

# A Test Lab Techno Corp.

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## SAR EVALUATION REPORT



Test Report No.	:	1106FS14
Applicant	:	HTC Corporation
Product Type	:	Smartphone
Trade Name	:	HTC
Model Number	:	PG76240
Dates of Test	:	Jun. 09 ~ Jun. 14, 2011
Date of Issued	:	Jun. 16, 2011
Test Environment	:	Ambient Temperature : $22 \pm 2$ ° C Relative Humidity : 40 - 70 %
Standard	:	ANSI/IEEE C95.1-1999 IEEE Std. 1528-2003 47 CFR Part §2.1093; FCC/OET Bulletin 65 Supplement C [July 2001]
Max. SAR	:	0.921 W/kg Head SAR 1.390 W/kg Body SAR
Test Lab Location	:	Chang-an Lab



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Approved By :



(Sam Chuang)

Tested By :



(Alex Wu)



# Contents

1. Description of Equipment under Test (EUT) .....	3
2. Introduction .....	4
2.1 SAR Definition .....	4
3. SAR Measurement Setup .....	5
3.1 DASY5 E-Field Probe System .....	6
3.2 Data Acquisition Electronic (DAE) System.....	9
3.3 Robot.....	9
3.4 Measurement Server.....	9
3.5 Device Holder.....	10
3.6 Phantom - SAM v4.0 .....	10
3.7 Oval Flat Phantom - ELI 4.0.....	11
3.8 Data Storage and Evaluation .....	11
4. Tissue Simulating Liquids .....	14
4.1 Ingredients .....	15
4.2 Recipes .....	15
4.3 Liquid Confirmation .....	16
5. SAR Testing with RF Transmitters .....	19
5.1 SAR Testing with HSDPA Transmitters .....	19
5.2 SAR Testing with 802.11 Transmitters .....	20
5.2.1 General Device Setup .....	20
5.2.2 Frequency Channel Configurations .....	20
5.3 Conducted Power.....	22
5.4 Simultaneous Transmitting Evaluate.....	26
6. System Performance Check .....	31
6.1 Symmetric Dipoles for System Validation .....	31
6.2 Validation.....	32
7. Test Equipment List.....	37
8. Measurement Uncertainty .....	38
9. Measurement Procedure .....	40
9.1 Spatial Peak SAR Evaluation .....	40
9.2 Area & Zoom Scan Procedures .....	41
9.3 Volume Scan Procedures .....	41
9.4 SAR Averaged Methods.....	41
9.5 Power Drift Monitoring.....	41
10. SAR Test Results Summary.....	42
10.1 Head SAR .....	42
10.2 Body SAR.....	43
10.3 Std. C95.1-1999 RF Exposure Limit .....	46
11. Conclusion .....	47
12. References.....	47
Appendix A - System Performance Check.....	48
Appendix B - SAR Measurement Data.....	55
Appendix C - Calibration.....	113



## 1. Description of Equipment under Test (EUT)

Applicant	HTC Corporation	
Applicant Address	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan	
Manufacture	HTC Corporation	
Manufacture Address	No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan	
Product Type	Smartphone	
Trade Name	HTC	
Model Number	PG76240	
FCC ID	NM8PG76240	
RF Function	GSM/GPRS/EGPRS 850 (Device Class B, Multi-slot Class 10) GSM/GPRS/EGPRS 1900 (Device Class B, Multi-slot Class 10) WCDMA(RMC 12.2K) / HSDPA Band IV IEEE 802.11b / 802.11g / draft 802.11n 2.4GHz Standard-20MHz with Wi-Fi Hot spot mode Bluetooth	
Tx Frequency	Band	Operate Frequency (MHz)
	GSM/GPRS/EGPRS 850	824.2 - 848.8
	GSM/GPRS/EGPRS 1900	1850.2 - 1909.8
	WCDMA(RMC 12.2K) / HSDPA Band IV	1712.4 - 1752.6
	IEEE 802.11b/802.11g	2412 - 2462
	draft 802.11n 2.4GHz Standard-20MHz	2412 - 2462
	Bluetooth	2402 - 2480
RF Conducted Power (Avg.)	Band	Power (W / dBm)
	GSM/GPRS/EGPRS 850	1.862 / 32.70
	GSM/GPRS/EGPRS 1900	1.096 / 30.40
	WCDMA(RMC 12.2K) / HSDPA Band IV	0.211 / 23.24
	IEEE 802.11b	0.053 / 17.23
	IEEE 802.11g	0.017 / 12.31
	Draft 802.11n 2.4GHz Standard-20MHz	0.017 / 12.32
	Bluetooth	0.001 / -2.53
Max. SAR Measurement	0.921 W/kg Head SAR 1.390 W/kg Body SAR	
Antenna Type	PIFA Type	
Device Category	Portable Device	
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. Introduction

The A Test Lab Techno Corp. has performed measurements of the maximum potential exposure to the user of **HTC Corporation Trade Name : HTC Model(s) : PG76240**. 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 20cm 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.

### 2.1 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 ( $\rho$ ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Figure 2).

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

Figure 2. SAR Mathematical Equation

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

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

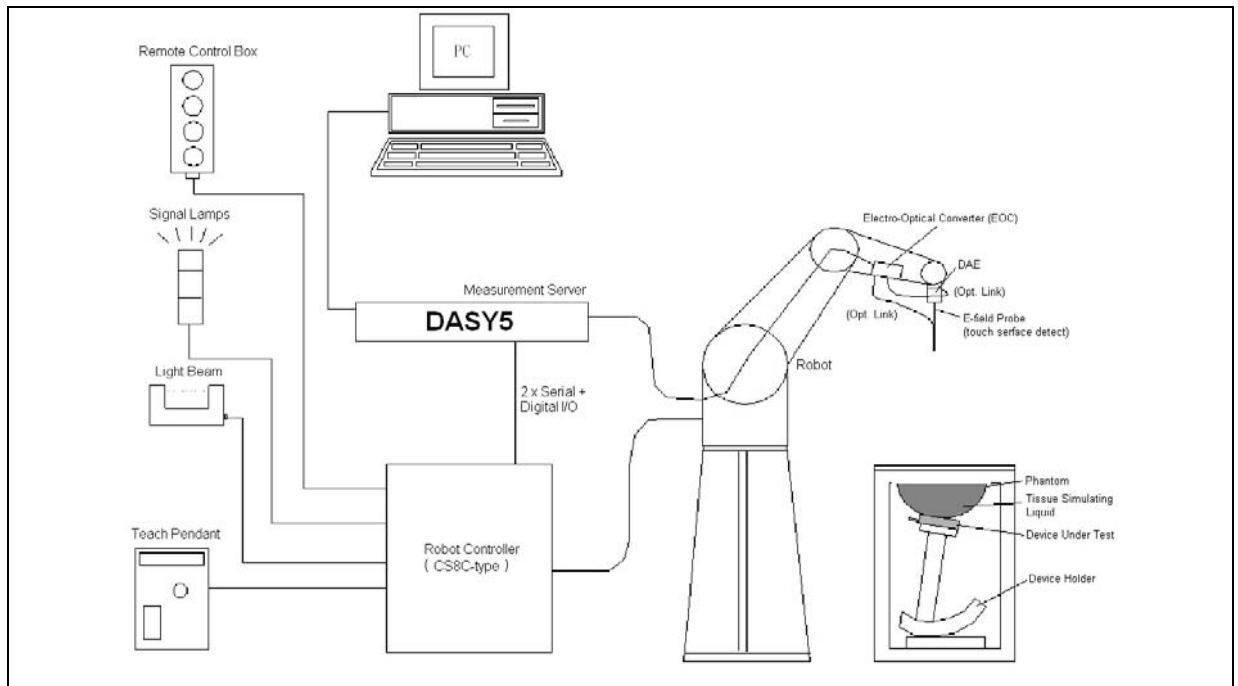
Where :

- $\sigma$  = conductivity of the tissue (S/m)
- $\rho$  = mass density of the tissue (kg/m<sup>3</sup>)
- $E$  = 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 ]

### 3. SAR Measurement Setup



The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli TX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
5. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
6. A computer operating Windows 2000 or Windows XP.
7. DASY5 software.
8. Remote controls with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
9. The SAM twin phantom enabling testing left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. Validation dipole kits allowing validating the proper functioning of the system.

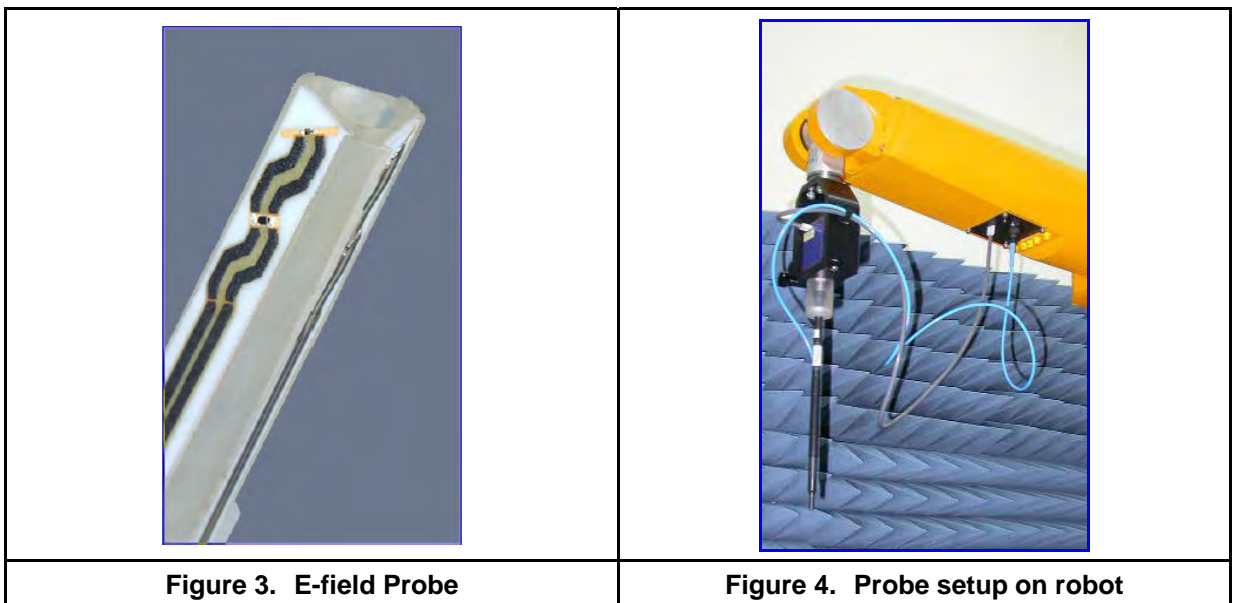


### 3.1 DASYS E-Field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3, EX3DV4 or EX3DV3 (manufactured by SPEAG), designed in the classical triangular configuration [ 3 ] and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multi-fiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASYS software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting. The approach is stopped when reaching the maximum.

### 3.1.1 E-Field Probe Specification

Construction	<p>Symmetrical design with triangular core</p> <p>Built-in optical fiber for surface detection System</p> <p>Built-in shielding against static charges</p> <p>PEEK enclosure material (resistant to organic solvents, e.q., glycol)</p>
Calibration	<p>In air from 10 MHz to 6 GHz</p> <p>In brain and muscle simulating tissue at frequencies of 2450MHz (accuracy <math>\pm 8\%</math>)</p> <p>Calibration for other liquids and frequencies upon request</p>
Frequency	<p><math>\pm 0.2</math> dB (30 MHz to 6 GHz) for EX3DV4</p> <p><math>\pm 0.2</math> dB (30 MHz to 4 GHz) for ES3DV3</p>
Directivity	<p><math>\pm 0.3</math> dB in brain tissue (rotation around probe axis)</p> <p><math>\pm 0.5</math> dB in brain tissue (rotation normal probe axis)</p>
Dynamic Range	<p>10 <math>\mu</math> W/g to &gt; 100mW/g; Linearity: <math>\pm 0.2</math>dB</p>
Dimensions	<p>Overall length: 337mm</p> <p>Tip length: 20mm</p> <p>Body diameter: 12mm</p> <p>Tip diameter: 2.5mm for EX3DV4, 3.9mm for ES3DV3</p> <p>Distance from probe tip to dipole centers: 1.0mm for EX3DV4, 2.0mm for ES3DV3</p>
Application	<p>General dosimetry up to 6GHz</p> <p>Compliance tests of mobile phones</p> <p>Fast automatic scanning in arbitrary phantoms</p>





### 3.1.2 E-Field Probe Calibration process

#### Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm<sup>2</sup>) using an RF Signal generator, TEM cell, and RF Power Meter.

#### Free Space Assessment

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/cm<sup>2</sup>.

#### Temperature Assessment

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the 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 :

- $\Delta t$  = Exposure time (30 seconds),
- $C$  = Heat capacity of tissue (head or body),
- $\Delta T$  = Temperature increase due to RF exposure.

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

Where :

- $\sigma$  = Simulated tissue conductivity,
- $\rho$  = Tissue density (kg/m<sup>3</sup>).





### 3.2 Data Acquisition Electronic (DAE) System

#### Cell Controller

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

#### Data Converter

Features : Signal Amplifier, multiplexer, A/D converter, and control logic  
Software : DASY5 v5.0 (Build 125) & SEMCAD X Version 13.4 Build 125  
Connecting Lines : Optical downlink for data and status info  
Optical uplink for commands and clock

### 3.3 Robot

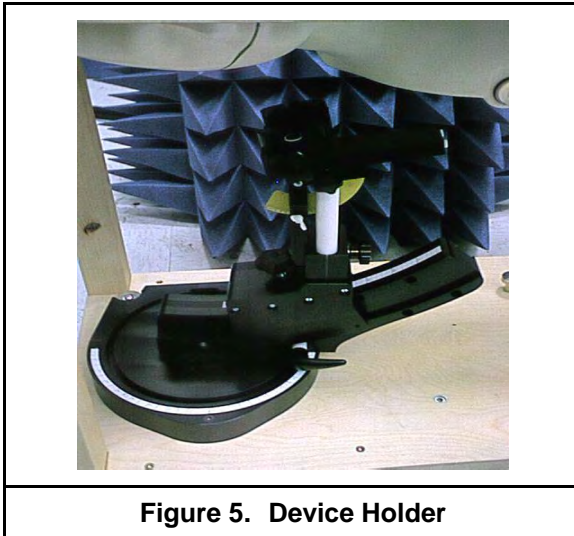
Positioner : Stäubli Unimation Corp. Robot Model: TX90XL  
Repeatability :  $\pm 0.02$  mm  
No. of Axis : 6

### 3.4 Measurement Server

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

### 3.5 Device Holder

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity  $\epsilon=3$  and loss tangent  $\delta=0.02$ . The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



**Figure 5. Device Holder**

### 3.6 Phantom - SAM v4.0

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 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.

Shell Thickness	2 ±0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	1000x500 mm (LxW)
<b>Table 1. Specification of SAM v4.0</b>	



**Figure 6. SAM Twin Phantom**

### 3.7 Oval Flat Phantom - ELI 4.0

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (Oval Flat) phantom defined in IEEE 1528-2003, CENELEC 50361 and IEC 62209. It enables the dosimetric evaluation of wireless portable device 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.

<b>Shell Thickness</b>	2 ±0.2 mm
<b>Filling Volume</b>	Approx. 30 liters
<b>Dimensions</b>	190x600x400 mm (HxLxW)
<b>Table 2. Specification of ELI 4.0</b>	

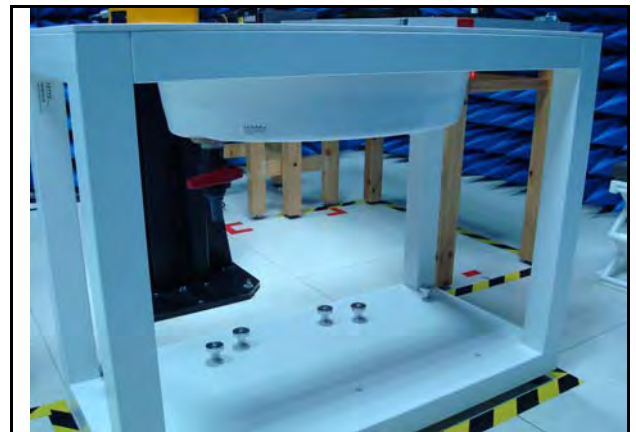


Figure 7. Oval Flat Phantom

### 3.8 Data Storage and Evaluation

#### 3.8.1 Data Storage

The DASY5 software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension DA55. 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.



### 3.8.2 Data Evaluation

The DASY5 post processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software :

<b>Probe parameters :</b>	- Sensitivity	Normi, ai0, ai1, ai2
	- Conversion factor	ConvFi
	- Diode compression point	dcp <sub>i</sub>
<b>Device parameters :</b>	- Frequency	f
	- Crest factor	cf
<b>Media parameters :</b>	- Conductivity	$\sigma$
	- Density	$\rho$

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

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

**H-field probes :**

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

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

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

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

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

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

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

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

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



#### 4. 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 E5071B 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 specified in 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equation and extrapolated according to the head parameter specified in 1528.

Target Frequency (MHz)	Head		Body	
	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (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

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

**Table 3. Tissue dielectric parameters for head and body phantoms**



## 4.1 Ingredients

The following ingredients are used:

- Water: deionized water (pure H<sub>2</sub>O), resistivity  $\geq 16 \text{ M } \Omega$  -as basis for the liquid
- Sugar: refined white sugar (typically 99.7 % sucrose, available as crystal sugar in food shops)  
-to reduce relative permittivity
- Salt: pure NaCl -to increase conductivity
- Cellulose: Hydroxyethyl-cellulose, medium viscosity (75-125 mPa.s, 2% in water, 20 °C), CAS # 54290 -to increase viscosity and to keep sugar in solution.
- Preservative: Preventol D-7 Bayer AG, D-51368 Leverkusen, CAS # 55965-84-9 -to prevent the spread of bacteria and molds
- DGBE: Diethylenglycol-monobutyl ether (DGBE), Fluka Chemie GmbH, CAS # 112-34-5 -to reduce relative permittivity

## 4.2 Recipes

The following tables give the recipes for tissue simulating liquids to be used in different frequency bands.

Note: The goal dielectric parameters (at 22 °C) must be achieved within a tolerance of  $\pm 5\%$  for  $\epsilon$  and  $\pm 5\%$  for  $\sigma$ .

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99+% Pure Sodium Chloride      Sugar: 98+% Pure Sucrose

Water: De-ionized, 16 M $\Omega$ <sup>+</sup> resistivity      HEC: Hydroxyethyl Cellulose

DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether



### 4.3 Liquid Confirmation

#### 4.3.1 Parameters

Liquid Verify								
Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70%								
Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
835MHz Head	820MHz	22.0	$\epsilon_r$	41.50	42.91	3.40	± 5	06/10/2011
			$\sigma$	0.90	0.90	0.00	± 5	
	835MHz	22.0	$\epsilon_r$	41.50	43.07	3.78	± 5	
			$\sigma$	0.90	0.88	-2.22	± 5	
	850MHz	22.0	$\epsilon_r$	41.50	42.77	3.06	± 5	
			$\sigma$	0.90	0.91	1.11	± 5	
1750MHz Head	1700MHz	22.0	$\epsilon_r$	40.08	39.51	-1.42	± 5	06/10/2011
			$\sigma$	1.37	1.40	2.19	± 5	
	1750MHz	22.0	$\epsilon_r$	40.08	39.56	-1.30	± 5	
			$\sigma$	1.37	1.36	-0.73	± 5	
	1760MHz	22.0	$\epsilon_r$	40.08	39.48	-1.50	± 5	
			$\sigma$	1.37	1.41	2.92	± 5	
1900MHz Head	1850MHz	22.0	$\epsilon_r$	40.00	38.19	-4.53	± 5	06/11/2011
			$\sigma$	1.40	1.37	-2.14	± 5	
	1900MHz	22.0	$\epsilon_r$	40.00	38.37	-4.08	± 5	
			$\sigma$	1.40	1.35	-3.57	± 5	
	1930MHz	22.0	$\epsilon_r$	40.00	38.12	-4.70	± 5	
			$\sigma$	1.40	1.40	0.00	± 5	

**Table 4. Measured Tissue dielectric parameters for head and body phantoms**



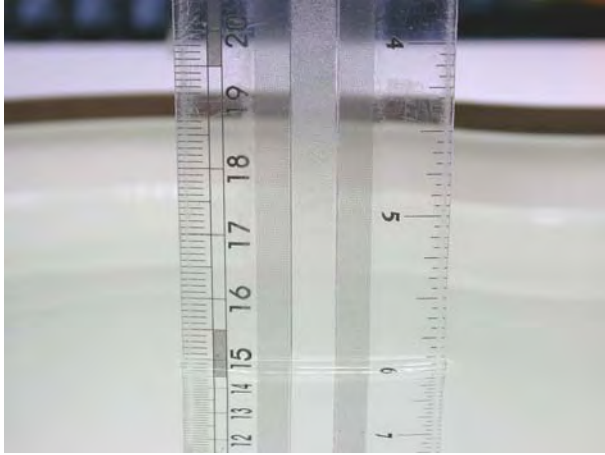


Liquid Verify								
Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70%								
Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
835MHz Body	820MHz	22.0	$\epsilon_r$	55.20	54.39	-1.47	± 5	06/09/2011
			$\sigma$	0.97	0.98	1.03	± 5	
	835MHz	22.0	$\epsilon_r$	55.20	54.56	-1.16	± 5	
			$\sigma$	0.97	0.96	-1.03	± 5	
	850MHz	22.0	$\epsilon_r$	55.20	54.31	-1.61	± 5	
			$\sigma$	0.97	1.00	3.09	± 5	
1750MHz Body	1700MHz	22.0	$\epsilon_r$	53.43	53.00	-0.80	± 5	06/10/2011
			$\sigma$	1.49	1.52	2.01	± 5	
	1750MHz	22.0	$\epsilon_r$	53.43	52.95	-0.90	± 5	
			$\sigma$	1.49	1.47	-1.34	± 5	
	1760MHz	22.0	$\epsilon_r$	53.43	52.98	-0.84	± 5	
			$\sigma$	1.49	1.53	2.68	± 5	
1900MHz Body	1850MHz	22.0	$\epsilon_r$	53.30	53.50	0.38	± 5	06/13/2011
			$\sigma$	1.52	1.55	1.97	± 5	
	1900MHz	22.0	$\epsilon_r$	53.30	53.17	-0.24	± 5	
			$\sigma$	1.52	1.49	-1.97	± 5	
	1930MHz	22.0	$\epsilon_r$	53.30	53.67	0.69	± 5	
			$\sigma$	1.52	1.55	1.97	± 5	
2450MHz Body	1850MHz	22.0	$\epsilon_r$	52.70	51.67	-1.95	± 5	06/14/2011
			$\sigma$	1.95	1.94	-0.51	± 5	
	1900MHz	22.0	$\epsilon_r$	52.70	51.81	-1.69	± 5	
			$\sigma$	1.95	1.88	-3.59	± 5	
	1930MHz	22.0	$\epsilon_r$	52.70	51.50	-2.28	± 5	
			$\sigma$	1.95	2.00	2.56	± 5	

**Table 5. Measured Tissue dielectric parameters for head and body phantoms**

### 4.3.2 Liquid Depth

The liquid level was during measurement 15cm  $\pm$ 0.5cm.



