

SAR TEST REPORT

HCT CO., LTD

EUT Type:	Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)		
FCC ID:	BEJA360K		
Model:	LG-A360k		
Additional Model:	A360k,A360K,A355f,A355F,LG-A360K,LG-A355f,LG-A355F,LGA360k,LGA360K,LGA355f,LGA355F		
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Testing has been carried out in accordance with:	RSS-102 Issue 4; Health Canada Safety Code 6 47CFR §2.1093 FCC OET Bulletin 65(Edition 97-01), Supplement C (Edition 01-01) ANSI/ IEEE C95.1 – 2005 IEEE 1528-2003		
Test result:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.		
Signature	 Report prepared by : Young-Soo Jang Test Engineer of SAR Part  Approved by : Jae-Sang So Manager of SAR Part		

Table of Contents

1. INTRODUCTION	3
2. DESCRIPTION OF DEVICE	4
3. DESCRIPTION OF TEST EQUIPMENT	5
3.1 SAR MEASUREMENT SETUP	5
3.3 PROBE CALIBRATION PROCESS	7
3.4 SAM Phantom	9
3.5 Device Holder for Transmitters	9
3.6 Brain & Muscle Simulating Mixture Characterization	10
3.7 SAR TEST EQUIPMENT	11
4. SAR MEASUREMENT PROCEDURE	12
5. DESCRIPTION OF TEST POSITION	13
5.1 HEAD POSITION	13
5.2 Body Holster/Belt Clip Configurations	14
6. MEASUREMENT UNCERTAINTY	15
7. ANSI/ IEEE C95.1 - 2005 RF EXPOSURE LIMITS	16
8. SYSTEM VERIFICATION	17
8.1 Tissue Verification	17
8.2 System Validation	17
9. RF CONDUCTED POWER	18
9.1 Procedures Used to Establish RF Signal for SAR	18
9.2 SAR Measurement Conditions for UMTS	18
10. SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas	20
11. SAR TEST DATA SUMMARY	21
11.1 Measurement Results (GSM850 Head SAR)	21
11.2 Measurement Results (GSM1900 Head SAR)	22
11.3 Measurement Results (WCDMA850 Head SAR)	23
11.4 Measurement Results (GSM850 Body SAR)	24
11.5 Measurement Results (GSM1900 Body SAR)	25
11.6 Measurement Results (WCDMA850 Body SAR)	26
12. CONCLUSION	27
13. REFERENCES	28
Attachment 1. – SAR Test Plots	29
Attachment 2. – Dipole Validation Plots	59
Attachment 3. – Probe Calibration Data	66
Attachment 4. – Dipole Calibration Data	80

1. INTRODUCTION

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

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

SAR Definition

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

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

Figure 2. SAR Mathematical Equation

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

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

where:

σ	=	conductivity of the tissue-simulant material (S/m)
ρ	=	mass density of the tissue-simulant material (kg/m ³)
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	Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)		
FCC ID:	BEJA360K		
Model:	LG-A360k		
Additional Model:	A360k,A360K,A355f,A355F,LG-A360K,LG-A355f,LG-A355F,LGA360k,LGA360K,LGA355f,LGA355F		
Trade Name	LG	Serial Number(s)	#1
Application Type	Certification		
Mode(s) of Operation	GSM850/GSM1900/ WCDMA 850		
Tx Frequency	824.20 - 848.80 MHz (GSM850) 1 850.20 – 1 909.80 MHz (GSM1900) 826.4~846.6 MHz (WCDMA850)		
Rx Frequency	869.20 - 893.80 MHz (GSM850) 1 930.20 – 1 989.80 MHz (GSM1900) 871.4 - 891.6 MHz (WCDMA850)		
FCC Classification	Licensed Portable Transmitter Held to Ear (PCE)		
Production Unit or Identical Prototype	Prototype		
Max SAR	1.27 W/kg GSM850 Head SAR / 1.08 W/kg GSM850 Body SAR 0.614 W/kg GSM1900 Head SAR / 0.406 W/kg GSM1900 Body SAR 0.609 W/kg WCDMA850 Head SAR / 0.362 W/kg WCDMA850 Body SAR		
Date(s) of Tests	Apr.25, 2011 ~ Apr.26, 2011		
Antenna Type	Intenna		

3. DESCRIPTION OF TEST EQUIPMENT

3.1 SAR MEASUREMENT SETUP

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

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

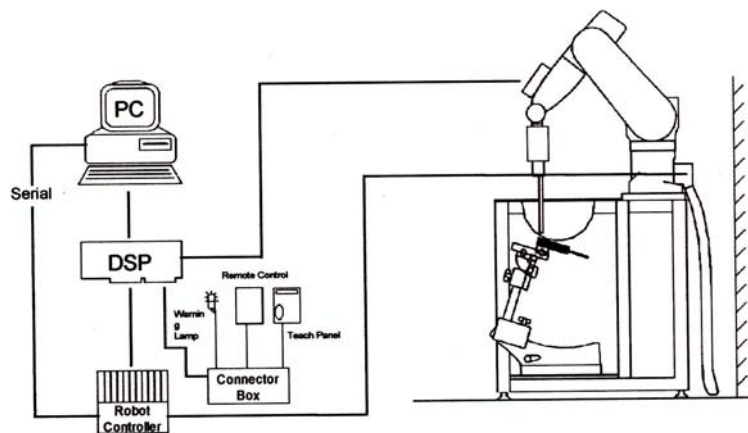


Figure 3.1 HCT SAR Lab. Test Measurement Set-up

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

3.2 DASY4 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

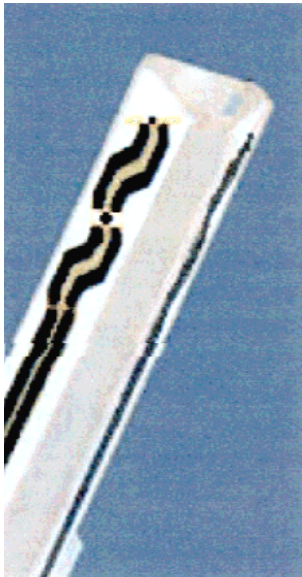


Figure 3.3 ET3DV6 E-field Probe

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)

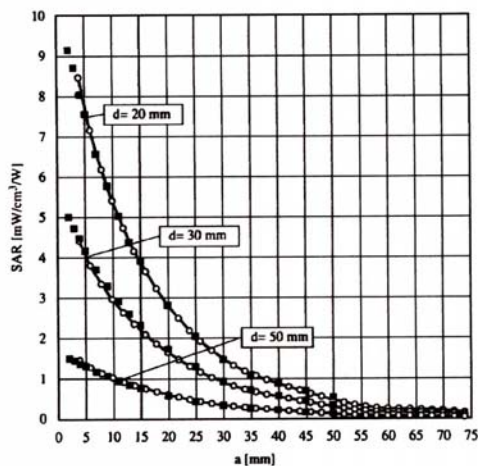


Figure 3.4 E-Field and Temperature measurements at 900 MHz

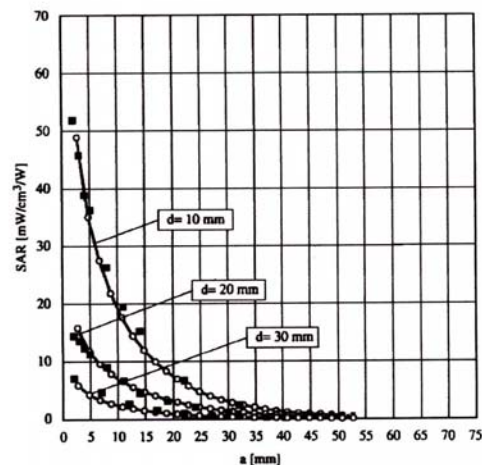


Figure 3.5 E-Field and temperature measurements at 1.8 GHz

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 shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.



Figure 3.6 SAM Phantom

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

3.5 Device Holder for Transmitters

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

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



Figure 3.7 Device Holder

3.6 Brain & Muscle Simulating Mixture Characterization

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

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1 900		2 450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M resistivity	HEC:	Hydroxyethyl Cellulose
DGBE:	99 % Di(ethylene glycol) butyl ether,[2-(2-butoxyethoxy) ethanol]		
Triton X-100(ultra pure):	Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl] ether		

Table 3.1 Composition of the Tissue Equivalent Matter

3.7 SAR TEST EQUIPMENT

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
Staubli	Robot RX90L	F01/5K09A1/A/01	N/A	N/A	N/A
Staubli	Robot ControllerCS7MB	F99/5A82A1/C/01	N/A	N/A	N/A
HP	Pavilion t000_puffer	KRJ51201TV	N/A	N/A	N/A
SPEAG	Light Alignment Sensor	265	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D221340.01	N/A	N/A	N/A
SPEAG	DAE4	466	July 21, 2010	Annual	July 21, 2011
SPEAG	E-Field Probe ET3DV6	1609	Nov. 24, 2010	Annual	Nov. 24, 2011
SPEAG	Validation Dipole D835V2	441	May 21, 2010	Annual	May 21, 2011
SPEAG	Validation Dipole D1900V2	5d032	July 16, 2010	Annual	July 16, 2011
SPEAG	Validation Dipole D2450V2	743	Aug. 25, 2010	Annual	Aug. 25, 2011
Agilent	Power Meter(F) E4419B	MY41291386	Nov. 05, 2010	Annual	Nov. 05, 2011
Agilent	Power Sensor(G) 8481	MY41090870	Nov. 05, 2010	Annual	Nov. 05, 2011
HP	Dielectric Probe Kit 85070C	00721521	N/A	N/A	N/A
HP	Dual Directional Coupler	16072	Nov. 05, 2010	Annual	Nov. 05, 2011
R&S	Base Station CMU200	110740	July 26, 2010	Annual	July 26, 2011
Agilent	Base Station E5515C	GB44400269	Feb. 10, 2011	Annual	Feb. 10, 2012
HP	Signal Generator E4438C	MY42082646	Nov. 11, 2010	Annual	Nov. 11, 2011
HP	Network Analyzer 8753ES	JP39240221	Mar. 30, 2011	Annual	Mar. 30, 2012

NOTE:

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

4. SAR MEASUREMENT PROCEDURE

The evaluation was performed with the following procedure:

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

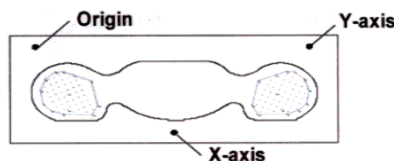


Figure 4.1 SAR Measurement Point in Area Scan

5. DESCRIPTION OF TEST POSITION

5.1 HEAD POSITION

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

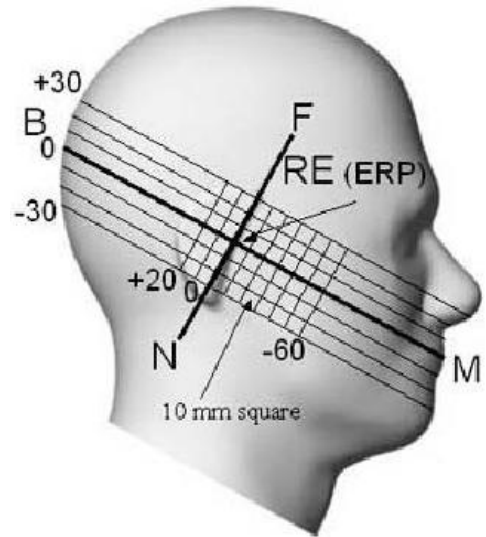


Figure 5.1 Side view of the phantom

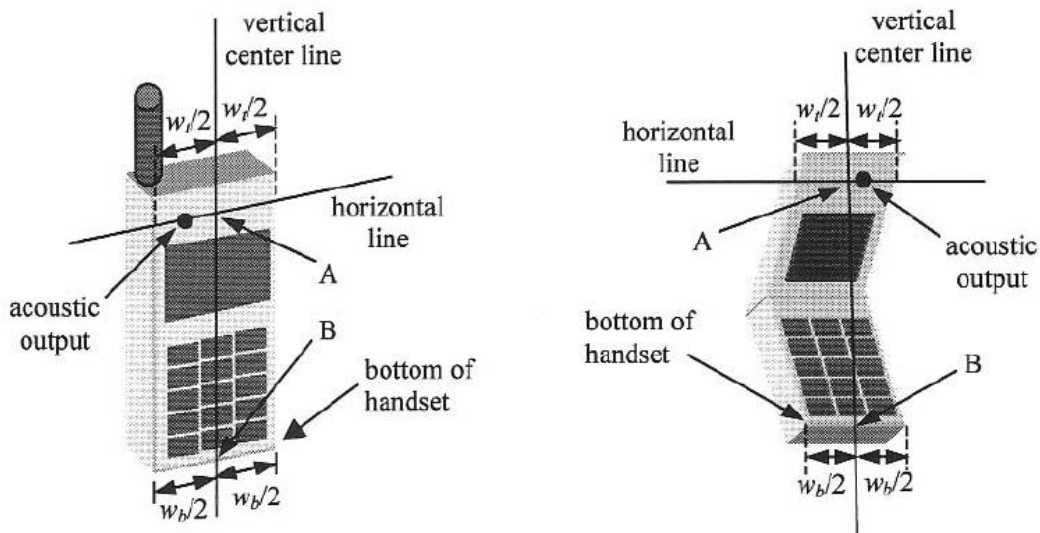


Figure 5.2 Handset vertical and horizontal reference lines

5.2 Body Holster/Belt Clip Configurations

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

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

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

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

"See the Test SET-UP Photo"

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

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

6. MEASUREMENT UNCERTAINTY

Error Description	Tol ($\pm$ %)	Prob. dist.	Div.	C_i	Standard Uncertainty ($\pm$ %)	v_{eff}
1. Measurement System						
Probe Calibration	5.50	N	1	1	5.50	∞
Axial Isotropy	4.70	R	1.73	0.7	1.90	∞
Hemispherical Isotropy	9.60	R	1.73	0.7	3.88	∞
Boundary Effects	1.00	R	1.73	1	0.58	∞
Linearity	4.70	R	1.73	1	2.71	∞
System Detection Limits	1.00	R	1.73	1	0.58	∞
Readout Electronics	0.30	N	1.00	1	0.30	∞
Response Time	0.8	R	1.73	1	0.46	∞
Integration Time	2.6	R	1.73	1	1.50	∞
RF Ambient Noise	3.00	R	1.73	1	1.73	∞
RF Ambient Reflection	3.00	R	1.73	1	1.73	∞
Probe Positioner	0.40	R	1.73	1	0.23	∞
Probe Positioning	2.90	R	1.73	1	1.67	∞
Max SAR Eval	1.00	R	1.73	1	0.58	∞
2. Test Sample Related						
Device Positioning	1.80	N	1.00	1	1.80	9
Device Holder	3.60	N	1.00	1	3.60	5
Power Drift	5.00	R	1.73	1	2.89	∞
3. Phantom and Setup						
Phantom Uncertainty	4.00	R	1.73	1	2.31	∞
Liquid Conductivity(target)	5.00	R	1.73	0.64	1.85	∞
Liquid Conductivity(meas.)	2.07	N	1	0.64	1.32	9
Liquid Permittivity(target)	5.00	R	1.73	0.6	1.73	∞
Liquid Permittivity(meas.)	5.02	N	1	0.6	3.01	9
Combine Standard Uncertainty					10.76	
Coverage Factor for 95 %					$k=2$	
Expanded STD Uncertainty					21.53	

Table 6.1 Uncertainty (800 MHz- 2450 MHz)

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

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

Table 7.1 Safety Limits for Partial Body Exposure

NOTES:

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

** The Spatial Average value of the SAR averaged over the whole-body.

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

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

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

8. SYSTEM VERIFICATION

8.1 Tissue Verification

Freq. [MHz]	Date	Liquid	Liquid Temp.[°C]	Parameters	Target Value	Measured Value	Deviation [%]	Limit [%]
835	Apr.25, 2011	Head	21.2	ϵ_r	41.5	40.8	- 1.69	± 5
				σ	0.90	0.873	- 3.00	± 5
835	Apr.25, 2011	Body	21.2	ϵ_r	55.2	56.8	+ 2.90	± 5
				σ	0.97	0.981	+ 1.13	± 5
1 900	Apr.26, 2011	Head	21.3	ϵ_r	40.0	40.8	+ 2.00	± 5
				σ	1.40	1.4	0.00	± 5
1 900	Apr.26, 2011	Body	21.3	ϵ_r	53.3	53.3	0.00	± 5
				σ	1.52	1.5	- 1.32	± 5

8.2 System Validation

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

* Input Power: 100 m W

Freq. [MHz]	Date	Liquid	Liquid Temp. [°C]	SAR Average	Target Value (SPEAG) (mW/g)	*Measured Value (mW/g)	Deviation [%]	Limit [%]
835	Apr.25, 2011	Head	21.2	1 g	9.66	0.984	+ 1.86	± 10
835	Apr.25, 2011	Body	21.2	1 g	9.92	1.01	+ 1.81	± 10
1 900	Apr.26, 2011	Head	21.3	1 g	39.9	3.85	- 3.51	± 10
1 900	Apr.26, 2011	Body	21.3	1 g	41.5	4.09	- 1.45	± 10

9. RF CONDUCTED POWER

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

9.1 Procedures Used to Establish RF Signal for SAR

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

9.2 SAR Measurement Conditions for UMTS

Body SAR is not required for handsets with HSDPA capabilities when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than that measured without HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of the SAR limit. Otherwise, SAR is Measured for HSDPA, using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA, on the maximum output channel with the body exposure configuration that results in the highest SAR in 12.2 kbps RMC for that RF channel.

9.2.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3 GPP TS 34.121, using the appropriate RMC or AMR with TPC(transmit power control) set to all "1s"

9.2.2 Head SAR Measurements

SAR for head exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all "1s". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than ¼ dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 AMR with a 3.4 kbps SRB (signaling radio bearer) using the exposure configuration that results in the highest SAR for that RF channel in 12.2 RMC.

9.2.3 Body SAR Measurement

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all "1s".

