SAR TEST REPORT

No. 2010SAR00115

For

TCT Mobile Limited

GSM/GPRS/EDGE dual band mobile phone

Amber A

OT-806A

With

Hardware Version: Iot0

Software Version: SW22B

FCCID: RAD138

Issued Date: 2010-10-26

Deutscher Akkreditierungs Rat

No. **DGA-PL-114/01-02**

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of MIIT

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TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

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Postal Code:	100191
Telephone:	+86-10-62304633
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1.2 Testing Environment

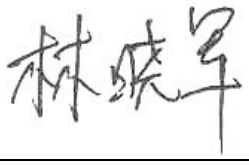
Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω

Ambient noise is checked and found very low and in compliance with requirement of standards.
Reflection of surrounding objects is minimized and in compliance with requirement of standards.

1.3 Project Data

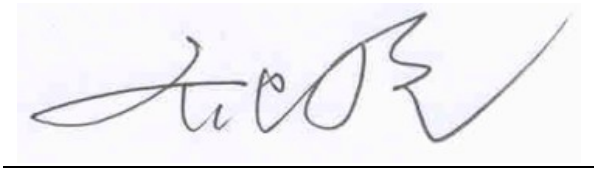
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	October 12, 2010
Testing End Date:	October 18, 2010

1.4 Signature



Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)

Xiao Li

Deputy Director of the laboratory

(Approved this test report)

2 Client Information

2.1 Applicant Information

Company Name:	TCT Mobile Limited
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City:	Shanghai
Postal Code:	201203
Country:	P. R. China
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Contact Email	zhizhou.gong@jrdcom.com
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2.2 Manufacturer Information

Company Name:	TCT Mobile Limited
Address /Post:	4/F, South Building,No.2966, Jinke Road, Zhangjiang High-Tech Park, Pudong, Shanghai, 201203, P.R.China
City:	Shanghai
Postal Code:	201203
Country:	P. R. China
Contact Person:	Gong Zhizhou
Contact Email	zhizhou.gong@jrdcom.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

3 Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1 About EUT

EUT Description:	GSM/GPRS/EDGE dual band mobile phone
Model Name:	Amber A
Marketing Name:	OT-806A
GSM Frequency Band:	GSM 850 / PCS 1900 / WiFi
GPRS Multislot Class:	12
EGPRS Multislot Class:	12
GPRS capability Class:	B

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	012320000100030	Iot0	SW22B

*EUT ID: is used to identify the test sample in the lab internally.

3.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	CAB3120000C1	\	BYD
AE2	Stereo headset	CCB3160A10C0	\	Juwei
AE3	Stereo headset	CCB3160A10C2	\	SHUNDA

*AE ID: is used to identify the test sample in the lab internally.

4 CHARACTERISTICS OF THE TEST

4.1 Applicable Limit Regulations

EN 50360–2001: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.
It specifies the maximum exposure limit of **2.0 W/kg** as averaged over any 10 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

4.2 Applicable Measurement Standards

EN 62209-1–2006: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz).

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

OET Bulletin 65 (Edition 97-01) and Supplement C(Edition 01-01): Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits.

IEC 62209-1: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1:Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)

KDB648474 D01 SAR Handsets Multi Xmiter and Ant, v01r05: SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas.

KDB248227: SAR measurement procedures for 802.112abg transmitters.

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

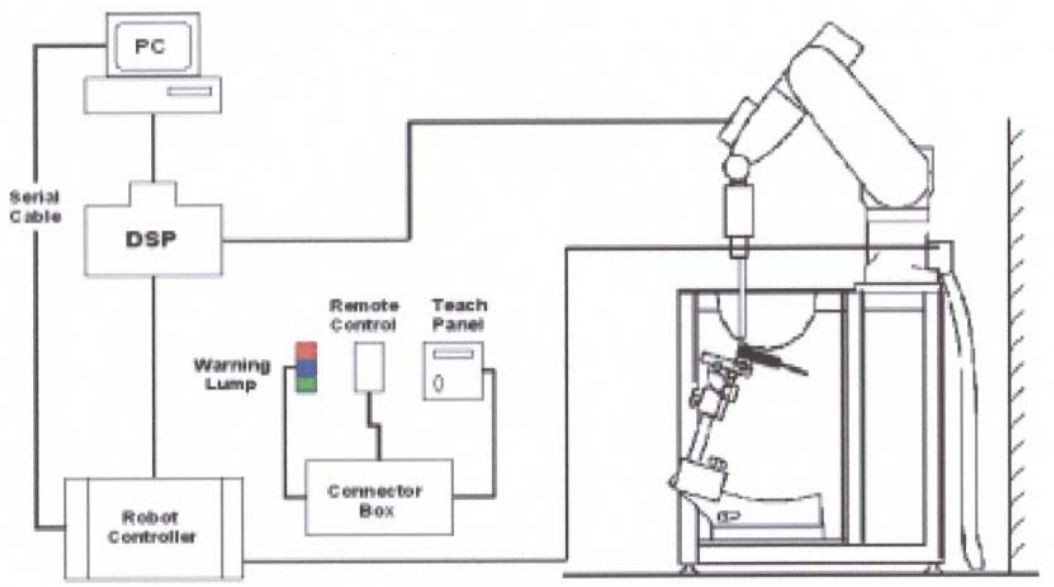
During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz. The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 30 dB.

5.2 SAR Measurement Set-up

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

A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the Micron Pentium III 800 MHz computer with Windows 2000 system and SAR Measurement Software DASY4 Professional, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.



Picture 2: SAR Lab Test Measurement Set-up

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

5.3 Dasy4 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the standard procedure with an accuracy of better than ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB.

ES3DV3 Probe Specification

Construction	Symmetrical design with triangular core
	Interleaved sensors
	Built-in shielding against static charges

	PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 900 and HSL 1810 Additional CF for other liquids and frequencies upon request

Picture 3: ES3DV3 E-field

Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

Picture4:ES3DV3 E-field probe

5.4 E-field Probe Calibration

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

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

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

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

Where: Δt = Exposure time (30 seconds),
C = Heat capacity of tissue (brain or muscle),
ΔT = Temperature increase due to RF exposure.

Or

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

Where:
σ = Simulated tissue conductivity,
ρ = Tissue density (kg/m^3).

Picture 5: Device Holder

5.5 Other Test Equipment

5.5.1 Device Holder for Transmitters

In combination with the Generic Twin Phantom V3.0, the Mounting Device (POM) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatable positioned according to the FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

5.5.2 Phantom

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

Shell Thickness	2±0. l mm
Filling Volume	Approx. 20 liters
Dimensions	810 x l000 x 500 mm (H x L x W)
Available	Special

Picture 6: Generic Twin Phantom

5.6 Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, Glycol monobutyl, Preventol and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 1 and 2 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

Table 1. Composition of the Head Tissue Equivalent Matter

MIXTURE %	FREQUENCY 850MHz
Water	41.45
Sugar	56.0
Salt	1.45
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=850MHz ε=41.5 σ=0.90
MIXTURE %	FREQUENCY 1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz ε=40.0 σ=1.40
MIXTURE %	FREQUENCY 2450MHz
Water	58.79
Glycol monobutyl	41.15
Salt	0.06
Dielectric Parameters Target Value	f=2450MHz ε=39.2 σ=1.80

Table 2. Composition of the Body Tissue Equivalent Matter

MIXTURE %	FREQUENCY 850MHz
Water	52.5
Sugar	45.0
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=850MHz ε=55.2 σ=0.97
MIXTURE %	FREQUENCY 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52
MIXTURE %	FREQUENCY 2450MHz
Water	72.60
Glycol monobutyl	27.22
Salt	0.18
Dielectric Parameters Target Value	f=2450MHz ε=52.7 σ=1.95

5.7 System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: RX90L
Repeatability: ±0.02 mm
No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Pentium III
Clock Speed: 800 MHz
Operating System: Windows 2000

Data Converter

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

6 CONDUCTED OUTPUT POWER MEASUREMENT

6.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU-200) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured output power should be greater and within 5% than EMI measurement.

6.2 Conducted Power

6.2.1 Measurement Methods

The EUT was set up for the maximum output power. The channel power was measured with Agilent Spectrum Analyzer E4440A. These measurements were done at low, middle and high channels.

6.2.2 Measurement result

Table 3: The conducted power for GSM 850/1900

GSM 850MHZ	**Conducted Power (dBm)**		
	Channel 251(848.8MHz)	**Channel 190(836.6MHz)**	**Channel 128(824.2MHz)**
	32.59	32.57	32.56
GSM 1900MHZ	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1880MHz)**	**Channel 512(1850.2MHz)**
	29.19	29.22	29.17

Table 4: The conducted power for GPRS 850/1900 and EGPRS 850/1900

GSM 850	Measured Power (dBm)			calculation	Averaged Power (dBm)		
GPRS	**251**	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.5	32.6	32.6	-9.03dB	23.47	23.57	23.57
2 Txslots	30.6	30.7	30.7	-6.02dB	24.58	24.68	24.68
3Txslots	29.7	29.8	29.8	-4.26dB	**25.44**	**25.54**	**25.54**
4 Txslots	27.2	27.2	27.3	-3.01dB	24.19	24.19	24.29
GSM 850	Measured Power (dBm)			calculation	Averaged Power (dBm)		
EGPRS	**251**	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.59	32.56	32.52	-9.03dB	23.56	23.53	23.49
2 Txslots	30.49	30.54	30.60	-6.02dB	24.47	24.52	24.58
3Txslots	29.54	29.58	29.65	-4.26dB	**25.28**	**25.32**	**25.39**
4 Txslots	27.05	27.06	27.05	-3.01dB	24.04	24.05	24.04
PCS1900	Measured Power (dBm)			calculation	Averaged Power (dBm)		
GPRS	**810**	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.18	29.19	29.14	-9.03dB	20.15	20.16	20.11
2 Txslots	27.61	27.56	27.50	-6.02dB	21.59	21.54	21.48
3Txslots	26.69	26.63	26.56	-4.26dB	**22.43**	**22.37**	**22.3**
4 Txslots	24.20	24.14	24.06	-3.01dB	21.19	21.13	21.05
PCS1900	Measured Power (dBm)			calculation	Averaged Power (dBm)		
EGPRS	**810**	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.18	29.2	29.15	-9.03dB	20.15	20.17	20.12
2 Txslots	27.62	27.57	27.50	-6.02dB	21.6	21.55	21.48
3Txslots	26.7	26.64	26.57	-4.26dB	**22.44**	**22.38**	**22.31**
4 Txslots	24.19	24.14	24.06	-3.01dB	21.18	21.13	21.05

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 3 Txslots for GPRS and EGPRS.

6.2.3 Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 9 to Table 14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

7 TEST RESULTS

7.1 Dielectric Performance

Table 5: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 42%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **Oct 12, 2010** 1900 MHz **Oct 13, 2010** 2450 MHz **Oct 14, 2010**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	41.5	0.90
	1900 MHz	40.0	1.40
	2450 MHz	39.2	1.80
Measurement value (Average of 10 tests)	835 MHz	40.6	0.87
	1900 MHz	39.5	1.39
	2450 MHz	39.4	1.81

Table 6: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 42%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **Oct 12, 2010** 1900 MHz **Oct 13, 2010** 2450 MHz **Oct 14, 2010**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	55.2	0.97
	1900 MHz	53.3	1.52
	2450 MHz	52.7	1.95
Measurement value (Average of 10 tests)	835 MHz	54.2	0.95
	1900 MHz	52.3	1.53
	2450 MHz	51.9	1.96

7.2 System Validation

Table 7: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 42%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **Oct 12, 2010** 1900 MHz **Oct 13, 2010** 2450 MHz **Oct 14, 2010**				
Liquid parameters	Dipole calibration Target value	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
		835 MHz	41.6	0.92
		1900 MHz	39.6	1.40
		2450 MHz	40.5	1.85
	Actural Measurement value	835 MHz	40.6	0.87
		1900 MHz	39.5	1.39
		2450 MHz	39.4	1.81

Verification results	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
	835 MHz	6.12	9.41	6.04	9.44	-1.31%	0.32%
	1900 MHz	20.1	39.4	19.7	39.5	-1.99%	0.25%
	2450 MHz	23.65	52.26	23.08	51.2	-2.41%	-2.03%

Note：Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

Table 8: System Validation of Body

Measurement is made at temperature 23.0 ℃ and relative humidity 42%.
Liquid temperature during the test: 22.5℃
Measurement Date : 850 MHz **Oct 12, 2010** 1900 MHz **Oct 13, 2010** 2450 MHz **Oct 14, 2010**

Liquid parameters	Dipole calibration Target value	Frequency	Permittivity ε	Conductivity σ (S/m)
		835 MHz	54.5	0.97
		1900 MHz	52.5	1.51
		2450 MHz	51.8	1.93
	Actural Measurement value	835 MHz	54.2	0.95
		1900 MHz	52.3	1.53
		2450 MHz	51.9	1.96

Verification results	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
	835 MHz	6.24	9.57	6.12	9.56	-1.92%	-0.10%
	1900 MHz	20.9	41.4	21.2	41.2	1.44%	-0.48%
	2450 MHz	23.28	51.13	23.64	52.0	1.55%	1.70%

Note：Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

7.3 Summary of Measurement Results

Table 9: SAR Values (850MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency (See Fig.1)	0.402	0.592	-0.146
Left hand, Touch cheek, Mid frequency (See Fig.2)	0.374	0.552	-0.019

Left hand, Touch cheek, Bottom frequency (See Fig.3)	0.340	0.504	-0.039
Left hand, Tilt 15 Degree, Top frequency (See Fig.4)	0.178	0.239	0.032
Left hand, Tilt 15 Degree, Mid frequency (See Fig.5)	0.170	0.227	0.131
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.6)	0.161	0.214	-0.151
Right hand, Touch cheek, Top frequency (See Fig.7)	0.350	0.514	-0.163
Right hand, Touch cheek, Mid frequency (See Fig.8)	0.350	0.517	0.123
Right hand, Touch cheek, Bottom frequency (See Fig.9)	0.309	0.456	-0.013
Right hand, Tilt 15 Degree, Top frequency (See Fig.10)	0.233	0.311	-0.046
Right hand, Tilt 15 Degree, Mid frequency (See Fig.11)	0.223	0.298	-0.062
Right hand, Tilt 15 Degree, Bottom frequency (See Fig.12)	0.201	0.268	-0.024

Table 10: SAR Values (1900MHz-Head)

Limit of SAR (W/kg)	**10 g Average**	**1 g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Left hand, Touch cheek, Top frequency (See Fig.13)	0.281	0.461	0.189
Left hand, Touch cheek, Mid frequency (See Fig.14)	0.248	0.405	-0.00448
Left hand, Touch cheek, Bottom frequency (See Fig.15)	0.239	0.388	-0.173
Left hand, Tilt 15 Degree, Top frequency (See Fig.16)	0.087	0.141	-0.023
Left hand, Tilt 15 Degree, Mid frequency (See Fig.17)	0.077	0.127	-0.086
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.18)	0.080	0.131	0.145
Right hand, Touch cheek, Top frequency (See Fig.19)	0.252	0.415	-0.122
Right hand, Touch cheek, Mid frequency (See Fig.20)	0.221	0.361	-0.186
Right hand, Touch cheek, Bottom frequency (See Fig.21)	0.219	0.354	-0.021
Right hand, Tilt 15 Degree, Top frequency (See Fig.22)	0.124	0.209	-0.027
Right hand, Tilt 15 Degree, Mid frequency (See Fig.23)	0.111	0.186	-0.129
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.24)	0.107	0.177	-0.030

Table 11: SAR Values (850MHz-Body)

Limit of SAR (W/kg)	**10 g Average**	**1g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Body, Towards Ground, Top frequency with GPRS (See Fig.25)	0.662	0.928	-0.017

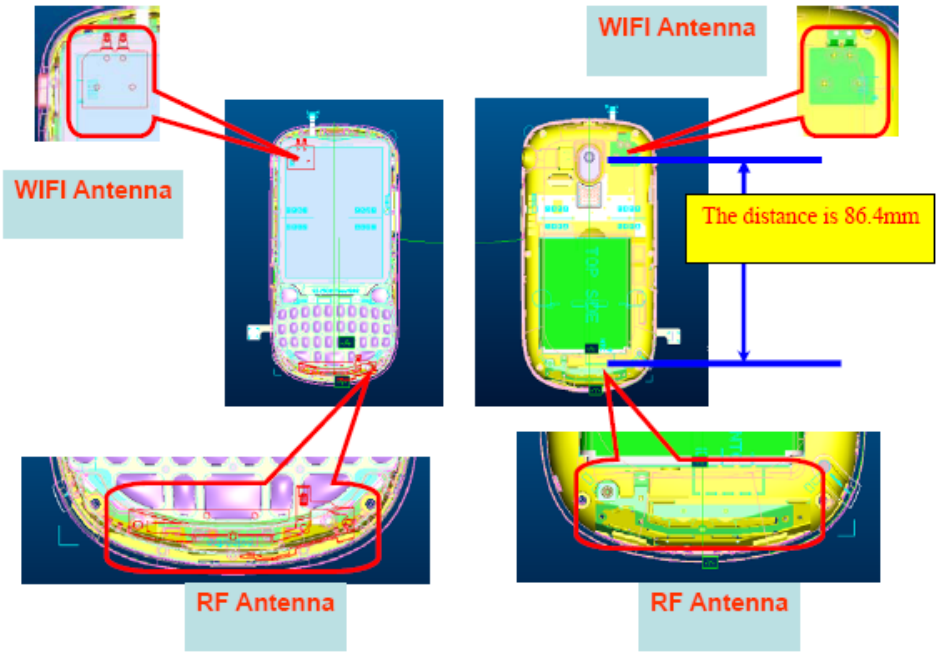
Body, Towards Ground, Mid frequency with GPRS (See Fig.26)	0.672	0.947	0.036
Body, Towards Ground, Bottom frequency with GPRS (See Fig.27)	0.693	0.976	0.018
Body, Towards Phantom, Top frequency with GPRS (See Fig.28)	0.378	0.522	-0.156
Body, Towards Phantom, Mid frequency with GPRS (See Fig.29)	0.392	0.540	0.017
Body, Towards Phantom, Bottom frequency with GPRS (See Fig.30)	0.398	0.549	-0.042
Body, Towards Ground, Bottom frequency with EGPRS (See Fig.31)	0.689	0.973	-0.002
Body, Towards Ground, Bottom frequency with Headset_ CCB3160A10C0 (See Fig.32)	0.540	0.752	0.078
Body, Towards Ground, Bottom frequency with Headset_ CCB3160A10C2 (See Fig.33)	0.508	0.732	0.078

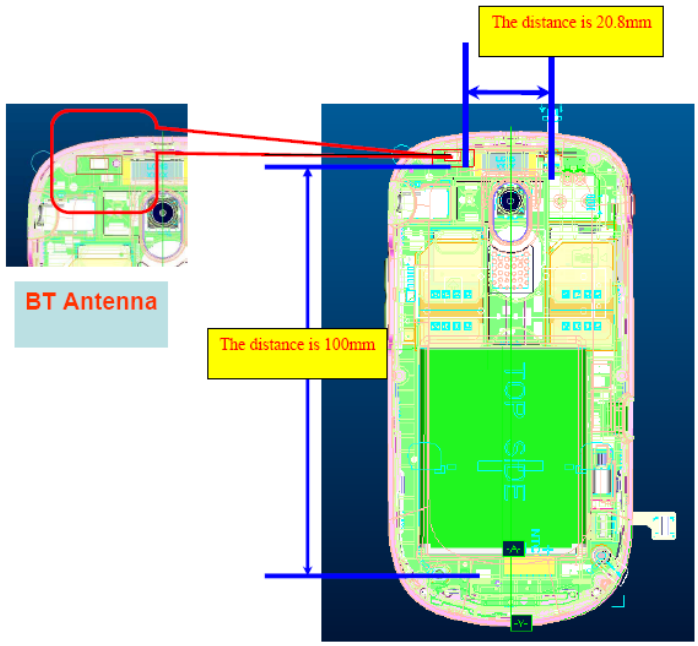
Table 12: SAR Values (1900MHz-Body)

Limit of SAR (W/kg)	**10 g Average**	**1g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Body, Towards Ground, Top frequency with GPRS (See Fig.34)	0.367	0.602	-0.026
Body, Towards Ground, Mid frequency with GPRS (See Fig.35)	0.314	0.515	0.043
Body, Towards Ground, Bottom frequency with GPRS (See Fig.36)	0.279	0.456	0.072
Body, Towards Phantom, Top frequency with GPRS (See Fig.37)	0.284	0.458	0.005
Body, Towards Phantom, Mid frequency with GPRS (See Fig.38)	0.246	0.397	-0.007
Body, Towards Phantom, Bottom frequency with GPRS (See Fig.39)	0.214	0.343	-0.023
Body, Towards Ground, Top frequency with EGPRS (See Fig.40)	0.365	0.601	-0.059
Body, Towards Ground, Top frequency with Headset_ CCB3160A10C0 (See Fig.41)	0.227	0.374	0.016
Body, Towards Ground, Top frequency with Headset_ CCB3160A10C2 (See Fig.42)	0.225	0.370	0.095

7.4 Summary of Measurement Results (Bluetooth and WiFi function)

The distance between BT/WiFi antenna and RF antenna is ＞5cm, the distance between BT antenna and WiFi antenna is ＜2.5cm. The location of the antennas inside mobile phone is shown below:





The output power of BT antenna is as following:

Channel	**Ch 0** **2402 MHz**	**Ch 39** **2441 Mhz**	**Ch 78** **2480 MHz**
Peak Conducted Output Power(dBm)	7.38	6.89	6.90

The output power of BT transmitter is $\leqslant 2P_{Ref}$ and its antenna is ＞5cm from the RF antenna. The 1g SAR for WiFi is ＜1.2W/kg and the BT antenna is ＜2.5cm from the WiFi antenna. So we can draw the conclusion that: stand-alone SAR and simultaneous transmission SAR are not required for BT transmitter.

The average conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	17.34	17.30	17.22	17.19
6	17.22	17.16	17.16	17.13
11	17.17	17.10	17.13	17.13

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	12.23	12.20	12.20	12.18	12.22	12.22	12.20	12.20
6	12.39	12.39	12.41	12.40	12.43	12.42	12.45	12.41
11	12.52	12.53	12.53	12.54	12.56	12.56	12.55	12.58

According to the conducted power measurement result, we can draw the conclusion that: stand-alone SAR for WiFi should be performed. Then, simultaneous transmission SAR for WiFi is considered with measurement results of GSM and WiFi.

SAR is not required for 802.11g channels if the output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels, and for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate. According to the above conducted power, the EUT should be tested for “802.11b, 1Mbps, channel 1”.

Table 13: SAR Values (WIFI 802.b - Head)

Limit of SAR (W/kg)	**10 g Average**	**1 g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Left hand, Touch cheek, 1Mbps,channel 1 (See Fig.43)	0.020	0.043	0.088
Left hand, Tilt 15 Degree, 1Mbps,channel 1 (See Fig.44)	0.016	0.035	0.141
Right hand, Touch cheek, 1Mbps,channel 1 (See Fig.45)	0.031	0.067	0.117
Right hand, Tilt 15 Degree, 1Mbps,channel 1 (See Fig.46)	0.023	0.053	0.187

Table 14: SAR Values (WIFI 802.b - Body)

Limit of SAR (W/kg)	**10 g Average**	**1 g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Toward Ground, 1Mbps,channel 1 (See Fig.47)	0.018	0.032	-0.126
Toward Phantom, 1Mbps,channel 1 (See Fig.48)	0.0059	0.011	-0.171

Table 15: The sum of SAR values for GSM and WiFi

	Maximum SAR value for Head	**Maximum SAR value for Body**
GSM	0.592	0.976
WiFi	0.067	0.032
Sum	**0.659**	**1.008**

According to the above tables, the sum of SAR values for GSM and WiFi ＜1.6W/kg. So simultaneous transmission SAR are not required for WiFi transmitter.

7.5 Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 4.2 of this report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 4.1 of this test report.

The maximum SAR values are obtained at the case of **GSM 850 MHz Band, Body, Towards Ground, Bottom frequency with GPRS (Table 11)**, and the value are: **0.976(1g).**

8 Measurement Uncertainty

No.	Error Description	Type	Tolerance (±%)	Probability Distribution	Divisor	c_i	Standard Uncertainty (%) u_i' (%)	Degree of freedom V_{eff} or v_i
1	System repeatability	A	0.5	N	1	1	0.5	9
	Measurement system							
2	－probe calibration	B	3.5	N	1	1	3.5	∞
3	－axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	0.5	4.3	∞
4	－hemisphere isotropy of the probe	B	9.4	R	$\sqrt{3}$			

5	—space resolution	B	0	R	$\sqrt{3}$	1	0	∞
6	—boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	∞
7	—probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	—detection limit	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	—readout electronics	B	1.0	N	1	1	1.0	∞
10	—RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞
11	— Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
12	— Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
13	—Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
	Test sample Related							
14	—Test Sample Positioning	A	4.9	N	1	1	4.9	5
15	—Device Holder	A	6.1	N	1	1	6.1	5
16	—Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	∞
	Phantom and Tissue Parameters							
17	— Phantom Uncertainty (shape and thickness tolerances)	B	1.0	R	$\sqrt{3}$	1	0.6	∞
18	— liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
19	— liquid conductivity (measurement error)	A	0.23	N	1	1	0.23	9
20	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
21	— liquid permittivity (measurement error)	A	0.46	N	1	1	0.46	9
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$		/			12.2	88.7
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2		24.4	/

9 MAIN TEST INSTRUMENTS

Table 16: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 29,2010	One year
02	Power meter	NRVD	101253	September 4, 2010	One year
03	Power sensor	NRV-Z5	100333		
04	Signal Generator	E4433C	MY49070393	November 13, 2009	One Year
05	Amplifier	VTL5400	0505	No Calibration Requested	
06	BTS	CMU 200	105948	August 24, 2010	One year
07	E-field Probe	SPEAG ES3DV3	3149	September 25, 2010	One year
08	E-field Probe	SPEAG EX3DV4	3617	July 9, 2010	One year
09	DAE	SPEAG DAE4	771	November 19, 2009	One year
10	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Two years
11	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	Two years
12	Dipole Validation Kit	IndexSAR IXD-245	40102	October, 2008	Two years

END OF REPORT BODY

ANNEX A MEASUREMENT PROCESS

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the reference point was measured and was used as a reference value for assessing the power drop.

Step 2: The SAR distribution at the exposed side of the phantom was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the flat phantom and the horizontal grid spacing was 10 mm x 10 mm. Based on this data, the area of the maximum absorption was determined by spline interpolation.

