SAR TEST REPORT

No. 2011SAR00028

For

ZTE CORPORATION

WCDMA/GSM（GPRS） Dual-Mode Digital Mobile Phone

ZTE WP750

With

Hardware Version: wy9A

Software Version: VIV_BR_WP750V0.0.1B03

FCCID: Q78-ZTEWP750

Issued Date: 2011-04-14

Deutscher Akkreditierungs Rat DAR

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
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1.2 Testing Environment

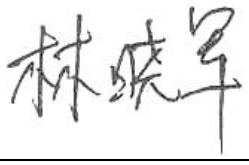
Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω

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

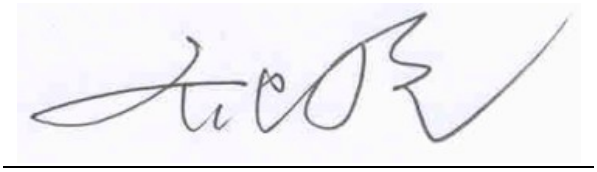
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	March 20, 2011
Testing End Date:	March 21, 2011

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:	ZTE CORPORATION
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Fax:	/

2.2 Manufacturer Information

Company Name:	ZTE CORPORATION
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City:	Nanjing
Postal Code:	/
Country:	P. R. China
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Fax:	/

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

3.1 About EUT

EUT Description:	WCDMA/GSM（GPRS） Dual-Mode Digital Mobile Phone
Model Name:	ZTE WP750
Frequency Band:	GSM850 / PCS1900 / WCDMA850
GPRS Multislot Class:	12
GPRS capability Class:	B and C
EGPRS Multislot Class:	12

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	357327040000131	wy9A	VIV_BR_WP750V0.0.1B03

*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	Li3710T42P3h553457	/	ZTE

*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 62209-1-2005: 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)

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

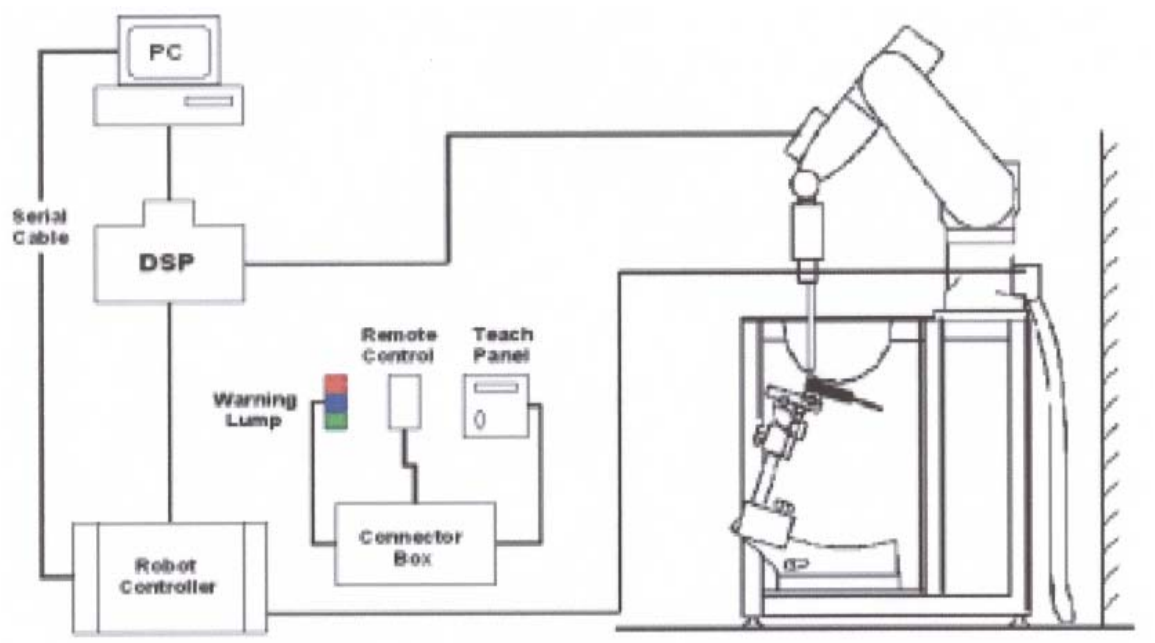
During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of GSM 850 MHz; 512, 661 and 810 respectively in the case of PCS 1900 MHz; 4132, 4182 and 4233 respectively in the case of WCDMA 850 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
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)

Picture 3: ES3DV3 E-field

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 800-2000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl 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)**
	32.16	32.20	32.22
GSM 1900MHZ	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1880MHz)**	**Channel 512(1850.2MHz)**
	28.95	28.72	28.54

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

GSM 850 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.18	32.22	32.22	-9.03dB	23.15	23.19	23.19
2 Txslots	31.60	31.64	31.65	-6.02dB	25.58	25.62	25.63
3Txslots	29.70	29.74	29.75	-4.26dB	25.44	25.48	25.49
4 Txslots	28.60	28.64	28.65	-3.01dB	**25.59**	**25.63**	**25.64**
GSM 850 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.15	32.19	32.20	-9.03dB	23.12	23.16	23.17
2 Txslots	31.57	31.62	31.63	-6.02dB	25.55	25.60	25.61
3Txslots	29.67	29.72	29.73	-4.26dB	25.41	25.46	25.47
4 Txslots	28.59	28.63	28.63	-3.01dB	**25.58**	**25.62**	**25.62**
PCS1900 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	28.98	28.75	28.58	-9.03dB	19.95	19.72	19.55
2 Txslots	28.44	28.19	28.00	-6.02dB	22.42	22.17	21.98
3Txslots	26.54	26.29	26.09	-4.26dB	22.28	22.03	21.83
4 Txslots	25.44	25.19	25.00	-3.01dB	**22.43**	**22.18**	**21.99**

PCS1900 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	28.95	28.72	28.54	-9.03dB	19.92	19.69	19.51
2 Txslots	28.42	28.17	27.99	-6.02dB	22.40	22.15	21.97
3Txslots	26.52	26.26	26.06	-4.26dB	22.26	22.00	21.80
4 Txslots	25.42	25.17	24.98	-3.01dB	**22.41**	**22.16**	**21.97**

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 4 Txslots for GPRS and EGPRS.

Table 5: The conducted Power for WCDMA850

Item	**band**	**FDDV result**		
	ARFCN	**4233 (846.6MHz)**	**4182 (836.4MHz)**	**4132 (826.4MHz)**
WCDMA	****	23.12	23.25	23.18
HSDPA	**1**	22.59	22.53	22.58
	2	22.55	22.50	22.63
	3	22.59	22.49	22.60
	4	21.58	21.48	21.56

Note: HSDPA body SAR are not required, because maximum average output power of each RF channel with HSDPA active is not 1/4 dB higher than that measured without HSDPA and the maximum SAR for WCDMA850 are not above 75% of the SAR limit (see table 15 for the SAR measurement results).

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 10 to Table 15 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 6: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **March 20, 2011** 1900 MHz **March 21, 2011**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	41.5	0.90
	1900 MHz	40.0	1.40
Measurement value (Average of 10 tests)	835 MHz	41.9	0.91
	1900 MHz	40.7	1.41

Table 7: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **March 20, 2011** 1900 MHz **March 21, 2011**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	55.2	0.97
	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	835 MHz	54.7	0.95
	1900 MHz	52.8	1.53

7.2 System Validation

Table 8: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **March 20, 2011** 1900 MHz **March 21, 2011**							
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	
	Actural Measurement value	835 MHz		41.9		0.91	
		1900 MHz		40.7		1.41	
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	6.00	9.36	-1.96%	-0.53%
	1900 MHz	20.1	39.4	19.8	38.2	-1.49%	-3.05%

Table 9: System Validation of Body

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **March 20, 2011** 1900 MHz **March 21, 2011**							
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	
	Actural Measurement value	835 MHz		54.7		0.95	
		1900 MHz		52.8		1.53	
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	6.08	9.44	-2.56%	-1.36%
	1900 MHz	20.9	41.4	20.6	41.2	-1.44%	-0.48%

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 10: SAR Values (GSM 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)	0.614	0.891	-0.147
Left hand, Touch cheek, Mid frequency (See Fig.2)	0.469	0.675	-0.061
Left hand, Touch cheek, Bottom frequency (See Fig.3)	0.339	0.487	-0.046
Left hand, Tilt 15 Degree, Top frequency (See Fig.4)	0.213	0.298	0.018
Left hand, Tilt 15 Degree, Mid frequency (See Fig.5)	0.174	0.242	-0.017
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.6)	0.141	0.195	-0.053
Right hand, Touch cheek, Top frequency (See Fig.7)	0.612	0.883	-0.012
Right hand, Touch cheek, Mid frequency (See Fig.8)	0.478	0.685	-0.00226
Right hand, Touch cheek, Bottom frequency (See Fig.9)	0.361	0.516	-0.046
Right hand, Tilt 15 Degree, Top frequency (See Fig.10)	0.250	0.349	0.010
Right hand, Tilt 15 Degree, Mid frequency (See Fig.11)	0.205	0.285	-0.054
Right hand, Tilt 15 Degree, Bottom frequency (See Fig.12)	0.178	0.247	-0.101

Table 11: SAR Values (PCS 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)	0.075	0.128	0.116
Left hand, Touch cheek, Mid frequency (See Fig.14)	0.099	0.168	0.025
Left hand, Touch cheek, Bottom frequency (See Fig.15)	0.144	0.242	0.036
Left hand, Tilt 15 Degree, Top frequency (See Fig.16)	0.054	0.099	-0.178
Left hand, Tilt 15 Degree, Mid frequency (See Fig.17)	0.064	0.119	0.056
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.18)	0.091	0.169	0.043
Right hand, Touch cheek, Top frequency (See Fig.19)	0.064	0.123	-0.114
Right hand, Touch cheek, Mid frequency (See Fig.20)	0.079	0.151	0.066
Right hand, Touch cheek, Bottom frequency (See Fig.21)	0.109	0.199	0.101
Right hand, Tilt 15 Degree, Top frequency (See Fig.22)	0.062	0.120	0.007
Right hand, Tilt 15 Degree, Mid frequency (See Fig.23)	0.074	0.142	0.018
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.24)	0.097	0.185	0.049

Table 12: SAR Values (WCDMA 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.25)	0.610	0.877	-0.171
Left hand, Touch cheek, Mid frequency (See Fig.26)	0.494	0.705	-0.105
Left hand, Touch cheek, Bottom frequency (See Fig.27)	0.429	0.609	-0.025
Left hand, Tilt 15 Degree, Top frequency (See Fig.28)	0.250	0.347	0.026
Left hand, Tilt 15 Degree, Mid frequency (See Fig.29)	0.228	0.317	-0.054
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.30)	0.214	0.294	-0.051
Right hand, Touch cheek, Top frequency (See Fig.31)	0.560	0.805	-0.015
Right hand, Touch cheek, Mid frequency (See Fig.32)	0.496	0.712	0.024
Right hand, Touch cheek, Bottom frequency (See Fig.33)	0.437	0.626	0.023
Right hand, Tilt 15 Degree, Top frequency (See Fig.34)	0.266	0.370	0.044
Right hand, Tilt 15 Degree, Mid frequency (See Fig.35)	0.245	0.342	0.021
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.36)	0.237	0.329	0.00428

Table 13: SAR Values (GSM 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	
Towards Phantom, Top frequency with GPRS (See Fig.37)	0.529	0.735	-0.130
Towards Phantom, Mid frequency with GPRS (See Fig.38)	0.508	0.702	0.035
Towards Phantom, Bottom frequency with GPRS (See Fig.39)	0.483	0.667	-0.044
Towards Ground, Top frequency with GPRS (See Fig.40)	0.595	0.824	0.029
Towards Ground, Mid frequency with GPRS (See Fig.41)	0.525	0.732	-0.010
Towards Ground, Bottom frequency with GPRS (See Fig.42)	0.490	0.684	0.048
Towards Ground, Top frequency with EGPRS (See Fig.43)	0.571	0.789	-0.049

Table 14: SAR Values (PCS 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	
Towards Phantom, Top frequency with GPRS (See Fig.44)	0.078	0.128	0.146
Towards Phantom, Mid frequency with GPRS (See Fig.45)	0.103	0.166	0.178
Towards Phantom, Bottom frequency with GPRS (See Fig.46)	0.140	0.227	-0.114
Towards Ground, Top frequency with GPRS (See Fig.47)	0.194	0.336	0.004
Towards Ground, Mid frequency with GPRS (See Fig.48)	0.276	0.437	-0.005
Towards Ground, Bottom frequency with GPRS (See Fig.49)	0.342	0.534	-0.028
Towards Ground, Bottom frequency with EGPRS (See Fig.50)	0.339	0.528	-0.012

Table 15: SAR Values (WCDMA 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	
Towards Phantom, Top frequency (See Fig.51)	0.356	0.495	-0.077
Towards Phantom, Mid frequency (See Fig.52)	0.330	0.456	-0.011

Towards Phantom, Bottom frequency (See Fig.53)	0.325	0.451	-0.038
Towards Ground, Top frequency (See Fig.54)	0.322	0.448	-0.030
Towards Ground, Mid frequency (See Fig.55)	0.296	0.409	-0.023
Towards Ground, Bottom frequency (See Fig.56)	0.325	0.449	0.086

7.4 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, Head, Left hand, Touch cheek, Top frequency (Table 10)**, and the value are: **0.891(1g).**

8 Measurement Uncertainty

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	5.5	N	1	1	1	5.5	5.5	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder	A	3.4	N	1	1	1	3.4	3.4	5

	uncertainty									
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						9.25	9.12	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						18.5	18.2	

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 4,2010	One year
02	Power meter	NRVD	102083	September 11, 2010	One year
03	Power sensor	NRV-Z5	100542		
04	Signal Generator	E4433C	MY49070393	November 13, 2010	One Year
05	Amplifier	VTL5400	0505	No Calibration Requested	
06	BTS	8960	MY48365192	November 18, 2010	One year
07	E-field Probe	SPEAG ES3DV3	3149	September 25, 2010	One year
08	DAE	SPEAG DAE4	771	November 21, 2010	One year
09	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Two years
10	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	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.

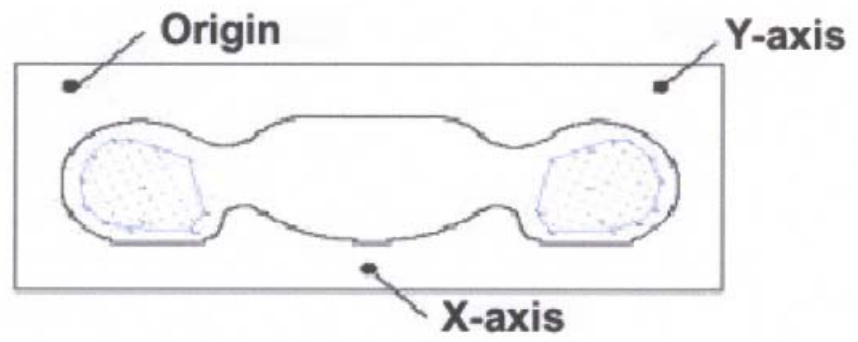
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

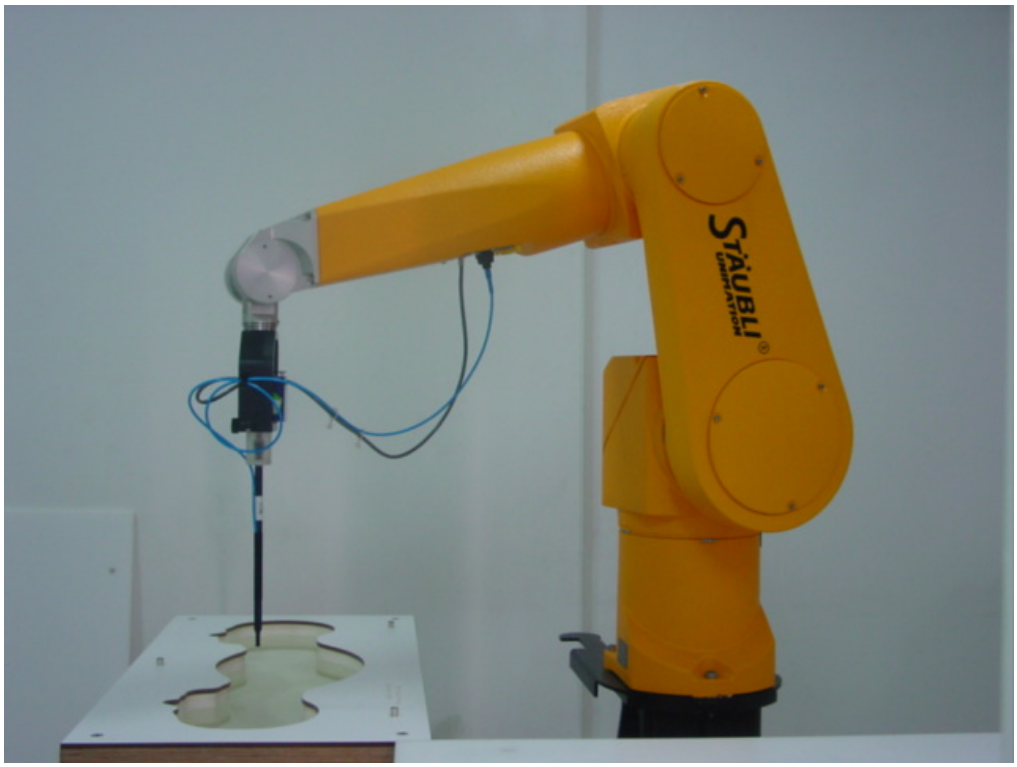
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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.

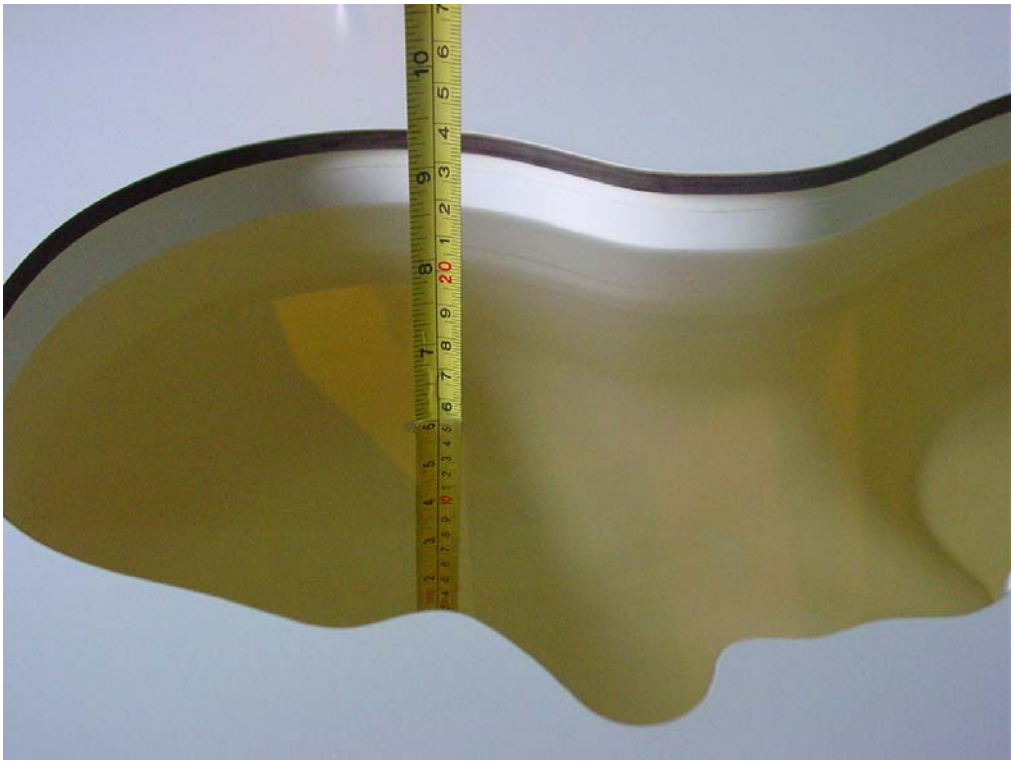


Picture A: SAR Measurement Points in Area Scan

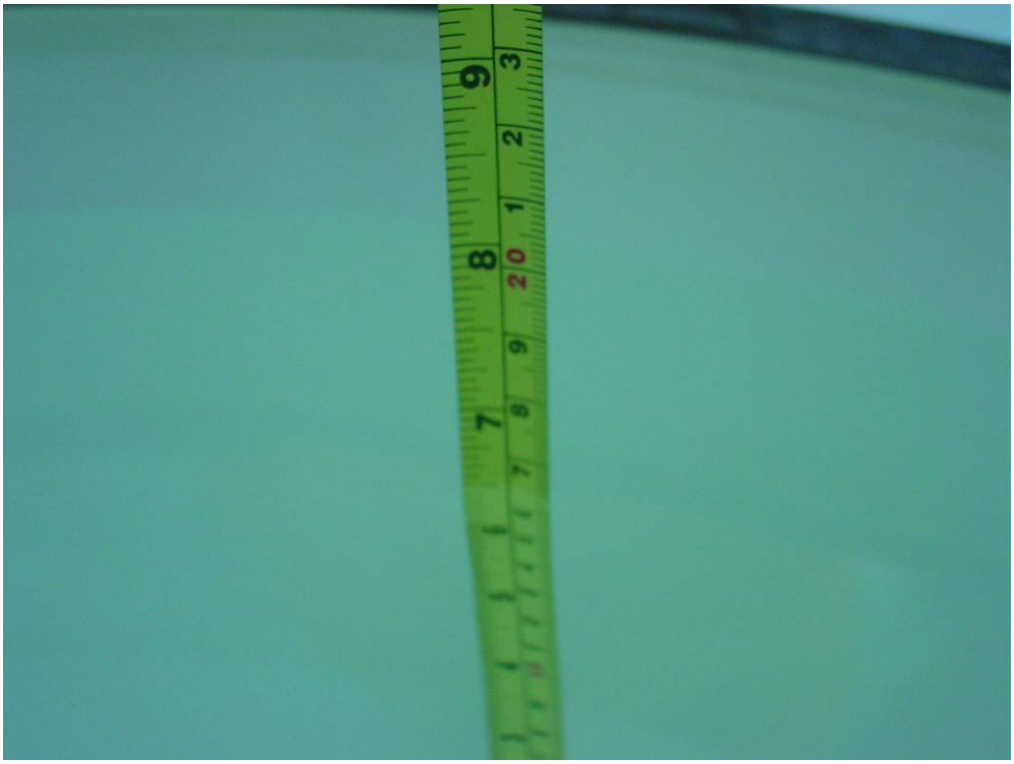
ANNEX B TEST LAYOUT



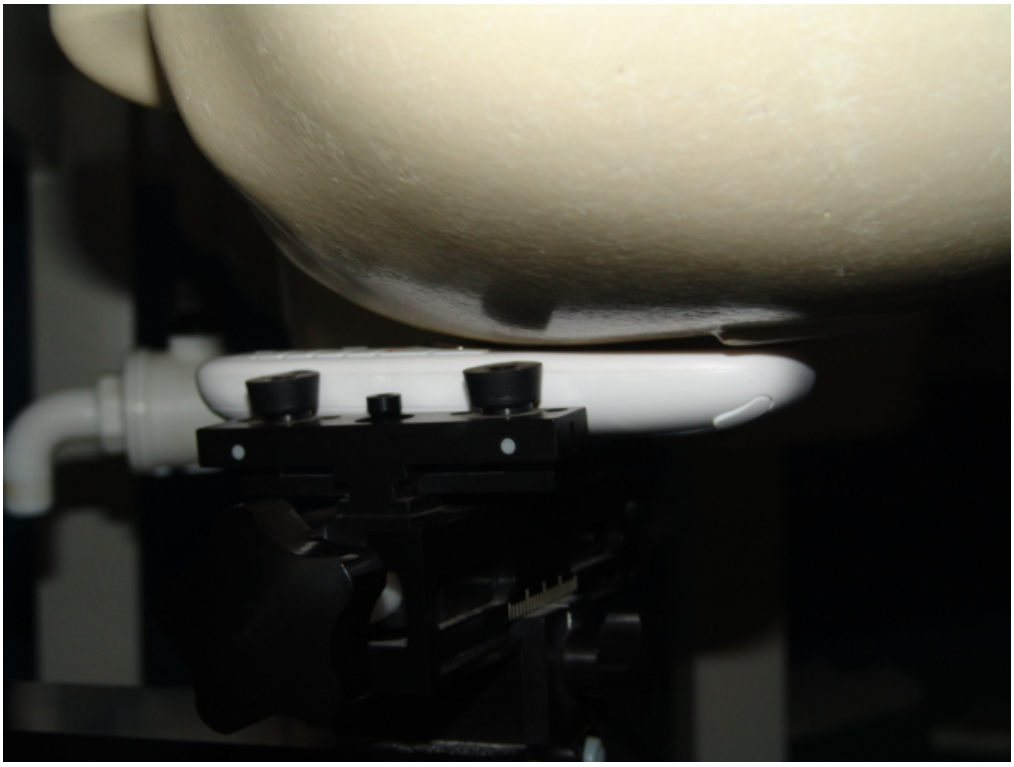
Picture B1: Specific Absorption Rate Test Layout



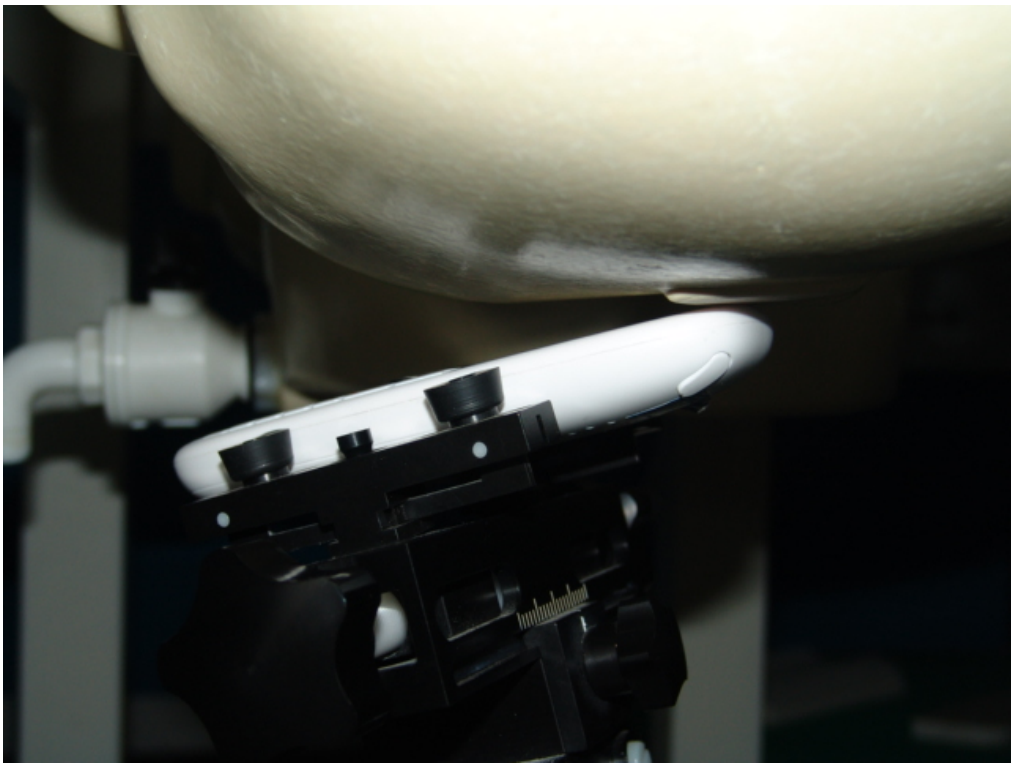
Picture B2: Liquid depth in the Head Phantom (850 MHz)



