

# TEST REPORT

**Equipment Under Test** : M340 / M130B / M347  
**Model No.** : HW76  
**FCC ID** : TKH-M340M130BM347  
**Applicant** : Vitelcom Mobile Technology S.A.  
**Address of Applicant** : Parque Tecnológico de Andalucía  
Avda. Juan Peñalver, 7, Malaga Spain  
**Date of Receipt** : 2006.06.01  
**Date of Test(s)** : 2006.06.02-2006.07.20  
**Date of Issue** : 2006.07.20

**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.

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**Prepared by :** Leo Hsu

**Date :** 2006.07.20

**Approved by :** DIKIN YANG

**Date :** 2006.07.20

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# 1. General Information

## 1.1 Testing Laboratory

SGS Taiwan Ltd.  
134, Wu Kung Road, Wuku industrial zone  
Taipei county, Taiwan, R.O.C.  
Telephone : +886-2-2299-3279  
Fax : +886-2-2298-0488  
Internet : <http://www.sgs.com.tw>

## 1.2 Details of Applicant

Name : Vitelcom Mobile Technology S.A.  
Address : Parque Tecnológico de Andalucía  
Avda. Juan Peñalver, 7  
City : Campanillas (Malaga)  
Country : SPAIN  
Telephone : +34 952 02 86 86  
Fax : +34 952 367 590  
Contact Person : Jose Luis Cordoba  
E-mail : [jlcordova@vitelcom.es](mailto:jlcordova@vitelcom.es)

## 1.3 Description of EUT(s)

EUT Name	M340 / M130B / M347	
IMEI	446019197507590	
FCC ID	TKH-M340M130BM347	
Mode of Operation	Mobile phones GSM quad band bar type, option FM radio and/or Bluetooth	
Duty Cycle	GSM	GPRS(class=10)
	1/8	1/4
Modulation Mode	GMSK	
Maximum RF Conducted Power (Peak)	GSM 850	PCS 1900
	33 dBm	30 dBm
TX Frequency range	GSM 850	PCS 1900

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	824.2-848.8 MHz	1850.2-1909.8MHz
Channel Number (ARFCN)	GSM 850	PCS 1900
	128-251	512-810
Battery Type	3.6v Lithium-Ion	
Antenna Type	PIFA	
Antenna Gain (Peak)	GSM850	PCS 1900
	0 dBi	
Exposure environment	Uncontrolled exposure	
HW Version	D	
SW Version	8322861x or 851089xx	
Max. SAR Measured (1g)	1.39 W/kg (At GSM 850 Body 251 Channel, testing in GPRS mode and switch-on Bluetooth)	

## 1.4 Test Environment

Ambient Temperature: 22.1° C

Tissue Simulating Liquid: 21.6° C

Relative Humidity: 62 %

## 1.5 Operation description

The EUT was controlled by using a Universal Radio Communication Tester (CMU 200), and the communication between the EUT and the tester was established by air link. Measurements were performed respectively on the lowest, middle and highest channels of the operating bands. The phone was set to maximum power level during all tests, and at the beginning of each test the battery was fully charged. During the SAR testing, the DASY4 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing. Moreover, since the EUT supports Bluetooth function, the Bluetooth transmitter has to keep on at the worst case condition.

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## 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 ET3DV6 1759-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation  $SAR = \sigma (|E_i|^2) / \rho$  where  $\sigma$  and  $\rho$  are the conductivity and mass density of the tissue-simulant.

The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software. An arm extension is 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.

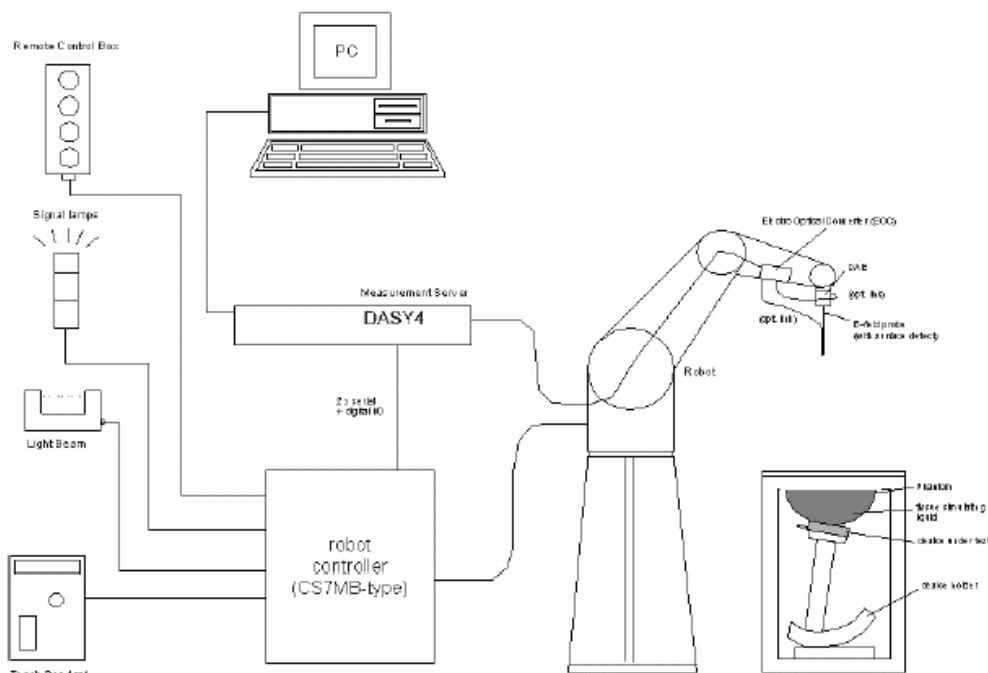


Fig. a The microwave circuit arrangement used for SAR system verification

- 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

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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 handheld 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

### ET3DV6 E-Field Probe

**Construction:** Symmetrical design with triangular core  
Built-in shielding against static charges  
PEEK enclosure material  
(resistant to organic solvents, e.g. glycol)

**Calibration:** In air from 10 MHz to 2.5 GHz  
In brain simulating tissue at  
frequencies of 850&1900 MHz  
(accuracy  $\pm 8\%$ )

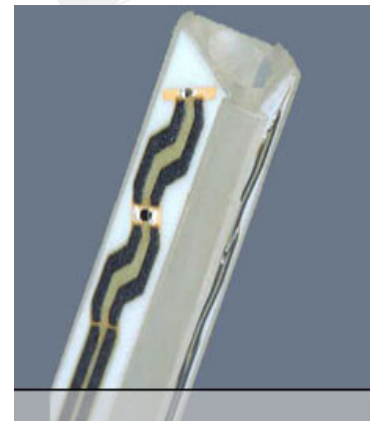
**Frequency:** 10 MHz to 6 GHz; Linearity:  $\pm 0.2$  dB  
(30 MHz to 3 GHz)

**Directivity:**  $\pm 0.2$  dB in brain tissue (rotation around probe axis)  
 $\pm 0.4$  dB in brain tissue (rotation normal to probe axis)

**Dynamic Range:** 5  $\mu$ W/g to 100 mW/g; Linearity:  $\pm 0.2$  dB

**Surface. Detect:**  $\pm 0.2$  mm repeatability in air and clear liquids over  
diffuse reflecting surfaces

**Dimensions:** Overall length: 330 mm  
Tip length: 16 mm  
Body diameter: 12 mm



**ET3DV6 E-Field Probe**

Tip diameter: 6.8 mm  
Distance from probe tip to dipole centers: 2.7 mm  
Application: General dosimetry up to 3 GHz  
Compliance tests of mobile phone

## 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:  $2 \pm 0.2$  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 phantom).



Device Holder



## 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  $\pm 10\%$  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 22.2°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.

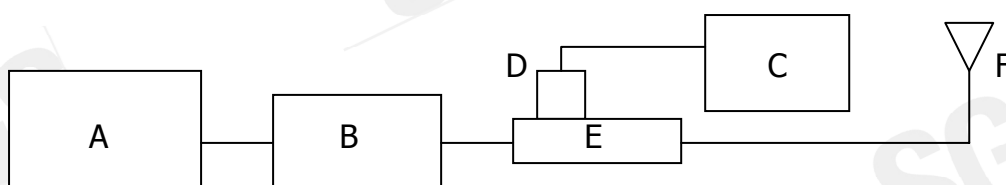
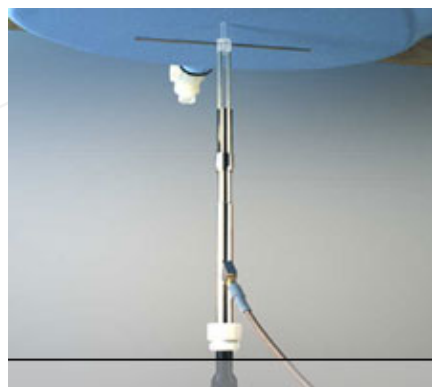


Fig.b The microwave circuit arrangement used for SAR system verification

- 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 and 777D  
Dual directional coupling
- F. Reference dipole antenna



Photograph of the dipole Antenna

Validation Probe	Frequency	Target SAR 1g (250mW)	Target SAR 10g (250mW)	Measured SAR 1g	Measured SAR 10g	Measured date
DT3DV6 S/N :1759	900 MHz (Head)	2.7 m W/g	1.74 m W/g	2.72m W/g	1.78m W/g	2006/06/05
	900 MHz (Body)	2.78 m W/g	1.81 m W/g	2.64m W/g	1.75m W/g	2006/06/02
		2.78 m W/g	1.81 m W/g	2.65m W/g	1.73m W/g	2006/07/20
	1900 MHz (Head)	9.64 m W/g	5.07 m W/g	9.43 m W/g	4.96 m W/g	2006/06/06

	1900 MHz (Body)	9.92 m W/g	5.28 m W/g	10.1 m W/g	5.27 m W/g	2006/06/05
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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 8714ET Network Analyzer (30 KHz - 3000 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)

F (MHz)	Tissue type	Limits/ Measured	Dielectric Parameters		
			$\rho$	$\sigma$ (S/m)	Simulated Tissue Temp(° C)
900	Head	Measured, 2006.06.05	39.4	0.935	21.7
		Recommended Limits	39.4-43.6	0.86-1.02	20-24
	Body	Measured, 2006.06.02	54.0	1.02	22.1
		Measured, 2006.07.20	53.2	0.994	22.1
		Recommended Limits	52.3-58	0.92-1.1	20-24
1900	Head	Measured, 2006.06.06	39.1	1.35	21.8
		Recommended Limits	38-42	1.305-1.595	20-24
	Body	Measured, 2006.06.05	52.3	1.59	22.0
		Recommended Limits	50.6-56	1.44-1.6	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)
BDGMBE	X	X	444.52 g	300.67
Water	532.98 g	632.68	552.42 g	716.56
Salt	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

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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)

<b>Human Exposure</b>	<b>Uncontrolled Environment General Population</b>	<b>Controlled Environment Occupational</b>
<b>Spatial Peak SAR</b> (Brain)	1.60 m W/g	8.00 m W/g
<b>Spatial Average SAR</b> (Whole Body)	0.08 m W/g	0.40 m W/g
<b>Spatial Peak SAR</b> (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

#### Right Head (Cheek Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	33dbm	0.635/0.436	22	21.7
	190	836.6	33dbm	0.649/0.444	22	21.7
	251	848.8	33dbm	0.737/0.505	22	21.7

#### Left Head (Cheek Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	33dbm	0.597/0.404	22	21.7
	190	836.6	33dbm	0.599/0.405	22	21.7
	251	848.8	33dbm	0.67/0.453	22	21.7

#### Right Head (15° Tilt Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	33dbm	0.371/0.258	22	21.7
	190	836.6	33dbm	0.367/0.256	22	21.7
	251	848.8	33dbm	0.411/0.285	22	21.7

#### Left Head (15° Tilt Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	33dbm	0.378/0.257	22	21.7
	190	836.6	33dbm	0.37/0.251	22	21.7
	251	848.8	33dbm	0.408/0.275	22	21.7

#### Body Worn-EUT back to the phantom (Testing in GPRS Mode and Bluetooth OFF)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	33dbm	1.22/0.874	22	21.7
	190	836.6	33dbm	1.37/0.974	22	21.7
	251	848.8	33dbm	1.37/0.977	22	21.7

#### Body Worn-EUT front to the phantom (Testing in GPRS Mode)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	251	848.8	33dbm	0.586/0.418	22	21.7

#### Body Worn worst case (Testing in GPRS Mode and Bluetooth ON)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	251	848.8	33dbm	1.39/1.02	22	21.7

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# PCS 1900 MHZ

## Right Head (Cheek Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
1900 MHz	512	1850.2	30dbm	0.358/0.223	22	21.7
	661	1880	30dbm	0.392/0.242	22	21.7
	810	1909.8	30dbm	0.309/0.19	22	21.7

## Left Head (Cheek Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
1900 MHz	512	1850.2	30dbm	0.314/0.169	22	21.7
	661	1880	30dbm	0.358/0.193	22	21.7
	810	1909.8	30dbm	0.272/0.194	22	21.7

## Right Head (15° Tilt Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
1900 MHz	512	1850.2	30dbm	0.252/0.135	22	21.7
	661	1880	30dbm	0.282/0.151	22	21.7
	810	1909.8	30dbm	0.223/0.119	22	21.7

## Left Head (15° Tilt Position)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
1900 MHz	512	1850.2	30dbm	0.334/0.173	22	21.7
	661	1880	30dbm	0.389/0.201	22	21.7
	810	1909.8	30dbm	0.299/0.156	22	21.7

## Body Worn-EUT back to the phantom (Testing in GPRS Mode and Bluetooth OFF)

Frequency	Channel	MHz	Conducted Output Power(Peak)	Measured(W/kg) 1g/10g	Amb. Temp[ °C]	Liquid Temp[ °C]
1900 MHz	512	1850.2	30dbm	0.806/0.51	22	21.7
	661	1880	30dbm	0.925/0.58	22	21.7
	810	1909.8	30dbm	0.8/0.497	22	21.7

Note:

SAR measurement results for the Mobile Phone at maximum output power.



