



# SAR TEST REPORT

HCT CO., LTD

EUT Type:	850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC	
FCC ID:	JYCP9090	
Model:	P9090	
Date of Issue:	Jul. 10, 2012	
Test report No.:	HCTA1206FS04	
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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 – 1992 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.	
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# 1. INTRODUCTION

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

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 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).**

where:

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

$\sigma$  = conductivity of the tissue-simulant material (S/m)  
 $\rho$  = mass density of the tissue-simulant material (kg/m<sup>3</sup>)  
 $E$  = Total RMS electric field strength (V/m)

NOTE:

The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

## 2. DESCRIPTION OF DEVICE

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

### 2.1 General Information

EUT Type	850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC			
FCC ID:	JYCP9090	Model:	P9090	
Trade Name	Pantech	Serial Number(s)	#1	
Mode(s)of	GSM850/GSM1900 / WCDMA 850/ WCDMA1900/802.11abgn/ LTE Band(17/5/4/2)			
Application Type	Certification			
Tx Frequency	826.4 - 846.6 MHz (WCDMA850) / 1 852.4 - 1 907.6 MHz (WCDMA1900) 824.20 - 848.80 MHz (GSM850) / 1 850.20 - 1 909.80 MHz (GSM1900) 2 412 - 2 462 MHz (WLAN) 704-716 MHz (LTE17), 824-849 MHz (LTE5), 1710-1755 MHz (LTE4), 1850-1910 MHz (LTE2) 802.11a/n (20 MHz BW): 5180 - 5240 MHz/ 5260 - 5320 MHz/ 5500 - 5700 MHz/ 5745-5825 MHz 802.11n (40 MHz BW): 5190 - 5230 MHz/ 5270 - 5310 MHz/ 5510 - 5670 MHz			
Rx Frequency	871.4 - 891.6 MHz (WCDMA850)/ 1 932.4 - 1 987.6 MHz (WCDMA1900) 869.20 - 893.80 MHz (GSM850)/ 1 930.20 - 1 989.80 MHz (GSM1900) 2 412 - 2 462 MHz (WLAN)/ 734-746MHz (LTE17), 869-894 MHz (LTE5), 2110-2155 MHz (LTE4), 1930-1990 MHz (LTE2) 802.11a/n (20 MHz BW): 5180 - 5240 MHz/ 5260 - 5320 MHz/ 5500 - 5700 MHz/ 5745-5825 MHz 802.11n (40 MHz BW): 5190 - 5230 MHz/ 5270 - 5310 MHz/ 5510 - 5670 MHz			
FCC Classification	Licensed Portable Transmitter Held to Ear (PCE)/ DSS/ DTS			
Production Unit	Prototype			
Max SAR	Band	1g SAR (W/kg)		
		Head	Body-worn	Hotspot
	GSM850	0.259	0.486	0.674
	GSM1900	0.163	0.507	1.05
	WCDMA850	0.259	0.364	0.436
	WCDMA1900	0.353	0.476	1.15
	LTE 17	0.239	0.315	0.315
	LTE 5	0.211	0.271	0.327
	LTE 4	0.411	0.336	1.05
	LTE 2	0.277	0.327	1.23
802.11b	0.302	0.288	0.288	
802.11a	0.223	0.061	-	
Simultaneous SAR per KDB 690783 D01	0.673	0.764	1.23	
Date(s) of Tests	Jun. 4, 2012 ~ Jun. 21, 2012			
Antenna Type	Integral Antenna			
GPRS	Multislot Class: 10, Mode Class: B			
Key Features;	Mobile Hotspot support, Power reduction implement GSM voice, GPRS, EDGE, UMTS voice, HSDPA/HSUPA and LTE will have power back off, when Hotspot mode is on. (Only exclude WiFi)			

## 2.2 KDB 941225 LTE information

Frequency Range:	Band 17: 704MHz-716MHz Band 5: 824MHz-849MHz Band 4: 1710MHz-1755MHz Band 2: 1850MHz-1910MHz							
Channel Bandwidth:	5 MHz, 10 MHz							
Channel Number & Frequency:	Band 17				Band 5			
	5 MHz		10 MHz		5 MHz		10 MHz	
	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)
	23790	710	23790	710	20425	826.5	20450	829
					20525	836.5	20525	836.5
					20625	846.5	20600	844
	Band 4				Band 2			
	5 MHz		10 MHz		5 MHz		10 MHz	
	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)
	19975	1712.5	20000	1715	18625	1852.5	18650	1855
	20175	1732.5	20175	1732.5	18900	1880	18900	1880
	20375	1752.5	20350	1750	19175	1907.5	19150	1905
UE Category & Uplink Modulation	UE Category 3 QPSK, 16QAM							
Power Class	UE Power Class 3							
Description of the LTE Transmitter & antenna	This model have two Tx antennas. - One for GSM, WCDMA and LTE. It can not transmit simultaneously. - Another is for BT/WLAN. It can not transmit simultaneously. Please find the section 10.							
LTE voice/data requirements	Data Only, Please find the section 10. LTE voice is available via VoIP. Considering the users may install 3 <sup>rd</sup> party software to enable VoIP, LTE Head SAR is also evaluated.							
Identify if MPR is optional or mandatory	The EUT incorporates MPR as per 3GPP TS36.101. The MPR is permanently built-in by design as a mandatory. A-MPR is not implemented. During SAR testing, A-MPR was disabled by setting NS=01 on the R&S CMW500.							
Maximum average conducted output power (dBm)	See section 9.4 RF output power measurements in the SAR report.							
Identify all other U.S. wireless operating modes, device exposure configurations and frequency bands	- GSM850/1900, WCDMA850/1900 and LTE Band 17/5/4/2 : Head/Body worn and Hotspot SAR is required. - Bluetooth 2.4 GHz: BT SAR is not required as maximum output power < 12 mW. - WiFi 2.4 GHz: Head/Body worn and Hotspot SAR is required. - WiFi 5 GHz: Head/Body worn SAR is required							
Maximum average conducted output power for other wireless mode and frequency	See section 9 RF output power measurements in the SAR report.							
Simultaneous Transmission condition	See section 11 Simultaneous transmission conditions in the SAR report.							
Power reduction explanation	Power reduction implement. Please find the section 9.							
Description of the test equipment,	LTE SAR Testing was performed using a CMW500.							



## 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 mMaximum 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.

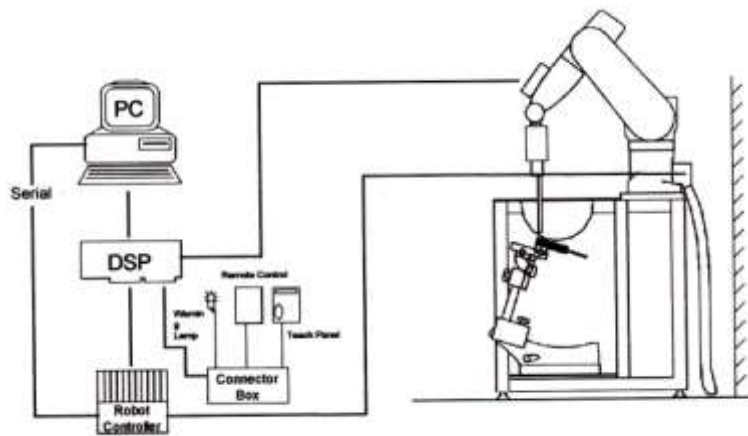


Figure 3.1 HCT SAR Lab. Test Measurement Set-up

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

### 3.1 EX3DV4 Probe Specification

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



Figure 3.1 Photograph of the probe and the Phantom



Figure 3.2 EX3DV4 E-field

The SAR measurements were conducted with the dosimetric probe EX3DV4, designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches a maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASy4 software reads the reflection during a software approach and looks for the maximum using a 2<sup>nd</sup> order fitting. The approach is stopped at reaching the maximum.

### 3.3 PROBE CALIBRATION PROCESS

#### 3.3.1 E-Probe Calibration

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

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

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

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

where:

- Δt = exposure time (30 seconds),
- C = heat capacity of tissue (brain or muscle),
- ΔT = temperature increase due to RF exposure.

SAR is proportional to ΔT/ Δt, 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/cm<sup>3</sup> for brain tissue)

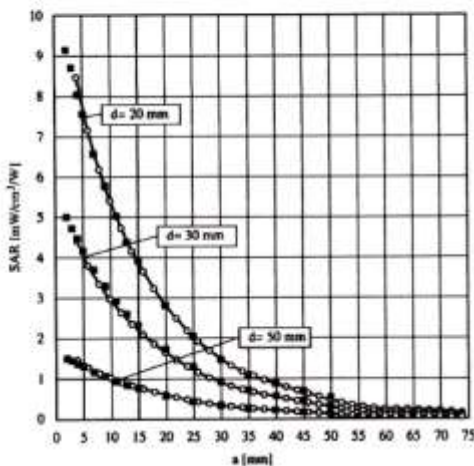


Figure 3.4 E-Field and Temperature measurements at 900 MHz

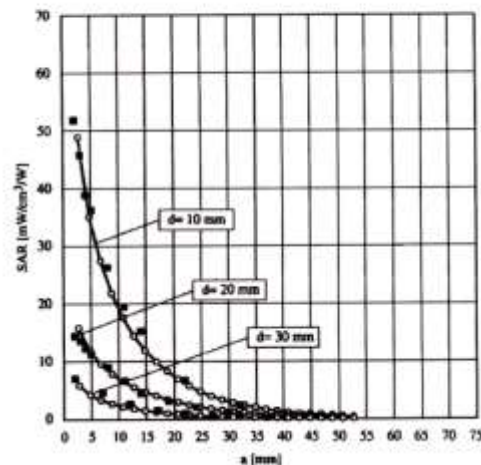


Figure 3.5 E-Field and temperature measurements at 1.8 GHz



### 3.3.2 Data Extrapolation

The DASY4 software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given like below;

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

with  $V_i$  = compensated signal of channel i (i=x,y,z)  
 $U_i$  = input signal of channel i (i=x,y,z)  
 $cf$  = crest factor of exciting field (DASY parameter)  
 $dcp_i$  = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes:

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

with  $V_i$  = compensated signal of channel i (i = x,y,z)  
 $Norm_i$  = sensor sensitivity of channel i (i = x,y,z)  
 $\mu V/(V/m)^2$  for E-field probes  
 $ConvF$  = sensitivity of enhancement in solution  
 $E_i$  = electric field strength of channel i in V/m

The RSS value of the field components gives the total field strength (Hermetian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with SAR = local specific absorption rate in W/g  
 $E_{tot}$  = total field strength in V/m  
 $\sigma$  = conductivity in [mho/m] or [Siemens/m]  
 $\rho$  = equivalent tissue density in g/cm<sup>3</sup>

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

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

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

### 3.4 SAM Phantom

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



Figure 3.6 SAM Phantom

Shell Thickness	2.0 mm $\pm$ 0.2 mm (6 $\pm$ 0.2 mm at ear point)
Filling Volume	about 25 L
Dimensions	1 000 mm x 500 mm (L x W)

### 3.5 Device Holder for Transmitters

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

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



Figure 3.7 Device Holder

### 3.6 Brain & Muscle Simulating Mixture Characterization

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

Ingredients (% by weight)	Frequency (MHz)											
	750		835		915		1 900		2 450		5200-5800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.2	51.7	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2	65.52	78.66
Salt (NaCl)	1.4	1.0	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04	0.0	0.0
Sugar	57	47.2	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0	0.0	0.0
HEC	0.2	0.0	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.2	0.1	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0	17.24	10.67
DGBE	0.00	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7	0.0	0.0
Diethylene glycol hexyl ether											17.24	10.67

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

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

### 3.7 SAR TEST EQUIPMENT

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
Staubli	Robot RX90L	F01/5K09A1/A/01	N/A	N/A	N/A
Staubli	Robot ControllerCS7MB	F99/5A82A1/C/01	N/A	N/A	N/A
HP	Pavilion t000_puffer	KRJ51201TV	N/A	N/A	N/A
SPEAG	Light Alignment Sensor	265	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D221340.01	N/A	N/A	N/A
SPEAG	DAE3	466	Feb. 21, 2012	Annual	Feb. 21, 2013
SPEAG	DAE3	638	Apr. 27, 2012	Annual	Apr. 27, 2013
SPEAG	E-Field Probe EX3DV4	3797	July 25, 2011	Annual	July 25, 2012
SPEAG	E-Field Probe ET3DV6	1609	Mar. 19, 2012	Annual	Mar. 19, 2013
SPEAG	Validation Dipole D750V3	1014	July 25, 2011	Annual	July 25, 2012
SPEAG	Validation Dipole 5GHzV2	1107	Nov. 15, 2011	Annual	Nov. 15, 2012
SPEAG	Validation Dipole D835V2	441	May 16, 2012	Annual	May 16, 2013
SPEAG	Validation Dipole D1800V2	2d006	Mar. 15, 2012	Annual	Mar. 15, 2012
SPEAG	Validation Dipole D1900V2	5d032	July 22, 2011	Annual	July 22, 2012
SPEAG	Validation Dipole D2450V2	743	Aug. 29, 2011	Annual	Aug. 29, 2012
Agilent	Power Meter(F) E4419B	MY41291386	Nov. 04, 2011	Annual	Nov. 04, 2012
Agilent	Power Sensor(G) 8481	MY41090870	Nov. 04, 2011	Annual	Nov. 04, 2012
HP	Dielectric Probe Kit	00721521	N/A	N/A	N/A
HP	Dual Directional Coupler	16072	Nov. 04, 2011	Annual	Nov. 04, 2012
R&S	Base Station CMU200	110740	July 26, 2011	Annual	July 26, 2012
Agilent	Base Station E5515C	GB44400269	Feb. 10, 2012	Annual	Feb. 10, 2013
HP	Signal Generator E4438C	MY42082646	Nov. 11, 2011	Annual	Nov. 11, 2012
HP	Network Analyzer 8753ES	JP39240221	Apr. 3, 2012	Annual	Apr. 3, 2013
R&S	Base Station CMW500	101901	Aug. 5, 2011	Annual	Aug. 5, 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 15 mm x 15 mm. Based on this data, the area of the mMaximum 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 mMaximum interpolated value was searched with a straight-forward algorithm. Around this mMaximum 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.
5. Per KDB pub. 865664 FCC SAR Measurement requirement, a minimum volume of 24 mm x 24 mm x 20 mm was assessed by measuring 7 x 7 x 11 points for 5GHz testing.

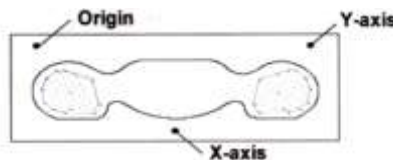


Figure 4.1 SAR Measurement Point in Area Scan



## 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.

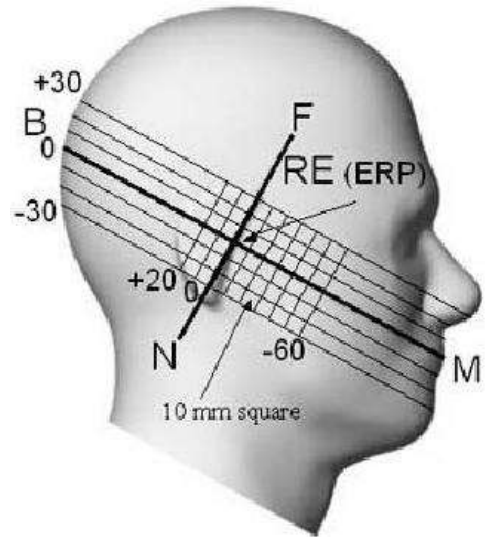


Figure 5.1 Side view of the phantom

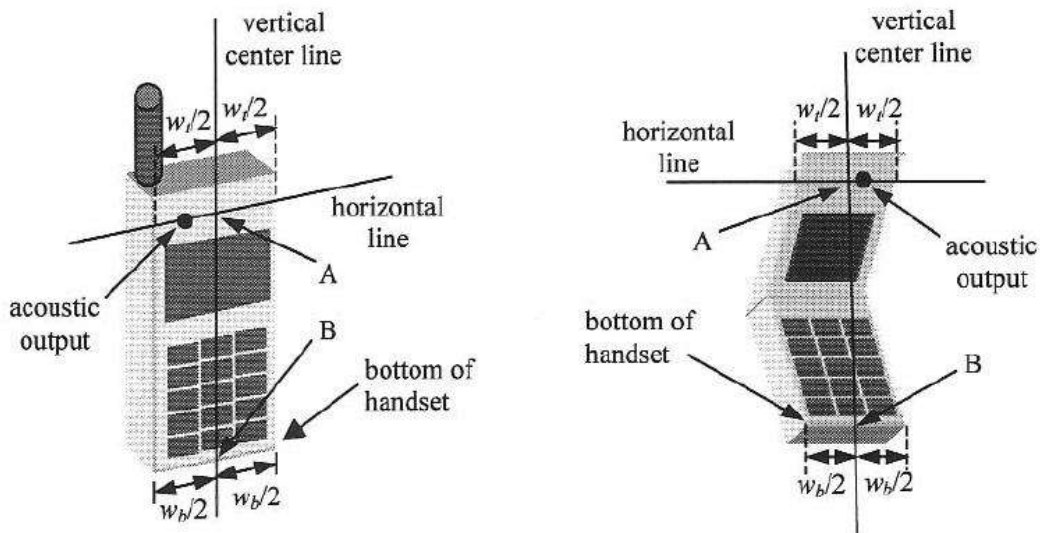


Figure 5.2 Handset vertical and horizontal reference lines

## **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 1.0 cm from the EUT back surface to the liquid interface is configured for the generic test.

"See the Test SET-UP Photo"

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

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

## 6. MEASUREMENT UNCERTAINTY

Error Description	Tol (± %)	Prob. dist.	Div.	$c_i$	Standard Uncertainty (± %)	$v_{eff}$	
<b>1. Measurement System</b>							
Probe Calibration	6.00	N	1	1	6.00	∞	
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 Conditions	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	∞	
<b>2. Test Sample Related</b>							
Device Positioning	2.90	N	1.00	1	2.90	145	
Device Holder	3.60	N	1.00	1	3.60	5	
Power Drift	5.00	R	1.73	1	2.89	∞	
<b>3. Phantom and Setup</b>							
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	
<b>Combine Standard Uncertainty</b>						11.13	
<b>Coverage Factor for 95 %</b>						$k=2$	
<b>Expanded STD Uncertainty</b>						22.25	

Table 6.1 Uncertainty (700 MHz- 2600 MHz)

Error Description	Tol (± %)	Prob. dist.	Div.	$c_i$	Standard Uncertainty (± %)	$v_{eff}$
<b>1. Measurement System</b>						
Probe Calibration	6.55	N	1	1	6.55	∞
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 Conditions	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	∞
<b>2. Test Sample Related</b>						
Device Positioning	2.90	N	1.00	1	2.90	145
Device Holder	3.60	N	1.00	1	3.60	5
Power Drift	5.00	R	1.73	1	2.89	∞
<b>3. Phantom and Setup</b>						
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
<b>Combind Standard Uncertainty</b>					11.43	
<b>Coverage Factor for 95 %</b>					$k=2$	
<b>Expanded STD Uncertainty</b>					22.86	

Table 6.2 Uncertainty (5000-5900 MHz)

## 7. ANSI/ IEEE C95.1 - 1992 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

Band	Date	Liquid	Liquid Temp.[°C]	Parameters	Target Value	Measured Value	Deviation [%]	Limit [%]
GSM/ WCDMA 850 MHz	Jun. 4, 2012	Head	21.2	$\epsilon_r$	41.5	43.2	+ 4.10	$\pm 5$
				$\sigma$	0.90	0.884	- 1.78	$\pm 5$
	Jun. 4, 2012	Body	21.2	$\epsilon_r$	55.2	54.7	- 0.91	$\pm 5$
				$\sigma$	0.97	1.01	+ 4.12	$\pm 5$
GSM/ WCDMA 1900MHz	Jun. 5, 2012	Head	21.2	$\epsilon_r$	40.0	39.9	- 0.25	$\pm 5$
				$\sigma$	1.40	1.4	0.00	$\pm 5$
	Jun. 5, 2012	Body	21.2	$\epsilon_r$	53.3	51.3	- 3.75	$\pm 5$
				$\sigma$	1.52	1.46	- 3.95	$\pm 5$
LTE17 750 MHz	Jun. 8, 2012	Head	21.2	$\epsilon_r$	41.9	42.3	+ 0.95	$\pm 5$
				$\sigma$	0.89	0.91	+ 2.25	$\pm 5$
	Jun. 14, 2012	Body	21.3	$\epsilon_r$	55.5	54.7	- 1.44	$\pm 5$
				$\sigma$	0.96	0.971	+ 1.15	$\pm 5$
LTE5 835 MHz	Jun. 11, 2012	Head	21.3	$\epsilon_r$	41.5	43	+ 3.61	$\pm 5$
				$\sigma$	0.90	0.876	- 2.67	$\pm 5$
	Jun. 15, 2012	Body	21.1	$\epsilon_r$	55.2	54.8	- 0.72	$\pm 5$
				$\sigma$	0.97	1.01	+ 4.12	$\pm 5$
LTE4 1750MHz	Jun. 12, 2012	Head	21.2	$\epsilon_p$	40.5	39.1	- 3.46	$\pm 5$
				$\sigma$	1.37	1.42	+ 3.65	$\pm 5$
	Jun. 18, 2012	Body	21.3	$\epsilon_r$	53.4	55	+ 3.00	$\pm 5$
				$\sigma$	1.49	1.5	+ 0.67	$\pm 5$
LTE2 1900MHz	Jun. 13, 2012	Head	21.2	$\epsilon_r$	40.0	39.9	- 0.25	$\pm 5$
				$\sigma$	1.40	1.4	0.00	$\pm 5$
	Jun. 19, 2012	Body	21.3	$\epsilon_r$	53.3	51	- 4.32	$\pm 5$
				$\sigma$	1.52	1.5	- 1.32	$\pm 5$
WLAN 2.4 GHz	Jun. 7, 2012	Head	21.3	$\epsilon_r$	39.2	38.4	- 2.04	$\pm 5$
				$\sigma$	1.80	1.85	+ 2.78	$\pm 5$
	Jun. 7, 2012	Body	21.3	$\epsilon_r$	52.7	51.6	- 2.09	$\pm 5$
				$\sigma$	1.95	1.96	+ 0.51	$\pm 5$
5200MHz	Jun.20, 2012	Head	21.3	$\epsilon_r$	36.0	36.6	+ 1.67	$\pm 5$
				$\sigma$	4.66	4.53	- 2.79	$\pm 5$
5200MHz	Jun.21, 2012	Body	21.3	$\epsilon_r$	49.0	47.6	- 2.86	$\pm 5$
				$\sigma$	5.3	5.2	- 1.89	$\pm 5$
5500MHz	Jun.20, 2012	Head	21.3	$\epsilon_r$	35.6	35.8	+ 0.56	$\pm 5$
				$\sigma$	4.96	4.89	- 1.41	$\pm 5$
5500MHz	Jun.21, 2012	Body	21.3	$\epsilon_r$	48.6	46.8	- 3.70	$\pm 5$
				$\sigma$	5.65	5.53	- 2.12	$\pm 5$
5800MHz	Jun.20, 2012	Head	21.3	$\epsilon_r$	35.3	35	- 0.85	$\pm 5$
				$\sigma$	5.27	5.29	+ 0.38	$\pm 5$
5800MHz	Jun.21, 2012	Body	21.3	$\epsilon_r$	48.2	46.4	- 3.73	$\pm 5$
				$\sigma$	6.00	6.06	+ 1.00	$\pm 5$

The dielectronic parameters of the liquids were measured prior to the SAR evaluation using an Agilent 85070C Dielectronic Probe Kit and Agilent Network Analyzer.

## 8.2 System Validation

Band	Probe (SN)	Dipole (SN)	Date	Liquid	Liquid Temp. [°C]	1 W Target SAR <sub>1g</sub> (mW/g)	Measured SAR <sub>1g</sub> (mW/g)	1 W Normalized SAR <sub>1g</sub> (mW/g)	Deviation [%]	Limit [%]
850	3797	441	Jun. 4, 2012	Head	21.2	9.43	0.950	9.5	+ 0.74	± 10
			Jun. 4, 2012	Body	21.2	9.50	0.952	9.52	+ 0.21	± 10
1900	3797	5d032	Jun. 5, 2012	Head	21.2	39.9	4.09	40.9	+ 2.51	± 10
	1609		Jun. 5, 2012	Body	21.2	40.9	4.24	42.4	+ 3.67	± 10
LTE17	1609	1014	Jun. 8, 2012	Head	21.2	8.44	0.838	8.38	- 0.71	± 10
			Jun. 14, 2012	Body	21.3	8.87	0.896	8.96	+ 1.01	± 10
LTE5	1609	441	Jun. 11, 2012	Head	21.3	9.43	0.972	9.72	+ 3.08	± 10
			Jun. 15, 2012	Body	21.1	9.50	0.983	9.83	+ 3.47	± 10
LTE4	1609	2d006	Jun. 12, 2012	Head	21.2	37.4	3.69	36.9	- 1.34	± 10
			Jun. 18, 2012	Body	21.3	38.7	4.01	40.1	+ 3.62	± 10
LTE2	1609	5d032	Jun. 13, 2012	Head	21.2	39.9	3.92	39.2	- 1.75	± 10
			Jun. 19, 2012	Body	21.3	40.9	3.95	39.5	- 3.42	± 10
WLAN	1609	743	Jun. 7, 2012	Head	21.3	53.8	5.3	53	- 1.49	± 10
			Jun. 7, 2012	Body	21.3	51.7	5.16	51.6	- 0.19	± 10
5 200	3797	1107	Jun. 20, 2012	Head	21.3	80.3	7.94	79.4	- 1.12	± 10
			Jun. 21, 2012	Body	21.3	77.2	7.68	76.8	- 0.52	± 10
5 500			Jun. 20, 2012	Head	21.3	87.8	8.53	85.3	- 2.85	± 10
			Jun. 21, 2012	Body	21.3	81.6	8.07	80.7	- 1.10	± 10
5 800			Jun. 20, 2012	Head	21.3	78.9	7.67	76.7	- 2.79	± 10
			Jun. 21, 2012	Body	21.3	76.9	7.69	76.9	0.00	± 10

## 8.3 System Validation Procedure

SAR measurement was Prior to assessment, the system is verified to the ± 10 % of the specifications at target frequency by using the system validation kit. (Graphic Plots Attached)

- Cabling the system, using the validation kit equipments.
- Generate about 100 mW Input Level from the Signal generator to the Dipole Antenna.
- Dipole Antenna was placed below the Flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 450824.

## 9. RF CONDUCTED POWER MEASUREMENT

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

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



SAR Test for WWAN & LTE were performed with a base station simulator Agilent E5515C & CMW500. Communication between the device and the emulator was established by air link. Set base station emulator to allow DUT to radiate maximum output power during all tests.

### 9.1 GSM

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



SAR Test for WWAN were performed with a base station simulator Agilent E5515C. Communication between the device and the emulator was established by air link. Set base station emulator to allow DUT to radiate maximum output power during all tests. Please refer to the below worst case SAR operation setup.

- GSM voice: Head SAR
- GPRS Multi-slots : Body SAR with GPRS Multi-slot Class10 2Tx with CS 1 (GMSK)

#### **Note;**

CS1/MCS7 coding scheme was used in GPRS/EDGE output power measurements and SAR Testing, as a condition where GMSK/8PSK modulation was ensured. Investigation has shown that CS1 - CS4/ MCS5 – MCS9 settings do not have any impact on the output levels in the GPRS/EDGE modes.

**Back-off Inactive**

GSM Conducted output powers (Burst-Average)

Band	Channel	GSM	GPRS(GMSK) Data – CS1		EDGE(8PSK) Data – MCS7	
		Voice (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	EDGE 1 TX Slot (dBm)	EDGE 2 TX Slot (dBm)
GSM 850	128	32.47	32.47	31.10	27.60	24.78
	190	32.54	32.52	31.18	27.60	24.79
	251	32.95	32.94	31.26	27.63	24.85
GSM 1900	512	29.60	29.58	27.72	26.03	24.33
	661	29.70	29.68	27.82	26.11	24.42
	810	29.69	29.68	27.95	26.33	24.67

GSM Conducted output powers (Frame-Average)

Band	Channel	GSM	GPRS(GMSK) Data – CS1		EDGE(8PSK) Data – MCS7	
		Voice (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	EDGE 1 TX Slot (dBm)	EDGE 2 TX Slot (dBm)
GSM 850	128	23.44	23.44	25.08	18.57	18.76
	190	23.51	23.49	25.16	18.57	18.77
	251	23.92	23.91	25.24	18.6	18.83
GSM 1900	512	20.57	20.55	21.7	17	18.31
	661	20.67	20.65	21.8	17.08	18.4
	810	20.66	20.65	21.93	17.3	18.65

**Back-off Active**

GSM Conducted output powers

Band	Channel	GSM	GPRS Data		EDGE Data	
		Voice (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	EDGE 1 TX Slot (dBm)	EDGE 2 TX Slot (dBm)
GSM 850	128	-	-	-	-	-
	190	-	-	-	-	-
	251	-	-	-	-	-
GSM 1900	512	27.96	27.92	25.89	23.87	22.62
	661	27.93	27.89	25.99	23.93	22.42
	810	27.89	27.95	26.01	23.99	22.41

**Note:**

Time slot average factor is as follows:

1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB

2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB

3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB

4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



## 9.2 WCDMA

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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	CM (dB) <sup>(2)</sup>
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	12/15 <sup>(3)</sup>	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:  $\Delta_{ACK}, \Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

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

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

## 9.2.5 Handsets with Release 6 HSPA (HSDPA/HSUPA)

Body SAR is not required for handsets with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than ¼ dB higher than that measured without HSUPA/HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is ≤ 75 % of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.1 kbps RMC without HSPA. When VOIP is applicable for head exposure, SAR is not required when the maximum output of each RF channel with HSPA is less than ¼ dB higher than that measured using 12.2 kbps RMC; otherwise, the same HSPA configuration used for body measurement should be used to test for head exposure.

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	$\beta_{ec}$	$\beta_{ed}$	$\beta_{ed}$ (SF)	$\beta_{ed}$ (codes)	CM <sup>(2)</sup> (dB)	MPR (dB)	AG <sup>(4)</sup> Index	E-TFCI
1	11/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	11/15 <sup>(3)</sup>	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	15/15 <sup>(4)</sup>	30/15	24/15	134/15	4	1	1.0	0.0	21	81

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

Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .

Note 4: For subtest 5 the  $\beta_c/\beta_d$  ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 14/15$  and  $\beta_d = 15/15$ .

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

**Back-off Inactive**

3GPP	Mode	3GPP 34.121	Cellular Band [dBm]						MPR Target
Release		Subtest	4132		4183		4233		
Version			Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	
99	WCDMA	12.2 kbps RMC	23.63		23.61		23.45		-
99	WCDMA	12.2 kbps AMR	23.59		23.72		23.43		
5	HSDPA	Subtest 1	23.23		23.1		22.98		0
5		Subtest 2	23.13	0.1	23.22	-0.12	23.08	-0.1	0
5		Subtest 3	22.51	0.72	22.5	0.6	22.49	0.49	0.5
5		Subtest 4	22.5	0.73	22.57	0.53	22.42	0.56	0.5
6	HSUPA	Subtest 1	22.91		22.98		23.14		0
6		Subtest 2	21.2	1.71	21.17	1.81	21.2	1.94	2
6		Subtest 3	21.62	1.29	21.71	1.27	22.44	0.7	1
6		Subtest 4	22.2	0.71	22.19	0.79	22.28	0.86	2
6		Subtest 5	23.02	-0.11	22.99	-0.01	23.08	0.06	0

3GPP	Mode	3GPP 34.121	PCS Band [dBm]						MPR Target
Release		Subtest	9262		9400		9538		
Version			Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	Power reduction (dB)	
99	WCDMA	12.2 kbps RMC	23.96		23.74		23.59		-
99	WCDMA	12.2 kbps AMR	23.95		23.69		23.58		
5	HSDPA	Subtest 1	23.48		23.37		23.17		0
5		Subtest 2	23.49	-0.01	23.41	-0.04	23.34	-0.17	0
5		Subtest 3	22.91	0.57	22.71	0.66	22.6	0.57	0.5
5		Subtest 4	22.92	0.56	22.63	0.74	22.59	0.58	0.5
6	HSUPA	Subtest 1	23.31		23.37		23.3		0
6		Subtest 2	21.4	1.91	21.63	1.74	21.33	1.97	2
6		Subtest 3	21.92	1.39	21.98	1.39	21.86	1.44	1
6		Subtest 4	22.29	1.02	22.56	0.81	22.5	0.8	2
6		Subtest 5	23.26	0.05	23.36	0.01	23.31	-0.01	0

WCDMA Average Conducted output powers

**Back-off Active**

3GPP Release	Mode	3GPP 34.121	PCS Band [dBm]						MPR Target
		Subtest	9262	Power reduction (dB)	9400	Power reduction (dB)	9538	Power reduction (dB)	
Version									
99	WCDMA	12.2 kbps RMC	21.58	-	21.65	-	21.62	-	-
99	WCDMA	12.2 kbps AMR	21.61	-	21.64	-	21.62	-	
5	HSDPA	Subtest 1	21.2	-	21.31	-	21.4	-	0
5		Subtest 2	21.11	0.09	21.32	-0.01	21.37	0.03	0
5		Subtest 3	20.53	0.67	20.62	0.69	20.63	0.77	0.5
5		Subtest 4	20.54	0.66	20.54	0.77	20.62	0.78	0.5
6	HSUPA	Subtest 1	20.95	-	21.24	-	21.31	-	0
6		Subtest 2	19.02	1.93	19.54	1.7	19.36	1.95	2
6		Subtest 3	19.54	1.41	19.89	1.35	19.89	1.42	1
6		Subtest 4	19.91	1.04	20.47	0.77	20.53	0.78	2
6		Subtest 5	20.88	0.07	21.27	-0.03	21.34	-0.03	0

WCDMA Average Conducted output power

## 9.3 WiFi

### 9.3.1 SAR Testing for 802.11a/b/g/n modes

#### General Device Setup

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

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

#### Frequency Channel Configurations

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

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

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

802.11 Test Channels per FCC Requirements

Band	Channel	Conducted Power (dBm)			
		Data Rate (Mbps)			
		1	2	5.5	11
IEEE 802.11b	1	16.87	16.92	16.65	16.15
	6	17.25	17.21	16.97	16.91
	11	16.10	16.03	16.01	15.49

Average IEEE 802.11b Conducted output power

Band	Channel	Conducted Power (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
IEEE 802.11g	1	12.93	12.53	12.34	11.95	11.48	11.01	10.29	10.15
	6	13.31	13.07	12.76	12.37	11.94	11.25	10.80	10.33
	11	11.93	11.80	11.51	11.10	10.67	10.18	9.44	9.24

Average IEEE 802.11g Conducted output power

Band	Channel	Conducted Power (dBm)							
		Data Rate (Mbps)							
		6.5	13	20	26	39	52	58	65
IEEE 802.11n (HT-20)	1	10.12	9.44	9.00	8.88	8.05	7.87	7.26	7.36
	6	10.28	9.65	9.26	8.93	8.26	7.75	7.55	7.32
	11	9.99	9.34	8.91	8.11	7.87	7.35	7.35	6.82

Average IEEE 802.11n Conducted output power

## WLAN 5GHz Average Conducted Powers

### 20 MHz

Conducted Output Power Measurements

### 802.11 a

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5180	36	13.76	13.40	13.24	12.78	12.32	11.66	10.96	10.88
802.11a	5200	40	14.11	13.56	13.47	12.92	12.78	11.80	11.28	10.91
802.11a	5220	44	13.92	13.55	13.43	12.96	12.43	11.80	11.20	11.80
802.11a	5240	48	14.96	14.87	14.41	13.96	13.69	12.85	12.50	11.97
802.11a	5260	52	14.16	13.62	13.47	12.98	12.83	11.81	11.32	11.05
802.11a	5280	56	13.51	13.10	12.73	12.47	11.91	11.38	10.45	10.35
802.11a	5300	60	13.73	13.25	13.20	13.18	12.16	11.47	10.96	10.66
802.11a	5320	64	13.09	12.82	12.62	12.30	11.91	11.02	11.04	10.05
802.11a	5500	100	14.57	14.48	14.03	13.70	13.02	12.54	11.91	11.64
802.11a	5520	104	13.54	13.25	13.26	12.40	12.20	11.30	10.84	10.64
802.11a	5540	108	13.70	13.37	13.28	12.85	12.43	11.70	11.20	10.83
802.11a	5560	112	13.97	13.82	13.51	12.92	12.70	11.92	11.23	11.13
802.11a	5580	116	14.12	12.37	13.49	13.05	12.66	11.96	11.41	11.16
802.11a	5600	120	10.16	9.70	9.30	9.25	8.22	7.70	7.09	6.78
802.11a	5620	124	15.51	15.15	15.00	14.55	14.25	13.63	12.98	12.91
802.11a	5640	128	15.24	14.86	14.76	14.37	13.98	13.40	12.83	12.62
802.11a	5660	132	9.54	9.14	8.99	8.36	7.97	7.44	6.77	6.63
802.11a	5680	136	12.77	12.64	12.38	11.85	11.48	10.87	10.22	10.09
802.11a	5700	140	12.97	12.71	12.31	11.89	11.41	10.89	10.53	9.43
802.11a	5745	149	9.38	9.14	8.96	8.41	7.90	7.42	6.94	6.48
802.11a	5765	153	13.83	13.62	13.30	12.85	12.54	11.73	11.37	11.10
802.11a	5785	157	14.05	13.81	13.47	12.82	12.70	12.20	11.38	11.49
802.11a	5805	161	12.22	11.86	11.65	11.06	10.72	10.02	9.46	9.13
802.11a	5825	165	9.07	9.35	9.42	8.91	8.50	7.87	7.02	7.03



**20 MHz**

## Conducted Output Power Measurements

**802.11 n**

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	5180	36	11.24	10.00	9.73	9.51	9.14	8.21	8.53	7.54
802.11n	5200	40	11.06	10.54	10.40	10.20	9.25	8.53	8.40	8.36
802.11n	5220	44	10.99	10.12	9.77	9.56	8.80	8.15	8.14	7.89
802.11n	5240	48	12.36	11.95	11.69	10.12	9.97	9.29	9.28	8.86
802.11n	5260	52	12.62	11.85	11.16	10.68	9.97	10.19	9.19	9.76
802.11n	5280	56	11.19	10.95	10.29	9.82	9.11	8.98	8.40	8.59
802.11n	5300	60	12.10	10.90	10.79	10.79	9.56	9.11	8.85	8.81
802.11n	5320	64	11.55	10.42	9.90	9.78	9.62	8.35	8.36	8.46
802.11n	5500	100	12.47	11.80	11.65	10.97	10.29	9.85	9.68	9.54
802.11n	5520	104	12.69	11.87	11.48	11.01	10.39	9.99	9.67	9.53
802.11n	5540	108	12.95	12.15	11.69	11.33	10.60	10.05	9.82	9.75
802.11n	5560	112	12.82	12.37	11.83	11.47	10.76	10.37	10.14	9.96
802.11n	5580	116	13.02	12.56	12.07	11.57	10.95	10.48	10.46	10.10
802.11n	5620	124	13.23	12.86	12.23	11.79	11.11	10.60	10.32	10.24
802.11n	5640	128	13.18	12.47	12.35	11.66	11.09	10.61	10.37	10.25
802.11n	5660	132	8.77	8.28	7.89	7.38	6.89	6.14	6.02	5.80
802.11n	5680	136	13.00	12.32	12.02	11.51	10.96	10.38	10.16	10.00
802.11n	5700	140	12.27	11.78	11.35	11.31	10.35	9.87	9.48	9.75
802.11n	5745	149	9.55	9.20	8.63	8.19	7.75	7.21	6.78	6.81
802.11n	5765	153	11.81	11.24	10.82	10.45	9.82	9.27	9.02	8.89
802.11n	5785	157	12.21	11.66	11.60	10.86	10.20	9.67	9.61	9.31
802.11n	5805	161	12.26	11.66	11.13	10.75	10.14	9.55	9.31	9.24
802.11n	5825	165	9.46	9.08	8.59	7.85	7.29	7.07	6.80	6.73

**Note;**

SAR testing was performed according to the FCC KDB 248227.

**40 MHz**
**Conducted Output Power Measurements**
**802.11n Mode**

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			13.5	27	40.5	54	81	108	121.5	135
802.11n	5755	151	13.2	12.78	12.42	12.01	11.56	11.12	10.96	10.87
802.11n	5795	159	12.10	11.52	11.15	10.81	10.24	9.74	9.71	9.57
802.11n	5190	38	11.51	11.09	10.69	10.46	9.57	9.44	8.99	9.24
802.11n	5230	46	11.59	11.12	10.66	10.41	9.97	9.60	9.36	9.30
802.11n	5270	54	12.01	11.42	11.01	10.53	10.10	9.57	9.55	9.41
802.11n	5310	62	12.15	11.60	11.18	10.75	10.27	9.90	9.64	9.69
802.11n	5510	102	12.69	12.48	12.02	11.45	11.00	10.64	10.66	10.32
802.11n	5590	118	11.53	11.03	10.62	10.10	9.72	9.18	9.12	8.94
802.11n	5670	134	10.40	9.95	9.44	9.05	8.51	8.00	7.89	7.85

## 9.4 LTE

SAR testing was performed according to the FCC KDB 941225 D05 publication.

The JYCP9090 developed base on MPR. The MPR is mandatory.

The device will not operate with any other MPR setting than that stated in the table as indicated.

SAR Testing was performed using a CMW500. UE transmits with Maximum output power during SAR testing.

A-MPR has been disabled for all SAR tests by setting NS=01 on the R&S CMW500.

### LTE Average Conducted output power (Back-off Inactive)

#### B2 Low

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	18625	1852.5	QPSK	1	0	23.16	0	0.03
				1	24	23.19	0	0.00
				12	6	22.31	1	0.88
				25	0	22.12	1	1.07
			16QAM	1	0	22	1	1.19
				1	24	22.17	1	1.02
				12	6	21.36	2	1.83
				25	0	21.26	2	1.93

#### B2 Middle

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	18900	1880	QPSK	1	0	22.93	0	0.00
				1	24	22.86	0	0.07
				12	6	21.99	1	0.94
				25	0	21.96	1	0.97
			16QAM	1	0	22.14	1	0.79
				1	24	21.99	1	0.94
				12	6	21.04	2	1.89
				25	0	21.04	2	1.89

**B2 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	19175	1907.5	QPSK	1	0	23.33	0	0.00
				1	24	23.08	0	0.25
				12	6	22.34	1	0.99
				25	0	22.21	1	1.12
			16QAM	1	0	22.28	1	1.05
				1	24	22.06	1	1.27
				12	6	21.23	2	2.10
				25	0	21.2	2	2.13

**B2 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	18650	1855	QPSK	1	0	23	0	0.30
				1	49	23.3	0	0.00
				25	13	22.1	1	1.20
				50	0	22.1	1	1.20
			16QAM	1	0	22.1	1	1.20
				1	49	22.2	1	1.10
				25	13	20.9	2	2.40
				50	0	20.9	2	2.40

**B2 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	18900	1880	QPSK	1	0	22.93	0	0.00
				1	49	22.63	0	0.30
				25	13	21.86	1	1.07
				50	0	21.69	1	1.24
			16QAM	1	0	21.93	1	1.00
				1	49	21.97	1	0.96
				25	13	20.88	2	2.05
				50	0	20.72	2	2.21

**B2 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	19150	1905	QPSK	1	0	23.2	0	0.00
				1	49	22.9	0	0.30
				25	13	22	1	1.20
				50	0	22.2	1	1.00
			16QAM	1	0	22	1	1.20
				1	49	21.7	1	1.50
				25	13	21	2	2.20
				50	0	21	2	2.20

**B4 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	19975	1712.5	QPSK	1	0	23.22	0	0.00
				1	24	23.09	0	0.13
				12	6	22.11	1	1.11
				25	0	22.08	1	1.14
			16QAM	1	0	22.03	1	1.19
				1	24	22.02	1	1.20
				12	6	21.08	2	2.14
				25	0	21.09	2	2.13

**B4 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20175	1732.5	QPSK	1	0	23.1	0	0.00
				1	24	23.1	0	0.00
				12	6	22.1	1	1.00
				25	0	21.94	1	1.16
			16QAM	1	0	22	1	1.10
				1	24	22	1	1.10
				12	6	21	2	2.10
				25	0	21	2	2.10

**B4 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20375	1752.5	QPSK	1	0	22.92	0	0.13
				1	24	23.05	0	0.00
				12	6	21.95	1	1.10
				25	0	22.02	1	1.03
			16QAM	1	0	21.98	1	1.07
				1	24	22.14	1	0.91
				12	6	20.74	2	2.31
				25	0	20.55	2	2.50

**B4 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20000	1715	QPSK	1	0	22.95	0	0.05
				1	49	23	0	0.00
				25	13	22.13	1	0.87
				50	0	22.11	1	0.89
			16QAM	1	0	22.15	1	0.85
				1	49	22.24	1	0.76
				25	13	20.87	2	2.13
				50	0	20.75	2	2.25

**B4 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20175	1732.5	QPSK	1	0	23.1	0	0.00
				1	49	22.82	0	0.28
				25	13	22.05	1	1.05
				50	0	22.03	1	1.07
			16QAM	1	0	22.21	1	0.89
				1	49	21.91	1	1.19
				25	13	21.06	2	2.04
				50	0	20.8	2	2.30

**B4 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20350	1750	QPSK	1	0	22.92	0	0.01
				1	49	22.93	0	0.00
				25	13	21.8	1	1.13
				50	0	21.82	1	1.11
			16QAM	1	0	21.55	1	1.38
				1	49	21.68	1	1.25
				25	13	20.63	2	2.30
				50	0	20.58	2	2.35

**B17 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	23755	706.5	QPSK	1	0	22.98	0	0.00
				1	24	22.89	0	0.09
				25	6	21.89	1	1.09
				25	0	21.76	1	1.22
			16QAM	1	0	21.74	1	1.24
				1	24	21.62	1	1.36
				25	6	20.6	2	2.38
				25	0	20.63	2	2.35

**B17 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	23790	710	QPSK	1	0	22.9	0	0.06
				1	24	22.96	0	0.00
				25	6	21.85	1	1.11
				25	0	21.78	1	1.18
			16QAM	1	0	21.66	1	1.30
				1	24	21.8	1	1.16
				25	6	20.77	2	2.19
				25	0	20.68	2	2.28



**B17 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	23825	713.5	QPSK	1	0	22.99	0	0.00
				1	24	22.98	0	0.01
				25	6	22	1	0.99
				25	0	21.9	1	1.09
			16QAM	1	0	21.88	1	1.11
				1	24	21.69	1	1.30
				25	6	21.03	2	1.96
				25	0	20.96	2	2.03

**B17 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	23780	709	QPSK	1	0	22.97	0	0.00
				1	49	22.97	0	0.00
				25	13	21.64	1	1.33
				50	0	21.64	1	1.33
			16QAM	1	0	21.54	1	1.43
				1	49	21.63	1	1.34
				25	13	20.74	2	2.23
				50	0	20.71	2	2.26

**B17 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	23790	710	QPSK	1	0	22.82	0	0.16
				1	49	22.98	0	0.00
				25	13	21.65	1	1.33
				50	0	21.68	1	1.30
			16QAM	1	0	21.52	1	1.46
				1	49	21.68	1	1.30
				25	13	20.82	2	2.16
				50	0	20.74	2	2.24

**B17 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	23800	711	QPSK	1	0	22.92	0	0.00
				1	49	22.82	0	0.10
				25	13	21.86	1	1.06
				50	0	21.63	1	1.29
			16QAM	1	0	21.46	1	1.46
				1	49	21.49	1	1.43
				25	13	20.91	2	2.01
				50	0	20.7	2	2.22

**B5 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20425	826.5	QPSK	1	0	22.9	0	0.00
				1	24	22.97	0	-0.07
				12	6	21.94	1	0.96
				25	0	21.82	1	1.08
			16QAM	1	0	21.65	1	1.25
				1	24	21.71	1	1.19
				12	6	20.72	2	2.18
				25	0	20.74	2	2.16

**B5 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20525	836.5	QPSK	1	0	22.98	0	0.00
				1	24	22.83	0	0.15
				12	6	22.09	1	0.89
				25	0	21.91	1	1.07
			16QAM	1	0	21.9	1	1.08
				1	24	21.65	1	1.33
				12	6	20.82	2	2.16
				25	0	20.84	2	2.14

**B5 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20625	846.5	QPSK	1	0	22.89	0	0.00
				1	24	22.88	0	0.01
				12	6	21.82	1	1.07
				25	0	21.73	1	1.16
			16QAM	1	0	21.58	1	1.31
				1	24	21.49	1	1.40
				12	6	20.85	2	2.04
				25	0	20.84	2	2.05

**B5 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20450	829	QPSK	1	0	22.95	0	0.00
				1	49	22.77	0	0.18
				25	13	21.81	1	1.14
				50	0	21.7	1	1.25
			16QAM	1	0	21.49	1	1.46
				1	49	21.5	1	1.45
				25	13	20.6	2	2.35
				50	0	20.76	2	2.19

**B5 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20525	836.5	QPSK	1	0	22.97	0	0.00
				1	49	22.92	0	0.05
				25	13	21.77	1	1.20
				50	0	21.88	1	1.09
			16QAM	1	0	21.62	1	1.35
				1	49	21.49	1	1.48
				25	13	20.87	2	2.10
				50	0	20.96	2	2.01

## B5 High

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20600	844	QPSK	1	0	22.9	0	0.00
				1	49	22.82	0	0.08
				25	13	21.68	1	1.22
				50	0	21.56	1	1.34
			16QAM	1	0	21.82	1	1.08
				1	49	21.69	1	1.21
				25	13	20.82	2	2.08
				50	0	20.8	2	2.10

## LTE Average Conducted output power (Back-off Active)

### B2 Low

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	18625	1852.5	QPSK	1	0	21.04	0	0.03
				1	24	21.08	0	0.00
				12	6	20.21	1	0.87
				25	0	20.13	1	0.95
			16QAM	1	0	19.9	1	1.18
				1	24	20.18	1	0.90
				12	6	19.38	2	1.70
				25	0	19.29	2	1.79

### B2 Middle

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	18900	1880	QPSK	1	0	20.95	0	0.00
				1	24	20.87	0	0.08
				12	6	19.99	1	0.96
				25	0	19.95	1	1.00
			16QAM	1	0	20.19	1	0.76
				1	24	20.03	1	0.92
				12	6	19.07	2	1.88
				25	0	19.06	2	1.89

**B2 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	19175	1907.5	QPSK	1	0	21.13	0	0.00
				1	24	20.89	0	0.24
				12	6	20.16	1	0.97
				25	0	20.04	1	1.09
			16QAM	1	0	20.1	1	1.03
				1	24	19.89	1	1.24
				12	6	19.07	2	2.06
				25	0	19.05	2	2.08

**B2 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	18650	1855	QPSK	1	0	21.03	0	0.29
				1	49	21.32	0	0.00
				25	13	20.11	1	1.21
				50	0	20.1	1	1.22
			16QAM	1	0	20.09	1	1.23
				1	49	20.2	1	1.12
				25	13	18.91	2	2.41
				50	0	18.92	2	2.40

**B2 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	18900	1880	QPSK	1	0	20.98	0	0.00
				1	49	20.67	0	0.31
				25	13	19.89	1	1.09
				50	0	19.71	1	1.27
			16QAM	1	0	19.93	1	1.05
				1	49	19.96	1	1.02
				25	13	18.86	2	2.12
				50	0	18.68	2	2.30

**B2 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	19150	1905	QPSK	1	0	21.2	0	0.00
				1	49	20.89	0	0.31
				25	13	19.97	1	1.23
				50	0	20.16	1	1.04
			16QAM	1	0	19.94	1	1.26
				1	49	19.72	1	1.48
				25	13	19.04	2	2.16
				50	0	19.06	2	2.14

**B4 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	19975	1712.5	QPSK	1	0	21.22	0	0.00
				1	24	21.07	0	0.15
				12	6	20.07	1	1.15
				25	0	20.02	1	1.20
			16QAM	1	0	19.99	1	1.23
				1	24	20	1	1.22
				12	6	19.08	2	2.14
				25	0	19.11	2	2.11

**B4 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20175	1732.5	QPSK	1	0	21	0	0.03
				1	24	21.03	0	0.00
				12	6	20.05	1	0.98
				25	0	19.91	1	1.12
			16QAM	1	0	19.99	1	1.04
				1	24	20.01	1	1.02
				12	6	19.03	2	2.00
				25	0	19.04	2	1.99



**B4 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20375	1752.5	QPSK	1	0	21.03	0	0.15
				1	24	21.18	0	0.00
				12	6	20.06	1	1.12
				25	0	20.09	1	1.09
			16QAM	1	0	20.03	1	1.15
				1	24	20.15	1	1.03
				12	6	18.83	2	2.35
				25	0	18.81	2	2.37

**B4 Low**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20000	1715	QPSK	1	0	21.06	0	0.07
				1	49	21.13	0	0.00
				25	13	20.28	1	0.85
				50	0	20.22	1	0.91
			16QAM	1	0	20.27	1	0.86
				1	49	20.38	1	0.75
				25	13	19.03	2	2.10
				50	0	18.88	2	2.25

**B4 Middle**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20175	1732.5	QPSK	1	0	21.22	0	0.00
				1	49	20.97	0	0.25
				25	13	20.19	1	1.03
				50	0	20.18	1	1.04
			16QAM	1	0	20.28	1	0.94
				1	49	20	1	1.22
				25	13	19.14	2	2.08
				50	0	18.92	2	2.30

**B4 High**

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20350	1750	QPSK	1	0	20.97	0	-0.01
				1	49	20.96	0	0.00
				25	13	19.87	1	1.09
				50	0	19.87	1	1.09
			16QAM	1	0	19.61	1	1.35
				1	49	19.72	1	1.24
				25	13	18.69	2	2.27
				50	0	18.67	2	2.29

**Note;**

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

**Note;**

1. When hotspot function is on state, there isn't any change on the transmitter and antenna path. The power level through the antenna path is just backed-off equal to prepared power table. Therefore, the influence of transmitter and antenna path is less than normal state.

