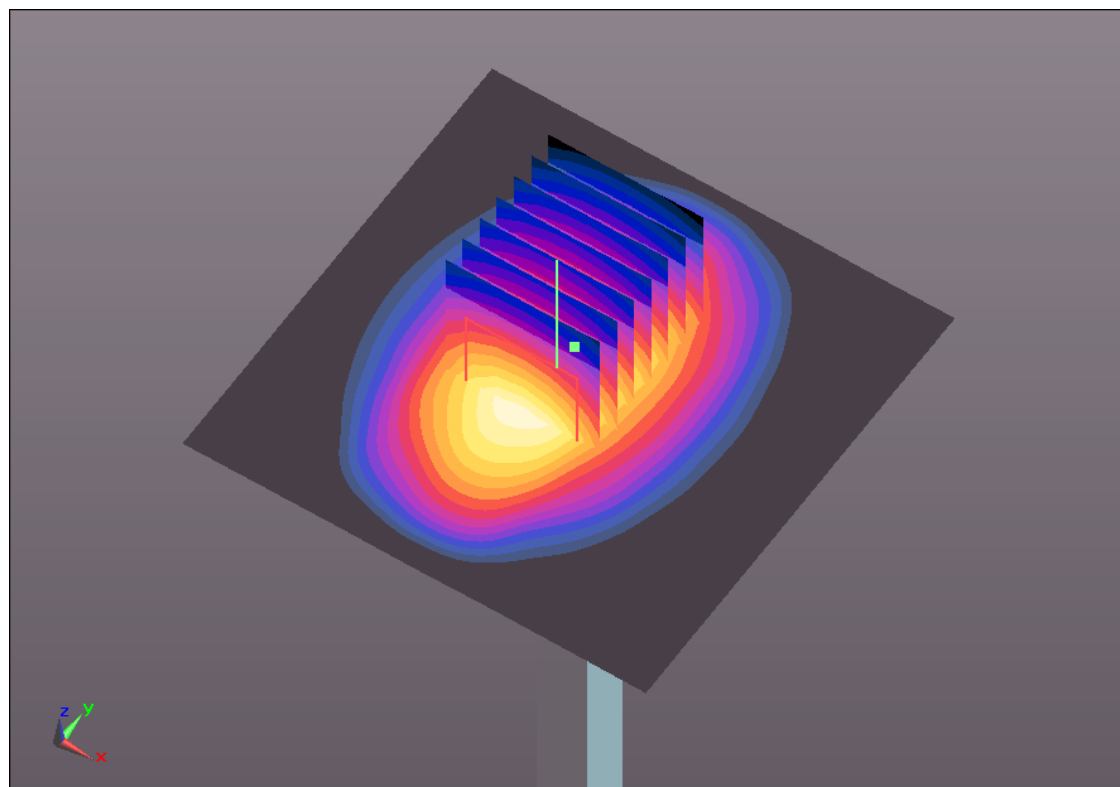
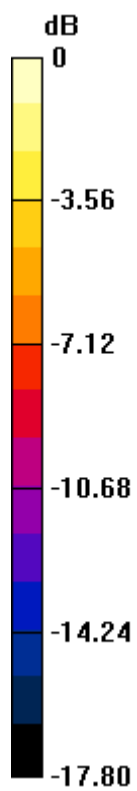
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.374 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 18.140 W/kg

**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.6 mW/g**

Maximum value of SAR (measured) = 11.968 mW/g



0 dB = 11.970mW/g

## **System Check\_Body\_2450MHz\_111028**

### **DUT: Dipole 2450 MHz**

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

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 2.002$  mho/m;  $\epsilon_r =$

53.464;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 15.553 mW/g

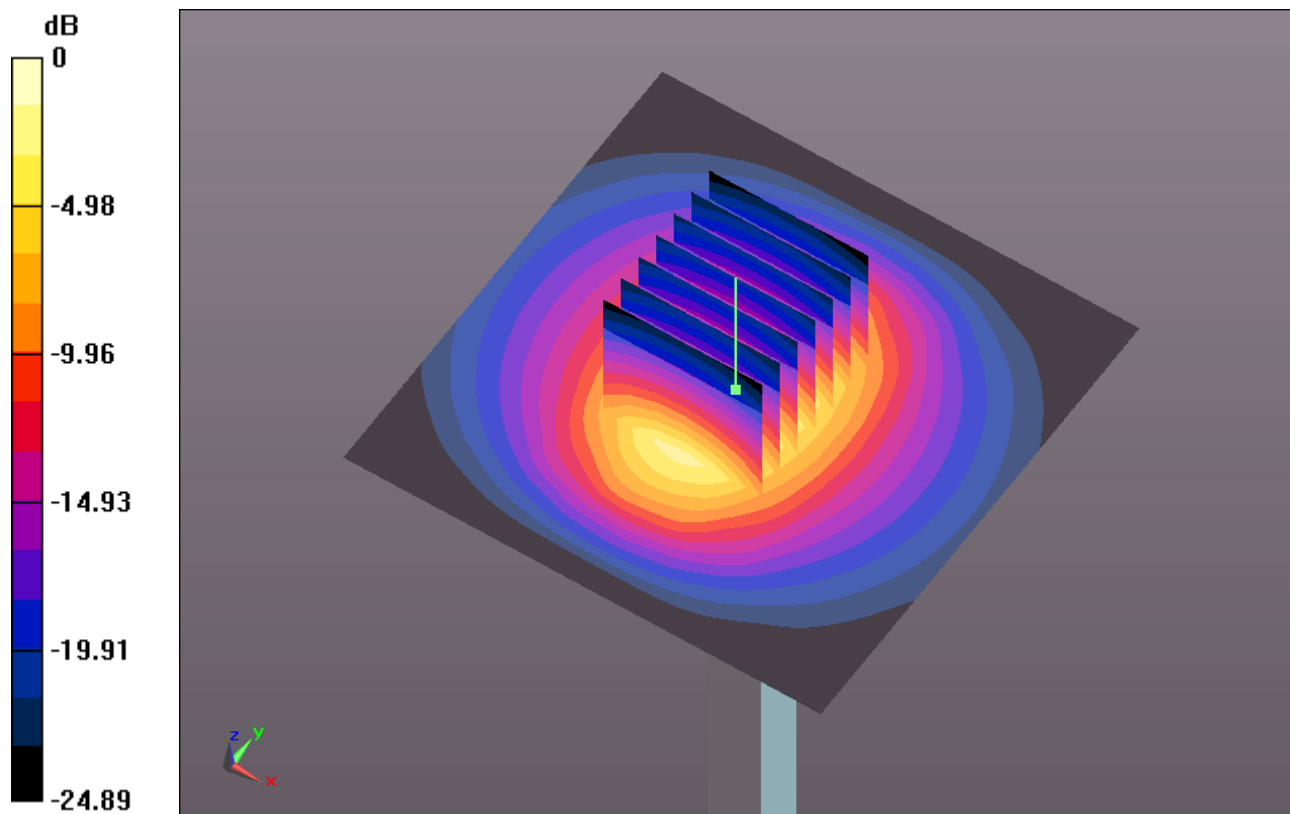
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.685 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 31.759 W/kg

**SAR(1 g) = 13.5 mW/g; SAR(10 g) = 5.92 mW/g**

Maximum value of SAR (measured) = 15.248 mW/g



## **System Check\_Body\_5200MHz\_111028**

### **DUT: Dipole 5GHz**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.264$  mho/m;  $\epsilon_r =$

48.303;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C ; Liquid Temperature : 21.3 °C

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(4.13, 4.13, 4.13); Calibrated: 2011-9-2
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 33.888 mW/g

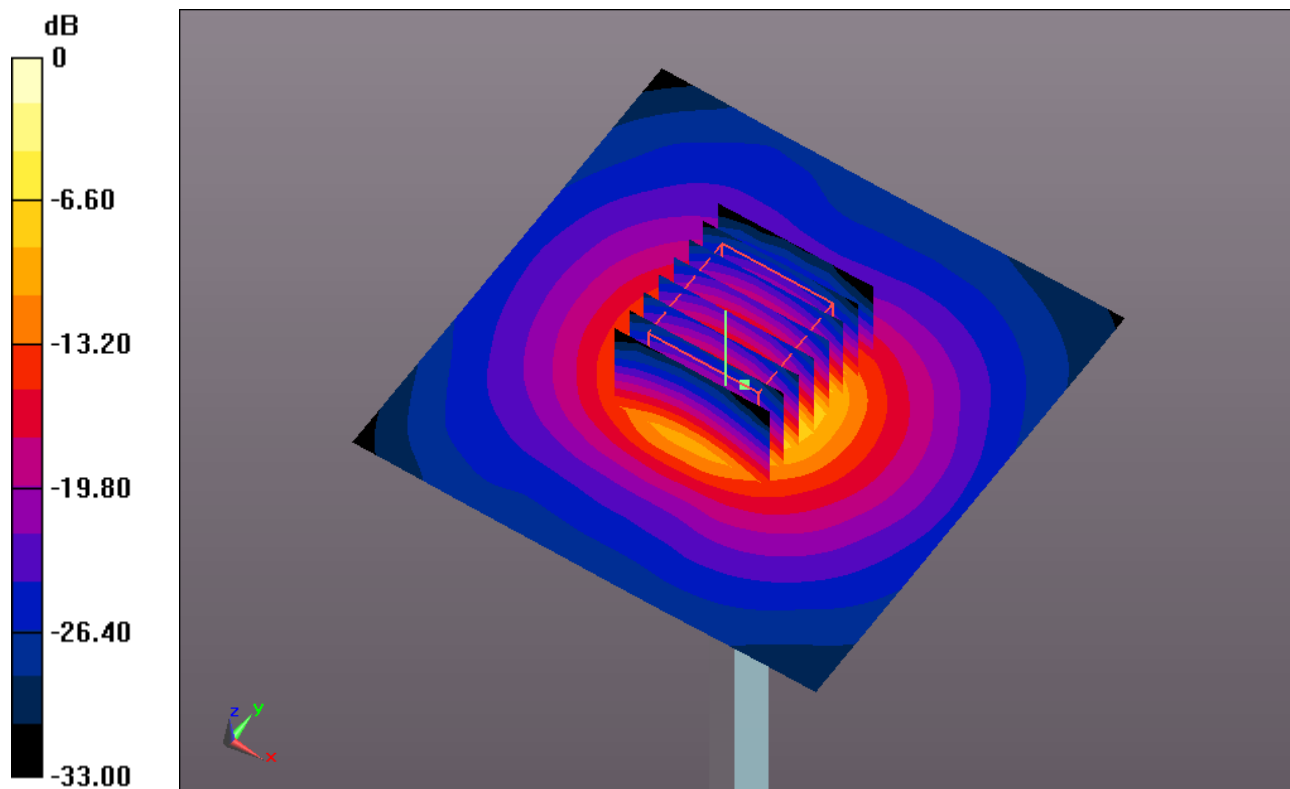
**Pin=250mW/Zoom Scan (8x8x8)/Cube 0:** Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 87.123 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 59.254 W/kg

**SAR(1 g) = 20.6 mW/g; SAR(10 g) = 6.12 mW/g**

Maximum value of SAR (measured) = 34.504 mW/g



## **System Check\_Body\_5800MHz\_111028**

### **DUT: Dipole 5GHz**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5800 \text{ MHz}$ ;  $\sigma = 6.096 \text{ mho/m}$ ;  $\epsilon_r = 46.929$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(3.74, 3.74, 3.74); Calibrated: 2011-9-2
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (91x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $35.049 \text{ mW/g}$

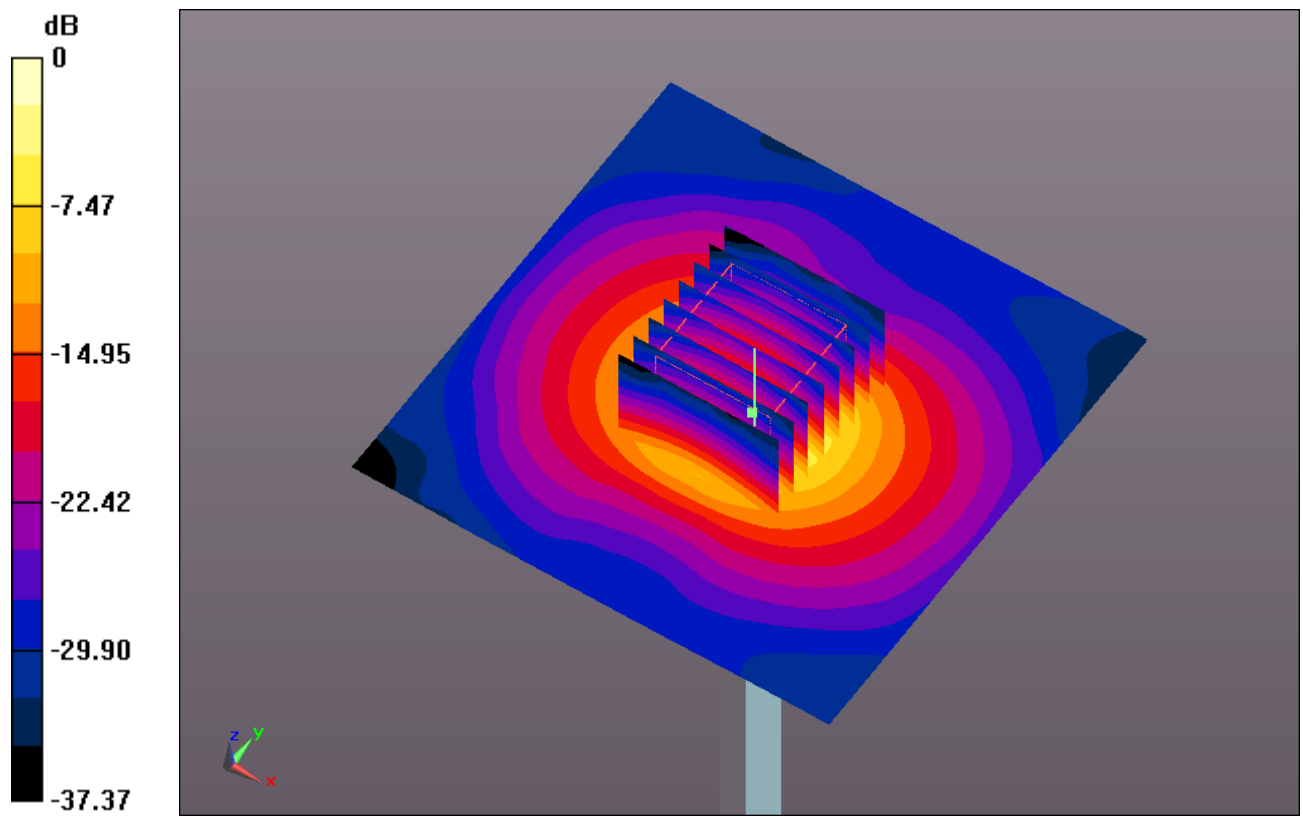
**Pin=250mW/Zoom Scan (8x8x8)/Cube 0:** Measurement grid:  $dx=4.3\text{mm}$ ,  $dy=4.3\text{mm}$ ,  $dz=3\text{mm}$

Reference Value =  $82.798 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $61.111 \text{ W/kg}$

**SAR(1 g) =  $19.6 \text{ mW/g}$ ; SAR(10 g) =  $5.68 \text{ mW/g}$**

Maximum value of SAR (measured) =  $32.554 \text{ mW/g}$



0 dB = 32.550mW/g

**#20 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.377 mW/g

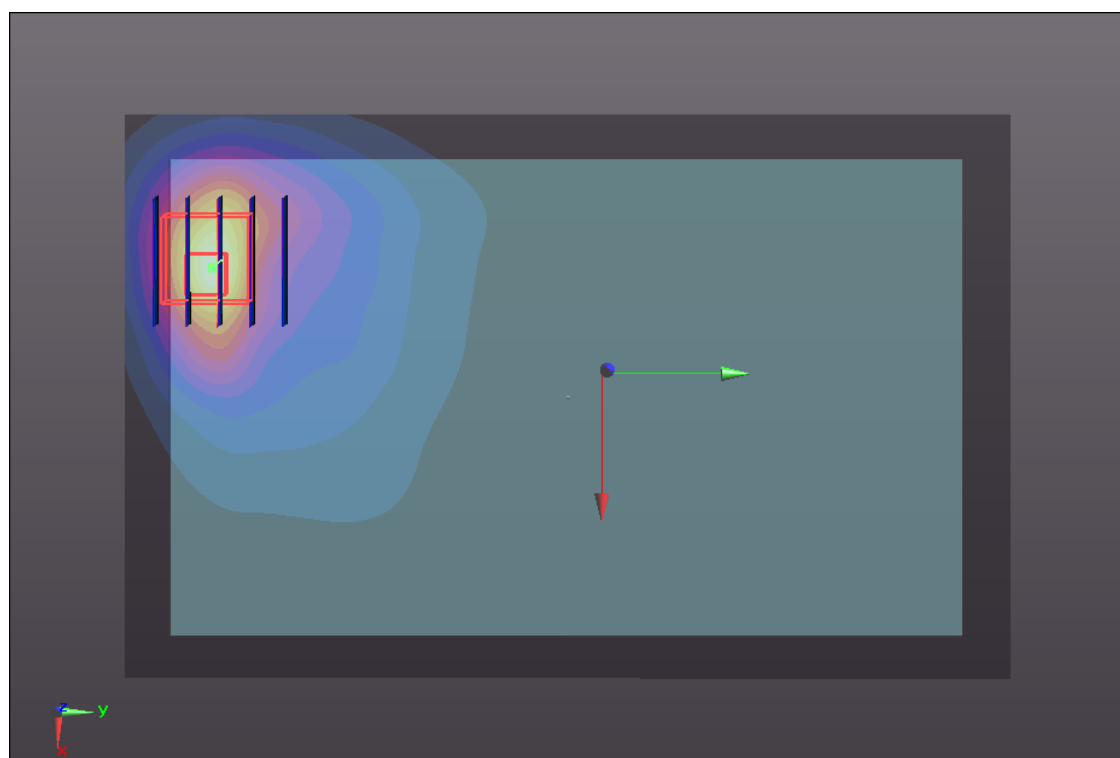
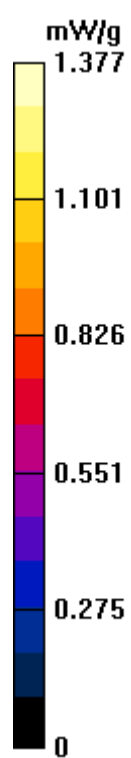
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.716 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2.164 W/kg

**SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.573 mW/g**

Maximum value of SAR (measured) = 1.202 mW/g



**#20 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0cm\_Ch384\_Earphone\_2D**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.377 mW/g

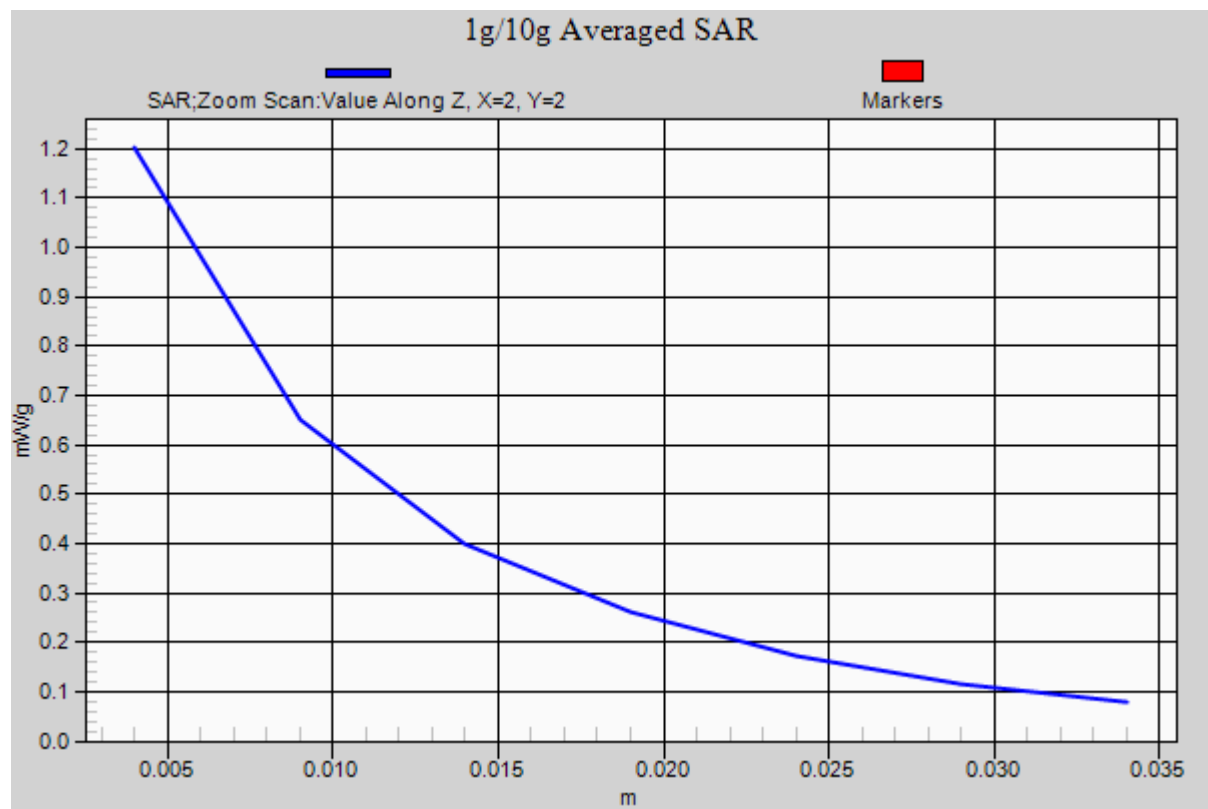
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.716 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2.164 W/kg

**SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.573 mW/g**

Maximum value of SAR (measured) = 1.202 mW/g



**#21 CDMA2000 BC0\_RC3 SO32\_Primary Portrait\_0cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (21x71x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.830 mW/g

**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.893 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.383 W/kg

**SAR(1 g) = 0.787 mW/g; SAR(10 g) = 0.451 mW/g**

Maximum value of SAR (measured) = 0.916 mW/g

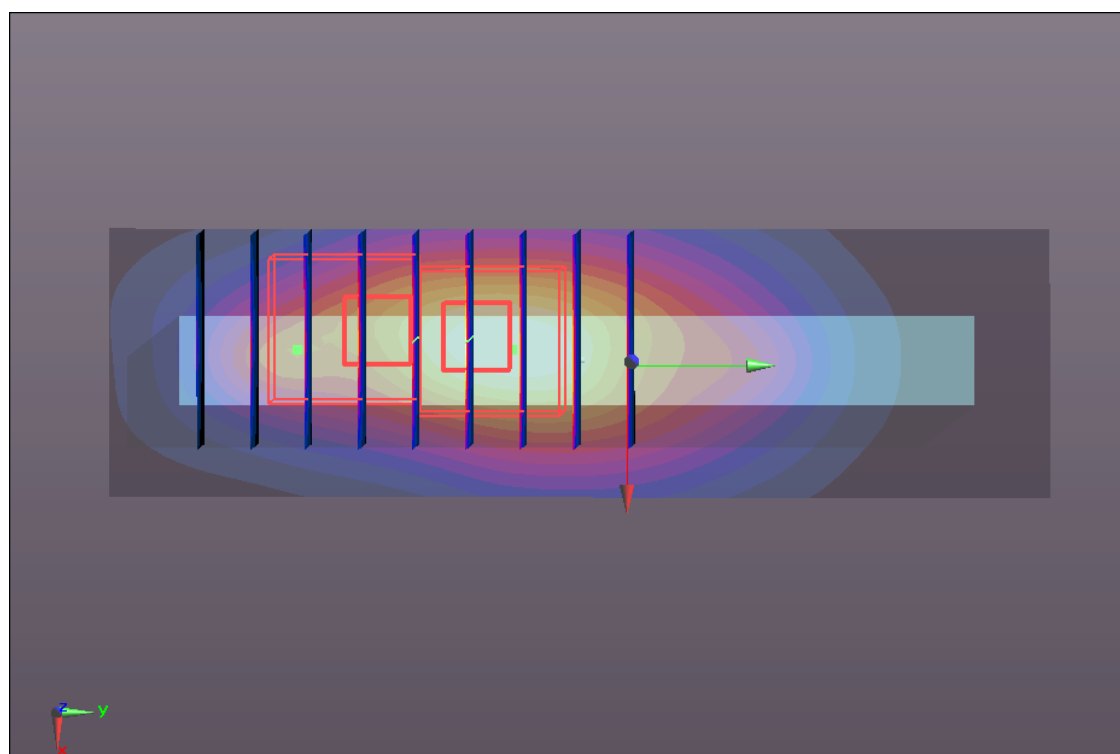
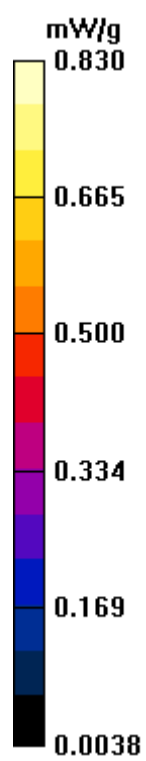
**Ch384/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.893 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.027 W/kg

**SAR(1 g) = 0.634 mW/g; SAR(10 g) = 0.357 mW/g**

Maximum value of SAR (measured) = 0.745 mW/g



**#22 CDMA2000 BC0\_RC3 SO32\_Secondary Landscape\_0cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (21x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.523 mW/g

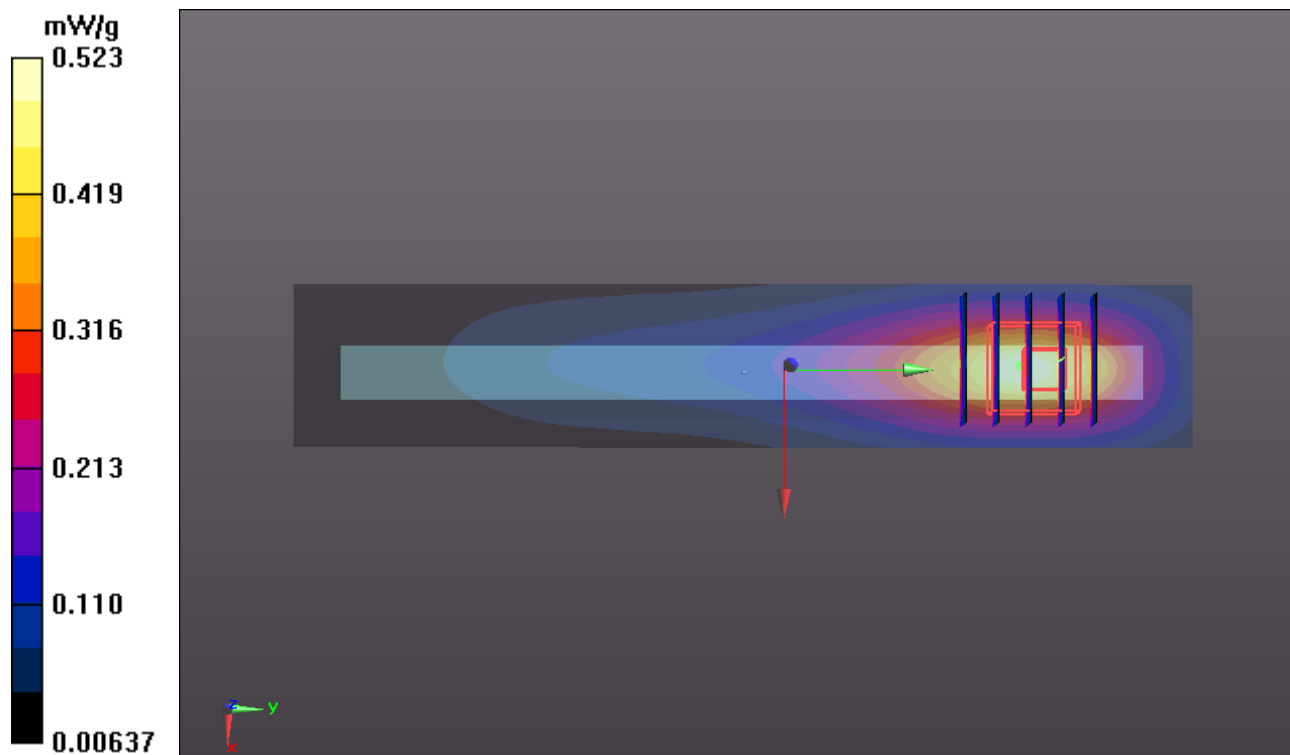
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.896 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.799 W/kg

**SAR(1 g) = 0.455 mW/g; SAR(10 g) = 0.256 mW/g**

Maximum value of SAR (measured) = 0.503 mW/g



**#23 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0cm\_Ch1013\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 54.282$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1013/Area Scan (71x51x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.237 mW/g

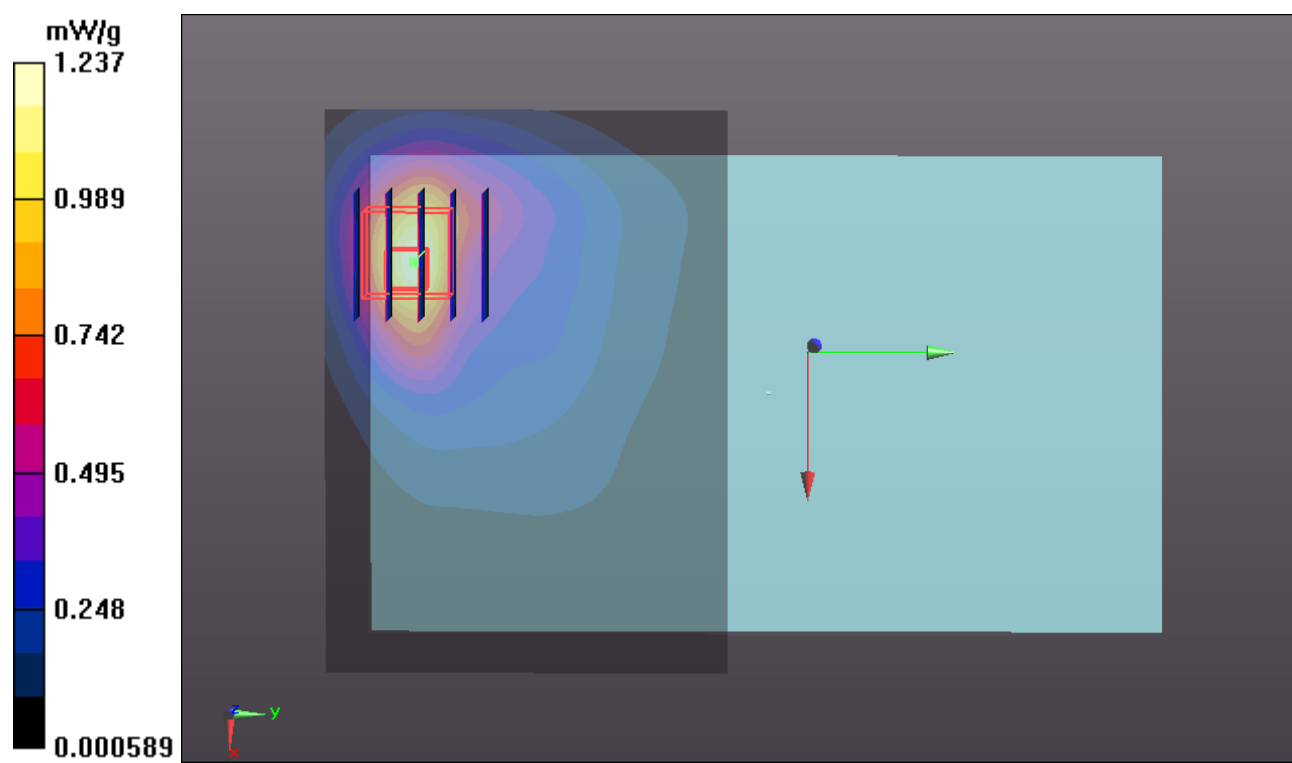
**Ch1013/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.481 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.922 W/kg

**SAR(1 g) = 0.967 mW/g; SAR(10 g) = 0.518 mW/g**

Maximum value of SAR (measured) = 1.091 mW/g



**#24 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0cm\_Ch777\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 848.31 \text{ MHz}$ ;  $\sigma = 0.987 \text{ mho/m}$ ;  $\epsilon_r =$

$54.083$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch777/Area Scan (71x51x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.266 \text{ mW/g}$

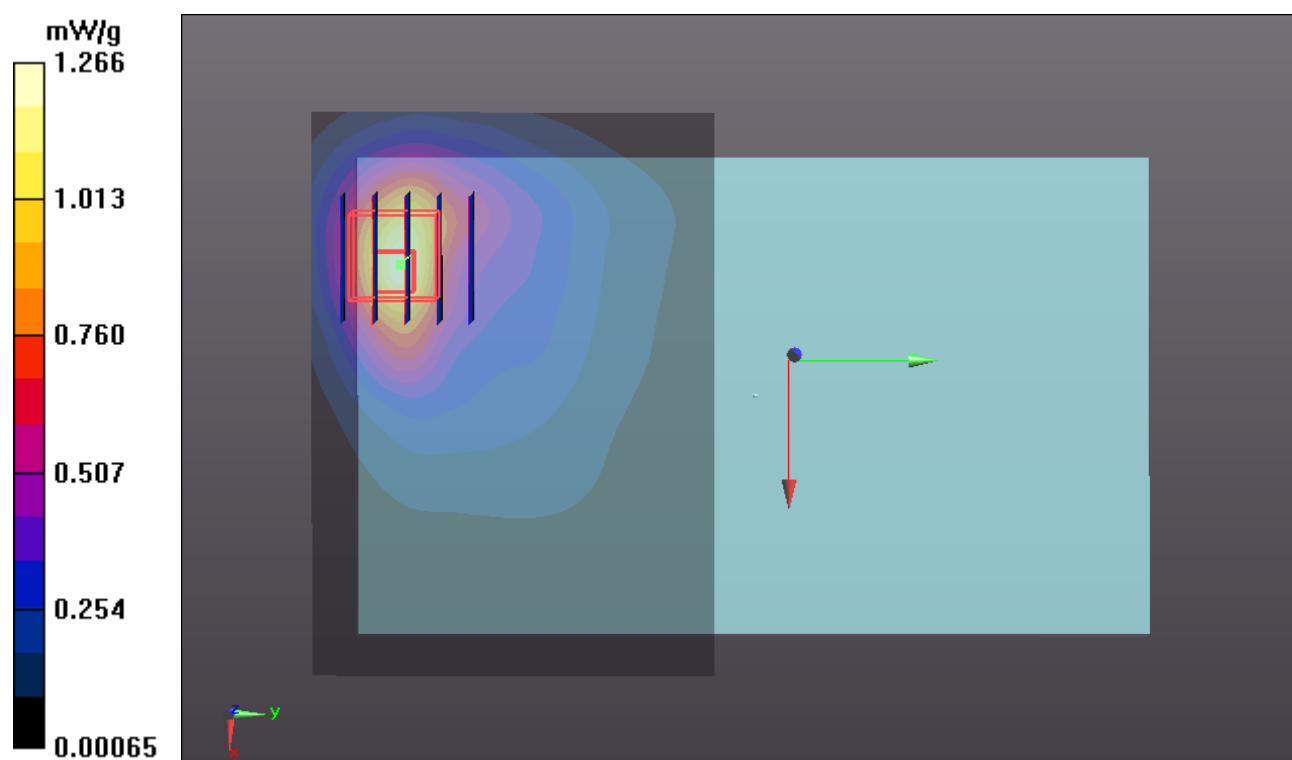
**Ch777/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $6.255 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$

Peak SAR (extrapolated) =  $2.011 \text{ W/kg}$

**SAR(1 g) =  $0.999 \text{ mW/g}$ ; SAR(10 g) =  $0.537 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.109 \text{ mW/g}$



**#25 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0.7cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x51x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.159 mW/g

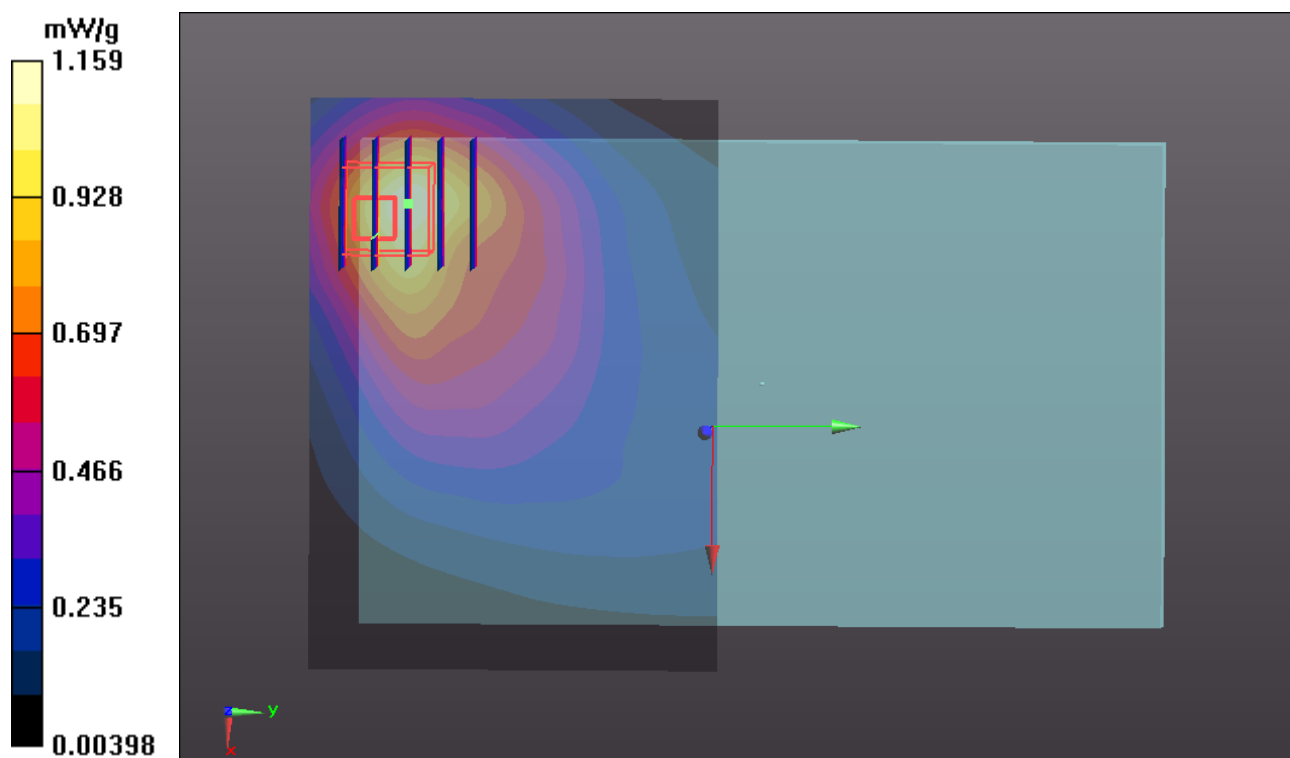
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.380 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.449 W/kg

**SAR(1 g) = 0.953 mW/g; SAR(10 g) = 0.603 mW/g**

Maximum value of SAR (measured) = 1.056 mW/g



**#26 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0.7cm\_Ch1013\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 54.282$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1013/Area Scan (71x51x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.140 mW/g

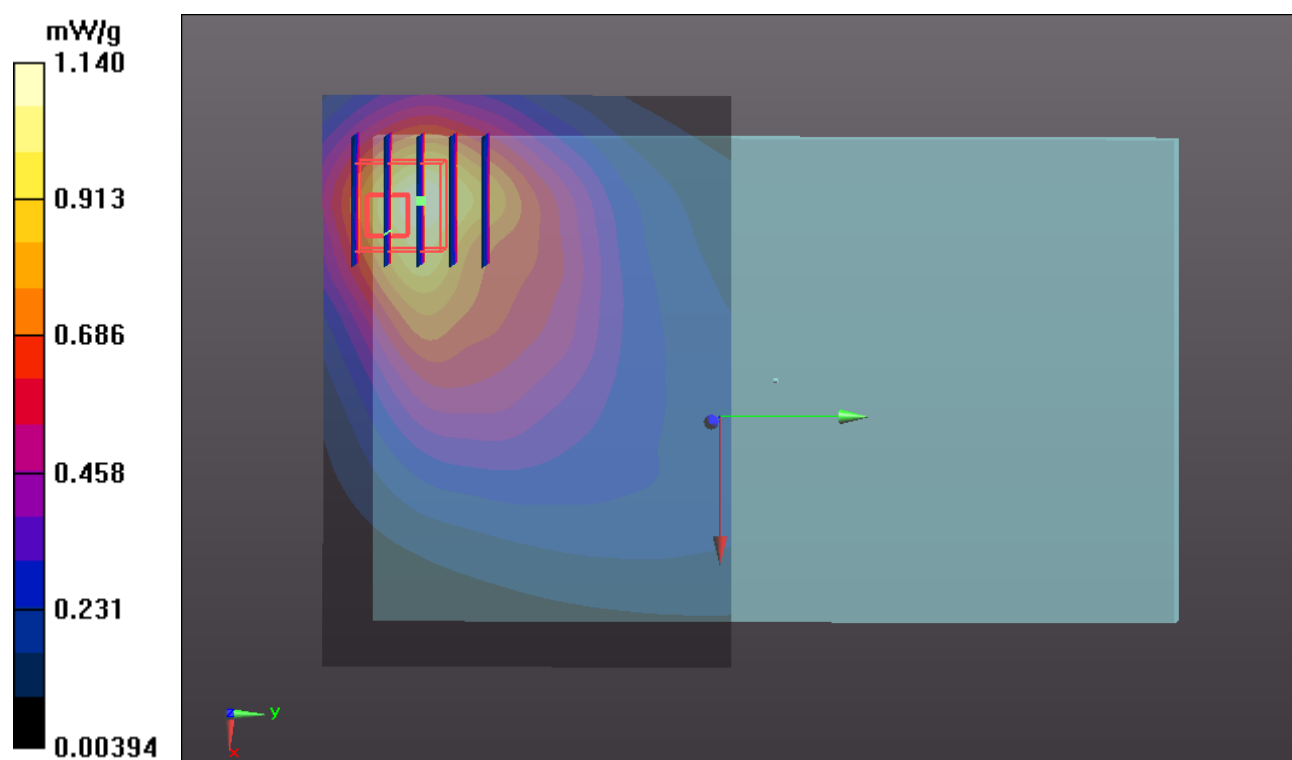
**Ch1013/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.766 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.442 W/kg

**SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.601 mW/g**

Maximum value of SAR (measured) = 1.045 mW/g



**#27 CDMA2000 BC0\_RC3 SO32\_Bottom Face\_0.7cm\_Ch777\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 848.31 \text{ MHz}$ ;  $\sigma = 0.987 \text{ mho/m}$ ;  $\epsilon_r =$

$54.083$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch777/Area Scan (71x51x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.008 \text{ mW/g}$

