



A Test Lab Techno Corp.

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SAR EVALUATION REPORT




| | | |
|--------------------|---|---|
| Test Report No. | : | 0811FS12-01 |
| Applicant | : | Inventec Corporation |
| FCC ID | : | DGIBC8121AABAB0 |
| Trade Name | : | velocitymobile |
| Model Number | : | velocity 111 |
| Product Type | : | PDA PHONE |
| Dates of Test | : | Feb. 26 ~ Feb. 27, 2009 |
| Test Environment | : | Ambient Temperature : $22 \pm 2^{\circ} \text{C}$ Relative Humidity : 40 - 70 % |
| Test Specification | : | Standard C95.1-2005 IEEE Std. 1528-2003 FCC KDB 941225 D01 SAR for 3G devices v02 |
| Max. SAR | : | 0.629 W/kg Head SAR 1.010 W/kg Body SAR 1.040 W/kg Co-Transmission SAR |
| Test Lab | : | Chang-an Lab |



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1. Description of Equipment Under Test (EUT)

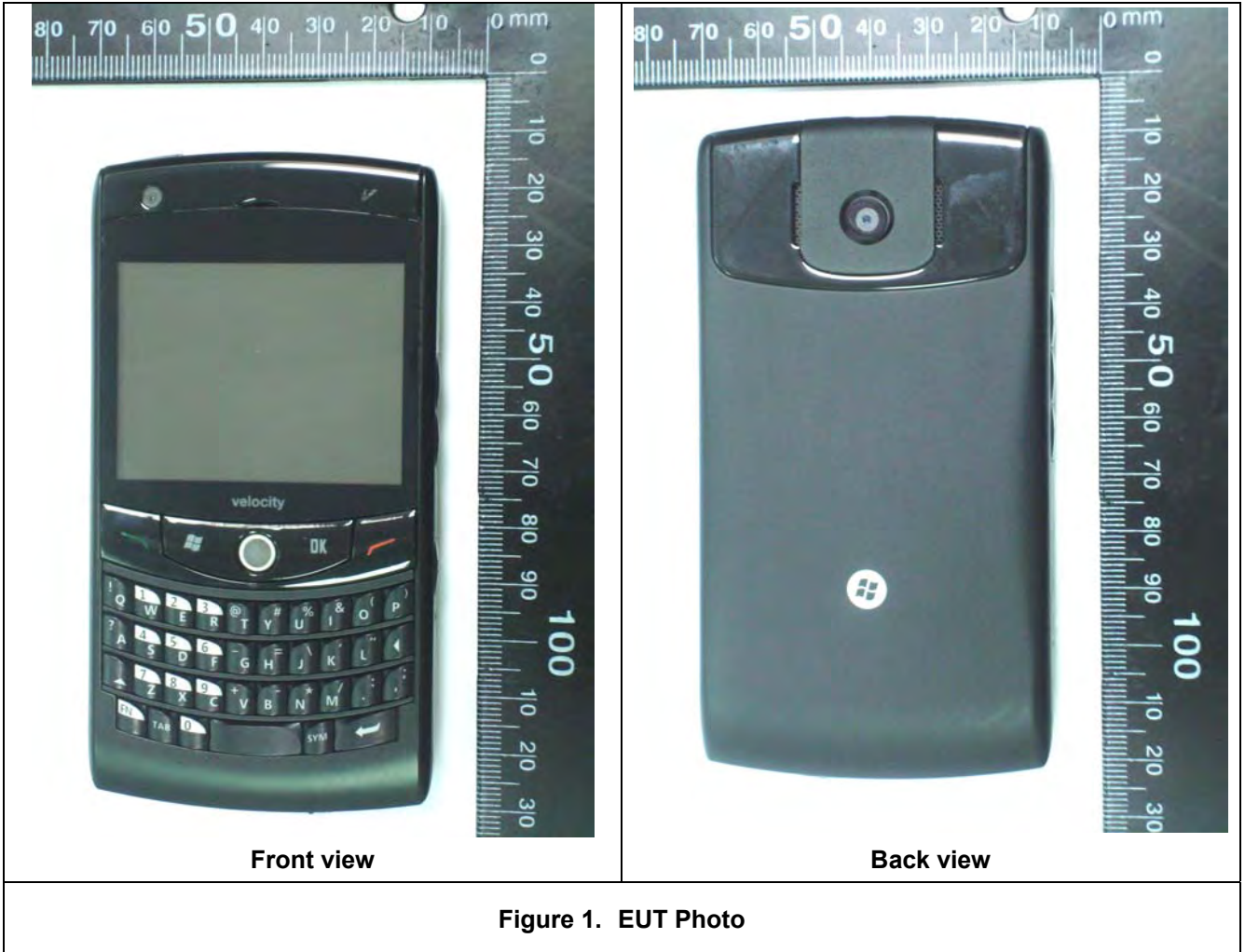
Applicant :

Inventec Corporation

Inventec Building, 66 Hou-Kang Street, Shih-Lin District, Taipei 11170, Taiwan

Manufacturer : Inventec Corporation
Manufacturer Address : Inventec Building, 66 Hou-Kang Street,
Shih-Lin District, Taipei 11170, Taiwan
Product Type : PDA PHONE
Trade Name : velocitymobile
Model Number : velocity 111
FCC ID : DGIBC8121AABAB0
Test Device : Production Unit
Tx Frequency : 824.2 - 848.8 MHz (GSM/GPRS/EGPRS 850)
1850.2 - 1909.8 MHz (PCS/GPRS/EGPRS 1900)
826.6 - 846.4 MHz (WCDMA/HSDPA/HSUPA Band V)
1852.6 - 1907.4 MHz (WCDMA/HSDPA/HSUPA Band II)
2412 - 2462 MHz (Wi-Fi 802.11b / 802.11g)
Max. RF Conducted Power : 1.722 W (32.37 dBm) GSM/GPRS/EGPRS 850
0.822 W (29.15 dBm) PCS/GPRS/EGPRS 1900
0.272 W (24.35 dBm) WCDMA/HSDPA/HSUPA Band V
0.230 W (23.62 dBm) WCDMA/HSDPA/HSUPA Band II
0.076 W (18.81 dBm) Wi-Fi 802.11b
0.070 W (18.47 dBm) Wi-Fi 802.11g
Max. SAR Measurement : 0.629 W/kg Head SAR
1.010 W/kg Body SAR
1.040 W/kg Co-Transmission SAR
HW Version : N/A
SW Version : 1.0.0
Antenna Type : Wi-Fi 802.11b/g: PIFA Chip Antenna
GSM850/PCS1900/WCDMA Band II&V: PIFA Antenna
Antenna Gain : -4.01 dB (GSM 850 / WCDMA Band V)
-2.02 dB (PCS 1900 / WCDMA Band II)
1.71 dB (Wi-Fi 802.11b/802.11g)
Device Category : Portable
RF Exposure Environment : General Population / Uncontrolled
Battery Option : Standard
Application Type : Certification

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment / general population exposure limits specified in Standard C95.1-2005 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003.



2. Other Accessories

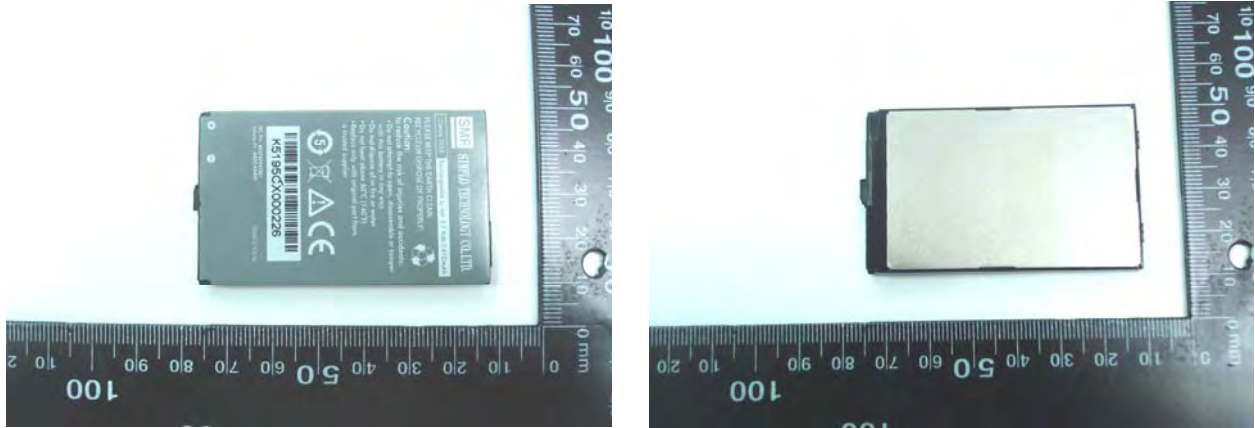


Figure 2. Li-ion Battery (3.7V 1410mAh)



Figure 3. Adapter



Figure 4. Headset



3. Introduction

The A Test Lab Techno Corp. has performed measurements of the maximum potential exposure to the user of **Inventec Corporation Trade Name : velocitymobile Model(s) : velocity 111**. The test procedures, as described in American National Standards, Institute C95.1 - 1999 [1], FCC/OET Bulletin 65 Supplement C [July 2001] were employed and they specify the maximum exposure limit of 1.6mW/g as averaged over any 1 gram of tissue for portable devices being used within 25cm between user and EUT in the uncontrolled environment. A description of the product and operating configuration, detailed summary of the test results, methodology and procedures used in the equipment used are included within this test report.



4. SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative (rate) of the incremental energy (dw) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Figure 5).

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

Figure 5. SAR Mathematical Equation

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

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

Where :

σ = conductivity of the tissue (S/m)

ρ = mass density of the tissue (kg/m^3)

E = RMS electric field strength (V/m)

*** Note :**

The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in 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 [2]



5. SAR Measurement Setup

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot (working range greater than 0.9m) which positions the probes with a positional repeatability of better than $\pm 0.02\text{mm}$. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines (length = 300mm) to the data acquisition unit.

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Measurement Server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with either the DAE4 (or DAE3) electronic box as well as the 16-bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O-board, which is directly connected to the PC/104 bus of the CPU board. The PC consists of the Intel Core(TM)2 CPU @1.86GHz computer with Windows XP system and SAR Measurement Software DASY5, Post Processor SEMCAD, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection...etc. is connected to the Electro-optical converter (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the Measurement Server.

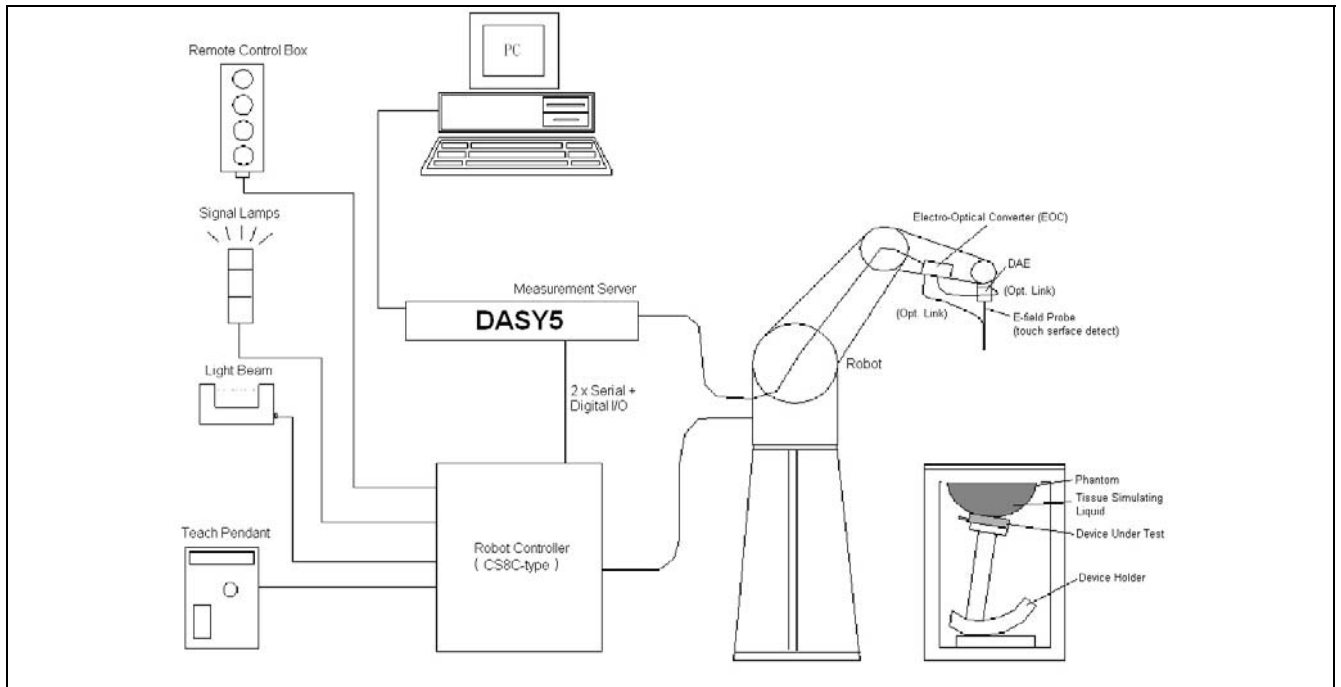


Figure 2. SAR Lab Test Measurement Setup

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 PC-card 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. The system is described in detail in [3] .



6. System Components

6.1 DASYS E-Field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 or ET3DV6 (manufactured by SPEAG), designed in the classical triangular configuration [3] and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multi-fiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. 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 DASYS software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting. The approach is stopped when reaching the maximum.

6.1.1 E-Field Probe Specification

| | |
|--------------------------|---|
| Construction | <p>Symmetrical design with triangular core</p> <p>Built-in optical fiber for surface detection System</p> <p>Built-in shielding against static charges</p> <p>PEEK enclosure material</p> <p>(resistant to organic solvents, e.q., glycol)</p> |
| Calibration | <p>In air from 10 MHz to 6 GHz</p> <p>In brain and muscle simulating tissue at frequencies of 900MHz, 1800MHz, 1950MHz, 5200MHz and 5500MHz and 5800MHz (accuracy $\pm 8\%$)</p> <p>Calibration for other liquids and frequencies upon request</p> |
| Frequency | <p>10 MHz to > 6 GHz; Linearity: ± 0.2 dB</p> <p>(30 MHz to 3 GHz)</p> |
| Directivity | <p>± 0.3 dB in brain tissue (rotation around probe axis)</p> <p>± 0.5 dB in brain tissue (rotation normal probe axis)</p> |
| Dynamic Range | <p>10 μ W/g to > 100mW/g; Linearity: ± 0.2dB</p> |
| Surface Detection | <p>± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surface(EX3DV3 only)</p> |
| Dimensions | <p>Overall length: 330mm</p> <p>Tip length: 20mm</p> <p>Body diameter: 12mm</p> <p>Tip diameter: 2.5mm</p> <p>Distance from probe tip to dipole centers: 1.0mm</p> |
| Application | <p>General dosimetry up to 6GHz</p> <p>Compliance tests of mobile phones</p> <p>Fast automatic scanning in arbitrary phantoms</p> |



Figure 6. E-field Probe



Figure 7. Probe setup on robot



6.1.2 E-Field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure described in [4] with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated with the procedure described in [5] and found to be better than $\pm 0.25\text{dB}$. The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

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

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

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

Where :

Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (head or body),

ΔT = Temperature increase due to RF exposure.

Or

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

Where :

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).



6.2 Data Acquisition Electronic (DAE) System

Cell Controller

Processor : Intel Core(TM)2 CPU
Clock Speed : @ 1.86GHz
Operating System : Windows XP Professional

Data Converter

Features : Signal Amplifier, multiplexer, A/D converter, and control logic
Software : DASY5 v5.0 (Build 120) & SEMCAD X Version 13.2 Build 87
Connecting Lines : Optical downlink for data and status info
Optical uplink for commands and clock

6.3 Robot

Positioner : Stäubli Unimation Corp. Robot Model: TX90XL
Repeatability : ± 0.02 mm
No. of Axis : 6

6.4 Measurement Server

Processor : PC/104 with a 400MHz intel ULV Celeron
I/O-board : Link to DAE4(or DAE3)
16-bit A/D converter for surface detection system
Digital I/O interface
Serial link to robot
Direct emergency stop output for robot

6.5 Device Holder for Transmitters

In combination with the SAM Twin Phantom V4.0, the Mounting Device (POM) 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 repeat ably positioned according to the IEEE SCC34-SC2 and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, and flat phantom).

***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 configurations [6] . To produce the worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

Larger DUT cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values. Therefore those devices are normally only tested at the flat part of the SAM.



Figure 8. Device Holder

6.6 Phantom - SAM v4.0

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-2003 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. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.

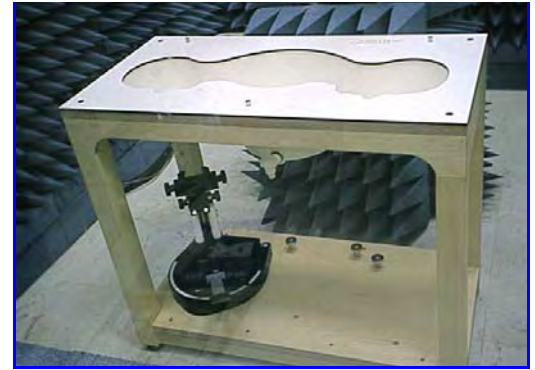


Figure 9. SAM Twin Phantom

| | |
|------------------------|-------------------------|
| Shell Thickness | 2 ±0.2 mm |
| Filling Volume | Approx. 25 liters |
| Dimensions | 810×1000×500 mm (H×L×W) |

Table 1. Specification of SAM v4.0

6.7 Data Storage and Evaluation

6.7.1 Data Storage

The DASY5 software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension .DA5. The post processing software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.



6.7.2 Data Evaluation

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

| | | |
|----------------------------|---------------------------|----------------------|
| Probe parameters : | - Sensitivity | Normi, ai0, ai1, ai2 |
| | - Conversion factor | ConvFi |
| | - Diode compression point | dcp _i |
| Device parameters : | - Frequency | f |
| | - Crest factor | cf |
| Media parameters : | - Conductivity | σ |
| | - Density | ρ |

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

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

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

- with
- V_i = compensated signal of channel i ($i = x, y, z$)
 - U_i = input signal of channel i ($i = x, y, z$)
 - cf = crest factor of exciting field (DASY parameter)
 - dcp_i = diode compression point (DASY parameter)

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

E-field probes :

$$E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$



H-field probes :

$$H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

- with V_i = compensated signal of channel i ($i = x, y, z$)
 $Norm_i$ = sensor sensitivity of channel i ($i = x, y, z$)
 $\mu V/(V/m)^2$ for E-field Probes
 $ConvF$ = sensitivity enhancement in solution
 a_{ij} = sensor sensitivity factors for H-field probes
 f = carrier frequency [GHz]
 E_i = electric field strength of channel i in V/m
 Hi = magnetic field strength of channel i in A/m

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

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

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

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

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

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

The power flow density is calculated assuming the excitation field to be a free space field.

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

- with P_{pwe} = equivalent power density of a plane wave in mW/cm^2
 E_{tot} = total electric field strength in V/m
 H_{tot} = total magnetic field strength in A/m



7. Test Equipment List

| Manufacturer | Name of Equipment | Type/Model | Serial Number | Calibration | |
|---------------|------------------------------------|----------------------------|----------------------|---------------|---------------|
| | | | | Last Cal. | Due Date |
| SPEAG | Dosimetric E-Field Probe | EX3DV4 | 3554 | Sep. 19, 2008 | Sep. 19, 2009 |
| SPEAG | 835MHz System Validation Kit | D835V2 | 4d063 | Jun. 06, 2008 | Jun. 06, 2009 |
| SPEAG | 1900MHz System Validation Kit | D1900V2 | 5d018 | May. 22, 2008 | May. 22, 2009 |
| SPEAG | 1900MHz System Validation Kit | D2450V2 | 735 | May. 22, 2008 | May. 22, 2009 |
| SPEAG | Data Acquisition Electronics | DAE4 | 779 | Nov. 11, 2008 | Nov. 11, 2009 |
| SPEAG | Device Holder | N/A | N/A | NCR | NCR |
| SPEAG | Phantom | SAM V4.0 | TP-1150 | NCR | NCR |
| SPEAG | Robot | Staubli TX90XL | F07/564ZA1/C/01 | NCR | NCR |
| SPEAG | Software | DASY5 V5.0 Build 120 | N/A | NCR | NCR |
| SPEAG | Software | SEMCAD X V13.2 Build 87 | N/A | NCR | NCR |
| SPEAG | Measurement Server | SE UMS 011 AA | 1025 | NCR | NCR |
| R&S | Wireless Communication Test Set | CMU200 | 112387 | Oct. 31, 2008 | Oct. 31, 2009 |
| Agilent | Wireless Communication Test Set | E5515C | GB47020167 | Apr. 17, 2008 | Apr. 17, 2009 |
| Agilent | ENA Series Network Analyzer | E5071B | MY42402996 | Nov. 04, 2008 | Nov. 04, 2009 |
| Agilent | Dielectric Probe Kit | 85070C | US99360094 | NCR | NCR |
| R&S | Power Sensor | NRP-Z22 | 100179 | May. 03, 2008 | May. 03, 2009 |
| Agilent | Signal Generator | E8257D | MY44320425 | Jul. 03, 2008 | Jul. 03, 2009 |
| Agilent | Dual Directional Coupler | 778D | 50334 | NCR | NCR |
| Mini-Circuits | Power Amplifier | ZHL-42W-SMA | D111103#5 | NCR | NCR |
| Mini-Circuits | Power Amplifier | ZVE-8G-SMA | D042005 671800514 | NCR | NCR |

Table 2. Test Equipment List



8. Tissue Simulating Liquids

The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an 85070C Dielectric Probe Kit and an 8720ES Network Analyzer.

IEEE SCC-34/SC-2 in 1528 recommended Tissue Dielectric Parameters

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in 1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in human head. Other head and body tissue parameters that have not been s

pecified in 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equation and extrapolated according to the head parameter specified in 1528.

| Target Frequency (MHz) | Head | | Body | |
|---------------------------|--------------|----------------|--------------|----------------|
| | ϵ_r | σ (S/m) | ϵ_r | σ (S/m) |
| 150 | 52.3 | 0.76 | 61.9 | 0.80 |
| 300 | 45.3 | 0.87 | 58.2 | 0.92 |
| 450 | 43.5 | 0.87 | 56.7 | 0.94 |
| 835 | 41.5 | 0.90 | 55.2 | 0.97 |
| 900 | 41.5 | 0.97 | 55.0 | 1.05 |
| 915 | 41.5 | 0.98 | 55.0 | 1.06 |
| 1450 | 40.5 | 1.20 | 54.0 | 1.30 |
| 1610 | 40.3 | 1.29 | 53.8 | 1.40 |
| 1800 - 2000 | 40.0 | 1.40 | 53.3 | 1.52 |
| 2450 | 39.2 | 1.80 | 52.7 | 1.95 |
| 3000 | 38.5 | 2.40 | 52.0 | 2.73 |
| 5800 | 35.3 | 5.27 | 48.2 | 6.00 |

(ϵ_r = relative permittivity, σ = conductivity and $\rho = 1000 \text{ kg/m}^3$)

Table 3. Tissue dielectric parameters for head and body phantoms



8.1 Liquid Confirmation

8.1.1 Parameters

| Liquid Verify | | | | | | | | |
|---|-----------|-----------|------------|--------------|----------------|---------------|-----------|---------------|
| Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70% | | | | | | | | |
| Liquid Type | Frequency | Temp (°C) | Parameters | Target Value | Measured Value | Deviation (%) | Limit (%) | Measured Date |
| 835MHz Head | 800MHz | 22.0 | εr | 41.5 | 42.24 | 1.78% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.90 | 0.8775 | -2.50% | ± 5 | |
| 835MHz Head | 835MHz | 22.0 | εr | 41.5 | 41.9 | 0.96% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.90 | 0.92 | 2.22% | ± 5 | |
| 835MHz Head | 850MHz | 22.0 | εr | 41.5 | 41.49 | -0.02% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.90 | 0.9305 | 3.39% | ± 5 | |
| 835MHz Body | 800MHz | 22.0 | εr | 55.2 | 55.79 | 1.07% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.97 | 0.9255 | -4.59% | ± 5 | |
| 835MHz Body | 835MHz | 22.0 | εr | 55.2 | 55.5 | 0.54% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.97 | 0.96 | -1.03% | ± 5 | |
| 835MHz Body | 850MHz | 22.0 | εr | 55.2 | 55.44 | 0.43% | ± 5 | Feb. 26, 2009 |
| | | | σ | 0.97 | 0.9745 | 0.46% | ± 5 | |
| 1900MHz Head | 1850MHz | 22.0 | εr | 40.0 | 40.67 | 1.68% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.40 | 1.365 | -2.50% | ± 5 | |
| 1900MHz Head | 1900MHz | 22.0 | εr | 40.0 | 40.5 | 1.25% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.40 | 1.40 | 0.00% | ± 5 | |
| 1900MHz Head | 1950MHz | 22.0 | εr | 40.0 | 40.31 | 0.78% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.40 | 1.442 | 3.00% | ± 5 | |
| 1900MHz Body | 1850MHz | 22.0 | εr | 53.3 | 51.9 | -2.63% | ± 5 | Feb. 27, 2009 |
| | | | σ | 1.52 | 1.456 | -4.21% | ± 5 | |
| 1900MHz Body | 1900MHz | 22.0 | εr | 53.3 | 51.7 | -3.00% | ± 5 | Feb. 27, 2009 |
| | | | σ | 1.52 | 1.51 | -0.66% | ± 5 | |
| 1900MHz Body | 1950MHz | 22.0 | εr | 53.3 | 51.64 | -3.11% | ± 5 | Feb. 27, 2009 |
| | | | σ | 1.52 | 1.562 | 2.76% | ± 5 | |

Measured Tissue dielectric parameters for head and body phantoms

| Liquid Type | Frequency | Temp (°C) | Parameters | Target Value | Measured Value | Deviation (%) | Limit (%) | Measured Date |
|--------------|-----------|-----------|--------------|--------------|----------------|---------------|-----------|---------------|
| 2450MHz Body | 2400MHz | 22.0 | ϵ_r | 52.7 | 52.49 | -0.40% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.95 | 1.911 | -2.00% | ± 5 | |
| 2450MHz Body | 2450MHz | 22.0 | ϵ_r | 52.7 | 52.2 | -0.95% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.95 | 1.97 | 1.03% | ± 5 | |
| 2450MHz Body | 2500MHz | 22.0 | ϵ_r | 52.7 | 52.14 | -1.06% | ± 5 | Feb. 26, 2009 |
| | | | σ | 1.95 | 2.046 | 4.92% | ± 5 | |

Measured Tissue dielectric parameters for head and body phantoms

8.1.2 Liquid Depth

The liquid level was during measurement 15cm ± 0.5 cm.

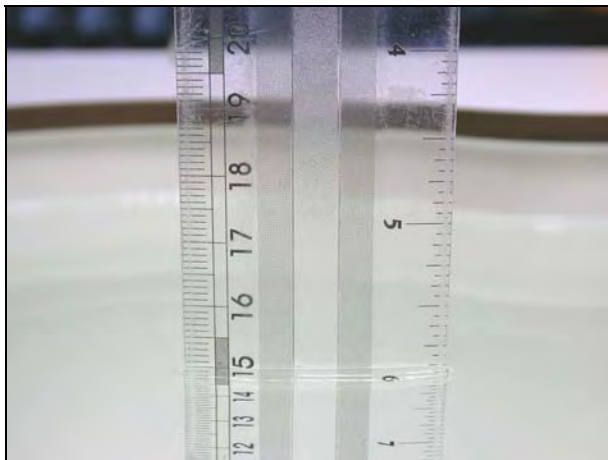


Figure 10. Head-Tissue-Simulating-Liquid

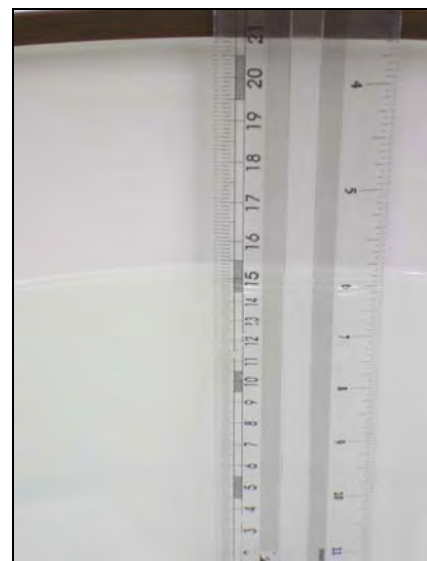


Figure 11. Body-Tissue-Simulating-Liquid



9. Measurement Process

9.1 Device and Test Conditions

The Test Device was provided by **Inventec Corporation** for this evaluation. The spatial peak SAR values were assessed for the lowest, middle and highest channels defined by **GSM 850** (#128=824.2MHz, #190=836.6MHz, #251=848.8MHz), **PCS 1900** (#512=1850.2MHz, #661=1880.0MHz, #810=1909.8MHz) , **WCDMA Band V** (#4133=826.6MHz, #4180=836MHz, #4232=846.6MHz), **WCDMA Band II** (#9263=1852.6MHz, #9400=1880.0MHz, #9537=1907.4MHz) and **Wi-Fi 802.11b & 802.11g** (Ch1 = 2412MHz , Ch6 = 2437MHz , Ch11 = 2462MHz) systems.

HSDPA Data Devices setup for SAR Measurement.

HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below.³² The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.³³

| Sub-test | β_c | β_d | β_d (SF) | β_c/β_d | $\beta_{hs}^{(1,2)}$ | CM (dB) ⁽³⁾ | MRP (dB) ⁽³⁾ |
|----------|----------------------|----------------------|----------------|----------------------|----------------------|------------------------|-------------------------|
| 1 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 0.0 | 0.0 |
| 2 | 12/15 ⁽⁴⁾ | 15/15 ⁽⁴⁾ | 64 | 12/15 ⁽⁴⁾ | 24/15 | 1.0 | 0.0 |
| 3 | 15/15 | 8/15 | 64 | 15/8 | 30/15 | 1.5 | 0.5 |
| 4 | 15/15 | 4/15 | 64 | 15/4 | 30/15 | 1.5 | 0.5 |

Note

- Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
- For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1A and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$ and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$
- CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
- For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Table 4. Setup for Release 5 HSDPA



HSPA Data Devices setup for SAR Measurement.

The following procedures are applicable to HSPA (HSUPA/HSDPA) data devices operating under 3GPP Release 6. Body exposure conditions generally apply to these devices, including handsets and data modems operating in various electronic devices. HSUPA operates in conjunction with WCDMA and HSDPA. SAR is initially measured in WCDMA test configurations without HSPA. The default test configuration is to establish a radio link between the DUT and a communication test set to configure a 12.2 kbps RMC (reference measurement channel) in Test Loop Mode 1. SAR for HSPA is selectively measured with HS-DPCCH, EDPCCH and E-DPDCH, all enabled, along with a 12.2 kbps RMC using the highest SAR configuration in WCDMA with 12.2 kbps RMC only. An FRC is configured according to HSDPCCH Sub-test 1 using H-set 1 and QPSK. HSPA is configured according to E-DCH Subtest 5 requirements. SAR for other HSPA sub-test configurations is also confirmed selectively according to output power, exposure conditions and E-DCH UE Category. Maximum output power is verified according to procedures in applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. The UE Categories for HSDPCCH and HSPA should be clearly identified in the SAR report. The following procedures are applicable only if Maximum Power Reduction (MPR) is implemented according to Cubic Metric (CM) requirements.

When voice transmission and head exposure conditions are applicable to a WCDMA/HSPA data device, head exposure is measured according to the 'Head SAR Measurements' procedures in the 'WCDMA Handsets' section of this document. SAR for body exposure configurations are measured according to the 'Body SAR Measurements' procedures in the 'WCDMA Handsets' section of this document. In addition, body SAR is also measured for HSPA when the maximum average output of each RF channel with HSPA active is at least ¼ dB higher than that measured without HSPA using 12.2 kbps RMC or the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP is applicable for head exposure, SAR is not required when the maximum output of each RF channel with HSPA is less than ¼ dB higher than that measured using 12.2 kbps RMC; otherwise, the same HSPA configuration used for body measurements should be used to test for head exposure.

Due to inner loop power control requirements in HSPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA should be configured according to the β values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of this document.



The highest body SAR measured in Antenna Extended & Retracted configurations on a channel in 12.2 kbps RMC. The possible channels are the High, Middle & Low channel. Contact the FCC Laboratory for test and approval requirements if the maximum output power measured in E-DCH Sub-test 2 - 4 is higher than Sub-test 5.

| Sub-test | β_c | β_d | β_d (SF) | β_c/β_d | $\beta_{hs}^{(1)}$ | β_{ec} | β_{ed} | Bed (SF) | Bed (codes) | CM ⁽²⁾ (dB) | MPR (dB) | AG ⁽⁴⁾ Index | E-TFCI |
|----------|----------------------|----------------------|----------------|----------------------|--------------------|--------------|--|----------|-------------|------------------------|----------|-------------------------|--------|
| 1 | 11/15 ⁽³⁾ | 15/15 ⁽³⁾ | 64 | 11/15 ⁽³⁾ | 22/15 | 209/225 | 1039/225 | 4 | 1 | 1.0 | 0.0 | 20 | 75 |
| 2 | 6/15 | 15/15 | 64 | 6/15 | 12/15 | 12/15 | 94/75 | 4 | 1 | 3.0 | 2.0 | 12 | 67 |
| 3 | 15/15 | 9/15 | 64 | 15/9 | 30/15 | 30/15 | $\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$ | 4 | 2 | 2.0 | 1.0 | 15 | 92 |
| 4 | 2/15 | 15/15 | 64 | 2/15 | 4/15 | 2/15 | 56/75 | 4 | 1 | 3.0 | 2.0 | 17 | 71 |
| 5 | 15/15 ⁽⁴⁾ | 15/15 ⁽⁴⁾ | 64 | 15/15 ⁽⁴⁾ | 30/15 | 24/15 | 134/15 | 4 | 1 | 1.0 | 0.0 | 21 | 81 |

Note 1: $\Delta ACK, \Delta NACK$ and $\Delta CQI = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Table 5. Setup for Release 6 HSPA



| | |
|----------------------------|---|
| Usage | Operates with a Normal mode by client (GSM/PCS/WCDMA) Operates with a built-in test mode by client (802.11b/g) |
| Simulating human Head/Body | Head & Body |
| EUT Battery | Fully-charged with Li-ion batteries. |

| Band | Mode | CH | Frequency (MHz) | Conducted Power (dBm) | Worst |
|-----------|----------|---------|-----------------|-----------------------|-------------------------------------|
| GSM 850 | --- | Lowest | 824.2 | 32.37 | <input checked="" type="checkbox"/> |
| | | Middle | 836.6 | 32.21 | <input type="checkbox"/> |
| | | Highest | 848.8 | 32.02 | <input type="checkbox"/> |
| GPRS 850 | 3Down2Up | Lowest | 824.2 | 32.35 | <input type="checkbox"/> |
| | | Middle | 836.6 | 32.17 | <input type="checkbox"/> |
| | | Highest | 848.8 | 31.89 | <input type="checkbox"/> |
| | 3Down1Up | Lowest | 824.2 | 32.17 | <input type="checkbox"/> |
| | | Middle | 836.6 | 32.07 | <input type="checkbox"/> |
| | | Highest | 848.8 | 31.87 | <input type="checkbox"/> |
| EGPRS 850 | 3Down2Up | Lowest | 824.2 | 27.00 | <input type="checkbox"/> |
| | | Middle | 836.6 | 26.73 | <input type="checkbox"/> |
| | | Highest | 848.8 | 26.46 | <input type="checkbox"/> |
| | 3Down1Up | Lowest | 824.2 | 26.97 | <input type="checkbox"/> |
| | | Middle | 836.6 | 26.87 | <input type="checkbox"/> |
| | | Highest | 848.8 | 26.87 | <input type="checkbox"/> |

| Band | Mode | CH | Frequency (MHz) | Conducted Power (dBm) | Worst |
|------------|----------|---------|-----------------|-----------------------|-------------------------------------|
| PCS 1900 | --- | Lowest | 1850.2 | 28.81 | <input type="checkbox"/> |
| | | Middle | 1880.0 | 29.11 | <input type="checkbox"/> |
| | | Highest | 1909.8 | 29.15 | <input checked="" type="checkbox"/> |
| GPRS 1900 | 3Down2Up | Lowest | 1850.2 | 28.76 | <input type="checkbox"/> |
| | | Middle | 1880.0 | 29.10 | <input type="checkbox"/> |
| | | Highest | 1909.8 | 29.10 | <input type="checkbox"/> |
| | 3Down1Up | Lowest | 1850.2 | 28.76 | <input type="checkbox"/> |
| | | Middle | 1880.0 | 28.96 | <input type="checkbox"/> |
| | | Highest | 1909.8 | 28.98 | <input type="checkbox"/> |
| EGPRS 1900 | 3Down2Up | Lowest | 1850.2 | 26.37 | <input type="checkbox"/> |
| | | Middle | 1880.0 | 26.20 | <input type="checkbox"/> |
| | | Highest | 1909.8 | 26.16 | <input type="checkbox"/> |
| | 3Down1Up | Lowest | 1850.2 | 25.66 | <input type="checkbox"/> |
| | | Middle | 1880.0 | 25.96 | <input type="checkbox"/> |
| | | Highest | 1909.8 | 26.36 | <input type="checkbox"/> |



| Band | Date Rate or Sub-test | Mode | CH | Frequency (MHz) | Conducted Power (dBm) | Worst |
|---------|-----------------------|-----------|---------|-----------------|-----------------------|-------|
| WCDMA V | --- | 12.2k RMC | Lowest | 826.4 | 24.35 | ■ |
| | | 12.2k RMC | Middle | 836.0 | 24.16 | □ |
| | | 12.2k RMC | Highest | 846.4 | 23.88 | □ |
| HSDPA V | 1 | 12.2k RMC | Lowest | 826.4 | 23.17 | ■ |
| | | 12.2k RMC | Middle | 836.0 | 23.13 | □ |
| | | 12.2k RMC | Highest | 846.4 | 22.88 | □ |
| | 2 | 12.2k RMC | Lowest | 826.4 | 23.00 | □ |
| | | 12.2k RMC | Middle | 836.0 | 22.97 | □ |
| | | 12.2k RMC | Highest | 846.4 | 22.75 | □ |
| | 3 | 12.2k RMC | Lowest | 826.4 | 22.69 | □ |
| | | 12.2k RMC | Middle | 836.0 | 22.67 | □ |
| | | 12.2k RMC | Highest | 846.4 | 22.33 | □ |
| | 4 | 12.2k RMC | Lowest | 826.4 | 22.63 | □ |
| | | 12.2k RMC | Middle | 836.0 | 22.60 | □ |
| | | 12.2k RMC | Highest | 846.4 | 22.29 | □ |
| HSUPA V | 1 | 12.2k RMC | Lowest | 826.4 | 22.90 | □ |
| | | 12.2k RMC | Middle | 836.0 | 23.16 | ■ |
| | | 12.2k RMC | Highest | 846.4 | 22.66 | □ |
| | 2 | 12.2k RMC | Lowest | 826.4 | 21.00 | □ |
| | | 12.2k RMC | Middle | 836.0 | 21.33 | □ |
| | | 12.2k RMC | Highest | 846.4 | 20.97 | □ |
| | 3 | 12.2k RMC | Lowest | 826.4 | 21.97 | □ |
| | | 12.2k RMC | Middle | 836.0 | 22.29 | □ |
| | | 12.2k RMC | Highest | 846.4 | 21.85 | □ |
| | 4 | 12.2k RMC | Lowest | 826.4 | 20.97 | □ |
| | | 12.2k RMC | Middle | 836.0 | 21.27 | □ |
| | | 12.2k RMC | Highest | 846.4 | 20.85 | □ |
| | 5 | 12.2k RMC | Lowest | 826.4 | 22.86 | □ |
| | | 12.2k RMC | Middle | 836.0 | 23.06 | □ |
| | | 12.2k RMC | Highest | 846.4 | 22.58 | □ |



| Band | Date Rate or Sub-test | Mode | CH | Frequency (MHz) | Conducted Power (dBm) | Worst |
|----------|-----------------------|-----------|---------|-----------------|-----------------------|-------------------------------------|
| WCDMA II | --- | 12.2k RMC | Lowest | 1852.4 | 23.62 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 23.39 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 23.51 | <input type="checkbox"/> |
| HSDPA II | 1 | 12.2k RMC | Lowest | 1852.4 | 23.09 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 23.34 | <input checked="" type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.90 | <input type="checkbox"/> |
| | 2 | 12.2k RMC | Lowest | 1852.4 | 22.93 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 23.14 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.74 | <input type="checkbox"/> |
| | 3 | 12.2k RMC | Lowest | 1852.4 | 22.61 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 22.98 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.58 | <input type="checkbox"/> |
| | 4 | 12.2k RMC | Lowest | 1852.4 | 22.54 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 22.86 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.50 | <input type="checkbox"/> |
| HSUPA II | 1 | 12.2k RMC | Lowest | 1852.4 | 23.09 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 23.34 | <input checked="" type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.89 | <input type="checkbox"/> |
| | 2 | 12.2k RMC | Lowest | 1852.4 | 21.34 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 21.39 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 21.01 | <input type="checkbox"/> |
| | 3 | 12.2k RMC | Lowest | 1852.4 | 22.20 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 22.41 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.02 | <input type="checkbox"/> |
| | 4 | 12.2k RMC | Lowest | 1852.4 | 21.29 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 21.51 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 21.23 | <input type="checkbox"/> |
| | 5 | 12.2k RMC | Lowest | 1852.4 | 23.04 | <input type="checkbox"/> |
| | | 12.2k RMC | Middle | 1880.0 | 23.27 | <input type="checkbox"/> |
| | | 12.2k RMC | Highest | 1907.6 | 22.86 | <input type="checkbox"/> |



| Band | Data | CH | Frequency (MHz) | Conducted Power (dBm) | Worst |
|---------|------|---------|-----------------|-----------------------|-------------------------------------|
| 802.11b | 1M | Lowest | 2412 | 18.40 | <input type="checkbox"/> |
| | | Middle | 2437 | 18.81 | <input checked="" type="checkbox"/> |
| | | Highest | 2462 | 17.72 | <input type="checkbox"/> |
| | 11M | Lowest | 2412 | 18.33 | <input type="checkbox"/> |
| | | Middle | 2437 | 18.70 | <input type="checkbox"/> |
| | | Highest | 2462 | 17.56 | <input type="checkbox"/> |
| 802.11g | 6M | Lowest | 2412 | 18.47 | <input checked="" type="checkbox"/> |
| | | Middle | 2437 | 17.24 | <input type="checkbox"/> |
| | | Highest | 2462 | 18.25 | <input type="checkbox"/> |
| | 54M | Lowest | 2412 | 17.85 | <input type="checkbox"/> |
| | | Middle | 2437 | 16.60 | <input type="checkbox"/> |
| | | Highest | 2462 | 17.59 | <input type="checkbox"/> |

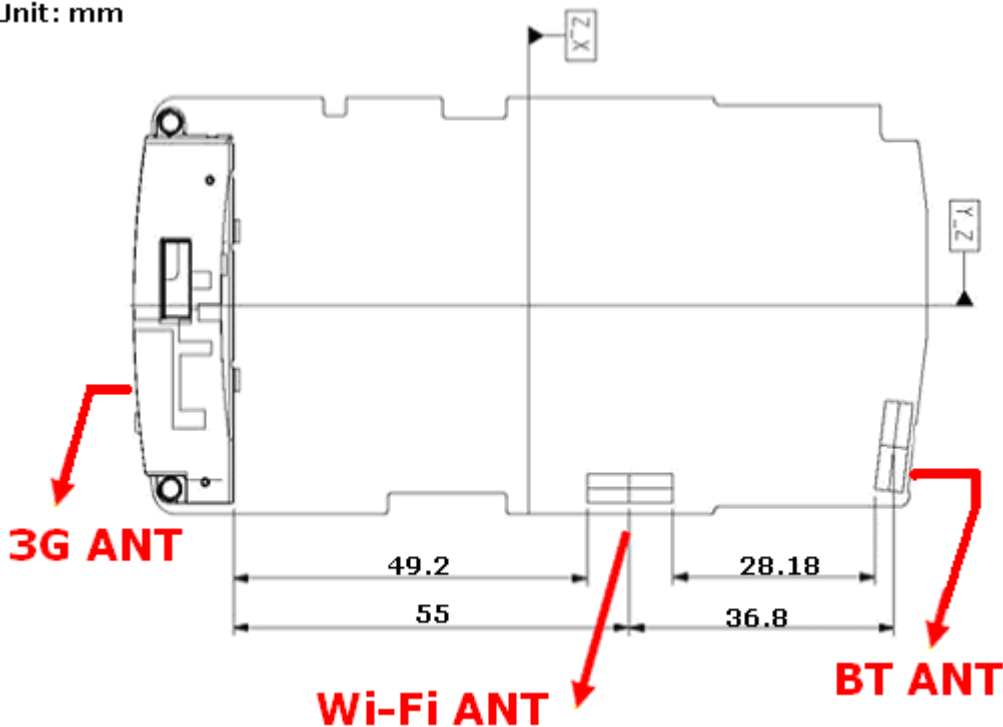
Note:

1. The EUT has built-in test mode that used to evaluate SAR (802.11b/g).
2. The SAR test mode is chosen by the max conducted power.