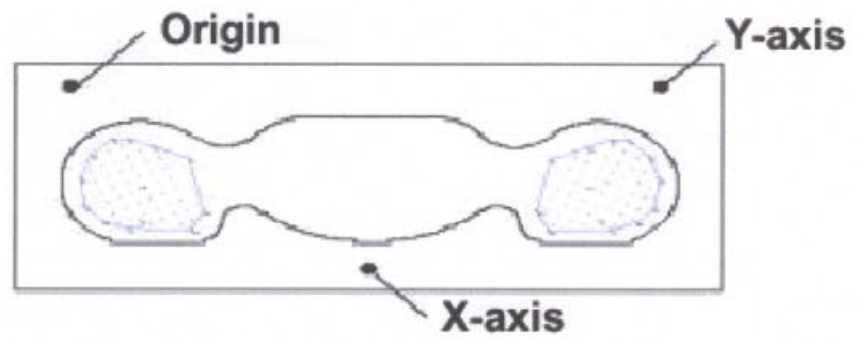
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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

b. The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x ~ y and z-directions). The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

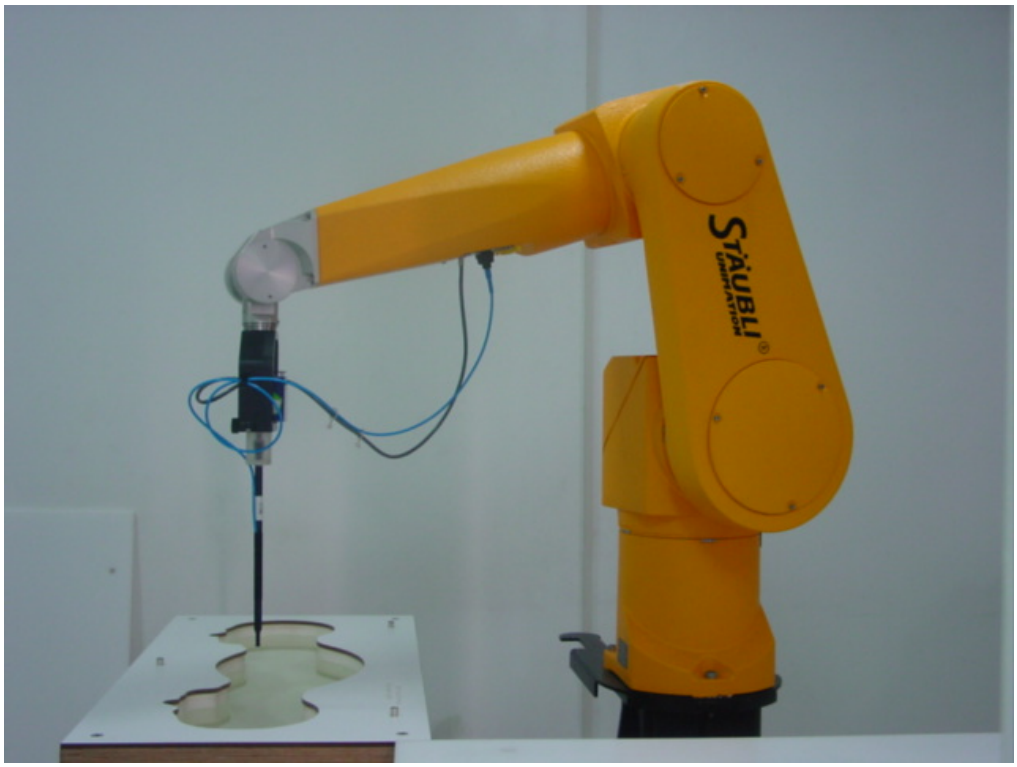
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation is repeated.

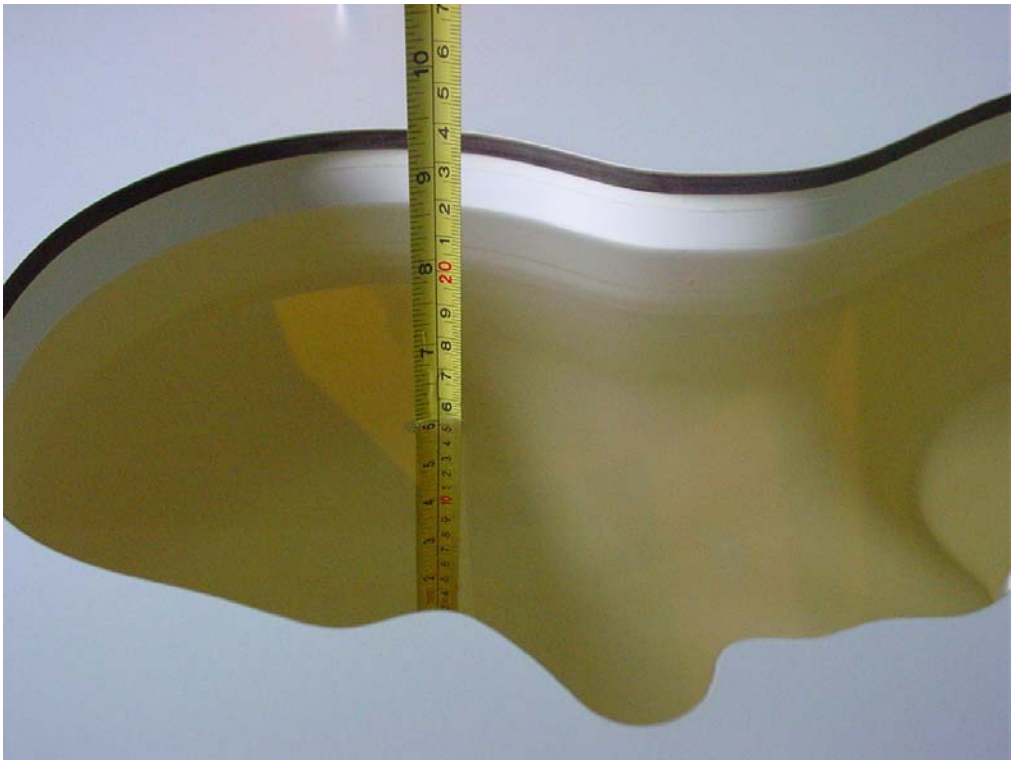


Picture A: SAR Measurement Points in Area Scan

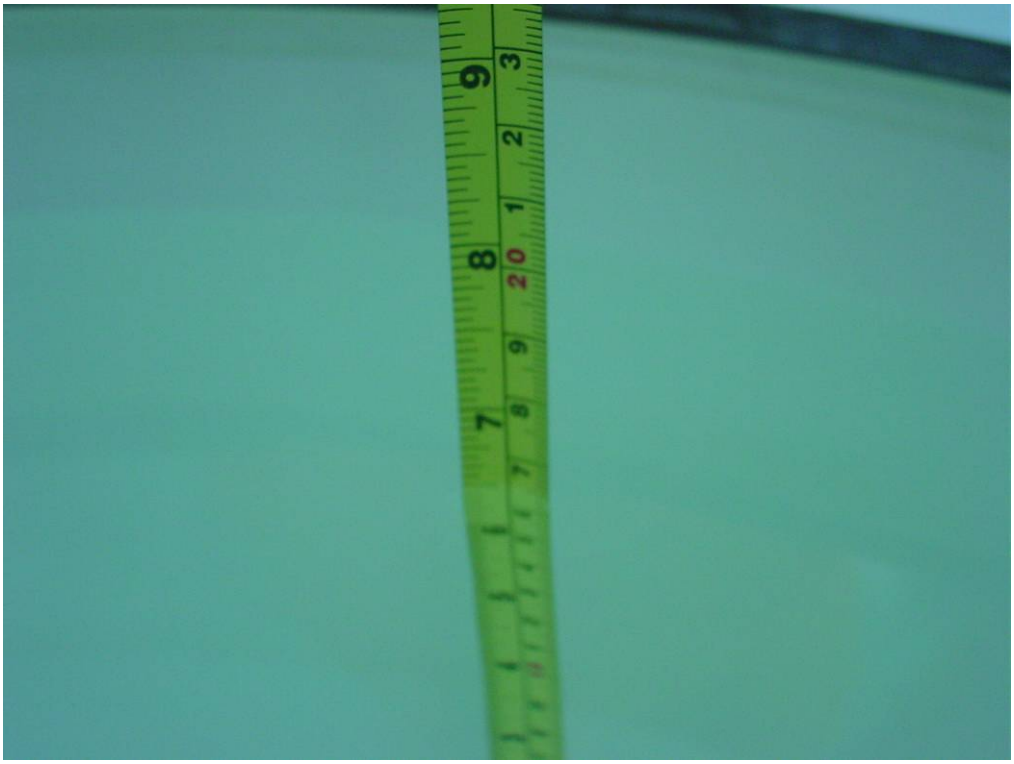
ANNEX B TEST LAYOUT



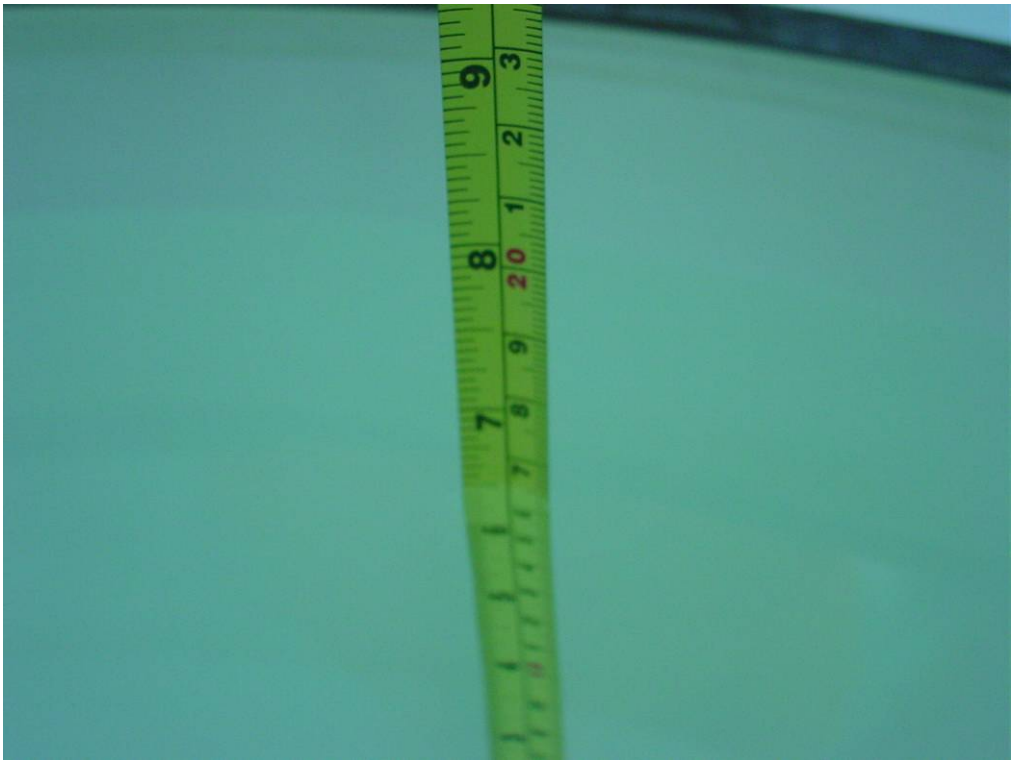
Picture B1: Specific Absorption Rate Test Layout



Picture B2: Liquid depth in the Flat Phantom (850 MHz)



Picture B3 Liquid depth in the Flat Phantom (1900MHz)



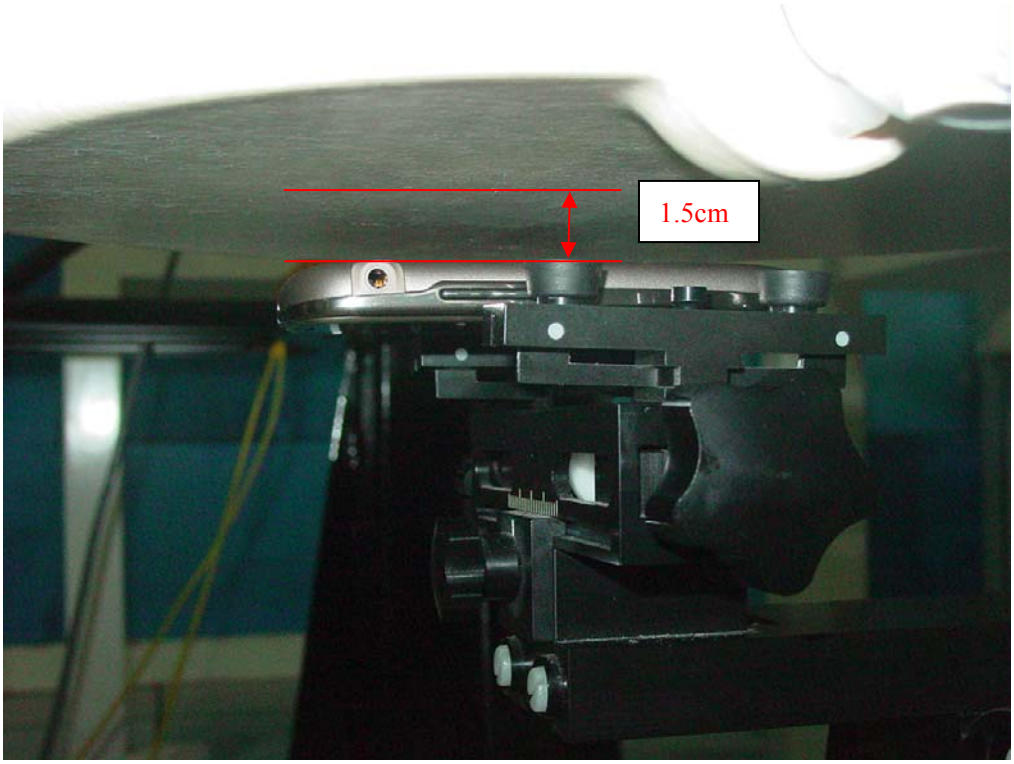
Picture B4 Liquid depth in the Flat Phantom (2450MHz)

Picture B5: Left Hand Touch Cheek Position

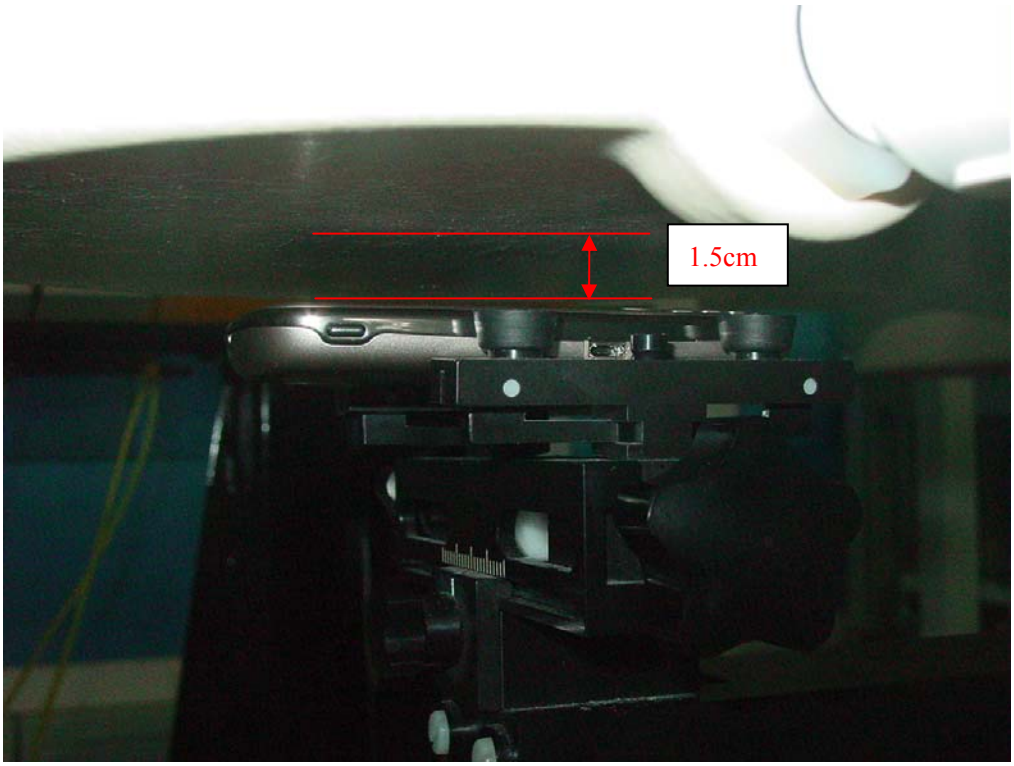
Picture B6: Left Hand Tilt 15° Position

Picture B7: Right Hand Touch Cheek Position

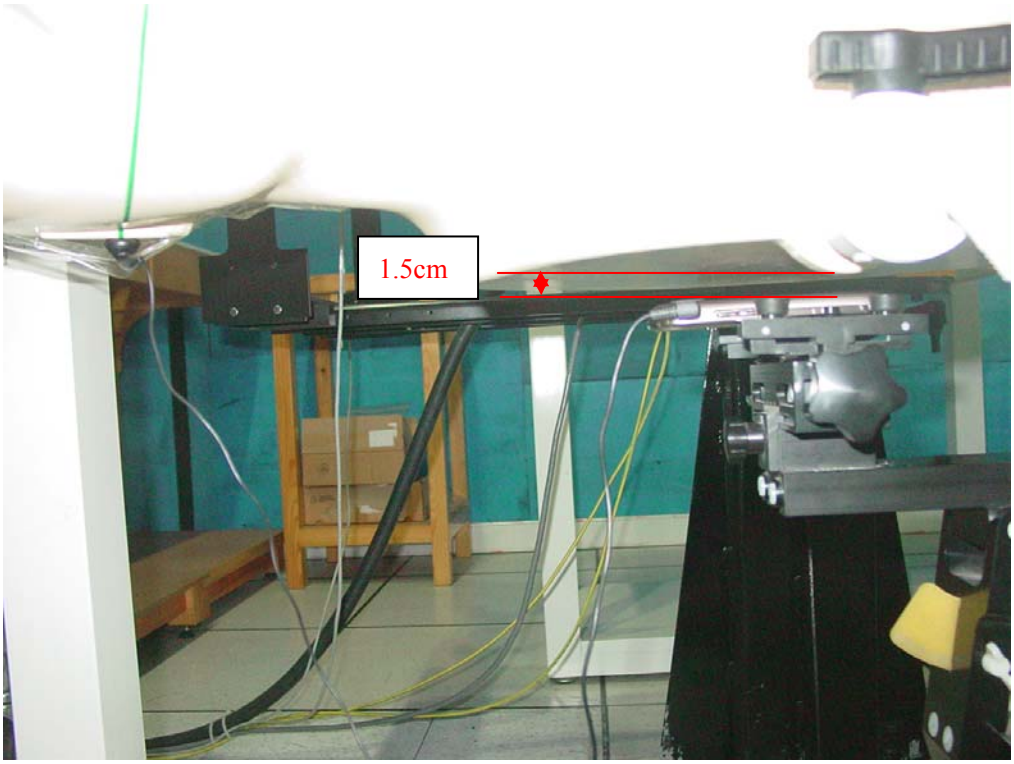
Picture B8: Right Hand Tilt 15° Position



Picture B9: Body-worn Position (towards ground, the distance from handset to the bottom of the Phantom is 1.5cm)



Picture B10: Body-worn Position (towards phantom, the distance from handset to the bottom of the Phantom is 1.5cm)



Picture B11: Body-worn Position with Headset (towards ground, the distance from handset to the bottom of the Phantom is 1.5cm)

ANNEX C GRAPH RESULTS

850 Left Cheek High

Date/Time: 2010-10-12 11:03:17
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.633 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.45 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 0.821 W/kg
SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.402 mW/g
Maximum value of SAR (measured) = 0.643 mW/g

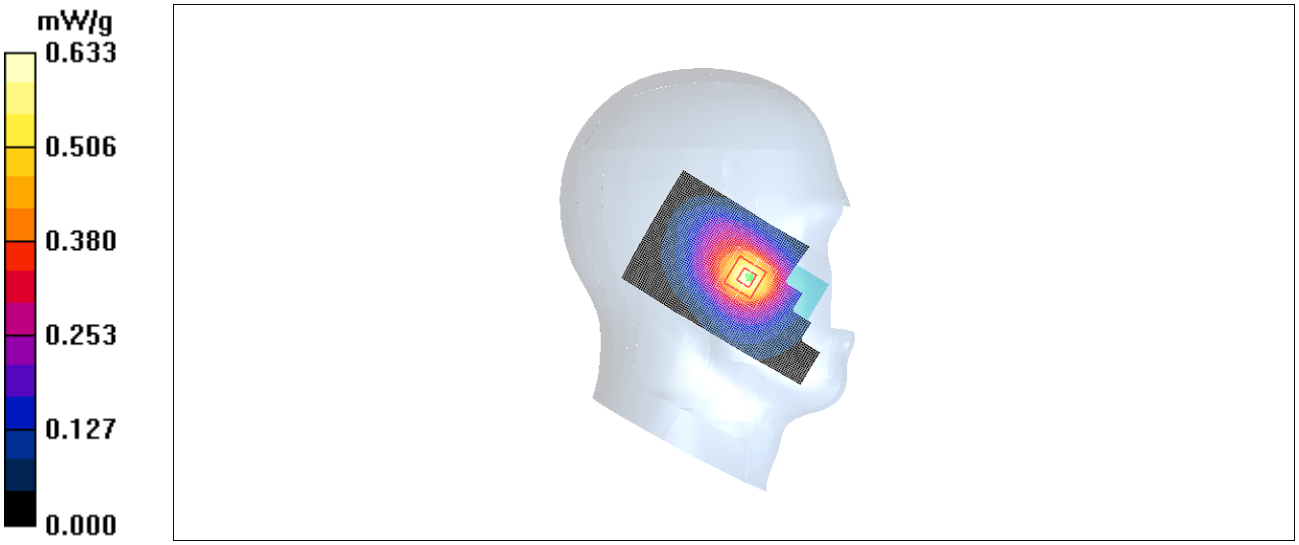


Fig. 1 850MHz CH251

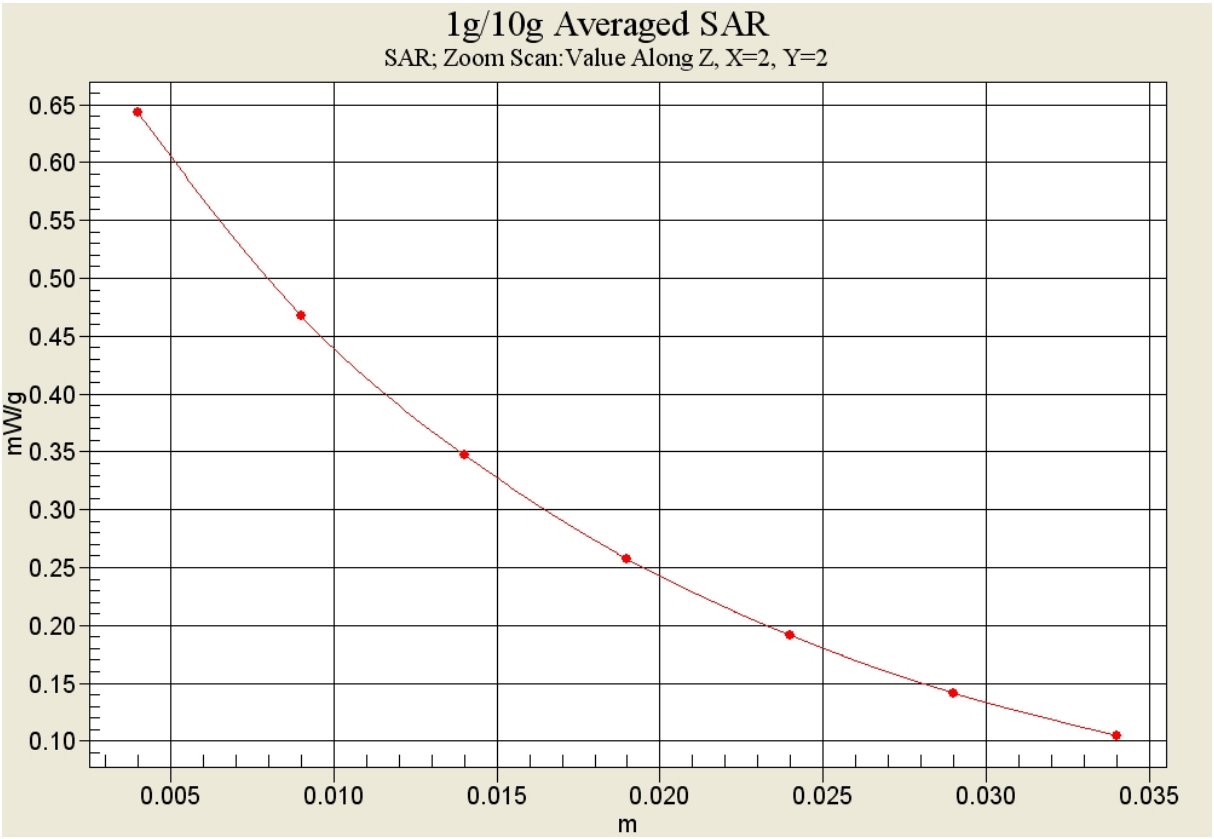


Fig. 1-1 Z-Scan at power reference point (850 MHz CH251)

850 Left Cheek Middle

Date/Time: 2010-10-12 11:17:33
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.878 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.592 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.21 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.771 W/kg
SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.374 mW/g
Maximum value of SAR (measured) = 0.598 mW/g