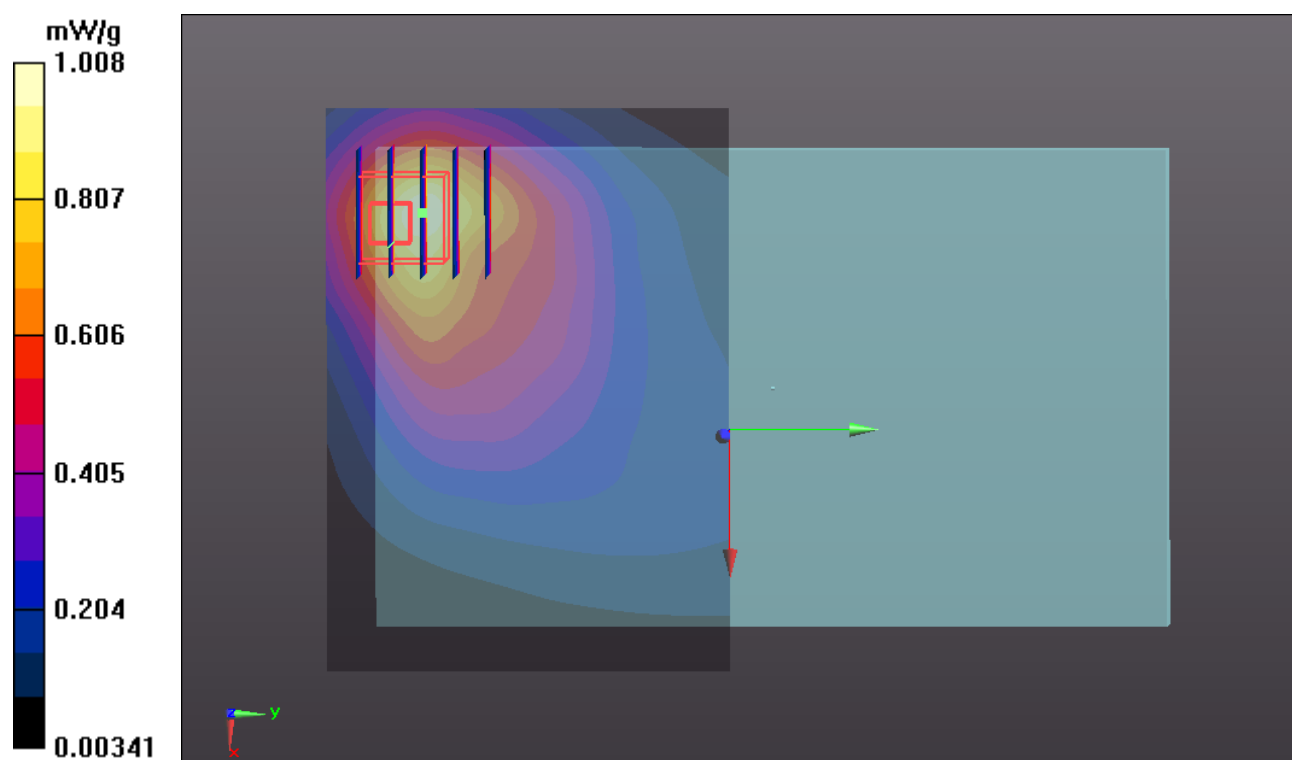
**Ch777/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $12.190 \text{ V/m}$ ; Power Drift =  $-0.07 \text{ dB}$

Peak SAR (extrapolated) =  $1.270 \text{ W/kg}$

**SAR(1 g) =  $0.833 \text{ mW/g}$ ; SAR(10 g) =  $0.530 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.909 \text{ mW/g}$



**#01 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (91x141x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.484 \text{ mW/g}$

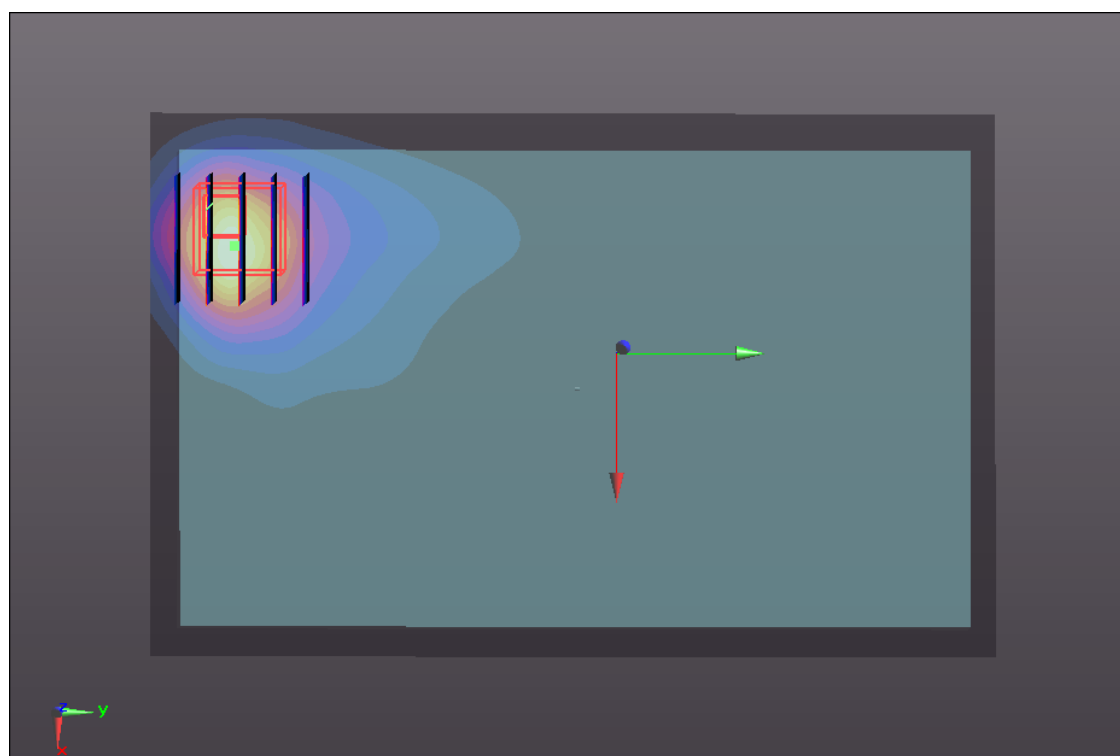
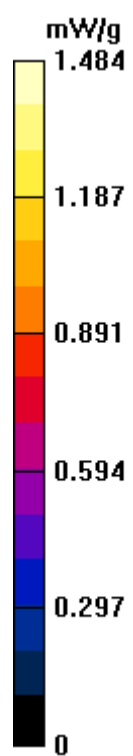
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $3.792 \text{ V/m}$ ; Power Drift =  $0.14 \text{ dB}$

Peak SAR (extrapolated) =  $2.477 \text{ W/kg}$

**SAR(1 g) =  $1.24 \text{ mW/g}$ ; SAR(10 g) =  $0.623 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.380 \text{ mW/g}$



**#02 CDMA2000 BC1\_RC3 SO32\_Primary Portrait\_0cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25$  MHz;  $\sigma = 1.476$  mho/m;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (31x101x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $0.978$  mW/g

**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $17.176$  V/m; Power Drift =  $0.13$  dB

Peak SAR (extrapolated) =  $2.192$  W/kg

**SAR(1 g) =  $0.976$  mW/g; SAR(10 g) =  $0.412$  mW/g**

Maximum value of SAR (measured) =  $1.219$  mW/g

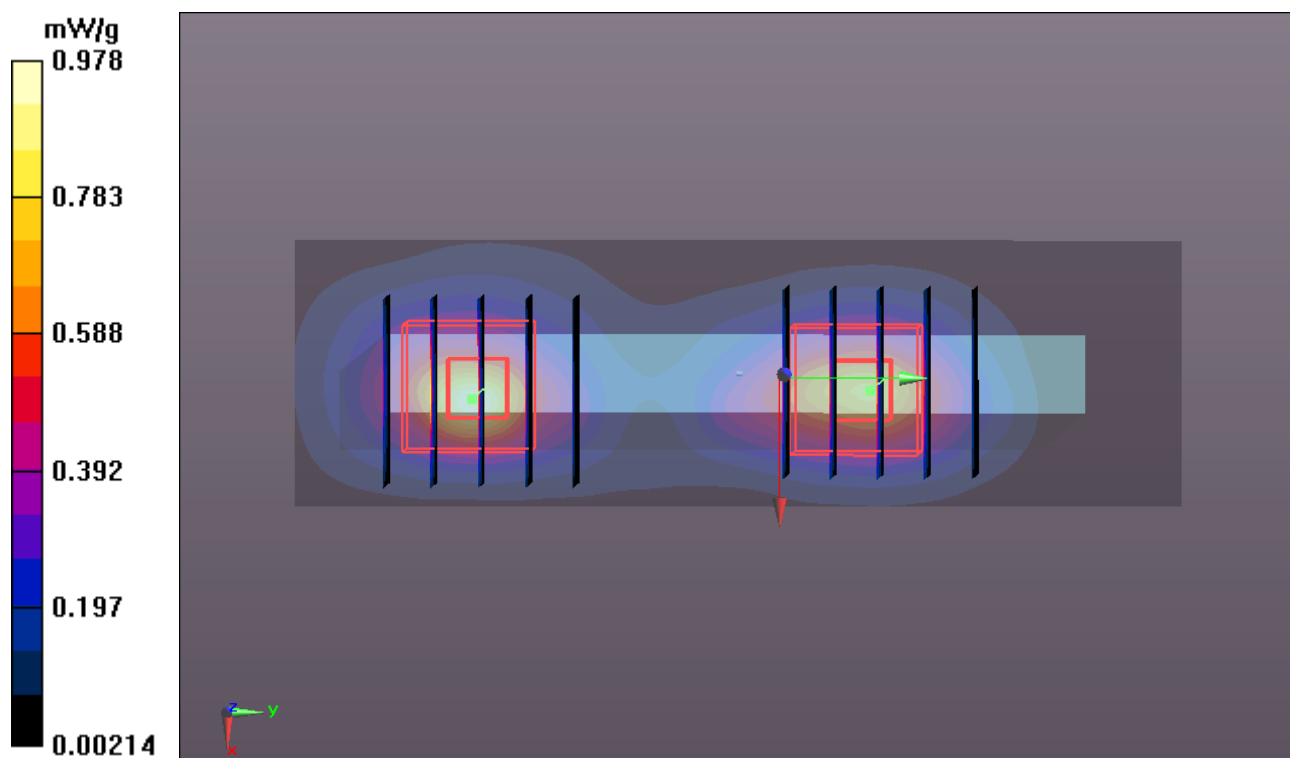
**Ch25/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $17.176$  V/m; Power Drift =  $0.13$  dB

Peak SAR (extrapolated) =  $1.031$  W/kg

**SAR(1 g) =  $0.632$  mW/g; SAR(10 g) =  $0.331$  mW/g**

Maximum value of SAR (measured) =  $0.704$  mW/g



**#03 CDMA2000 BC1\_RC3 SO32\_Secondary Landscape\_0cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (31x151x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.693 \text{ mW/g}$

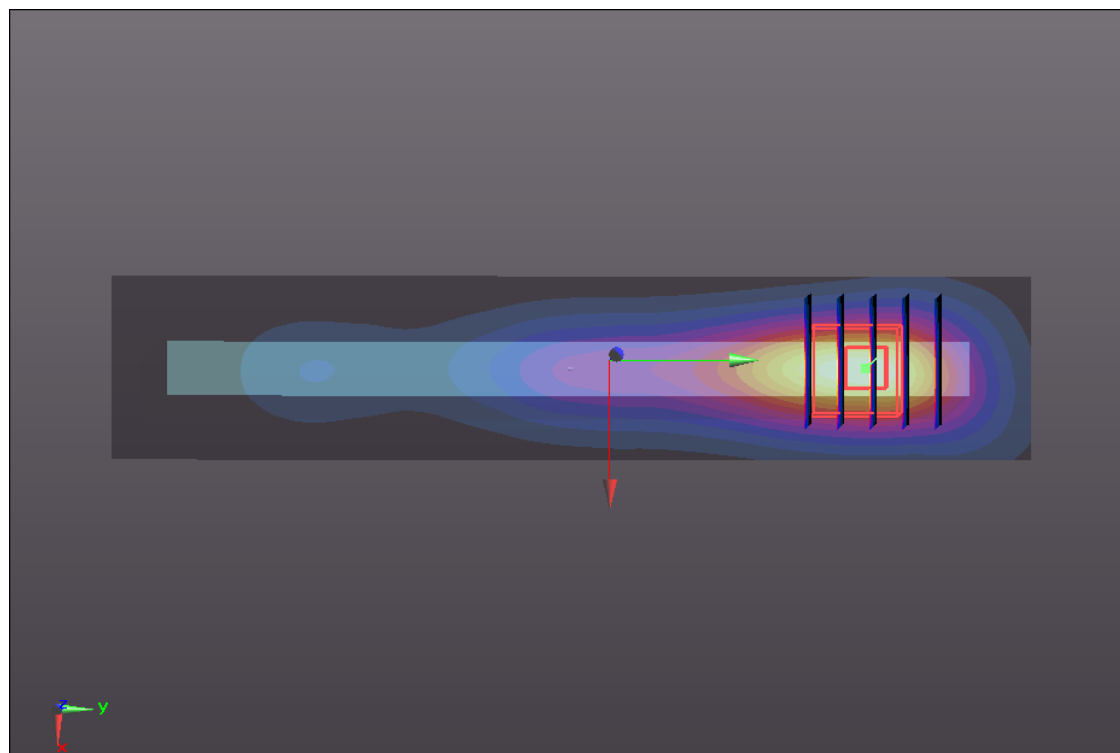
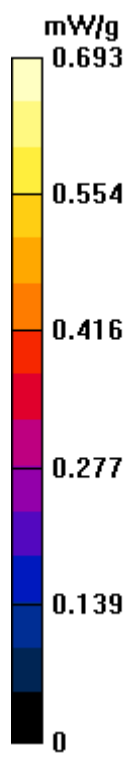
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $12.876 \text{ V/m}$ ; Power Drift =  $0.14 \text{ dB}$

Peak SAR (extrapolated) =  $1.324 \text{ W/kg}$

**SAR(1 g) =  $0.711 \text{ mW/g}$ ; SAR(10 g) =  $0.360 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.838 \text{ mW/g}$



**#04 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0cm\_Ch600\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C ; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (91x141x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.550 mW/g

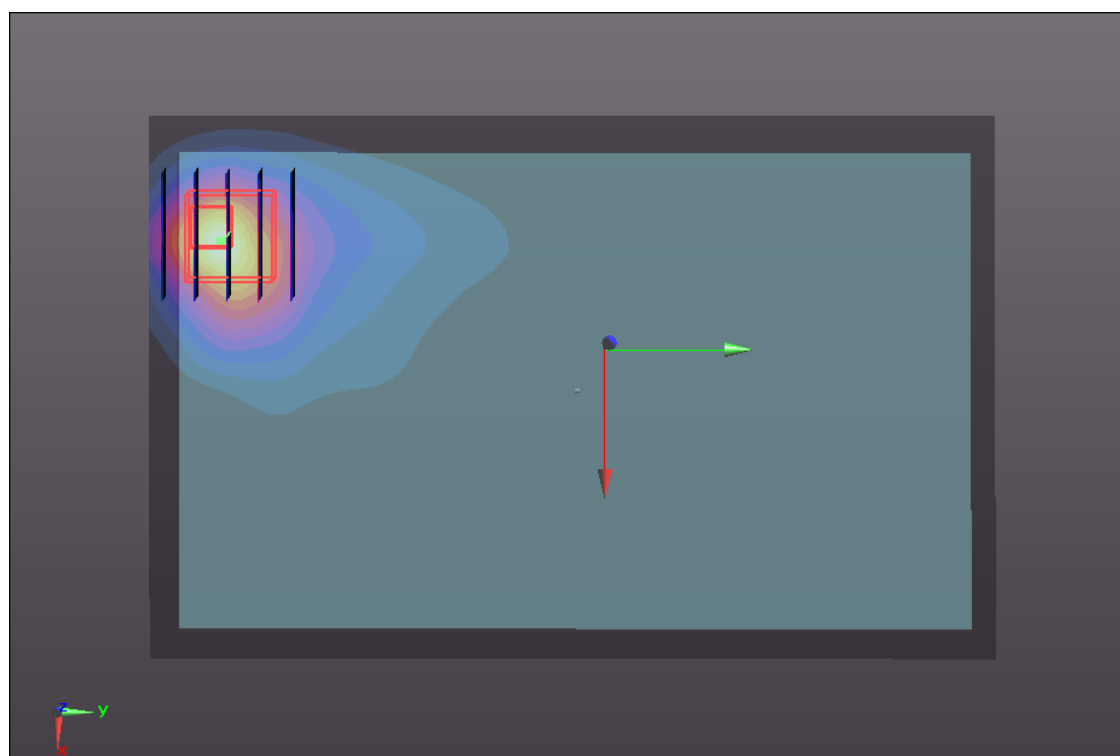
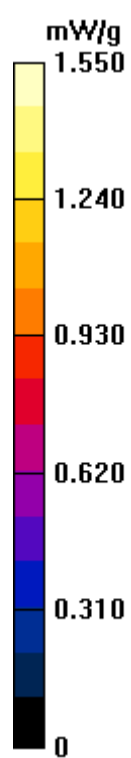
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.517 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.540 W/kg

**SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.603 mW/g**

Maximum value of SAR (measured) = 1.358 mW/g



**#05 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (91x51x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.185$  mW/g

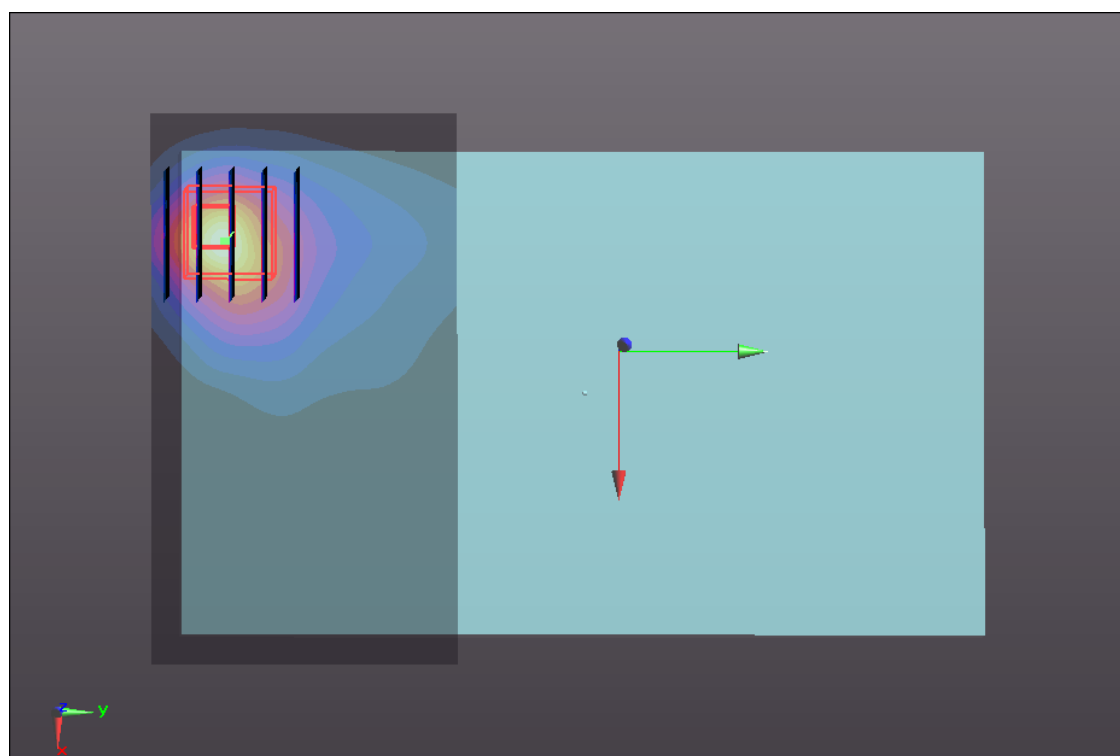
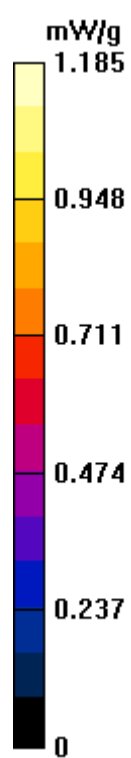
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $2.999$  V/m; Power Drift =  $0.11$  dB

Peak SAR (extrapolated) =  $2.055$  W/kg

**SAR(1 g) =  $0.965$  mW/g; SAR(10 g) =  $0.451$  mW/g**

Maximum value of SAR (measured) =  $1.033$  mW/g



**#06 CDMA2000 BC1\_RC3 SO32\_Primary Portrait\_0cm\_Ch600\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (31x101x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.881 mW/g

**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.817 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.989 W/kg

**SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.369 mW/g**

Maximum value of SAR (measured) = 1.089 mW/g

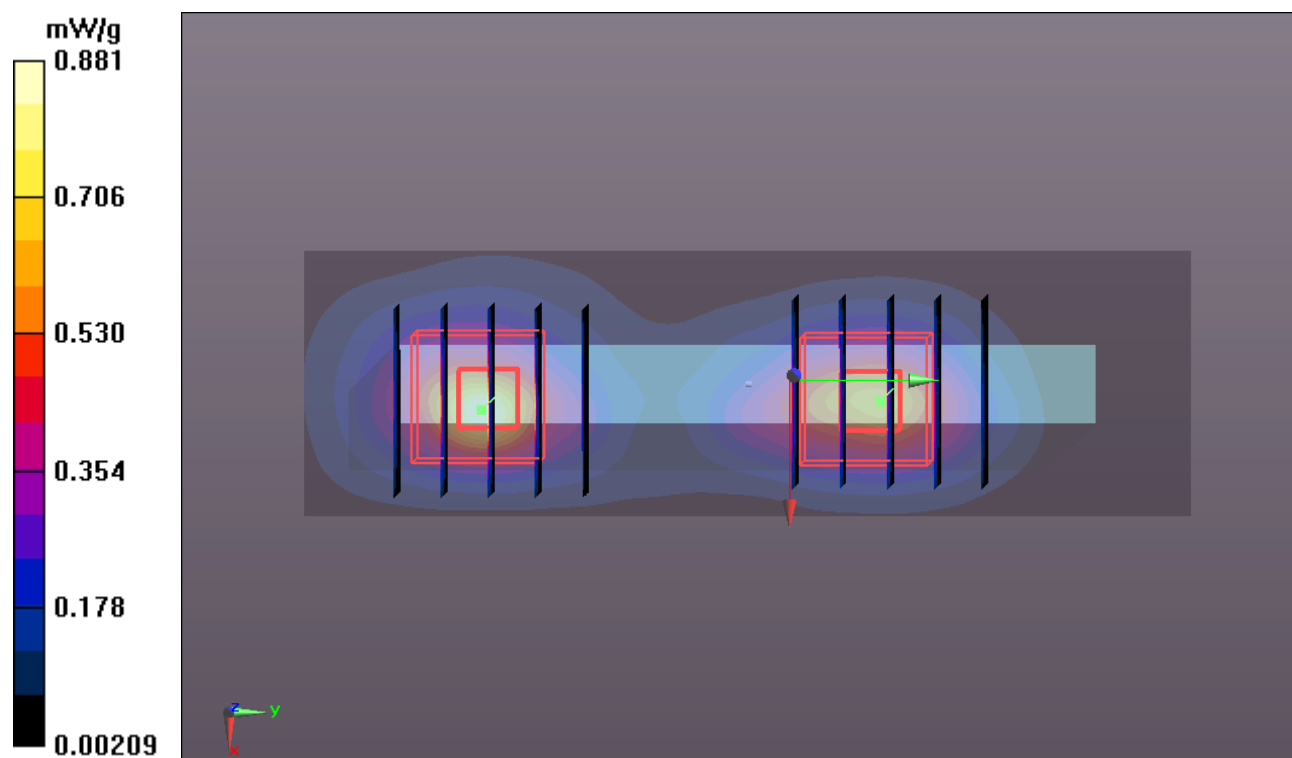
**Ch600/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.817 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.914 W/kg

**SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.286 mW/g**

Maximum value of SAR (measured) = 0.613 mW/g



**#07 CDMA2000 BC1\_RC3 SO32\_Primary Portrait\_0cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (31x101x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $0.697$  mW/g

**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $13.205$  V/m; Power Drift =  $0.08$  dB

Peak SAR (extrapolated) =  $1.624$  W/kg

**SAR(1 g) =  $0.697$  mW/g; SAR(10 g) =  $0.287$  mW/g**

Maximum value of SAR (measured) =  $0.851$  mW/g

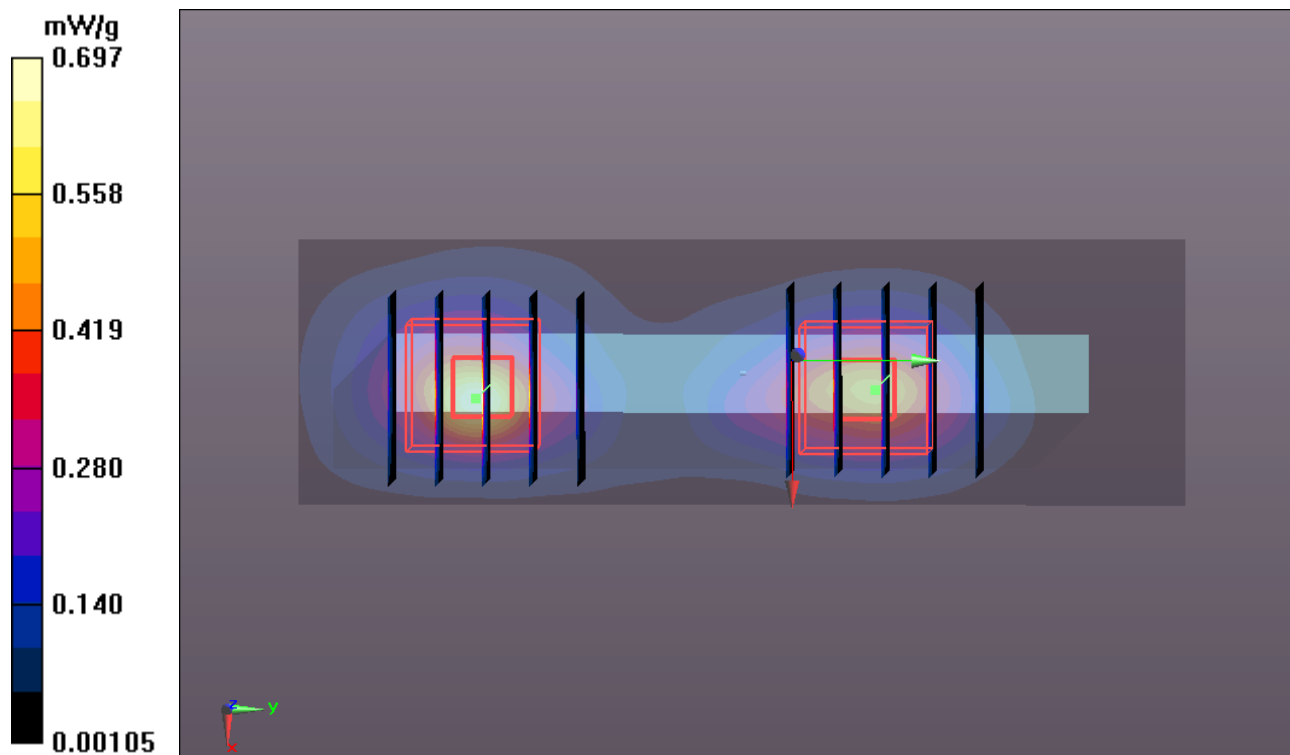
**Ch1175/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $13.205$  V/m; Power Drift =  $0.08$  dB

Peak SAR (extrapolated) =  $0.731$  W/kg

**SAR(1 g) =  $0.421$  mW/g; SAR(10 g) =  $0.214$  mW/g**

Maximum value of SAR (measured) =  $0.472$  mW/g



**#08 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0.7cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (91x141x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.306 \text{ mW/g}$

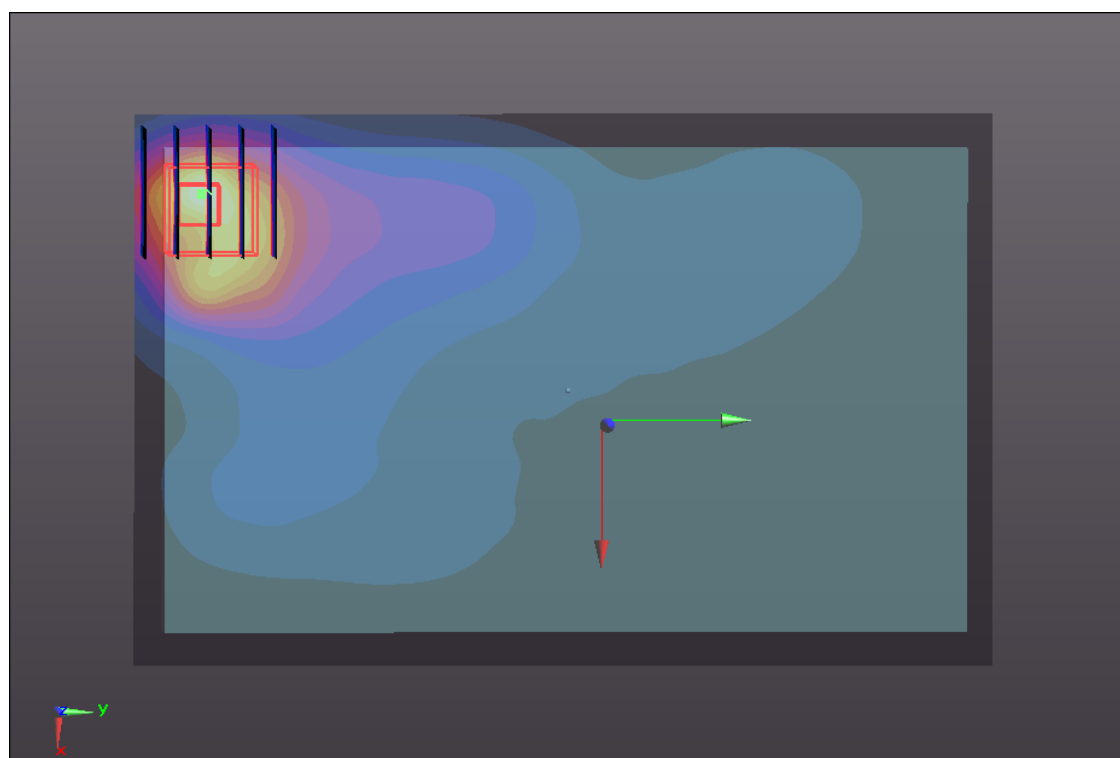
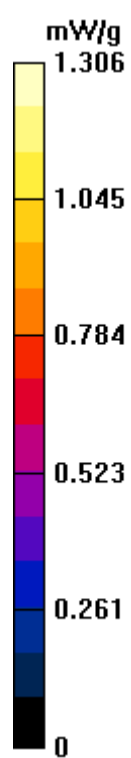
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.618 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $2.293 \text{ W/kg}$

**SAR(1 g) =  $1.24 \text{ mW/g}$ ; SAR(10 g) =  $0.651 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.309 \text{ mW/g}$



**#09 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0.7cm\_Ch600\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (91x51x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.398 mW/g

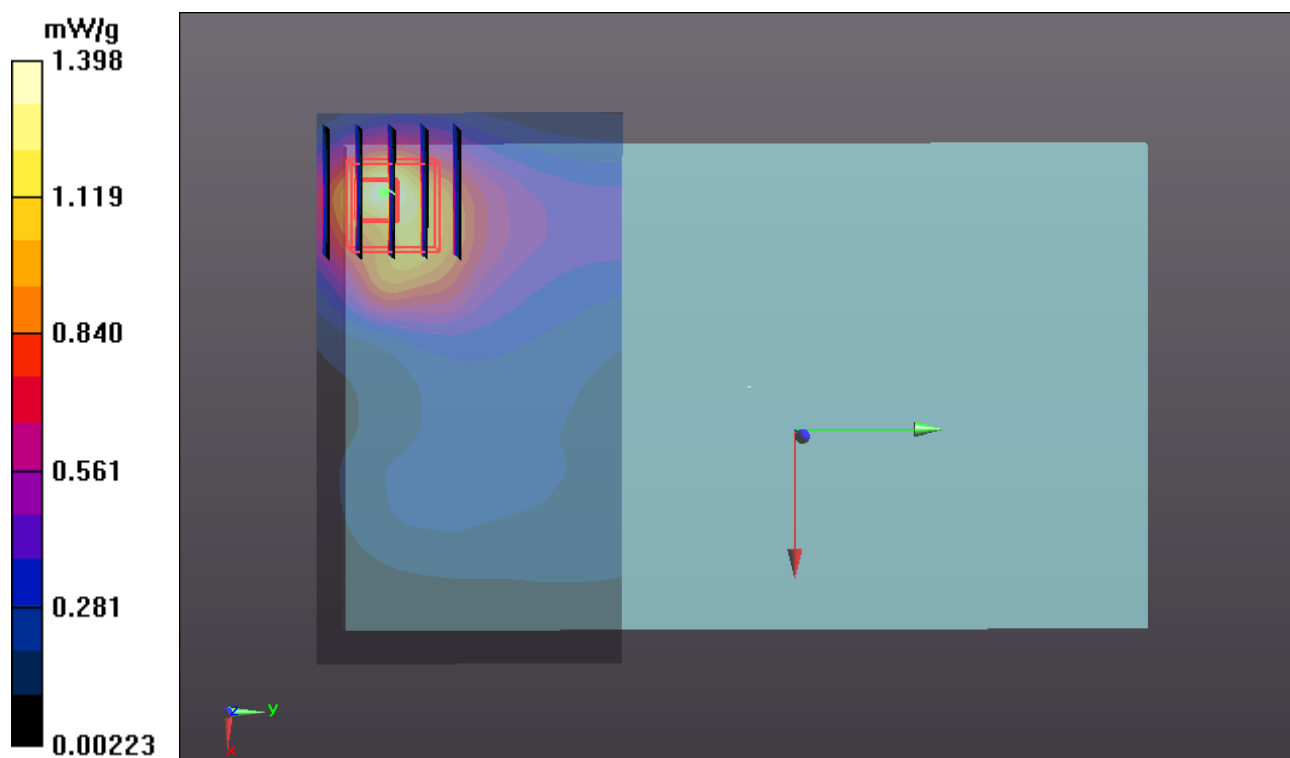
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.800 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 2.477 W/kg

**SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.686 mW/g**

Maximum value of SAR (measured) = 1.388 mW/g



**#09 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0.7cm\_Ch600\_Earphone\_2D**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

$52.468$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (91x51x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.398$  mW/g

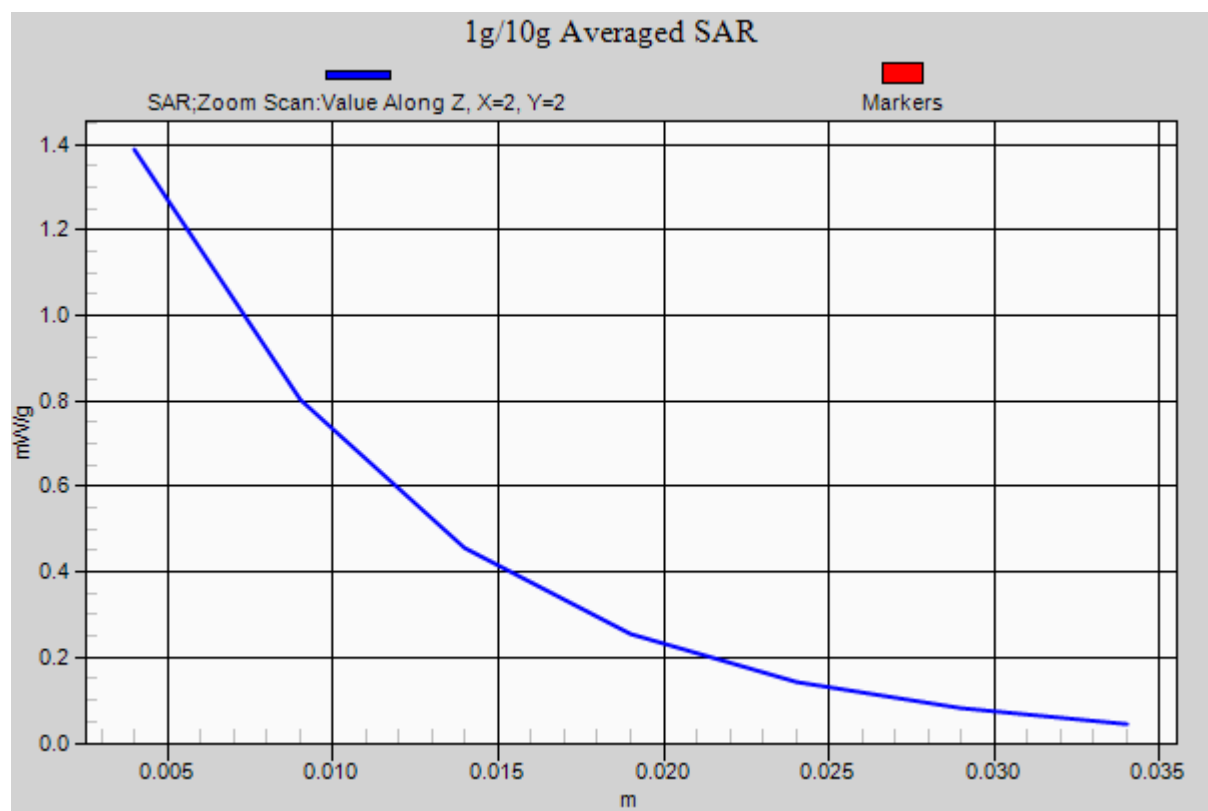
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $8.800$  V/m; Power Drift =  $0.14$  dB

Peak SAR (extrapolated) =  $2.477$  W/kg

**SAR(1 g) =  $1.32$  mW/g; SAR(10 g) =  $0.686$  mW/g**

Maximum value of SAR (measured) =  $1.388$  mW/g



**#10 CDMA2000 BC1\_RC3 SO32\_Bottom Face\_0.7cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (91x51x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.084$  mW/g

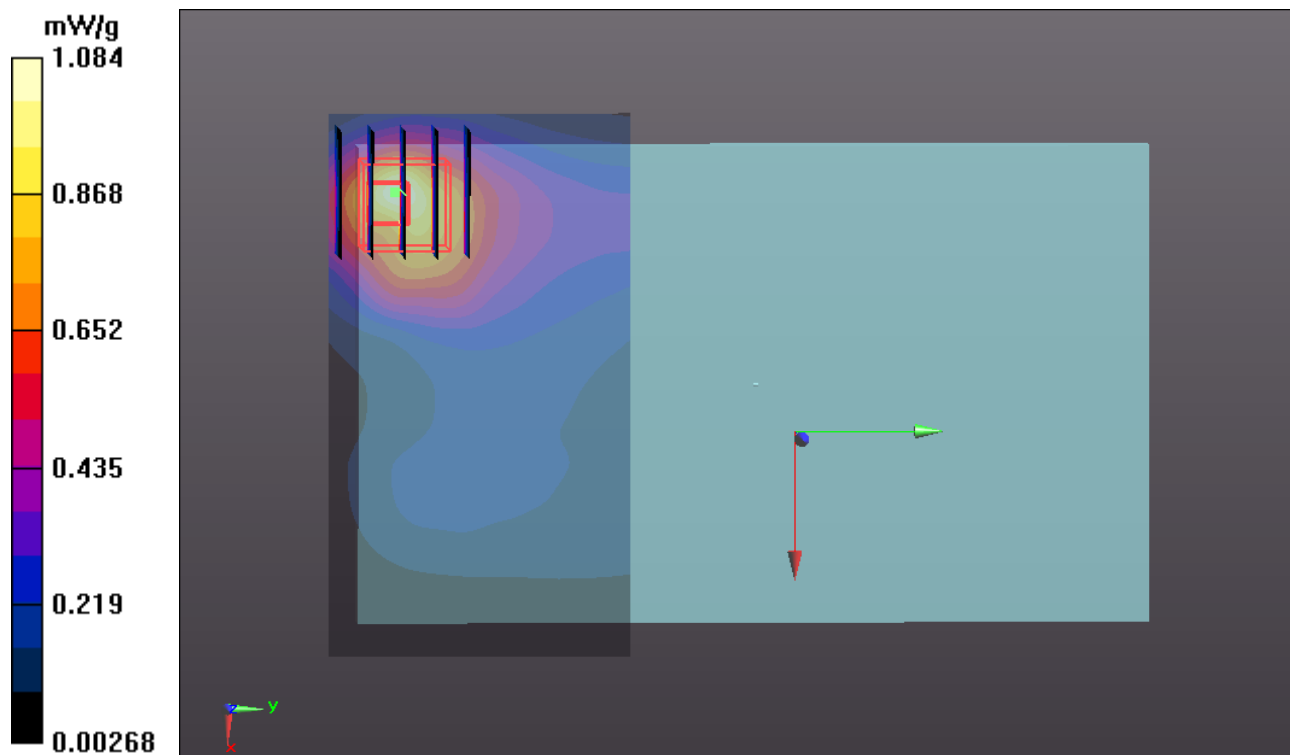
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $7.648$  V/m; Power Drift =  $0.11$  dB

Peak SAR (extrapolated) =  $1.979$  W/kg

**SAR(1 g) =  $1.01$  mW/g; SAR(10 g) =  $0.520$  mW/g**

Maximum value of SAR (measured) =  $1.058$  mW/g



**#28 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.244 mW/g

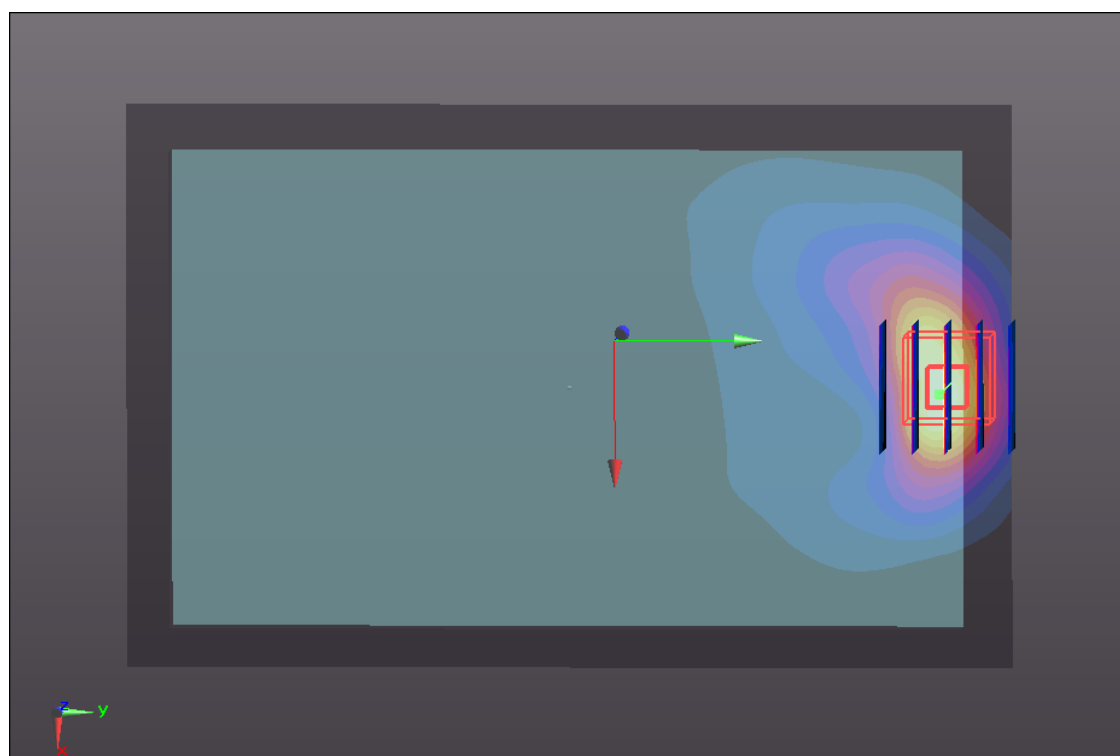
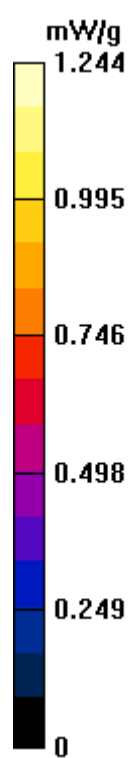
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.332 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.040 W/kg