### 3. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ET3DV6	1759	Aug.30.2005
Schmid & Partner Engineering AG	900/1800 MHz System Validation Dipole	D900V2 D1900V2	178 5d027	Feb.07.2006 Mar.21.2006
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE3	547	Apr.28.2006
Schmid & Partner Engineering AG	Software	DASY 4 V4.6 Build 23	N/A	Calibration isn't necessary
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration isn't necessary
Agilent	Network Analyzer	8714ET	US41442815	Oct.31.2005
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration isn't necessary
Agilent	Dual-directional coupler	777D 778D	50114 50313	Aug.12.2005 Aug12.2005
Agilent	RF Signal Generator	8648D	3847M00432	May.04.2006
Agilent	Power Sensor	8481H	MY41091361	May.29.2006
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	102189	Oct.24.2005

## 4. Measurements

HEAD\_RE\_Cheek\_CH128

Date/Time: 2006/6/5 10:07:35

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

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

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.683 mW/g

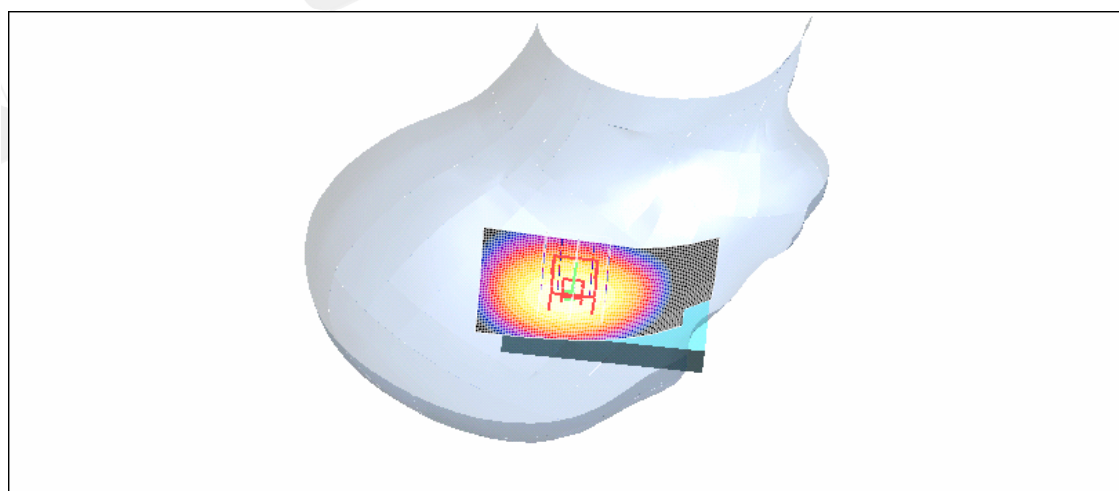
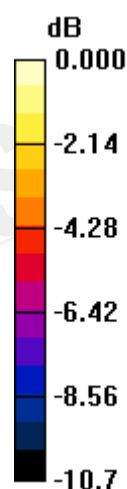
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.2 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.635 mW/g; SAR(10 g) = 0.436 mW/g

Maximum value of SAR (measured) = 0.677 mW/g



0 dB = 0.677mW/g

## HEAD\_RE\_Cheek\_CH190

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.694 \text{ mW/g}$

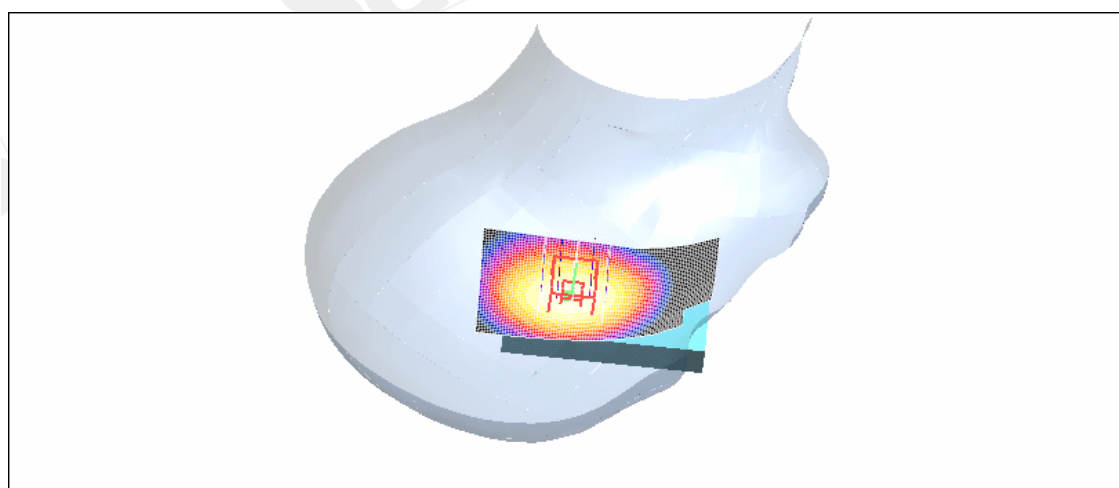
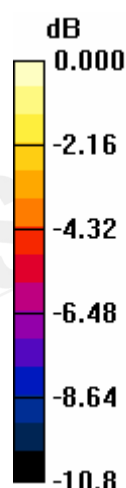
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $22.9 \text{ V/m}$ ; Power Drift =  $-0.041 \text{ dB}$

Peak SAR (extrapolated) =  $0.882 \text{ W/kg}$

SAR(1 g) =  $0.649 \text{ mW/g}$ ; SAR(10 g) =  $0.444 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.689 \text{ mW/g}$



0 dB =  $0.689 \text{ mW/g}$

## HEAD\_RE\_Cheek\_CH251

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.889 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.798 \text{ mW/g}$

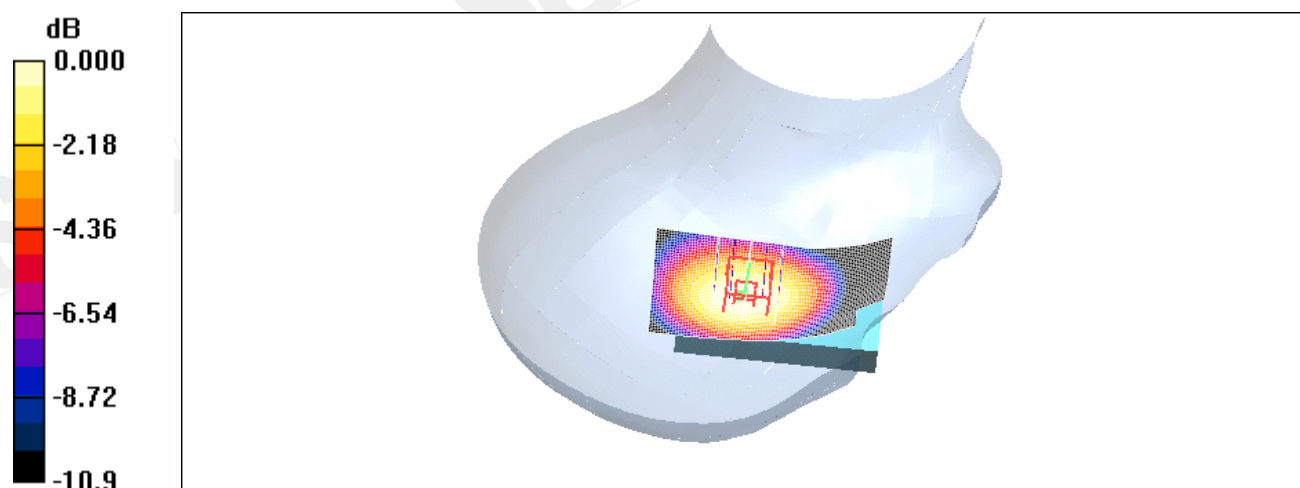
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $24.1 \text{ V/m}$ ; Power Drift =  $0.046 \text{ dB}$

Peak SAR (extrapolated) =  $0.994 \text{ W/kg}$

SAR(1 g) =  $0.737 \text{ mW/g}$ ; SAR(10 g) =  $0.505 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.785 \text{ mW/g}$



0 dB =  $0.785 \text{ mW/g}$

## HEAD\_LE\_Cheek\_CH128

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

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

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.87 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.636 \text{ mW/g}$

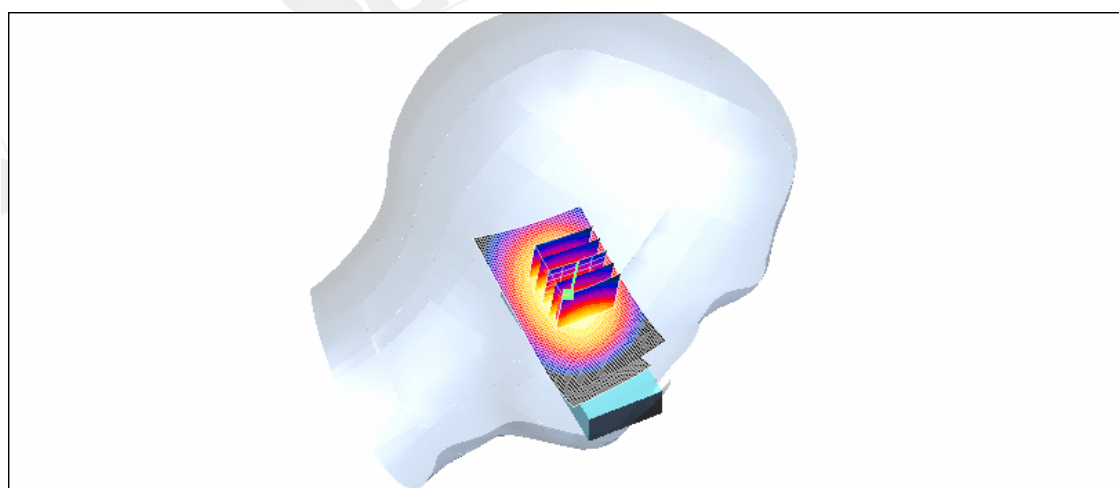
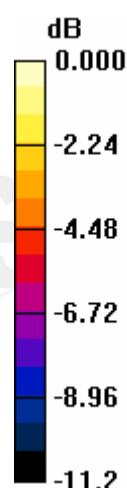
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $22.8 \text{ V/m}$ ; Power Drift =  $-0.103 \text{ dB}$

Peak SAR (extrapolated) =  $0.834 \text{ W/kg}$

SAR(1 g) =  $0.597 \text{ mW/g}$ ; SAR(10 g) =  $0.404 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.640 \text{ mW/g}$



0 dB =  $0.640 \text{ mW/g}$



## HEAD\_LE\_Cheek\_CH190

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.635 \text{ mW/g}$

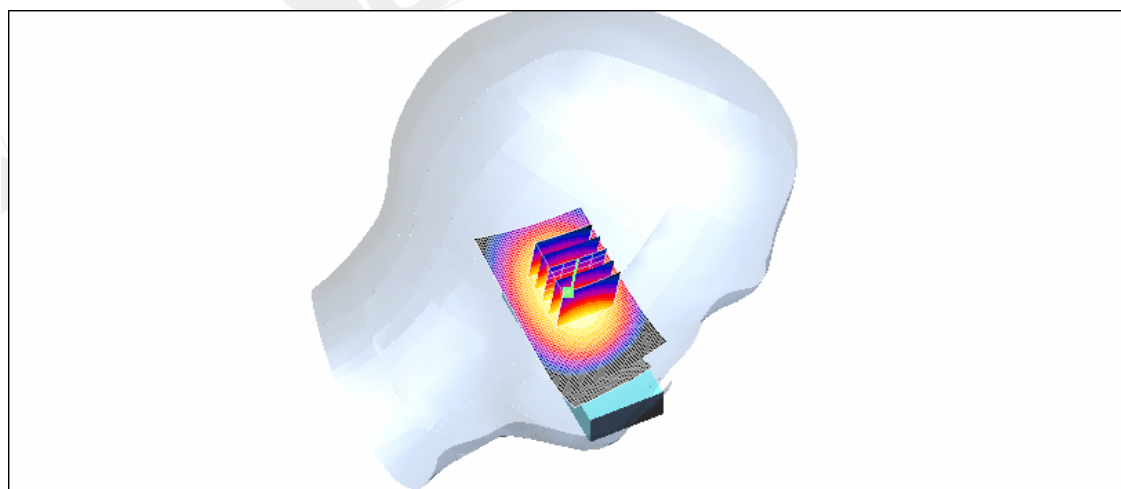
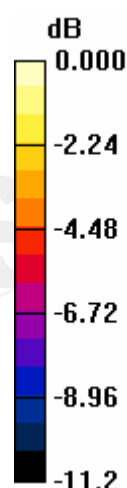
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $22.4 \text{ V/m}$ ; Power Drift =  $-0.013 \text{ dB}$

