SAR TEST REPORT

No. 2011SAR00076

For

TCT Mobile Limited

HSDPA/UMTS three bands / GSM four bands mobile phone

Martini Y

one touch 906Y

With

Hardware Version: V1.5

Software Version: 1.3.6.0

FCCID: RAD198

Issued Date: 2011-07-06

Deutscher Akkreditierungs Rat

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

Note:

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

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of MIIT

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TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	TMC Beijing, Telecommunication Metrology Center of MIIT
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1.2 Testing Environment

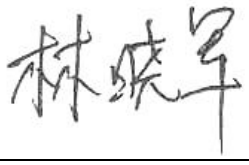
Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω

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

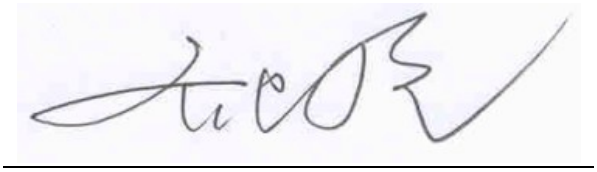
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	July 4, 2011
Testing End Date:	July 5, 2011

1.4 Signature



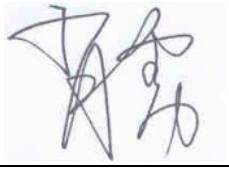
Lin Xiaojun

(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:	TCT Mobile Limited
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2.2 Manufacturer Information

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

3.1 About EUT

EUT Description:	HSDPA/UMTS three bands / GSM four bands mobile phone
Model Name:	Martini Y
Marketing Name:	one touch 906Y
Frequency Band:	GSM850 / PCS1900 / WCDMA850 / WCDMA1900 / WiFi
GPRS Multislot Class:	32
GPRS capability Class:	B
EGPRS Multislot Class:	32
Form factor:	11.7cm×5.6cm

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	012788000021101	V1.5	1.3.6.0

*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	CAB31K0000C1	/	BYD
AE2	Headset	CCB3160A10C0	/	Shen Zhen Ju Wei Electronic Co.,Ltd
AE3	Headset	CCB31C0A10C0	/	Shen Zhen Ju Wei Electronic Co.,Ltd

*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)
KDB648474 D01 SAR Handsets Multi Xmiter and Ant, v01r05: SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas.
KDB941225 D06 Hot Spot SAR v01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities.

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

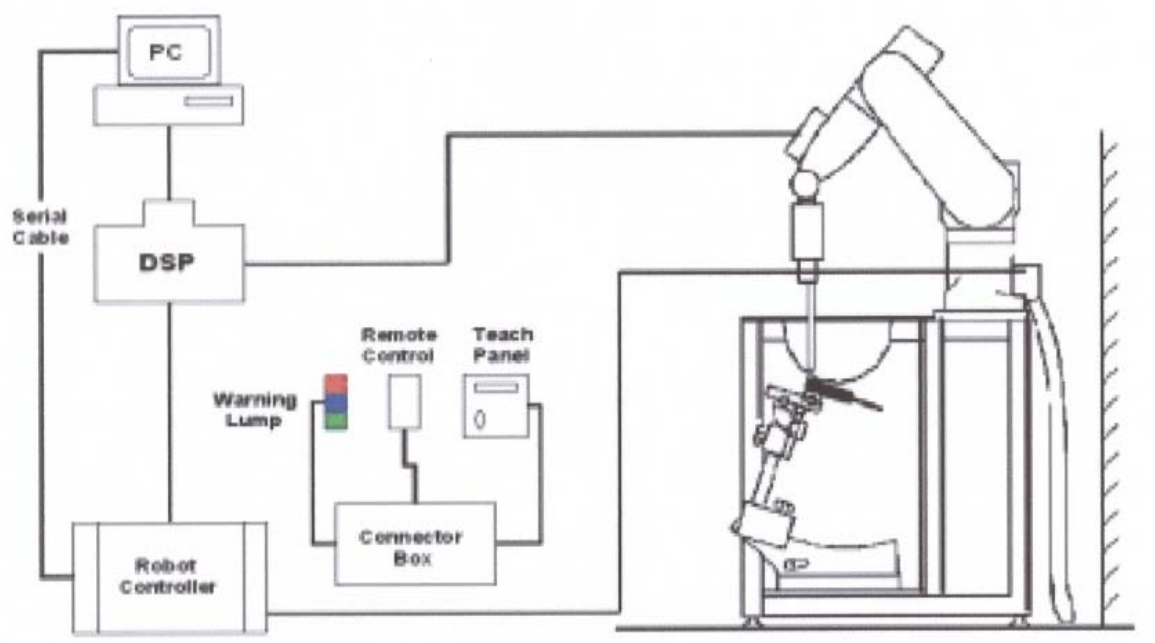
During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of 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; 9262, 9400 and 9538 respectively in the case of WCDMA 1900 MHz. The EUT is commanded to operate at maximum transmitting power.

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

5.2 SAR Measurement Set-up

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

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



Picture 2: SAR Lab Test Measurement Set-up

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

5.3 Dasy4 E-field Probe System

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

ES3DV3 Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 900 and HSL 1810 Additional CF for other liquids and frequencies upon request
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. I mm
Filling Volume	Approx. 20 liters
Dimensions	810 x l000 x 500 mm (H x L x W)
Available	Special

Picture 6: Generic Twin Phantom

5.6 Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, 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

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

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)**
	32.8	32.7	32.7
GSM 1900MHZ	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1880MHz)**	**Channel 512(1850.2MHz)**
	29.6	29.5	29.8

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	32.8	32.7	32.7	-9.03dB	23.77	23.67	23.67
2 Txslots	31.2	31.2	31.1	-6.02dB	**25.18**	**25.18**	**25.08**
3 Txslot	29.1	29.1	29.1	-4.26dB	24.84	24.84	24.84
GSM 850 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.8	32.7	32.7	-9.03dB	23.77	23.67	23.67
2 Txslots	31.2	31.2	31.1	-6.02dB	**25.18**	**25.18**	**25.08**
3 Txslot	29.1	29.1	29.1	-4.26dB	24.84	24.84	24.84
PCS1900 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.3	29.3	29.4	-9.03dB	20.27	20.27	20.37
2 Txslots	27.8	27.8	28.0	-6.02dB	**21.78**	**21.78**	**21.98**
3 Txslot	25.8	25.8	25.9	-4.26dB	21.54	21.54	21.64
PCS1900 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.3	29.3	29.4	-9.03dB	20.27	20.27	20.37
2 Txslots	27.8	27.7	28.0	-6.02dB	**21.78**	**21.68**	**21.98**
3 Txslot	25.8	25.8	25.9	-4.26dB	21.54	21.54	21.64

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

According to the conducted power as above, the body measurements are performed with 2 Txslots for GPRS and EGPRS.

Table 5: The conducted Power for WCDMA850/1900

Item	band	FDDV result		
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)
WCDMA	\	22.75	22.98	23.29
HSDPA	1	21.98	21.80	21.98
	2	21.83	21.55	21.78
	3	21.73	21.19	21.66
	4	20.73	20.44	20.72
Item	band	FDDII result		
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)
WCDMA	\	22.97	22.68	22.55
HSDPA	1	22.08	22.01	21.71
	2	22.13	21.90	21.77
	3	22.16	21.84	21.70
	4	21.67	21.45	21.00

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 and WCDMA1900 are not above 75% of the SAR limit (see table 16 and 17 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 17 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 40%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **July 4, 2011** 1900 MHz **July 5, 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	40.9	0.90
	1900 MHz	40.6	1.41

Table 7: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 40%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **July 4, 2011** 1900 MHz **July 5, 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	54.4	0.96
	1900 MHz	52.6	1.52

7.2 System Validation

Table 8: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 40%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **July 4, 2011** 1900 MHz **July 5, 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		40.9		0.90	
		1900 MHz		40.6		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	5.96	9.24	-2.61%	-1.81%
	1900 MHz	20.1	39.4	19.8	38.72	-1.49%	-1.73%

Table 9: System Validation of Body

Measurement is made at temperature 23.0 °C and relative humidity 40%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **July 4, 2011** 1900 MHz **July 5, 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		54.4		0.96	
		1900 MHz		52.6		1.52	
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	6.32	9.88	1.28%	3.24%
	1900 MHz	20.9	41.4	20.68	41.2	-1.05%	-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, High frequency (See Fig.1)	0.409	0.568	-0.148
Left hand, Touch cheek, Middle frequency (See Fig.2)	0.423	0.587	0.011
Left hand, Touch cheek, Low frequency (See Fig.3)	0.420	0.582	0.068
Left hand, Tilt 15 Degree, High frequency (See Fig.4)	0.212	0.283	-0.024
Left hand, Tilt 15 Degree, Middle frequency (See Fig.5)	0.209	0.278	0.081
Left hand, Tilt 15 Degree, Low frequency (See Fig.6)	0.211	0.279	0.044
Right hand, Touch cheek, High frequency (See Fig.7)	0.408	0.554	-0.132
Right hand, Touch cheek, Middle frequency (See Fig.8)	0.421	0.571	0.017
Right hand, Touch cheek, Low frequency (See Fig.9)	0.424	0.573	0.100
Right hand, Tilt 15 Degree, High frequency (See Fig.10)	0.207	0.275	0.047
Right hand, Tilt 15 Degree, Middle frequency (See Fig.11)	0.219	0.289	-0.056
Right hand, Tilt 15 Degree, Low frequency (See Fig.12)	0.221	0.291	0.062

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, High frequency (See Fig.13)	0.124	0.222	0.093
Left hand, Touch cheek, Middle frequency (See Fig.14)	0.170	0.308	0.199
Left hand, Touch cheek, Low frequency (See Fig.15)	0.229	0.415	0.129
Left hand, Tilt 15 Degree, High frequency (See Fig.16)	0.036	0.060	0.088
Left hand, Tilt 15 Degree, Middle frequency (See Fig.17)	0.050	0.081	-0.166
Left hand, Tilt 15 Degree, Low frequency (See Fig.18)	0.069	0.109	0.045
Right hand, Touch cheek, High frequency (See Fig.19)	0.137	0.240	0.173
Right hand, Touch cheek, Middle frequency (See Fig.20)	0.170	0.294	0.148
Right hand, Touch cheek, Low frequency (See Fig.21)	0.206	0.351	0.156
Right hand, Tilt 15 Degree, High frequency (See Fig.22)	0.034	0.056	0.081
Right hand, Tilt 15 Degree, Middle frequency (See Fig.23)	0.047	0.075	0.010
Right hand, Tilt 15 Degree, Low frequency(See Fig.24)	0.060	0.095	0.113

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, High frequency (See Fig.25)	0.266	0.371	0.055
Left hand, Touch cheek, Middle frequency (See Fig.26)	0.325	0.453	-0.108
Left hand, Touch cheek, Low frequency (See Fig.27)	0.361	0.501	0.128
Left hand, Tilt 15 Degree, High frequency (See Fig.28)	0.154	0.206	-0.015
Left hand, Tilt 15 Degree, Middle frequency (See Fig.29)	0.173	0.230	0.033
Left hand, Tilt 15 Degree, Low frequency (See Fig.30)	0.198	0.263	-0.022
Right hand, Touch cheek, High frequency (See Fig.31)	0.273	0.372	0.059
Right hand, Touch cheek, Middle frequency (See Fig.32)	0.329	0.446	-0.041
Right hand, Touch cheek, Low frequency (See Fig.33)	0.358	0.485	0.096
Right hand, Tilt 15 Degree, High frequency (See Fig.34)	0.153	0.203	0.085
Right hand, Tilt 15 Degree, Middle frequency (See Fig.35)	0.180	0.237	0.078
Right hand, Tilt 15 Degree, Low frequency(See Fig.36)	0.198	0.261	0.012

Table 13: SAR Values (WCDMA 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, High frequency (See Fig.37)	0.401	0.741	-0.180
Left hand, Touch cheek, Middle frequency (See Fig.38)	0.587	1.1	-0.106
Left hand, Touch cheek, Low frequency (See Fig.39)	0.468	0.878	0.015
Left hand, Tilt 15 Degree, High frequency (See Fig.40)	0.101	0.161	0.033
Left hand, Tilt 15 Degree, Middle frequency (See Fig.41)	0.166	0.262	-0.051
Left hand, Tilt 15 Degree, Low frequency (See Fig.42)	0.126	0.196	-0.046
Right hand, Touch cheek, High frequency (See Fig.43)	0.427	0.745	-0.113
Right hand, Touch cheek, Middle frequency (See Fig.44)	0.544	0.942	0.140
Right hand, Touch cheek, Low frequency (See Fig.45)	0.372	0.637	-0.152
Right hand, Tilt 15 Degree, High frequency (See Fig.46)	0.112	0.185	-0.003
Right hand, Tilt 15 Degree, Middle frequency (See Fig.47)	0.180	0.296	-0.169
Right hand, Tilt 15 Degree, Low frequency(See Fig.48)	0.121	0.191	0.126

Table 14: 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, High frequency with GPRS (See Fig.49)	0.544	0.749	-0.021
Towards Ground, High frequency with GPRS (See Fig.50)	0.626	0.887	-0.039
Left Side, High frequency with GPRS (See Fig.51)	0.320	0.469	-0.017
Right Side, High frequency with GPRS (See Fig.52)	0.374	0.541	-0.113
Bottom Side, High frequency with GPRS (See Fig.53)	0.052	0.086	0.017
Towards Ground, Middle frequency with GPRS (See Fig.54)	0.653	0.921	-0.097
Towards Ground, Low frequency with GPRS (See Fig.55)	0.620	0.875	-0.099
Towards Ground, Middle frequency with EGPRS (See Fig.56)	0.639	0.905	0.051
Towards Ground, Middle frequency with Headset_CCB3160A10C0 (See Fig.57)	0.464	0.655	0.009
Towards Ground, Middle frequency with Headset_CCB31C0A10C0 (See Fig.58)	0.469	0.661	-0.010

Table 15: 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, Low frequency with GPRS (See Fig.59)	0.194	0.333	0.011
Towards Ground, Low frequency with GPRS (See Fig.60)	0.218	0.373	-0.025
Left Side, Low frequency with GPRS (See Fig.61)	0.059	0.104	-0.037
Right Side, Low frequency with GPRS (See Fig.62)	0.128	0.214	0.083
Bottom Side, Low frequency with GPRS (See Fig.63)	0.152	0.273	-0.018
Towards Ground, High frequency with GPRS (See Fig.64)	0.121	0.212	-0.004
Towards Ground, Middle frequency with GPRS (See Fig.65)	0.168	0.290	0.030
Towards Ground, Low frequency with EGPRS (See Fig.66)	0.201	0.342	-0.017
Towards Ground, Low frequency with Headset_CCB3160A10C0 (See Fig.67)	0.148	0.254	0.105
Towards Ground, Low frequency with Headset_CCB31C0A10C0 (See Fig.68)	0.141	0.237	0.071

Table 16: SAR Values (WCDMA 850MHz-Body)

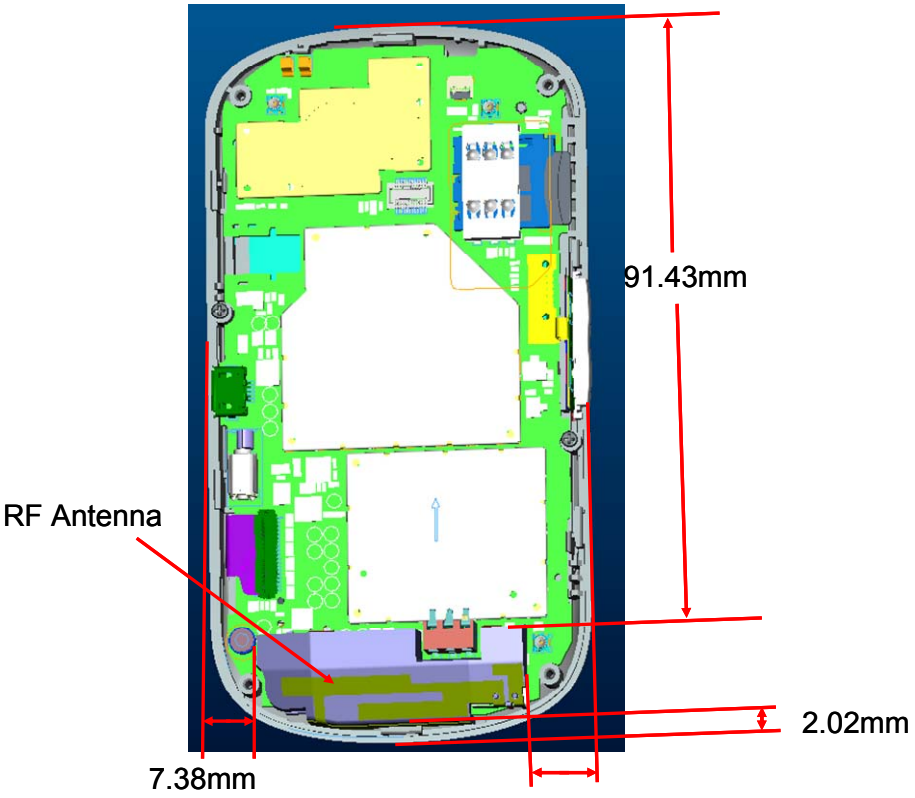
Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Towards Phantom, Low frequency (See Fig.69)	0.344	0.474	-0.121
Towards Ground, Low frequency (See Fig.70)	0.391	0.549	-0.122
Left Side, Low frequency (See Fig.71)	0.191	0.279	-0.125
Right Side, Low frequency (See Fig.72)	0.203	0.292	-0.080
Bottom Side, Low frequency (See Fig.73)	0.038	0.063	0.007
Towards Ground, High frequency (See Fig.74)	0.316	0.445	-0.027
Towards Ground, Middle frequency (See Fig.75)	0.383	0.540	-0.029
Towards Ground, Low frequency with Headset_CCB3160A10C0 (See Fig.76)	0.353	0.495	0.055
Towards Ground, Low frequency with Headset_CCB31C0A10C0 (See Fig.77)	0.366	0.516	-0.041

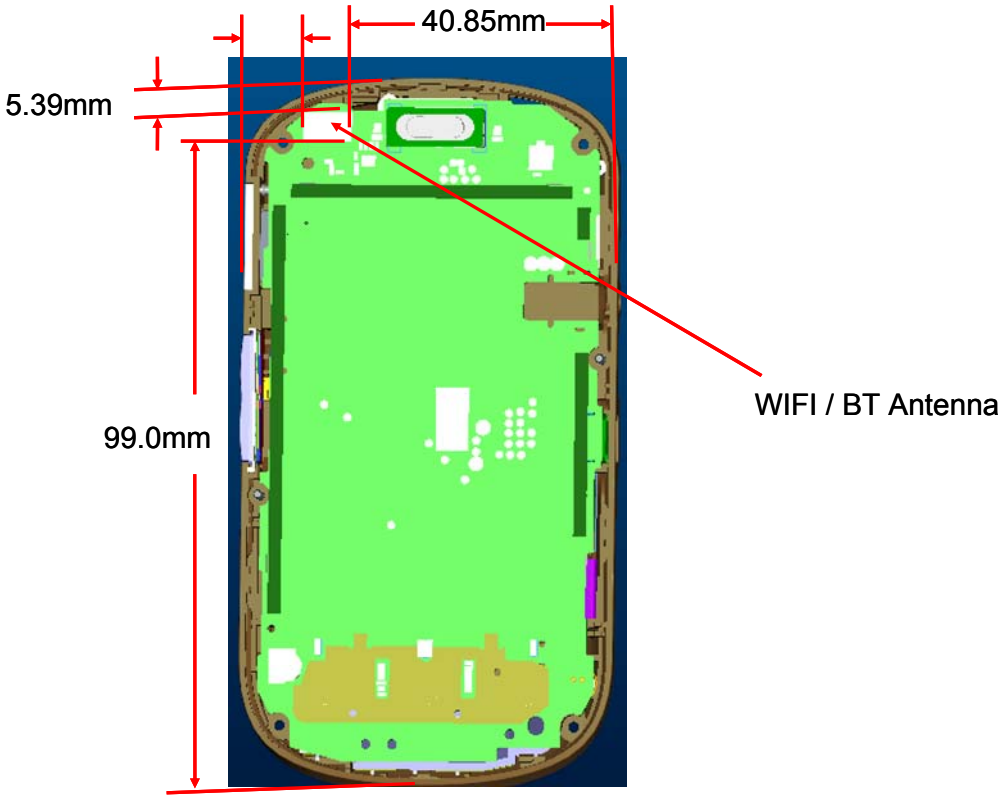
Table 17: SAR Values (WCDMA 1900MHz-Body)

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, High frequency (See Fig.78)	0.240	0.418	-0.012
Towards Ground, High frequency (See Fig.79)	0.265	0.464	-0.164
Left Side, High frequency (See Fig.80)	0.051	0.089	-0.082
Right Side, High frequency (See Fig.81)	0.125	0.210	-0.196
Bottom Side, High frequency (See Fig.82)	0.257	0.458	-0.077
Towards Ground, Middle frequency (See Fig.83)	0.374	0.646	0.019
Towards Ground, Low frequency (See Fig.84)	0.275	0.471	-0.080
Towards Ground, Middle frequency with Headset_CCB3160A10C0 (See Fig.85)	0.367	0.637	-0.042
Towards Ground, Middle frequency with Headset_CCB31C0A10C0 (See Fig.86)	0.359	0.618	-0.060

7.4 Summary of Measurement Results (Bluetooth and WiFi function)

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





The output power of BT antenna is as following:

Channel	**Ch 0 (2402 MHz)**	**Ch 39 (2441 MHz)**	**Ch 78 (2480 MHz)**
Peak Conducted Output Power(dBm)	4.48	3.91	5.43

According to the output power measurement result and the distance between the two antennas, we can draw the conclusion that: stand-alone SAR and simultaneous transmission SAR are not required for BT transmitter, because the output power of BT transmitter is $\leqslant 2P_{Ref}$ and its antenna is ＞5cm from other antenna

Note: Power thresholds (P_{Ref}) is derived from multiples of $0.5 \times 60/f_{(GHz)}$, that is 12mW (10.79dBm) for BT frequency. So $2P_{Ref}$ = 24mW (13.8dBm).

The average conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	13.08	13.06	12.02	12.96
6	12.43	12.42	12.40	12.35
11	11.50	11.52	11.49	11.45

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	11.55	11.45	11.52	11.43	11.41	11.32	11.35	11.29
6	11.67	11.65	11.66	11.63	11.60	11.58	11.50	11.45
11	10.13	9.93	9.86	9.83	9.97	9.72	9.75	9.58

The peak conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	20.27	20.38	21.55	23.02
6	/	/	/	23.43
11	/	/	/	23.59

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	22.27	22.23	21.92	21.88	22.31	22.32	22.39	22.40
6	/	/	/	/	/	/	/	22.87
11	/	/	/	/	/	/	/	23.06

According to the output power measurement result and the distance between the two antennas, we can draw the conclusion that: stand-alone SAR and simultaneous transmission SAR are not required for WiFi transmitter, because the output power of WiFi transmitter is $\leqslant 2P_{Ref}$ and its antenna is ＞5cm from other antenna

Note: Power thresholds (P_{Ref}) is derived from multiples of $0.5 \times 60/f_{(GHz)}$, that is 12mW (10.79dBm) for BT frequency. So $2P_{Ref}$ = 24mW (13.8dBm).

7.5 Conclusion

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

The maximum SAR values are obtained at the case of **WCDMA 1900 MHz Band, Head, Left hand, Touch cheek, Middle frequency (Table 13)**, and the value are: **1.1(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 uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
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 18: 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.

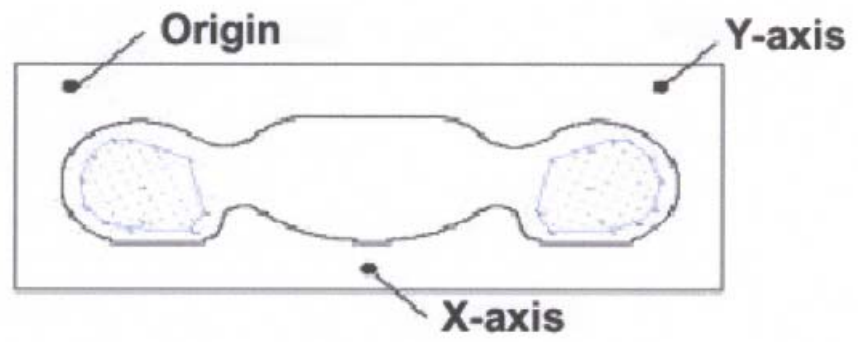
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

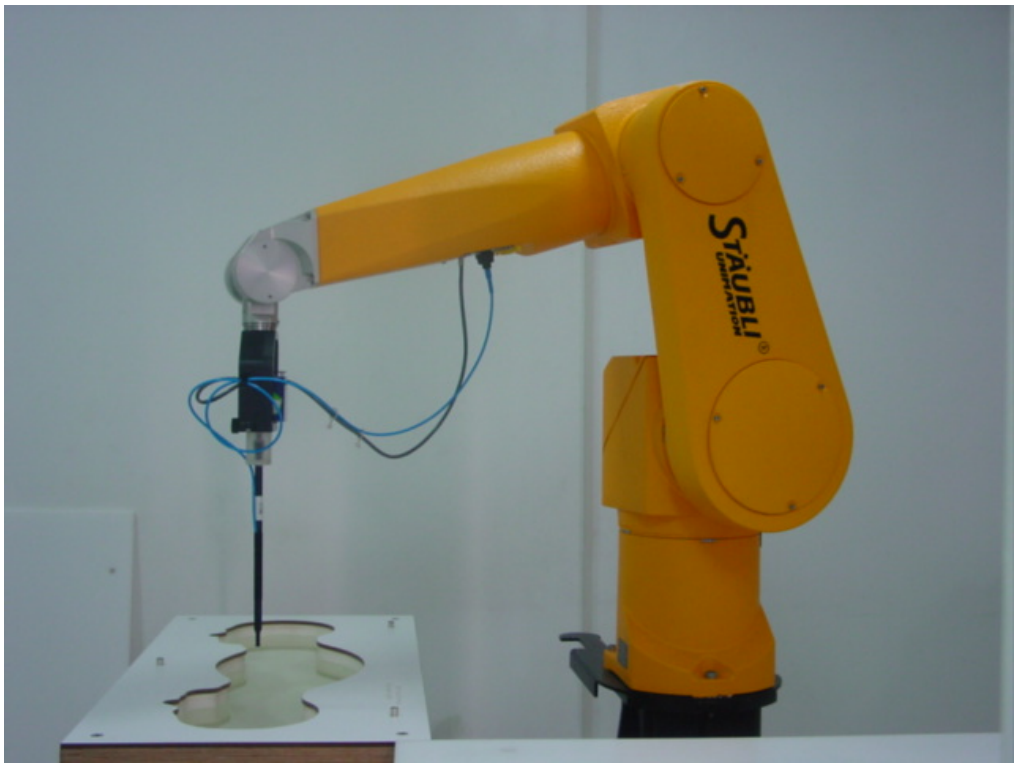
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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.