9.2.4 Handsets with Release 5 HSDPA

Body SAR is not required for handsets with HSDPA capabilities when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than that measured without HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of the SAR limit. Otherwise, SAR is Measured for HSDPA, using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA, on the maximum output channel with the body exposure configuration that results in the highest SAR in 12.2 kbps RMC for that RF channel.

Sub-Test 1 Setup for Release 5 HSDPA

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

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

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Band	Channel	Voice	GPRS Data				EDGE Data			
		GSM (dBm)	GPRS 1 TX	GPRS 2 TX	GPRS 3 TX	GPRS 4 TX	EDGE 1 TX	EDGE 2 TX	EDGE 3 TX	EDGE 4 TX
			Slot (dBm)	Slot (dBm)	Slot (dBm)	Slot (dBm)	Slot (dBm)	Slot (dBm)	Slot (dBm)	Slot (dBm)
GSM 850	128	32.90	32.89	31.58	29.73	28.91	26.56	26.55	26.54	26.53
	190	32.91	32.9	31.59	29.78	28.96	26.61	26.60	26.59	26.58
	251	32.88	33.87	31.53	29.8	29.04	26.69	26.68	26.67	26.66
GSM 1900	512	30.25	30.25	29.3	28.01	27.27	25.92	25.90	25.88	25.87
	661	29.93	29.93	29.00	27.97	26.97	25.62	25.61	25.58	25.57
	810	29.71	29.71	28.76	27.73	26.73	25.37	25.37	25.34	25.33

Table 1. GSM Conducted output powers

3GPP Release Version	Mode	3GPP 34.121	Cellular Band [dBm]		
		Subtest	UL 4132 (826.4)	UL 4183 (836.6)	UL 4233 (846.6)
99	WCDMA	12.2kbps(RMC)	23.06	23.14	23.03
5	HSDPA	Subtest1	23.02	23.03	23.07

Table 2. WCDMA Conducted output powers

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

10.1 SAR Evaluation Considerations

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

	2.45	5.15 - 5.35	5.47 - 5.85	GHz
P_{Ref}	12	6	5	mW

Device output power should be rounded to the nearest mW to compare with values specified in this

Table. 10.1 Output Power Thresholds for Unlicensed Transmitters

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	<u>Routine evaluation required</u>	<u>SAR not required:</u> <u>Unlicensed only</u> - when stand-alone 1-g SAR is not required and antenna is ≥ 5 cm from other antennas <u>Licensed & Unlicensed</u> - 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 <u>SAR required:</u> <u>Licensed & Unlicensed</u> 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 <u>Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply</u>
Unlicensed Transmitters	<u>When there is no simultaneous transmission –</u> - output ≤ 60 f: SAR not required - output > 60 f: stand-alone SAR required <u>When there is simultaneous transmission –</u> <u>Stand-alone SAR not required when</u> - output $\leq 2 \cdot P_{Ref}$ and antenna is ≥ 5.0 cm from other antennas - output $\leq P_{Ref}$ and antenna is ≥ 2.5 cm from other antennas - output $\leq P_{Ref}$ and antenna is < 2.5 cm from other antennas, each with either output power $\leq P_{Ref}$ or 1-g SAR < 1.2 W/kg <u>Otherwise stand-alone SAR is required</u> <u>When stand-alone SAR is required</u> - 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	
Jaw, Mouth and Nose	<u>Flat phantom SAR required</u> - 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. 10.2 SAR Evaluation Requirements for Cellphones with Multiple Transmitters

FCC ID: BEJA360K

BT Max. RF output power: 3.05 dBm (2.02 mW)

Antenna separation distance between Main and BT: 10.2 cm

Because the conducted output power level of the BT transmitter is less than $2 \cdot P_{ref}$, and the BT antenna is more than 5 cm from the Main antenna, neither simultaneous SAR nor stand-alone BT SAR are required for the EUT.

11. SAR TEST DATA SUMMARY

11.1 Measurement Results (GSM850 Head SAR)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
824.2	128 (Low)	GSM850	32.90	32.72	Standard	Left Ear	Intenna	0.994
836.6	190 (Mid)	GSM850	32.91	32.85	Standard	Left Ear	Intenna	1.16
849.8	251 (High)	GSM850	32.88	32.78	Standard	Left Ear	Intenna	1.27
836.6	190 (Mid)	GSM850	32.91	32.90	Standard	Left Tilt 15°	Intenna	0.56
824.2	128 (Low)	GSM850	32.90	32.85	Standard	Right Ear	Intenna	1.03
836.6	190 (Mid)	GSM850	32.91	32.76	Standard	Right Ear	Intenna	1.13
849.8	251 (High)	GSM850	32.88	32.97	Standard	Right Ear	Intenna	1.21
836.6	190 (Mid)	GSM850	32.91	32.82	Standard	Right Tilt 15°	Intenna	0.614
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram		

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

11.2 Measurement Results (GSM1900 Head SAR)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
1 880.0	661 (Mid)	GSM1900	29.93	29.83	Standard	Left Ear	Intenna	0.614
1 880.0	661 (Mid)	GSM1900	29.93	29.91	Standard	Left Tilt 15°	Intenna	0.121
1 880.0	661 (Mid)	GSM1900	29.93	29.96	Standard	Right Ear	Intenna	0.564
1 880.0	661 (Mid)	GSM1900	29.93	30.04	Standard	Right Tilt 15°	Intenna	0.142
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram		

NOTES:

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

11.3 Measurement Results (WCDMA850 Head SAR)

Frequency		Modulation	Conducted Power (dBm)		Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel		Begin	End				
836.6	4183 (Mid)	WCDMA850	23.14	23.12	Standard	Left Ear	Intenna	0.609
836.6	4183 (Mid)	WCDMA850	23.14	23.22	Standard	Left Tilt 15°	Intenna	0.368
836.6	4183 (Mid)	WCDMA850	23.14	23.30	Standard	Right Ear	Intenna	0.568
836.6	4183 (Mid)	WCDMA850	23.14	22.98	Standard	Right Tilt 15°	Intenna	0.338
ANSI/ IEEE C95.1 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg (mW/g) Averaged over 1 gram		

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).
- WCDMA Mode was tested under RMC 12.2 kbps and HSDPA Inactive.

11.4 Measurement Results (GSM850 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Separation Distance	SAR(mW/g)
MHz	Channel		Begin	End			
824.2	128 (Low)	GPRS 4Tx	28.91	28.90	Rear	2.0 cm	0.984
836.6	190 (Mid)	GPRS 4Tx	28.96	28.83	Rear	2.0 cm	1.08
848.8	251 (High)	GPRS 4Tx	29.04	28.96	Rear	2.0 cm	1.04
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg (mW/g) Averaged over 1 gram	

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
- Test Configuration ☐ With Holster ☒ Without Holster

11.5 Measurement Results (GSM1900 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Separation Distance	SAR(mW/g)
MHz	Channel		Begin	End			
1 880.0	661 (Mid)	GPRS 4Tx	26.97	26.89	Rear	2.0 cm	0.406
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg (mW/g) Averaged over 1 gram	

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
- Test Configuration ☐ With Holster ☒ Without Holster
- Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

11.6 Measurement Results (WCDMA850 Body SAR)

Frequency		Modulation	Conducted Power (dBm)		Configuration	Separation Distance	SAR(mW/g)
MHz	Channel		Begin	End			
836.6	4183 (Mid)	WCDMA850	23.14	23.15	Rear	2.0 cm	0.362
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg (mW/g) Averaged over 1 gram	

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 $\pm$ 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
- Test Configuration ☐ With Holster ☒ Without Holster
- 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).
- WCDMA Mode was tested under RMC 12.2 kbps and HSDPA Inactive.

12. 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.

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Attachment 1. – SAR Test Plots

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

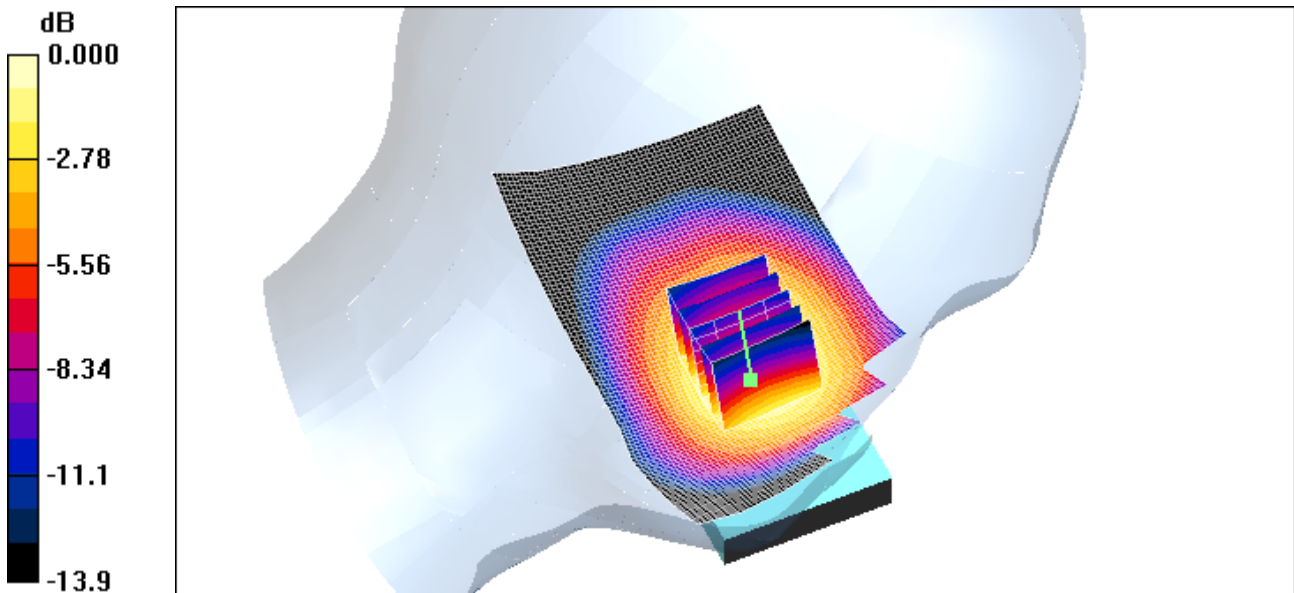
Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
 Medium parameters used: $f = 825 \text{ MHz}$; $\sigma = 0.863 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 128/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 1.11 mW/g

Left touch 128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.8 V/m; Power Drift = -0.181 dB
 Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.639 mW/g
 Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 190/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 1.30 mW/g

Left touch 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

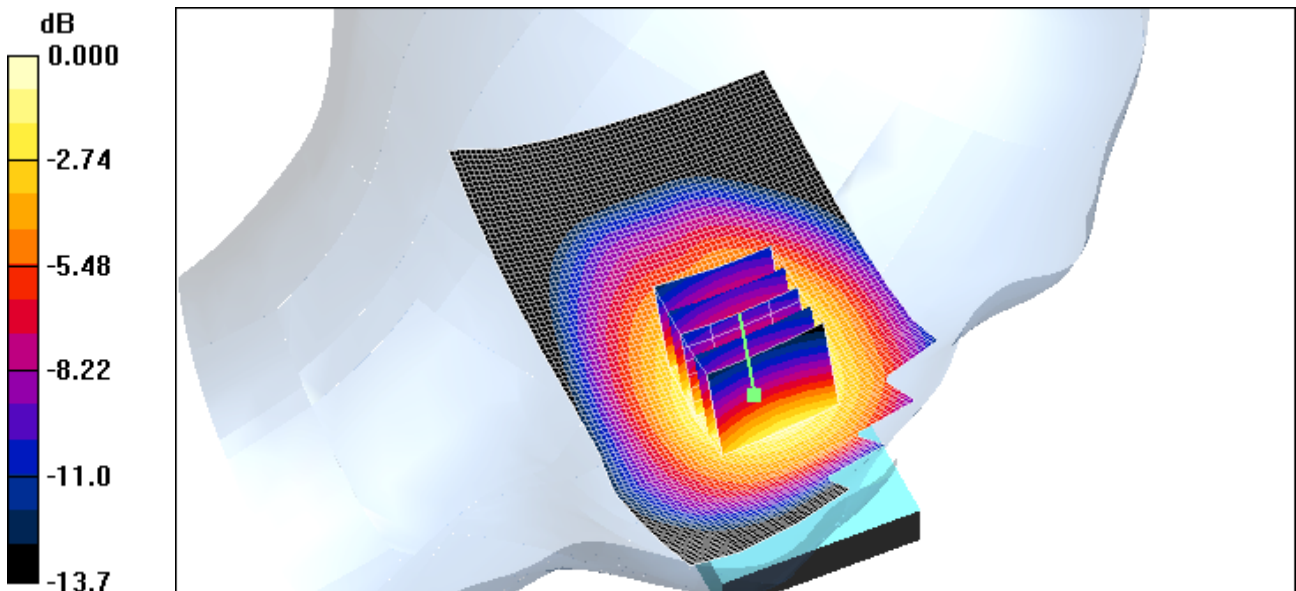
Reference Value = 12.3 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.755 mW/g

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

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



0 dB = 1.27mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.886 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8
Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 251/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 1.40 mW/g

Left touch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

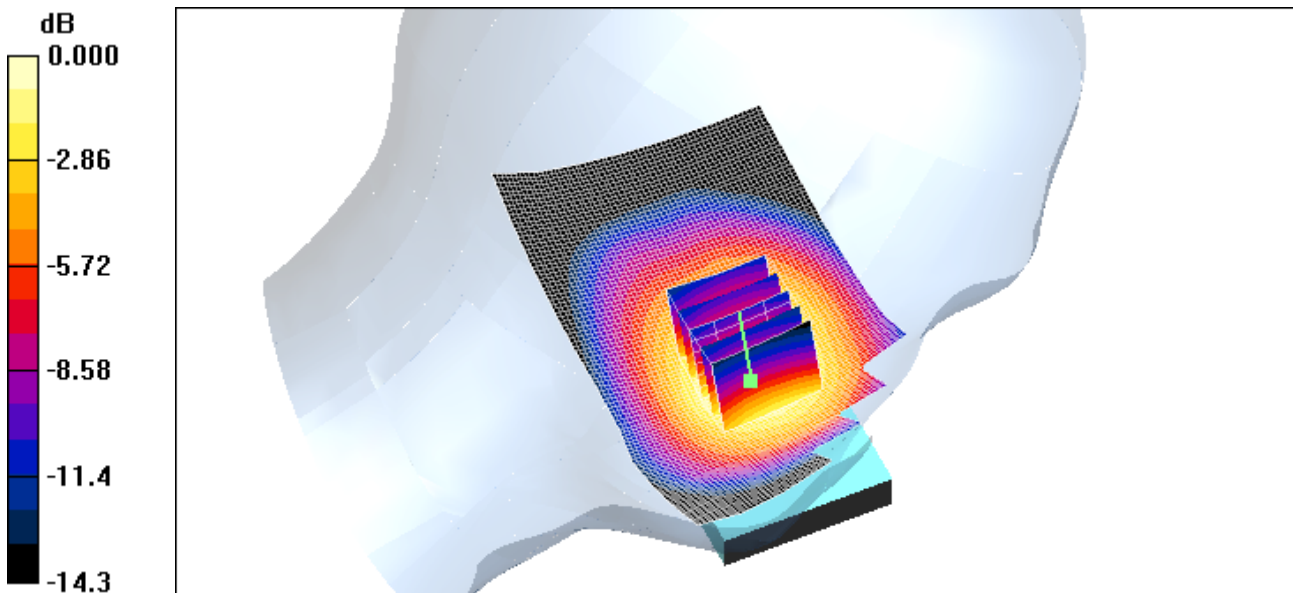
Reference Value = 13.0 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.802 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: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left tilt 190/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 0.613 mW/g

Left tilt 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

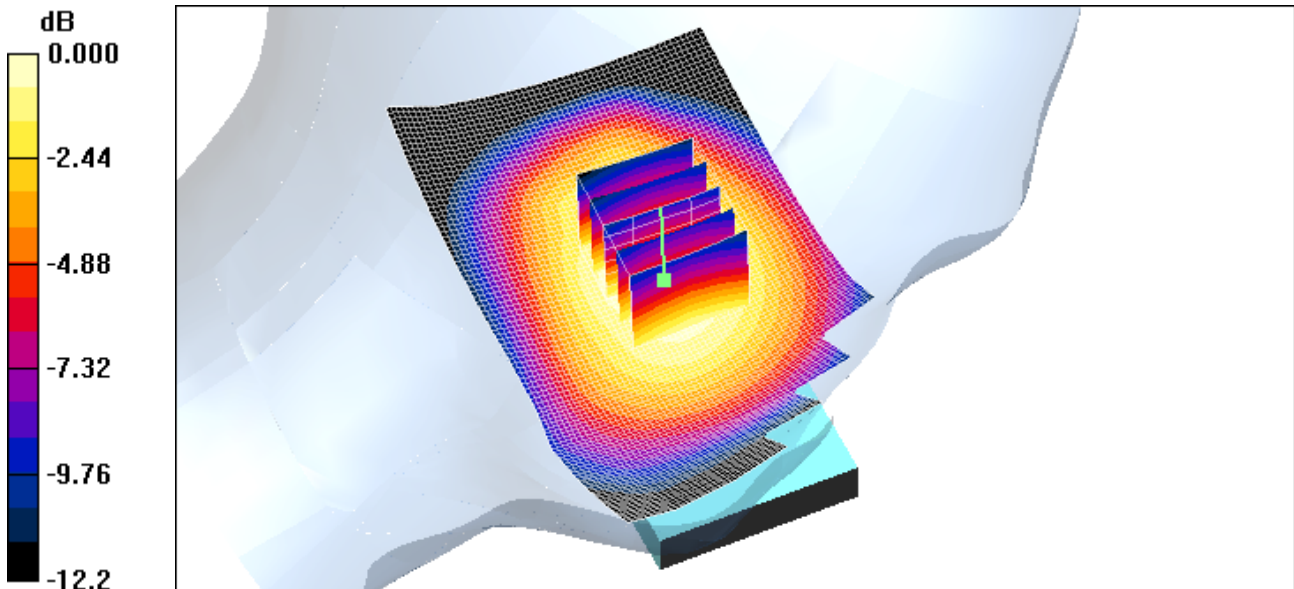
Reference Value = 19.9 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.737 W/kg

