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No.L1659

ShenZhen Electronic Product Quality Testing Center

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SZ_AWG_0504_F_a

FCC ID: S63MRBSC528

Advanced Wireless Group Limited

GSM/GPRS 850/1900 MHz Terminal Equipment

Type Name: SC528

Hardware Version: 86512201_REV1.0
Software Version: 5AX1BCEZZ0205V4.14

Date of Issue: 2005-4-7

OFTA 電訊管理局

MORLAB

GCF Official Observer of Global Certification Forum

GSM GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS

GENERAL SUMMARY

Product Name	SC528	Development Stage	MP
Standard(s)	**OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01):** Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields: **EN 50360–2001:** Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones. **EN 50361–2001:** Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones. **ANSI C95.1–1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. **IEEE 1528–2003:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.		
Conclusion	Localized Specific Absorption Rate (SAR) of this portable wireless equipment has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report. General Judgment: **Pass** **Date of issue: Apr 7th, 2005**		
Comment	TX Freq. Band: 869 to 894 MHz. (GSM) 1850–1910MHz (PCS) Max. Power (ERP): 25.74 dBm (Cellular); 27.53 dBm (PCS) Antenna Character : 23mm The test result only responds to the measured sample.		

Project Leader
(Responsible for the Test Report)

Deputy Project leader
(Verification of the Test Report)

Test Lab Manger

Contents

This Test Report consists of the following Annexes:

1. GENERAL CONDITIONS

1.1 This report only refers to the item that has undergone the test.

1.2 This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities.

1.3 This document is only valid if complete; no partial reproduction can be made without written approval of Telecommunication Metrology Center of Ministry of Information Industry.

1.4 This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of Morlab and the Accreditation Bodies, if it applies.

2. Administrative Date

2.1. Identification of the Responsible Testing Laboratory

Company Name:	Morlab
Department:	Mobile Communication
Address:	3FL,Electronic Testing Building, ShaHe Road, NanShan District, ShenZhen, P. R. China
Telephone:	+86-0755-86130318
Fax:	+86-0755-86130218
Responsible Test Lab Managers:	Mr. Wang Keqin

2.2. Identification of the Responsible Testing Location(s)

Company Name:	Morlab
Address:	3FL, Electronic Testing Building, ShaHe Road, NanShan District, ShenZhen, P. R. China

2.3. Organization Item

Morlab Report No.:	SZ_AWG_0504_F_a
Morlab Project Leader:	Mr. Xue Zhen
Morlab Responsible for accreditation scope:	Mr. Wang Keqin
Start of Testing:	2005-3-16
End of Testing:	2005-4-4

2.4. Identification of Applicant

Company Name:	Advanced Wireless Group Limited
Address:	Suite 2013, 20F., West Wing Grandtech Centre, 8 On Ping Street, Shaitin, N.T. Hong Kong
Contact person:	Mr. Stephen HO
Telephone:	(+86) 755-2794 2851
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2.5. Identification of Manufacture

Company Name:	Advanced Wireless Group Limited
Address:	Suite 2013, 20F., West Wing Grandtech Centre, 8 On Ping Street, Shaitin, N.T. Hong Kong
Contact person:	Mr. Stephen HO
Telephone:	(+86) 755-2794 2851
Fax:	(+86) 755-2794 2555

Notes: This data is based on the information by the applicant.

3. Equipment Under Test (EUT)

3.1. Identification of the Equipment under Test

Brand Name: Advanced Wireless Group Limited
Type Name: SC528
Marking Name: SC528
GSM Frequency Bands: GSM 850/1900
General Description: GSM 850/1900 Quad Band handset; GSM features: SMS; GPRS

3.2. Identification of all used Test Sample of the Equipment under Test

EUT Code	Serial Number	Hardware Version	Software Version	IMEI
18040a01	01	86512201_REV1.0	5AX1BCEZZ0205V4.14	000000000000000
18040b01	01	86512201_REV1.0	5AX1BCEZZ0205V4.14	000000000000000

4 OPERATIONAL CONDITIONS DURING TEST

4.1. Schematic Test Configuration

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.

The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 189 and 251 respectively in the case of GSM 850 MHz, or to 1, 62 and 123 respectively in the case of GSM 900 MHz, or to 512, 700 and 885 respectively in the case of DCS 1800 MHz. or to 513, 661 and 809 respectively in the case of PCS 1900 MHz. The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.

The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 30 dB.

4.2. DASY4 E-FIELD PROBE SYSTEM

Probe Measurement System

Figure 3.1 DAE System

The SAR measurements were conducted with the dosimetric probe ET3DV6, designed in the classical triangular configuration [7] (see Fig. 3.2) 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 (see Fig. 3.3). It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY4 software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting (see Fig.3.1). The approach is stopped at reaching the maximum.

Probe Specifications

Calibration: In air from 10 MHz to 6 GHz
In brain and muscle simulating tissue at
Frequencies of 835 MHz, 900 MHz, 1900MHz, 2450MHz,

Frequency: 10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)

Directivity: ± 0.2 dB in HSL (rotation around probe axis)
± 0.4 dB in HSL (rotation normal probe axis)

Dynamic: 5 :W/g to > 100 mW/g;

Range: Linearity: ± 0.2 dB

Dimensions: Overall length: 330 mm
Tip length: 16 mm
Body diameter: 12 mm
Tip diameter: 3 mm
Distance from probe tip to dipole centers: 2 mm

Application: General dosimetry up to 6 GHz
Compliance tests of mobile phones

Fast automatic scanning in arbitrary phantoms

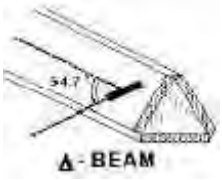


Figure 3.1 Triangular Probe Configuration

Figure 3.2 Probe Thick-Film Technique

4.3. Probe Calibration Process

Dosimetric Assessment Procedure

Each probe is calibrated according to a dosimetric assessment procedure described in [8] with accuracy better than +/- 10%. The spherical isotropy was evaluated with the procedure described in [9] and found to be better than +/-0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe is tested.

Free Space Assessment

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz (see Fig. 4.1), 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 at the proper orientation with the field. The probe is then rotated 360 degrees.

Temperature Assessment *

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 (see Fig. 4.2).

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

where:

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

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

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

where:

σ = simulated tissue conductivity,

ρ = Tissue density (1.25 g/cm^3 for brain tissue)

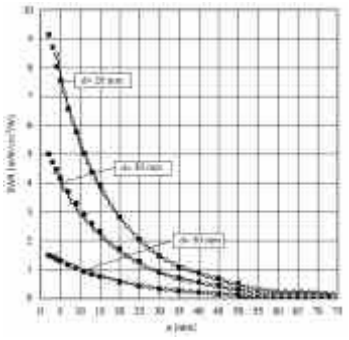


Figure 4.1 E-Field and Temperature measurements at 900MHz [7]

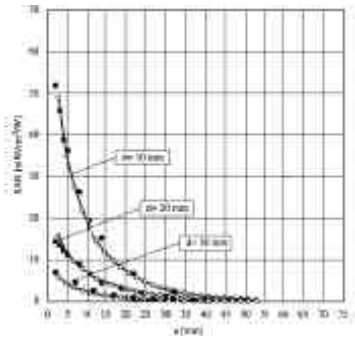


Figure 4.2 E-Field and temperature measurements at 1.9GHz [7]

**NOTE: The temperature calibration was not performed by PCTEST. For information use only.*

4.4 Data Extrapolation

The DASY3 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. Thecompensation depends on the input signal, the diode type and the DC-transmission factor from the diode
to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as :

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

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

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

E-field probes:

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

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

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

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

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

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

with
SAR = local specific absorption rate in W/g
E_{tot} = total field strength in V/m
σ = conductivity in [mho/m] or [Siemens/m]
ρ = equivalent tissue density in g/cm^3

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

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

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

4.5. PHANTOM & EQUIVALENT TISSUES

SAM Phantom

Figure 5.1 SAM Twin Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users [11][12]. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. (see Fig. 5.1)

Brain & Muscle Simulating Mixture Characterization

Figure 5.2 Simulated Tissue

The brain and muscle mixtures consist of a viscous gel using hydroxethylcellullose (HEC) gelling agent and saline solution (see Table 6.1). Preservation with a bacteriacide 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 head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following table. Other head and body tissue parameters that have not bee specified in P1528 are derived from the issue dielectric parameters computed from the 4-Cole-Cole equations The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Hartsgrove [13].(see Fig. 5.2)

Table 5.1 Composition of the Brain & Muscle Tissue Equivalent Matter

		SIMULATING TISSUE			
INGREDIENTS		835MHz Brain	835MHz Muscle	1900MHz Brain	1900MHz Muscle
Mixture Percentage					
WATER		41.45	52.50	54.90	40.40
DGBE		0.000	0.000	44.92	0.000
SUGAR		56.00	45.00	0.000	58.00
SALT		1.450	1.400	0.180	0.500
BACTERIACIDE		0.100	0.100	0.000	0.100
HEC		1.000	1.000	0.000	1.000
Dielectric Constant	Target	41.50	55.20	40.00	53.30
Conductivity (S/m)	Target	0.900	0.970	1.400	1.520

Device Holder for Transmitters

Figure 5.2 Mounting Device

In combination with the SAM Twin Phantom V4.0, the Mounting Device (see Fig. 5.2) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation point is the ear opening. The devices can be easily, accurately, and repeatably be positioned according to the FCC 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 infinite number of configurations [12]. To produce the worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

4.6. TEST SYSTEM SPECIFICATIONS

Automated Test System Specifications

Positioner

Robot: Stäubli Unimation Corp. Robot Model: RX60L
Repeatability: 0.02 mm
No. of axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Pentium 4
Clock Speed: 2.53 GHz
Operating System: Windows XP Professional

Data Converter

Features: Signal Amplifier, multiplexer, A/D converter, &control logic
Software: DASY4 software
Connecting Lines: Optical downlink for data and status info.
Optical uplink for commands and clock

Figure 6.1 DASY4 Test System

PC Interface Card

Function: 24 bit (64 MHz) DSP for real time processing
Link to DAE3
16 bit A/D converter for surface detection system
serial link to robot
direct emergency stop output for robot

E-Field Probes

Model: ES3DV2 S/N: 3022
Construction: Triangular core
Frequency: 10 MHz to 6 GHz
Linearity: ± 0.2 dB (30 MHz to 6 GHz)

Phantom

Phantom: SAM Twin Phantom (V4.0)
Shell Material: VIVAC Composite
Thickness: 2.0 ± 0.2 mm

4.7. DOSIMETRIC ASSESSMENT & PHANTOM SPECS

Measurement Procedure

The evaluation was performed using the following procedure:

1. The SAR measurement was taken at a selected spatial reference point to monitor power variations during testing. This fixed location point was measured and used as a reference value.

2. The SAR distribution at the exposed side of the head was measured at a distance of 3.9mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15mm x 15mm.

3. Based on the area scan data, the area of the maximum absorption was determined by spline interpolation. Around this point, a volume of 32mm x 32mm x 34mm (fine resolution volume scan, zoom scan) was assessed by measuring 7 x 7 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see Fig. 7.1):

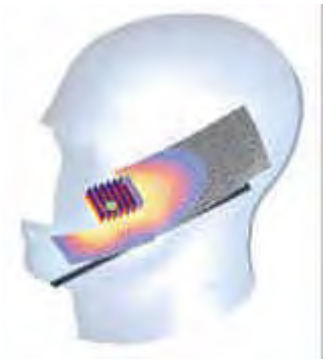


Figure 7.1 Sample SAR Area Scan

a. The data at the surface was extrapolated, since the center of the dipoles is 2.7mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. The extrapolation was based on a least square algorithm [15]. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) 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) [15][16]. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10x 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 reference value, at the same location as procedure #1, was remeasured. If the value changed by more than 5%, the evaluation is repeated.

Specific Anthropomorphic Mannequin (SAM) Specifications

The phantom for handset SAR assessment testing is a low-loss dielectric shell, with shape and dimensions derived from the anthropometric data of the 90th percentile adult male head dimensions as tabulated by the US Army. The SAM Twin Phantom shell is bisected along the mid-sagittal plane into right and left halves (see Fig. 7.2). The perimeter sidewalls of each phantom halves are extended to allow filling with liquid to a depth that is sufficient to minimized reflections from the upper surface. The liquid depth is maintained at a minimum depth of 15cm to minimize reflections from the upper surface.

Figure 7.2 SAM Twin Phantom shell

4.8. DEFINITION OF REFERENCE POINTS

EAR Reference Point

Figure 8.1 shows the front, back and side views of the SAM Twin Phantom. The point "M" is the reference point for the center of the mouth, "LE" is the left ear reference point (ERP), and "RE" is the right ERP. The ERPs are 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 9.2. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front) is perpendicular to the reference plane and passing through the RE (or LE) is called the Reference Pivoting Line (see Figure 8.2). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

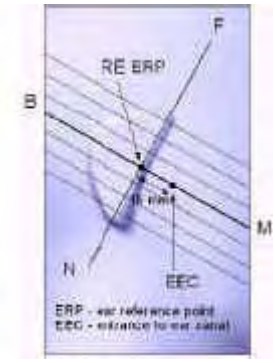


Figure 8.2 Close-up side view of ERPs

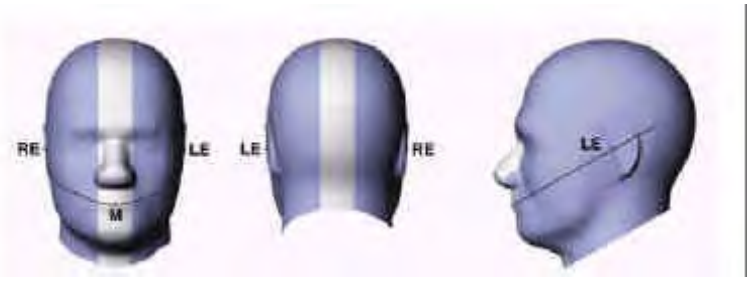


Figure 8.1 Front, back and side view of SAM Twin Phantom

Handset Reference Points

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Fig. 8.3). The "test device reference point" was than located at the same level as the center of the ear reference point. The test device was positioned so that the "vertical centerline" was bisecting the front surface of the handset at it's top and bottom edges, positioning the "ear reference point" on the outer surface of the both the left and right head phantoms on the ear reference point.

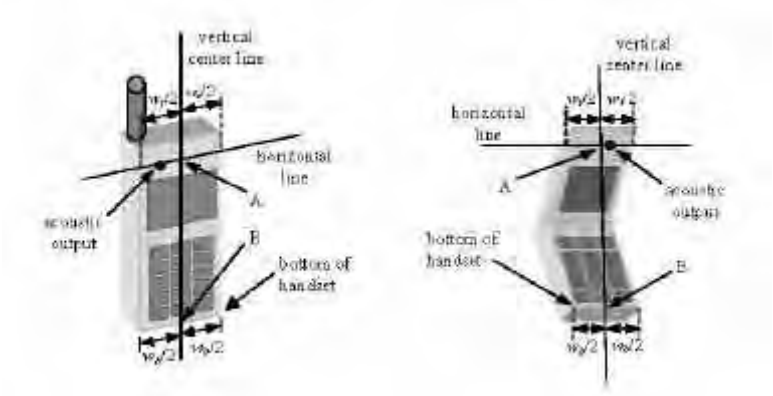


Figure 8.3 Handset Vertical Center & Horizontal Line Reference Points

4.9. SAR Measurement Set-up

These measurements were performed with the automated near-field scanning system DASY4 from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot (working range greater than 0.9m) which positions the probes with a positional repeatability of better than ± 0.02mm. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines (length =300mm) to the data acquisition unit.

