



A Test Lab Techno Corp.

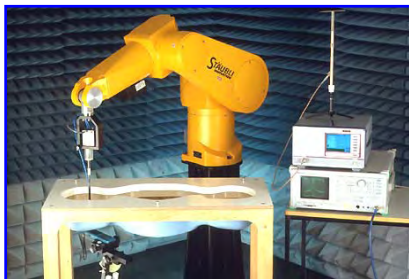
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SAR EVALUATION REPORT



Test Report No.	:	0811FS12
Applicant	:	Inventec Corporation
FCC ID	:	DGIBC8121AABAB0
Trade Name	:	velocitymobile
Model Number	:	velocity 111
Product Type	:	PDA PHONE
Dates of Test	:	Jul. 17 ~ Oct. 07, 2008 (Original) Nov. 05 ~ Nov. 07, 2008 (Class II Change)
Test Environment	:	Ambient Temperature : $22 \pm 2^{\circ} \text{C}$ Relative Humidity : 40 - 70 %
Test Specification	:	Standard C95.1-1999 IEEE Std. 1528-2003 FCC KDB 941225 D01 SAR for 3G devices v02
Max. SAR	:	0.633 W/kg Head SAR 1.050 W/kg Body SAR
Test Lab	:	Chang-an Lab



1. The test operations have to be performed with cautious behavior, the test results are as attached.
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1. Description of Equipment Under Test (EUT)

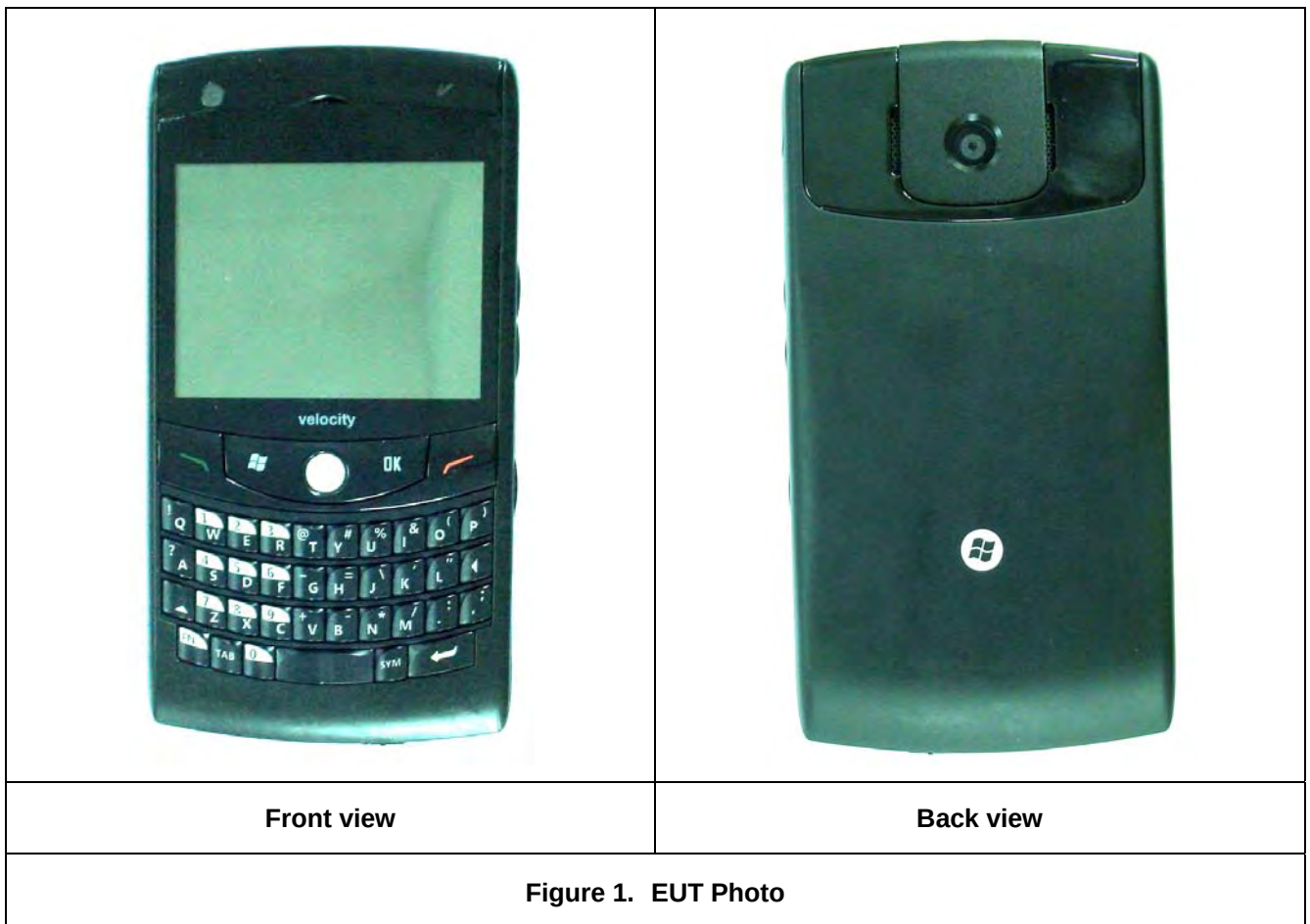
Applicant :

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	:	1.738 W (32.40 dBm) GSM/GPRS/EGPRS 850 0.830 W (29.19 dBm) PCS/GPRS/EGPRS 1900 0.274 W (24.37 dBm) WCDMA/HSDPA/HSUPA Band V 0.231 W (23.63 dBm) WCDMA/HSDPA/HSUPA Band II 0.076 W (18.83 dBm) Wi-Fi 802.11b 0.071 W (18.49 dBm) Wi-Fi 802.11g
Max. SAR Measurement	:	0.633 W/kg Head SAR 1.050 W/kg Body 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 C95.1-1999 and had been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003.



2. Other Accessories

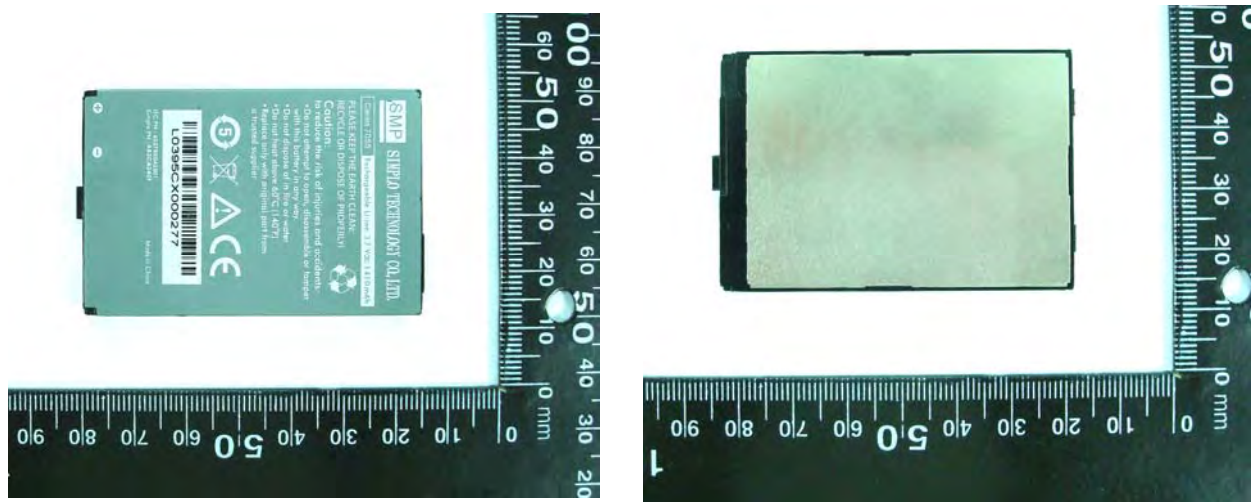


Figure 2. Li-ion Battery (3.7V 1410mAh)

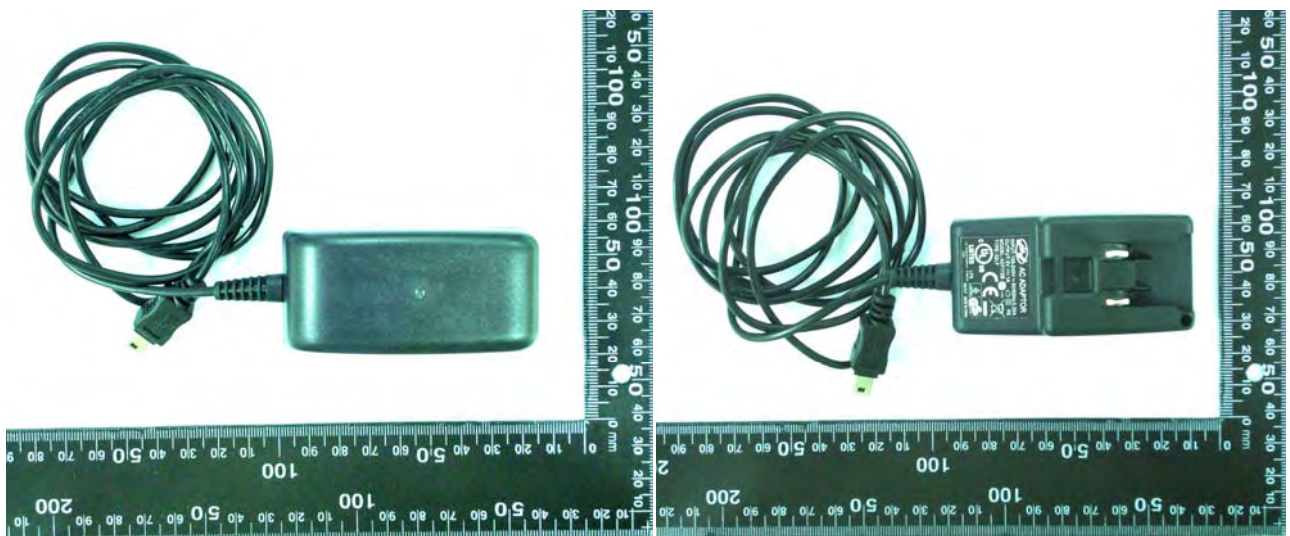


Figure 3. Adapter

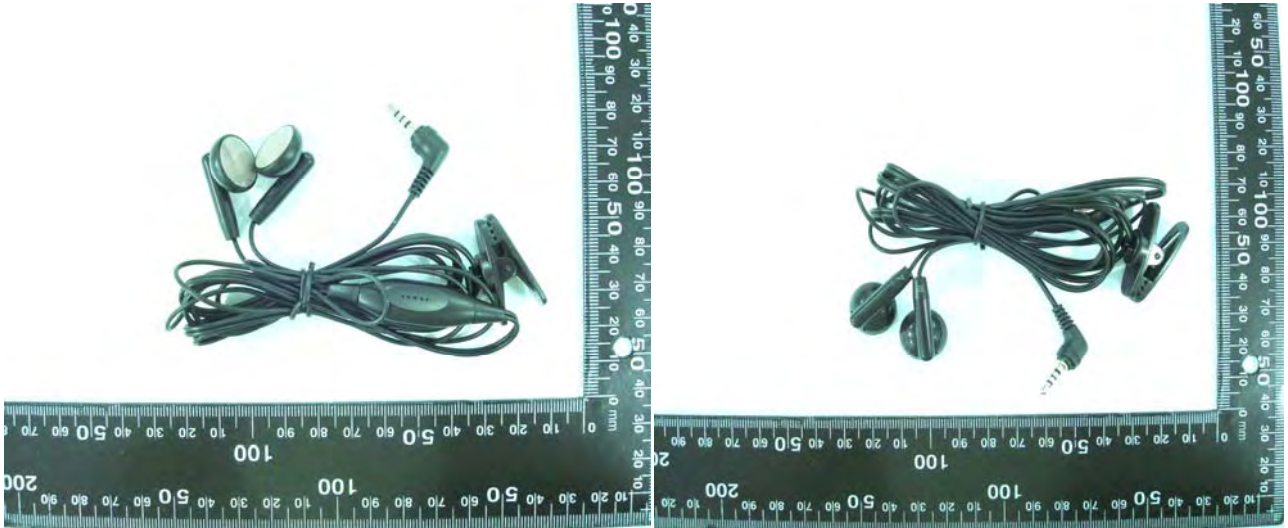


Figure 4. Headset



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 DASY4 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 $\pm 0.025\text{mm}$. 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, teaches pendant (Joystick) and remote control, and is used to drive the robot motors. The Measurement Server is based on a PC/104 CPU board with a 166MHz low-power Pentium, 32MB chipdisk and 64MB RAM. The necessary circuits for communication with either the DAE3 electronic box as well as the 16-bit AD-converter system for optical detection and digital I/O interface are contained on the DASY4 I/O-board, which is directly connected to the PC/104 bus of the CPU board. The PC consists of the Intel Pentium 4 2.4GHz computer with Windows XP system and SAR Measurement Software DASY4, 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.

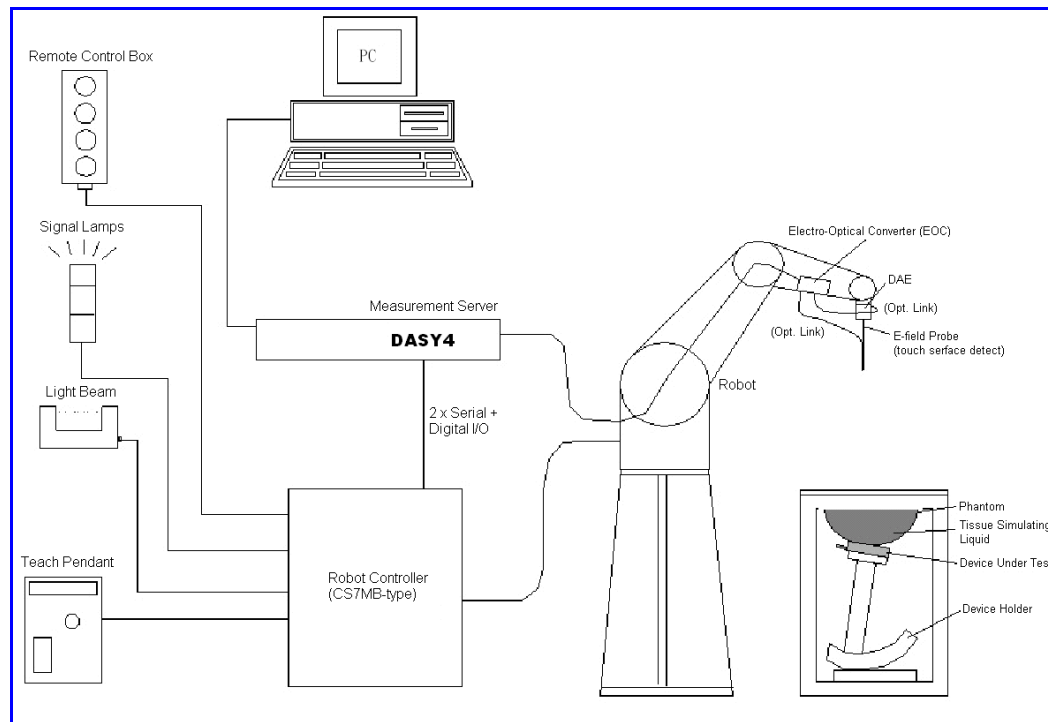


Figure 6. SAR Lab Test Measurement Setup

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 DASY4 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 DASY4 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	Symmetrical design with triangular core Built-in optical fiber for surface detection System Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.q., glycol)
Calibration	In air from 10 MHz to 6 GHz In brain and muscle simulating tissue at frequencies of 900MHz, 1800MHz, 1950MHz, 5200MHz and 5500MHz and 5800MHz (accuracy $\pm 8\%$) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.3 dB in brain tissue (rotation around probe axis) ± 0.5 dB in brain tissue (rotation normal probe axis)
Dynamic Range	10 μ W/g to > 100mW/g; Linearity: ± 0.2 dB
Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surface(EX3DV3 only)
Dimensions	Overall length: 330mm Tip length: 20mm Body diameter: 12mm Tip diameter: 2.5mm Distance from probe tip to dipole centers: 1.0mm
Application	General dosimetry up to 6GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms



Figure 7. E-field Probe



**Figure 8.
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 Pentium 4
Clock Speed : 2.4GHz
Operating System : Windows XP Professional

Data Converter

Features : Signal Amplifier, multiplexer, A/D converter, and control logic
Software : DASY4 v4.7 (Build 71) & SEMCAD X Version 1.8 Build 184
Connecting Lines : Optical downlink for data and status info
Optical uplink for commands and clock

6.3 Robot

Positioner : Stäubli Unimation Corp. Robot Model: RX90L
Repeatability : ± 0.025 mm
No. of Axis : 6

6.4 Measurement Server

Processor : PC/104 with a 166MHz low-power Pentium
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 9. 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, CENELEC 50361 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.

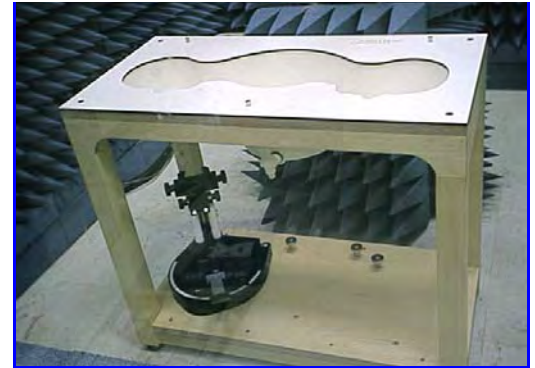


Figure 10. SAM Twin Phantom

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 DASY4 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 .DA4. 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 DASY4 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 DASY 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/cm³

***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/cm²
 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-Filed Probe	ET3DV6	1530	Sep. 26, 2007	Sep. 26, 2008
SPEAG	900MHz System Validation Kit	D900V2	172	Jan. 28, 2008	Jan. 28, 2009
SPEAG	1950MHz System Validation Kit	D1950V2	1117	Dec. 20, 2007	Dec. 20, 2008
SPEAG	2450MHz System Validation Kit	D2450V2	712	Jan. 30, 2008	Jan. 30, 2009
SPEAG	Data Acquisition Electronics	DAE3	393	Aug. 25, 2008	Aug. 25, 2009
SPEAG	Data Acquisition Electronics	DAE4	541	Nov. 15, 2007	Nov. 15, 2008
SPEAG	Device Holder	N/A	N/A	NCR	NCR
SPEAG	Phantom	SAM V4.0	1009	NCR	NCR
SPEAG	Robot	Staubli RX90L	F00/589B1/A/01	NCR	NCR
SPEAG	Software	DASY4 V4.7 Build 71	N/A	NCR	NCR
SPEAG	Software	SEMCAD X V1.8 Build 184	N/A	NCR	NCR
SPEAG	Measurement Server	SE UMS 001 BA	1021	NCR	NCR
R&S	Wireless Communication Test Set	CMU200	112387	Oct. 24, 2007	Oct. 24, 2008
Agilent	Wireless Communication Test Set	E5515C	GB47020167	Apr. 17, 2008	Apr. 17, 2009
Agilent	ENA Series Network Analyzer	E5071B	MY42402996	Oct. 23, 2007	Oct. 23, 2008
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	Head		Body	
(MHz)	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 ρ = 1000 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
900MHz Head	900MHz	22.0	ϵ_r	41.5	40.1	-3.37	± 5	Jul. 16, 2008
			σ	0.97	0.994	2.47	± 5	
900MHz Head	900MHz	22.0	ϵ_r	41.5	40.1	-3.37	± 5	Jul. 17, 2008
			σ	0.97	0.994	2.47	± 5	
900MHz Body	900MHz	22.0	ϵ_r	55.5	54.0	-2.70	± 5	Jul. 18, 2008
			σ	1.05	1.05	0.00	± 5	
900MHz Body	900MHz	22.0	ϵ_r	55.5	53.9	-2.88	± 5	Sep. 05, 2008
			σ	1.05	1.04	-0.95	± 5	
900MHz Body	900MHz	22.0	ϵ_r	55.5	54.0	-2.70	± 5	Nov. 05, 2008
			σ	1.05	1.05	0.00	± 5	
1950MHz Head	1950MHz	22.0	ϵ_r	40.0	39.6	-1.00	± 5	Jul. 17, 2008
			σ	1.40	1.45	3.57	± 5	
1950MHz Head	1950MHz	22.0	ϵ_r	40.0	39.6	-1.00	± 5	Nov. 07, 2008
			σ	1.40	1.42	0.01	± 5	
1950MHz Body	1950MHz	22.0	ϵ_r	53.3	51.6	-3.19	± 5	Jul. 21, 2008
			σ	1.52	1.56	2.63	± 5	
1950MHz Body	1950MHz	22.0	ϵ_r	53.3	51.6	-3.19	± 5	Sep. 04, 2008
			σ	1.52	1.56	2.63	± 5	
2450MHz Head	2450MHz	22.0	ϵ_r	39.2	38.7	-0.01	± 5	Nov. 07, 2008
			σ	18.0	17.3	-0.04	± 5	
2450MHz Body	2450MHz	22.0	ϵ_r	52.7	52.2	-0.95	± 5	Aug. 19, 2008
			σ	1.95	1.97	1.03	± 5	
2450MHz Body	2450MHz	22.0	ϵ_r	52.7	51.7	-0.02	± 5	Nov. 05, 2008
			σ	1.95	1.95	0.00	± 5	

Measured Tissue dielectric parameters for head and body phantoms



Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
835MHz Head	800MHz	22.0	ϵ_r	41.5	41.55	0.12%	± 5	Jul. 16, 2008
			σ	0.90	0.89	-1.11%	± 5	
835MHz Head	800MHz	22.0	ϵ_r	41.5	41.55	0.12%	± 5	Jul. 17, 2008
			σ	0.90	0.89	-1.11%	± 5	
835MHz Body	800MHz	22.0	ϵ_r	55.2	55.09	-0.20%	± 5	Jul. 18, 2008
			σ	0.97	0.96	-1.03%	± 5	
835MHz Body	800MHz	22.0	ϵ_r	55.2	55.09	-0.20%	± 5	Sep. 05, 2008
			σ	0.97	0.96	-1.03%	± 5	
835MHz Body	800MHz	22.0	ϵ_r	55.2	55.09	-0.20%	± 5	Nov. 05, 2008
			σ	0.97	0.96	-1.03%	± 5	
835MHz Head	850MHz	22.0	ϵ_r	41.5	40.45	-2.53%	± 5	Jul. 16, 2008
			σ	0.90	0.92	2.22%	± 5	
835MHz Head	850MHz	22.0	ϵ_r	41.5	40.45	-2.53%	± 5	Jul. 17, 2008
			σ	0.90	0.92	2.22%	± 5	
835MHz Body	850MHz	22.0	ϵ_r	55.2	54.55	-1.18%	± 5	Jul. 18, 2008
			σ	0.97	1.00	3.09%	± 5	
835MHz Body	850MHz	22.0	ϵ_r	55.2	54.55	-1.18%	± 5	Sep. 05, 2008
			σ	0.97	1.00	3.09%	± 5	
835MHz Body	850MHz	22.0	ϵ_r	55.2	54.55	-1.18%	± 5	Nov. 05, 2008
			σ	0.97	1.00	3.09%	± 5	
1950MHz Head	1850MHz	22.0	ϵ_r	40.0	39.94	-0.15%	± 5	Jul. 17, 2008
			σ	1.40	1.35	-3.57%	± 5	
1950MHz Head	1850MHz	22.0	ϵ_r	40.0	39.94	-0.15%	± 5	Nov. 07, 2008
			σ	1.40	1.35	-3.57%	± 5	
1950MHz Body	1850MHz	22.0	ϵ_r	53.3	51.90	-2.63%	± 5	Jul. 21, 2008
			σ	1.52	1.45	-4.61%	± 5	
1950MHz Body	1850MHz	22.0	ϵ_r	53.3	51.90	-2.63%	± 5	Sep. 04, 2008
			σ	1.52	1.45	-4.61%	± 5	

Measured Tissue dielectric parameters for head and body phantoms

Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
1950MHz Head	1900MHz	22.0	ϵ_r	40.0	40.02	0.05%	± 5	Jul. 17, 2008
			σ	1.40	1.41	0.71%	± 5	
1950MHz Head	1900MHz	22.0	ϵ_r	40.0	40.02	0.05%	± 5	Nov. 07, 2008
			σ	1.40	1.41	0.71%	± 5	
1950MHz Body	1900MHz	22.0	ϵ_r	53.3	51.74	-2.93%	± 5	Jul. 21, 2008
			σ	1.52	1.51	-0.66%	± 5	
1950MHz Body	1900MHz	22.0	ϵ_r	53.3	51.74	-2.93%	± 5	Sep. 04, 2008
			σ	1.52	1.51	-0.66%	± 5	
2450MHz Head	2400MHz	22.0	ϵ_r	39.2	38.83	-0.94%	± 5	Nov. 07, 2008
			σ	1.80	1.73	-3.89%	± 5	
2450MHz Body	2400MHz	22.0	ϵ_r	52.7	52.49	0.00%	± 5	Aug. 19, 2008
			σ	1.95	1.91	-0.02%	± 5	
2450MHz Body	2400MHz	22.0	ϵ_r	52.7	52.49	0.00%	± 5	Nov. 05, 2008
			σ	1.95	1.91	-0.02%	± 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.

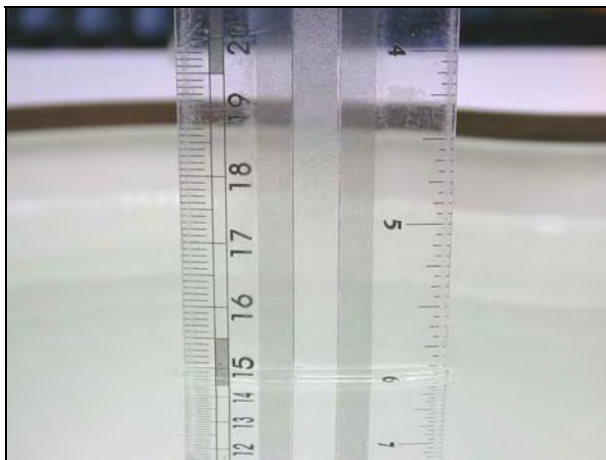


Figure 11. Head-Tissue-Simulating-Liquid

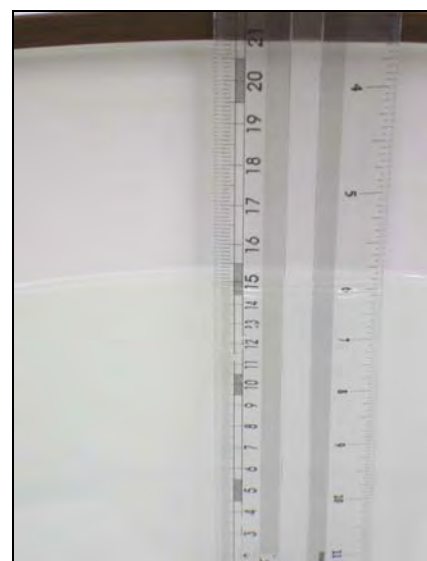


Figure 12. Body-Tissue-Simulating-Liquid



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

1. Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
2. 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 $\beta_{hs} = 24/15 * \beta_c$
3. 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.
4. 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, EDPDCH 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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	β_{ed1} : 47/15 β_{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: ΔACK , $\Delta NACK$ 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	32.40	■
		Middle	836.6	32.24	□
		Highest	848.8	32.05	□
GPRS 850	3Down2Up	Lowest	824.2	32.38	□
		Middle	836.6	32.20	□
		Highest	848.8	31.92	□
	3Down1Up	Lowest	824.2	32.20	□
		Middle	836.6	32.10	□
		Highest	848.8	31.90	□
EGPRS 850	3Down2Up	Lowest	824.2	26.92	□
		Middle	836.6	26.65	□
		Highest	848.8	26.38	□
	3Down1Up	Lowest	824.2	27.10	□
		Middle	836.6	27.00	□
		Highest	848.8	27.00	□

Band	Mode	CH	Frequency (MHz)	Conducted Power (dBm)	Worst
PCS 1900	---	Lowest	1850.2	28.85	□
		Middle	1880.0	29.15	□
		Highest	1909.8	29.19	■
GPRS 1900	3Down2Up	Lowest	1850.2	38.80	□
		Middle	1880.0	29.14	□
		Highest	1909.8	29.14	□
	3Down1Up	Lowest	1850.2	28.80	□
		Middle	1880.0	29.00	□
		Highest	1909.8	29.02	□
EGPRS 1900	3Down2Up	Lowest	1850.2	26.11	□
		Middle	1880.0	25.94	□
		Highest	1909.8	25.90	□
	3Down1Up	Lowest	1850.2	26.00	□
		Middle	1880.0	26.30	□
		Highest	1909.8	26.70	□



Band	Date Rate or Sub-test	Mode	CH	Frequency (MHz)	Conducted Power (dBm)	Worst
WCDMA V	---	12.2k RMC	Lowest	826.4	24.37	■
		12.2k RMC	Middle	836.0	24.18	□
		12.2k RMC	Highest	846.4	23.90	□
HSDPA V	1	12.2k RMC	Lowest	826.4	23.19	■
		12.2k RMC	Middle	836.0	23.15	□
		12.2k RMC	Highest	846.4	22.90	□
	2	12.2k RMC	Lowest	826.4	23.02	□
		12.2k RMC	Middle	836.0	22.99	□
		12.2k RMC	Highest	846.4	22.77	□
	3	12.2k RMC	Lowest	826.4	22.71	□
		12.2k RMC	Middle	836.0	22.69	□
		12.2k RMC	Highest	846.4	22.35	□
	4	12.2k RMC	Lowest	826.4	22.65	□
		12.2k RMC	Middle	836.0	22.62	□
		12.2k RMC	Highest	846.4	22.31	□
HSUPA V	1	12.2k RMC	Lowest	826.4	22.92	□
		12.2k RMC	Middle	836.0	23.18	■
		12.2k RMC	Highest	846.4	22.68	□
	2	12.2k RMC	Lowest	826.4	21.02	□
		12.2k RMC	Middle	836.0	21.35	□
		12.2k RMC	Highest	846.4	20.99	□
	3	12.2k RMC	Lowest	826.4	21.99	□
		12.2k RMC	Middle	836.0	22.31	□
		12.2k RMC	Highest	846.4	21.87	□
	4	12.2k RMC	Lowest	826.4	20.99	□
		12.2k RMC	Middle	836.0	21.29	□
		12.2k RMC	Highest	846.4	20.87	□
	5	12.2k RMC	Lowest	826.4	22.88	□
		12.2k RMC	Middle	836.0	23.08	□
		12.2k RMC	Highest	846.4	22.60	□



Band	Date Rate or Sub-test	Mode	CH	Frequency (MHz)	Conducted Power (dBm)	Worst
WCDMA II	---	12.2k RMC	Lowest	1852.4	23.63	☐
		12.2k RMC	Middle	1880.0	23.40	☐
		12.2k RMC	Highest	1907.6	23.52	☐
HSDPA II	1	12.2k RMC	Lowest	1852.4	23.10	☐
		12.2k RMC	Middle	1880.0	23.35	☒
		12.2k RMC	Highest	1907.6	22.91	☐
	2	12.2k RMC	Lowest	1852.4	22.94	☐
		12.2k RMC	Middle	1880.0	23.15	☐
		12.2k RMC	Highest	1907.6	22.75	☐
	3	12.2k RMC	Lowest	1852.4	22.62	☐
		12.2k RMC	Middle	1880.0	22.99	☐
		12.2k RMC	Highest	1907.6	22.59	☐
	4	12.2k RMC	Lowest	1852.4	22.55	☐
		12.2k RMC	Middle	1880.0	22.87	☐
		12.2k RMC	Highest	1907.6	22.51	☐
HSUPA II	1	12.2k RMC	Lowest	1852.4	23.10	☐
		12.2k RMC	Middle	1880.0	23.35	☒
		12.2k RMC	Highest	1907.6	22.90	☐
	2	12.2k RMC	Lowest	1852.4	21.35	☐
		12.2k RMC	Middle	1880.0	21.40	☐
		12.2k RMC	Highest	1907.6	21.02	☐
	3	12.2k RMC	Lowest	1852.4	22.21	☐
		12.2k RMC	Middle	1880.0	22.42	☐
		12.2k RMC	Highest	1907.6	22.03	☐
	4	12.2k RMC	Lowest	1852.4	21.30	☐
		12.2k RMC	Middle	1880.0	21.52	☐
		12.2k RMC	Highest	1907.6	21.24	☐
	5	12.2k RMC	Lowest	1852.4	23.05	☐
		12.2k RMC	Middle	1880.0	23.28	☐
		12.2k RMC	Highest	1907.6	22.87	☐



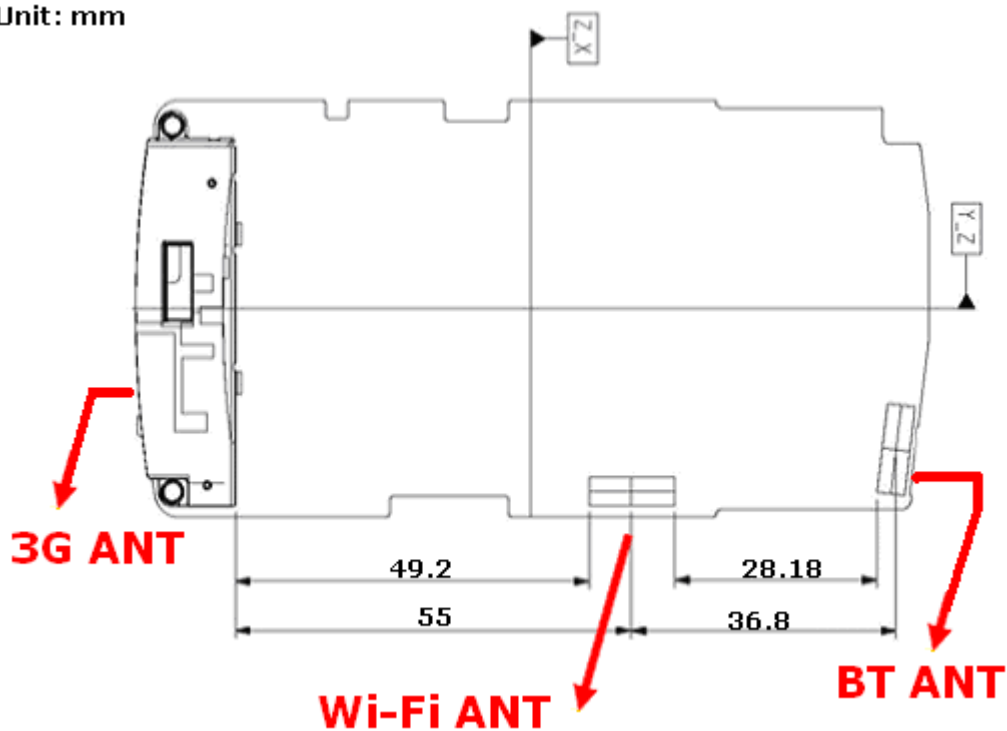
Band	Data	CH	Frequency (MHz)	Conducted Power (dBm)	Worst
802.11b	1M	Lowest	2412	18.42	☐
		Middle	2437	18.83	☒
		Highest	2462	17.74	☐
	11M	Lowest	2412	18.35	☐
		Middle	2437	18.72	☐
		Highest	2462	17.58	☐
802.11g	6M	Lowest	2412	18.49	☒
		Middle	2437	17.26	☐
		Highest	2462	18.27	☐
	54M	Lowest	2412	17.87	☐
		Middle	2437	16.62	☐
		Highest	2462	17.61	☐

Note: The EUT has built-in test mode that used to evaluate SAR (802.11b/g).

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 : 32.40 dBm
	WCDMA : 24.37 dBm
	WLAN : 18.83 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>1.5</u> mW/g
	WCDMA = <u>0.74</u> mW/g
	WLAN = <u>0.54</u> mW/g
Co-Transmission SAR (Max) :	Head = <u>0.617</u> mW/g
	Body = <u>1.05</u> mW/g

Unit: mm





Test Mode_Body						
Band	CH	Frequency (MHz)	Right Cheek	Right Tilted	Left Cheek	Left Tilted
GSM 850	Lowest	824.2	■	■	■	■
	Middle	836.6	■	■	■	■
	Highest	848.8	■	■	■	■
PCS 1900	Lowest	1850.2	■	■	■	■
	Middle	1880.0	■	■	■	■
	Highest	1909.8	■	■	■	■
WCDMA V	Lowest	826.4	■	■	■	■
	Middle	836.0	■	■	■	■
	Highest	846.4	■	■	■	■
WCDMA II	Lowest	1852.4	■	■	■	■
	Middle	1880.0	■	■	■	■
	Highest	1907.6	■	■	■	■
Comment : N/A						

Note: ■ be test □ not to test

Test Mode_Body					
Band	Test Mode	CH	Frequency (MHz)	Body	SAR Worst
GSM 850	-----	Lowest	824.2	■	■
		Middle	836.6	■	□
		Highest	848.8	■	□
GPRS 850	3Down2Up	Lowest	824.2	■	■
		Middle	836.6	■	□
		Highest	848.8	■	□
	3Down1Up	Lowest	824.2	■	□
		Middle	836.6	□	□
		Highest	848.8	□	□
EGPRS 850	3Down2Up	Lowest	824.2	■	□
		Middle	836.6	■	■
		Highest	848.8	■	□
	3Down1Up	Lowest	824.2	□	□
		Middle	836.6	■	□
		Highest	848.8	□	□
PCS 1900	-----	Lowest	1850.2	■	□
		Middle	1880.0	■	□
		Highest	1909.8	■	■
GPRS 1900	3Down2Up	Lowest	1850.2	■	□
		Middle	1880.0	■	□
		Highest	1909.8	■	■
	3Down1Up	Lowest	1850.2	□	□
		Middle	1880.0	□	□
		Highest	1909.8	■	□
EGPRS 1900	3Down2Up	Lowest	1850.2	■	□
		Middle	1880.0	■	□
		Highest	1909.8	■	■
	3Down1Up	Lowest	1850.2	□	□
		Middle	1880.0	□	□
		Highest	1909.8	■	□
Comment : 1. The GPRS / EGPRS 850 (3Down2Up)'s SAR value was higher than GPRS / EGPRS 850 (3Down1Up) condition. 2. The GPRS / EGPRS 1900 (3Down2Up)'s SAR value was higher than GPRS / EGPRS 1900 (3Down1Up) condition.					

Note: ■ be test □ not to test

Test Mode_Body					
Band	Test Mode	CH	Frequency (MHz)	Body	SAR Worst
WCDMA V	---	Lowest	826.4	■	☐
		Middle	836.0	■	☐
		Highest	846.4	■	■
HSDPA V	Sub 1	Lowest	826.4	■	☐
		Middle	836.0	■	☐
		Highest	846.4	■	■
HSUPA V	Sub 1	Lowest	826.4	■	■
		Middle	836.0	■	☐
		Highest	846.4	■	☐
WCDMA II	---	Lowest	1852.4	■	☐
		Middle	1880.0	■	■
		Highest	1907.6	■	☐
WCDMA II	Sub 1	Lowest	1852.4	■	■
		Middle	1880.0	■	☐
		Highest	1907.6	■	☐
WCDMA II	Sub 1	Lowest	1852.4	■	☐
		Middle	1880.0	■	■
		Highest	1907.6	■	☐
Comment : 1. The HSDPA / HSDPA Band V (Sub-test 1)'s conducted power was higher than HSDPA / HSDPA Band V other Sub-test condition. 2. The HSDPA / HSDPA Band II (Sub-test 1)'s conducted power was higher than HSDPA / HSDPA Band II other Sub-test condition.					

Note: ■ be test ☐ not to test



Test Mode_Body					
Band	Test Mode	CH	Frequency (MHz)	Body	SAR Worst
802.11b	1M	Lowest	2412	■	■
		Middle	2437	■	□
		Highest	2462	■	□
	11M	Lowest	2412	■	□
		Middle	2437	□	□
		Highest	2462	□	□
802.11g	6M	Lowest	2412	■	■
		Middle	2437	■	□
		Highest	2462	■	□
	54M	Lowest	2412	■	□
		Middle	2437	□	□
		Highest	2462	□	□
Comment : 1. The 802.11b (Rate 1)'s SAR value was higher than 802.11b (Rate 11) condition. 2. The 802.11g (Rate 6)'s SAR value was higher than 802.11g (Rate 54) condition.					

Note: ■ be test □ not to test

Test Mode_Co-Location				
Position	Band	Test Mode	Channel	Frequency (MHz)
Head	WCDMA Band II	----	Middle - 9400	1880.0
	802.11 b	1M	Lowest - 1	2412
Body	GPRS 850	Lowest	Lowest - 128	824.2
	802.11 b	Lowest	Lowest - 1	2412
Comment : 1. WCDMA Band II middle CH of Head SAR (max.). 2. GPRS 850 lowest CH of Body SAR (max.). 3. 802.11 b (rate 1M) lowest CH's SAR value was higher than the other WLAN test.				

Note: ■ be test □ not to test

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 13. 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 900MHz, 1950MHz and 2450MHz.

Validation kit		Mixture Type	SAR _{1g} [mW/g]		SAR _{10g} [mW/g]		Date of Calibration
D900V2-SN172		Head	11.04		7.08		Jan. 28, 2008
		Body	11.48		7.40		
Frequency (MHz)	Power (dBm)	SAR _{1g} (mW/g)	SAR _{10g} (mW/g)	Drift (dB)	Difference percentage		Date
					1g	10g	
900 (Head)	250mW	2.68	1.72	0.020	-2.9 %	-2.8 %	Jul. 16, 2008
	Normalize to 1 Watt	10.72	6.88				
900 (Head)	250mW	2.72	1.75	0.001	-1.4 %	-1.1 %	Jul. 17, 2008
	Normalize to 1 Watt	10.88	7				
900 (Body)	250mW	2.76	1.77	-0.039	-3.8 %	-4.3 %	Jul. 18, 2008
	Normalize to 1 Watt	11.04	7.08				
900 (Body)	250mW	2.94	1.8	0.008	2.4 %	-2.7 %	Sep. 05, 2008
	Normalize to 1 Watt	11.76	7.2				
900 (Body)	250mW	2.79	1.82	0.000	-2.8 %	-1.6 %	Nov. 05, 2008
	Normalize to 1 Watt	11.16	7.28				

Detail results see Appendix A.