SAR(1 g) = 0.560 mW/g; SAR(10 g) = 0.388 mW/g

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

Maximum value of SAR (measured) = 0.596 mW/g



0 dB = 0.596mW/g

Test Laboratory: HCT CO., LTD

EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)

Liquid Temperature: 21.1 °C

Ambient Temperature: 21.3 °C

Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 825$ MHz; $\sigma = 0.863$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 128/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.15 mW/g

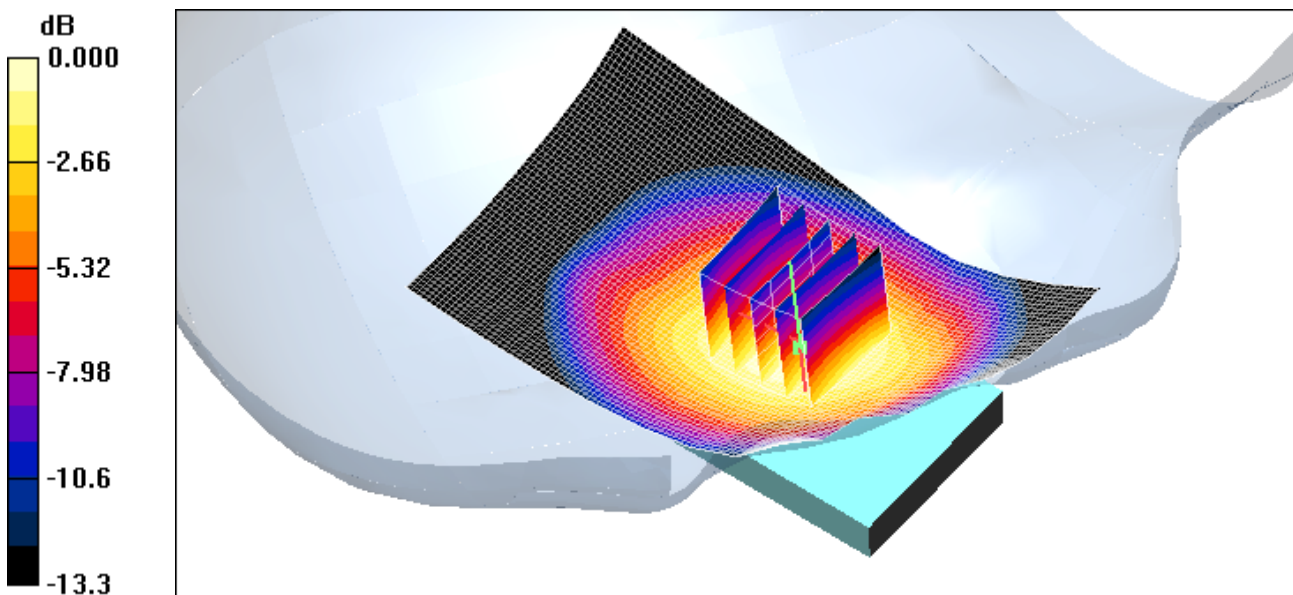
Right touch 128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.677 mW/g

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



0 dB = 1.12mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
 - Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn466; Calibrated: 2011-03-01
 - Phantom: SAM 835/900 MHz; Type: SAM

Right touch 190/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 1.24 mW/g

Right touch 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

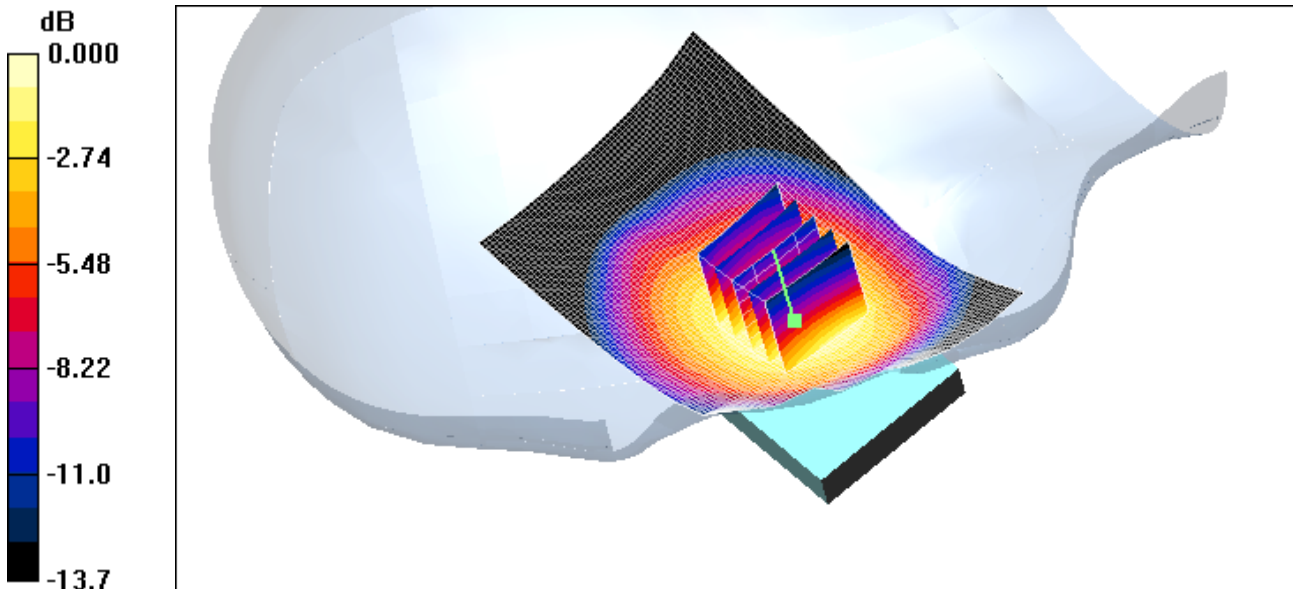
Reference Value = 11.1 V/m; Power Drift = -0.152 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.728 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: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.886$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 251/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.36 mW/g

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

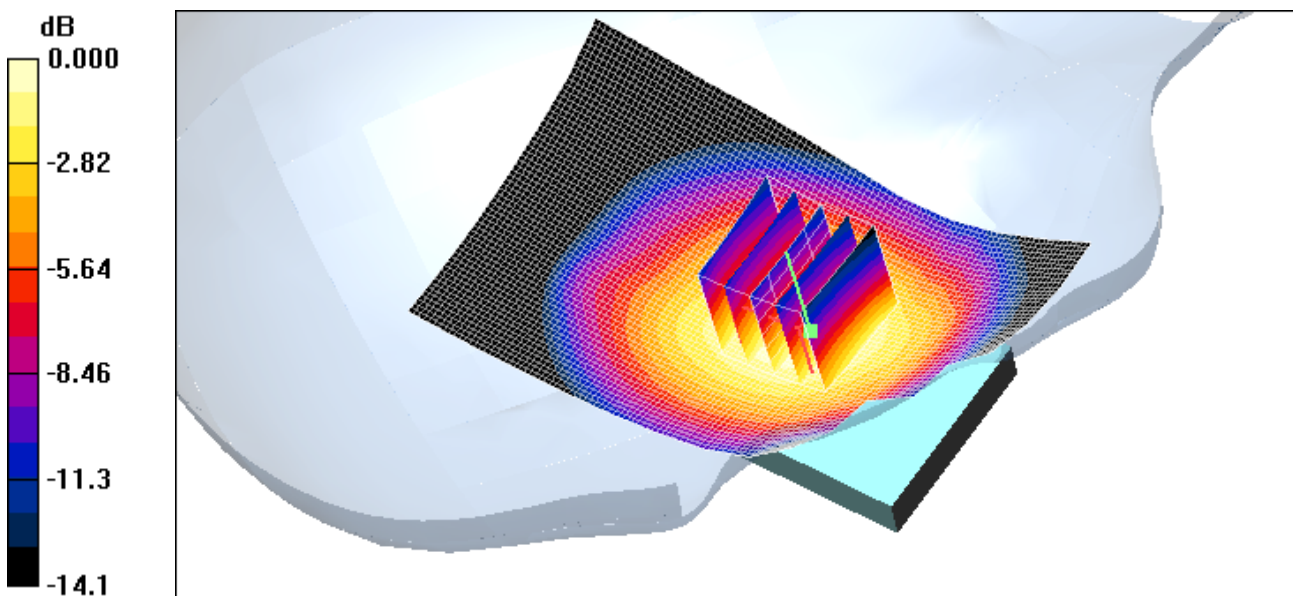
Reference Value = 10.7 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.784 mW/g

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

Maximum value of SAR (measured) = 1.33 mW/g



0 dB = 1.33mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 190/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 0.663 mW/g

Right tilt 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.0 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 0.814 W/kg

SAR(1 g) = 0.614 mW/g; SAR(10 g) = 0.418 mW/g

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

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

Right tilt 190/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

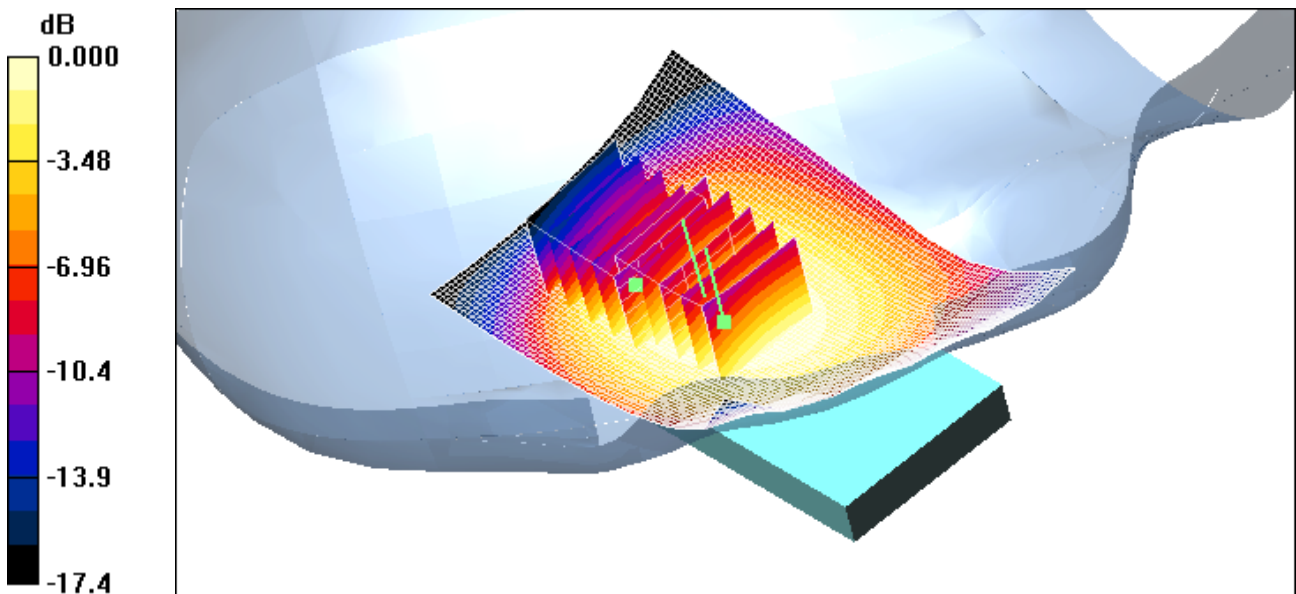
Reference Value = 21.0 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 0.790 W/kg

SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.330 mW/g

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

Maximum value of SAR (measured) = 0.609 mW/g



0 dB = 0.609mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.3 °C
 Ambient Temperature: 21.5 °C
 Test Date: Apr.26, 2011

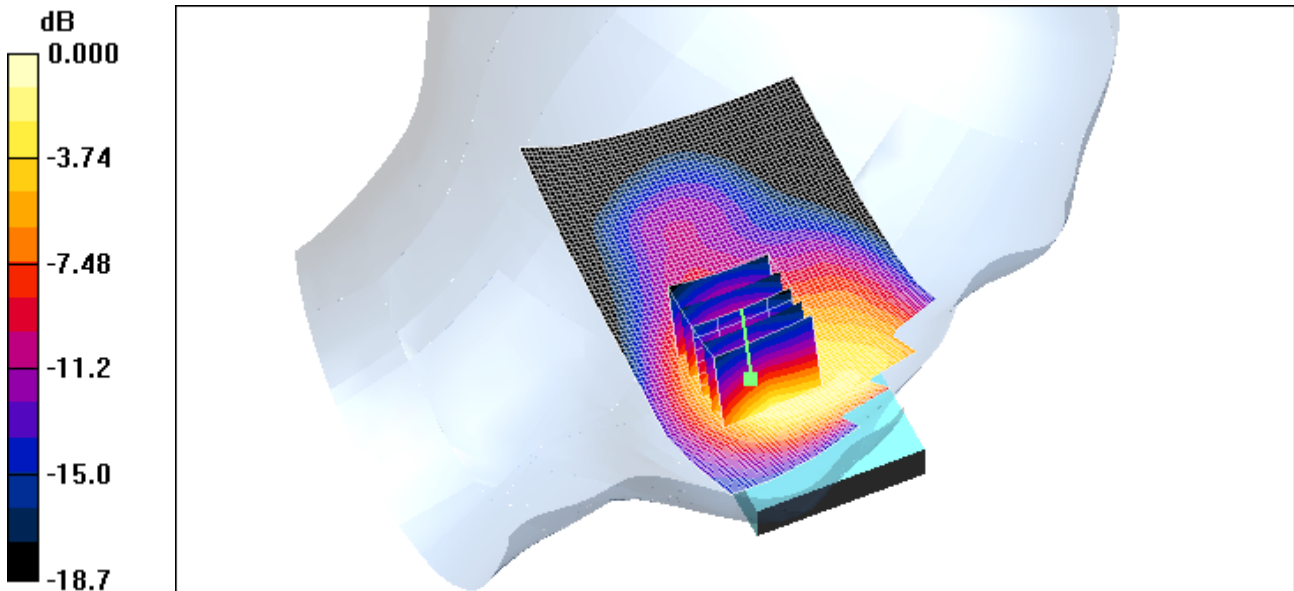
DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
 - Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn466; Calibrated: 2011-03-01
 - Phantom: SAM 1800/1900 MHz; Type: SAM

Left touch 661/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 0.692 mW/g

Left touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 5.87 V/m; Power Drift = -0.101 dB
 Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.614 mW/g; SAR(10 g) = 0.327 mW/g
 Maximum value of SAR (measured) = 0.690 mW/g



0 dB = 0.690mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.3 °C
Ambient Temperature: 21.5 °C
Test Date: Apr.26, 2011

DUT: LG-A360k; Type: bar; Serial: #1

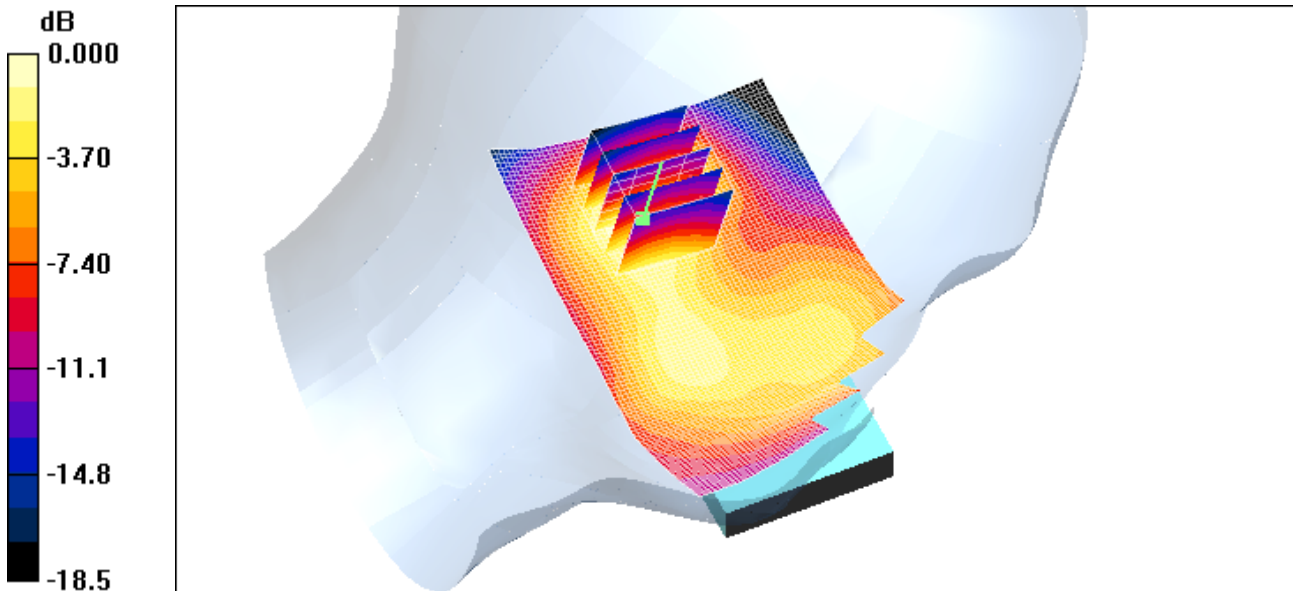
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left tilt 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.138 mW/g

Left tilt 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.191 W/kg
SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.070 mW/g
Maximum value of SAR (measured) = 0.130 mW/g



0 dB = 0.130mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.3 °C
 Ambient Temperature: 21.5 °C
 Test Date: Apr.26, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right touch 661/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 0.648 mW/g

Right touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 5.56 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.985 W/kg

SAR(1 g) = 0.564 mW/g; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.650 mW/g

Right touch 661/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.56 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.863 W/kg

SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.586 mW/g

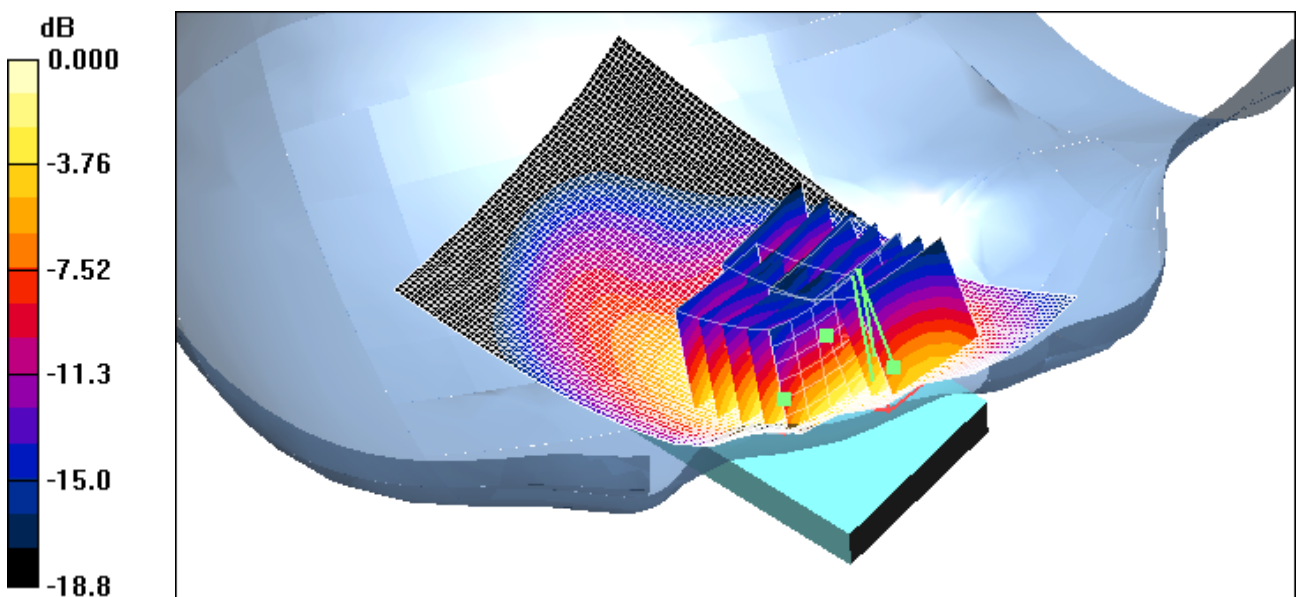
Right touch 661/Zoom Scan (5x5x7)/Cube 2: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.56 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.885 W/kg

SAR(1 g) = 0.506 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.567 mW/g



0 dB = 0.567mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.3 °C
 Ambient Temperature: 21.5 °C
 Test Date: Apr.26, 2011

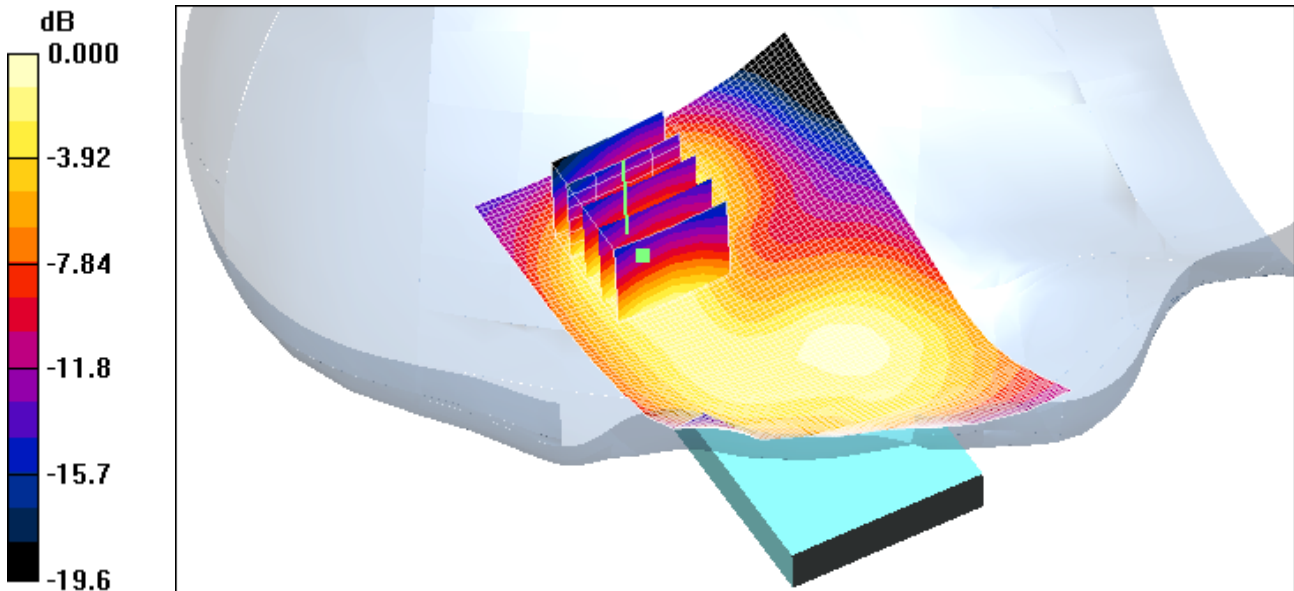
DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
 - Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn466; Calibrated: 2011-03-01
 - Phantom: SAM 1800/1900 MHz; Type: SAM

Right tilt 661/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 0.153 mW/g

Right tilt 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 9.21 V/m; Power Drift = 0.107 dB
 Peak SAR (extrapolated) = 0.246 W/kg
SAR(1 g) = 0.142 mW/g; SAR(10 g) = 0.080 mW/g
 Maximum value of SAR (measured) = 0.153 mW/g



0 dB = 0.153mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 4183/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Maximum value of SAR (interpolated) = 0.645 mW/g

Left touch 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

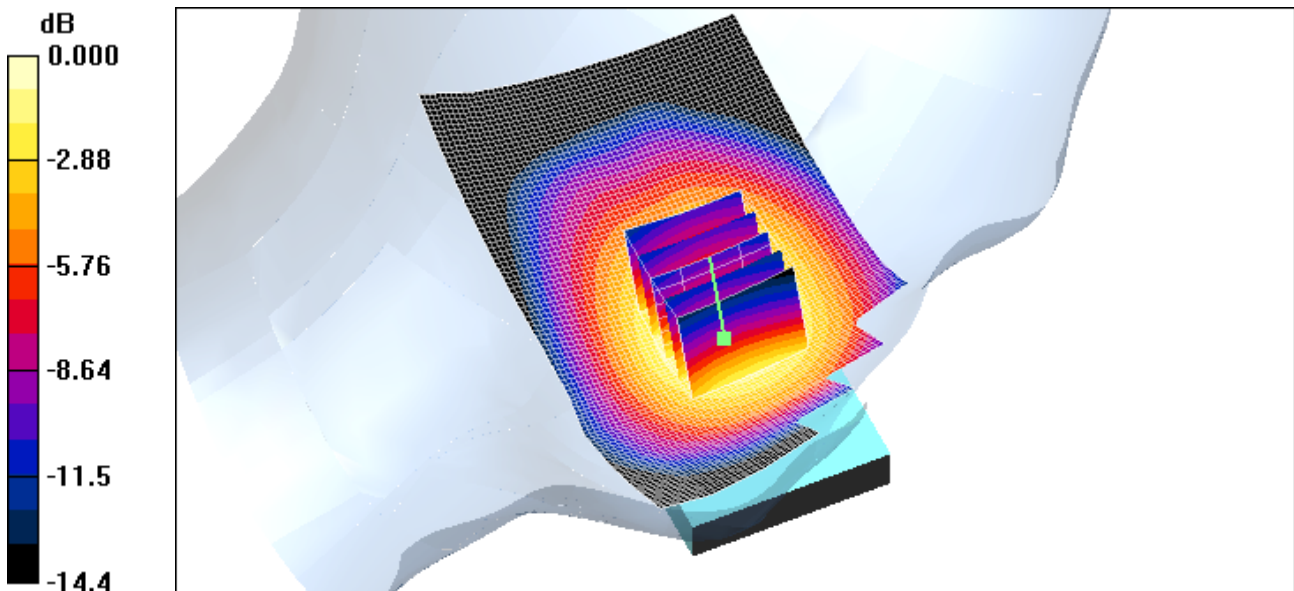
Reference Value = 9.43 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 0.899 W/kg

SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.388 mW/g

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

Maximum value of SAR (measured) = 0.666 mW/g



0 dB = 0.666mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left tilt 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Left tilt 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

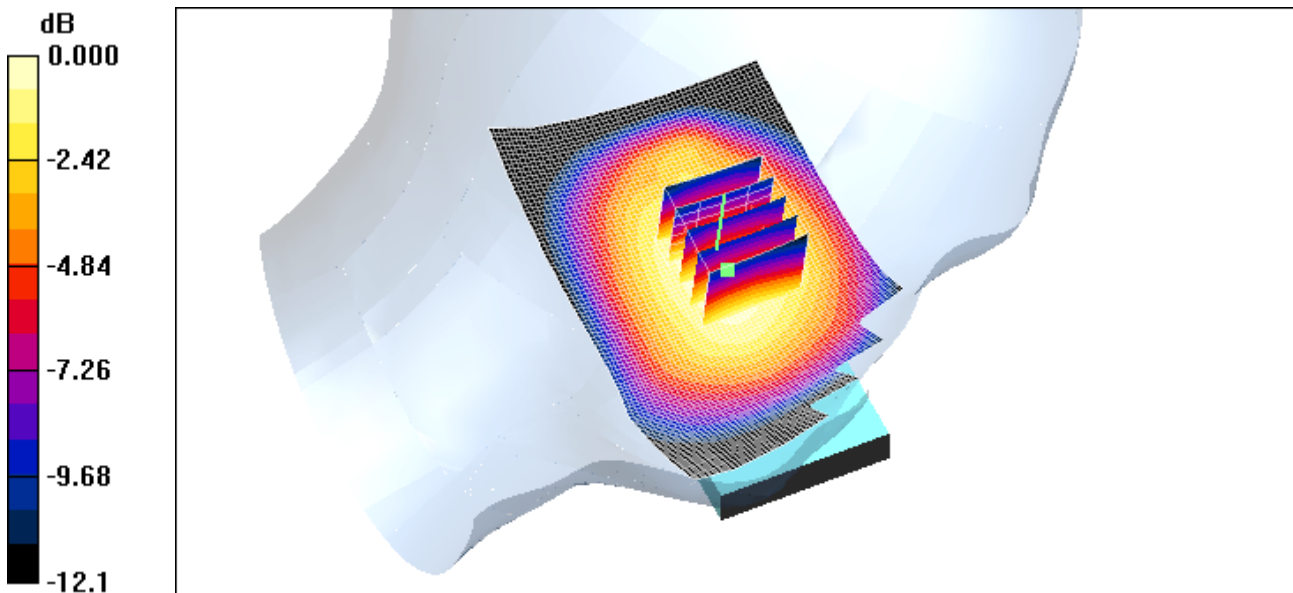
Reference Value = 15.8 V/m; Power Drift = 0.079 dB

Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.251 mW/g

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

Maximum value of SAR (measured) = 0.395 mW/g



0 dB = 0.395mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.624 mW/g

Right touch 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

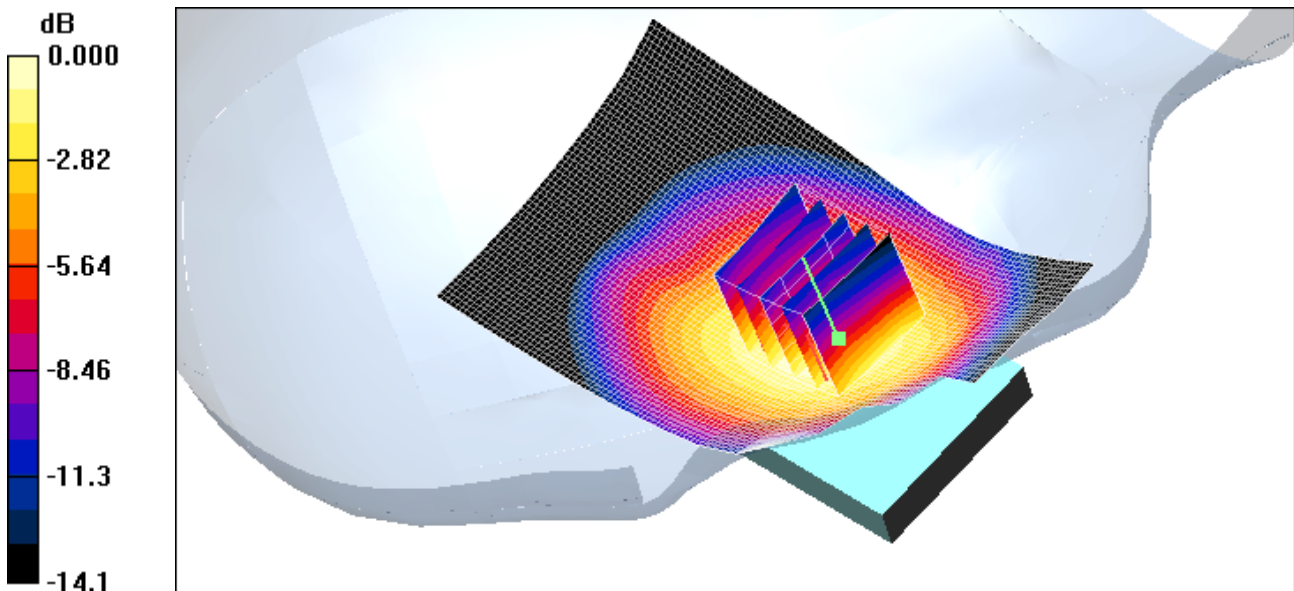
Reference Value = 7.21 V/m; Power Drift = 0.163 dB

Peak SAR (extrapolated) = 0.873 W/kg

SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.367 mW/g

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

Maximum value of SAR (measured) = 0.615 mW/g



0 dB = 0.615mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.875$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Right tilt 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

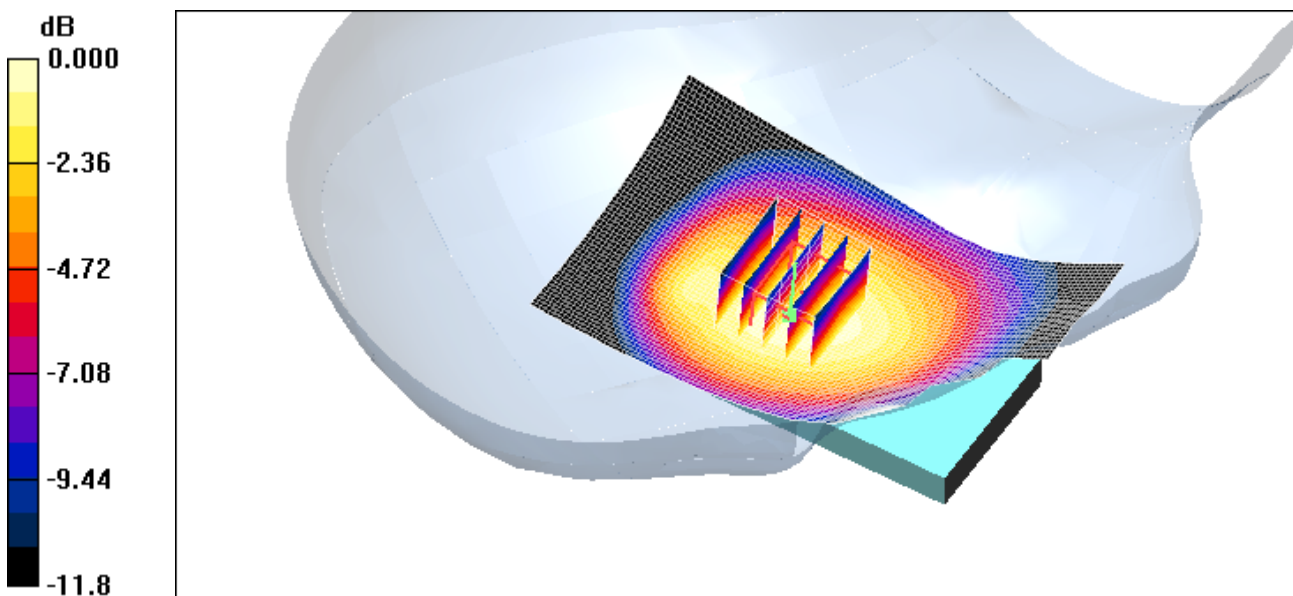
Reference Value = 14.6 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 0.467 W/kg

SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.230 mW/g

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

Maximum value of SAR (measured) = 0.363 mW/g



0 dB = 0.363mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:2.075
 Medium parameters used: $f = 825 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 56.9$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

