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**Regulatory Compliance Group**
**IT R&D Center**

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Gyeonggi-do, Korea 443-742

# TEST REPORT ON SAR

**Model Tested:** **GT-N7105**

**FCC ID (Requested):** **A3LGTN7105**

**Job No:** **FJ-216**

**Report No:** **FJ-216-S1**

- Abstract –

This document reports on SAR Tests carried out in accordance with FCC/OET Bulletin 65, Supplement C(July 2001).

**Prepared By**

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## 1. GENERAL INFORMATION

| | |
|---|---|
| Test Dates : | Aug.22, 2012 ~ Aug.27, 2012 |
| Manufacturer : | SAMSUNG ELECTRONICS Co., Ltd. |
| Address : | 416 Maetan3-Dong, Suwon City, Korea |
| Test Standard : | §2.1093; FCC/OET Bulletin 65, Supplement C(July 2001) |
| | Licensed Portable Transmitter Held to Ear (PCE) |
| FCC Classification : | Digital Transmitter System (DTS) |
| | Unlicensed National Information Infrastructure Tx (UNII) |
| Tested for : | FCC/TCB Certification |

## 2. DESCRIPTION OF DEVICE

| | |
|---|---|
| Test Sample : | 850/1900 GSM/GPRS/EDGE and 850 WCDMA/HSPA Mobile Phone with WLAN, Bluetooth and NFC |
| Model Number : | GT-N7105 |
| Serial Number : | Identical prototype (S/N : # FJ-216-B) |
| Tx Freq.Range : | 824.2 ~ 848.8 MHz (GSM850) |
| | 1850.20 ~ 1909.80 MHz (GSM1900) |
| | 826.4 ~ 846.6 MHz (WCDMA850) |
| | 2412 ~ 2462 MHz (2.4 GHz WLAN) |
| | 5180 ~5240 MHz (5.2 GHz WLAN) |
| | 5260 ~ 5320 MHz (5.3 GHz WLAN) |
| | 5500 ~5700 MHz (5.5 GHz WLAN) |
| | 5745 ~5825 MHz (5.8 GHz WLAN) |
| | 2402 ~ 2480 MHz (Bluetooth) |
| | 13.56 MHz (NFC) |
| Antenna Manufacturer : | TYCO |
| | Model No.: GT-N7105 |
| Antenna Dimensions : | 60.57 X 19.61 X 4.9 (mm) |
| Separation distance between Main and Bluetooth antenna : | 87mm |

# 3. DESCRIPTION OF TEST EQUIPMENT

## 3.1 SAR Measurement Setup

### Robotic System

Measurements are performed using the DASY4 (or DASY5) automated dosimetric assessment system. Which is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland and consists of high precision robotics system (Stäubli), robot controller, measurement server, Samsung computer, near-field probe, probe alignment sensor, and the SAM twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Fig. 3.1).

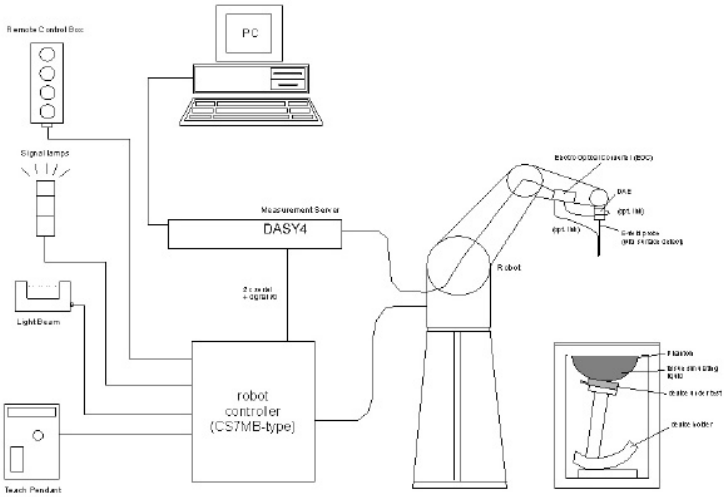



**Figure 3.1 SAR Measurement System Setup**

### System Hardware

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and a remote control is used to drive the robot motors. The PC consists of the Samsung computer with Windows XP system and SAR Measurement Software DASY4 (or DASY5), LCD monitor, mouse and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit that performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the measurement server.

**System Electronics**

The DAE4(or DAE3) 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 and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

## 3.2 E-field Probe

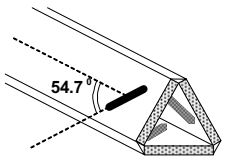
**Figure 3.2 DAE System**

The SAR measurement were conducted with the dosimetric probe ES3DV2, ES3DV3, EX3DV4 and ET3DV6, designed in the classical triangular configuration (see Fig.3.3) and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY4 software reads the reflection during a software approach and looks for the maximum using a 2$^{nd}$ order fitting (see Fig.3.2). The approach is stopped at reaching the maximum.

**Probe Specifications**

Construction: Symmetrical design with triangular core
Interleaved sensors
Built-in shielding against static charges
PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

Calibration: Basic Broad Band Calibration in air: 10-3000 MHz
Conversion Factors (CF) for HSL 900 and HSL 1800




**Δ - BEAM**

**Figure 3.3 Triangular Probe Configuration**

Additional CF for other liquids and frequencies upon request

Frequency 10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)

Directivity **[ES3DV3], [ET3DV6]**

± 0.2 dB in HSL (rotation around probe axis)

± 0.3 dB in tissue material (rotation normal to probe axis)

**[EX3DV4]**

± 0.3 dB in HSL (rotation around probe axis)

± 0.5 dB in tissue material (rotation normal to probe axis)

Dynamic Range **[ES3DV3], [ET3DV6]**

5μW/g to > 100mW/g; Linearity: ± 0.2dB

**[EX3DV4]**

10 μW/g to > 100 mW/g; Linearity: ± 0.2 dB

Dimensions **[ES3DV3], [ES3DV2]**

Overall length: 330 mm (Tip: 20 mm)

Tip diameter: 3.9 mm (Body: 12 mm)

Distance from probe tip to dipole centers: 2.1 mm

[ES3DV3] ,[ES3DV2]

**[EX3DV4]**

Overall length: 330 mm (Tip: 20 mm)

Tip diameter: 2.5 mm (Body: 12 mm)

Typical distance from probe tip to dipole centers: 1 mm

**[ET3DV6]**

Overall length: 330mm

Tip length: 16mm

Body diameter: 12mm

Tip diameter: 6.8mm

Distance from probe tip to dipole centers: 2.7mm

[EX3DV4]

| | |
|---|---|
| Application | **[ES3DV3], [ES3DV2]**<br>General dosimetry up to 5 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones<br><br>**[EX3DV4]**<br>High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields).Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30 %.<br><br>**[ET3DV6]**<br>General dosimetry up to 3 GHz<br>Compliance tests of mobile phones<br>Fast automatic scanning in arbitrary phantoms |
| Optical Surface Detection | **[ET3DV6]**<br>± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces |

[ET3DV6]

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## 3.3 Phantom

### SAM Twin Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid.

Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. (See Figure 3.5)

**Figure3.5 SAM Twin Phantom**

### SAM Twin Phantom Specification

| | |
|---|---|
| Construction | The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-2003, EN 50361:2001 and IEC 62209. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. |
| Shell Thickness | 2 ± 0.2 mm |
| Filling Volume | Approx. 25 liters |
| Dimensions | Height: 810 mm; Length: 1000 mm; Width: 500 mm |

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**Modular Flat Phantom**

The Modular Flat Phantom V5.1 is constructed of a fiberglass shell integrated in a wooden table. Also It consists of three identical flat phantoms (modules) which can be installed and removed separately without emptying the liquid, as well as a wooden support.. It enables the dosimetric evaluation of body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid.

Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. (See Figure 3.6)

**Figure 3.6 Modular Flat Phantom**

**Modular Flat Phantom Specification**

| | |
|---|---|
| Construction | The shell corresponds to the specifications of IEEE 1528-2003. It enables the dosimetric evaluation of body mounted usage above 800 MHz at the flat phantom region. A cover prevents evaporation of the liquid |
| Shell Thickness | 2 ± 0.2 mm |
| Filling Volume | Approx. 10 liters |
| Dimension | Wooden support - Height: 810 mm; Length: 830 mm; Width: 500 mm<br>Each Module - Height:190 mm; Length: 200 mm; width: 300 mm |

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### 3.4 Brain Simulating Mixture Characterization

The brain mixtures consist of a viscous gel using hydroxethylcellullose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bactericide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue.

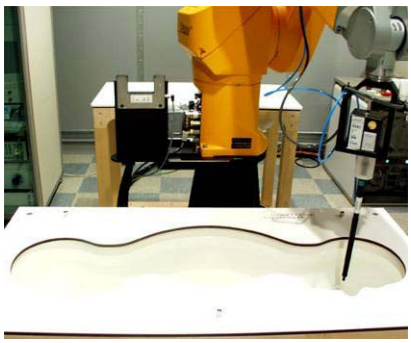

**Figure 3.7 Simulated Tissue**

**Table 3.1 Composition of the Brain Tissue Equivalent Matter**

| INGREDIENTS | 835MHz Brain | 835MHz Muscle | 1900MHz Brain | 1900MHz Muscle | 2450MHz Brain | 2450MHz Muscle |
|---|---|---|---|---|---|---|
| WATER | 40.29% | 50.75% | 55.24% | 70.23% | 62.7% | 73.2% |
| SUGAR | 57.90% | 48.21% | - | - | - | - |
| SALT | 1.38% | 0.94% | 0.24% | 0.21% | - | 0.04% |
| TWEEN20 | - | - | 44.52% | 29.56% | 37.3% | 26.76% |
| BACTERIACIDE | 0.18% | 0.10% | - | - | - | - |
| HEC | 0.25% | - | - | - | - | - |
| Dielectric Constant Target | 41.50 | 55.20 | 40.00 | 53.30 | 39.2 | 52.7 |
| Conductivity Target (S/m) | 0.900 | 0.970 | 1.400 | 1.520 | 1.80 | 1.95 |

**Table 3.2 Simulating Liquids for 5GHz, Manufactured by SPEAG**

| INGREDIENTS | Brain | Muscle |
|---|---|---|
| WATER | 50 - 65% | 60 - 80% |
| Mineral oil | 10 - 30% | - |
| Emulsifiers | 8 - 25% | - |
| Esters, Emulsfiers, Inhibitors | - | 20 - 40 % |
| Sodium salt | 0 - 1.5% | 0 - 1.5% |

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## 3.5 Device Holder for Transmitters

In combination with the Twin SAM Phantom V4.0, the Mounting Device (see Fig. 3.7) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately and repeatedly be positioned according to the EN 50360:2001 and FCC specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

**Figure 3.8 Device Holder**

*Note: A simulating human hand is not used due to the complex anatomical and geometrical structure of the hand that may produced infinite number of configuration. To produce worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

## 3.6 Validation Dipole

The reference dipole should have a return loss better than –20 dB (measured in the setup) at the resonant frequency to reduce the uncertainty in the power measurement.

| | |
|---|---|
| Frequency | 835, 1900, 2450, 5000 MHz |
| Return Loss | < -20 dB at specified validation position |
| Dimensions | D835V2: dipole length: 161 mm; overall height: 330 mm<br>D1900V2: dipole length: 68 mm; overall height: 300 mm<br>D2450V2: dipole length: 51.8 mm; overall height: 300 mm<br>D5000V2: dipole length: 20.6mm; overall height: 300 mm |

Note:

Usage of SAR dipoles calibrated less than 2 years ago but more than 1 year ago were confirmed in maintaining return loss (< -20dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibration in KDB 450824

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## 3.7 Equipment Calibration

### Table 3.2 Test Equipment Calibration

| Type | Calibration Date | Calibration Due Date | Serial No. |
|---|---|---|---|
| SPEAG E-Field Probe ES3DV2 | May.17, 2012 | May.17, 2013 | 3017 |
| SPEAG E-Field Probe EX3DV4 | Feb.21, 2012 | Feb.21, 2013 | 3520 |
| SPEAG DAE4 | Jan.19, 2012 | Jan.19, 2013 | 486 |
| SPEAG Validation Dipole D835V2 | Nov.18, 2011 | Nov.18, 2013 | 4d111 |
| SPEAG Validation Dipole D1900V2 | Jan.26, 2012 | Jan.26, 2014 | 5d023 |
| SPEAG Validation Dipole D2450V2 | Feb.23, 2012 | Feb.23, 2014 | 807 |
| SPEAG Validation Dipole D5GHzV2 | Jul.02, 2012 | Jul.02, 2014 | 1132 |
| Stäubli Robot RX90BL | Not Required | Not Required | F01/5N19A1/A/01 |
| SPEAG SAM Twin Phantom V4.0 | Not Required | Not Required | TP-1141 |
| SPEAG SAM Twin Phantom V4.0 | Not Required | Not Required | TP-1143 |
| Modular Phantom | Not Required | Not Required | MP-1001 |
| E4421B Signal Generator | Oct.12, 2011 | Oct.12, 2012 | MY41000654 |
| BBS3Q7ELU Power Amp | Oct.12, 2011 | Oct.12, 2012 | 1007D/C0035 |
| E4419B Power meter | Oct.12, 2011 | Oct.12, 2012 | GB41293847 |
| E9300B Power sensor | Feb.13, 2012 | Feb.13, 2013 | MY41495533 |
| HP-8753ES Network Analyzer | Apr.16, 2012 | Apr.16, 2013 | US39173712 |
| HP85070C Dielectric Probe Kit | Not Required | Not Required | US99360087 |
| Digital thermo-hygrometer | Feb.10, 2012 | Feb.10, 2013 | 1374 |
| Digital thermo-hygrometer | Feb.10, 2012 | Feb.10, 2013 | 1375 |
| E4419B Power meter | Feb.20, 2012 | Feb.20, 2013 | MY45103291 |
| E9300B Power sensor | Feb.20, 2012 | Feb.20, 2013 | MY41496209 |
| E9300B Power sensor | Feb.20, 2012 | Feb.20, 2013 | MY41496085 |
| DASY4 S/W (ver 4.7) | Not Required | Not Required | - |
| 8560E Spectrum Analyzer | Sep.16, 2011 | Sep.16, 2012 | 3635A02452 |
| 778D Dual Directional Coupler | Dec.02, 2011 | Dec.02, 2012 | 50189 |
| 777D Dual Directional Coupler | Feb.20, 2012 | Feb.20, 2013 | 07523 |
| 772D Dual Directional Coupler | Mar.04, 2012 | Mar.04, 2013 | ZA200100954 |
| Base Station Simulator | Dec.19, 2011 | Dec.19, 2012 | GB46490112 |
| Pre-Amplifier 84498B | Dec.09, 2011 | Dec.09, 2012 | 3008A00691 |
| Spectrum Analyzer | Mar.08,2012 | Mar.08,2013 | MY46187454 |
| Communication tester(E5515C) | Nov.27,2011 | Nov.27,2012 | GB42230535 |
| 11636B | Apr.03,2012 | Apr.03,2013 | 58459 |

NOTE:
The E-field probe was calibrated by SPEAG, by temperature measurement procedure. Dipole Validation measurement is performed by Samsung Lab. before each test. (see § 7.2) The brain/Body simulating material is calibrated by Samsung using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain/Body-equivalent material. (see § 7.1)

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# 4. SAR MEASUREMENT PROCEDURE

The evaluation was performed using the following procedure.

**STEP 1**

The SAR measurement was taken at a selected spatial reference point to monitor power variations during testing. This fixed location point was measured and used as a reference value.

**STEP 2**

The SAR distribution at the exposed side of the head was measured at a distance of 3.9mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 20mm x 20mm. Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

**STEP 3**

Around this point, a volume of 32mm x 32mm x 30mm (fine resolution volume scan, zoom scan) was assessed by measuring 5 x 5 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

The data at the surface was extrapolated, since the center of the dipoles is 2.7mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluated the points between the surface and the probe tip. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

**STEP 4**

The SAR value at the same location as in step 1 was again measured.

(If the value changed by more than 5%, the evaluation is repeated.)

**STEP 5**

For 5GHz testing finer resolution zoom scans were performed as specified by FCC SAR Measurement Requirements for 3 -6 GHz, KDB pub 865664. The 5GHz zoom scan requires a minimum volume of 24mm x 24mm x 20mm and 7 x 7 x 11 points.

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# 5. DESCRIPTION OF TEST POSITION

## 5.1 SAM Phantom Shape

Figure 5.1 shows the front, back and side views of SAM. The point “M” is the reference point for the center of mouth, “LE” is the left ear reference point (ERP), and “RE” is the right ERP. The ERPs are 15 mm posterior to the entrance to ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 5.2.

**Figure 5.1 Front, back and side view of SAM**

The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front) perpendicular to the reference plane and passing through the RE (or LE) is called the Reference Pivoting Line (see Figure 5.3). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines should be marked on the external phantom shell to facilitate handset positioning. Posterior to the N-F line, the thickness of the phantom shell with the shape of an ear is a flat surface 6 mm thick at the ERPs.

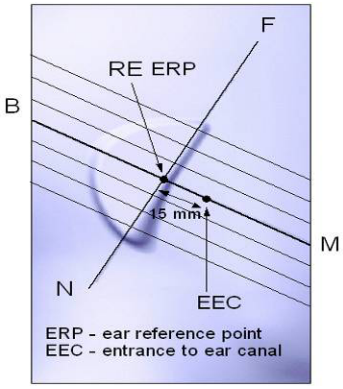


**Figure 5.2 Close up side view**

## 5.2 “cheek” Position

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the “test device reference point” located along the “vertical centerline” on the front of the device aligned to the “ear reference point” (see Fig. 5.4). The “test device reference point” was than located at the same level as the center of the eat reference point. The test device was positioned so that the “vertical centerline” was bisecting the front surface of the handset at it’s tip and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head

phantoms on the ear reference point

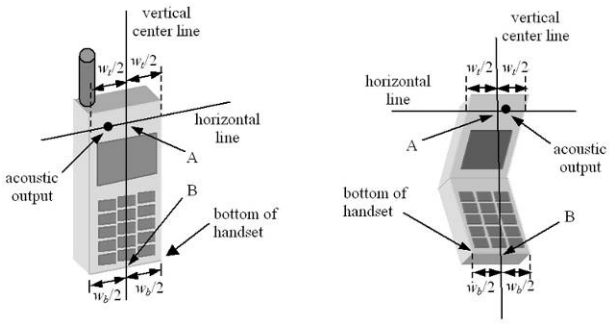


**Figure 5.4 Handset vertical and horizontal reference lines**

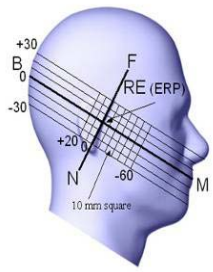


**Figure 5.3 Side view of the phantom showing relevant markings**

**Step 1**

The test device was positioned with the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 5.5), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom

.

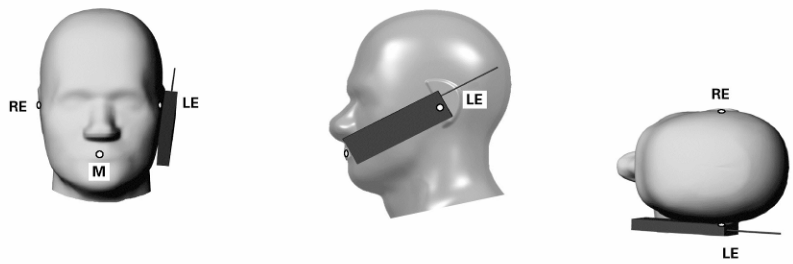


**Figure 5.5 Front, Side and Top View of Cheek/Touch Position**

**Step 2**

The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the ear.

**Step 3**

While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the plane normal to MB-NF including the line MB (reference plane).

**Step 4**

Rotate the handset around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.

**Step 5**

While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the phone contact with the ear, the handset was rotated about the line NF until any point on the handset made contact with a phantom point below the ear (cheek). See Figure 5.2.

## 5.3 "tilted" Position

With the test device aligned in the "cheek" position :

**Step 1**

Repeat steps 1 to 5 of 5.2 to place the device in the "Cheek/Touch Position"

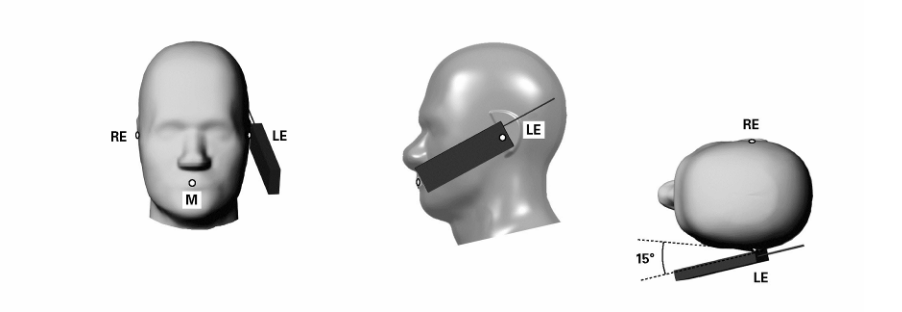


**Figure 5.6 Front, side and Top View of Ear/Tilt 15° Position**

**Step 2**

While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15 degree.

**Step 3**

The phone was then rotated around the horizontal line by 15 degree.

**Step 4**

While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the phone touches the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. The tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head.

## 5.4 Body Holster/Belt Clip Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 5.7). A device with a headset output is tested with a headset connected to the device. Body dielectric parameters are used.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are supplied with the device, the device is tested with each accessory that contains unique metallic component. If multiple accessory share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some Devices intended to be authorized for body-worn use. In this case, a test configuration where a separation distance between the back of the device and the flat phantom is used.

Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessory(ies), Including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

In all cases SAR measurements are performed to investigate the worst-case positioning. Worst-case positioning is then documented and used to perform Body SAR testing.

In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and cautions statements must be included in the user's manual.

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## 5.5 FCC Personal Wireless Router Configurations

### 5.5.1 Personal Wireless Router

Some battery-operated handsets have the capability to transmit and receive internet connectivity through simultaneous transmission of WIFI in conjunction with a separate licensed transmitter. The FCC has provided guidance in KDB Publication 941225 D06 for handsets greater than 9cm x 5cm where SAR test considerations are based on a composite test separation distance of 10mm from the edges, front and back of the device with antennas 2.5cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR test.

### 5.5.2 SAR test Setup for Personal Wireless Router Features

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus connot be evaluated for SAR under actual use conditions. Therefore, SAR must be evaluated for each frequency transmission and mode separately and summed with the WIFI transmitter according to KDB 648474 publication procedures. The “Portable Hotspot: feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

- End of page -

**Table 5-1 Mobile Hotspot Sides for SAR testing**

| Mode | Back | Left | Right | Top | Bottom | Front |
|---|---|---|---|---|---|---|
| GPRS850 | Yes | Yes | No | No | Yes | Yes |
| GPRS1900 | Yes | Yes | No | No | Yes | Yes |
| WCDMA850 | Yes | Yes | No | No | Yes | Yes |
| WLAN | Yes | No | Yes | Yes | No | Yes |

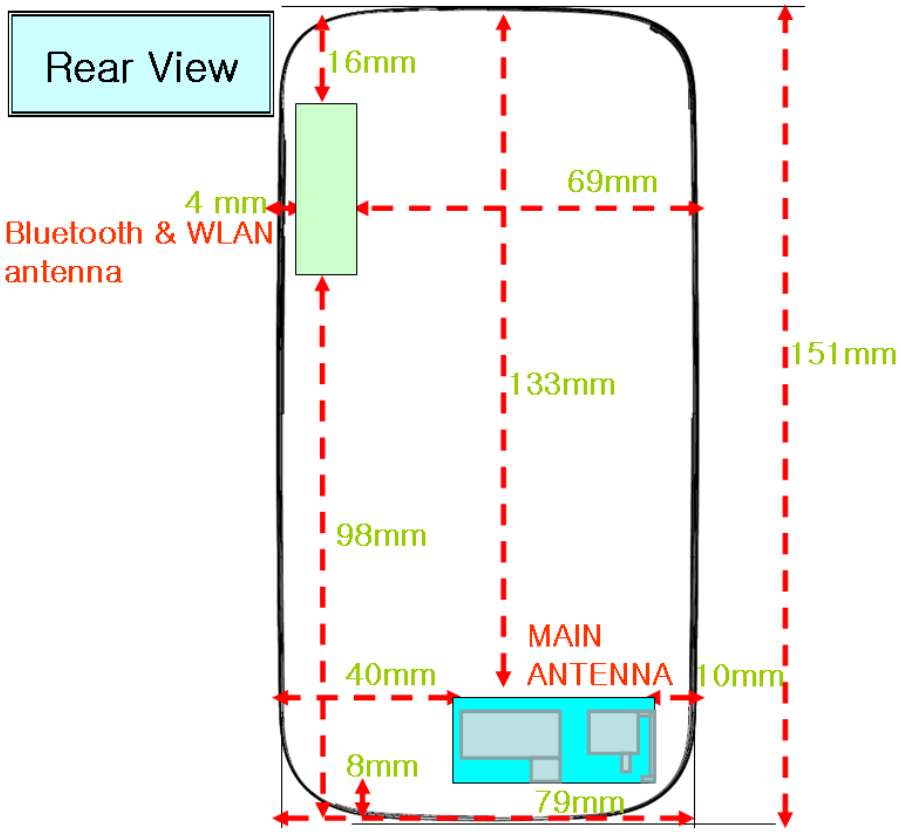


**Figure 5.7 Identification of Sides for SAR testing**

Note : Particular DUT edges were not necessary to be evaluated for Wireless Router SAR if the edges were greater than 2.5cm from the transmitting antenna according to FCC KDB Publication 941225 D06 guidance, page2. The antenna document shows the distances between the transmit antennas and the edges of the device. When the wireless router mode is enabled, all 5 GHz bands are disabled. Therefore 5GHz WIFI is not considered in this section.

- End of page -

## 5.6 Near Fiel Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the battery cover and will be the only battery available from the manufacturer for this model. Therefore all SAR tests were performed with the standard battery and battery cover with the NFC antenna. The device restricts the battery used to the battery model. Please refer to NFC operational descrition.

- End of page -

# 6. MEASUREMENT UNCERTAINTY

## Table 6.1 Uncertainty Budget at 835MHz

| Error Description | Uncertainty Value (±%) | Probability Distribution | Divisor | $c_i$ | Standard uncertainty (±%) | $v_i^2$ or $v_{eff}$ |
|---|---|---|---|---|---|---|
| **Measurement System** | | | | | | |
| Probe Calibration | 11.00 | normal | 2.000 | 1 | 5.50 | ∞ |
| Axial Isotropy | 4.70 | rectangular | 1.732 | 0.7 | 1.90 | ∞ |
| Hemispherical Isotropy | 9.60 | rectangular | 1.732 | 0.7 | 3.88 | ∞ |
| Linearity | 4.70 | rectangular | 1.732 | 1 | 2.71 | ∞ |
| System Detection Limits | 0.25 | rectangular | 1.732 | 1 | 0.14 | ∞ |
| Boundary effects | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| Readout electronics | 0.30 | normal | 1.000 | 1 | 0.30 | ∞ |
| Response time | 0.80 | rectangular | 1.732 | 1 | 0.46 | ∞ |
| RF ambient conditions | 3.00 | rectangular | 1.732 | 1 | 1.73 | ∞ |
| Integration time | 1.73 | rectangular | 1.732 | 1 | 1.00 | ∞ |
| Mechanical constrains of robot | 1.50 | rectangular | 1.732 | 1 | 0.87 | ∞ |
| Probe positioning | 2.90 | rectangular | 1.732 | 1 | 1.67 | ∞ |
| Extrapolation and integration | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| **Test Sample Related** | | | | | | |
| Test Sample positioning | 1.12 | normal | 1.000 | 1 | 1.12 | 14 |
| Device holded uncertainty | 3.44 | normal | 1.000 | 1 | 3.44 | ∞ |
| Power Drift | 5.00 | rectangular | 1.732 | 1 | 2.89 | ∞ |
| **Phantom and Setup** | | | | | | |
| Modular Phantom uncertainty | 5.62 | normal | 1.000 | 1 | 5.62 | 2 |
| Phantom uncertainty | 4.00 | rectangular | 1.732 | 1 | 2.31 | ∞ |
| Liquid conductivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.64 | 1.85 | ∞ |
| Liquid conductivity (measurement error) | 0.38 | normal | 1.000 | 0.64 | 0.24 | ∞ |
| Liquid permittivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.6 | 1.73 | ∞ |
| Liquid permittivity (measurement error) | 5.44 | normal | 1.000 | 0.6 | 3.26 | ∞ |
| **Combined Standard Uncertainty** | | Normal | - | - | **11.84** | **172776** |
| **Extended Standard Uncertainty(K=2.00)** | | | | | **23.69** | **172776** |

## Table 6.2 Uncertainty Budget at 1900MHz

| Error Description | Uncertainty Value (±%) | Probability Distribution | Divisor | $c_i$ | Standard uncertainty (±%) | $v_i^2$ or $v_{eff}$ |
|---|---|---|---|---|---|---|
| **Measurement System** | | | | | | |
| Probe Calibration | 11.00 | normal | 2.000 | 1 | 5.50 | ∞ |
| Axial Isotropy | 4.70 | rectangular | 1.732 | 0.7 | 1.90 | ∞ |
| Hemispherical Isotropy | 9.60 | rectangular | 1.732 | 0.7 | 3.88 | ∞ |
| Linearity | 4.70 | rectangular | 1.732 | 1 | 2.71 | ∞ |
| System Detection Limits | 0.25 | rectangular | 1.732 | 1 | 0.14 | ∞ |
| Boundary effects | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| Readout electronics | 0.30 | normal | 1.000 | 1 | 0.30 | ∞ |
| Response time | 0.80 | rectangular | 1.732 | 1 | 0.46 | ∞ |
| RF ambient conditions | 3.00 | rectangular | 1.732 | 1 | 1.73 | ∞ |
| Integration time | 0.00 | rectangular | 1.732 | 1 | 0.00 | ∞ |
| Mechanical constrains of robot | 1.50 | rectangular | 1.732 | 1 | 0.87 | ∞ |
| Probe positioning | 2.90 | rectangular | 1.732 | 1 | 1.67 | ∞ |
| Extrapolation and integration | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| **Test Sample Related** | | | | | | |
| Test Sample positioning | 1.50 | normal | 1.000 | 1 | 1.50 | 14 |
| Device holded uncertainty | 3.44 | normal | 1.000 | 1 | 3.44 | ∞ |
| Power Drift | 5.00 | rectangular | 1.732 | 1 | 2.89 | ∞ |
| **Phantom and Setup** | | | | | | |
| Modular Phantom uncertainty | 6.02 | normal | 1.000 | 1 | 6.02 | 2 |
| Phantom uncertainty | 4.00 | rectangular | 1.732 | 1 | 2.31 | ∞ |
| Liquid conductivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.64 | 1.85 | ∞ |
| Liquid conductivity (measurement error) | 1.84 | normal | 1.000 | 0.64 | 1.18 | ∞ |
| Liquid permittivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.6 | 1.73 | ∞ |
| Liquid permittivity (measurement error) | 4.54 | normal | 1.000 | 0.6 | 2.73 | ∞ |
| **Combined Standard Uncertainty** | | Normal | - | - | **12.00** | **60176** |
| **Extended Standard Uncertainty(K=2.00)** | | | | | **24.00** | **60176** |

## Table 6.3 Uncertainty Budget at 2450MHz

| Error Description | Uncertainty Value (±%) | Probability Distribution | Divisor | $c_i$ | Standard uncertainty (±%) | $v_i^2$ or $v_{eff}$ |
|---|---|---|---|---|---|---|
| **Measurement System** | | | | | | |
| Probe Calibration | 11.00 | normal | 2.000 | 1 | 5.00 | ∞ |
| Axial Isotropy | 4.70 | rectangular | 1.732 | 0.7 | 1.90 | ∞ |
| Hemispherical Isotropy | 9.60 | rectangular | 1.732 | 0.7 | 3.88 | ∞ |
| Linearity | 4.70 | rectangular | 1.732 | 1 | 2.71 | ∞ |
| System Detection Limits | 0.25 | rectangular | 1.732 | 1 | 0.14 | ∞ |
| Boundary effects | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| Readout electronics | 0.30 | normal | 1.000 | 1 | 0.30 | ∞ |
| Response time | 0.80 | rectangular | 1.732 | 1 | 0.46 | ∞ |
| RF ambient conditions | 3.00 | rectangular | 1.732 | 1 | 1.73 | ∞ |
| Integration time | 0.00 | rectangular | 1.732 | 1 | 0.00 | ∞ |
| Mechanical constrains of robot | 1.50 | rectangular | 1.732 | 1 | 0.87 | ∞ |
| Probe positioning | 2.90 | rectangular | 1.732 | 1 | 1.67 | ∞ |
| Extrapolation and integration | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| **Test Sample Related** | | | | | | |
| Test Sample positioning | 4.22 | normal | 1.000 | 1 | 4.22 | 14 |
| Device holded uncertainty | 3.44 | normal | 1.000 | 1 | 3.44 | ∞ |
| Power Drift | 5.00 | rectangular | 1.732 | 1 | 2.89 | ∞ |
| **Phantom and Setup** | | | | | | |
| Modular Phantom uncertainty | 2.32 | Normal | 1.0001 | 1 | 2.32 | 2 |
| Phantom uncertainty | 4.00 | rectangular | 1.732 | 1 | 2.31 | ∞ |
| Liquid conductivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.64 | 1.85 | ∞ |
| Liquid conductivity (measurement error) | 2.04 | normal | 1.000 | 0.64 | 1.30 | ∞ |
| Liquid permittivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.6 | 1.73 | ∞ |
| Liquid permittivity (measurement error) | 4.27 | normal | 1.000 | 0.6 | 2.56 | ∞ |
| **Combined Standard Uncertainty** | | Normal | - | - | **11.32** | **728** |
| **Extended Standard Uncertainty(K=2.00)** | | | | | **22.64** | **728** |

## Table 6.4 Uncertainty Budget at 5GHz

| Error Description | Uncertainty Value (±%) | Probability Distribution | Divisor | $c_i$ | Standard uncertainty (±%) | $v_i^2$ or $v_{eff}$ |
|---|---|---|---|---|---|---|
| **Measurement System** | | | | | | |
| Probe Calibration | 13.1 | normal | 2.000 | 1 | 6.55 | ∞ |
| Axial Isotropy | 4.70 | rectangular | 1.732 | 0.7 | 1.90 | ∞ |
| Hemispherical Isotropy | 9.60 | rectangular | 1.732 | 0.7 | 3.88 | ∞ |
| Linearity | 4.70 | rectangular | 1.732 | 1 | 2.71 | ∞ |
| System Detection Limits | 0.25 | rectangular | 1.732 | 1 | 0.14 | ∞ |
| Boundary effects | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| Readout electronics | 0.30 | normal | 1.000 | 1 | 0.30 | ∞ |
| Response time | 0.80 | rectangular | 1.732 | 1 | 0.46 | ∞ |
| RF ambient conditions | 3.00 | rectangular | 1.732 | 1 | 1.73 | ∞ |
| Integration time | 0.00 | rectangular | 1.732 | 1 | 0.00 | ∞ |
| Mechanical constrains of robot | 1.50 | rectangular | 1.732 | 1 | 0.87 | ∞ |
| Probe positioning | 2.90 | rectangular | 1.732 | 1 | 1.67 | ∞ |
| Extrapolation and integration | 1.00 | rectangular | 1.732 | 1 | 0.58 | ∞ |
| **Test Sample Related** | | | | | | |
| Test Sample positioning | 4.22 | normal | 1.000 | 1 | 4.22 | 14 |
| Device holded uncertainty | 3.44 | normal | 1.000 | 1 | 3.44 | ∞ |
| Power Drift | 5.00 | rectangular | 1.732 | 1 | 2.89 | ∞ |
| **Phantom and Setup** | | | | | | |
| Modular Phantom uncertainty | 2.32 | Normal | 1.0001 | 1 | 2.32 | 2 |
| Phantom uncertainty | 4.00 | rectangular | 1.732 | 1 | 2.31 | ∞ |
| Liquid conductivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.64 | 1.85 | ∞ |
| Liquid conductivity (measurement error) | 1.12 | normal | 1.000 | 0.64 | 1.30 | ∞ |
| Liquid permittivity (deviation from target) | 5.00 | rectangular | 1.732 | 0.6 | 1.73 | ∞ |
| Liquid permittivity (measurement error) | 3.06 | normal | 1.000 | 0.6 | 2.56 | ∞ |
| **Combined Standard Uncertainty** | | Normal | - | - | **11.68** | **822** |
| **Extended Standard Uncertainty(K=2.00)** | | | | | **23.36** | **822** |

# 7. SYSTEM VERIFICATION

## 7.1 Tissue Verification

**Table 7.1 MEASURED TISSUE PARAMETERS**

| | 835MHz Head | | 835MHz Body | | 1900MHz Head | | 1900MHz Body | | 2450MHz Head | | 2450MHz Body | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Target | Measured | Target | Measured | Target | Measured | Target | Measured | Target | Measured | Target | Measured |
| Date | Aug.22,2012 | | Aug.22,2012 | | Aug.24,2012 | | Aug.24,2012 | | Aug.27,2012 | | Aug.27,2012 | |
| Liquid Temperature(°C) | 22.5 | | 22.5 | | 22.4 | | 22.2 | | 22.6 | | 22.7 | |
| Dielectric Constant: å' | 41.5 | 40.9 | 55.2 | 55 | 40 | 39.4 | 53.3 | 52 | 39.2 | 38.8 | 52.7 | 51.4 |
| Conductivity: | 0.9 | 0.90 | 0.97 | 0.99 | 1.4 | 1.40 | 1.52 | 1.49 | 1.8 | 1.85 | 1.95 | 1.93 |
| Tissue Batch Number | 835DF1001X | | 835B1001V | | 1900F1002F | | 1900B3001F | | 2450MF1001M | | 2450B1001X | |

| | 5200MHz Head | | 5200MHz Body | | 5500MHz Head | | 5500MHz Body | | 5800MHz Head | | 5800MHz Body | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Target | Measured | Target | Measured | Target | Measured | Target | Measured | Target | Measured | Target | Measured |
| Date | Aug.24,2012 | | Aug.27,2012 | | Aug.24,2012 | | Aug.27,2012 | | Aug.24,2012 | | Aug.27,2012 | |
| Liquid Temperature(°C) | 22.3 | | 22.2 | | 22.3 | | 22.2 | | 22.3 | | 22.2 | |
| Dielectric Constant: å' | 35.99 | 34.7 | 49.02 | 47.9 | 35.65 | 34.9 | 48.61 | 47.2 | 35.4 | 34.5 | 48.2 | 46.1 |
| Conductivity: | 4.65 | 4.85 | 5.29 | 5.41 | 4.96 | 5.2 | 5.64 | 5.91 | 5.27 | 5.47 | 6 | 6.17 |
| Tissue Batch Number | 5000MF1001A | | 5000B1001A | | 5000MF1001A | | 5000B1001A | | 5000MF1001A | | 5000B1001A | |

The measured value must be within ±5% of the target value.