The antenna(s), battery and accessories shall be those specified by the manufacturer. The battery shall be fully charged before each measurement and there shall be no external connections.

| | |
|------------------------------------|--|
| Wireless Device | GSM / GPRS / EGPRS 850, GSM / GPRS / EGPRS 1900 |
| | WCDMA Cellular / PCS , HSDPA Release 8 , HSUPA Release 5 |
| | WLAN 802.11b , WLAN 802.11g |
| | Bluetooth 2.0 |
| Max. Conducted Power: | GSM : 32.37 dBm |
| | WCDMA : 24.35 dBm |
| | WLAN : 18.81 dBm |
| | Bluetooth : 4.03 dBm |
| Antenna Distance : | GSM to WLAN = <u>4.92</u> cm |
| | WLAN to BT = <u>2.81</u> cm |
| | GSM to BT = <u>> 8.8</u> cm |
| Co-Transmission System: | GSM / WCDMA / BT / WLAN |
| Stand alone SAR (Max) : | GSM = <u>1.010</u> mW/g |
| | WCDMA = <u>0.742</u> mW/g |
| | WLAN = <u>0.541</u> mW/g |
| Co-Transmission SAR (Max) : | <u>1.040</u> mW/g |

Unit: mm



9.2 System Performance Check

9.2.1 Symmetric Dipoles for System Validation


| | | |
|-------------------------|--|--|
| Construction | Symmetrical dipole with 1/4 balun enables measurement of feed point impedance with NWA matched for use near flat phantoms filled with head simulating solutions Includes distance holder and tripod adaptor Calibration Calibrated SAR value for specified position and input power at the flat phantom in head simulating solutions. |  |
| Frequency | 450, 900, 1800, 1950, 2000, 2450, 5000MHz | |
| Return Loss | > 20 dB at specified validation position | |
| Power Capability | > 100 W (f < 1GHz); > 40 W (f > 1GHz) | |
| Options | Dipoles for other frequencies or solutions and other calibration conditions are available upon request | |
| Dimensions | D450V2 : dipole length 270 mm; overall height 330 mm D900V2 : dipole length 149 mm; overall height 330 mm D1800V2 : dipole length 72 mm; overall height 300 mm D1950V2 : dipole length 62 mm; overall height 300 mm D2000V2 : dipole length 65 mm; overall height 300 mm D2450V2 : dipole length 51.5 mm; overall height 300 mm D5GHzV2 : dipole length 20.6 mm; overall height 450 mm | |

Figure 12. Validation Kit



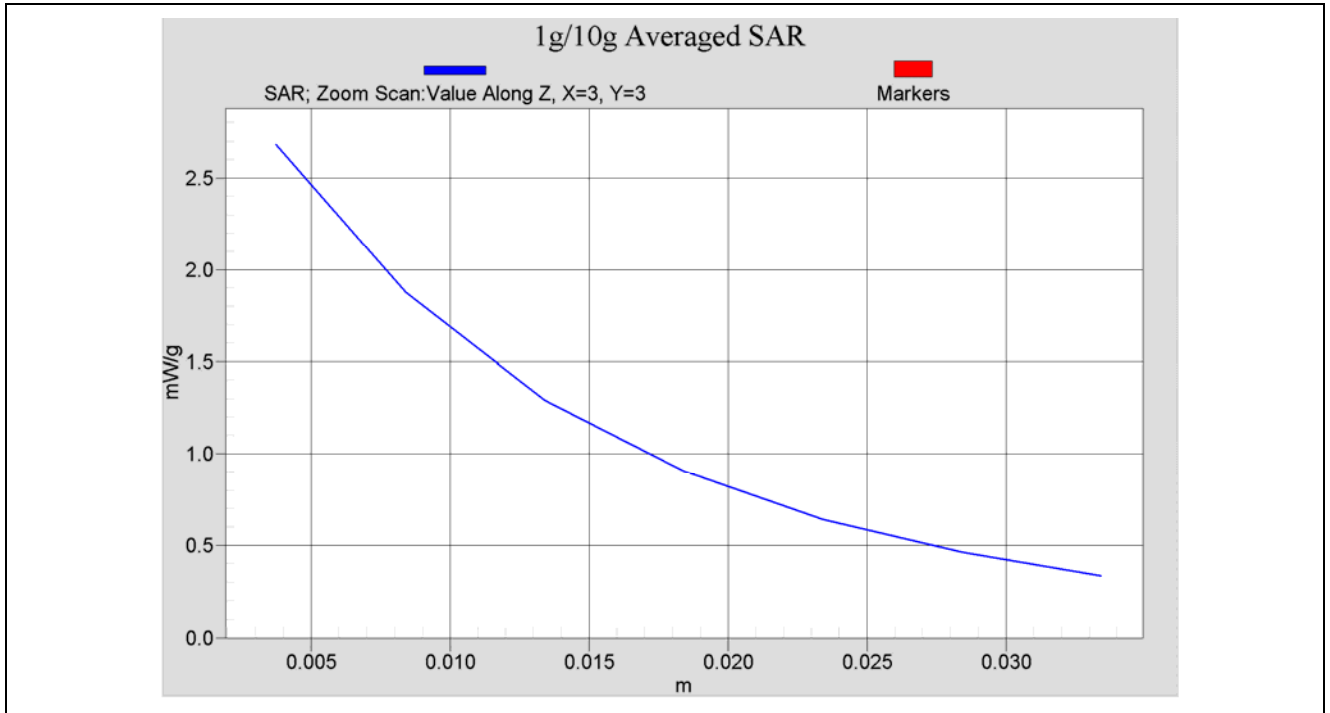
9.2.2 Validation

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of $\pm 7\%$. The validation was performed at 835MHz, 1900MHz and 2450MHz.

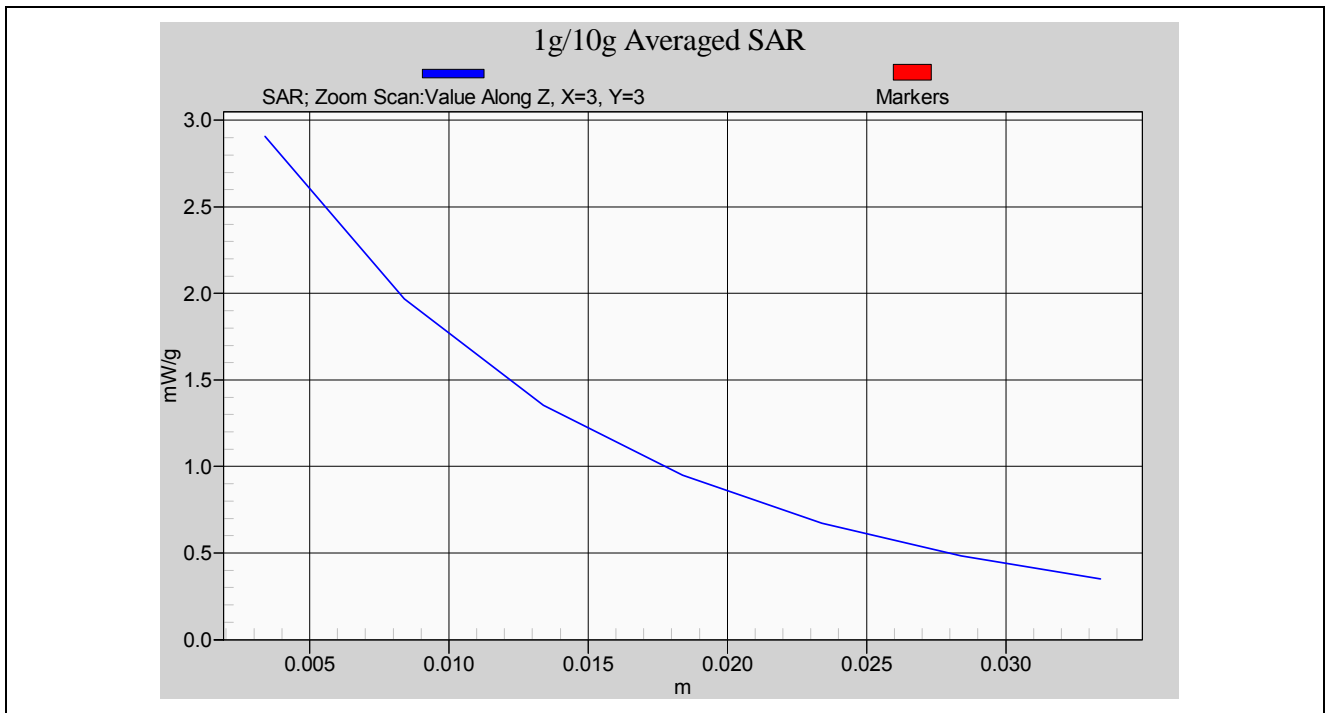
| Validation kit | | Mixture Type | SAR _{1g} [mW/g] | | SAR _{10g} [mW/g] | | Date of Calibration |
|-----------------|---------------------|--------------------------|---------------------------|------------|---------------------------|--------|---------------------|
| D835V2-SN172 | | Head | 9.16 | | 6.08 | | Jun. 06, 2008 |
| | | Body | 9.76 | | 6.44 | | |
| D1900V2-SN5d018 | | Head | 39.4 | | 20.28 | | May. 22, 2008 |
| | | Body | 38.4 | | 20.16 | | |
| D2450V2-SN735 | | Body | 50.8 | | 23.68 | | May. 22, 2008 |
| Frequency (MHz) | Power (dBm) | SAR _{1g} (mW/g) | SAR _{10g} (mW/g) | Drift (dB) | Difference percentage | | Date |
| | | | | | 1g | 10g | |
| 835 (Head) | 250mW | 2.31 | 1.51 | -0.140 | 0.9 % | -0.7 % | Feb. 26, 2009 |
| | Normalize to 1 Watt | 9.24 | 6.04 | | | | |
| 835 (Body) | 250mW | 2.48 | 1.65 | -0.074 | 1.6 % | 2.5 % | Feb. 26, 2009 |
| | Normalize to 1 Watt | 9.92 | 6.6 | | | | |
| 1950 (Head) | 250mW | 9.54 | 4.92 | 0.051 | -3.1 % | -3.0 % | Feb. 26, 2009 |
| | Normalize to 1 Watt | 38.16 | 19.68 | | | | |
| 1950 (Body) | 250mW | 9.55 | 4.94 | 0.010 | -0.5 % | -2.0 % | Feb. 27, 2009 |
| | Normalize to 1 Watt | 38.2 | 19.76 | | | | |
| 2450 (Body) | 250mW | 13.1 | 6.12 | -0.020 | 3.1 % | 3.4 % | Feb. 26, 2009 |
| | Normalize to 1 Watt | 52.4 | 24.48 | | | | |



Z-axis Plot of System Performance Check



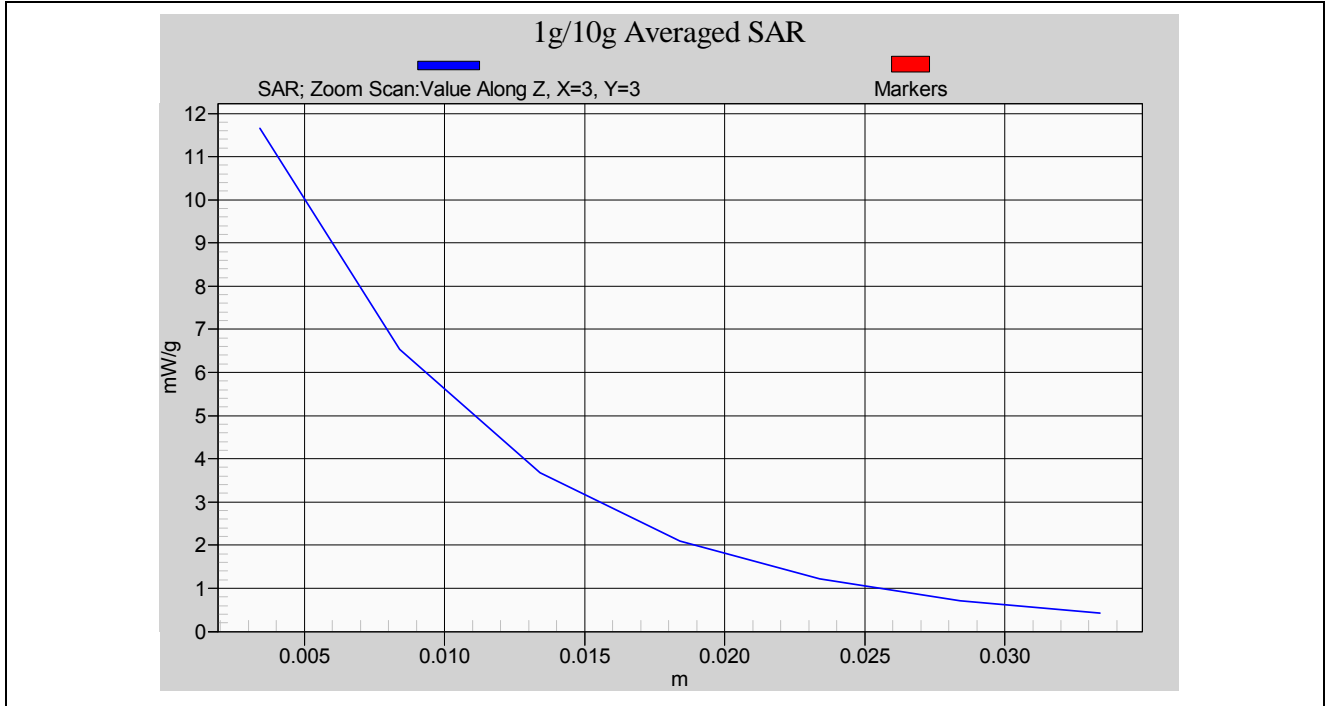
Head-Tissue-Simulating-Liquid 835MHz



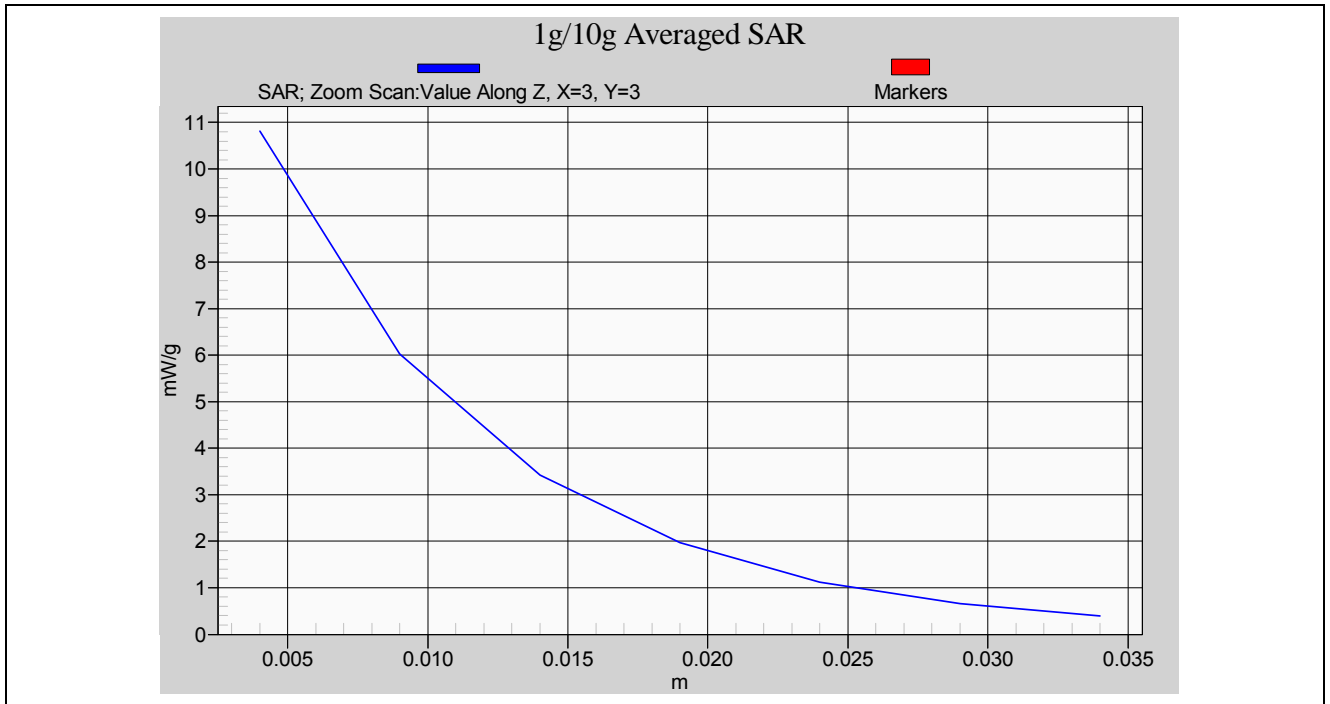
Head-Tissue-Simulating-Liquid 835MHz



Z-axis Plot of System Performance Check



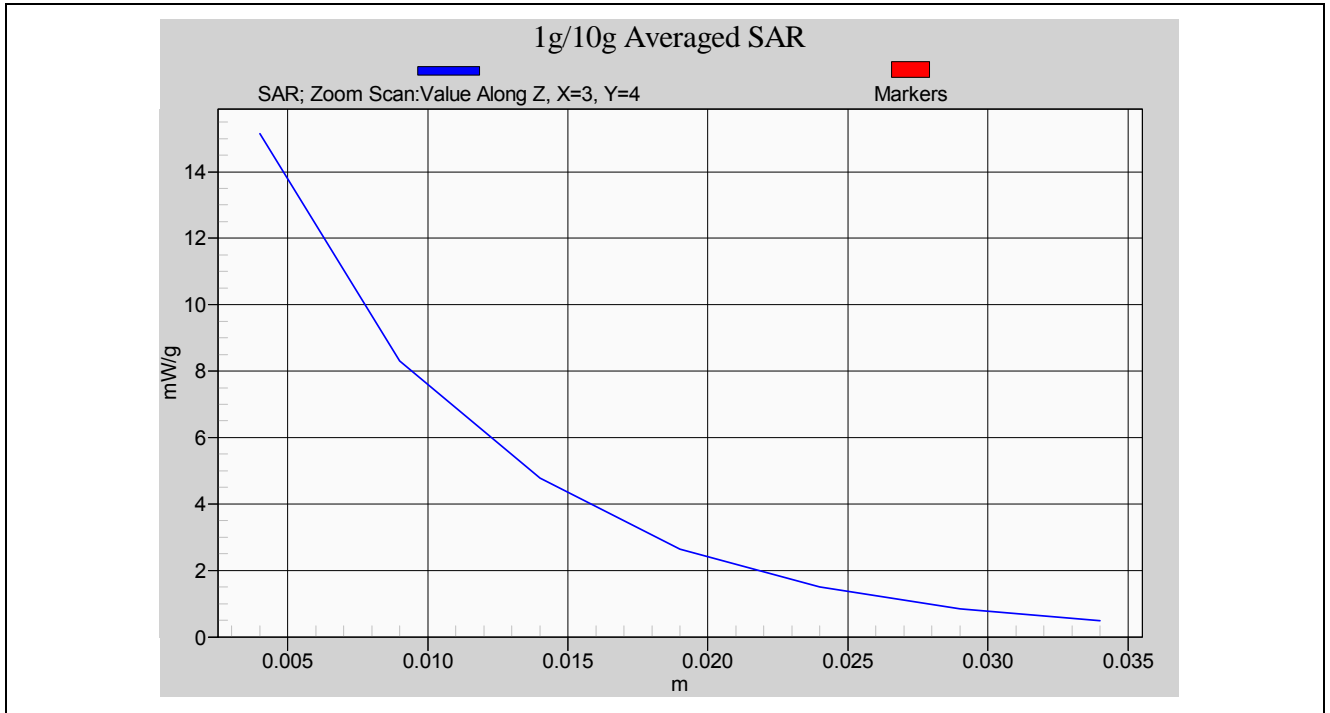
Head-Tissue-Simulating-Liquid 1900MHz



Head-Tissue-Simulating-Liquid 1900MHz



Z-axis Plot of System Performance Check



Body-Tissue-Simulating-Liquid 2450MHz



9.3 Dosimetric Assessment Setup

9.3.1 Body Test Position

Body - Worn Configuration

Body - Worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device.

Body - Worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 15 mm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances.

For this test :

The EUT is placed into the holster/belt clip and the holster is positioned against the surface of the phantom in a normal operating position.

■ Since this EUT doesn't supply any body-worn accessory to the end user, for **GSM850 band**, **PCS1900 band**, **WCDMA Band V** and **WCDMA Band II** the distance of **15 mm** was tested to confirm the necessary "minimum SAR separation distance".

(* Note : This distance includes the 2 mm phantom shell thickness.)

■ Since this EUT doesn't supply any body-worn accessory to the end user, for **802.11b** and **802.11g** band the distance of **2 mm** was tested to confirm the necessary "minimum SAR separation distance".

(* Note : This distance includes the 2 mm phantom shell thickness.)



9.3.2 Measurement Procedures

The evaluation was performed with the following procedures :

- Surface Check :** A surface checks job gathers data used with optical surface detection. It determines the distance from the phantom surface where the reflection from the optical detector has its peak. Any following measurement jobs using optical surface detection will then rely on this value. The surface check performs its search a specified number of times, so that the repeatability can be verified. The probe tip distance is 1.3mm to phantom inner surface during scans.
- Reference :** The reference job measures the field at a specified reference position, at 4 mm from the selected section's grid reference point.
- Area Scan :** The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a finer measurement around the hot spot. The sophisticated interpolation routines can find the maximum locations even in relatively coarse grids. When an area scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. Any following zoom scan within the same procedure will then perform fine scans around these maxima. The area covered the entire dimension of the EUT and the horizontal grid spacing was 15 mm x 15 mm.
- Zoom Scan :** Zoom scans are used to assess the highest averaged SAR for cubic averaging volumes with 1 g and 10 g of simulated tissue. The zoom scan measures 5 x 5 x 7 points in a 32 x 32 x 30 mm cube whose base faces are centered around the maxima returned from a preceding area scan within the same procedure.
- Drift :** The drift job measures the field at the same location as the most recent reference job within the same procedure, with the same settings. The drift measurement gives the field difference in dB from the last reference measurement. Several drift measurements are possible for each reference measurement. This allows monitoring of the power drift of the device in the batch process. If the value changed by more than 5%, the evaluation was repeated.



2 Hot spots

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. The test use 2dB range is required in IEEE 1528-2003, EN50361 and IEC 62209 standards.

If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scan has to be increased accordingly. After measurement is completed, all maxima and their coordinates are listed in the Results property page. The maximum selected in the list is highlighted in the 3-D view. For the secondary maxima returned from an Area Scan, the user can specify a lower limit (peak SAR value), in addition to the Find secondary maxima within xdB condition. Only the primary maximum and any secondary maxima within xdB from the primary maximum and above this limit will be measured.

The screenshot shows the 'Area Scan' software window with the following configuration:

- Grid | Measurement Profile | Results | Report
- Maxima section:
 - Find secondary maxima: 2 dB,
 - and with a peak SAR value greater than: 0.5 W/kg,
 - and at least: 5 mm away from the global
- Maxima table:

| Value... | X | Y | Z | Yaw | Pitch | Roll |
|----------|---|---|---|-----|-------|------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
- Motorola Averaged SAR section:
 - Linear fit a: -10.7 b: 40.4
 - Polynomial fit
- Buttons: 確定 (OK), 取消 (Cancel), 套用(A) (Apply)



9.4 Spatial Peak SAR Evaluation

The DASY5 software includes all numerical procedures necessary to evaluate the spatial peak SAR values. Based on the Draft: SCC-34, SC-2, WG-2 - Computational Dosimetry, IEEE P1529/D0.0 (Draft Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) Associated with the Use of Wireless Handsets - Computational Techniques), a new algorithm has been implemented. The spatial-peak SAR can be computed over any required mass.

The base for the evaluation is a "cube" measurement in a volume of $(32 \times 32 \times 30) \text{mm}^3$ ($5 \times 5 \times 7$ points). The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan. If the 10g cube or both cubes are not entirely inside the measured volumes, the system issues a warning regarding the evaluated spatial peak values within the Postprocessing engine (SEMCAD). This means that if the measured volume is shifted, higher values might be possible. To get the correct values you can use a finer measurement grid for the area scan. In complicated field distributions, a large grid spacing for the area scan might miss some details and give an incorrectly interpolated peak location.

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

Interpolation and Extrapolation

The probe is calibrated at the center of the dipole sensors which is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated.

In DASY5, the choice of the coordinate system defining the location of the measurement points has no influence on the uncertainty of the interpolation, Maxima Search and SAR extrapolation routines. The interpolation, Maxima Search and extrapolation routines are all based on the modified Quadratic Shepard's method [7].



10. Measurement Uncertainty

Measurement uncertainties in SAR measurements are difficult to quantify due to several variables including biological, physiological, and environmental. However, we estimate the measurement uncertainties in SAR to be less than $\pm 21.9\%$ [8] .

According to Std. C95.3 [9] , the overall uncertainties are difficult to assess and will vary with the type of meter and usage situation. However, accuracy's of ± 1 to 3 dB can be expected in practice, with greater uncertainties in near-field situations and at higher frequencies (shorter wavelengths), or areas where large reflecting objects are present. Under optimum measurement conditions, SAR measurement uncertainties of at least ± 2 dB can be expected.

According to CENELEC [10] , typical worst-case uncertainty of field measurements is ± 5 dB. For well-defined modulation characteristics the uncertainty can be reduced to ± 3 dB.



| Error Description | Uncertainty value | Prob. Dist. | Div. | (c _i) 1g | (c _i) 10g | Std. Unc. (1g) | Std. Unc. (10g) | (v _i) v _{eff} |
|----------------------------------|-------------------|-------------|------|----------------------|-----------------------|-----------------|-----------------|------------------------------------|
| Measurement System | | | | | | | | |
| Probe Calibration | ± 5.9 % | N | 1 | 1 | 1 | ± 5.9 % | ± 5.9 % | |
| Axial Isotropy | ± 4.7 % | R | | 0.7 | 0.7 | ± 1.9 % | ± 1.9 % | ∞ |
| Hemispherical Isotropy | ± 9.6 % | R | √3 | 0.7 | 0.7 | ± 3.9 % | ± 3.9 % | ∞ |
| Boundary Effects | ± 1.0 % | R | √3 | 1 | 1 | ± 0.6 % | ± 0.6 % | ∞ |
| Linearity | ± 4.7 % | R | √3 | 1 | 1 | ± 2.7 % | ± 2.7 % | ∞ |
| System Detection Limits | ± 1.0 % | R | √3 | 1 | 1 | ± 0.6 % | ± 0.6 % | ∞ |
| Readout Electronics | ± 0.3 % | N | 1 | 1 | 1 | ± 0.3 % | ± 0.3 % | ∞ |
| Response Time | ± 0.8 % | R | √3 | 1 | 1 | ± 0.5 % | ± 0.5 % | ∞ |
| Integration Time | ± 2.6 % | R | √3 | 1 | 1 | ± 1.5 % | ± 1.5 % | ∞ |
| RF Ambient Noise | ± 3.0 % | R | √3 | 1 | 1 | ± 1.7 % | ± 1.7 % | ∞ |
| RF Ambient Reflections | ± 3.0 % | R | √3 | 1 | 1 | ± 1.7 % | ± 1.7 % | ∞ |
| Probe Positioner | ± 0.4 % | R | √3 | 1 | 1 | ± 0.2 % | ± 0.2 % | ∞ |
| Probe Positioning | ± 2.9 % | R | √3 | 1 | 1 | ± 1.7 % | ± 1.7 % | ∞ |
| Max. SAR Eval. | ± 1.0 % | R | √3 | 1 | 1 | ± 0.6 % | ± 0.6 % | ∞ |
| Test Sample Related | | | | | | | | |
| Device Positioning | ± 2.9 % | N | 1 | 1 | 1 | ± 2.9 % | ± 2.9 % | 145 |
| Device Holder | ± 3.6 % | N | 1 | 1 | 1 | ± 3.6 % | ± 3.6 % | 5 |
| Power Drift | ± 5.0 % | R | √3 | 1 | 1 | ± 2.9 % | ± 2.9 % | ∞ |
| Phantom and Setup | | | | | | | | |
| Phantom Uncertainty | ± 4.0 % | R | √3 | 1 | 1 | ± 2.3 % | 2.3 % | ∞ |
| Liquid Conductivity (target) | ± 5.0 % | R | √3 | 0.64 | 0.43 | ± 1.8 % | 1.2 % | ∞ |
| Liquid Conductivity (meas.) | ± 2.5 % | N | 1 | 0.64 | 0.43 | ± 1.6 % | 1.1 % | ∞ |
| Liquid Permittivity (target) | ± 5.0 % | R | √3 | 0.6 | 0.49 | ± 1.7 % | 1.4 % | ∞ |
| Liquid Permittivity (meas.) | ± 2.5 % | N | 1 | 0.6 | 0.49 | ± 1.5 % | 1.2 % | ∞ |
| Combined Std. Uncertainty | | | | | | ± 10.9 % | ± 10.7 % | 387 |
| Expanded STD Uncertainty | | | | | | ± 21.9 % | ± 21.4 % | |

Table 6. Uncertainty Budget of DASY



11. SAR Test Results Summary

11.1 GSM 850 - Head SAR

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

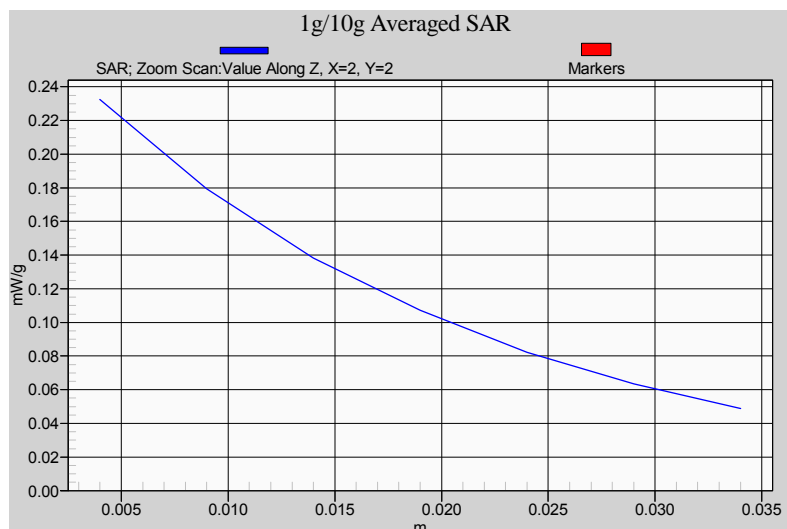
Mixture Type : HSL835 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

Measurement :

Crest Factor : 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|-----|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 824.2 | 128 | GSM 850 | 32.37 | Right-cheek | PIFA | N/A | 0.190 | 0.083 | - |
| 836.6 | 190 | GSM 850 | 32.21 | Right-cheek | PIFA | N/A | 0.191 | 0.069 | - |
| 848.8 | 251 | GSM 850 | 32.02 | Right-cheek | PIFA | N/A | 0.162 | 0.112 | - |
| 824.2 | 128 | GSM 850 | 32.37 | Right-Tilted | PIFA | N/A | 0.143 | -0.102 | - |
| 836.6 | 190 | GSM 850 | 32.21 | Right-Tilted | PIFA | N/A | 0.145 | -0.011 | - |
| 848.8 | 251 | GSM 850 | 32.02 | Right-Tilted | PIFA | N/A | 0.114 | -0.020 | - |
| 824.2 | 128 | GSM 850 | 32.37 | Left-cheek | PIFA | N/A | 0.211 | 0.121 | - |
| 836.6 | 190 | GSM 850 | 32.21 | Left-cheek | PIFA | N/A | 0.201 | -0.005 | - |
| 848.8 | 251 | GSM 850 | 32.02 | Left-cheek | PIFA | N/A | 0.169 | 0.102 | - |
| 824.2 | 128 | GSM 850 | 32.37 | Left-Tilted | PIFA | N/A | 0.154 | -0.120 | - |
| 836.6 | 190 | GSM 850 | 32.21 | Left-Tilted | PIFA | N/A | 0.168 | -0.045 | - |
| 848.8 | 251 | GSM 850 | 32.02 | Left-Tilted | PIFA | N/A | 0.133 | -0.121 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Z-axis Plot of SAR Measurement



Z-axis Plot of Left-Cheek GSM850 CH128



11.2 GSM 850 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL835 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

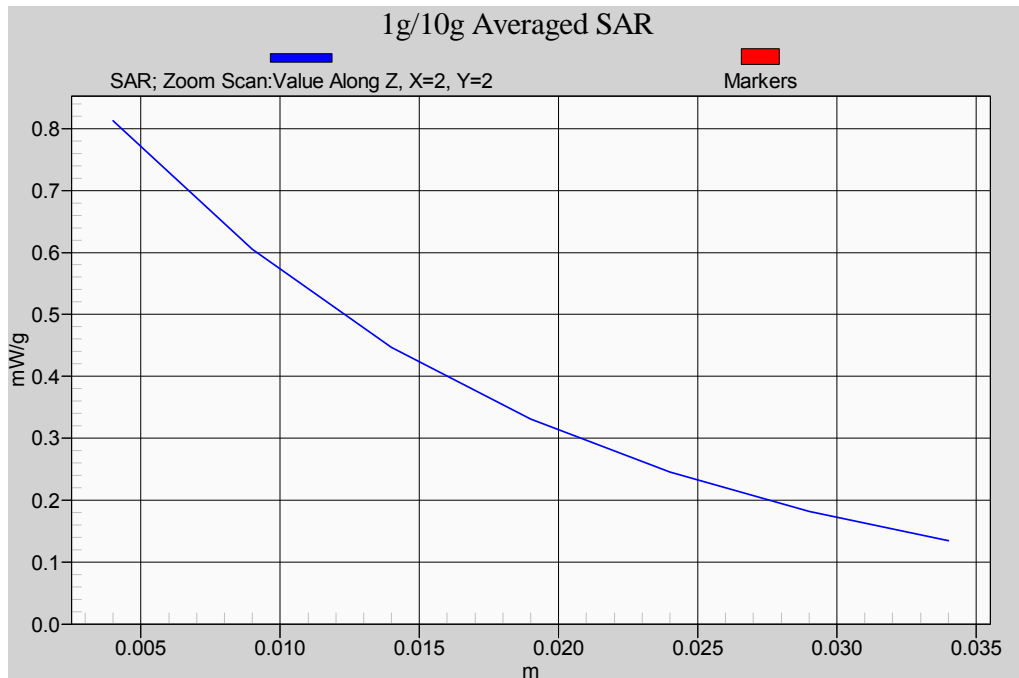
Measurement :

Crest Factor : 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|-----|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 824.2 | 128 | GSM 850 | 32.37 | Flat | PIFA | Headset | 0.761 | -0.161 | - |
| 836.6 | 190 | GSM 850 | 32.21 | Flat | PIFA | Headset | 0.690 | -0.085 | - |
| 848.8 | 251 | GSM 850 | 32.02 | Flat | PIFA | Headset | 0.481 | -0.068 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat GSM850 CH128



11.3 GPRS 850 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL835 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

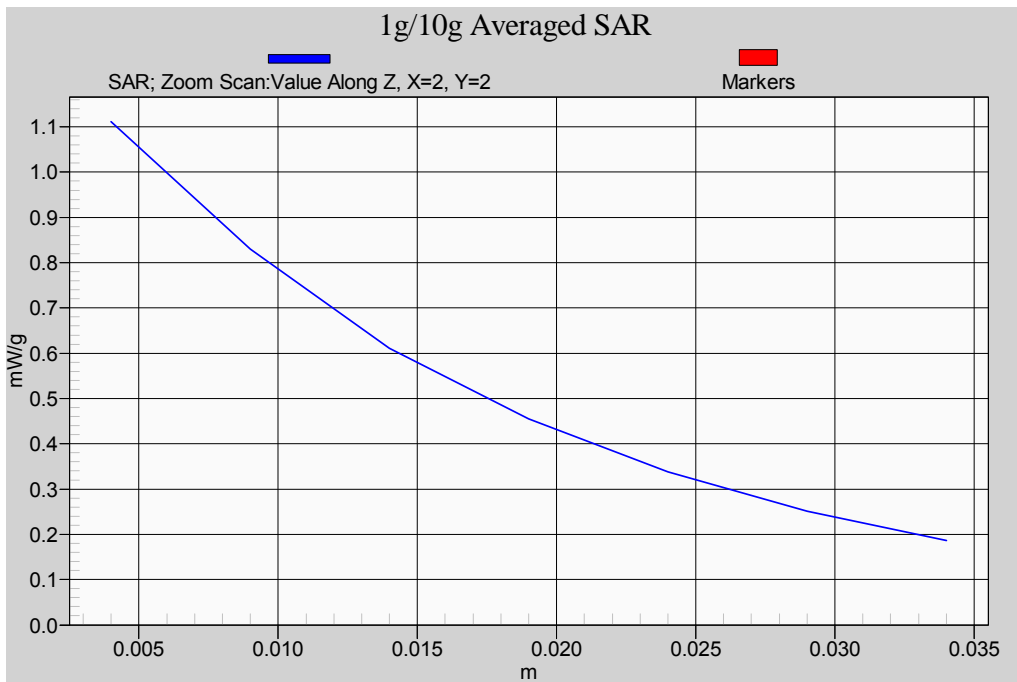
Measurement :

Crest Factor : 8.3 / 4.2 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|-----|----------|-------------|------------------|---|-----------|--------------------------|------------------|----------|
| MHz | CH | | | | | | | | |
| 824.2 | 128 | GPRS 850 | 32.35 | Flat | PIFA | Headset | 1.010 | -0.113 | 3Down2Up |
| 824.2 | 128 | GPRS 850 | 32.17 | Flat | PIFA | Headset | 0.529 | -0.140 | 3Down1Up |
| 836.6 | 190 | GPRS 850 | 32.17 | Flat | PIFA | Headset | 0.989 | -0.160 | 3Down2Up |
| 848.8 | 251 | GPRS 850 | 31.89 | Flat | PIFA | Headset | 0.781 | -0.128 | 3Down2Up |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat GPRS 850 CH128 (3Down2Up)



11.4 EGPRS 850 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL835 Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