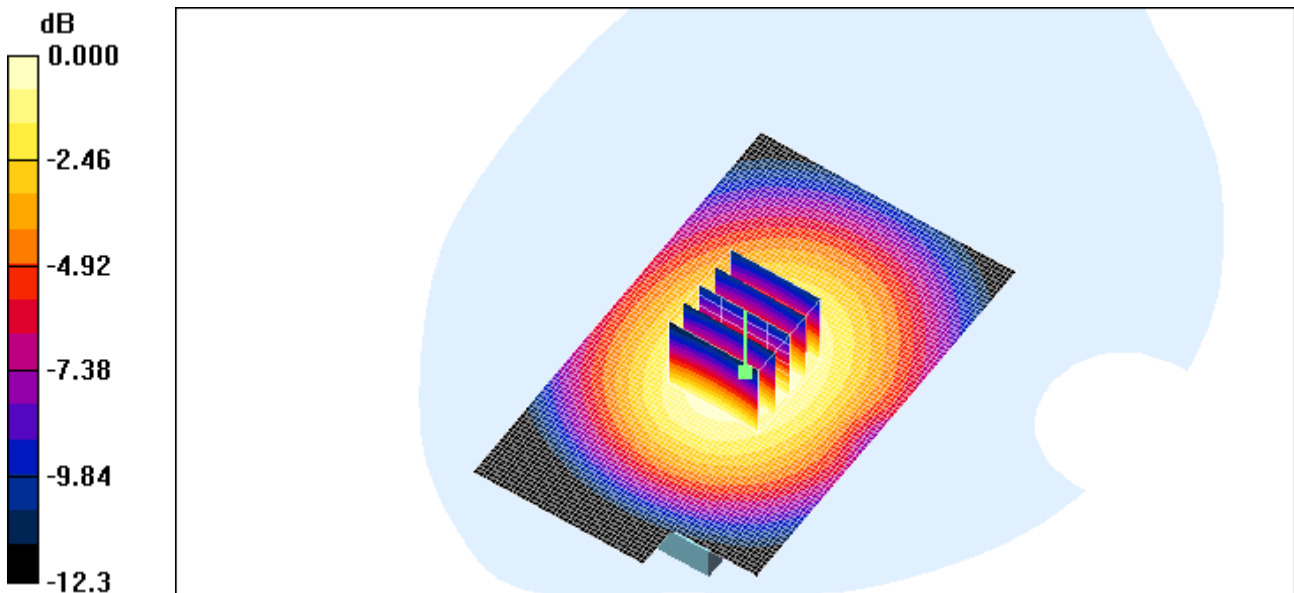
DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

body 128/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 1.11 mW/g

body 128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 21.7 V/m; Power Drift = -0.007 dB
 Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.984 mW/g; SAR(10 g) = 0.656 mW/g

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



0 dB = 1.08mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.075
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.982 \text{ mho/m}$; $\epsilon_r = 56.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
 - Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn466; Calibrated: 2011-03-01
 - Phantom: SAM 835/900 MHz; Type: SAM

body 190/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.17 mW/g

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

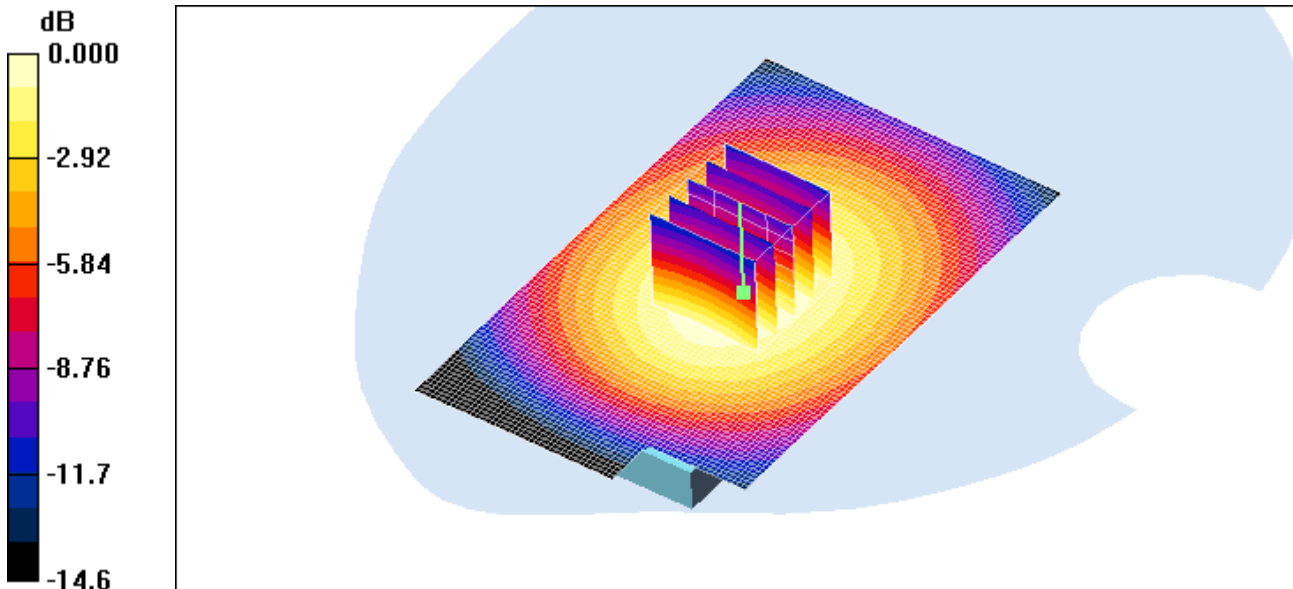
Reference Value = 22.1 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.716 mW/g

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

Maximum value of SAR (measured) = 1.17 mW/g



0 dB = 1.17mW/g

Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2.075
Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.992 \text{ mho/m}$; $\epsilon_r = 56.7$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

body 251/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

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

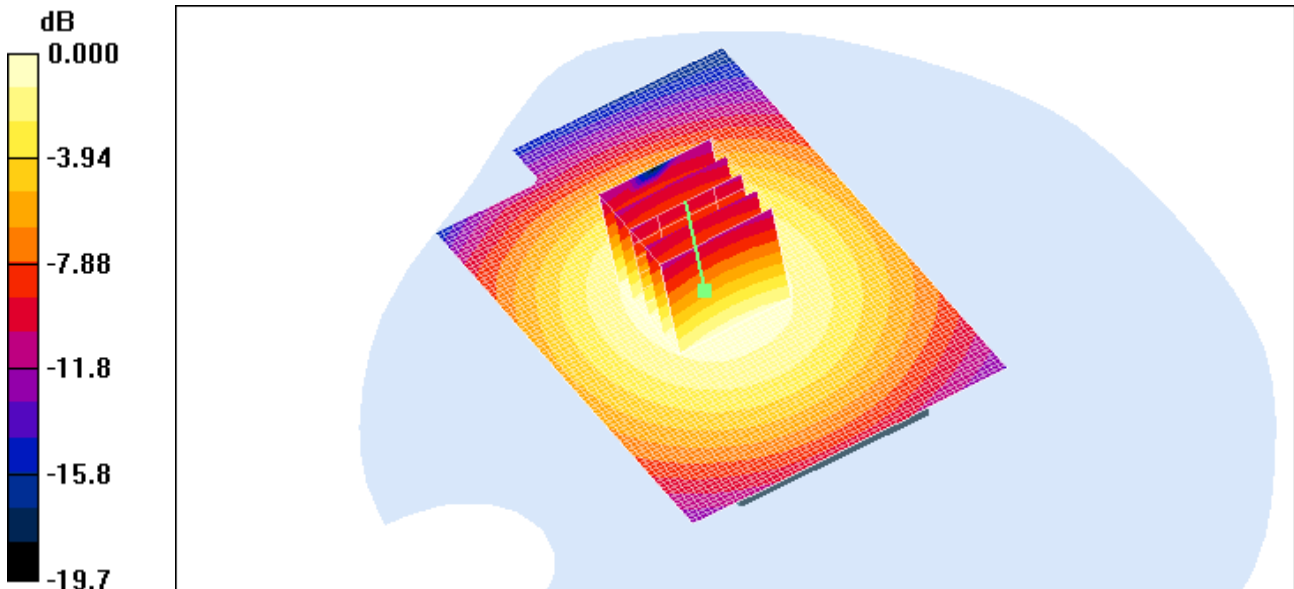
Reference Value = 22.5 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.697 mW/g

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

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



0 dB = 1.11mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.3 °C
 Ambient Temperature: 21.5 °C
 Test Date: Apr.26, 2011

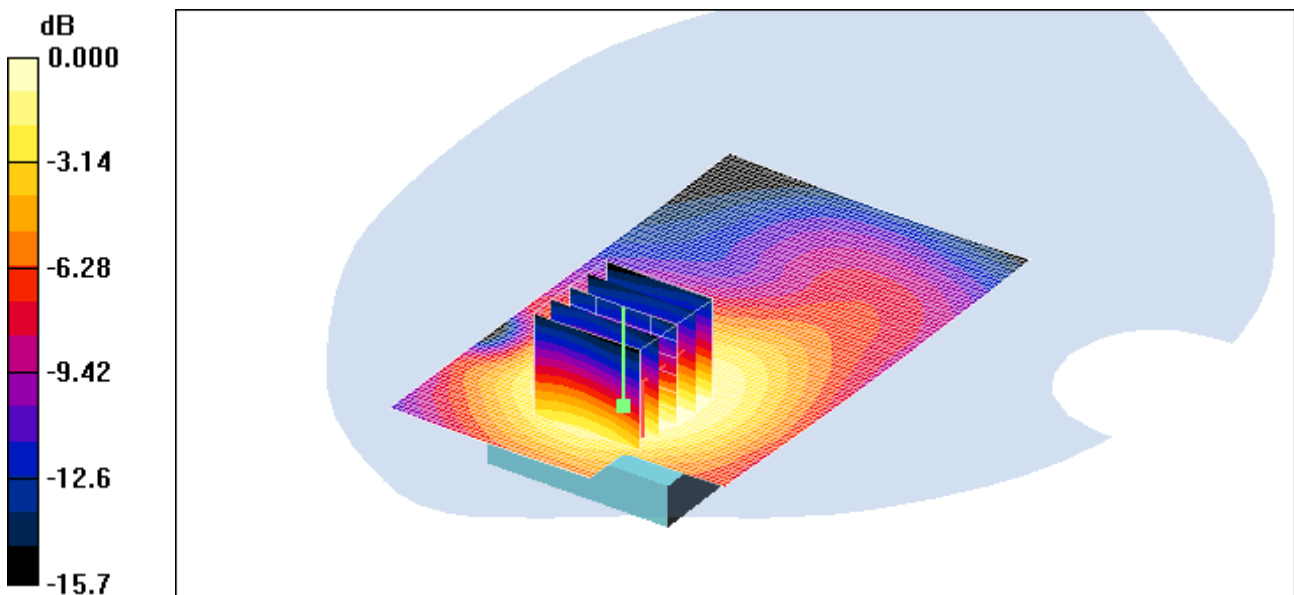
DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.075
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.48 \text{ mho/m}$; $\epsilon_r = 53.3$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
 - Probe: ET3DV6 - SN1609; ConvF(4.6, 4.6, 4.6); Calibrated: 2010-11-24
 - Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE3 Sn466; Calibrated: 2011-03-01
 - Phantom: SAM 1800/1900 MHz; Type: SAM

body 661/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (interpolated) = 0.455 mW/g

body 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 6.69 V/m; Power Drift = -0.077 dB
 Peak SAR (extrapolated) = 0.557 W/kg
SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.249 mW/g
 Maximum value of SAR (measured) = 0.445 mW/g



0 dB = 0.445mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.982 \text{ mho/m}$; $\epsilon_r = 56.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

body 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.392 mW/g

body 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

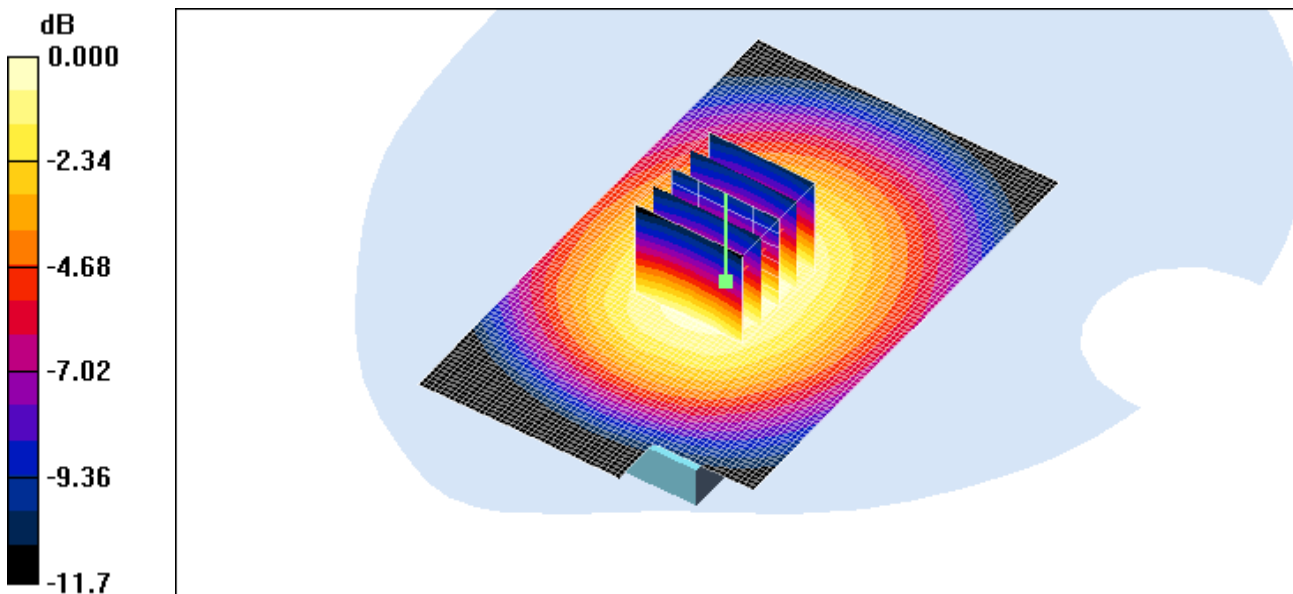
Reference Value = 12.1 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.247 mW/g

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

Maximum value of SAR (measured) = 0.387 mW/g



0 dB = 0.387mW/g

Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.886 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 251/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.40 mW/g

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

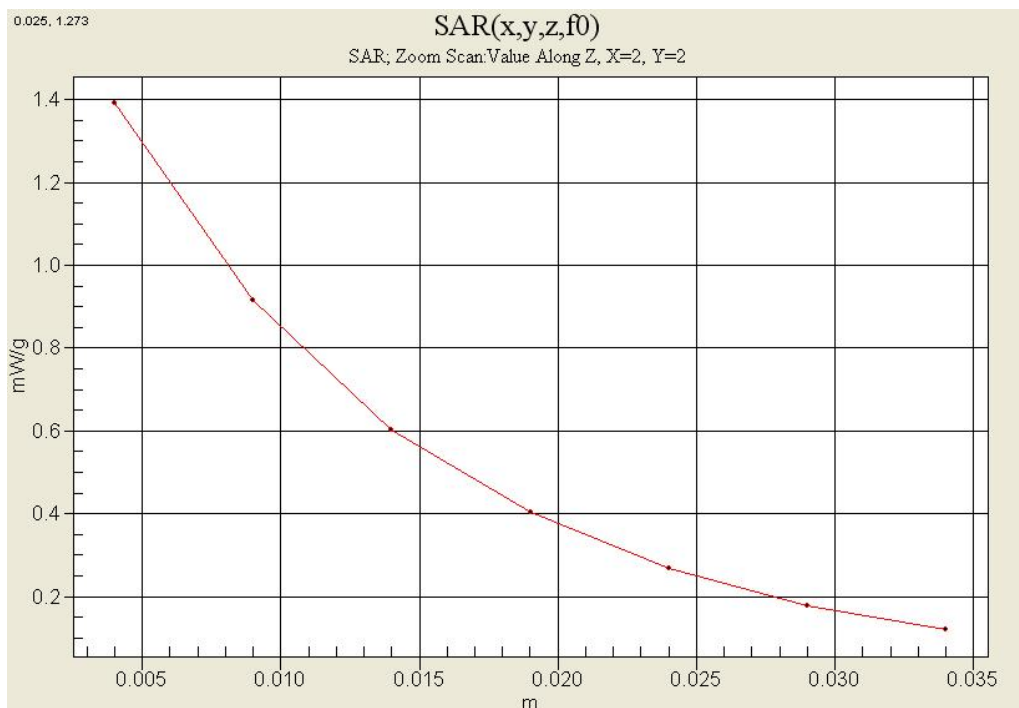
Reference Value = 13.0 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.802 mW/g

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

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



Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.075
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.982 \text{ mho/m}$; $\epsilon_r = 56.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

body 190/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.17 mW/g

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

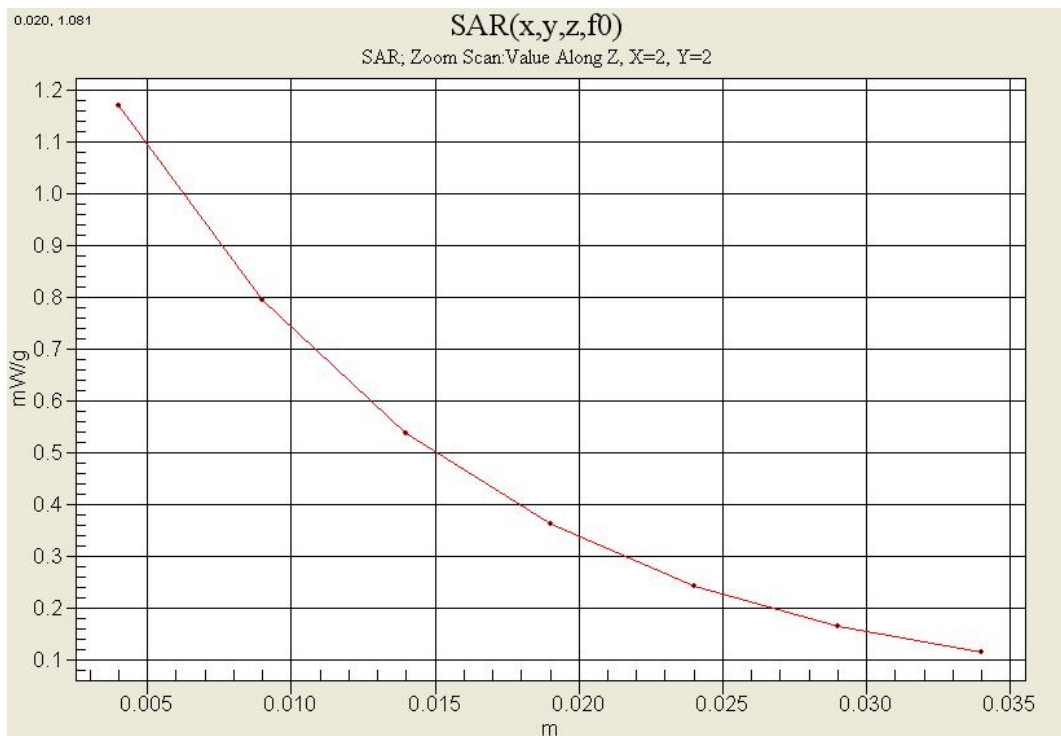
Reference Value = 22.1 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.716 mW/g