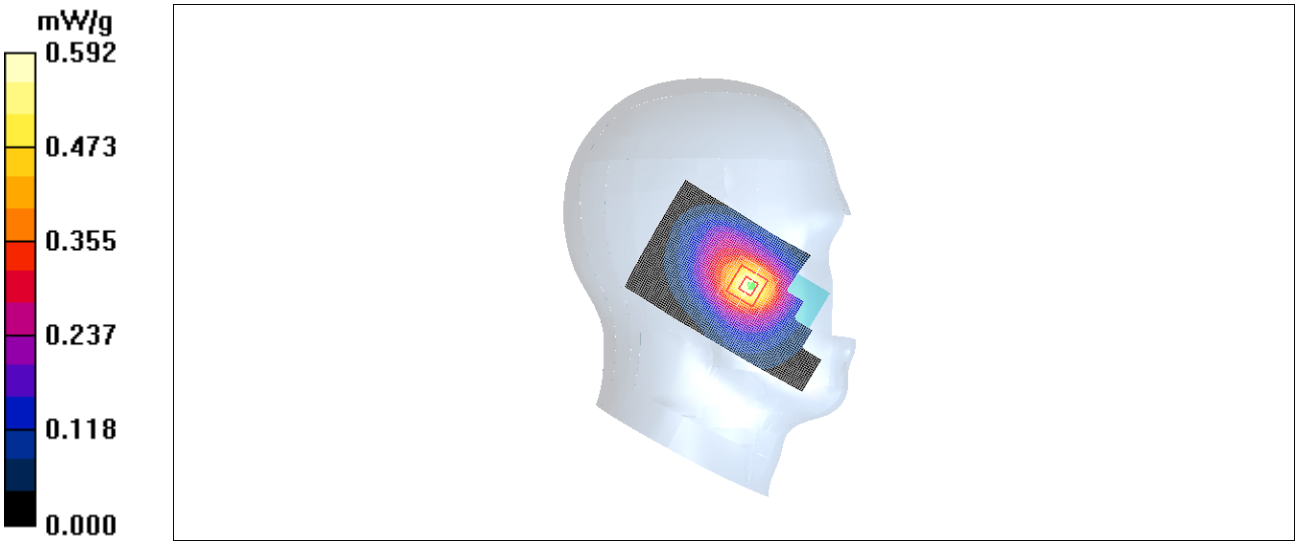


Fig. 2 850 MHz CH190

850 Left Cheek Low

Date/Time: 2010-10-12 11:31:56
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.866 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.534 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.85 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.504 mW/g; SAR(10 g) = 0.340 mW/g
Maximum value of SAR (measured) = 0.547 mW/g

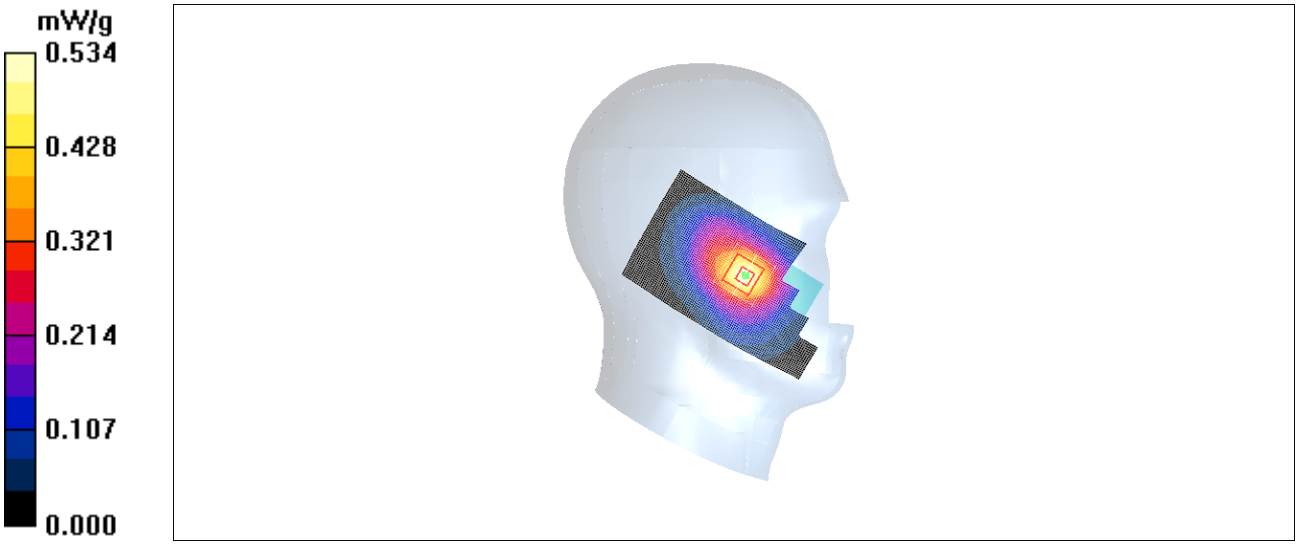


Fig. 3 850 MHz CH128

850 Left Tilt High

Date/Time: 2010-10-12 11:46:25
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.253 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.92 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 0.300 W/kg
SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.178 mW/g
Maximum value of SAR (measured) = 0.251 mW/g

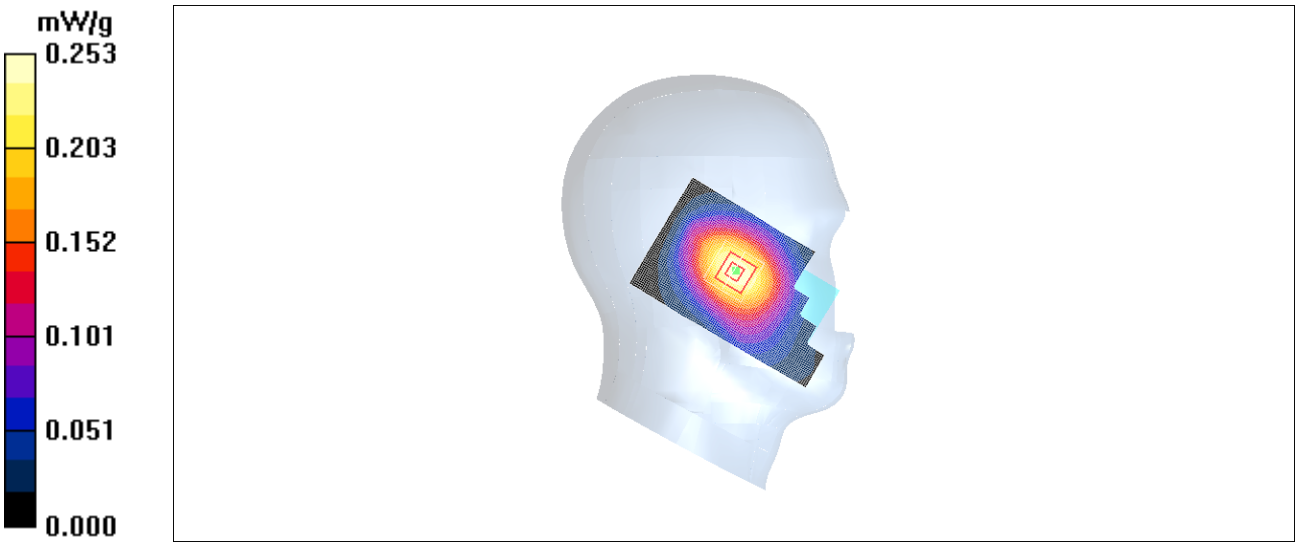


Fig.4 850 MHz CH251

850 Left Tilt Middle

Date/Time: 2010-10-12 12:00:41
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.878 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.236 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.78 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.170 mW/g
Maximum value of SAR (measured) = 0.238 mW/g

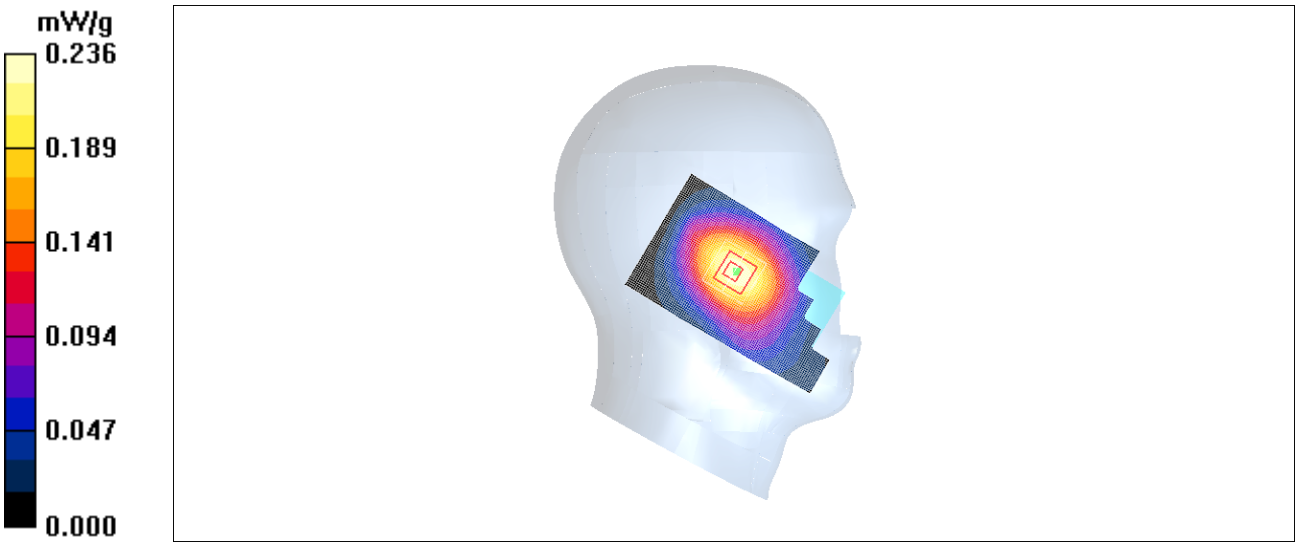


Fig.5 850 MHz CH190

850 Left Tilt Low

Date/Time: 2010-10-12 12:15:01
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.866 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.230 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.99 V/m; Power Drift = -0.151 dB
Peak SAR (extrapolated) = 0.266 W/kg
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.161 mW/g
Maximum value of SAR (measured) = 0.225 mW/g

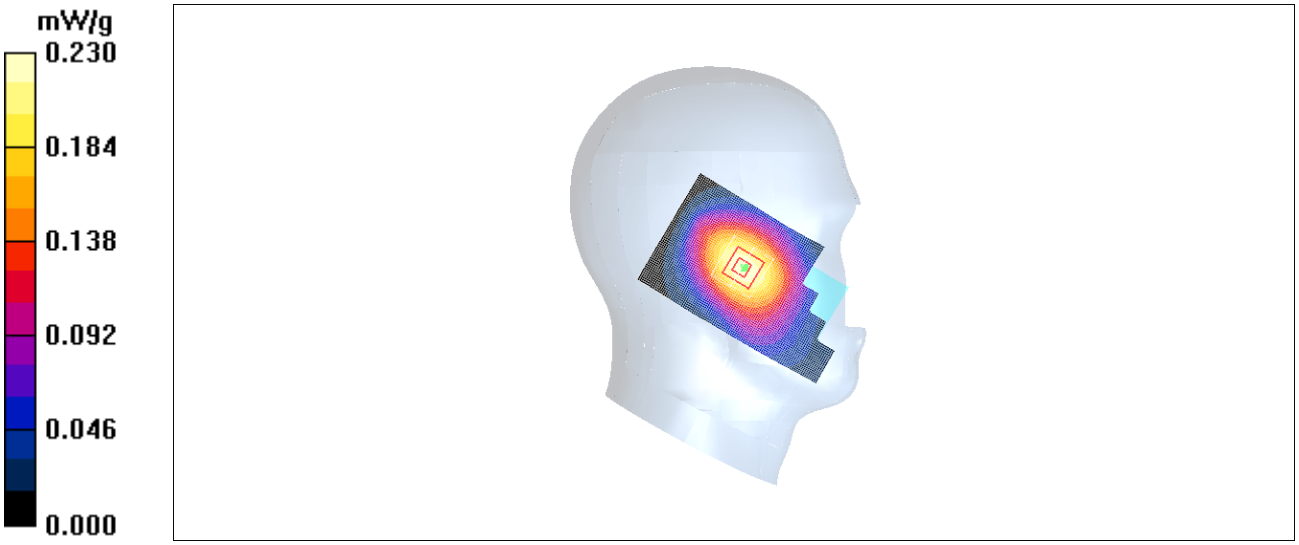


Fig. 6 850 MHz CH128

850 Right Cheek High

Date/Time: 2010-10-12 12:29:28
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.541 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.87 V/m; Power Drift = -0.163 dB
Peak SAR (extrapolated) = 0.723 W/kg
SAR(1 g) = 0.514 mW/g; SAR(10 g) = 0.350 mW/g
Maximum value of SAR (measured) = 0.554 mW/g

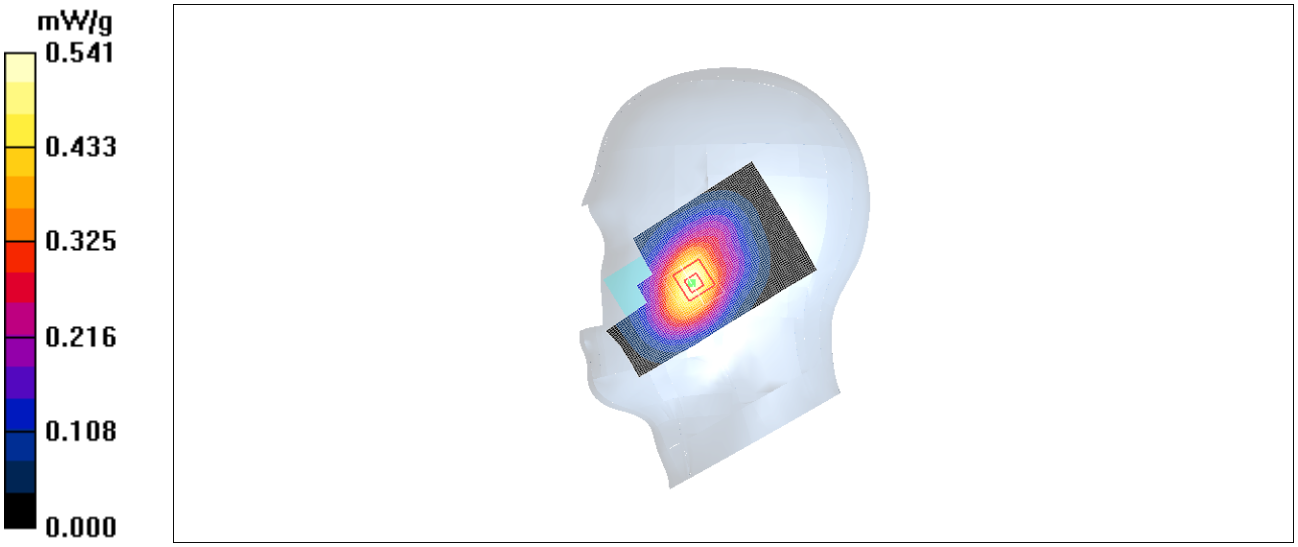


Fig. 7 850 MHz CH251

850 Right Cheek Middle

Date/Time: 2010-10-12 12:43:45
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.878 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.531 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.96 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 0.739 W/kg
SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.350 mW/g
Maximum value of SAR (measured) = 0.561 mW/g

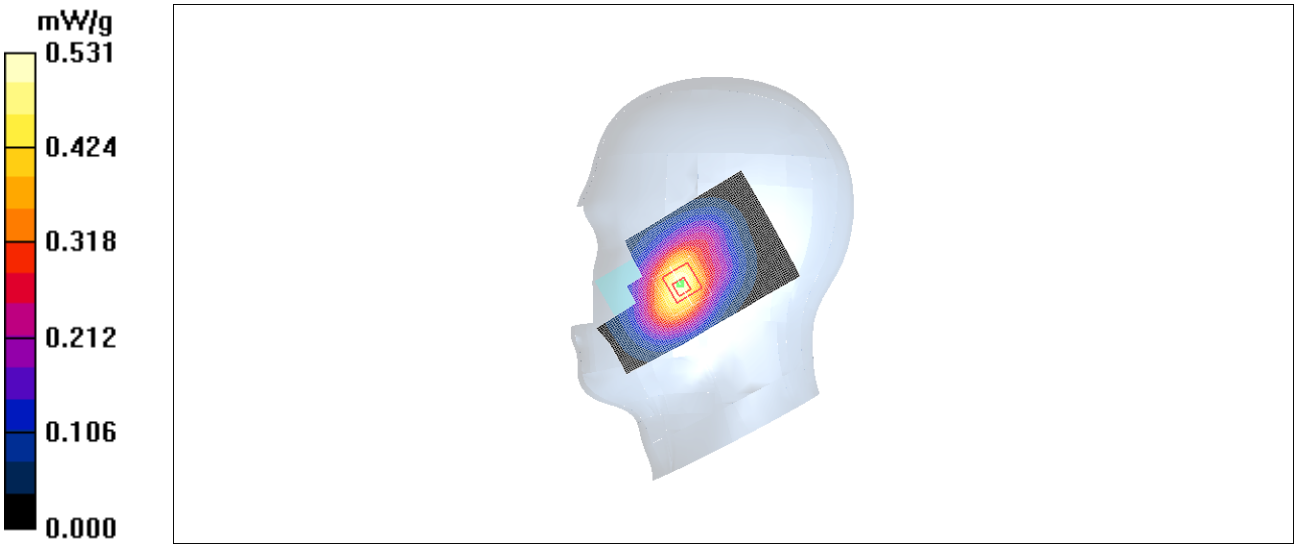


Fig. 8 850 MHz CH190

850 Right Cheek Low

Date/Time: 2010-10-12 12:58:09
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.866 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.480 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.84 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 0.643 W/kg
SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.309 mW/g
Maximum value of SAR (measured) = 0.493 mW/g

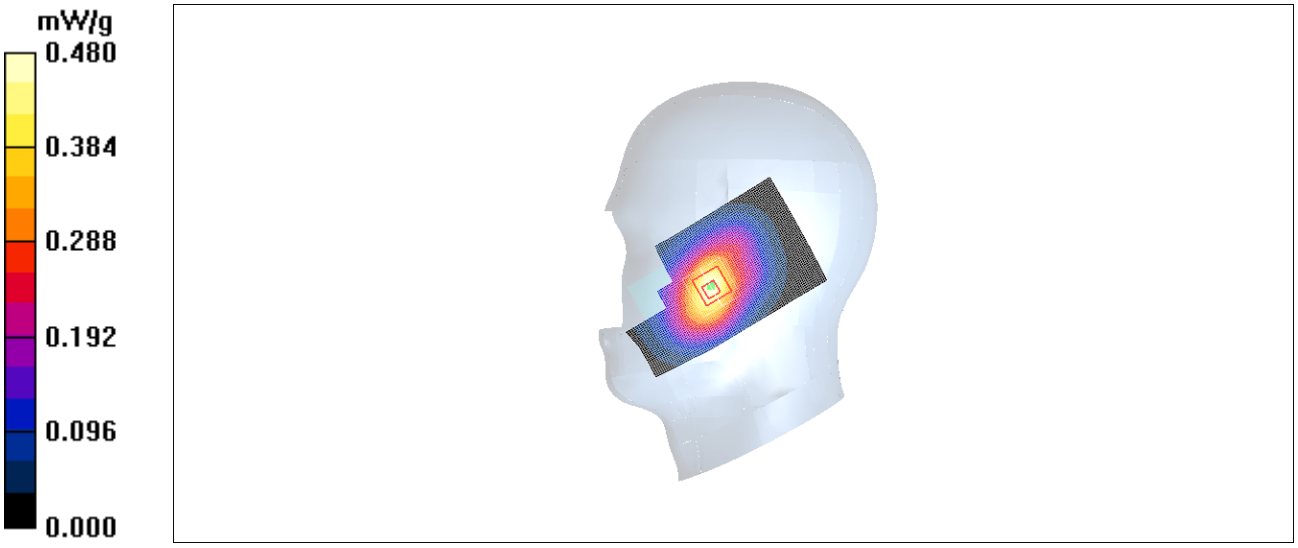


Fig. 9 850 MHz CH128

850 Right Tilt High

Date/Time: 2010-10-12 13:12:37
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.330 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.311 mW/g; SAR(10 g) = 0.233 mW/g
Maximum value of SAR (measured) = 0.325 mW/g

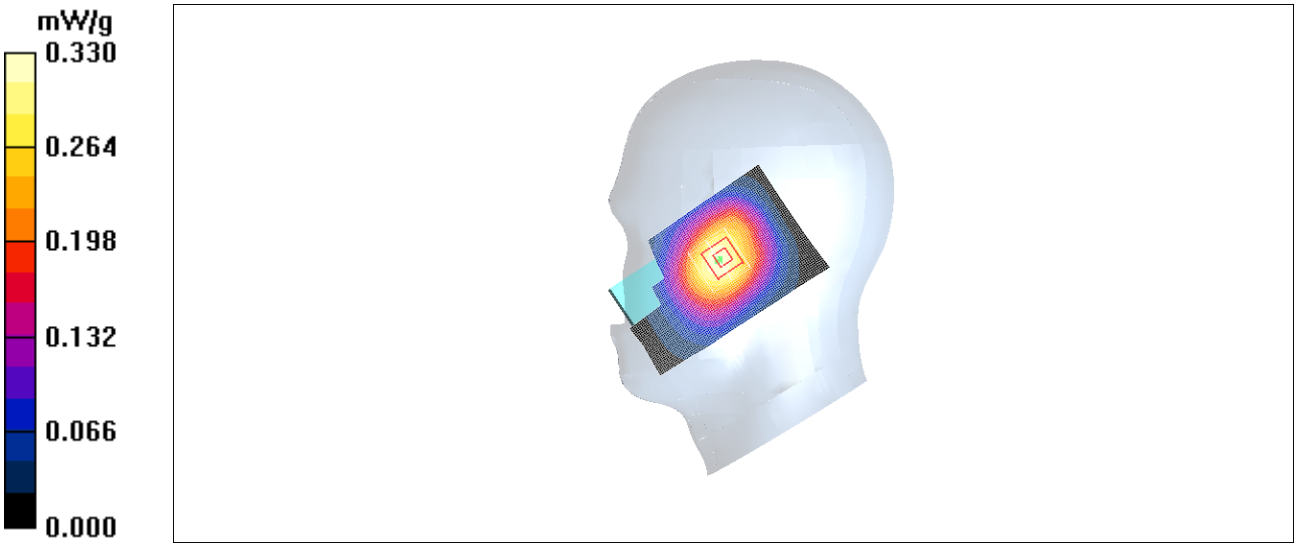


Fig.10 850 MHz CH251

850 Right Tilt Middle

Date/Time: 2010-10-12 13:26:55
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.878 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.313 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.7 V/m; Power Drift = -0.062 dB
Peak SAR (extrapolated) = 0.366 W/kg
SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.313 mW/g

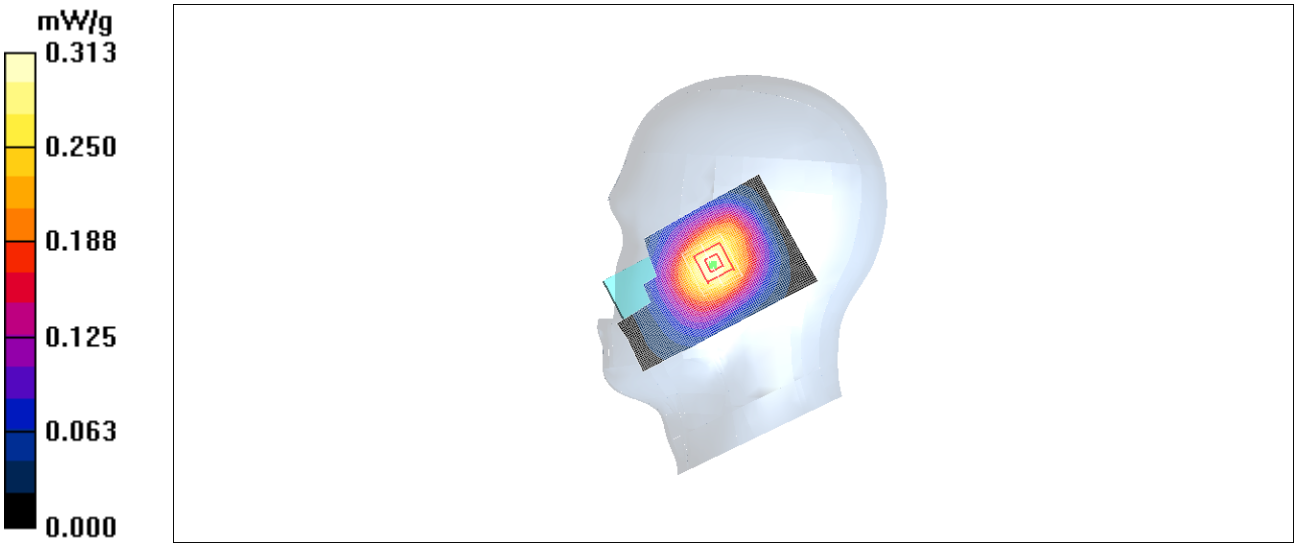


Fig.11 850 MHz CH190

850 Right Tilt Low

Date/Time: 2010-10-12 13:41:19
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.866 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.281 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.334 W/kg
SAR(1 g) = 0.268 mW/g; SAR(10 g) = 0.201 mW/g
Maximum value of SAR (measured) = 0.280 mW/g

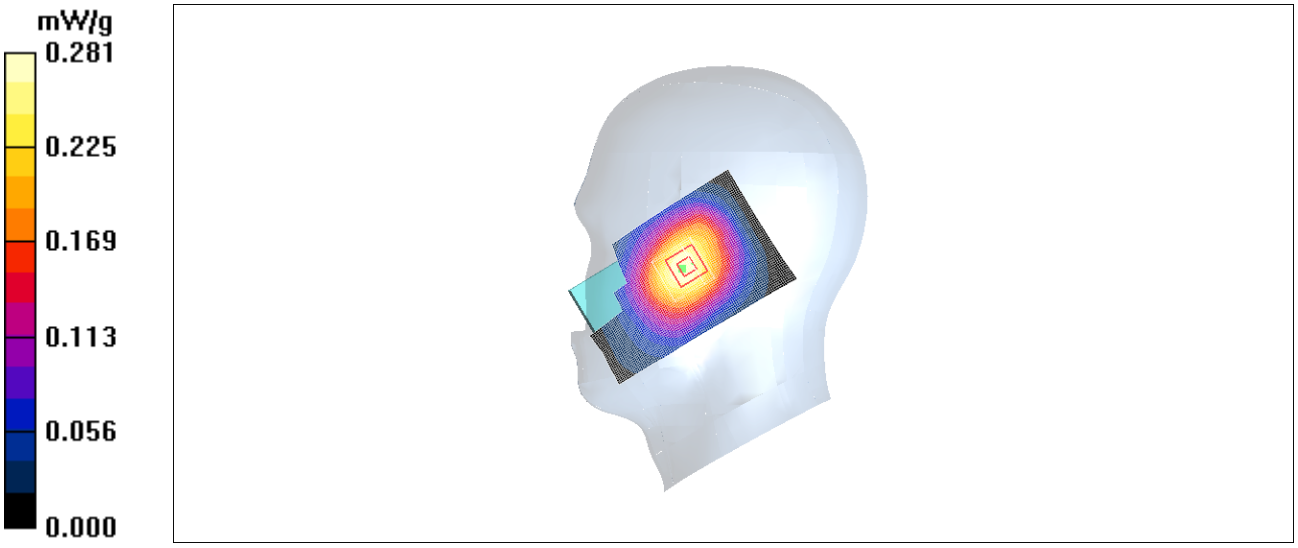


Fig. 12 850 MHz CH128

1900 Left Cheek High
Date/Time: 2010-10-13 11:21:56
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 39.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.523 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.29 V/m; Power Drift = 0.189 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.461 mW/g; SAR(10 g) = 0.281 mW/g
Maximum value of SAR (measured) = 0.504 mW/g