**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.638 mW/g**

Maximum value of SAR (measured) = 1.328 mW/g



**#28 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0cm\_Ch384\_Earphone\_2D**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.244 mW/g

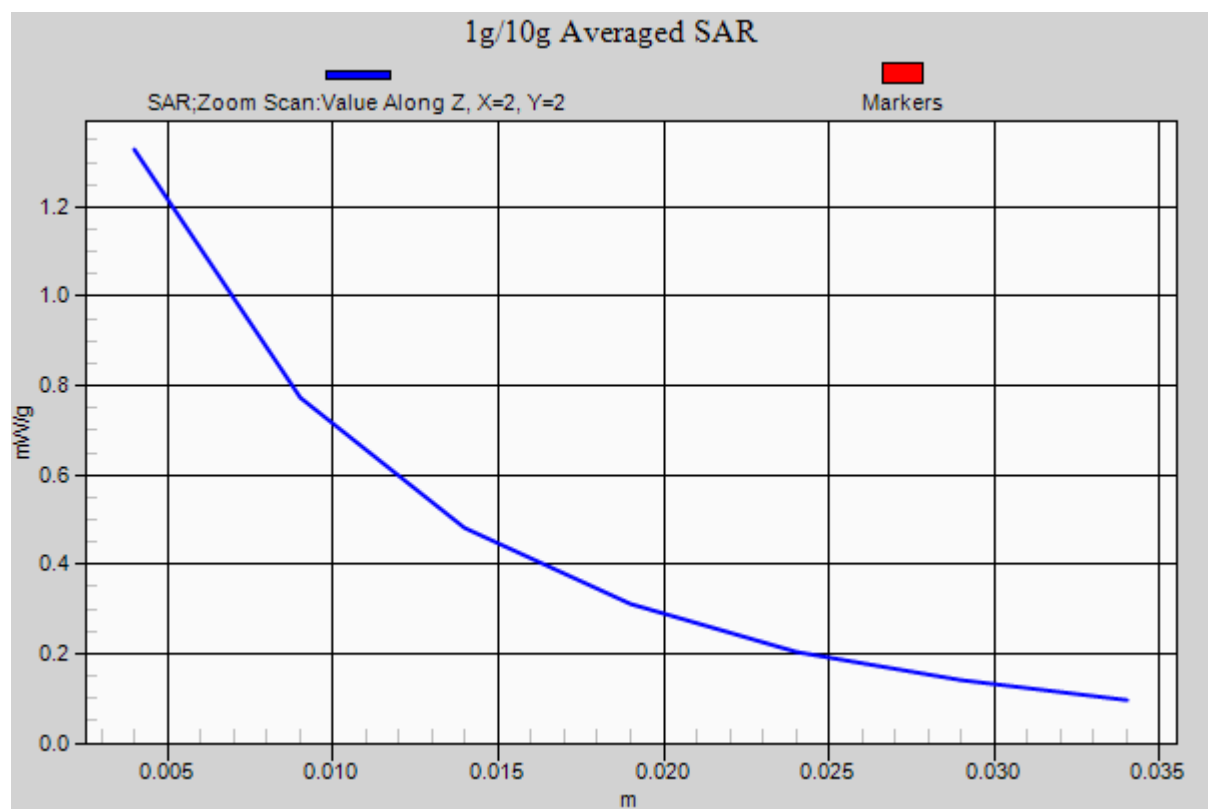
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.332 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.040 W/kg

**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.638 mW/g**

Maximum value of SAR (measured) = 1.328 mW/g



**#29 CDMA2000 BC0\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch384**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (21x71x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.362 mW/g

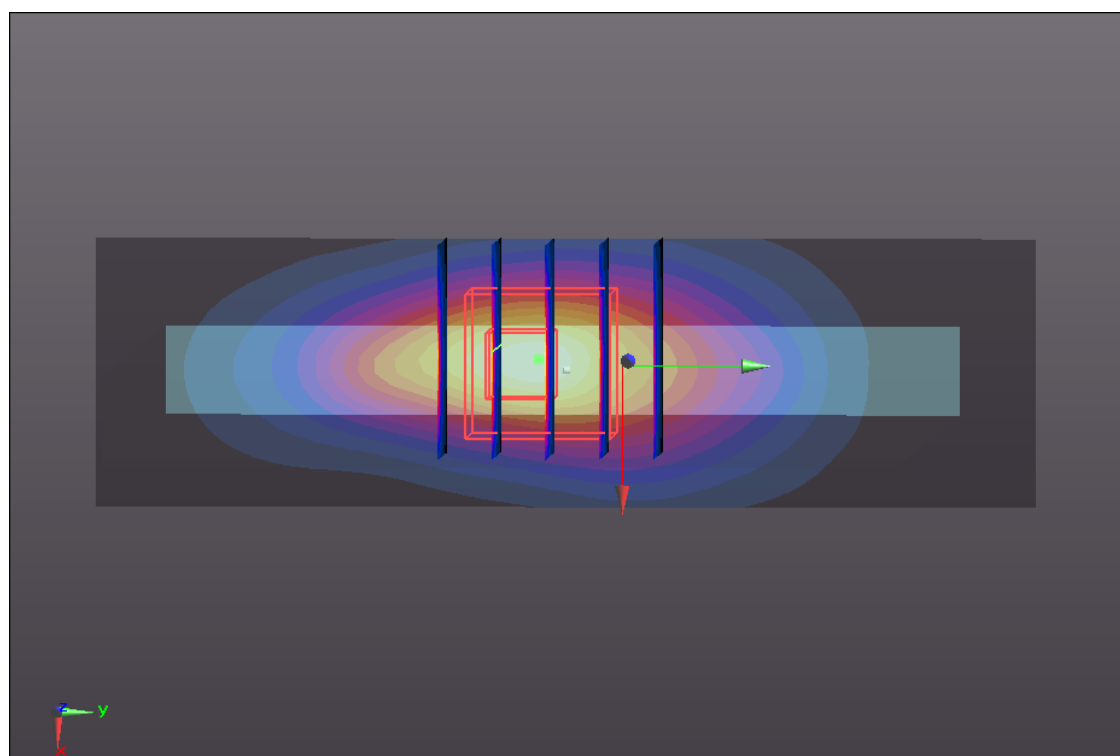
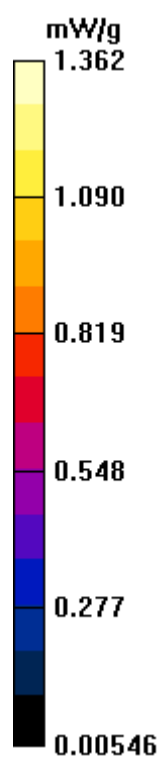
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 30.937 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.035 W/kg

**SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.626 mW/g**

Maximum value of SAR (measured) = 1.203 mW/g



**#30 CDMA2000 BC0\_RTAP 153.6\_Secondary Landscape\_0cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (21x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.141 mW/g

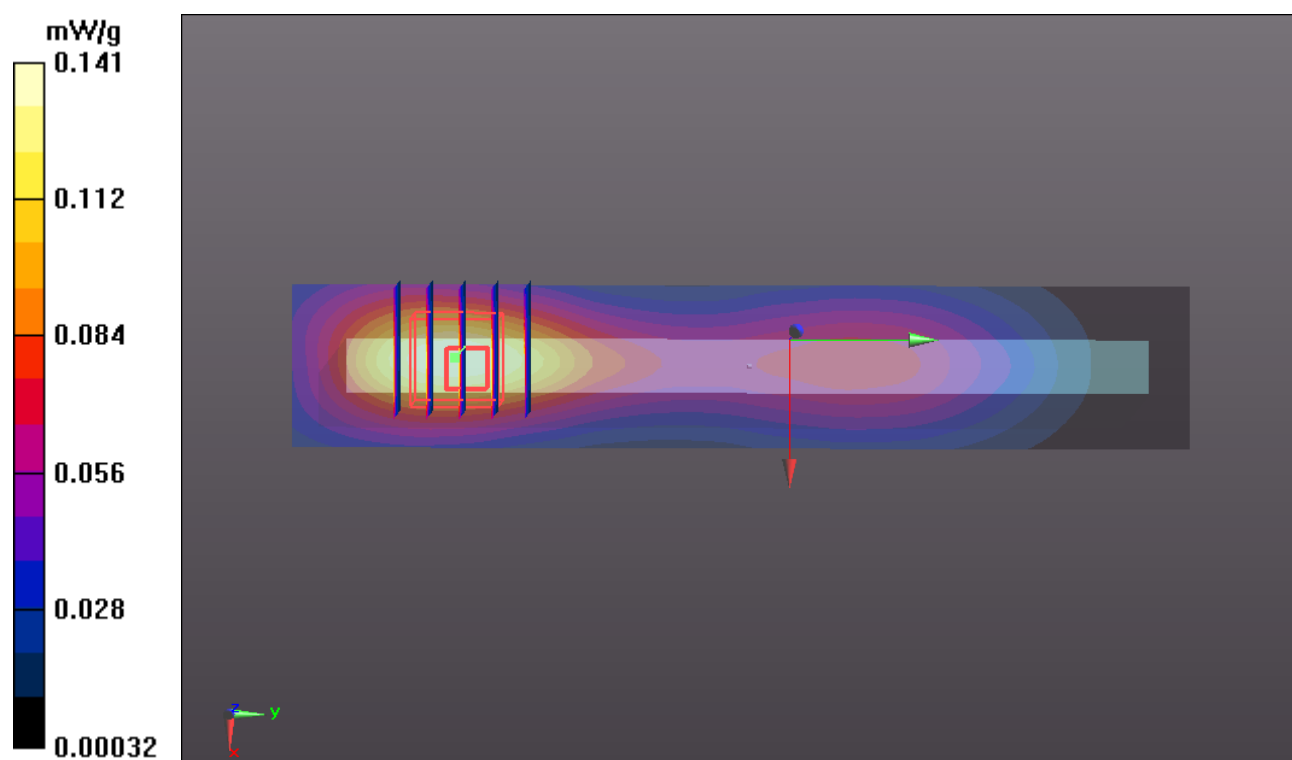
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.122 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.201 W/kg

**SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.075 mW/g**

Maximum value of SAR (measured) = 0.127 mW/g



### #31 CDMA2000 BC0\_RTAP 153.6\_Primary Landscape\_0cm\_Ch384\_Earphone

#### DUT: 190101

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

#### DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (21x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.278 mW/g

**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.778 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.456 W/kg

**SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.152 mW/g**

Maximum value of SAR (measured) = 0.287 mW/g

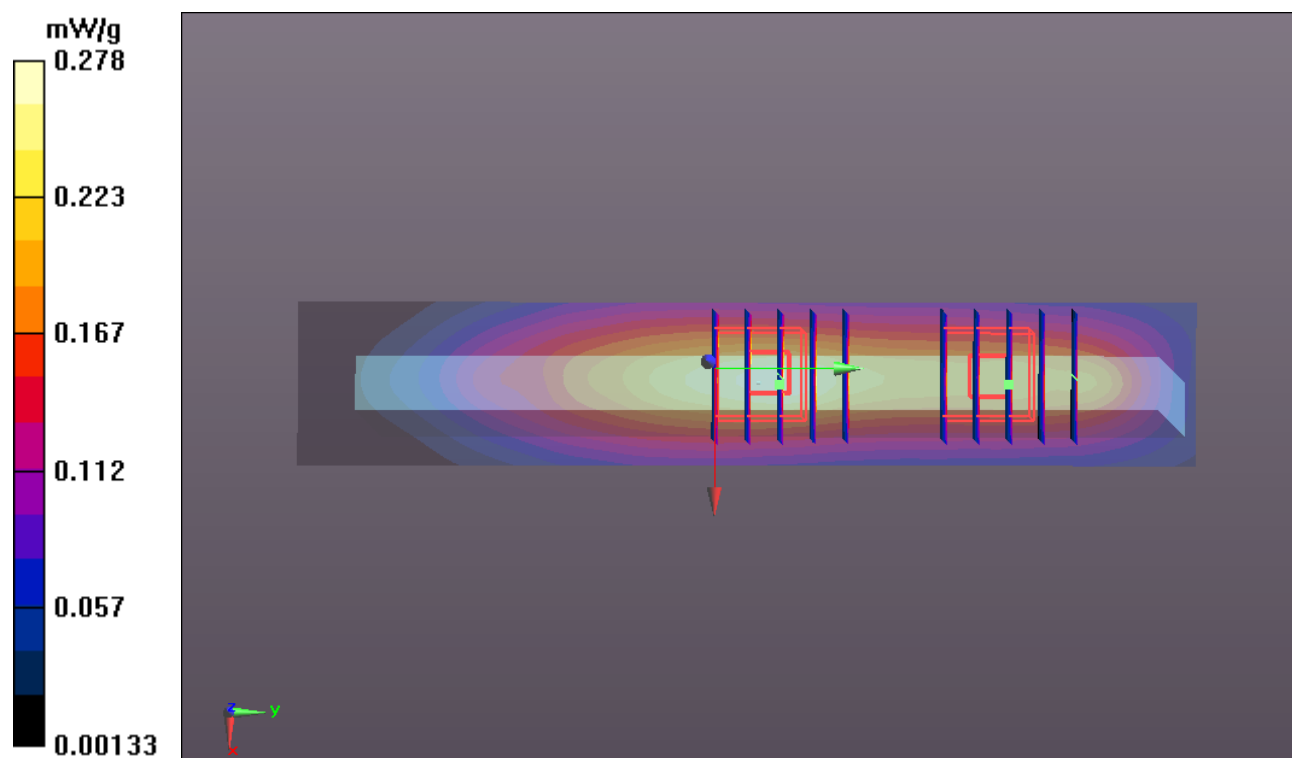
**Ch384/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.778 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.428 W/kg

**SAR(1 g) = 0.198 mW/g; SAR(10 g) = 0.123 mW/g**

Maximum value of SAR (measured) = 0.250 mW/g



**#32 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0cm\_Ch1013\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 54.282$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1013/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.219 mW/g

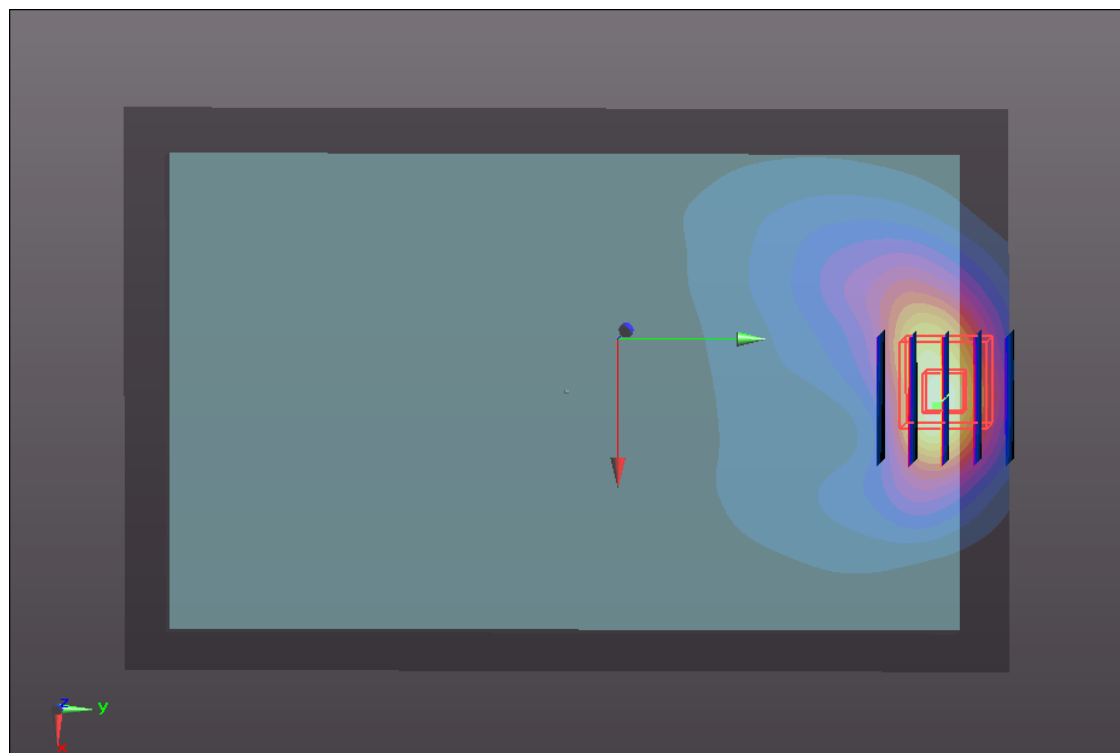
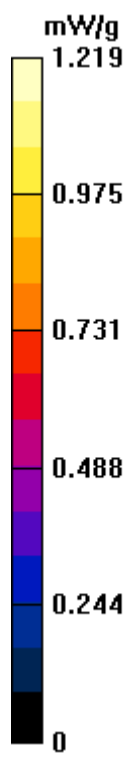
**Ch1013/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.304 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.995 W/kg

**SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.616 mW/g**

Maximum value of SAR (measured) = 1.268 mW/g



**#33 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0cm\_Ch777\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 848.31 \text{ MHz}$ ;  $\sigma = 0.987 \text{ mho/m}$ ;  $\epsilon_r =$

$54.083$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch777/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.092 \text{ mW/g}$

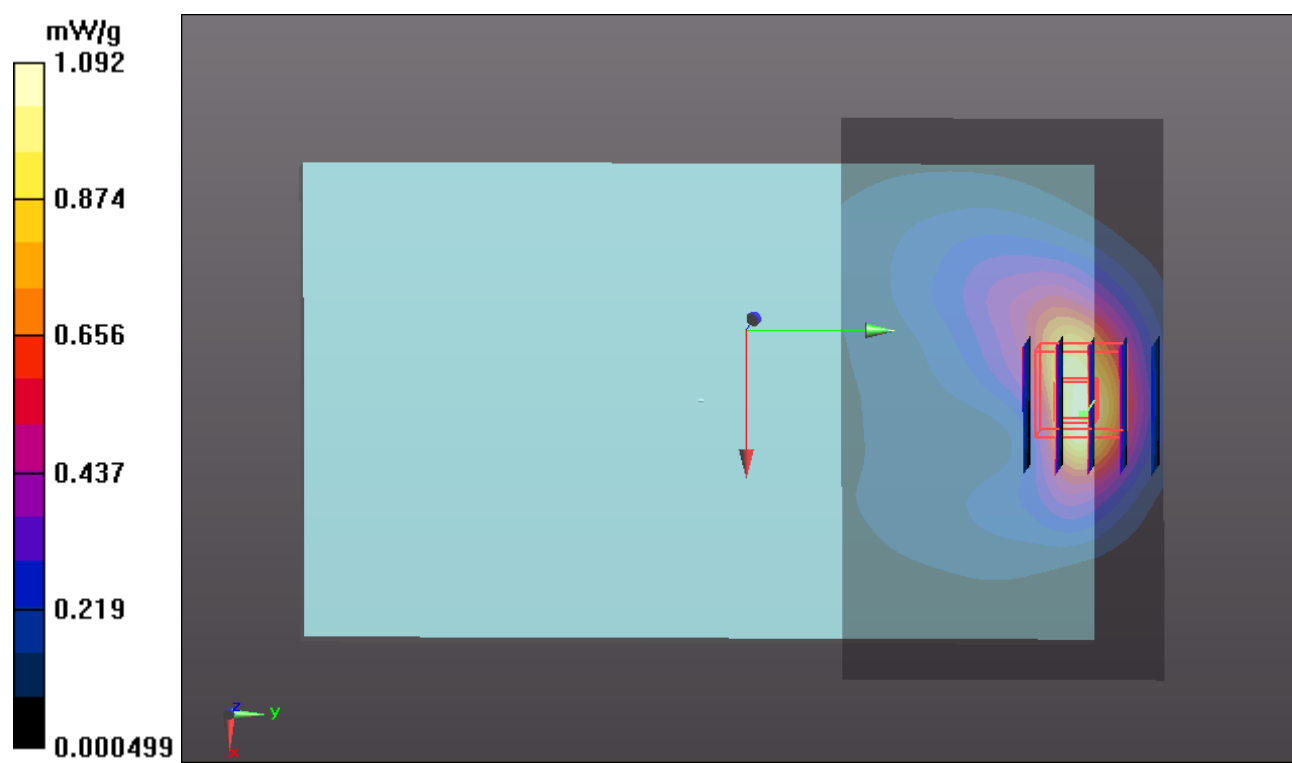
**Ch777/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $4.722 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $1.792 \text{ W/kg}$

**SAR(1 g) =  $1 \text{ mW/g}$ ; SAR(10 g) =  $0.554 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.075 \text{ mW/g}$



**#34 CDMA2000 BC0\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch1013**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 54.282$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1013/Area Scan (21x71x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.214 mW/g

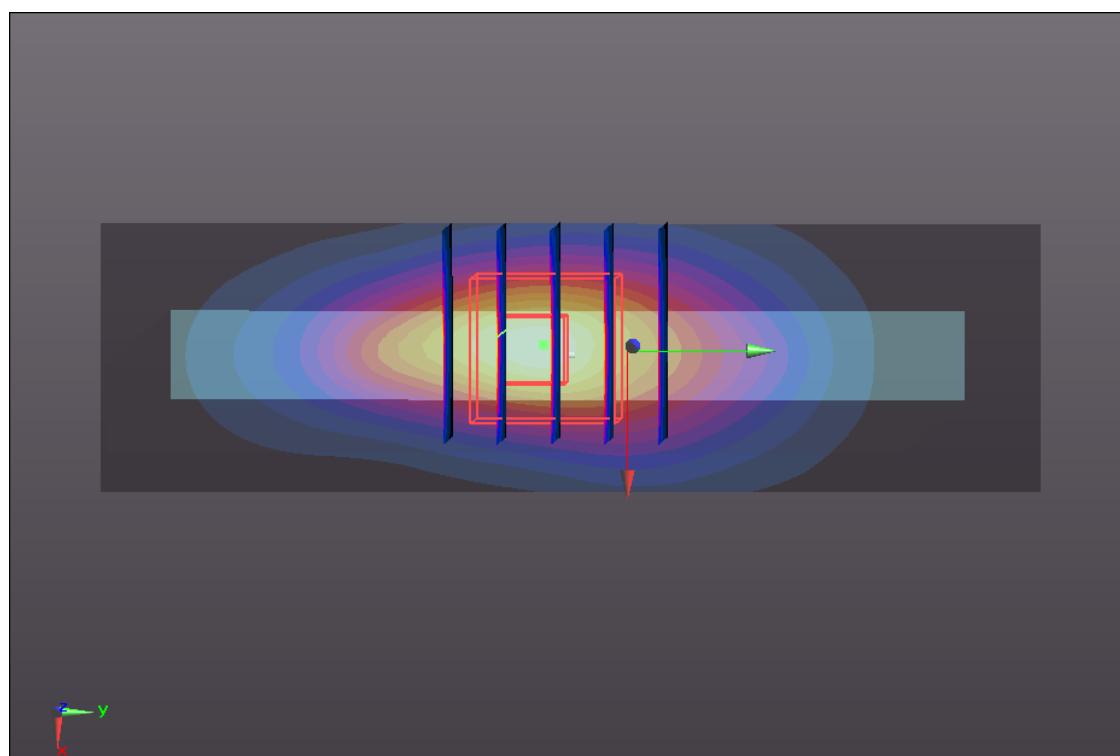
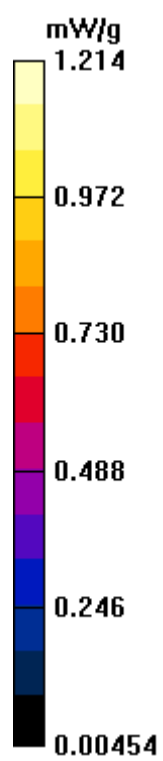
**Ch1013/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.873 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.811 W/kg

**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.567 mW/g**

Maximum value of SAR (measured) = 1.078 mW/g



**#35 CDMA2000 BC0\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch777**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 848.31$  MHz;  $\sigma = 0.987$  mho/m;  $\epsilon_r =$

$54.083$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.4$  °C; Liquid Temperature :  $21.6$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch777/Area Scan (21x71x1):** Measurement grid:  $dx=20$ mm,  $dy=20$ mm

Maximum value of SAR (interpolated) =  $1.192$  mW/g

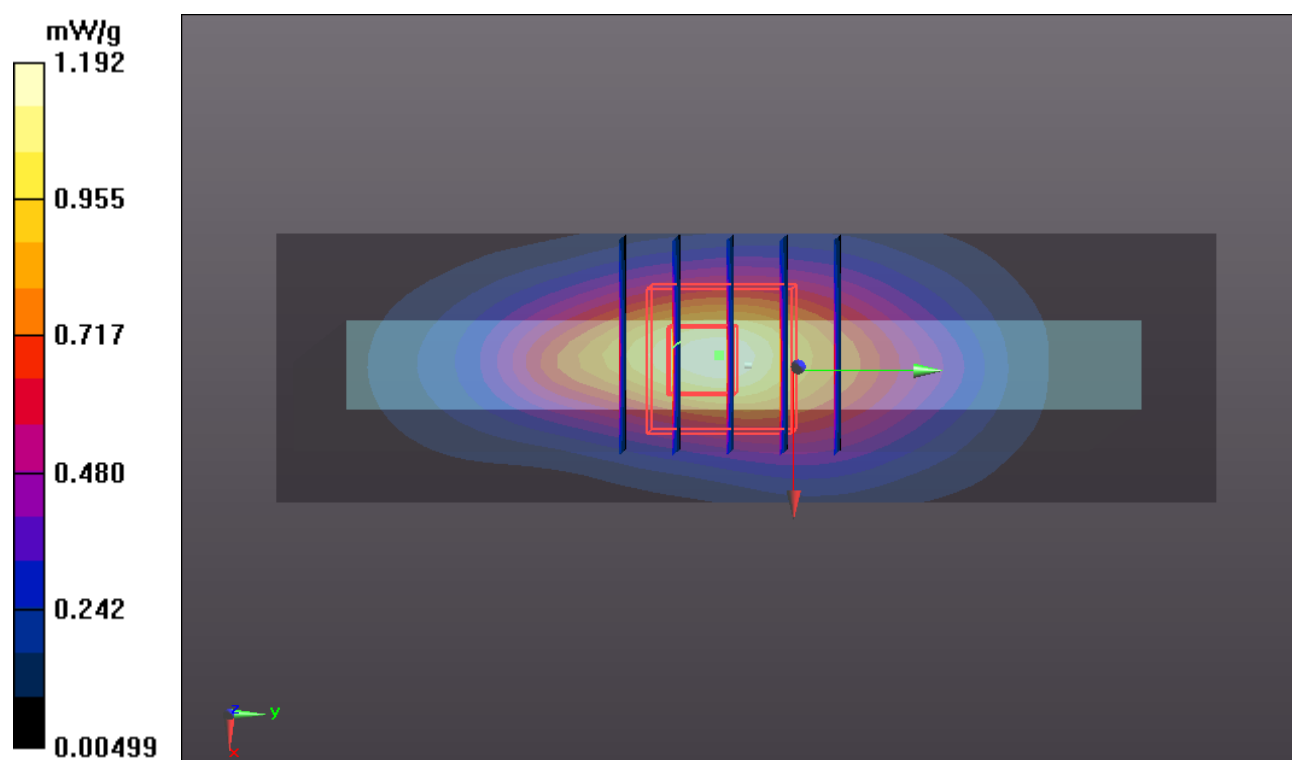
**Ch777/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $29.410$  V/m; Power Drift =  $0.02$  dB

Peak SAR (extrapolated) =  $1.677$  W/kg

**SAR(1 g) =  $0.987$  mW/g; SAR(10 g) =  $0.558$  mW/g**

Maximum value of SAR (measured) =  $1.074$  mW/g



**#36 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch384\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 54.184$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch384/Area Scan (71x41x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.018 mW/g

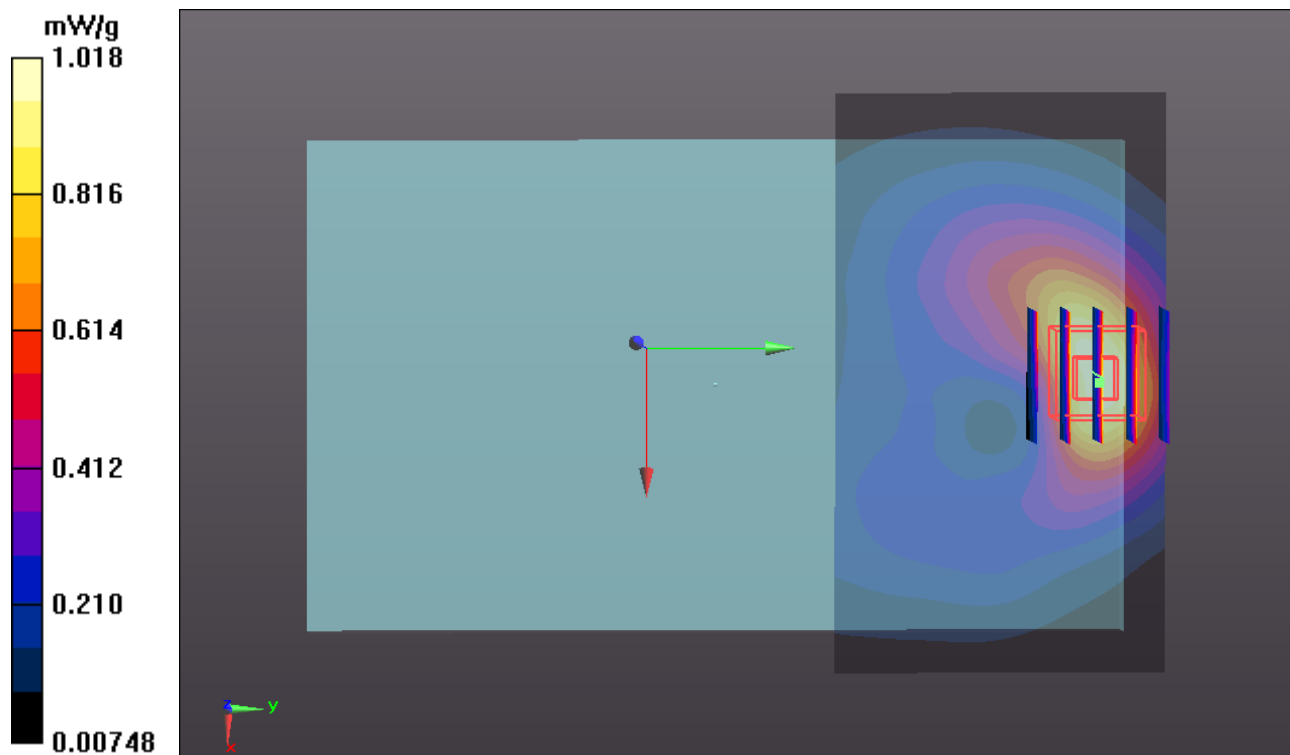
**Ch384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.112 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.391 W/kg

**SAR(1 g) = 0.938 mW/g; SAR(10 g) = 0.584 mW/g**

Maximum value of SAR (measured) = 1.016 mW/g



**#37 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch1013\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 54.282$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1013/Area Scan (71x41x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.876 mW/g

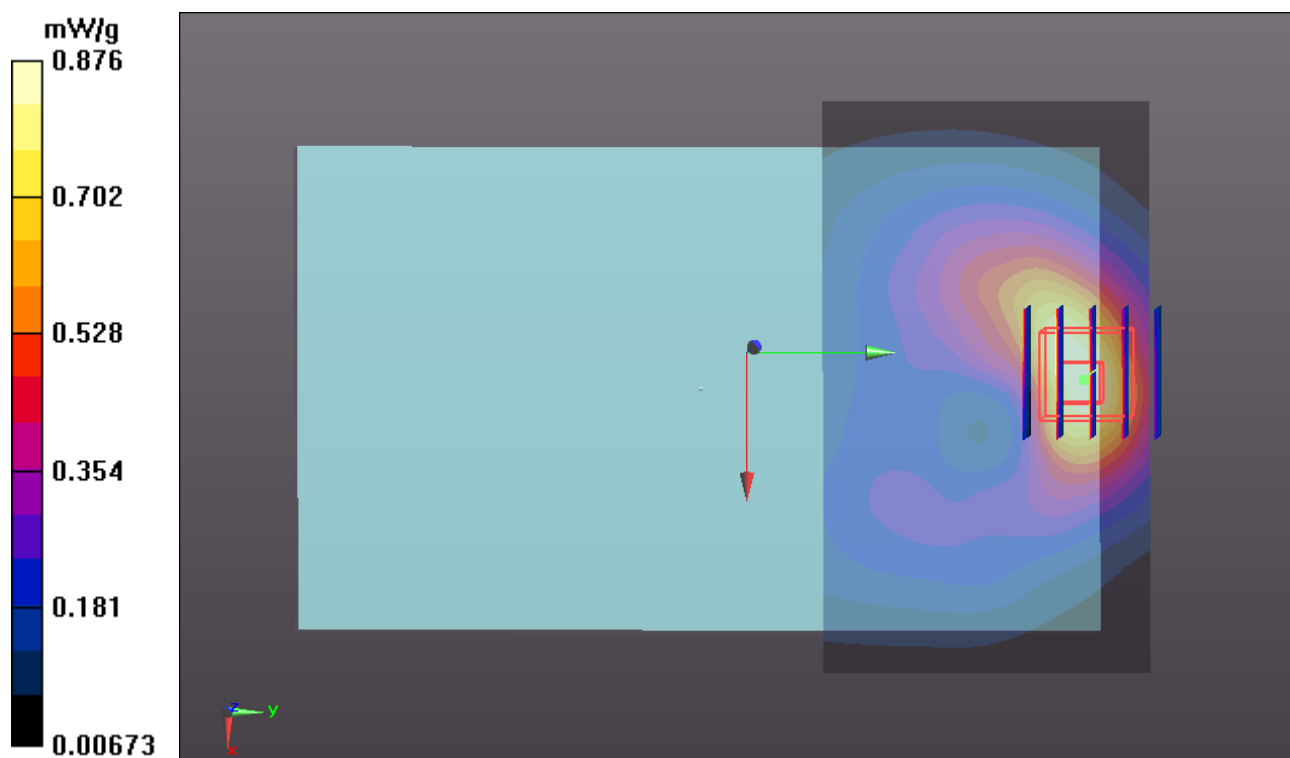
**Ch1013/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.341 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.259 W/kg

**SAR(1 g) = 0.854 mW/g; SAR(10 g) = 0.535 mW/g**

Maximum value of SAR (measured) = 0.919 mW/g



**#38 CDMA2000 BC0\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch777\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: MSL\_835\_111027 Medium parameters used:  $f = 848.31 \text{ MHz}$ ;  $\sigma = 0.987 \text{ mho/m}$ ;  $\epsilon_r =$

$54.083$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.22, 6.22, 6.22); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch777/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.849 \text{ mW/g}$

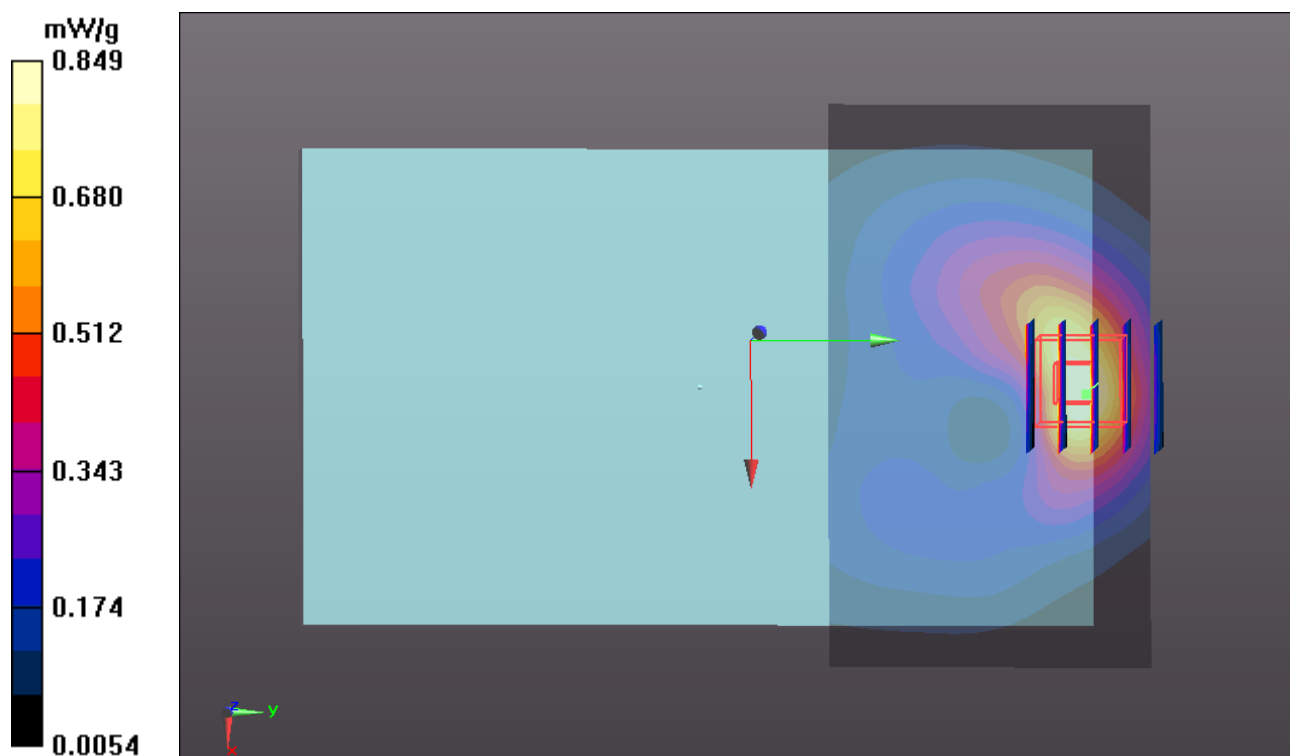
**Ch777/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.817 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $1.212 \text{ W/kg}$

**SAR(1 g) =  $0.810 \text{ mW/g}$ ; SAR(10 g) =  $0.494 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.850 \text{ mW/g}$



**#11 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (91x51x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.125$  mW/g

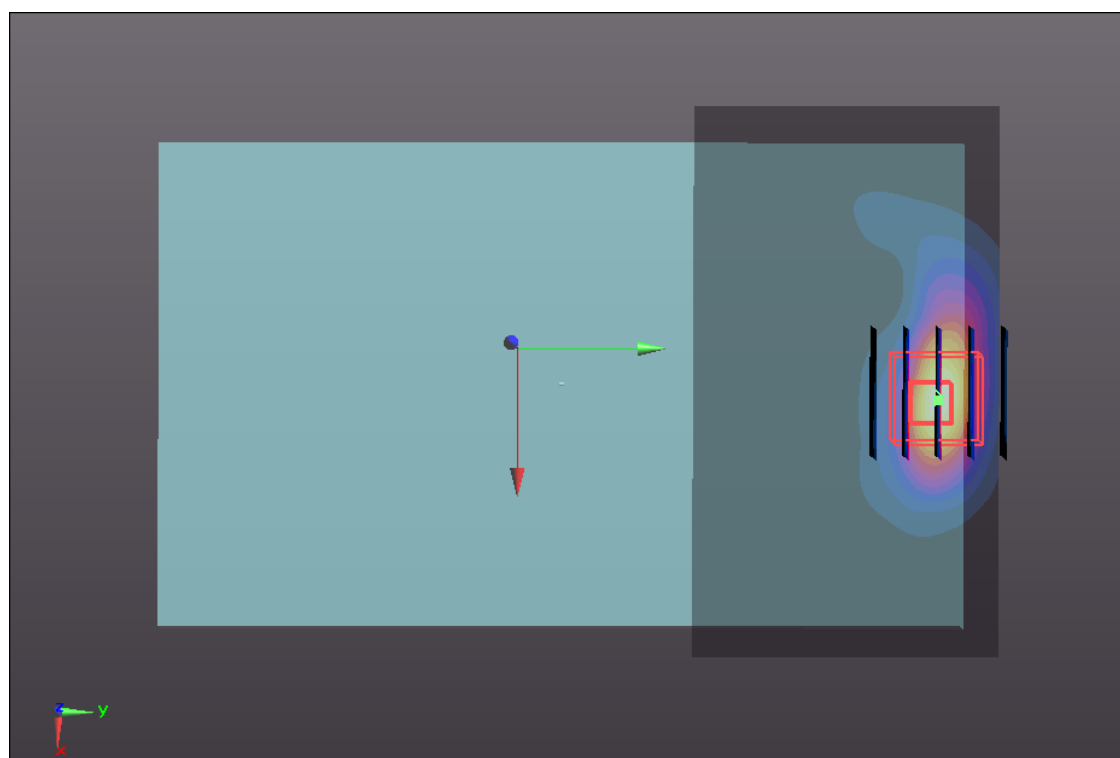
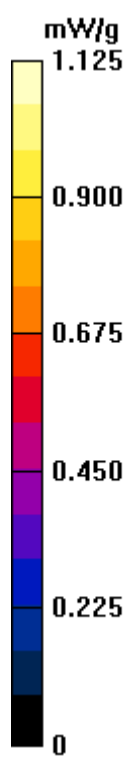
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $1.535$  V/m; Power Drift =  $0.10$  dB

Peak SAR (extrapolated) =  $1.925$  W/kg

**SAR(1 g) =  $0.984$  mW/g; SAR(10 g) =  $0.461$  mW/g**

Maximum value of SAR (measured) =  $1.031$  mW/g



**#12 CDMA2000 BC1\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch1175**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (21x71x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.473$  mW/g