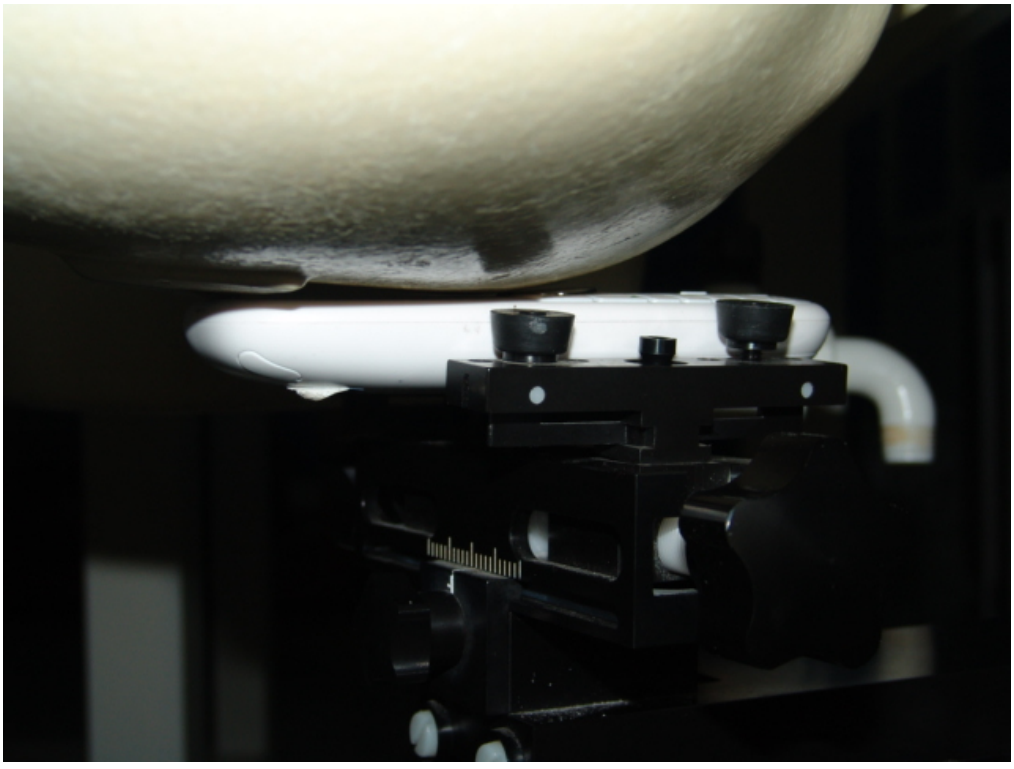
Picture B3 Liquid depth in the Flat Phantom (1900MHz)



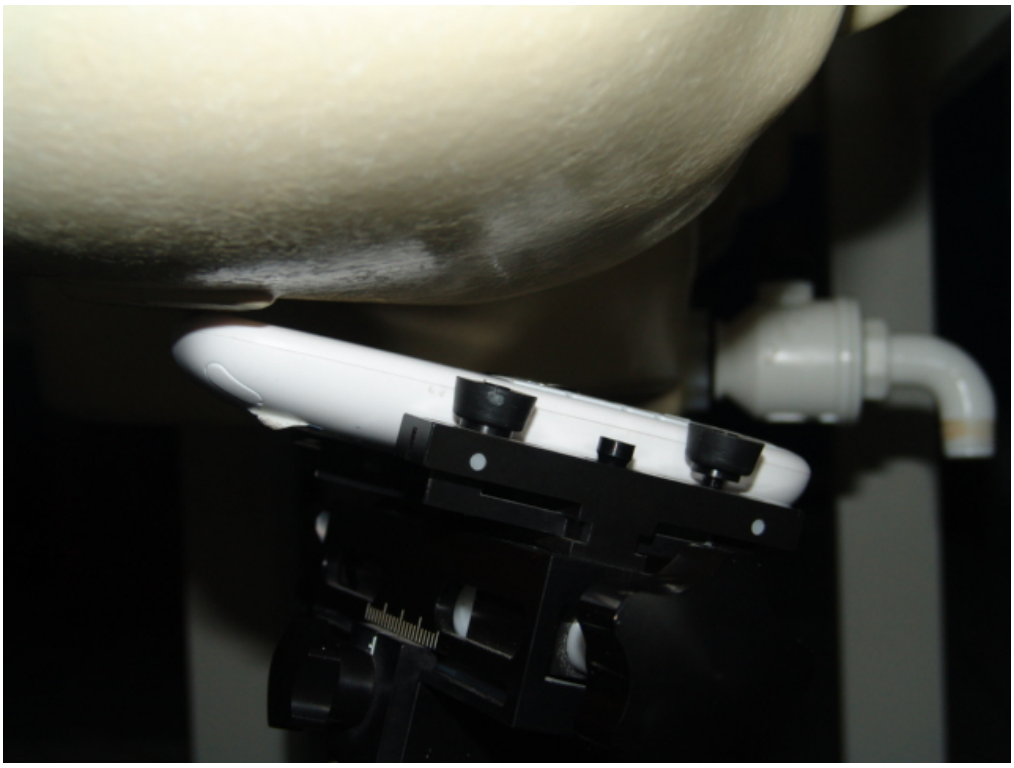
Picture B4: Left Hand Touch Cheek Position



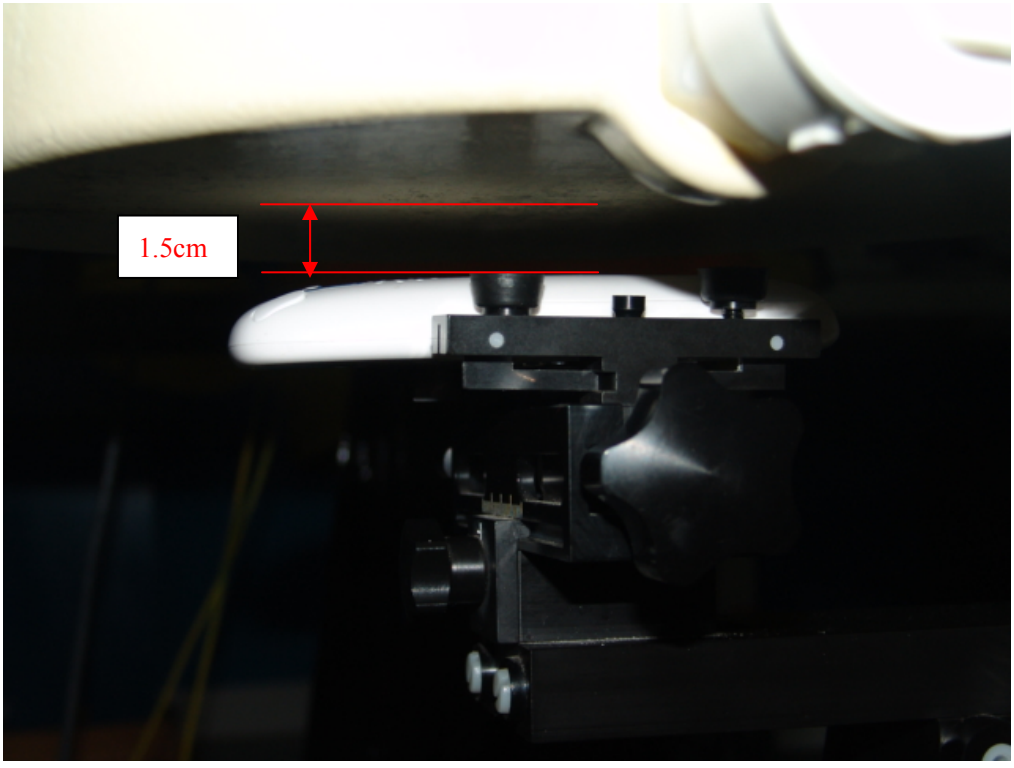
Picture B5: Left Hand Tilt 15° Position



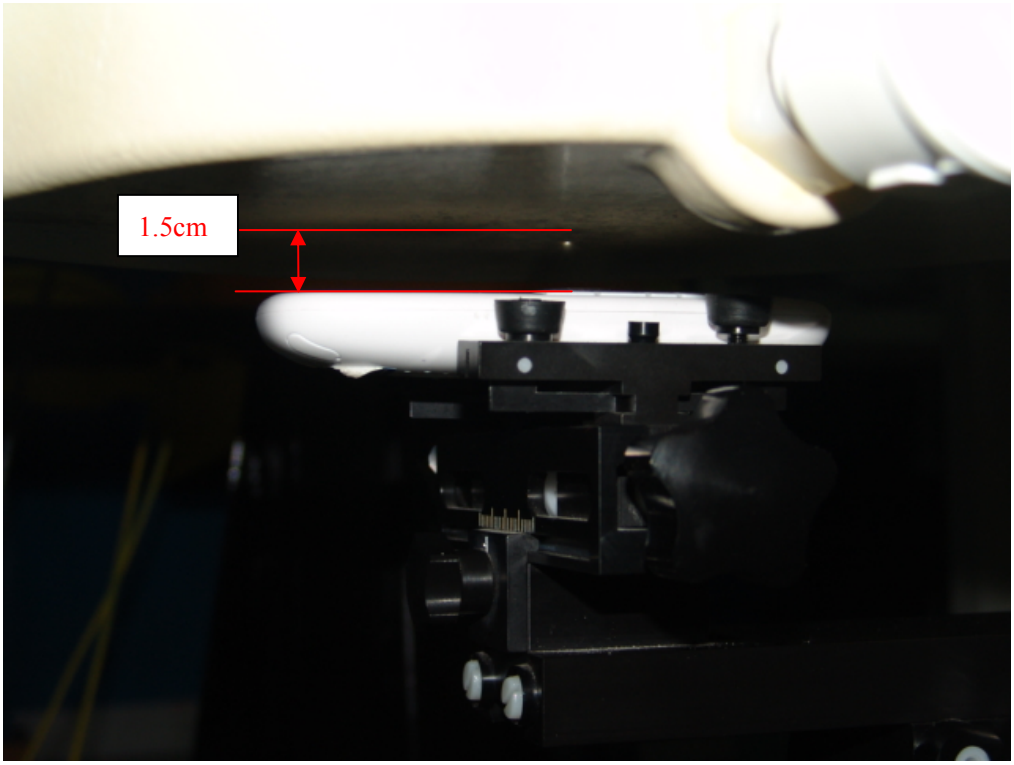
Picture B6: Right Hand Touch Cheek Position



Picture B7: Right Hand Tilt 15° Position



Picture B8: Body-worn Position (towards ground, the distance from handset to the bottom of the Phantom is 1.5cm)



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

ANNEX C GRAPH RESULTS

850 Left Cheek High

Date/Time: 2011-3-20 8:09:25
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 42.0; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.957 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.7 V/m; Power Drift = -0.147 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.891 mW/g; SAR(10 g) = 0.614 mW/g
Maximum value of SAR (measured) = 0.947 mW/g

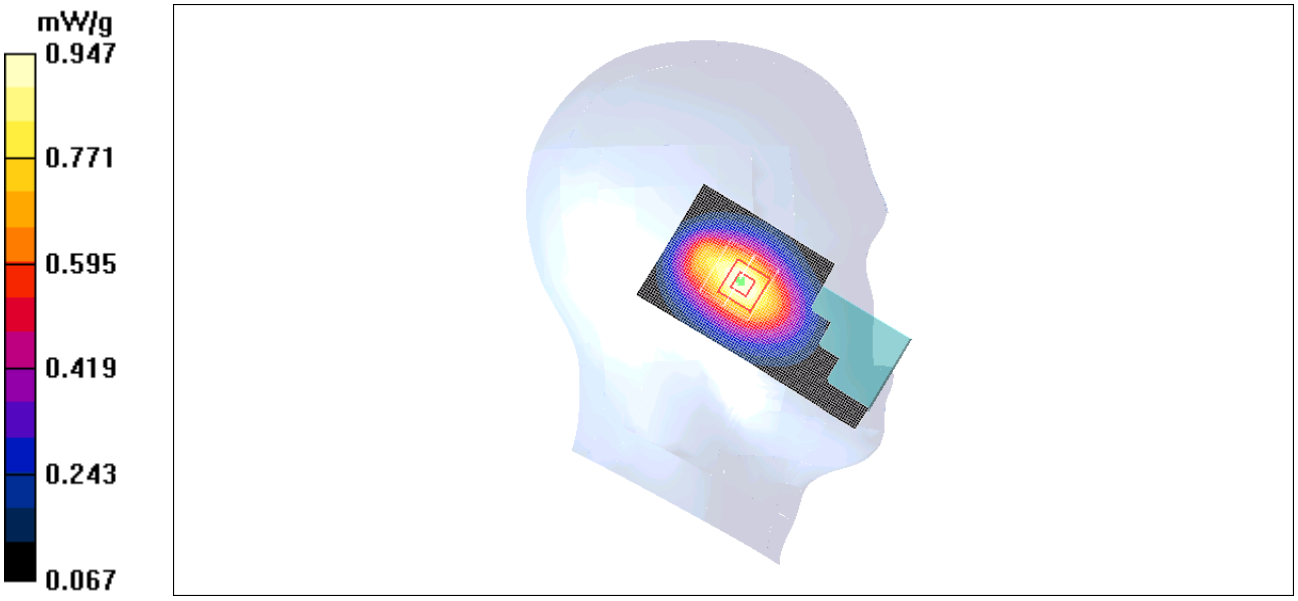


Fig. 1 850MHz CH251

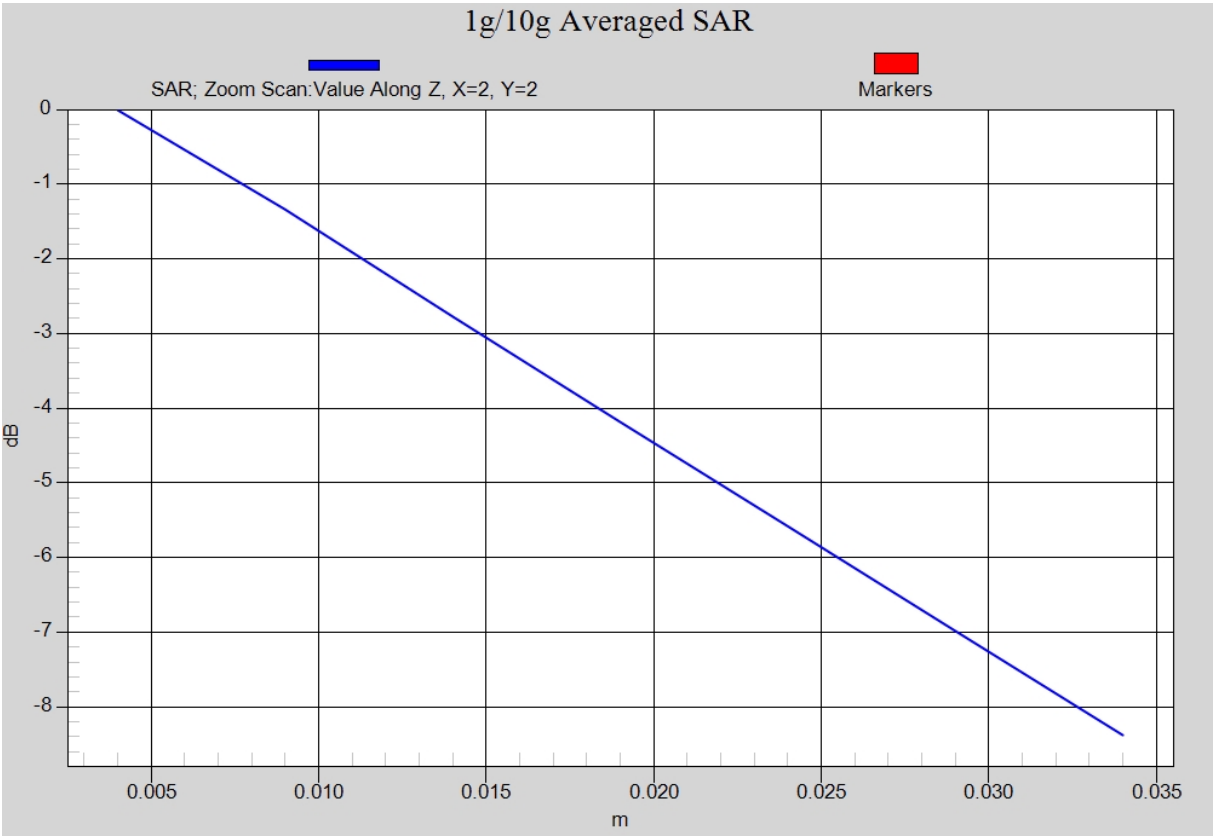


Fig. 1-1 Z-Scan at power reference point (850 MHz CH251)

850 Left Cheek Middle

Date/Time: 2011-3-20 8:23:43
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.1; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.729 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.2 V/m; Power Drift = -0.061 dB
Peak SAR (extrapolated) = 0.899 W/kg
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.469 mW/g
Maximum value of SAR (measured) = 0.721 mW/g

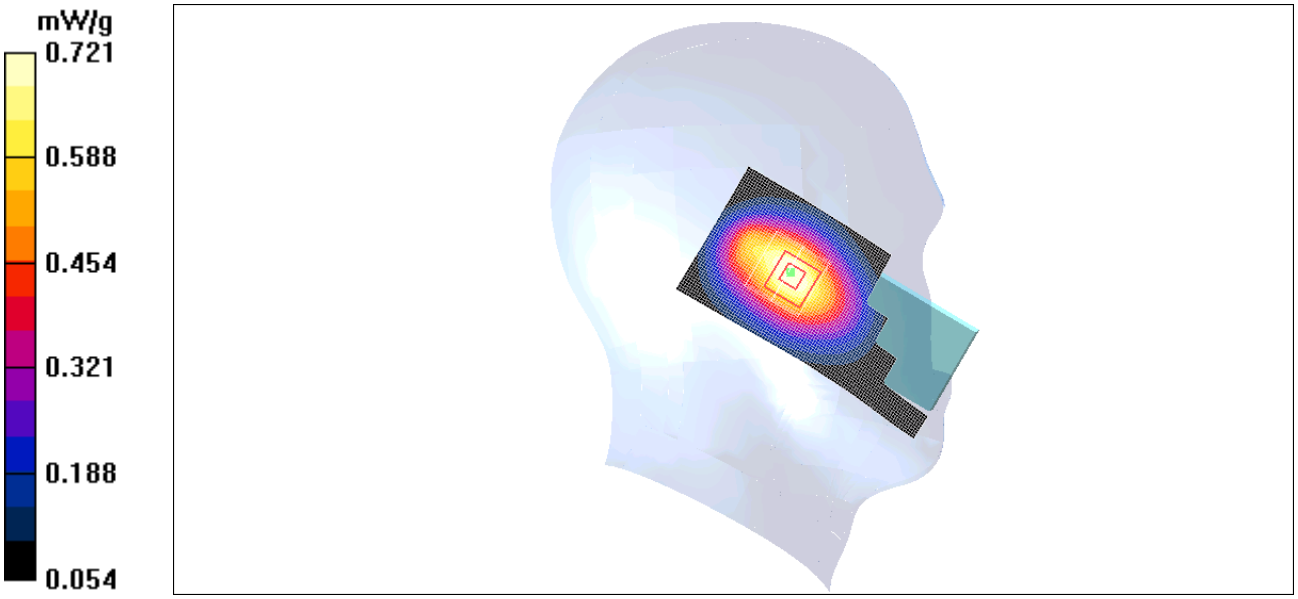


Fig. 2 850 MHz CH190

850 Left Cheek Low

Date/Time: 2011-3-20 8:38:02
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.3; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.523 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 0.658 W/kg
SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.339 mW/g
Maximum value of SAR (measured) = 0.517 mW/g

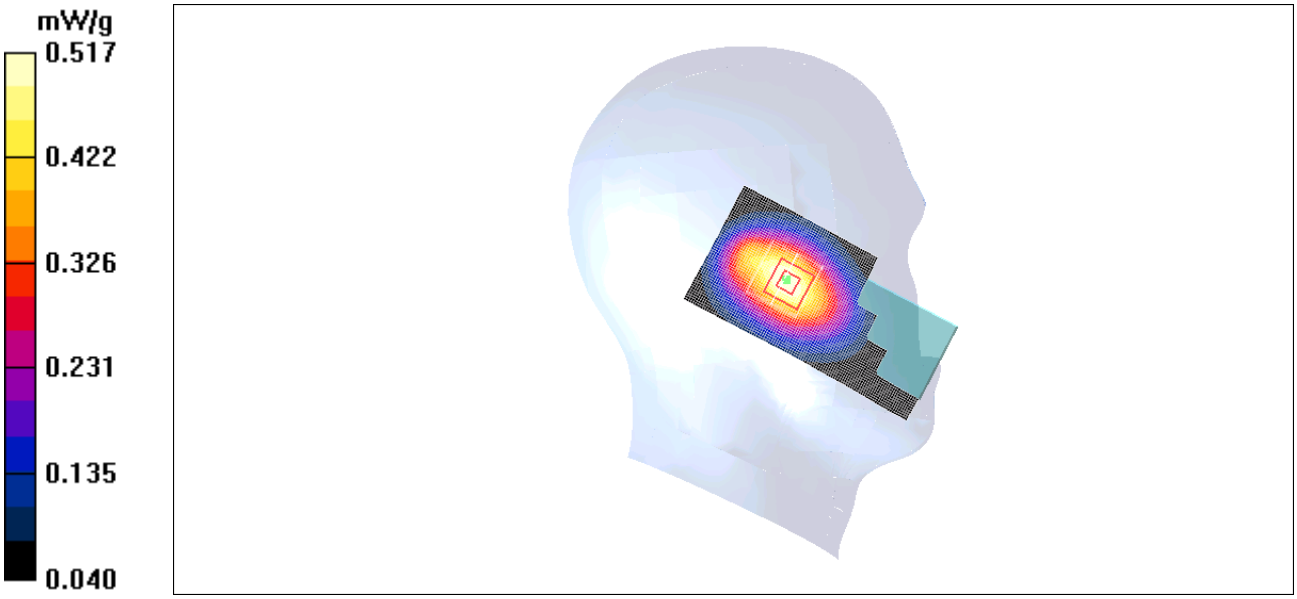


Fig. 3 850 MHz CH128

850 Left Tilt High

Date/Time: 2011-3-20 8:52:47
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 42.0; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.344 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.2 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.395 W/kg
SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.313 mW/g

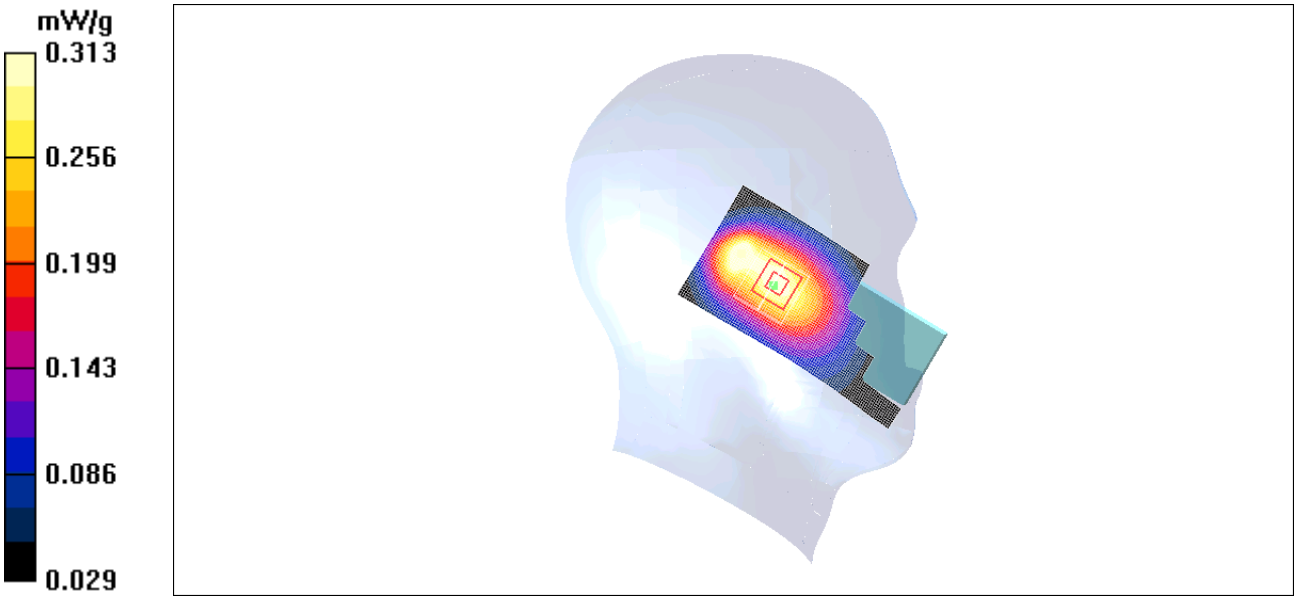


Fig.4 850 MHz CH251

850 Left Tilt Middle

Date/Time: 2011-3-20 9:07:04
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.1; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.272 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.4 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.317 W/kg
SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.174 mW/g
Maximum value of SAR (measured) = 0.252 mW/g

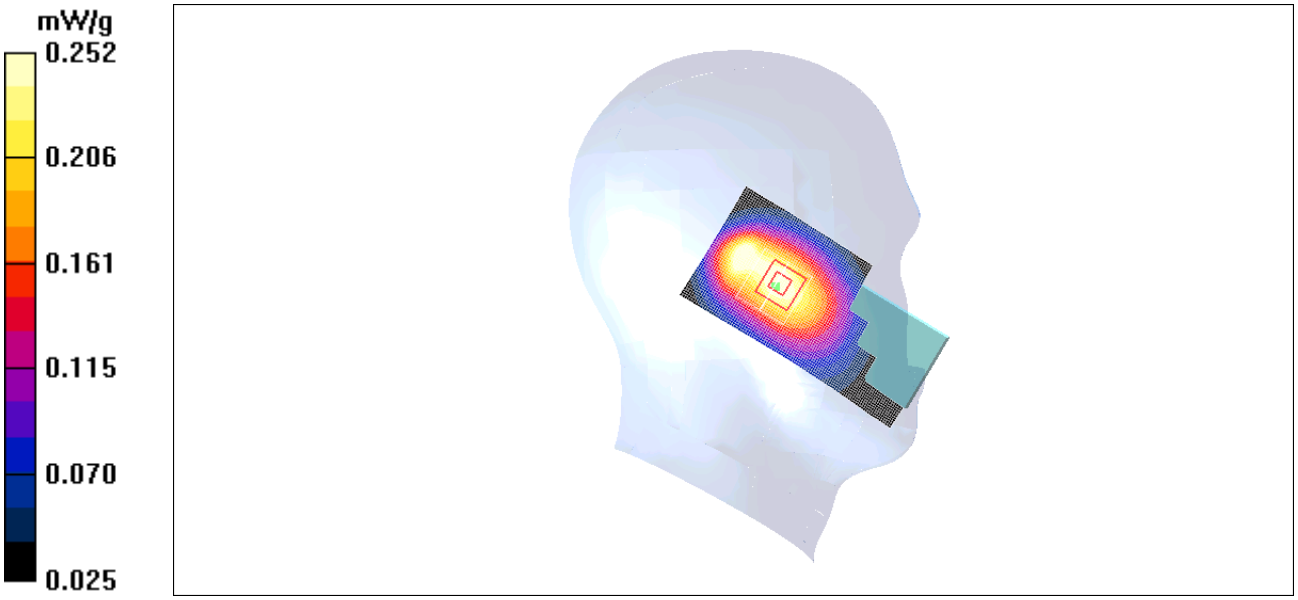


Fig.5 850 MHz CH190

850 Left Tilt Low

Date/Time: 2011-3-20 9:21:22
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.3; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.216 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.6 V/m; Power Drift = -0.053 dB
Peak SAR (extrapolated) = 0.256 W/kg
SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.141 mW/g
Maximum value of SAR (measured) = 0.203 mW/g