**Figure 8. Head-Tissue-Simulating-Liquid**



**Figure 9. Body-Tissue-Simulating-Liquid**



## 5. SAR Testing with RF Transmitters

### 5.1 SAR Testing with HSDPA Transmitters

#### 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( $\beta_c$ ,  $\beta_d$ ), and HS-DPCCH power offset parameters ( $\Delta_{ACK}$ ,  $\Delta_{NACK}$ ,  $\Delta_{CQI}$ ) should be set according to values indicated in the Table below.<sup>32</sup> The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.<sup>33</sup>

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1,2)}$	CM (dB) <sup>(3)</sup>	MRP (dB) <sup>(3)</sup>
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	12/15 <sup>(4)</sup>	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

- $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
- For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1A and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$  and  $\Delta_{CQI} = 24/15$  with  $\beta_{hs} = 24/15 * \beta_c$
- CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
- For subtest 2 the  $\beta_c/\beta_d$  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 6. Setup for Release 5 HSDPA**



## **5.2 SAR Testing with 802.11 Transmitters**

Normal network operating configurations are not suitable for measuring the SAR of 802.11 a/b/g transmitters. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable.

### **5.2.1 General Device Setup**

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined

for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate.

The same data pattern should be used for all measurements.

### **5.2.2 Frequency Channel Configurations**

802.11 a/b/g and 4.9 GHz operating modes are tested independently according to the service requirements in each frequency band. 802.11 b/g modes are tested on channels 1, 6 and 11. 802.11a is tested for UNII operations on channels 36 and 48 in the 5.15-5.25 GHz band; channels 52 and 64 in the 5.25-5.35 GHz band; channels 104, 116, 124 and 136 in the 5.470-5.725 GHz band; and channels 149 and 161 in the 5.8 GHz band. When 5.8 GHz §15.247 is also available, channels 149, 157 and 165 should be tested instead of the UNII channels. 4.9 GHz is tested on channels 1, 10 and 5 or 6, whichever has the higher output power, for 5 MHz channels; channels 11, 15 and 19 for 10 MHz channels; and channels 21 and 25 for 20 MHz channels. These are referred to as the “default test channels”. 802.11g mode was evaluated only if the output power was 0.25 dB higher than the 802.11b mode.



**802.11 Test Channels per FCC Requirement**

Mode	GHz	Channel	Turbo Channel	Default Test "Channels"				
				§15.247		UNII		
				802.11b	802.11g			
802.11 b/g	2412	1		✓	▽			
	2437	6	6	✓	▽			
	2462	11		✓	▽			
802.11a	5.18	36				✓		
	5.20	40	42 (5.21 GHz)				*	
	5.22	44					*	
	5.24	48	50 (5.25 GHz)					
	5.26	52		✓				
	5.28	56	58 (5.29 GHz)				*	
	5.30	60					*	
	5.32	64				✓		
		5.500	100	Unknown				*
		5.520	104				✓	
		5.540	108					*
		5.560	112					*
		5.580	116				✓	
		5.600	120					*
		5.620	124				✓	
		5.640	128					*
		5.660	132					*
		5.680	136				✓	
		5.700	140				*	
		5.745	149		✓		✓	
	5.765	153	152 (5.76 GHz)		*		*	
	5.785	157		✓			*	
	5.805	161	160 (5.80 GHz)		*	✓		
	§15.247	5.825	165	✓				



### 5.3 Conducted Power

Band	Mode	CH	Frequency (MHz)	RF Conducted Output Power (dBm)
				Average
GSM 850	---	Lowest	824.2	32.50
		Middle	836.6	32.60
		Highest	848.8	<b>32.70</b>
GPRS 850	4Down1Up	Lowest	824.2	32.60
		Middle	836.6	<b>32.70</b>
		Highest	848.8	<b>32.70</b>
	3Down2Up	Lowest	824.2	31.50
		Middle	836.6	31.60
		Highest	848.8	31.70
EGPRS 850	4Down1Up	Lowest	824.2	27.10
		Middle	836.6	27.20
		Highest	848.8	27.30
	3Down2Up	Lowest	824.2	26.10
		Middle	836.6	26.20
		Highest	848.8	26.30

Band	Mode	CH	Frequency (MHz)	RF Conducted Output Power (dBm)
				Average
GSM 1900	---	Lowest	1850.2	<b>30.40</b>
		Middle	1880.0	30.20
		Highest	1909.8	29.90
GPRS 1900	4Down1Up	Lowest	1850.2	<b>30.40</b>
		Middle	1880.0	30.20
		Highest	1909.8	29.90
	3Down2Up	Lowest	1850.2	28.80
		Middle	1880.0	28.60
		Highest	1909.8	28.40
EGPRS 1900	4Down1Up	Lowest	1850.2	26.50
		Middle	1880.0	26.30
		Highest	1909.8	26.10
	3Down2Up	Lowest	1850.2	25.40
		Middle	1880.0	25.20
		Highest	1909.8	25.00



Band	Sub-test	CH	Frequency (MHz)	RF Conducted Output Power (dBm)
				Average
WCDMA Band IV	---	Lowest	1712.4	23.11
		Middle	1740.0	<b>23.12</b>
		Highest	1752.6	22.93
HSDPA Band V	1	Lowest	1712.4	23.08
		Middle	1740.0	<b>23.24</b>
		Highest	1752.6	22.85
	2	Lowest	1712.4	22.82
		Middle	1740.0	22.95
		Highest	1752.6	22.59
	3	Lowest	1712.4	21.35
		Middle	1740.0	21.46
		Highest	1752.6	21.05
	4	Lowest	1712.4	20.97
		Middle	1740.0	21.03
		Highest	1752.6	20.38



Band	Data Rate	CH	Frequency (MHz)	RF Conducted Output Power (dBm)
				Average
IEEE 802.11b	1M	1	2412.0	16.61
		6	2437.0	16.65
		11	2462.0	17.13
	2M	1	2412.0	16.78
		6	2437.0	16.87
		11	2462.0	<b>17.23</b>
	5.5M	1	2412.0	16.79
		6	2437.0	16.82
		11	2462.0	17.21
	11M	1	2412.0	16.48
		6	2437.0	16.53
		11	2462.0	16.94
IEEE 802.11g	6M	1	2412.0	12.14
		6	2437.0	11.92
		11	2462.0	<b>12.31</b>
	9M	1	2412.0	11.91
		6	2437.0	11.73
		11	2462.0	12.23
	12M	1	2412.0	11.83
		6	2437.0	11.65
		11	2462.0	12.17
	18M	1	2412.0	11.73
		6	2437.0	11.58
		11	2462.0	11.97
	24M	1	2412.0	11.53
		6	2437.0	11.26
		11	2462.0	11.82
	36M	1	2412.0	11.02
		6	2437.0	10.98
		11	2462.0	11.52
	48M	1	2412.0	10.75
		6	2437.0	10.78
		11	2462.0	10.96
	54M	1	2412.0	10.63
		6	2437.0	10.52
		11	2462.0	10.83





Band	Data Rate	CH	Frequency (MHz)	RF Conducted Output Power (dBm)
				Average
Draft 802.11n_HT20	7.20 M	1	2412.0	12.02
		6	2437.0	11.82
		11	2462.0	<b>12.32</b>
	14.40 M	1	2412.0	11.92
		6	2437.0	11.34
		11	2462.0	12.03
	21.70M	1	2412.0	11.62
		6	2437.0	11.52
		11	2462.0	11.84
	28.90 M	1	2412.0	11.46
		6	2437.0	11.27
		11	2462.0	11.63
	43.30 M	1	2412.0	11.03
		6	2437.0	10.89
		11	2462.0	11.32
	57.80 M	1	2412.0	10.72
		6	2437.0	10.75
		11	2462.0	11.09
	65.00 M	1	2412.0	10.58
		6	2437.0	10.62
		11	2462.0	10.89
	72.20 M	1	2412.0	10.64
		6	2437.0	10.55
		11	2462.0	10.82



## 5.4 Simultaneous Transmitting Evaluate

RF Conducted Power		
Band	dBm	W
GSM/GPRS/EGPRS 850	32.70	1.86
GSM/GPRS/EGPRS 1900	30.40	1.10
WCDMA/HSDPA Band IV	23.24	0.21
Wi-Fi 802.11b	17.23	0.05
Wi-Fi 802.11g	12.31	0.02
Wi-Fi 802.11n	12.32	0.02
BT 2.0	-2.53	0.0006

Antenna Distance	
Antenna Account	Distance (cm)
BT to WLAN	0
BT to GSM(License)	7.5
WLAN to GSM(License)	7.5

### BT and GSM and WLAN simultaneously SAR Description

(1) Antenna Distance

1a. BT & GSM 7.5 cm

1b. BT & WLAN 0cm

(2) BT Power  $< P_{ref}$  and antenna-to-antenna is  $> 2.5$  cm ~ BT Stand-alone SAR is not required.

(3) WLAN  $> 2 * P_{ref}$  and antenna-to-antenna  $> 5.0$  cm ~ WLAN Stand-alone SAR is required.

(4) Cellular/PCS Stand-alone SAR is required due to routine evaluation requirements.

(5) Highest Simultaneous SAR Evaluation:

$\Sigma SAR = 1.674 > SAR$  limit: 1.6mW/g

SAR to peak location separation ratio = 9.1cm

$1.674 / 9.1 = 0.18 < 0.3$

Therefore, the Simultaneous SAR is not required.

(6) For WiFi hot spot mode, since the GSM and WCDMA network will not support the DTM mode, Therefore the (E)GPRS/HSPA SAR of head is not required.

(7) The WiFi protocol is not support VoIP function.

Note:

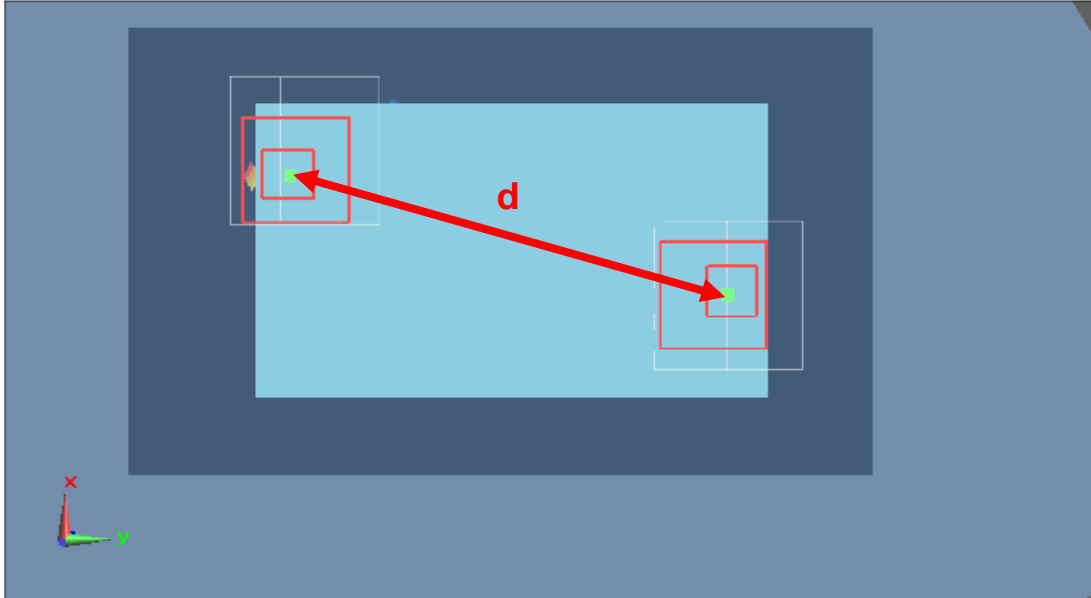
1. SAR to peak location separation please fined the Table 7 as below.

2. Simultaneous Transmission Summation of SAR, please find the Table 8 as below.

2a. For Edge Top mode, that license antenna to edge top  $> 2.5$ cm, therefore the license Stand-alone SAR is not required.

2b. For Edge Bottom mode, that Unlicense antenna to edge Bottom  $> 2.5$ cm, therefore the Unlicensed Stand-alone SAR is not required.

**Table 7.**



$$d = \sqrt{((-0.002) - (-0.026))^2 + ((-0.047) - (0.041))^2 + ((-0.203) - (-0.203))^2} = 9.1cm$$

**Table 8.**

<b>Back surface mode</b>					
The sum of the 1-g SAR					
Simult Tx	Configuration	GPRS 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	1.39	0.284	1.674	<1.6
The SAR to antenna separation ratio of simultaneous transmitting					
Distance of peak cm		$\Sigma$ SAR/distance of peak		$\Sigma$ SAR/distance of peak <0.3	
9.12		0.18		<0.3	
Simult Tx	Configuration	HSDPA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	1.02	0.284	1.304	<1.6
Simult Tx	Configuration	GPRS 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	1.31	0.284	1.594	<1.6
Simult Tx	Configuration	GSM 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	1.11	0.284	1.394	<1.6
Simult Tx	Configuration	GSM 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	1.03	0.284	1.314	<1.6
Simult Tx	Configuration	WCDMA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.972	0.284	1.256	<1.6



Front surface mode					
The sum of the 1-g SAR					
Simult Tx	Configuration	GPRS 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.691	0.097	0.788	<1.6
Simult Tx	Configuration	HSDPA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.523	0.097	0.620	<1.6
Simult Tx	Configuration	GPRS 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.780	0.097	0.877	<1.6
Simult Tx	Configuration	GSM 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.478	0.097	0.575	<1.6
Simult Tx	Configuration	GSM 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.467	0.097	0.564	<1.6
Simult Tx	Configuration	WCDMA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.575	0.097	0.672	<1.6

Edge Left mode					
The sum of the 1-g SAR					
Simult Tx	Configuration	GPRS 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.238	0.039	0.277	<1.6
Simult Tx	Configuration	HSDPA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.135	0.039	0.174	<1.6
Simult Tx	Configuration	GPRS 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.427	0.039	0.466	<1.6



Edge Right mode					
The sum of the 1-g SAR					
Simult Tx	Configuration	GPRS 1900 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.422	0.050	0.472	<1.6
Simult Tx	Configuration	HSDPA Band IV SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.292	0.050	0.342	<1.6
Simult Tx	Configuration	GPRS 850 SAR mW/g	WLAN SAR mW/g	$\Sigma$ SAR mW/g	$\Sigma$ SAR
Body SAR	Flat	0.611	0.050	0.661	<1.6

## 6. System Performance Check

### 6.1 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	835, 1750, 1900, 2450 MHz
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	D835V2 : dipole length 150 mm; overall height 330 mm D1750V2 : dipole length 72 mm; overall height 300 mm D1900V2 : dipole length 62 mm; overall height 300 mm D2450V2 : dipole length 51.5 mm; overall height 300 mm

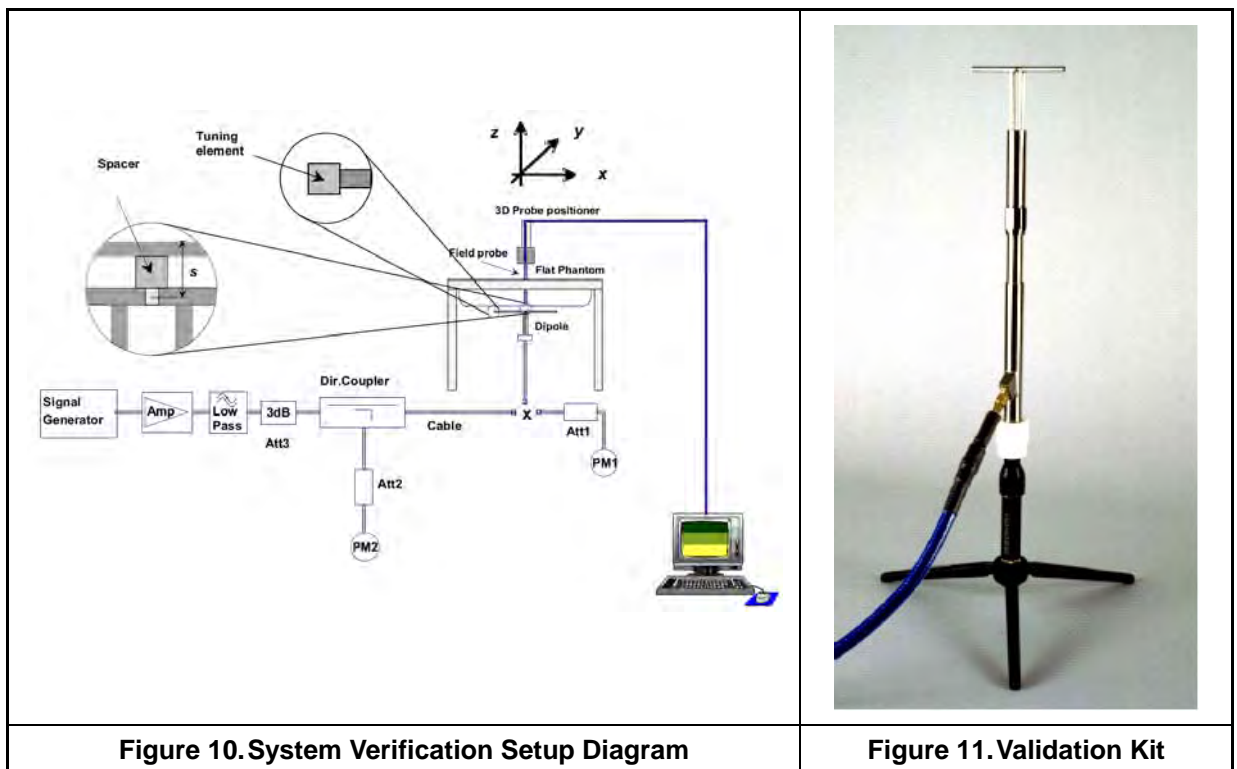


Figure 10. System Verification Setup Diagram

Figure 11. Validation Kit



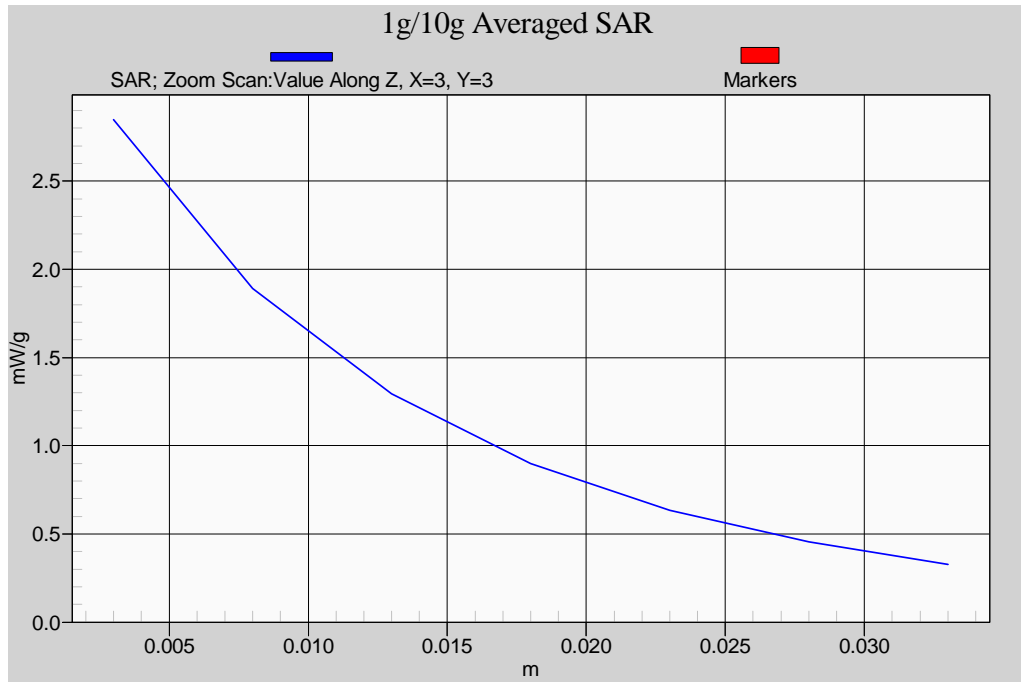
## 6.2 Validation

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 835, 1750, 1900, 2450 MHz.