2. GSM/GPRS1900 with 2 dB Back off +0.5/-2 dB power tolerance.

WCDMA1900 with 2 dB Back off +0.5/-2 dB power tolerance.

LTE B2 & B4 with 2 dB Back off +0.5/-2 dB power tolerance.

3. This device will have power back off, when Hotspot mode is on.

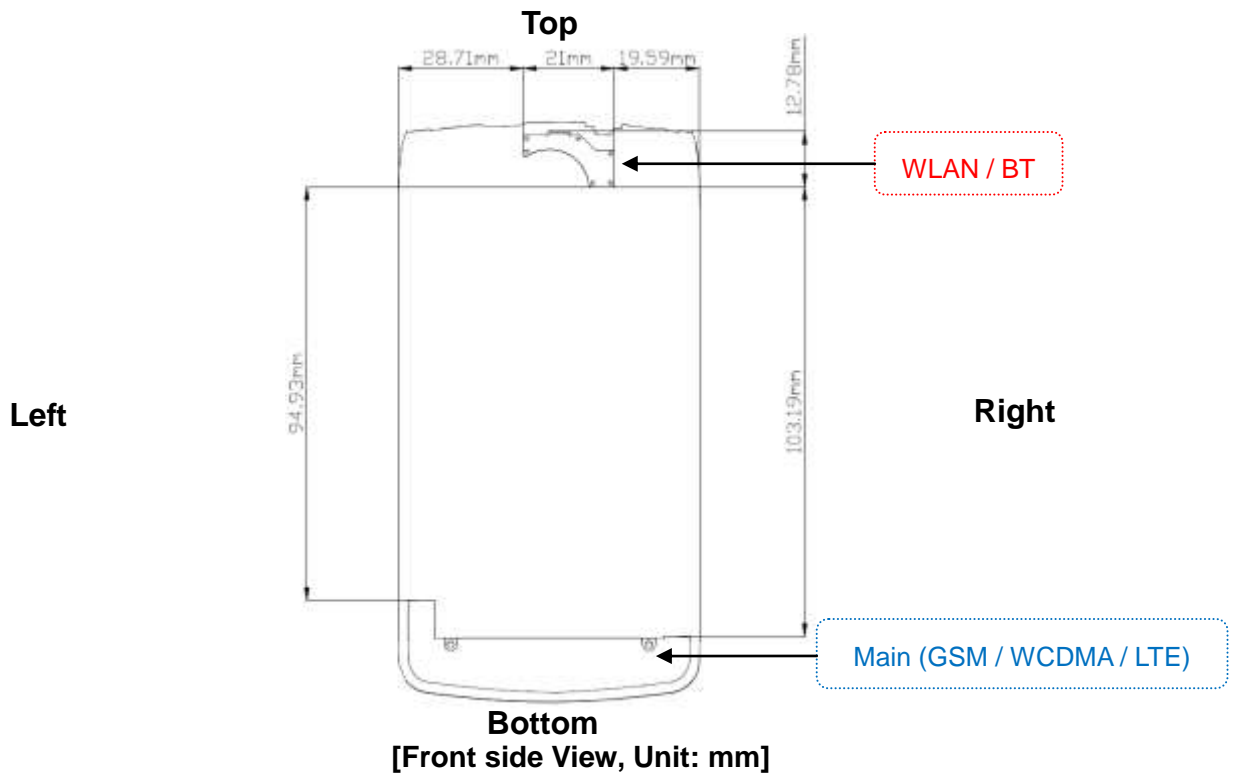
4. Please see the separate Power Back-off Description document.

## 10. SAR Test configuration & Antenna Information

### 10.1 SAR Test configurations for Mobile Hotspot

Mode	Back	Front	Left	Right	Bottom	Top
850 GPRS	Yes	Yes	Yes	Yes	Yes	No
1900 GPRS	Yes	Yes	Yes	Yes	Yes	No
WCDMA850	Yes	Yes	Yes	Yes	Yes	No
WCDMA1900	Yes	Yes	Yes	Yes	Yes	No
LTE B17/5/4/2	Yes	Yes	Yes	Yes	Yes	No
WLAN2450	Yes	Yes	No	Yes	No	Yes

### 10.2 Antenna and Device Information



**Note;**

Per KDB 941225 D06 hotspot procedures, we performed the SAR testing at 1 cm from the top & bottom surfaces and also from side edges with a transmitting antenna  $\leq 2.5$  cm from an edge.

### 10.3 Simultaneous Transmission Paths

Possible Transmission paths for the DUT are shown in below and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.



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

## 11.1 SAR Evaluation Considerations

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

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

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

Table. 11.1 Output Power Thresholds for Unlicensed Transmitters

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

Table. 11.2 SAR Evaluation Requirements for Cellphones with Multiple Transmitters

FCC ID: JYCP9090

BT Max. RF output power: 2 mW

## 10.2 SAR Test configurations

Head Operation			
Mode	Tx(MHz)	Main ANT	BT/WLAN ANT
GSM Voice	850	Yes	No
GSM Voice	1900	Yes	No
WCDMA Voice	850	Yes	No
WCDMA Voice	1900	Yes	No
LTE(VOIP)	750	Yes	No
LTE(VOIP)	850	Yes	No
LTE(VOIP)	1 800	Yes	No
LTE(VOIP)	1 900	Yes	No
Wi-Fi(VOIP)	2 400	No	Yes
Wi-Fi(VOIP)	5 000	No	Yes
BT	2 400	No	No

Body-worn Operation			
Mode	Tx(MHz)	Main ANT	BT/WLAN ANT
GPRS/EDGE Data	850	Yes	No
GPRS/EDGE Data	1 900	Yes	No
WCDMA Data	850	Yes	No
WCDMA Data	1 900	Yes	No
LTE Data	750	Yes	No
LTE Data	850	Yes	No
LTE Data	1 800	Yes	No
LTE Data	1 900	Yes	No
Wi-Fi Data	2400	No	Yes
Wi-Fi Data	5 000	No	Yes
BT	2400	No	No

Hotspot Operation			
Separation Distance = 1 cm			
Mode	Tx(MHz)	Main ANT	BT/WLAN ANT
GPRS/EDGE Data	850	Yes	No
GPRS/EDGE Data	1 900	Yes	No
WCDMA Data	850	Yes	No
WCDMA Data	1 900	Yes	No
LTE Data	750	Yes	No
LTE Data	850	Yes	No
LTE Data	1 800	Yes	No
LTE Data	1 900	Yes	No
Wi-Fi Data	2400	No	Yes
Wi-Fi Data	5 000	No	No
BT	2400	No	No

## 11.3 SAR Summation Scenario

### All Simultaneous case

No.	Capable TX Configuration	Head SAR	Body Worn SAR	Hotspot SAR	Power Reduction	Note
1	GSM850 Voice	0	0	-	-	Stand-alone GSM 850 Voice
2	GSM 1900 Voice	0	0	-	-	Standalone GSM 1900Voice
3	WCDMA 850 Voice	0	0	-	-	Stand-alone WCDMA 850 Voice
4	WCDMA 1900 Voice	0	0	-	-	Stand-alone WCDMA 1900 Voice
5	GSM850 GPRS/EDGE Data	-	0	-	-	Stand-alone GSM850 GPRS/EDGE Data
6	GSM 1900 GPRS/EDGE Data	-	0	-	-	Stand-alone GSM 1900 GPRS/EDGE Data
7	WCDMA/ HSPA 850 Data	-	0	-	-	Stand-alone WCDMA/HSPA 850 Data
8	WCDMA / HSPA 1900 Data	-	0	-	-	Stand-alone WCDMA / HSPA 1900 Data
5	LTE B17	0	0	-	-	Stand-alone LTE B17 data
6	LTE B5	0	0	-	-	Stand-alone LTE B5 data
7	LTE B4	0	0	-	-	Stand-alone LTE B4 data
8	LTE B2	0	0	-	-	Stand-alone LTE B2 data
9	Wi-Fi 2.4 GHz	0	0	-	-	Stand-alone Wi-Fi 2.4G
10	Wi-Fi 5 GHz	0	0	-	-	Stand-alone Wi-Fi 5G
11	BT	-	-	-	-	N/A
12	GSM850 Voice + Wi-Fi 2.4GHz VOIP	0	0	-	-	
13	GSM1900 Voice + Wi-Fi 2.4GHz VOIP	0	0	-	-	
14	WCDMA 850 Voice + Wi-Fi 2.4GHz VOIP	0	0	-	-	
15	WCDMA 1900 Voice + Wi-Fi 2.4GHz VOIP	0	0	-	-	
16	GSM850 GPRS/EDGE Data + Wi-Fi 2.4GHz Data	-	-	0	-	Wi-Fi Hotspot
17	GSM1900 GPRS/EDGE Data + Wi-Fi 2.4GHz Data	-	-	0	0	Wi-Fi Hotspot
18	WCDMA / HSPA 850 Data+ Wi-Fi 2.4GHz Data	-	-	0	-	Wi-Fi Hotspot
19	WCDMA / HSPA 1900 Data + Wi-Fi 2.4GHz Data	-	-	0	0	Wi-Fi Hotspot
20	GSM850 Voice + Wi-Fi 5 GHz VOIP	0	0	-	-	
21	GSM1900 Voice + Wi-Fi 5 GHz VOIP	0	0	-	-	
22	WCDMA 850 Voice + Wi-Fi 5 GHz VOIP	0	0	-	-	
23	WCDMA 1900 Voice + Wi-Fi 5 GHz VOIP	0	0	-	-	
24	GSM850 GPRS/EDGE Data + Wi-Fi 5 GHz Data	-	0	-	-	
25	GSM1900 GPRS/EDGE Data + Wi-Fi 5 GHz Data	-	0	-	-	
26	WCDMA / HSPA 850 Data + Wi-Fi 5 GHz Data	-	0	-	-	
27	WCDMA / HSPA 1900 Data + Wi-Fi 5 GHz Data	-	0	-	-	
28	LTE B17 VOIP + Wi-Fi 2.4GHz VOIP	0	-	-	-	
29	LTE B5 VOIP + Wi-Fi 2.4GHz VOIP	0	-	-	-	
30	LTE B4 VOIP + Wi-Fi 2.4GHz VOIP	0	-	-	-	
31	LTE B2 VOIP + Wi-Fi 2.4GHz VOIP	0	-	-	-	
32	LTE B17 Data + Wi-Fi 2.4GHz Data	-	0	0	-	Wi-Fi Hotspot
33	LTE B5 Data + Wi-Fi 2.4GHz Data	-	0	0	-	Wi-Fi Hotspot
34	LTE B4 Data + Wi-Fi 2.4GHz Data	-	0	0	0	Wi-Fi Hotspot
35	LTE B2 Data + Wi-Fi 2.4GHz Data	-	0	0	0	Wi-Fi Hotspot
36	LTE B17 VOIP + Wi-Fi 5GHz VOIP	0	-	-	-	
37	LTE B5 VOIP + Wi-Fi 5GHz VOIP	0	-	-	-	
38	LTE B4 VOIP + Wi-Fi 5GHz VOIP	0	-	-	-	
39	LTE B2 VOIP + Wi-Fi 5GHz VOIP	0	-	-	-	
40	LTE B17 Data + Wi-Fi 5GHz Data	-	0	-	-	
41	LTE B5 Data + Wi-Fi 5GHz Data	-	0	-	-	
42	LTE B4 Data + Wi-Fi 5GHz Data	-	0	-	-	
43	LTE B2 Data + Wi-Fi 5GHz Data	-	0	-	-	

\* BT and WLAN are not simultaneous transmission.

\* GSM ,WCDMA and LTE are not simultaneous transmission.

\* VOIP support (LTE, Wi-Fi 2.4GHz, Wi-Fi 5GHz ).

\*Hotspot support (LTE, GPRS, Wi-Fi 2.4GHz).

**Simultaneous Transmission Summation for Held to Ear**

Simultaneous TX	configuration	850 GSM SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 GSM SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.259	0.287	0.546	Head SAR	Left Cheek	0.062	0.287	0.349
	Left Tilt	0.184	0.299	0.483		Left Tilt	0.045	0.299	0.344
	Right Cheek	0.253	0.262	0.515		Right Cheek	0.163	0.262	0.425
	Right Tilt	0.188	0.302	0.490		Right Tilt	0.049	0.302	0.351
Simultaneous TX	configuration	850 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.259	0.287	0.546	Head SAR	Left Cheek	0.147	0.287	0.434
	Left Tilt	0.174	0.299	0.473		Left Tilt	0.11	0.299	0.409
	Right Cheek	0.245	0.262	0.507		Right Cheek	0.353	0.262	0.615
	Right Tilt	0.196	0.302	0.498		Right Tilt	0.116	0.302	0.418
Simultaneous TX	configuration	LTE B17 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B5 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.239	0.287	0.526	Head SAR	Left Cheek	0.203	0.287	0.490
	Left Tilt	0.145	0.299	0.444		Left Tilt	0.128	0.299	0.427
	Right Cheek	0.212	0.262	0.474		Right Cheek	0.211	0.262	0.473
	Right Tilt	0.14	0.302	0.442		Right Tilt	0.155	0.302	0.457
Simultaneous TX	configuration	LTE B4 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B2 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.242	0.287	0.529	Head SAR	Left Cheek	0.117	0.287	0.404
	Left Tilt	0.188	0.299	0.487		Left Tilt	0.088	0.299	0.387
	Right Cheek	0.411	0.262	0.673		Right Cheek	0.277	0.262	0.539
	Right Tilt	0.174	0.302	0.476		Right Tilt	0.09	0.302	0.392



Simultaneous TX	configuration	850 GSM SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 GSM SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.259	0.126	0.385	Head SAR	Left Cheek	0.062	0.126	0.188
	Left Tilt	0.184	0.152	0.336		Left Tilt	0.045	0.152	0.197
	Right Cheek	0.253	0.179	0.432		Right Cheek	0.163	0.179	0.342
	Right Tilt	0.188	0.223	0.411		Right Tilt	0.049	0.223	0.272
Simultaneous TX	configuration	850 WCDMA SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 WCDMA SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.259	0.126	0.385	Head SAR	Left Cheek	0.147	0.126	0.273
	Left Tilt	0.174	0.152	0.326		Left Tilt	0.11	0.152	0.262
	Right Cheek	0.245	0.179	0.424		Right Cheek	0.353	0.179	0.532
	Right Tilt	0.196	0.223	0.419		Right Tilt	0.116	0.223	0.339
Simultaneous TX	configuration	LTE B17 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B5 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.239	0.126	0.365	Head SAR	Left Cheek	0.203	0.126	0.329
	Left Tilt	0.145	0.152	0.297		Left Tilt	0.128	0.152	0.280
	Right Cheek	0.212	0.179	0.391		Right Cheek	0.211	0.179	0.390
	Right Tilt	0.14	0.223	0.363		Right Tilt	0.155	0.223	0.378
Simultaneous TX	configuration	LTE B4 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B2 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Head SAR	Left Cheek	0.242	0.126	0.368	Head SAR	Left Cheek	0.117	0.126	0.243
	Left Tilt	0.188	0.152	0.340		Left Tilt	0.088	0.152	0.240
	Right Cheek	0.411	0.179	0.590		Right Cheek	0.277	0.179	0.456
	Right Tilt	0.174	0.223	0.397		Right Tilt	0.09	0.223	0.313

**Simultaneous Transmission Summation for Hotspot (1cm)**

Simultaneous TX	configuration	850 GPRS SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 GPRS SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.454	0.288	0.742	Body SAR	Back	0.296	0.288	0.584
	Front	0.486	0.101	0.587		Front	0.689	0.101	0.790
	Left	0.674	-	0.674		Left	0.028	-	0.028
	Right	0.578	0.043	0.621		Right	0.091	0.043	0.134
	Bottom	0.085	-	0.085		Bottom	1.05	-	1.050
	Top	-	0.243	0.243		Top	-	0.243	0.243
Simultaneous TX	configuration	850 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.359	0.288	0.647	Body SAR	Back	0.406	0.288	0.694
	Front	0.364	0.101	0.465		Front	0.975	0.101	1.076
	Left	0.436	-	0.436		Left	0.044	-	0.044
	Right	0.38	0.043	0.423		Right	0.169	0.043	0.212
	Bottom	0.089	-	0.089		Bottom	1.15	-	1.150
	Top	-	0.243	0.243		Top	-	0.243	0.243
Simultaneous TX	configuration	LTE B17 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B5 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.278	0.288	0.566	Body SAR	Back	0.271	0.288	0.559
	Front	0.315	0.101	0.416		Front	0.265	0.101	0.366
	Left	0.204	-	0.204		Left	0.327	-	0.327
	Right	0.218	0.043	0.261		Right	0.283	0.043	0.326
	Bottom	0.071	-	0.071		Bottom	0.051	-	0.051
	Top	-	0.243	0.243		Top	-	0.243	0.243
Simultaneous TX	configuration	LTE B4 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B2 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.493	0.288	0.781	Body SAR	Back	0.442	0.288	0.730
	Front	0.752	0.101	0.853		Front	0.878	0.101	0.979
	Left	0.165	-	0.165		Left	0.042	-	0.042
	Right	0.372	0.043	0.415		Right	0.125	0.043	0.168
	Bottom	1.05	-	1.050		Bottom	1.23	-	1.230
	Top	-	0.243	0.243		Top	-	0.243	0.243

**Simultaneous Transmission Summation for Body-Worn**
**(GSM1900 / WCDMA1900 / LTE B2 / LTE B4 2cm , GSM850 / WCDMA850 / LTE B17 / LTE B5 / 2.4G WIFI 1cm)**

Simultaneous TX	configuration	850 GPRS SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 GPRS SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.454	0.288	0.742	Body SAR	Back	0.441	0.288	0.729
Body SAR	Front	0.486	0.101	0.587	Body SAR	Front	0.507	0.101	0.608
Simultaneous TX	configuration	850 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 WCDMA SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.359	0.288	0.647	Body SAR	Back	0.476	0.288	0.764
Body SAR	Front	0.364	0.101	0.465	Body SAR	Front	0.425	0.101	0.526
Simultaneous TX	configuration	LTE B17 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B5 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.278	0.288	0.566	Body SAR	Back	0.271	0.288	0.559
Body SAR	Front	0.315	0.101	0.416	Body SAR	Front	0.265	0.101	0.366
Simultaneous TX	configuration	LTE B4 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B2 SAR(W/kg)	2.4G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.253	0.288	0.541	Body SAR	Back	0.209	0.288	0.497
Body SAR	Front	0.336	0.101	0.437	Body SAR	Front	0.327	0.101	0.428

**Simultaneous Transmission Summation for Body-Worn**
**(GSM1900 / WCDMA1900 / LTE B2 / LTE B4 2cm , GSM850 / WCDMA850 / LTE B17 / LTE B5 / 5G WIFI 1cm)**

Simultaneous TX	configuration	850 GPRS SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 GPRS SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.454	0.061	0.515	Body SAR	Back	0.441	0.061	0.502
Body SAR	Front	0.486	0.024	0.510	Body SAR	Front	0.507	0.024	0.531
Simultaneous TX	configuration	850 WCDMA SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	1900 WCDMA SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.359	0.061	0.420	Body SAR	Back	0.476	0.061	0.537
Body SAR	Front	0.364	0.024	0.388	Body SAR	Front	0.425	0.024	0.449
Simultaneous TX	configuration	LTE B17 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B5 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.278	0.061	0.339	Body SAR	Back	0.271	0.061	0.332
Body SAR	Front	0.315	0.024	0.339	Body SAR	Front	0.265	0.024	0.289
Simultaneous TX	configuration	LTE B4 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)	Simultaneous TX	configuration	LTE B2 SAR(W/kg)	5G WIFI SAR (W/kg)	$\Sigma$ SAR (W/kg)
Body SAR	Back	0.253	0.061	0.314	Body SAR	Back	0.209	0.061	0.270
Body SAR	Front	0.336	0.024	0.360	Body SAR	Front	0.327	0.024	0.351

## 11.4 Simultaneous Transmission Conclusion

The above tables represent the worst-case simultaneous transmission scenarios possibility with this device.

The conducted output power level of the BT transmitter is less than  $2 \cdot P_{ref}$ , the BT antenna is more than 5 cm from the other antenna, therefore, a stand-alone BT SAR evaluation is not required.

## 12. SAR TEST DATA SUMMARY

### 12.1 Measurement Results (GSM850 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
836.6	190 (Mid)	GSM850	32.54	-0.188	Standard	Left Ear	0.259
			32.54	0.121	Standard	Left Tilt 15°	0.184
			32.54	-0.075	Standard	Right Ear	0.253
			32.54	0.100	Standard	Right Tilt 15°	0.188
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Head 1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>	

#### NOTES:

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

## 12.2 Measurement Results (GSM1900 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
1 880.0	661 (Mid)	GSM1900	29.70	-0.093	Standard	Left Ear	0.062
			29.70	-0.035	Standard	Left Tilt 15°	0.045
			29.70	-0.088	Standard	Right Ear	0.163
			29.70	0.02	Standard	Right Tilt 15°	0.049
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>	

### NOTES:

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

## 12.3 Measurement Results (WCDMA850 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel							
836.6	4183 (Mid)	WCDMA850	23.61	0.068	Standard	Left Ear	Intenna	0.259
			23.61	0.152	Standard	Left Tilt 15°	Intenna	0.174
			23.61	0.080	Standard	Right Ear	Intenna	0.245
			23.61	-0.094	Standard	Right Tilt 15°	Intenna	0.196
<b>ANSI/ IEEE C95.1 1992 – Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>						<b>Head</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>		

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard  Extended  Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 WCDMA Mode was tested under RMC 12.2 kbps and HSPA Inactive.

## 12.4 Measurement Results (WCDMA1900 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	Antenna Type	SAR(mW/g)
MHz	Channel							
1 880.0	9400 (Mid)	WCDMA1900	23.74	-0.044	Standard	Left Ear	Intenna	0.147
1 880.0	9400 (Mid)	WCDMA1900	23.74	0.090	Standard	Left Tilt 15°	Intenna	0.110
1 880.0	9400 (Mid)	WCDMA1900	23.74	-0.105	Standard	Right Ear	Intenna	0.353
1 880.0	9400 (Mid)	WCDMA1900	23.74	-0.161	Standard	Right Tilt 15	Intenna	0.116
<b>ANSI/ IEEE C95.1 – 1992– Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>						<b>Head</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>		

### NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type  Standard  Extended  Slim  
Batteries are fully charged for all readings.
- Test Signal Call Mode  Manual Test cord  Base Station Simulator
- WCDMA Mode was tested under RMC 12.2 kbps and HSPA Inactive.
- Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).



## 12.5 Measurement Results (LTE Band17 10MHz QPSK Head SAR)

Frequency		Modulation	Conducte d Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MH	Chann									
710	23790	QPSK	21.65	-0.08	Left Ear	25	13	Intenna	0.175	1
			22.82	-0.026		1	0		0.193	0
			22.98	0.05		1	49		0.239	0
			21.65	-0.091	Left Tilt 15°	25	13		0.105	1
			22.82	0.130		1	0		0.111	0
			22.98	0.127		1	49		0.145	0
			21.65	-0.010	Right Ear	25	13		0.129	1
			22.82	-0.022		1	0		0.143	0
			22.98	0.033		1	49		0.15	0
			21.65	0.146	Right Tilt 15°	25	13		0.082	1
			22.82	0.108		1	0		0.092	0
			22.98	0.150		1	49		0.105	0
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) <small>Averaged over 1 gram</small></b>			

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.6 Measurement Results (LTE Band17 10MHz 16QAM Head SAR)

Frequency		Modulation	Conducte d Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MH	Chann									
710	23790	16QAM	20.82	0.031	Left Ear	25	13	Intenna	0.112	2
			21.52	0.129		1	0		0.133	1
			21.68	0.083		1	49		0.175	1
			20.82	-0.021	Left Tilt 15°	25	13		0.074	2
			21.52	0.081		1	0		0.083	1
			21.68	-0.042		1	49		0.103	1
			20.82	-0.05	Right Ear	25	13		0.152	2
			21.52	0.076		1	0		0.173	1
			21.68	-0.116		1	49		0.212	1
			20.82	-0.037	Right Tilt 15°	25	13		0.102	2
			21.52	0.012		1	0		0.118	1
			21.68	-0.001		1	49		0.140	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) <small>Averaged over 1 gram</small></b>			

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.7 Measurement Results (LTE Band5 10MHz QPSK Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chan									
836.5	20525	QPSK	21.77	-0.024	Left Ear	25	13	Intenna	0.152	0
			22.97	0.067		1	0		0.203	0
			22.92	-0.176		1	49		0.155	1
			21.77	0.014	Left Tilt 15°	25	13		0.096	0
			22.97	-0.158		1	0		0.128	0
			22.92	0.132		1	49		0.099	1
			21.77	-0.058	Right Ear	25	13		0.143	0
			22.97	0.119		1	0		0.211	0
			22.92	0.046		1	49		0.145	1
			21.77	0.015	Right Tilt 15°	25	13		0.123	0
			22.97	0.046		1	0		0.155	0
			22.92	-0.063		1	49		0.102	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) <small>Averaged over 1 gram</small></b>			

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.8 Measurement Results (LTE Band5 10MHz 16QAM Head SAR)

Frequency		Modulation	Conducte d Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chann									
836.5	20525	16QAM	20.87	-0.025	Left Ear	25	13	Intenna	0.106	2
			21.62	-0.001		1	0		0.156	1
			21.49	-0.004		1	49		0.126	1
			20.87	-0.064	Left Tilt 15°	25	13		0.063	2
			21.62	-0.146		1	0		0.106	1
			21.49	0.010		1	49		0.08	1
			20.87	-0.041	Right Ear	25	13		0.109	2
			21.62	-0.088		1	0		0.175	1
			21.49	-0.035		1	49		0.120	1
			20.87	-0.090	Right Tilt 15°	25	13		0.087	2
			21.62	-0.076		1	0		0.115	1
			21.49	0.066		1	49		0.079	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>			

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.9 Measurement Results (LTE Band4 10MHz QPSK Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chann									
1 732.5	20175	QPSK	22.05	-0.119	Left Ear	25	13	Intenna	0.188	1
			23.10	0.004		1	0		0.242	0
			22.82	0.112		1	49		0.233	0
			22.05	0.017	Left Tilt 15°	25	13		0.14	1
			23.10	0.173		1	0		0.188	0
			22.82	-0.075		1	49		0.179	0
			22.05	-0.003	Right Ear	25	13		0.325	1
			23.10	0.012		1	0		0.408	0
			22.82	0.014		1	49		0.411	0
			22.05	0.055	Right Tilt 15°	25	13		0.131	1
			23.10	0.152		1	0		0.174	0
			22.82	-0.056		1	49		0.168	0

**ANSI/ IEEE C95.1 - 1992– Safety Limit**  
**Spatial Peak**  
**Uncontrolled Exposure/ General Population**

**Head**  
**1.6 W/kg (mW/g)**  
Averaged over 1 gram

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.10 Measurement Results (LTE Band4 10MHz 16QAM Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chann									
1 732.5	20175	QPSK	20.87	-0.026	Left Ear	25	13	Antenna	0.147	2
			22.15	-0.052		1	0		0.234	1
			22.24	0.161		1	49		0.230	1
			20.87	-0.152	Left Tilt 15°	25	13		0.101	2
			22.15	-0.009		1	0		0.141	1
			22.24	0.009		1	49		0.133	1
			20.87	0.052	Right Ear	25	13		0.204	2
			22.15	-0.046		1	0		0.282	1
			22.24	-0.077		1	49		0.273	1
			20.87	0.067	Right Tilt 15°	25	13		0.101	2
			22.15	-0.096		1	0		0.128	1
			22.24	0.04		1	49		0.119	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>			

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.11 Measurement Results (LTE Band2 10MHz QPSK Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chann									
1 880	18900	QPSK	21.86	-0.068	Left Ear	25	13	Intenna	0.088	1
			22.93	-0.126		1	0		0.101	0
			22.63	-0.026		1	49		0.117	0
			21.86	0.111	Left Tilt 15°	25	13		0.068	1
			22.93	-0.033		1	0		0.08	0
			22.63	-0.072		1	49		0.088	0
			21.86	-0.080	Right Ear	25	13		0.207	1
			22.93	-0.045		1	0		0.242	0
			22.63	0.073		1	49		0.277	0
			21.86	0.031	Right Tilt 15°	25	13		0.066	1
			22.93	-0.125		1	0		0.076	0
			22.63	0.160		1	49		0.09	0
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>			

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.



## 12.12 Measurement Results (LTE Band2 10MHz 16QAM Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Phantom Position	RB Size	RB Offset	Antenna Type	SAR(mW/g)	MPR
MHz	Chann									
1 880	18900	QPSK	20.88	-0.052	Left Ear	25	13	Intenna	0.070	2
			21.93	-0.03		1	0		0.077	1
			21.97	-0.07		1	49		0.093	1
			20.88	0.059	Left Tilt 15°	25	13		0.056	2
			21.93	-0.105		1	0		0.063	1
			21.97	-0.08		1	49		0.069	1
			20.88	-0.123	Right Ear	25	13		0.182	2
			21.93	-0.094		1	0		0.217	1
			21.97	-0.093		1	49		0.240	1
			20.88	0.182	Right Tilt 15°	25	13		0.054	2
			21.93	-0.090		1	0		0.065	1
			21.97	-0.026		1	49		0.075	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>				

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.



## 12.13 Measurement Results (802.11b/g/n Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	Data Rate	SAR(mW/g)
MHz	Channel							
2 437	6 (Mid)	802.11b	17.25	-0.004	Standard	Left Ear	1 Mbps	0.287
2 437	6 (Mid)	802.11b	17.25	-0.040	Standard	Left Tilt 15°	1 Mbps	0.299
2 437	6 (Mid)	802.11b	17.25	0.037	Standard	Right Ear	1 Mbps	0.262
2 437	6 (Mid)	802.11b	17.25	-0.052	Standard	Right Tilt 15	1 Mbps	0.302
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit</b>						<b>Head</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/ General Population</b>						<small>Averaged over 1 gram</small>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type             Standard             Extended             Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord     Base Station Simulator
- 7 IEEE 802.11g(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB Than the conducted powers in IEEE 802.11b.
- 8 For 2.4GHz WLAN, Highest average power channel for the lowest data rate was selected for SAR evaluation based on KDB 248227. Other channels are not necessary because 1g-average SAR < 0.8 W/Kg and peak SAR < 1.6W/Kg per KDB 248227.

## 12.14 Measurement Results (802.11a/n 5GHz Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	Data Rate	SAR(mW/g)
MHz	Channel							
5 240	48	802.11a	14.96	-0.09	Standard	Left Ear	6Mbps	0.035
5 240	48	802.11a	14.96	-0.104	Standard	Left Tilt 15°	6Mbps	0.046
5 240	48	802.11a	14.96	0.08	Standard	Right Ear	6Mbps	0.037
5 240	48	802.11a	14.96	-0.038	Standard	Right Tilt 15	6Mbps	0.048
5 260	52	802.11a	14.16	0.02	Standard	Left Ear	6Mbps	0.052
5 260	52	802.11a	14.16	0.099	Standard	Left Tilt 15°	6Mbps	0.051
5 260	52	802.11a	14.16	0.014	Standard	Right Ear	6Mbps	0.042
5 260	52	802.11a	14.16	0.007	Standard	Right Tilt 15	6Mbps	0.048
5 620	124	802.11a	14.57	0.107	Standard	Left Ear	6Mbps	0.048
5 620	124	802.11a	14.57	0.027	Standard	Left Tilt 15°	6Mbps	0.056
5 620	124	802.11a	14.57	-0.050	Standard	Right Ear	6Mbps	0.067
5 620	124	802.11a	14.57	0.024	Standard	Right Tilt 15	6Mbps	0.068
5785	157	802.11a	14.05	0.05	Standard	Left Ear	6Mbps	0.126
5785	157	802.11a	14.05	-0.09	Standard	Left Tilt 15°	6Mbps	0.152
5785	157	802.11a	14.05	-0.074	Standard	Right Ear	6Mbps	0.179
5785	157	802.11a	14.05	0.037	Standard	Right Tilt 15	6Mbps	0.223
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Head 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

### 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
- Highest average RF output power channel for the lowest data rate were selected for SAR testing. IEEE 802.11(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB than the conducted powers in IEEE 802.11a.
- When Hotspot is enabled, 5 GHz Bands are disabled

## 12.15 Measurement Results (GSM850 Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
836.6	190 (Mid)	GPRS 2Tx	31.18	-0.03	Rear	Standard	1.0 cm	0.454
836.6	190 (Mid)	GPRS 2Tx	31.18	0.036	Front	Standard	1.0 cm	0.486
836.6	190 (Mid)	GPRS 2Tx	31.18	-0.084	Left	Standard	1.0 cm	0.674
836.6	190 (Mid)	GPRS 2Tx	31.18	-0.167	Right	Standard	1.0 cm	0.578
836.6	190 (Mid)	GPRS 2Tx	31.18	-0.041	Bottom	Standard	1.0 cm	0.085
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

### NOTES:

- The test data reported are the worst-case SAR value with the antenna-body 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).
- For body SAR testing, the EUT was set in GPRS multi-slot class10 with 2uplink slots for GSM850 due to maximum source-based time-averaged output power.  
According to the KDB 941225 D03 SAR test reduction GSM/GPRS/EDGE, the maximum output power configuration were chosen for Body SAR testing.

## 12.16 Measurement Results (GSM1900 Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
1 880.0	661 (Mid)	GPRS 2Tx	25.99	0.01	Rear	Standard	1.0 cm	0.296
1 880.0	661 (Mid)	GPRS 2Tx	25.99	-0.061	Front	Standard	1.0 cm	0.689
1 880.0	661 (Mid)	GPRS 2Tx	25.99	-0.188	Left	Standard	1.0 cm	0.028
1 880.0	661 (Mid)	GPRS 2Tx	25.99	-0.029	Right	Standard	1.0 cm	0.091
1 850.2	512 (Mid)	GPRS 2Tx	25.89	0.049	Bottom	Standard	1.0 cm	0.597
1 880.0	661 (Mid)	GPRS 2Tx	25.99	-0.114	Bottom	Standard	1.0 cm	0.876
1 909.8	810 (Mid)	GPRS 2Tx	26.01	-0.033	Bottom	Standard	1.0 cm	1.05
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord             Base Station Simulator
- 7 Test Configuration             With Holster                     Without Holster
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 9 For body SAR testing, the EUT was set in GPRS multi-slot class10 with 2uplink slots for GSM1900 due to maximum source-based time-averaged output power.  
According to the KDB 941225 D03 SAR test reduction GSM/GPRS/EDGE, the maximum output power configuration were chosen for Body SAR testing.

## 12.17 Measurement Results (GSM1900 Body-Worn SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
1 880.0	661 (Mid)	GPRS 2Tx	27.82	0.073	Rear	Standard	2.0 cm	0.441
1 880.0	661 (Mid)	GPRS 2Tx	27.82	-0.035	Front	Standard	2.0 cm	0.507
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>		

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type            Standard                            Extended                            Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode    Manual Test cord            Base Station Simulator
- 7 Test Configuration        With Holster                    Without Holster
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 9 For body SAR testing, the EUT was set in GPRS multi-slot class10 with 2uplink slots for GSM1900 due to maximum source-based time-averaged output power.  
According to the KDB 941225 D03 SAR test reduction GSM/GPRS/EDGE, the maximum output power configuration were chosen for Body SAR testing.



## 12.19 Measurement Results (WCDMA1900 Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Separation Distance	SAR(mW/g)
MHz	Channel						
1 880.0	9400 (Mid)	WCDMA1900	21.65	-0.032	Rear	1.0 cm	0.406
1852.4	9262 (Low)	WCDMA1900	21.58	-0.128	Front	1.0 cm	0.689
1 880.0	9400 (Mid)	WCDMA1900	21.65	-0.114	Front	1.0 cm	0.941
1907.6	9538 (High)	WCDMA1900	21.62	0.040	Front	1.0 cm	0.975
1 880.0	9400 (Mid)	WCDMA1900	21.65	-0.054	Left	1.0 cm	0.044
1 880.0	9400 (Mid)	WCDMA1900	21.65	0.032	Right	1.0 cm	0.169
1852.4	9262 (Low)	WCDMA1900	21.58	-0.069	Bottom	1.0 cm	0.735
1 880.0	9400 (Mid)	WCDMA1900	21.65	-0.108	Bottom	1.0 cm	1.06
1907.6	9538 (High)	WCDMA1900	21.62	-0.083	Bottom	1.0 cm	1.15
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>	

- 1 The test data reported are the worst-case SAR value with the antenna-Body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord         Base Station Simulator
- 7 Test Configuration             With Holster             Without Holster
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 9 WCDMA Mode was tested under RMC 12.2 kbps and HSPA Inactive.

## 12.20 Measurement Results(WCDMA1900 Body-Worn SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Separation Distance	SAR(mW/g)
MHz	Channel						
1 880.0	9400 (Mid)	WCDMA1900	23.74	-0.100	Rear	2.0 cm	0.476
1 880.0	9400 (Mid)	WCDMA1900	23.74	-0.003	Front	2.0 cm	0.425
<b>ANSI/ IEEE C95.1 - 1992- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g) <small>Averaged over 1 gram</small></b>	

- 1 The test data reported are the worst-case SAR value with the antenna-Body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type                     Standard                     Extended                     Slim  
Batteries are fully charged for all readings.
- 6 Test Signal Call Mode         Manual Test cord             Base Station Simulator
- 7 Test Configuration             With Holster                     Without Holster
- 8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 9 WCDMA Mode was tested under RMC 12.2 kbps and HSPA Inactive.



## 12.21 Measurement Results (LTE Band17 10MHz QPSK Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR(mW/g)	MPR
MHz	Channel										
710	23790	QPSK	21.65	-0.032	Rear	25	13	1.0 cm	Intenna	0.194	1
			22.82	-0.072		1	0		Intenna	0.221	0
			22.98	0.101		1	49		Intenna	0.278	0
			21.65	-0.069	Front	25	13		Intenna	0.219	1
			22.82	0.007		1	0		Intenna	0.25	0
			22.98	-0.089		1	49		Intenna	0.315	0
			21.65	0.120	Left	25	13		Intenna	0.145	1
			22.82	-0.128		1	0		Intenna	0.161	0
			22.98	-0.073		1	49		Intenna	0.204	0
			21.65	-0.029	Right	25	13		Intenna	0.156	1
			22.82	-0.019		1	0		Intenna	0.192	0
			22.98	-0.011		1	49		Intenna	0.218	0
			21.65	0.071	bottom	25	13		Intenna	0.053	1
			22.82	0.107		1	0		Intenna	0.061	0
			22.98	0.034		1	49		Intenna	0.071	0

**ANSI/ IEEE C95.1 - 1992– Safety Limit**  
**Spatial Peak**  
**Uncontrolled Exposure/ General Population**

**Body**  
**1.6 W/kg (mW/g)**  
Averaged over 1 gram

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.22 Measurement Results (LTE Band17 10MHz 16QAM Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR(mW/g)	MPR
MHz	Channel										
710	23790	16QAM	20.82	0.049	Rear	25	13	1.0 cm	Intenna	0.152	2
			21.52	0.011		1	0		Intenna	0.173	1
			21.68	0.082		1	49		Intenna	0.213	1
			20.82	-0.097	Front	25	13		Intenna	0.172	2
			21.52	0.024		1	0		Intenna	0.201	1
			21.68	-0.112		1	49		Intenna	0.239	1
			20.82	-0.005	Left	25	13		Intenna	0.112	2
			21.52	-0.015		1	0		Intenna	0.120	1
			21.68	-0.097		1	49		Intenna	0.152	1
			20.82	-0.086	Right	25	13		Intenna	0.105	2
			21.52	0.061		1	0		Intenna	0.143	1
			21.68	0.061		1	49		Intenna	0.165	1
20.82	-0.055	bottom	25	13	Intenna	0.045	2				
21.52	-0.054		1	0	Intenna	0.035	1				
21.68	0.085		1	49	Intenna	0.045	1				

**ANSI/ IEEE C95.1 - 1992- Safety Limit**  
**Spatial Peak**  
**Uncontrolled Exposure/ General Population**

**Body**  
**1.6 W/kg (mW/g)**  
Averaged over 1 gram

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.23 Measurement Results (LTE Band5 10MHz QPSK Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR(mW/g)	MPR
MHz	Chann										
836.5	20525	QPSK	21.77	-0.186	Rear	25	13	1.0 cm	Intenna	0.196	1
			22.97	0.074		1	0		Intenna	0.271	0
			22.92	-0.114		1	49		Intenna	0.198	0
			21.77	0.04	Front	25	13		Intenna	0.15	1
			22.97	0.03		1	0		Intenna	0.265	0
			22.92	-0.026		1	49		Intenna	0.204	0
			21.77	0.183	Left	25	13		Intenna	0.265	1
			22.97	-0.173		1	0		Intenna	0.327	0
			22.92	-0.051		1	49		Intenna	0.265	0
			21.77	-0.078	Right	25	13		Intenna	0.228	1
			22.97	-0.057		1	0		Intenna	0.283	0
			22.92	-0.051		1	49		Intenna	0.204	0
			21.77	-0.045	bottom	25	13		Intenna	0.041	1
			22.97	0.137		1	0		Intenna	0.051	0
			22.92	0.042		1	49		Intenna	0.045	0

**ANSI/ IEEE C95.1 - 1992– Safety Limit  
Spatial Peak  
Uncontrolled Exposure/ General Population**

**Body  
1.6 W/kg (mW/g)**  
Averaged over 1 gram

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.24 Measurement Results (LTE Band5 10MHz 16QAM Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR(mW/g)	MPR
MHz	Chann										
836.5	20525	16QAM	20.87	-0.01	Rear	25	13	1.0 cm	Intenna	0.151	2
			21.62	-0.030		1	0		Intenna	0.209	1
			21.49	0.157		1	49		Intenna	0.121	1
			20.87	-0.070	Front	25	13		Intenna	0.123	2
			21.62	0.140		1	0		Intenna	0.202	1
			21.49	-0.180		1	49		Intenna	0.128	1
			20.87	-0.174	Left	25	13		Intenna	0.196	2
			21.62	0.131		1	0		Intenna	0.257	1
			21.49	-0.039		1	49		Intenna	0.206	1
			20.87	0.05	Right	25	13		Intenna	0.164	2
			21.62	-0.003		1	0		Intenna	0.189	1
			21.49	-0.023		1	49		Intenna	0.148	1
			20.87	0.055	bottom	25	13		Intenna	0.036	2
			21.62	-0.142		1	0		Intenna	0.031	1
			21.49	0.060		1	49		Intenna	0.041	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>								<b>Body 1.6 W/kg (mW/g)</b> 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 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg.

## 12.25 Measurement Results (LTE Band4 10MHz QPSK Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 732.5	20175	QPSK	20.19	0.092	Rear	25	13	1.0 cm	Intenna	0.368	1
			21.22	0.088		1	0		Intenna	0.493	0
			20.97	-0.147		1	49		Intenna	0.453	0
			20.19	-0.091	Front	25	13		Intenna	0.558	1
			21.22	-0.166		1	0		Intenna	0.708	0
			20.97	0.015		1	49		Intenna	0.752	0
			20.19	-0.049	Left	25	13		Intenna	0.124	1
			21.22	-0.042		1	0		Intenna	0.150	0
			20.97	0.139		1	49		Intenna	0.165	0
			20.19	-0.050	Right	25	13		Intenna	0.286	1
			21.22	-0.195		1	0		Intenna	0.372	0
			20.97	0.125		1	49		Intenna	0.357	0
			20.19	0.120	bottom	25	13		Intenna	0.798	1
			21.22	0.081		1	0		Intenna	1.01	0
			20.97	0.161		1	49		Intenna	1.05	0
<b>ANSI/ IEEE C95.1 - 1992- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>							<b>Body 1.6 W/kg (mW/g)</b> 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 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.26 Measurement Results (LTE Band4 10MHz 16QAM Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 732.5	20175	16QAM	19.14	-0.012	Rear	25	13	1.0 cm	Intenna	0.290	2
			20.28	0.028		1	0		Intenna	0.368	1
			20.00	0.154		1	49		Intenna	0.319	1
			19.14	-0.120	Front	25	13		Intenna	0.394	2
			20.28	0.024		1	0		Intenna	0.528	1
			20.00	0.024		1	49		Intenna	0.549	1
			19.14	-0.171	Left	25	13		Intenna	0.100	2
			20.28	0.048		1	0		Intenna	0.131	1
			20.00	0.025		1	49		Intenna	0.127	1
			19.14	0.052	Right	25	13		Intenna	0.205	2
			20.28	0.177		1	0		Intenna	0.274	1
			20.00	0.038		1	49		Intenna	0.263	1
			19.14	-0.015	bottom	25	13		Intenna	0.637	2
			20.28	-0.156		1	0		Intenna	0.738	1
			20.00	0.058		1	49		Intenna	0.718	1
<b>ANSI/ IEEE C95.1 - 1992- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>								<b>Body 1.6 W/kg (mW/g)</b> 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 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.27 Measurement Results (LTE Band4 10MHz QPSK Body-Worn SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 732.5	20175	QPSK	22.05	-0.18	Rear	25	13	2.0 cm	Intenna	0.198	1
			23.10	0.021		1	0		Intenna	0.253	0
			22.82	-0.04		1	49		Intenna	0.223	0
			22.05	0.006	Front	25	13		Intenna	0.265	1
			23.10	-0.058		1	0		Intenna	0.336	0
			22.82	0.142		1	49		Intenna	0.319	0
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g)</b> Averaged over 1 gram					

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.



## 12.28 Measurement Results (LTE Band4 10MHz 16QAM Body-Worn SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 732.5	20175	16QAM	21.06	-0.127	Rear	25	13	2.0 cm	Intenna	0.13	2
			22.21	0.183		1	0		Intenna	0.193	1
			21.91	0.097		1	49		Intenna	0.178	1
			21.06	-0.181	Front	25	13		Intenna	0.148	2
			22.21			1	0		Intenna	0.211	1
			21.91	-0.147		1	49		Intenna	0.199	1
<b>ANSI/ IEEE C95.1 - 1992- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>						<b>Body 1.6 W/kg (mW/g)</b> 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 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is  $\leq$  0.8 W/kg in QPSK with 50% RB allocation.



## 12.29 Measurement Results (LTE Band2 10MHz QPSK Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 880	18900	QPSK	19.89	0.006	Rear	25	13	1.0 cm	Intenna	0.309	1
			20.98	-0.033		1	0		Intenna	0.384	0
			20.67	-0.09		1	49		Intenna	0.442	0
			19.89	-0.035	Front	25	13		Intenna	0.613	1
			20.98	-0.10		1	0		Intenna	0.768	0
			20.67	-0.086		1	49		Intenna	0.878	0
			19.89	0.046	Left	25	13		Intenna	0.032	1
			20.98	0.025		1	0		Intenna	0.042	0
			20.67	-0.058		1	49		Intenna	0.042	0
			19.89	0.017	Right	25	13		Intenna	0.09	1
			20.98	-0.089		1	0		Intenna	0.114	0
			20.67	0.021		1	49		Intenna	0.125	0
			19.89	-0.01	bottom	25	13		Intenna	0.799	1
			20.98	-0.087		1	0		Intenna	0.999	0
			20.67	-0.113		1	49		Intenna	1.23	0
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population</b>								<b>Body 1.6 W/kg (mW/g) Averaged over 1 gram</b>			

### 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 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.30 Measurement Results (LTE Band2 10MHz 16QAM Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 880	18900	16QAM	18.86	-0.047	Rear	25	13	1.0 cm	Intenna	0.239	2
			19.93	-0.026		1	0		Intenna	0.280	1
			19.96	0.171		1	49		Intenna	0.330	1
			18.86	-0.07	Front	25	13		Intenna	0.540	2
			19.93	-0.060		1	0		Intenna	0.625	1
			19.96	0.063		1	49		Intenna	0.710	1
			18.86	-0.122	Left	25	13		Intenna	0.025	2
			19.93	-0.095		1	0		Intenna	0.032	1
			19.96	-0.028		1	49		Intenna	0.034	1
			18.86	-0.035	Right	25	13		Intenna	0.068	2
			19.93	-0.031		1	0		Intenna	0.085	1
			19.96	-0.165		1	49		Intenna	0.093	1
			18.86	-0.100	bottom	25	13		Intenna	0.722	2
			19.93	-0.069		1	0		Intenna	0.800	1
			19.96	-0.066		1	49		Intenna	0.932	1
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>								<b>Body</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>			

### NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type  Standard 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).
- KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.31 Measurement Results (LTE Band2 10MHz QPSK Body-Wron SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 880	18900	QPSK	21.86	-0.088	Rear	25	13	2.0 cm	Intenna	0.161	1
			22.93	-0.060		1	0		Intenna	0.209	0
			22.63	-0.150		1	49		Intenna	0.189	0
			21.86	0.063	Front	25	13		Intenna	0.264	1
			22.93	-0.069		1	0		Intenna	0.327	0
			22.63	0.096		1	49		Intenna	0.316	0

**ANSI/ IEEE C95.1 - 1992– Safety Limit**  
**Spatial Peak**  
**Uncontrolled Exposure/ General Population**

**Body**  
**1.6 W/kg (mW/g)**  
Averaged over 1 gram

### NOTES:

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.32 Measurement Results (LTE Band2 10MHz 16QAM Body-Wron SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	Antenna Type	SAR (mW/g)	MPR
MHz	Chan										
1 880	18900	16QAM	20.88	0.040	Rear	25	13	2.0 cm	Intenna	0.126	2
			21.93	0.017		1	0		Intenna	0.152	1
			21.97	-0.095		1	49		Intenna	0.170	1
			20.88	-0.135	Front	25	13		Intenna	0.190	2
			21.93	-0.003		1	0		Intenna	0.234	1
			21.97	0.132		1	49		Intenna	0.254	1

**ANSI/ IEEE C95.1 - 1992– Safety Limit**  
**Spatial Peak**  
**Uncontrolled Exposure/ General Population**

**Body**  
**1.6 W/kg (mW/g)**  
Averaged over 1 gram

**NOTES:**

- 1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- 2 All modes of operation were investigated and the worst-case are reported.
- 3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- 4 Tissue parameters and temperatures are listed on the SAR plot.
- 5 Battery Type  Standard Batteries are fully charged for all readings.
- 6 Test Signal Call Mode  Manual Test cord  Base Station Simulator
- 7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
- 8 KDB 941225 D05 SAR for LTE Devices v01 was followed.
  - QPSK with 50% RB is required for the largest channel Bandwidth.
  - QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 16QAM with 50% RB is required for the largest channel Bandwidth.
  - 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
  - 100% RB allocation is not required since SAR is not > 1.45 W/kg.
  - The Low & High channel were not required for Band 5/4 since the power variation across all channels is 1/2 dB and SAR is ≤ 0.8 W/kg in QPSK with 50% RB allocation.