- End of page –

## 7.2 Test System Validation

Prior to assessment, the system is verified to the ±10% of the specification at 835MHz, 1900MHz, 2450MHz and 5GHz by using the system validation kit(s). (see Appendix D, Graphic Plot Attached)

**Table 7.2 System Validation Results**

| System Validation Kit | Tissue | Targeted $SAR_{1g}$ (mW/g) | Normalized $SAR_{1g}$ (mW/g) | Measured $SAR_{1g}$ (mW/g) | Deviation (%) | Date | Liquid Temperature(°C) | Ambient Temperature(°C) | Input Power (mW) |
|---|---|---|---|---|---|---|---|---|---|
| 4d111 | 835MHz Brain | 9.43 | 9.73 | 0.973 | 3.18 | Aug.22, 2012 | 22.5 | 22.8 | 100 |
| 4d111 | 835MHz Body | 9.54 | 9.51 | 0.951 | -0.31 | Aug.22, 2012 | 22.5 | 22.9 | 100 |
| 5d023 | 1900MHz Brain | 39.0 | 40.3 | 4.03 | 3.33 | Aug.24, 2012 | 22.4 | 22.7 | 100 |
| 5d023 | 1900MHz Body | 38.8 | 38.0 | 3.80 | -2.06 | Aug.24, 2012 | 22.2 | 22.8 | 100 |
| 807 | 2450MHz Brain | 53.5 | 52.8 | 5.28 | -1.31 | Aug.27, 2012 | 22.6 | 23.0 | 100 |
| 807 | 2450MHz Body | 50.3 | 50.6 | 5.06 | 0.60 | Aug.27, 2012 | 22.7 | 23.0 | 100 |
| 1132 | 5200MHz Brain | 81.5 | 82.9 | 8.29 | 1.72 | Aug.24, 2012 | 22.3 | 22.4 | 100 |
| 1132 | 5200MHz Body | 75.3 | 72.8 | 7.28 | -3.32 | Aug.27, 2012 | 22.2 | 22.5 | 100 |
| 1132 | 5500MHz Brain | 85.2 | 82.8 | 8.28 | -2.82 | Aug.24, 2012 | 22.3 | 22.4 | 100 |
| 1132 | 5500MHz Body | 78.9 | 81.1 | 8.11 | 2.79 | Aug.27, 2012 | 22.2 | 22.5 | 100 |
| 1132 | 5800MHz Brain | 80.2 | 87.5 | 8.75 | 9.10 | Aug.24, 2012 | 22.3 | 22.4 | 100 |
| 1132 | 5800MHz Body | 74.5 | 76.3 | 7.63 | 2.42 | Aug.27, 2012 | 22.2 | 22.5 | 100 |

*Validation was measured with input power 100 mW and normalized to 1W.

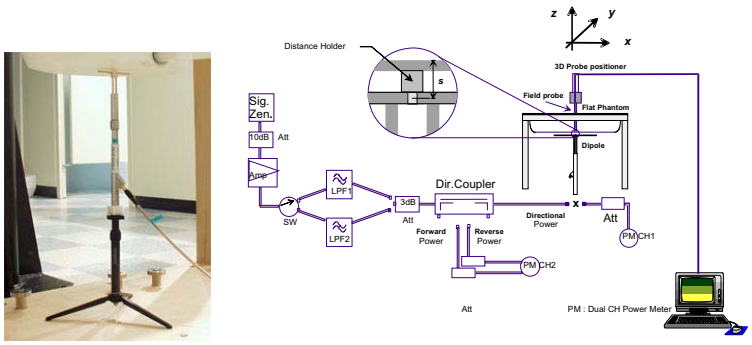


**Figure 7.1 Dipole Validation Test Setup**

# 8. SAR MEASUREMENT RESULTS

**Procedures Used To Establish Test Signal**

The handset was placed into simulated call mode using manufacturers test codes. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR. When test modes are not available or inappropriate for testing a handset, the actual transmission is activated through a base station simulator or similar equipment. See data pages for actual procedure used in measurement.

**SAR Measurement Conditions for WCDMA**

These procedures were followed according to FCC "SAR Measurement Procedures for 3G Devices"v02, October 2007.

**Output Power Verification**

Maximum output power is verified on the High, Middle and Low channels according to the ge neral descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR wit h TPC (transmit power control) set to all "1s". Results for all applicable physical channel co nfigurations (DPCCH, DPDCHn and spreading codes) should be tabulated in the test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations should be clearly identified.

**Head SAR Measurements**

SAR for head exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all "1s". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than ¼ dB higher than that measured in 12.2kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 AMR with a 3.4kbps SRB (signaling radio bearer) using the exposure configuration that results in the highest SAR for that RF channel in 12.2 RMC.

**Body SAR Measurements**

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits configured to all "1s". SAR for other spreading codes and multiple DPDCHn, when supported by the DUT, are not required when the maximum average outputs of each RF channel, for each spreading code and DPDCHn configuration, are less than ¼ dB higher than those measured in

12.2 RMC. Otherwise, SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure the additional DPDCHn for the DUT using FTM(Factory Test Mode) with parameters similar to those used in 384 kbps and 768 kbps RMC.

**Table 8.1 Max. Power Output Table for GT-N7105**

| Operating Band | Channel | HSPA Inactive | | HSPA Active |
|---|---|---|---|---|
| | | 12.2 kbps RMC | 12.2 kbps AMR | 12.2 kbps RMC |
| WCDMA 850 (dBm) | 4132 | 22.38 | 22.25 | 21.15 |
| | 4183 | 22.56 | 22.33 | 21.28 |
| | 4233 | 22.73 | 22.68 | 21.55 |

**Table 8.2 HSPA Max. Power Output Table for GT-N7105**

| | HSDPA | 4132 | 4183 | 4233 | MPR |
|---|---|---|---|---|---|
| WCDMA 850 (dBm) | Subtest1 | 21.15 | 21.28 | 21.55 | 0.0 |
| | Subtest2 | 21.02 | 21.19 | 21.45 | 0.0 |
| | Subtest3 | 20.56 | 20.65 | 20.80 | 0.5 |
| | Subtest4 | 20.42 | 20.61 | 20.87 | 0.5 |
| | HSUPA | 4132 | 4183 | 4233 | MPR |
| | Subtest1 | 20.53 | 20.66 | 20.64 | 0 |
| | Subtest2 | 19.95 | 20.02 | 20.15 | 1 |
| | Subtest3 | 19.77 | 19.79 | 19.56 | 2 |
| | Subtest4 | 20.59 | 20.57 | 20.88 | 1 |
| | Subtest5 | 20.94 | 20.96 | 20.84 | 0 |

- End of page –

**Device Test Conditions**

The handset is battery operated. Each SAR measurement was taken with a fully charged battery. In order to verify that the device was tested at full power, conducted output power measurements were performed before and after each SAR measurement to confirm the output power. If a conducted power deviation of more than 5% occurred, the test was repeated. And all Tx(1~4Tx) conducted power were also investigated for Body-Worn SAR Measurement

**Table 8.3 Conducted Power Table for GT-N7105**

| Band | Channel | Voice | GPRS/EDGE (GMSK) | | | | EDGE (8-PSK) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GSM(dBm) CS(1Tx) | 1Tx (dBm) | 2Tx (dBm) | 3Tx (dBm) | 4Tx (dBm) | 1Tx (dBm) | 2Tx (dBm) | 3Tx (dBm) | 4Tx (dBm) |
| 850 | 128 | 33.15 | 33.13 | 32.97 | 30.85 | 27.55 | 26.92 | 26.40 | 24.90 | 22.56 |
| | 190 | 33.02 | 32.96 | 32.77 | 30.94 | 27.52 | 26.98 | 26.84 | 25.12 | 22.72 |
| | 251 | 32.71 | 32.68 | 32.48 | 30.71 | 27.60 | 26.82 | 26.60 | 25.06 | 22.30 |
| 1900 | 512 | 29.54 | 29.34 | 29.28 | 27.61 | 24.36 | 25.52 | 25.13 | 23.72 | 21.38 |
| | 661 | 29.37 | 29.32 | 29.29 | 27.33 | 24.25 | 24.64 | 24.90 | 23.61 | 21.05 |
| | 810 | 29.53 | 29.38 | 29.36 | 27.64 | 24.30 | 24.90 | 25.24 | 23.72 | 20.83 |

**Table 8.4 Calculated Frame-Averaged Output Power Table for GT-N7105**

| Band | Channel | Voice | GPRS(GMSK) | | | | EDGE (8-PSK) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GSM(dBm) CS(1Tx) | 1Tx (dBm) | 2Tx (dBm) | 3Tx (dBm) | 4Tx (dBm) | 1Tx (dBm) | 2Tx (dBm) | 3Tx (dBm) | 4Tx (dBm) |
| 850 | 128 | 24.12 | 24.10 | 26.95 | 26.59 | 24.54 | 17.89 | 20.38 | 20.64 | 19.55 |
| | 190 | 23.99 | 23.93 | 26.75 | 26.68 | 24.51 | 17.95 | 20.82 | 20.86 | 19.71 |
| | 251 | 23.68 | 23.65 | 26.46 | 26.45 | 24.59 | 17.79 | 20.58 | 20.80 | 19.29 |
| 1900 | 512 | 20.51 | 20.31 | 23.26 | 23.35 | 21.35 | 16.49 | 19.11 | 19.46 | 18.37 |
| | 661 | 20.34 | 20.29 | 23.27 | 23.07 | 21.24 | 15.61 | 18.88 | 19.35 | 18.04 |
| | 810 | 20.50 | 20.35 | 23.34 | 23.38 | 21.29 | 15.87 | 19.22 | 19.46 | 17.82 |

**Note:**

1. Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
2. CS1 coding scheme was used in GPRS output power measurements and SAR Testing, as a condition where GMSK modulation was ensured. It was investigated that CS1 - CS4 settings do not have any impact on the output levels in the GPRS modes.
3. MCS7 coding scheme was used to measure the output power measurements and SAR Testing, as a condition where GMSK modulation was ensured. Investigation has shown that CS1- CS4 settings do not have any impact on the output levels in the GPRS modes.
4. The conducted powers are reported and measured by base station simulator E5515C when the equipment was calibrated.

**GSM Class : B**

**GPRS Multislot Class : 12 (max 4 Tx Uplink slots)**

**EDGE Multislot Class : 12 (max 4 Tx Uplink slots)**

**DTM Multislot Class : N/A**

- End of page -

**Table 8.5 802.11b Average RF Power**

| 802.11b Mode | | Rated | Measured Power |
|---|---|---|---|
| Frequncy[MHz] | Channel No. | [Mbps] | (dBm) |
| 2412 | 1 | 1 | 15.67 |
| | | 2 | 15.60 |
| | | 5.5 | 15.47 |
| | | 11 | 15.14 |
| 2437 | 6 | 1 | **15.72** |
| | | 2 | 15.52 |
| | | 5.5 | 15.41 |
| | | 11 | 15.30 |
| 2462 | 11 | 1 | 14.58 |
| | | 2 | 14.49 |
| | | 5.5 | 14.29 |
| | | 11 | 14.19 |

- End of page -

**Table 8.6 802.11g Average RF Power**

| 802.11g Mode | | Rated | Measured Power |
|---|---|---|---|
| Frequncy[MHz] | Channel No. | [Mbps] | (dBm) |
| 2412 | 1 | 6 | 13.42 |
| | | 9 | 13.35 |
| | | 12 | 13.10 |
| | | 18 | 12.92 |
| | | 24 | 12.58 |
| | | 36 | 12.21 |
| | | 48 | 11.94 |
| | | 54 | 11.81 |
| 2437 | 6 | 6 | 13.51 |
| | | 9 | 13.49 |
| | | 12 | 13.27 |
| | | 18 | 13.24 |
| | | 24 | 13.10 |
| | | 36 | 12.64 |
| | | 48 | 12.37 |
| | | 54 | 11.84 |
| 2462 | 11 | 6 | 12.49 |
| | | 9 | 12.36 |
| | | 12 | 12.23 |
| | | 18 | 11.98 |
| | | 24 | 11.73 |
| | | 36 | 11.29 |
| | | 48 | 11.04 |
| | | 54 | 10.81 |

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**Table 8.7 802.11n Average RF Power**

| 802.11n_HT20 Mode | | Rated | Measured Power |
|---|---|---|---|
| Frequncy[MHz] | Channel No. | [Mbps] | (dBm) |
| 2412 | 1 | MCS0 | 12.49 |
| | | MCS1 | 12.26 |
| | | MCS2 | 12.00 |
| | | MCS3 | 11.68 |
| | | MCS4 | 11.42 |
| | | MCS5 | 11.36 |
| | | MCS6 | 11.15 |
| | | MCS7 | 10.67 |
| 2437 | 6 | MCS0 | 12.44 |
| | | MCS1 | 12.28 |
| | | MCS2 | 12.17 |
| | | MCS3 | 12.10 |
| | | MCS4 | 11.82 |
| | | MCS5 | 11.61 |
| | | MCS6 | 11.23 |
| | | MCS7 | 10.73 |
| 2462 | 11 | MCS0 | 11.51 |
| | | MCS1 | 11.19 |
| | | MCS2 | 11.00 |
| | | MCS3 | 10.68 |
| | | MCS4 | 10.38 |
| | | MCS5 | 9.98 |
| | | MCS6 | 9.93 |
| | | MCS7 | 9.71 |

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## Table 8.8 802.11a Average RF Power

| 802.11a Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11a Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11a Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) |
|---|---|---|---|---|---|---|---|---|
| 5180 | 6 | 9.78 | 5520 | 6 | 10.14 | 5700 | 6 | **10.68** |
| | 9 | 9.52 | | 9 | 10.02 | | 9 | 10.42 |
| | 12 | 9.36 | | 12 | 9.84 | | 12 | 10.33 |
| | 18 | 9.15 | | 18 | 9.46 | | 18 | 10.12 |
| | 24 | 9.06 | | 24 | 9.15 | | 24 | 9.95 |
| | 36 | 8.78 | | 36 | 8.94 | | 36 | 9.71 |
| | 48 | 8.52 | | 48 | 8.69 | | 48 | 9.38 |
| | 54 | 8.25 | | 54 | 8.57 | | 54 | 9.22 |
| 5200 | 6 | **10.31** | 5540 | 6 | 10.05 | 5745 | 6 | 10.72 |
| | 9 | 10.11 | | 9 | 9.85 | | 9 | 10.58 |
| | 12 | 10.05 | | 12 | 9.64 | | 12 | 10.24 |
| | 18 | 9.68 | | 18 | 9.43 | | 18 | 10.06 |
| | 24 | 9.24 | | 24 | 9.25 | | 24 | 9.85 |
| | 36 | 8.98 | | 36 | 9.05 | | 36 | 9.64 |
| | 48 | 8.85 | | 48 | 8.74 | | 48 | 9.46 |
| | 54 | 8.74 | | 54 | 8.55 | | 54 | 9.21 |
| 5220 | 6 | 10.15 | 5560 | 6 | 10.44 | 5765 | 6 | 10.67 |
| | 9 | 10.02 | | 9 | 10.13 | | 9 | 10.42 |
| | 12 | 9.84 | | 12 | 9.98 | | 12 | 10.31 |
| | 18 | 9.56 | | 18 | 9.74 | | 18 | 10.05 |
| | 24 | 9.32 | | 24 | 9.55 | | 24 | 9.84 |
| | 36 | 9.05 | | 36 | 9.38 | | 36 | 9.61 |
| | 48 | 8.74 | | 48 | 9.12 | | 48 | 9.37 |
| | 54 | 8.51 | | 54 | 8.95 | | 54 | 9.18 |
| 5240 | 6 | 9.79 | 5580 | 6 | 10.52 | 5785 | 6 | 10.86 |
| | 9 | 9.32 | | 9 | 10.45 | | 9 | 10.64 |
| | 12 | 9.18 | | 12 | 10.28 | | 12 | 10.56 |
| | 18 | 9.12 | | 18 | 10.05 | | 18 | 10.31 |
| | 24 | 8.85 | | 24 | 9.87 | | 24 | 10.11 |
| | 36 | 8.64 | | 36 | 9.65 | | 36 | 9.84 |
| | 48 | 8.48 | | 48 | 9.35 | | 48 | 9.52 |
| | 54 | 8.25 | | 54 | 9.04 | | 54 | 9.38 |
| 5260 | 6 | 10.12 | 5600 | 6 | N/A | 5805 | 6 | **10.92** |
| | 9 | 10.02 | | 9 | N/A | | 9 | 10.82 |
| | 12 | 9.85 | | 12 | N/A | | 12 | 10.34 |
| | 18 | 9.45 | | 18 | N/A | | 18 | 10.11 |
| | 24 | 9.32 | | 24 | N/A | | 24 | 10.02 |
| | 36 | 9.05 | | 36 | N/A | | 36 | 9.85 |
| | 48 | 8.77 | | 48 | N/A | | 48 | 9.69 |
| | 54 | 8.54 | | 54 | N/A | | 54 | 9.46 |
| 5280 | 6 | **10.33** | 5620 | 6 | N/A | 5825 | 6 | 10.65 |
| | 9 | 10.16 | | 9 | N/A | | 9 | 10.44 |
| | 12 | 9.97 | | 12 | N/A | | 12 | 10.31 |
| | 18 | 9.74 | | 18 | N/A | | 18 | 10.18 |
| | 24 | 9.35 | | 24 | N/A | | 24 | 9.98 |
| | 36 | 9.17 | | 36 | N/A | | 36 | 9.72 |
| | 48 | 8.94 | | 48 | N/A | | 48 | 9.38 |
| | 54 | 8.81 | | 54 | N/A | | 54 | 9.23 |
| 5300 | 6 | 10.05 | 5640 | 6 | N/A | | | |
| | 9 | 9.84 | | 9 | N/A | | | |
| | 12 | 9.64 | | 12 | N/A | | | |
| | 18 | 9.82 | | 18 | N/A | | | |
| | 24 | 9.33 | | 24 | N/A | | | |
| | 36 | 8.94 | | 36 | N/A | | | |
| | 48 | 8.75 | | 48 | N/A | | | |
| | 54 | 8.46 | | 54 | N/A | | | |
| 5320 | 6 | 9.95 | 5660 | 6 | 10.67 | | | |
| | 9 | 9.67 | | 9 | 10.42 | | | |
| | 12 | 9.77 | | 12 | 10.31 | | | |
| | 18 | 9.32 | | 18 | 10.02 | | | |
| | 24 | 9.12 | | 24 | 9.85 | | | |
| | 36 | 8.76 | | 36 | 9.48 | | | |
| | 48 | 8.45 | | 48 | 9.24 | | | |
| | 54 | 8.31 | | 54 | 9.17 | | | |
| 5500 | 6 | 10.36 | 5680 | 6 | 10.39 | | | |
| | 9 | 10.12 | | 9 | 10.13 | | | |
| | 12 | 9.87 | | 12 | 10.02 | | | |
| | 18 | 9.48 | | 18 | 9.87 | | | |
| | 24 | 9.32 | | 24 | 9.68 | | | |
| | 36 | 9.15 | | 36 | 9.52 | | | |
| | 48 | 8.94 | | 48 | 9.29 | | | |
| | 54 | 8.77 | | 54 | 9.02 | | | |

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## Table 8.9 802.11n_HT20 Average RF Power

| 802.11n_HT20 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11n_HT20 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11n_HT20 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) |
|---|---|---|---|---|---|---|---|---|
| 5180 | MCS0 | 9.72 | 5520 | MCS0 | 9.93 | 5700 | MCS0 | 10.55 |
| | MCS1 | 9.58 | | MCS1 | 9.75 | | MCS1 | 10.32 |
| | MCS2 | 9.42 | | MCS2 | 9.42 | | MCS2 | 10.19 |
| | MCS3 | 9.13 | | MCS3 | 9.13 | | MCS3 | 9.84 |
| | MCS4 | 8.95 | | MCS4 | 9.05 | | MCS4 | 9.67 |
| | MCS5 | 8.75 | | MCS5 | 8.82 | | MCS5 | 9.32 |
| | MCS6 | 8.36 | | MCS6 | 8.64 | | MCS6 | 9.05 |
| | MCS7 | 8.07 | | MCS7 | 8.40 | | MCS7 | 8.86 |
| 5200 | MCS0 | 10.11 | 5540 | MCS0 | 9.98 | 5745 | MCS0 | 10.55 |
| | MCS1 | 10.02 | | MCS1 | 9.61 | | MCS1 | 10.31 |
| | MCS2 | 9.82 | | MCS2 | 9.24 | | MCS2 | 10.17 |
| | MCS3 | 9.45 | | MCS3 | 9.05 | | MCS3 | 9.95 |
| | MCS4 | 9.32 | | MCS4 | 8.82 | | MCS4 | 9.67 |
| | MCS5 | 9.13 | | MCS5 | 8.64 | | MCS5 | 9.48 |
| | MCS6 | 8.85 | | MCS6 | 8.49 | | MCS6 | 9.13 |
| | MCS7 | 8.58 | | MCS7 | 8.35 | | MCS7 | 9.32 |
| 5220 | MCS0 | 9.94 | 5560 | MCS0 | 10.24 | 5765 | MCS0 | 10.52 |
| | MCS1 | 9.75 | | MCS1 | 10.02 | | MCS1 | 10.33 |
| | MCS2 | 9.32 | | MCS2 | 9.84 | | MCS2 | 10.72 |
| | MCS3 | 9.16 | | MCS3 | 9.61 | | MCS3 | 10.62 |
| | MCS4 | 8.94 | | MCS4 | 9.24 | | MCS4 | 9.93 |
| | MCS5 | 8.82 | | MCS5 | 8.98 | | MCS5 | 9.64 |
| | MCS6 | 8.65 | | MCS6 | 8.81 | | MCS6 | 9.62 |
| | MCS7 | 8.34 | | MCS7 | 8.78 | | MCS7 | 9.58 |
| 5240 | MCS0 | 9.72 | 5580 | MCS0 | 10.46 | 5785 | MCS0 | 10.77 |
| | MCS1 | 9.46 | | MCS1 | 10.24 | | MCS1 | 10.72 |
| | MCS2 | 9.32 | | MCS2 | 10.07 | | MCS2 | 10.69 |
| | MCS3 | 9.13 | | MCS3 | 9.82 | | MCS3 | 10.61 |
| | MCS4 | 8.95 | | MCS4 | 9.45 | | MCS4 | 10.28 |
| | MCS5 | 8.67 | | MCS5 | 9.32 | | MCS5 | 9.94 |
| | MCS6 | 8.42 | | MCS6 | 9.05 | | MCS6 | 9.79 |
| | MCS7 | 8.11 | | MCS7 | 8.87 | | MCS7 | 9.45 |
| 5260 | MCS0 | 9.97 | 5600 | MCS0 | N/A | 5805 | MCS0 | 10.84 |
| | MCS1 | 9.76 | | MCS1 | N/A | | MCS1 | 10.87 |
| | MCS2 | 9.41 | | MCS2 | N/A | | MCS2 | 10.55 |
| | MCS3 | 9.24 | | MCS3 | N/A | | MCS3 | 10.83 |
| | MCS4 | 9.02 | | MCS4 | N/A | | MCS4 | 10.37 |
| | MCS5 | 8.88 | | MCS5 | N/A | | MCS5 | 10.30 |
| | MCS6 | 8.64 | | MCS6 | N/A | | MCS6 | 10.33 |
| | MCS7 | 8.40 | | MCS7 | N/A | | MCS7 | 10.15 |
| 5280 | MCS0 | 10.27 | 5620 | MCS0 | N/A | 5825 | MCS0 | 10.62 |
| | MCS1 | 10.02 | | MCS1 | N/A | | MCS1 | 10.60 |
| | MCS2 | 9.43 | | MCS2 | N/A | | MCS2 | 10.29 |
| | MCS3 | 9.24 | | MCS3 | N/A | | MCS3 | 9.54 |
| | MCS4 | 9.03 | | MCS4 | N/A | | MCS4 | 10.04 |
| | MCS5 | 8.88 | | MCS5 | N/A | | MCS5 | 9.94 |
| | MCS6 | 8.76 | | MCS6 | N/A | | MCS6 | 9.71 |
| | MCS7 | 8.60 | | MCS7 | N/A | | MCS7 | 9.65 |
| 5300 | MCS0 | 9.95 | 5640 | MCS0 | N/A | | | |
| | MCS1 | 9.64 | | MCS1 | N/A | | | |
| | MCS2 | 9.52 | | MCS2 | N/A | | | |
| | MCS3 | 9.31 | | MCS3 | N/A | | | |
| | MCS4 | 9.18 | | MCS4 | N/A | | | |
| | MCS5 | 8.87 | | MCS5 | N/A | | | |
| | MCS6 | 8.64 | | MCS6 | N/A | | | |
| | MCS7 | 8.29 | | MCS7 | N/A | | | |
| 5320 | MCS0 | 9.87 | 5660 | MCS0 | 10.59 | | | |
| | MCS1 | 9.54 | | MCS1 | 10.36 | | | |
| | MCS2 | 9.32 | | MCS2 | 10.14 | | | |
| | MCS3 | 9.11 | | MCS3 | 9.95 | | | |
| | MCS4 | 8.95 | | MCS4 | 9.74 | | | |
| | MCS5 | 8.64 | | MCS5 | 9.48 | | | |
| | MCS6 | 8.52 | | MCS6 | 9.22 | | | |
| | MCS7 | 8.26 | | MCS7 | 9.01 | | | |
| 5500 | MCS0 | 10.24 | 5680 | MCS0 | 10.38 | | | |
| | MCS1 | 10.01 | | MCS1 | 10.11 | | | |
| | MCS2 | 9.82 | | MCS2 | 9.98 | | | |
| | MCS3 | 9.58 | | MCS3 | 9.74 | | | |
| | MCS4 | 9.31 | | MCS4 | 9.55 | | | |
| | MCS5 | 9.05 | | MCS5 | 9.13 | | | |
| | MCS6 | 8.82 | | MCS6 | 8.98 | | | |
| | MCS7 | 8.60 | | MCS7 | 8.86 | | | |

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## Table 8.10 802.11n_HT40 Average RF Power

| 802.11n_HT40 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11n_HT40 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) | 802.11n_HT40 Mode Frequncy[MHz] | Rated [Mbps] | Average Power (dBm) (dBm) |
|---|---|---|---|---|---|---|---|---|
| 5190 | MCS0 | 9.65 | 5510 | MCS0 | 9.28 | 5670 | MCS0 | 10.09 |
| | MCS1 | 9.48 | | MCS1 | 9.23 | | MCS1 | 10.03 |
| | MCS2 | 9.37 | | MCS2 | 9.21 | | MCS2 | 9.99 |
| | MCS3 | 9.25 | | MCS3 | 9.20 | | MCS3 | 9.95 |
| | MCS4 | 9.11 | | MCS4 | 9.15 | | MCS4 | 9.83 |
| | MCS5 | 9.10 | | MCS5 | 9.13 | | MCS5 | 9.80 |
| | MCS6 | 9.05 | | MCS6 | 9.12 | | MCS6 | 9.75 |
| | MCS7 | 8.93 | | MCS7 | 9.03 | | MCS7 | 9.70 |
| 5230 | MCS0 | 9.49 | 5550 | MCS0 | 9.57 | 5755 | MCS0 | **11.36** |
| | MCS1 | 9.38 | | MCS1 | 9.43 | | MCS1 | 11.25 |
| | MCS2 | 9.37 | | MCS2 | 9.33 | | MCS2 | 11.20 |
| | MCS3 | 9.35 | | MCS3 | 9.31 | | MCS3 | 11.20 |
| | MCS4 | 9.25 | | MCS4 | 9.25 | | MCS4 | 11.16 |
| | MCS5 | 9.21 | | MCS5 | 9.21 | | MCS5 | 11.13 |
| | MCS6 | 9.15 | | MCS6 | 9.20 | | MCS6 | 11.11 |
| | MCS7 | 9.03 | | MCS7 | 9.15 | | MCS7 | 11.03 |
| 5270 | MCS0 | 9.37 | 5590 | MCS0 | N/A | 5795 | MCS0 | **11.40** |
| | MCS1 | 9.25 | | MCS1 | N/A | | MCS1 | 11.38 |
| | MCS2 | 9.24 | | MCS2 | N/A | | MCS2 | 11.35 |
| | MCS3 | 9.23 | | MCS3 | N/A | | MCS3 | 11.32 |
| | MCS4 | 9.11 | | MCS4 | N/A | | MCS4 | 11.25 |
| | MCS5 | 9.10 | | MCS5 | N/A | | MCS5 | 11.22 |
| | MCS6 | 9.06 | | MCS6 | N/A | | MCS6 | 11.20 |
| | MCS7 | 9.02 | | MCS7 | N/A | | MCS7 | 11.15 |
| 5310 | MCS0 | 8.93 | 5630 | MCS0 | N/A | | | |
| | MCS1 | 8.92 | | MCS1 | N/A | | | |
| | MCS2 | 8.88 | | MCS2 | N/A | | | |
| | MCS3 | 8.79 | | MCS3 | N/A | | | |
| | MCS4 | 8.77 | | MCS4 | N/A | | | |
| | MCS5 | 8.73 | | MCS5 | N/A | | | |
| | MCS6 | 8.70 | | MCS6 | N/A | | | |
| | MCS7 | 8.65 | | MCS7 | N/A | | | |

Per FCC KDB Publication 443999, transmission on channels which overlap the 5600-5650 MHz is prohibited as a client. This device does not transmit any beacons or initiate any transmissions in 5.3 and 5.5 GHz Bands. (*) – indicates default channels per KDB Publication 248227. When the adjacent channels are higher in power then the default channels, these “required channels” are considered instead of the default channels for SAR testing.