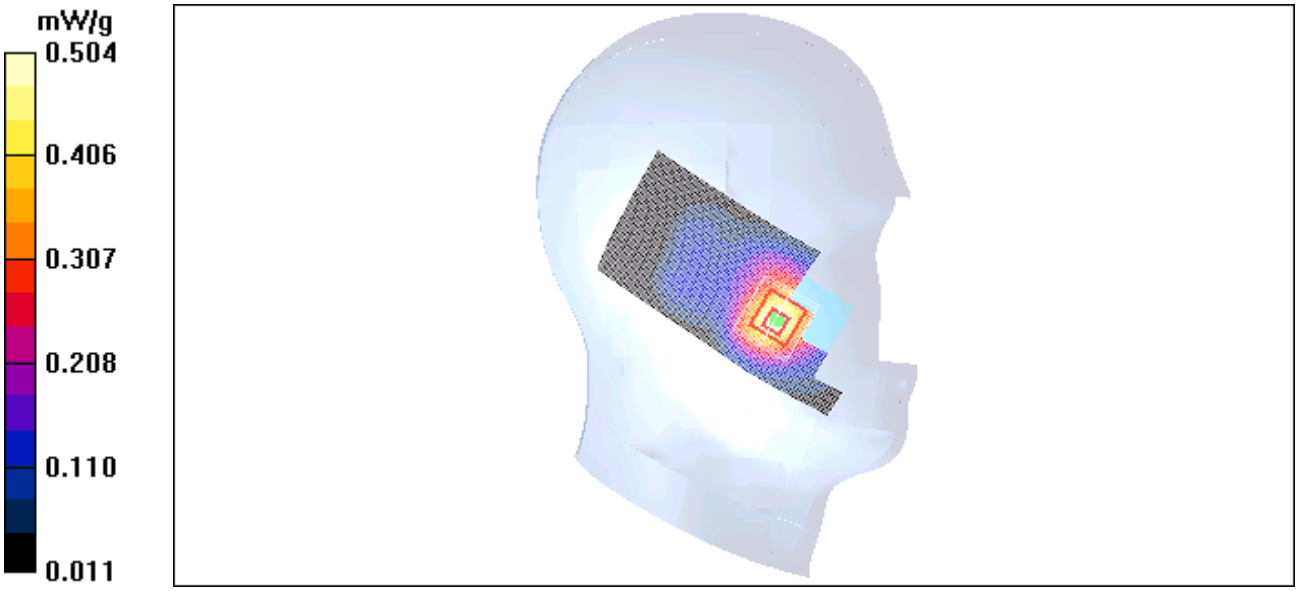


Fig. 13 1900 MHz CH810

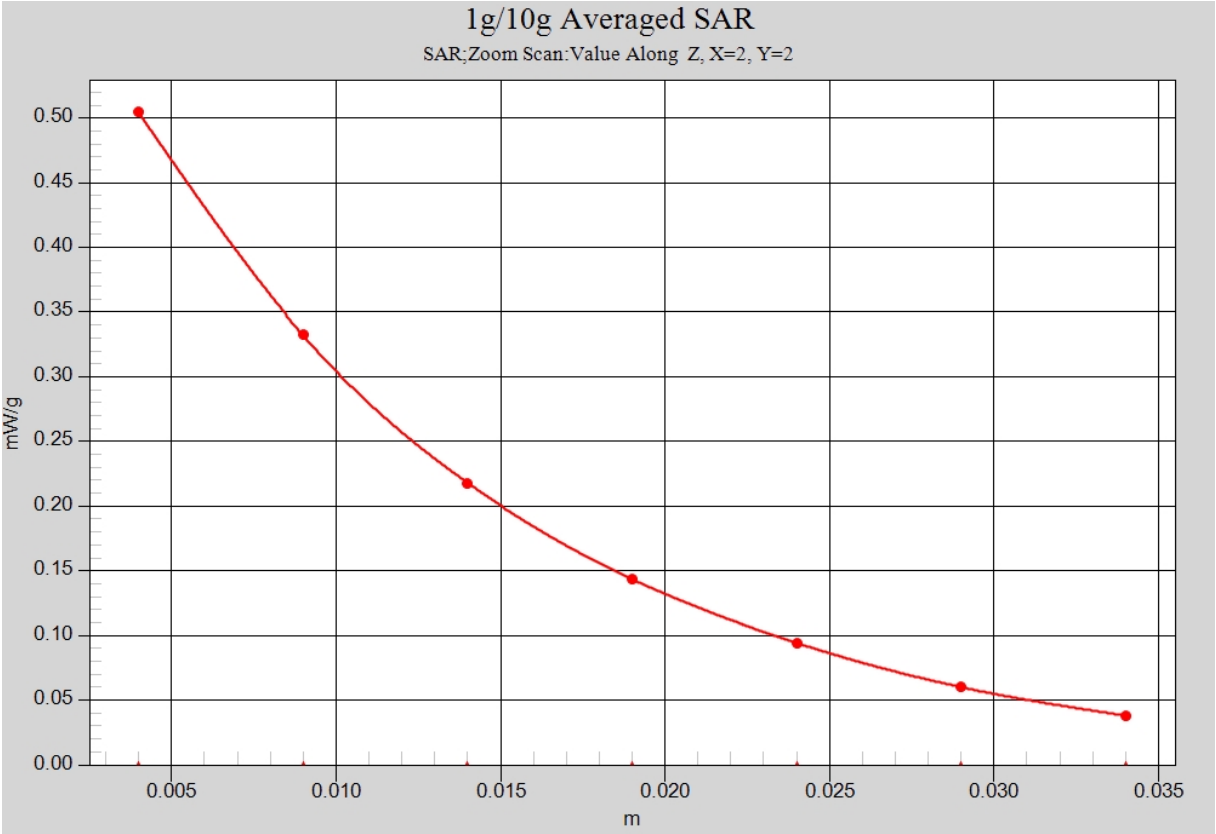


Fig. 13-1 Z-Scan at power reference point (1900 MHz CH810)

1900 Left Cheek Middle

Date/Time: 2010-10-13 11:36:20
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.460 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.87 V/m; Power Drift = -0.00448 dB
Peak SAR (extrapolated) = 0.609 W/kg
SAR(1 g) = 0.405 mW/g; SAR(10 g) = 0.248 mW/g
Maximum value of SAR (measured) = 0.445 mW/g

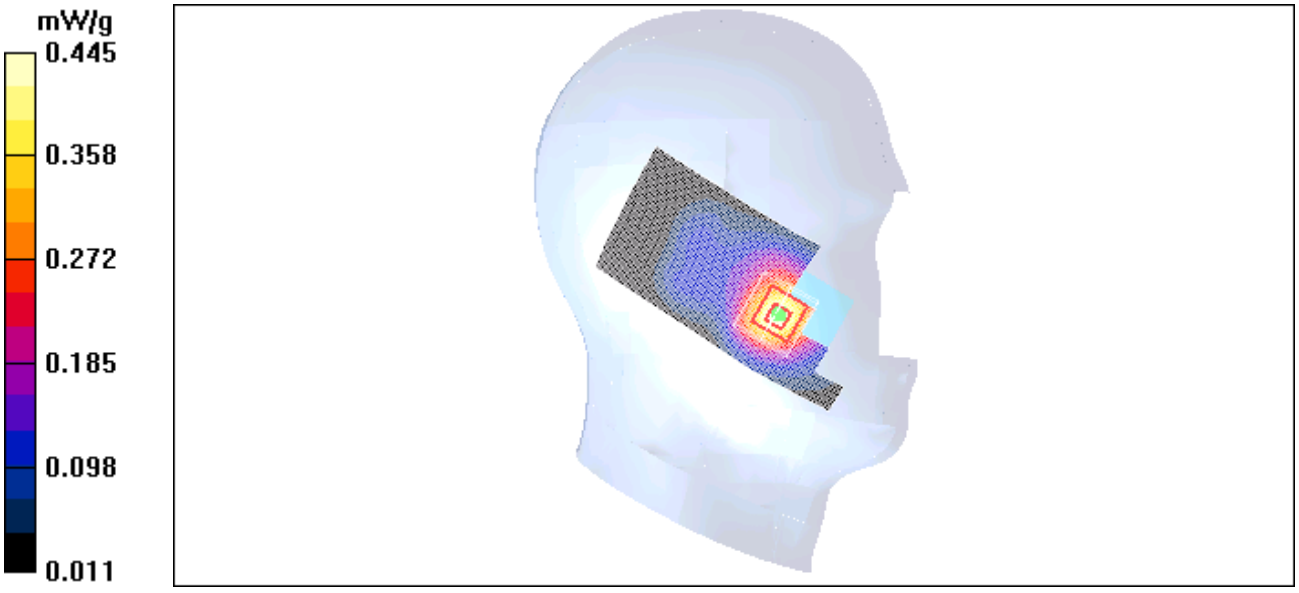


Fig. 14 1900 MHz CH661

1900 Left Cheek Low

Date/Time: 2010-10-13 11:50:42
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

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

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.14 V/m; Power Drift = -0.173 dB
Peak SAR (extrapolated) = 0.581 W/kg
SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.239 mW/g
Maximum value of SAR (measured) = 0.423 mW/g

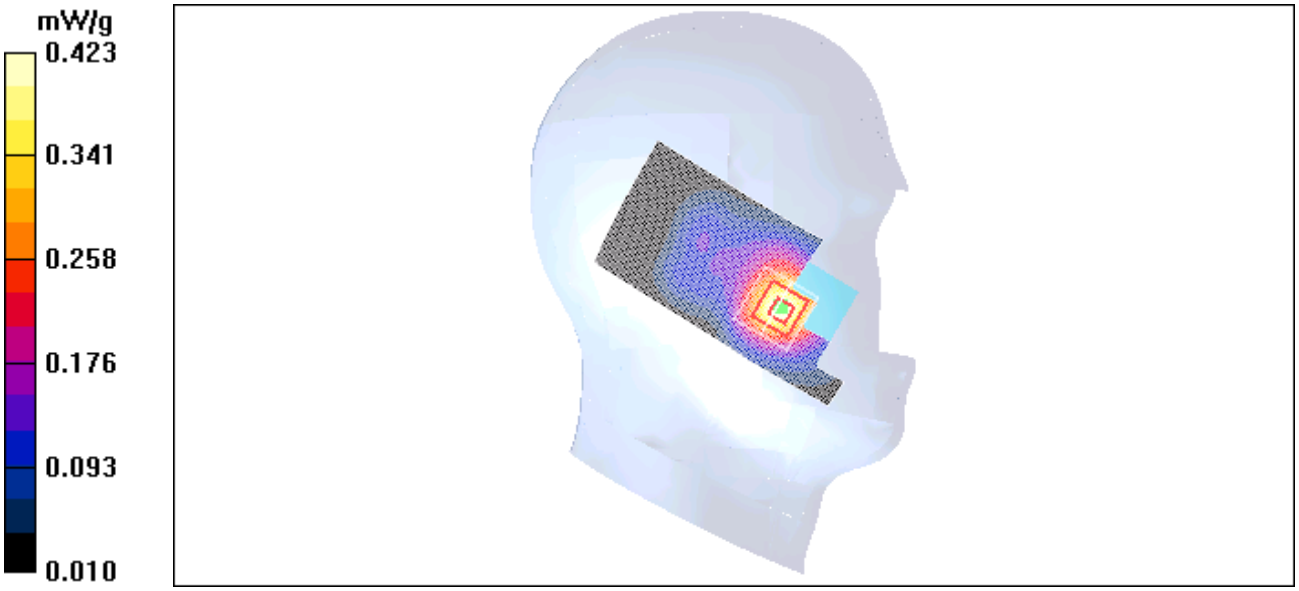


Fig. 15 1900 MHz CH512

1900 Left Tilt High

Date/Time: 2010-10-13 12:05:08
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 39.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.161 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.7 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.228 W/kg
SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.152 mW/g

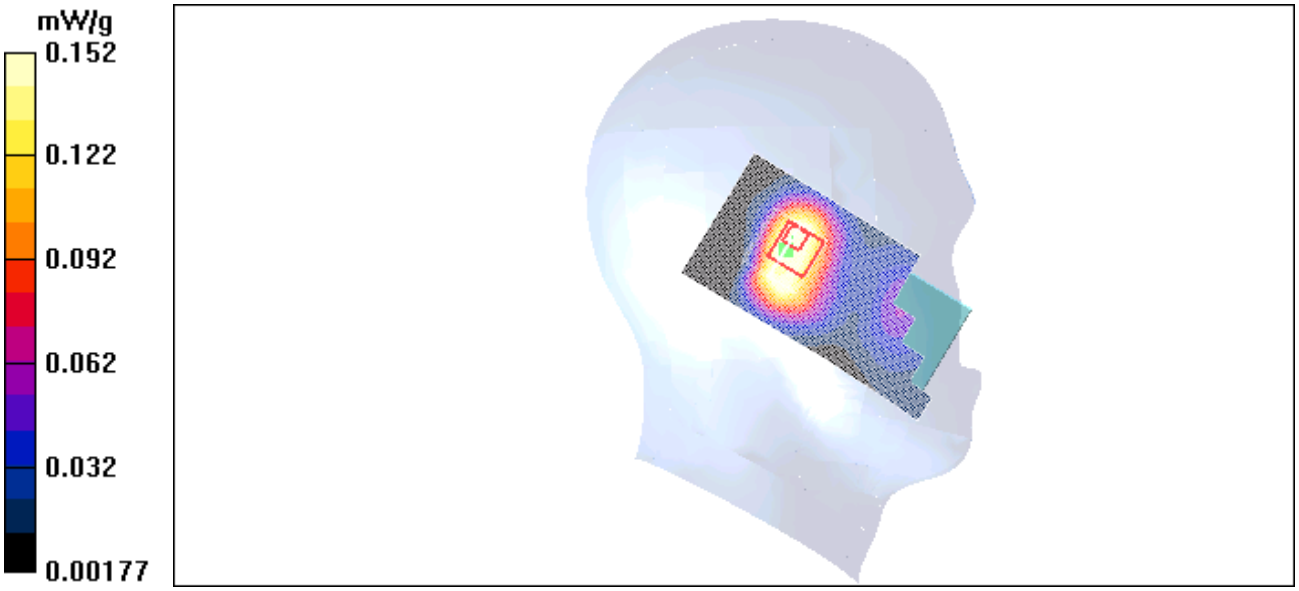


Fig.16 1900 MHz CH810

1900 Left Tilt Middle
Date/Time: 2010-10-13 12:19:27
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.143 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.71 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.205 W/kg
SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.077 mW/g
Maximum value of SAR (measured) = 0.139 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.71 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.111 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.121 mW/g

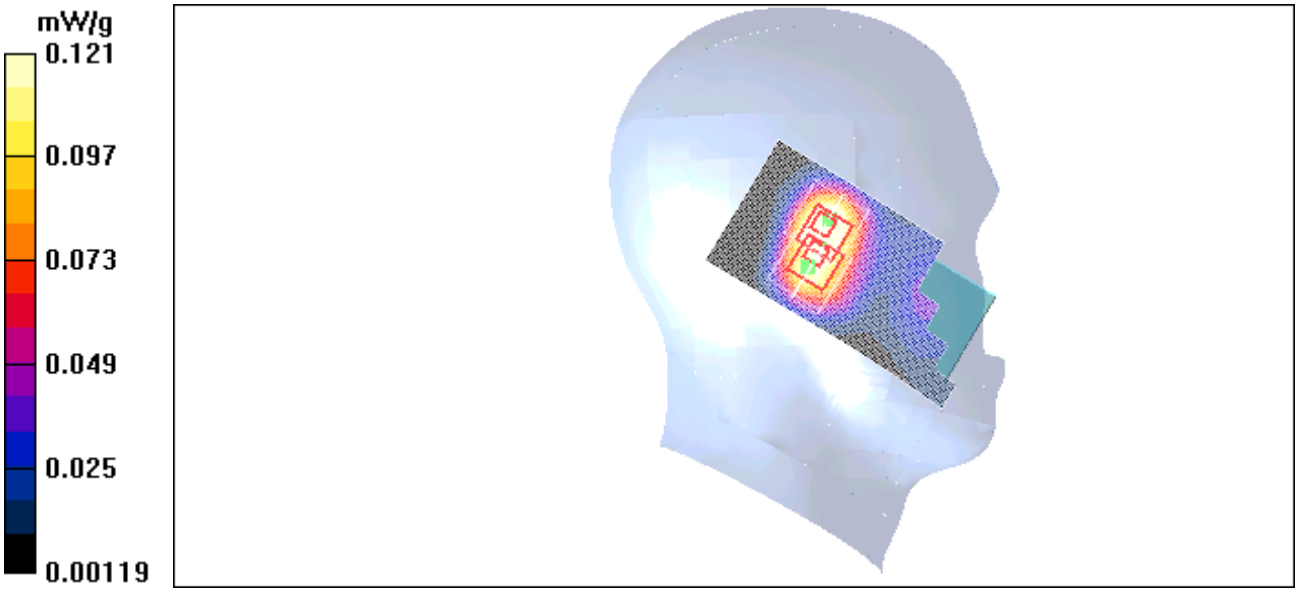


Fig. 17 1900 MHz CH661

1900 Left Tilt Low
Date/Time: 2010-10-13 12:33:50
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.145 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.55 V/m; Power Drift = 0.145 dB
Peak SAR (extrapolated) = 0.212 W/kg
SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.080 mW/g
Maximum value of SAR (measured) = 0.141 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.55 V/m; Power Drift = 0.145 dB
Peak SAR (extrapolated) = 0.177 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.070 mW/g
Maximum value of SAR (measured) = 0.124 mW/g

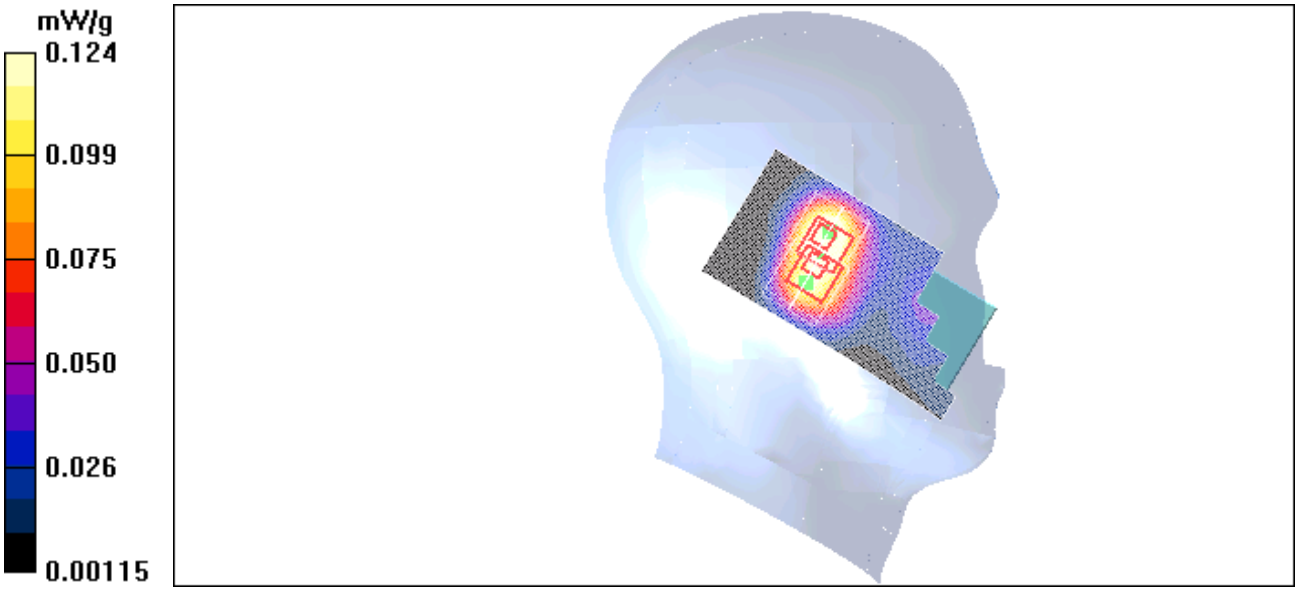


Fig. 18 1900 MHz CH512

1900 Right Cheek High

Date/Time: 2010-10-13 12:49:35
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 39.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.478 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.67 V/m; Power Drift = -0.122 dB
Peak SAR (extrapolated) = 0.667 W/kg
SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.252 mW/g
Maximum value of SAR (measured) = 0.449 mW/g

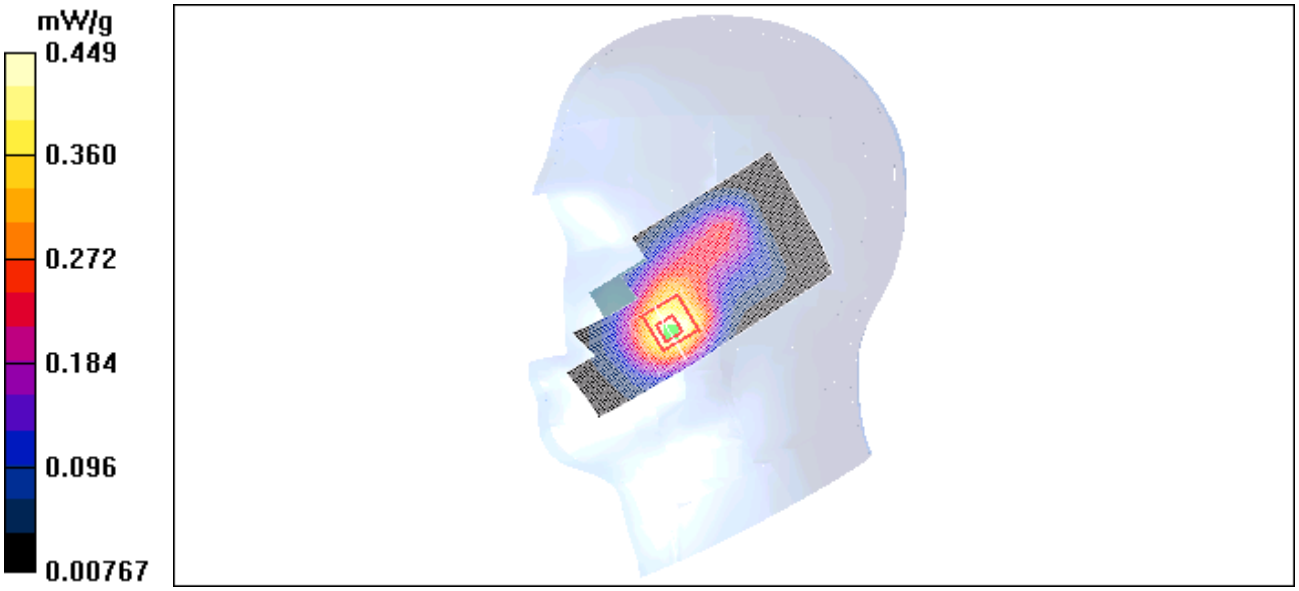


Fig. 19 1900 MHz CH810

1900 Right Cheek Middle

Date/Time: 2010-10-13 13:03:54
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.411 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.77 V/m; Power Drift = -0.186 dB
Peak SAR (extrapolated) = 0.579 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 0.388 mW/g

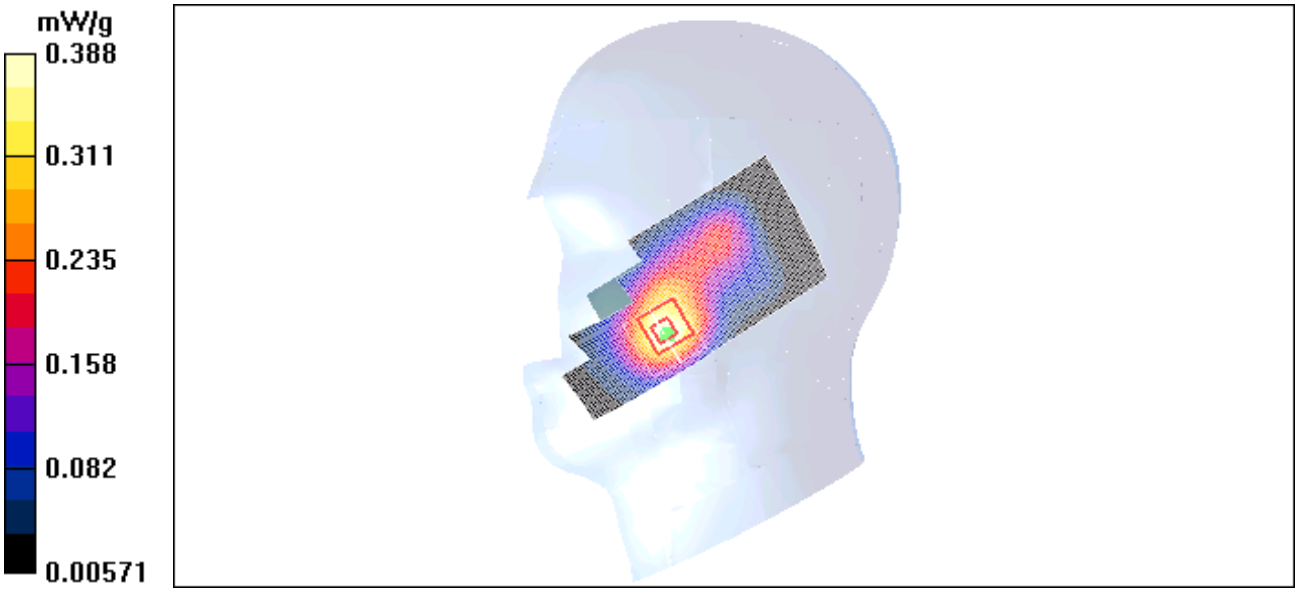


Fig. 20 1900 MHz CH661

1900 Right Cheek Low

Date/Time: 2010-10-13 13:18:18
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.392 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.12 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.559 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.379 mW/g

