SAR TEST REPORT

Equipment Under Test	Notebook
Model No.	M72S
FCC ID	U9M-M72S
Applicant	CLEVO CO.
Address of Applicant	No.129, Hsing-Te road, Sun Chung city 241,Taipei Hsien, Taiwan, R.O.C
Date of Receipt	2007.04.20
Date of Test(s)	2007.04.24-2007.04.25
Date of Issue	2007.05.04

Standards:

FCC OET Bulletin 65 supplement C,
ANSI / IEEE C95.1 , C95.3, IEEE 1528

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan EC Services or testing done by SGS Taiwan EC Services in connection with distribution or use of the product described in this report must be approved by SGS Taiwan EC Services in writing.

Tested by : **LEO HSU** Leo Hsu **Date** : **2007.05.02**

Approved by : **DIKIN YANG** Dikin Yang **Date** : **2007.05.04**

Contents

1. General Information

1.1 Testing Laboratory

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1.2 Details of Applicant

Name	CLEVO CO.
Address	No.129, Hsing-Te road, Sun Chung city 241,Taipei Hsien, Taiwan, R.O.C
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1.3 Description of EUT

Product Name	Notebook	
Model Number	M72S	
IMEI	352678010204050	
Mode of Operation	GSM,GPRS,EDGE,(900/1800/850/1900), WCDMA B1	
Modulation mode	GMSK/ QPSK/8PSK/ WCDMA	
Duty Cycle	GSM	GPRS(EDGE)
	1/8	1/2
Maximum RF Conducted Power (Average)	GSM 850	PCS 1900
	31.92 dBm	28.79 dBm
TX Frequency range	GSM 850	PCS 1900
	824.2-848.8 MHz	1850.2-1909.8 MHz
Channel Number (ARFCN)	GSM 850	PCS 1900
	128-251	512-810
Power Supply	14.8Vdc re-chargeable battery or 19Vdc by AC/DC power adapter	

	Battery Model:	M720SBAT-4, Supplier: LI SHIN
	Adapter Model	0335A1965, Supplier: LI SHIN
Antenna Type	PIFA Antenna	
Antenna Gain	GSM 850	PCS 1900
	-0.97 dBi	
Max. SAR Measured (10 g)	0.114 W/kg (At GSM 850 Body 251 Channel-testing in GPRS mode, Uplink solt=4)	

Note:

1. EGPRS mode(power class E2, 24dBm) was not measured because maximum averaged output power is more than 3 dB lower in EGPRS mode than in GPRS mode.

1.4 Test Environment

Ambient Temperature: 22.1° C
Tissue Simulating Liquid: 21.6° C
Relative Humidity: 62 %

1.5 Operation description

The EUT type is Notebook. When ues it, it will be defined as a portable device since the Notebook will place in the thigh, so SAR measurement is mandatory. The EUT is controlled by using a Communication simulate Tester (Agilent 8960), and the communication between the EUT and the tester is established by air link. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

Value of Crest Factors are 2 for GPRS mode (multi-slot=4) and 1 for WCDMA Band I were used for SAR testing according to the nature of the EUT. The test configuration tested at the low, middle and high frequency channels. By using the program subordinated in the computer, and change into the written channel, and then test of set in highest power. Finally, we will test it by dividing into 2 configurations:

Configuration 1: Right side of the Notebook of EUT is vertical with flat phantom and spacing between EUT and Phantom- in contact 15mm.
Configuration 2: Bottom face of the Notebook is paralleled with flat phantom and Notebook is contact it.

1.6 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (Speag Dasy 4 professional system). A Model EX3DV3 3526-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= $\sigma (|Ei|^2)/ \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant.
The DASY4 system for performing compliance tests consists of the following items:

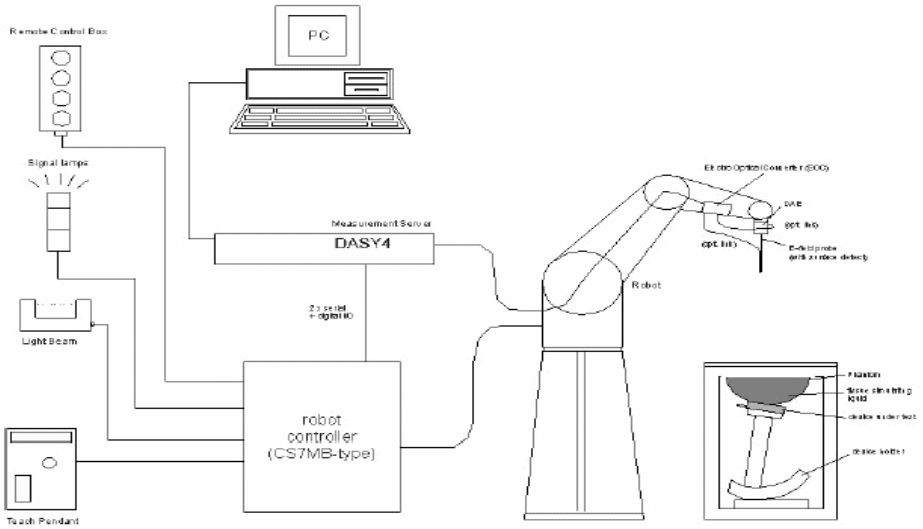


Fig. a The microwave circuit arrangement used for SAR system verification

- A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection,

collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
  - A computer operating Windows 2000 or Windows XP.
  - DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
  - The SAM twin phantom enabling testing left-hand and right-hand usage.
  - The device holder for hand-held mobile phones.
  - Tissue simulating liquid mixed according to the given recipes.
  - Validation dipole kits allowing to validate the proper functioning of the system.

