



SAR TEST REPORT

HCT CO., LTD

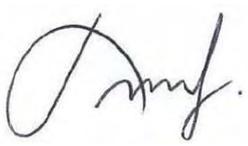
EUT Type:	Slide Dual-band CDMA Phone with Bluetooth/WLAN		
FCC ID:	APYNAR0067		
Model:	PB10ZU	Trade Name	SHARP CORPORATION
Date of Issue:	Jan.26, 2010		
Test report No.:	HCTA1001FS04		
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Testing has been carried out in accordance with:	47CFR §2.1093 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	<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <hr style="width: 100%; border: 0.5px solid black;"/> <p>Report prepared by : Sun-Hee Kim Test Engineer of SAR Part</p> </div> <div style="text-align: center;">  <hr style="width: 100%; border: 0.5px solid black;"/> <p>Approved by : Jae-Sang So Manager of SAR Part</p> </div> </div>		

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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 (r). 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:

- σ = conductivity of the tissue-simulant material (S/m)
- ρ = mass density of the tissue-simulant material (kg/m³)
- 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	Slide Dual-band CDMA Phone with Bluetooth/WLAN
FCC ID	APYNAR0067
Model(s)	PB10ZU
Trade Name	SHARP CORPORATION
Serial Number(s)	#1
Application Type	Certification
Modulation(s)	CDMA835/PCS1900/WLAN
Tx Frequency	824.70 - 848.31 MHz (CDMA) 1 851.25 - 1908.75 MHz (PCS CDMA) 2 412- 2 462 MHz (DSSS/ OFDM)
Rx Frequency	869.70 - 893.31 MHz (CDMA) 1 931.25 - 1 988.75 MHz (PCS CDMA) 2 412- 2 462 MHz (DSSS/ OFDM)
FCC Classification	Licensed Portable Transmitter Held to Ear (PCE)
Production Unit or Identical Prototype	Production Unit
Max SAR	1.38 W/kg CDMA835 Head SAR / 0.491 W/kg CDMA835 Body SAR 1.38 W/kg PCS1900 Head SAR / 0.255 W/kg PCS1900 Body SAR 0.087 W/kg Wi-Fi 802.11b
Date(s) of Tests	Jan. 20, 2010 ~ Jan. 21, 2010
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.

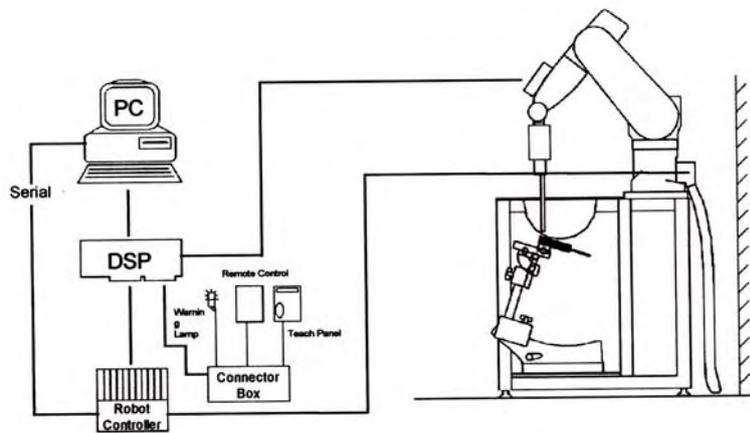


Figure 3.1 HCT SAR Lab. Test Measurement Set-up

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

3.2.1 ET3DV6 Probe Specification

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection System Built-in shielding against static charges
Calibration	In air from 10 MHz to 2.5 GHz In brain and muscle simulating tissue at Frequencies of 450 MHz, 900 MHz and 1.8 GHz (accuracy: 8 %)
Frequency	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.2 dB in brain tissue (rotation around probe axis) ± 0.4 dB in brain tissue (rotation normal probe axis)
Dynamic	5 μ W/g to > 100 mW/g;
Range Linearity:	± 0.2 dB
Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces.
Dimensions	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm
Application	General dissymmetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms



Figure 3.2 Photograph of the probe and the Phantom

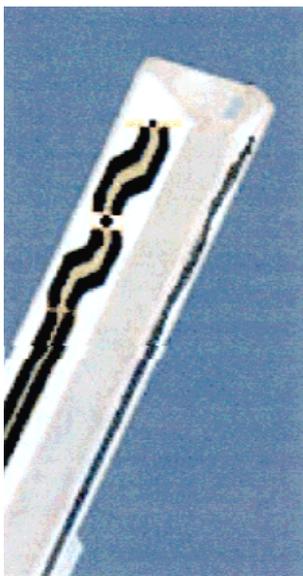


Figure 3.3 ET3DV6 E-field Probe

The SAR measurements were conducted with the dosimetric probe ET3DV6, 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 2nd 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 $\pm 10\%$. 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 below 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:

- Δt = exposure time (30 seconds),
- C = heat capacity of tissue (brain or muscle),
- ΔT = 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:

- σ = simulated tissue conductivity,
- ρ = Tissue density (1.25 g/cm³ for brain tissue)

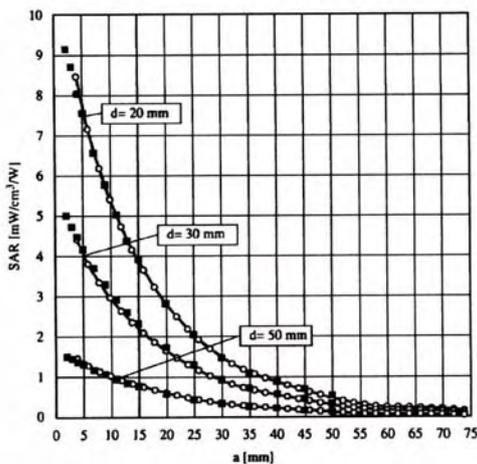


Figure 3.4 E-Field and Temperature measurements at 900 MHz

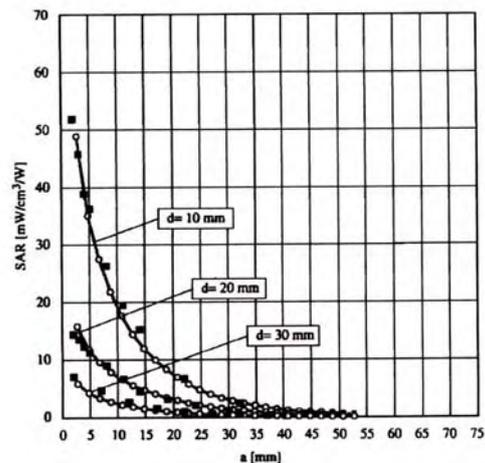


Figure 3.5 E-Field and temperature measurements at 1.8 GHz

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
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm³

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/cm²
 E_{tot} = total electric field strength in V/m

3.4 SAM Phantom

The SAM Phantom is constructed of a fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90 % of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

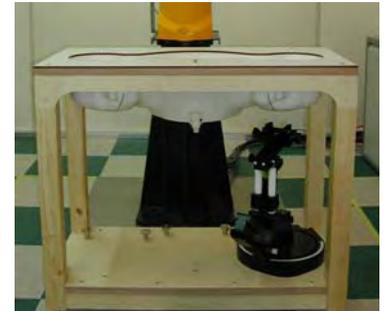


Figure 3.6 SAM Phantom

Shell Thickness	2.0 mm
Filling Volume	about 30 L
Dimensions	810 mm x 1 000 mm x 500 mm (H x 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	DAE3	446	May 22, 2009	Annual	May 22, 2010
SPEAG	DAE3	466	July 21, 2009	Annual	July 21, 2010
SPEAG	E-Field Probe ET3DV6	1631	Jun. 24, 2009	Annual	Jun. 24, 2010
SPEAG	E-Field Probe ET3DV6	1609	Mar. 17, 2009	Annual	Mar. 17, 2010
SPEAG	Validation Dipole D450V2	1007	July 15, 2008	Biennial	July 15, 2010
SPEAG	Validation Dipole D835V2	441	May 25, 2009	Annual	May 25, 2010
SPEAG	Validation Dipole D1800V2	2d007	May 20, 2008	Biennial	May 20, 2010
SPEAG	Validation Dipole D1900V2	5d032	July 20, 2009	Annual	July 20, 2010
SPEAG	Validation Dipole D2450V2	743	Aug. 27, 2008	Biennial	Aug. 27, 2010
Agilent	Power Meter(F) E4419B	MY41291386	Nov. 05, 2009	Annual	Nov. 05, 2010
Agilent	Power Sensor(G) 8481	MY41090870	Nov. 05, 2009	Annual	Nov. 05, 2010
HP	Dielectric Probe Kit 85070C	00721521	N/A	N/A	N/A
HP	Dual Directional Coupler	16072	Nov. 05, 2009	Annual	Nov. 05, 2010
R&S	Base Station CMU200	110740	July 26, 2009	Annual	July 26, 2010
Agilent	Base Station E5515C	GB44400269	Feb. 10, 2009	Annual	Feb. 10, 2010
HP	Signal Generator E4438C	MY42082646	Dec. 24, 2009	Annual	Dec. 24, 2010
HP	Network Analyzer 8753C	3310J01394	Dec. 04, 2009	Annual	Dec. 04, 2010
Tescom	TC-3000/ Bluetooth	3000A490112	Jan. 09, 2009	Annual	Jan. 09, 2010

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 34 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.

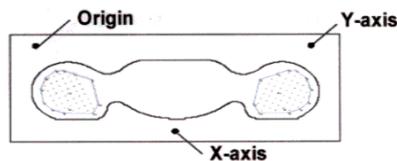


Figure 4.1 SAR Measurement Point in Area Scan

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.

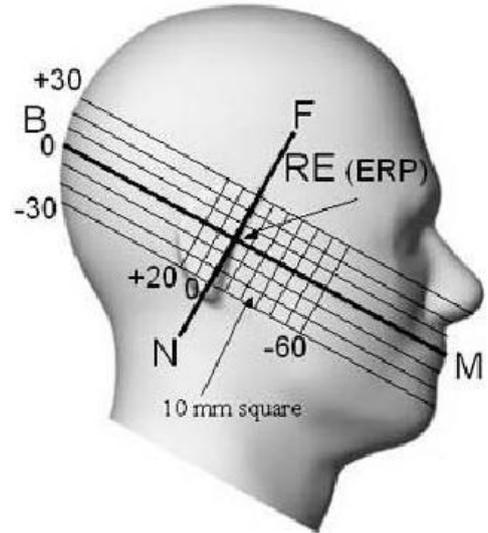


Figure 5.1 Side view of the phantom

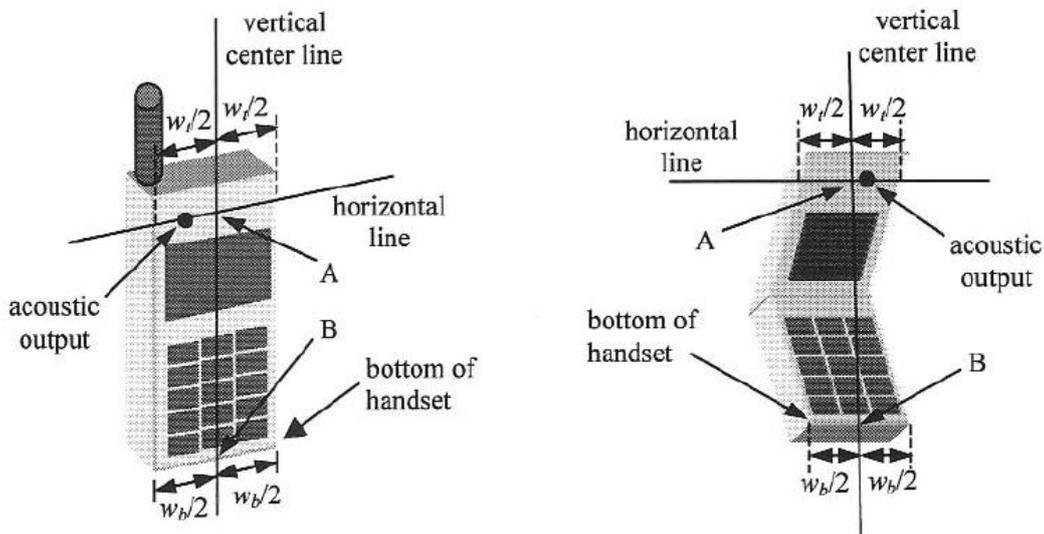


Figure 5.2 Handset vertical and horizontal reference lines

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

Measurement uncertainties in SAR measurements are difficult to quantify due to several variables including biological, physiological, and environmental. However, we estimate the measurement uncertainties in SAR to be less than 15 % - 25 %.

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

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

Error Description	Uncertainty value [%]	Probability Distribution	Divisor	ci	ci ²	Standard Uncertainty [%]	Stand Uncert ²	(Stand Uncert ²) X (ci ²)	<i>V_i</i> & <i>V_{eff}</i>
1. Measurement System									
Probe Calibration	5.5	Normal	1.00	1	1	5.50	30.25	30.25	∞
Axial Isotropy	4.7	Rectangular	1.73	0.7	0.49	2.71	7.36	3.61	∞
Hemispherical Isotropy	9.6	Rectangular	1.73	0.7	0.49	5.54	30.72	15.05	∞
Linearity	4.7	Rectangular	1.73	1	1	2.71	7.36	7.36	∞
System Detection limits	1.0	Rectangular	1.73	1	1	0.58	0.33	0.33	∞
Boundary effect	1.0	Rectangular	1.73	1	1	0.58	0.33	0.33	∞
Response time	0.8	Rectangular	1.73	1	1	0.46	0.21	0.21	∞
RF Ambient conditions	3.0	Rectangular	1.73	1	1	1.73	3.00	3.00	∞
Readout Electronics	0.3	Normal	1.00	1	1	0.30	0.09	0.09	∞
Integration time	2.6	Rectangular	1.73	1	1	1.50	2.25	2.25	∞
Probe positioner	0.4	Rectangular	1.73	1	1	0.23	0.05	0.05	∞
Probe positioning	2.9	Rectangular	1.73	1	1	1.67	2.80	2.80	∞
Maximum SAR evaluation	1.0	Rectangular	1.73	1	1	0.58	0.33	0.33	∞
Sub Total								65.69	
2. Test Sample Related									
Device Positioning	1.8	Normal	1.00	1	1	1.81	3.28	3.28	9
Device Holder	3.6	Normal	1.00	1	1	3.60	12.96	12.96	∞
Power Drift	5.0	Rectangular	1.73	1	1	2.89	8.33	8.33	∞
Sub Total								24.57	
3. Phantom and Setup									
Phantom Uncertainty	4.0	Rectangular	1.73	1	1	2.31	5.33	5.33	∞
Liquid conductivity (target)	5.0	Rectangular	1.73	0.5	0.25	2.89	8.33	2.08	∞
Liquid conductivity (measurement error)	2.5	Normal	1.00	0.5	0.25	2.50	6.25	1.56	∞
Liquid permittivity (target)	5.0	Rectangular	1.73	0.5	0.25	2.89	8.33	2.08	∞
Liquid permittivity (measurement error)	2.5	Normal	1.00	0.5	0.25	2.50	6.25	1.56	∞
Sub Total								12.63	
Combined standard uncertainty [%]						10.14		102.88	-
Expanded uncertainty [<i>k</i>=2, approximately confidence level 95 %]						± 20.28 %			

Table 6.1 Breakdown of Errors

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	Jan.20, 2010	Head	21.4	ϵr	41.5	42.1	+ 1.45	± 5
				σ	0.90	0.89	- 1.11	± 5
835	Jan.20, 2010	Body	21.4	ϵr	55.2	54.35	- 1.54	± 5
				σ	0.97	0.97	0.00	± 5
1 900	Jan.21, 2010	Head	21.2	ϵr	40.0	41.6	+ 4.00	± 5
				σ	1.40	1.4	0.00	± 5
1 900	Jan.21, 2010	Body	21.2	ϵr	53.3	53.42	+ 0.23	± 5
				σ	1.52	1.50	- 1.32	± 5
2 450	Jan.20, 2010	Head	21.4	ϵr	39.2	39.5	+ 0.77	± 5
				σ	1.80	1.83	+ 1.67	± 5
2 450	Jan.20, 2010	Body	21.4	ϵr	52.7	51.74	- 1.82	± 5
				σ	1.95	1.96	+ 0.51	± 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 / 2 450 MHz by using the system validation kit. (Graphic Plots Attached)

* Input Power: 100 mW

Freq. [MHz]	Date	Liquid	Liquid Temp. [°C]	SAR Average	Target Value (SPEAG) (mW/g)	Measured Value (mW/g)	Deviation [%]	Limit [%]
835	Jan.20, 2010	Head	21.4	1 g	9.56	0.967	+ 1.15	± 10
1 900	Jan.21, 2010	Head	21.2	1 g	40.5	4.09	+ 0.99	± 10
2 450	Jan.20, 2010	Head	21.4	1 g	52.4	5.36	+ 2.29	± 10

9. TEST CONFIGURATIONS

SAR Testing with IEEE 802.11 a/b/g Transmitters

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

9.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

9.2 Frequency Channel Configurations

80.11 a/b/g and 4.9 GHz operating modes are tested independently according to the service requirements in each frequency band. 80.211 b/g modes are tested on channels 1, 6 and 11. 802.11a is tested for UNII operations on channels 36 and 48 in the 5.15-5.25 GHz band; channels 52 and 64 in the 5.25-5.35 GHz band; Channels 104, 116, 124 and 136 in the 5.470-5.725 GHz band; and channels 149 and 161 in the 5.8 GHz band. When 5.8 GHz § 15.247 is also available, channels 149, 157 and 165 should be tested instead of the UNII channels. 4.9 GHz is tested on channels 1, 10 and 5 or 6, whichever has the higher output power, for 5 MHz channels; channels 11, 15 and 19 for 10 MHz channels; and channels 21 and 25 for 20 MHz channels.