Peak SAR (extrapolated) =  $0.845 \text{ W/kg}$

SAR(1 g) =  $0.599 \text{ mW/g}$ ; SAR(10 g) =  $0.405 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.643 \text{ mW/g}$



0 dB =  $0.643 \text{ mW/g}$



## HEAD\_LE\_Cheek\_CH251

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.889 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.713 mW/g

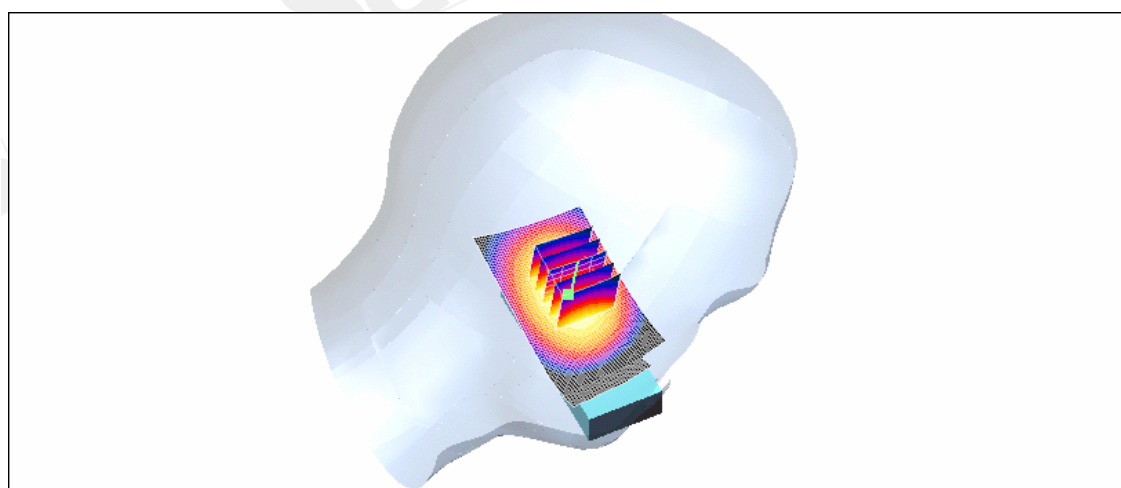
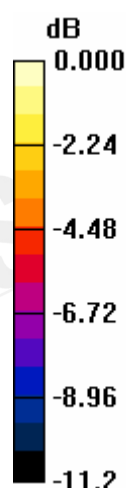
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.5 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.938 W/kg

SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.453 mW/g

Maximum value of SAR (measured) = 0.716 mW/g



0 dB = 0.716mW/g

## HEAD\_RE\_Tilt\_CH128

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

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

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.87 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.399 \text{ mW/g}$

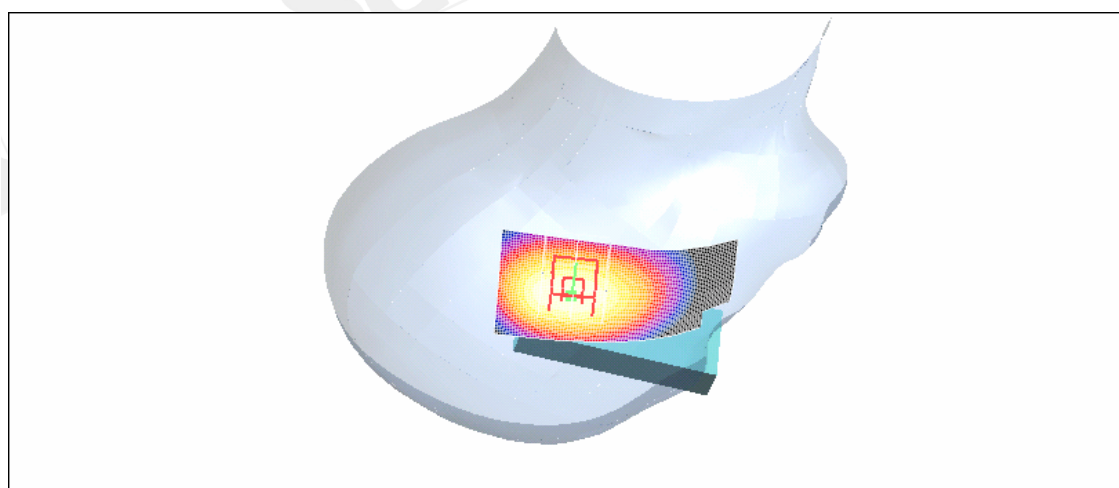
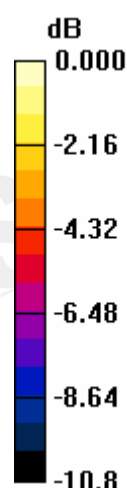
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $20.6 \text{ V/m}$ ; Power Drift =  $-0.040 \text{ dB}$

Peak SAR (extrapolated) =  $0.496 \text{ W/kg}$

SAR(1 g) =  $0.371 \text{ mW/g}$ ; SAR(10 g) =  $0.258 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.397 \text{ mW/g}$



0 dB =  $0.397 \text{ mW/g}$

## HEAD\_RE\_Tilt\_CH190

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.391 \text{ mW/g}$

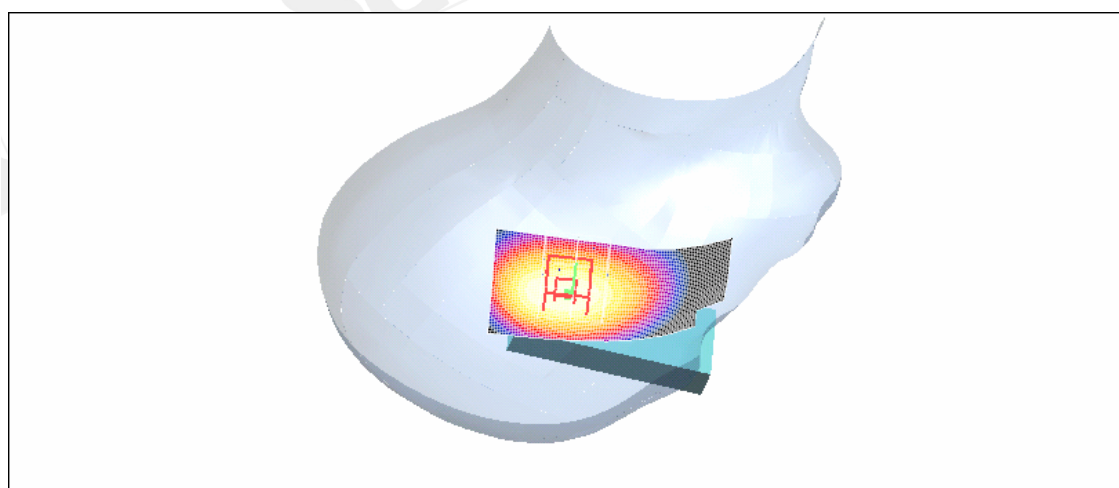
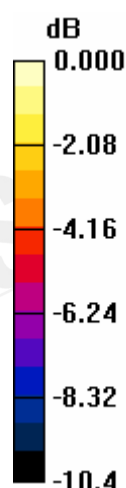
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $20.1 \text{ V/m}$ ; Power Drift =  $0.045 \text{ dB}$

Peak SAR (extrapolated) =  $0.491 \text{ W/kg}$

SAR(1 g) =  $0.367 \text{ mW/g}$ ; SAR(10 g) =  $0.256 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.389 \text{ mW/g}$



0 dB =  $0.389 \text{ mW/g}$

## HEAD\_RE\_Tilt\_CH251

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.889 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.436 \text{ mW/g}$

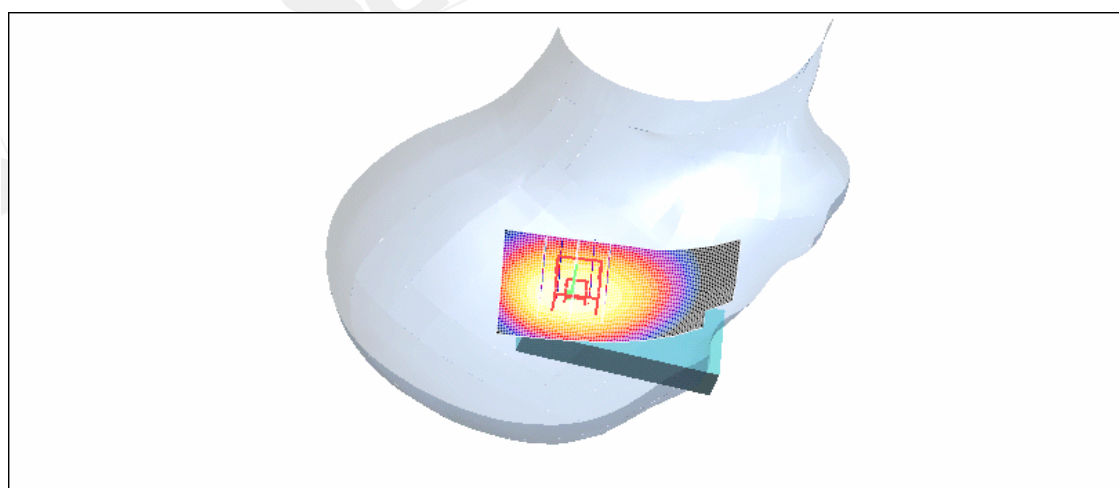
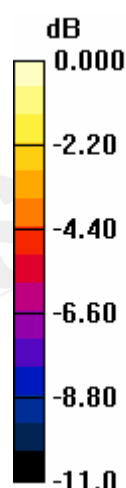
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $21.2 \text{ V/m}$ ; Power Drift =  $-0.023 \text{ dB}$

Peak SAR (extrapolated) =  $0.556 \text{ W/kg}$

SAR(1 g) =  $0.411 \text{ mW/g}$ ; SAR(10 g) =  $0.285 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.438 \text{ mW/g}$



0 dB =  $0.438 \text{ mW/g}$



## HEAD\_LE\_Tilt\_CH128

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

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

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.406 mW/g

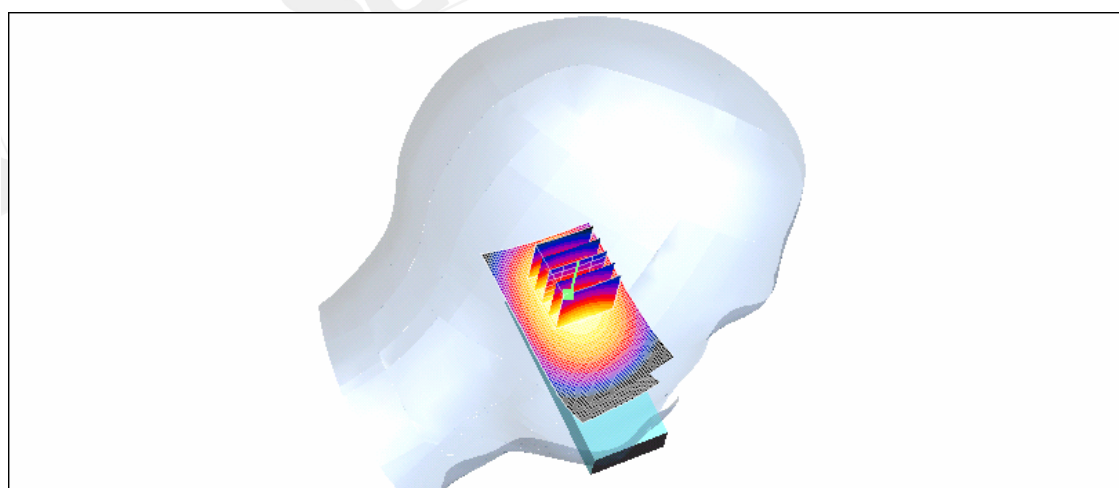
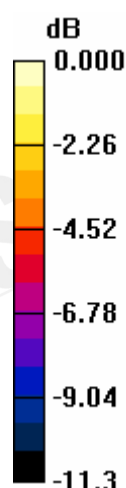
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.5 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.378 mW/g; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 0.404 mW/g