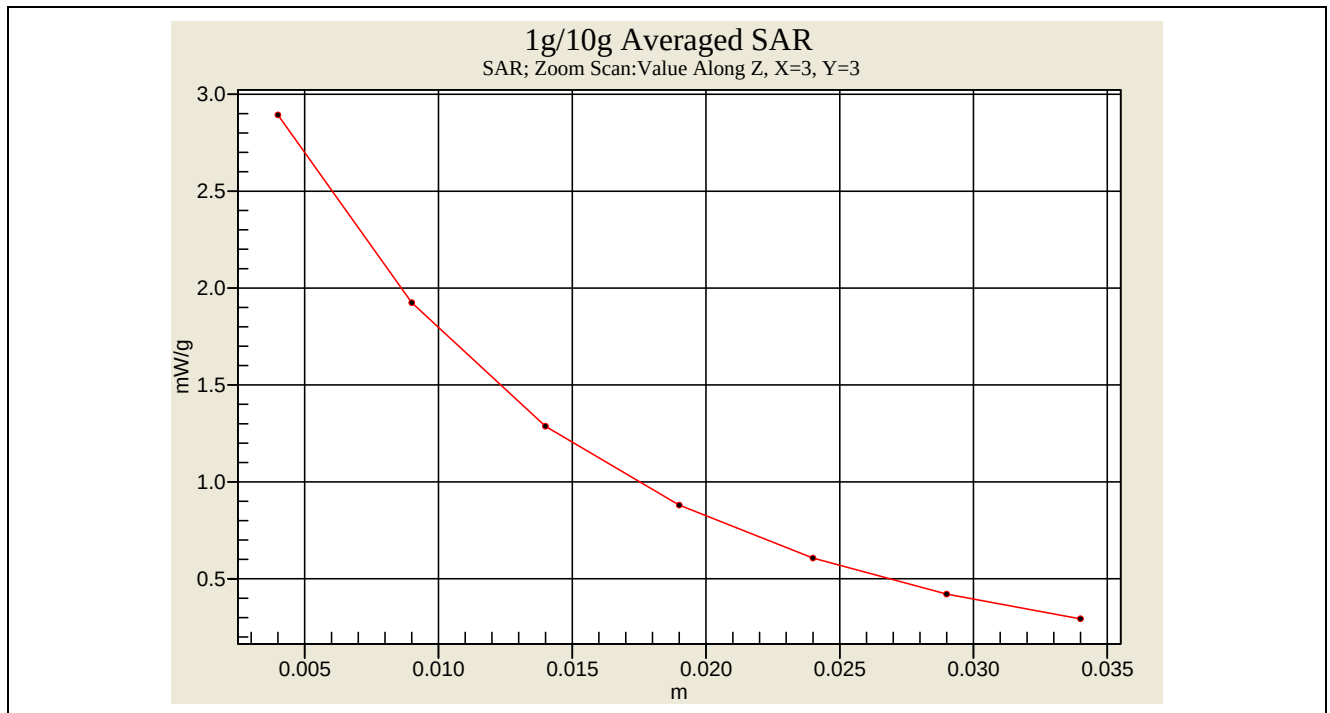
Validation kit		Mixture Type	SAR _{1g} [mW/g]		SAR _{10g} [mW/g]		Date of Calibration
D1950V2-SN1117		Head	40		20.96		Dec. 20, 2007
		Body	41.2		21.76		
Frequency (MHz)	Power (dBm)	SAR _{1g} (mW/g)	SAR _{10g} (mW/g)	Drift (dB)	Difference percentage		Date
					1g	10g	
1950 (Head)	250mW	10	5.35	0.093	0.0 %	2.1 %	Jul. 17, 2008
	Normalize to 1 Watt	40	21.4				
1950 (Head)	250mW	9.7	5.09	-0.003	-3.0 %	-2.9 %	Nov. 07, 2008
	Normalize to 1 Watt	38.8	20.36				
1950 (Body)	250mW	10.3	5.41	-0.024	0.0 %	-0.6 %	Jul. 21, 2008
	Normalize to 1 Watt	41.2	21.64				
1950 (Body)	250mW	10.3	5.39	0.128	0.0 %	-0.9 %	Sep. 04, 2008
	Normalize to 1 Watt	41.2	21.56				

Validation kit		Mixture Type	SAR _{1g} [mW/g]		SAR _{10g} [mW/g]		Date of Calibration
D2450V2-SN712		Head					Jan. 30, 2008
		Body	53.6		24.8		
Frequency (MHz)	Power (dBm)	SAR _{1g} (mW/g)	SAR _{10g} (mW/g)	Drift (dB)	Difference percentage		Date
					1g	10g	
2450 (Head)	250mW	13.4	6.22	-0.017	-3.6 %	-3.4 %	Nov. 07, 2008
	Normalize to 1 Watt	53.6	24.88				
2450 (Body)	250mW	13.4	6.51	-0.060	0.0 %	5.0 %	Aug. 19, 2008
	Normalize to 1 Watt	53.6	26.04				
2450 (Body)	250mW	13.4	6.3	-0.061	0.0 %	1.6 %	Nov. 05, 2008
	Normalize to 1 Watt	53.6	25.2				

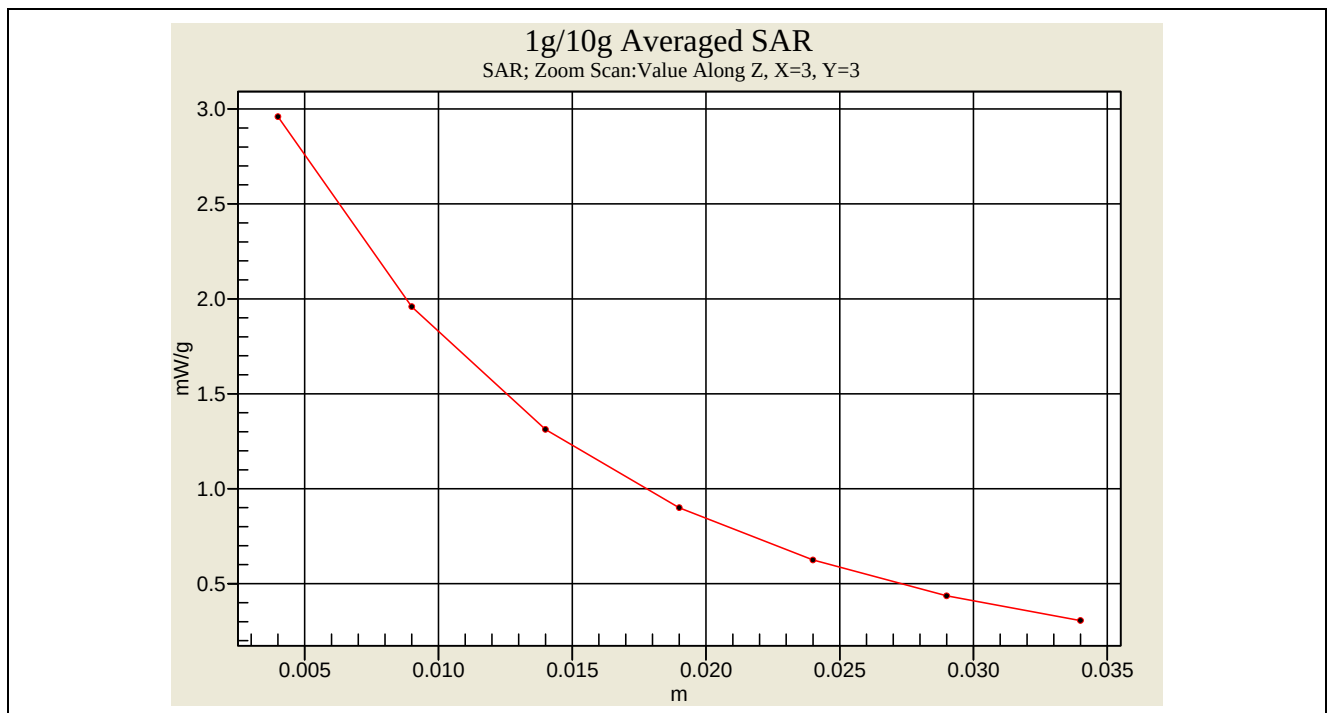
Detail results see Appendix A.



Z-axis Plot of System Performance Check



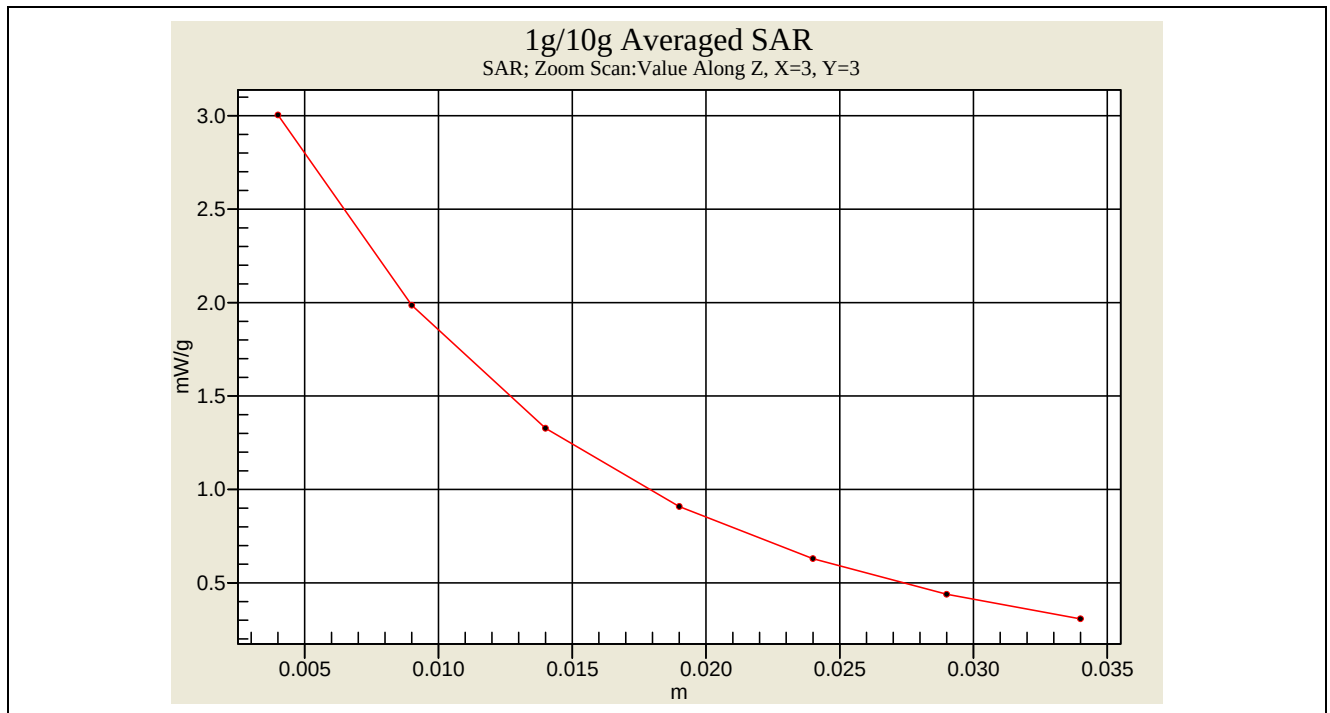
Head-Tissue-Simulating-Liquid 900MHz (2008.07.16)



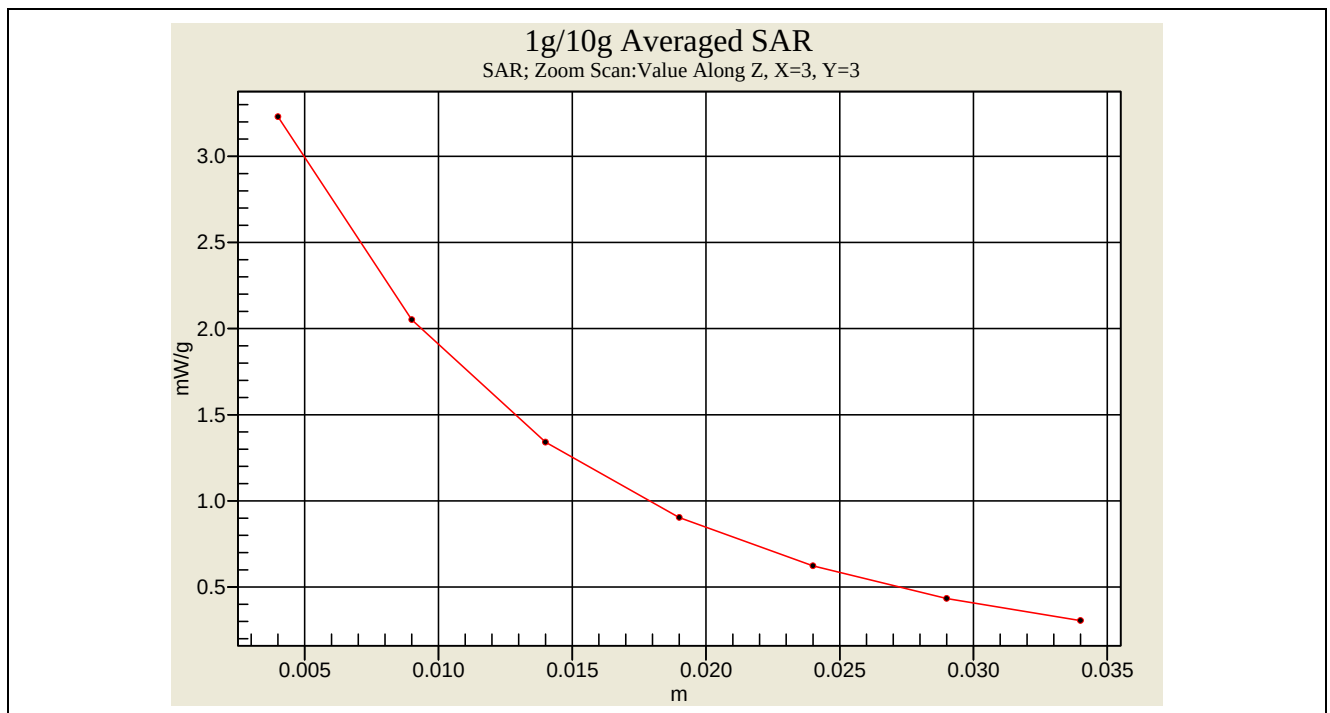
Head-Tissue-Simulating-Liquid 900MHz (2008.07.17)



Z-axis Plot of System Performance Check



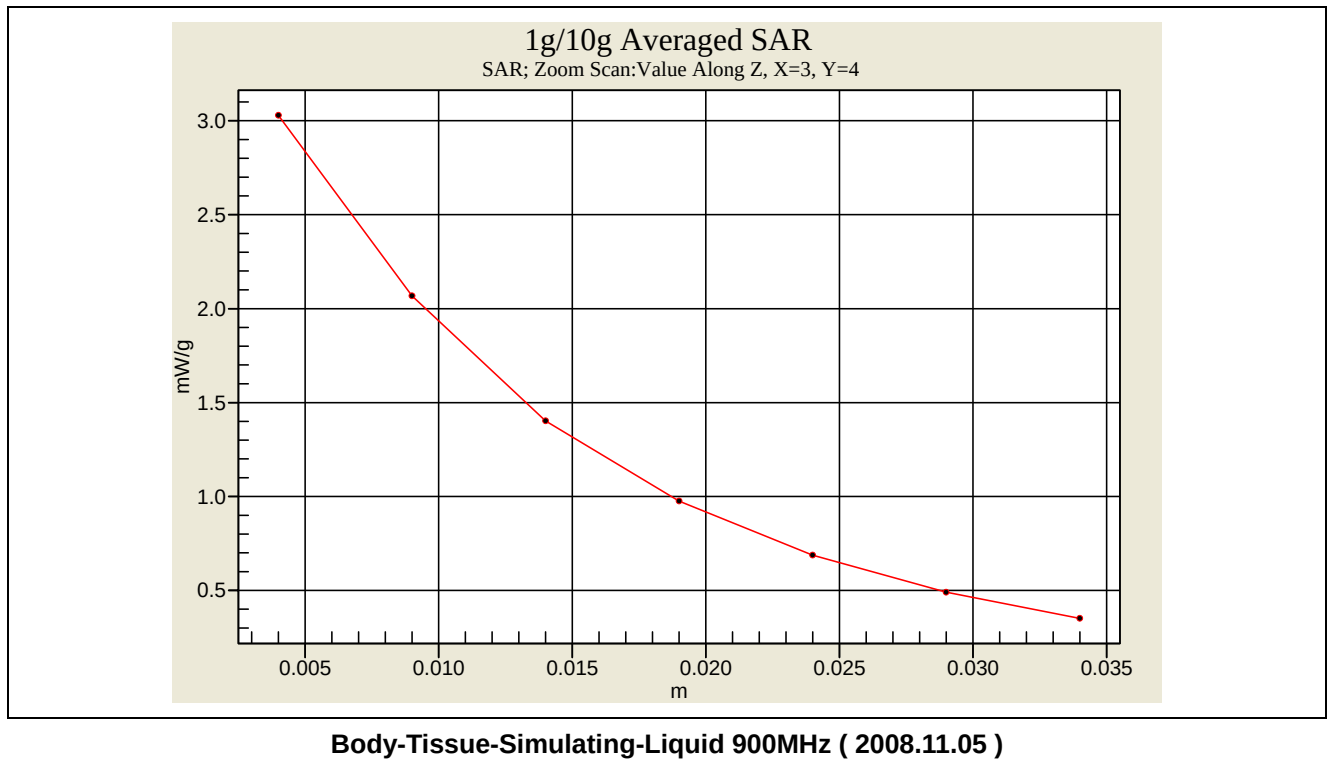
Body-Tissue-Simulating-Liquid 900MHz (2008.07.18)



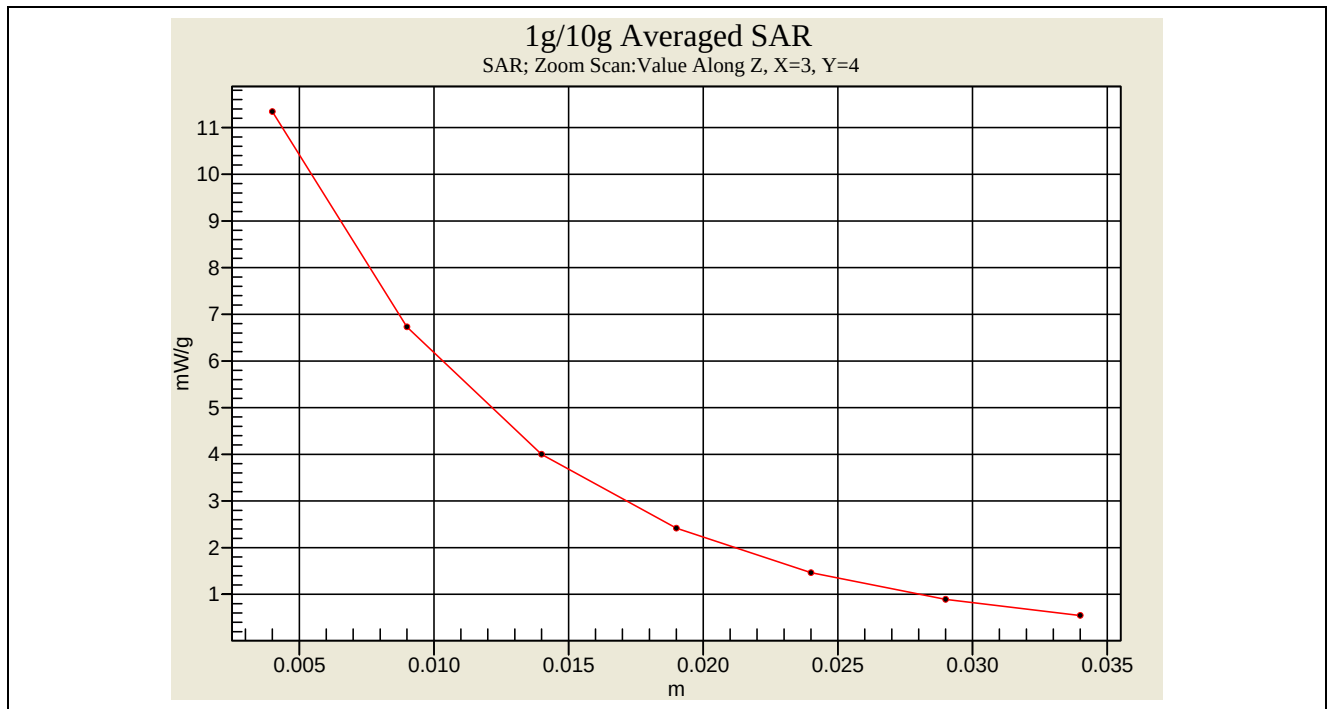
Body-Tissue-Simulating-Liquid 900MHz (2008.09.05)



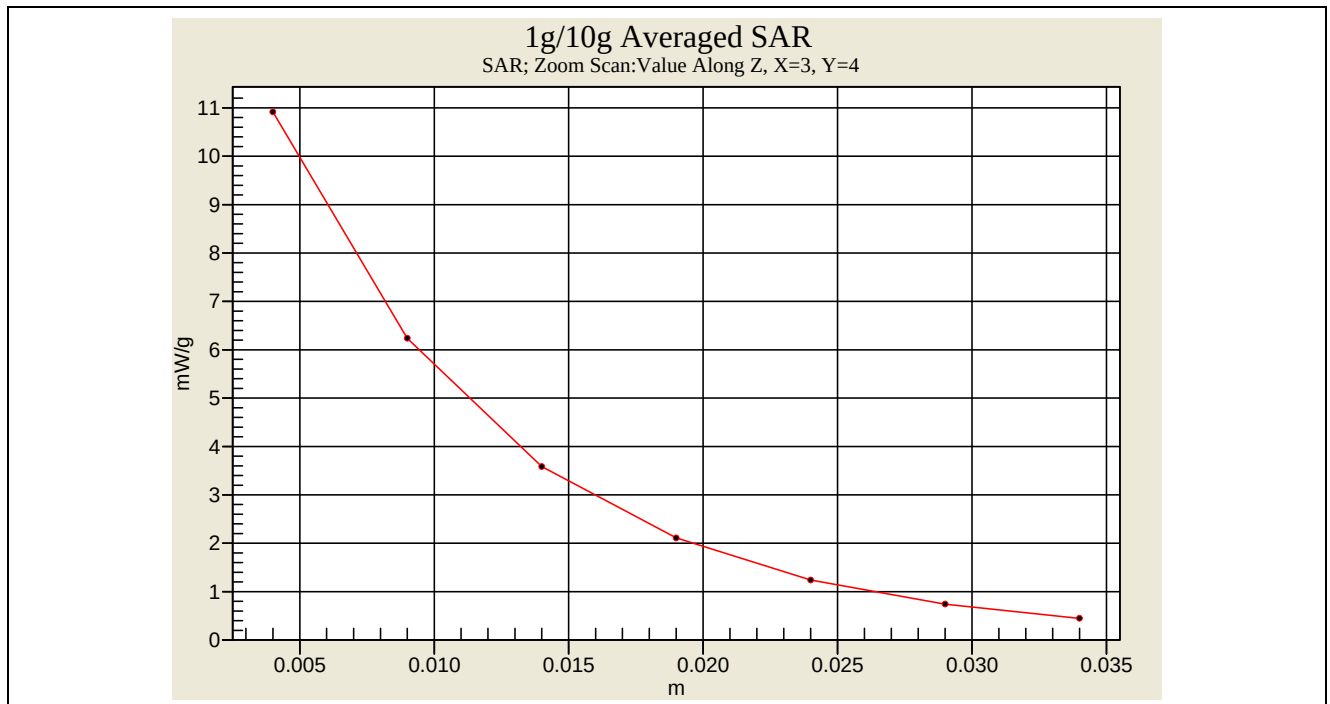
Z-axis Plot of System Performance Check



Z-axis Plot of System Performance Check



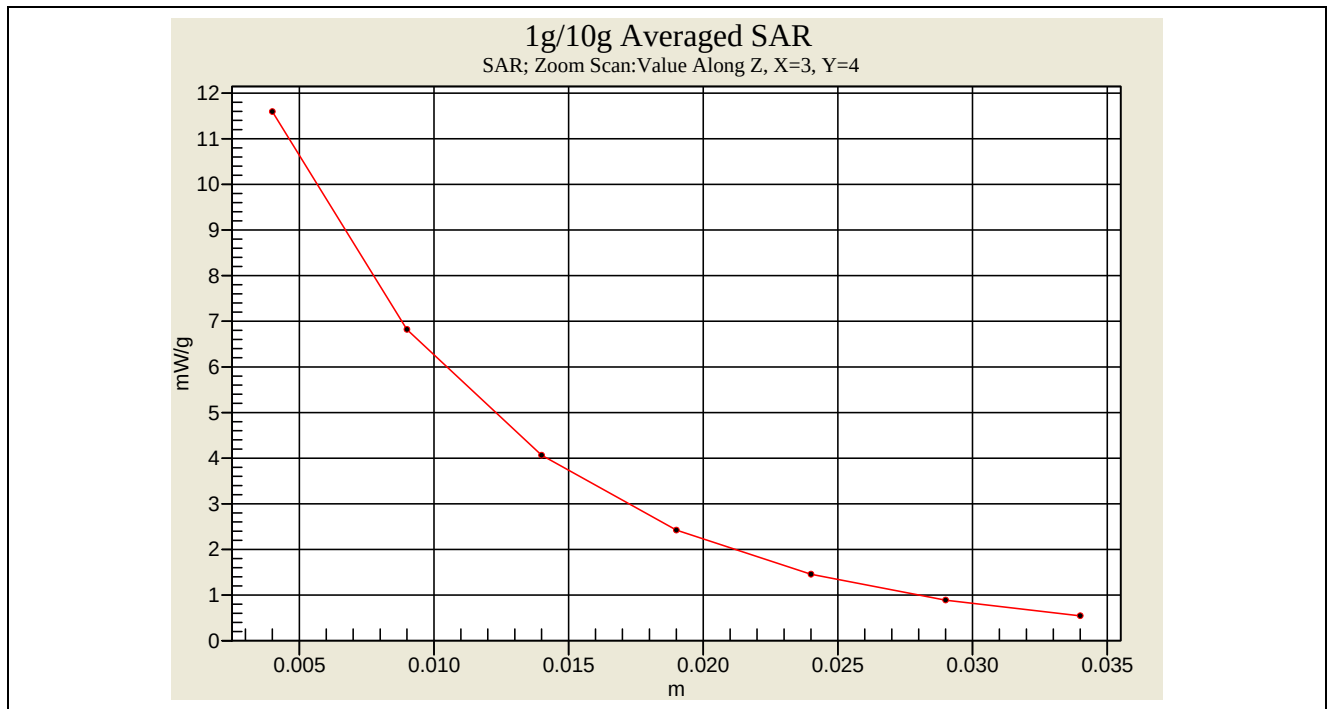
Head-Tissue-Simulating-Liquid 1950MHz (2008.07.17)



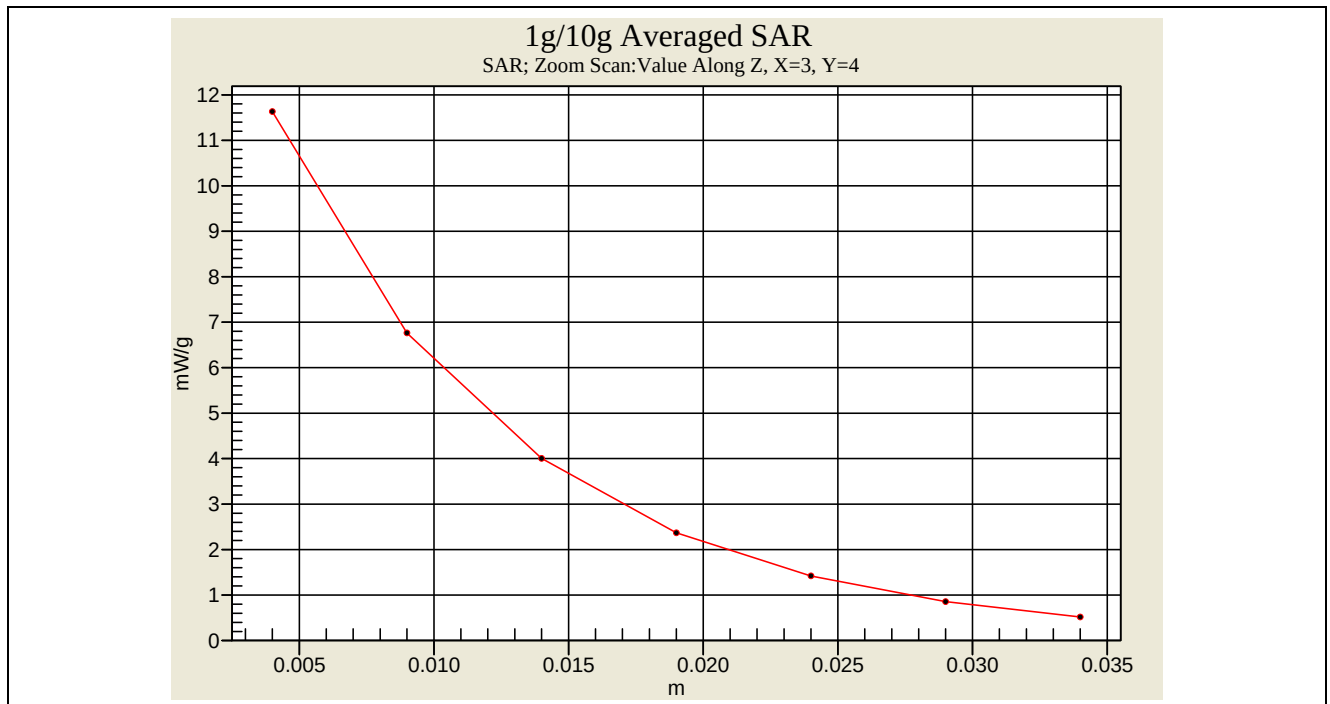
Head-Tissue-Simulating-Liquid 1950MHz (2008.11.07)



Z-axis Plot of System Performance Check



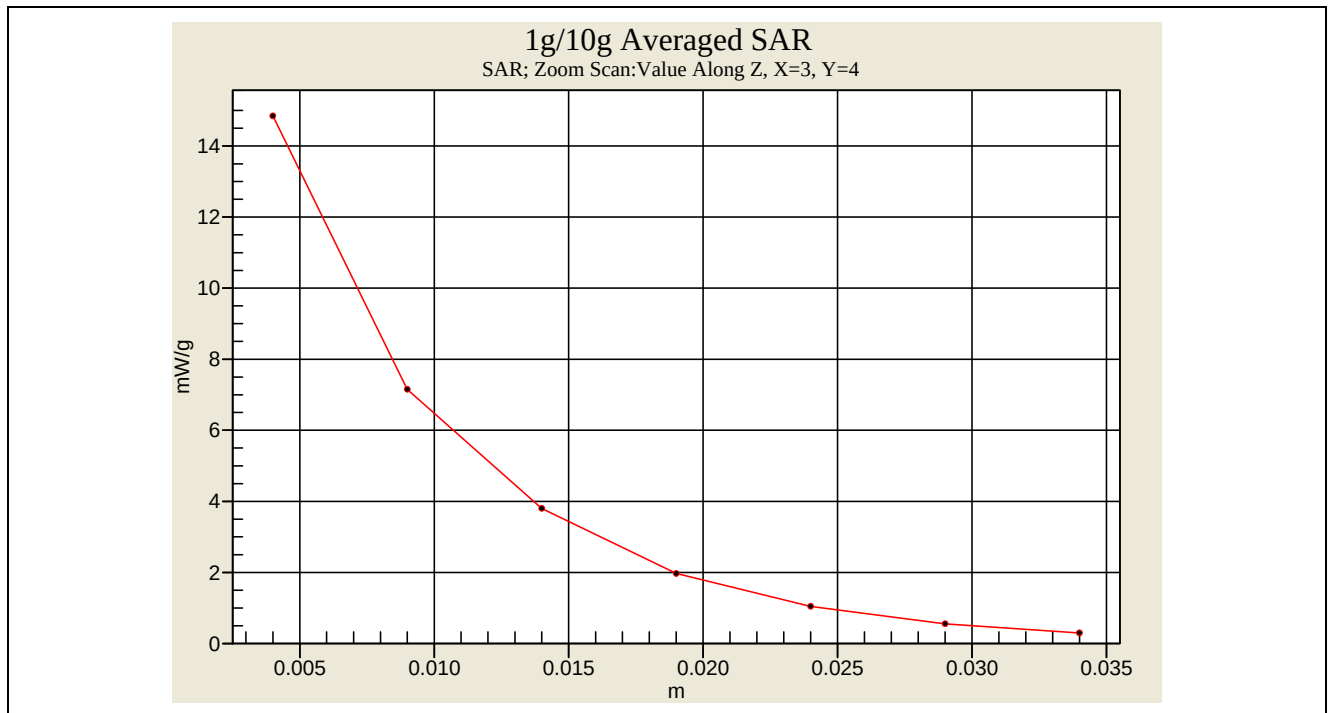
Body-Tissue-Simulating-Liquid 1950MHz (2008.07.21)



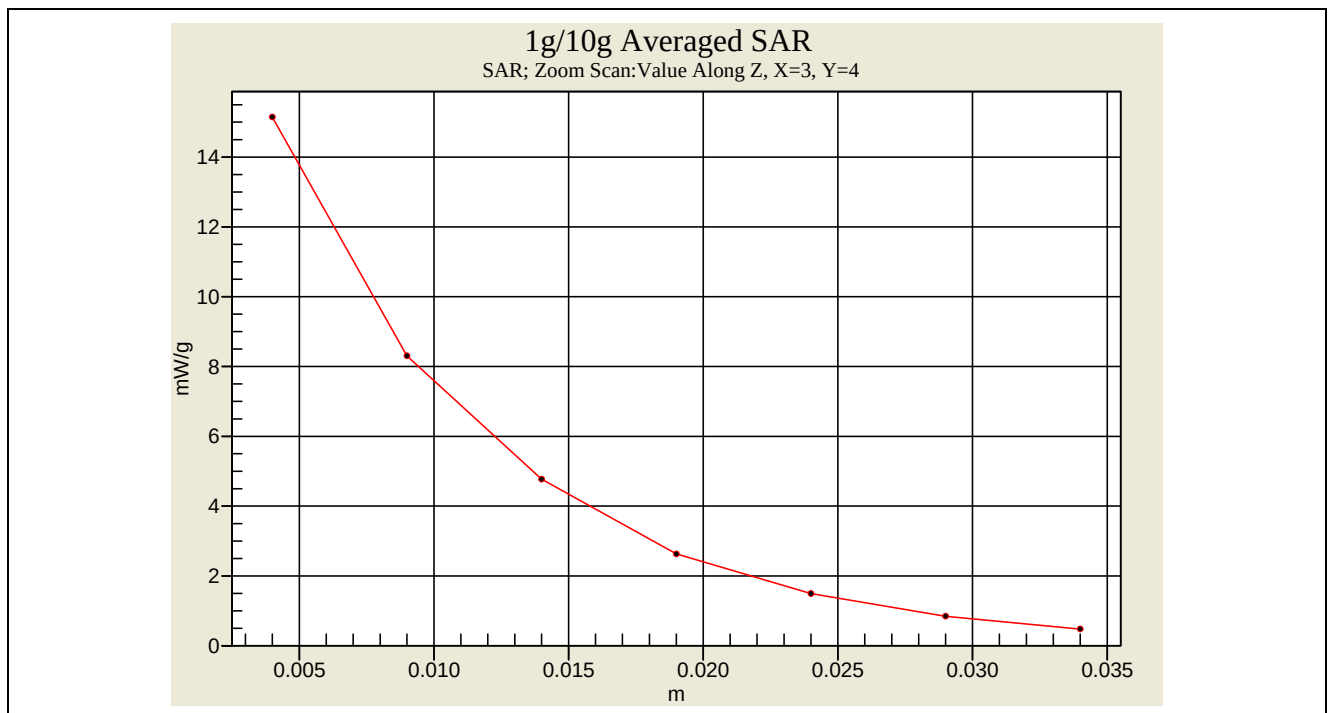
Body-Tissue-Simulating-Liquid 1950MHz (2008.09.04)



Z-axis Plot of System Performance Check



Haed-Tissue-Simulating-Liquid 2450MHz (2008.11.07)



Body-Tissue-Simulating-Liquid 2450MHz (2008.08.19)



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 :

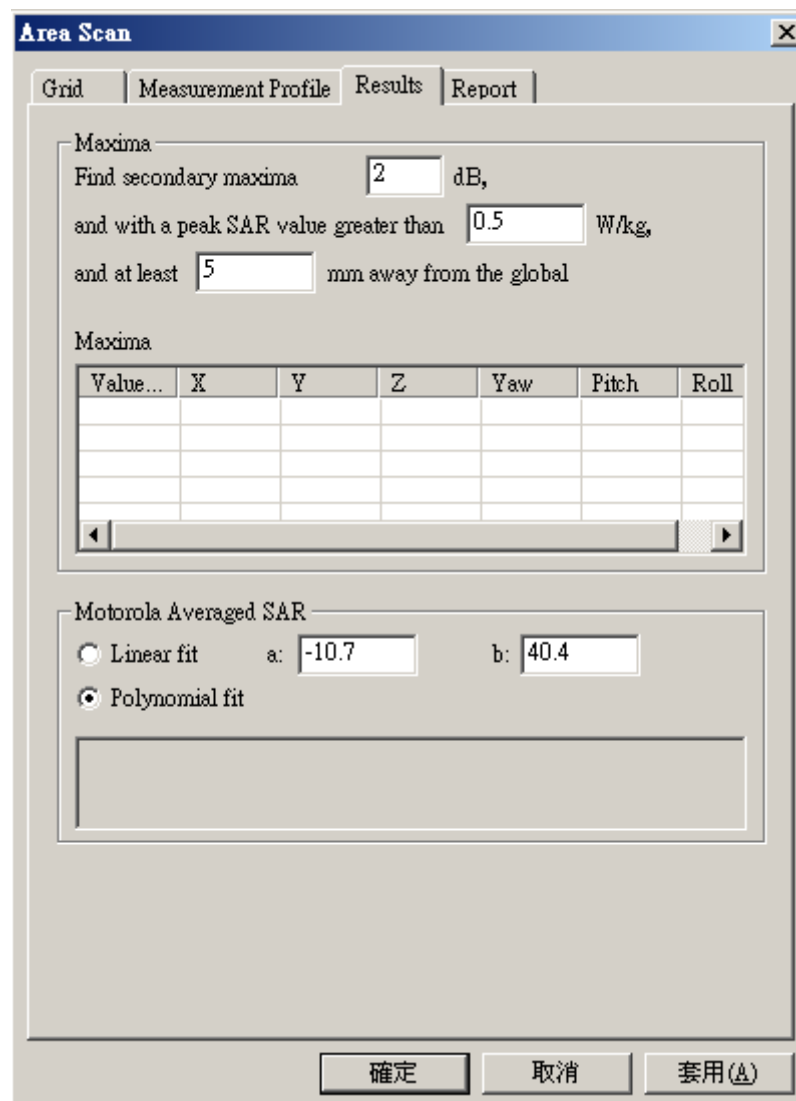
- Surface Check :** A surface checks job gathers data used with optical surface detection. It determines the distance from the phantom surface where the reflection from the optical detector has its peak. Any following measurement jobs using optical surface detection will then rely on this value. The 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 dialog box titled "Area Scan" contains four tabs: "Grid", "Measurement Profile", "Results", and "Report". The "Results" tab is currently selected. It features a "Maxima" section with input fields for "Find secondary maxima" (set to 2 dB), "and with a peak SAR value greater than" (set to 0.5 W/kg), and "and at least" (set to 5 mm away from the global). Below this is a table of maxima results.

Value...	X	Y	Z	Yaw	Pitch	Roll

Below the table is a "Motorola Averaged SAR" section with two radio buttons: "Linear fit" (unselected) and "Polynomial fit" (selected). The "Linear fit" section has input fields for "a:" (set to -10.7) and "b:" (set to 40.4). The "Polynomial fit" section has a large empty text area.

At the bottom of the dialog are three buttons: "確定" (OK), "取消" (Cancel), and "套用(A)" (Apply).



9.4 Spatial Peak SAR Evaluation

The DASY4 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 DASY4, 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 $\pm 22.4\%$ [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.