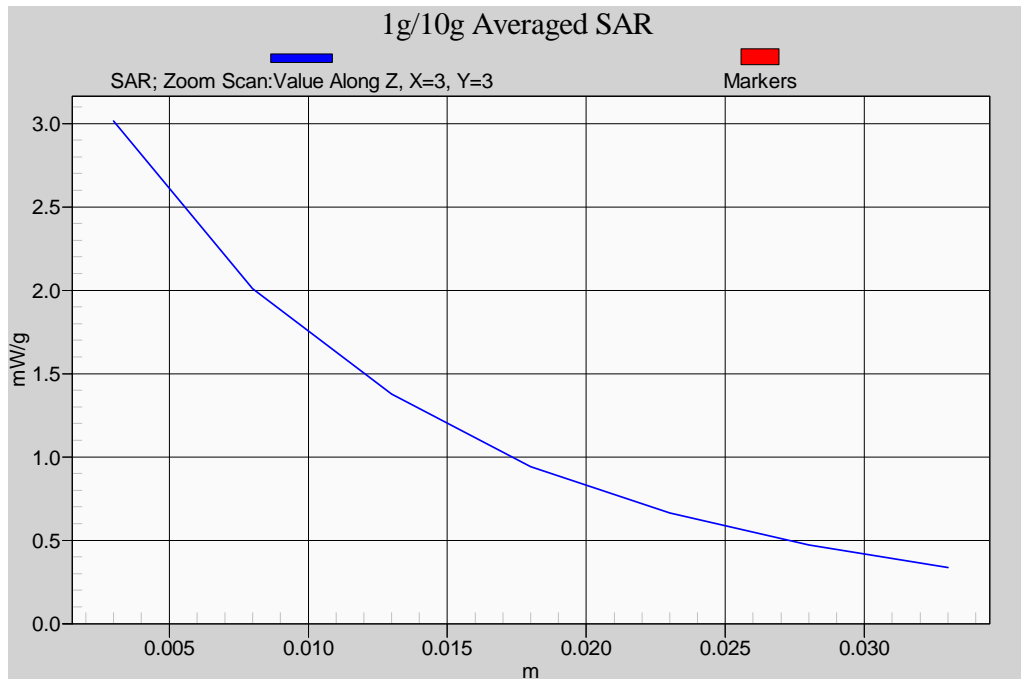
Validation kit		Mixture Type	SAR <sub>1g</sub> [mW/g]	SAR <sub>10g</sub> [mW/g]	Date of Calibration		
D835V2-SN4d082		Head	9.65	6.26	07/20/2010		
		Body	10.00	6.60			
D1750V2-SN1008		Head	35.90	19.00	05/24/2011		
		Body	36.7	19.4			
D1900V2-SN5d111		Head	39.90	21.00	07/16/2010		
		Body	41.90	22.50			
D2450V2-SN712		Body	50.40	23.30	02/23/2011		
Frequency (MHz)	Power (dBm)	SAR <sub>1g</sub> (mW/g)	SAR <sub>10g</sub> (mW/g)	Drift (dB)	Difference percentage		Date
					1g	10g	
835 (Head)	250mW	2.43	1.58	0.00	0.73 %	0.96 %	06/10/2011
	Normalize to 1 Watt	9.72	6.32				
835 (Body)	250mW	2.57	1.67	0.02	2.80 %	1.21 %	06/09/2011
	Normalize to 1 Watt	10.28	6.68				
1750 (Head)	250mW	8.85	4.67	0.06	-1.39 %	-1.68 %	06/10/2011
	Normalize to 1 Watt	35.40	18.68				
1750 (Body)	250mW	9.07	4.79	-0.01	-1.14 %	-1.24 %	06/10/2011
	Normalize to 1 Watt	36.28	19.16				
1900 (Head)	250mW	9.76	5.15	0.05	-2.16 %	-1.90 %	06/11/2011
	Normalize to 1 Watt	39.04	20.60				
1900 (Body)	250mW	10.60	5.64	0.03	1.19 %	0.27 %	06/13/2011
	Normalize to 1 Watt	42.40	22.56				
2450 (Body)	250mW	12.90	6.05	0.10	2.38 %	3.86 %	06/14/2011
	Normalize to 1 Watt	51.60	24.20				



**Z-axis Plot of System Performance Check**

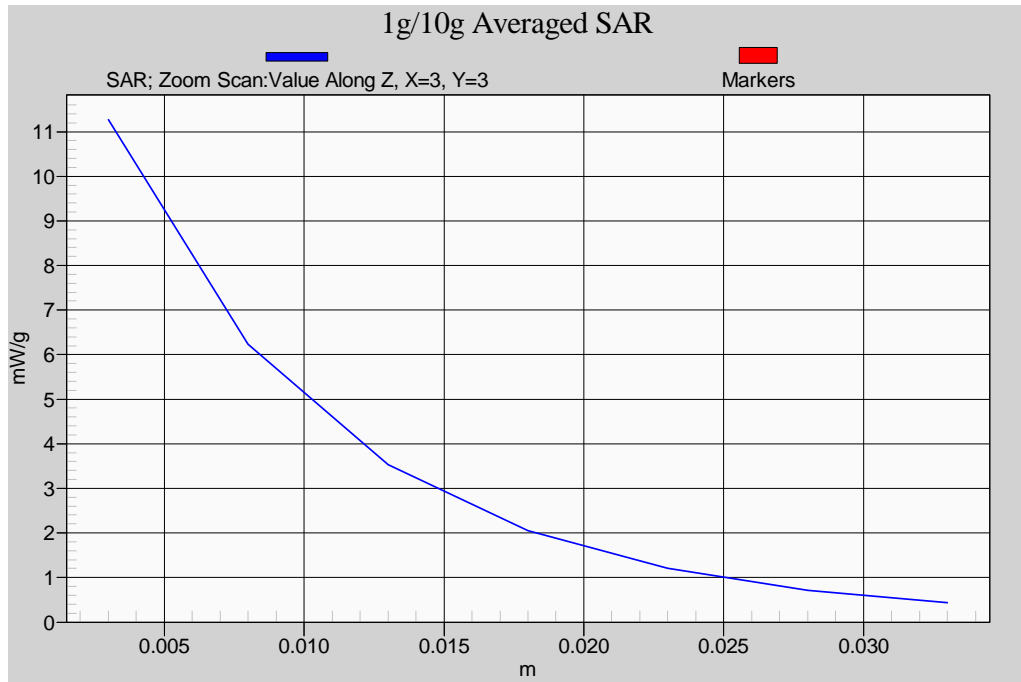


**Head-Tissue-Simulating-Liquid 835MHz**

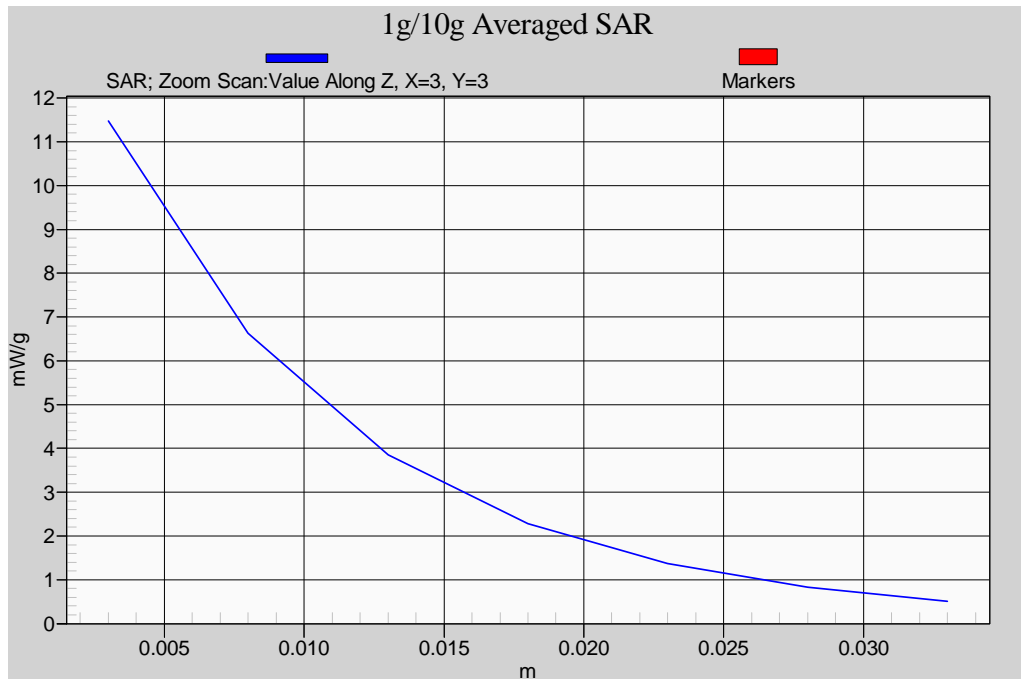


**Body-Tissue-Simulating-Liquid 835MHz**

**Z-axis Plot of System Performance Check**

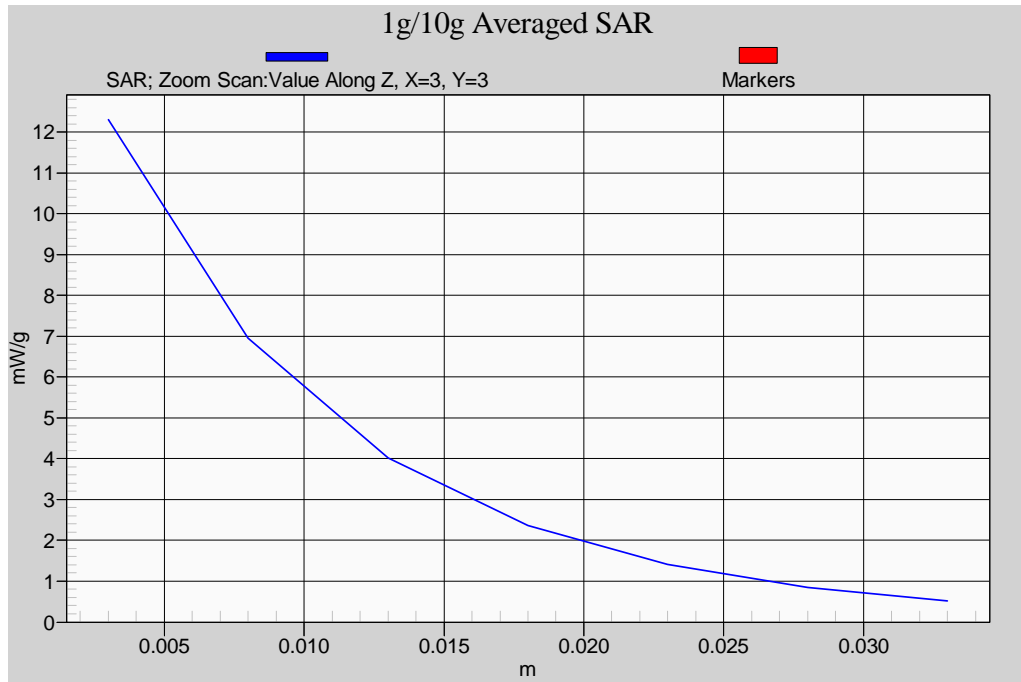


**Head-Tissue-Simulating-Liquid 1750MHz**

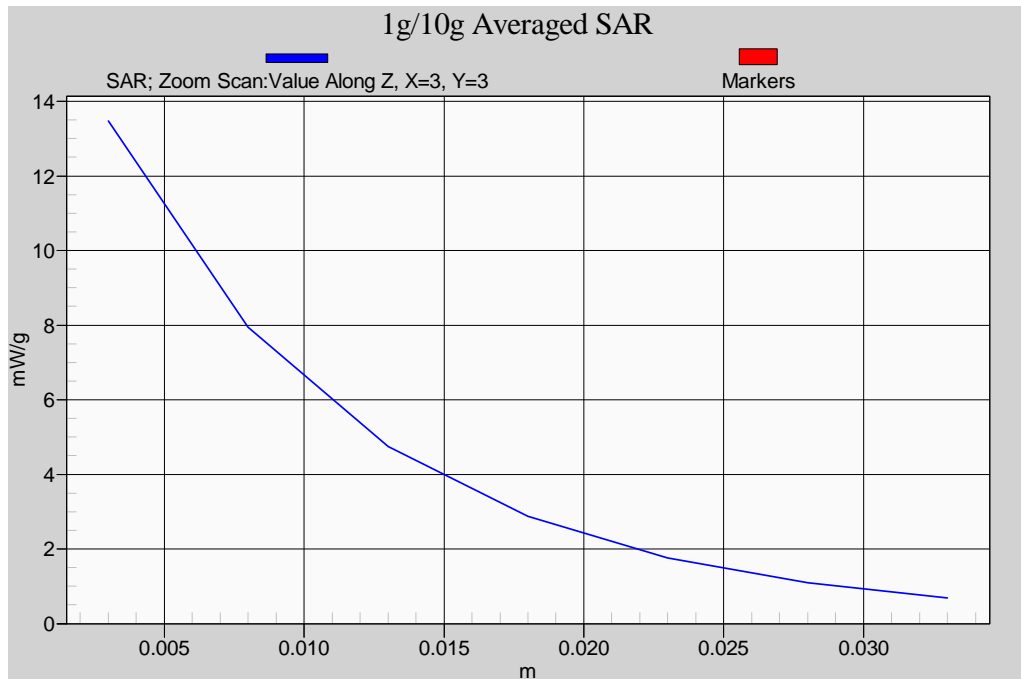


**Body-Tissue-Simulating-Liquid 1750MHz**

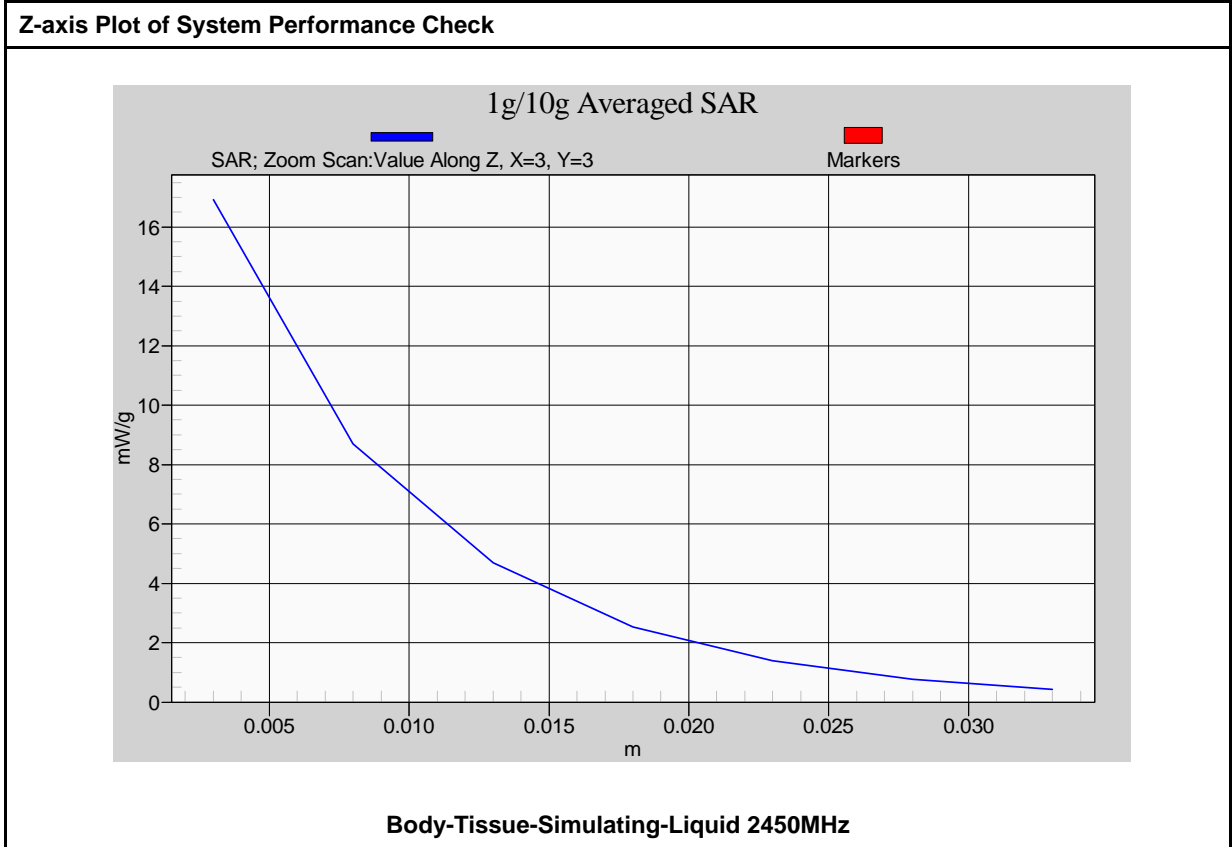
**Z-axis Plot of System Performance Check**



**Head-Tissue-Simulating-Liquid 1900MHz**



**Body-Tissue-Simulating-Liquid 1900MHz**





## 7. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	Dosimetric E-Field Probe	ES3DV3	3150	01/19/2011	01/19/2012
SPEAG	Dosimetric E-Field Probe	EX3DV4	3758	02/14/2011	02/14/2012
SPEAG	Dosimetric E-Field Probe	EX3DV3	3519	02/25/2011	02/25/2012
SPEAG	835MHz System Validation Kit	D835V2	4d082	07/20/2010	07/20/2011
SPEAG	1750MHz System Validation Kit	D1750V2	1008	05/24/2011	05/24/2012
SPEAG	1900MHz System Validation Kit	D1900V2	5d111	07/16/2010	07/16/2011
SPEAG	2450MHz System Validation Kit	D2450V2	712	02/23/2011	02/23/2012
SPEAG	Data Acquisition Electronics	DAE4	779	01/31/2011	01/31/2012
SPEAG	Measurement Server	SE UMS 011 AA	1025	NCR	
SPEAG	Device Holder	N/A	N/A	NCR	
SPEAG	Phantom	SAM V4.0	TP-1150	NCR	
SPEAG	Robot	Staubli TX90XL	F07/564ZA1/C/01	NCR	
SPEAG	Software	DASY5 V5.0 Build 125	N/A	NCR	
SPEAG	Software	SEMCAD V13.4 Build 125	N/A	NCR	
Agilent	Dielectric Probe Kit	85070C	US99360094	NCR	
Agilent	ENA Series Network Analyzer	E5071B	MY42404655	04/14/2010	04/14/2012
R&S	Power Sensor	NRP-Z22	100179	05/27/2011	05/27/2012
Agilent	MXG Vector Signal Generator	N5182A	MY47420962	06/25/2009	06/25/2011
Agilent	Dual Directional Coupler	778D	50334	NCR	
Mini-Circuits	Power Amplifier	ZHL-42W-SMA	D111103#5	NCR	
Mini-Circuits	Power Amplifier	ZVE-8G-SMA	D042005 671800514	NCR	

**Table 9. Test Equipment List**



## **8. 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  $\pm 20.10\%$  [ 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  $\pm 1$  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  $\pm 2$ dB can be expected.

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



Item	Uncertainty Component	Uncertainty Value	Prob. Dist	Div.	$c_i$ (1g)	$c_i$ (10g)	Std. Unc. (1-g)	Std. Unc. (10-g)	$v_i$ or $V_{eff}$
<b>Measurement System</b>									
u1	Probe Calibration ( $k=1$ )	±5.5%	Normal	1	1	1	±5.5%	±5.5%	∞
u2	Probe Isotropy	±7.6%	Rectangular	$\sqrt{3}$	0.7	0.7	±3.1%	±3.1%	∞
u3	Boundary Effect	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
u4	Linearity	±4.7%	Rectangular	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
u5	System Detection Limit	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.58%	±0.58%	∞
u6	Readout Electronics	±0.3%	Normal	1	1	1	±0.3%	±0.3%	∞
u7	Response Time	±0.8%	Rectangular	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
u8	Integration Time	±2.6%	Rectangular	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
u9	RF Ambient Conditions	±0%	Rectangular	$\sqrt{3}$	1	1	±0%	±0%	∞
u10	RF Ambient Reflections	±0%	Rectangular	$\sqrt{3}$	1	1	±0%	±0%	∞
u11	Probe Positioner Mechanical Tolerance	±0.4%	Rectangular	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
u12	Probe Positioning with respect to Phantom Shell	±2.9%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u13	Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
<b>Test sample Related</b>									
u14	Test sample Positioning	±3.6%	Normal	1	1	1	±3.6%	±3.6%	89
u15	Device Holder Uncertainty	±3.5%	Normal	1	1	1	±3.5%	±3.5%	5
u16	Output Power Variation - SAR drift measurement	±5.0%	Rectangular	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
<b>Phantom and Tissue Parameters</b>									
u17	Phantom Uncertainty ( shape and thickness tolerances)	±4.0%	Rectangular	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
u18	Liquid Conductivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
u19	Liquid Conductivity - measurement uncertainty	±1.93%	Normal	1	0.64	0.43	±1.24%	±0.83%	69
u20	Liquid Permittivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
u21	Liquid Permittivity - measurement uncertainty	±1.4%	Normal	1	0.6	0.49	±0.84%	±1.69%	69
<b>Combined standard uncertainty</b>			RSS				±10.05%	±9.98%	313
<b>Expanded uncertainty (95% CONFIDENCE LEVEL )</b>			$k=2$				±20.10%	±19.96%	

Table 10. Uncertainty Budget of DASY



## 9. Measurement Procedure

The measurement procedures are as follows:

1. For WLAN function, engineering testing software installed on Notebook can provide continuous transmitting signal.
2. Measure output power through RF cable and power meter
3. Set scan area, grid size and other setting on the DASY software
4. Find out the largest SAR result on these testing positions of each band
5. Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

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

1. Power reference measurement
2. Area scan
3. Zoom scan
4. Power drift measurement

### 9.1 Spatial Peak SAR Evaluation

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

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

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

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





## 9.2 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 7x7x9 points with step size 5, 5 and 3 mm for 300 MHz to 3 GHz, and 7x7x9 points with step size 5, 5 and 3 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

## 9.3 Volume Scan Procedures

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

## 9.4 SAR Averaged Methods

In DASYS, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation. Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

## 9.5 Power Drift Monitoring

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



## 10. SAR Test Results Summary

### 10.1 Head SAR

Measurement Results								
Band	Frequency		Power (dBm)	Phantom Position	Spacing (mm)	SAR <sub>1g</sub> [mW/g]	Power Drift (dB)	Remark
	CH	MHz						
GSM 850	251	848.8	32.70	Right-cheek	0	0.633	-0.008	---
	251	848.8	32.70	Right-Tilted	0	0.426	-0.004	---
	251	848.8	32.70	Left-cheek	0	0.687	0.017	---
	251	848.8	32.70	Left-Tilted	0	0.582	-0.028	---
GSM 1900	512	1850.2	30.40	Right-cheek	0	0.770	-0.011	---
	512	1850.2	30.40	Right-Tilted	0	0.763	0.008	---
	512	1850.2	30.40	Left-cheek	0	0.844	0.031	---
	661	1880.0	30.20	Left-cheek	0	0.788	0.027	---
	810	1909.8	29.90	Left-cheek	0	0.593	0.034	---
	512	1850.2	30.40	Left-Tilted	0	0.587	0.046	---
WCDMA Band IV	1312	1712.4	23.11	Right-cheek	0	<b>0.921</b>	0.001	---
	1413	1740.0	23.12	Right-cheek	0	0.879	0.004	---
	1513	4752.6	22.93	Right-cheek	0	0.824	0.051	---
	1413	1740.0	23.12	Right-Tilted	0	0.682	0.013	---
	1413	1740.0	23.12	Left-cheek	0	0.755	0.030	---
	1413	1740.0	23.12	Left-Tilted	0	0.501	0.020	---
Std. C95.1-1999 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population					1.6 W/kg (mW/g) Averaged over 1 gram			



## 10.2 Body SAR

Measurement Results									
Band	Frequency		Power (dBm)	Phantom Position	Spacing (mm)	Accessory	SAR <sub>1g</sub> [mW/g]	Power Drift (dB)	Remark
	CH	MHz							
GSM 850	251	848.8	32.70	Flat	10	Headset	0.478	-0.103	Front Surface to Phantom
	128	824.2	32.50	Flat	10	Headset	0.710	-0.035	Back Surface to Phantom
	190	836.6	32.60	Flat	10	Headset	0.793	-0.017	Back Surface to Phantom
	251	848.8	32.70	Flat	10	Headset	1.110	-0.004	Back Surface to Phantom
GPRS 850 (3Down2Up)	251	848.8	31.70	Flat	10	N/A	0.780	-0.308	Front Surface to Phantom
	128	824.2	31.50	Flat	10	N/A	1.100	-0.052	Back Surface to Phantom
	190	836.6	31.60	Flat	10	N/A	1.210	-0.057	Back Surface to Phantom
	251	848.8	31.70	Flat	10	N/A	1.310	-0.045	Back Surface to Phantom
	251	848.8	31.70	Flat	10	N/A	0.427	0.046	Edge Left to Phantom
	251	848.8	31.70	Flat	10	N/A	0.611	-0.034	Edge Right to Phantom
	251	848.8	31.70	Flat	10	N/A	0.130	0.005	Edge Bottom to Phantom
GSM 1900	512	1850.2	30.40	Flat	10	Headset	0.467	0.001	Front Surface to Phantom
	512	1850.2	30.40	Flat	10	Headset	1.000	-0.035	Back Surface to Phantom
	661	1880.0	30.20	Flat	10	Headset	1.030	-0.062	Back Surface to Phantom
	810	1909.8	29.90	Flat	10	Headset	0.839	-0.018	Back Surface to Phantom
GPRS 1900 (3Down2Up)	512	1850.2	28.80	Flat	10	N/A	0.691	-0.040	Front Surface to Phantom
	512	1850.2	28.80	Flat	10	N/A	<b>1.390</b>	-0.014	Back Surface to Phantom
	661	1880.0	28.60	Flat	10	N/A	<b>1.390</b>	-0.032	Back Surface to Phantom
	810	1909.8	28.40	Flat	10	N/A	1.220	-0.045	Back Surface to Phantom
	512	1850.2	28.80	Flat	10	N/A	0.238	0.016	Edge Left to Phantom
	512	1850.2	28.80	Flat	10	N/A	0.422	-0.011	Edge Right to Phantom
	512	1850.2	28.80	Flat	10	N/A	1.190	0.154	Edge Bottom to Phantom
	661	1880.0	28.60	Flat	10	N/A	1.240	0.151	Edge Bottom to Phantom
	810	1909.8	28.40	Flat	10	N/A	1.010	0.093	Edge Bottom to Phantom
Std. C95.1-1999 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1 gram			



Measurement Results									
Band	Frequency		Power (dBm)	Phantom Position	Spacing (mm)	Accessory	SAR <sub>1g</sub> [mW/g]	Power Drift (dB)	Remark
	CH	MHz							
WCDMA Band IV	1413	1740.0	23.12	Flat	10	Headset	0.575	-0.004	Front Surface to Phantom
	1312	1712.4	23.11	Flat	10	Headset	0.948	-0.013	Back Surface to Phantom
	1413	1740.0	23.12	Flat	10	Headset	0.972	0.026	Back Surface to Phantom
	1513	4752.6	22.93	Flat	10	Headset	0.955	0.039	Back Surface to Phantom
HSDPA Band IV (Sub-Test 1)	1413	1740.0	23.24	Flat	10	N/A	0.523	-0.012	Front Surface to Phantom
	1312	1712.4	23.08	Flat	10	N/A	0.951	-0.007	Back Surface to Phantom
	1413	1740.0	23.24	Flat	10	N/A	1.020	-0.013	Back Surface to Phantom
	1513	4752.6	22.85	Flat	10	N/A	1.010	0.031	Back Surface to Phantom
	1413	1740.0	23.24	Flat	10	N/A	0.135	0.066	Edge Left to Phantom
	1413	1740.0	23.24	Flat	10	N/A	0.292	-0.078	Edge Right to Phantom
	1413	1740.0	23.24	Flat	10	N/A	0.674	0.143	Edge Bottom to Phantom
IEEE 802.11b (Data rate 2 M)	11	2462.0	17.23	Flat	10	N/A	0.097	-0.047	Front Surface to Phantom
	11	2462.0	17.23	Flat	10	N/A	0.284	0.083	Back Surface to Phantom
	11	2462.0	17.23	Flat	10	N/A	0.039	-0.066	Edge Left to Phantom
	11	2462.0	17.23	Flat	10	N/A	0.050	0.019	Edge Right to Phantom
	11	2462.0	17.23	Flat	10	N/A	0.148	0.144	Edge Top to Phantom
Std. C95.1-1999 - Safety Limit Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1 gram			

Notes:

1. The test data reported are the worst-case SAR value with the position set in a typical configuration. Test procedures used were according to FCC/OET Bulletin 65, Supplement C [June 2001], IEEE1528-2003 and RSS-102.
2. All modes of operation were investigated, and worst-case results are reported.
3. Tissue parameters and temperatures are listed on the SAR plots.
4. Batteries are fully charged for all readings.
5. Base on power table (section 5.2), the worst case is 802.11b CH1 rate 2M, therefore the test sample was investigated on this configuration.
6. If the conducted power of 802.11g and 802.11n are higher 0.25dB than 802.11b, 802.11g and 802.11n are supposed to be tested. Base on power table (section 5.2), the 802.11g and 802.11n were not required.