These are referred to as the "default test channels". 802.11g mode was evaluated only if the output power was 0.25 dB higher than the 802.11b mode.

Mode	GHz	Channel	Turbo Channel	"Default Test Channels"		
				§15.247 802.11b	802.11g	UNII
802.11 b/g	2.412	1		√	∇	
	2.437	6	6	√	∇	
	2.462	11		√	∇	
802.11a	5.18	36				√
	5.20	40	42 (5.21 GHz)			*
	5.22	44				*
	5.24	48	50 (5.25 GHz)			√
	5.26	52				√
	5.28	56	58 (5.29 GHz)			*
	5.30	60				*
	5.32	64				√
	5.500	100	Unknown			*
	5.520	104				√
	5.540	108				*
	5.560	112				*
	5.580	116				√
	5.600	120				*
	5.620	124				√
	5.640	128				*
	5.660	132				*
	5.680	136				√
	5.700	140			*	
	UNII or §15.247	5.745	149		√	
5.765		153	152 (5.76 GHz)		*	*
5.785		157		√		*
5.805		161	160 (5.80 GHz)		*	√
§15.247		5.825	165		√	

802.11 Test Channels per FCC Requirements

10. 3G MEASUREMENT PROCEDURES

10.1 Procedures Used To Establish Test Signal

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 evaluating SAR. 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.

10.2 SAR Measurement Conditions for CDMA2000 1x

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

10.2.1 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
\overline{I}_{or}	dBm/1.23 MHz	-104
$\frac{\text{Pilot } E_c}{\overline{I}_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{\overline{I}_{or}}$	dB	-7.4

Table. 10.1

Parameters for Max. Power for RC3

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

Table. 10.2

10.2.2 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.

10.2.3 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.

10.2.4 Handsets with EV-DO

For handsets with Ev-Do capabilities, when the maximum average output of each channel in Rev. 0 is less than ¼ dB higher than that measured in RC3 (1x RTT), body SAR for Ev-Do is not required. Otherwise, SAR for Rev. 0 is measured on the maximum output channel at 153.6 kbps using the body exposure configuration that results in the highest SAR for that channel in RC3. SAR for Rev. A is not required when the maximum average output of each channel is less than that measured in Rev. 0 or less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel for Rev. A using a Reverse Data Channel payload size of 4 096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations. A Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots should be configured in the downlink for both Rev. 0 and Rev. A.

Average Output Power Measurement for FCC ID: APYNAR0067

Band	Channel	SO2	SO2	SO55	SO55	TDSO	1xEvD	1xEvD	1xEvDO	1xEvDO
		RC1/1 (dBm)	RC3/3 (dBm)	RC1/1 (dBm)	RC3/3 (dBm)	RC3/3 (dBm)	SO32 (FTAP)	Rev.0 (RTAP)	Rev.0 (FETAP)	Rev.1 (RETAP)
CDMA	1013	23.99	24.05	23.97	24.10	23.98	24.17	24.23	24.05	23.95
	384	24.12	24.04	24.09	23.98	24.00	24.22	24.26	24.00	24.01
	777	24.03	24.09	24.21	24.03	24.10	24.28	24.28	24.12	24.04
PCS	25	24.32	24.25	24.38	24.34	24.31	24.36	24.36	24.17	24.13
	600	24.14	24.10	24.25	24.05	24.04	24.17	24.27	23.97	23.97
	1175	24.00	24.00	24.14	24.06	24.06	24.01	24.07	23.79	23.84

Table 10.3 Conducted output power

Band	Channel	Mbps			
		1	2	5.5	11
IEEE 802.11b	1	19.28	19.97	21.43	22.88
	6	19.67	20.12	21.93	23.10
	11	19.57	19.87	21.68	22.73

Table 10.4 IEEE 802.11b Conducted output power

Band	Channel	Mbps							
		6	9	12	18	24	36	48	54
IEEE 802.11g	1	17.12	15.82	16.72	17.12	17.38	17.67	17.06	17.86
	6	17.30	16.12	17.50	17.42	17.69	17.65	17.57	18.08
	11	17.48	15.89	16.94	17.71	17.27	17.36	17.02	17.83

Table 10.5 IEEE 802.11g Conducted output power

11. SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas

11.1 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. 11.1 Output Power Thresholds for Unlicensed Transmitters

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

Table. 11.2 SAR Evaluation Requirements for Cellphones with Multiple Transmitters

FCC ID: APYNAR0067

BT Max. RF output power: 3.54 dBm (2.26 mW)

Antenna separation distance between Main and BT/ WLAN: 1.27 cm

WLAN Max. RF output power: Wi-Fi 802.11b (23.10 dBm) / Wi-Fi 802.11g (18.08 dBm)

The conducted output power level of the BT transmitter is less than P_{ref}, the BT antenna is less than 2.5 cm from the Main antenna, and licensed Transmitter SAR is 0.491 W/kg for body, which are less than 1.2 W/kg, therefore, a stand-alone BT SAR evaluation is not required.

Based on the output power and antenna separation distance, a stand-alone WLAN SAR test is required. The summation of Main and WLAN is (1.38 + 0.087) = 1.467 < 1.6 mW/g. Therefore a simultaneous SAR evaluation is not required.

12. SAR TEST DATA SUMMARY

12.1 Measurement Results (CDMA835 Head SAR Touch Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
824.70	1013 (Low)	CDMA835	24.10	24.14	Standard	Left Ear	Intenna	1.24
836.52	384 (Mid)	CDMA835	23.98	24.00	Standard	Left Ear	Intenna	1.03
848.31	777 (High)	CDMA835	24.03	24.02	Standard	Left Ear	Intenna	1.17
824.70	1013 (Low)	CDMA835	24.10	24.29	Standard	Right Ear	Intenna	1.34
836.52	384 (Mid)	CDMA835	23.98	24.02	Standard	Right Ear	Intenna	1.31
848.31	777 (High)	CDMA835	24.03	23.94	Standard	Right Ear	Intenna	1.38
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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

12.2 Measurement Results (CDMA835 Head SAR Touch Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	23.98	23.95	Standard	Left Ear	Intenna	0.757
836.52	384 (Mid)	CDMA835	23.98	23.91	Standard	Right Ear	Intenna	0.612
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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).

12.3 Measurement Results (CDMA835 Head SAR Tilt Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	23.98	23.80	Standard	Left Tilt 15°	Intenna	0.530
836.52	384 (Mid)	CDMA835	23.98	23.84	Standard	Right Tilt 15°	Intenna	0.480
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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).

12.4 Measurement Results (CDMA835 Head SAR Tilt Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.52	384 (Mid)	CDMA835	23.98	24.03	Standard	Left Tilt 15°	Intenna	0.331
836.52	384 (Mid)	CDMA835	23.98	23.87	Standard	Right Tilt 15°	Intenna	0.292
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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).

12.5 Measurement Results (PCS 1900 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	24.34	24.28	Standard	Left Ear	Intenna	1.37
1 880.00	600 (Mid)	PCS1900	24.05	24.14	Standard	Left Ear	Intenna	0.863
1 908.75	1175 (High)	PCS1900	24.06	23.86	Standard	Left Ear	Intenna	0.986
1 851.25	25 (Low)	PCS1900	24.34	24.19	Standard	Right Ear	Intenna	1.05
1 880.00	600 (Mid)	PCS1900	24.05	23.99	Standard	Right Ear	Intenna	0.971
1 908.75	1175 (High)	PCS1900	24.06	23.99	Standard	Right Ear	Intenna	1.13
ANSI/ IEEE C95.1 2005 – Safety Limit						Head 1.6 W/kg (mW/g) <small>Averaged over 1 gram</small>		
Spatial Peak Uncontrolled Exposure/ General Population								

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

12.6 Measurement Results (PCS 1900 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	24.34	0.00	Standard	Left Ear	Intenna	1.00
1 880.00	600 (Mid)	PCS1900	24.05	24.22	Standard	Left Ear	Intenna	0.831
1 908.75	1175 (High)	PCS1900	24.06	24.13	Standard	Left Ear	Intenna	1.38
1 880.00	600 (Mid)	PCS1900	24.05	23.92	Standard	Right Ear	Intenna	0.71
ANSI/ IEEE C95.1 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) <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

12.7 Measurement Results (PCS 1900 Head SAR Tilt Slide up)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.00	600 (Mid)	PCS1900	24.05	24.06	Standard	Left Tilt 15°	Intenna	0.513
1 880.00	600 (Mid)	PCS1900	24.05	24.09	Standard	Right Tilt 15°	Intenna	0.565
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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).

12.8 Measurement Results (PCS 1900 Head SAR Tilt Slide down)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.00	600 (Mid)	PCS1900	24.05	24.06	Standard	Left Tilt 15°	Intenna	0.563
1 880.00	600 (Mid)	PCS1900	24.05	24.09	Standard	Right Tilt 15°	Intenna	0.513
ANSI/ IEEE C95.1 2005 – Safety Limit						Head		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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).

12.9 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	24.00	24.02	Rear	2.0 cm without Holster	Intenna	0.491
836.52	384 (Mid)	CDMA835	24.00	23.98	Front	2.0 cm without Holster	Intenna	0.145
836.52	384 (Mid)	EVDO	24.26	24.23	Rear	2.0 cm without Holster	Intenna	0.463
ANSI/ IEEE C95.1 2005 – Safety Limit						Body		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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 Both side of the phone were tested and the worst-case side is reported.
- 8 HEADSET was connected.
- 9 Test Configuration With Holster Without Holster
- 10 CDMA Body SAR was tested under RC3/SO32.
- 11 EVDO Body SAR was tested under EVDO Rev.0 RTAP.
- 12 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).

12.10 Measurement Results (PCS 1900 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	24.04	23.98	Rear	2.0 cm without Holster	Intenna	0.255
1 880.00	600 (Mid)	PCS1900	24.04	24.00	Front	2.0 cm without Holster	Intenna	0.148
1 880.00	600 (Mid)	EVDO	24.27	24.27	Rear	2.0 cm without Holster	Intenna	0.205
ANSI/ IEEE C95.1 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg (mW/g) <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 Both side of the phone were tested and the worst-case side is reported.
- 8 HEADSET was connected.
- 9 Test Configuration With Holster Without Holster
- 10 PCS Body SAR was tested under RC3/SO32.
- 11 EVDO Body SAR was tested under EVDO Rev.0 RTAP.
- 12 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).

12.11 Measurement Results (802.11b/g Module Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Separation Distance	Data Rate	SAR(mW/g)
MHz	Channel		Begin	End				
2 412	1 (Mid)	802.11b	19.28	19.10	Rear	2.0 cm	1 Mbps	0.059
2 412	1 (Mid)	802.11b	19.97	19.94	Rear	2.0 cm	2 Mbps	0.075
2 412	1 (Mid)	802.11b	21.43	21.38	Rear	2.0 cm	5.5 Mbps	0.083
2 412	1 (Mid)	802.11b	22.88	22.89	Rear	2.0 cm	11 Mbps	0.087
2437	6(Low)	802.11b	19.67	19.78	Rear	2.0 cm	1 Mbps	0.066
2437	6(Low)	802.11b	20.12	19.99	Rear	2.0 cm	2 Mbps	0.073
2437	6(Low)	802.11b	21.93	22.10	Rear	2.0 cm	5.5 Mbps	0.082
2437	6(Low)	802.11b	23.10	23.08	Rear	2.0 cm	11 Mbps	0.076
2462	11(High)	802.11b	19.57	19.74	Rear	2.0 cm	1 Mbps	0.063
2462	11(High)	802.11b	19.87	20.00	Rear	2.0 cm	2 Mbps	0.080
2462	11(High)	802.11b	21.68	21.61	Rear	2.0 cm	5.5 Mbps	0.087
2462	11(High)	802.11b	22.73	22.83	Rear	2.0 cm	11 Mbps	0.080
2462	11(High)	802.11b	21.68	21.65	Front	2.0 cm	5.5 Mbps	0.00658
ANSI/ IEEE C95.1 2005 – Safety Limit						Body		
Spatial Peak						1.6 W/kg (mW/g)		
Uncontrolled Exposure/ General Population						<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 with Charger Extended Slim
 Batteries are fully charged for all readings.
- 6 Test Signal Call Mode Manual Test code Base Station Simulator
- 7 IEEE 802.11g SAR testing is required when the conducted powers are equal to or greater than 0.25 dB Than the conducted powers in IEEE 802.11b.

13. CONCLUSION

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.

14. REFERENCES

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Attachment 1. – SAR Test Plots

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

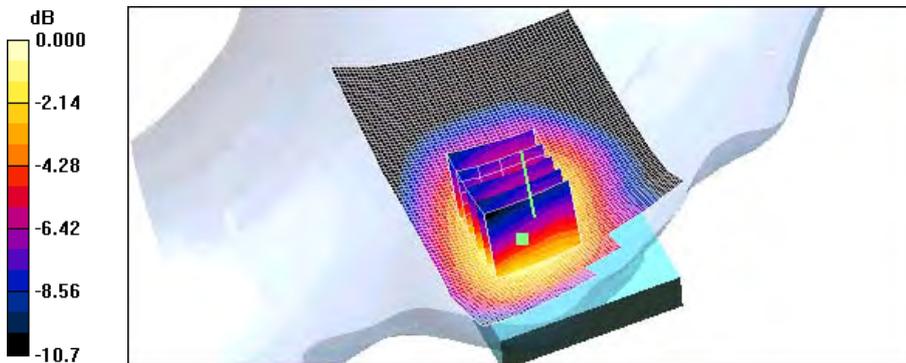
Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 825$ MHz; $\sigma = 0.881$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left touch 1013/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.23 mW/g

Left touch 1013/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 36.0 V/m; Power Drift = 0.0363 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.872 mW/g
Maximum value of SAR (measured) = 1.38 mW/g



0 dB = 1.38mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left touch 384/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.07 mW/g

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

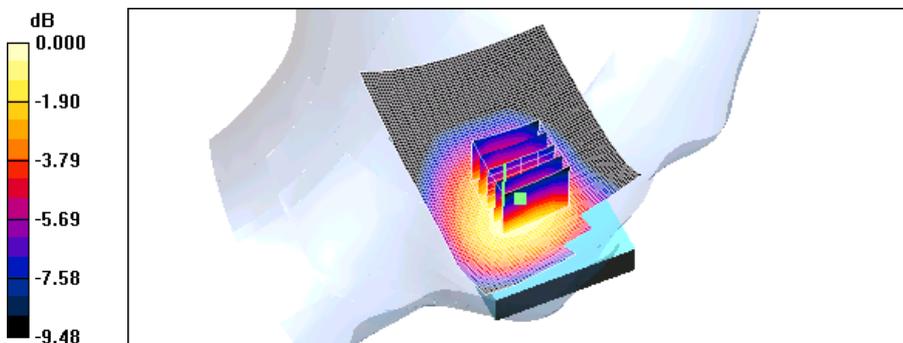
Reference Value = 34.2 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.736 mW/g

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

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



0 dB = 1.12mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 848.31$ MHz; $\sigma = 0.902$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left touch 777/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Left touch 777/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

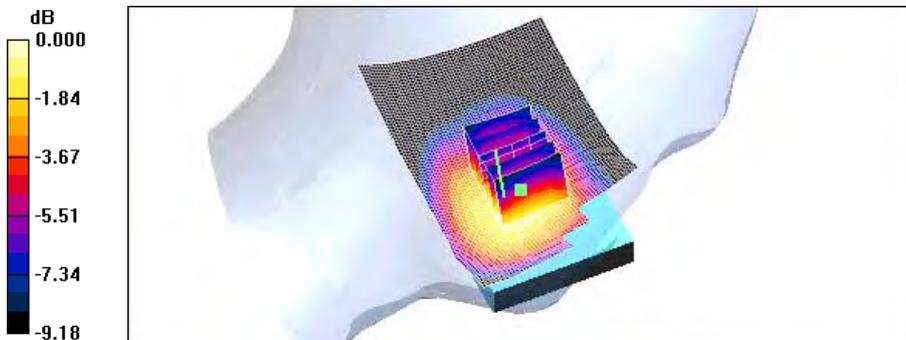
Reference Value = 35.8 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.843 mW/g