0 dB = 0.404mW/g

## HEAD\_LE\_Tilt\_CH190

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.394 \text{ mW/g}$

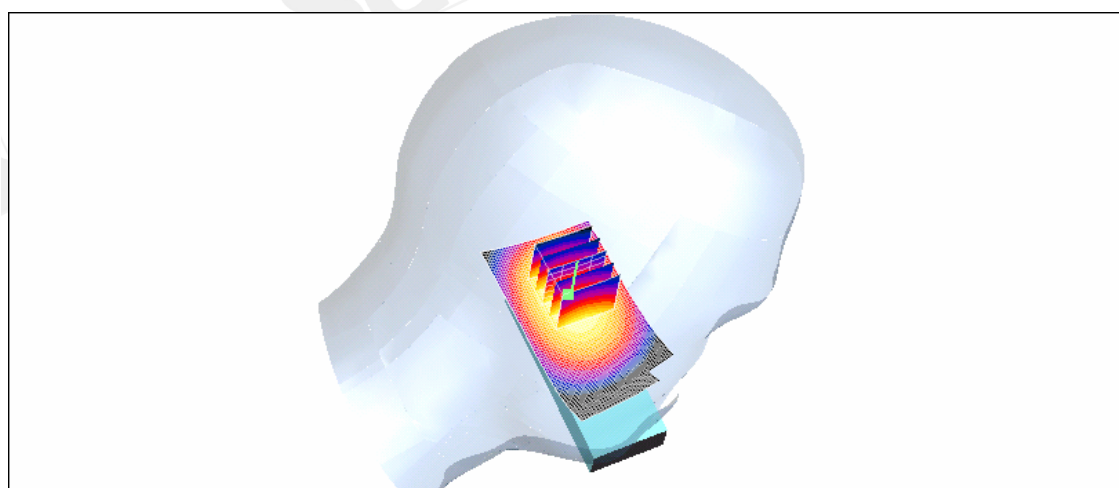
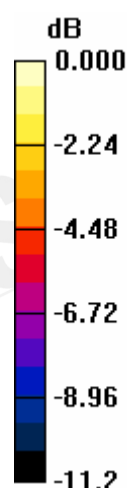
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $20.0 \text{ V/m}$ ; Power Drift =  $0.009 \text{ dB}$

Peak SAR (extrapolated) =  $0.530 \text{ W/kg}$

SAR(1 g) =  $0.370 \text{ mW/g}$ ; SAR(10 g) =  $0.251 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.396 \text{ mW/g}$



0 dB =  $0.396 \text{ mW/g}$



## HEAD\_LE\_Tilt\_CH251

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.889 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.432 \text{ mW/g}$

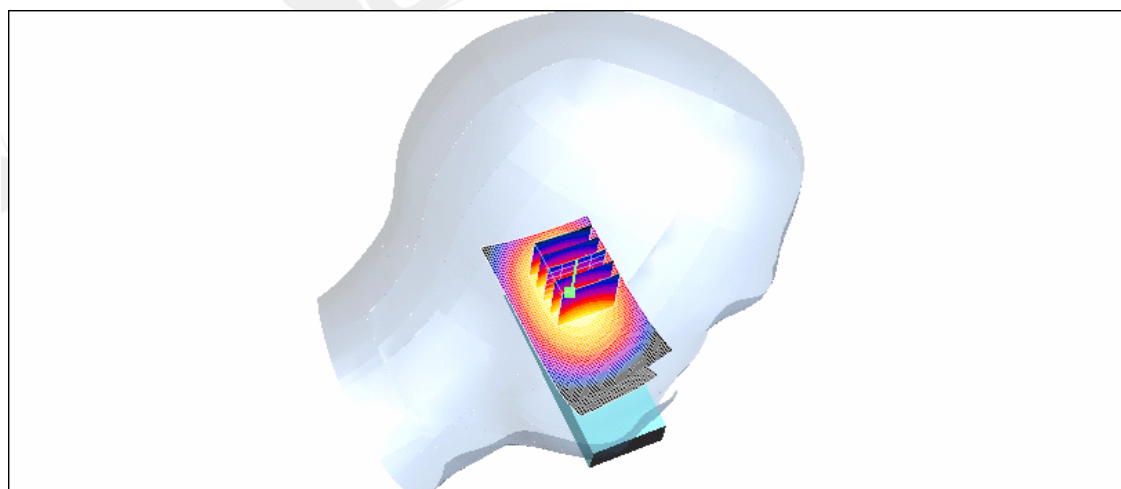
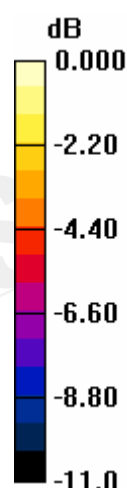
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $20.8 \text{ V/m}$ ; Power Drift =  $-0.013 \text{ dB}$

Peak SAR (extrapolated) =  $0.579 \text{ W/kg}$

SAR(1 g) =  $0.408 \text{ mW/g}$ ; SAR(10 g) =  $0.275 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.437 \text{ mW/g}$



0 dB =  $0.437 \text{ mW/g}$

## Body\_CH128(Testing in GPRS mode)

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.87 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

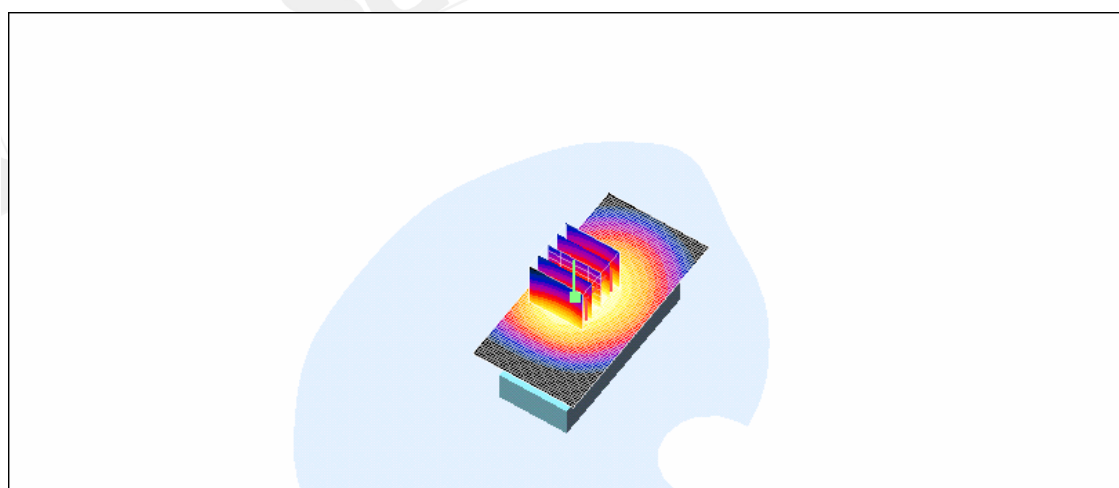
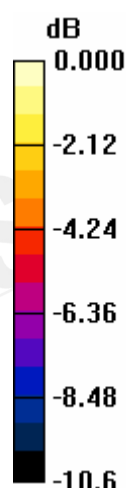
Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 14.4 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.874 mW/g

Maximum value of SAR (measured) = 1.31 mW/g



0 dB = 1.31mW/g

## Body\_CH190(Testing in GPRS mode)

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.48 \text{ mW/g}$

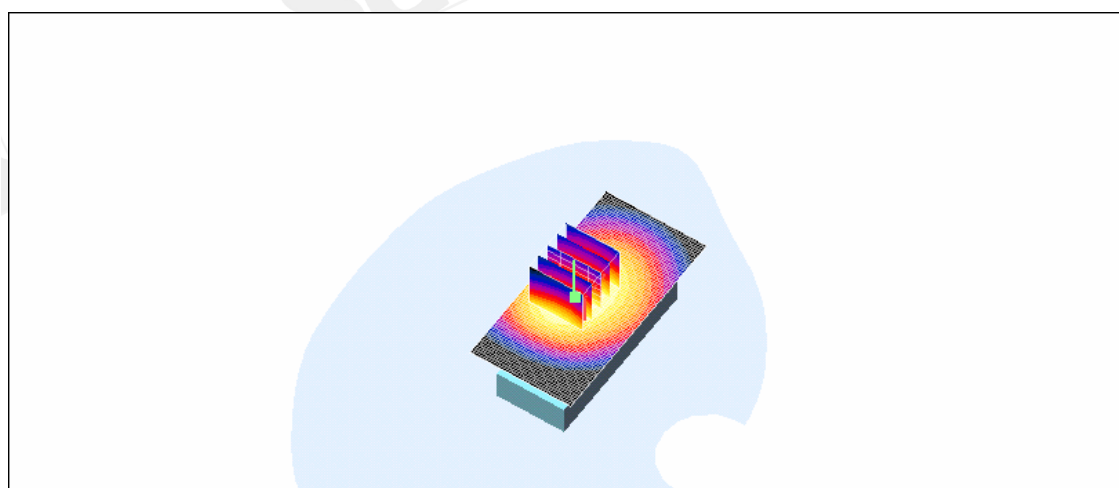
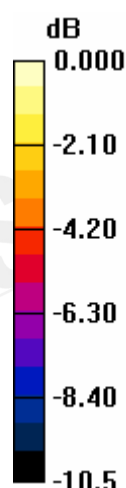
Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.0 \text{ V/m}$ ; Power Drift =  $0.077 \text{ dB}$

Peak SAR (extrapolated) =  $1.84 \text{ W/kg}$

SAR(1 g) =  $1.37 \text{ mW/g}$ ; SAR(10 g) =  $0.974 \text{ mW/g}$

Maximum value of SAR (measured) =  $1.46 \text{ mW/g}$



0 dB =  $1.46 \text{ mW/g}$

## Body\_CH251(Testing in GPRS mode)

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.889 \text{ mho/m}$ ;

$\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.47 \text{ mW/g}$

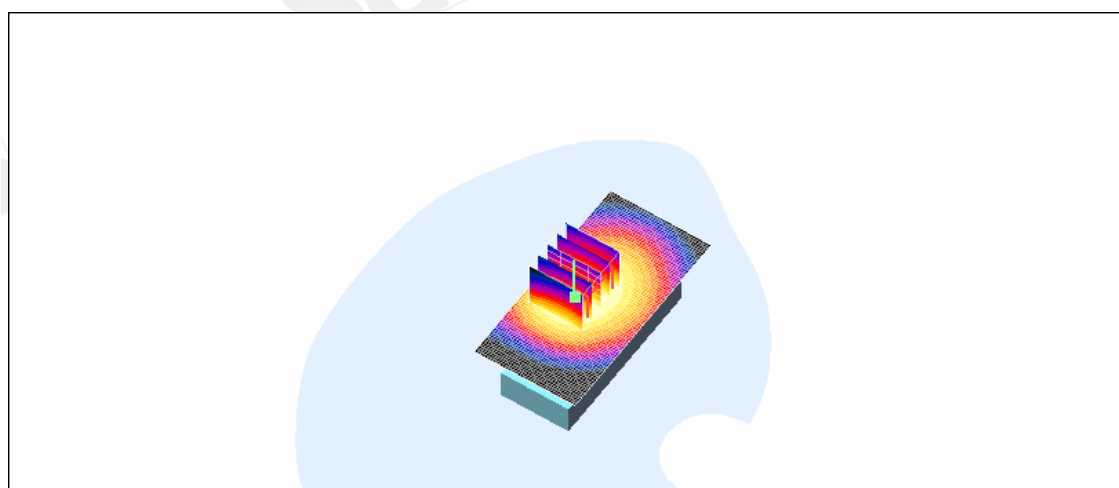
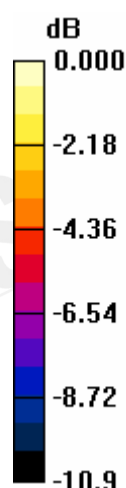
Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.0 \text{ V/m}$ ; Power Drift =  $0.001 \text{ dB}$

Peak SAR (extrapolated) =  $1.80 \text{ W/kg}$

SAR(1 g) =  $1.37 \text{ mW/g}$ ; SAR(10 g) =  $0.977 \text{ mW/g}$

Maximum value of SAR (measured) =  $1.45 \text{ mW/g}$



0 dB =  $1.45 \text{ mW/g}$

## Body\_CH251-EUT front to the phantom (Testing in GPRS mode)

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.967 \text{ mho/m}$ ;

$\epsilon_r = 54.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.93, 5.93, 5.93); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.630 \text{ mW/g}$

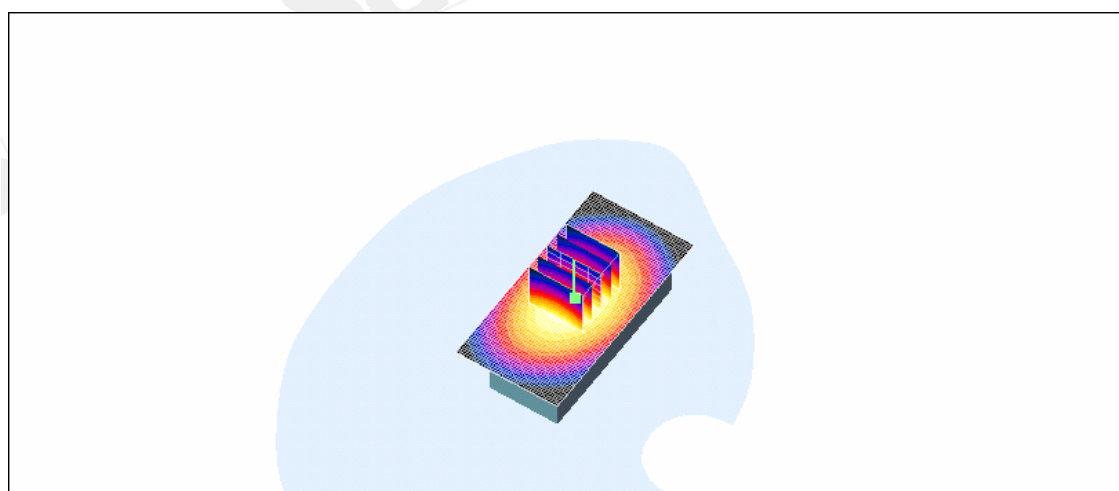
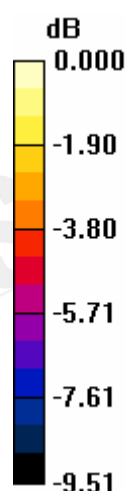
Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.2 \text{ V/m}$ ; Power Drift =  $-0.045 \text{ dB}$