## 12.33 Measurement Results (802.11b/g/n Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	Data Rate	SAR(mW/g)
MHz	Channel								
2 437	6 (Mid)	802.11b	17.25	-0.067	Rear	Standard	1.0 cm	1 Mbps	0.288
2 437	6 (Mid)	802.11b	17.25	-0.073	Front	Standard	1.0 cm	1 Mbps	0.101
2 437	6 (Mid)	802.11b	17.25	-0.045	Right	Standard	1.0 cm	1 Mbps	0.043
2 437	6 (Mid)	802.11b	17.25	0.063	Top	Standard	1.0 cm	1 Mbps	0.243
<b>ANSI/ IEEE C95.1 1992 – Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>							<b>Body</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>		

### NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type  Standard  Extended  Slim  
Batteries are fully charged for all readings.
- Test Signal Call Mode  Manual Test code  Base Station Simulator
- IEEE 802.11g(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB Than the conducted powers in IEEE 802.11b.
- For 2.4GHz WLAN, Highest average power channel for the lowest data rate was selected for SAR evaluation based on KDB 248227. Other channels are not necessary because 1g-average SAR < 0.8 W/Kg and peak SAR < 1.6W/Kg per KDB 248227.

## 12.34 Measurement Results (802.11a/n 5GHz Body-Worn)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Separation Distance	Data Rate	SAR(mW/g)
MHz	Channel							
5 240	48	802.11a	14.96	0.08	Rear	1.0 cm	6Mbps	0.020
5 240	48	802.11a	14.96	0.04	Front	1.0 cm	6Mbps	0.00762
5 260	52	802.11a	14.16	0.02	Rear	1.0 cm	6Mbps	0.016
5 260	52	802.11a	14.16	0.038	Front	1.0 cm	6Mbps	0.011
5 620	124	802.11a	15.51	-0.020	Rear	1.0 cm	6Mbps	0.033
5 620	124	802.11a	15.51	-0.130	Front	1.0 cm	6Mbps	0.014
5 785	157	802.11a	14.05	0.053	Rear	1.0 cm	6Mbps	0.061
5 785	157	802.11a	14.05	0.051	Front	1.0 cm	6Mbps	0.024
<b>ANSI/ IEEE C95.1 - 1992– Safety Limit</b> <b>Spatial Peak</b> <b>Uncontrolled Exposure/ General Population</b>							<b>Body</b> <b>1.6 W/kg (mW/g)</b> <small>Averaged over 1 gram</small>	

### NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
- All modes of operation were investigated and the worst-case are reported.
- Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
- Tissue parameters and temperatures are listed on the SAR plot.
- Battery Type  Standard  Extended  Slim  
Batteries are fully charged for all readings.
- Test Signal Call Mode  Manual Test cord  Base Station Simulator
- Highest average RF output power channel for the lowest data rate were selected for SAR testing. IEEE 802.11(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB than the conducted powers in IEEE 802.11a.
- When Hotspot is enabled, 5 GHz Bands are disabled

## **13. CONCLUSION**

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The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/IEEE C95.1 1992.

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: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left touch 190/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.278 mW/g

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

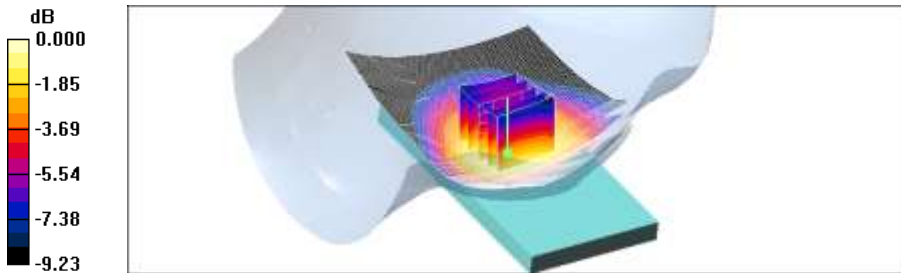
Reference Value = 17.3 V/m; Power Drift = -0.188 dB

Peak SAR (extrapolated) = 0.323 W/kg

**SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.197 mW/g**

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

Maximum value of SAR (measured) = 0.273 mW/g



0 dB = 0.273mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left tilt 190/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.193 mW/g

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

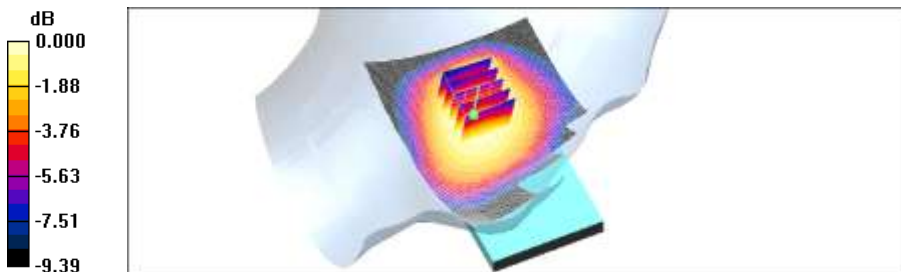
Reference Value = 12.2 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.229 W/kg

**SAR(1 g) = 0.184 mW/g; SAR(10 g) = 0.139 mW/g**

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

Maximum value of SAR (measured) = 0.193 mW/g



0 dB = 0.193mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 190/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

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

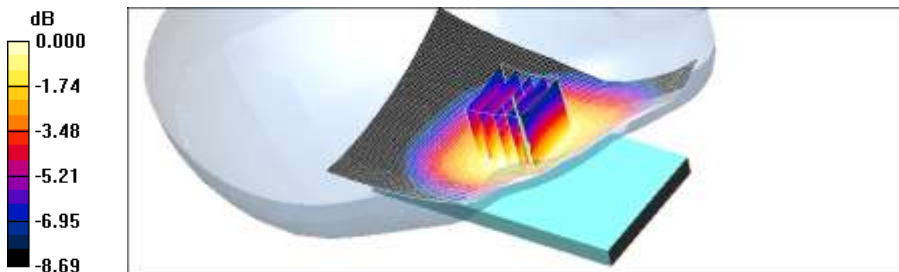
Reference Value = 17.1 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.315 W/kg

**SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.190 mW/g**

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

Maximum value of SAR (measured) = 0.264 mW/g



0 dB = 0.264mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 190/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

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

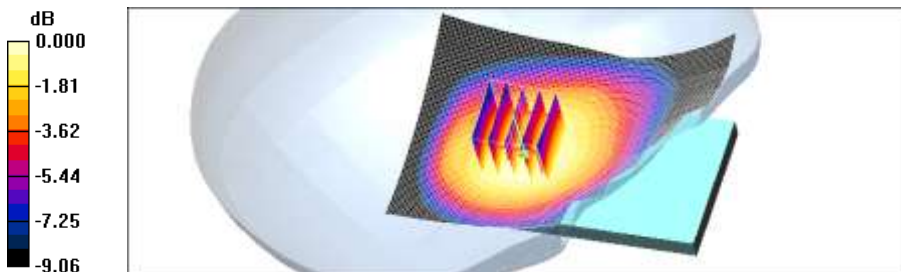
Reference Value = 12.5 V/m; Power Drift = 0.100 dB

Peak SAR (extrapolated) = 0.230 W/kg

**SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.144 mW/g**

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

Maximum value of SAR (measured) = 0.196 mW/g



0 dB = 0.196mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

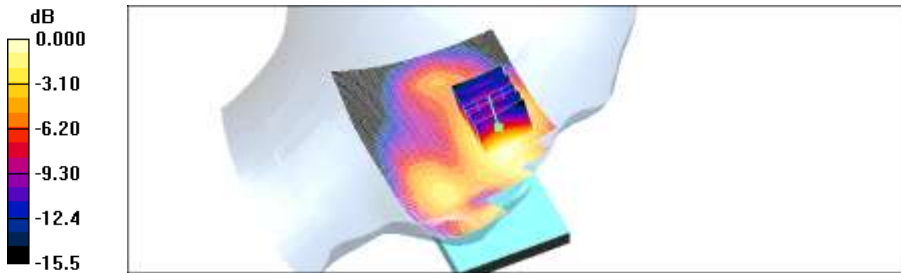
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 661/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.066 mW/g

**Left touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.82 V/m; Power Drift = -0.093 dB  
Peak SAR (extrapolated) = 0.101 W/kg  
**SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.037 mW/g**  
Maximum value of SAR (measured) = 0.067 mW/g



0 dB = 0.067mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

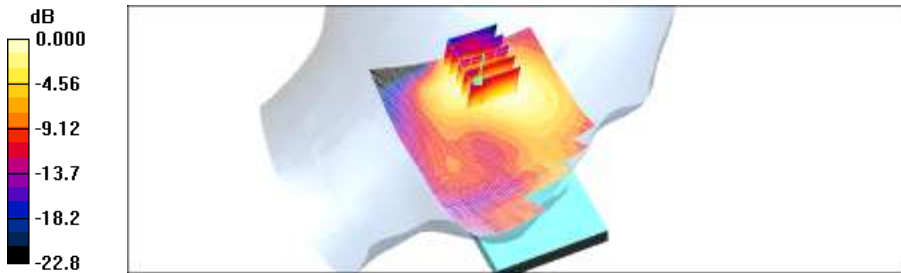
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 661/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.049 mW/g

**Left tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 1.80 V/m; Power Drift = -0.035 dB  
Peak SAR (extrapolated) = 0.074 W/kg  
**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.026 mW/g**  
Maximum value of SAR (measured) = 0.048 mW/g



0 dB = 0.048mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

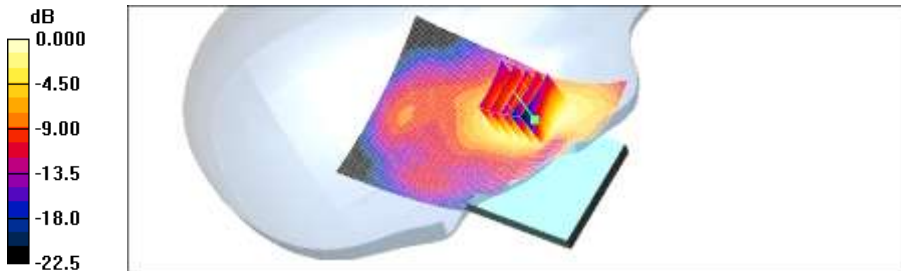
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 661/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.181 mW/g

**Right touch 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 5.19 V/m; Power Drift = -0.088 dB  
Peak SAR (extrapolated) = 0.265 W/kg  
**SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.097 mW/g**  
Maximum value of SAR (measured) = 0.179 mW/g



0 dB = 0.179mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

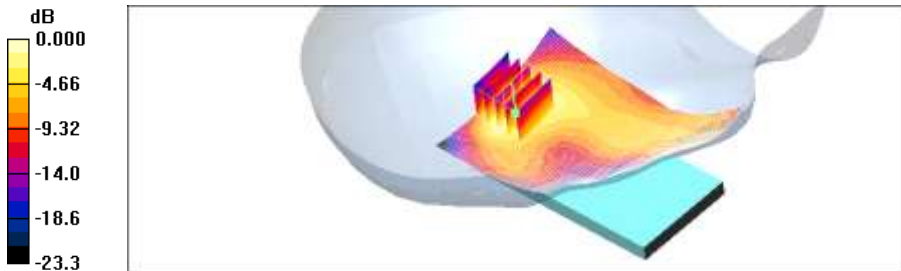
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 661/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.056 mW/g

**Right tilt 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 1.97 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 0.083 W/kg  
**SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.027 mW/g**  
Maximum value of SAR (measured) = 0.055 mW/g



0 dB = 0.055mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left touch 4183/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.275 mW/g

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

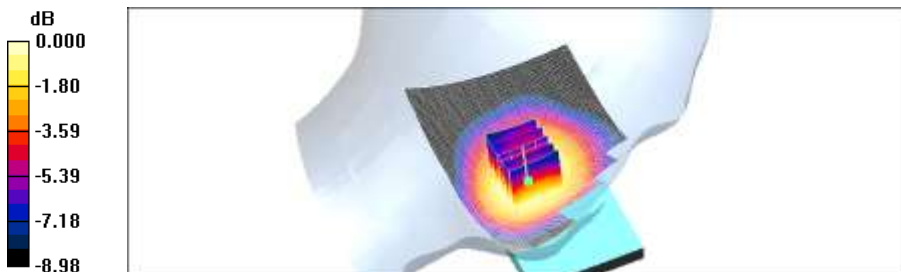
Reference Value = 16.9 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 0.322 W/kg

**SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.197 mW/g**

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

Maximum value of SAR (measured) = 0.272 mW/g



0 dB = 0.272mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left tilt 4183/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.187 mW/g

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

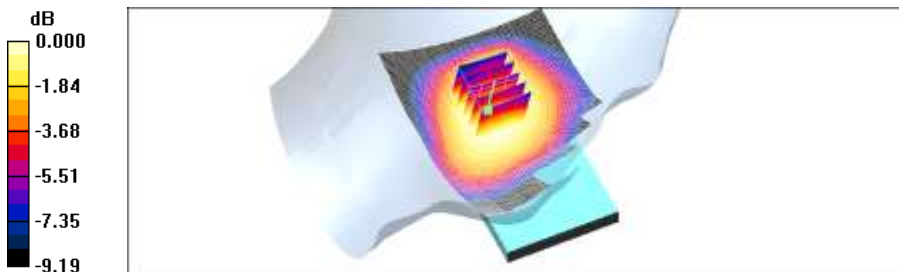
Reference Value = 12.2 V/m; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 0.213 W/kg

**SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.134 mW/g**

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

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



0 dB = 0.180mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 4183/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.251 mW/g

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

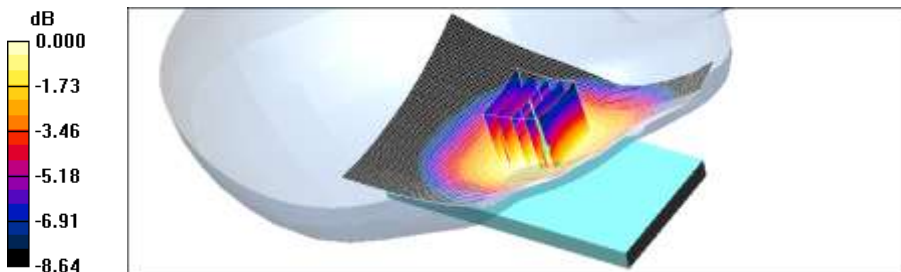
Reference Value = 16.3 V/m; Power Drift = 0.080 dB

Peak SAR (extrapolated) = 0.306 W/kg

**SAR(1 g) = 0.245 mW/g; SAR(10 g) = 0.185 mW/g**

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

Maximum value of SAR (measured) = 0.257 mW/g



0 dB = 0.257mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 43.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 4183/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.216 mW/g

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

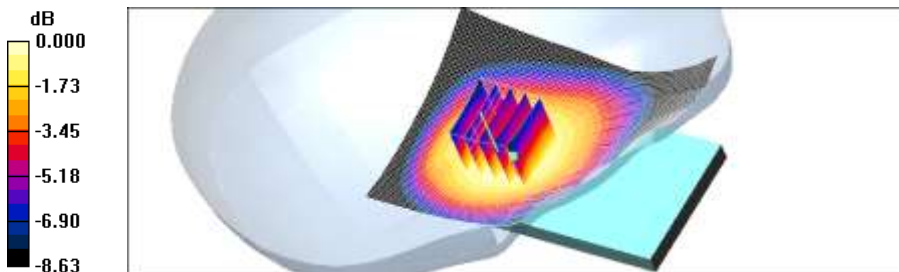
Reference Value = 12.9 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.242 W/kg

**SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.149 mW/g**

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

Maximum value of SAR (measured) = 0.205 mW/g



0 dB = 0.205mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

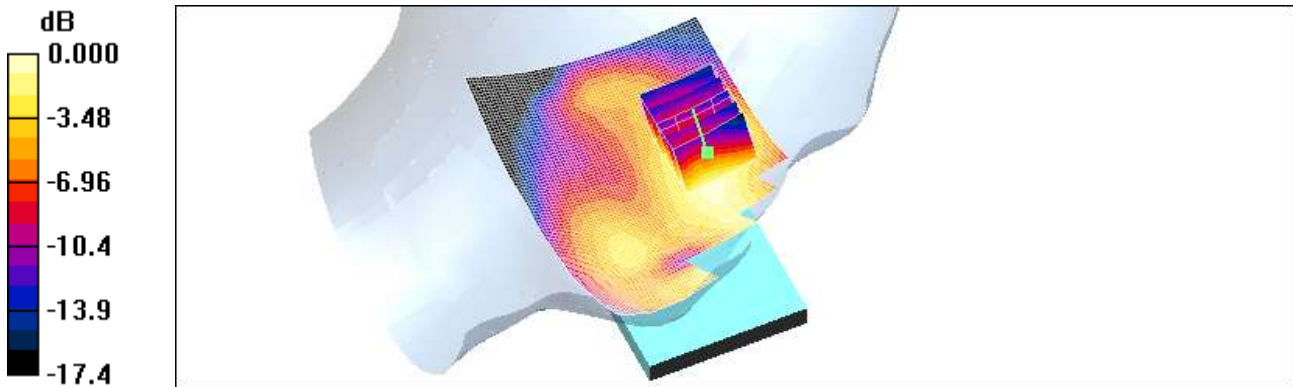
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 9400/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.157 mW/g

**Left touch 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 5.91 V/m; Power Drift = -0.044 dB  
Peak SAR (extrapolated) = 0.247 W/kg  
**SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.088 mW/g**  
Maximum value of SAR (measured) = 0.158 mW/g



0 dB = 0.158mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

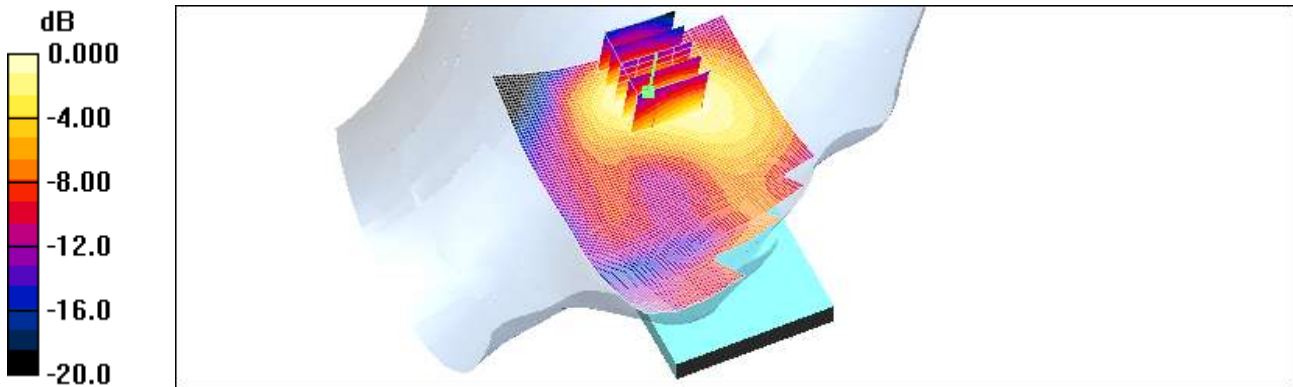
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 9400/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.123 mW/g

**Left tilt 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.51 V/m; Power Drift = 0.090 dB  
Peak SAR (extrapolated) = 0.185 W/kg  
**SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.064 mW/g**  
Maximum value of SAR (measured) = 0.121 mW/g



0 dB = 0.121mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

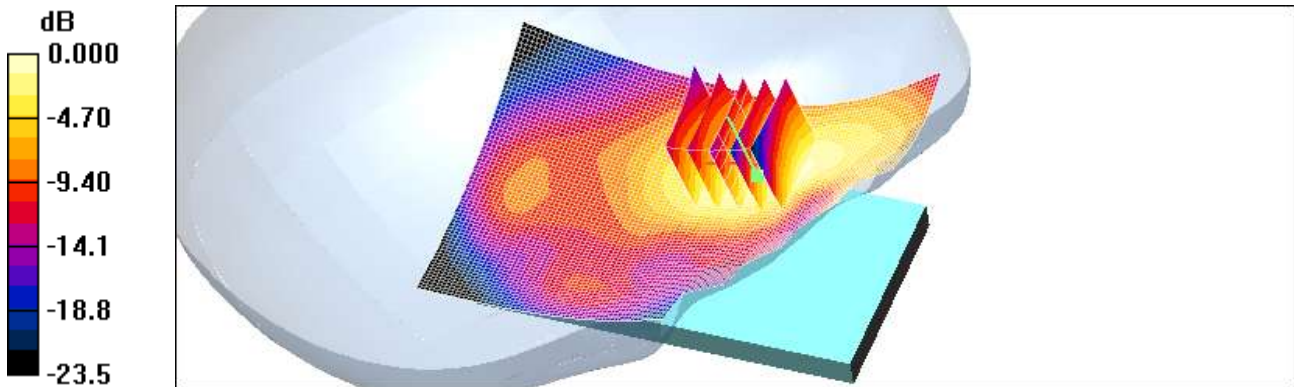
Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 40$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 9400/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.392 mW/g

**Right touch 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 7.39 V/m; Power Drift = -0.105 dB  
Peak SAR (extrapolated) = 0.582 W/kg  
**SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.207 mW/g**  
Maximum value of SAR (measured) = 0.395 mW/g



0 dB = 0.395mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012

**DUT: P9090; Type: bar; Serial: #1**

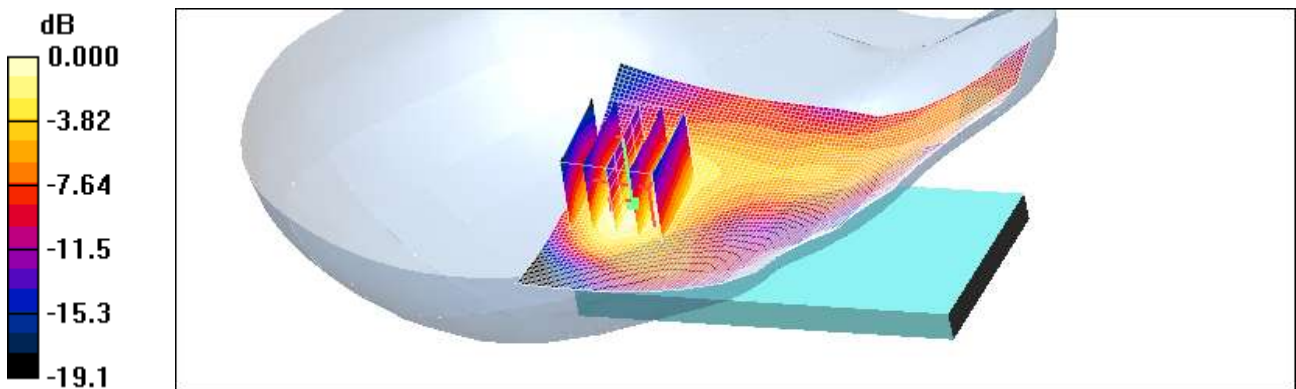
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASy4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 9400/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.136 mW/g

**Right tilt 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.90 V/m; Power Drift = -0.161 dB  
Peak SAR (extrapolated) = 0.200 W/kg  
**SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.065 mW/g**  
Maximum value of SAR (measured) = 0.128 mW/g



0 dB = 0.128mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 25RB 12offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.179 mW/g

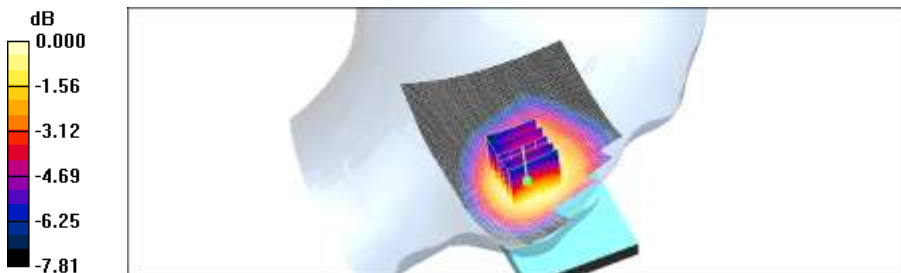
**Left Touch QPSK 25RB 12offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 0.209 W/kg

**SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.137 mW/g**

Maximum value of SAR (measured) = 0.185 mW/g



0 dB = 0.185mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 1RB Offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.199 mW/g

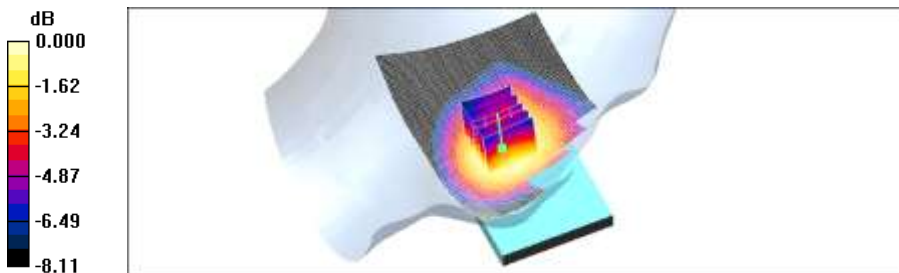
**Left Touch QPSK 1RB Offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.232 W/kg

**SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.151 mW/g**

Maximum value of SAR (measured) = 0.205 mW/g



0 dB = 0.205mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.256 mW/g

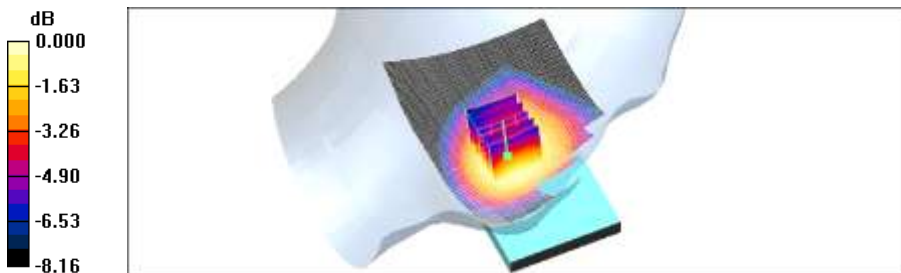
**Left Touch QPSK 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.1 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.287 W/kg

**SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.189 mW/g**

Maximum value of SAR (measured) = 0.247 mW/g



0 dB = 0.247mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 25RB 12offset 23790ch/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.107 mW/g

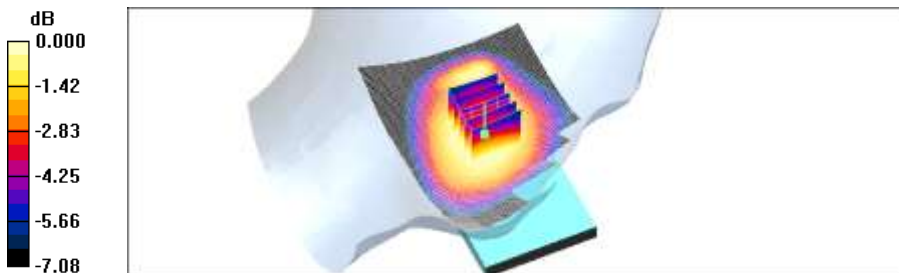
**Left Tilt QPSK 25RB 12offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.1 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 0.121 W/kg

**SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.085 mW/g**

Maximum value of SAR (measured) = 0.109 mW/g



0 dB = 0.109mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

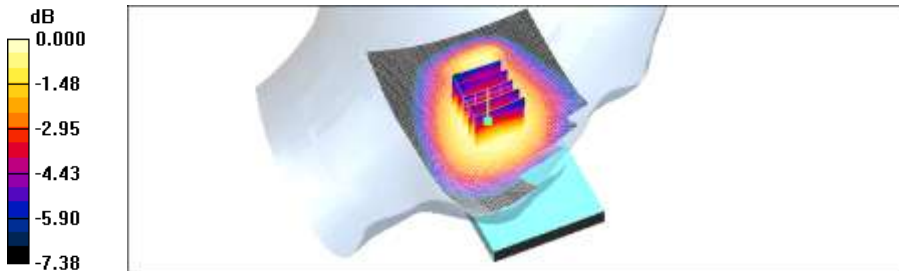
Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 1RB Offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.113 mW/g

**Left Tilt QPSK 1RB Offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 11.2 V/m; Power Drift = 0.130 dB  
Peak SAR (extrapolated) = 0.131 W/kg  
**SAR(1 g) = 0.111 mW/g; SAR(10 g) = 0.090 mW/g**  
Maximum value of SAR (measured) = 0.117 mW/g



0 dB = 0.117mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

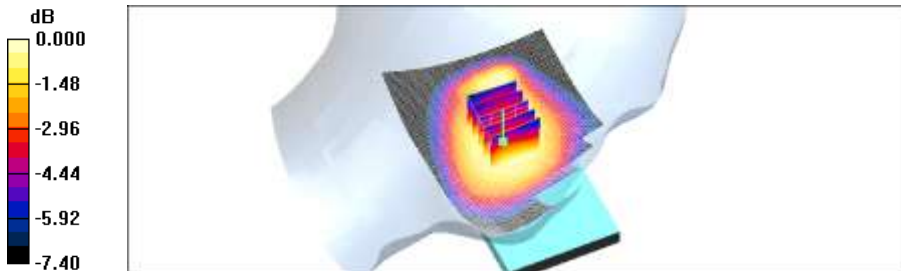
Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.152 mW/g

**Left Tilt QPSK 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 12.7 V/m; Power Drift = 0.127 dB  
Peak SAR (extrapolated) = 0.169 W/kg  
**SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.118 mW/g**  
Maximum value of SAR (measured) = 0.152 mW/g



0 dB = 0.152mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 25RB 12offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.133 mW/g

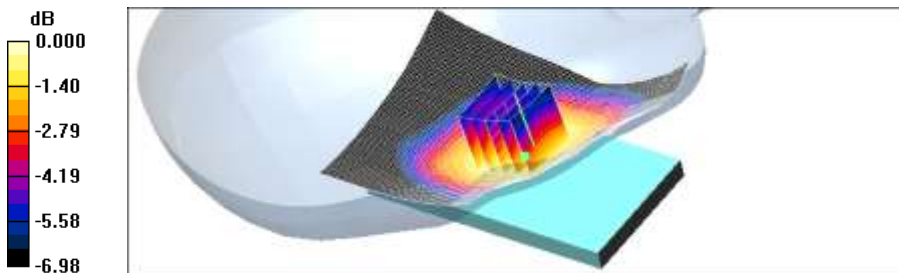
**Right touch QPSK 25RB 12offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.9 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.154 W/kg

**SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.103 mW/g**

Maximum value of SAR (measured) = 0.136 mW/g



0 dB = 0.136mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 1RB 0offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.146 mW/g

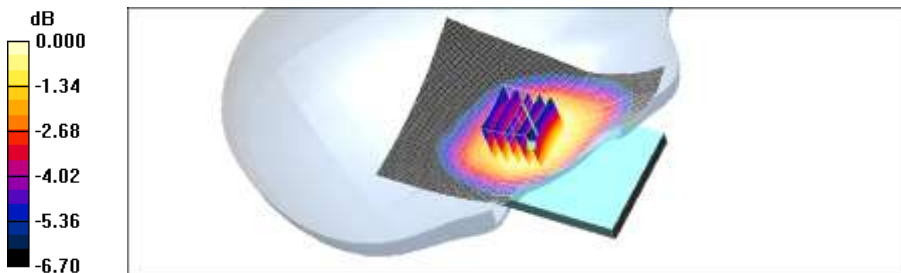
**Right touch QPSK 1RB 0offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.7 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.167 W/kg

**SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.114 mW/g**

Maximum value of SAR (measured) = 0.148 mW/g



0 dB = 0.148mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.156 mW/g

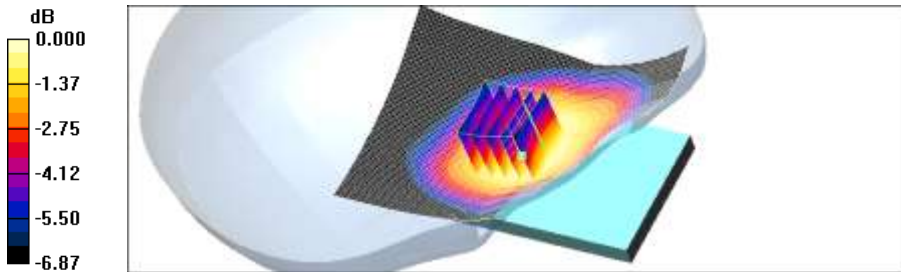
**Right touch QPSK 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.179 W/kg

**SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.119 mW/g**

Maximum value of SAR (measured) = 0.155 mW/g



0 dB = 0.155mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 25RB 12offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.087 mW/g

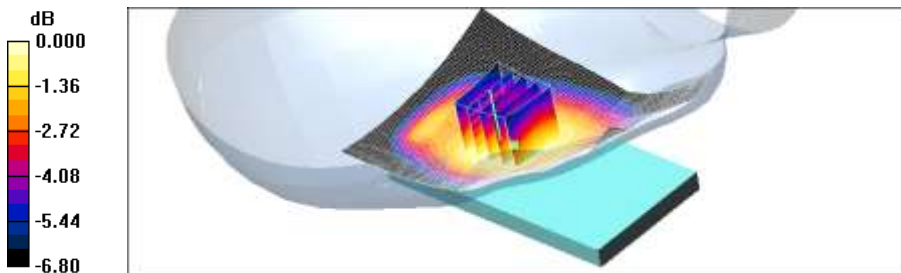
**Right tilt QPSK 25RB 12offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.66 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 0.095 W/kg

**SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.066 mW/g**

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



0 dB = 0.085mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

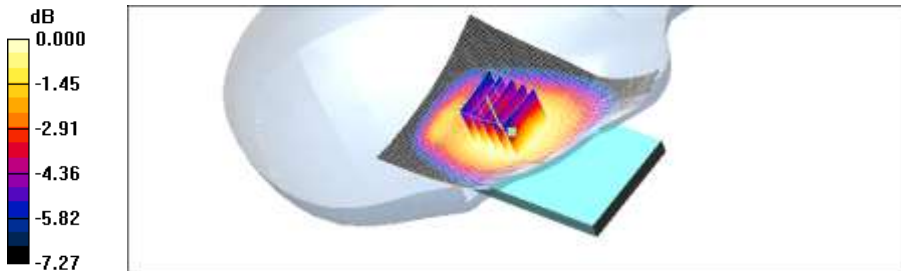
Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 1RB Offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.096 mW/g

**Right tilt QPSK 1RB Offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.2 V/m; Power Drift = 0.108 dB  
Peak SAR (extrapolated) = 0.107 W/kg  
**SAR(1 g) = 0.092 mW/g; SAR(10 g) = 0.074 mW/g**  
Maximum value of SAR (measured) = 0.096 mW/g



0 dB = 0.096mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

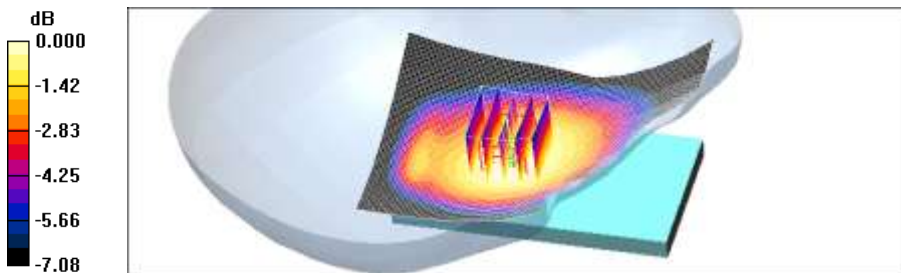
Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.107 mW/g

**Right tilt QPSK 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.7 V/m; Power Drift = 0.150 dB  
Peak SAR (extrapolated) = 0.122 W/kg  
**SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.084 mW/g**  
Maximum value of SAR (measured) = 0.109 mW/g



0 dB = 0.109mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710$  MHz;  $\sigma = 0.878$  mho/m;  $\epsilon_r = 42.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left touch 16QAM 25RB 12 offset 23790/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.113 mW/g

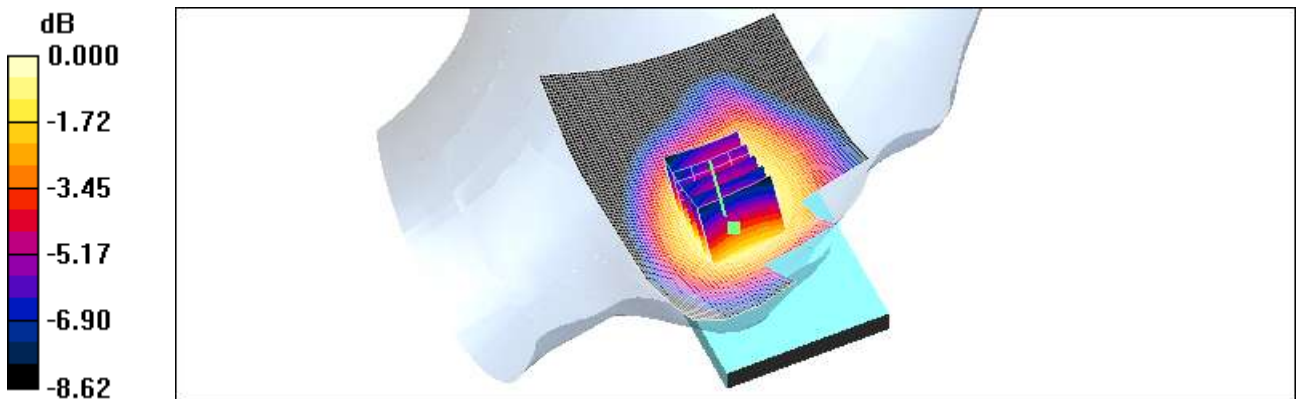
**Left touch 16QAM 25RB 12 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.9 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.137 W/kg

**SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.085 mW/g**

Maximum value of SAR (measured) = 0.118 mW/g



0 dB = 0.118mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left touch 16QAM 1RB 0 offset 23790/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.136 mW/g

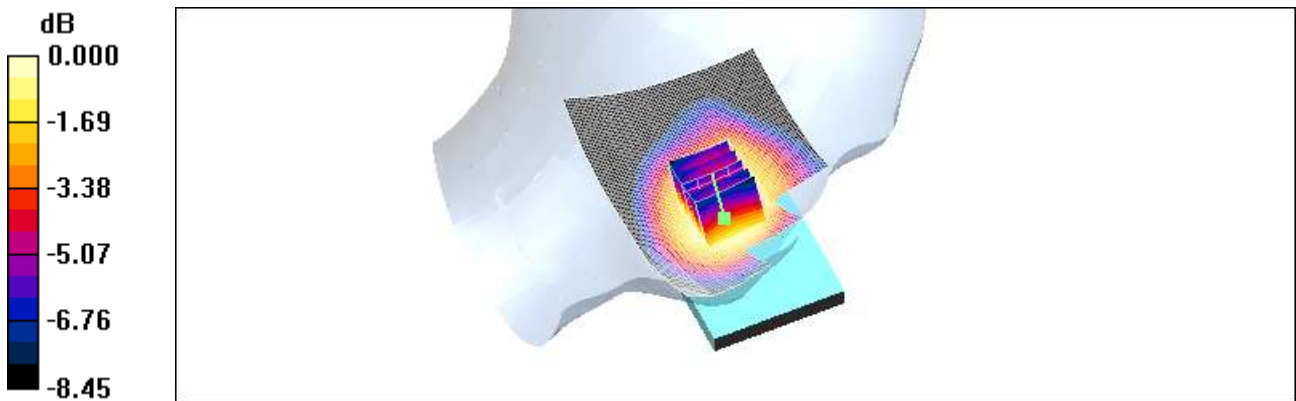
**Left touch 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 12.8 V/m; Power Drift = 0.129 dB

Peak SAR (extrapolated) = 0.162 W/kg

**SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.103 mW/g**

Maximum value of SAR (measured) = 0.139 mW/g



0 dB = 0.139mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with  
Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710$  MHz;  $\sigma = 0.878$  mho/m;  $\epsilon_r = 42.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 16QAM 1RB 49 offset 23790/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.180 mW/g

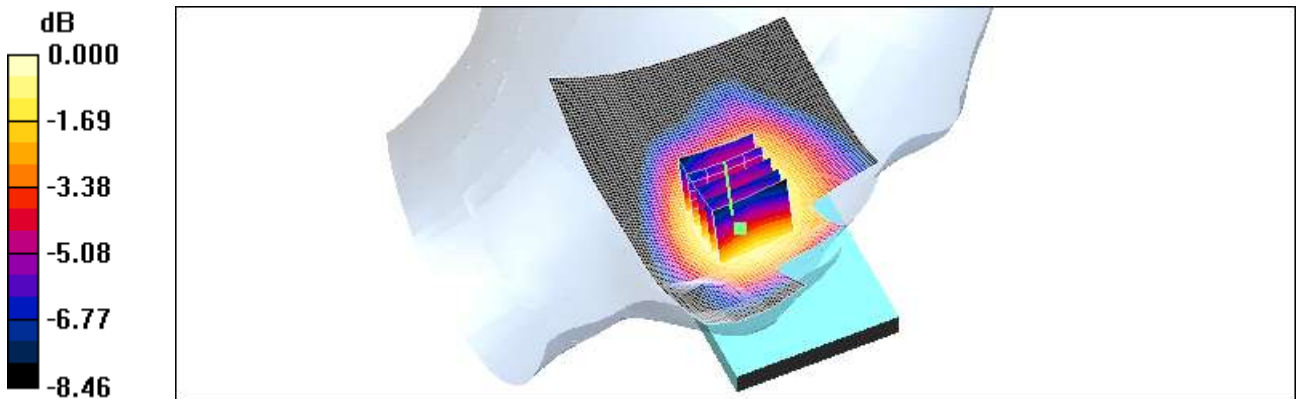
Left touch 16QAM 1RB 49 offset 23790/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = 0.083 dB

Peak SAR (extrapolated) = 0.214 W/kg

**SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.134 mW/g**

Maximum value of SAR (measured) = 0.184 mW/g



0 dB = 0.184mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with  
Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

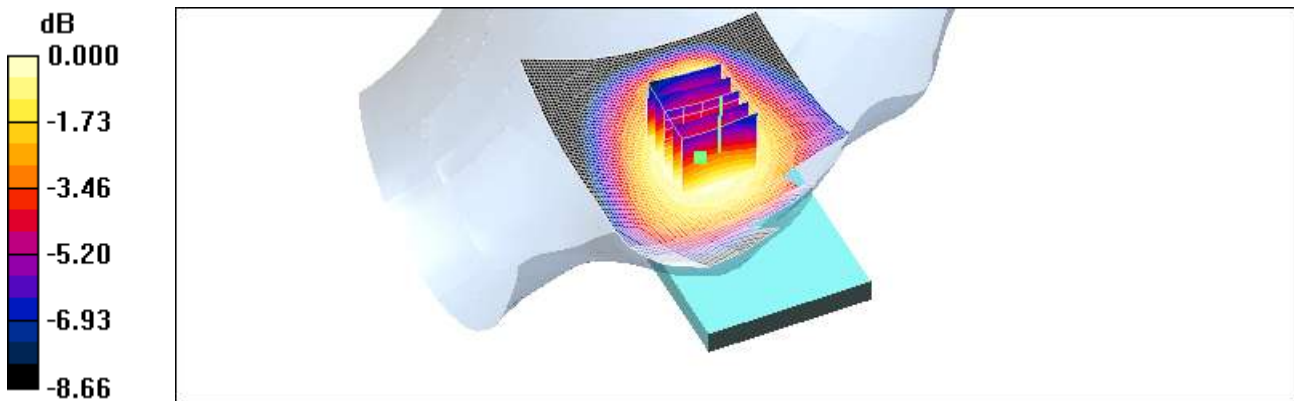
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left tilt 16QAM 25RB 12 offset 23790/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.078 mW/g

**Left tilt 16QAM 25RB 12 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 9.11 V/m; Power Drift = -0.021 dB  
Peak SAR (extrapolated) = 0.090 W/kg  
**SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.058 mW/g**  
Maximum value of SAR (measured) = 0.077 mW/g



0 dB = 0.077mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with  
Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

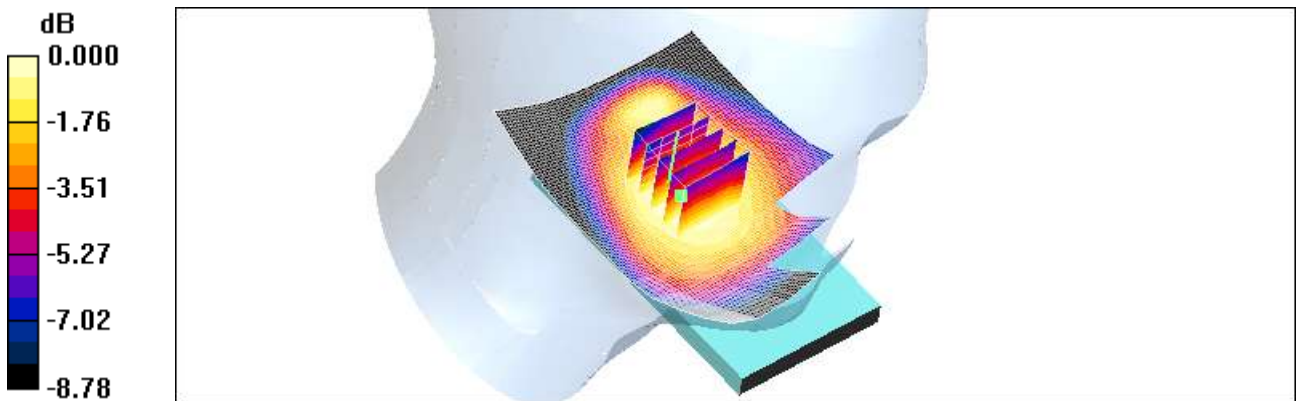
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left tilt 16QAM 1RB 0 offset 23790/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.088 mW/g

**Left tilt 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 9.53 V/m; Power Drift = 0.018 dB  
Peak SAR (extrapolated) = 0.100 W/kg  
**SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.064 mW/g**  
Maximum value of SAR (measured) = 0.088 mW/g



0 dB = 0.088mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

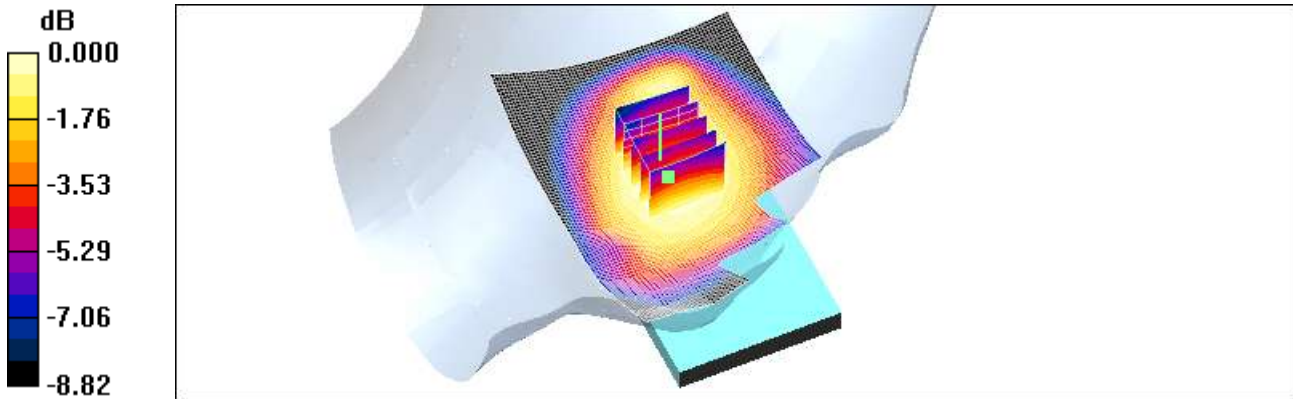
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left tilt 16QAM 1RB 49 offset 23790/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.109 mW/g

**Left tilt 16QAM 1RB 49 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 10.8 V/m; Power Drift = -0.042 dB  
Peak SAR (extrapolated) = 0.126 W/kg  
**SAR(1 g) = 0.103 mW/g; SAR(10 g) = 0.080 mW/g**  
Maximum value of SAR (measured) = 0.108 mW/g



0 dB = 0.108mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 25RB 13offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.153 mW/g

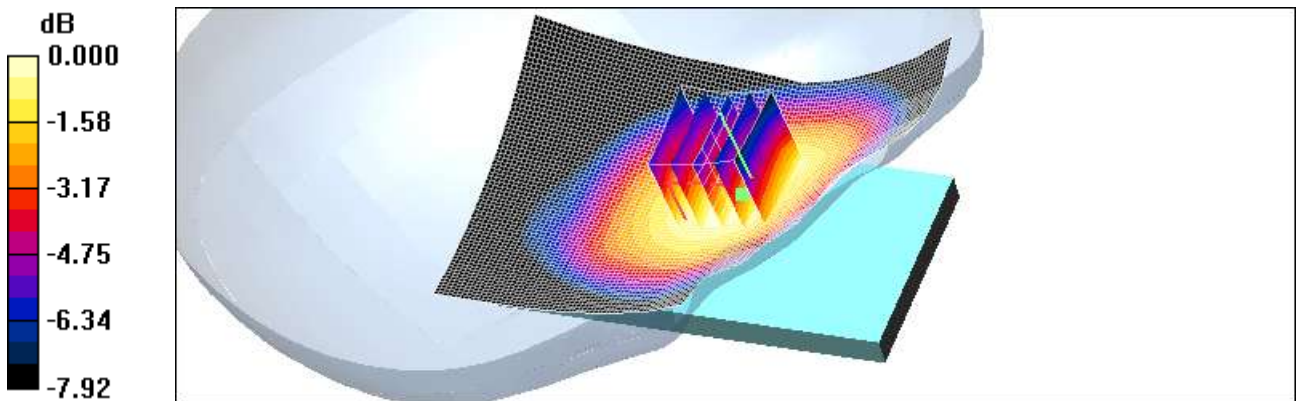
**Right touch 16QAM 25RB 13offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 0.198 W/kg

**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.117 mW/g**

Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with  
Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 1RB 0 offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.180 mW/g

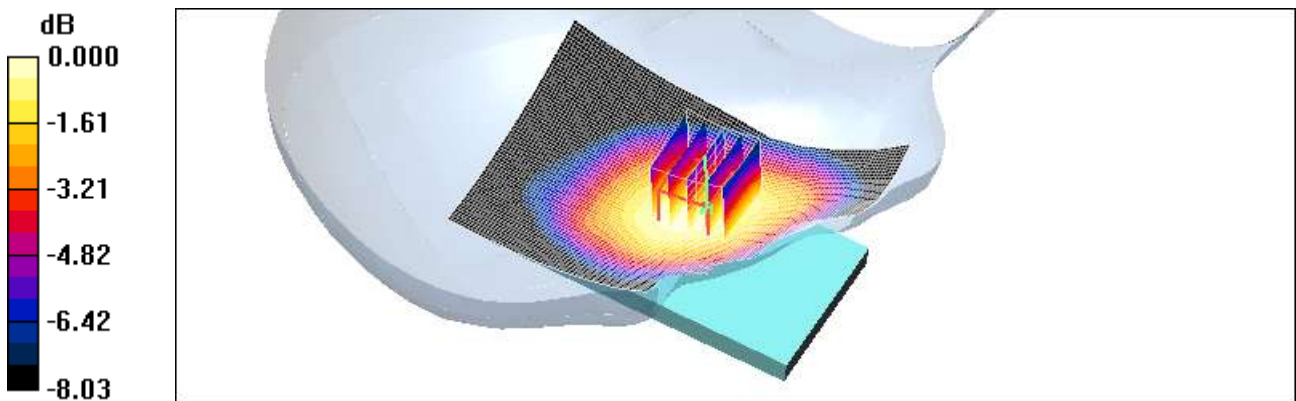
**Right touch 16QAM 1RB 0 offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.7 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 0.220 W/kg