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

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



0 dB = 1.23mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

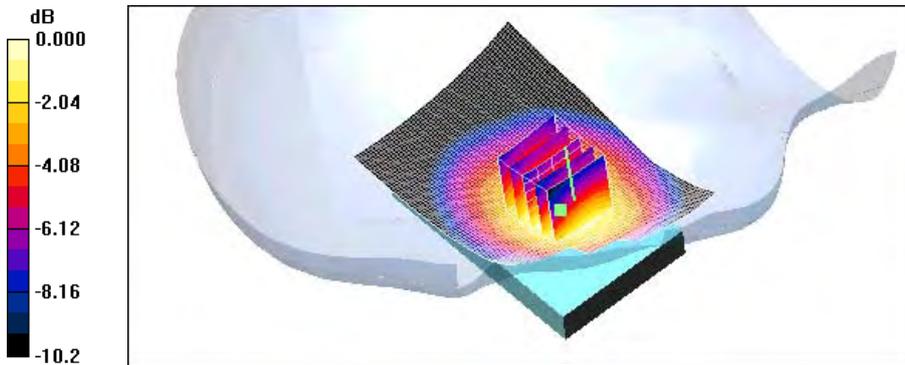
Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 825$ MHz; $\sigma = 0.881$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right touch 1013/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.34 mW/g

Right touch 1013/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 39.4 V/m; Power Drift = 0.198 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.974 mW/g
Maximum value of SAR (measured) = 1.40 mW/g



0 dB = 1.40mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right touch 384/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.38 mW/g

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

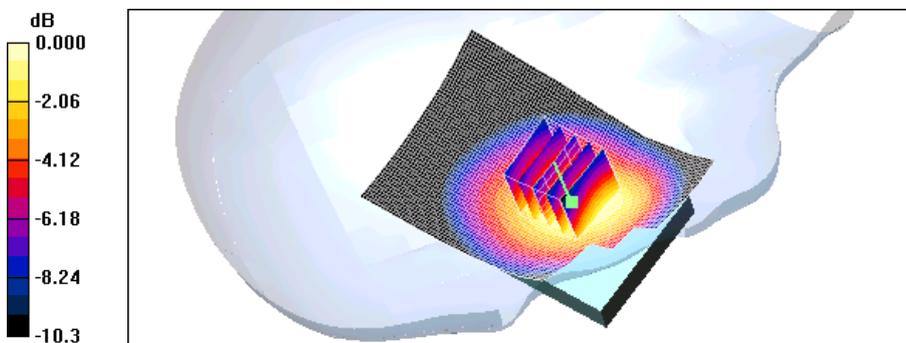
Reference Value = 39.2 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 1.31 mW/g; SAR(10 g) = 0.932 mW/g

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

Maximum value of SAR (measured) = 1.39 mW/g



0 dB = 1.39mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 848.31 \text{ MHz}$; $\sigma = 0.902 \text{ mho/m}$; $\epsilon_r = 42$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right touch 777/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Right touch 777/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

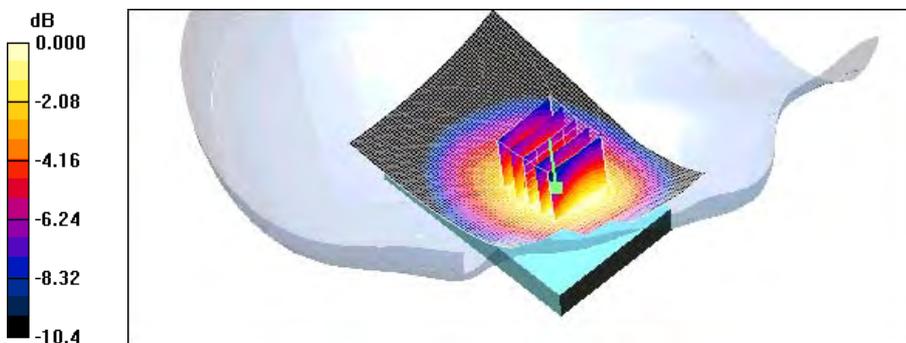
Reference Value = 40.1 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 1.70 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 1 mW/g

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

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



0 dB = 1.45mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

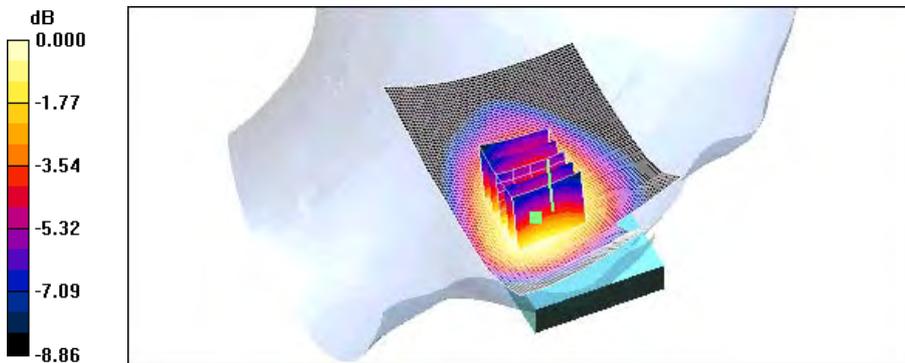
Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 825$ MHz; $\sigma = 0.881$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left touch 1013/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.809 mW/g

Left touch 1013/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.2 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.914 W/kg
SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.580 mW/g
Maximum value of SAR (measured) = 0.790 mW/g



0 dB = 0.790mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right touch 384/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

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

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

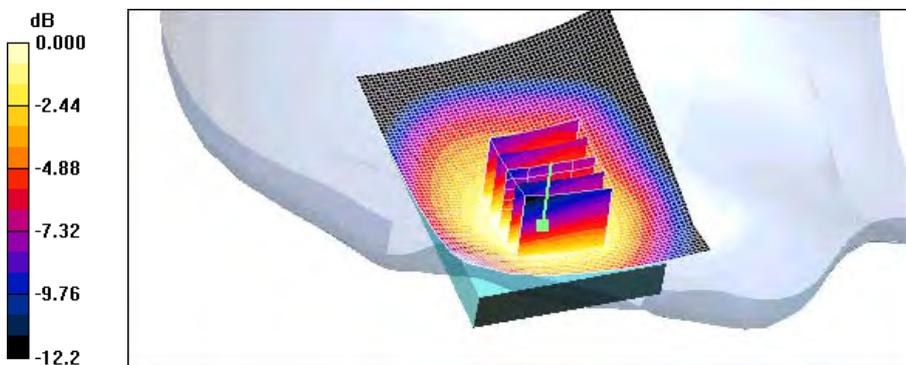
Reference Value = 24.3 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.612 mW/g; SAR(10 g) = 0.431 mW/g

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

Maximum value of SAR (measured) = 0.656 mW/g



0 dB = 0.656mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left tilt 384/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.565 mW/g

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

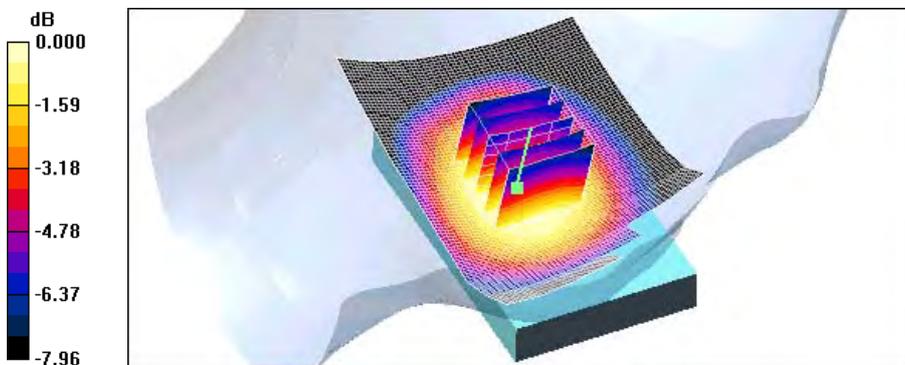
Reference Value = 22.6 V/m; Power Drift = -0.179 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.530 mW/g; SAR(10 g) = 0.410 mW/g

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

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



0 dB = 0.559mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right tilt 384/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.493 mW/g

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

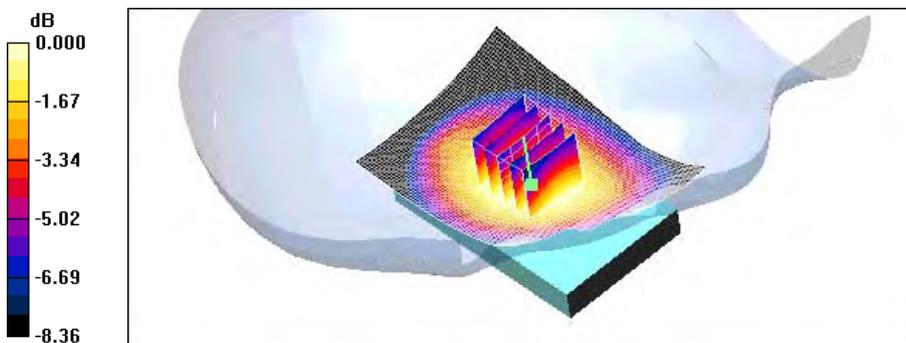
Reference Value = 21.7 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 0.546 W/kg

SAR(1 g) = 0.480 mW/g; SAR(10 g) = 0.376 mW/g

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

Maximum value of SAR (measured) = 0.500 mW/g



0 dB = 0.500mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Left tilt 384/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.348 mW/g

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

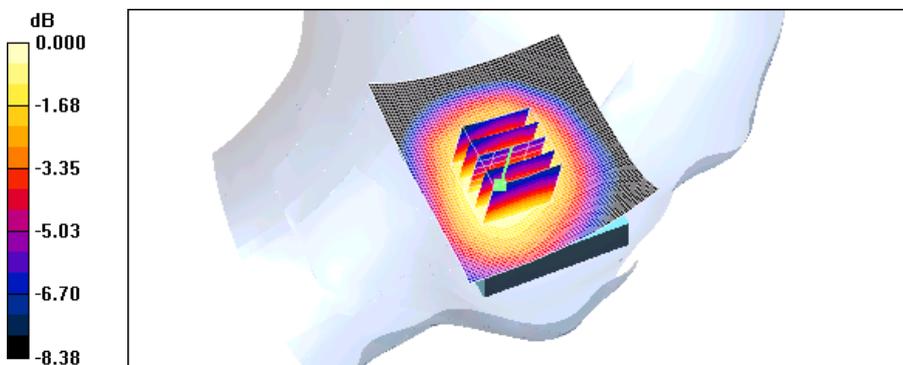
Reference Value = 14.5 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.392 W/kg

SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.254 mW/g

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

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



0 dB = 0.345mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right tilt 384/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.311 mW/g

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

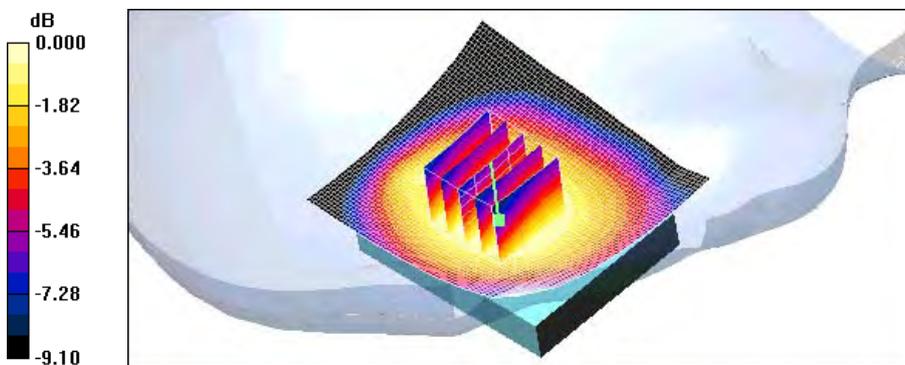
Reference Value = 14.0 V/m; Power Drift = -0.113 dB

Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.224 mW/g

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

Maximum value of SAR (measured) = 0.305 mW/g



0 dB = 0.305mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1851.25$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 25/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.57 mW/g

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

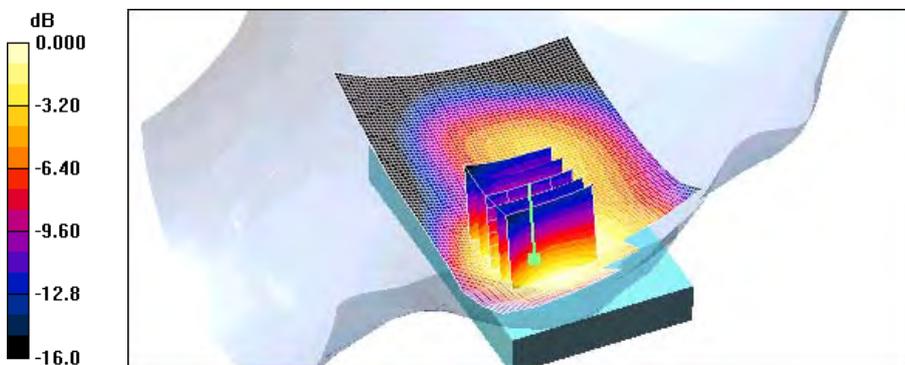
Reference Value = 30.1 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 1.90 W/kg

SAR(1 g) = 1.37 mW/g; SAR(10 g) = 0.850 mW/g

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

Maximum value of SAR (measured) = 1.50 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

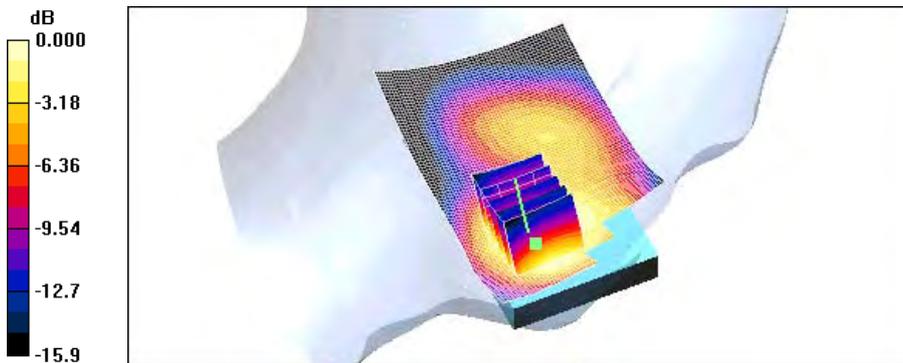
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 600/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.928 mW/g

Left touch 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.7 V/m; Power Drift = 0.094 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.863 mW/g; SAR(10 g) = 0.527 mW/g
Maximum value of SAR (measured) = 0.926 mW/g



0 dB = 0.926mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; 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; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 1175/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.13 mW/g

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

Reference Value = 24.4 V/m; Power Drift = -0.197 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.986 mW/g; SAR(10 g) = 0.582 mW/g

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

Maximum value of SAR (measured) = 1.08 mW/g

Left touch 1175/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

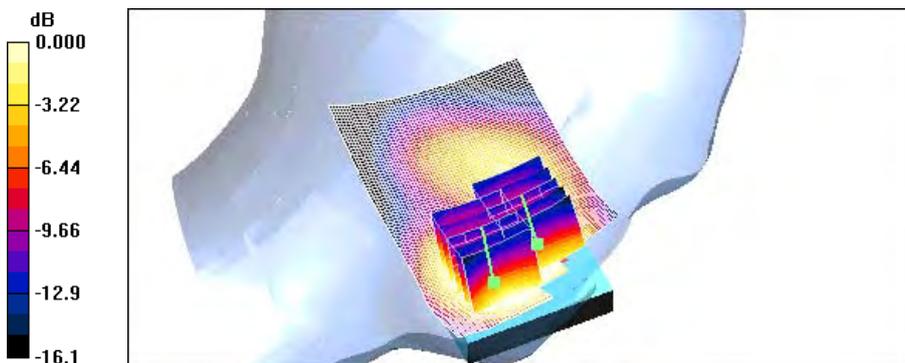
Reference Value = 24.4 V/m; Power Drift = -0.197 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.840 mW/g; SAR(10 g) = 0.509 mW/g

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

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



0 dB = 0.912mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1851.25$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right touch 25/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.15 mW/g

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

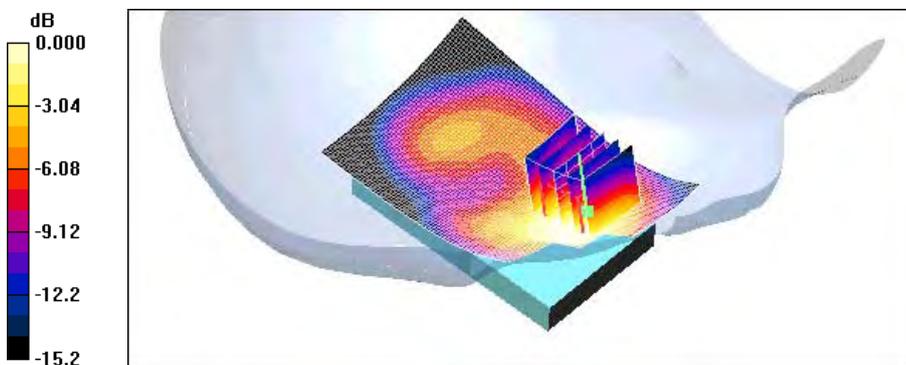
Reference Value = 26.3 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.652 mW/g