The bolded channels and data rates above were tested for SAR

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## 8.1 SAR DATA Summay

**Table 8.11 GSM850 Head SAR Results**

| Frequency | | Mode | Conducted | | Side | Test Position | Antenna Type | Battery | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | |
| 836.6 | 190 | GSM850 | 33.01 | 33.04 | Right | Cheek/Touch | Intenna | Standard | 0.040 | 0.080 |
| 836.6 | 190 | GSM850 | 33.01 | 33.02 | Right | Ear/Tilt 15° | Intenna | Standard | 0.029 | 0.041 |
| 836.6 | 190 | GSM850 | 32.98 | 33.00 | Left | Cheek/Touch | Intenna | Standard | 0.020 | **0.088** |
| 836.6 | 190 | GSM850 | 32.99 | 33.04 | Left | Ear/Tilt 15° | Intenna | Standard | -0.016 | 0.052 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | |

**Table 8.12 GSM850 Body SAR Results**

| Frequency | | Mode | Conducted Power | | Separation Distance | Test Position | Antenna Type | Battery | Tx Slots | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 836.6 | 190 | GSM850 | 33.05 | 33.04 | 1.0 cm | Back | Intenna | Standard | 1 | -0.011 | 0.217 |
| 836.6 | 190 | GPRS850 | 32.94 | 32.97 | 1.0 cm | Back | Intenna | Standard | 1 | -0.006 | 0.208 |
| 836.6 | 190 | GPRS850 | 32.79 | 32.79 | 1.0 cm | Back | Intenna | Standard | 2 | 0.012 | 0.435 |
| 836.6 | 190 | GPRS850 | 30.92 | 30.90 | 1.0 cm | Back | Intenna | Standard | 3 | -0.032 | **0.508** |
| 836.6 | 190 | GPRS850 | 27.55 | 27.56 | 1.0 cm | Back | Intenna | Standard | 4 | 0.025 | 0.367 |
| 836.6 | 190 | GPRS850 | 30.95 | 30.98 | 1.0 cm | Left | Intenna | Standard | 3 | -0.018 | 0.204 |
| 836.6 | 190 | GPRS850 | 30.96 | 30.96 | 1.0 cm | Bottom | Intenna | Standard | 3 | 0.013 | 0.232 |
| 836.6 | 190 | GPRS850 | 30.94 | 30.91 | 1.0 cm | Front | Intenna | Standard | 3 | 0.026 | 0.232 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

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**Table 8.13 GSM1900 Head SAR Results**

| Frequency | | Mode | Conducted | | Side | Test Position | Antenna Type | Battery | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | |
| 1880 | 661 | GSM1900 | 29.35 | 29.34 | Right | Cheek/Touch | Intenna | Standard | 0.013 | 0.044 |
| 1880 | 661 | GSM1900 | 29.33 | 29.34 | Right | Ear/Tilt 15° | Intenna | Standard | -0.116 | 0.045 |
| 1880 | 661 | GSM1900 | 29.37 | 29.39 | Left | Cheek/Touch | Intenna | Standard | -0.015 | **0.061** |
| 1880 | 661 | GSM1900 | 29.33 | 29.35 | Left | Ear/Tilt 15° | Intenna | Standard | -0.003 | 0.033 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | |

**Table 8.14 GSM1900 Body SAR Results**

| Frequency | | Mode | Conducted Power | | Separation Distance | Test Position | Antenna Type | Battery | Tx Slots | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 1880 | 661 | GSM1900 | 29.35 | 29.34 | 1.0 cm | Back | Intenna | Standard | 1 | 0.046 | 0.158 |
| 1880 | 661 | GSM1900 | 29.34 | 29.33 | 1.0 cm | Back | Intenna | Standard | 1 | -0.034 | 0.159 |
| 1880 | 661 | GSM1900 | 29.26 | 29.25 | 1.0 cm | Back | Intenna | Standard | 2 | -0.028 | 0.305 |
| 1880 | 661 | GSM1900 | 27.36 | 27.37 | 1.0 cm | Back | Intenna | Standard | 3 | -0.039 | 0.298 |
| 1880 | 661 | GSM1900 | 24.21 | 24.22 | 1.0 cm | Back | Intenna | Standard | 4 | 0.020 | 0.191 |
| 1880 | 661 | GSM1900 | 29.29 | 29.31 | 1.0 cm | Left | Intenna | Standard | 2 | 0.004 | 0.232 |
| 1880 | 661 | GSM1900 | 29.31 | 29.28 | 1.0 cm | Bottom | Intenna | Standard | 2 | 0.000 | **0.345** |
| 1880 | 661 | GSM1900 | 29.33 | 29.32 | 1.0 cm | Front | Intenna | Standard | 2 | -0.007 | 0.280 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

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**Table 8.15 WCDMA850 Head SAR Results**

| Frequency | | Mode | Conducted Power | | Side | Test Position | Antenna Type | Battery | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | |
| 836.6 | 4183 | WCDMA850 | 22.54 | 22.52 | Right | Cheek/Touch | Intenna | Standard | 0.031 | 0.072 |
| 836.6 | 4183 | WCDMA850 | 22.56 | 22.56 | Right | Ear/Tilt 15° | Intenna | Standard | 0.078 | 0.038 |
| 836.6 | 4183 | WCDMA850 | 22.60 | 22.59 | Left | Cheek/Touch | Intenna | Standard | -0.043 | **0.078** |
| 836.6 | 4183 | WCDMA850 | 22.58 | 22.59 | Left | Ear/Tilt 15° | Intenna | Standard | 0.022 | 0.047 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | |

**Table 8.16 WCDMA850 Body SAR Results**

| Frequency | | Mode | Conducted Power | | Separation Distance | Test Position | Antenna Type | Battery | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | |
| 836.6 | 4183 | WCDMA850 | 22.59 | 22.59 | 1.0 cm | Back | Intenna | Standard | -0.002 | **0.212** |
| 836.6 | 4183 | WCDMA850 | 22.55 | 22.57 | 1.0 cm | Left | Intenna | Standard | 0.004 | 0.091 |
| 836.6 | 4183 | WCDMA850 | 22.58 | 22.57 | 1.0 cm | Bottom | Intenna | Standard | -0.011 | 0.103 |
| 836.6 | 4183 | WCDMA850 | 22.56 | 22.51 | 1.0 cm | Front | Intenna | Standard | -0.008 | 0.099 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | |

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**Table 8.17 2.4GHz 802.11b Head SAR Results**

| Frequency | | Mode | Conducted | | Side | Test Position | Antenna Type | Battery | Data Rate (Mbps) | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 2437 | 6 | IEEE 802.11b | 15.76 | 15.71 | Right | Cheek/Touch | Intenna | Standard | 1 | 0.001 | 0.068 |
| 2437 | 6 | IEEE 802.11b | 15.72 | 15.74 | Right | Ear/Tilt 15° | Intenna | Standard | 1 | 0.010 | 0.054 |
| 2437 | 6 | IEEE 802.11b | 15.72 | 15.70 | Left | Cheek/Touch | Intenna | Standard | 1 | 0.103 | **0.134** |
| 2437 | 6 | IEEE 802.11b | 15.70 | 15.74 | Left | Ear/Tilt 15° | Intenna | Standard | 1 | -0.069 | 0.097 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

**Table 8.18 2.4GHz 802.11b Body SAR Results**

| Frequency | | Mode | Conducted | | Separation Distance | Test Position | Antenna Type | Battery | Data Rate (Mbps) | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 2437 | 6 | IEEE 802.11b | 15.75 | 15.72 | 1.0 cm | Back | Intenna | Standard | 1 | 0.042 | **0.222** |
| 2437 | 6 | IEEE 802.11b | 15.71 | 15.71 | 1.0 cm | Right | Intenna | Standard | 1 | -0.051 | 0.080 |
| 2437 | 6 | IEEE 802.11b | 15.73 | 15.70 | 1.0 cm | Top | Intenna | Standard | 1 | 0.055 | 0.026 |
| 2437 | 6 | IEEE 802.11b | 15.73 | 15.75 | 1.0 cm | Front | Intenna | Standard | 1 | 0.014 | 0.035 |
| **ANSI / IEEE C95.1 2005 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

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**Table 8.19 5GHz WLAN Head SAR Results**

| Frequency | | Mode | Conducted | | Side | Test Position | Antenna Type | Battery | Data Rate (Mbps) | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 5200 | 40 | IEEE 802.11a | 10.29 | 10.27 | Right | Cheek/Touch | Intenna | Standard | 6 | 0.197 | 0.011 |
| 5200 | 40 | IEEE 802.11a | 10.28 | 10.30 | Right | Ear/Tilt 15° | Intenna | Standard | 6 | -0.196 | 0.013 |
| 5200 | 40 | IEEE 802.11a | 10.30 | 10.28 | Left | Cheek/Touch | Intenna | Standard | 6 | 0.067 | 0.024 |
| 5200 | 40 | IEEE 802.11a | 10.32 | 10.30 | Left | Ear/Tilt 15° | Intenna | Standard | 6 | 0.074 | 0.025 |
| 5280 | 56 | IEEE 802.11a | 10.36 | 10.33 | Right | Cheek/Touch | Intenna | Standard | 6 | 0.114 | 0.013 |
| 5280 | 56 | IEEE 802.11a | 10.34 | 10.35 | Right | Ear/Tilt 15° | Intenna | Standard | 6 | 0.029 | 0.022 |
| 5280 | 56 | IEEE 802.11a | 10.30 | 10.34 | Left | Cheek/Touch | Intenna | Standard | 6 | 0.184 | **0.037** |
| 5280 | 56 | IEEE 802.11a | 10.33 | 10.33 | Left | Ear/Tilt 15° | Intenna | Standard | 6 | 0.172 | 0.033 |
| 5700 | 140 | IEEE 802.11a | 10.68 | 10.69 | Right | Cheek/Touch | Intenna | Standard | 6 | 0.183 | 0.016 |
| 5700 | 140 | IEEE 802.11a | 10.66 | 10.70 | Right | Ear/Tilt 15° | Intenna | Standard | 6 | 0.164 | 0.014 |
| 5700 | 140 | IEEE 802.11a | 10.71 | 10.69 | Left | Cheek/Touch | Intenna | Standard | 6 | 0.120 | 0.023 |
| 5700 | 140 | IEEE 802.11a | 10.67 | 10.69 | Left | Ear/Tilt 15° | Intenna | Standard | 6 | 0.192 | 0.019 |
| 5755 | 151 | IEEE 802.11n(HT40) | 11.32 | 11.34 | Right | Cheek/Touch | Intenna | Standard | MCS0 | 0.114 | 0.013 |
| 5755 | 151 | IEEE 802.11n(HT40) | 11.36 | 11.36 | Right | Ear/Tilt 15° | Intenna | Standard | MCS0 | -0.091 | 0.017 |
| 5755 | 151 | IEEE 802.11n(HT40) | 11.38 | 11.35 | Left | Cheek/Touch | Intenna | Standard | MCS0 | 0.157 | 0.022 |
| 5755 | 151 | IEEE 802.11n(HT40) | 11.33 | 11.33 | Left | Ear/Tilt 15° | Intenna | Standard | MCS0 | 0.135 | 0.017 |
| 5795 | 159 | IEEE 802.11n(HT40) | 11.44 | 11.41 | Right | Cheek/Touch | Intenna | Standard | MCS0 | 0.036 | 0.013 |
| 5795 | 159 | IEEE 802.11n(HT40) | 11.43 | 11.43 | Right | Ear/Tilt 15° | Intenna | Standard | MCS0 | 0.181 | 0.015 |
| 5795 | 159 | IEEE 802.11n(HT40) | 11.42 | 11.39 | Left | Cheek/Touch | Intenna | Standard | MCS0 | 0.123 | 0.022 |
| 5795 | 159 | IEEE 802.11n(HT40) | 11.37 | 11.39 | Left | Ear/Tilt 15° | Intenna | Standard | MCS0 | -0.056 | 0.020 |
| 5805 | 161 | IEEE 802.11a | 10.90 | 10.93 | Right | Cheek/Touch | Intenna | Standard | 6 | -0.024 | 0.014 |
| 5805 | 161 | IEEE 802.11a | 10.95 | 10.96 | Right | Ear/Tilt 15° | Intenna | Standard | 6 | 0.103 | 0.019 |
| 5805 | 161 | IEEE 802.11a | 10.92 | 10.93 | Left | Cheek/Touch | Intenna | Standard | 6 | -0.086 | 0.021 |
| 5805 | 161 | IEEE 802.11a | 10.92 | 10.91 | Left | Ear/Tilt 15° | Intenna | Standard | 6 | 0.178 | 0.024 |
| **ANSI / IEEE C95.1 1992 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

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**Table 8.20 5GHz WLAN Body SAR Results**

| Frequency | | Mode | Conducted | | Separation Distance | Test Position | Antenna Type | Battery | Data Rate (Mbps) | Drift (dB) | SAR Level (W/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MHz | Ch | | Start | End | | | | | | | |
| 5200 | 40 | IEEE 802.11a | 10.29 | 10.28 | 1.0cm | Back | Intenna | Standard | 6 | 0.054 | 0.326 |
| 5280 | 56 | IEEE 802.11a | 10.37 | 10.34 | 1.0cm | Back | Intenna | Standard | 6 | 0.039 | **0.438** |
| 5700 | 140 | IEEE 802.11a | 10.66 | 10.70 | 1.0cm | Back | Intenna | Standard | 6 | 0.007 | 0.248 |
| 5755 | 151 | IEEE 802.11n(HT40) | 11.38 | 11.40 | 1.0cm | Back | Intenna | Standard | MCS0 | 0.008 | 0.126 |
| 5795 | 159 | IEEE 802.11n(HT40) | 11.44 | 11.43 | 1.0cm | Back | Intenna | Standard | MCS0 | -0.068 | 0.088 |
| 5805 | 161 | IEEE 802.11a | 10.90 | 10.92 | 1.0cm | Back | Intenna | Standard | 6 | 0.186 | 0.082 |
| **ANSI / IEEE C95.1 1992 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population** | | | | | | **1.6W/kg (mW/g)** averaged over 1 gram | | | | | |

## 8.2 SAR Note

**General Note :**

1. The test data reported are the worst-case SAR value with the position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [June 2001].
2. Tissue parameters and temperatures are listed on the SAR plot.
3. Liquid tissue depth is 15.2 ± 0.2cm
4. Battery is fully charged for all readings. The Standard battery was used.
5. Test Configuration ☐ With Holster ☒ Without Holster
6. Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (June, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tilt/ear, extended and retracted) is least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
7. Device was tested using a fixed spacing for body-worn accessory tesing. A separation distance of 10mm was tested because the manufacturer has determined that there will be body-worn accessories available in the marketplace for usere to support this separation distance.
8. The standard battery contains a near field communications (NFC) antenna, and is the only battery that comes with the device. All tests were performed using the standard NFC battery. The technical description contains detailed informations about the near field communications antenna. As described in Operational Description, the device does not allow other battery than model.

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**GSM Notes**

1. Body-Worn Accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR using headphone.
2. Per FCC guidance, GPRS Data Mode is additionally required for body-worn configuration. When the same wireless modes and device transmission configurations are required for body-worn accderssory SAR for the same device orientation. Therefore, the hotspot data for the back and front side configuration additionally shows body-worn compliance at the same distance.
3. Justification for reduced thest configurations per KDB Publication 941225 D03: The source-based time-averaged output power was evaluated for all multi-slot operations. In addition to the worst-case reported, all source-based time-averaged powers within 10% of the worst-case were additionally included in the evaluation for data modes.

**WCDMA Notes**

1. WCDMA mode in Body SAR was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2W/Kg.
2. Per FCC KDB Publication 941225 D06, when the same wireless modes and device transmission configurations are required for body-worn accessory SAR for the same device orientation. Therefore, the hotspot data for the back side configuration additionally shows body-worn complicane at the same distance.

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**WLAN Notes**

1. Justification for reduced test configurations for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes for 2.4GHz WIFI : Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11b. Other IEEE 802.11 modes (including 802.11g/n) were not investigated since the average output powers over all channels and data rates were not more than 0.25dB higher than the tested channel in the lowest data rate of IEEE 802.11b mode.
2. Justification for reduced test configurations for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes for 5GHz WIFI : Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11a. Other IEEE 802.11 mode (802.11n 40MHz Bandwidth, Channel 151, 159) were investigated since the average output power was more than 0.25dB higher than the tested channel in the lowest data rate of IEEE 802.11a mode.
3. When Hotspot is enabled, all 5GHz bands are disabled.
4. WLAN transmission was verified using an uncalibrated spectrum analyzer.
5. When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/Kg and the 1g averaged SAR is <0.8 W/Kg, SAR testing on other channels is not required. The other default(or corresponding required) test channels were additionally tested using the lowest data rate since the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is greater than 1.6W/Kg.
6. Per FCC KDB Publication 941225 D06, when the same wireless modes and device transmission configurations are required for body-worn accessories and hotspot mode(2.4GHz WLAN), it is not necessary to additionally test body-worn accessory SAR for the same device orientation. Therefore, the hotspot data for the back side configuration additionally shows body-worn compliance at the same distance.

**Hotspot Notes**

1. Top and Right Edge for the licensed transmitter was not tested since the antenna distance from the edge was greater than 2.5cm per FCC KDB Publication 941225 D06 guidance.
2. Bottom and Left Edges for the WLAN transmitter were not tested since the antenna distance from the edge was greater than 2.5cm per FCC KDB Publication 941225 D06 guidance.
3. During SAR testing for the wireless Router conditions per KDB 941225 D06, the actural Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated.

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## 8.3 Simultaneous Transmission

Refer to the FCC OET document, 'SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas' (Feb 2008)

**Table 8.21 Output Power Thresholds for Unlicensed Transmitters**

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

**Table 8.22 Summary of SAR Evaluation Requirements for Cell phones with Multiple Transmitters**

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

**Table 8.23 Simultaneous Transmission Summation for Held to Ear Voice Call (2.4GHz WLAN)**

| Simult Tx | Configuration | GSM850 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GSM1900 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Head SAR | Right Cheek | 0.080 | 0.068 | 0.148 | Head SAR | Right Cheek | 0.044 | 0.068 | 0.112 |
| | Right Tilt | 0.041 | 0.054 | 0.095 | | Right Tilt | 0.045 | 0.054 | 0.099 |
| | Left Cheek | 0.088 | 0.134 | 0.222 | | Left Cheek | 0.061 | 0.134 | 0.195 |
| | Left Tilt | 0.052 | 0.097 | 0.149 | | Left Tilt | 0.033 | 0.097 | 0.130 |
| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | | | | | |
| Head SAR | Right Cheek | 0.072 | 0.068 | 0.140 | | | | | |
| | Right Tilt | 0.038 | 0.054 | 0.092 | | | | | |
| | Left Cheek | 0.078 | 0.134 | 0.212 | | | | | |
| | Left Tilt | 0.047 | 0.097 | 0.144 | | | | | |

The above tables represent a held to ear voice call with 2.4GHz WLAN.

**Table 8.24 Simultaneous Transmission Summation for Held to Ear Voice Call (5.2GHz WLAN)**

| Simult Tx | Configuration | GSM850 SAR(W/Kg) | 5.2GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GSM1900 SAR(W/Kg) | 5.2GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Head SAR | Right Cheek | 0.080 | 0.011 | 0.091 | Head SAR | Right Cheek | 0.044 | 0.011 | 0.055 |
| | Right Tilt | 0.041 | 0.013 | 0.054 | | Right Tilt | 0.045 | 0.013 | 0.058 |
| | Left Cheek | 0.088 | 0.024 | 0.112 | | Left Cheek | 0.061 | 0.024 | 0.085 |
| | Left Tilt | 0.052 | 0.025 | 0.077 | | Left Tilt | 0.033 | 0.025 | 0.058 |
| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 5.2GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | | | | | |
| Head SAR | Right Cheek | 0.072 | 0.011 | 0.083 | | | | | |
| | Right Tilt | 0.038 | 0.013 | 0.051 | | | | | |
| | Left Cheek | 0.078 | 0.024 | 0.102 | | | | | |
| | Left Tilt | 0.047 | 0.025 | 0.072 | | | | | |

The above tables represent a held to ear voice call with 5.2GHz WLAN.

**Table 8.25 Simultaneous Transmission Summation for Held to Ear Voice Call (5.3GHz WLAN)**

| Simult Tx | Configuration | GSM850 SAR(W/Kg) | 5.3GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GSM1900 SAR(W/Kg) | 5.3GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Head SAR | Right Cheek | 0.080 | 0.013 | 0.093 | Head SAR | Right Cheek | 0.044 | 0.013 | 0.057 |
| | Right Tilt | 0.041 | 0.022 | 0.063 | | Right Tilt | 0.045 | 0.022 | 0.067 |
| | Left Cheek | 0.088 | 0.037 | 0.125 | | Left Cheek | 0.061 | 0.037 | 0.098 |
| | Left Tilt | 0.052 | 0.033 | 0.085 | | Left Tilt | 0.033 | 0.033 | 0.066 |
| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 5.3GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | | | | | |
| Head SAR | Right Cheek | 0.072 | 0.013 | 0.085 | | | | | |
| | Right Tilt | 0.038 | 0.022 | 0.060 | | | | | |
| | Left Cheek | 0.078 | 0.037 | 0.115 | | | | | |
| | Left Tilt | 0.047 | 0.033 | 0.080 | | | | | |

The above tables represent a held to ear voice call with 5.3GHz WLAN.

**Table 8.26 Simultaneous Transmission Summation for Held to Ear Voice Call (5.5GHz WLAN)**

| Simult Tx | Configuration | GSM850 SAR(W/Kg) | 5.5GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GSM1900 SAR(W/Kg) | 5.5GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Head SAR | Right Cheek | 0.080 | 0.016 | 0.096 | Head SAR | Right Cheek | 0.044 | 0.016 | 0.060 |
| | Right Tilt | 0.041 | 0.014 | 0.055 | | Right Tilt | 0.045 | 0.014 | 0.059 |
| | Left Cheek | 0.088 | 0.023 | 0.111 | | Left Cheek | 0.061 | 0.023 | 0.084 |
| | Left Tilt | 0.052 | 0.019 | 0.071 | | Left Tilt | 0.033 | 0.019 | 0.052 |
| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 5.5GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | | | | | |
| Head SAR | Right Cheek | 0.072 | 0.016 | 0.088 | | | | | |
| | Right Tilt | 0.038 | 0.014 | 0.052 | | | | | |
| | Left Cheek | 0.078 | 0.023 | 0.101 | | | | | |
| | Left Tilt | 0.047 | 0.019 | 0.066 | | | | | |

The above tables represent a held to ear voice call with 5.5GHz WLAN.

**Table 8.27 Simultaneous Transmission Summation for Held to Ear Voice Call (5.8GHz WLAN)**

| Simult Tx | Configuration | GSM850 SAR(W/Kg) | 5.8GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GSM1900 SAR(W/Kg) | 5.8GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Head SAR | Right Cheek | 0.080 | 0.014 | 0.094 | Head SAR | Right Cheek | 0.044 | 0.014 | 0.058 |
| | Right Tilt | 0.041 | 0.019 | 0.060 | | Right Tilt | 0.045 | 0.019 | 0.064 |
| | Left Cheek | 0.088 | 0.021 | 0.109 | | Left Cheek | 0.061 | 0.021 | 0.082 |
| | Left Tilt | 0.052 | 0.024 | 0.076 | | Left Tilt | 0.033 | 0.024 | 0.057 |

| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 5.8GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|
| Head SAR | Right Cheek | 0.072 | 0.014 | 0.086 |
| | Right Tilt | 0.038 | 0.019 | 0.057 |
| | Left Cheek | 0.078 | 0.021 | 0.099 |
| | Left Tilt | 0.047 | 0.024 | 0.071 |

The above tables represent a held to ear voice call with 5.8GHz WLAN.

**Table 8.28 Simultaneous Transmission Summation for 2G&3G voice and 2.4GHz WLAN(Body-Worn)**

| Configuration | Mode | 2G&3G SAR (W/Kg) | WIFI SAR | Σ SAR |
|---|---|---|---|---|
| Back | GSM850 | 0.217 | 0.222 | 0.439 |
| Back | GSM1900 | 0.158 | 0.222 | 0.380 |
| Back | WCDMA850 | 0.212 | 0.222 | 0.434 |

The above tables represent a body worn voice call with 2.4GHz WLAN.

**Table 8.29 Simultaneous Transmission Summation for 2G&3G voice and 5GHz WLAN(Body-Worn)**

| Configuration | Mode | 2G&3G SAR (W/Kg) | 5.2GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Configuration | Mode | 2G&3G SAR (W/Kg) | 5.3GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Back | GSM850 | 0.217 | 0.326 | 0.543 | Back | GSM850 | 0.217 | 0.438 | 0.655 |
| Back | GSM1900 | 0.158 | 0.326 | 0.484 | Back | GSM1900 | 0.158 | 0.438 | 0.596 |
| Back | WCDMA850 | 0.212 | 0.326 | 0.538 | Back | WCDMA850 | 0.212 | 0.438 | 0.650 |
| Configuration | Mode | 2G&3G SAR (W/Kg) | 5.5GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Configuration | Mode | 2G&3G SAR (W/Kg) | 5.8GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
| Back | GSM850 | 0.217 | 0.248 | 0.465 | Back | GSM850 | 0.217 | 0.126 | 0.343 |
| Back | GSM1900 | 0.158 | 0.248 | 0.406 | Back | GSM1900 | 0.158 | 0.126 | 0.284 |
| Back | WCDMA850 | 0.212 | 0.248 | 0.460 | Back | WCDMA850 | 0.212 | 0.126 | 0.338 |

The above tables represent a body worn voice call with 5GHz WLAN.

**Table 8.30 Simultaneous Transmission Summation for 2G&3G Data and 2.4GHz WLAN(Hotspot)**

| Simult Tx | Configuration | GPRS850 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | Simult Tx | Configuration | GPRS1900 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) |
|---|---|---|---|---|---|---|---|---|---|
| Body SAR | Back | 0.508 | 0.222 | **0.730** | Body SAR | Back | 0.305 | 0.222 | 0.527 |
| | Left | 0.204 | - | 0.204 | | Left | 0.232 | - | 0.232 |
| | Right | - | 0.080 | 0.080 | | Right | - | 0.080 | 0.080 |
| | Top | - | 0.026 | 0.026 | | Top | - | 0.026 | 0.026 |
| | Bottom | 0.232 | - | 0.232 | | Bottom | 0.345 | - | 0.345 |
| | Front | 0.232 | 0.035 | 0.267 | | Front | 0.280 | 0.035 | 0.315 |
| Simult Tx | Configuration | WCDMA850 SAR(W/Kg) | 2.4GHz WIFI SAR (W/Kg) | Σ SAR (W/Kg) | | | | | |
| Body SAR | Back | 0.212 | 0.222 | 0.434 | | | | | |
| | Left | 0.091 | - | 0.091 | | | | | |
| | Right | - | 0.080 | 0.080 | | | | | |
| | Top | - | 0.026 | 0.026 | | | | | |
| | Bottom | 0.103 | - | 0.103 | | | | | |
| | Front | 0.099 | 0.035 | 0.134 | | | | | |

**Note :**

1. Per FCC KDB Publication941225 D06, the edges with antennas more than 2.5cm are not required to be evaluated for SAR(”-“). The above tables represent a portable hotspot condition.
2. When Hotspot is enabled all 5GHz WLAN bands are disabled.

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**Multiple Antenna/Transmission Information for GT-N7105**

The separation between the main antenna and the Bluetooth and WLAN antennas is 87mm.

RF Conducted Power of Bluetooth Tx is 7.64dBm. RF Conducted Power of 2.4GHz WLAN is 15.72dBm. Maximum RF conducted power of 5GHz WLAN is 11.40 Bm

2.4 GHz and 5 GHz WIFI and Bluetooth share the same antenna path and cannot transmit simultaneously.

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

**Simultaneous Transmission Conclusion**

The above numerical summed SAR was below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit. Therefore, no volumetric SAR summation is required since the numerical sums are below the limit

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# 9. CONCLUSION

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

The highest reported SAR values are as follows:
GSM850: Head: 0.088 W/Kg : Body-worn: 0.217 W/Kg : Hotspot: 0.508 W/Kg
GSM1900: Head: 0.061 W/Kg : Body-worn: 0.158 W/Kg : Hotspot: 0.345 W/Kg
WCDMA850: Head: 0.078 W/Kg : Body-worn: 0.212 W/Kg : Hotspot: 0.212 W/Kg
2.4GHz WLAN: Head: 0.134 W/Kg : Body-worn: 0.222 W/Kg : Hotspot: 0.222 W/Kg
5.2GHz WLAN: Head: 0.025 W/Kg : Body-worn: 0.326 W/Kg
5.3GHz WLAN: Head: 0.037 W/Kg : Body-worn: 0.438 W/Kg
5.5GHz WLAN: Head: 0.023 W/Kg : Body-worn: 0.248 W/Kg
5.8GHz WLAN: Head: 0.024 W/Kg : Body-worn: 0.126 W/Kg
Highest Simulataneous SAR : Head : 0.222 W/Kg : Body : 0.730 W/Kg

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## APPENDIX A

### SAR Definition

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

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{pdv}\right)$$

**Figure A.1 SAR Mathematical Equation**

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

$$\text{SAR} = \sigma E^2 / p$$

**Where :**

$\sigma$ = conductivity of the tissue-simulant material (S/m)
$p$ = mass density of the tissue-simulant material (kg/m$^3$)
$E$ = Total RMS electric field strength (V/m)

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

- End of page -

# APPENDIX B

## Probe Calibration Process

### Dosimetric Assessment Procedure

Each probe is calibrated according to a dosimetric assessment procedure described in **K. Pokovic, T.Schmid, N. Kuster, *Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies*, ICECOM97, Oct. 1997, pp. 120-124** with an accuracy better than +/-10%. The spherical isotropy was evaluated with the procedure described in **K. Pokovic, T.Schmid, N. Kuster, *E-field Probe with improved isotropy in brain simulating liquids*, Proceedings of the ELMAR, Zadar, June 23-25, 1996, pp. 172-175** and found to be better than +/-0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe is tested.

### Free Space Assessment

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

### Temperature Assessment

E-field temperature correlation calibration is performed in a flat phantom flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe (see Fig. B.2).

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

where:

**Δt** = exposure time (30 seconds)

**C** = heat capacity of tissue (brain or muscle).

**ΔT** = temperature increase due to RF exposure.

SAR is proportional to ΔT/ Δt, the initial rate of tissue heating, before thermal diffusion takes place. Now it's possible to quantify the electric field in the simulated tissue by equating the thermally derived SAR to the E-field;

$$\text{SAR} = \frac{|E|^2 \cdot \sigma}{p}$$

where:

**σ** = simulated tissue conductivity

**p** = Tissue density (1.25 g/cm$^3$ for brain tissue)

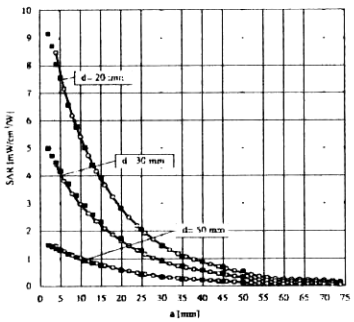



**Figure B.1. E-Field and Temperature measurements at 900MHz**

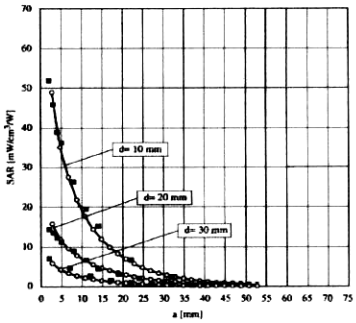



**Figure B.2. E-Field and temperature measurements at 1.9GHz**

# APPENDIX C

# ANSI/IEEE C95.1 – 2005 RF EXPOSURE LIMITS

## Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

## Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is the exposure that may be incurred by persons who are aware of the potential for exposure,(i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

## Table C.1 Safety Limits for Partial Body Exposure

| | UNCONTROLLED ENVIRONMENT<br>General Population<br>(W/kg) or (mW/g) | CONTROLLED ENVIRONMENT<br>General Population<br>(W/kg) or (mW/g) |
|---|---|---|
| SPATIAL PEAK SAR[1]<br>Brain | 1.60 | 8.00 |
| SPATIAL PEAK SAR[2]<br>Whole Body | 0.08 | 0.40 |
| SPATIAL PEAK SAR[3]<br>Hands,Feet,Ankles, Wrists | 4.00 | 20.00 |

[1] The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as tissue volume in the shape of a cube) and over the appropriate averaging time.
[2] The Spatial Average value of the SAR averaged over the whole body.
[3] The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

# APPENDIX D

## The Validation Measurements

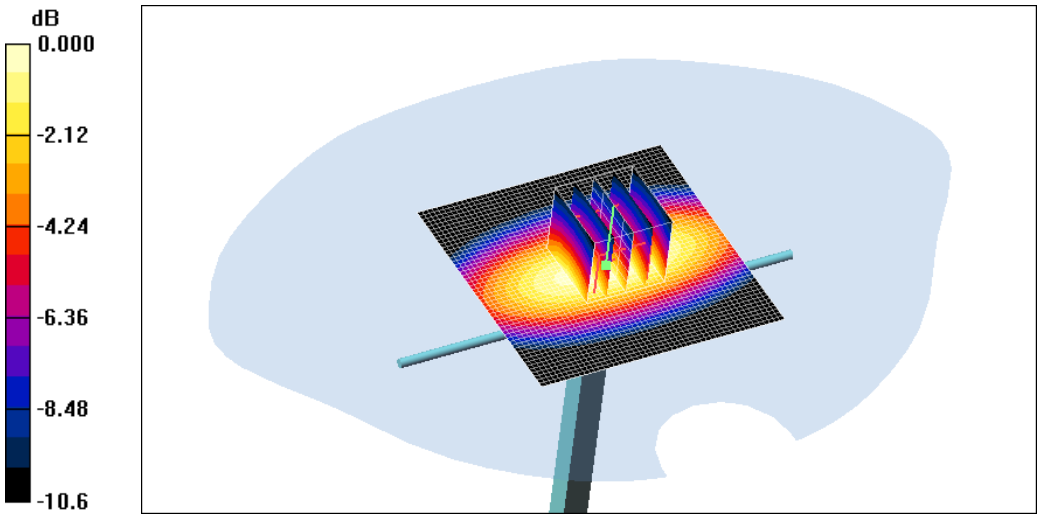
**DUT: Dipole 835 MHz; Serial: 4d111**
**Program Name: 835MHz Dipole Validation 2012.08.22**
**Procedure Name: 835MHz @ 100mW Head**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; $\sigma$ = 0.904 mho/m; $\varepsilon_r$ = 40.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**835MHz @ 100mW Head/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.14 mW/g

**835MHz @ 100mW Head/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 36.4 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 1.46 W/kg
**SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.636 mW/g**
Maximum value of SAR (measured) = 1.14 mW/g




0 dB = 1.14mW/g

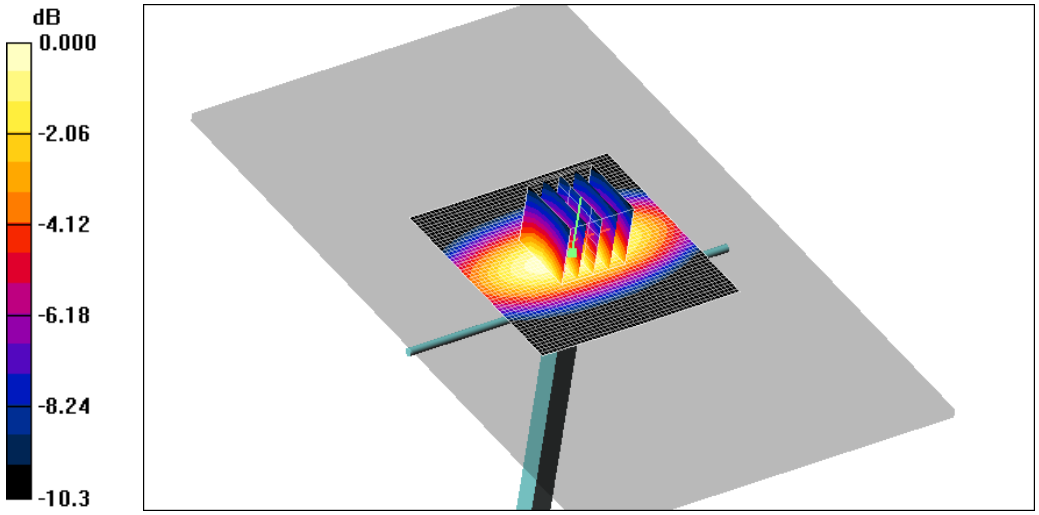
**DUT: Dipole 835 MHz; Serial: 4d111**
**Program Name: 835MHz Dipole Validation 2012.08.22**
**Procedure Name: 835MHz @ 100mW Body**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**835MHz @ 100mW Body/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.14 mW/g

**835MHz @ 100mW Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.1 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.38 W/kg
**SAR(1 g) = 0.951 mW/g; SAR(10 g) = 0.629 mW/g**
Maximum value of SAR (measured) = 1.10 mW/g




0 dB = 1.10mW/g

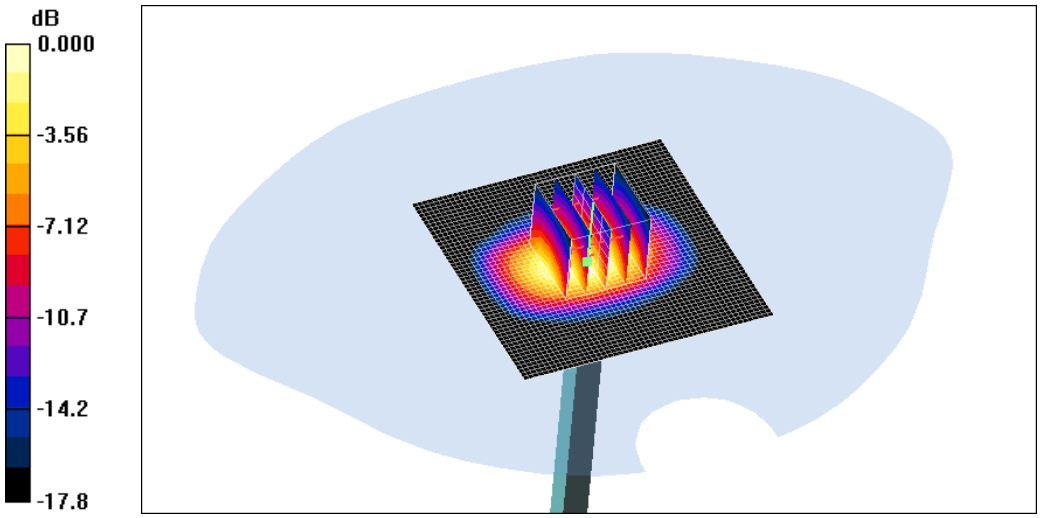
**DUT: Dipole 1900 MHz; Serial: 5d023**
**Program Name: 1900MHz Dipole Validation 2012.08.24**
**Procedure Name: 1900MHz @ 100mW Head**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.41 mho/m; $\varepsilon_r$ = 39.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**1900MHz @ 100mW Head/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 6.77 mW/g

**1900MHz @ 100mW Head/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.9 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 7.24 W/kg
**SAR(1 g) = 4.03 mW/g; SAR(10 g) = 2.11 mW/g**
Maximum value of SAR (measured) = 5.03 mW/g




0 dB = 5.03mW/g

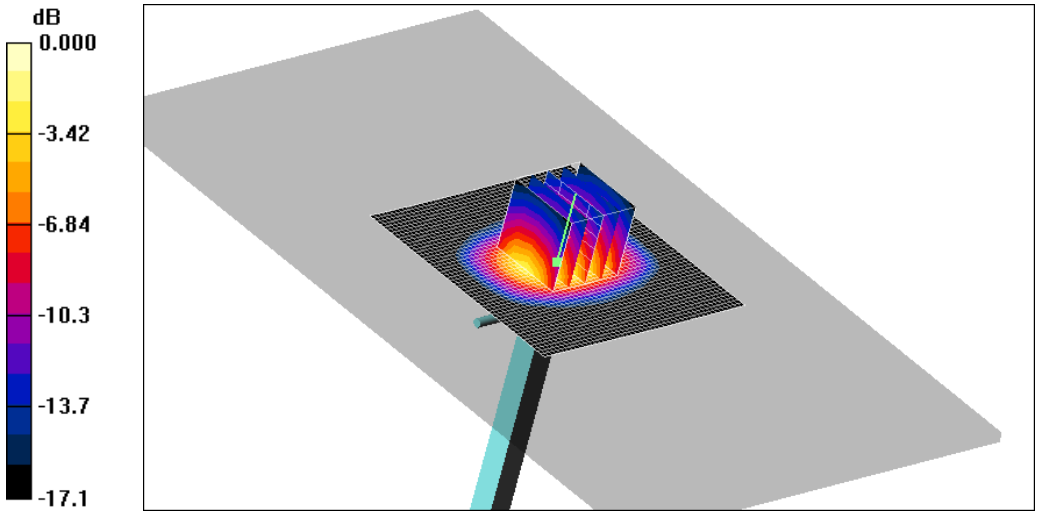
**DUT: Dipole 1900 MHz; Serial: 5d023**
**Program Name: 1900MHz Dipole Validation 2012.08.24**
**Procedure Name: 1900MHz @ 100mW Body**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.49 mho/m; $\varepsilon_r$ = 52; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**1900MHz @ 100mW Body/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 6.30 mW/g

**1900MHz @ 100mW Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.8 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 6.54 W/kg
**SAR(1 g) = 3.8 mW/g; SAR(10 g) = 2.02 mW/g**
Maximum value of SAR (measured) = 4.76 mW/g