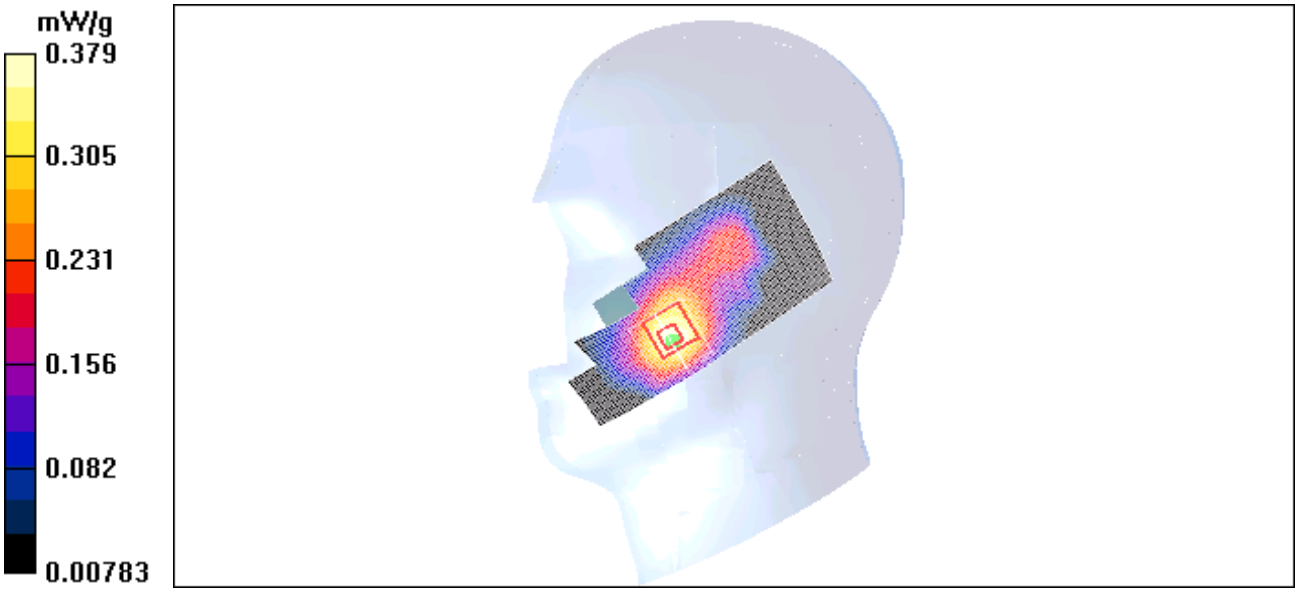


Fig. 21 1900 MHz CH512

1900 Right Tilt High

Date/Time: 2010-10-13 13:32:43
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 39.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.255 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.99 V/m; Power Drift = -0.027 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.124 mW/g
Maximum value of SAR (measured) = 0.229 mW/g

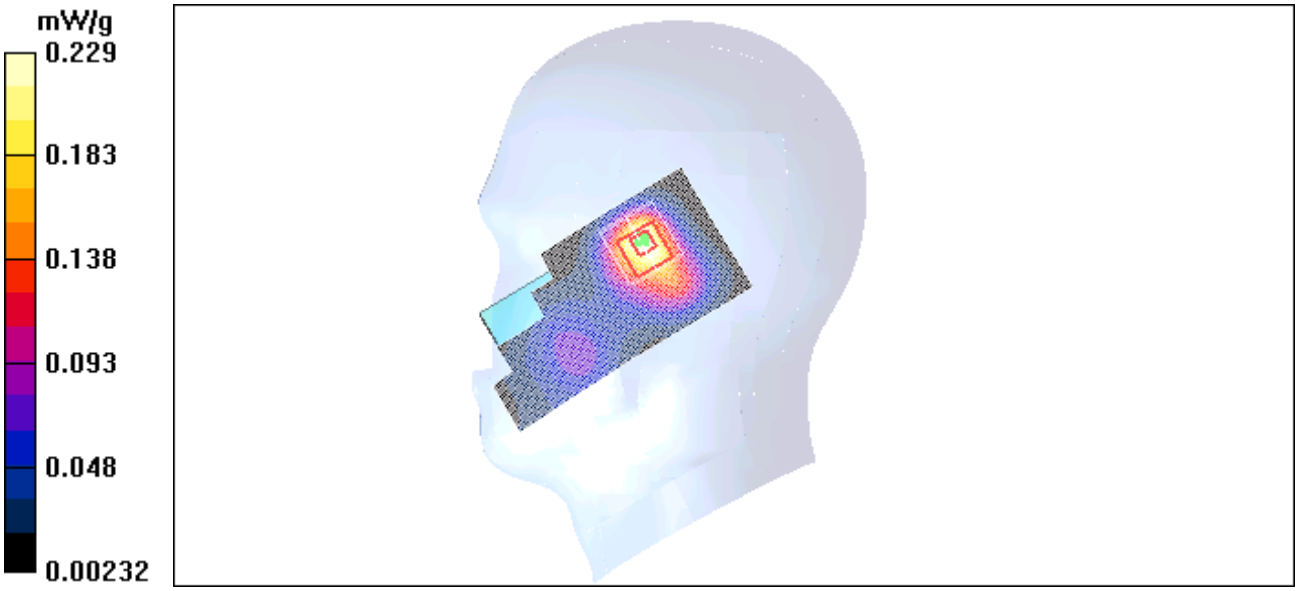


Fig. 22 1900 MHz CH810

1900 Right Tilt Middle
Date/Time: 2010-10-13 13:47:09
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.228 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.89 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 0.297 W/kg
SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.111 mW/g
Maximum value of SAR (measured) = 0.204 mW/g

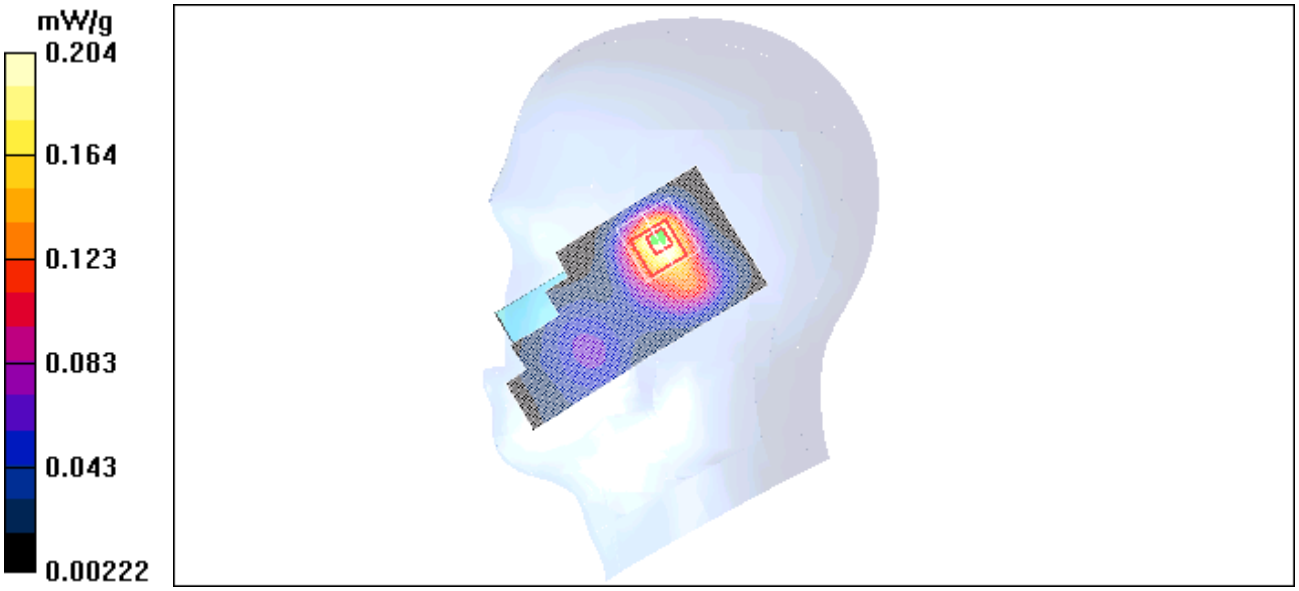


Fig.23 1900 MHz CH661

1900 Right Tilt Low

Date/Time: 2010-10-13 14:01:22
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.210 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.52 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.177 mW/g; SAR(10 g) = 0.107 mW/g
Maximum value of SAR (measured) = 0.193 mW/g

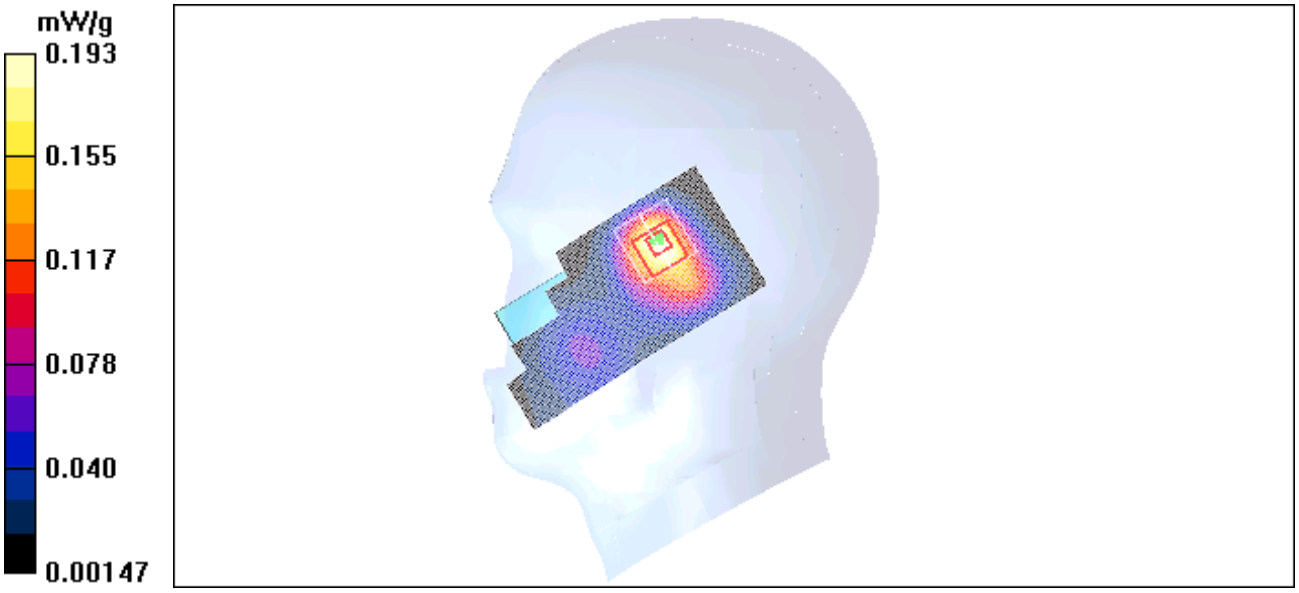


Fig.24 1900 MHz CH512

850 Body Towards Ground High with GPRS

Date/Time: 2010-10-12 17:44:25
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.2; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.985 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.928 mW/g; SAR(10 g) = 0.662 mW/g
Maximum value of SAR (measured) = 0.981 mW/g

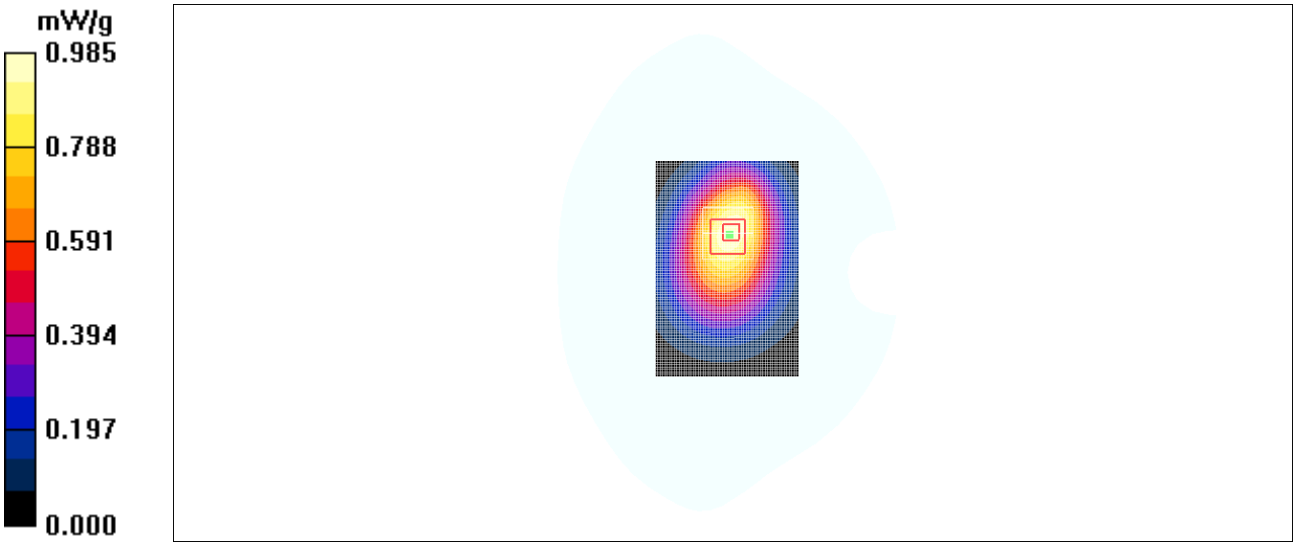


Fig. 25 850 MHz CH251

850 Body Towards Ground Middle with GPRS

Date/Time: 2010-10-12 17:59:48
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.94 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.999 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.947 mW/g; SAR(10 g) = 0.672 mW/g
Maximum value of SAR (measured) = 1.00 mW/g

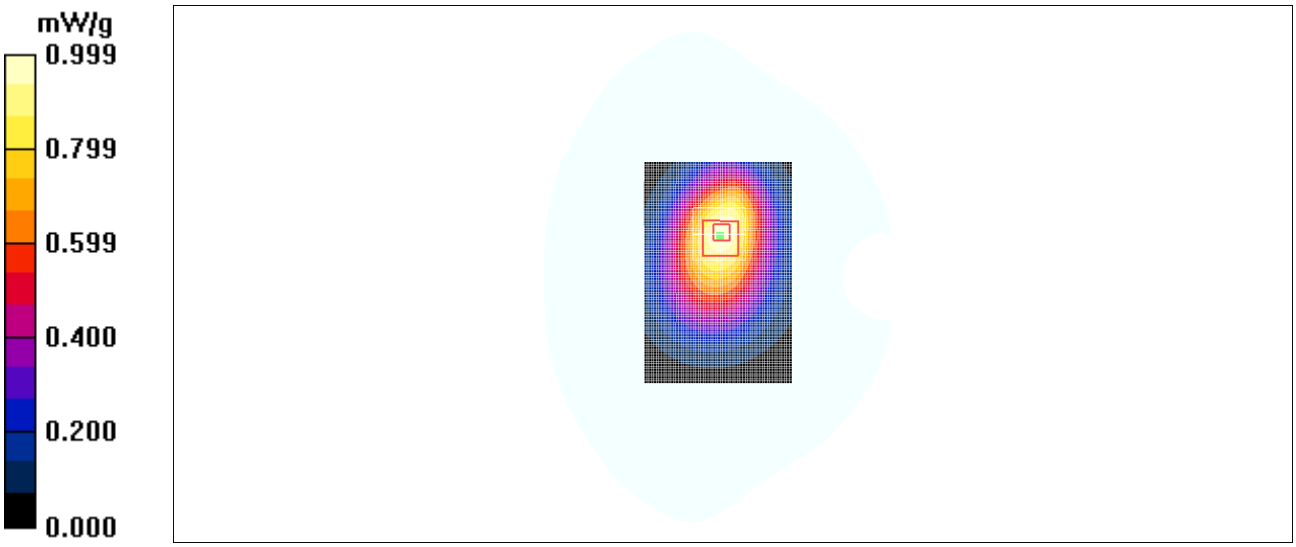


Fig. 26 850 MHz CH190

850 Body Towards Ground Low with GPRS

Date/Time: 2010-10-12 18:15:22
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.923 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.02 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.1 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.693 mW/g
Maximum value of SAR (measured) = 1.04 mW/g

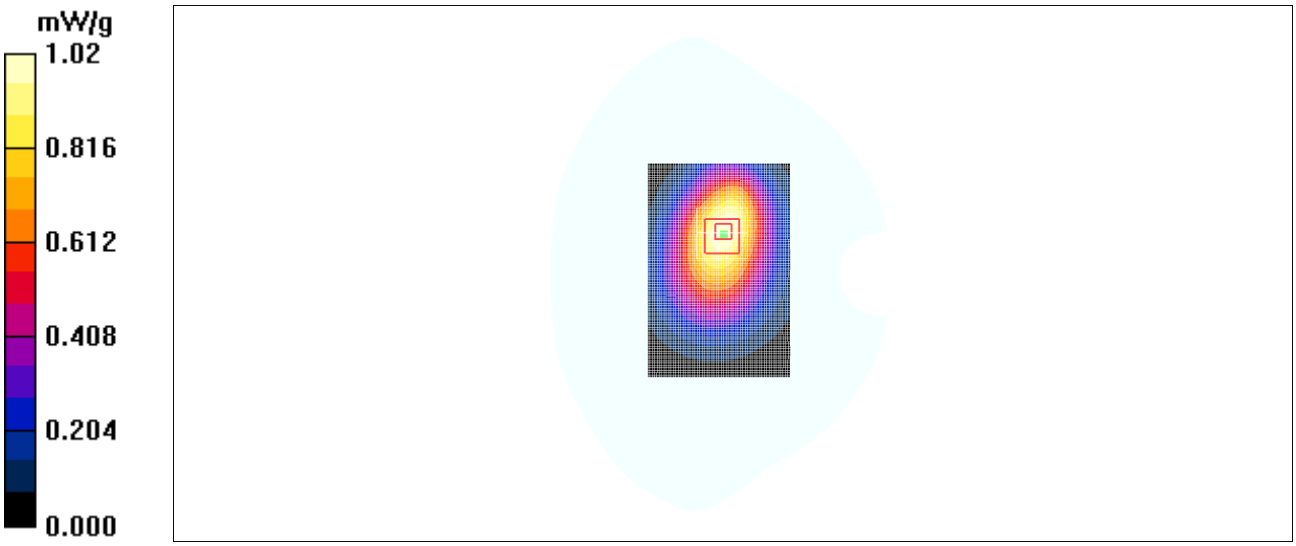


Fig. 27 850 MHz CH128

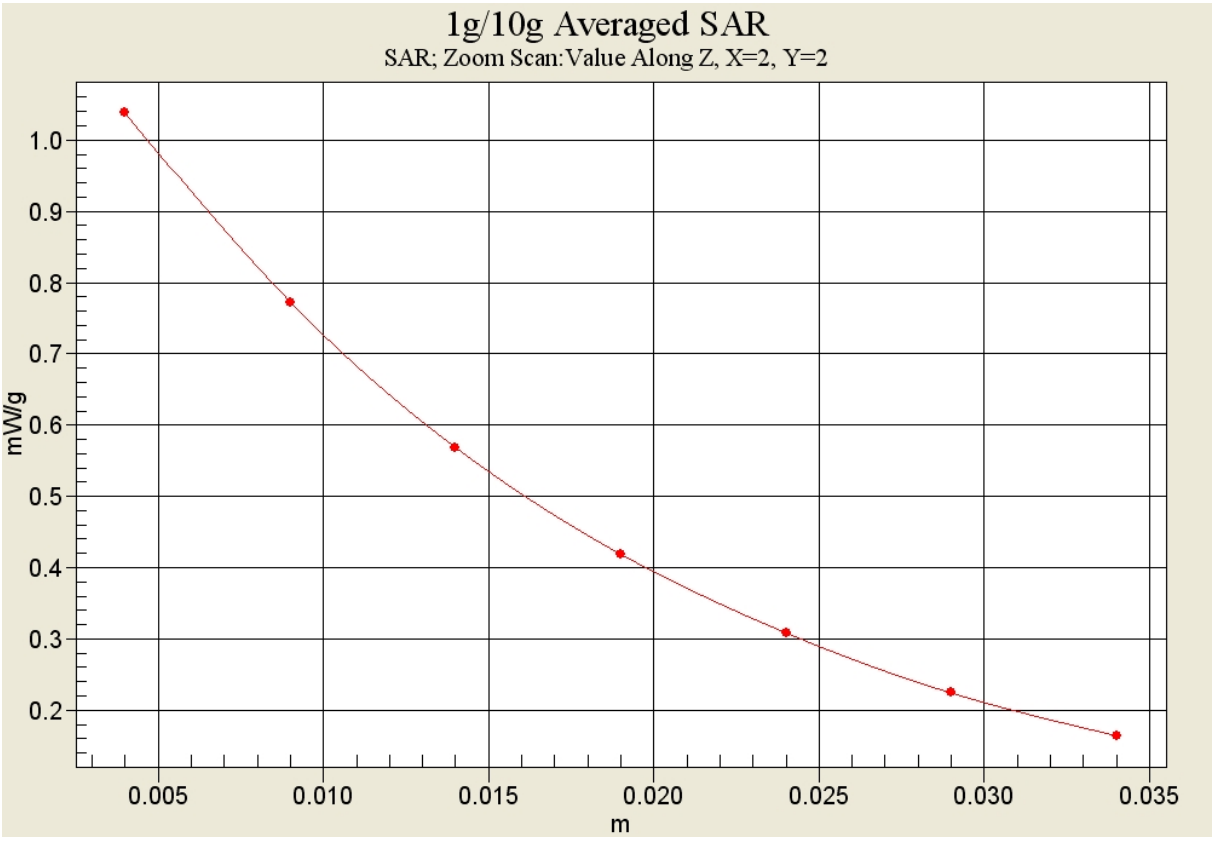


Fig. 27-1 Z-Scan at power reference point (850 MHz CH128)

850 Body Towards Phantom High with GPRS

Date/Time: 2010-10-12 18:30:59
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.2; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.560 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.8 V/m; Power Drift = -0.156 dB
Peak SAR (extrapolated) = 0.687 W/kg
SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.378 mW/g
Maximum value of SAR (measured) = 0.548 mW/g

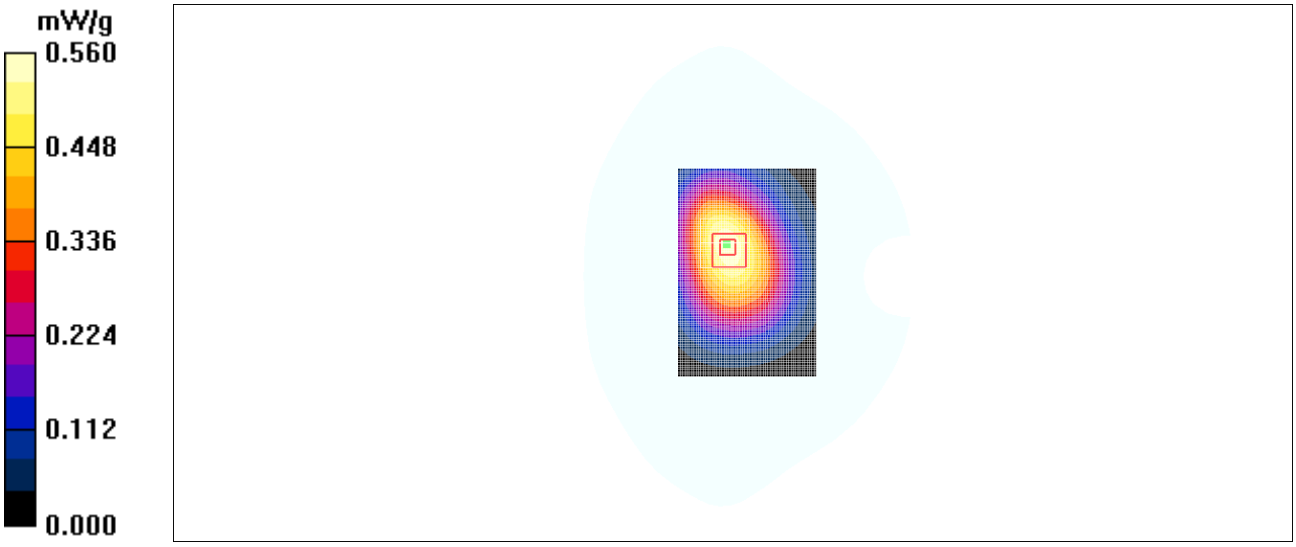


Fig. 28 850 MHz CH251

850 Body Towards Phantom Middle with GPRS

Date/Time: 2010-10-12 18:46:20
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.94 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.575 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.9 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.392 mW/g
Maximum value of SAR (measured) = 0.568 mW/g

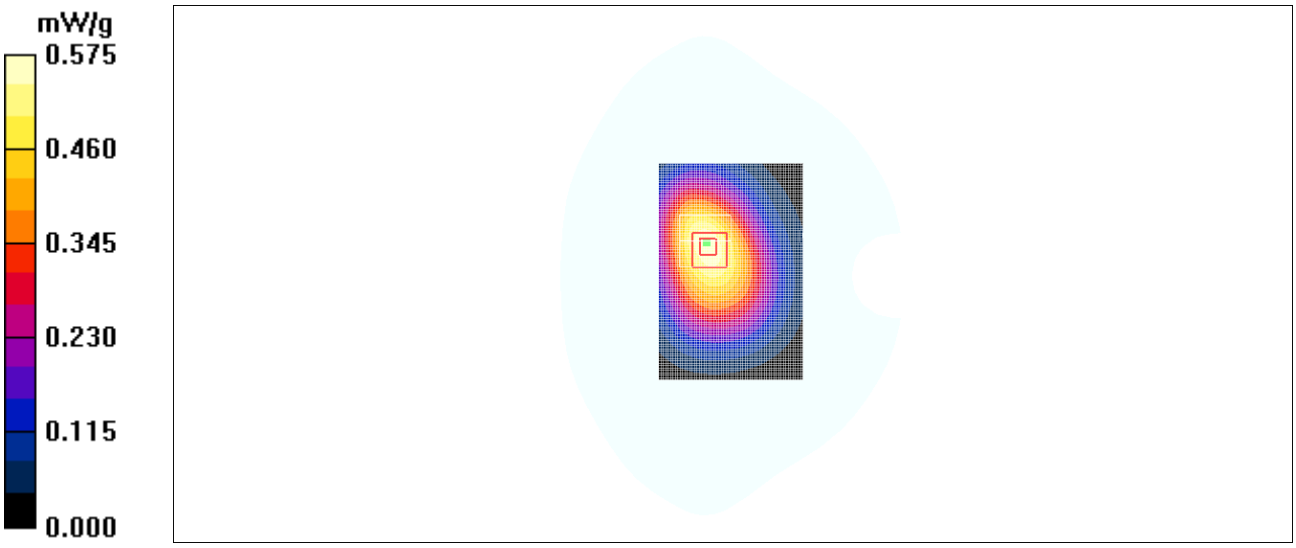


Fig. 29 850 MHz CH190

850 Body Towards Phantom Low with GPRS

Date/Time: 2010-10-12 19:01:45
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.923 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.590 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.1 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.714 W/kg
SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.398 mW/g
Maximum value of SAR (measured) = 0.577 mW/g