**SAR(1 g) = 0.173 mW/g; SAR(10 g) = 0.135 mW/g**

Maximum value of SAR (measured) = 0.184 mW/g



0 dB = 0.184mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.217 mW/g

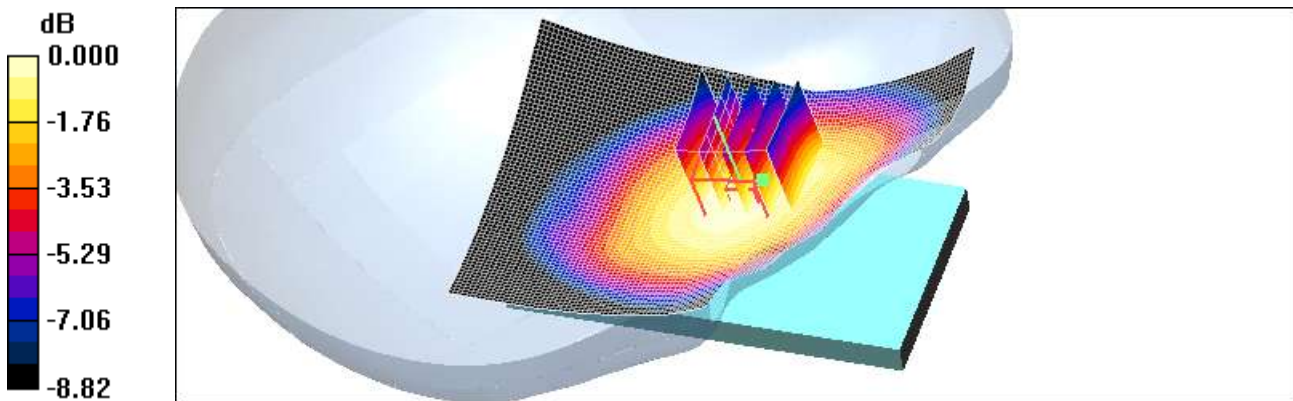
**Right touch 16QAM 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.3 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.262 W/kg

**SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.163 mW/g**

Maximum value of SAR (measured) = 0.220 mW/g



0 dB = 0.220mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 16QAM 25RB 13offset 23790ch/Area Scan (71x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.105 mW/g

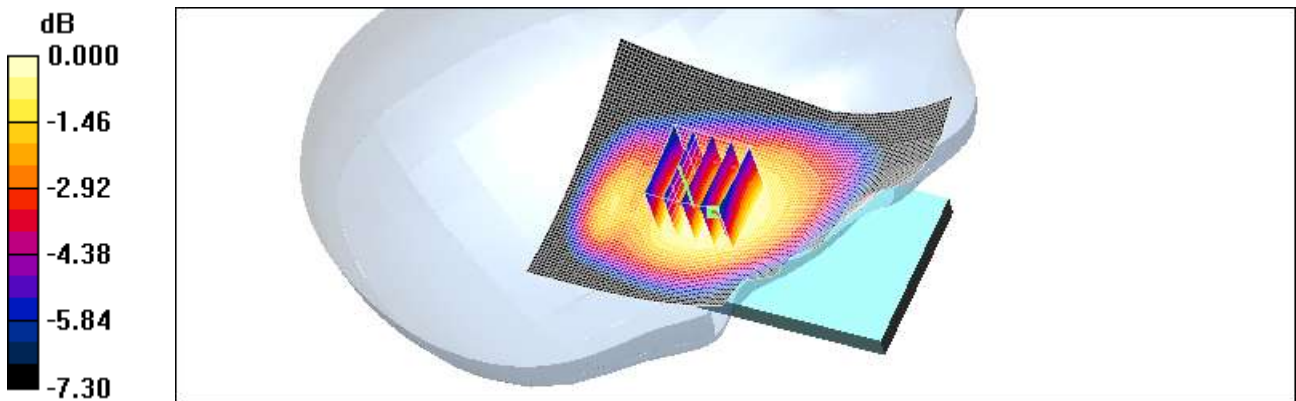
**Right tilt 16QAM 25RB 13offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 10.4 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.118 W/kg

**SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.081 mW/g**

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



0 dB = 0.107mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with  
Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710$  MHz;  $\sigma = 0.878$  mho/m;  $\epsilon_r = 42.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right tilt 16QAM 1RB 0 offset 23790ch/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.122 mW/g

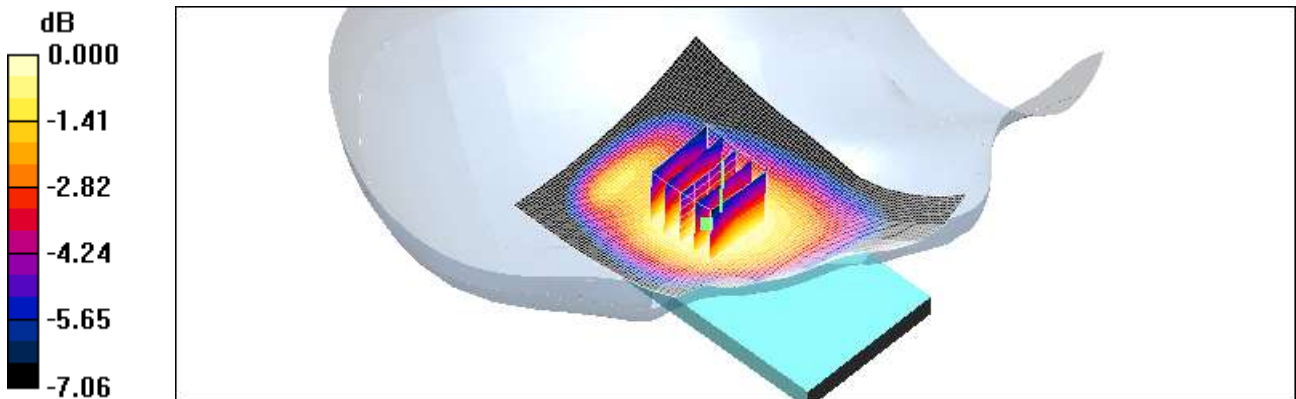
Right tilt 16QAM 1RB 0 offset 23790ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.138 W/kg

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.094 mW/g

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



0 dB = 0.122mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.08, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.878 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.68, 6.68, 6.68); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt 16QAM 1RB 49offset 23790ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.149 mW/g

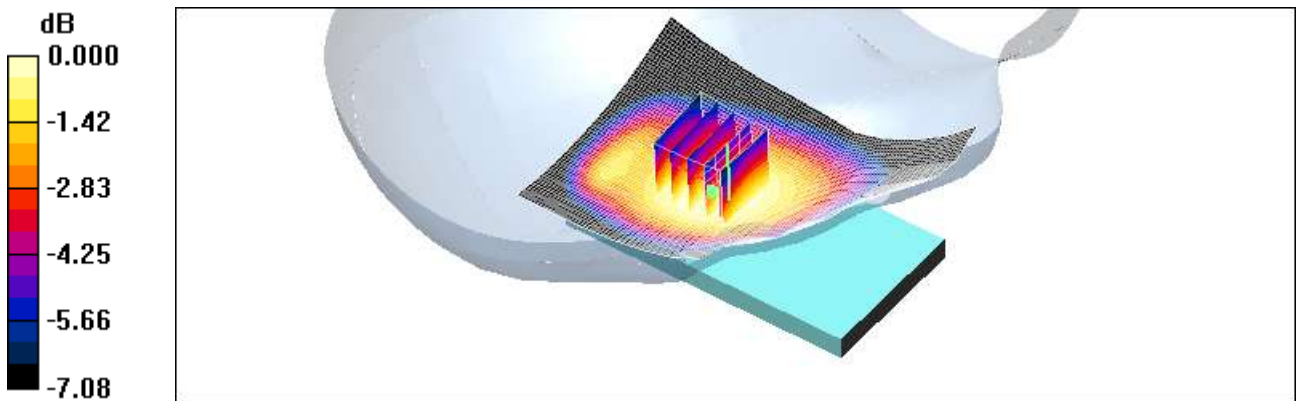
**Right tilt 16QAM 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.168 W/kg

**SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.114 mW/g**

Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 25RB 13offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.161 mW/g

**Left Touch QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

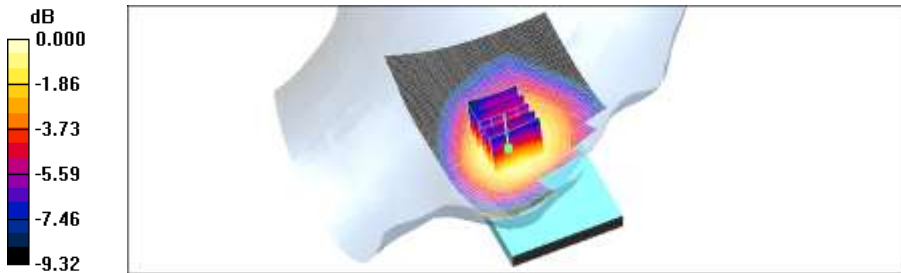
Reference Value = 13.6 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.192 W/kg

**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.113 mW/g**

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

Maximum value of SAR (measured) = 0.160 mW/g



0 dB = 0.160mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 1RB Offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Left Touch QPSK 1RB Offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

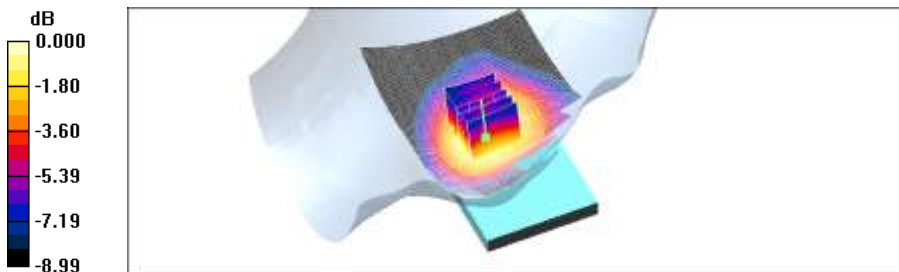
Reference Value = 15.9 V/m; Power Drift = 0.067 dB

Peak SAR (extrapolated) = 0.261 W/kg

**SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.150 mW/g**

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

Maximum value of SAR (measured) = 0.217 mW/g



0 dB = 0.217mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch QPSK 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Left Touch QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

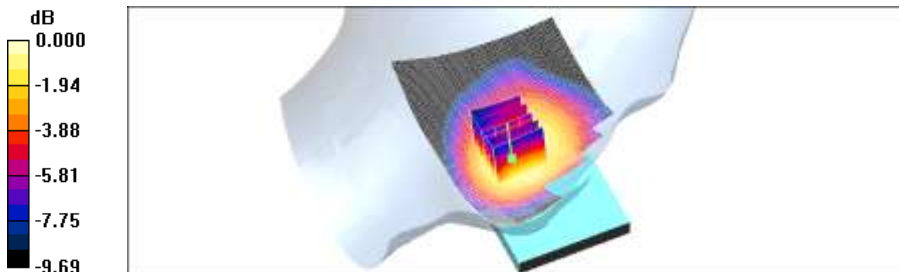
Reference Value = 14.0 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.194 W/kg

**SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.116 mW/g**

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

Maximum value of SAR (measured) = 0.163 mW/g



0 dB = 0.163mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 25 RB 13 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.096 mW/g

**Left Tilt QPSK 25 RB 13 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

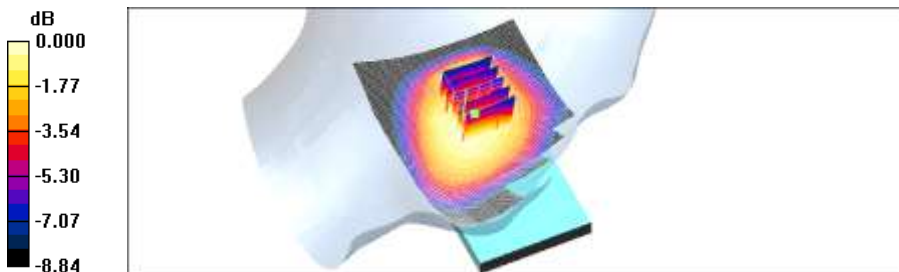
Reference Value = 9.63 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.116 W/kg

**SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.074 mW/g**

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

Maximum value of SAR (measured) = 0.101 mW/g



0 dB = 0.101mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 1RB Offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.137 mW/g

**Left Tilt QPSK 1RB Offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

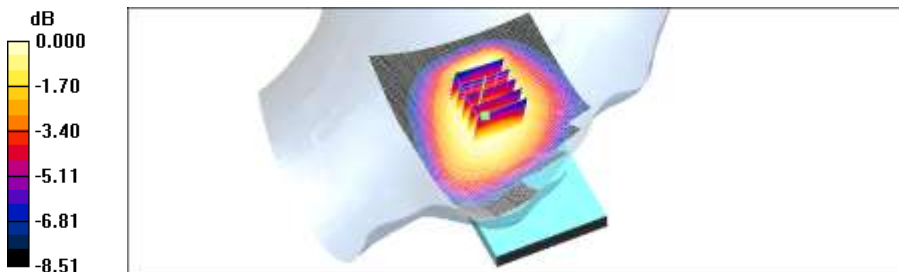
Reference Value = 11.5 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 0.152 W/kg

**SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.101 mW/g**

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

Maximum value of SAR (measured) = 0.133 mW/g



0 dB = 0.133mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt QPSK 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.103 mW/g

**Left Tilt QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

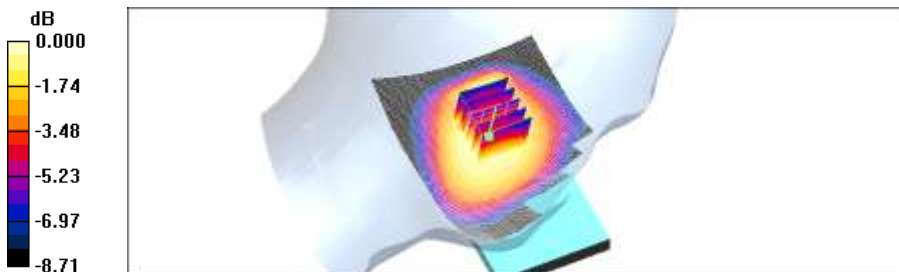
Reference Value = 9.96 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.122 W/kg

**SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.075 mW/g**

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

Maximum value of SAR (measured) = 0.105 mW/g



0 dB = 0.105mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 25RB 13offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.145 mW/g

**Right touch QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

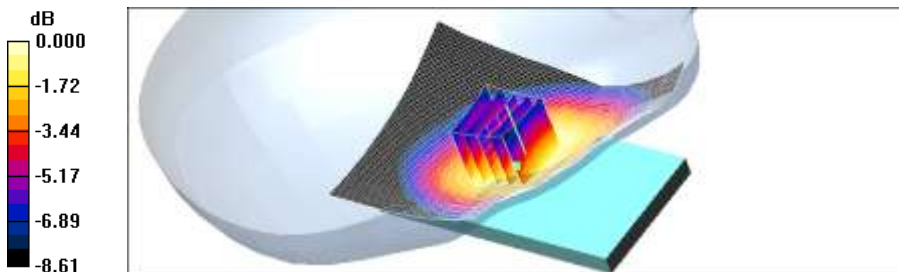
Reference Value = 13.8 V/m; Power Drift = -0.058 dB

Peak SAR (extrapolated) = 0.177 W/kg

**SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.108 mW/g**

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

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



0 dB = 0.152mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 1RB 0offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Right touch QPSK 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

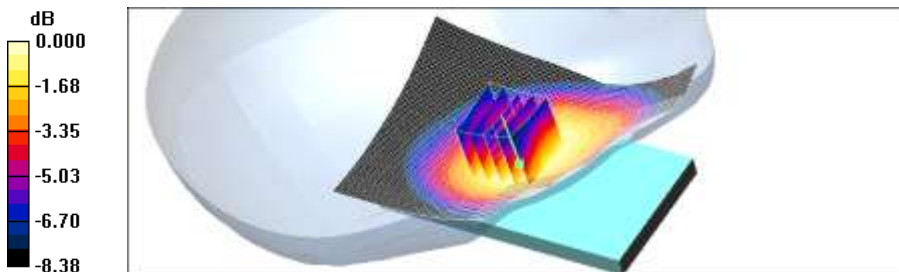
Reference Value = 16.3 V/m; Power Drift = 0.119 dB

Peak SAR (extrapolated) = 0.254 W/kg

**SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.161 mW/g**

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

Maximum value of SAR (measured) = 0.222 mW/g



0 dB = 0.222mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch QPSK 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.153 mW/g

**Right touch QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

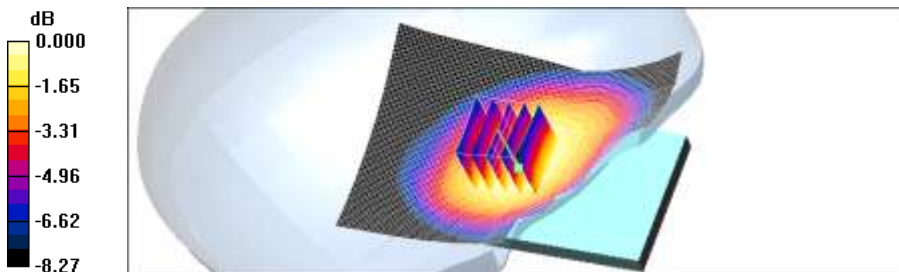
Reference Value = 13.6 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 0.183 W/kg

**SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.113 mW/g**

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

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



0 dB = 0.152mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 25RB 13offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.127 mW/g

**Right tilt QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

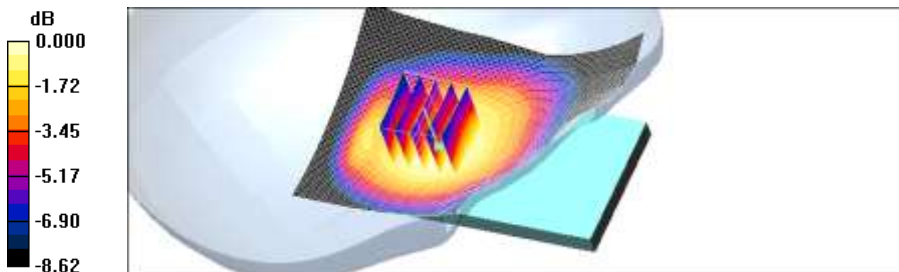
Reference Value = 10.6 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 0.148 W/kg

**SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.094 mW/g**

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

Maximum value of SAR (measured) = 0.128 mW/g



0 dB = 0.128mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 1RB 0offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.165 mW/g

**Right tilt QPSK 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

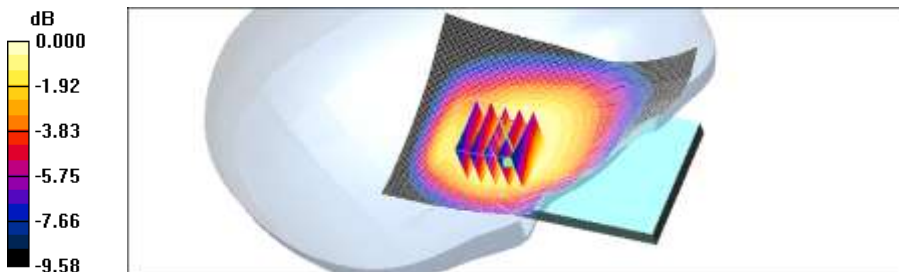
Reference Value = 12.8 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.186 W/kg

**SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.115 mW/g**

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

Maximum value of SAR (measured) = 0.160 mW/g



0 dB = 0.160mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt QPSK 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.110 mW/g

**Right tilt QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

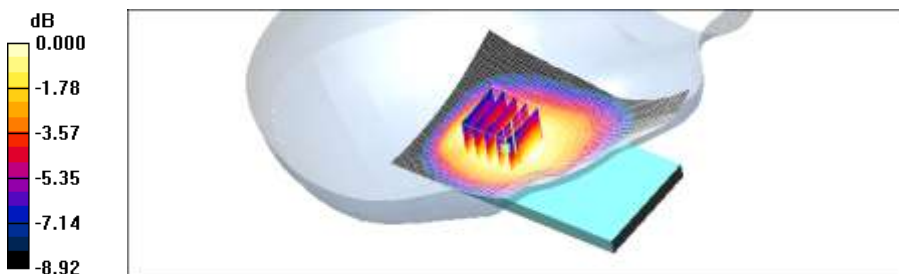
Reference Value = 9.64 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.117 W/kg

**SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.078 mW/g**

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

Maximum value of SAR (measured) = 0.106 mW/g



0 dB = 0.106mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left ouch 16QAM 25RB 13 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.117 mW/g

**Left ouch 16QAM 25RB 13 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

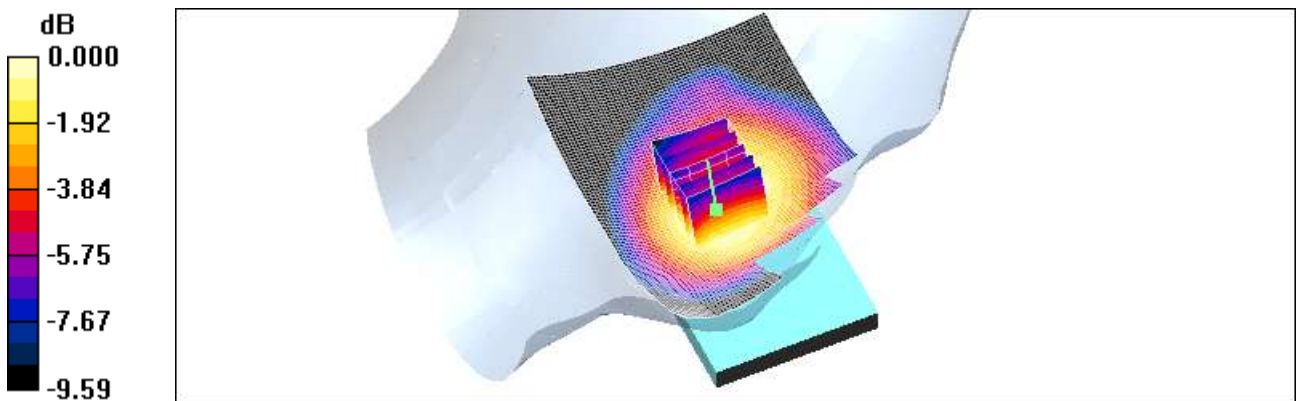
Reference Value = 11.8 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.140 W/kg

**SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.079 mW/g**

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

Maximum value of SAR (measured) = 0.110 mW/g



0 dB = 0.110mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 16QAM 1RB 0 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.171 mW/g

**Left touch 16QAM 1RB 0 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

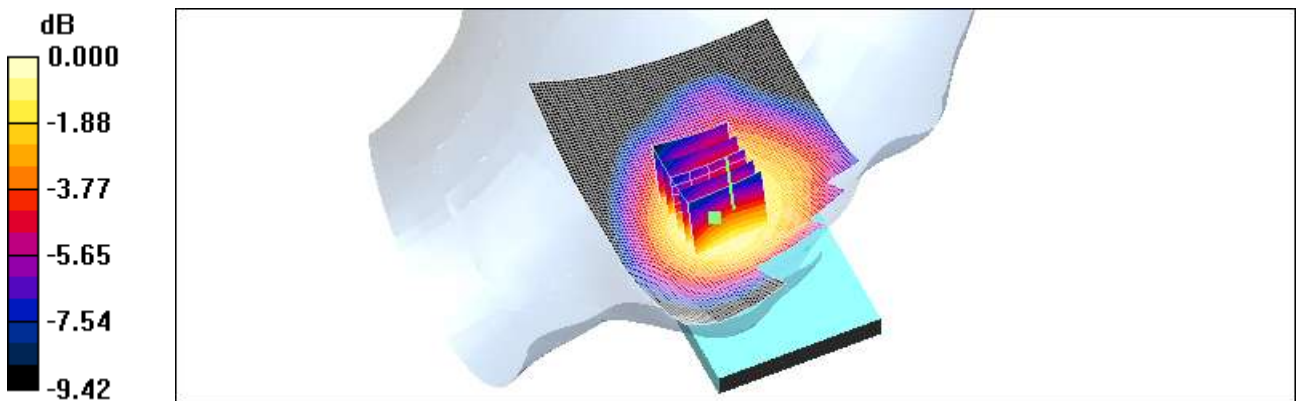
Reference Value = 14.3 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.187 W/kg

**SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.118 mW/g**

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

Maximum value of SAR (measured) = 0.163 mW/g



0 dB = 0.163mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left touch 16QAM 1RB 49 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.131 mW/g

**Left touch 16QAM 1RB 49 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

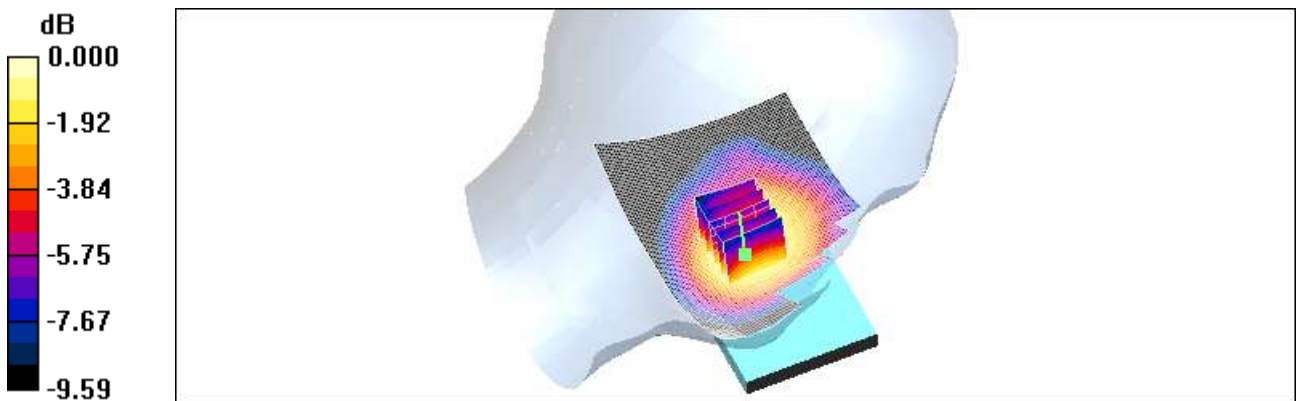
Reference Value = 12.6 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.165 W/kg

**SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.094 mW/g**

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

Maximum value of SAR (measured) = 0.134 mW/g



0 dB = 0.134mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 16QAM 25RB 13 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Left tilt 16QAM 25RB 13 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

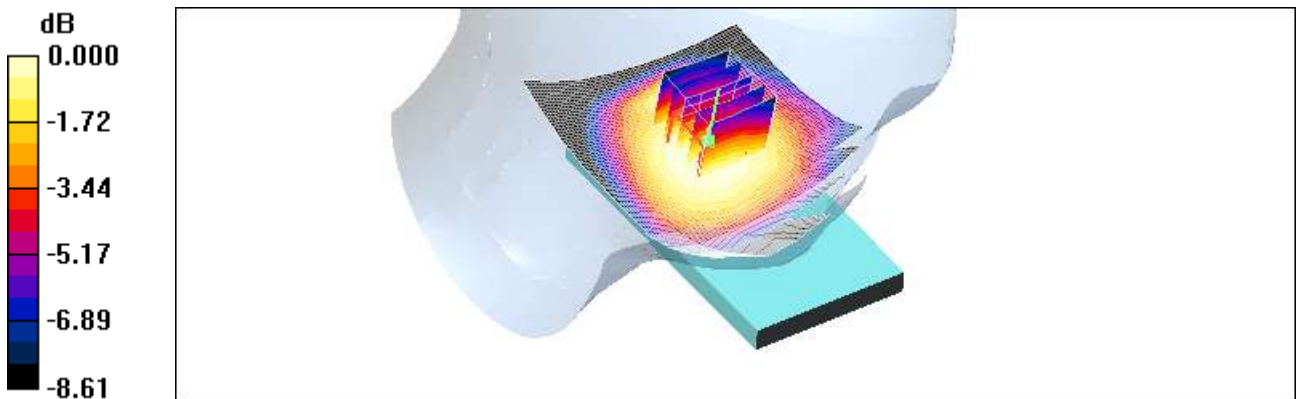
Reference Value = 8.20 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.076 W/kg

**SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.048 mW/g**

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

Maximum value of SAR (measured) = 0.065 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 16QAM 1RB 0 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.106 mW/g

**Left tilt 16QAM 1RB 0 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

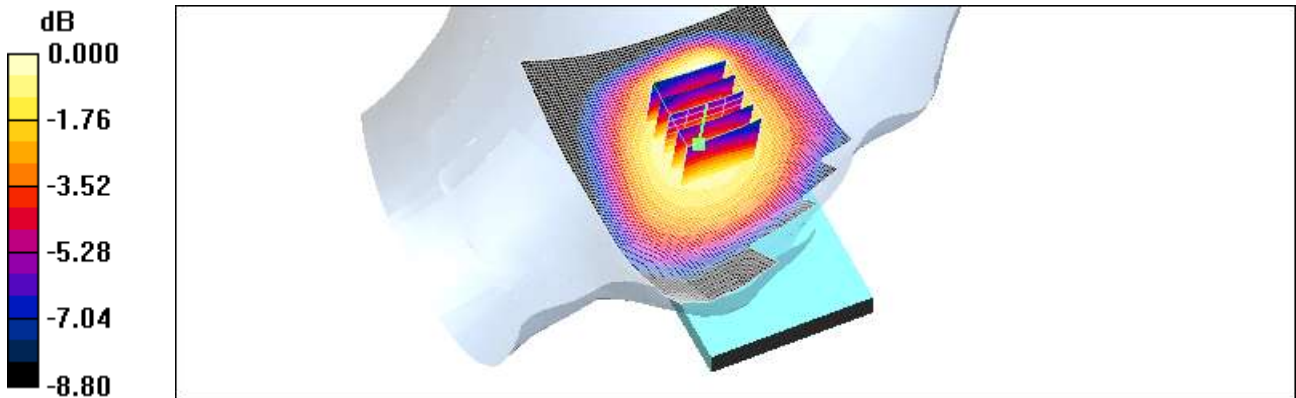
Reference Value = 10.0 V/m; Power Drift = -0.146 dB

Peak SAR (extrapolated) = 0.124 W/kg

**SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.081 mW/g**

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

Maximum value of SAR (measured) = 0.112 mW/g



0 dB = 0.112mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left tilt 16QAM 1RB 49 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.081 mW/g

**Left tilt 16QAM 1RB 49 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

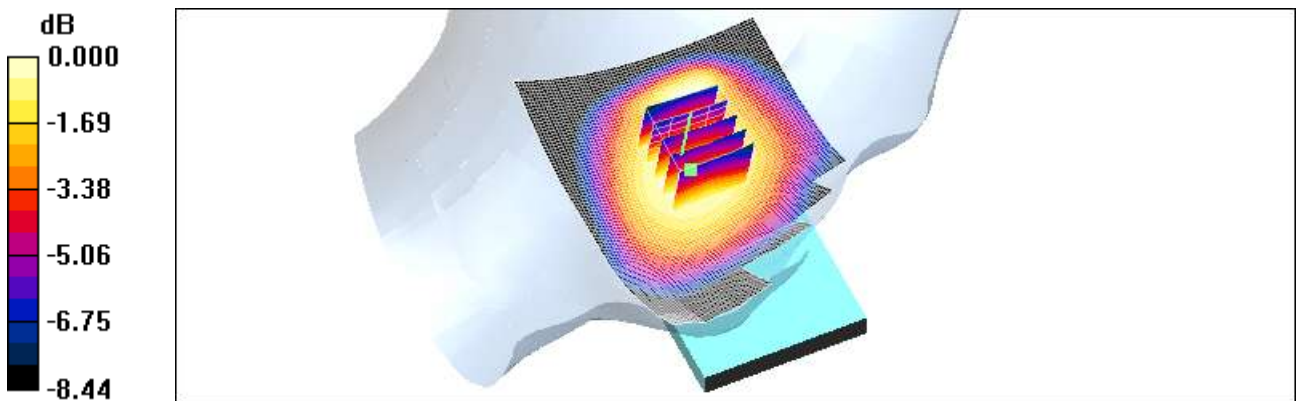
Reference Value = 8.50 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.097 W/kg

**SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.062 mW/g**

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

Maximum value of SAR (measured) = 0.084 mW/g



0 dB = 0.084mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Touch 16QAM 25RB 13offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

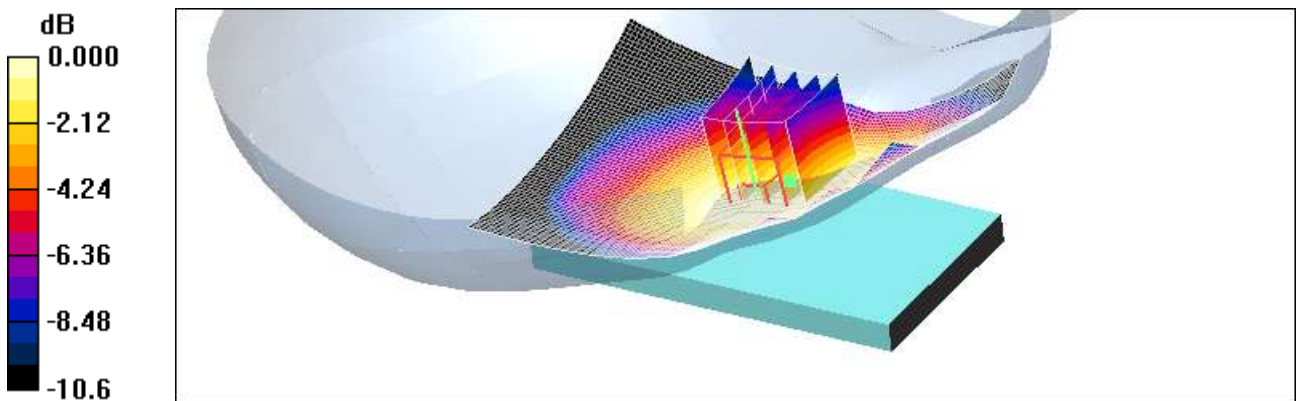
**Right Touch 16QAM 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.041 dB

Peak SAR (extrapolated) = 0.139 W/kg

**SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.080 mW/g**

Maximum value of SAR (measured) = 0.115 mW/g



0 dB = 0.115mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Touch 16QAM 1RB 0 offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.188 mW/g

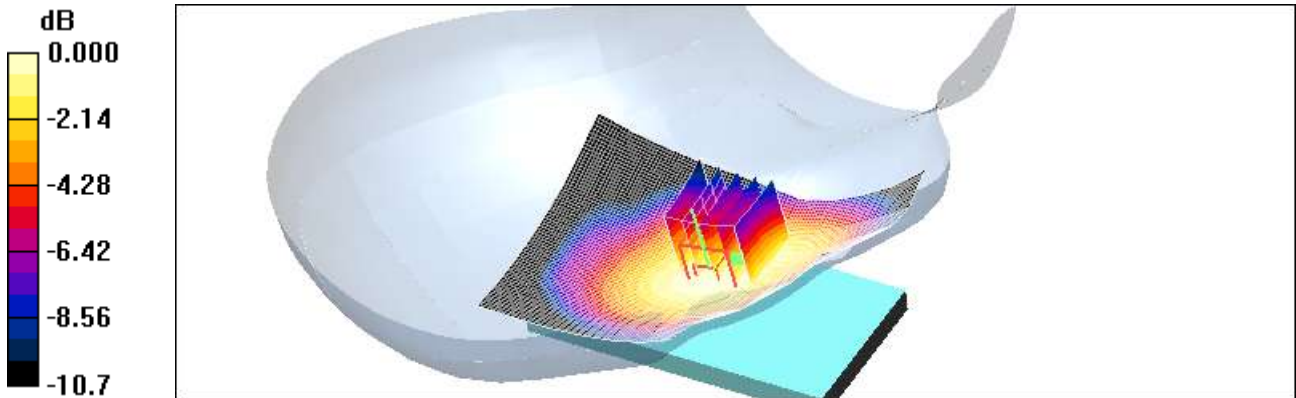
**Right Touch 16QAM 1RB 0 offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.224 W/kg

**SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.128 mW/g**

Maximum value of SAR (measured) = 0.187 mW/g



0 dB = 0.187mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DAS4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Touch 16QAM 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.128 mW/g

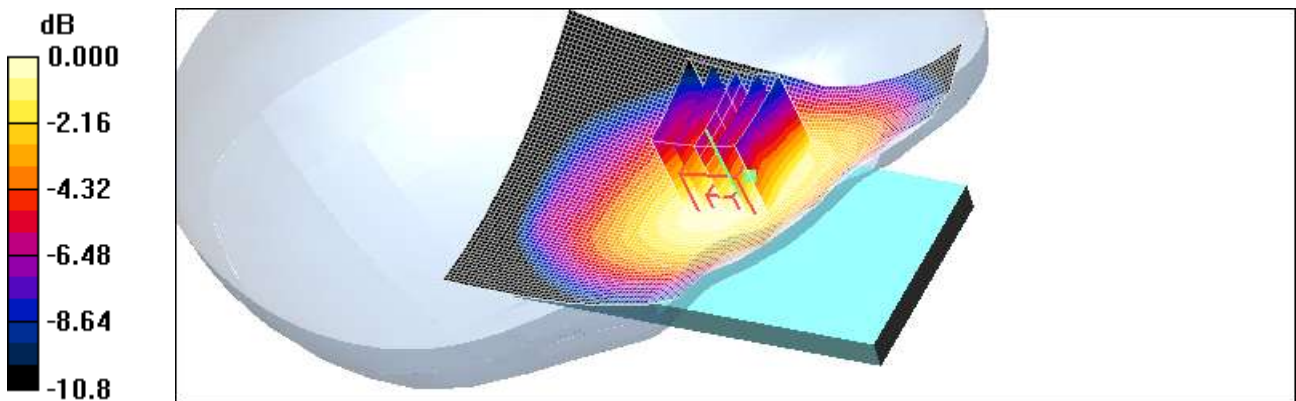
**Right Touch 16QAM 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.153 W/kg

**SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.089 mW/g**

Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Tilt 16QAM 25RB 13offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Right Tilt 16QAM 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

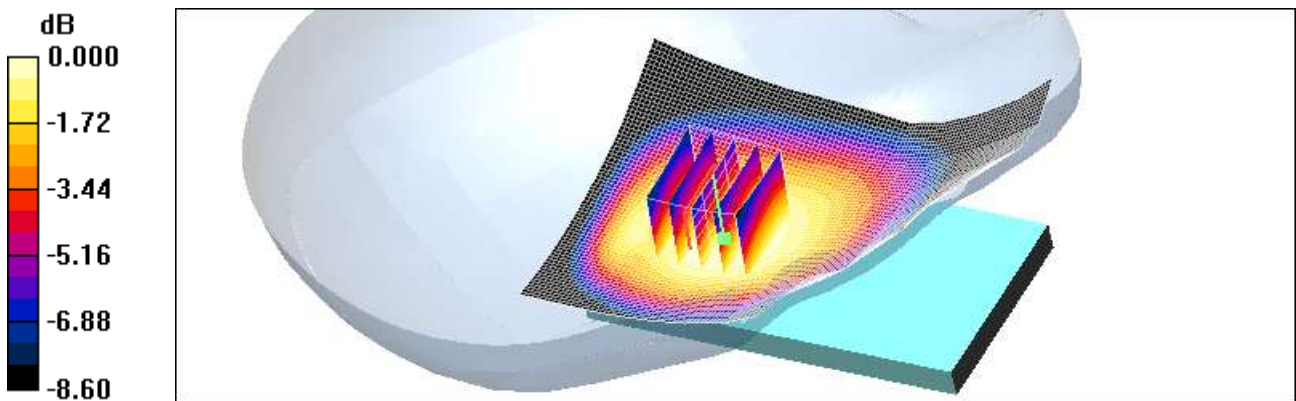
Reference Value = 9.07 V/m; Power Drift = -0.090 dB

Peak SAR (extrapolated) = 0.104 W/kg

**SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.067 mW/g**

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

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



0 dB = 0.091mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5 \text{ MHz}$ ;  $\sigma = 0.877 \text{ mho/m}$ ;  $\epsilon_r = 43$ ;  $\rho = 1000 \text{ kg/m}^3$ 

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

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Tilt 16QAM 1RB Offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

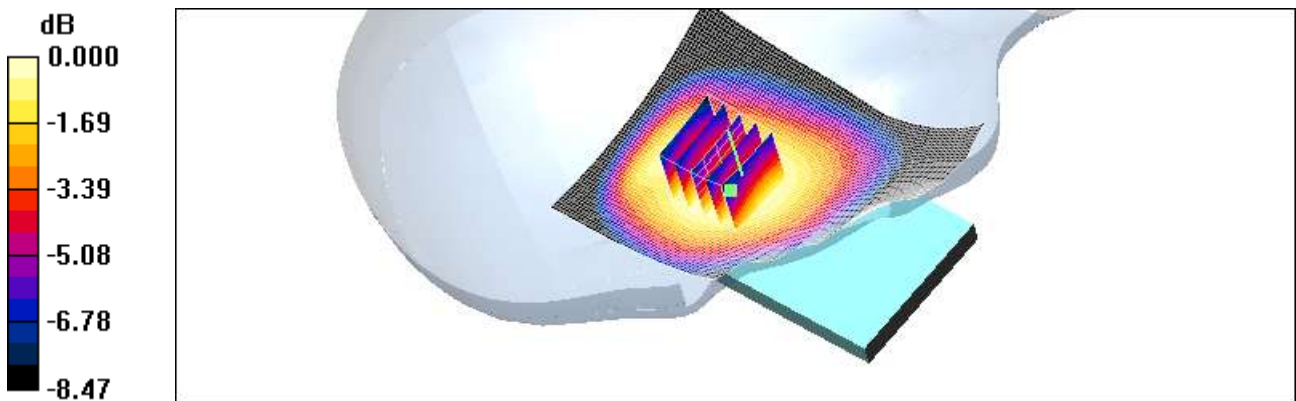
**Right Tilt 16QAM 1RB Offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.136 W/kg

**SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.087 mW/g**[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.119 mW/g



0 dB = 0.119mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.11, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.877$  mho/m;  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.36, 6.36, 6.36); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right Tilt 16QAM 1RB 49offset 20525ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.079 mW/g

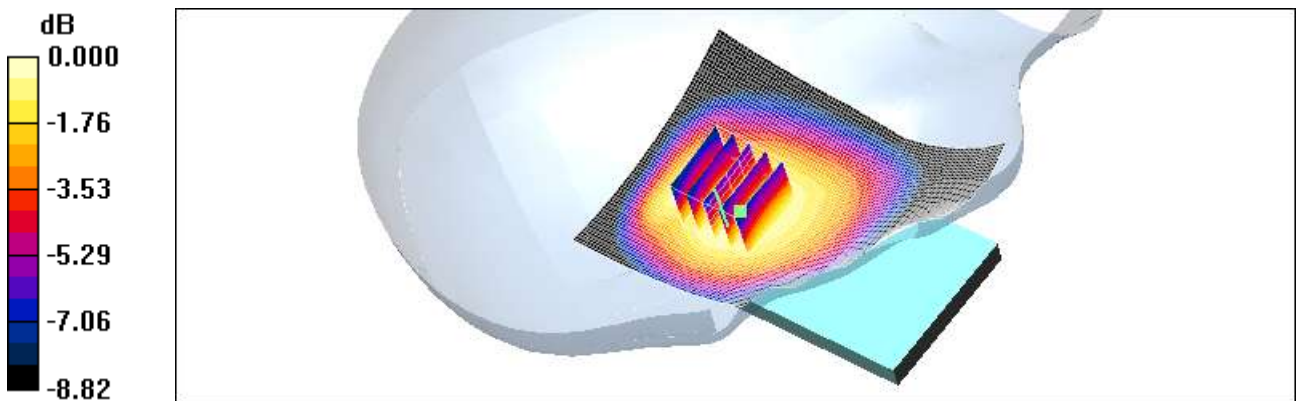
**Right Tilt 16QAM 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.11 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 0.095 W/kg

**SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.060 mW/g**[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.082mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 25RB 13offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.214 mW/g

**Left Touch QPSK 25RB 13offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

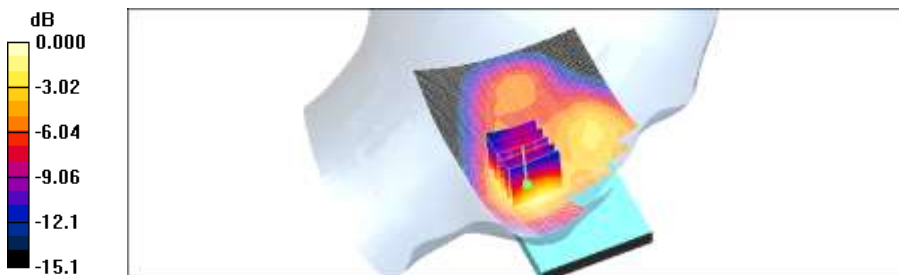
Reference Value = 9.36 V/m; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 0.258 W/kg

**SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.121 mW/g**

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

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



0 dB = 0.210mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 1RB 0 offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.276 mW/g

**Left Touch QPSK 1RB 0 offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

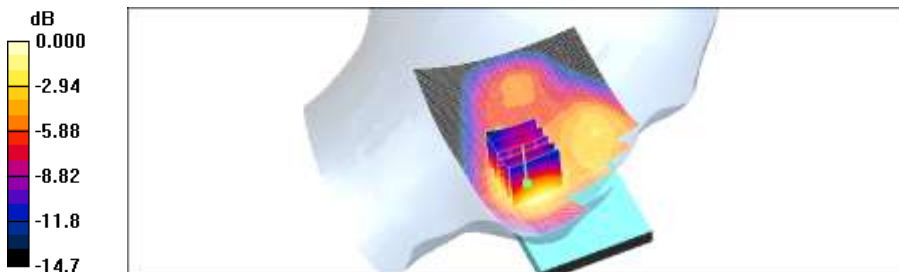
Reference Value = 10.5 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 0.329 W/kg

**SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.156 mW/g**

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

Maximum value of SAR (measured) = 0.269 mW/g



0 dB = 0.269mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 1RB 49offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.262 mW/g

**Left Touch QPSK 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

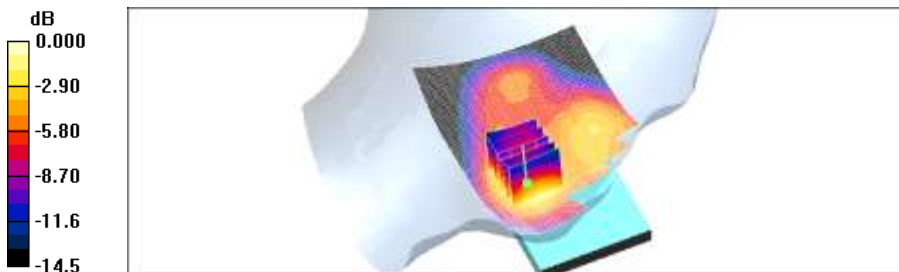
Reference Value = 10.3 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 0.311 W/kg

**SAR(1 g) = 0.233 mW/g; SAR(10 g) = 0.152 mW/g**

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

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



0 dB = 0.258mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 25RB 13offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.172 mW/g

**Left Tilt QPSK 25RB 13offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

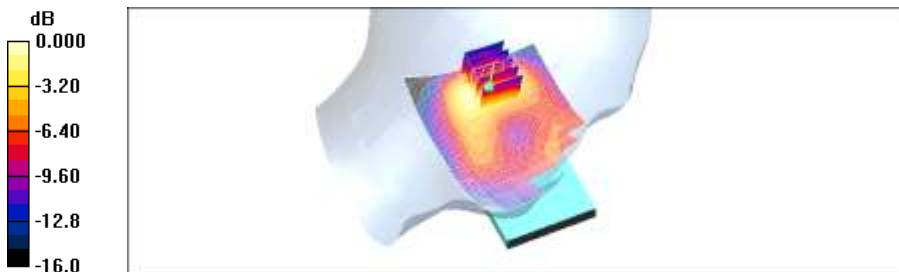
Reference Value = 4.46 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 0.189 W/kg

**SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.087 mW/g**

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

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



0 dB = 0.152mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 1RB Offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.223 mW/g

**Left Tilt QPSK 1RB Offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

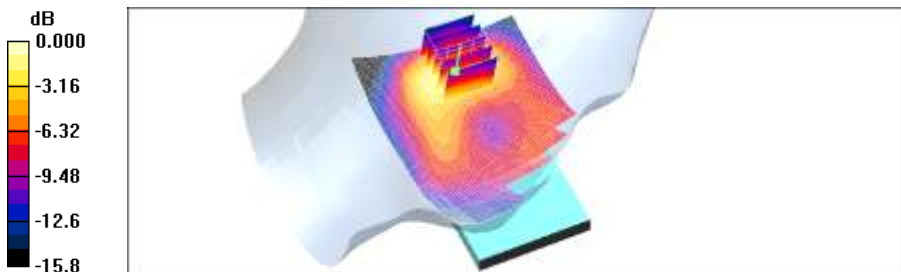
Reference Value = 4.99 V/m; Power Drift = 0.173 dB

Peak SAR (extrapolated) = 0.262 W/kg

**SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.114 mW/g**

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

Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 1RB 49offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.213 mW/g

**Left Tilt QPSK 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

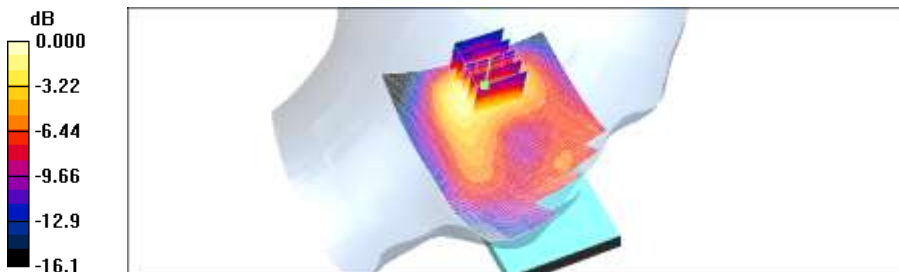
Reference Value = 5.08 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.254 W/kg

**SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.110 mW/g**

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

Maximum value of SAR (measured) = 0.199 mW/g



0 dB = 0.199mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 25RB 13offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.355 mW/g

**Right touch QPSK 25RB 13offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

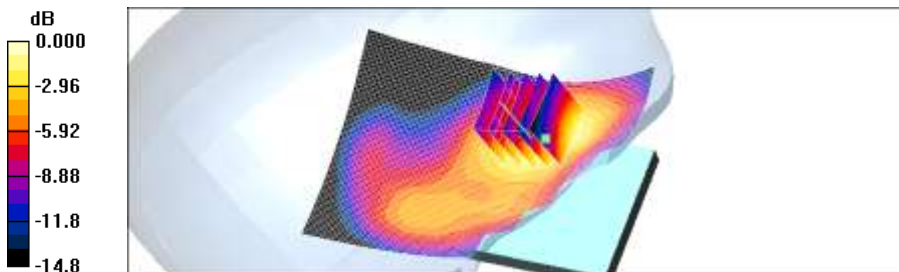
Reference Value = 11.6 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.428 W/kg

**SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.213 mW/g**

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

Maximum value of SAR (measured) = 0.353 mW/g



0 dB = 0.353mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 1RB Offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.458 mW/g

**Right touch QPSK 1RB Offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

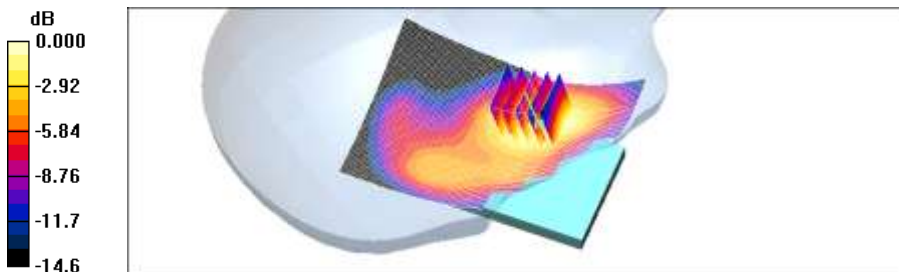
Reference Value = 12.9 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.527 W/kg