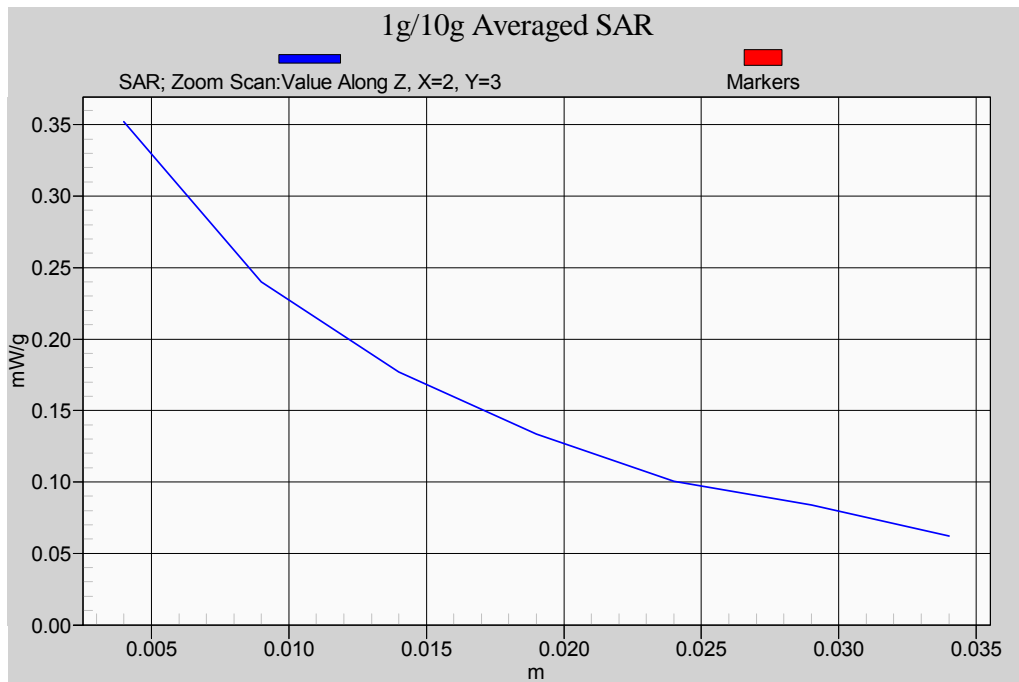
Measurement :

Crest Factor : 8.3 / 4.2 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|-----|-----------|-------------|------------------|---|-----------|--------------------------|------------------|----------|
| MHz | CH | | | | | | | | |
| 824.2 | 128 | EGPRS 850 | 27.00 | Flat | PIFA | Headset | 0.310 | 0.118 | 3Down2Up |
| 836.6 | 190 | EGPRS 850 | 26.73 | Flat | PIFA | Headset | 0.321 | -0.035 | 3Down2Up |
| 836.6 | 190 | EGPRS 850 | 26.87 | Flat | PIFA | Headset | 0.144 | 0.013 | 3Down1Up |
| 848.8 | 251 | EGPRS 850 | 26.46 | Flat | PIFA | Headset | 0.214 | 0.130 | 3Down2Up |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat EGPRS 850 CH190 (3Down2Up)



11.5 PCS 1900 - Head SAR

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL1900 Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

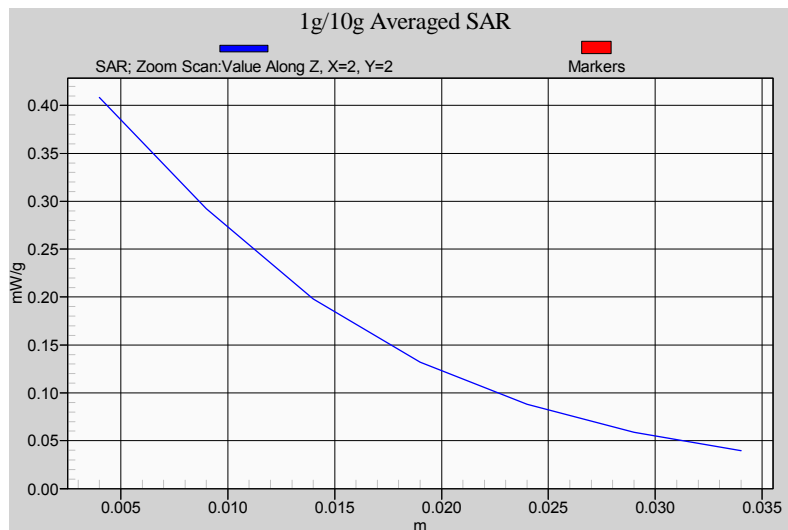
Measurement :

Crest Factor : 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|-----|------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1850.2 | 512 | PCS | 28.81 | Right-cheek | PIFA | N/A | 0.286 | -0.012 | - |
| 1880.0 | 661 | PCS | 29.11 | Right-cheek | PIFA | N/A | 0.339 | -0.121 | - |
| 1909.8 | 810 | PCS | 29.15 | Right-cheek | PIFA | N/A | 0.371 | -0.123 | - |
| 1850.2 | 512 | PCS | 28.81 | Right-Tilted | PIFA | N/A | 0.138 | -0.130 | - |
| 1880.0 | 661 | PCS | 29.11 | Right-Tilted | PIFA | N/A | 0.181 | -0.119 | - |
| 1909.8 | 810 | PCS | 29.15 | Right-Tilted | PIFA | N/A | 0.234 | -0.027 | - |
| 1850.2 | 512 | PCS | 28.81 | Left-cheek | PIFA | N/A | 0.261 | -0.140 | - |
| 1880.0 | 661 | PCS | 29.11 | Left-cheek | PIFA | N/A | 0.300 | -0.117 | - |
| 1909.8 | 810 | PCS | 29.15 | Left-cheek | PIFA | N/A | 0.319 | -0.081 | - |
| 1850.2 | 512 | PCS | 28.81 | Left-Tilted | PIFA | N/A | 0.191 | -0.120 | - |
| 1880.0 | 661 | PCS | 29.11 | Left-Tilted | PIFA | N/A | 0.241 | -0.051 | - |
| 1909.8 | 810 | PCS | 29.15 | Left-Tilted | PIFA | N/A | 0.268 | -0.187 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Right-Check PCS1900 CH810



11.6 PCS 1900 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

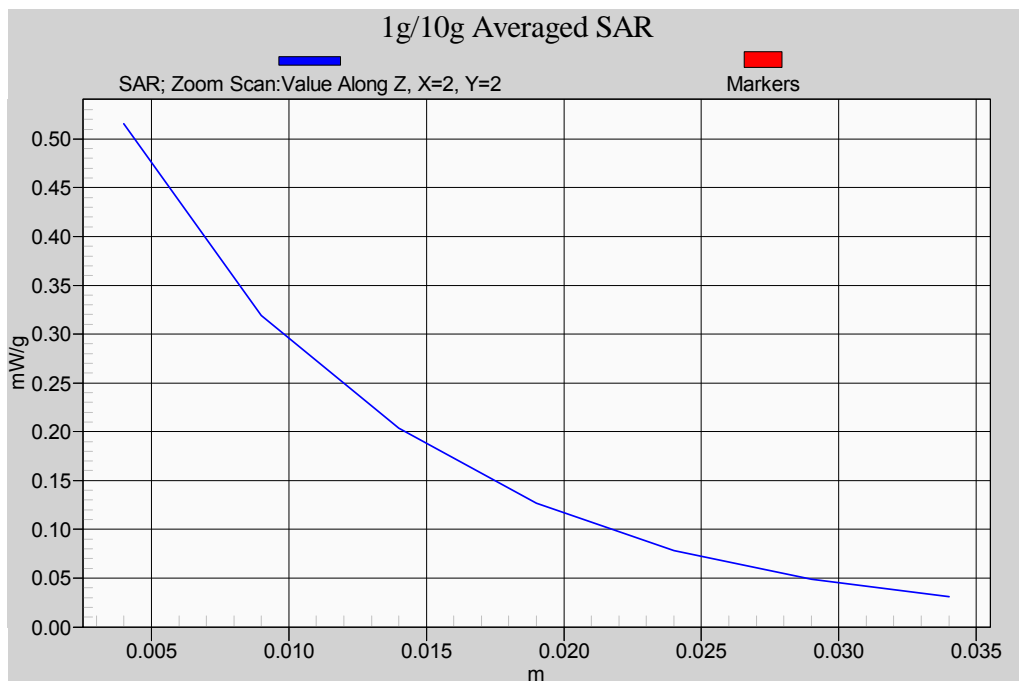
Measurement :

Crest Factor : 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|-----|----------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1850.2 | 512 | PCS 1900 | 28.81 | Flat | PIFA | Headset | 0.335 | -0.114 | - |
| 1880.0 | 661 | PCS 1900 | 29.11 | Flat | PIFA | Headset | 0.428 | 0.024 | - |
| 1909.8 | 810 | PCS 1900 | 29.15 | Flat | PIFA | Headset | 0.472 | -0.048 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat PCS CH810



11.7 GPRS 1900 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

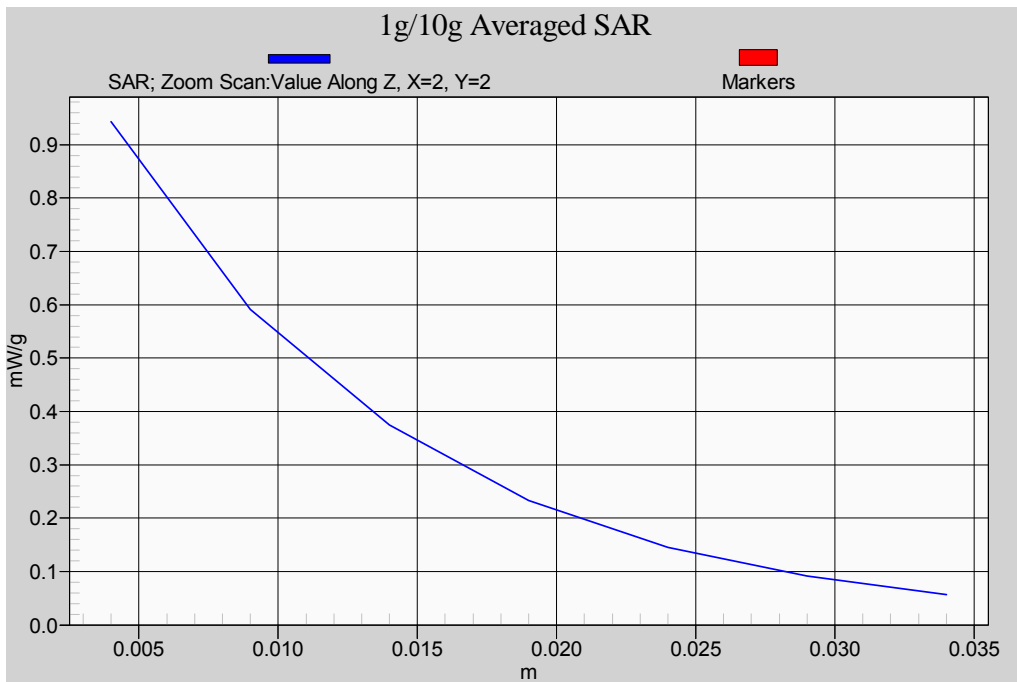
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|-----|-----------|-------------|------------------|--|-----------|--------------------------|------------------|----------|
| MHz | CH | | | | | | | | |
| 1850.2 | 512 | GPRS 1900 | 28.76 | Flat | PIFA | Headset | 0.641 | -0.040 | 3Down2Up |
| 1880.0 | 661 | GPRS 1900 | 29.10 | Flat | PIFA | Headset | 0.802 | -0.022 | 3Down2Up |
| 1909.8 | 810 | GPRS 1900 | 29.10 | Flat | PIFA | Headset | 0.880 | 0.130 | 3Down2Up |
| 1909.8 | 810 | GPRS 1900 | 28.98 | Flat | PIFA | Headset | 0.453 | -0.018 | 3Down1Up |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat GPRS 1900 CH810 (3Down2Up)



11.8 EGPRS 1900 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

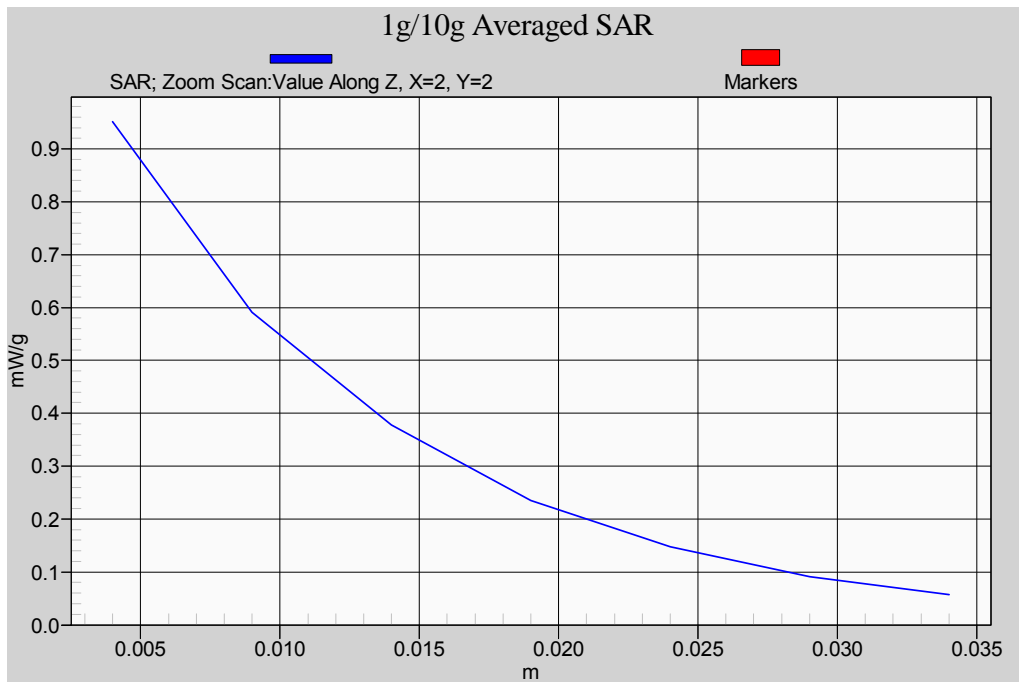
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|-----|------------|-------------|------------------|--|-----------|--------------------------|------------------|----------|
| MHz | CH | | | | | | | | |
| 1850.2 | 512 | EGPRS 1900 | 26.37 | Flat | PIFA | Headset | 0.700 | -0.015 | 3Down2Up |
| 1880.0 | 661 | EGPRS 1900 | 26.20 | Flat | PIFA | Headset | 0.811 | -0.180 | 3Down2Up |
| 1909.8 | 810 | EGPRS 1900 | 26.16 | Flat | PIFA | Headset | 0.879 | -0.029 | 3Down2Up |
| 1909.8 | 810 | EGPRS 1900 | 26.36 | Flat | PIFA | Headset | 0.455 | 0.078 | 3Down1Up |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat EGPRS 1900 CH810 (3Down2Up)



11.9 WCDMA Band V - Head SAR

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL835 Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

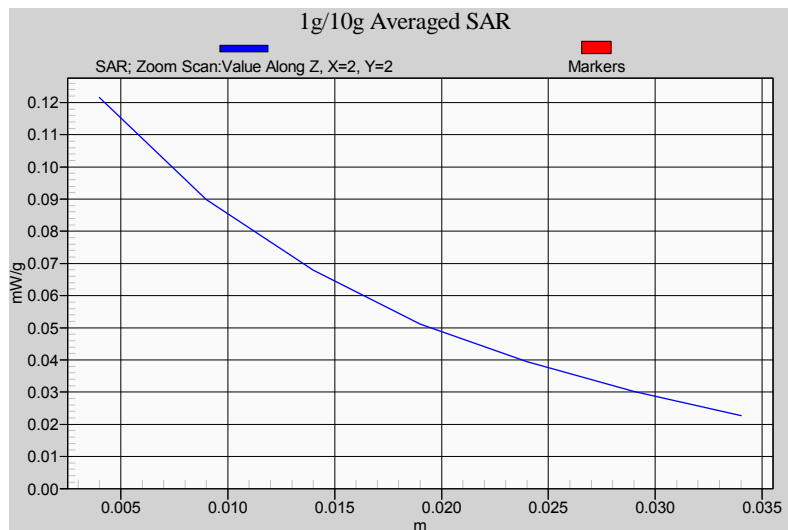
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 826.4 | 4132 | WCDMA V | 24.35 | Right-cheek | PIFA | N/A | 0.081 | -0.100 | - |
| 836.0 | 4180 | WCDMA V | 24.16 | Right-cheek | PIFA | N/A | 0.049 | -0.002 | - |
| 846.4 | 4232 | WCDMA V | 23.88 | Right-cheek | PIFA | N/A | 0.088 | -0.011 | - |
| 826.4 | 4132 | WCDMA V | 24.35 | Right-Tilted | PIFA | N/A | 0.052 | 0.124 | - |
| 836.0 | 4180 | WCDMA V | 24.16 | Right-Tilted | PIFA | N/A | 0.028 | 0.088 | - |
| 846.4 | 4232 | WCDMA V | 23.88 | Right-Tilted | PIFA | N/A | 0.054 | -0.124 | - |
| 826.4 | 4132 | WCDMA V | 24.35 | Left-cheek | PIFA | N/A | 0.098 | -0.137 | - |
| 836.0 | 4180 | WCDMA V | 24.16 | Left-cheek | PIFA | N/A | 0.056 | -0.055 | - |
| 846.4 | 4232 | WCDMA V | 23.88 | Left-cheek | PIFA | N/A | 0.110 | 0.023 | - |
| 826.4 | 4132 | WCDMA V | 24.35 | Left-Tilted | PIFA | N/A | 0.054 | 0.157 | - |
| 836.0 | 4180 | WCDMA V | 24.16 | Left-Tilted | PIFA | N/A | 0.031 | 0.129 | - |
| 846.4 | 4232 | WCDMA V | 23.88 | Left-Tilted | PIFA | N/A | 0.060 | -0.152 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Left-Cheek WCDMA Band V CH4232



11.10 WCDMA Band V - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Mixture Type : MSL835 Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

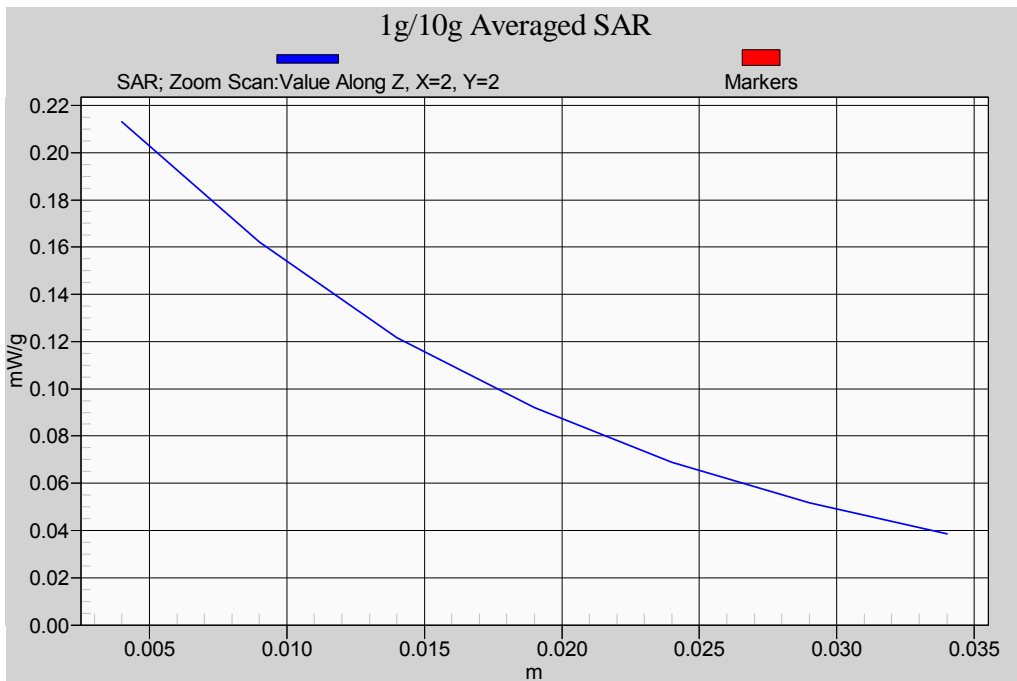
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 826.6 | 4132 | WCDMA V | 24.35 | Flat | PIFA | Headset | 0.201 | -0.110 | - |
| 836.0 | 4180 | WCDMA V | 24.16 | Flat | PIFA | Headset | 0.119 | -0.012 | - |
| 846.6 | 4232 | WCDMA V | 23.88 | Flat | PIFA | Headset | 0.201 | 0.090 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

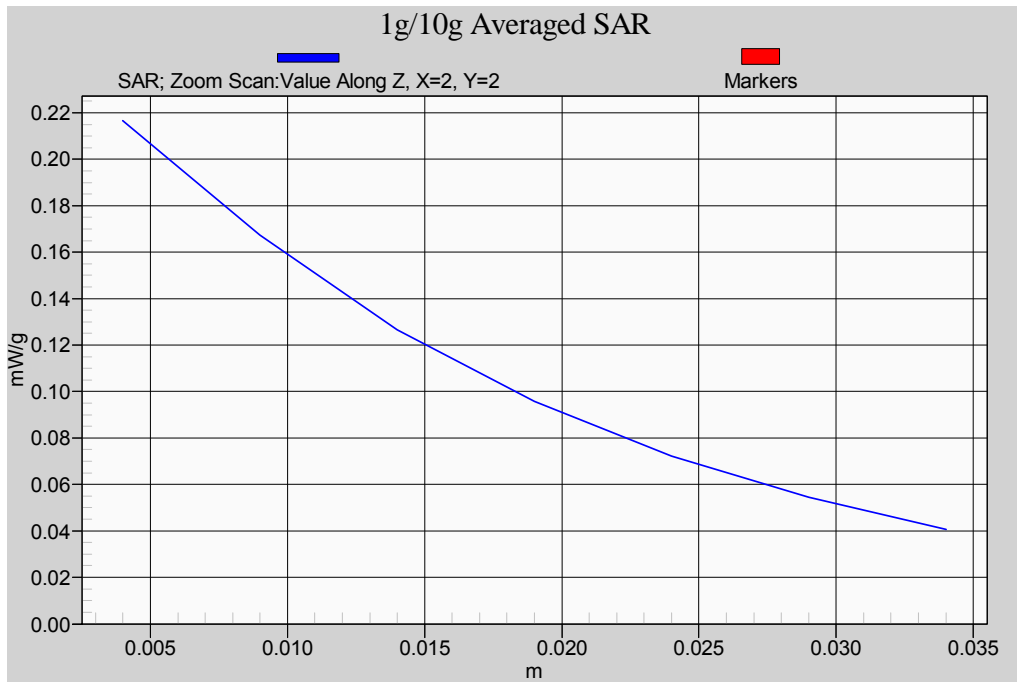
Z-axis Plot of SAR Measurement



Z-axis Plot of Flat WCDMA Band V CH4132



Z-axis Plot of SAR Measurement



Z-axis Plot of Flat WCDMA Band V CH4232



11.11 HSDPA Band V - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL835 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

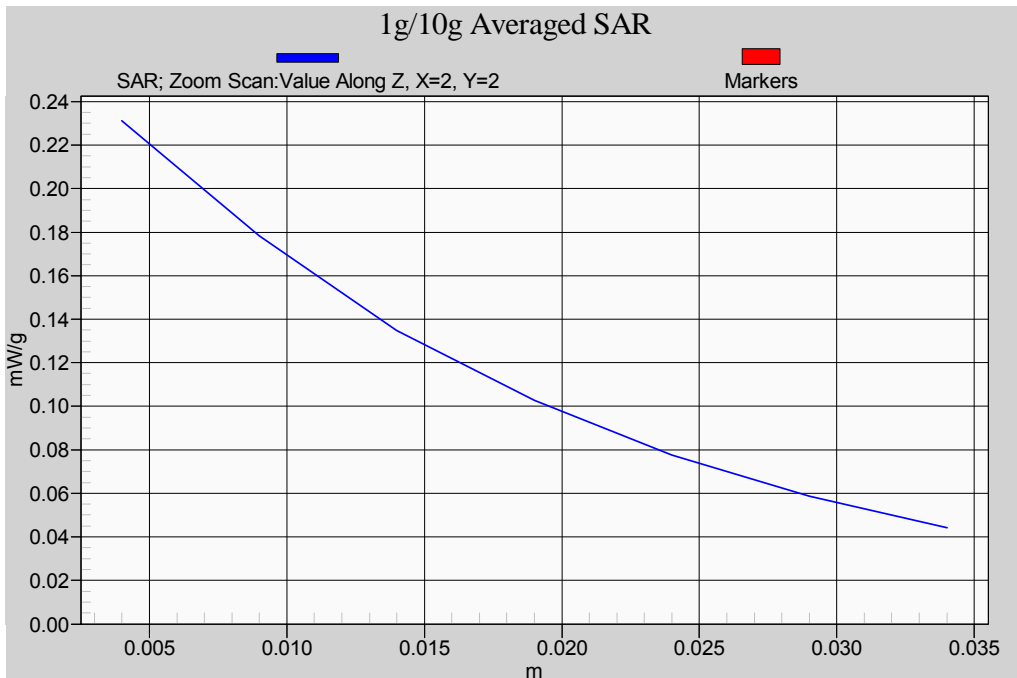
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 826.6 | 4132 | HSDPA V | 23.17 | Flat | PIFA | Headset | 0.195 | -0.123 | - |
| 836.0 | 4180 | HSDPA V | 23.13 | Flat | PIFA | Headset | 0.131 | 0.059 | - |
| 846.6 | 4232 | HSDPA V | 22.88 | Flat | PIFA | Headset | 0.215 | 0.031 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat HSDPA Band V CH4232



11.12 HSUPA Band V - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL835 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

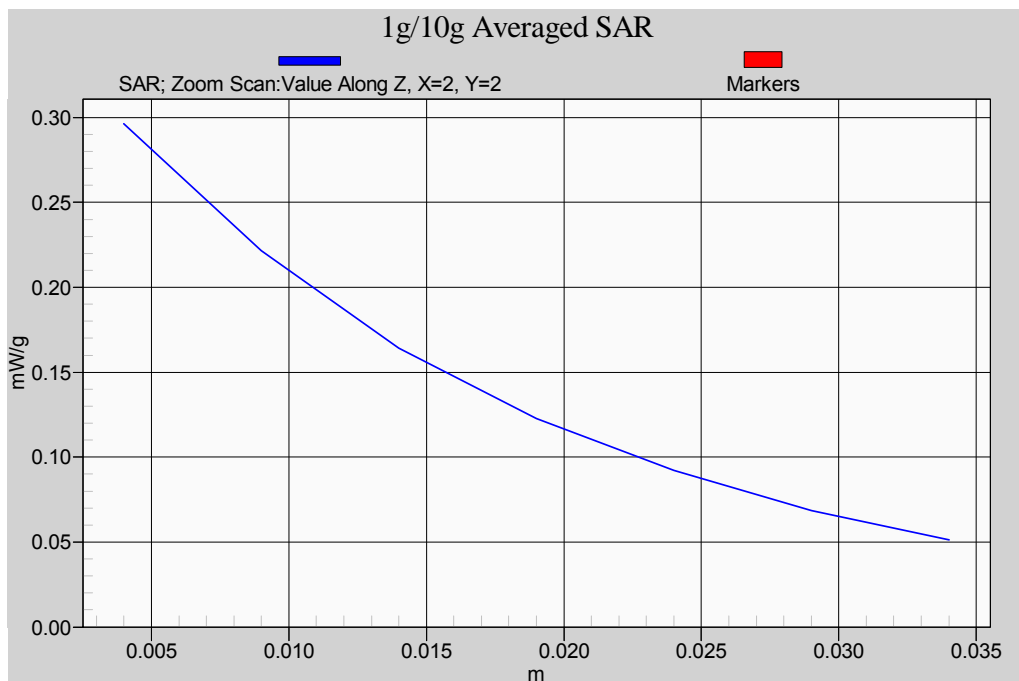
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|------|---------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 826.6 | 4132 | HSUPA V | 22.90 | Flat | PIFA | Headset | 0.279 | 0.130 | - |
| 836.0 | 4180 | HSUPA V | 23.16 | Flat | PIFA | Headset | 0.120 | -0.180 | - |
| 846.6 | 4232 | HSUPA V | 22.66 | Flat | PIFA | Headset | 0.151 | -0.019 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat HSUPA Band V CH4132



11.13 WCDMA Band II - Head SAR

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL1900 Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

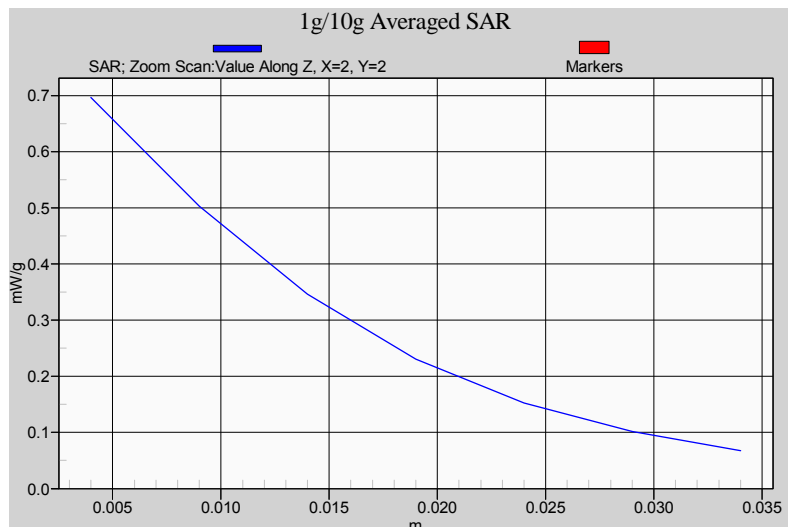
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|------|----------|-------------|------------------|---|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1852.4 | 9262 | WCDMA II | 23.62 | Right-cheek | PIFA | N/A | 0.601 | -0.034 | - |
| 1880.0 | 9400 | WCDMA II | 23.39 | Right-cheek | PIFA | N/A | 0.629 | -0.125 | - |
| 1907.6 | 9538 | WCDMA II | 23.51 | Right-cheek | PIFA | N/A | 0.591 | -0.156 | - |
| 1852.4 | 9262 | WCDMA II | 23.62 | Right-Tilted | PIFA | N/A | 0.261 | 0.035 | - |
| 1880.0 | 9400 | WCDMA II | 23.39 | Right-Tilted | PIFA | N/A | 0.298 | 0.019 | - |
| 1907.6 | 9538 | WCDMA II | 23.51 | Right-Tilted | PIFA | N/A | 0.314 | -0.124 | - |
| 1852.4 | 9262 | WCDMA II | 23.62 | Left-cheek | PIFA | N/A | 0.590 | -0.011 | - |
| 1880.0 | 9400 | WCDMA II | 23.39 | Left-cheek | PIFA | N/A | 0.594 | 0.022 | - |
| 1907.6 | 9538 | WCDMA II | 23.51 | Left-cheek | PIFA | N/A | 0.498 | 0.017 | - |
| 1852.4 | 9262 | WCDMA II | 23.62 | Left-Tilted | PIFA | N/A | 0.354 | -0.011 | - |
| 1880.0 | 9400 | WCDMA II | 23.39 | Left-Tilted | PIFA | N/A | 0.371 | -0.014 | - |
| 1907.6 | 9538 | WCDMA II | 23.51 | Left-Tilted | PIFA | N/A | 0.339 | -0.111 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Right-Cheek WCDMA Band II CH9400



11.14 WCDMA Band II - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

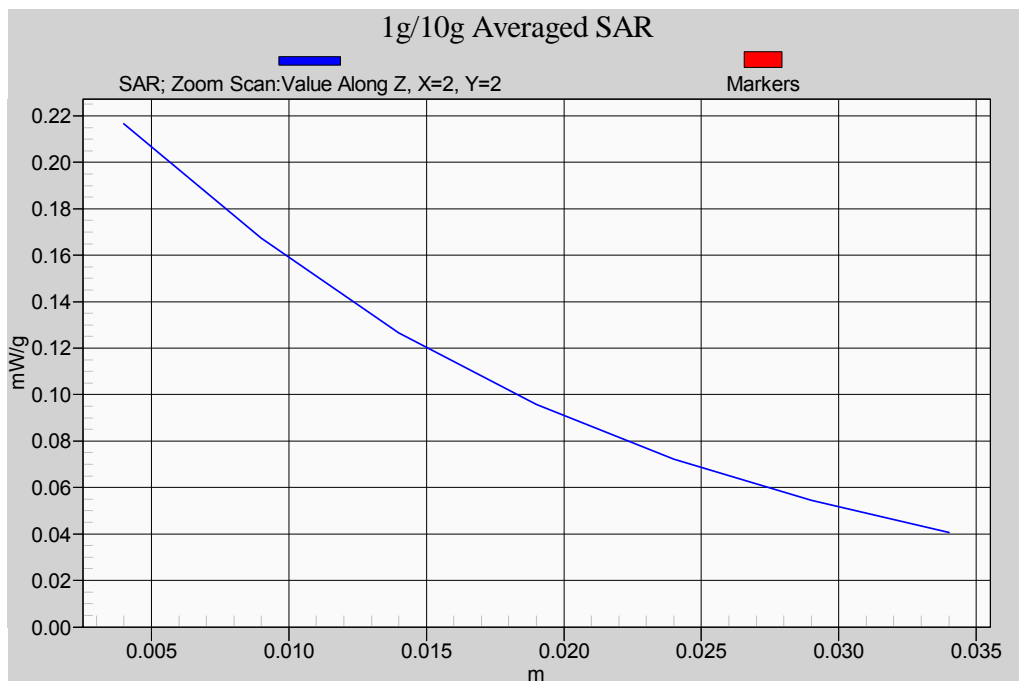
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|----------|-------------|------------------|------------------|--|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1852.4 | 9262 | WCDMA II | 23.62 | Flat | PIFA | Headset | 0.641 | 0.114 | - |
| 1880.0 | 9400 | WCDMA II | 23.39 | Flat | PIFA | Headset | 0.742 | -0.122 | - |
| 1907.6 | 9538 | WCDMA II | 23.51 | Flat | PIFA | Headset | 0.695 | 0.030 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat WCDMA Band II CH9400



11.15 HSDPA Band II - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

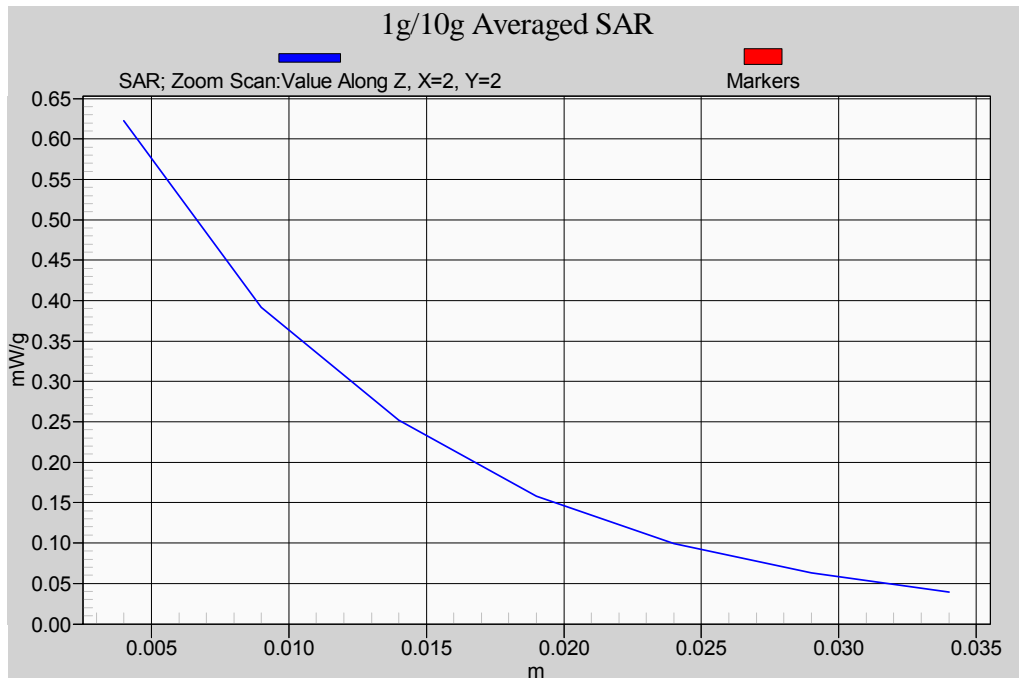
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|----------|-------------|------------------|------------------|--|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1852.4 | 9262 | HSDPA II | 23.09 | Flat | PIFA | Headset | 0.568 | -0.019 | - |
| 1880.0 | 9400 | HSDPA II | 23.34 | Flat | PIFA | Headset | 0.554 | -0.127 | - |
| 1907.6 | 9538 | HSDPA II | 22.90 | Flat | PIFA | Headset | 0.548 | -0.123 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat HSDPA Band II CH9262



11.16 HSUPA Band II - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1900 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

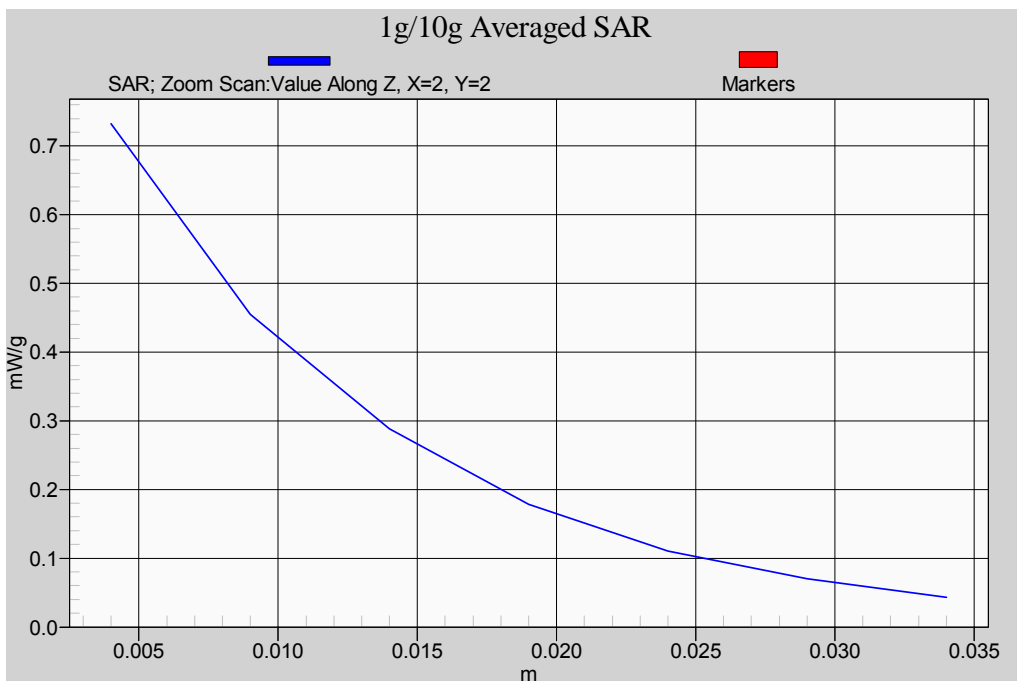
Measurement :

Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|------|----------|-------------|------------------|------------------|---|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 1852.4 | 9262 | HSUPA II | 23.09 | Flat | PIFA | Headset | 0.529 | 0.133 | - |
| 1880.0 | 9400 | HSUPA II | 23.34 | Flat | PIFA | Headset | 0.670 | 0.070 | - |
| 1907.6 | 9538 | HSUPA II | 22.89 | Flat | PIFA | Headset | 0.414 | 0.122 | - |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | |

Detail results see Appendix B.

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat HSUPA Band II CH9400



11.17 Wi-Fi 802.11b - Body SAR (2 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL2450 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

Measurement :

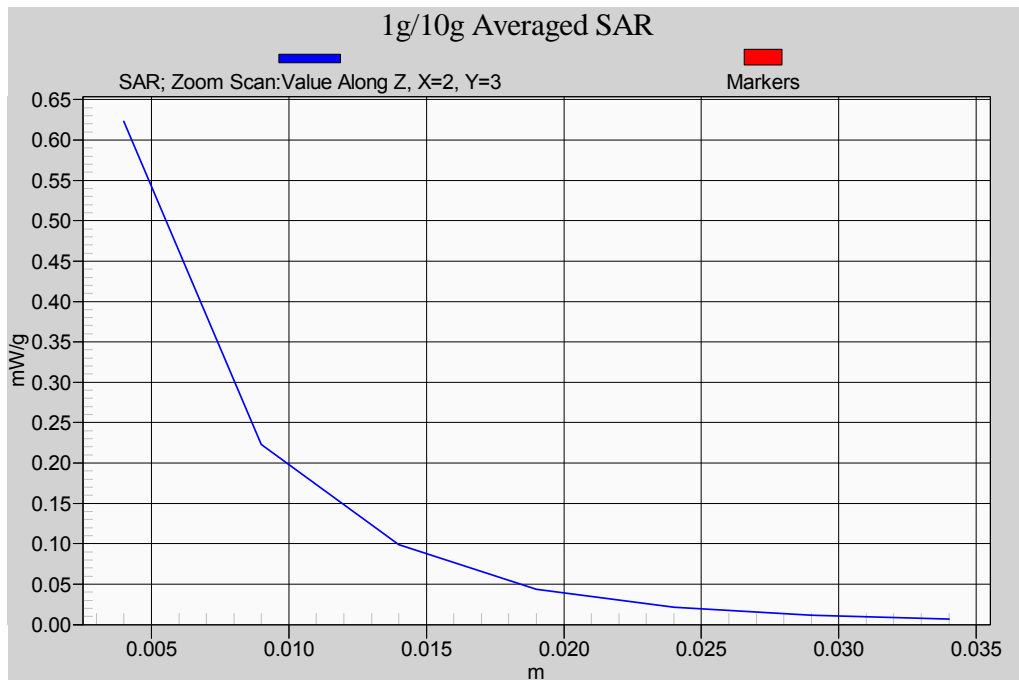
Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|----|----------|-------------|------------------|--|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 2412 | 1 | 802.11 b | 18.40 | Flat | PIFA Chip | Headset | 0.541 | 0.058 | 1M |
| 2412 | 1 | 802.11 b | 18.33 | Flat | PIFA Chip | Headset | 0.528 | 0.141 | 11M |
| 2437 | 6 | 802.11 b | 18.81 | Flat | PIFA Chip | Headset | 0.527 | -0.160 | 1M |
| 2462 | 11 | 802.11 b | 17.72 | Flat | PIFA Chip | Headset | 0.362 | -0.050 | 1M |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix B.

