



# SAR TEST REPORT

HCT CO., LTD

EUT Type:	Quad-Band GSM/CDMA Phone with Bluetooth GPRS Class 12 and GPRS mode class B(GPRS and GSM, but not simultaneously)	
FCC ID:	JYCBUDDY	
Model:	TXT8045	
Additional Model:	TXT8045VW, TXT8045PP	
Date of Issue:	Apr.29, 2011	
Test report No.:	HCTA1104FS05	
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Testing has been carried out in accordance with:	RSS-102 Issue 4; Health Canada Safety Code 6 47CFR §2.1093 FCC OET Bulletin 65(Edition 97-01), Supplement C (Edition 01-01) ANSI/ IEEE C95.1 – 2005 IEEE 1528-2003	
Test result:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.	
Signature	 _____ Report prepared by : Sun-Hee Kim Test Engineer of SAR Part	 _____ Approved by : Jae-Sang So Manager of SAR Part

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# 1. INTRODUCTION

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-2005 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

## SAR Definition

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

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

**Figure 2. SAR Mathematical Equation**

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

$$SAR = \sigma E^2 / \rho$$

where:

- $\sigma$  = conductivity of the tissue-simulant material (S/m)
- $\rho$  = mass density of the tissue-simulant material (kg/m<sup>3</sup>)
- $E$  = Total 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. DESCRIPTION OF DEVICE

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

EUT Type	Quad-Band GSM/CDMA Phone with Bluetooth GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)
FCC ID	JYCBUDDY
Model(s)	TXT8045
Additional Model:	TXT8045VW, TXT8045PP
Trade Name	Pantech
Serial Number(s)	#1
Application Type	Certification
Modulation(s)	CDMA835/PCS1900/GSM850/GSM1900
Tx Frequency	824.70 - 848.31 MHz (CDMA) 1 851.25 – 1 908.75 MHz (PCS CDMA) 824.20 - 848.80 MHz (GSM850) 1 850.20 – 1 909.80 MHz (GSM1900)
Rx Frequency	869.70 - 893.31 MHz (CDMA) 1 931.25 – 1 988.75 MHz (PCS CDMA) 869.20 - 893.80 MHz (GSM850) 1 930.20 – 1 989.80 MHz (GSM1900)
FCC Classification	Licensed Portable Transmitter Held to Ear (PCE)
Production Unit or Identical Prototype	Prototype
Max SAR	0.726 W/kg CDMA835 Head SAR / 0.496 W/kg CDMA835 Body SAR 1.15 W/kg PCS1900 Head SAR / 0.76 W/kg PCS1900 Body SAR 0.487 W/kg GSM850 Head SAR / 1.15 W/kg GSM850 Body SAR 0.515 W/kg GSM1900 Head SAR / 1.17 W/kg GSM1900 Body SAR
Date(s) of Tests	Apr.25, 2011 ~ Apr.26, 2011
Antenna Type	Intenna

## 3. DESCRIPTION OF TEST EQUIPMENT

### 3.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.3.1).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the HP Pentium IV 3.0 GHz computer with Windows XP system and SAR Measurement Software DASY4, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

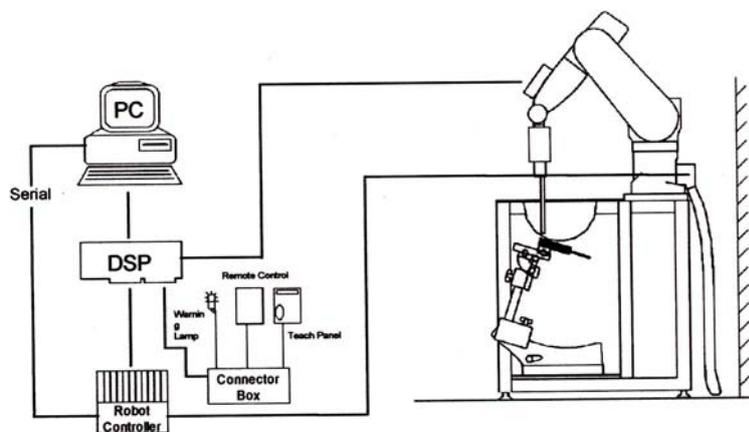


Figure 3.1 HCT SAR Lab. Test Measurement Set-up

The DAE4 consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

## **3.2 DASY E-FIELD PROBE SYSTEM**

### **4.1 ES3DV3 Probe Specification**

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 900 and HSL 1810 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 4 GHz; Linearity: $\pm 0.2$ dB (30 MHz to 4 GHz)
Directivity	$\pm 0.2$ dB in HSL (rotation around probe axis) $\pm 0.3$ dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 $\mu$ W/g to > 100 mW/g; Linearity: $\pm 0.2$ dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

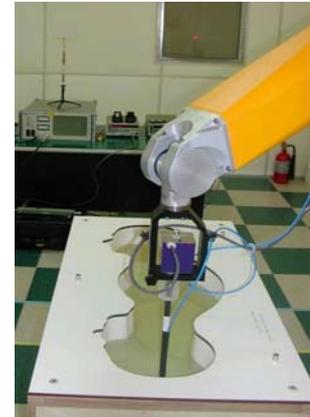


Figure 4.1 Photograph of the probe and the Phantom



Figure 4.2 ES3DV3 E-field Probe

The SAR measurements were conducted with the dosimetric probe ES3DV3, designed in the classical triangular configuration 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 multifiber 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 a maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle.

The DASY4 software reads the reflection during a software approach and looks for the maximum using a 2<sup>nd</sup> order fitting. The approach is stopped at reaching the maximum.

### 3.3 PROBE CALIBRATION PROCESS

#### 3.3.1 E-Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with an accuracy better than ± 10 %. The spherical isotropy was evaluated with the proper procedure and found to be better than ± 0.25 dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe is tested.

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

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

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

where:

- $\Delta t$  = exposure time (30 seconds),
- C = heat capacity of tissue (brain or muscle),
- $\Delta T$  = temperature increase due to RF exposure.

SAR is proportional to  $\Delta T / \Delta t$ , the initial rate of tissue heating, before thermal diffusion takes place. Now it's possible to quantify the electric field in the simulated tissue by equating the thermally derived SAR to the E- field;

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

where:

- $\sigma$  = simulated tissue conductivity,
- $\rho$  = Tissue density (1.25 g/cm<sup>3</sup> for brain tissue)

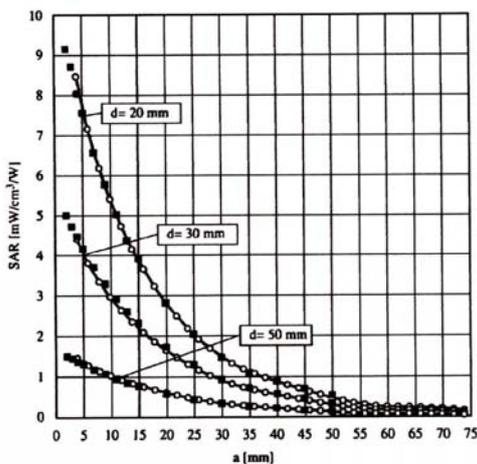


Figure 3.4 E-Field and Temperature measurements at 900 MHz

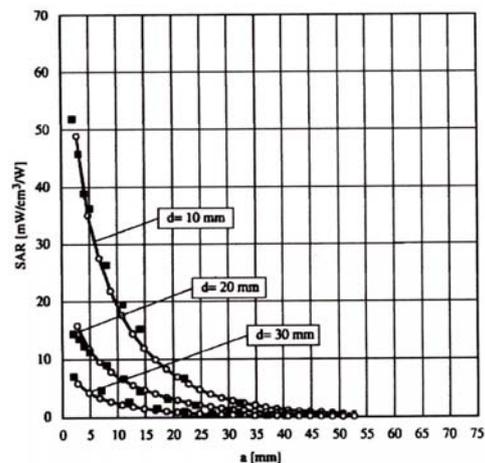


Figure 3.5 E-Field and temperature measurements at 1.8 GHz

### 3.3.2 Data Extrapolation

The DASY4 software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. 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 like below;

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

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:

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

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 of enhancement in solution  
 $E_i$  = electric field strength of channel i in V/m

The RSS value of the field components gives the total field strength (Hermetian 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 W/g  
 $E_{tot}$  = total field strength in V/m  
 $\sigma$  = conductivity in [mho/m] or [Siemens/m]  
 $\rho$  = equivalent tissue density in g/cm<sup>3</sup>

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

$$P_{pwe} = \frac{E_{tot}^2}{3770}$$

with  $P_{pwe}$  = equivalent power density of a plane wave in W/cm<sup>2</sup>  
 $E_{tot}$  = total electric field strength in V/m

### 3.4 SAM Phantom

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. 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 teaching three points with the robot.



Figure 3.6 SAM Phantom

Shell Thickness	2.0 mm
Filling Volume	about 25 L
Dimensions	1 000 mm x 500 mm (L x W)

### 3.5 Device Holder for Transmitters

In combination with the SAM Phantom V 4.0, the Mounting Device (POM) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatably positioned according to the FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

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



Figure 3.7 Device Holder

### 3.6 Brain & Muscle Simulating Mixture Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bactericide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Hartsgrove.

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1 900		2 450	
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

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M 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		

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

### 3.7 SAR TEST EQUIPMENT

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
Staubli	Robot RX90L	F01/5K09A1/A/01	N/A	N/A	N/A
Staubli	Robot ControllerCS7MB	F99/5A82A1/C/01	N/A	N/A	N/A
HP	Pavilion t000_puffer	KRJ51201TV	N/A	N/A	N/A
SPEAG	Light Alignment Sensor	265	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D221340.01	N/A	N/A	N/A
SPEAG	DAE4	869	Sep. 18, 2010	Annual	Sep. 18, 2011
SPEAG	E-Field Probe ES3DV3	3161	Mar. 17, 2011	Annual	Mar. 17, 2012
SPEAG	Validation Dipole D835V2	441	May 21, 2010	Annual	May 21, 2011
SPEAG	Validation Dipole D1900V2	5d032	July 16, 2010	Annual	July 16, 2011
SPEAG	Validation Dipole D2450V2	743	Aug. 25, 2010	Annual	Aug. 25, 2011
Agilent	Power Meter(F) E4419B	MY41291386	Nov. 05, 2010	Annual	Nov. 05, 2011
Agilent	Power Sensor(G) 8481	MY41090870	Nov. 05, 2010	Annual	Nov. 05, 2011
HP	Dielectric Probe Kit 85070C	00721521	N/A	N/A	N/A
HP	Dual Directional Coupler	16072	Nov. 05, 2010	Annual	Nov. 05, 2011
R&S	Base Station CMU200	110740	July 26, 2010	Annual	July 26, 2011
Agilent	Base Station E5515C	GB44400269	Feb. 10, 2011	Annual	Feb. 10, 2012
HP	Signal Generator E4438C	MY42082646	Nov. 11, 2010	Annual	Nov. 11, 2011
HP	Network Analyzer 8753ES	JP39240221	Mar. 30, 2011	Annual	Mar. 30, 2012

**NOTE:**

The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Validation measurement is performed by HCT Lab. before each test. The brain simulating material is calibrated by HCT using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain-equivalent material.

## 4. SAR MEASUREMENT PROCEDURE

The evaluation was performed with the following procedure:

1. The SAR value at a fixed location above the ear point was measured and was used as a reference value for assessing the power drop.
2. The SAR distribution at the exposed side of the head was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 20 mm x 20 mm. Based on this data, the area of the maximum absorption was determined by spline interpolation.
3. Around this point, a volume of 32 mm x 32 mm x 30 mm was assessed by measuring 5 x 5 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:
  - a. The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
  - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
  - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR value, at the same location as procedure #1, was re-measured. If the value changed by more than 5 %, the evaluation is repeated.

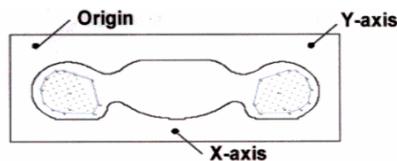


Figure 4.1 SAR Measurement Point in Area Scan

## 5. DESCRIPTION OF TEST POSITION

### 5.1 HEAD POSITION

The device was placed in a normal operating position with the Point A on the device, as illustrated in following drawing, aligned with the location of the RE(ERP) on the phantom. With the ear-piece pressed against the head, the vertical center line of the body of the handset was aligned with an imaginary plane consisting of the RE, LE and M. While maintaining these alignments, the body of the handset was gradually moved towards the cheek until any point on the mouth-piece or keypad contacted the cheek. This is a cheek/touch position. For ear/tilt position, while maintain the device aligned with the BM and FN lines, the device was pivot against ERP back for 15° or until the device antenna touch the phantom. Please refer to IEEE 1528-2003 illustration below.

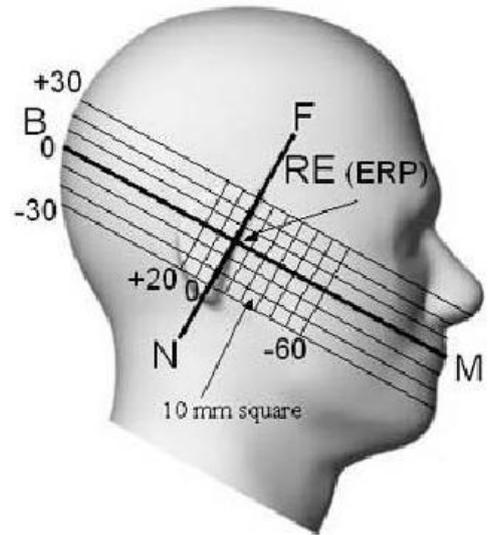


Figure 5.1 Side view of the phantom

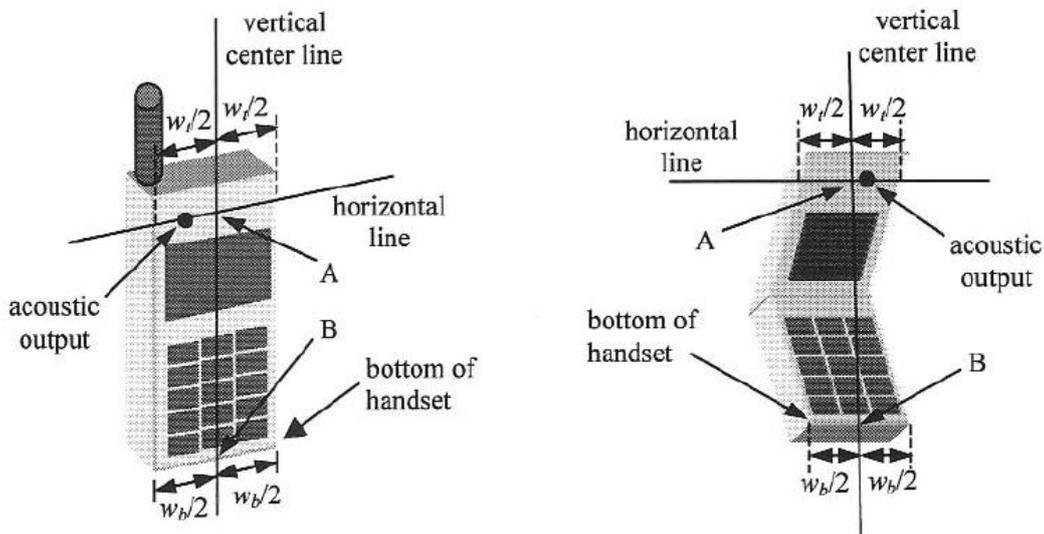


Figure 5.2 Handset vertical and horizontal reference lines

## **5.2 Body Holster/Belt Clip Configurations**

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

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

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

Since this EUT does not supply any body worn accessory to the end user a distance of 2.0 cm from the EUT back surface to the liquid interface is configured for the generic test.

"See the Test SET-UP Photo"

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

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

## 6. MEASUREMENT UNCERTAINTY

Error Description	Tol (± %)	Prob. dist.	Div.	$C_1$	Standard Uncertainty (± %)	$v_{eff}$
<b>1. Measurement System</b>						
Probe Calibration	6.00	N	1	1	6.00	$\infty$
Axial Isotropy	4.70	R	1.73	0.7	1.90	$\infty$
Hemispherical Isotropy	9.60	R	1.73	0.7	3.88	$\infty$
Boundary Effects	1.00	R	1.73	1	0.58	$\infty$
Linearity	4.70	R	1.73	1	2.71	$\infty$
System Detection Limits	1.00	R	1.73	1	0.58	$\infty$
Readout Electronics	0.30	N	1.00	1	0.30	$\infty$
Response Time	0.8	R	1.73	1	0.46	$\infty$
Integration Time	2.6	R	1.73	1	1.50	$\infty$
RF Ambient Noise	3.00	R	1.73	1	1.73	$\infty$
RF Ambient Reflection	3.00	R	1.73	1	1.73	$\infty$
Probe Positioner	0.40	R	1.73	1	0.23	$\infty$
Probe Positioning	2.90	R	1.73	1	1.67	$\infty$
Max SAR Eval	1.00	R	1.73	1	0.58	$\infty$
<b>2. Test Sample Related</b>						
Device Positioning	1.80	N	1.00	1	1.80	9
Device Holder	3.60	N	1.00	1	3.60	5
Power Drift	5.00	R	1.73	1	2.89	$\infty$
<b>3. Phantom and Setup</b>						
Phantom Uncertainty	4.00	R	1.73	1	2.31	$\infty$
Liquid Conductivity(target)	5.00	R	1.73	0.64	1.85	$\infty$
Liquid Conductivity(meas.)	2.07	N	1	0.64	1.32	9
Liquid Permittivity(target)	5.00	R	1.73	0.6	1.73	$\infty$
Liquid Permittivity(meas.)	5.02	N	1	0.6	3.01	9
<b>Combine Standard Uncertainty</b>					11.03	
<b>Coverage Factor for 95 %</b>					$k = 2$	
<b>Expanded STD Uncertainty</b>					22.06	

**Table 6.1 Uncertainty (800 MHz- 2450 MHz)**

## 7. ANSI/ IEEE C95.1 - 2005 RF EXPOSURE LIMITS

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Brain)	1.60	8.00
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.40
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.00	20.00

**Table 7.1 Safety Limits for Partial Body Exposure**

**NOTES:**

\* The Spatial Peak value of the SAR averaged over any 1 g 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 Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

**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).

## 8. SYSTEM VERIFICATION

### 8.1 Tissue Verification

Freq. [MHz]	Date	Liquid	Liquid Temp.[°C]	Parameters	Target Value	Measured Value	Deviation [%]	Limit [%]
835	Apr.25, 2011	Head	21.2	$\epsilon_r$	41.5	41.4	- 0.24	$\pm 5$
				$\sigma$	0.90	0.889	- 1.22	$\pm 5$
835	Apr.25, 2011	Body	21.2	$\epsilon_r$	55.2	56.9	+ 3.08	$\pm 5$
				$\sigma$	0.97	0.983	+ 1.34	$\pm 5$
1 900	Apr.26, 2011	Head	21.3	$\epsilon_r$	40.0	40.4	+ 1.00	$\pm 5$
				$\sigma$	1.40	1.4	0.00	$\pm 5$
1 900	Apr.26, 2011	Body	21.3	$\epsilon_r$	53.3	52.8	- 0.94	$\pm 5$
				$\sigma$	1.52	1.53	+ 0.66	$\pm 5$

### 8.2 System Validation

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 835 MHz/ 1 900 MHz by using the system validation kit. (Graphic Plots Attached)

\* Input Power: 100 m W

Freq. [MHz]	Date	Liquid	Liquid Temp. [°C]	SAR Average	Target Value (SPEAG) (mW/g)	* Measured Value (mW/g)	Deviation [%]	Limit [%]
835	Apr.25, 2011	Head	21.2	1 g	9.66	0.972	+ 0.62	$\pm 10$
835	Apr.25, 2011	Body	21.2	1 g	9.92	1.01	+ 1.81	$\pm 10$
1 900	Apr.26, 2011	Head	21.3	1 g	39.9	3.95	- 1.00	$\pm 10$
1 900	Apr.26, 2011	Body	21.3	1 g	41.5	4.22	+ 1.69	$\pm 10$

## 9. RF CONDUCTED POWER

Power measurements were performed using a base station simulator under digital average power.

### 9.1 Procedures Used to Establish RF Signal for SAR

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR[4] SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to check for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

### 9.2 SAR Measurement Conditions for CDMA2000 1x

These procedures were followed according to FCC "SAR Measurement Procedures for 3G Devices", May 2006.

#### 9.2.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices", May 2006. Maximum output power is verified on the High, Middle and Low channels according to procedures defined in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in "All Up" condition.

1. If the mobile station supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9 600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1 (Table 9.1) parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH0 and demodulation of RC 3, 4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9 600 bps Fundamental Channel and 9 600 bps SCH0 data rate Channel and 9 600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2(Table 9.2) was applied.
5. FCHs were configured at full rate for maximum SAR with "All Up" power control bits.

Parameters for Max. Power for RC1

Parameter	Units	Value
$I_{or}$	dBm/1.23 MHz	-104
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

Table. 9.1

Parameters for Max. Power for RC3

Parameter	Units	Value
$I_{or}$	dBm/1.23 MHz	-86
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

Table. 9.2

#### 9.2.2 Head SAR Measurement

SAR for head exposure configurations is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55. SAR for RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1 using the exposure configuration that results in the highest SAR for that channel in RC3.

### 9.2.3 Body SAR Measurement

SAR for body exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. SAR for multiple code channels (FCH + SCHn) is not required when the maximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only. Otherwise, SAR is measured on the maximum output channel (FCH + SCHn) with FCH at full rate and SCH0 enabled at 9 600 bps using the exposure configuration that results in the highest SAR for that channel with FCH only. When multiple code channels are enabled, the DUT output may shift by more than 0.5 dB and lead to higher SAR drifts and SCH dropouts.

Body SAR in RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1; with Loopback Service Option SO55, at full rate, using the body exposure configuration that results in the highest SAR for that channel in RC3.