0 dB = 4.76mW/g

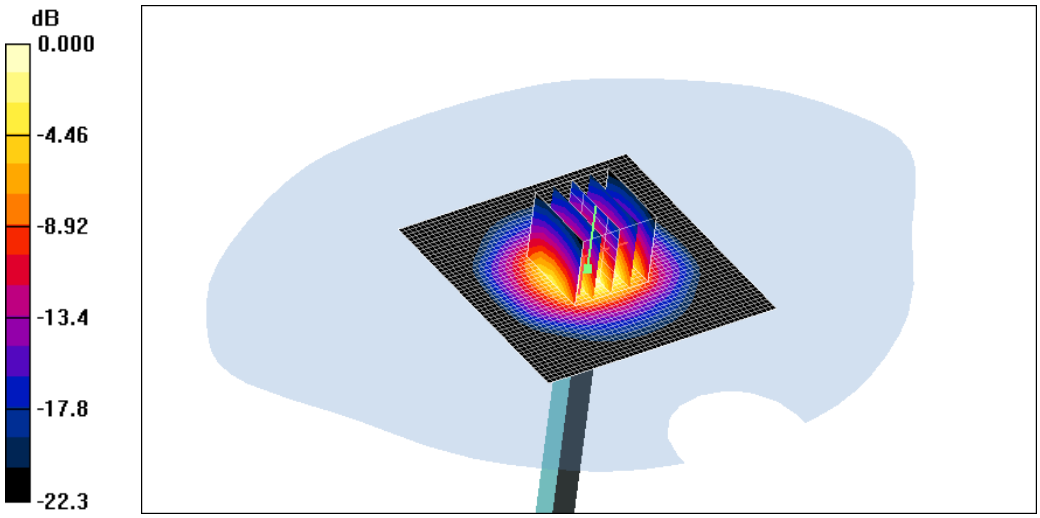
**DUT: Dipole 2450 MHz; Serial: D2450V2 - SN:807**
**Program Name: 2450MHz Dipole Validation 2012.08.27**
**Procedure Name: 2450MHz @ 100mW Head**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; $\sigma$ = 1.85 mho/m; $\varepsilon_r$ = 38.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**2450MHz @ 100mW Head/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 8.76 mW/g

**2450MHz @ 100mW Head/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.7 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 11.1 W/kg
**SAR(1 g) = 5.28 mW/g; SAR(10 g) = 2.44 mW/g**
Maximum value of SAR (measured) = 6.00 mW/g




0 dB = 6.00mW/g

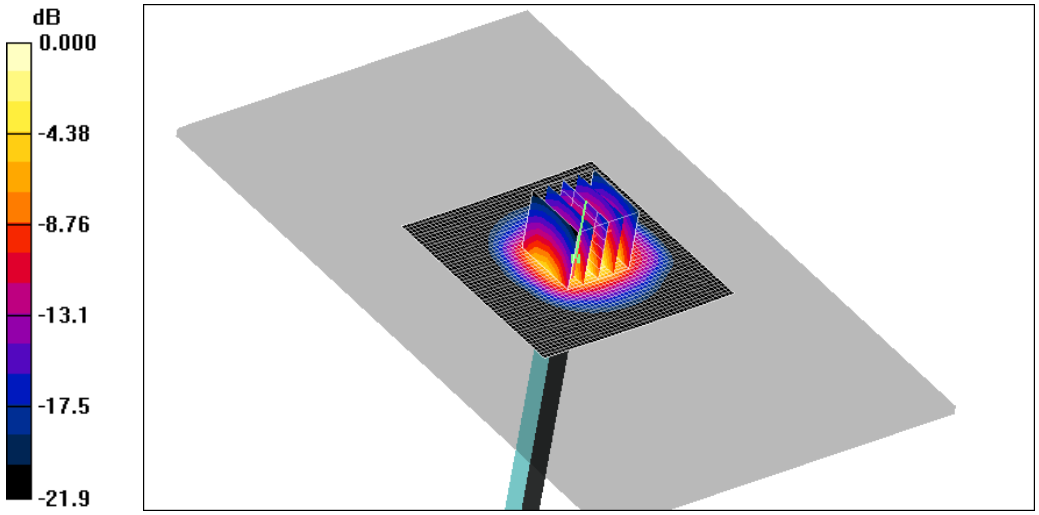
**DUT: Dipole 2450 MHz; Serial: D2450V2 - SN:807**
**Program Name: 2450MHz Dipole Validation 2012.08.27**
**Procedure Name: 2450MHz @ 100mW Body**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; $\sigma$ = 1.94 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**2450MHz @ 100mW Body/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 6.94 mW/g

**2450MHz @ 100mW Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 56.5 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 10.2 W/kg
**SAR(1 g) = 5.06 mW/g; SAR(10 g) = 2.39 mW/g**
Maximum value of SAR (measured) = 6.51 mW/g




0 dB = 6.51mW/g

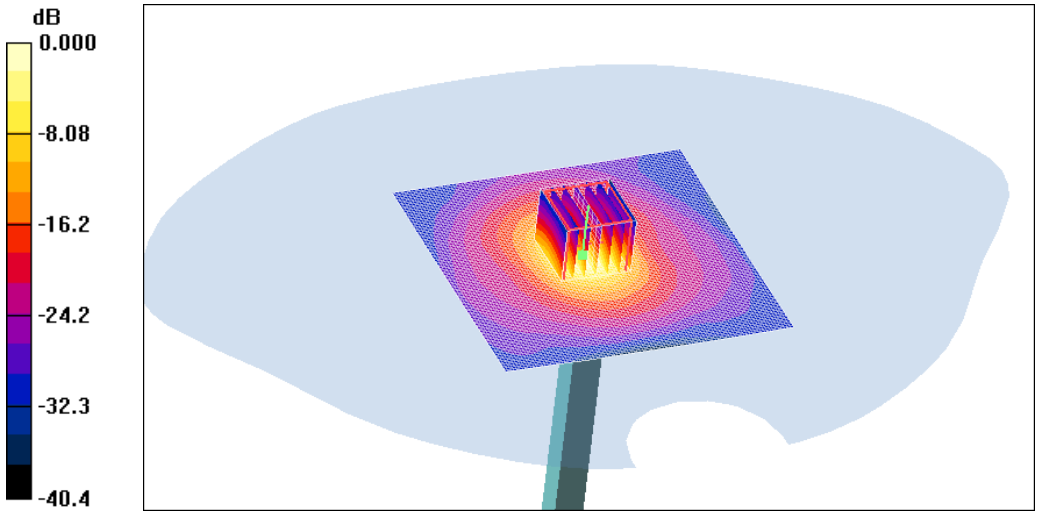
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5200MHz Dipole Validation 2012.08.24**
**Procedure Name: 5200MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.85 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.91, 4.91, 4.91); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5200MHz @ 100mW/Area Scan (101x101x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.6 mW/g

**5200MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 56.5 V/m; Power Drift = 0.170 dB
Peak SAR (extrapolated) = 35.2 W/kg
**SAR(1 g) = 8.29 mW/g; SAR(10 g) = 2.34 mW/g**
Maximum value of SAR (measured) = 17.5 mW/g




0 dB = 17.5mW/g

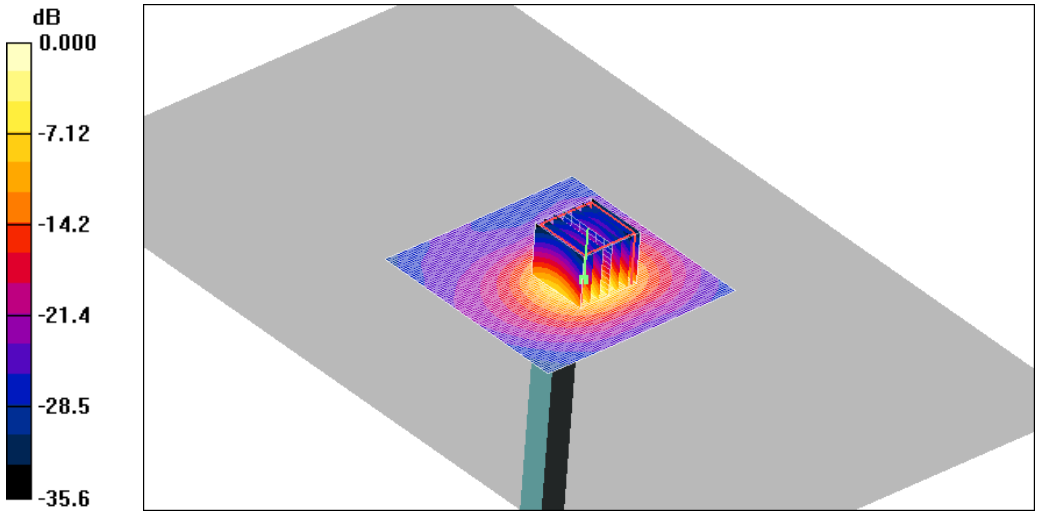
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5200MHz Dipole Validation 2012.08.27**
**Procedure Name: 5200MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 47.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.9, 3.9, 3.9); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5200MHz @ 100mW/Area Scan (81x81x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.1 mW/g

**5200MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 41.5 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 28.9 W/kg
**SAR(1 g) = 7.28 mW/g; SAR(10 g) = 2.06 mW/g**
Maximum value of SAR (measured) = 15.4 mW/g




0 dB = 15.4mW/g

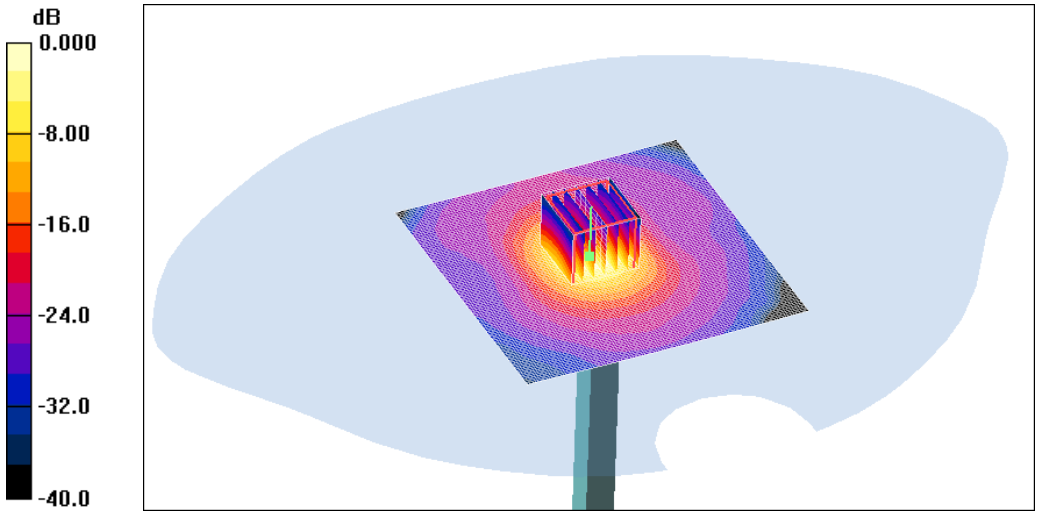
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5500MHz Dipole Validation 2012.08.24**
**Procedure Name: 5500MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; $\sigma$ = 5.2 mho/m; $\varepsilon_r$ = 34.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.52, 4.52, 4.52); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5500MHz @ 100mW/Area Scan (101x101x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 17.1 mW/g

**5500MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 53.9 V/m; Power Drift = -0.119 dB
Peak SAR (extrapolated) = 36.1 W/kg
**SAR(1 g) = 8.28 mW/g; SAR(10 g) = 2.35 mW/g**
Maximum value of SAR (measured) = 17.5 mW/g




0 dB = 17.5mW/g

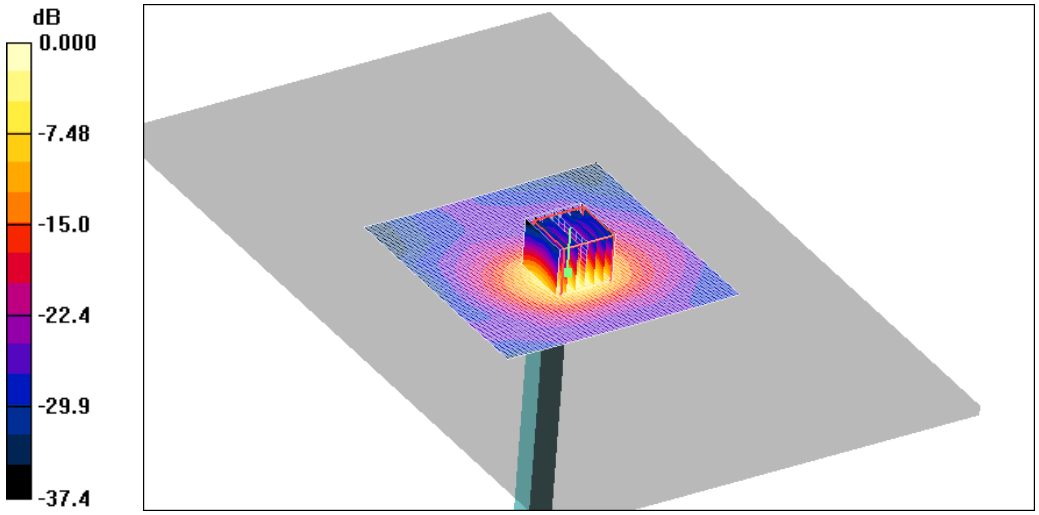
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5500MHz Dipole Validation 2012.08.27**
**Procedure Name: 5500MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; $\sigma$ = 5.91 mho/m; $\varepsilon_r$ = 47.2; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.38, 3.38, 3.38); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5500MHz @ 100mW/Area Scan (101x101x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 19.0 mW/g

**5500MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.9 V/m; Power Drift = -0.078 dB
Peak SAR (extrapolated) = 33.4 W/kg
**SAR(1 g) = 8.11 mW/g; SAR(10 g) = 2.27 mW/g**
Maximum value of SAR (measured) = 17.0 mW/g




0 dB = 17.0mW/g

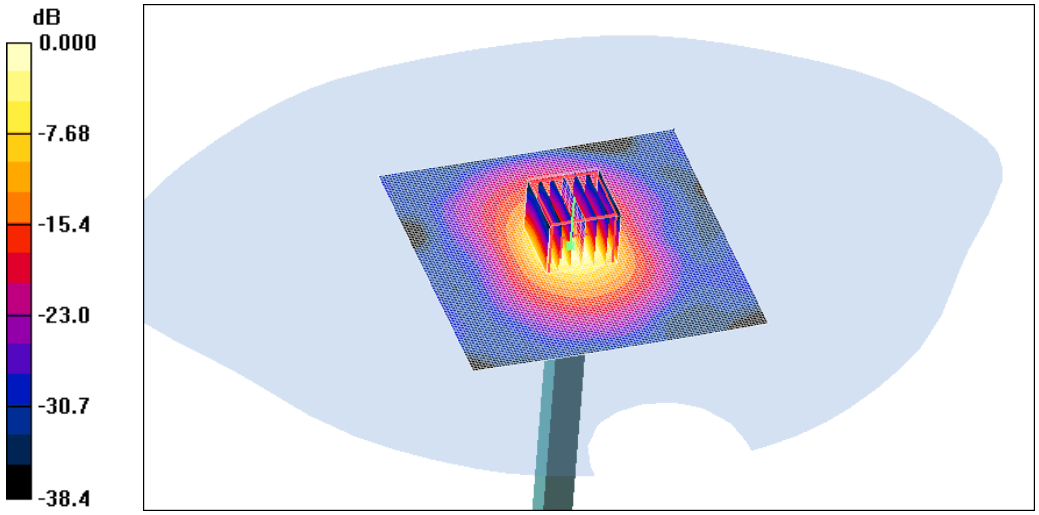
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5800MHz Dipole Validation 2012.08.24**
**Procedure Name: 5800MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; $\sigma$ = 5.47 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5800MHz @ 100mW/Area Scan (101x101x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.1 mW/g

**5800MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.5 V/m; Power Drift = 0.124 dB
Peak SAR (extrapolated) = 40.4 W/kg
**SAR(1 g) = 8.75 mW/g; SAR(10 g) = 2.49 mW/g**
Maximum value of SAR (measured) = 18.2 mW/g




0 dB = 18.2mW/g

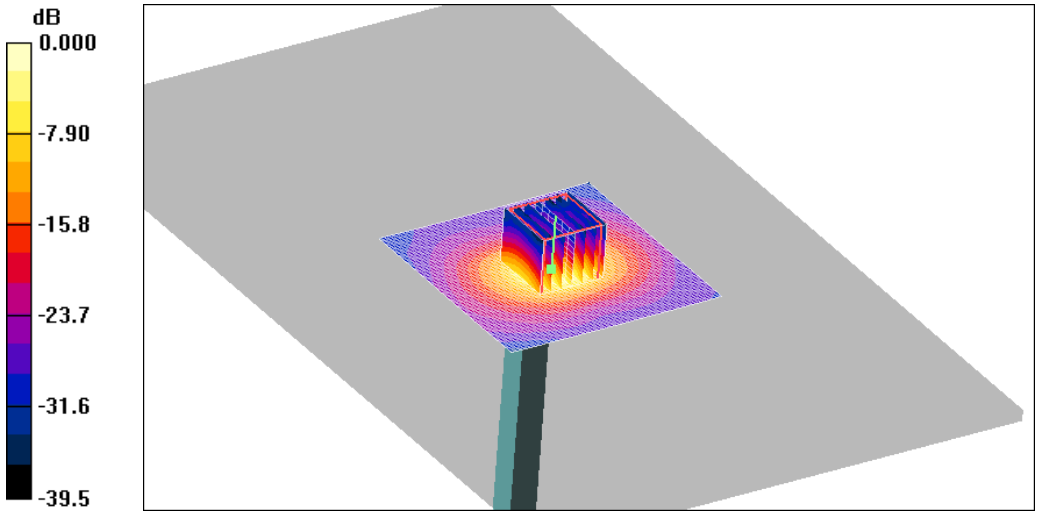
**DUT: Dipole 5000 MHz; Serial: D5GHzV2 - SN:1132**
**Program Name: 5800MHz Dipole Validation 2012.08.27**
**Procedure Name: 5800MHz @ 100mW**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; $\sigma$ = 6.17 mho/m; $\varepsilon_r$ = 46.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.5, 3.5, 3.5); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**5800MHz @ 100mW/Area Scan (81x81x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.5 mW/g

**5800MHz @ 100mW/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 30.3 V/m; Power Drift = 0.190 dB
Peak SAR (extrapolated) = 32.3 W/kg
**SAR(1 g) = 7.63 mW/g; SAR(10 g) = 2.13 mW/g**
Maximum value of SAR (measured) = 16.6 mW/g




0 dB = 16.6mW/g

# APPENDIX E

## Plots of The SAR Measurements

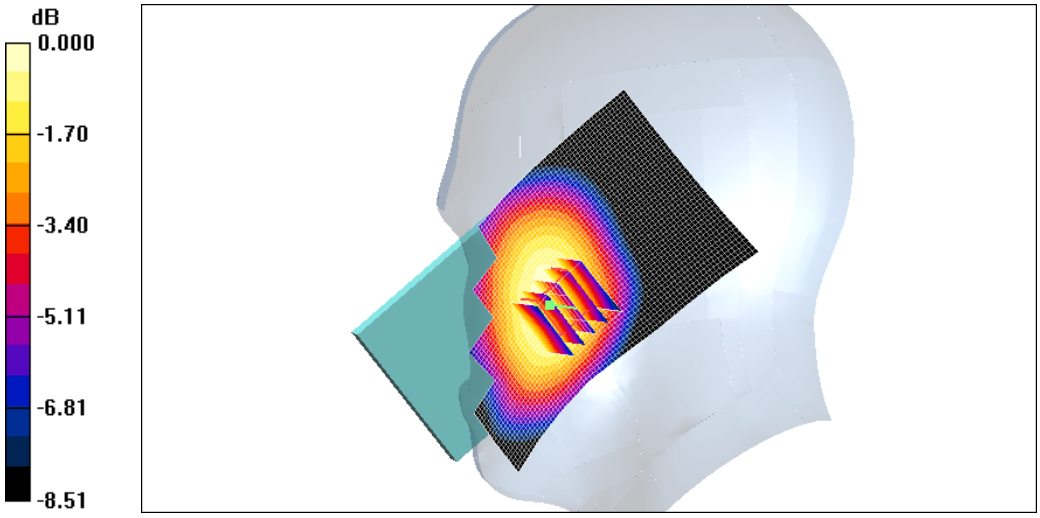
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Right (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.088 mW/g

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.81 V/m; Power Drift = 0.040 dB
Peak SAR (extrapolated) = 0.099 W/kg
**SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.063 mW/g**
Maximum value of SAR (measured) = 0.088 mW/g




0 dB = 0.088mW/g

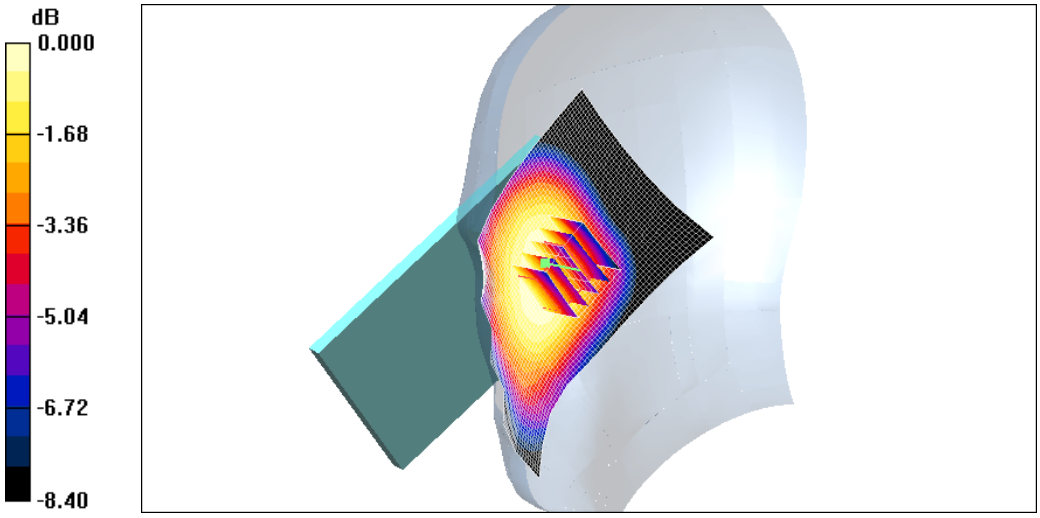
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Right (Job No. : FJ-216)**
**Procedure Name: Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.044 mW/g

**Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.01 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 0.050 W/kg
**SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.032 mW/g**
Maximum value of SAR (measured) = 0.044 mW/g




0 dB = 0.044mW/g

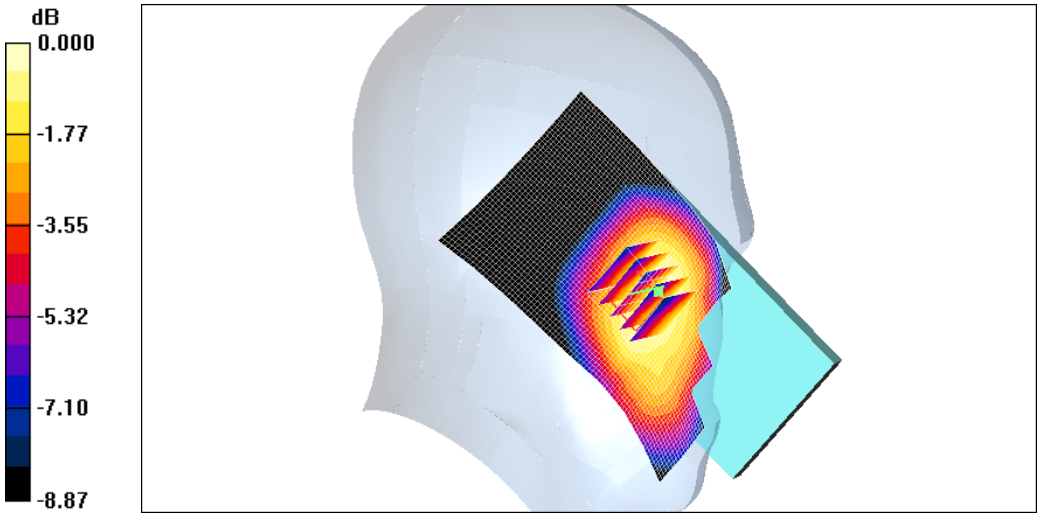
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Left (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.092 mW/g

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.107 W/kg
**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.068 mW/g**
Maximum value of SAR (measured) = 0.095 mW/g




0 dB = 0.095mW/g

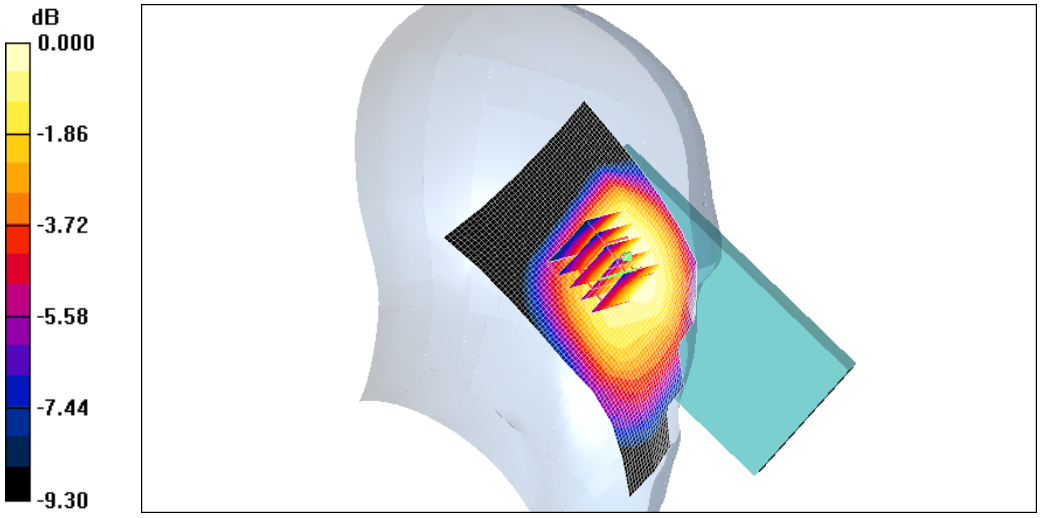
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Left (Job No. : FJ-216)**
**Procedure Name: Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.060 mW/g

**Ear/Tilt, Ch.190, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.02 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.064 W/kg
**SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.041 mW/g**
Maximum value of SAR (measured) = 0.057 mW/g




0 dB = 0.057mW/g

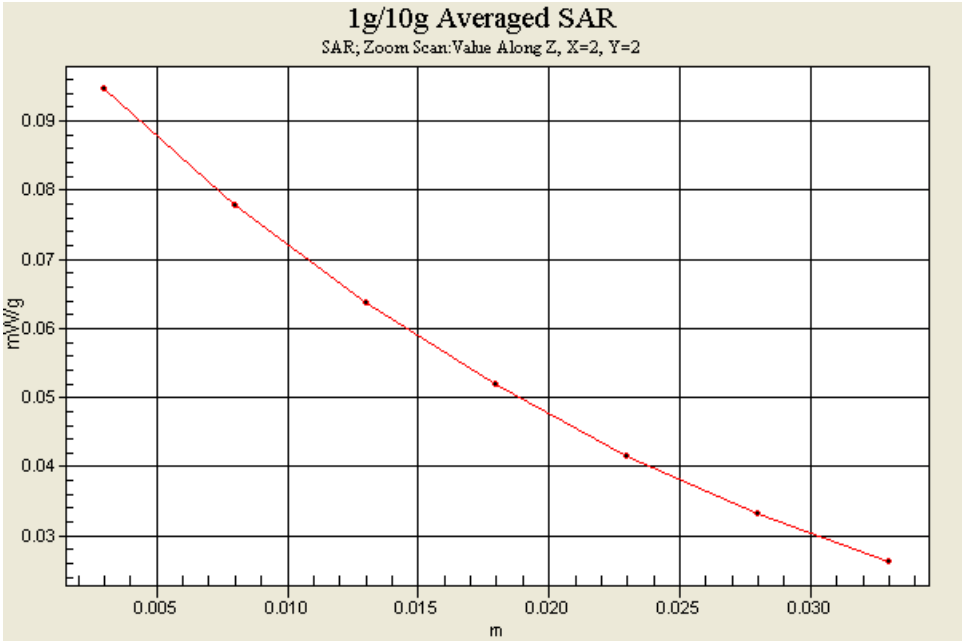
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Left (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.092 mW/g

**Cheek/Touch, Ch.190, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.107 W/kg
**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.068 mW/g**
Maximum value of SAR (measured) = 0.095 mW/g



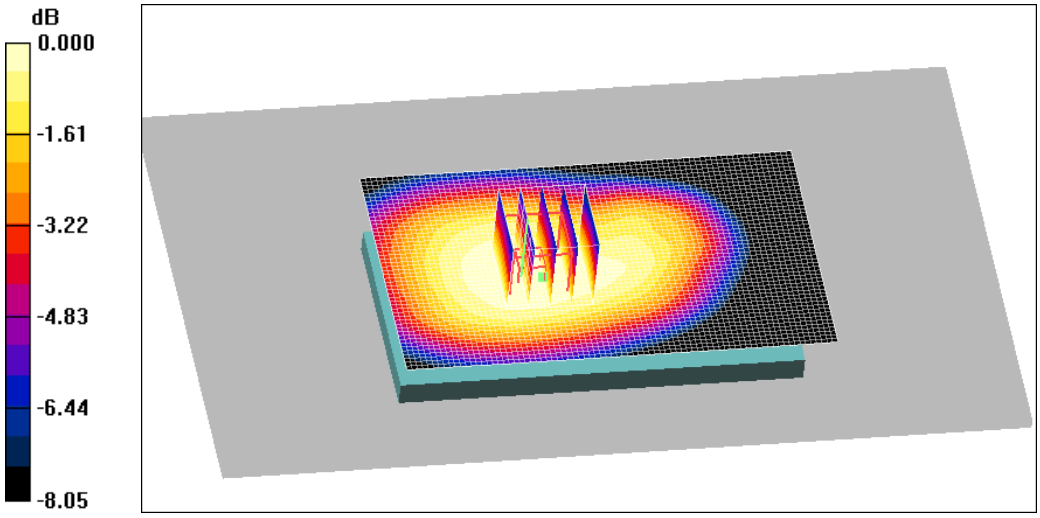
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.238 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.267 W/kg
**SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.169 mW/g**
Maximum value of SAR (measured) = 0.235 mW/g




0 dB = 0.235mW/g

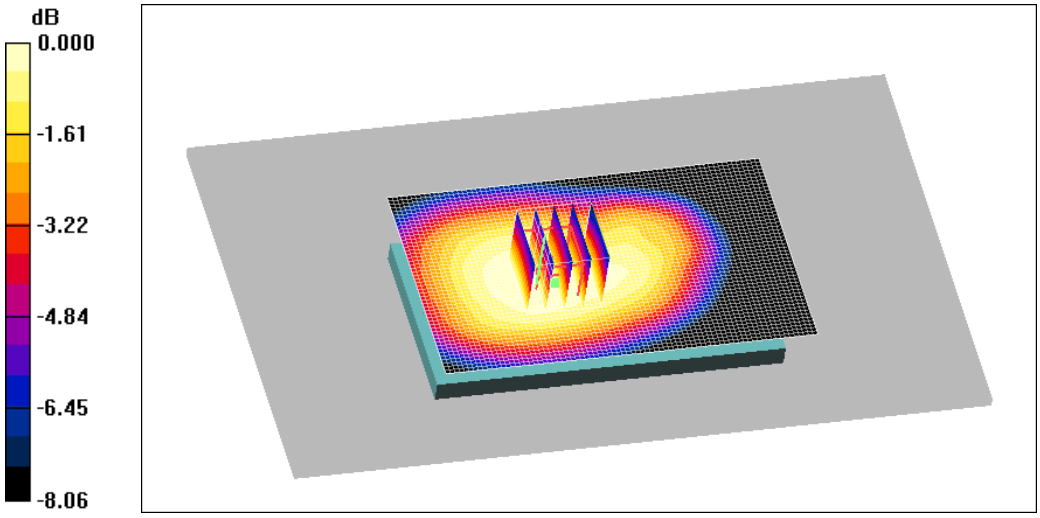
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.228 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.1 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 0.257 W/kg
**SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.162 mW/g**
Maximum value of SAR (measured) = 0.226 mW/g




0 dB = 0.226mW/g

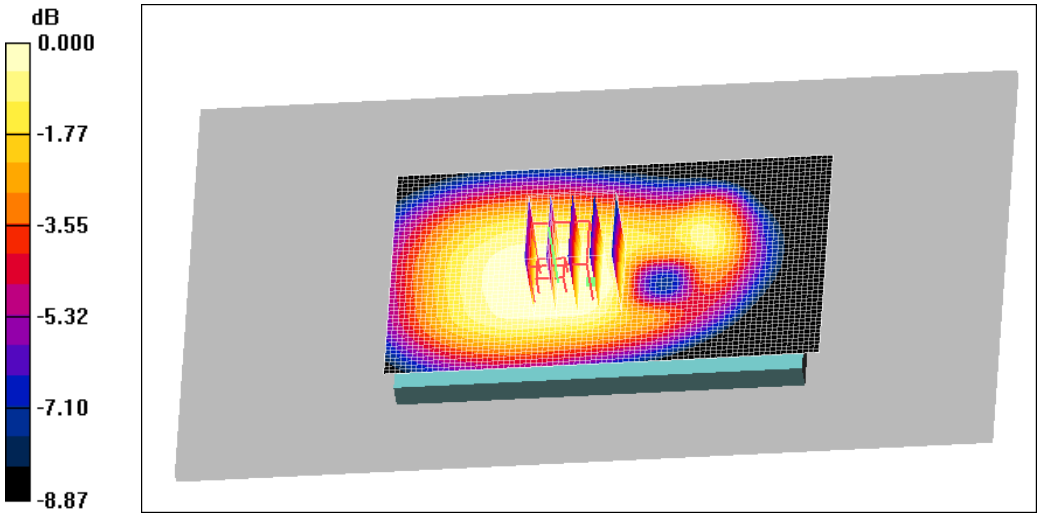
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.510 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm/Zoom Scan 2 (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.0 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.541 W/kg
**SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.337 mW/g**
Maximum value of SAR (measured) = 0.474 mW/g




0 dB = 0.474mW/g

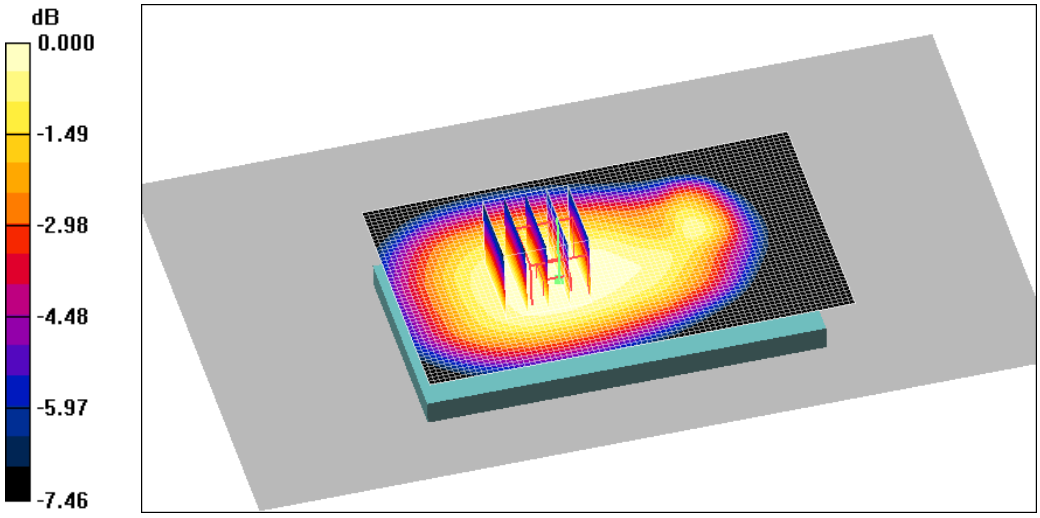
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.562 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.1 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 0.634 W/kg
**SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.394 mW/g**
Maximum value of SAR (measured) = 0.554 mW/g




0 dB = 0.554mW/g

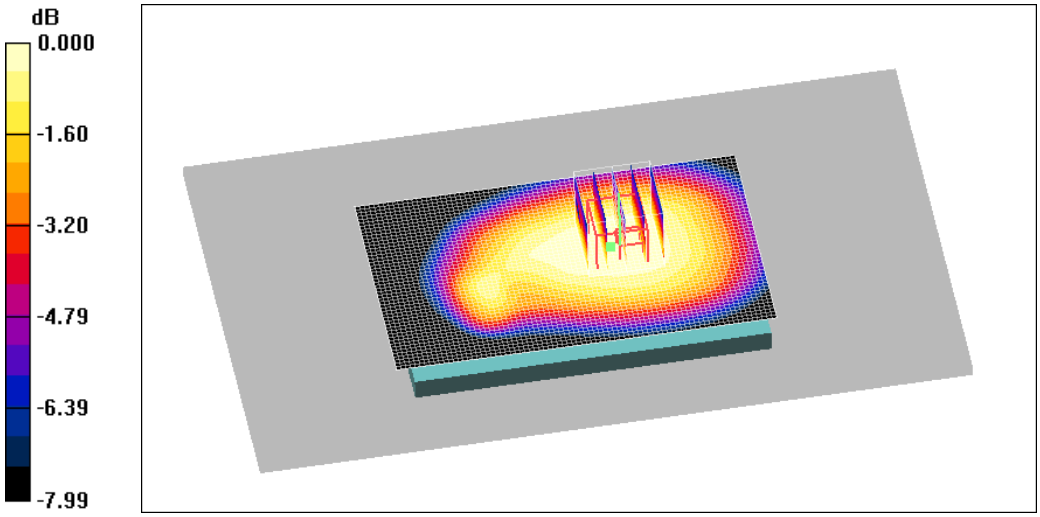
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.075
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.401 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 0.469 W/kg
**SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.284 mW/g**
Maximum value of SAR (measured) = 0.398 mW/g