1.7 System Components

EX3DV3 E-Field Probe

Construction	Symmetrical design with triangular core 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 HSL850/1900 Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz, Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	Overall length: 330 mm (Tip: 20 mm)	

	Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

SAM PHANTOM V4.0C

Construction:	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X, CENELEC 50361 and IEC 62209. 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 manually teaching three points with the robot.	
Shell Thickness:	2 ± 0.2 mm	
Filling Volume:	Approx. 25 liters	
Dimensions:	Height: 251 mm; Length: 1000 mm; Width: 500 mm	

DEVICE HOLDER

Construction	In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat	 Device Holder

	phantom).	

1.8 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. These tests were done at 850&1900 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the ambient temperature of the laboratory was in the range 22.1°C, the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

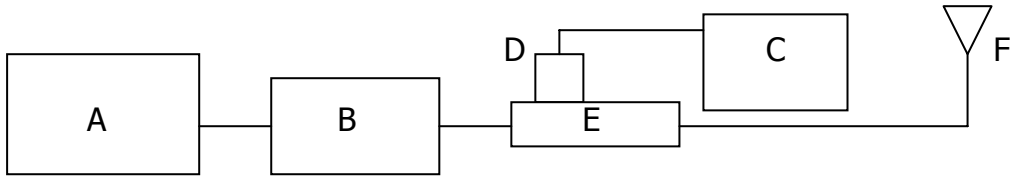
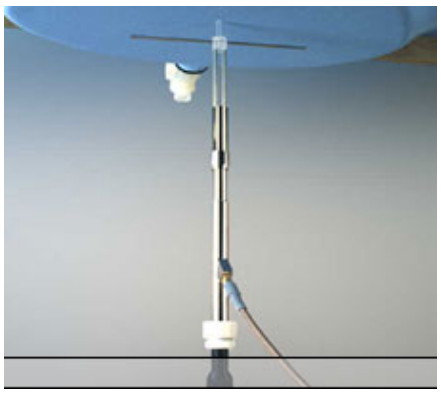


Fig.b The microwave circuit arrangement used for SAR system verification

A. Agilent Model 8648D Signal Generator
B. Mini circuits Model ZHL-42 Amplifier
C. Agilent Model E4416A Power Meter
D. Agilent Model 8481H Power Sensor
E. Agilent Model 778D Dual directional coupling
F. Reference dipole antenna



Photograph of the dipole Antenna

Validation Kit	Frequency Hz	Target SAR (1g) (Pin=250mW)	Target SAR (10g) (Pin=250mW)	Measured SAR (1g)	Measured SAR (10g)	Measured Date
D850V2 S/N: 178	850 MHz (Body)	2.66 m W/g	1.71 m W/g	2.76 m W/g	1.79 m W/g	2007-04-24
D1900V2 S/N: 5d027	1900 MHz (Body)	9.67 m W/g	5.16 m W/g	9.94 m W/g	5.15 m W/g	2007-04-24

Table 1. Results system validation

1.9 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this body-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with HP 8753D Network Analyzer (30 KHz-6000 MHz) by using a procedure detailed in Section V.
All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurement. The depth of the tissue simulant in the ear reference point of the phantom was 15cm±5mm during all tests. (Fig .2)

Frequency (MHz)	Tissue type	Measurement date/ Limits	Dielectric Parameters		
			ρ	σ (S/m)	Simulated Tissue Temperature(° C)
850	Body	Measured, 2007.04.24	55.5	1.03	21.7
		Recommended Limits	52.3-58.0	0.92-1.10	20-24
1900	Body	Measured, 2007.04.24	52.1	1.61	21.6
		Recommended Limits	50.6-56.0	1.38-1.60	20-24

Table 2. Dielectric Parameters of Tissue Simulant Fluid

The composition of the brain tissue simulating liquid for 900 & 1900 MHz is:

Ingredient	900Mhz(Head)	900Mhz(Body)	1900Mhz(Head)	1900Mhz(Body)
DGMBE	X	X	444.52 g	300.67
Water	532.98 g	632.68	552.42 g	716.56
Sale	18.3 g	11.72	3.06 g	4.0
Preventol D-7	2.4 g	1.2	X	X
Cellulose	3.2 g	X	X	X
Sugar	766.0 g	600 g	X	X
Total amount	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)

Table 3. Recipes for tissue simulating liquid

1.10 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1–1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. 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, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 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. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

(1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube). Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .4)

Human Exposure	**Uncontrolled Environment General Population**	**Controlled Environment Occupational**
Spatial Peak SAR (Brain)	1.60 m W/g	8.00 m W/g

Spatial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g

Table .4 RF exposure limits

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

2.Summary of Results

GSM 850 MHZ- testing in GPRS mode (uplink solt=4)

Configuration 1- Vertical position						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	31.80 dBm	0.070	22.1	21.7
	190	836.6	31.91 dBm	0.092	22.1	21.7
	251	848.8	31.97 dBm	0.114	22.1	21.7
Configuration 2- Horizontal position						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	31.80 dBm	0.006	22.1	21.7
	190	836.6	31.91 dBm	0.009	22.1	21.7
	251	848.8	31.97 dBm	0.013	22.1	21.7

PCS 1900 MHZ- testing in GPRS mode (uplink solt=4)

Configuration 1- Vertical position						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	28.79 dBm	0.066	22.1	21.7
	661	1880.0	28.79 dBm	0.099	22.1	21.7
	810	1909.8	28.85 dBm	0.095	22.1	21.7
Configuration 2 Horizontal position						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1710.2	28.79 dBm	0.015	22.1	21.7
	661	1747.4	28.79 dBm	0.022	22.1	21.7
	810	1784.8	28.85 dBm	0.022	22.1	21.7

3. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV3	3526	Aug.25.2006
Schmid & Partner Engineering AG	900/1900 MHz System Validation Dipole	D900V2 D1900V2	178 5d027	Feb.19.2007 Mar.20.2007
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	547	Mar.21.2007
Schmid & Partner Engineering AG	Software	DASY 4 V4.7 Build 53	N/A	Calibration isn't necessary
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration isn't necessary
Agilent	Network Analyzer	8753D	3410A05547	Nov.16.2006
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration isn't necessary
Agilent	Dual-directional coupler	778D	50313	Sep.01.2006
Agilent	RF Signal Generator	8648D	3847M00432	May.04.2006
Agilent	Power Sensor	8481H	MY41091361	May.27.2006
Agilent	8960 Series 10 Wireless Communication Tester	8960	GB44051912	Nov.28.2006

4.Measurements

GPRS_CH128 -Vertical position Date/Time: 2007/4/24 22:19:42

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.951 mho/m; ε_r = 56.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

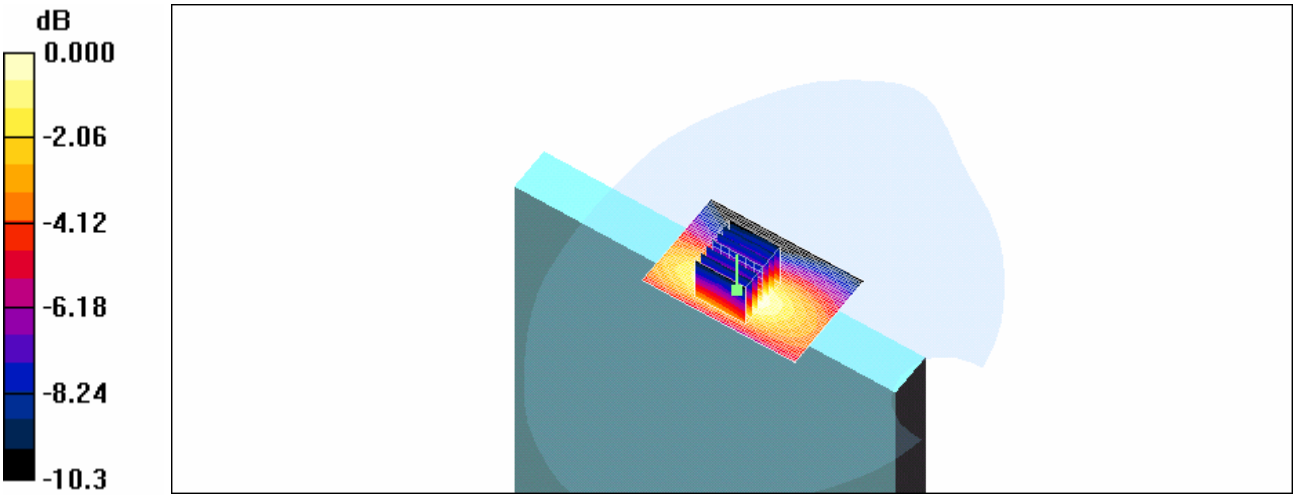
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.081 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.11 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.103 W/kg

SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.045 mW/g
Maximum value of SAR (measured) = 0.075 mW/g



0 dB = 0.075mW/g

GPRS_CH190 -Vertical position

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.962 mho/m; ε_r = 56.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

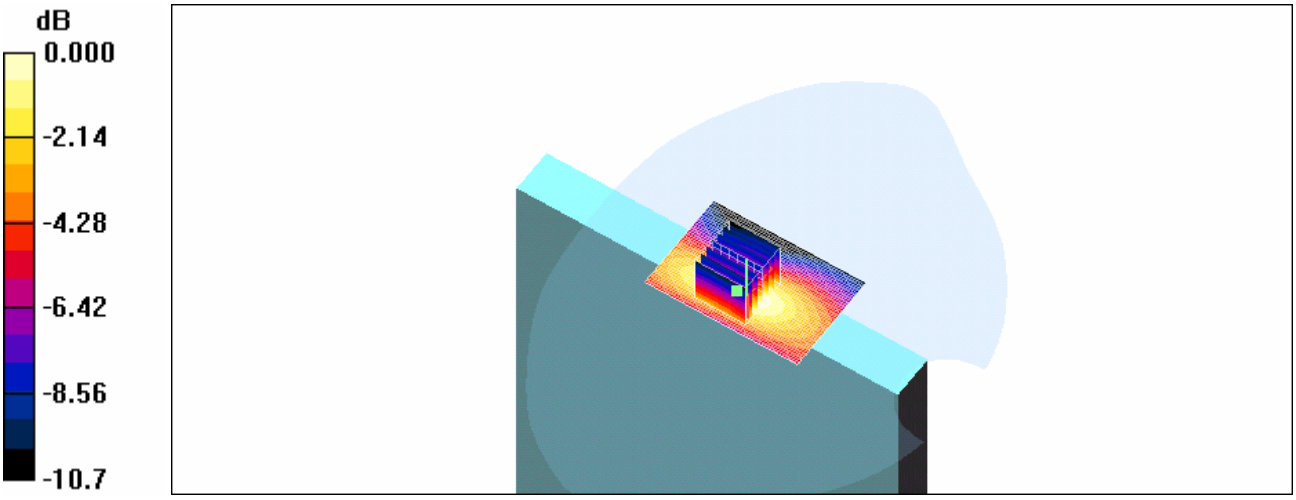
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.105 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.13 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 0.138 W/kg

SAR(1 g) = 0.092 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.100 mW/g



0 dB = 0.100mW/g

GPRS_CH251 -Vertical position

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.975 mho/m; ε_r = 56; ρ = 1000 kg/m^3
Phantom section: Flat Section