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

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



0 dB = 1.14mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

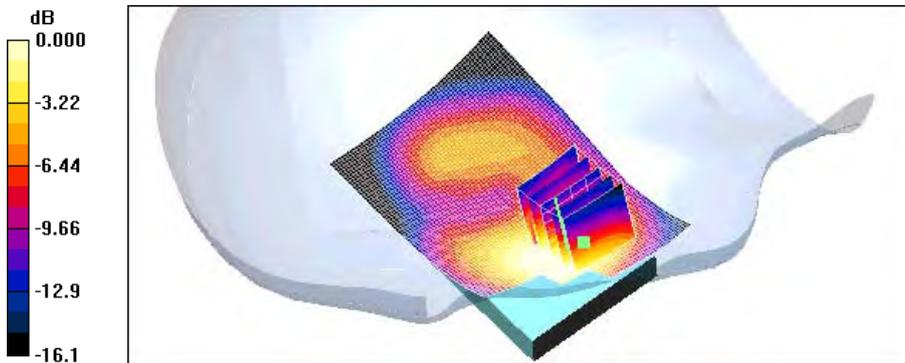
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right touch 600/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.09 mW/g

Right touch 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.9 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.971 mW/g; SAR(10 g) = 0.606 mW/g
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; 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; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right touch 1175/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

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

Reference Value = 26.2 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.676 mW/g

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

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

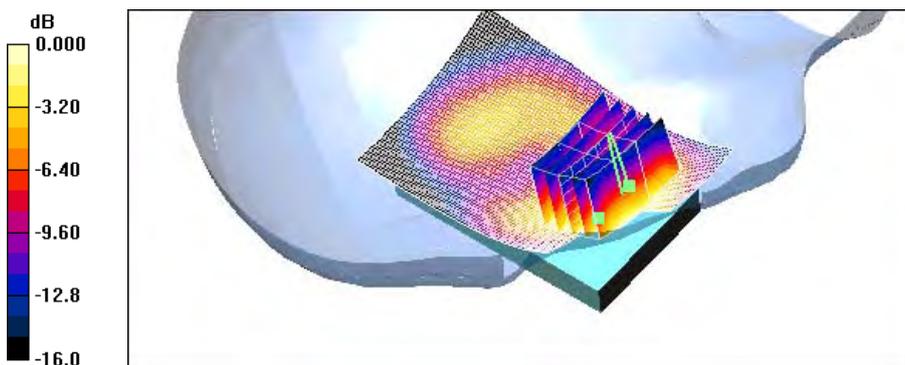
Right touch 1175/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.2 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.591 mW/g

Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

Communication System: PCS 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1851.25$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 25/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

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

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

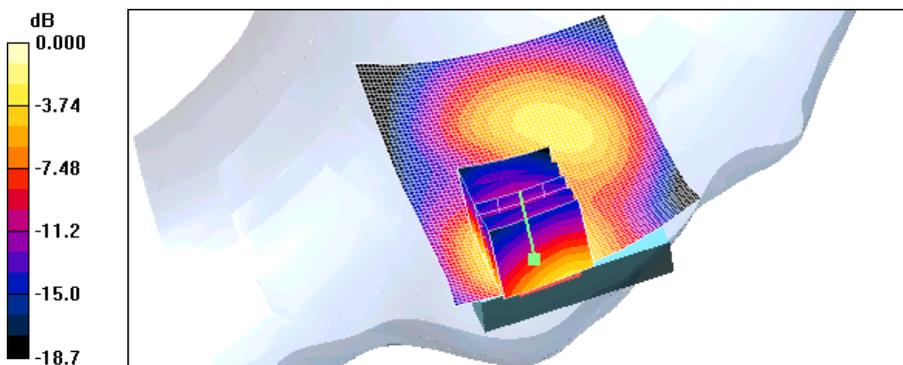
Reference Value = 24.7 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 1 mW/g; SAR(10 g) = 0.542 mW/g

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

Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

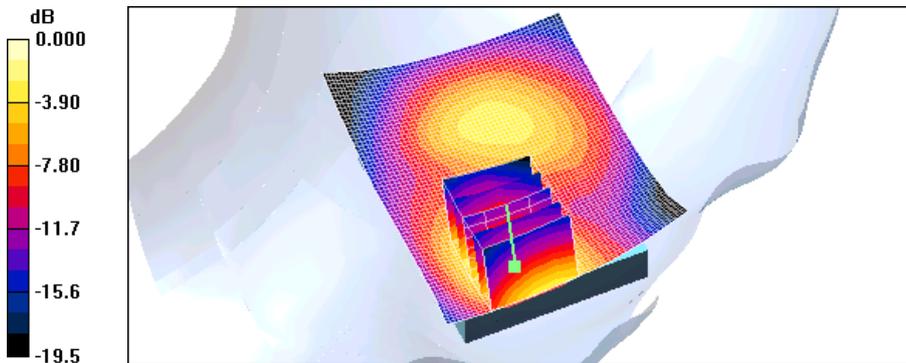
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 600/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.822 mW/g

Left touch 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.8 V/m; Power Drift = 0.080 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.831 mW/g; SAR(10 g) = 0.448 mW/g
Maximum value of SAR (measured) = 0.927 mW/g



0 dB = 0.927mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; 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; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 1175/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.61 mW/g

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

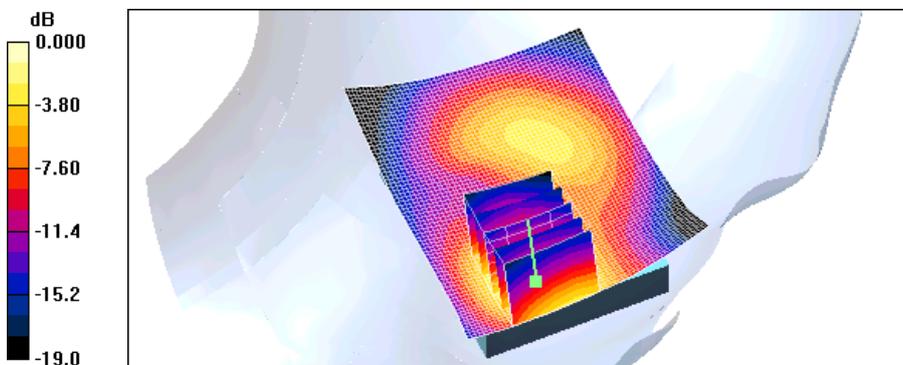
Reference Value = 28.2 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.733 mW/g

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

Maximum value of SAR (measured) = 1.56 mW/g



0 dB = 1.56mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

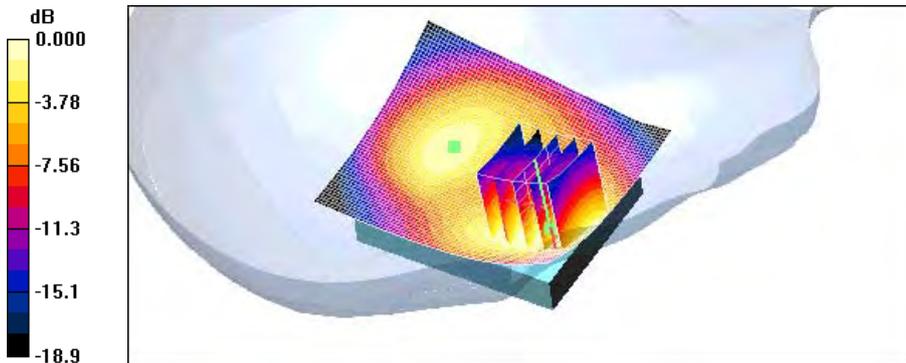
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right touch 600/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.792 mW/g

Right touch 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = -0.052 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.710 mW/g; SAR(10 g) = 0.404 mW/g
Maximum value of SAR (measured) = 0.777 mW/g



0 dB = 0.777mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

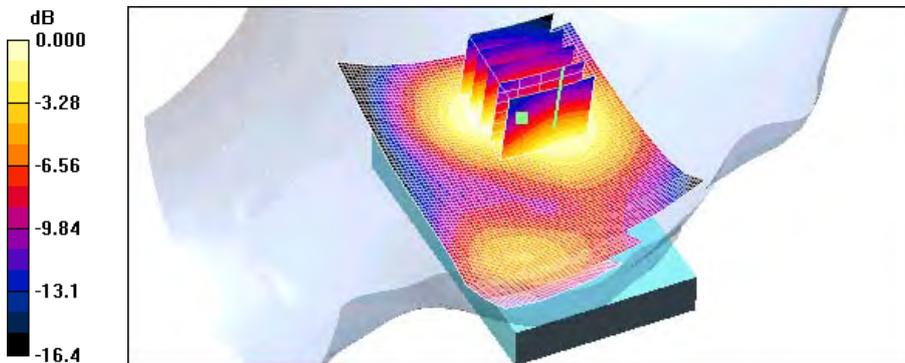
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left tilt 600/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.596 mW/g

Left tilt 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.718 W/kg
SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.334 mW/g
Maximum value of SAR (measured) = 0.552 mW/g



0 dB = 0.552mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

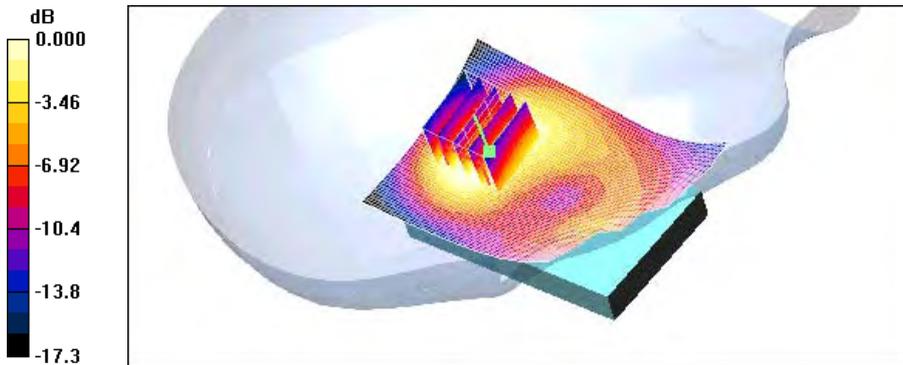
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right tilt 600/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.632 mW/g

Right tilt 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.88 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.565 mW/g; SAR(10 g) = 0.340 mW/g
Maximum value of SAR (measured) = 0.587 mW/g



0 dB = 0.587mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

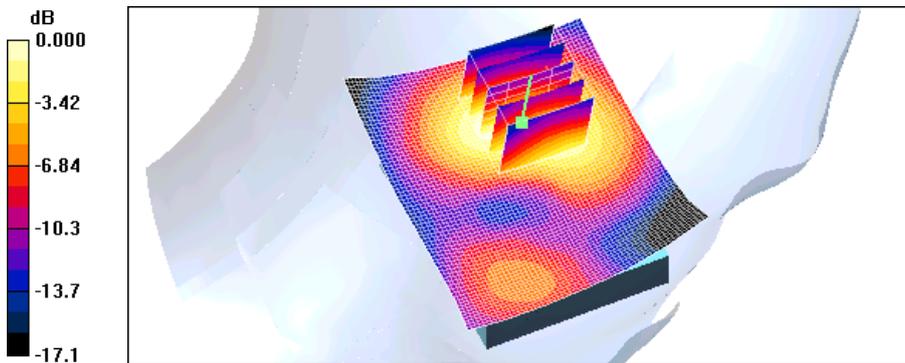
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left tilt 600/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.643 mW/g

Left tilt 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.22 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.812 W/kg
SAR(1 g) = 0.563 mW/g; SAR(10 g) = 0.347 mW/g
Maximum value of SAR (measured) = 0.603 mW/g



0 dB = 0.603mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

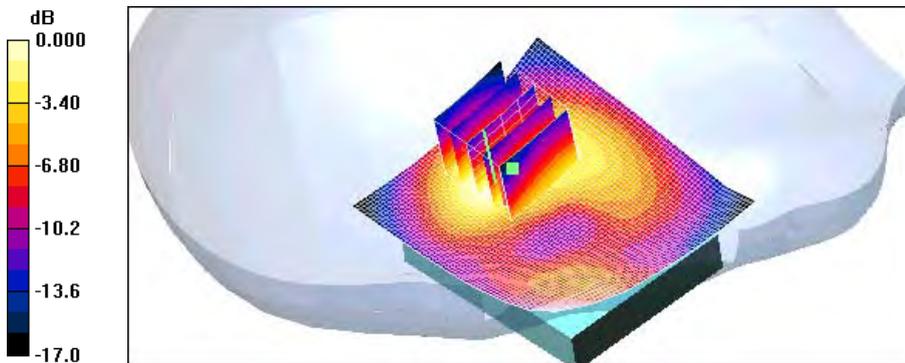
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right tilt 600/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.545 mW/g

Right tilt 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.47 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 0.709 W/kg
SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.307 mW/g
Maximum value of SAR (measured) = 0.558 mW/g



0 dB = 0.558mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.91, 5.91, 5.91); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- 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) = 0.539 mW/g

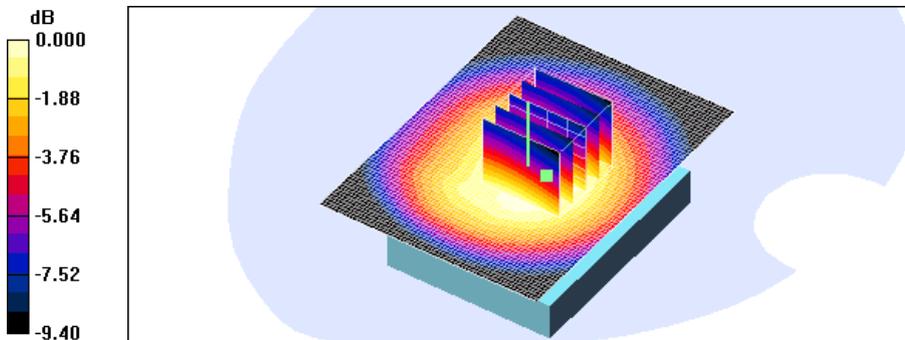
CDMA Body 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 0.635 W/kg

SAR(1 g) = 0.491 mW/g; SAR(10 g) = 0.356 mW/g

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



0 dB = 0.519mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.91, 5.91, 5.91); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- 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) = 0.147 mW/g

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

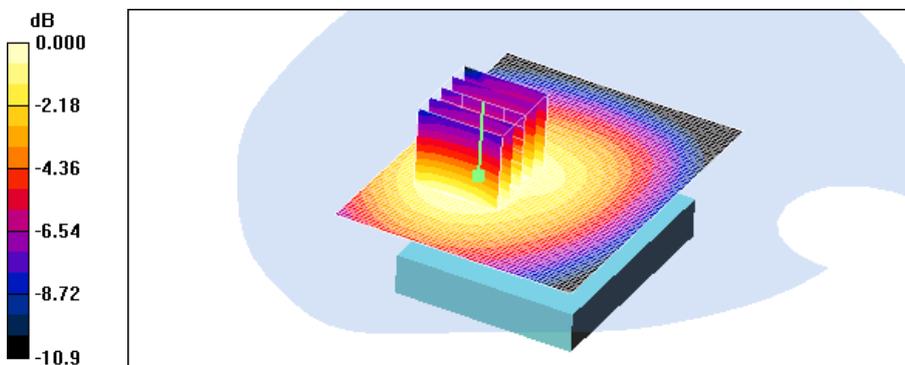
Reference Value = 7.80 V/m; Power Drift = -0.207 dB

Peak SAR (extrapolated) = 0.186 W/kg

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.107 mW/g

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

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



0 dB = 0.154mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.91, 5.91, 5.91); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- 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) = 0.482 mW/g

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

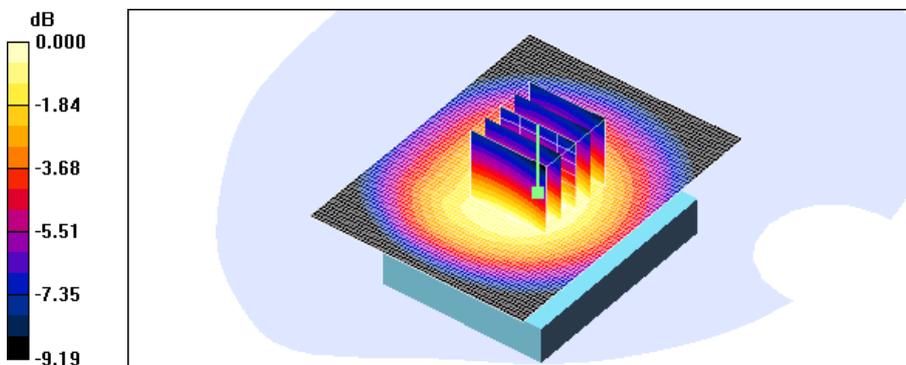
Reference Value = 14.7 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 0.598 W/kg

SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.335 mW/g

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

Maximum value of SAR (measured) = 0.490 mW/g



0 dB = 0.490mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

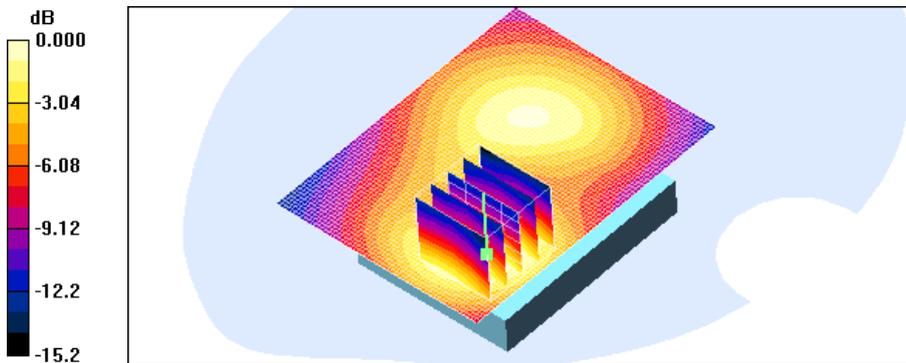
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.48, 4.48, 4.48); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