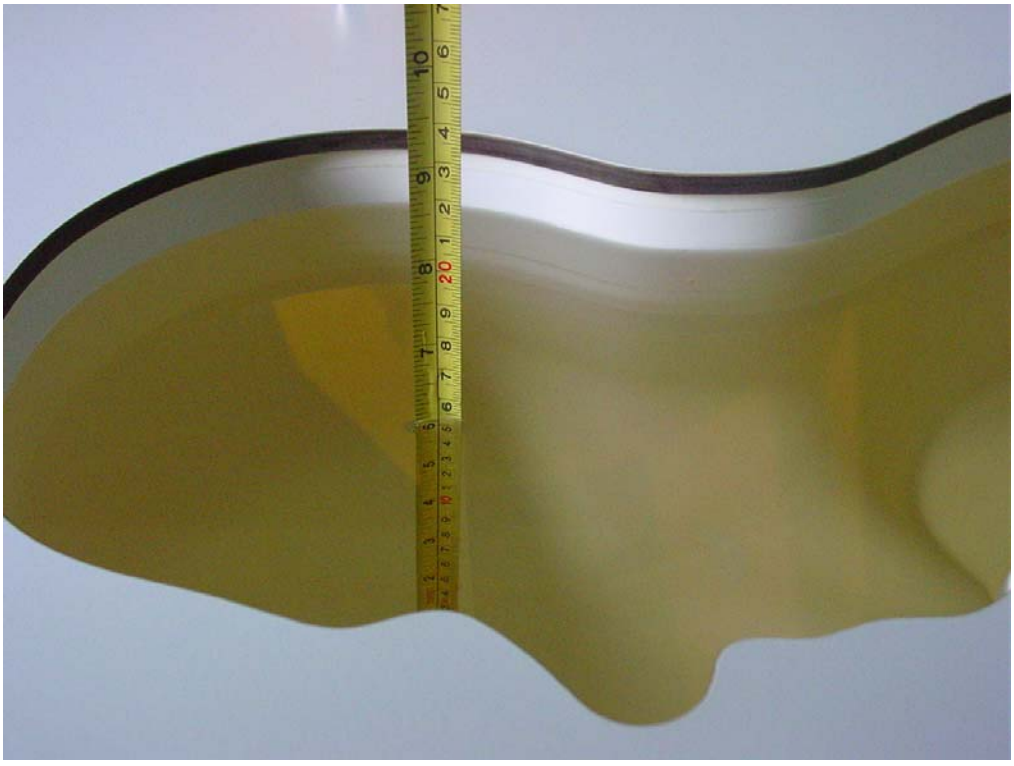


Picture A: SAR Measurement Points in Area Scan

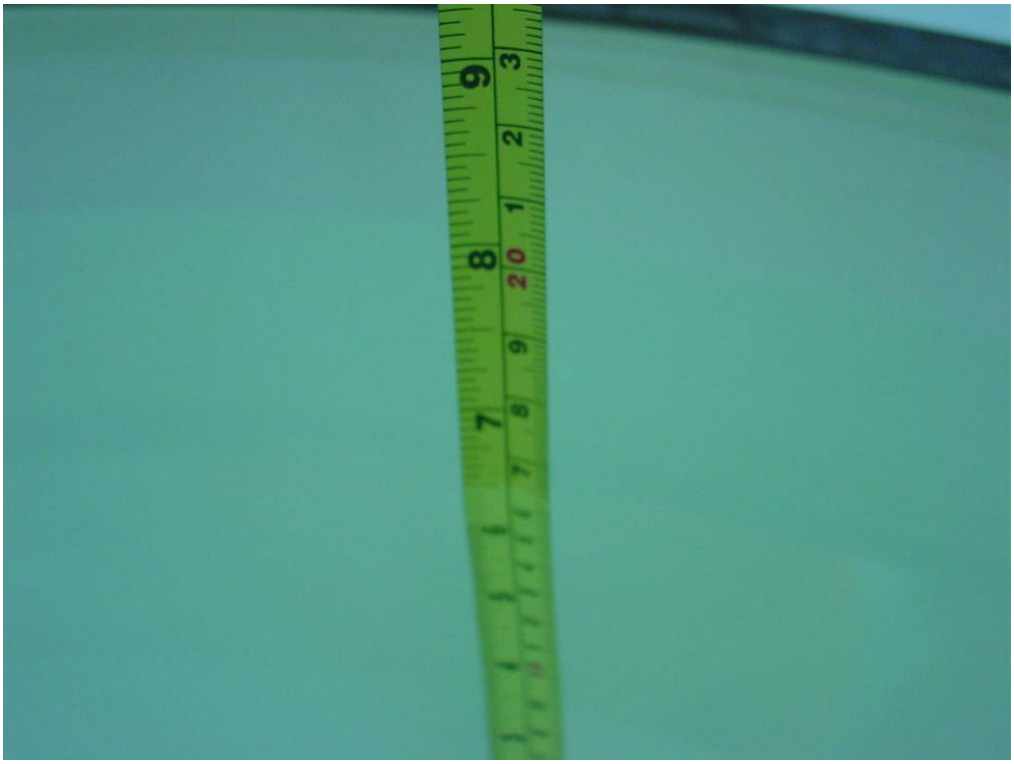
ANNEX B TEST LAYOUT



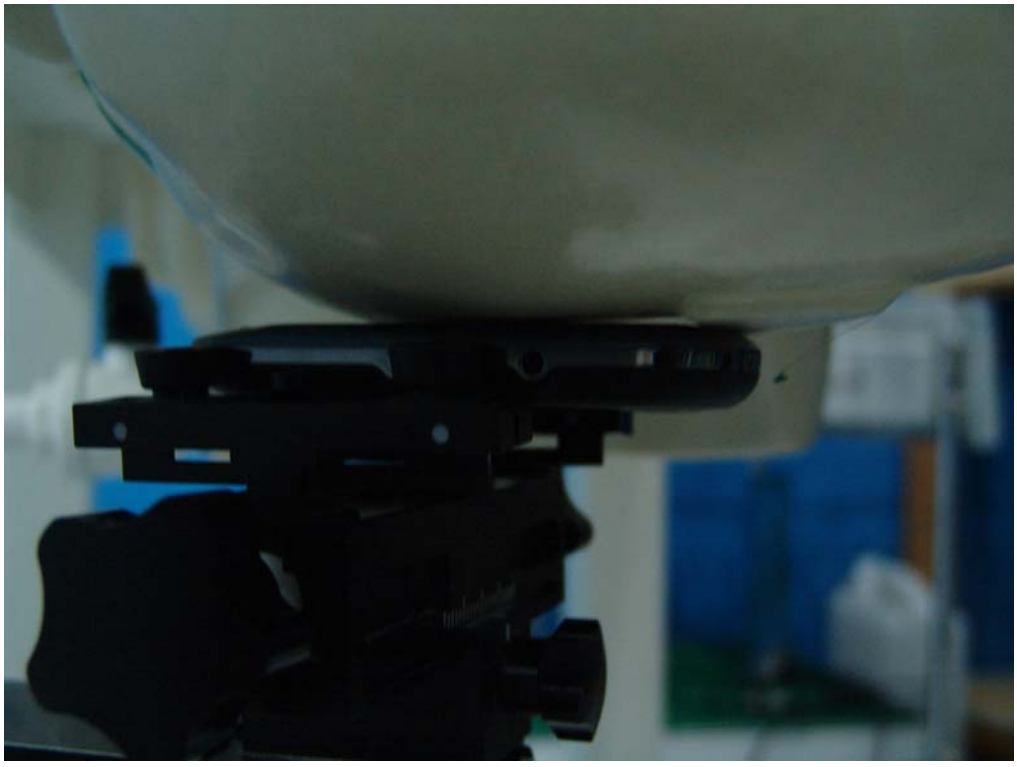
Picture B1: Specific Absorption Rate Test Layout



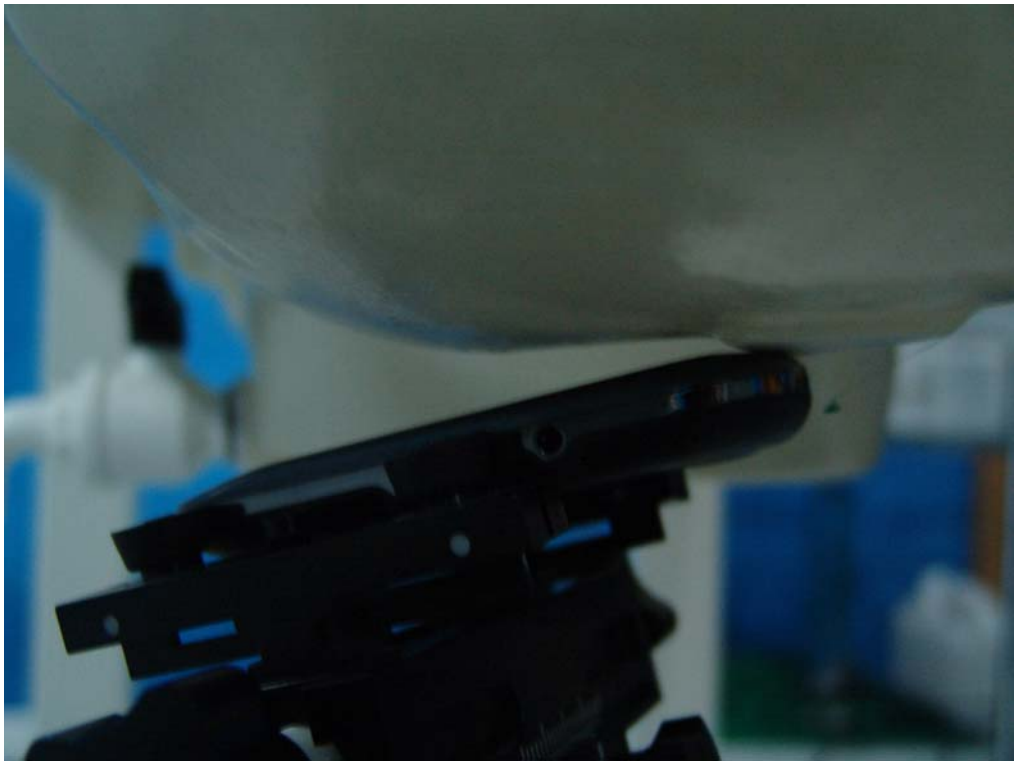
Picture B2: Liquid depth in the Head Phantom (850 MHz)



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



Picture B4: Left Hand Touch Cheek Position



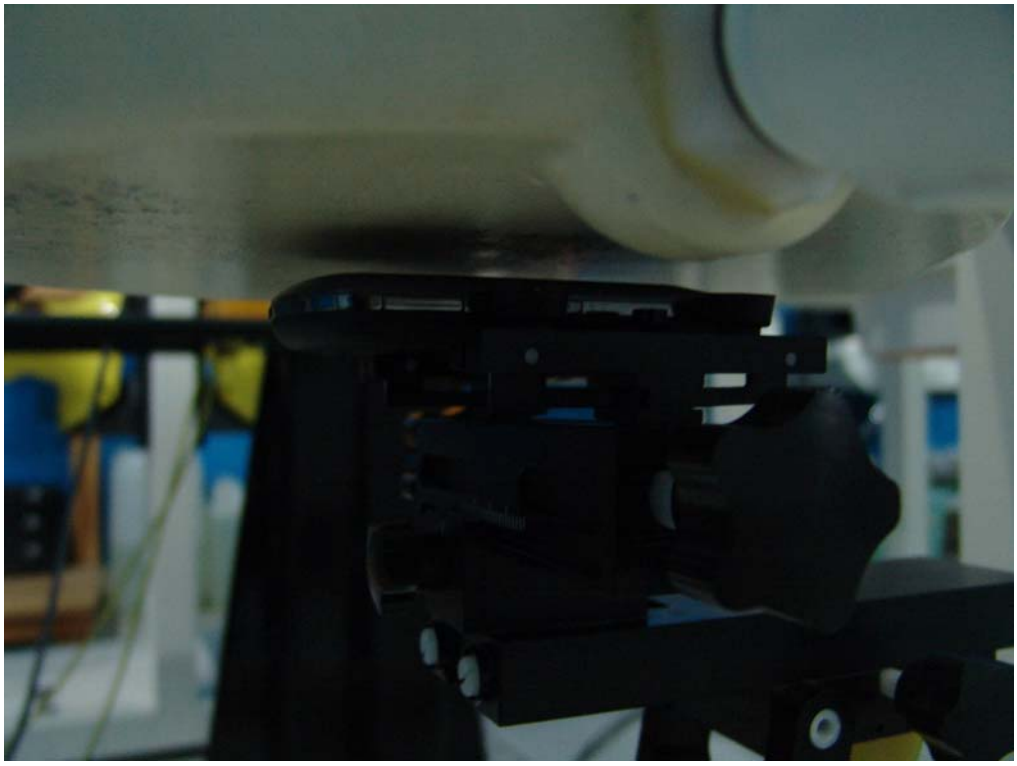
Picture B5: Left Hand Tilt 15° Position

Picture B6: Right Hand Touch Cheek Position

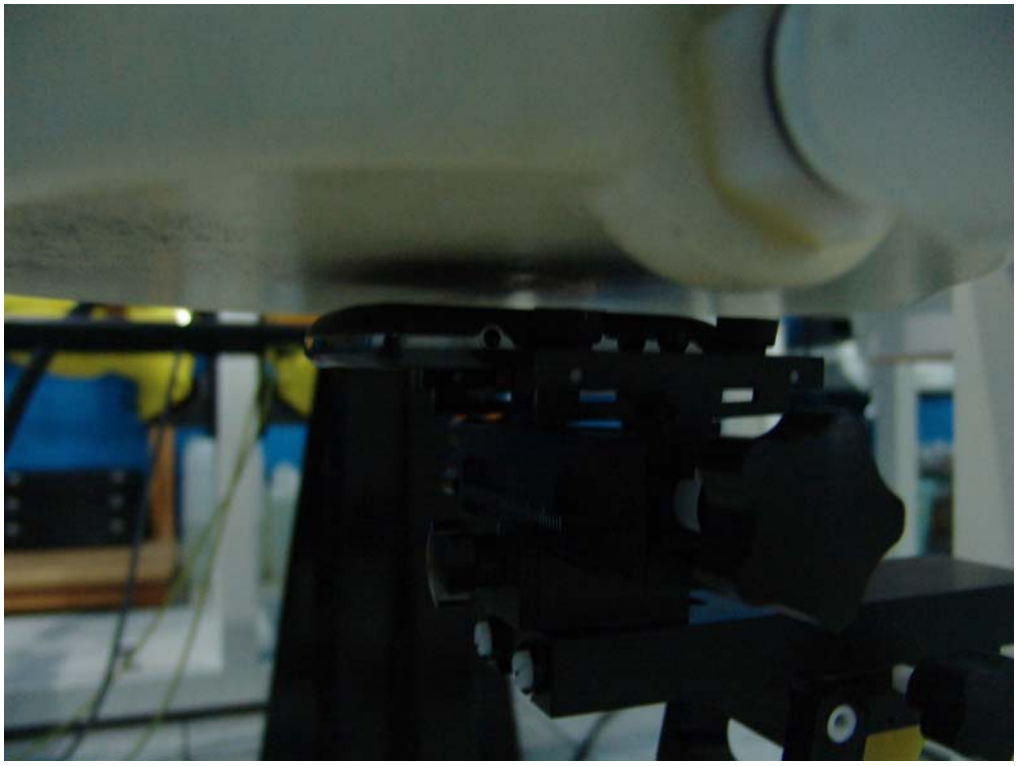
Picture B7: Right Hand Tilt 15° Position

Test positions for body:

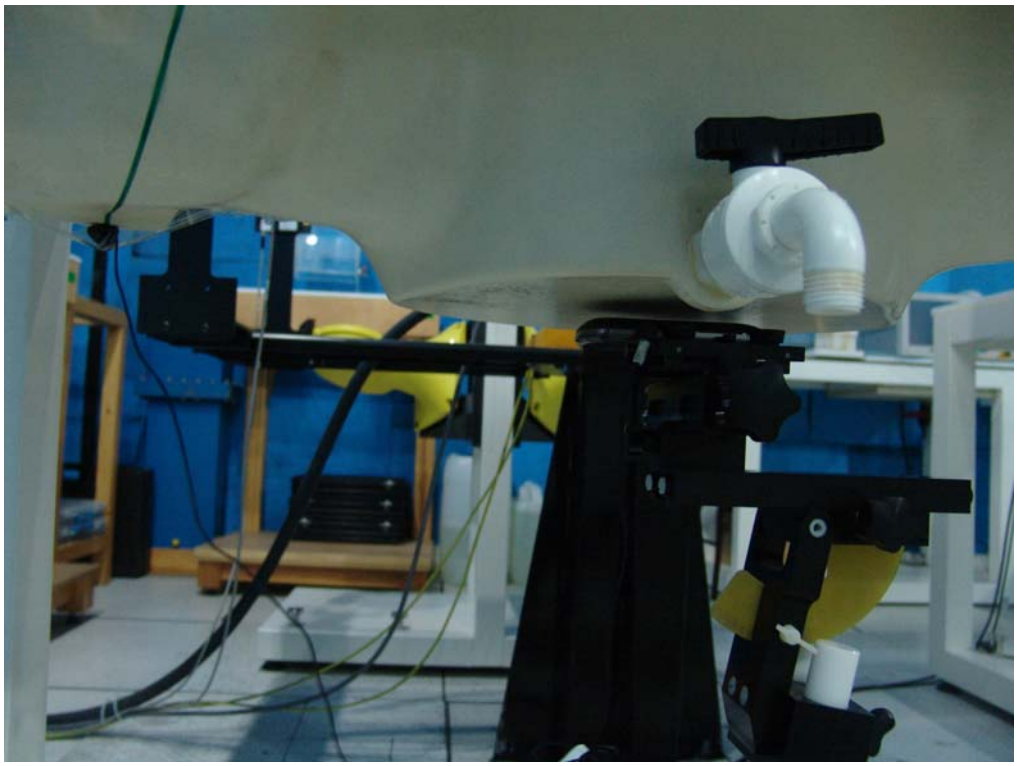
The Body SAR is tested at the following 5 test positions all with the distance =10mm between the EUT and the phantom bottom :



Picture B8: Forward Surface



Picture B9: Back Surface



Picture B9-1: Back Surface with Headset

Picture B10: Left Side

Picture B11: Right Side

Picture B12: Bottom Side

ANNEX C GRAPH RESULTS

850 Left Cheek High

Date/Time: 2011-7-4 8:36:15
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.615 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.31 V/m; Power Drift = -0.148 dB
Peak SAR (extrapolated) = 0.781 W/kg
SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.409 mW/g
Maximum value of SAR (measured) = 0.608 mW/g

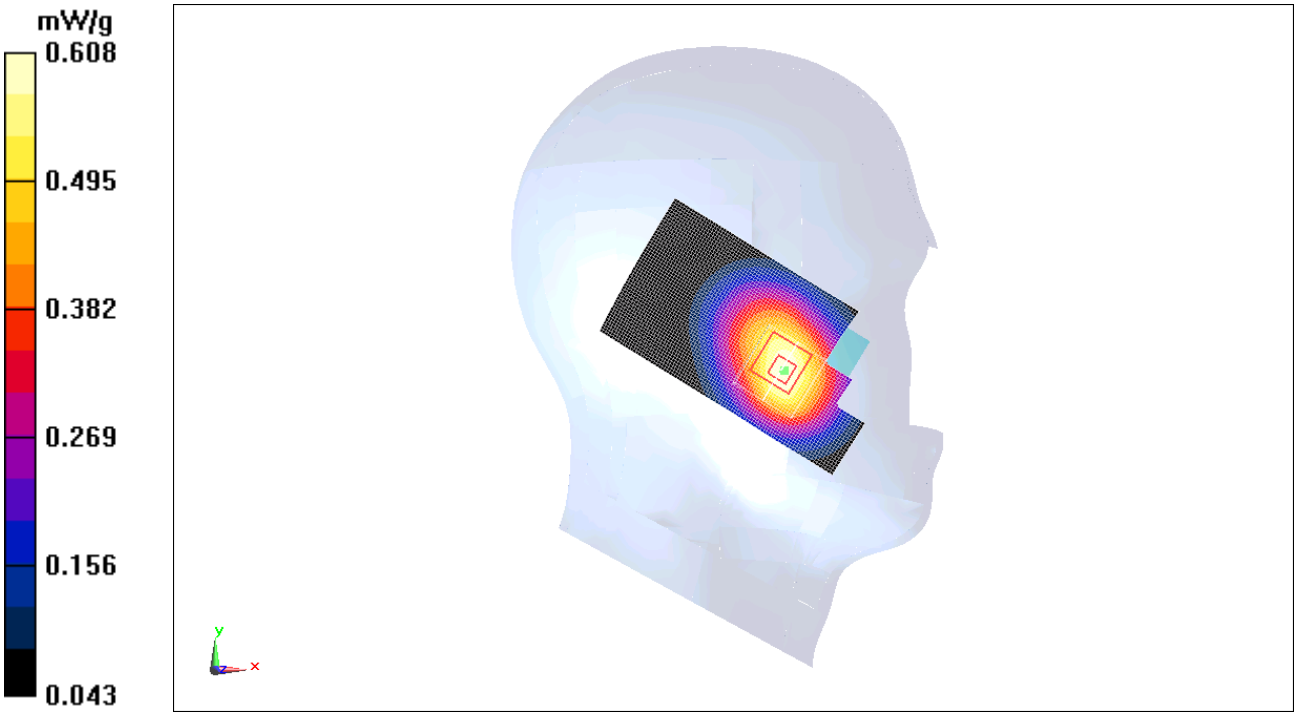


Fig. 1 850MHz CH251

850 Left Cheek Middle

Date/Time: 2011-7-4 8:50:39
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.631 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.15 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.807 W/kg
SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.423 mW/g
Maximum value of SAR (measured) = 0.625 mW/g

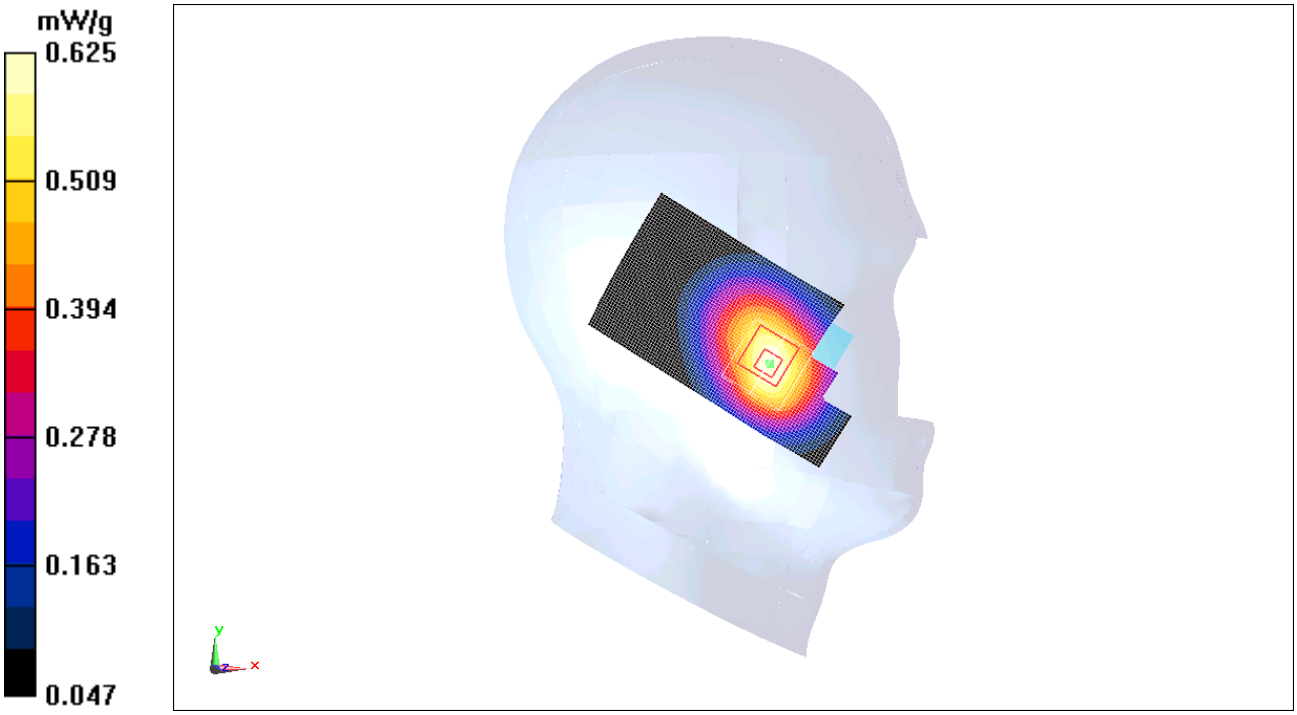


Fig. 2 850 MHz CH190

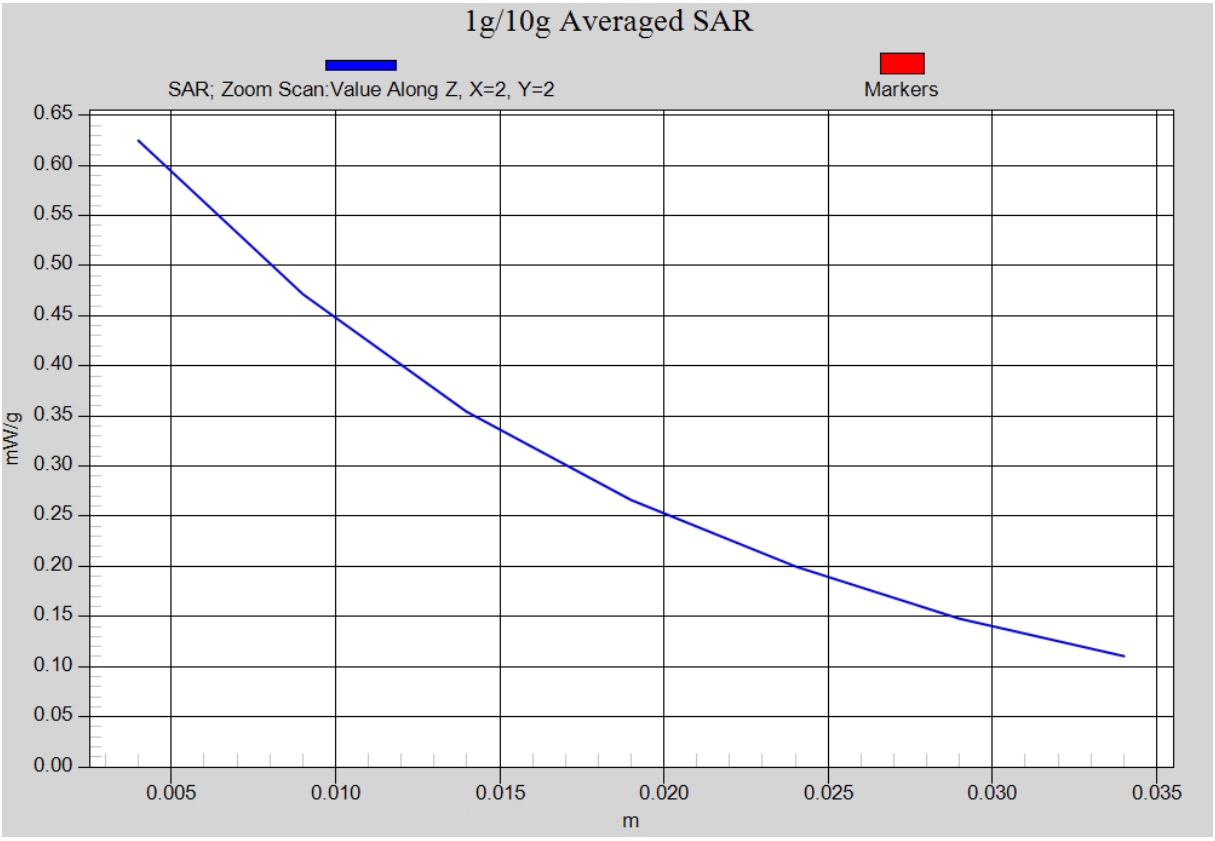


Fig. 2-1 Z-Scan at power reference point (850 MHz CH190)

850 Left Cheek Low

Date/Time: 2011-7-4 9:05:04
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.626 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.21 V/m; Power Drift = 0.068 dB
Peak SAR (extrapolated) = 0.790 W/kg
SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.420 mW/g
Maximum value of SAR (measured) = 0.620 mW/g

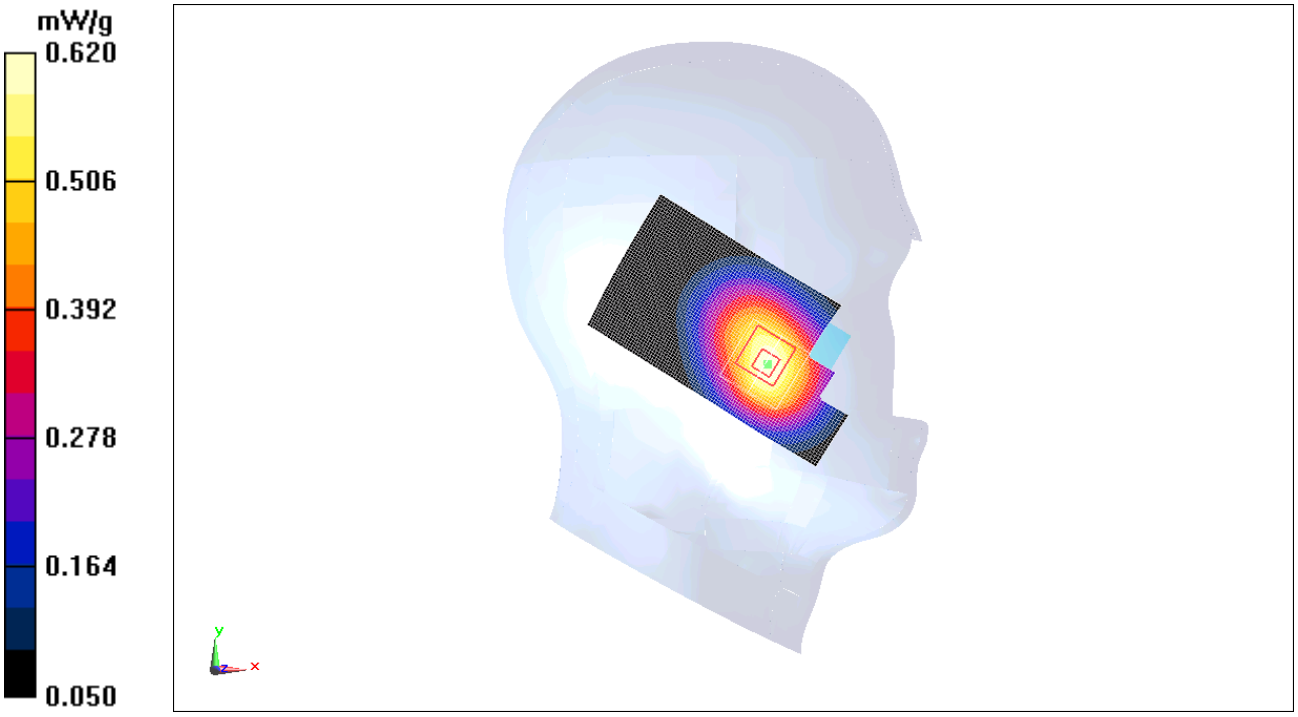


Fig. 3 850 MHz CH128

850 Left Tilt High

Date/Time: 2011-7-4 9:19:37
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.302 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.350 W/kg
SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.212 mW/g
Maximum value of SAR (measured) = 0.299 mW/g

Fig.4 850 MHz CH251

850 Left Tilt Middle

Date/Time: 2011-7-4 9:33:56
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.294 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 0.344 W/kg
SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.209 mW/g
Maximum value of SAR (measured) = 0.292 mW/g