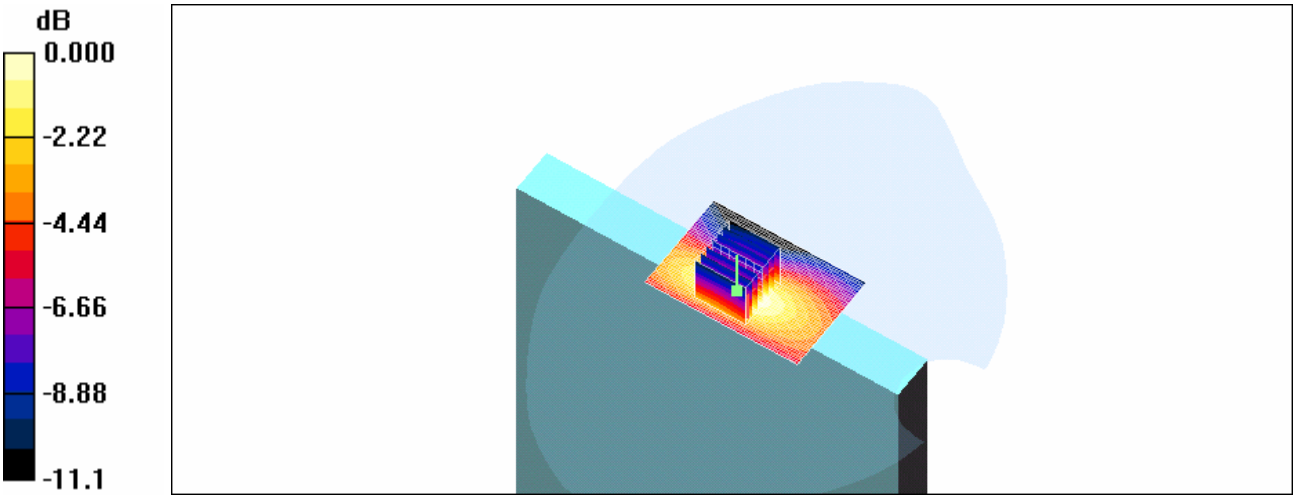
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.131 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = 0.060 dB
Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.072 mW/g
Maximum value of SAR (measured) = 0.124 mW/g



0 dB = 0.124mW/g

GPRS_CH128 –Horizontal position

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.925 mho/m; ε_r = 54; ρ = 1000 kg/m^3
Phantom section: Flat Section

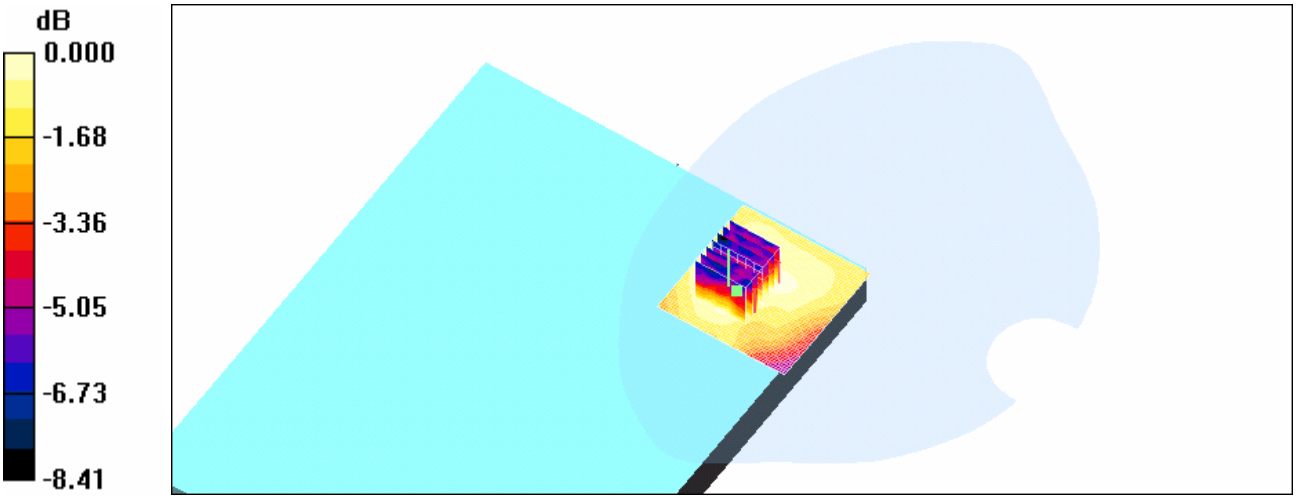
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.007 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.20 V/m; Power Drift = 0.245 dB
Peak SAR (extrapolated) = 0.010 W/kg

SAR(1 g) = 0.00642 mW/g; SAR(10 g) = 0.00492 mW/g
Maximum value of SAR (measured) = 0.007 mW/g



0 dB = 0.007mW/g

GPRS_CH190 –Horizontal position

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 mho/m; ε_r = 53.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

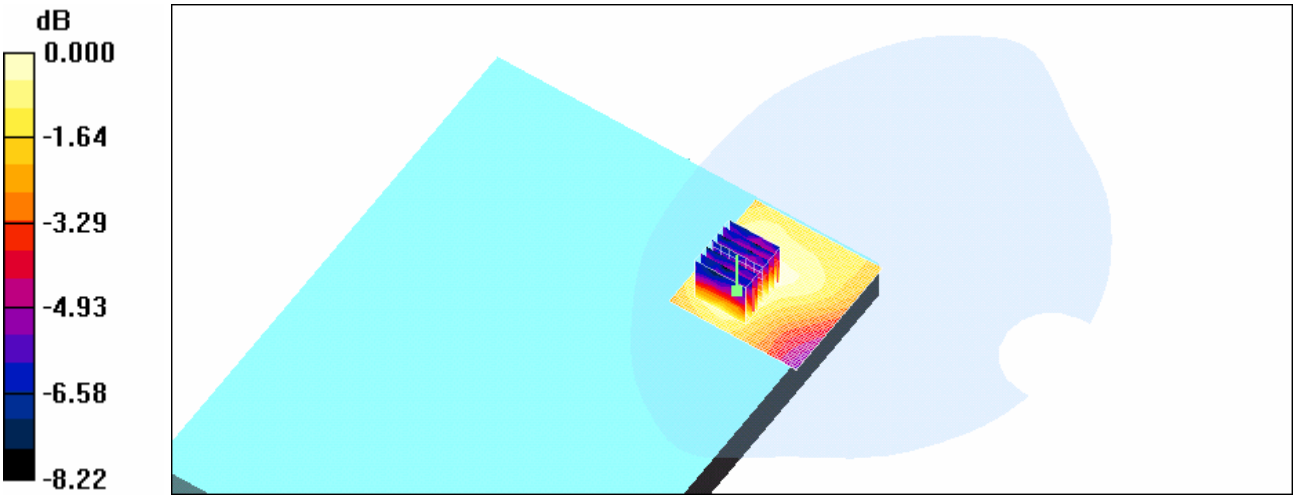
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.010 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.67 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.013 W/kg