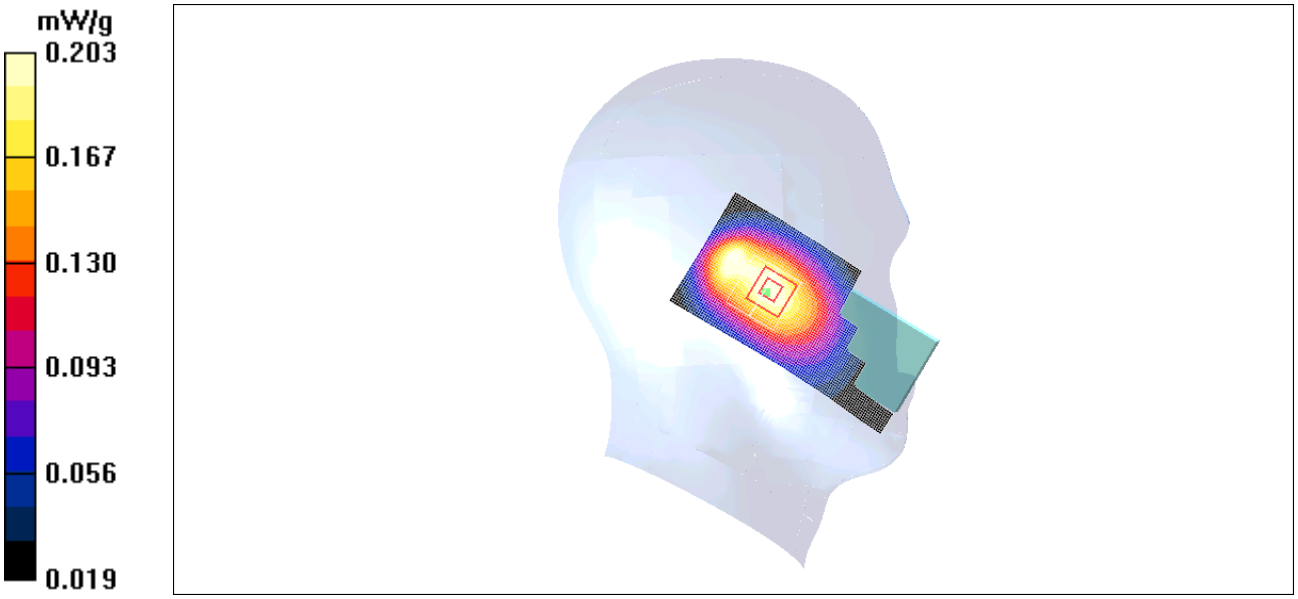


Fig. 6 850 MHz CH128

850 Right Cheek High

Date/Time: 2011-3-20 9:36:08
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 42.0; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.933 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.1 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 1.2 W/kg
SAR(1 g) = 0.883 mW/g; SAR(10 g) = 0.612 mW/g
Maximum value of SAR (measured) = 0.949 mW/g

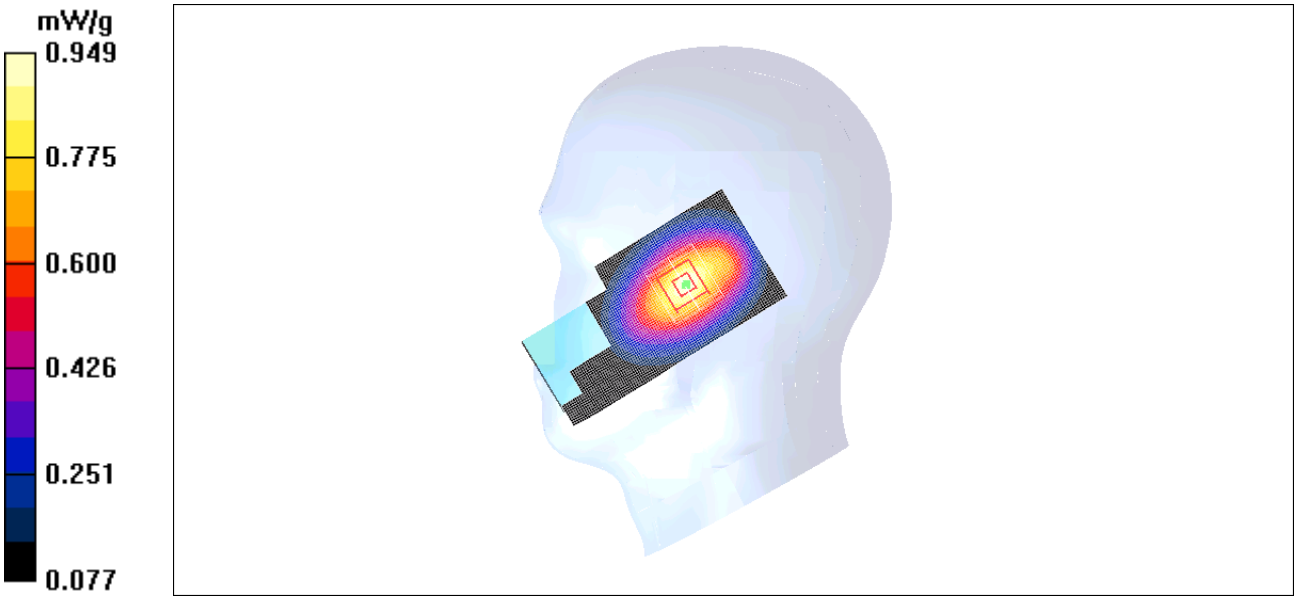


Fig. 7 850 MHz CH251

850 Right Cheek Middle

Date/Time: 2011-3-20 9:50:29
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.1; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.730 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.4 V/m; Power Drift = -0.00226 dB
Peak SAR (extrapolated) = 0.917 W/kg
SAR(1 g) = 0.685 mW/g; SAR(10 g) = 0.478 mW/g
Maximum value of SAR (measured) = 0.735 mW/g

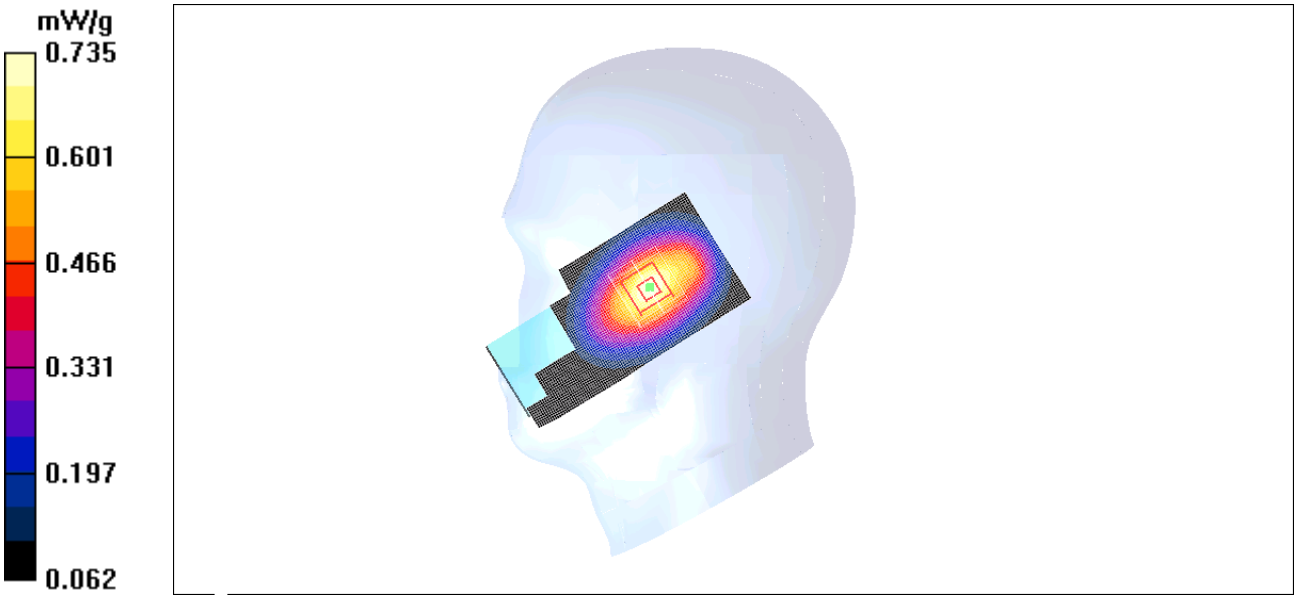


Fig. 8 850 MHz CH190

850 Right Cheek Low

Date/Time: 2011-3-20 10:04:51
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.3; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.548 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.7 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 0.694 W/kg
SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.361 mW/g
Maximum value of SAR (measured) = 0.553 mW/g

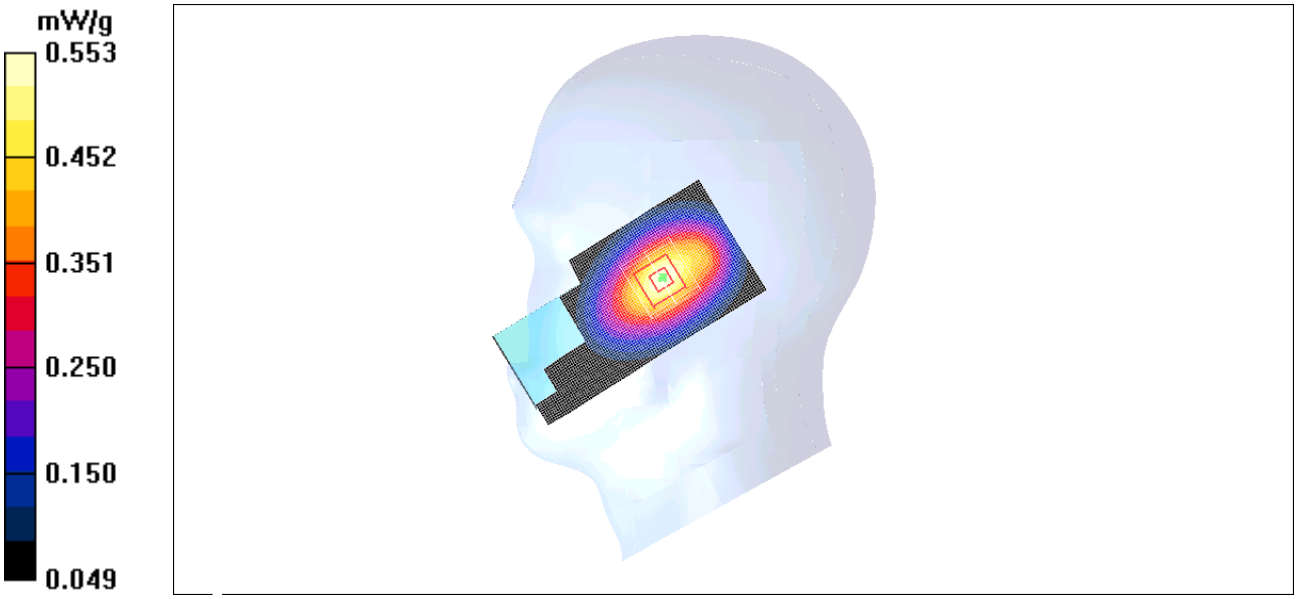


Fig. 9 850 MHz CH128

850 Right Tilt High

Date/Time: 2011-3-20 10:19:30
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 42.0; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.364 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.250 mW/g
Maximum value of SAR (measured) = 0.373 mW/g

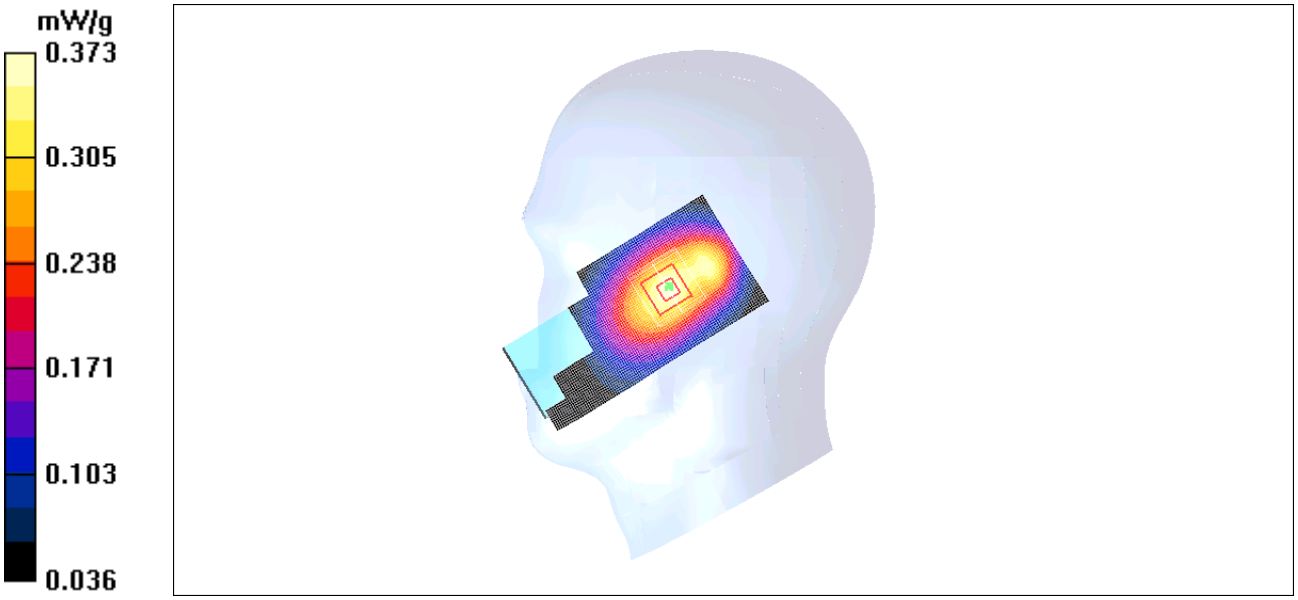


Fig.10 850 MHz CH251

850 Right Tilt Middle

Date/Time: 2011-3-20 10:33:52
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.1; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.296 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.9 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 0.377 W/kg
SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.205 mW/g
Maximum value of SAR (measured) = 0.305 mW/g

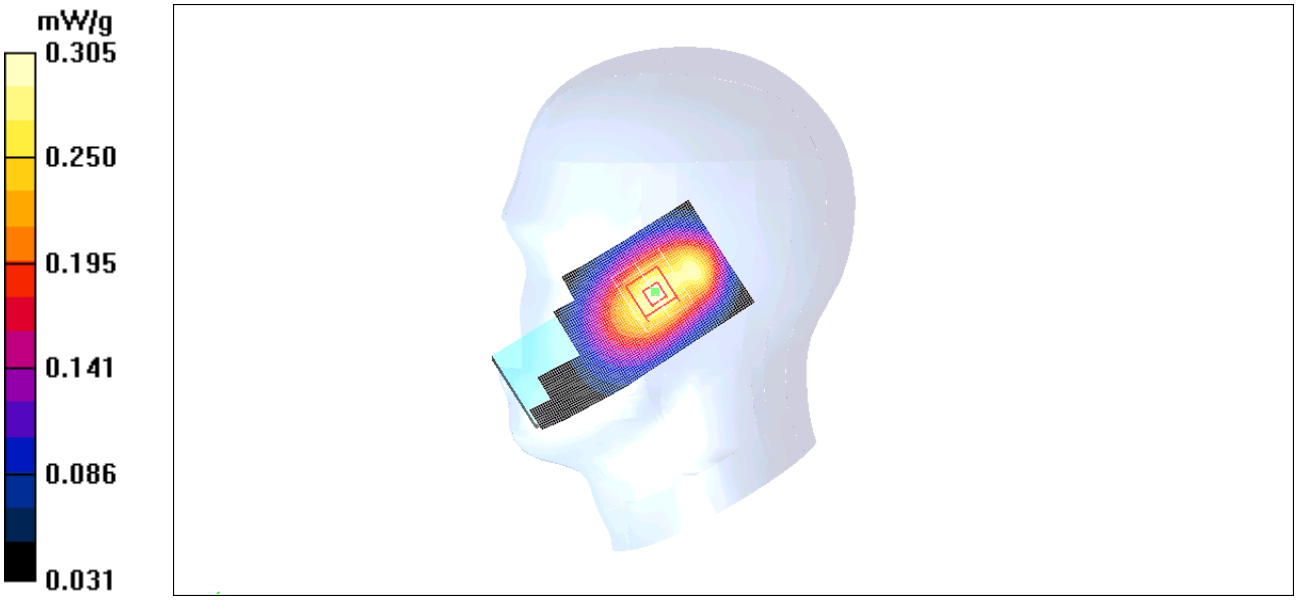


Fig.11 850 MHz CH190

850 Right Tilt Low
Date/Time: 2011-3-20 10:48:23
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.90 mho/m; εr = 42.3; 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 (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.258 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 0.326 W/kg
SAR(1 g) = 0.247 mW/g; SAR(10 g) = 0.178 mW/g
Maximum value of SAR (measured) = 0.263 mW/g

Fig. 12 850 MHz CH128

1900 Left Cheek High
Date/Time: 2011-3-21 8:11:36
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.5; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.143 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.75 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.197 W/kg
SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.075 mW/g
Maximum value of SAR (measured) = 0.134 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.75 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.190 W/kg
SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.061 mW/g
Maximum value of SAR (measured) = 0.127 mW/g

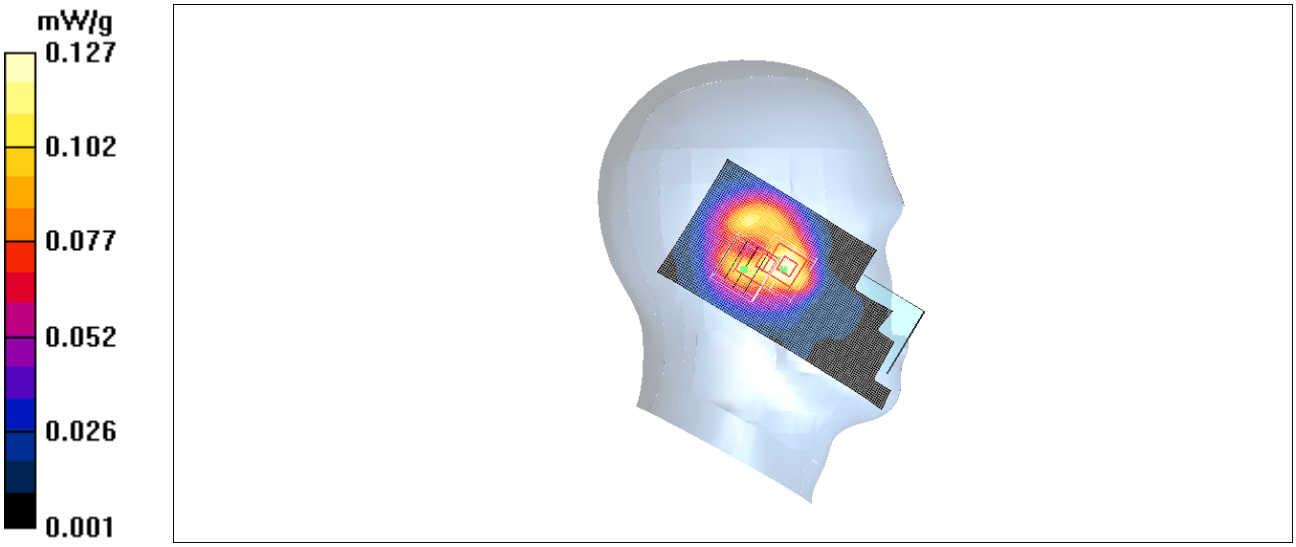


Fig. 13 1900 MHz CH810

1900 Left Cheek Middle

Date/Time: 2011-3-21 8:25:57
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.9; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.190 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.43 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 0.255 W/kg
SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.178 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.43 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.079 mW/g
Maximum value of SAR (measured) = 0.169 mW/g

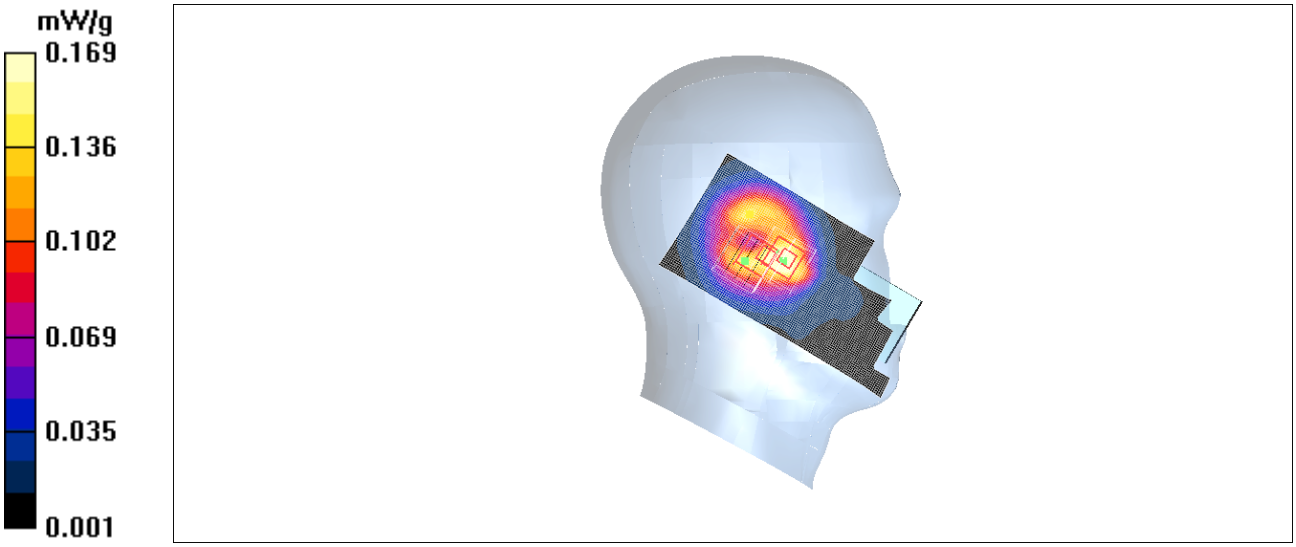


Fig. 14 1900 MHz CH661

1900 Left Cheek Low
Date/Time: 2011-3-21 8:40:26
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.8; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.274 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.33 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.144 mW/g
Maximum value of SAR (measured) = 0.259 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.33 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.350 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.116 mW/g
Maximum value of SAR (measured) = 0.248 mW/g