A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the Micron Pentium III 800 MHz computer with Windows 2000 system and SAR Measurement Software DASY4, A/D interface card, monitor, mouse, and keyboard. The Stäubli 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.

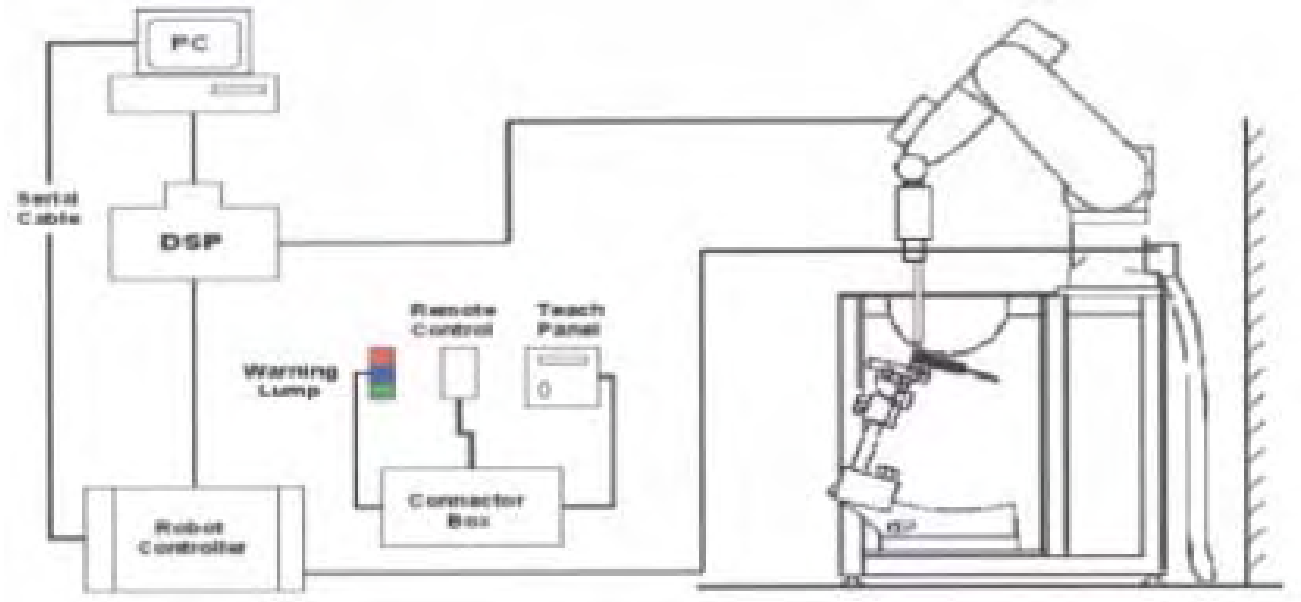


Figure2. SAR Lab Test Measurement Set-up

The DAE3 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.

5. CHARACTERISTICS OF THE TEST

5.1 Applicable Limit Regulations

EN 50360–2001: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

It specifies the maximum exposure limit of **2.0 W/kg** as averaged over any 10 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

EN 50361–2001: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

IEEE 1528–2003: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.

They specify the measurement method for demonstration of compliance with the SAR limits for such equipments.

6 LABORATORY ENVIRONMENT

Table: The Ambient Conditions during SAR Test

Temperature	Min. = 15 ° C, Max. = 30 ° C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

7 TEST RESULTS

7.1 Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Tables 1 and 2 respectively. The humidity and ambient temperature of test facility were 44.2% - 40.5% and 22.7 °C – 24.5 °C respectively. The depth of the head tissue simulating liquid was 15.1cm and of the muscle tissue simulating liquid was 15.5cm. A base station simulator was used to control the device during the SAR measurement. The phone was supplied with full-charged battery for each measurement.

For head measurement, the device was tested on the right-hand phantom (corresponding to the right side of the head) and the left-hand phantom in two phone position, cheek (touch) and tilt (cheek + 15deg). The device was tested at the lowest, middle and highest frequencies in the transmit band.

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 22 ° C and relative humidity 34%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	1850.2MHz	40.5	1.40
	1880MHZ	40.4	1.43
	1909.8MHZ	40.3	1.46
	824.2MHz	42.2	0.89
	836.4MHZ	42.0	0.90
	848.8MHZ	41.7	0.91

For body-worn measurements, the device was tested against flat phantom representing the user body. Under measurement phone was put on in the belt holder ICT-14 and measurement provides the phone to the phantom.

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 22 ° C and relative humidity 34%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	1850.2MHz	52.2	1.53
	1880MHZ	52.1	1.56
	1909.8MHZ	52.0	1.60
	824.2MHz	55.3	0.97
	836.4MHZ	55.1	1.00
	848.8MHZ	55.1	1.01

7.2. Summary of Measurement Results (PCS1900 MHz Band)

Table 3: SAR Values (PCS1900 MHz Band), Measured against the head

Temperature: 22 ° C, humidity: 34%.		
Limit of SAR (W/kg)	**10 g Average**	**1 g Average**
	2.0	**1.6**
Test Case	**Measurement Result (W/kg)**	
	10 g Average	**1 g Average**
Left hand, Touch cheek, Top frequency	0.052	0.085
Left hand, Touch cheek, Mid frequency	0.096	0.159
Left hand, Touch cheek, Bottom frequency	0.175	0.289
Left hand, Tilt 15 Degree, Top frequency	0.030	0.053
Left hand, Tilt 15 Degree, Mid frequency	0.065	0.117
Left hand, Tilt 15 Degree, Bottom frequency	0.130	0.235
Right hand, Touch cheek, Top frequency	0.057	0.064
Right hand, Touch cheek, Mid frequency	0.071	0.085
Right hand, Touch cheek, Bottom frequency	0.080	0.104
Right hand, Tilt 15 Degree, Top frequency	0.033	0.038
Right hand, Tilt 15 Degree, Mid frequency	0.029	0.047
Right hand, Tilt 15 Degree, Bottom frequency	0.051	0.080

Table 4: SAR Values (PCS1900 MHz Band), Measured against the body

Temperature: 22 ° C, humidity: 34%.		
Limit of SAR (W/kg)	**10 g Average**	**1 g Average**
	2.0	**1.6**
Test Case	**Measurement Result (W/kg)**	
	10 g Average	**1 g Average**
Front Sideup , Top frequency	0.052	0.079
Front Sideup, Mid frequency	0.096	0.146
Front Sideup, Bottom frequency	0.147	0.222

Table 5: SAR Values (GSM 850 MHz Band), Measured against the head

Temperature: 22 ° C, humidity: 34%.		
Limit of SAR (W/kg)	**10 g Average**	**1 g Average**
	2.0	**1.6**
Test Case	**Measurement Result (W/kg)**	
	10 g Average	**1 g Average**
Left hand, Touch cheek, Top frequency	0.056	0.082
Left hand, Touch cheek, Mid frequency	0.039	0.058
Left hand, Touch cheek, Bottom frequency	0.022	0.033
Left hand, Tilt 15 Degree, Top frequency	0.041	0.060
Left hand, Tilt 15 Degree, Mid frequency	0.026	0.038
Left hand, Tilt 15 Degree, Bottom frequency	0.014	0.020
Right hand, Touch cheek, Top frequency	0.026	0.036
Right hand, Touch cheek, Mid frequency	0.040	0.056
Right hand, Touch cheek, Bottom frequency	0.038	0.057
Right hand, Tilt 15 Degree, Top frequency	0.035	0.047
Right hand, Tilt 15 Degree, Mid frequency	0.021	0.029
Right hand, Tilt 15 Degree, Bottom frequency	0.012	0.016

Table 6: SAR Values (GSM 850 MHz Band), Measured against the body

Temperature: 22 ° C, humidity: 34%.		
Limit of SAR (W/kg)	**10 g Average**	**1 g Average**
	2.0	**1.6**
Test Case	**Measurement Result (W/kg)**	
	10 g Average	**1 g Average**
Front Sideup , Top frequency	0.059	0.081
Front Sideup, Mid frequency	0.038	0.051
Front Sideup, Bottom frequency	0.020	0.028

7.3 Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.

8 Measurement Uncertainty

No	Error source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard Uncertainty (%) u_i(%)	Degree of freedom V_{eff} or v_i
1	System repetivity	A	0.5	N	1	1	0.5	9
	Measurement system							
2	－probe calibration	B	7	N	2	1	3.5	∞
3	－axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	$\sqrt{5.0}$	4.3	∞
4	－ hemisphere isotropy of the probe	B	9.4	R	$\sqrt{3}$	$\sqrt{5.0}$		
5	－spatial resolution	B	0	R	$\sqrt{3}$	1	0	∞
6	－boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	∞
7	－probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	－detection limit	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	－electronic readout	B	1.0	N	1	1	1.0	∞
10	－RF interference	B	3.0	R	$\sqrt{3}$	1	1.73	∞
11	－ probe mechanical positioning constraint	B	0.4	R	$\sqrt{3}$	1	0.2	∞
12	－ matching between probe and phantom references	B	2.9	R	$\sqrt{3}$	1	1.7	∞
13	－ SAR interpolation and extrapolation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
	Uncertainties of the DUT							
14	－position of the DUT	A	4.9	N	1	1	4.9	5
15	－holder of the DUT	A	6.1	N	1	1	6.1	5
16	－drift of the output power	B	5.0	R	$\sqrt{3}$	1	2.9	∞

	Physical parameters							
17	－phantom shell	B	1.0	R	$\sqrt{3}$	1	0.6	∞
18	－liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
19	－ liquid conductivity(measurement error)	B	10.0	R	$\sqrt{3}$	0.6	3.4	∞
20	－ liquid dielectric constant (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
21	－ liquid dielectric constant (measurement error)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					13.5	88.7
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N		k=2	27	

9 MAIN TEST INSTRUMENTS

No.	EQUIPMENT	TYPE	Due Date
1	SAR Probe	ES3DV3 (SN3034)	2005-10-28
2	Dummy Probe	DP1	2005-10-28
3	DAE(Data Acquisition Electronics)	V4.0 (SN661)	2005-10-28
4	DASY 4 Measurement Server	CS7MB	2005-10-28
5	System Validation Dipole 900MHz	D900V2	2005-10-28
6	System Validation Dipole 835MHZ	D835V2	2005-10-28
7	System Validation Dipole 1800MHZ	D1800V2	2005-10-28
8	System Validation Dipole 1900MHZ	D1900V2	2005-10-28
9	System Validation Dipole 2450MHZ	D2450V2	2005-10-28

ANNEX A

of

ShenZhen Electronic Product Quality Testing Center

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SZ_AWG_0504_F_a

Accreditation Certificate

This Annex consists of 2 pages
Date of Report: 2005-4-7

ACCREDITATION CERTIFICATE OF CHINA NATIONAL ACCREDITATION BOARD FOR LABORATORIES

(No.L1659)

This is to certify that

Shenzhen Electronic Product Quality Testing Center

Electronic Testing Building, Shahe Road, Xili, Nanshan District,

Shenzhen, Guangdong, China

has been assessed and proved to be in compliance with CNAL/AC01: 2003 *Accreditation Criteria for Testing and Calibration Laboratories* (identical to ISO/IEC17025：1999 *General Requirements for the Competence of Testing and Calibration Laboratories*).

Accreditation scope of the laboratory is listed in the attachment.