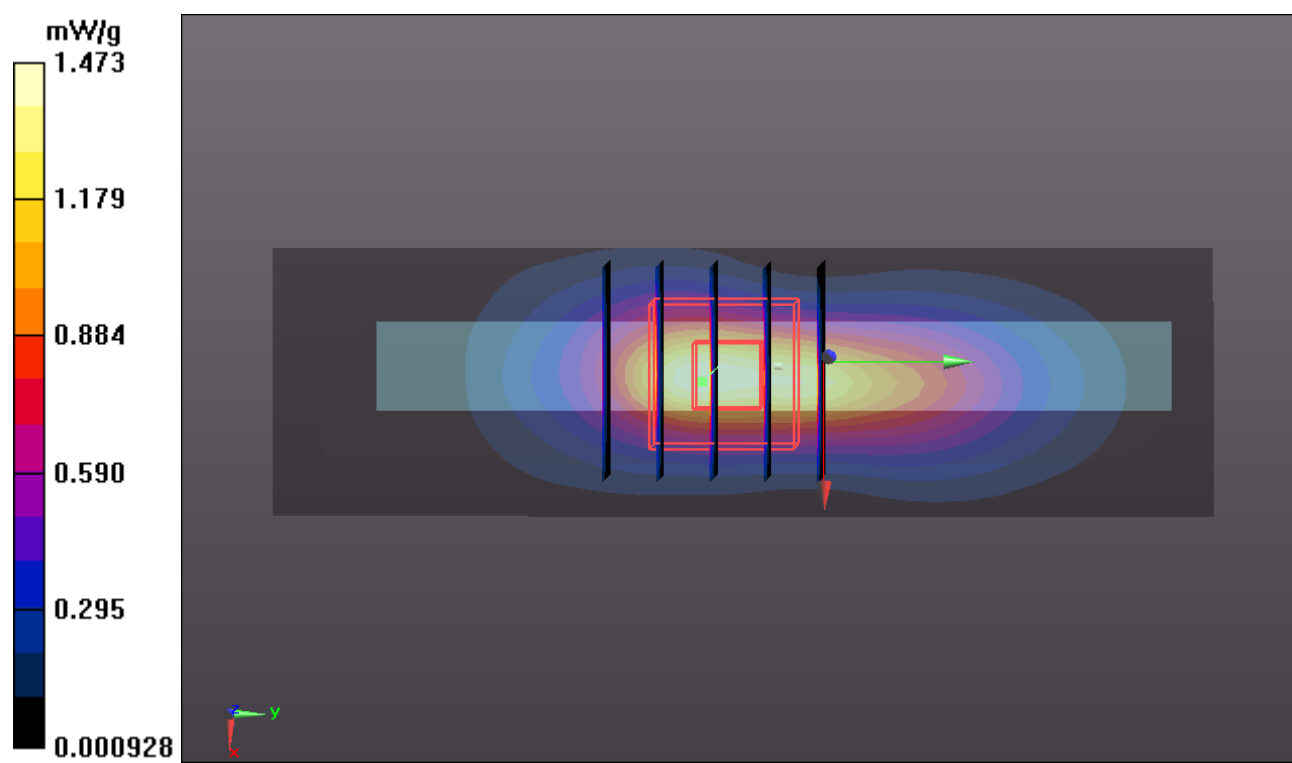
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $29.245$  V/m; Power Drift =  $0.11$  dB

Peak SAR (extrapolated) =  $2.519$  W/kg

**SAR(1 g) =  $1.35$  mW/g; SAR(10 g) =  $0.653$  mW/g**

Maximum value of SAR (measured) =  $1.524$  mW/g



**#13 CDMA2000 BC1\_RTAP 153.6\_Secondary Landscape\_0cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (31x151x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $0.198$  mW/g

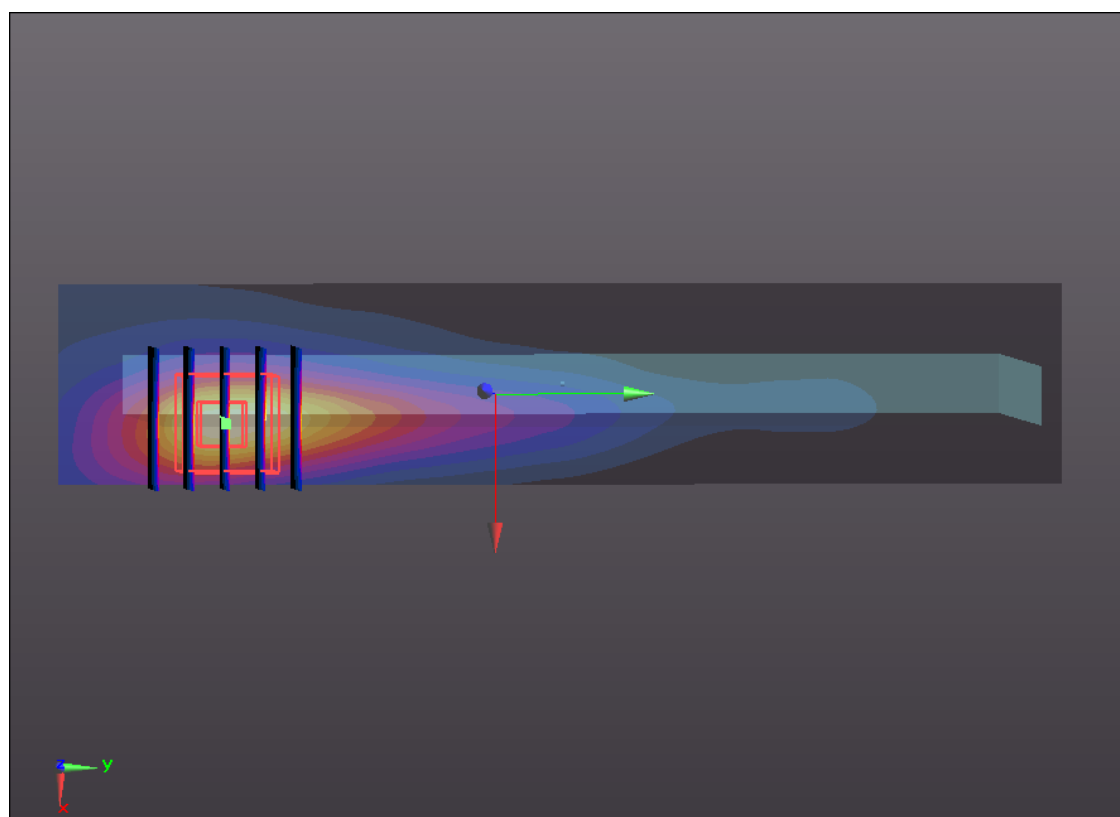
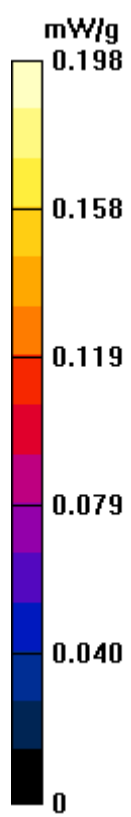
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $6.289$  V/m; Power Drift =  $0.02$  dB

Peak SAR (extrapolated) =  $0.326$  W/kg

**SAR(1 g) =  $0.170$  mW/g; SAR(10 g) =  $0.087$  mW/g**

Maximum value of SAR (measured) =  $0.198$  mW/g



**#14 CDMA2000 BC1\_RTAP 153.6\_Primary Landscape\_0cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (31x151x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $0.139$  mW/g

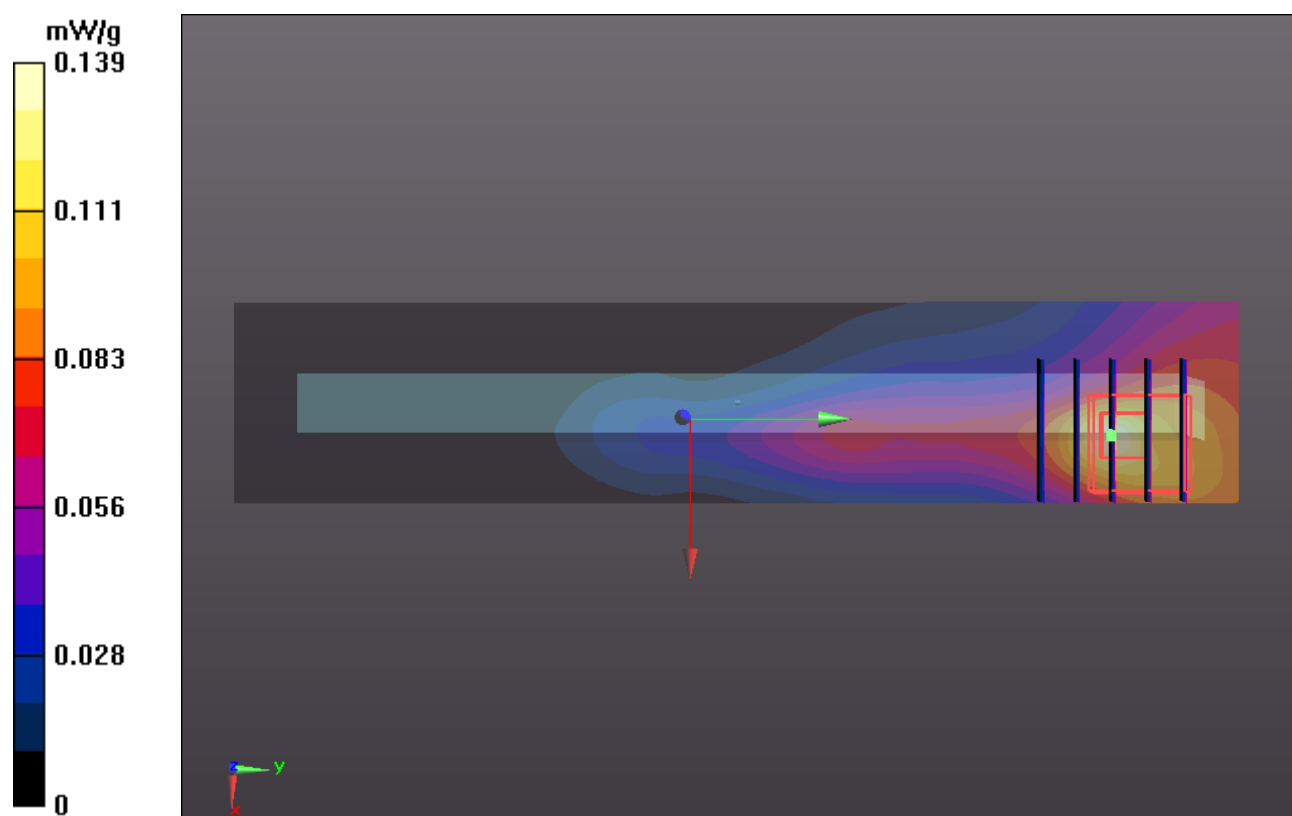
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $5.414$  V/m; Power Drift =  $0.05$  dB

Peak SAR (extrapolated) =  $0.241$  W/kg

**SAR(1 g) =  $0.113$  mW/g; SAR(10 g) =  $0.061$  mW/g**

Maximum value of SAR (measured) =  $0.134$  mW/g



**#15 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch1175\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1909$  MHz;  $\sigma = 1.542$  mho/m;  $\epsilon_r =$

$52.376$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature :  $23.3$  °C; Liquid Temperature :  $21.4$  °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1175/Area Scan (91x51x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) =  $1.086$  mW/g

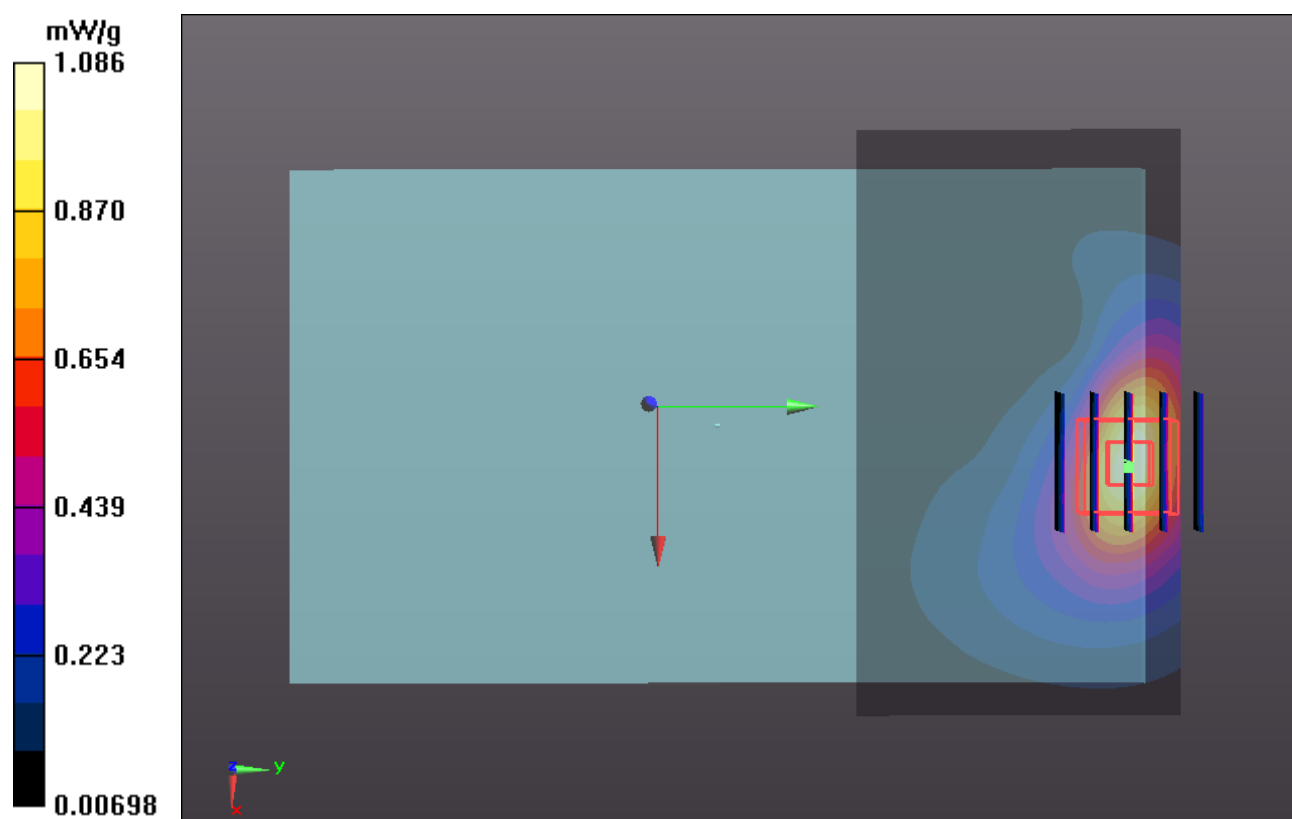
**Ch1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value =  $3.839$  V/m; Power Drift =  $0.06$  dB

Peak SAR (extrapolated) =  $1.608$  W/kg

**SAR(1 g) =  $0.950$  mW/g; SAR(10 g) =  $0.536$  mW/g**

Maximum value of SAR (measured) =  $1.043$  mW/g



**#16 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (91x141x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.382 \text{ mW/g}$

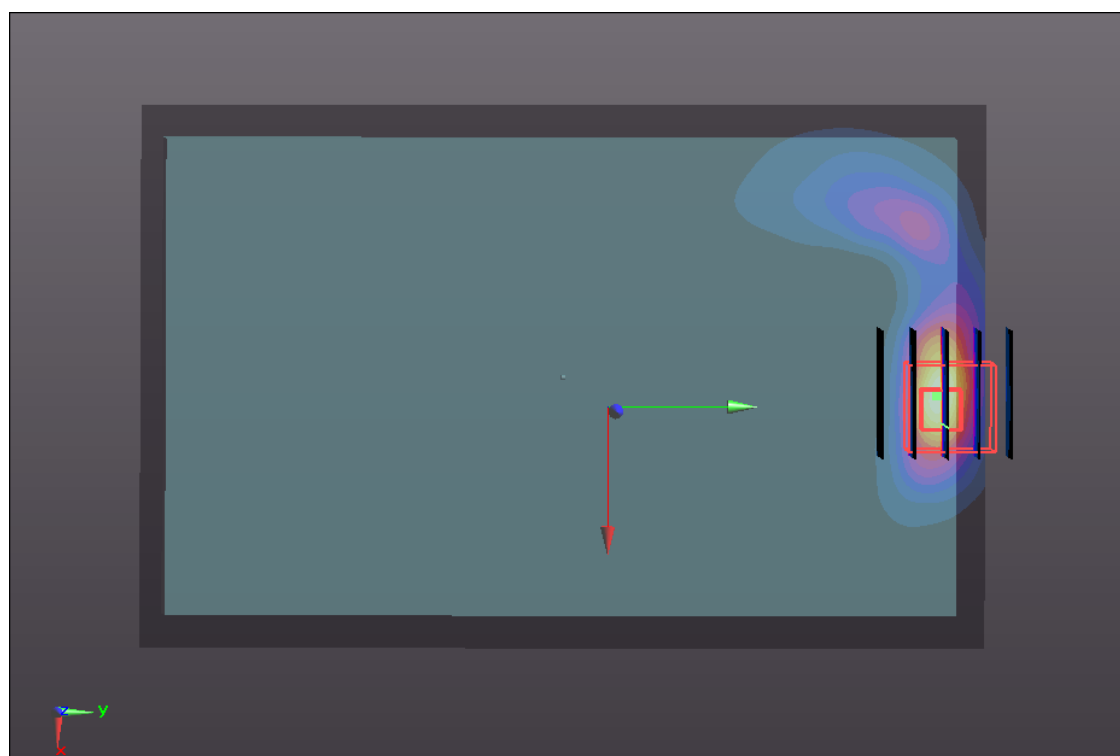
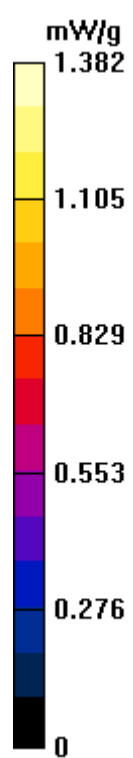
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $1.390 \text{ V/m}$ ; Power Drift =  $-0.08 \text{ dB}$

Peak SAR (extrapolated) =  $2.135 \text{ W/kg}$

**SAR(1 g) =  $1.08 \text{ mW/g}$ ; SAR(10 g) =  $0.509 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.216 \text{ mW/g}$



**#17 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0cm\_Ch600\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (91x51x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.203 mW/g

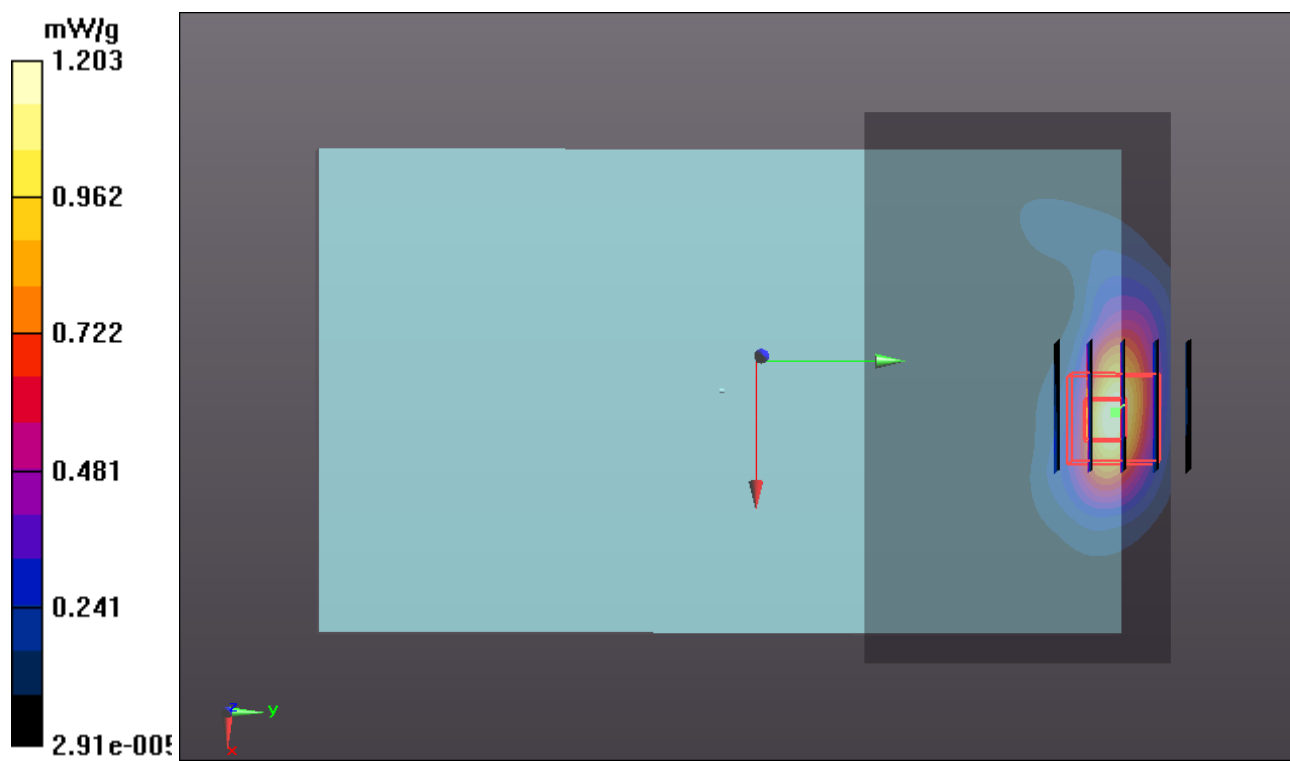
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.330 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.037 W/kg

**SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.508 mW/g**

Maximum value of SAR (measured) = 1.059 mW/g



**#18 CDMA2000 BC1\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch25**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (21x71x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.562 \text{ mW/g}$

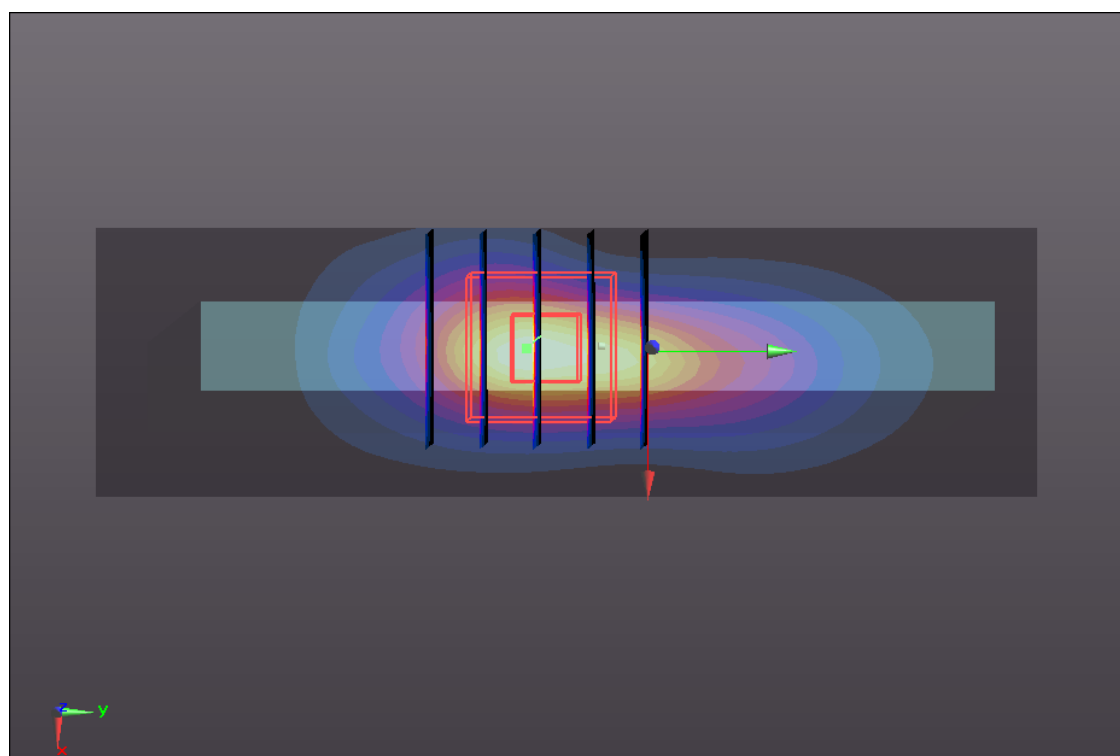
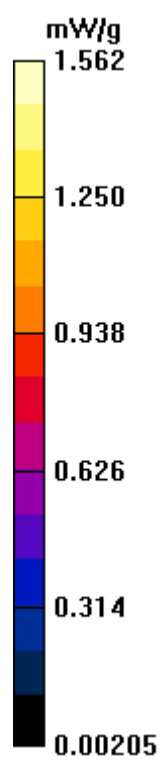
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $30.174 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $2.522 \text{ W/kg}$

**SAR(1 g) =  $1.44 \text{ mW/g}$ ; SAR(10 g) =  $0.718 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.574 \text{ mW/g}$



**#18 CDMA2000 BC1\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch25\_2D**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (21x71x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.562 \text{ mW/g}$

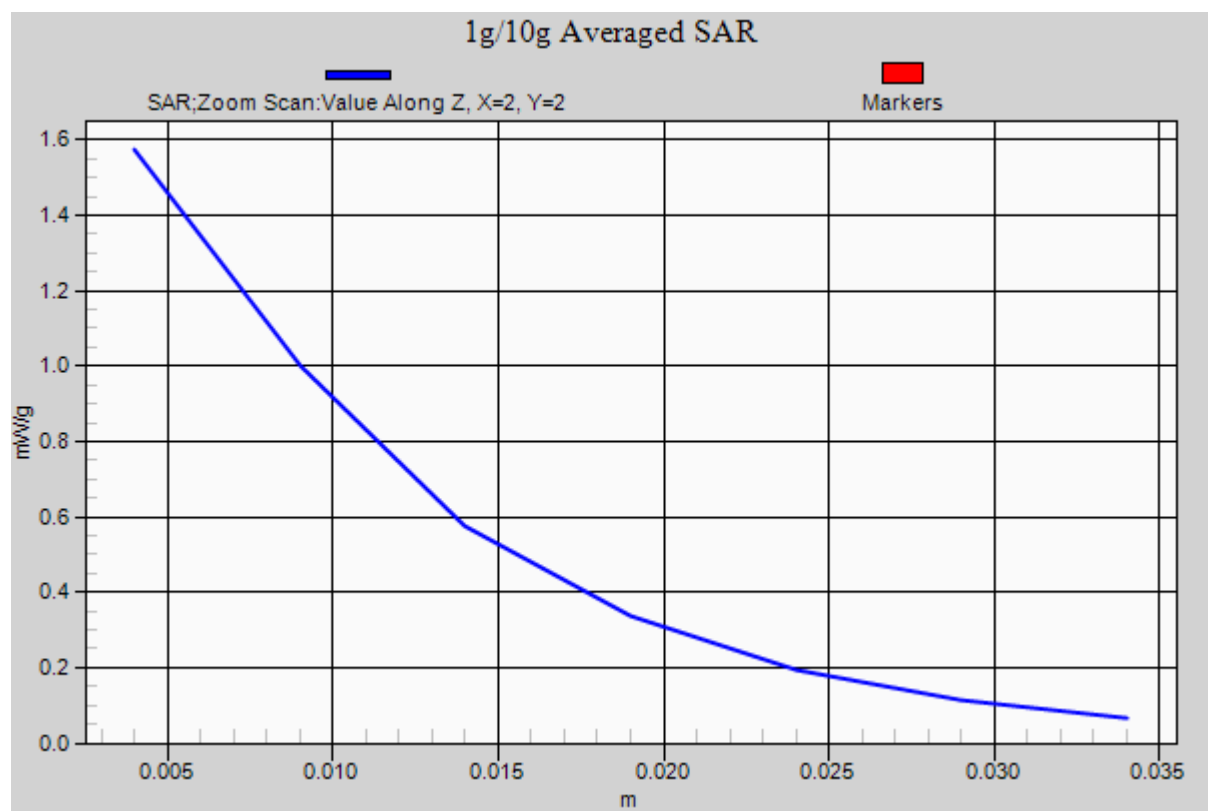
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $30.174 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $2.522 \text{ W/kg}$

**SAR(1 g) =  $1.44 \text{ mW/g}$ ; SAR(10 g) =  $0.718 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.574 \text{ mW/g}$



**#19 CDMA2000 BC1\_RTAP 153.6\_Secondary Portrait\_0cm\_Ch600**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (21x71x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.522 mW/g

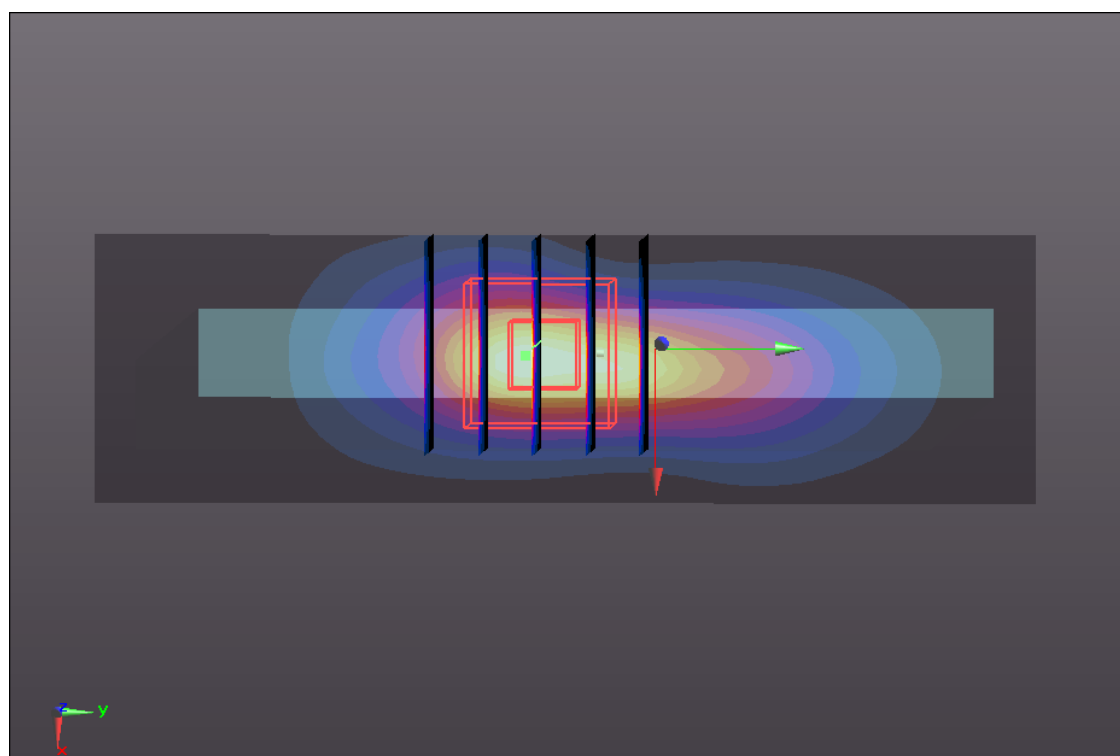
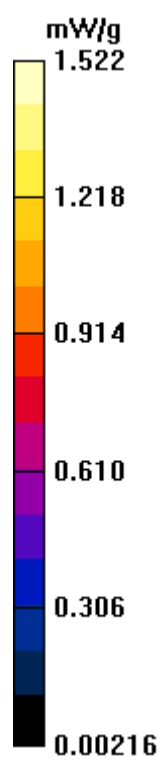
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.901 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.558 W/kg

**SAR(1 g) = 1.43 mW/g; SAR(10 g) = 0.699 mW/g**

Maximum value of SAR (measured) = 1.614 mW/g



**#84 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch25\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1851.25 \text{ MHz}$ ;  $\sigma = 1.476 \text{ mho/m}$ ;  $\epsilon_r =$

$52.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.4 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch25/Area Scan (91x51x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.584 \text{ mW/g}$

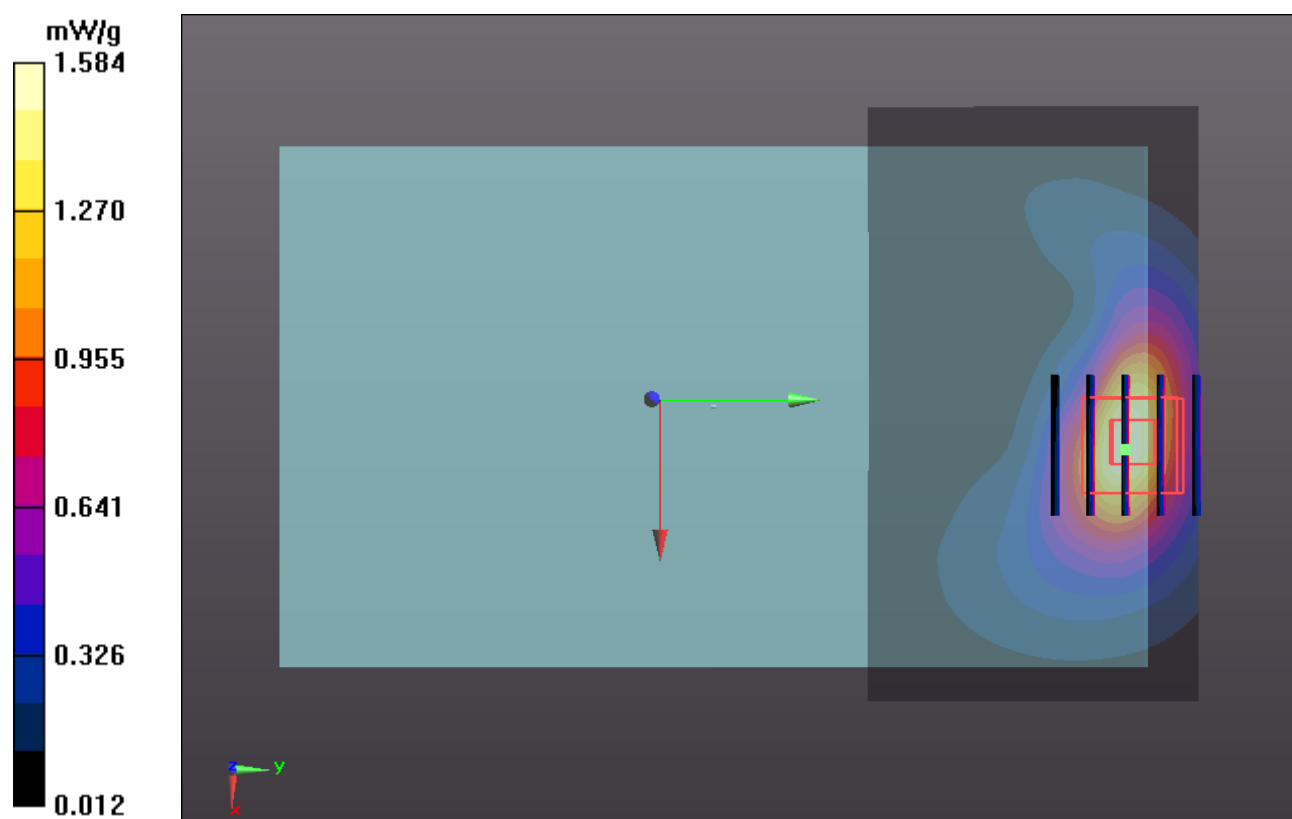
**Ch25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $4.255 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

Peak SAR (extrapolated) =  $2.096 \text{ W/kg}$

**SAR(1 g) =  $1.31 \text{ mW/g}$ ; SAR(10 g) =  $0.745 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.453 \text{ mW/g}$



**#85 CDMA2000 BC1\_RTAP 153.6\_Bottom Face\_0.9cm\_Ch600\_Earphone**

**DUT: 190101**

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111026 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r =$

52.468;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.4 °C

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(4.48, 4.48, 4.48); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch600/Area Scan (91x51x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.266 mW/g

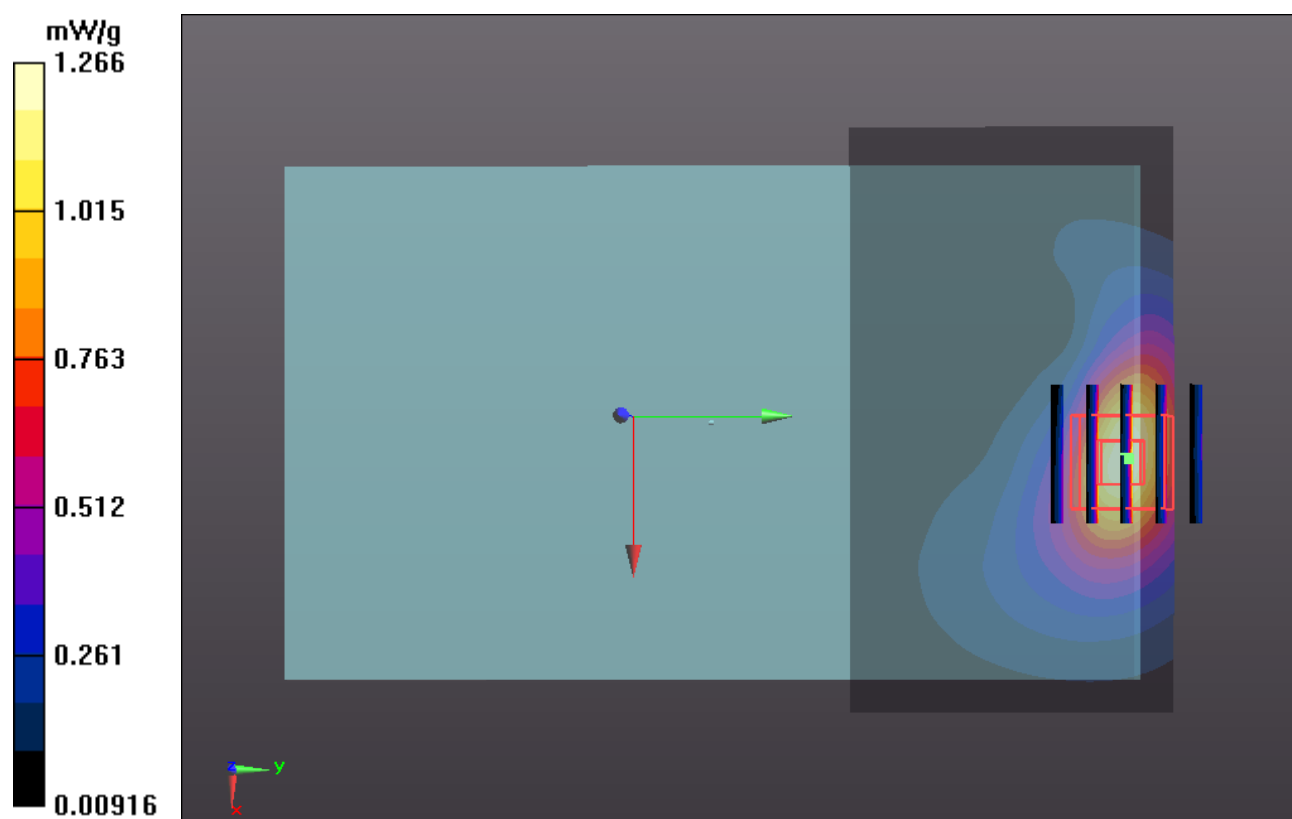
**Ch600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.893 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.797 W/kg

**SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.631 mW/g**

Maximum value of SAR (measured) = 1.190 mW/g



**#39 LTE BAND XIII\_QPSK(25-13)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.334 \text{ mW/g}$

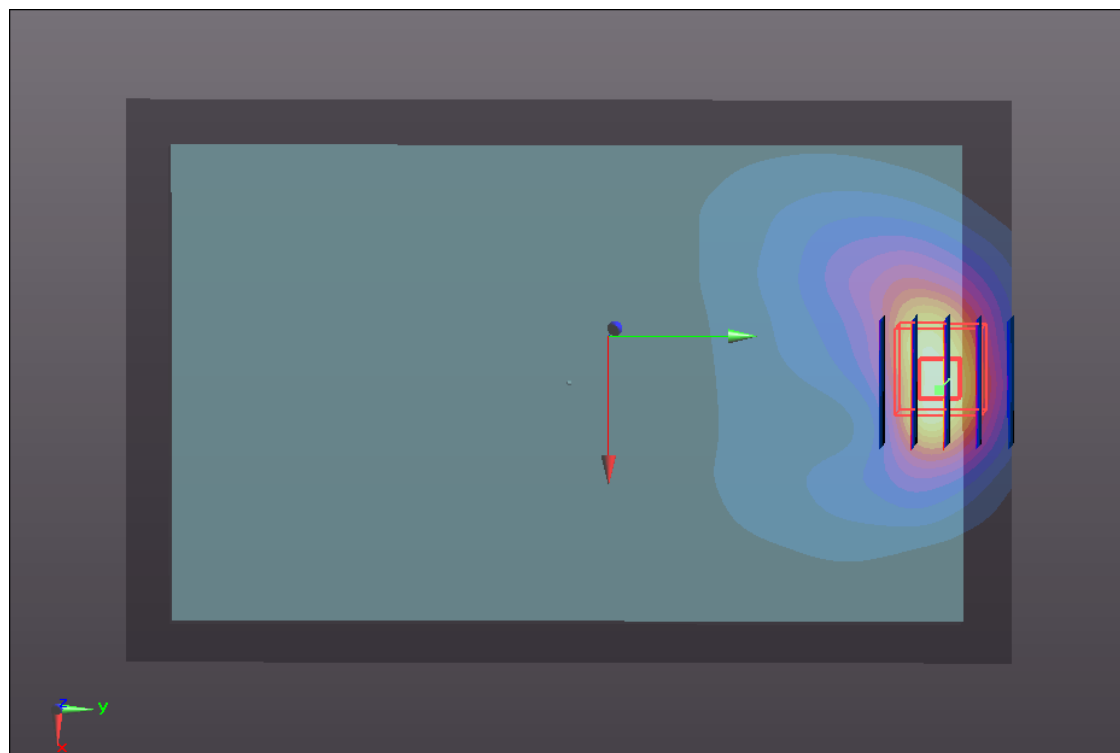
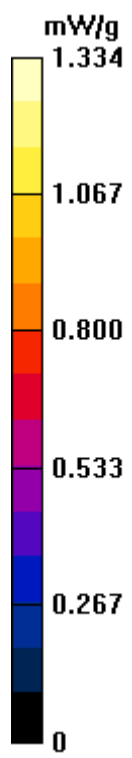
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $5.655 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

Peak SAR (extrapolated) =  $2.235 \text{ W/kg}$

**SAR(1 g) =  $1.21 \text{ mW/g}$ ; SAR(10 g) =  $0.658 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.355 \text{ mW/g}$