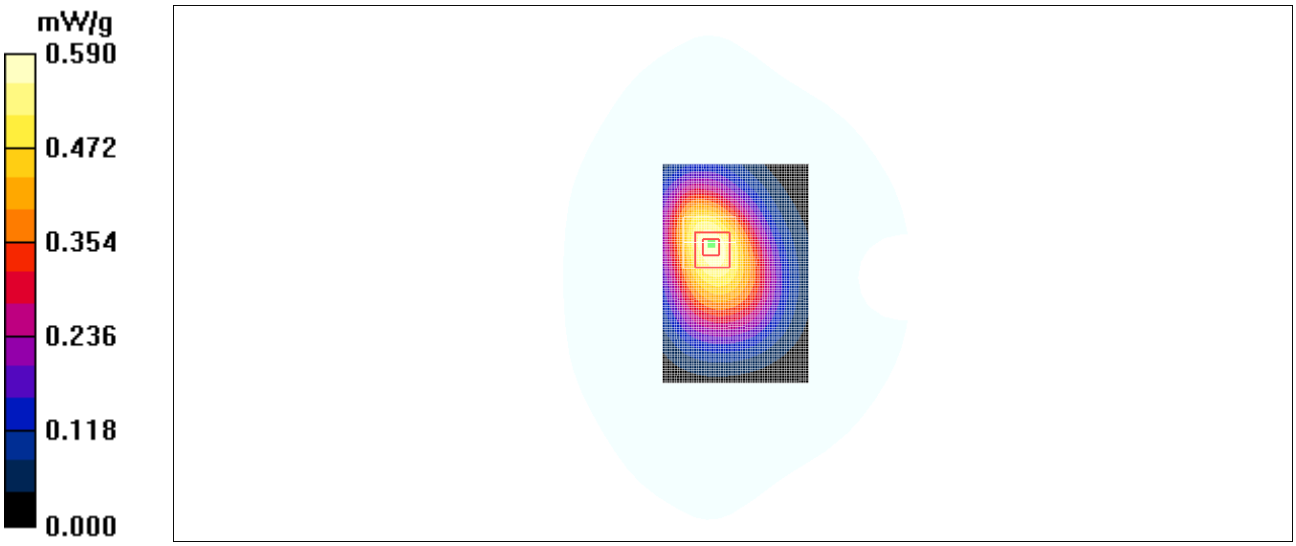


Fig. 30 850 MHz CH128

850 Body Towards Ground Low with EGPRS

Date/Time: 2010-10-12 19:18:25
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.923 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.01 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.689 mW/g
Maximum value of SAR (measured) = 1.03 mW/g

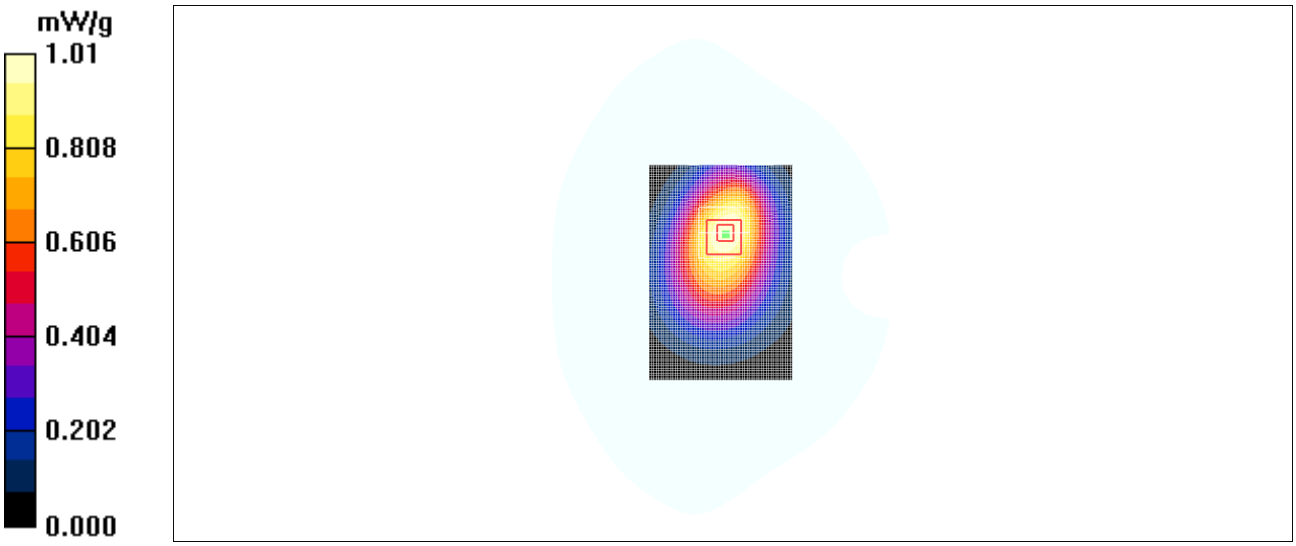


Fig. 31 850 MHz CH128

850 Body Towards Ground Low with Headset__CCB3160A10C0

Date/Time: 2010-10-12 19:35:40
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.923 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.782 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.2 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.993 W/kg
SAR(1 g) = 0.752 mW/g; SAR(10 g) = 0.540 mW/g
Maximum value of SAR (measured) = 0.796 mW/g

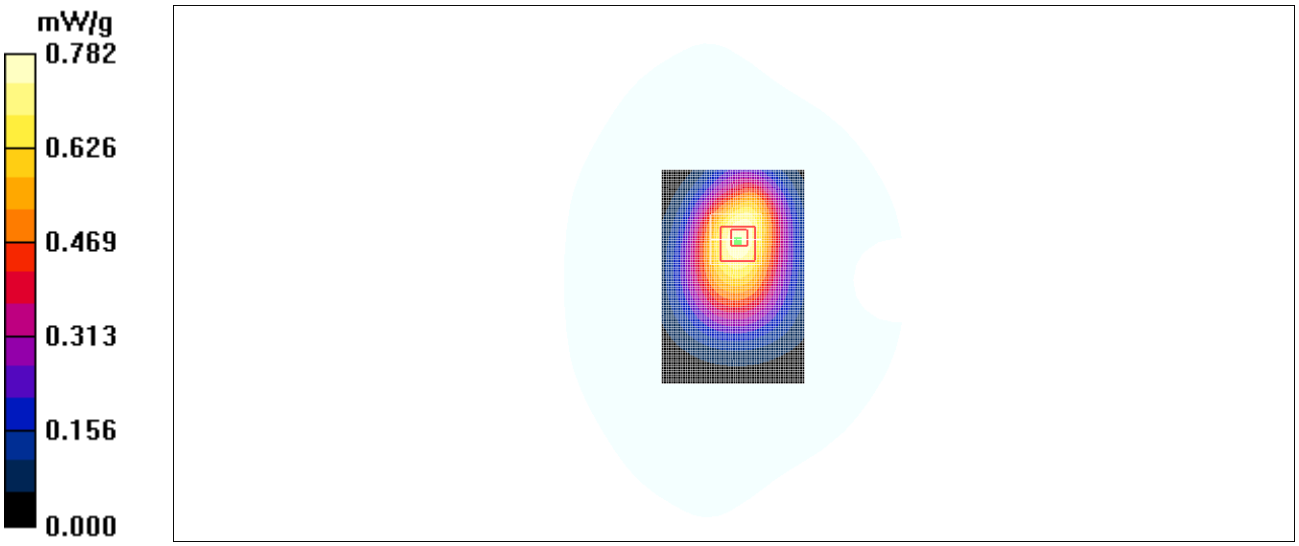


Fig. 32 850 MHz CH128

850 Body Towards Ground Low with Headset__CCB3160A10C2

Date/Time: 2010-10-12 19:51:33
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.923 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.765 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.2 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.959 W/kg
SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.508 mW/g
Maximum value of SAR (measured) = 0.774 mW/g

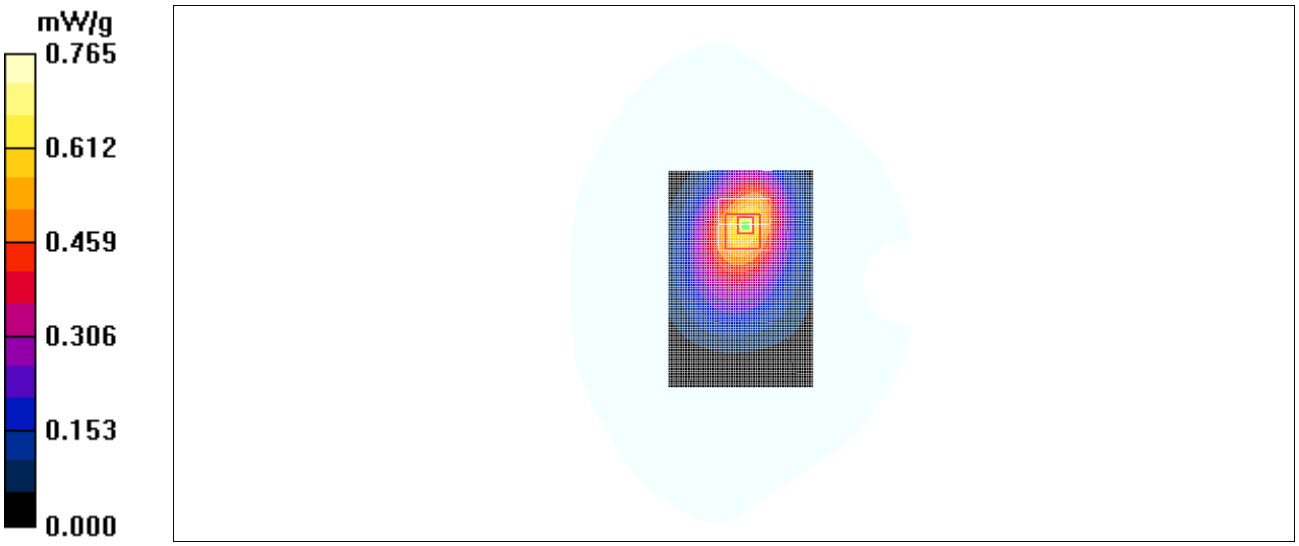


Fig. 33 850 MHz CH128

1900 Body Towards Ground High with GPRS

Date/Time: 2010-10-13 17:40:06
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.688 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.17 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.964 W/kg
SAR(1 g) = 0.602 mW/g; SAR(10 g) = 0.367 mW/g
Maximum value of SAR (measured) = 0.649 mW/g

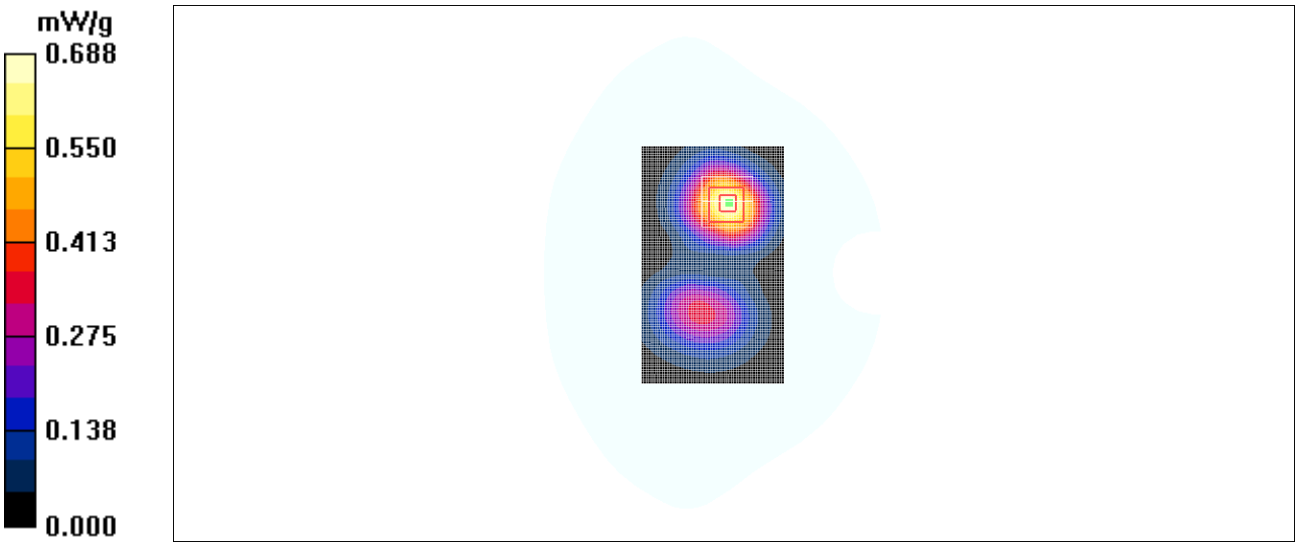


Fig. 34 1900 MHz CH810

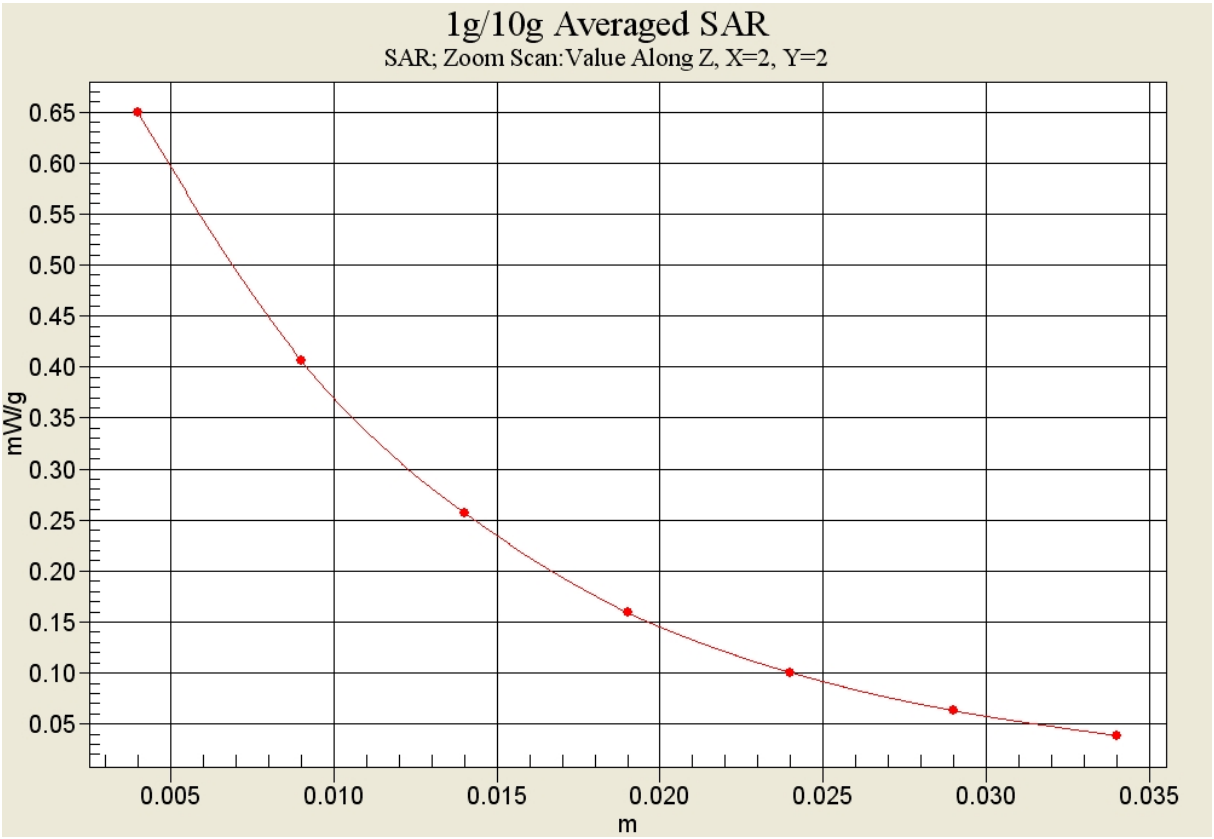


Fig. 34-1 Z-Scan at power reference point (1900 MHz CH810)

1900 Body Towards Ground Middle with GPRS

Date/Time: 2010-10-13 17:55:31
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.51 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.589 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.39 V/m; Power Drift = 0.043 dB
Peak SAR (extrapolated) = 0.826 W/kg
SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.314 mW/g
Maximum value of SAR (measured) = 0.553 mW/g

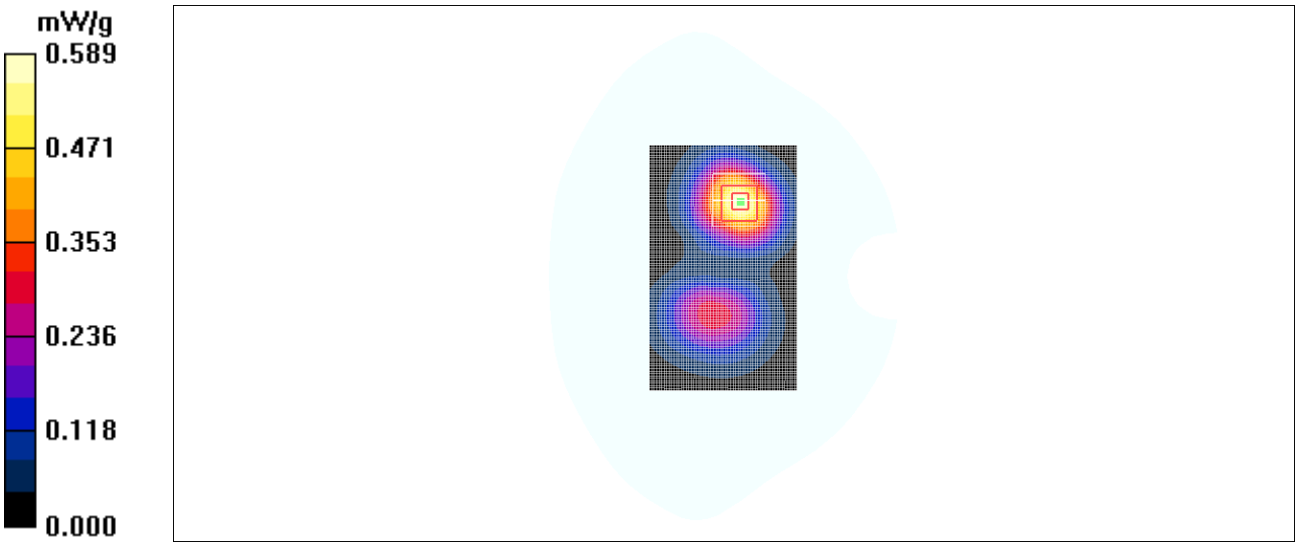


Fig. 35 1900 MHz CH661

1900 Body Towards Ground Low with GPRS

Date/Time: 2010-10-13 18:10:57
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.49 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.518 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.78 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 0.733 W/kg
SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.279 mW/g
Maximum value of SAR (measured) = 0.490 mW/g

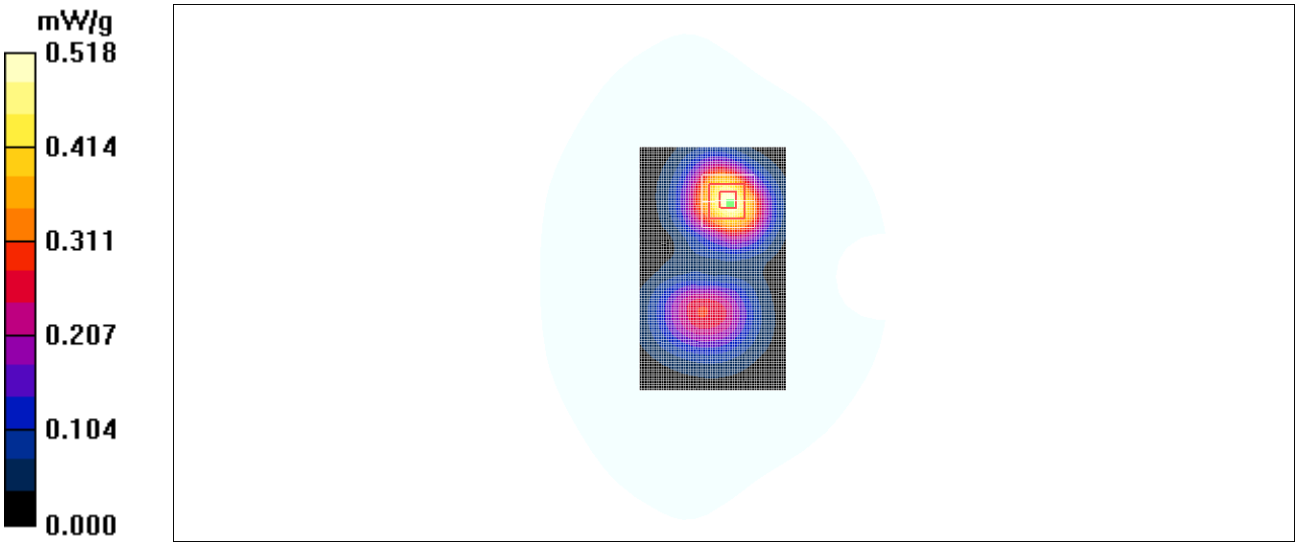


Fig. 36 1900 MHz CH512

1900 Body Towards Phantom High with GPRS

Date/Time: 2010-10-13 18:26:29
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.498 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.39 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.717 W/kg
SAR(1 g) = 0.458 mW/g; SAR(10 g) = 0.284 mW/g
Maximum value of SAR (measured) = 0.493 mW/g

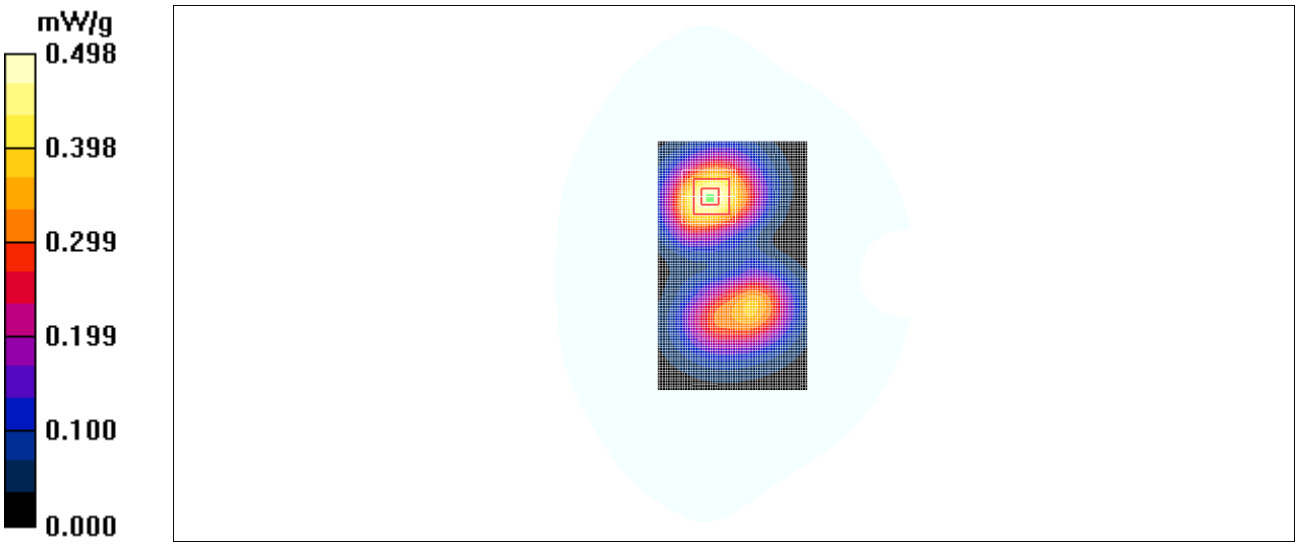


Fig. 37 1900 MHz CH810

1900 Body Towards Phantom Middle with GPRS

Date/Time: 2010-10-13 18:41:50
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.51 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.439 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.98 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.246 mW/g
Maximum value of SAR (measured) = 0.430 mW/g

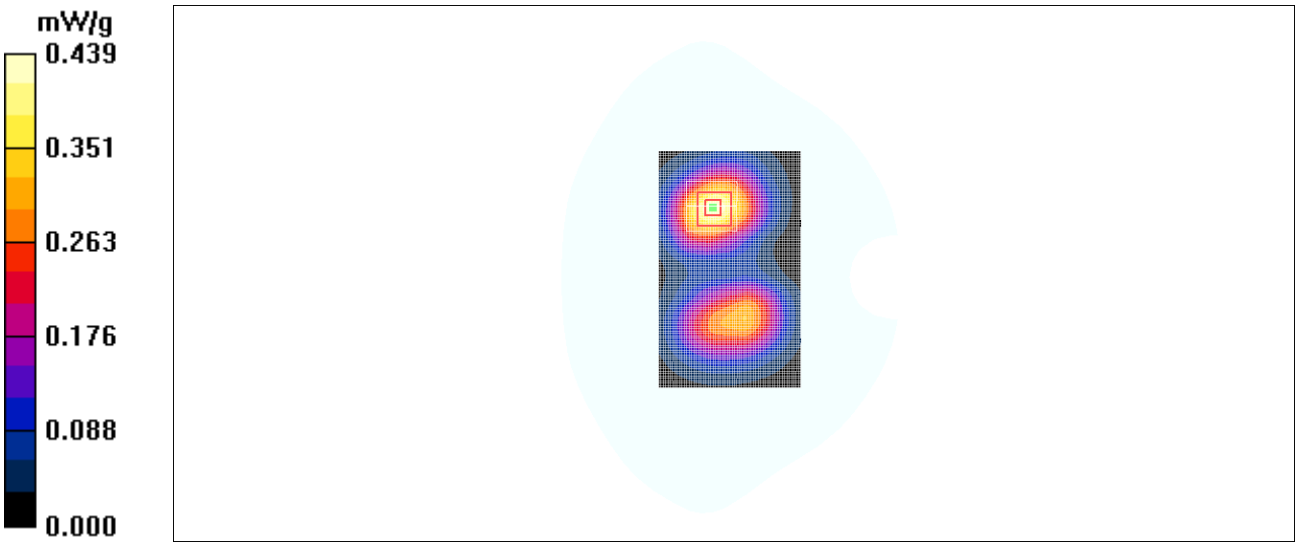


Fig. 38 1900 MHz CH661

1900 Body Towards Phantom Low with GPRS
Date/Time: 2010-10-13 18:57:23
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.49 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.386 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.91 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.530 W/kg
SAR(1 g) = 0.343 mW/g; SAR(10 g) = 0.214 mW/g
Maximum value of SAR (measured) = 0.370 mW/g