Note: 1M → Data rate 1MHz ; 11M → Data rate 11MHz

Z-axis Plot of SAR Measurement



Z-axis Plot of flat 802.11b CH1_ Data Rate 1M



11.18 Wi-Fi 802.11g - Body SAR (2 mm separation)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL2450 Liquid Temperature (°C) : 22.0
 Depth of liquid (cm) : 15

Measurement :

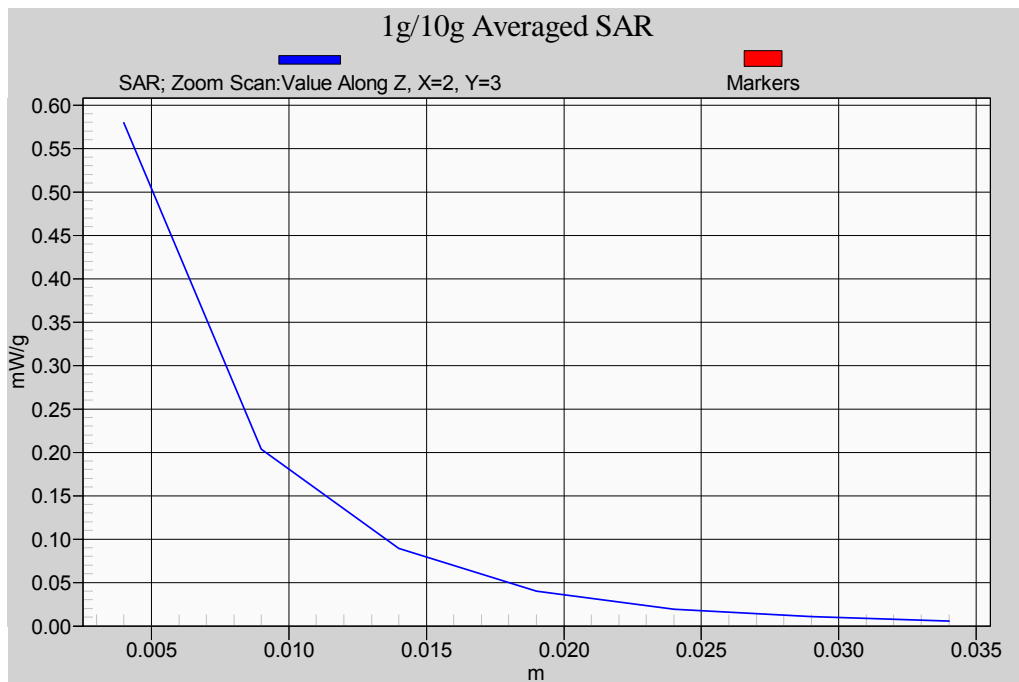
Crest Factor : 1 Probe S/N : 3554

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|--|----|----------|-------------|------------------|------------------|---|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| 2412 | 1 | 802.11 g | 18.47 | Flat | PIFA Chip | Headset | 0.471 | -0.032 | 6M |
| 2412 | 1 | 802.11 g | 17.85 | Flat | PIFA Chip | Headset | 0.364 | 0.012 | 54M |
| 2437 | 6 | 802.11 g | 17.24 | Flat | PIFA Chip | Headset | 0.441 | -0.140 | 6M |
| 2462 | 11 | 802.11 g | 18.25 | Flat | PIFA Chip | Headset | 0.301 | 0.013 | 6M |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | |

Detail results see Appendix B.

Note: 6M → Data rate 6MHz ; 54M → Data rate 54MHz

Z-axis Plot of SAR Measurement



Z-axis Plot of Flat 802.11g CH1_6M



11.19 Co-Location SAR (Worst Case)

Ambient :

Temperature (°C) : 22 ± 2 Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL835 Liquid Temperature (°C) : 22.0
MSL2450 Depth of liquid (cm) : 15

Measurement :

Crest Factor : GPRS 850 – 4.2 Probe S/N : 3554
802.11b – 1

| Frequency | | Band | Power (dBm) | Phantom Position | Antenna Position | Accessory | SAR _{1g} [mW/g] | Power Drift (dB) | Remark |
|---|----|------|-------------|------------------|--|-----------|--------------------------|------------------|--------|
| MHz | CH | | | | | | | | |
| GPRS 850 CH128 + 802.11b 1M CH1 | | | 1M CH1 | Flat | --- | Headset | 1.040 | --- | --- |
| Std. C95.1-2005 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population | | | | | 1.6 W/kg (mW/g) Averaged over 1 gram | | | | |

Detail results see Appendix C.

11.20 Setup Photo

Head Setup



Figure 13. Right Head SAR Test Setup (Cheek)

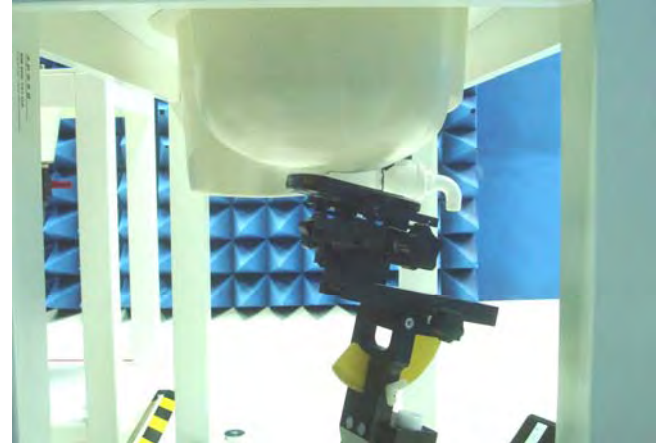


Figure 14. Right Head SAR Test Setup (Tilted)



Figure 15. Left Head SAR Test Setup (Cheek)

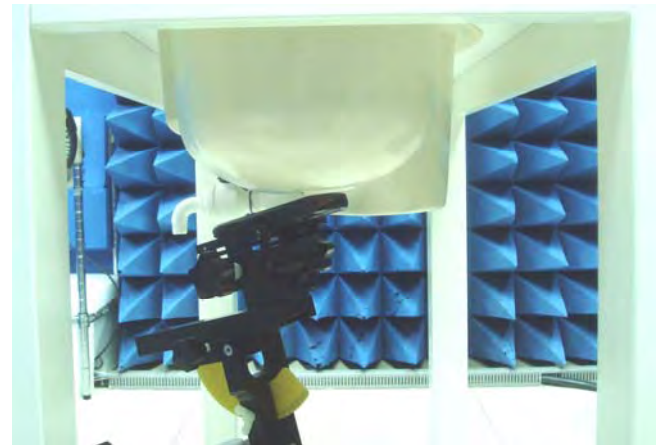


Figure 16. Left Head SAR Test Setup (Tilted)

Body Setup

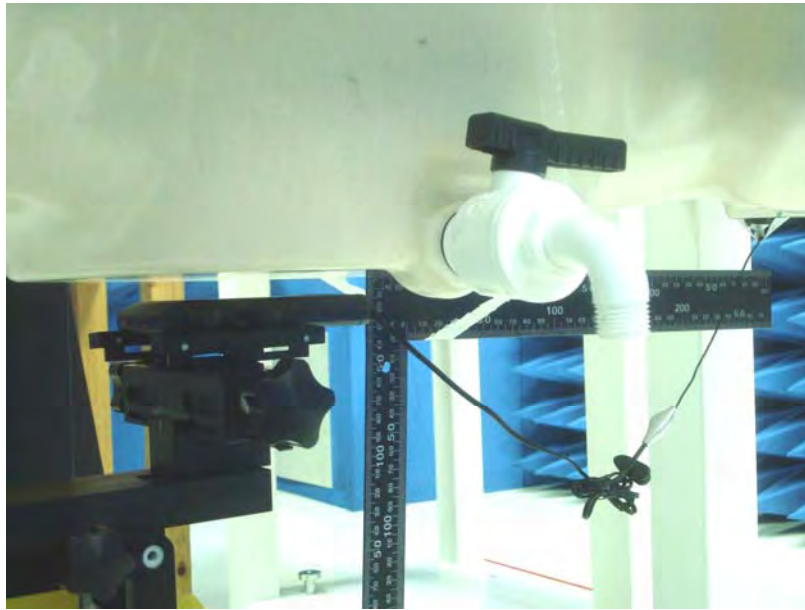


Figure 17. Body SAR Test Setup (Flat Section) _ 15 mm separation



Figure 18. Body SAR Test Setup (Flat Section) _ 2 mm separation



11.21 Std. C95.1-2005 RF Exposure Limit

| Human Exposure | Population Uncontrolled Exposure (W/kg) or (mW/g) | Occupational Controlled Exposure (W/kg) or (mW/g) |
|--|--|--|
| Spatial Peak SAR* (head) | 1.60 | 8.00 |
| Spatial Peak SAR** (Whole Body) | 0.08 | 0.40 |
| Spatial Peak SAR*** (Partial-Body) | 1.60 | 8.00 |
| Spatial Peak SAR**** (Hands / Feet / Ankle / Wrist) | 4.00 | 20.00 |

Table 7. Safety Limits for Partial Body Exposure

Notes :

- * The Spatial Peak value of the SAR averaged over any 1 gram of tissue.
(defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
- ** The Spatial Average value of the SAR averaged over the whole – body.
- *** The Spatial Average value of the SAR averaged over the partial – body.
- **** 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.

Population / Uncontrolled Environments : are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Occupational / Controlled Environments : are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation).



12. Conclusion

The SAR test values found for the portable mobile phone **Inventec Corporation Trade Name : velocitymobile Model(s) : velocity 111** is below the maximum recommended level of 1.6 W/kg (mW/g).



13. References

- [1] Std. C95.1-2005, "American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300KHz to 100GHz", New York.
- [2] NCRP, National Council on Radiation Protection and Measurements, "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields", NCRP report NO. 86, 1986.
- [3] T. Schmid, O. Egger, and N. Kuster, "Automatic E-field scanning system for dosimetric assessments", IEEE Transactions on Microwave Theory and Techniques, vol. 44, pp, 105-113, Jan. 1996.
- [4] K. Poković, T. Schmid, and N. Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequency", in ICECOM'97, Dubrovnik, October 15-17, 1997, pp.120-124.
- [5] K. Poković, T. Schmid, and N. Kuster, "E-field probe with improved isotropy in brain simulating liquids", in Proceedings of the ELMAR, Zadar, Croatia, 23-25 June, 1996, pp.172-175.
- [6] N. Kuster, and Q. Balzano, "Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz", IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [7] Robert J. Renka, "Multivariate Interpolation Of Large Sets Of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988 , pp. 139-148.
- [8] N. Kuster, R. Kastle, T. Schmid, *Dosimetric evaluation of mobile communications equipment with known precision*, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.
- [9] Std. C95.3-1991, "IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, Aug. 1992.
- [10] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), *Human Exposure to Electromagnetic Fields High-frequency. 10KHz-300GHz*, Jan. 1995.



Appendix A - System Performance Check

See following attached Pages.



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:35:10 AM

System Performance Check at 835MHz_20090226_Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.915 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

System Performance Check at 835MHz/Area Scan (61x121x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.72 mW/g

System Performance Check at 835MHz/Zoom Scan (7x7x7)/Cube 0:

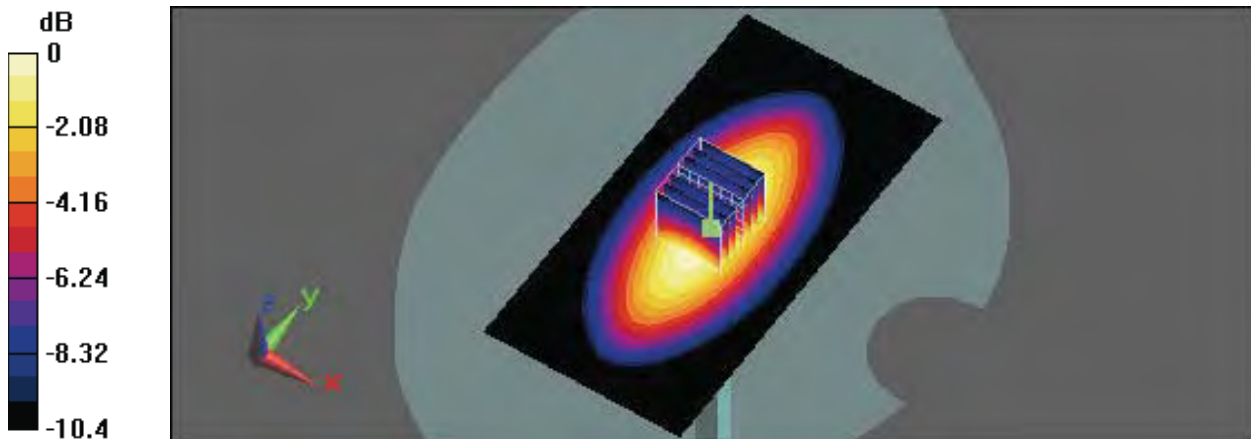
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.8 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 3.5 W/kg

SAR(1 g) = 2.31 mW/g; SAR(10 g) = 1.51 mW/g

Maximum value of SAR (measured) = 2.68 mW/g



0 dB = 2.68mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:10:22 AM

System Performance Check at 835MHz_20090226_Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d031

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

System Performance Check at 835MHz/Area Scan (61x121x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.73 mW/g

System Performance Check at 835MHz/Zoom Scan (7x7x7)/Cube 0:

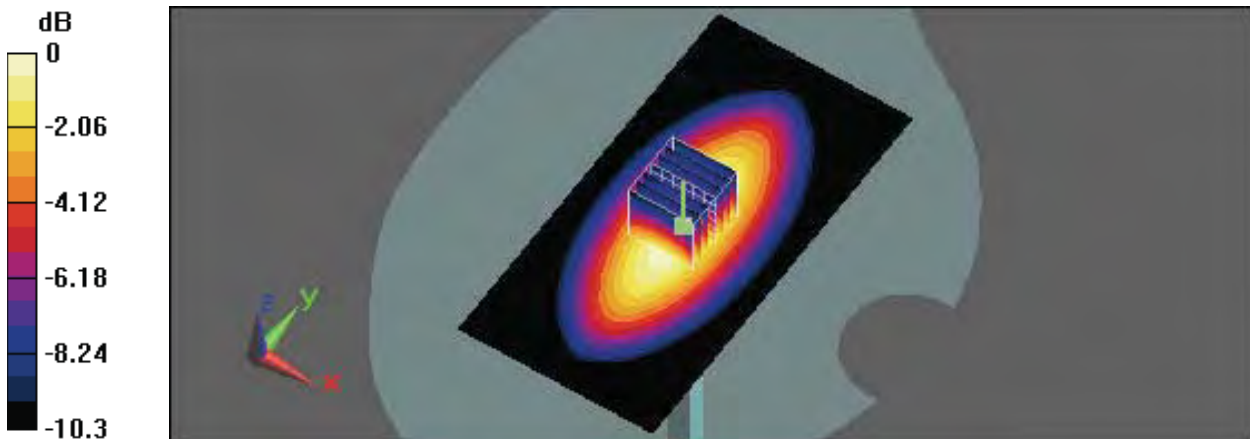
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.7 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 3.51 W/kg

SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.91 mW/g



0 dB = 2.91mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 5:01:07 PM

System Performance Check at 1900MHz_20090226_Head

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

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

System Performance Check at 1900MHz/Area Scan (61x61x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 11.5 mW/g

System Performance Check at 1900MHz/Zoom Scan (7x7x7)/Cube 0:

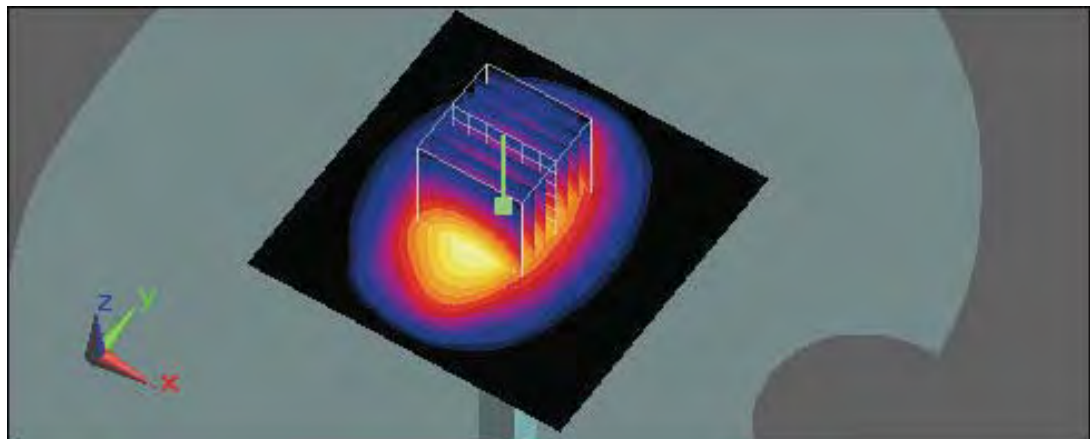
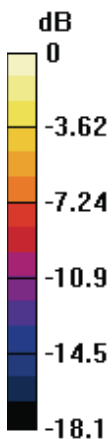
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 91.1 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 16.9 W/kg

SAR(1 g) = 9.54 mW/g; SAR(10 g) = 4.92 mW/g

Maximum value of SAR (measured) = 11.7 mW/g



0 dB = 11.7mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:05:31 PM

System Performance Check at 1900MHz_20090227_Body

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

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

System Performance Check at 1900 MHz/Area Scan (81x101x1):

Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 11.4 mW/g

System Performance Check at 1900 MHz/Zoom Scan (7x7x7)/Cube 0:

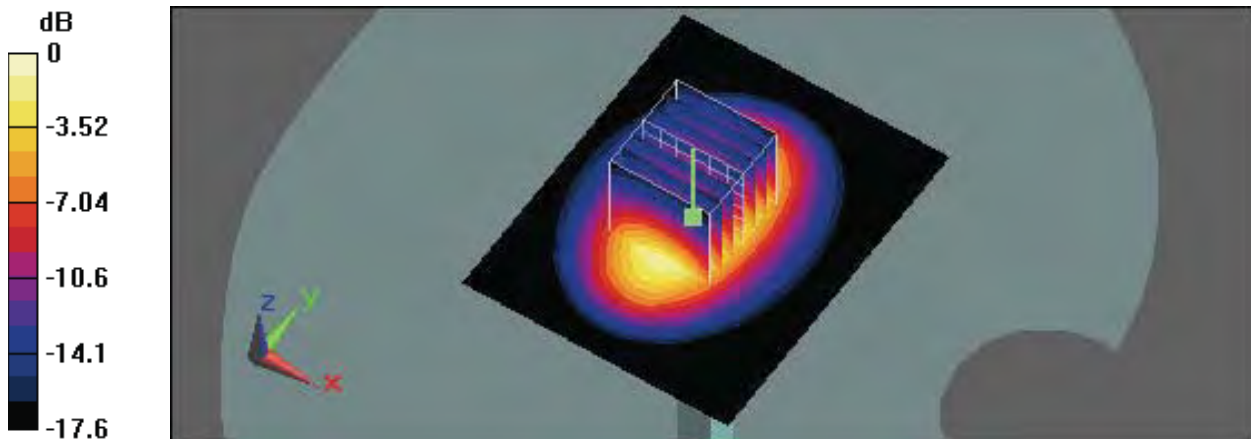
Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 90.5 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 17.4 W/kg

SAR(1 g) = 9.55 mW/g; SAR(10 g) = 4.94 mW/g

Maximum value of SAR (measured) = 10.8 mW/g



0 dB = 10.8mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 9:25:14 PM

System Performance Check at 2450MHz_20090226_Body

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:735

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

System Performance Check at 2450MHz/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.9 mW/g

System Performance Check at 2450MHz/Zoom Scan (7x7x7)/Cube 0:

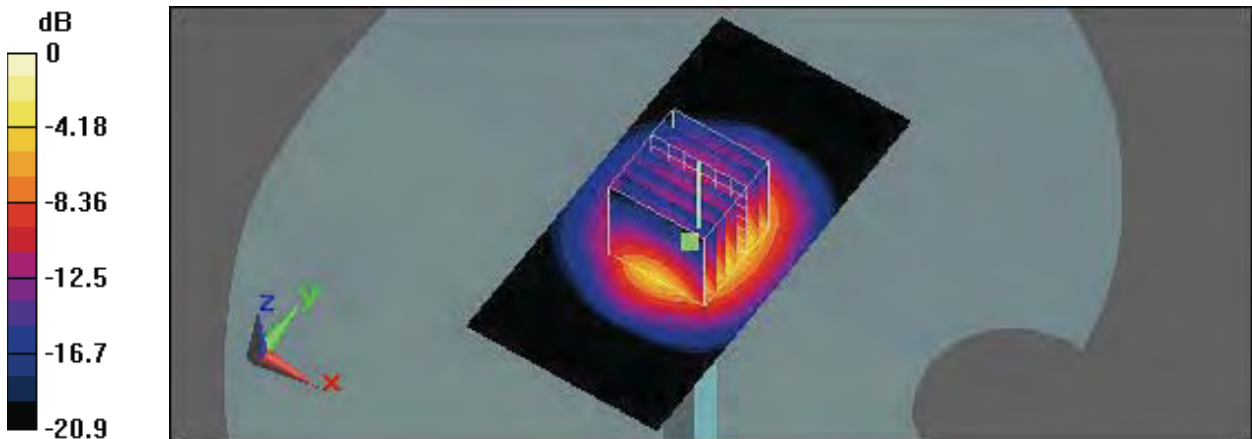
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.9 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 26.1 W/kg

SAR(1 g) = 13.1 mW/g; SAR(10 g) = 6.12 mW/g

Maximum value of SAR (measured) = 15.1 mW/g



0 dB = 15.1mW/g



Appendix B - SAR Measurement Data

See following Attached Pages.



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:50:27 AM

RC_GSM850 CH128

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (71x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.204 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

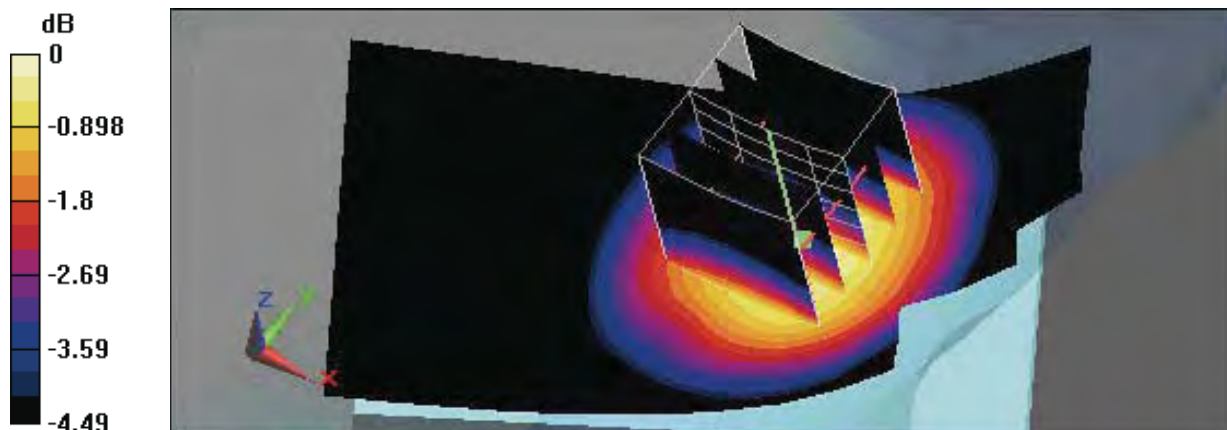
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.12 V/m; Power Drift = 0.083 dB

Peak SAR (extrapolated) = 0.237 W/kg

SAR(1 g) = 0.190 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.201 mW/g



0 dB = 0.201mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:12:51 AM

RC_GSM850 CH190

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.208 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

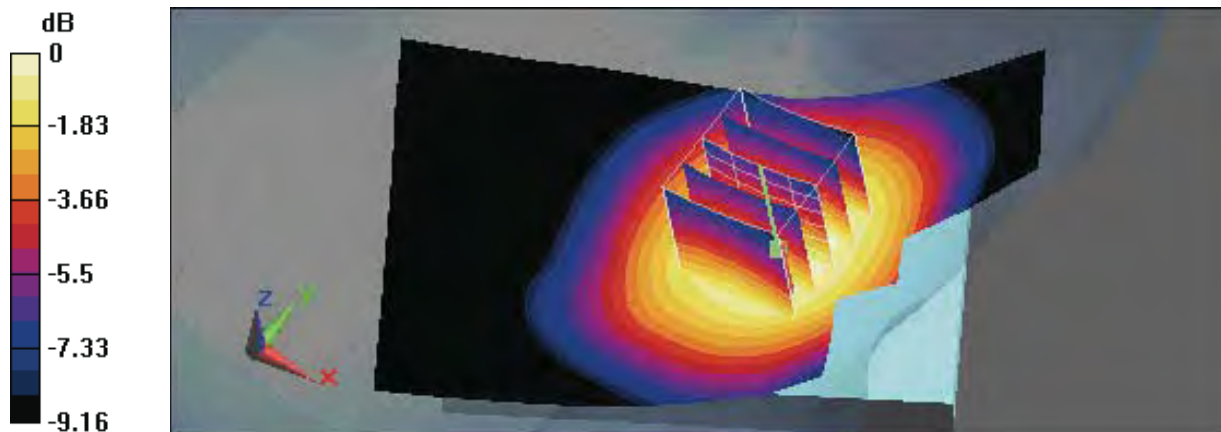
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.25 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 0.227 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.142 mW/g

Maximum value of SAR (measured) = 0.202 mW/g



0 dB = 0.202mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:27:21 AM

RC_GSM850 CH251

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (91x151x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.184 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

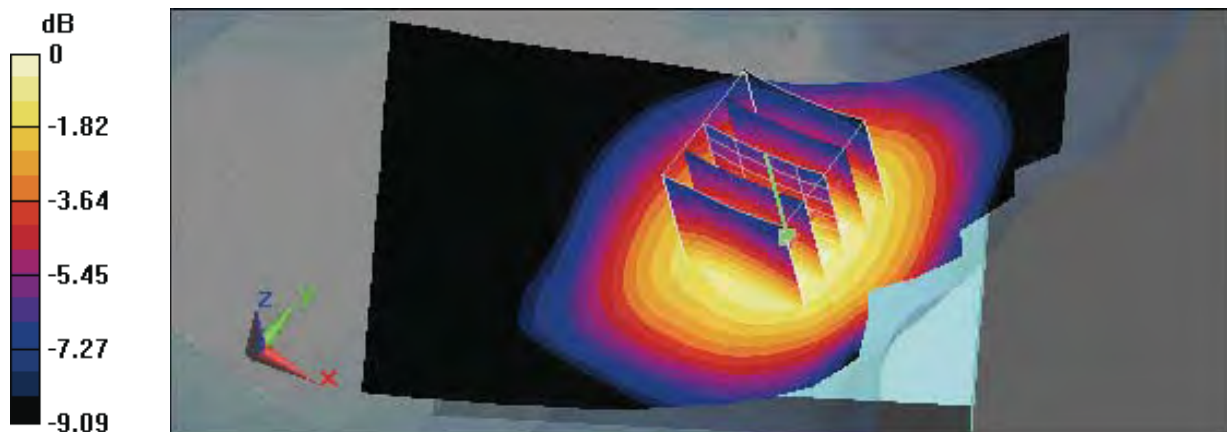
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.05 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 0.204 W/kg

SAR(1 g) = 0.162 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.177 mW/g



0 dB = 0.177mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:42:38 AM

RT_GSM850 CH128

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (71x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.151 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

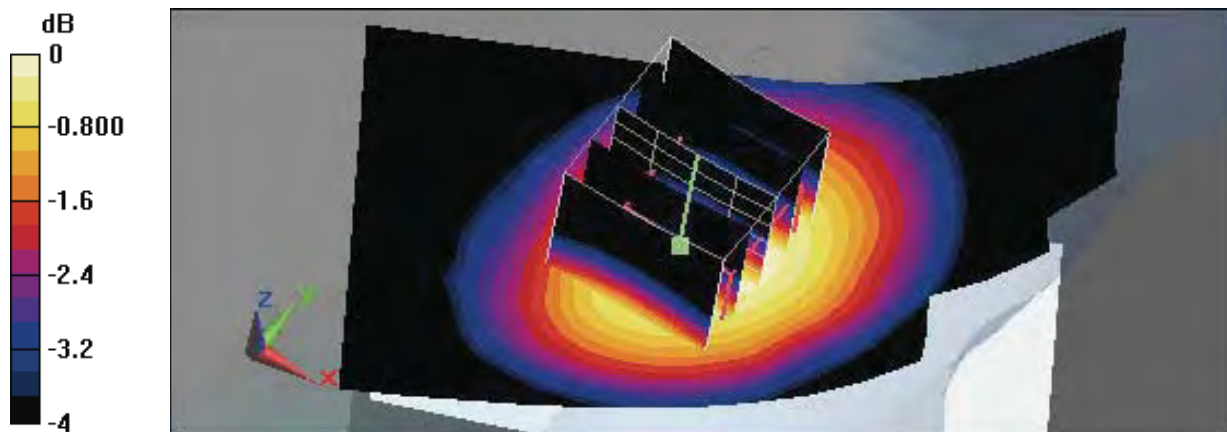
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.34 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.150 mW/g



0 dB = 0.150mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:01:22 AM

RT_GSM850 CH190

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (71x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.155 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

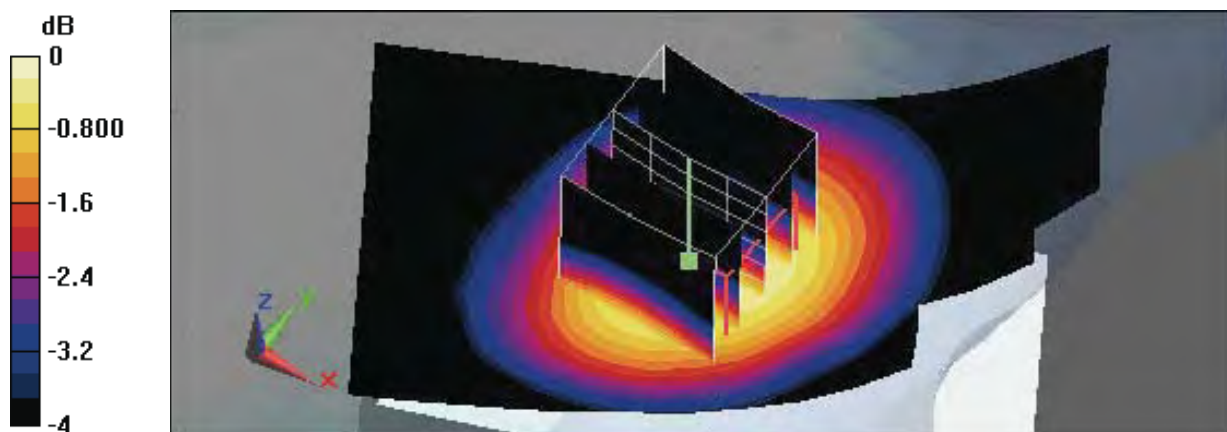
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.31 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.176 W/kg

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.155 mW/g



0 dB = 0.155mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:16:30 AM

RT_GSM850 CH251

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (71x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.124 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

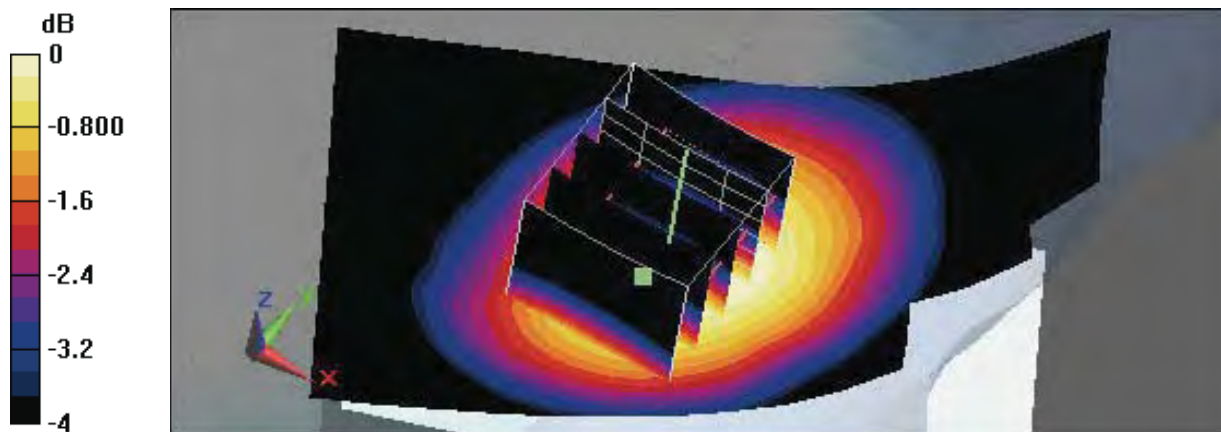
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.3 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.139 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.089 mW/g

Maximum value of SAR (measured) = 0.119 mW/g



0 dB = 0.119mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:32:31 AM

LC_GSM850 CH128

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (71x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.245 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

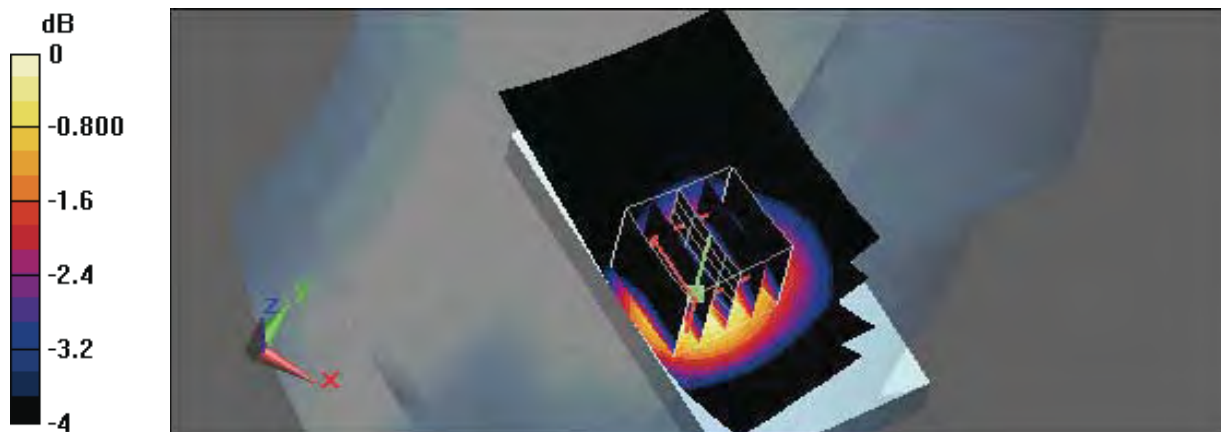
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.09 V/m; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 0.281 W/kg

SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.153 mW/g

Maximum value of SAR (measured) = 0.233 mW/g



0 dB = 0.233mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:48:12 AM

LC_GSM850 CH190

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (91x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.218 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

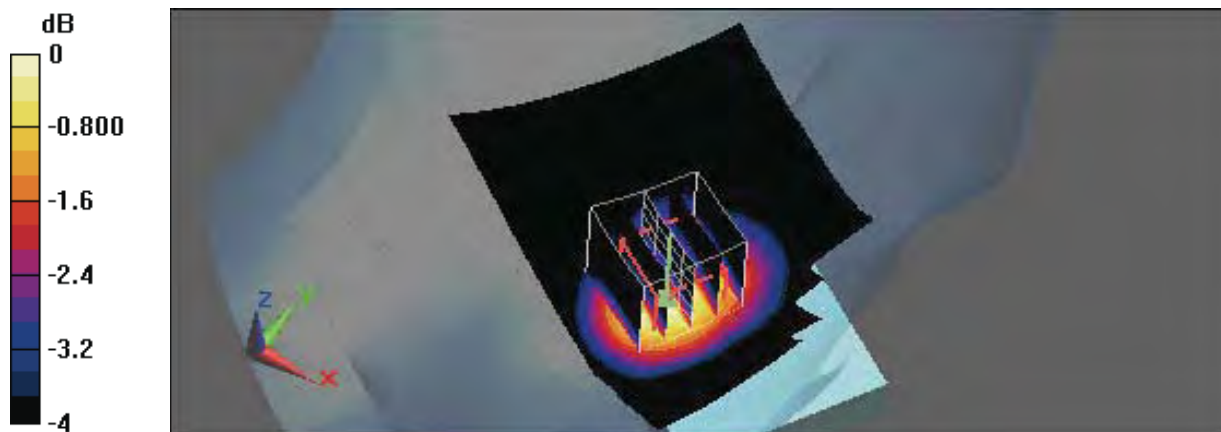
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.92 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 0.272 W/kg

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.218mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:01:24 AM

LC_GSM850 CH251

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (91x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.180 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

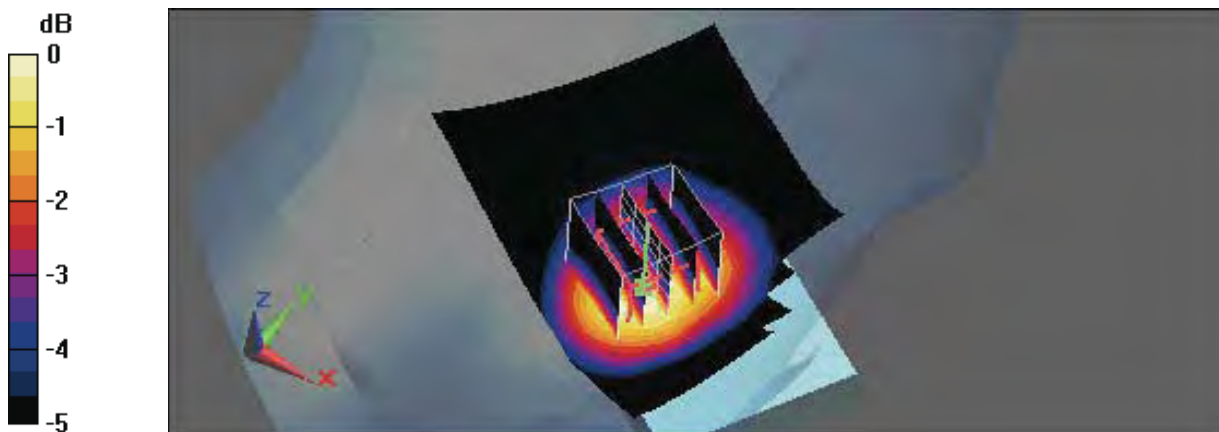
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.89 V/m; Power Drift = 0.102 dB

Peak SAR (extrapolated) = 0.220 W/kg

SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.176 mW/g



0 dB = 0.176mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:17:33 AM

LT_GSM850 CH128

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.171 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

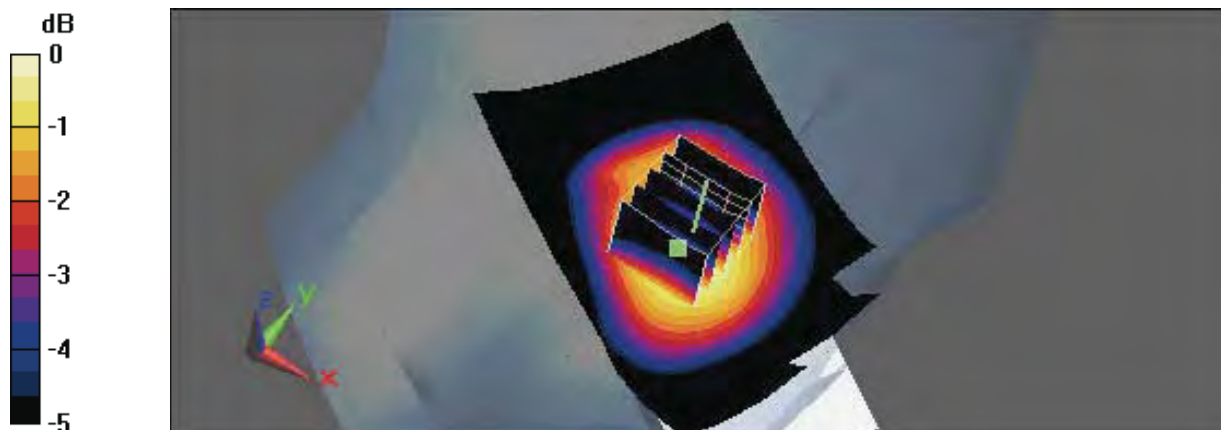
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.192 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.166 mW/g



0 dB = 0.166mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:35:21 AM

LT_GSM850 CH190

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.179 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

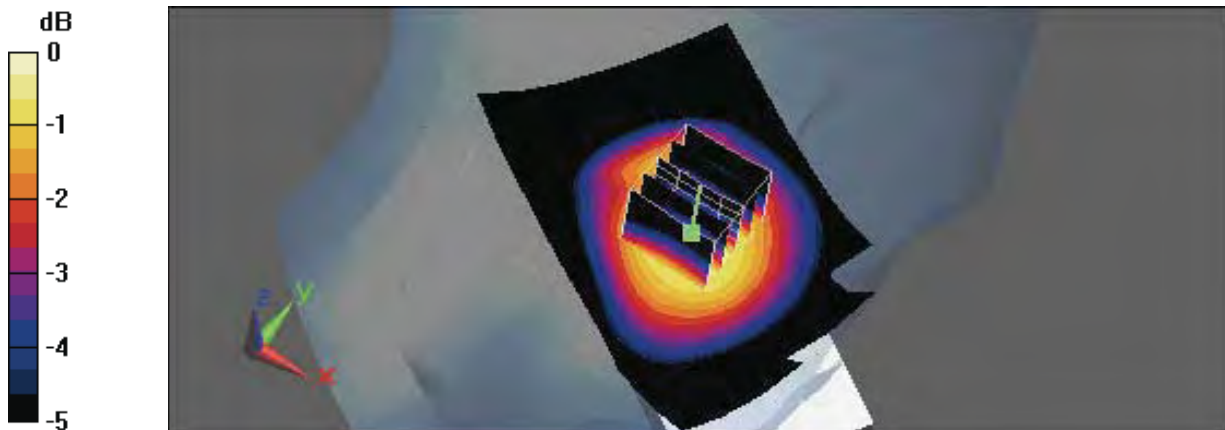
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.212 W/kg

SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.126 mW/g

Maximum value of SAR (measured) = 0.180 mW/g



0 dB = 0.180mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:53:35 AM

LT_GSM850 CH251

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

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

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

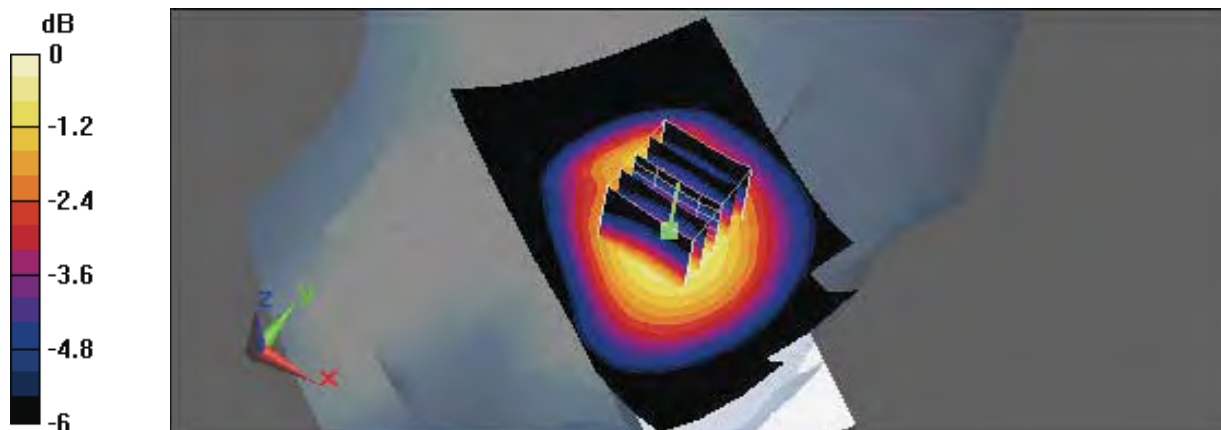
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.66 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.168 W/kg

SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.144 mW/g



0 dB = 0.144mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:20:12 AM

Flat_GSM850 CH128_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.815 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

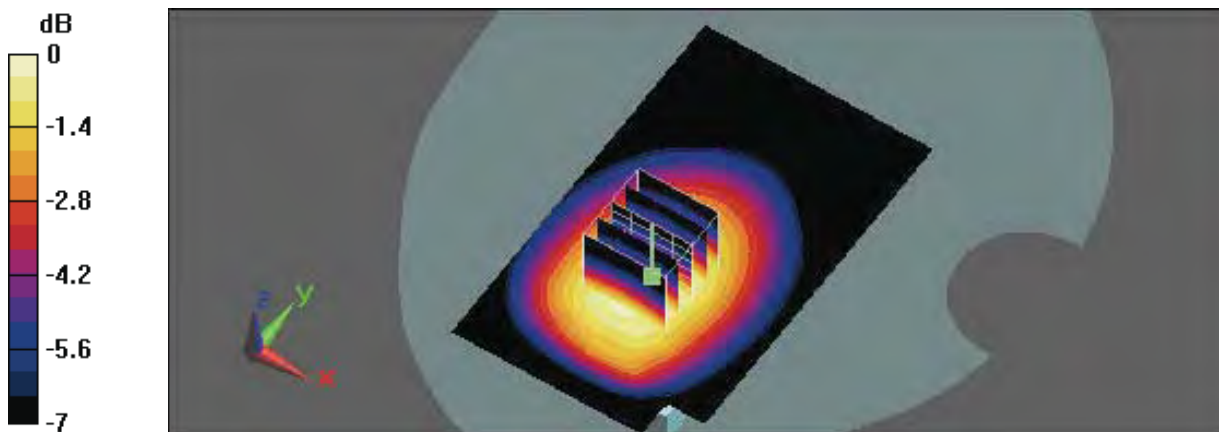
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.161 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.761 mW/g; SAR(10 g) = 0.549 mW/g

Maximum value of SAR (measured) = 0.812 mW/g



0 dB = 0.812mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:39:24 AM

Flat_GSM850 CH190_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.731 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

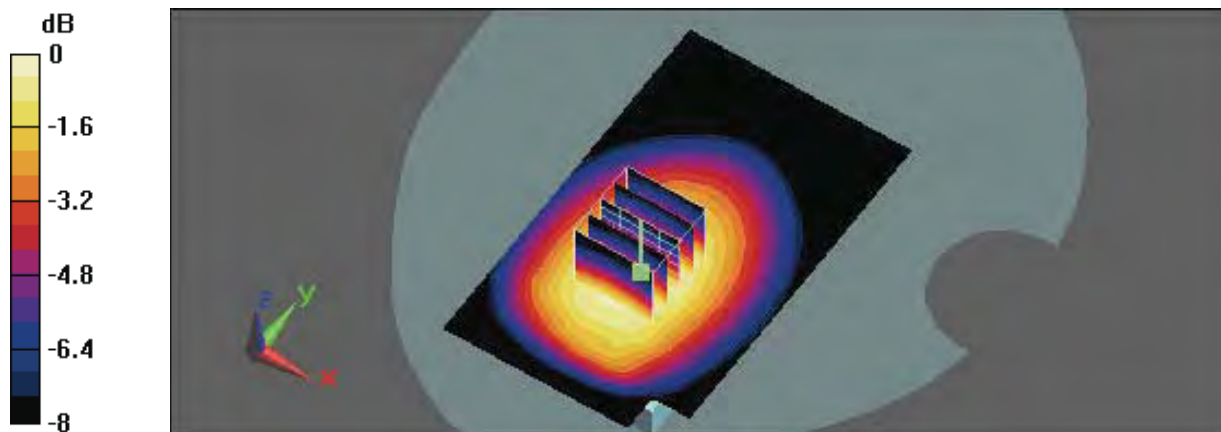
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.085 dB

Peak SAR (extrapolated) = 0.901 W/kg

SAR(1 g) = 0.690 mW/g; SAR(10 g) = 0.498 mW/g

Maximum value of SAR (measured) = 0.731 mW/g



0 dB = 0.731mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:58:44 AM

Flat_GSM850 CH251_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
Medium parameters used: $f = 849$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

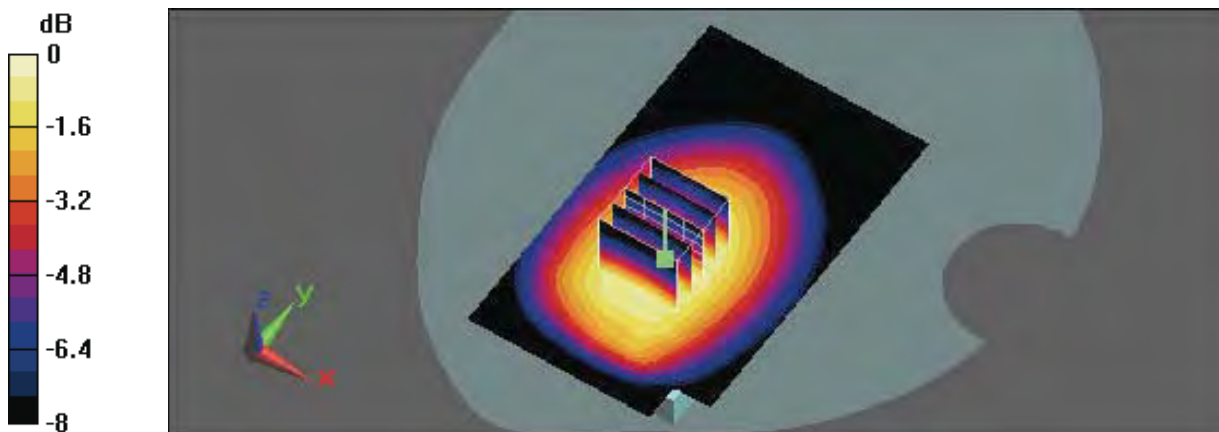
- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.519 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = -0.0682 dB
Peak SAR (extrapolated) = 0.641 W/kg
SAR(1 g) = 0.481 mW/g; SAR(10 g) = 0.350 mW/g
Maximum value of SAR (measured) = 0.514 mW/g



0 dB = 0.514mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 8:31:14 AM

Flat_GSM850_GPRS CH128_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

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

Flat/Zoom Scan (5x5x7)/Cube 0:

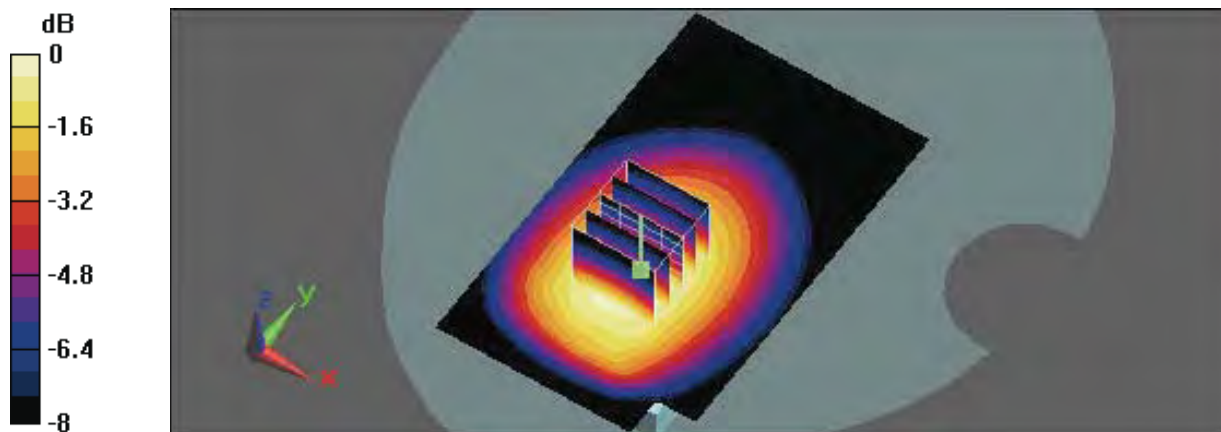
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = -0.113 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.752 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



0 dB = 1.11mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 3:20:57 PM

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 GPRS(3Down, 2Up)Communication System: IEEE 802.11b; Frequency: 824.2 MHzFrequency: 2412 MHz;Duty Cycle: 1:4.2Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³ Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77)ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Multi Band Result:

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.761 mW/g

Maximum value of SAR (measured) = 1.04 mW/g

Flat/Volume Scan (8x10x3):

Measurement grid: dx=15mm, dy=15mm, dz=15mm

Reference Value = 13.1 V/m; Power Drift = -0.138 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.710 mW/g

Total Absorbed Power = 0.0870615 W

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

Flat/Volume Scan (8x10x3):

Measurement grid: dx=15mm, dy=15mm, dz=15mm

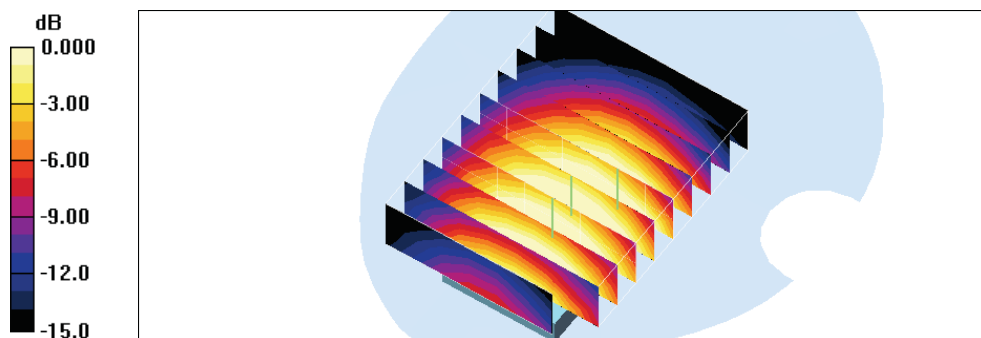
Reference Value = 3.65 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.728 W/kg

SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.164 mW/g

Total Absorbed Power = 0.00674363 W

Maximum value of SAR (measured) = 0.405 mW/g



0 dB = 0.405mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 9:28:12 AM

Flat_GSM850_GPRS CH128_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 1Up); Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x91x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.561 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

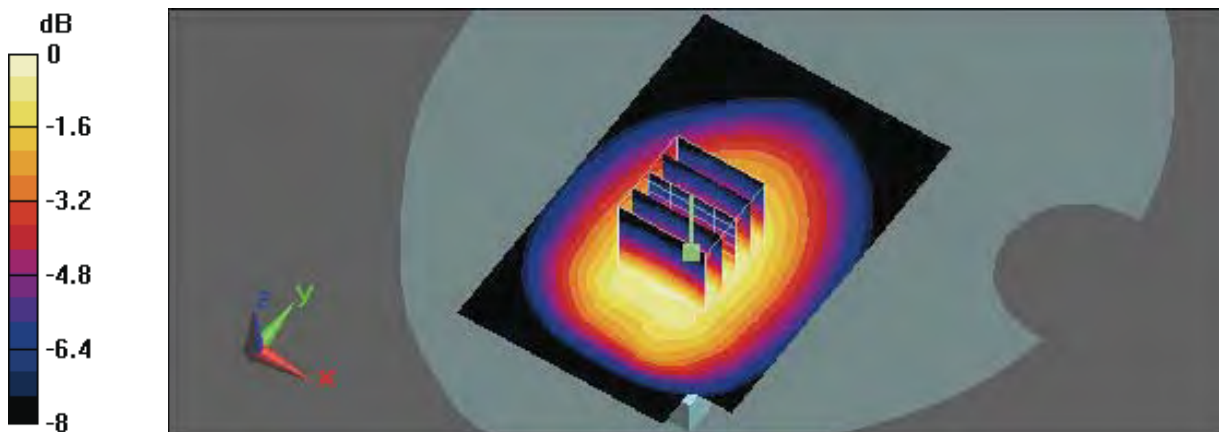
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 0.695 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.382 mW/g

Maximum value of SAR (measured) = 0.559W/g



0 dB = 0.559/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 8:50:54 AM

Flat_GSM850_GPRS CH190_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 837$ MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.05 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

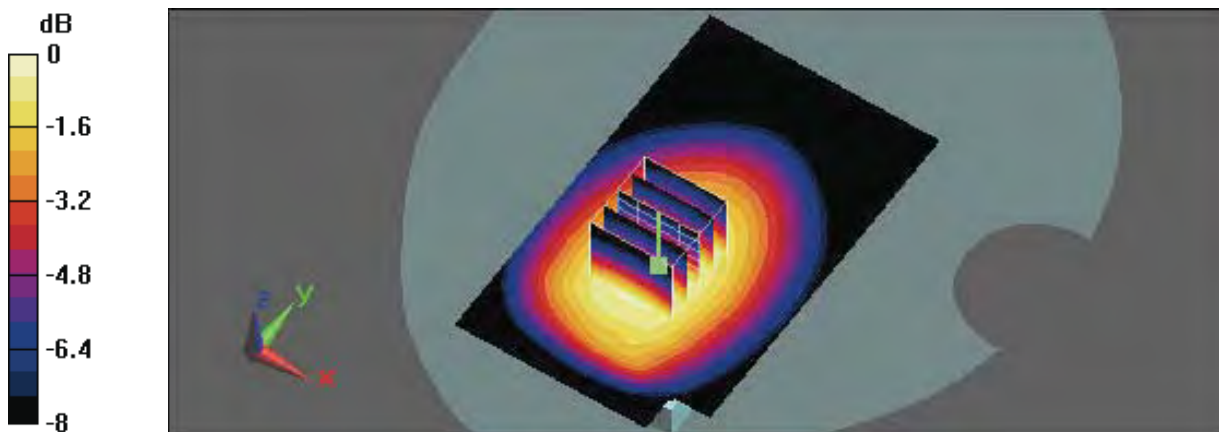
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.1 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.989 mW/g; SAR(10 g) = 0.715 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 9:09:51 AM

Flat_GSM850_GPRS CH251_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 849$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.824 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

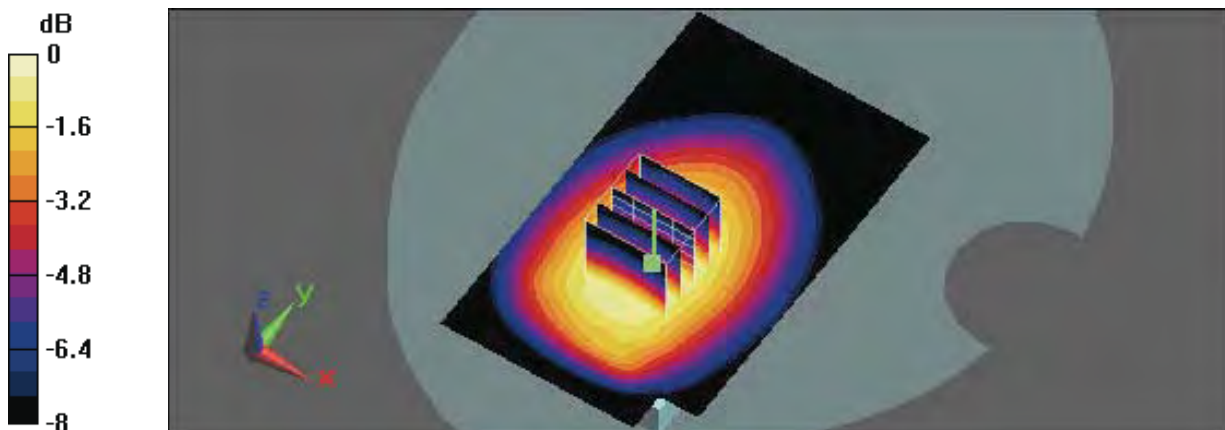
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.1 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.781 mW/g; SAR(10 g) = 0.562 mW/g

Maximum value of SAR (measured) = 0.829 mW/g



0 dB = 0.829mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 9:49:10 AM

Flat_GSM850_EGPRS CH128_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.329 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

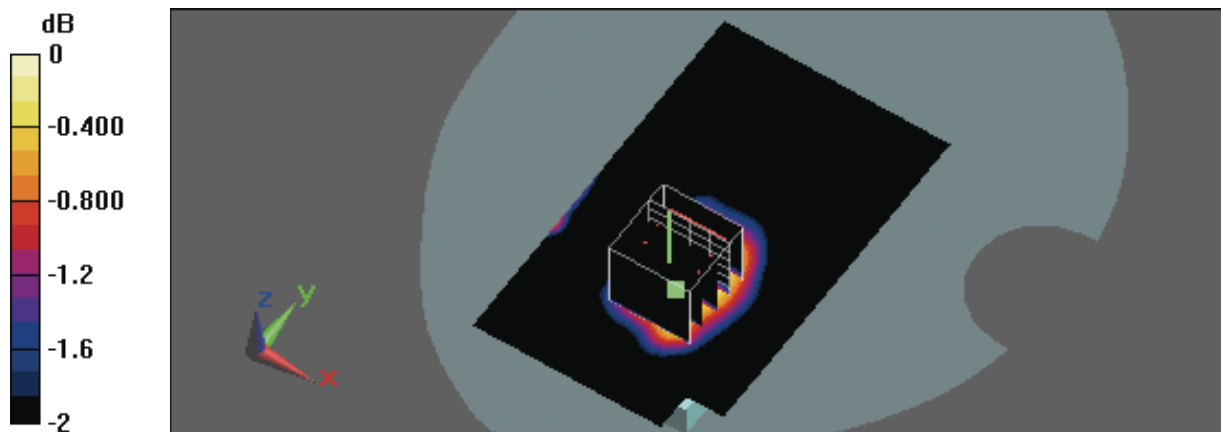
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.24 V/m; Power Drift = 0.118 dB

Peak SAR (extrapolated) = 0.441 W/kg

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.334 mW/g



0 dB = 0.334mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:09:18 AM

Flat_GSM850_EGPRS CH190_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 837$ MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x91x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.358 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

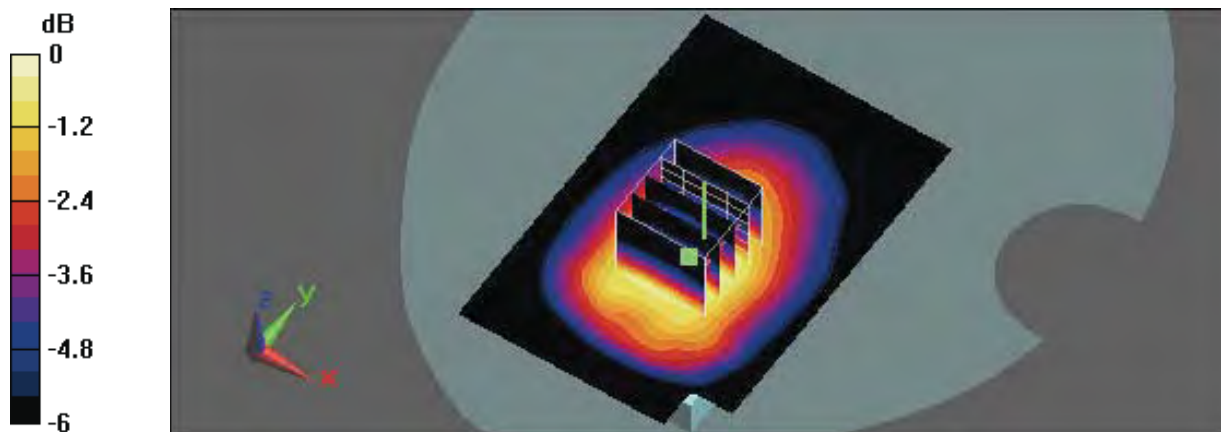
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.18 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.229 mW/g

Maximum value of SAR (measured) = 0.352 mW/g



0 dB = 0.352mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:49:48 AM

Flat_GSM850_EGPRS CH190_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 1Up); Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x91x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.151 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

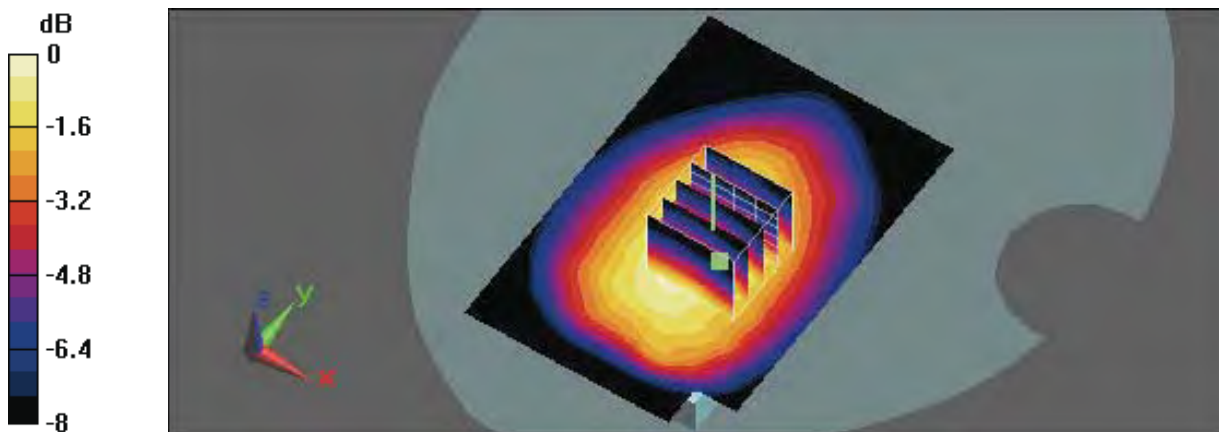
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.76 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 0.189 W/kg

SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.105 mW/g

Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:29:28 AM

Flat_GSM850_EGPRS CH251_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 849$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x91x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.241 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

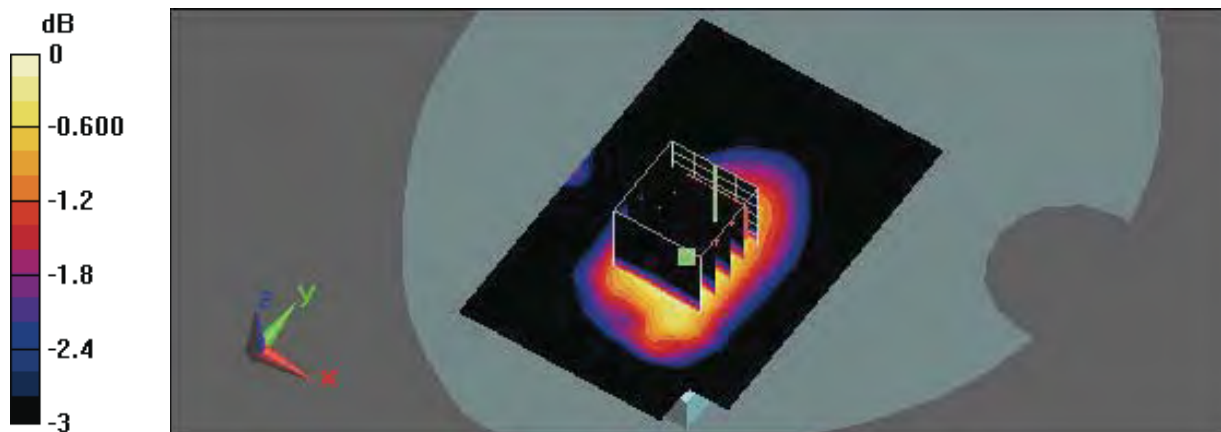
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.91 V/m; Power Drift = 0.130 dB

Peak SAR (extrapolated) = 0.298 W/kg

SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.228 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 6:05:11 PM

RC_PCS CH512

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.314 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

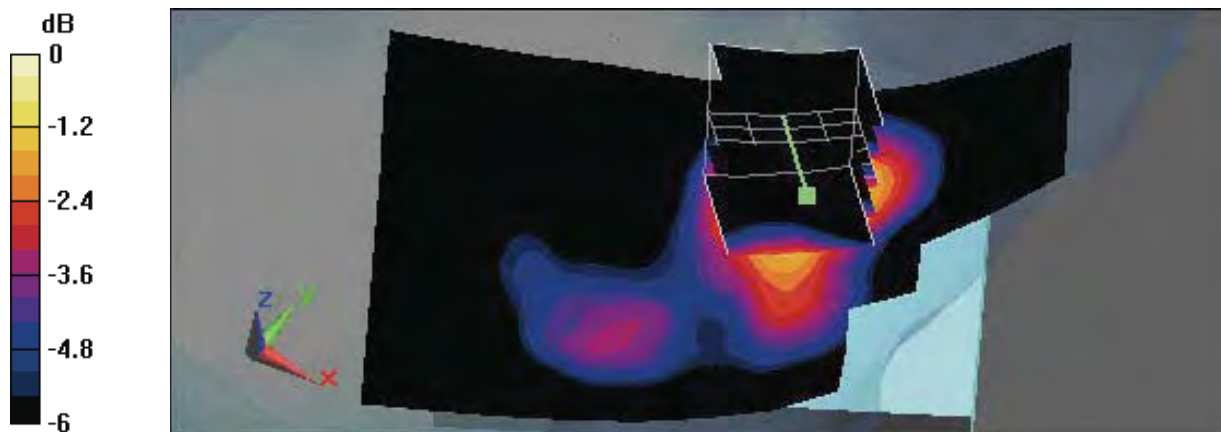
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.49 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.393 W/kg

SAR(1 g) = 0.286 mW/g; SAR(10 g) = 0.183 mW/g

Maximum value of SAR (measured) = 0.315 mW/g



0 dB = 0.315mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 6:23:25 PM

RC_PCS CH661

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.368 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

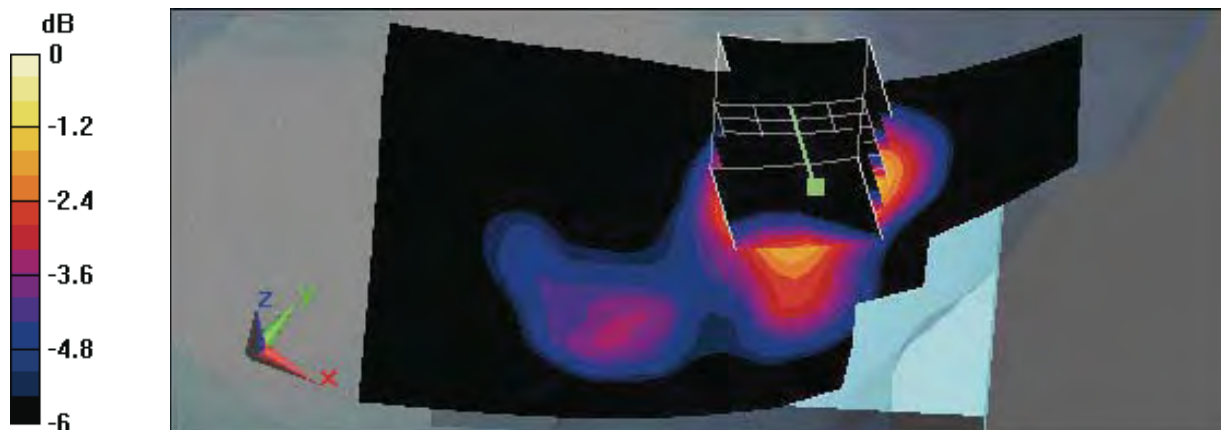
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.58 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.475 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.214 mW/g

Maximum value of SAR (measured) = 0.371 mW/g



0 dB = 0.371mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 6:41:45 PM

RC_PCS CH810

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.404 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

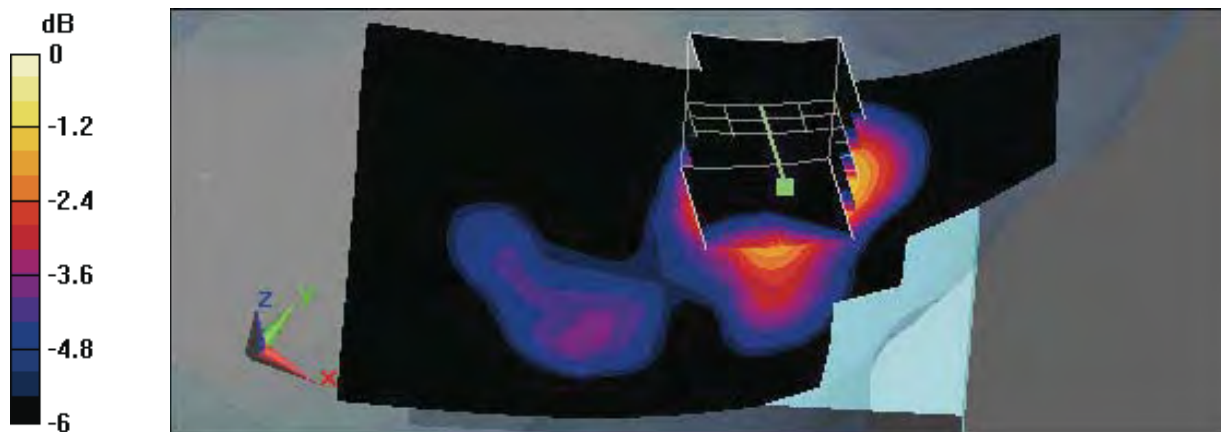
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 0.519 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.234 mW/g

Maximum value of SAR (measured) = 0.408 mW/g



0 dB = 0.408mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 7:05:12 PM

RT_PCS CH512

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.152 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

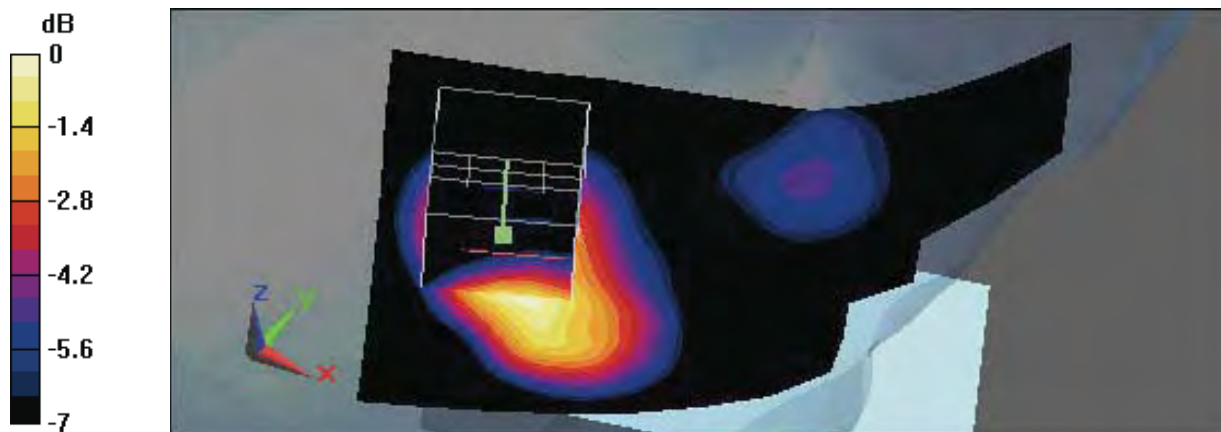
Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 10.9 V/m; Power Drift = -0.130 dB

Peak SAR (extrapolated) = 0.201 W/kg

SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.087 mW/g

Maximum value of SAR (measured) = 0.149 mW/g



0 dB = 0.149mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 7:24:32 PM

RT_PCS CH661

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.201 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

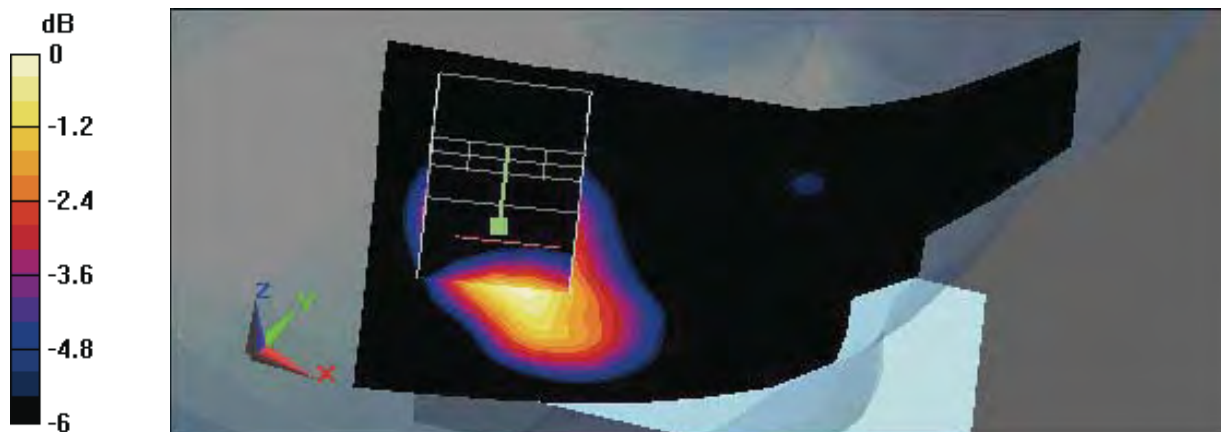
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 0.273 W/kg

SAR(1 g) = 0.181 mW/g; SAR(10 g) = 0.114 mW/g

Maximum value of SAR (measured) = 0.195 mW/g



0 dB = 0.195mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 7:42:12 PM

RT_PCS CH810

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.261 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

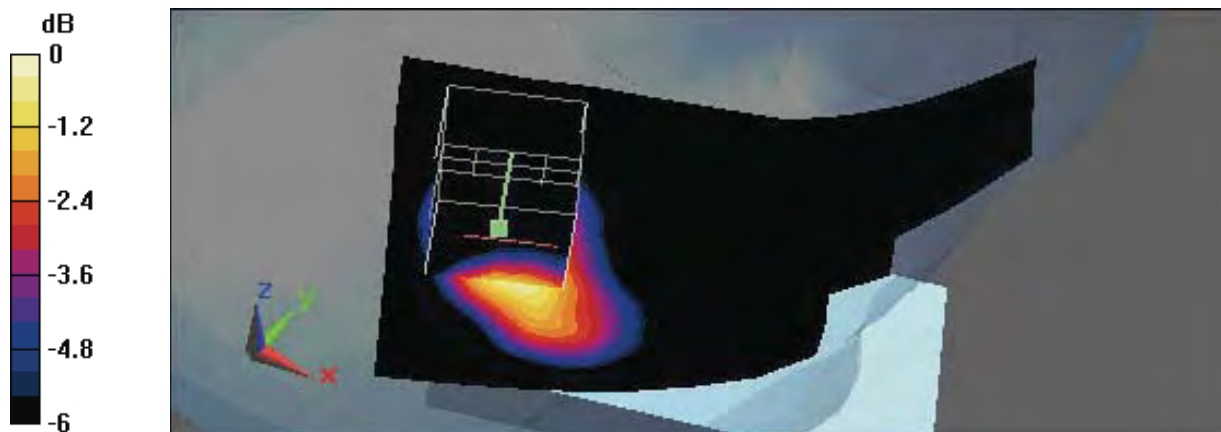
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.349 W/kg

SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.251 mW/g



0 dB = 0.251mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:01:44 PM

LC_PCS CH512

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.285 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

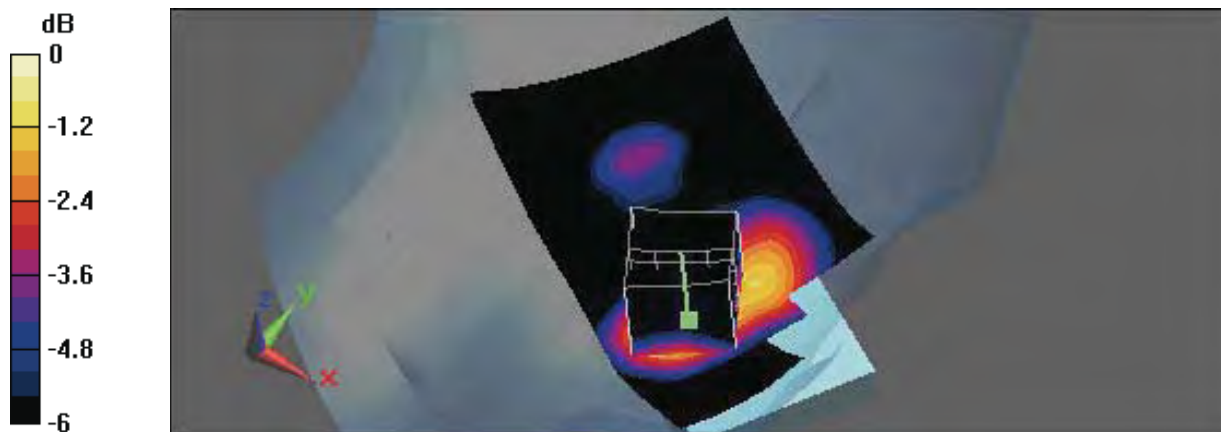
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.08 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 0.363 W/kg

SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.167 mW/g

Maximum value of SAR (measured) = 0.277 mW/g



0 dB = 0.277mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:17:11 PM

LC_PCS CH661

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.329 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

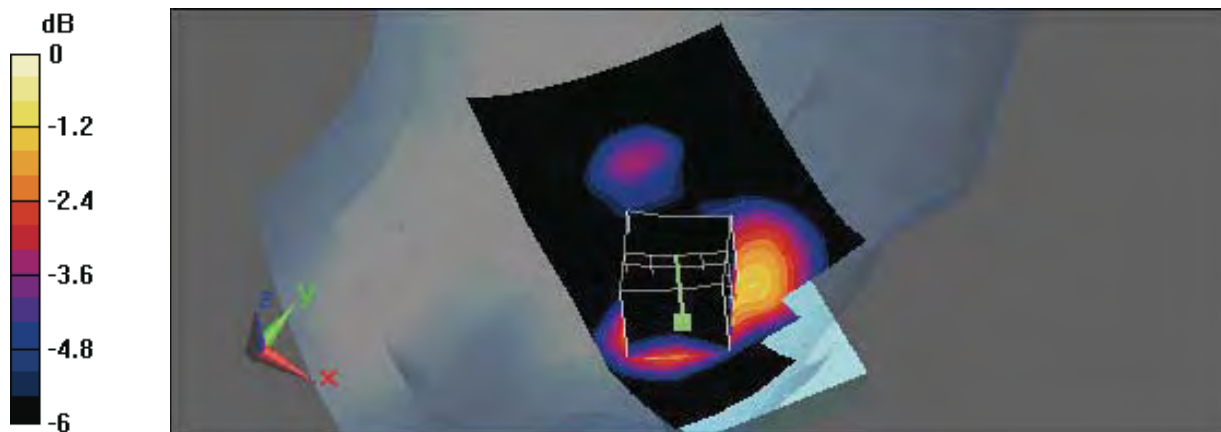
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.96 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.321 mW/g



0 dB = 0.321mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:35:12 PM

LC_PCS CH810

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.345 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

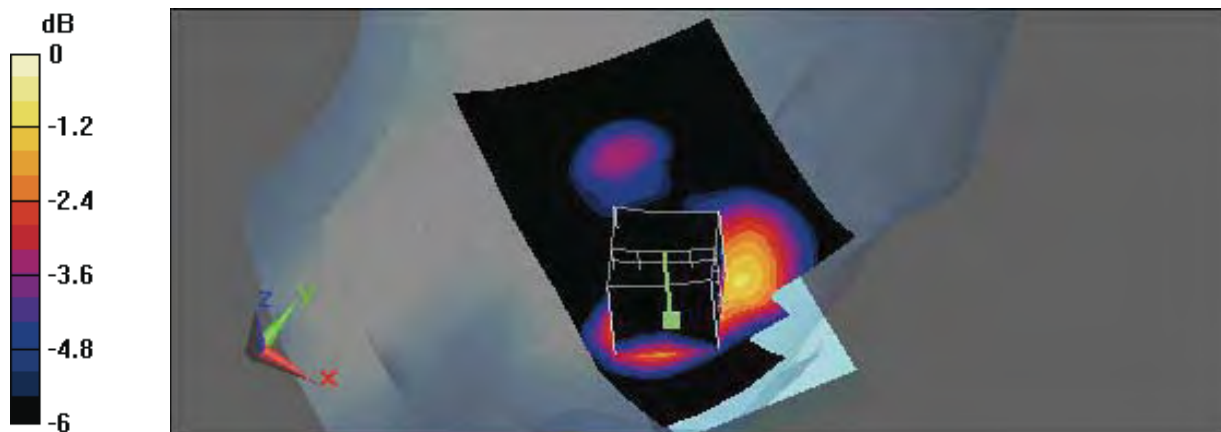
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 0.464 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.335 mW/g