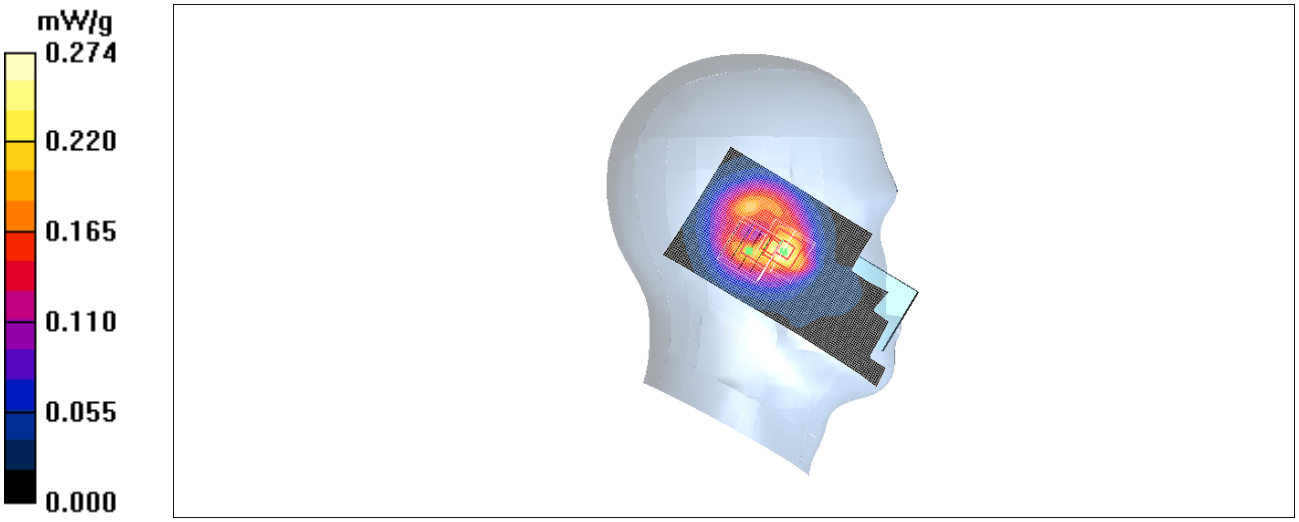


Fig. 15 1900 MHz CH512

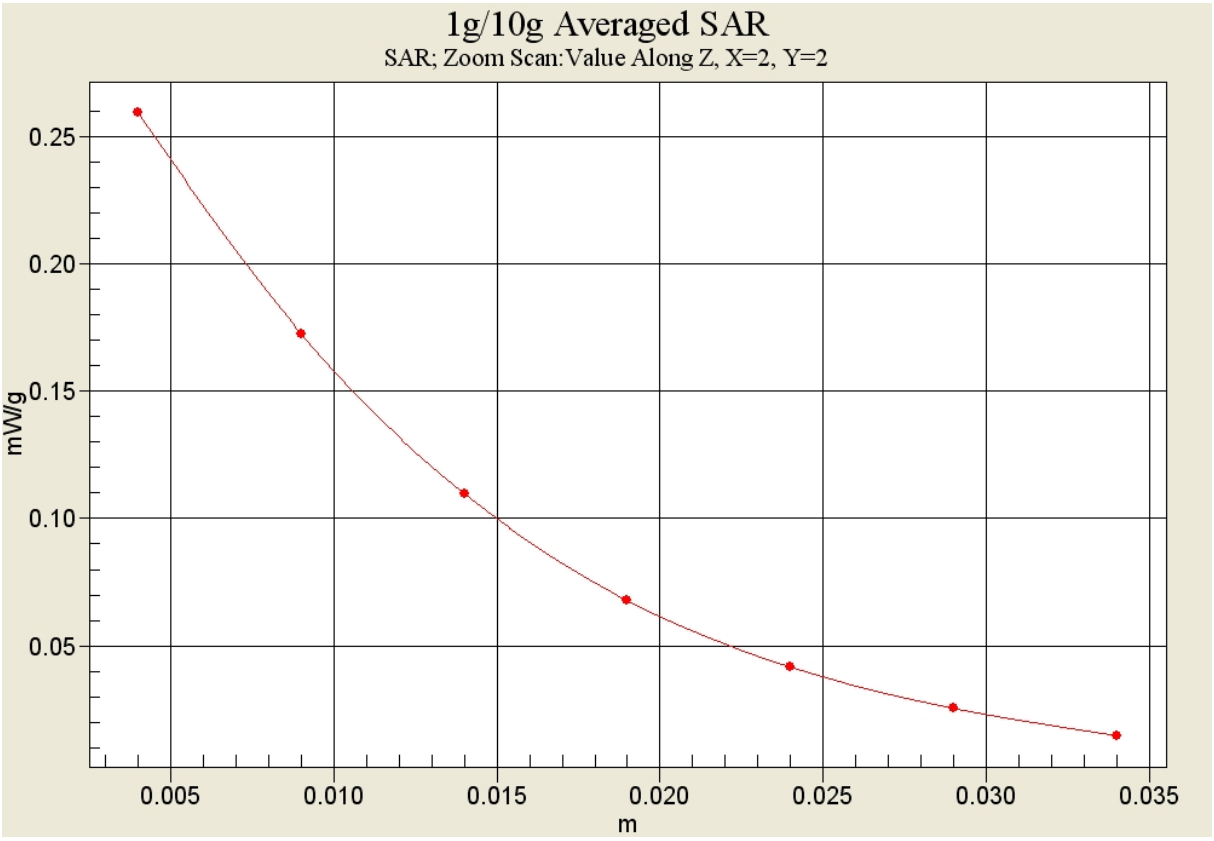


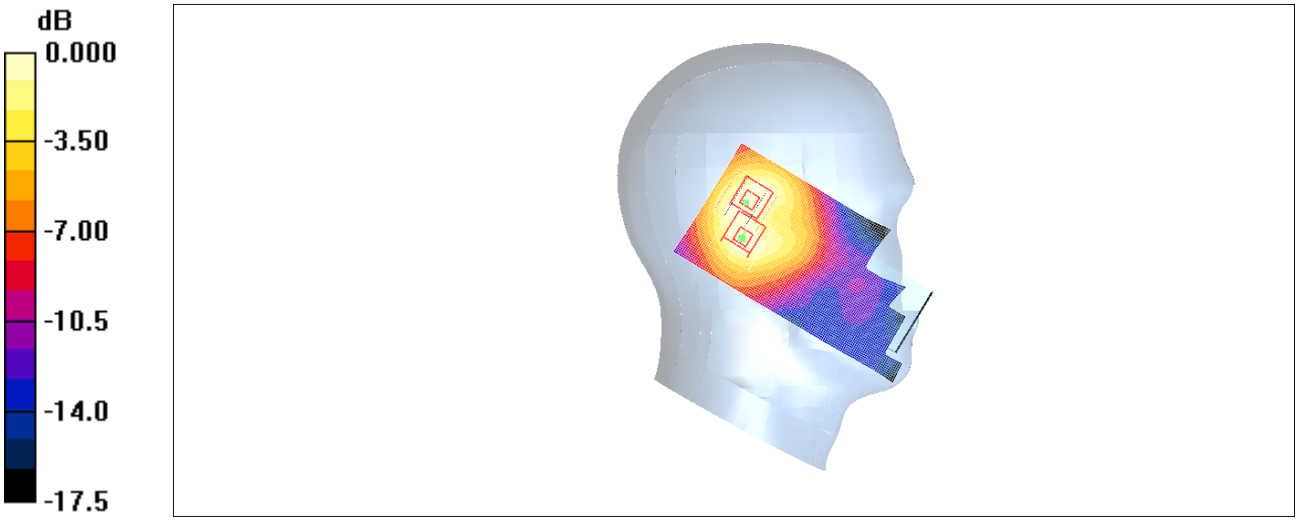
Fig. 15-1 Z-Scan at power reference point (1900 MHz CH512)

1900 Left Tilt High
Date/Time: 2011-3-21 8:55:01
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.5; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.108 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.84 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 0.194 W/kg
SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.054 mW/g
Maximum value of SAR (measured) = 0.111 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.84 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.104 mW/g



0 dB = 0.104mW/g

Fig.16 1900 MHz CH810

1900 Left Tilt Middle
Date/Time: 2011-3-21 9:09:22
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.9; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.129 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.44 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 0.233 W/kg
SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.129 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.44 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 0.235 W/kg
SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.131 mW/g

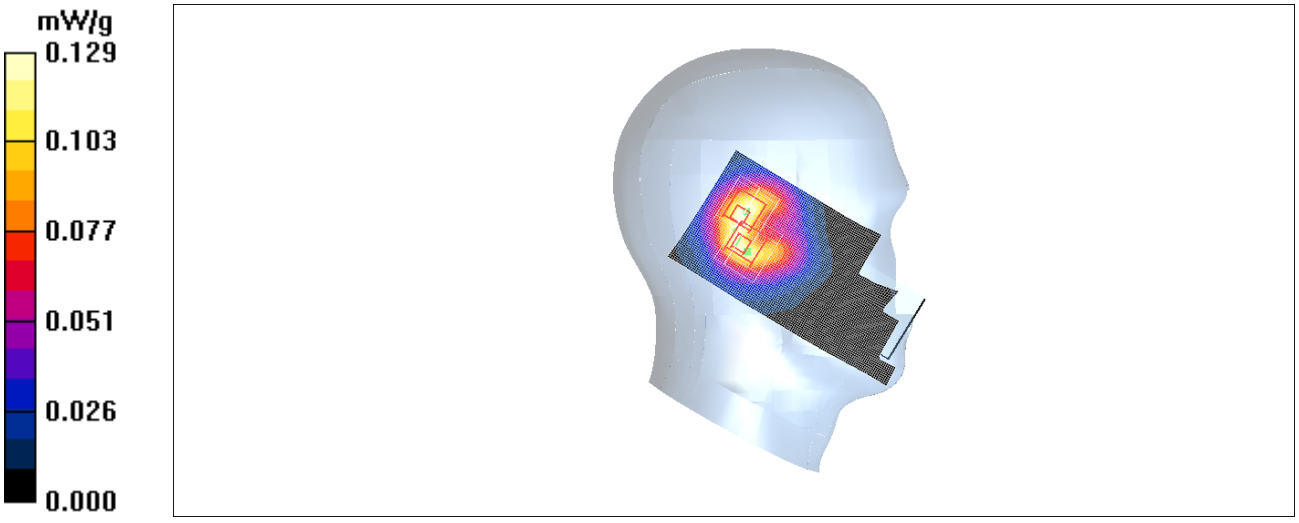


Fig. 17 1900 MHz CH661

1900 Left Tilt Low
Date/Time: 2011-3-21 9:23:48
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.8; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.178 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = 0.043 dB
Peak SAR (extrapolated) = 0.325 W/kg
SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.187 mW/g

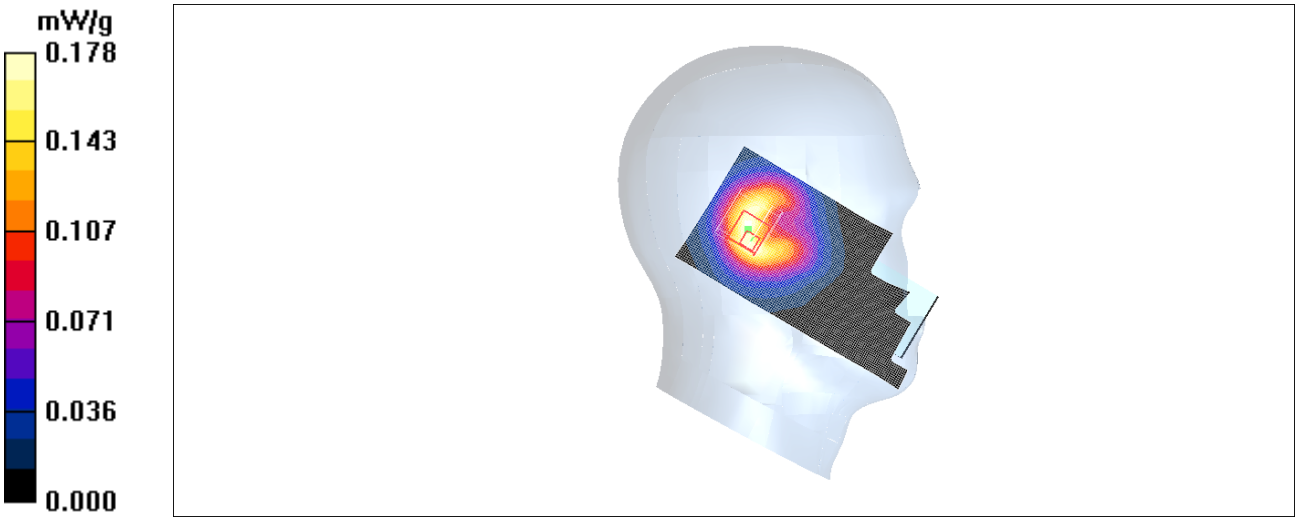


Fig. 18 1900 MHz CH512

1900 Right Cheek High

Date/Time: 2011-3-21 9:38:30
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.5; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.141 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.85 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.244 W/kg
SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.143 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.85 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.166 W/kg
SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.119 mW/g

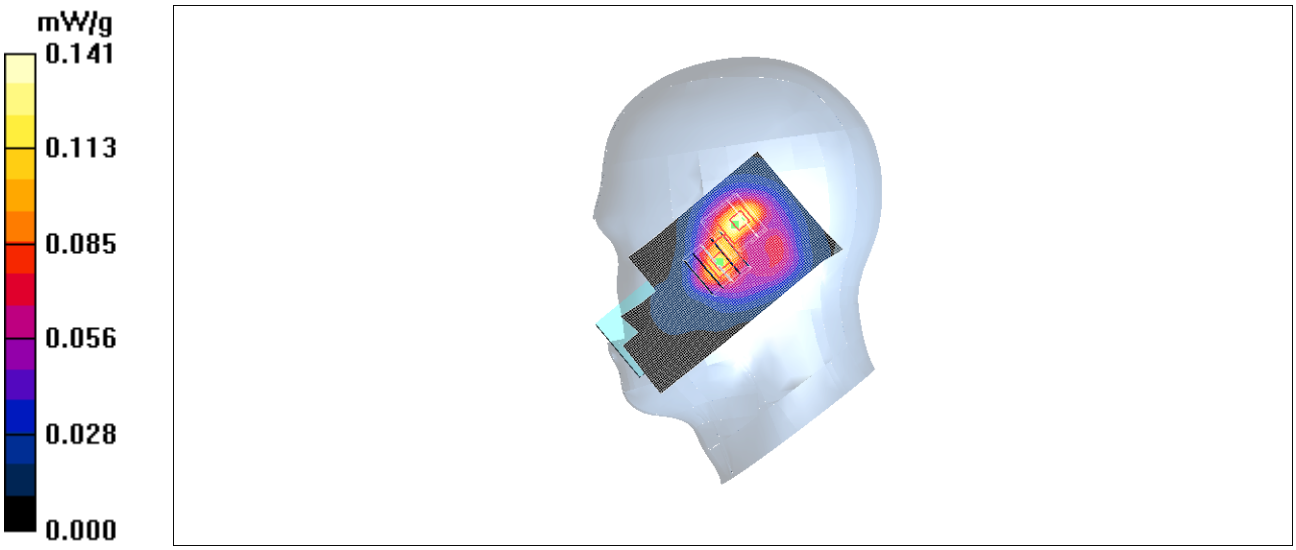


Fig. 19 1900 MHz CH810

1900 Right Cheek Middle

Date/Time: 2011-3-21 9:52:54
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.9; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.174 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.19 V/m; Power Drift = 0.066 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.079 mW/g
Maximum value of SAR (measured) = 0.174 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.19 V/m; Power Drift = 0.066 dB
Peak SAR (extrapolated) = 0.207 W/kg
SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.149 mW/g

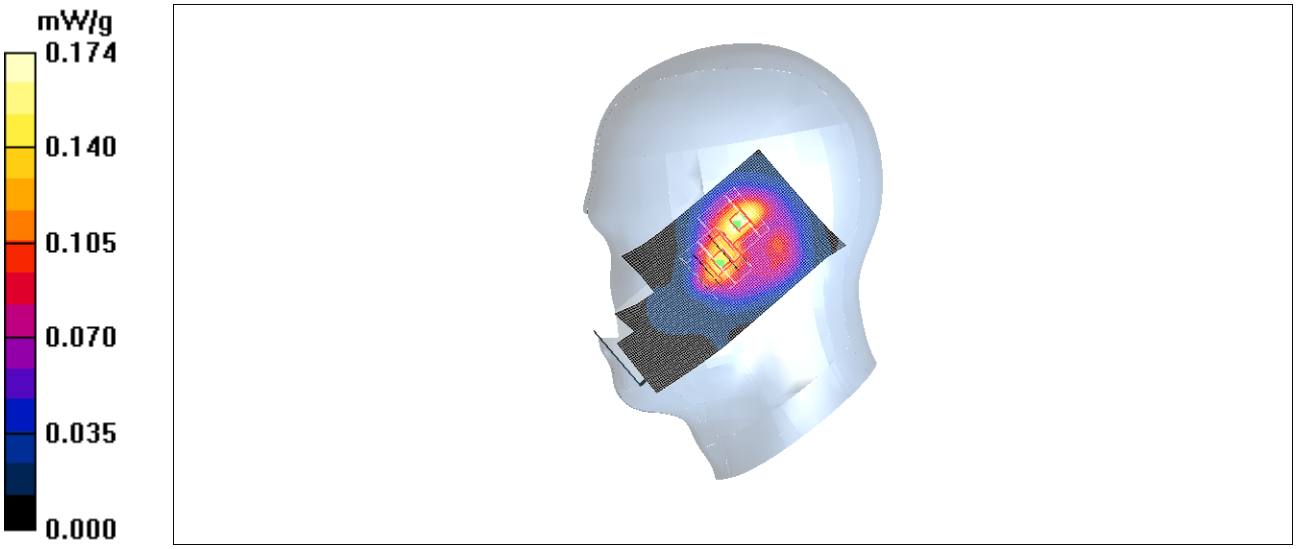


Fig. 20 1900 MHz CH661

1900 Right Cheek Low

Date/Time: 2011-3-21 10:07:18
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.8; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.226 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.29 V/m; Power Drift = 0.101 dB
Peak SAR (extrapolated) = 0.376 W/kg
SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.109 mW/g
.Maximum value of SAR (measured) = 0.226 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.29 V/m; Power Drift = 0.101 dB
Peak SAR (extrapolated) = 0.289 W/kg
SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.118 mW/g
Maximum value of SAR (measured) = 0.212 mW/g

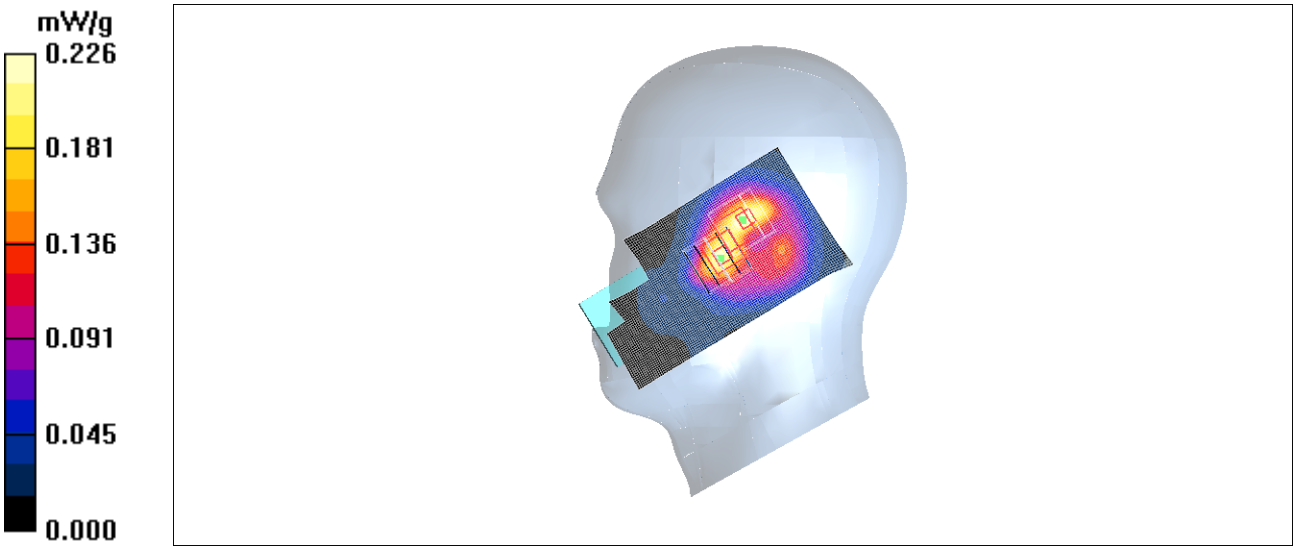


Fig. 21 1900 MHz CH512

1900 Right Tilt High

Date/Time: 2011-3-21 10:22:00
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.5; 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 (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.135 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.91 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.244 W/kg
SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.062 mW/g
Maximum value of SAR (measured) = 0.136 mW/g

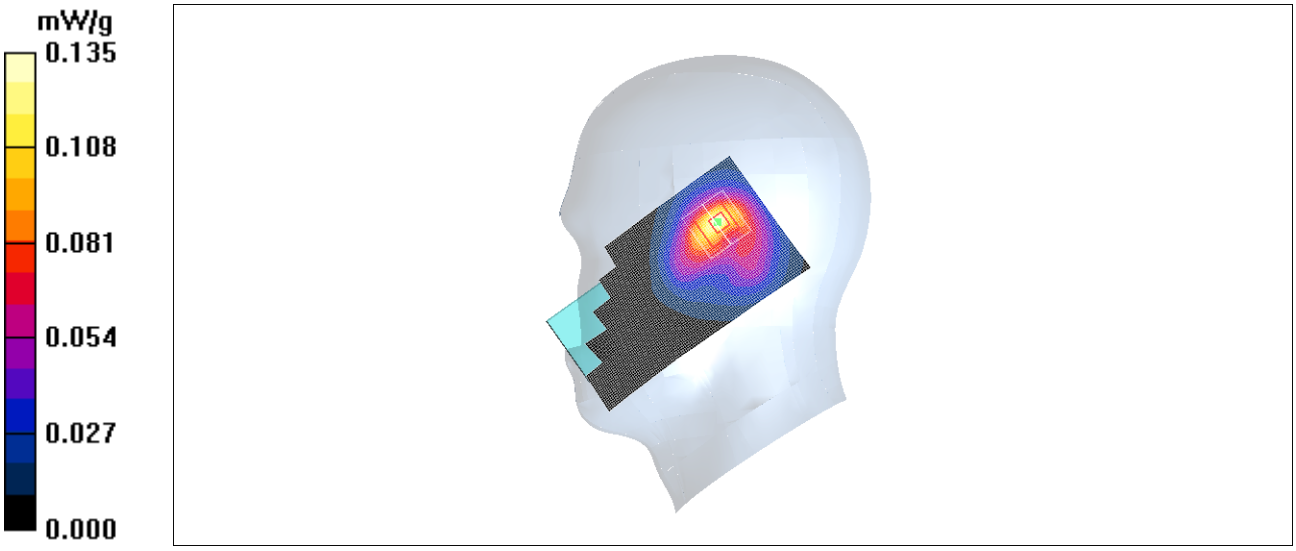


Fig. 22 1900 MHz CH810

1900 Right Tilt Middle
Date/Time: 2011-3-21 10:36:24
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.9; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.161 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.61 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.284 W/kg
SAR(1 g) = 0.142 mW/g; SAR(10 g) = 0.074 mW/g
Maximum value of SAR (measured) = 0.161 mW/g

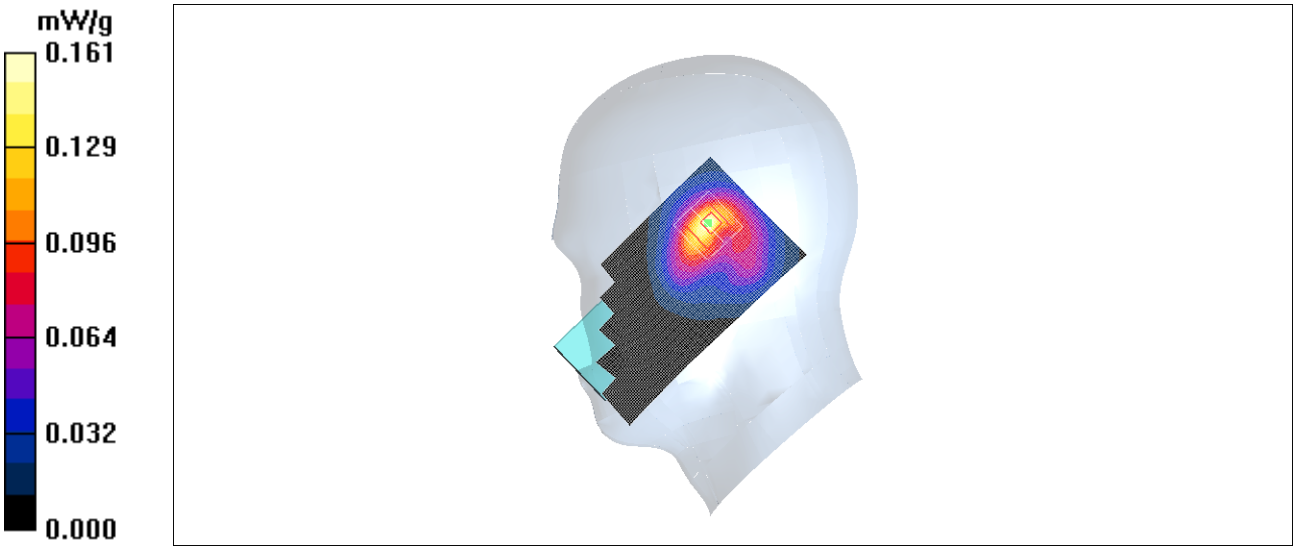


Fig.23 1900 MHz CH661

1900 Right Tilt Low

Date/Time: 2011-3-21 10:50:49
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.8; 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 (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.209 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.96 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 0.370 W/kg
SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.097 mW/g
Maximum value of SAR (measured) = 0.209 mW/g

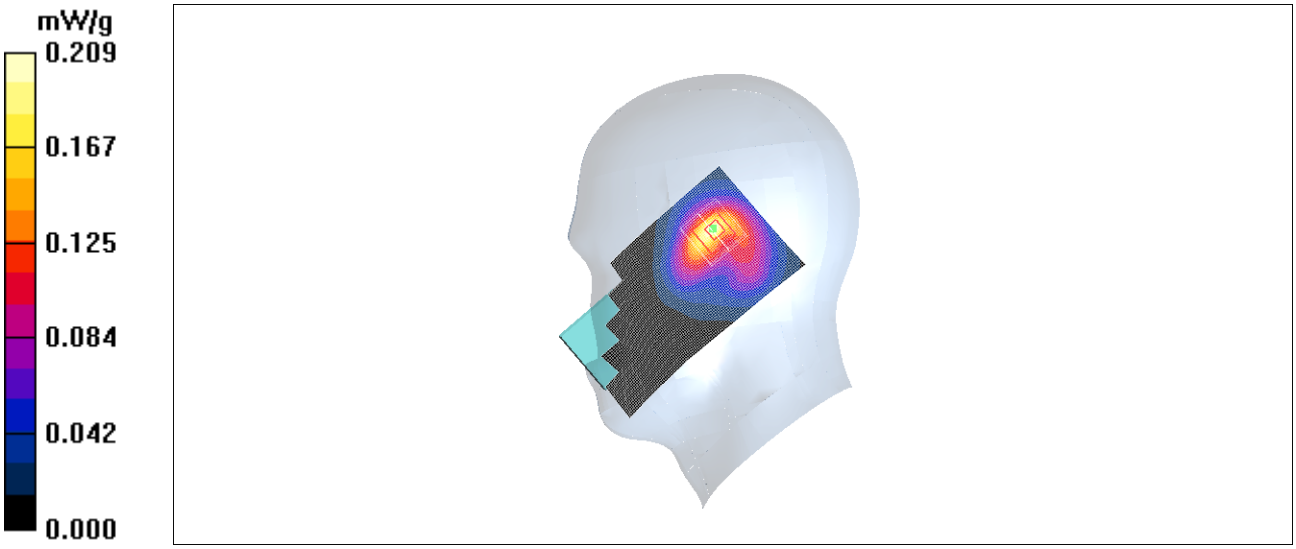


Fig.24 1900 MHz CH512

WCDMA850 Left Cheek High
Date/Time: 2011-3-20 11:15:06
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.901 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.966 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.2 V/m; Power Drift = -0.171 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.877 mW/g; SAR(10 g) = 0.610 mW/g
Maximum value of SAR (measured) = 0.939 mW/g