#### Average Output Power Measurement for FCC ID: JYCBUDDY

Band	Channel	SO2	SO2	SO55	SO55	TDSO
		RC1/1	RC3/3	RC1/1	RC3/3	RC3/3
CDMA	1013	24.33	24.29	24.32	24.28	24.32
	384	24.31	24.19	24.31	24.24	24.21
	777	24.09	24.06	24.23	24.15	24.25
PCS	25	24.24	24.05	24.11	24.06	24.10
	600	24.26	24.19	24.21	24.19	24.21
	1175	24.23	24.19	24.29	24.21	24.20

Table 1. CDMA Conducted output powers

Band	Channel	Voice	GPRS Data			
		GSM (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	GPRS 3 TX Slot (dBm)	GPRS 4 TX Slot (dBm)
GSM 850	128	32.65	32.58	32.17	30.4	29.65
	190	32.48	32.48	32.08	30.32	29.53
	251	32.45	32.45	32.04	30.28	29.48
GSM 1900	512	29.94	29.8	29.79	28.15	27.22
	661	29.70	29.59	29.59	28.2	27.43
	810	29.70	29.63	29.57	28.03	27.01

Table 2. GSM Conducted output powers

# 10. SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas

## 10.1 SAR Evaluation Considerations

These procedures were followed according to FCC "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas", May 2008. The procedures are applicable to phones with built-in unlicensed transmitters, such as 802.11 a/b/g and Bluetooth devices.

	2.45	5.15 - 5.35	5.47 - 5.85	GHz
$P_{Ref}$	12	6	5	mW
Device output power should be rounded to the nearest mW to compare with values specified in this table.				

Table. 10.1 Output Power Thresholds for Unlicensed Transmitters

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	<u>Routine evaluation required</u>	<u>SAR not required:</u> <u>Unlicensed only</u>
Unlicensed Transmitters	<p><u>When there is no simultaneous transmission –</u></p> <ul style="list-style-type: none"> <li>output <math>\leq 60</math>/f: SAR not required</li> <li>output <math>&gt; 60</math>/f: stand-alone SAR required</li> </ul> <p><u>When there is simultaneous transmission –</u> <u>Stand-alone SAR not required when</u></p> <ul style="list-style-type: none"> <li>output <math>\leq 2 \cdot P_{Ref}</math> and antenna is <math>\geq 5.0</math> cm from other antennas</li> <li>output <math>\leq P_{Ref}</math> and antenna is <math>\geq 2.5</math> cm from other antennas</li> <li>output <math>\leq P_{Ref}</math> and antenna is <math>&lt; 2.5</math> cm from other antennas, each with either output power <math>\leq P_{Ref}</math> or 1-g SAR <math>&lt; 1.2</math> W/kg</li> </ul> <p><u>Otherwise stand-alone SAR is required</u></p> <p><u>When stand-alone SAR is required</u></p> <ul style="list-style-type: none"> <li>test SAR on highest output channel for each wireless mode and exposure condition</li> <li>if SAR for highest output channel is <math>&gt; 50\%</math> of SAR limit, evaluate all channels according to normal procedures</li> </ul>	<ul style="list-style-type: none"> <li>when stand-alone 1-g SAR is not required and antenna is <math>\geq 5</math> cm from other antennas</li> </ul> <p><u>Licensed &amp; Unlicensed</u></p> <ul style="list-style-type: none"> <li>when the sum of the 1-g SAR is <math>&lt; 1.6</math> W/kg for all simultaneous transmitting antennas</li> <li>when SAR to peak location separation ratio of simultaneous transmitting antenna pair is <math>&lt; 0.3</math></li> </ul> <p><u>SAR required:</u> <u>Licensed &amp; Unlicensed</u></p> <p>antenna pairs with SAR to peak location separation ratio <math>\geq 0.3</math>; test is only required for the configuration that results in the highest SAR in stand-alone configuration for each wireless mode and exposure condition</p> <p><b>Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply</b></p>
Jaw, Mouth and Nose	<p><u>Flat phantom SAR required</u></p> <ul style="list-style-type: none"> <li>when measurement is required in tight regions of SAM and it is not feasible or the results can be questionable due to probe tilt, calibration, positioning and orientation issues</li> <li>position rectangular and clam-shell phones according to flat phantom procedures and conduct SAR measurements for these specific locations</li> </ul>	When simultaneous transmission SAR testing is required, contact the FCC Laboratory for interim guidance.

Table. 10.2 SAR Evaluation Requirements for Cellphones with Multiple Transmitters

**FCC ID: JYCBUDDY**

BT Max. RF output power: 8.85 dBm = 7.67 mW  
Antenna separation distance: 5.3 cm

Because the conducted output power level of the BT transmitter is less than  $2 \cdot P_{ref}$ , and the BT antenna is more than 5.0 cm from the Main antenna, neither simultaneous SAR nor stand-alone BT SAR are required for the EUT.

## 11. SAR TEST DATA SUMMARY

### 11.1 Measurement Results (CDMA835 Head SAR Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	24.24	24.19	Standard	Left Ear	Intenna	0.726
836.52	384 (Mid)	CDMA835	24.24	24.31	Standard	Left Tilt 15°	Intenna	0.366
836.52	384 (Mid)	CDMA835	24.24	24.23	Standard	Right Ear	Intenna	0.638
836.52	384 (Mid)	CDMA835	24.24	24.25	Standard	Right Tilt 15°	Intenna	0.328
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>						<b>Head</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type             Standard             Extended             Slim  
Batteries are fully charged for all readings.
- Test Signal Call Mode    Manual Test cord        Base Station Simulator
- Head SAR was tested under RC3/SO55.
- Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.2 Measurement Results (CDMA835 Head SAR Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	24.24	24.13	Standard	Left Ear	Intenna	0.464
836.52	384 (Mid)	CDMA835	24.24	24.28	Standard	Left Tilt 15°	Intenna	0.275
836.52	384 (Mid)	CDMA835	24.24	24.42	Standard	Right Ear	Intenna	0.456
836.52	384 (Mid)	CDMA835	24.24	24.35	Standard	Right Tilt 15°	Intenna	0.222
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 Head SAR was tested under RC3/SO55.
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.3 Measurement Results (PCS1900 Head SAR Touch Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 851.25	25 (Low)	PCS1900	24.06	24.10	Standard	Left Ear	Intenna	0.931
1 880.00	600 (Mid)	PCS1900	24.19	24.23	Standard	Left Ear	Intenna	1.13
1 908.75	1175 (High)	PCS1900	24.21	24.18	Standard	Left Ear	Intenna	1.15
1 880.00	600 (Mid)	PCS1900	24.19	24.17	Standard	Left Tilt 15°	Intenna	0.244
1 851.25	25 (Low)	PCS1900	24.06	24.14	Standard	Right Ear	Intenna	0.893
1 880.00	600 (Mid)	PCS1900	24.19	24.16	Standard	Right Ear	Intenna	0.970
1 908.75	1175 (High)	PCS1900	24.21	24.24	Standard	Right Ear	Intenna	1.07
1 880.00	600 (Mid)	PCS1900	24.19	24.28	Standard	Right Tilt 15°	Intenna	0.246
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 Head SAR was tested under RC3/SO55.

## 11.4 Measurement Results (PCS1900 Head SAR Touch Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 851.25	25 (Low)	PCS1900	24.06	24.03	Standard	Left Ear	Intenna	0.799
1 880.00	600 (Mid)	PCS1900	24.19	24.11	Standard	Left Ear	Intenna	0.926
1 908.75	1175 (High)	PCS1900	24.21	24.15	Standard	Left Ear	Intenna	0.937
1 880.00	600 (Mid)	PCS1900	24.19	24.21	Standard	Left Tilt 15°	Intenna	0.343
1 880.00	600 (Mid)	PCS1900	24.19	24.09	Standard	Right Ear	Intenna	0.557
1 880.00	600 (Mid)	PCS1900	24.19	24.22	Standard	Right Tilt 15°	Intenna	0.365
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode        Manual Test cord        Base Station Simulator
- 7 Head SAR was tested under RC3/SO55.
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.5 Measurement Results (GSM850 Head SAR Touch Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.6	190 (Mid)	GSM850	32.48	32.40	Standard	Left Ear	Intenna	0.487
836.6	190 (Mid)	GSM850	32.48	32.52	Standard	Left Tilt 15°	Intenna	0.325
836.6	190 (Mid)	GSM850	32.48	32.47	Standard	Right Ear	Intenna	0.433
836.6	190 (Mid)	GSM850	32.48	32.39	Standard	Right Tilt 15°	Intenna	0.196
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type             Standard             Extended             Slim  
Batteries are fully charged for all readings.
- Test Signal Call Mode    Manual Test cord     Base Station Simulator
- Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.6 Measurement Results (GSM850 Head SAR Touch Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.6	190 (Mid)	GSM850	32.48	32.53	Standard	Left Ear	Intenna	0.340
836.6	190 (Mid)	GSM850	32.48	32.53	Standard	Left Tilt 15°	Intenna	0.200
836.6	190 (Mid)	GSM850	32.48	32.43	Standard	Right Ear	Intenna	0.317
836.6	190 (Mid)	GSM850	32.48	32.41	Standard	Right Tilt 15°	Intenna	0.154
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type             Standard             Extended             Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode    Manual Test cord     Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.7 Measurement Results (GSM1900 Head SAR Touch Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.0	661 (Mid)	GSM1900	29.70	29.73	Standard	Left Ear	Intenna	0.515
1 880.0	661 (Mid)	GSM1900	29.70	29.78	Standard	Left Tilt 15°	Intenna	0.110
1 880.0	661 (Mid)	GSM1900	29.70	29.55	Standard	Right Ear	Intenna	0.414
1 880.0	661 (Mid)	GSM1900	29.70	29.72	Standard	Right Tilt 15°	Intenna	0.103
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.8 Measurement Results (GSM1900 Head SAR Touch Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.0	661 (Mid)	GSM1900	29.70	29.51	Standard	Left Ear	Intenna	0.406
1 880.0	661 (Mid)	GSM1900	29.70	29.77	Standard	Left Tilt 15°	Intenna	0.152
1 880.0	661 (Mid)	GSM1900	29.70	29.56	Standard	Right Ear	Intenna	0.221
1 880.0	661 (Mid)	GSM1900	29.70	29.69	Standard	Right Tilt 15°	Intenna	0.143
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord             Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.9 Measurement Results (CDMA835 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	24.21	24.27	Rear	2.0 cm without Holster	Intenna	0.496
<b>ANSI/ IEEE C95.1 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 HEADSET was connected.
- 8 Test Configuration             With Holster                     Without Holster
- 9 Body SAR was tested under RC3/SO32.
- 10 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.10 Measurement Results (PCS1900 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.00	600 (Mid)	PCS1900	24.21	24.27	Rear	2.0 cm without Holster	Intenna	0.760
<b>ANSI/ IEEE C95.1 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 HEADSET was connected.
- 8 Test Configuration             With Holster                     Without Holster
- 9 Body SAR was tested under RC3/SO32.
- 10 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

## 11.11 Measurement Results (GSM850 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
824.2	128 (Low)	GPRS 4Tx	29.65	29.84	Rear	2.0 cm without Holster	Intenna	0.657
836.6	190 (Mid)	GPRS 4Tx	29.53	29.35	Rear	2.0 cm without Holster	Intenna	0.935
848.8	251 (High)	GPRS 4Tx	29.48	29.58	Rear	2.0 cm without Holster	Intenna	1.15
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Body</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode        Manual Test cord        Base Station Simulator
- 7 HEADSET was connected.
- 8 Test Configuration            With Holster                 Without Holster

## 11.12 Measurement Results (GSM1900 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
824.2	512 (Low)	GPRS 4Tx	27.22	24.03	Rear	2.0 cm without Holster	Intenna	0.838
836.6	661 (Mid)	GPRS 4Tx	27.43	24.11	Rear	2.0 cm without Holster	Intenna	1.03
848.8	810(High)	GPRS 4Tx	27.01	24.15	Rear	2.0 cm without Holster	Intenna	1.17
<b>ANSI/ IEEE C95.1 2005 – Safety Limit</b>						<b>Body</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode        Manual Test cord        Base Station Simulator
- 7 HEADSET was connected.
- 8 Test Configuration            With Holster                 Without Holster

## **12. CONCLUSION**

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The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/IEEE C95.1 2005.

These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests.

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## Attachment 1. – SAR Test Plots

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left touch 384/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.820 mW/g

**Left touch 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

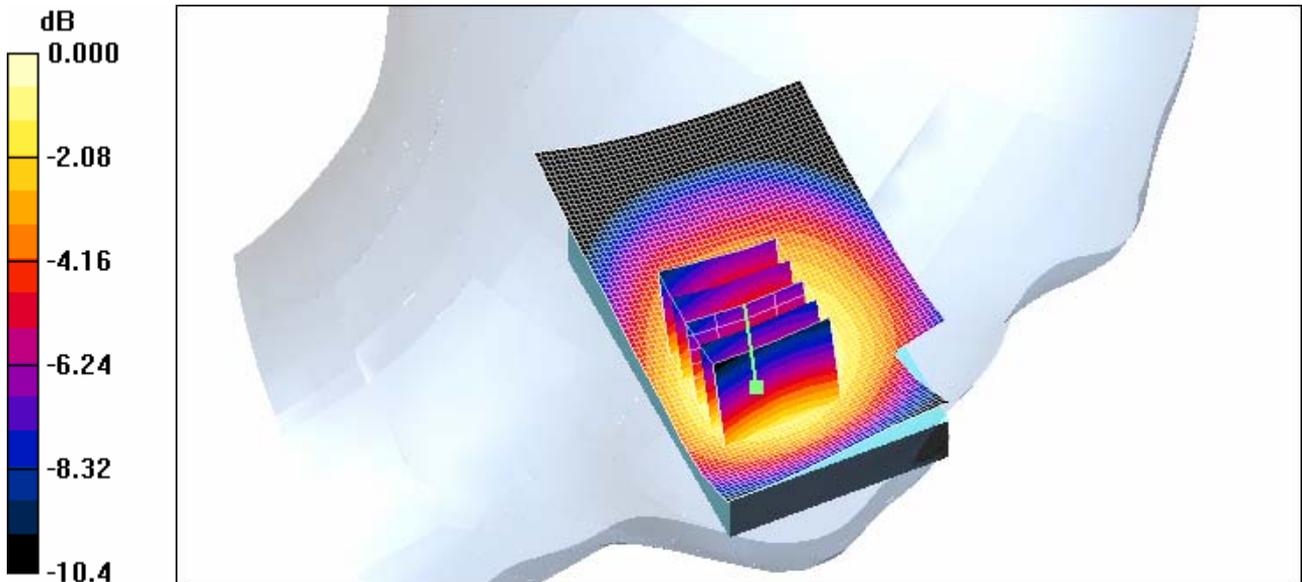
Reference Value = 12.0 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.936 W/kg

**SAR(1 g) = 0.726 mW/g; SAR(10 g) = 0.528 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.769 mW/g



0 dB = 0.769mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left tilt 384/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.393 mW/g

**Left tilt 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

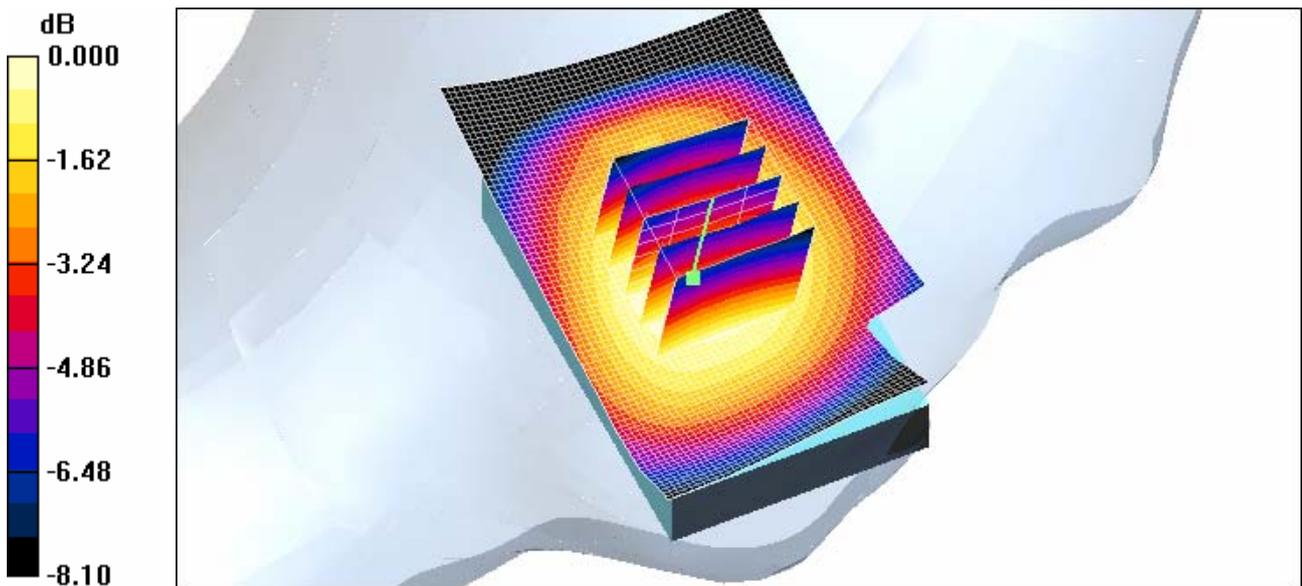
Reference Value = 15.0 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 0.446 W/kg

**SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.282 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.382 mW/g



0 dB = 0.382mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Right touch 384/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**Right touch 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

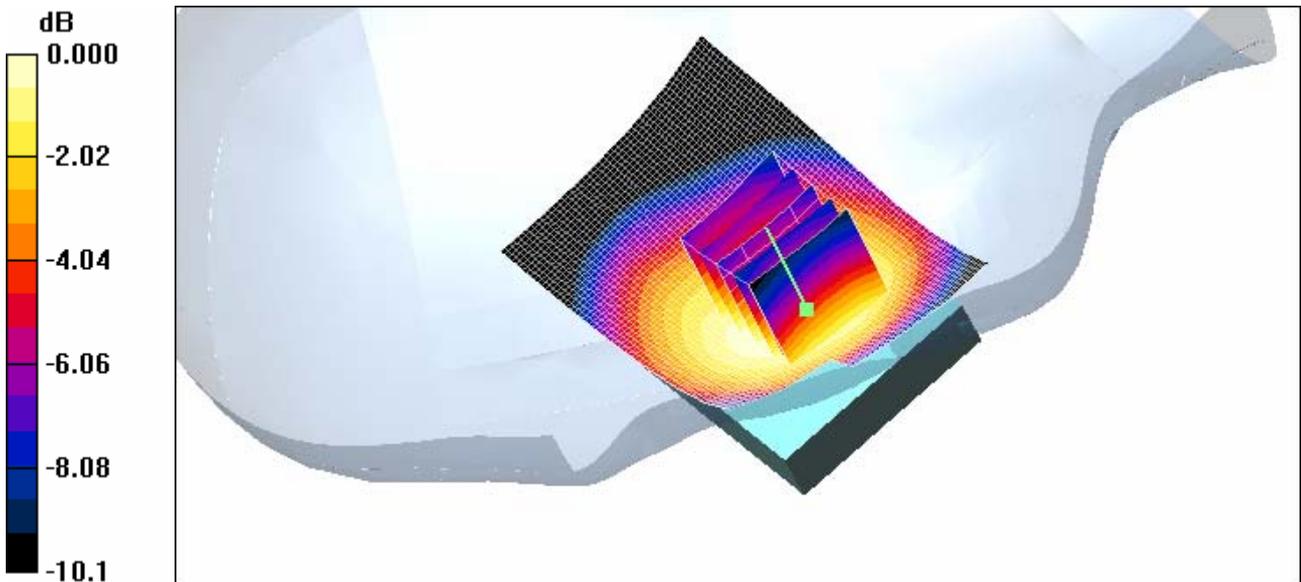
Reference Value = 10.3 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.796 W/kg

**SAR(1 g) = 0.638 mW/g; SAR(10 g) = 0.476 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.668 mW/g



0 dB = 0.668mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Right tilt 384/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

**Info:** [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.336 mW/g

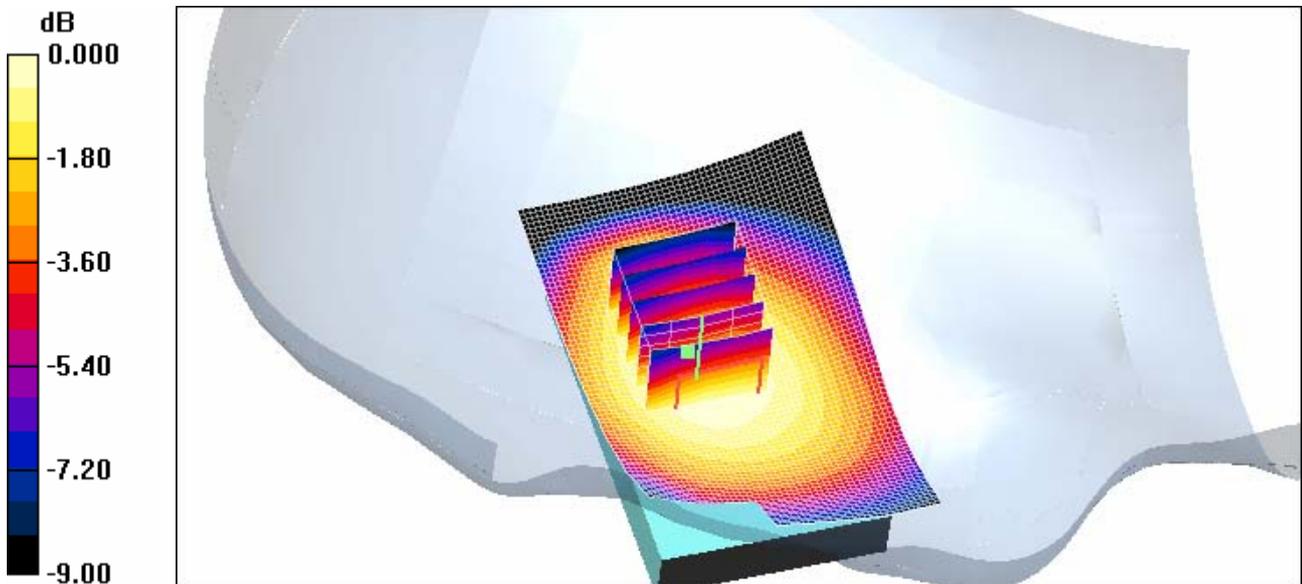
**Right tilt 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.2 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.403 W/kg

**SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.251 mW/g**

Maximum value of SAR (measured) = 0.338 mW/g



0 dB = 0.338mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left touch 384/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.519 mW/g