Date of Issue：2004.10.09

Date of Expiry：2009.10.08

Wei Hao

Secretary General of CNAL

ANNEX B

of

ShenZhen Electronic Product Quality Testing Center

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SZ_AWG_0504_F_a

Advanced Wireless Group Limited

GSM/GPRS 850/1900 MHz Terminal Equipment

Type Name: SC528

Hardware Version: 86512201_REV1.0
Software Version: 5AX1BCEZZ0205V4.14

TEST LAYOUT

This Annex consists of 5 pages
Date of Report: 2005-4-7

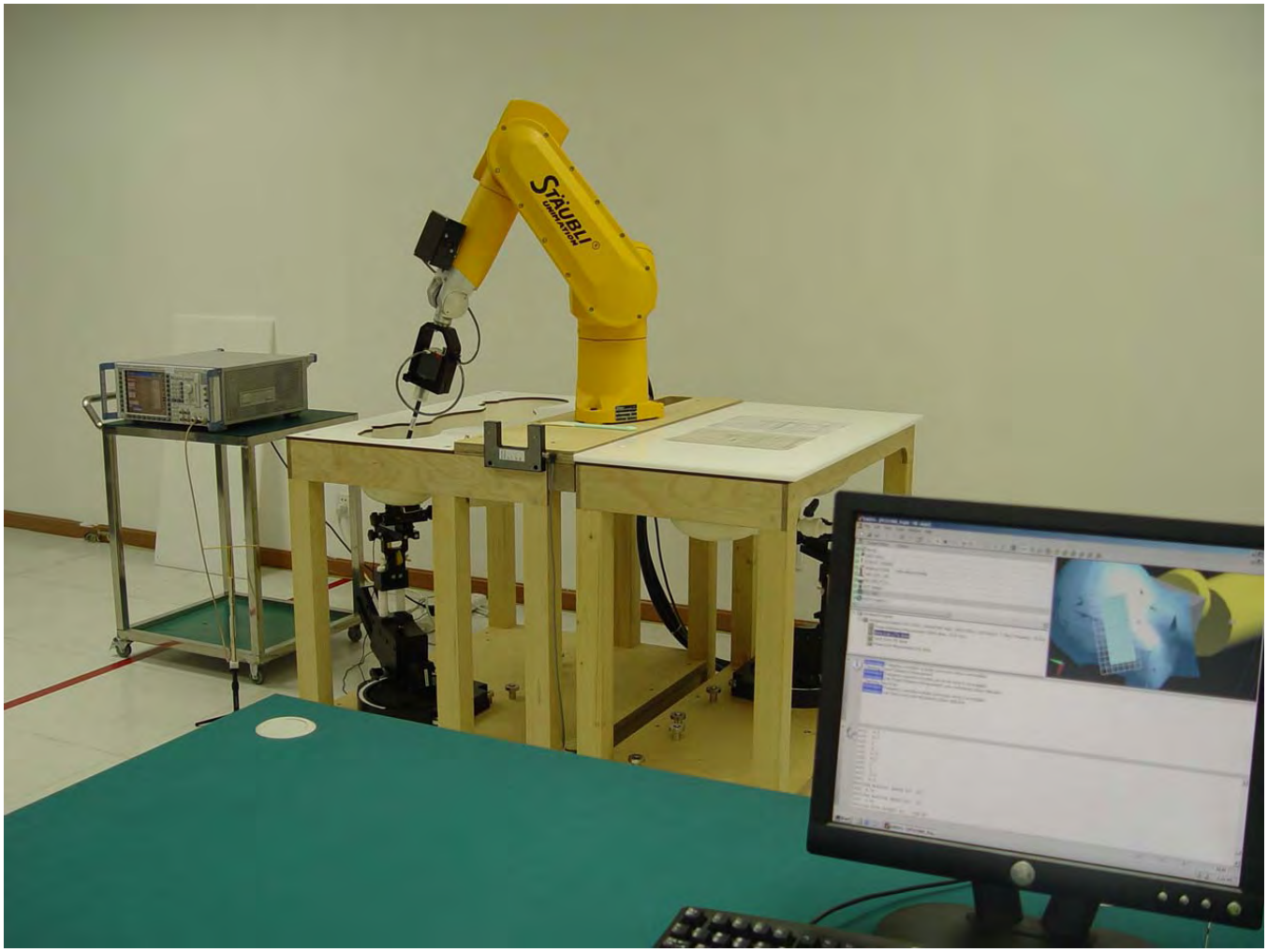


Fig.1 Specific Absorption Rate Test Layout

Fig.2 Left Hand Touch Cheek Position

Fig.3 Left Hand Tilt 15^0 Position

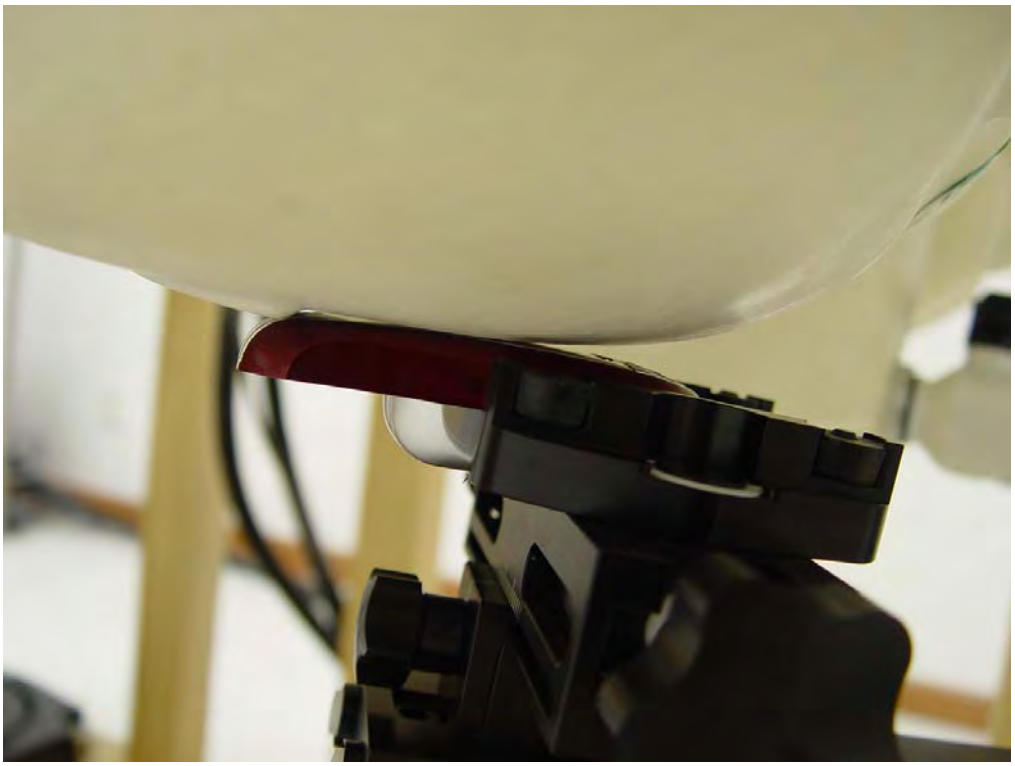


Fig.4 Right Hand Touch Cheek Position

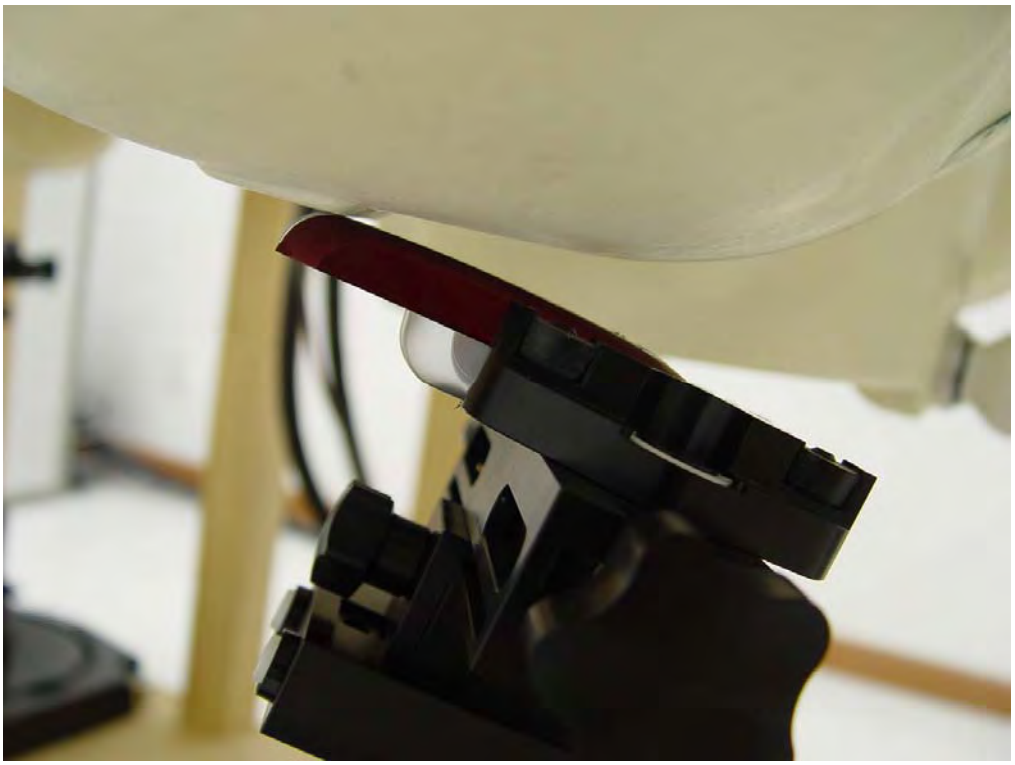


Fig.5 Right Hand Tilt 15^0 Position

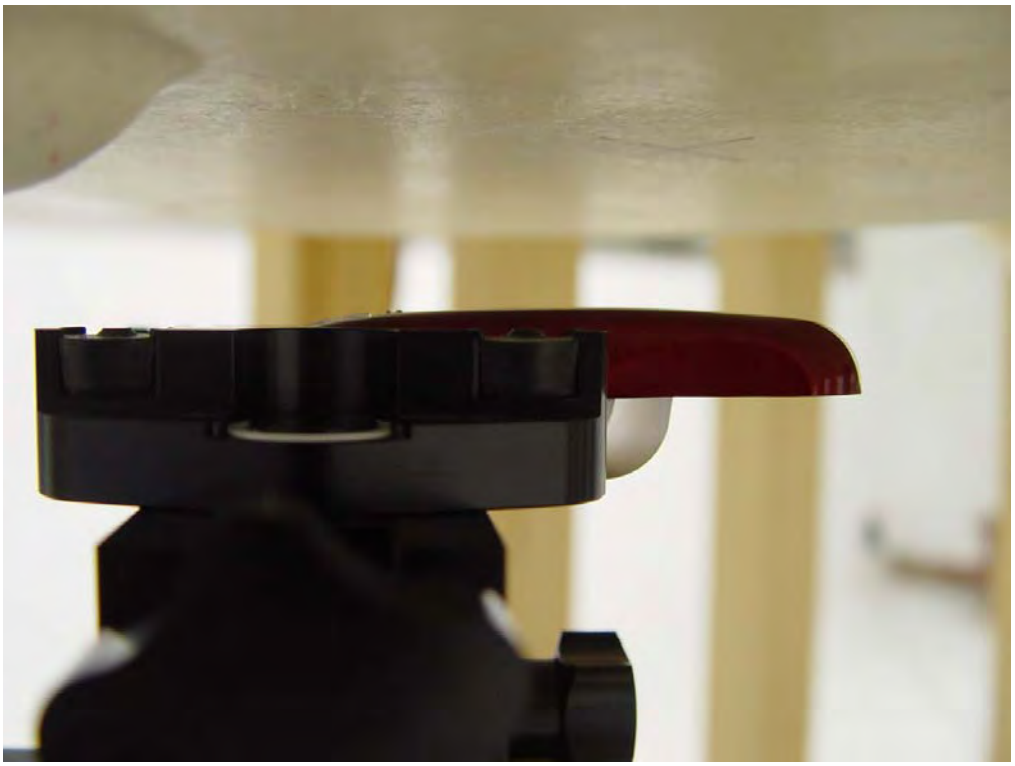


Fig.6 Front Side up Position

Fig.7 Bottom Side up Position

ANNEX C

of

ShenZhen Electronic Product Quality Testing Center

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SZ_AWG_0504_F_a

Advanced Wireless Group Limited

GSM/GPRS 850/1900 MHz Terminal Equipment

Type Name: SC528

Hardware Version: 86512201_REV1.0
Software Version: 5AX1BCEZZ0205V4.14

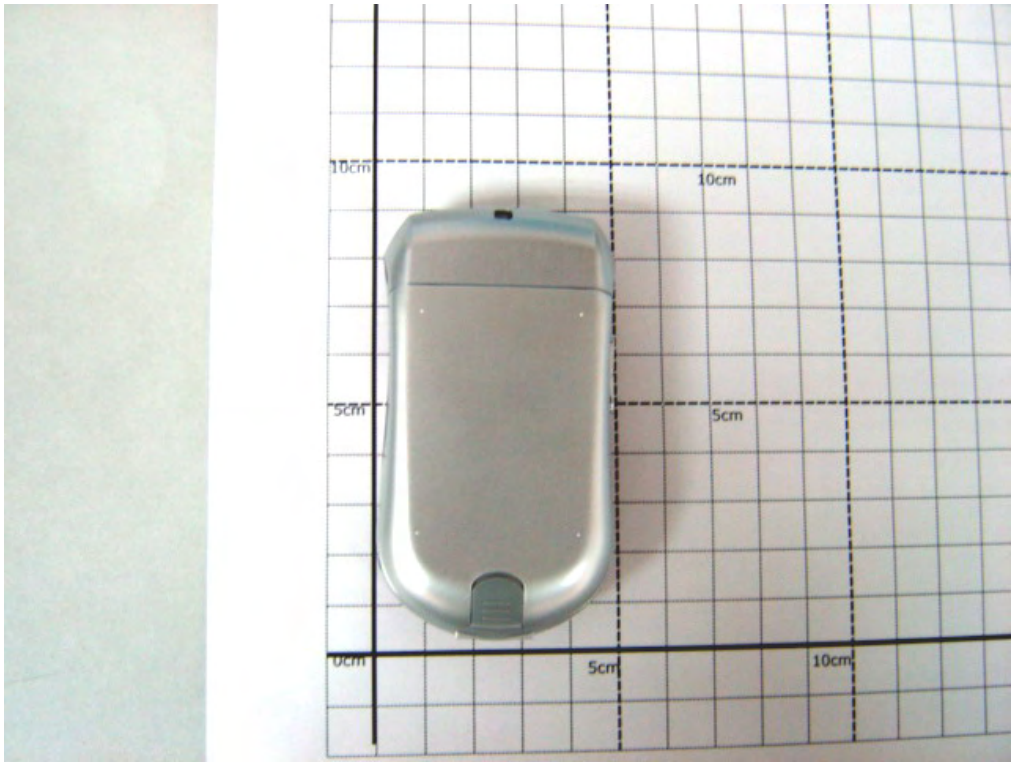
Sample Photographs

This Annex consists of 3 pages
Date of Report: 2005-4-7

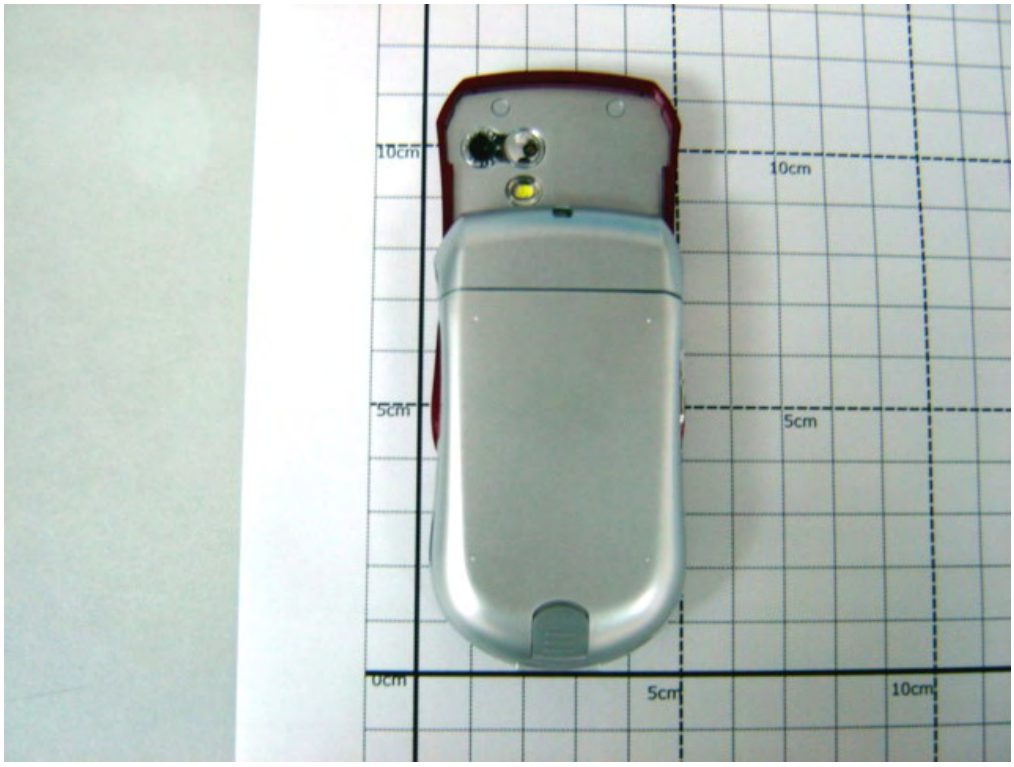
1. Photograph of the Equipment under Test

1.1. Front View of the EUT

1.2. Front View of the EUT Open



1.3. Back View of the EUT



1.4. Back View of the EUT without Battery

ANNEX D

of

ShenZhen Electronic Product Quality Testing Center

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SZ_AWG_0504_F_a

Advanced Wireless Group Limited

GSM/GPRS 850/1900 MHz Terminal Equipment

Type Name: SC528

Hardware Version: 86512201_REV1.0
Software Version: 5AX1BCEZZ0205V4.14

Graph Test Results (EUT a01)

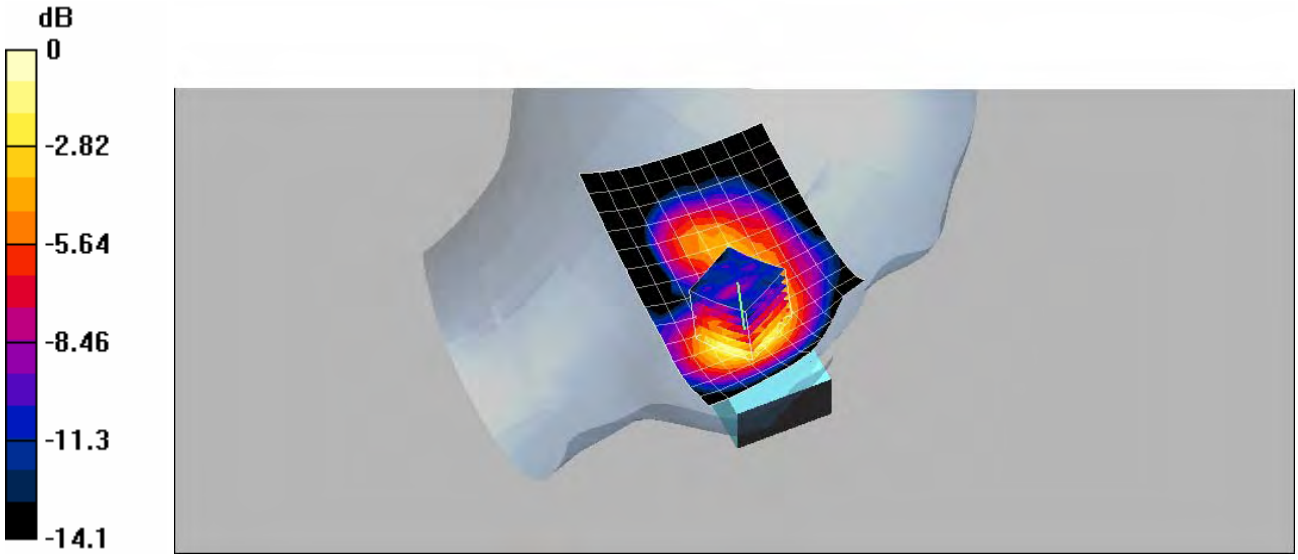
This Annex consists of 31 pages
Date of Report: 2005-4-7