PCS Body 600/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.292 mW/g

PCS Body 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.065 dB
Peak SAR (extrapolated) = 0.346 W/kg
SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.157 mW/g
Maximum value of SAR (measured) = 0.282 mW/g



0 dB = 0.282mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

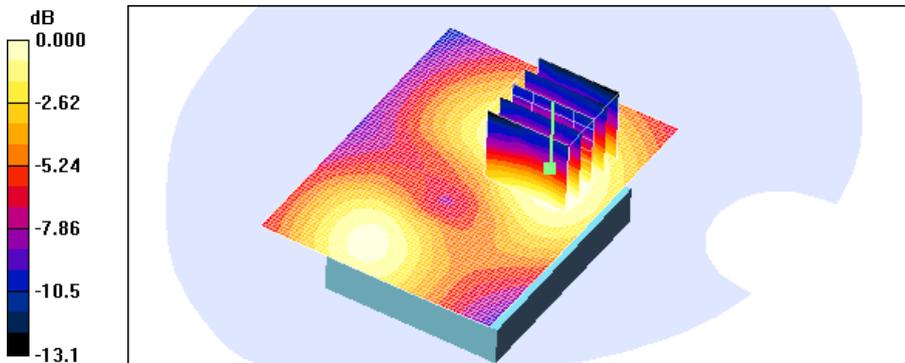
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.48, 4.48, 4.48); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

PCS Body 600/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.167 mW/g

PCS Body 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.80 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.185 W/kg
SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.098 mW/g
Maximum value of SAR (measured) = 0.160 mW/g



0 dB = 0.160mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

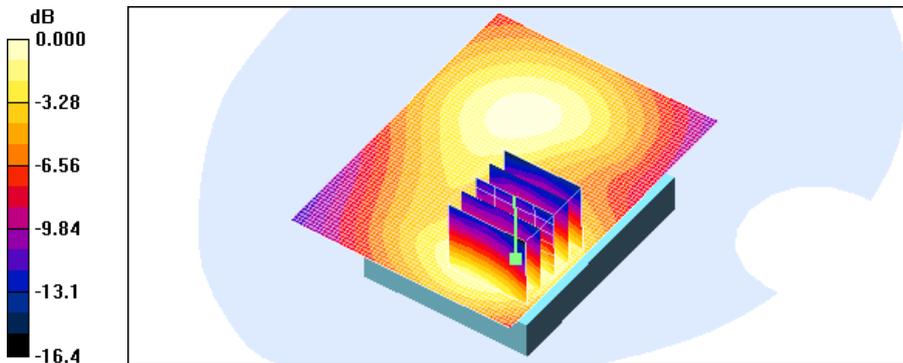
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.48, 4.48, 4.48); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

PCS Body 600/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.235 mW/g

PCS Body 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.280 W/kg
SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.224 mW/g



0 dB = 0.224mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 1ch/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

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

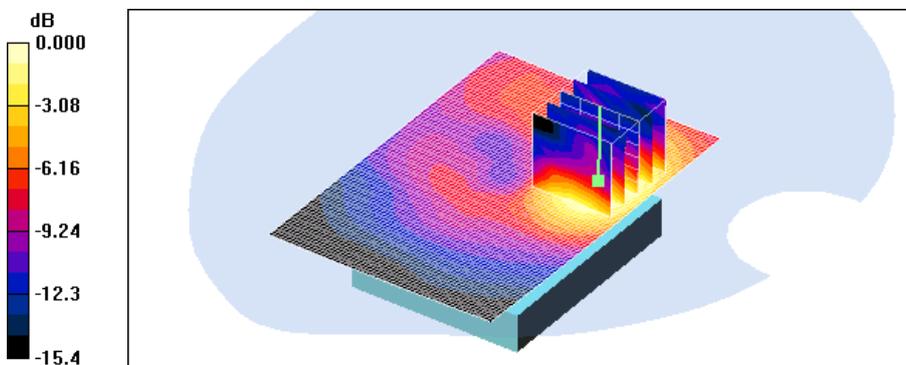
802.11b 1ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.25 V/m; Power Drift = -0.191 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.033 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.063mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 1ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.085 mW/g

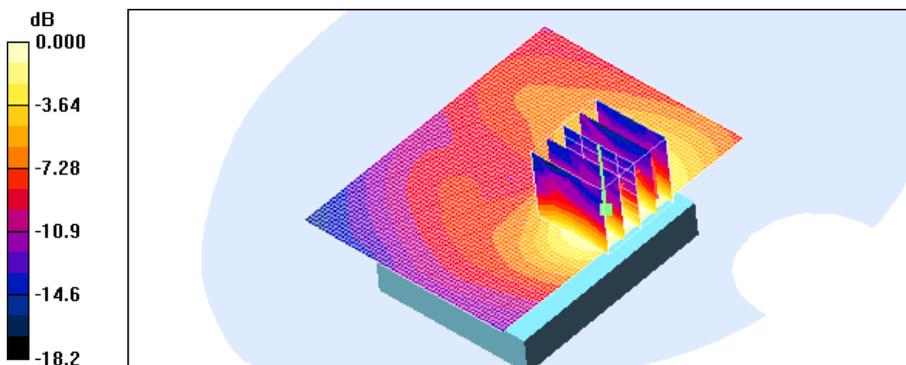
802.11b 1ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.93 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.142 W/kg

SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.041 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.080 mW/g



0 dB = 0.080mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 1ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.091 mW/g

802.11b 1ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

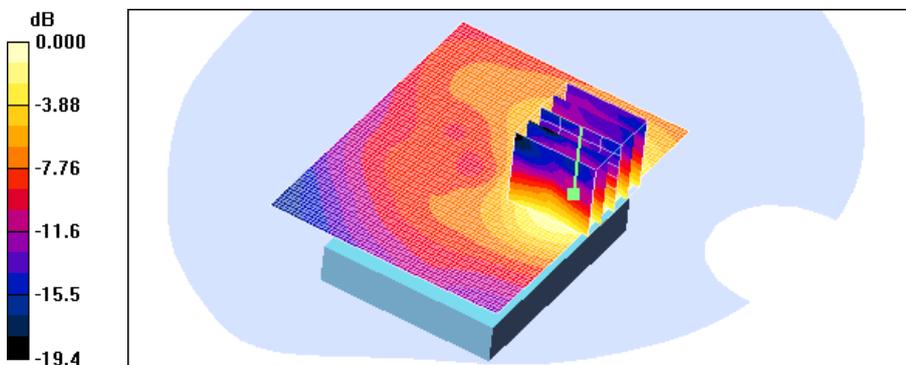
Reference Value = 3.97 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 0.167 W/kg

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.045 mW/g

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

Maximum value of SAR (measured) = 0.089 mW/g



0 dB = 0.089mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 1ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.094 mW/g

802.11b 1ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

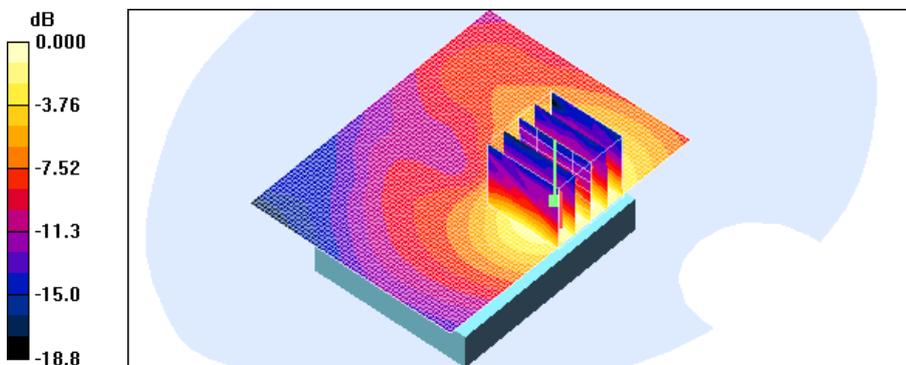
Reference Value = 3.99 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.174 W/kg

SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.047 mW/g

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

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



0 dB = 0.093mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 6ch/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.069 mW/g

802.11b 6ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

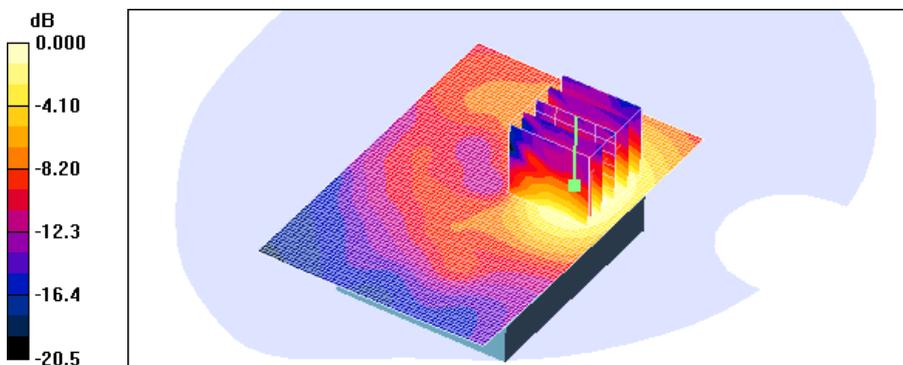
Reference Value = 3.09 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.036 mW/g

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

Maximum value of SAR (measured) = 0.070 mW/g



0 dB = 0.070mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 6ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.080 mW/g

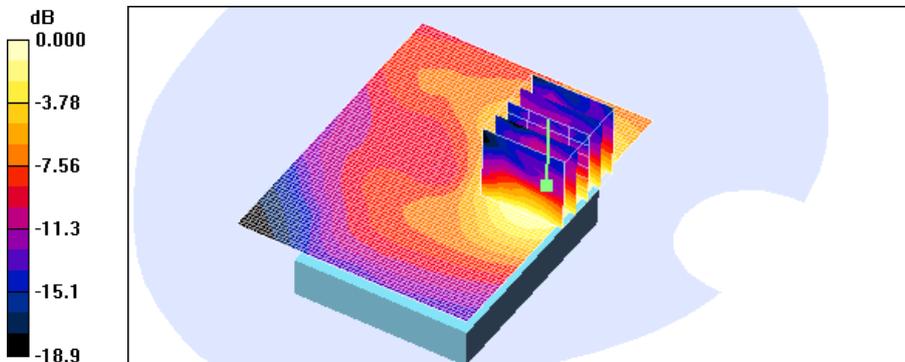
802.11b 6ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.65 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 0.140 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.039 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.078 mW/g



0 dB = 0.078mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 6ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.091 mW/g

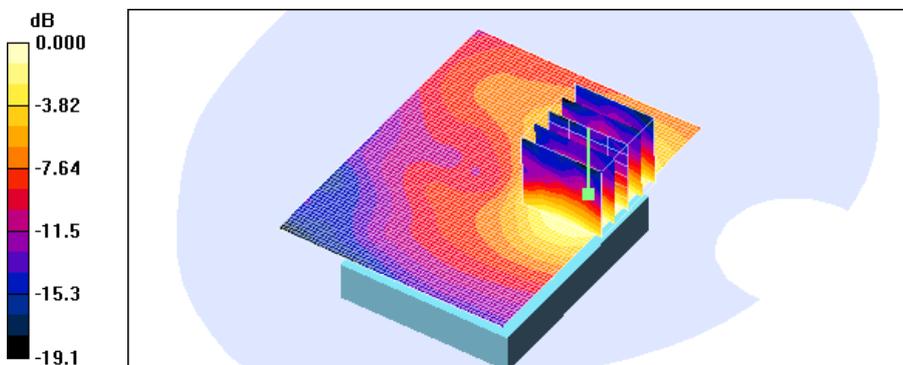
802.11b 6ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.83 V/m; Power Drift = 0.172 dB

Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.045 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.089 mW/g



0 dB = 0.089mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 6ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.083 mW/g

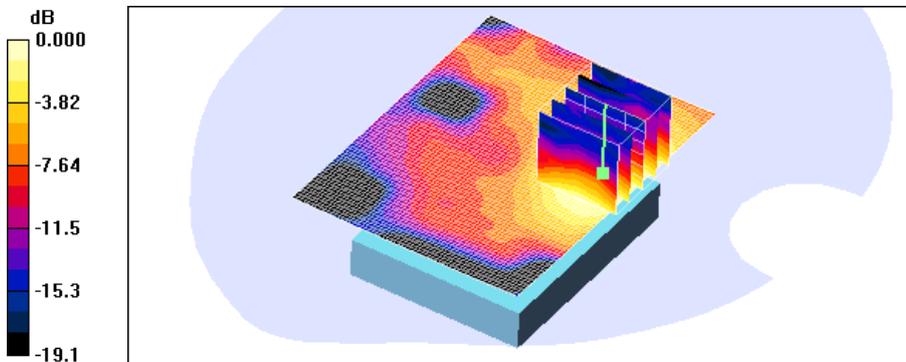
802.11b 6ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.82 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.148 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.041 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.082 mW/g



0 dB = 0.082mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 11ch/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.066 mW/g

802.11b 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

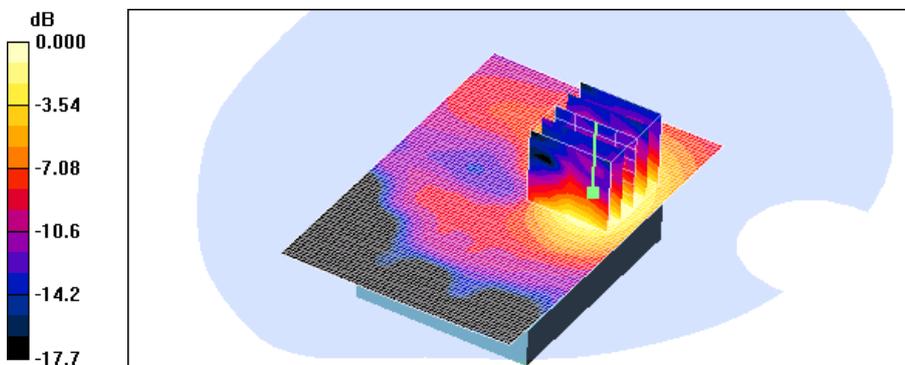
Reference Value = 3.22 V/m; Power Drift = 0.167 dB

Peak SAR (extrapolated) = 0.138 W/kg

SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.034 mW/g

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

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



0 dB = 0.067mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 11ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.092 mW/g

802.11b 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

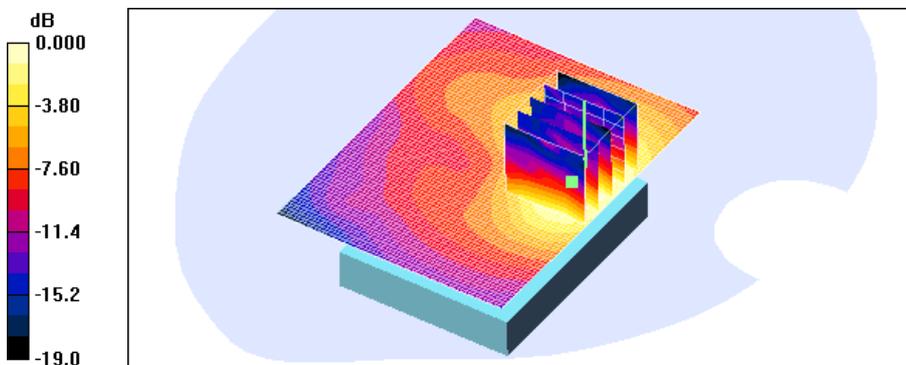
Reference Value = 4.29 V/m; Power Drift = 0.129 dB

Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.042 mW/g

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

Maximum value of SAR (measured) = 0.088 mW/g



0 dB = 0.088mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 11ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.094 mW/g

802.11b 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

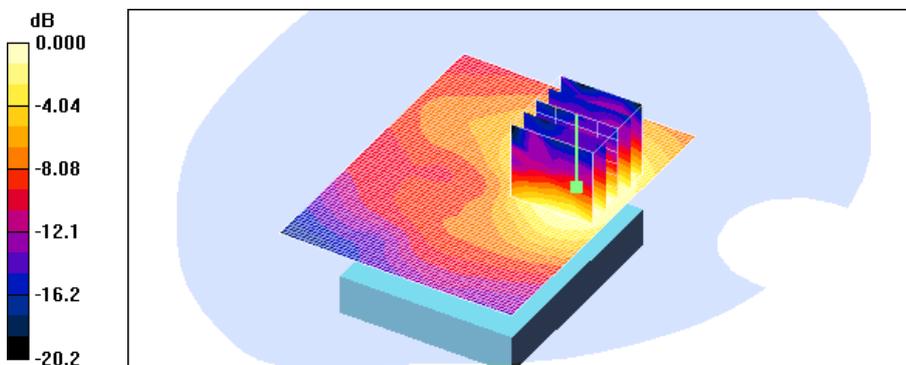
Reference Value = 4.81 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.047 mW/g