**Left touch 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

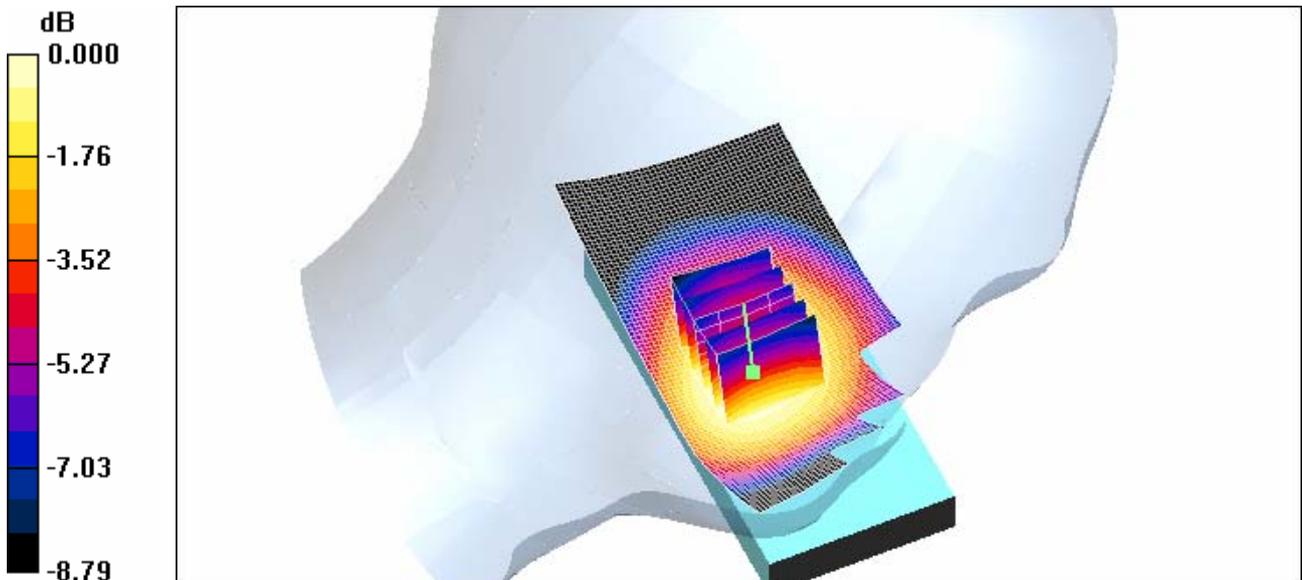
Reference Value = 8.86 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 0.585 W/kg

**SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.349 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.483 mW/g



0 dB = 0.483mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left tilt 384/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.292 mW/g

**Left tilt 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

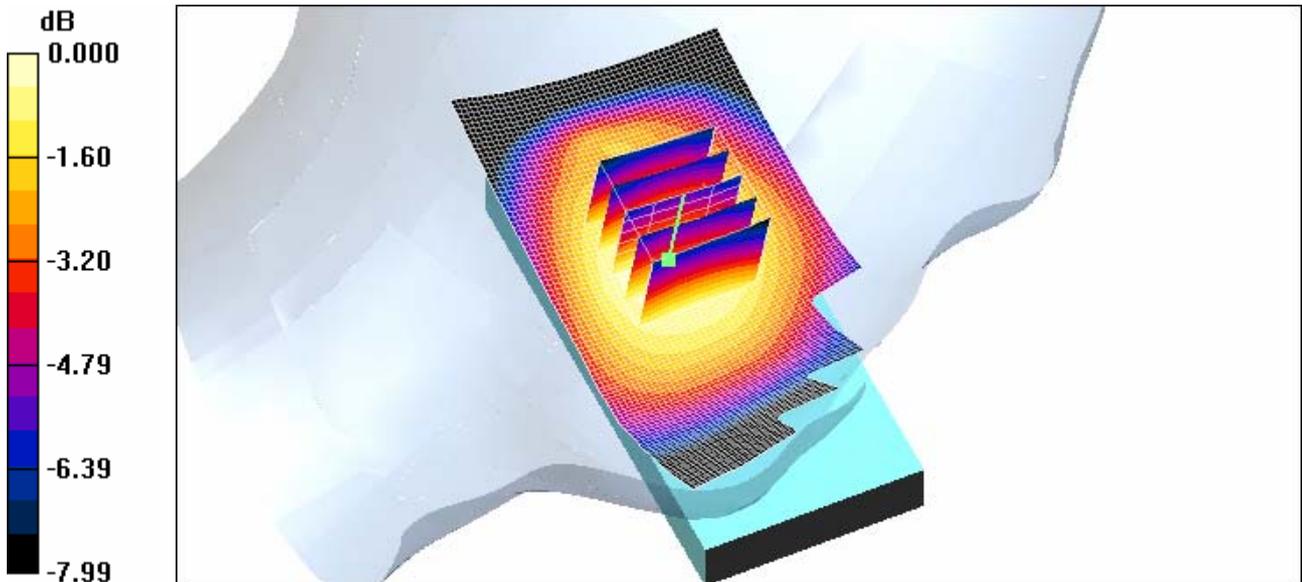
Reference Value = 13.3 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.336 W/kg

**SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.212 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.285mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Right touch 384/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.486 mW/g

**Right touch 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

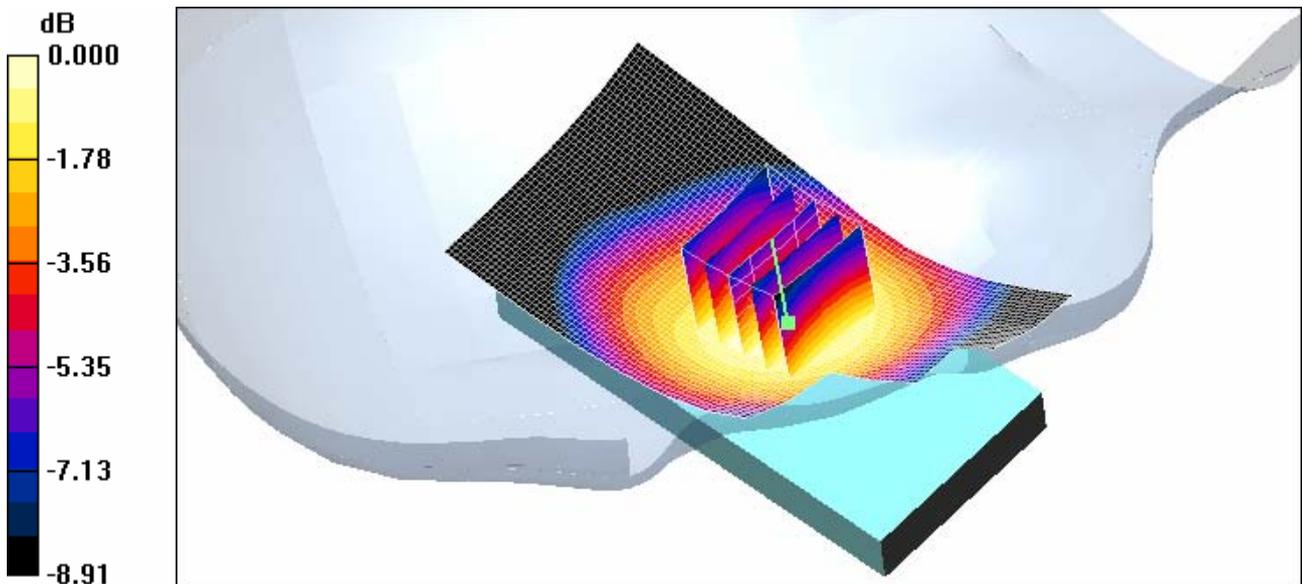
Reference Value = 8.20 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.559 W/kg

**SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.346 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.479 mW/g



0 dB = 0.479mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Right tilt 384/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.231 mW/g

**Right tilt 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

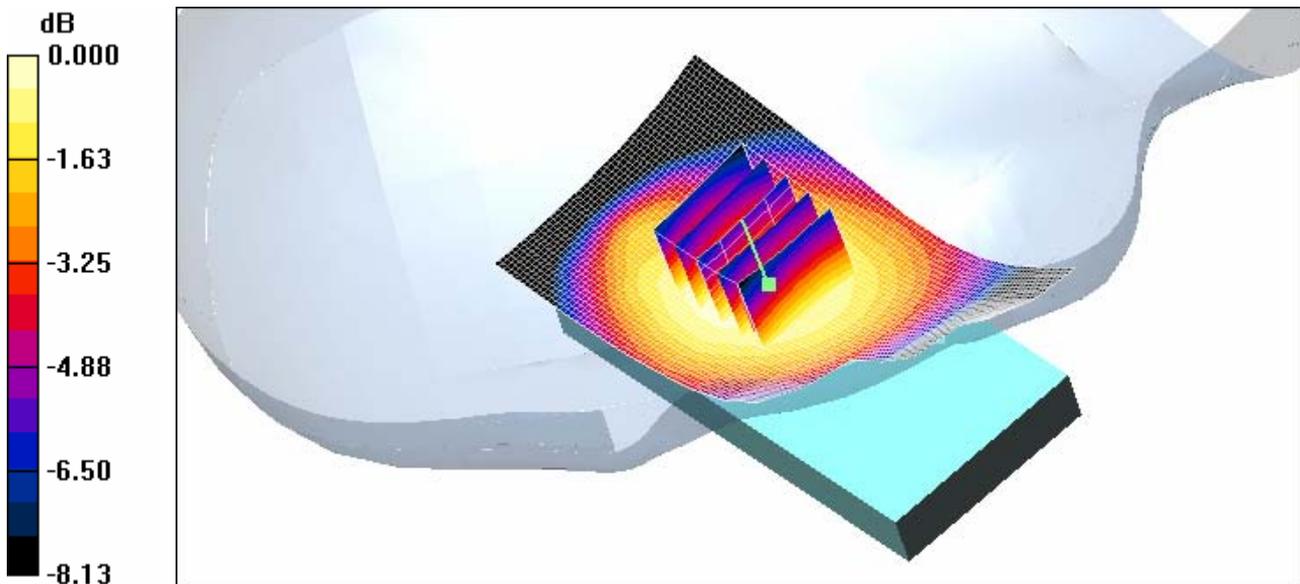
Reference Value = 11.8 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.272 W/kg

**SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.171 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.230 mW/g



0 dB = 0.230mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 25/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.982 mW/g

**Left touch 25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

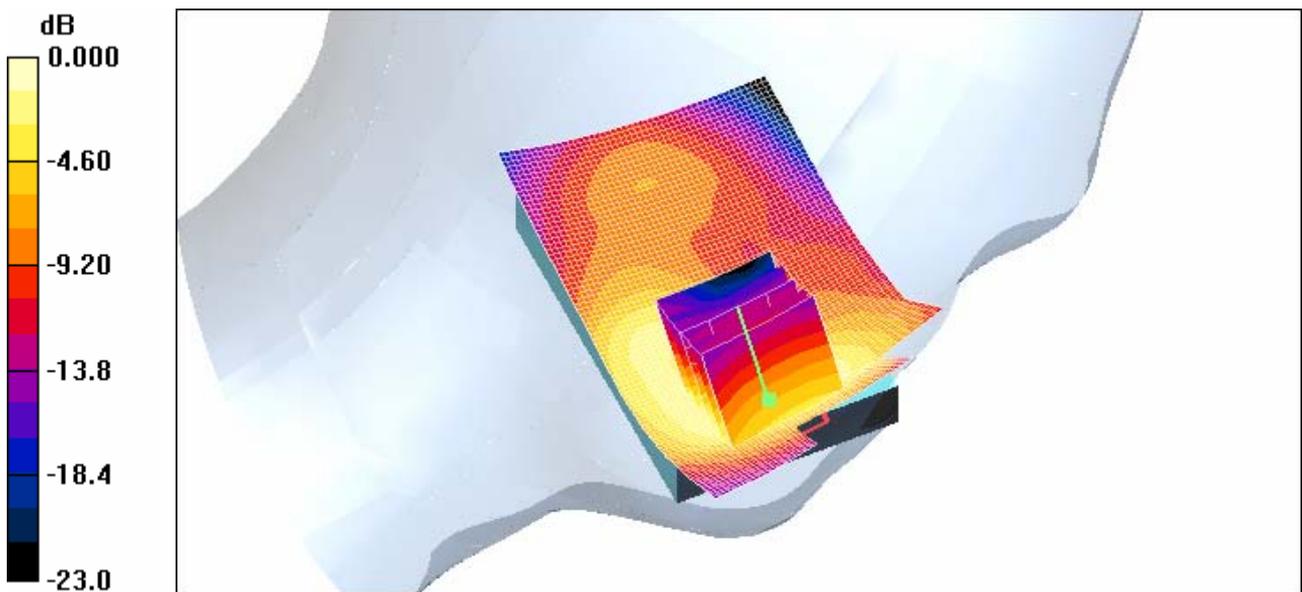
Reference Value = 10.8 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 1.65 W/kg

**SAR(1 g) = 0.931 mW/g; SAR(10 g) = 0.508 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

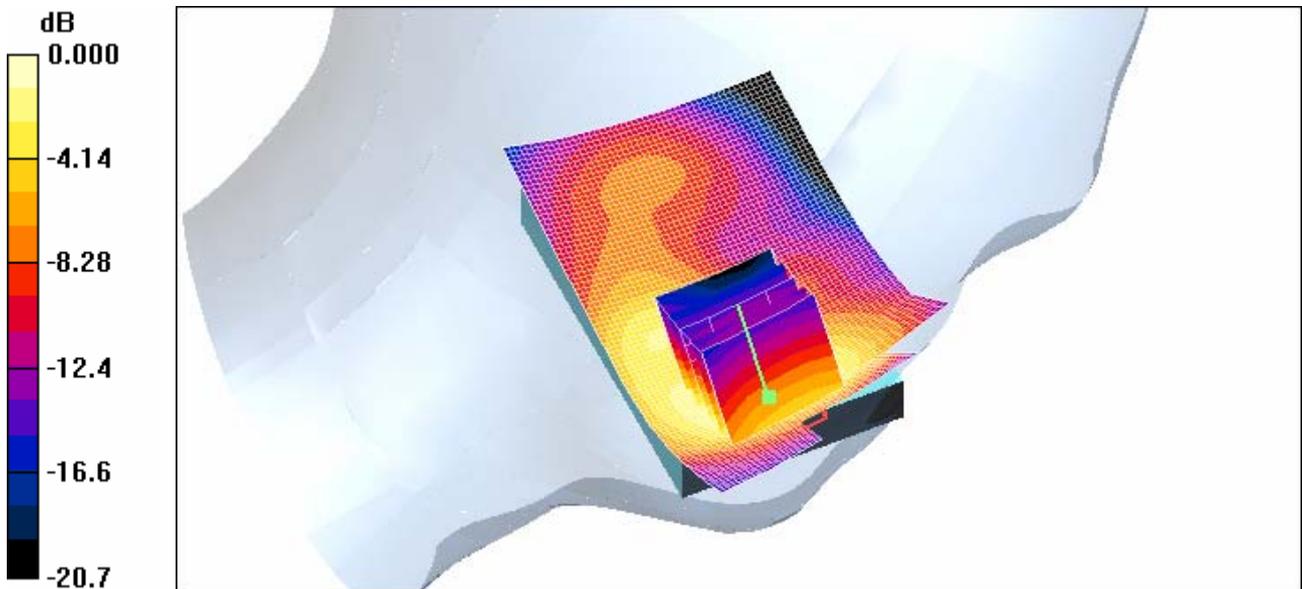
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 600/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.20 mW/g

**Left touch 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 11.5 V/m; Power Drift = -0.037 dB  
Peak SAR (extrapolated) = 2.05 W/kg  
**SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.607 mW/g**  
Maximum value of SAR (measured) = 1.22 mW/g



0 dB = 1.22mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: PCS 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 1175/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**Left touch 1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

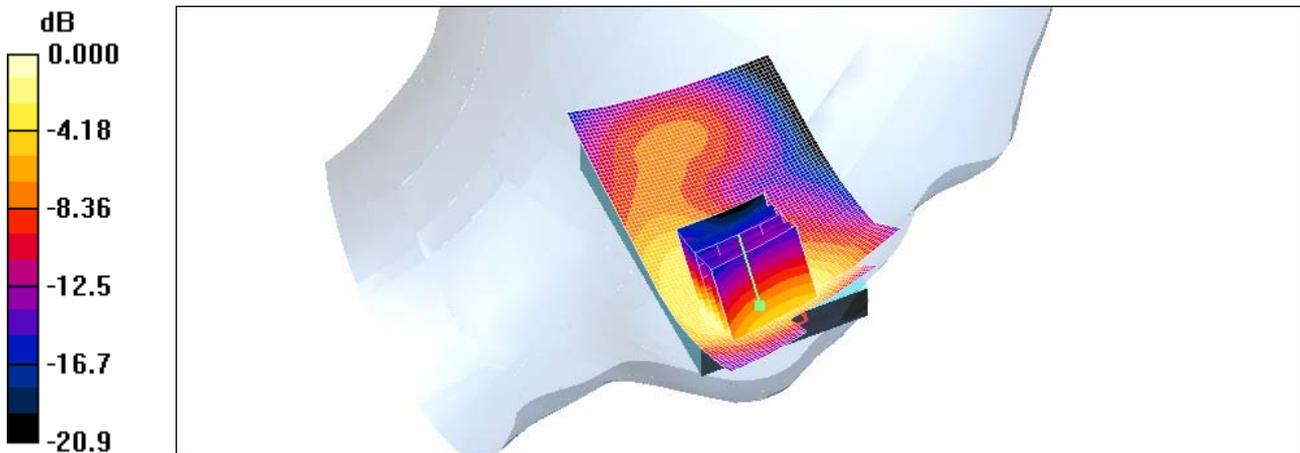
Reference Value = 11.2 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 2.09 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.612 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.27 mW/g



0 dB = 1.27mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

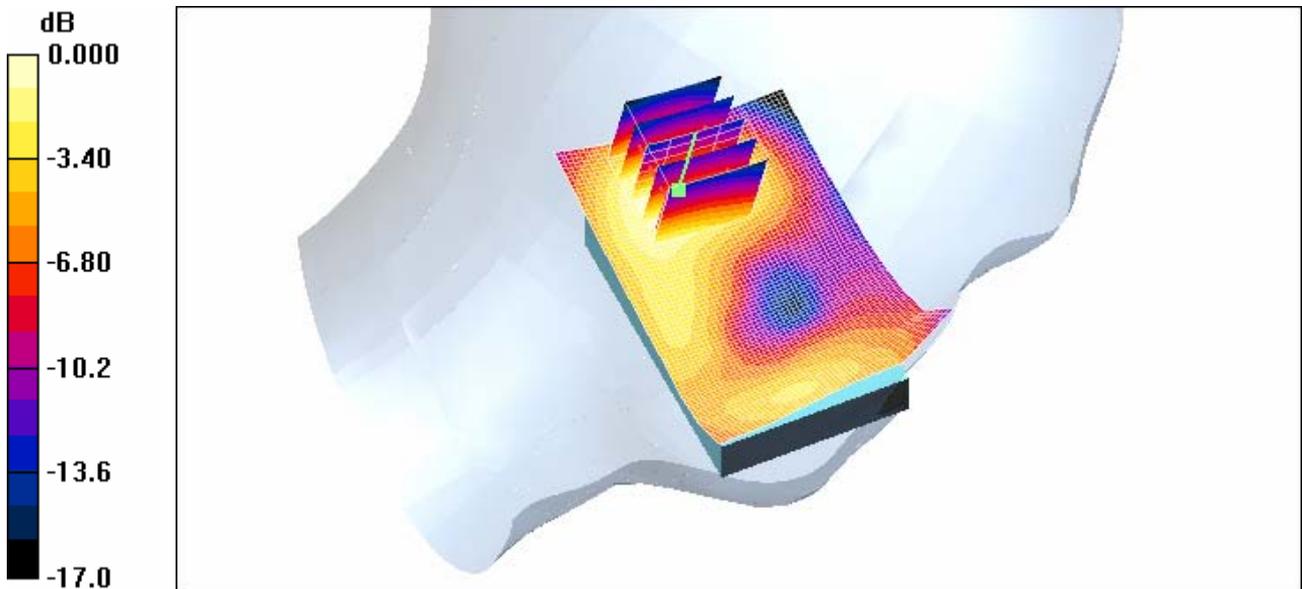
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 600/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.271 mW/g

**Left tilt 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 13.7 V/m; Power Drift = -0.017 dB  
Peak SAR (extrapolated) = 0.381 W/kg  
**SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.144 mW/g**  
Maximum value of SAR (measured) = 0.265 mW/g



0 dB = 0.265mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 25/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.952 mW/g

**Right touch 25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

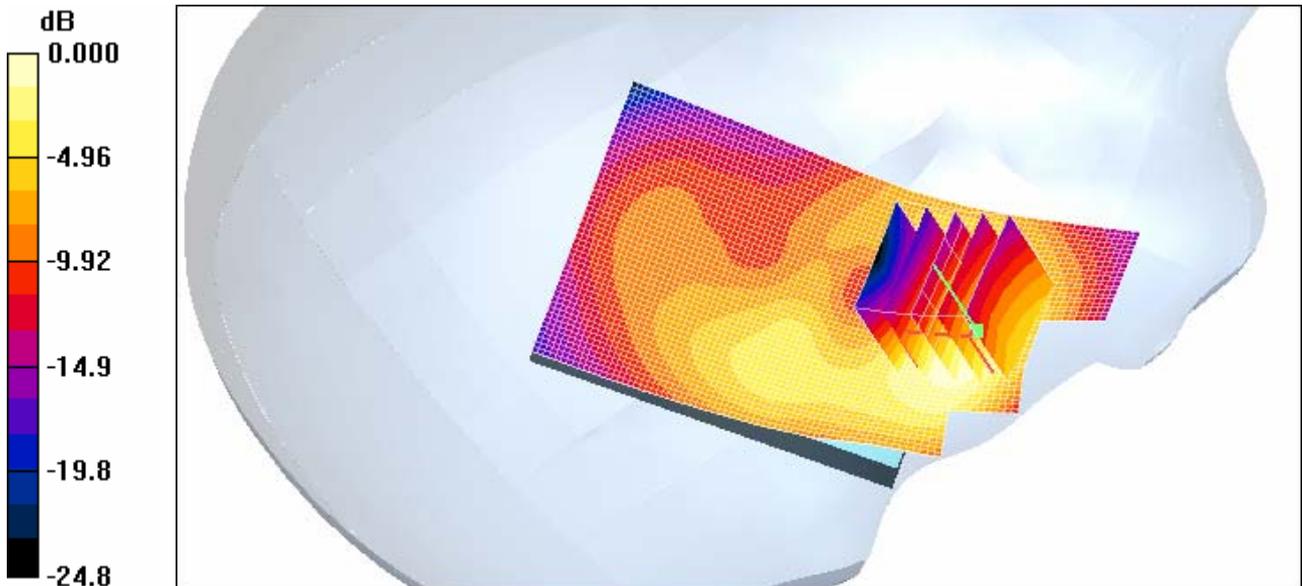
Reference Value = 8.78 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 1.60 W/kg