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

Maximum value of SAR (measured) = 1.17 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.3 °C
Ambient Temperature: 21.5 °C
Test Date: Apr.26, 2011

DUT: LG-A360k; Type: bar; Serial: #1

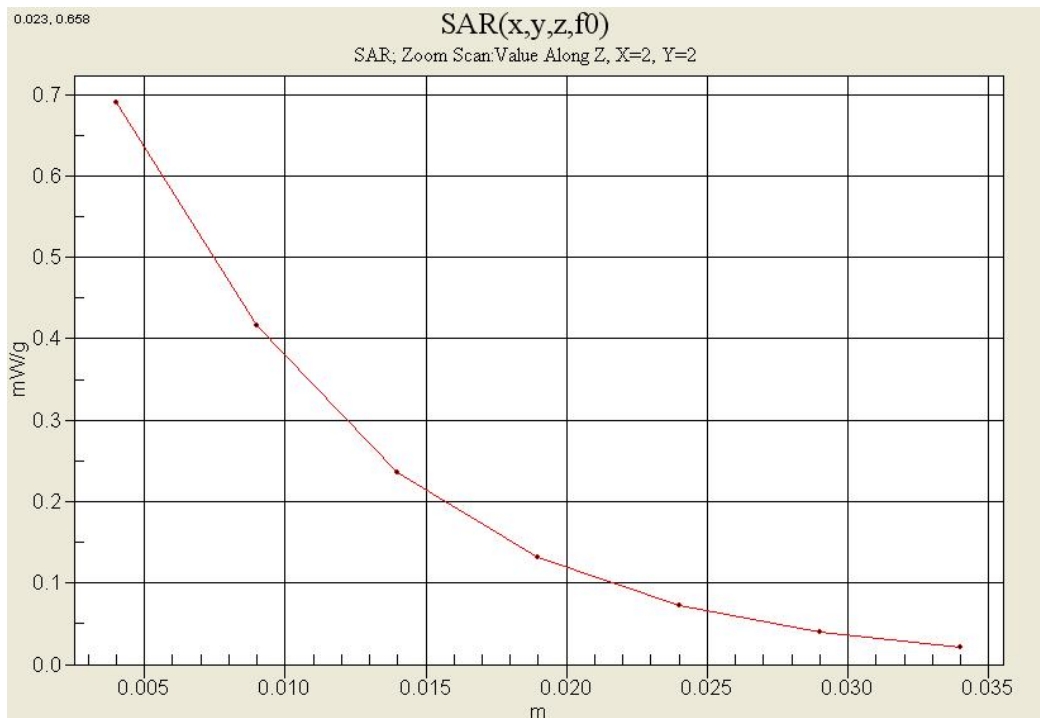
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left touch 661/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (interpolated) = 0.692 mW/g

Left touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 5.87 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.614 mW/g; SAR(10 g) = 0.327 mW/g
Maximum value of SAR (measured) = 0.690 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.3 °C
Ambient Temperature: 21.5 °C
Test Date: Apr.26, 2011

DUT: LG-A360k; Type: bar; Serial: #1

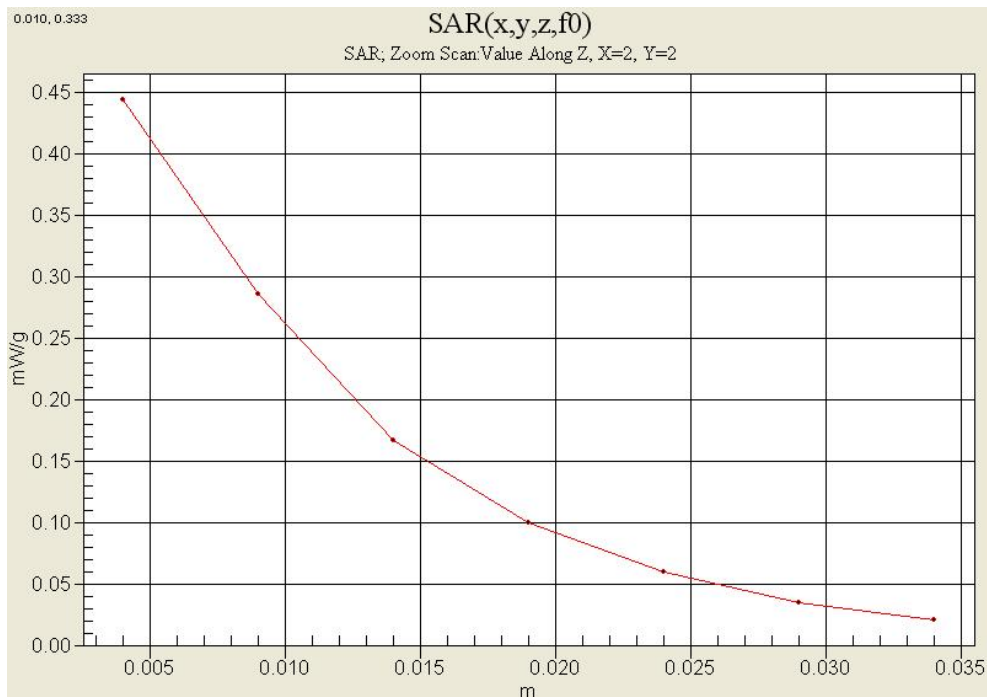
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.075
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.6, 4.6, 4.6); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

body 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.455 mW/g

body 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.69 V/m; Power Drift = -0.077 dB
Peak SAR (extrapolated) = 0.557 W/kg
SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.249 mW/g
Maximum value of SAR (measured) = 0.445 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
Liquid Temperature: 21.1 °C
Ambient Temperature: 21.3 °C
Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.875$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8
Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.645 mW/g

Left touch 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

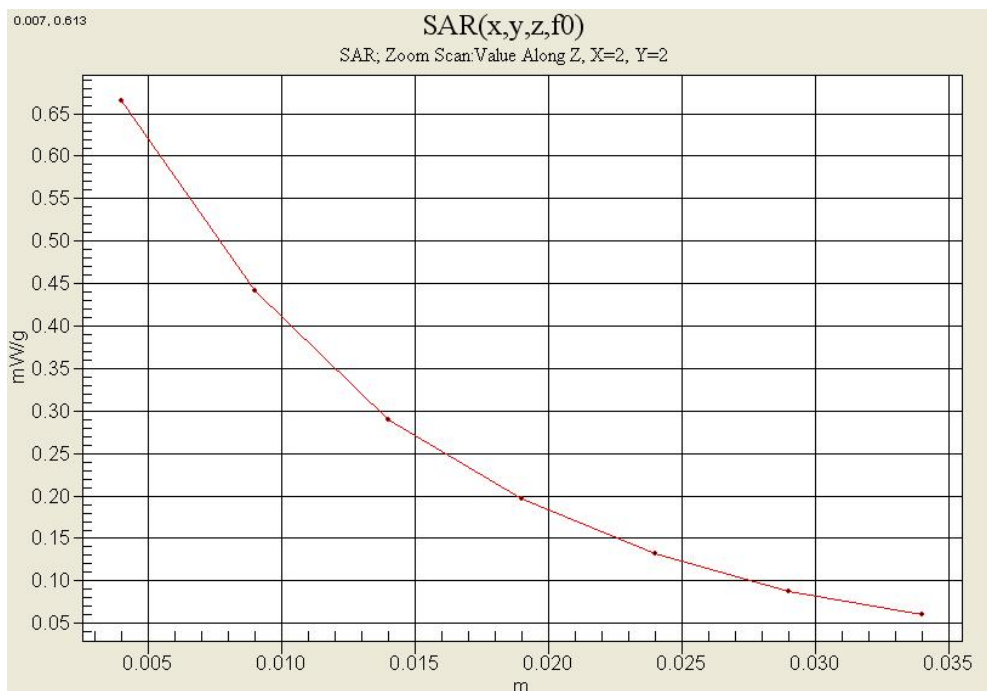
Reference Value = 9.43 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 0.899 W/kg

SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.388 mW/g

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

Maximum value of SAR (measured) = 0.666 mW/g



Test Laboratory: HCT CO., LTD
 EUT Type: Cellular/PCS GSM/GPRS/EDGE and Cellular WCDMA HSDPA Phone with Bluetooth
 GPRS Class12 and GPRS mode class B(GPRS and GSM, but not simultaneously)
 Liquid Temperature: 21.1 °C
 Ambient Temperature: 21.3 °C
 Test Date: Apr.25, 2011

DUT: LG-A360k; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.982 \text{ mho/m}$; $\epsilon_r = 56.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 835/900 MHz; Type: SAM

body 4183/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.392 mW/g

body 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

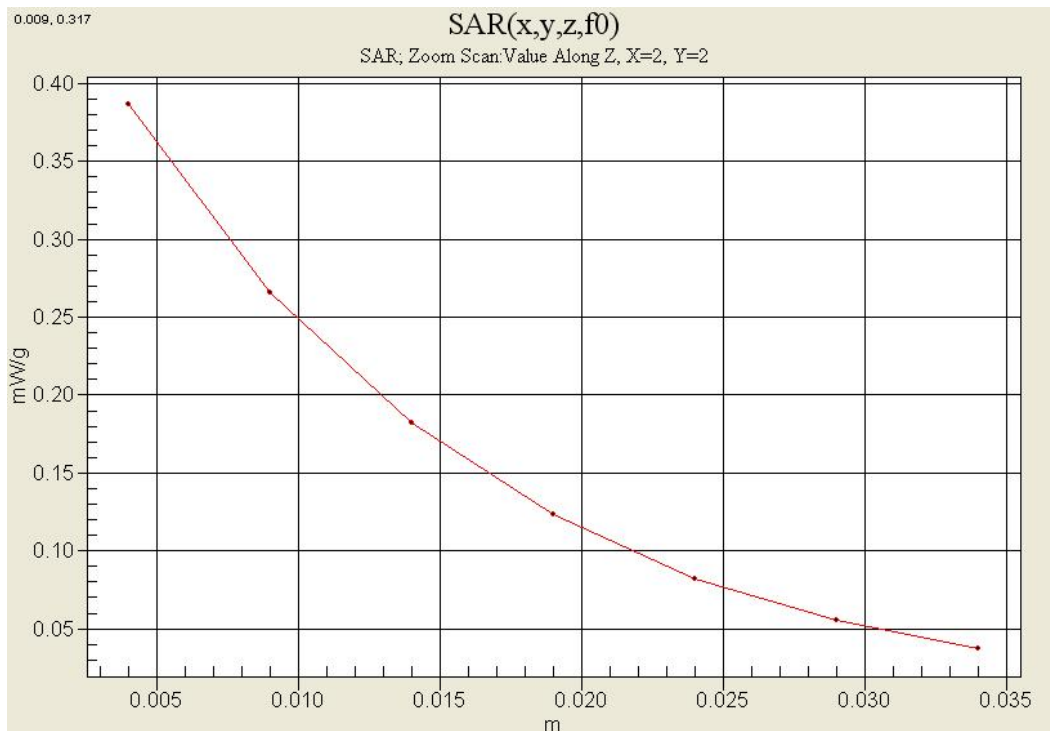
Reference Value = 12.1 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.247 mW/g

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

Maximum value of SAR (measured) = 0.387 mW/g



Attachment 2. – Dipole Validation Plots

■ Validation Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20 dBm)
Liquid Temp: 21.2 °C
Test Date: Apr.25, 2011

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

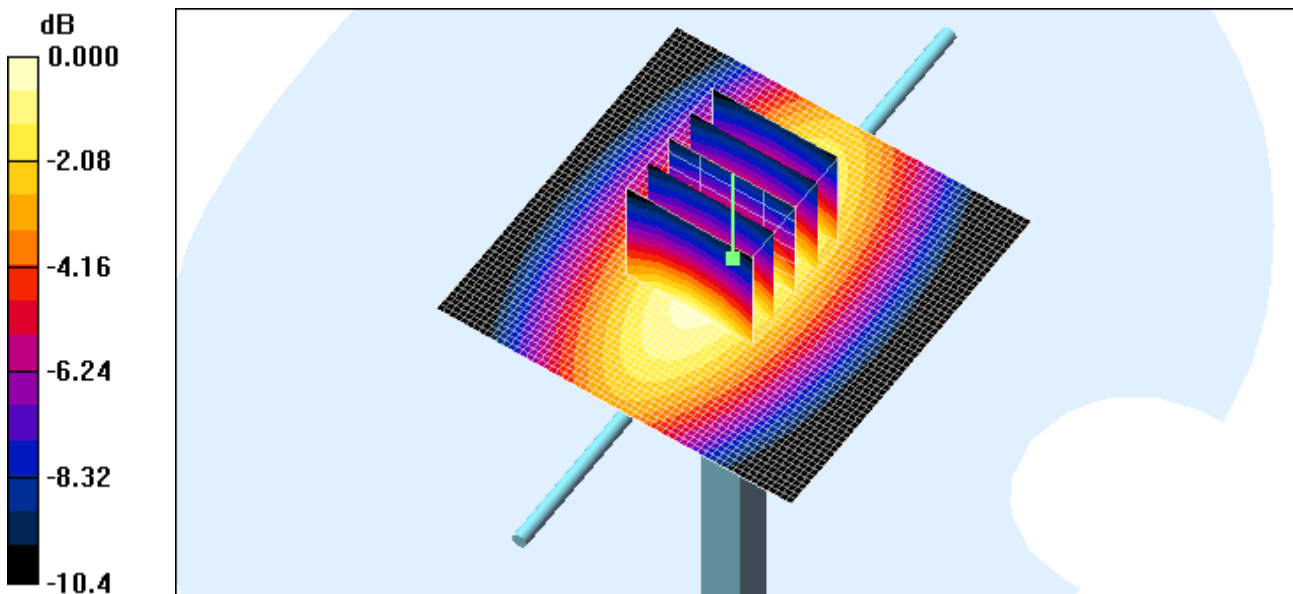
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.873 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 – SN1609; ConvF(6.27, 6.27, 6.27); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- 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) = 1.06 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 = 36.2 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.984 mW/g; SAR(10 g) = 0.649 mW/g
Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.06mW/g

■ Validation Data (835 MHz Body)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20 dBm)
Liquid Temp: 21.2 °C
Test Date: Apr.25, 2011

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

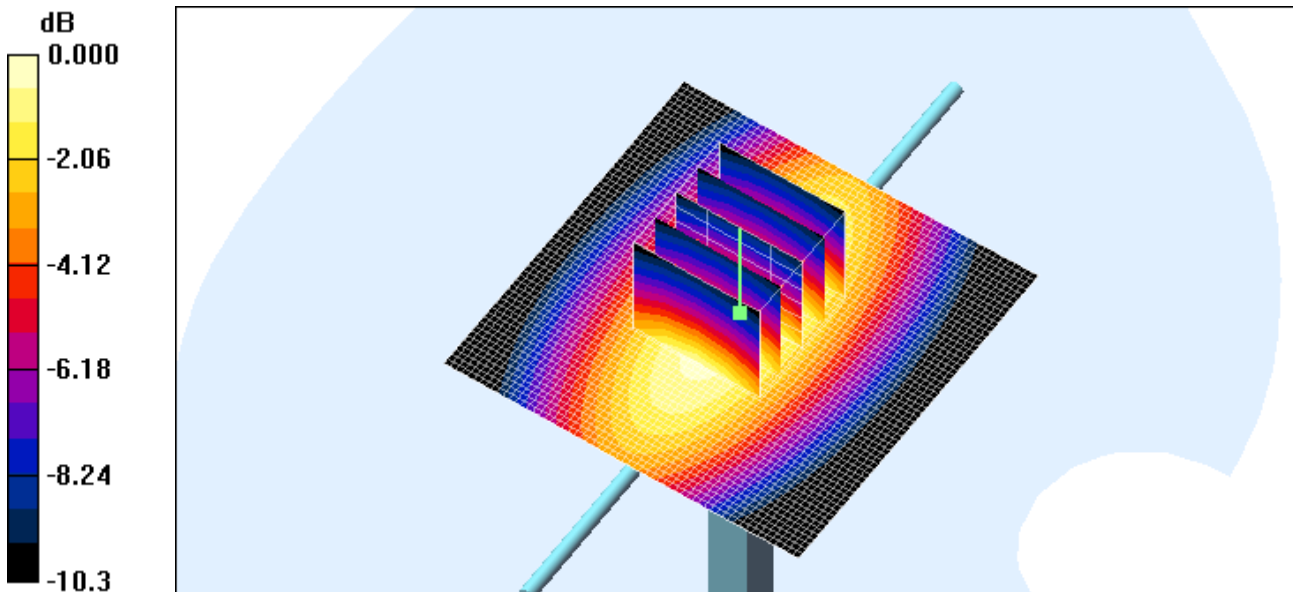
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.981 \text{ mho/m}$; $\epsilon_r = 56.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 – SN1609; ConvF(6.12, 6.12, 6.12); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- 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) = 1.09 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 = 34.8 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.672 mW/g
Maximum value of SAR (measured) = 1.10 mW/g



0 dB = 1.10mW/g

■ Validation Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20 dBm)
Liquid Temp: 21.3 °C
Test Date: Apr.26, 2011

