SAR TEST REPORT

No. 2011SAR00021

For

ZTE CORPORATION

CDMA1x/GSM Digital Mobile Handset

ZTE-C F450

With

Hardware Version: 1.1

Software Version: VZW_US_F450V1.0.0B11

FCCID：Q78-ZTECF450

Issued Date: 2011-03-31

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

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China 100191.

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

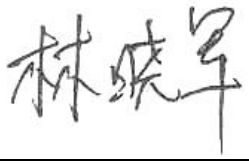
Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω

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

1.3 Project Data

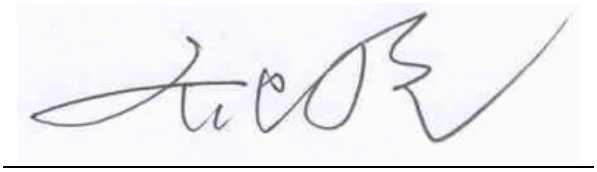
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	March 8, 2011
Testing End Date:	March 9, 2011

1.4 Signature



Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)

Xiao Li

Deputy Director of the laboratory

(Approved this test report)

2 Client Information

2.1 Applicant Information

Company Name:	ZTE CORPORATION
Address /Post:	#68 Zijin Hua Road, Nanjing,Jiangsu Province，China
City:	Nanjing
Postal Code:	/
Country:	P. R. China
Telephone:	+8613813893560
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2.2 Manufacturer Information

Company Name:	ZTE CORPORATION
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City:	Nanjing
Postal Code:	/
Country:	P. R. China
Telephone:	+8613813893560
Fax:	/

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

3.1 About EUT

EUT Description:	CDMA1x/GSM Digital Mobile Handset
Model Name:	ZTE-C F450
Frequency Band:	GSM 850 / PCS 1900 / CDMA 835 / CDMA 1900
GPRS Multislot Class:	10
GPRS capability Class:	B
EGPRS Multislot Class:	12

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	356540040000148	1.1	VZW_US_F450V1.0.0B11

*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	Li3710T42P3h483757	/	ZTE

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

4 CHARACTERISTICS OF THE TEST

4.1 Applicable Limit Regulations

EN 50360–2001: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

It specifies the maximum exposure limit of **2.0 W/kg** as averaged over any 10 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

4.2 Applicable Measurement Standards

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

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

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

IEC 62209-1: 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.

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

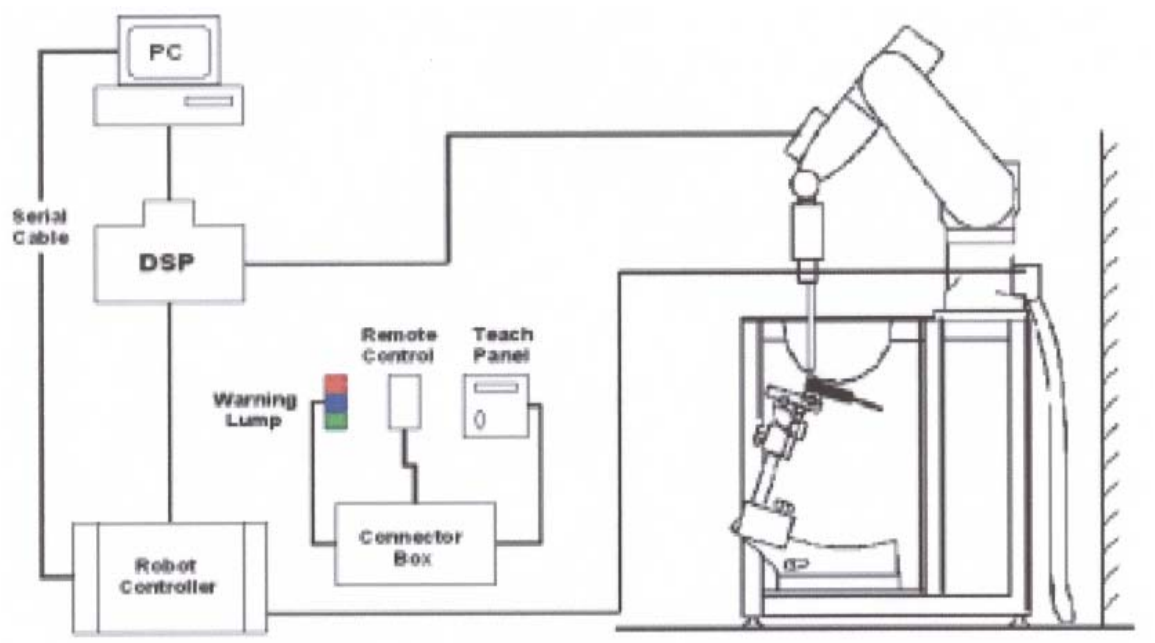
During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of GSM 850 MHz, 512, 661 and 810 respectively in the case of PCS 1900 MHz, 1013, 384 and 777 respectively in the case of CDMA 835 MHz, 25, 600 and 1175 respectively in the case of CDMA 1880 MHz. The EUT is commanded to operate at maximum transmitting power.