**SAR(1 g) = 0.893 mW/g; SAR(10 g) = 0.483 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.926 mW/g



0 dB = 0.926mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

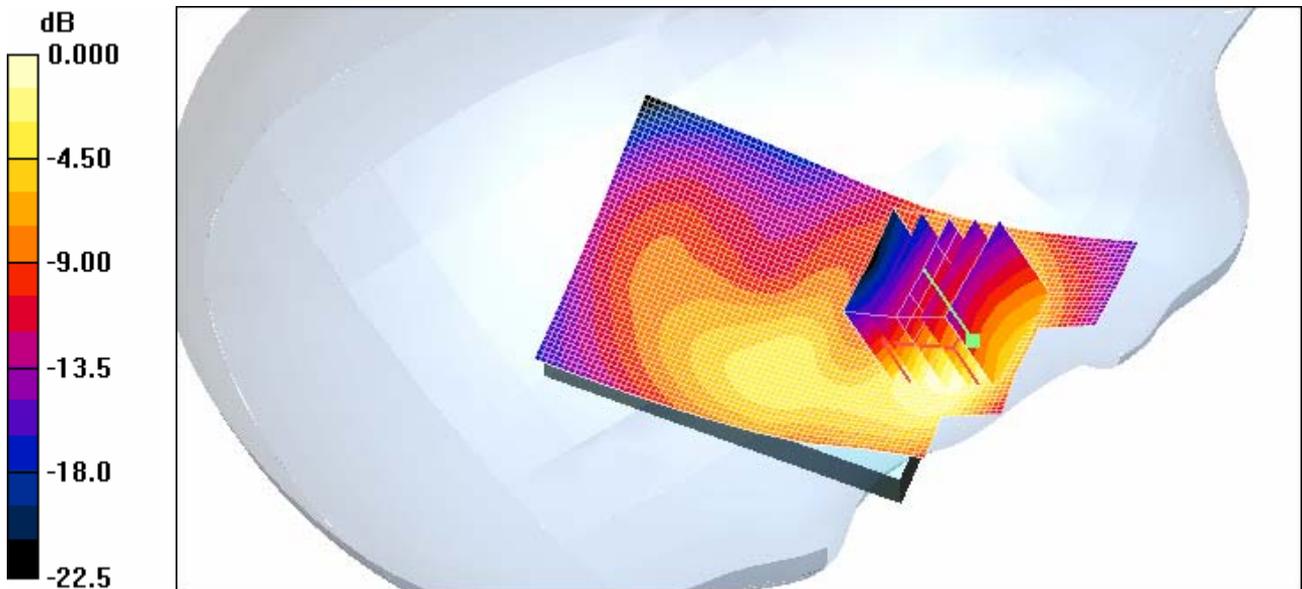
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 600/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.03 mW/g

**Right touch 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 9.17 V/m; Power Drift = -0.026 dB  
Peak SAR (extrapolated) = 1.77 W/kg  
**SAR(1 g) = 0.970 mW/g; SAR(10 g) = 0.521 mW/g**  
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: PCS 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 1175/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.14 mW/g

**Right touch 1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

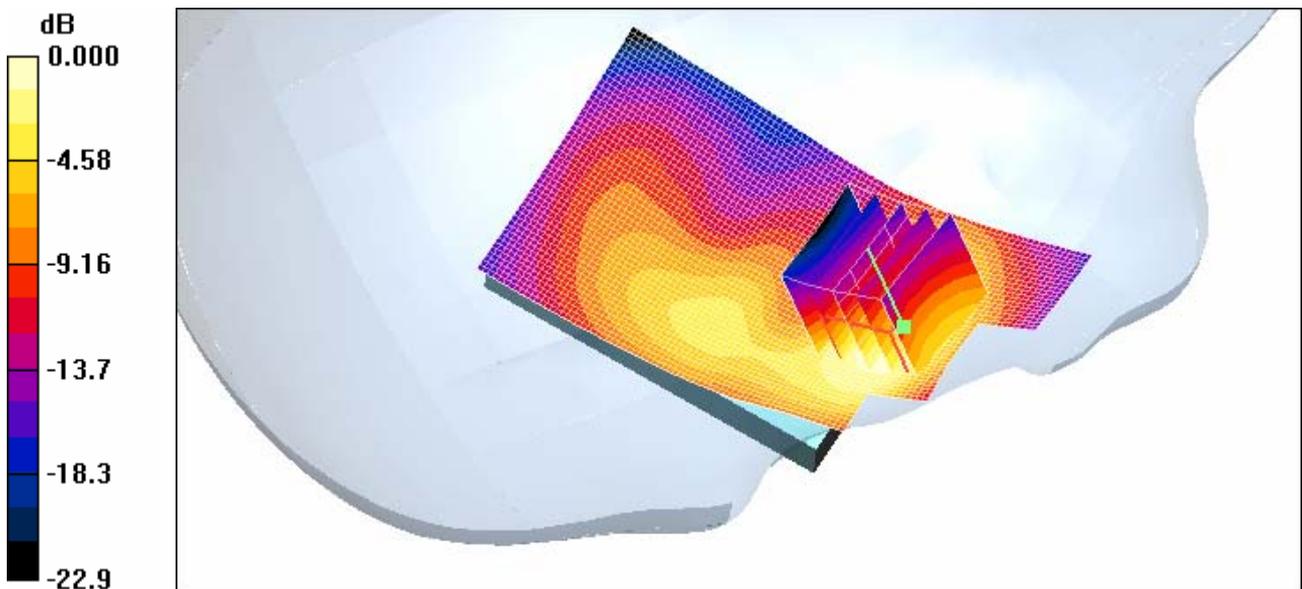
Reference Value = 8.82 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 1.99 W/kg

**SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.575 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.16 mW/g



0 dB = 1.16mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

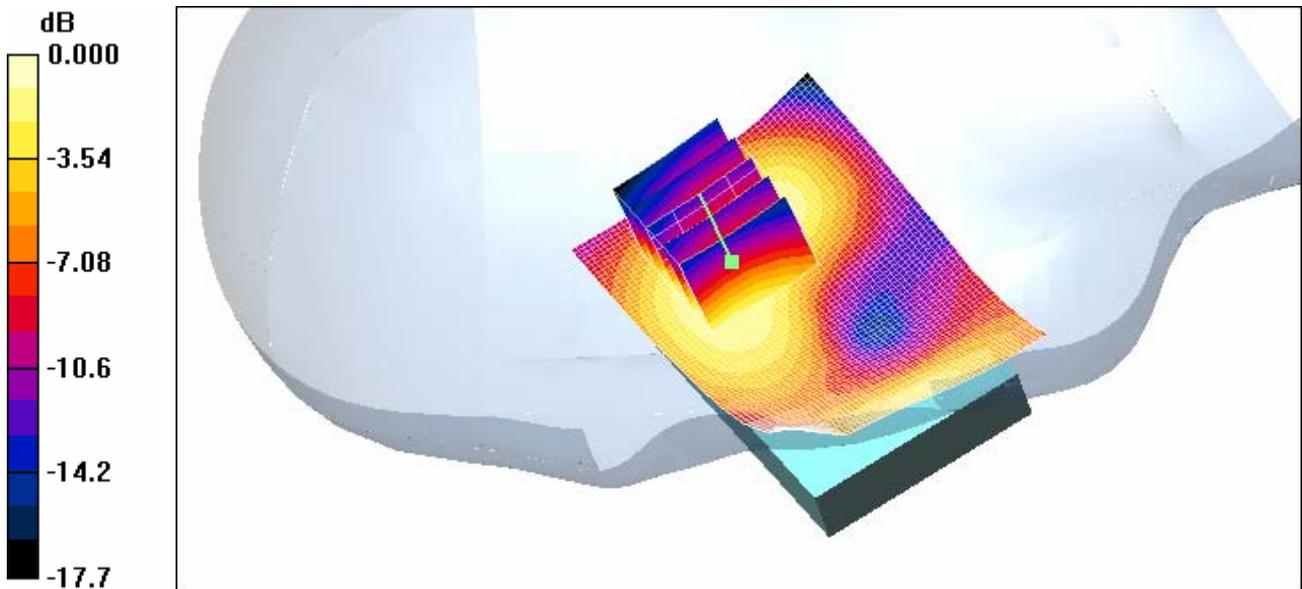
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 600/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.260 mW/g

**Right tilt 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 13.2 V/m; Power Drift = 0.093 dB  
Peak SAR (extrapolated) = 0.401 W/kg  
**SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.145 mW/g**  
Maximum value of SAR (measured) = 0.261 mW/g



0 dB = 0.261mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 25/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.912 mW/g

**Left touch 25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

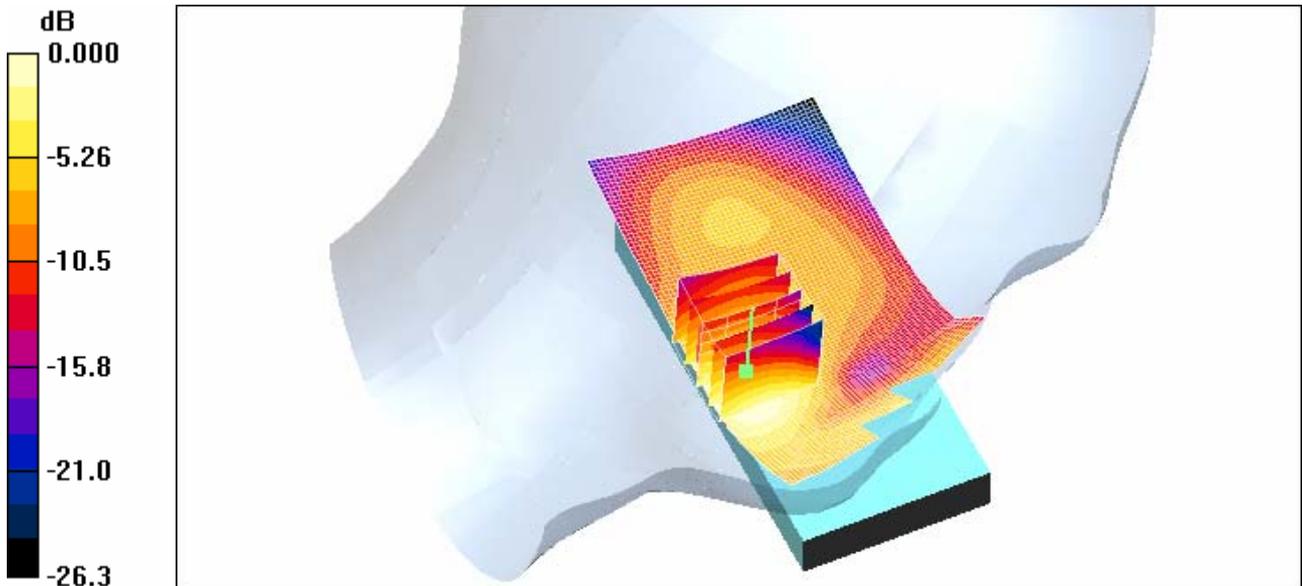
Reference Value = 10.9 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.24 W/kg

**SAR(1 g) = 0.799 mW/g; SAR(10 g) = 0.474 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.869 mW/g



0 dB = 0.869mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

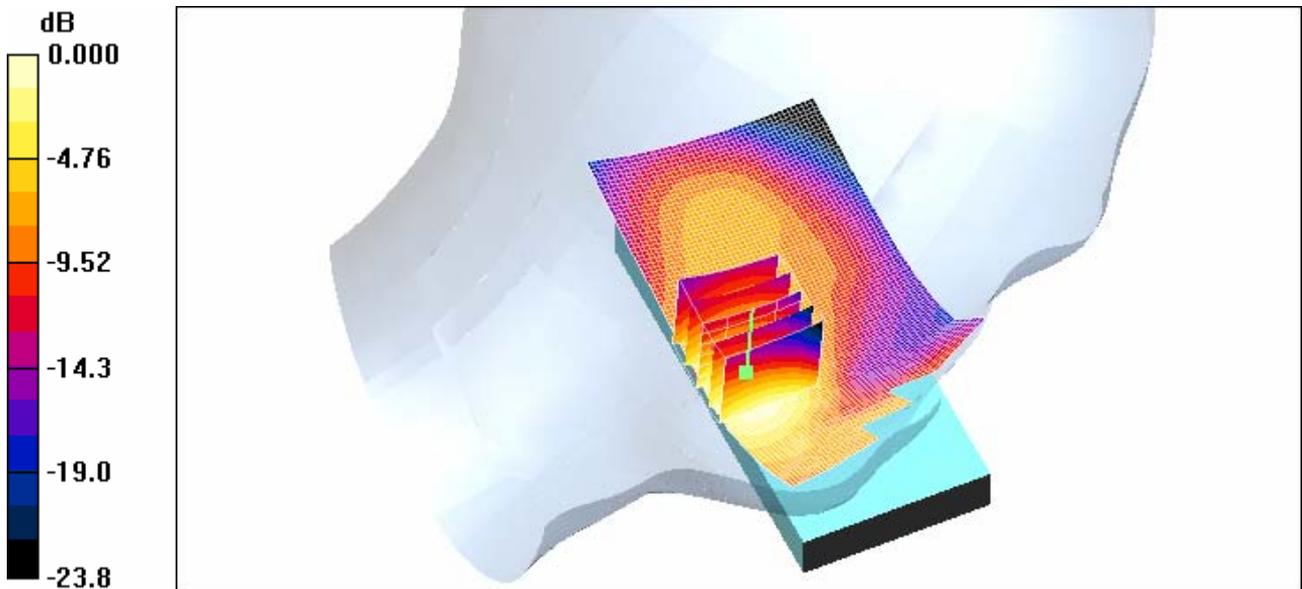
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 600/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.06 mW/g

**Left touch 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 11.4 V/m; Power Drift = -0.082 dB  
Peak SAR (extrapolated) = 1.45 W/kg  
**SAR(1 g) = 0.926 mW/g; SAR(10 g) = 0.545 mW/g**  
Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: PCS 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 1175/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**Left touch 1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

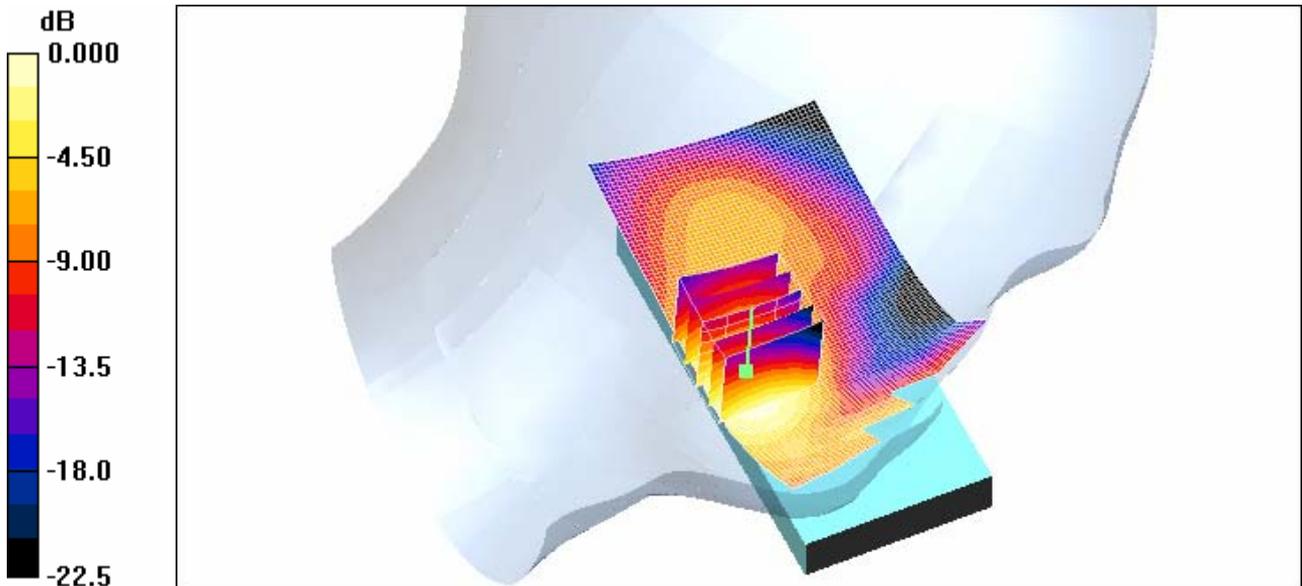
Reference Value = 11.7 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 1.45 W/kg

**SAR(1 g) = 0.937 mW/g; SAR(10 g) = 0.551 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g

Test Laboratory: HCT CO., LTD  
 EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
 GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
 Liquid Temperature: 21.3 °C  
 Ambient Temperature: 21.5 °C  
 Test Date: Apr.26, 2011

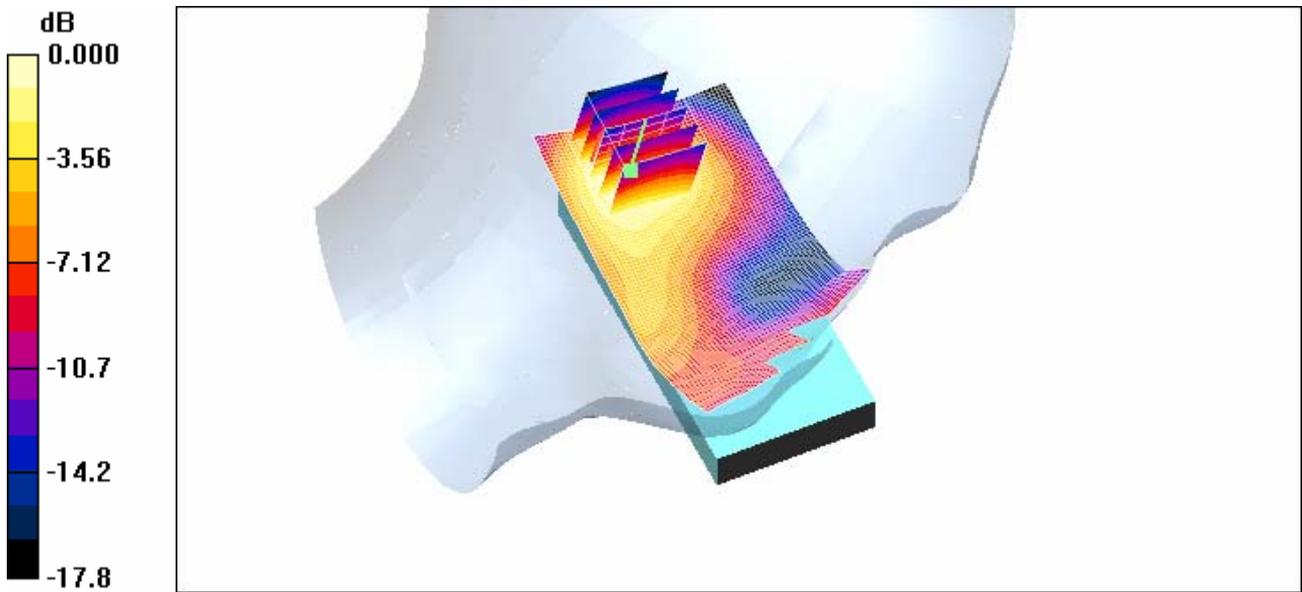
**DUT: TXT8045: Type: Up: Serial: #1**

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:  
 - Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17  
 - Sensor-Surface: 4mm (Mechanical Surface Detection)  
 - Electronics: DAE4 Sn869; Calibrated: 2010-09-21  
 - Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 600/Area Scan (51x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.385 mW/g

**Left tilt 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 15.4 V/m; Power Drift = -0.016 dB  
 Peak SAR (extrapolated) = 0.548 W/kg  
**SAR(1 g) = 0.343 mW/g; SAR(10 g) = 0.204 mW/g**  
 Maximum value of SAR (measured) = 0.373 mW/g



0 dB = 0.373mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045: Type: Up: Serial: #1**

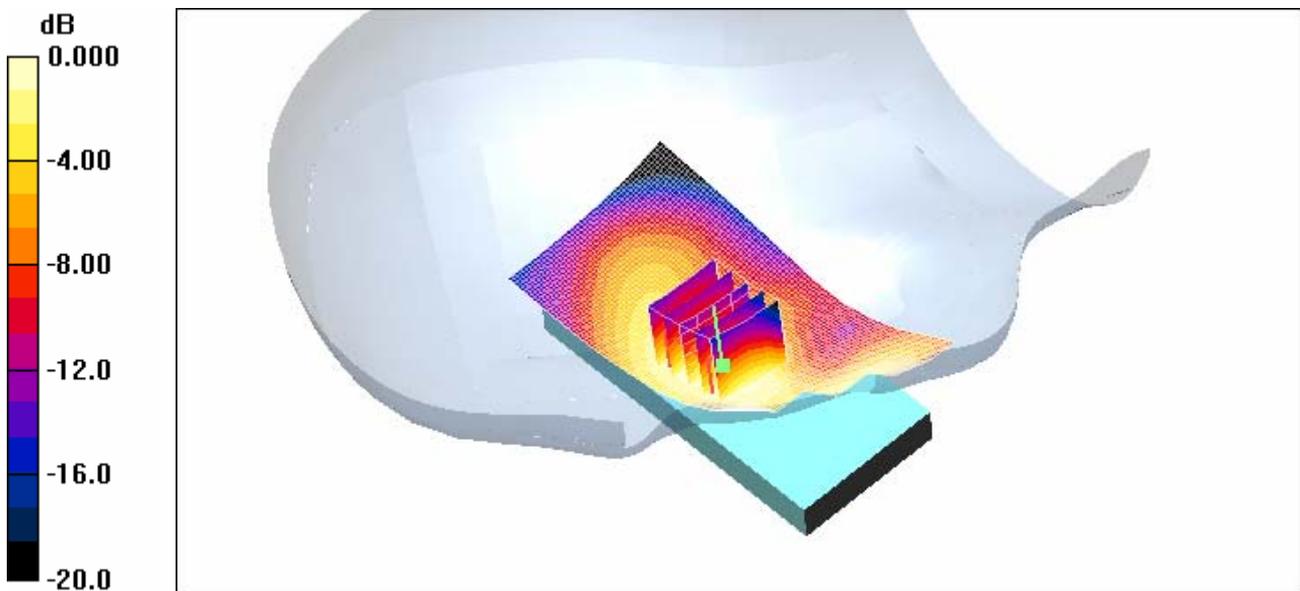
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 600/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.615 mW/g