7. If the conducted power of HSDPA are higher 0.25dB than WCDMA, HSDPA are supposed to be tested.  
Base on power table (section 5.2), the HSDPA were not required.
8. If the Channel's SAR 1g of maximum conducted power is  $> 0.8$  mW/g, then low, middle and high channel are supposed to be tested.
9. Since the Wi-Fi antenna separation with bottom  $> 5$ cm. Therefore Wi-Fi SAR is not required on edge bottom.
10. Since the WWAN antenna separation with top  $> 5$ cm. Therefore WWAN SAR is not required on edge top.



### 10.3 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 11. 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).



## 11. Conclusion

The SAR test values found for the portable mobile phone **HTC Corporation Trade Name : HTC Model(s) : PG76240** is below the maximum recommended level of 1.6 W/kg (mW/g).

## 12. 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.
- [2] NCRP, National Council on Radiation Protection and Measurements, "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields", NCRP report NO. 86, 1986.
- [3] T. Schmid, O. Egger, and N. Kuster, "Automatic E-field scanning system for dosimetric assessments", IEEE Transactions on Microwave Theory and Techniques, vol. 44, pp, 105-113, Jan. 1996.
- [4] K. Poković, T. Schmid, and N. Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequency", in ICECOM'97, Dubrovnik, October 15-17, 1997, pp.120-124.
- [5] K. Poković, T. Schmid, and N. Kuster, "E-field probe with improved isotropy in brain simulating liquids", in Proceedings of the ELMAR, Zadar, Croatia, 23-25 June, 1996, pp.172-175.
- [6] N. Kuster, and Q. Balzano, "Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz", IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [7] Robert J. Renka, "Multivariate Interpolation Of Large Sets Of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988 , pp. 139-148.
- [8] N. Kuster, R. Kastle, T. Schmid, "Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.
- [9] Std. C95.3-1991, "IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, Aug. 1992.
- [10] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), *Human Exposure to Electromagnetic Fields High-frequency: 10KHz-300GHz*, Jan. 1995.
- [11] KDB248227 D01 SAR meas for 802 11 a b g v01r02.
- [12] KDB 648474 D01 SAR Handsets Multi Xmitter and Ant v01r05
- [13] KDB 941225 D01 SAR Test for 3G Devices 3G-SAR
- [14] KDB 941225 D03 SAR Test Reduction GSM GPRS EDGE
- [15] KDB 941225 D04 SAR for GSM E GPRS Dual Xfer Mode v01
- [16] KDB 941225 D06 Hot Spot SAR v01



## Appendix A - System Performance Check

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 9:56:35 PM

### System Performance Check at 835MHz\_20110610\_Head

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d082**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.896 \text{ mho/m}$ ;  $\epsilon_r = 42.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

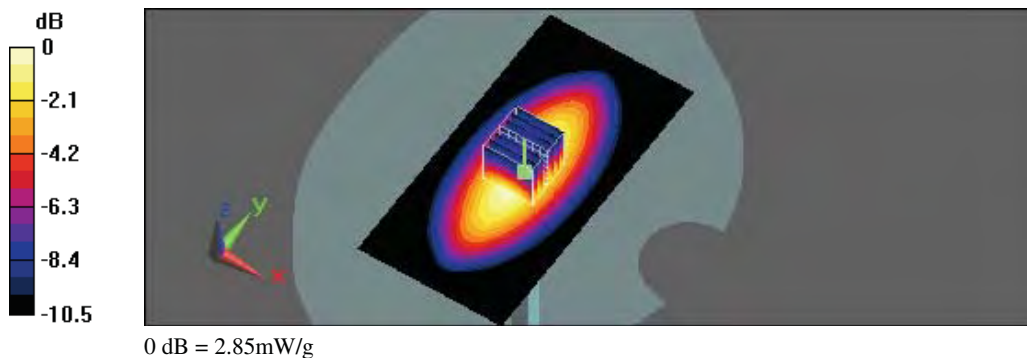
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(6.15, 6.15, 6.15); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

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

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 2.84 mW/g

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

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 57.9 V/m; Power Drift = -0.0013 dB  
Peak SAR (extrapolated) = 3.68 W/kg  
**SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.58 mW/g**  
Maximum value of SAR (measured) = 2.85 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 9:32:50 AM

**System Performance Check at 835MHz\_20110609\_Body**

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d082**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.98 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

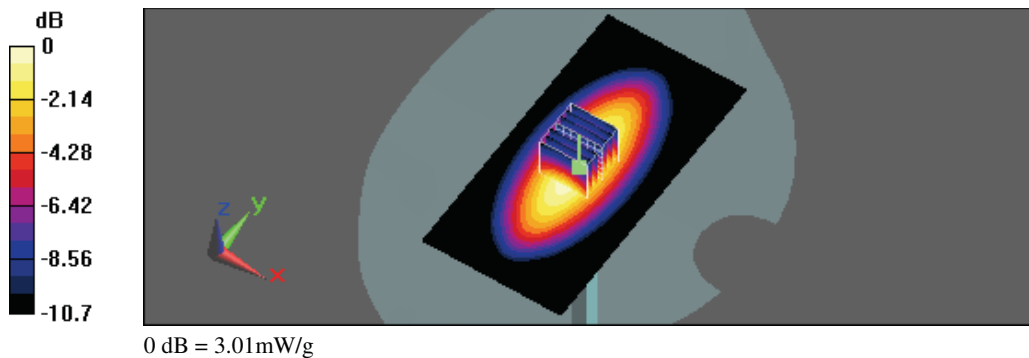
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

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

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 3 mW/g

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

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 55.6 V/m; Power Drift = 0.023 dB  
 Peak SAR (extrapolated) = 3.88 W/kg  
**SAR(1 g) = 2.57 mW/g; SAR(10 g) = 1.67 mW/g**  
 Maximum value of SAR (measured) = 3.01 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 9:07:19 AM

**System Performance Check at 1750MHz\_20110610\_Head**

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1008**

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.4$  mho/m;  $\epsilon_r = 39.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

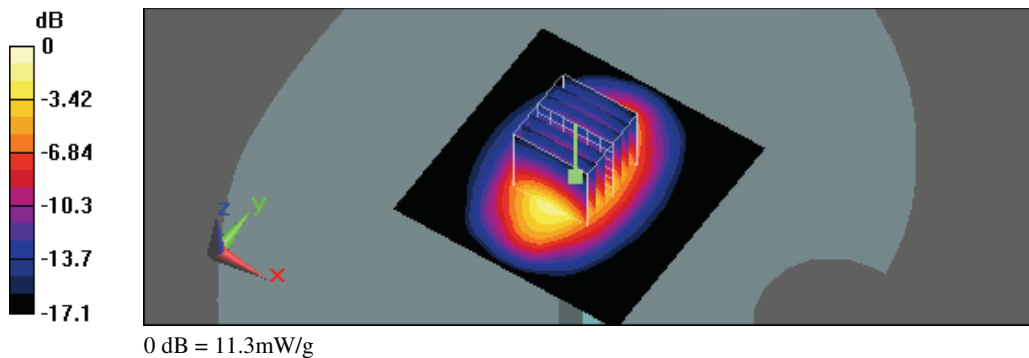
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**System Performance Check at 1750MHz/Area Scan (61x61x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 11.2 mW/g

**System Performance Check at 1750MHz/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 92 V/m; Power Drift = 0.061 dB  
Peak SAR (extrapolated) = 16.1 W/kg  
**SAR(1 g) = 8.85 mW/g; SAR(10 g) = 4.67 mW/g**  
Maximum value of SAR (measured) = 11.3 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 8:07:41 AM

**System Performance Check at 1750MHz\_20110610\_Body**

**DUT: Dipole 1750 MHz; Type: D1008; Serial: D1750V2 - SN:1008**

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

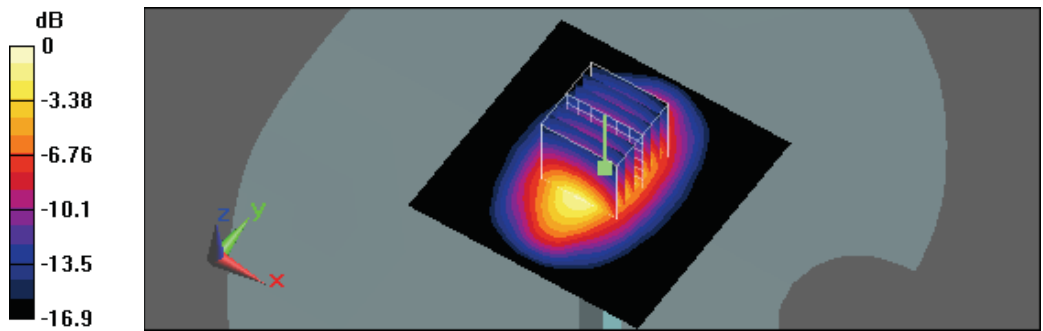
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**System Performance Check at 1750MHz/Area Scan (61x61x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 11.5 mW/g

**System Performance Check at 1750MHz/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
 Reference Value = 90.7 V/m; Power Drift = -0.00986 dB  
 Peak SAR (extrapolated) = 15.9 W/kg  
**SAR(1 g) = 9.07 mW/g; SAR(10 g) = 4.79 mW/g**  
 Maximum value of SAR (measured) = 11.5 mW/g



0 dB = 11.5mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 3:16:33 AM

**System Performance Check at 1900MHz\_20110611\_Head**

**DUT: Dipole D1900V2\_SN5d111; Type: D1900V2; Serial: D1900V2 - SN:5d111**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

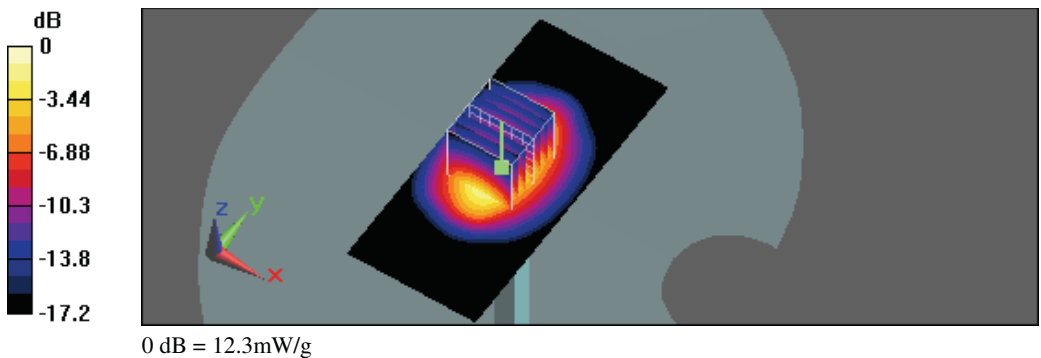
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**System Performance Check at 1900MHz/Area Scan (41x91x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 12.8 mW/g

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

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
 Reference Value = 95.2 V/m; Power Drift = 0.047 dB  
 Peak SAR (extrapolated) = 17.5 W/kg  
**SAR(1 g) = 9.76 mW/g; SAR(10 g) = 5.15 mW/g**  
 Maximum value of SAR (measured) = 12.3 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 11:00:56 AM

**System Performance Check at 1900MHz\_20110613\_Body**

**DUT: Dipole D1900V2\_SN5d111; Type: D1900V2; Serial: D1900V2 - SN:5d111**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.55 \text{ mho/m}$ ;  $\epsilon_r = 53.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

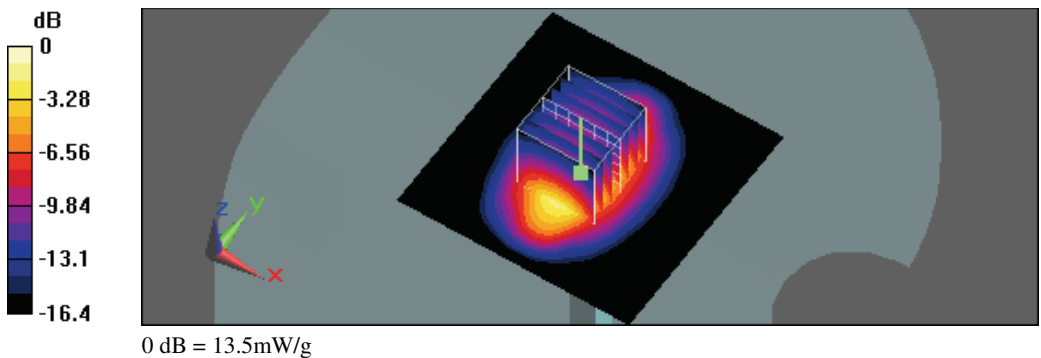
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

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

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 13.6 mW/g

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

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 96.5 V/m; Power Drift = 0.029 dB  
 Peak SAR (extrapolated) = 18.3 W/kg  
**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.64 mW/g**  
 Maximum value of SAR (measured) = 13.5 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 11:02:47 AM

**System Performance Check at 2450MHz\_20110614\_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;  $\sigma = 1.94$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

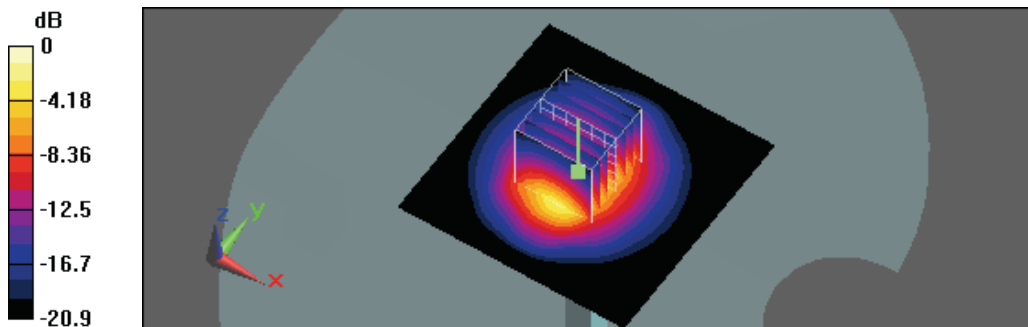
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**System Performance Check at 2450MHz/Area Scan (61x61x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 16.8 mW/g

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

Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 91.1 V/m; Power Drift = 0.098 dB  
Peak SAR (extrapolated) = 26 W/kg  
**SAR(1 g) = 12.9 mW/g; SAR(10 g) = 6.05 mW/g**  
Maximum value of SAR (measured) = 16.9 mW/g



0 dB = 16.9mW/g



## Appendix B - SAR Measurement Data

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 10:45:02 PM

RC\_GSM850 CH251

DUT: PG76240; Type: Smart Phone; Serial: 004402260020882

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.911$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

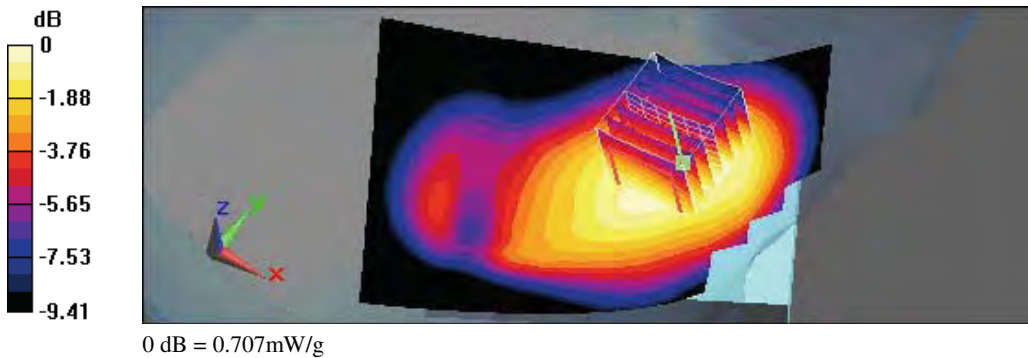
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(6.15, 6.15, 6.15); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

### Right Cheek/Area Scan (91x131x1):

Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 0.713 mW/g

### Right Cheek/Zoom Scan (7x7x9)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 17.2 V/m; Power Drift = -0.00778 dB  
Peak SAR (extrapolated) = 0.817 W/kg  
**SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.468 mW/g**  
Maximum value of SAR (measured) = 0.707 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 11:20:21 PM

**RT\_GSM850 CH251**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.911$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

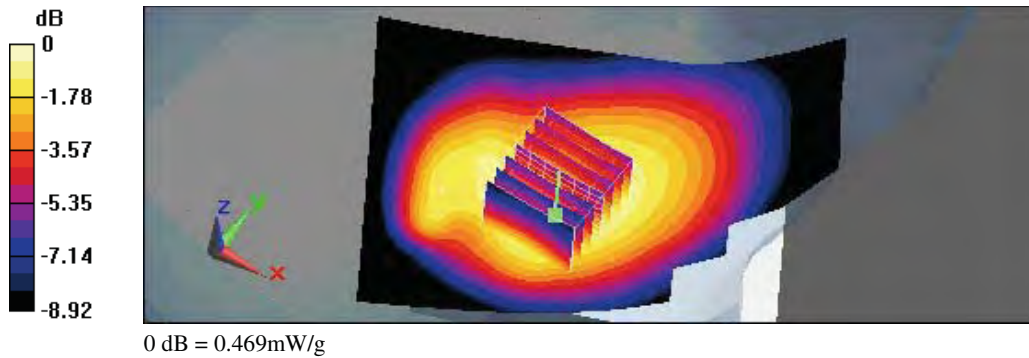
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(6.15, 6.15, 6.15); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Tilted/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.473 mW/g

**Right Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 21.4 V/m; Power Drift = -0.00369 dB  
Peak SAR (extrapolated) = 0.533 W/kg  
**SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.317 mW/g**  
Maximum value of SAR (measured) = 0.469 mW/g







Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 1:04:58 AM

**LC\_GSM850 CH251**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.911$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

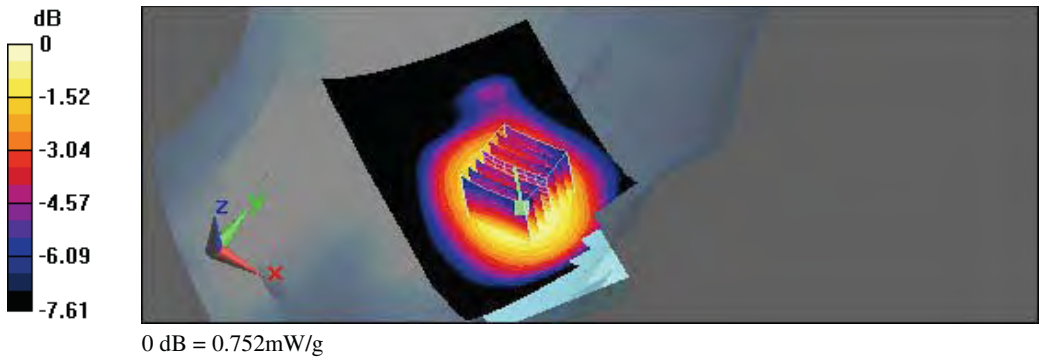
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(6.15, 6.15, 6.15); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Cheek/Area Scan (91x131x1):**

Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 0.765 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 12.7 V/m; Power Drift = 0.017 dB  
Peak SAR (extrapolated) = 0.853 W/kg  
**SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.525 mW/g**  
Maximum value of SAR (measured) = 0.752 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 2:20:31 AM

**LT\_GSM850 CH251**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.911 \text{ mho/m}$ ;  $\epsilon_r = 42.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