SAR Test PCS 1900 Left Cheek High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1909.8 MHz; σ = 1.46 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.088 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.64 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.131 W/kg
SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.093 mW/g



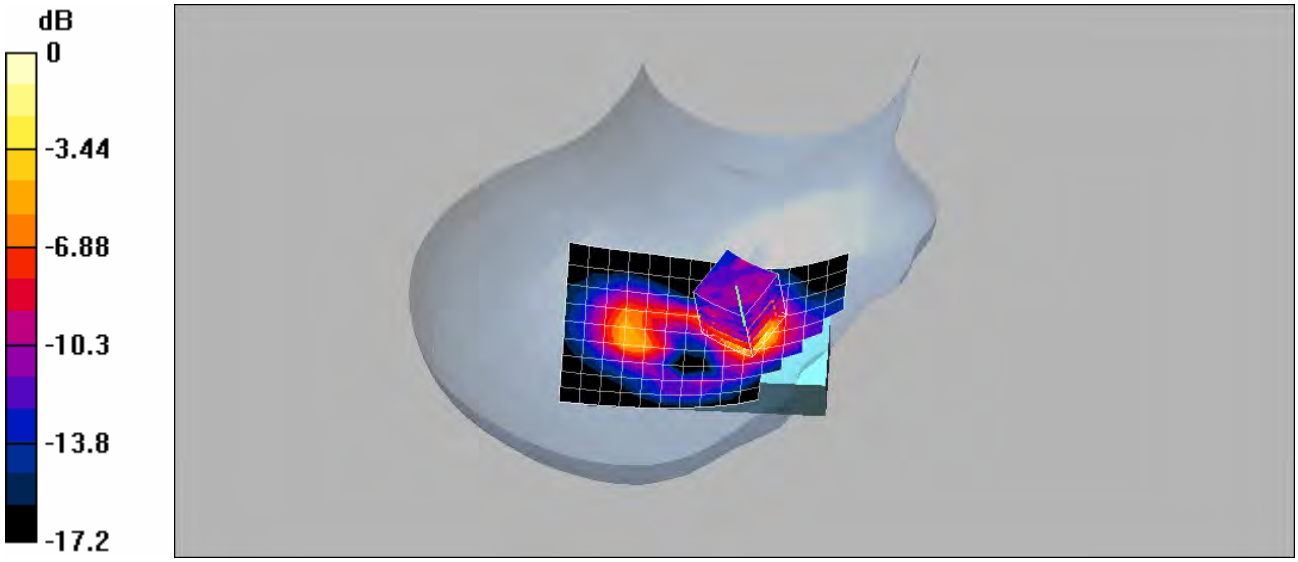
0 dB = 0.093mW/g

SAR Test PCS 1900 Left Cheek Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.163 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.03 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.096 mW/g
Maximum value of SAR (measured) = 0.173 mW/g



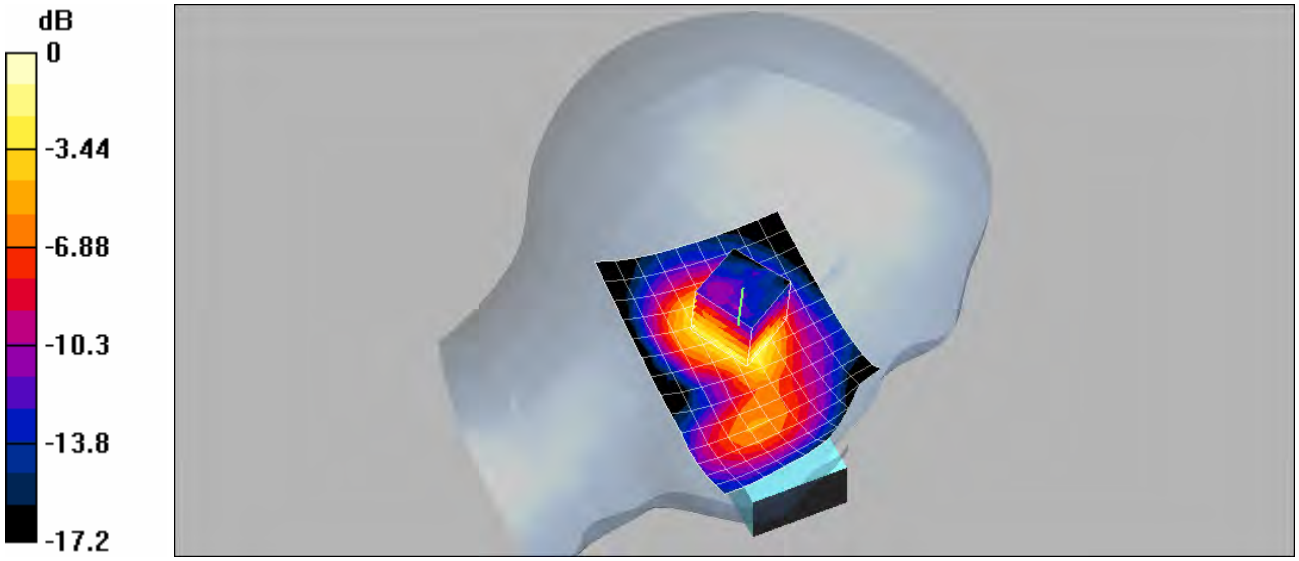
0 dB = 0.173mW/g

SAR Test PCS 1900 Left Cheek Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1850.2 MHz; σ = 1.4 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.306 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.2 V/m; Power Drift = 0.3 dB
Peak SAR (extrapolated) = 0.418 W/kg
SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.175 mW/g
Maximum value of SAR (measured) = 0.314 mW/g



0 dB = 0.314mW/g

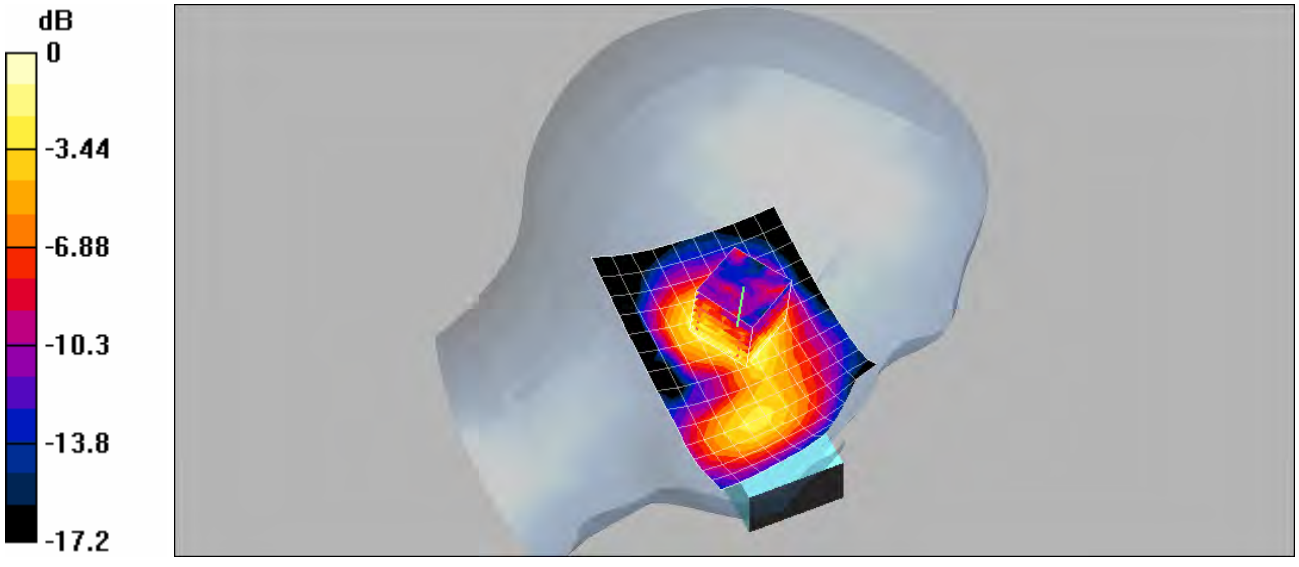
SAR Test PCS 1900 Left Tilt High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1909.8 MHz; σ = 1.46 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.059 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.19 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.098 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

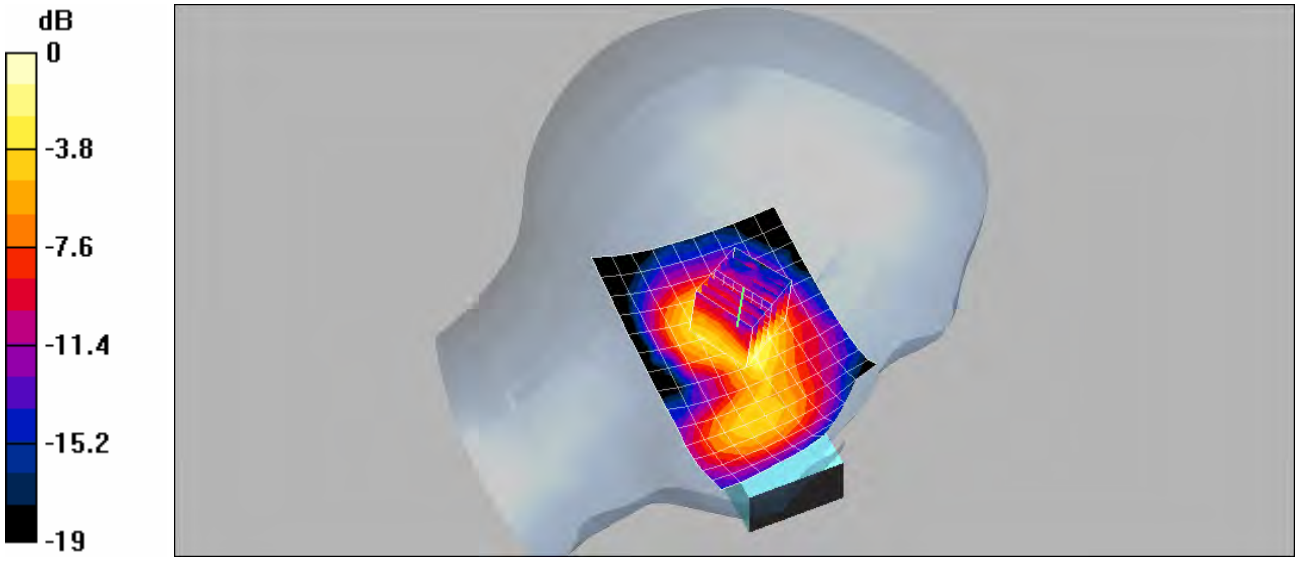
SAR Test PCS 1900 Left Tilt Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004

- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.133 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 0.210 W/kg
SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.131 mW/g



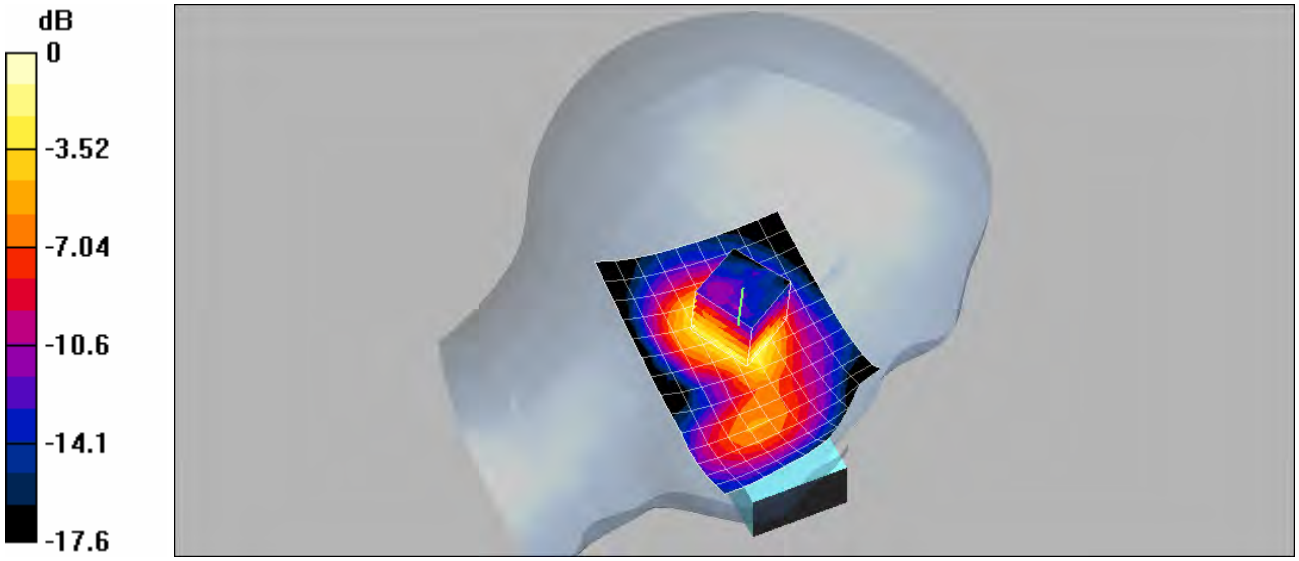
0 dB = 0.131mW/g

SAR Test PCS 1900 Left Tilt Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1850.2 MHz; σ = 1.4 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.259 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.84 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.402 W/kg
SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.130 mW/g
Maximum value of SAR (measured) = 0.263 mW/g



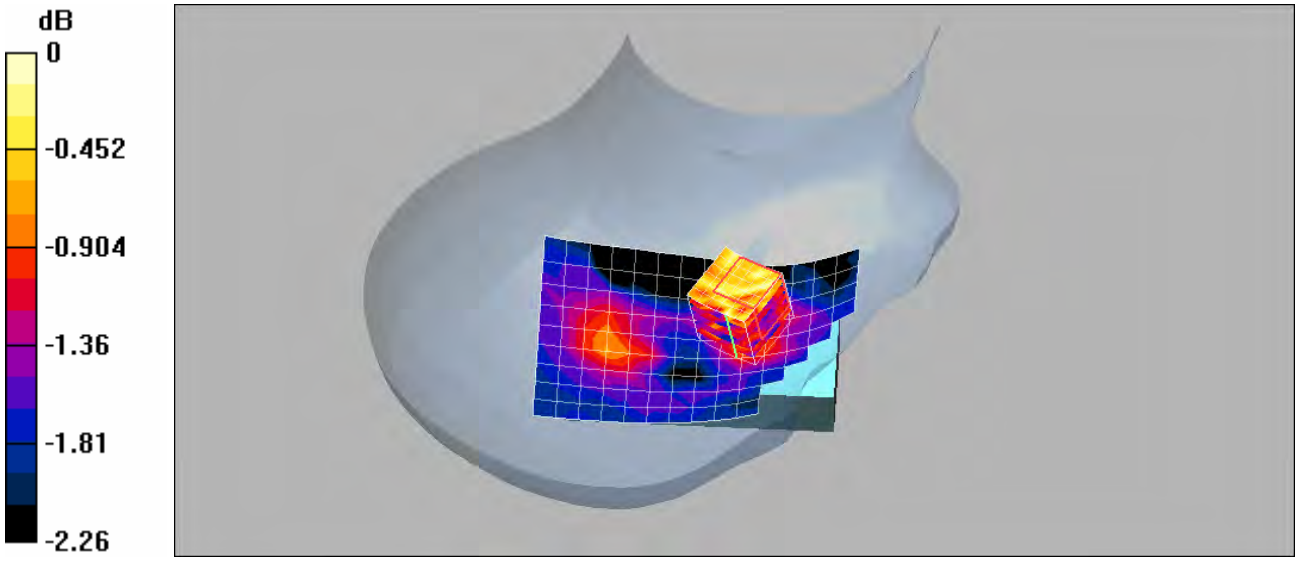
0 dB = 0.263mW/g

SAR Test PCS 1900 Right Cheek High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1909.8 MHz; σ = 1.46 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.064 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.62 V/m; Power Drift = -0.5 dB
Peak SAR (extrapolated) = 0.076 W/kg
SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.072 mW/g