**#40 LTE BAND XIII\_QPSK(1-0)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.464 \text{ mW/g}$

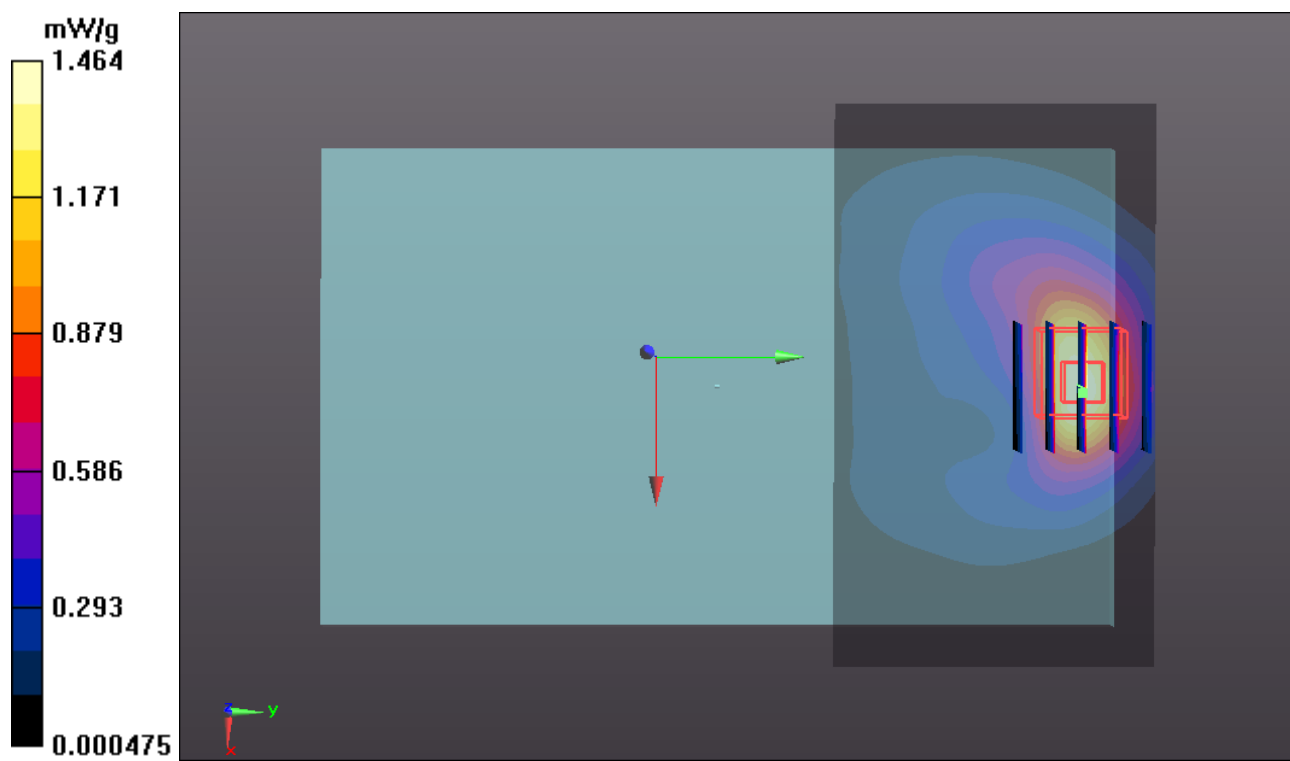
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $6.050 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $2.350 \text{ W/kg}$

**SAR(1 g) =  $1.29 \text{ mW/g}$ ; SAR(10 g) =  $0.710 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.447 \text{ mW/g}$



**#41 LTE BAND XIII\_QPSK(1-49)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.332 \text{ mW/g}$

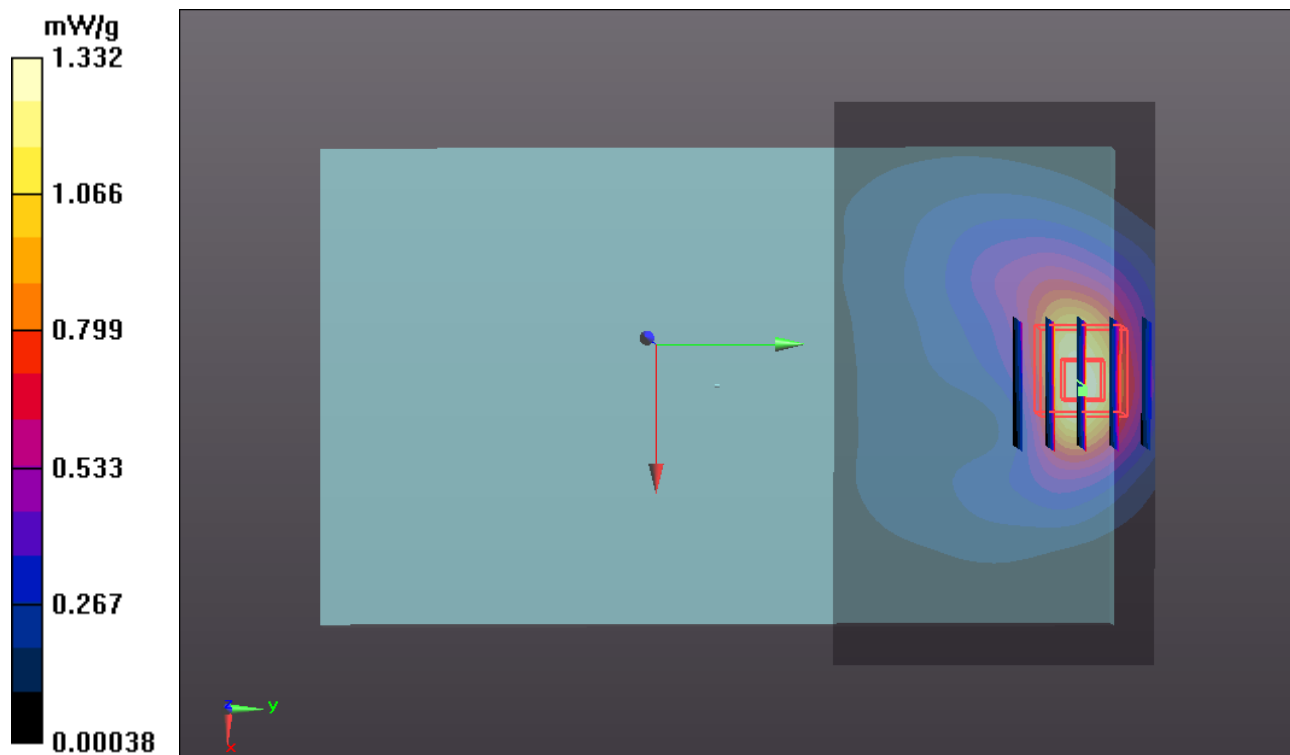
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $5.582 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $2.197 \text{ W/kg}$

**SAR(1 g) =  $1.21 \text{ mW/g}$ ; SAR(10 g) =  $0.666 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.364 \text{ mW/g}$



**#42 LTE BAND XIII\_16-QAM(25-13)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782$  MHz;  $\sigma = 0.996$  mho/m;  $\epsilon_r = 53.964$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.530 mW/g

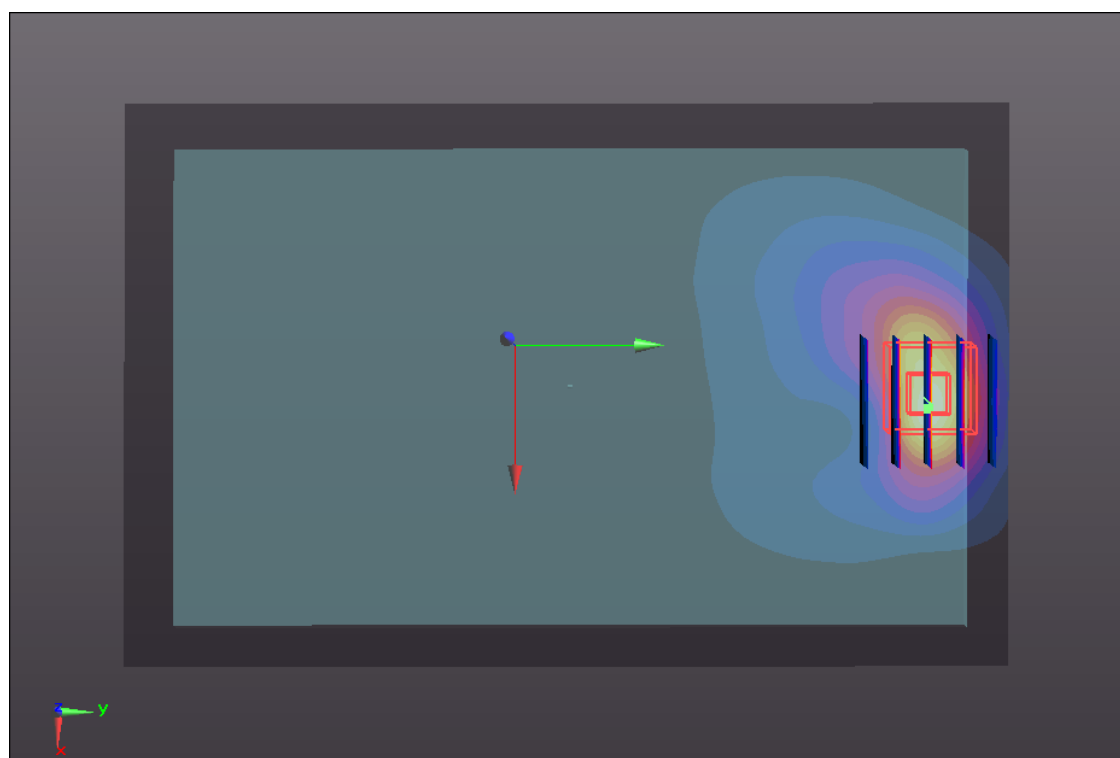
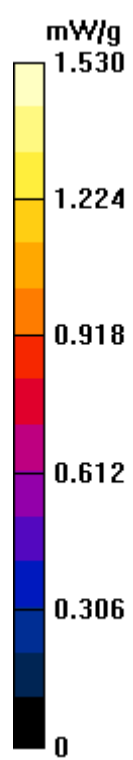
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.838 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.480 W/kg

**SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.743 mW/g**

Maximum value of SAR (measured) = 1.535 mW/g



**#42 LTE BAND XIII\_16-QAM(25-13)\_Bottom Face\_0cm\_Ch23230\_Earphone\_2D**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.530 \text{ mW/g}$

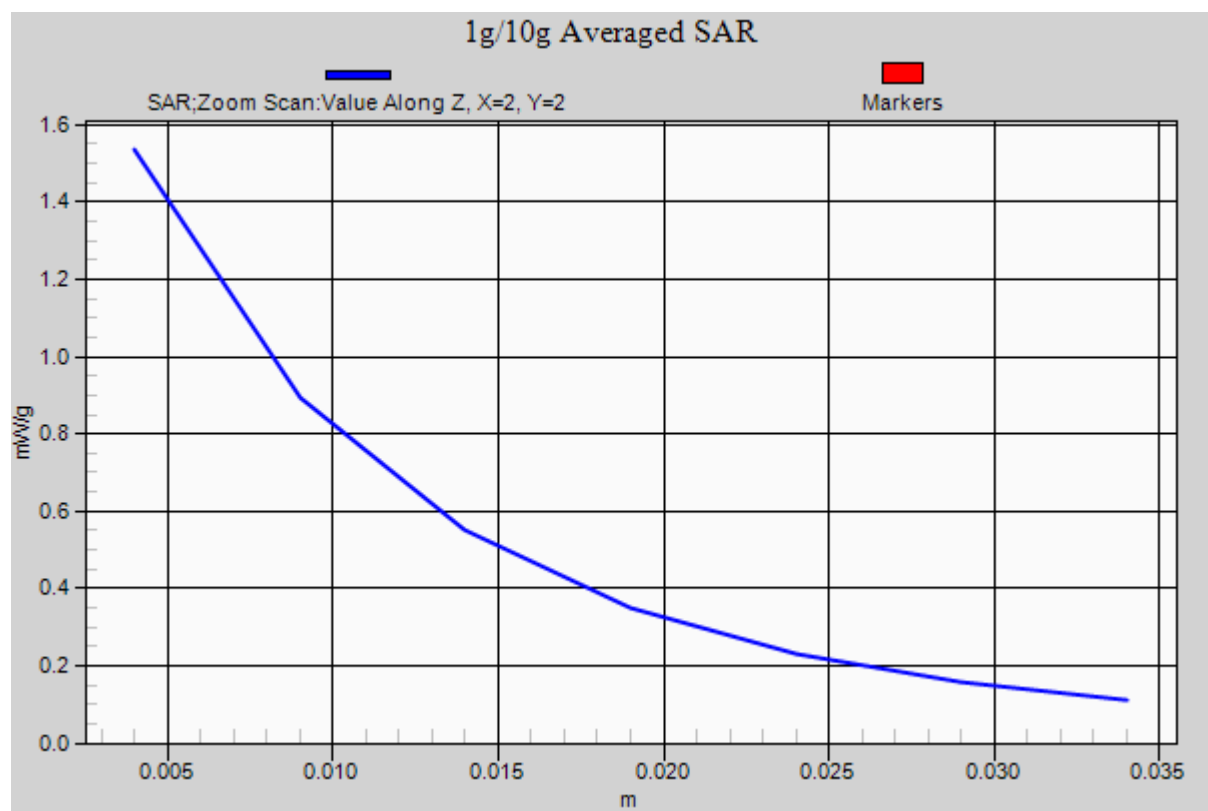
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $5.838 \text{ V/m}$ ; Power Drift =  $0.10 \text{ dB}$

Peak SAR (extrapolated) =  $2.480 \text{ W/kg}$

**SAR(1 g) =  $1.36 \text{ mW/g}$ ; SAR(10 g) =  $0.743 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.535 \text{ mW/g}$



**#43 LTE BAND XIII\_16-QAM(1-0)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.448 \text{ mW/g}$

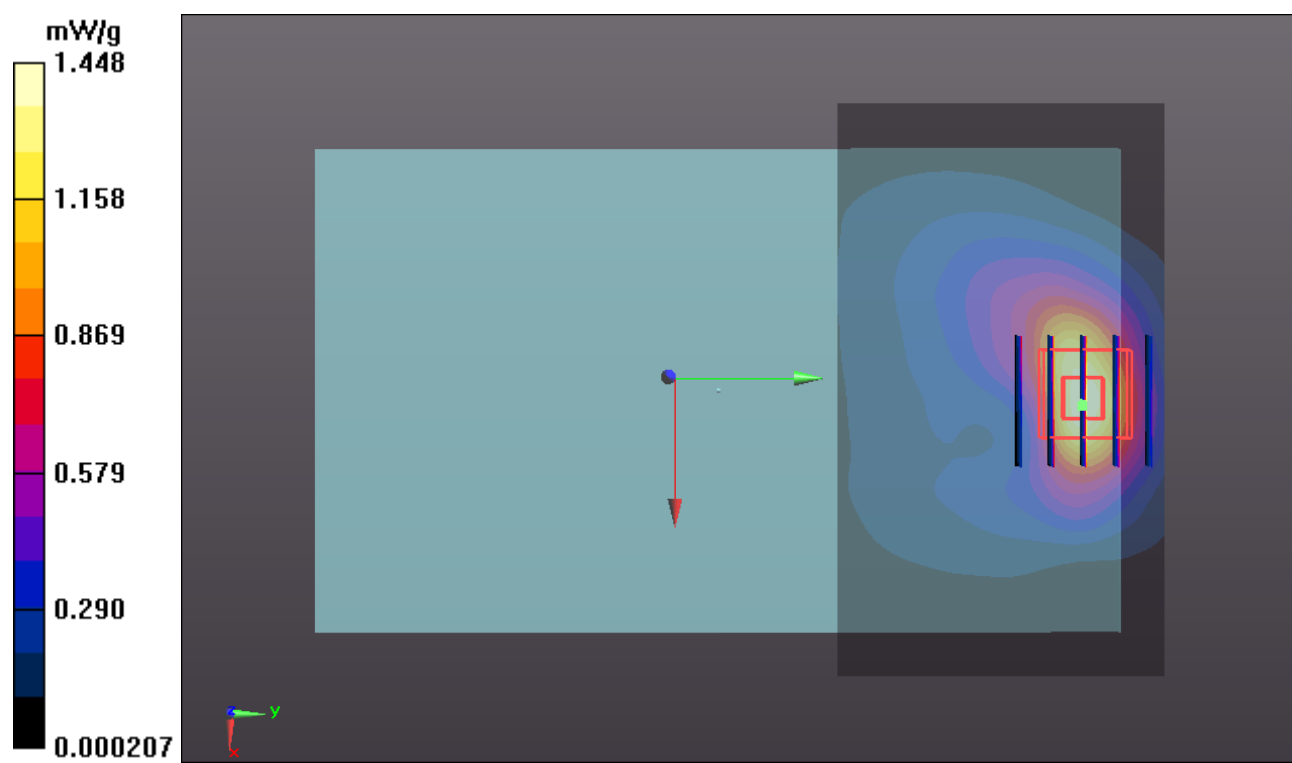
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $5.962 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $2.310 \text{ W/kg}$

**SAR(1 g) =  $1.31 \text{ mW/g}$ ; SAR(10 g) =  $0.728 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.473 \text{ mW/g}$



**#44 LTE BAND XIII\_16-QAM(1-49)\_Bottom Face\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.413 \text{ mW/g}$

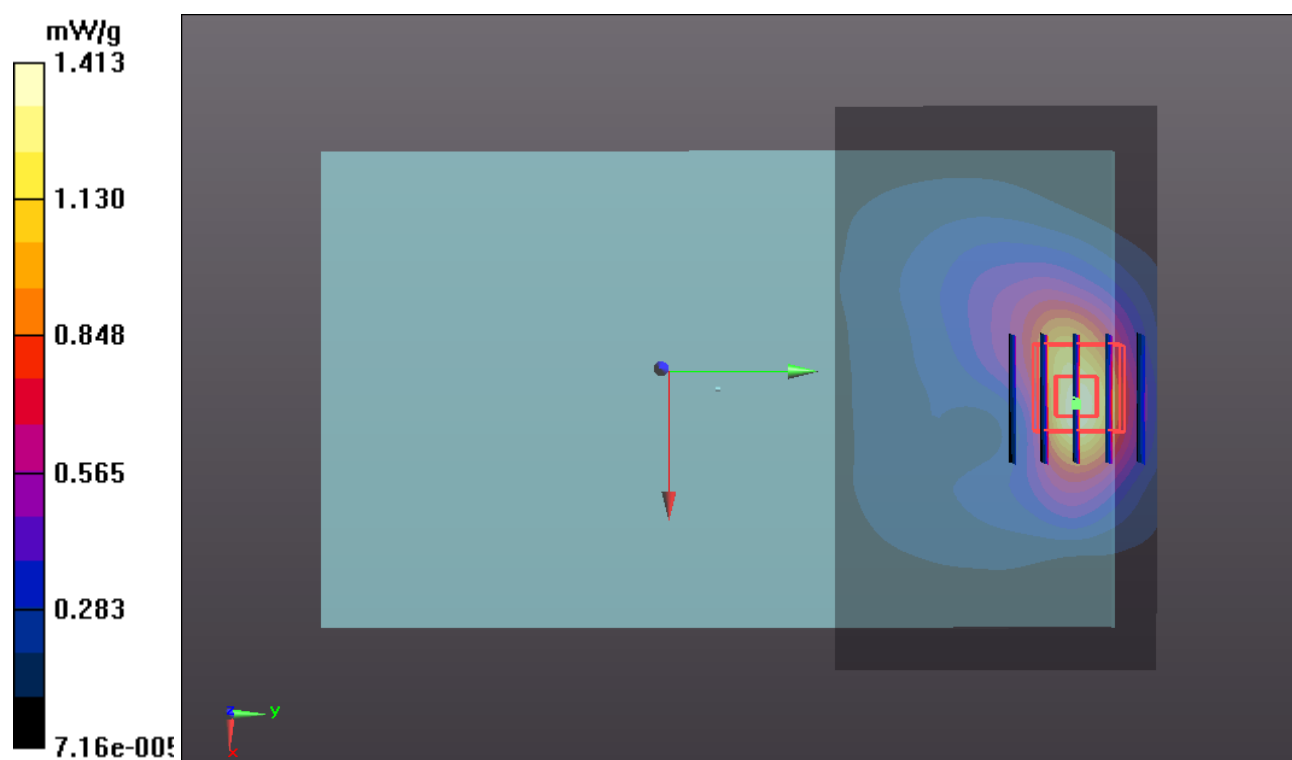
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $5.739 \text{ V/m}$ ; Power Drift =  $-0.0039 \text{ dB}$

Peak SAR (extrapolated) =  $2.087 \text{ W/kg}$

**SAR(1 g) =  $1.22 \text{ mW/g}$ ; SAR(10 g) =  $0.684 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.406 \text{ mW/g}$



**#45 LTE BAND XIII\_QPSK(25-13)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $21.6^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.909 \text{ mW/g}$

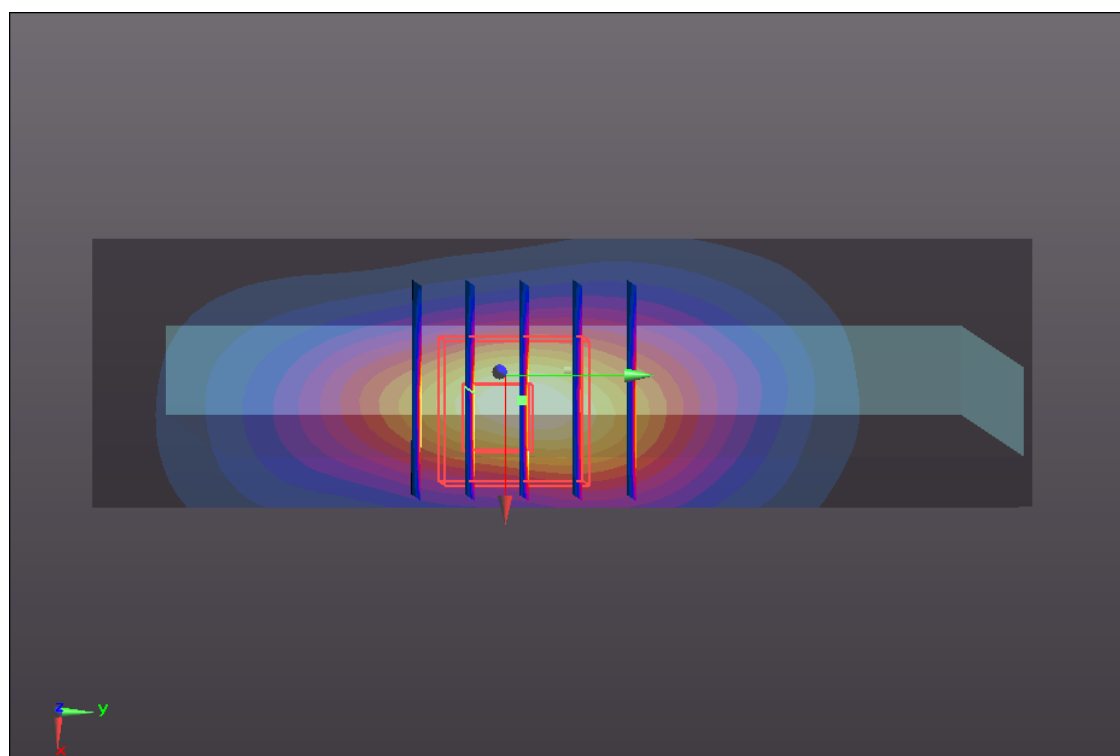
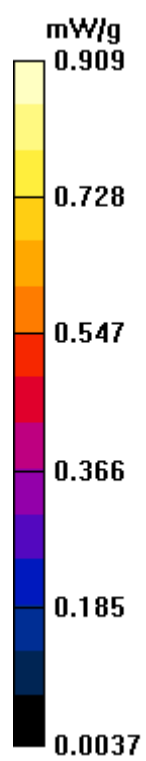
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $33.643 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$

Peak SAR (extrapolated) =  $1.705 \text{ W/kg}$

**SAR(1 g) =  $0.968 \text{ mW/g}$ ; SAR(10 g) =  $0.540 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.981 \text{ mW/g}$



**#46 LTE BAND XIII\_QPSK(1-0)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.110 \text{ mW/g}$

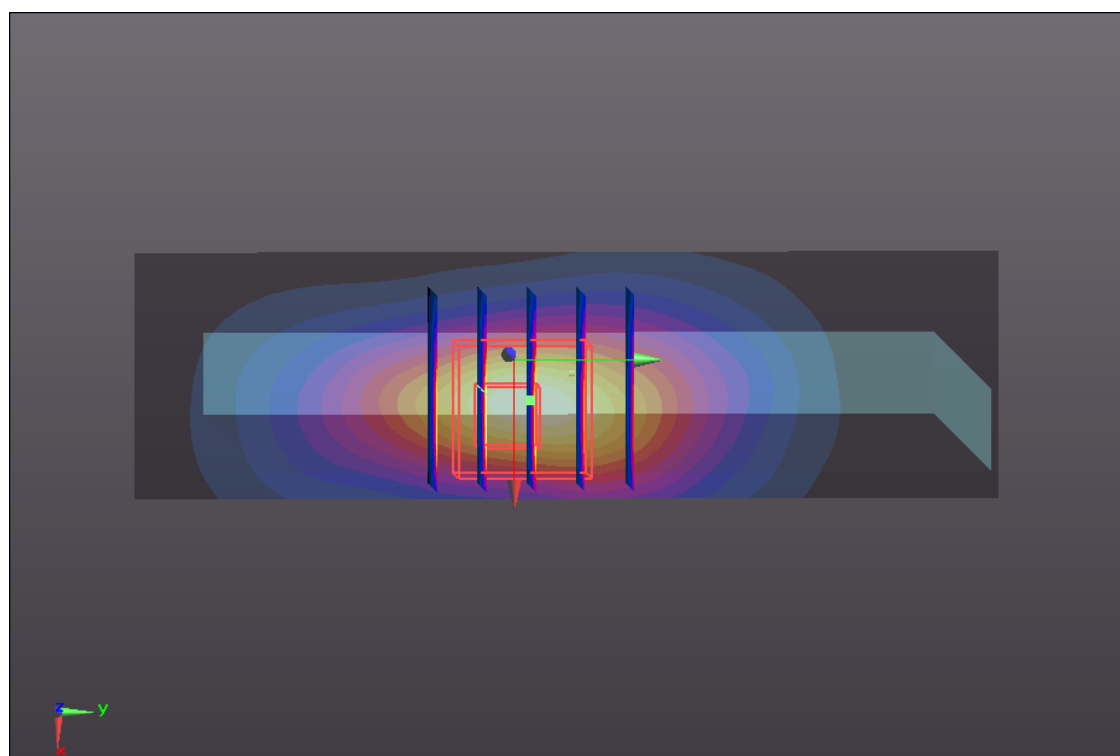
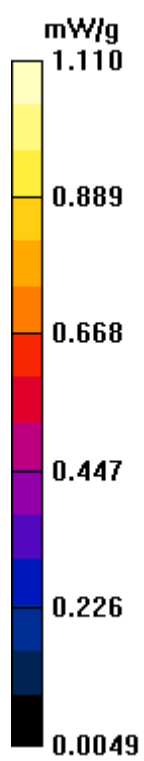
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $36.977 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $2.059 \text{ W/kg}$

**SAR(1 g) =  $1.18 \text{ mW/g}$ ; SAR(10 g) =  $0.659 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.204 \text{ mW/g}$



**#47 LTE BAND XIII\_QPSK(1-49)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.998 \text{ mW/g}$

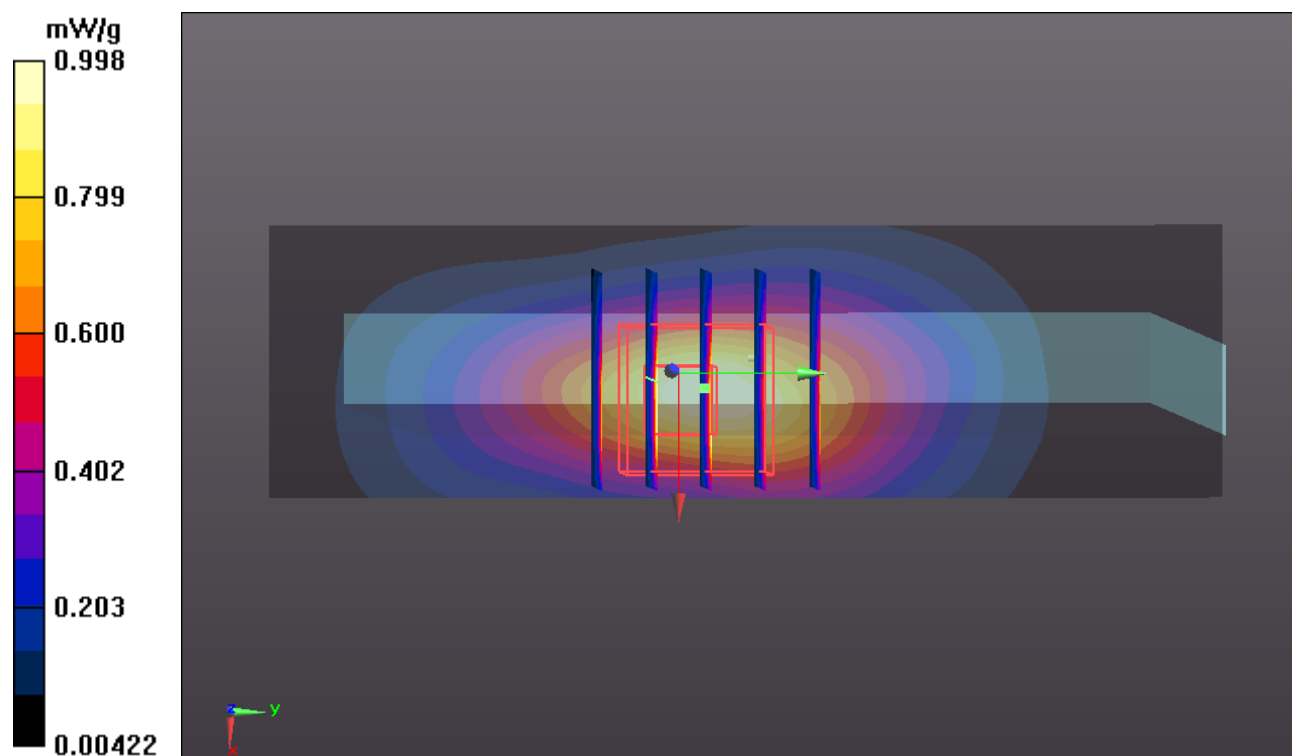
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $34.867 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$

Peak SAR (extrapolated) =  $1.810 \text{ W/kg}$

**SAR(1 g) =  $1.04 \text{ mW/g}$ ; SAR(10 g) =  $0.589 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.066 \text{ mW/g}$



**#48 LTE BAND XIII\_16-QAM(25-13)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.992 \text{ mW/g}$

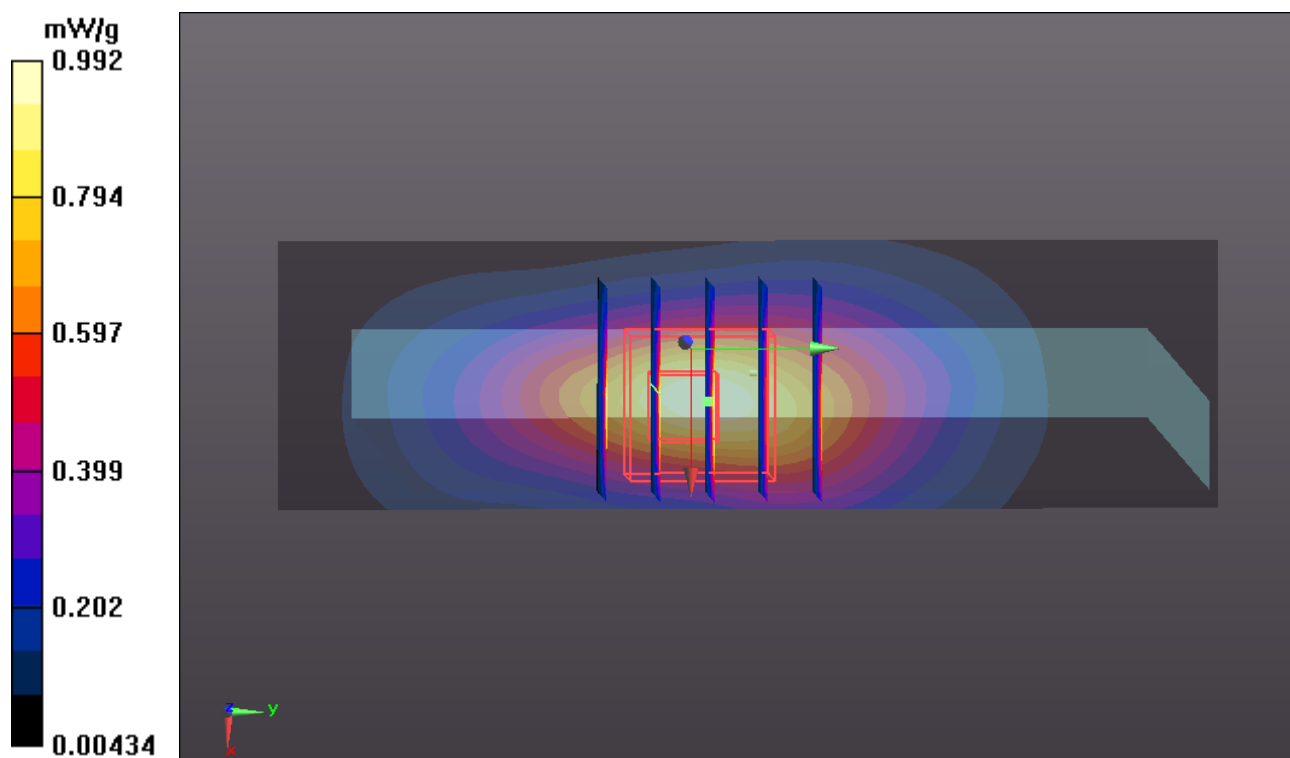
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $34.542 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $1.769 \text{ W/kg}$

**SAR(1 g) =  $1.01 \text{ mW/g}$ ; SAR(10 g) =  $0.565 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.090 \text{ mW/g}$



**#49 LTE BAND XIII\_16-QAM(1-0)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $21.6^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.166 \text{ mW/g}$

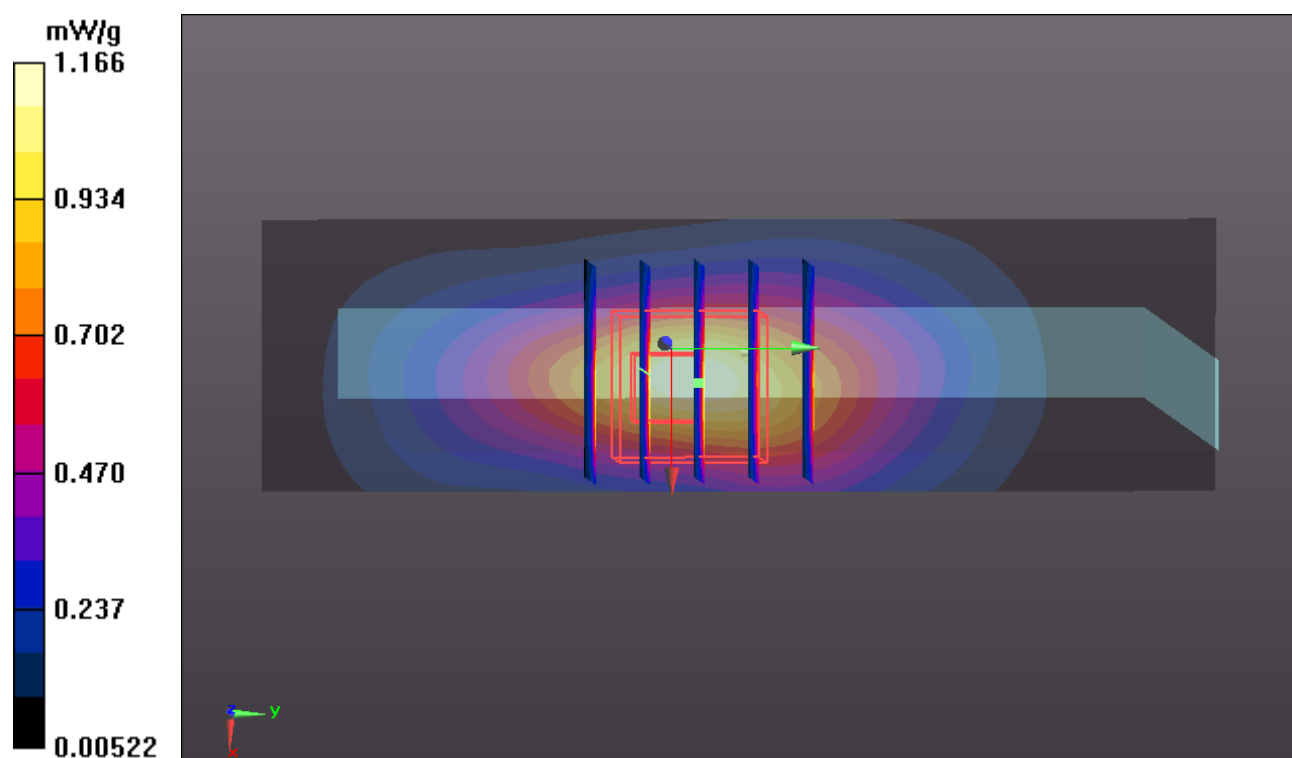
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $37.446 \text{ V/m}$ ; Power Drift =  $-0.02 \text{ dB}$

Peak SAR (extrapolated) =  $2.169 \text{ W/kg}$

**SAR(1 g) =  $1.21 \text{ mW/g}$ ; SAR(10 g) =  $0.675 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.298 \text{ mW/g}$



**#50 LTE BAND XIII\_16-QAM(1-49)\_Secondary Portrait\_0cm\_Ch23230**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x71x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.047 \text{ mW/g}$

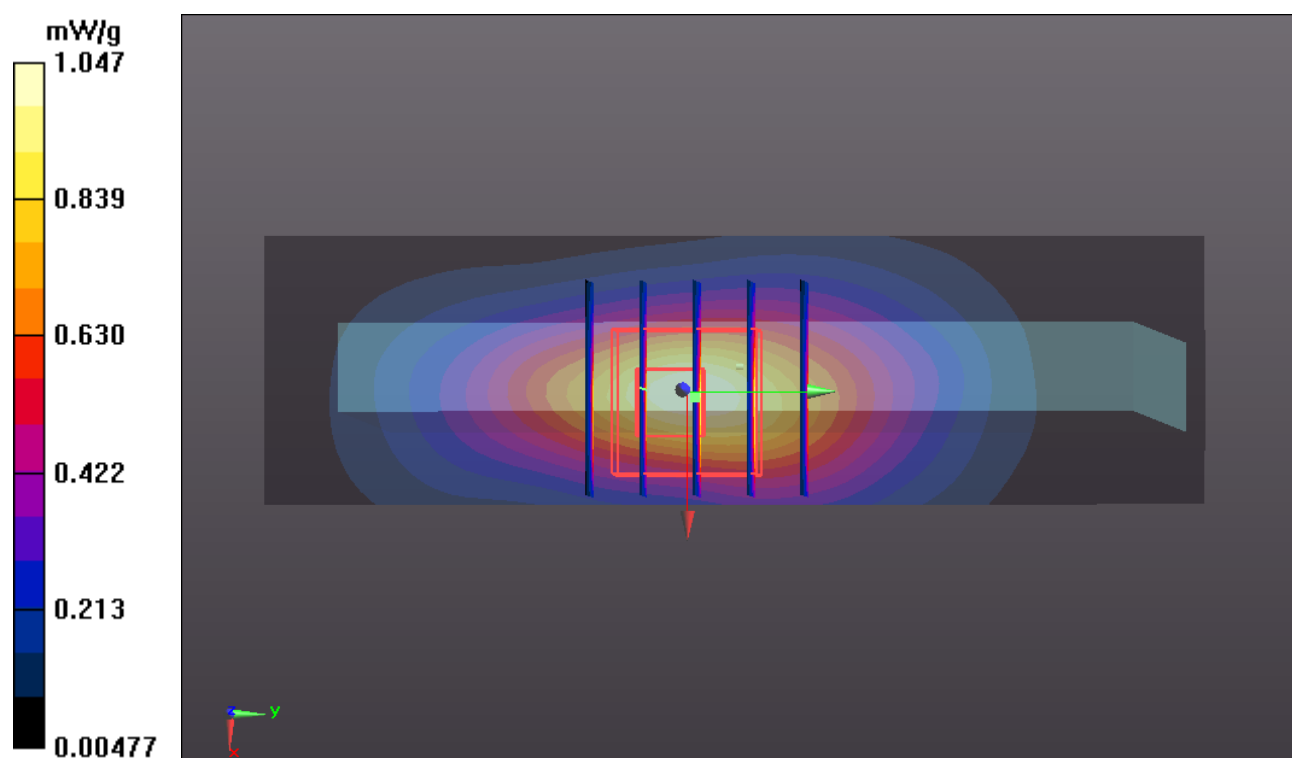
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $35.532 \text{ V/m}$ ; Power Drift =  $0.00055 \text{ dB}$

Peak SAR (extrapolated) =  $1.784 \text{ W/kg}$

**SAR(1 g) =  $1.04 \text{ mW/g}$ ; SAR(10 g) =  $0.592 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.135 \text{ mW/g}$



**#51 LTE BAND XIII\_QPSK(25-13)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.083 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.934 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $0.110 \text{ W/kg}$

**SAR(1 g) =  $0.080 \text{ mW/g}$ ; SAR(10 g) =  $0.053 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.086 \text{ mW/g}$

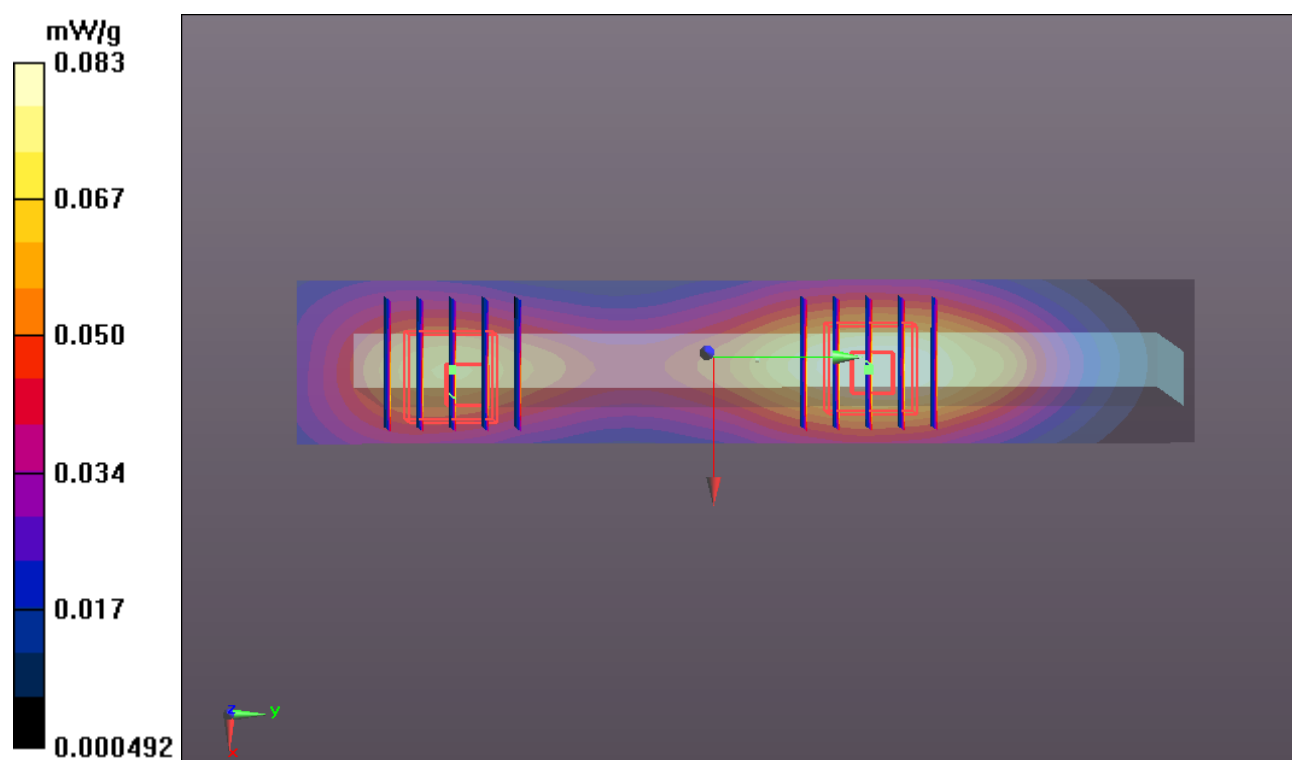
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.934 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $0.113 \text{ W/kg}$