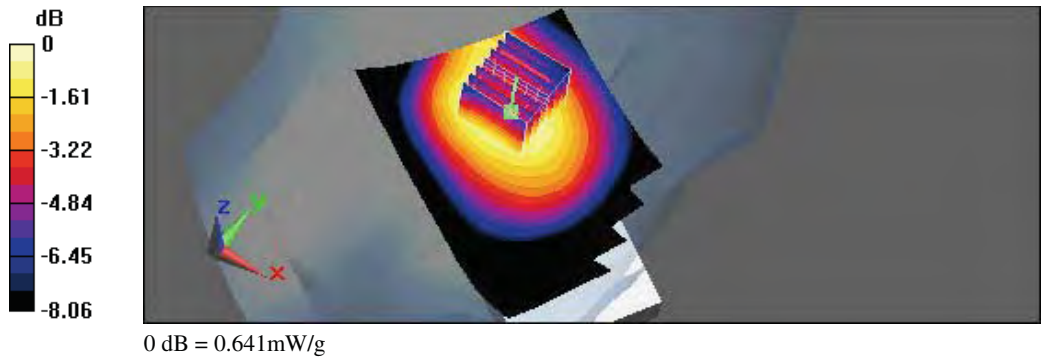
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(6.15, 6.15, 6.15); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Tilted/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.646 mW/g

**Left Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 26.3 V/m; Power Drift = -0.028 dB  
 Peak SAR (extrapolated) = 0.731 W/kg  
**SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.432 mW/g**  
 Maximum value of SAR (measured) = 0.641 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 10:43:33 AM

**RC\_PCS CH512**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.35 \text{ mho/m}$ ;  $\epsilon_r = 38.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Cheek/Area Scan (61x91x1):**

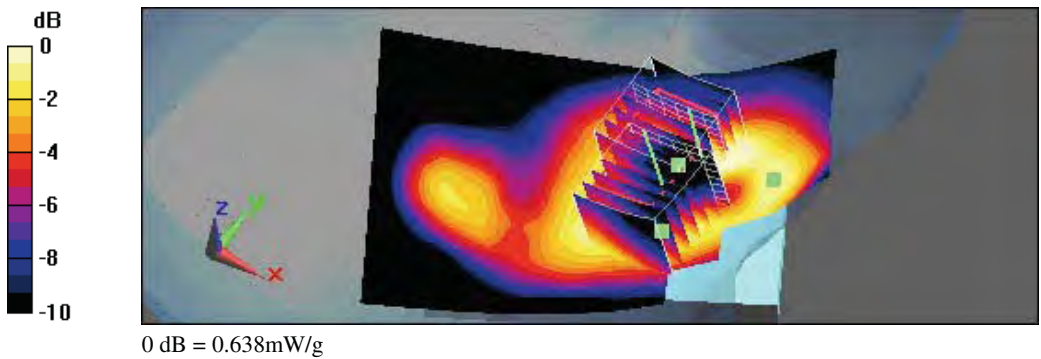
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.888 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 20.3 V/m; Power Drift = -0.011 dB  
 Peak SAR (extrapolated) = 1.15 W/kg  
**SAR(1 g) = 0.770 mW/g; SAR(10 g) = 0.455 mW/g**  
 Maximum value of SAR (measured) = 0.917 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 20.3 V/m; Power Drift = -0.011 dB  
 Peak SAR (extrapolated) = 0.755 W/kg  
**SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.352 mW/g**  
 Maximum value of SAR (measured) = 0.638 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 11:23:31 AM

**RT\_PCS CH512**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

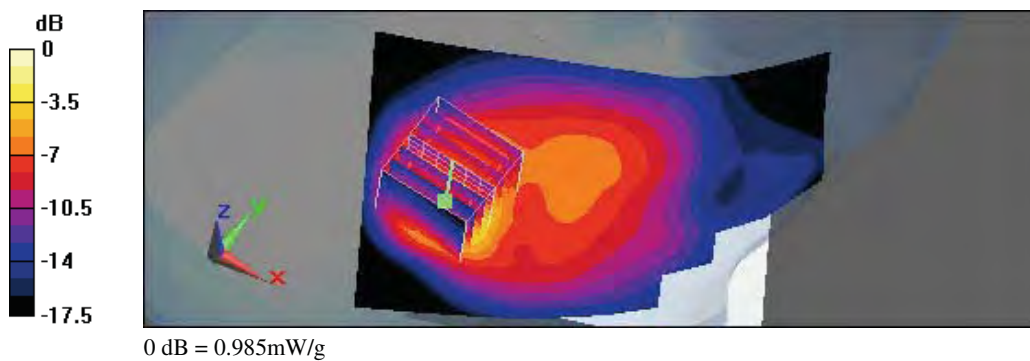
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Tilted/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.910 mW/g

**Right Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 27.5 V/m; Power Drift = 0.0083 dB  
Peak SAR (extrapolated) = 1.32 W/kg  
**SAR(1 g) = 0.763 mW/g; SAR(10 g) = 0.391 mW/g**  
Maximum value of SAR (measured) = 0.985 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 11:49:52 AM

**LC\_PCS CH512**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

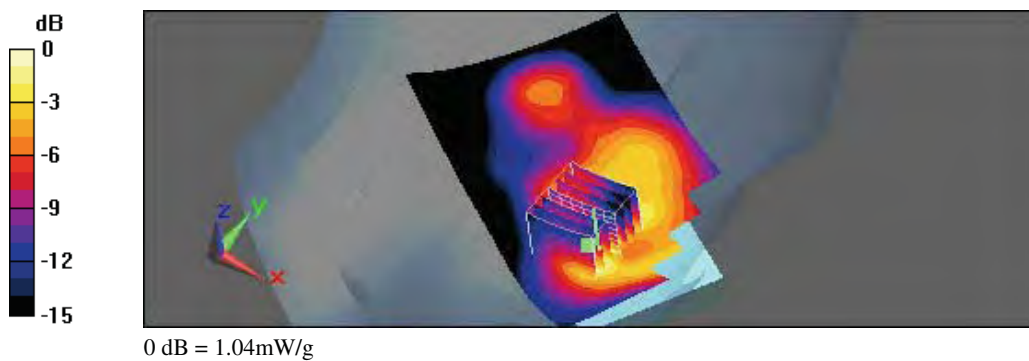
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Cheek/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.975 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 17.3 V/m; Power Drift = 0.031 dB  
Peak SAR (extrapolated) = 1.33 W/kg  
**SAR(1 g) = 0.844 mW/g; SAR(10 g) = 0.451 mW/g**  
Maximum value of SAR (measured) = 1.04 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 12:13:20 PM

**LC\_PCS CH661**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

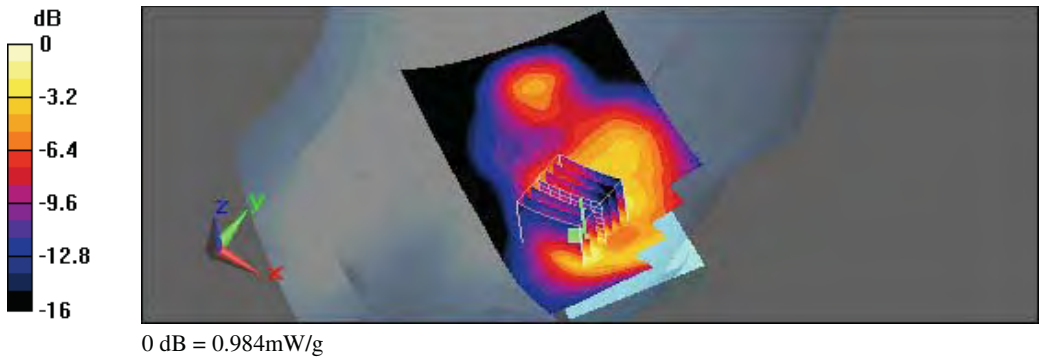
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Cheek/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.894 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 17.4 V/m; Power Drift = 0.027 dB  
Peak SAR (extrapolated) = 1.28 W/kg  
**SAR(1 g) = 0.788 mW/g; SAR(10 g) = 0.407 mW/g**  
Maximum value of SAR (measured) = 0.984 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 12:36:49 PM

**LC\_PCS CH810**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

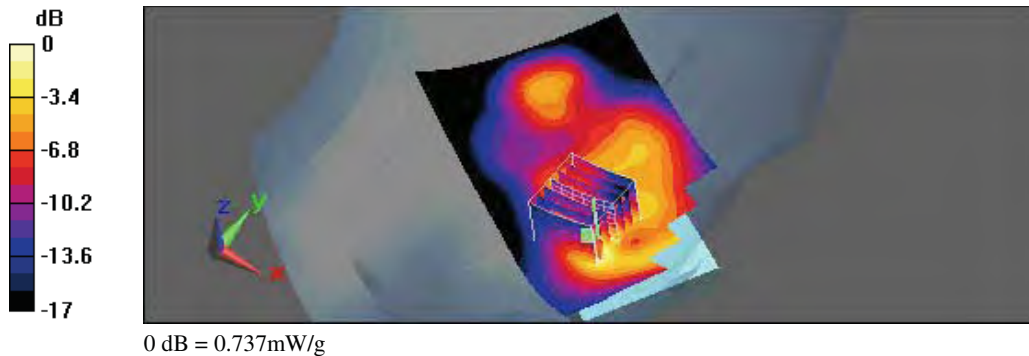
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Cheek/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.683 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 15.7 V/m; Power Drift = 0.034 dB  
Peak SAR (extrapolated) = 0.975 W/kg  
**SAR(1 g) = 0.593 mW/g; SAR(10 g) = 0.295 mW/g**  
Maximum value of SAR (measured) = 0.737 mW/g







Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/11/2011 1:08:43 PM

**LT\_PCS CH512**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.35 \text{ mho/m}$ ;  $\epsilon_r = 38.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

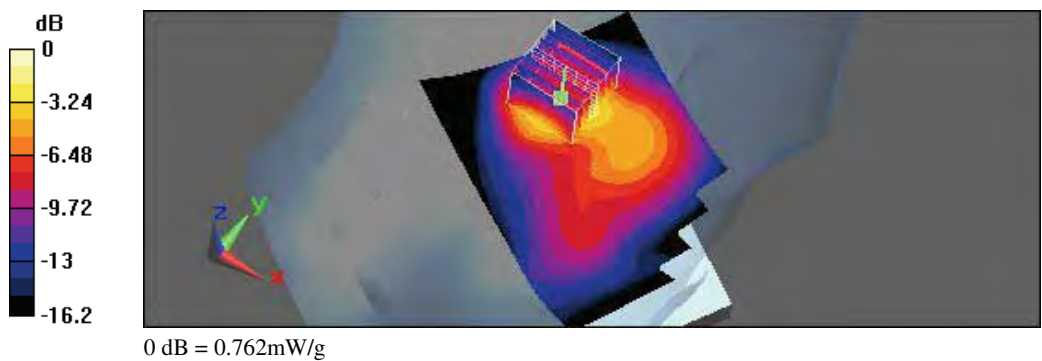
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.18, 5.18, 5.18); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Tilted/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.722 mW/g

**Left Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
Reference Value = 23.8 V/m; Power Drift = 0.046 dB  
Peak SAR (extrapolated) = 1.03 W/kg  
**SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.304 mW/g**  
Maximum value of SAR (measured) = 0.762 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 10:37:44 AM

**RC\_WCDMA Band IV CH1312**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 1712.4 \text{ MHz}$ ;  $\sigma = 1.37 \text{ mho/m}$ ;  $\epsilon_r = 39.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Cheek/Area Scan (61x91x1):**

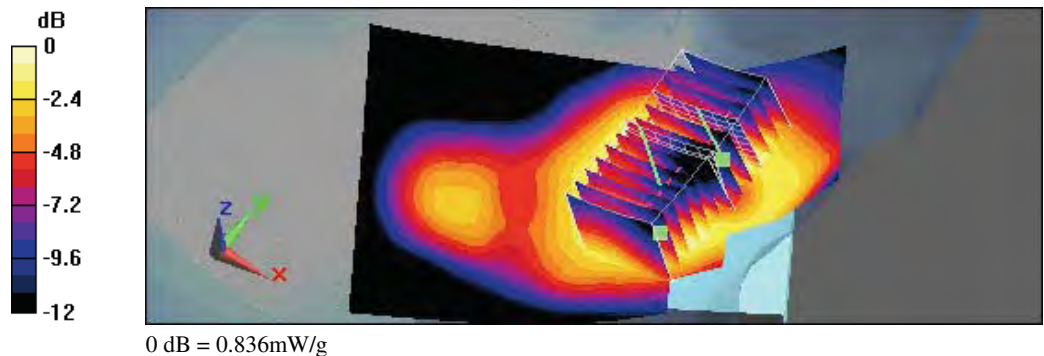
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.05 mW/g

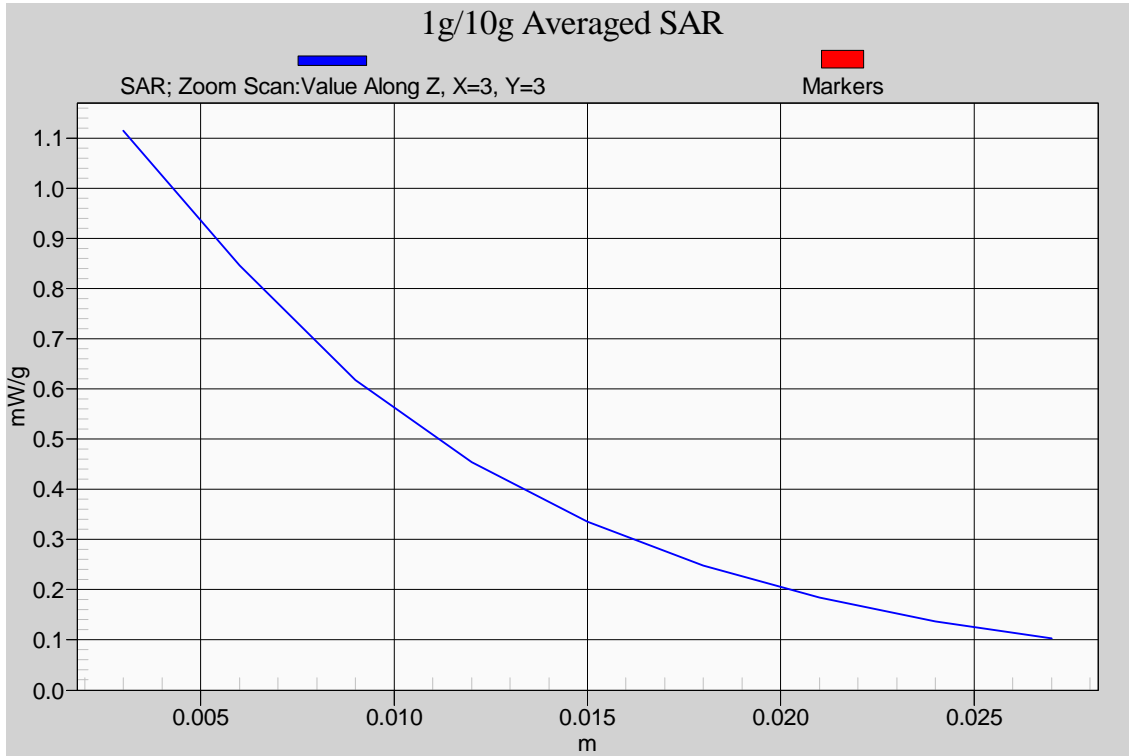
**Right Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 18.9 V/m; Power Drift = 0.000913 dB  
 Peak SAR (extrapolated) = 1.41 W/kg  
**SAR(1 g) = 0.921 mW/g; SAR(10 g) = 0.539 mW/g**  
 Maximum value of SAR (measured) = 1.11 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 18.9 V/m; Power Drift = 0.000913 dB  
 Peak SAR (extrapolated) = 0.955 W/kg  
**SAR(1 g) = 0.696 mW/g; SAR(10 g) = 0.470 mW/g**  
 Maximum value of SAR (measured) = 0.836 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 9:55:31 AMD

**RC\_WCDMA Band IV CH1413**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Right Cheek/Area Scan (61x91x1):**

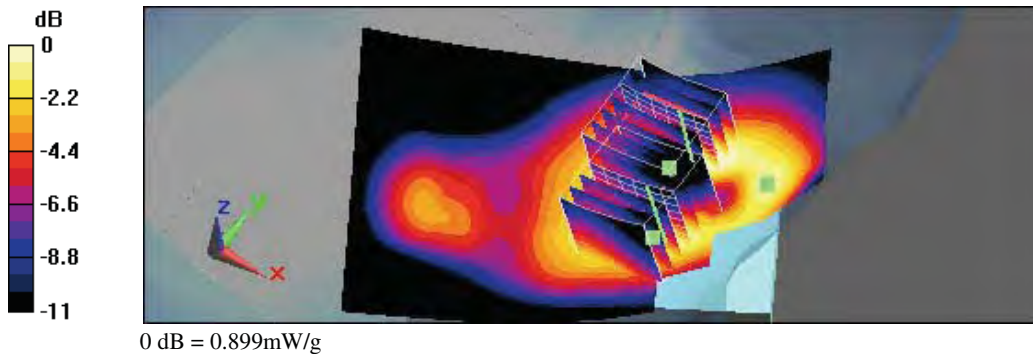
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.01 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 18 V/m; Power Drift = 0.00381 dB  
 Peak SAR (extrapolated) = 1.4 W/kg  
**SAR(1 g) = 0.879 mW/g; SAR(10 g) = 0.507 mW/g**  
 Maximum value of SAR (measured) = 1.08 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 18 V/m; Power Drift = 0.00381 dB  
 Peak SAR (extrapolated) = 1.13 W/kg  
**SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.468 mW/g**  
 Maximum value of SAR (measured) = 0.899 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 11:23:18 AM

**RC\_WCDMA Band IV CH1513**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1753$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Right Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Cheek/Area Scan (61x91x1):**

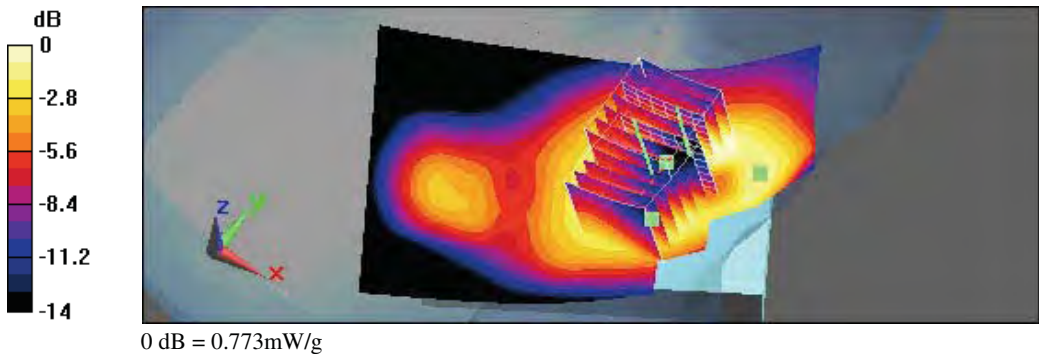
Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.922 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 17.3 V/m; Power Drift = 0.051 dB  
 Peak SAR (extrapolated) = 1.31 W/kg  
**SAR(1 g) = 0.824 mW/g; SAR(10 g) = 0.478 mW/g**  
 Maximum value of SAR (measured) = 1.01 mW/g

**Right Cheek/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 17.3 V/m; Power Drift = 0.051 dB  
 Peak SAR (extrapolated) = 0.905 W/kg  
**SAR(1 g) = 0.612 mW/g; SAR(10 g) = 0.396 mW/g**  
 Maximum value of SAR (measured) = 0.773 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 12:03:22 PM

**RT\_WCDMA Band IV CH1413**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

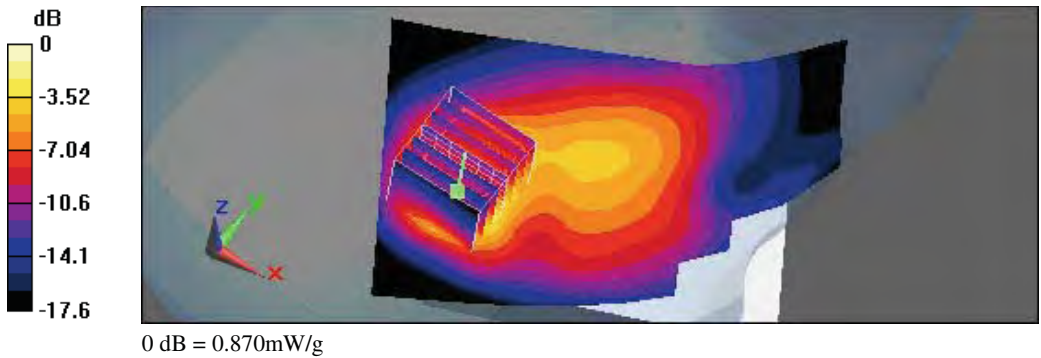
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Right Tilted/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.842 mW/g

**Right Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 25.4 V/m; Power Drift = 0.013 dB  
 Peak SAR (extrapolated) = 1.22 W/kg  
**SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.354 mW/g**  
 Maximum value of SAR (measured) = 0.870 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 12:31:46 PM

**LC\_WCDMA Band IV CH1413**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Left Cheek/Area Scan (61x91x1):**

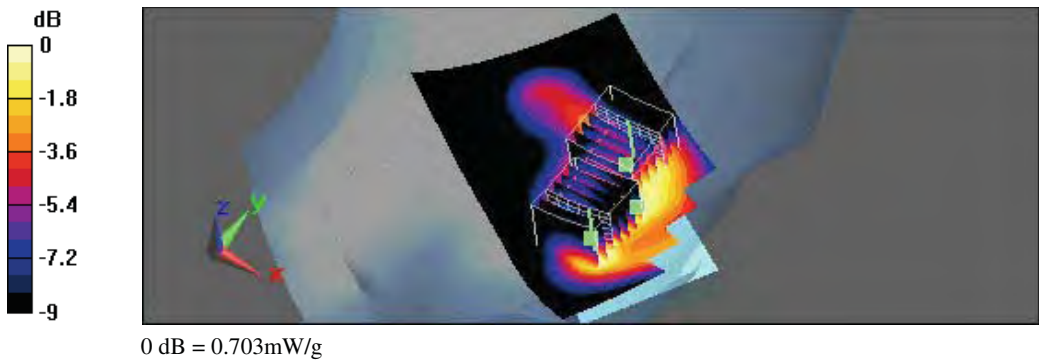
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.935 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 15 V/m; Power Drift = 0.030 dB  
 Peak SAR (extrapolated) = 1.17 W/kg  
**SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.419 mW/g**  
 Maximum value of SAR (measured) = 0.911 mW/g

**Left Cheek/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 15 V/m; Power Drift = 0.030 dB  
 Peak SAR (extrapolated) = 0.893 W/kg  
**SAR(1 g) = 0.584 mW/g; SAR(10 g) = 0.378 mW/g**  
 Maximum value of SAR (measured) = 0.703 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 1:11:43 PM