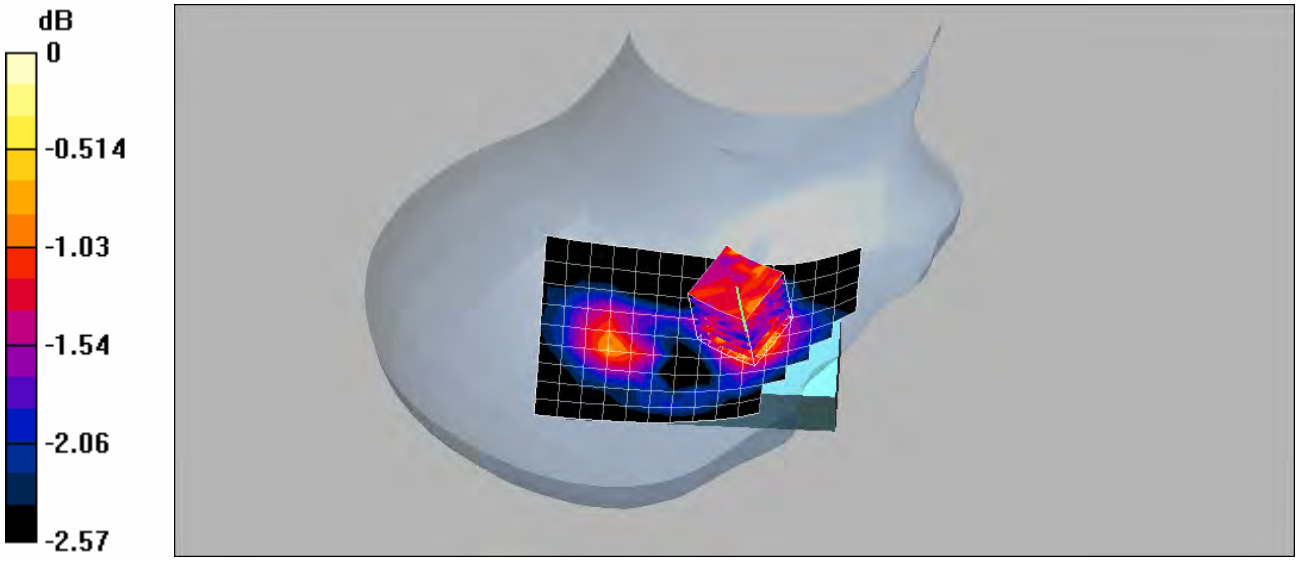
0 dB = 0.072mW/g

SAR Test PCS 1900 Right Cheek Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.086 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.29 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 0.101 W/kg
SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.088 mW/g



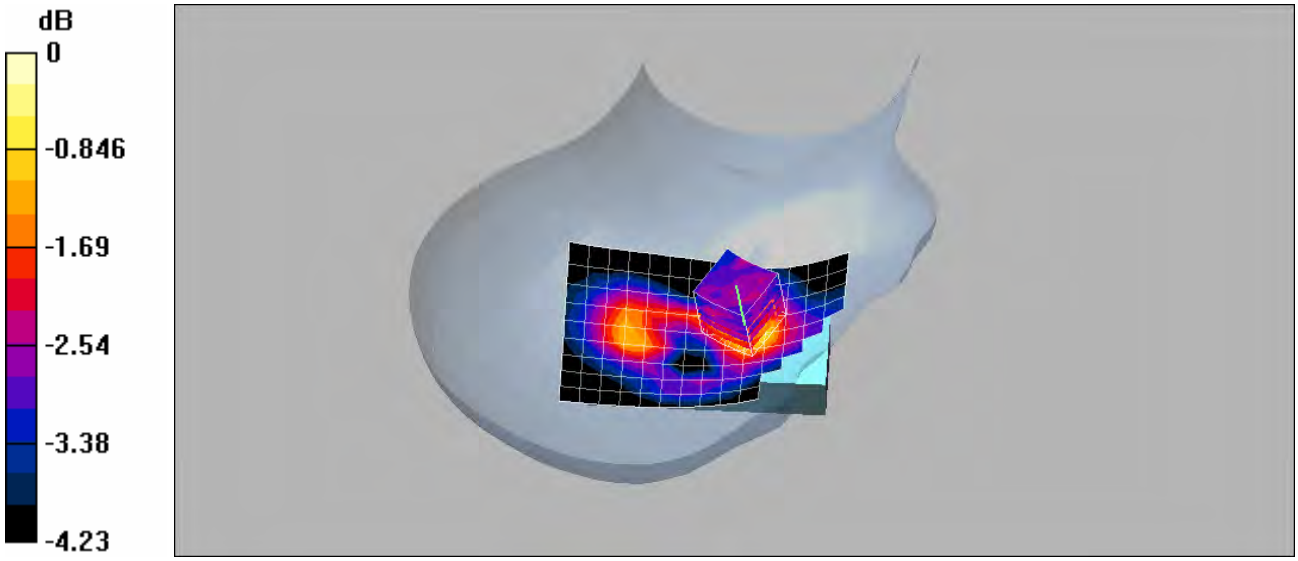
0 dB = 0.088mW/g

SAR Test PCS 1900 Right Cheek Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1850.2 MHz; σ = 1.4 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.107 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.02 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 0.129 W/kg
SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.080 mW/g
Maximum value of SAR (measured) = 0.110 mW/g



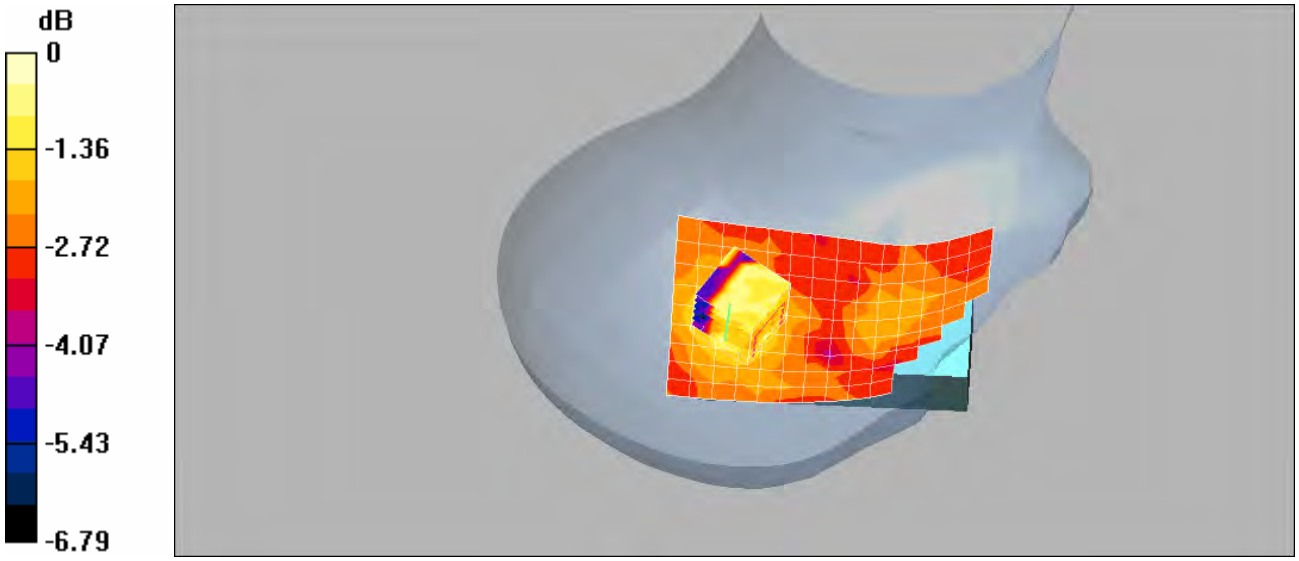
0 dB = 0.110mW/g

SAR Test PCS 1900 Right Tilt High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1909.8 MHz; σ = 1.46 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.039 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.03 V/m; Power Drift = 0.5 dB
Peak SAR (extrapolated) = 0.042 W/kg
SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.042 mW/g



0 dB = 0.042mW/g

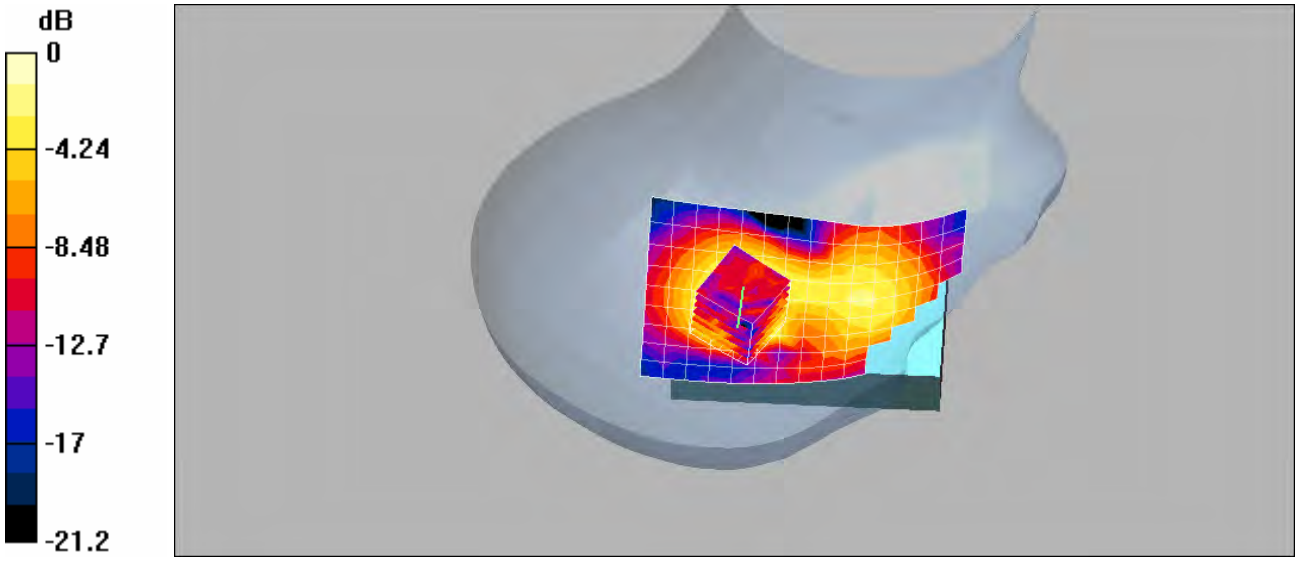
SAR Test PCS 1900 Right Tilt Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004-

Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.048 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.16 V/m; Power Drift = 0.008 dB
Peak SAR (extrapolated) = 0.072 W/kg
SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.029 mW/g
Maximum value of SAR (measured) = 0.052 mW/g



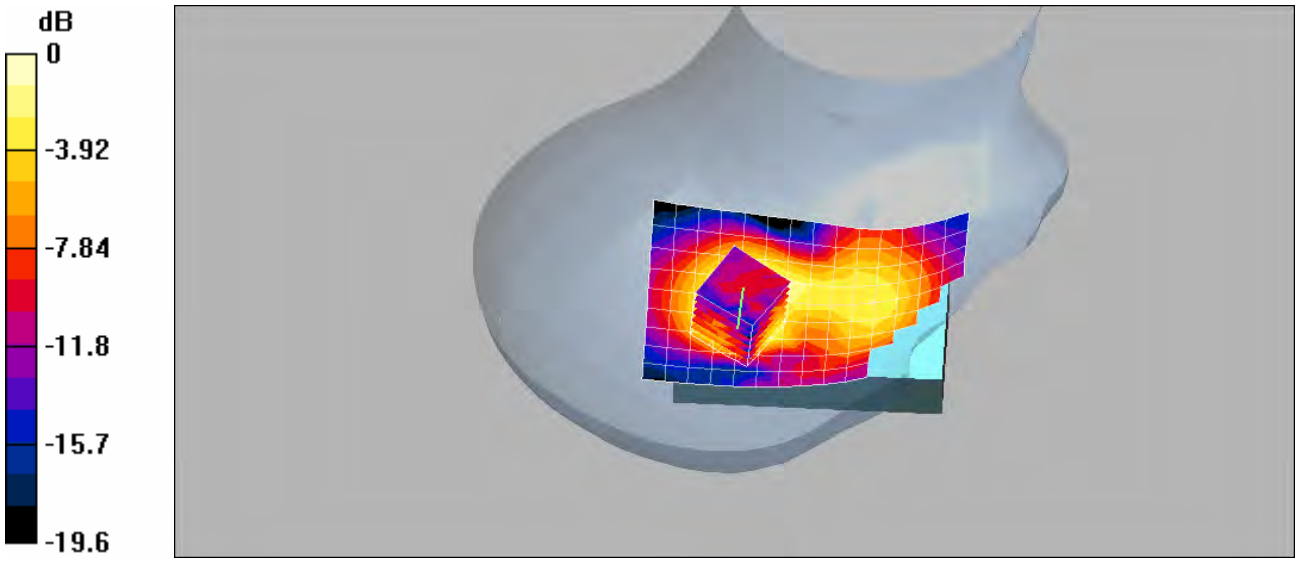
0 dB = 0.052mW/g

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1850.2 MHz; σ = 1.4 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(5.14, 5.14, 5.14); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (10x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.083 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.96 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 0.129 W/kg
SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.051 mW/g
Maximum value of SAR (measured) = 0.086 mW/g