Uncertainty Component	Uncertainty Value	Probability Distribution	Divisor	c_i (1g)	c_i (10g)	Standard Uncertainty $\pm 1\%$ (1-g)	Standard Uncertainty $\pm 1\%$ (10-g)	v_i or v_{eff}
Measurement System								
Probe Calibration ($k=1$)	4.8	Normal	1	1	1	4.8	4.8	∞
Axial Isotropy	4.7	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	3.9	3.9	∞
Boundary Effect	0.8	Rectangular	$\sqrt{3}$	1	1	0.5	0.5	∞
Linearity	4.7	Rectangular	$\sqrt{3}$	1	1	2.7	2.7	∞
System Detection Limit	1.0	Rectangular	$\sqrt{3}$	1	1	0.6	0.6	∞
Readout Electronics	1.0	Normal	1	1	1	1.0	1.0	∞
Response Time	1.0	Rectangular	$\sqrt{3}$	1	1	0.6	0.6	∞
Integration Time	1.9	Rectangular	$\sqrt{3}$	1	1	1.1	1.1	∞
RF Ambient Conditions	3.0	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	1.4	Rectangular	$\sqrt{3}$	1	1	0.8	0.8	∞
Probe Positioning with respect to Phantom Shell	2.9	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	4.5	Rectangular	$\sqrt{3}$	1	1	2.6	2.6	∞
Test sample Related								
Test sample Positioning	2.9	Normal	1	1	1	2.9	2.9	145
Device Holder Uncertainty	3.6	Normal	1	1	1	3.6	3.6	5
Output Power Variation - SAR drift measurement	5.0	Rectangular	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and Tissue Parameters								
Phantom Uncertainty (shape and thickness tolerances)	4.0	Rectangular	$\sqrt{3}$	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	5.0	Rectangular	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	5.0	Normal	1	0.64	0.43	3.2	2.2	∞
Liquid Permittivity - deviation from target values	5.0	Rectangular	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
Liquid Permittivity - measurement uncertainty	5.0	Normal	1	0.6	0.49	3.0	2.5	∞
Combined standard uncertainty		RSS				11.2	10.7	388
Expanded uncertainty (95% CONFIDENCE LEVEL)		$k=2$				22.4	21.5	

Table 6. Uncertainty Budget of DASY



11. SAR Test Results Summary

11.1 Head SAR

11.1.1 GSM 850 - Head SAR

Ambient :

Temperature (°C) :

22 ± 2

Relative HUMIDITY (%) :

40-70

Liquid :

Mixture Type :

HSL900

Liquid Temperature (°C) :

22.0

Depth of liquid (cm) :

15

Measurement :

Crest Factor :

8.3

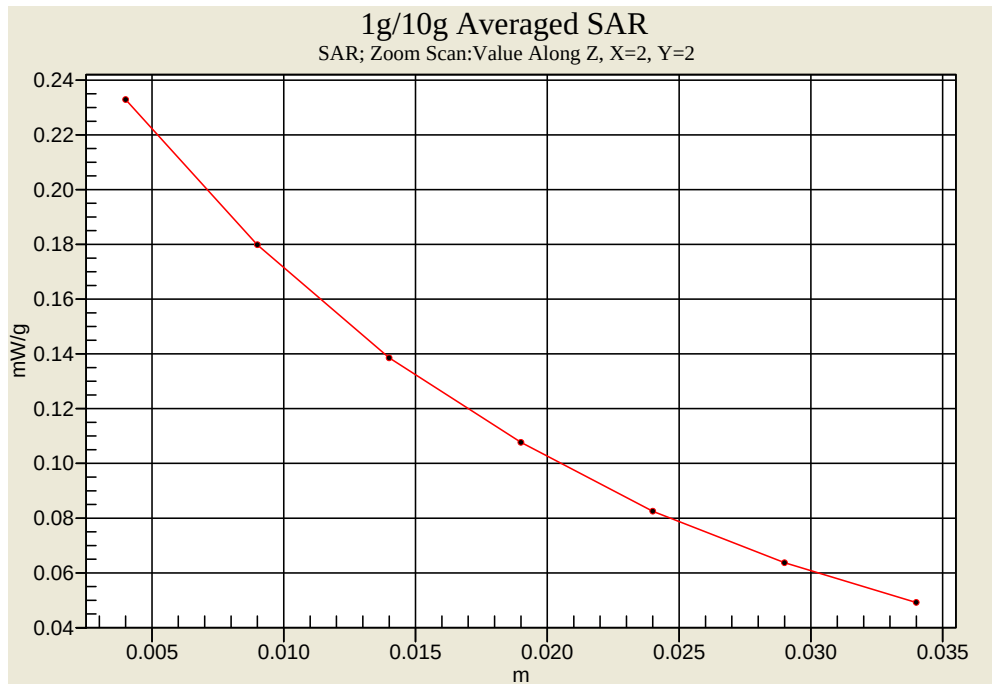
Probe S/N :

1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
824.2	128	GSM 850	32.40	Right-cheek	PIFA	N/A	0.191	0.060	-
836.6	190	GSM 850	32.24	Right-cheek	PIFA	N/A	0.191	0.166	-
848.8	251	GSM 850	32.05	Right-cheek	PIFA	N/A	0.168	0.036	-
824.2	128	GSM 850	32.40	Right-Tilted	PIFA	N/A	0.145	-0.028	-
836.6	190	GSM 850	32.24	Right-Tilted	PIFA	N/A	0.149	-0.001	-
848.8	251	GSM 850	32.05	Right-Tilted	PIFA	N/A	0.117	-0.150	-
824.2	128	GSM 850	32.40	Left-cheek	PIFA	N/A	0.217	0.106	-
836.6	190	GSM 850	32.24	Left-cheek	PIFA	N/A	0.207	-0.192	-
848.8	251	GSM 850	32.05	Left-cheek	PIFA	N/A	0.172	0.032	-
824.2	128	GSM 850	32.40	Left-Tilted	PIFA	N/A	0.159	-0.030	-
836.6	190	GSM 850	32.24	Left-Tilted	PIFA	N/A	0.171	-0.149	-
848.8	251	GSM 850	32.05	Left-Tilted	PIFA	N/A	0.138	-0.027	-
Std. C95.1-1999 - 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 Right-Cheek GSM850 CH128



11.1.2 PCS 1900 - Head SAR

Ambient :

Temperature (°C) : 22 ± 2

Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL1950

Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

Measurement :

Crest Factor : 8.3

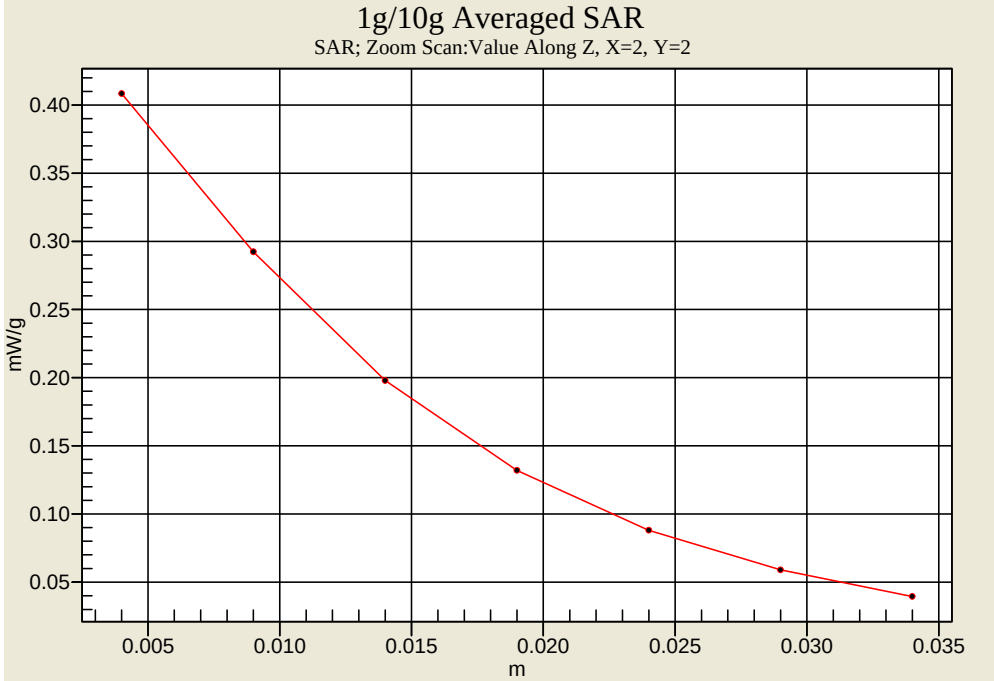
Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1850.2	512	PCS	28.85	Right-cheek	PIFA	N/A	0.293	-0.003	-
1880.0	661	PCS	29.15	Right-cheek	PIFA	N/A	0.342	-0.026	-
1909.8	810	PCS	29.19	Right-cheek	PIFA	N/A	0.375	-0.032	-
1850.2	512	PCS	28.85	Right-Tilted	PIFA	N/A	0.141	-0.030	-
1880.0	661	PCS	29.15	Right-Tilted	PIFA	N/A	0.185	-0.019	-
1909.8	810	PCS	29.19	Right-Tilted	PIFA	N/A	0.238	-0.127	-
1850.2	512	PCS	28.85	Left-cheek	PIFA	N/A	0.263	-0.040	-
1880.0	661	PCS	29.15	Left-cheek	PIFA	N/A	0.305	-0.017	-
1909.8	810	PCS	29.19	Left-cheek	PIFA	N/A	0.320	-0.011	-
1850.2	512	PCS	28.85	Left-Tilted	PIFA	N/A	0.193	-0.020	-
1880.0	661	PCS	29.15	Left-Tilted	PIFA	N/A	0.243	-0.061	-
1909.8	810	PCS	29.19	Left-Tilted	PIFA	N/A	0.271	-0.117	-
Std. C95.1-1999 - 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-Tilted PCS1900 CH810



11.1.3 WCDMA Band V - Head SAR

Ambient :

Temperature (°C) : 22 ± 2

Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL900

Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

Measurement :

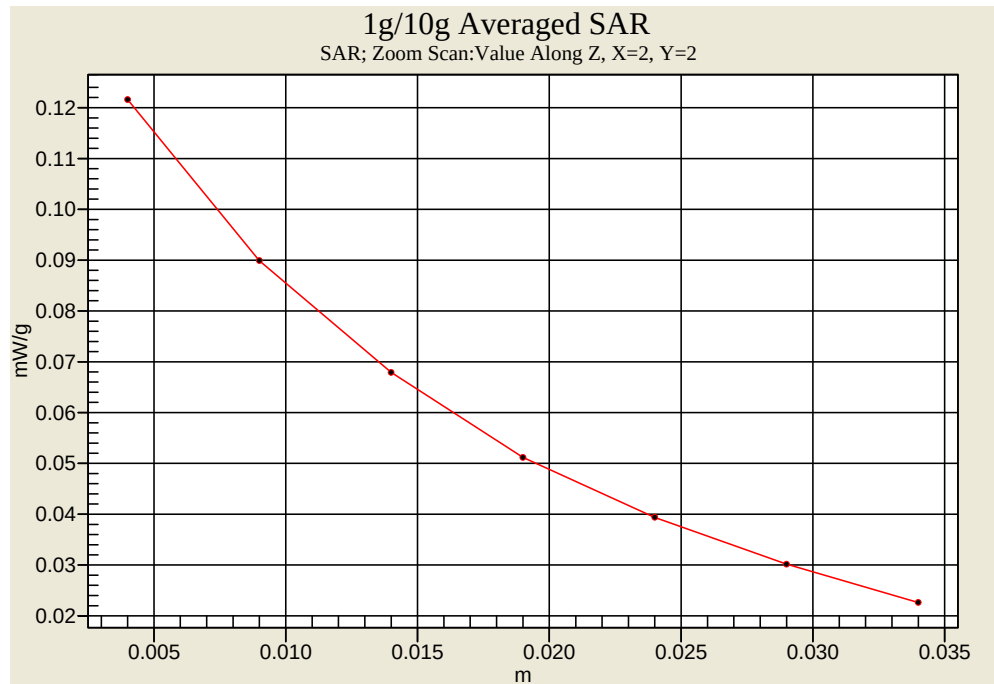
Crest Factor : 1

Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
826.4	4132	WCDMA V	24.37	Right-cheek	PIFA	N/A	0.088	-0.004	-
836.0	4180	WCDMA V	24.18	Right-cheek	PIFA	N/A	0.053	-0.141	-
846.4	4232	WCDMA V	23.90	Right-cheek	PIFA	N/A	0.092	-0.053	-
826.4	4132	WCDMA V	24.37	Right-Tilted	PIFA	N/A	0.056	0.033	-
836.0	4180	WCDMA V	24.18	Right-Tilted	PIFA	N/A	0.033	0.019	-
846.4	4232	WCDMA V	23.90	Right-Tilted	PIFA	N/A	0.057	-0.043	-
826.4	4132	WCDMA V	24.37	Left-cheek	PIFA	N/A	0.100	-0.037	-
836.0	4180	WCDMA V	24.18	Left-cheek	PIFA	N/A	0.060	-0.164	-
846.4	4232	WCDMA V	23.90	Left-cheek	PIFA	N/A	0.114	0.051	-
826.4	4132	WCDMA V	24.37	Left-Tilted	PIFA	N/A	0.059	0.038	-
836.0	4180	WCDMA V	24.18	Left-Tilted	PIFA	N/A	0.034	0.039	-
846.4	4232	WCDMA V	23.90	Left-Tilted	PIFA	N/A	0.064	-0.014	-
Std. C95.1-1999 - 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 V CH4232



11.1.4 WCDMA Band II - Head SAR

Ambient :

Temperature (°C) : 22 ± 2

Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : HSL1950

Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

Measurement :

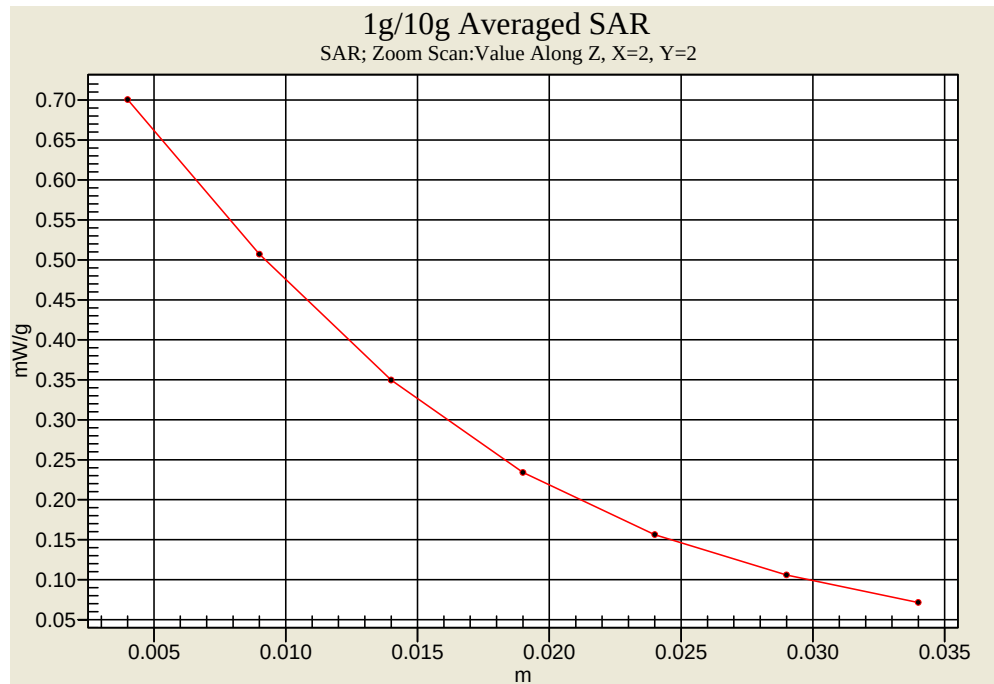
Crest Factor : 1

Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1852.4	9262	WCDMA II	23.63	Right-cheek	PIFA	N/A	0.606	-0.044	-
1880.0	9400	WCDMA II	23.40	Right-cheek	PIFA	N/A	0.633	-0.011	-
1907.6	9538	WCDMA II	23.52	Right-cheek	PIFA	N/A	0.594	-0.013	-
1852.4	9262	WCDMA II	23.63	Right-Tilted	PIFA	N/A	0.267	0.065	-
1880.0	9400	WCDMA II	23.40	Right-Tilted	PIFA	N/A	0.302	0.049	-
1907.6	9538	WCDMA II	23.52	Right-Tilted	PIFA	N/A	0.318	-0.024	-
1852.4	9262	WCDMA II	23.63	Left-cheek	PIFA	N/A	0.594	-0.049	-
1880.0	9400	WCDMA II	23.40	Left-cheek	PIFA	N/A	0.595	0.006	-
1907.6	9538	WCDMA II	23.52	Left-cheek	PIFA	N/A	0.500	0.007	-
1852.4	9262	WCDMA II	23.63	Left-Tilted	PIFA	N/A	0.359	-0.017	-
1880.0	9400	WCDMA II	23.40	Left-Tilted	PIFA	N/A	0.376	-0.029	-
1907.6	9538	WCDMA II	23.52	Left-Tilted	PIFA	N/A	0.342	-0.011	-
Std. C95.1-1999 - 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



11.2 Body SAR

11.2.1 GSM 850 - Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

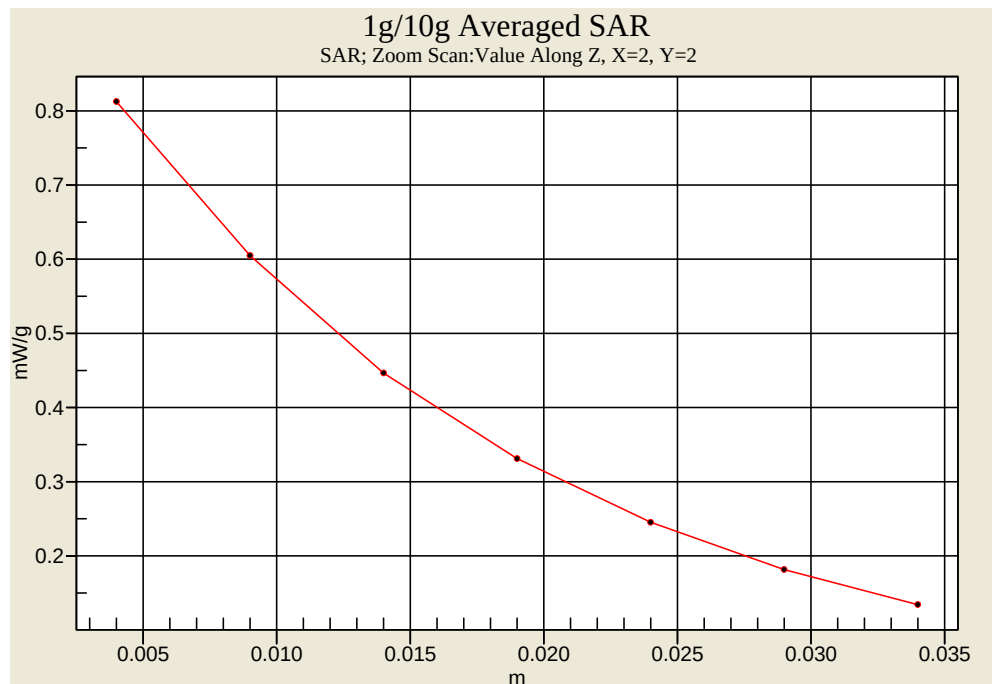
Measurement :

Crest Factor : 8.3 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
824.2	128	GSM 850	32.40	Flat	PIFA	Headset	0.768	-0.061	-
836.6	190	GSM 850	32.24	Flat	PIFA	Headset	0.693	-0.015	-
848.8	251	GSM 850	32.05	Flat	PIFA	Headset	0.489	-0.007	-
Std. C95.1-1999 - 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



11.2.2 GPRS 850 - Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

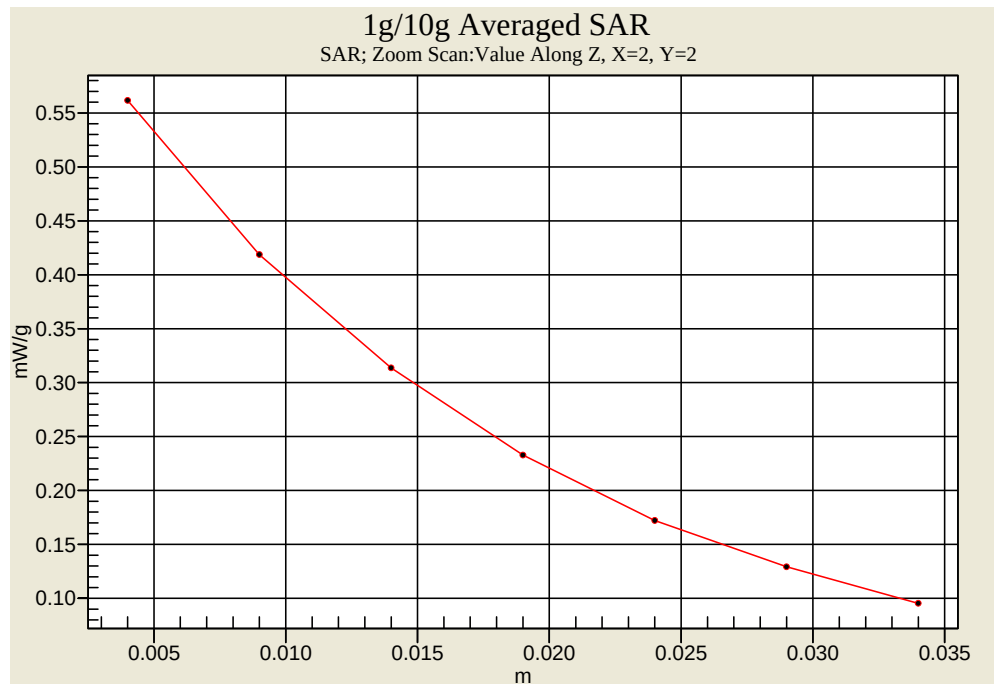
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
824.2	128	GPRS 850	32.60	Flat	PIFA	Headset	0.531	-0.040	3Down1Up
824.2	128	GPRS 850	32.38	Flat	PIFA	Headset	1.050	-0.023	3Down2Up
836.6	190	GPRS 850	32.20	Flat	PIFA	Headset	0.994	-0.016	3Down2Up
848.8	251	GPRS 850	31.92	Flat	PIFA	Headset	0.784	-0.029	3Down2Up
Std. C95.1-1999 - 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)



11.2.3 EGPRS 850 - Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

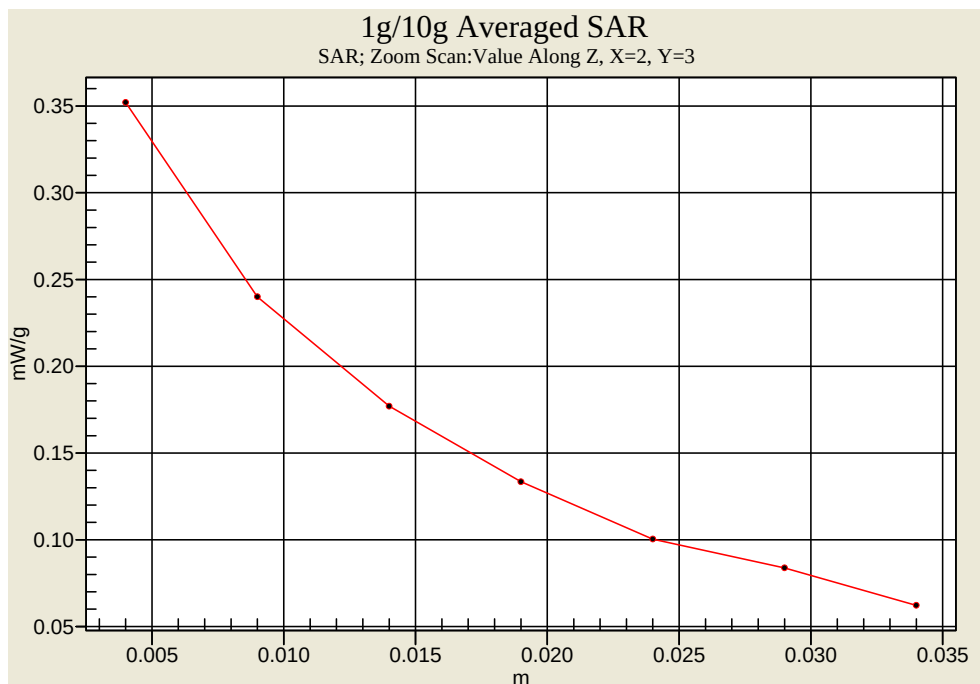
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
824.2	128	EGPRS 850	26.92	Flat	PIFA	Headset	0.313	0.007	3Down2Up
836.6	190	EGPRS 850	27.00	Flat	PIFA	Headset	0.147	0.023	3Down1Up
836.6	190	EGPRS 850	26.65	Flat	PIFA	Headset	0.324	-0.004	3Down2Up
848.8	251	EGPRS 850	26.38	Flat	PIFA	Headset	0.217	0.140	3Down2Up
Std. C95.1-1999 - 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)



11.2.4 PCS 1900 - Body SAR (15 mm separation)

Ambient :

Temperature (°C) : 22 ± 2

Relative HUMIDITY (%) : 40-70

Liquid :

Mixture Type : MSL1950

Liquid Temperature (°C) : 22.0

Depth of liquid (cm) : 15

Measurement :

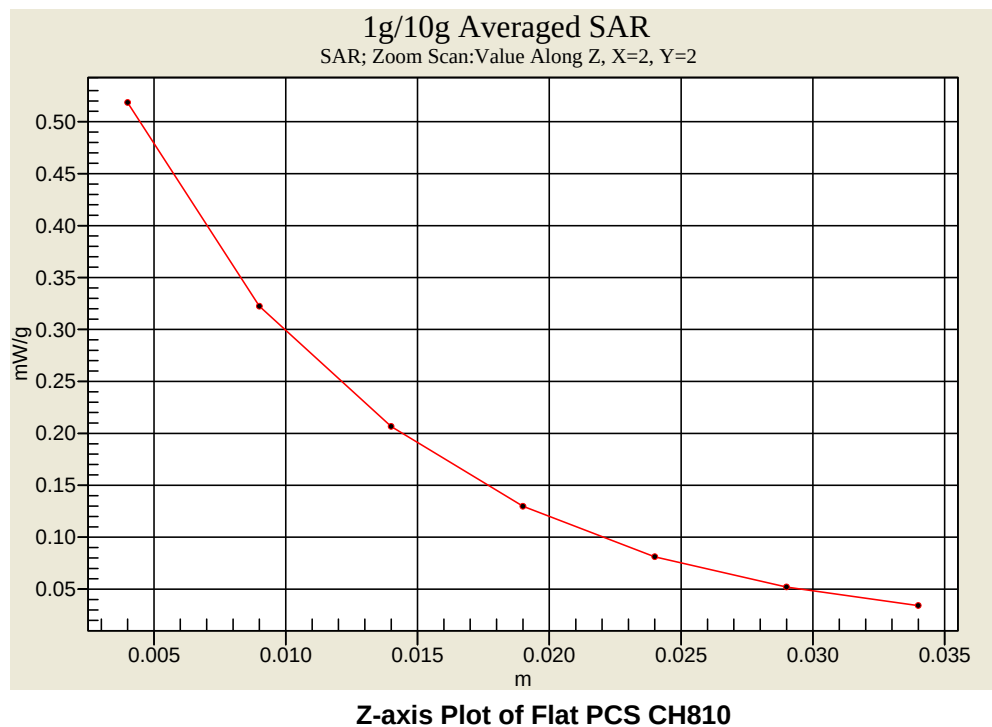
Crest Factor : 8.3

Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1850.2	512	PCS 1900	28.85	Flat	PIFA	Headset	0.339	-0.014	-
1880.0	661	PCS 1900	29.15	Flat	PIFA	Headset	0.430	0.027	-
1909.8	810	PCS 1900	29.19	Flat	PIFA	Headset	0.478	-0.018	-
Std. C95.1-1999 - 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





11.2.5 GPRS 1900 - Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL1950 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

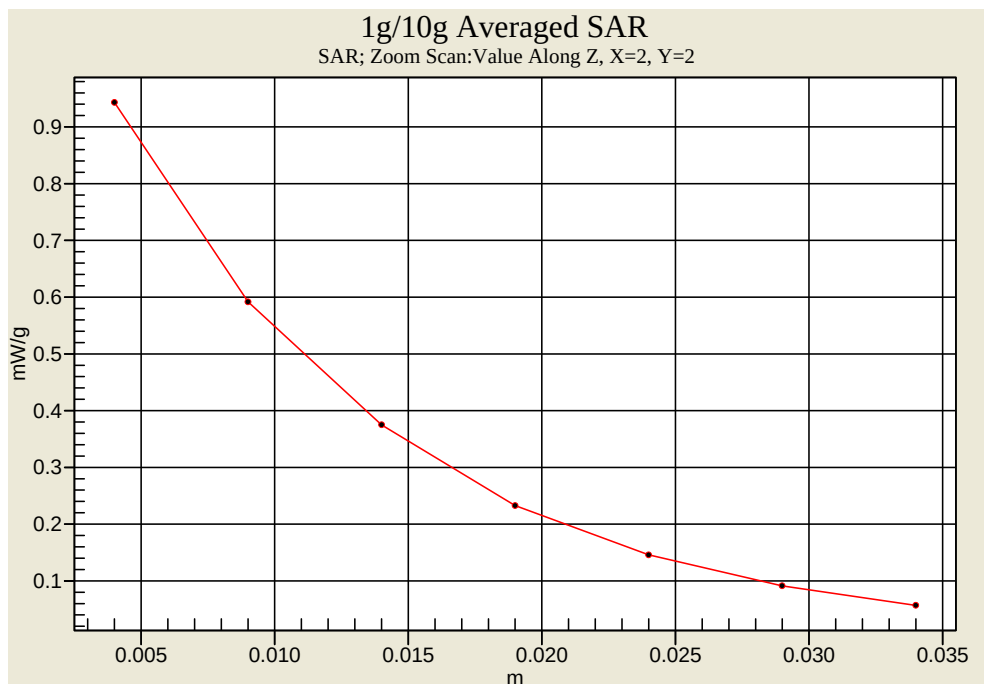
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1850.2	512	GPRS 1900	28.80	Flat	PIFA	Headset	0.646	-0.034	3Down2Up
1880.0	661	GPRS 1900	28.91	Flat	PIFA	Headset	0.809	-0.122	3Down2Up
1909.8	810	GPRS 1900	29.80	Flat	PIFA	Headset	0.456	-0.038	3Down1Up
1909.8	810	GPRS 1900	29.14	Flat	PIFA	Headset	0.888	0.013	3Down2Up
Std. C95.1-1999 - 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)



11.2.6 EGPRS 1900 - Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL1950 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

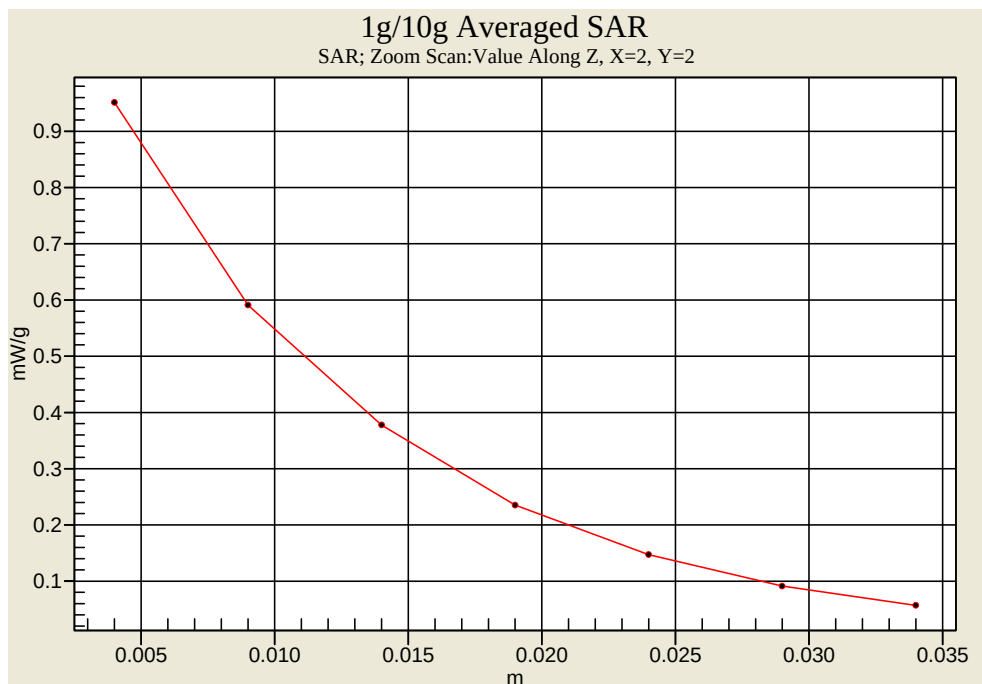
Measurement :

Crest Factor : 4.2 / 8.3 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1850.2	512	EGPRS 1900	26.11	Flat	PIFA	Headset	0.702	-0.025	3Down2Up
1880.0	661	EGPRS 1900	25.94	Flat	PIFA	Headset	0.814	-0.018	3Down2Up
1909.8	810	EGPRS 1900	26.70	Flat	PIFA	Headset	0.459	0.008	3Down1Up
1909.8	810	EGPRS 1900	25.90	Flat	PIFA	Headset	0.883	-0.129	3Down2Up
Std. C95.1-1999 - 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)



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

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

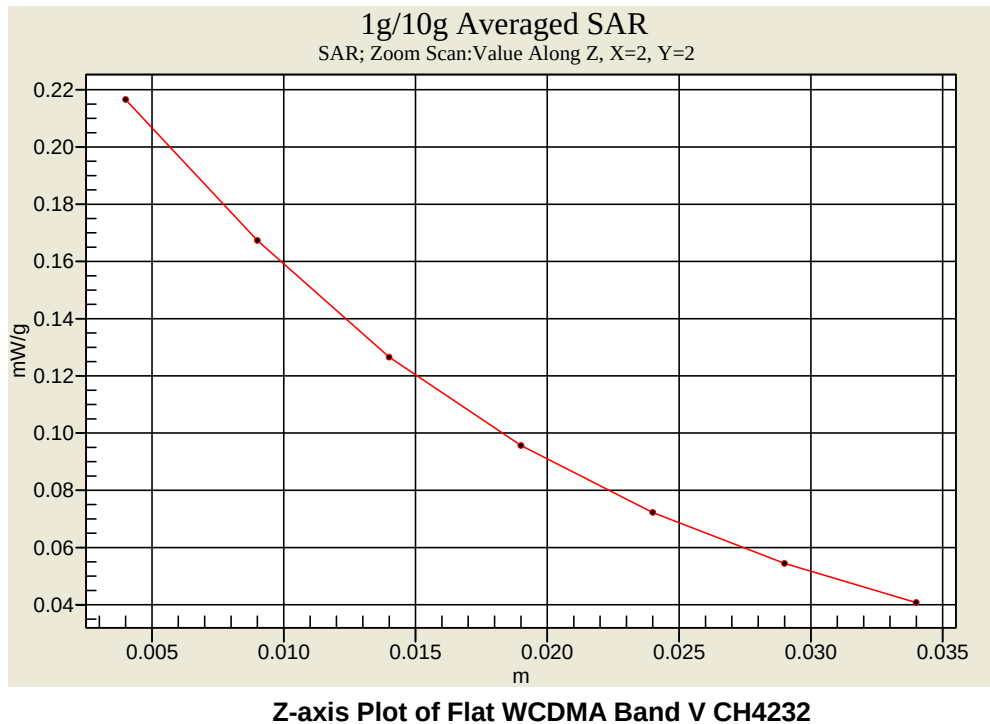
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
826.6	4132	WCDMA V	24.37	Flat	PIFA	Headset	0.202	-0.011	-
836.0	4180	WCDMA V	24.18	Flat	PIFA	Headset	0.123	-0.001	-
846.6	4232	WCDMA V	23.90	Flat	PIFA	Headset	0.205	0.049	-
Std. C95.1-1999 - 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





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

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

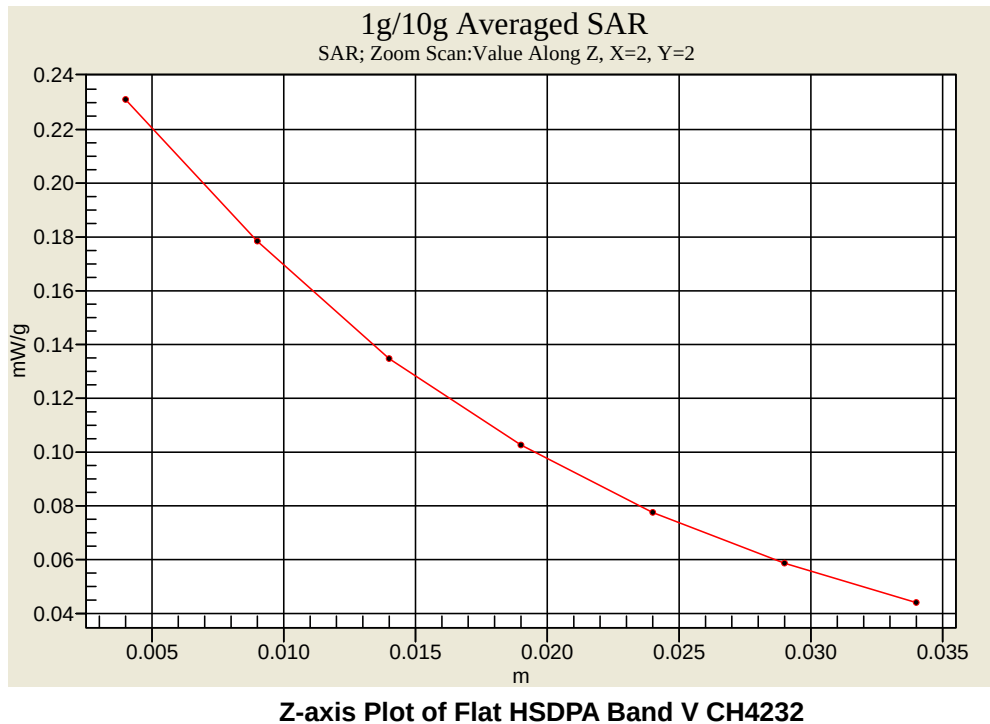
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
826.6	4132	HSDPA V	23.19	Flat	PIFA	Headset	0.198	-0.023	-
836.0	4180	HSDPA V	23.15	Flat	PIFA	Headset	0.134	0.060	-
846.6	4232	HSDPA V	22.90	Flat	PIFA	Headset	0.219	0.007	-
Std. C95.1-1999 - 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





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

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

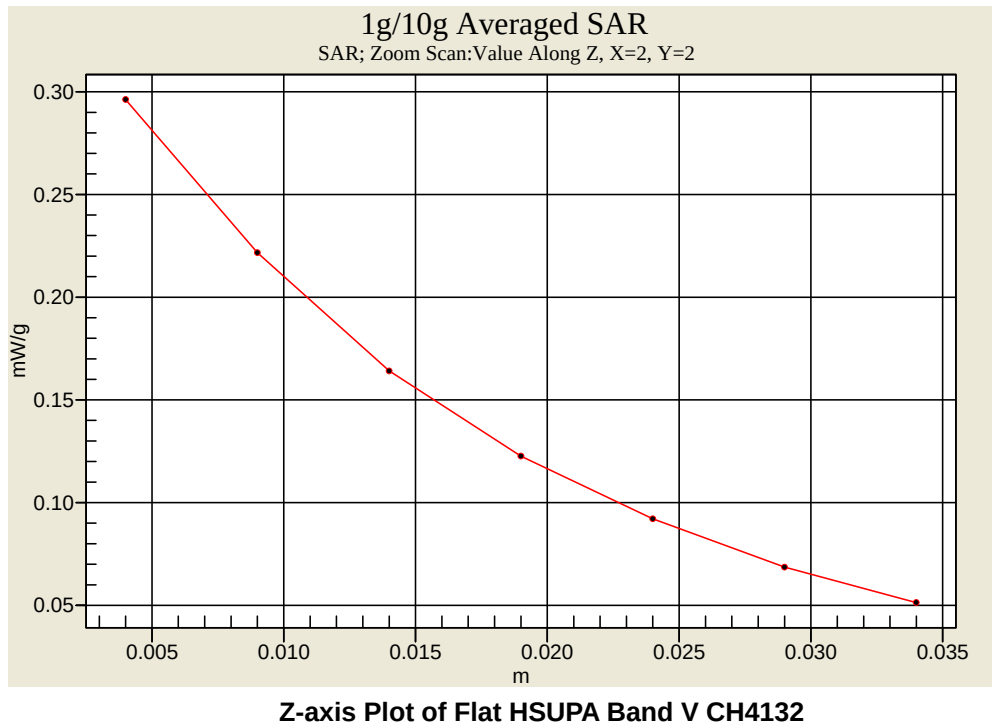
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
826.6	4132	HSUPA V	22.92	Flat	PIFA	Headset	0.281	0.093	-
836.0	4180	HSUPA V	23.18	Flat	PIFA	Headset	0.123	-0.178	-
846.6	4232	HSUPA V	22.68	Flat	PIFA	Headset	0.155	-0.049	-
Std. C95.1-1999 - 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





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

Ambient :

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

Liquid :

Mixture Type : MSL1950 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

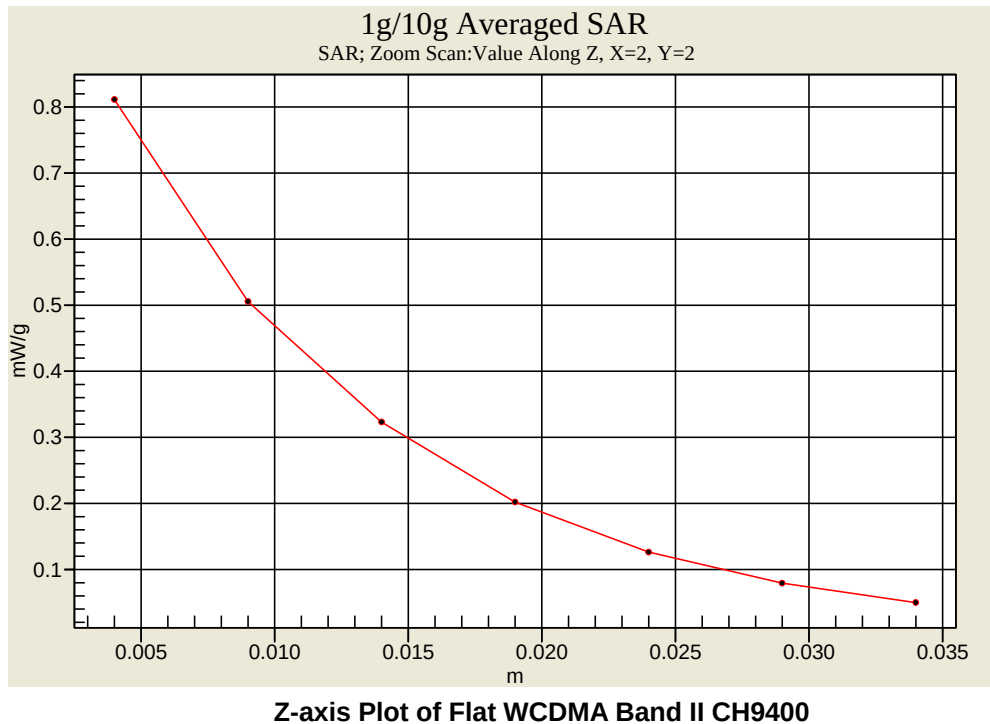
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1852.4	9262	WCDMA II	23.63	Flat	PIFA	Headset	0.647	0.014	-
1880.0	9400	WCDMA II	23.40	Flat	PIFA	Headset	0.748	-0.032	-
1907.6	9538	WCDMA II	23.52	Flat	PIFA	Headset	0.700	0.053	-
Std. C95.1-1999 - 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





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

Ambient :

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

Liquid :