**LT\_WCDMA Band IV CH1413**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

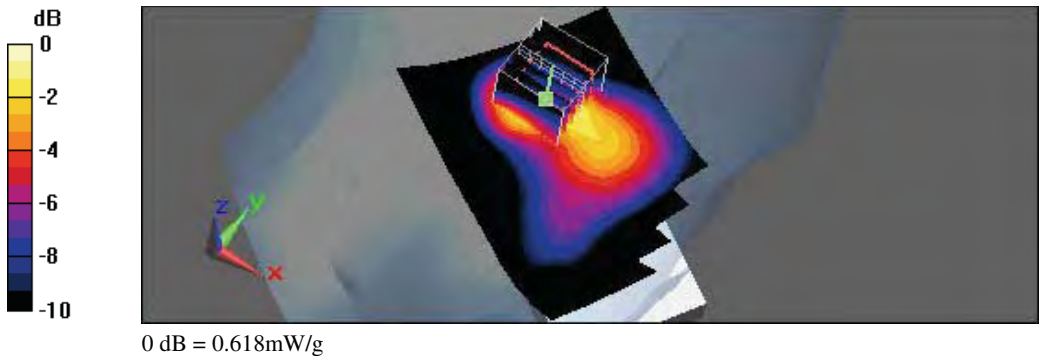
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5.28, 5.28, 5.28); Calibrated: 1/19/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Left Tilted/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.645 mW/g

**Left Tilted/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.6 V/m; Power Drift = 0.020 dB  
 Peak SAR (extrapolated) = 0.883 W/kg  
**SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.278 mW/g**  
 Maximum value of SAR (measured) = 0.618 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 2:57:45 AM

**Flat\_GSM850 CH251\_Headset\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

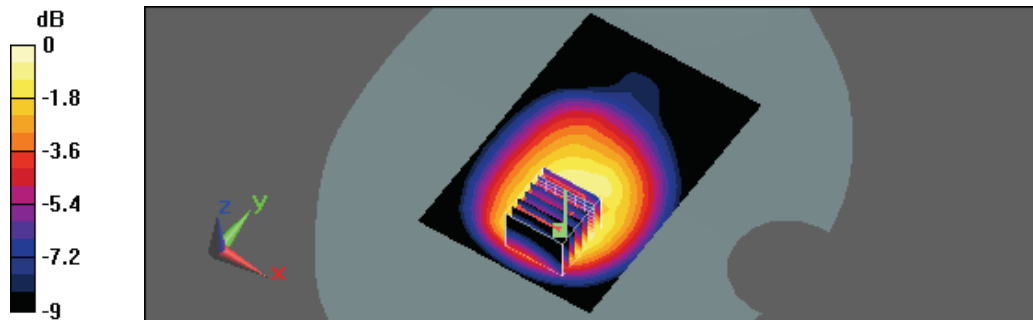
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.546 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 18.9 V/m; Power Drift = -0.103 dB  
 Peak SAR (extrapolated) = 0.651 W/kg  
**SAR(1 g) = 0.478 mW/g; SAR(10 g) = 0.320 mW/g**  
 Maximum value of SAR (measured) = 0.540 mW/g



0 dB = 0.540mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 4:10:35 AM

**Flat\_GSM850 CH128 Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
 Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.969 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

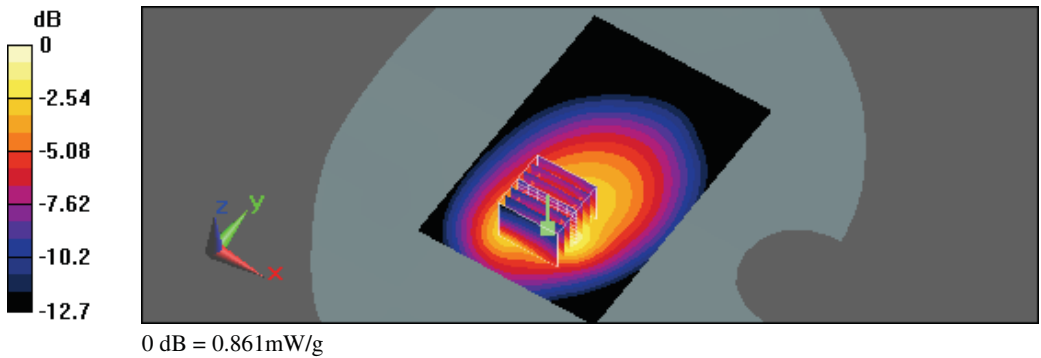
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.897 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 19.1 V/m; Power Drift = -0.035 dB  
 Peak SAR (extrapolated) = 1.21 W/kg  
**SAR(1 g) = 0.710 mW/g; SAR(10 g) = 0.426 mW/g**  
 Maximum value of SAR (measured) = 0.861 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 4:58:22 AM

**Flat\_GSM850 CH190 Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.982$  mho/m;  $\epsilon_r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

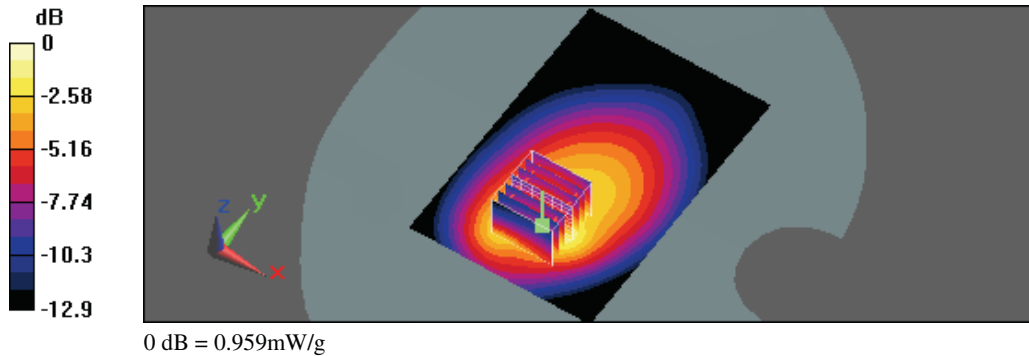
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.01 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 20.4 V/m; Power Drift = -0.017 dB  
Peak SAR (extrapolated) = 1.38 W/kg  
**SAR(1 g) = 0.793 mW/g; SAR(10 g) = 0.473 mW/g**  
Maximum value of SAR (measured) = 0.959 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 2:30:37 AM

**Flat\_GSM850 CH251\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

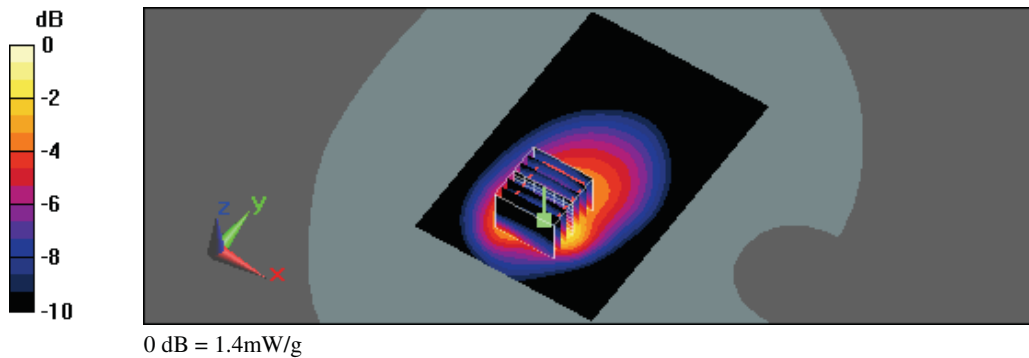
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 1.39 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
Reference Value = 22.8 V/m; Power Drift = -0.00446 dB  
Peak SAR (extrapolated) = 2.03 W/kg  
**SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.624 mW/g**  
Maximum value of SAR (measured) = 1.4 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 10:38:32 PM

**Flat\_GPRS850\_CH251\_3D2U\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

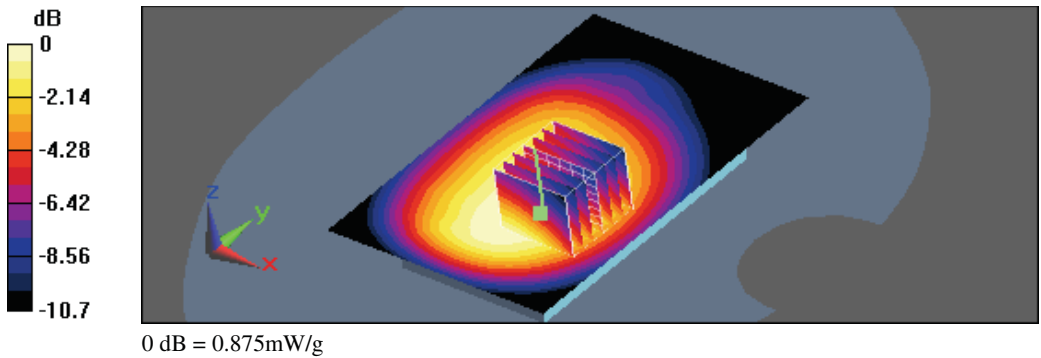
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.926 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 26.7 V/m; Power Drift = -0.308 dB  
 Peak SAR (extrapolated) = 1.04 W/kg  
**SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.527 mW/g**  
 Maximum value of SAR (measured) = 0.875 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 9:24:22 PM

**Flat\_GPRS850\_CH128\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS 850 (3Down, 2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.969 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

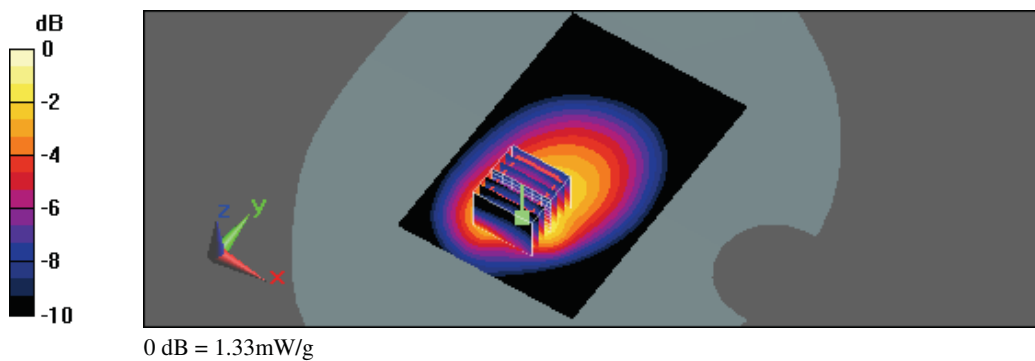
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.37 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 26.5 V/m; Power Drift = -0.052 dB  
 Peak SAR (extrapolated) = 1.79 W/kg  
**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.679 mW/g**  
 Maximum value of SAR (measured) = 1.33 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 10:06:18 PM

**Flat\_GPRS850\_CH190\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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

Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.982 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

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

Maximum value of SAR (interpolated) = 1.51 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

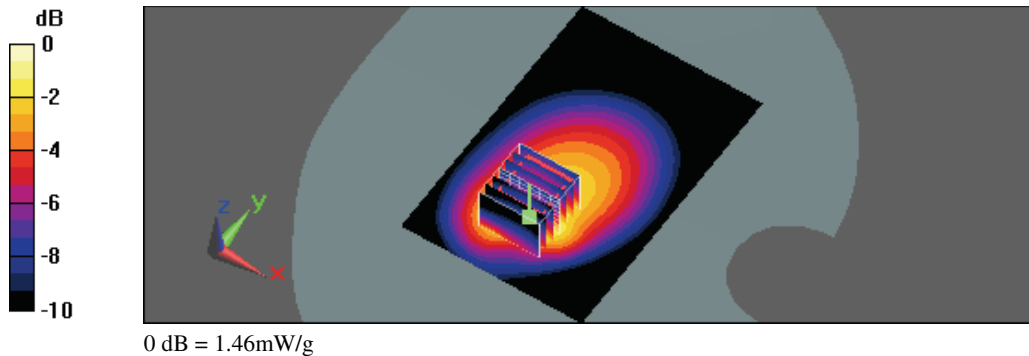
Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$

Reference Value = 27.7 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 1.99 W/kg

**SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.741 mW/g**

Maximum value of SAR (measured) = 1.46 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 8:50:41 PM

**Flat\_GPRS850\_CH251\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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

Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.997$  mho/m;  $\epsilon_r = 54.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

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

Maximum value of SAR (interpolated) = 1.69 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

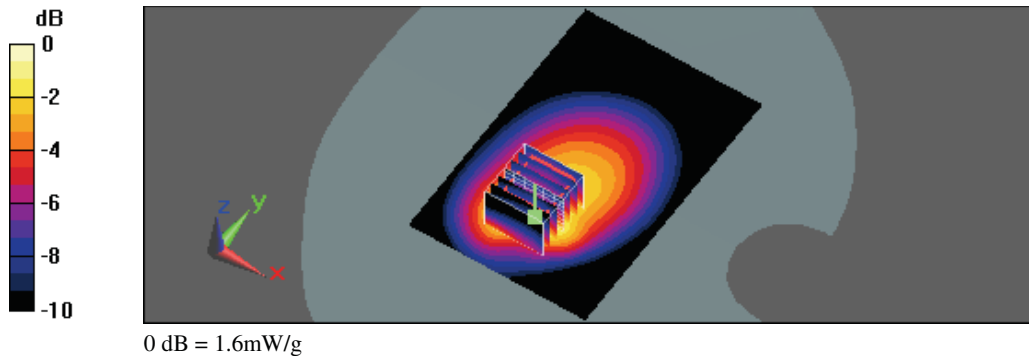
Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 29.2 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 2.2 W/kg

**SAR(1 g) = 1.31 mW/g; SAR(10 g) = 0.796 mW/g**

Maximum value of SAR (measured) = 1.6 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 12:17:02 AM

**Flat\_GPRS850\_CH251\_3D2U\_Edge Left to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

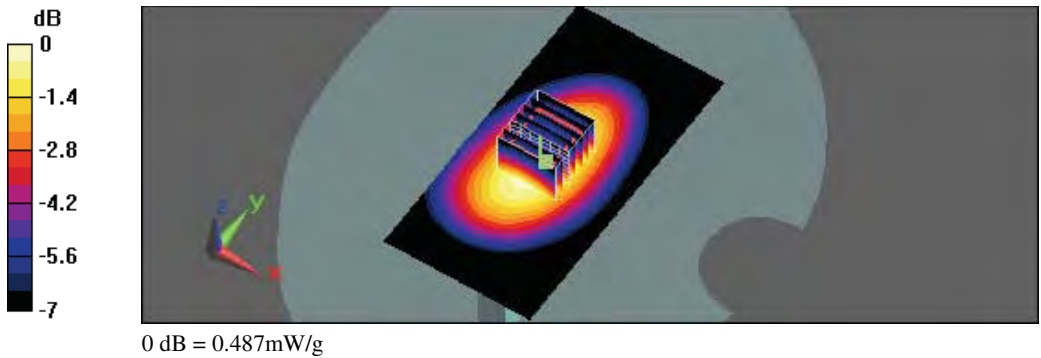
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.503 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 22.4 V/m; Power Drift = 0.046 dB  
 Peak SAR (extrapolated) = 0.609 W/kg  
**SAR(1 g) = 0.427 mW/g; SAR(10 g) = 0.293 mW/g**  
 Maximum value of SAR (measured) = 0.487 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/9/2011 11:46:56 PM

**Flat\_GPRS850\_CH251\_3D2U\_Edge Right to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

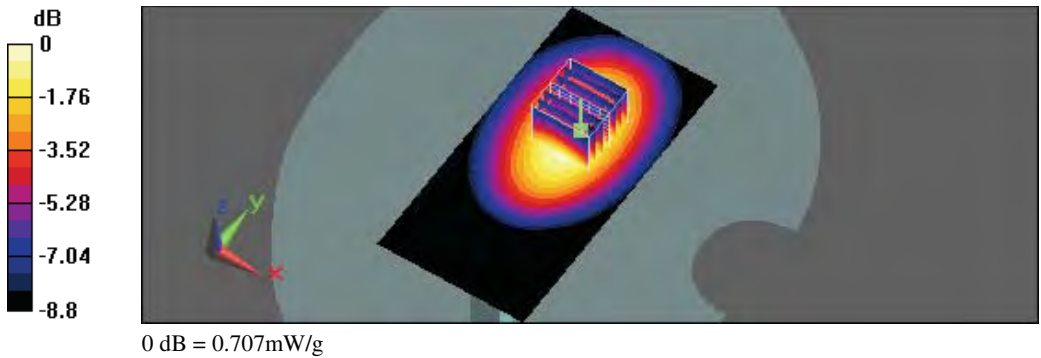
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.716 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 25.4 V/m; Power Drift = -0.034 dB  
 Peak SAR (extrapolated) = 0.896 W/kg  
**SAR(1 g) = 0.611 mW/g; SAR(10 g) = 0.412 mW/g**  
 Maximum value of SAR (measured) = 0.707 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 1:01:44 AM

**Flat\_GPRS850 CH251\_3D2U\_Edge Bottom to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS 850 (3Down, 2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.997 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

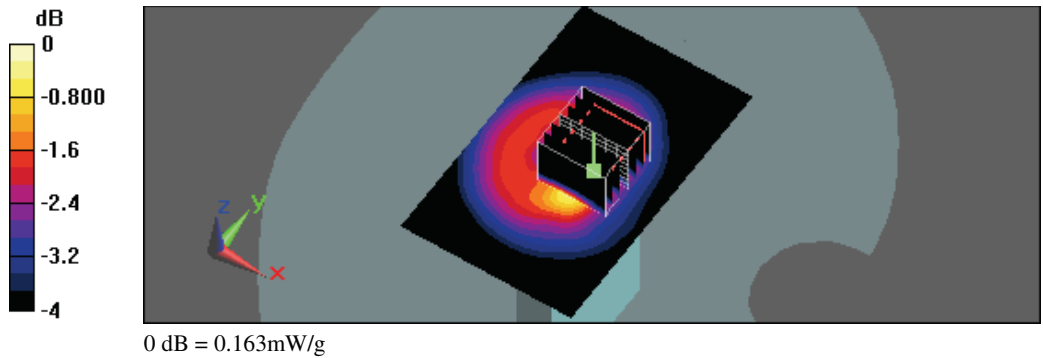
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3758; ConvF(9.39, 9.39, 9.39); Calibrated: 2/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x81x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.164 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 12.9 V/m; Power Drift = 0.00514 dB  
 Peak SAR (extrapolated) = 0.244 W/kg  
**SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.075 mW/g**  
 Maximum value of SAR (measured) = 0.163 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 12:32:29 AM

**Flat\_PCS CH512\_Headset\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.49 \text{ mho/m}$ ;  $\epsilon_r = 53.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

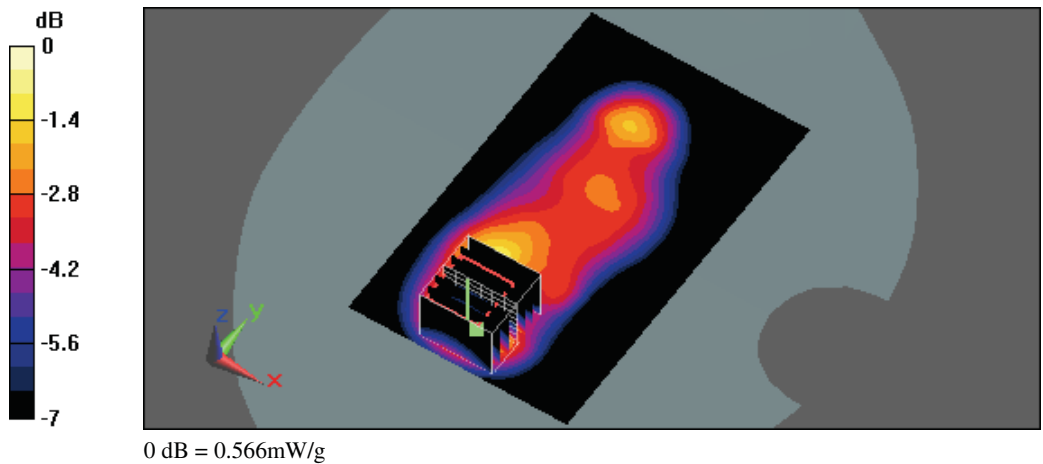
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.510 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 14.7 V/m; Power Drift = 0.000753 dB  
 Peak SAR (extrapolated) = 0.687 W/kg  
**SAR(1 g) = 0.467 mW/g; SAR(10 g) = 0.262 mW/g**  
 Maximum value of SAR (measured) = 0.566 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 1:25:19 AM

**Flat\_PCS CH512\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.49 \text{ mho/m}$ ;  $\epsilon_r = 53.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

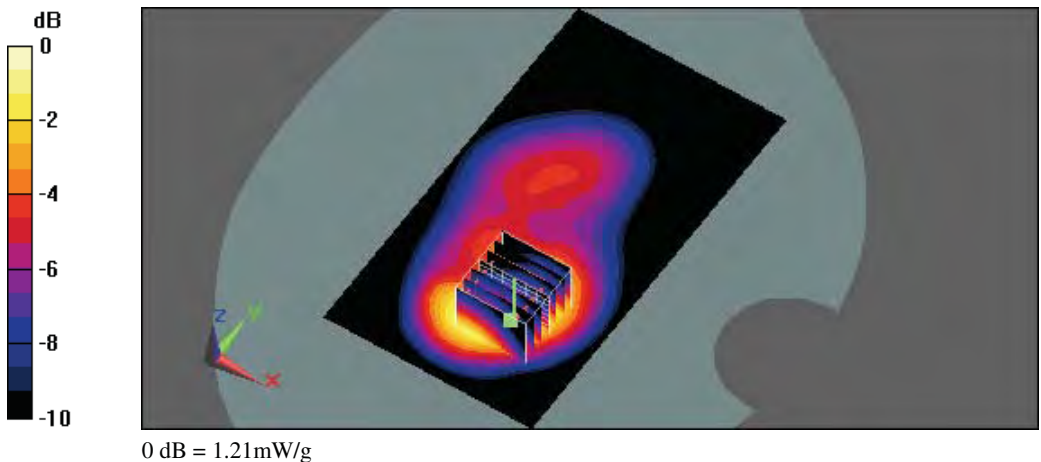
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.22 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 15.3 V/m; Power Drift = -0.035 dB  
 Peak SAR (extrapolated) = 1.51 W/kg  
**SAR(1 g) = 1 mW/g; SAR(10 g) = 0.592 mW/g**  
 Maximum value of SAR (measured) = 1.21 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 1:52:26 AM

**Flat\_PCS CH661\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.54 \text{ mho/m}$ ;  $\epsilon_r = 53.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

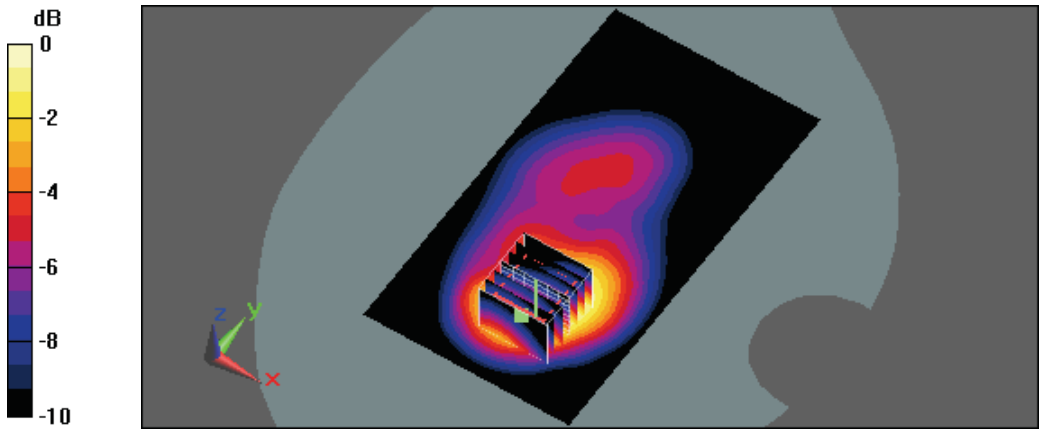
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.24 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 14.4 V/m; Power Drift = -0.062 dB  
 Peak SAR (extrapolated) = 1.52 W/kg  
**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.596 mW/g**  
 Maximum value of SAR (measured) = 1.23 mW/g