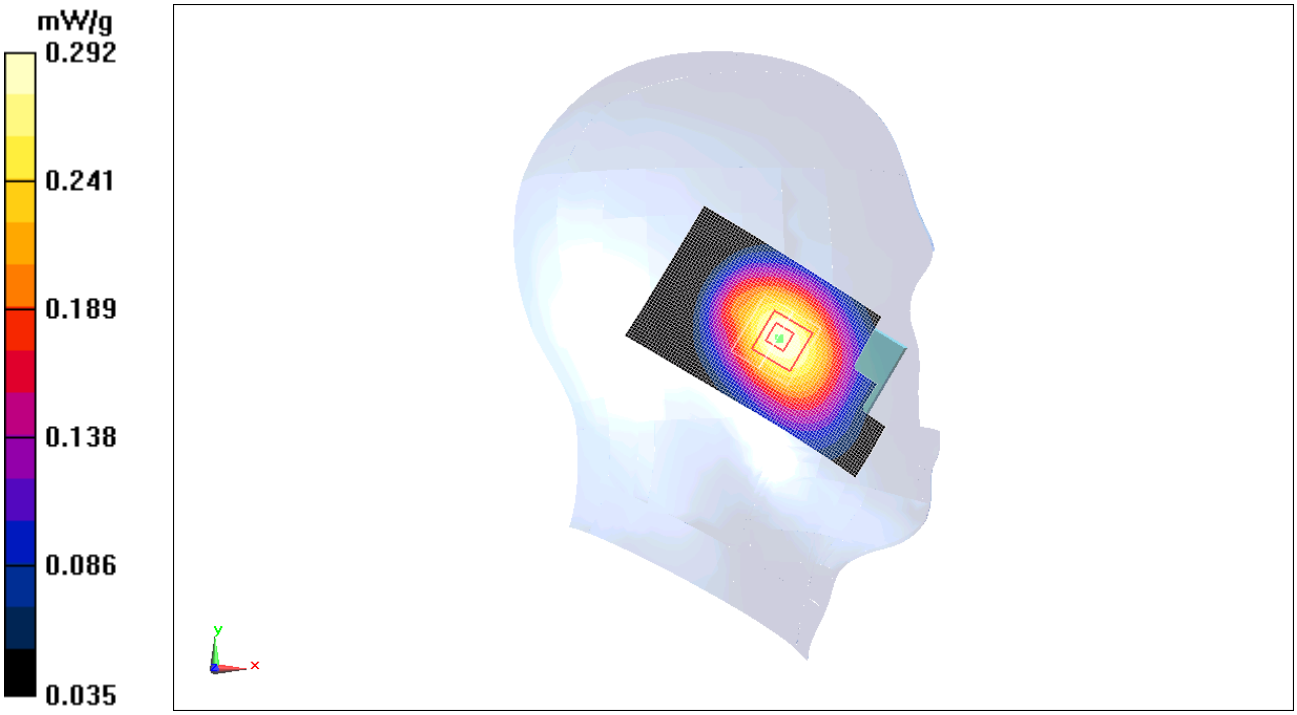


Fig.5 850 MHz CH190

850 Left Tilt Low
Date/Time: 2011-7-4 9:48:20
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.298 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.344 W/kg
SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.211 mW/g
Maximum value of SAR (measured) = 0.295 mW/g

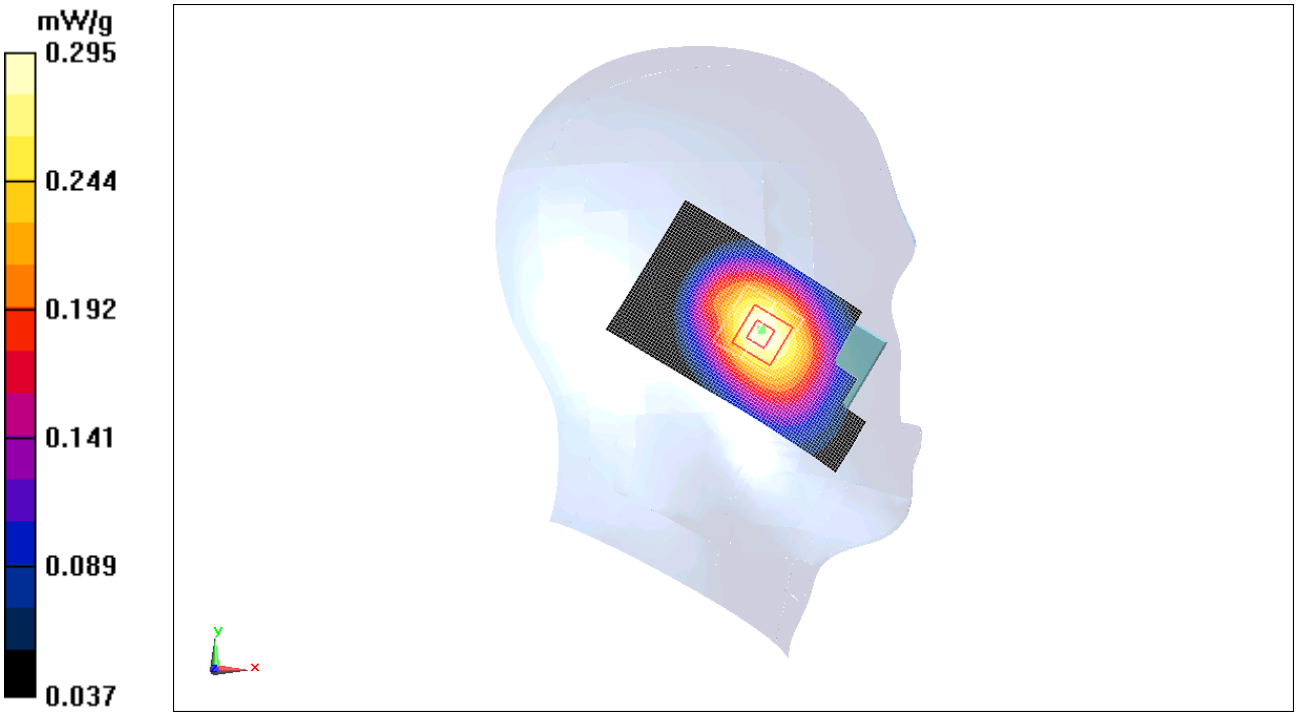


Fig. 6 850 MHz CH128

850 Right Cheek High

Date/Time: 2011-7-4 10:03:08
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.592 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.88 V/m; Power Drift = -0.132 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.408 mW/g
Maximum value of SAR (measured) = 0.580 mW/g

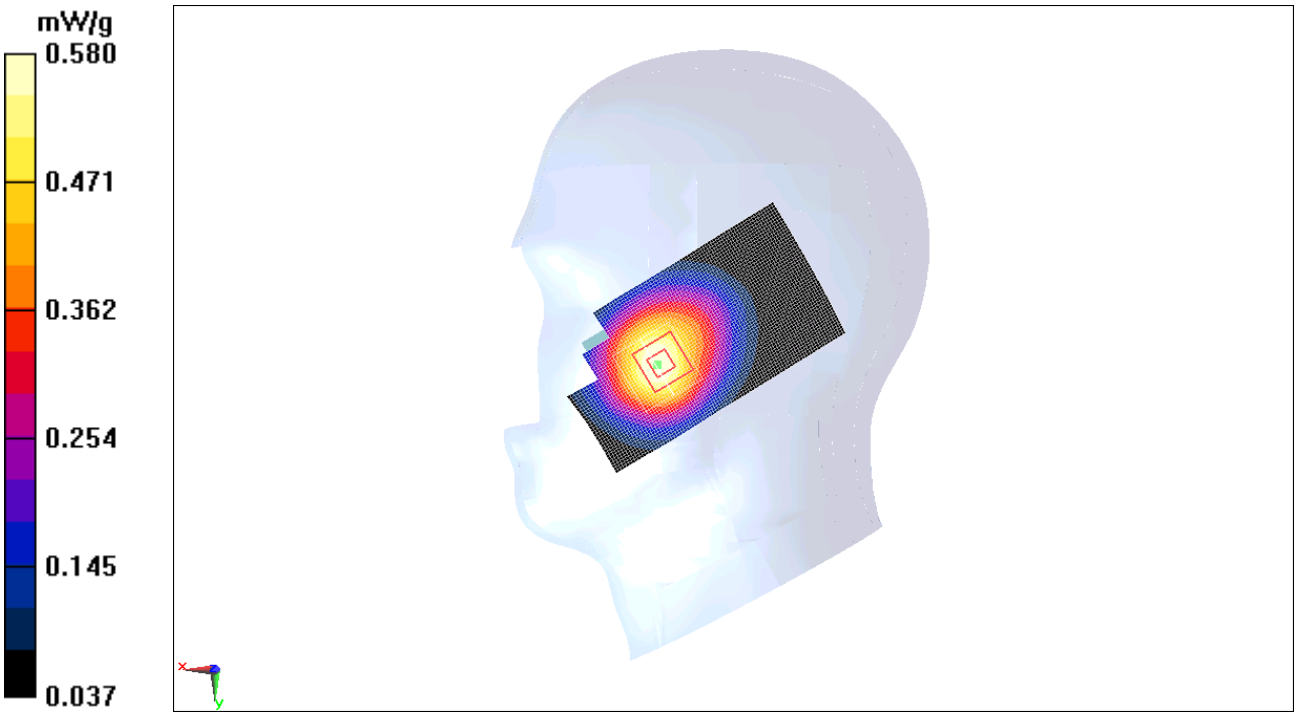


Fig. 7 850 MHz CH251

850 Right Cheek Middle

Date/Time: 2011-7-4 10:17:33
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.607 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.706 W/kg
SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.421 mW/g
Maximum value of SAR (measured) = 0.599 mW/g

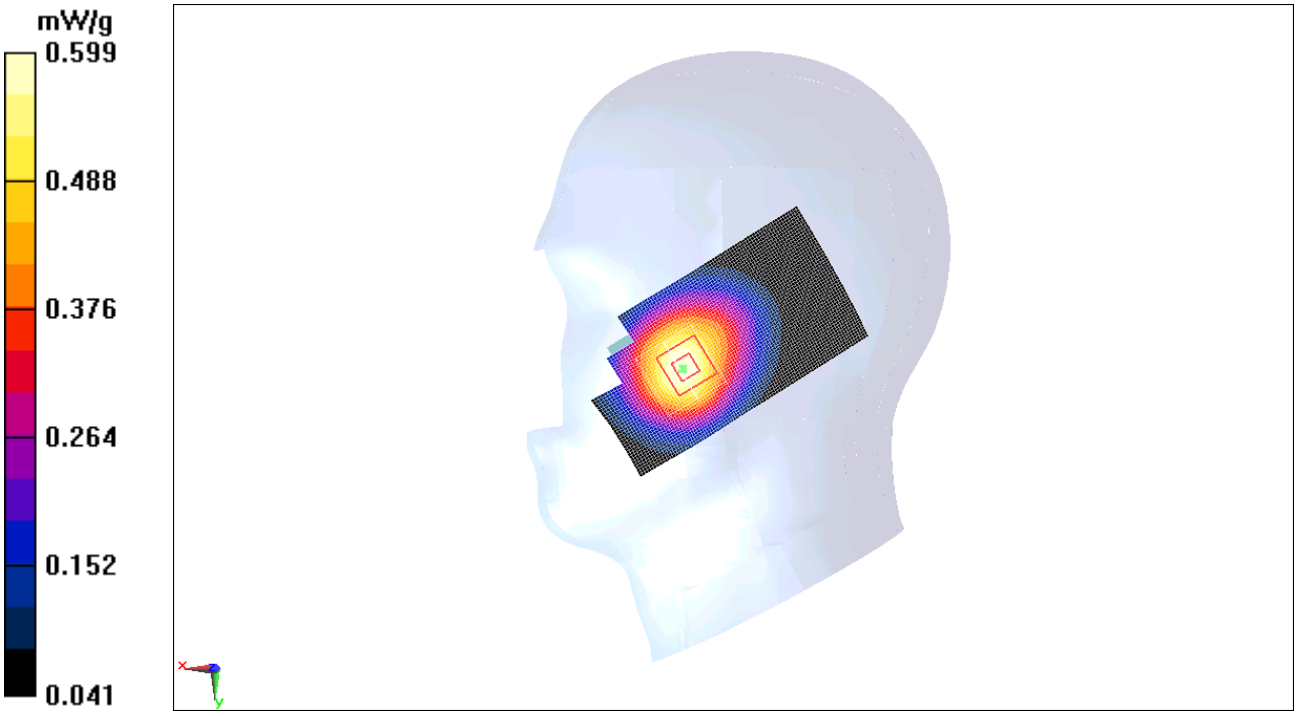


Fig. 8 850 MHz CH190

850 Right Cheek Low

Date/Time: 2011-7-4 10:31:54
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.606 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.16 V/m; Power Drift = 0.100 dB
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.573 mW/g; SAR(10 g) = 0.424 mW/g
Maximum value of SAR (measured) = 0.601 mW/g

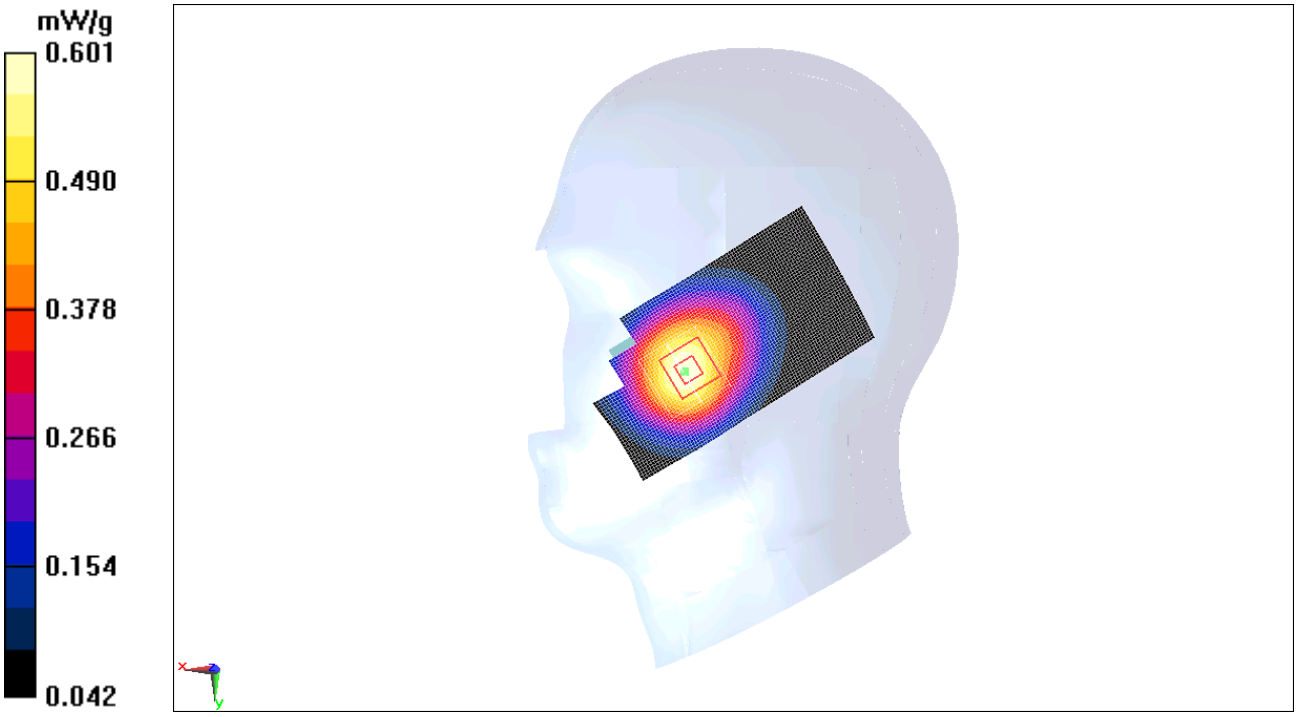


Fig. 9 850 MHz CH128

850 Right Tilt High

Date/Time: 2011-7-4 10:46:19
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.289 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.8 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.340 W/kg
SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.207 mW/g
Maximum value of SAR (measured) = 0.290 mW/g

Fig.10 850 MHz CH251

850 Right Tilt Middle

Date/Time: 2011-7-4 11:00:42
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.305 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = -0.056 dB
Peak SAR (extrapolated) = 0.356 W/kg
SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.305 mW/g

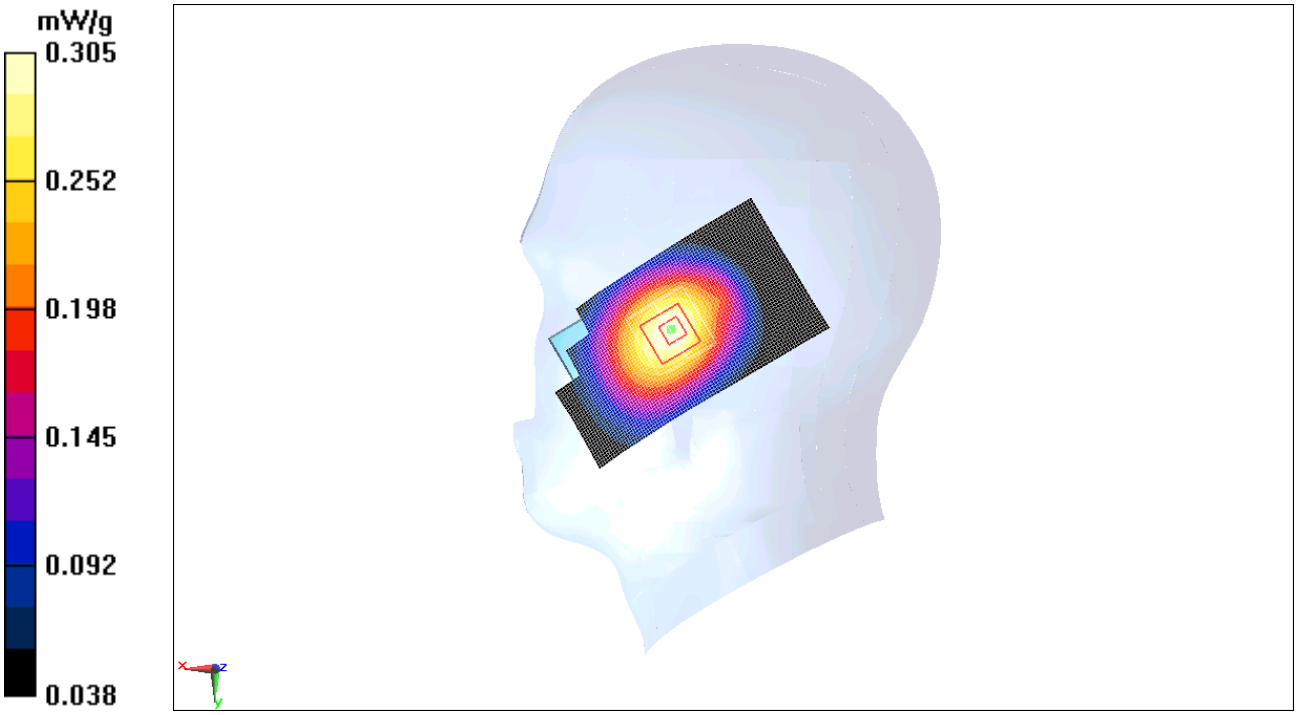


Fig.11 850 MHz CH190

850 Right Tilt Low
Date/Time: 2011-7-4 11:15:01
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.307 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 0.357 W/kg
SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 0.304 mW/g

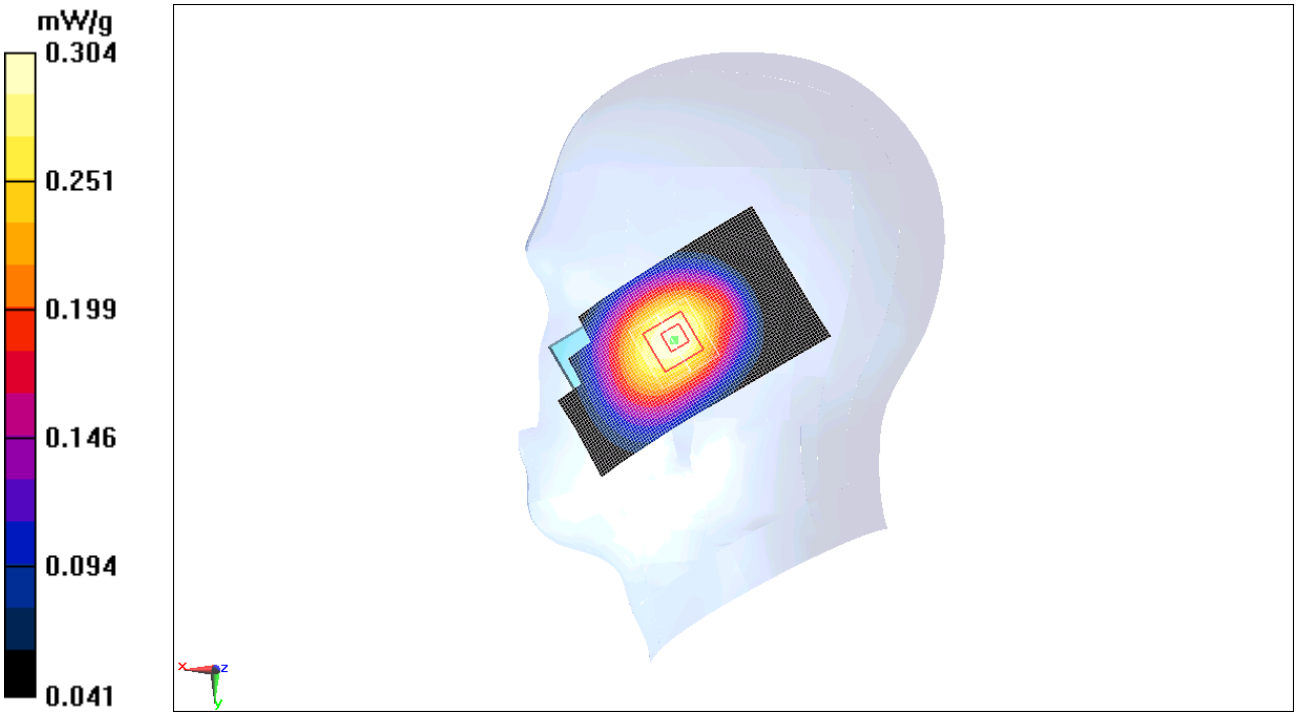


Fig. 12 850 MHz CH128

1900 Left Cheek High
Date/Time: 2011-7-5 8:23:14
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.252 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.69 V/m; Power Drift = 0.093 dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.124 mW/g
Maximum value of SAR (measured) = 0.246 mW/g

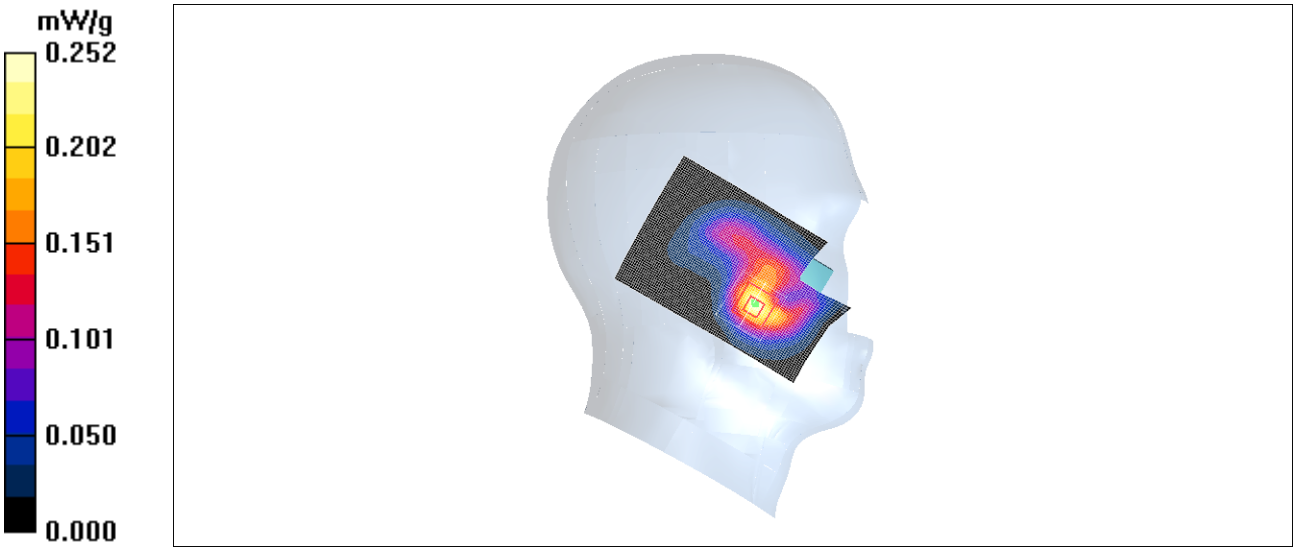


Fig. 13 1900 MHz CH810

1900 Left Cheek Middle

Date/Time: 2011-7-5 8:37:27
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.345 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.99 V/m; Power Drift = 0.199 dB
Peak SAR (extrapolated) = 0.514 W/kg
SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.170 mW/g
Maximum value of SAR (measured) = 0.337 mW/g

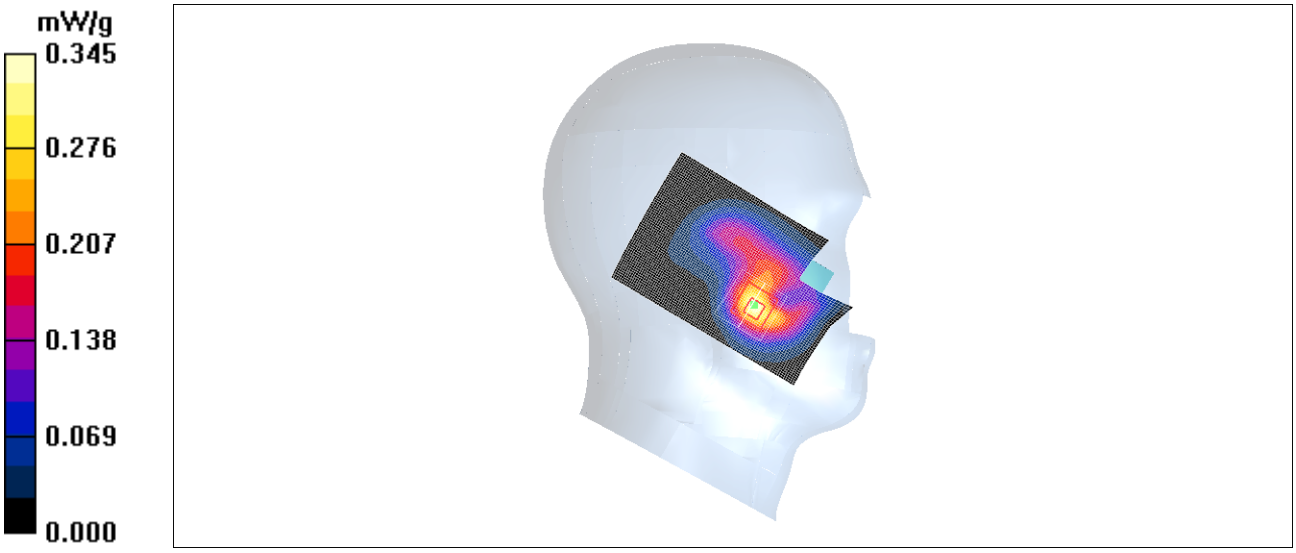


Fig. 14 1900 MHz CH661

1900 Left Cheek Low

Date/Time: 2011-7-5 8:51:53
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.461 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.73 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 0.687 W/kg
SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.229 mW/g
Maximum value of SAR (measured) = 0.457 mW/g