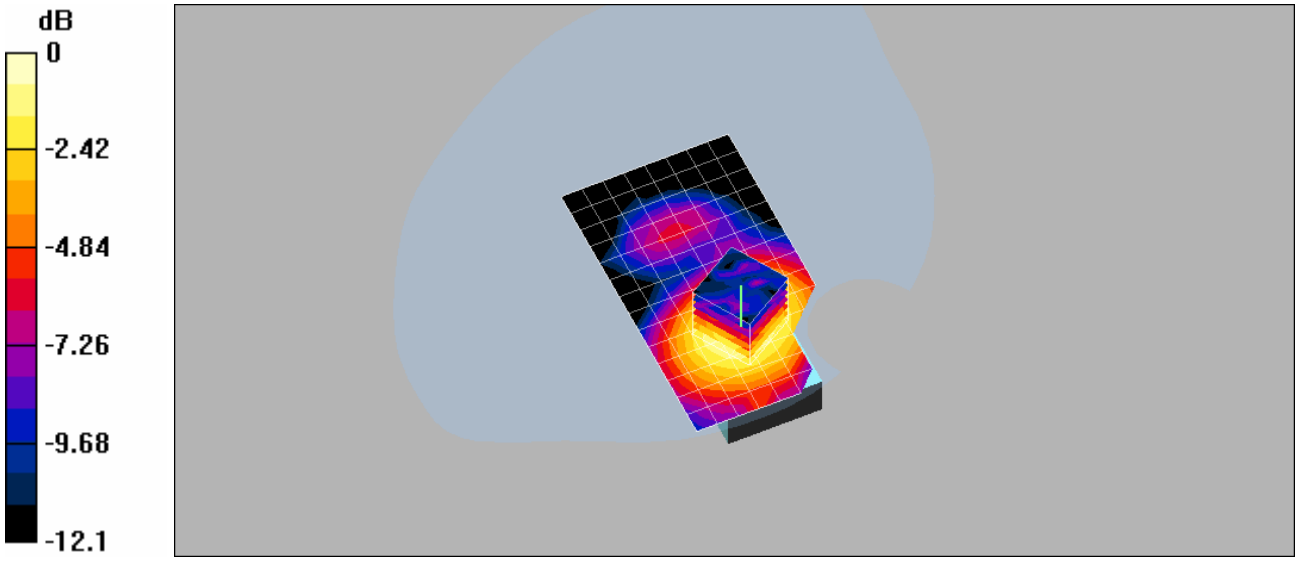
0 dB = 0.086mW/g

SAR Test PCS 1900 Front Sideup, High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1909.8 MHz; σ = 1.6 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(4.64, 4.64, 4.64); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.084 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.52 V/m; Power Drift = -0.004 dB
Peak SAR (extrapolated) = 0.113 W/kg
SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.085 mW/g



0 dB = 0.085mW/g

SAR Test PCS 1900 Front Sideup, Middle

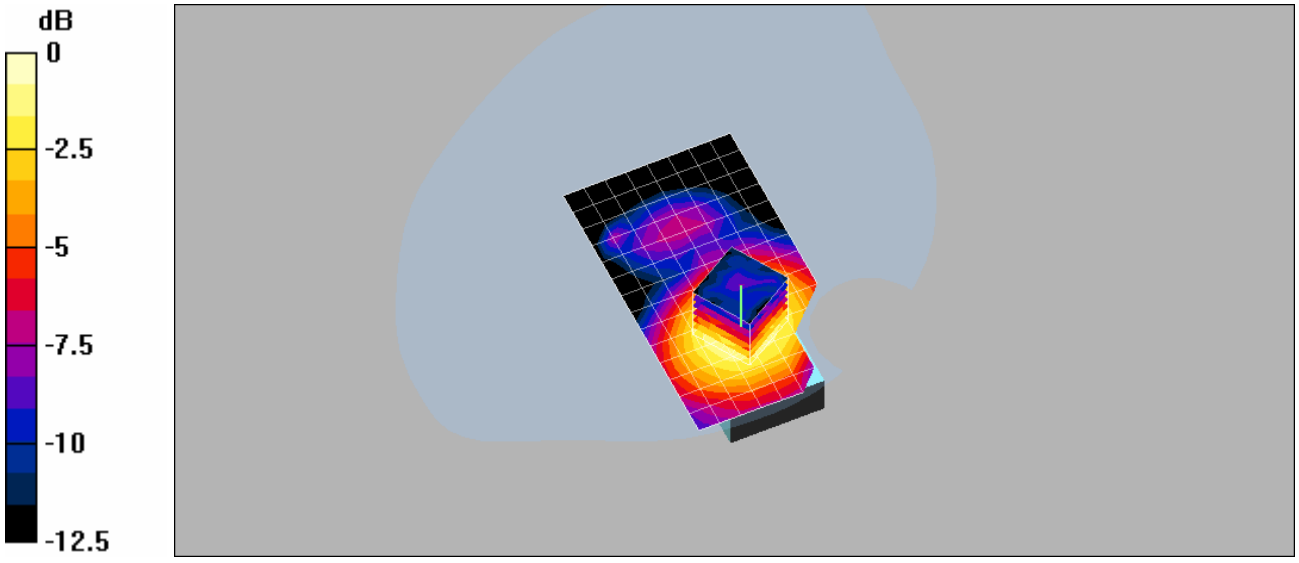
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(4.64, 4.64, 4.64); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004

- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.155 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.37 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.205 W/kg
SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.096 mW/g
Maximum value of SAR (measured) = 0.158 mW/g



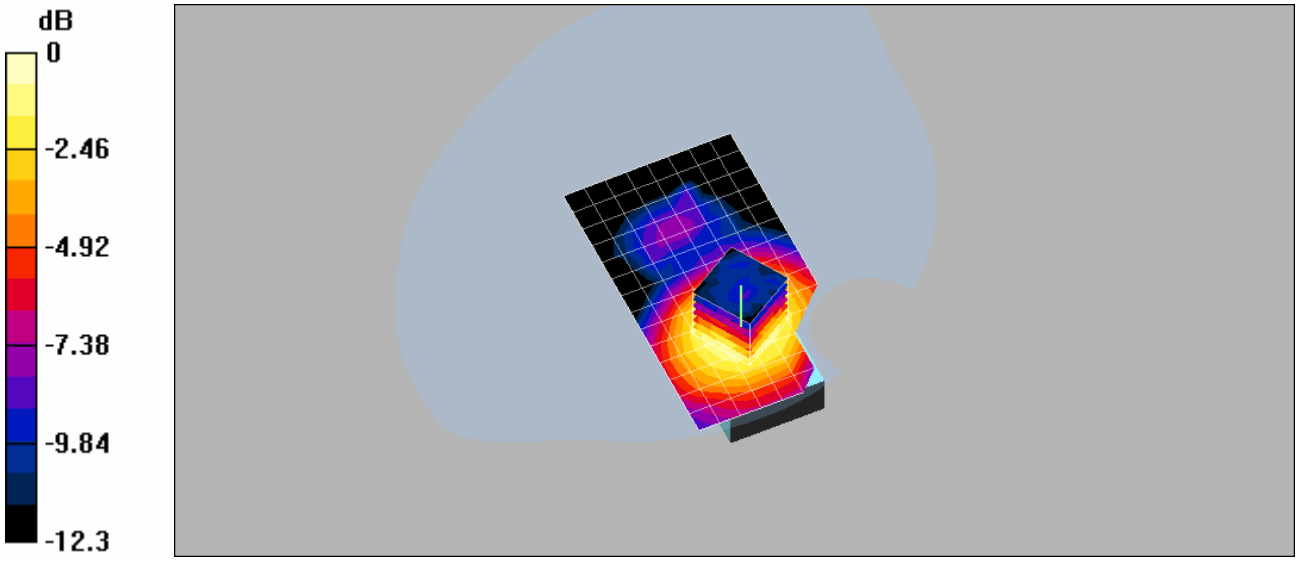
0 dB = 0.158mW/g

SAR Test PCS 1900 Front Sideup, Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:3
Medium parameters used: f = 1850.2 MHz; σ = 1.53 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(4.64, 4.64, 4.64); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1324; Type: SAM; Serial: TP-1324
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.239 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.26 V/m; Power Drift = -0.2 dB
Peak SAR (extrapolated) = 0.321 W/kg
SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.242 mW/g



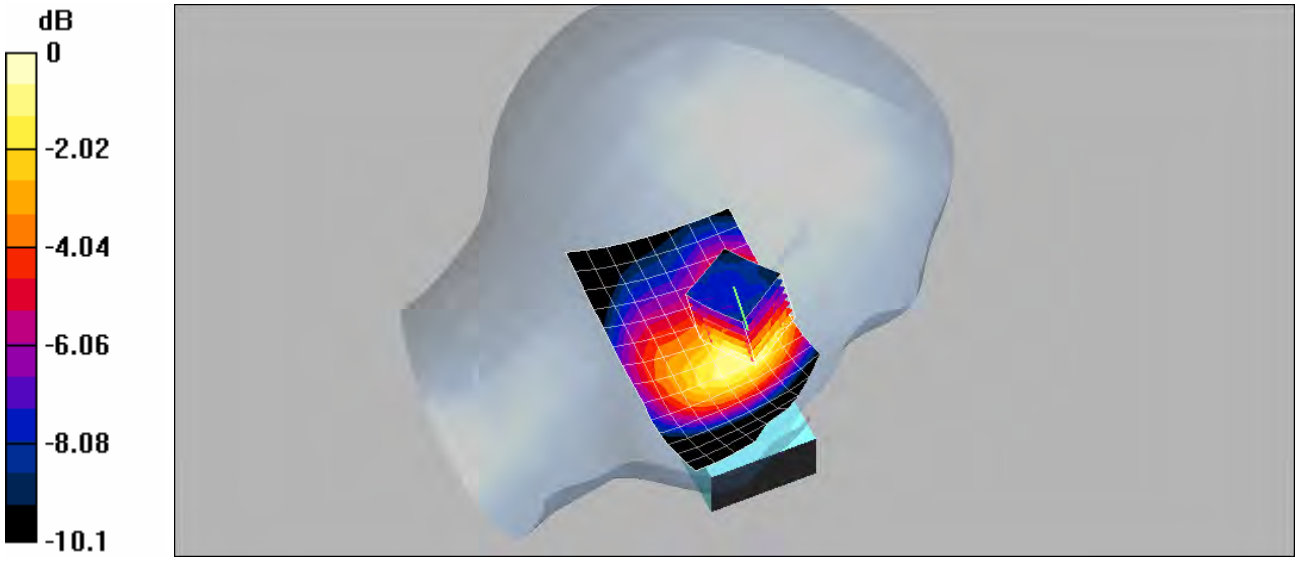
0 dB = 0.242mW/g

SAR Test GSM 850 Left Cheek High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; σ = 0.91 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.089 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.14 V/m; Power Drift = -0.2 dB
Peak SAR (extrapolated) = 0.120 W/kg
SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.056 mW/g
Maximum value of SAR (measured) = 0.089 mW/g



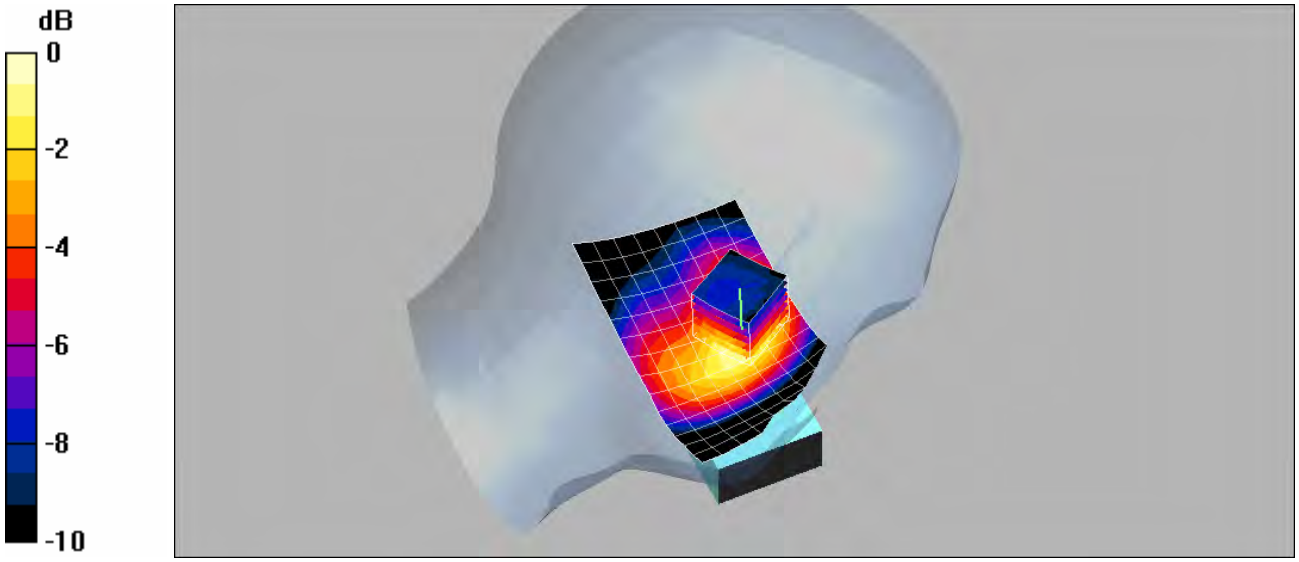
0 dB = 0.089mW/g

SAR Test GSM 850 Left Cheek Middle

Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.4 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.058 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.37 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 0.086 W/kg
SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.039 mW/g
Maximum value of SAR (measured) = 0.063 mW/g



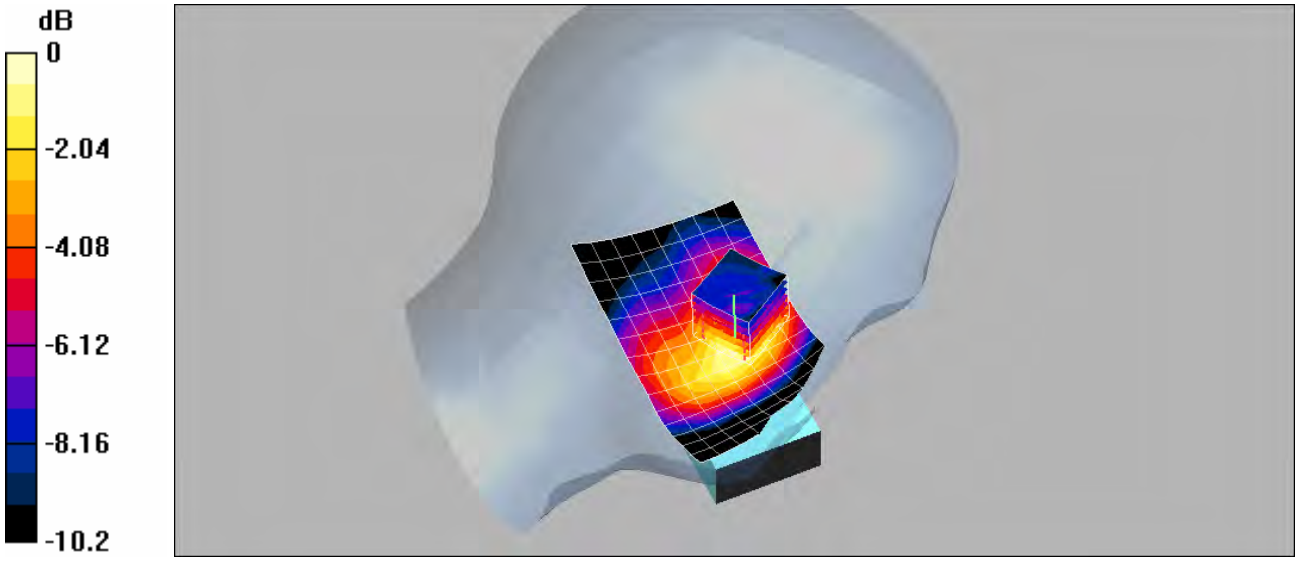
0 dB = 0.063mW/g

SAR Test GSM 850 Left Cheek Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 824.2 MHz; σ = 0.89 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.032 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.43 V/m; Power Drift = 0.3 dB
Peak SAR (extrapolated) = 0.050 W/kg
SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.035 mW/g