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

Maximum value of SAR (measured) = 0.094 mW/g



0 dB = 0.094mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 11ch/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.086 mW/g

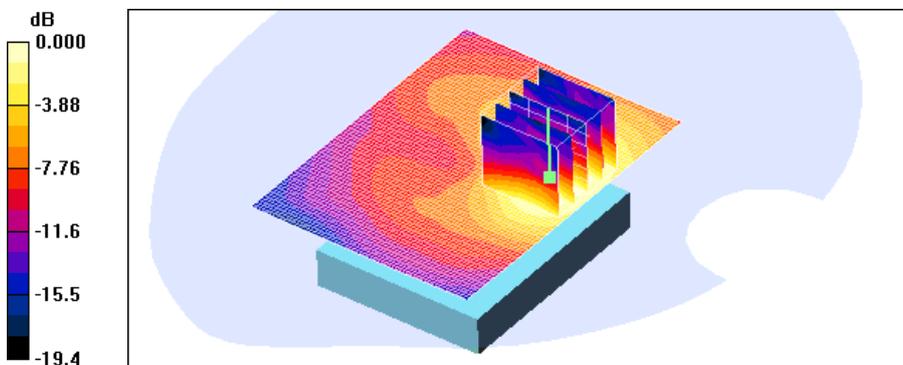
802.11b 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.27 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.043 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.086 mW/g



0 dB = 0.086mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.21, 4.21, 4.21); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

802.11b 11ch/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.010 mW/g

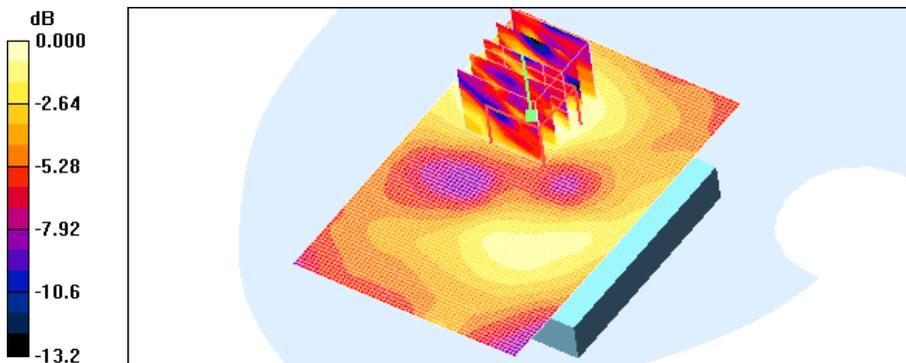
802.11b 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.05 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.019 W/kg

SAR(1 g) = 0.00658 mW/g; SAR(10 g) = 0.00236 mW/g

Maximum value of SAR (measured) = 0.010 mW/g



0 dB = 0.010mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.4 °C
Ambient Temperature: 21.5 °C
Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 848.31$ MHz; $\sigma = 0.902$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 835/900 Phantom ; Type: SAM

Right touch 777/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Right touch 777/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

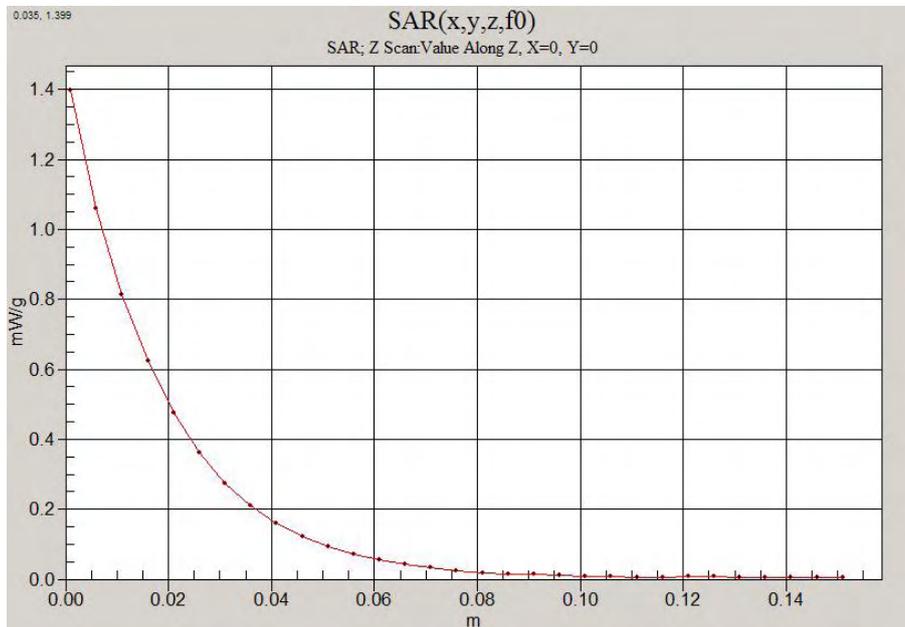
Reference Value = 40.1 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 1.70 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 1 mW/g

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

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



Test Laboratory: HCT CO., LTD
 EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
 Liquid Temperature: 21.4 °C
 Ambient Temperature: 21.5 °C
 Test Date: Jan.20, 2010

DUT: PB10ZU; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.91, 5.91, 5.91); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- 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) = 0.539 mW/g

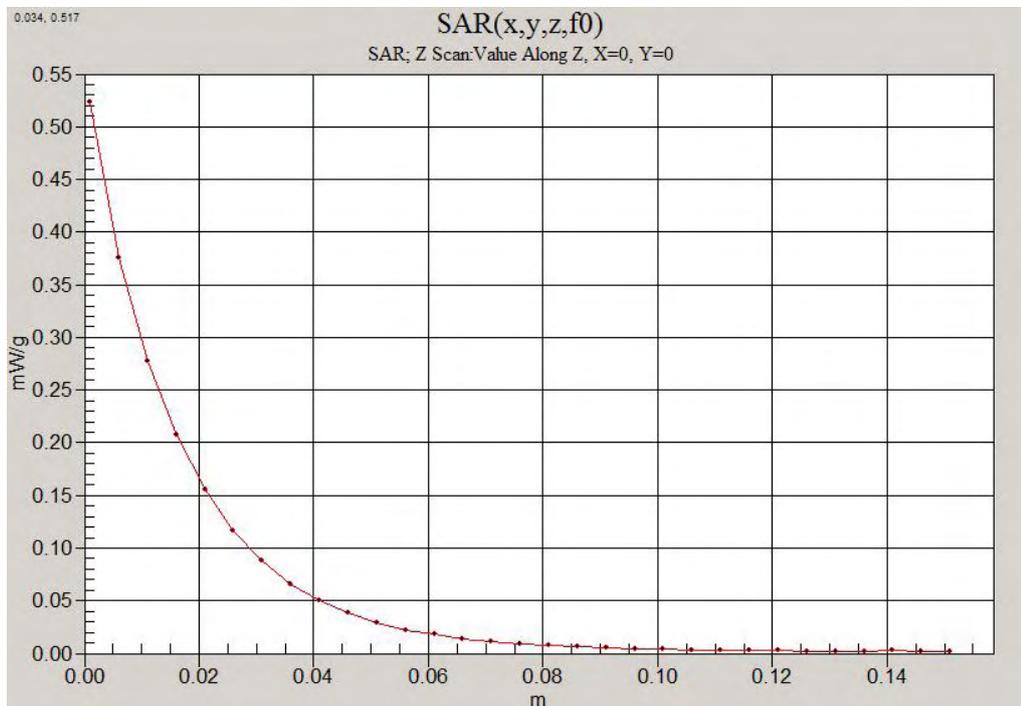
CDMA Body 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 0.635 W/kg

SAR(1 g) = 0.491 mW/g; SAR(10 g) = 0.356 mW/g

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



Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; 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; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 1175/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.61 mW/g

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

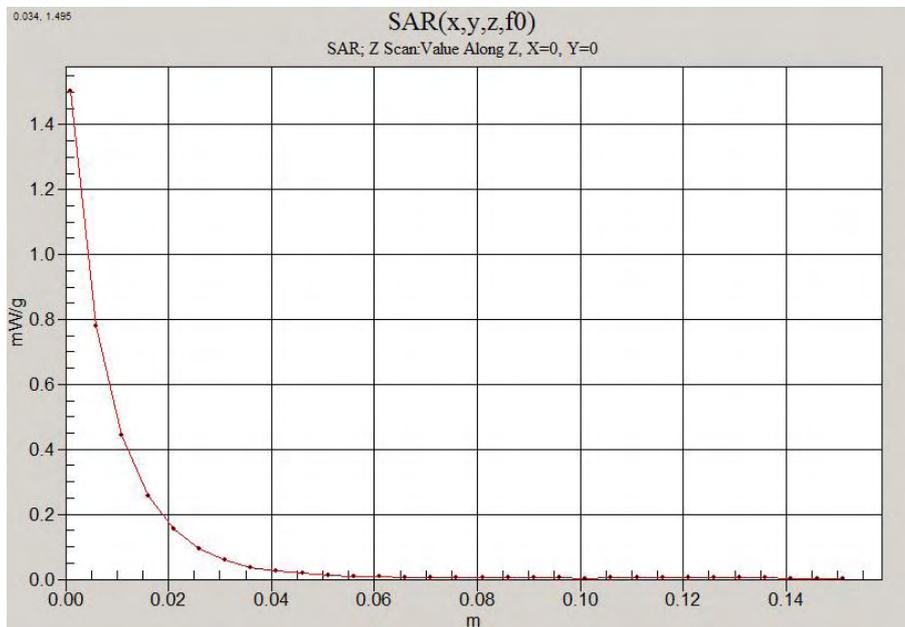
Reference Value = 28.2 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.733 mW/g

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

Maximum value of SAR (measured) = 1.56 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: Slide Dual-band CDMA Phone with Bluetooth/WLAN
Liquid Temperature: 21.2 °C
Ambient Temperature: 21.6 °C
Test Date: Jan.21, 2010

DUT: PB10ZU; Serial: #1

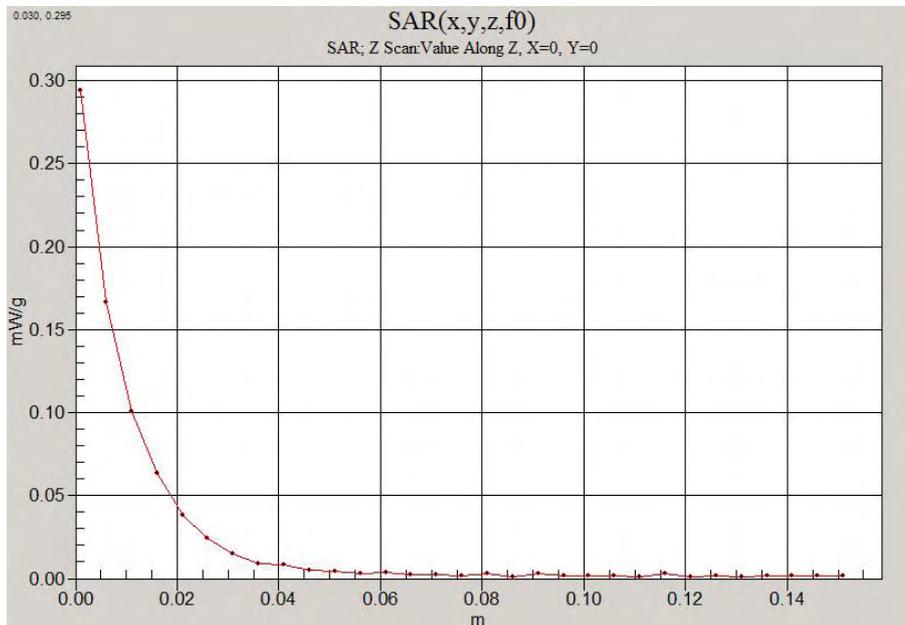
Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(4.48, 4.48, 4.48); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: 1800/1900 Phantom; Type: SAM

PCS Body 600/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.292 mW/g

PCS Body 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.065 dB
Peak SAR (extrapolated) = 0.346 W/kg
SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.157 mW/g
Maximum value of SAR (measured) = 0.282 mW/g



Attachment 2. – Dipole Validation Plots

■ Validation Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20dBm)
Liquid Temp: 21.4 °C
Test Date: Jan.20, 2010

DUT: Dipole 835 MHz;; Serial: D835V2 – SN:441

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.89 \text{ mho/m}$; $\epsilon_r = 42.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 – SN1631; ConvF(5.83, 5.83, 5.83); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: SAM 835/900 MHz; Type: SAM

Validation 835MHz/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (interpolated) = 1.05 mW/g

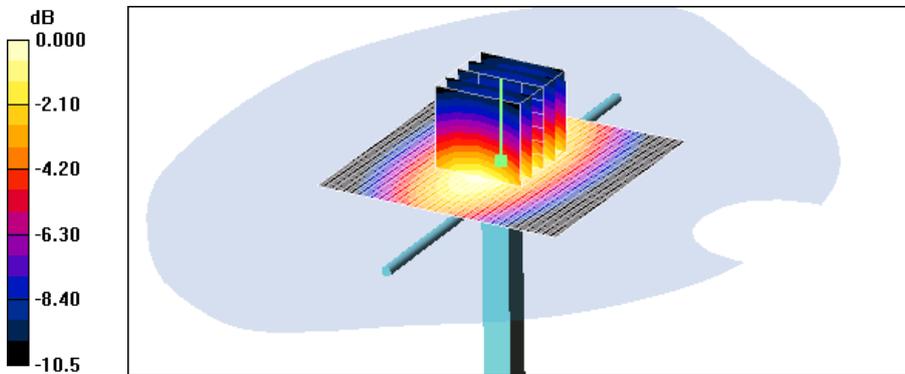
Validation 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.8 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.967 mW/g; SAR(10 g) = 0.636 mW/g

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



0 dB = 1.05mW/g

■ Validation Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20dBm)
Liquid Temp: 21.2 °C
Test Date: Jan.21, 2010

DUT: Dipole 1900 MHz;; Serial: D1900V2 - SN:5d032

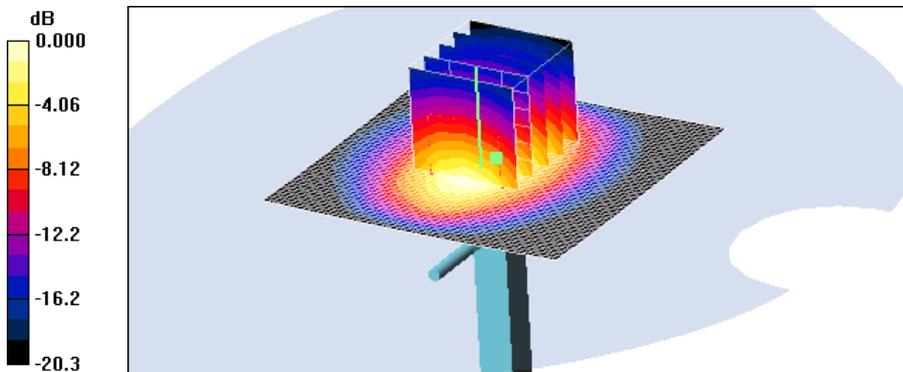
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 - SN1631; ConvF(5.07, 5.07, 5.07); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.89 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.5 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 7.01 W/kg
SAR(1 g) = 4.09 mW/g; SAR(10 g) = 2.1 mW/g
Maximum value of SAR (measured) = 4.60 mW/g



0 dB = 4.60mW/g

■ Validation Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20 dBm)
Liquid Temp: 21.4 °C
Test Date: Jan.20, 2010

DUT: Dipole 2450 MHz; Serial: D2450V2 – SN:743

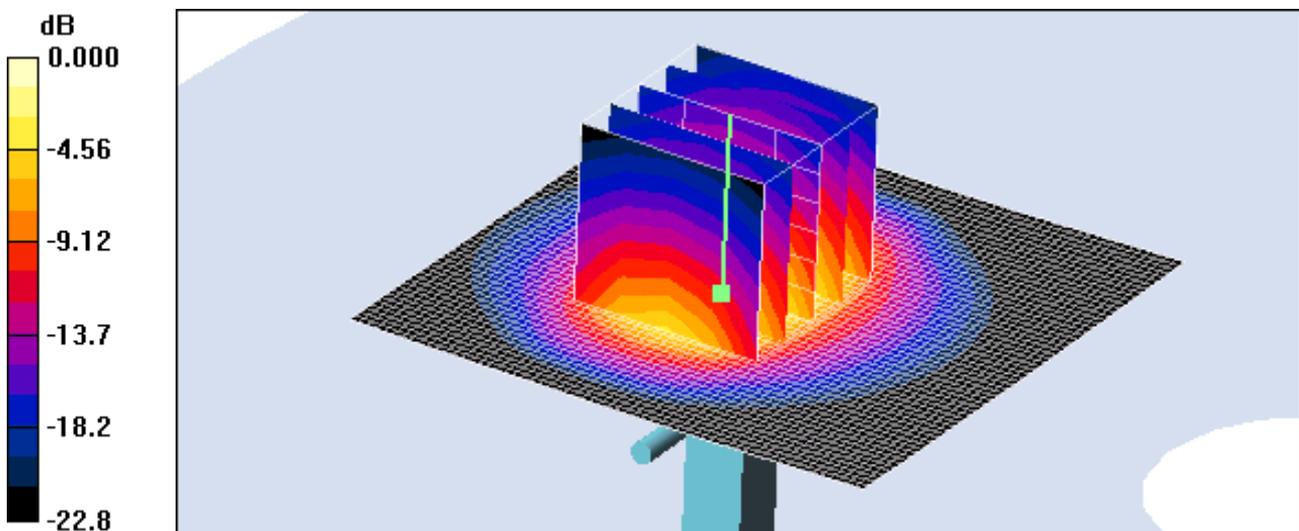
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:

- Probe: ET3DV6 – SN1631; ConvF(4.52, 4.52, 4.52); Calibrated: 2009-06-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2009-05-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 2450MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.55 mW/g

Validation 2450MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.9 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 11.6 W/kg
SAR(1 g) = 5.36 mW/g; SAR(10 g) = 2.49 mW/g
Maximum value of SAR (measured) = 5.92 mW/g



0 dB = 5.92mW/g

Validation Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power 100 mW (20 dBm)
 Liquid Temp: 21.4 °C
 Test Date: Jan.20, 2010

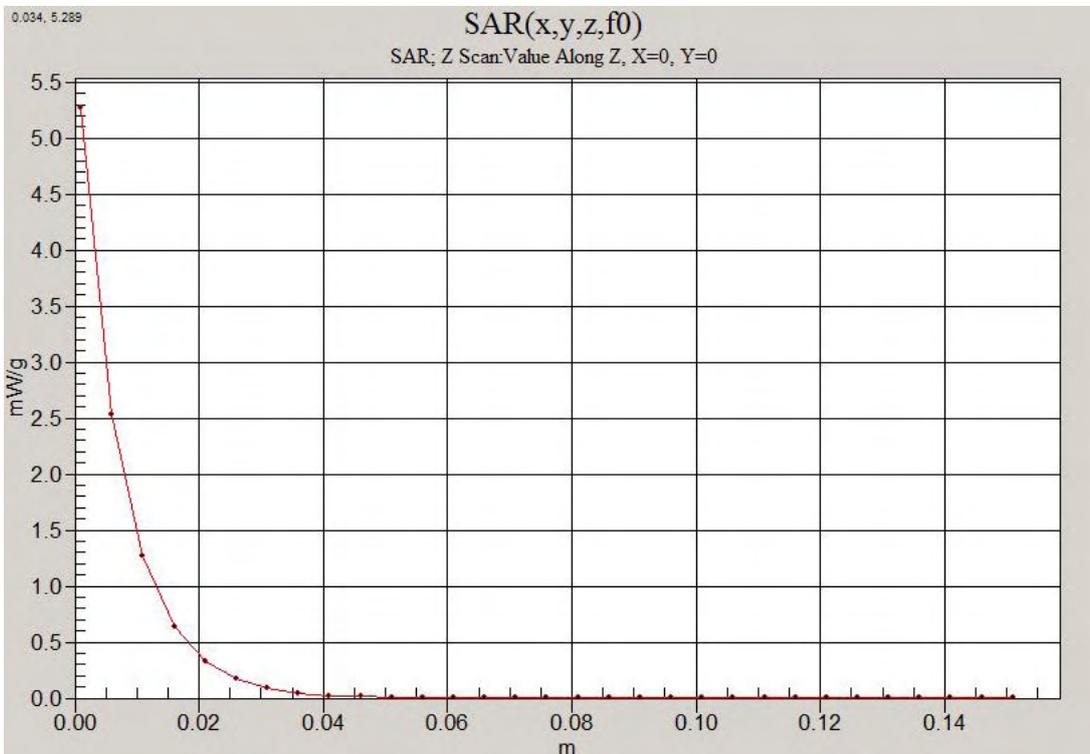
DUT: Dipole 2450 MHz; Serial: D2450V2 – SN:743

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.83 \text{ mho/m}$; $\epsilon_r = 39.5$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 176

DASY4 Configuration:
 - Probe: ET3DV6 - SN1631; ConvF(4.52, 4.52, 4.52); Calibrated: 2009-06-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn446; Calibrated: 2009-05-22
 - Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 2450MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (interpolated) = 6.55 mW/g

Validation 2450MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 61.9 V/m; Power Drift = -0.124 dB
 Peak SAR (extrapolated) = 11.6 W/kg
SAR(1 g) = 5.36 mW/g; SAR(10 g) = 2.49 mW/g
 Maximum value of SAR (measured) = 5.92 mW/g



■ Dielectric Parameter (835 MHz Head)

Title PB10ZU
SubTitle CDMA835(Head)
Test Date Jan.20, 2010

Frequency	e'	e''
800000000	42.4669	19.2702
805000000	42.4195	19.2095
810000000	42.3689	19.1934
815000000	42.3284	19.1910
820000000	42.2867	19.1622
825000000	42.2301	19.1910
830000000	42.1384	19.1662
835000000	42.1174	19.1639
840000000	42.0819	19.1082
845000000	42.0209	19.1073
850000000	41.9841	19.1151
855000000	41.9338	19.0906
860000000	41.8572	19.0793
865000000	41.7772	19.1050
870000000	41.7471	19.0705
875000000	41.6991	19.0769
880000000	41.5818	19.0333
885000000	41.5746	19.0181
890000000	41.4544	19.0416
895000000	41.4418	19.0033
900000000	41.3500	19.0138

■ Dielectric Parameter (835 MHz Body)

Title PB10ZU
SubTitle CDMA835(Body)
Test Date Jan.20, 2010

Frequency	e'	e''
800000000	54.8598	21.1925
805000000	54.8267	21.1294
810000000	54.7442	21.0741
815000000	54.6477	21.0678
820000000	54.5879	21.0161
825000000	54.4847	21.0507
830000000	54.4505	20.9912
835000000	54.3547	20.9739
840000000	54.3079	20.9535
845000000	54.2397	20.9404
850000000	54.2198	20.9241
855000000	54.2004	20.9472
860000000	54.1482	20.9398
865000000	54.1960	20.9524
870000000	54.1597	20.9453
875000000	54.1803	20.9678
880000000	54.1864	20.9544
885000000	54.1376	20.9414
890000000	54.1650	20.9160
895000000	54.1493	20.8891
900000000	54.0454	20.8866

■ Dielectric Parameter (1900 MHz Head)

Title PB10ZU
SubTitle PCS1900(Head)
Test Date Jan.21, 2010

Frequency	e'	e''
1800000000	41.9787	12.8912
1810000000	41.9207	12.8983
1820000000	41.9099	12.9800
1830000000	41.9044	13.0392
1840000000	41.8665	13.0703
1850000000	41.8331	13.0923
1860000000	41.7985	13.0967
1870000000	41.7345	13.1149
1880000000	41.6465	13.1680
1890000000	41.6171	13.2062
1900000000	41.5767	13.2215
1910000000	41.5045	13.2374
1920000000	41.4656	13.2734
1930000000	41.4368	13.3177
1940000000	41.4432	13.3496
1950000000	41.4278	13.3573
1960000000	41.4349	13.3913
1970000000	41.4191	13.4082
1980000000	41.3726	13.4227
1990000000	41.3680	13.4437
2000000000	41.2776	13.4900

■ Dielectric Parameter (1900 MHz Body)

Title PB10ZU
SubTitle PCS1900(Body)
Test Date Jan.21, 2010

Frequency	e'	e''
1850000000	53.6613	14.1104
1855000000	53.6651	14.1001
1860000000	53.6564	14.1251
1865000000	53.6139	14.1599
1870000000	53.6306	14.1514
1875000000	53.5664	14.1790
1880000000	53.5524	14.2092
1885000000	53.5255	14.2306
1890000000	53.4652	14.2621
1895000000	53.4429	14.2692
1900000000	53.4199	14.2862
1905000000	53.3912	14.3126
1910000000	53.3531	14.3163
1915000000	53.3289	14.3366
1920000000	53.3201	14.3960
1925000000	53.3086	14.4182
1930000000	53.2538	14.4417
1935000000	53.3075	14.4509
1940000000	53.2642	14.4783
1945000000	53.2657	14.5281
1950000000	53.2794	14.4999

■ Dielectric Parameter (2450 MHz Head)

Title PB10ZU
SubTitle 2450 MHz(Head)
Test Date Jan.20, 2010

Frequency	e'	e''
2400000000.0000	39.6518	13.2600
2405000000.0000	39.6243	13.2540
2410000000.0000	39.5870	13.2760
2415000000.0000	39.5624	13.2762
2420000000.0000	39.5434	13.2828
2425000000.0000	39.5218	13.3255
2430000000.0000	39.5324	13.3464
2435000000.0000	39.5216	13.3912
2440000000.0000	39.5172	13.4136
2445000000.0000	39.4629	13.4398
2450000000.0000	39.4896	13.4552
2455000000.0000	39.4398	13.4664
2460000000.0000	39.4170	13.4825
2465000000.0000	39.4112	13.4953
2470000000.0000	39.3677	13.5323
2475000000.0000	39.3440	13.5045
2480000000.0000	39.3131	13.5393
2485000000.0000	39.2717	13.5552
2490000000.0000	39.2798	13.5729
2495000000.0000	39.2452	13.5832
2500000000.0000	39.2254	13.5750

■ Dielectric Parameter (2450 MHz Body)

Title PB10ZU
 SubTitle 2450 MHz (Body)
 Test Date Jan.20, 2010

Frequency	e'	e''
2400000000.0000	51.9824	14.0947
2405000000.0000	52.0092	14.1133
2410000000.0000	51.9591	14.1269
2415000000.0000	51.9093	14.1254
2420000000.0000	51.9029	14.1820
2425000000.0000	51.8616	14.1928
2430000000.0000	51.8207	14.2184
2435000000.0000	51.8057	14.2790
2440000000.0000	51.7838	14.2923
2445000000.0000	51.7484	14.3567
2450000000.0000	51.7366	14.3951
2455000000.0000	51.7045	14.4407
2460000000.0000	51.6776	14.4575
2465000000.0000	51.6919	14.5122
2470000000.0000	51.6852	14.5413
2475000000.0000	51.6600	14.5262
2480000000.0000	51.6767	14.5785
2485000000.0000	51.6334	14.5607
2490000000.0000	51.6388	14.5860
2495000000.0000	51.6177	14.6081
2500000000.0000	51.6352	14.6217

Attachment 3. – Probe Calibration Data

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
S Service suisse d'étalonnage
C Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **H-CT (Dymstec)**

Certificate No: **ET3-1631_Jun09**

CALIBRATION CERTIFICATE

Object **ET3DV6 - SN:1631**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-12.v5 and QA CAL-23.v3
Calibration procedure for dosimetric E-field probes**

Calibration date: **June 24, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility; environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	9-Sep-08 (No. DAE4-660_Sep08)	Sep-09
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by: **Jeton Kastrati** (Name) **Laboratory Technician** (Function) *[Signature]* (Signature)

Approved by: **Katja Pokovic** (Name) **Technical Manager** (Function) *[Signature]* (Signature)

Issued: June 24, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary:

TSL tissue simulating liquid
 NORM_{x,y,z} sensitivity in free space
 ConvF sensitivity in TSL / NORM_{x,y,z}
 DCP diode compression point
 Polarization φ φ rotation around probe axis
 Polarization ϑ ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- **NORM_{x,y,z}:** Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E²-field uncertainty inside TSL (see below *ConvF*).
- **NORM(f)_{x,y,z} = NORM_{x,y,z} * frequency_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- **DCP_{x,y,z}:** DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- **ConvF and Boundary Effect Parameters:** Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- **Spherical isotropy (3D deviation from isotropy):** in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- **Sensor Offset:** The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

ET3DV6 SN:1631

June 24, 2009

Probe ET3DV6

SN:1631

Manufactured:	October 12, 2001
Last calibrated:	October 29, 2001
Modified:	June 17, 2009
Recalibrated:	June 24, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

ET3DV6 SN:1631

June 24, 2009

DASY - Parameters of Probe: ET3DV6 SN:1631

Sensitivity in Free Space^A

Diode Compression^B

NormX	1.86 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	93 mV
NormY	1.83 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	92 mV
NormZ	1.75 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	92 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL 900 MHz Typical SAR gradient: 5 % per mm

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR _{be} [%]	Without Correction Algorithm	11.8	7.6
SAR _{be} [%]	With Correction Algorithm	0.9	0.6

TSL 1750 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR _{be} [%]	Without Correction Algorithm	15.7	10.6
SAR _{be} [%]	With Correction Algorithm	0.8	0.7

Sensor Offset

Probe Tip to Sensor Center	2.7 mm
Optical Surface Detection	not supported

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 8).

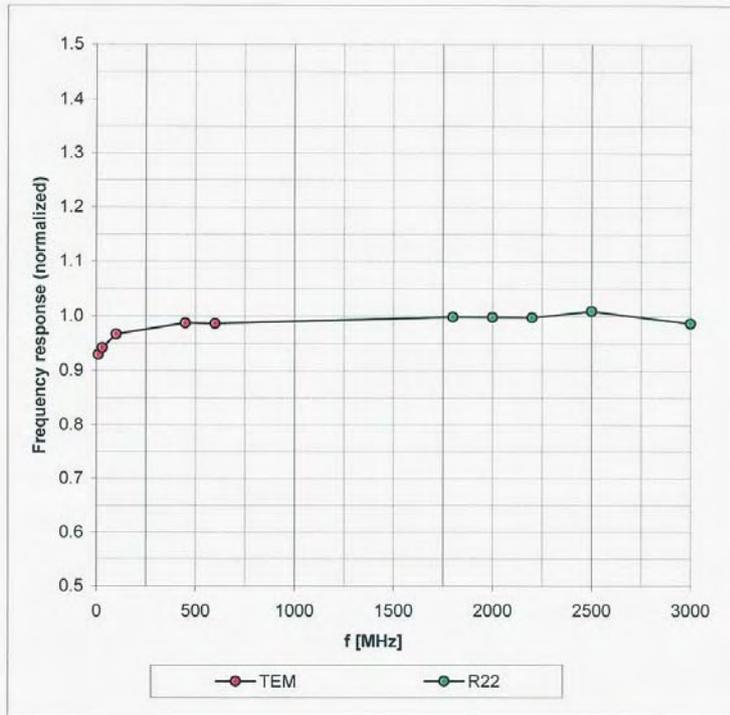
^B Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1631

June 24, 2009

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)

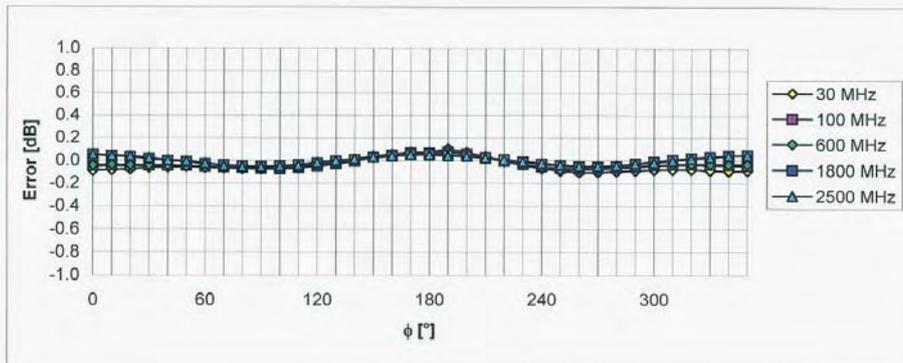
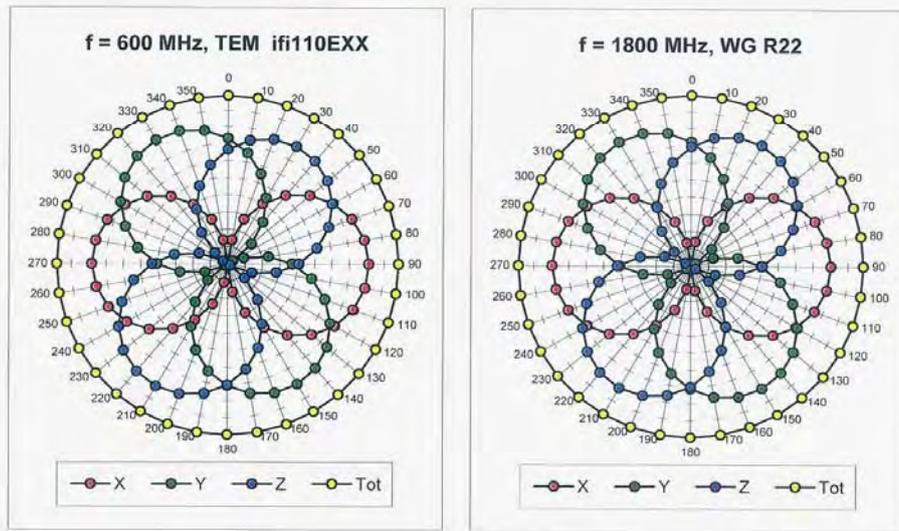