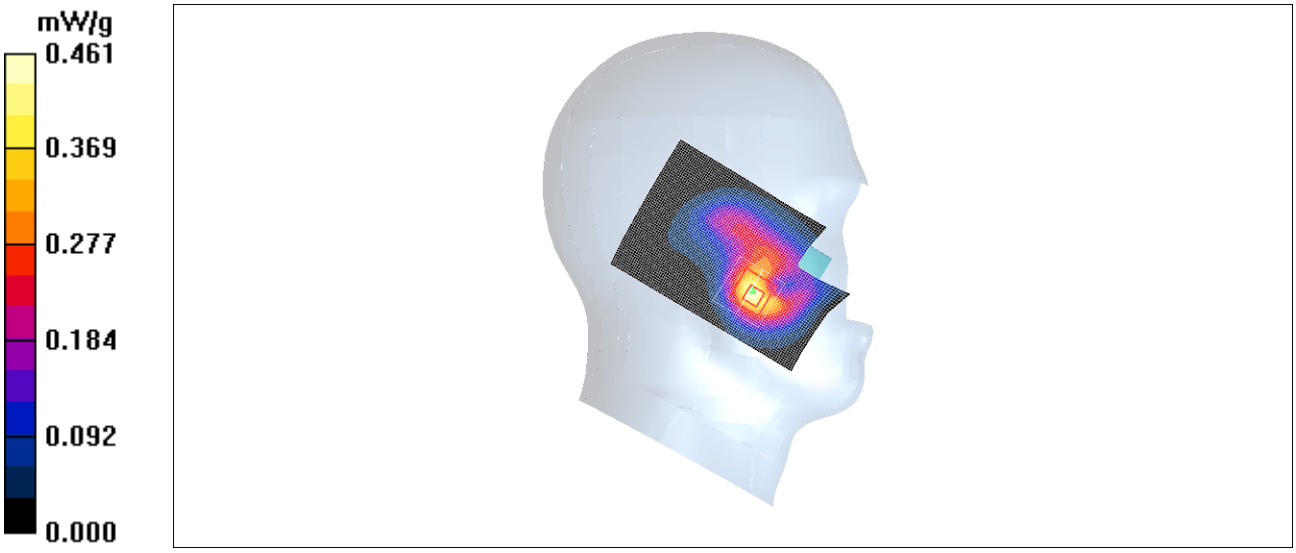


Fig. 15 1900 MHz CH512

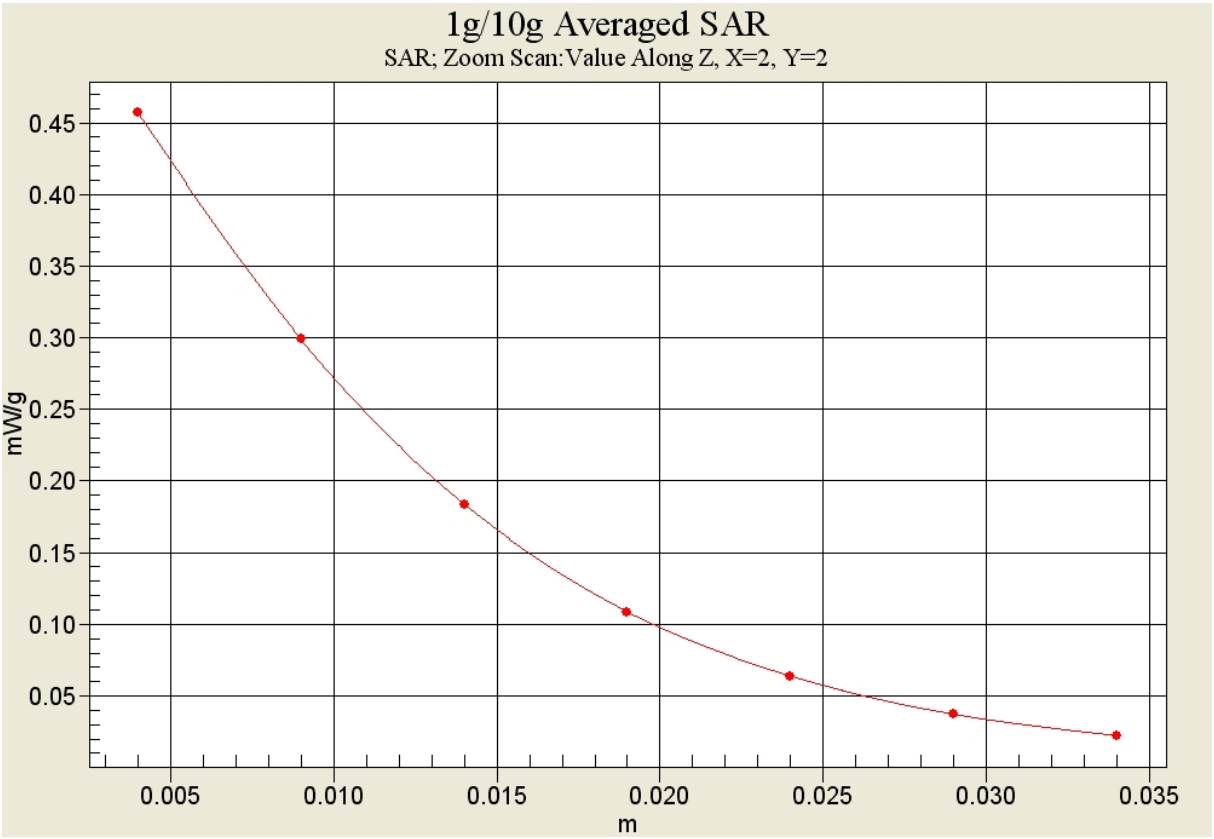


Fig. 15-1 Z-Scan at power reference point (1900 MHz CH512)

1900 Left Tilt High

Date/Time: 2011-7-5 9:06:20
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.068 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.05 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.093 W/kg
SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.036 mW/g
Maximum value of SAR (measured) = 0.062 mW/g

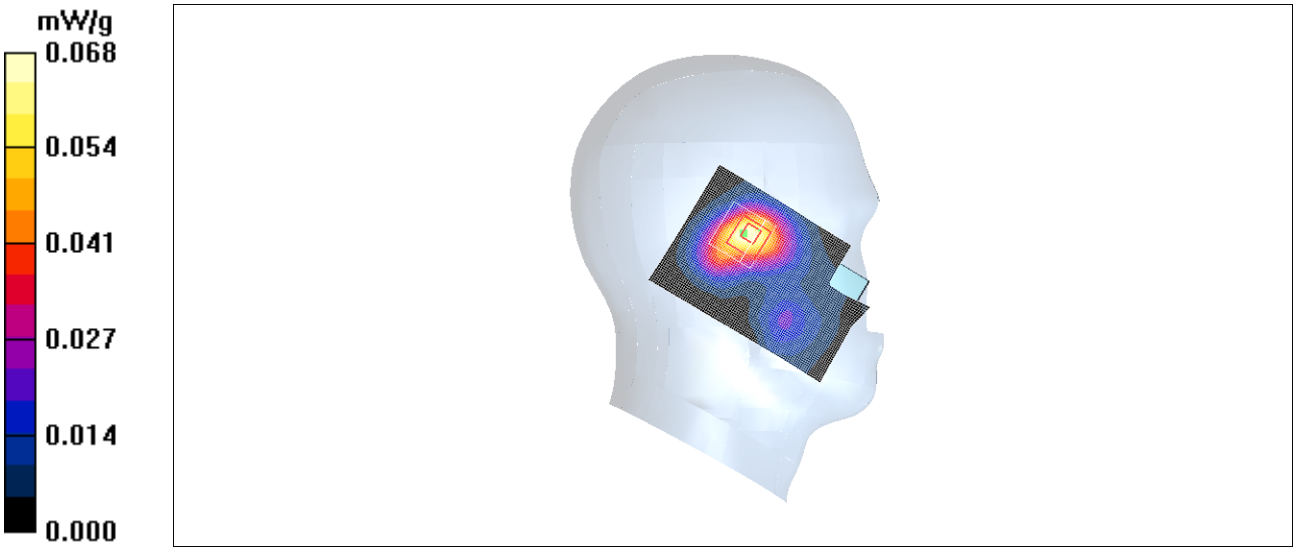


Fig.16 1900 MHz CH810

1900 Left Tilt Middle

Date/Time: 2011-7-5 9:20:39
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.090 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.84 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.050 mW/g
Maximum value of SAR (measured) = 0.084 mW/g

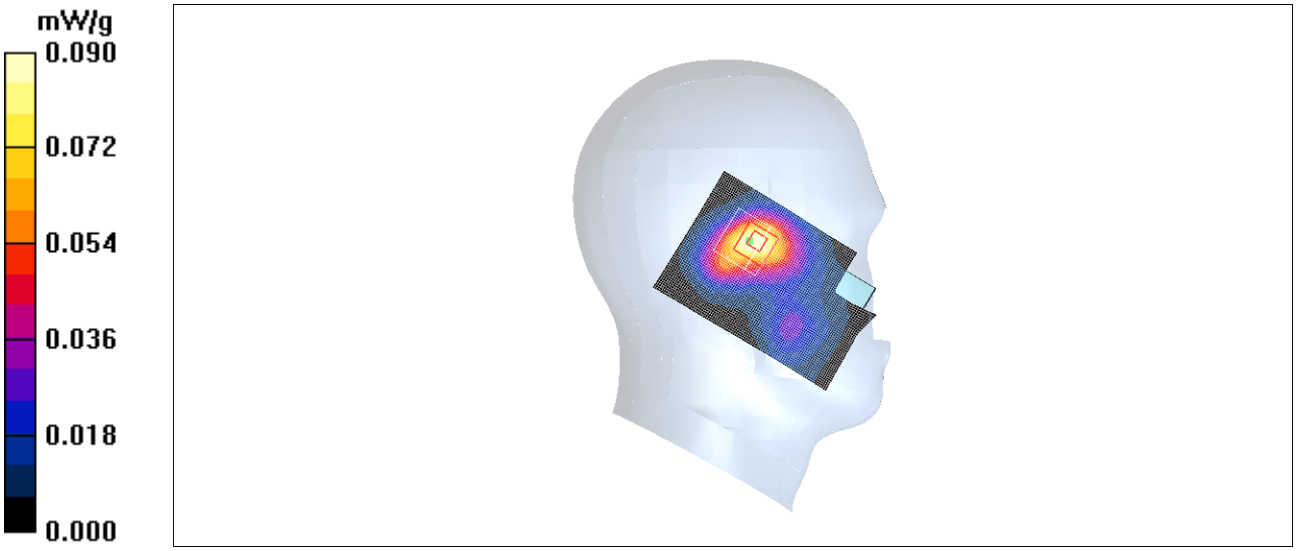


Fig. 17 1900 MHz CH661

1900 Left Tilt Low
Date/Time: 2011-7-5 9:35:03
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.121 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.01 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 0.162 W/kg
SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.116 mW/g

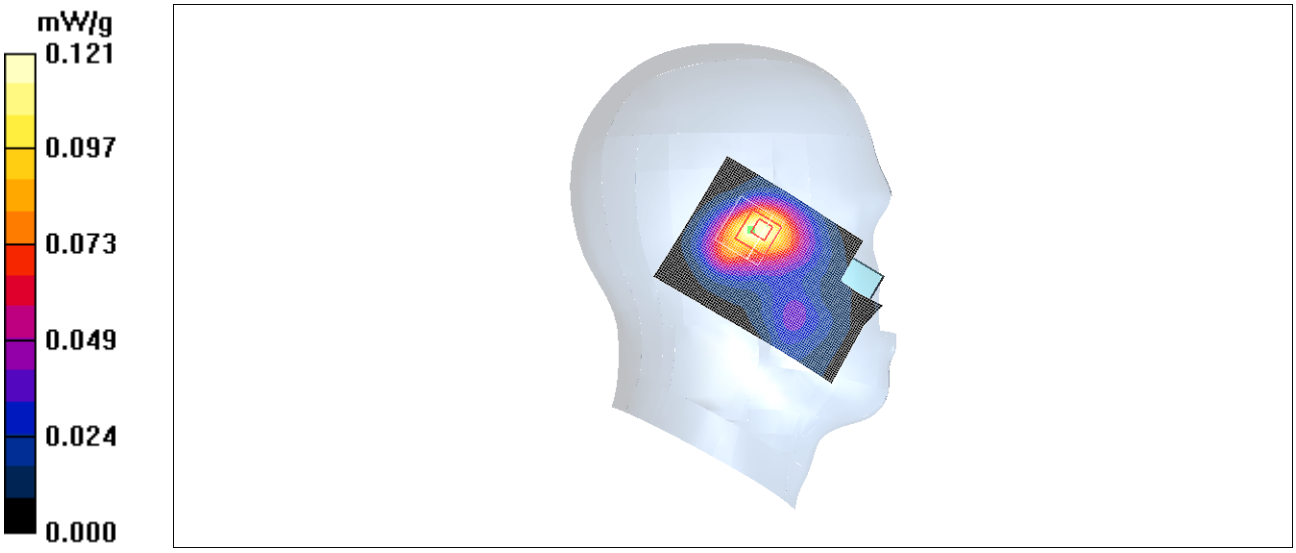


Fig. 18 1900 MHz CH512

1900 Right Cheek High

Date/Time: 2011-7-5 9:49:36
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.263 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.38 V/m; Power Drift = 0.173 dB
Peak SAR (extrapolated) = 0.379 W/kg
SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.137 mW/g
Maximum value of SAR (measured) = 0.259 mW/g

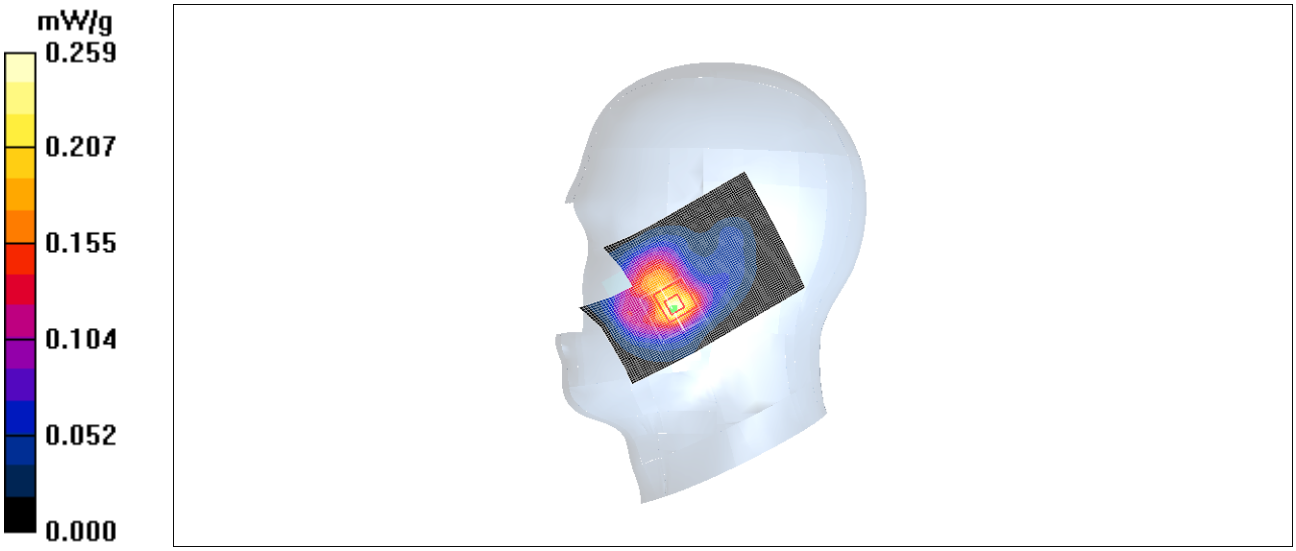


Fig. 19 1900 MHz CH810

1900 Right Cheek Middle

Date/Time: 2011-7-5 10:03:55
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.325 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.01 V/m; Power Drift = 0.148 dB
Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.170 mW/g
Maximum value of SAR (measured) = 0.320 mW/g

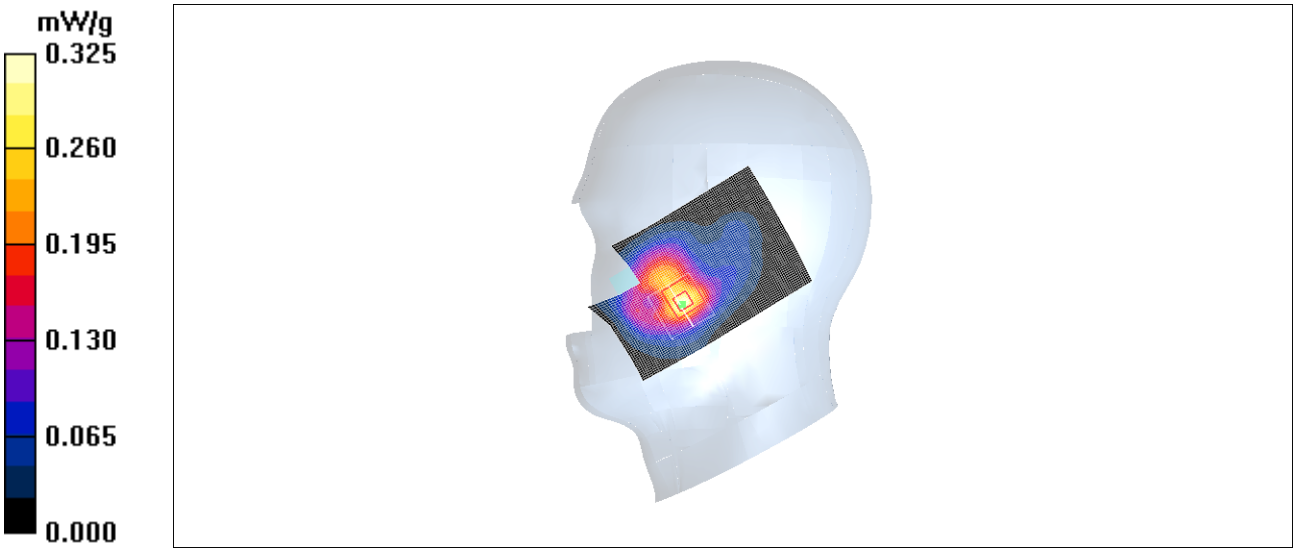


Fig. 20 1900 MHz CH661

1900 Right Cheek Low

Date/Time: 2011-7-5 10:18:21
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.384 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.54 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 0.544 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.206 mW/g
Maximum value of SAR (measured) = 0.378 mW/g

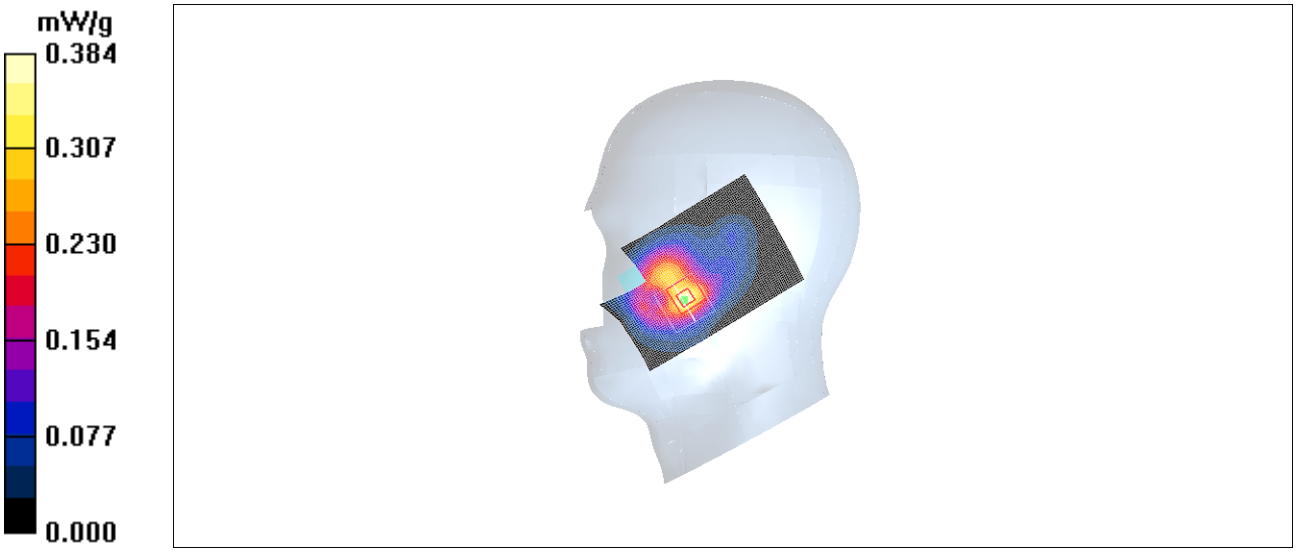


Fig. 21 1900 MHz CH512

1900 Right Tilt High

Date/Time: 2011-7-5 10:32:56
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.067 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.12 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 0.091 W/kg
SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.034 mW/g
Maximum value of SAR (measured) = 0.062 mW/g

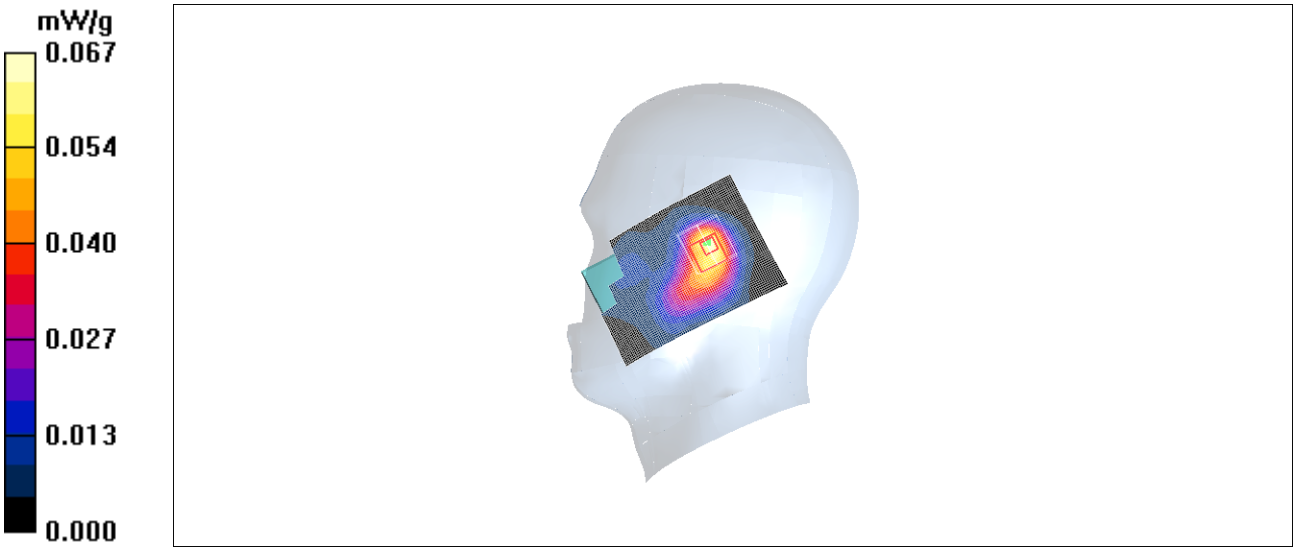


Fig. 22 1900 MHz CH810

1900 Right Tilt Middle
Date/Time: 2011-7-5 10:47:16
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.087 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.98 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 0.116 W/kg
SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.047 mW/g
Maximum value of SAR (measured) = 0.082 mW/g

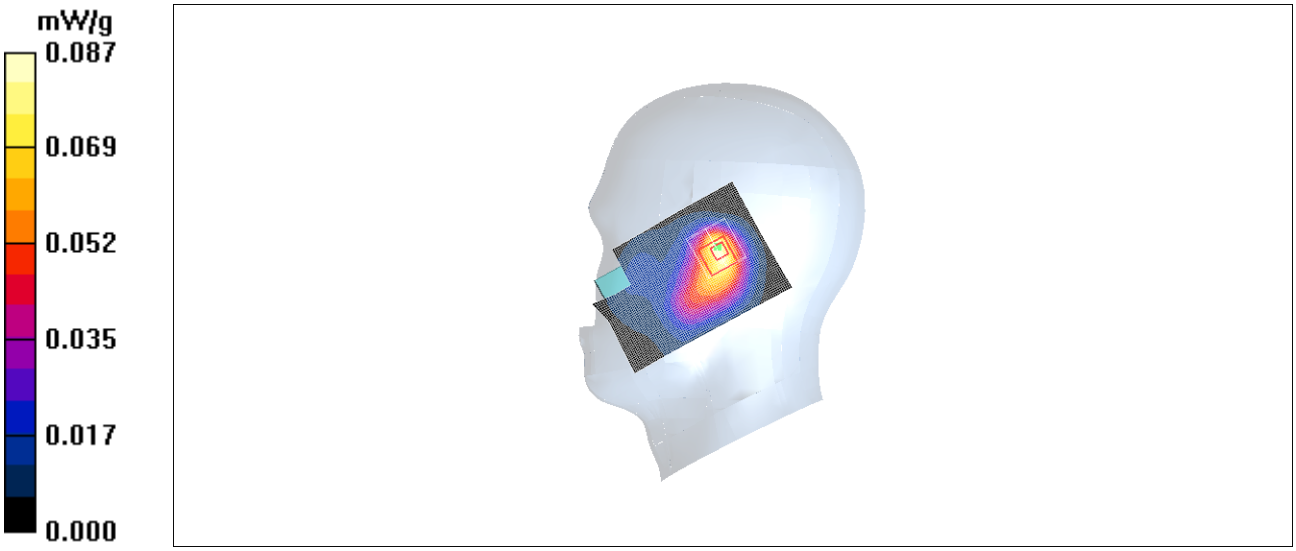


Fig.23 1900 MHz CH661

1900 Right Tilt Low
Date/Time: 2011-7-5 11:01:44
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.112 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.74 V/m; Power Drift = 0.113 dB
Peak SAR (extrapolated) = 0.144 W/kg
SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.060 mW/g
Maximum value of SAR (measured) = 0.103 mW/g

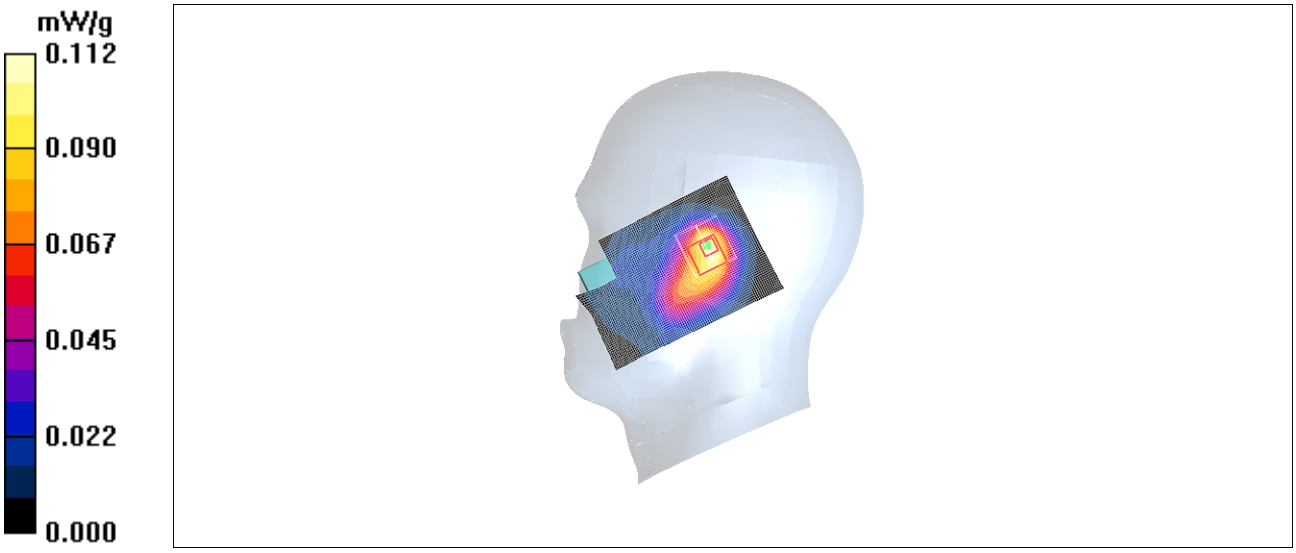


Fig.24 1900 MHz CH512

WCDMA850 Left Cheek High

Date/Time: 2011-7-4 11:37:23
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.404 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.14 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 0.515 W/kg
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.266 mW/g
Maximum value of SAR (measured) = 0.395 mW/g

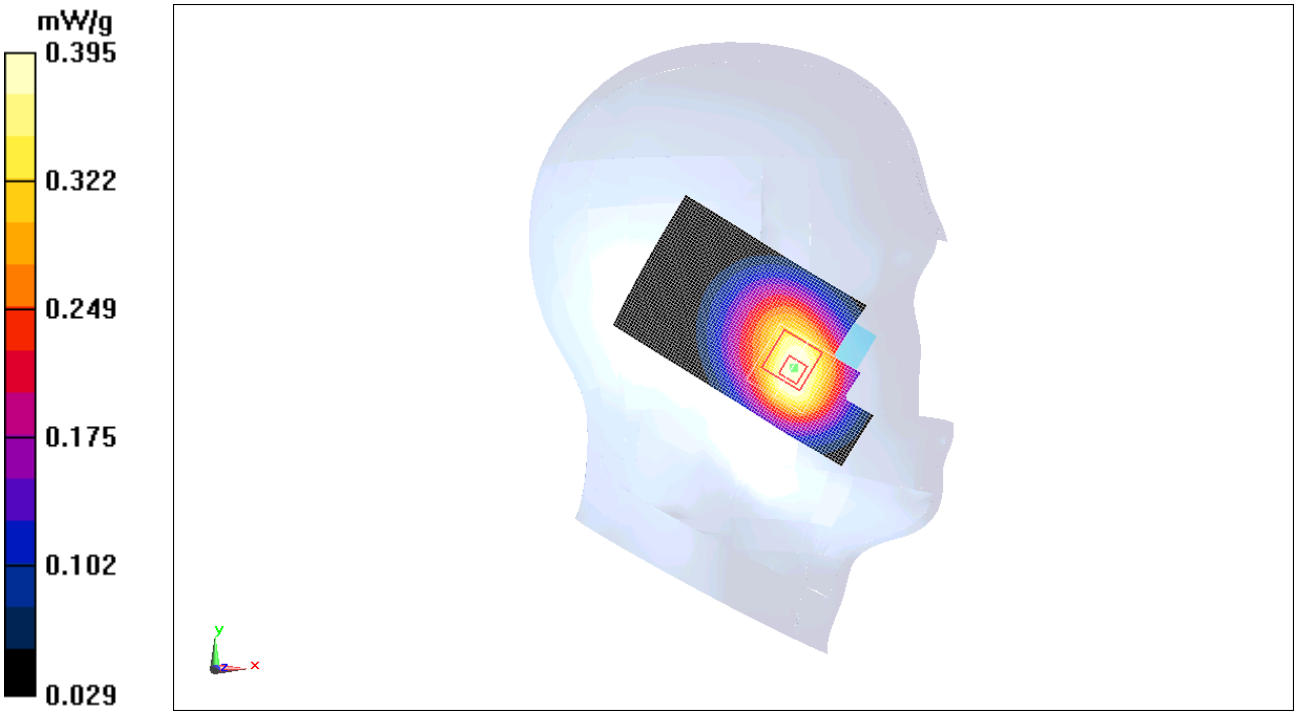


Fig. 25 850MHz CH4233

WCDMA 850 Left Cheek Middle

Date/Time: 2011-7-4 11:51:46
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.485 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.11 V/m; Power Drift = -0.108 dB
Peak SAR (extrapolated) = 0.632 W/kg
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.325 mW/g
Maximum value of SAR (measured) = 0.482 mW/g