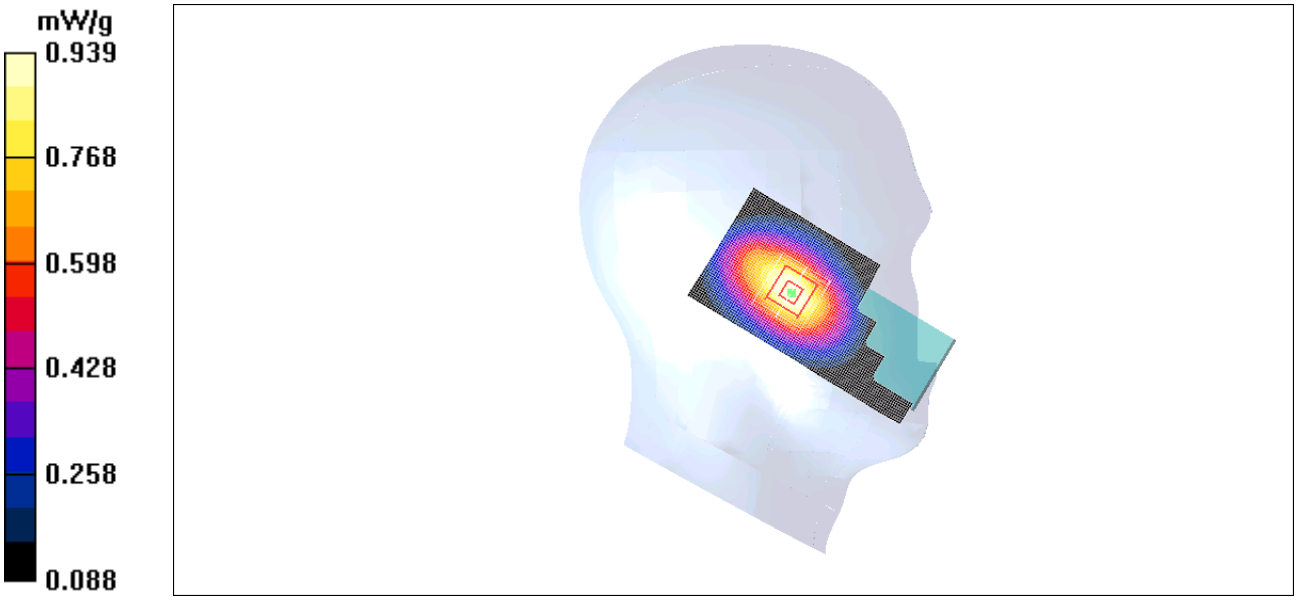


Fig. 25 850MHz CH4233

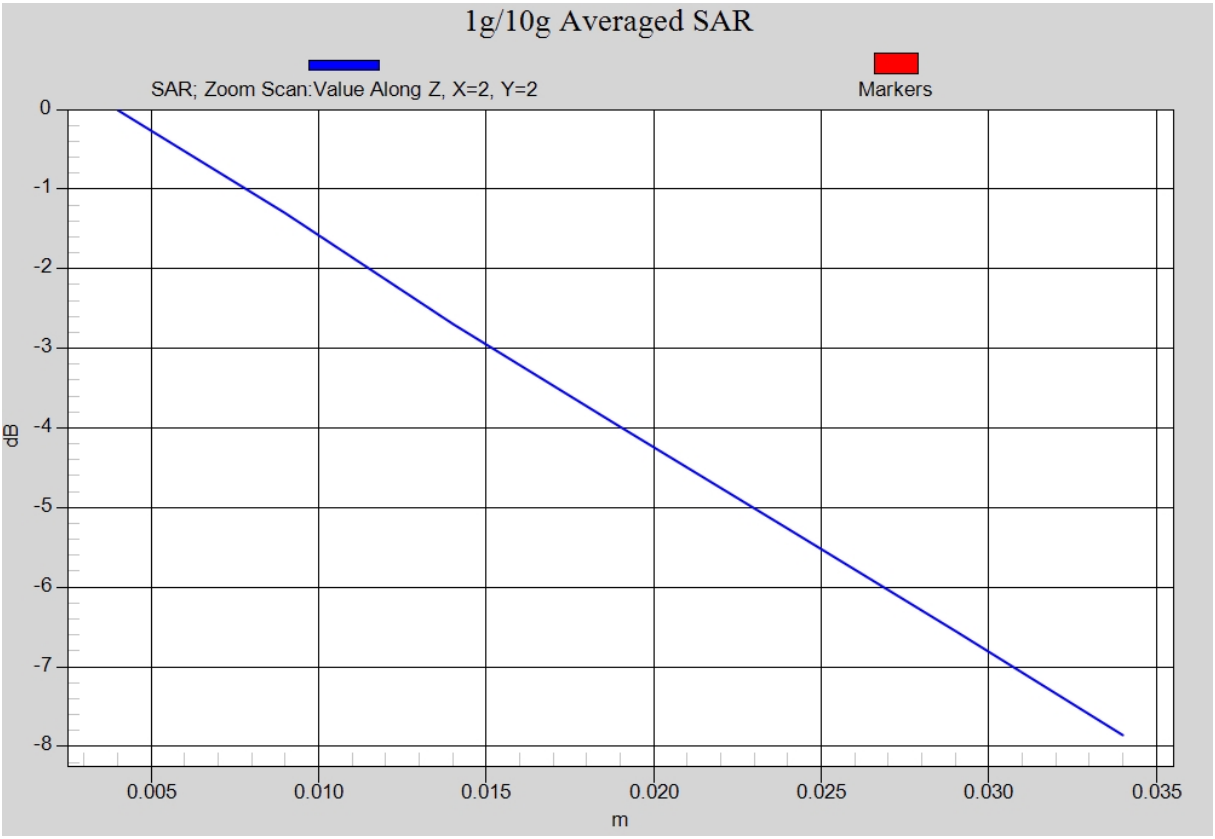


Fig. 25-1 Z-Scan at power reference point (850 MHz CH4233)

WCDMA 850 Left Cheek Middle

Date/Time: 2011-3-20 11:29:25
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.90 mho/m; εr = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:23°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.748 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.5 V/m; Power Drift = -0.105 dB
Peak SAR (extrapolated) = 0.936 W/kg
SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.494 mW/g
Maximum value of SAR (measured) = 0.750 mW/g

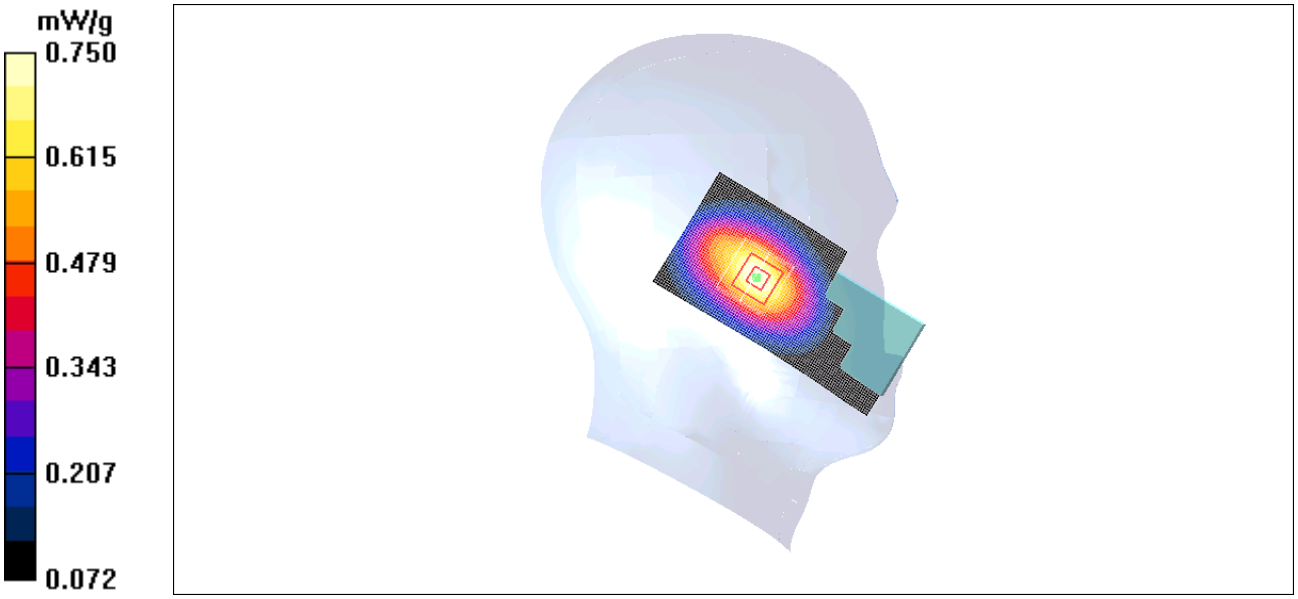


Fig. 26 850 MHz CH4182

WCDMA 850 Left Cheek Low
Date/Time: 2011-3-20 11:43:50
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.88 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature:23°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.643 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.8 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.806 W/kg
SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.429 mW/g
Maximum value of SAR (measured) = 0.643 mW/g

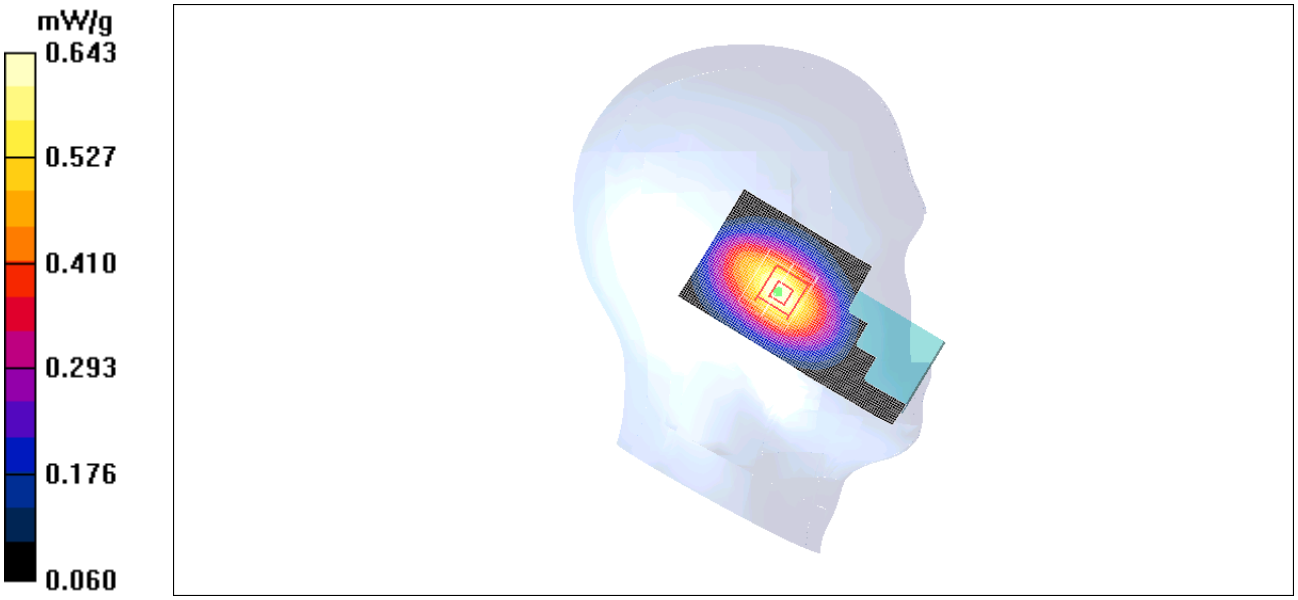


Fig. 27 850 MHz CH4132

WCDMA 850 Left Tilt High
Date/Time: 2011-3-20 11:58:24
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.901 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.366 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.7 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 0.460 W/kg
SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.250 mW/g
Maximum value of SAR (measured) = 0.366 mW/g

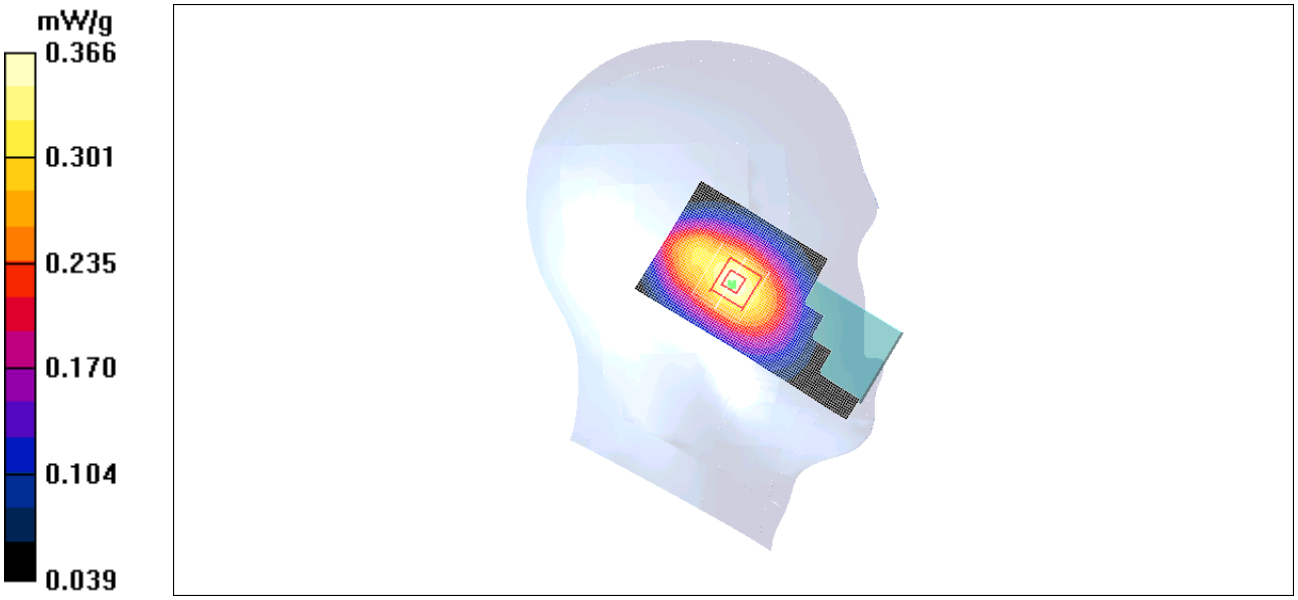


Fig.28 850 MHz CH4233

WCDMA 850 Left Tilt Middle
Date/Time: 2011-3-20 12:12:44
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.90 mho/m; εr = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:23°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.330 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 0.419 W/kg
SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.228 mW/g
Maximum value of SAR (measured) = 0.332 mW/g

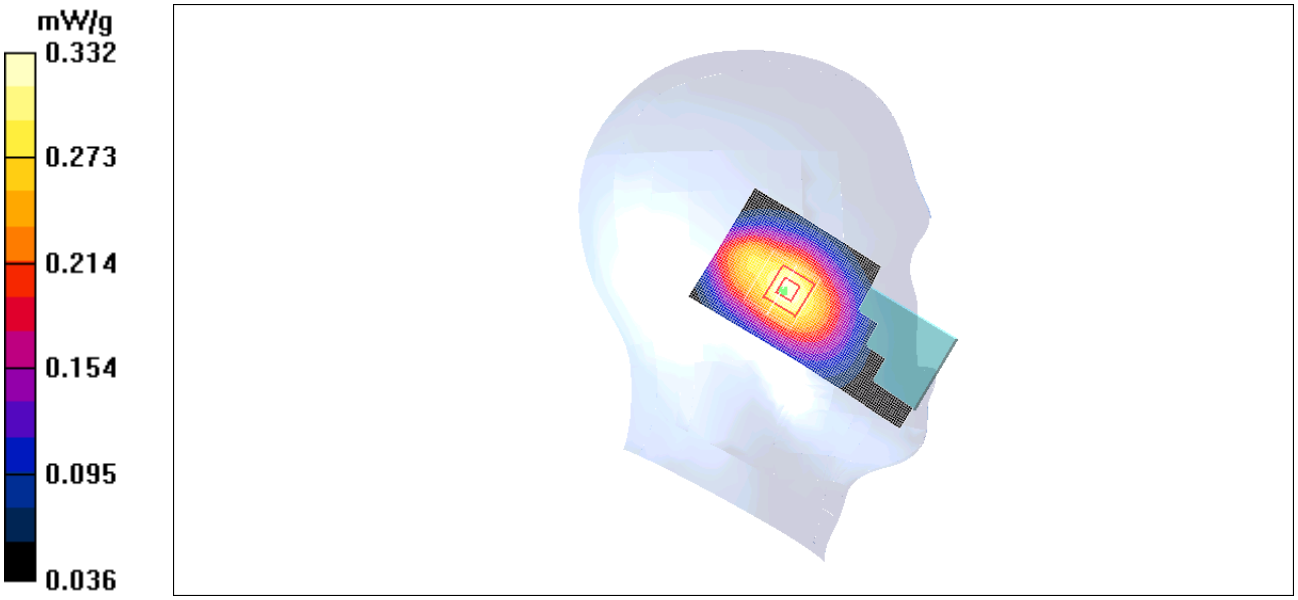


Fig.29 850 MHz CH4182

WCDMA 850 Left Tilt Low
Date/Time: 2011-3-20 12:27:01
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.88 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature:23°C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.312 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.5 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 0.387 W/kg
SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.214 mW/g
Maximum value of SAR (measured) = 0.309 mW/g

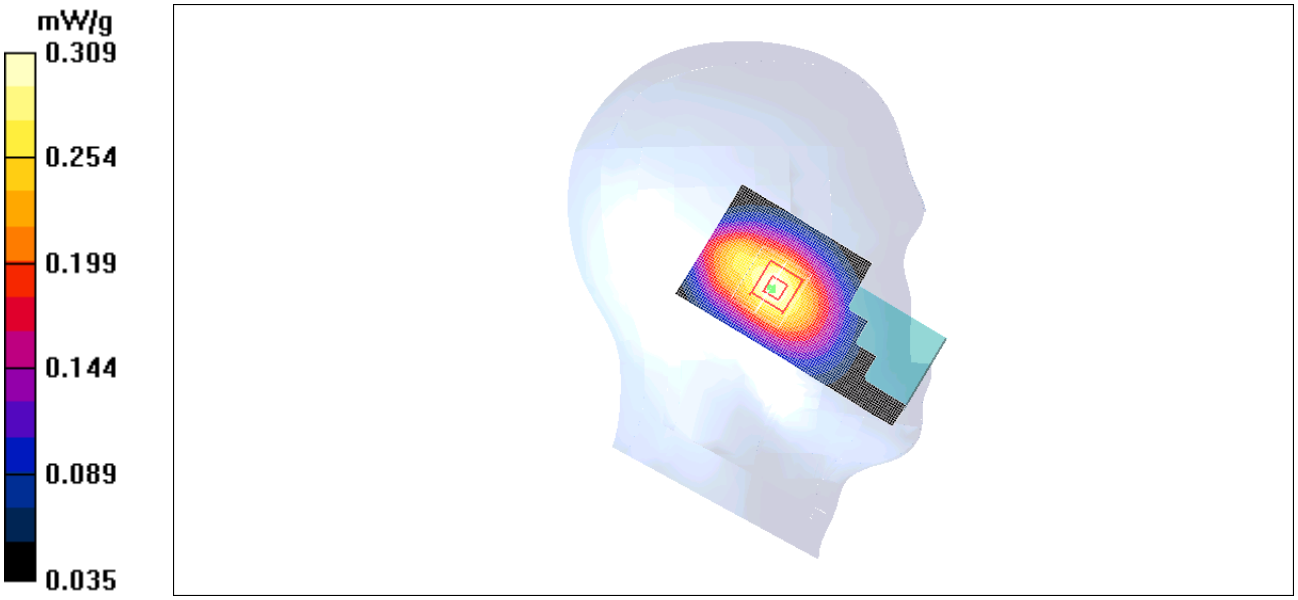


Fig. 30 850 MHz CH4132

WCDMA 850 Right Cheek High

Date/Time: 2011-3-20 12:41:58
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.901 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.870 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.2 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.805 mW/g; SAR(10 g) = 0.560 mW/g
Maximum value of SAR (measured) = 0.855 mW/g

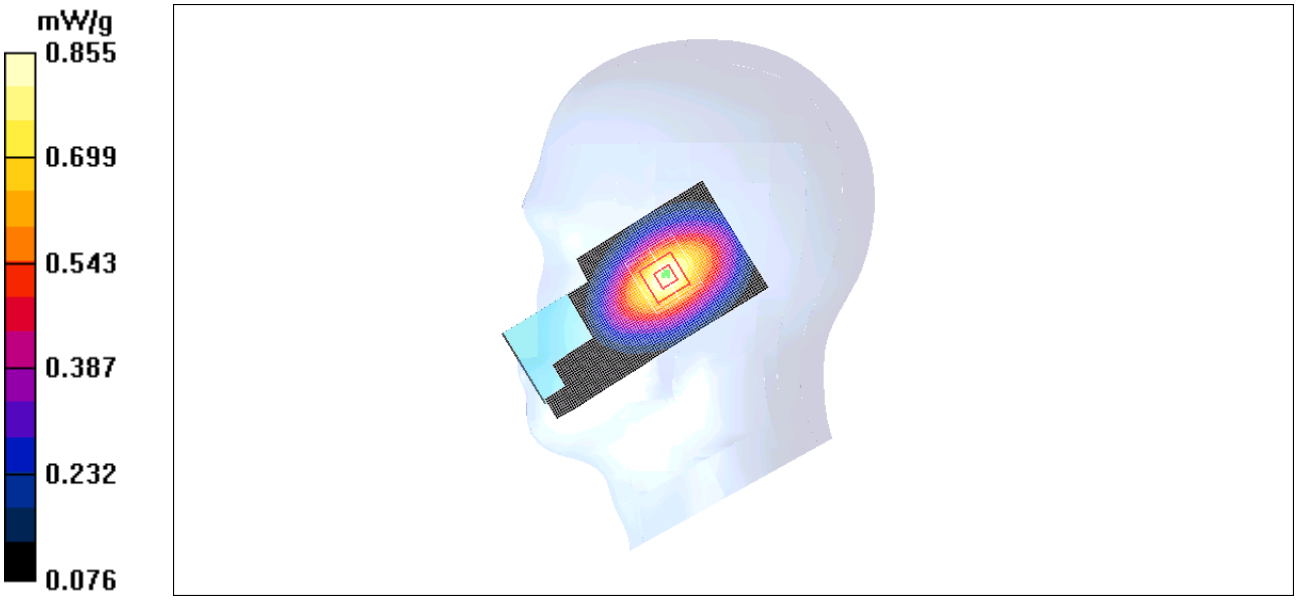


Fig. 31 850 MHz CH4233

WCDMA 850 Right Cheek Middle
Date/Time: 2011-3-20 12:56:20
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.90 mho/m; εr = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.759 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 0.955 W/kg
SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.496 mW/g
Maximum value of SAR (measured) = 0.766 mW/g

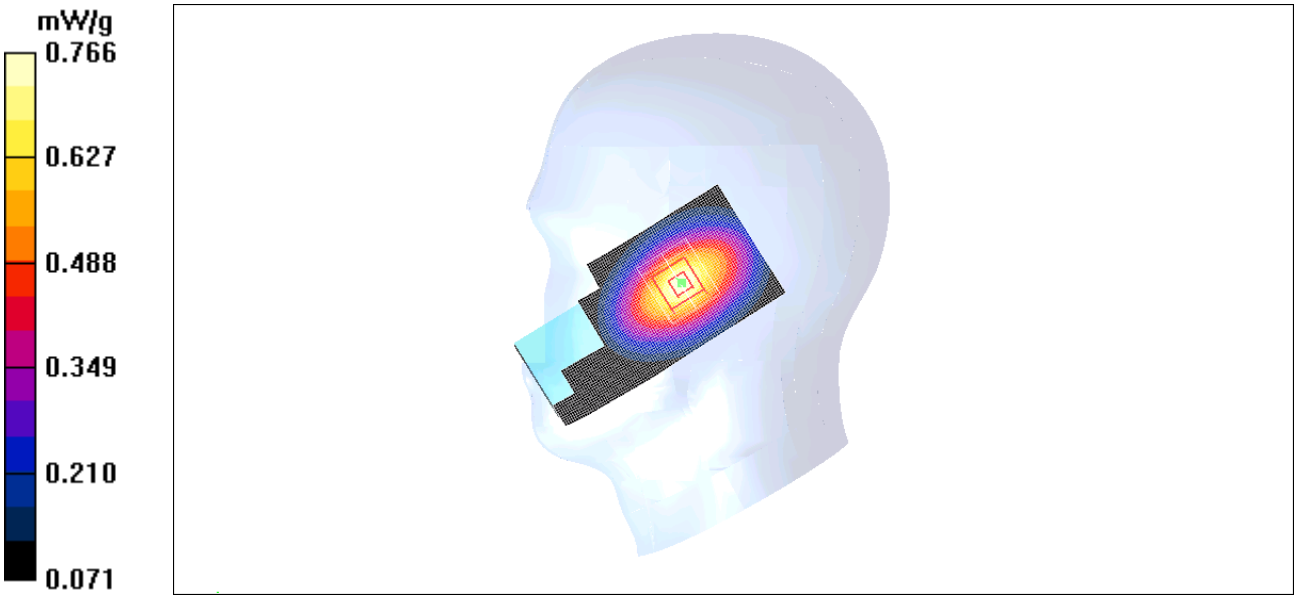


Fig. 32 850 MHz CH4182

WCDMA 850 Right Cheek Low
Date/Time: 2011-3-20 13:10:42
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.88 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.661 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.7 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.837 W/kg
SAR(1 g) = 0.626 mW/g; SAR(10 g) = 0.437 mW/g
Maximum value of SAR (measured) = 0.675 mW/g

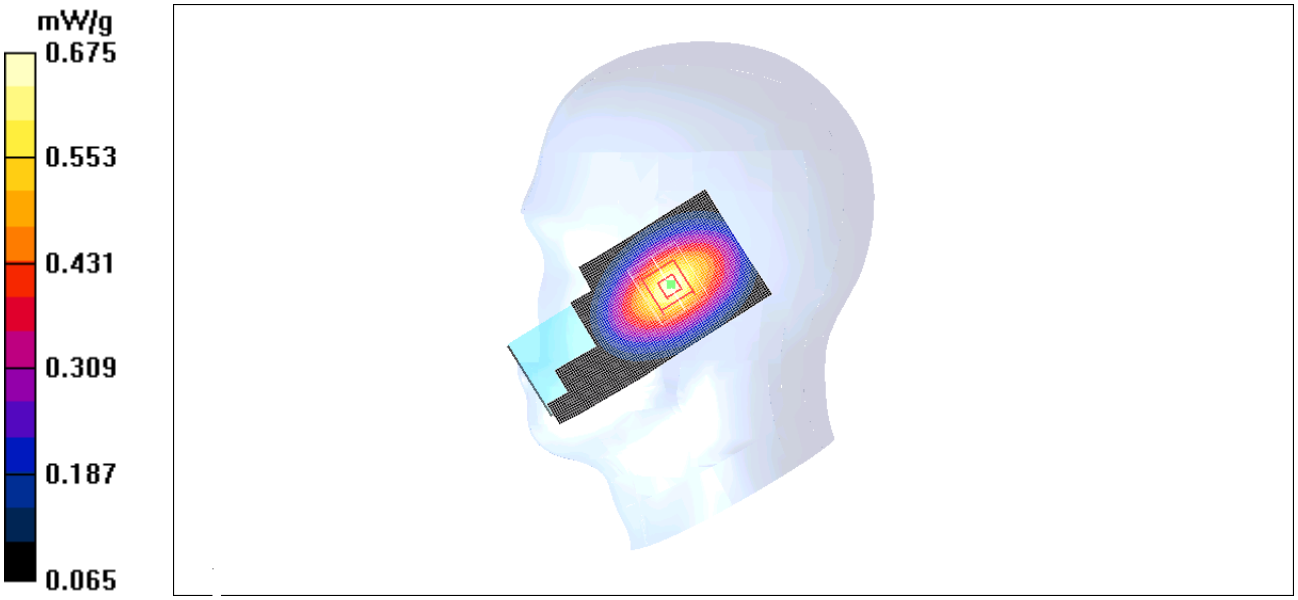


Fig. 33 850 MHz CH4132

WCDMA 850 Right Tilt High
Date/Time: 2011-3-20 13:25:27
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.901 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.394 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.1 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.493 W/kg
SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.266 mW/g
Maximum value of SAR (measured) = 0.389 mW/g