**SAR(1 g) = 0.408 mW/g; SAR(10 g) = 0.269 mW/g**

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

Maximum value of SAR (measured) = 0.436 mW/g



0 dB = 0.436mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 1RB 49offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.432 mW/g

**Right touch QPSK 1RB 49offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

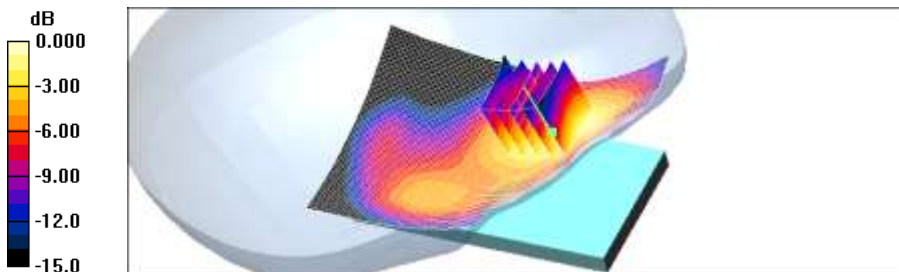
Reference Value = 12.5 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.552 W/kg

**SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.264 mW/g**

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

Maximum value of SAR (measured) = 0.452 mW/g



0 dB = 0.452mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 25RB 13offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.155 mW/g

**Right tilt QPSK 25RB 13offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

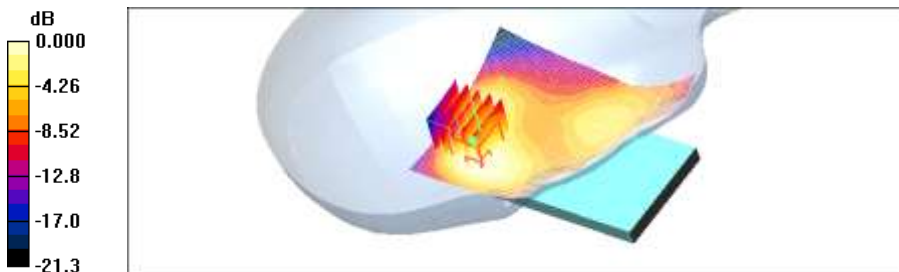
Reference Value = 5.96 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 0.184 W/kg

**SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.087 mW/g**

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

Maximum value of SAR (measured) = 0.142 mW/g



0 dB = 0.142mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 1RB 0offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Right tilt QPSK 1RB 0offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

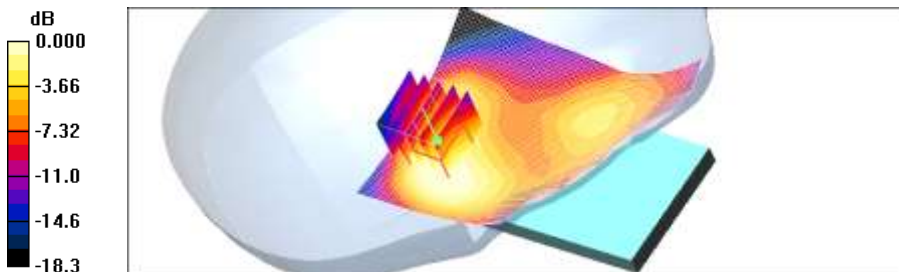
Reference Value = 6.57 V/m; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 0.243 W/kg

**SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.115 mW/g**

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

Maximum value of SAR (measured) = 0.191 mW/g



0 dB = 0.191mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 1RB 49offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.205 mW/g

**Right tilt QPSK 1RB 49offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

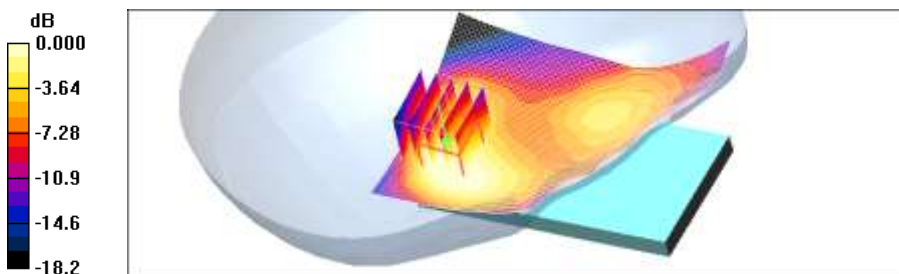
Reference Value = 6.61 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.228 W/kg

**SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.113 mW/g**

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

Maximum value of SAR (measured) = 0.186 mW/g



0 dB = 0.186mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 25RB 13offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.170 mW/g

**Left Touch 16QAM 25RB 13offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

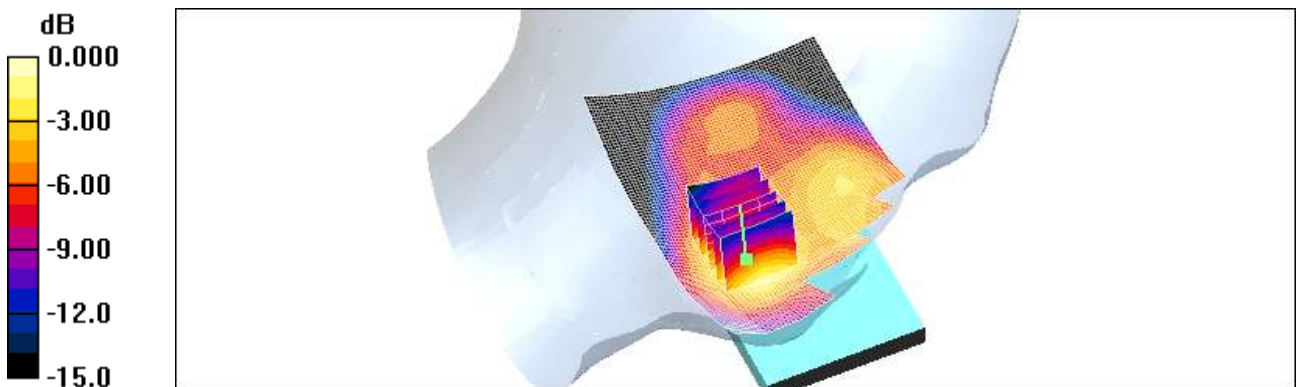
Reference Value = 8.21 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.198 W/kg

**SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.094 mW/g**

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

Maximum value of SAR (measured) = 0.166 mW/g



0 dB = 0.166mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 1RB Ooffset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.270 mW/g

**Left Touch 16QAM 1RB Ooffset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

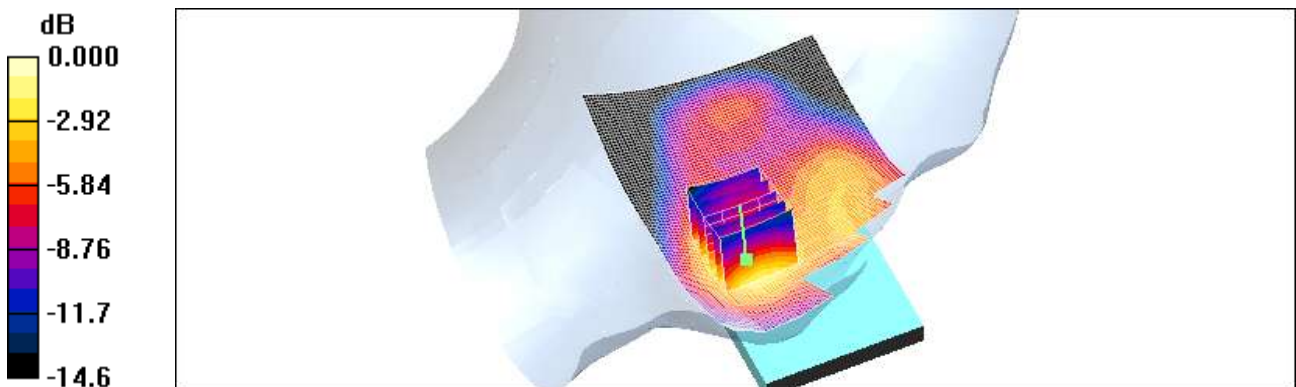
Reference Value = 10.2 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.309 W/kg

**SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.150 mW/g**

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

Maximum value of SAR (measured) = 0.266 mW/g



0 dB = 0.266mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 1RB 49offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.273 mW/g

**Left Touch 16QAM 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

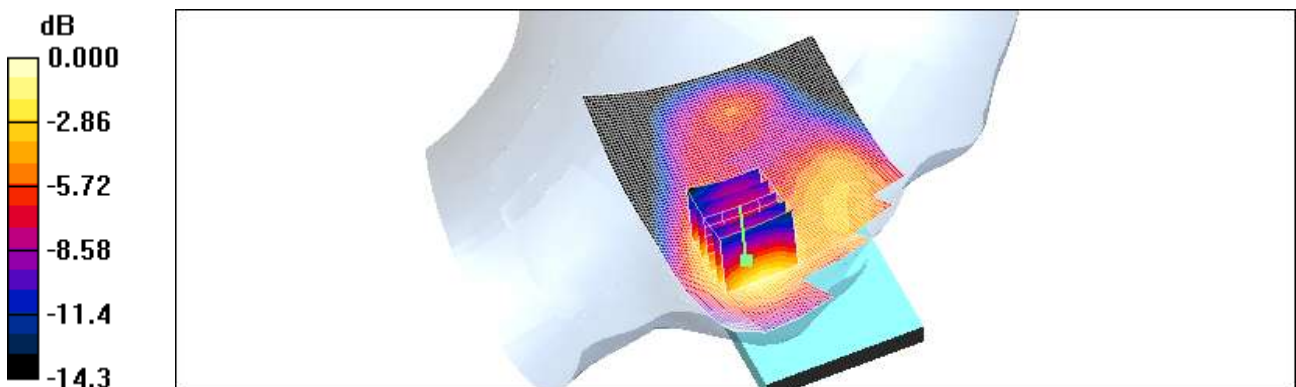
Reference Value = 10.0 V/m; Power Drift = 0.161 dB

Peak SAR (extrapolated) = 0.307 W/kg

**SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.150 mW/g**

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

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



0 dB = 0.255mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 25RB 13offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.118 mW/g

**Left Tilt 16QAM 25RB 13offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

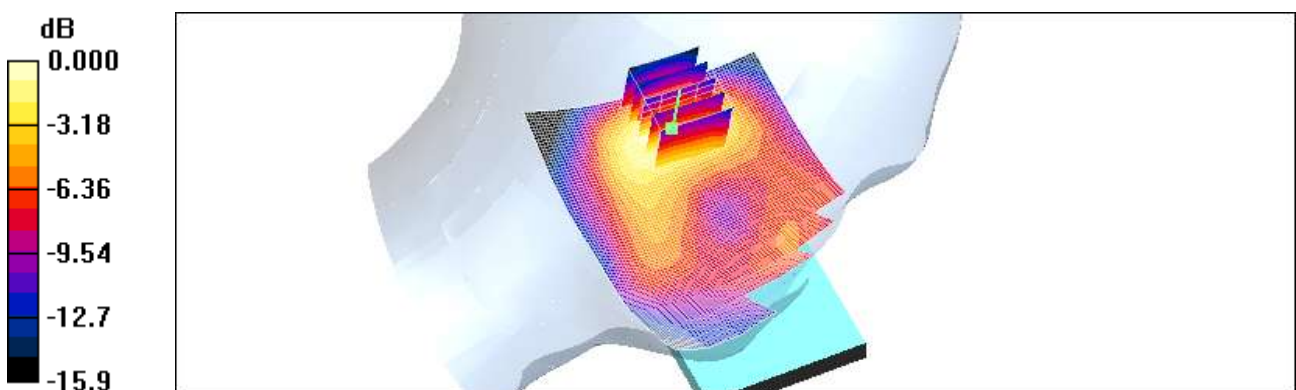
Reference Value = 3.80 V/m; Power Drift = -0.152 dB

Peak SAR (extrapolated) = 0.136 W/kg

**SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.061 mW/g**

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

Maximum value of SAR (measured) = 0.110 mW/g



0 dB = 0.110mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 1RB Offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.171 mW/g

**Left Tilt 16QAM 1RB Offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

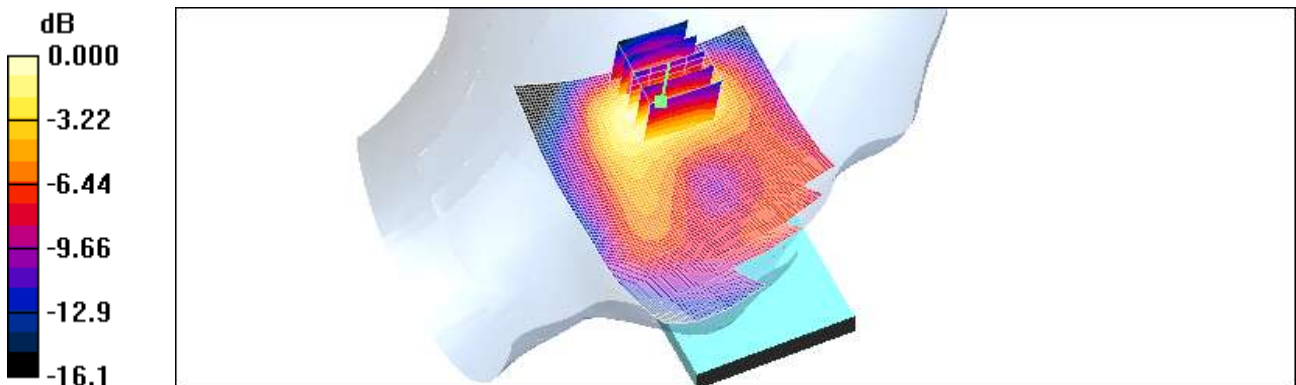
Reference Value = 4.40 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.198 W/kg

**SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.086 mW/g**

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

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



0 dB = 0.157mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 1RB 49offset 20175ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Left Tilt 16QAM 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

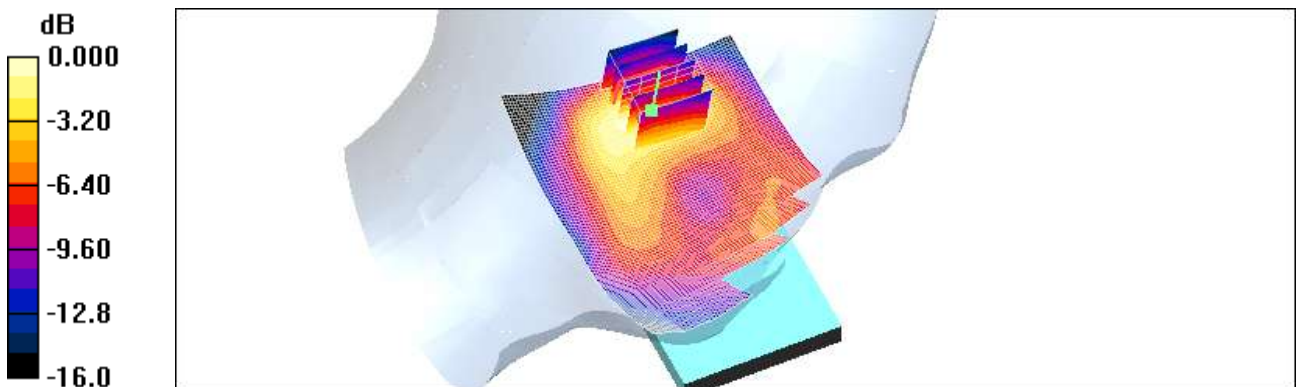
Reference Value = 4.34 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.180 W/kg

**SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.081 mW/g**

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

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



0 dB = 0.147mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 16QAM 25RB 13offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Right touch 16QAM 25RB 13offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

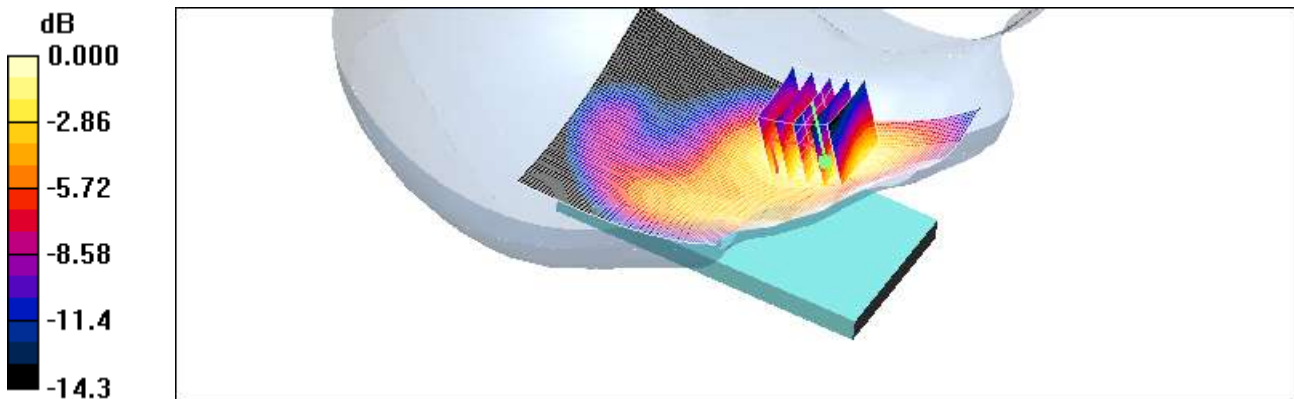
Reference Value = 9.56 V/m; Power Drift = 0.052 dB

Peak SAR (extrapolated) = 0.265 W/kg

**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.135 mW/g**

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

Maximum value of SAR (measured) = 0.222 mW/g



0 dB = 0.222mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 16QAM 1RB 0 offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.303 mW/g

**Right touch 16QAM 1RB 0 offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

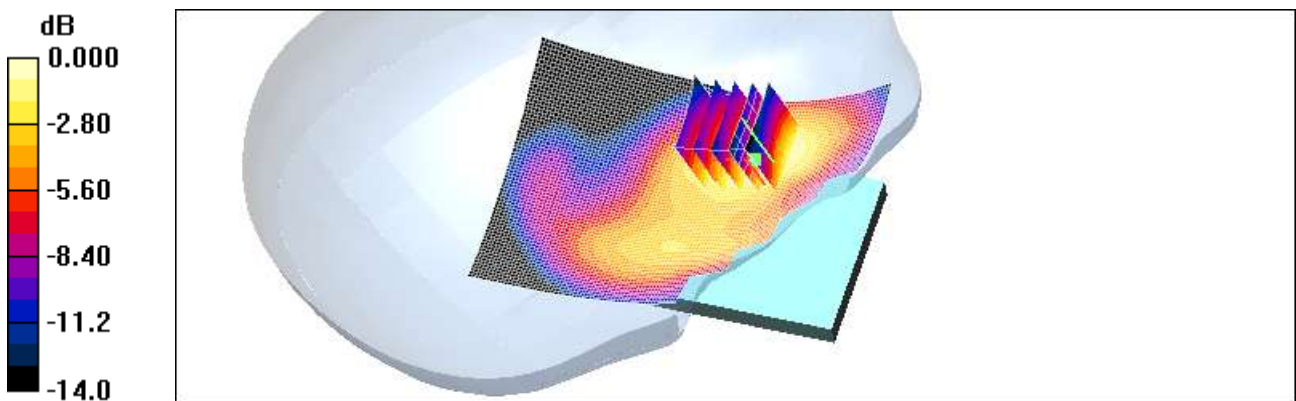
Reference Value = 11.4 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.383 W/kg

**SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.186 mW/g**

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

Maximum value of SAR (measured) = 0.314 mW/g



0 dB = 0.314mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 16QAM 1RB 49offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.301 mW/g

**Right touch 16QAM 1RB 49offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

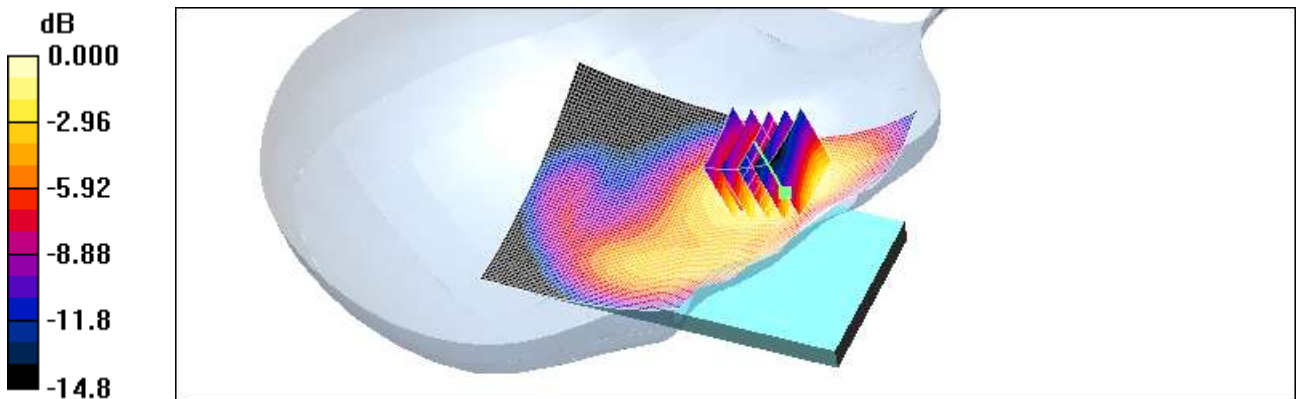
Reference Value = 11.0 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.366 W/kg

**SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.179 mW/g**

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

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



0 dB = 0.296mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 25RB 13offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.123 mW/g

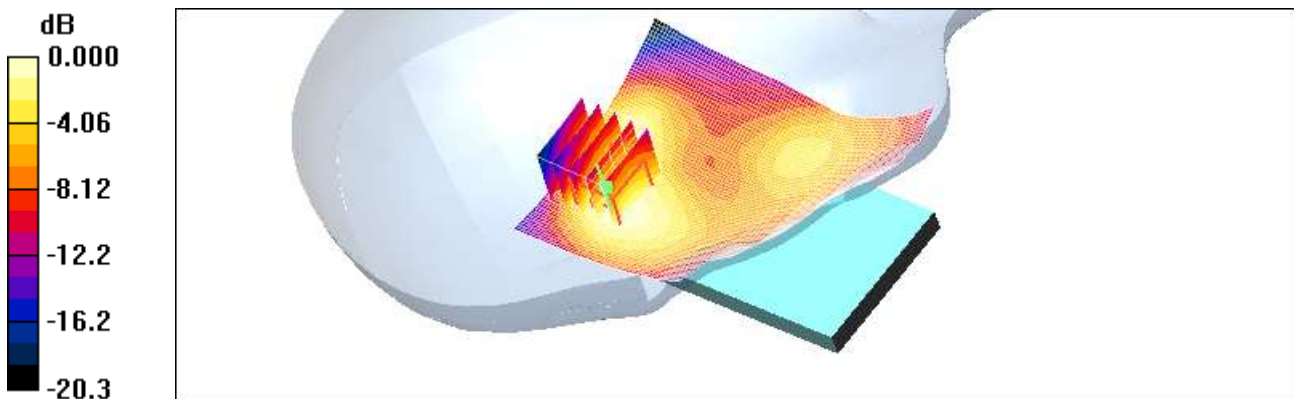
**Right tilt 16QAM 25RB 13offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.80 V/m; Power Drift = 0.159 dB

Peak SAR (extrapolated) = 0.149 W/kg

**SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.067 mW/g**

Maximum value of SAR (measured) = 0.109 mW/g



0 dB = 0.109mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 1RB 0 offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.165 mW/g

**Right tilt 16QAM 1RB 0 offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

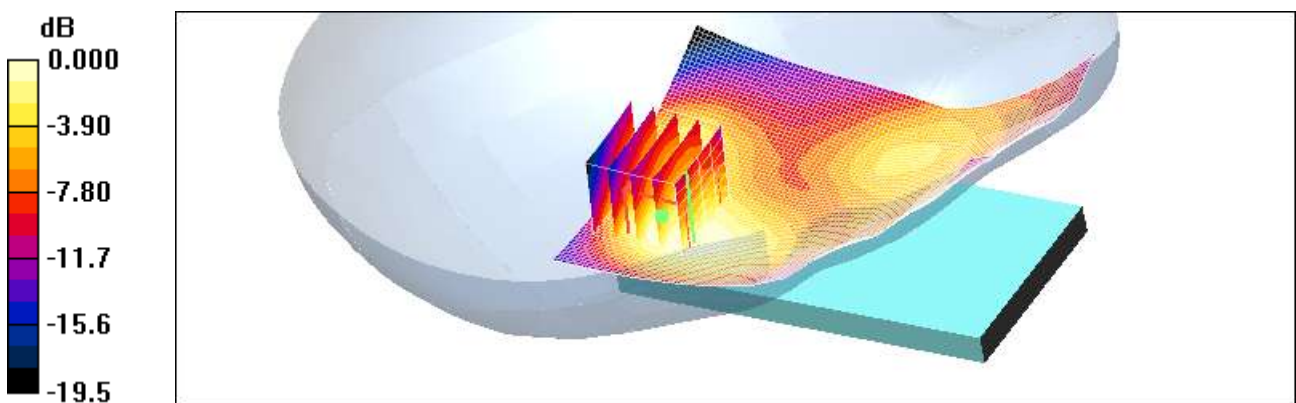
Reference Value = 5.59 V/m; Power Drift = -0.096 dB

Peak SAR (extrapolated) = 0.200 W/kg

**SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.086 mW/g**

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

Maximum value of SAR (measured) = 0.138 mW/g



0 dB = 0.138mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.12, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 4; Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.25$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.5, 5.5, 5.5); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 1RB 49offset 20175/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm

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

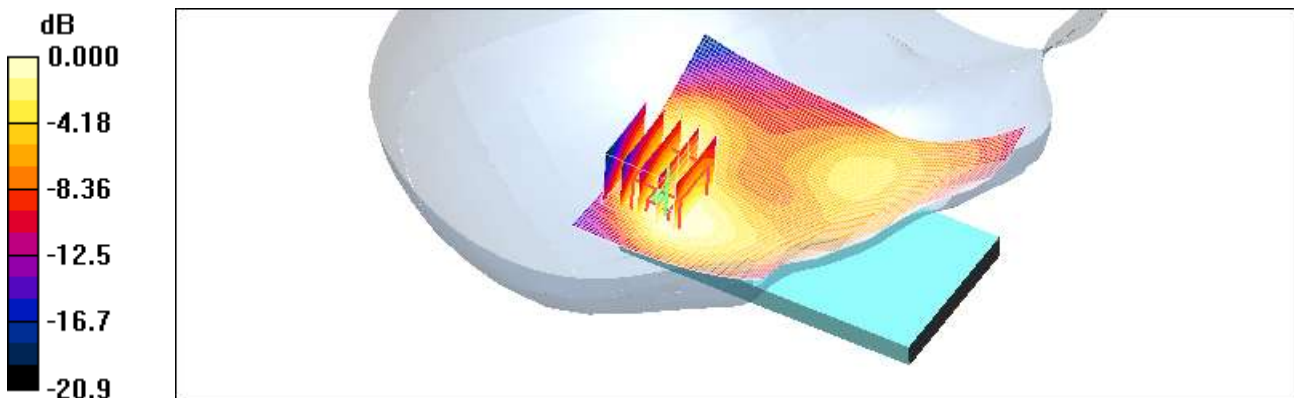
Maximum value of SAR (interpolated) = 0.162 mW/g

**Right tilt 16QAM 1RB 49offset 20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.39 V/m; Power Drift = 0.04

Peak SAR (extrapolated) = 0.180 W/kg

**SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.078 mW/g**

Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 25RB 13 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.097 mW/g

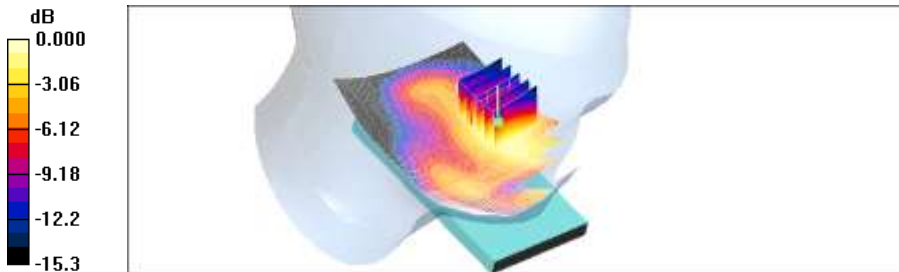
**Left Touch QPSK 25RB 13 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.34 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.128 W/kg

**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.054 mW/g**

Maximum value of SAR (measured) = 0.098 mW/g



0 dB = 0.098mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 1RB 0 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.108 mW/g

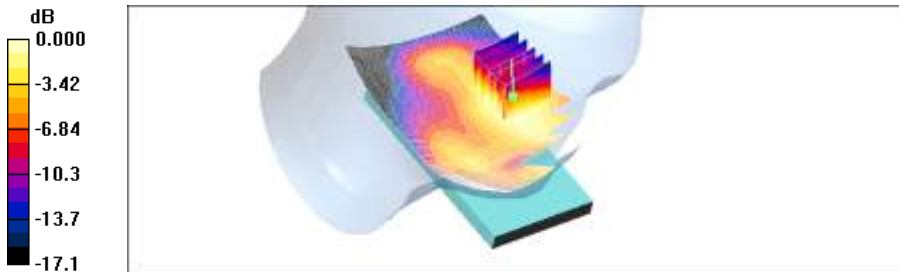
**Left Touch QPSK 1RB 0 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.73 V/m; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 0.146 W/kg

**SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.062 mW/g**

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



0 dB = 0.108mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch QPSK 1RB 49 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.130 mW/g

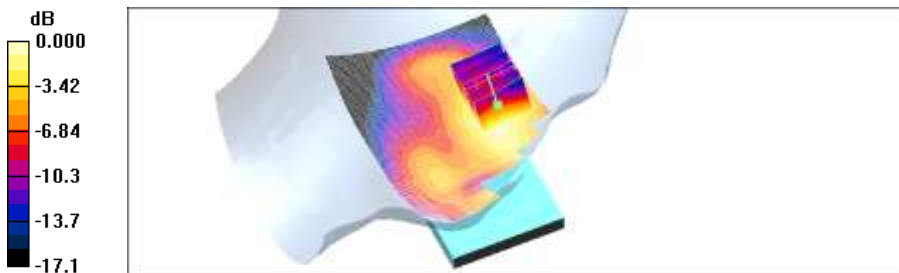
**Left Touch QPSK 1RB 49 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.98 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.169 W/kg

**SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.073 mW/g**

Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 25RB 13offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.084 mW/g

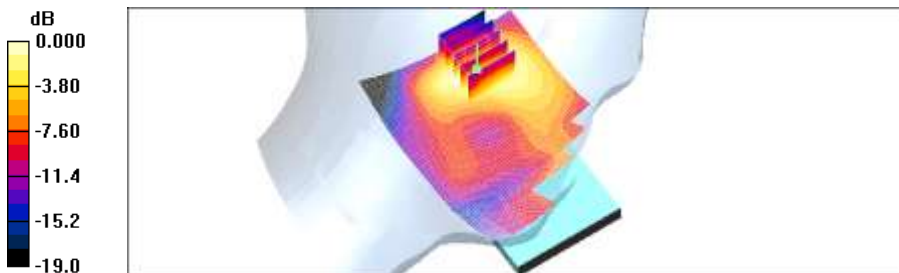
**Left Tilt QPSK 25RB 13offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.59 V/m; Power Drift = 0.111 dB

Peak SAR (extrapolated) = 0.101 W/kg

**SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.041 mW/g**

Maximum value of SAR (measured) = 0.075 mW/g



0 dB = 0.075mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

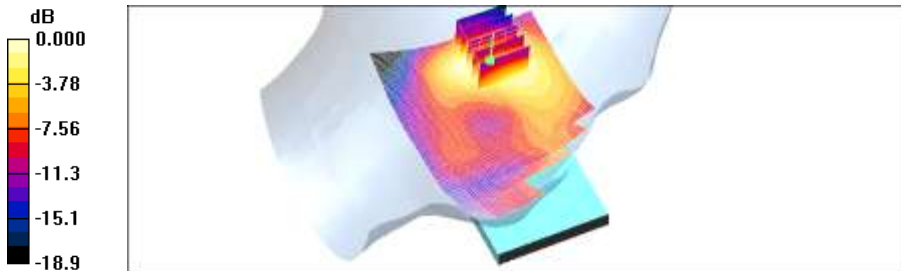
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 1RB Offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.099 mW/g

**Left Tilt QPSK 1RB Offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.98 V/m; Power Drift = -0.033 dB  
Peak SAR (extrapolated) = 0.118 W/kg  
**SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.048 mW/g**  
Maximum value of SAR (measured) = 0.088 mW/g



0 dB = 0.088mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

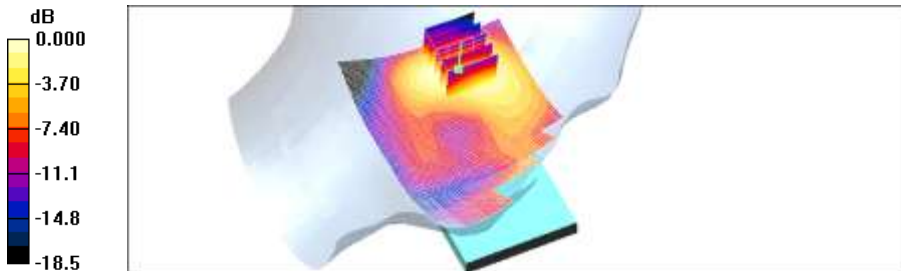
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 39.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt QPSK 1RB 49offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.109 mW/g

**Left Tilt QPSK 1RB 49offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.92 V/m; Power Drift = -0.072 dB  
Peak SAR (extrapolated) = 0.129 W/kg  
**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.054 mW/g**  
Maximum value of SAR (measured) = 0.095 mW/g



0 dB = 0.095mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 25RB 13offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.224 mW/g

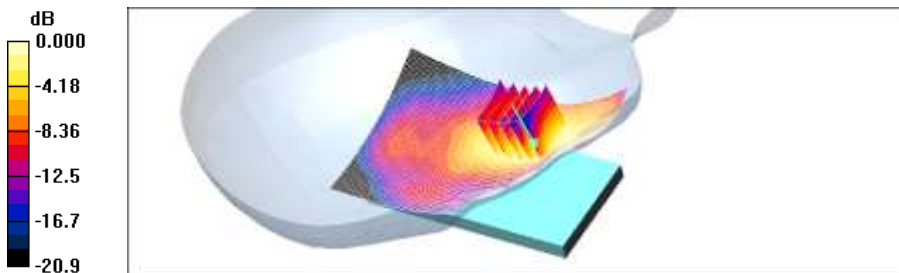
**Right touch QPSK 25RB 13offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.99 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 0.317 W/kg

**SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.127 mW/g**

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



0 dB = 0.230mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

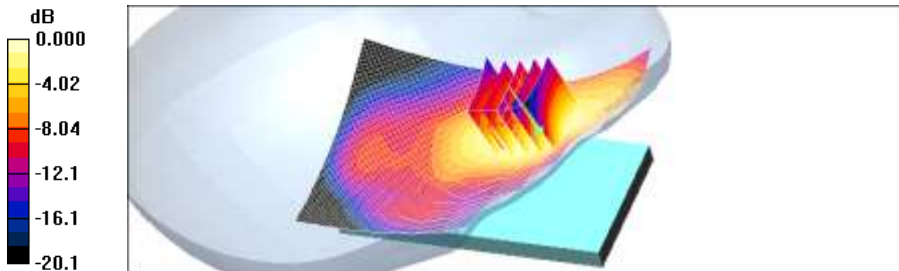
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 1RB Offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.268 mW/g

**Right touch QPSK 1RB Offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.30 V/m; Power Drift = -0.045 dB  
Peak SAR (extrapolated) = 0.355 W/kg  
**SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.151 mW/g**  
Maximum value of SAR (measured) = 0.263 mW/g



0 dB = 0.263mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch QPSK 1RB 49offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.304 mW/g

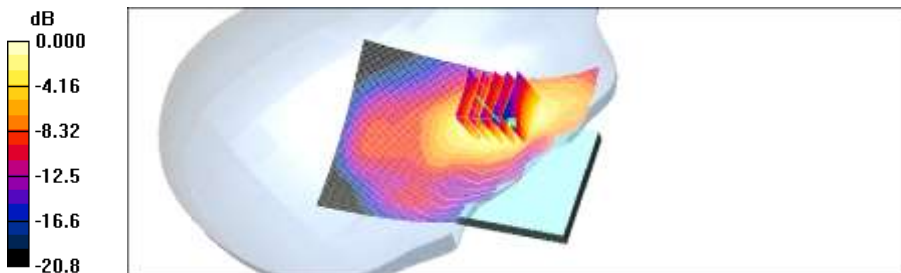
**Right touch QPSK 1RB 49offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.56 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 0.410 W/kg

**SAR(1 g) = 0.277 mW/g; SAR(10 g) = 0.172 mW/g**

aximum value of SAR (measured) = 0.306 mW/g



0 dB = 0.306mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

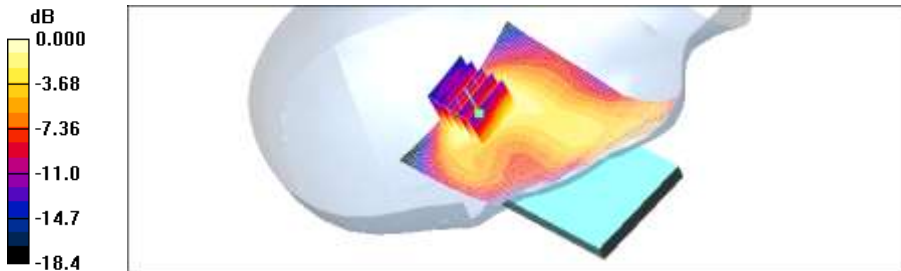
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 25RB 13offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.080 mW/g

**Right tilt QPSK 25RB 13offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.04 V/m; Power Drift = 0.031 dB  
Peak SAR (extrapolated) = 0.099 W/kg  
**SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.039 mW/g**  
Maximum value of SAR (measured) = 0.072 mW/g



0 dB = 0.072mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

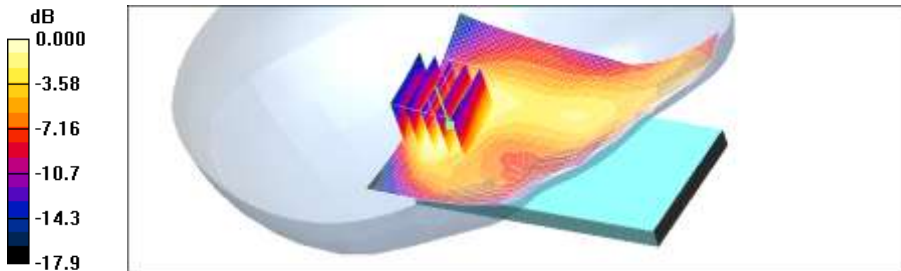
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 1RB 0 offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.091 mW/g

**Right tilt QPSK 1RB 0 offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.41 V/m; Power Drift = -0.125 dB  
Peak SAR (extrapolated) = 0.112 W/kg  
**SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.045 mW/g**  
Maximum value of SAR (measured) = 0.083 mW/g



0 dB = 0.083mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

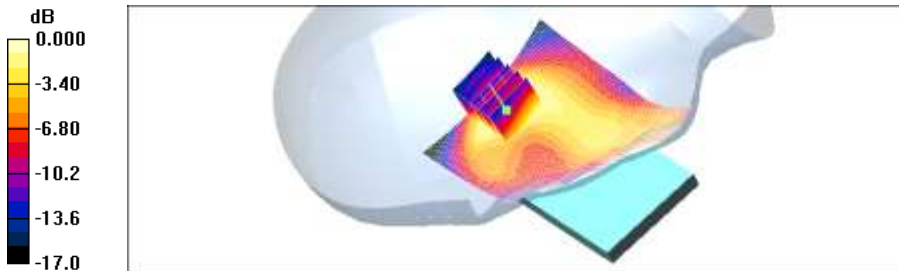
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right tilt QPSK 1RB 49offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.107 mW/g

**Right tilt QPSK 1RB 49offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.75 V/m; Power Drift = 0.160 dB  
Peak SAR (extrapolated) = 0.134 W/kg  
**SAR(1 g) = 0.090 mW/g; SAR(10 g) = 0.053 mW/g**  
Maximum value of SAR (measured) = 0.098 mW/g



0 dB = 0.098mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 25RB 13 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.078 mW/g

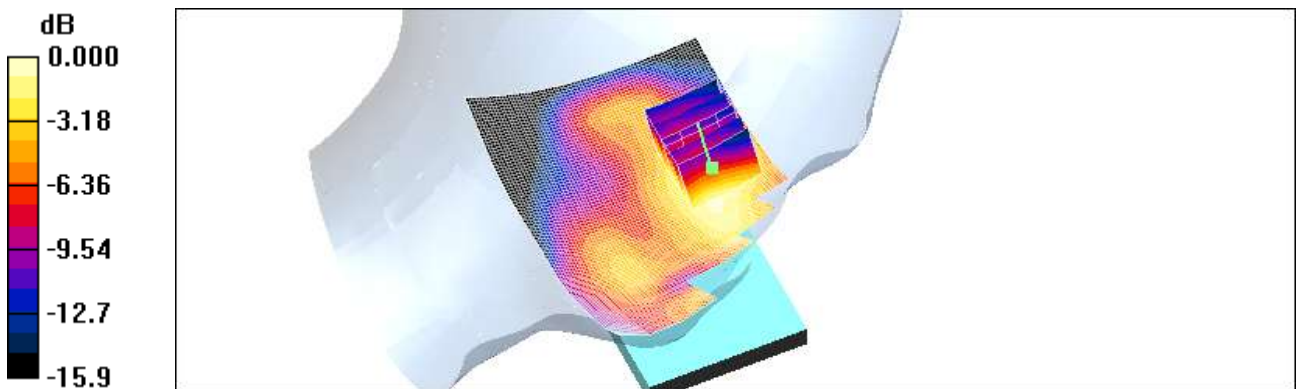
**Left Touch 16QAM 25RB 13 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.95 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.101 W/kg

**SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.044 mW/g**

Maximum value of SAR (measured) = 0.077 mW/g



0 dB = 0.077mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 1RB 0 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.086 mW/g

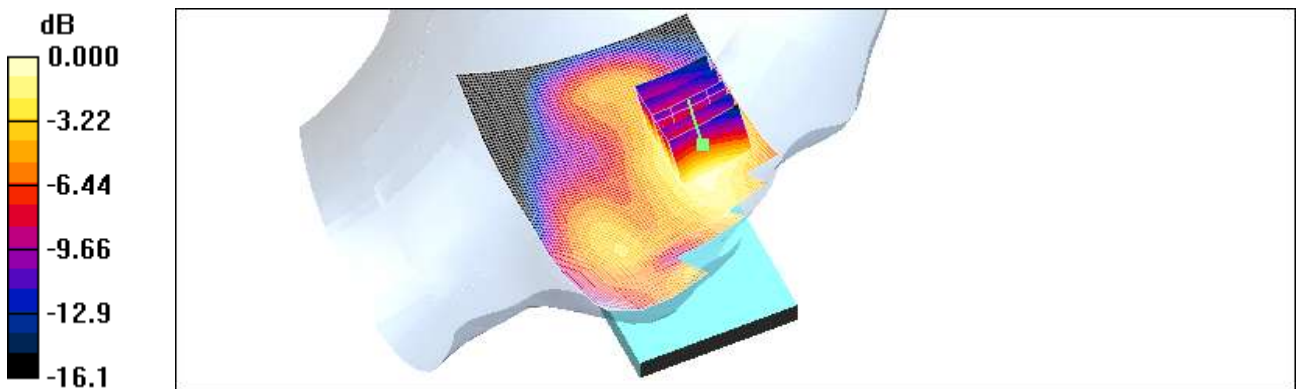
**Left Touch 16QAM 1RB 0 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.17 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.106 W/kg

**SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.049 mW/g**

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



0 dB = 0.083mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Touch 16QAM 1RB 49 offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.101 mW/g

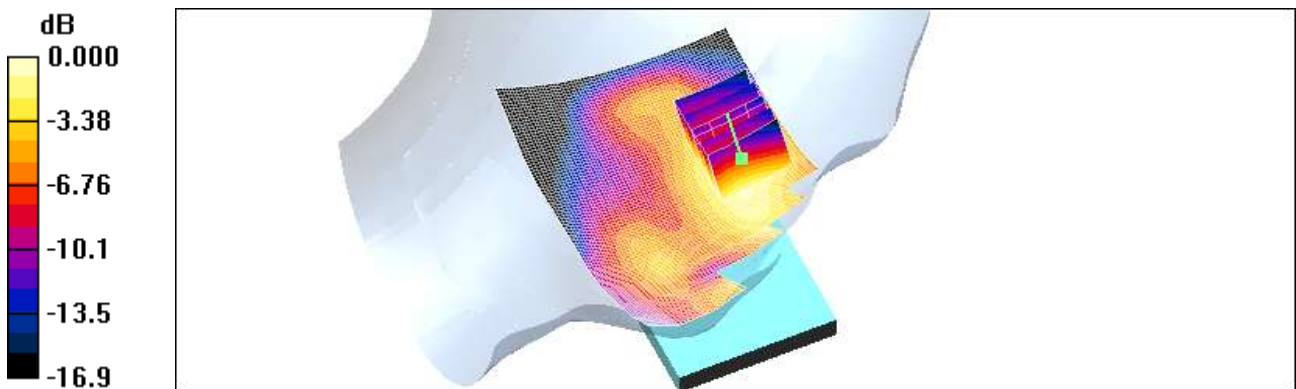
**Left Touch 16QAM 1RB 49 offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.54 V/m; Power Drift = -0.07dB

Peak SAR (extrapolated) = 0.138 W/kg

**SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.057 mW/g**

Maximum value of SAR (measured) = 0.104 mW/g



0 dB = 0.104mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 25RB 13offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.065 mW/g

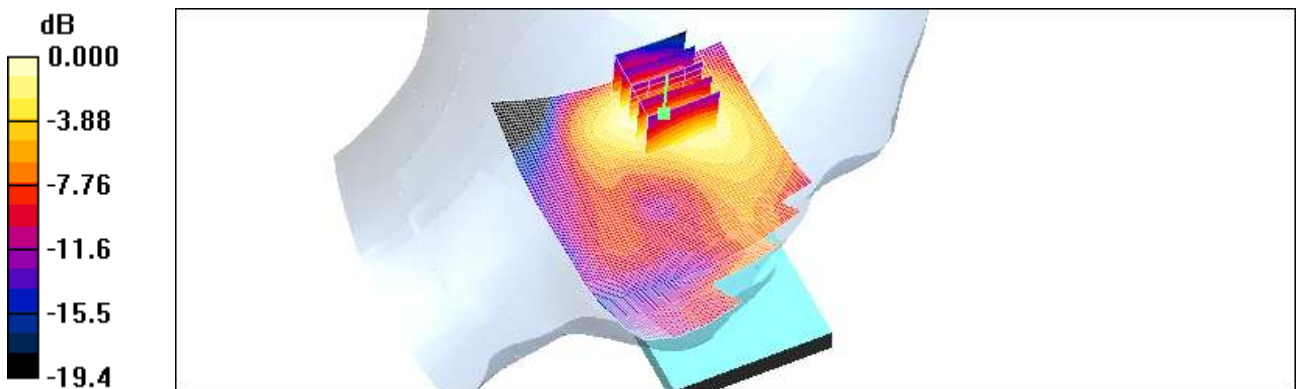
**Left Tilt 16QAM 25RB 13offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.29 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.085 W/kg

**SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.034 mW/g**

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



0 dB = 0.061mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

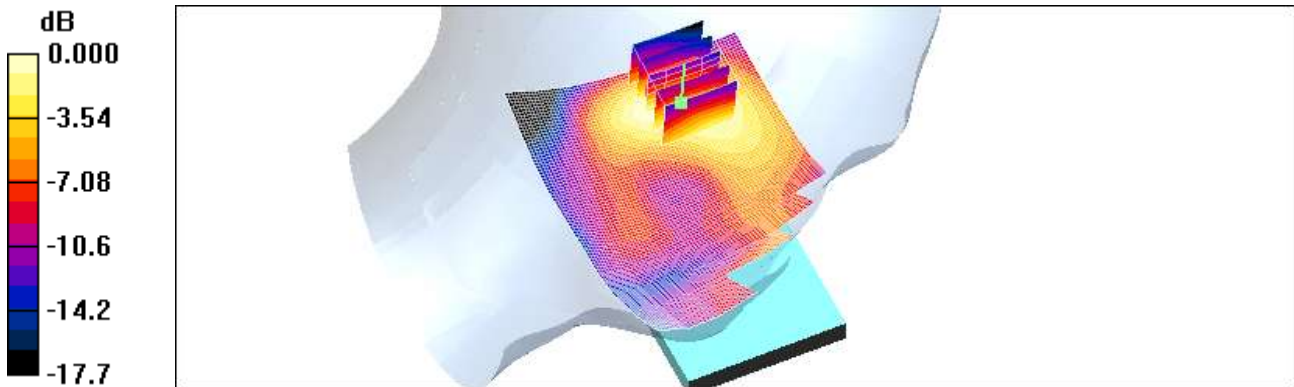
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 1RB Ooffset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.078 mW/g

**Left Tilt 16QAM 1RB Ooffset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.58 V/m; Power Drift = -0.105 dB  
Peak SAR (extrapolated) = 0.095 W/kg  
**SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.038 mW/g**  
Maximum value of SAR (measured) = 0.069 mW/g



0 dB = 0.069mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Left Tilt 16QAM 1RB 49offset 18900ch/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.082 mW/g

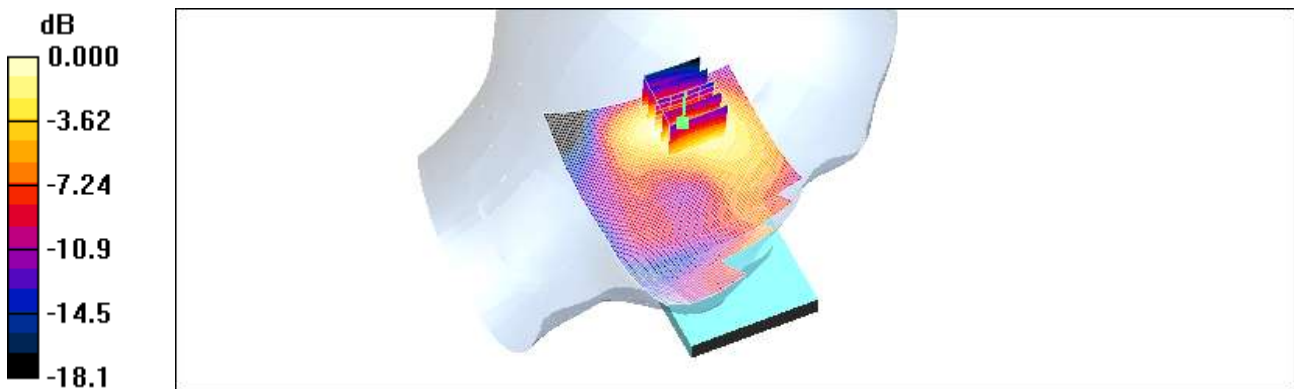
**Left Tilt 16QAM 1RB 49offset 18900ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.60 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.102 W/kg

**SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.041 mW/g**

Maximum value of SAR (measured) = 0.076 mW/g



0 dB = 0.076mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 25RB 13offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.199 mW/g