0 dB = 1.23mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 2:35:56 AM

**Flat\_PCS CH810\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

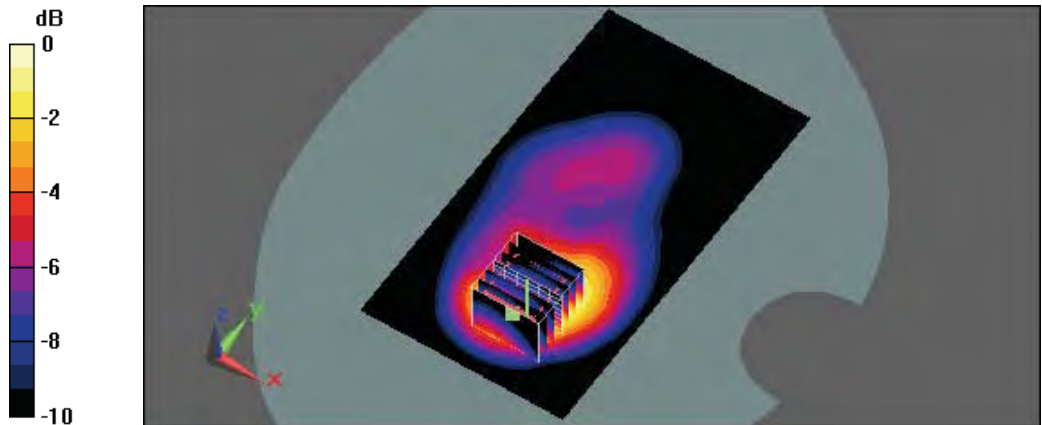
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.02 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 11.8 V/m; Power Drift = -0.018 dB  
Peak SAR (extrapolated) = 1.23 W/kg  
**SAR(1 g) = 0.839 mW/g; SAR(10 g) = 0.480 mW/g**  
Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 6:39:52 PM

**Flat\_GPRS PCS CH512\_3D2U\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.49 \text{ mho/m}$ ;  $\epsilon_r = 53.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

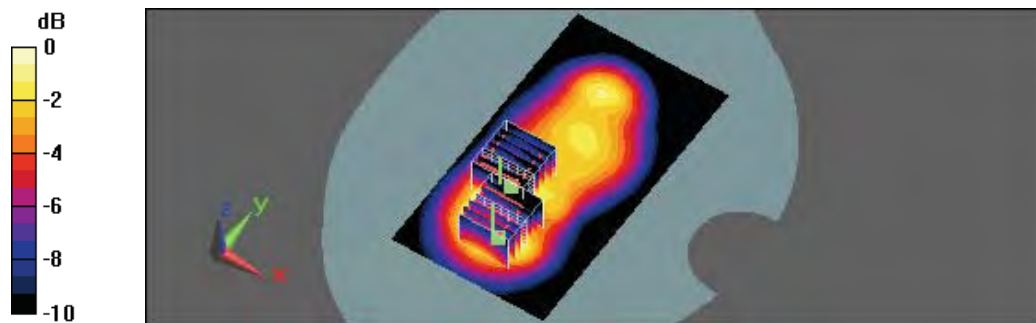
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.809 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 16.5 V/m; Power Drift = -0.040 dB  
 Peak SAR (extrapolated) = 1.04 W/kg  
**SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.388 mW/g**  
 Maximum value of SAR (measured) = 0.854 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 16.5 V/m; Power Drift = -0.040 dB  
 Peak SAR (extrapolated) = 0.758 W/kg  
**SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.283 mW/g**  
 Maximum value of SAR (measured) = 0.598 mW/g



0 dB = 0.598mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 3:28:45 PM

**Flat\_GPRS PCS CH512\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.49$  mho/m;  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

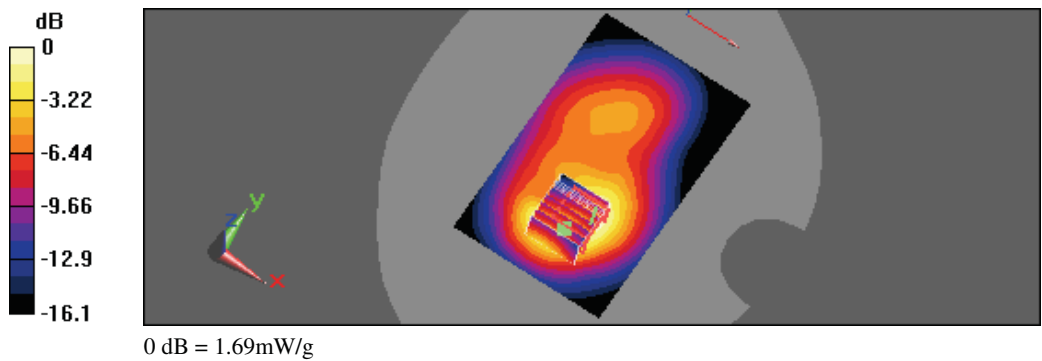
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x101x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.69 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 17.8 V/m; Power Drift = -0.014 dB  
 Peak SAR (extrapolated) = 2.11 W/kg  
**SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.815 mW/g**  
 Maximum value of SAR (measured) = 1.69 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 3:54:59 PM

**Flat\_GPRS PCS CH661\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.54 \text{ mho/m}$ ;  $\epsilon_r = 53.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

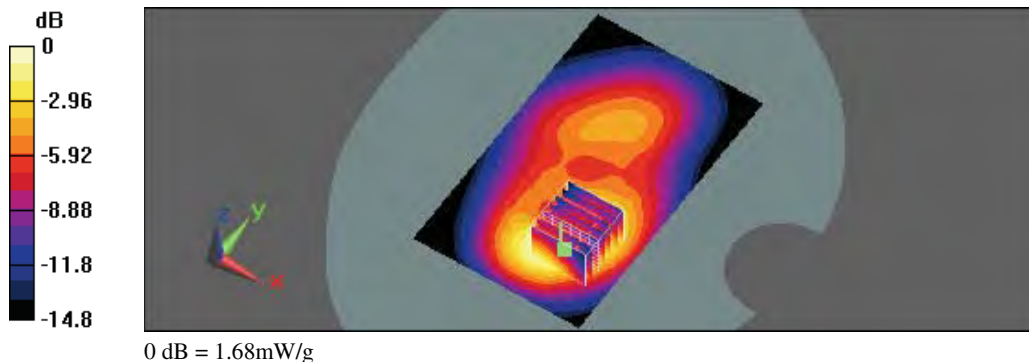
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

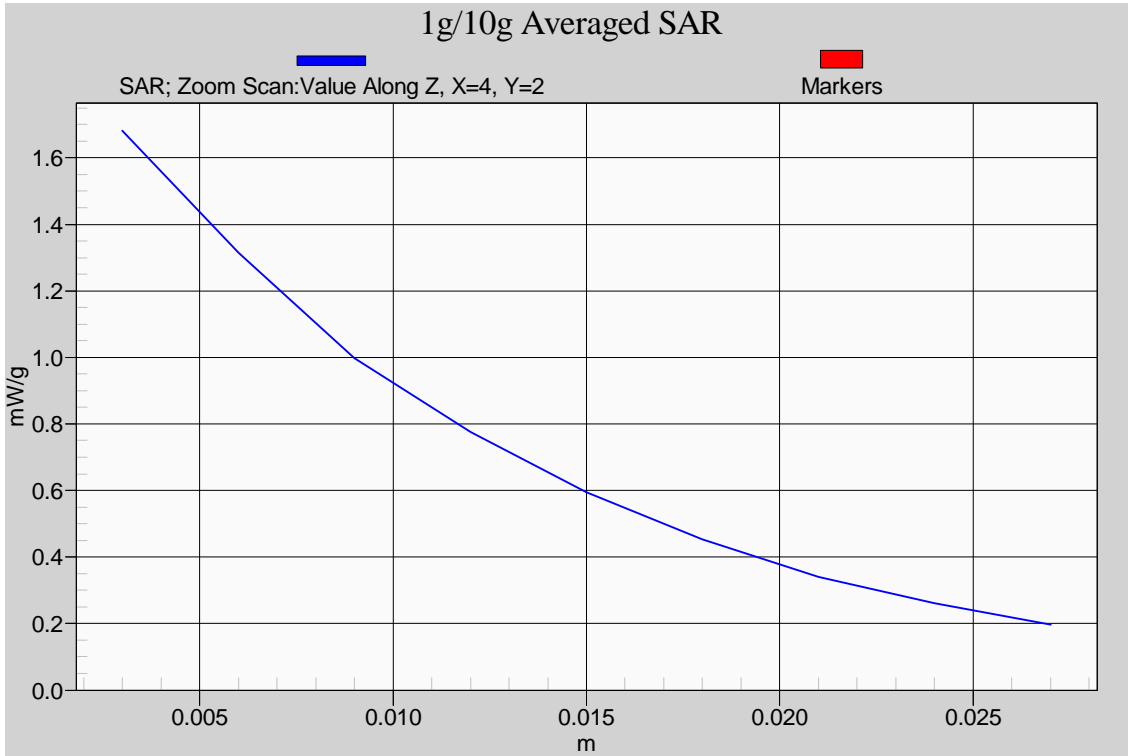
**Flat/Area Scan (61x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.76 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 17.7 V/m; Power Drift = -0.032 dB  
 Peak SAR (extrapolated) = 2.08 W/kg  
**SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.820 mW/g**  
 Maximum value of SAR (measured) = 1.68 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 4:21:08 PM

**Flat\_GPRS PCS CH810\_3D2U\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x101x1):**

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

Maximum value of SAR (interpolated) = 1.51 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

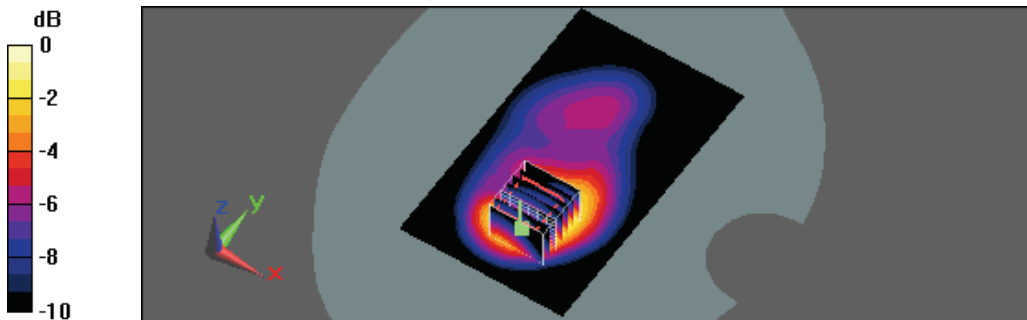
Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 15 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 1.75 W/kg

**SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.699 mW/g**

Maximum value of SAR (measured) = 1.45 mW/g



0 dB = 1.45mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 11:02:11 PM

**Flat\_GPRS PCS CH512\_3D2U\_Edge Left to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.49$  mho/m;  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS5 (IEEE/IEC)

DASY5 Configuration:

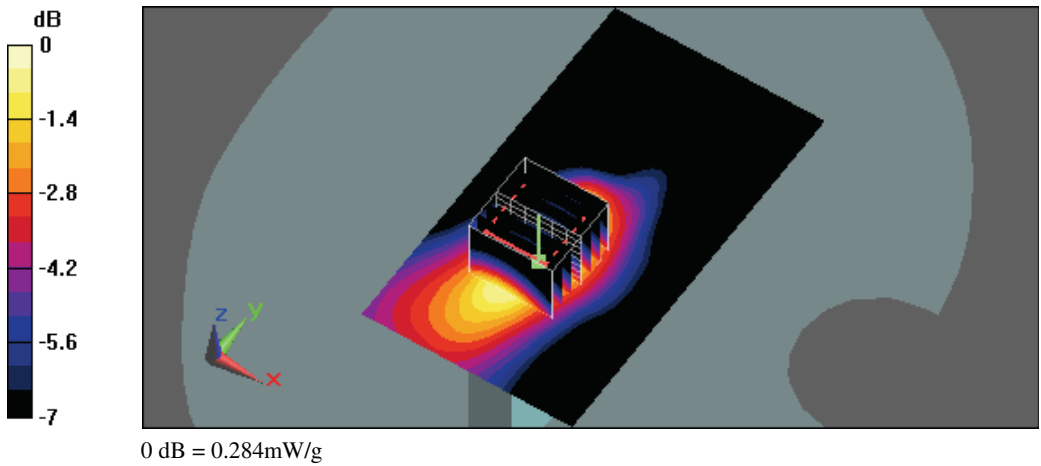
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.289 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 11.5 V/m; Power Drift = 0.016 dB  
 Peak SAR (extrapolated) = 0.352 W/kg  
**SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.146 mW/g**  
 Maximum value of SAR (measured) = 0.284 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 10:35:16 PM

**Flat\_GPRS PCS CH512\_3D2U\_Edge Right to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.49$  mho/m;  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

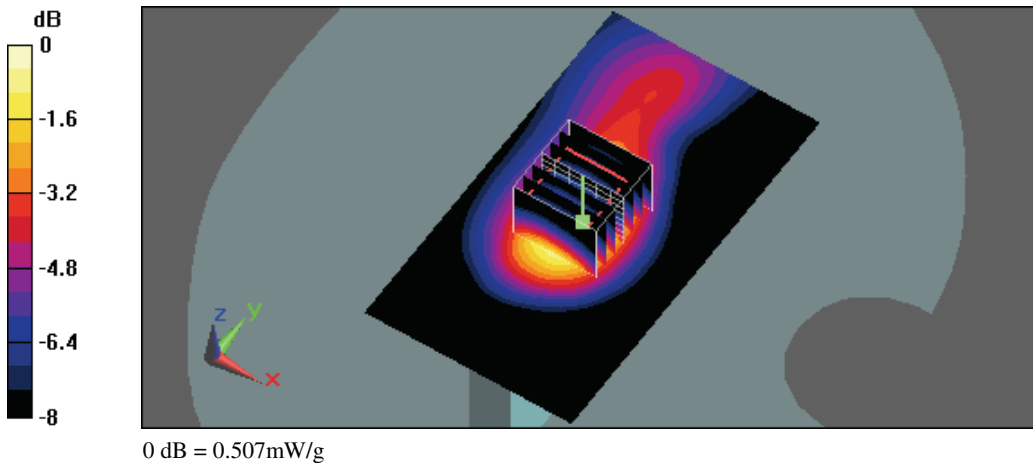
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.521 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 19 V/m; Power Drift = -0.011 dB  
 Peak SAR (extrapolated) = 0.609 W/kg  
**SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.255 mW/g**  
 Maximum value of SAR (measured) = 0.507 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 8:53:12 PM

**Flat\_GPRS PCS CH512\_3D2U\_Edge Bottom to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.2  
 Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.49$  mho/m;  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

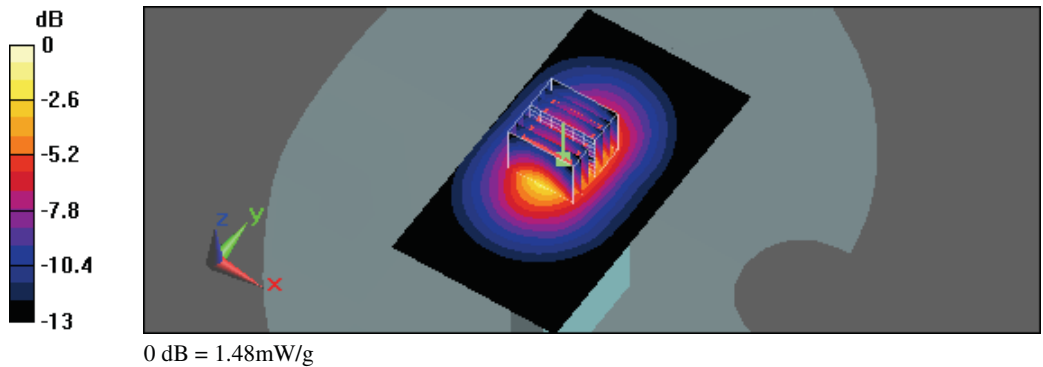
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.44 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
 Reference Value = 26.8 V/m; Power Drift = 0.154 dB  
 Peak SAR (extrapolated) = 1.83 W/kg  
**SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.647 mW/g**  
 Maximum value of SAR (measured) = 1.48 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 9:27:47 PM

**Flat\_GPRS PCS CH661\_3D2U\_Edge Bottom to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: GPRS PCS (3Down,2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.2  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.54 \text{ mho/m}$ ;  $\epsilon_r = 53.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

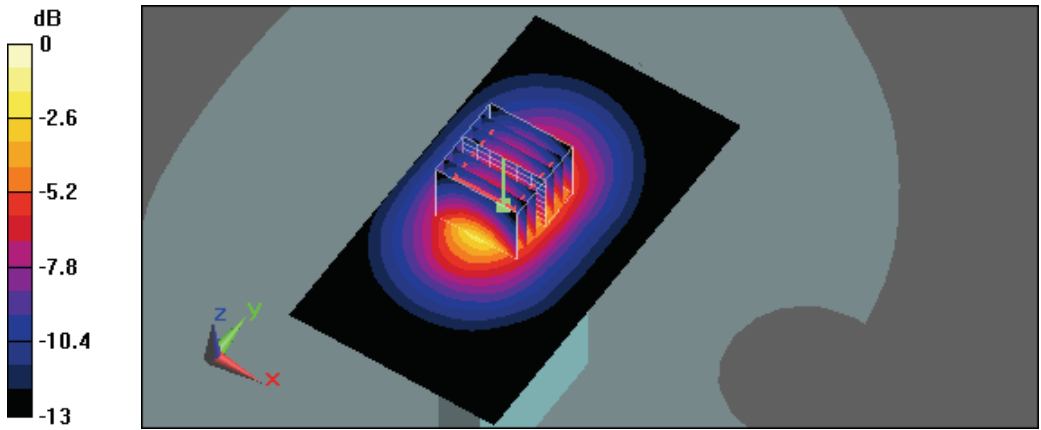
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125;SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.52 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 26.9 V/m; Power Drift = 0.151 dB  
 Peak SAR (extrapolated) = 1.89 W/kg  
**SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.678 mW/g**  
 Maximum value of SAR (measured) = 1.52 mW/g



0 dB = 1.52mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/13/2011 9:58:01 PM

**Flat\_GPRS PCS CH810\_3D2U\_Edge Bottom to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

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

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(4.71, 4.71, 4.71); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

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

Maximum value of SAR (interpolated) = 1.23 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

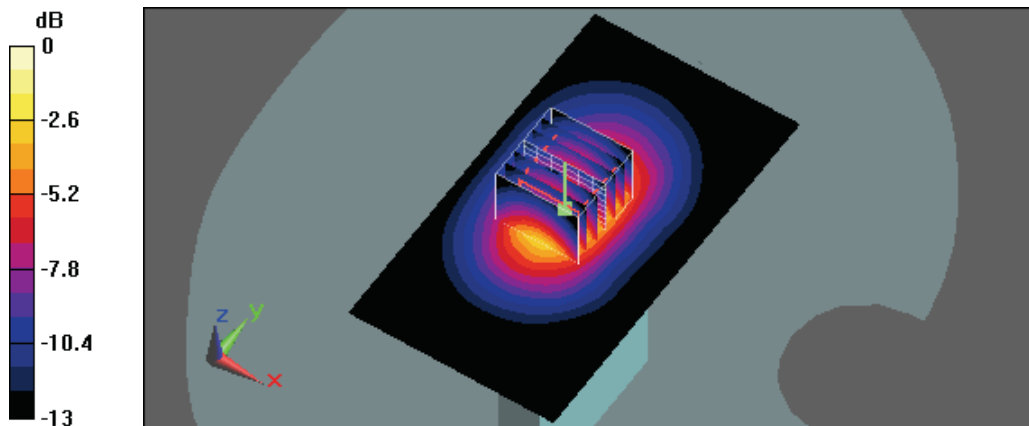
Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 26.3 V/m; Power Drift = 0.093 dB

Peak SAR (extrapolated) = 1.55 W/kg

**SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.536 mW/g**

Maximum value of SAR (measured) = 1.25 mW/g



0 dB = 1.25mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 6:04:52 PM

**Flat\_WCDMA Band IV CH1413\_Headset\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1733$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

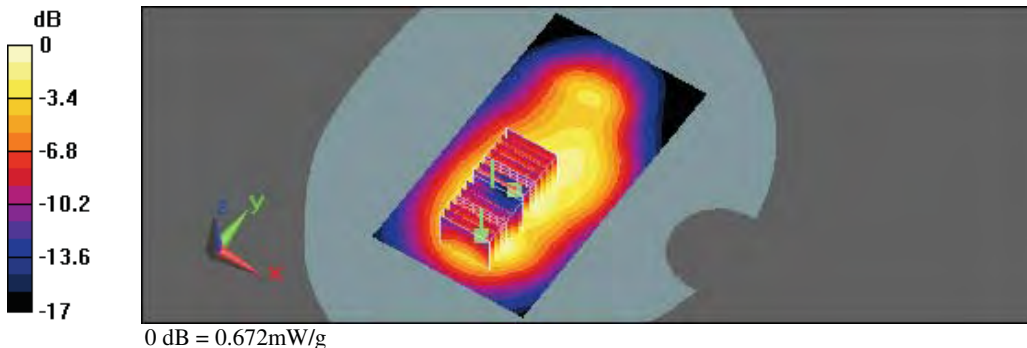
Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.725 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 17.3 V/m; Power Drift = -0.00395 dB  
Peak SAR (extrapolated) = 0.886 W/kg  
**SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.312 mW/g**  
Maximum value of SAR (measured) = 0.718 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 17.3 V/m; Power Drift = -0.00395 dB  
Peak SAR (extrapolated) = 0.843 W/kg  
**SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.327 mW/g**  
Maximum value of SAR (measured) = 0.672 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 7:45:19 PM

**Flat\_WCDMA Band IV CH1312\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 1712.4 \text{ MHz}$ ;  $\sigma = 1.48 \text{ mho/m}$ ;  $\epsilon_r = 52.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