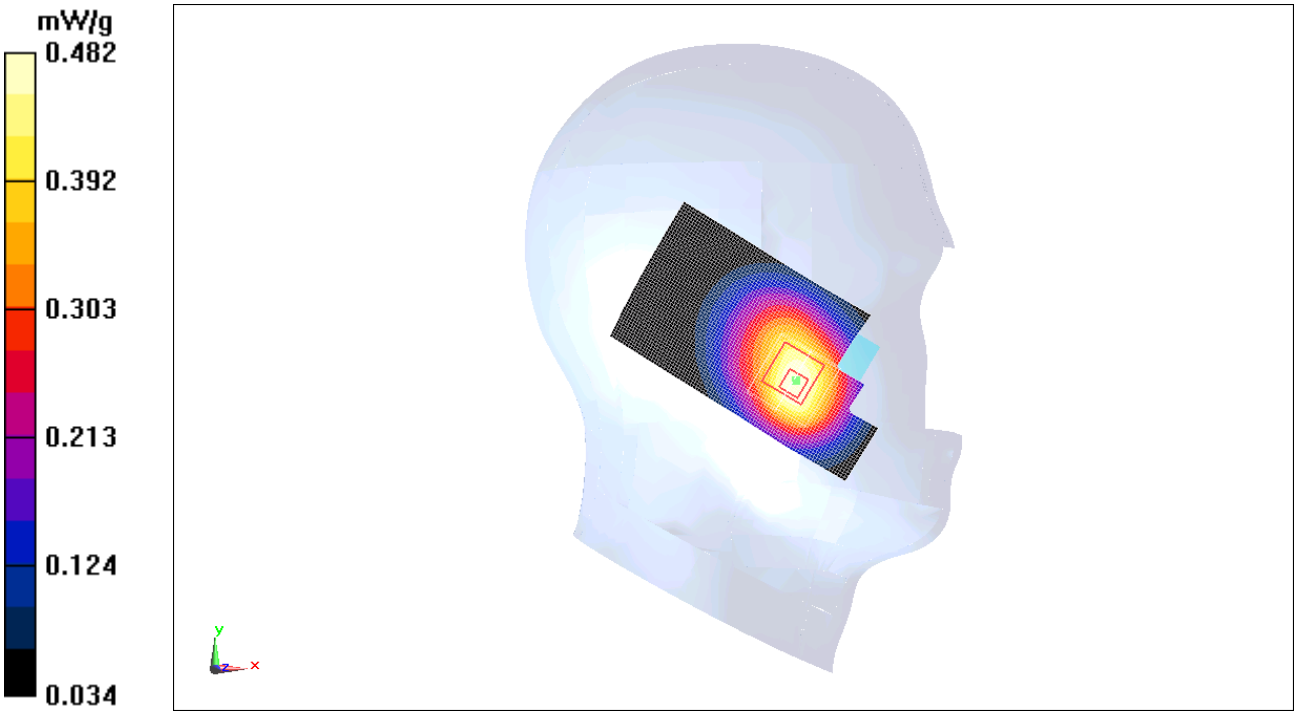


Fig. 26 850 MHz CH4182

WCDMA 850 Left Cheek Low
Date/Time: 2011-7-4 12:06:05
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.533 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.23 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 0.693 W/kg
SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.361 mW/g
Maximum value of SAR (measured) = 0.533 mW/g

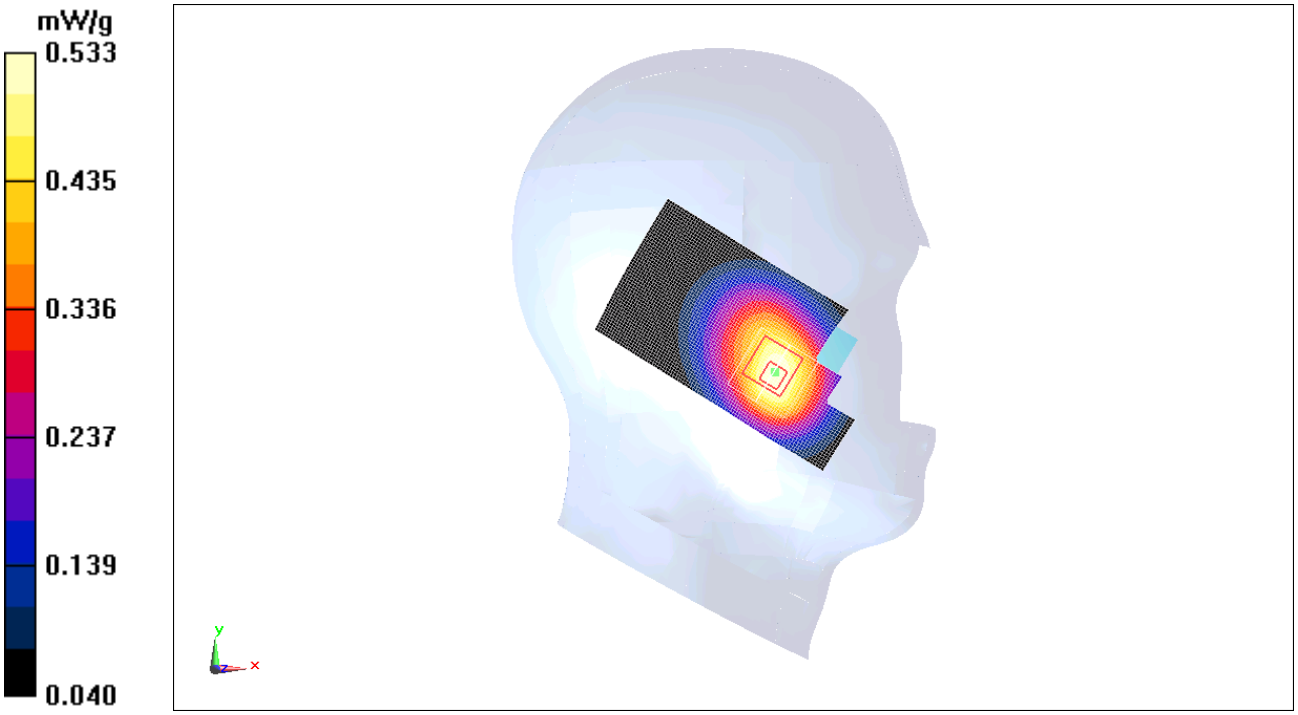


Fig. 27 850 MHz CH4132

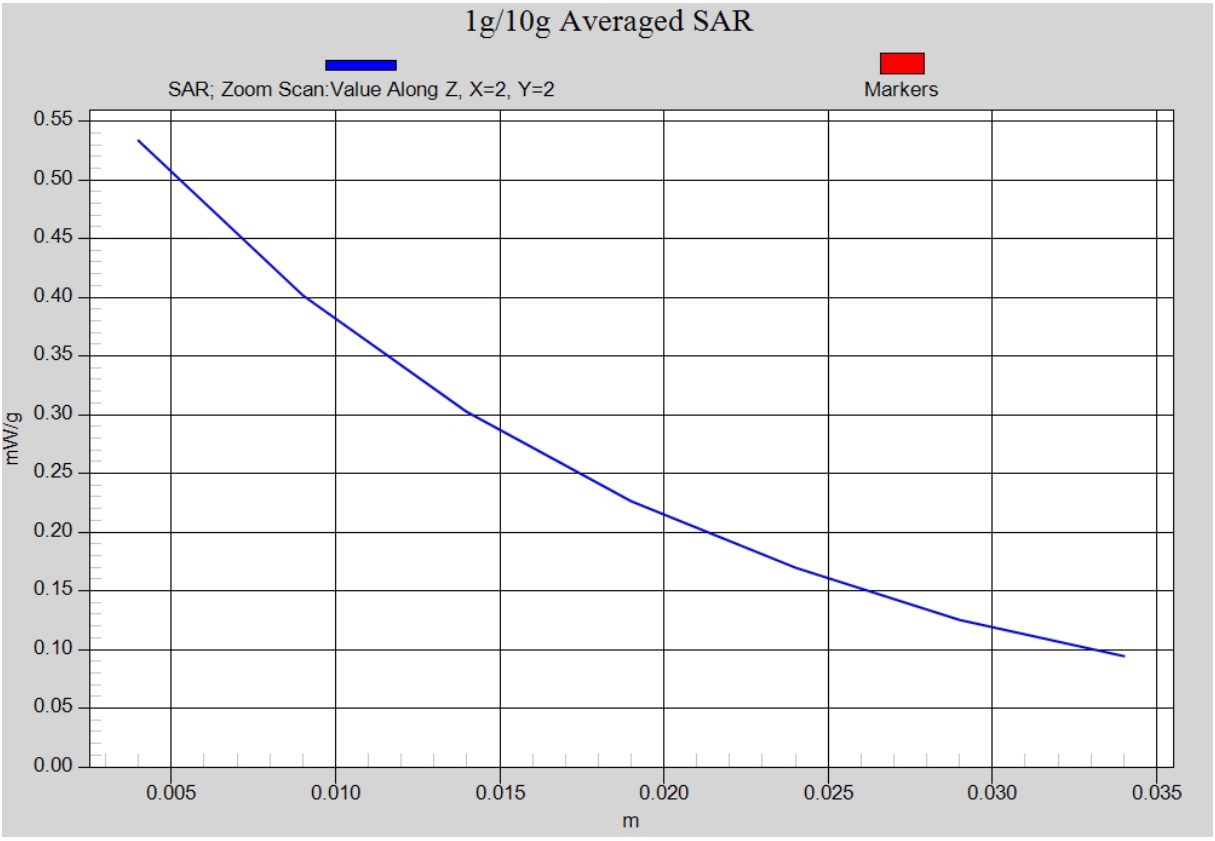


Fig. 27-1 Z-Scan at power reference point (850 MHz CH4132)

WCDMA 850 Left Tilt High
Date/Time: 2011-7-4 12:20:31
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.221 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.4 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 0.217 mW/g

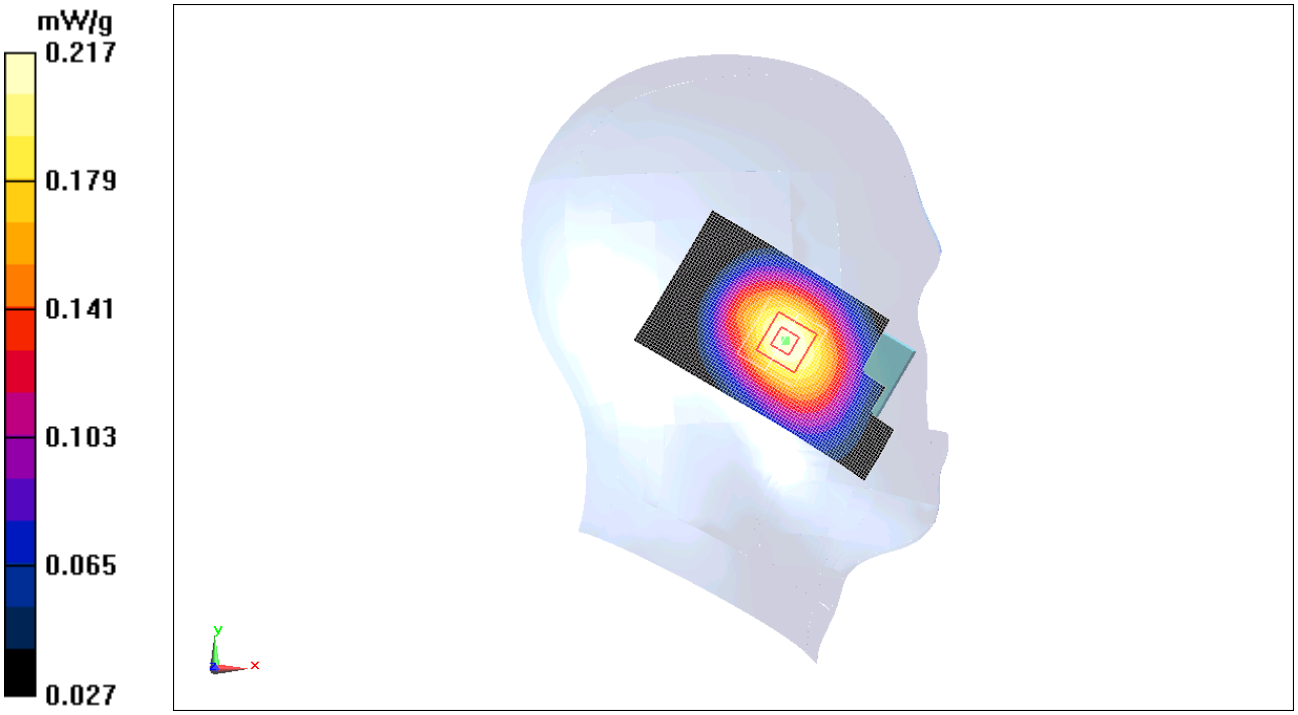


Fig.28 850 MHz CH4233

WCDMA 850 Left Tilt Middle

Date/Time: 2011-7-4 12:34:50
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.246 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.173 mW/g
Maximum value of SAR (measured) = 0.243 mW/g

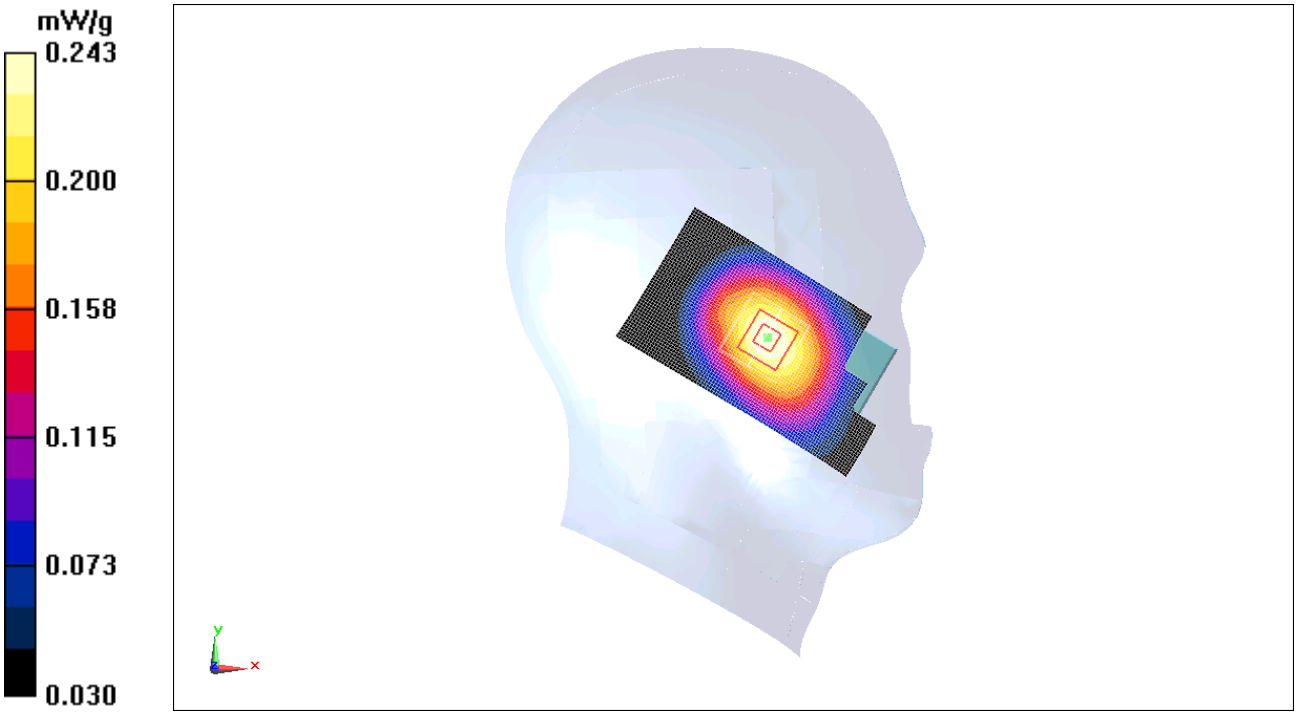


Fig.29 850 MHz CH4182

WCDMA 850 Left Tilt Low
Date/Time: 2011-7-4 12:49:10
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.281 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 0.326 W/kg
SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.198 mW/g
Maximum value of SAR (measured) = 0.277 mW/g

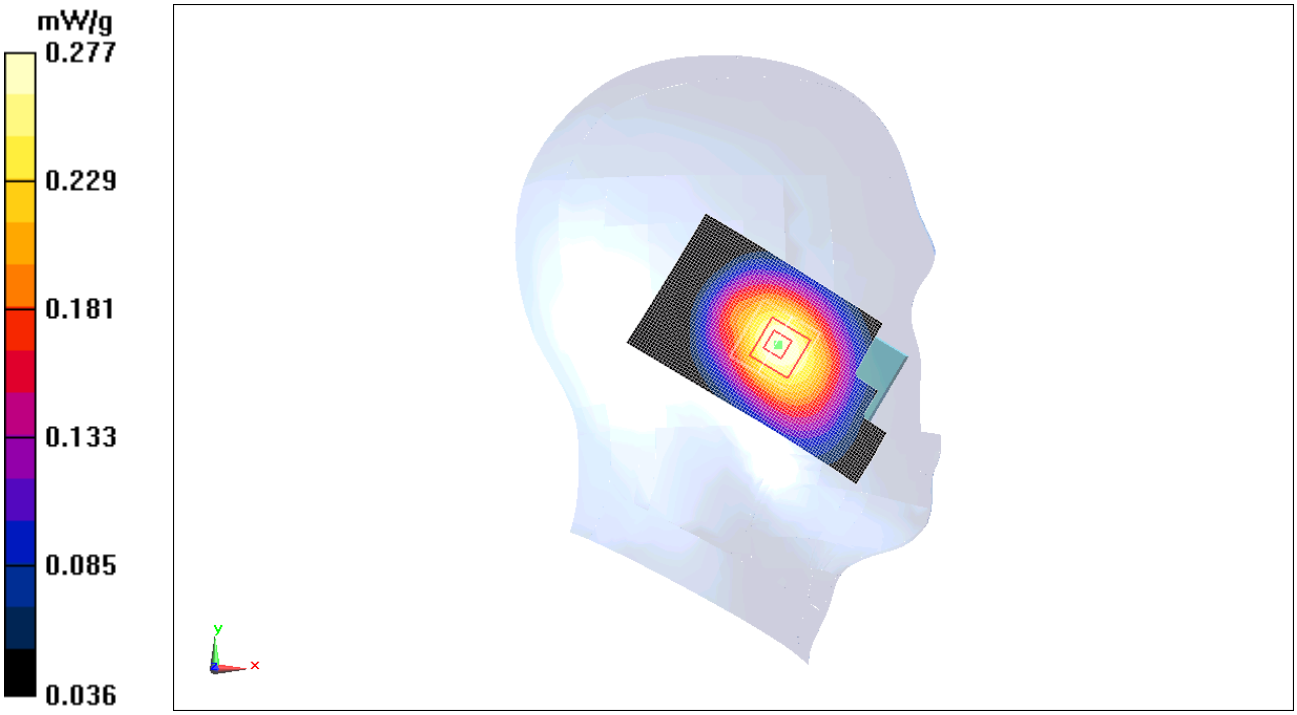


Fig. 30 850 MHz CH4132

WCDMA 850 Right Cheek High
Date/Time: 2011-7-4 13:03:59
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.407 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.26 V/m; Power Drift = 0.059 dB
Peak SAR (extrapolated) = 0.459 W/kg
SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.273 mW/g
Maximum value of SAR (measured) = 0.390 mW/g

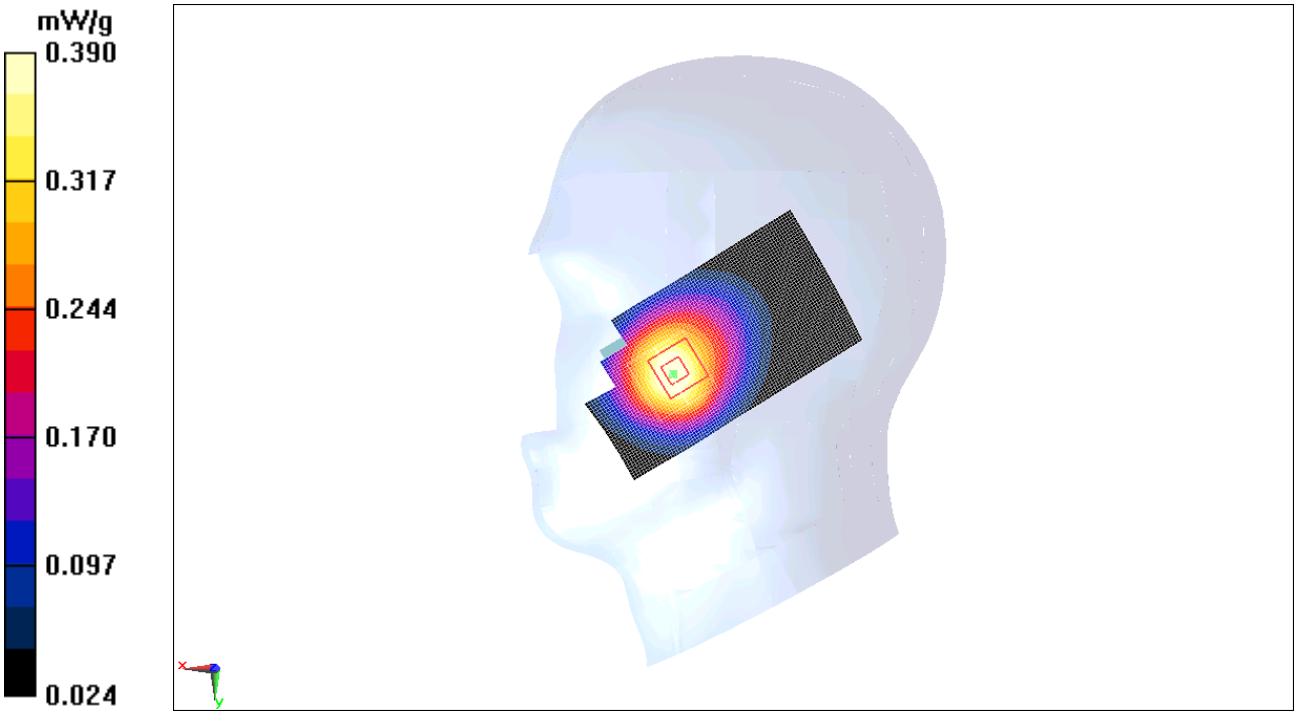


Fig. 31 850 MHz CH4233

WCDMA 850 Right Cheek Middle
Date/Time: 2011-7-4 13:18:23
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.484 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.08 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 0.549 W/kg
SAR(1 g) = 0.446 mW/g; SAR(10 g) = 0.329 mW/g
Maximum value of SAR (measured) = 0.468 mW/g

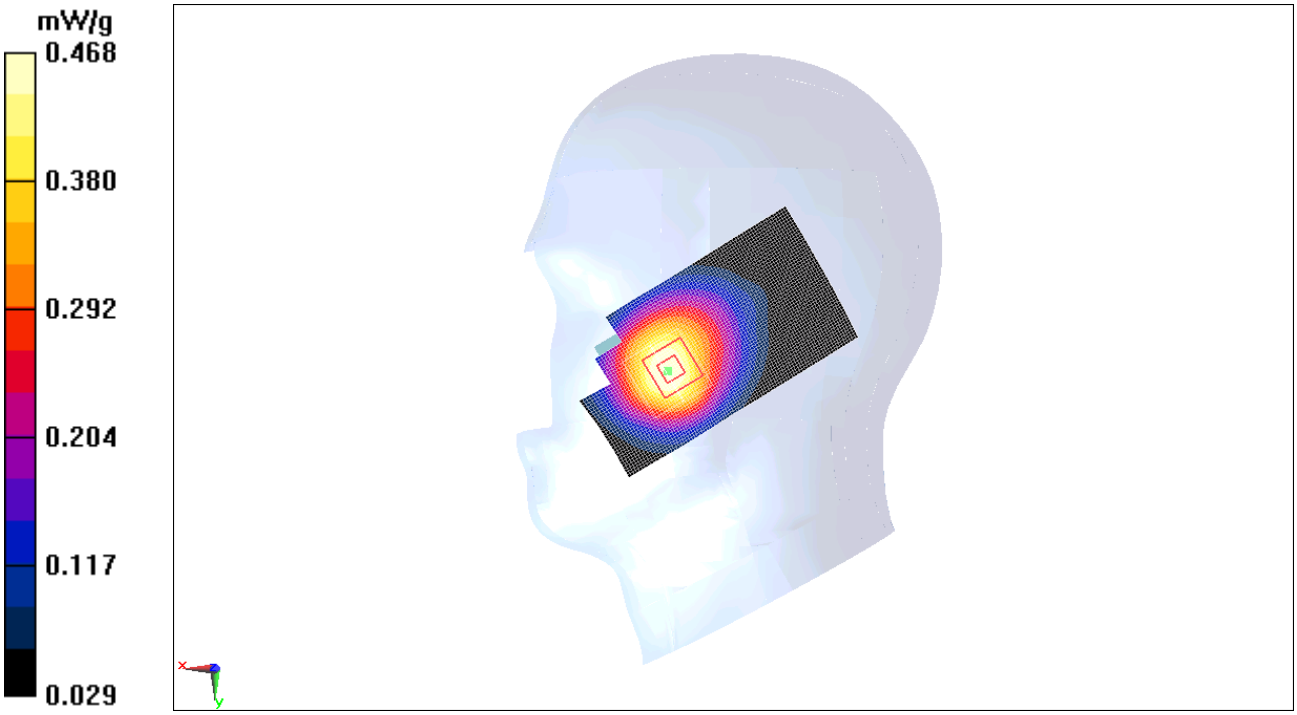


Fig. 32 850 MHz CH4182

WCDMA 850 Right Cheek Low
Date/Time: 2011-7-4 13:32:46
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.519 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.37 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 0.596 W/kg
SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.358 mW/g
Maximum value of SAR (measured) = 0.509 mW/g

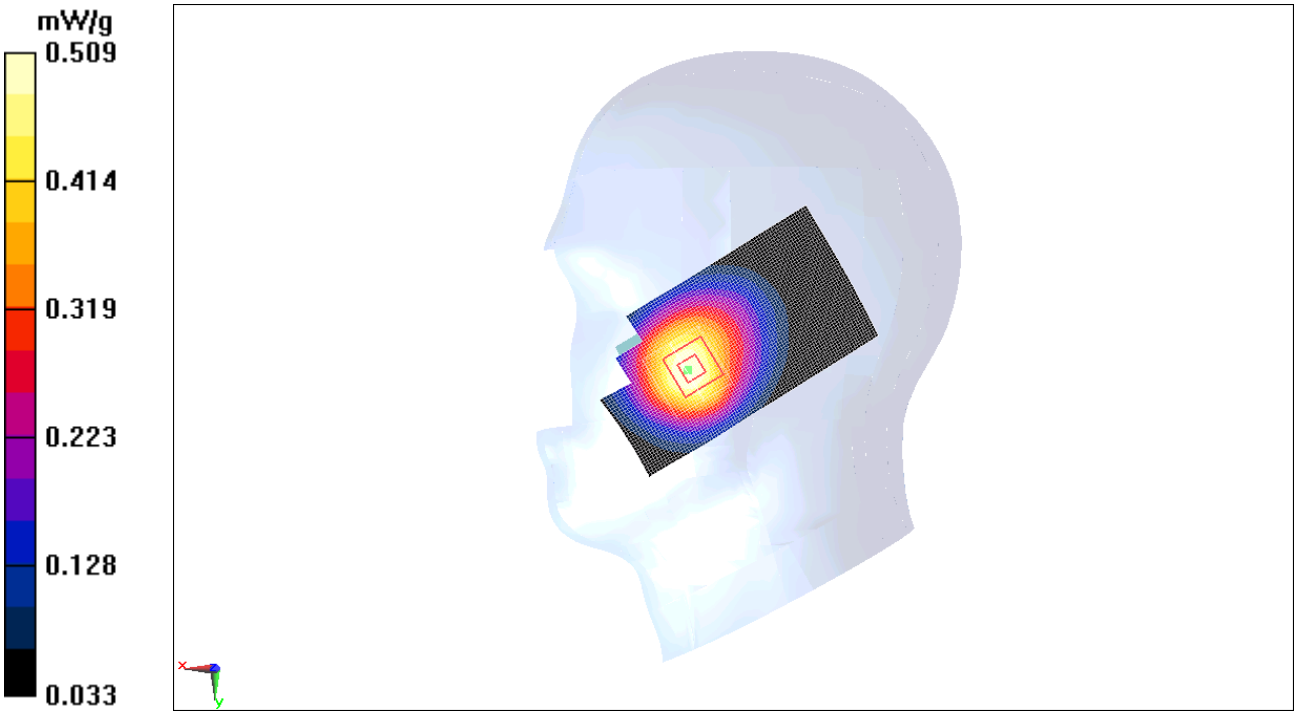


Fig. 33 850 MHz CH4132

WCDMA 850 Right Tilt High
Date/Time: 2011-7-4 13:47:09
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.0; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.214 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.79 V/m; Power Drift = 0.085 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.153 mW/g
Maximum value of SAR (measured) = 0.214 mW/g