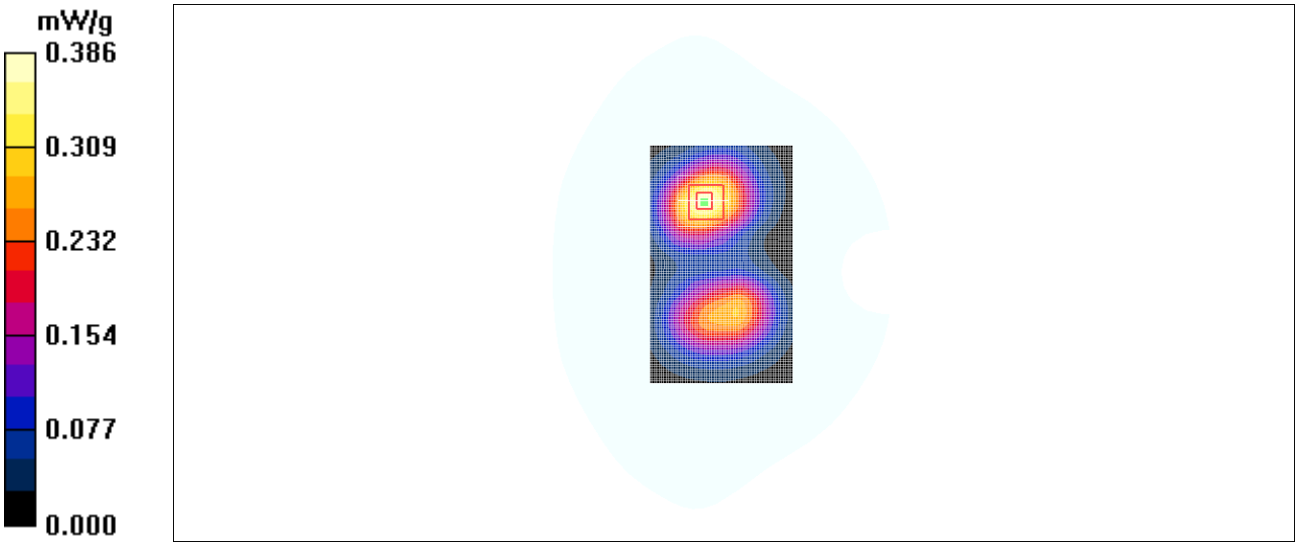


Fig. 39 1900 MHz CH512

1900 Body Towards Ground High with EGPRS

Date/Time: 2010-10-13 19:14:19
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:2.67
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.691 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.18 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.969 W/kg
SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.365 mW/g
Maximum value of SAR (measured) = 0.648 mW/g

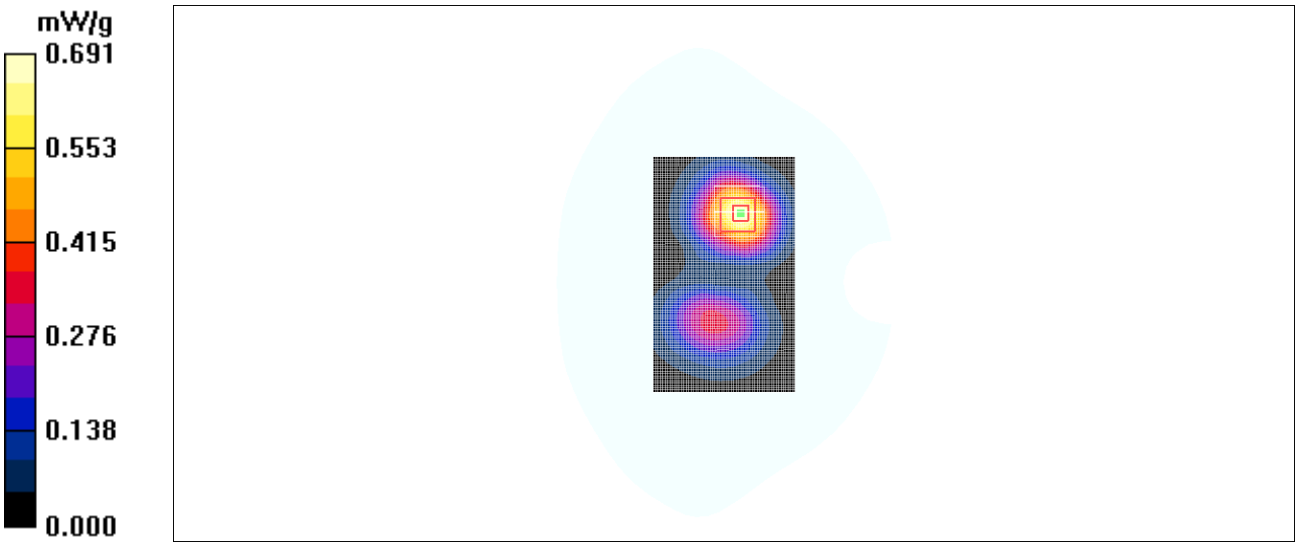


Fig. 40 1900 MHz CH810

1900 Body Towards Ground High with Headset__CCB3160A10C0

Date/Time: 2010-10-13 19:31:38
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.421 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.16 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 0.610 W/kg
SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.227 mW/g
Maximum value of SAR (measured) = 0.404 mW/g

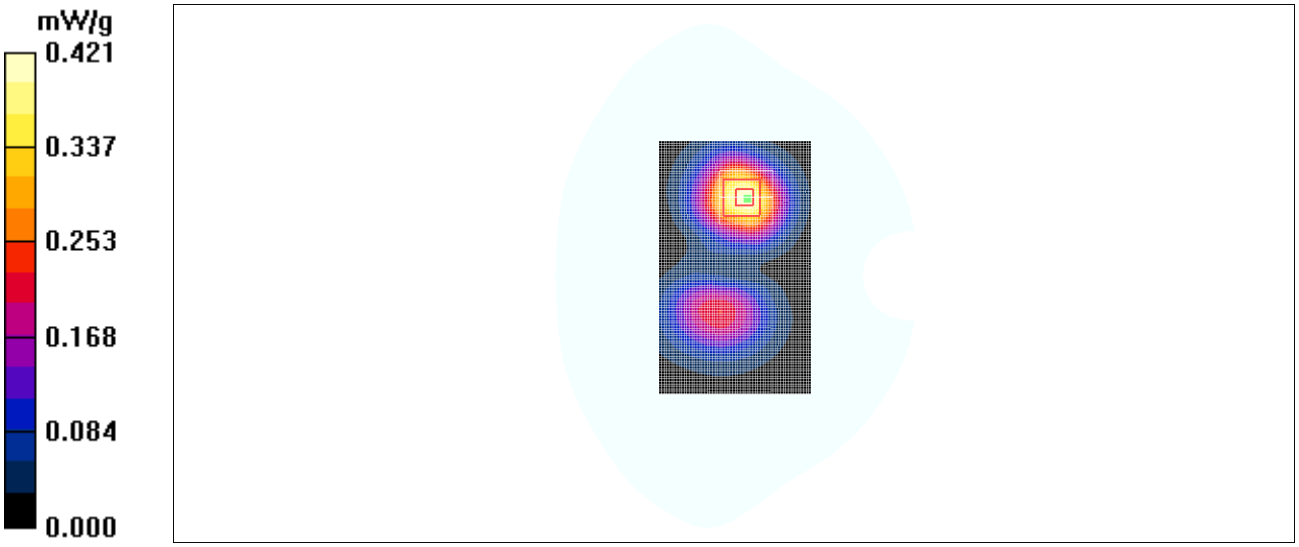


Fig. 41 1900 MHz CH810

1900 Body Towards Ground High with Headset__CCB3160A10C2

Date/Time: 2010-10-13 19:48:08
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.417 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.60 V/m; Power Drift = 0.095 dB
Peak SAR (extrapolated) = 0.597 W/kg
SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.225 mW/g
Maximum value of SAR (measured) = 0.399 mW/g

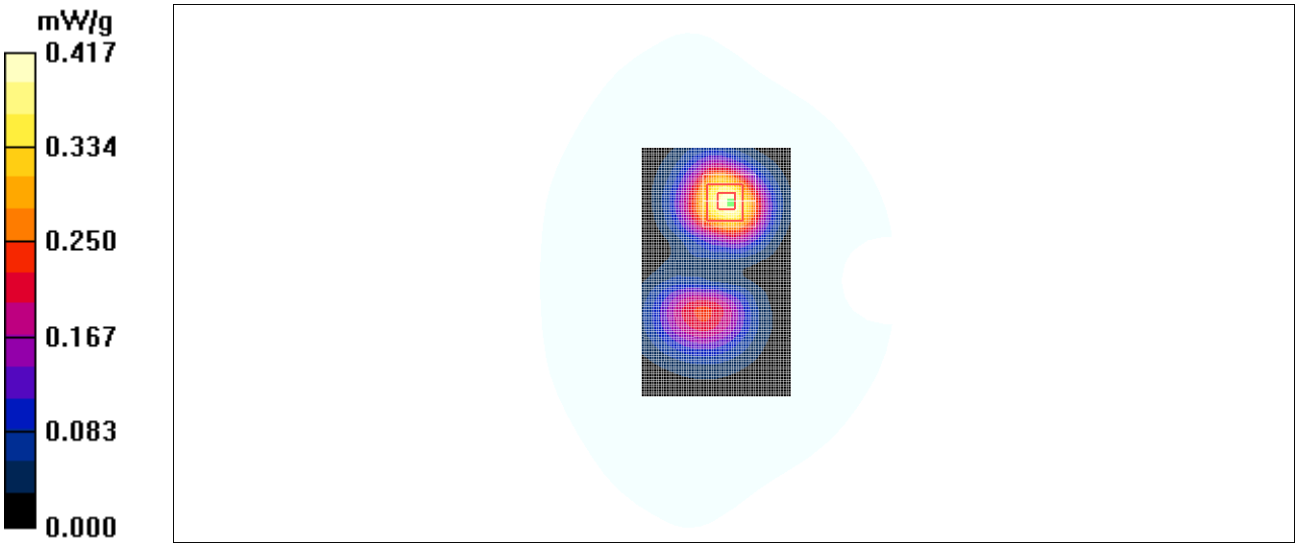


Fig. 42 1900 MHz CH810

WiFi 802.11b 1Mbps Left Cheek Channel 1
Date/Time: 2010-10-18 8:10:21
Electronics: DAE4 Sn771
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.077 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.89 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.077 W/kg
SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.020 mW/g
Maximum value of SAR (measured) = 0.049 mW/g

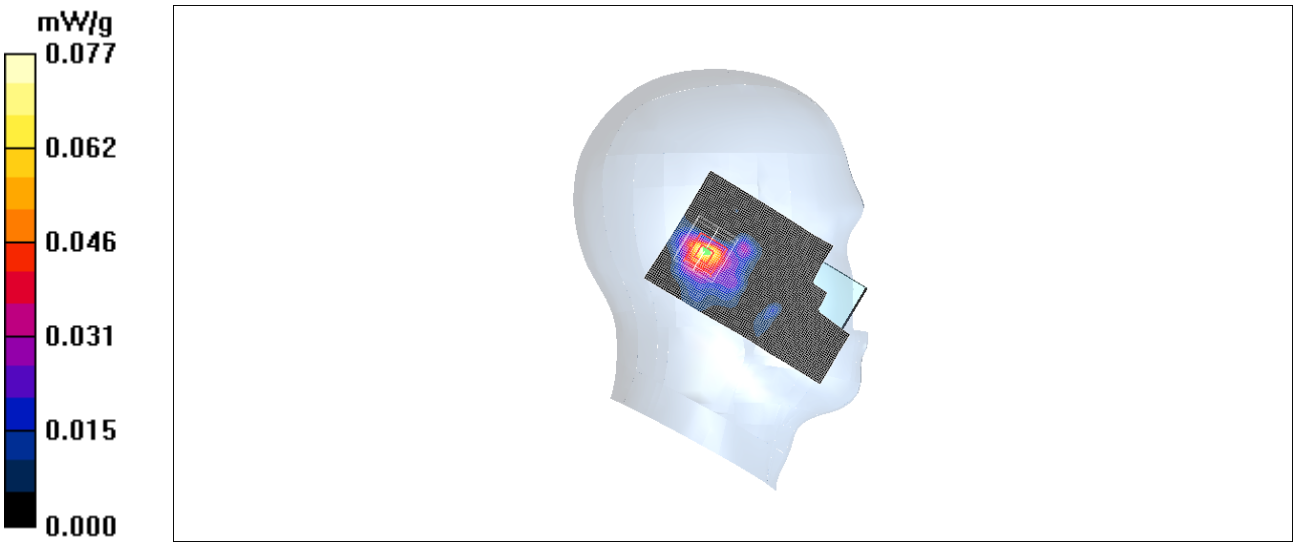


Fig.43 802.11b 1Mbps CH1

WiFi 802.11b 1Mbps Left Tilt Channel 1
Date/Time: 2010-10-18 8:24:50
Electronics: DAE4 Sn771
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.069 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.61 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.016 mW/g
Maximum value of SAR (measured) = 0.039 mW/g

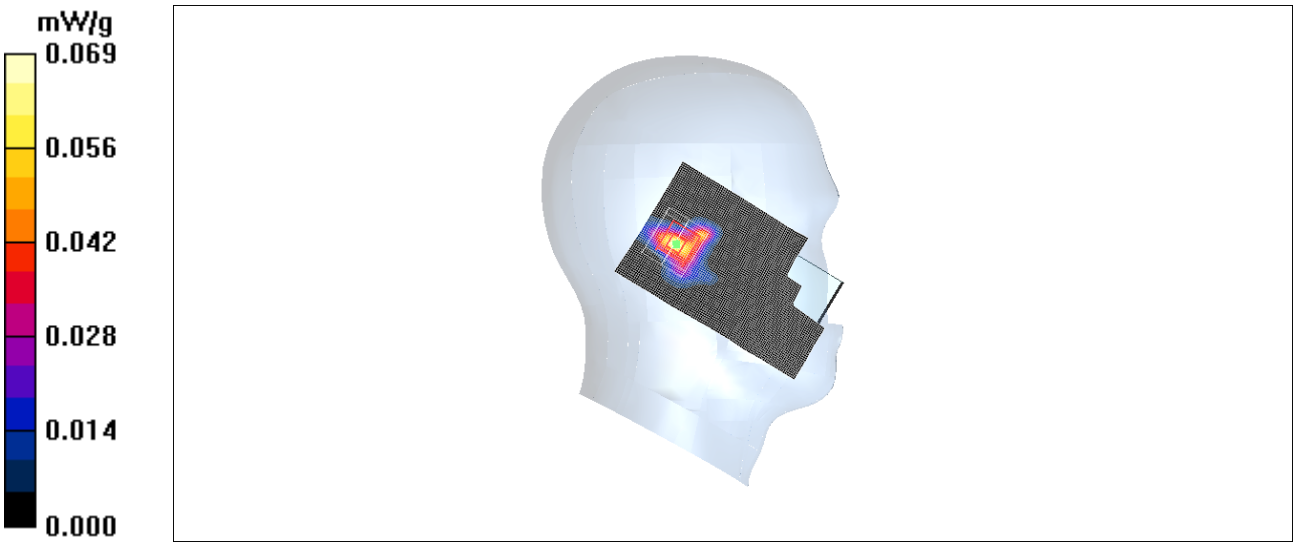


Fig.44 802.11b 1Mbps CH1

WiFi 802.11b 1Mbps Right Cheek Channel 1
Date/Time: 2010-10-18 8:39:18
Electronics: DAE4 Sn771
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.091 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.19 V/m; Power Drift = 0.117 dB
Peak SAR (extrapolated) = 0.190 W/kg
SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.031 mW/g
Maximum value of SAR (measured) = 0.078 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.19 V/m; Power Drift = 0.117 dB
Peak SAR (extrapolated) = 0.100 W/kg
SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.059 mW/g

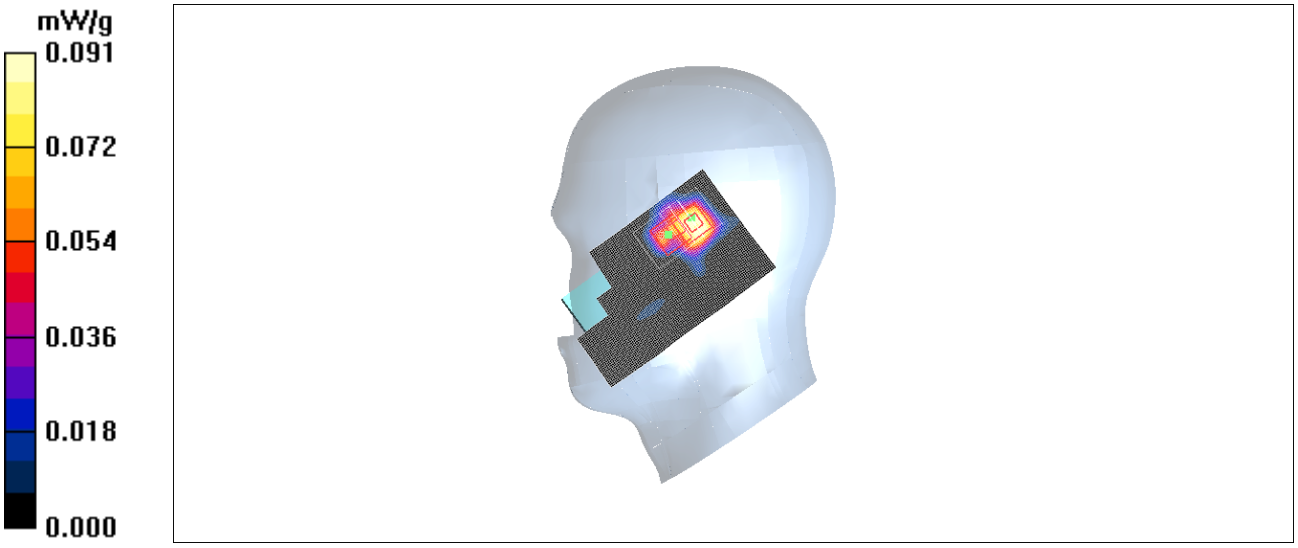


Fig.45 802.11b 1Mbps CH1

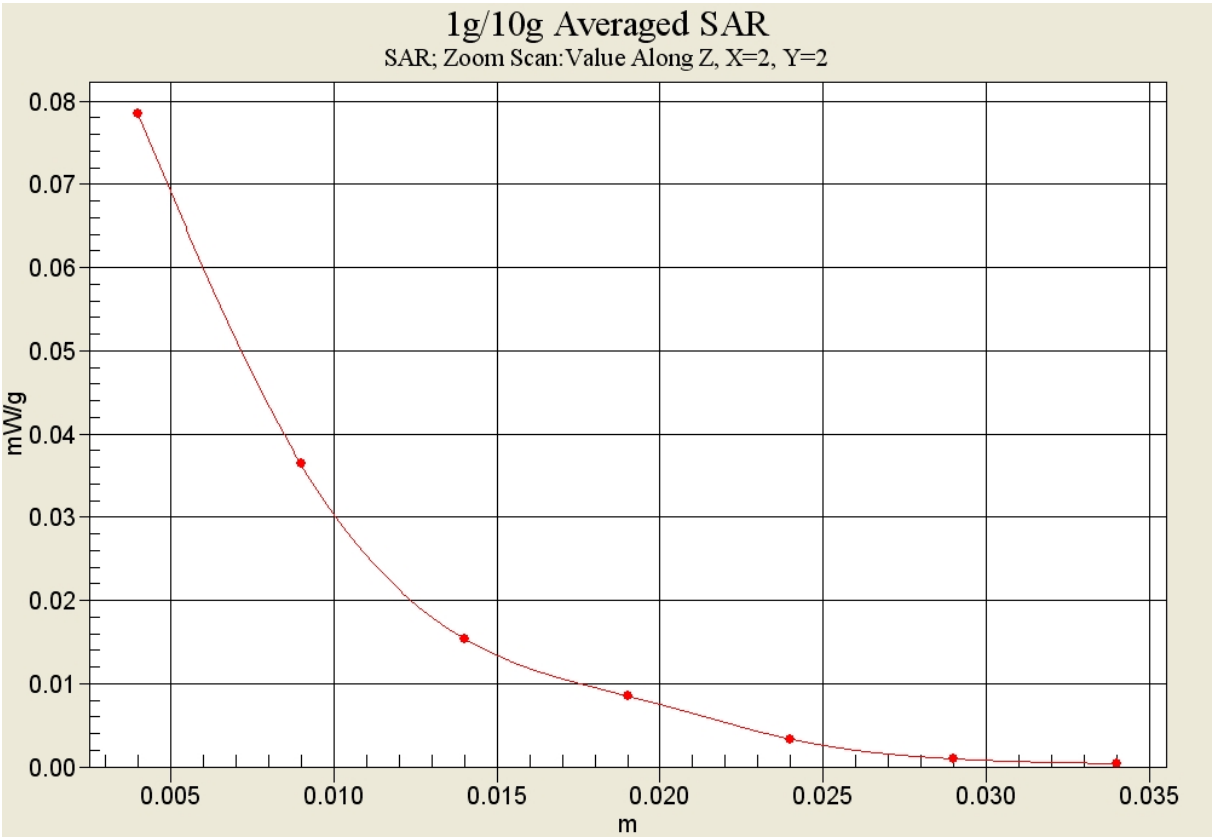


Fig. 45-1 Z-Scan at power reference point (2412 MHz CH1)

WiFi 802.11b 1Mbps Right Tilt Channel 1

Date/Time: 2010-10-18 8:53:34
Electronics: DAE4 Sn771
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 mho/m; εr = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.054 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.23 V/m; Power Drift = 0.187 dB
Peak SAR (extrapolated) = 0.132 W/kg
SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.023 mW/g
Maximum value of SAR (measured) = 0.061 mW/g

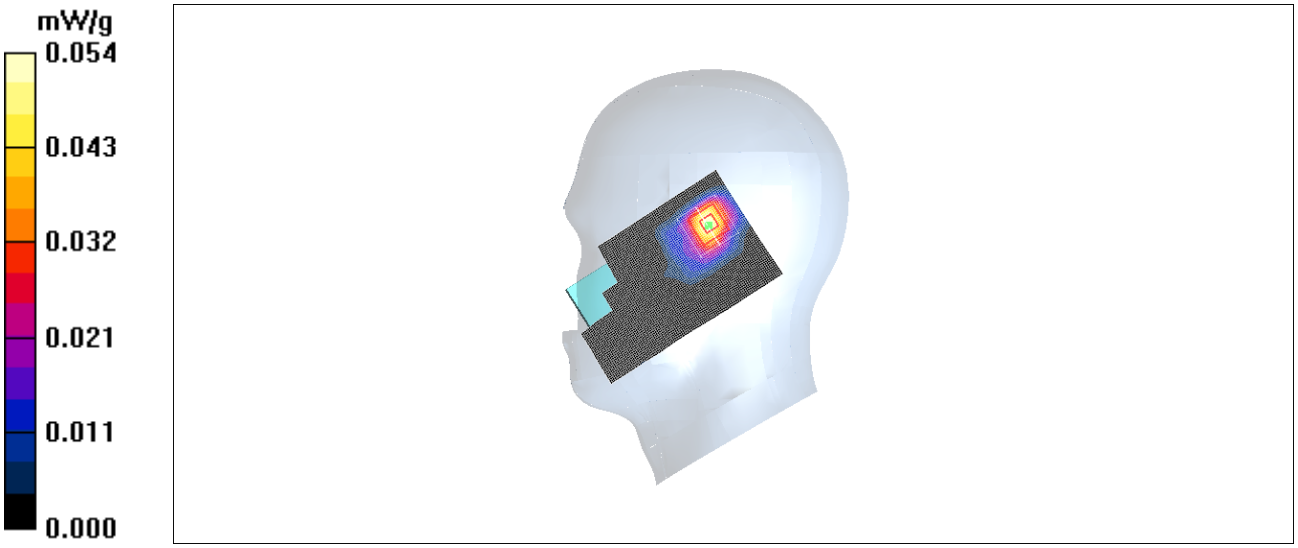


Fig.46 802.11b 1Mbps CH1

WiFi 802.11b 1Mbps Toward Ground Channel 1
Date/Time: 2010-10-18 9:53:11
Electronics: DAE4 Sn771
Medium: Body 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.92 mho/m; εr = 52.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(6.88, 6.88, 6.88)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.037 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.94 V/m; Power Drift = -0.126 dB
Peak SAR (extrapolated) = 0.076 W/kg
SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.035 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.94 V/m; Power Drift = -0.126 dB
Peak SAR (extrapolated) = 0.053 W/kg
SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.032 mW/g