0 dB = 0.398mW/g

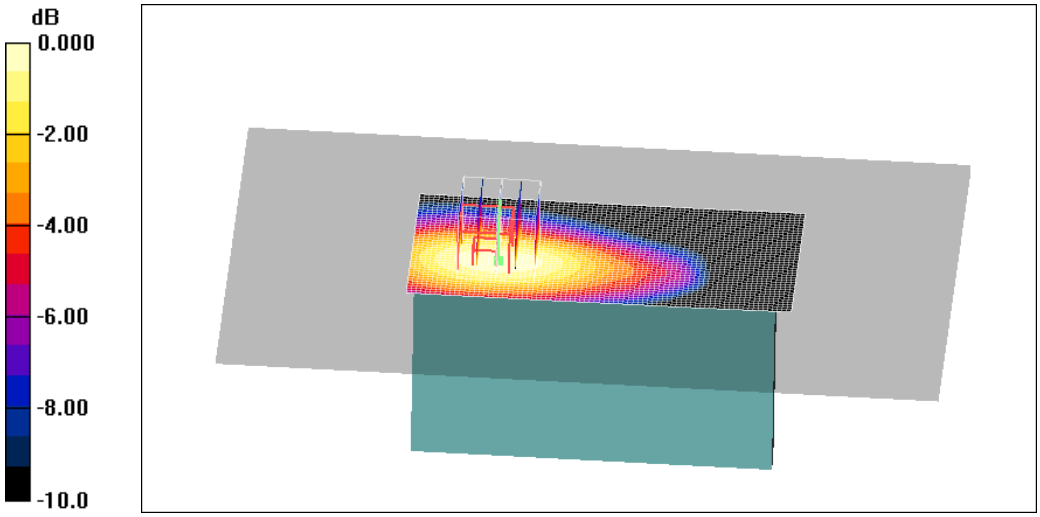
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Left, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Left, 10mm/Area Scan (41x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.223 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Left, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.292 W/kg
**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.133 mW/g**
Maximum value of SAR (measured) = 0.227 mW/g




0 dB = 0.227mW/g

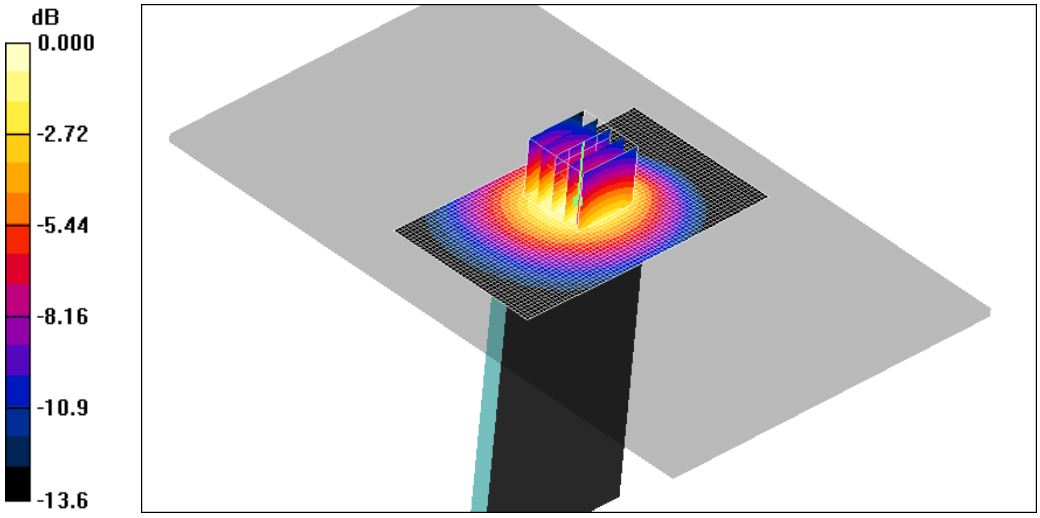
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Bottom, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Bottom, 10mm/Area Scan (71x41x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.275 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Bottom, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.351 W/kg
**SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.150 mW/g**
Maximum value of SAR (measured) = 0.271 mW/g




0 dB = 0.271mW/g

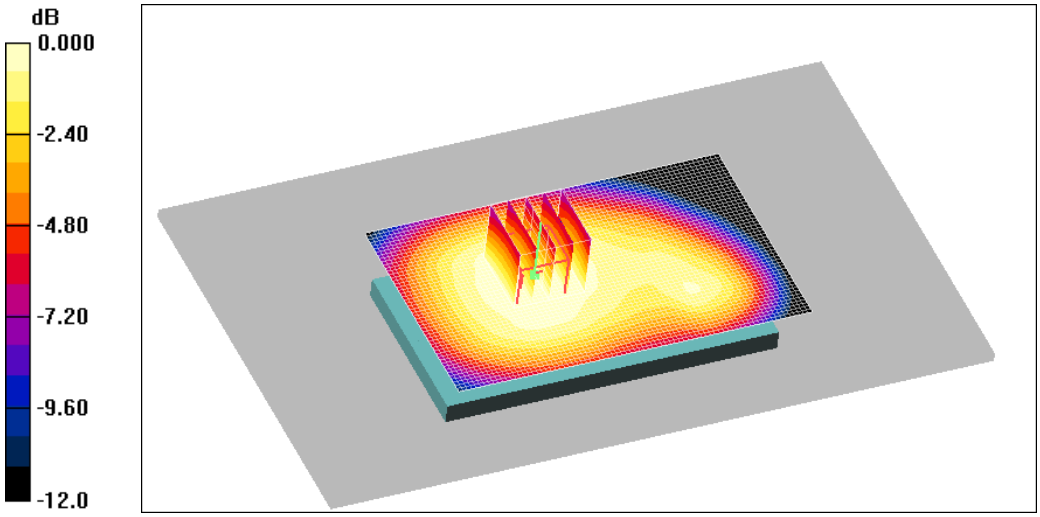
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Front, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Front, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.255 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Front, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.4 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 0.288 W/kg
**SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.180 mW/g**
Maximum value of SAR (measured) = 0.253 mW/g




0 dB = 0.253mW/g

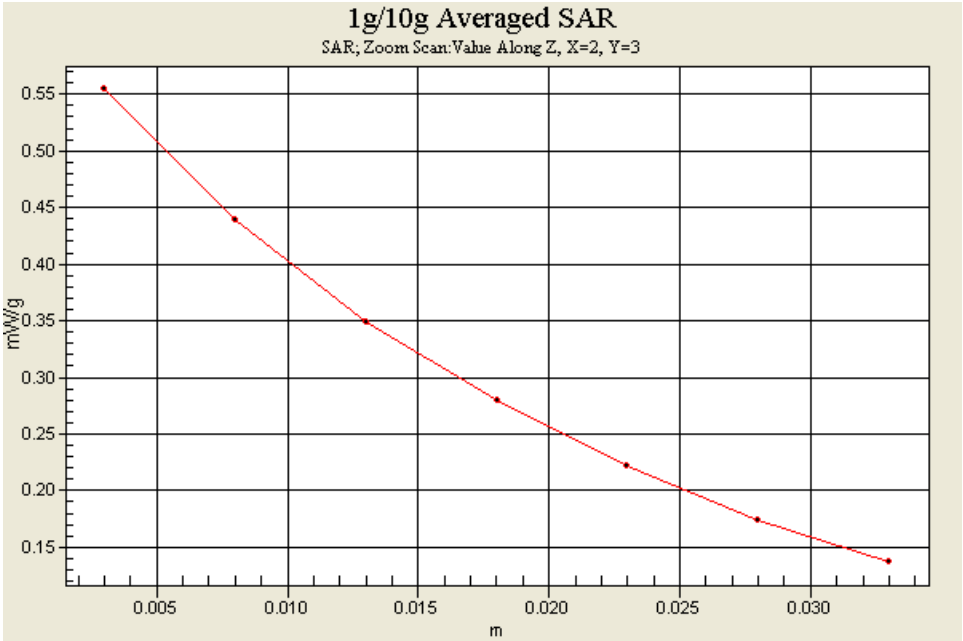
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.562 mW/g

**Body, Ch.190, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.1 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 0.634 W/kg
**SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.394 mW/g**
Maximum value of SAR (measured) = 0.554 mW/g



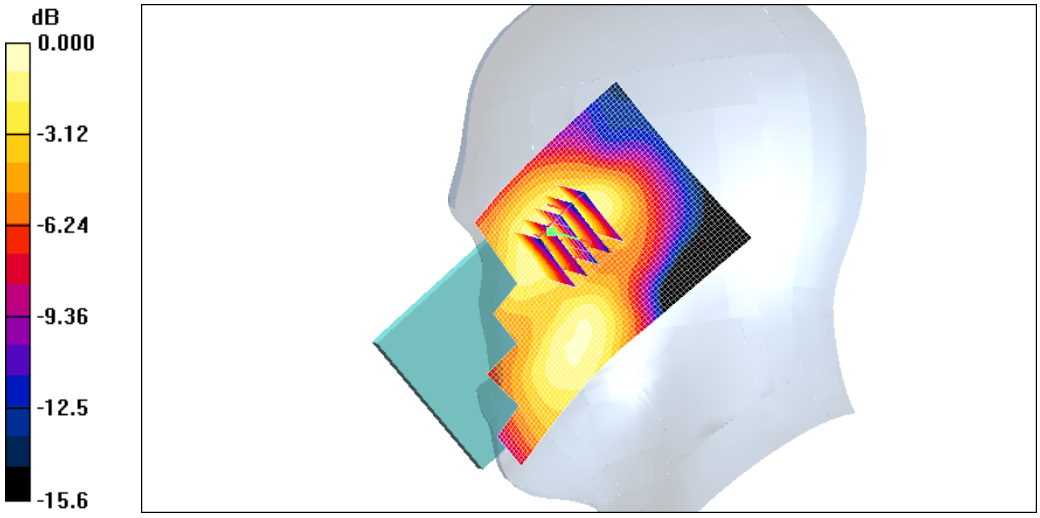
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.661, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.38 mho/m; $\varepsilon_r$ = 39.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.045 mW/g

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.37 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.068 W/kg
**SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.027 mW/g**
Maximum value of SAR (measured) = 0.052 mW/g




0 dB = 0.052mW/g

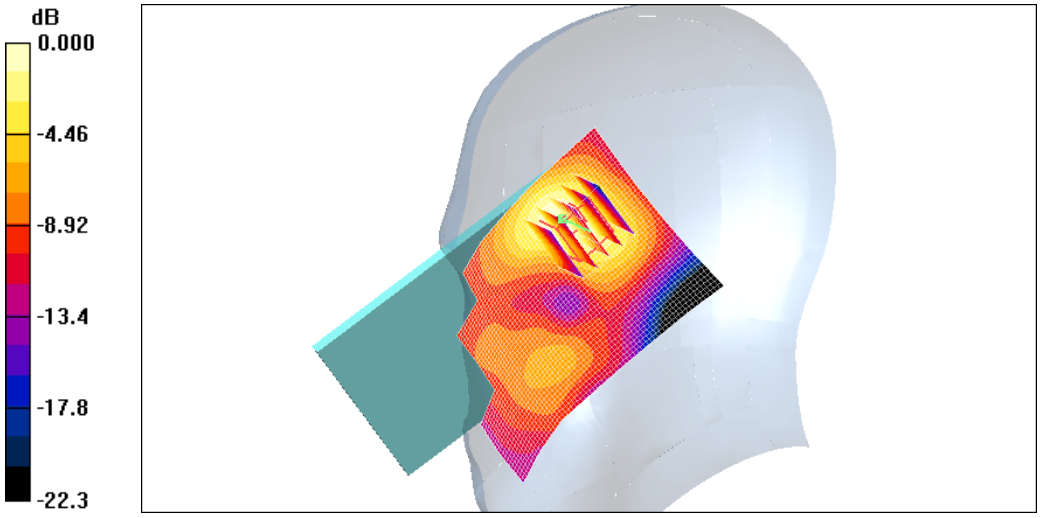
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.661, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.38 mho/m; $\varepsilon_r$ = 39.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.661, Ant.Intenna, Bat.Standard/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.053 mW/g

**Tilt, Ch.661, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.20 V/m; Power Drift = -0.116 dB
Peak SAR (extrapolated) = 0.068 W/kg
**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.027 mW/g**
Maximum value of SAR (measured) = 0.052 mW/g




0 dB = 0.052mW/g

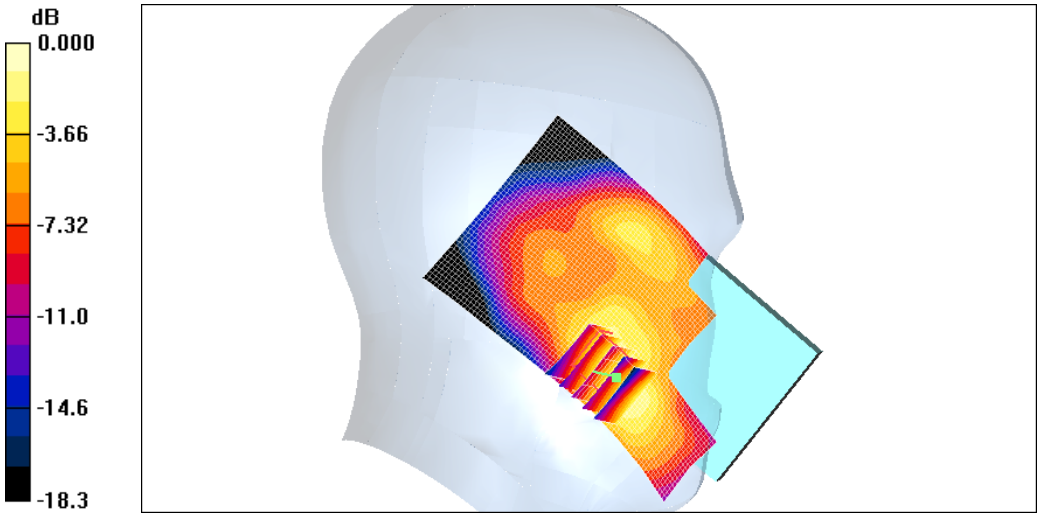
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.661, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.38 mho/m; $\varepsilon_r$ = 39.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.071 mW/g

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.53 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.092 W/kg
**SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.038 mW/g**
Maximum value of SAR (measured) = 0.071 mW/g




0 dB = 0.071mW/g

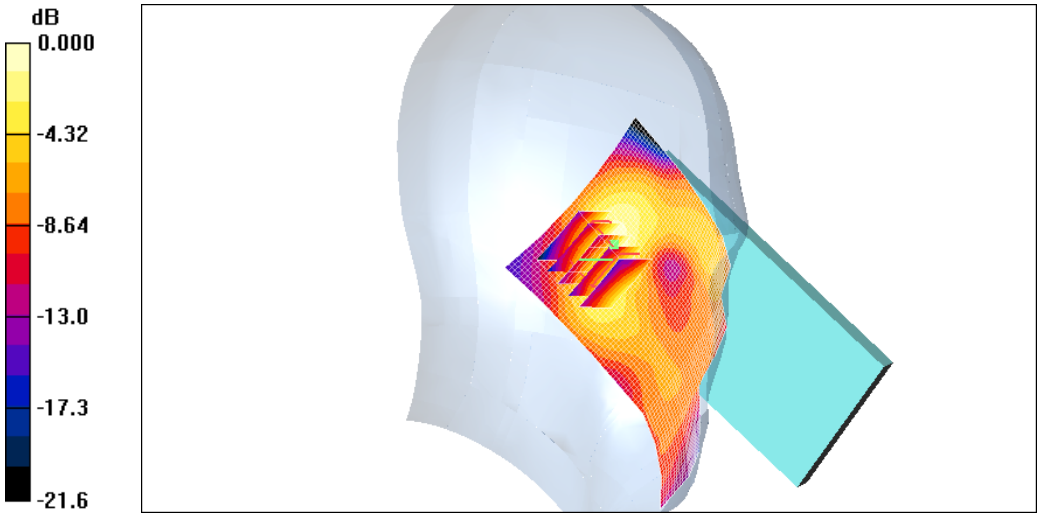
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.661, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.38 mho/m; $\varepsilon_r$ = 39.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.661, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.037 mW/g

**Tilt, Ch.661, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.66 V/m; Power Drift = -0.003 dB
Peak SAR (extrapolated) = 0.051 W/kg
**SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.020 mW/g**
Maximum value of SAR (measured) = 0.039 mW/g




0 dB = 0.039mW/g

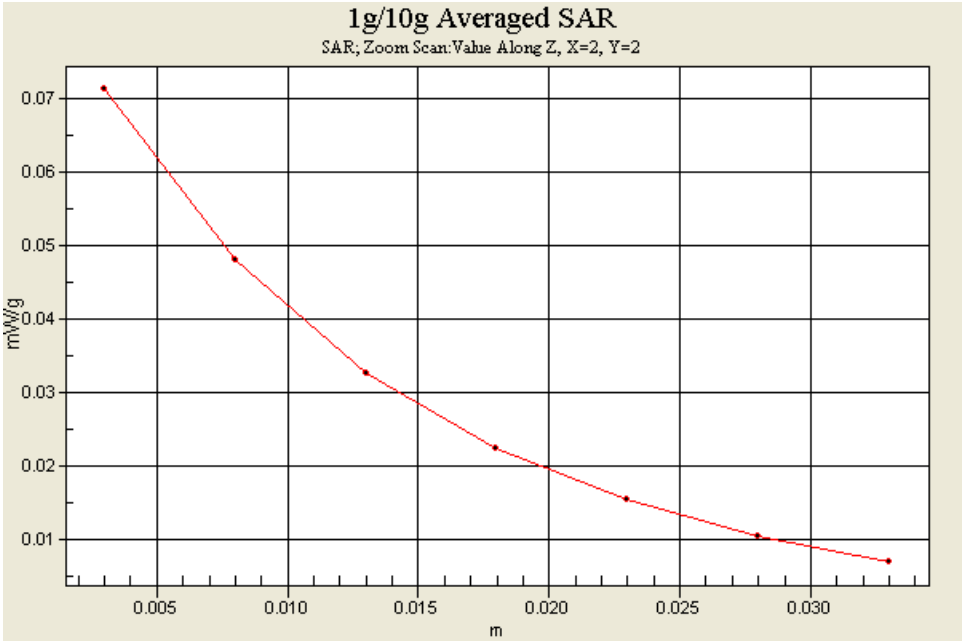
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.661, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.7,Tissue Temp(celsius)-22.4;Test Date-24/Aug/2012**

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.38 mho/m; $\varepsilon_r$ = 39.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.94, 4.94, 4.94); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.071 mW/g

**Cheek, Ch.661, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.53 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.092 W/kg
**SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.038 mW/g**
Maximum value of SAR (measured) = 0.071 mW/g



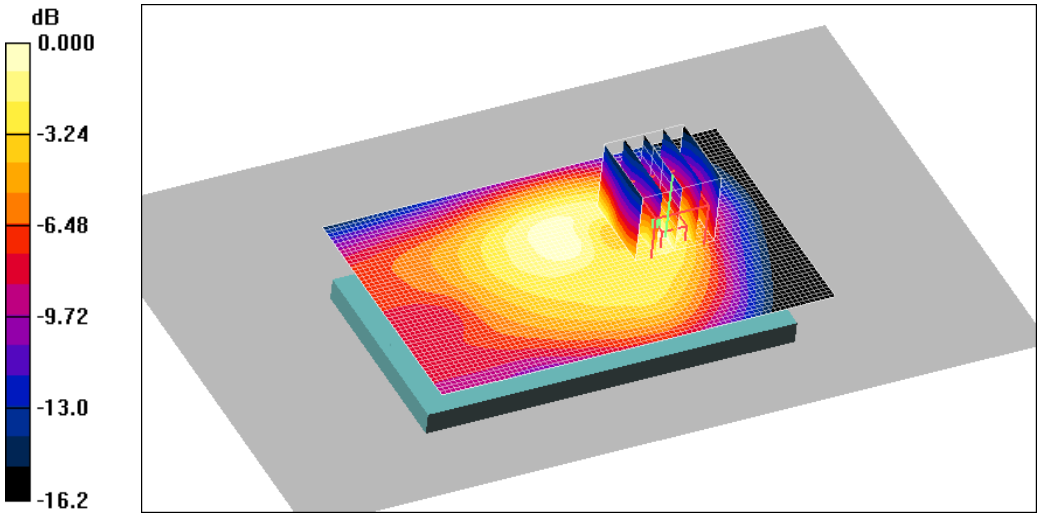
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GSM1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.196 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, Voice call, 1Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.86 V/m; Power Drift = 0.046 dB
Peak SAR (extrapolated) = 0.264 W/kg
**SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.085 mW/g**
Maximum value of SAR (measured) = 0.202 mW/g




0 dB = 0.202mW/g

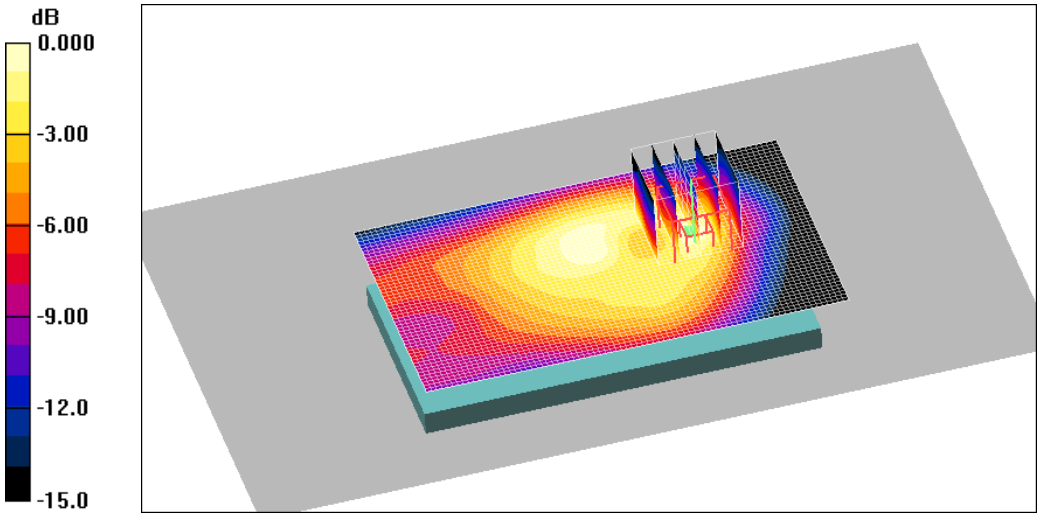
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.200 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 1Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.263 W/kg
**SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.086 mW/g**
Maximum value of SAR (measured) = 0.203 mW/g




0 dB = 0.203mW/g

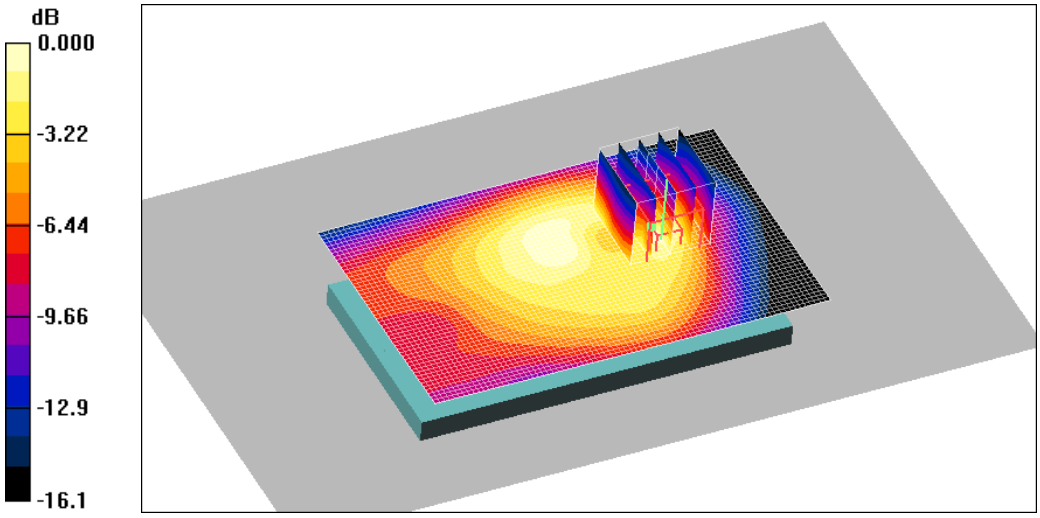
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.381 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.9 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.586 W/kg
**SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.161 mW/g**
Maximum value of SAR (measured) = 0.382 mW/g




0 dB = 0.382mW/g

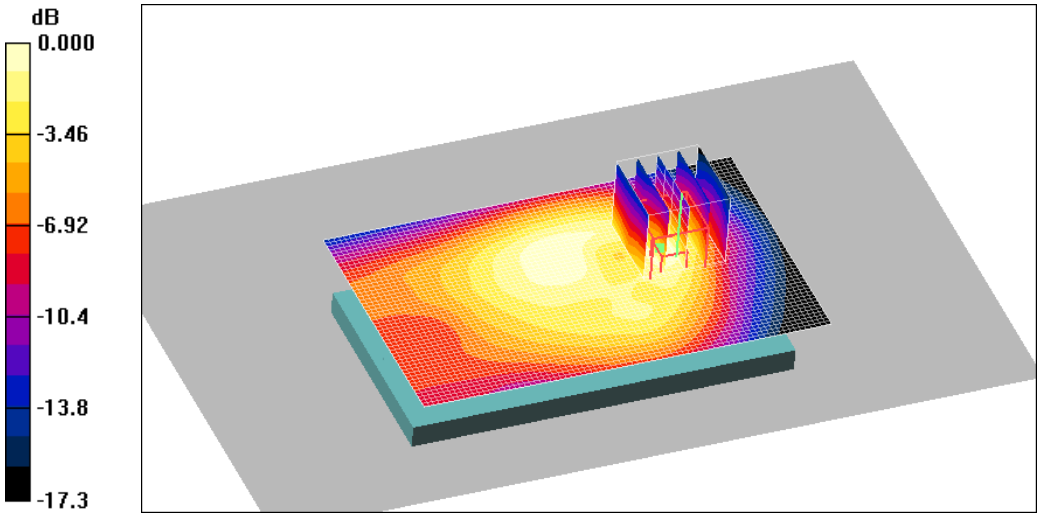
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:2.767
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.376 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 3Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.8 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.496 W/kg
**SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.159 mW/g**
Maximum value of SAR (measured) = 0.353 mW/g




0 dB = 0.353mW/g

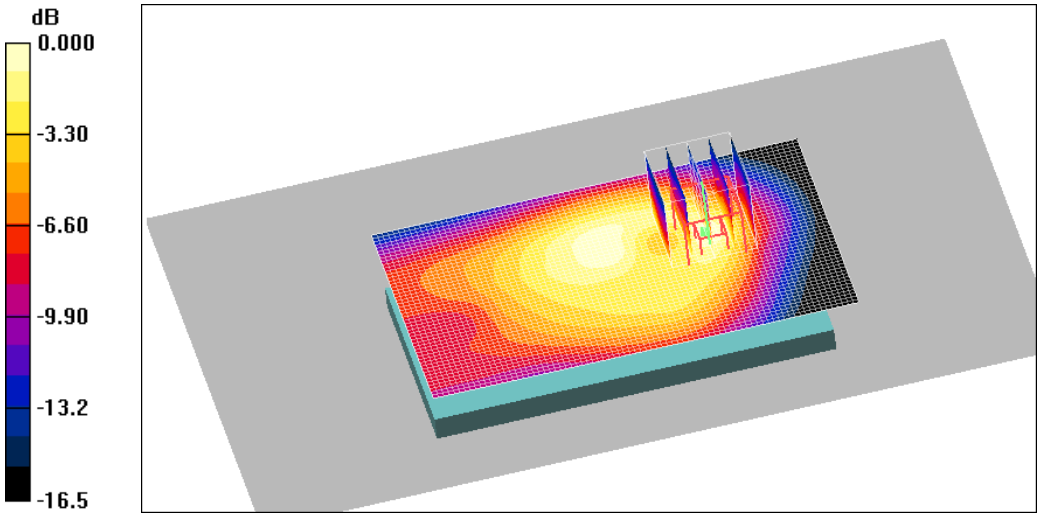
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:2.075
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.238 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 4Tx, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.317 W/kg
**SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.102 mW/g**
Maximum value of SAR (measured) = 0.243 mW/g




0 dB = 0.243mW/g

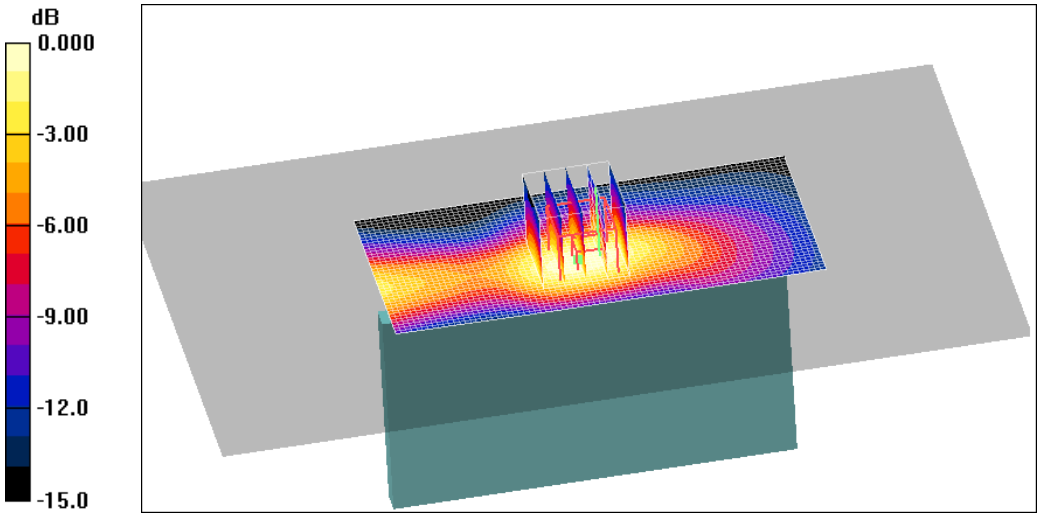
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Left, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Left, 10mm/Area Scan (41x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.277 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Left, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.361 W/kg
**SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.139 mW/g**
Maximum value of SAR (measured) = 0.275 mW/g




0 dB = 0.275mW/g

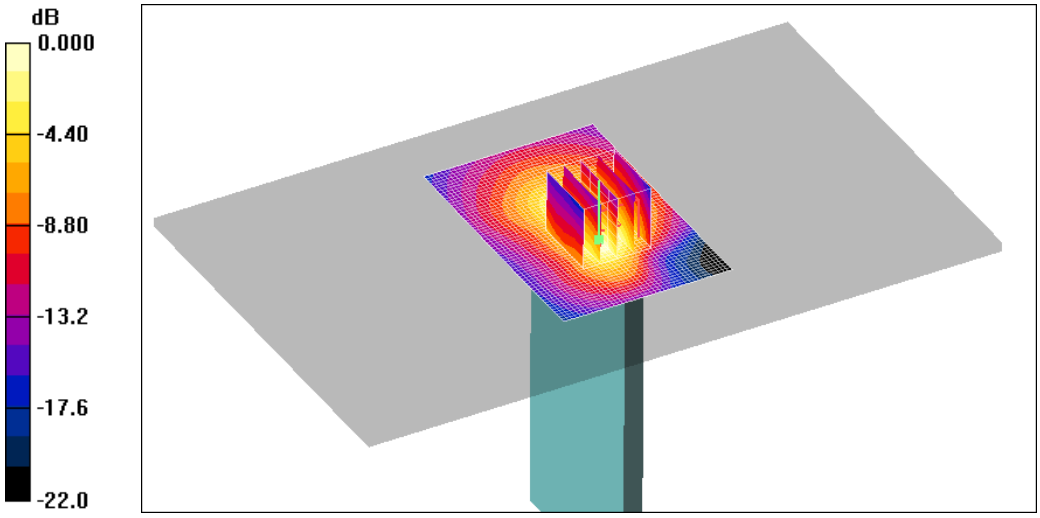
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm/Area Scan (61x41x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.425 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.4 V/m; Power Drift = 0.000 dB
Peak SAR (extrapolated) = 0.580 W/kg
**SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.188 mW/g**
Maximum value of SAR (measured) = 0.408 mW/g




0 dB = 0.408mW/g

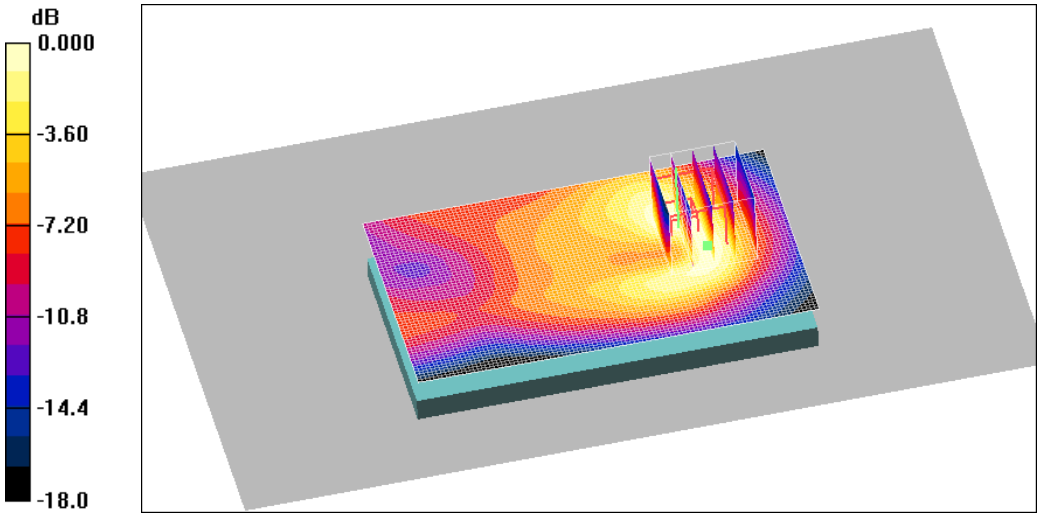
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Front, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Front, 10mm/Area Scan (61x101x1):**
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.317 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Front, 10mm/Zoom Scan 2 (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.85 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 0.451 W/kg
**SAR(1 g) = 0.280 mW/g; SAR(10 g) = 0.159 mW/g**
Maximum value of SAR (measured) = 0.333 mW/g




0 dB = 0.333mW/g

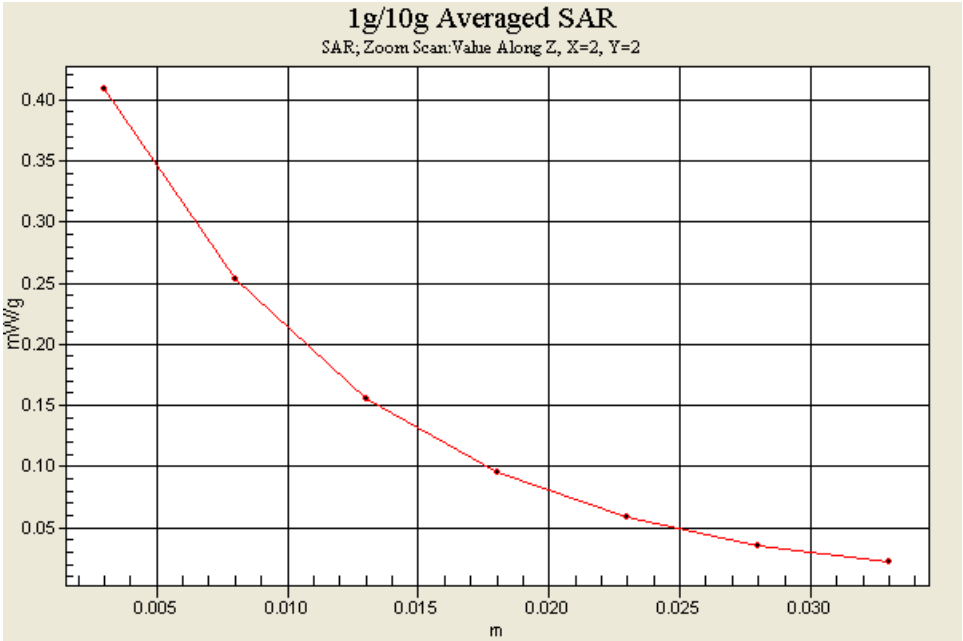
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 GPRS1900 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.2;Test Date-24/Aug/2012**

Communication System: Body GPRS ; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 52.1; $\rho$ = 1000 kg/$m^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.56, 4.56, 4.56); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm/Area Scan (61x41x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.425 mW/g