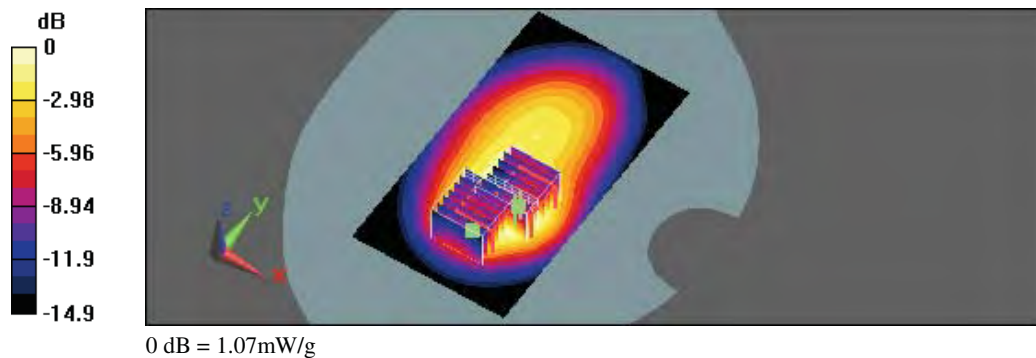
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.19 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 22.5 V/m; Power Drift = -0.013 dB  
 Peak SAR (extrapolated) = 1.47 W/kg  
**SAR(1 g) = 0.948 mW/g; SAR(10 g) = 0.535 mW/g**  
 Maximum value of SAR (measured) = 1.16 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 22.5 V/m; Power Drift = -0.013 dB  
 Peak SAR (extrapolated) = 1.37 W/kg  
**SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.449 mW/g**  
 Maximum value of SAR (measured) = 1.07 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 6:56:10 PM

**Flat\_WCDMA Band IV CH1413\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon_r = 53$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

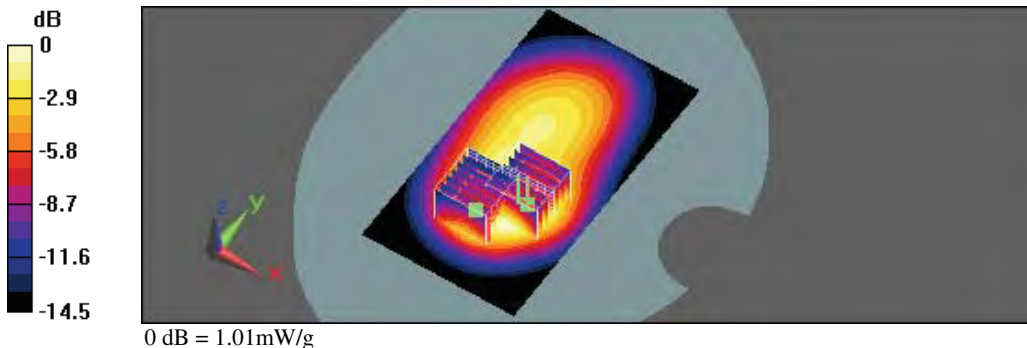
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.22 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.5 V/m; Power Drift = 0.026 dB  
 Peak SAR (extrapolated) = 1.52 W/kg  
**SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.548 mW/g**  
 Maximum value of SAR (measured) = 1.19 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.5 V/m; Power Drift = 0.026 dB  
 Peak SAR (extrapolated) = 1.39 W/kg  
**SAR(1 g) = 0.808 mW/g; SAR(10 g) = 0.458 mW/g**  
 Maximum value of SAR (measured) = 1.01 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 8:33:12 PM

**Flat\_WCDMA Band IV CH1513\_Headset\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1753$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

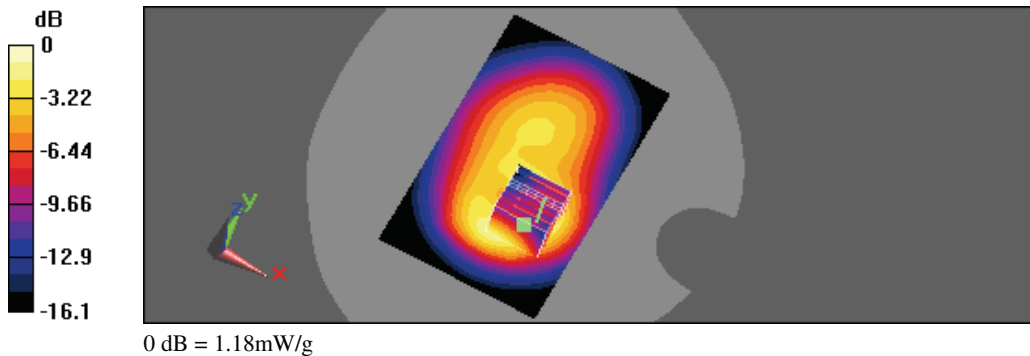
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x111x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.15 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 19.8 V/m; Power Drift = 0.039 dB  
Peak SAR (extrapolated) = 1.5 W/kg  
**SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.537 mW/g**  
Maximum value of SAR (measured) = 1.18 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 3:47:09 PM

**Flat\_HSDPA Band IV CH1413\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon_r = 53$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

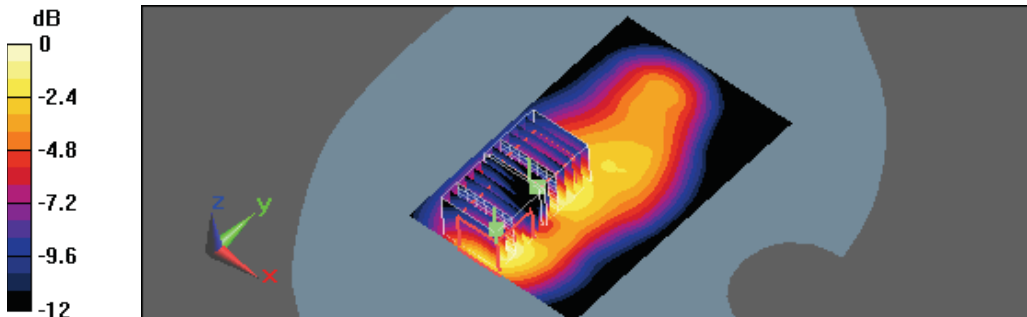
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.581 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 16.6 V/m; Power Drift = -0.012 dB  
 Peak SAR (extrapolated) = 0.763 W/kg  
**SAR(1 g) = 0.506 mW/g; SAR(10 g) = 0.295 mW/g**  
 Maximum value of SAR (measured) = 0.619 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 16.6 V/m; Power Drift = -0.012 dB  
 Peak SAR (extrapolated) = 0.796 W/kg  
**SAR(1 g) = 0.523 mW/g; SAR(10 g) = 0.285 mW/g**  
 Maximum value of SAR (measured) = 0.653 mW/g



0 dB = 0.653mW/g

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 2:40:55 PM

**Flat\_HSDPA Band IV CH1312\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 1712.4 \text{ MHz}$ ;  $\sigma = 1.48 \text{ mho/m}$ ;  $\epsilon_r = 52.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

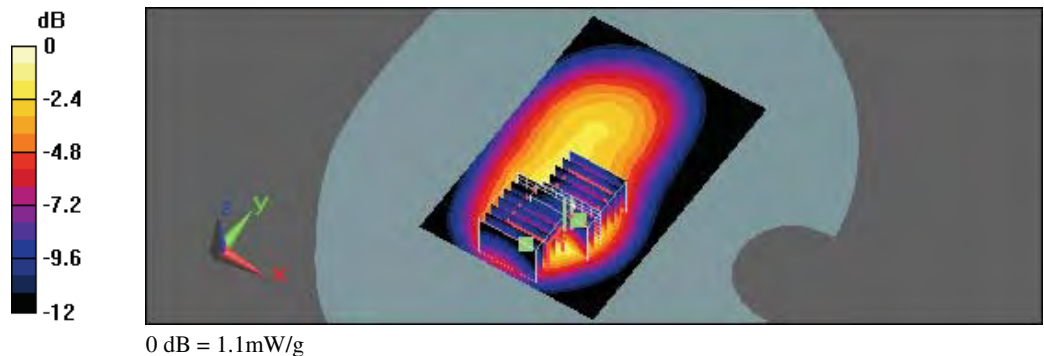
Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.17 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.6 V/m; Power Drift = -0.00685 dB  
 Peak SAR (extrapolated) = 1.45 W/kg  
**SAR(1 g) = 0.951 mW/g; SAR(10 g) = 0.543 mW/g**  
 Maximum value of SAR (measured) = 1.17 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 1:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.6 V/m; Power Drift = -0.00685 dB  
 Peak SAR (extrapolated) = 1.43 W/kg  
**SAR(1 g) = 0.828 mW/g; SAR(10 g) = 0.446 mW/g**  
 Maximum value of SAR (measured) = 1.1 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 2:15:33 PM

**Flat\_HSDPA Band IV CH1413\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon_r = 53$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

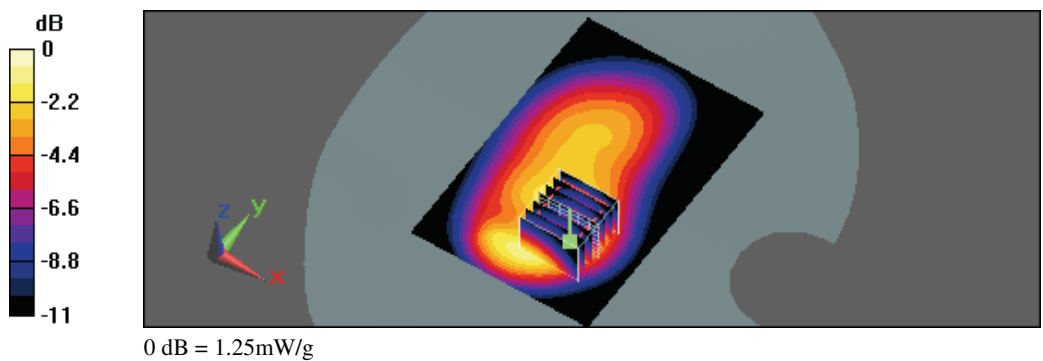
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.27 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 21.5 V/m; Power Drift = -0.013 dB  
 Peak SAR (extrapolated) = 1.56 W/kg  
**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.584 mW/g**  
 Maximum value of SAR (measured) = 1.25 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 3:22:00 PM

**Flat\_HSDPA Band IV CH1513\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1753 \text{ MHz}$ ;  $\sigma = 1.52 \text{ mho/m}$ ;  $\epsilon_r = 53$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

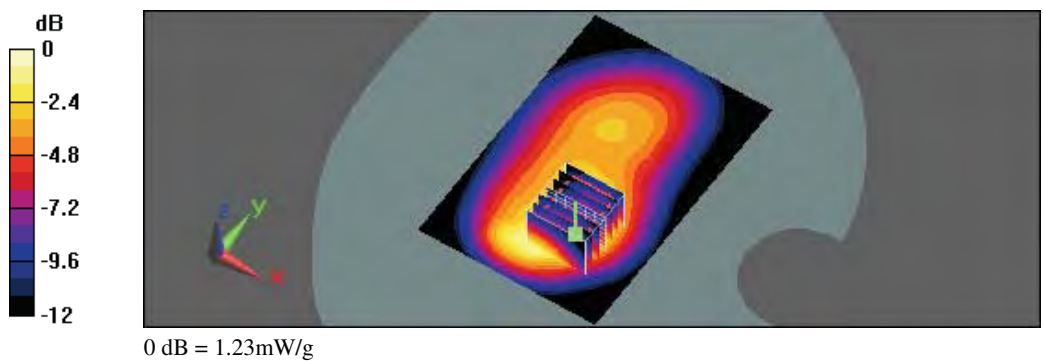
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.26 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 20.5 V/m; Power Drift = 0.031 dB  
 Peak SAR (extrapolated) = 1.54 W/kg  
**SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.571 mW/g**  
 Maximum value of SAR (measured) = 1.23 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 4:30:33 PM

**Flat\_HSDPA Band IV CH1413\_Edge Left to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1733 \text{ MHz}$ ;  $\sigma = 1.51 \text{ mho/m}$ ;  $\epsilon_r = 53$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

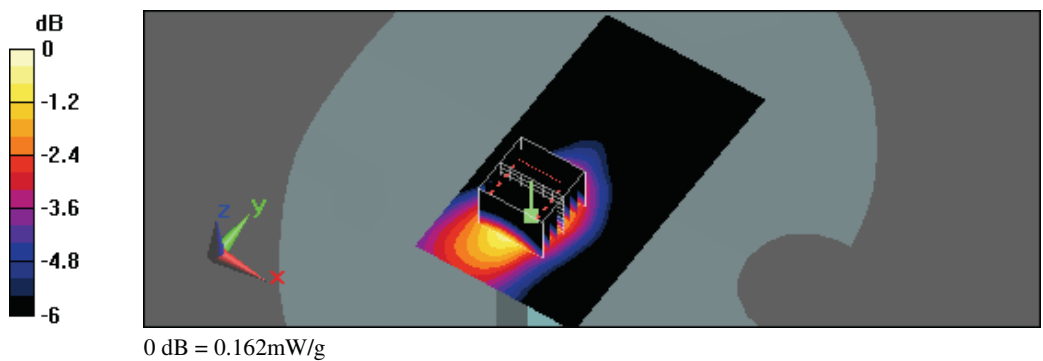
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.164 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 6.48 V/m; Power Drift = 0.066 dB  
 Peak SAR (extrapolated) = 0.199 W/kg  
**SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.082 mW/g**  
 Maximum value of SAR (measured) = 0.162 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 4:53:43 PM

**Flat\_HSDPA Band IV CH1413\_Edge Right to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1733$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

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

Maximum value of SAR (interpolated) = 0.361 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

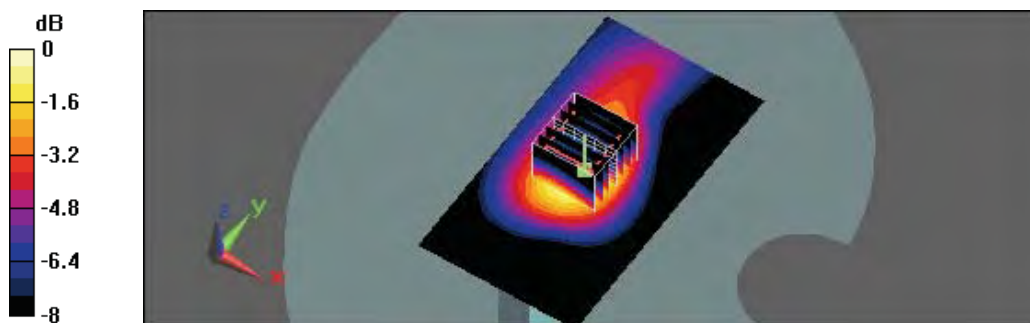
Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 16.1 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.419 W/kg

**SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.180 mW/g**

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



0 dB = 0.349mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/10/2011 5:19:33 PM

**Flat\_HSDPA Band IV CH1413\_Edge Bottom to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: WCDMA HSDPA Band IV; Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1733$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: ES3DV3 - SN3150; ConvF(5, 5, 5); Calibrated: 4/14/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x91x1):**

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

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

**Flat/Zoom Scan (7x7x9)/Cube 0:**

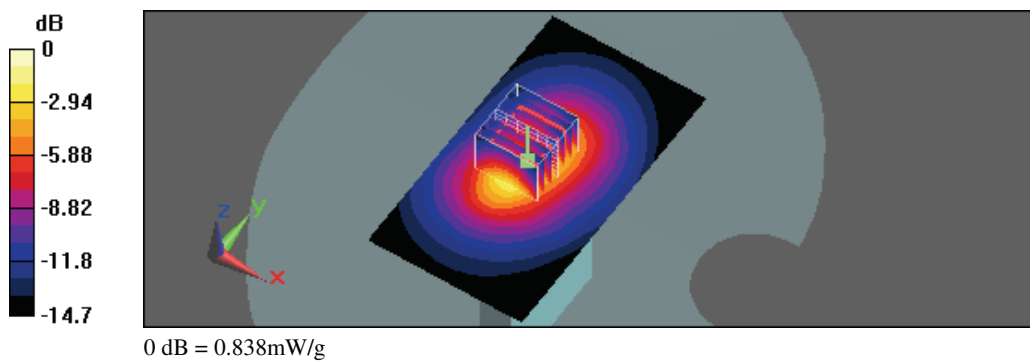
Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 20.3 V/m; Power Drift = 0.143 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.674 mW/g; SAR(10 g) = 0.361 mW/g**

Maximum value of SAR (measured) = 0.838 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 12:15:16 PM

**Flat\_802.11b CH11\_2M\_Front Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

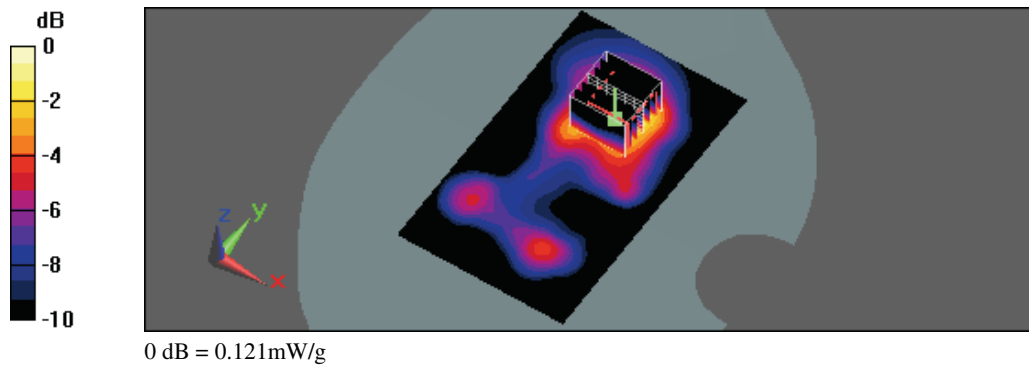
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x101x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.110 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 3.17 V/m; Power Drift = -0.047 dB  
Peak SAR (extrapolated) = 0.199 W/kg  
**SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.048 mW/g**  
Maximum value of SAR (measured) = 0.121 mW/g





Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 11:48:47 AM

**Flat\_802.11b CH11\_2M\_Back Surface to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

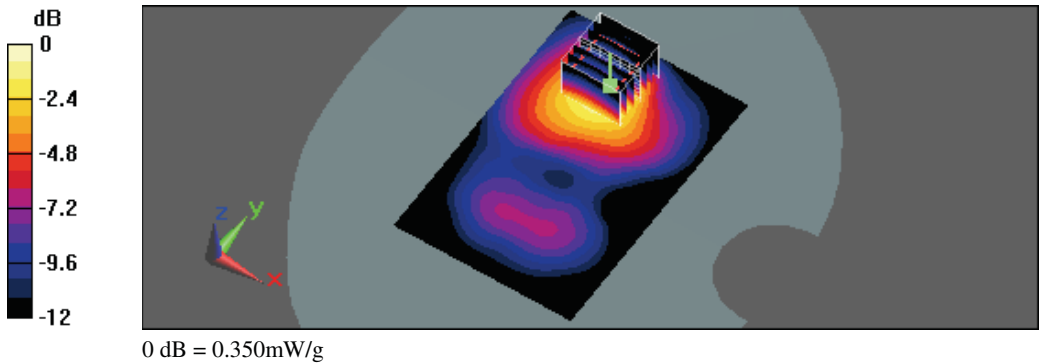
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (61x91x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.329 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 5.06 V/m; Power Drift = 0.083 dB  
Peak SAR (extrapolated) = 0.538 W/kg  
**SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.150 mW/g**  
Maximum value of SAR (measured) = 0.350 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 1:10:42 PM

**Flat\_802.11b CH11\_2M\_Edge Left to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.95 \text{ mho/m}$ ;  $\epsilon_r = 51.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

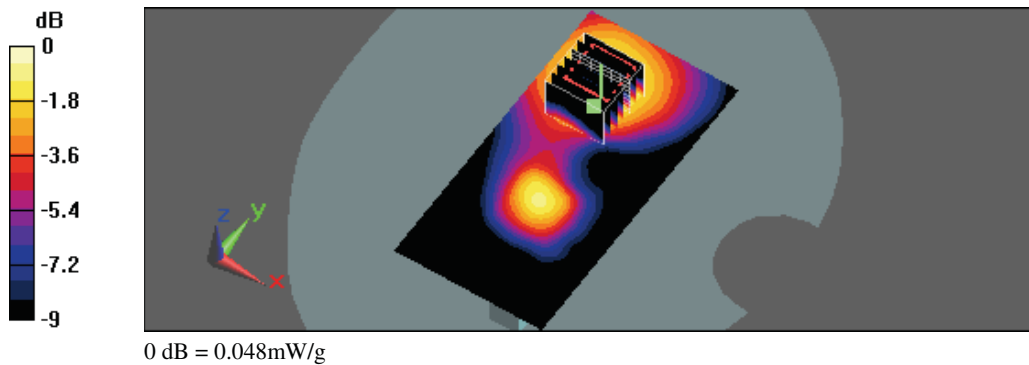
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASYS, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.047 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 1.78 V/m; Power Drift = -0.066 dB  
 Peak SAR (extrapolated) = 0.071 W/kg  
**SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.022 mW/g**  
 Maximum value of SAR (measured) = 0.048 mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 1:37:34 PM

**Flat\_802.11b CH11\_2M\_Edge Right to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.95 \text{ mho/m}$ ;  $\epsilon_r = 51.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

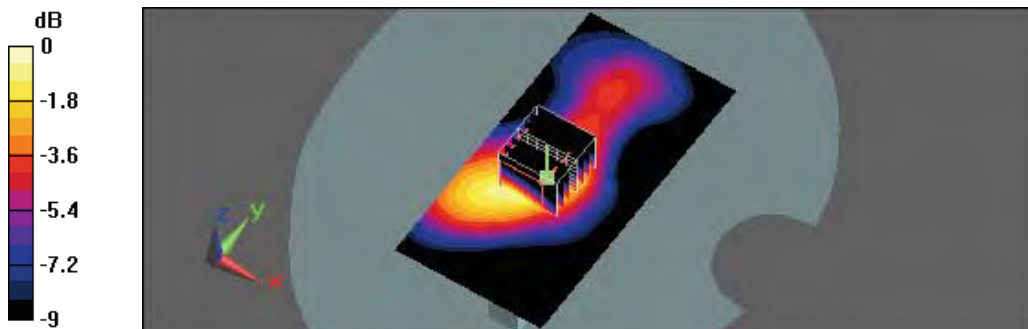
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x101x1):**

Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.060 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=3\text{mm}$   
 Reference Value = 4.49 V/m; Power Drift = 0.019 dB  
 Peak SAR (extrapolated) = 0.095 W/kg  
**SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.028 mW/g**  
 Maximum value of SAR (measured) = 0.062 mW/g



0 dB = 0.062mW/g



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 6/14/2011 2:03:11 PM

**Flat\_802.11b CH11\_2M\_Edge Top to Phantom\_10mm**

**DUT: PG76240; Type: Smart Phone; Serial: 004402260020882**

Communication System: IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC)

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV3 - SN3519; ConvF(8.17, 8.17, 8.17); Calibrated: 2/25/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 1/31/2011
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1150 and higher
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

**Flat/Area Scan (51x81x1):**

Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.169 mW/g

**Flat/Zoom Scan (7x7x9)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=3mm  
Reference Value = 7.86 V/m; Power Drift = 0.144 dB  
Peak SAR (extrapolated) = 0.291 W/kg  
**SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.073 mW/g**  
Maximum value of SAR (measured) = 0.189 mW/g