0 dB = 0.335mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 8:53:28 PM

LT_PCS CH512

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.211 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

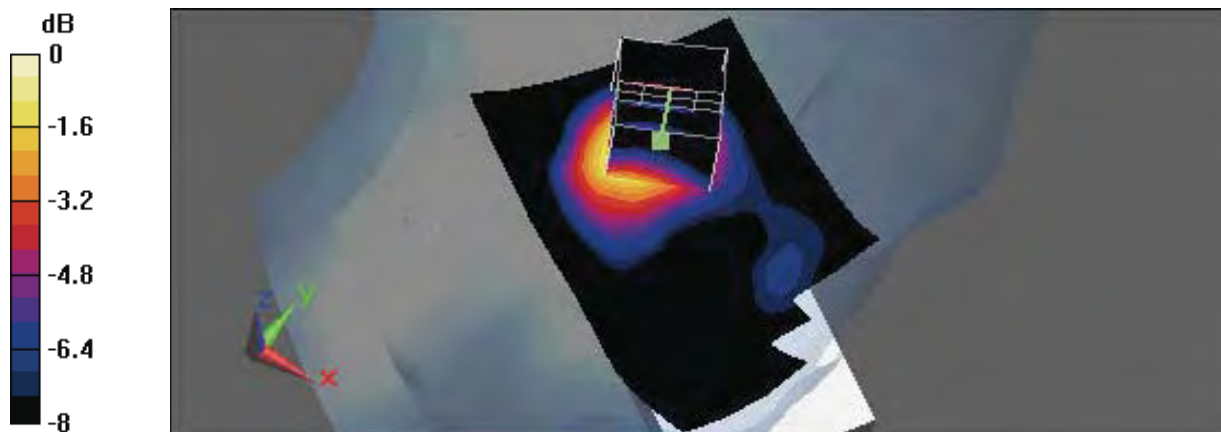
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.281 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.204 mW/g



0 dB = 0.204mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:10:21 PM

LT_PCS CH661

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.262 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

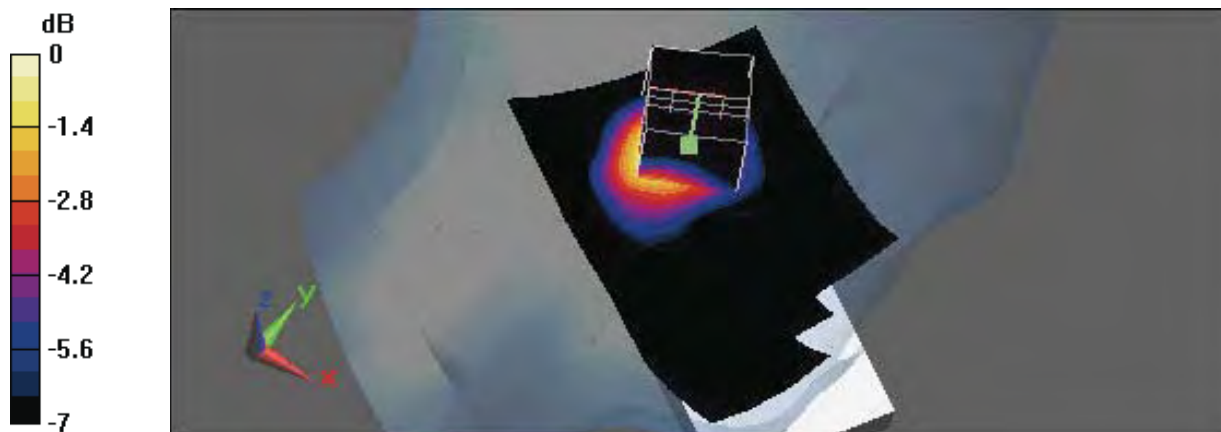
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.0 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.361 W/kg

SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.146 mW/g

Maximum value of SAR (measured) = 0.254 mW/g



0 dB = 0.254mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:29:11 PM

LT_PCS CH810

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.291 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

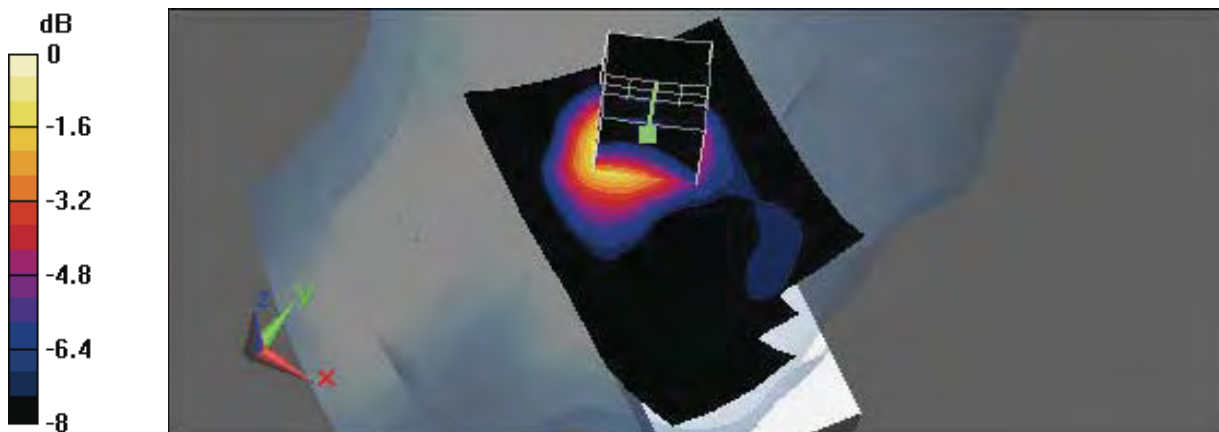
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 0.409 W/kg

SAR(1 g) = 0.268 mW/g; SAR(10 g) = 0.160 mW/g

Maximum value of SAR (measured) = 0.285 mW/g



0 dB = 0.285mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:26:11 PM

Flat_PCS CH512_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.389 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

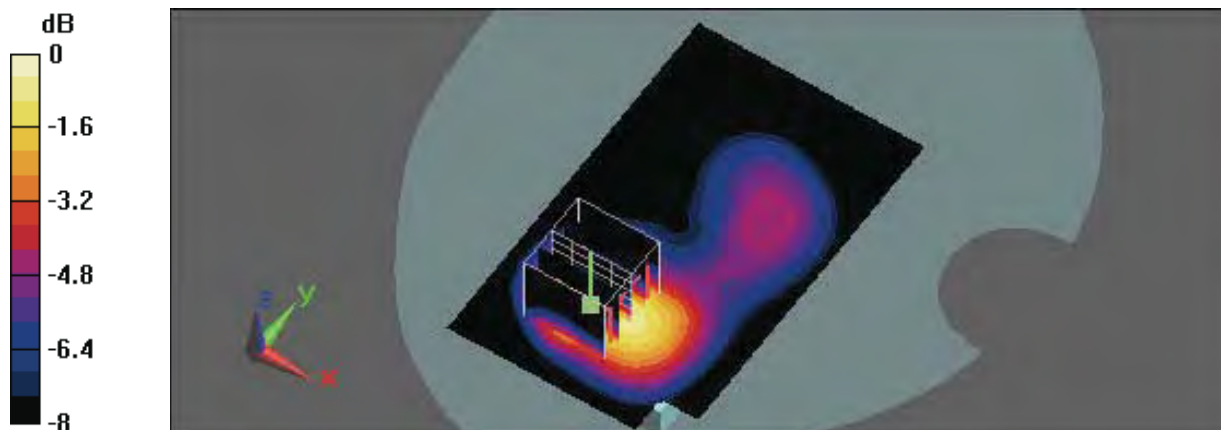
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.09 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 0.545 W/kg

SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.202 mW/g

Maximum value of SAR (measured) = 0.368 mW/g



0 dB = 0.368mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 2:46:31 PM

Flat_PCS CH661_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.489 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

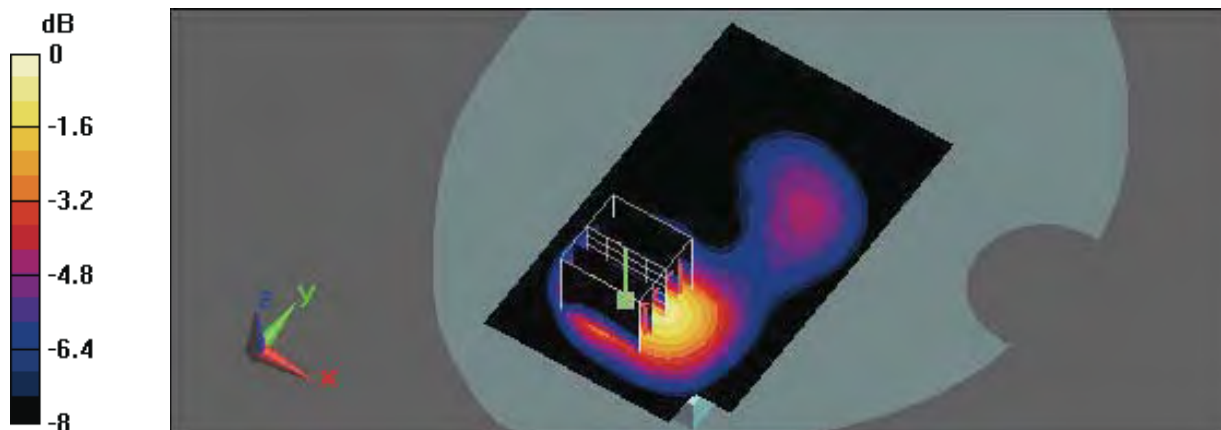
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.92 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.698 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.258 mW/g

Maximum value of SAR (measured) = 0.464 mW/g



0 dB = 0.464mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 3:05:11 PM

Flat_PCS CH810_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.540 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

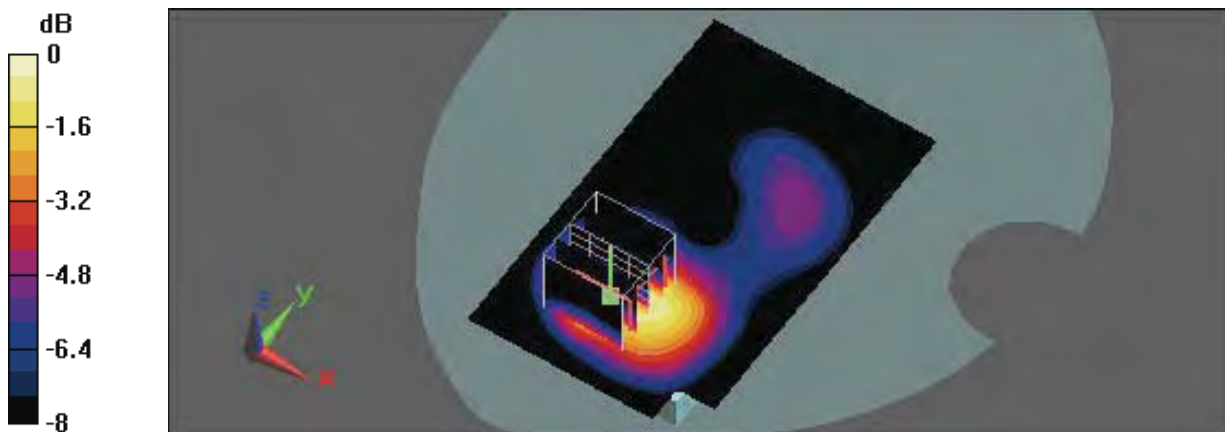
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.18 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.786 W/kg

SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.288 mW/g

Maximum value of SAR (measured) = 0.515 mW/g



0 dB = 0.515mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 3:25:54 PM

Flat_PCS_GPRS CH512_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS 1900 GPRS(3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2
Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.698 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

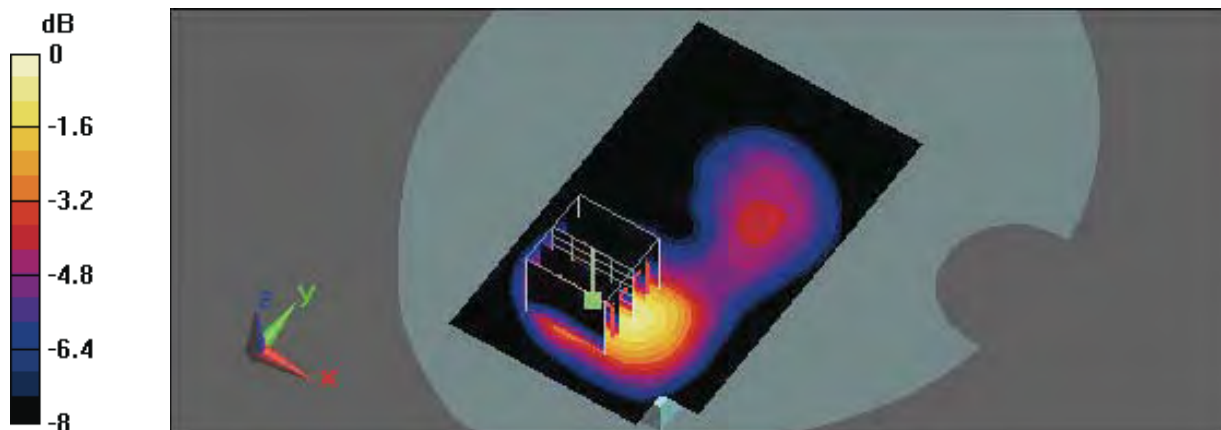
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.641 mW/g; SAR(10 g) = 0.383 mW/g

Maximum value of SAR (measured) = 0.710 mW/g



0 dB = 0.710mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 3:44:16 PM

Flat_PCS_GPRS CH661_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS 1900 GPRS(3Down,2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.2

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.948 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

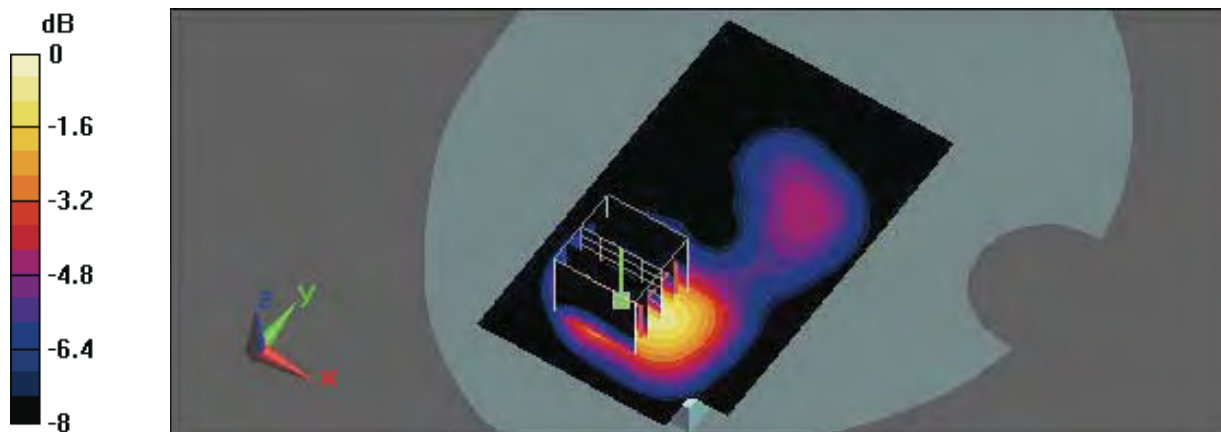
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.802 mW/g; SAR(10 g) = 0.479 mW/g

Maximum value of SAR (measured) = 0.888 mW/g



0 dB = 0.888mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 4:04:25 PM

Flat_PCS_GPRS CH810_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS 1900 GPRS(3Down,2Up); Frequency: 1909.8 MHz;Duty Cycle: 1:4.2

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.01 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

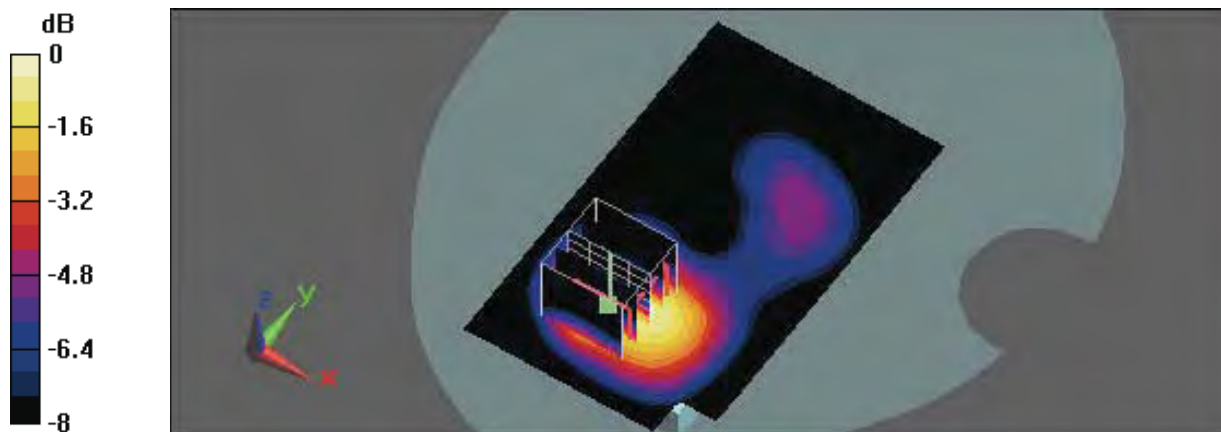
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.5 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.880 mW/g; SAR(10 g) = 0.535 mW/g

Maximum value of SAR (measured) = 0.943 mW/g



0 dB = 0.943mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 4:25:55 PM

Flat_PCS_GPRS CH810_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS 1900 GPRS(3Down,1Up); Frequency: 1909.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.521 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

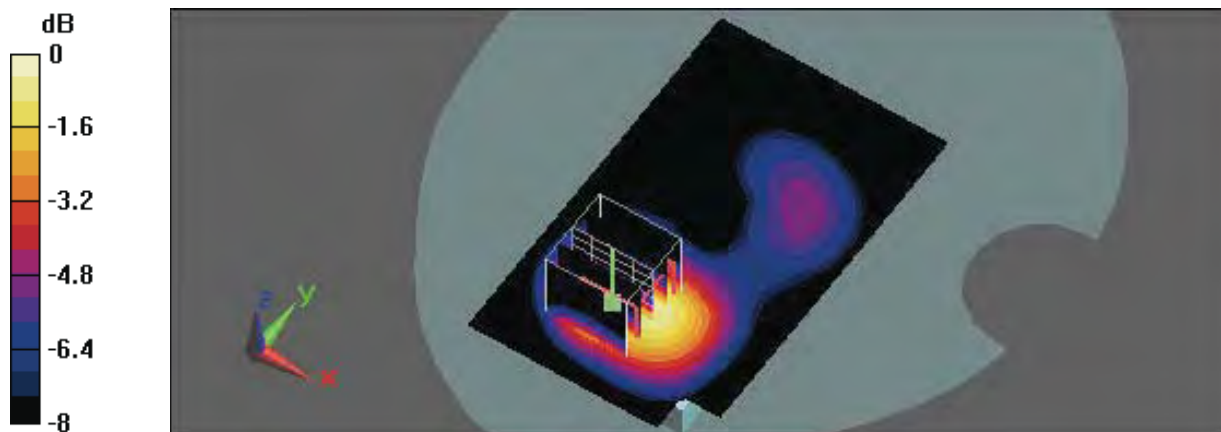
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.07 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.745 W/kg

SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.274 mW/g

Maximum value of SAR (measured) = 0.492 mW/g



0 dB = 0.492mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 4:45:27 PM

Flat_PCS_EGPRS CH512_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS EGPRS(3Down 2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2
Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (81x131x1):

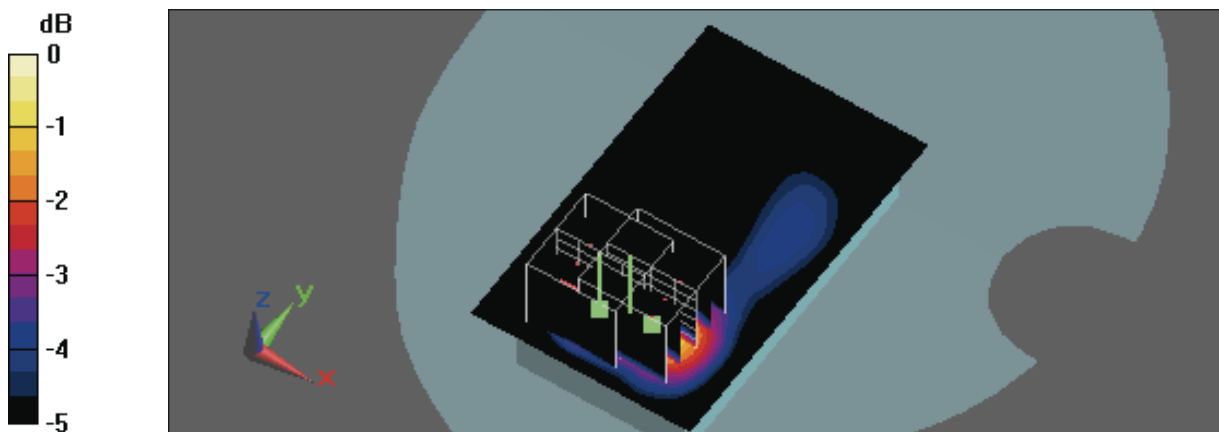
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.710 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.402 mW/g
Maximum value of SAR (measured) = 0.784 mW/g

Flat/Zoom Scan (5x5x7)/Cube 1:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.419 mW/g
Maximum value of SAR (measured) = 0.757 mW/g



0 dB = 0.757mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 5:05:15 PM

Flat_PCS_EGPRS CH661_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS EGPRS(3Down 2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.2

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (81x131x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.906 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

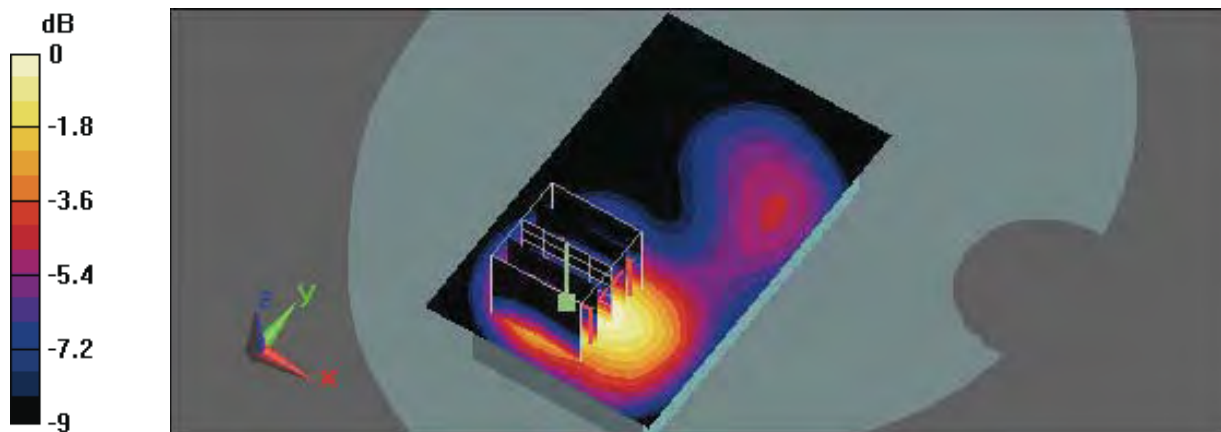
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.811 mW/g; SAR(10 g) = 0.496 mW/g

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



0 dB = 0.881mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 5:24:26 PM

Flat_PCS_EGPRS CH810_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS EGPRS(3Down 2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (81x131x1):

Measurement grid: dx=10mm, dy=10mm

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

Flat/Zoom Scan (5x5x7)/Cube 0:

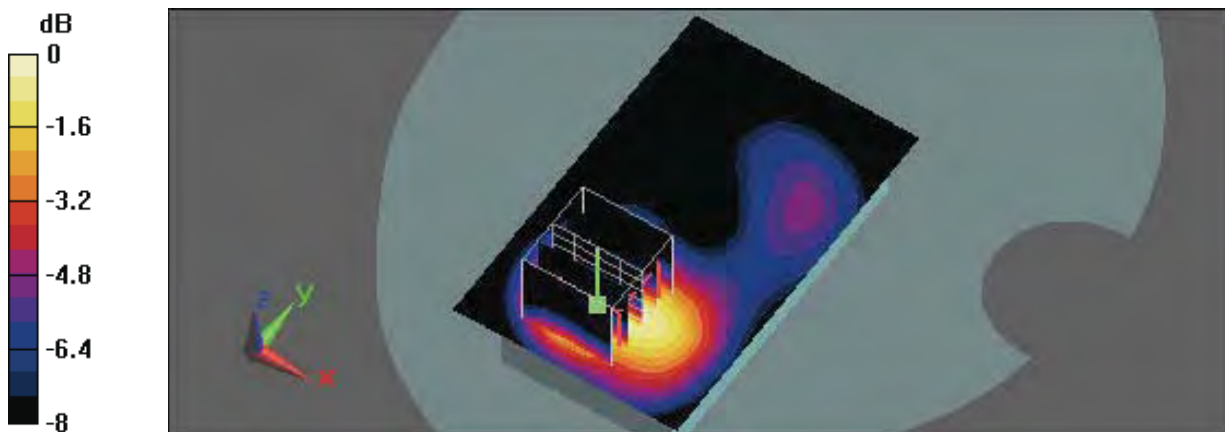
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.879 mW/g; SAR(10 g) = 0.531 mW/g

Maximum value of SAR (measured) = 0.951 mW/g



0 dB = 0.951mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 5:44:19 PM

Flat_PCS_EGPRS CH810_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: PCS EGPRS(3Down 1Up); Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (81x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.500 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

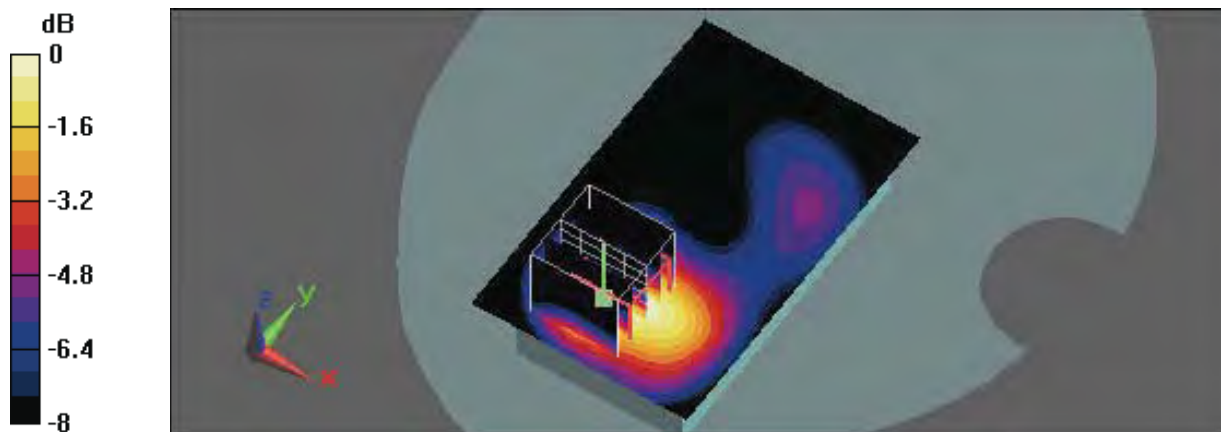
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.54 V/m; Power Drift = 0.078 dB

Peak SAR (extrapolated) = 0.760 W/kg

SAR(1 g) = 0.455 mW/g; SAR(10 g) = 0.277 mW/g

Maximum value of SAR (measured) = 0.490 mW/g



0 dB = 0.490mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 12:10:22 PM

RC_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.904$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

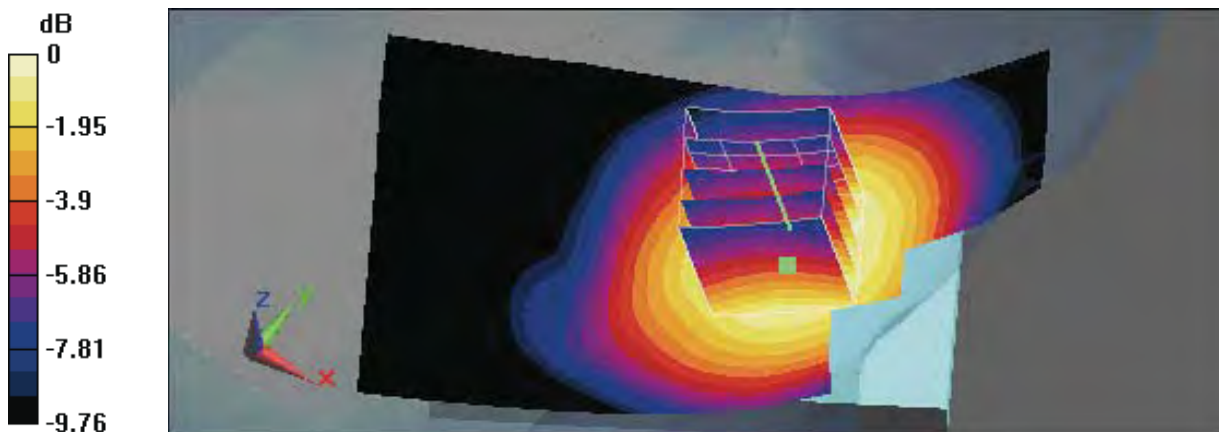
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.088 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.61 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 0.108 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.089 mW/g



0 dB = 0.089mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 12:30:10 PM

RC_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 836$ MHz; $\sigma = 0.911$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.051 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

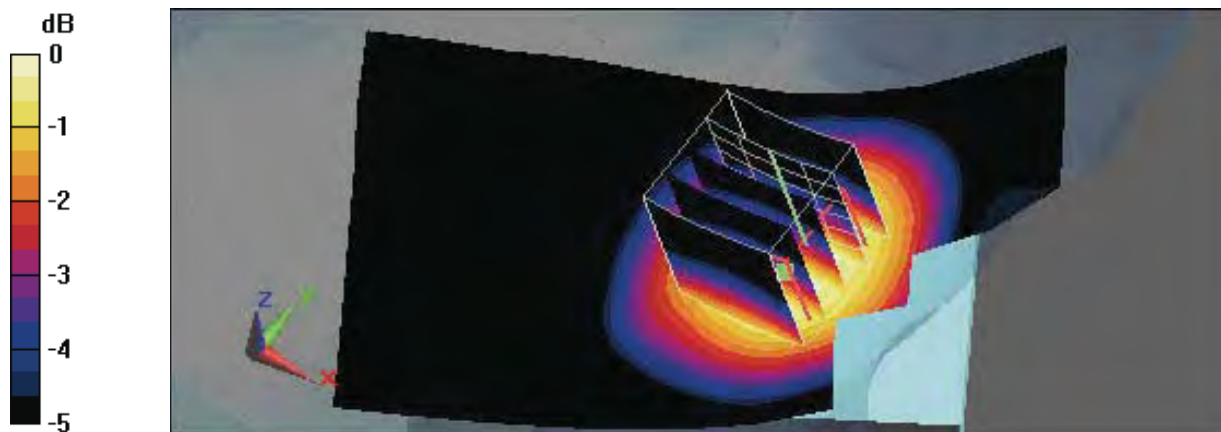
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.10 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.061 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.052 mW/g



0 dB = 0.052mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 12:50:21 PM

RC_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 0.922$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.094 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

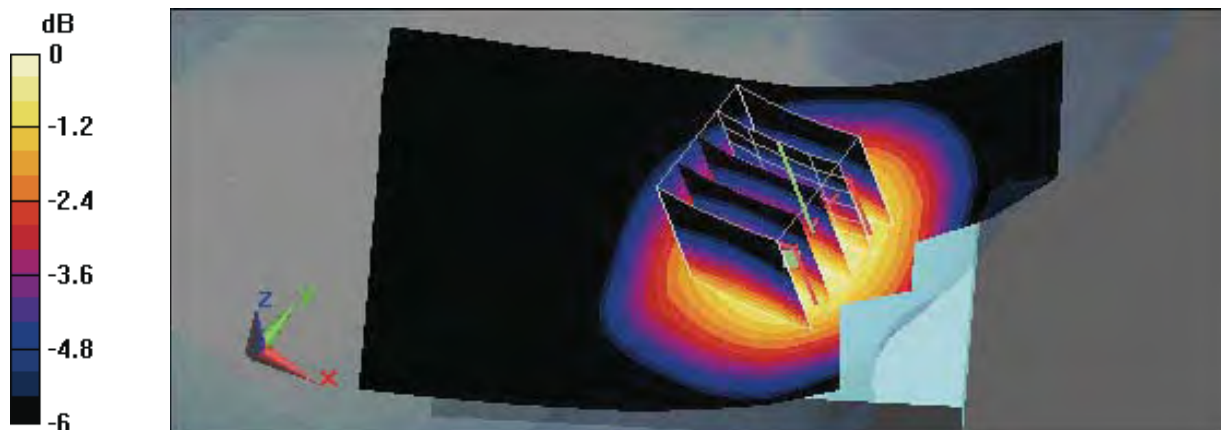
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.75 V/m; Power Drift = -0.011 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



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 1:09:24 PM

RT_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.904$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

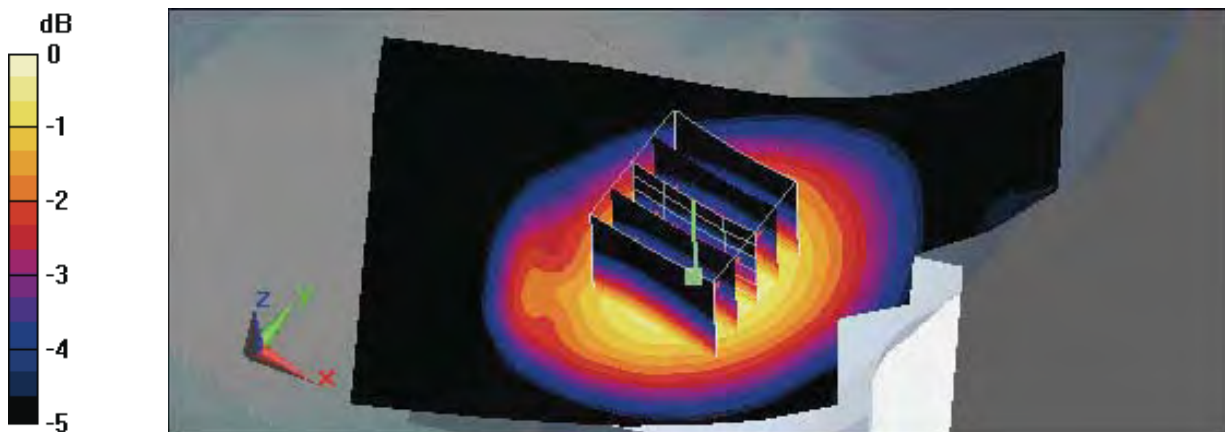
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 0.054 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 4.75 V/m; Power Drift = 0.124 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) = 0.054 mW/g



0 dB = 0.054mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 1:26:34 PM

RT_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 836$ MHz; $\sigma = 0.911$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

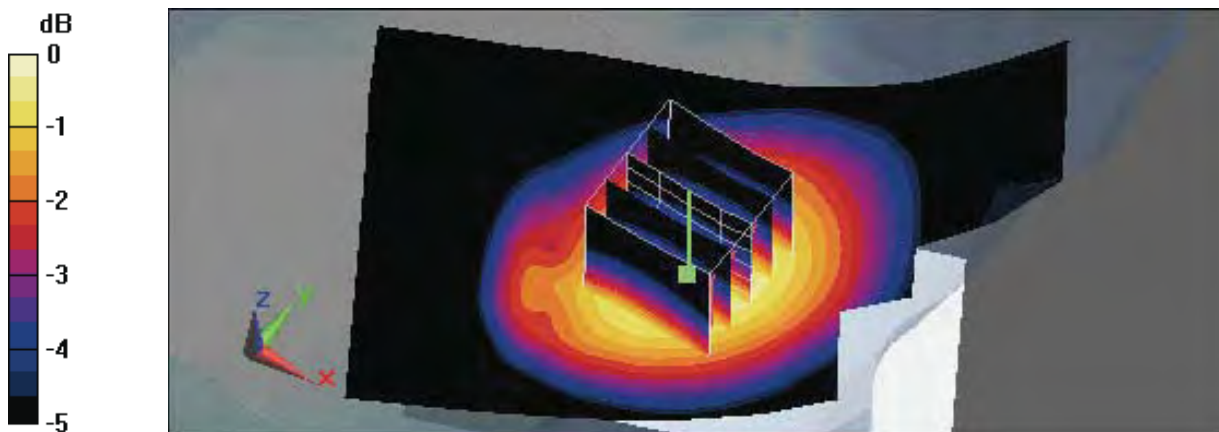
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.033 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.66 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.039 W/kg
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.023 mW/g
Maximum value of SAR (measured) = 0.031 mW/g



0 dB = 0.031mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 1:48:33 PM

RT_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 0.922$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

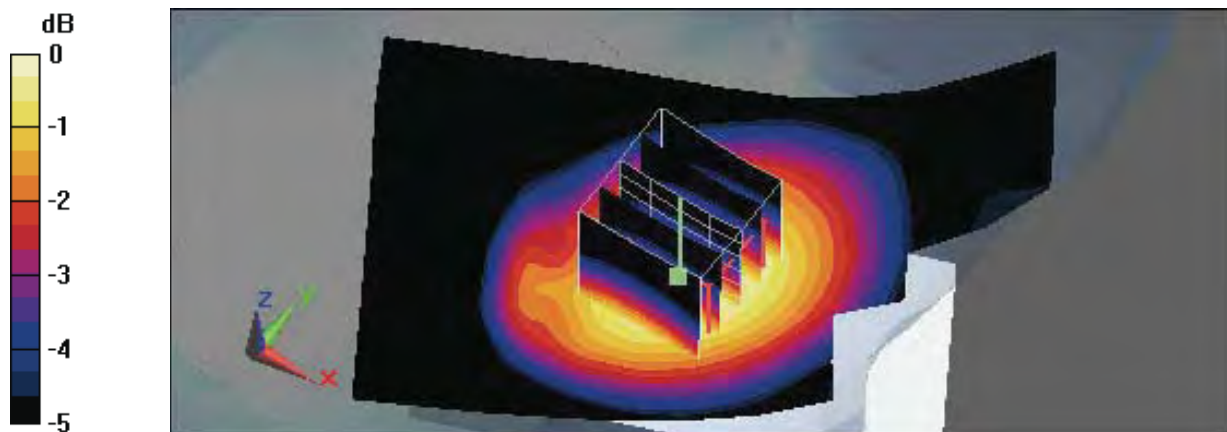
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.058 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.85 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 0.069 W/kg
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.042 mW/g
Maximum value of SAR (measured) = 0.058 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 2:06:44 PM

LC_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.904$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

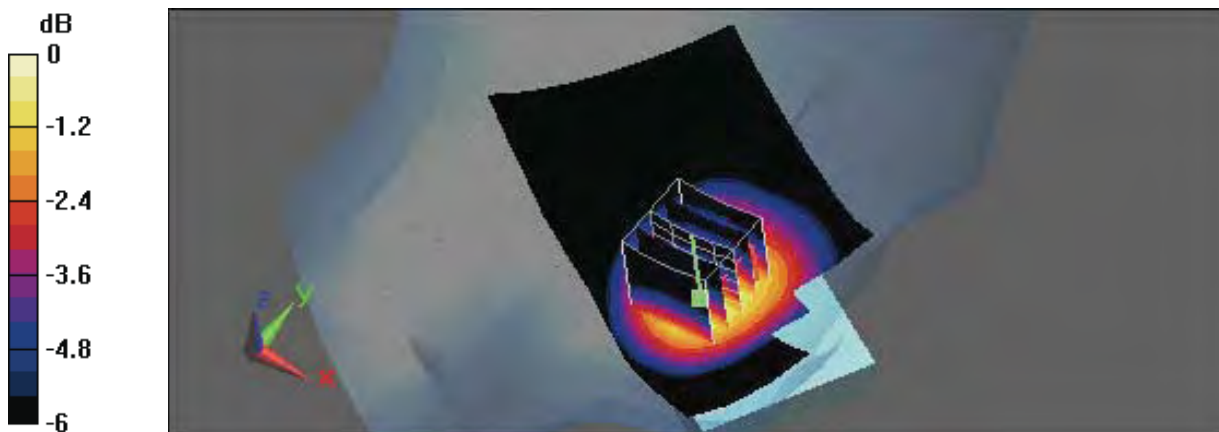
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.101 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.10 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 0.131 W/kg
SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.104 mW/g



0 dB = 0.104mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 2:26:14 PM

LC_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 836 \text{ MHz}$; $\sigma = 0.911 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.061 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