SAR(1 g) = 0.0092 mW/g; SAR(10 g) = 0.00699 mW/g
Maximum value of SAR (measured) = 0.010 mW/g



0 dB = 0.010mW/g

GPRS_CH251 –Horizontal position

DUT: M72S; Type: GSM850;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:2
Medium: Muscle 850 MHz Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.944 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

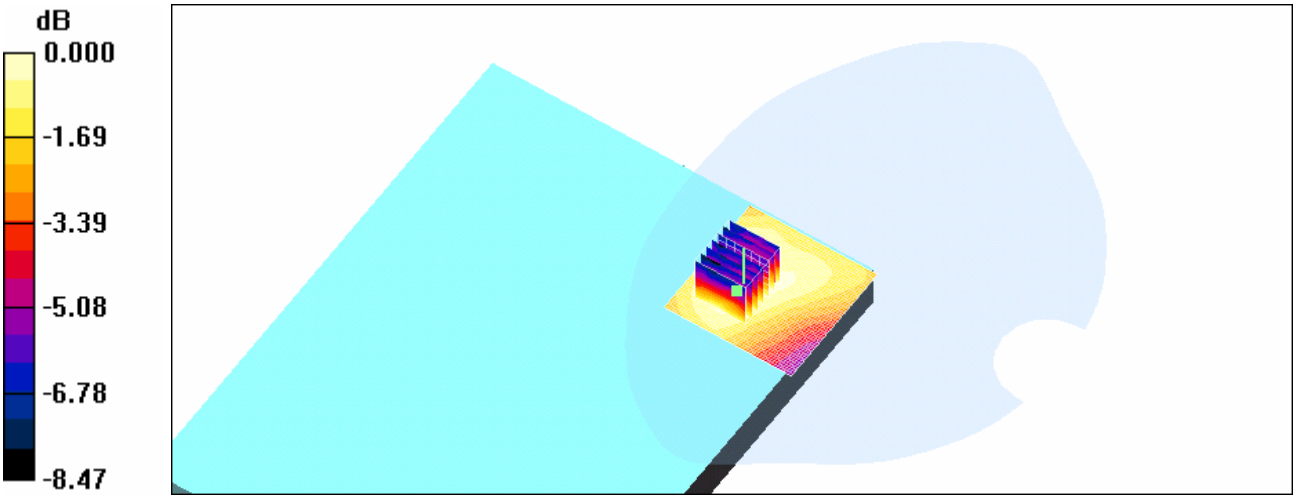
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.014 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.11 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 0.018 W/kg

SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00978 mW/g
Maximum value of SAR (measured) = 0.014 mW/g



0 dB = 0.014mW/g

GPRS_CH512 -**Vertical position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1850.2 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.55 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

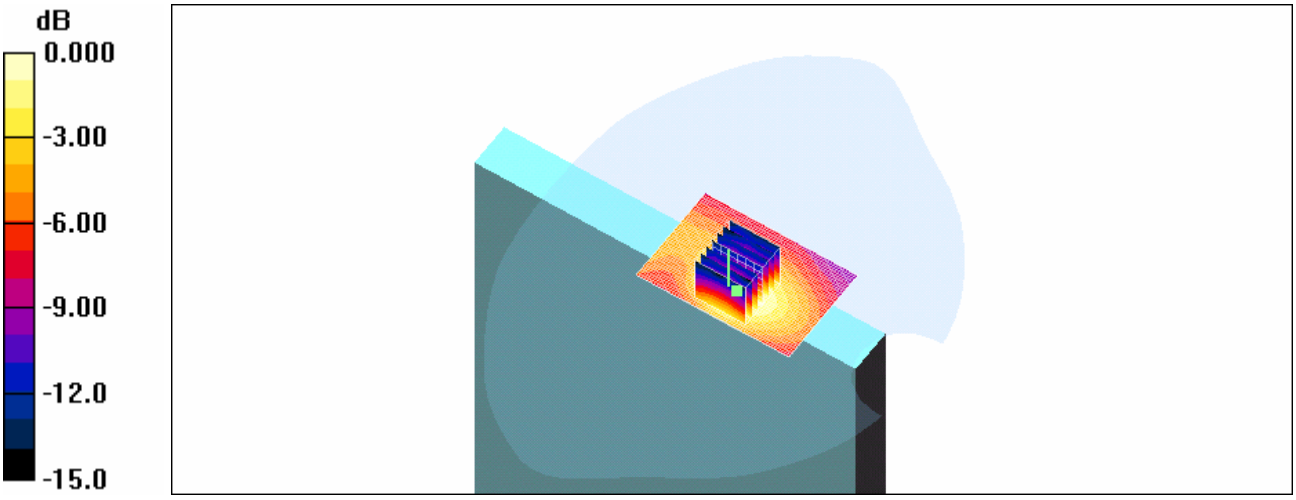
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.078 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.45 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.107 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