Mixture Type : MSL1950 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

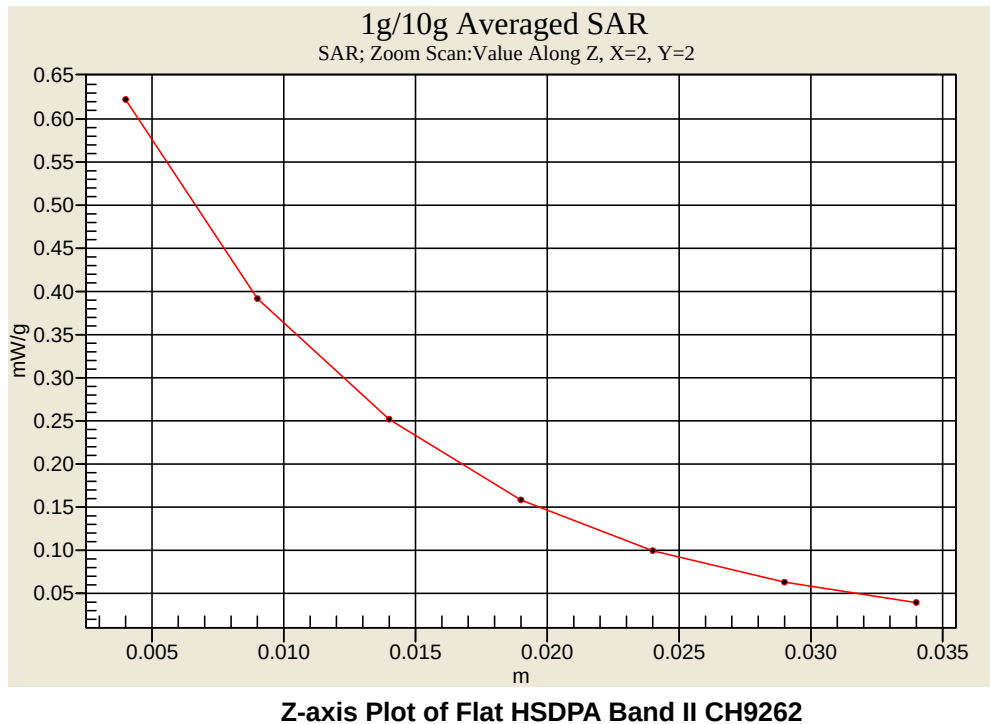
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1852.4	9262	HSDPA II	23.10	Flat	PIFA	Headset	0.572	-0.049	-
1880.0	9400	HSDPA II	23.35	Flat	PIFA	Headset	0.558	-0.057	-
1907.6	9538	HSDPA II	22.90	Flat	PIFA	Headset	0.551	-0.023	-
Std. C95.1-1999 - 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





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

Ambient :

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

Liquid :

Mixture Type : MSL1950 Liquid Temperature (°C) : 22.0
Depth of liquid (cm) : 15

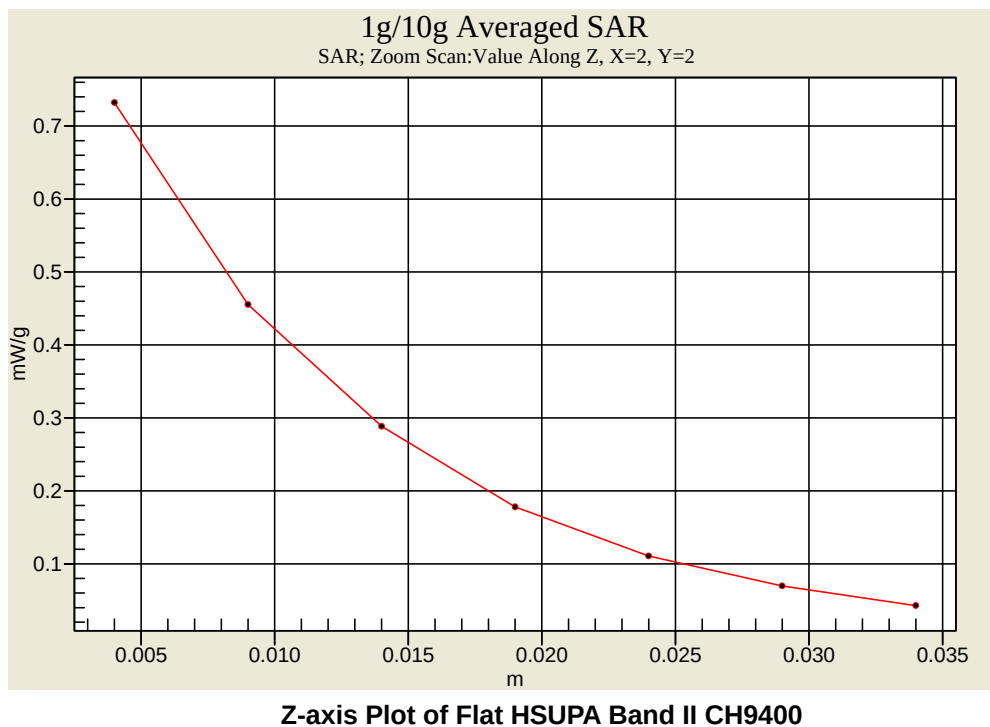
Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1852.4	9262	HSUPA II	22.92	Flat	PIFA	Headset	0.533	0.033	-
1880.0	9400	HSUPA II	23.18	Flat	PIFA	Headset	0.675	0.067	-
1907.6	9538	HSUPA II	22.68	Flat	PIFA	Headset	0.417	0.008	-
Std. C95.1-1999 - 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





11.2.13 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 :

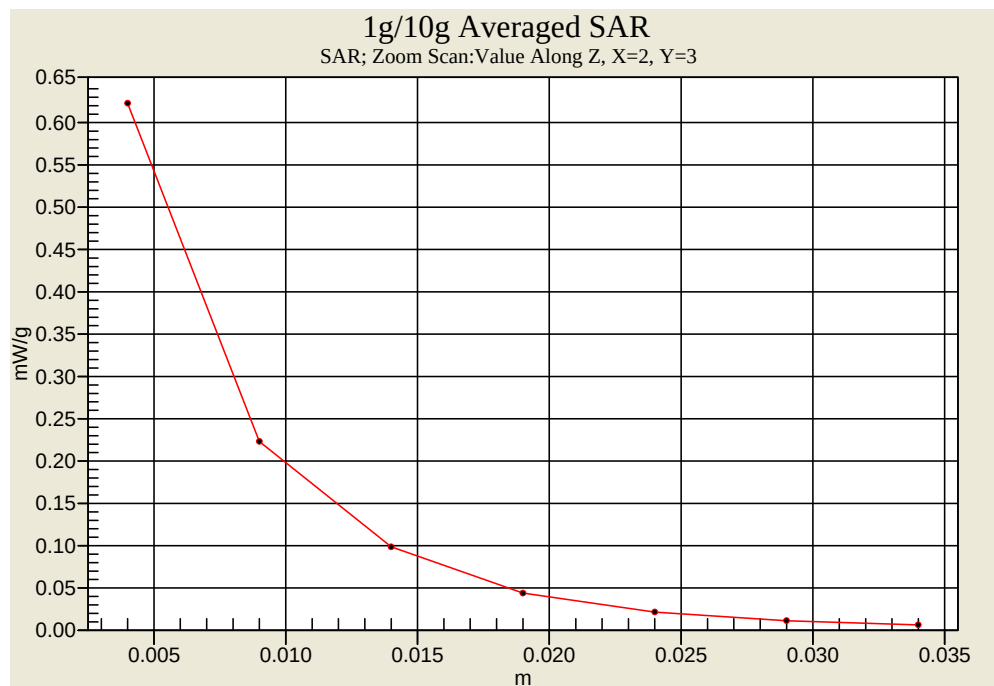
Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
2412	1	802.11 b	18.42	Flat	PIFA Chip	Headset	0.544	0.006	1M
2412	1	802.11 b	18.35	Flat	PIFA Chip	Headset	0.533	0.041	11M
2437	6	802.11 b	18.83	Flat	PIFA Chip	Headset	0.532	-0.016	1M
2462	11	802.11 b	17.74	Flat	PIFA Chip	Headset	0.369	-0.025	1M
Std. C95.1-1999 - 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



11.2.14 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 :

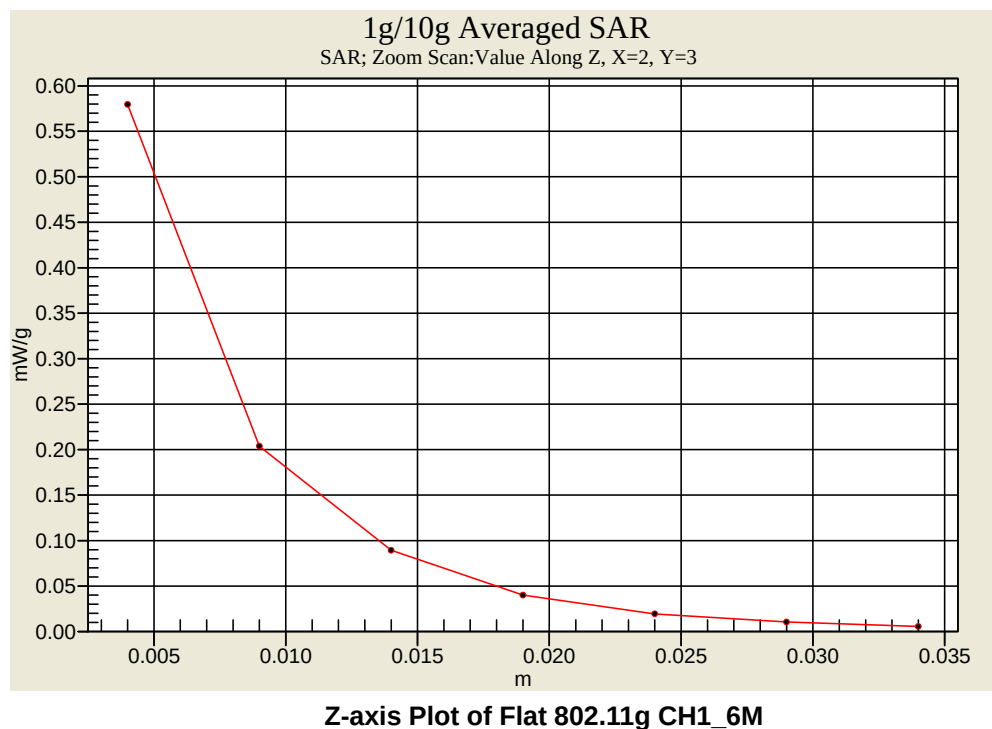
1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
2412	1	802.11 g	18.49	Flat	PIFA Chip	Headset	0.476	-0.031	6M
2412	1	802.11 g	18.42	Flat	PIFA Chip	Headset	0.368	0.003	54M
2437	6	802.11 g	18.27	Flat	PIFA Chip	Headset	0.445	-0.014	6M
2462	11	802.11 g	17.87	Flat	PIFA Chip	Headset	0.303	0.002	6M
Std. C95.1-1999 - 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





11.3 Co-Location SAR

11.3.1 Head SAR

Ambient :

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

Liquid :

Mixture Type : HSL1950 Liquid Temperature (°C) : 22.0
HSL2450 Depth of liquid (cm) : 15

Measurement :

Crest Factor : 1 Probe S/N : 1530

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
1880.0	9400	WCDMA II	23.40	Right-Cheek	PIFA	N/A	0.615	-0.037	---
2412	1	802.11b / 1M	18.42	Right-Cheek	PIFA Chip	N/A	0.021	-0.037	---
WCDMA II CH9400 + 802.11b 1M CH1				Right-Cheek	---	N/A	0.617	---	---
Std. C95.1-1999 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population					1.6 W/kg (mW/g) Averaged over 1 gram				

Detail results see Appendix C.

11.3.2 Body SAR (15 mm separation)

Ambient :

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

Liquid :

Mixture Type : MSL900 Liquid Temperature (°C) : 22.0
MSL2450 Depth of liquid (cm) : 15

Measurement :

Crest Factor : GPRS 850 – 4.2 Probe S/N : 1530
802.11b – 1

Frequency		Band	Power (dBm)	Phantom Position	Antenna Position	Accessory	SAR _{1g} [mW/g]	Power Drift (dB)	Remark
MHz	CH								
824.2	128	GPRS 850	32.38	Flat	PIFA	Headset	0.978	-0.138	3Down2Up
2412	1	802.11b / 1M	18.42	Flat	PIFA Chip	Headset	0.354	-0.002	---
GPRS 850 CH128 + 802.11b 1M CH1				Flat	---	Headset	1.050	---	---
Std. C95.1-1999 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population					1.6 W/kg (mW/g) Averaged over 1 gram				

Detail results see Appendix C.

11.4 Setup Photo

Head Setup



Figure 14. Right Head SAR Test Setup (Cheek)



Figure 15. Right Head SAR Test Setup (Tilted)



Figure 16. Left Head SAR Test Setup (Cheek)



Figure 17. Left Head SAR Test Setup (Tilted)

Body Setup

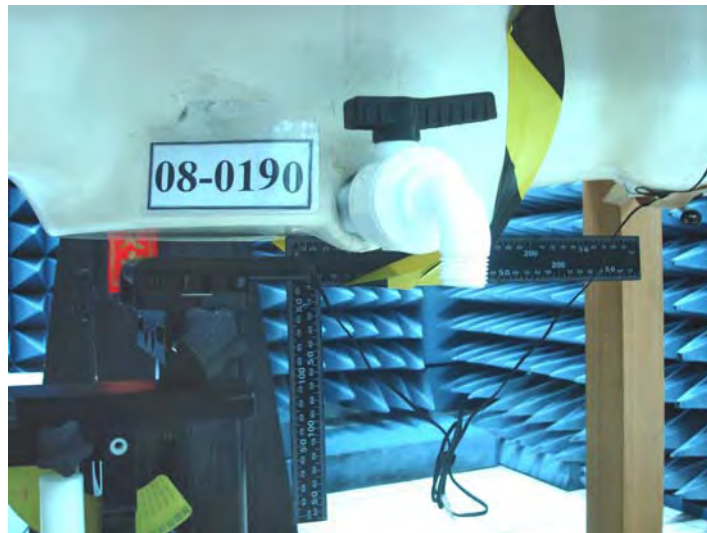


Figure 18. Body SAR Test Setup (Flat Section) _ 15 mm separation



Figure 19. Body SAR Test Setup (Flat Section) _ 2 mm separation



11.5 Std. C95.1-1999 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. C95.1-1999, "American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300KHz to 100GHz", New York.
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- [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.
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- [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: 7/16/2008 7:58:19 PM

System Performance Check at 900MHz_20080716_Head

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:172

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 0.994 \text{ mho/m}$; $\epsilon_r = 40.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 900MHz/Area Scan (61x121x1):

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

Maximum value of SAR (interpolated) = 2.86 mW/g

System Performance Check at 900MHz/Zoom Scan (7x7x7)/Cube 0:

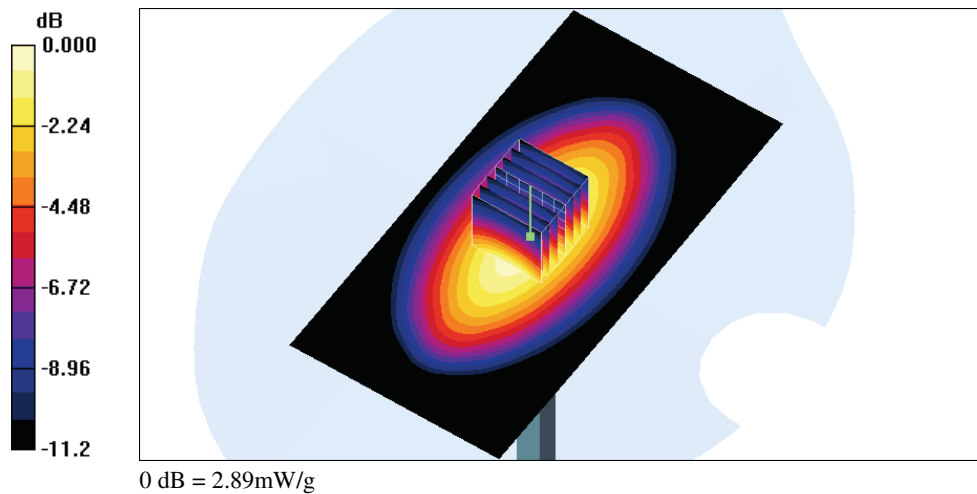
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.1 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 4.00 W/kg

SAR(1 g) = 2.68 mW/g; SAR(10 g) = 1.72 mW/g

Maximum value of SAR (measured) = 2.89 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 11:11:37 PM

System Performance Check at 900MHz_20080717_Head

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:172

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 0.994 \text{ mho/m}$; $\epsilon_r = 40.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 900MHz/Area Scan (61x121x1):

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

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

System Performance Check at 900MHz/Zoom Scan (7x7x7)/Cube 0:

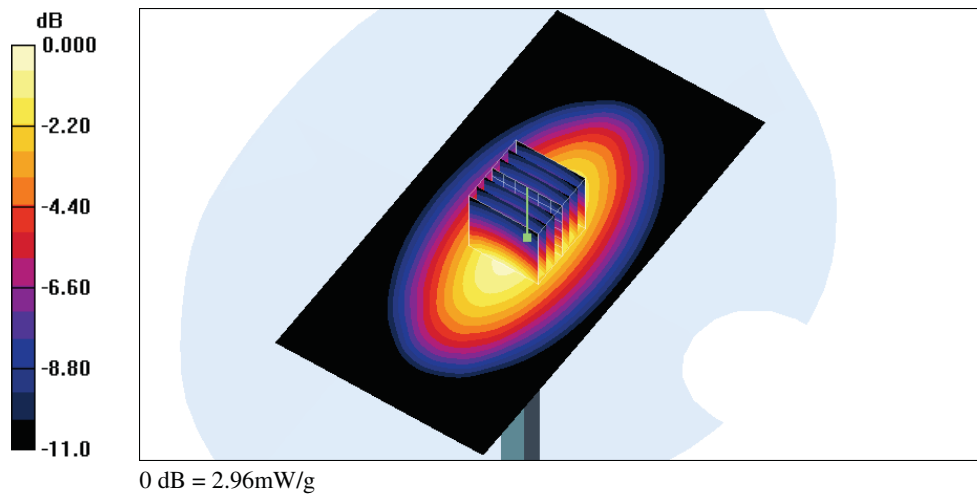
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.9 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 4.08 W/kg

SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.75 mW/g

Maximum value of SAR (measured) = 2.96 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 11:44:07 AM

System Performance Check at 900MHz_20080718_Body

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:172

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.05 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 900MHz/Area Scan (61x121x1):

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

Maximum value of SAR (interpolated) = 3.01 mW/g

System Performance Check at 900MHz/Zoom Scan (7x7x7)/Cube 0:

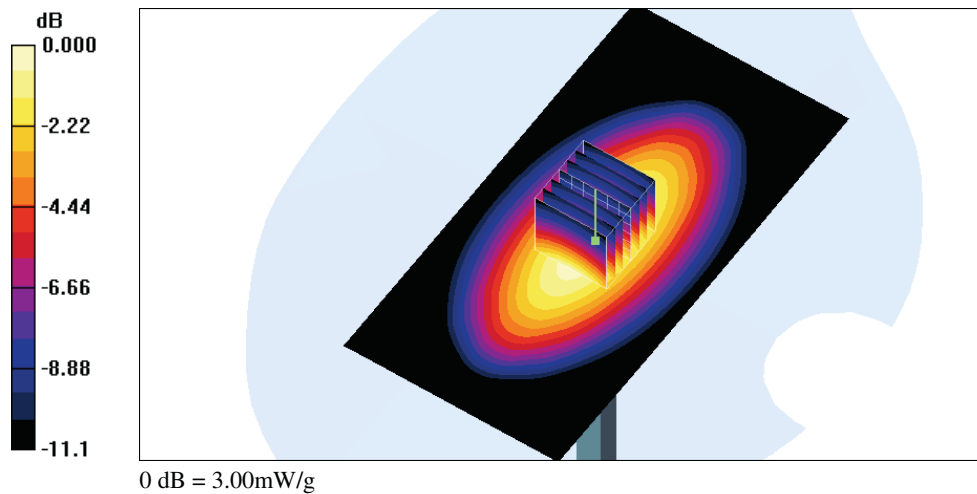
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.5 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 4.15 W/kg

SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.77 mW/g

Maximum value of SAR (measured) = 3.00 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 1:02:27 AM

System Performance Check at 900MHz_20080905_Body

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:172

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.04 \text{ mho/m}$; $\epsilon_r = 53.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 900MHz/Area Scan (61x121x1):

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

Maximum value of SAR (interpolated) = 3.21 mW/g

System Performance Check at 900MHz/Zoom Scan (7x7x7)/Cube 0:

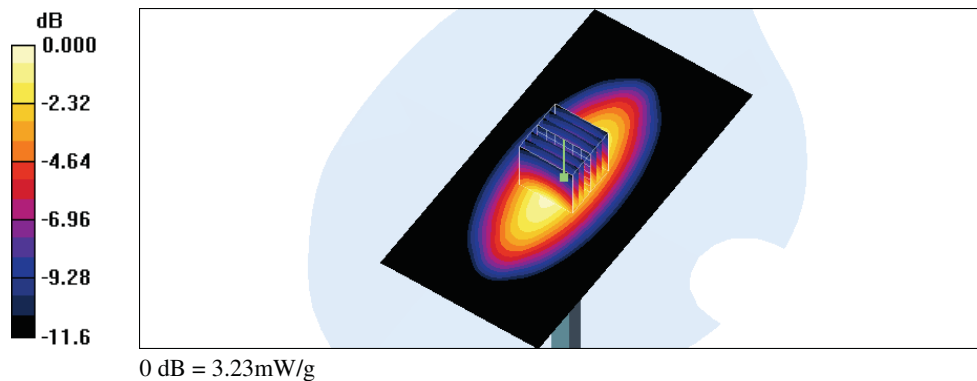
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.9 V/m ; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 4.70 W/kg

SAR(1 g) = 2.94 mW/g ; SAR(10 g) = 1.8 mW/g

Maximum value of SAR (measured) = 3.23 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2008/11/5 AM 10:34:18

System Performance Check at 900MHz_20081105_Body

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:172

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.05 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(6.24, 6.24, 6.24); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 900MHz/Area Scan (61x121x1):

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

Maximum value of SAR (interpolated) = 3.05 mW/g

System Performance Check at 900MHz/Zoom Scan (7x7x7)/Cube 0:

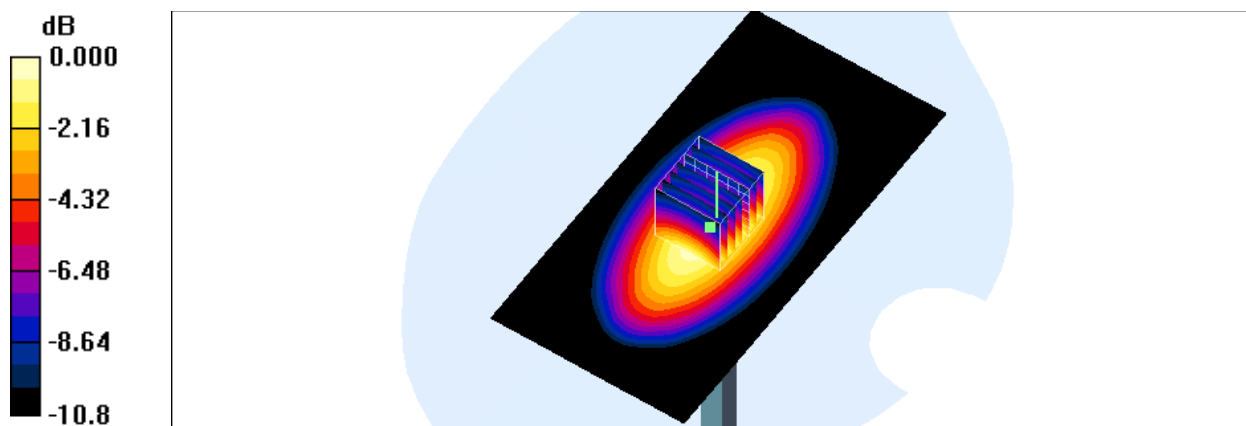
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.8 V/m ; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 4.03 W/kg

SAR(1 g) = 2.79 mW/g ; SAR(10 g) = 1.82 mW/g

Maximum value of SAR (measured) = 3.03 mW/g



0 dB = 3.03mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 2:33:57 PM

System Performance Check at 1950MHz_20080717_Head

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1117

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 39.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.48, 4.48, 4.48); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 1950 MHz/Area Scan (61x81x1):

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

Maximum value of SAR (interpolated) = 11.2 mW/g

System Performance Check at 1950 MHz/Zoom Scan (7x7x7)/Cube 0:

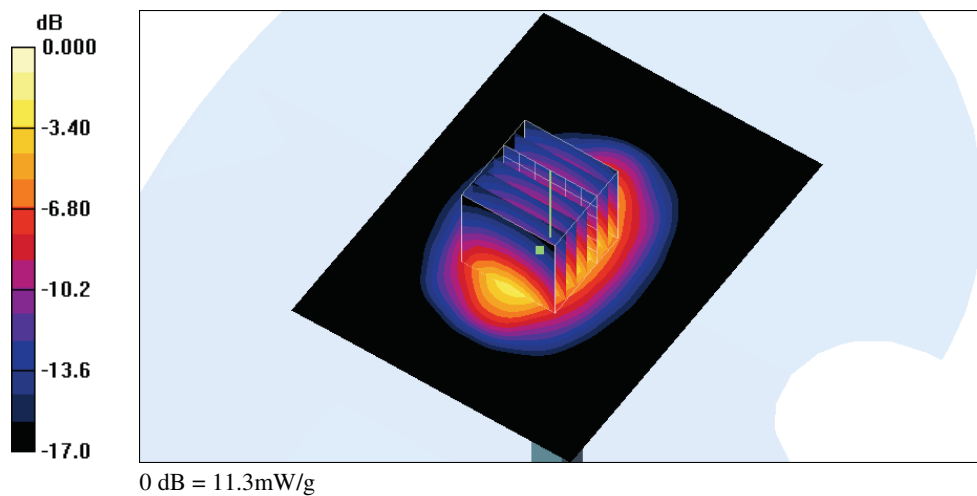
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 91.4 V/m; Power Drift = 0.093 dB

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 10 mW/g; SAR(10 g) = 5.35 mW/g

Maximum value of SAR (measured) = 11.3 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2008/11/7 PM 02:46:13

System Performance Check at 1950MHz_20081107_Head

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1117

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.25, 5.25, 5.25); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 1950MHz/Area Scan (61x61x1):

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

Maximum value of SAR (interpolated) = 11.9 mW/g

System Performance Check at 1950MHz/Zoom Scan (7x7x7)/Cube 0:

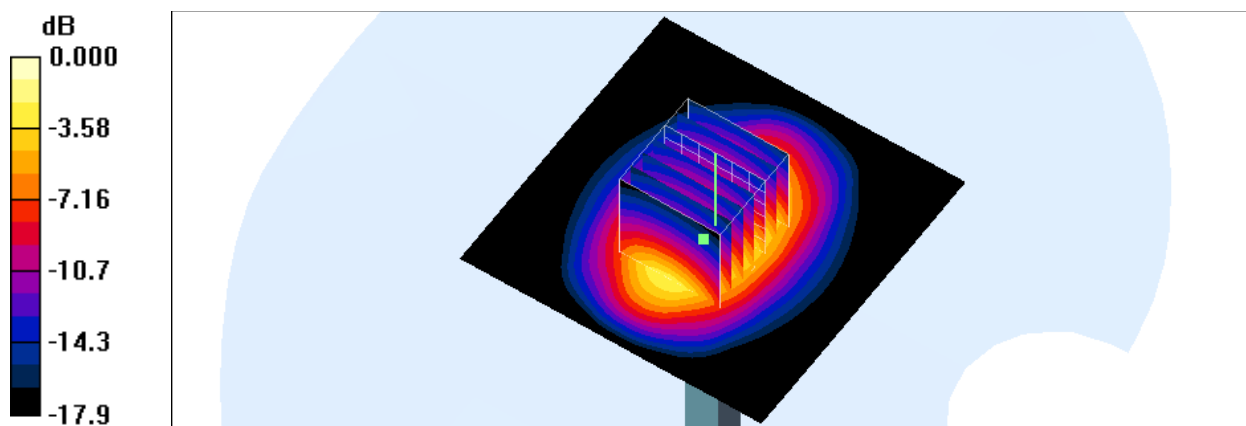
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 91.5 V/m ; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.7 mW/g ; SAR(10 g) = 5.09 mW/g

Maximum value of SAR (measured) = 10.9 mW/g



0 dB = 10.9 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 7:42:45 PM

System Performance Check at 1950MHz_20080721_Body

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1117

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.56 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.1, 4.1, 4.1); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 1950MHz/Area Scan (61x81x1):

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

Maximum value of SAR (interpolated) = 12.1 mW/g

System Performance Check at 1950MHz/Zoom Scan (7x7x7)/Cube 0:

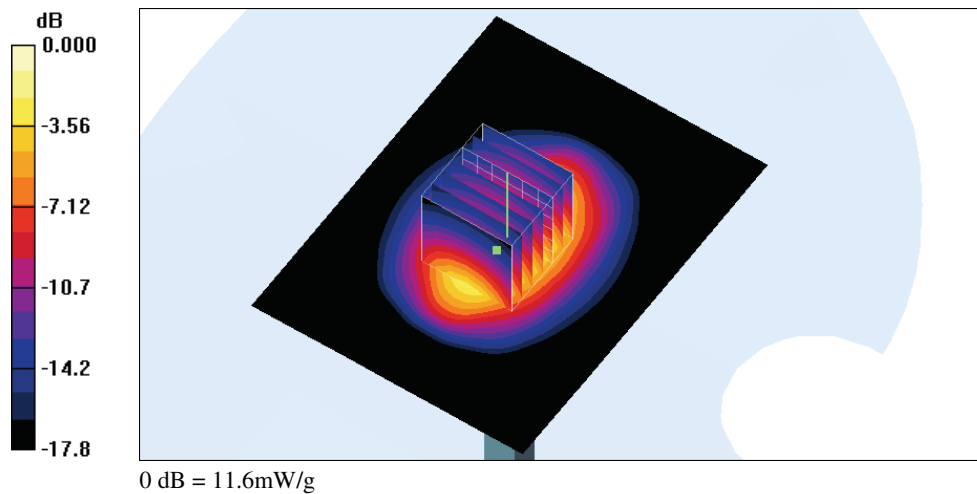
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 92.0 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.41 mW/g

Maximum value of SAR (measured) = 11.6 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/4/2008 11:28:32 PM

System Performance Check at 1950MHz_20080904_Body

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1117

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.56 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.1, 4.1, 4.1); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 1950MHz/Area Scan (41x81x1):

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

Maximum value of SAR (interpolated) = 11.0 mW/g

System Performance Check at 1950MHz/Zoom Scan (7x7x7)/Cube 0:

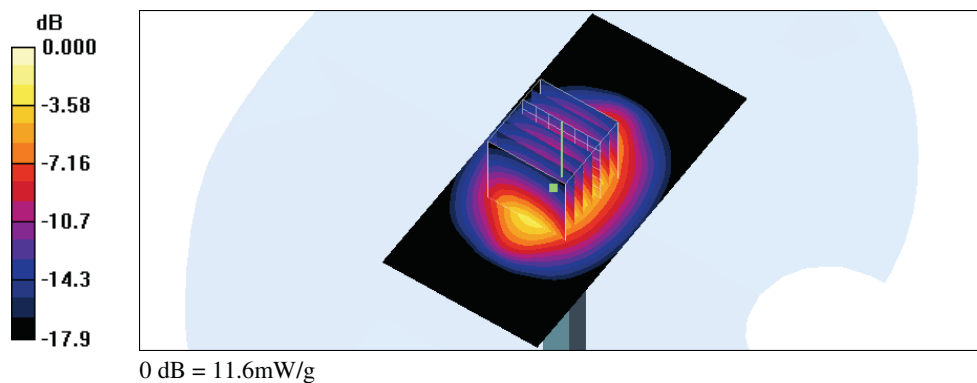
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 88.6 V/m; Power Drift = 0.128 dB

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.39 mW/g

Maximum value of SAR (measured) = 11.6 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2008/11/7 PM 05:53:02

System Performance Check at 2450Hz_20081107_Head

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

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.73$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.79, 4.79, 4.79); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

System Performance Check at 1950MHz/Area Scan (61x61x1):

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

Maximum value of SAR (interpolated) = 16.3 mW/g

System Performance Check at 1950MHz/Zoom Scan (7x7x7)/Cube 0:

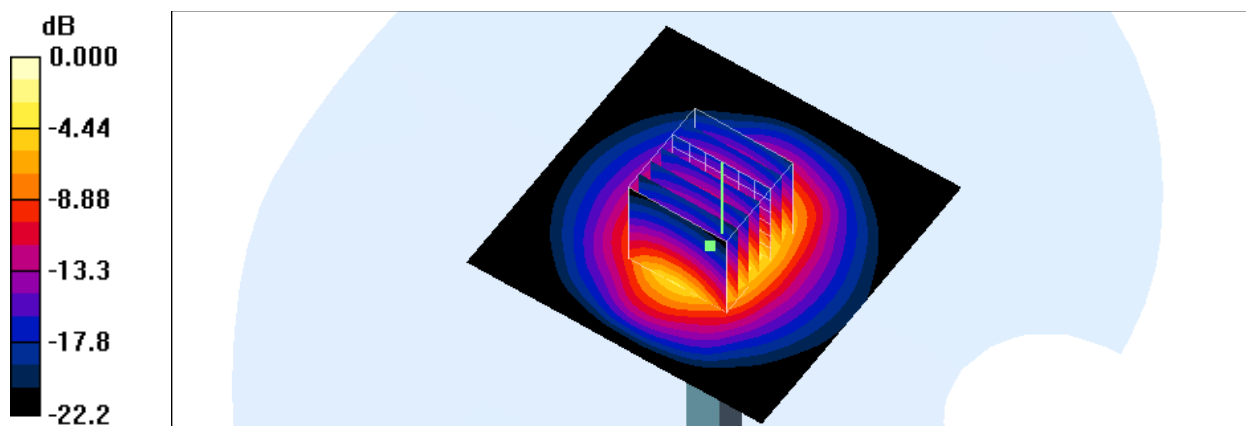
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.6 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 30.5 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (measured) = 14.8 mW/g



0 dB = 14.8mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 6:44:51 PM

System Performance Check at 2450MHz_20080819_Body

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

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

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.97 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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

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

Maximum value of SAR (interpolated) = 16.1 mW/g

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

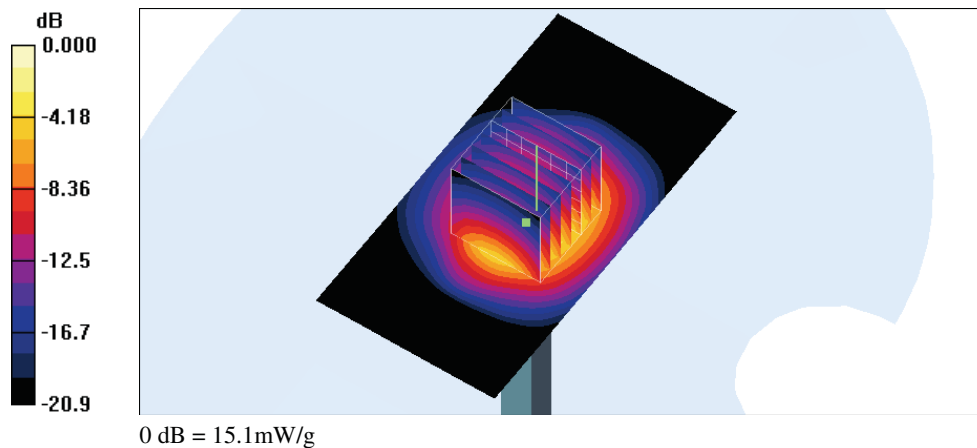
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 92.0 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 26.2 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.51 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2008/11/5 PM 06:44:51

System Performance Check at 2450MHz_20081105_Body

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

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.11, 4.11, 4.11); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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

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

Maximum value of SAR (interpolated) = 15.7 mW/g

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

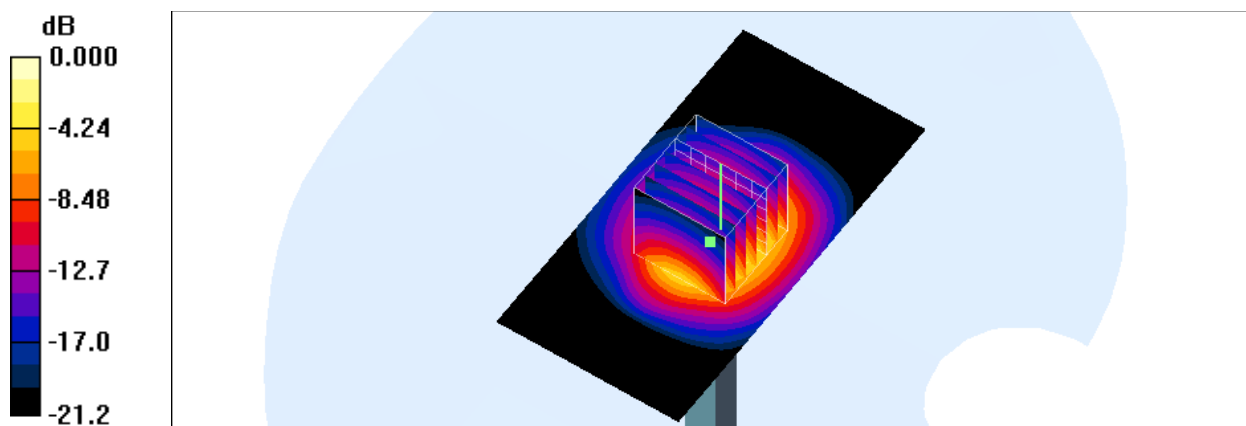
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.0 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 30.1 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.3 mW/g

Maximum value of SAR (measured) = 14.7 mW/g



0 dB = 14.7mW/g



Appendix B - SAR Measurement Data

See following Attached Pages.