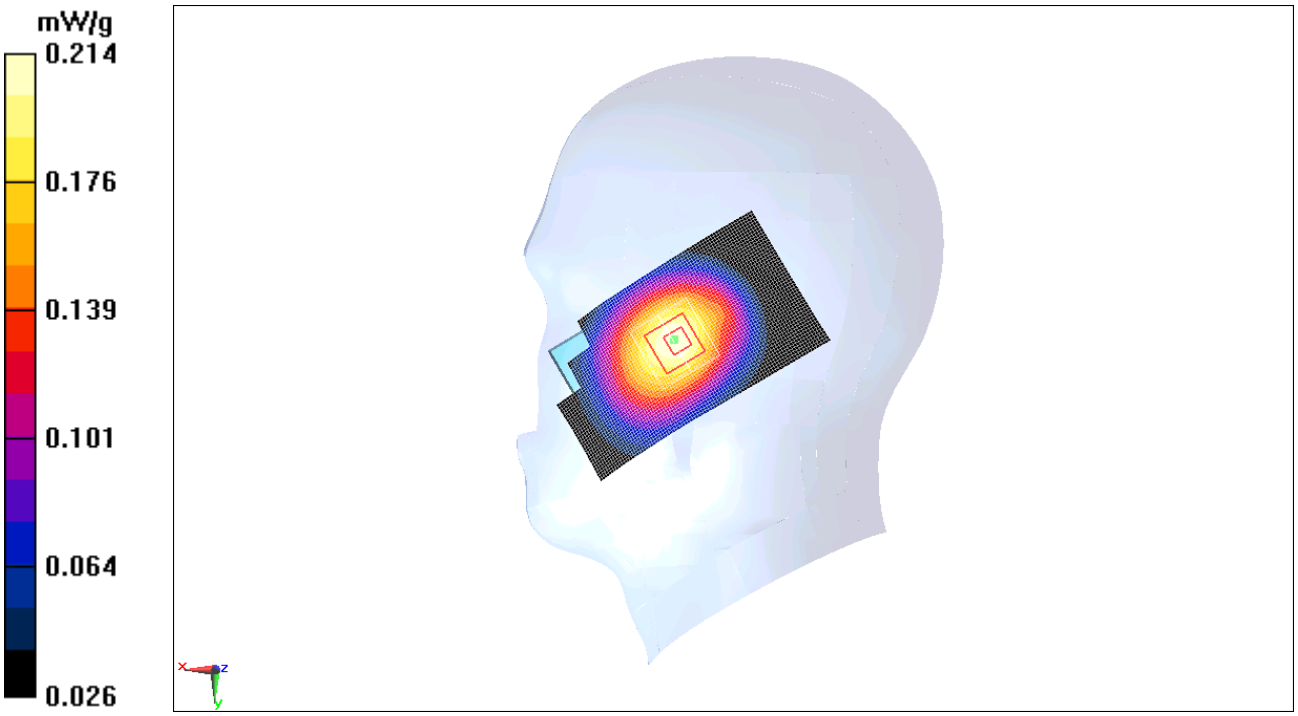


Fig.34 850 MHz CH4233

WCDMA 850 Right Tilt Middle

Date/Time: 2011-7-4 14:01:30
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.1; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.249 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.250 mW/g

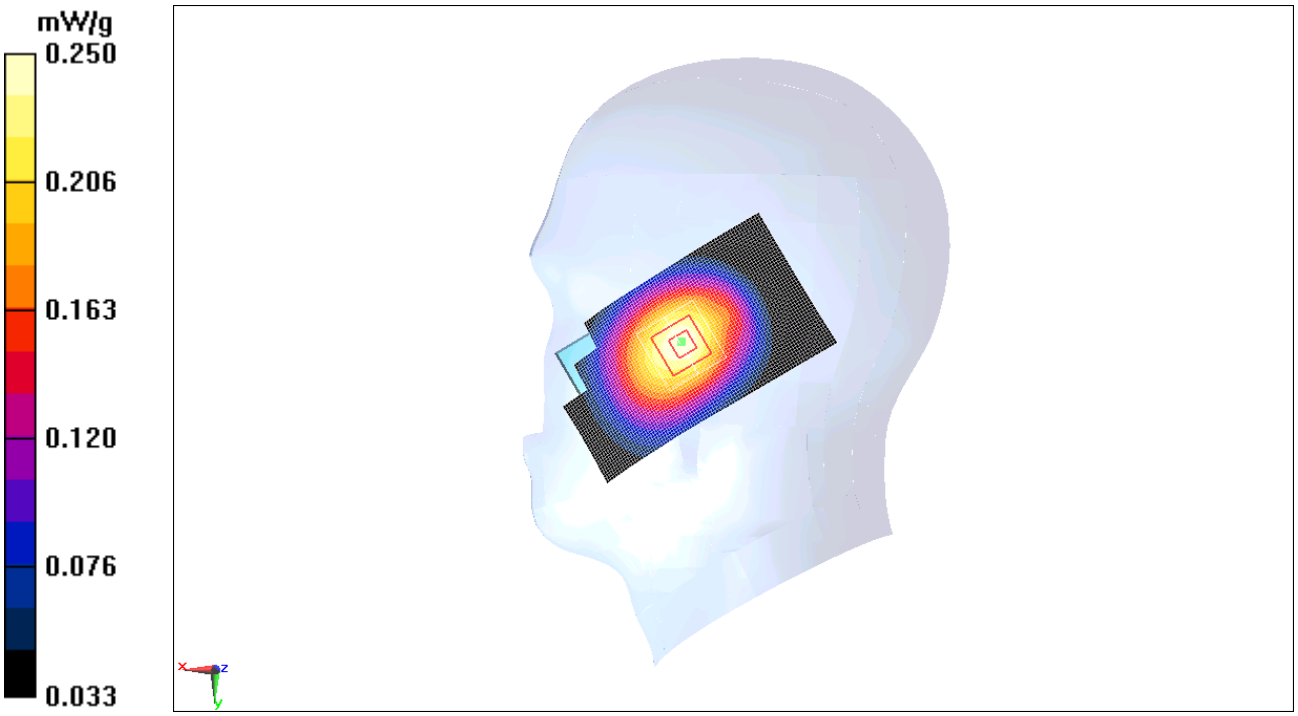


Fig.35 850 MHz CH4182

WCDMA 850 Right Tilt Low
Date/Time: 2011-7-4 14:15:58
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 41.3; 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.277 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.198 mW/g
Maximum value of SAR (measured) = 0.274 mW/g

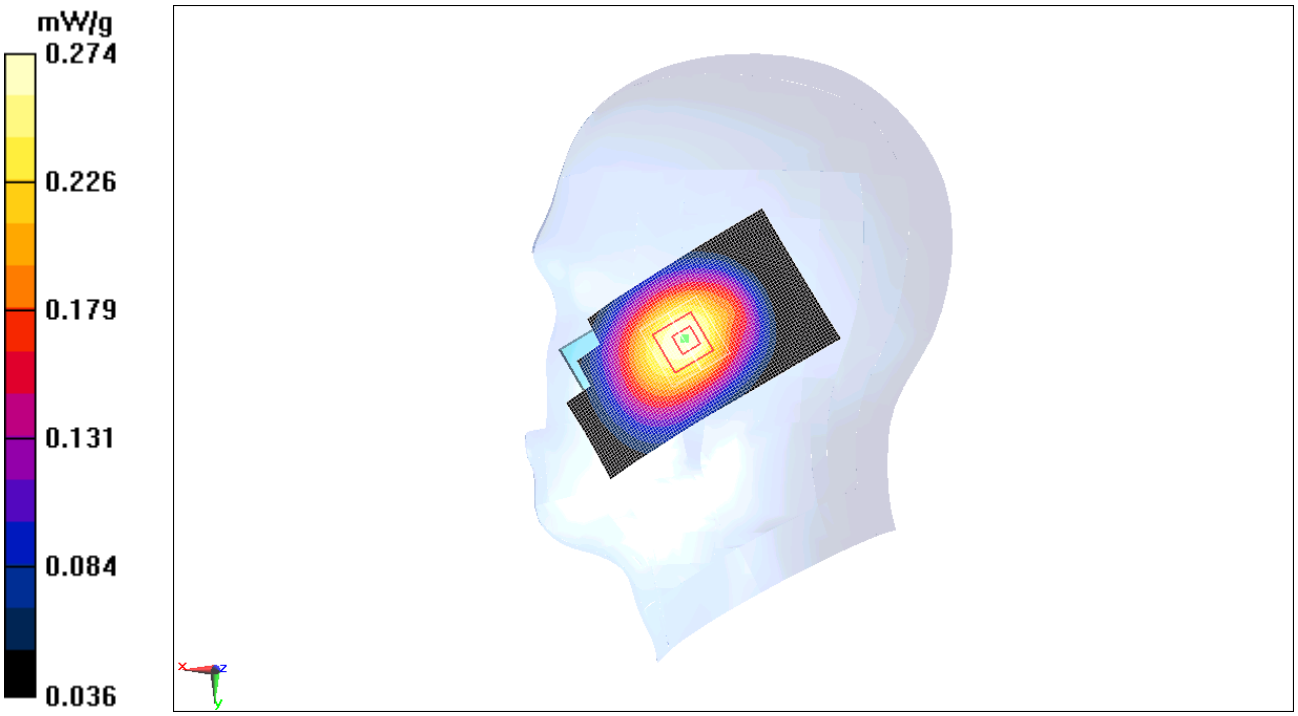


Fig. 36 850 MHz CH4132

WCDMA 1900 Left Cheek High

Date/Time: 2011-7-5 11:22:54
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.42 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.855 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.78 V/m; Power Drift = -0.180 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.741 mW/g; SAR(10 g) = 0.401 mW/g
Maximum value of SAR (measured) = 0.823 mW/g

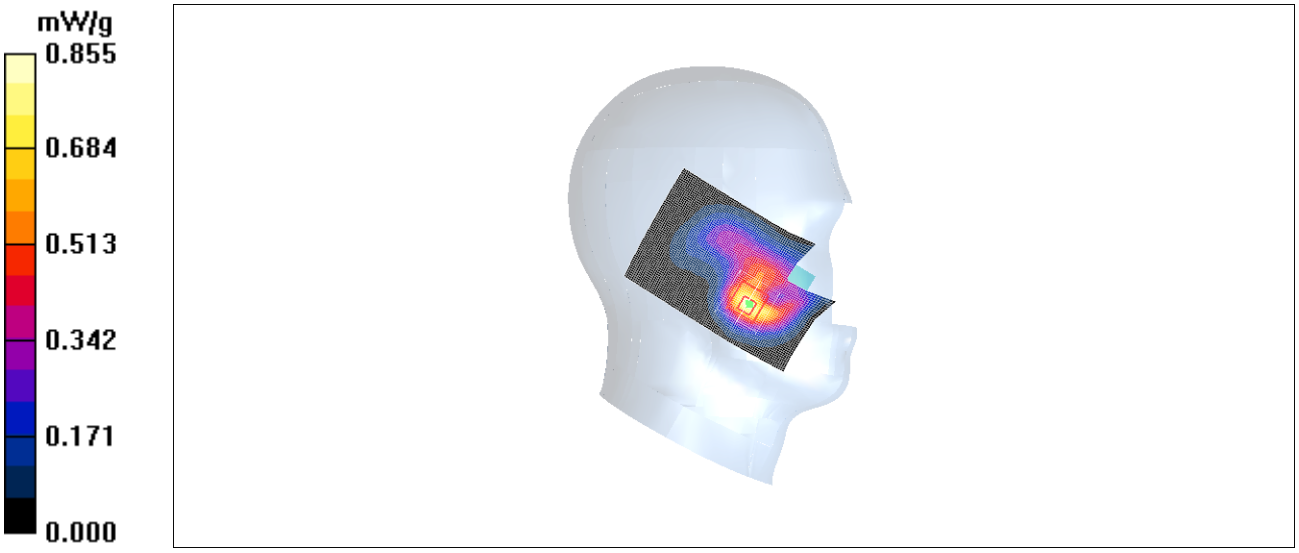


Fig. 37 1900 MHz CH9538

WCDMA 1900 Left Cheek Middle
Date/Time: 2011-7-5 11:37:20
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.27 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.49 V/m; Power Drift = -0.106 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.587 mW/g
Maximum value of SAR (measured) = 1.22 mW/g

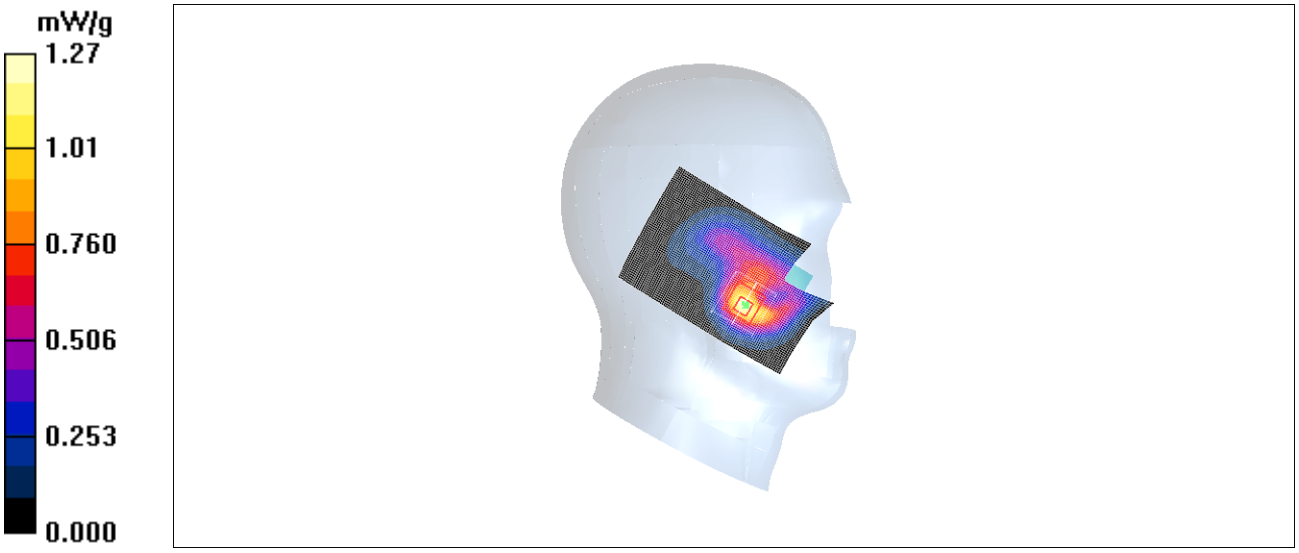


Fig. 38 1900 MHz CH9400

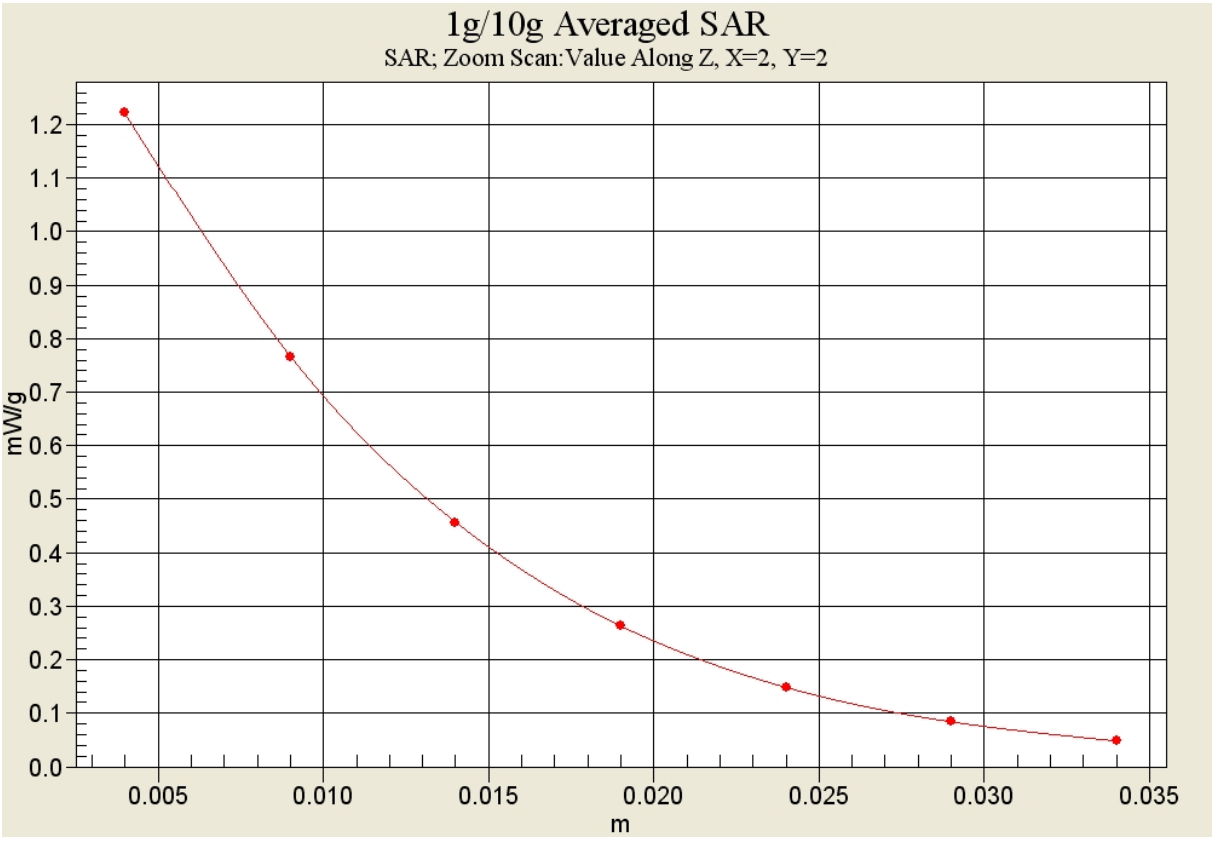


Fig. 39-1 Z-Scan at power reference point (1900 MHz CH9400)

WCDMA 1900 Left Cheek Low
Date/Time: 2011-7-5 11:51:42
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; εr = 41.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.988 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.10 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.878 mW/g; SAR(10 g) = 0.468 mW/g
Maximum value of SAR (measured) = 0.976 mW/g

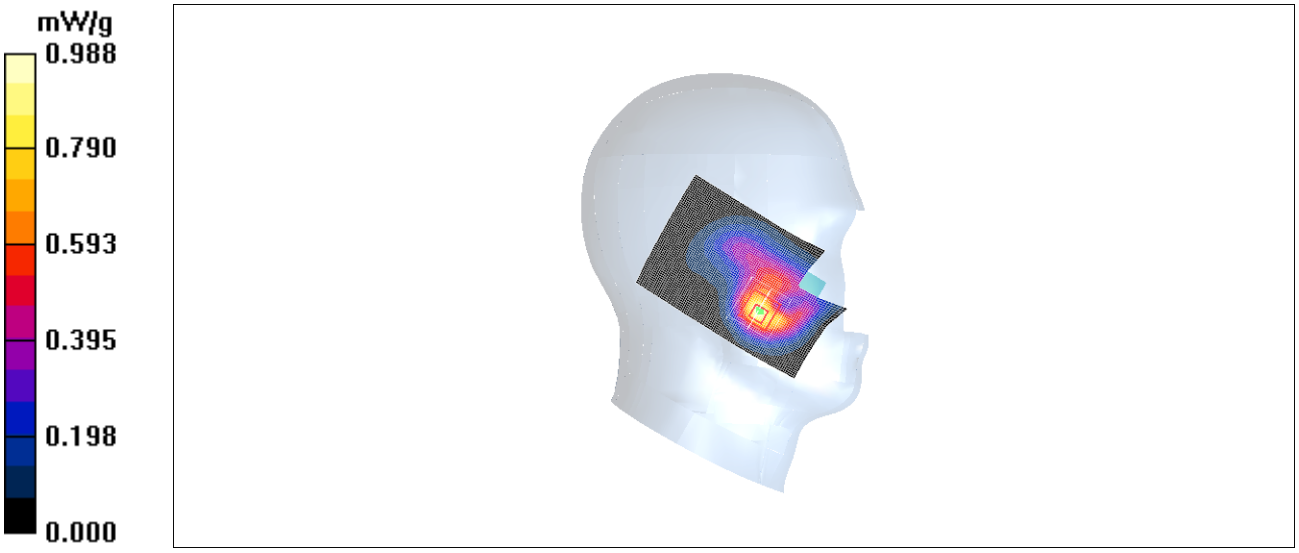


Fig. 39 1900 MHz CH9262

WCDMA 1900 Left Tilt High

Date/Time: 2011-7-5 12:06:11
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.42 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.180 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.24 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.172 mW/g

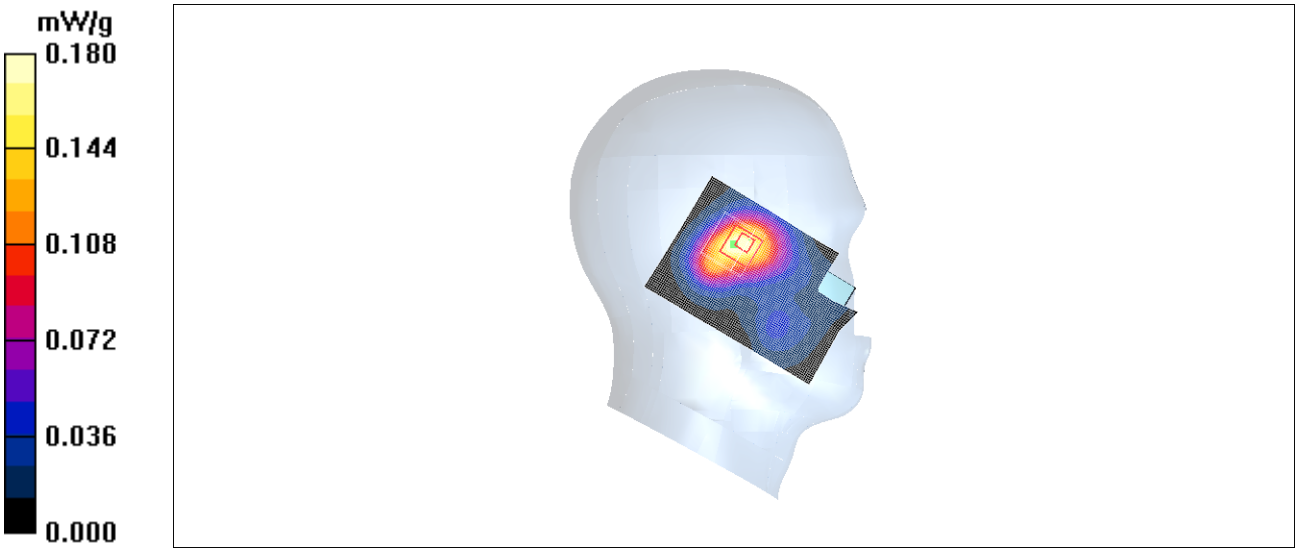


Fig.40 1900 MHz CH9538

WCDMA 1900 Left Tilt Middle

Date/Time: 2011-7-5 12:20:34
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.295 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.166 mW/g
Maximum value of SAR (measured) = 0.279 mW/g

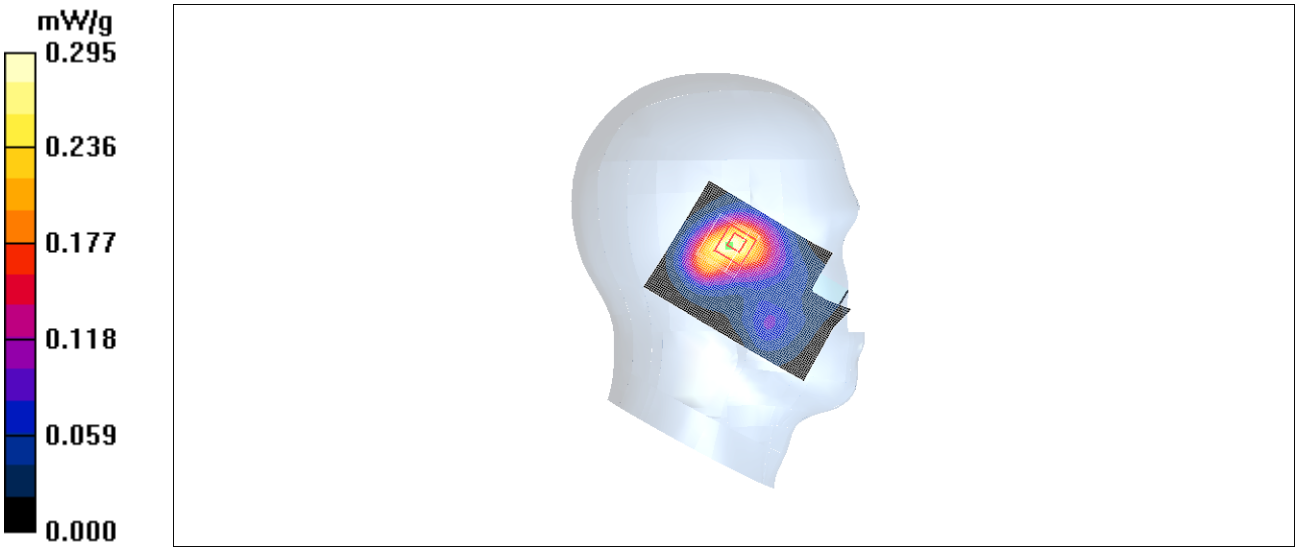


Fig. 41 1900 MHz CH9400

WCDMA 1900 Left Tilt Low
Date/Time: 2011-7-5 12:35:02
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; εr = 41.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.227 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 0.287 W/kg
SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.210 mW/g

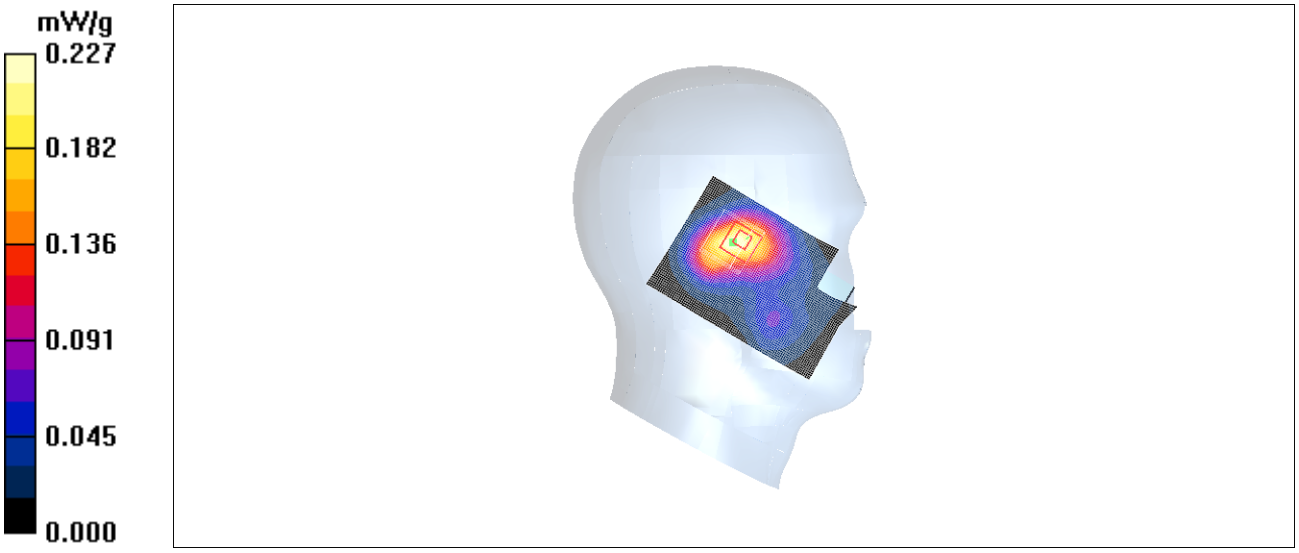


Fig. 42 1900 MHz CH9262

WCDMA 1900 Right Cheek High
Date/Time: 2011-7-5 12:49:47
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.42 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.864 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.59 V/m; Power Drift = -0.113 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.823 mW/g

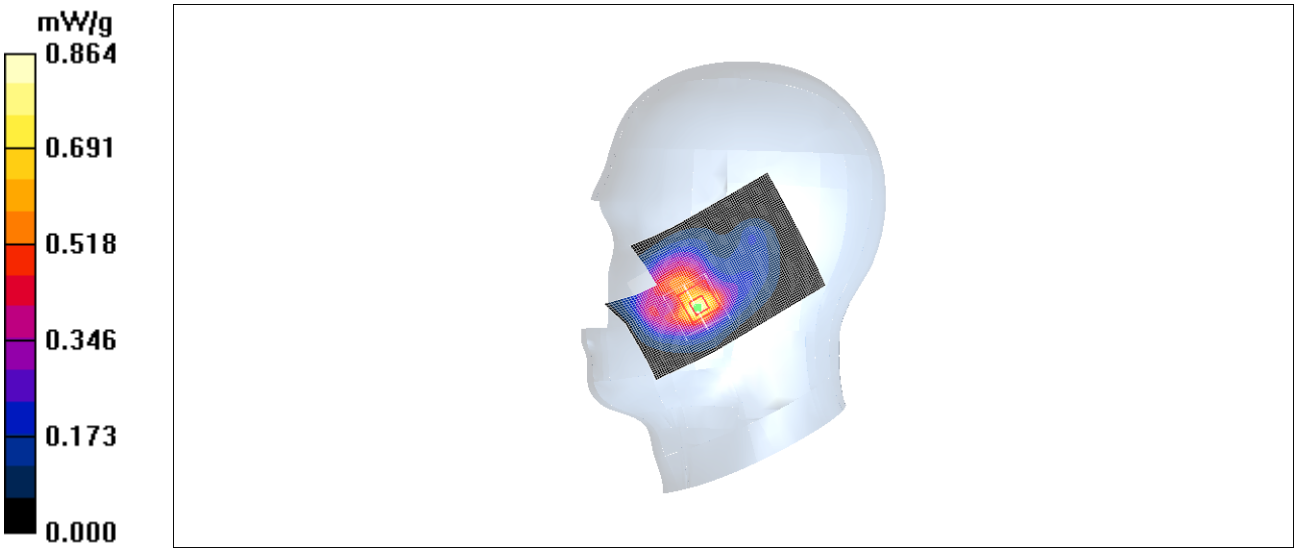


Fig. 43 1900 MHz CH9538

WCDMA 1900 Right Cheek Middle

Date/Time: 2011-7-5 13:04:11
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.07 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.20 V/m; Power Drift = 0.140 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.544 mW/g
Maximum value of SAR (measured) = 1.04 mW/g