GPRS_CH661 -**Vertical position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1880 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; σ = 1.57 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

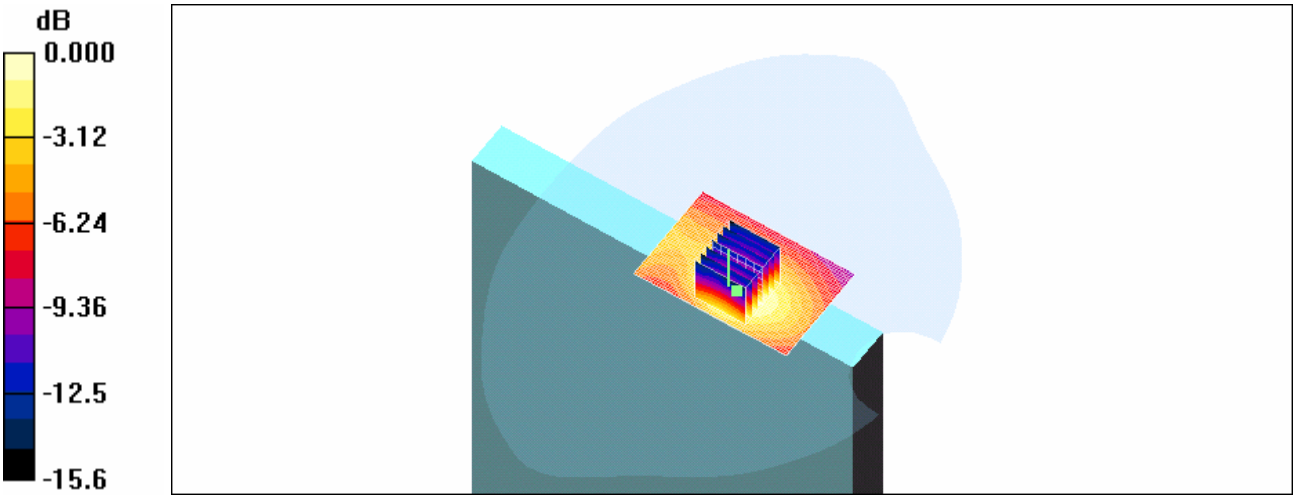
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.114 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.67 V/m; Power Drift = 0.002 dB
Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.058 mW/g
Maximum value of SAR (measured) = 0.108 mW/g



0 dB = 0.108mW/g

GPRS_CH810 -**Vertical position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz; σ = 1.6 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

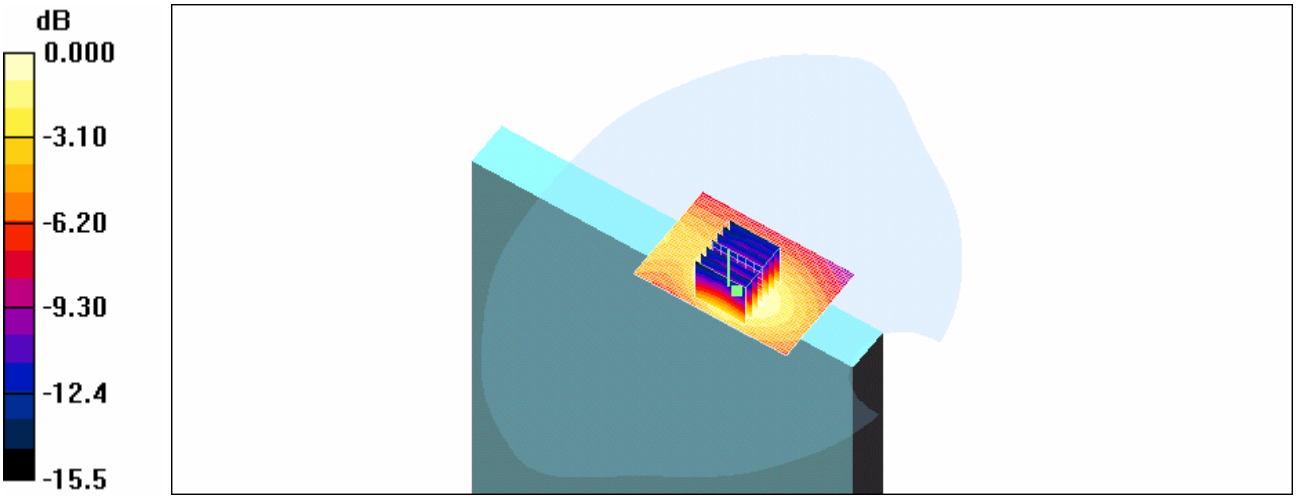
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (61x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.107 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.48 V/m; Power Drift = 0.066 dB
Peak SAR (extrapolated) = 0.160 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.056 mW/g
Maximum value of SAR (measured) = 0.104 mW/g



0 dB = 0.104mW/g

GPRS_CH512 – **Horizontal position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1850.2 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.55 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