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 1:10:47 AM

RC_GSM850 CH128

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (71x131x1):

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

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

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

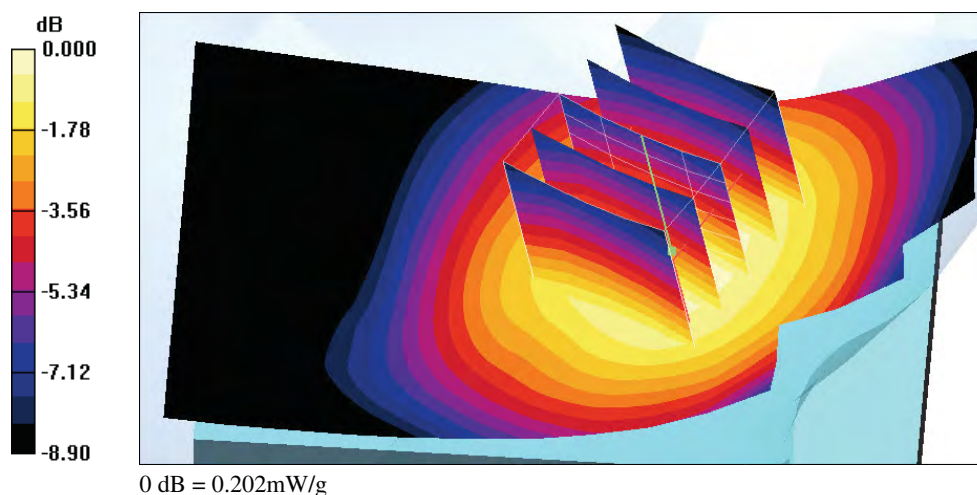
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.30 V/m; Power Drift = 0.060 dB

Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.143 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 12:18:55 AM

RC_GSM850 CH190

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.206 mW/g

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

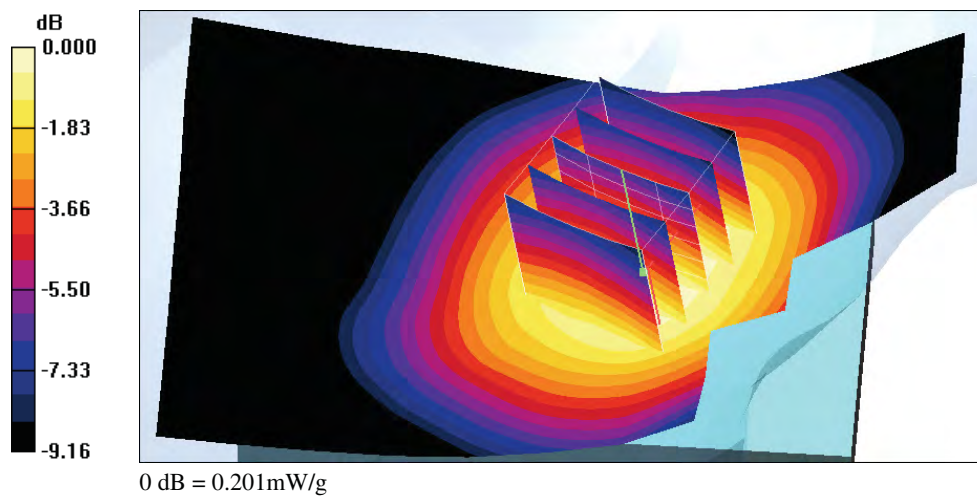
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.42 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.144 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 12:48:42 AM

RC_GSM850 CH251

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (91x151x1):

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

Maximum value of SAR (interpolated) = 0.178 mW/g

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

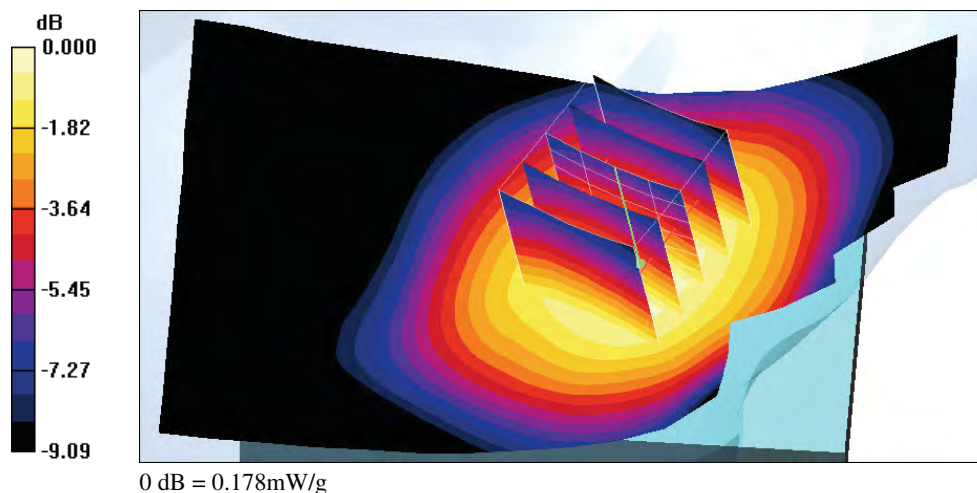
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.11 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.210 W/kg

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

Maximum value of SAR (measured) = 0.178 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 1:36:14 AM

RT_GSM850 CH128

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (71x131x1):

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

Maximum value of SAR (interpolated) = 0.154 mW/g

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

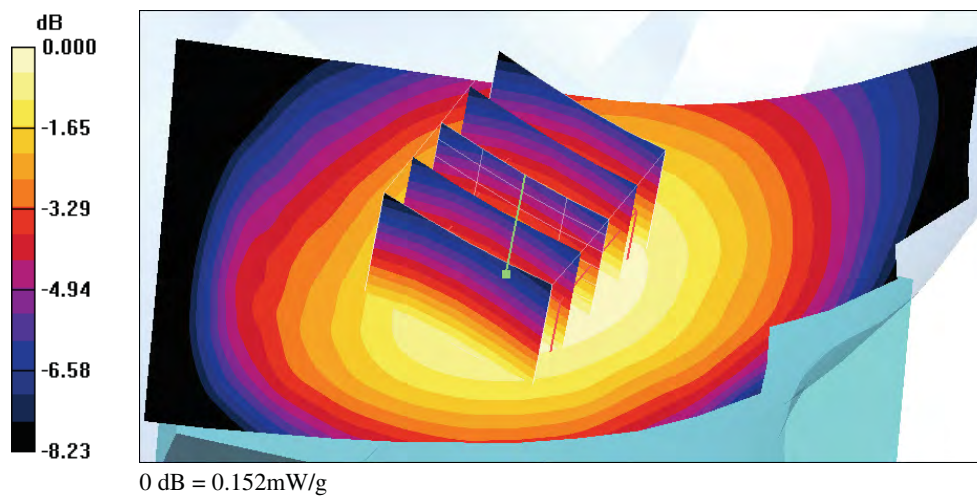
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.51 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.174 W/kg

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

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 1:54:25 AM

RT_GSM850 CH190

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (71x131x1):

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

Maximum value of SAR (interpolated) = 0.157 mW/g

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

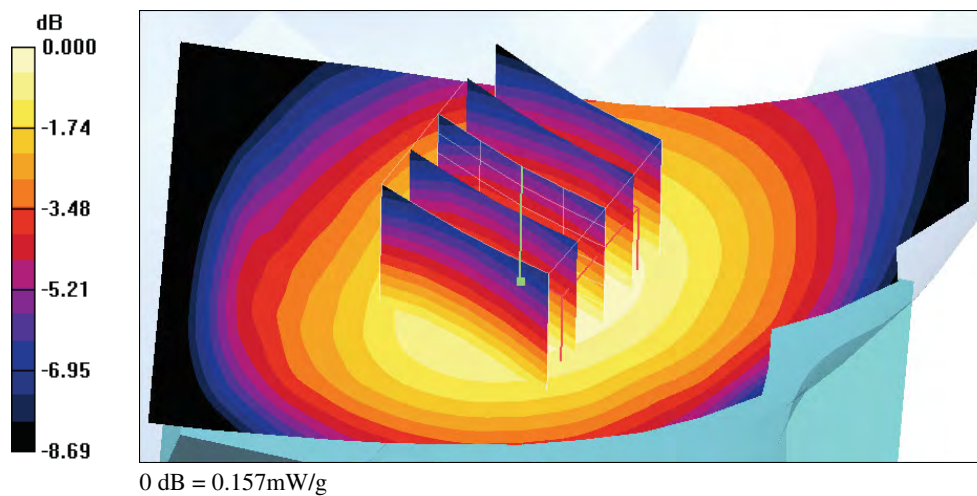
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.37 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.114 mW/g

Maximum value of SAR (measured) = 0.157 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 2:12:58 AM

RT_GSM850 CH251

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 0.924 \text{ mho/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (71x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.126 mW/g

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

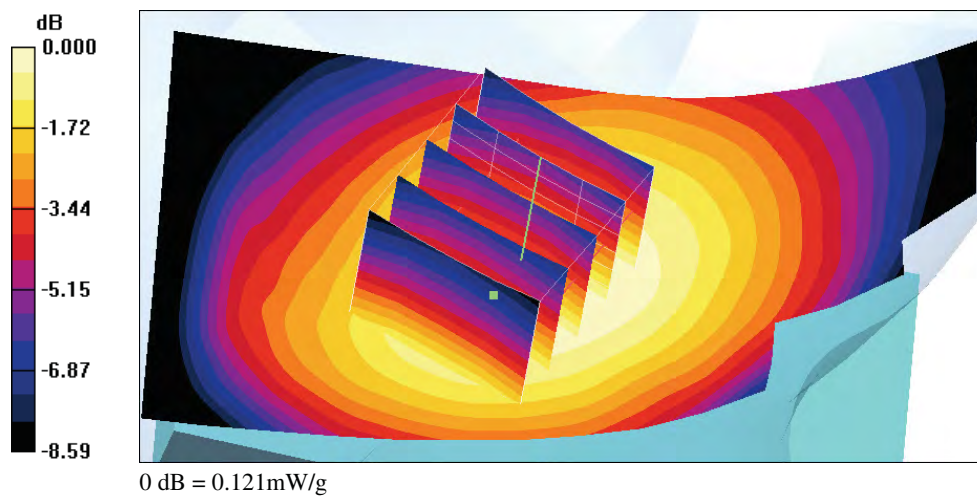
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.60 V/m ; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.117 mW/g ; SAR(10 g) = 0.090 mW/g

Maximum value of SAR (measured) = 0.121 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 2:39:41 AM

LC_GSM850 CH128

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (71x131x1):

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

Maximum value of SAR (interpolated) = 0.249 mW/g

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

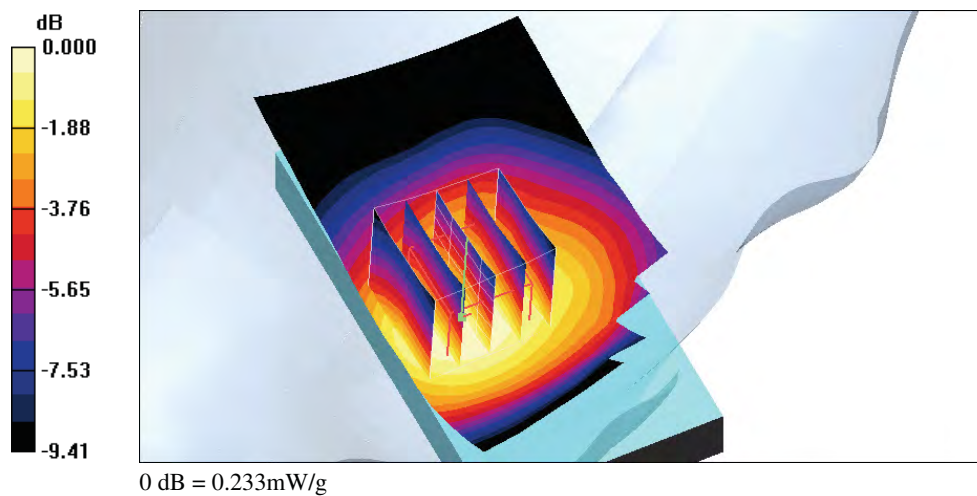
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.17 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.157 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 3:28:55 AM

LC_GSM850 CH190

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (91x131x1):

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

Maximum value of SAR (interpolated) = 0.221 mW/g

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

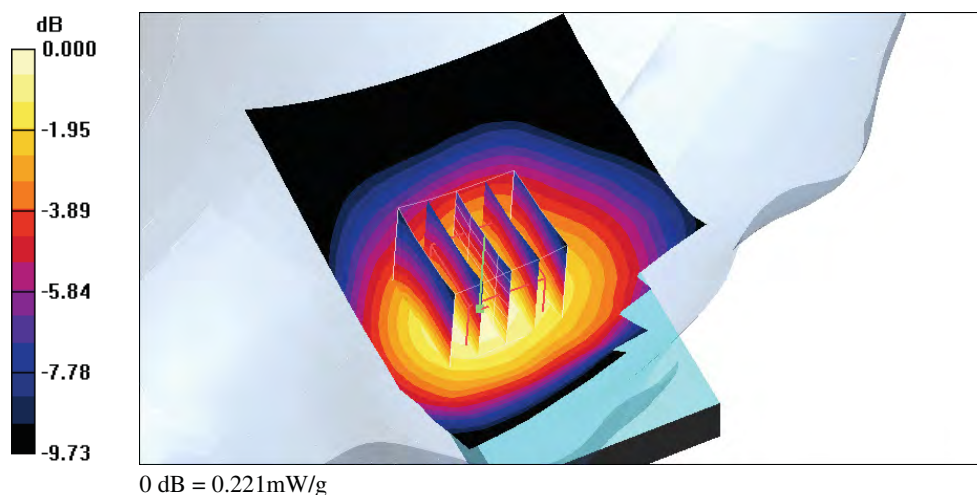
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.97 V/m; Power Drift = -0.192 dB

Peak SAR (extrapolated) = 0.276 W/kg

SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.221 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 3:59:14 AM

LC_GSM850 CH251

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 0.924 \text{ mho/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (91x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.182 mW/g

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

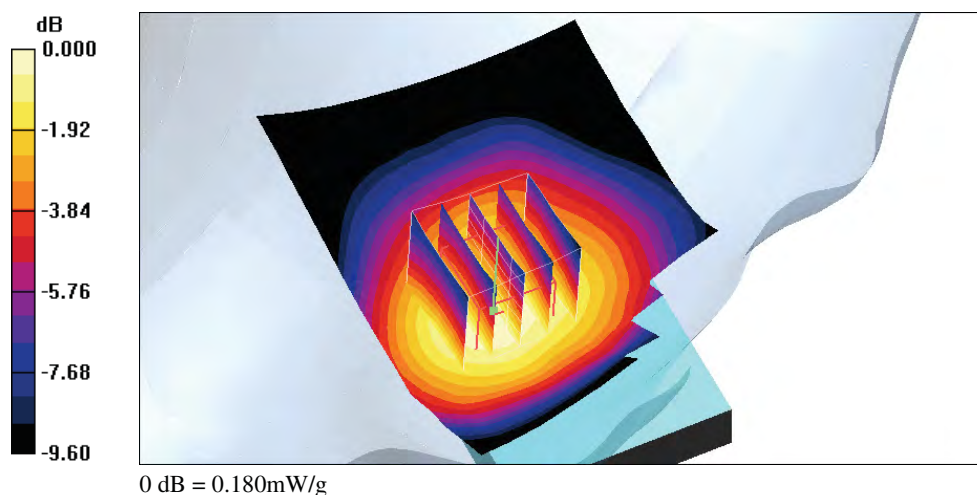
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.95 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.127 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 12:00:38 PM

LT_GSM850 CH128

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.174 mW/g

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

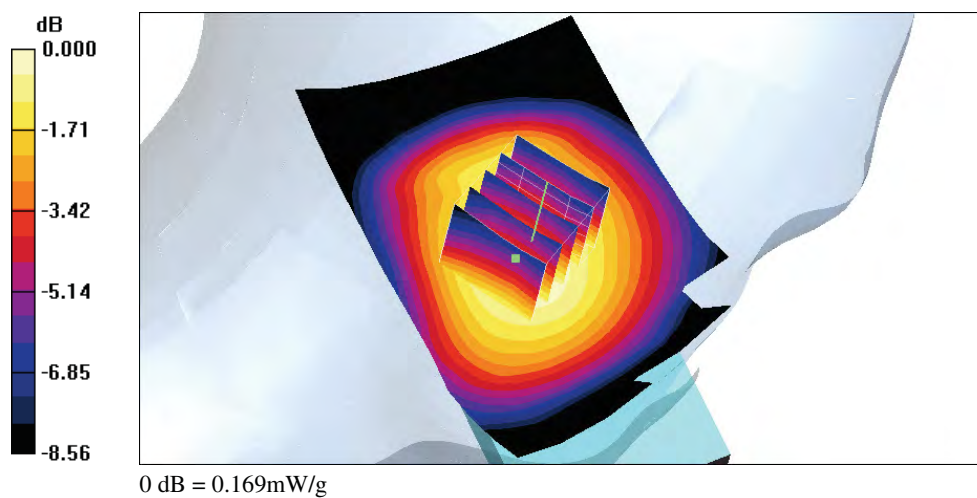
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.196 W/kg

SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.169 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 1:22:34 PM

LT_GSM850 CH190

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.181 mW/g

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

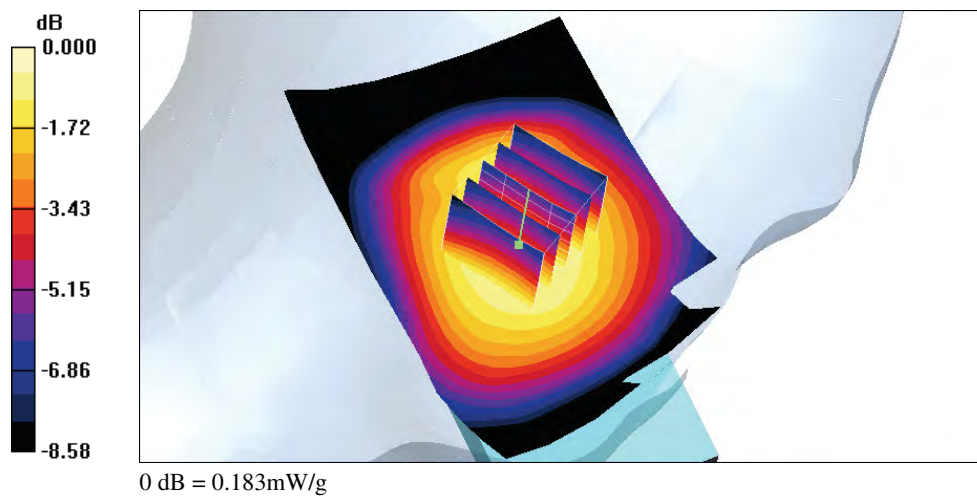
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.128 mW/g

Maximum value of SAR (measured) = 0.183 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 1:38:41 PM

LT_GSM850 CH251

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 0.924 \text{ mho/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

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

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

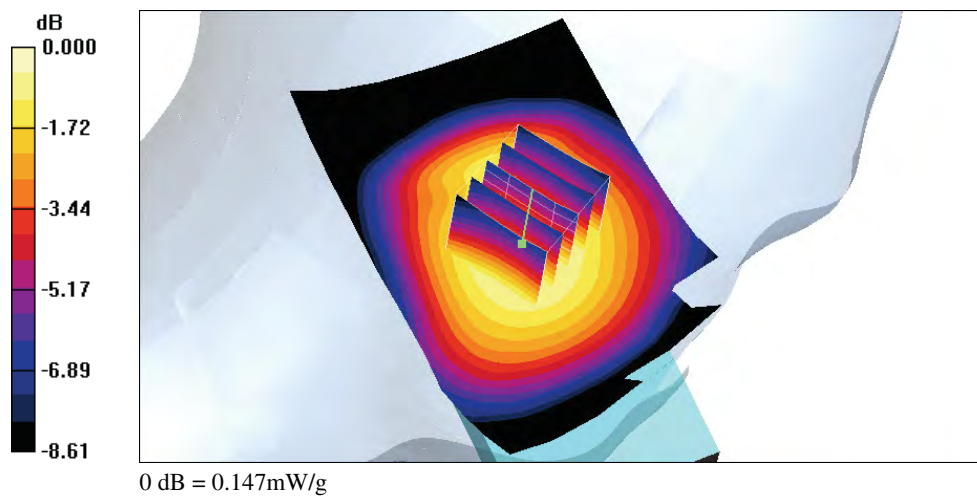
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.73 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.173 W/kg

SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.103 mW/g

Maximum value of SAR (measured) = 0.147 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 3:25:29 PM

RC_PCS CH512

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.316 mW/g

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

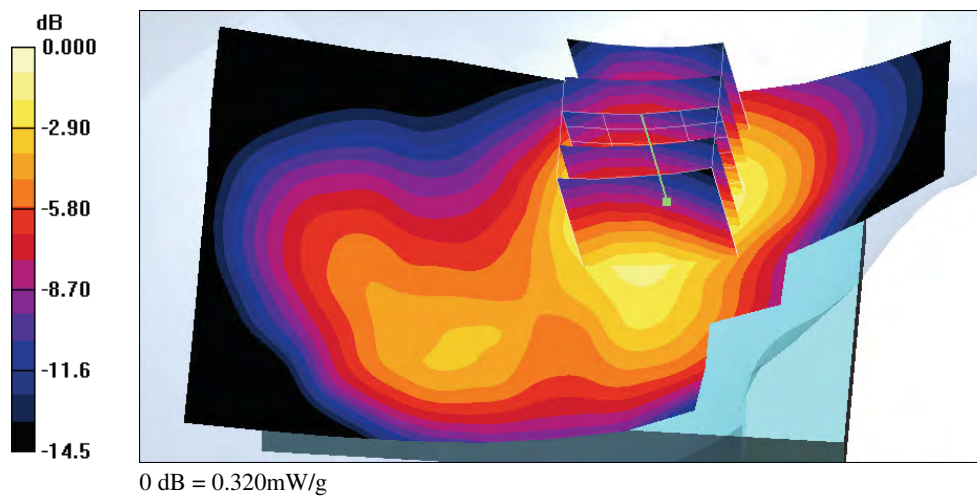
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.58 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.407 W/kg

SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.186 mW/g

Maximum value of SAR (measured) = 0.320 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 3:39:57 PM

RC_PCS CH661

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.373 mW/g

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

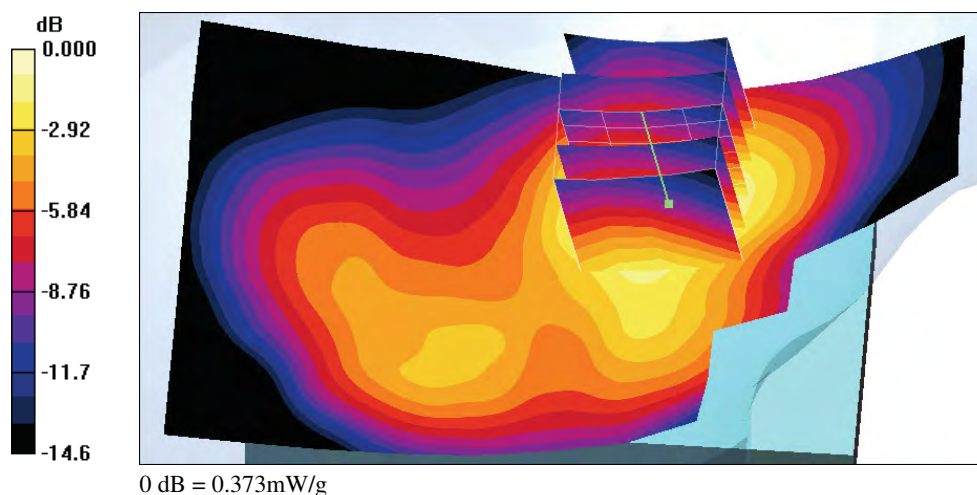
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.64 V/m ; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.342 mW/g ; SAR(10 g) = 0.216 mW/g

Maximum value of SAR (measured) = 0.373 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 3:54:39 PM

RC_PCS CH810

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.409 mW/g

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

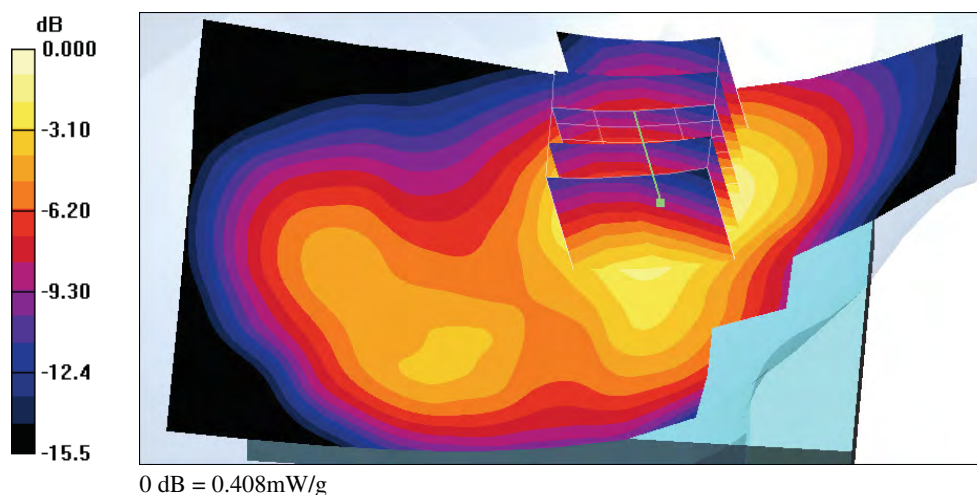
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.525 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.236 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 4:13:57 PM

RT_PCS CH512

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.156 mW/g

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

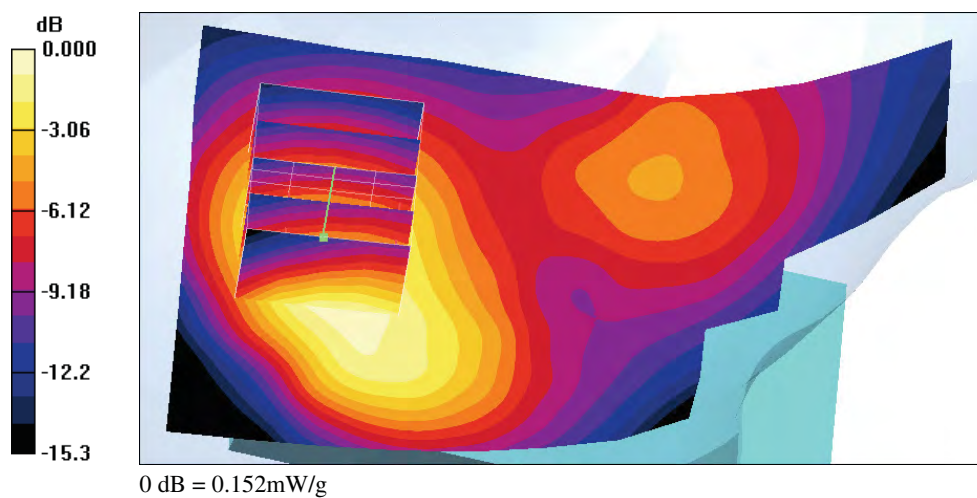
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.206 W/kg

SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.089 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 4:28:31 PM

RT_PCS CH661

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.203 mW/g

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

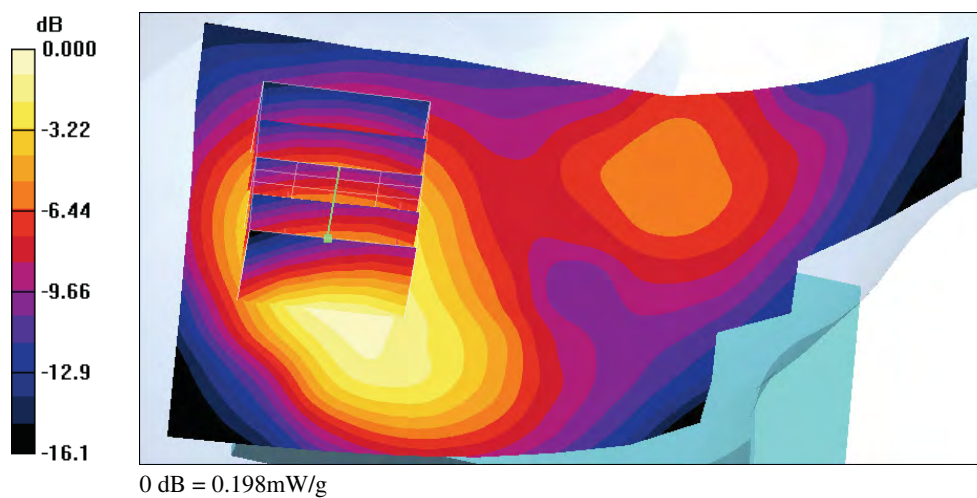
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.276 W/kg

SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.116 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 4:42:44 PM

RT_PCS CH810

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.267 mW/g

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

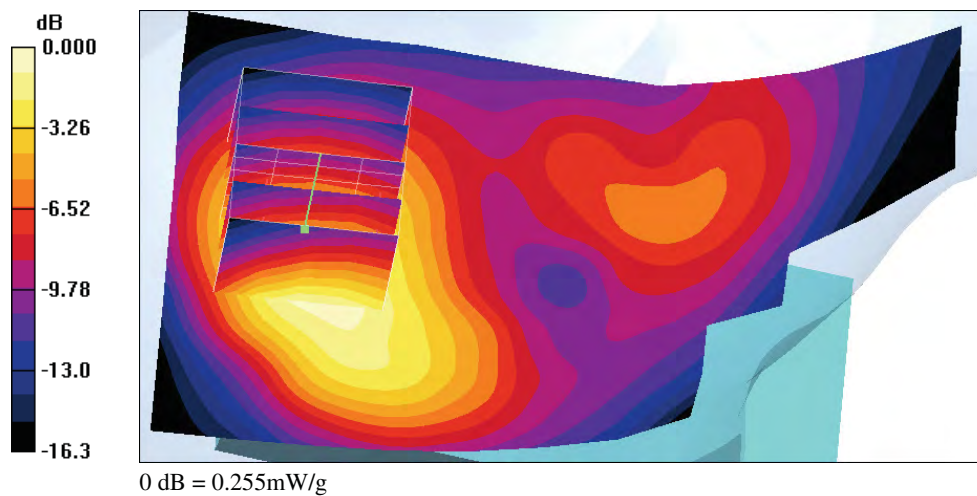
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.5 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 0.351 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.255 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 5:06:37 PM

LC_PCS CH512

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.289 mW/g

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

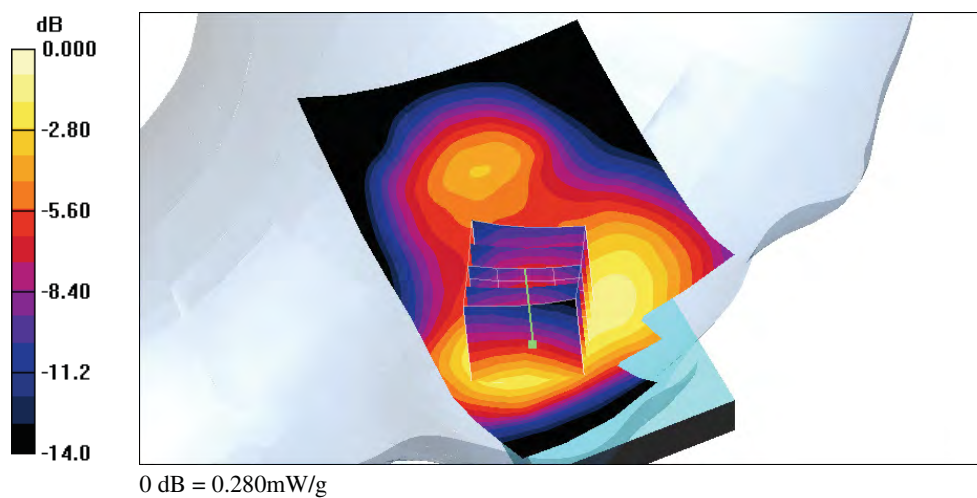
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.11 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.168 mW/g

Maximum value of SAR (measured) = 0.280 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 5:21:20 PM

LC_PCS CH661

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

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

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

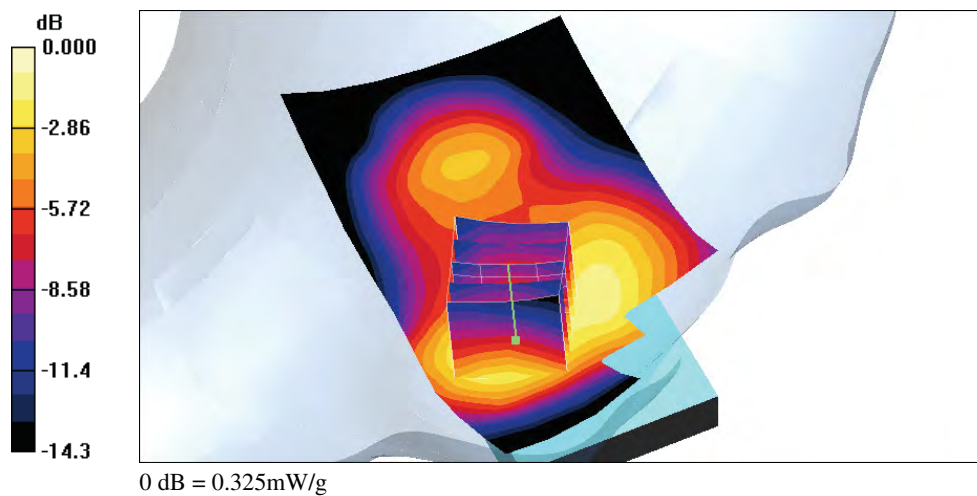
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.99 V/m ; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.442 W/kg

SAR(1 g) = 0.305 mW/g ; SAR(10 g) = 0.192 mW/g

Maximum value of SAR (measured) = 0.325 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 5:36:15 PM

LC_PCS CH810

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.349 mW/g

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

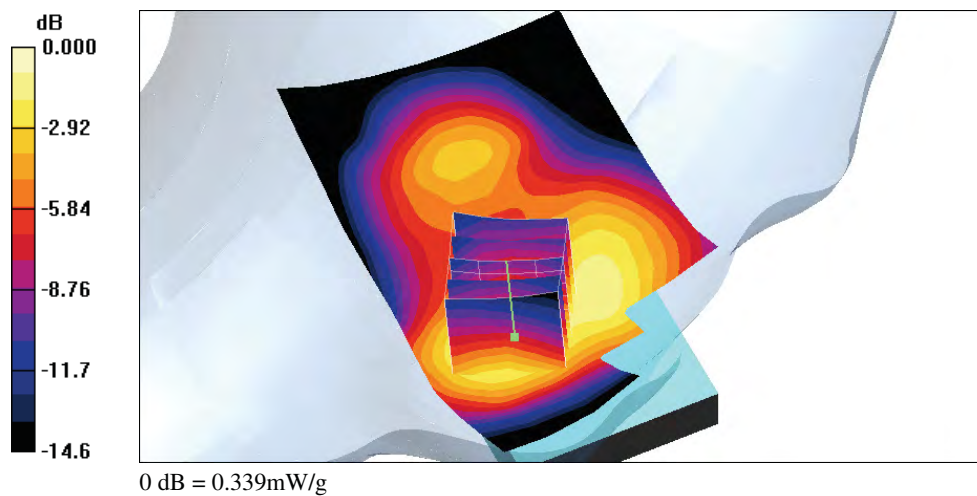
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.465 W/kg

SAR(1 g) = 0.320 mW/g; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.339 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 5:57:42 PM

LT_PCS CH512

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.215 mW/g

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

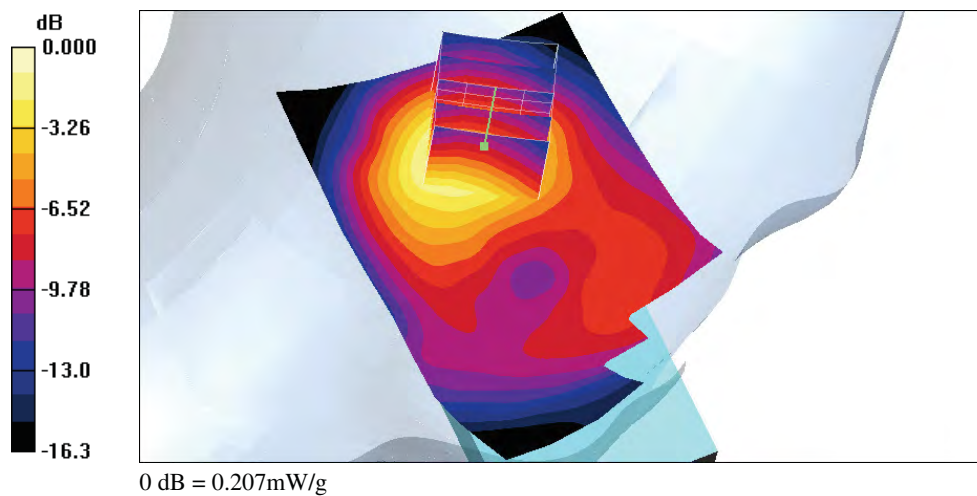
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.118 mW/g

Maximum value of SAR (measured) = 0.207 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 6:12:16 PM

LT_PCS CH661

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.268 mW/g

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

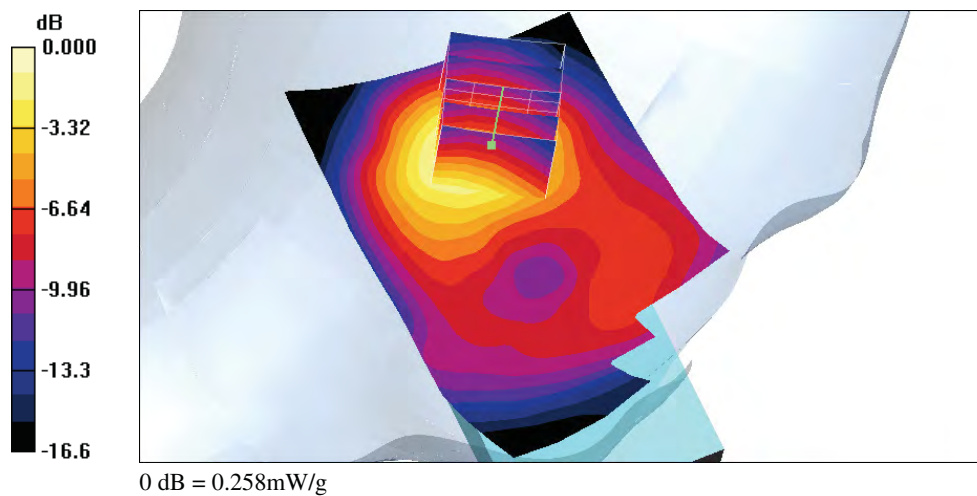
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.2 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 0.364 W/kg

SAR(1 g) = 0.243 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.258 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 6:29:12 PM

LT_PCS CH810

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.296 mW/g

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

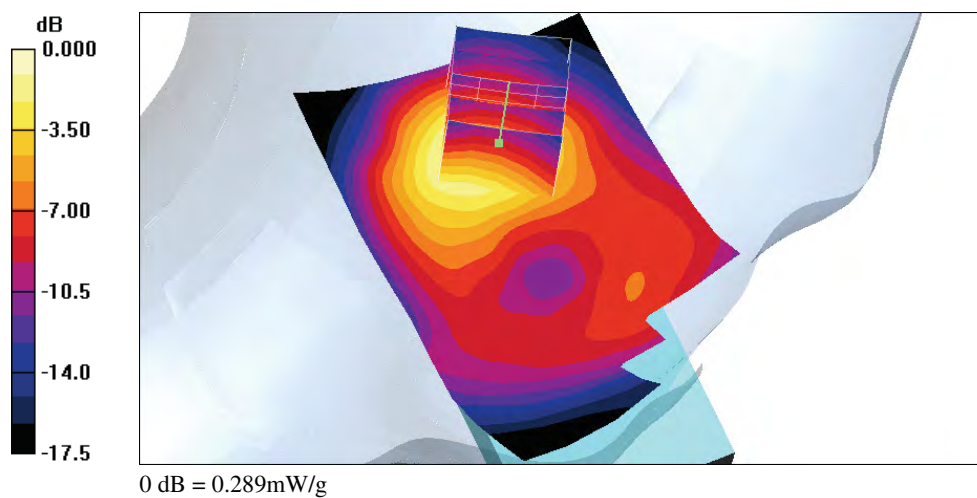
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.1 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.162 mW/g

Maximum value of SAR (measured) = 0.289 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 11:36:38 PM

RC_WCDMA Band V CH4132

DUT: velocity 111elocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.090 mW/g

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

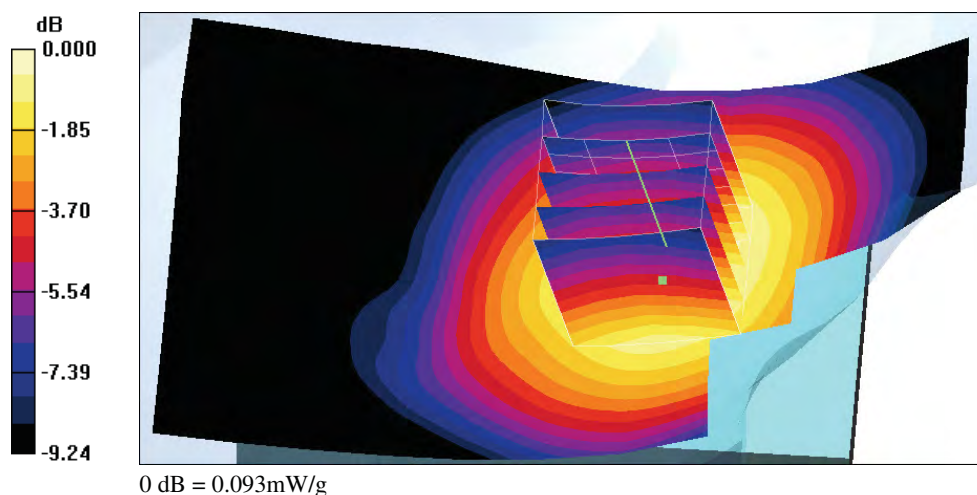
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.65 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.110 W/kg

SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.066 mW/g

Maximum value of SAR (measured) = 0.093 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 11:53:41 PM

RC_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.055 mW/g

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

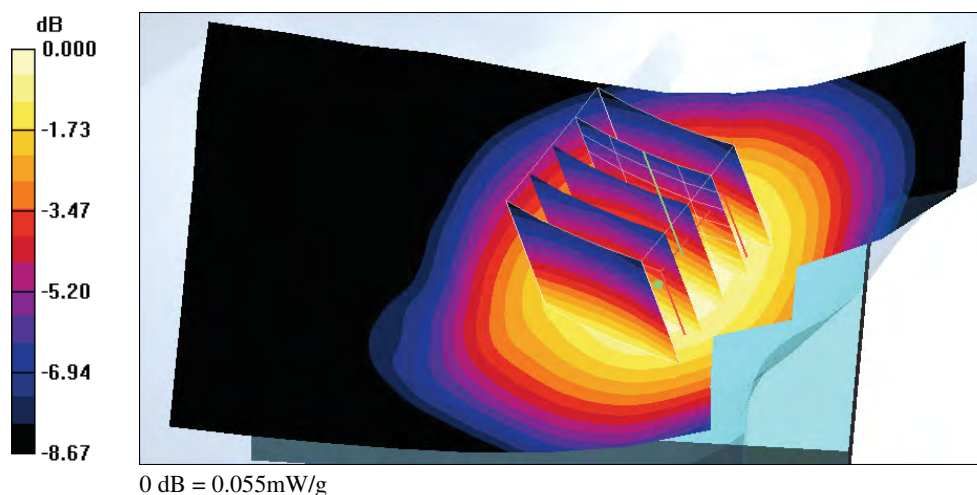
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.17 V/m ; Power Drift = -0.141 dB

Peak SAR (extrapolated) = 0.065 W/kg

SAR(1 g) = 0.053 mW/g ; SAR(10 g) = 0.040 mW/g

Maximum value of SAR (measured) = 0.055 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 12:08:17 AM

RC_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.097 mW/g

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

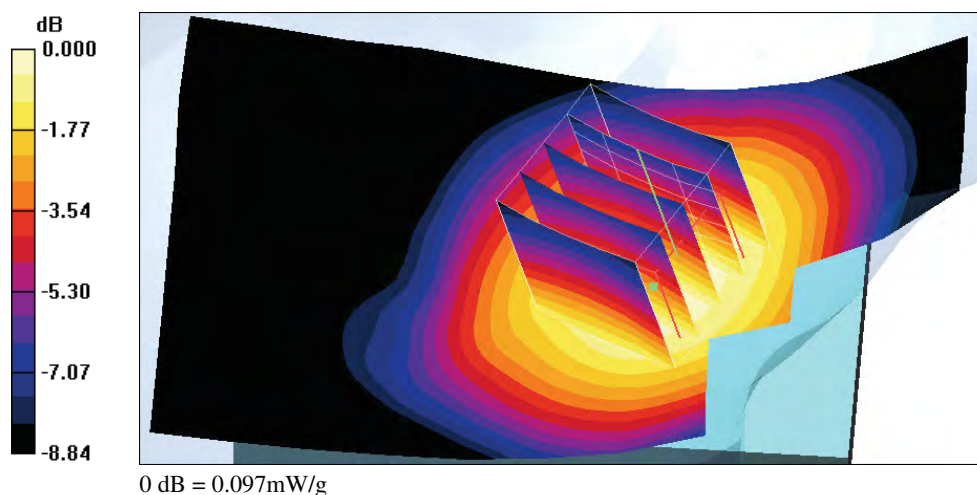
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.87 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.092 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.097 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 12:59:48 AM

RT_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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:

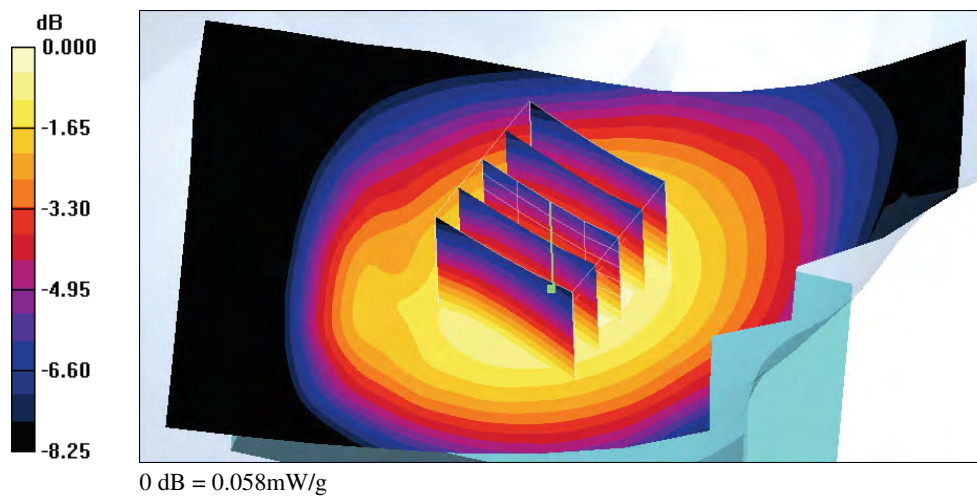
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.82 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.068 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.058 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 12:38:29 AM