**SAR(1 g) =  $0.068 \text{ mW/g}$ ; SAR(10 g) =  $0.042 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.071 \text{ mW/g}$



**#52 LTE BAND XIII\_QPSK(1-0)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.080 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.662 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.106 \text{ W/kg}$

**SAR(1 g) =  $0.076 \text{ mW/g}$ ; SAR(10 g) =  $0.050 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.081 \text{ mW/g}$

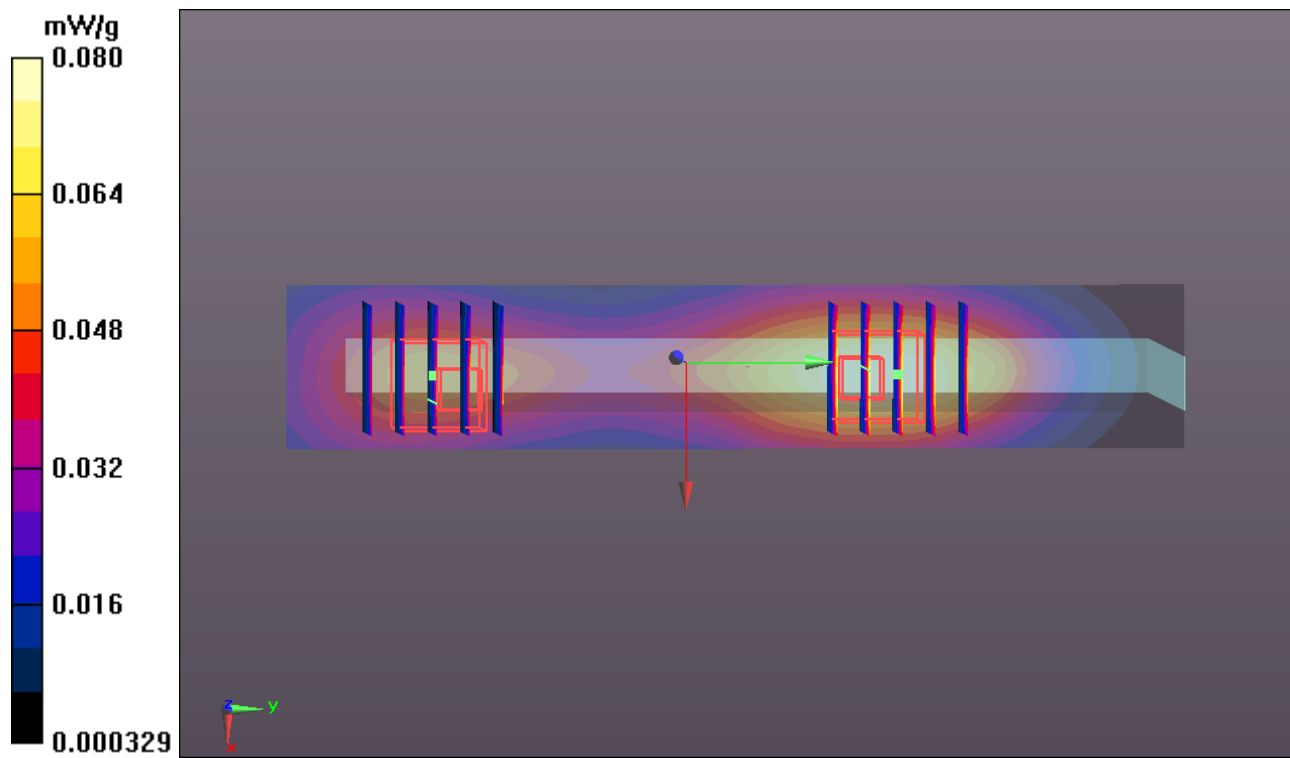
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.662 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.100 \text{ W/kg}$

**SAR(1 g) =  $0.060 \text{ mW/g}$ ; SAR(10 g) =  $0.037 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.063 \text{ mW/g}$



**#53 LTE BAND XIII\_QPSK(1-49)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.082 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.868 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.110 \text{ W/kg}$

**SAR(1 g) =  $0.078 \text{ mW/g}$ ; SAR(10 g) =  $0.052 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.083 \text{ mW/g}$

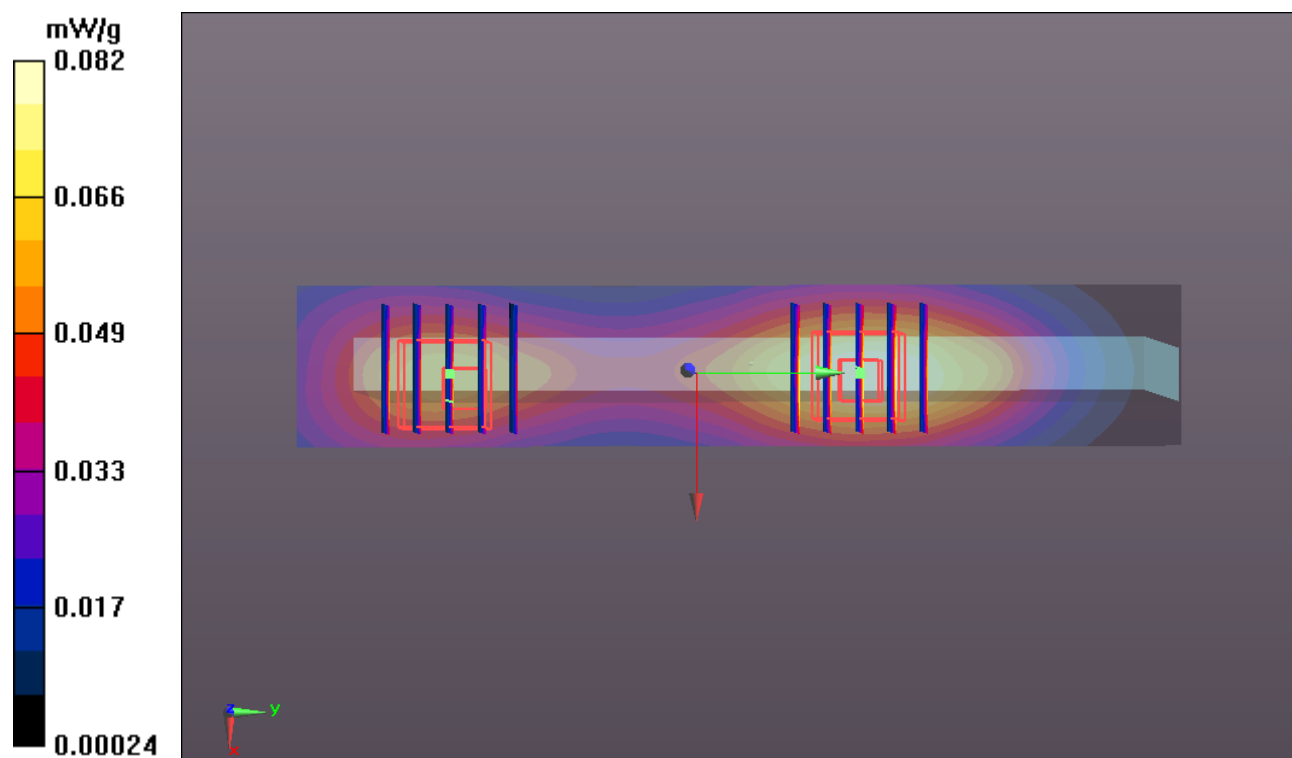
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.868 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.112 \text{ W/kg}$

**SAR(1 g) =  $0.067 \text{ mW/g}$ ; SAR(10 g) =  $0.041 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.070 \text{ mW/g}$



**#54 LTE BAND XIII\_16-QAM(25-13)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.088 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.664 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.113 \text{ W/kg}$

**SAR(1 g) =  $0.080 \text{ mW/g}$ ; SAR(10 g) =  $0.054 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.087 \text{ mW/g}$

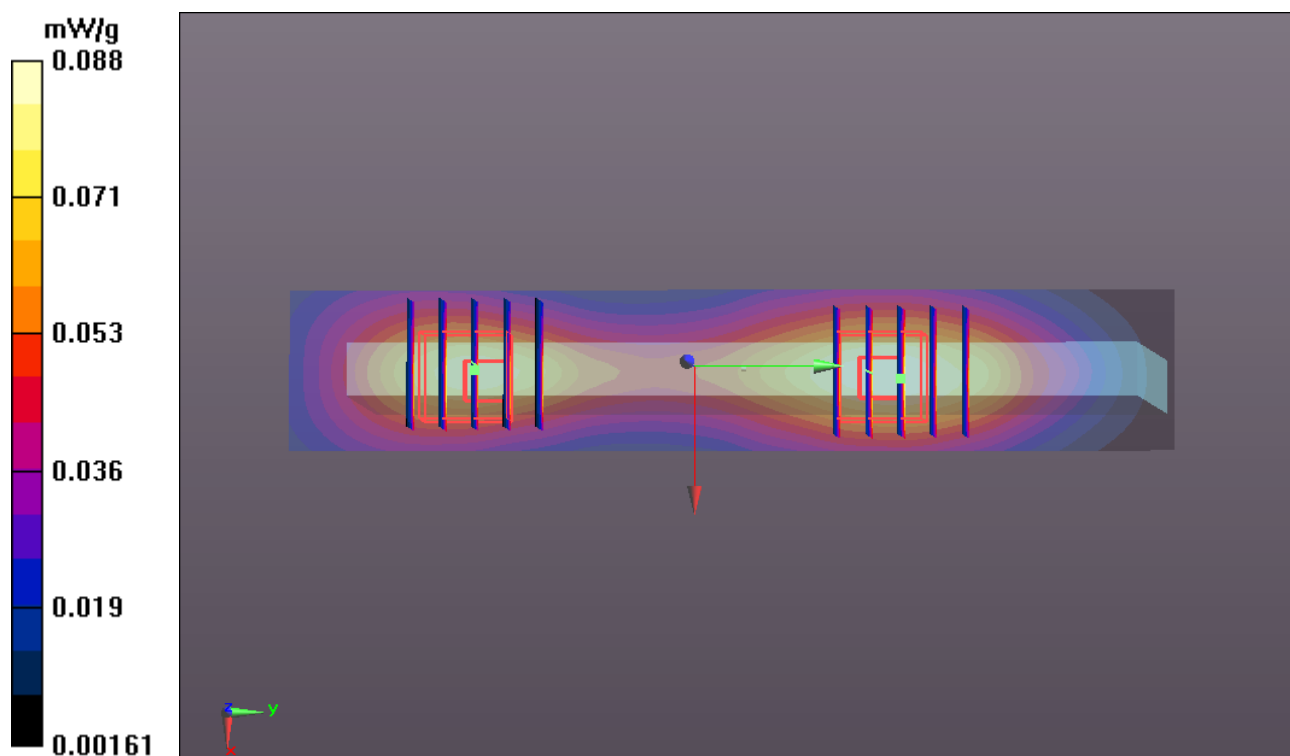
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.664 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.124 \text{ W/kg}$

**SAR(1 g) =  $0.075 \text{ mW/g}$ ; SAR(10 g) =  $0.046 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.077 \text{ mW/g}$



**#55 LTE BAND XIII\_16-QAM(1-0)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.078 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.087 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $0.099 \text{ W/kg}$

**SAR(1 g) =  $0.072 \text{ mW/g}$ ; SAR(10 g) =  $0.048 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.078 \text{ mW/g}$

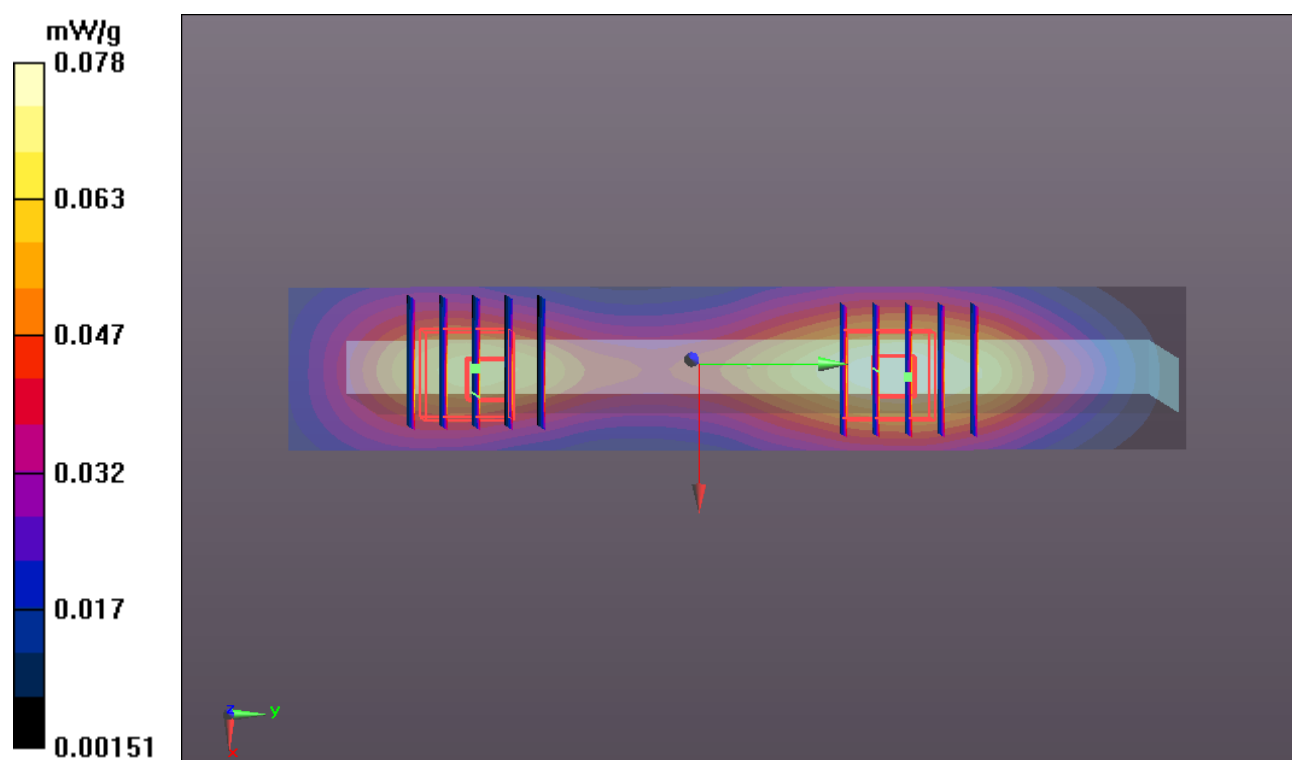
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.087 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $0.104 \text{ W/kg}$

**SAR(1 g) =  $0.062 \text{ mW/g}$ ; SAR(10 g) =  $0.038 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.064 \text{ mW/g}$



**#56 LTE BAND XIII\_16-QAM(1-49)\_Secondary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.085 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.289 \text{ V/m}$ ; Power Drift =  $0.08 \text{ dB}$

Peak SAR (extrapolated) =  $0.105 \text{ W/kg}$

**SAR(1 g) =  $0.075 \text{ mW/g}$ ; SAR(10 g) =  $0.050 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.082 \text{ mW/g}$

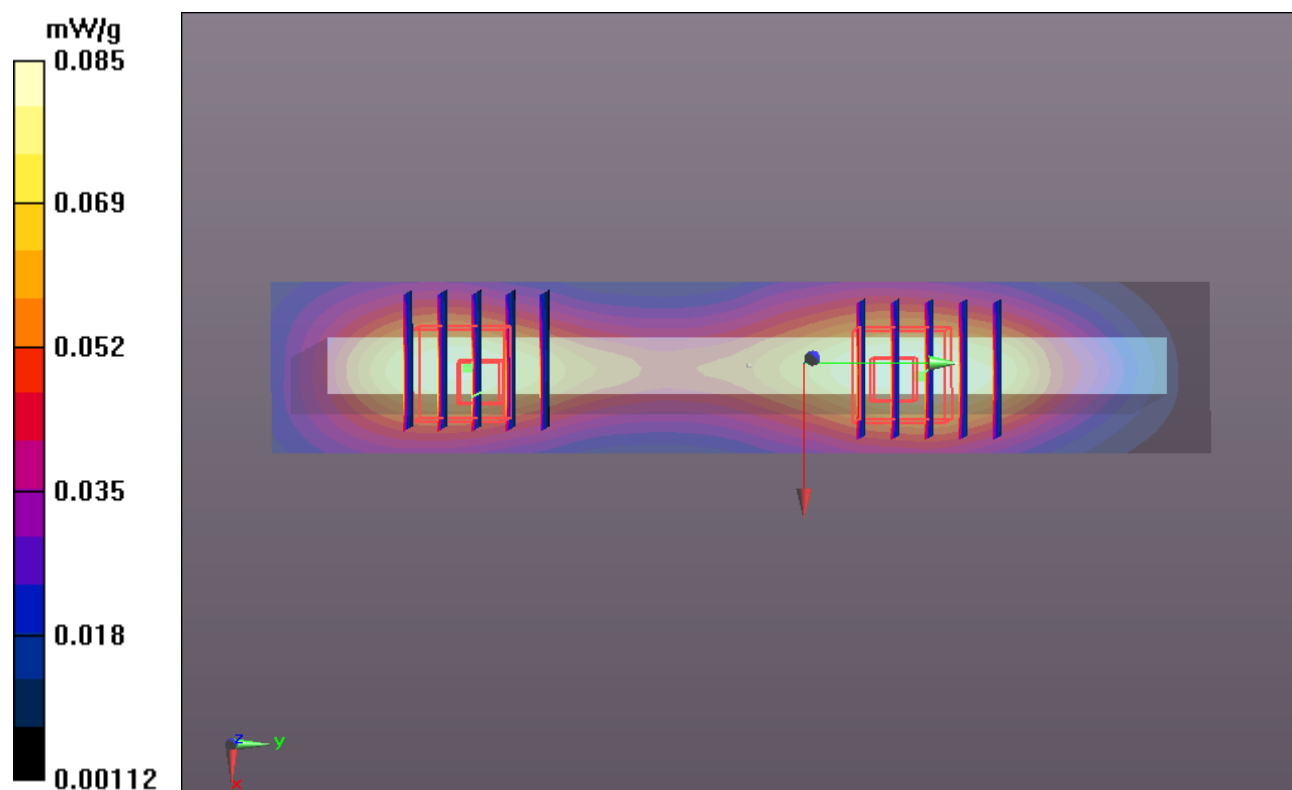
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.289 \text{ V/m}$ ; Power Drift =  $0.08 \text{ dB}$

Peak SAR (extrapolated) =  $0.131 \text{ W/kg}$

**SAR(1 g) =  $0.074 \text{ mW/g}$ ; SAR(10 g) =  $0.046 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.078 \text{ mW/g}$



**#57 LTE BAND XIII\_QPSK(25-13)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.241 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $16.890 \text{ V/m}$ ; Power Drift =  $0.15 \text{ dB}$

Peak SAR (extrapolated) =  $0.396 \text{ W/kg}$

**SAR(1 g) =  $0.240 \text{ mW/g}$ ; SAR(10 g) =  $0.147 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.273 \text{ mW/g}$

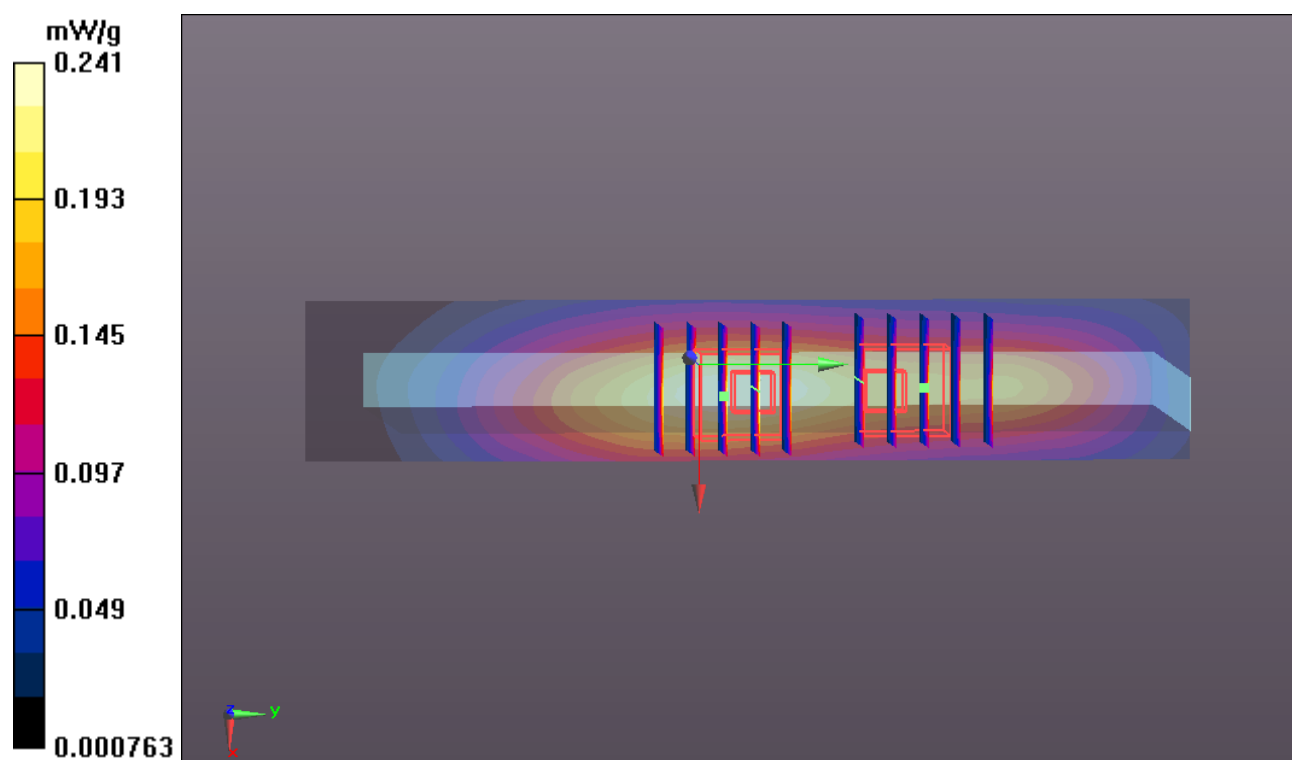
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $16.890 \text{ V/m}$ ; Power Drift =  $0.15 \text{ dB}$

Peak SAR (extrapolated) =  $0.287 \text{ W/kg}$

**SAR(1 g) =  $0.180 \text{ mW/g}$ ; SAR(10 g) =  $0.114 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.202 \text{ mW/g}$



**#58 LTE BAND XIII\_QPSK(1-0)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.267 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $17.780 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$

Peak SAR (extrapolated) =  $0.415 \text{ W/kg}$

**SAR(1 g) =  $0.254 \text{ mW/g}$ ; SAR(10 g) =  $0.158 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.282 \text{ mW/g}$

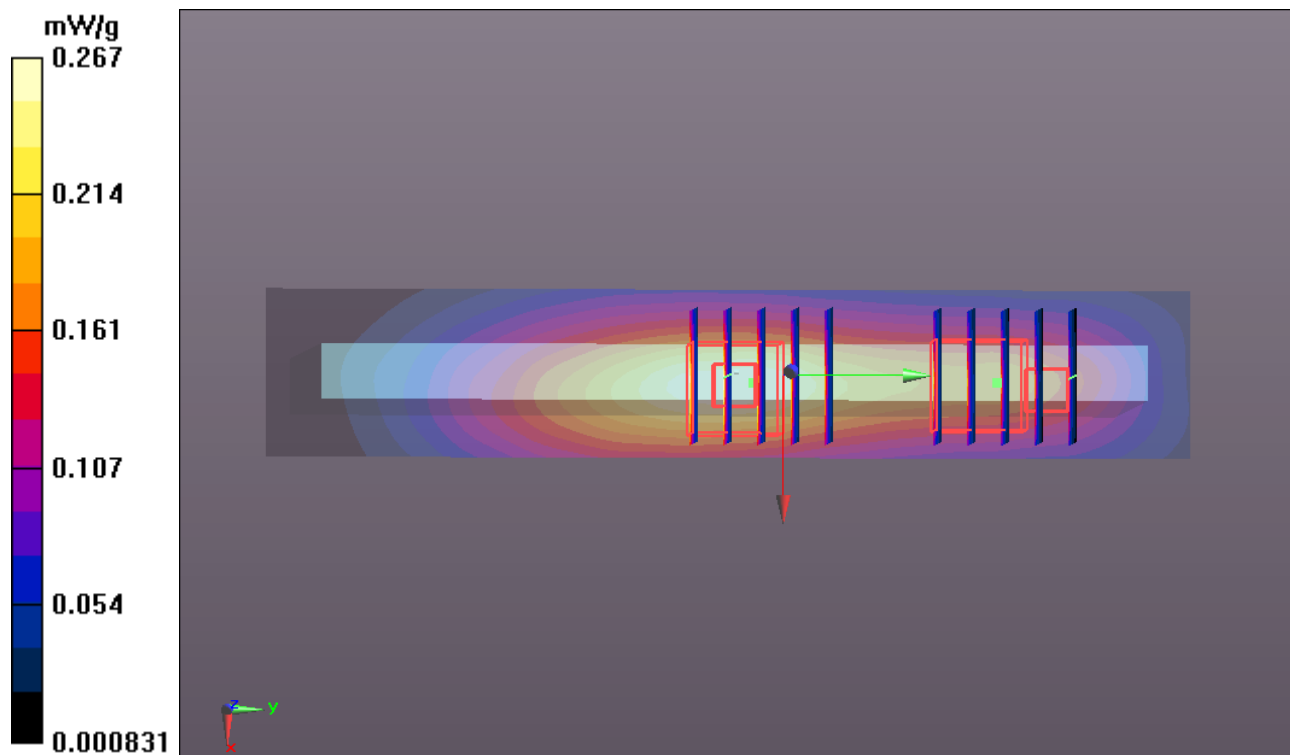
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $17.780 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$

Peak SAR (extrapolated) =  $0.443 \text{ W/kg}$

**SAR(1 g) =  $0.197 \text{ mW/g}$ ; SAR(10 g) =  $0.112 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.226 \text{ mW/g}$



**#59 LTE BAND XIII\_QPSK(1-49)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.261 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $17.696 \text{ V/m}$ ; Power Drift =  $-0.09 \text{ dB}$

Peak SAR (extrapolated) =  $0.400 \text{ W/kg}$

**SAR(1 g) =  $0.243 \text{ mW/g}$ ; SAR(10 g) =  $0.149 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.262 \text{ mW/g}$

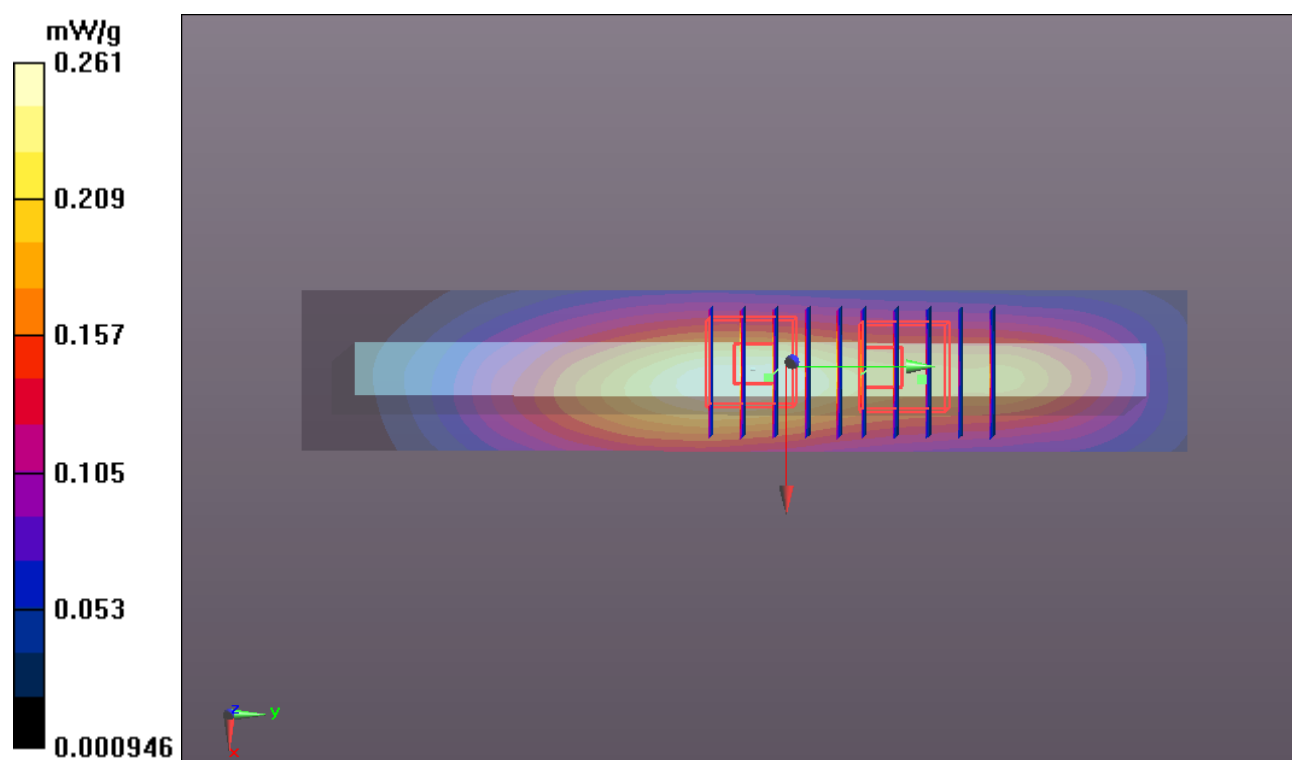
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $17.696 \text{ V/m}$ ; Power Drift =  $-0.09 \text{ dB}$

Peak SAR (extrapolated) =  $0.295 \text{ W/kg}$

**SAR(1 g) =  $0.177 \text{ mW/g}$ ; SAR(10 g) =  $0.112 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.198 \text{ mW/g}$



**#60 LTE BAND XIII\_16-QAM(25-13)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.256 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.588 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$

Peak SAR (extrapolated) =  $0.349 \text{ W/kg}$

**SAR(1 g) =  $0.213 \text{ mW/g}$ ; SAR(10 g) =  $0.131 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.239 \text{ mW/g}$

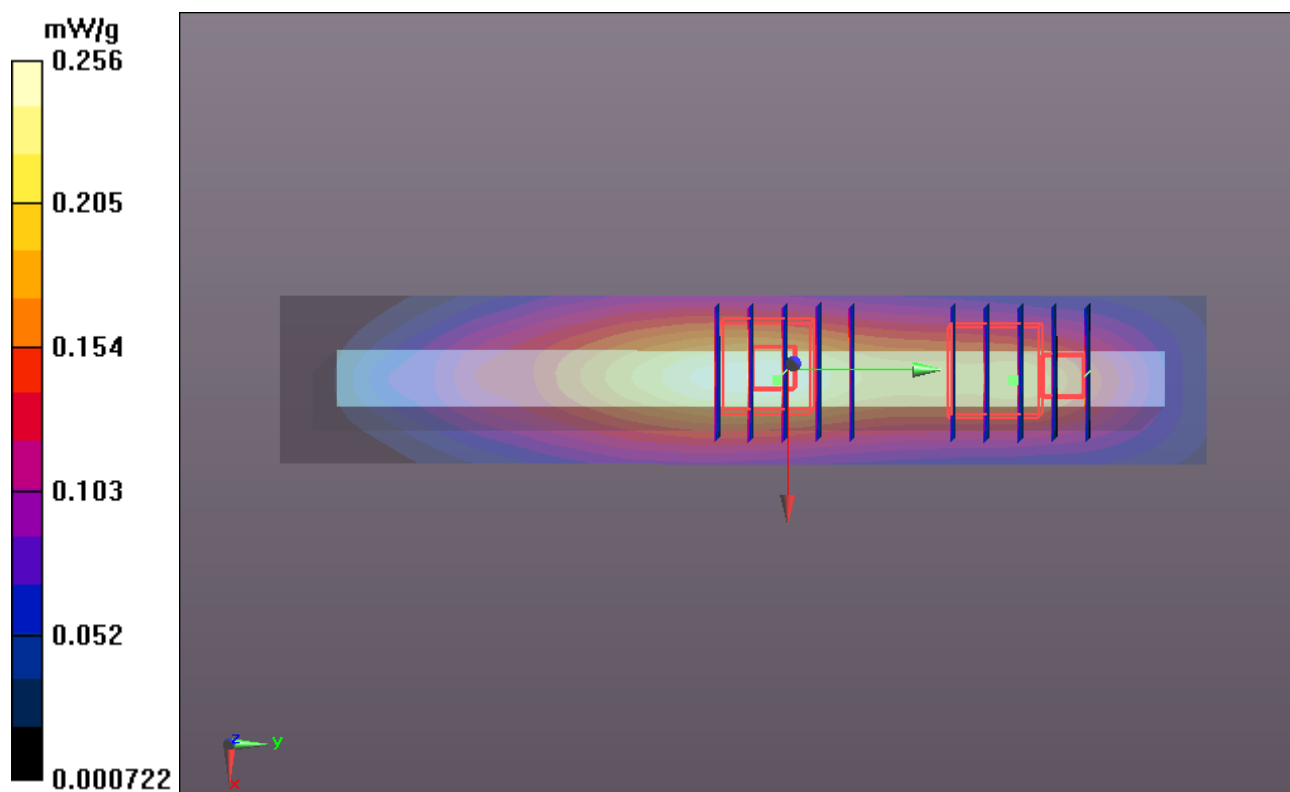
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.588 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$

Peak SAR (extrapolated) =  $0.462 \text{ W/kg}$

**SAR(1 g) =  $0.180 \text{ mW/g}$ ; SAR(10 g) =  $0.105 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.248 \text{ mW/g}$



**#61 LTE BAND XIII\_16-QAM(1-0)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.219 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.162 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $0.314 \text{ W/kg}$

**SAR(1 g) =  $0.198 \text{ mW/g}$ ; SAR(10 g) =  $0.123 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.220 \text{ mW/g}$

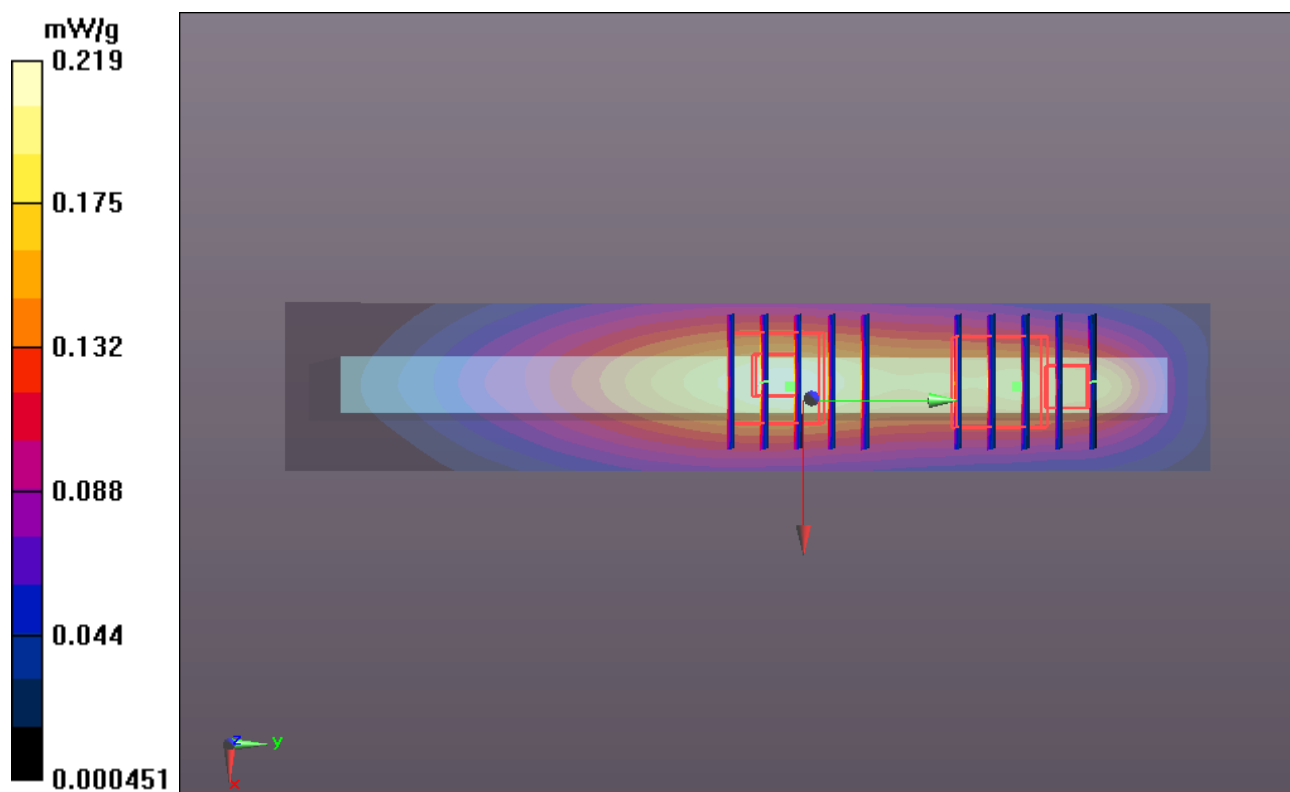
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.162 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $0.441 \text{ W/kg}$

**SAR(1 g) =  $0.170 \text{ mW/g}$ ; SAR(10 g) =  $0.098 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.230 \text{ mW/g}$



**#62 LTE BAND XIII\_16-QAM(1-49)\_Primary Landscape\_0cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (21x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.238 \text{ mW/g}$

**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.802 \text{ V/m}$ ; Power Drift =  $0.12 \text{ dB}$

Peak SAR (extrapolated) =  $0.337 \text{ W/kg}$

**SAR(1 g) =  $0.218 \text{ mW/g}$ ; SAR(10 g) =  $0.136 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.250 \text{ mW/g}$

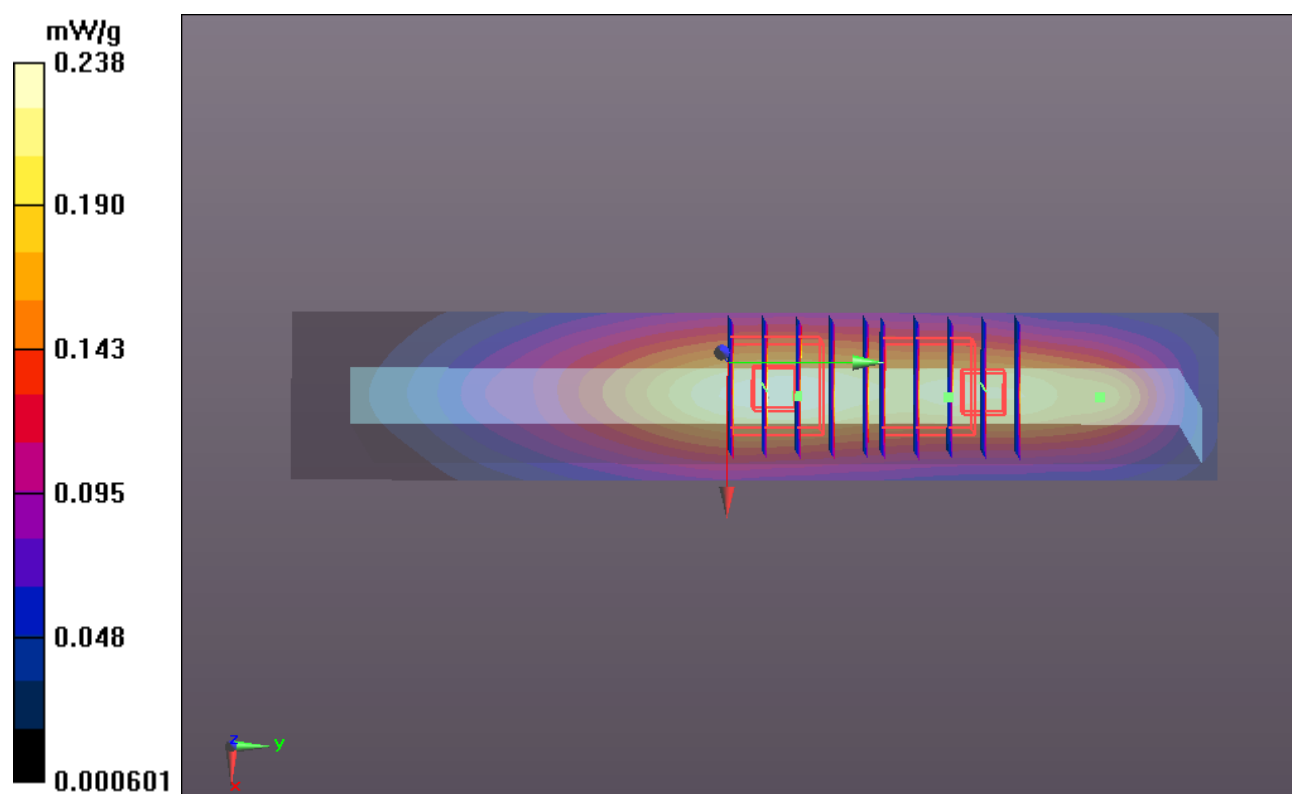
**Ch23230/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.802 \text{ V/m}$ ; Power Drift =  $0.12 \text{ dB}$

Peak SAR (extrapolated) =  $0.346 \text{ W/kg}$

**SAR(1 g) =  $0.186 \text{ mW/g}$ ; SAR(10 g) =  $0.115 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.216 \text{ mW/g}$