Peak SAR (extrapolated) =  $0.768 \text{ W/kg}$

SAR(1 g) =  $0.586 \text{ mW/g}$ ; SAR(10 g) =  $0.418 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.622 \text{ mW/g}$



0 dB =  $0.622 \text{ mW/g}$



## Body\_CH251- Switch-on Bluetooth (Testing in GPRS mode)

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.967 \text{ mho/m}$ ;

$\epsilon_r = 54.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.93, 5.93, 5.93); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.54 \text{ mW/g}$

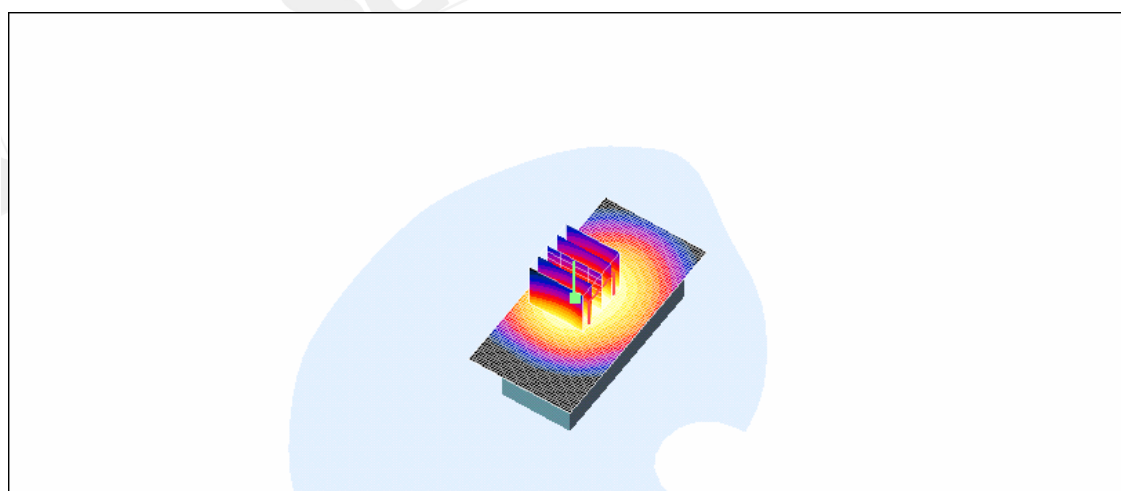
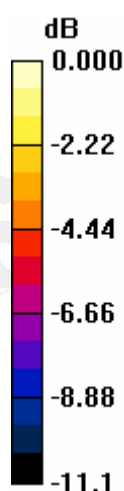
Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.0 \text{ V/m}$ ; Power Drift =  $-0.005 \text{ dB}$

Peak SAR (extrapolated) =  $1.88 \text{ W/kg}$

SAR(1 g) =  $1.39 \text{ mW/g}$ ; SAR(10 g) =  $1.02 \text{ mW/g}$

Maximum value of SAR (measured) =  $1.51 \text{ mW/g}$



0 dB =  $1.51 \text{ mW/g}$



## HEAD\_RE\_Cheek\_CH512

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.28 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.403 mW/g

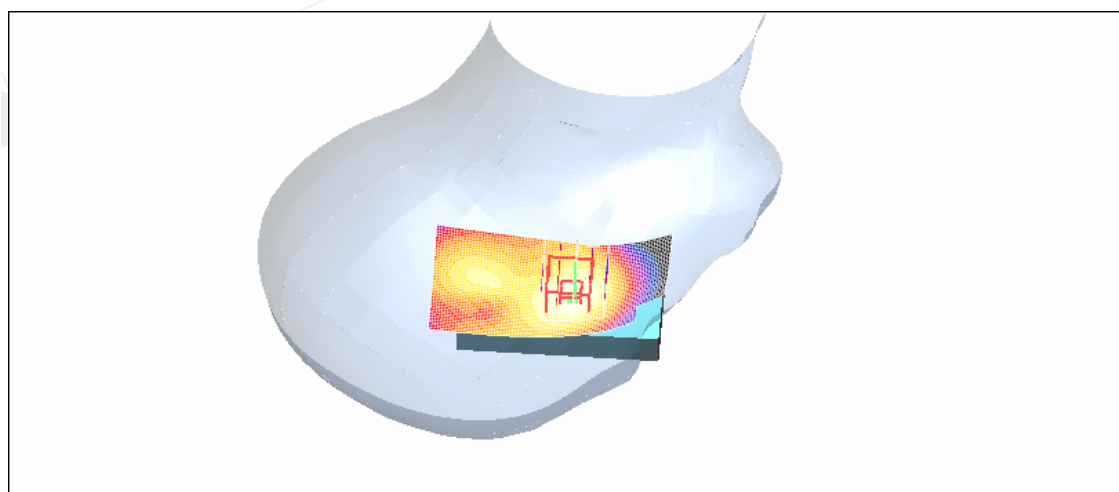
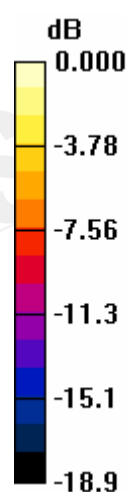
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.7 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.476 W/kg

SAR(1 g) = 0.358 mW/g; SAR(10 g) = 0.223 mW/g

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



0 dB = 0.389mW/g

## HEAD\_RE\_Cheek\_CH661

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.3 \text{ mho/m}$ ;  $\epsilon_r = 39$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.434 mW/g

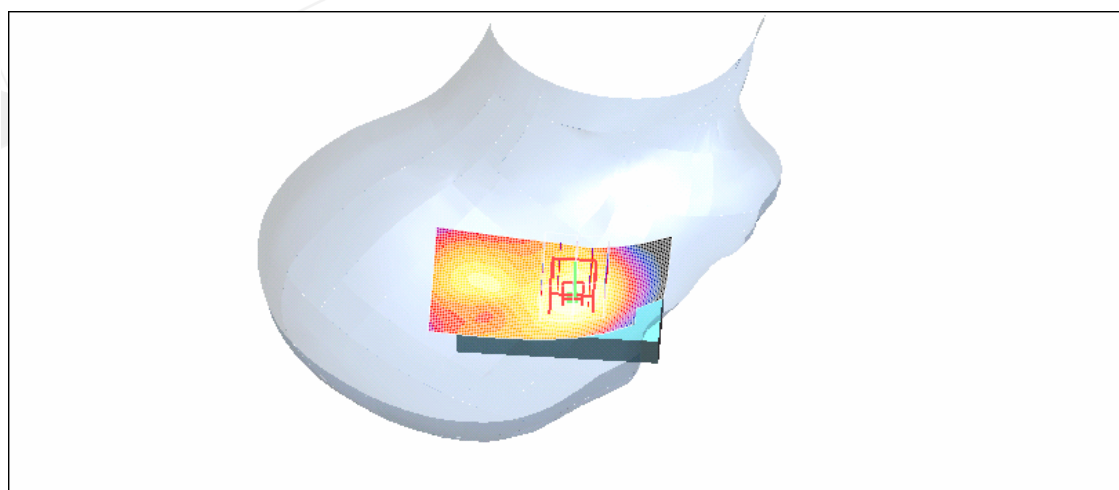
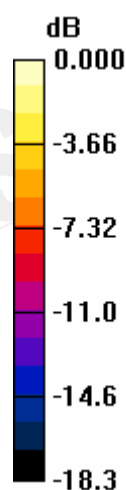
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 14.7 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 0.528 W/kg

SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.430 mW/g



0 dB = 0.430mW/g

## HEAD\_RE\_Cheek\_CH810

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.343 mW/g

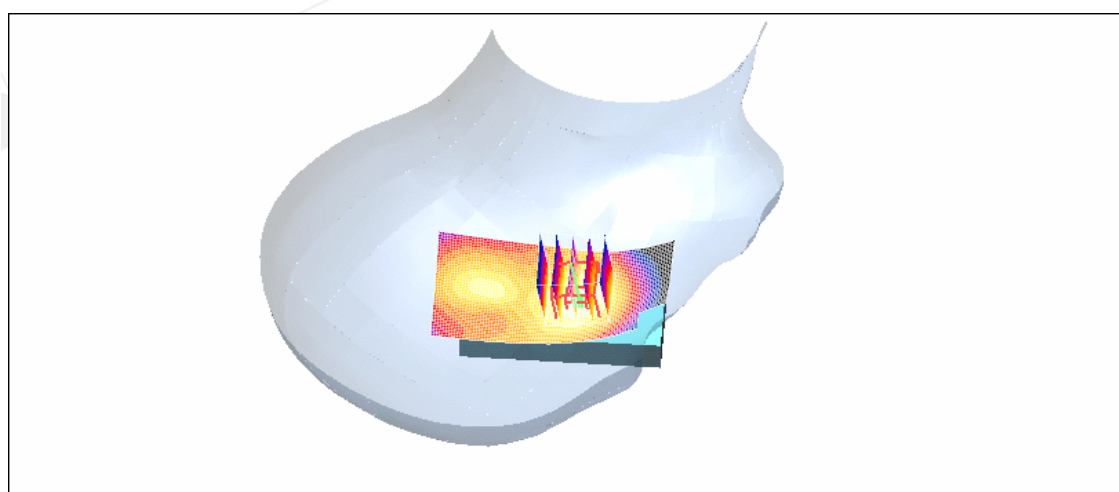
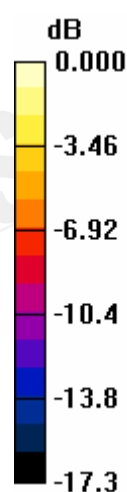
Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.2 V/m; Power Drift = -0.058 dB

Peak SAR (extrapolated) = 0.421 W/kg

SAR(1 g) = 0.309 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.337 mW/g



0 dB = 0.337mW/g

## HEAD\_LE\_Cheek\_CH512

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.28 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.364 mW/g

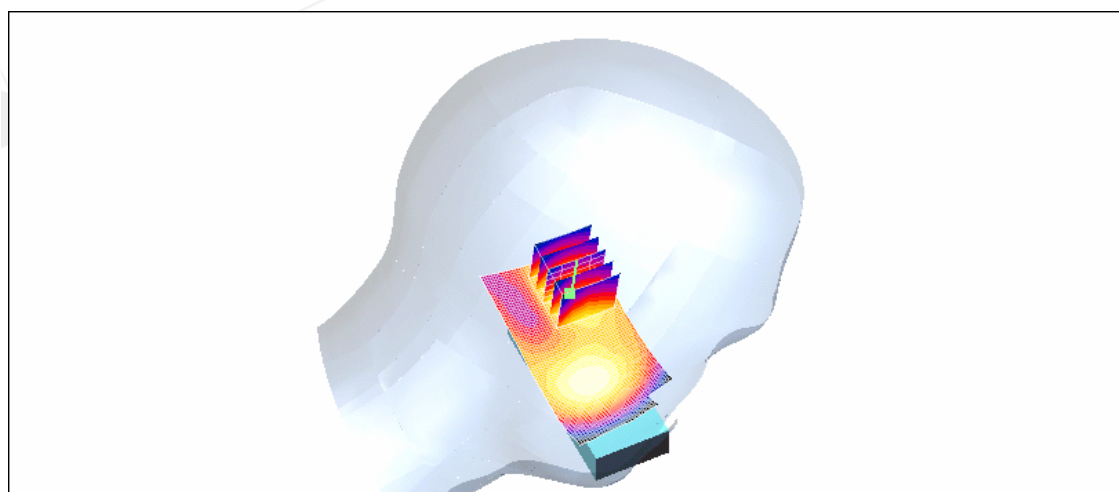
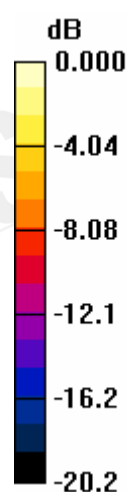
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 14.2 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.527 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.350 mW/g



0 dB = 0.350mW/g



## HEAD\_LE\_Cheek\_CH661

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.3 \text{ mho/m}$ ;  $\epsilon_r = 39$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.438 mW/g