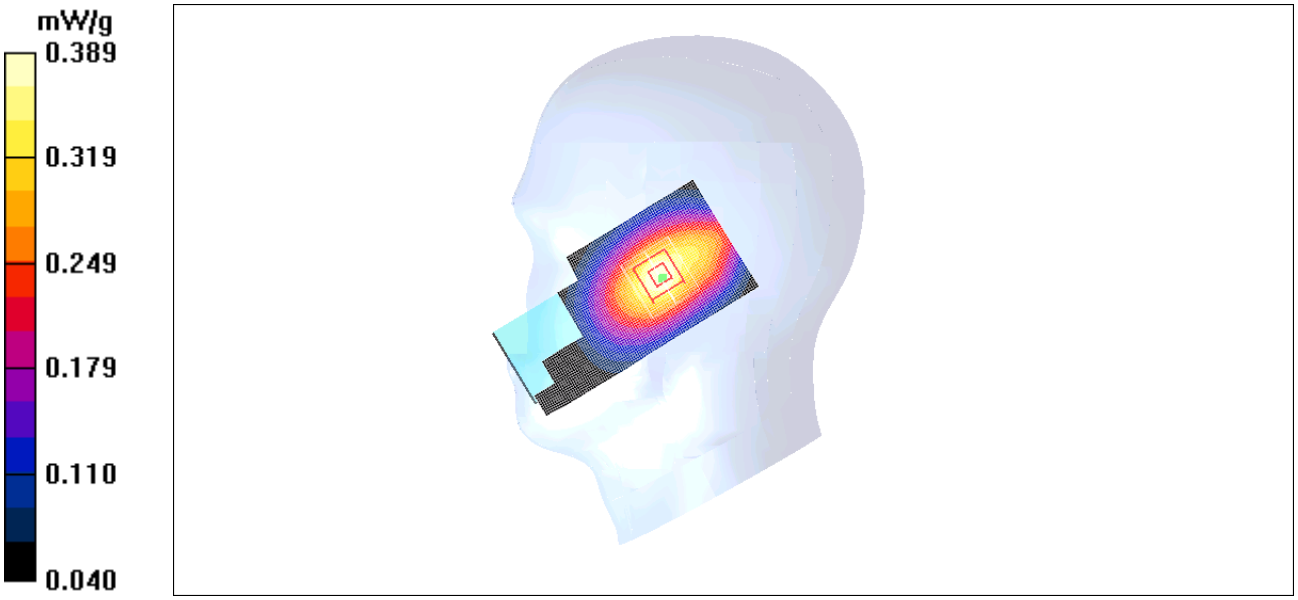


Fig.34 850 MHz CH4233

WCDMA 850 Right Tilt Middle
Date/Time: 2011-3-20 13:39:46
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.90 mho/m; εr = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.357 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.2 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.452 W/kg
SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.245 mW/g
Maximum value of SAR (measured) = 0.364 mW/g

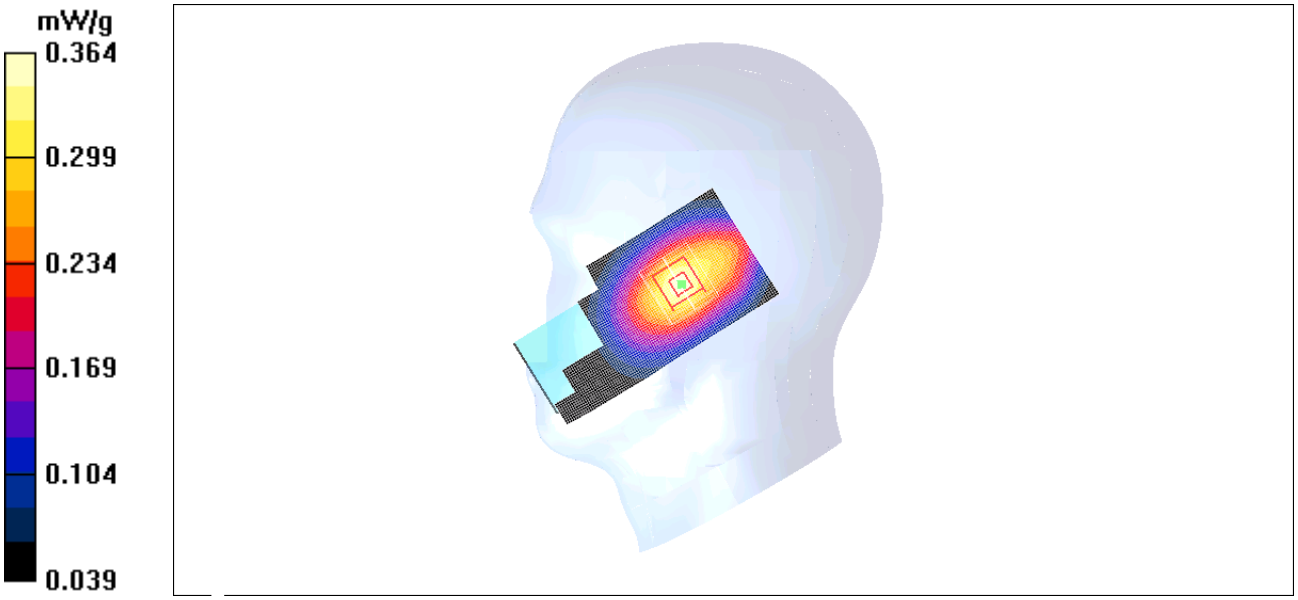


Fig.35 850 MHz CH4182

WCDMA 850 Right Tilt Low
Date/Time: 2011-3-20 13:54:11
Electronics: DAE4 Sn771
Medium: Head 900
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.88 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.345 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.1 V/m; Power Drift = 0.00428 dB
Peak SAR (extrapolated) = 0.433 W/kg
SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.237 mW/g
Maximum value of SAR (measured) = 0.346 mW/g

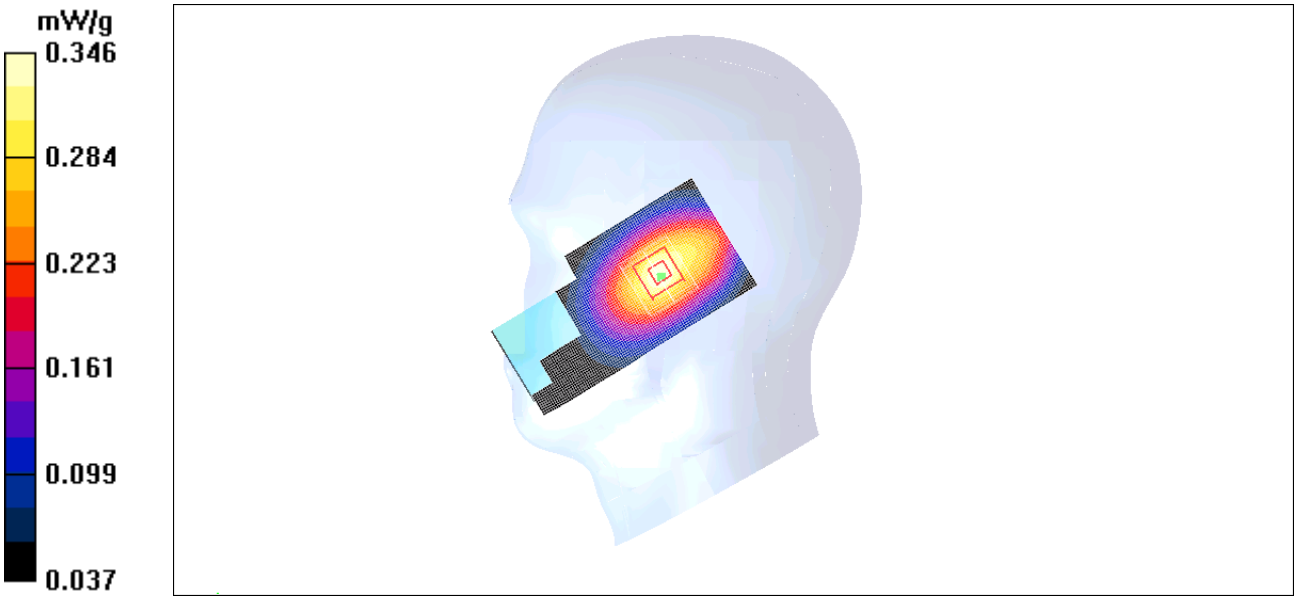


Fig. 36 850 MHz CH4132

850 Body Towards Phantom High with GPRS

Date/Time: 2011-3-20 15:07:13
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.94 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: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.785 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.1 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 0.972 W/kg
SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.529 mW/g
Maximum value of SAR (measured) = 0.756 mW/g

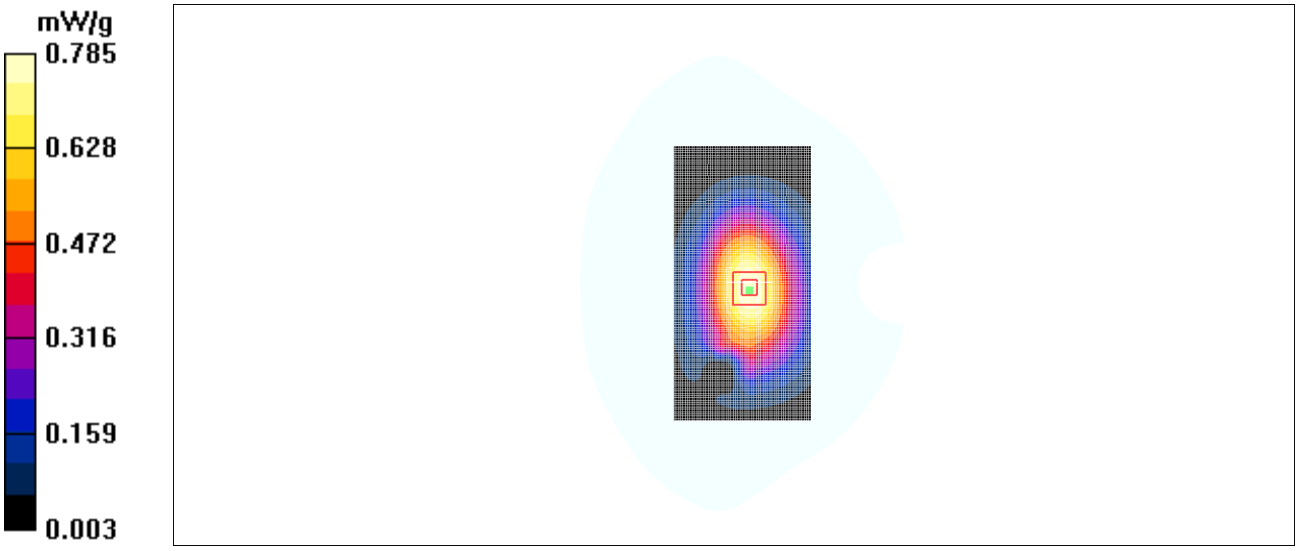


Fig. 37 850 MHz CH251

850 Body Towards Phantom Middle with GPRS

Date/Time: 2011-3-20 15:22:34
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.95 mho/m; εr = 54.7; 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
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.749 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.3 V/m; Power Drift = 0.035 dB
Peak SAR (extrapolated) = 0.924 W/kg
SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.508 mW/g
Maximum value of SAR (measured) = 0.720 mW/g

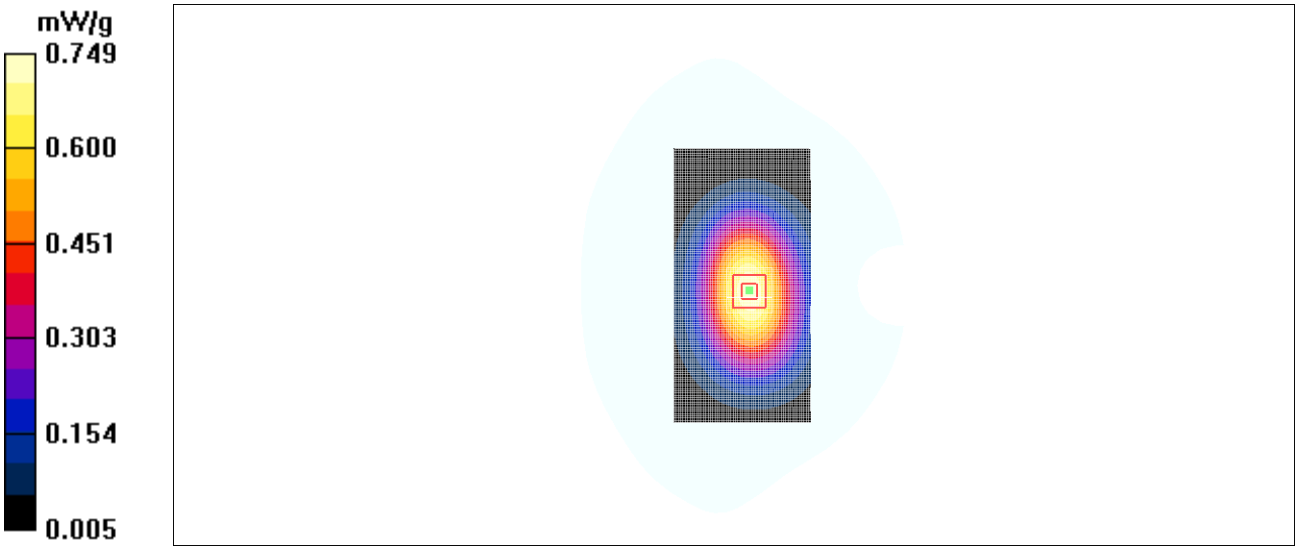


Fig. 38 850 MHz CH190

850 Body Towards Phantom Low with GPRS

Date/Time: 2011-3-20 15:37:59
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.93 mho/m; εr = 55.7; 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
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.711 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.9 V/m; Power Drift = -0.044 dB
Peak SAR (extrapolated) = 0.865 W/kg
SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.483 mW/g
Maximum value of SAR (measured) = 0.687 mW/g

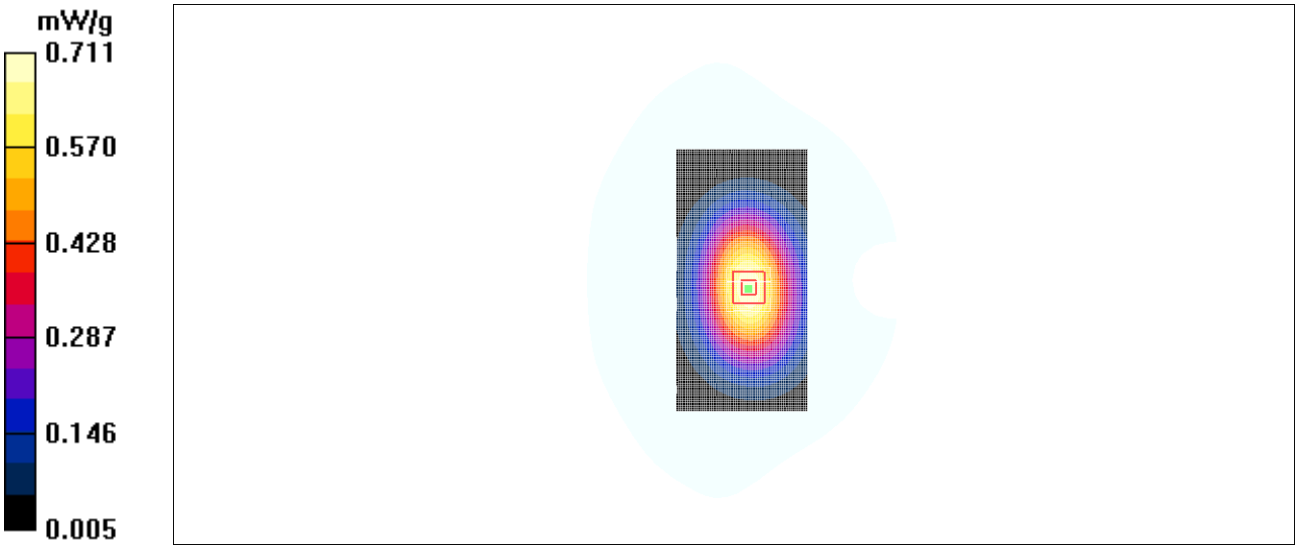


Fig. 39 850 MHz CH128

850 Body Towards Ground High with GPRS

Date/Time: 2011-3-20 15:54:25
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.94 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: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.880 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.4 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.824 mW/g; SAR(10 g) = 0.595 mW/g
Maximum value of SAR (measured) = 0.849 mW/g

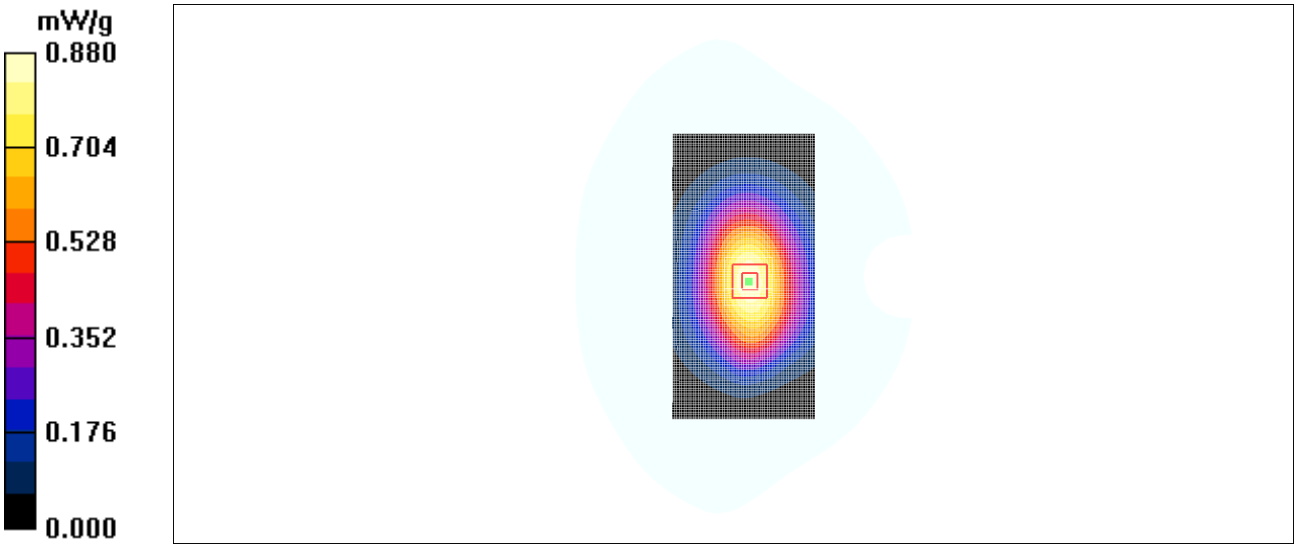


Fig. 40 850 MHz CH251

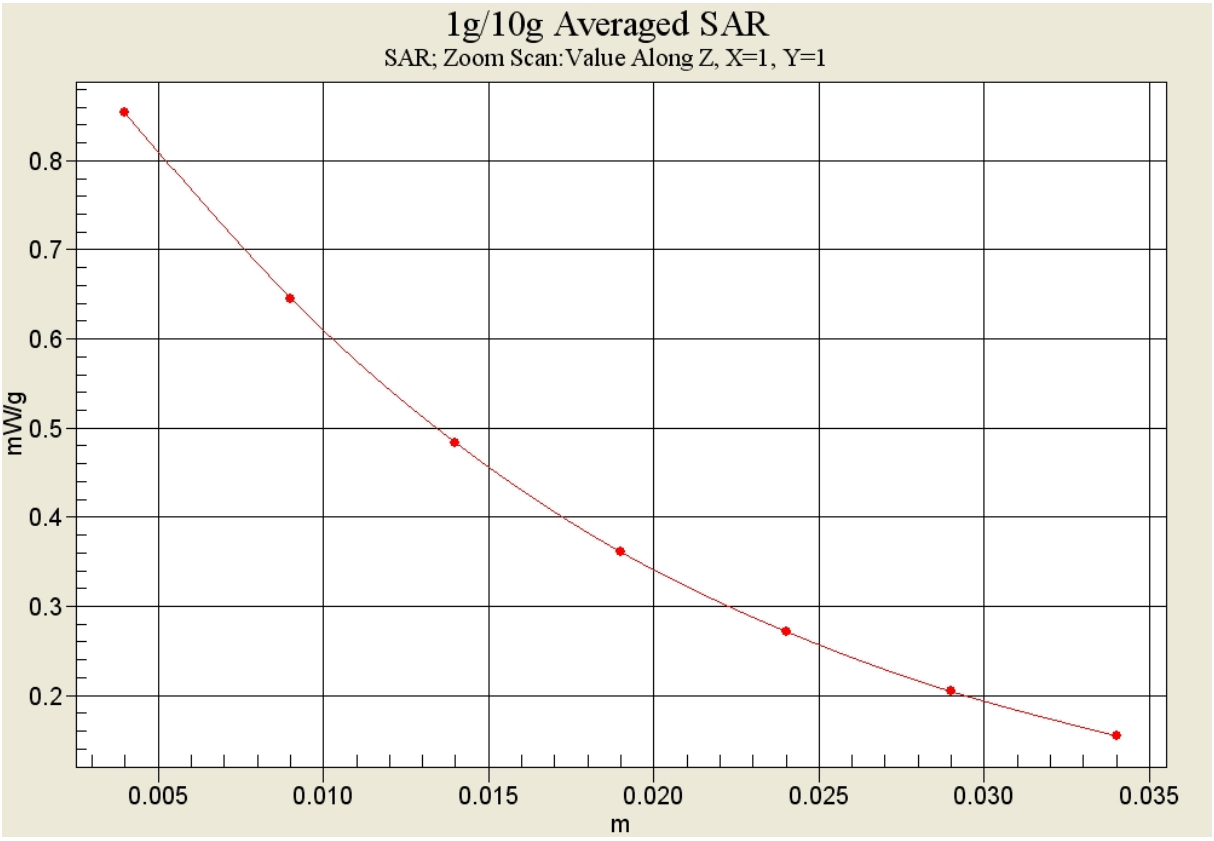


Fig. 40-1 Z-Scan at power reference point (850 MHz CH251)

850 Body Towards Ground Middle with GPRS

Date/Time: 2011-3-20 16:09:53
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.95 mho/m; εr = 54.7; 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
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.793 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.3 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 0.888 W/kg
SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.525 mW/g
Maximum value of SAR (measured) = 0.767 mW/g

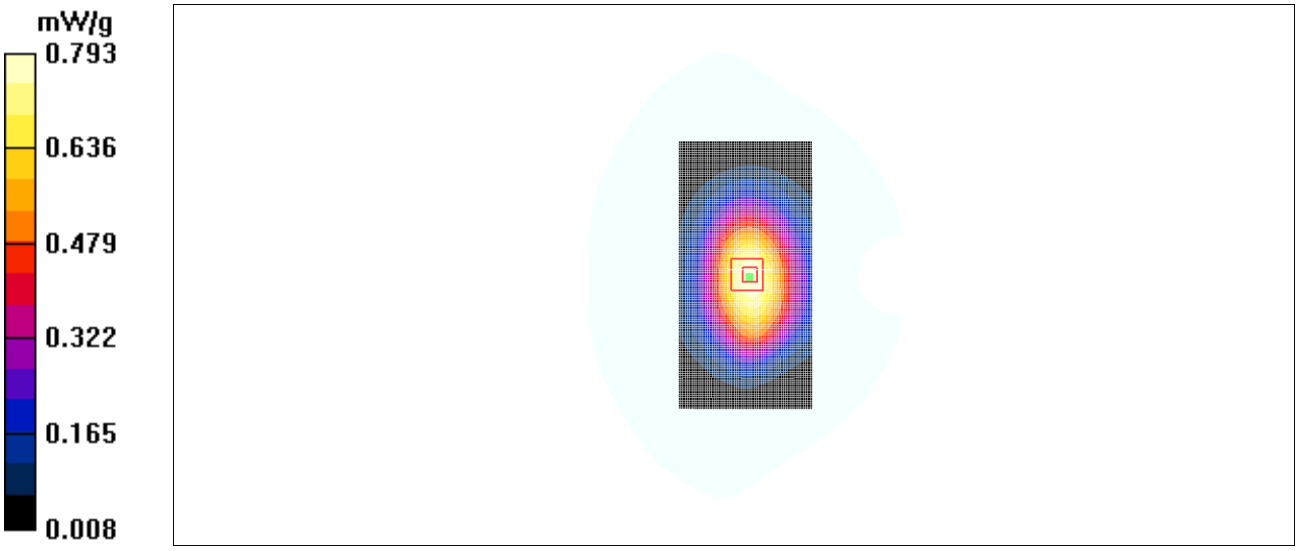


Fig. 41 850 MHz CH190

850 Body Towards Ground Low with GPRS

Date/Time: 2011-3-20 16:25:30
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.93 mho/m; εr = 55.7; 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
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.783 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.1 V/m; Power Drift = 0.048 dB
Peak SAR (extrapolated) = 0.918 W/kg
SAR(1 g) = 0.684 mW/g; SAR(10 g) = 0.490 mW/g
Maximum value of SAR (measured) = 0.721 mW/g

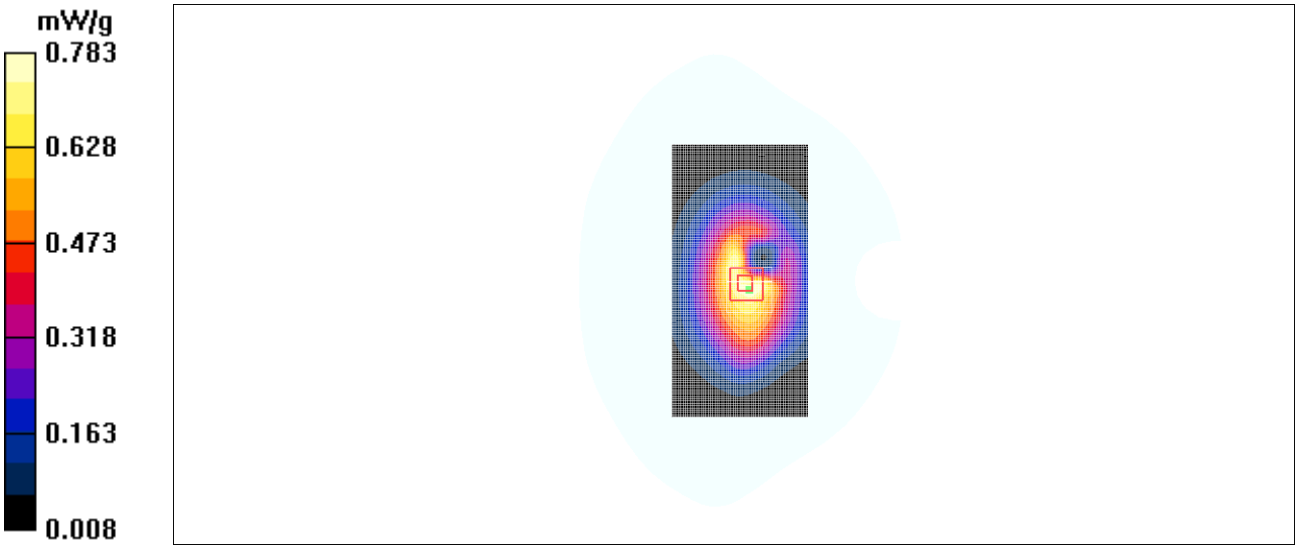


Fig. 42 850 MHz CH128

850 Body Towards Ground High with EGPRS

Date/Time: 2011-3-20 16:42:34
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.94 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: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.995 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.571 mW/g
Maximum value of SAR (measured) = 0.831 mW/g