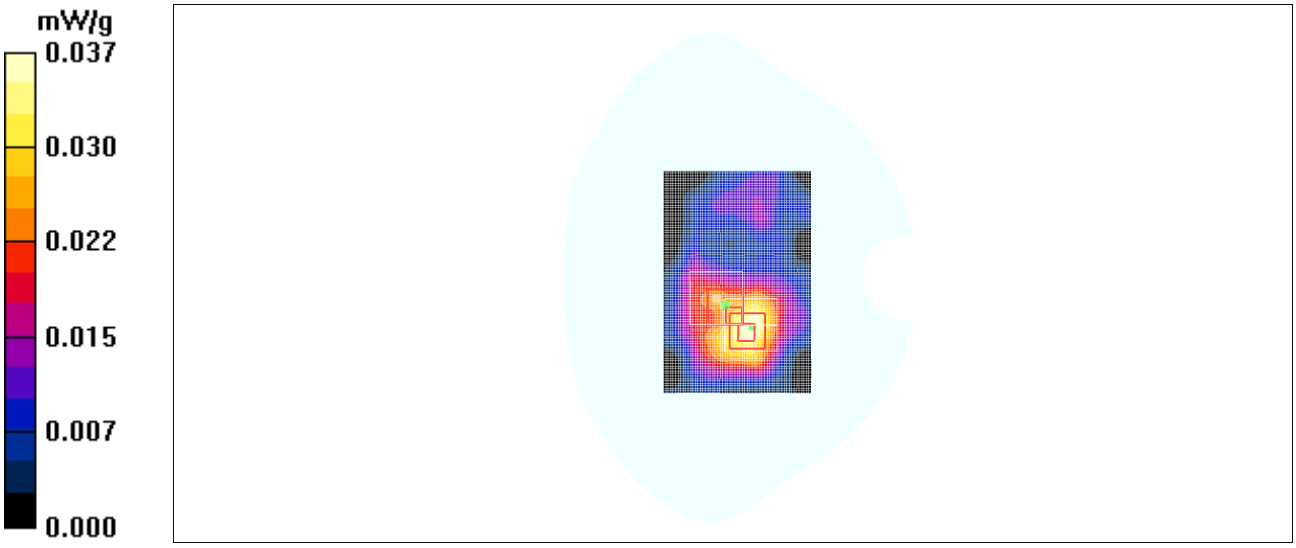


Fig.47 802.11b 1Mbps CH1

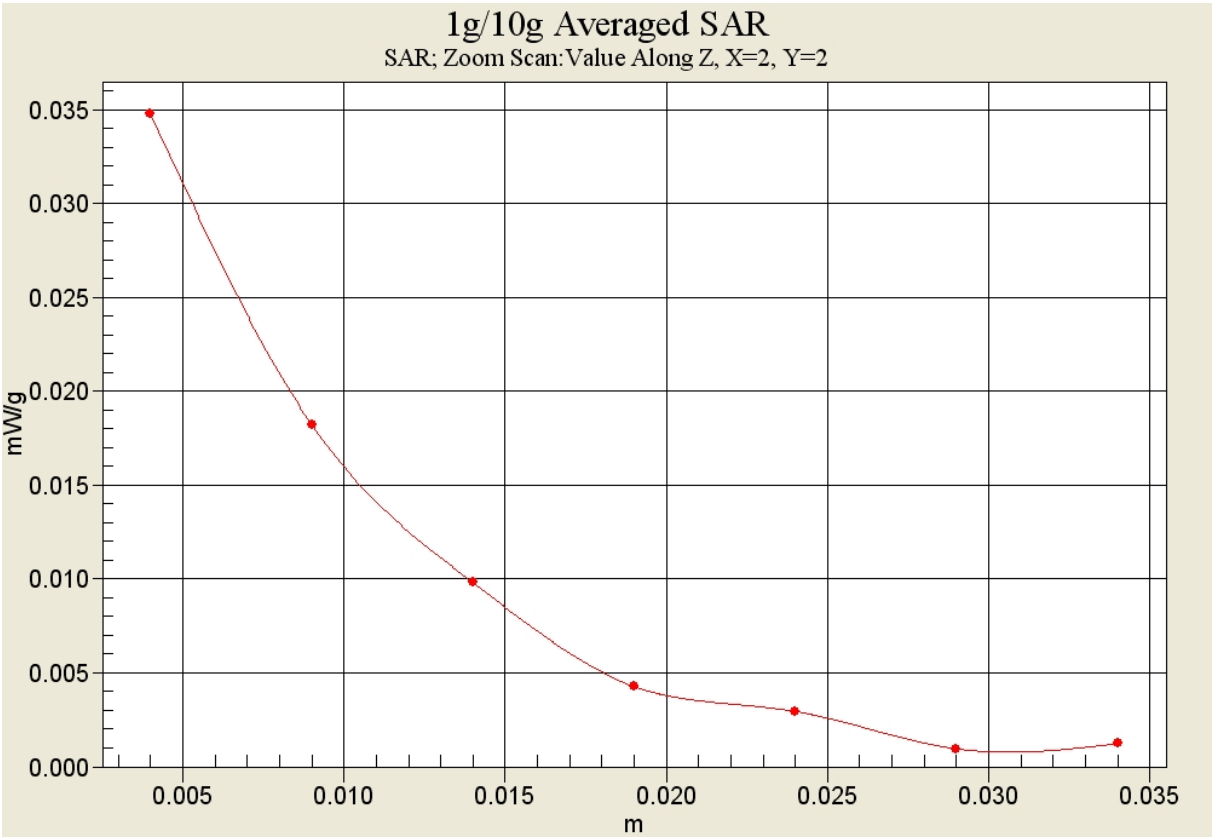


Fig. 47-1 Z-Scan at power reference point (2412 MHz CH1)

WiFi 802.11b 1Mbps Toward Phantom Channel 1
Date/Time: 2010-10-18 10:08:45
Electronics: DAE4 Sn771
Medium: Body 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.92 mho/m; εr = 52.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2462 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(6.88, 6.88, 6.88)

Toward Phantom Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.020 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.56 V/m; Power Drift = -0.171 dB
Peak SAR (extrapolated) = 0.033 W/kg
SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.0059 mW/g
Maximum value of SAR (measured) = 0.013 mW/g

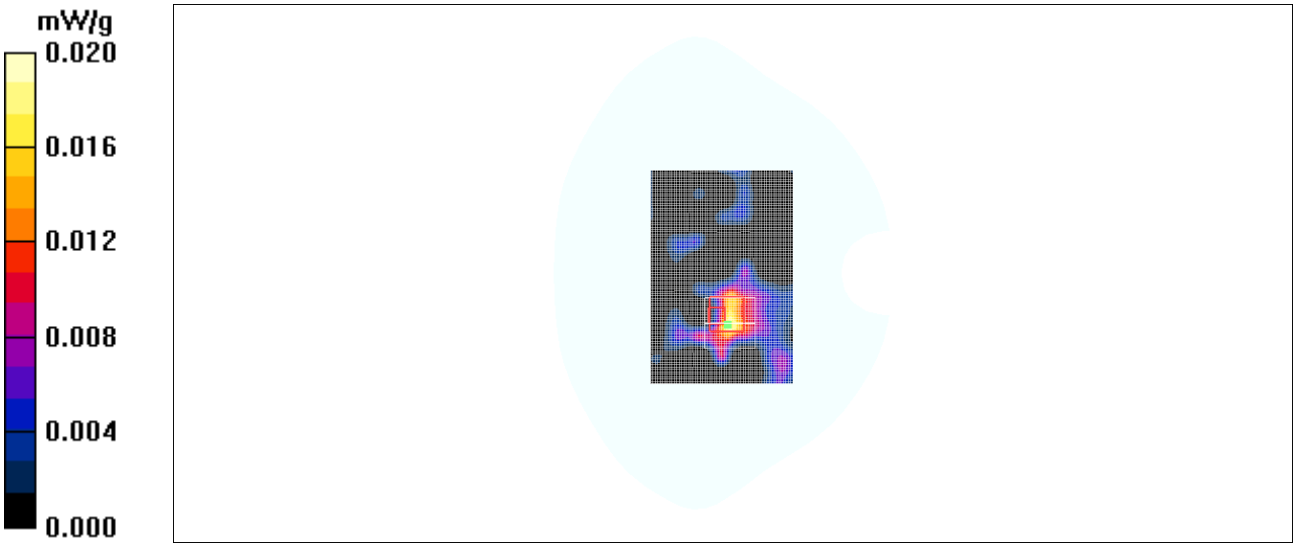


Fig.48 802.11b 1Mbps CH1

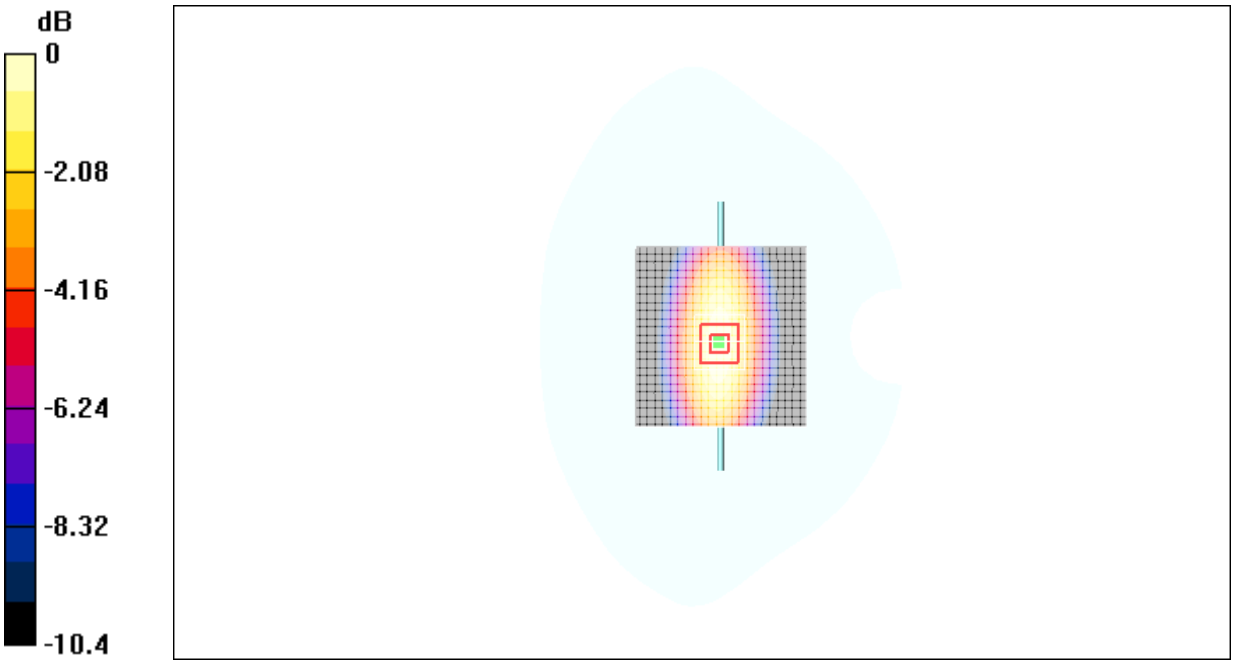
ANNEX D SYSTEM VALIDATION RESULTS

835MHz

Date/Time: 2010-10-12 7:25:14
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

System Validation /Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.57 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.5 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 3.42 W/kg
SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.51 mW/g
Maximum value of SAR (measured) = 2.50 mW/g



0 dB = 2.50mW/g

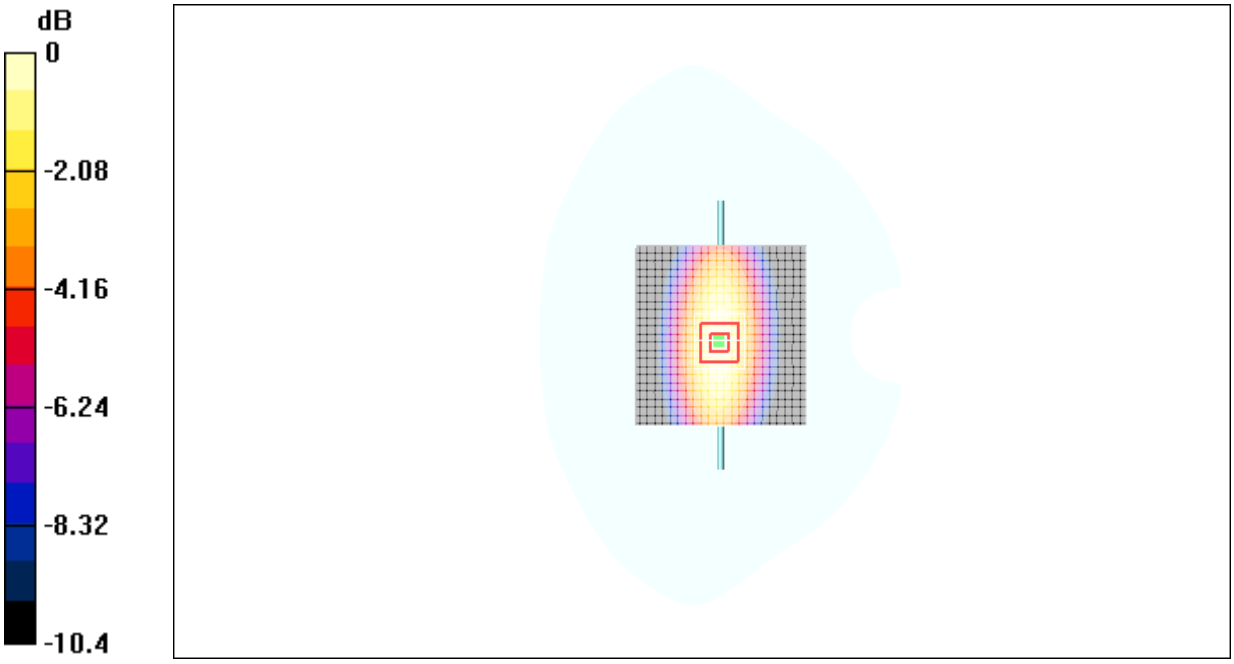
Fig.49 validation 835MHz 250mW

835MHz

Date/Time: 2010-10-12 14:12:36
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.95 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

System Validation /Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.58 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.9 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 3.41 W/kg
SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.53 mW/g
Maximum value of SAR (measured) = 2.47 mW/g



0 dB = 2.47mW/g

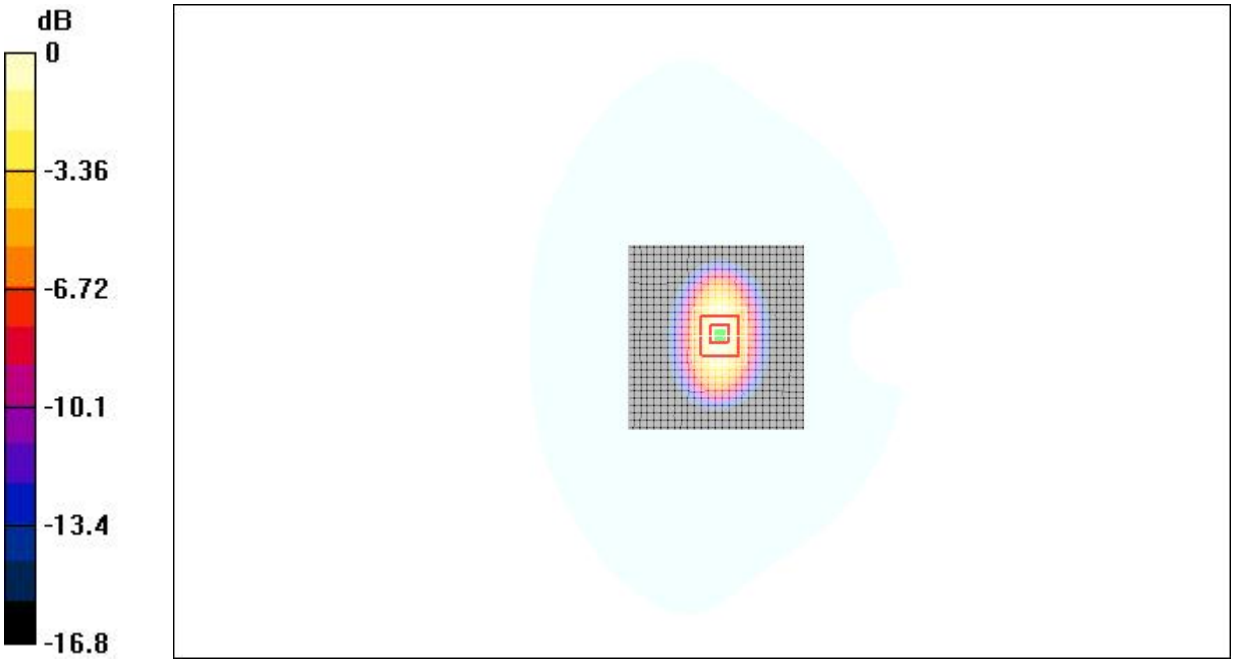
Fig.50 validation 835MHz 250mW

1900MHz

Date/Time: 2010-10-13 7:26:01
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.39 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 11.6 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.0 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 14.9 W/kg
SAR(1 g) = 9.87 mW/g; SAR(10 g) = 4.92 mW/g
Maximum value of SAR (measured) = 10.5 mW/g



0 dB = 10.5mW/g

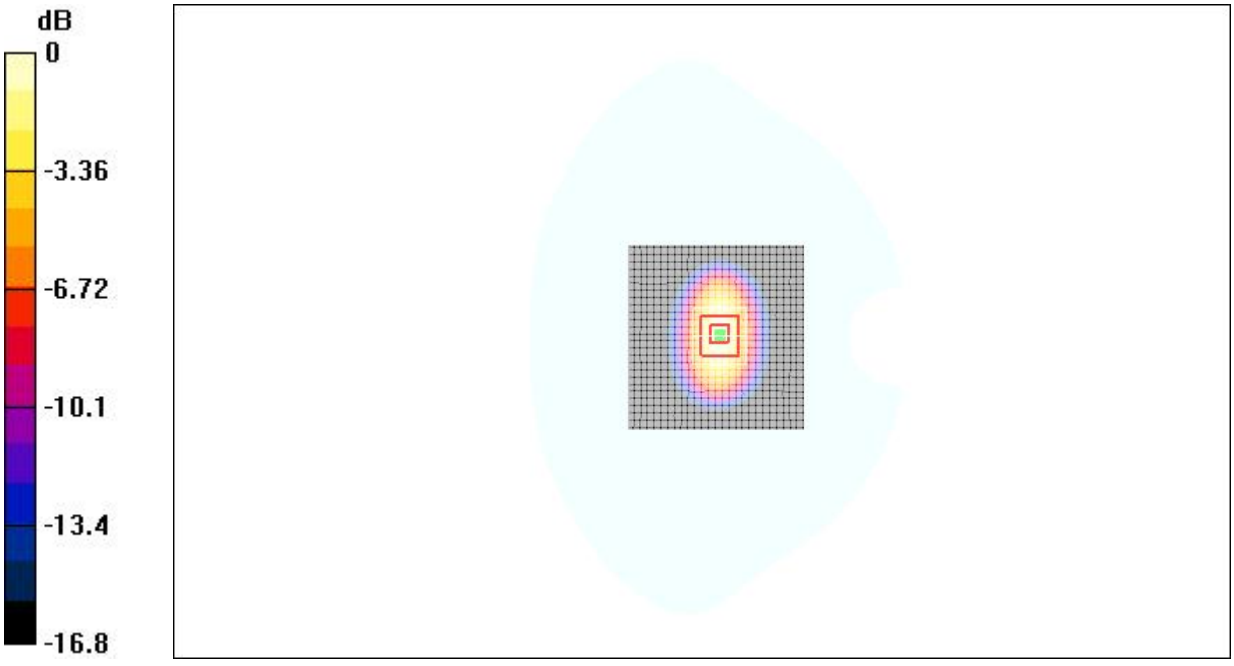
Fig.51 validation 1900MHz 250mW

1900MHz

Date/Time: 2010-10-13 14:29:17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 11.3 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.8 V/m; Power Drift = -0.053 dB
Peak SAR (extrapolated) = 16.2 W/kg
SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.29 mW/g
Maximum value of SAR (measured) = 10.8 mW/g



0 dB = 10.8mW/g

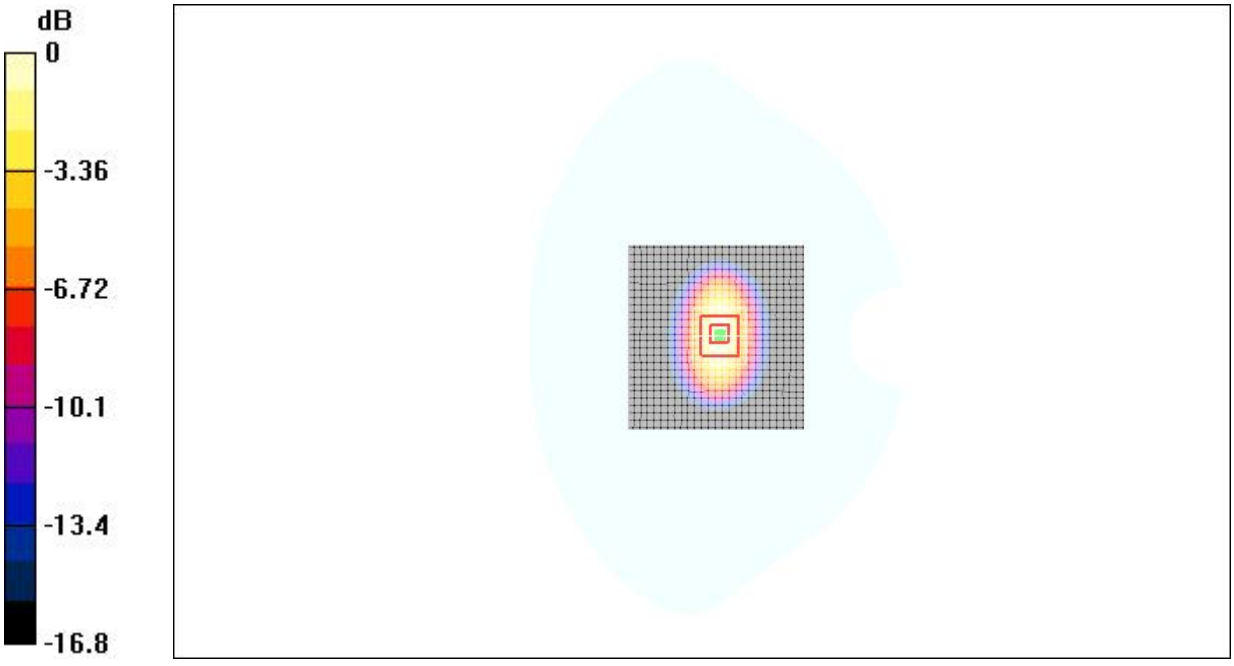
Fig.52 validation 1900MHz 250mW

2450MHz

Date/Time: 2010-10-18 7:28:49
Electronics: DAE4 Sn771
Medium: Head 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.81 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 14.6 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.1 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 12.8 mW/g; SAR(10 g) = 5.77 mW/g
Maximum value of SAR (measured) = 13.9 mW/g



0 dB = 13.9mW/g

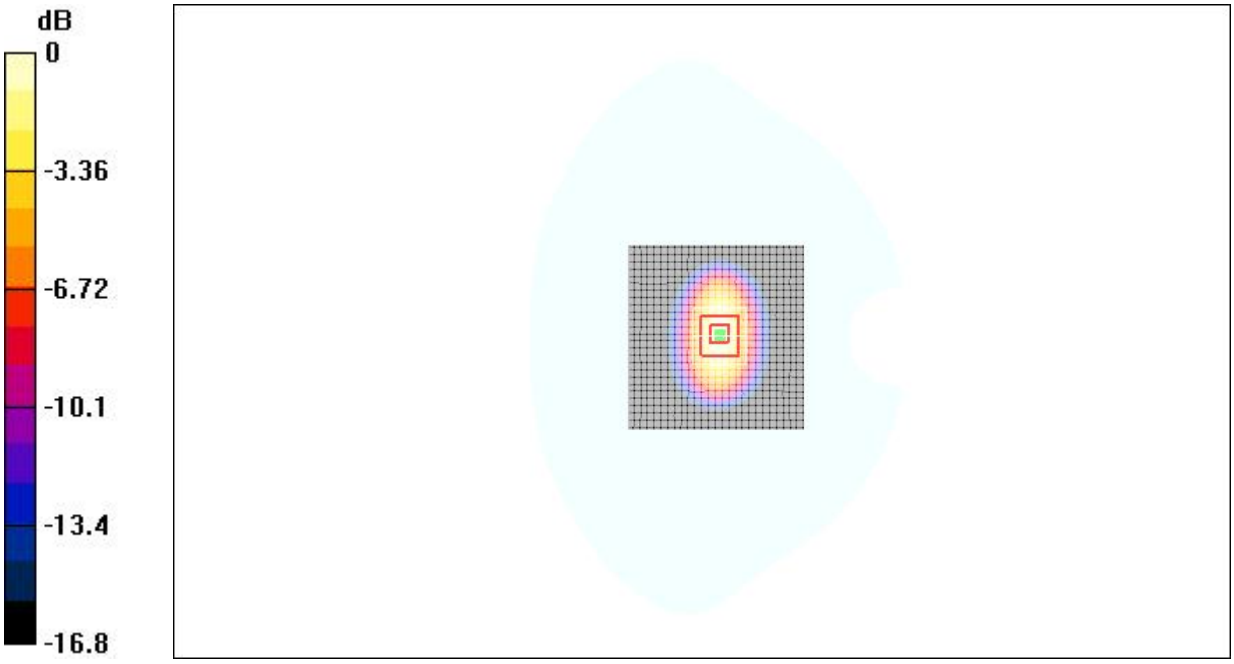
Fig.53 validation 2450MHz 250mW

2450MHz

Date/Time: 2010-10-18 9:22:05
Electronics: DAE4 Sn771
Medium: Body 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.96 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0oC Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(6.88, 6.88, 6.88)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.9 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 83.2 V/m; Power Drift = 0.082 dB
Peak SAR (extrapolated) = 24.3 W/kg
SAR(1 g) = 13.0 mW/g; SAR(10 g) = 5.91 mW/g
Maximum value of SAR (measured) = 14.4 mW/g



0 dB = 14.4mW/g

Fig.54 validation 2450MHz 250mW

ANNEX E PROBE CALIBRATION CERTIFICATE

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client TMC China Certificate No: ES3DV3-3149_Sep10

CALIBRATION CERTIFICATE

Object	ES3DV3-SN: 3149
Calibration procedure(s)	QA CAL-01.v6 Calibration procedure for dosimetric E-field probes
Calibration date:	September 25, 2010
Condition of the calibrated item	In Tolerance

This calibration certify documents the traceability to national standards, which realize the physical units of measurements(SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been conducted at an environment temperature (22±3)°C and humidity<70%

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID#	Cal Data (Calibrated by, Certification NO.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-May-10 (METAS, NO. 251-00388)	May-11
Power sensor E4412A	MY41495277	5-May-10 (METAS, NO. 251-00388)	May-11
Reference 3 dB Attenuator	SN:S5054 (3c)	10-Aug-10 (METAS, NO. 251-00403)	Aug-11
Reference 20 dB Attenuator	SN:S5086 (20b)	3-May-10 (METAS, NO. 251-00389)	May-11
Reference 30 dB Attenuator	SN:S5129 (30b)	10-Aug-10 (METAS, NO. 251-00404)	Aug-11
DAE4	SN:617	10-Jun-10 (SPEAG, NO.DAE4-907_Jun10)	Jun-11
Reference Probe ES3DV2	SN: 3013	12-Jan-10 (SPEAG, NO. ES3-3013_Jan10)	Jan-11

Secondary Standards	ID#	Check Data (in house)	Scheduled Calibration
RF generator HP8648C	US3642U01700	4-Aug-99(SPEAG, in house check Oct-09)	In house check: Oct-10
Network Analyzer HP 8753E	US37390585	18-Oct-01(SPEAG, in house check Nov-09)	In house check: Nov-10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: September 25, 2010

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

Certificate No: ES3DV3-3149_Sep10 Page 1 of 9

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.