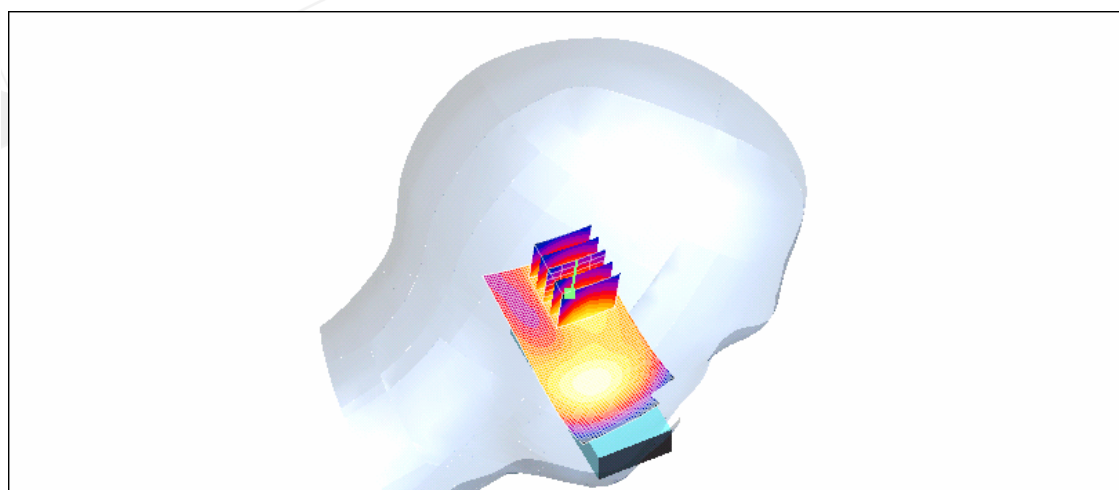
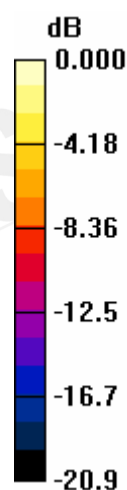
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 15.5 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.606 W/kg

SAR(1 g) = 0.358 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.399 mW/g



0 dB = 0.399mW/g



## HEAD\_LE\_Cheek\_CH810

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Cheek/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.339 mW/g

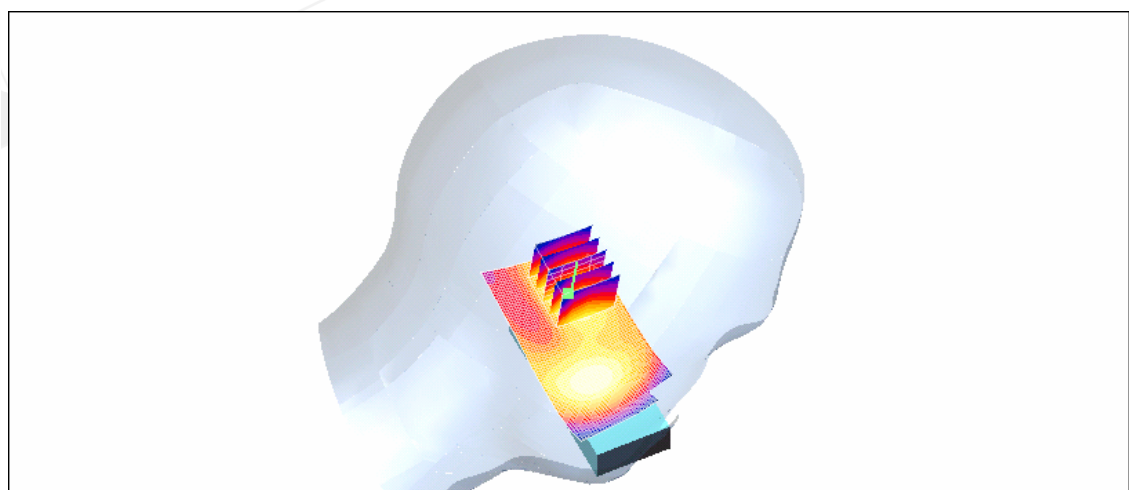
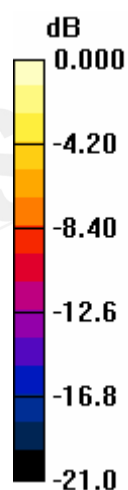
Left Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.5 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.301 mW/g



0 dB = 0.301mW/g

## HEAD\_RE\_Tilt\_CH512

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.28 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.287 mW/g

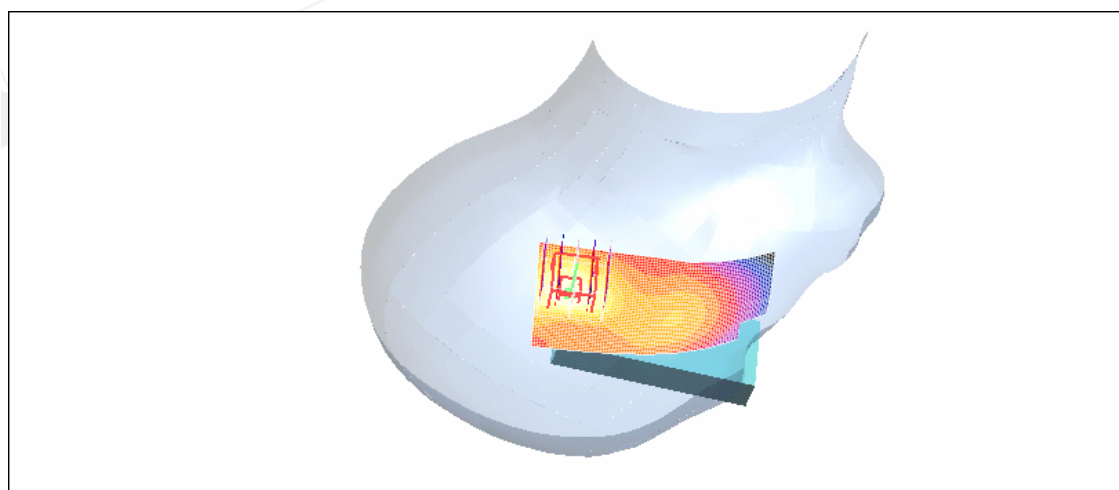
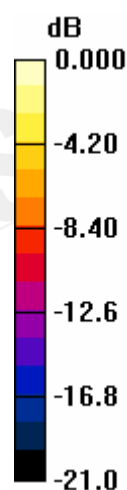
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.436 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.277 mW/g



0 dB = 0.277mW/g

## HEAD\_RE\_Tilt\_CH661

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.3 \text{ mho/m}$ ;  $\epsilon_r = 39$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.322 mW/g

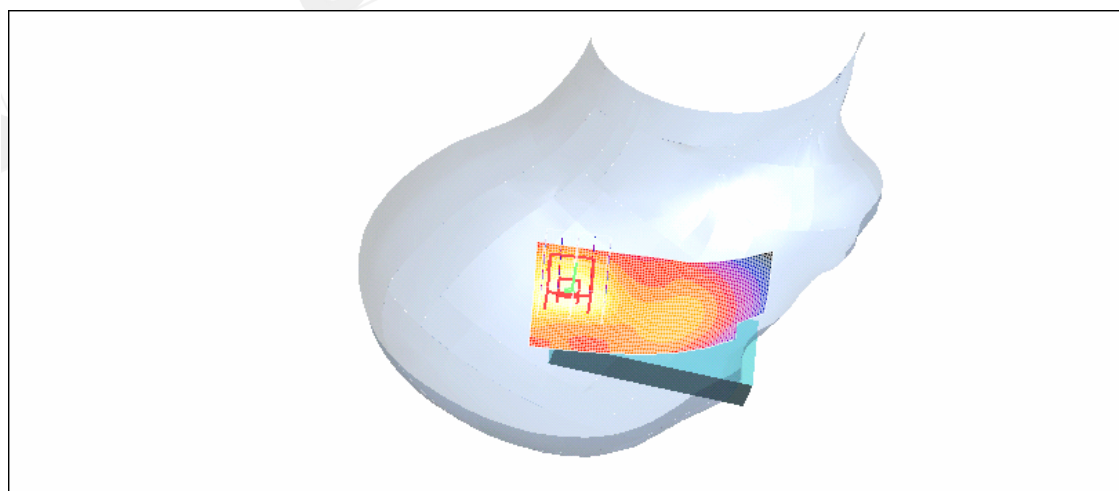
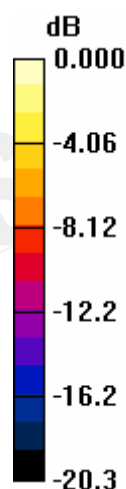
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 15.7 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.151 mW/g

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



0 dB = 0.305mW/g

## HEAD\_RE\_Tilt\_CH810

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Right Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.256 \text{ mW/g}$

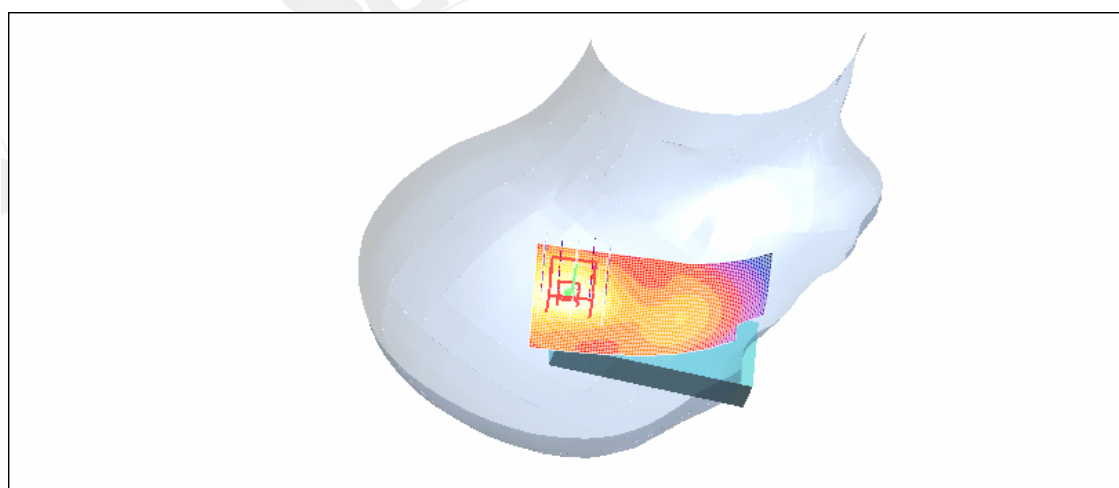
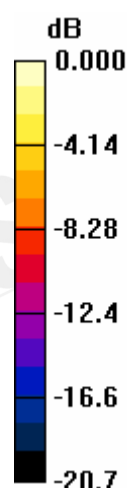
Right Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $13.9 \text{ V/m}$ ; Power Drift =  $-0.070 \text{ dB}$

Peak SAR (extrapolated) =  $0.386 \text{ W/kg}$

SAR(1 g) =  $0.223 \text{ mW/g}$ ; SAR(10 g) =  $0.119 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.238 \text{ mW/g}$



0 dB =  $0.238 \text{ mW/g}$



## HEAD\_LE\_Tilt\_CH512

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.28 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.382 \text{ mW/g}$

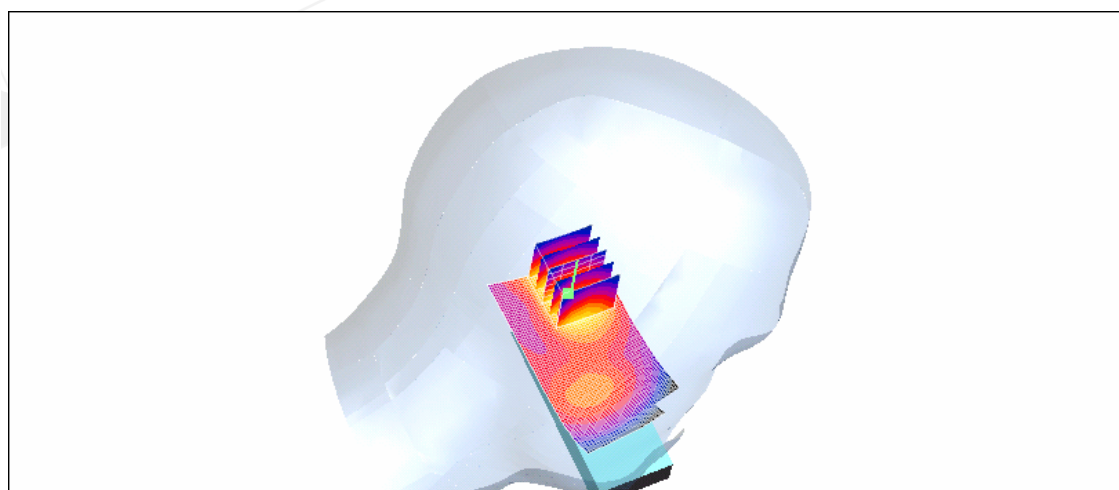
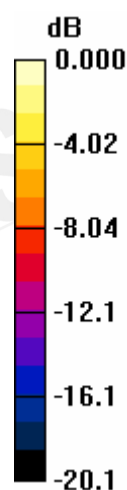
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.4 \text{ V/m}$ ; Power Drift =  $-0.020 \text{ dB}$