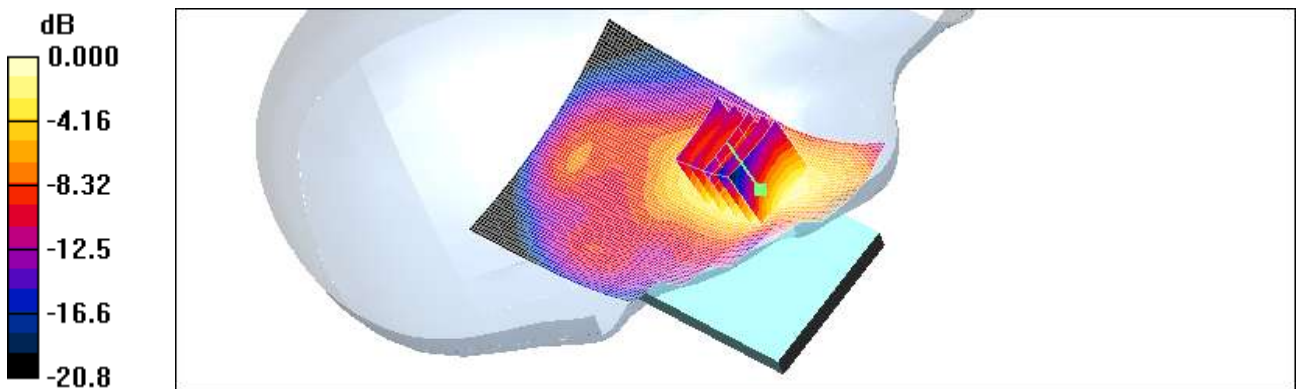
**Right touch 16QAM 25RB 13offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.20 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 0.263 W/kg

**SAR(1 g) = 0.182 mW/g; SAR(10 g) = 0.111 mW/g**

Maximum value of SAR (measured) = 0.197 mW/g



0 dB = 0.197mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 1RB Ooffset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.234 mW/g

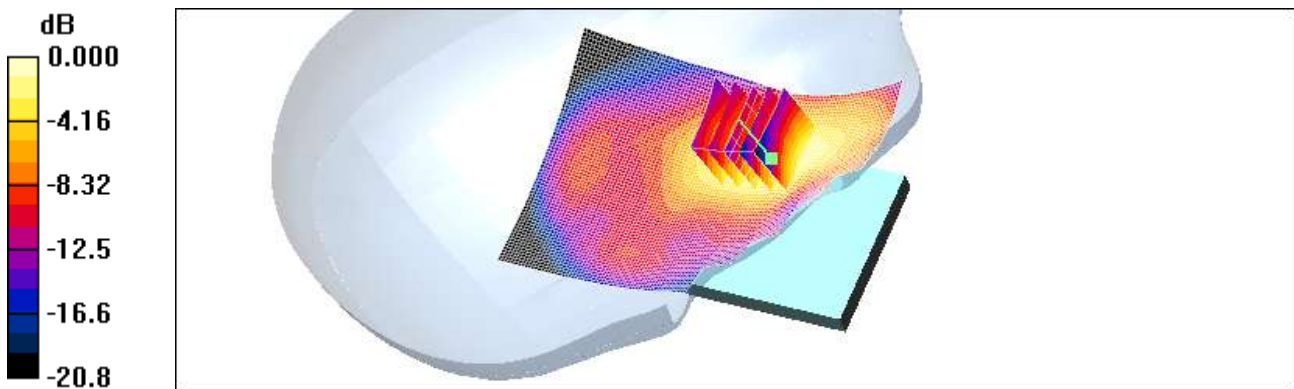
**Right touch 16QAM 1RB Ooffset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.69 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.321 W/kg

**SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.130 mW/g**

Maximum value of SAR (measured) = 0.242 mW/g



0 dB = 0.242mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Right touch 16QAM 1RB 49offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.270 mW/g

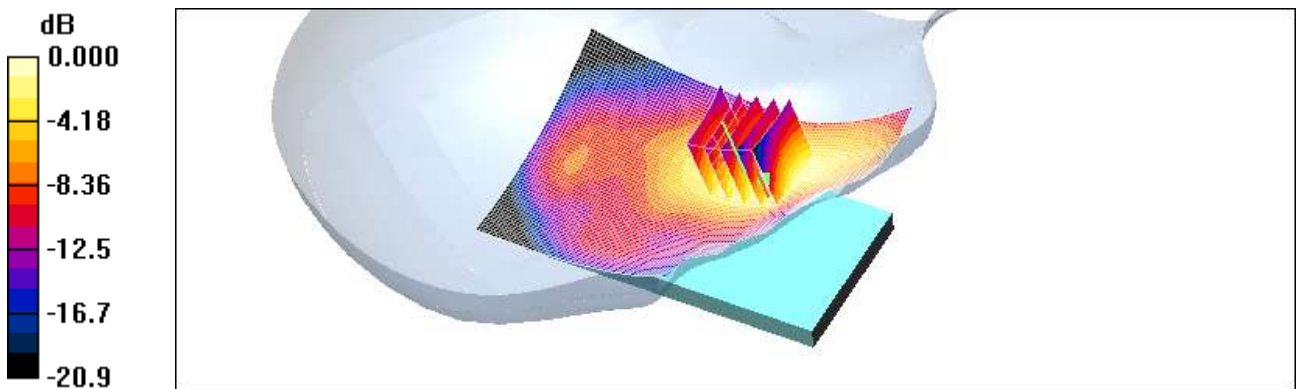
**Right touch 16QAM 1RB 49offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.44 V/m; Power Drift = -0.093 dB

Peak SAR (extrapolated) = 0.343 W/kg

**SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.147 mW/g**

Maximum value of SAR (measured) = 0.261 mW/g



0 dB = 0.261mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 25RB 13offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.062 mW/g

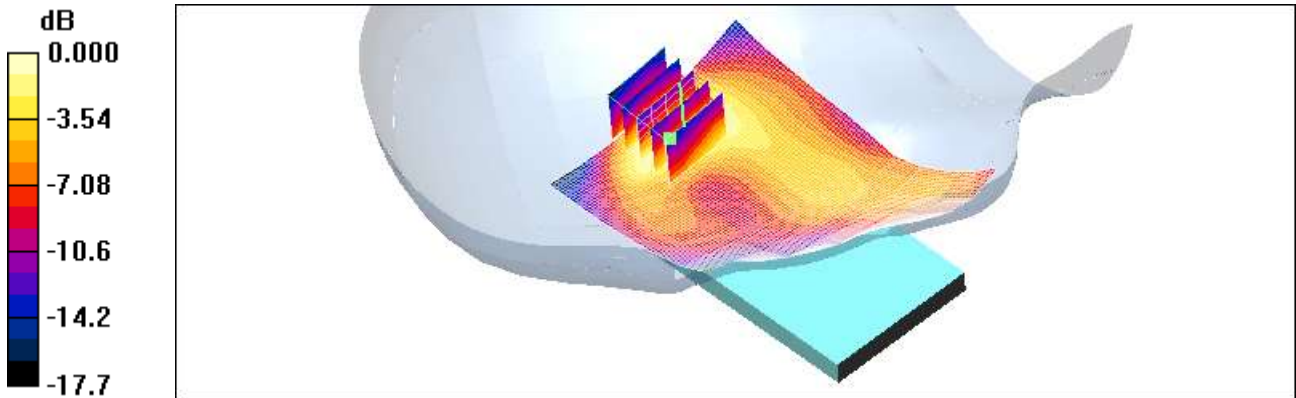
**Right tilt 16QAM 25RB 13offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.99 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 0.081 W/kg

**SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.032 mW/g**

Maximum value of SAR (measured) = 0.059 mW/g



0 dB = 0.059mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

DUT: P9090; Type: bar; Serial: #1

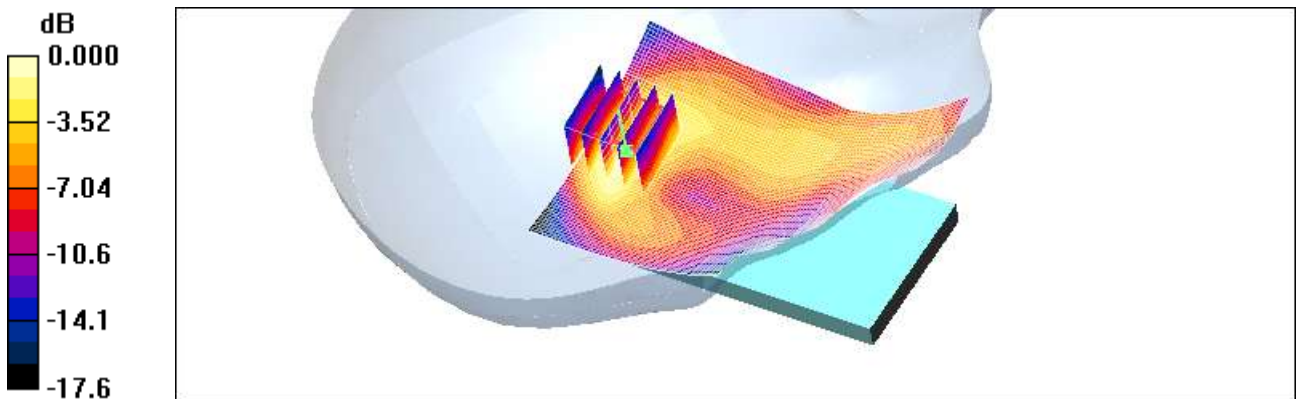
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 1RB 0offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.075 mW/g

**Right tilt 16QAM 1RB 0offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.33 V/m; Power Drift = -0.090 dB  
Peak SAR (extrapolated) = 0.098 W/kg  
**SAR(1 g) = 0.065 mW/g; SAR(10 g) = 0.037 mW/g**  
Maximum value of SAR (measured) = 0.074 mW/g



0 dB = 0.074mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.13, 2012

**DUT: P9090; Type: bar; Serial: #1**

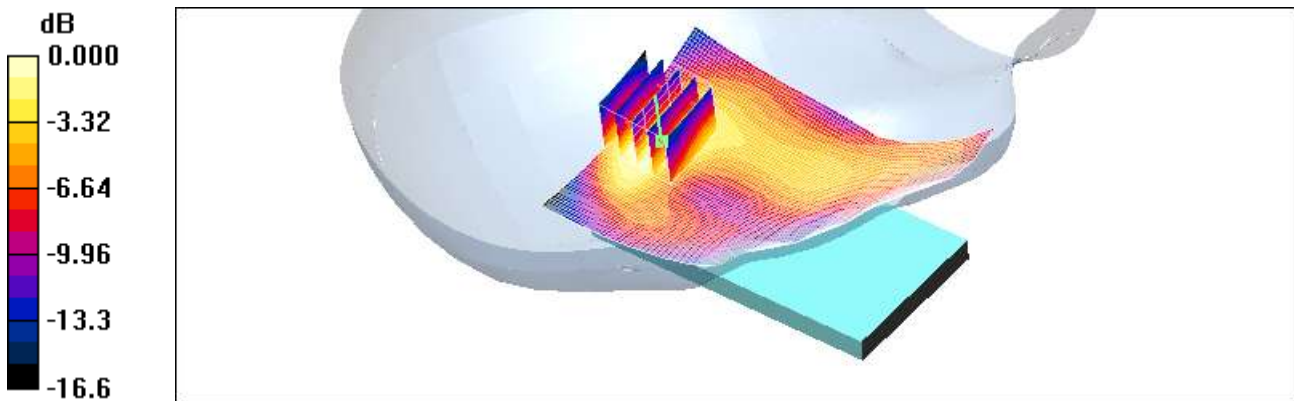
Communication System: LTE Band 2(10MHz BW); Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 16QAM 1RB 49offset 18900/Area Scan (71x101x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.084 mW/g

**Right tilt 16QAM 1RB 49offset 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.53 V/m; Power Drift = -0.029 dB  
Peak SAR (extrapolated) = 0.112 W/kg  
**SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.044 mW/g**  
Maximum value of SAR (measured) = 0.081 mW/g



0 dB = 0.081mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.07, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.52, 4.52, 4.52); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left touch 6 1Mbps /Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Left touch 6 1Mbps /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

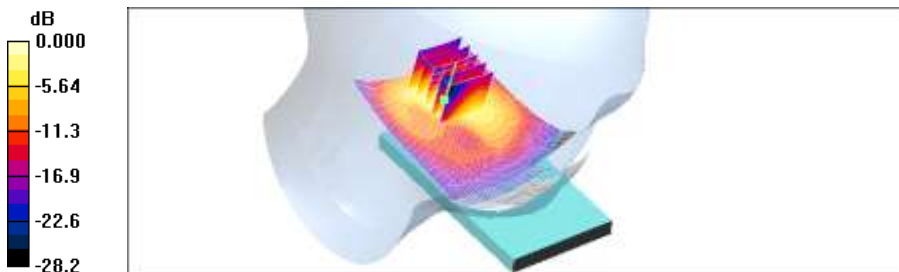
Reference Value = 13.1 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.633 W/kg

**SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.138 mW/g**

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

Maximum value of SAR (measured) = 0.312 mW/g



0 dB = 0.312mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.07, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.52, 4.52, 4.52); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Left tilt 6 1Mbps /Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.368 mW/g

**Left tilt 6 1Mbps /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

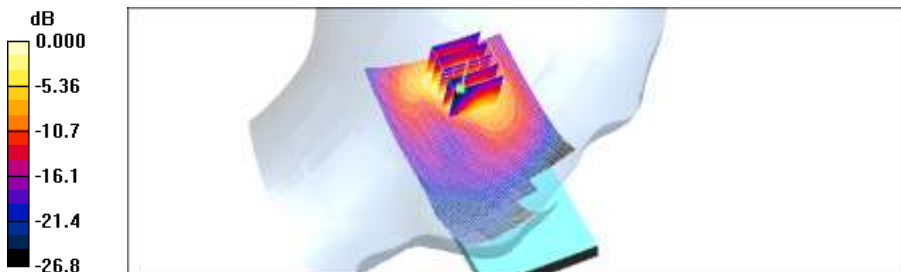
Reference Value = 13.0 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.654 W/kg

**SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.141 mW/g**

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

Maximum value of SAR (measured) = 0.326 mW/g



0 dB = 0.326mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.07, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.52, 4.52, 4.52); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Right touch 6 1Mbps /Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.276 mW/g

**Right touch 6 1Mbps /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

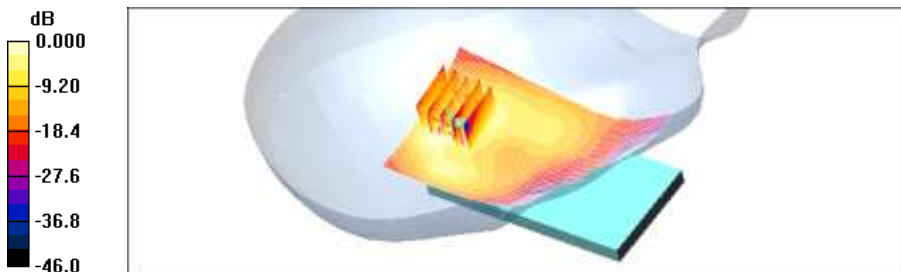
Reference Value = 12.5 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.648 W/kg

**SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.120 mW/g**

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

Maximum value of SAR (measured) = 0.288 mW/g



0 dB = 0.288mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.07, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: 2450MHz FCC; Frequency: 2437 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.52, 4.52, 4.52); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Right tilt 6 1Mbps /Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Right tilt 6 1Mbps /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

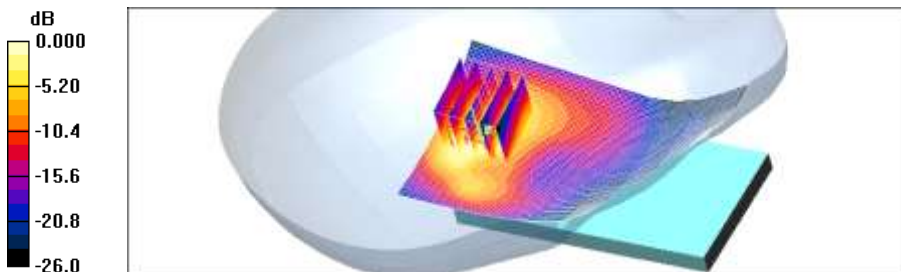
Reference Value = 13.6 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.704 W/kg

**SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.141 mW/g**

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

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



0 dB = 0.320mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5240 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5240$  MHz;  $\sigma = 4.56$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.73, 4.73, 4.73); Calibrated: 2011-07-25
- Sensor -Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Left touch 48ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.123 mW/g

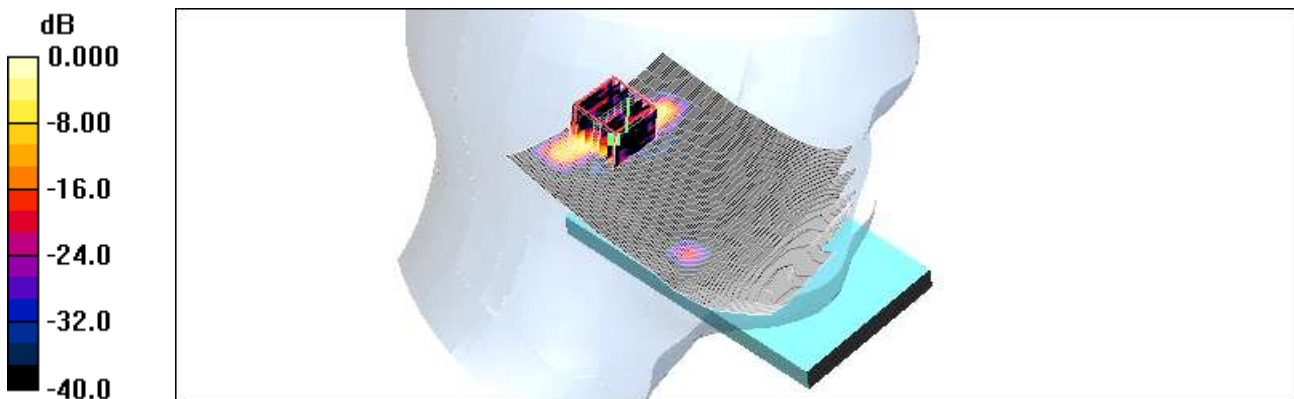
**802.11a Left touch 48ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.95 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.148 W/kg

**SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.011 mW/g**

Maximum value of SAR (measured) = 0.077 mW/g



0 dB = 0.077mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5240 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5240$  MHz;  $\sigma = 4.56$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.73, 4.73, 4.73); Calibrated: 2011-07-25
- SensorSurface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Left tilt 48ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.114 mW/g

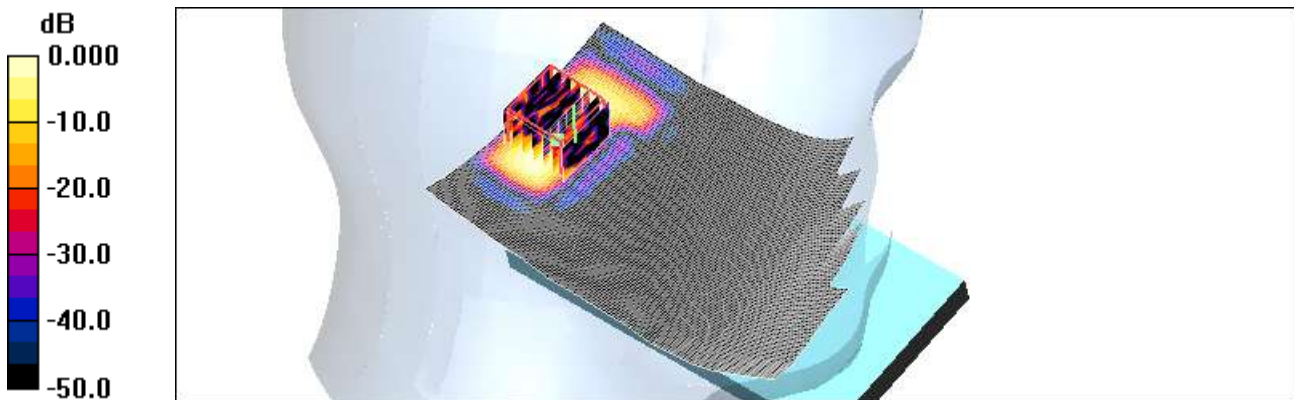
**802.11a Left tilt 48ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.55 V/m; Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.184 W/kg

**SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.015 mW/g.**

Maximum value of SAR (measured) = 0.102 mW/g



0 dB = 0.102mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5240 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5240$  MHz;  $\sigma = 4.56$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.73, 4.73, 4.73); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Right touch 48ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

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

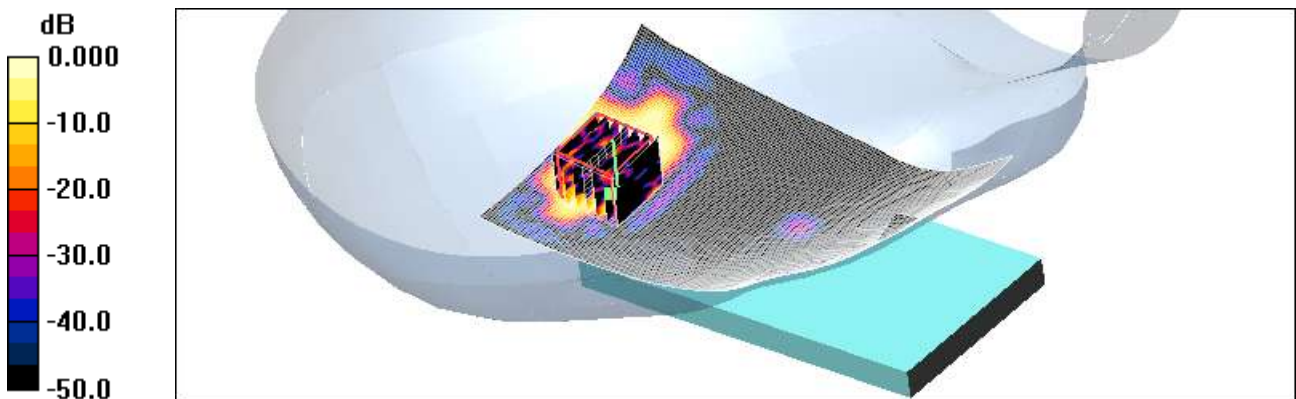
**802.11a Right touch 48ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.75 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.133 W/kg

**SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.010 mW/g**

Maximum value of SAR (measured) = 0.074 mW/g



0 dB = 0.074mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5240 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5240$  MHz;  $\sigma = 4.56$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.73, 4.73, 4.73); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Right tilt 48ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.143 mW/g

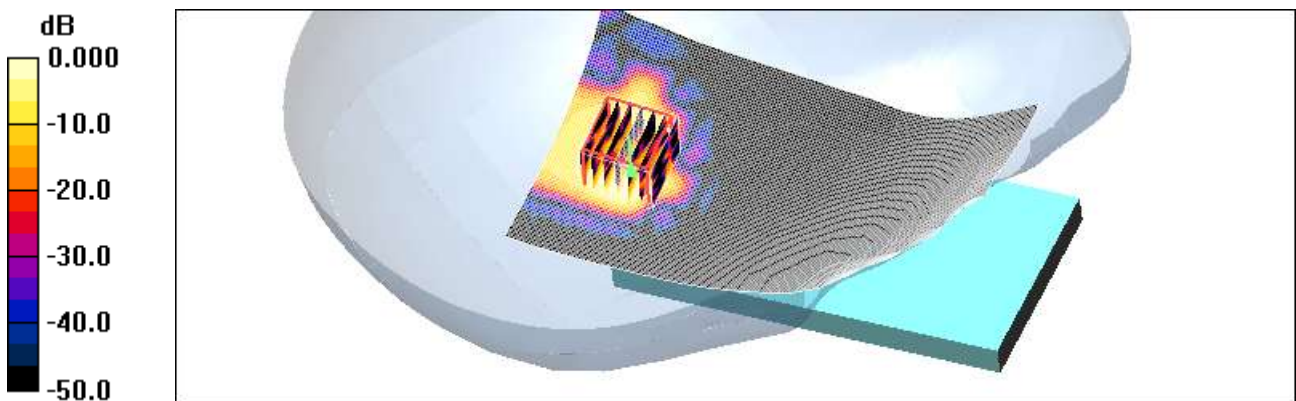
**802.11a Right tilt 48ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.57 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.215 W/kg

**SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.015 mW/g**

Maximum value of SAR (measured) = 0.101 mW/g



0 dB = 0.101mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5260 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5260$  MHz;  $\sigma = 4.6$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.44, 4.44, 4.44); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Left touch 52ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.044 mW/g

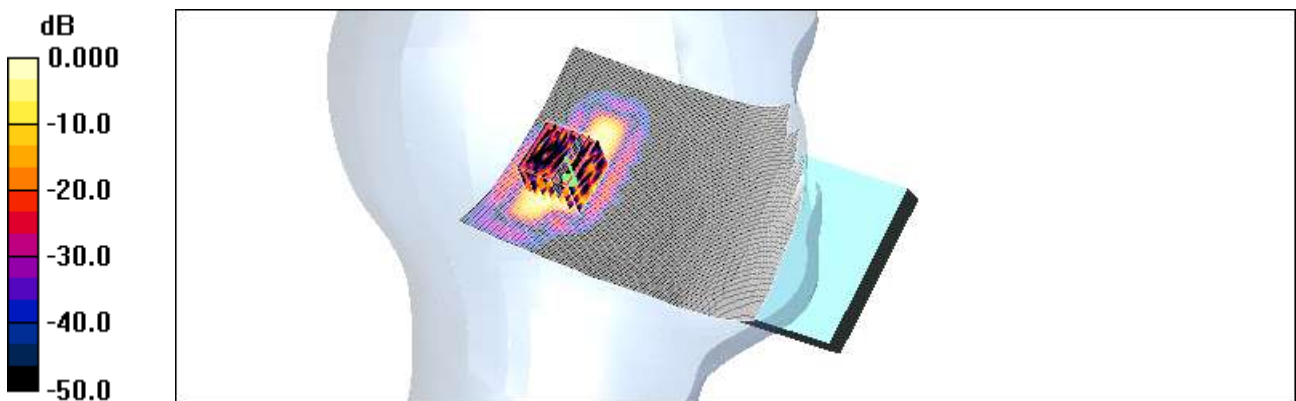
**802.11a Left touch 52ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.43 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.539 W/kg

**SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.018 mW/g**

Maximum value of SAR (measured) = 0.038 mW/g



0 dB = 0.038mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5260 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5260$  MHz;  $\sigma = 4.6$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.44, 4.44, 4.44); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Left tilt 52ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.150 mW/g

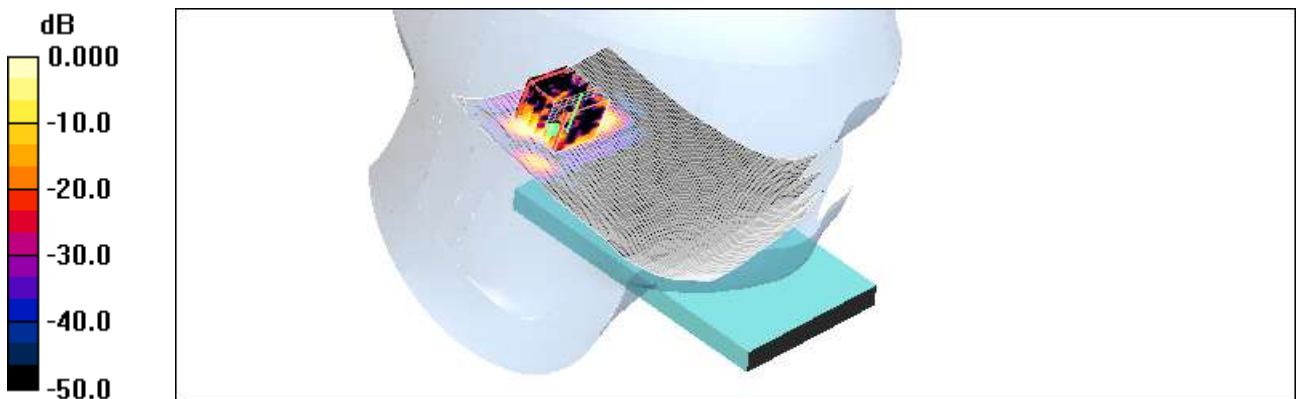
**802.11a Left tilt 52ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.68 V/m; Power Drift = 0.099 dB

Peak SAR (extrapolated) = 0.489 W/kg

**SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.015 mW/g**

Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5260 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5260$  MHz;  $\sigma = 4.6$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.44, 4.44, 4.44); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Right touch 52ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.100 mW/g

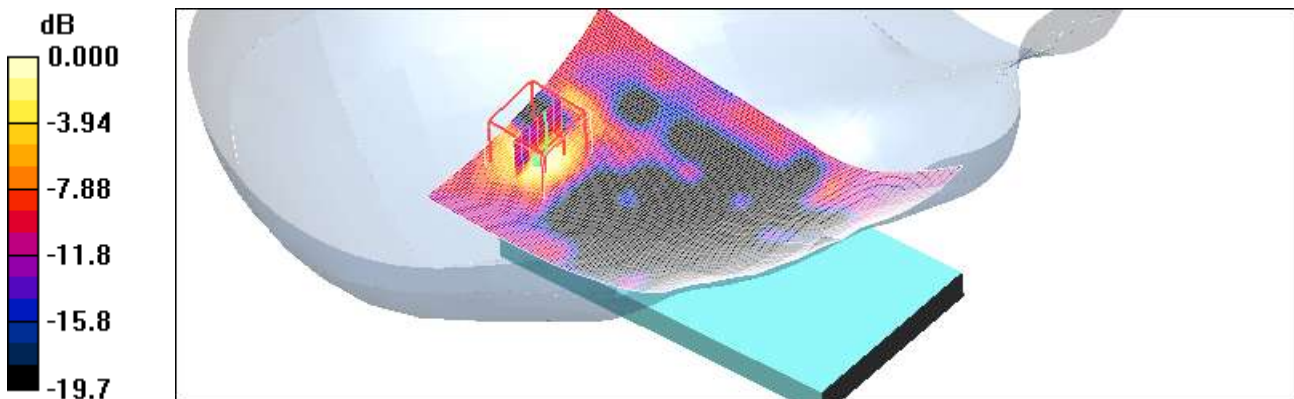
**802.11a Right touch 52ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.97 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.192 W/kg

**SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.015 mW/g**

Maximum value of SAR (measured) = 0.079 mW/g



0 dB = 0.079mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5260 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5260$  MHz;  $\sigma = 4.6$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.44, 4.44, 4.44); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**802.11a Right tilt 52ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.111 mW/g

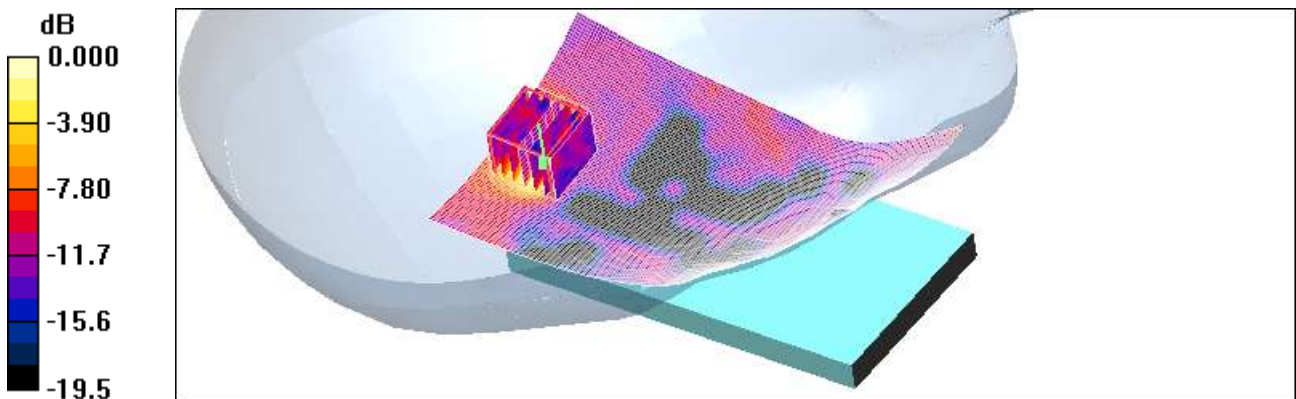
**802.11a Right tilt 52ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.58 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.238 W/kg

**SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.017 mW/g**

Maximum value of SAR (measured) = 0.098 mW/g



0 dB = 0.098mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5620 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5620$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 35.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.16, 4.16, 4.16); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Touch 802.11a 124ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

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

**Left Touch 802.11a 124ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

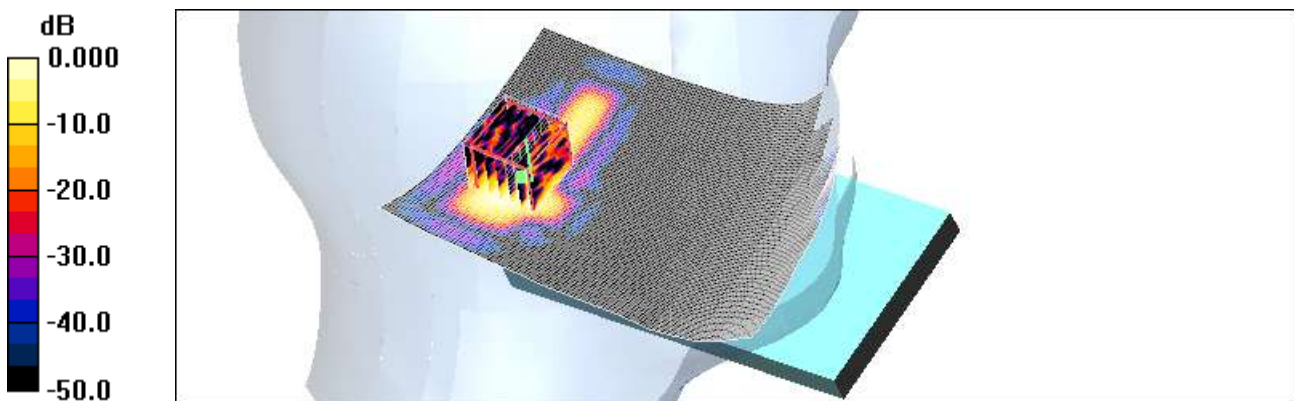
Reference Value = 2.95 V/m; Power Drift = 0.107 dB

Peak SAR (extrapolated) = 0.256 W/kg

**SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.013 mW/g**

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

Maximum value of SAR (measured) = 0.112 mW/g



0 dB = 0.112mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5620 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5620$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 35.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.16, 4.16, 4.16); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left Tilt 802.11a 124ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.163 mW/g

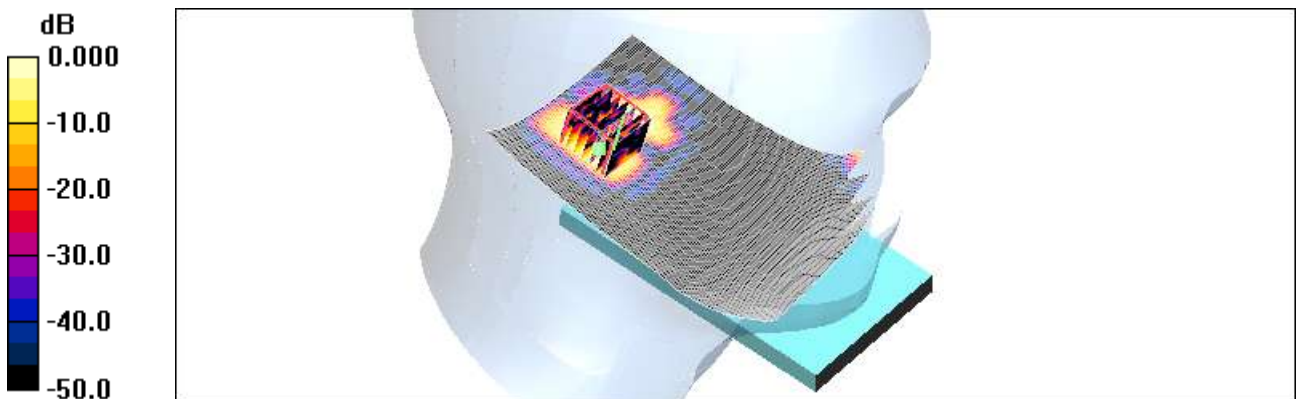
**Left Tilt 802.11a 124ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.77 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 0.242 W/kg

**SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.015 mW/g**

Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5620 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5620$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 35.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.16, 4.16, 4.16); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 802.11a 124ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.163 mW/g

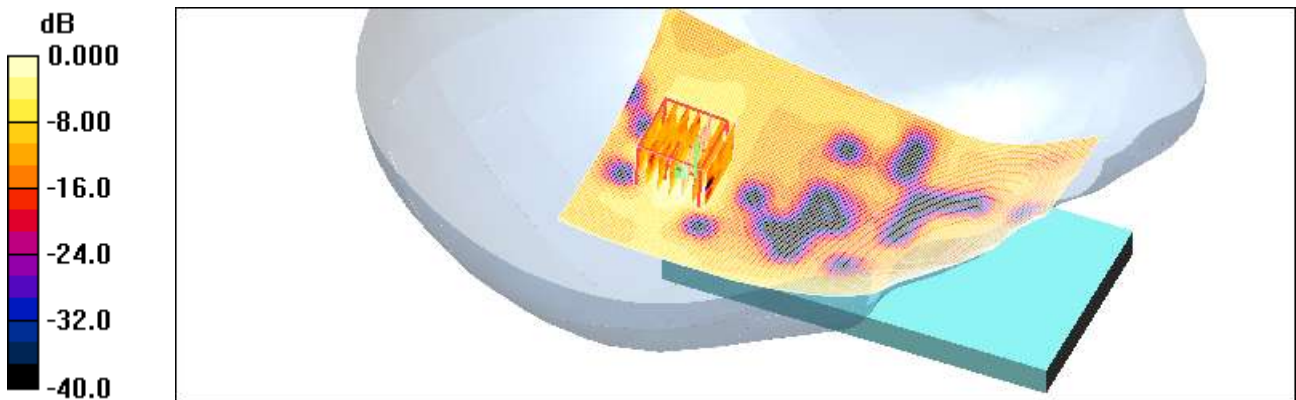
**Right touch 802.11a 124ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.08 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 0.255 W/kg

**SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.022 mW/g**

Maximum value of SAR (measured) = 0.135 mW/g



0 dB = 0.135mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5620 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5620$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 35.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.16, 4.16, 4.16); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 802.11a 124ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.153 mW/g

**Right tilt 802.11a 124ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

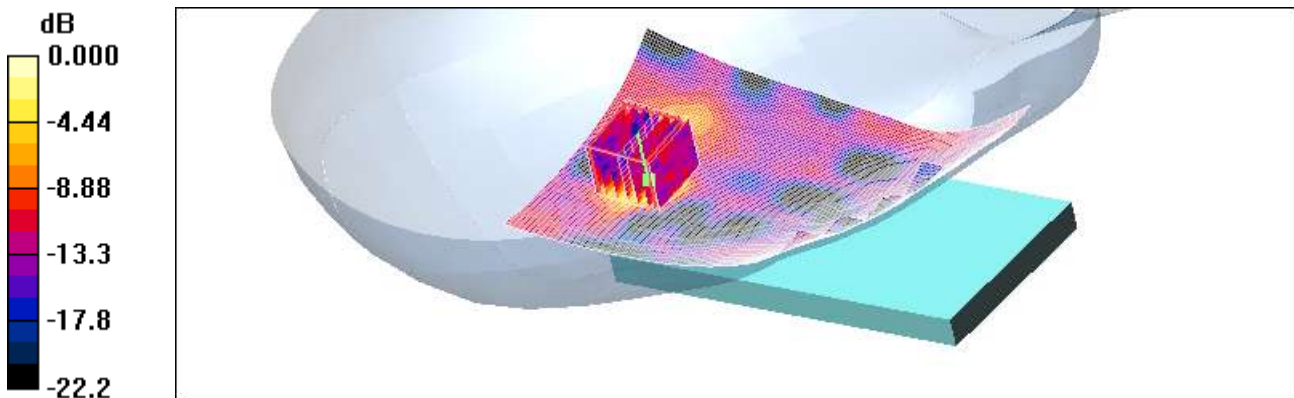
Reference Value = 4.29 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.285 W/kg

**SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.024 mW/g**

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

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



0 dB = 0.156mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5785 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 5.28$  mho/m;  $\epsilon_r = 35.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.26, 4.26, 4.26); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left touch 802.11a 157ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.294 mW/g

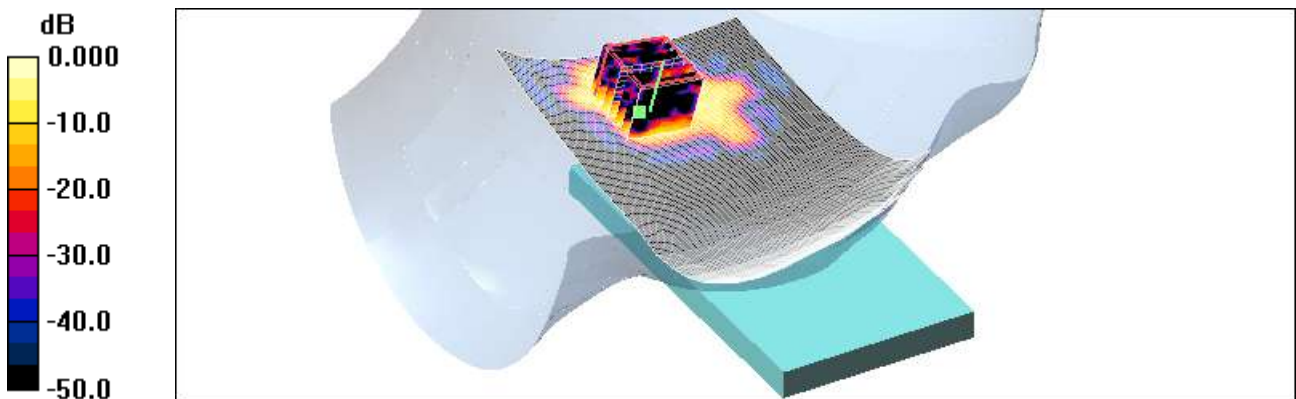
**Left touch 802.11a 157ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.67 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.526 W/kg

**SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.035 mW/g**

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



0 dB = 0.268mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5785 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 5.28$  mho/m;  $\epsilon_r = 35.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.26, 4.26, 4.26); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Left tilt 802.11a 157ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

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

**Left tilt 802.11a 157ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

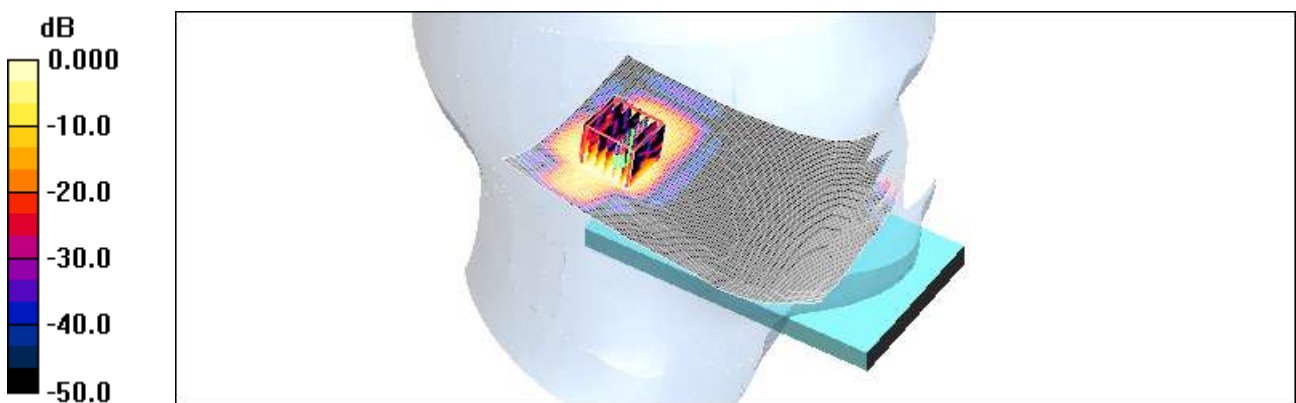
Reference Value = 6.66 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.800 W/kg

**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.042 mW/g**

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

Maximum value of SAR (measured) = 0.326 mW/g



0 dB = 0.326mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5785 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.07$  mho/m;  $\epsilon_r = 46.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(3.75, 3.75, 3.75); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right touch 802.11a 157ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.401 mW/g

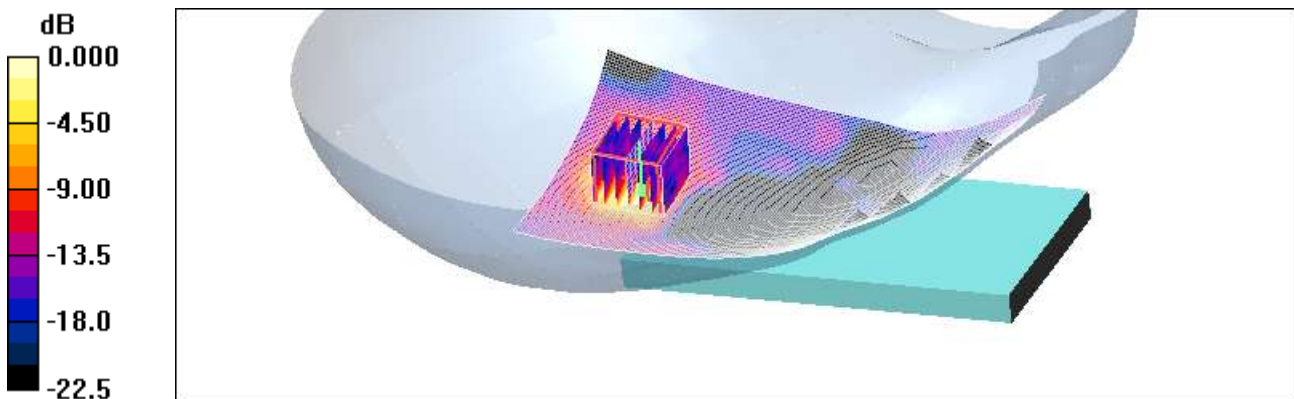
**Right touch 802.11a 157ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.78 V/m; Power Drift = -0.071 dB

Peak SAR (extrapolated) = 1.59 W/kg

**SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.055 mW/g**

Maximum value of SAR (measured) = 0.379 mW/g



0 dB = 0.379mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.20, 2012

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WIFI 5GHz; Frequency: 5785 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.07$  mho/m;  $\epsilon_r = 46.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(3.75, 3.75, 3.75); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

**Right tilt 802.11a 157ch 6Mbps/Area Scan (91x151x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (interpolated) = 0.441 mW/g

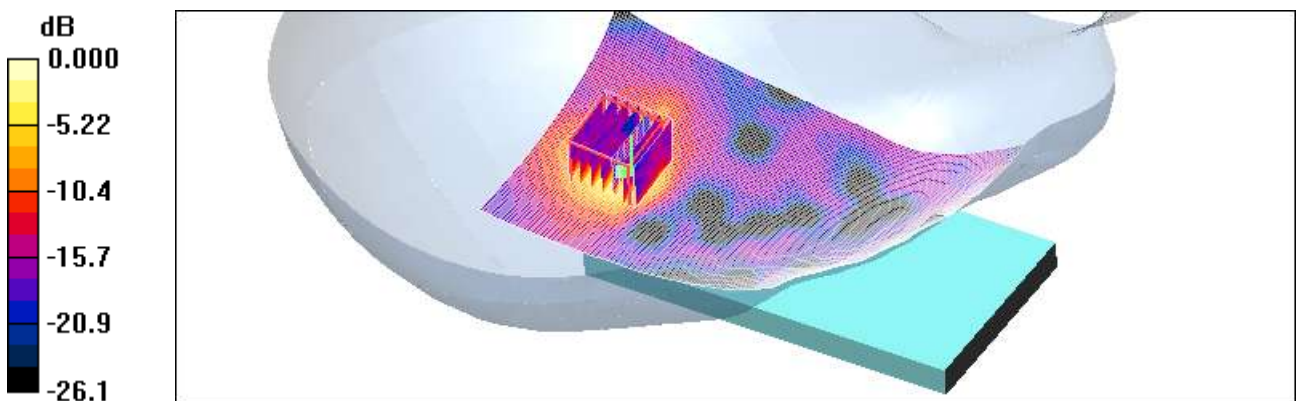
**Right tilt 802.11a 157ch 6Mbps/Zoom Scan (7x7x11)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.95 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.064 mW/g**

Maximum value of SAR (measured) = 0.467 mW/g



0 dB = 0.467mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**HotSpot Body Rear GPRS 2Tx 190/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.482 mW/g

**HotSpot Body Rear GPRS 2Tx 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

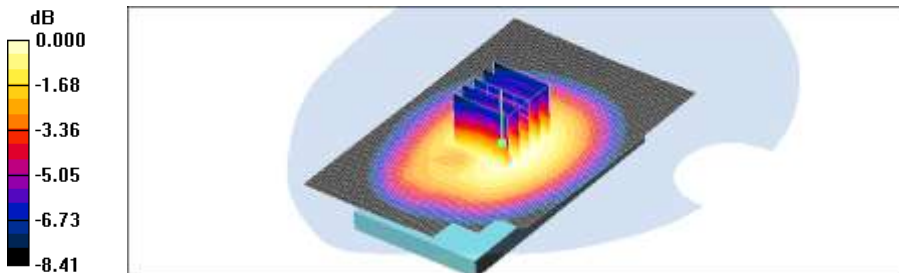
Reference Value = 14.8 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.581 W/kg

**SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.342 mW/g**

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

Maximum value of SAR (measured) = 0.475 mW/g



0 dB = 0.475mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**HotSpot Body Front GPRS 2Tx 190/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.510 mW/g

**HotSpot Body Front GPRS 2Tx 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

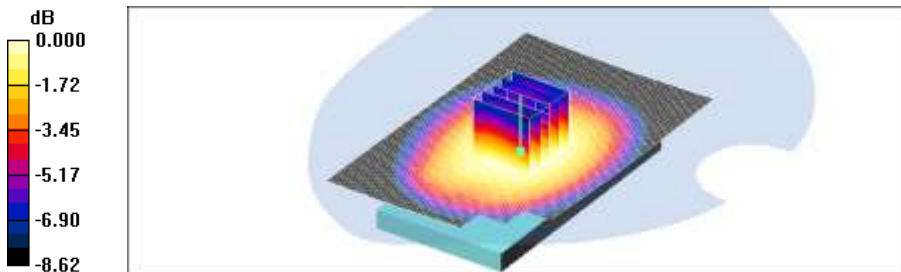
Reference Value = 14.9 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.609 W/kg

**SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.372 mW/g**

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

Maximum value of SAR (measured) = 0.509 mW/g



0 dB = 0.509mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body left side GPRS 2Tx 190/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.744 mW/g

**Hotspot Body left side GPRS 2Tx 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

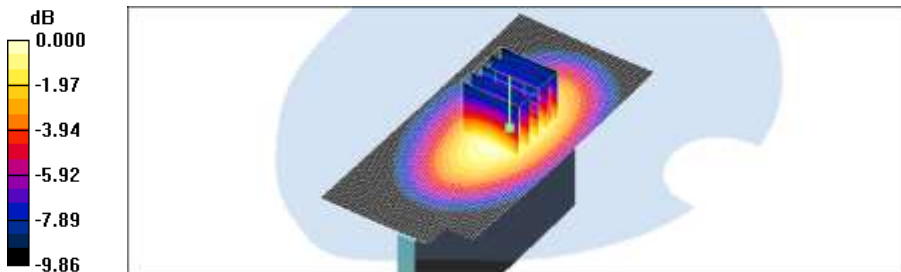
Reference Value = 21.1 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.971 W/kg

**SAR(1 g) = 0.674 mW/g; SAR(10 g) = 0.452 mW/g**

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

Maximum value of SAR (measured) = 0.729 mW/g



0 dB = 0.729mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body Right side GPRS 2Tx 190/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.608 mW/g

**Hotspot Body Right side GPRS 2Tx 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

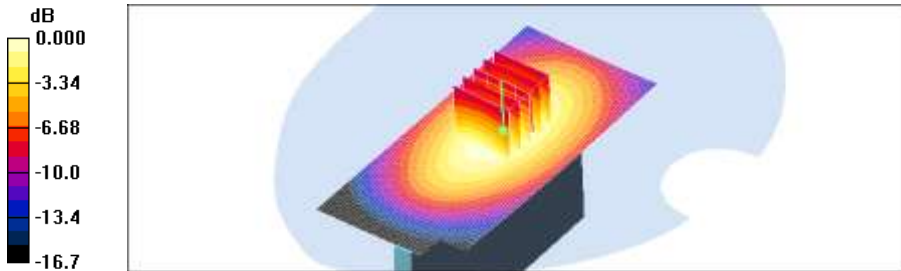
Reference Value = 21.0 V/m; Power Drift = -0.167 dB