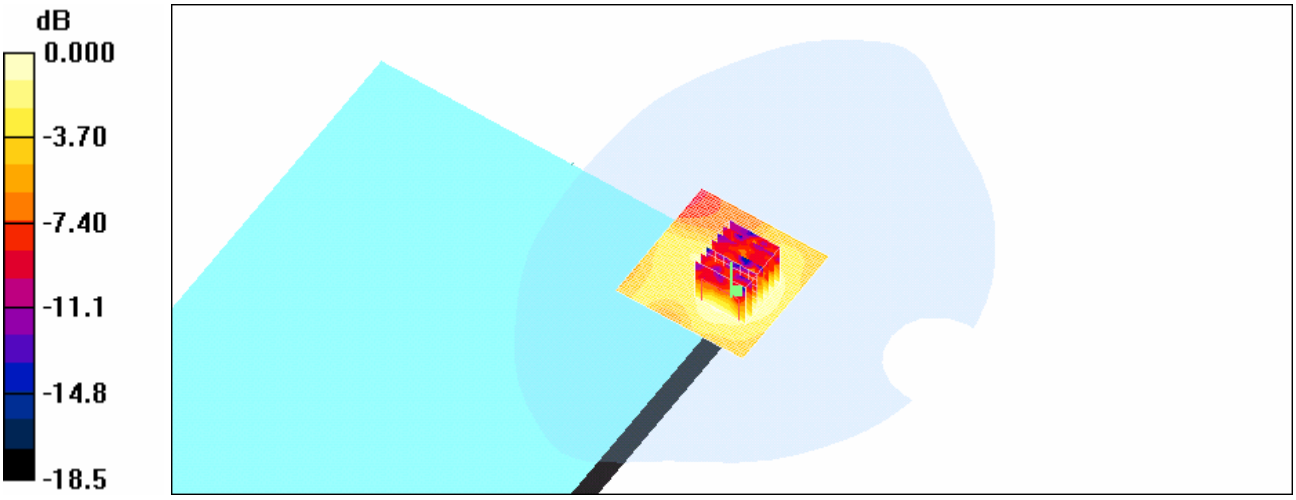
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.015 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.59 V/m; Power Drift = -0.212 dB
Peak SAR (extrapolated) = 0.024 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.0092 mW/g
Maximum value of SAR (measured) = 0.016 mW/g



0 dB = 0.016mW/g

GPRS_CH661- **Horizontal position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1880 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; σ = 1.57 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

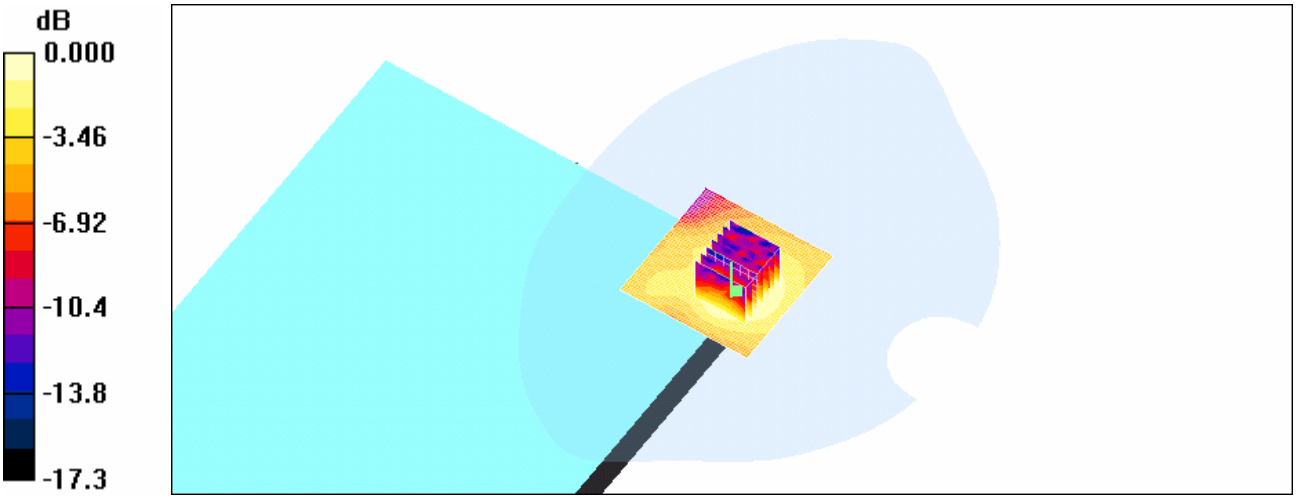
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.025 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.06 V/m; Power Drift = -0.215 dB
Peak SAR (extrapolated) = 0.038 W/kg

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.014 mW/g
Maximum value of SAR (measured) = 0.025 mW/g



0 dB = 0.025mW/g

GPRS_CH810 - **Horizontal position**

DUT: M72S; Type: GSM1900;

Communication System: GSM1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2
Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz; σ = 1.6 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

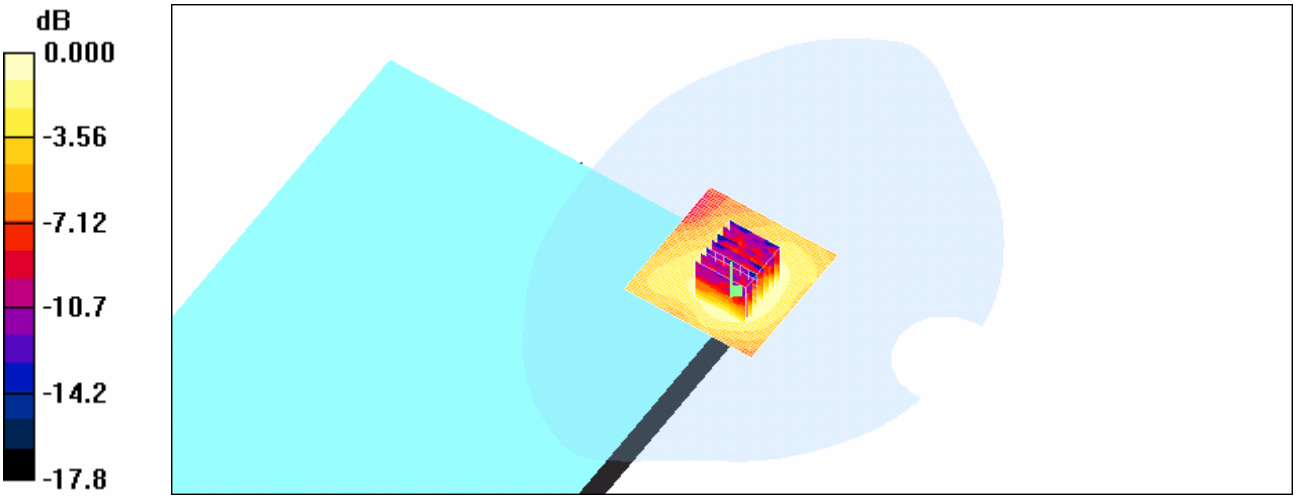
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