**Right touch 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.0 V/m; Power Drift = -0.104 dB  
Peak SAR (extrapolated) = 0.900 W/kg  
**SAR(1 g) = 0.557 mW/g; SAR(10 g) = 0.334 mW/g**  
Maximum value of SAR (measured) = 0.597 mW/g



0 dB = 0.597mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045: Type: Up: Serial: #1**

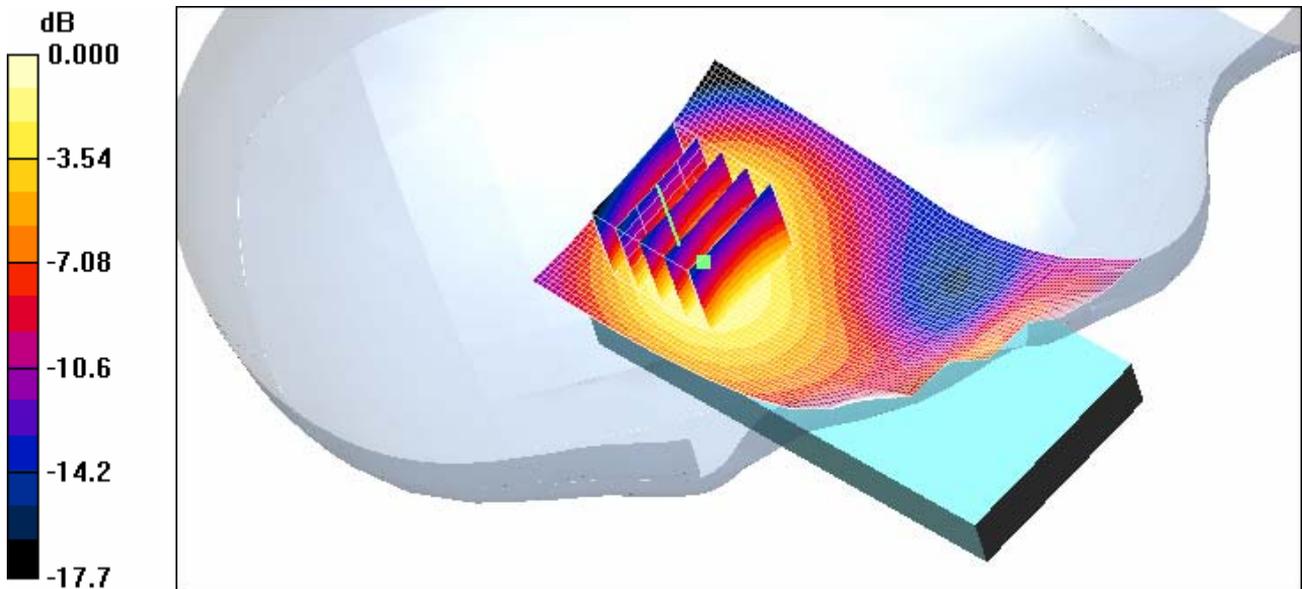
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 600/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.396 mW/g

**Right tilt 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 15.9 V/m; Power Drift = 0.033 dB  
Peak SAR (extrapolated) = 0.593 W/kg  
**SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.217 mW/g**  
Maximum value of SAR (measured) = 0.393 mW/g



0 dB = 0.393mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left touch 190/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.541 mW/g

**Left touch 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

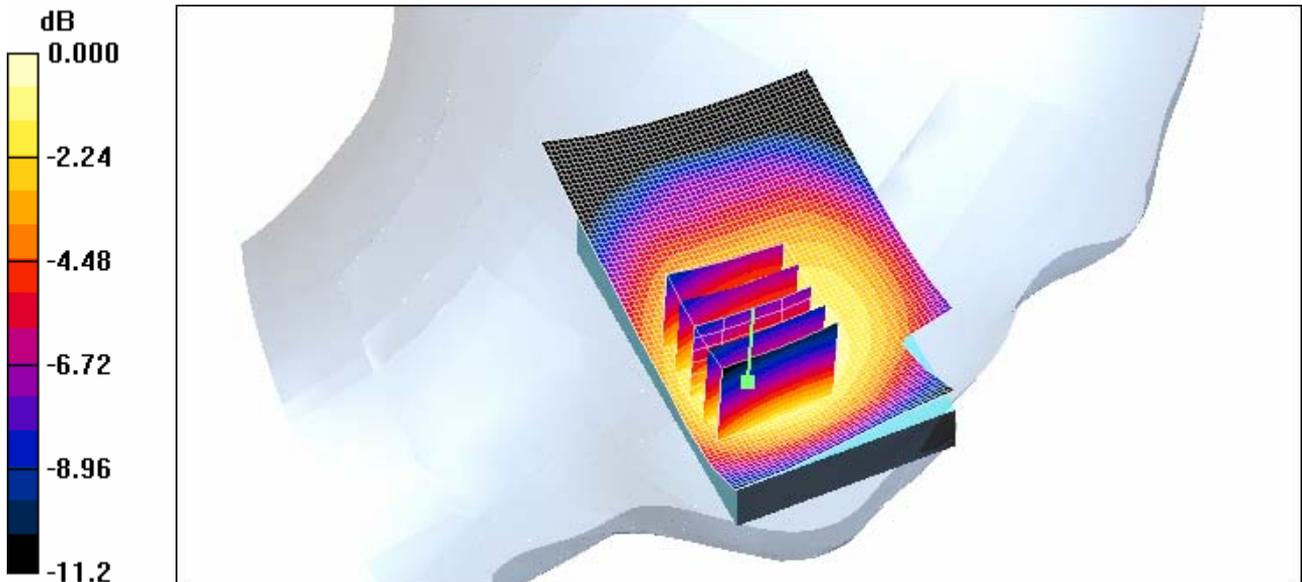
Reference Value = 9.81 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 0.639 W/kg

**SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.348 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.517mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left tilt 190/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.338 mW/g

**Left tilt 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

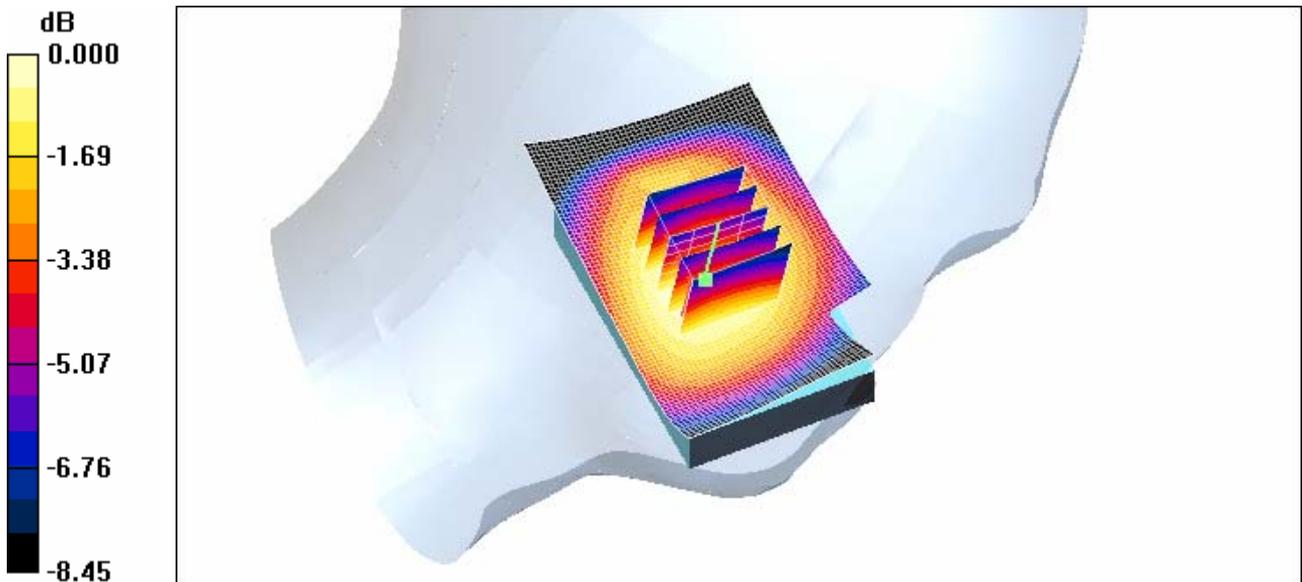
Reference Value = 14.4 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.401 W/kg

**SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.249 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.340 mW/g



0 dB = 0.340mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 190/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.474 mW/g

**Right touch 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

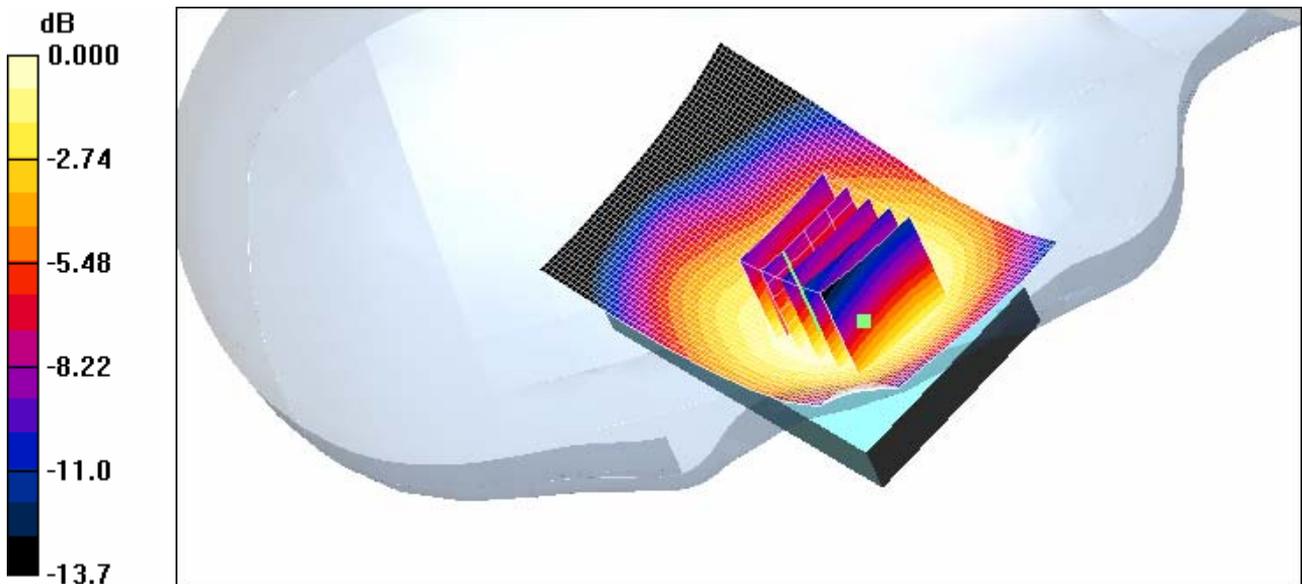
Reference Value = 8.46 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.614 W/kg

**SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.298 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.463 mW/g



0 dB = 0.463mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 190/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**Right tilt 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

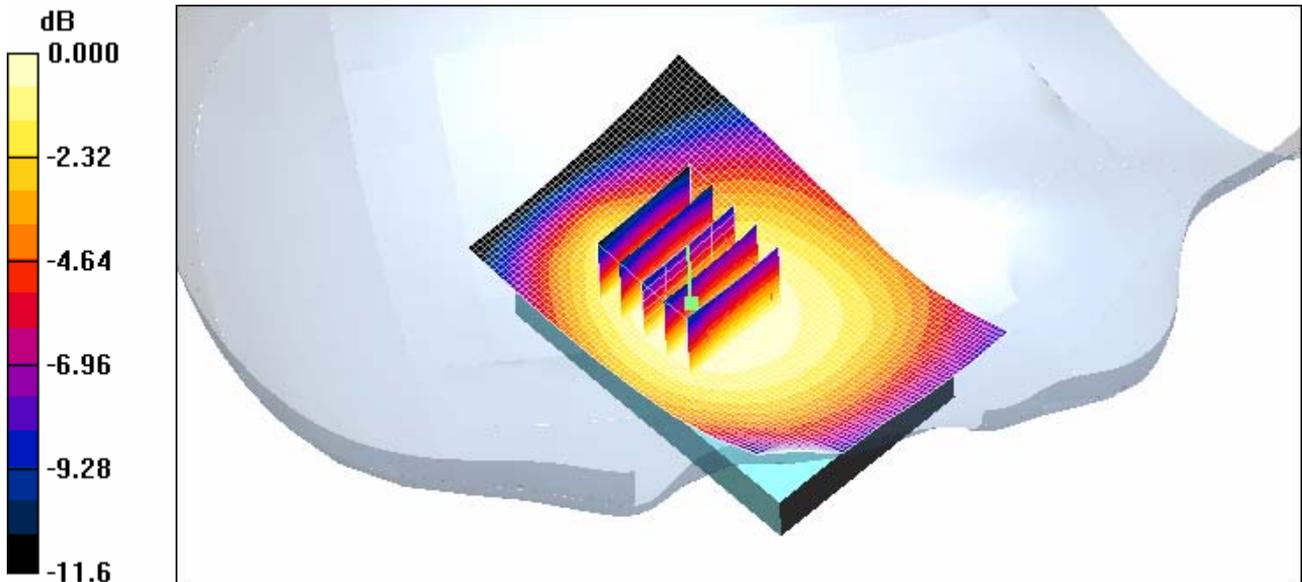
Reference Value = 10.5 V/m; Power Drift = -0.089 dB

Peak SAR (extrapolated) = 0.266 W/kg

**SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.139 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.206mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left touch 190/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

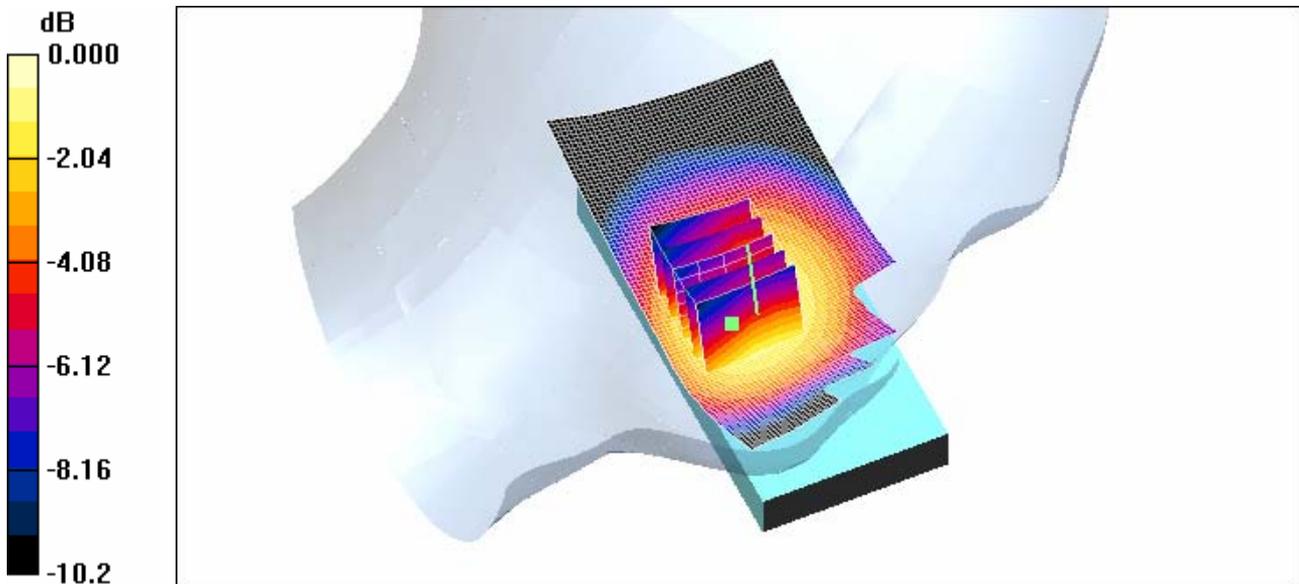
**Left touch 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.15 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 0.426 W/kg

**SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.246 mW/g**

Maximum value of SAR (measured) = 0.359 mW/g



0 dB = 0.359mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**Left tilt 190/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.210 mW/g

**Left tilt 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

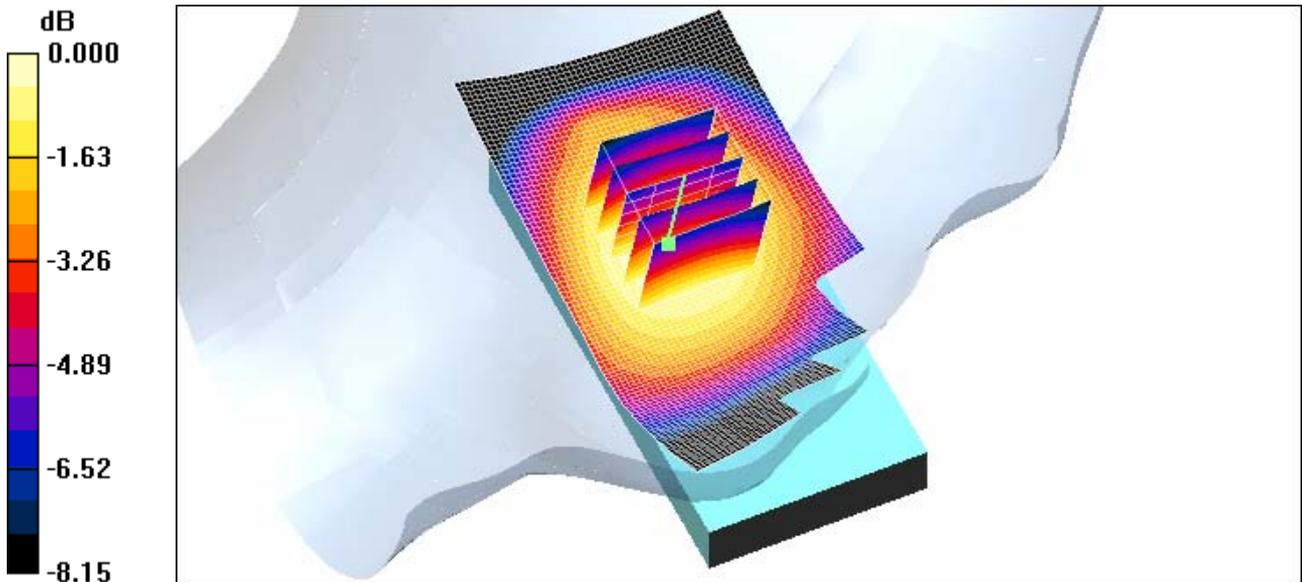
Reference Value = 11.1 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.244 W/kg

**SAR(1 g) = 0.200 mW/g; SAR(10 g) = 0.154 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.209 mW/g



0 dB = 0.209mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045: Type: Up: Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 190/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.337 mW/g

**Right touch 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

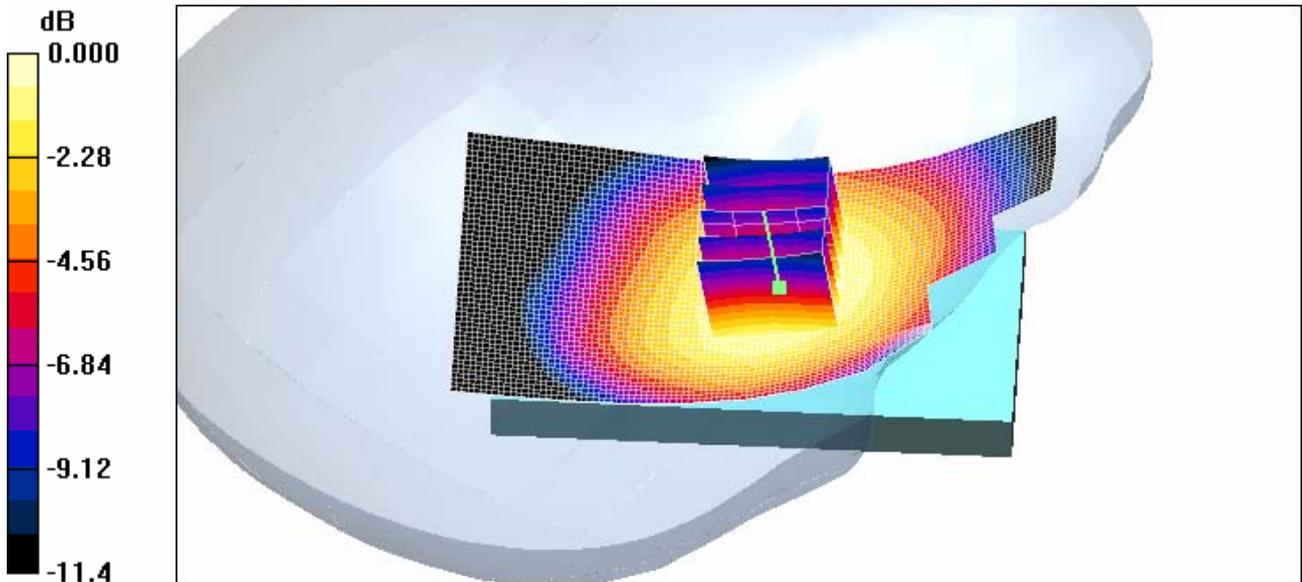
Reference Value = 6.46 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.421 W/kg

**SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.223 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.338 mW/g



0 dB = 0.338mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045: Type: Up: Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 190/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.162 mW/g

**Right tilt 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

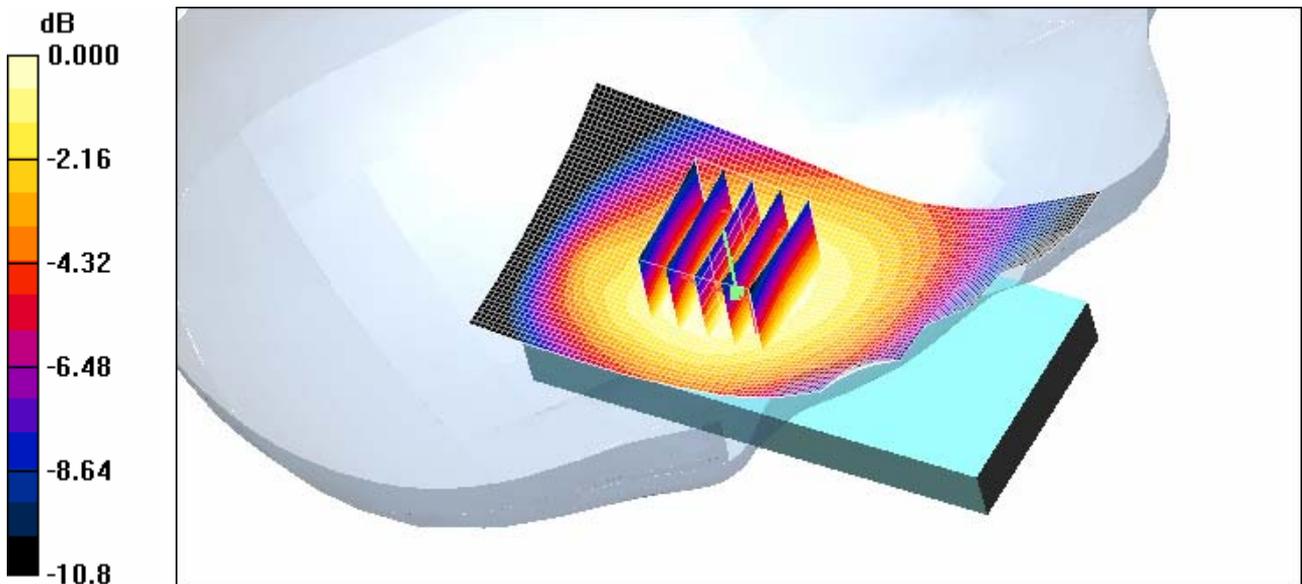
Reference Value = 9.29 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.206 W/kg

**SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.108 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.164 mW/g



0 dB = 0.164mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

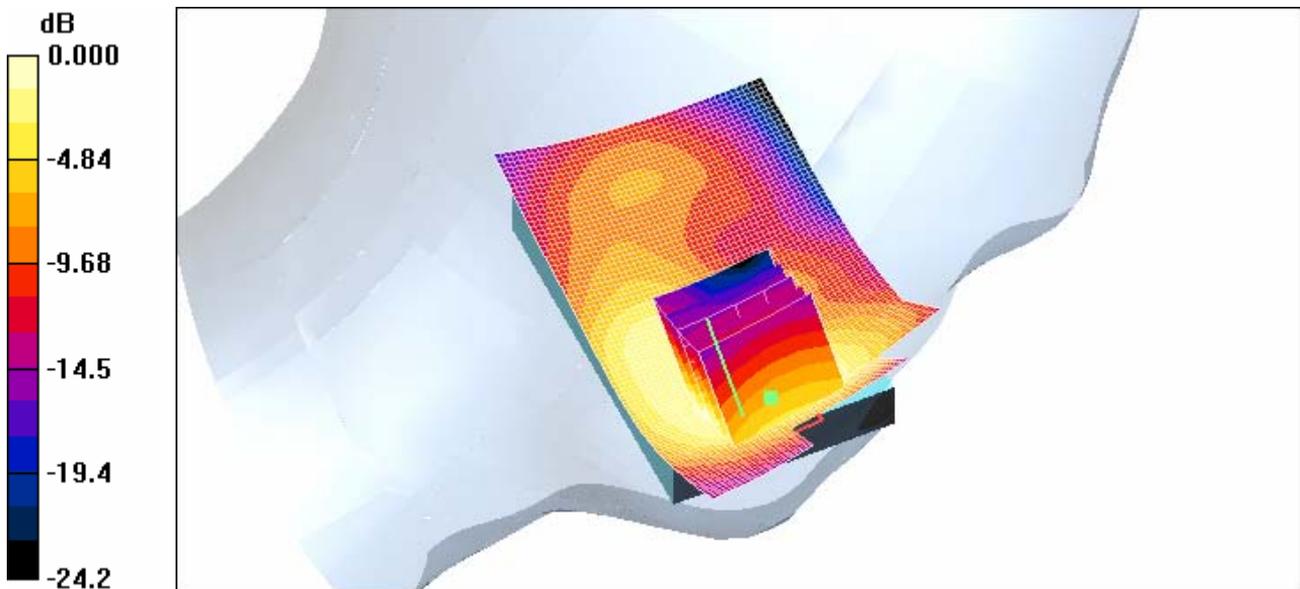
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 661/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.577 mW/g

**Left touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.89 V/m; Power Drift = -0.027 dB  
Peak SAR (extrapolated) = 0.955 W/kg  
**SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.273 mW/g**  
Maximum value of SAR (measured) = 0.584 mW/g



0 dB = 0.584mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

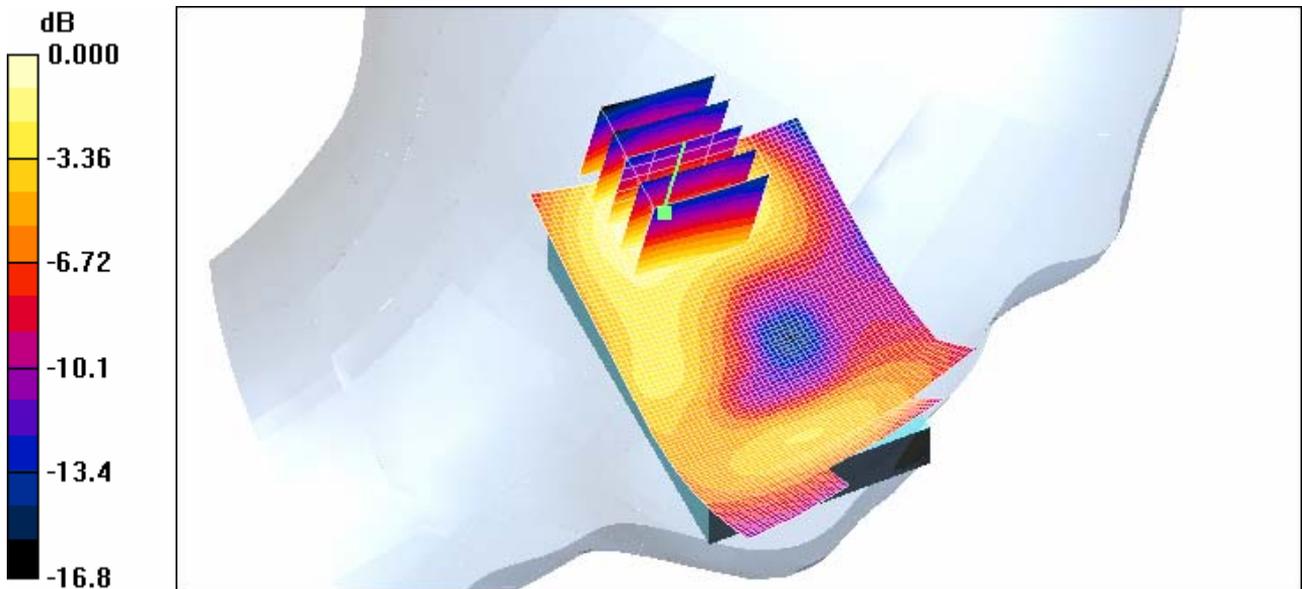
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 661/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.119 mW/g

**Left tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 9.23 V/m; Power Drift = 0.082 dB  
Peak SAR (extrapolated) = 0.177 W/kg  
**SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.066 mW/g**  
Maximum value of SAR (measured) = 0.121 mW/g



0 dB = 0.121mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

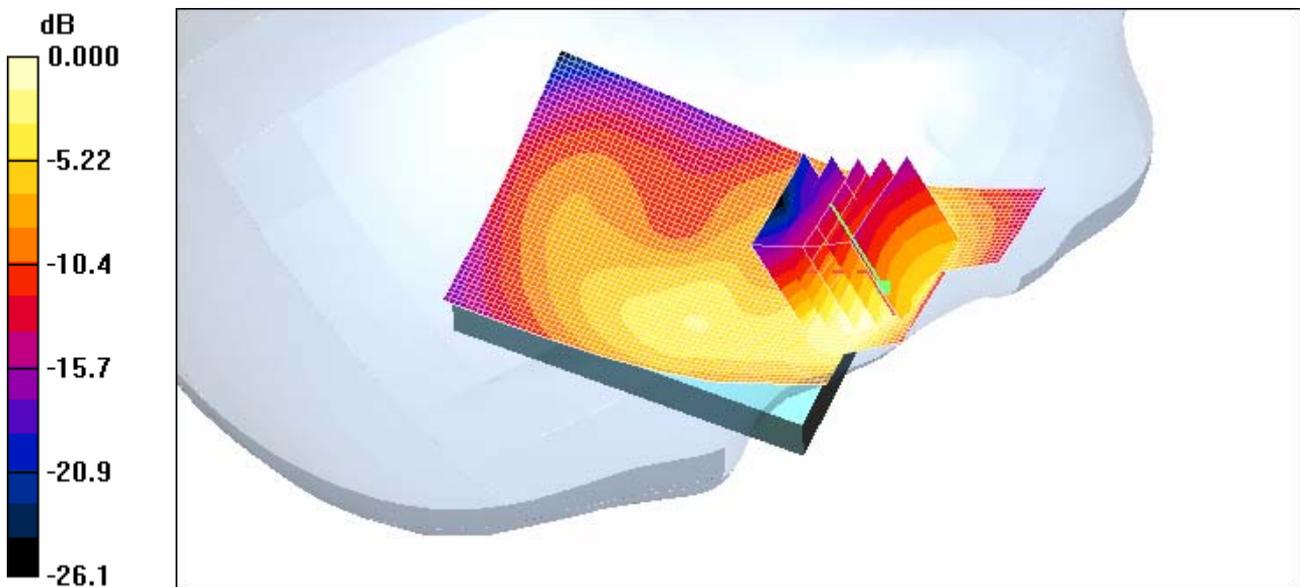
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 661/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.450 mW/g

**Right touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.01 V/m; Power Drift = -0.154 dB  
Peak SAR (extrapolated) = 0.751 W/kg  
**SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.222 mW/g**  
Maximum value of SAR (measured) = 0.436 mW/g



0 dB = 0.436mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

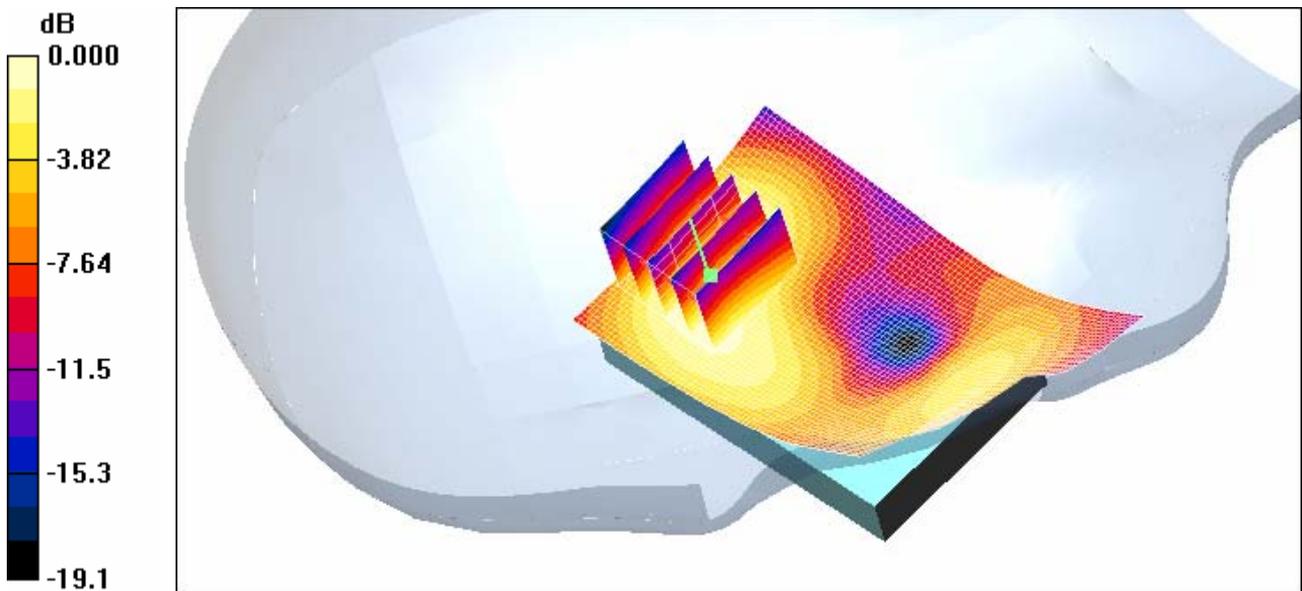
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 661/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.114 mW/g

**Right tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.51 V/m; Power Drift = 0.024 dB  
Peak SAR (extrapolated) = 0.168 W/kg  
**SAR(1 g) = 0.103 mW/g; SAR(10 g) = 0.062 mW/g**  
Maximum value of SAR (measured) = 0.111 mW/g



0 dB = 0.111mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

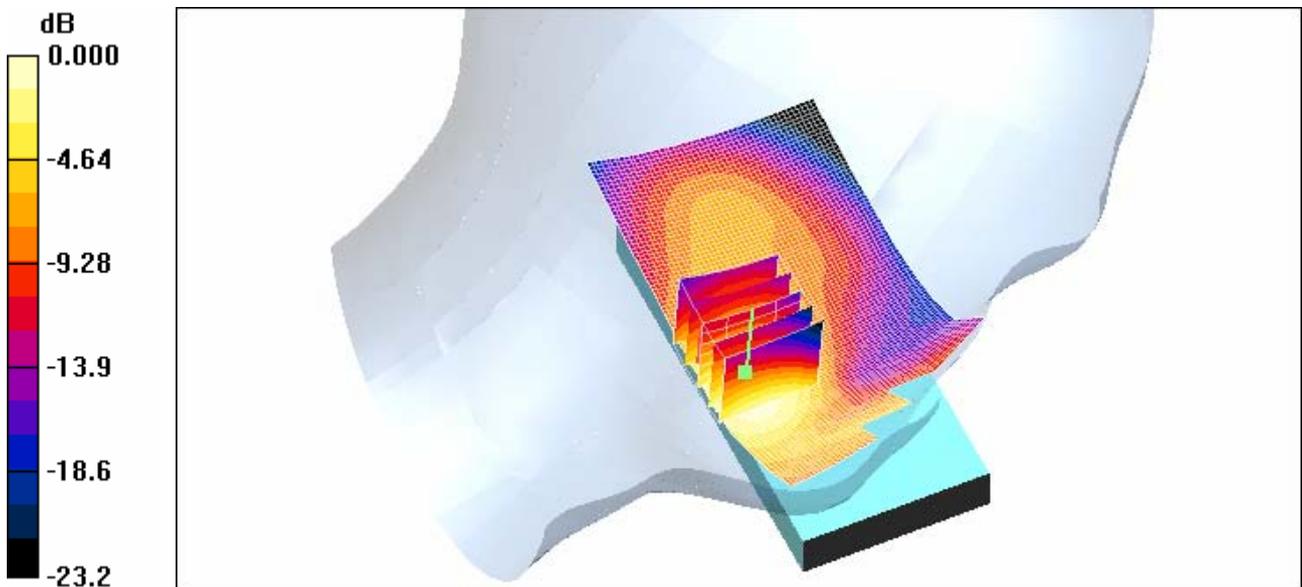
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 661/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.484 mW/g

**Left touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.53 V/m; Power Drift = -0.191 dB  
Peak SAR (extrapolated) = 0.626 W/kg  
**SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.239 mW/g**  
Maximum value of SAR (measured) = 0.445 mW/g



0 dB = 0.445mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

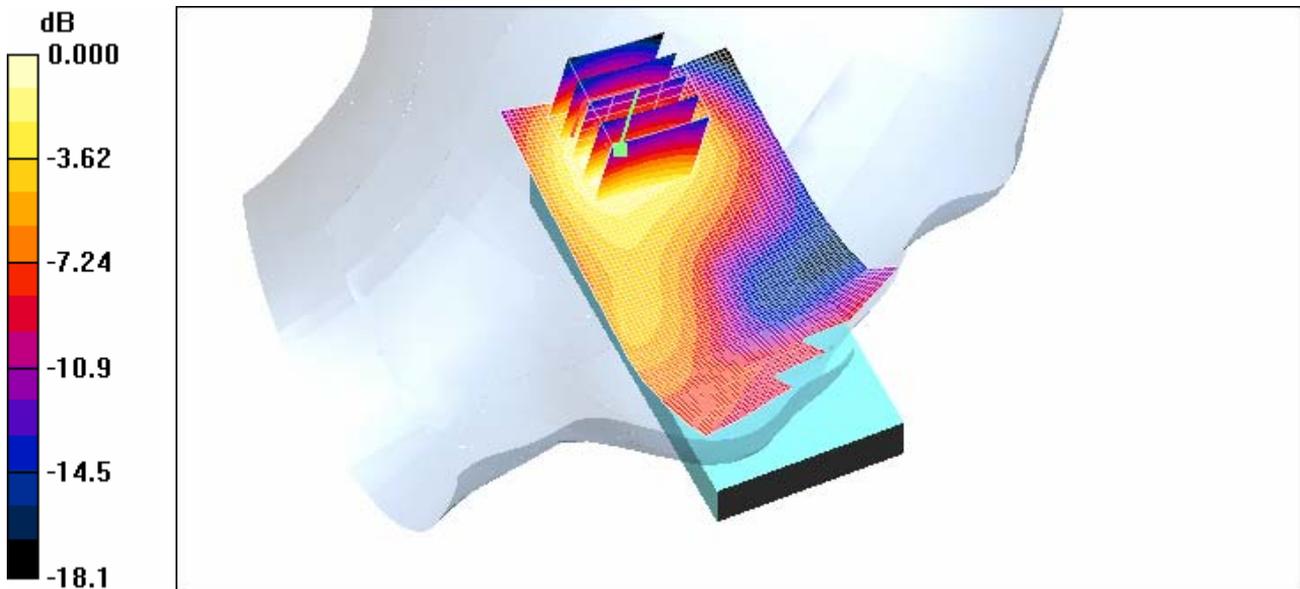
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 661/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.168 mW/g

**Left tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.4 V/m; Power Drift = 0.072 dB  
Peak SAR (extrapolated) = 0.243 W/kg  
**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.090 mW/g**  
Maximum value of SAR (measured) = 0.164 mW/g



0 dB = 0.164mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

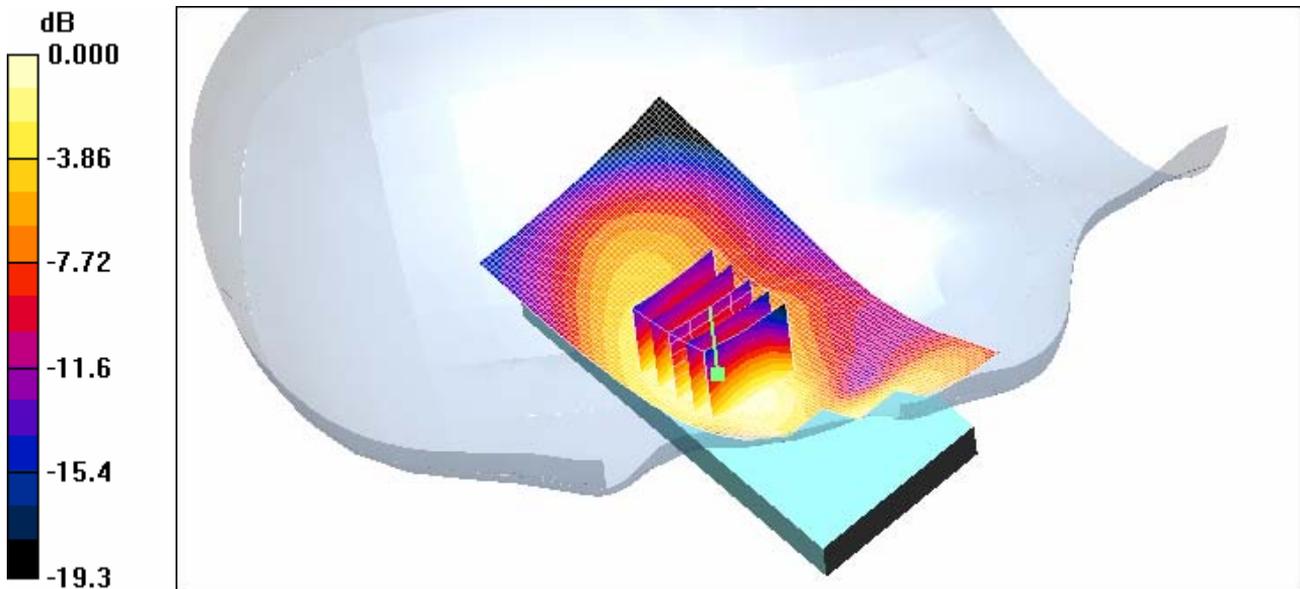
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 661/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.247 mW/g

**Right touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.26 V/m; Power Drift = -0.145 dB  
Peak SAR (extrapolated) = 0.354 W/kg  
**SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.134 mW/g**  
Maximum value of SAR (measured) = 0.238 mW/g



0 dB = 0.238mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: Up; Serial: #1**

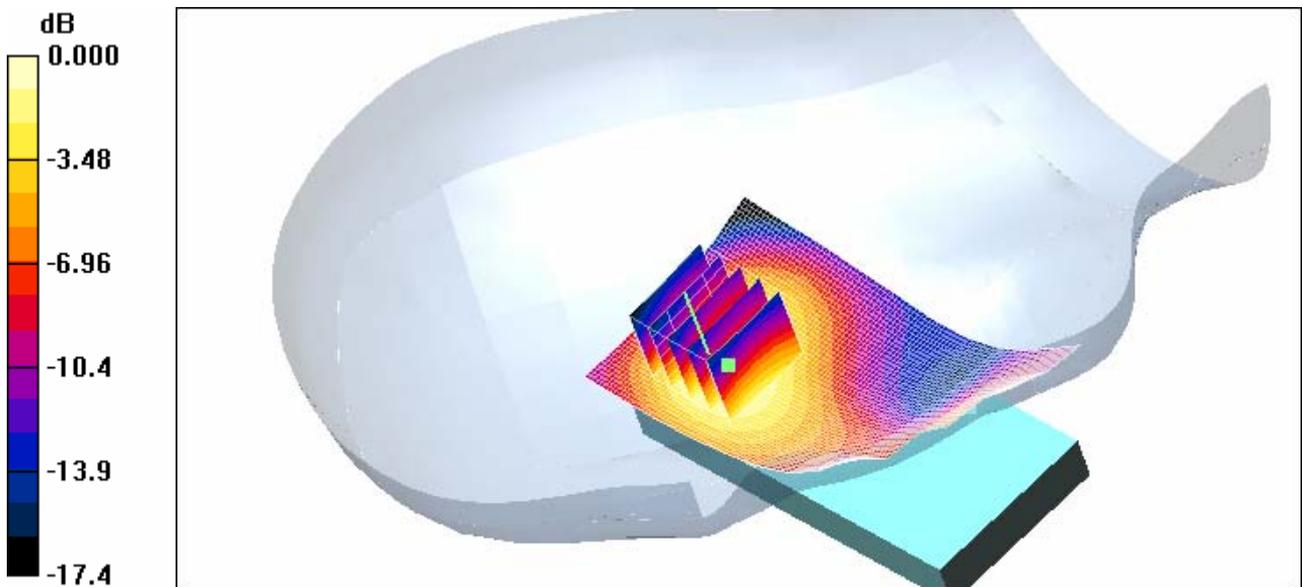
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 661/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.152 mW/g