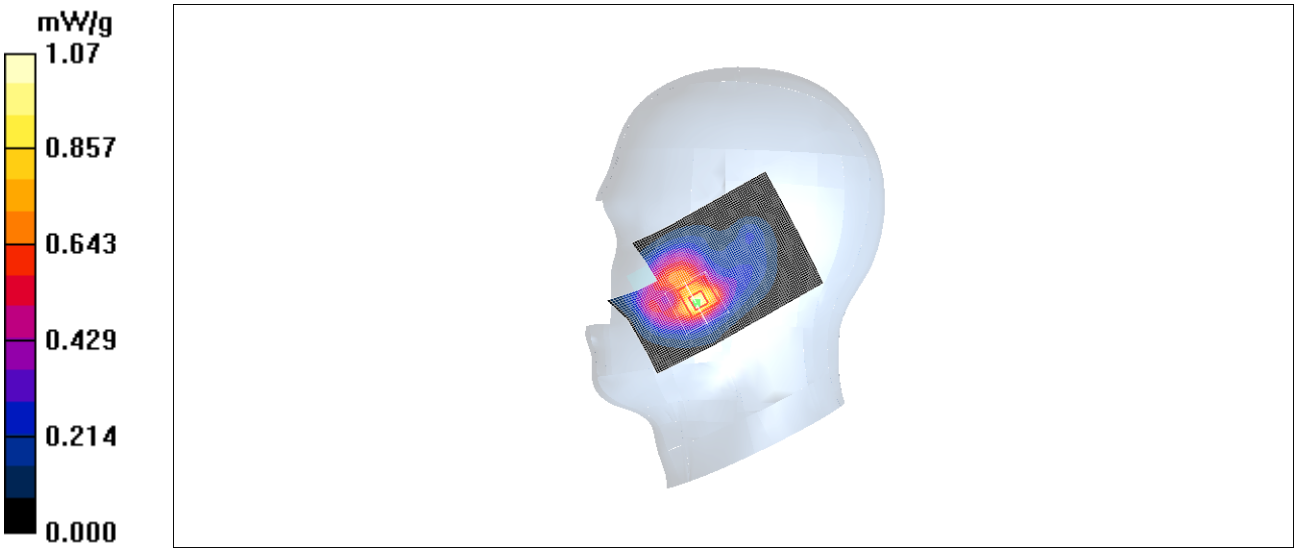


Fig. 44 1900 MHz CH9400

WCDMA 1900 Right Cheek Low

Date/Time: 2011-7-5 13:18:30
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; εr = 41.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.723 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.64 V/m; Power Drift = -0.152 dB
Peak SAR (extrapolated) = 0.982 W/kg
SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.372 mW/g
Maximum value of SAR (measured) = 0.700 mW/g

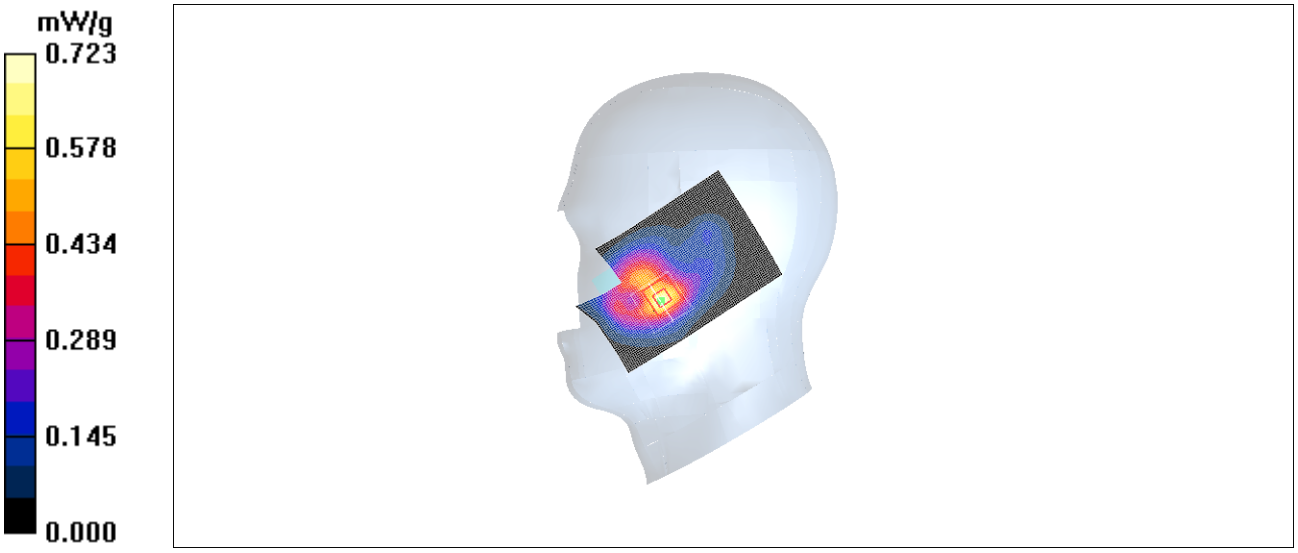


Fig. 45 1900 MHz CH9262

WCDMA 1900 Right Tilt High
Date/Time: 2011-7-5 13:34:05
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.42 mho/m; εr = 40.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.228 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = -0.003 dB
Peak SAR (extrapolated) = 0.288 W/kg
SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.112 mW/g
Maximum value of SAR (measured) = 0.193 mW/g

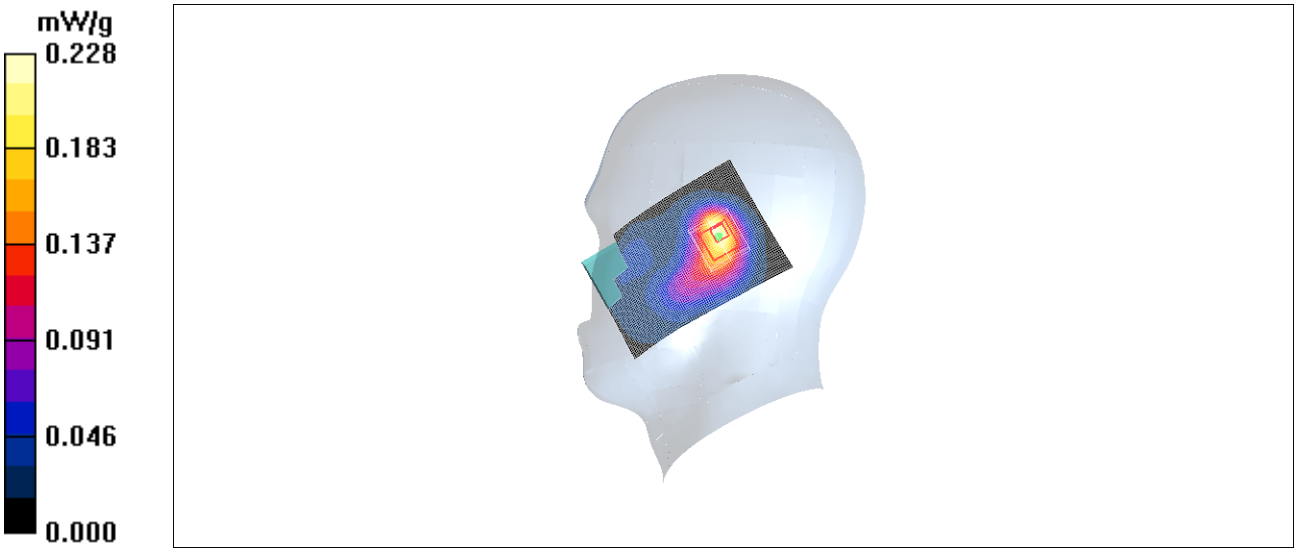


Fig. 46 1900 MHz CH9538

WCDMA 1900 Right Tilt Middle

Date/Time: 2011-7-5 13:48:28
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.339 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.3 V/m; Power Drift = -0.169 dB
Peak SAR (extrapolated) = 0.456 W/kg
SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.310 mW/g

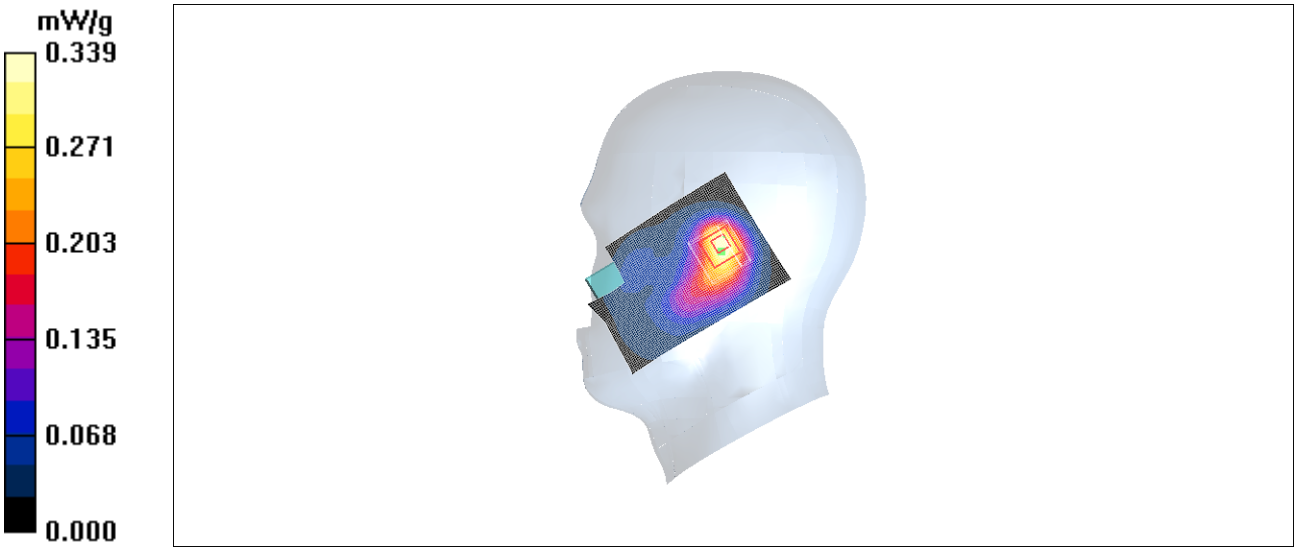


Fig.47 1900 MHz CH9400

WCDMA 1900 Right Tilt Low
Date/Time: 2011-7-5 14:02:46
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; εr = 41.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.214 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.126 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.121 mW/g
Maximum value of SAR (measured) = 0.201 mW/g

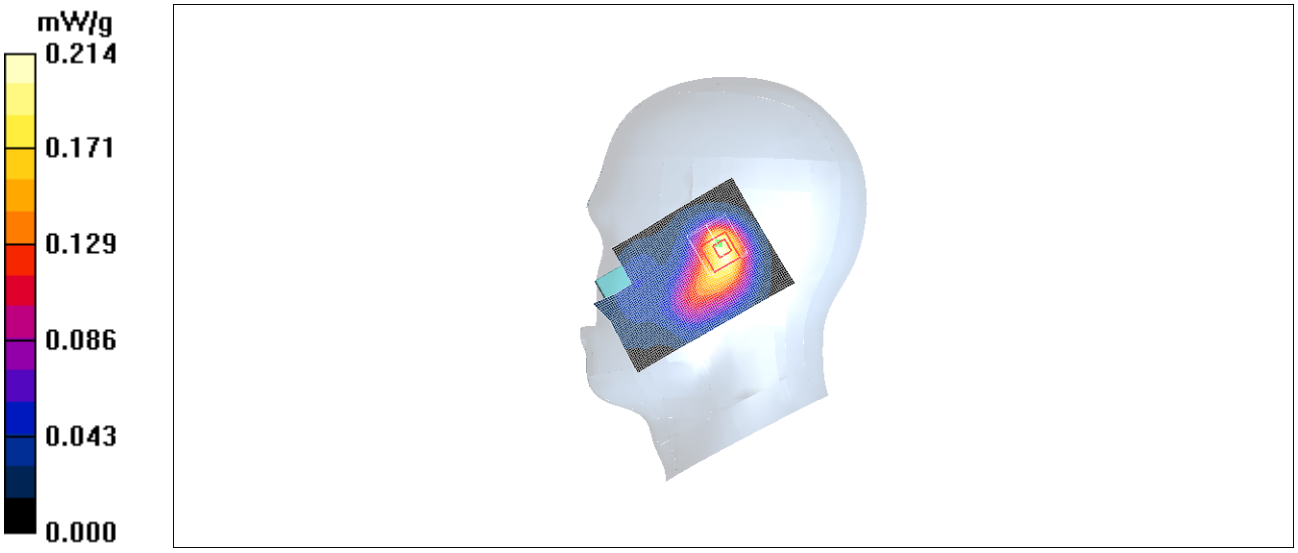


Fig.48 1900 MHz CH9262

850 Body Towards Phantom High with GPRS

Date/Time: 2011-7-4 14:44:13
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.1; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.794 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.2 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.976 W/kg
SAR(1 g) = 0.749 mW/g; SAR(10 g) = 0.544 mW/g
Maximum value of SAR (measured) = 0.791 mW/g

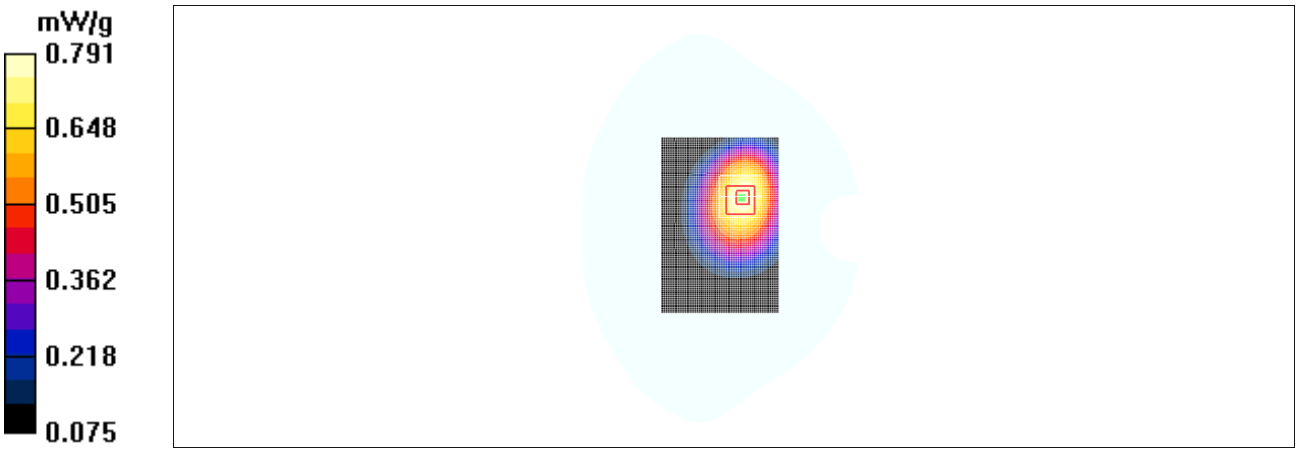


Fig. 49 850 MHz CH251

850 Body Towards Ground High with GPRS

Date/Time: 2011-7-4 15:00:06
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.1; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.952 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.9 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.887 mW/g; SAR(10 g) = 0.626 mW/g
Maximum value of SAR (measured) = 0.937 mW/g

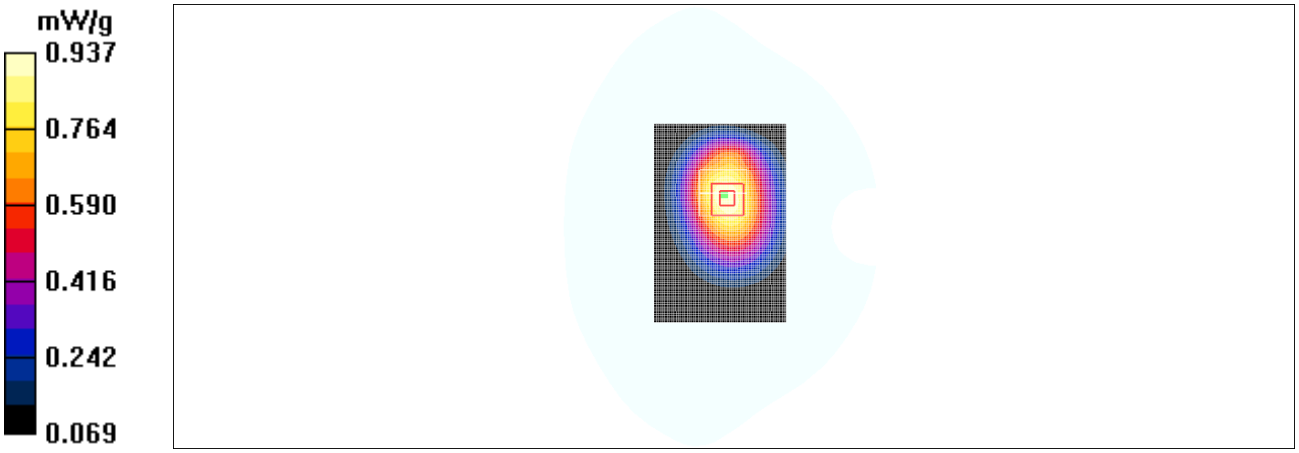


Fig. 50 850 MHz CH251

850 Body Left Side High with GPRS

Date/Time: 2011-7-4 15:15:47
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.1; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Left Side High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.501 mW/g

Left Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.5 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.655 W/kg
SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.320 mW/g
Maximum value of SAR (measured) = 0.501 mW/g

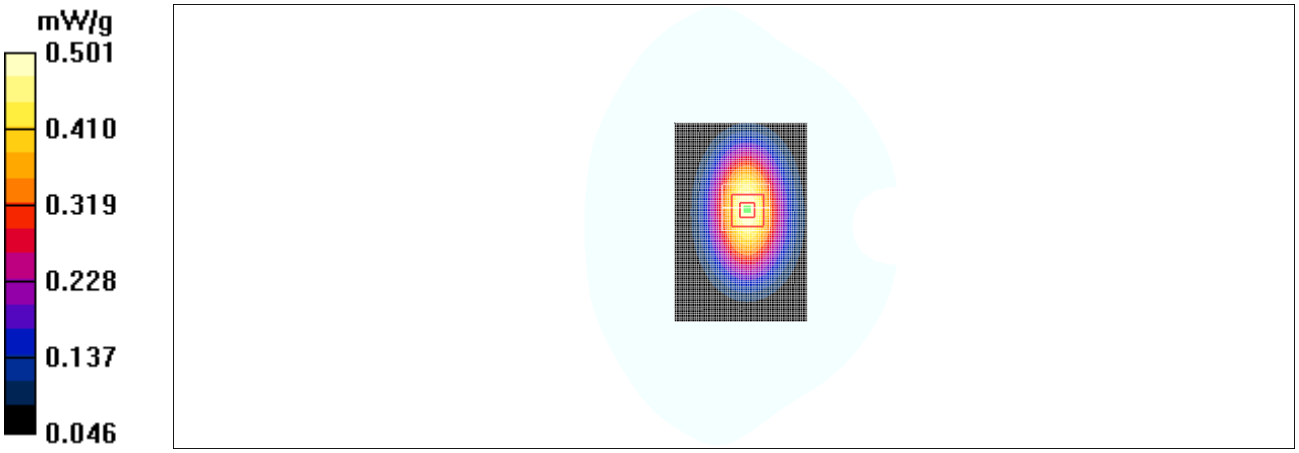


Fig. 51 850 MHz CH251

850 Body Right Side High with GPRS

Date/Time: 2011-7-4 15:31:20
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.1; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Right Side High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.594 mW/g

Right Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.8 V/m; Power Drift = -0.113 dB
Peak SAR (extrapolated) = 0.750 W/kg
SAR(1 g) = 0.541 mW/g; SAR(10 g) = 0.374 mW/g
Maximum value of SAR (measured) = 0.572 mW/g

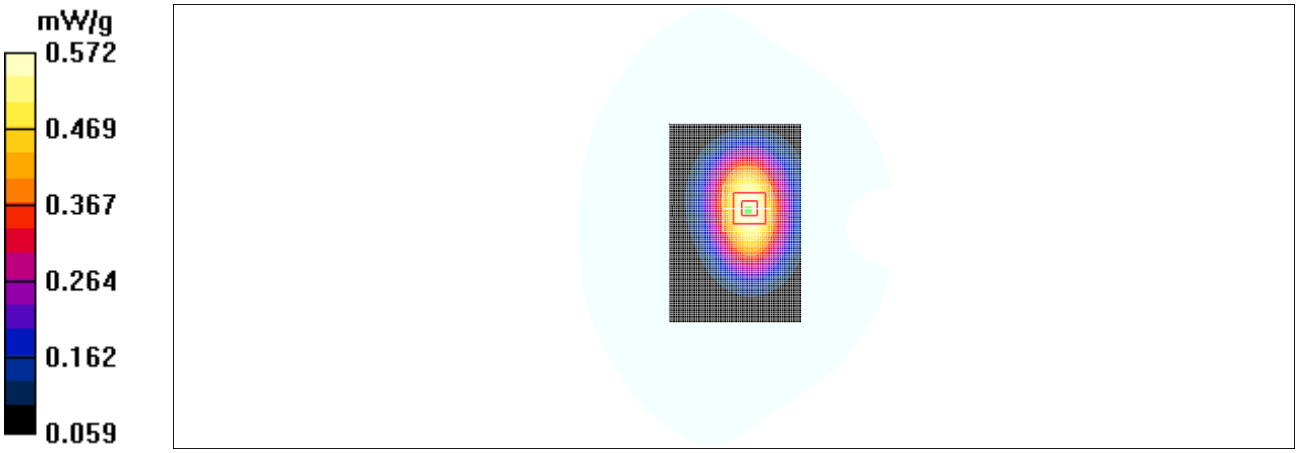


Fig. 52 850 MHz CH251

850 Body Bottom Side High with GPRS

Date/Time: 2011-7-4 15:47:06
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.1; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Bottom Side High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.091 mW/g

Bottom Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.50 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.154 W/kg
SAR(1 g) = 0.086 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.093 mW/g

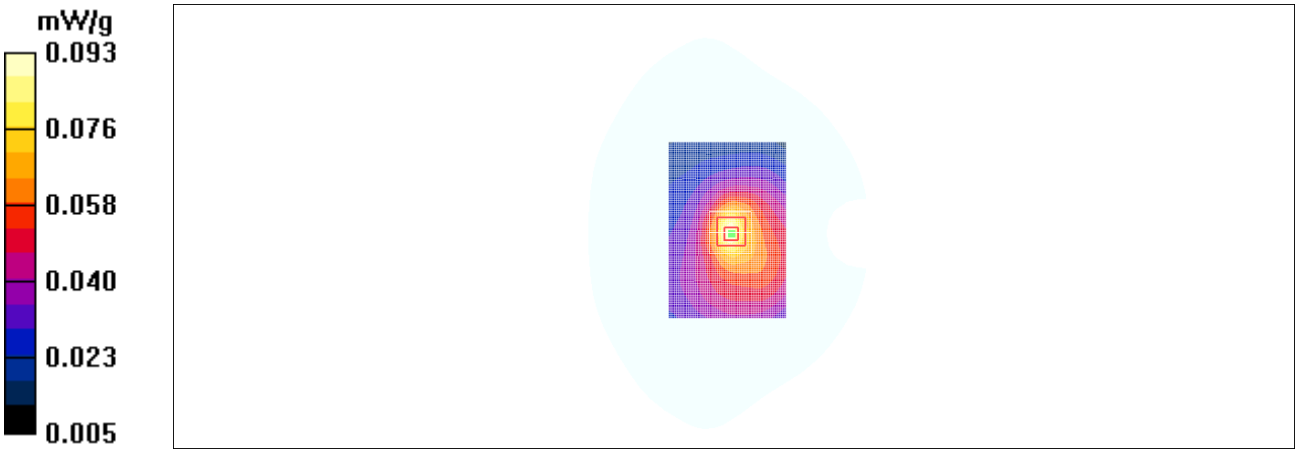


Fig. 53 850 MHz CH251

850 Body Towards Ground Middle with GPRS

Date/Time: 2011-7-4 16:03:24
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 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: 836.6 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.983 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.4 V/m; Power Drift = -0.097 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.921 mW/g; SAR(10 g) = 0.653 mW/g
Maximum value of SAR (measured) = 0.979 mW/g

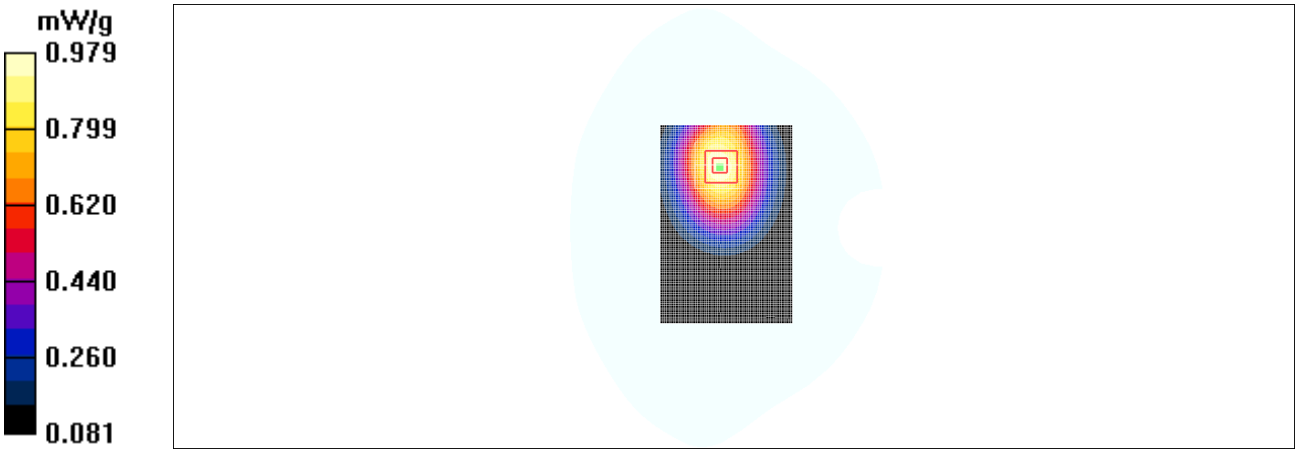


Fig. 54 850 MHz CH190

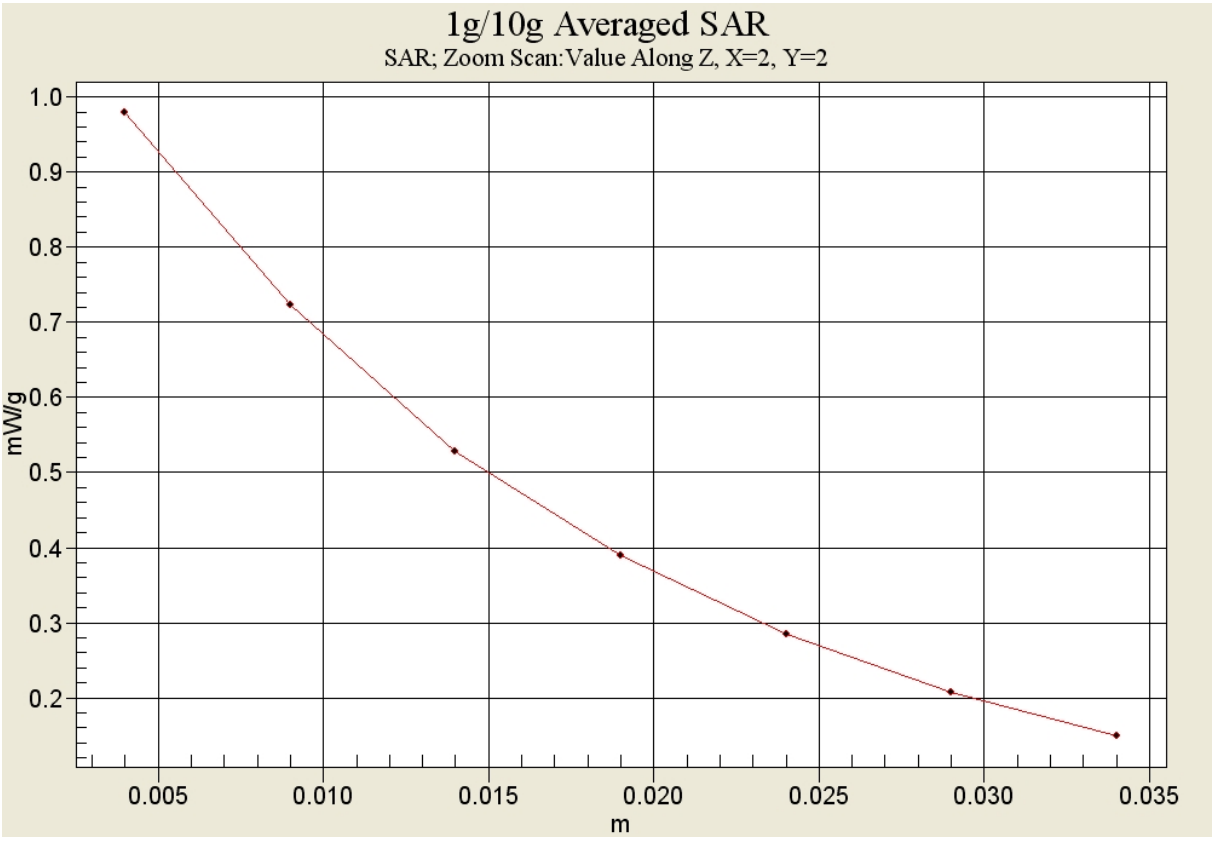


Fig. 54-1 Z-Scan at power reference point (850 MHz CH190)