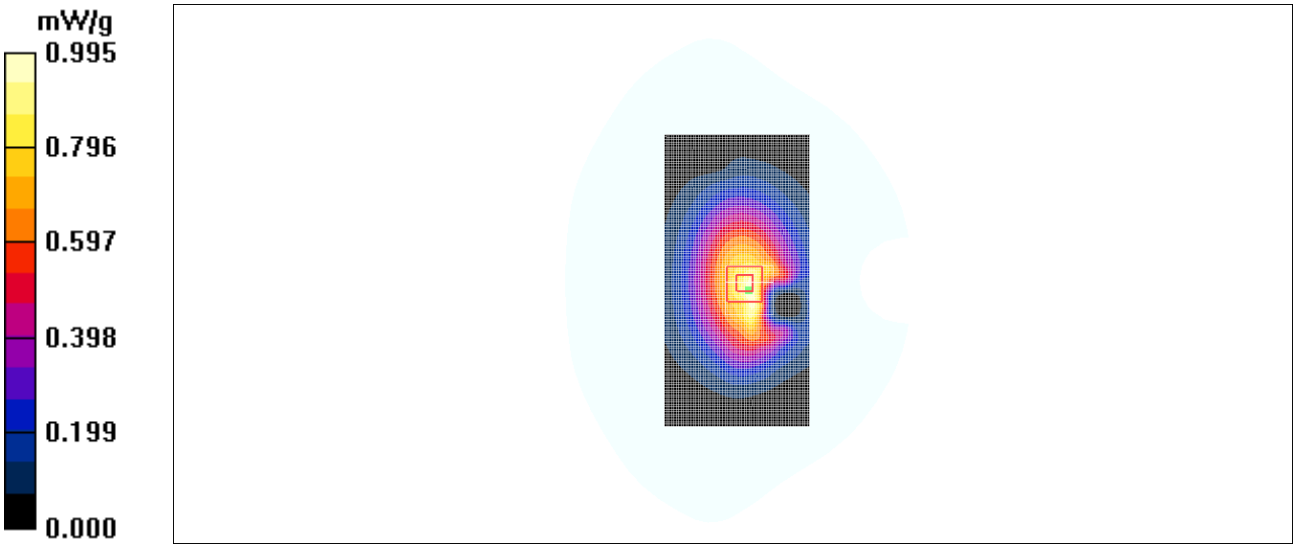


Fig. 43 850 MHz CH128

1900 Body Towards Phantom High with GPRS

Date/Time: 2011-3-21 13:43:16
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.55 mho/m; εr = 52.6; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.143 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = 0.146 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.078 mW/g
Maximum value of SAR (measured) = 0.129 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = 0.146 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.116 mW/g

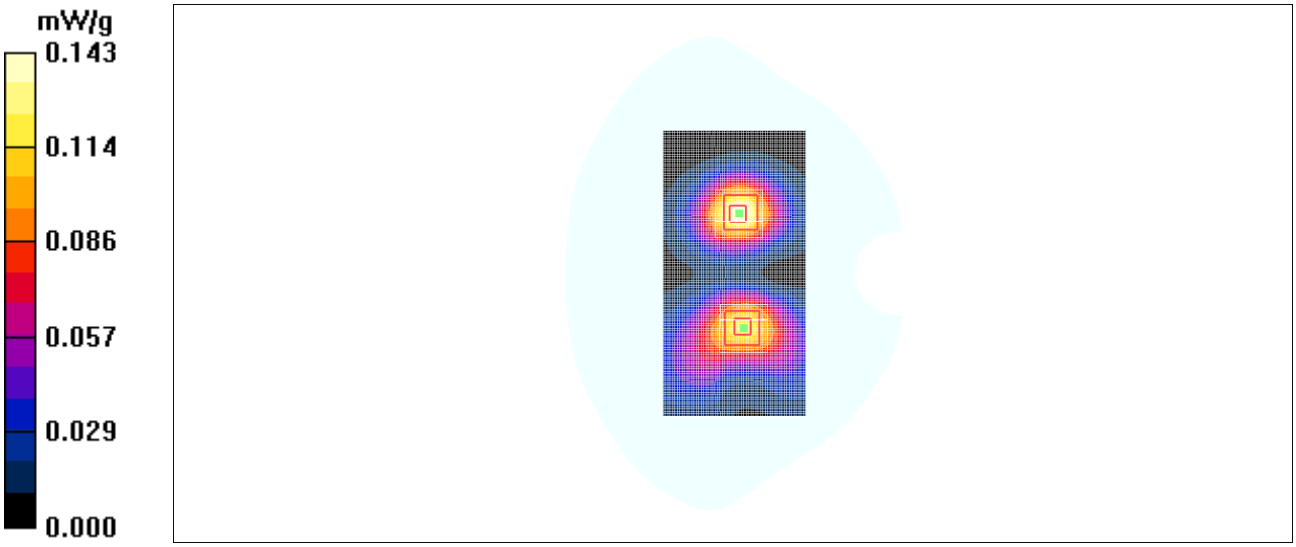


Fig. 44 1900 MHz CH810

1900 Body Towards Phantom Middle with GPRS

Date/Time: 2011-3-21 13:58:37
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; εr = 53.1; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.186 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.66 V/m; Power Drift = 0.178 dB
Peak SAR (extrapolated) = 0.259 W/kg
SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.103 mW/g
Maximum value of SAR (measured) = 0.167 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.66 V/m; Power Drift = 0.178 dB
Peak SAR (extrapolated) = 0.261 W/kg
SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.153 mW/g

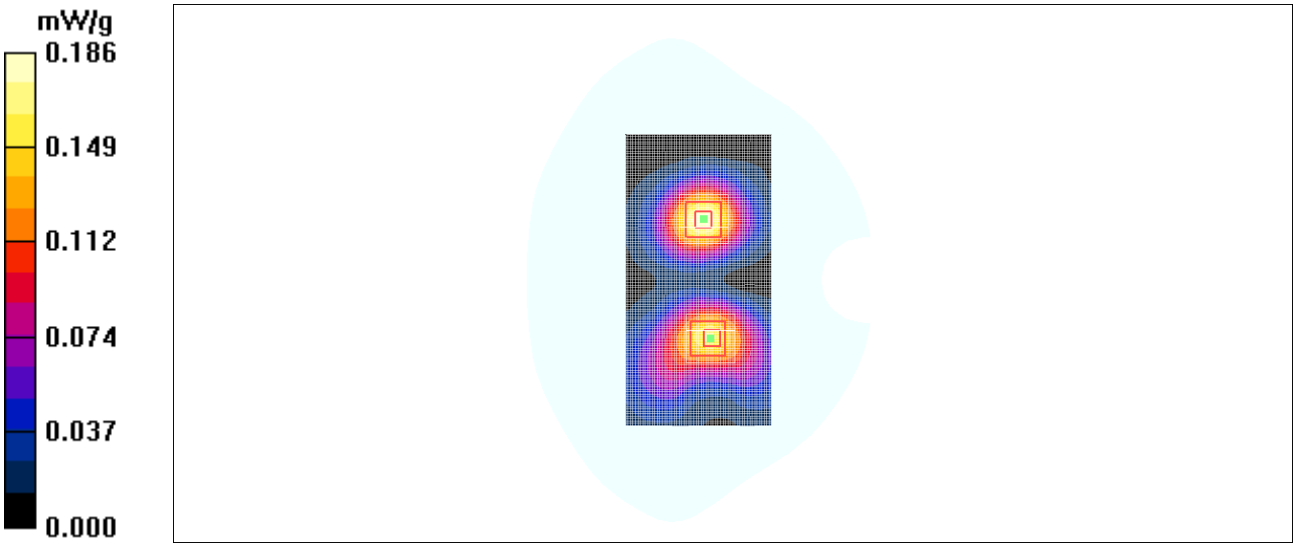


Fig. 45 1900 MHz CH661

1900 Body Towards Phantom Low with GPRS
Date/Time: 2011-3-21 14:13:58
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.48 mho/m; εr = 53.5; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.248 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.54 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.378 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.225 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.54 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.788 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.127 mW/g
Maximum value of SAR (measured) = 0.202 mW/g

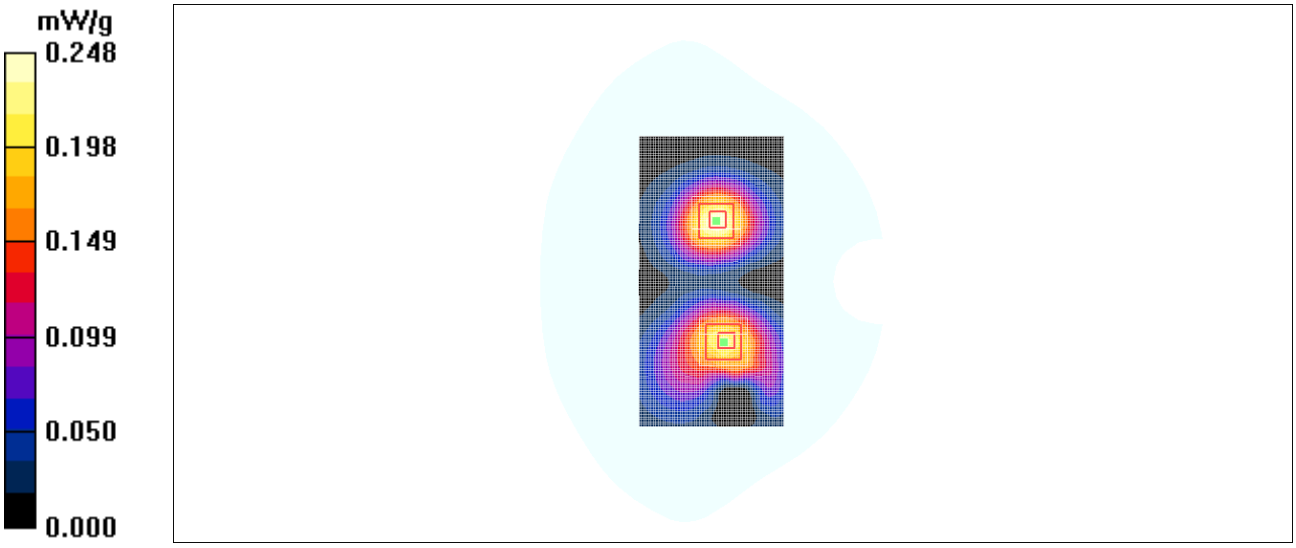


Fig. 46 1900 MHz CH512

1900 Body Towards Ground High with GPRS

Date/Time: 2011-3-21 14:29:33
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.55 mho/m; εr = 52.6; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.361 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.530 W/kg
SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.203 mW/g
Maximum value of SAR (measured) = 0.353 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.562 W/kg
SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.194 mW/g
Maximum value of SAR (measured) = 0.330 mW/g

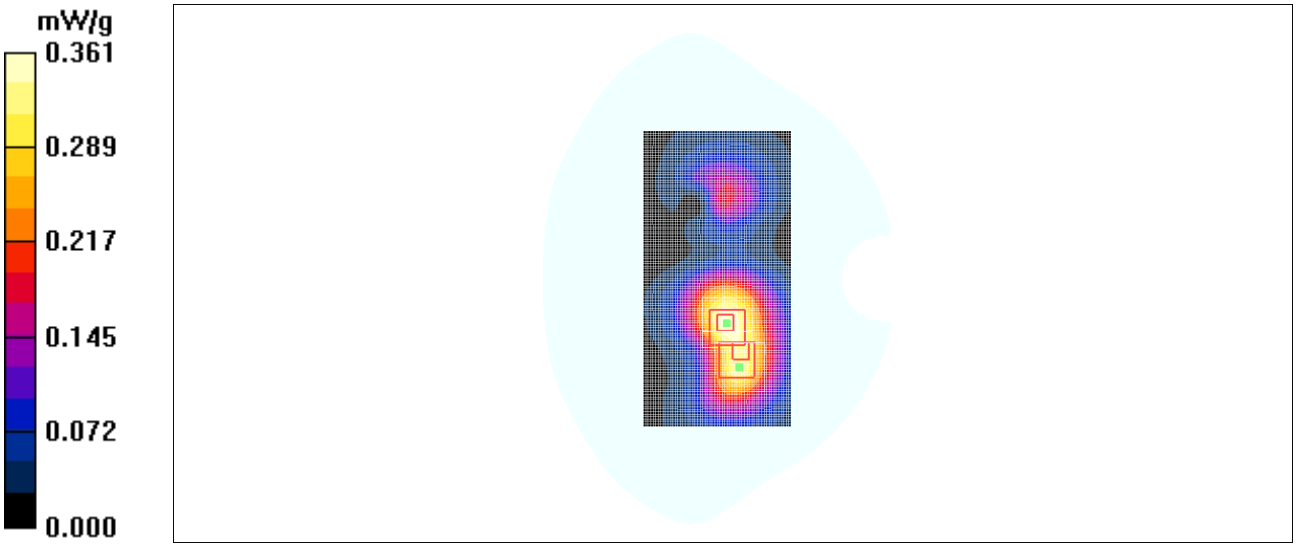


Fig. 47 1900 MHz CH810

1900 Body Towards Ground Middle with GPRS

Date/Time: 2011-3-21 14:44:57
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; εr = 53.1; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.501 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.687 W/kg
SAR(1 g) = 0.437 mW/g; SAR(10 g) = 0.276 mW/g
Maximum value of SAR (measured) = 0.460 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.654 W/kg
SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.255 mW/g
Maximum value of SAR (measured) = 0.442 mW/g

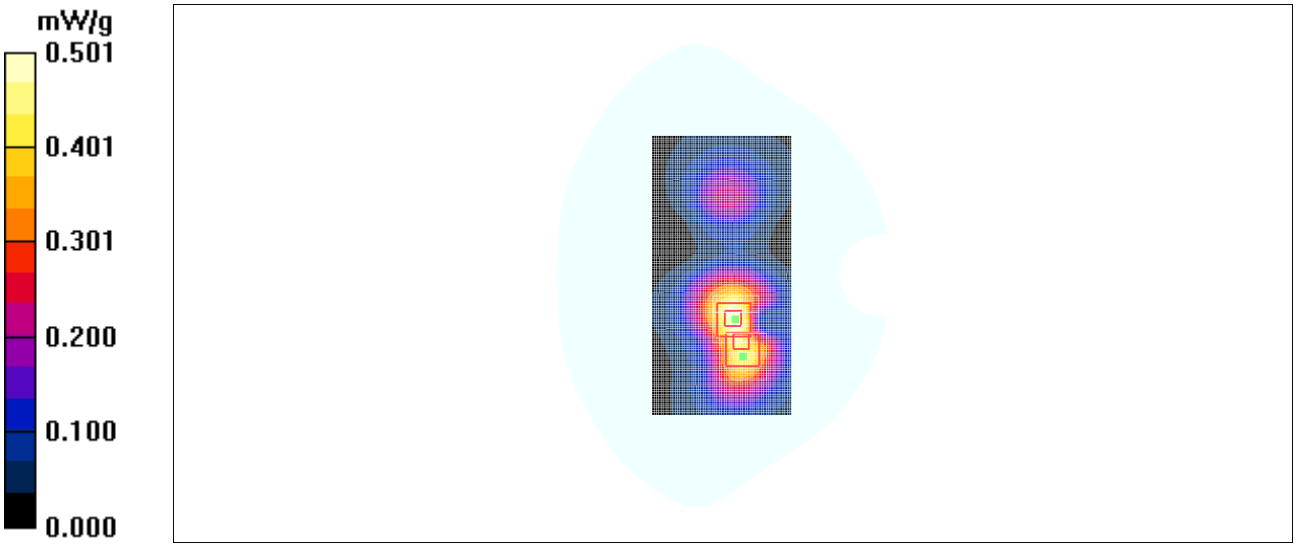


Fig. 48 1900 MHz CH661

1900 Body Towards Ground Low with GPRS

Date/Time: 2011-3-21 15:00:23
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.48 mho/m; εr = 53.5; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.582 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.770 W/kg
SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.342 mW/g
Maximum value of SAR (measured) = 0.567 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.802 W/kg
SAR(1 g) = 0.511 mW/g; SAR(10 g) = 0.324 mW/g
Maximum value of SAR (measured) = 0.550 mW/g

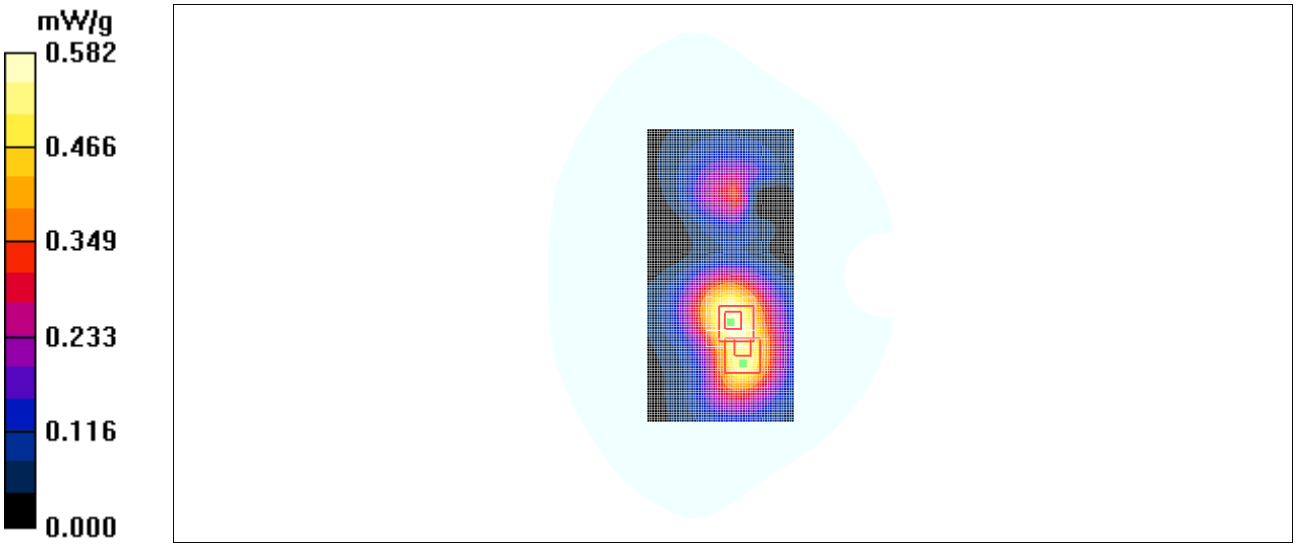


Fig. 49 1900 MHz CH512

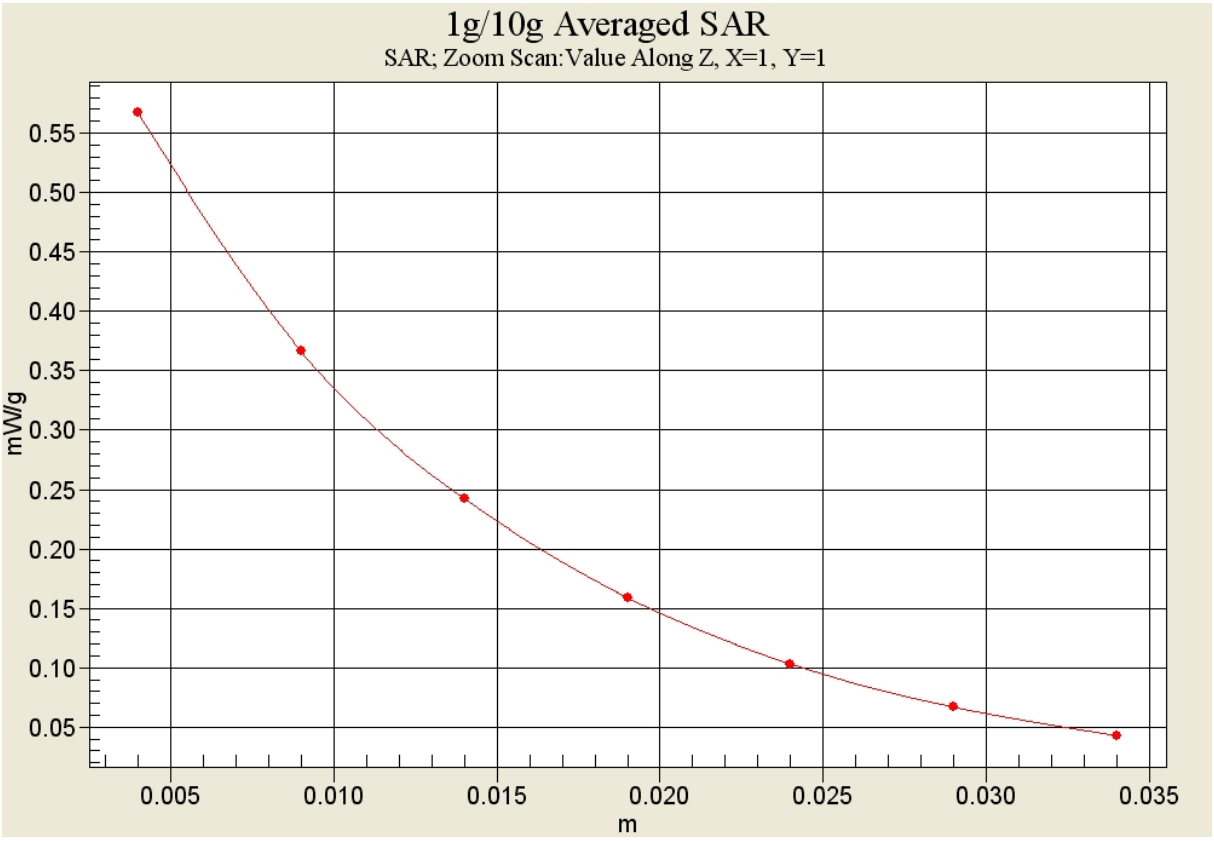


Fig. 49-1 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Ground Low with EGPRS

Date/Time: 2011-3-21 15:17:36
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.48 mho/m; εr = 53.5; 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
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.564 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.40 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.528 mW/g; SAR(10 g) = 0.339 mW/g
Maximum value of SAR (measured) = 0.546 mW/g

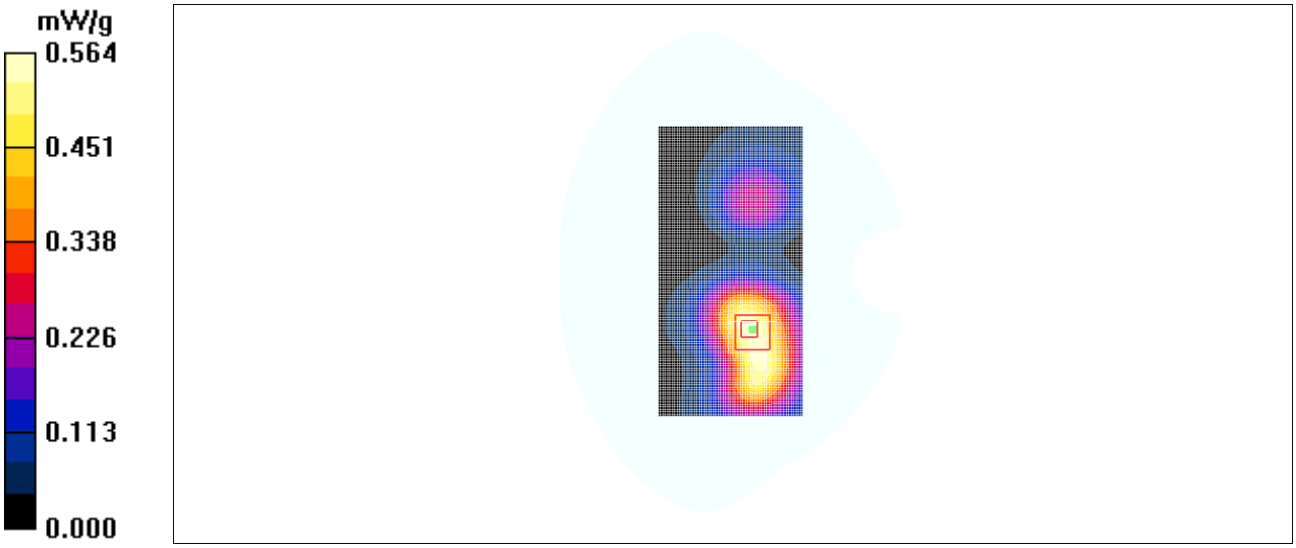


Fig. 50 1900 MHz CH512

WCDMA850 Body Towards Phantom High
Date/Time: 2011-3-20 17:40:55
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.94 mho/m; εr = 54.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.529 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.7 V/m; Power Drift = -0.077 dB
Peak SAR (extrapolated) = 0.643 W/kg
SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.356 mW/g
Maximum value of SAR (measured) = 0.509 mW/g

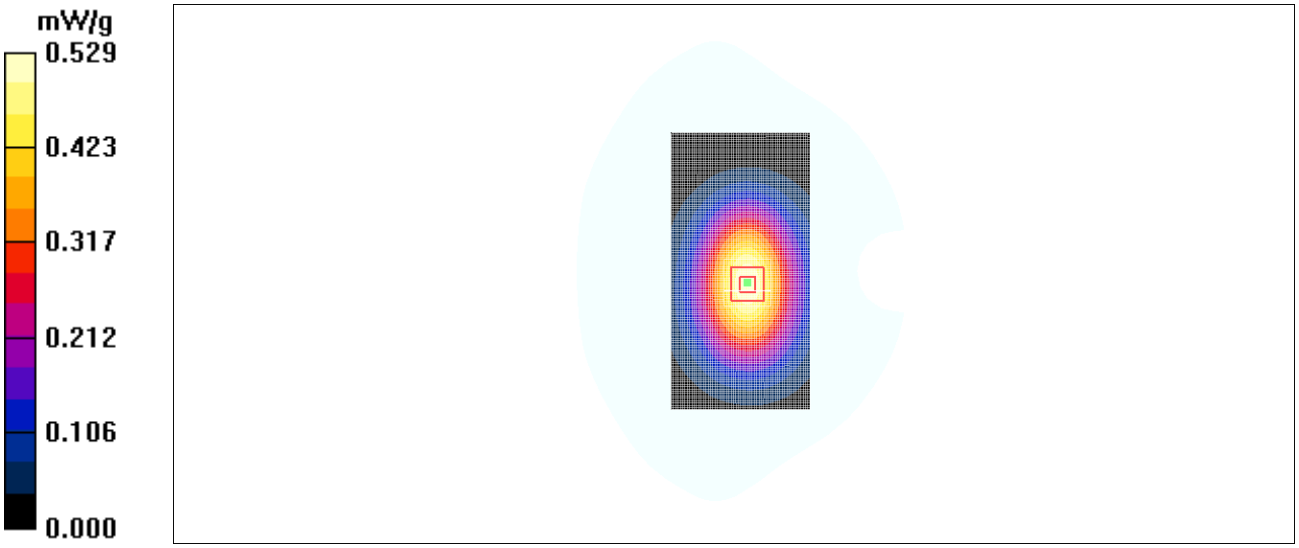


Fig. 51 850 MHz CH4233

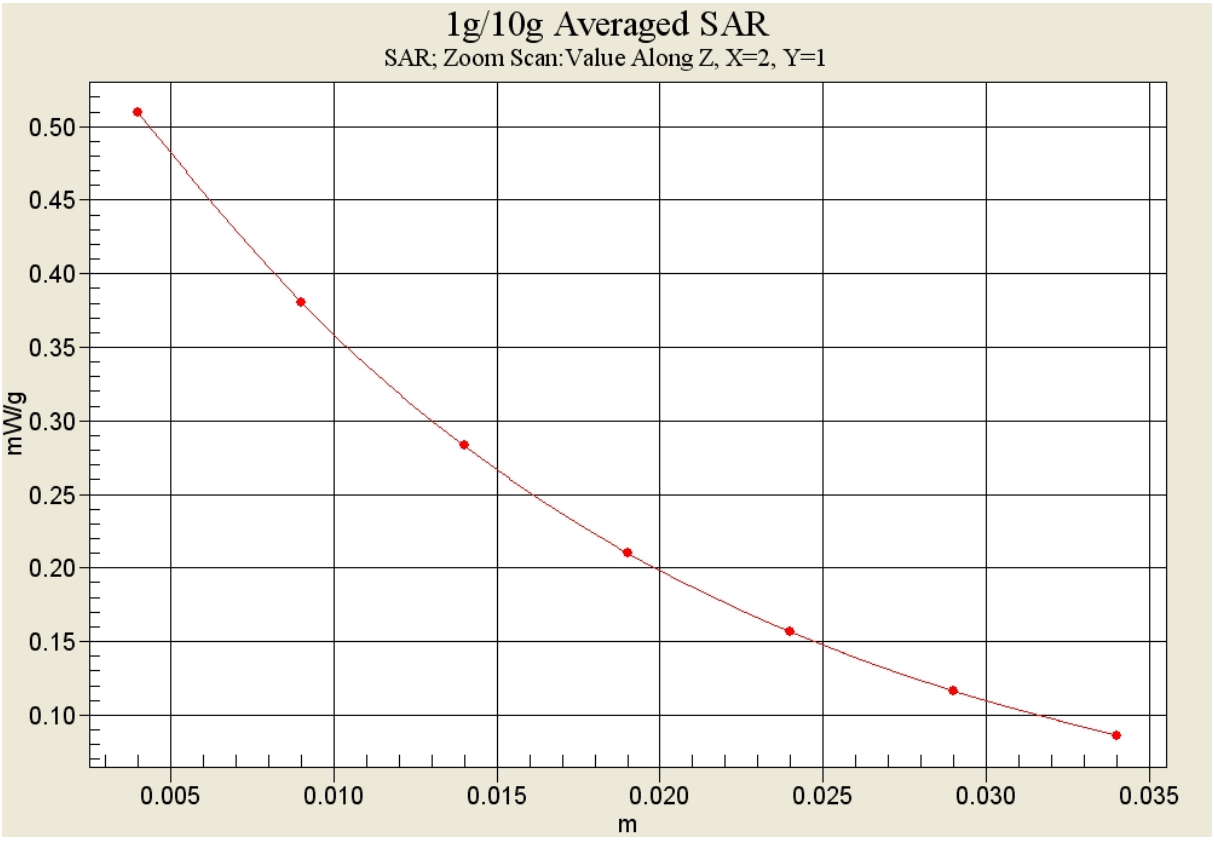


Fig. 51-1 Z-Scan at power reference point (850 MHz CH4233)