Peak SAR (extrapolated) =  $0.587 \text{ W/kg}$

SAR(1 g) =  $0.334 \text{ mW/g}$ ; SAR(10 g) =  $0.173 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.371 \text{ mW/g}$



0 dB =  $0.371 \text{ mW/g}$



## HEAD\_LE\_Tilt\_CH661

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.3 \text{ mho/m}$ ;  $\epsilon_r = 39$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.455 mW/g

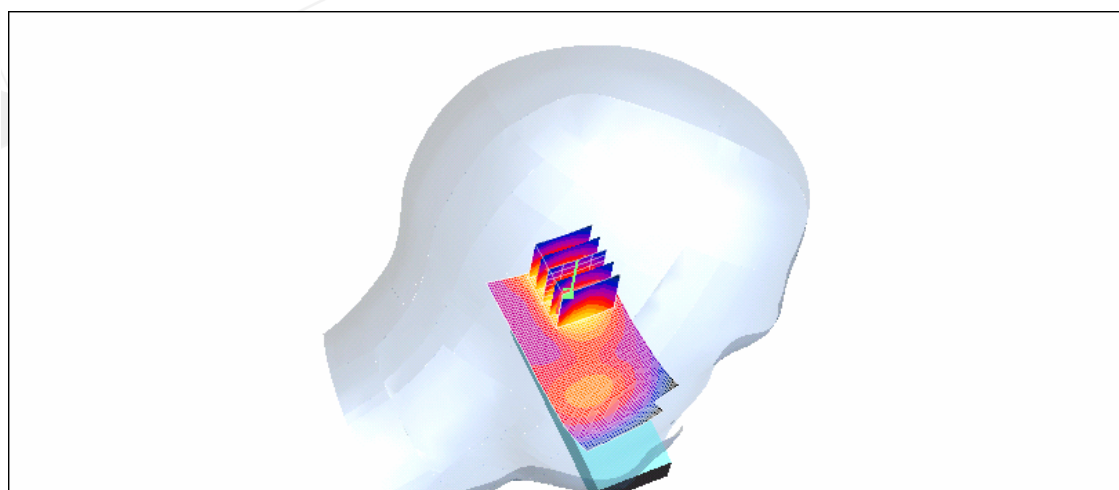
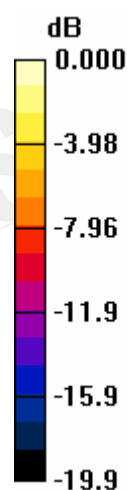
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 16.8 V/m; Power Drift = -0.070 dB

Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.420 mW/g



0 dB = 0.420mW/g

## HEAD\_LE\_Tilt\_CH810

DUT: CETECOM-HW76; Type: GSM 1900; Serial: 446019197507590

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Left Tilt/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.365 \text{ mW/g}$

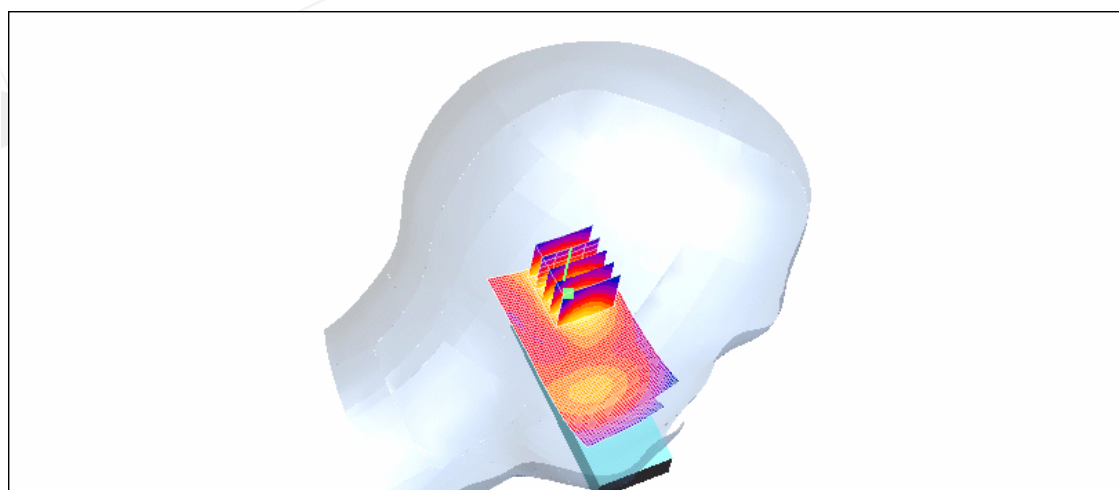
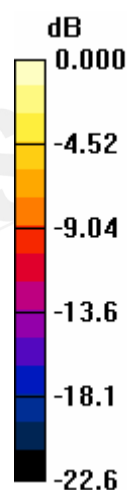
Left Tilt/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.8 \text{ V/m}$ ; Power Drift =  $-0.128 \text{ dB}$

Peak SAR (extrapolated) =  $0.541 \text{ W/kg}$

SAR(1 g) =  $0.299 \text{ mW/g}$ ; SAR(10 g) =  $0.156 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.329 \text{ mW/g}$



0 dB =  $0.329 \text{ mW/g}$

## Body\_CH512

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4

Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.54 \text{ mho/m}$ ;  $\epsilon_r = 52.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(4.4, 4.4, 4.4); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.899 \text{ mW/g}$

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

Reference Value =  $10.1 \text{ V/m}$ ; Power Drift =  $-0.086 \text{ dB}$

Peak SAR (extrapolated) =  $1.21 \text{ W/kg}$

SAR(1 g) =  $0.806 \text{ mW/g}$ ; SAR(10 g) =  $0.510 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.858 \text{ mW/g}$

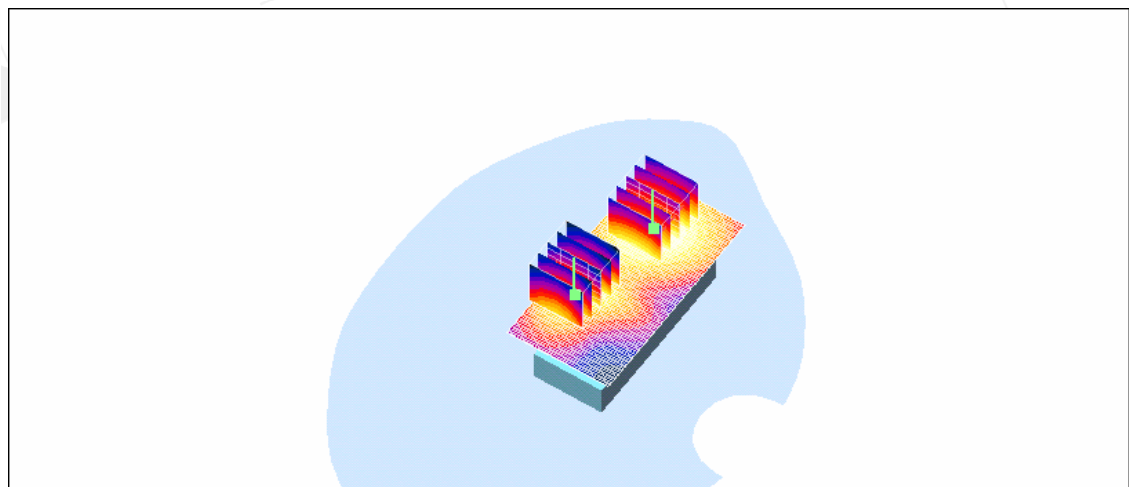
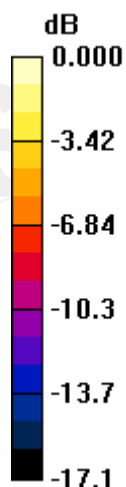
Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.1 \text{ V/m}$ ; Power Drift =  $-0.086 \text{ dB}$

Peak SAR (extrapolated) =  $1.29 \text{ W/kg}$

SAR(1 g) =  $0.747 \text{ mW/g}$ ; SAR(10 g) =  $0.407 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.841 \text{ mW/g}$



0 dB =  $0.841 \text{ mW/g}$

## Body\_CH661

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM1900; Frequency: 1800 MHz; Duty Cycle: 1:4

Medium: M1800 & 1900 Medium parameters used:  $f = 1800 \text{ MHz}$ ;  $\sigma = 1.48 \text{ mho/m}$ ;  $\epsilon_r = 52.6$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(4.4, 4.4, 4.4); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $1.03 \text{ mW/g}$

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

Reference Value =  $10.9 \text{ V/m}$ ; Power Drift =  $-0.014 \text{ dB}$

Peak SAR (extrapolated) =  $1.42 \text{ W/kg}$

SAR(1 g) =  $0.925 \text{ mW/g}$ ; SAR(10 g) =  $0.580 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.994 \text{ mW/g}$

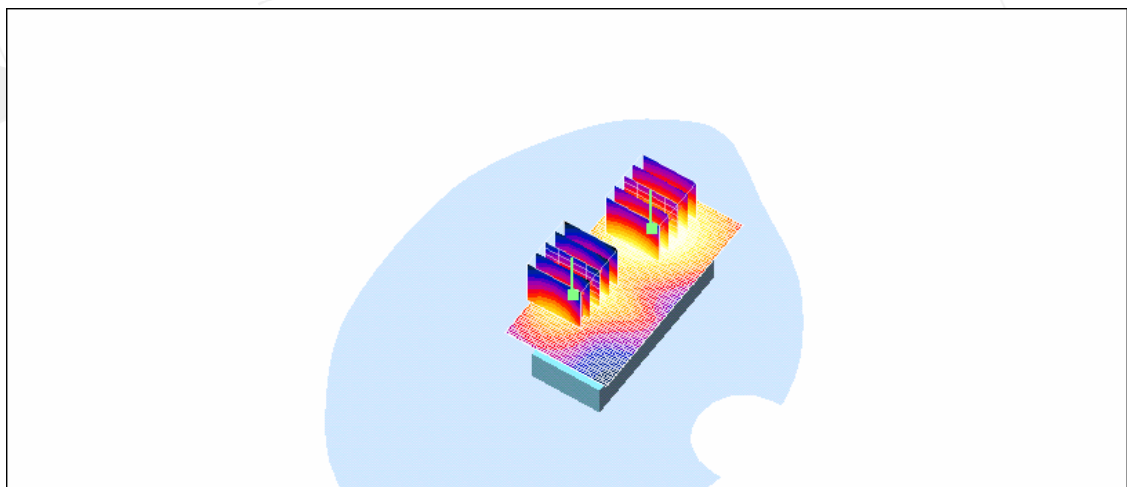
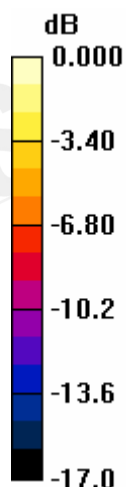
Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $10.9 \text{ V/m}$ ; Power Drift =  $-0.014 \text{ dB}$

Peak SAR (extrapolated) =  $1.36 \text{ W/kg}$

SAR(1 g) =  $0.779 \text{ mW/g}$ ; SAR(10 g) =  $0.424 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.878 \text{ mW/g}$



0 dB =  $0.878 \text{ mW/g}$

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## Body\_CH810

DUT: CETECOM-HW76; Type: GSM 850; Serial: 446019197507590

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: M1800 & 1900 Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 52.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(4.4, 4.4, 4.4); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body/Area Scan (41x81x1): Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $0.896 \text{ mW/g}$

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

Reference Value =  $9.74 \text{ V/m}$ ; Power Drift =  $-0.099 \text{ dB}$

Peak SAR (extrapolated) =  $1.23 \text{ W/kg}$

SAR(1 g) =  $0.800 \text{ mW/g}$ ; SAR(10 g) =  $0.497 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.859 \text{ mW/g}$

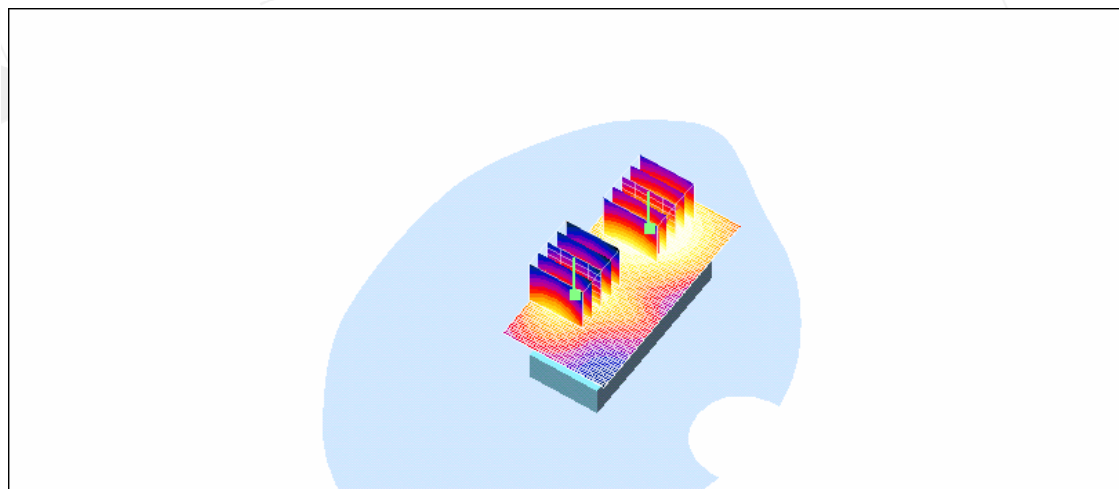
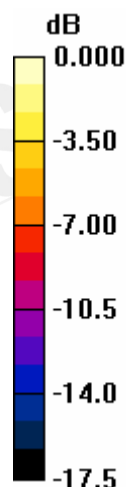
Body/Zoom Scan (5x5x7)/Cube 1: Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $9.74 \text{ V/m}$ ; Power Drift =  $-0.099 \text{ dB}$