RT_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.035 mW/g

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

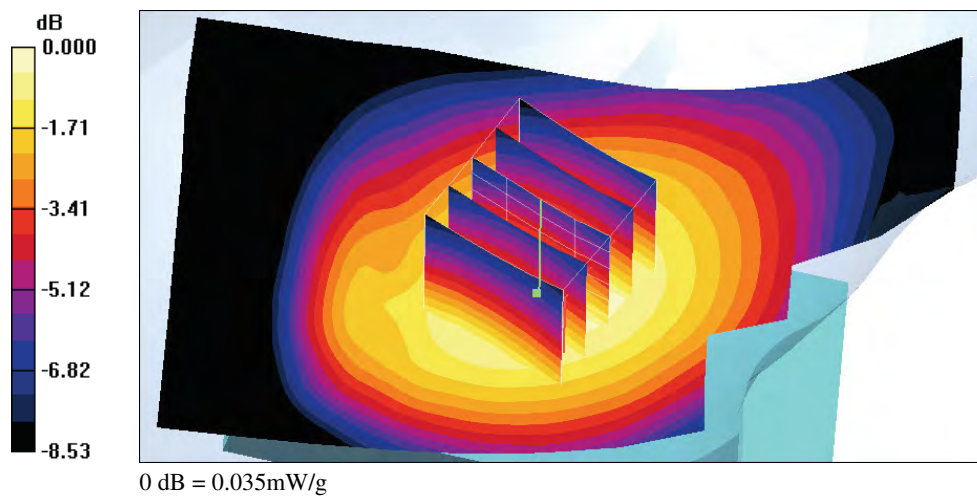
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.72 V/m ; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.041 W/kg

SAR(1 g) = 0.033 mW/g ; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.035 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 12:23:38 AM

RT_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.060 mW/g

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

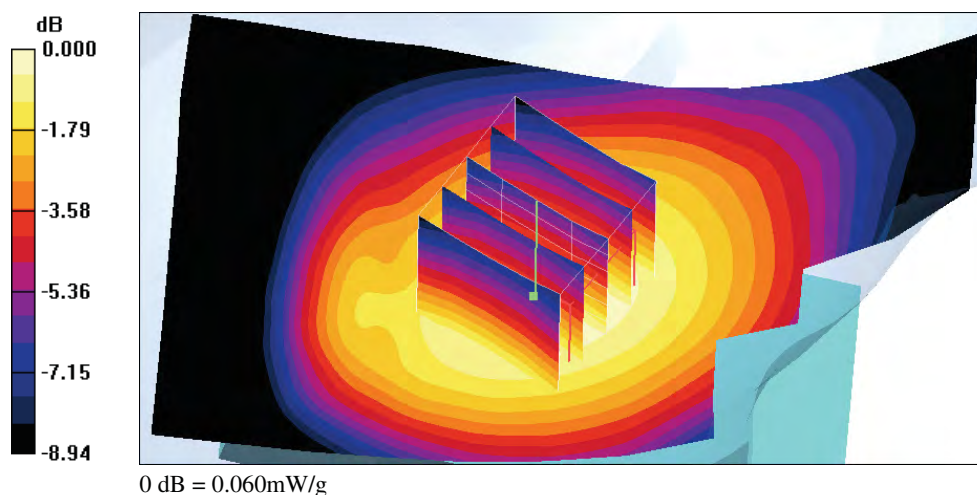
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.93 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 0.071 W/kg

SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.060 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 1:16:47 AM

LC_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.108 mW/g

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

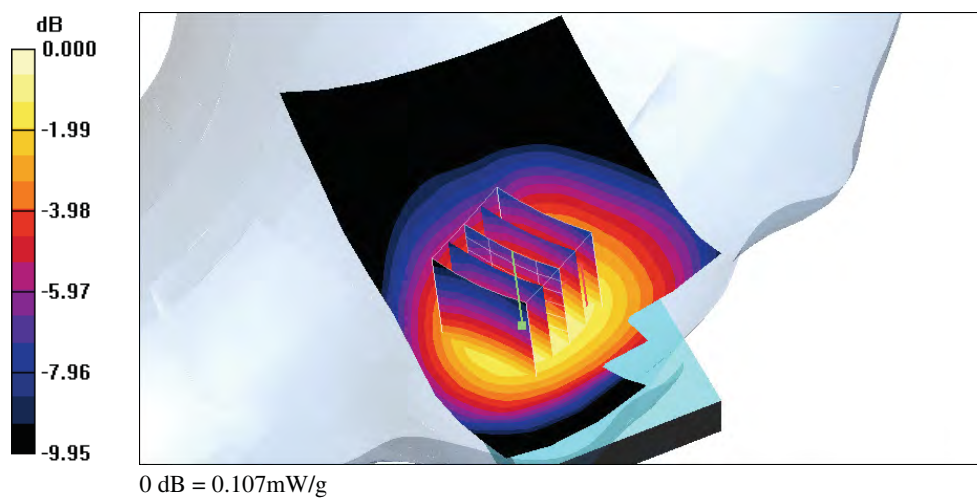
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.18 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.135 W/kg

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.072 mW/g

Maximum value of SAR (measured) = 0.107 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 1:31:32 AM

LC_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.064 mW/g

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

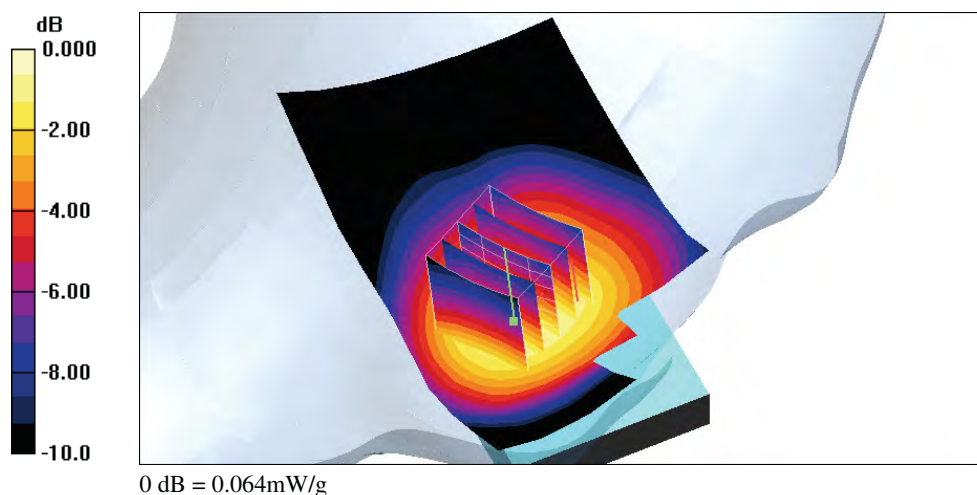
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.49 V/m ; Power Drift = -0.164 dB

Peak SAR (extrapolated) = 0.083 W/kg

SAR(1 g) = 0.060 mW/g ; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.064 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 1:46:10 AM

LC_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.122 mW/g

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

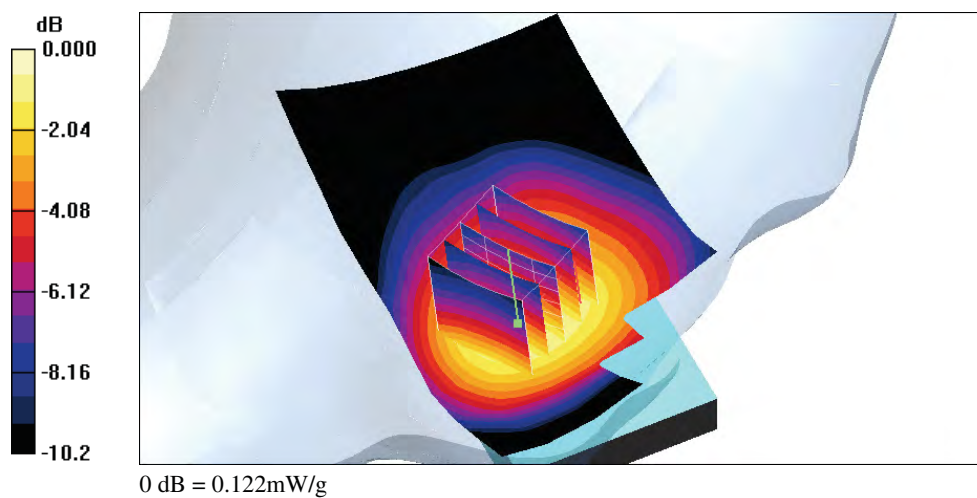
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.40 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 0.156 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.081 mW/g

Maximum value of SAR (measured) = 0.122 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 2:30:28 AM

LT_WCDMA Band V CH4132

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.063 mW/g

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

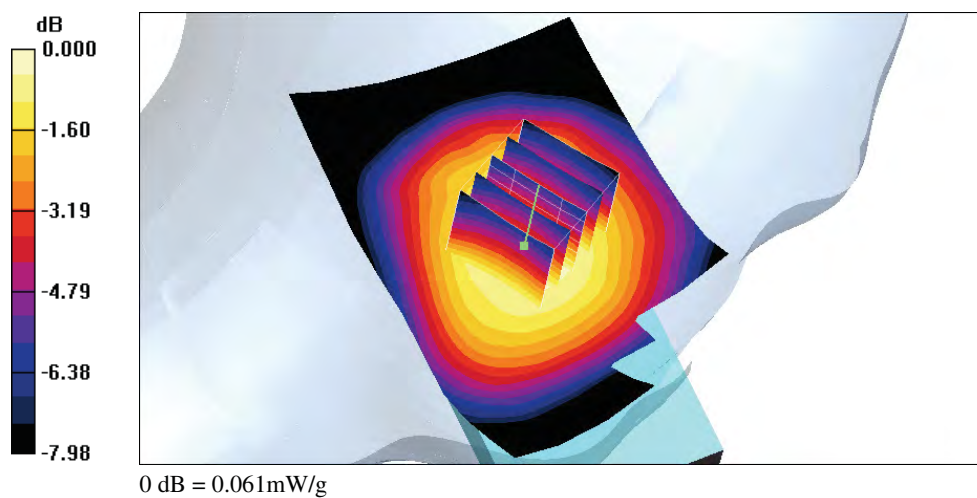
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.06 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 0.073 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.061 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 2:16:10 AM

LT_WCDMA Band V CH4180

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

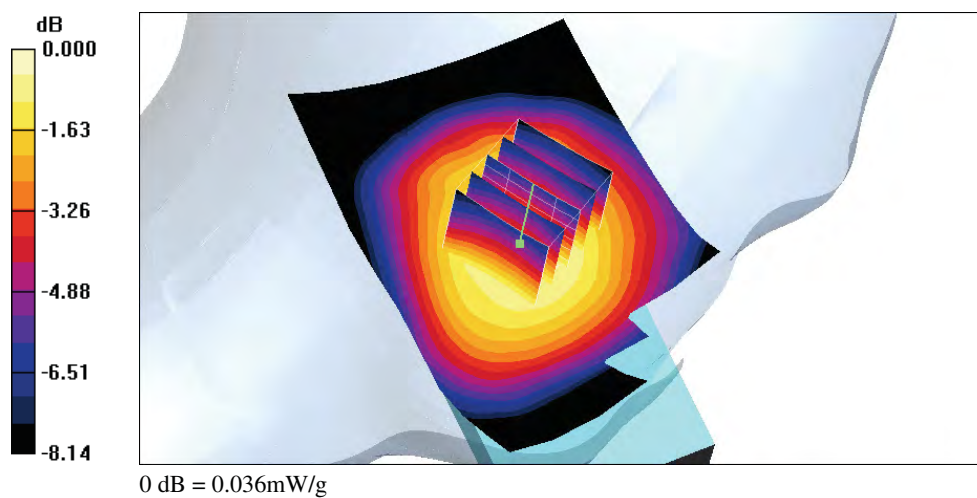
- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (interpolated) = 0.036 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 = 4.62 V/m ; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 0.042 W/kg
SAR(1 g) = 0.034 mW/g ; SAR(10 g) = 0.026 mW/g
Maximum value of SAR (measured) = 0.036 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 2:01:44 AM

LT_WCDMA Band V CH4232

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.88, 5.88, 5.88); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.067 mW/g

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

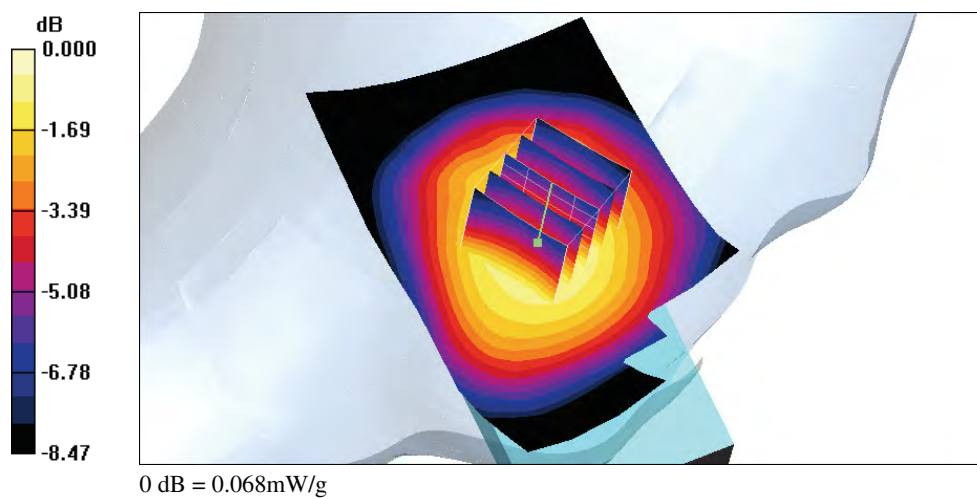
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.22 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.079 W/kg

SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.068 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 7:30:11 PM

RC_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.643 mW/g

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

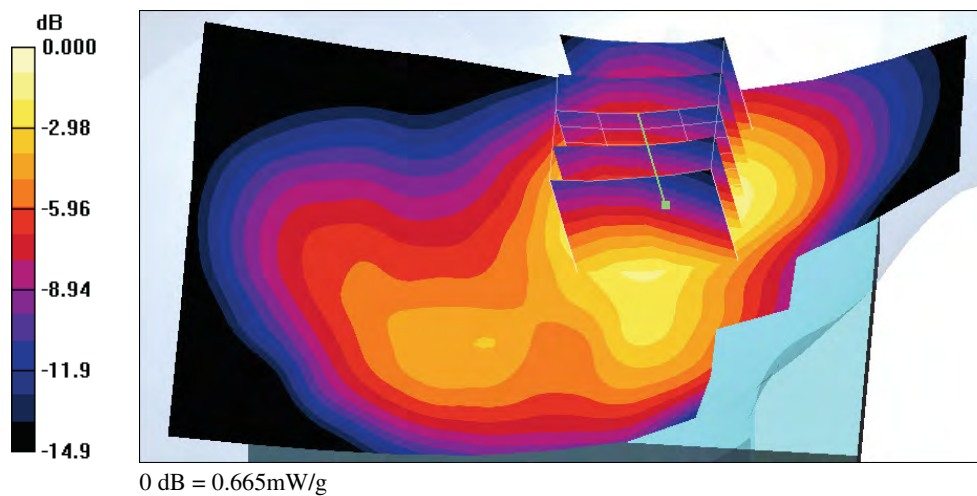
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.837 W/kg

SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.665 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 7:45:14 PM

RC_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.686 mW/g

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

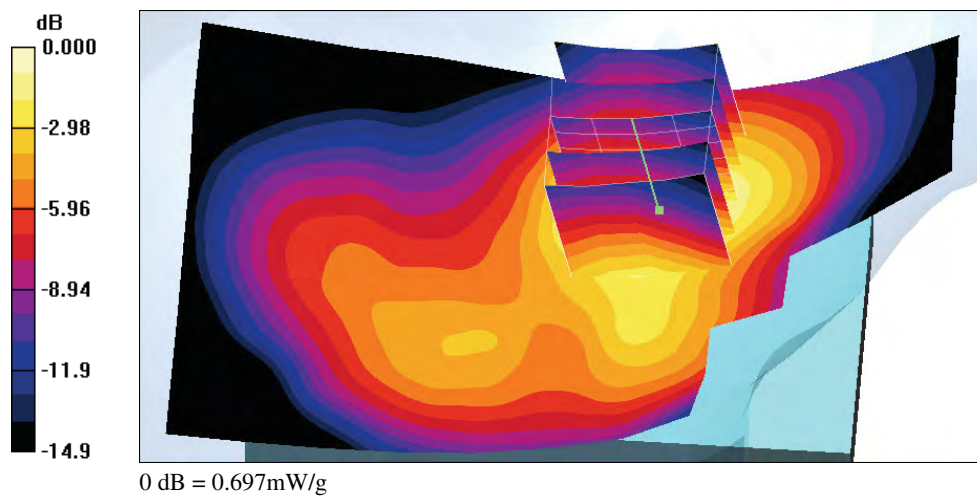
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.0 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.885 W/kg

SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.398 mW/g

Maximum value of SAR (measured) = 0.697 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 8:00:10 PM

RC_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.649 mW/g

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

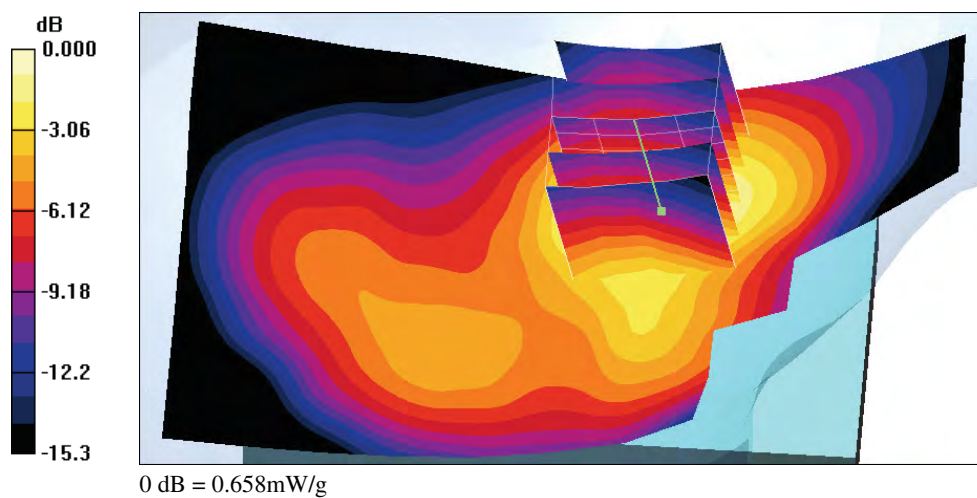
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.0 V/m ; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.846 W/kg

SAR(1 g) = 0.594 mW/g ; SAR(10 g) = 0.370 mW/g

Maximum value of SAR (measured) = 0.658 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 8:51:52 PM

RT_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.296 mW/g

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

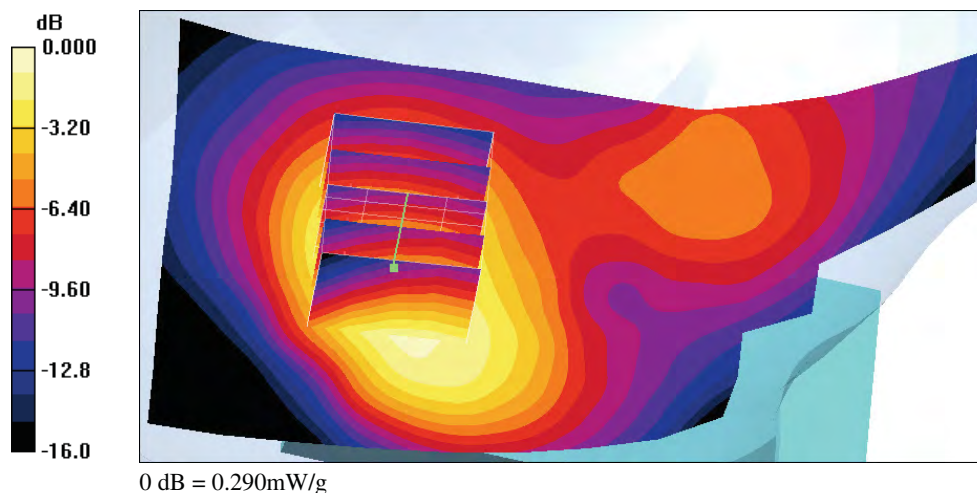
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.0 V/m; Power Drift = 0.065 dB

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.290 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 8:36:13 PM

RT_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.327 mW/g

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

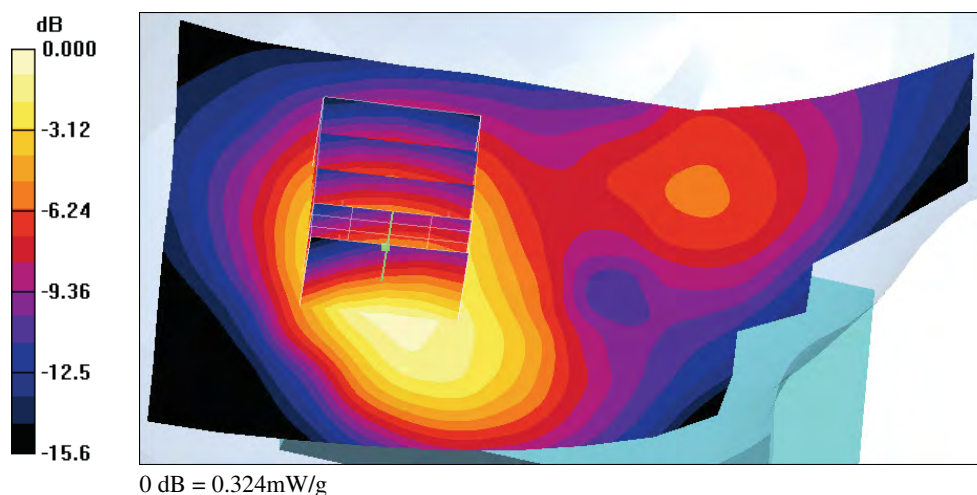
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.6 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.450 W/kg

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.189 mW/g

Maximum value of SAR (measured) = 0.324 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 8:20:13 PM

RT_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.351 mW/g

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

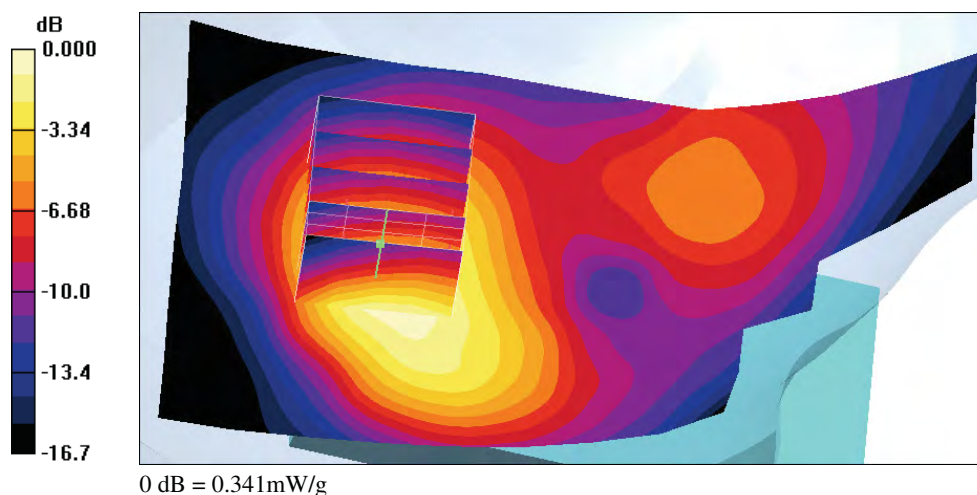
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.3 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.482 W/kg

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.196 mW/g

Maximum value of SAR (measured) = 0.341 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 9:13:33 PM

LC_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.641 mW/g

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

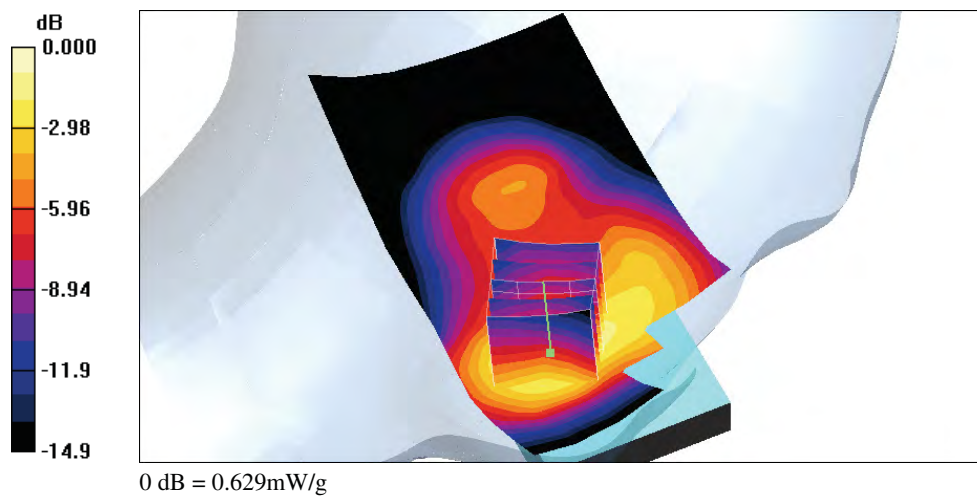
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.872 W/kg

SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.371 mW/g

Maximum value of SAR (measured) = 0.629 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 9:36:09 PM

LC_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.658 mW/g

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

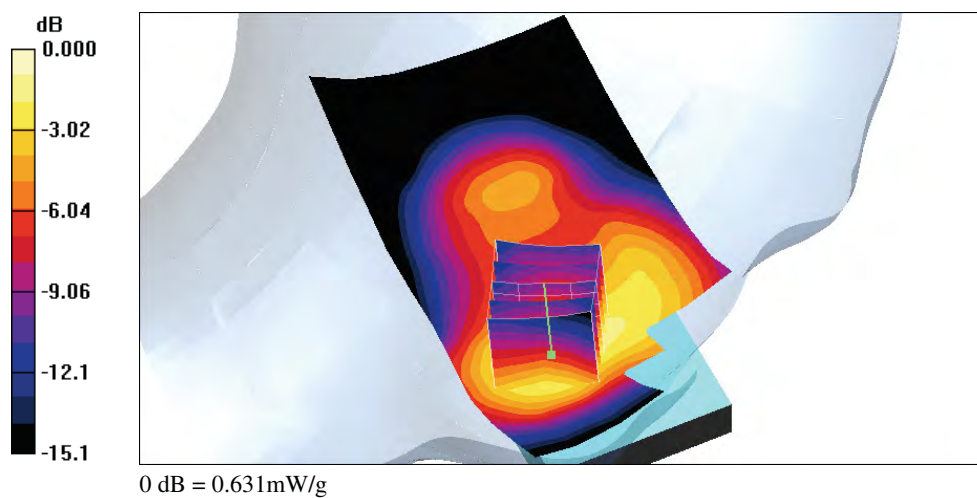
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.2 V/m ; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.595 mW/g ; SAR(10 g) = 0.368 mW/g

Maximum value of SAR (measured) = 0.631 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 9:51:50 PM

LC_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Cheek/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.549 mW/g

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

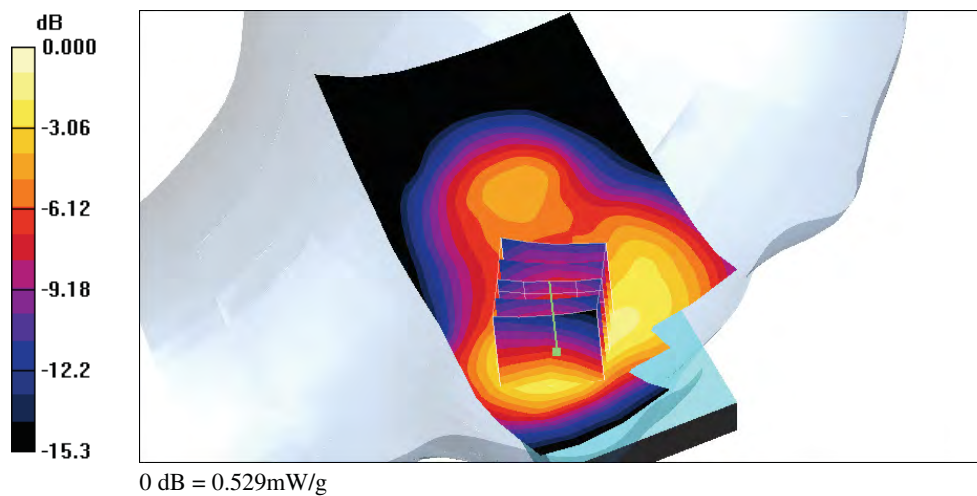
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.6 V/m ; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.750 W/kg

SAR(1 g) = 0.500 mW/g ; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 0.529 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 10:39:59 PM

LT_WCDMA Band II CH9262

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.414 mW/g

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

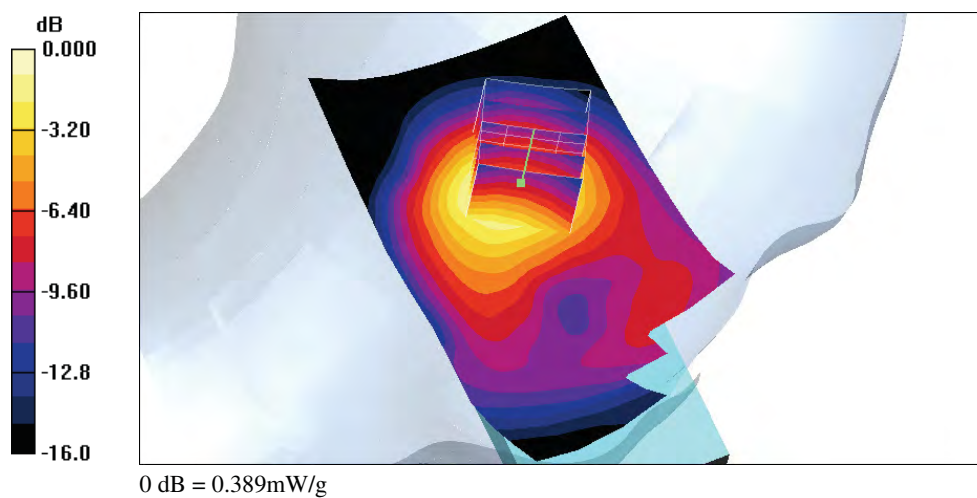
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.531 W/kg

SAR(1 g) = 0.359 mW/g; SAR(10 g) = 0.221 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 10:23:42 PM

LT_WCDMA Band II CH9400

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.427 mW/g

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

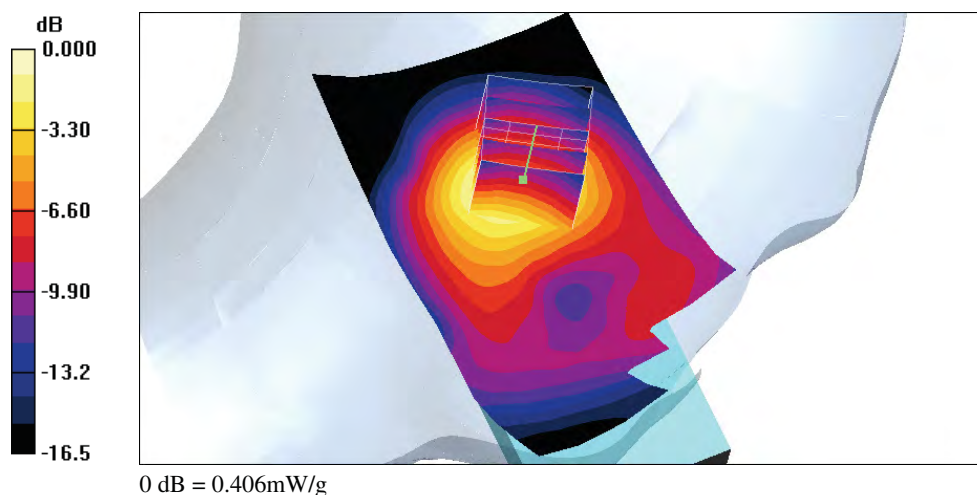
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.0 V/m ; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.566 W/kg

SAR(1 g) = 0.376 mW/g ; SAR(10 g) = 0.228 mW/g

Maximum value of SAR (measured) = 0.406 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/17/2008 10:07:56 PM

LT_WCDMA Band II CH9538

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.8, 4.8, 4.8); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Left Tilted/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.386 mW/g

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

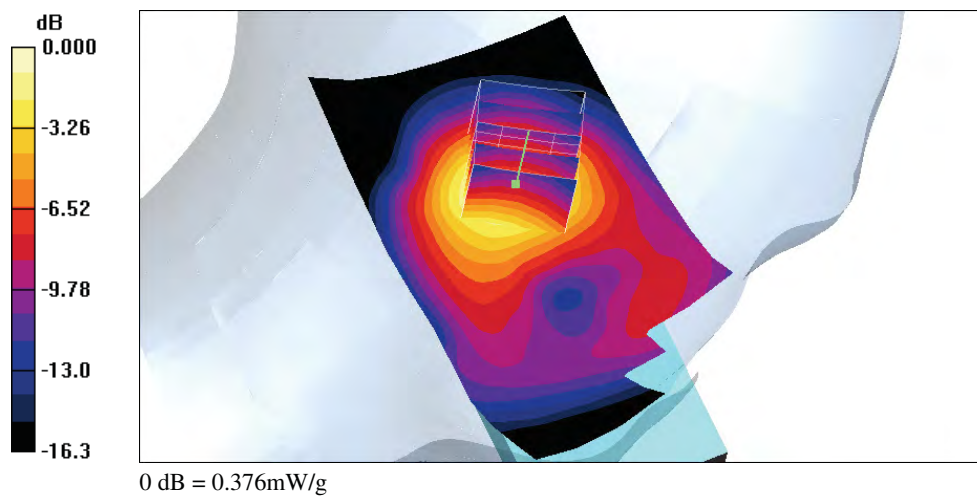
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.3 V/m ; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.518 W/kg

SAR(1 g) = 0.342 mW/g ; SAR(10 g) = 0.206 mW/g

Maximum value of SAR (measured) = 0.376 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 1:54:44 PM

Flat_GSM850 CH128_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.818 mW/g

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

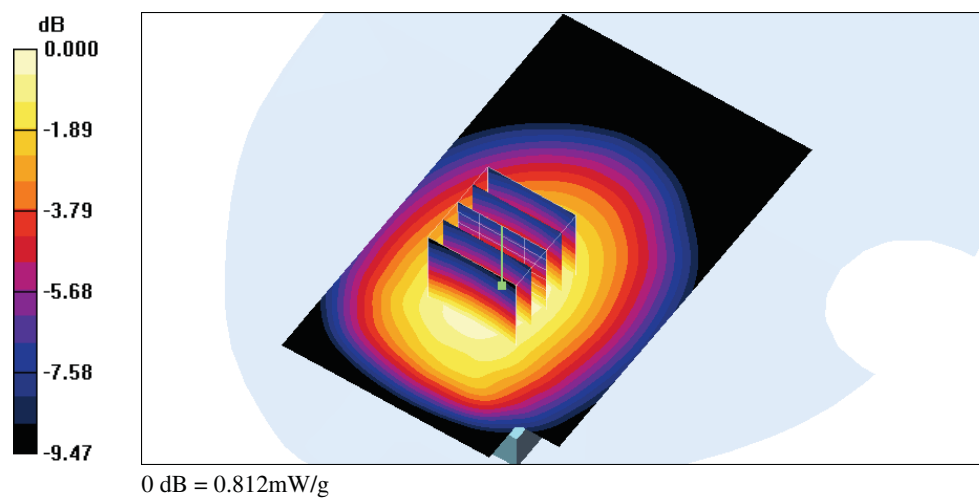
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.768 mW/g; SAR(10 g) = 0.552 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 2:13:43 PM

Flat_GSM850 CH190_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.737 mW/g

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

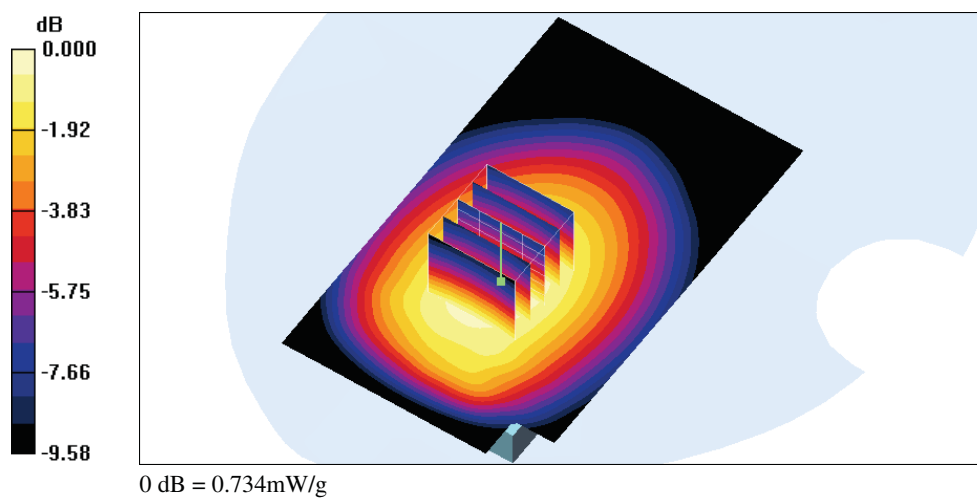
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.907 W/kg

SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.500 mW/g

Maximum value of SAR (measured) = 0.734 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 2:27:32 PM

Flat_GSM850 CH251_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

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

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

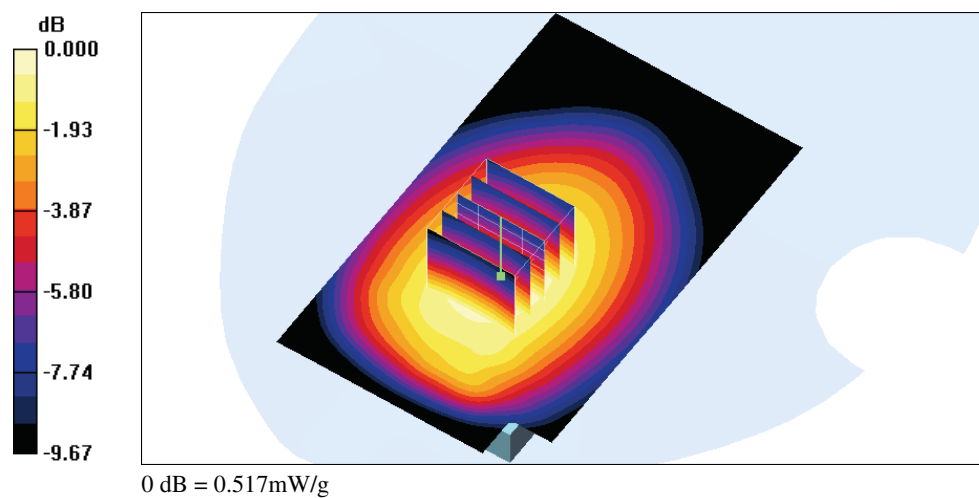
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.8 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 0.648 W/kg

SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.353 mW/g

Maximum value of SAR (measured) = 0.517 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 6:26:24 PM

Flat_GSM850_GPRS CH128_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x91x1):

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

Maximum value of SAR (interpolated) = 0.564 mW/g

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

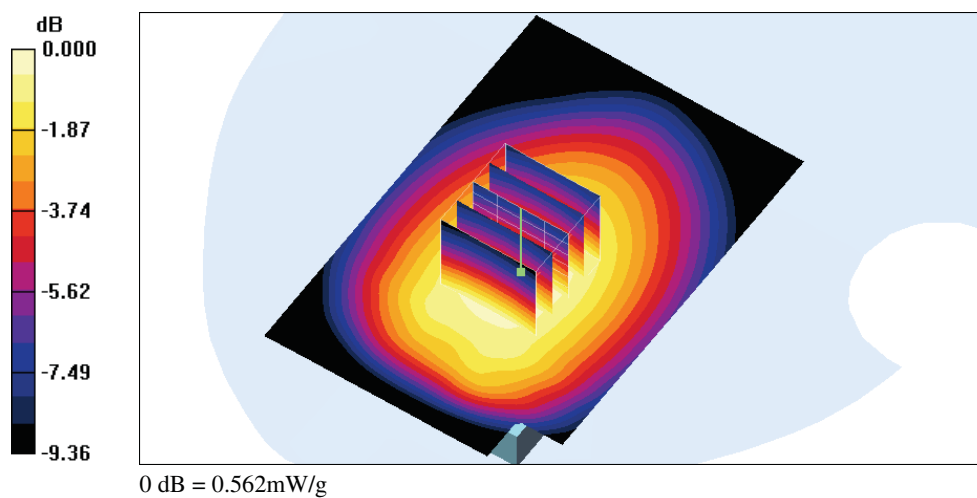
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.698 W/kg

SAR(1 g) = 0.531 mW/g; SAR(10 g) = 0.384 mW/g

Maximum value of SAR (measured) = 0.562 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 3:59:46 PM

Flat_GSM850_GPRS CH128_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

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

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

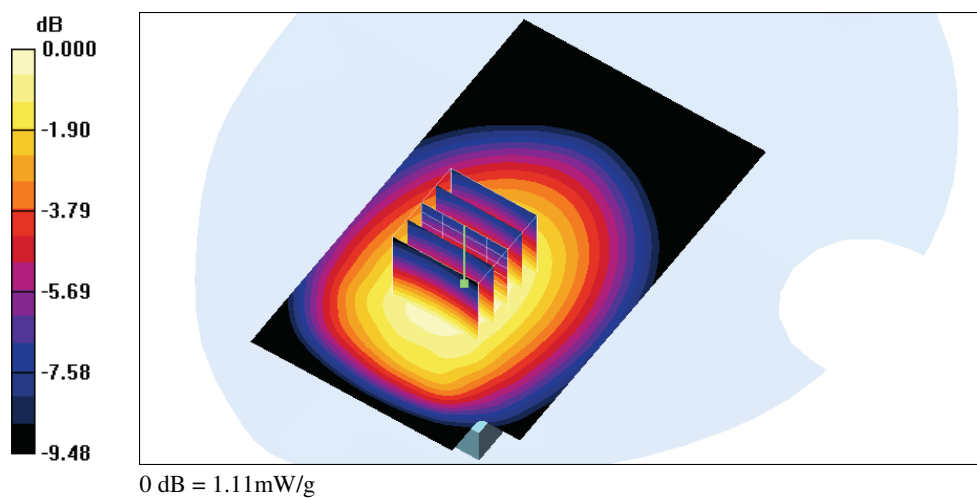
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.7 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.758 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 3:19:02 PM