WCDMA 850 Body Towards Phantom Middle

Date/Time: 2011-3-20 17:58:55
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.95 mho/m; εr = 54.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.487 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.8 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.590 W/kg
SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.330 mW/g
Maximum value of SAR (measured) = 0.471 mW/g

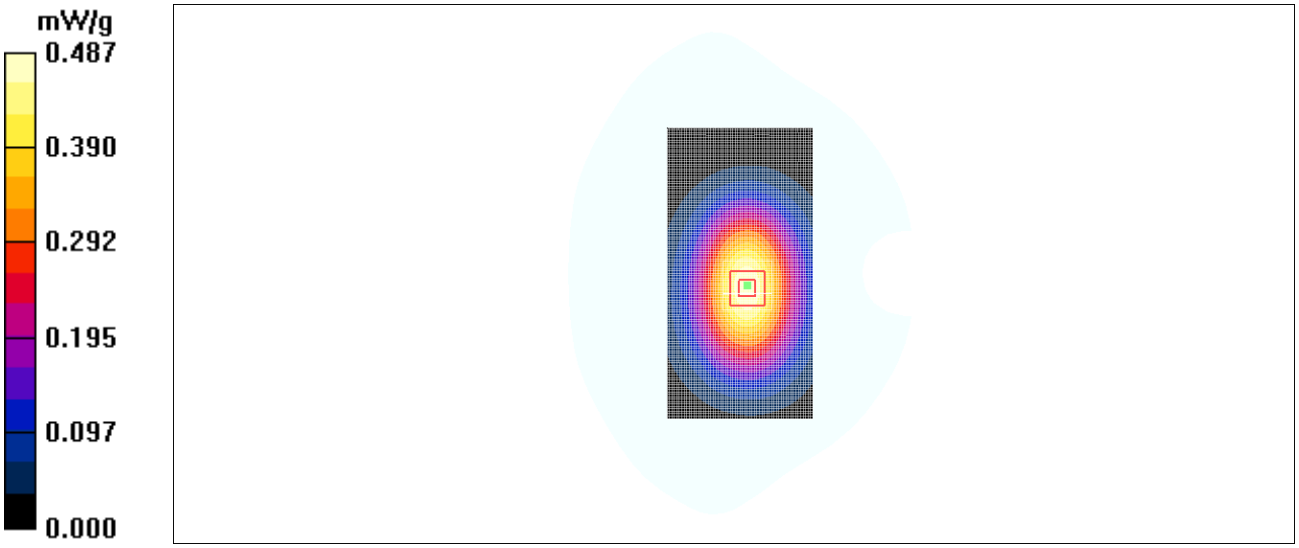


Fig. 52 850 MHz CH4182

WCDMA 850 Body Towards Phantom Low
Date/Time: 2011-3-20 18:15:37
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.94 mho/m; εr = 55.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.476 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.8 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 0.589 W/kg
SAR(1 g) = 0.451 mW/g; SAR(10 g) = 0.325 mW/g
Maximum value of SAR (measured) = 0.464 mW/g

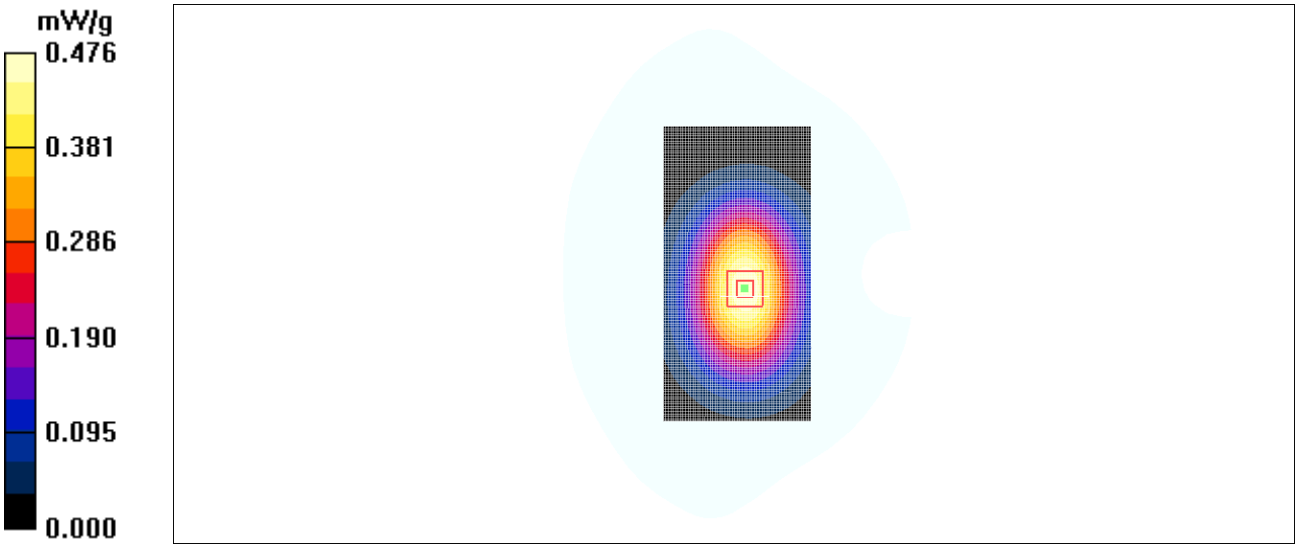


Fig. 53 850 MHz CH4132

WCDMA 850 Body Towards Ground High

Date/Time: 2011-3-20 18:32:59
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.94 mho/m; εr = 54.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.475 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 0.587 W/kg
SAR(1 g) = 0.448 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.465 mW/g

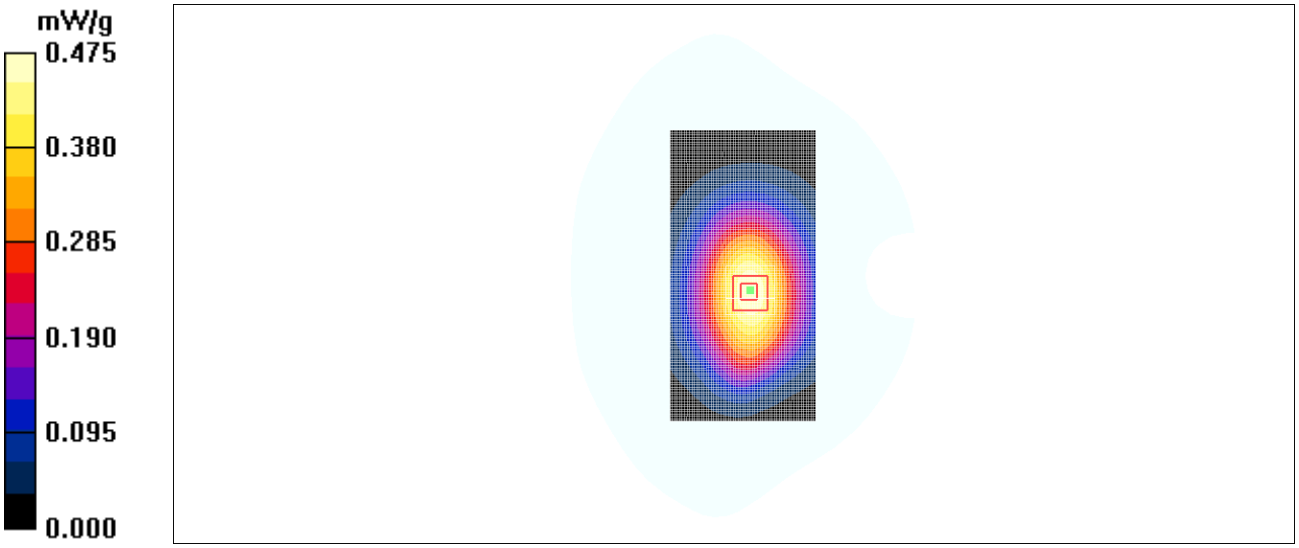


Fig. 54 850 MHz CH4233

WCDMA 850 Body Towards Ground Middle
Date/Time: 2011-3-20 18:49:18
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.95 mho/m; εr = 54.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.428 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.5 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.529 W/kg
SAR(1 g) = 0.409 mW/g; SAR(10 g) = 0.296 mW/g
Maximum value of SAR (measured) = 0.421 mW/g

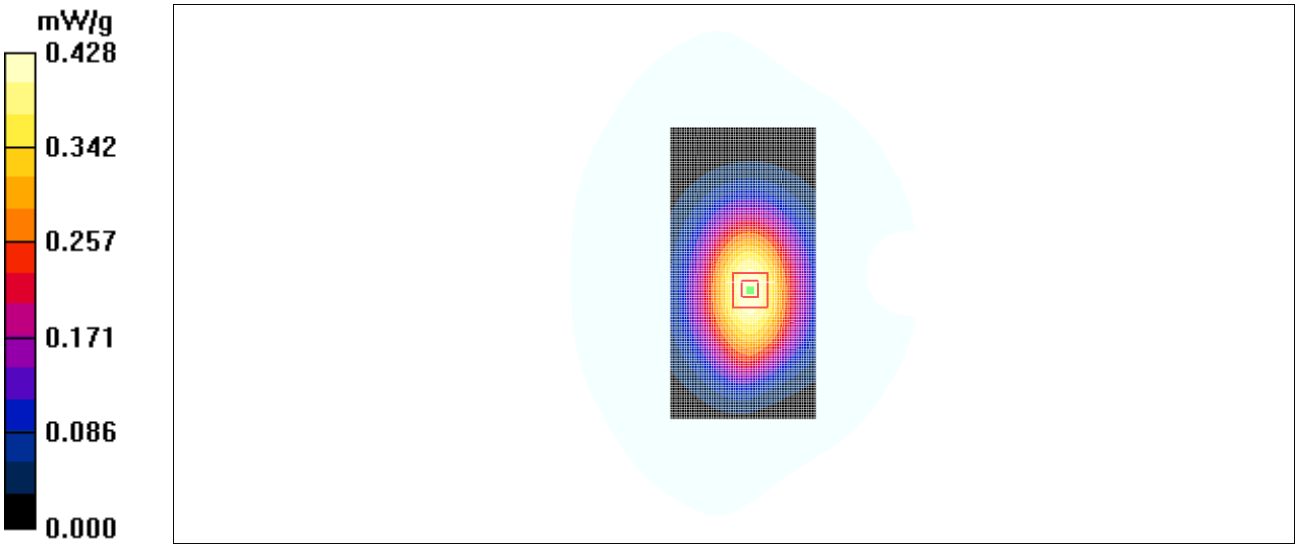


Fig. 55 850 MHz CH4182

WCDMA 850 Body Towards Ground Low
Date/Time: 2011-3-20 19:06:41
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.94 mho/m; εr = 55.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.475 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.5 V/m; Power Drift = 0.086 dB
Peak SAR (extrapolated) = 0.583 W/kg
SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.325 mW/g
Maximum value of SAR (measured) = 0.464 mW/g

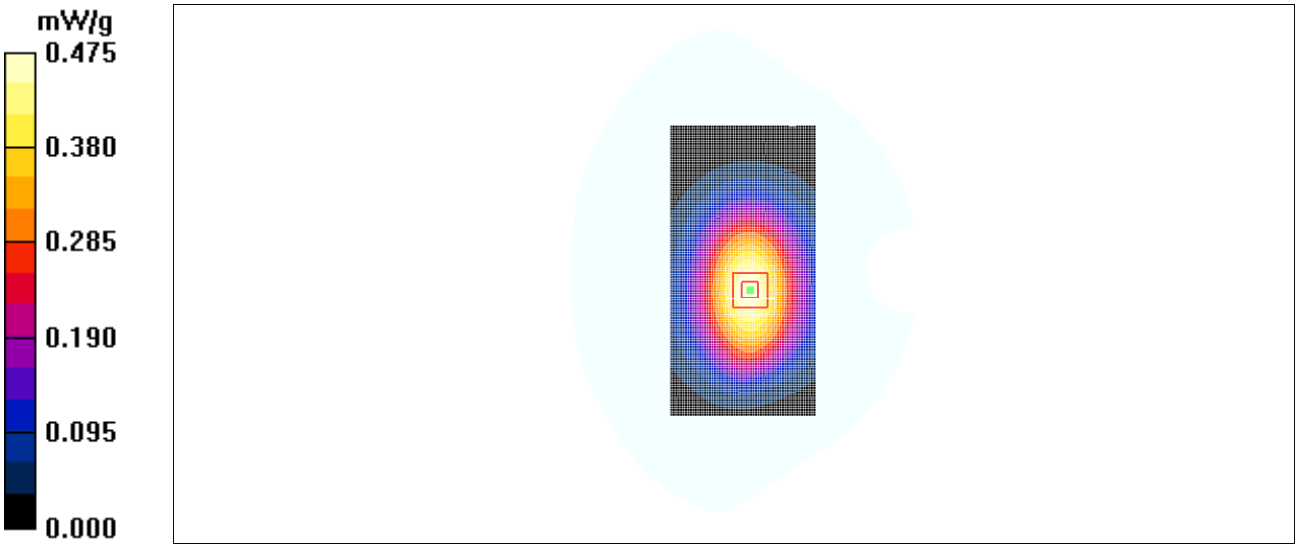


Fig. 56 850 MHz CH4132

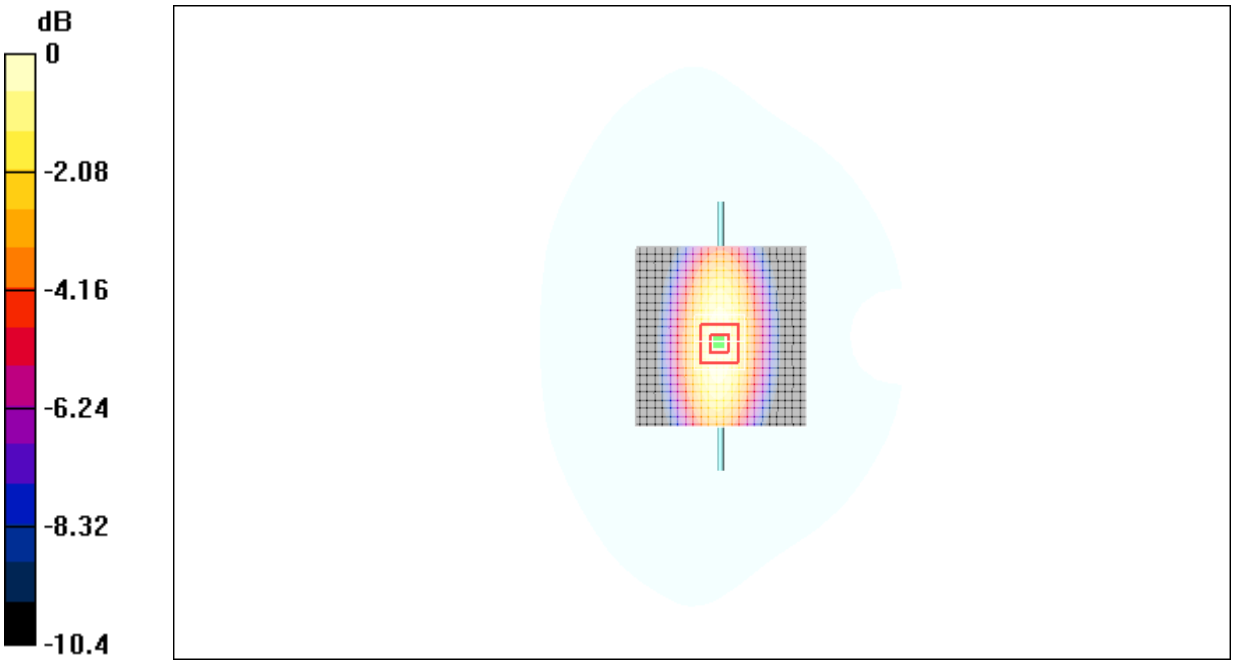
ANNEX D SYSTEM VALIDATION RESULTS

835MHz

Date/Time: 2011-3-20 7:29:50
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 41.9; 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) = 2.56 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.0 V/m; Power Drift = -0.105 dB
Peak SAR (extrapolated) = 3.37 W/kg
SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.50 mW/g
Maximum value of SAR (measured) = 2.49 mW/g



0 dB = 2.49mW/g

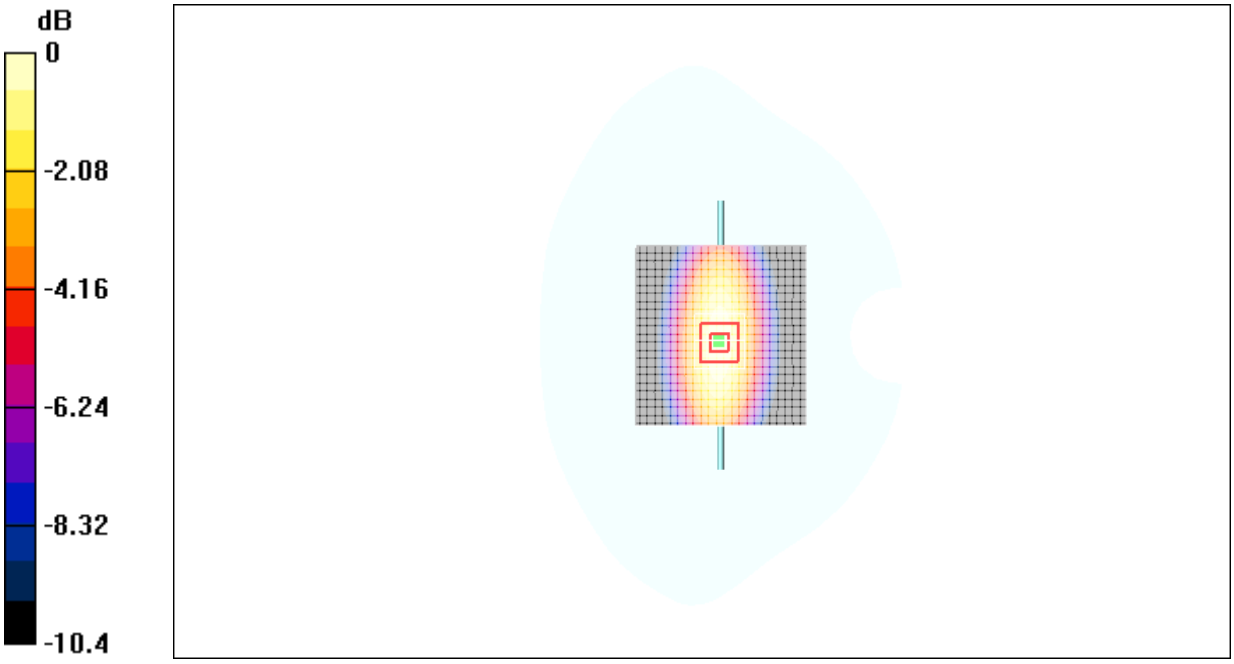
Fig.57 validation 835MHz 250mW

835MHz

Date/Time: 2011-3-20 14:34:07
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.95 mho/m; ε_r = 54.7; 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) = 2.50 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.1 V/m; Power Drift = 0.087 dB
Peak SAR (extrapolated) = 3.29 W/kg
SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.52 mW/g
Maximum value of SAR (measured) = 2.44 mW/g



0 dB = 2.44mW/g

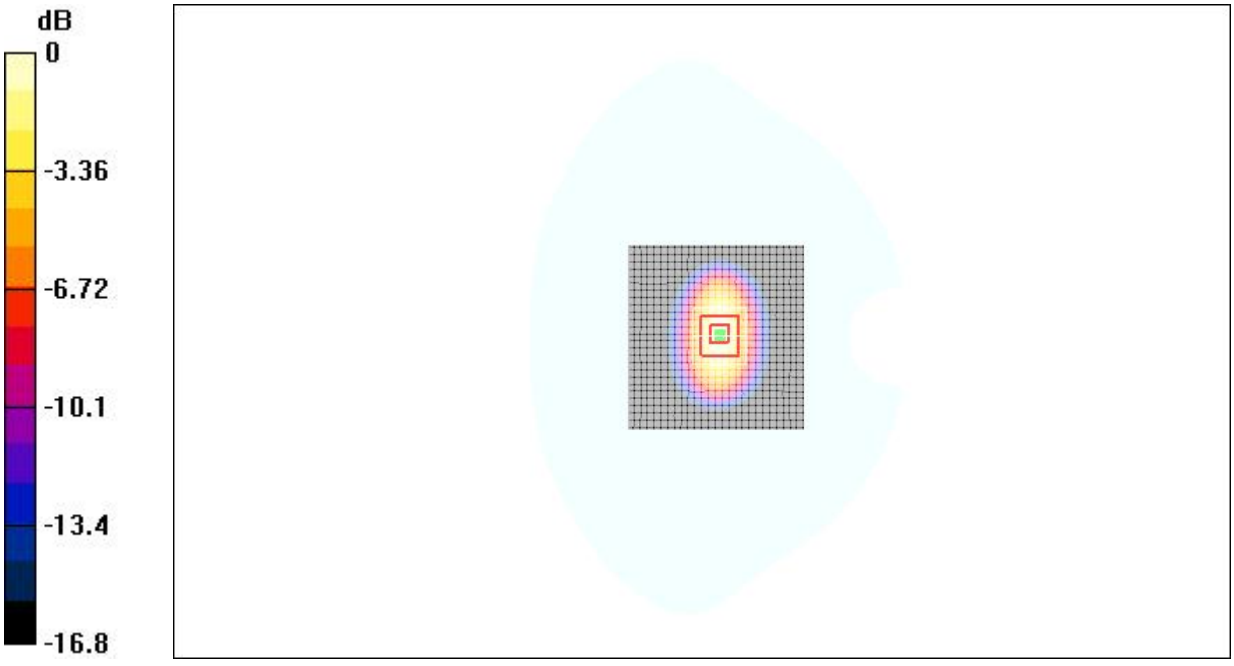
Fig.58 validation 835MHz 250mW

1900MHz

Date/Time: 2011-3-21 7:31:28
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 40.7; 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) = 11.2 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.3 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 14.5 W/kg
SAR(1 g) = 9.55 mW/g; SAR(10 g) = 4.95 mW/g
Maximum value of SAR (measured) = 10.4 mW/g



0 dB = 10.4mW/g

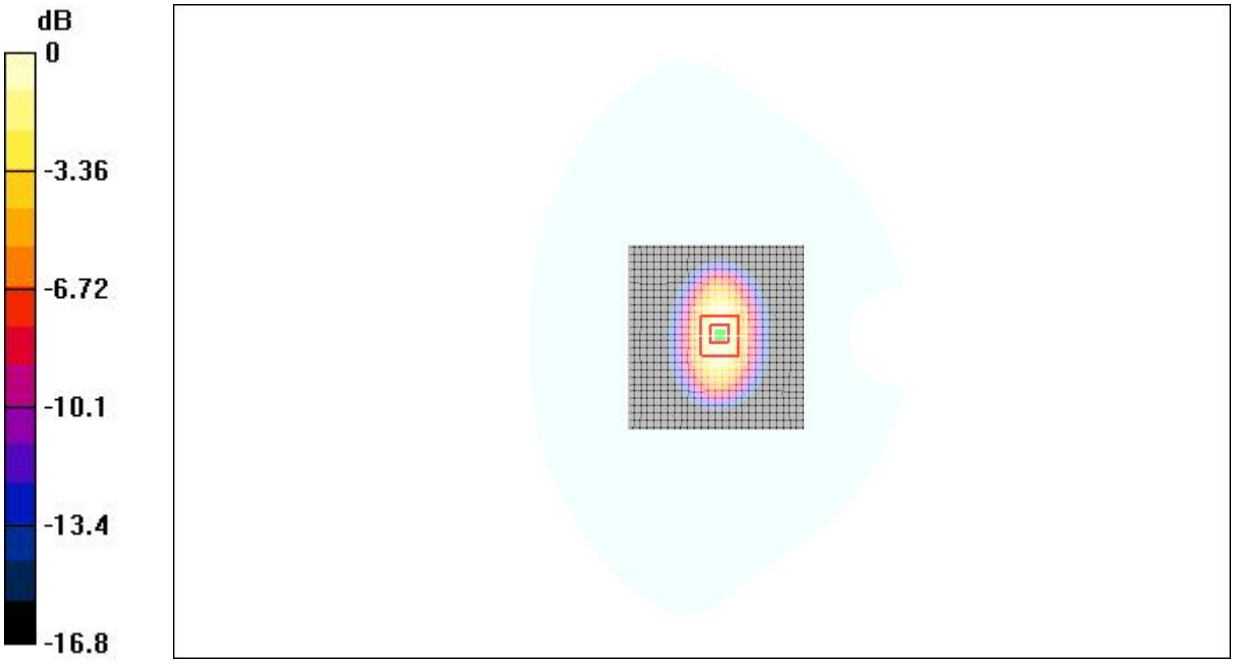
Fig.59 validation 1900MHz 250mW

1900MHz

Date/Time: 2011-3-21 13:18:35
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.8; 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) = 11.4 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.5 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.15 mW/g
Maximum value of SAR (measured) = 10.9 mW/g



0 dB = 10.9mW/g

Fig.60 validation 1900MHz 250mW