**Body, Ch.661, Ant.Intenna, Bat.Standard, 2Tx, Bottom, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.4 V/m; Power Drift = 0.000 dB
Peak SAR (extrapolated) = 0.580 W/kg
**SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.188 mW/g**
Maximum value of SAR (measured) = 0.408 mW/g



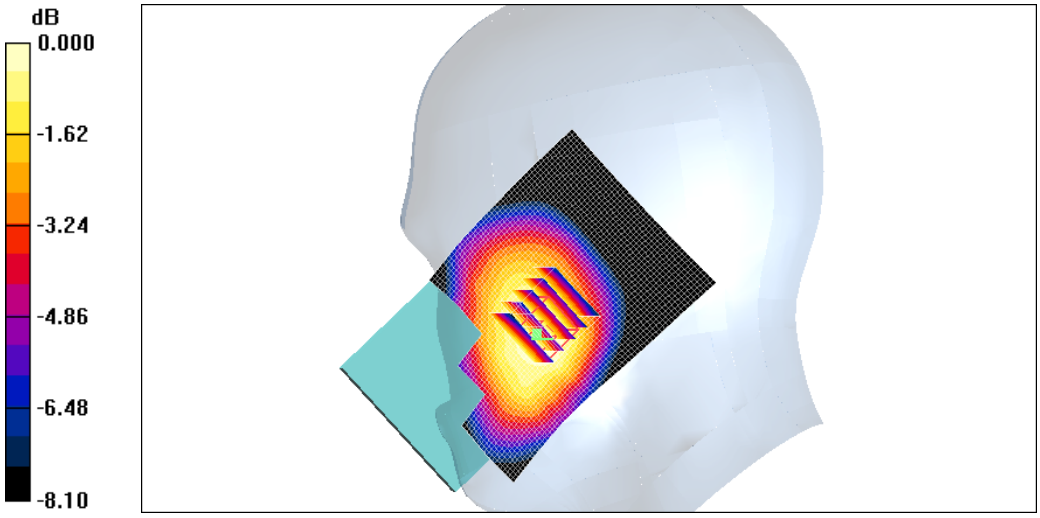
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Right (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.078 mW/g

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.17 V/m; Power Drift = 0.031 dB
Peak SAR (extrapolated) = 0.089 W/kg
**SAR(1 g) = 0.072 mW/g; SAR(10 g) = 0.056 mW/g**
Maximum value of SAR (measured) = 0.078 mW/g




0 dB = 0.078mW/g

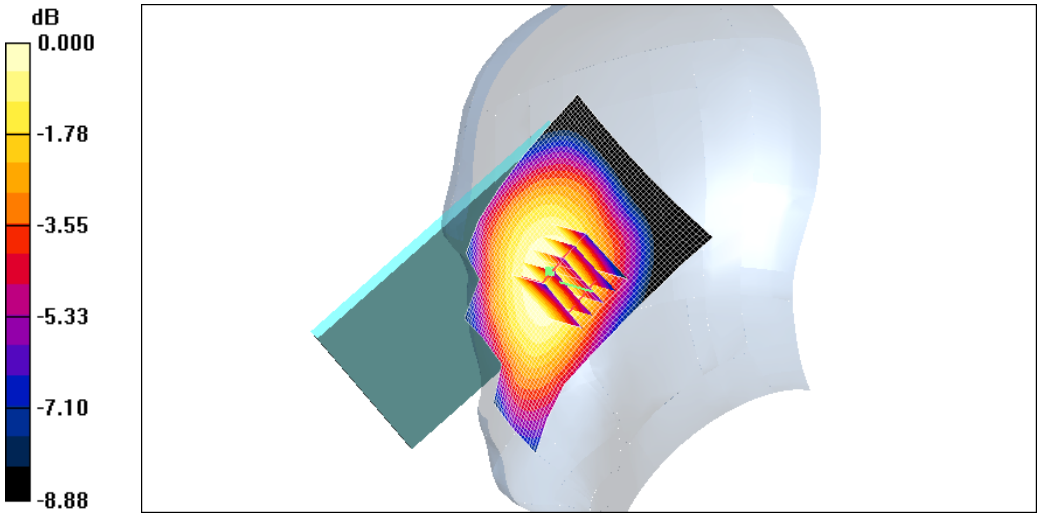
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Right (Job No. : FJ-216)**
**Procedure Name: Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.041 mW/g

**Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.62 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.045 W/kg
**SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.030 mW/g**
Maximum value of SAR (measured) = 0.040 mW/g




0 dB = 0.040mW/g

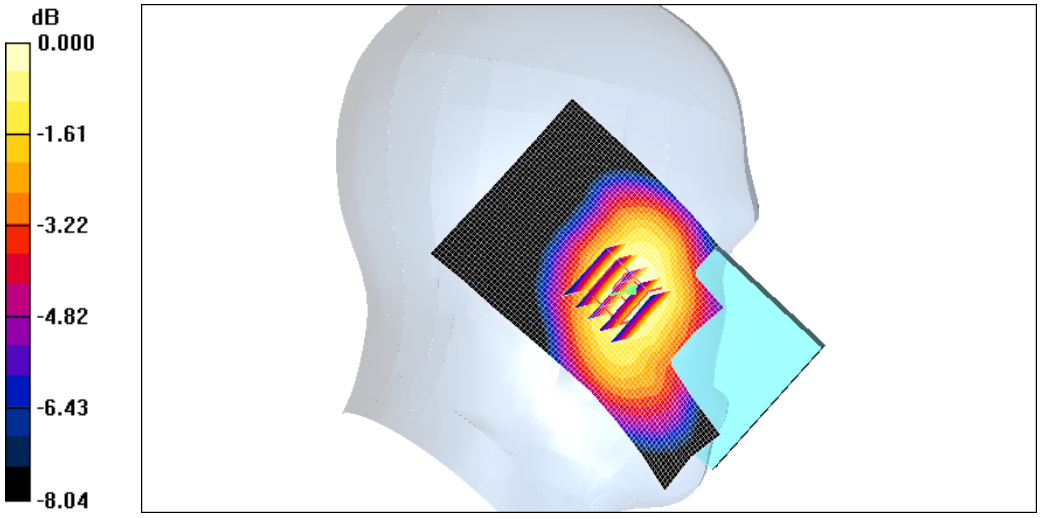
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Left (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.089 mW/g

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.84 V/m; Power Drift = -0.043 dB
Peak SAR (extrapolated) = 0.096 W/kg
**SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.061 mW/g**
Maximum value of SAR (measured) = 0.085 mW/g




0 dB = 0.085mW/g

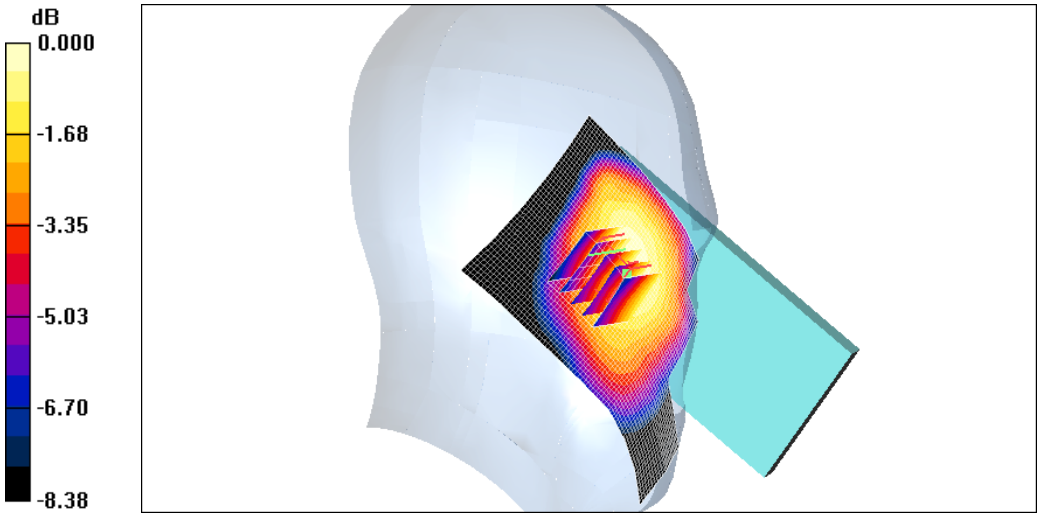
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Left (Job No. : FJ-216)**
**Procedure Name: Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.050 mW/g

**Ear/Tilt, Ch.4183, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.46 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.058 W/kg
**SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.036 mW/g**
Maximum value of SAR (measured) = 0.050 mW/g




0 dB = 0.050mW/g

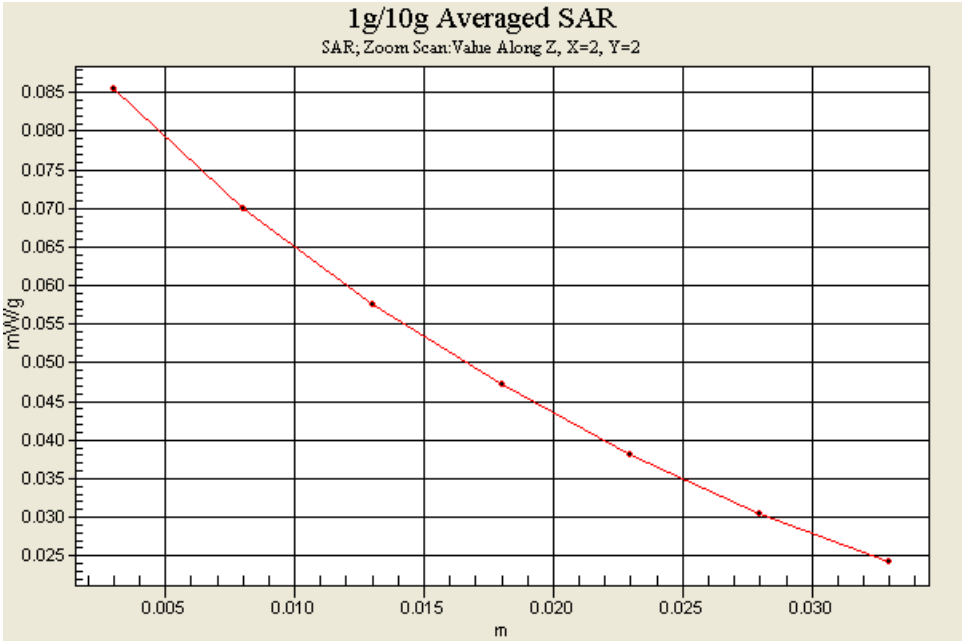
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Left (Job No. : FJ-216)**
**Procedure Name: Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard**
**Meas. Ambient Temp(celsius)-22.8,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.907 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.31, 6.31, 6.31); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #2; Type: SAM; Serial: TP-1141
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Area Scan (51x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.089 mW/g

**Cheek/Touch, Ch.4183, Ant.Intenna, Bat.Standard/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.84 V/m; Power Drift = -0.043 dB
Peak SAR (extrapolated) = 0.096 W/kg
**SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.061 mW/g**
Maximum value of SAR (measured) = 0.085 mW/g



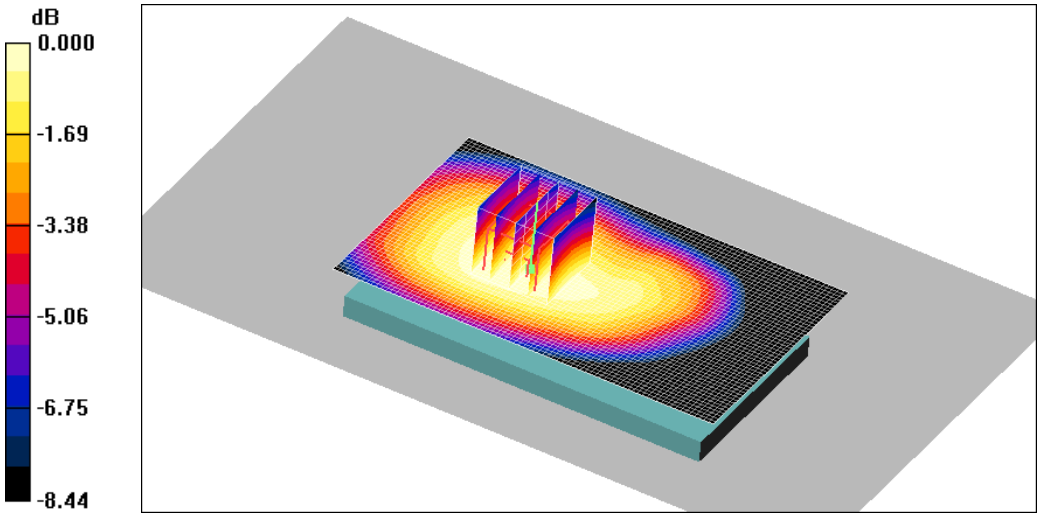
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.228 mW/g

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.9 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.263 W/kg
**SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.165 mW/g**
Maximum value of SAR (measured) = 0.231 mW/g




0 dB = 0.231mW/g

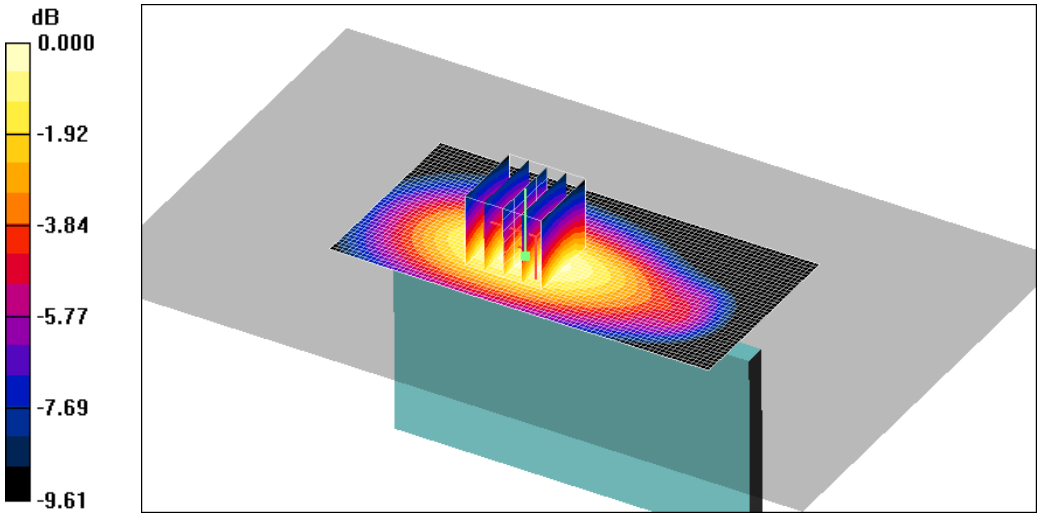
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.4183, Ant.Intenna, Bat.Standard, Left, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Left, 10mm/Area Scan (41x81x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.102 mW/g

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Left, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.36 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.127 W/kg
**SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.063 mW/g**
Maximum value of SAR (measured) = 0.104 mW/g




0 dB = 0.104mW/g

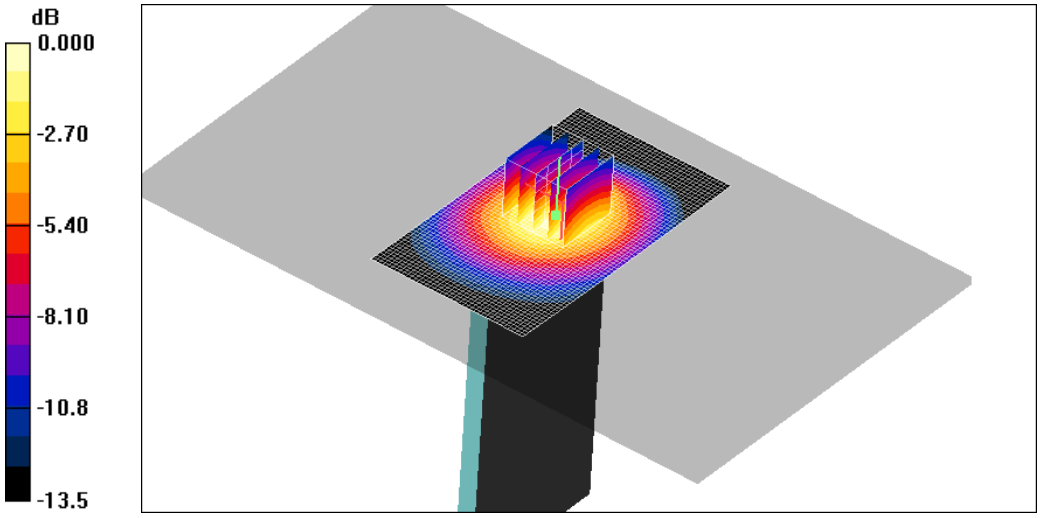
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.4183, Ant.Intenna, Bat.Standard, Bottom, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Bottom, 10mm/Area Scan (71x41x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.123 mW/g

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Bottom, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.155 W/kg
**SAR(1 g) = 0.103 mW/g; SAR(10 g) = 0.066 mW/g**
Maximum value of SAR (measured) = 0.120 mW/g




0 dB = 0.120mW/g

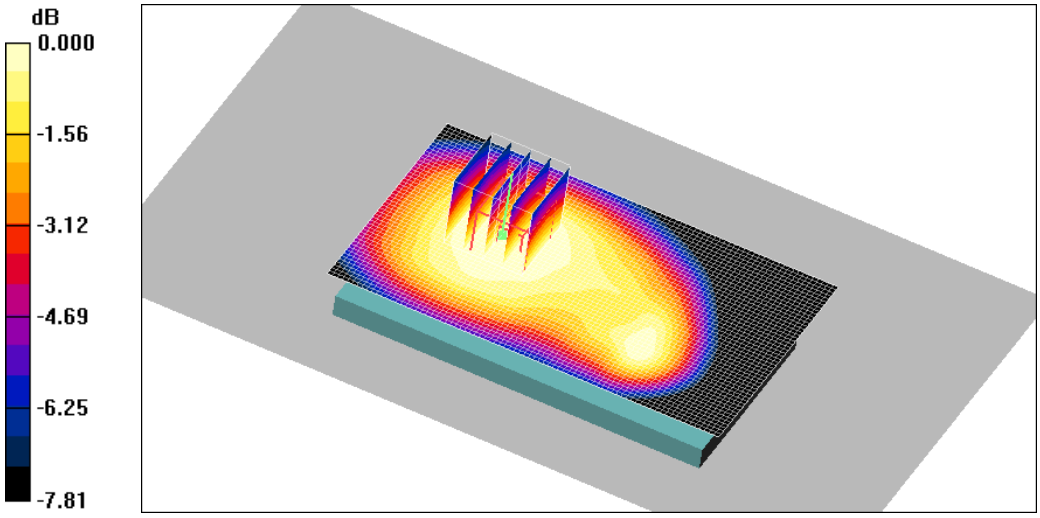
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.4183, Ant.Intenna, Bat.Standard, Front, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Front, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.108 mW/g

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Front, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.77 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.121 W/kg
**SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.077 mW/g**
Maximum value of SAR (measured) = 0.107 mW/g




0 dB = 0.107mW/g

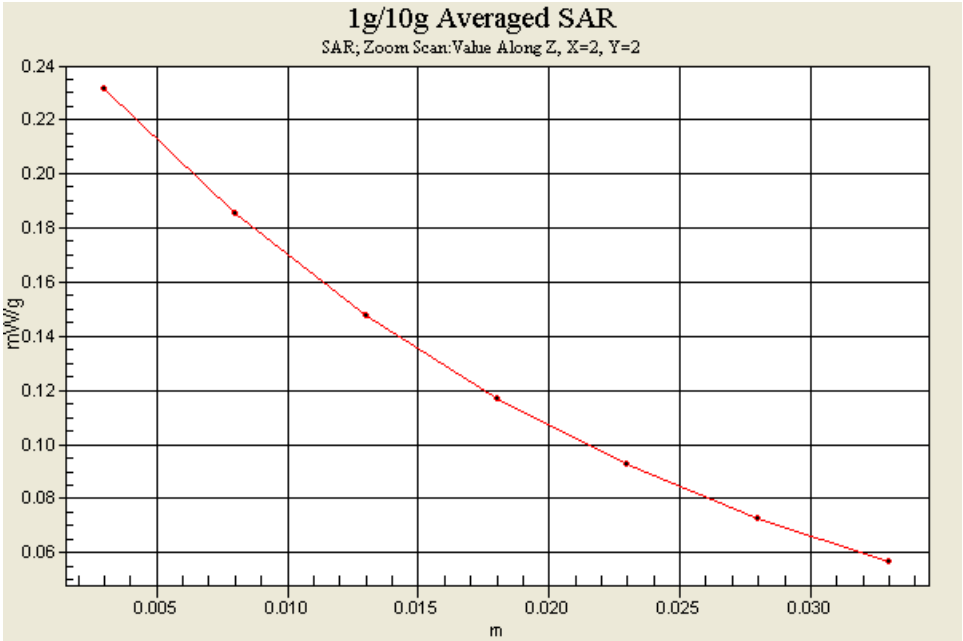
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 WCDMA850 Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm**
**Meas. Ambient Temp(celsius)-22.9,Tissue Temp(celsius)-22.5;Test Date-22/Aug/2012**

Communication System: W-CDMA 850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.78 MHz; $\sigma$ = 0.996 mho/m; $\varepsilon_r$ = 55; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(6.21, 6.21, 6.21); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm/Area Scan (51x81x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.228 mW/g

**Body, Ch.4183, Ant.Intenna, Bat.Standard, Back, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.9 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.263 W/kg
**SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.165 mW/g**
Maximum value of SAR (measured) = 0.231 mW/g



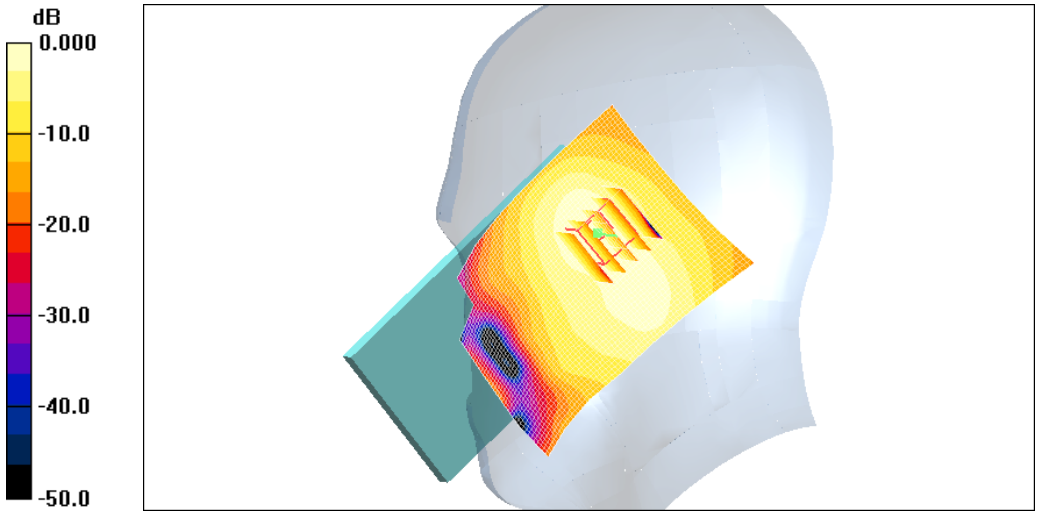
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Right(Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.83 mho/m; $\varepsilon_r$ = 38.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.087 mW/g

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.69 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 0.118 W/kg
**SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.037 mW/g**
Maximum value of SAR (measured) = 0.083 mW/g




0 dB = 0.083mW/g

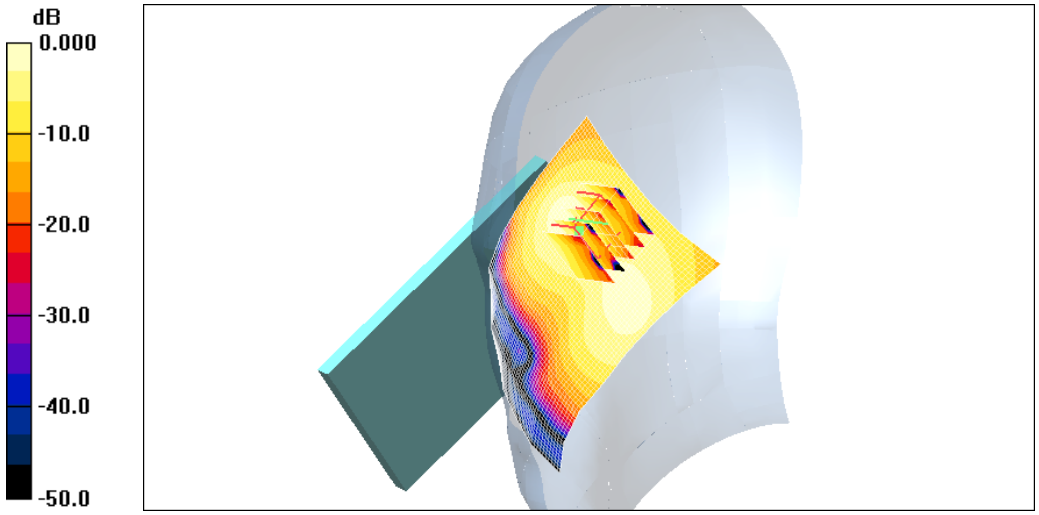
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Right(Job No. : FJ-216)**
**Procedure Name: Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.83 mho/m; $\varepsilon_r$ = 38.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.063 mW/g

**Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.31 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 0.099 W/kg
**SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.028 mW/g**
Maximum value of SAR (measured) = 0.065 mW/g




0 dB = 0.065mW/g

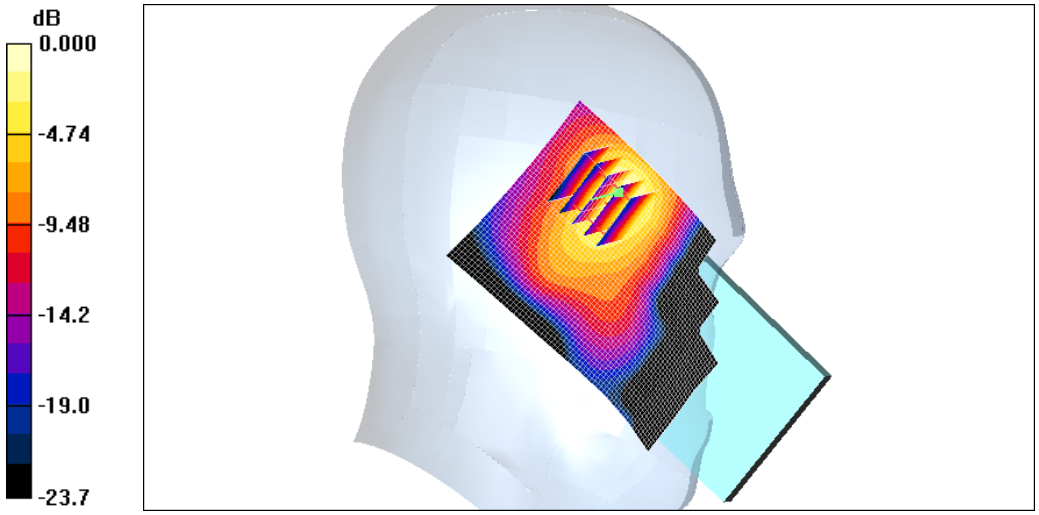
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Left(Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.83 mho/m; $\varepsilon_r$ = 38.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.169 mW/g

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.54 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.257 W/kg
**SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.068 mW/g**
Maximum value of SAR (measured) = 0.173 mW/g




0 dB = 0.173mW/g

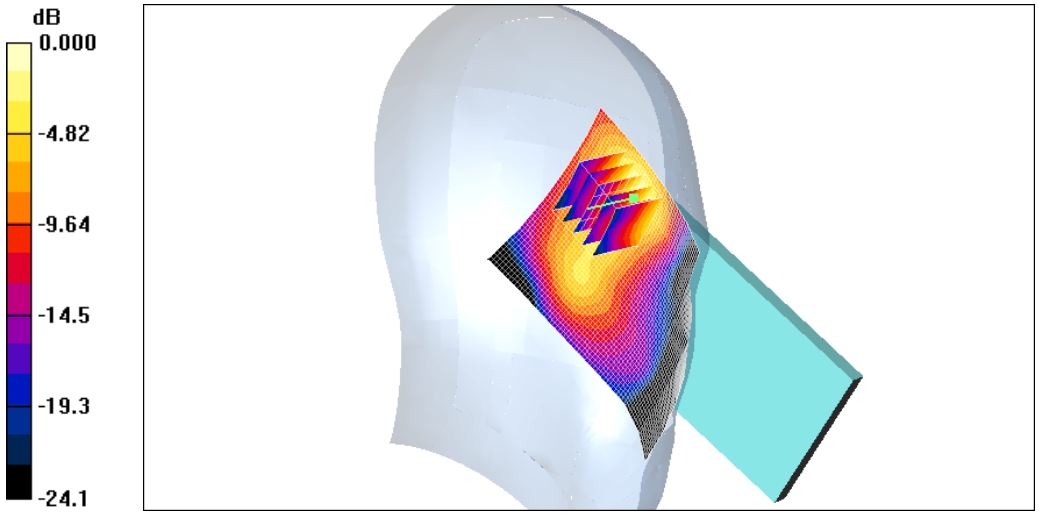
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Left(Job No. : FJ-216)**
**Procedure Name: Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.83 mho/m; $\varepsilon_r$ = 38.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.107 mW/g

**Tilted, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.78 V/m; Power Drift = -0.069 dB
Peak SAR (extrapolated) = 0.183 W/kg
**SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.049 mW/g**
Maximum value of SAR (measured) = 0.118 mW/g




0 dB = 0.118mW/g

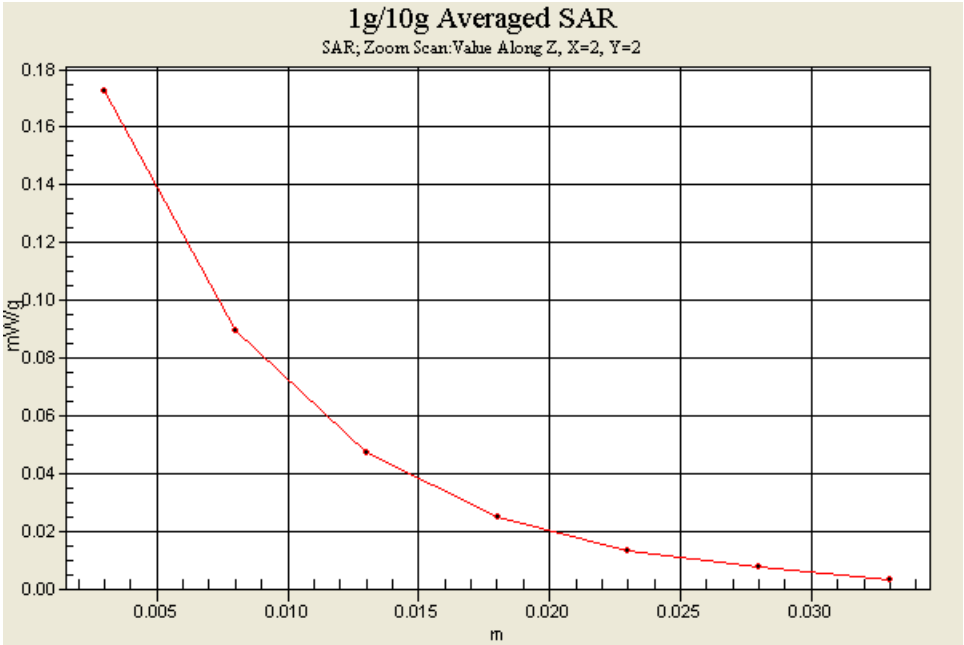
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Left(Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.6;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.83 mho/m; $\varepsilon_r$ = 38.9; $\rho$ = 1000 kg/$m^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Area Scan (51x71x1):** Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.169 mW/g

**Cheek, Ch.6, Ant.Intenna, Bat.Standard, 1Mbps/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.54 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.257 W/kg
**SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.068 mW/g**
Maximum value of SAR (measured) = 0.173 mW/g



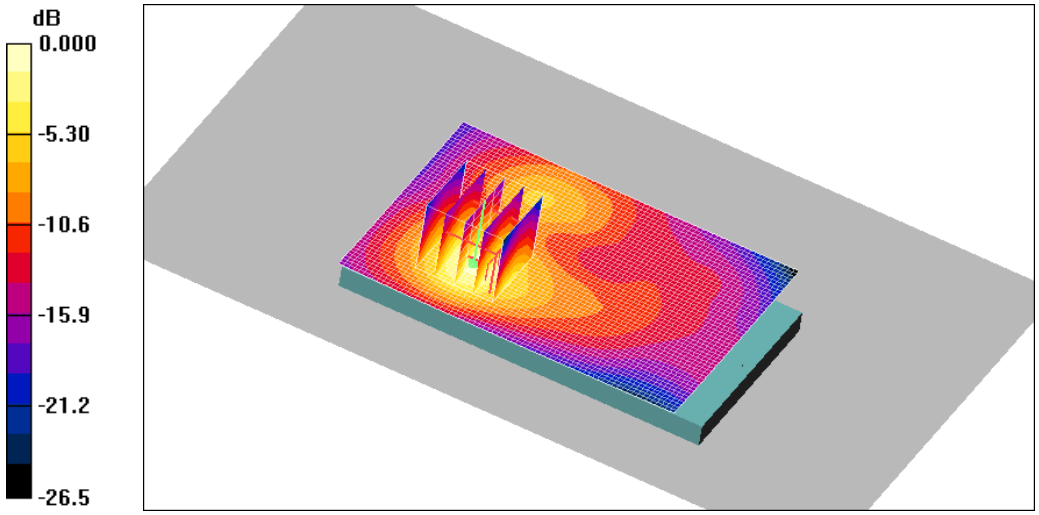
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm/Area Scan (51x71x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.209 mW/g

**Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.80 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 0.435 W/kg
**SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.107 mW/g**
Maximum value of SAR (measured) = 0.278 mW/g




0 dB = 0.278mW/g

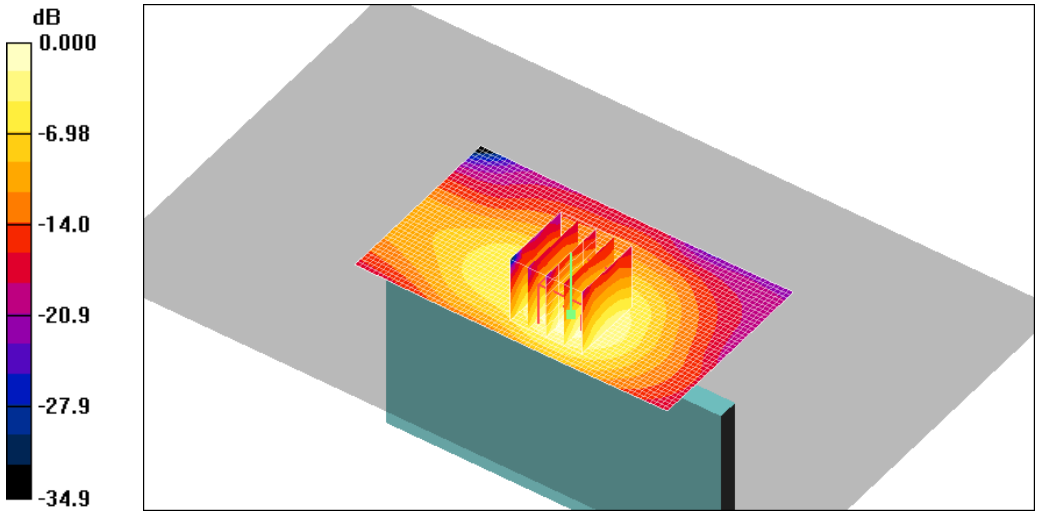
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.6, Ant.Intenna, Bat.Standard, Right, 1Mbps, 10mm**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.6, Ant.Intenna, Bat.Standard, Right, 1Mbps, 10mm/Area Scan (41x71x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.103 mW/g

**Body, Ch.6, Ant.Intenna, Bat.Standard, Right, 1Mbps, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.93 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 0.153 W/kg
**SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.041 mW/g**
Maximum value of SAR (measured) = 0.099 mW/g