**#63 LTE BAND XIII\_QPSK(25-13)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.812 \text{ mW/g}$

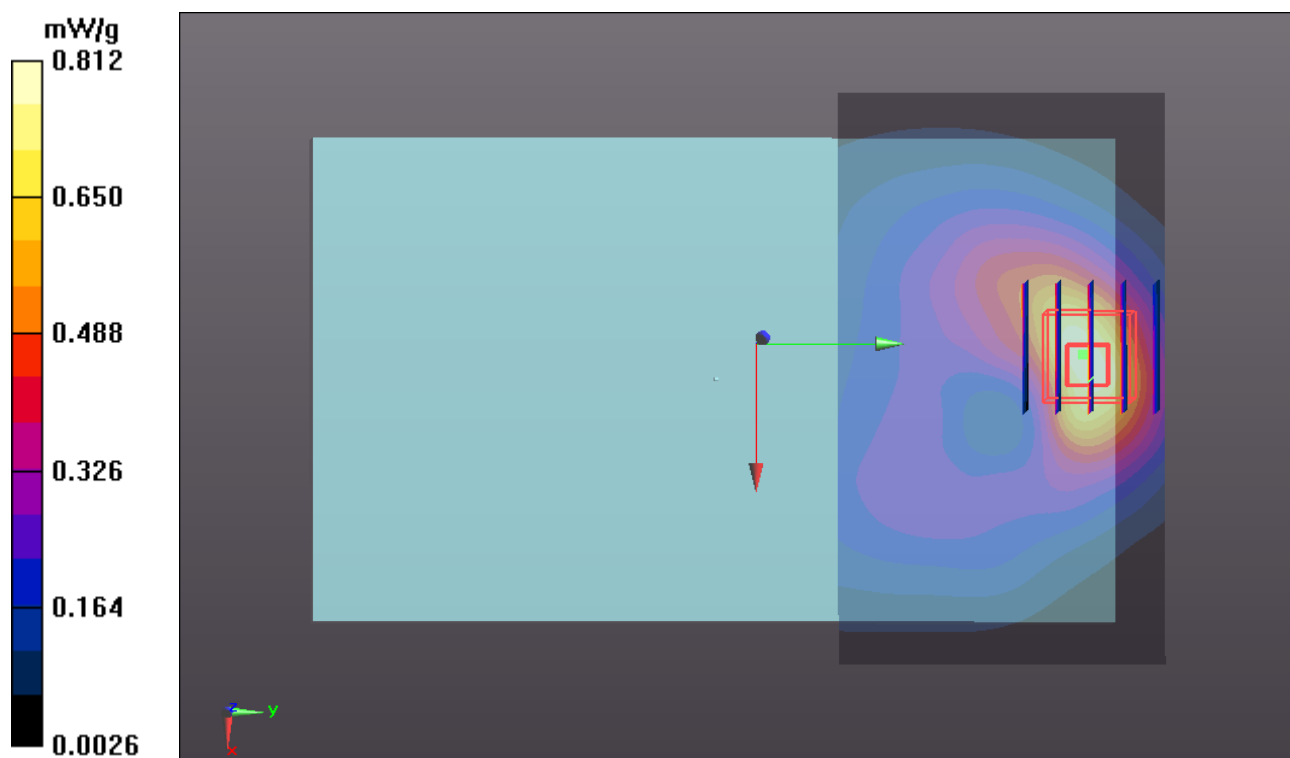
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $11.337 \text{ V/m}$ ; Power Drift =  $-0.08 \text{ dB}$

Peak SAR (extrapolated) =  $1.138 \text{ W/kg}$

**SAR(1 g) =  $0.751 \text{ mW/g}$ ; SAR(10 g) =  $0.461 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.815 \text{ mW/g}$



**#64 LTE BAND XIII\_QPSK(1-0)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.764 \text{ mW/g}$

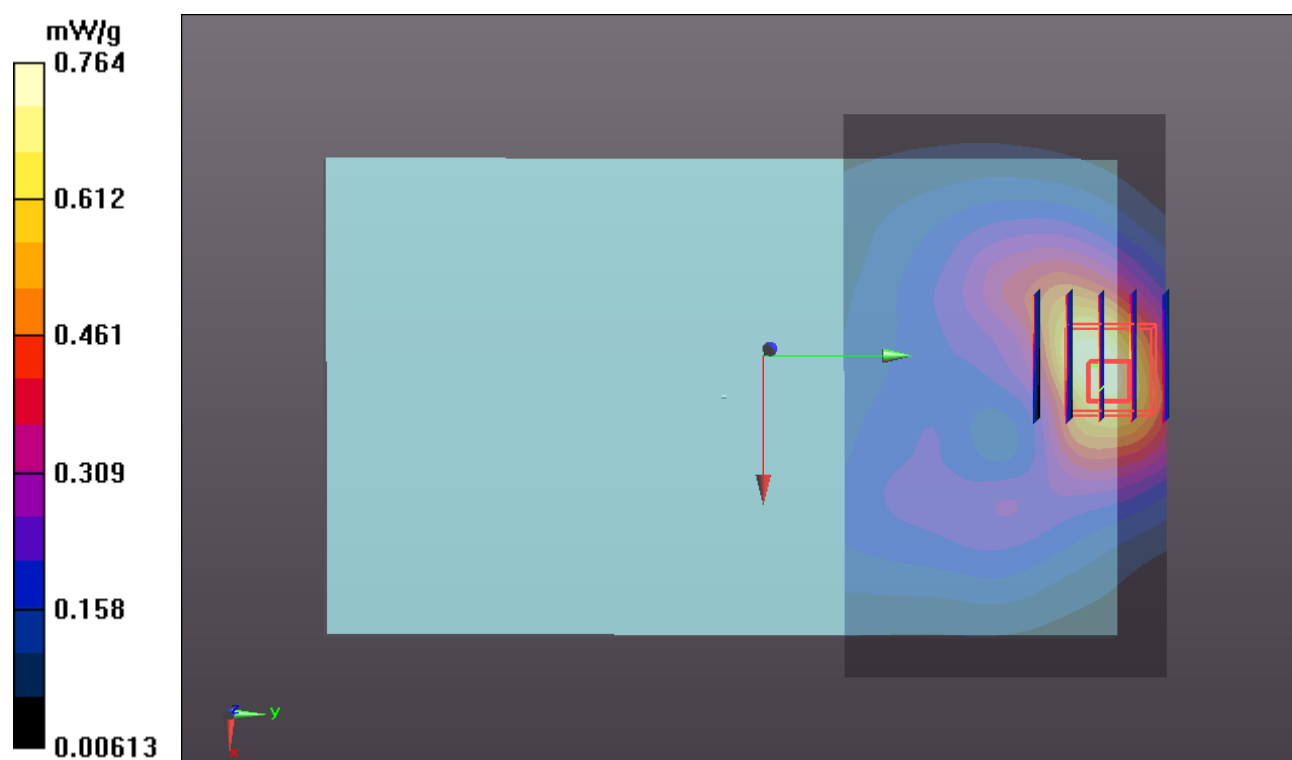
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $11.168 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $1.131 \text{ W/kg}$

**SAR(1 g) =  $0.746 \text{ mW/g}$ ; SAR(10 g) =  $0.456 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.793 \text{ mW/g}$



**#65 LTE BAND XIII\_QPSK(1-49)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.758 \text{ mW/g}$

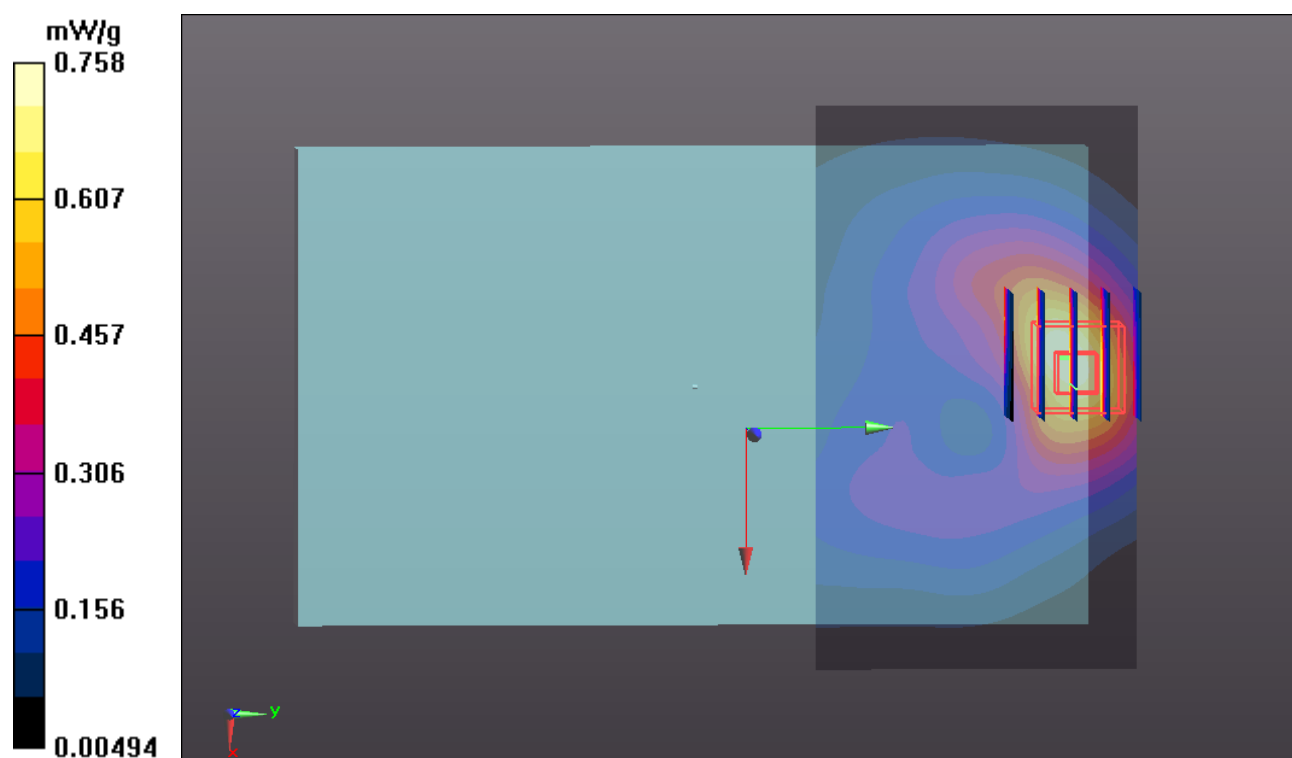
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.806 \text{ V/m}$ ; Power Drift =  $-0.14 \text{ dB}$

Peak SAR (extrapolated) =  $1.132 \text{ W/kg}$

**SAR(1 g) =  $0.740 \text{ mW/g}$ ; SAR(10 g) =  $0.451 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.814 \text{ mW/g}$



**#66 LTE BAND XIII\_16-QAM(25-13)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.802 \text{ mW/g}$

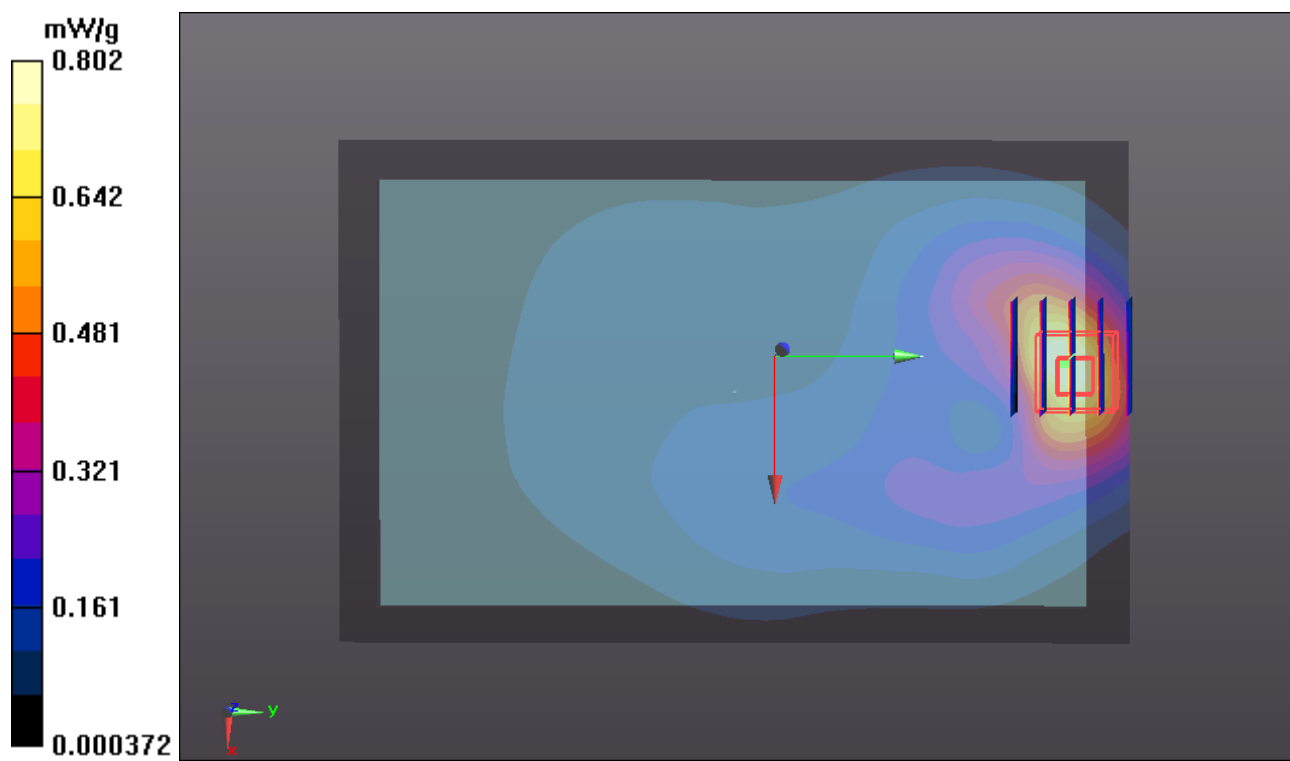
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.772 \text{ V/m}$ ; Power Drift =  $-0.0093 \text{ dB}$

Peak SAR (extrapolated) =  $1.194 \text{ W/kg}$

**SAR(1 g) =  $0.778 \text{ mW/g}$ ; SAR(10 g) =  $0.472 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.836 \text{ mW/g}$



**#67 LTE BAND XIII\_16-QAM(1-0)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.769 \text{ mW/g}$

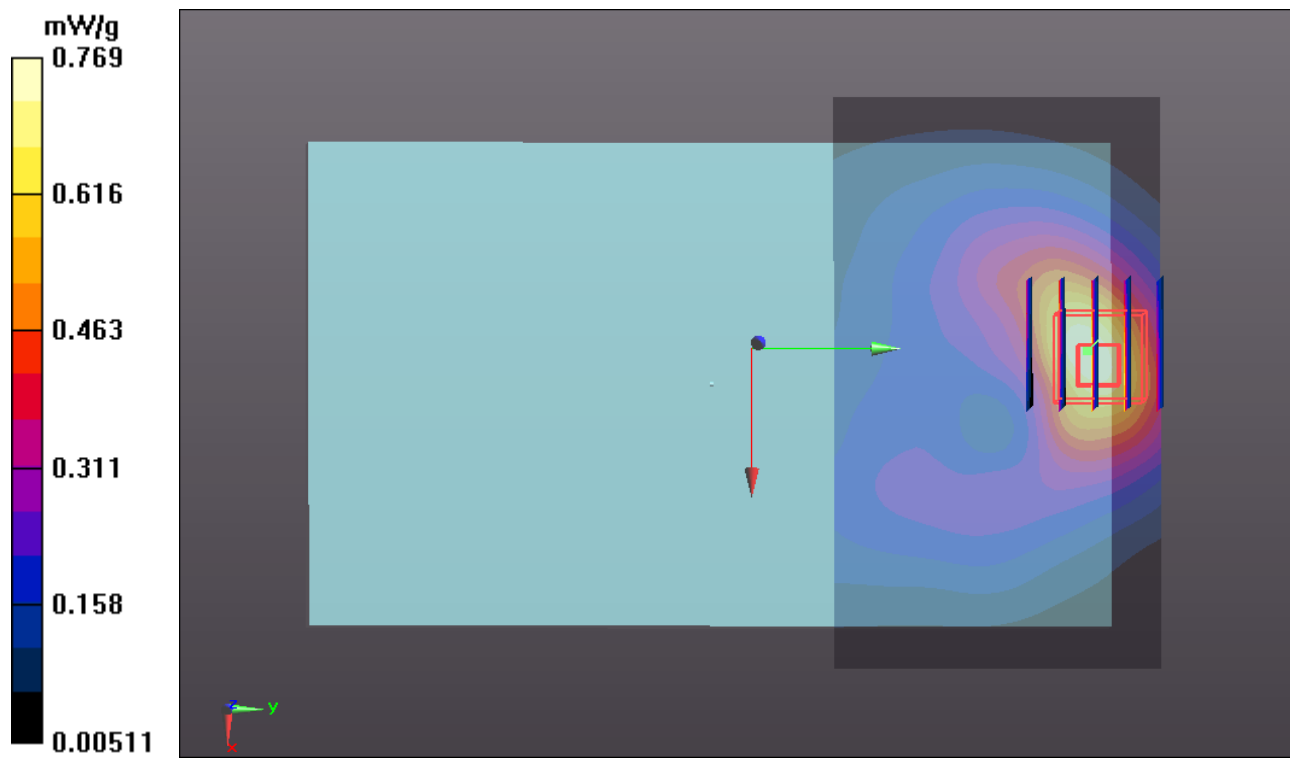
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.768 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$

Peak SAR (extrapolated) =  $1.104 \text{ W/kg}$

**SAR(1 g) =  $0.742 \text{ mW/g}$ ; SAR(10 g) =  $0.455 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.799 \text{ mW/g}$



**#68 LTE BAND XIII\_16-QAM(1-49)\_Bottom Face\_0.9cm\_Ch23230\_Earphone**

**DUT: 190101**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: MSL\_750\_111028 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.996 \text{ mho/m}$ ;  $\epsilon_r = 53.964$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $21.6^\circ\text{C}$

DASY5 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(6.35, 6.35, 6.35); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch23230/Area Scan (71x41x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.816 \text{ mW/g}$

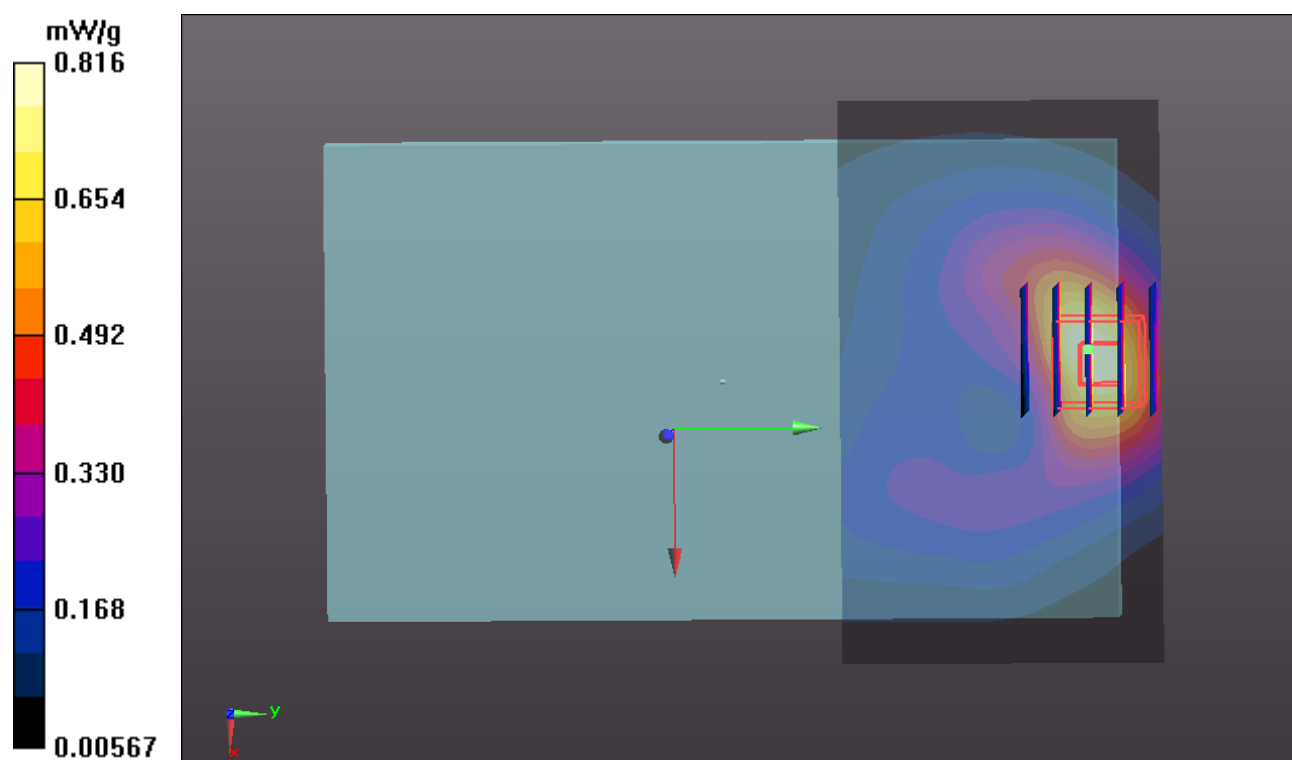
**Ch23230/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.849 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

Peak SAR (extrapolated) =  $1.187 \text{ W/kg}$

**SAR(1 g) =  $0.789 \text{ mW/g}$ ; SAR(10 g) =  $0.484 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.848 \text{ mW/g}$



**#75 802.11b\_Bottom Face\_0cm\_Ch1\_1M\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.933$  mho/m;  $\epsilon_r =$

53.535;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (81x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.426 mW/g

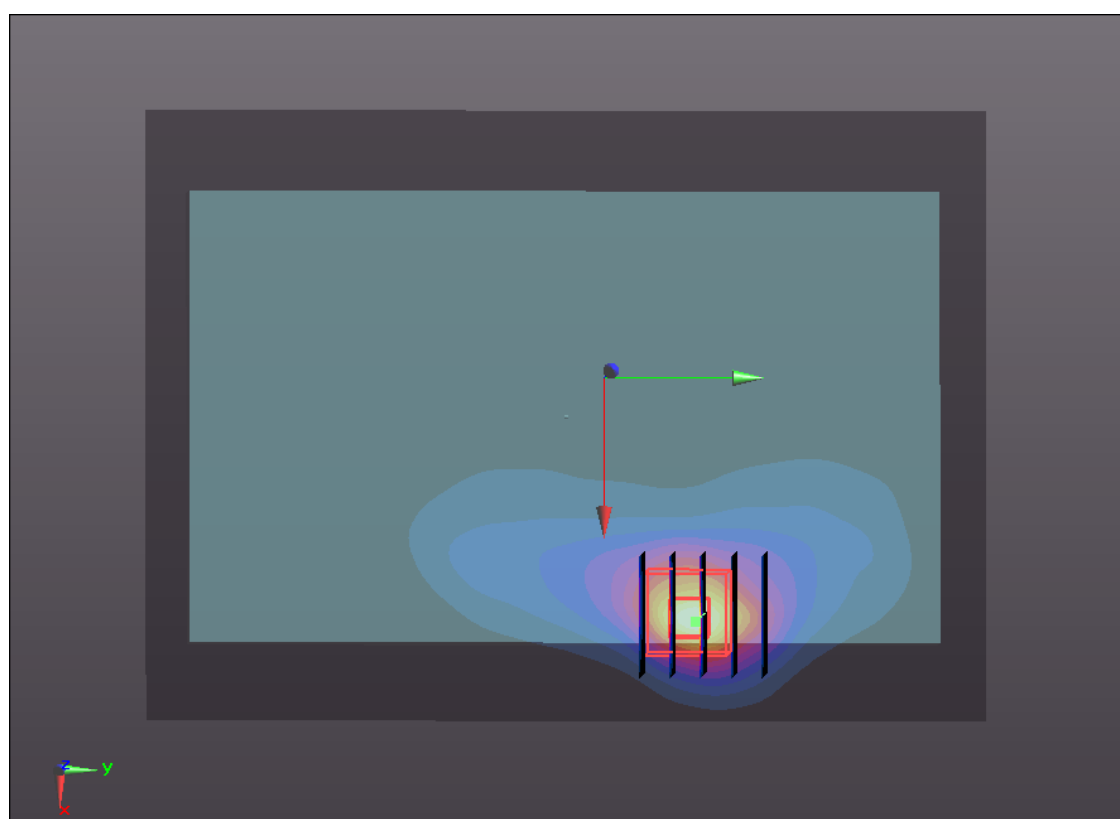
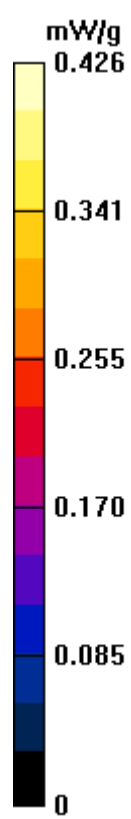
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.032 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.780 W/kg

**SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.142 mW/g**

Maximum value of SAR (measured) = 0.397 mW/g



**#76 802.11b\_Secondary Portrait\_0cm\_Ch1\_1M\_18**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.933$  mho/m;  $\epsilon_r =$

53.535;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (41x101x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.054 mW/g

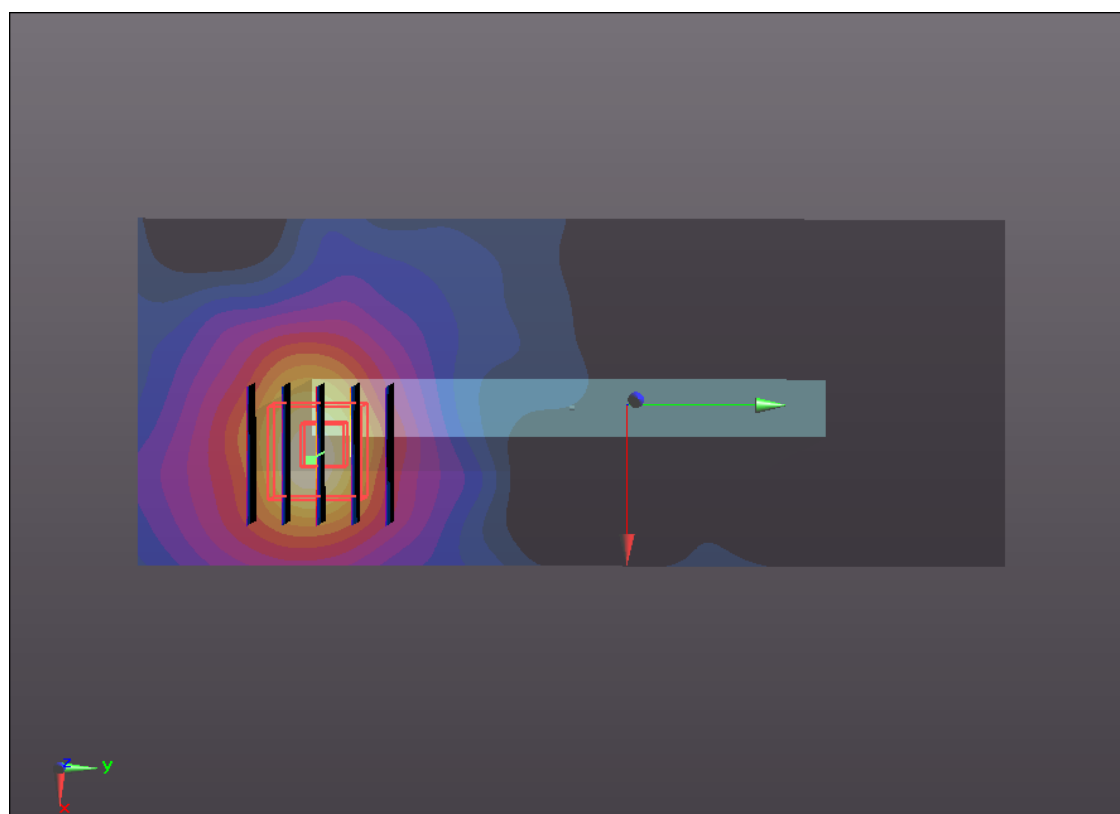
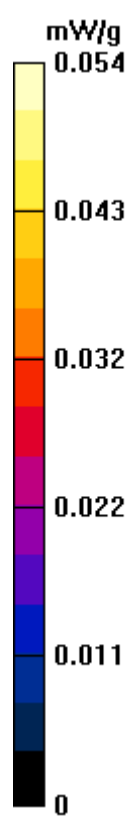
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.023 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.130 W/kg

**SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.022 mW/g**

Maximum value of SAR (measured) = 0.052 mW/g



**#77 802.11b\_Primary Landscape\_0cm\_Ch1\_1M\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.933$  mho/m;  $\epsilon_r =$

53.535;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (31x11x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.305 mW/g

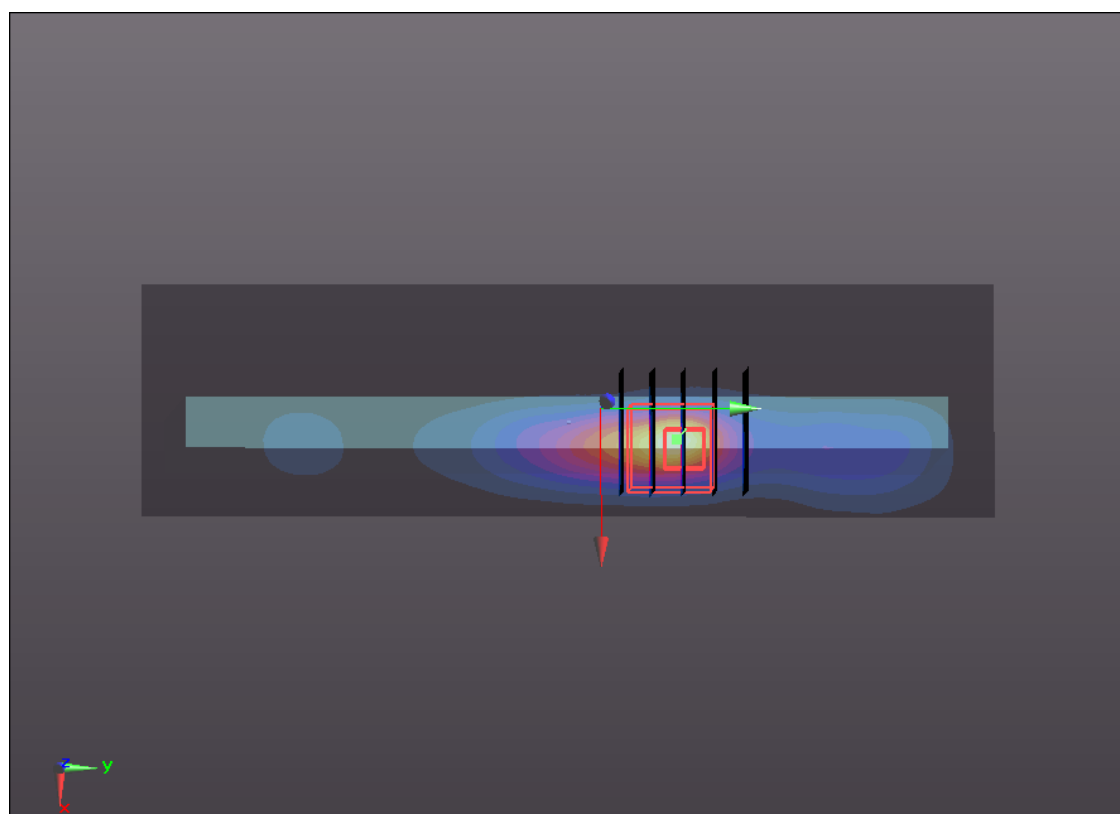
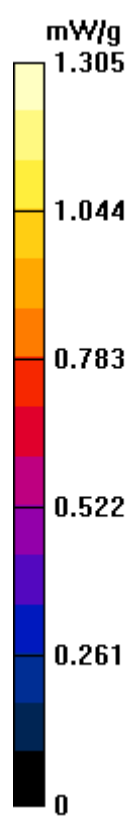
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.071 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.156 W/kg

**SAR(1 g) = 0.899 mW/g; SAR(10 g) = 0.365 mW/g**

Maximum value of SAR (measured) = 0.862 mW/g



**#78 802.11b\_Primary Landscape\_0cm\_Ch6\_1M\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.976 \text{ mho/m}$ ;  $\epsilon_r =$

$53.488$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch6/Area Scan (31x11x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.594 \text{ mW/g}$

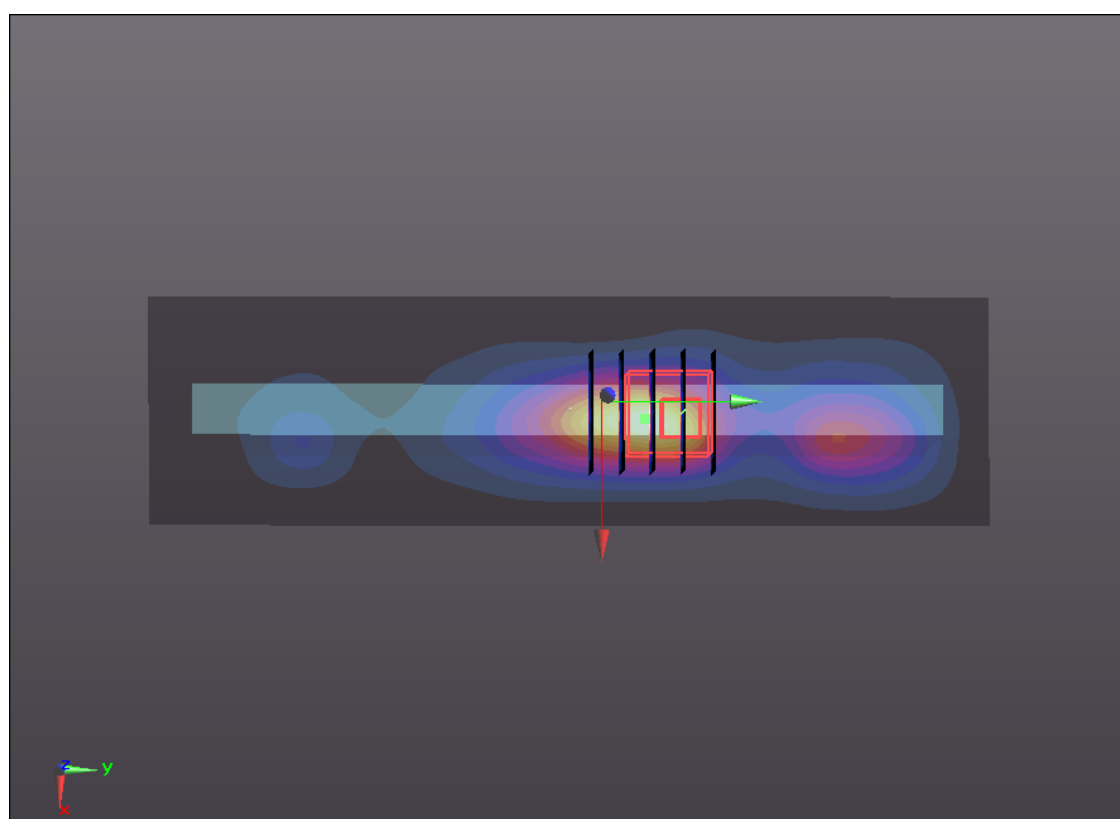
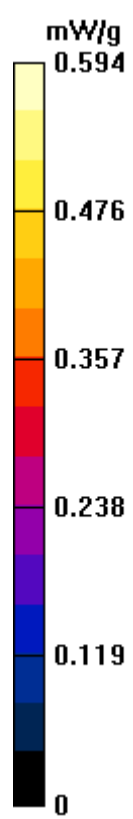
**Ch6/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.617 \text{ V/m}$ ; Power Drift =  $-0.02 \text{ dB}$

Peak SAR (extrapolated) =  $1.558 \text{ W/kg}$

**SAR(1 g) =  $0.661 \text{ mW/g}$ ; SAR(10 g) =  $0.267 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.813 \text{ mW/g}$



**#79 802.11b\_Primary Landscape\_0cm\_Ch11\_1M\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.027 \text{ mho/m}$ ;  $\epsilon_r =$

$53.408$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch11/Area Scan (31x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.581 \text{ mW/g}$

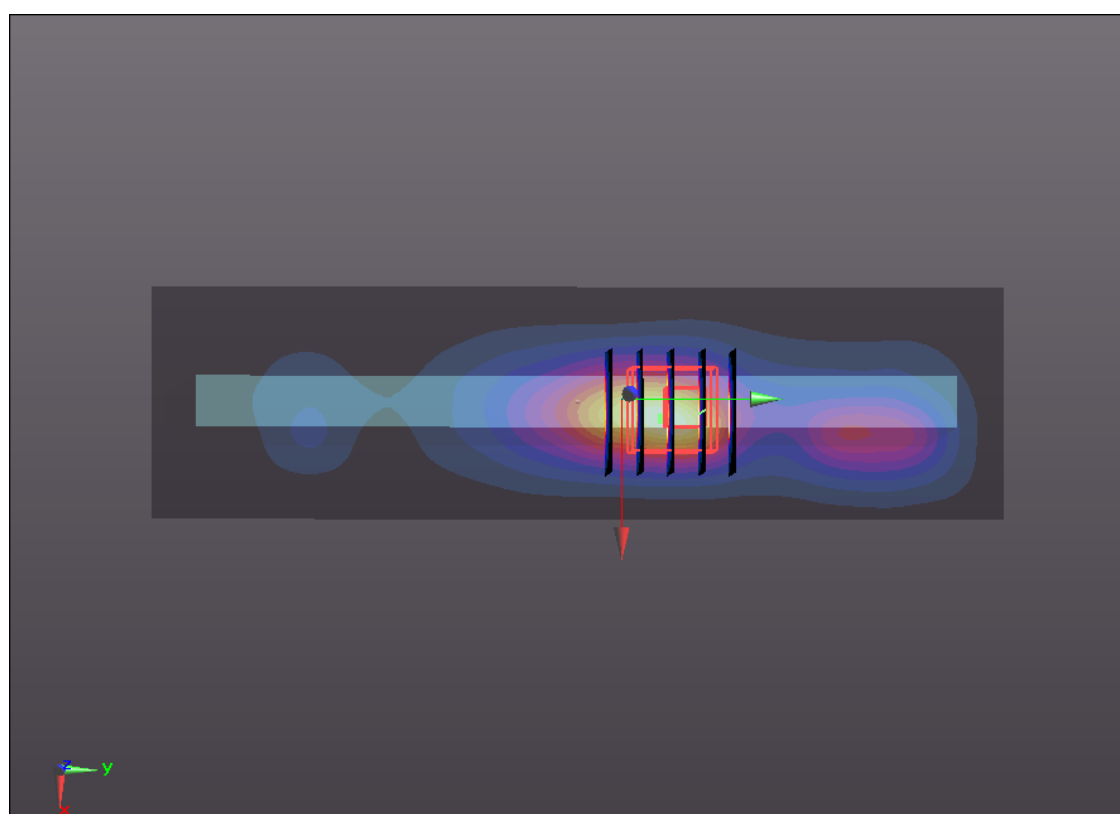
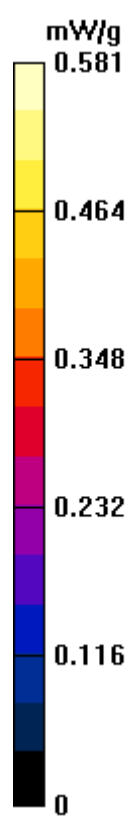
**Ch11/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $12.917 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $2.191 \text{ W/kg}$

**SAR(1 g) =  $0.884 \text{ mW/g}$ ; SAR(10 g) =  $0.368 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.064 \text{ mW/g}$



**#80 802.11n\_Primary Landscape\_0cm\_Ch1\_MCS0\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.933 \text{ mho/m}$ ;  $\epsilon_r =$

$53.535$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (31x11x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.549 \text{ mW/g}$

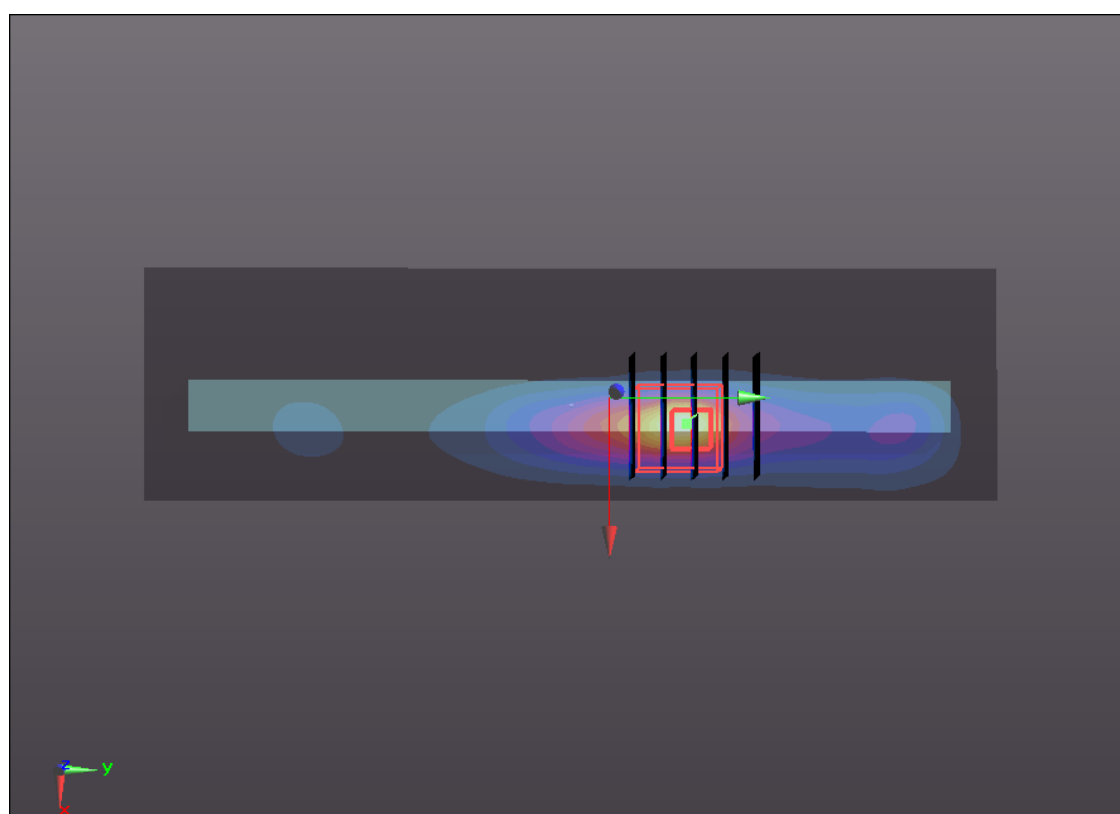
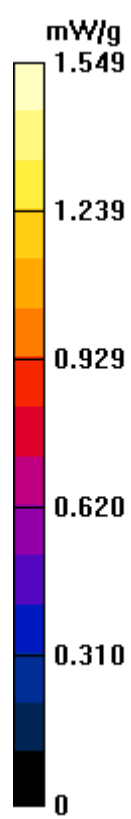
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.515 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$