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

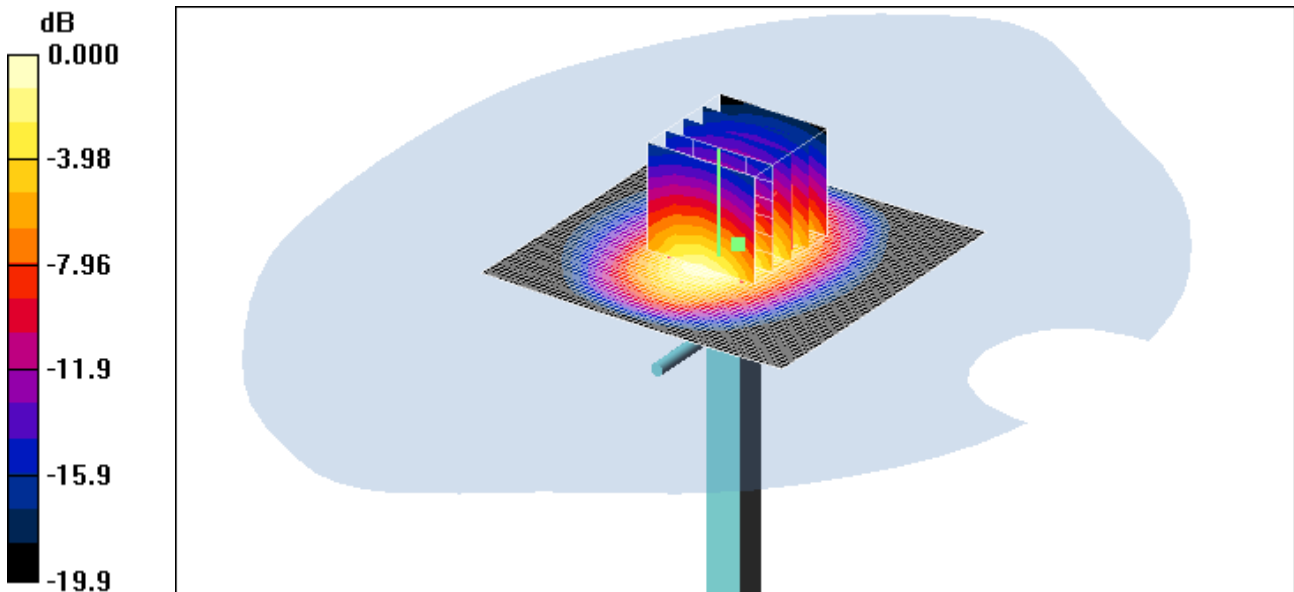
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 – SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (interpolated) = 4.49 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 58.3 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 6.71 W/kg
SAR(1 g) = 3.85 mW/g; SAR(10 g) = 2 mW/g
Maximum value of SAR (measured) = 4.31 mW/g



0 dB = 4.31mW/g

■ Validation Data (1900 MHz Body)

Test Laboratory: HCT CO., LTD
Input Power 100 mW (20 dBm)
Liquid Temp: 21.3 °C
Test Date: Apr.26, 2011

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

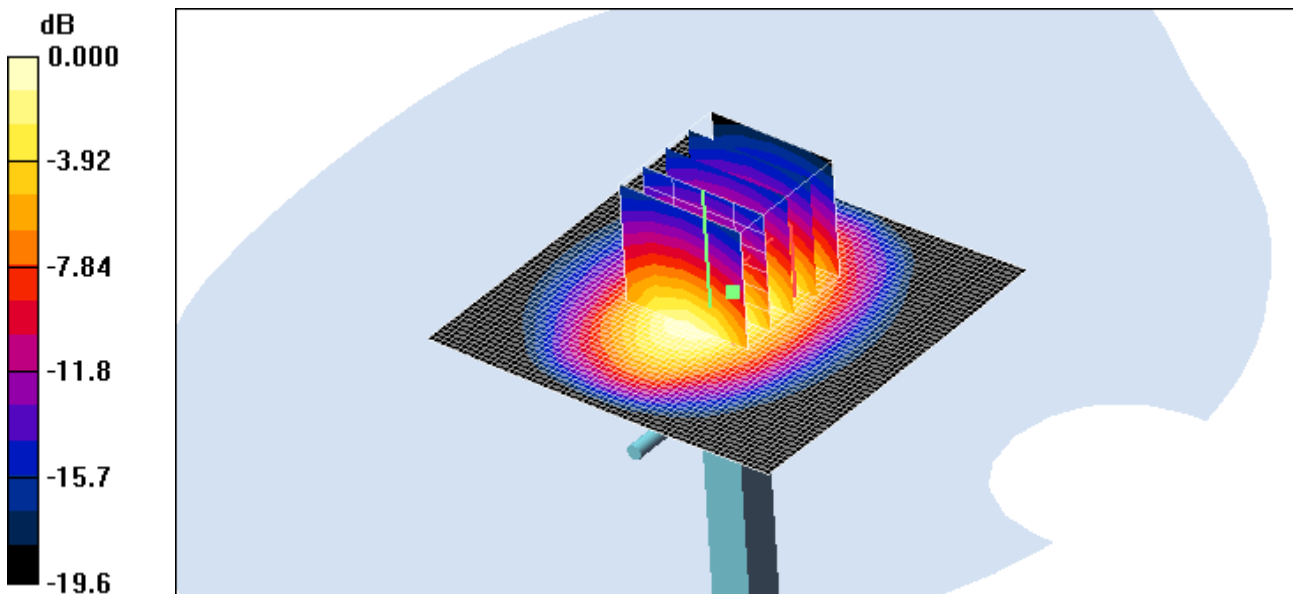
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.5 \text{ mho/m}$; $\epsilon_r = 53.3$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 – SN1609; ConvF(4.6, 4.6, 4.6); Calibrated: 2010-11-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2011-03-01
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (interpolated) = 5.04 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 60.5 V/m; Power Drift = -0.085 dB
Peak SAR (extrapolated) = 6.46 W/kg
SAR(1 g) = 4.09 mW/g; SAR(10 g) = 2.17 mW/g
Maximum value of SAR (measured) = 4.59 mW/g



0 dB = 4.59mW/g

■ Dielectric Parameter (835 MHz Head)

Title LG-A360k
SubTitle GSM850(Head)
Test Date Apr.25, 2011

Frequency	e'	e''
800000000.0000	41.1600	18.8569
805000000.0000	41.0977	18.8600
810000000.0000	41.0658	18.8121
815000000.0000	40.9603	18.8059
820000000.0000	40.9609	18.8138
825000000.0000	40.9271	18.8098
830000000.0000	40.8224	18.7937
835000000.0000	40.8369	18.7871
840000000.0000	40.8042	18.8352
845000000.0000	40.7979	18.7510
850000000.0000	40.7027	18.7542
855000000.0000	40.6427	18.7684
860000000.0000	40.6189	18.7622
865000000.0000	40.5715	18.7424
870000000.0000	40.5022	18.7494
875000000.0000	40.4884	18.7708
880000000.0000	40.4089	18.7357
885000000.0000	40.2996	18.7147
890000000.0000	40.2742	18.7047
895000000.0000	40.2044	18.6930
900000000.0000	40.1144	18.6087

■ Dielectric Parameter (835 MHz Body)

Title LG-A360k
SubTitle GSM850(Body)
Test Date Apr.25, 2011

Frequency	e'	e''
800000000.0000	57.0641	21.2926
805000000.0000	57.0211	21.2600
810000000.0000	56.9700	21.2782
815000000.0000	56.9631	21.2221
820000000.0000	56.9550	21.1622
825000000.0000	56.8787	21.1264
830000000.0000	56.8552	21.1258
835000000.0000	56.8358	21.1139
840000000.0000	56.7615	21.0741
845000000.0000	56.7198	21.0257
850000000.0000	56.6869	20.9908
855000000.0000	56.5833	20.9874
860000000.0000	56.5229	20.9155
865000000.0000	56.4983	20.9353
870000000.0000	56.3724	20.8537
875000000.0000	56.2768	20.8223
880000000.0000	56.2474	20.7886
885000000.0000	56.1735	20.7594
890000000.0000	56.1025	20.7553
895000000.0000	56.0483	20.7550
900000000.0000	56.0419	20.7005

■ Dielectric Parameter (1900 MHz Head)

Title LG-A360k
 SubTitle WCDMA1900(Head)
 Test Date Apr.26, 2011

Frequency	e'	e''
1800000000.0000	41.2821	12.9728
1810000000.0000	41.2494	12.9822
1820000000.0000	41.2456	13.0682
1830000000.0000	41.2277	13.1109
1840000000.0000	41.2029	13.1547
1850000000.0000	41.1535	13.1870
1860000000.0000	41.0893	13.1804
1870000000.0000	41.0335	13.2264
1880000000.0000	40.9469	13.1960
1890000000.0000	40.8837	13.2173
1900000000.0000	40.8347	13.2175
1910000000.0000	40.7722	13.2271
1920000000.0000	40.7604	13.2569
1930000000.0000	40.7426	13.2849
1940000000.0000	40.7044	13.3296
1950000000.0000	40.7322	13.3681
1960000000.0000	40.7271	13.4050
1970000000.0000	40.7385	13.4510
1980000000.0000	40.7193	13.4555
1990000000.0000	40.6693	13.5380
2000000000.0000	40.5905	13.5219

■ Dielectric Parameter (1900 MHz Body)

Title LG-A360k
SubTitle WCDMA1900(Body)
Test Date Apr.26, 2011

Frequency	e'	e''
1800000000.0000	53.0224	13.7070
1810000000.0000	53.0113	13.7860
1820000000.0000	53.0275	13.8809
1830000000.0000	52.9947	13.9461
1840000000.0000	53.0243	13.9887
1850000000.0000	53.0846	14.0471
1860000000.0000	53.1423	14.0636
1870000000.0000	53.2526	14.1077
1880000000.0000	53.2740	14.1519
1890000000.0000	53.2912	14.1812
1900000000.0000	53.2853	14.1952
1910000000.0000	53.2738	14.2364
1920000000.0000	53.2543	14.3291
1930000000.0000	53.2519	14.3947
1940000000.0000	53.2275	14.4961
1950000000.0000	53.1657	14.5749
1960000000.0000	53.0854	14.6318
1970000000.0000	53.0499	14.6646
1980000000.0000	52.9770	14.6794
1990000000.0000	52.8847	14.7249
2000000000.0000	52.8072	14.7312

Attachment 3. – Probe Calibration Data

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



S Schweizerischer Kalibrierdienst
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S 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 **HCT (Dymstec)**

Certificate No: **ET3-1609_Nov10**

CALIBRATION CERTIFICATE

Object **ET3DV6 - SN:1609**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-12.v6, QA CAL-23.v3 and QA CAL-25.v2**
Calibration procedure for dosimetric E-field probes

Calibration date: **November 24, 2010**

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-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

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

Issued: November 25, 2010

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

Certificate No: ET3-1609_Nov10

Page 1 of 11

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



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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
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
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:

- 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

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 E^2 -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 with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; VR_{x,y,z}:** A, B, C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- 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:1609

November 24, 2010

Probe ET3DV6

SN:1609

Manufactured:	July 21, 2001
Last calibrated:	March 17, 2009
Modified:	November 17, 2010
Recalibrated:	November 24, 2010

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

ET3DV6 SN:1609

November 24, 2010

DASY/EASY - Parameters of Probe: ET3DV6 SN:1609

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$) ^A	1.98	1.88	1.83	± 10.1%
DCP (mV) ^B	99.1	97.1	98.2	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc ^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	152.5	± 2.6 %
			Y	0.00	0.00	1.00	144.6	
			Z	0.00	0.00	1.00	150.5	

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 Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

ET3DV6 SN:1609

November 24, 2010

DASY/EASY - Parameters of Probe: ET3DV6 SN:1609

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
300	± 50 / ± 100	45.3 ± 5%	0.87 ± 5%	7.94	7.94	7.94	0.30	1.54 ± 13.3%
450	± 50 / ± 100	43.5 ± 5%	0.87 ± 5%	7.13	7.13	7.13	0.21	2.35 ± 13.3%
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	6.27	6.27	6.27	0.52	2.06 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	6.15	6.15	6.15	0.42	2.33 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.51	5.51	5.51	0.53	2.63 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	5.26	5.26	5.26	0.68	2.21 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	5.05	5.05	5.05	0.70	2.24 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.61	4.61	4.61	0.99	1.70 ± 11.0%

^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:1609

November 24, 2010

DASY/EASY - Parameters of Probe: ET3DV6 SN:1609

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
300	± 50 / ± 100	58.2 ± 5%	0.92 ± 5%	7.65	7.65	7.65	0.28	2.26 ± 13.3%
450	± 50 / ± 100	56.7 ± 5%	0.94 ± 5%	7.50	7.50	7.50	0.15	2.30 ± 13.3%
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	6.12	6.12	6.12	0.54	2.10 ± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	6.05	6.05	6.05	0.42	2.49 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.83	4.83	4.83	0.60	3.10 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.60	4.60	4.60	0.84	2.40 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.74	4.74	4.74	0.85	2.50 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.20	4.20	4.20	0.99	1.82 ± 11.0%

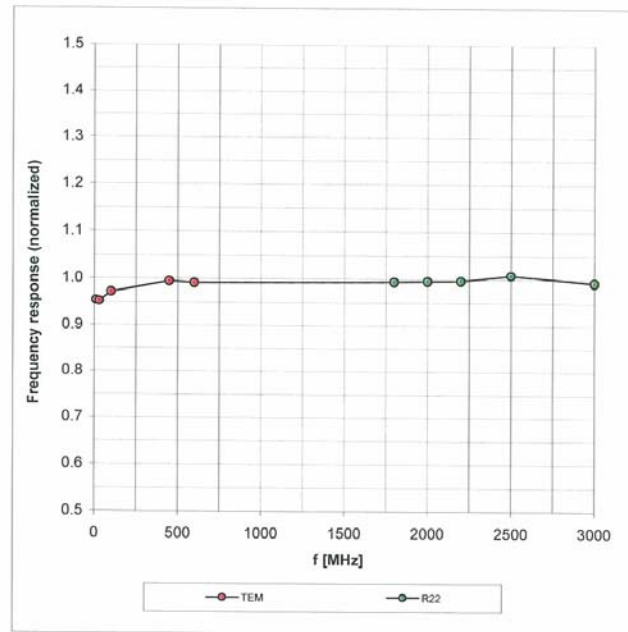
^C The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

ET3DV6 SN:1609

November 24, 2010

Frequency Response of E-Field

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

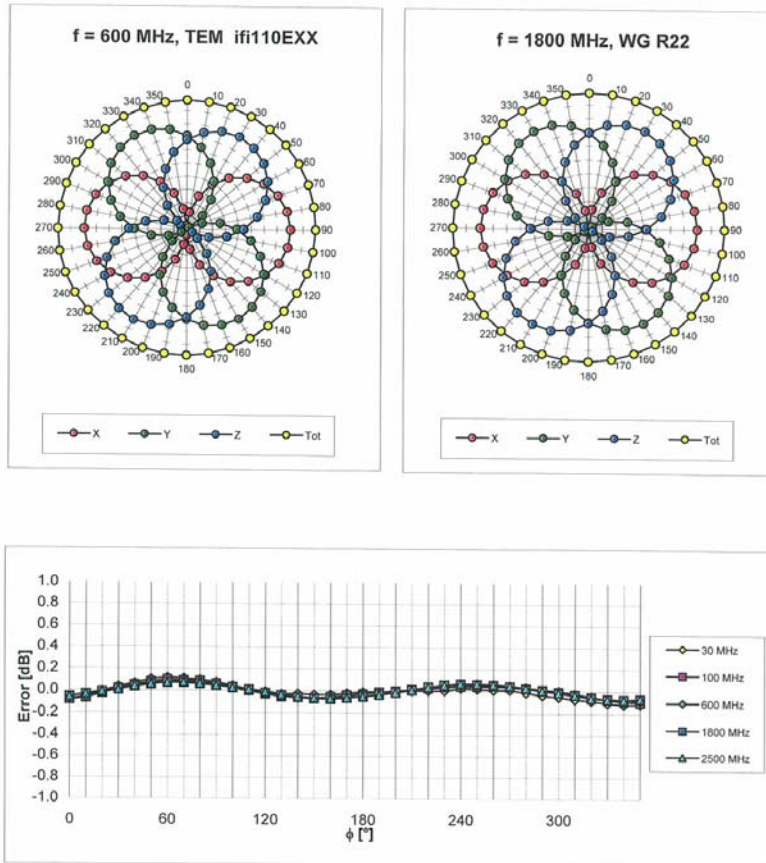


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

ET3DV6 SN:1609

November 24, 2010

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



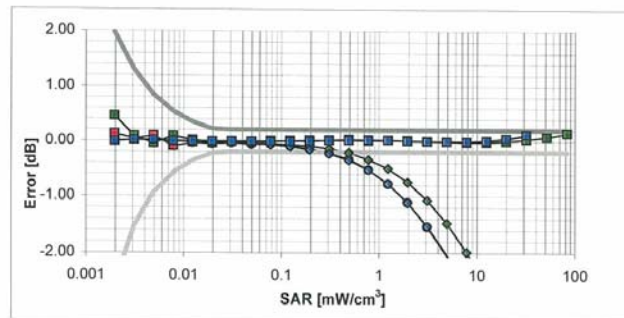
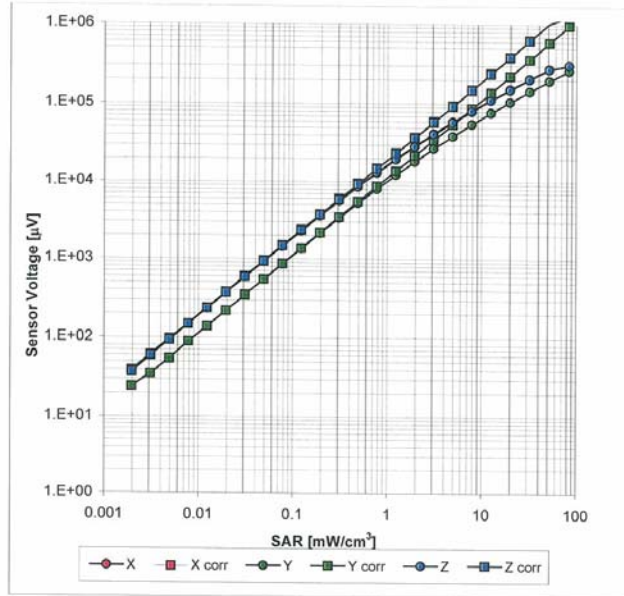
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