Peak SAR (extrapolated) = 0.866 W/kg

**SAR(1 g) = 0.578 mW/g; SAR(10 g) = 0.379 mW/g**

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

Maximum value of SAR (measured) = 0.597 mW/g



0 dB = 0.597mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body bottom GPRS 2Tx 190/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.101 mW/g

**Hotspot Body bottom GPRS 2Tx 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

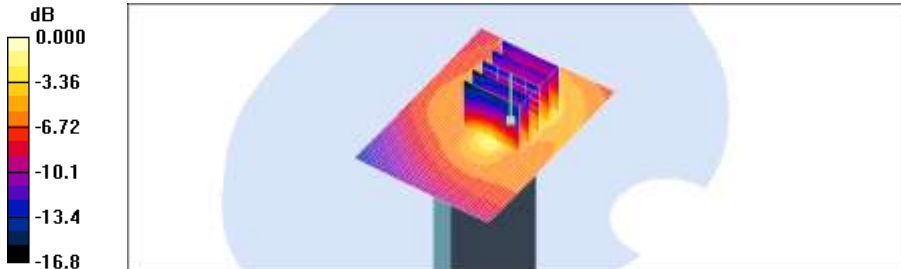
Reference Value = 7.13 V/m; Power Drift = -0.041 dB

Peak SAR (extrapolated) = 0.166 W/kg

**SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.045 mW/g**

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

Maximum value of SAR (measured) = 0.098 mW/g



0 dB = 0.098mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

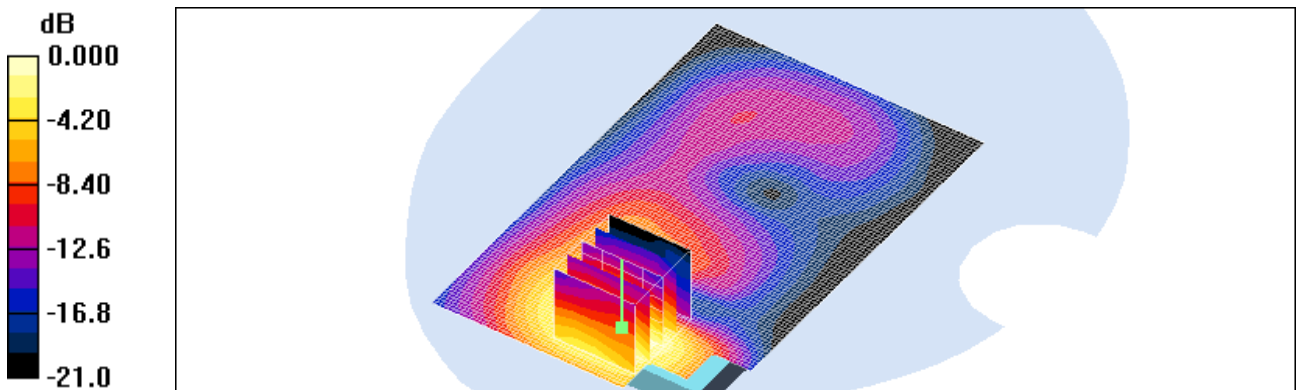
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Rear GPRS 2Tx 661/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.338 mW/g

**HotSpot Body Rear GPRS 2Tx 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.29 V/m; Power Drift = 0.010 dB  
Peak SAR (extrapolated) = 0.457 W/kg  
**SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.163 mW/g**  
Maximum value of SAR (measured) = 0.312 mW/g



0 dB = 0.312mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

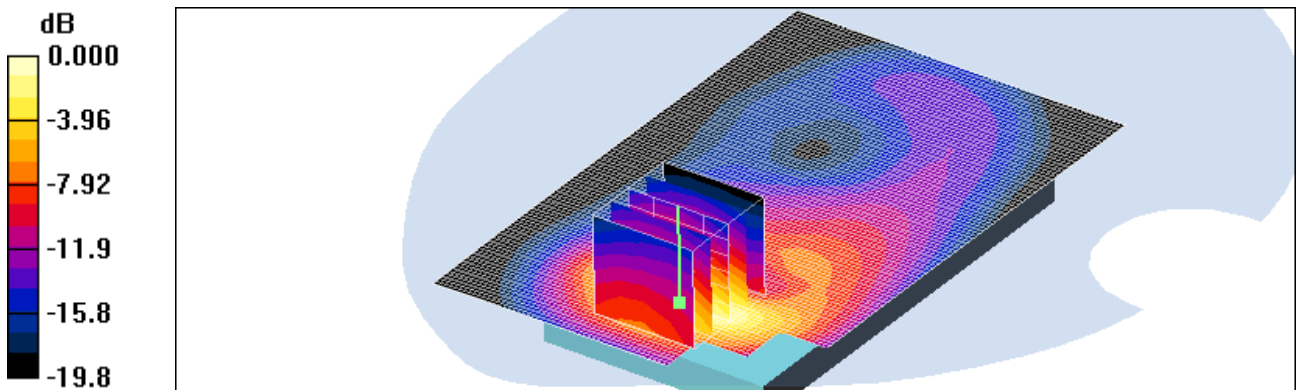
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Front GPRS 2Tx 661/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.871 mW/g

**HotSpot Body Front GPRS 2Tx 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.78 V/m; Power Drift = -0.061 dB  
Peak SAR (extrapolated) = 1.18 W/kg  
**SAR(1 g) = 0.689 mW/g; SAR(10 g) = 0.344 mW/g**  
Maximum value of SAR (measured) = 0.753 mW/g



0 dB = 0.753mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

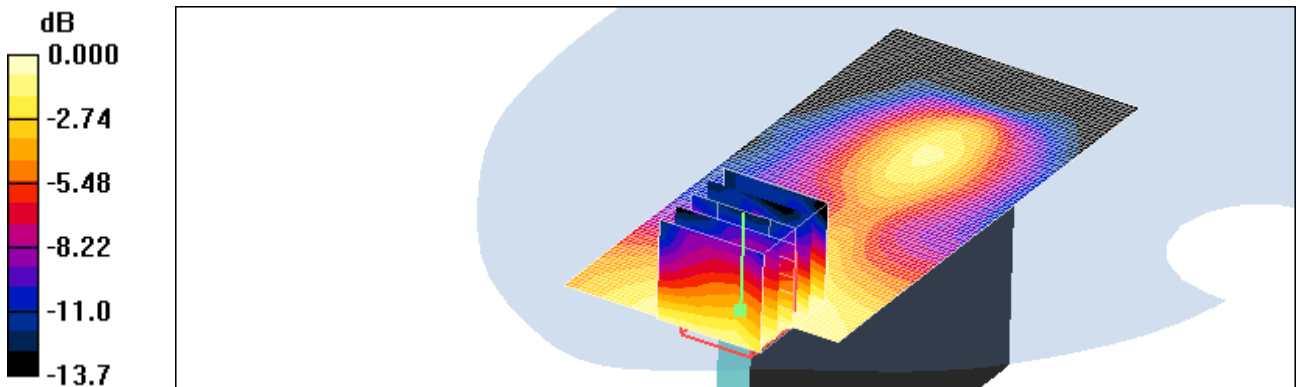
Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body Left side 661/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.030 mW/g

**Hotspot Body Left side 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.42 V/m; Power Drift = -0.188 dB  
Peak SAR (extrapolated) = 0.041 W/kg  
**SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.018 mW/g**  
Maximum value of SAR (measured) = 0.031 mW/g



0 dB = 0.031mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

DUT: P9090; Type: bar; Serial: #1

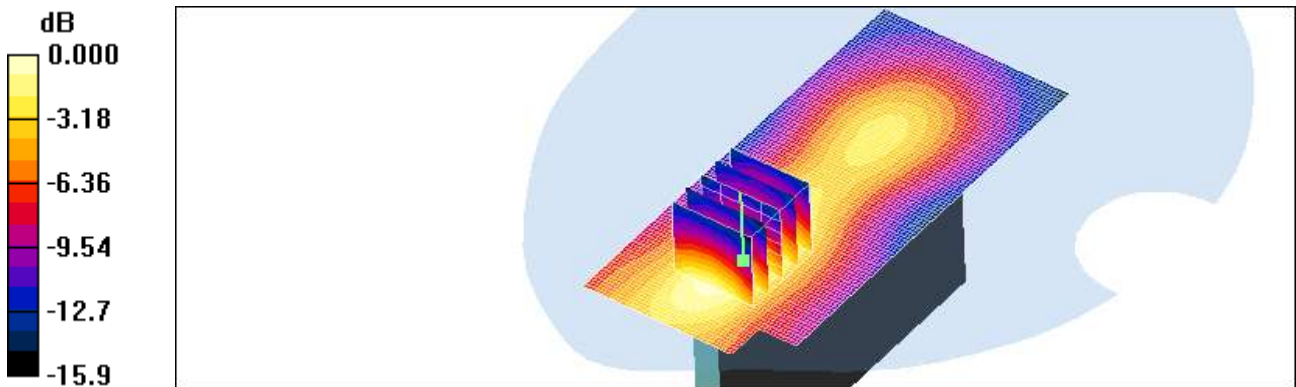
Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

Hotspot Body Right side 661/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.104 mW/g

Hotspot Body Right side 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.39 V/m; Power Drift = -0.029 dB  
Peak SAR (extrapolated) = 0.140 W/kg  
**SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.055 mW/g**  
Maximum value of SAR (measured) = 0.101 mW/g



0 dB = 0.101mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.15  
Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom GPRS 2Tx 512/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.774 mW/g

**Hotspot Body bottom GPRS 2Tx 512/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

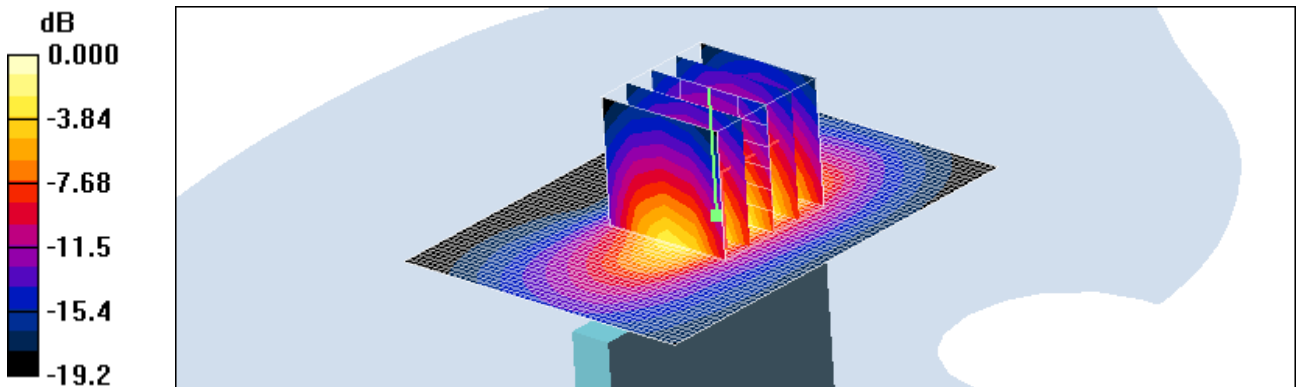
Reference Value = 19.9 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.961 W/kg

**SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.297 mW/g**

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

Maximum value of SAR (measured) = 0.693 mW/g



0 dB = 0.693mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

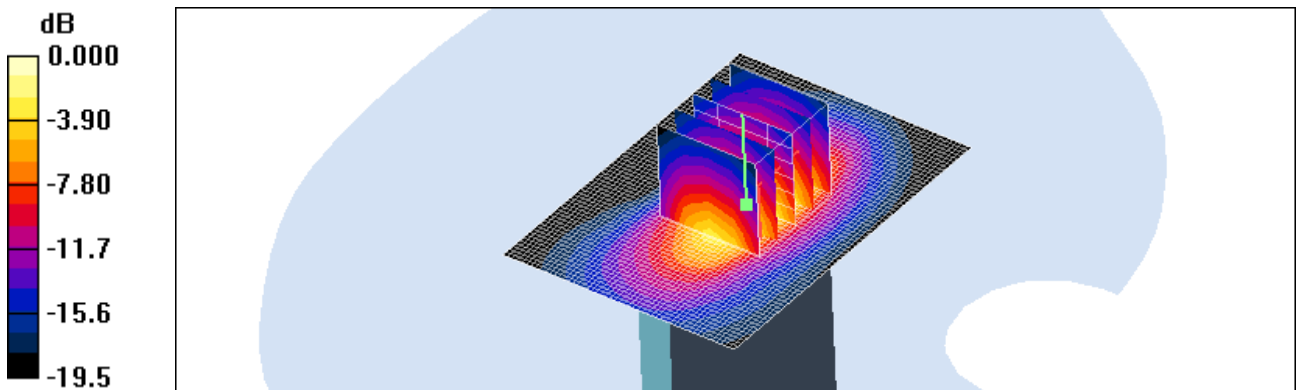
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom GPRS 2Tx 661/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.16 mW/g

**Hotspot Body bottom GPRS 2Tx 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 23.9 V/m; Power Drift = -0.114 dB  
Peak SAR (extrapolated) = 1.44 W/kg  
**SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.438 mW/g**  
Maximum value of SAR (measured) = 0.998 mW/g



0 dB = 0.998mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

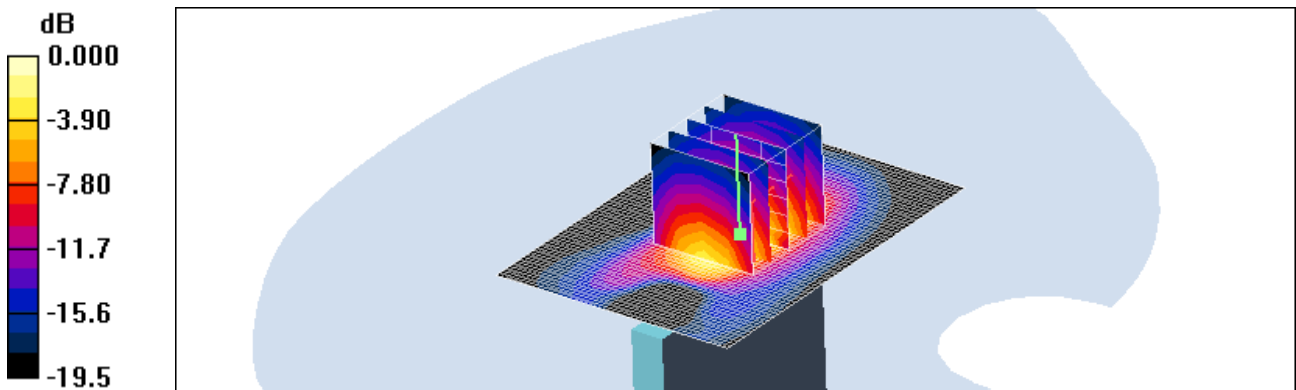
Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 51.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom GPRS 2Tx 810/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 1.42 mW/g

**Hotspot Body bottom GPRS 2Tx 810/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 26.7 V/m; Power Drift = -0.033 dB  
Peak SAR (extrapolated) = 1.74 W/kg  
**SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.512 mW/g**  
Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 2.0 cm

DUT: P9090; Type: bar; Serial: #1

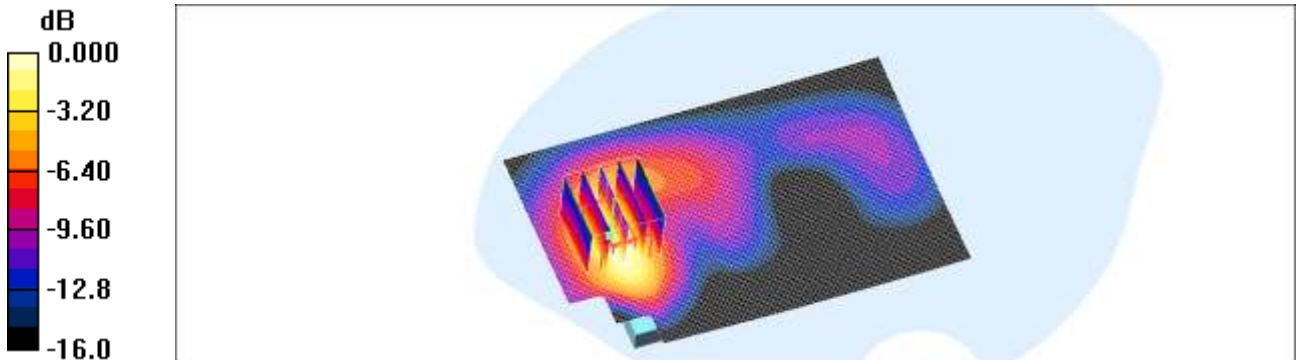
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Body Worn Rear GPRS 2Tx 661/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.460 mW/g

**Body Worn Rear GPRS 2Tx 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.29 V/m; Power Drift = 0.073 dB  
Peak SAR (extrapolated) = 0.677 W/kg  
**SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.243 mW/g**  
Maximum value of SAR (measured) = 0.448 mW/g



0 dB = 0.448mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 2.0 cm

**DUT: P9090; Type: bar; Serial: #1**

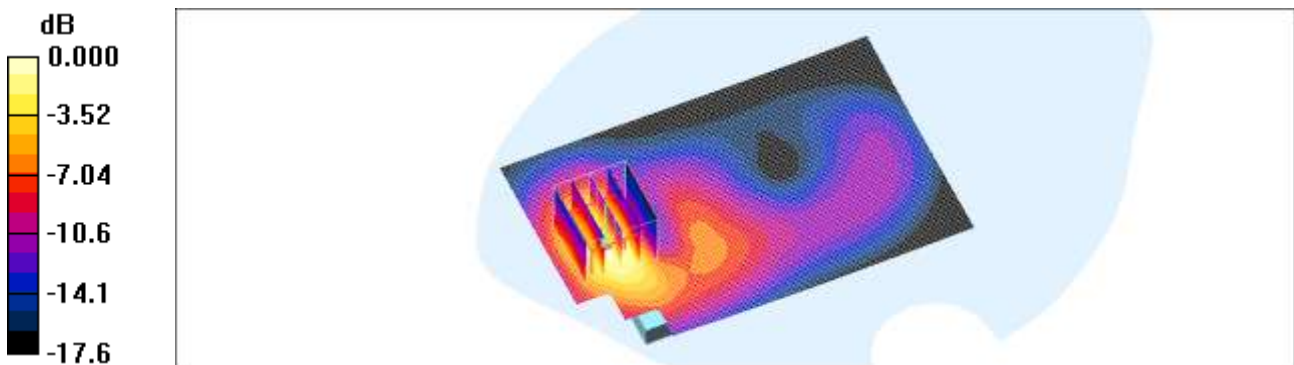
Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:4.15  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Body Worn Front GPRS 2Tx 661/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.568 mW/g

**Body Worn Front GPRS 2Tx 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.79 V/m; Power Drift = -0.035 dB  
Peak SAR (extrapolated) = 0.794 W/kg  
**SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.278 mW/g**  
Maximum value of SAR (measured) = 0.569 mW/g



0 dB = 0.569mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**HotSpot Body Rear 4183/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.367 mW/g

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

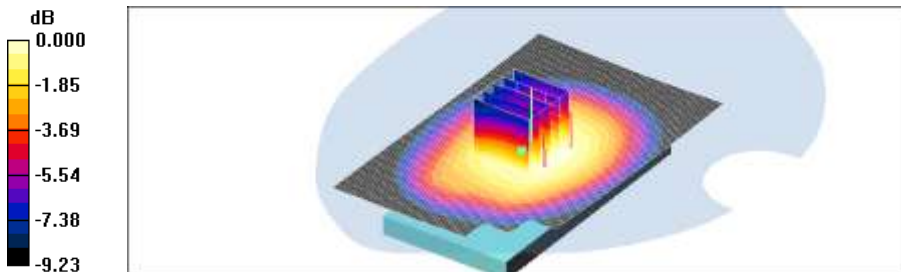
Reference Value = 13.8 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 0.459 W/kg

**SAR(1 g) = 0.359 mW/g; SAR(10 g) = 0.272 mW/g**

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

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



0 dB = 0.376mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**HotSpot Body Front 4183/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.384 mW/g

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

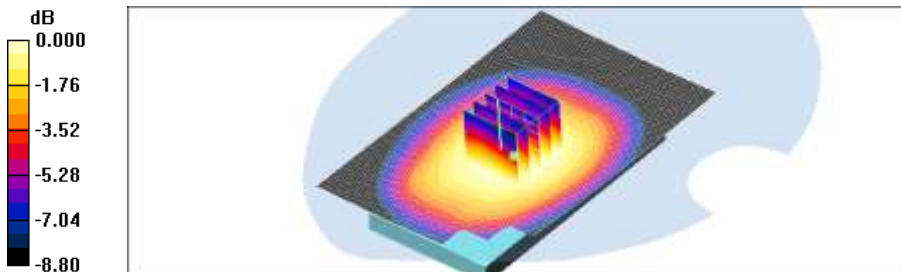
Reference Value = 11.7 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.469 W/kg

**SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.277 mW/g**

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

Maximum value of SAR (measured) = 0.385 mW/g



0 dB = 0.385mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body Left side 4183/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.468 mW/g

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

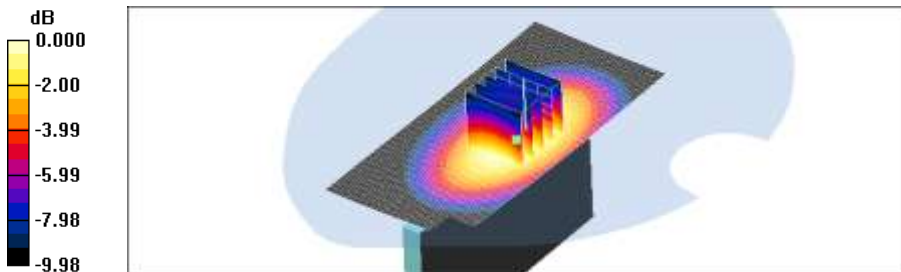
Reference Value = 13.7 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.633 W/kg

**SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.296 mW/g**

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

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



0 dB = 0.463mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body Right side 4183/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

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

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

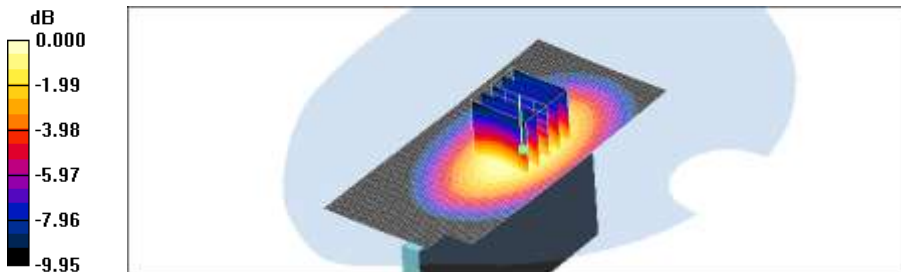
Reference Value = 14.6 V/m; Power Drift = 0.179 dB

Peak SAR (extrapolated) = 0.546 W/kg

**SAR(1 g) = 0.380 mW/g; SAR(10 g) = 0.257 mW/g**

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

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



0 dB = 0.409mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.04, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA850; Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.14, 9.14, 9.14); Calibrated: 2011-07-25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Hotspot Body bottom 4183/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.098 mW/g

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

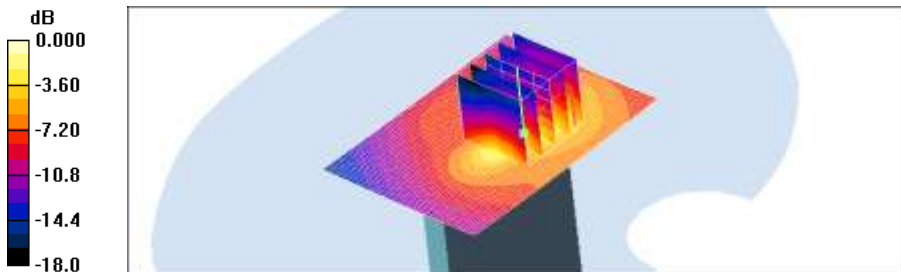
Reference Value = 5.00 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.187 W/kg

**SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.044 mW/g**

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

Maximum value of SAR (measured) = 0.106 mW/g



0 dB = 0.106mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

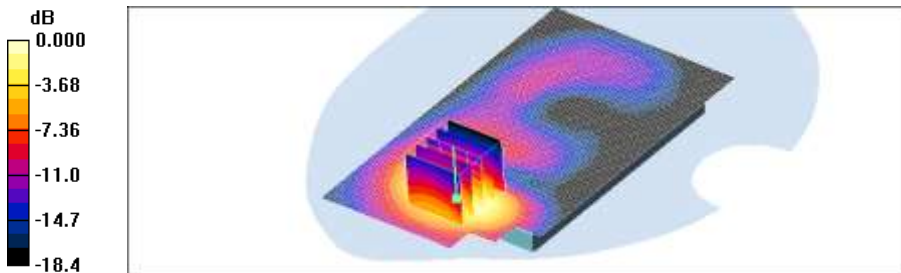
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Rear 9400/Area Scan (71x121x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.430 mW/g

**HotSpot Body Rear 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 2.45 V/m; Power Drift = -0.032 dB  
Peak SAR (extrapolated) = 0.621 W/kg  
**SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.227 mW/g**  
Maximum value of SAR (measured) = 0.444 mW/g



0 dB = 0.444mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Front 9262/Area Scan (71x121x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**HotSpot Body Front 9262/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

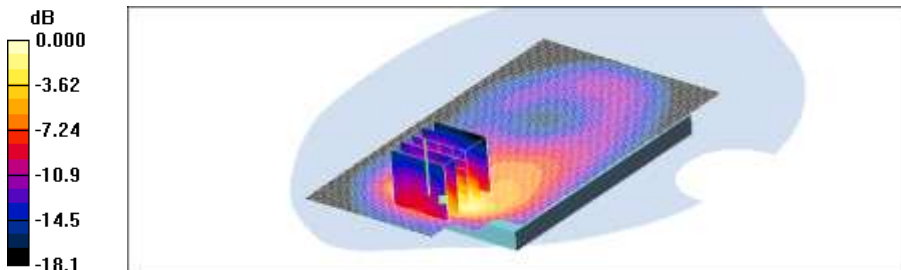
Reference Value = 4.12 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.689 mW/g; SAR(10 g) = 0.353 mW/g**

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

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



0 dB = 0.734mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Front 9400/Area Scan (71x121x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.951 mW/g

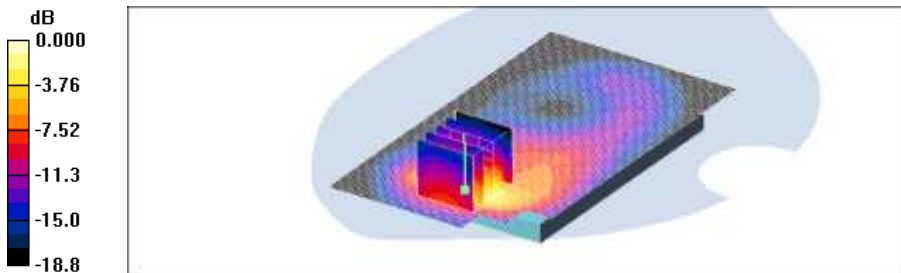
**HotSpot Body Front 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.79 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 1.55 W/kg

**SAR(1 g) = 0.941 mW/g; SAR(10 g) = 0.475 mW/g**

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



0 dB = 1.02mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1907.6$  MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 51.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**HotSpot Body Front 9538/Area Scan (71x121x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.954 mW/g

**HotSpot Body Front 9538/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

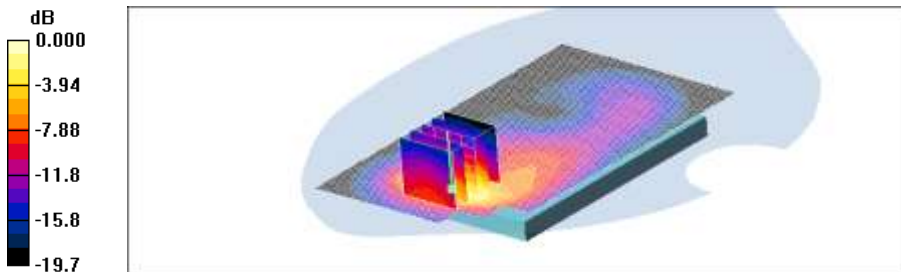
Reference Value = 4.14 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 1.67 W/kg

**SAR(1 g) = 0.975 mW/g; SAR(10 g) = 0.480 mW/g**

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

Maximum value of SAR (measured) = 1.06 mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.44 \text{ mho/m}$ ;  $\epsilon_r = 51.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body Left side 9400/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.049 mW/g

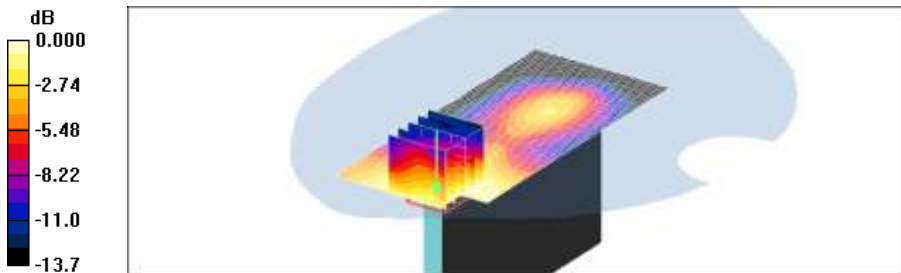
**Hotspot Body Left side 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.00 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.063 W/kg

**SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.029 mW/g**

Maximum value of SAR (measured) = 0.048 mW/g



0 dB = 0.048mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

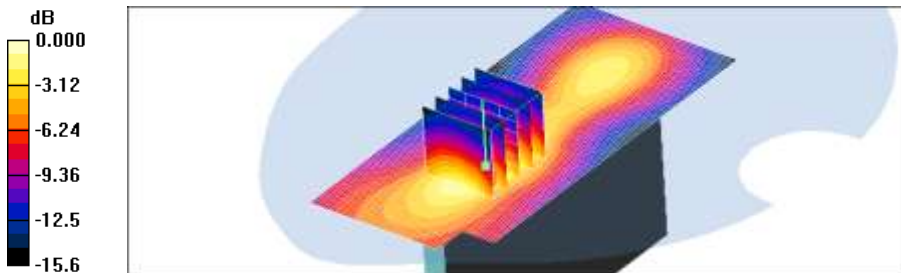
**Hotspot Body Right side 9400/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.194 mW/g

**Hotspot Body Right side 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 9.32 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.251 W/kg

**SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.099 mW/g**

Maximum value of SAR (measured) = 0.186 mW/g



0 dB = 0.186mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 51.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom 9262/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.962 mW/g

**Hotspot Body bottom 9262/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

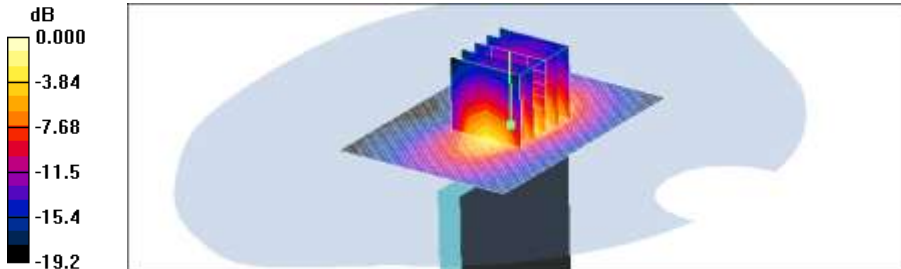
Reference Value = 25.2 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 1.16 W/kg

**SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.386 mW/g**

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

Maximum value of SAR (measured) = 0.811 mW/g



0 dB = 0.811mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom 9400/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.37 mW/g

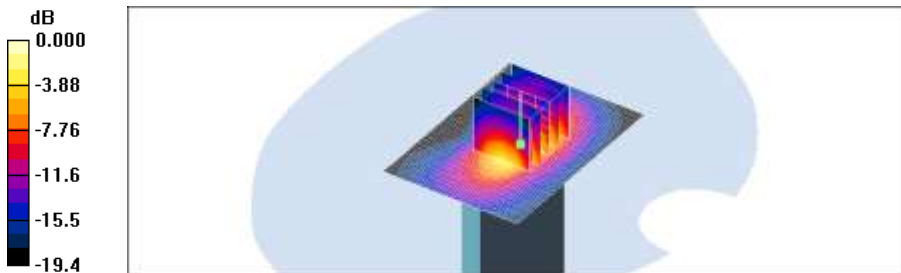
**Hotspot Body bottom 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.3 V/m; Power Drift = -0.108 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.541 mW/g**

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



0 dB = 1.20mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: WCDMA1900; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1907.6$  MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 51.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 1800/1900 Phantom; Type: SAM

**Hotspot Body bottom 9538/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 1.52 mW/g

**Hotspot Body bottom 9538/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

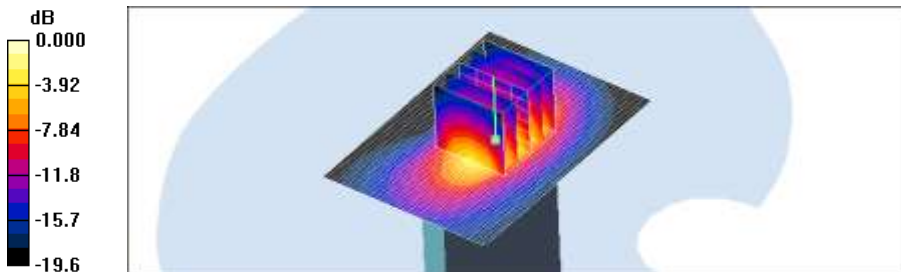
Reference Value = 30.0 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 1.91 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.576 mW/g**

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

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



0 dB = 1.30mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 2.0 cm

**DUT: P9090; Type: bar; Serial: #1**

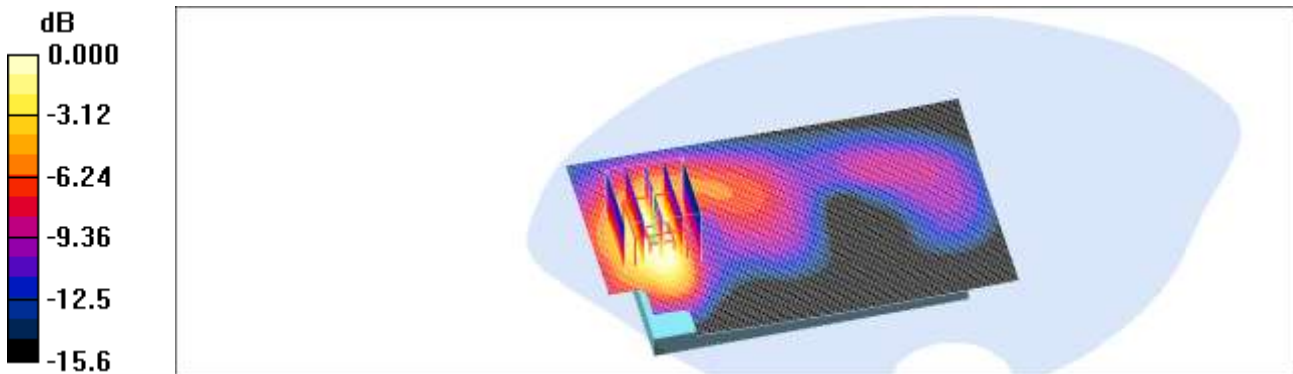
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**WCDMA 1900 Body Worn Rear 9400/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.572 mW/g

**WCDMA 1900 Body Worn Rear 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.45 V/m; Power Drift = -0.100 dB  
Peak SAR (extrapolated) = 0.717 W/kg  
**SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.275 mW/g**  
Maximum value of SAR (measured) = 0.505 mW/g



0 dB = 0.505mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.2 °C  
Ambient Temperature: 21.4 °C  
Test Date: Jun.05, 2012  
Separation Distance 2.0 cm

**DUT: P9090; Type: bar; Serial: #1**

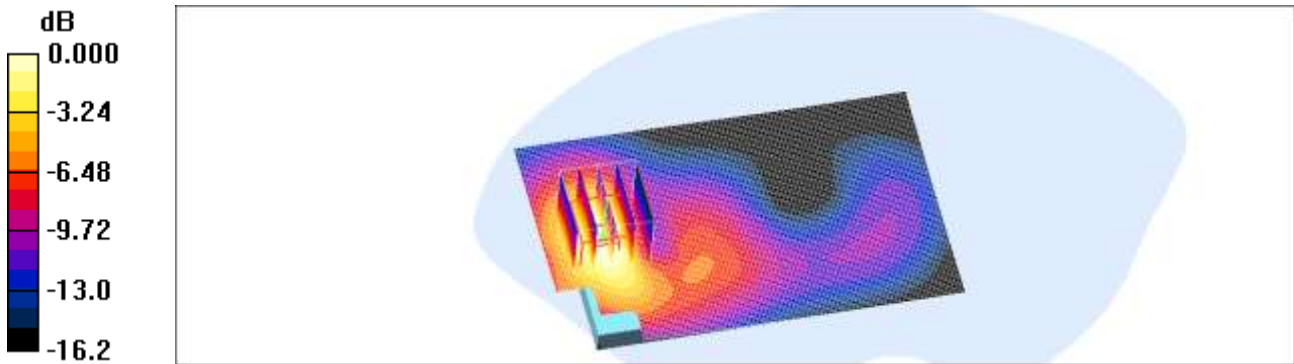
Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(4.55, 4.55, 4.55); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Body Worn Front 9400/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.512 mW/g

**Body Worn Front 9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.12 V/m; Power Drift = -0.003 dB  
Peak SAR (extrapolated) = 0.627 W/kg  
**SAR(1 g) = 0.425 mW/g; SAR(10 g) = 0.252 mW/g**  
Maximum value of SAR (measured) = 0.470 mW/g



0 dB = 0.470mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Rear QPSK 25RB 12 offset 23790/Area Scan (71x111x1):** Measurement grid:

dx=15mm, dy=15mm

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

**LTE Band 17 HotSpot Body Rear QPSK 25RB 12 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

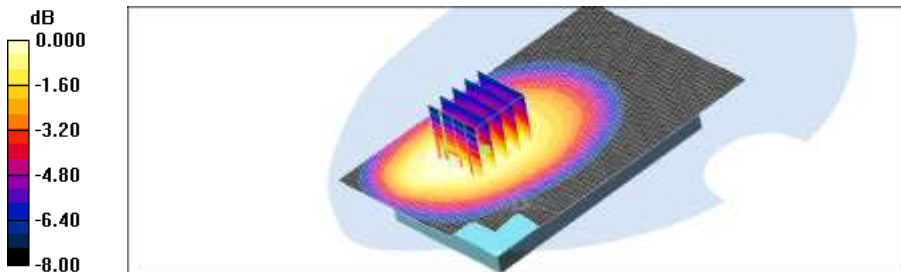
dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.25 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.240 W/kg

**SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.149 mW/g**

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



0 dB = 0.203mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Rear QPSK 1RB 0 offset 23790/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.229 mW/g

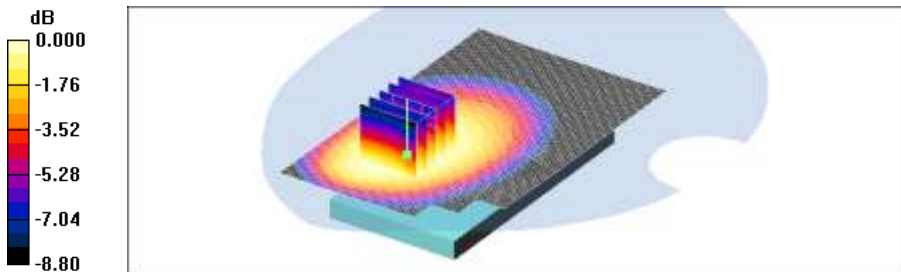
**LTE Band 17 HotSpot Body Rear QPSK 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.04 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.276 W/kg

**SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.169 mW/g**

Maximum value of SAR (measured) = 0.232 mW/g



0 dB = 0.232mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phamtom ; Type: SAM

**LTE Band 17 HotSpot Body Rear QPSK 1RB 49 offset 23790/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.294 mW/g

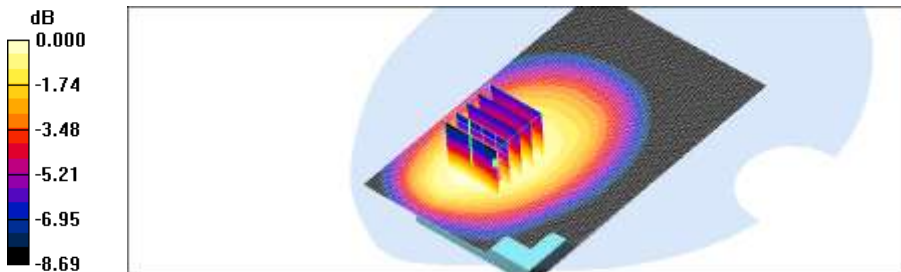
**LTE Band 17 HotSpot Body Rear QPSK 1RB 49 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.70 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.349 W/kg

**SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.211 mW/g**

Maximum value of SAR (measured) = 0.293 mW/g



0 dB = 0.293mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phamtom ; Type: SAM

**LTE Band 17 HotSpot Body Front QPSK 25RB 12 offset 23790/Area Scan (71x111x1):** Measurement grid:

dx=15mm, dy=15mm

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

**LTE Band 17 HotSpot Body Front QPSK 25RB 12 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

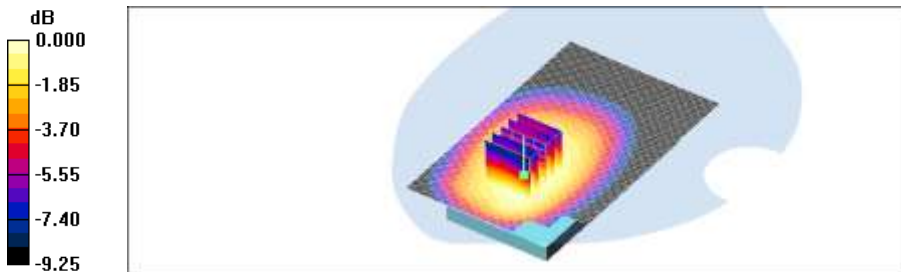
dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.73 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.270 W/kg

**SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.167 mW/g**

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



0 dB = 0.230mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Front QPSK 1RB 0 offset 23790/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.273 mW/g

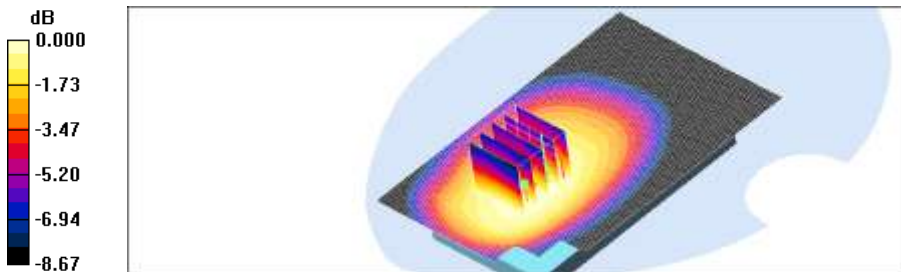
**LTE Band 17 HotSpot Body Front QPSK 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.19 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.312 W/kg

**SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.192 mW/g**

Maximum value of SAR (measured) = 0.261 mW/g



0 dB = 0.261mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phamtom ; Type: SAM

**LTE Band 17 HotSpot Body Front QPSK 1RB 49offset 23790/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.322 mW/g

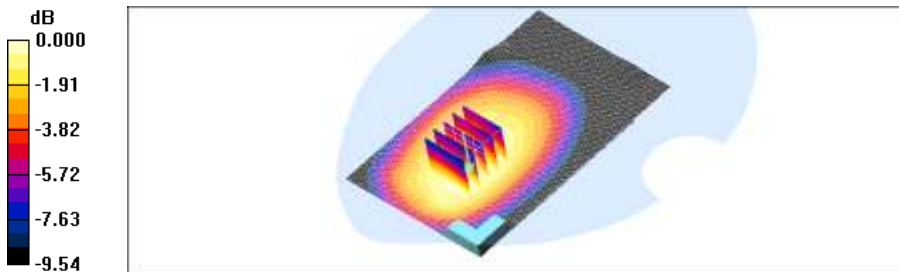
**LTE Band 17 HotSpot Body Front QPSK 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.17 V/m; Power Drift = -0.089 dB

Peak SAR (extrapolated) = 0.398 W/kg

**SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.238 mW/g**

Maximum value of SAR (measured) = 0.329 mW/g



0 dB = 0.329mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 25RB 13offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

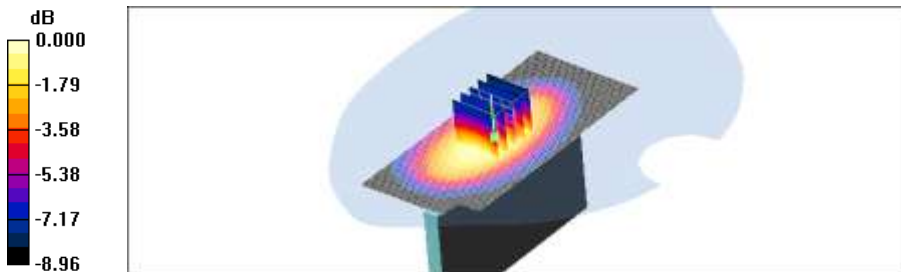
**Hotspot Body Left side QPSK 25RB 13offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.24 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 0.196 W/kg

**SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.100 mW/g**

Maximum value of SAR (measured) = 0.155 mW/g



0 dB = 0.155mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 1RB Ooffset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.175 mW/g

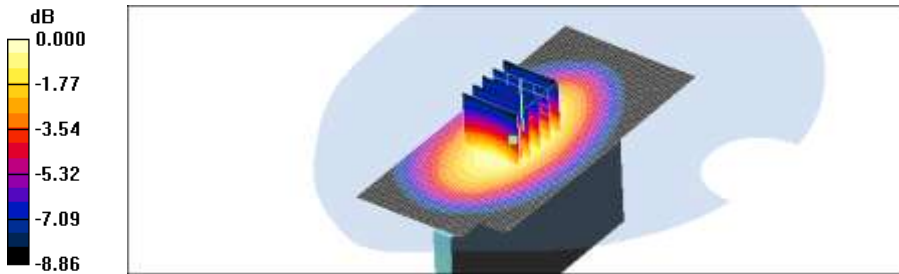
**Hotspot Body Left side QPSK 1RB Ooffset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.89 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 0.222 W/kg

**SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.113 mW/g**

Maximum value of SAR (measured) = 0.173 mW/g



0 dB = 0.173mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 1RB 49offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.218 mW/g

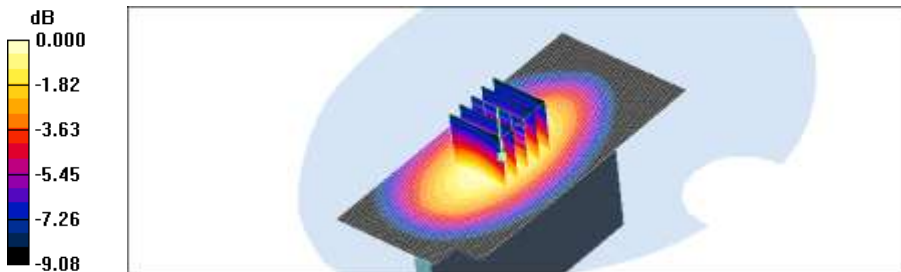
**Hotspot Body Left side QPSK 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.279 W/kg

**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.142 mW/g**

Maximum value of SAR (measured) = 0.219 mW/g



0 dB = 0.219mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 25RB 13offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

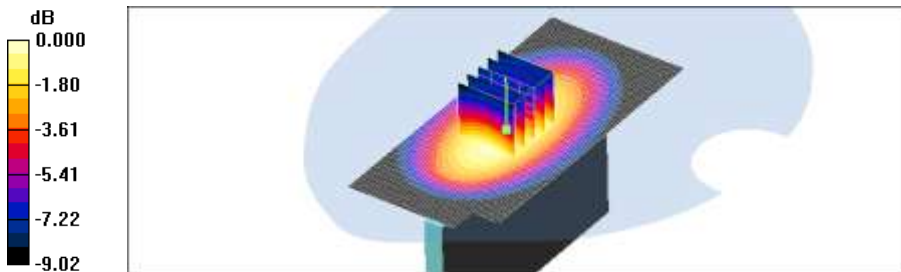
**Hotspot Body Right side QPSK 25RB 13offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.91 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.212 W/kg

**SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.109 mW/g**

Maximum value of SAR (measured) = 0.167 mW/g



0 dB = 0.167mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 1RB 0offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.207 mW/g

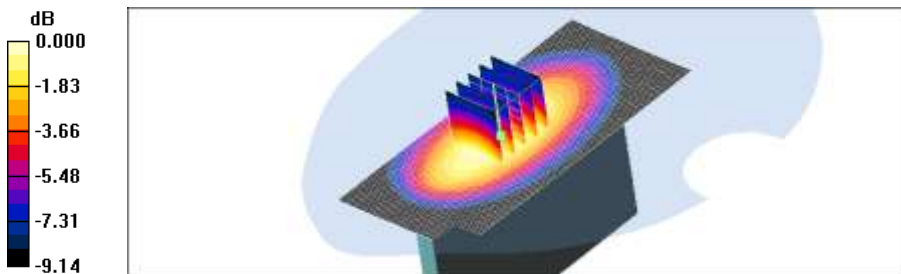
**Hotspot Body Right side QPSK 1RB 0offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.257 W/kg

**SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.133 mW/g**

Maximum value of SAR (measured) = 0.208 mW/g



0 dB = 0.208mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 1RB 49offset 23790/Area Scan (51x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.245 mW/g

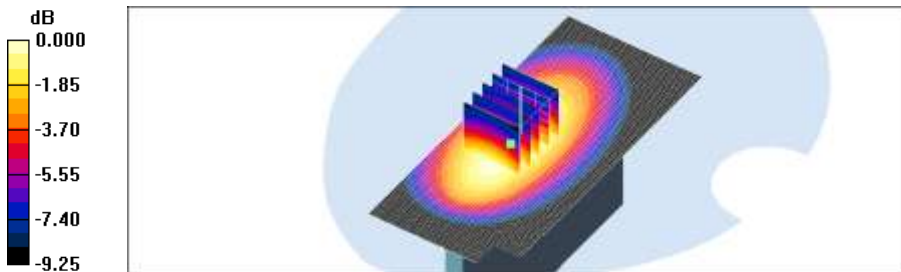
**Hotspot Body Right side QPSK 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.3 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.296 W/kg

**SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.153 mW/g**

Maximum value of SAR (measured) = 0.232 mW/g



0 dB = 0.232mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

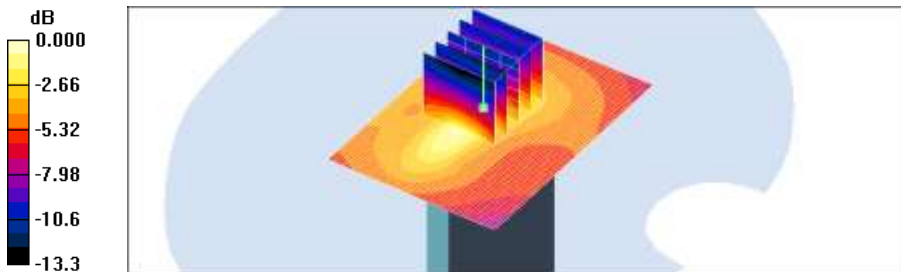
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 25RB 13offset 23790ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.060 mW/g

**Hotspot Body bottom QPSK 25RB 13offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.39 V/m; Power Drift = 0.071 dB  
Peak SAR (extrapolated) = 0.115 W/kg  
**SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.030 mW/g**  
Maximum value of SAR (measured) = 0.059 mW/g



0 dB = 0.059mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 1RB 0offset 23790ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.067 mW/g