Peak SAR (extrapolated) =  $1.08 \text{ W/kg}$

SAR(1 g) =  $0.619 \text{ mW/g}$ ; SAR(10 g) =  $0.336 \text{ mW/g}$

Maximum value of SAR (measured) =  $0.691 \text{ mW/g}$



0 dB =  $0.691 \text{ mW/g}$



## SAR System Performance Verification

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

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 900 \text{ MHz}$ ;  $\sigma = 0.935 \text{ mho/m}$ ;  $\epsilon_r = 39.4$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(6.15, 6.15, 6.15); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

**Pin=250mW/Area Scan (41x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.98 mW/g

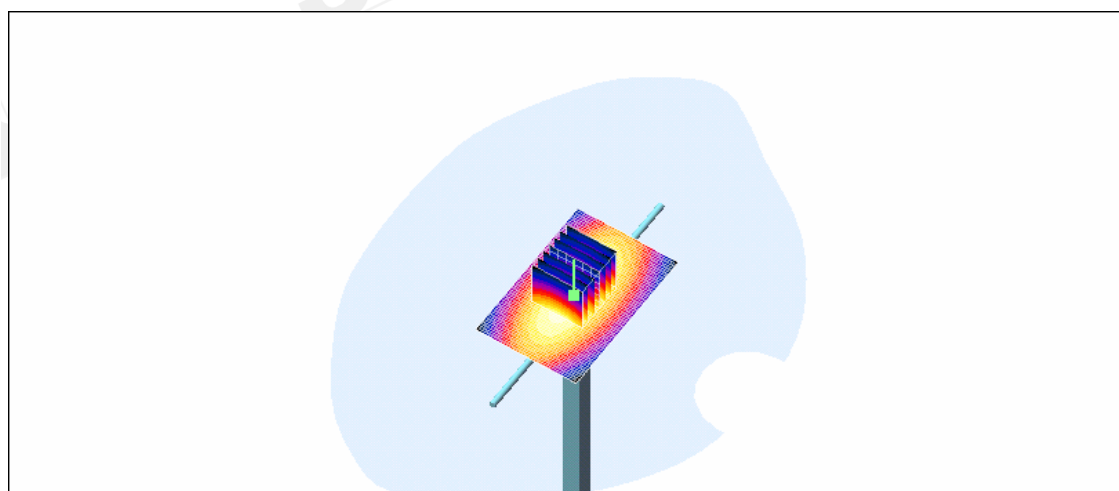
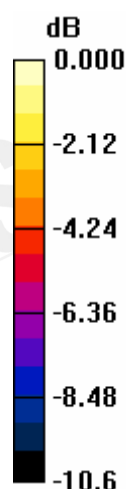
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 58.3 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 3.99 W/kg

**SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.78 mW/g**

Maximum value of SAR (measured) = 2.96 mW/g



0 dB = 2.96mW/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:  $f = 900 \text{ MHz}$ ;  $\sigma = 1.02 \text{ mho/m}$ ;  $\epsilon_r = 54$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.93, 5.93, 5.93); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: DAE not calibrated
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin=250mw/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 2.87 mW/g

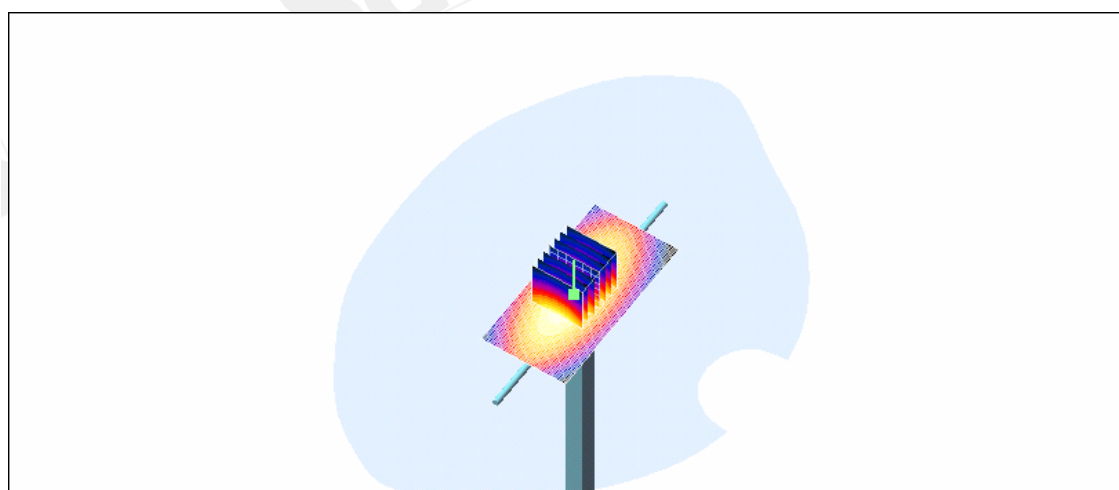
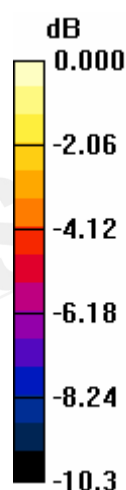
Pin=250mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.7 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 2.64 mW/g; SAR(10 g) = 1.75 mW/g

Maximum value of SAR (measured) = 2.86 mW/g



0 dB = 2.86mW/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 (interpolated):  $f = 900 \text{ MHz}$ ;  $\sigma = 0.994 \text{ mho/m}$ ;  $\epsilon_r = 53.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.93, 5.93, 5.93); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin=250mw/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.92 mW/g

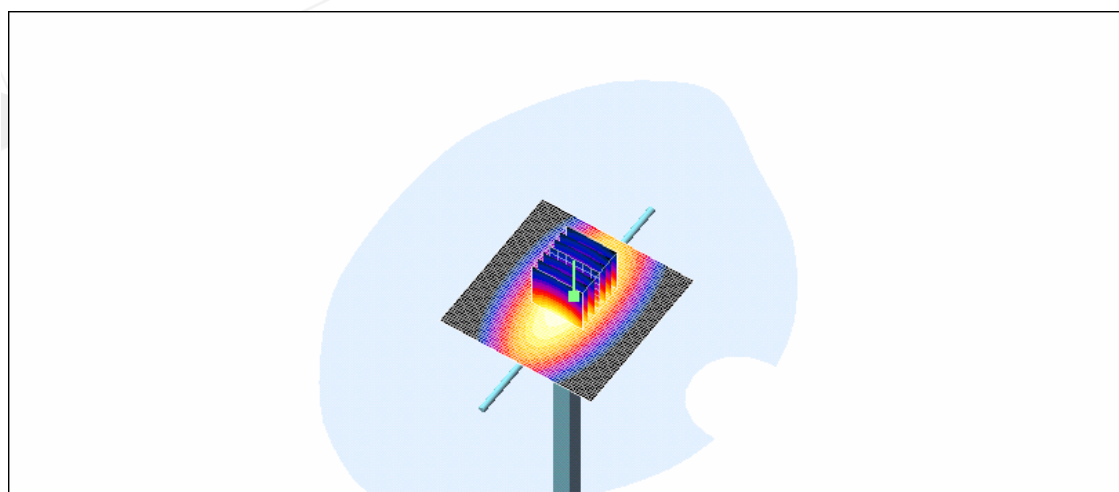
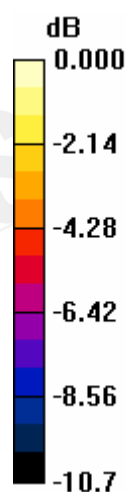
Pin=250mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.2 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 3.87 W/kg

SAR(1 g) = 2.65 mW/g; SAR(10 g) = 1.73 mW/g

Maximum value of SAR (measured) = 2.89 mW/g



0 dB = 2.89mW/g

## SAR System Performance Verification

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

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

Medium: Head 1900MHz Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.35 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(5.11, 5.11, 5.11); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin=250mw/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.1 mW/g

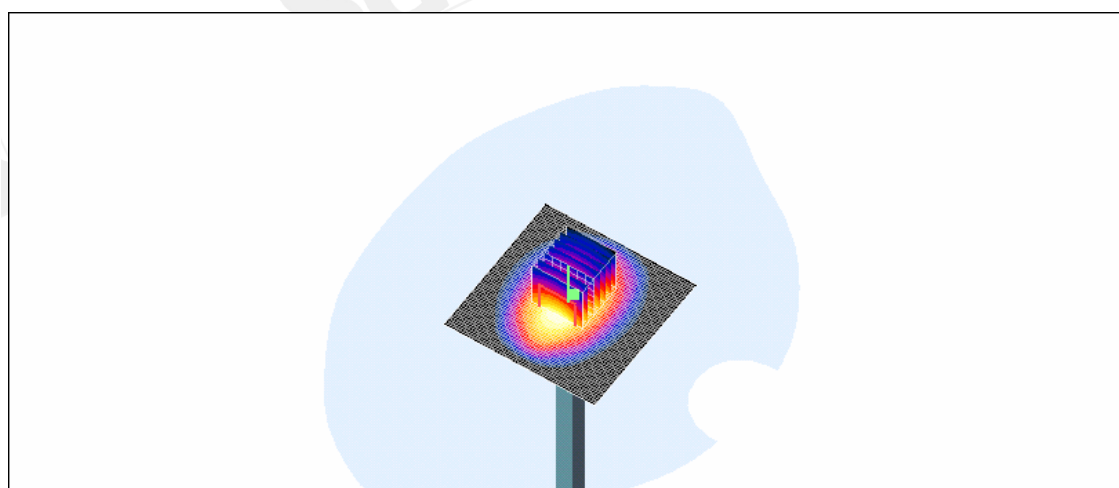
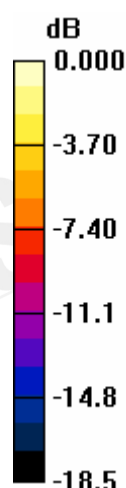
Pin=250mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.8 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 9.43 mW/g; SAR(10 g) = 4.96 mW/g

Maximum value of SAR (measured) = 10.6 mW/g



0 dB = 10.6mW/g

## SAR System Performance Verification

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

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

Medium: M1800 & 1900 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 52.3$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1759; ConvF(4.4, 4.4, 4.4); Calibrated: 2005/8/30
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn547; Calibrated: 2006/4/28
- Phantom: SAM 12; Type: SAM 4.0; Serial: TP:1150
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

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

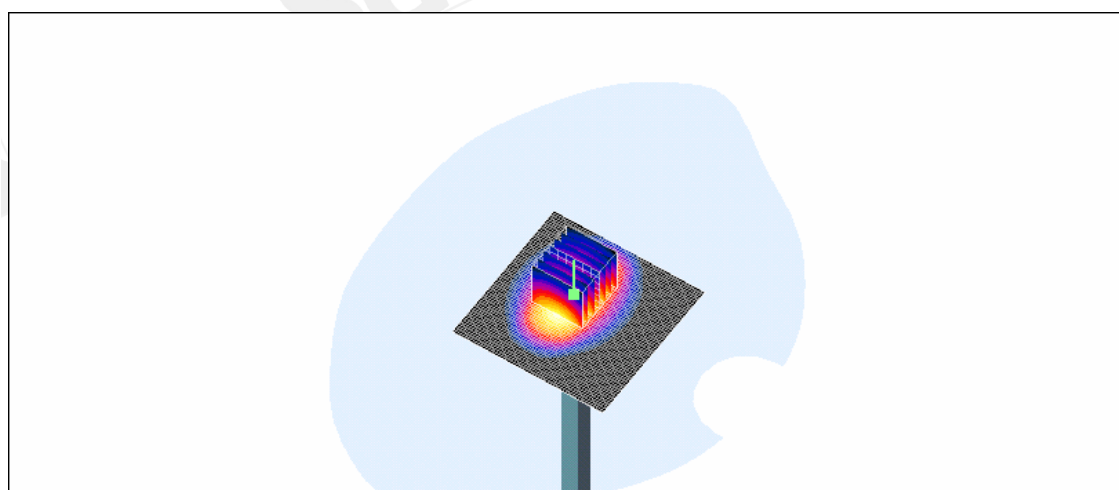
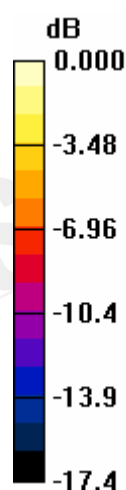
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 89.2 V/m; Power Drift = -0.065 dB

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.27 mW/g

Maximum value of SAR (measured) = 11.5 mW/g



0 dB = 11.5mW/g