ET3DV6 SN:1609

November 24, 2010

Dynamic Range f(SAR_{head})

(TEM cell, f = 900 MHz)

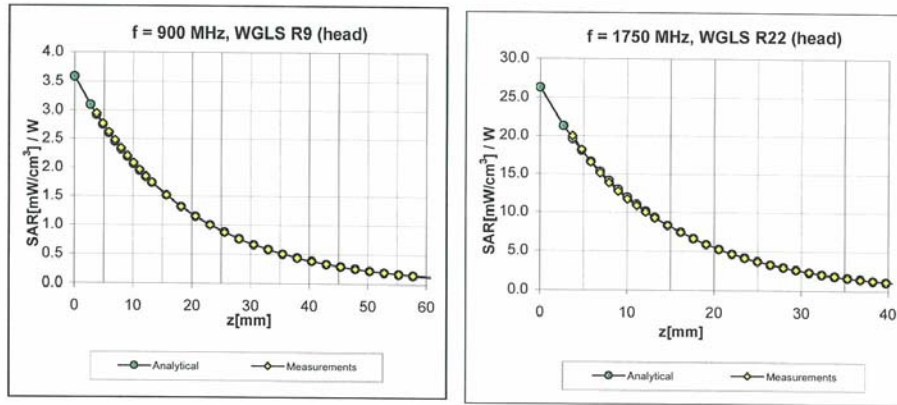


Uncertainty of Linearity Assessment: $\pm 0.6\%$ (k=2)

ET3DV6 SN:1609

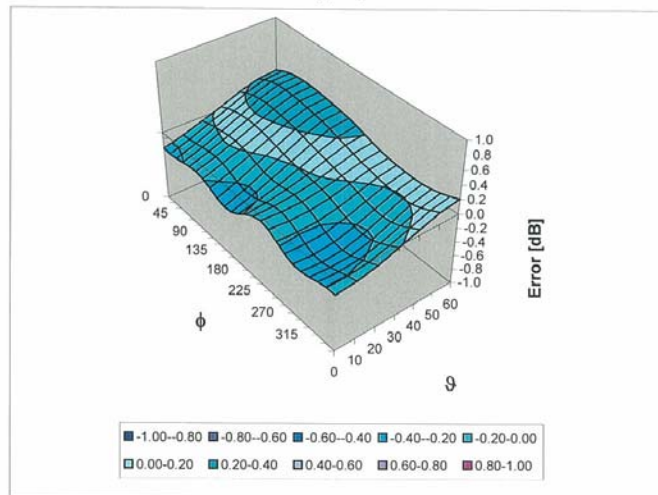
November 24, 2010

Conversion Factor Assessment



Deviation from Isotropy in HSL

Error (ϕ , θ), f = 900 MHz



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

ET3DV6 SN:1609

November 24, 2010

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	6.8 mm
Probe Tip to Sensor X Calibration Point	2.7 mm
Probe Tip to Sensor Y Calibration Point	2.7 mm
Probe Tip to Sensor Z Calibration Point	2.7 mm
Recommended Measurement Distance from Surface	3.7 mm

Schmid & Partner Engineering AG

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Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, <http://www.speag.com>

Additional Conversion Factors

for Dosimetric E-Field Probe

Type:

ET3DV6

Serial Number:

1609

Place of Assessment:

Zurich

Date of Assessment:

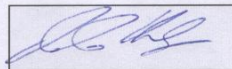
November 26, 2010

Probe Calibration Date:

November 24, 2010

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1750 MHz.

Assessed by:



ET3DV6-SN:1609

Page 1 of 2

November 26, 2010

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Dosimetric E-Field Probe ET3DV6 SN:1609

Conversion factor ($\pm$ standard deviation)

150 $\pm$ 50 MHz *СолвF* **8.4 $\pm$ 10%**

$\epsilon_r = 52.3$
 $\sigma = 0.76$ mho/m
(head tissue)

150 $\pm$ 50 MHz *СолвF* **8.1 $\pm$ 10%**

$\epsilon_r = 61.9$
 $\sigma = 0.80$ mho/m
(body tissue)

Important Note:

For numerically assessed probe conversion factors, parameters Alpha and Delta in the DASY software must have the following entries: Alpha = 0 and Delta = 1.

Please see also DASY4 Manual.

ET3DV6-SN:1609

Page 2 of 2

November 26, 2010

Attachment 4. – Dipole Calibration Data

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



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S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **HCT (Dymstec)**

Certificate No: **D835V2-441_May10**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 441**

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

Calibration date: **May 21, 2010**

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 ($22 \pm 3^\circ\text{C}$) 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	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	02-Mar-10 (No. DAE4-601_Mar10)	Mar-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

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

Issued: May 21, 2010

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

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Multilateral Agreement for the recognition of calibration certificates

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	V5.2
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 $\pm$ 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 $\pm$ 0.2) °C	41.7 $\pm$ 6 %	0.91 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.5 $\pm$ 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.43 mW / g
SAR normalized	normalized to 1W	9.72 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	9.66 mW /g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.58 mW / g
SAR normalized	normalized to 1W	6.32 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	6.29 mW /g $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.2 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.51 mW / g
SAR normalized	normalized to 1W	10.0 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	9.92 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.64 mW / g
SAR normalized	normalized to 1W	6.56 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	6.51 mW / g ± 16.5 % (k=2)

Appendix**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	55.2 Ω - 8.2 j Ω
Return Loss	- 20.8 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.3 Ω - 9.4 j Ω
Return Loss	- 19.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.375 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: 21.05.2010 09:55:07

Test Laboratory: SPEAG, Zurich, Switzerland

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

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

Medium: HSL900

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.03, 6.03, 6.03); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 61

Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement

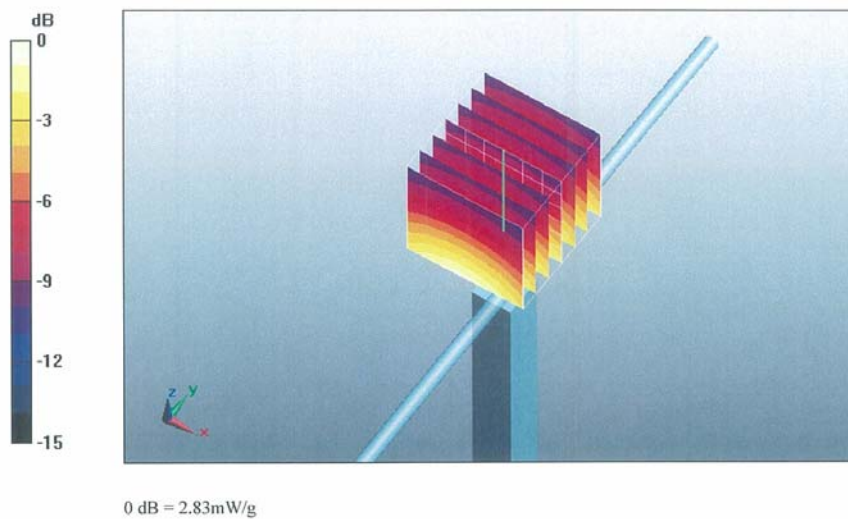
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.3 V/m; Power Drift = -0.023 dB

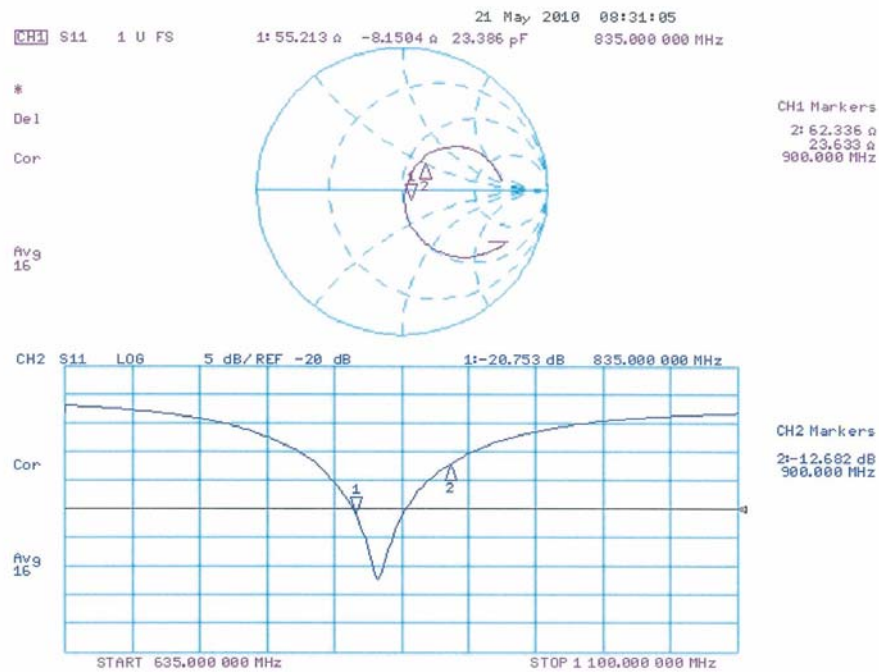
Peak SAR (extrapolated) = 3.63 W/kg

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.58 mW/g

Maximum value of SAR (measured) = 2.83 mW/g



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body

Date/Time: 20.05.2010 09:50:16

Test Laboratory: SPEAG, Zurich, Switzerland

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

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

Medium: MSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 54.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 61

Pin250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement

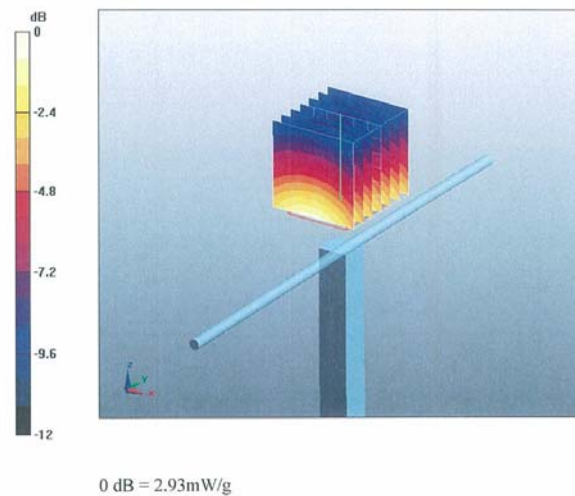
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.4 V/m; Power Drift = 0.000719 dB

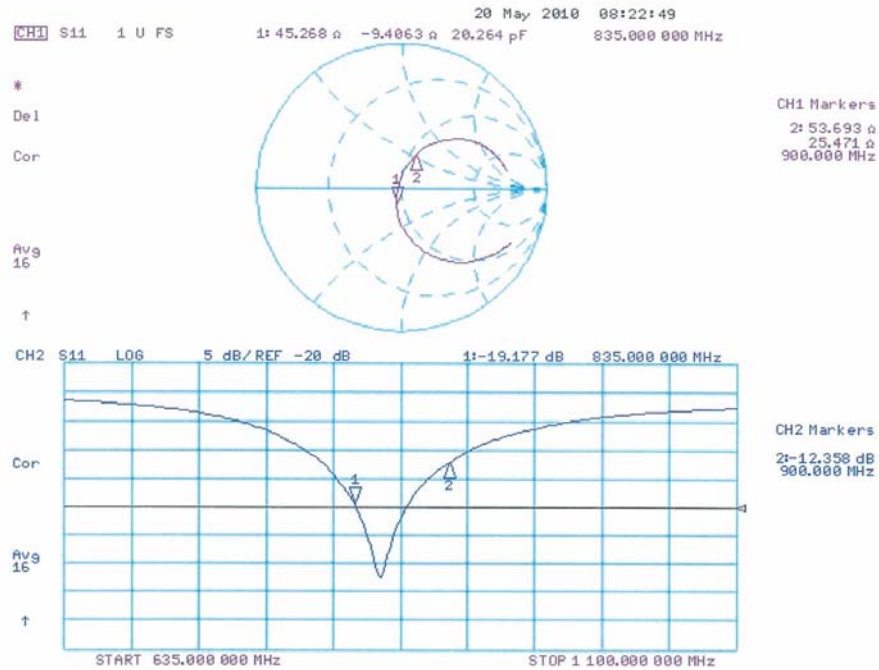
Peak SAR (extrapolated) = 3.69 W/kg

SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.64 mW/g

Maximum value of SAR (measured) = 2.93 mW/g



Impedance Measurement Plot for Body TSL



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Accreditation No.: **SCS 108**

Client **HCT (Dymstec)**

Certificate No: **D1900V2-5d032_Jul10**

CALIBRATION CERTIFICATE

Object	D1900V2 - SN: 5d032		
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits		
Calibration date:	July 16, 2010		
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	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10
Calibrated by:	Name Dimce Iliev	Function Laboratory Technician	Signature
Approved by:	Katja Pokovic	Technical Manager	
			Issued: July 19, 2010
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Certificate No: D1900V2-5d032_Jul10

Page 1 of 9

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificatesAccreditation 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	V52.2
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	40.3 $\pm$ 6 %	1.43 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.6 $\pm$ 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	10.1 mW / g
SAR normalized	normalized to 1W	40.4 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	39.9 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.26 mW / g
SAR normalized	normalized to 1W	21.0 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	20.9 mW / g $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.3 ± 6 %	1.55 mho/m ± 6 %
Body TSL temperature during test	(22.5 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.5 mW / g
SAR normalized	normalized to 1W	42.0 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	41.5 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.63 mW / g
SAR normalized	normalized to 1W	22.5 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	22.4 mW / g ± 16.5 % (k=2)

Appendix**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	$51.6 \Omega + 6.2 j\Omega$
Return Loss	- 24.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$50.3 \Omega + 7.0 j\Omega$
Return Loss	- 23.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.177 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: 16.07.2010 12:15:48

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 U12 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.09, 5.09, 5.09); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement

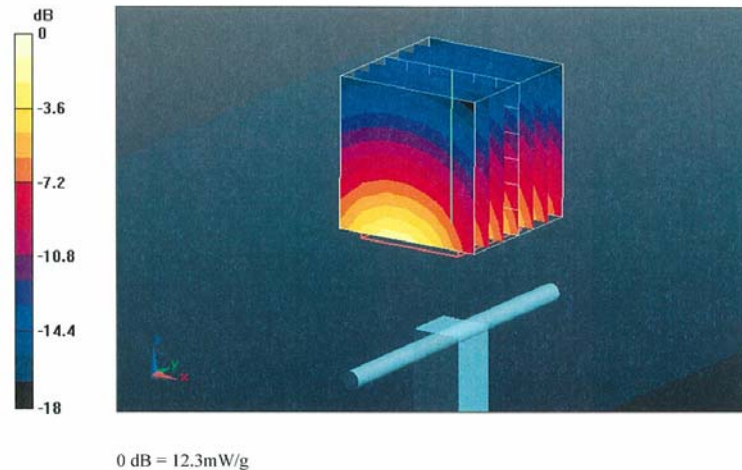
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.4 V/m; Power Drift = 0.039 dB

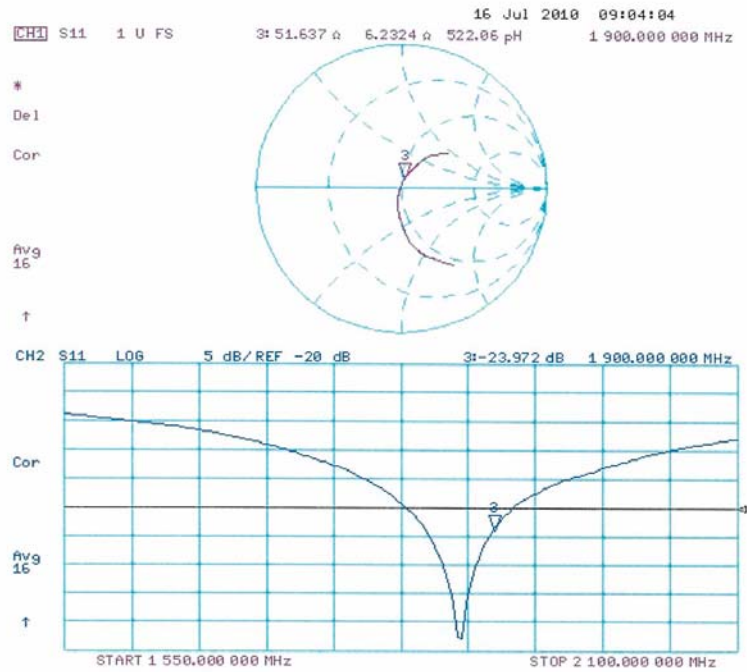
Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.26 mW/g

Maximum value of SAR (measured) = 12.3 mW/g



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body

Date/Time: 13.07.2010 12:14:01

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: MSL U11 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.59, 4.59, 4.59); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement

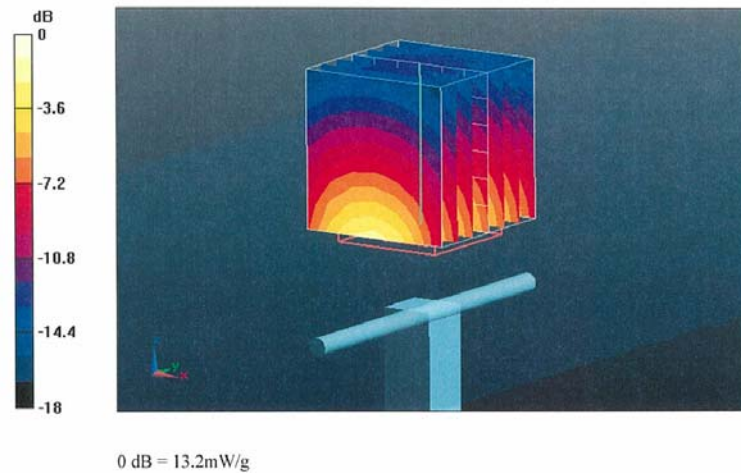
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.1 V/m; Power Drift = 0.00127 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.63 mW/g

Maximum value of SAR (measured) = 13.2 mW/g



Impedance Measurement Plot for Body TSL