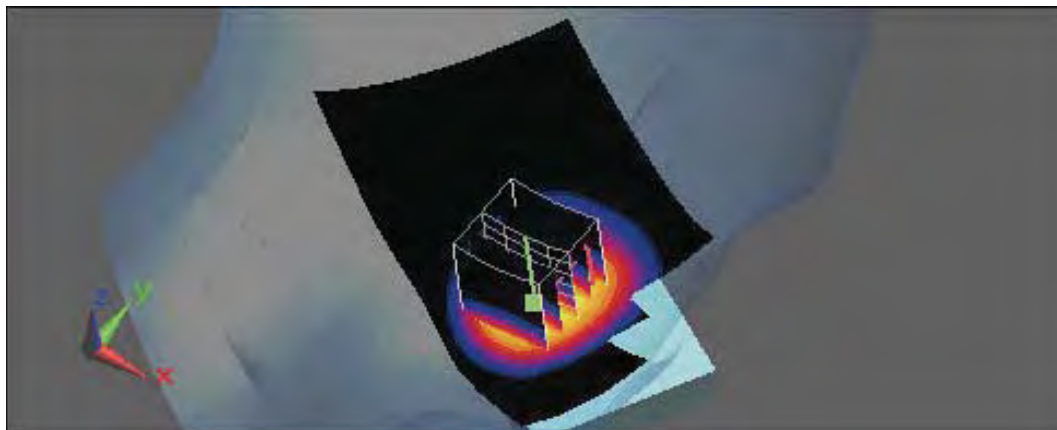
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.44 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 0.079 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.041 mW/g

Maximum value of SAR (measured) = 0.061 mW/g



0 dB = 0.061mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 2:45:21 PM

LC_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 0.922$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

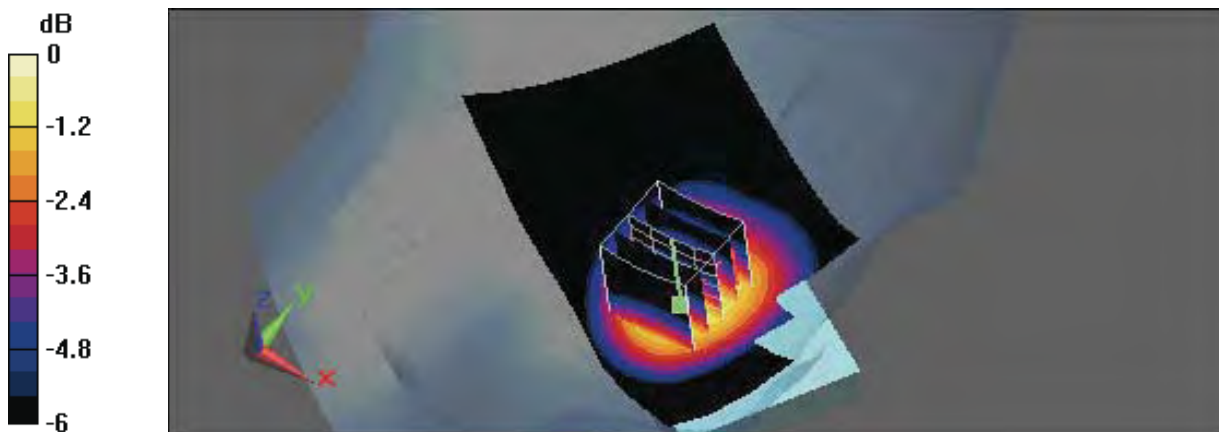
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x101x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 0.111 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 3.2 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.152 W/kg
SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.079 mW/g
Maximum value of SAR (measured) = 0.122 mW/g



0 dB = 0.122mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 3:04:10 PM

LT_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.904$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.061 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

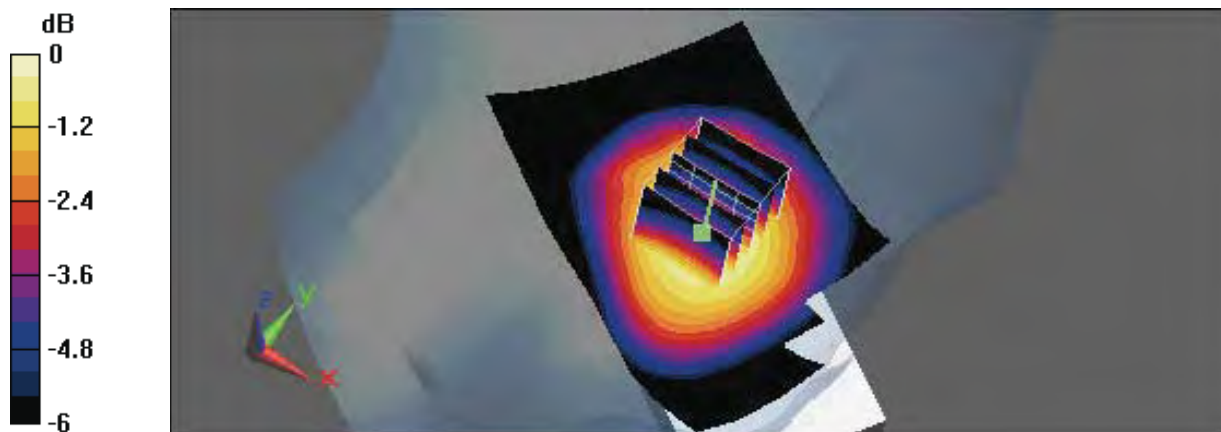
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.01 V/m; Power Drift = 0.157 dB

Peak SAR (extrapolated) = 0.069 W/kg

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.057 mW/g



0 dB = 0.057mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 3:22:56 PM

LT_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 836$ MHz; $\sigma = 0.911$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

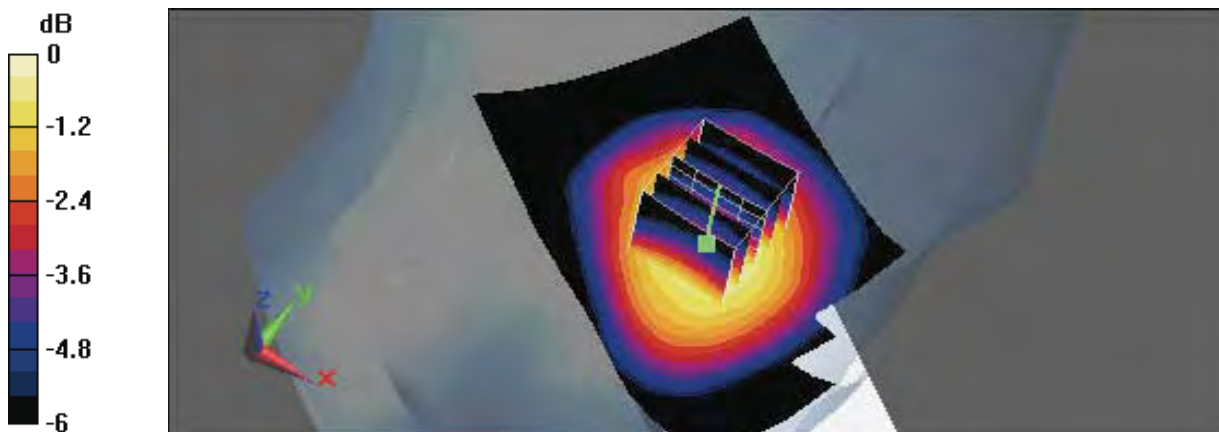
- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.033 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.58 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 0.041 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.034 mW/g



0 dB = 0.034mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 3:41:47 PM

LT_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 0.922$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.72, 7.72, 7.72); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.065 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

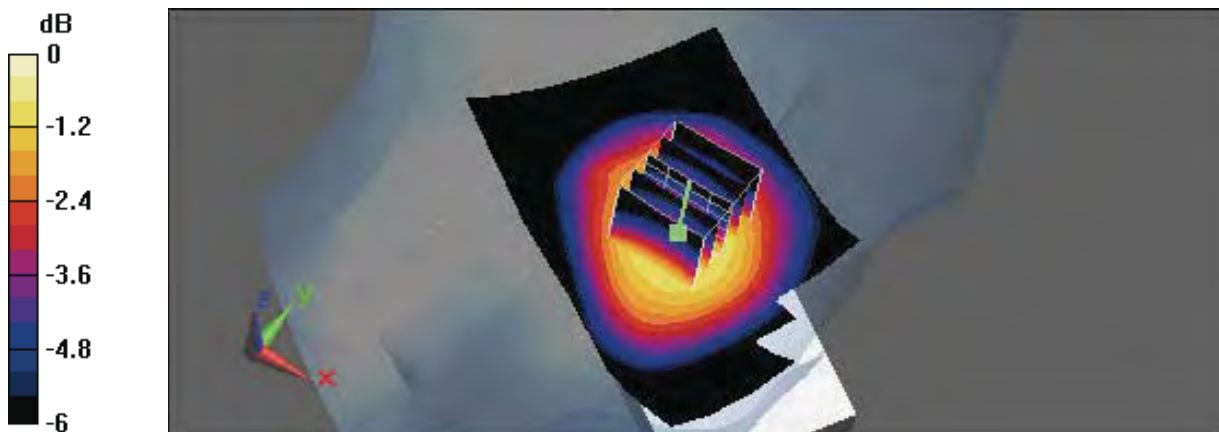
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.19 V/m; Power Drift = -0.152 dB

Peak SAR (extrapolated) = 0.075 W/kg

SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.046 mW/g

Maximum value of SAR (measured) = 0.064 mW/g



0 dB = 0.064mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:06:40 AM

Flat_WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.982$ mho/m; $\epsilon_r = 54.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

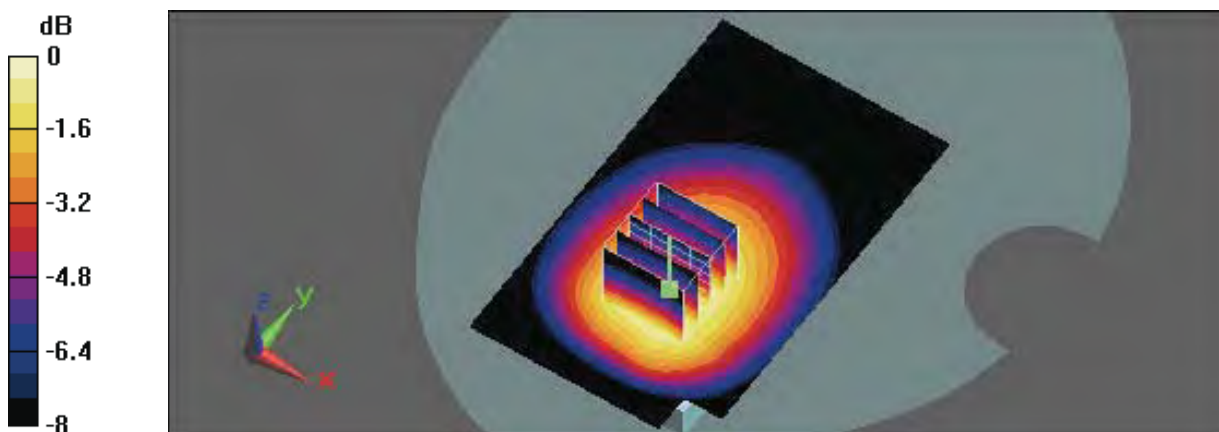
- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.209 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.81 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.211 mW/g



0 dB = 0.211mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:26:41 AM

Flat_WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836 \text{ MHz}$; $\sigma = 0.991 \text{ mho/m}$; $\epsilon_r = 54.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.125 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

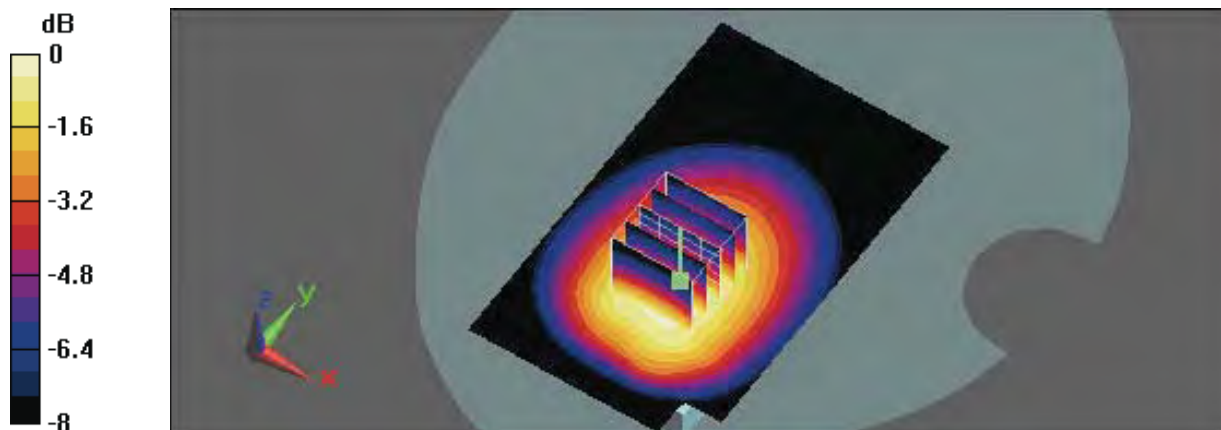
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.64 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.153 W/kg

SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.088 mW/g

Maximum value of SAR (measured) = 0.128 mW/g



0 dB = 0.128mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:45:01 AM

Flat_WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.211 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

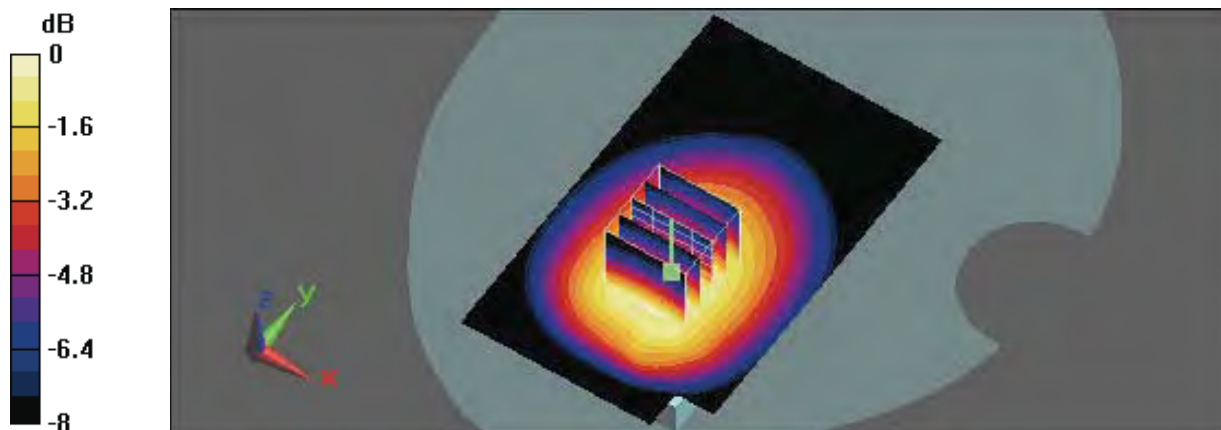
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.21 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.217 mW/g



0 dB = 0.217mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:05:04 PM

Flat_HSDPA WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.982$ mho/m; $\epsilon_r = 54.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

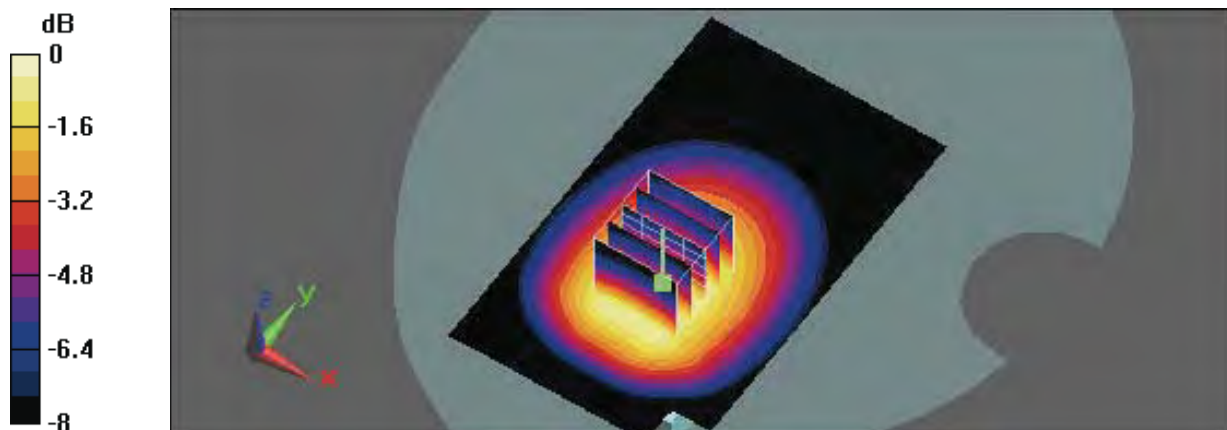
- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.204 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.51 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 0.250 W/kg
SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.141 mW/g
Maximum value of SAR (measured) = 0.205 mW/g



0 dB = 0.205mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:24:44 PM

Flat_HSDPA WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836$ MHz; $\sigma = 0.991$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.138 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

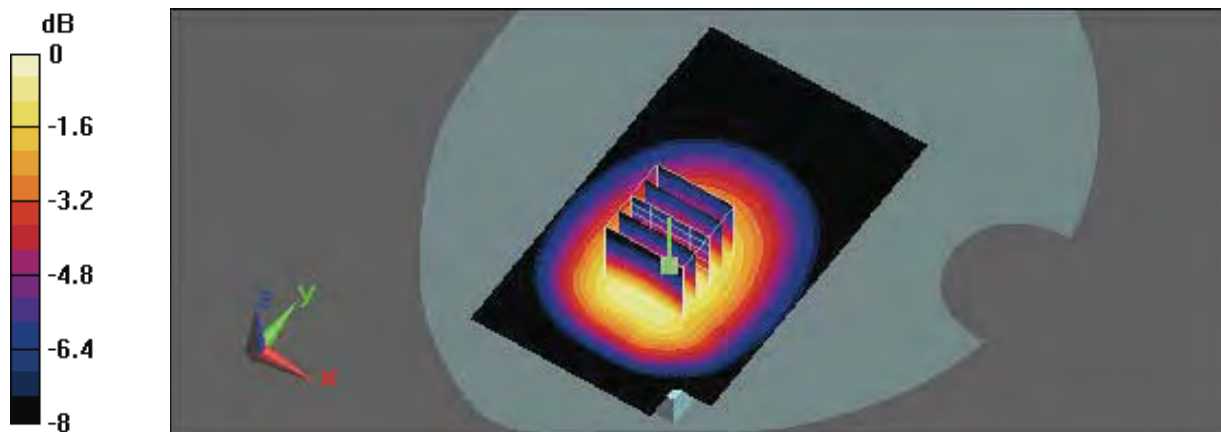
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.52 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.171 W/kg

SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.095 mW/g

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



0 dB = 0.141mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:43:41 PM

Flat_HSDPA WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

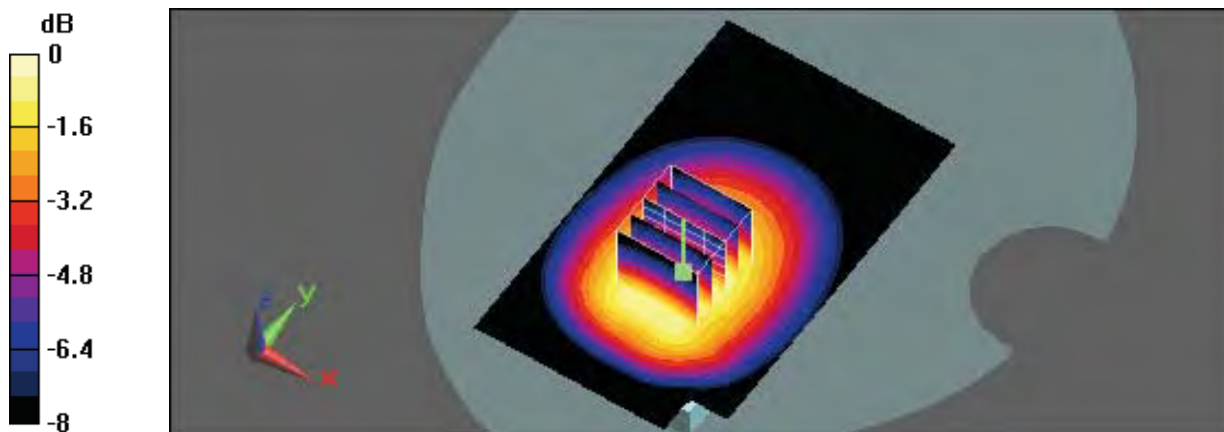
- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.228 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.84 V/m; Power Drift = 0.031 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.215 mW/g; SAR(10 g) = 0.158 mW/g
Maximum value of SAR (measured) = 0.231 mW/g



0 dB = 0.231mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 1:02:31 PM

Flat_HSUPA WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.956$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.291 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

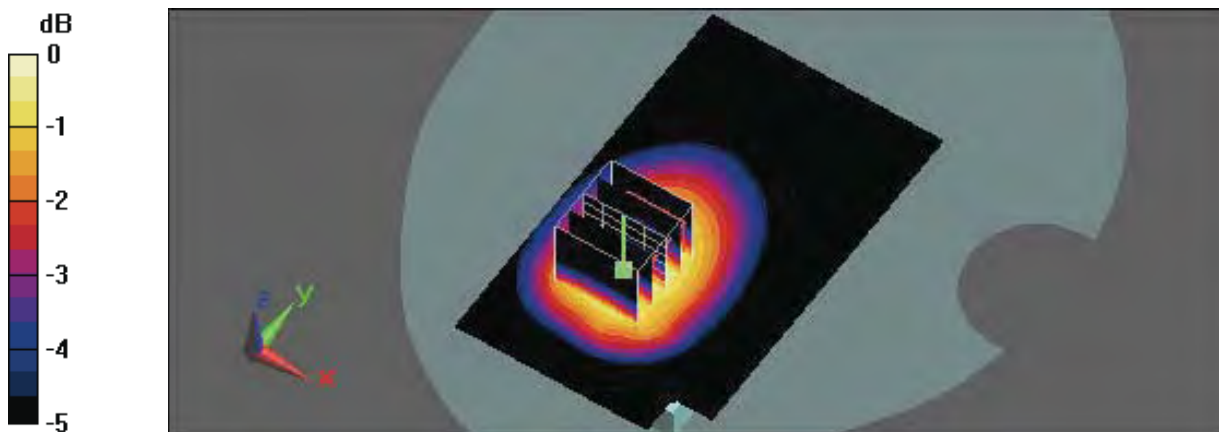
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.49 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.359 W/kg

SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.202 mW/g

Maximum value of SAR (measured) = 0.296 mW/g



0 dB = 0.296mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 1:19:41 PM

Flat_HSUPA WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band V; Frequency: 836 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836 \text{ MHz}$; $\sigma = 0.968 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.124 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

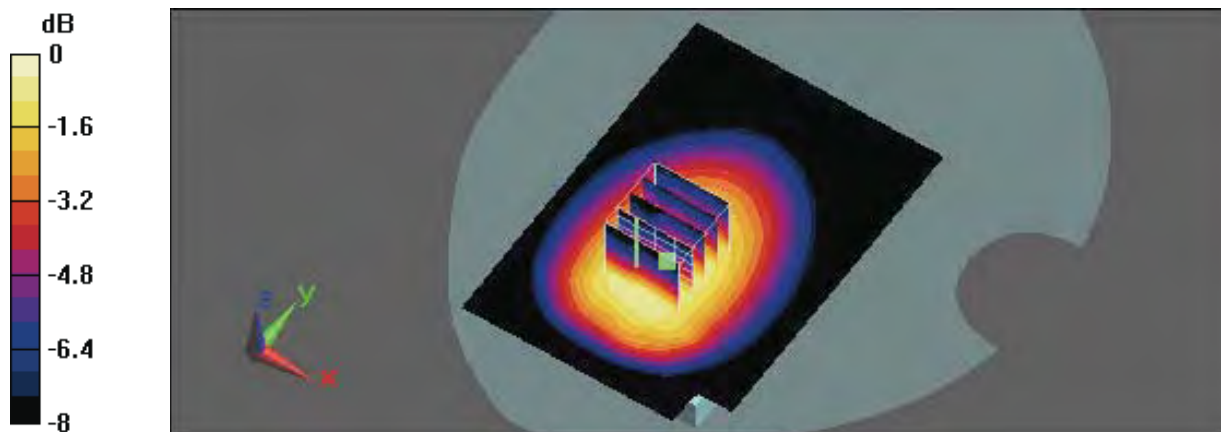
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.21 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.200 W/kg

SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.086 mW/g

Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 1:38:11 PM

Flat_HSUPA WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band V; Frequency: 846.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 846.4$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.161 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

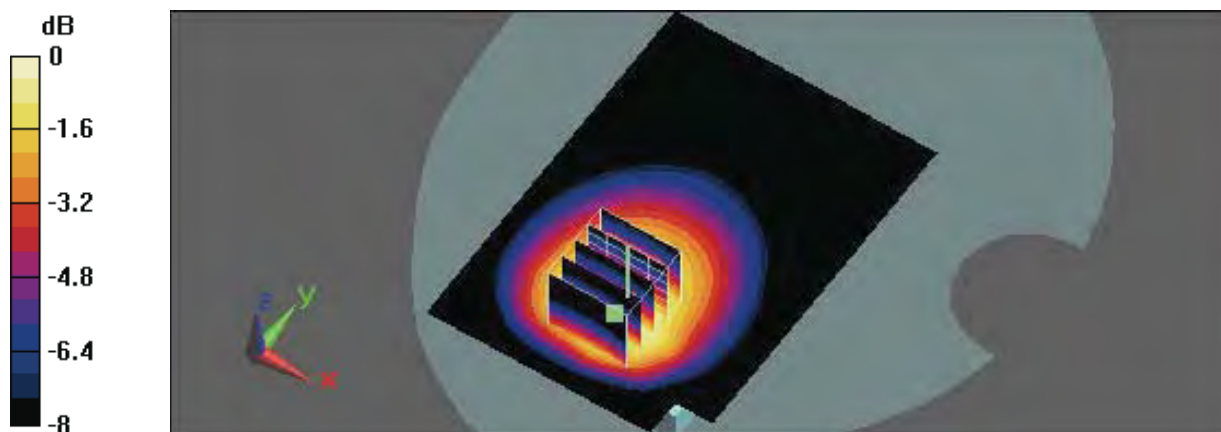
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.21 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 9:55:21 PM

RC_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.639 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

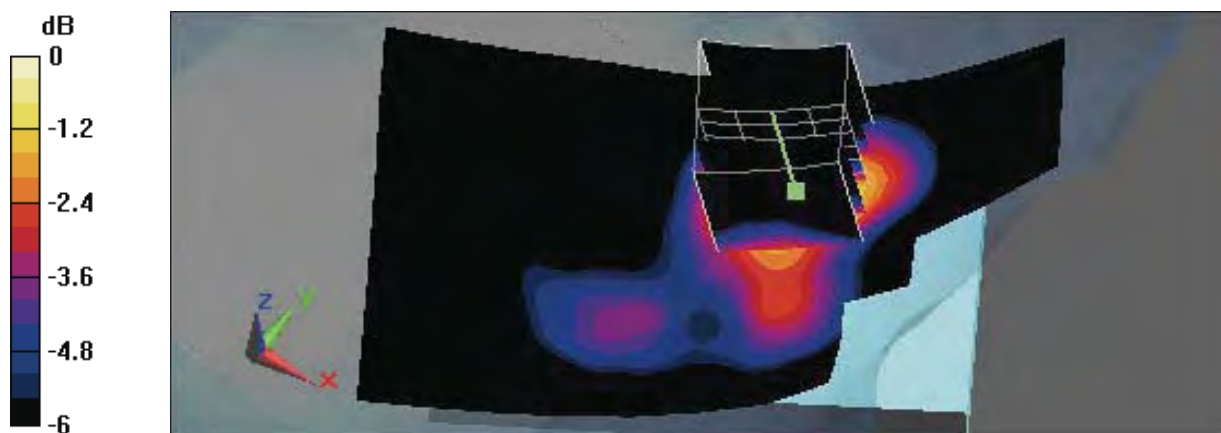
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 0.831 W/kg

SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.383 mW/g

Maximum value of SAR (measured) = 0.661 mW/g



0 dB = 0.661mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:15:33 PM

RC_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.684 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

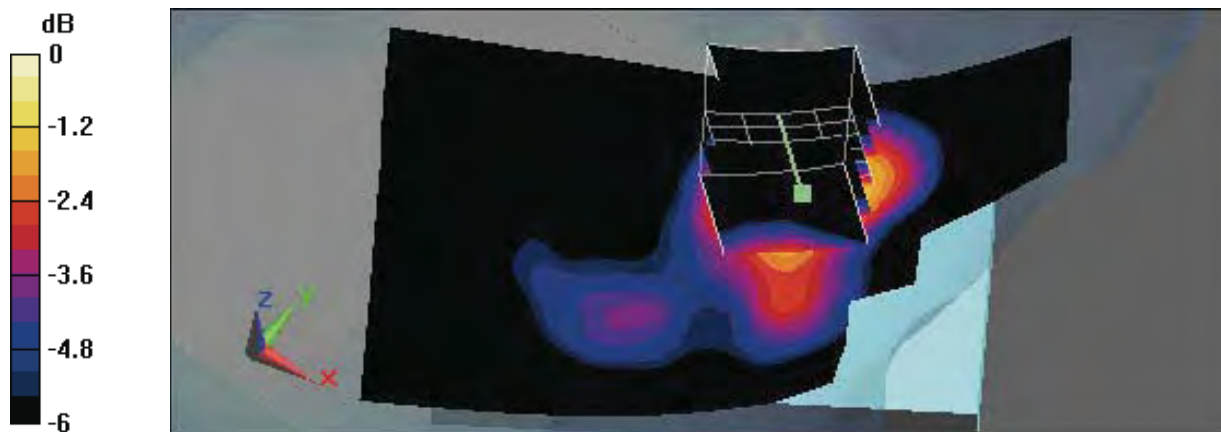
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.6 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 0.884 W/kg

SAR(1 g) = 0.629 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 0.697 mW/g



0 dB = 0.697mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:32:43 PM

RC_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Cheek/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.641 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0:

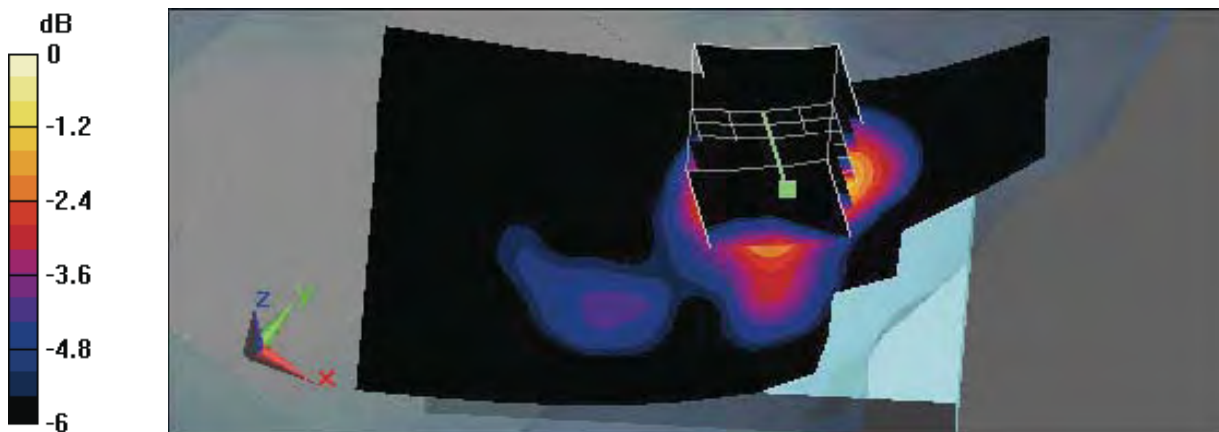
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 0.844 W/kg

SAR(1 g) = 0.591 mW/g; SAR(10 g) = 0.369 mW/g

Maximum value of SAR (measured) = 0.654 mW/g



0 dB = 0.654mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 10:51:55 PM

RT_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.291 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

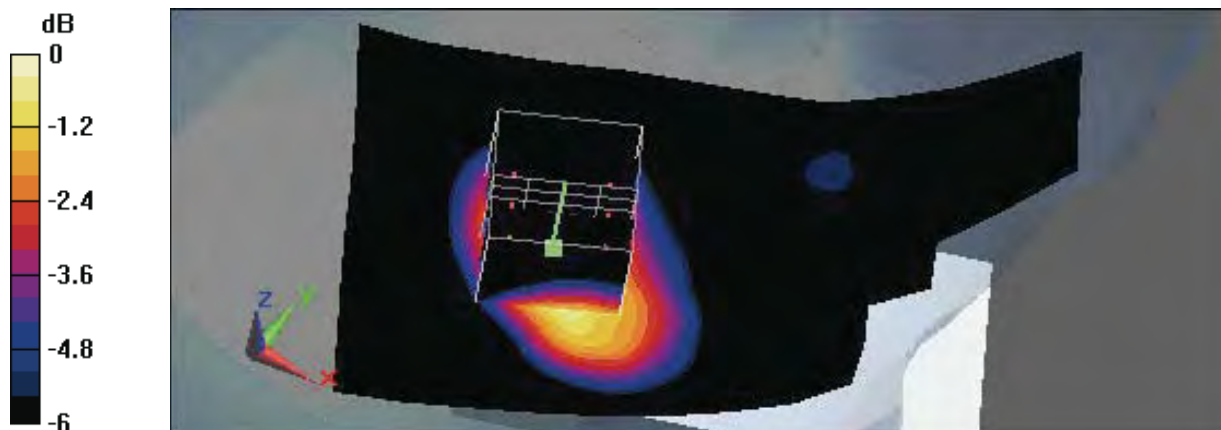
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.168 mW/g

Maximum value of SAR (measured) = 0.288 mW/g



0 dB = 0.288mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:09:45 PM

RT_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.324 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

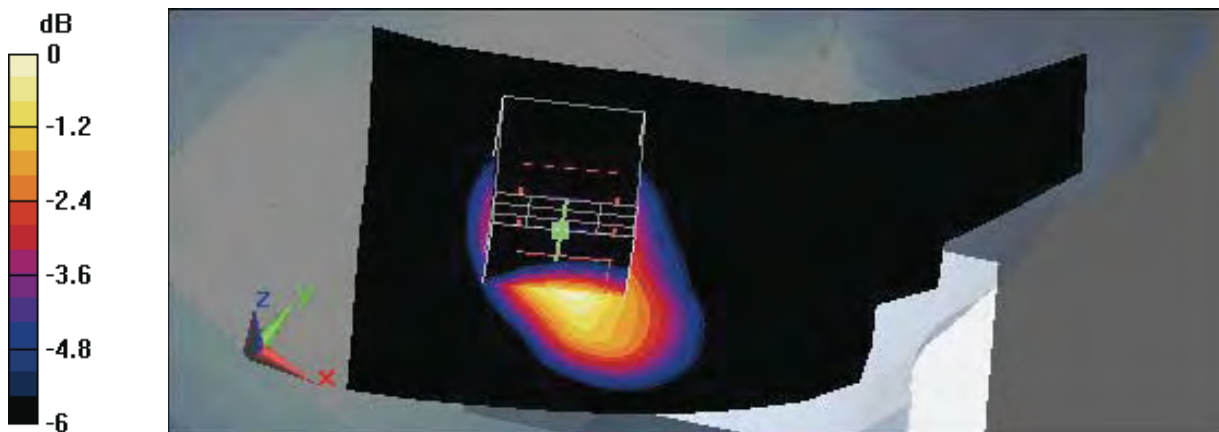
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.1 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.445 W/kg

SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.320 mW/g



0 dB = 0.320mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:27:41 PM

RT_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Right Tilted/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.348 mW/g

Right Tilted/Zoom Scan (5x5x7)/Cube 0:

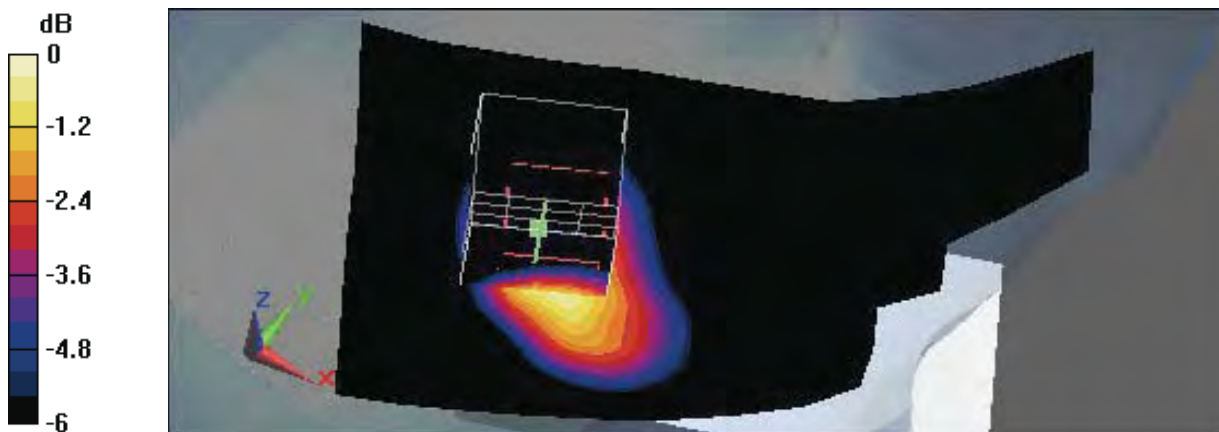
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.194 mW/g

Maximum value of SAR (measured) = 0.340 mW/g



0 dB = 0.340mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/26/2009 11:45:11 PM

LC_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.639 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

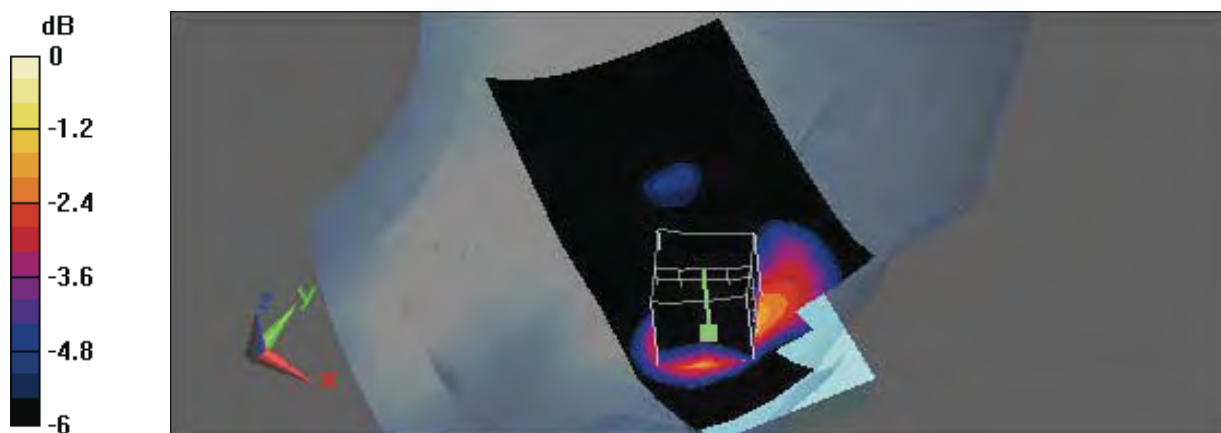
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.869 W/kg

SAR(1 g) = 0.590 mW/g; SAR(10 g) = 0.369 mW/g

Maximum value of SAR (measured) = 0.625 mW/g



0 dB = 0.625mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:04:10 AM

LC_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.654 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

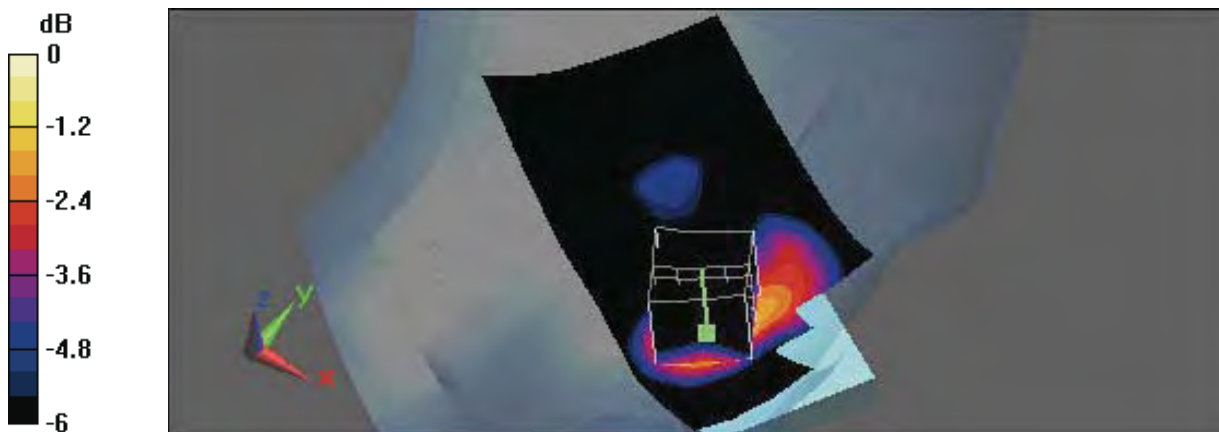
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.879 W/kg

SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.367 mW/g

Maximum value of SAR (measured) = 0.630 mW/g



0 dB = 0.630mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:22:20 AM

LC_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1908$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Cheek/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.545 mW/g

Left Cheek/Zoom Scan (5x5x7)/Cube 0:

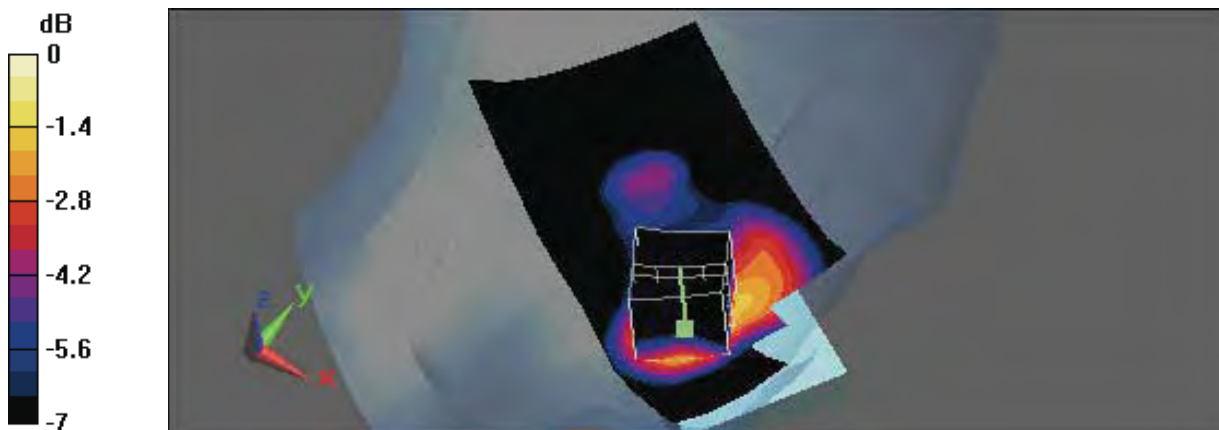
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = 0.0174 dB

Peak SAR (extrapolated) = 0.745 W/kg

SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.524 mW/g



0 dB = 0.524mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:41:30 AM

LT_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

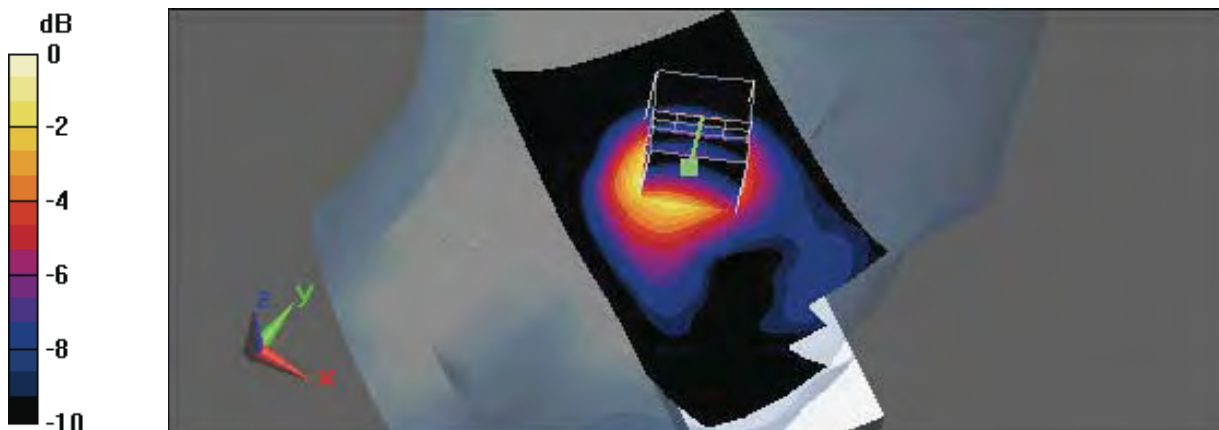
- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.411 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.529 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.384 mW/g



0 dB = 0.384mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 12:58:32 AM

LT_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x111x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.425 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

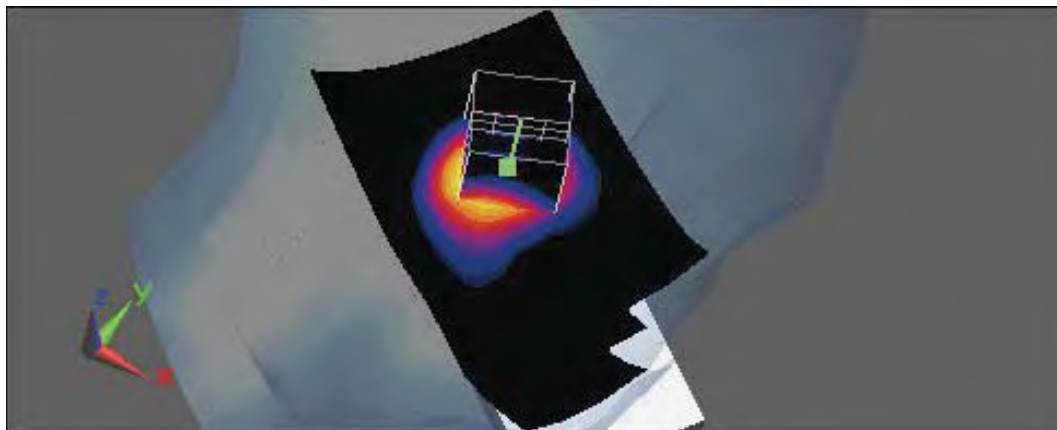
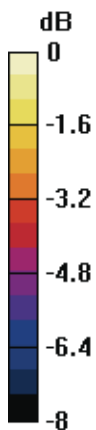
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.7 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.561 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.400 mW/g



0 dB = 0.400mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 1:15:42 AM

LT_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.62, 6.62, 6.62); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Left Tilted/Area Scan (61x111x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.381 mW/g

Left Tilted/Zoom Scan (5x5x7)/Cube 0:

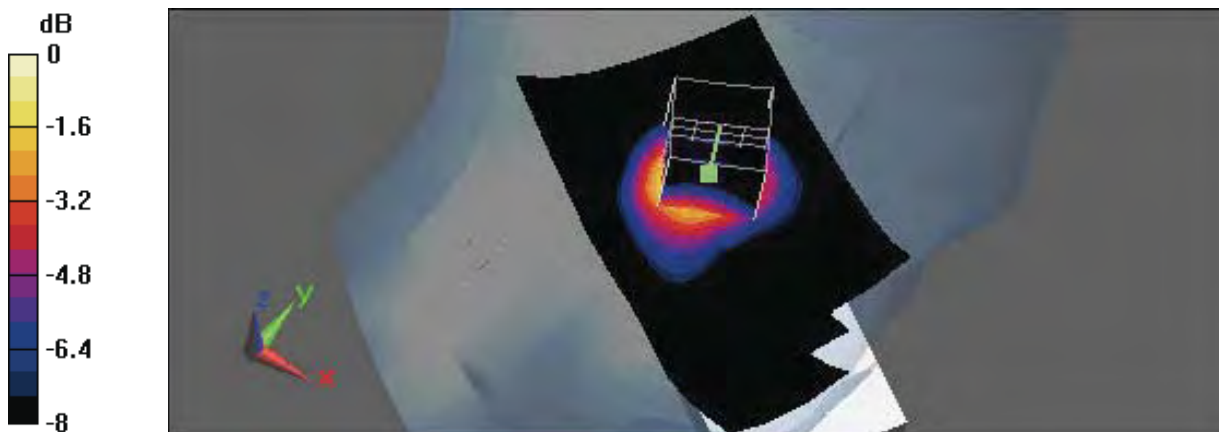
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.1 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.514 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.374 mW/g



0 dB = 0.374mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 6:05:29 PM

Flat_WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$

kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.748 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

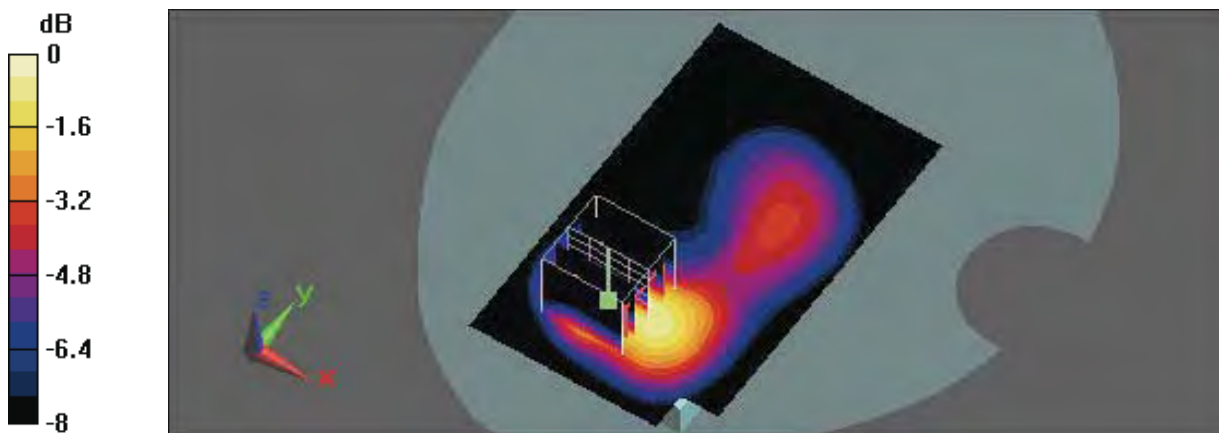
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.641 mW/g; SAR(10 g) = 0.389 mW/g

Maximum value of SAR (measured) = 0.701 mW/g



0 dB = 0.701mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 6:24:01 PM

Flat_WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.879 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

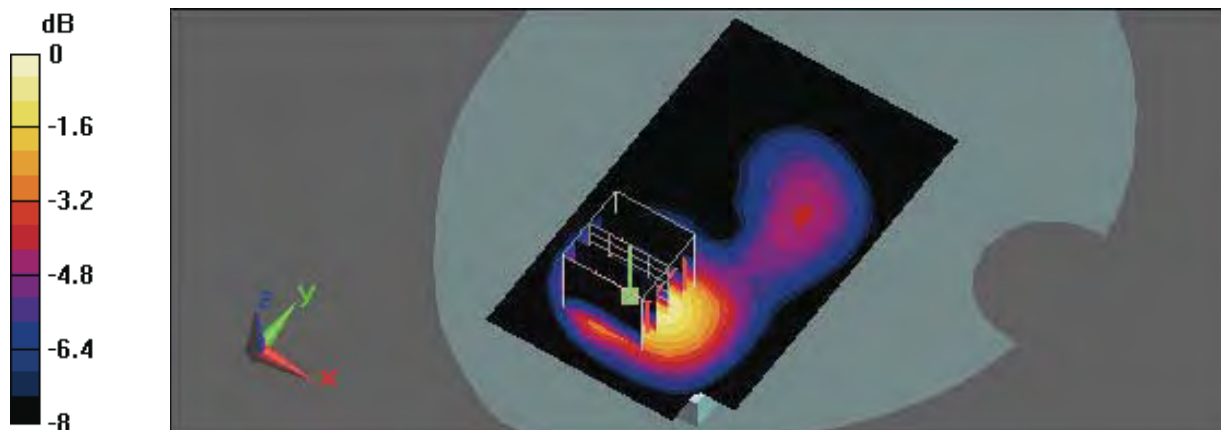
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.742 mW/g; SAR(10 g) = 0.449 mW/g

Maximum value of SAR (measured) = 0.811 mW/g



0 dB = 0.811mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 6:44:21 PM

Flat_WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.791 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

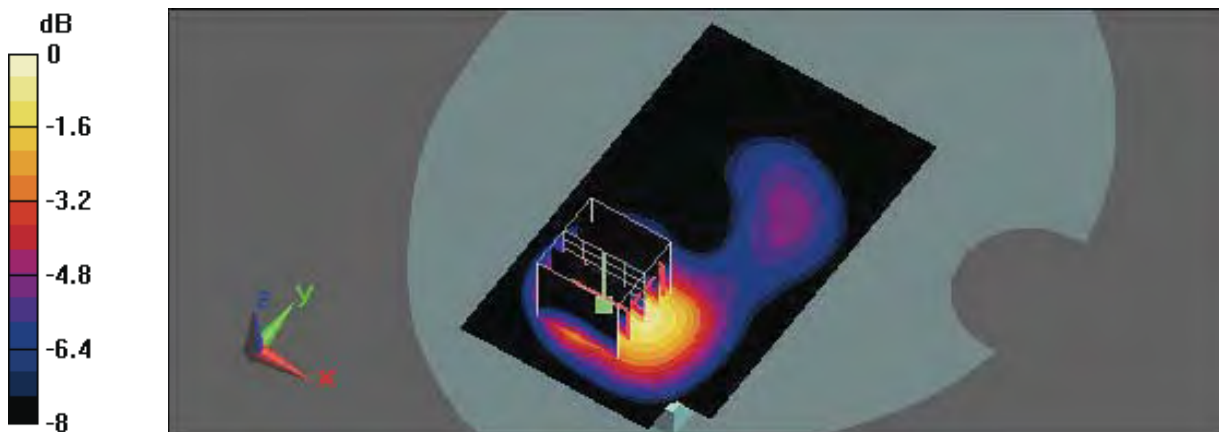
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.2 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.695 mW/g; SAR(10 g) = 0.417 mW/g

Maximum value of SAR (measured) = 0.752 mW/g



0 dB = 0.752mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 7:04:31 PM

Flat_HSDPA WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.642 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

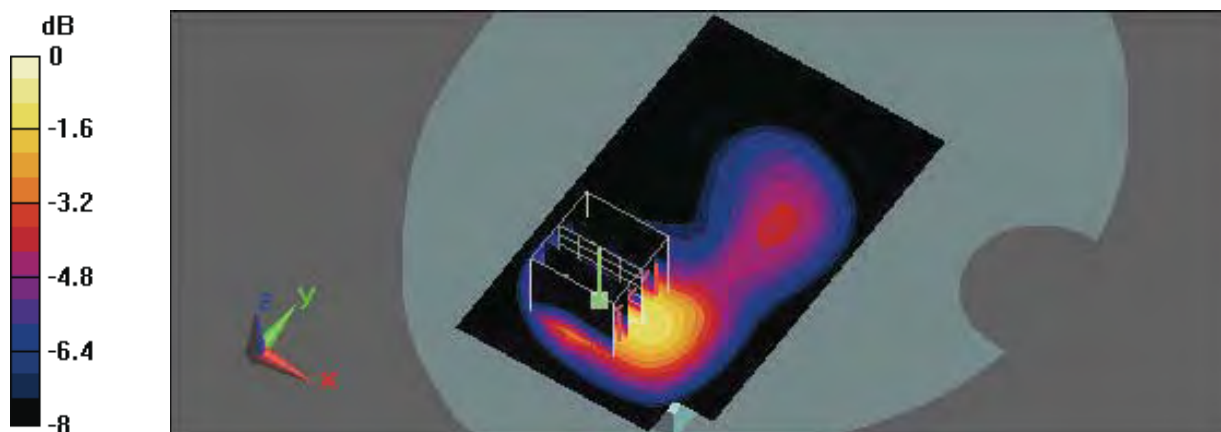
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.932 W/kg

SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.342 mW/g

Maximum value of SAR (measured) = 0.623 mW/g



0 dB = 0.623mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 7:22:11 PM

Flat_HSDPA WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.641 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

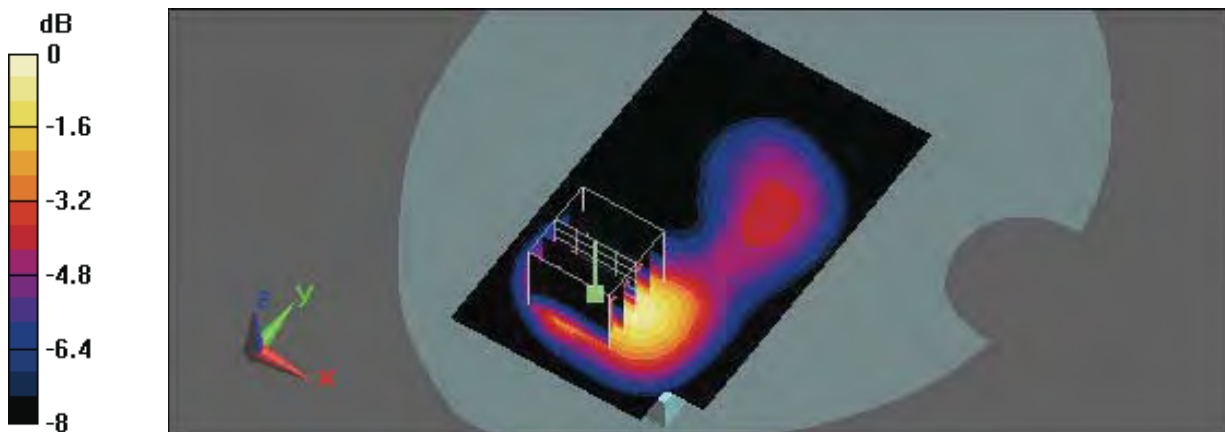
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.8 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 0.911 W/kg

SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.334 mW/g

Maximum value of SAR (measured) = 0.601 mW/g



0 dB = 0.601mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 7:41:58 PM

Flat_HSDPA WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSDPA WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (61x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.625 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

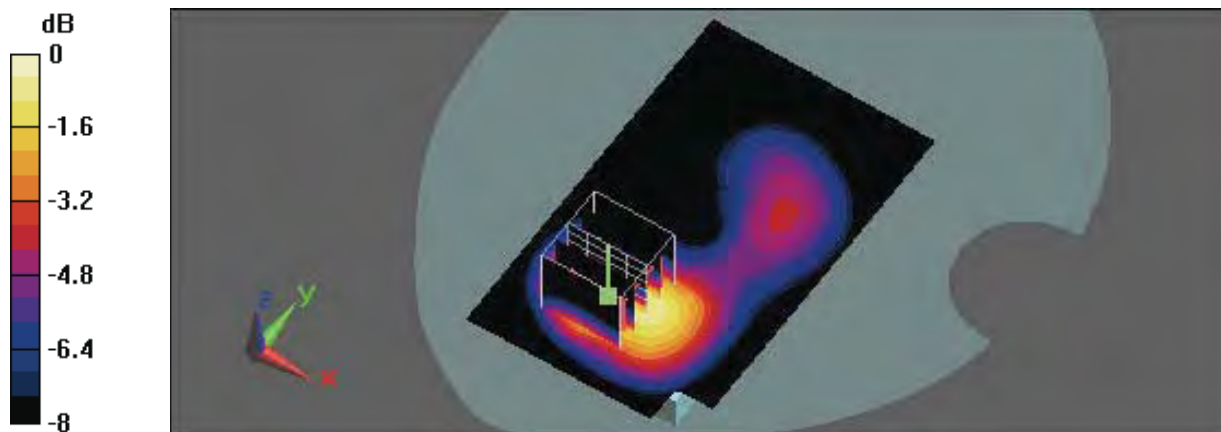
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.9 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 0.911 W/kg

SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.328 mW/g

Maximum value of SAR (measured) = 0.590 mW/g



0 dB = 0.590mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 8:00:38 PM

Flat_HSUPA WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.571 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

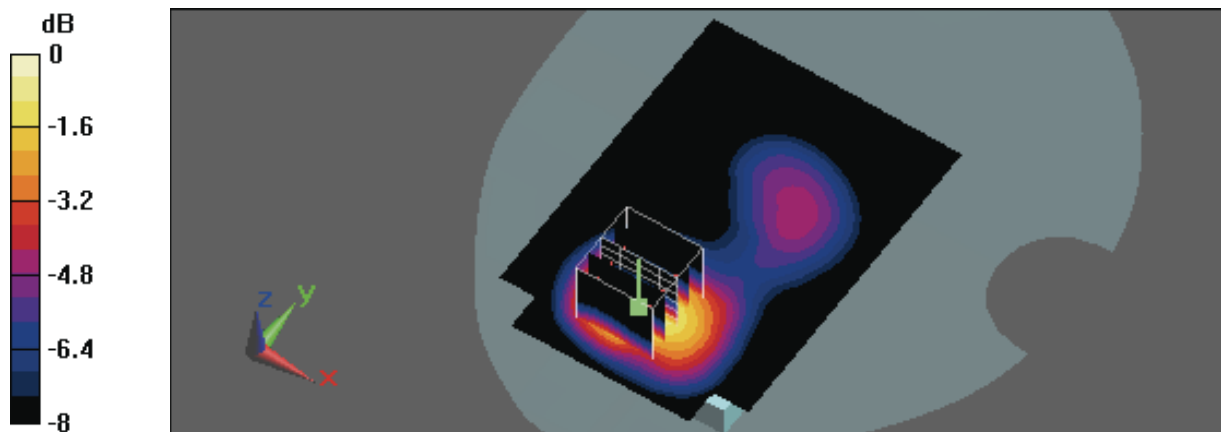
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.89 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.861 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.318 mW/g

Maximum value of SAR (measured) = 0.572 mW/g



0 dB = 0.572mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 8:19:18 PM

Flat_HSUPA WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

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

Flat/Zoom Scan (5x5x7)/Cube 0:

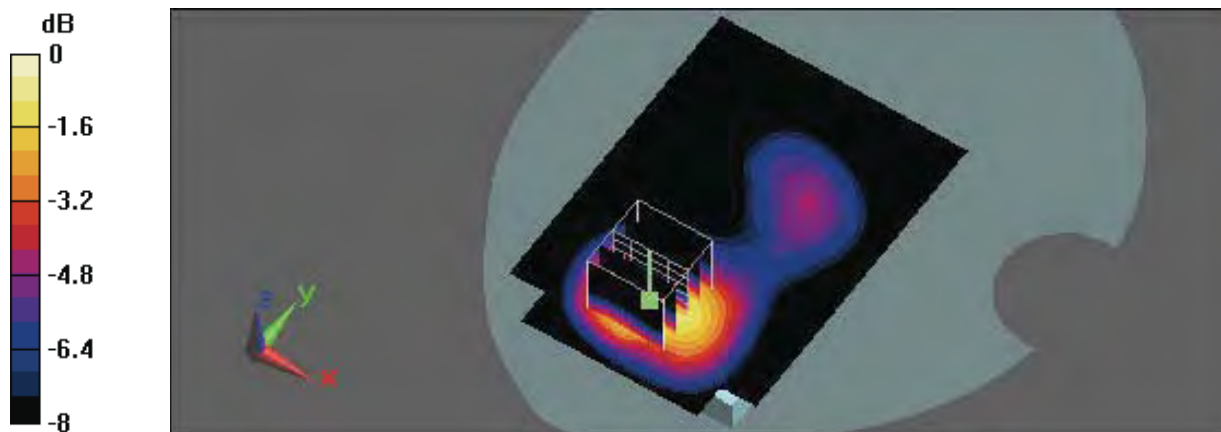
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.1 W/kg

SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.403 mW/g

Maximum value of SAR (measured) = 0.732 mW/g



0 dB = 0.732mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 8:37:22 PM

Flat_HSUPA WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: HSUPA WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(6.31, 6.31, 6.31); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.469 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

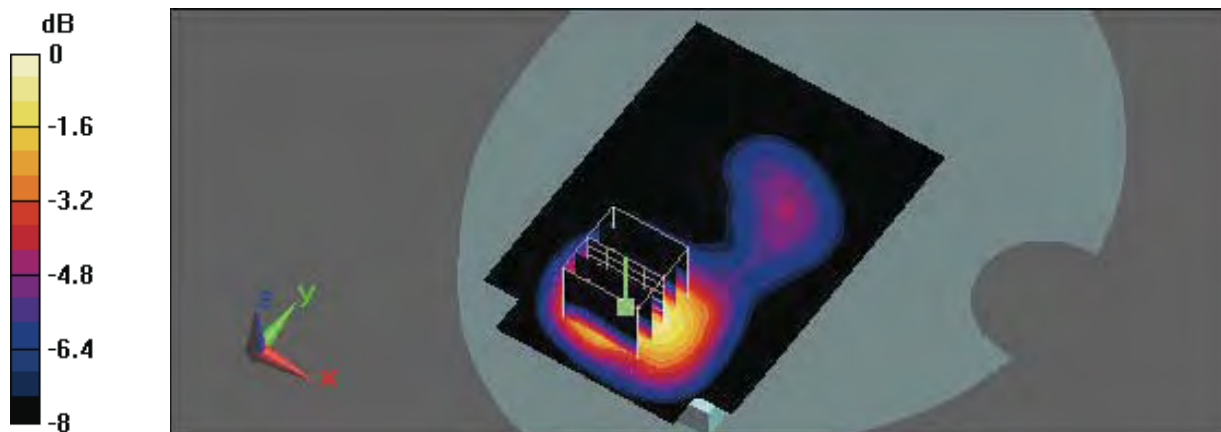
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.78 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 0.698 W/kg

SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.445 mW/g



0 dB = 0.445mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 9:40:45 PM

Flat_802.11b CH1_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.632 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

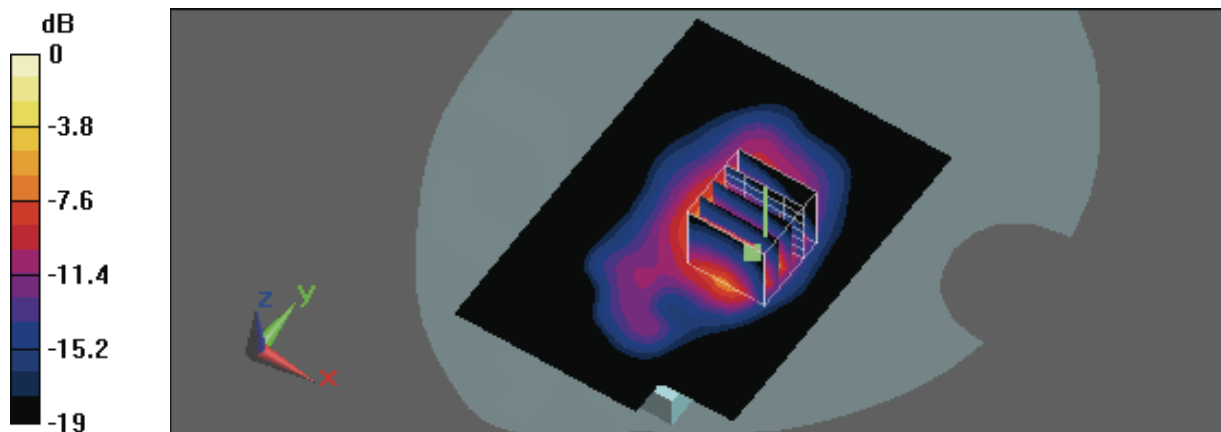
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.54 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.541 mW/g; SAR(10 g) = 0.218 mW/g

Maximum value of SAR (measured) = 0.623 mW/g



0 dB = 0.623mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:05:33 PM

Flat_802.11b CH1_11M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.602 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

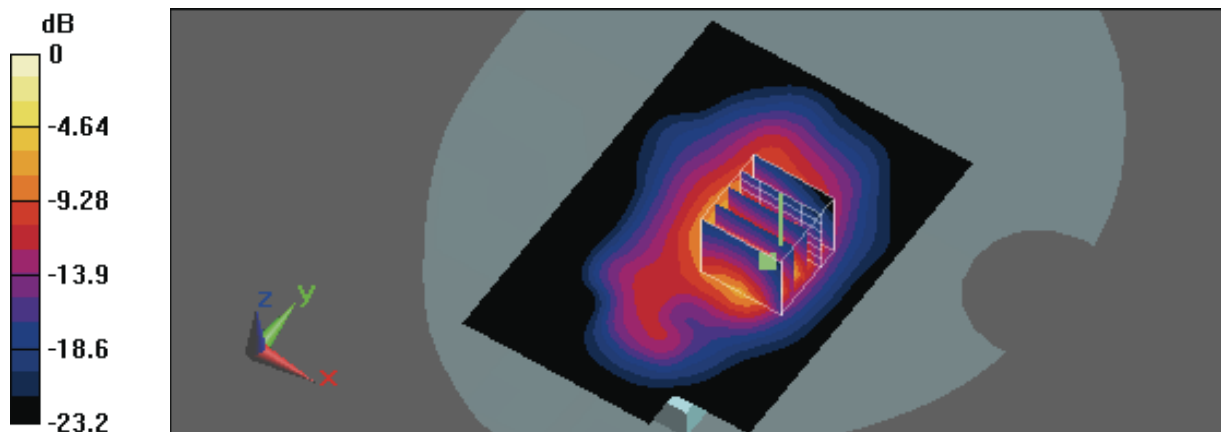
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.67 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.528 mW/g; SAR(10 g) = 0.213 mW/g

Maximum value of SAR (measured) = 0.630 mW/g



0 dB = 0.630mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:24:24 PM

Flat_802.11b CH6_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.569 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

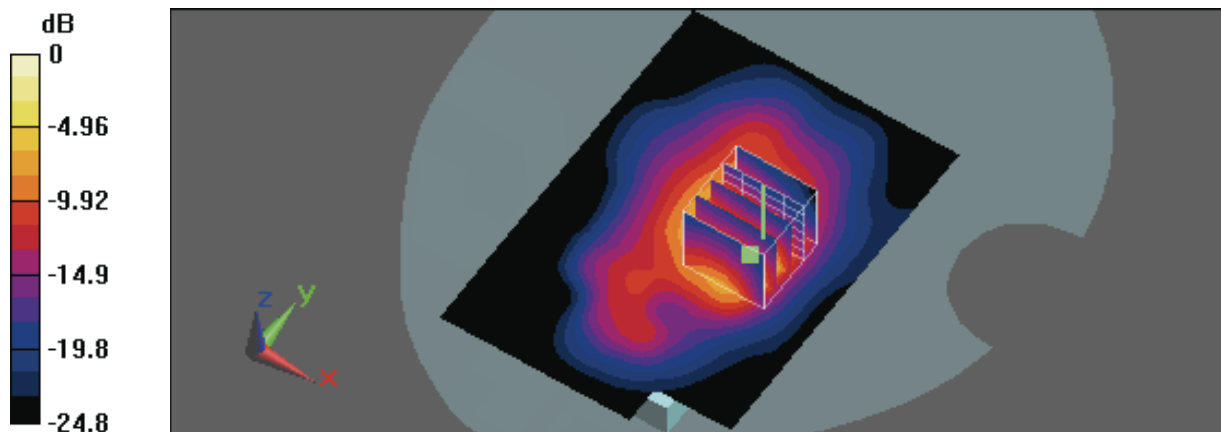
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.58 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.4 W/kg

SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.212 mW/g

Maximum value of SAR (measured) = 0.650 mW/g



0 dB = 0.650mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 10:42:34 PM

Flat_802.11b CH11_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.381 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

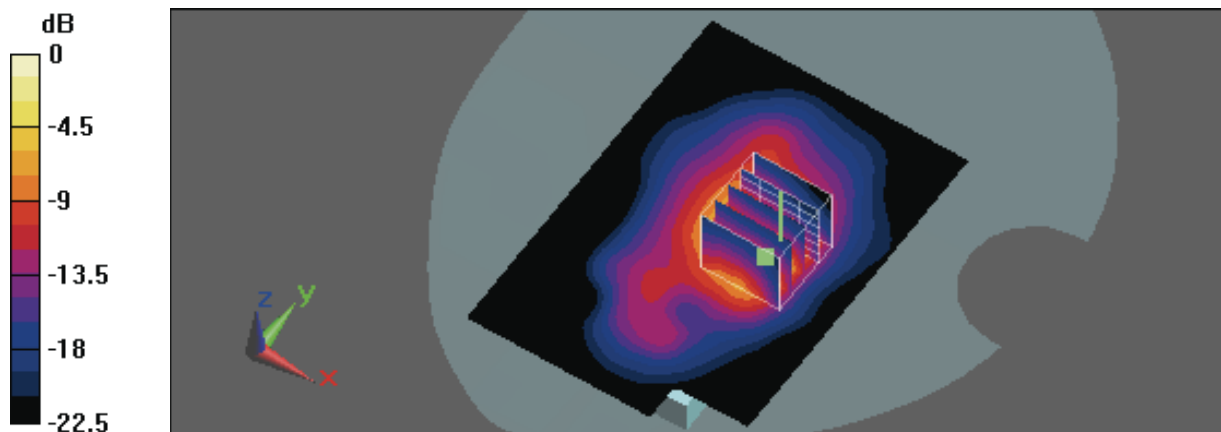
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.68 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.451 mW/g



0 dB = 0.451mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:01:14 PM

Flat_802.11g CH1_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11g; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.522 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

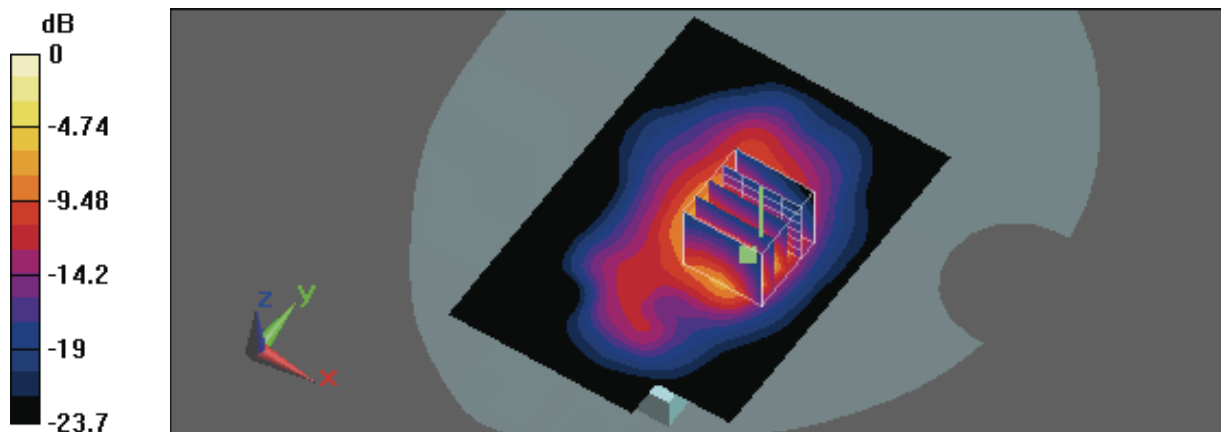
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.43 V/m; Power Drift = -0.0321 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.471 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.580 mW/g



0 dB = 0.580mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:21:54 PM

Flat_802.11g CH1_54M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11g; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.398 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

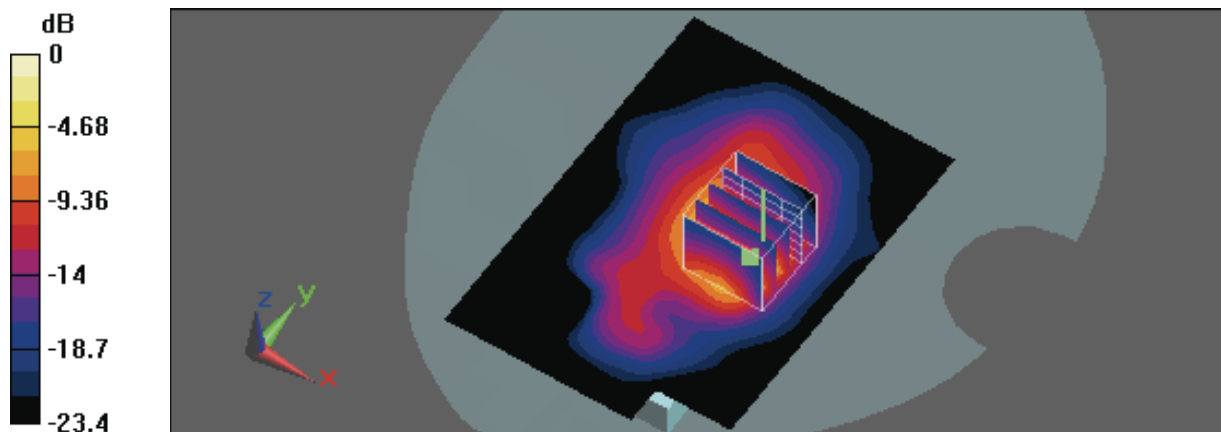
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.78 V/m; Power Drift = 0.0117 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.445 mW/g



0 dB = 0.445mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:41:34 PM

Flat_802.11g CH6_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11g; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.483 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

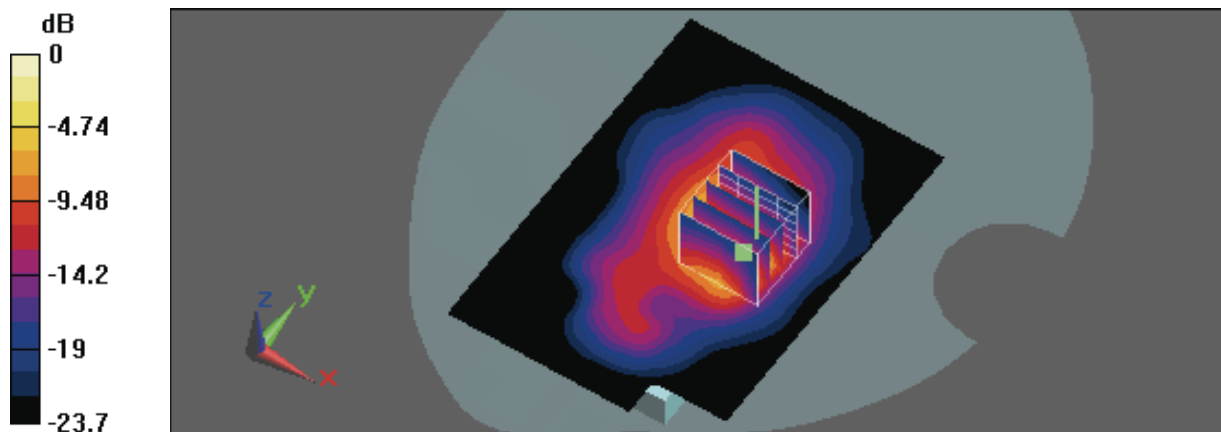
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.14 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.541 mW/g



0 dB = 0.541mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 11:59:11 PM

Flat_802.11g CH11_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: IEEE 802.11g; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Flat/Area Scan (71x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.321 mW/g

Flat/Zoom Scan (5x5x7)/Cube 0:

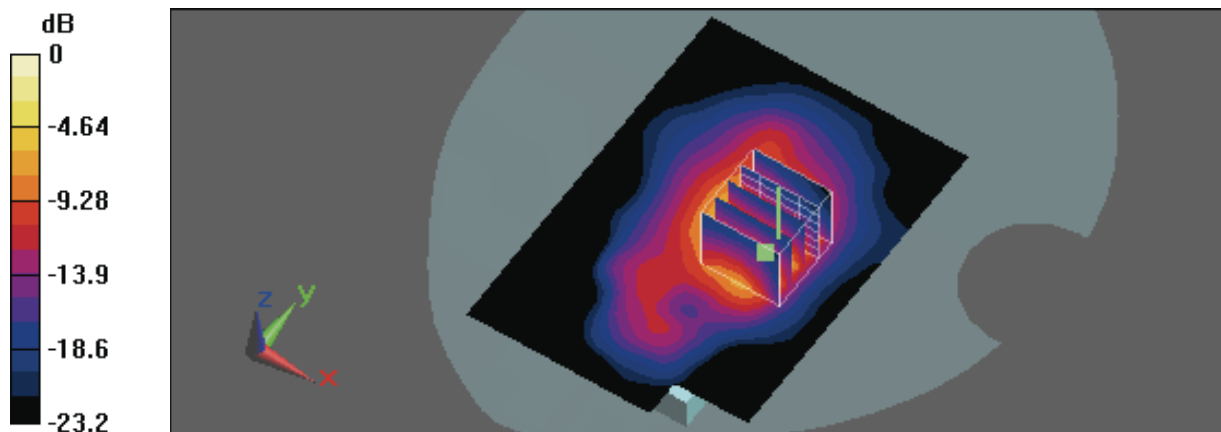
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.21 V/m; Power Drift = 0.0134 dB

Peak SAR (extrapolated) = 0.851 W/kg

SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.368 mW/g



0 dB = 0.368mW/g



Appendix C - Co-Location SAR Measurement Data

See following Attached Pages.



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2/27/2009 3:20:57 PM

Combined

DUT: velocity 111; Type: PDA PHONE; FCC ID: DGIBC8121AABAB0

Communication System: GSM 850 GPRS(3Down, 2Up)Communication System: IEEE 802.11b; Frequency: 824.2 MHzFrequency: 2412 MHz;Duty Cycle: 1:4.2Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³ Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3554; ConvF(7.77, 7.77, 7.77)ConvF(5.93, 5.93, 5.93); Calibrated: 9/19/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 11/11/2008
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.2 Build 87

Multi Band Result:

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.761 mW/g

Maximum value of SAR (measured) = 1.04 mW/g

Flat/Volume Scan (8x10x3):

Measurement grid: dx=15mm, dy=15mm, dz=15mm
Reference Value = 13.1 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.710 mW/g

Total Absorbed Power = 0.0870615 W

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

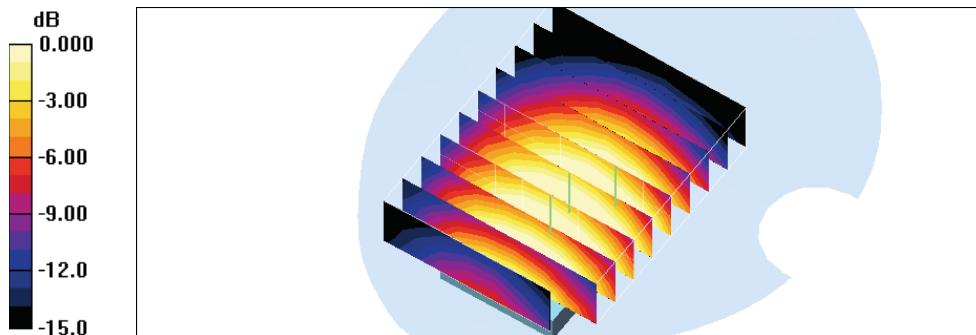
Flat/Volume Scan (8x10x3):

Measurement grid: dx=15mm, dy=15mm, dz=15mm
Reference Value = 3.65 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.728 W/kg

SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.164 mW/g

Total Absorbed Power = 0.00674363 W

Maximum value of SAR (measured) = 0.405 mW/g



0 dB = 0.405mW/g



Appendix D - 3G SAR Measurement Procedures

See following Attached Pages.



Appendix E - Multiband Evaluation

See following Attached Pages.



Appendix F - Calibration

All of the instruments Calibration information are listed below.

- Dipole _ D835V2 SN:4d063 Calibration No.D835V2-4d063_Sep08
- Dipole _ D1900V2 SN:5d018 Calibration No.D1900V-5d018_Jun06
- Dipole _ D2450V2 SN: 735 Calibration No.D2450V735_May08
- Probe _ EX3DV4 SN:3554 Calibration No.EX3-3554_Sep09
- DAE _ DAE4 SN:779 Calibration No.DAE4-779_Nov08