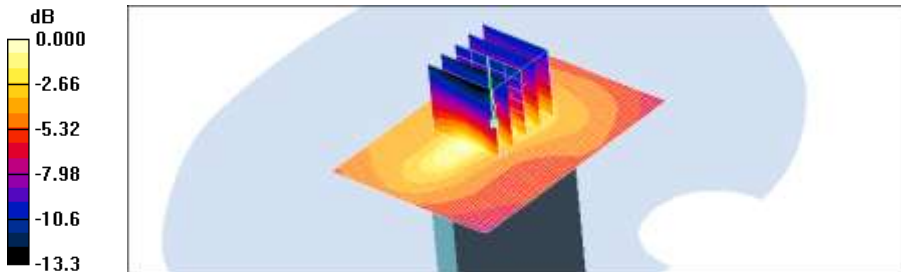
**Hotspot Body bottom QPSK 1RB 0offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.92 V/m; Power Drift = 0.107 dB

Peak SAR (extrapolated) = 0.131 W/kg

**SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.034 mW/g**

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



0 dB = 0.067mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 1RB 49offset 23790ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.079 mW/g

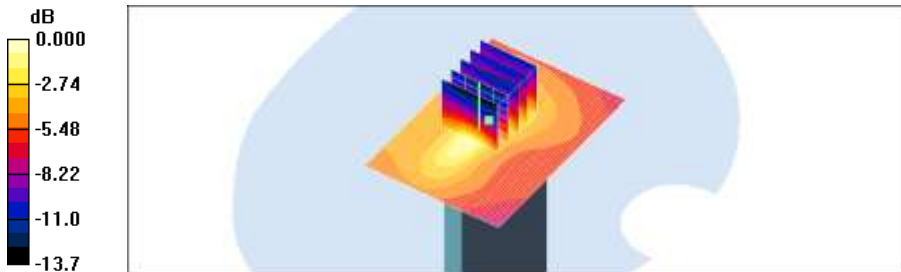
**Hotspot Body bottom QPSK 1RB 49offset 23790ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.48 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.158 W/kg

**SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.039 mW/g**

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



0 dB = 0.078mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

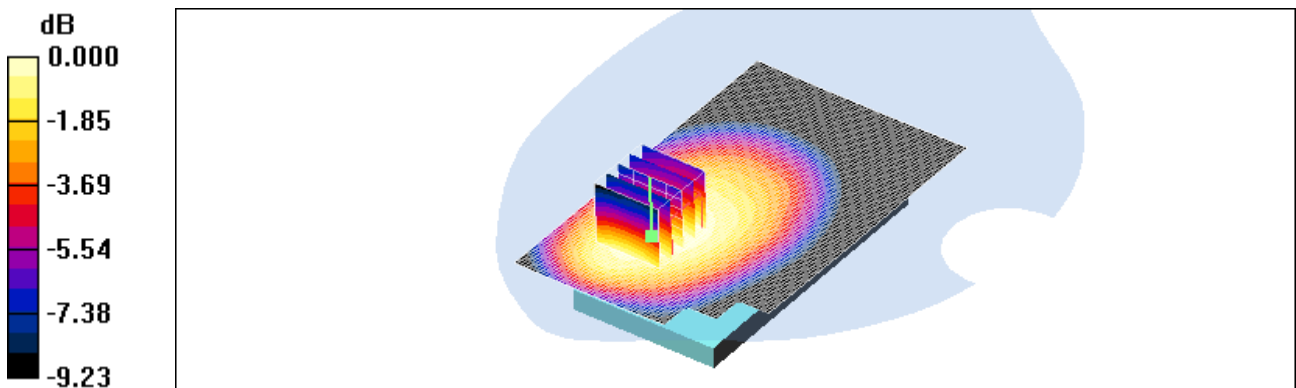
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Rear 16QAM 25RB 13 offset 23790/Area Scan (71x111x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.160 mW/g

**LTE Band 17 HotSpot Body Rear 16QAM 25RB 13 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.38 V/m; Power Drift = 0.049 dB  
Peak SAR (extrapolated) = 0.189 W/kg  
**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.116 mW/g**  
Maximum value of SAR (measured) = 0.160 mW/g



0 dB = 0.160mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Rear 16QAM 1RB 0 offset 23790/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

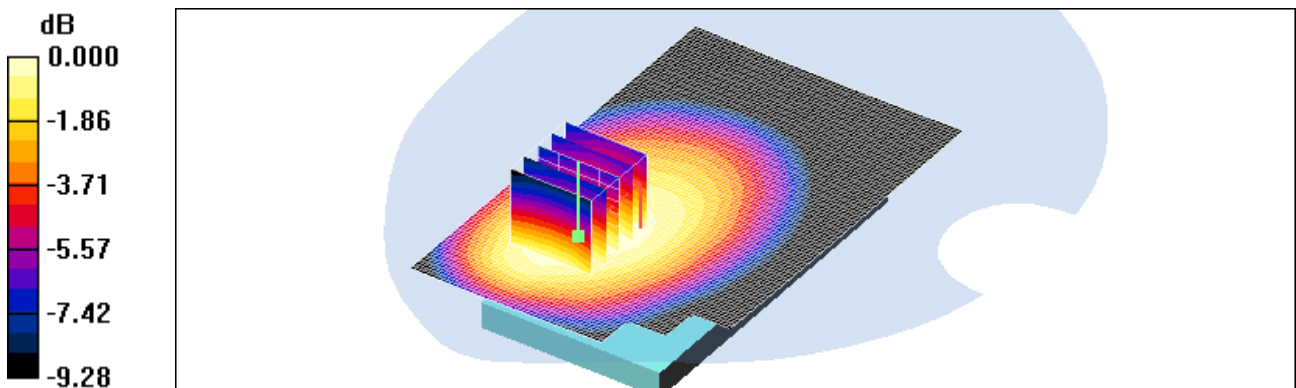
**LTE Band 17 HotSpot Body Rear 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.69 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 0.220 W/kg

**SAR(1 g) = 0.173 mW/g; SAR(10 g) = 0.131 mW/g**

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



0 dB = 0.183mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

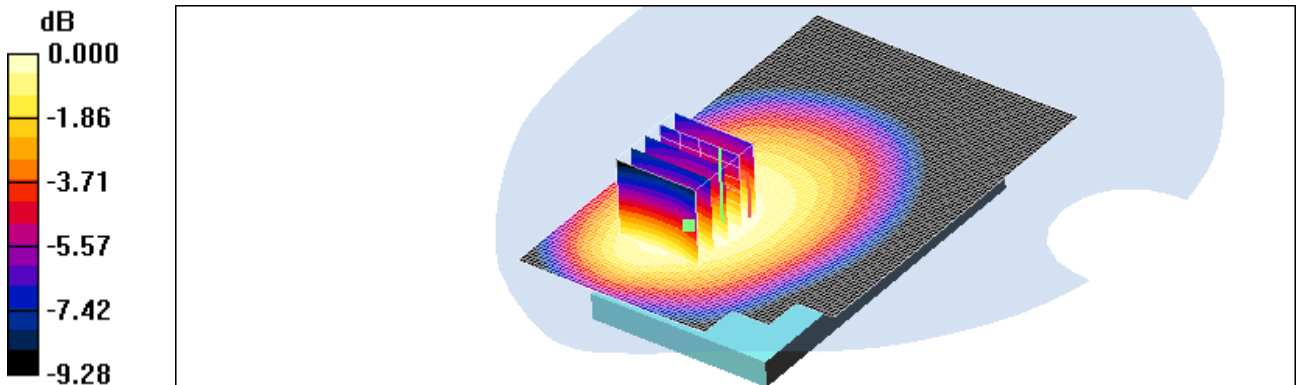
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Rear 16QAM 1RB 49 offset 23790/Area Scan (71x111x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.222 mW/g

**LTE Band 17 HotSpot Body Rear 16QAM 1RB 49 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 7.53 V/m; Power Drift = 0.082 dB  
Peak SAR (extrapolated) = 0.267 W/kg  
**SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.163 mW/g**  
Maximum value of SAR (measured) = 0.223 mW/g



0 dB = 0.223mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

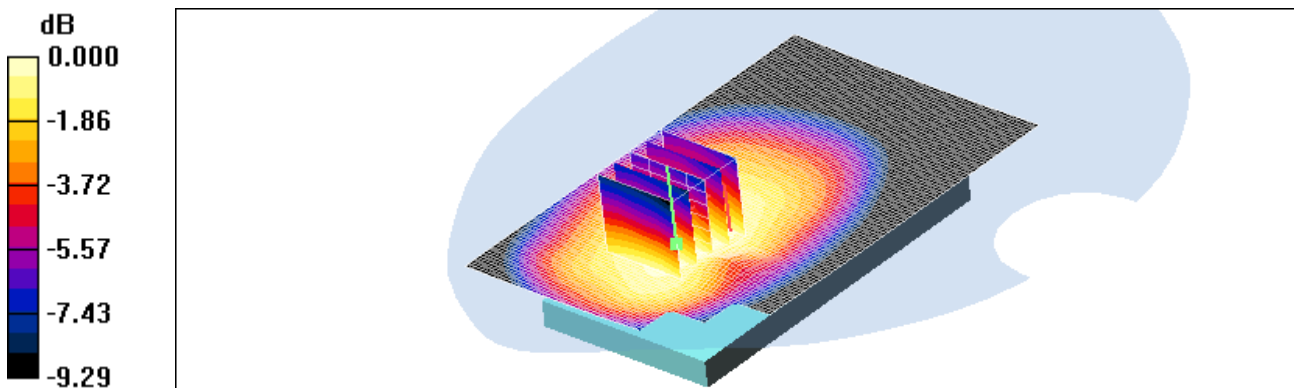
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Front 16QAM 25RB 13 offset 23790/Area Scan (71x111x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.184 mW/g

**LTE Band 17 HotSpot Body Front 16QAM 25RB 13 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.90 V/m; Power Drift = -0.097 dB  
Peak SAR (extrapolated) = 0.217 W/kg  
**SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.131 mW/g**  
Maximum value of SAR (measured) = 0.180 mW/g



0 dB = 0.180mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Front 16QAM 1RB 0 offset 23790/Area Scan (71x111x1):** Measurement grid:

$dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

**LTE Band 17 HotSpot Body Front 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

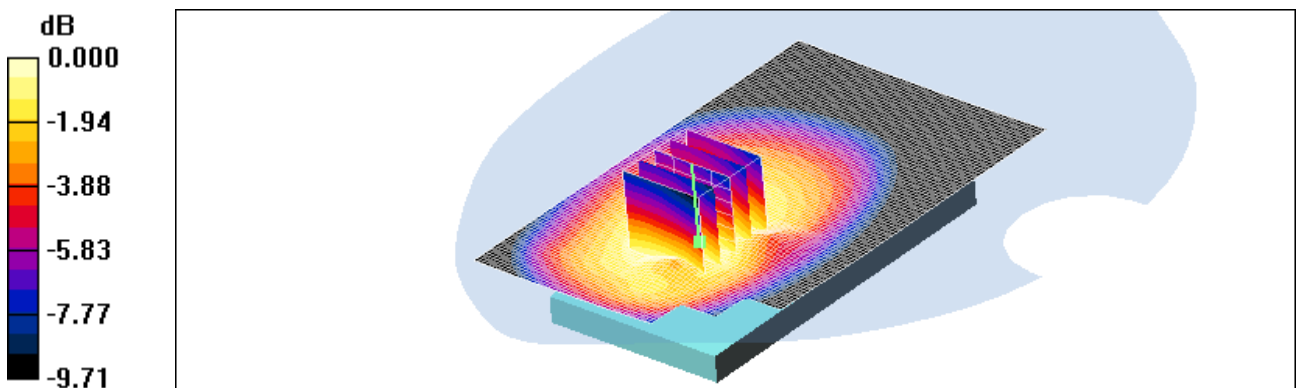
$dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.27 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.247 W/kg

**SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.153 mW/g**

Maximum value of SAR (measured) = 0.212 mW/g



0 dB = 0.212mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

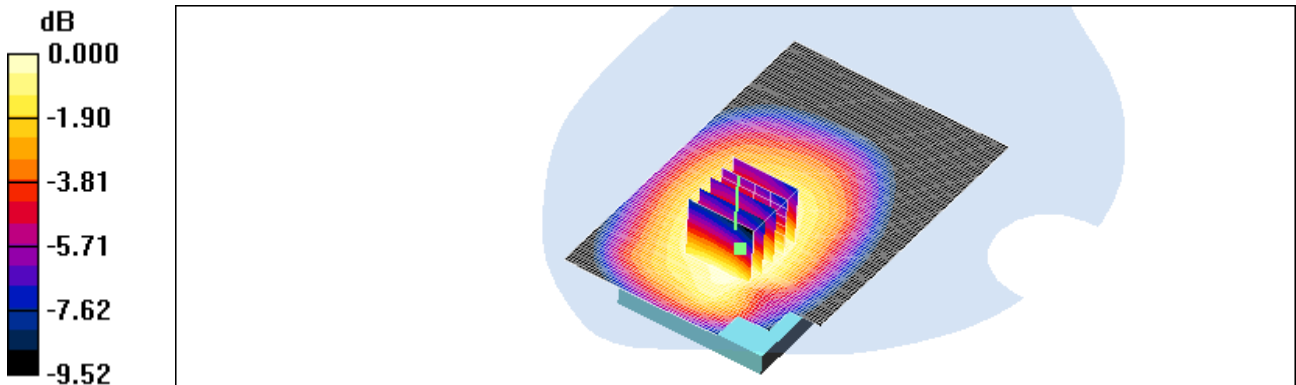
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 17 HotSpot Body Front 16QAM 1RB 49 offset 23790/Area Scan (71x111x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.258 mW/g

**LTE Band 17 HotSpot Body Front 16QAM 1RB 49 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.43 V/m; Power Drift = -0.112 dB  
Peak SAR (extrapolated) = 0.297 W/kg  
**SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.182 mW/g**  
Maximum value of SAR (measured) = 0.251 mW/g



0 dB = 0.251mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side 16QAM 25RB 13offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm

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

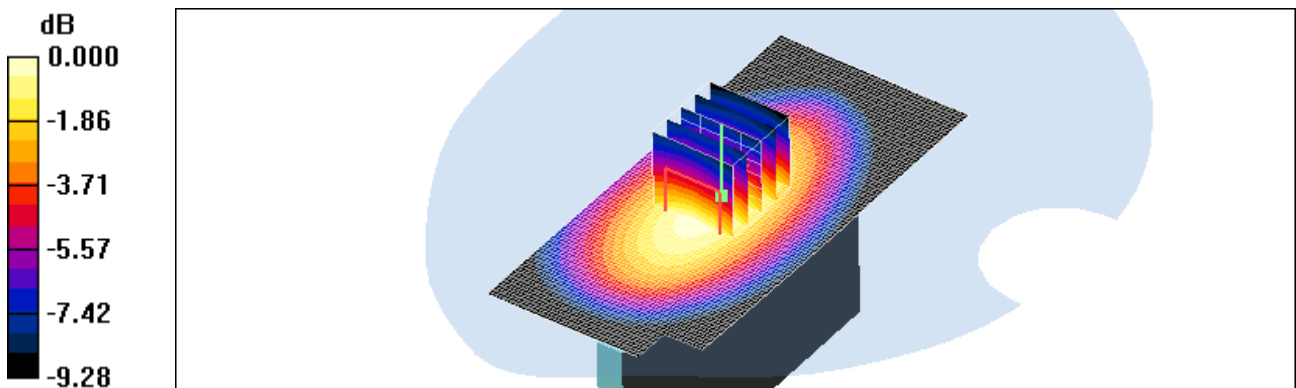
**Hotspot Body Left side 16QAM 25RB 13offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.13 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 0.156 W/kg

**SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.078 mW/g**

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



0 dB = 0.122mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

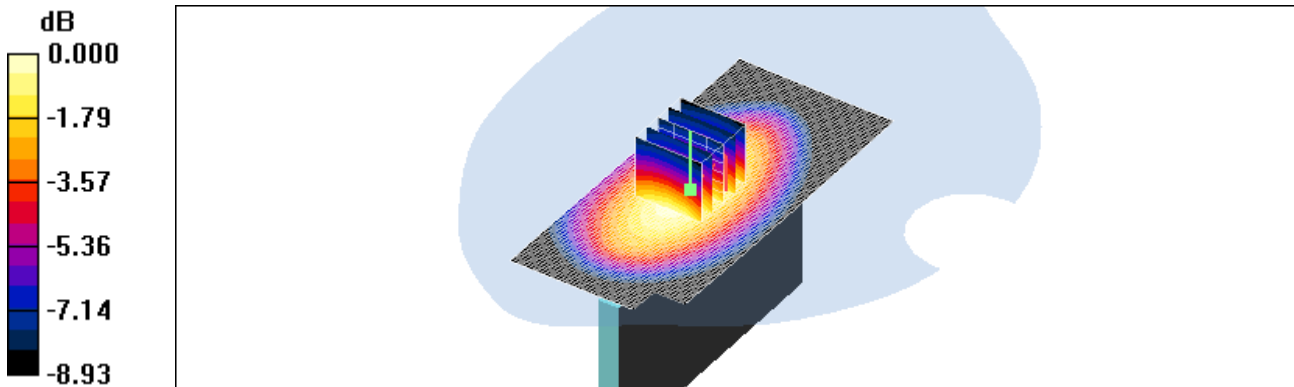
Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side 16QAM 1RB 0offset 23790/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.127 mW/g

**Hotspot Body Left side 16QAM 1RB 0offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.43 V/m; Power Drift = -0.015 dB  
Peak SAR (extrapolated) = 0.164 W/kg  
**SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.084 mW/g**  
Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

DUT: P9090; Type: bar; Serial: #1

Communication System: LTE ; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

Hotspot Body Left side 16QAM 1RB 49offset 23790/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

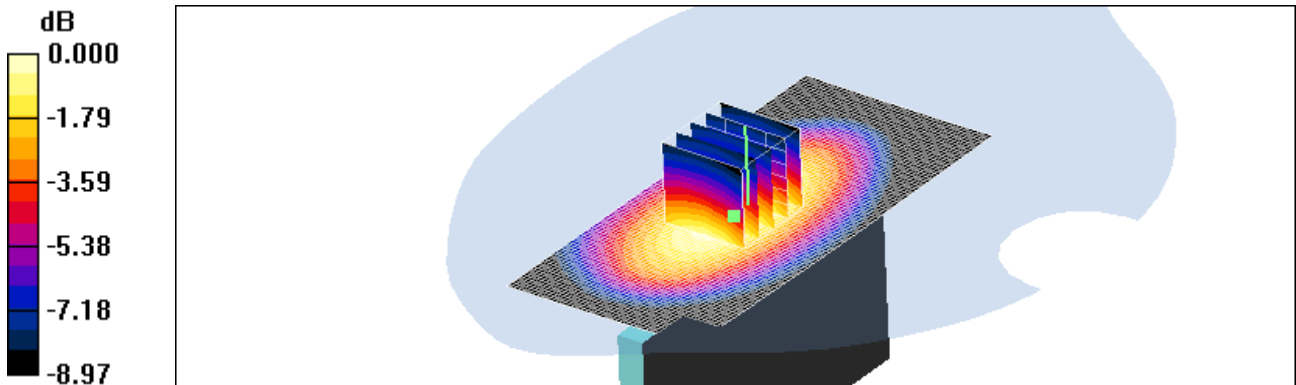
Hotspot Body Left side 16QAM 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.59 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 0.205 W/kg

**SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.106 mW/g**

Maximum value of SAR (measured) = 0.163 mW/g



0 dB = 0.163mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Band 17 Hotspot Body Right side 16QAM 25RB 13offset 23790/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.114 mW/g

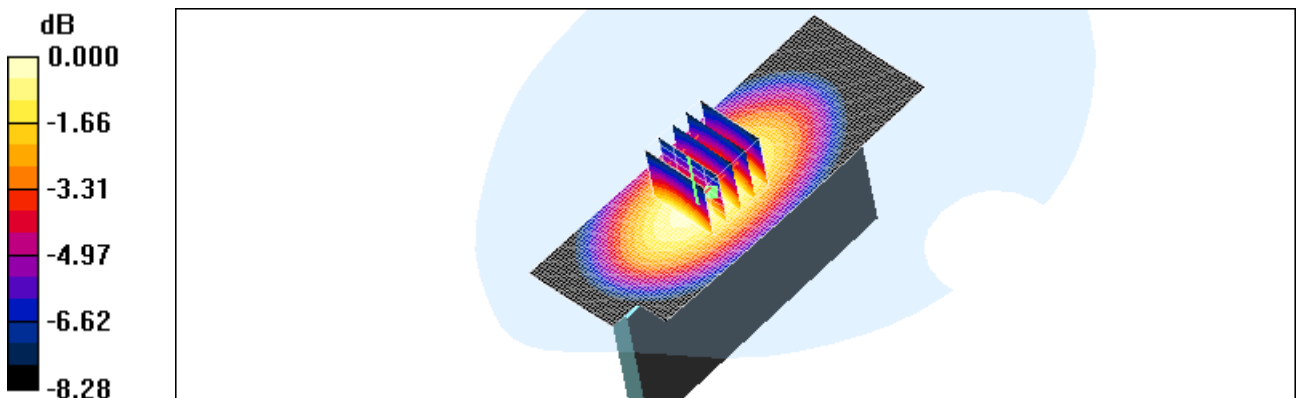
**LTE Band 17 Hotspot Body Right side 16QAM 25RB 13offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.48 V/m; Power Drift = -0.086 dB

Peak SAR (extrapolated) = 0.137 W/kg

**SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.077 mW/g**

Maximum value of SAR (measured) = 0.113 mW/g



0 dB = 0.113mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

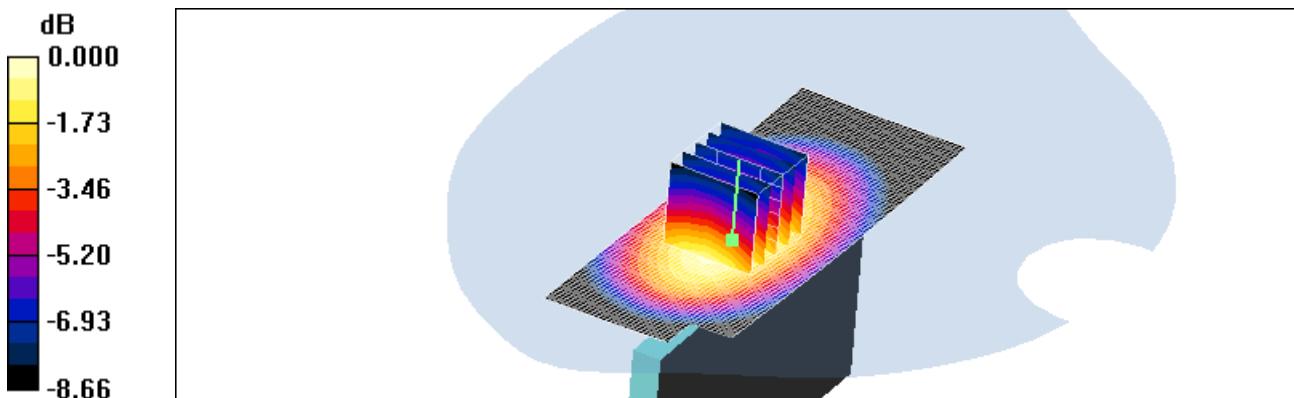
Communication System: LTE Band 17; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710$  MHz;  $\sigma = 0.934$  mho/m;  $\epsilon_r = 55.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Band 17 Hotspot Body Right side 16QAM 1RB 0 offset 23790/Area Scan (41x111x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.152 mW/g

**LTE Band 17 Hotspot Body Right side 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.51 V/m; Power Drift = 0.061 dB  
Peak SAR (extrapolated) = 0.188 W/kg  
**SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.103 mW/g**  
Maximum value of SAR (measured) = 0.154 mW/g



0 dB = 0.154mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Band 17 Hotspot Body Right side 16QAM 1RB 49offset 23790/Area Scan (41x111x1):** Measurement grid:

$dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.176 mW/g

**LTE Band 17 Hotspot Body Right side 16QAM 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

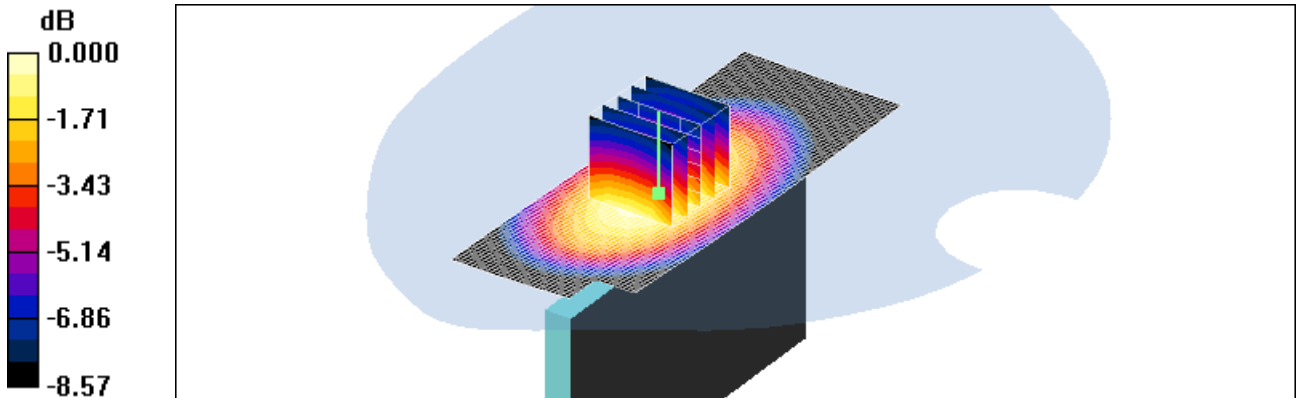
$dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 9.28 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 0.217 W/kg

**SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.117 mW/g**

Maximum value of SAR (measured) = 0.176 mW/g



0 dB = 0.176mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 17; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Bans 17 Hotspot Body bottom 16QAM 25RB 13 offset 23790/Area Scan (41x71x1):** Measurement grid:  
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.043 mW/g

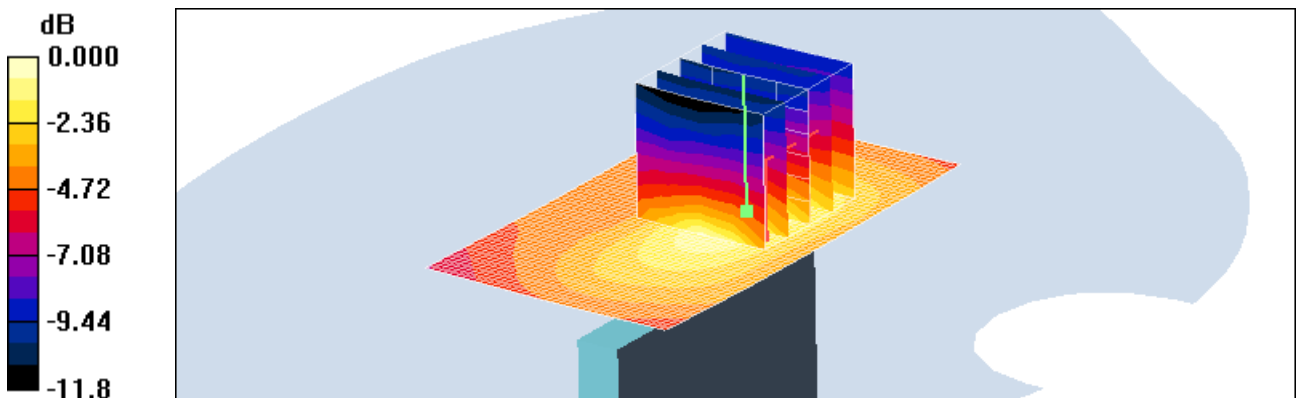
**LTE Bans 17 Hotspot Body bottom 16QAM 25RB 13 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.40 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 0.092 W/kg

**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.026 mW/g**

Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

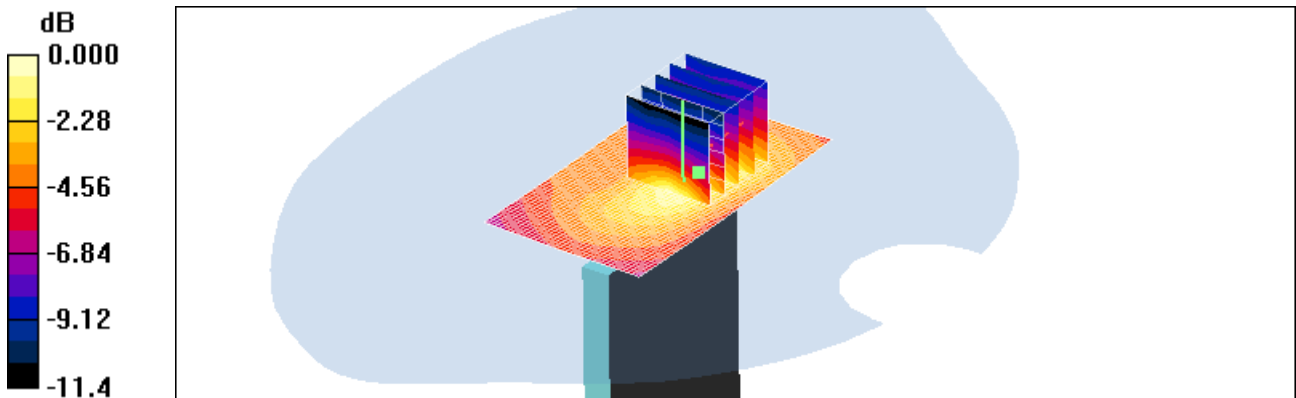
Communication System: LTE Band 17; Frequency: 710 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 710$  MHz;  $\sigma = 0.934$  mho/m;  $\epsilon_r = 55.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Bans 17 Hotspot Body bottom 16QAM 1RB 0 offset 23790/Area Scan (41x71x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.035 mW/g

**LTE Bans 17 Hotspot Body bottom 16QAM 1RB 0 offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 5.69 V/m; Power Drift = -0.054 dB  
Peak SAR (extrapolated) = 0.069 W/kg  
**SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.021 mW/g**  
Maximum value of SAR (measured) = 0.039 mW/g



0 dB = 0.039mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.3 °C  
Ambient Temperature: 21.5 °C  
Test Date: Jun.14, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

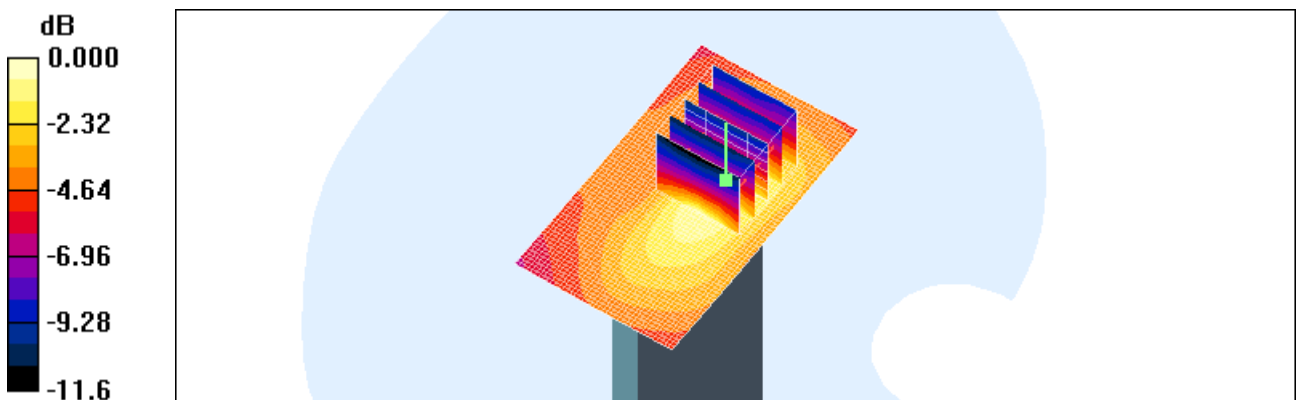
Communication System: LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 710 \text{ MHz}$ ;  $\sigma = 0.934 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.38, 6.38, 6.38); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: SAM 1800/1900 MHz; Type: SAM

**LTE Bans 17 Hotspot Body bottom 16QAM 1RB 49offset 23790/Area Scan (41x71x1):** Measurement grid:  
dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.045 mW/g

**LTE Bans 17 Hotspot Body bottom 16QAM 1RB 49offset 23790/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 6.29 V/m; Power Drift = 0.085 dB  
Peak SAR (extrapolated) = 0.094 W/kg  
**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.027 mW/g**  
Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Rear QPSK 25RB 13offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**LTE Band 5 HotSpot Body Rear QPSK 25RB 13offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

dx=8mm, dy=8mm, dz=5mm

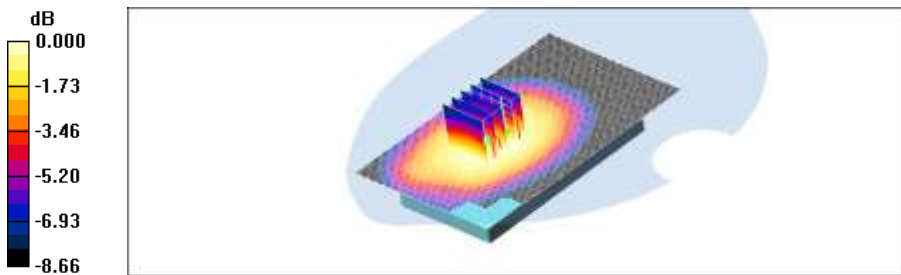
Reference Value = 7.55 V/m; Power Drift = -0.186 dB

Peak SAR (extrapolated) = 0.245 W/kg

**SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.149 mW/g**

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

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



0 dB = 0.209mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Rear QPSK 1RB 0offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.288 mW/g

**LTE Band 5 HotSpot Body Rear QPSK 1RB 0offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

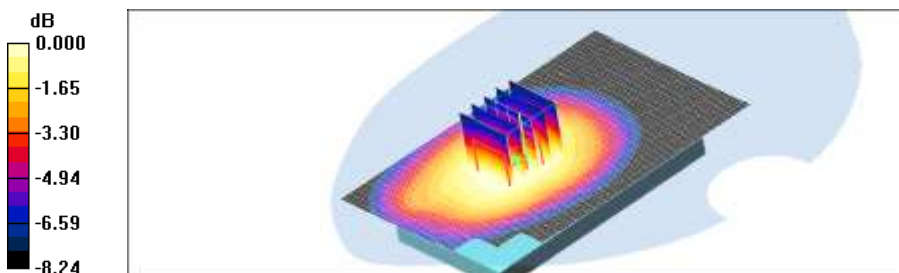
Reference Value = 8.45 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 0.333 W/kg

**SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.206 mW/g**

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

Maximum value of SAR (measured) = 0.282 mW/g



0 dB = 0.282mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Rear QPSK 1RB 49offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**LTE Band 5 HotSpot Body Rear QPSK 1RB 49offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

dx=8mm, dy=8mm, dz=5mm

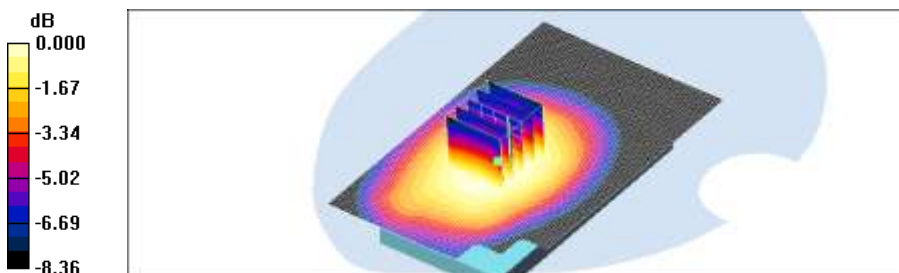
Reference Value = 7.78 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 0.247 W/kg

**SAR(1 g) = 0.198 mW/g; SAR(10 g) = 0.148 mW/g**

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

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



0 dB = 0.207mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Front QPSK 25RB 13 offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.165 mW/g

**LTE Band 5 HotSpot Body Front QPSK 25RB 13 offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

dx=8mm, dy=8mm, dz=5mm

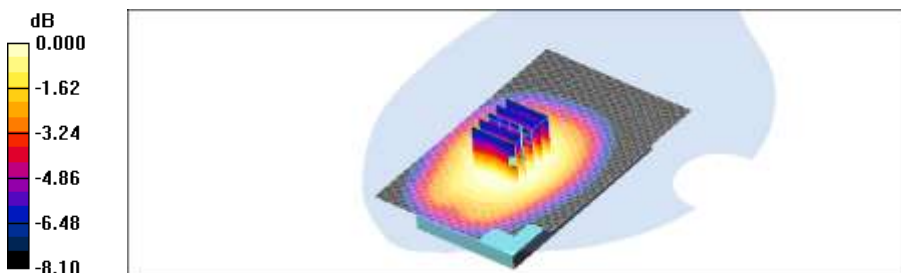
Reference Value = 7.42 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 0.186 W/kg

**SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.114 mW/g**

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

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



0 dB = 0.157mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Front QPSK 1RB 0 offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.282 mW/g

**LTE Band 5 HotSpot Body Front QPSK 1RB 0 offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

dx=8mm, dy=8mm, dz=5mm

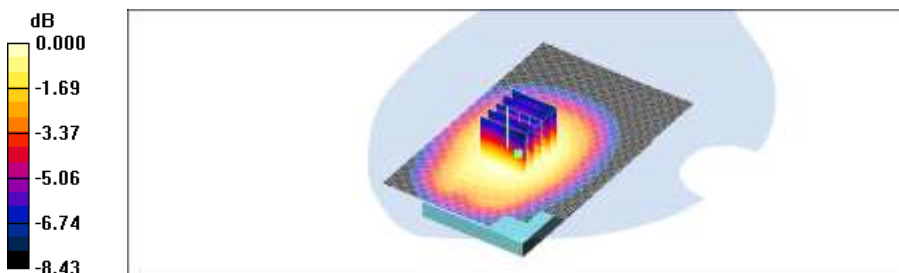
Reference Value = 9.73 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.316 W/kg

**SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.200 mW/g**

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

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



0 dB = 0.280mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Front QPSK 1RB 49 offset 20525/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.200 mW/g

**LTE Band 5 HotSpot Body Front QPSK 1RB 49 offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

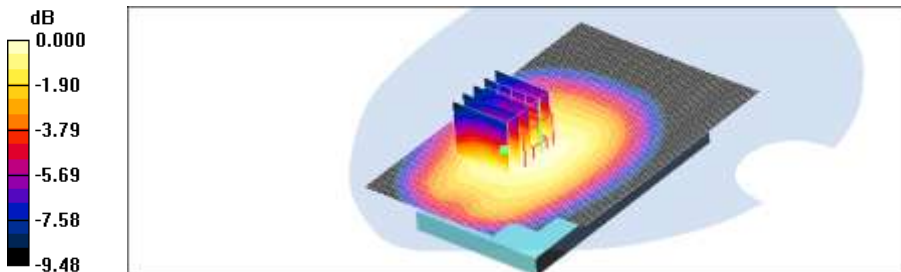
dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.14 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.254 W/kg

**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.151 mW/g**

Maximum value of SAR (measured) = 0.217 mW/g



0 dB = 0.217mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 25RB 13offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.299 mW/g

**Hotspot Body Left side QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

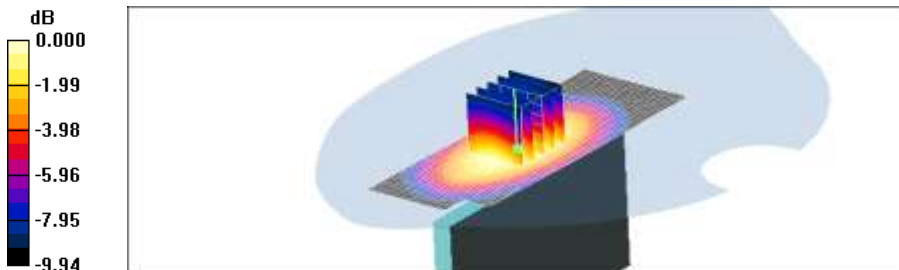
Reference Value = 10.5 V/m; Power Drift = 0.183 dB

Peak SAR (extrapolated) = 0.372 W/kg

**SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.180 mW/g**

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

Maximum value of SAR (measured) = 0.288 mW/g



0 dB = 0.288mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 1RB 0offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.366 mW/g

**Hotspot Body Left side QPSK 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

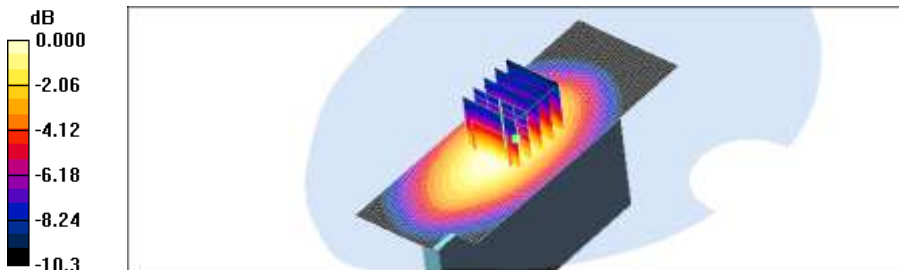
Reference Value = 11.7 V/m; Power Drift = -0.173 dB

Peak SAR (extrapolated) = 0.450 W/kg

**SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.221 mW/g**

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

Maximum value of SAR (measured) = 0.357 mW/g



0 dB = 0.357mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Left side QPSK 1RB 49offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.286 mW/g

**Hotspot Body Left side QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

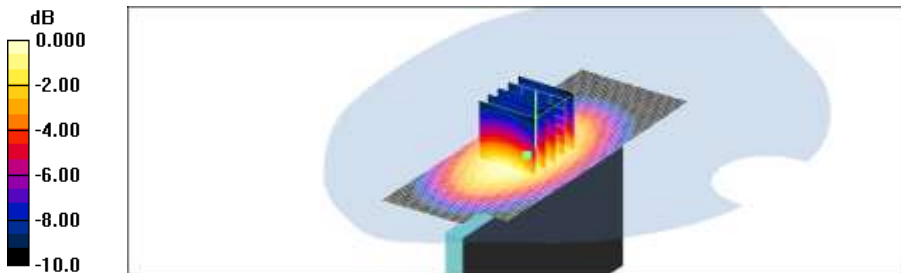
Reference Value = 11.0 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.365 W/kg

**SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.181 mW/g**

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

Maximum value of SAR (measured) = 0.287 mW/g



0 dB = 0.287mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 25RB 13offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.246 mW/g

**Hotspot Body Right side QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

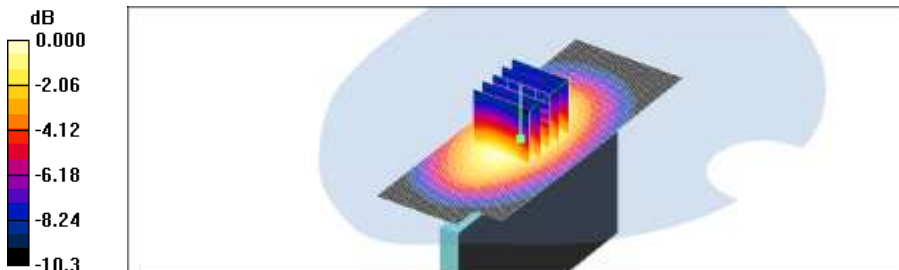
Reference Value = 10.5 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.314 W/kg

**SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.156 mW/g**

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

Maximum value of SAR (measured) = 0.244 mW/g



0 dB = 0.244mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 1RB 0offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

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

**Hotspot Body Right side QPSK 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

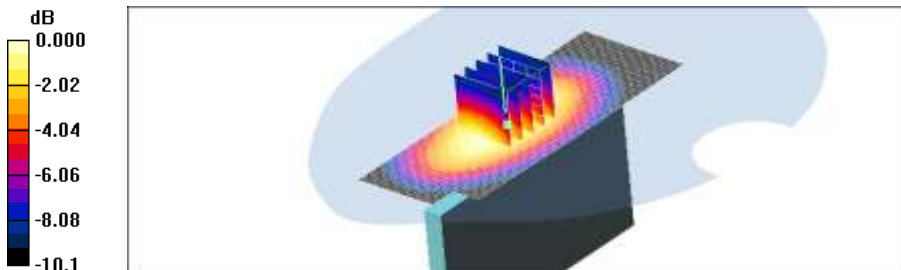
Reference Value = 11.2 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.388 W/kg

**SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.192 mW/g**

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

Maximum value of SAR (measured) = 0.302 mW/g



0 dB = 0.302mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body Right side QPSK 1RB 49offset 20525ch/Area Scan (41x111x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.227 mW/g

**Hotspot Body Right side QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

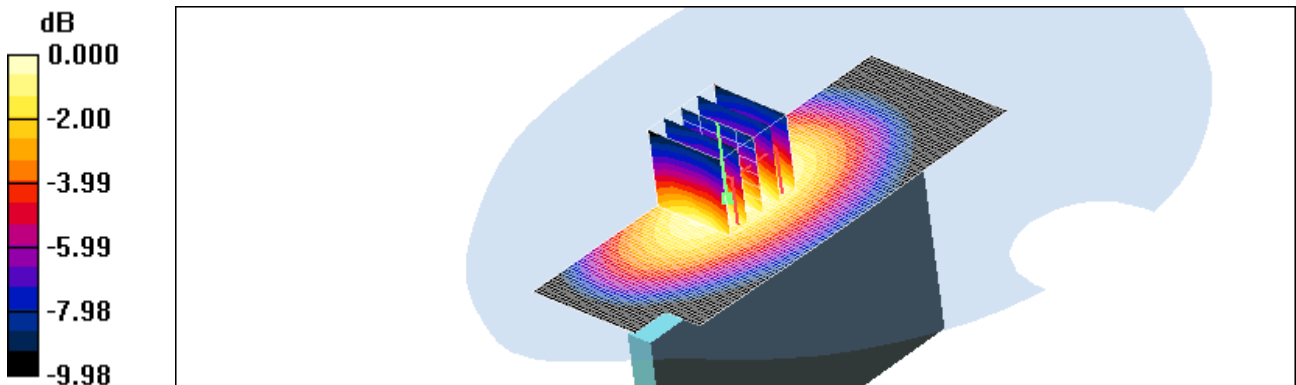
Reference Value = 8.87 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.274 W/kg

**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.141 mW/g**

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

Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.218mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 25RB 13offset 20525ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.045 mW/g

**Hotspot Body bottom QPSK 25RB 13offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

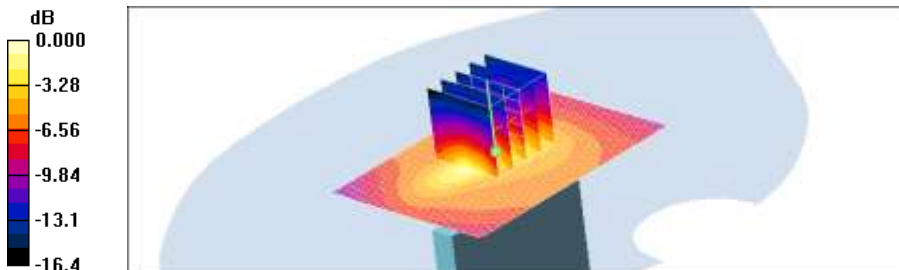
Reference Value = 6.68 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.090 W/kg

**SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.020 mW/g**

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

Maximum value of SAR (measured) = 0.047 mW/g



0 dB = 0.047mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 1RB 0offset 20525ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.057 mW/g

**Hotspot Body bottom QPSK 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

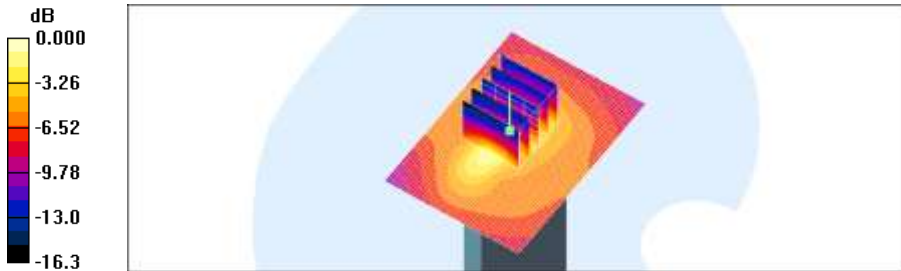
Reference Value = 7.44 V/m; Power Drift = 0.137 dB

Peak SAR (extrapolated) = 0.112 W/kg

**SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.026 mW/g**

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

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



0 dB = 0.058mW/g

Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

## DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**Hotspot Body bottom QPSK 1RB 49offset 20525ch/Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.050 mW/g

**Hotspot Body bottom QPSK 1RB 49offset 20525ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

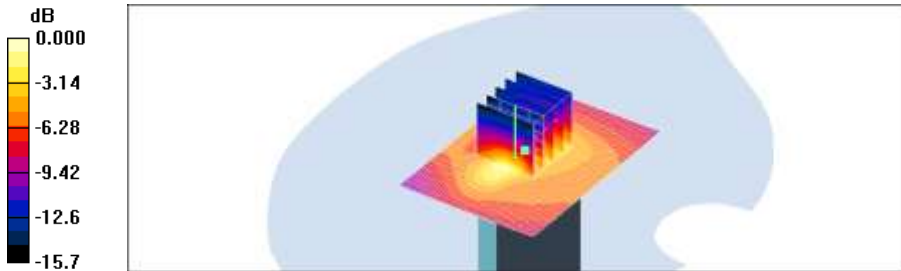
Reference Value = 6.97 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.101 W/kg

**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.023 mW/g**

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

Maximum value of SAR (measured) = 0.050 mW/g



0 dB = 0.050mW/g



Test Laboratory: HCT CO., LTD  
EUT Type: 850/1900 GSM/GPRS/EDGE/WCDMA Phone with Bluetooth/WLAN/NFC  
Liquid Temperature: 21.1 °C  
Ambient Temperature: 21.3 °C  
Test Date: Jun.15, 2012  
Separation Distance 1.0 cm

**DUT: P9090; Type: bar; Serial: #1**

Communication System: LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(6.24, 6.24, 6.24); Calibrated: 2012-03-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: 835/900 Phantom ; Type: SAM

**LTE Band 5 HotSpot Body Rear 16QAM 25RB 13offset 20525/Area Scan (71x111x1):** Measurement grid:  
dx=15mm, dy=15mm

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

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

**LTE Band 5 HotSpot Body Rear 16QAM 25RB 13offset 20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm

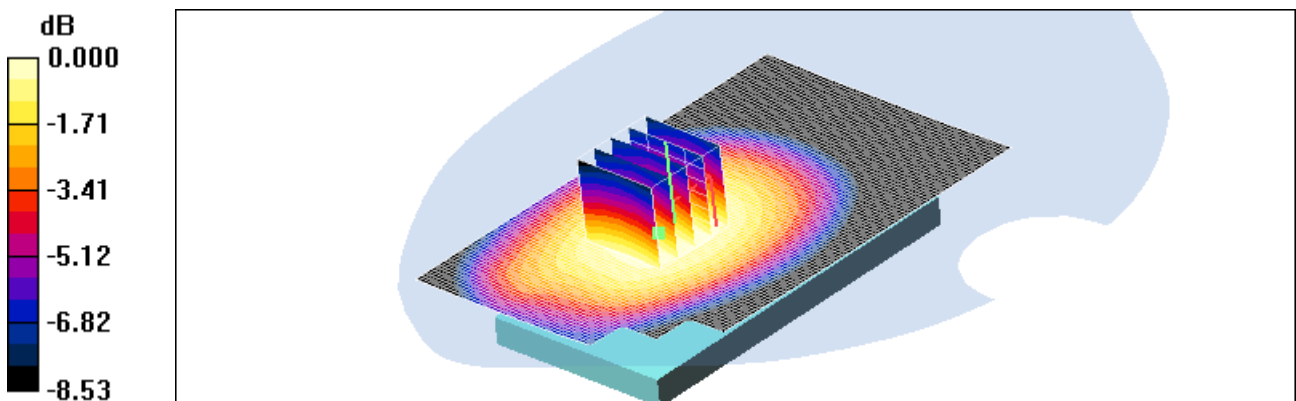
Reference Value = 6.62 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.182 W/kg

**SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.115 mW/g**

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

Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g