Peak SAR (extrapolated) =  $2.534 \text{ W/kg}$

**SAR(1 g) =  $1.03 \text{ mW/g}$ ; SAR(10 g) =  $0.420 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.077 \text{ mW/g}$



**#80 802.11n\_Primary Landscape\_0cm\_Ch1\_MCS0\_18\_Earphone\_2D**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.933 \text{ mho/m}$ ;  $\epsilon_r =$

$53.535$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (31x11x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $1.549 \text{ mW/g}$

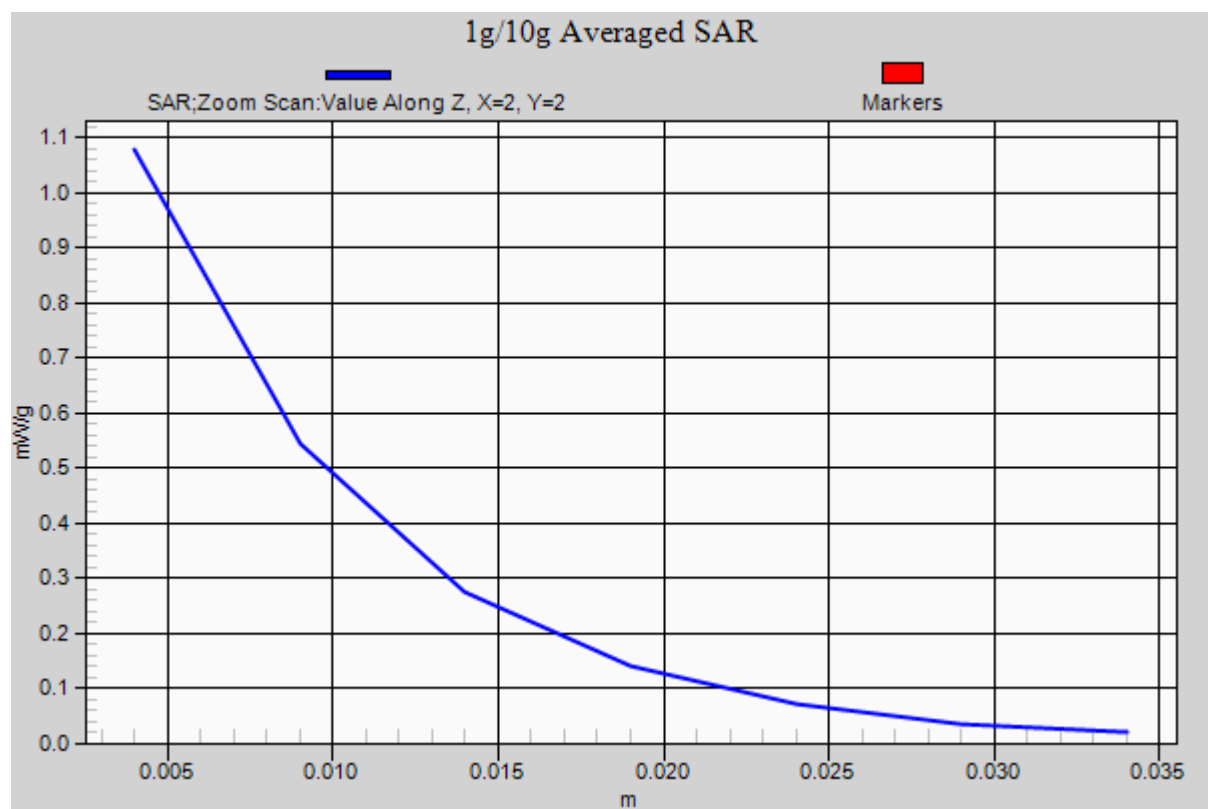
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.515 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$

Peak SAR (extrapolated) =  $2.534 \text{ W/kg}$

**SAR(1 g) =  $1.03 \text{ mW/g}$ ; SAR(10 g) =  $0.420 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.077 \text{ mW/g}$



**#81 802.11n\_Primary Landscape\_0cm\_Ch6\_MCS0\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.976$  mho/m;  $\epsilon_r =$

53.488;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch6/Area Scan (31x111x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.583 mW/g

**Ch6/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.302 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.978 W/kg

**SAR(1 g) = 0.825 mW/g; SAR(10 g) = 0.333 mW/g**

Maximum value of SAR (measured) = 0.971 mW/g

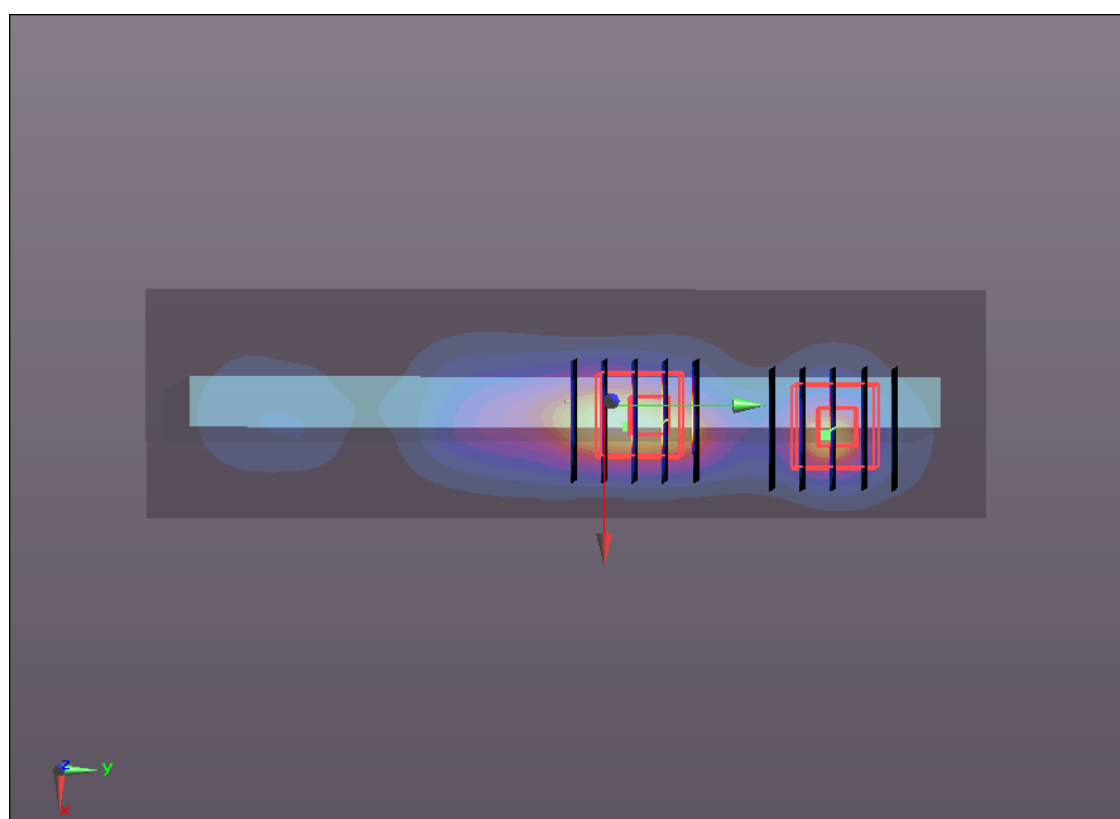
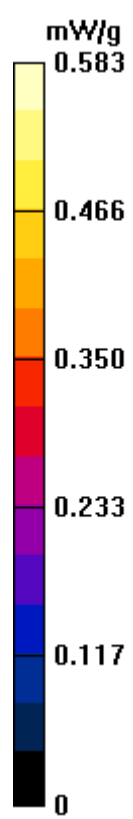
**Ch6/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.302 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.926 W/kg

**SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.164 mW/g**

Maximum value of SAR (measured) = 0.451 mW/g



**#82 802.11n\_Primary Landscape\_0cm\_Ch11\_MCS0\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.027 \text{ mho/m}$ ;  $\epsilon_r =$

$53.408$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch11/Area Scan (31x111x1):** Measurement grid:  $dx=20\text{mm}$ ,  $dy=20\text{mm}$

Maximum value of SAR (interpolated) =  $0.655 \text{ mW/g}$

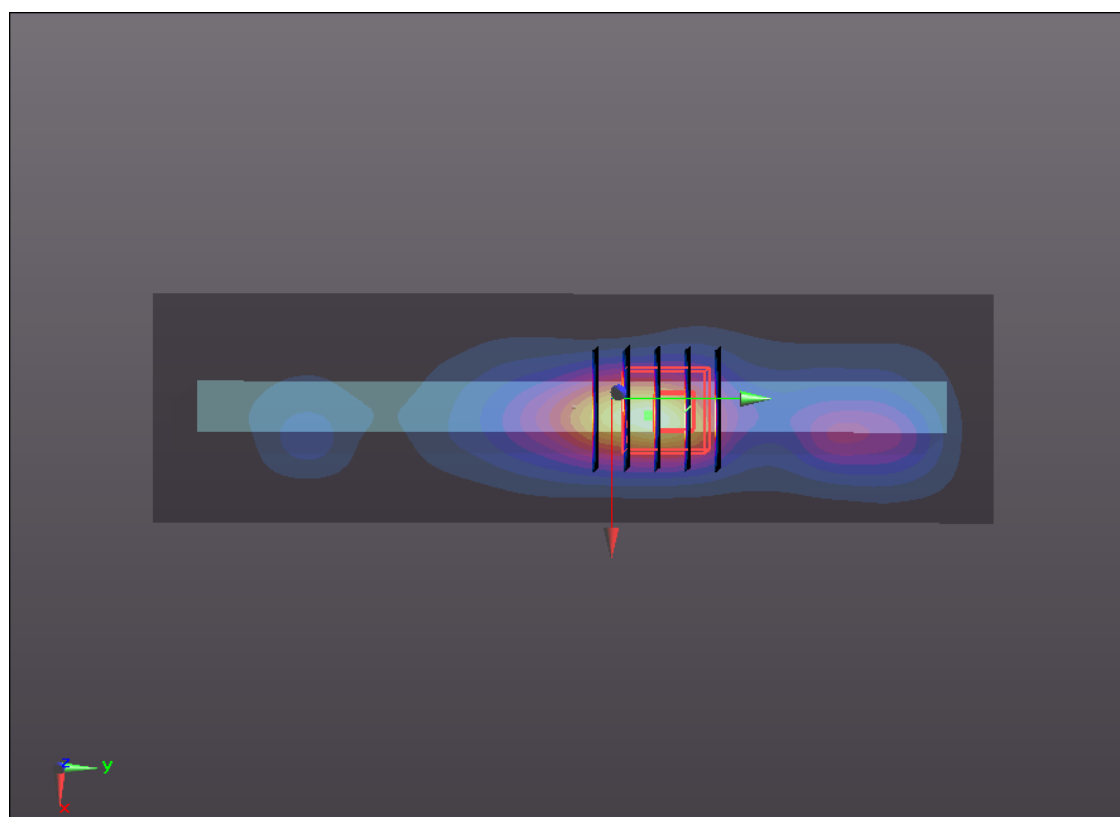
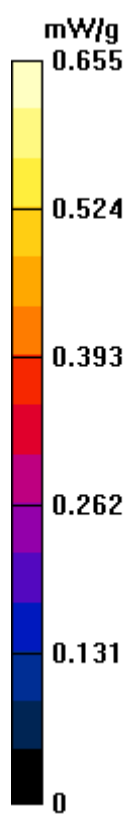
**Ch11/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.816 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $2.284 \text{ W/kg}$

**SAR(1 g) =  $0.981 \text{ mW/g}$ ; SAR(10 g) =  $0.407 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.206 \text{ mW/g}$



**#83 802.11n\_Bottom Face\_0cm\_Ch1\_MCS0\_18\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111028 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.933$  mho/m;  $\epsilon_r =$

53.535;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.73, 6.73, 6.73); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch1/Area Scan (31x11x1):** Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.538 mW/g

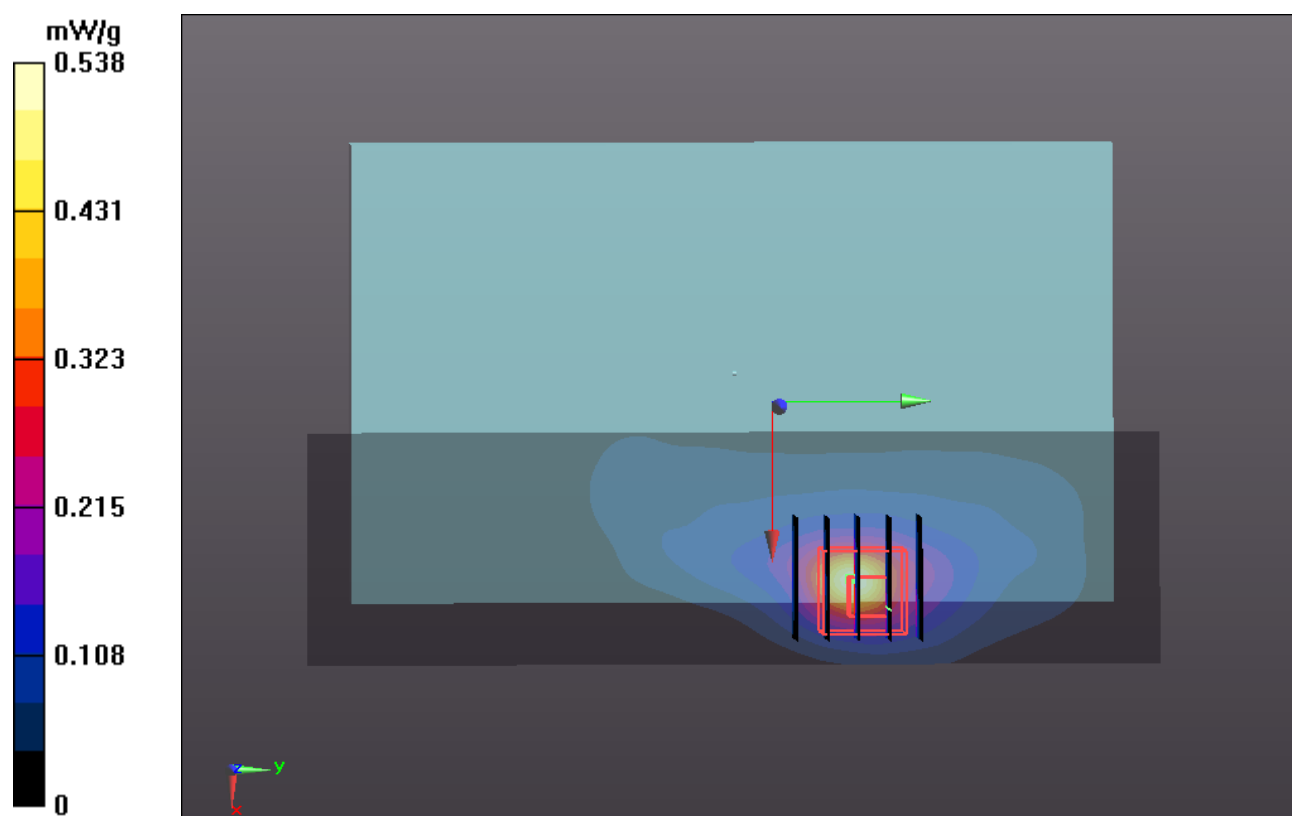
**Ch1/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.796 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.832 W/kg

**SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.158 mW/g**

Maximum value of SAR (measured) = 0.406 mW/g



**#69 802.11a\_Bottom Face\_0cm\_Ch36\_6M\_12\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5180$  MHz;  $\sigma = 5.235$  mho/m;  $\epsilon_r = 48.34$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(4.13, 4.13, 4.13); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch36/Area Scan (81x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.134 mW/g

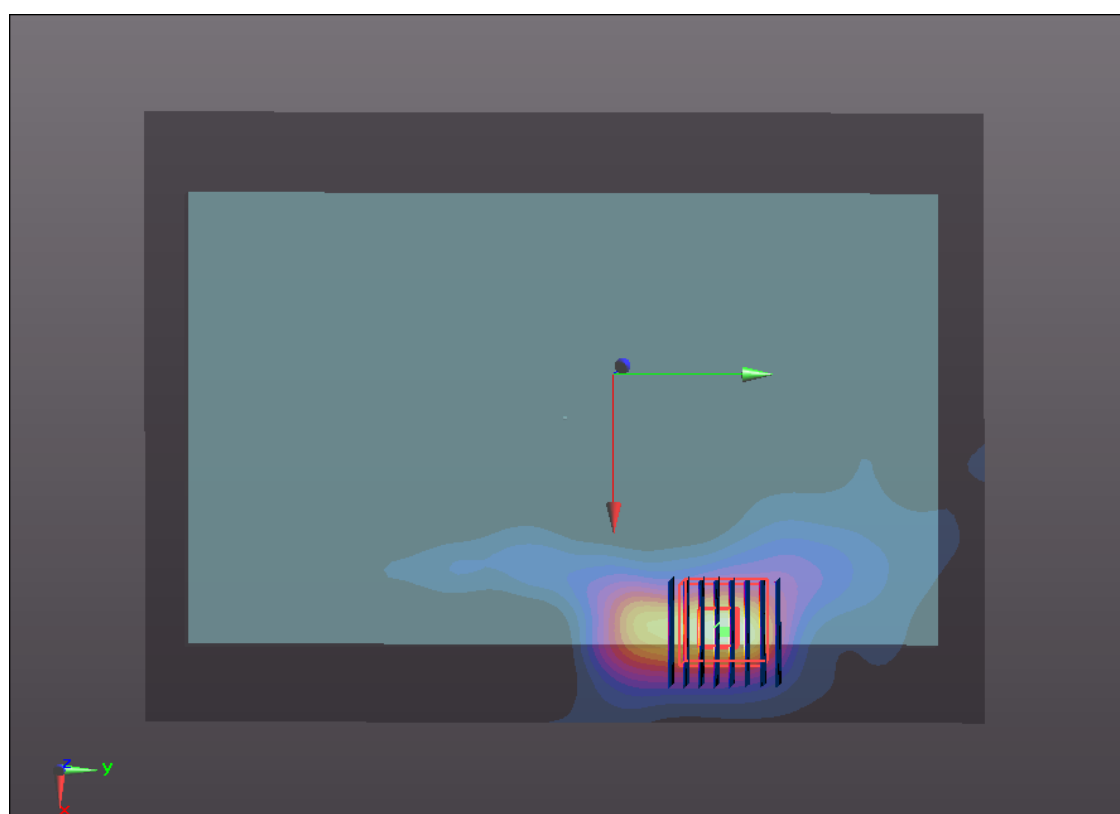
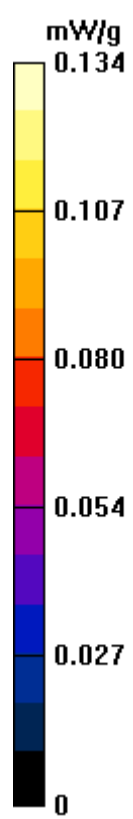
**Ch36/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.707 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.355 W/kg

**SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.035 mW/g**

Maximum value of SAR (measured) = 0.218 mW/g



**#70 802.11a\_Secondary Portrait\_0cm\_Ch36\_6M\_12**

**DUT: 190101**

Communication System: WIFI; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5180$  MHz;  $\sigma = 5.235$  mho/m;  $\epsilon_r = 48.34$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(4.13, 4.13, 4.13); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch36/Area Scan (41x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.018 mW/g

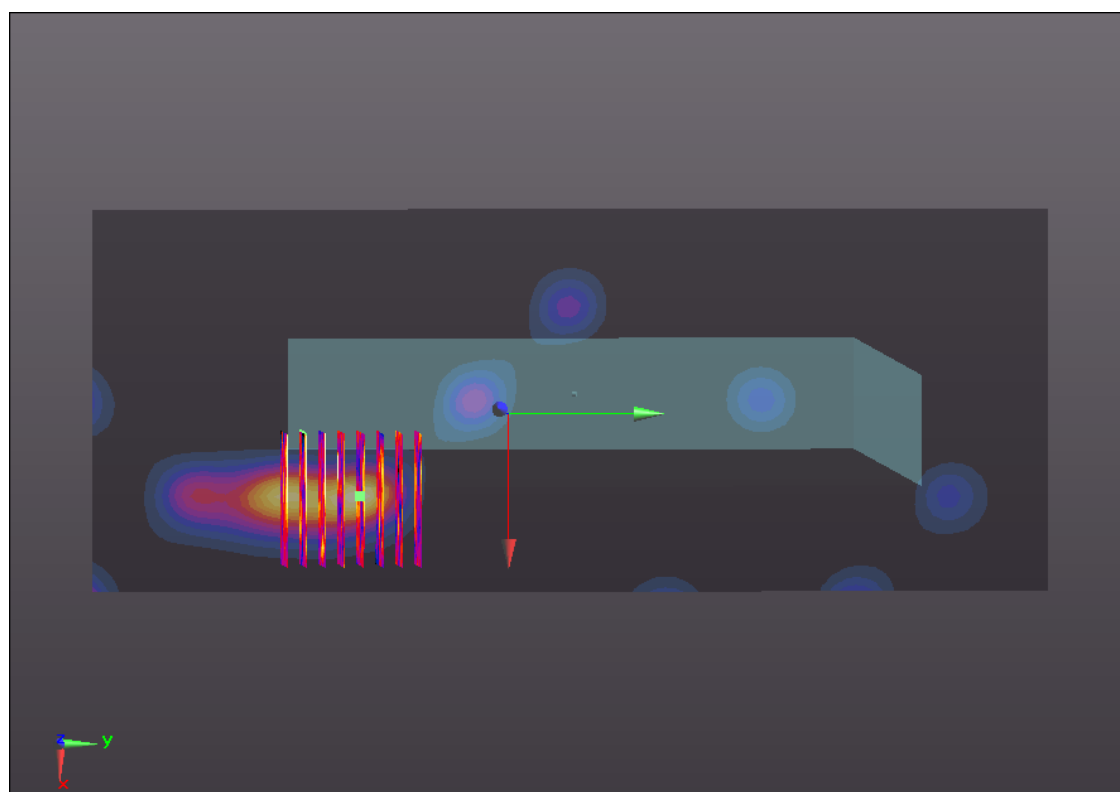
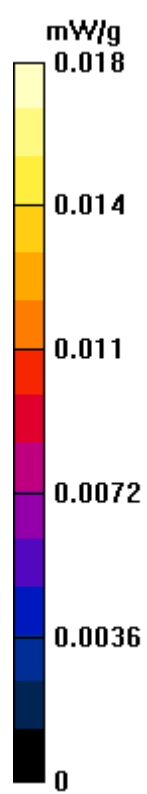
**Ch36/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.020 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0 W/kg

**SAR(1 g) = n.a. ; SAR(10 g) = n.a.**

Maximum value of SAR (measured) = 0.060 mW/g



**#71 802.11a\_Primary Landscape\_0cm\_Ch36\_6M\_12\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5180 \text{ MHz}$ ;  $\sigma = 5.235 \text{ mho/m}$ ;  $\epsilon_r = 48.34$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $21.3^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(4.13, 4.13, 4.13); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch36/Area Scan (31x111x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.589 \text{ mW/g}$

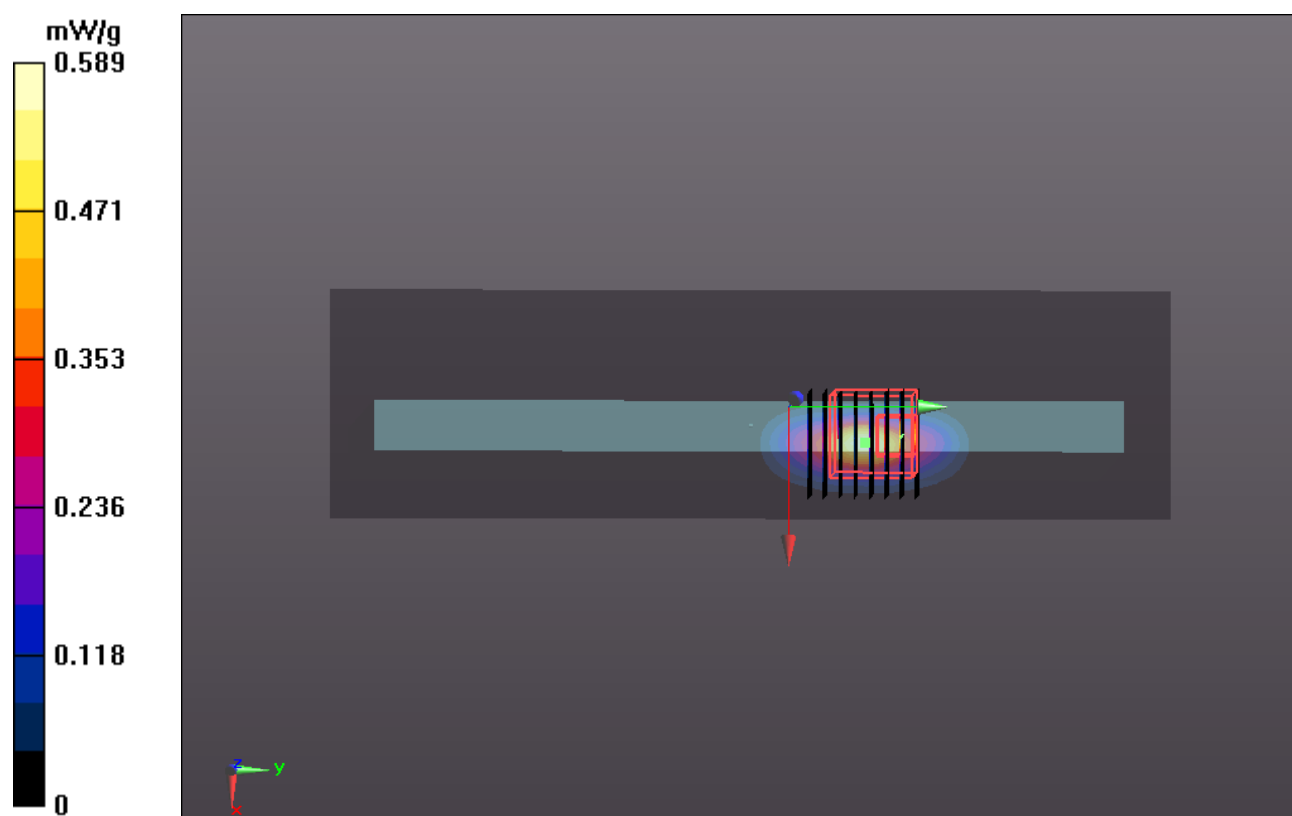
**Ch36/Zoom Scan (8x8x10)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2.5\text{mm}$

Reference Value =  $1.970 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $2.102 \text{ W/kg}$

**SAR(1 g) =  $0.503 \text{ mW/g}$ ; SAR(10 g) =  $0.103 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.213 \text{ mW/g}$



**#71 802.11a\_Primary Landscape\_0cm\_Ch36\_6M\_12\_Earphone\_2D**

**DUT: 190101**

Communication System: WIFI; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5180$  MHz;  $\sigma = 5.235$  mho/m;  $\epsilon_r = 48.34$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(4.13, 4.13, 4.13); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch36/Area Scan (31x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.589 mW/g

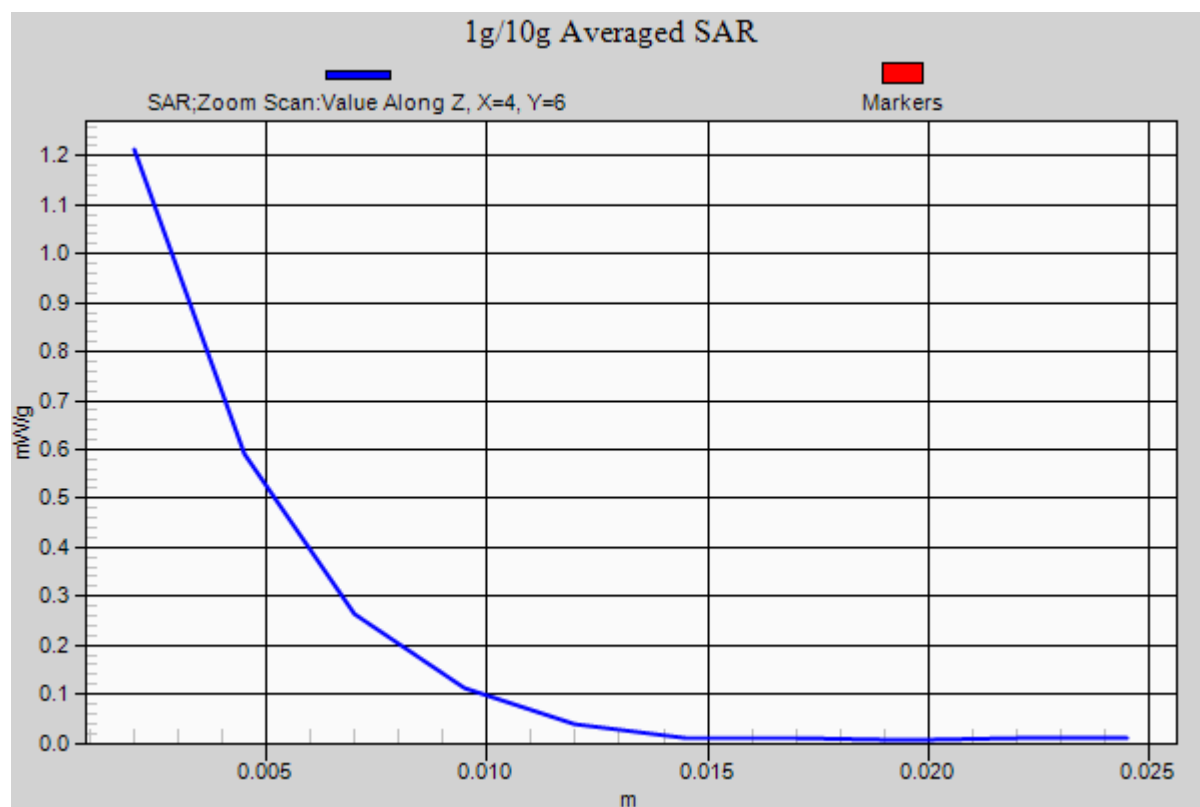
**Ch36/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.970 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.102 W/kg

**SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.103 mW/g**

Maximum value of SAR (measured) = 1.213 mW/g



**#72 802.11a\_Bottom Face\_0cm\_Ch149\_6M\_12\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.035 \text{ mho/m}$ ;  $\epsilon_r = 47.138$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $21.3^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(3.74, 3.74, 3.74); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch149/Area Scan (81x111x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.073 \text{ mW/g}$

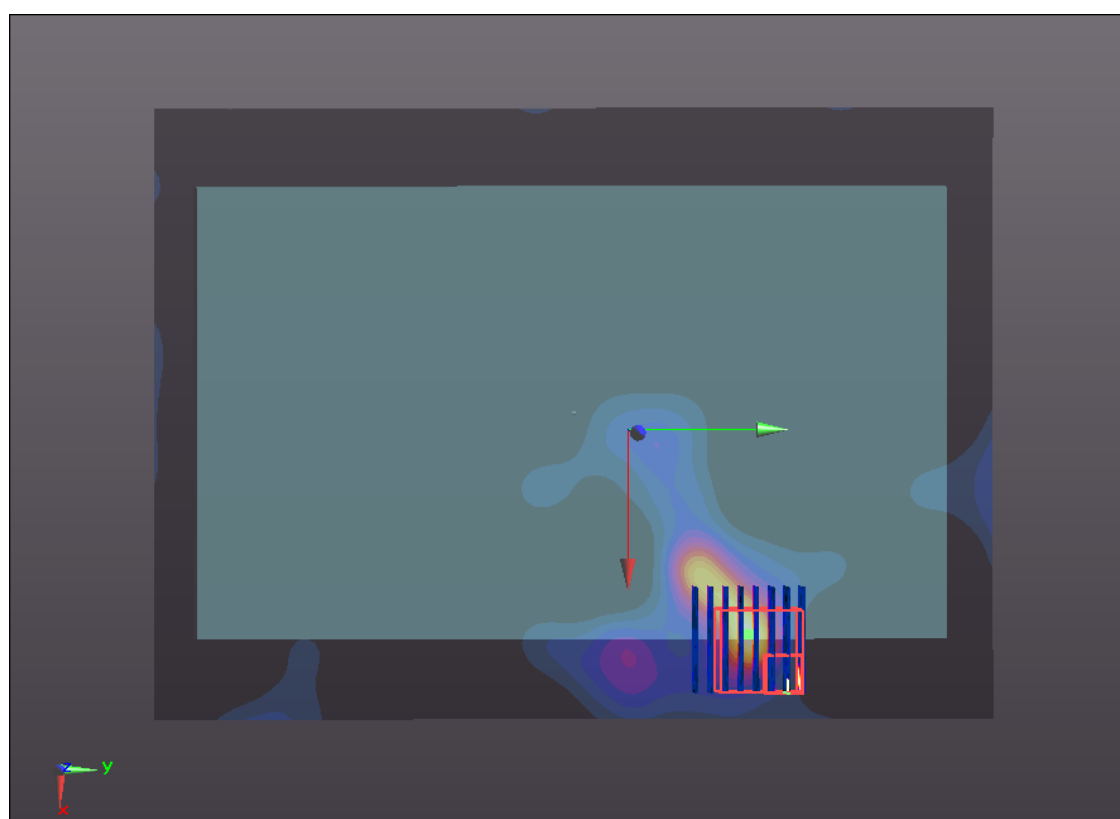
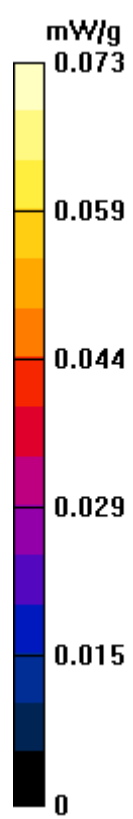
**Ch149/Zoom Scan (8x8x10)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2.5\text{mm}$

Reference Value =  $1.140 \text{ V/m}$ ; Power Drift =  $0.14 \text{ dB}$

Peak SAR (extrapolated) =  $1.470 \text{ W/kg}$

**SAR(1 g) =  $0.00277 \text{ mW/g}$ ; SAR(10 g) =  $0.000129 \text{ mW/g}$**

Maximum value of SAR (measured) =  $1.470 \text{ mW/g}$



**#73 802.11a\_Secondary Portrait\_0cm\_Ch149\_6M\_12**

**DUT: 190101**

Communication System: WIFI; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5745$  MHz;  $\sigma = 6.035$  mho/m;  $\epsilon_r =$

47.138;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(3.74, 3.74, 3.74); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch149/Area Scan (41x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.00896 mW/g

**Ch149/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.680 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.030 W/kg

**SAR(1 g) = 0.00322 mW/g; SAR(10 g) = 0.000993 mW/g**

Maximum value of SAR (measured) = 0.022 mW/g

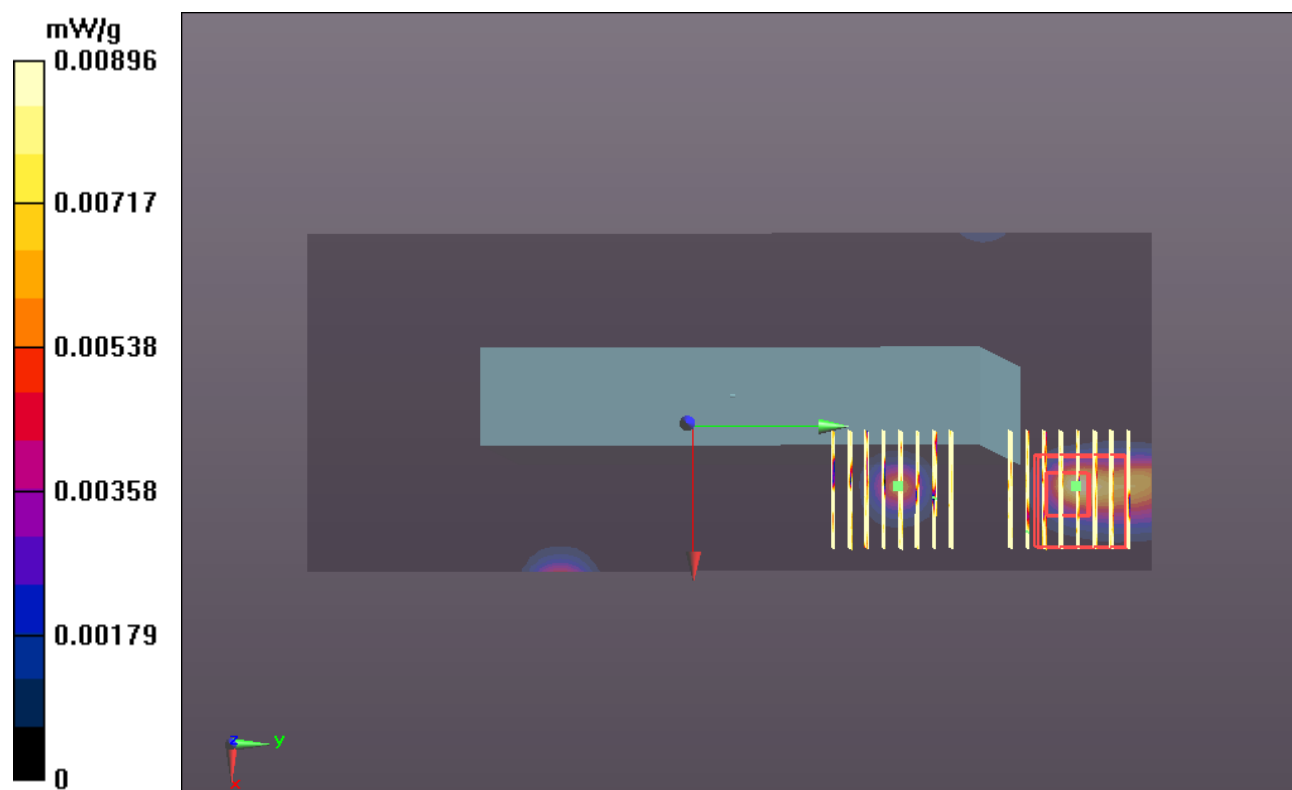
**Ch149/Zoom Scan (8x8x10)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.680 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0 W/kg

**SAR(1 g) = n.a. ; SAR(10 g) = n.a.**

Maximum value of SAR (measured) = 0.067 mW/g



**#74 802.11a\_Primary Landscape\_0cm\_Ch149\_6M\_12\_Earphone**

**DUT: 190101**

Communication System: WIFI; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.035 \text{ mho/m}$ ;  $\epsilon_r = 47.138$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $21.3^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(3.74, 3.74, 3.74); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch149/Area Scan (41x121x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.143 \text{ mW/g}$

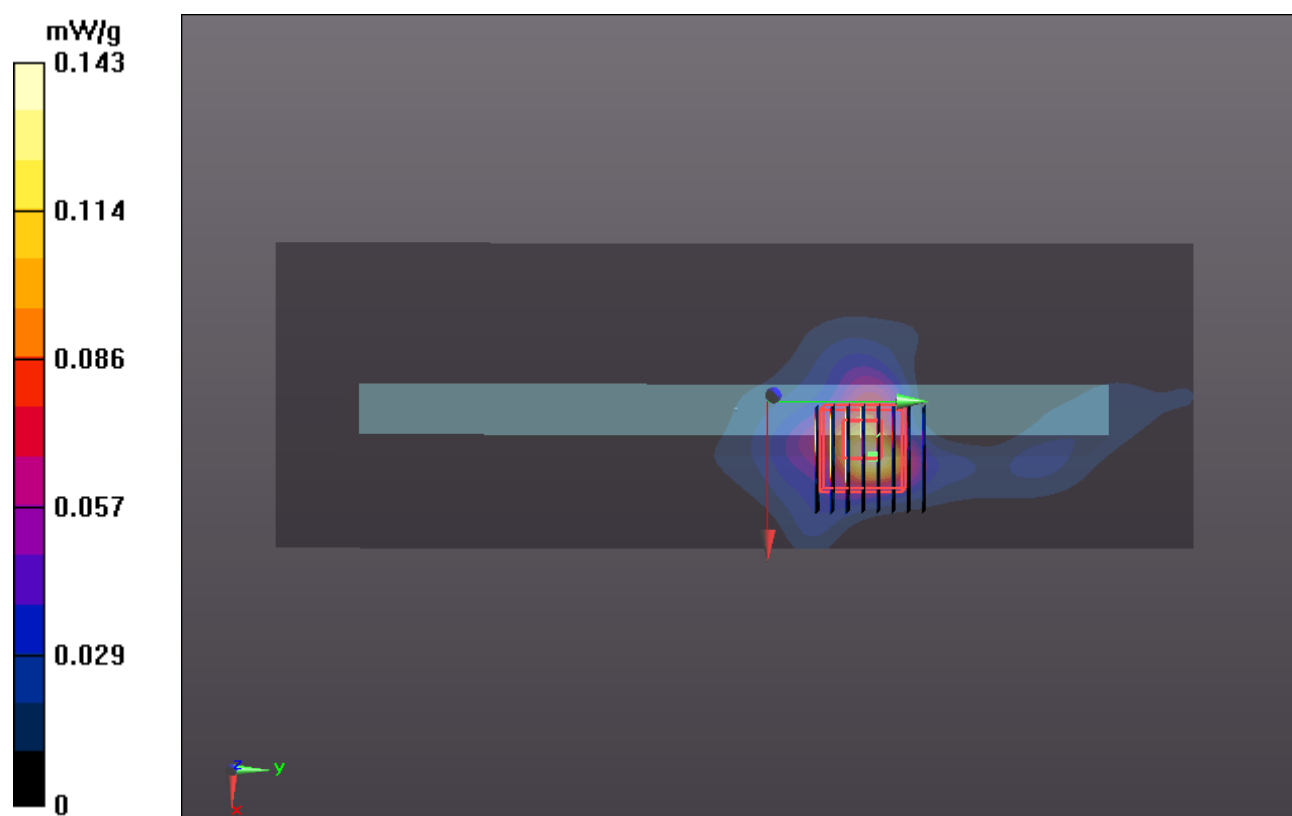
**Ch149/Zoom Scan (8x8x10)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2.5\text{mm}$

Reference Value =  $3.409 \text{ V/m}$ ; Power Drift =  $-0.10 \text{ dB}$

Peak SAR (extrapolated) =  $0.858 \text{ W/kg}$

**SAR(1 g) =  $0.249 \text{ mW/g}$ ; SAR(10 g) =  $0.065 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.615 \text{ mW/g}$



**#74 802.11a\_Primary Landscape\_0cm\_Ch149\_6M\_12\_Earphone\_2D**

**DUT: 190101**

Communication System: WIFI; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL\_5000\_111028 Medium parameters used:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.035 \text{ mho/m}$ ;  $\epsilon_r = 47.138$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(3.74, 3.74, 3.74); Calibrated: 2011-9-2
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch149/Area Scan (41x121x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.143 \text{ mW/g}$

**Ch149/Zoom Scan (8x8x10)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2.5\text{mm}$

Reference Value =  $3.409 \text{ V/m}$ ; Power Drift =  $-0.10 \text{ dB}$

Peak SAR (extrapolated) =  $0.858 \text{ W/kg}$

**SAR(1 g) =  $0.249 \text{ mW/g}$ ; SAR(10 g) =  $0.065 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.615 \text{ mW/g}$