850 Body Towards Ground Low with GPRS

Date/Time: 2011-7-4 16:18:50
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 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: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.932 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.7 V/m; Power Drift = -0.099 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.875 mW/g; SAR(10 g) = 0.620 mW/g
Maximum value of SAR (measured) = 0.927 mW/g

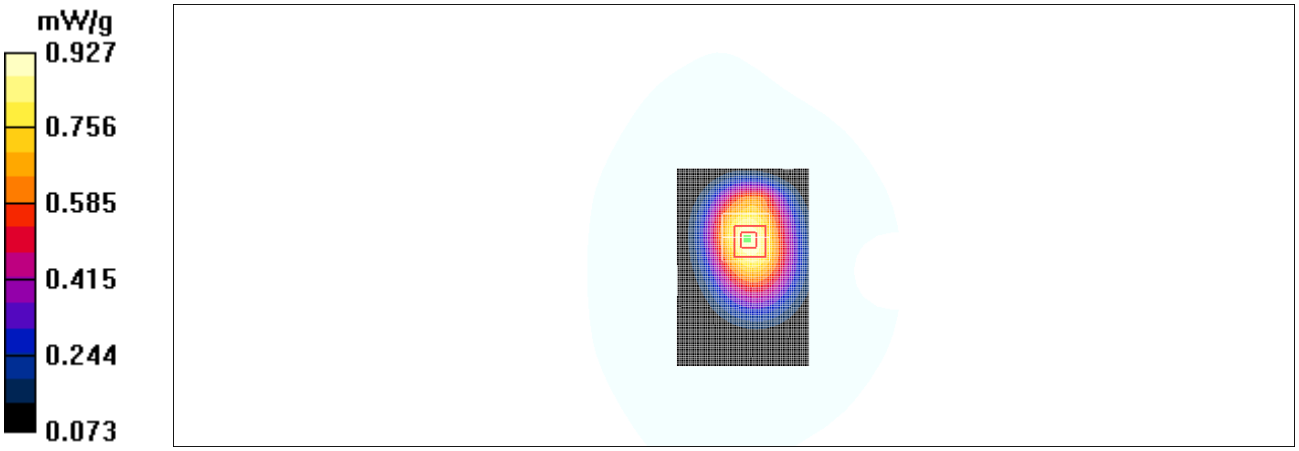


Fig. 55 850 MHz CH128

850 Body Towards Ground Middle with EGPRS

Date/Time: 2011-7-4 16:35:15
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 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: 836.6 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.927 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.7 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.905 mW/g; SAR(10 g) = 0.639 mW/g
Maximum value of SAR (measured) = 0.958 mW/g

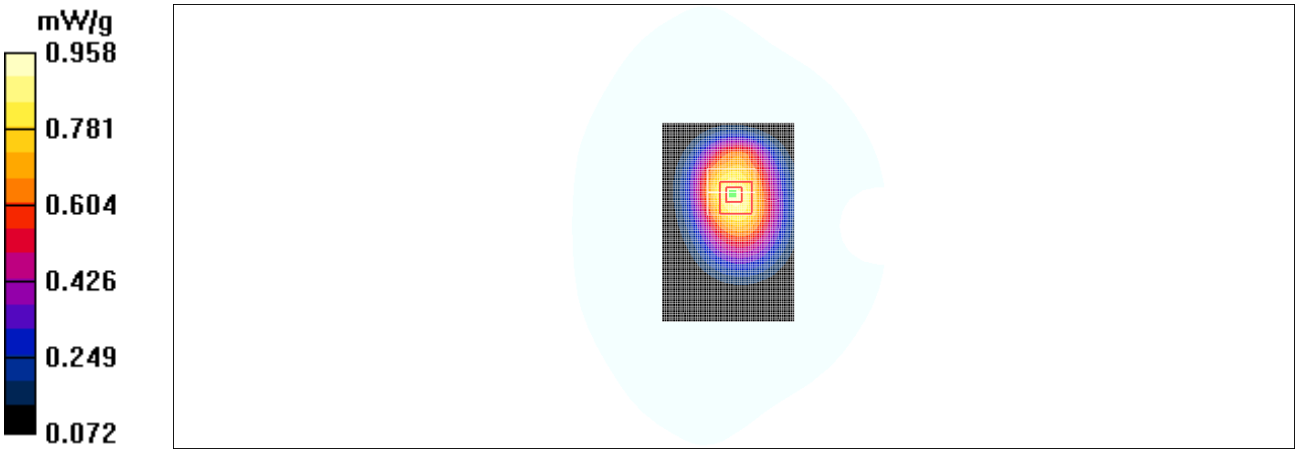


Fig. 56 850 MHz CH190

850 Body Towards Ground Middle with Headset_CCB3160A10C0

Date/Time: 2011-7-4 16:51:26
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.693 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.2 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.886 W/kg
SAR(1 g) = 0.655 mW/g; SAR(10 g) = 0.464 mW/g
Maximum value of SAR (measured) = 0.694 mW/g

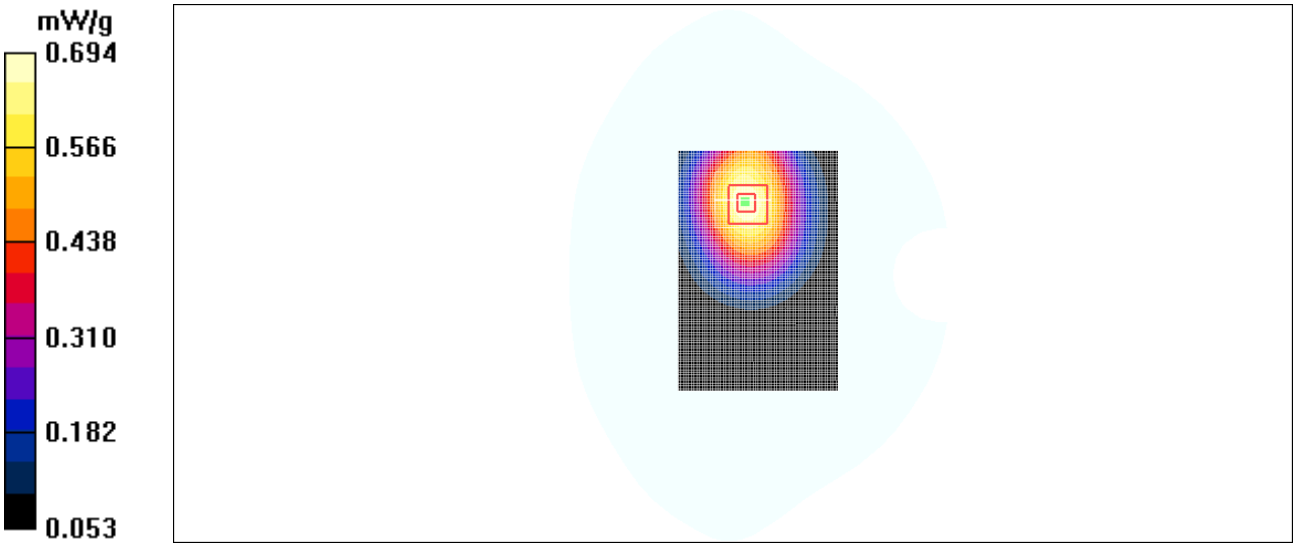


Fig. 57 850 MHz CH190

850 Body Towards Ground Middle with Headset_CCB31C0A10C0

Date/Time: 2011-7-4 17:07:42
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.706 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 0.884 W/kg
SAR(1 g) = 0.661 mW/g; SAR(10 g) = 0.469 mW/g
Maximum value of SAR (measured) = 0.703 mW/g

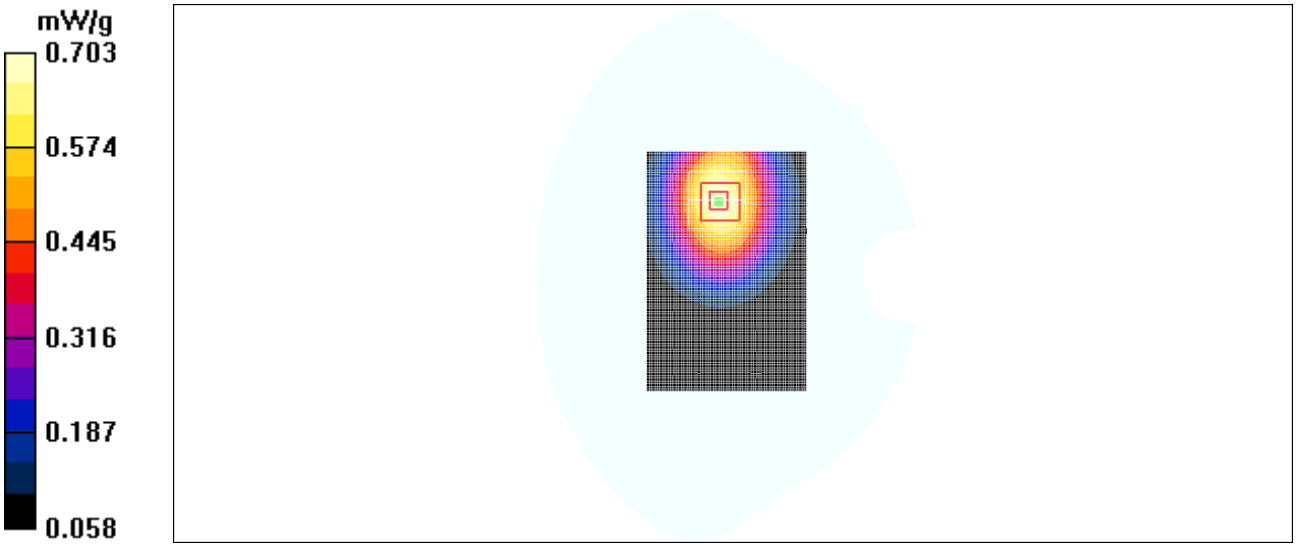


Fig. 58 850 MHz CH190

1900 Body Towards Phantom Low with GPRS
Date/Time: 2011-7-5 14:29:21
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 mho/m; εr = 53.3; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.374 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.575 W/kg
SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.194 mW/g
Maximum value of SAR (measured) = 0.346 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.507 W/kg
SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 0.312 mW/g

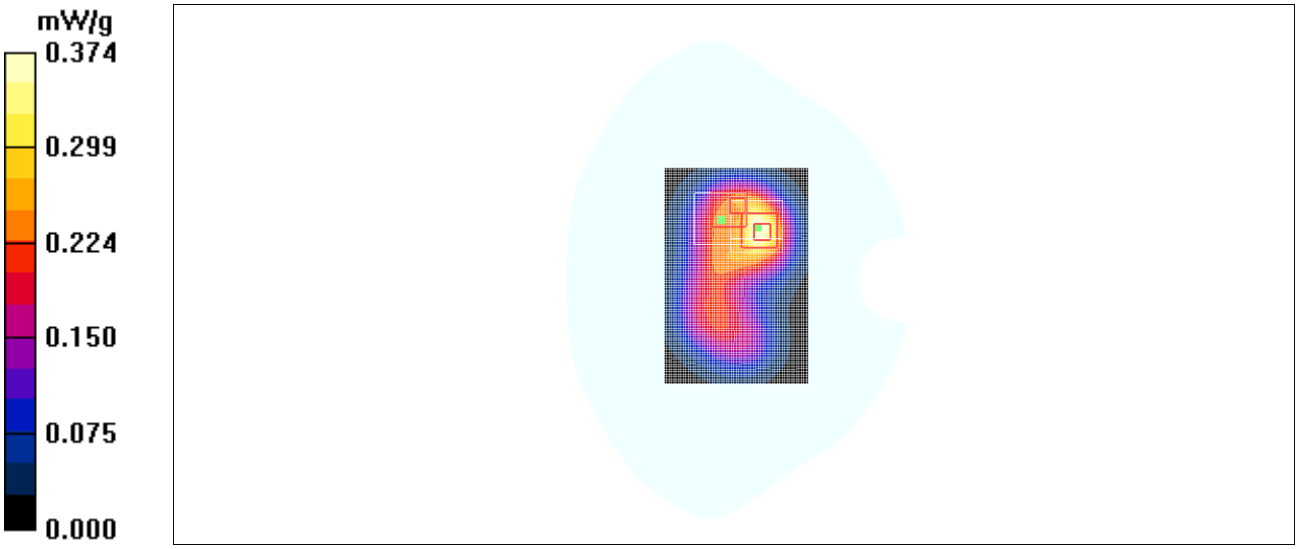


Fig. 59 1900 MHz CH512

1900 Body Towards Ground Low with GPRS

Date/Time: 2011-7-5 14:45:07
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 mho/m; εr = 53.3; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.417 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.630 W/kg
SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 0.404 mW/g

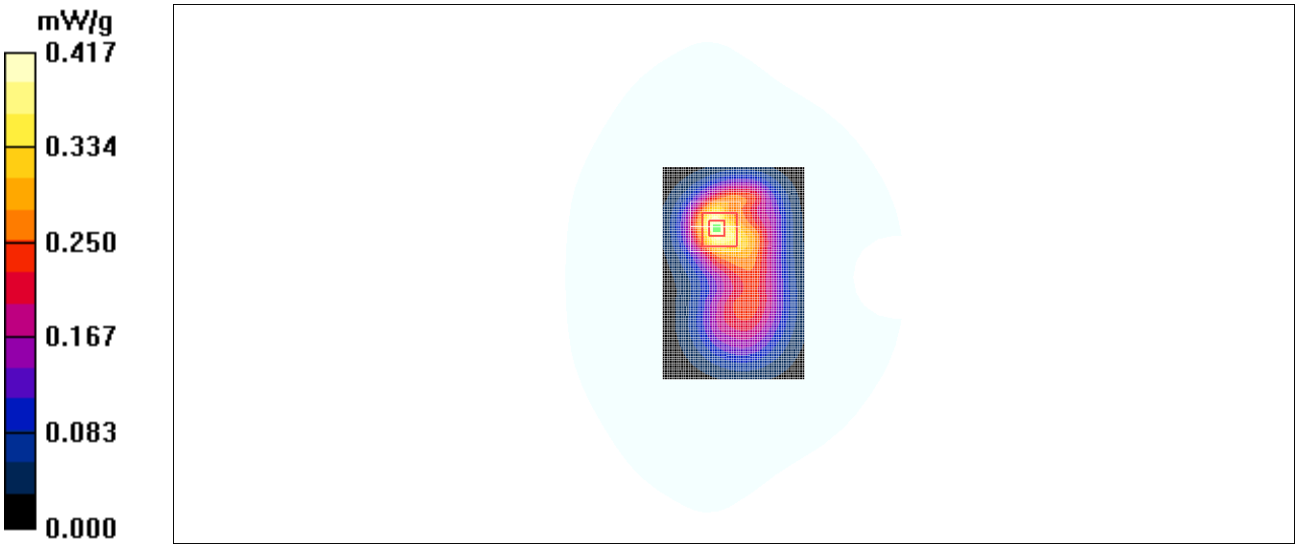


Fig. 60 1900 MHz CH512

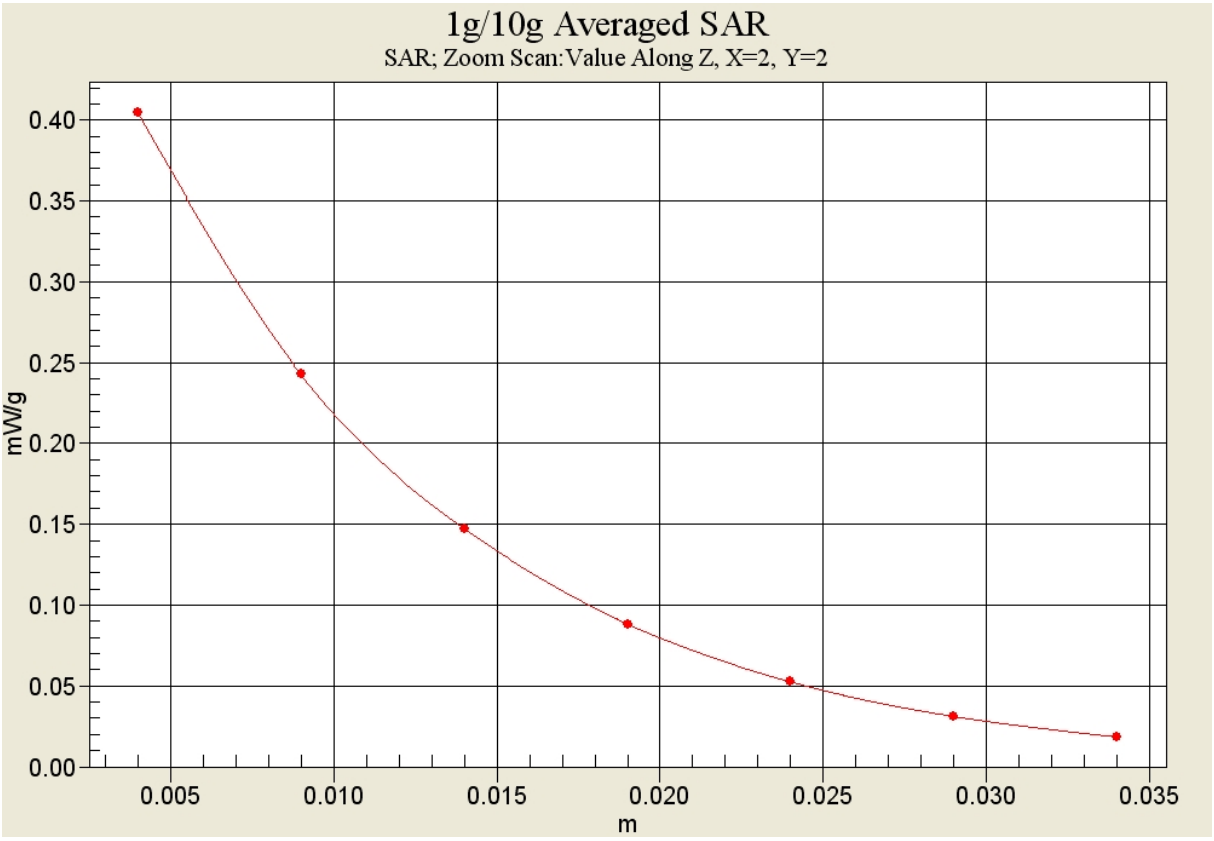


Fig. 60-1 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Left Side Low with GPRS

Date/Time: 2011-7-5 15:00:41
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 mho/m; εr = 53.3; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Left Side Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.115 mW/g

Left Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.85 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 0.173 W/kg
SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.113 mW/g

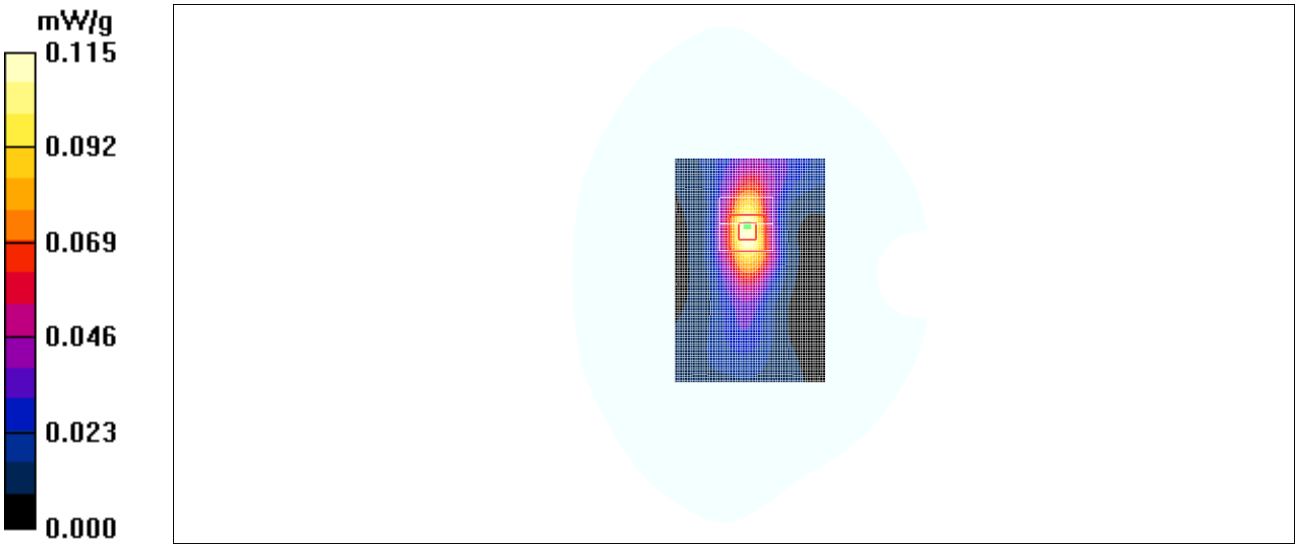


Fig. 61 1900 MHz CH512

1900 Body Right Side Low with GPRS

Date/Time: 2011-7-5 15:16:16
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 mho/m; εr = 53.3; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Right Side Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.242 mW/g

Right Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.083 dB
Peak SAR (extrapolated) = 0.346 W/kg
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.128 mW/g
Maximum value of SAR (measured) = 0.235 mW/g

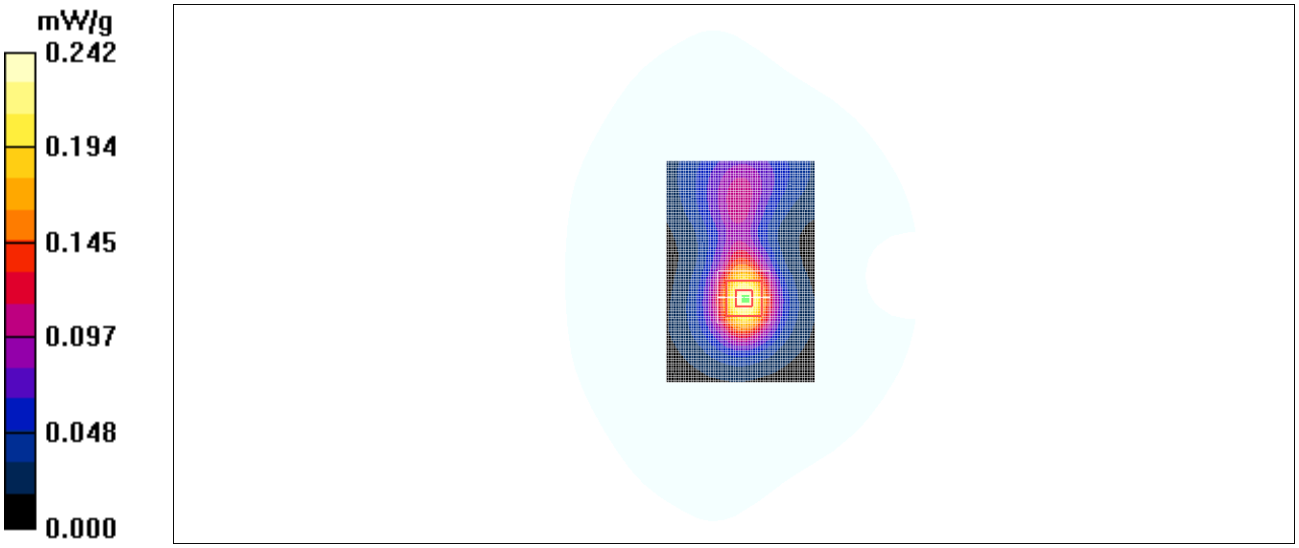


Fig. 62 1900 MHz CH512

1900 Body Bottom Side Low with GPRS

Date/Time: 2011-7-5 15:31:55
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 mho/m; εr = 53.3; 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: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Bottom Side Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.291 mW/g

Bottom Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.7 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.450 W/kg
SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.152 mW/g
Maximum value of SAR (measured) = 0.310 mW/g

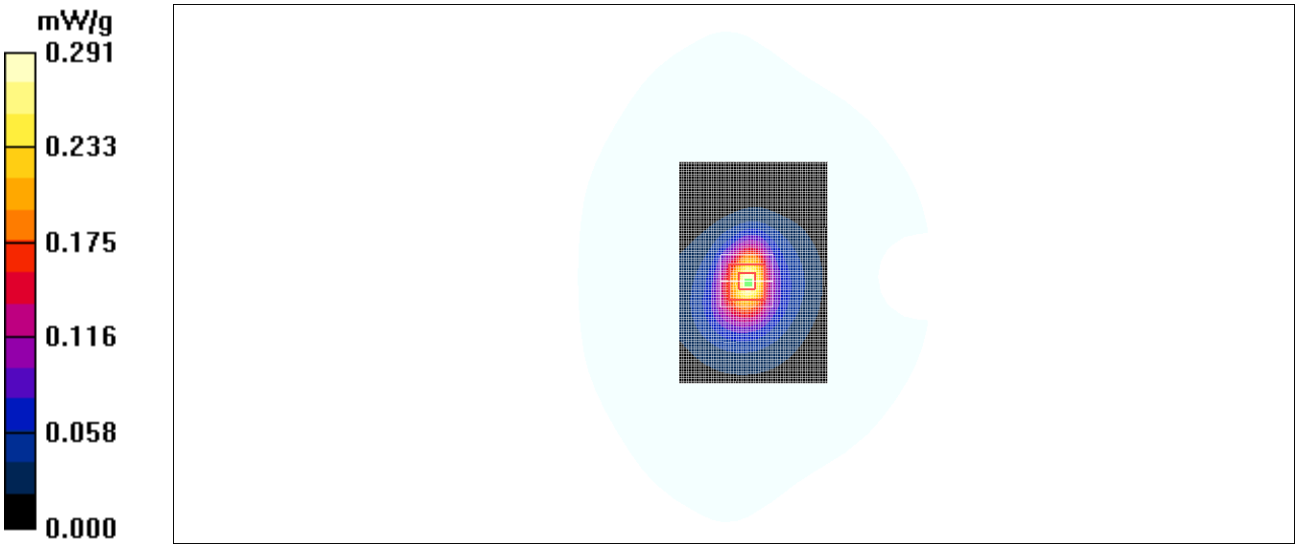


Fig. 63 1900 MHz CH512

1900 Body Towards Ground High with GPRS

Date/Time: 2011-7-5 15:48:29
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.239 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.13 V/m; Power Drift = -0.004 dB
Peak SAR (extrapolated) = 0.368 W/kg
SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.121 mW/g
Maximum value of SAR (measured) = 0.228 mW/g

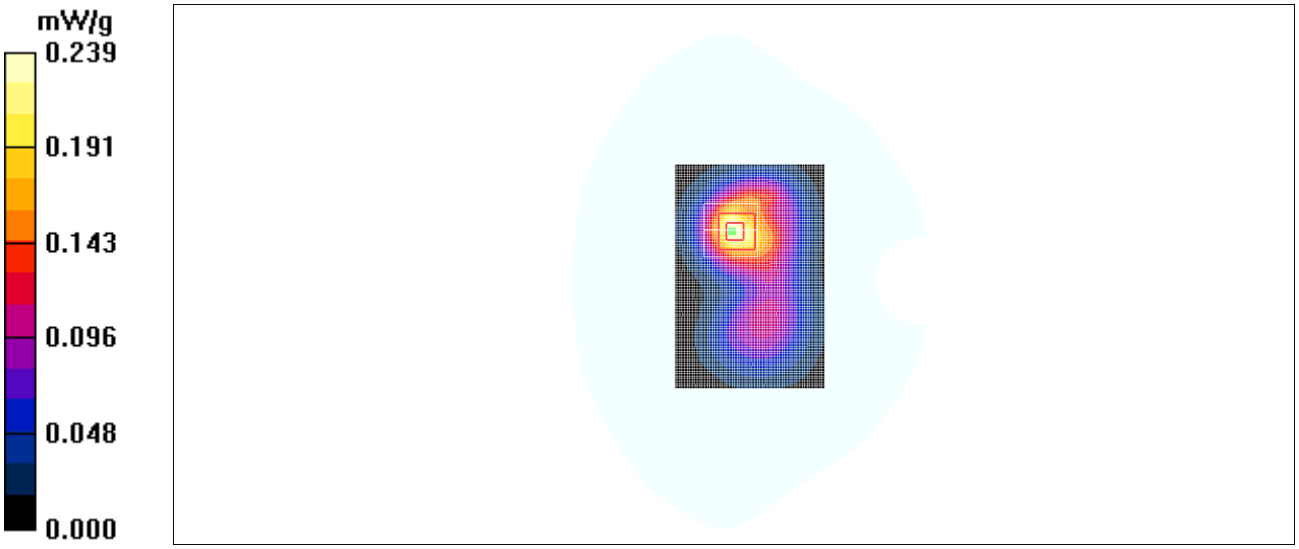


Fig. 64 1900 MHz CH810