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

ET3DV6 SN:1631

June 24, 2009

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

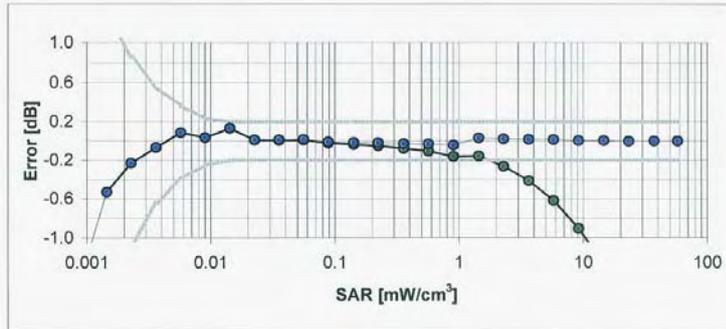
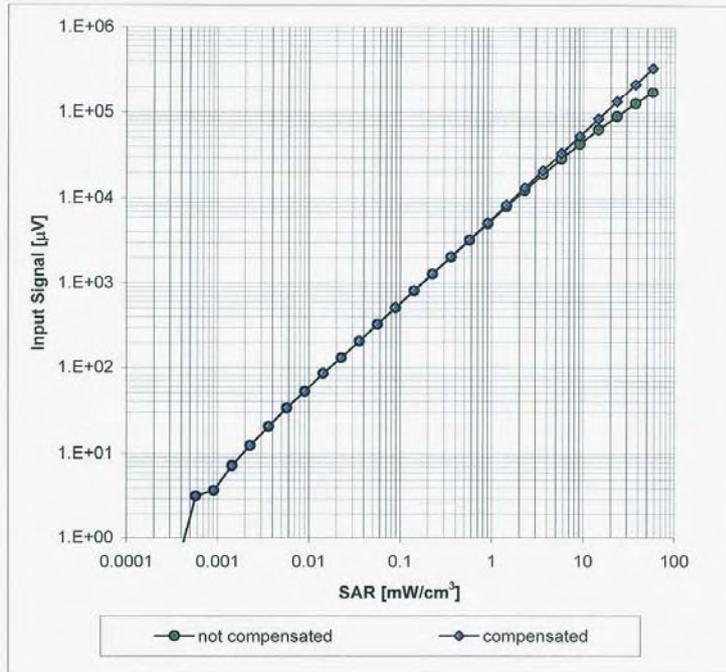


Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

ET3DV6 SN:1631

June 24, 2009

Dynamic Range $f(SAR_{head})$
(Waveguide R22, $f = 1800$ MHz)

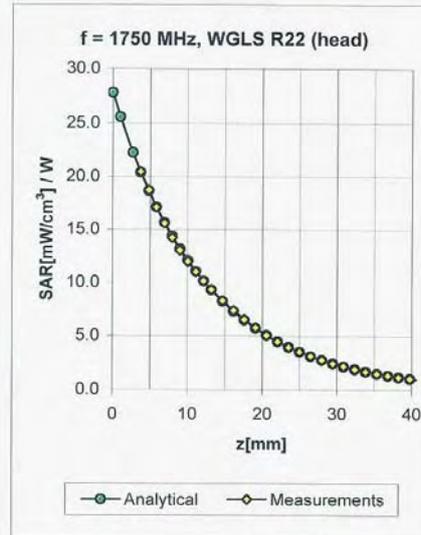
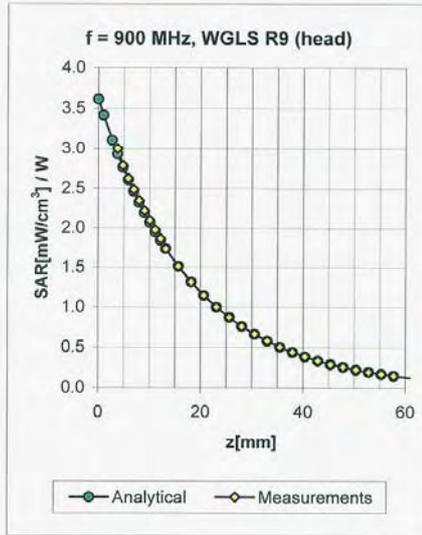


Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

ET3DV6 SN:1631

June 24, 2009

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^C	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
450	± 50 / ± 100	Head	43.5 ± 5%	0.87 ± 5%	0.30	1.98	6.83 ± 13.3% (k=2)
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.34	2.67	5.83 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.25	3.45	5.67 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.67	2.50	5.30 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.71	2.45	5.07 ± 11.0% (k=2)
1950	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.69	2.46	4.90 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.99	1.90	4.52 ± 11.0% (k=2)
450	± 50 / ± 100	Body	56.7 ± 5%	0.94 ± 5%	0.23	2.04	7.31 ± 13.3% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.51	2.18	5.91 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.63	3.28	4.67 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.82	2.63	4.48 ± 11.0% (k=2)
1950	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.92	2.40	4.60 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.80	4.21 ± 11.0% (k=2)

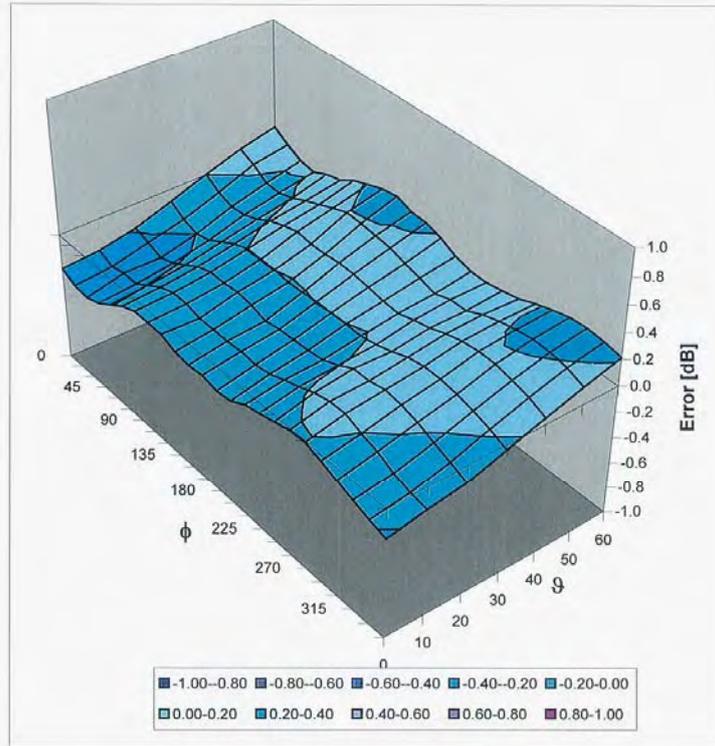
^C The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

ET3DV6 SN:1631

June 24, 2009

Deviation from Isotropy in HSL

Error (ϕ , θ), $f = 900$ MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

Attachment 4. – Dipole Calibration Data

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Accreditation No.: **SCS 108**

Client **HTC (Dymstec)**

Certificate No: **D835V2-441_May09**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 441**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **May 25, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature

Issued: May 25, 2009

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:* SAR measured at the stated antenna input power.
- SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.8 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature during test	(21.6 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 mW / g
SAR normalized	normalized to 1W	9.52 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	9.56 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.56 mW / g
SAR normalized	normalized to 1W	6.24 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	6.26 mW / g ± 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	50.3 Ω - 7.4 j Ω
Return Loss	- 22.7 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.393 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 09, 2001

DASY5 Validation Report for Head TSL

Date/Time: 25.05.2009 09:55:22

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:441

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

Medium: HSL 900 MHz

Medium parameters used: $f = 835$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

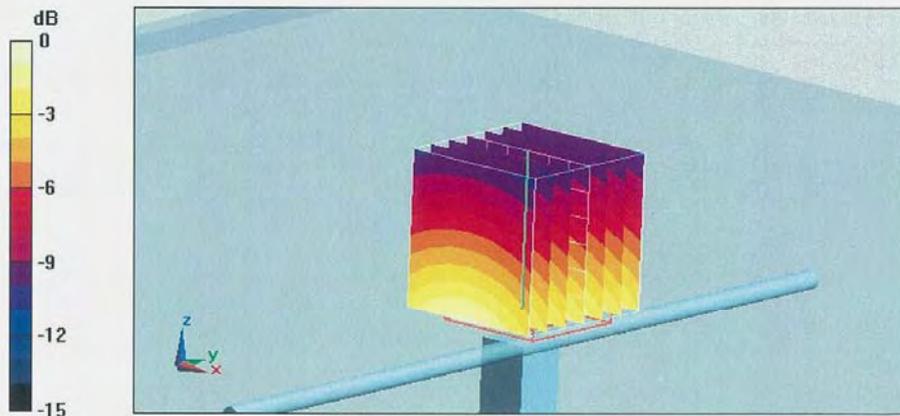
Pin=250mW; dip=15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.1 V/m; Power Drift = 0.0073 dB

Peak SAR (extrapolated) = 3.53 W/kg

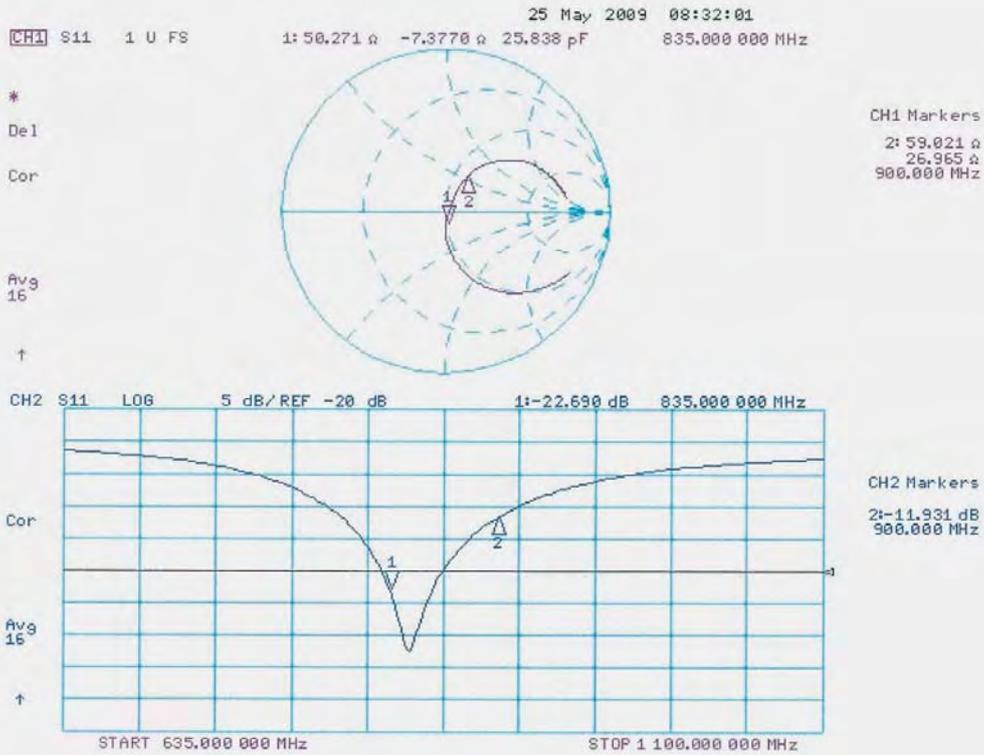
SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.56 mW/g

Maximum value of SAR (measured) = 2.77 mW/g



0 dB = 2.77mW/g

Impedance Measurement Plot for Head TSL



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Accreditation No.: **SCS 108**

Client **HCT (Dymstec)**

Certificate No: **D1900V2-5d032_Jul09**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d032**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **July 20, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by: **Claudio Leubler** (Name), **Laboratory Technician** (Function), *[Signature]* (Signature)

Approved by: **Katja Pokovic** (Name), **Technical Manager** (Function), *[Signature]* (Signature)

Issued: July 22, 2009

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001
- Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz \pm 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	40.9 \pm 6 %	1.43 mho/m \pm 6 %
Head TSL temperature during test	(22.0 \pm 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	condition	
SAR measured	250 mW input power	10.2 mW / g
SAR normalized	normalized to 1W	40.8 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	40.5 mW / g \pm 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.36 mW / g
SAR normalized	normalized to 1W	21.4 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	21.4 mW / g \pm 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	51.2 Ω + 4.4 j Ω
Return Loss	- 27.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.197 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 17, 2003

DASY5 Validation Report for Head TSL

Date/Time: 20.07.2009 14:41:47

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d032

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

Medium: HSL U11 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.88, 4.88, 4.88); Calibrated: 30.04.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Pin = 250 mW; dip = 10 mm, scan at 3.0 mm/Zoom Scan (dist=3.0 mm, probe 0deg)**(7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.5 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 18.6 W/kg

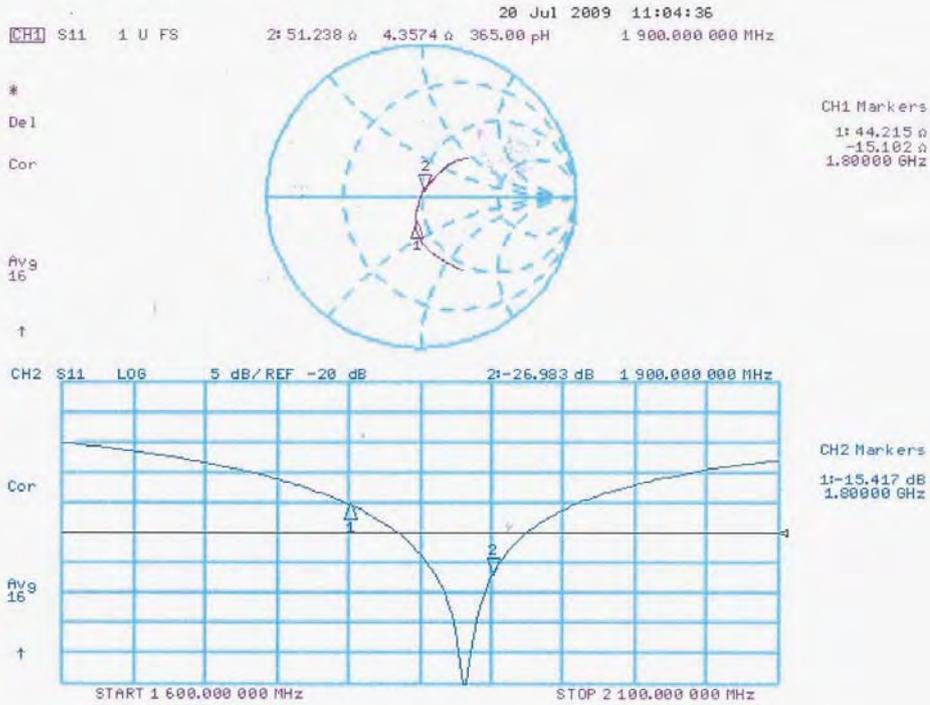
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.36 mW/g

Maximum value of SAR (measured) = 12.8 mW/g



0 dB = 12.8mW/g

Impedance Measurement Plot for Head TSL



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Accreditation No.: **SCS 108**

Client **H-CT (Dymstec)**

Certificate No: **D2450V2-743_Aug08**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 743**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **August 27, 2008**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	04-Oct-07 (No. 217-00736)	Oct-08
Power sensor HP 8481A	US37292783	04-Oct-07 (No. 217-00736)	Oct-08
Reference 20 dB Attenuator	SN: S5086 (20g)	01-Jul-08 (No. 217-00864)	Jul-09
Type-N mismatch combination	SN: 5047.2 / 06327	01-Jul-08 (No. 217-00867)	Jul-09
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	14-Mar-08 (No. DAE4-601_Mar08)	Mar-09
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-07)	In house check: Oct-08

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 27, 2008

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz \pm 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	38.1 \pm 6 %	1.80 mho/m \pm 6 %
Head TSL temperature during test	(22.0 \pm 0.2) °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 mW / g
SAR normalized	normalized to 1W	53.2 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	52.4 mW / g \pm 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.17 mW / g
SAR normalized	normalized to 1W	24.7 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	24.4 mW / g \pm 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	53.8 Ω + 3.8 j Ω
Return Loss	- 25.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.162 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 01, 2003

DASY5 Validation Report for Head TSL

Date/Time: 27.08.2008 11:29:32

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN743

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

Medium: HSL U10 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.4, 4.4, 4.4); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 119; SEMCAD X Version 13.2 Build 87

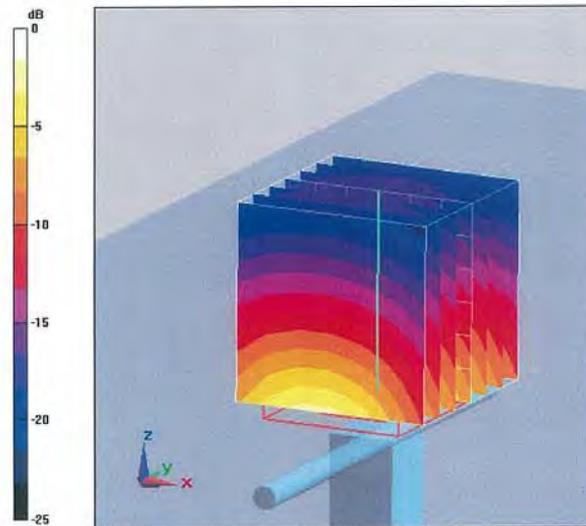
Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.6 V/m; Power Drift = 0.054 dB

Peak SAR (extrapolated) = 28.2 W/kg

SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.17 mW/g

Maximum value of SAR (measured) = 16 mW/g



0 dB = 16mW/g

Impedance Measurement Plot for Head TSL