0 dB = 0.099mW/g

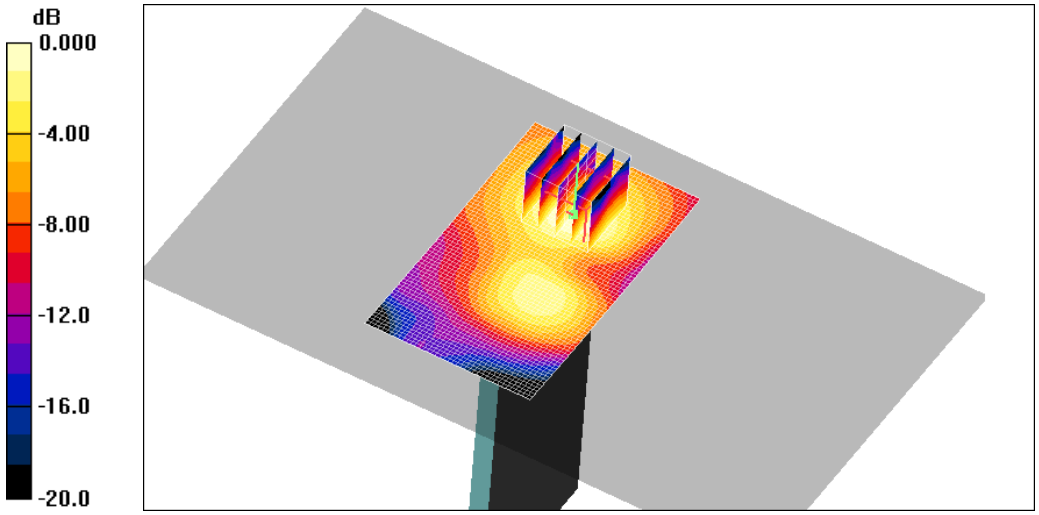
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.6, Ant.Intenna, Bat.Standard, Top, 1Mbps, 10mm**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.6, Ant.Intenna, Bat.Standard, Top, 1Mbps, 10mm/Area Scan (71x41x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.031 mW/g

**Body, Ch.6, Ant.Intenna, Bat.Standard, Top, 1Mbps, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.59 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 0.046 W/kg
**SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.014 mW/g**
Maximum value of SAR (measured) = 0.031 mW/g




0 dB = 0.031mW/g

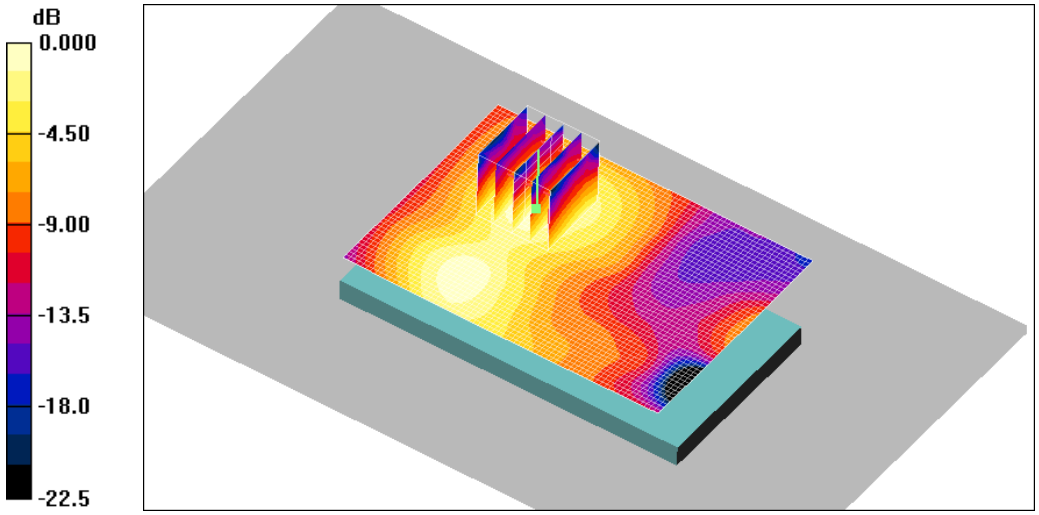
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.6, Ant.Intenna, Bat.Standard, Front, 1Mbps, 10mm**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.6, Ant.Intenna, Bat.Standard, Front, 1Mbps, 10mm/Area Scan (51x71x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.040 mW/g

**Body, Ch.6, Ant.Intenna, Bat.Standard, Front, 1Mbps, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.18 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 0.063 W/kg
**SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.020 mW/g**
Maximum value of SAR (measured) = 0.042 mW/g




0 dB = 0.042mW/g

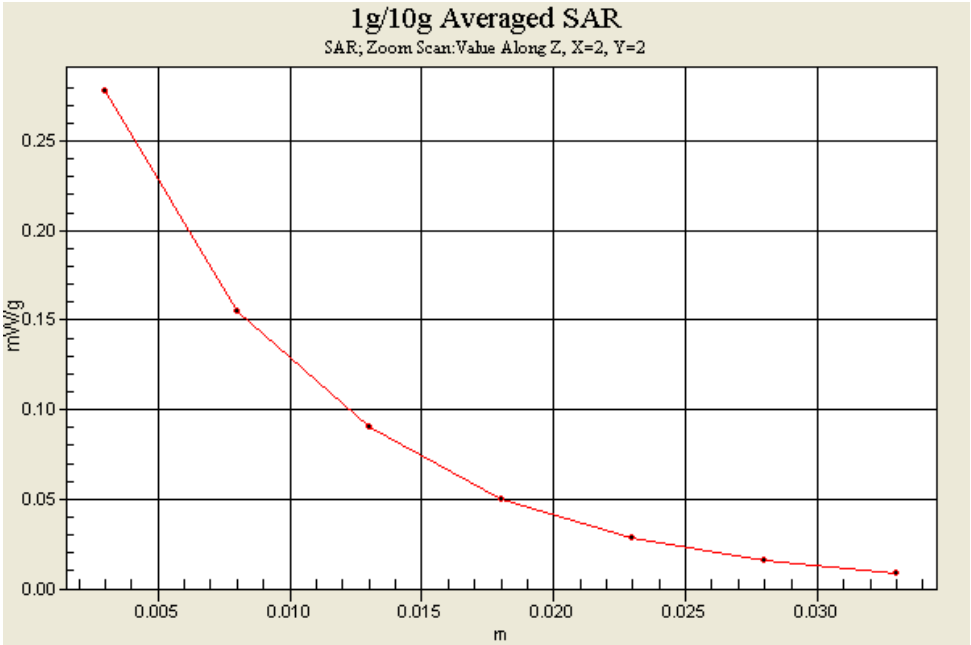
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11b Body (Job No. : FJ-216)**
**Procedure Name: Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm**
**Meas. Ambient Temp(celsius)-23.0,Tissue Temp(celsius)-22.7;Test Date-27/Aug/2012**

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.92 mho/m; $\varepsilon_r$ = 51.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV2 - SN3017; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-05-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm/Area Scan (51x71x1):**
Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.209 mW/g

**Body, Ch.6, Ant.Intenna, Bat.Standard, Back, 1Mbps, 10mm/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.80 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 0.435 W/kg
**SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.107 mW/g**
Maximum value of SAR (measured) = 0.278 mW/g



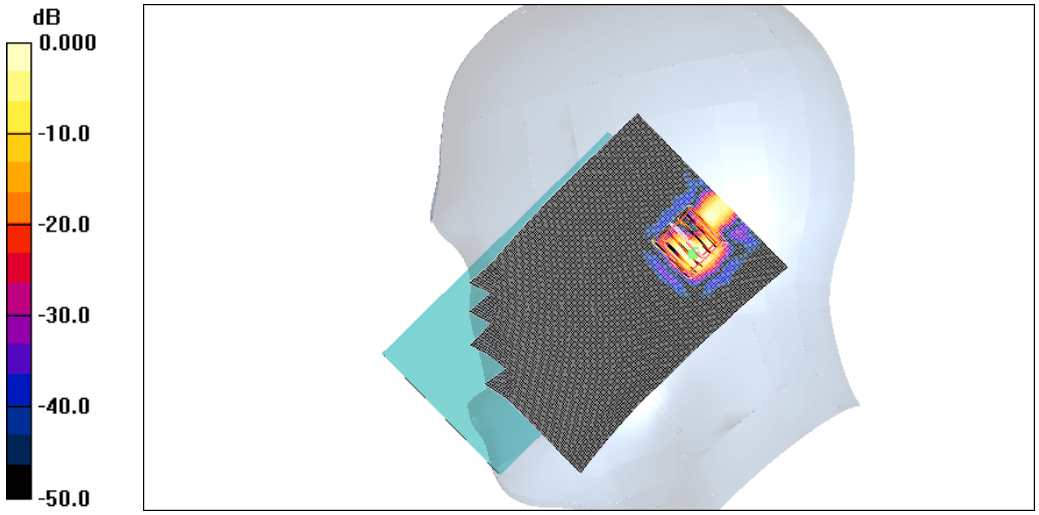
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.85 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.91, 4.91, 4.91); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.034 mW/g

**Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.63 V/m; Power Drift = 0.197 dB
Peak SAR (extrapolated) = 0.124 W/kg
**SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00327 mW/g**
Maximum value of SAR (measured) = 0.029 mW/g




0 dB = 0.029mW/g

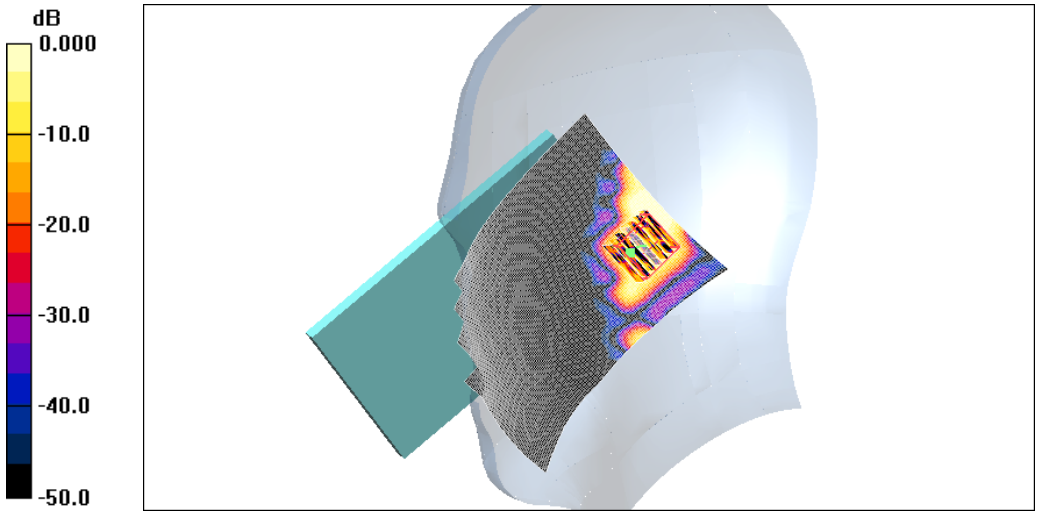
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.85 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.91, 4.91, 4.91); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.043 mW/g

**Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan 2 (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.46 V/m; Power Drift = -0.196 dB
Peak SAR (extrapolated) = 0.099 W/kg
**SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00448 mW/g**
Maximum value of SAR (measured) = 0.033 mW/g




0 dB = 0.033mW/g

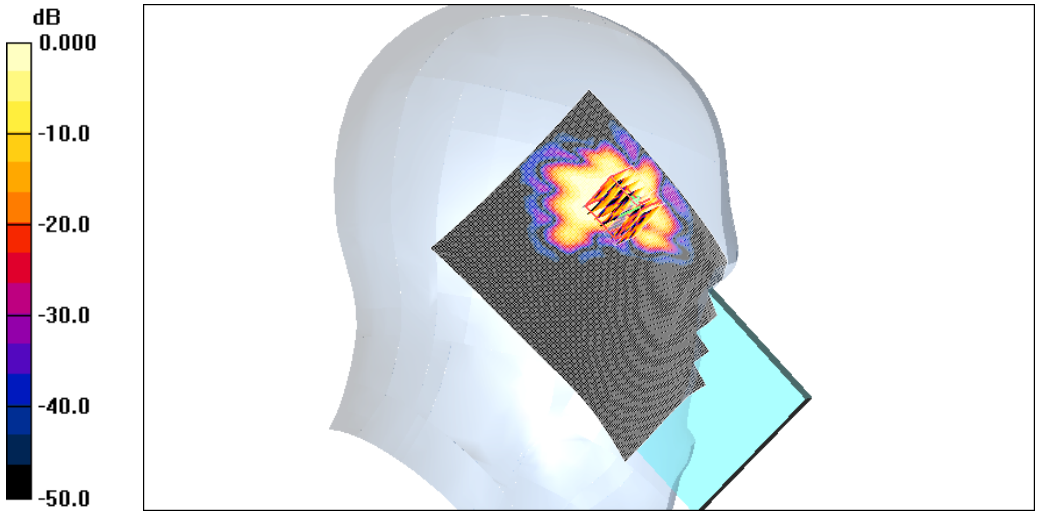
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.85 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.91, 4.91, 4.91); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.071 mW/g

**Cheek, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.41 V/m; Power Drift = 0.067 dB
Peak SAR (extrapolated) = 0.087 W/kg
**SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.00762 mW/g**
Maximum value of SAR (measured) = 0.051 mW/g




0 dB = 0.051mW/g

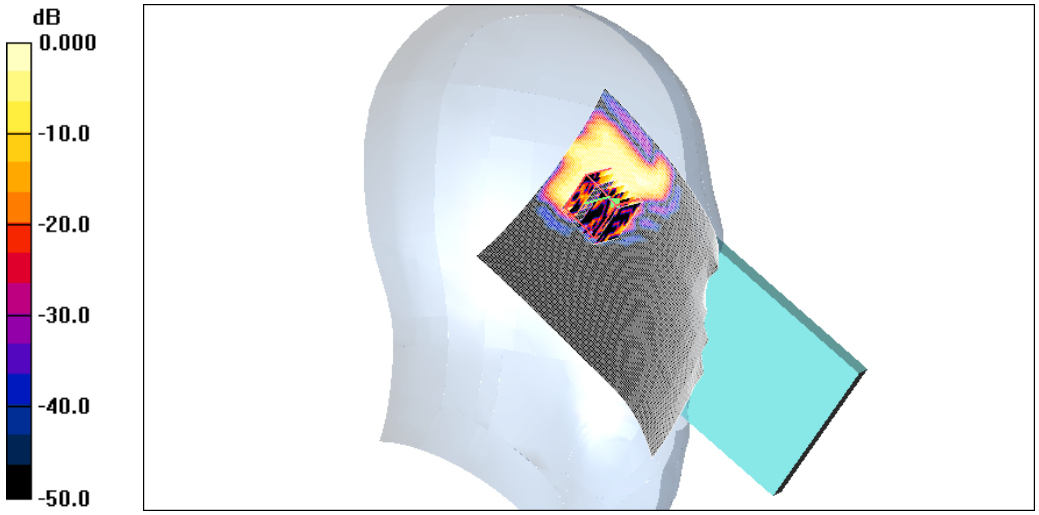
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.85 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.91, 4.91, 4.91); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.056 mW/g

**Tilt, Ch.40, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.17 V/m; Power Drift = 0.074 dB
Peak SAR (extrapolated) = 0.106 W/kg
**SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.00727 mW/g**
Maximum value of SAR (measured) = 0.053 mW/g




0 dB = 0.053mW/g

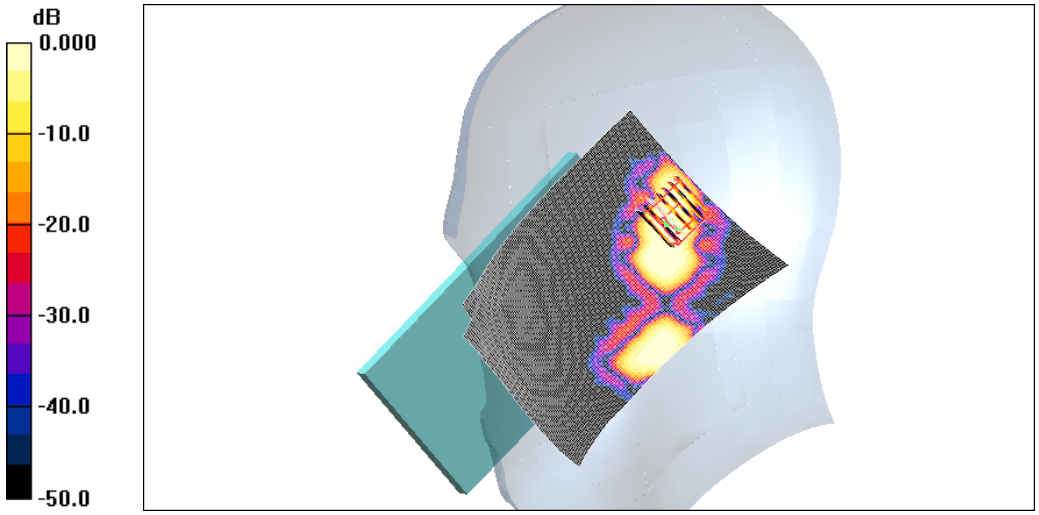
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.56 Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 4.94 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.72, 4.72, 4.72); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.56 Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.038 mW/g

**Cheek, Ch.56 Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.39 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 0.105 W/kg
**SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00507 mW/g**
Maximum value of SAR (measured) = 0.033 mW/g




0 dB = 0.033mW/g

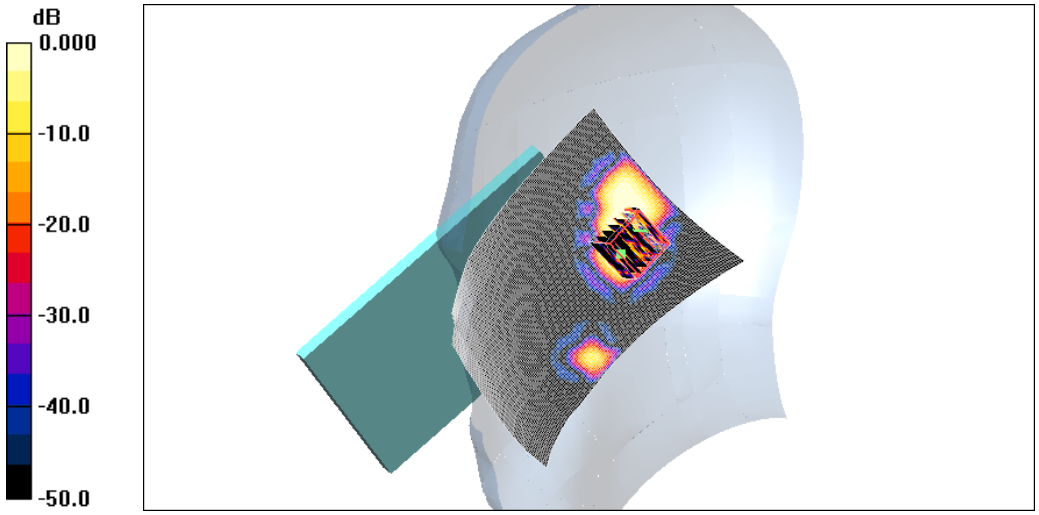
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 4.94 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.72, 4.72, 4.72); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.141 mW/g

**Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.11 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 0.244 W/kg
**SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.0067 mW/g**
Maximum value of SAR (measured) = 0.046 mW/g




0 dB = 0.046mW/g

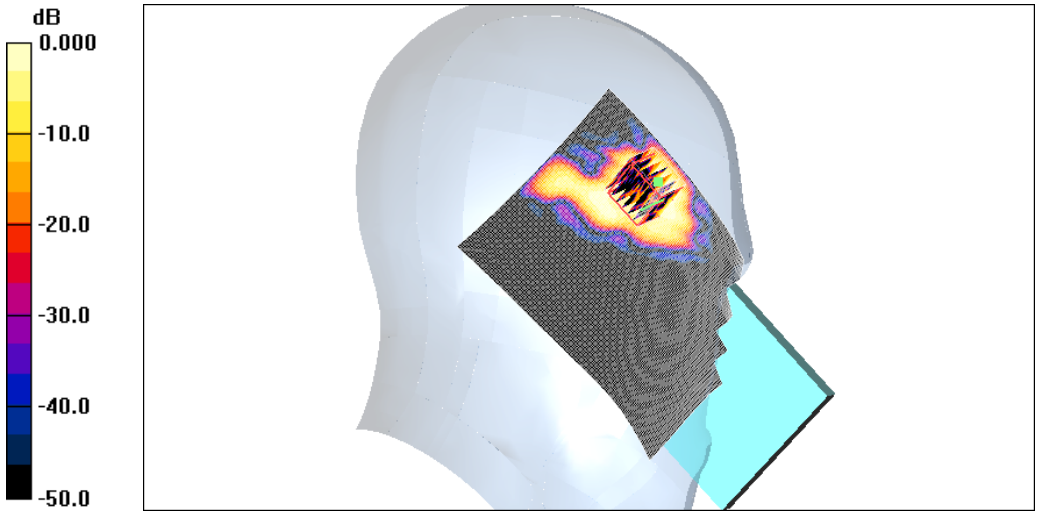
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 4.94 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.72, 4.72, 4.72); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.089 mW/g

**Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.25 V/m; Power Drift = 0.184 dB
Peak SAR (extrapolated) = 0.174 W/kg
**SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.010 mW/g**
Maximum value of SAR (measured) = 0.081 mW/g




0 dB = 0.081mW/g

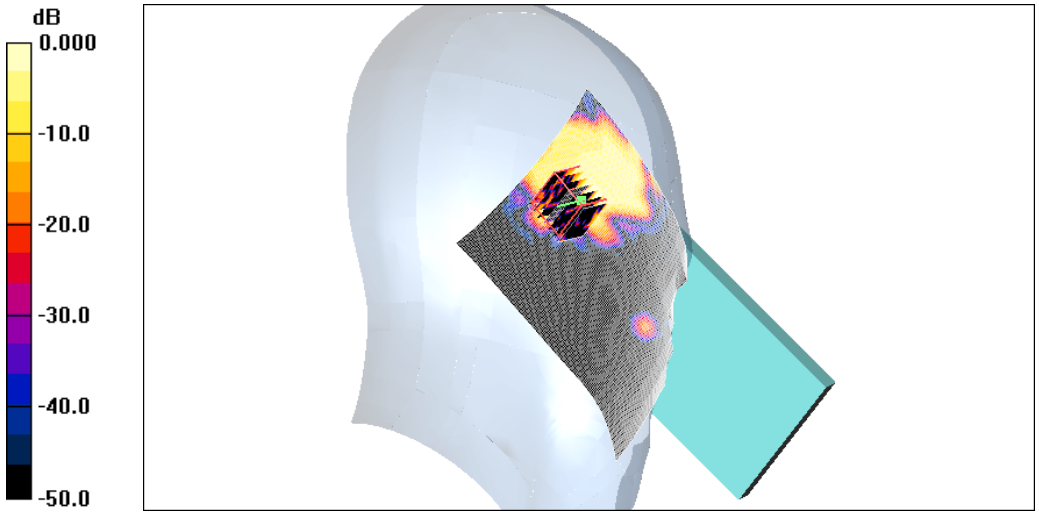
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 4.94 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.72, 4.72, 4.72); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.071 mW/g

**Tilt, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.04 V/m; Power Drift = 0.172 dB
Peak SAR (extrapolated) = 0.158 W/kg
**SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.00902 mW/g**
Maximum value of SAR (measured) = 0.078 mW/g




0 dB = 0.078mW/g

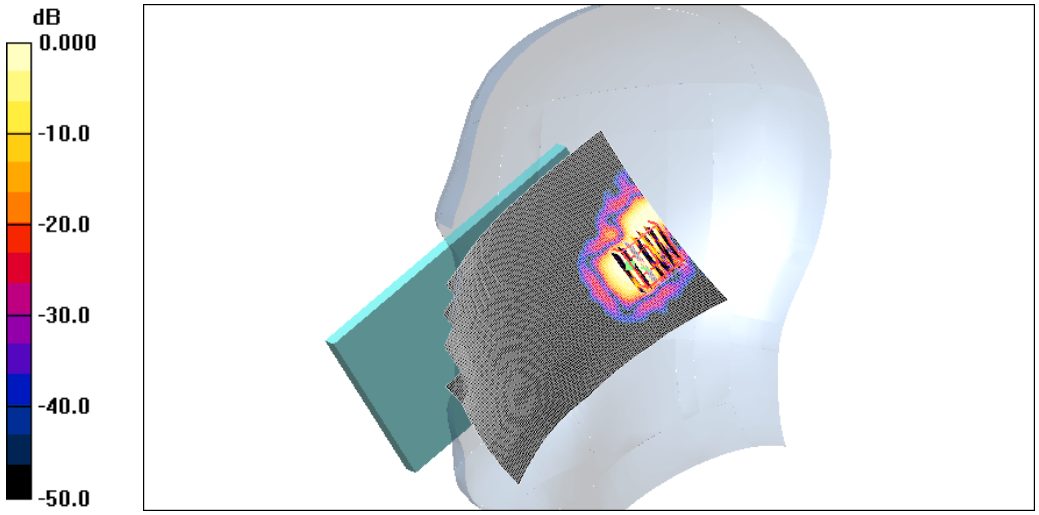
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.140 Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; $\sigma$ = 5.35 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.140 Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.022 mW/g

**Cheek, Ch.140 Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.27 V/m; Power Drift = 0.183 dB
Peak SAR (extrapolated) = 0.194 W/kg
**SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00442 mW/g**
Maximum value of SAR (measured) = 0.022 mW/g




0 dB = 0.022mW/g

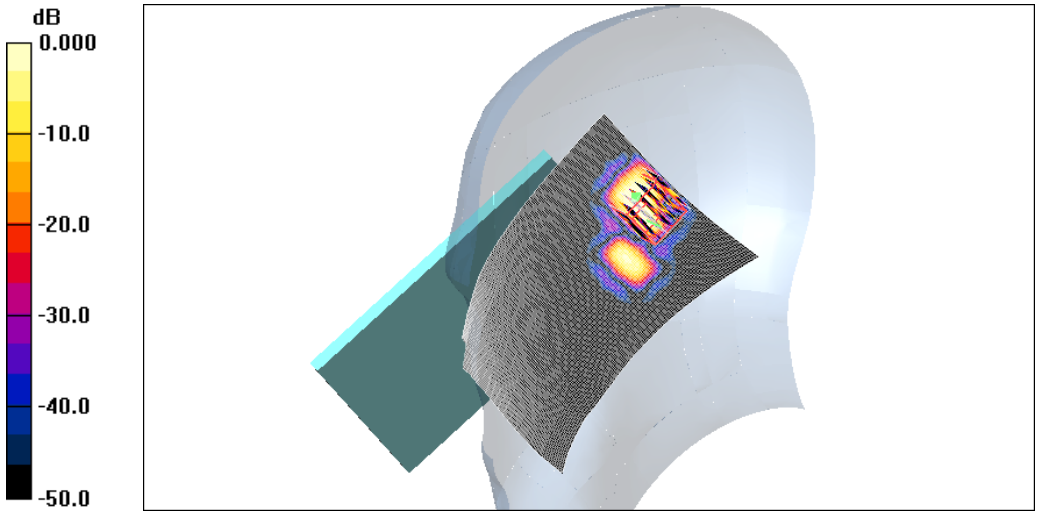
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; $\sigma$ = 5.35 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.092 mW/g

**Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.83 V/m; Power Drift = 0.164 dB
Peak SAR (extrapolated) = 0.141 W/kg
**SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00497 mW/g**
Maximum value of SAR (measured) = 0.030 mW/g




0 dB = 0.030mW/g

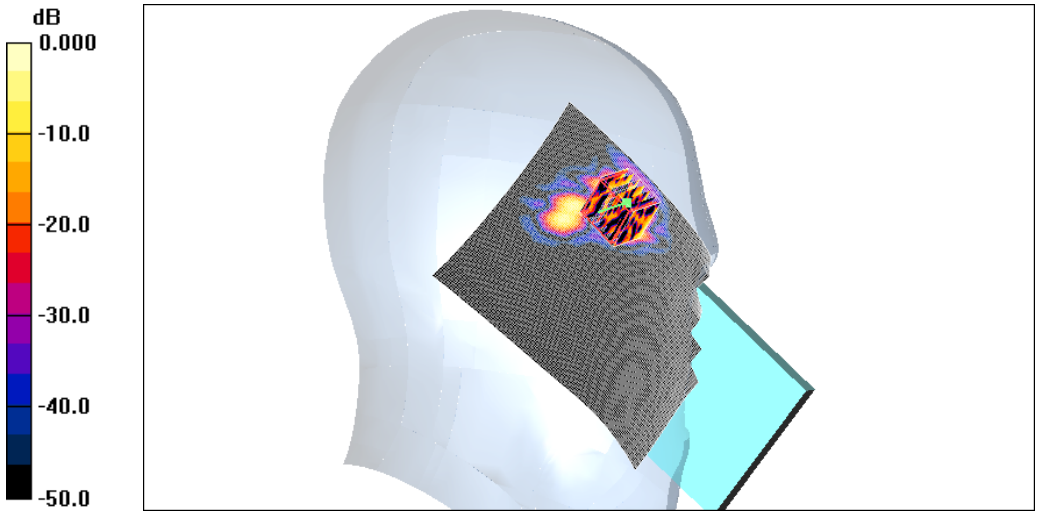
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; $\sigma$ = 5.35 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.052 mW/g

**Cheek, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.65 V/m; Power Drift = 0.120 dB
Peak SAR (extrapolated) = 0.102 W/kg
**SAR(1 g) = 0.023 mW/g; SAR(10 g) = 0.0065 mW/g**
Maximum value of SAR (measured) = 0.059 mW/g




0 dB = 0.059mW/g

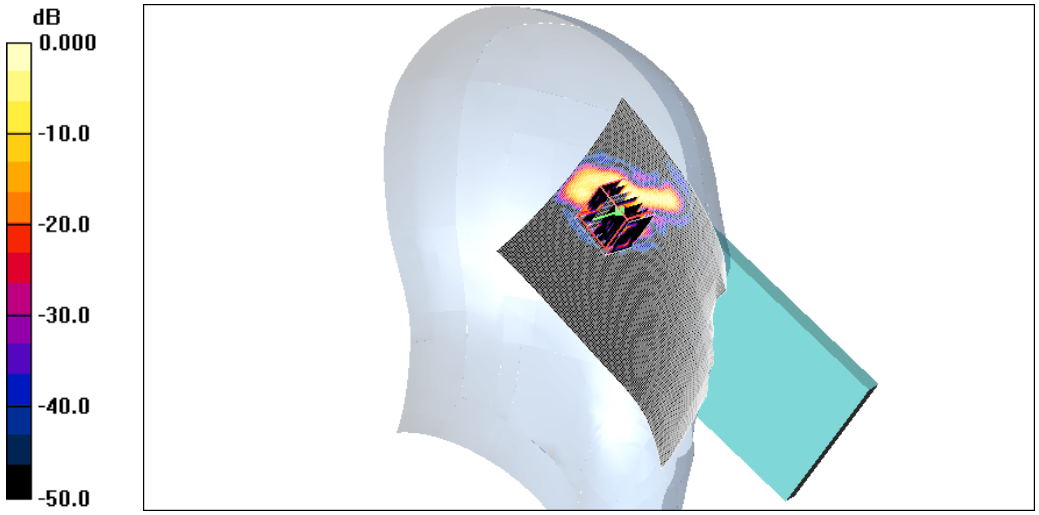
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; $\sigma$ = 5.35 mho/m; $\varepsilon_r$ = 34.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.044 mW/g

**Tilt, Ch.140, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.50 V/m; Power Drift = 0.192 dB
Peak SAR (extrapolated) = 0.184 W/kg
**SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.00484 mW/g**
Maximum value of SAR (measured) = 0.048 mW/g




0 dB = 0.048mW/g

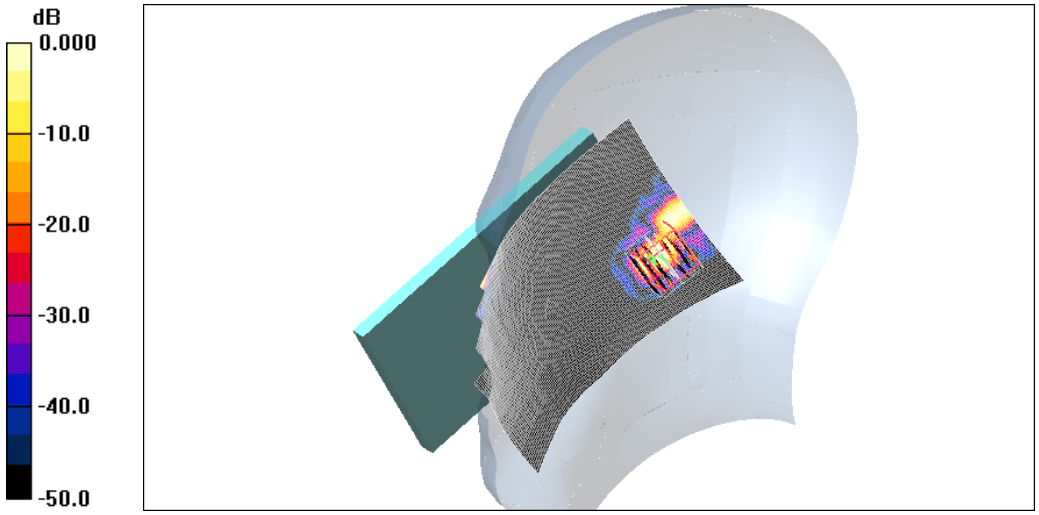
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5755 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5755 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 34.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (101x141x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.033 mW/g

**Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.20 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 0.143 W/kg
**SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00424 mW/g**
Maximum value of SAR (measured) = 0.024 mW/g




0 dB = 0.024mW/g

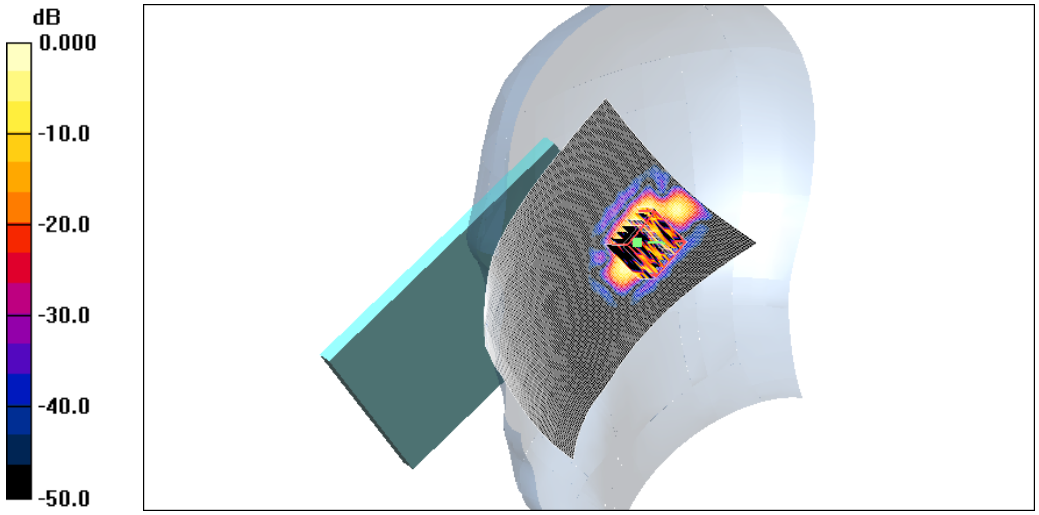
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5755 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5755 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 34.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.098 mW/g

**Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.02 V/m; Power Drift = -0.091 dB
Peak SAR (extrapolated) = 0.181 W/kg
**SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.00493 mW/g**
Maximum value of SAR (measured) = 0.030 mW/g




0 dB = 0.030mW/g

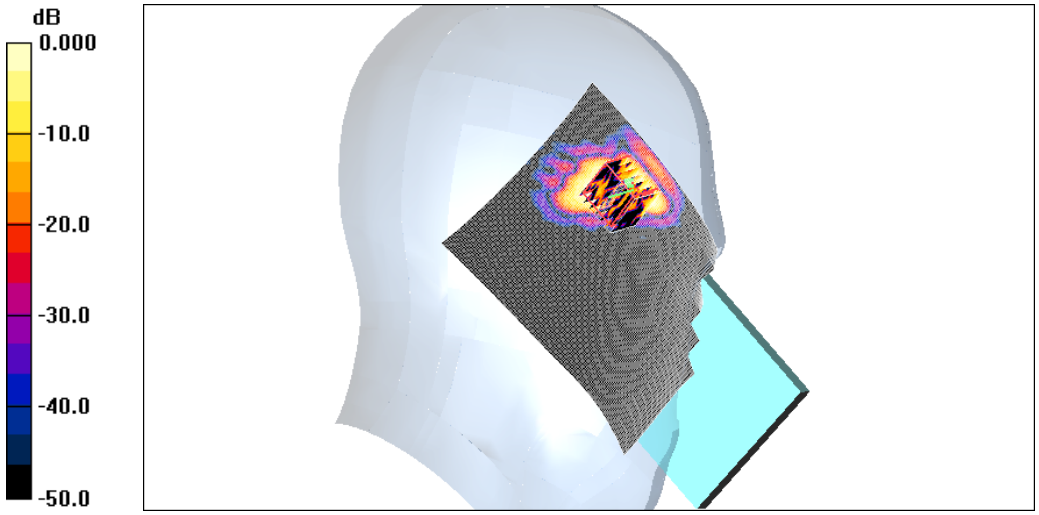
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5755 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5755 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 34.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (111x141x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.052 mW/g

**Cheek, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.49 V/m; Power Drift = 0.157 dB
Peak SAR (extrapolated) = 0.140 W/kg
**SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.00629 mW/g**
Maximum value of SAR (measured) = 0.051 mW/g