Flat_GSM850_GPRS CH190_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 1.06 mW/g

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

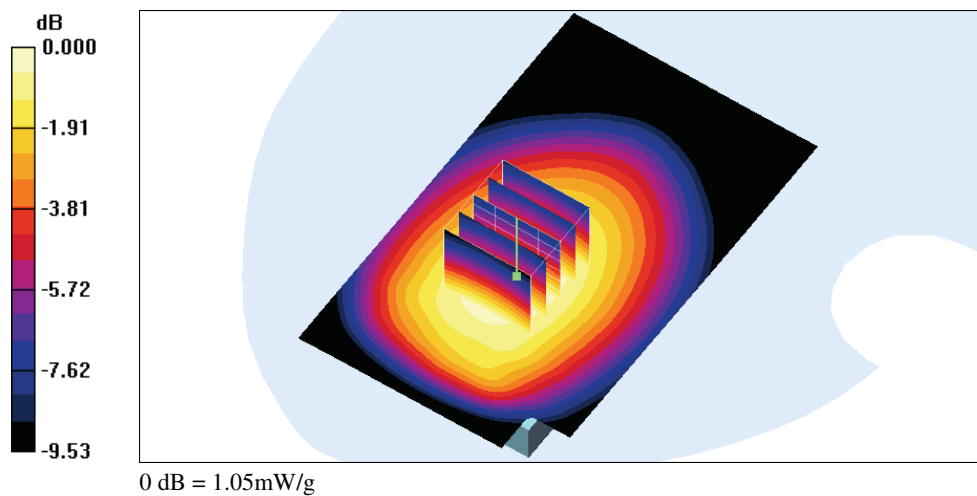
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.5 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.720 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 3:33:51 PM

Flat_GSM850_GPRS CH251_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.828 mW/g

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

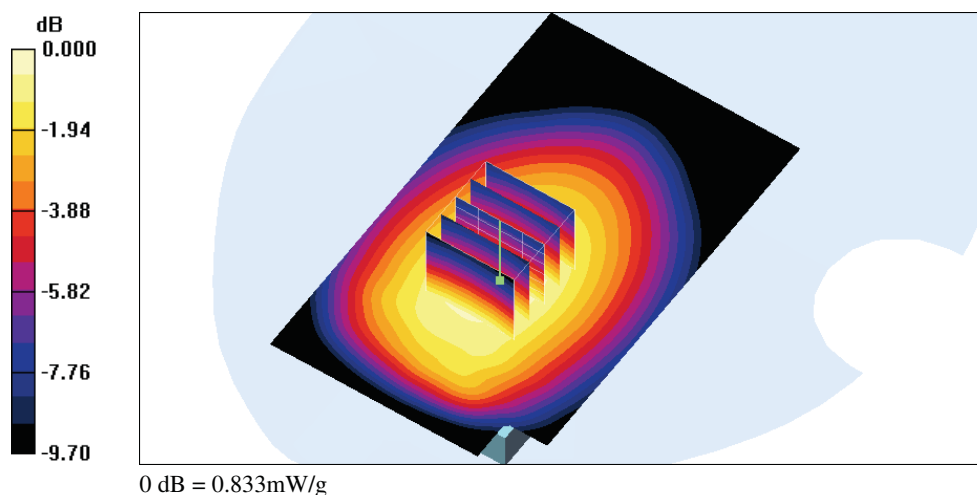
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.784 mW/g; SAR(10 g) = 0.564 mW/g

Maximum value of SAR (measured) = 0.833 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 4:53:06 PM

Flat_GSM850_EGPRS CH128_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.333 mW/g

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

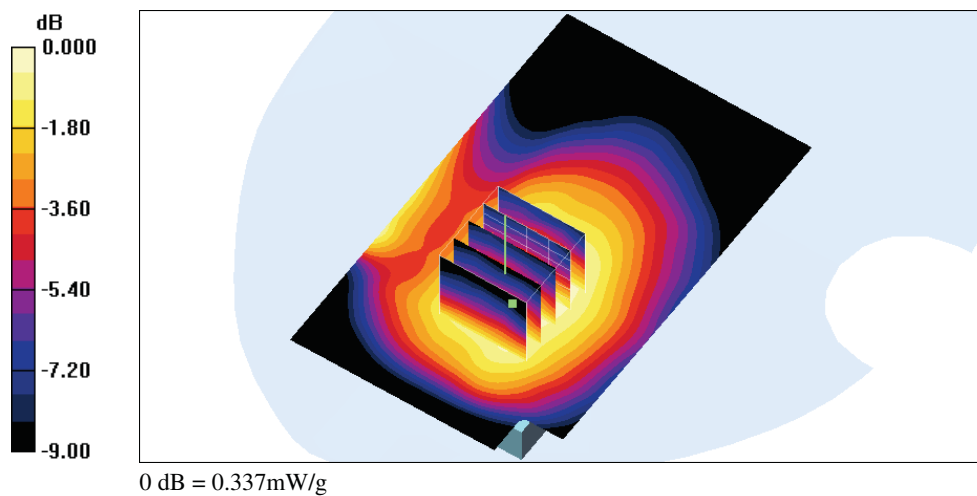
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.29 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.446 W/kg

SAR(1 g) = 0.313 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.337 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 6:11:08 PM

Flat_GSM850_EGPRS CH190_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.994 \text{ mho/m}$; $\epsilon_r = 54.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x91x1):

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

Maximum value of SAR (interpolated) = 0.157 mW/g

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

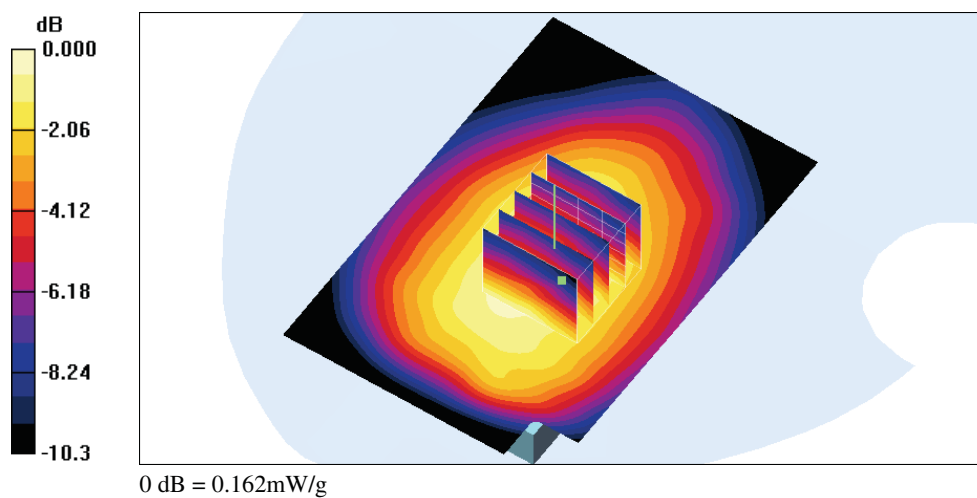
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.81 V/m ; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.191 W/kg

SAR(1 g) = 0.147 mW/g ; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.162 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 5:24:53 PM

Flat_GSM850_EGPRS CH190_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x91x1):

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

Maximum value of SAR (interpolated) = 0.360 mW/g

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

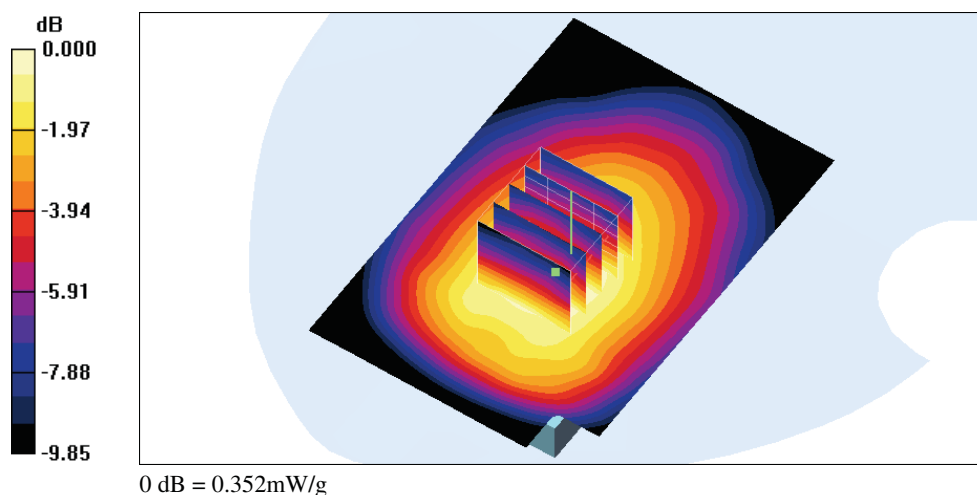
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.20 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.470 W/kg

SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.230 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 5:49:15 PM

Flat_GSM850_EGPRS CH251_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x91x1):

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

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

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

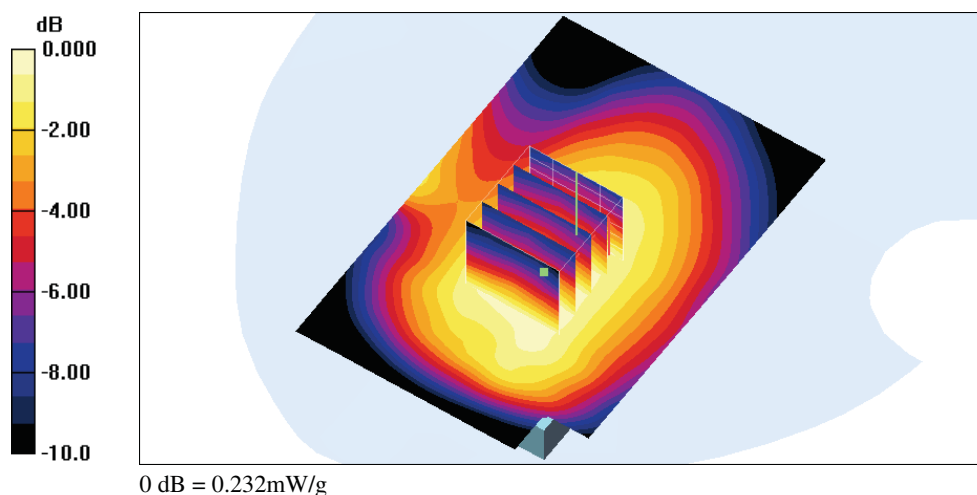
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.97 V/m; Power Drift = 0.140 dB

Peak SAR (extrapolated) = 0.301 W/kg

SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.161 mW/g

Maximum value of SAR (measured) = 0.232 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/22/2008 1:03:59 AM

Flat_PCS CH512_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.393 mW/g

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

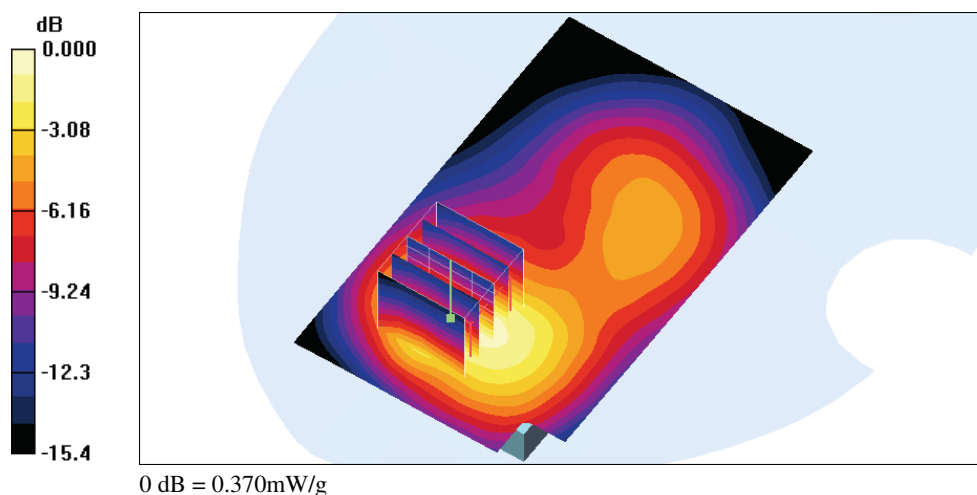
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.11 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.550 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.370 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/22/2008 1:19:38 AM

Flat_PCS CH661_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

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

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

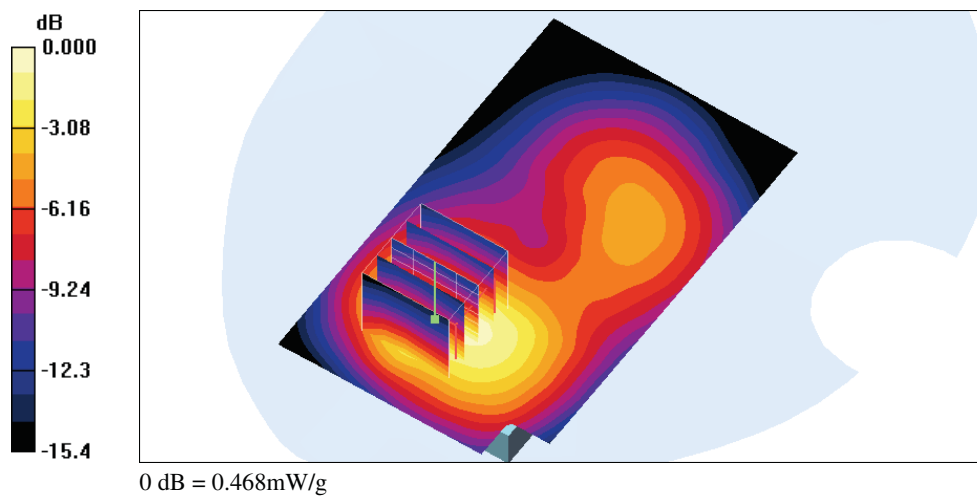
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.97 V/m ; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 0.703 W/kg

SAR(1 g) = 0.430 mW/g ; SAR(10 g) = 0.260 mW/g

Maximum value of SAR (measured) = 0.468 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/22/2008 1:39:56 AM

Flat_PCS CH810_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: PCS; 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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.545 mW/g

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

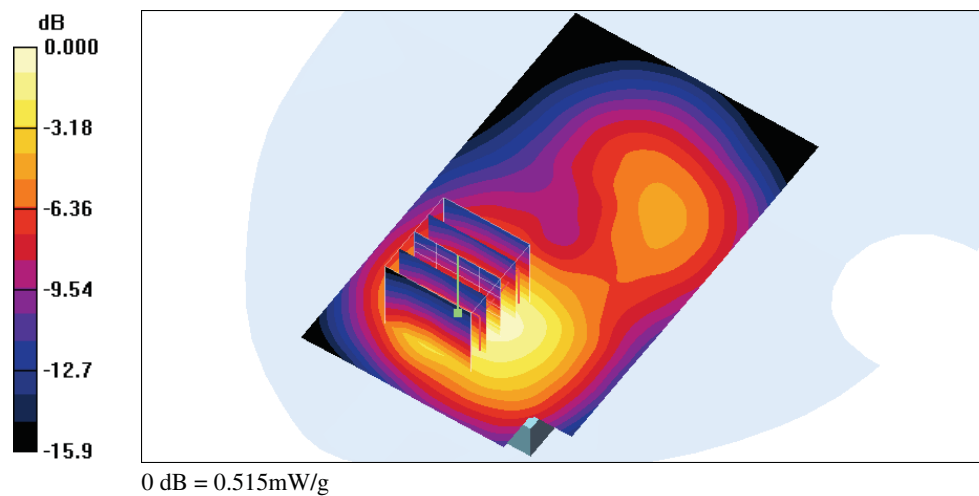
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.21 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.790 W/kg

SAR(1 g) = 0.478 mW/g; SAR(10 g) = 0.290 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 11:32:01 PM

Flat_PCS_GPRS CH512_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.702 mW/g

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

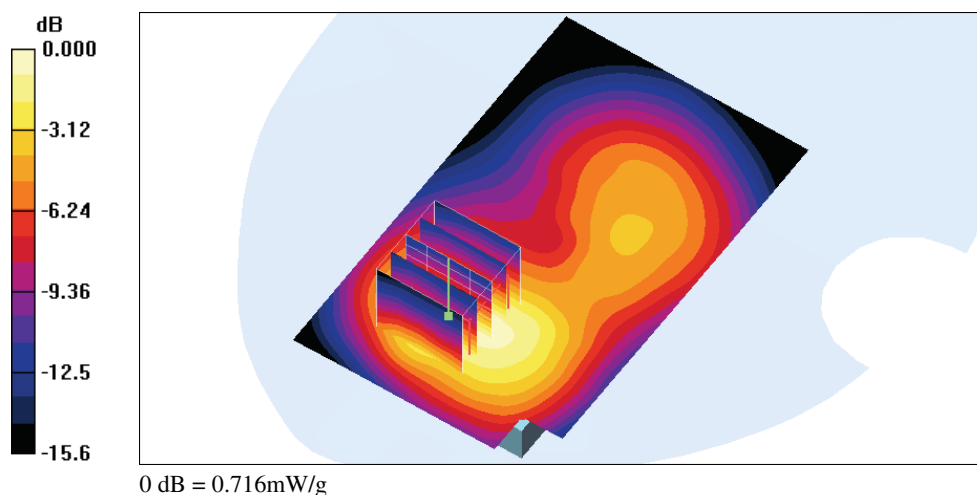
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.646 mW/g; SAR(10 g) = 0.386 mW/g

Maximum value of SAR (measured) = 0.716 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 11:58:45 PM

Flat_PCS_GPRS CH661_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.954 mW/g

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

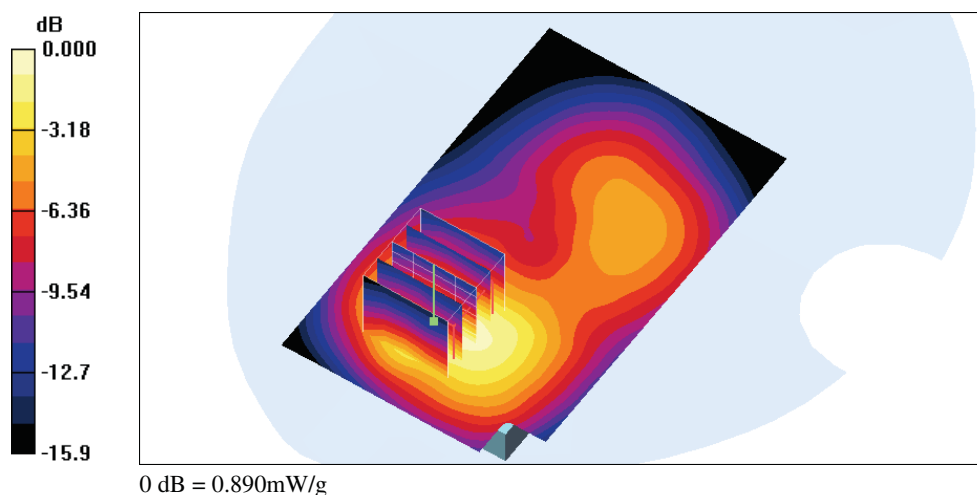
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.9 V/m ; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.809 mW/g ; SAR(10 g) = 0.483 mW/g

Maximum value of SAR (measured) = 0.890 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/22/2008 12:36:30 AM

Flat_PCS_GPRS CH810_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

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

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

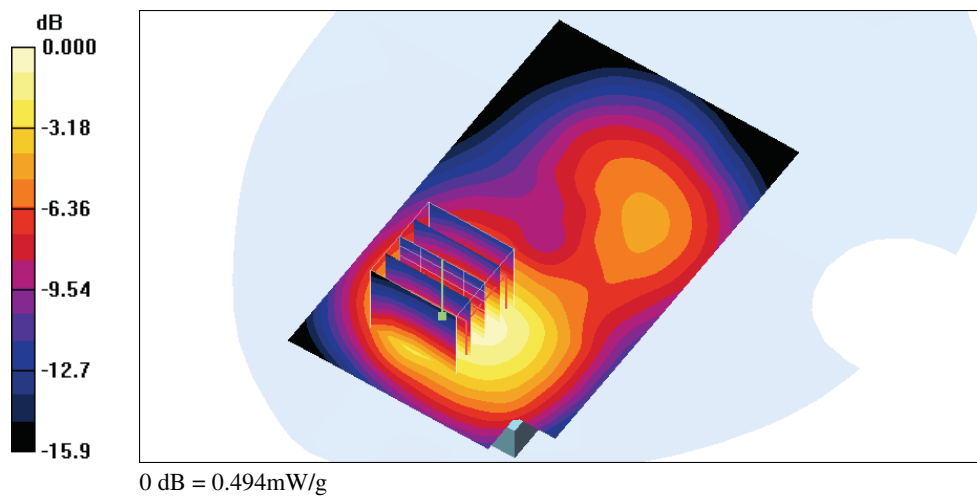
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.09 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.750 W/kg

SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.276 mW/g

Maximum value of SAR (measured) = 0.494 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/22/2008 12:16:44 AM

Flat_PCS_GPRS CH810_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 1.03 mW/g

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

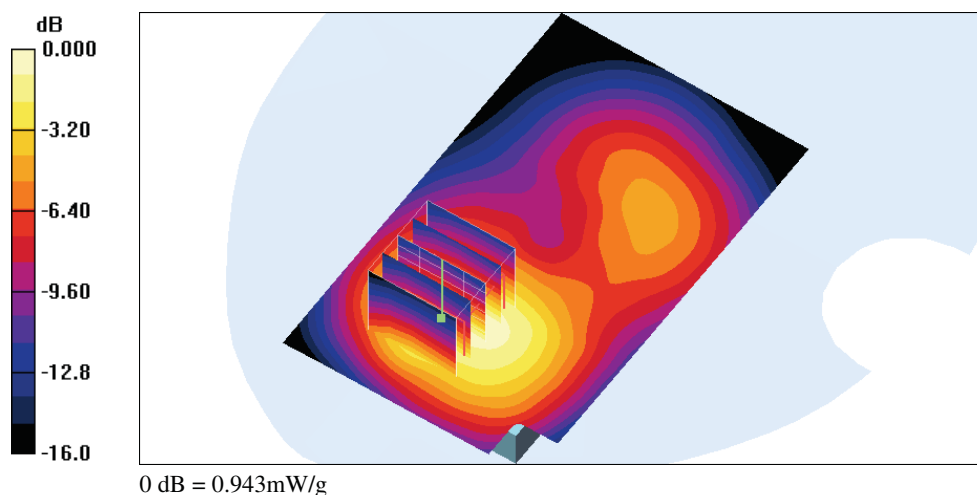
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.888 mW/g; SAR(10 g) = 0.539 mW/g

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





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 10:02:27 PM

Flat_PCS_EGPRS CH512_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (81x131x1):

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

Maximum value of SAR (interpolated) = 0.714 mW/g

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

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

Reference Value = 12.1 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.696 mW/g; SAR(10 g) = 0.404 mW/g

Maximum value of SAR (measured) = 0.784 mW/g

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

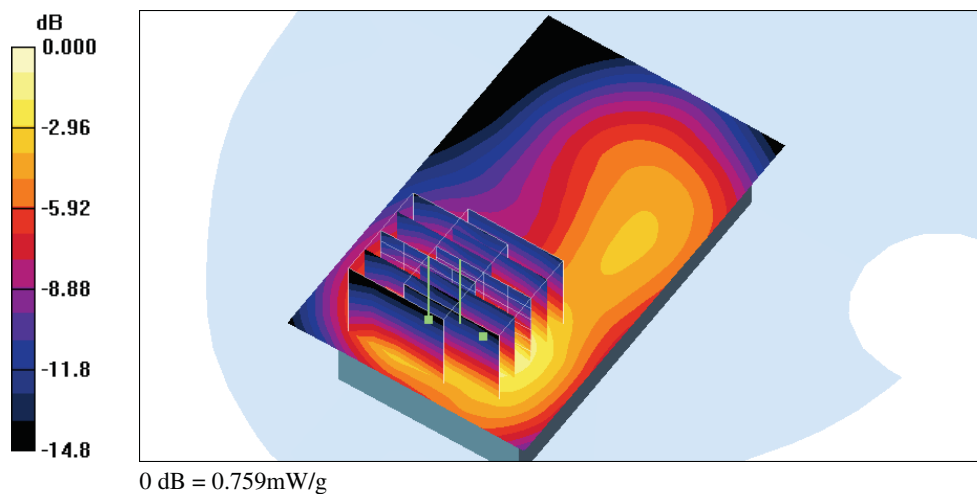
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.421 mW/g

Maximum value of SAR (measured) = 0.759 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 10:27:46 PM

Flat_PCS_EGPRS CH661_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (81x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.908 mW/g

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

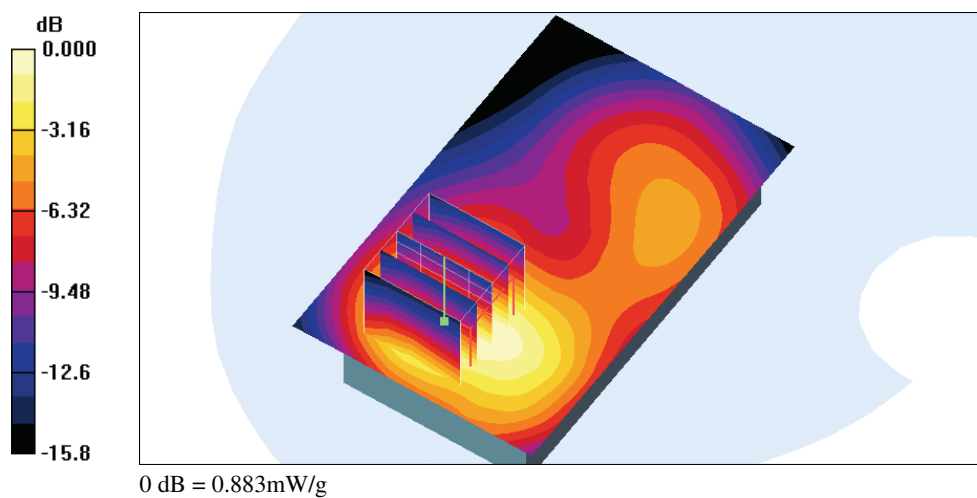
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.2 V/m ; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.814 mW/g ; SAR(10 g) = 0.497 mW/g

Maximum value of SAR (measured) = 0.883 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 11:07:35 PM

Flat_PCS_EGPRS CH810_3Down1Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: PCS EGPRS(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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (81x131x1):

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

Maximum value of SAR (interpolated) = 0.502 mW/g

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

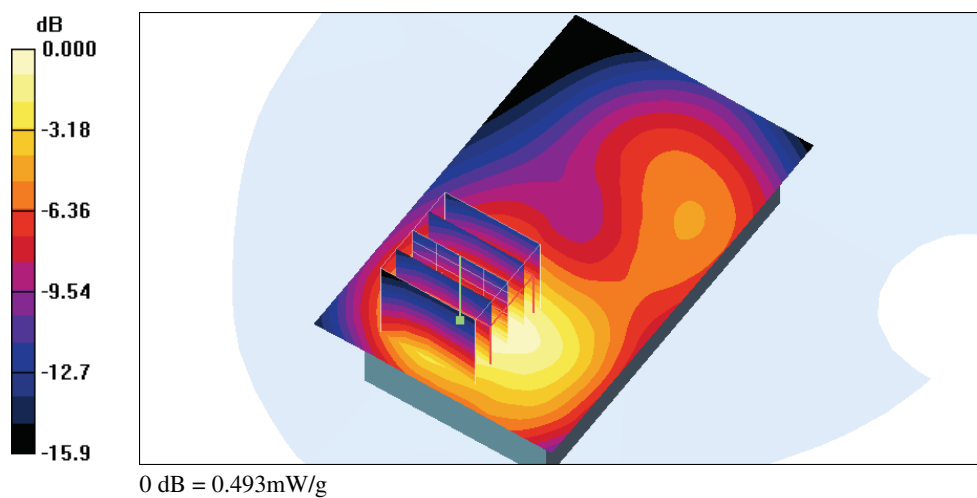
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.58 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.763 W/kg

SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.493 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 10:46:59 PM

Flat_PCS_EGPRS CH810_3Down2Up_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (81x131x1):

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

Maximum value of SAR (interpolated) = 0.964 mW/g

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

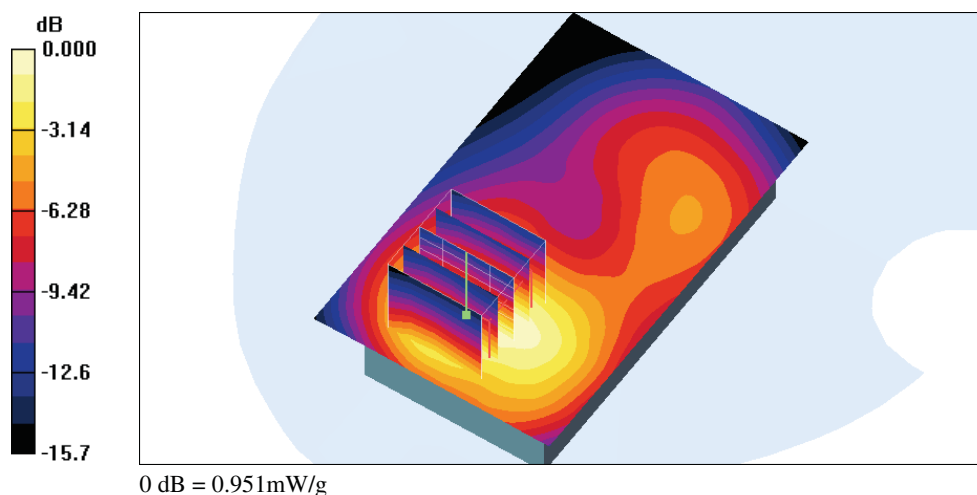
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.129 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.883 mW/g; SAR(10 g) = 0.533 mW/g

Maximum value of SAR (measured) = 0.951 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 6:36:24 PM

Flat_WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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:

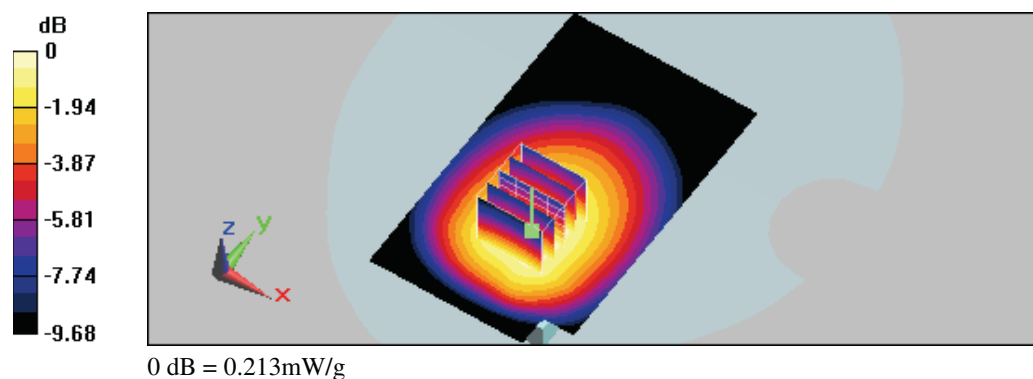
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.89 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.259 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.213 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 6:52:07 PM

Flat_WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: 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

DASY4 Configuration:

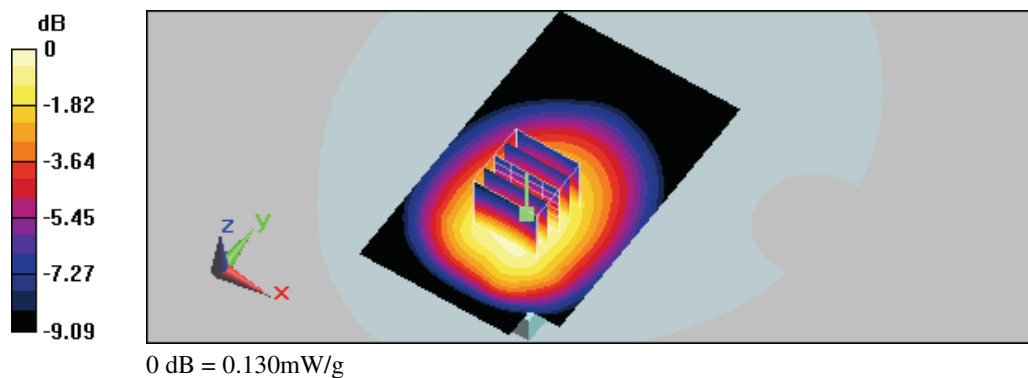
- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 0.129 mW/g

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

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 4.66 V/m; Power Drift = -0.001 dB
Peak SAR (extrapolated) = 0.156 W/kg
SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.130 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 7:08:47 PM

Flat_WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.215 mW/g

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

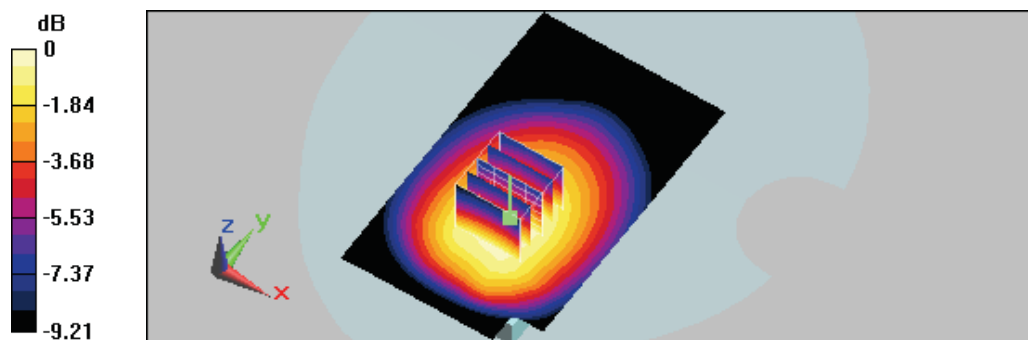
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.29 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.260 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.151 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: 7/18/2008 7:36:04 PM

Flat_HSDPA WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

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

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

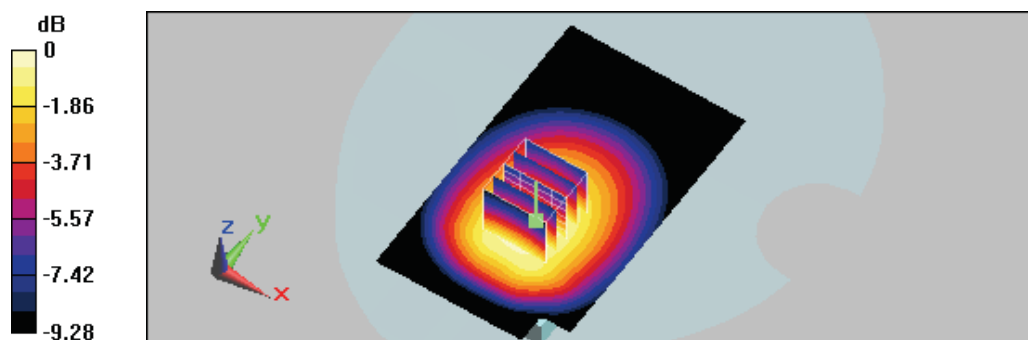
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.56 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.252 W/kg

SAR(1 g) = 0.198 mW/g; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.210 mW/g



0 dB = 0.210mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 8:02:55 PM

Flat_HSDPA WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.140 mW/g

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

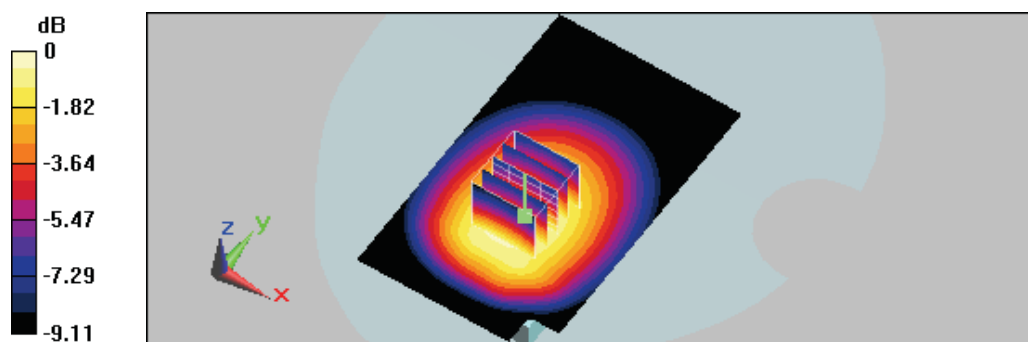
Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 4.56 V/m; Power Drift = 0.060 dB

Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.098 mW/g

Maximum value of SAR (measured) = 0.142 mW/g



0 dB = 0.142mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/18/2008 8:18:20 PM

Flat_HSDPA WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.230 mW/g

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

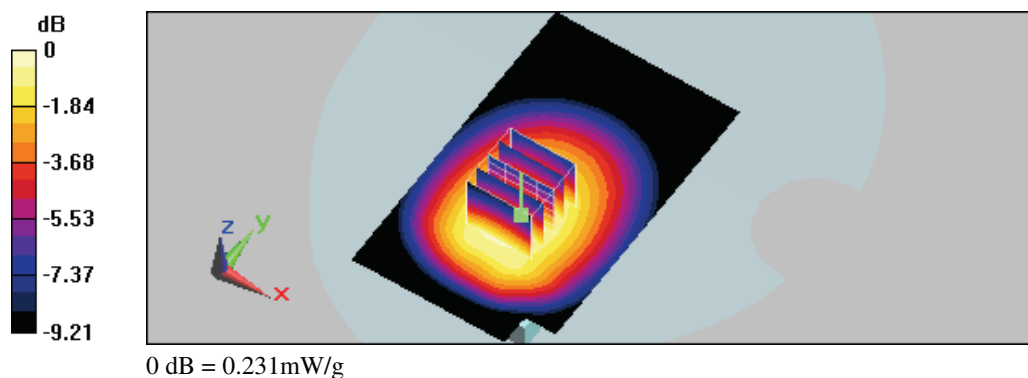
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.88 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.280 W/kg

SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.161 mW/g

Maximum value of SAR (measured) = 0.231 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 1:32:37 AM

Flat_HSUPA WCDMA Band V CH4132_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.295 mW/g

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

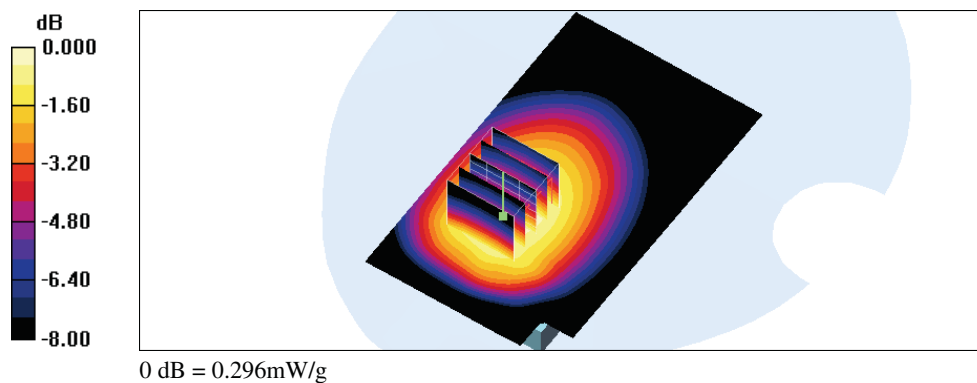
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.52 V/m; Power Drift = 0.093 dB

Peak SAR (extrapolated) = 0.362 W/kg

SAR(1 g) = 0.281 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.296 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 1:47:06 AM

Flat_HSUPA WCDMA Band V CH4180_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

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

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

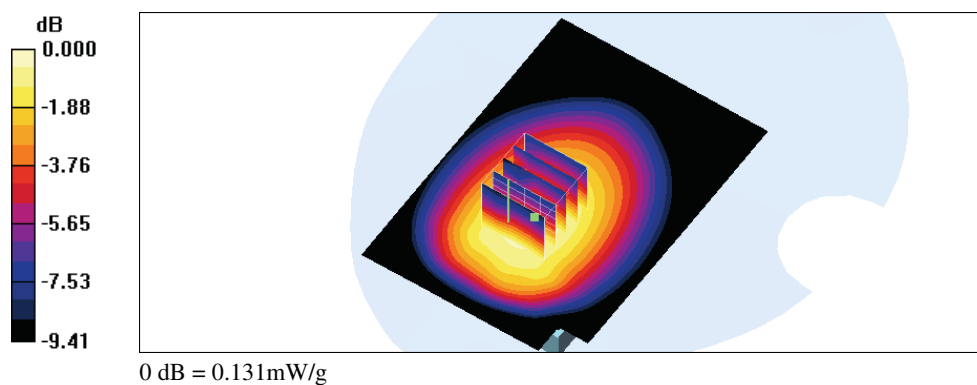
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.23 V/m ; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.204 W/kg

SAR(1 g) = 0.123 mW/g ; SAR(10 g) = 0.088 mW/g

Maximum value of SAR (measured) = 0.131 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 2:18:20 AM

Flat_HSUPA WCDMA Band V CH4232_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.63, 5.63, 5.63); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.165 mW/g

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

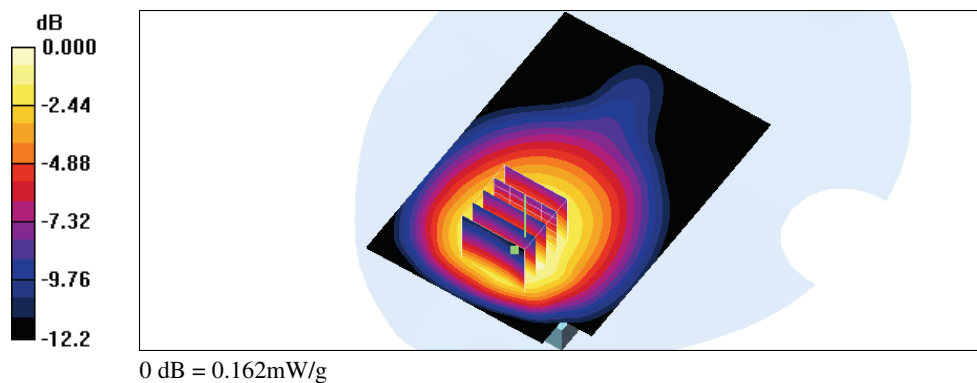
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.25 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.109 mW/g