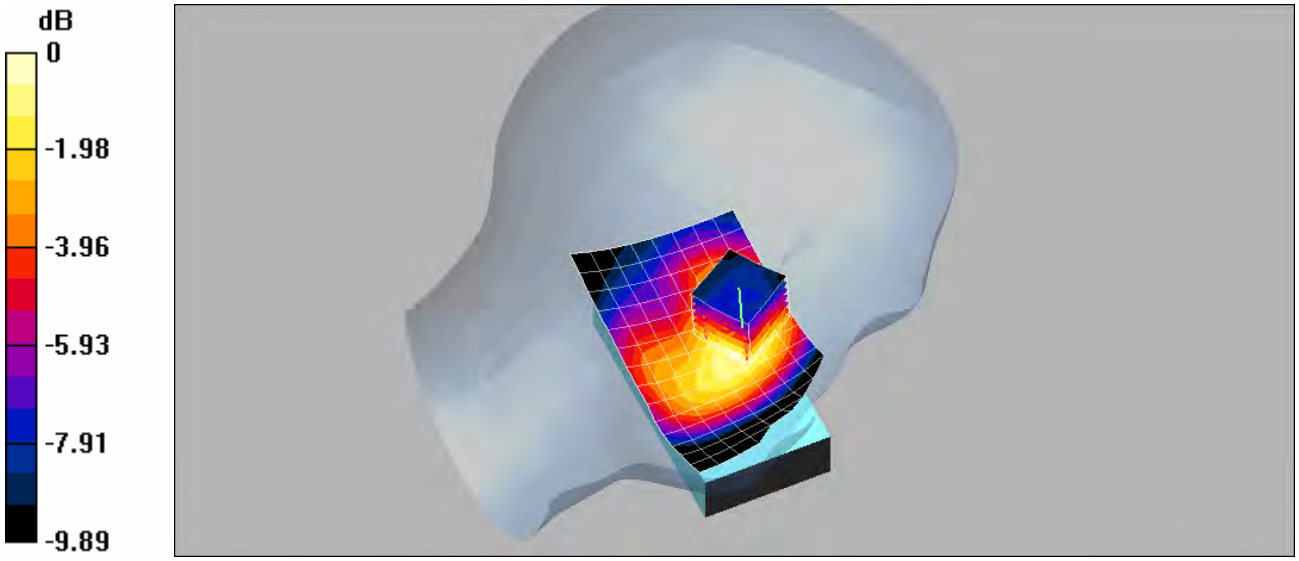
0 dB = 0.035mW/g

SAR Test GSM 850 Left Tilt High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; σ = 0.91 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.064 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.31 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.086 W/kg
SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.064 mW/g



0 dB = 0.064mW/g

SAR Test GSM 850 Left Tilt Middle

Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 836.4 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.040 mW/g

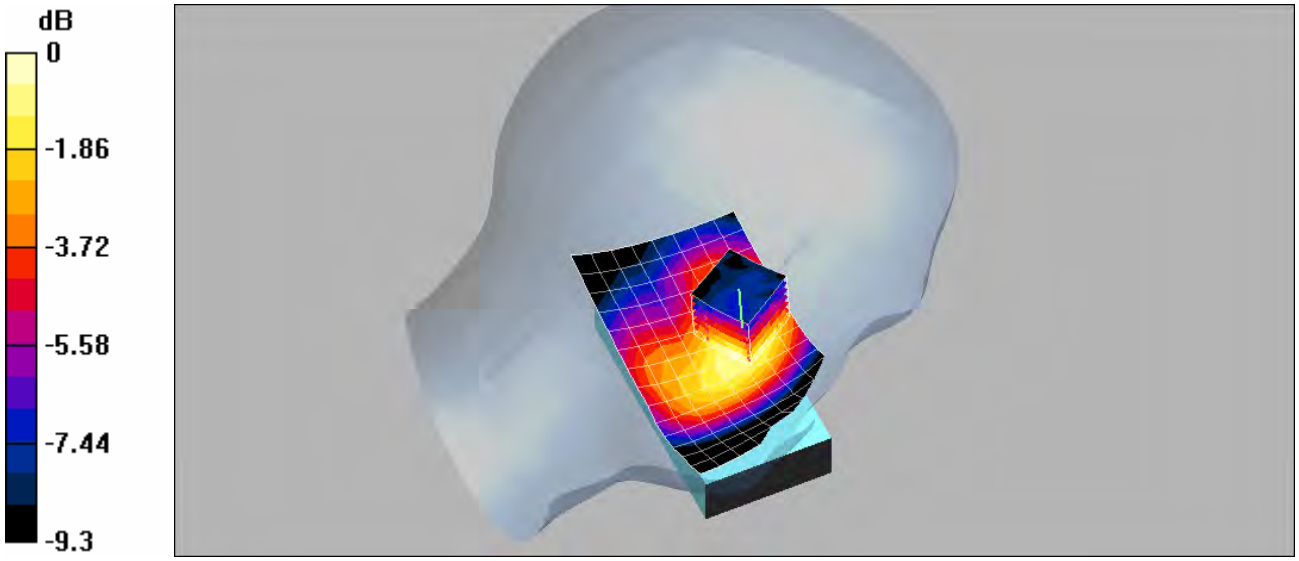
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.54 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.056 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.041 mW/g



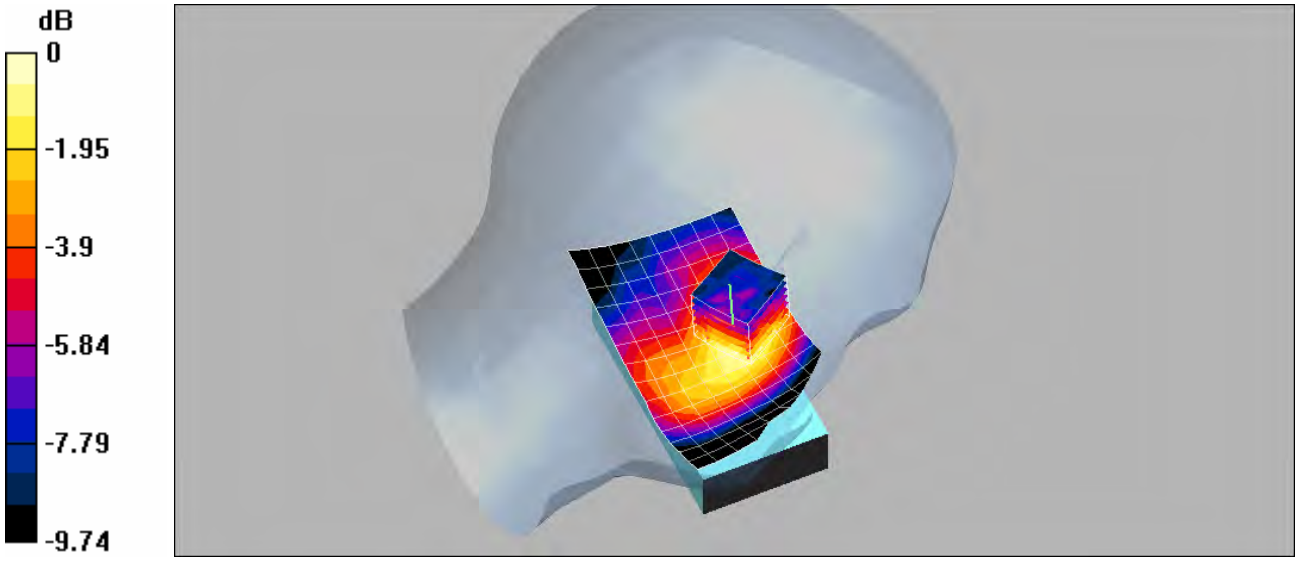
0 dB = 0.041mW/g

SAR Test GSM 850 Left Tilt Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 824.2 MHz; σ = 0.89 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.021 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.41 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 0.028 W/kg
SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.014 mW/g
Maximum value of SAR (measured) = 0.021 mW/g



0 dB = 0.021mW/g

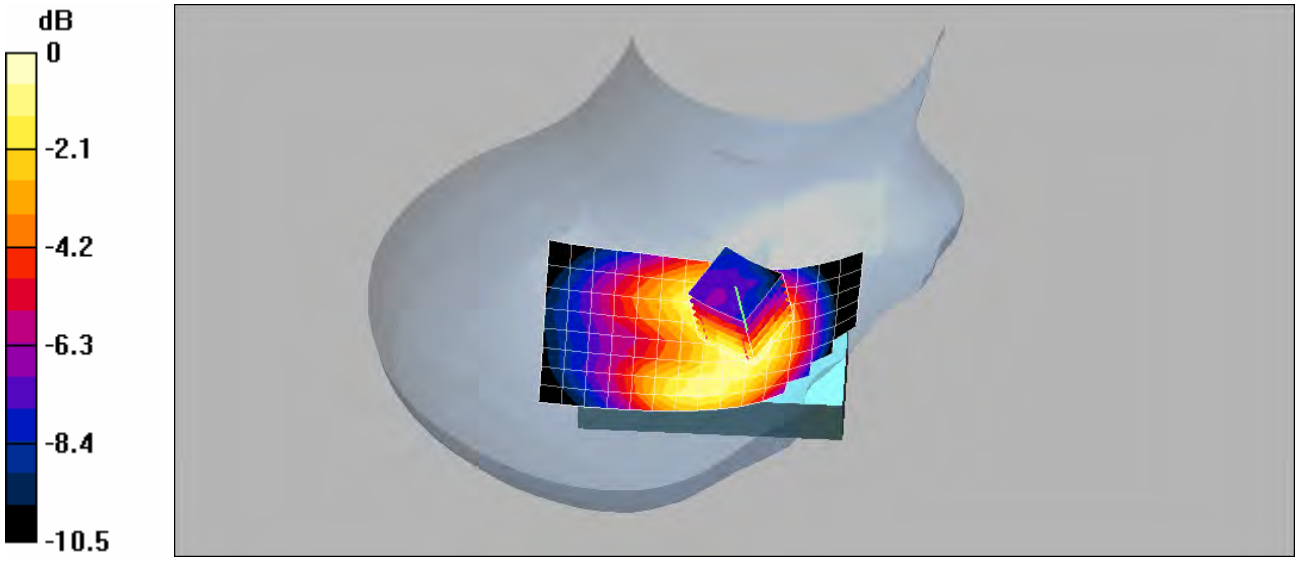
SAR Test GSM 850 Right Cheek High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; σ = 0.91 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004

- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.059 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.04 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.078 W/kg
SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.040 mW/g
Maximum value of SAR (measured) = 0.060 mW/g



0 dB = 0.060mW/g

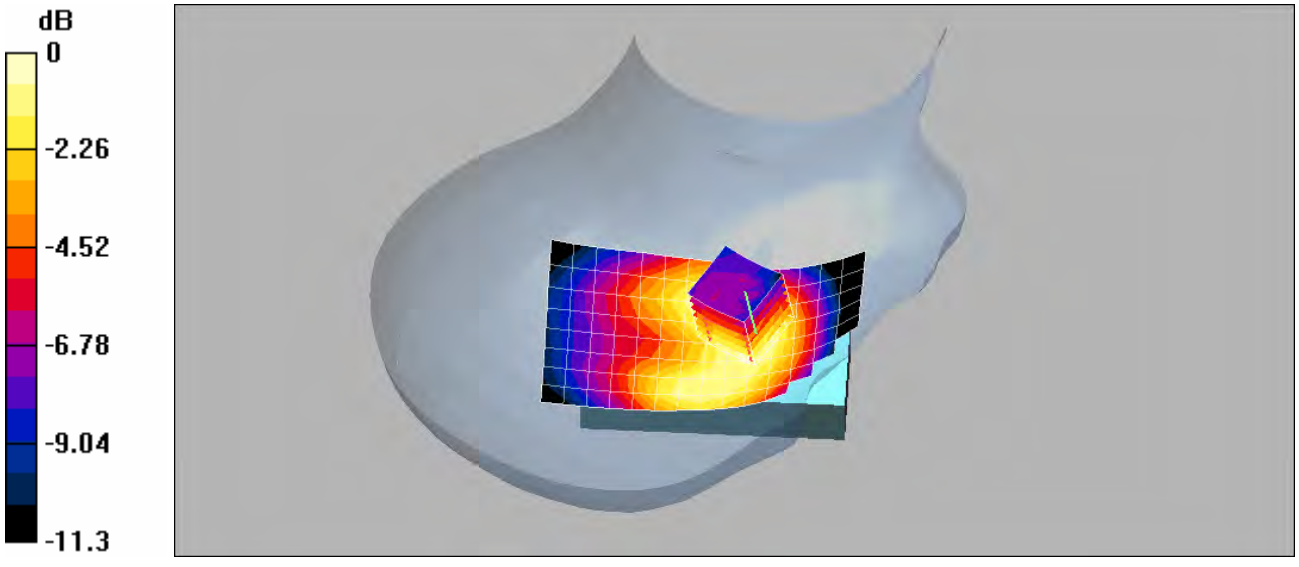
SAR Test GSM 850 Right Cheek Middle

Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.4 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004

- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.038 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.22 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.050 W/kg
SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.026 mW/g
Maximum value of SAR (measured) = 0.038 mW/g



0 dB = 0.038mW/g

SAR Test GSM 850 Right Cheek Low

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

Medium parameters used: f = 824.2 MHz; σ = 0.89 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.061 mW/g

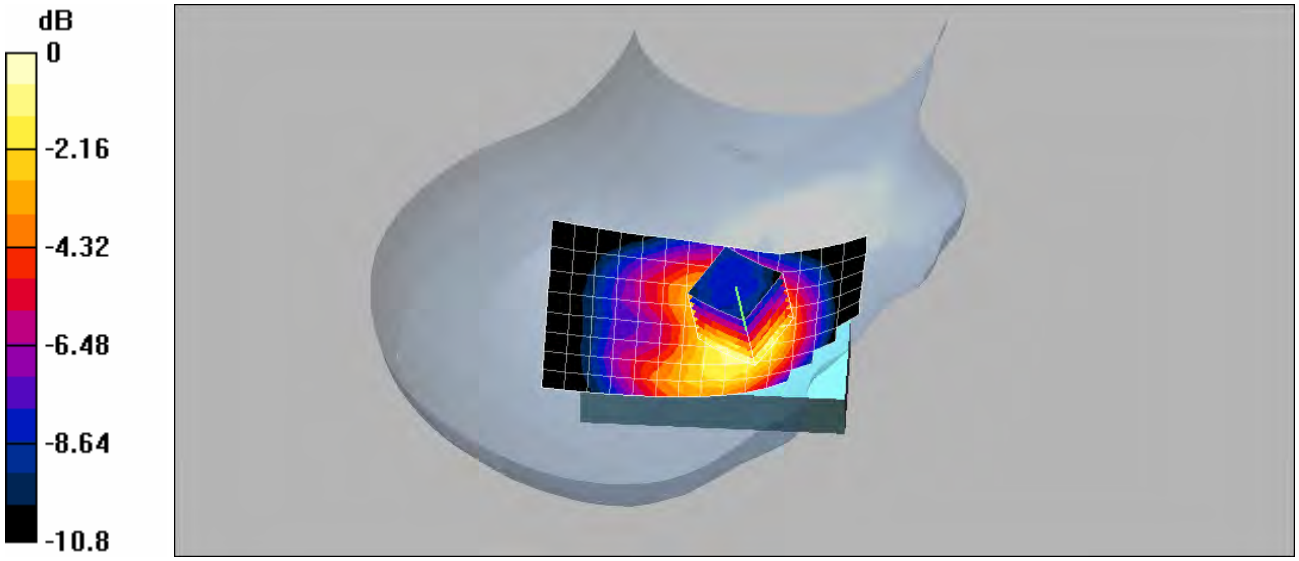
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.43 V/m; Power Drift = 0.4 dB