0 dB = 0.051mW/g

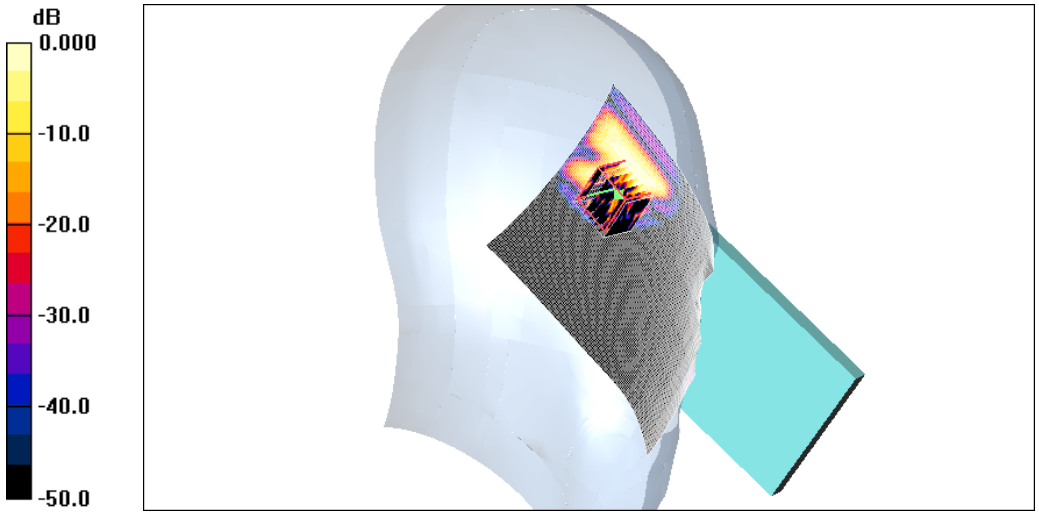
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5755 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5755 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 34.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (111x141x1**): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.084 mW/g

**Tilt, Ch.151, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.69 V/m; Power Drift = 0.135 dB
Peak SAR (extrapolated) = 0.158 W/kg
**SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.00534 mW/g**
Maximum value of SAR (measured) = 0.046 mW/g




0 dB = 0.046mW/g

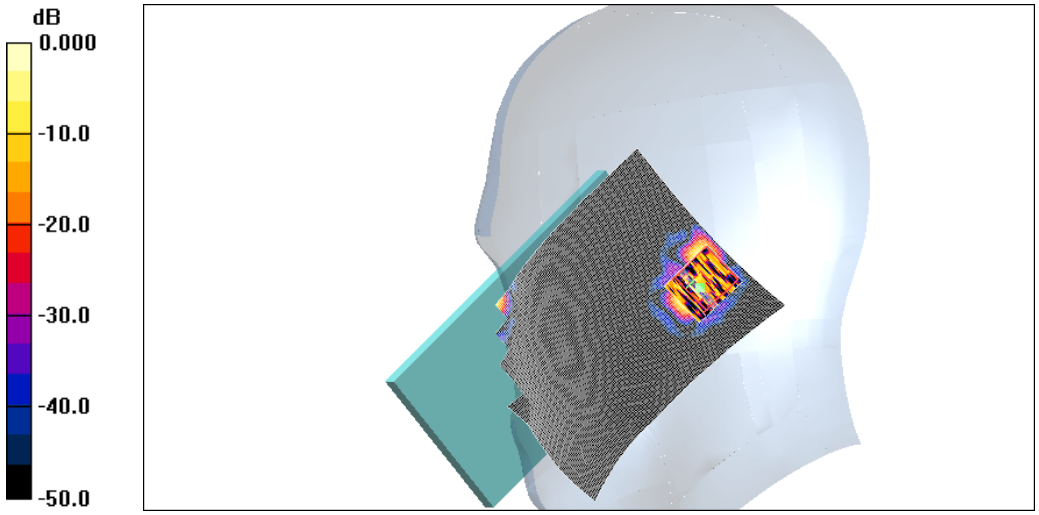
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5795 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5795 MHz; $\sigma$ = 5.46 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (101x141x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.026 mW/g

**Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.51 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.160 W/kg
**SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00377 mW/g**
Maximum value of SAR (measured) = 0.027 mW/g




0 dB = 0.027mW/g

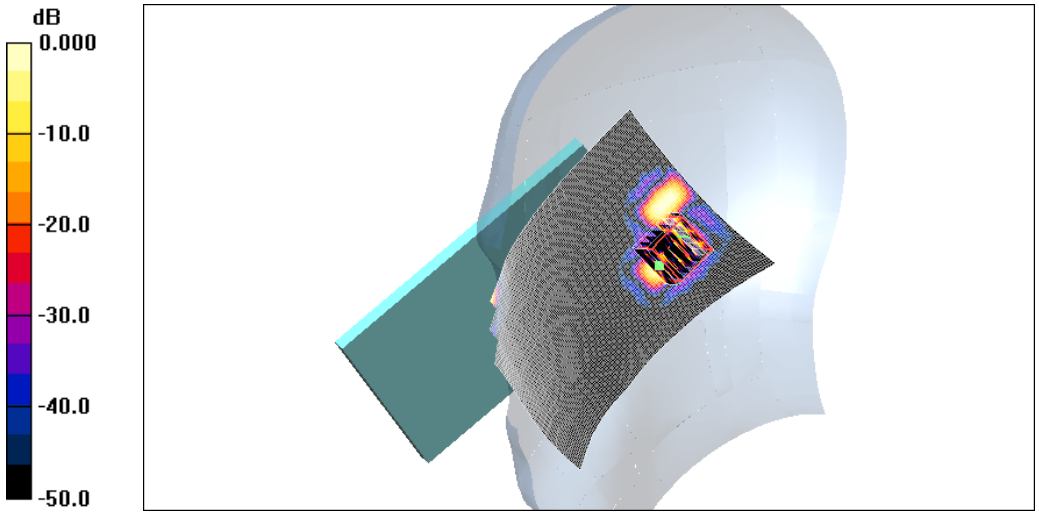
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5795 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5795 MHz; $\sigma$ = 5.46 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.026 mW/g

**Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.01 V/m; Power Drift = 0.181 dB
Peak SAR (extrapolated) = 0.187 W/kg
**SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00418 mW/g**
Maximum value of SAR (measured) = 0.026 mW/g




0 dB = 0.026mW/g

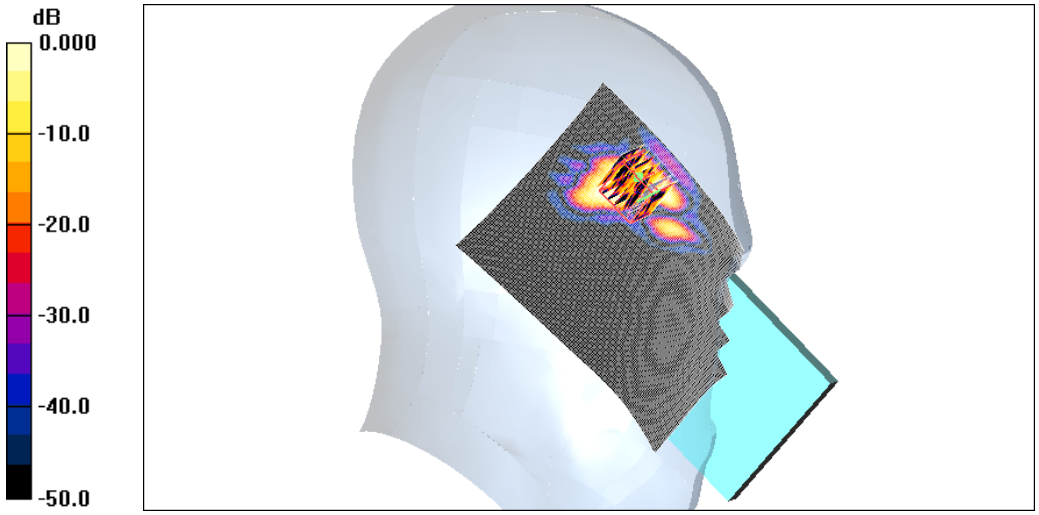
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5795 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5795 MHz; $\sigma$ = 5.46 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (111x141x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.154 mW/g

**Cheek, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.77 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 0.151 W/kg
**SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.00668 mW/g**
Maximum value of SAR (measured) = 0.052 mW/g




0 dB = 0.052mW/g

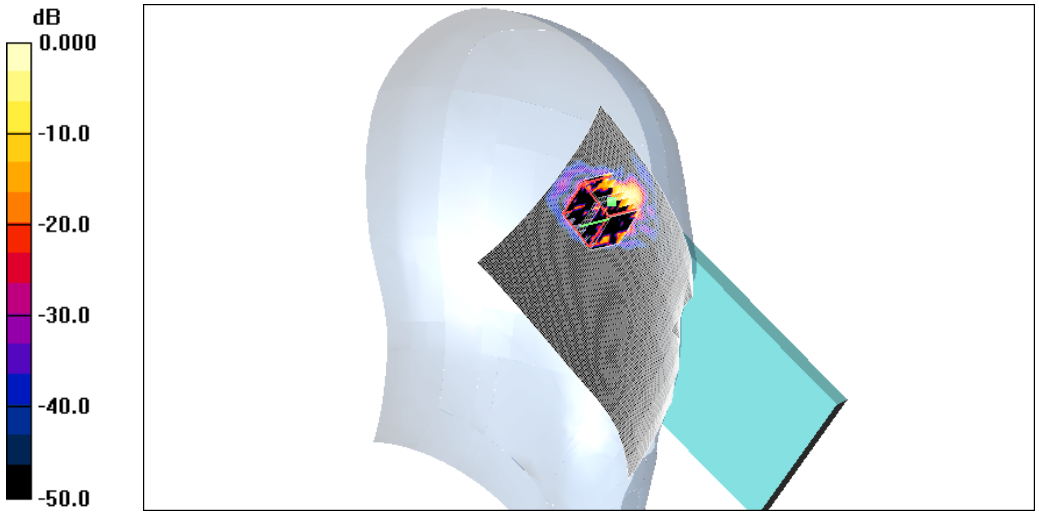
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5795 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5795 MHz; $\sigma$ = 5.46 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.084 mW/g

**Tilt, Ch.159, Ant.Intenna, Bat.Standard, MCS0, HT40/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.49 V/m; Power Drift = -0.056 dB
Peak SAR (extrapolated) = 0.183 W/kg
**SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.00615 mW/g**
Maximum value of SAR (measured) = 0.046 mW/g




0 dB = 0.046mW/g

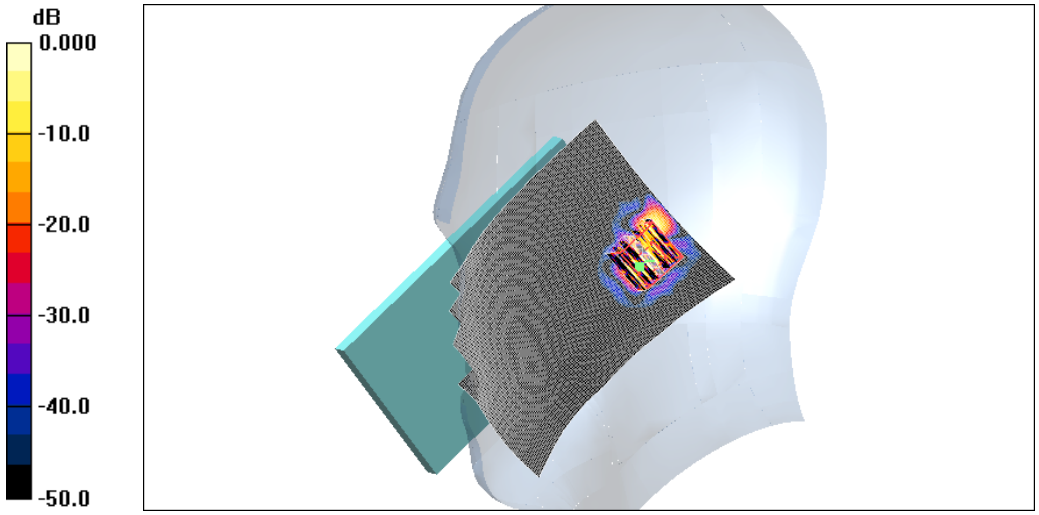
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 5.47 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.029 mW/g

**Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.10 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.161 W/kg
**SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00372 mW/g**
Maximum value of SAR (measured) = 0.025 mW/g




0 dB = 0.025mW/g

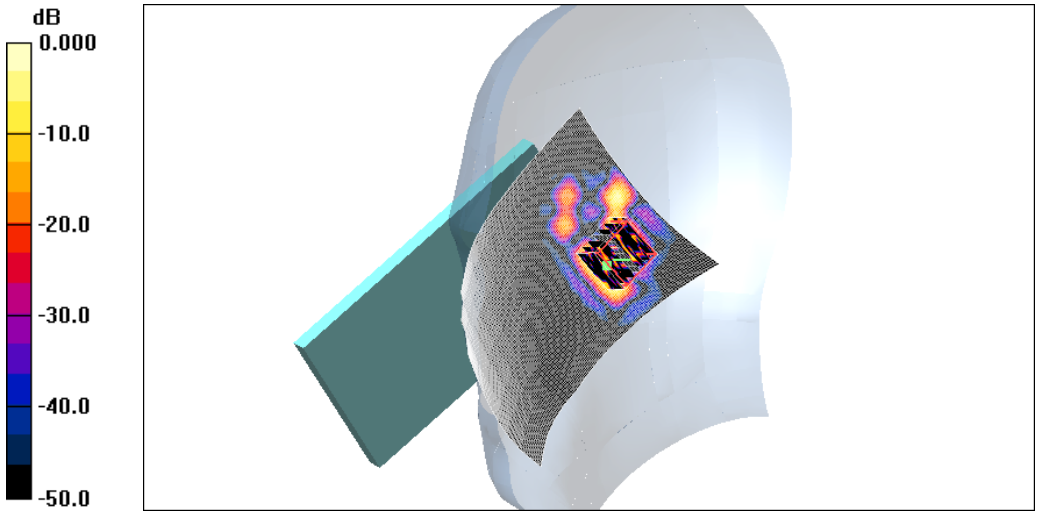
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Right (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 5.47 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (101x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.029 mW/g

**Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.38 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.240 W/kg
**SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.00402 mW/g**
Maximum value of SAR (measured) = 0.029 mW/g




0 dB = 0.029mW/g

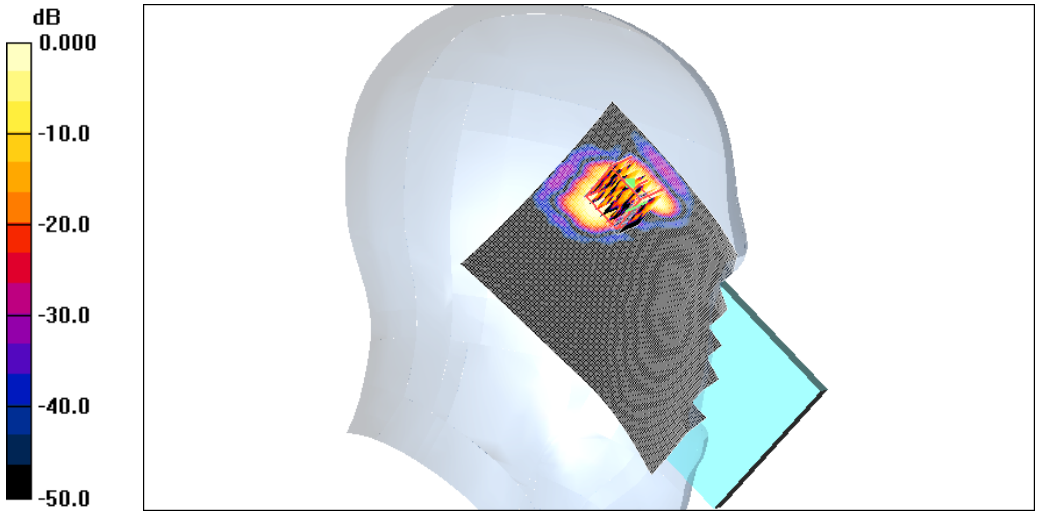
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 5.47 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/$m^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.160 mW/g

**Cheek, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan 2 (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.69 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.149 W/kg
**SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.00665 mW/g**
Maximum value of SAR (measured) = 0.058 mW/g




0 dB = 0.058mW/g

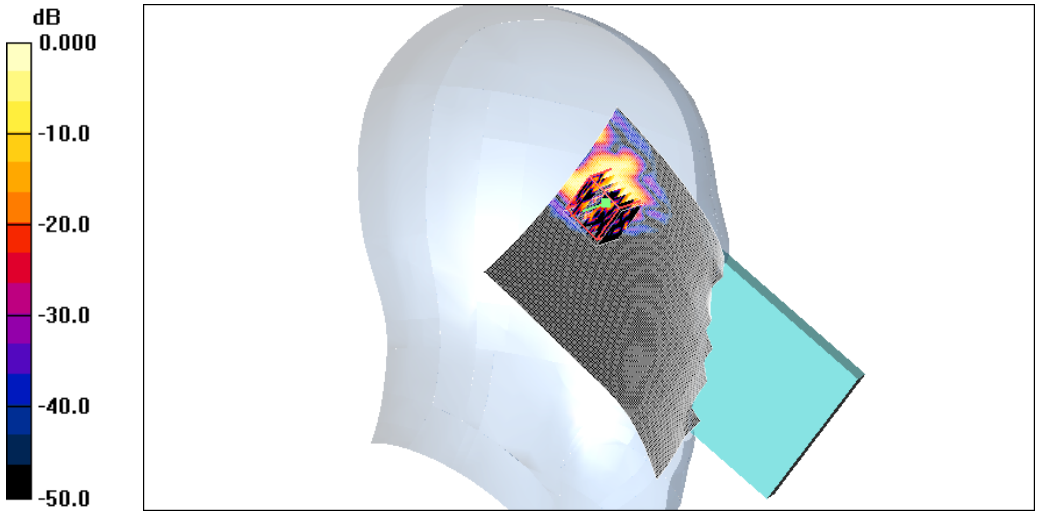
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 5.47 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/$m^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.28, 4.28, 4.28); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.095 mW/g

**Tilt, Ch.161, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.77 V/m; Power Drift = 0.178 dB
Peak SAR (extrapolated) = 0.147 W/kg
**SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.00662 mW/g**
Maximum value of SAR (measured) = 0.066 mW/g




0 dB = 0.066mW/g

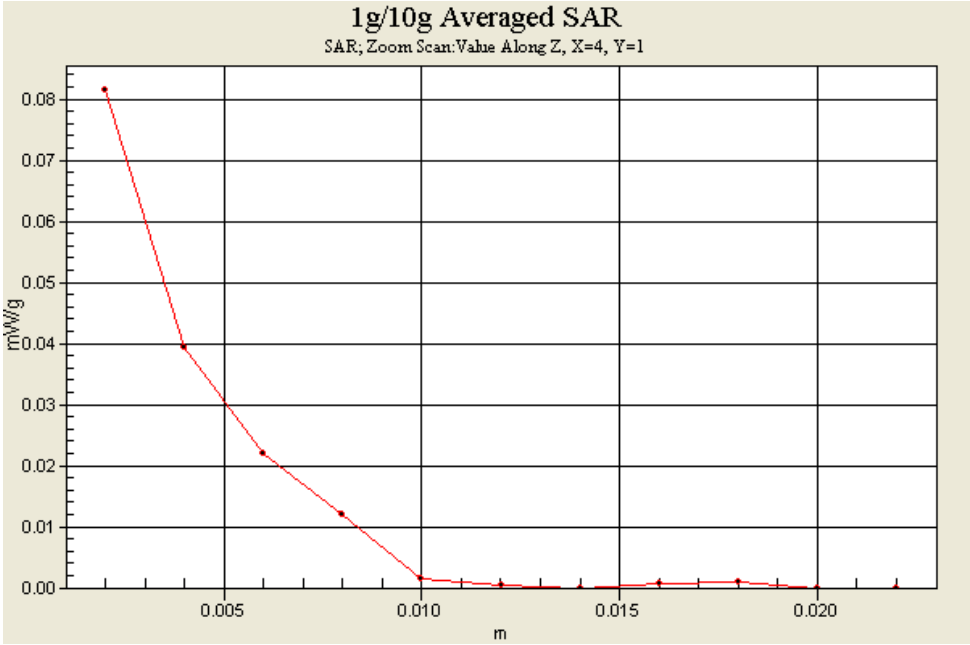
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Left (Job No. : FJ-216)**
**Procedure Name: Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps**
**Meas. Ambient Temp(celsius)-22.4,Tissue Temp(celsius)-22.3;Test Date-24/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 4.94 mho/m; $\varepsilon_r$ = 34.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(4.72, 4.72, 4.72); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: PHANTOM #1; Type: SAM; Serial: TP-1143
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Area Scan (111x141x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.089 mW/g

**Cheek, Ch.56, Ant.Intenna, Bat.Standard, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.25 V/m; Power Drift = 0.184 dB
Peak SAR (extrapolated) = 0.174 W/kg
**SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.010 mW/g**
Maximum value of SAR (measured) = 0.081 mW/g



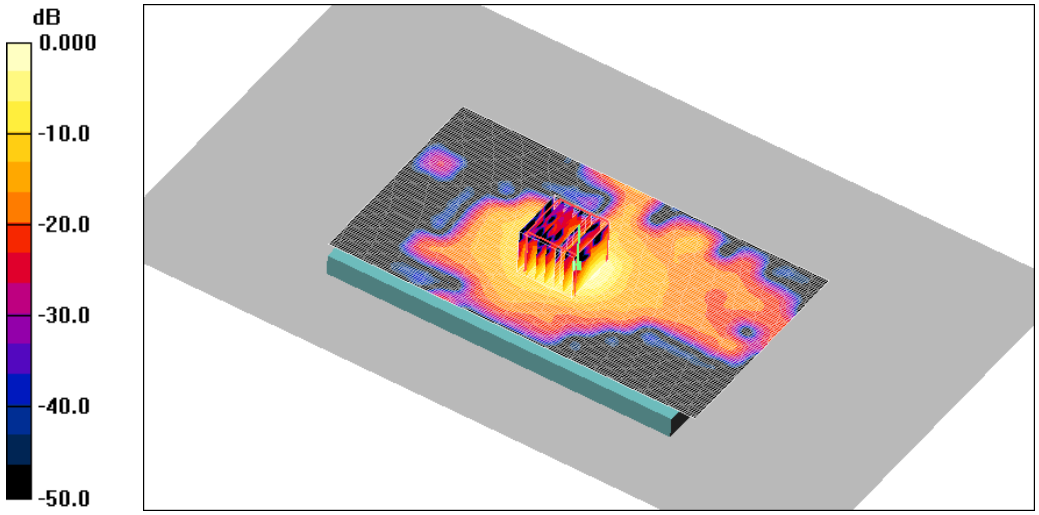
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.40, Ant.Intenna, Bat.Standard, 10mm, 6Mbps**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 5.41 mho/m; $\varepsilon_r$ = 47.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.9, 3.9, 3.9); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.40, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.619 mW/g

**Back, Ch.40, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 9.20 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 1.22 W/kg
**SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.090 mW/g**
Maximum value of SAR (measured) = 0.649 mW/g




0 dB = 0.649mW/g

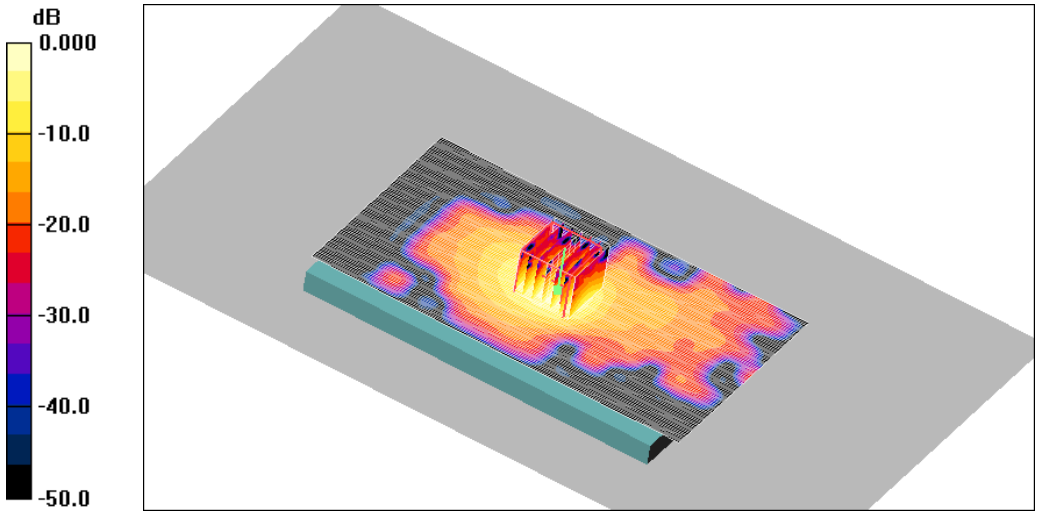
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 5.51 mho/m; $\varepsilon_r$ = 47.6; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.64, 3.64, 3.64); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.846 mW/g

**Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.8 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 1.59 W/kg
**SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.131 mW/g**
Maximum value of SAR (measured) = 0.872 mW/g




0 dB = 0.872mW/g

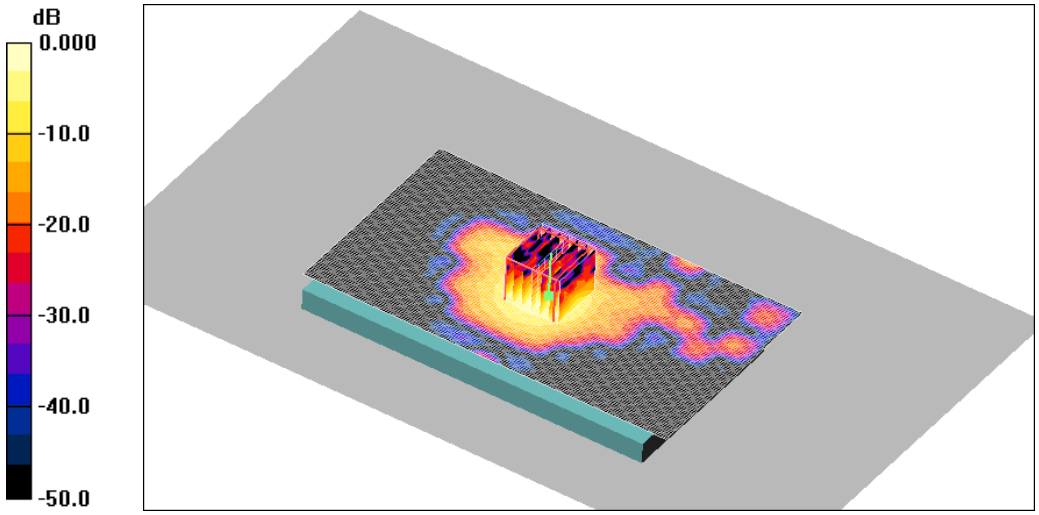
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.140, Ant.Intenna, Bat.Standard, 10mm, 6Mbps**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; $\sigma$ = 6.04 mho/m; $\varepsilon_r$ = 46.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.27, 3.27, 3.27); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.140, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.486 mW/g

**Back, Ch.140, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.89 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.935 W/kg
**SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.070 mW/g**
Maximum value of SAR (measured) = 0.513 mW/g




0 dB = 0.513mW/g

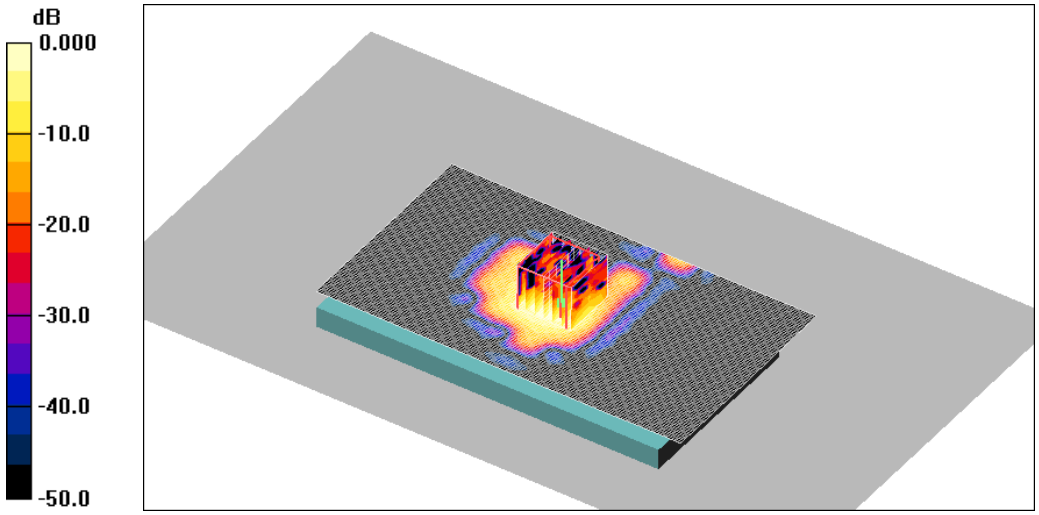
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.151, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5755 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5755 MHz; $\sigma$ = 6.11 mho/m; $\varepsilon_r$ = 46.3; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.5, 3.5, 3.5); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.151, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.289 mW/g

**Back, Ch.151, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.35 V/m; Power Drift = 0.008 dB
Peak SAR (extrapolated) = 0.464 W/kg
**SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.034 mW/g**
Maximum value of SAR (measured) = 0.256 mW/g




0 dB = 0.256mW/g

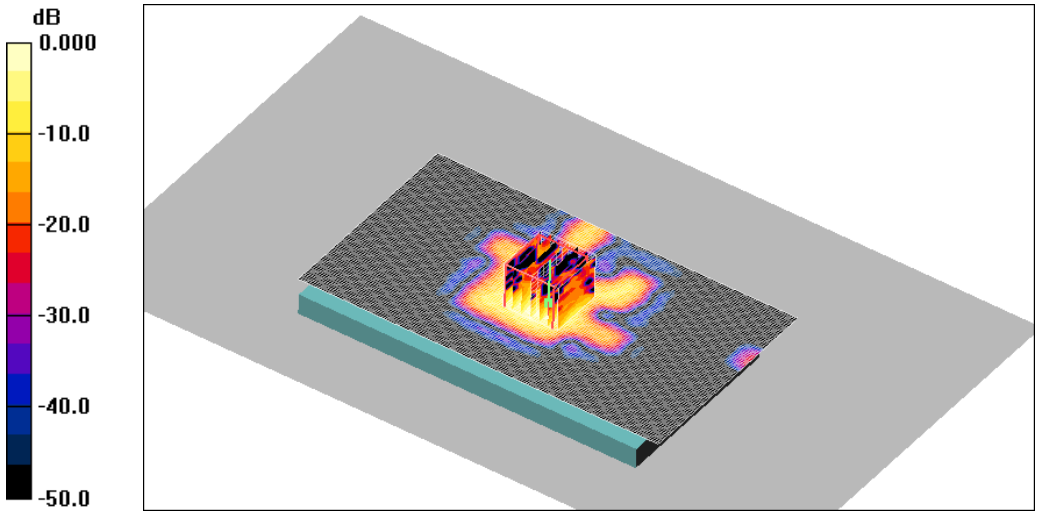
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11n Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.159, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5795 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5795 MHz; $\sigma$ = 6.16 mho/m; $\varepsilon_r$ = 46.1; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.5, 3.5, 3.5); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.159, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.193 mW/g

**Back, Ch.159, Ant.Intenna, Bat.Standard, 10mm, MCS0, HT40/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.55 V/m; Power Drift = -0.068 dB
Peak SAR (extrapolated) = 0.325 W/kg
**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.024 mW/g**
Maximum value of SAR (measured) = 0.189 mW/g




0 dB = 0.189mW/g

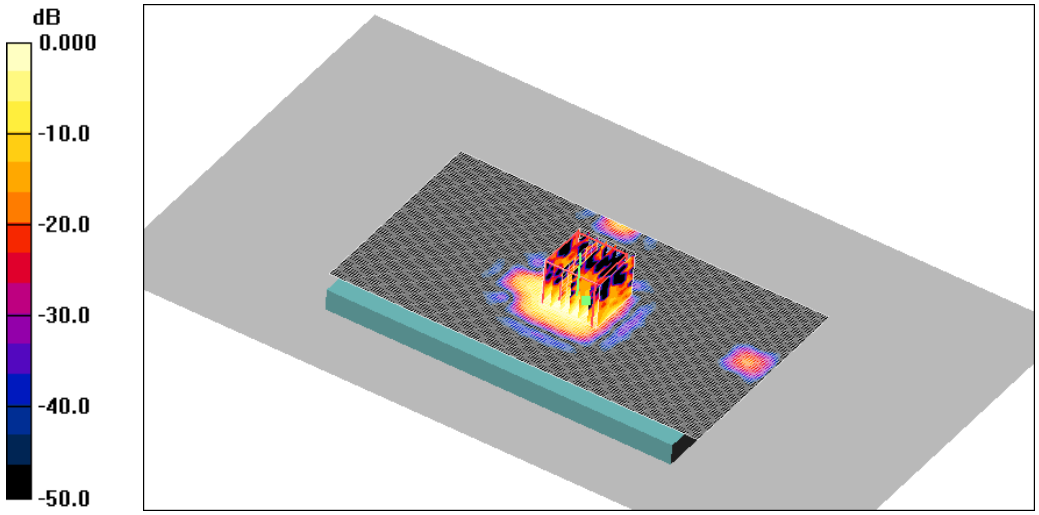
**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.161, Ant.Intenna, Bat.Standard, 10mm, 6Mbps**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 6.17 mho/m; $\varepsilon_r$ = 46.1; $\rho$ = 1000 kg/$m^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.5, 3.5, 3.5); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.161, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.208 mW/g

**Back, Ch.161, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.80 V/m; Power Drift = 0.186 dB
Peak SAR (extrapolated) = 0.301 W/kg
**SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.021 mW/g**
Maximum value of SAR (measured) = 0.171 mW/g

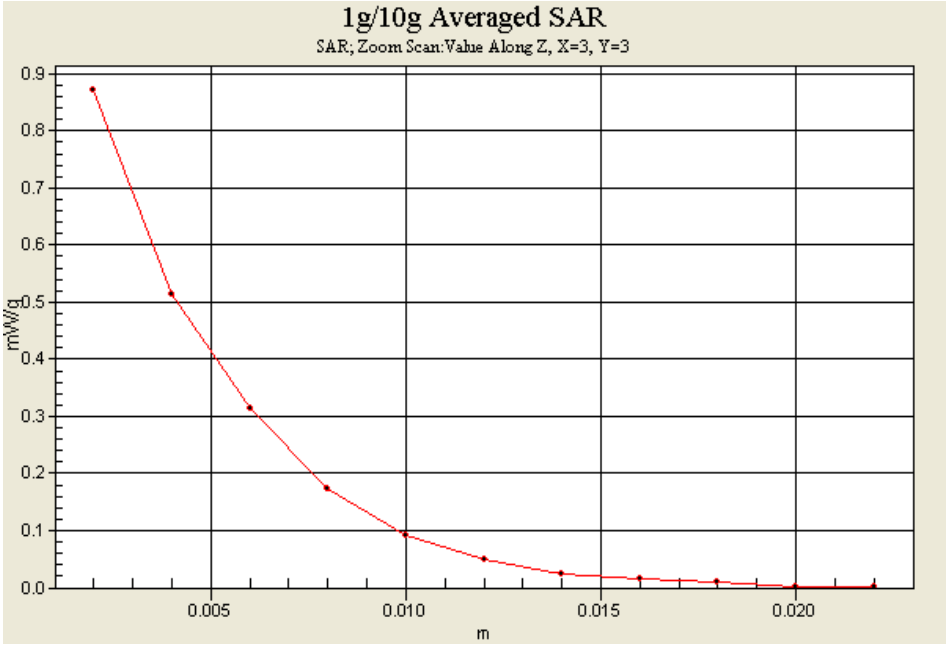



0 dB = 0.171mW/g

**DUT: GT-N7105; Serial: FJ-216-B**
**Program Name: GT-N7105 802.11a Body (Job No. : FJ-216)**
**Procedure Name: Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps**
**Meas. Ambient Temp(celsius)-22.5,Tissue Temp(celsius)-22.2;Test Date-27/Aug/2012**

Communication System: 5GHz; Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; $\sigma$ = 5.51 mho/m; $\varepsilon_r$ = 47.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3520; ConvF(3.64, 3.64, 3.64); Calibrated: 2012-02-21
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn486; Calibrated: 2012-01-19
- Phantom: Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: MP-1001
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Area Scan (91x161x1):**
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.846 mW/g

**Back, Ch.56, Ant.Intenna, Bat.Standard, 10mm, 6Mbps/Zoom Scan (7x7x11)/Cube 0:**
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.8 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 1.59 W/kg
**SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.131 mW/g**
Maximum value of SAR (measured) = 0.872 mW/g