BODY/Area Scan (51x51x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.023 mW/g

BODY/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.02 V/m; Power Drift = 0.195 dB
Peak SAR (extrapolated) = 0.034 W/kg

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.013 mW/g
Maximum value of SAR (measured) = 0.024 mW/g



0 dB = 0.024mW/g

SAR System Performance Verification

DUT: Dipole 900 MHz; Type: D900V2; Serial: SN:178

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: Muscle 900 MHz Medium parameters used: f = 900 MHz; σ = 1.03 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

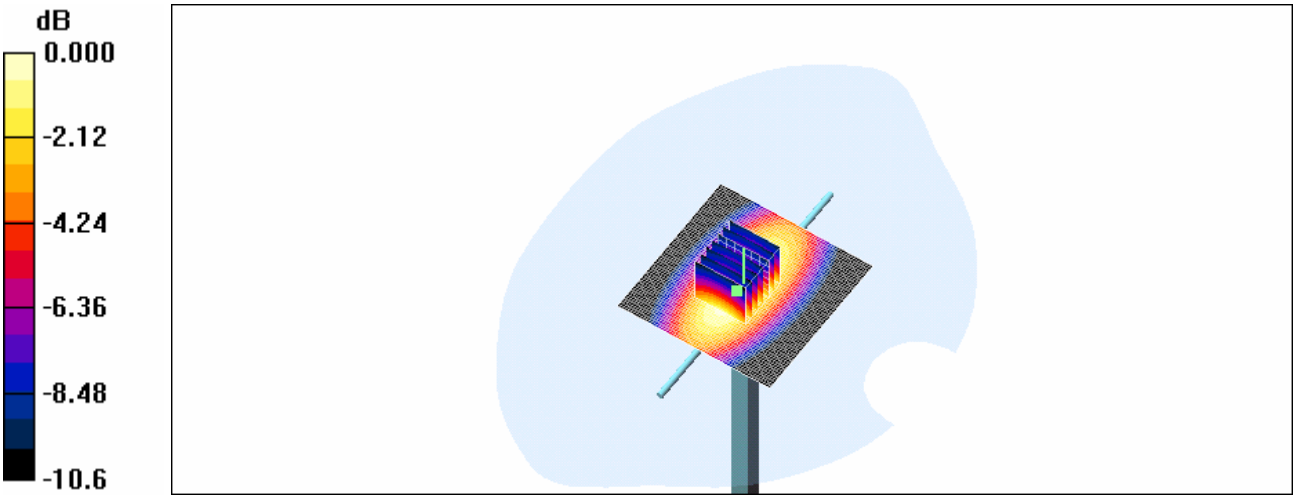
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.63, 11.63, 11.63); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.97 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.7 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 4.17 W/kg

SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.79 mW/g
Maximum value of SAR (measured) = 2.98 mW/g



0 dB = 2.98mW/g

SAR System Performance Verification

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN:5d027

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: M1800 & 1900 Medium parameters used: f = 1900 MHz; σ = 1.61 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

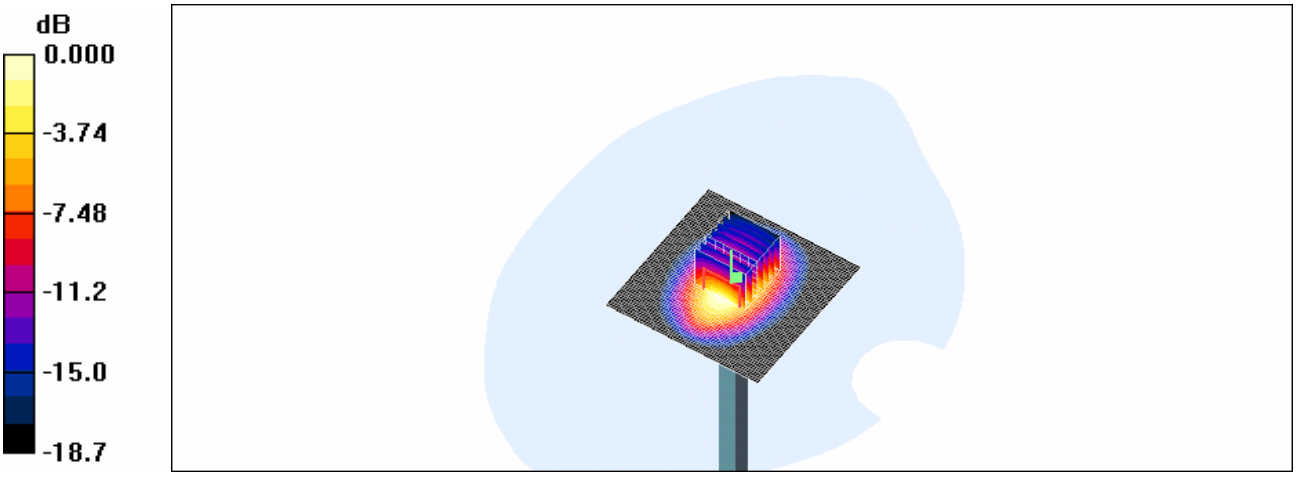
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.64, 9.64, 9.64); Calibrated: 2006/8/25
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2007/3/5
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.0 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.5 V/m; Power Drift = -0.093 dB
Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.94 mW/g; SAR(10 g) = 5.15 mW/g
Maximum value of SAR (measured) = 11.3 mW/g



0 dB = 11.3mW/g