Maximum value of SAR (measured) = 0.162 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 8:58:27 PM

Flat_WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.752 mW/g

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

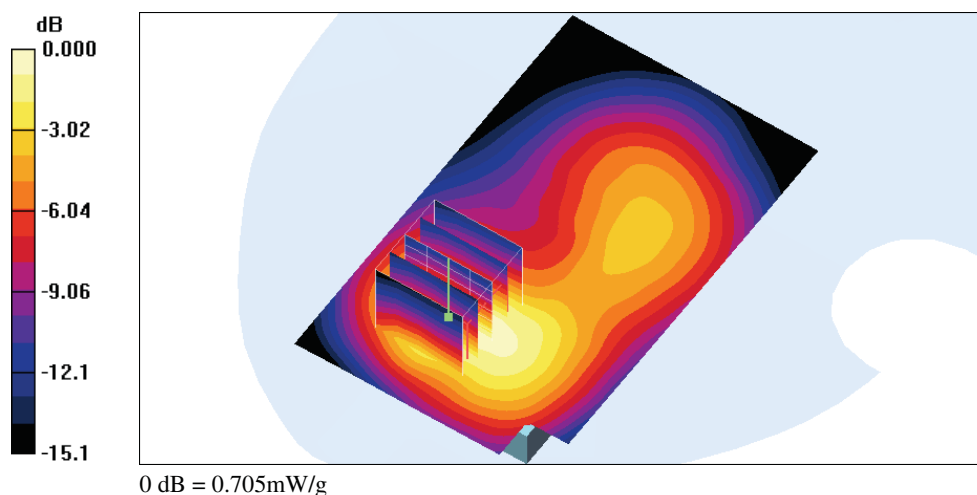
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.9 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.392 mW/g

Maximum value of SAR (measured) = 0.705 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 9:12:37 PM

Flat_WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.885 mW/g

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

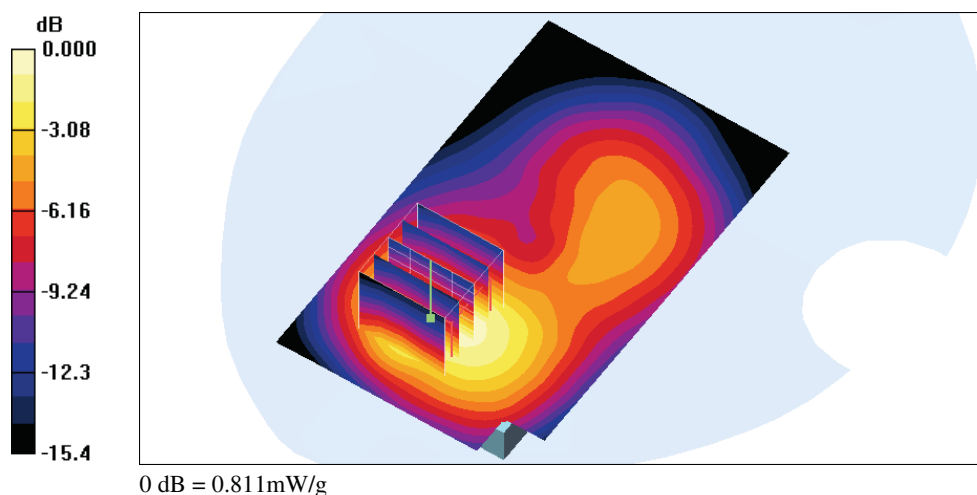
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.8 V/m ; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.748 mW/g ; SAR(10 g) = 0.452 mW/g

Maximum value of SAR (measured) = 0.811 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 9:26:20 PM

Flat_WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.797 mW/g

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

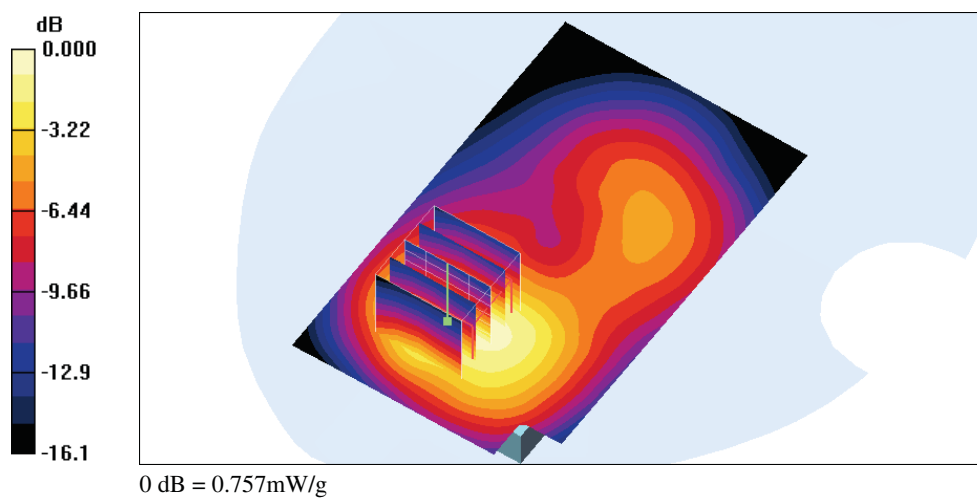
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.421 mW/g

Maximum value of SAR (measured) = 0.757 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 8:14:51 PM

Flat_HSDPA WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.647 mW/g

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

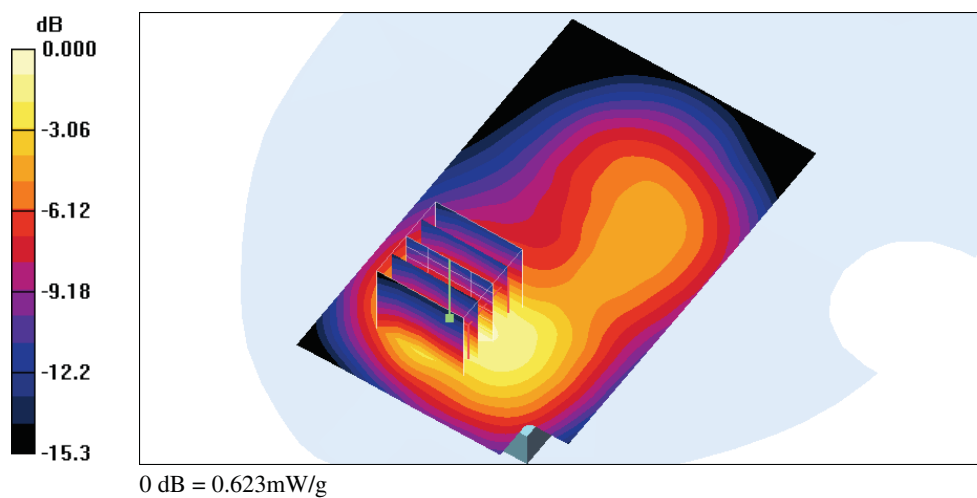
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.936 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.345 mW/g

Maximum value of SAR (measured) = 0.623 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 8:29:28 PM

Flat_HSDPA WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: HSDPA WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.646 mW/g

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

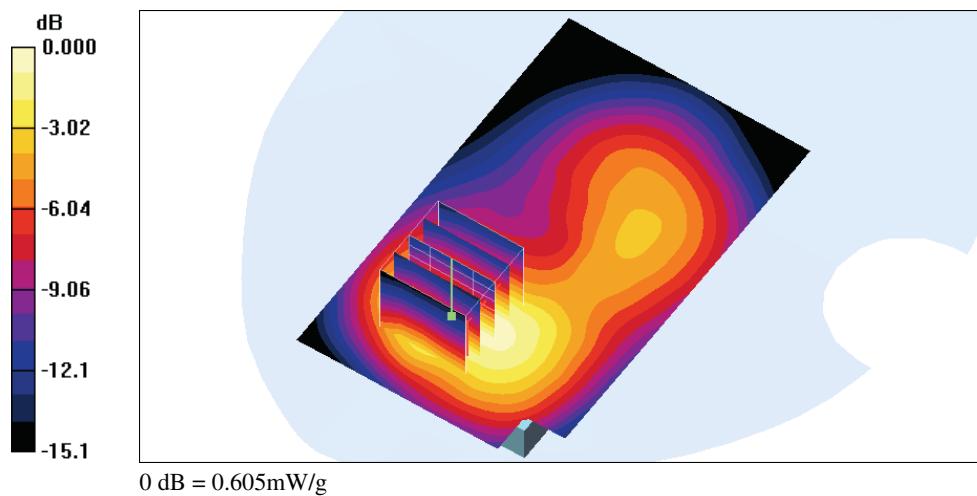
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.8 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.918 W/kg

SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.336 mW/g

Maximum value of SAR (measured) = 0.605 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 7/21/2008 8:43:12 PM

Flat_HSDPA WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: HSDPA WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 8/29/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.630 mW/g

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

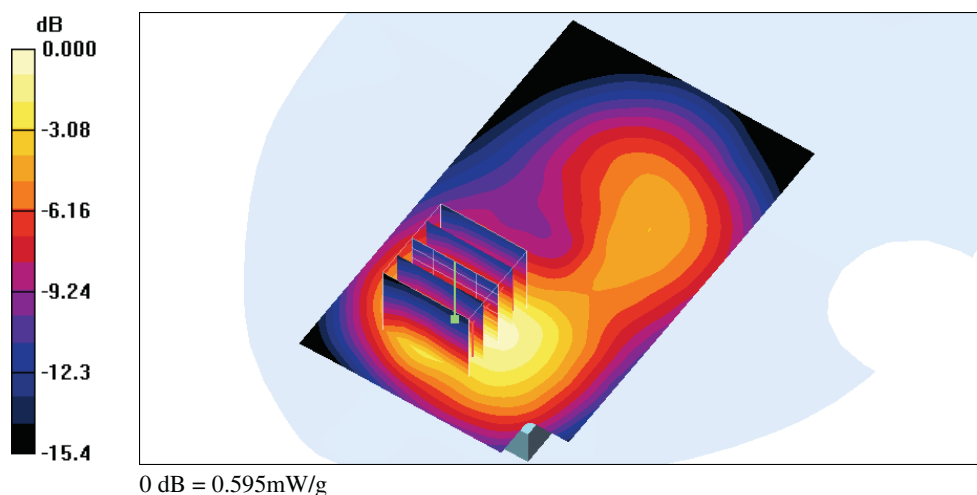
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.3 V/m ; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.915 W/kg

SAR(1 g) = 0.551 mW/g ; SAR(10 g) = 0.331 mW/g

Maximum value of SAR (measured) = 0.595 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 12:01:08 AM

Flat_HSUPA WCDMA Band II CH9262_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.578 mW/g

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

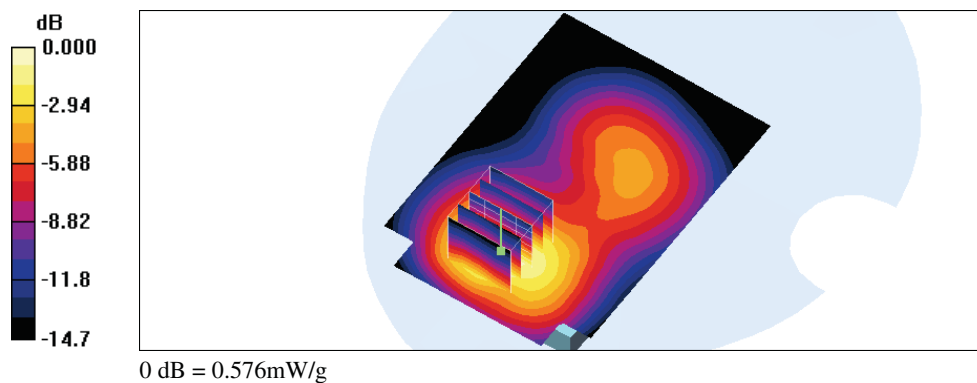
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.92 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.864 W/kg

SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.576 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 12:16:30 AM

Flat_HSUPA WCDMA Band II CH9400_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: HSUPA WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.749 mW/g

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

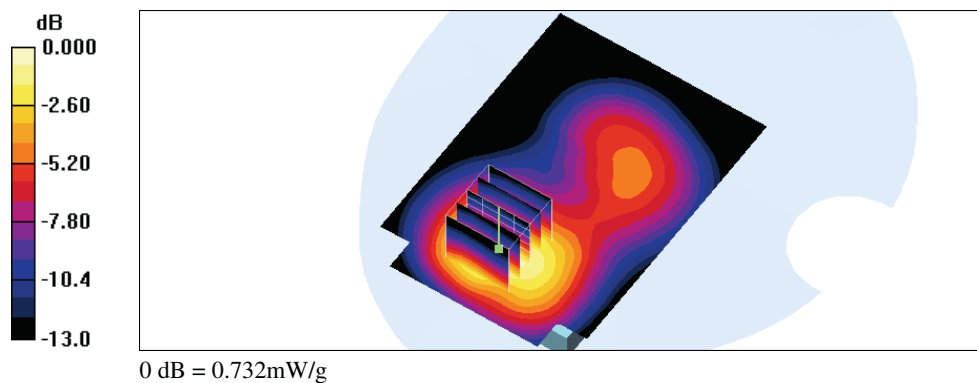
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.0 V/m ; Power Drift = 0.067 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.675 mW/g ; SAR(10 g) = 0.406 mW/g

Maximum value of SAR (measured) = 0.732 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 9/5/2008 12:33:24 AM

Flat_HSUPA WCDMA Band II CH9538_15mm_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: HSUPA WCDMA Band II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.4, 4.4, 4.4); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.471 mW/g

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

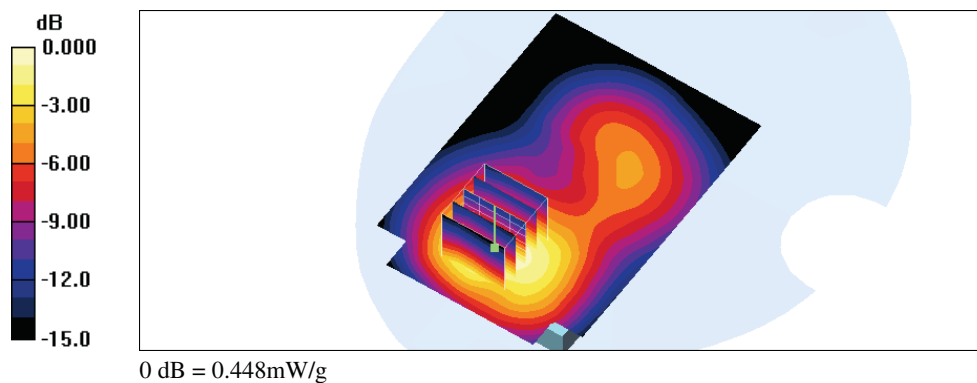
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.81 V/m ; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.417 mW/g ; SAR(10 g) = 0.253 mW/g

Maximum value of SAR (measured) = 0.448 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 7:12:29 PM

Flat_802.11b CH1_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.636 mW/g

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

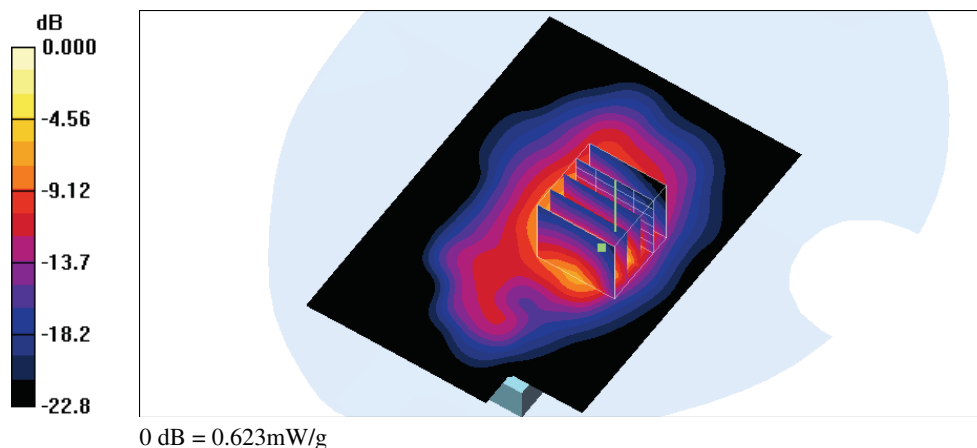
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.59 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.544 mW/g; SAR(10 g) = 0.220 mW/g

Maximum value of SAR (measured) = 0.623 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 7:37:01 PM

Flat_802.11b CH1_11M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.605 mW/g

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

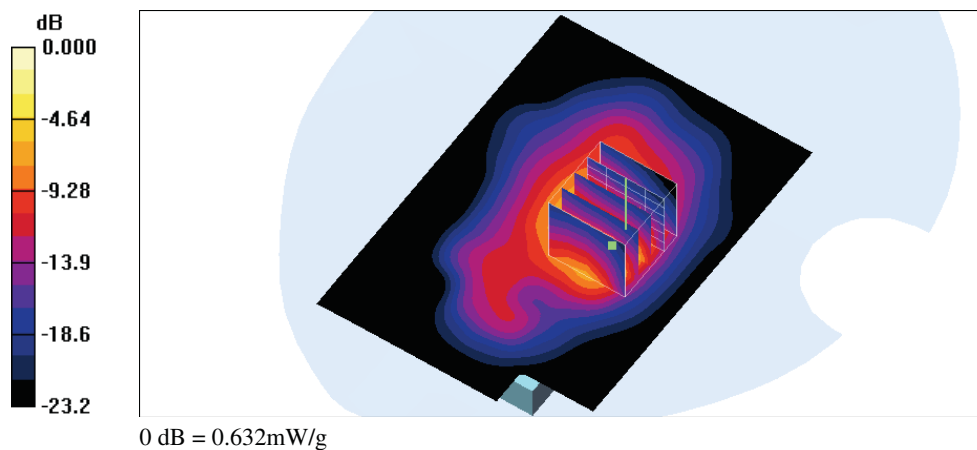
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.73 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.216 mW/g

Maximum value of SAR (measured) = 0.632 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 7:53:33 PM

Flat_802.11b CH6_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.573 mW/g

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

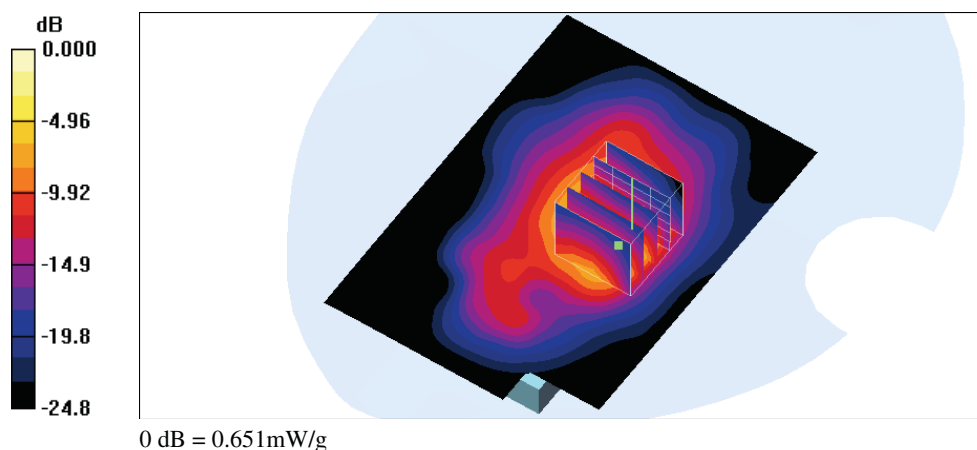
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.63 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.215 mW/g

Maximum value of SAR (measured) = 0.651 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 8:09:37 PM

Flat_802.11b CH11_1M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.99 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.387 mW/g

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

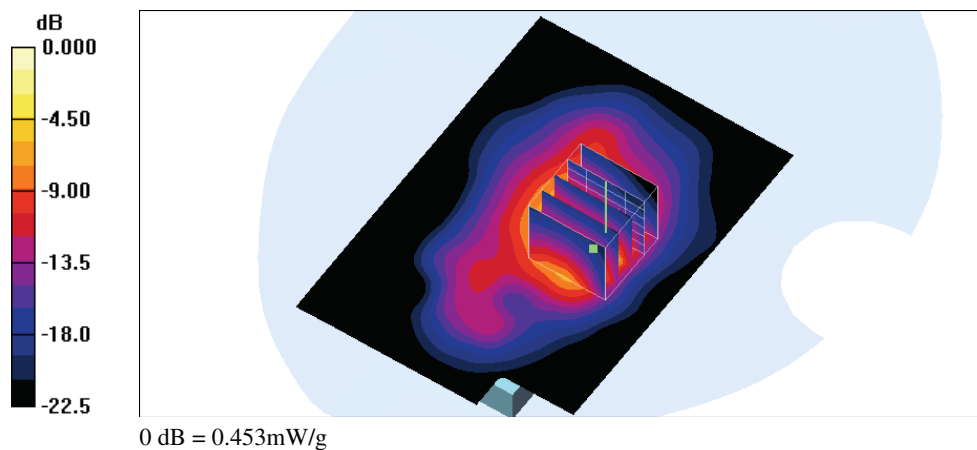
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.70 V/m ; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.369 mW/g ; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.453 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 8:25:48 PM

Flat_802.11g CH1_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.526 mW/g

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

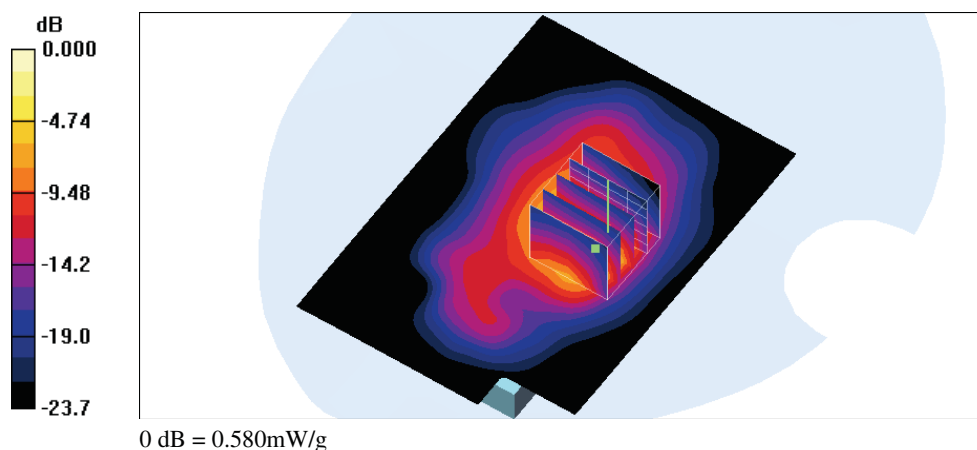
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.47 V/m; Power Drift = -0.031 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.191 mW/g

Maximum value of SAR (measured) = 0.580 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 8:41:10 PM

Flat_802.11g CH1_54M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: IEEE 802.11g; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.92 \text{ mho/m}$; $\epsilon_r = 52.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.402 mW/g

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

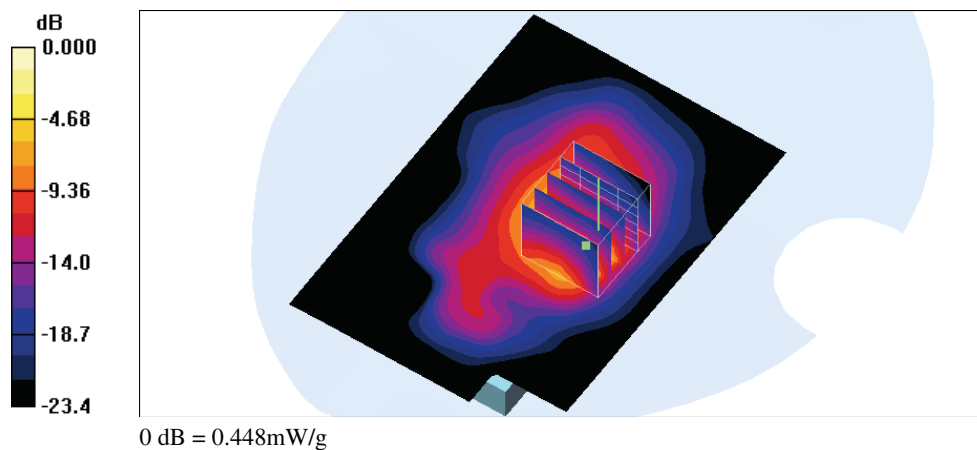
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.83 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.448 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 8:57:20 PM

Flat_802.11g CH6_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.486 mW/g

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

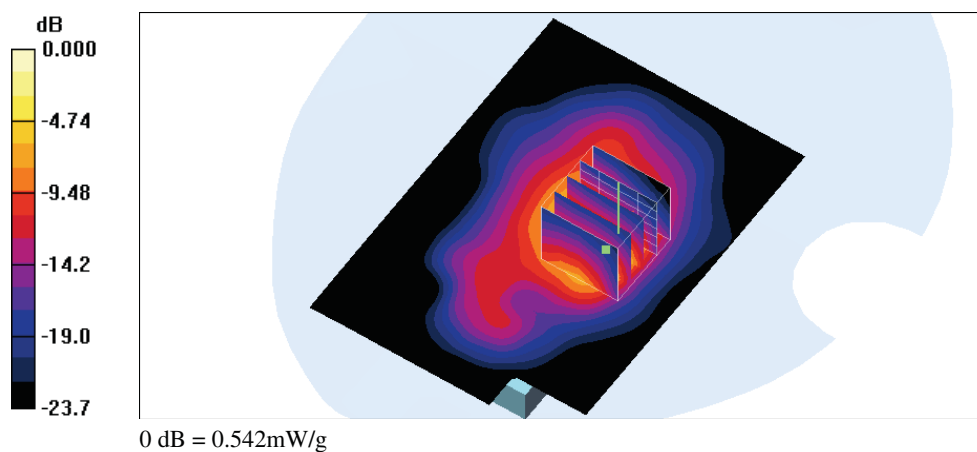
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.19 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.445 mW/g; SAR(10 g) = 0.179 mW/g

Maximum value of SAR (measured) = 0.542 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 8/19/2008 9:15:26 PM

Flat_802.11g CH11_6M_Close Body_Ear Phone

DUT: velocity 111; Type: PDA Phone; Serial: 355535020001737

Communication System: IEEE 802.11g; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.99 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(3.84, 3.84, 3.84); Calibrated: 9/26/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 11/15/2007
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Area Scan (71x101x1):

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

Maximum value of SAR (interpolated) = 0.324 mW/g

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

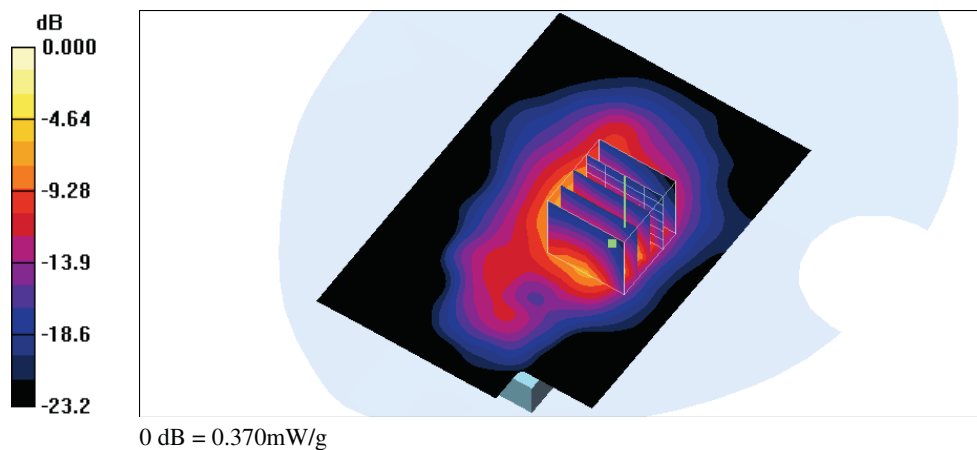
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.25 V/m ; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.859 W/kg

SAR(1 g) = 0.303 mW/g ; SAR(10 g) = 0.122 mW/g

Maximum value of SAR (measured) = 0.370 mW/g





Appendix C - Co-Location SAR Measurement Data

See following Attached Pages.



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/7 PM 04:20:31

RC_WCDMA Band II CH9400

DUT: Velocity111; Type: PDA Phone; Serial: 35553502000173

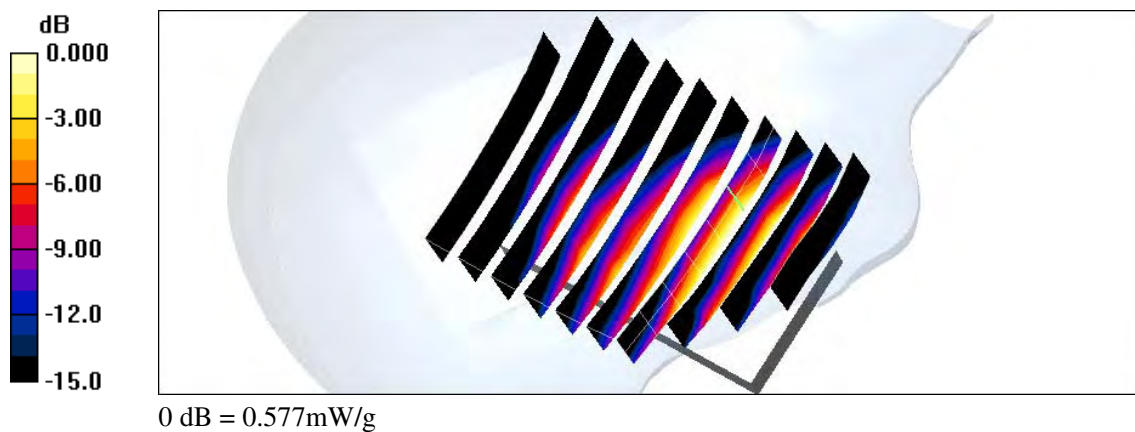
Communication System: WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(5.39, 5.39, 5.39); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Volume Scan (8x10x3):

Measurement grid: $dx=15$ mm, $dy=15$ mm, $dz=15$ mm
Reference Value = 11.3 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 10.9 W/kg
SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.380 mW/g
Total Absorbed Power = 0.0456301 W
Maximum value of SAR (measured) = 0.577 mW/g





Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/7 PM 06:39:03

RC_802.11b CH1_1M

DUT: Velocity 111; Type: PDA Phone; Serial: 35553502000173

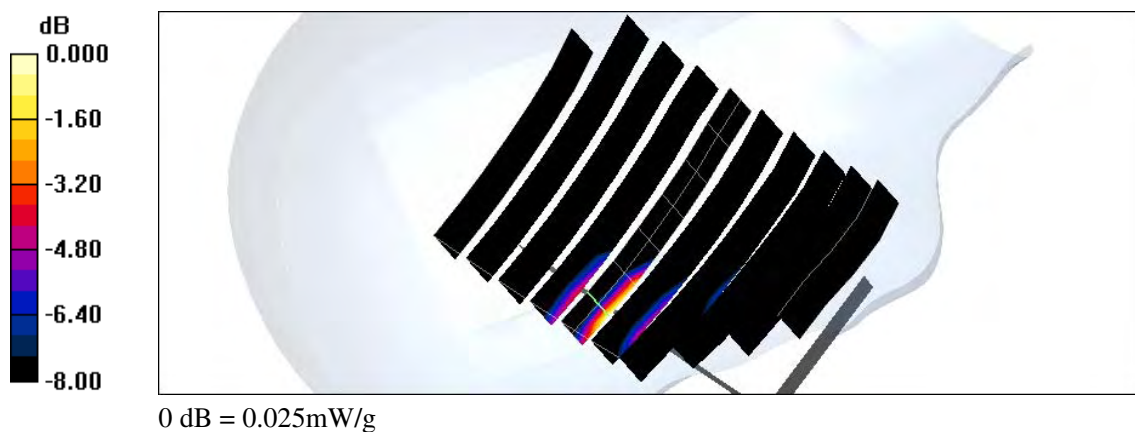
Communication System: IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2412$ MHz; $\sigma = 1.74$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.79, 4.79, 4.79); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Right Cheek/Volume Scan (8x10x3):

Measurement grid: $dx=15$ mm, $dy=15$ mm, $dz=15$ mm
Reference Value = 1.60 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 0.536 W/kg
SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.00866 mW/g
Total Absorbed Power = 0.000612583 W
Maximum value of SAR (measured) = 0.025 mW/g





Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/7 PM 06:39:03

Combined for Head

DUT: Velocity 111; Type: PDA Phone; Serial: 35553502000173

Communication System: IEEE 802.11bCommunication System: WCDMA Band II; Frequency: 2412 MHz

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.74$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³ Medium parameters used:
 $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.79, 4.79, 4.79)ConvF(5.39, 5.39, 5.39); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Multi Band Result:

SAR(1 g) = 0.617 mW/g; SAR(10 g) = 0.382 mW/g
Maximum value of SAR (measured) = 0.578 mW/g

Right Cheek/Volume Scan (8x10x3):

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

Reference Value = 1.60 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.536 W/kg

SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.00866 mW/g

Total Absorbed Power = 0.000612583 W

Maximum value of SAR (measured) = 0.025 mW/g

Right Cheek/Volume Scan (8x10x3):

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

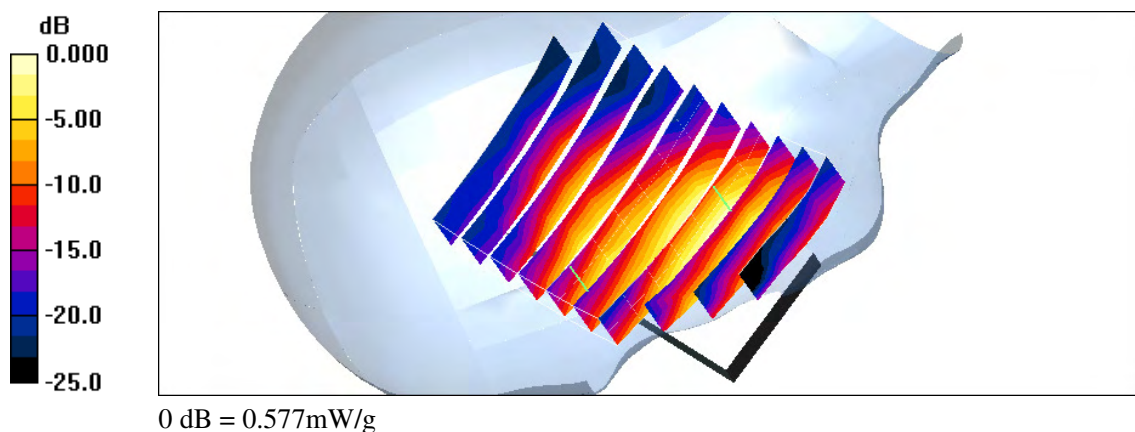
Reference Value = 11.3 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.380 mW/g

Total Absorbed Power = 0.0456301 W

Maximum value of SAR (measured) = 0.577 mW/g





Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/5 PM 06:40:53

Flat_GSM850 GPRS CH128_3Down2Up_15mm_Ear Phone

DUT: Velocity 111; Type: PDA Phone; Serial: 35553502000173

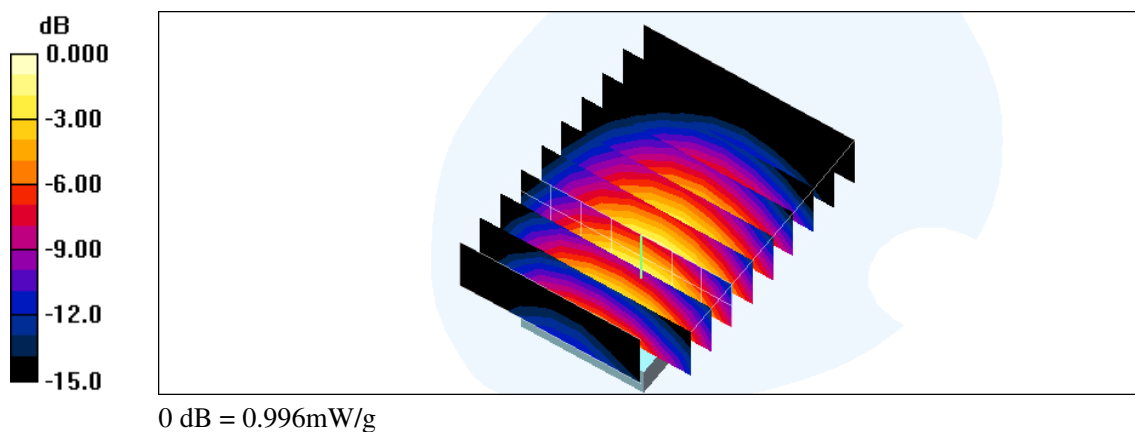
Communication System: GSM 850 GPRS(3Down, 2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(6.24, 6.24, 6.24); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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) = 0.978 mW/g; SAR(10 g) = 0.712 mW/g
Total Absorbed Power = 0.0870615 W
Maximum value of SAR (measured) = 0.996 mW/g





Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/5 PM 03:08:22

Flat_802.11b CH1_1M_Close Body_Ear Phone

DUT: Velocity 111; Type: PDA Phone; Serial: 35553502000173

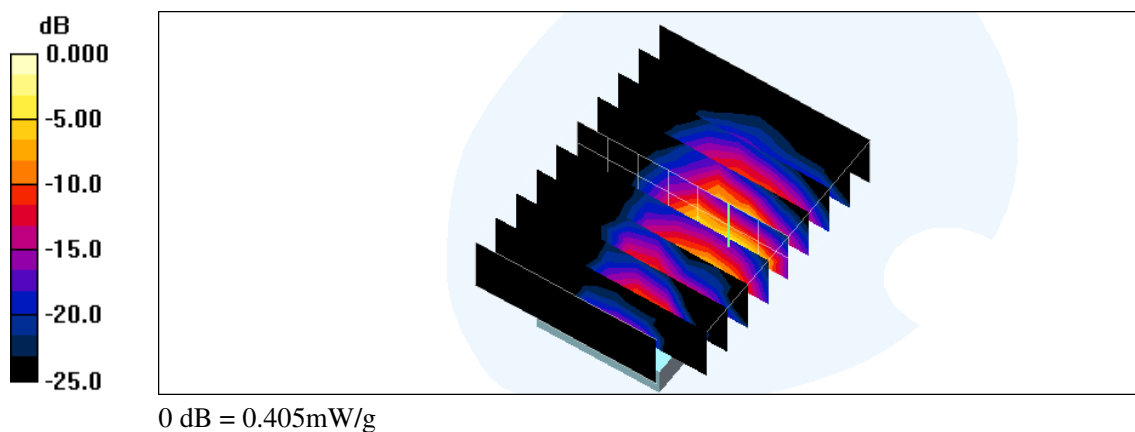
Communication System: IEEE 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1530; ConvF(4.11, 4.11, 4.11); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Flat/Volume Scan (8x10x3):

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





Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2008/11/5 PM 06:40:53

Combined for Body

DUT: Velocity 111; Type: PDA Phone; Serial: 35553502000173

Communication System: GSM 850 GPRS(3Down, 2Up)Communication System: IEEE 802.11b;
Frequency: 824.2 MHz; Frequency: 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: ET3DV6 - SN1530; ConvF(6.24, 6.24, 6.24)ConvF(4.11, 4.11, 4.11); Calibrated: 2008/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2008/2/21
- Phantom: SAM12; Type: SAM v4.0; Serial: TP:1009
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Multi Band Result:

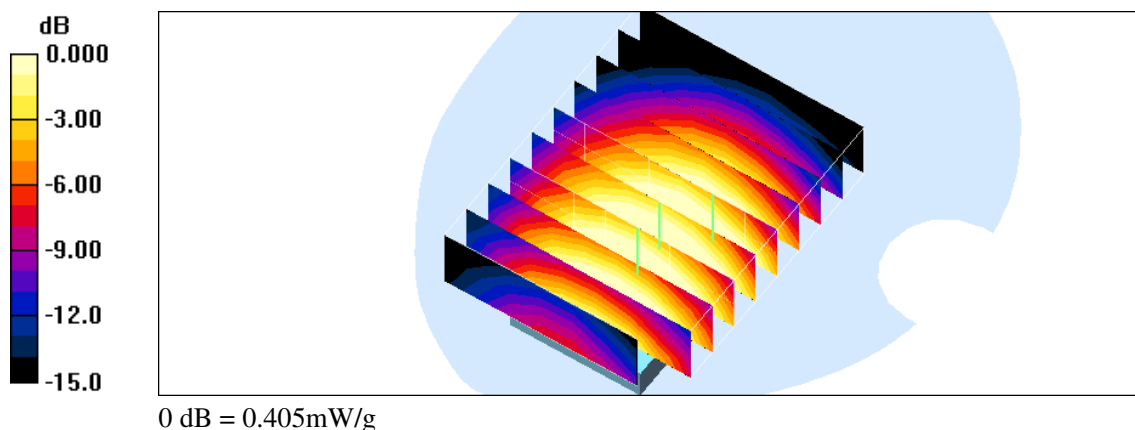
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.762 mW/g
Maximum value of SAR (measured) = 1.06 mW/g

Flat/Volume Scan (8x10x3):

Measurement grid: $dx=15$ mm, $dy=15$ mm, $dz=15$ mm
Reference Value = 13.1 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.978 mW/g; SAR(10 g) = 0.712 mW/g
Total Absorbed Power = 0.0870615 W
Maximum value of SAR (measured) = 0.996 mW/g

Flat/Volume Scan (8x10x3):

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





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 _ D900V2 SN:172 Calibration No.D900V2-172_Jan08
- Dipole _ D1950V2 SN: 1117 Calibration No.D1950V1117_Dec07
- Dipole _ D2450V2 SN: 712 Calibration No.D2450V712_Jan08
- Probe _ ET3DV6 SN:1530 Calibration No.ET3-1530_Sep07
- DAE _ DAE3 SN:393 Calibration No.DAE3-393_Aug08
- DAE _ DAE4 SN:541 Calibration No.DAE4-541_Nov07