Peak SAR (extrapolated) = 0.081 W/kg

SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.061 mW/g



0 dB = 0.061mW/g

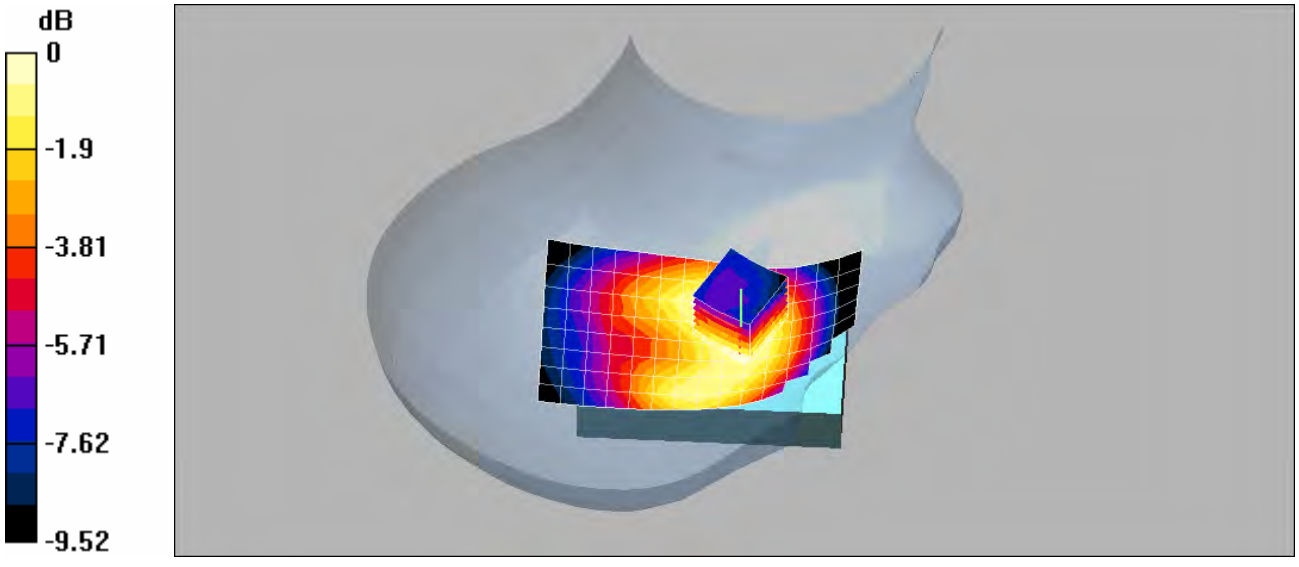
SAR Test GSM 850 Right Tilt High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; σ = 0.91 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004

- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.048 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.38 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.061 W/kg
SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.035 mW/g
Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

SAR Test GSM 850 Right Tilt Middle

Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 836.4 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.029 mW/g

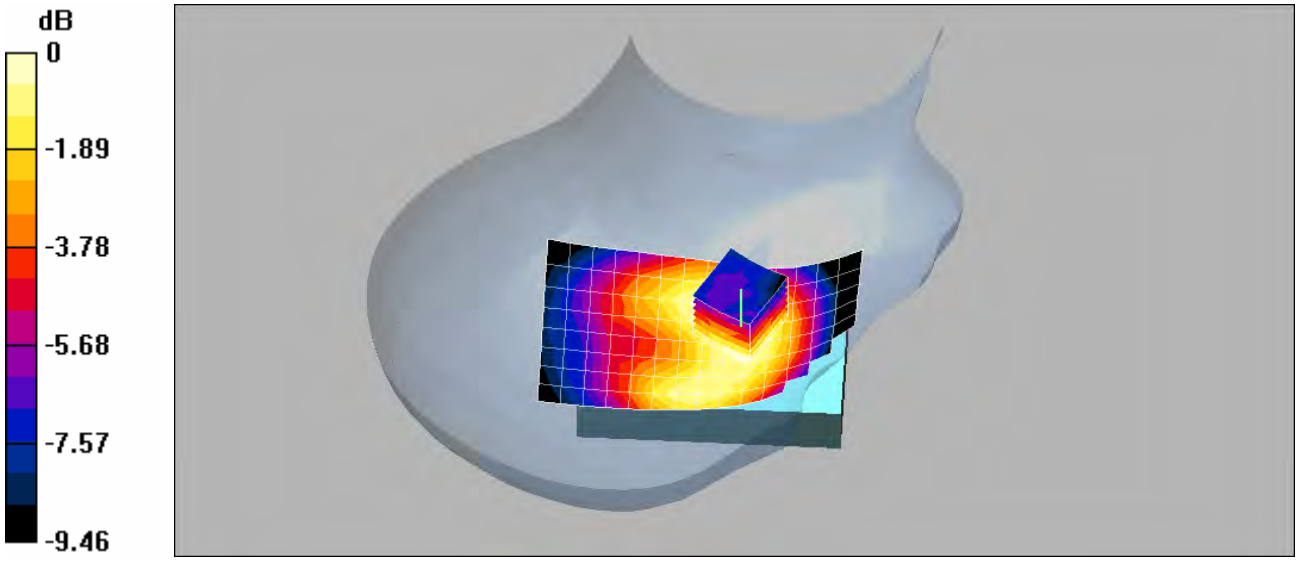
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.42 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.037 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.030 mW/g



0 dB = 0.030mW/g

SAR Test GSM 850 Right Tilt Low

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

Medium parameters used: f = 824.2 MHz; σ = 0.89 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3034; ConvF(6.48, 6.48, 6.48); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.017 mW/g

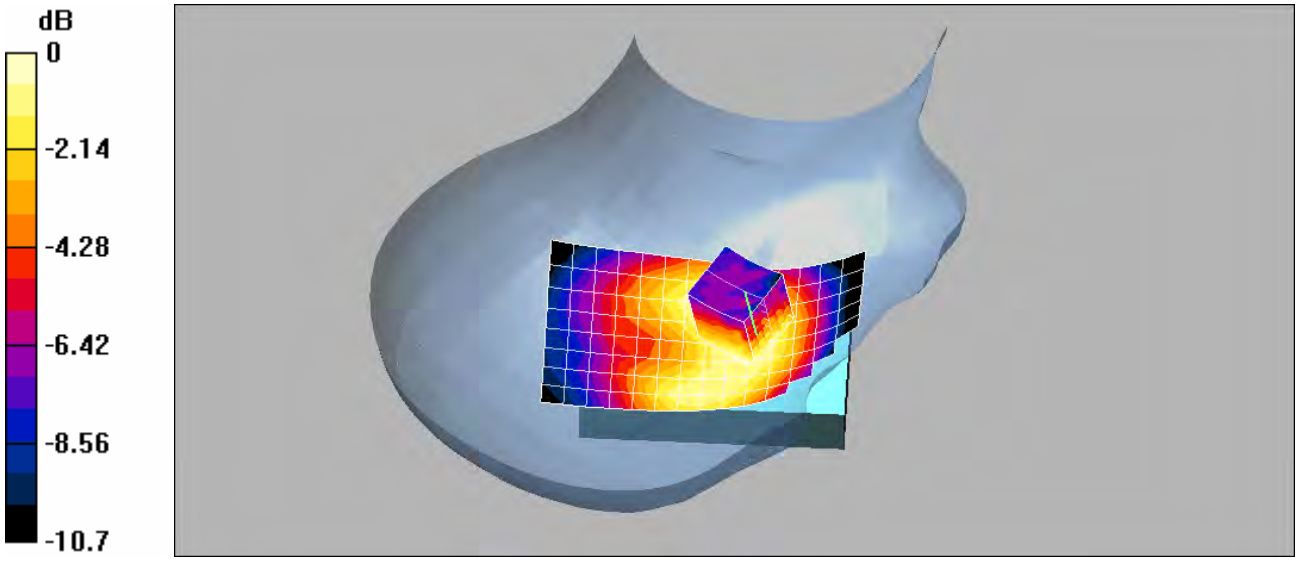
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.5 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.023 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.017 mW/g



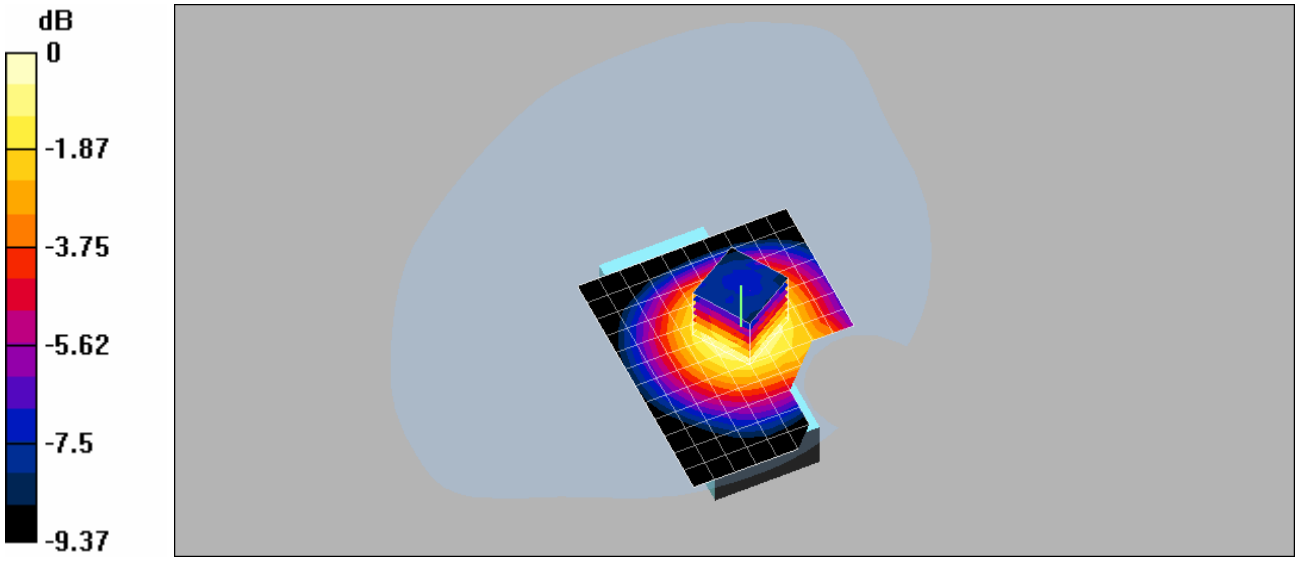
0 dB = 0.017mW/g

SAR Test GSM 850 Front Sideup, High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; σ = 1.01 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.35, 6.35, 6.35); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (11x13x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.084 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.65 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.085 mW/g



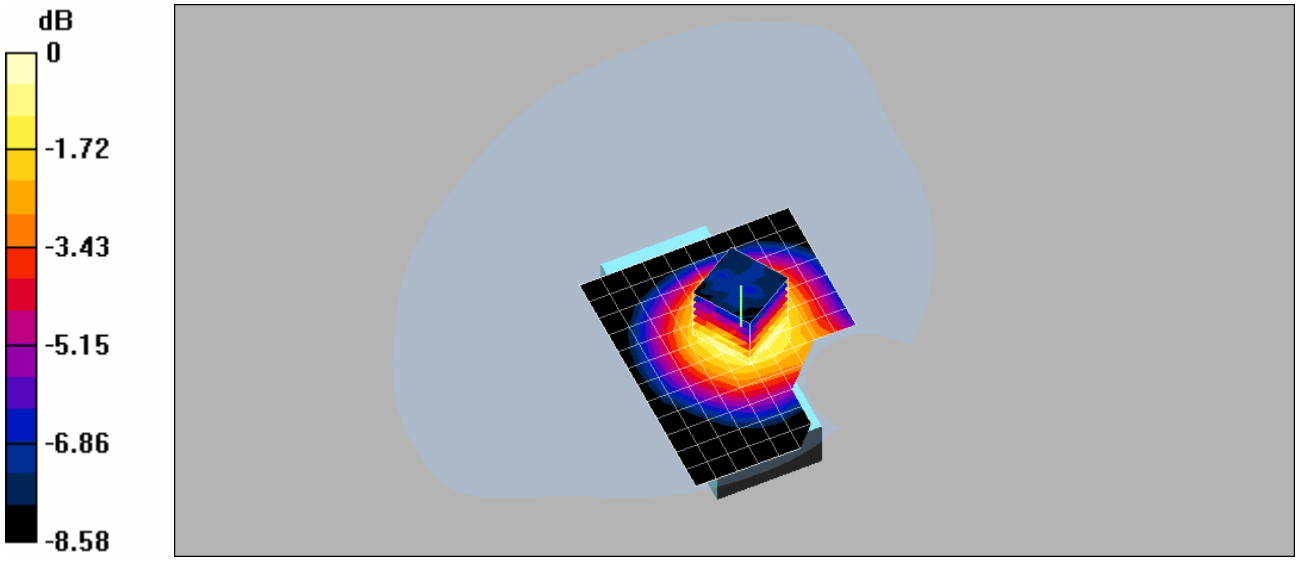
0 dB = 0.085mW/g

SAR Test GSM 850 Front Sideup, Middle

Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 836.4 MHz; σ = 1 mho/m; ε_r = 55.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.35, 6.35, 6.35); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (11x13x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.054 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.01 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.062 W/kg
SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.038 mW/g
Maximum value of SAR (measured) = 0.055 mW/g



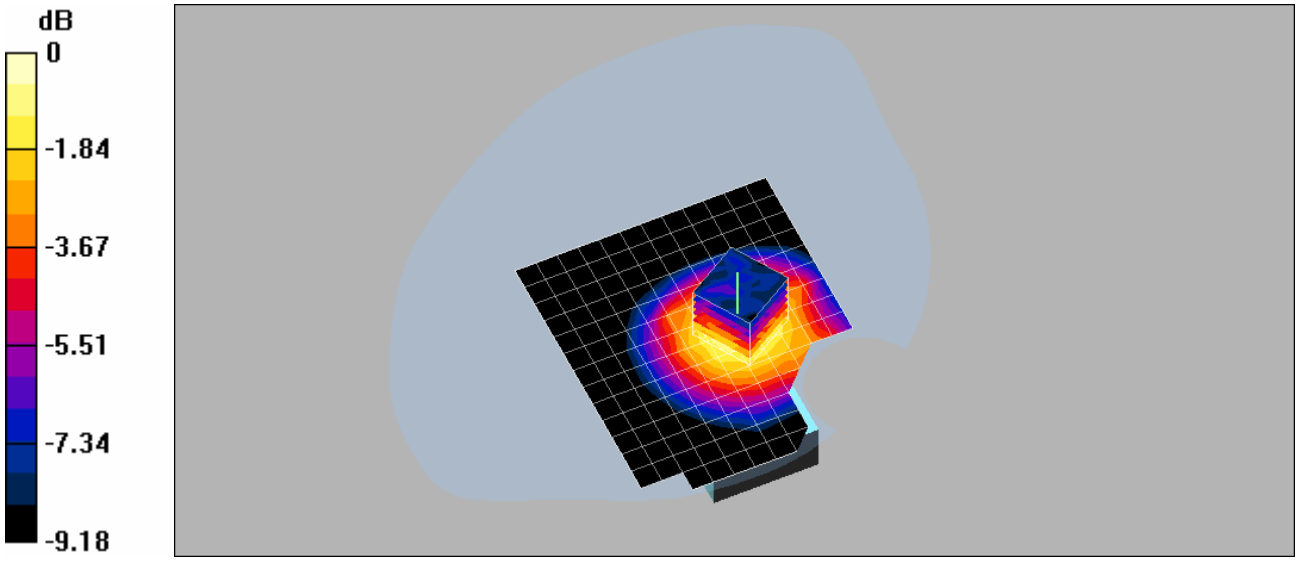
0 dB = 0.055mW/g

SAR Test GSM 850 Front Sideup, Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 824.2 MHz; σ = 0.97 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3034; ConvF(6.35, 6.35, 6.35); Calibrated: 10/28/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn611; Calibrated: 10/27/2004
- Phantom: SAM 1343; Type: SAM; Serial: TP-1343
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Unnamed procedure/Area Scan (13x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.029 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.27 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.036 W/kg
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.020 mW/g
Maximum value of SAR (measured) = 0.033 mW/g



0 dB = 0.033mW/g