**Right tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 9.71 V/m; Power Drift = -0.006 dB  
Peak SAR (extrapolated) = 0.230 W/kg  
**SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.085 mW/g**  
Maximum value of SAR (measured) = 0.154 mW/g



0 dB = 0.154mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.984$  mho/m;  $\epsilon_r = 56.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: 835/900 Phantom ; Type: SAM

**CDMA Body 384/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.524 mW/g

**CDMA Body 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

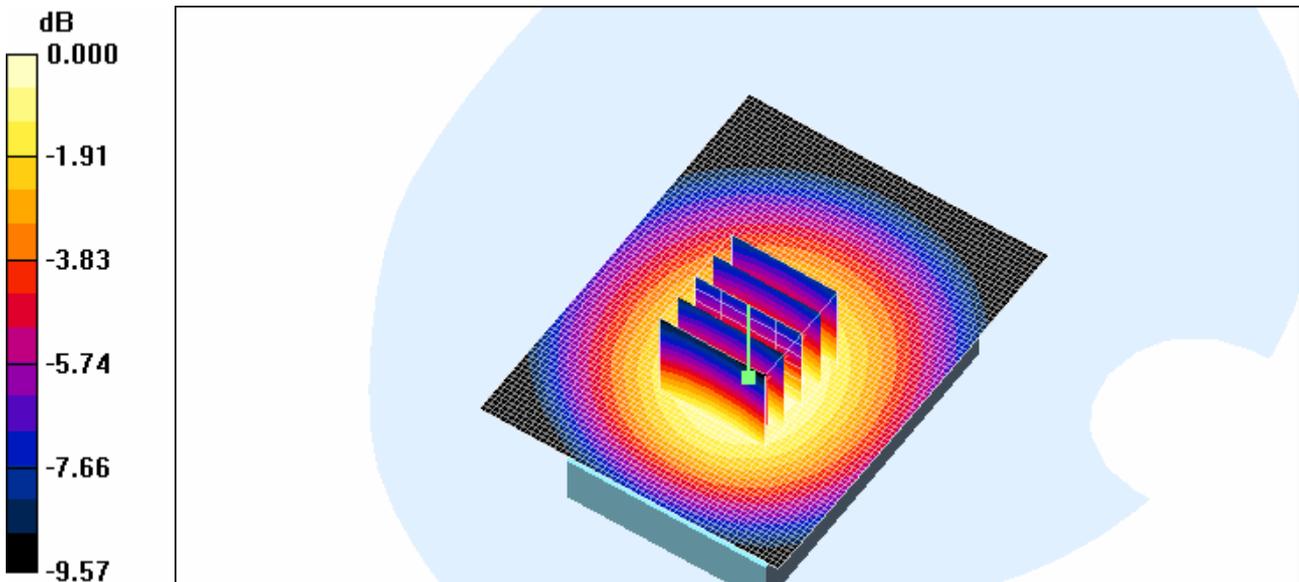
Reference Value = 11.7 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 0.650 W/kg

**SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.356 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.526 mW/g



0 dB = 0.526mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

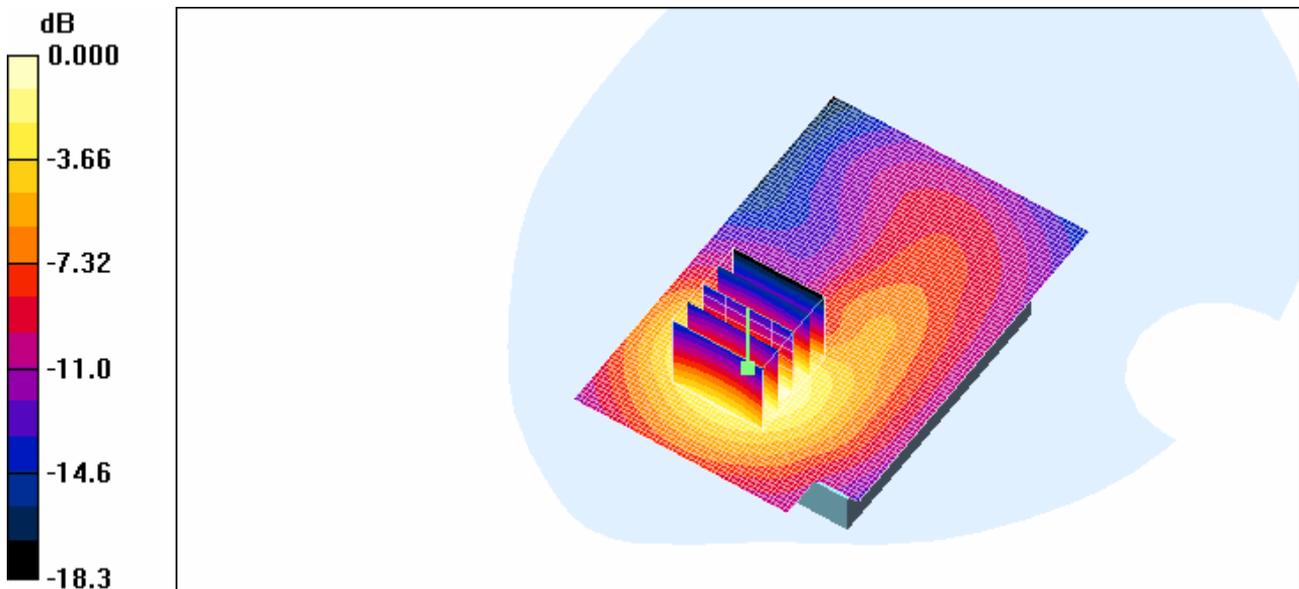
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**DASY4 Configuration:**

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**PCS Body 600/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.908 mW/g

**PCS Body 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.48 V/m; Power Drift = -0.057 dB  
Peak SAR (extrapolated) = 1.25 W/kg  
**SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.435 mW/g**  
Maximum value of SAR (measured) = 0.834 mW/g



0 dB = 0.834mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

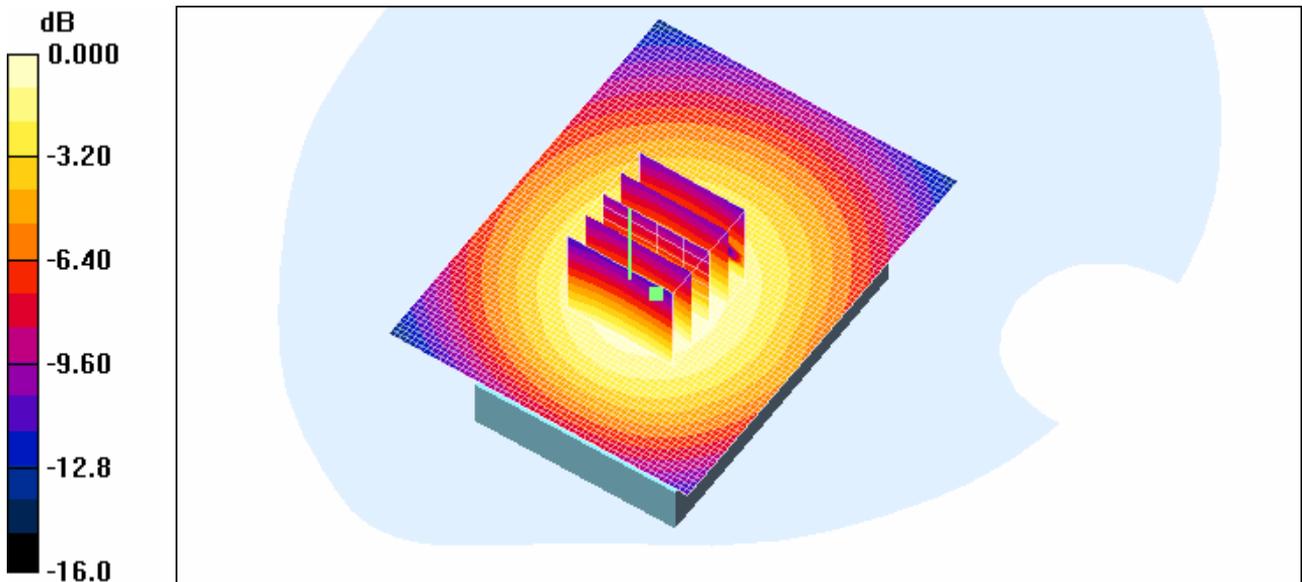
Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:2.075  
Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.973$  mho/m;  $\epsilon_r = 56.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**GSM Body 128/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.701 mW/g

**GSM Body 128/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 14.2 V/m; Power Drift = 0.189 dB  
Peak SAR (extrapolated) = 1.50 W/kg  
**SAR(1 g) = 0.657 mW/g; SAR(10 g) = 0.436 mW/g**  
Maximum value of SAR (measured) = 0.713 mW/g



0 dB = 0.713mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.075  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.984$  mho/m;  $\epsilon_r = 56.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**GSM Body 190/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.997 mW/g

**GSM Body 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

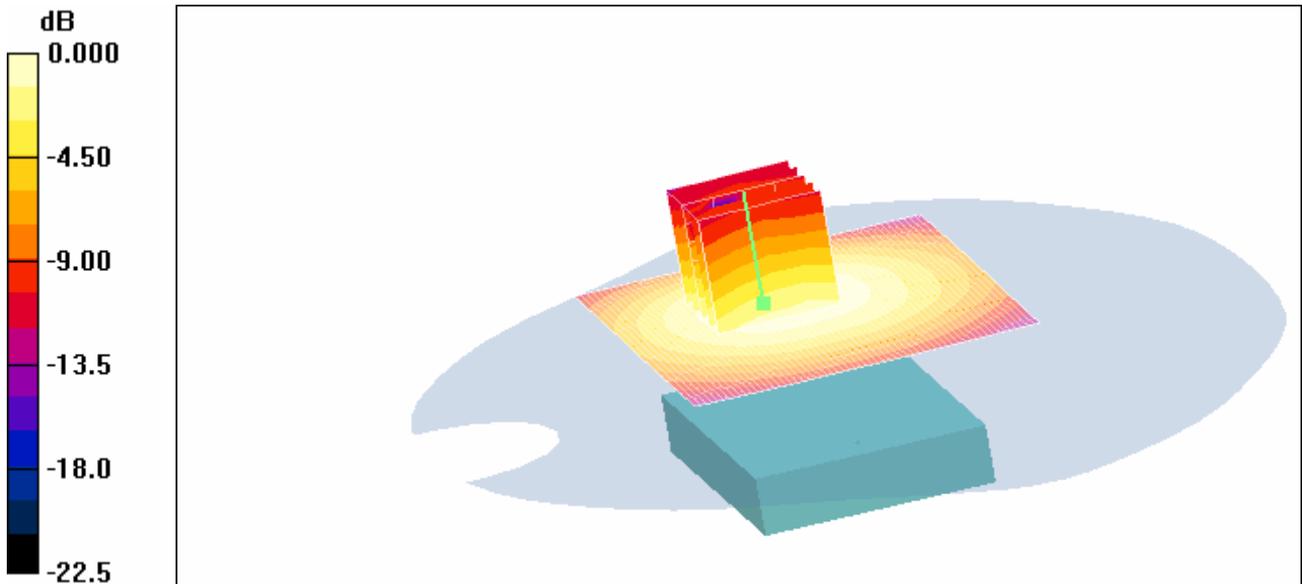
Reference Value = 16.8 V/m; Power Drift = -0.181 dB

Peak SAR (extrapolated) = 1.37 W/kg

**SAR(1 g) = 0.935 mW/g; SAR(10 g) = 0.624 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 1.01mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2.075  
Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 0.993$  mho/m;  $\epsilon_r = 56.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**GSM Body 251/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.20 mW/g

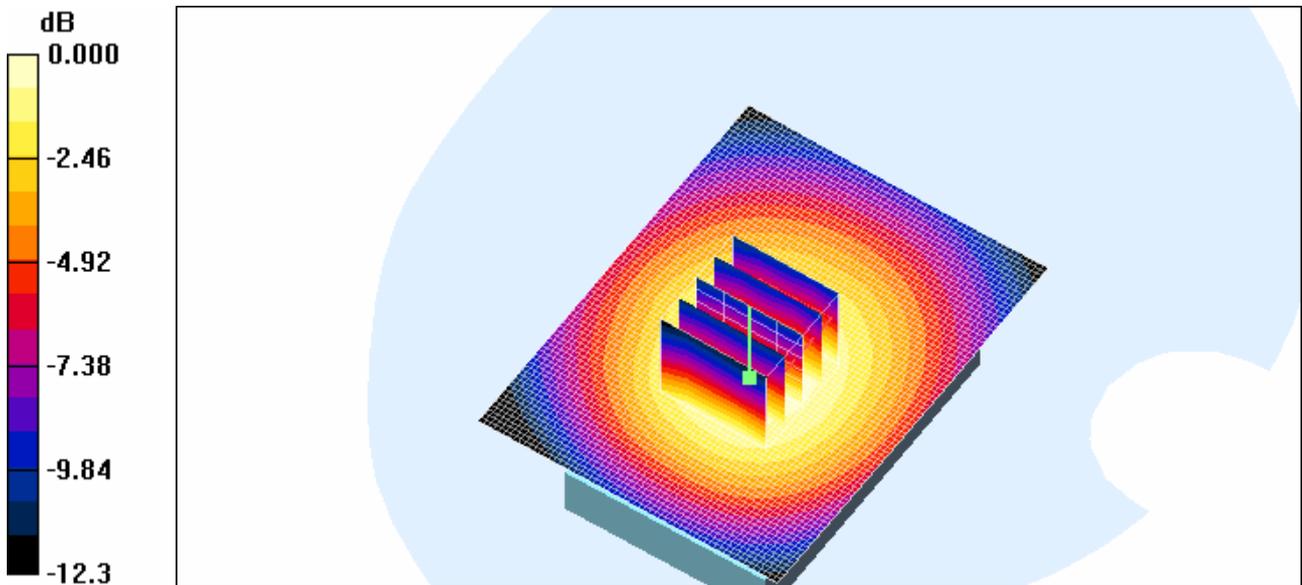
**GSM Body 251/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.9 V/m; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 1.67 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.776 mW/g**

Maximum value of SAR (measured) = 1.22 mW/g



0 dB = 1.22mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.075  
Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.49$  mho/m;  $\epsilon_r = 53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**GPRS Body 512/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.994 mW/g

**GPRS Body 512/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

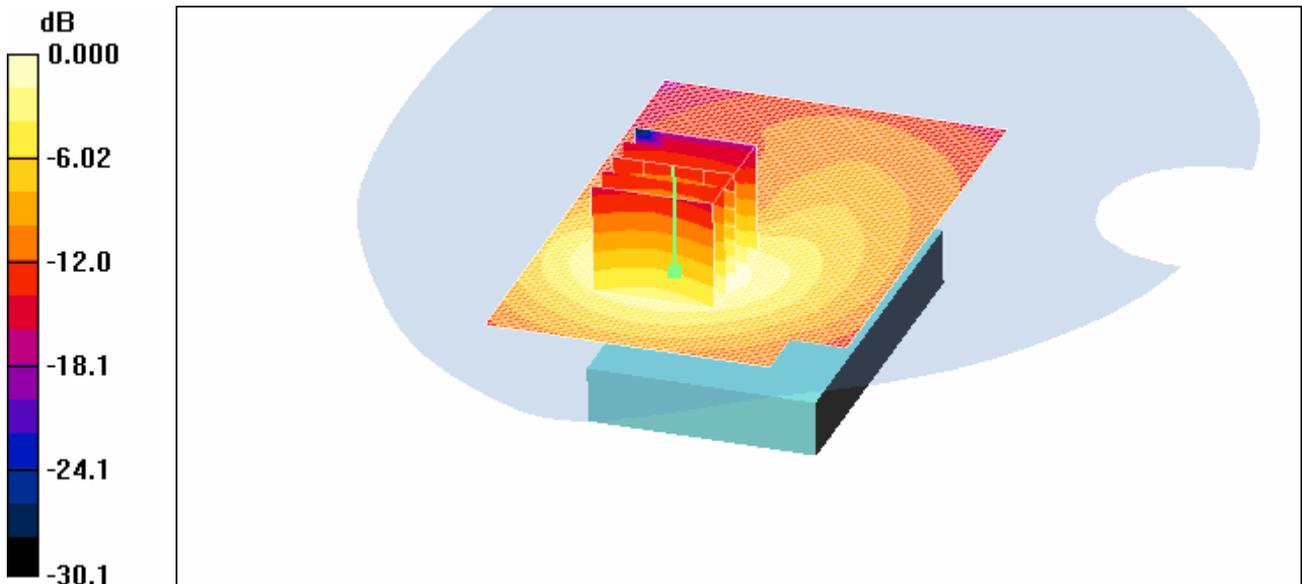
Reference Value = 7.12 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.37 W/kg

**SAR(1 g) = 0.838 mW/g; SAR(10 g) = 0.479 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.905 mW/g



0 dB = 0.905mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

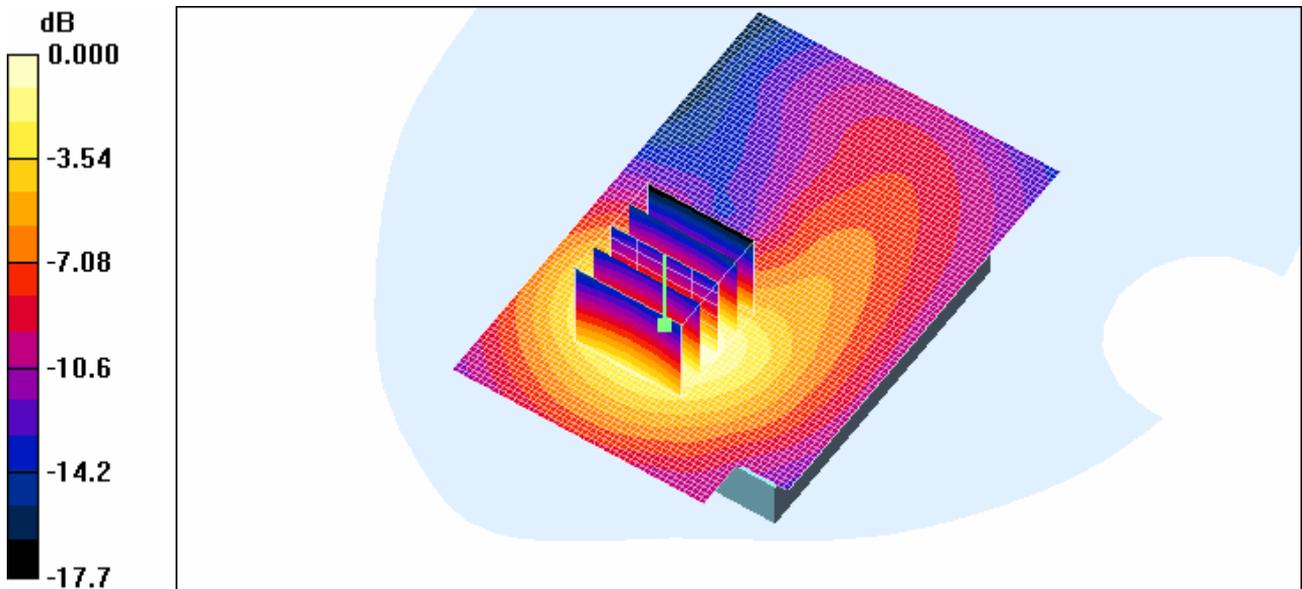
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.075  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**GPRS Body 661/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.28 mW/g

**GPRS Body 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.2 V/m; Power Drift = -0.091 dB  
Peak SAR (extrapolated) = 1.64 W/kg  
**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.587 mW/g**  
Maximum value of SAR (measured) = 1.14 mW/g



0 dB = 1.14mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

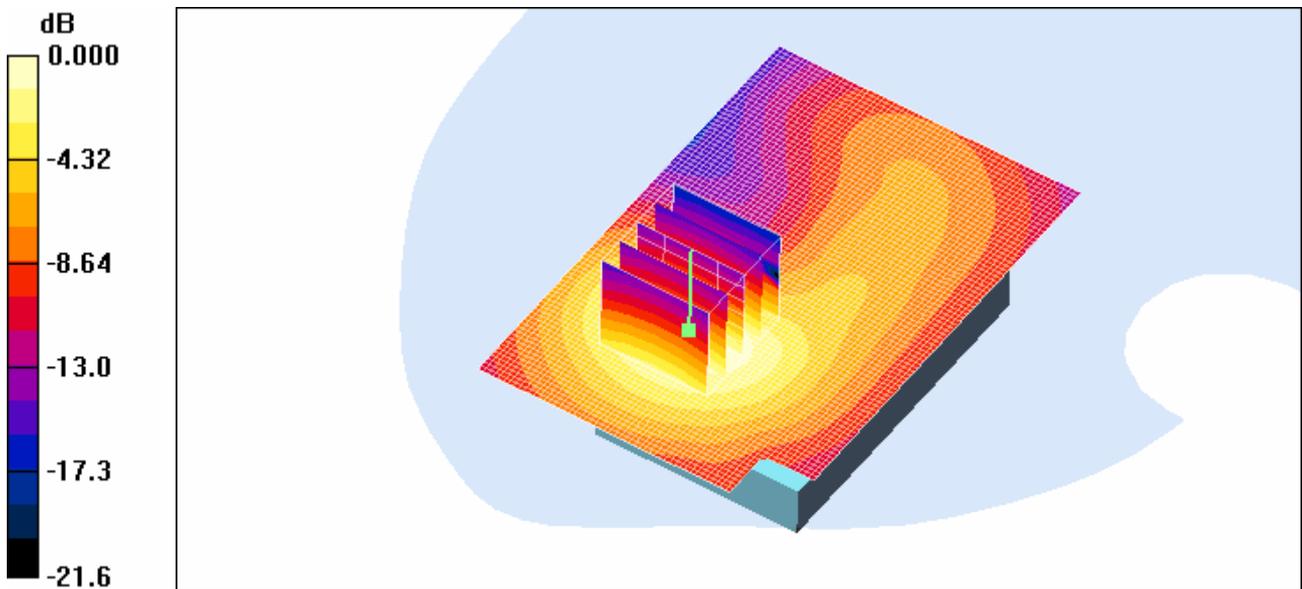
Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.075  
Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**GPRS Body 810/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.39 mW/g

**GPRS Body 810/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 12.9 V/m; Power Drift = -0.107 dB  
Peak SAR (extrapolated) = 1.93 W/kg  
**SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.680 mW/g**  
Maximum value of SAR (measured) = 1.29 mW/g



0 dB = 1.29mW/g

Test Laboratory: HCT CO., LTD  
 EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
 GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
 Liquid Temperature: 21.2 °C  
 Ambient Temperature: 21.4 °C  
 Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

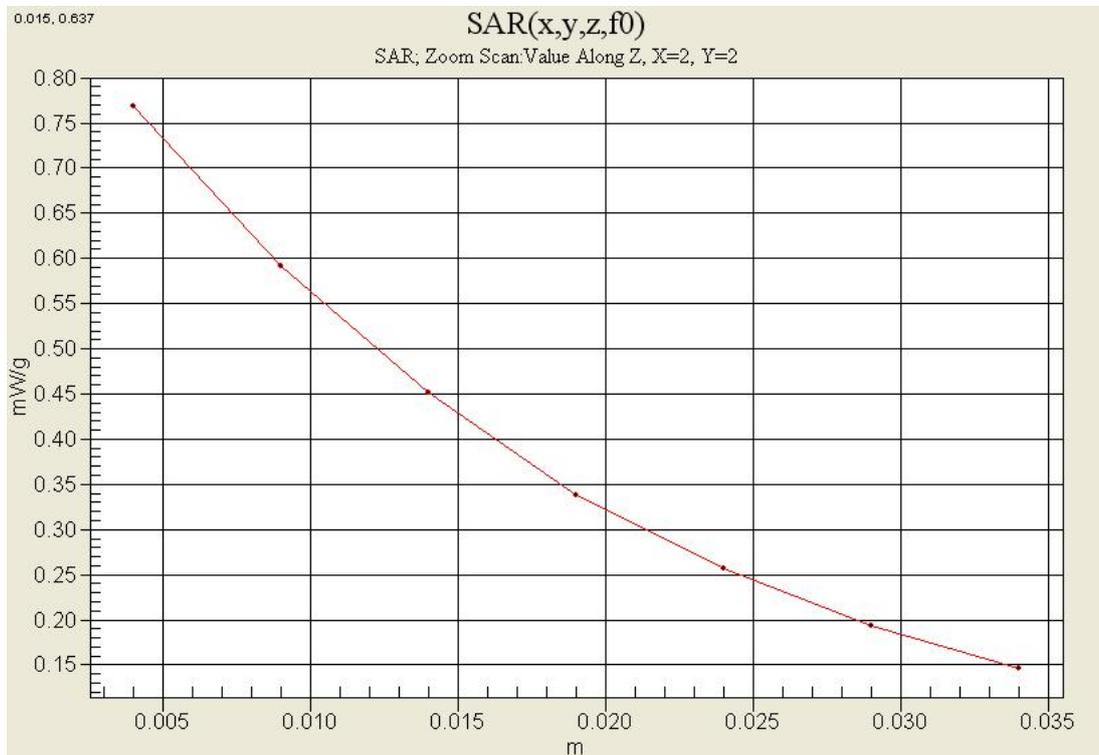
DASY4 Configuration:  
 - Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17  
 - Sensor-Surface: 4mm (Mechanical Surface Detection)  
 - Electronics: DAE4 Sn869; Calibrated: 2010-09-21  
 - Phantom: 835/900 Phantom ; Type: SAM

**Left touch 384/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (interpolated) = 0.820 mW/g

**Left touch 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 12.0 V/m; Power Drift = -0.052 dB  
 Peak SAR (extrapolated) = 0.936 W/kg  
**SAR(1 g) = 0.726 mW/g; SAR(10 g) = 0.528 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (measured) = 0.769 mW/g



Test Laboratory: HCT CO., LTD  
 EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
 GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
 Liquid Temperature: 21.2 °C  
 Ambient Temperature: 21.4 °C  
 Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.52 \text{ MHz}$ ;  $\sigma = 0.984 \text{ mho/m}$ ;  $\epsilon_r = 56.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

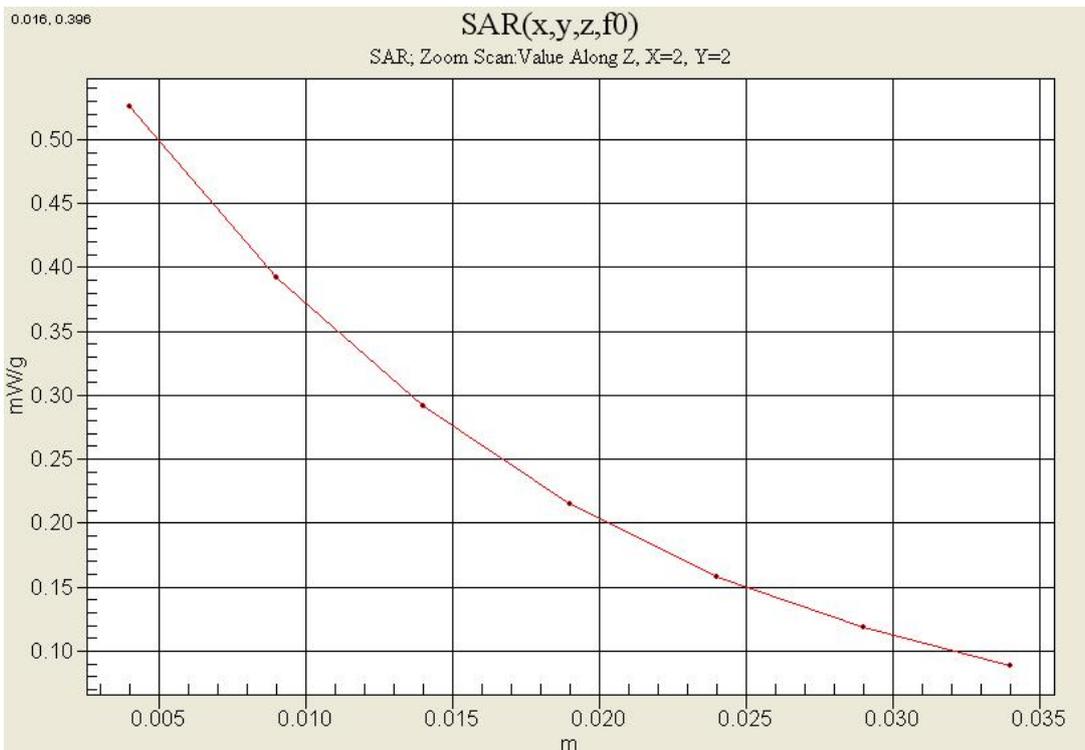
DASY4 Configuration:  
 - Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17  
 - Sensor-Surface: 4mm (Mechanical Surface Detection)  
 - Electronics: DAE4 Sn869; Calibrated: 2010-09-21  
 - Phantom: 835/900 Phantom ; Type: SAM

**CDMA Body 384/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (interpolated) = 0.524 mW/g

**CDMA Body 384/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 11.7 V/m; Power Drift = 0.057 dB  
 Peak SAR (extrapolated) = 0.650 W/kg  
**SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.356 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (measured) = 0.526 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: PCS 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**DASY4 Configuration:**

- Probe: ES3DV3 - SN3161; ConvF(4.79, 4.79, 4.79); Calibrated: 2010-03-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 1175/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**Left touch 1175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 2.09 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.612 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.27 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

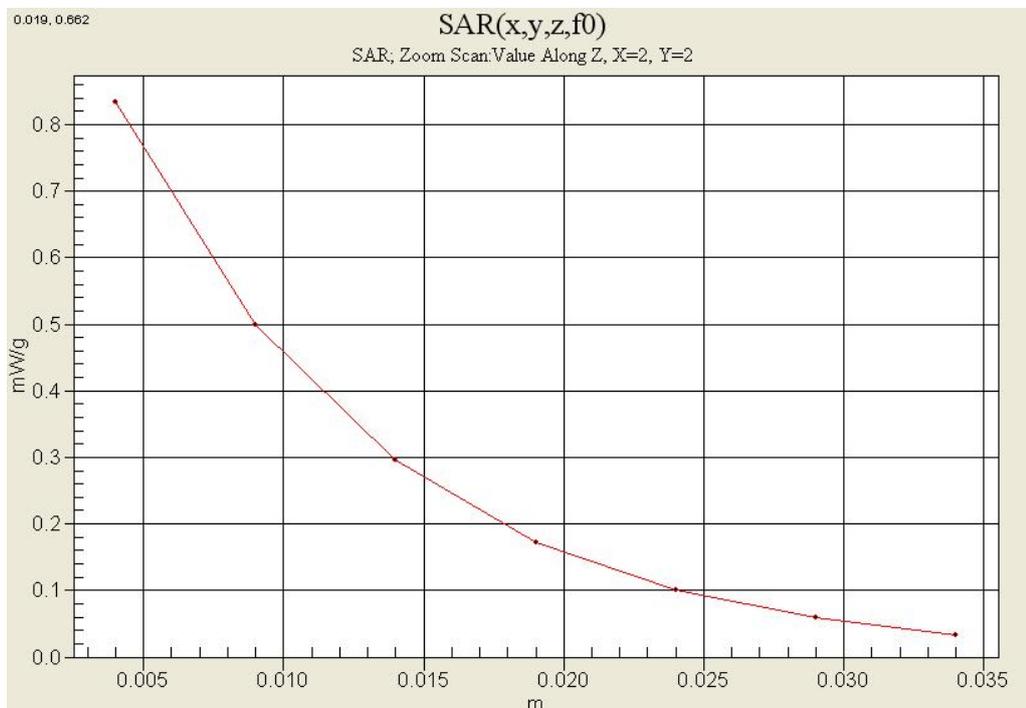
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**DASY4 Configuration:**

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**PCS Body 600/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.908 mW/g

**PCS Body 600/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.48 V/m; Power Drift = -0.057 dB  
Peak SAR (extrapolated) = 1.25 W/kg  
**SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.435 mW/g**  
Maximum value of SAR (measured) = 0.834 mW/g



Test Laboratory: HCT CO., LTD  
 EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
 GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
 Liquid Temperature: 21.2 °C  
 Ambient Temperature: 21.4 °C  
 Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
 Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

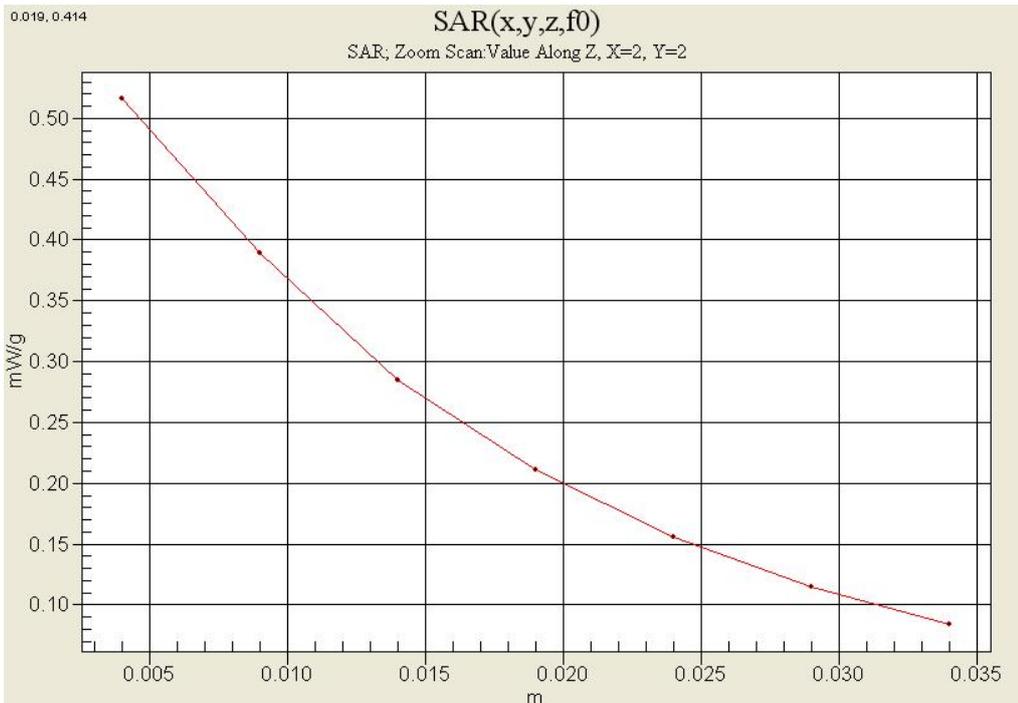
DASY4 Configuration:  
 - Probe: ES3DV3 - SN3161; ConvF(6.1, 6.1, 6.1); Calibrated: 2011-03-17  
 - Sensor-Surface: 4mm (Mechanical Surface Detection)  
 - Electronics: DAE4 Sn869; Calibrated: 2010-09-21  
 - Phantom: 835/900 Phantom ; Type: SAM

**Left touch 190/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (interpolated) = 0.541 mW/g

**Left touch 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 9.81 V/m; Power Drift = -0.080 dB  
 Peak SAR (extrapolated) = 0.639 W/kg  
**SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.348 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)  
 Maximum value of SAR (measured) = 0.517 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Apr.25, 2011

**DUT: TXT8045; Type: down; Serial: #1**

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2.075  
Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 0.993$  mho/m;  $\epsilon_r = 56.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(5.93, 5.93, 5.93); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 835/900 MHz; Type: SAM

**GSM Body 251/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.20 mW/g

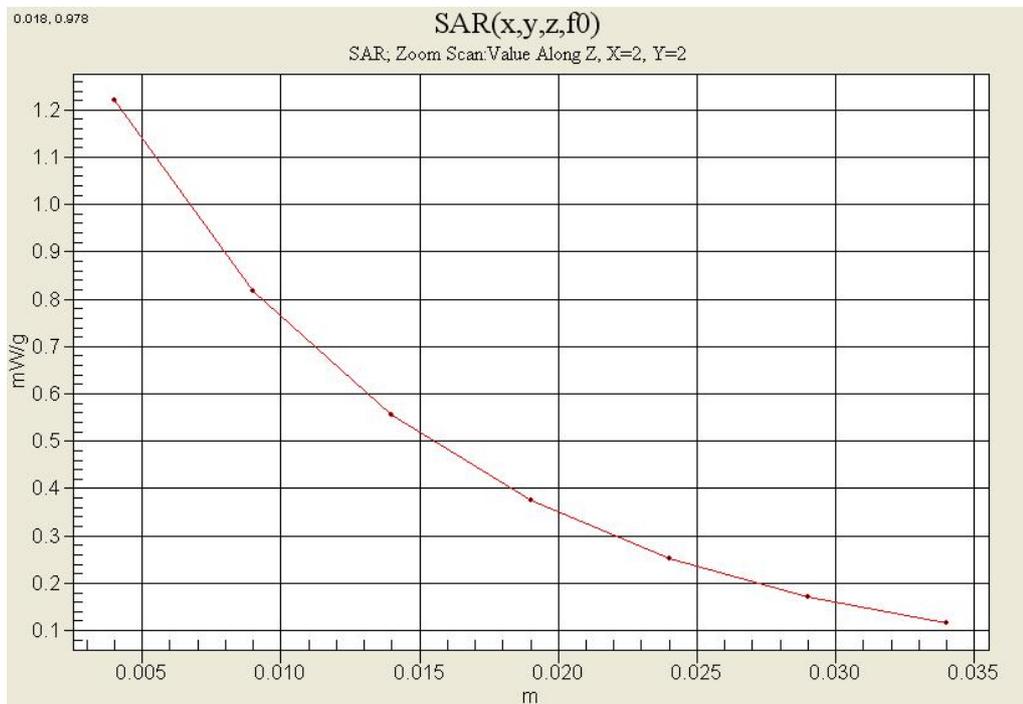
**GSM Body 251/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.9 V/m; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 1.67 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.776 mW/g**

Maximum value of SAR (measured) = 1.22 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

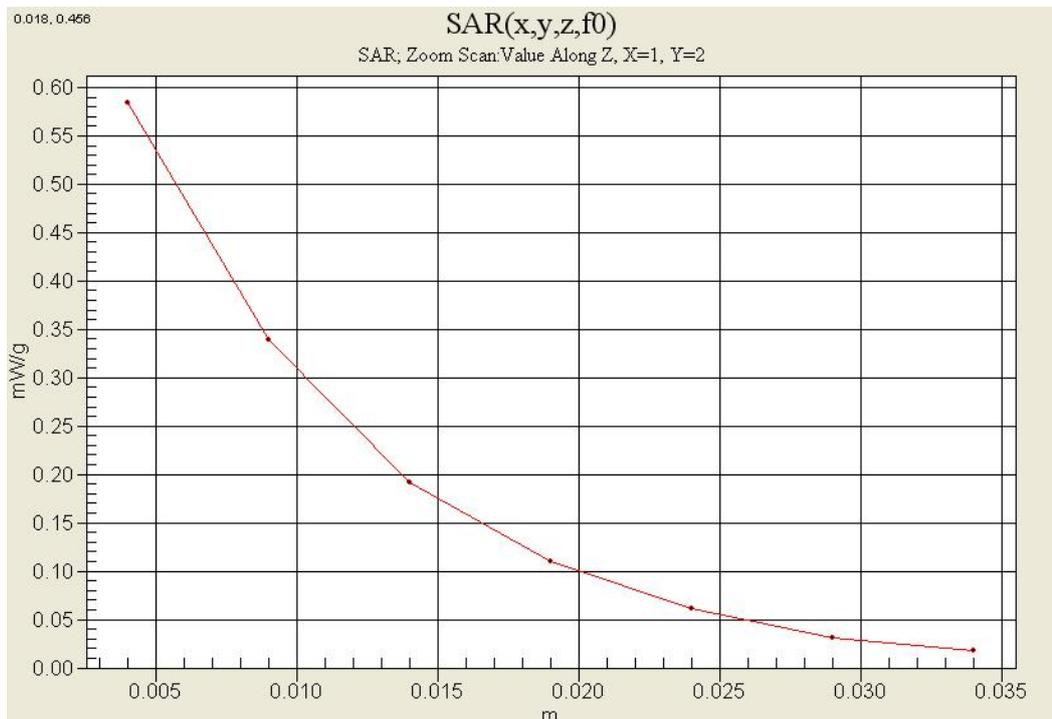
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

**DASY4 Configuration:**

- Probe: ES3DV3 - SN3161; ConvF(4.91, 4.91, 4.91); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 661/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.577 mW/g

**Left touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.89 V/m; Power Drift = -0.027 dB  
Peak SAR (extrapolated) = 0.955 W/kg  
**SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.273 mW/g**  
Maximum value of SAR (measured) = 0.584 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: Quad-Band GSM/CDMA Phone with Bluetooth  
GPRS Class 12 and GPRS mode class B (GPRS and GSM, but not simultaneously)  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Apr.26, 2011

**DUT: TXT8045; Type: down; Serial: #1**

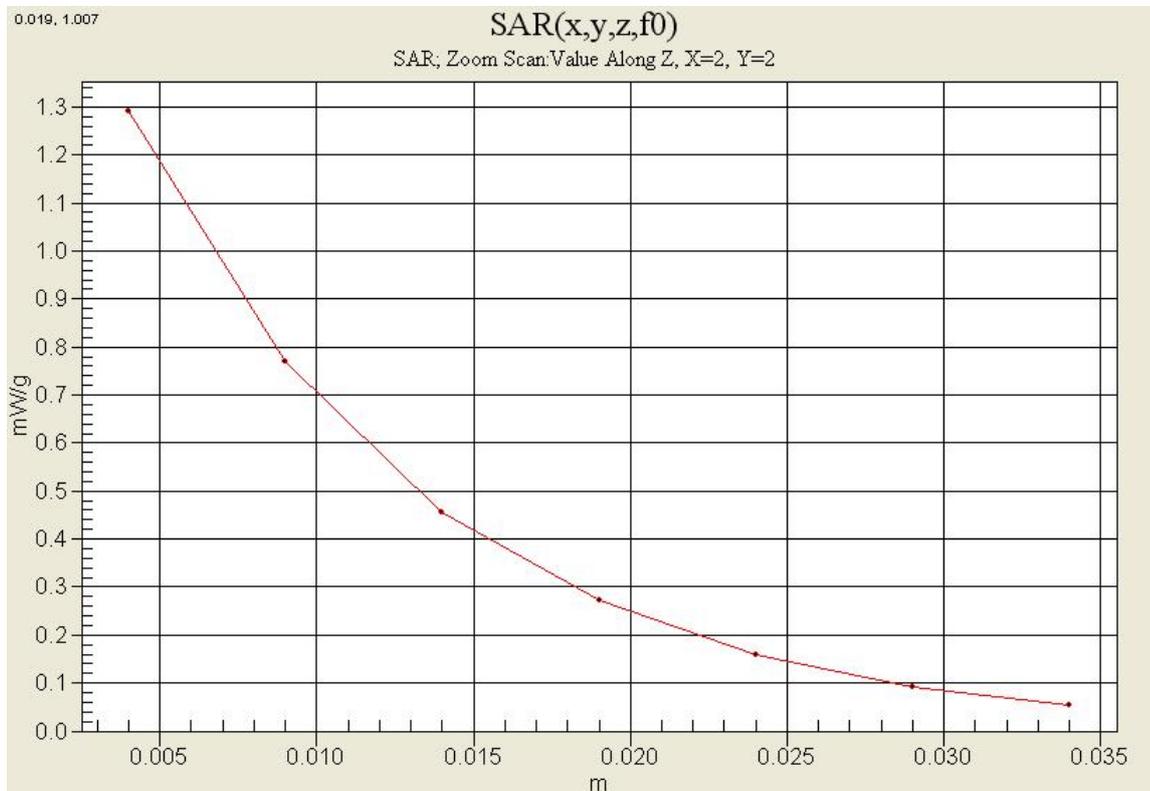
Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.075  
Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ES3DV3 - SN3161; ConvF(4.49, 4.49, 4.49); Calibrated: 2011-03-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2010-09-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**GPRS Body 810/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.39 mW/g

**GPRS Body 810/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 12.9 V/m; Power Drift = -0.107 dB  
Peak SAR (extrapolated) = 1.93 W/kg  
**SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.680 mW/g**  
Maximum value of SAR (measured) = 1.29 mW/g



## **Attachment 2. – Dipole Validation Plots**