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

5.2 SAR Measurement Set-up

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

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



Picture 2: SAR Lab Test Measurement Set-up

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

5.3 Dasy4 E-field Probe System

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

ES3DV3 Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 900 and HSL 1810 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)

Picture 3: ES3DV3 E-field

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

Picture4:ES3DV3 E-field probe

5.4 E-field Probe Calibration

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

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

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

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

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

Or

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

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

Picture 5: Device Holder

5.5 Other Test Equipment

5.5.1 Device Holder for Transmitters

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

5.5.2 Phantom

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

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

Picture 6: Generic Twin Phantom

5.6 Equivalent Tissues

The liquid used for the frequency range of 800-2000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 1 and 2 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

Table 1. Composition of the Head Tissue Equivalent Matter

MIXTURE %	FREQUENCY 835MHz
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 835MHz
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 LABORATORY ENVIRONMENT

Table 3: The Ambient Conditions during EMF Test

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surroundi objects is minimized and in compliance with requirement of standards.	

7 CONDUCTED OUTPUT POWER MEASUREMENT

7.1 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.

7.2 Conducted Power

7.2.1 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.

7.2.2 Measurement result

The conducted power for GSM 850/1900 and CDMA 835/1900 is as following:

GSM 850MHz	**Conducted Power (dBm)**		
	Channel 251(848.8MHz)	**Channel 190(836.6MHz)**	**Channel 128(824.2MHz)**
	32.09	32.14	32.07
GSM 1900MHz	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1880MHz)**	**Channel 512(1850.2MHz)**
	29.64	29.87	29.62
CDMA 835MHz	**Conducted Power (dBm)**		
	Channel 777(848.31MHz)	**Channel 384(836.52MHz)**	**Channel 1013(824.7MHz)**
	24.03	24.13	24.11
CDMA 1900MHz	**Conducted Power (dBm)**		
	Channel 1175(1908.75MHz)	**Channel 600(1880MHz)**	**Channel 25(1851.25MHz)**
	23.71	23.52	23.54

The conducted power for GPRS and EGPRS 850/1900 is as following:

GSM 850 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.03	32.08	32.08	-9.03dB	23.00	23.05	23.05
2 Txslots	30.01	29.88	29.75	-6.02dB	**23.99**	**23.86**	**23.73**
GSM 850 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	**190**	**128**		**251**	**190**	**128**
1 Txslot	32.14	32.19	32.19	-9.03dB	23.11	23.16	23.16
2 Txslots	29.87	29.87	29.71	-6.02dB	23.85	23.85	23.69
3Txslots	28.50	28.48	28.64	-4.26dB	24.24	24.22	24.38
4 Txslots	27.65	27.58	27.79	-3.01dB	**24.64**	**24.57**	**24.78**
PCS1900 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.71	29.91	29.62	-9.03dB	20.68	20.88	20.59
2 Txslots	28.34	28.42	28.20	-6.02dB	**22.32**	**22.40**	**22.18**

PCS1900 EGPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	810	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.76	29.68	29.77	-9.03dB	20.73	20.65	20.74
2 Txslots	28.40	28.51	28.33	-6.02dB	22.38	22.49	22.31
3Txslots	27.09	27.12	26.98	-4.26dB	**22.83**	**22.86**	**22.72**
4 Txslots	24.82	25.01	24.90	-3.01dB	21.81	22.00	21.89

NOTES:

1) Division Factors

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

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

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

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

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

According to the conducted power as above, the body measurements are performed with 2 Txslots for GPRS, 4 Txslots for EGPRS (GSM850) and 3 Txslots for EGPRS (PCS1900).

7.2.3 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 8 to Table 15 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

8 TEST RESULTS

8.1 Dielectric Performance

Table 4: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 37%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **March 8, 2011** 1900 MHz **March 9, 2011**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	41.5	0.90
	1900 MHz	40.0	1.40
Measurement value (Average of 10 tests)	835 MHz	41.9	0.93
	1900 MHz	38.8	1.39

Table 5: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 37%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **March 8, 2011** 1900 MHz **March 9, 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	53.8	1.00
	1900 MHz	52.3	1.56

8.2 System Validation

Table 6: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 37%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **March 8, 2011** 1900 MHz **March 9, 2011**							
Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		835 MHz		41.6		0.92	
		1900 MHz		39.6		1.40	
	Actural Measurement value	835 MHz		41.9		0.93	
		1900 MHz		38.8		1.39	
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	5.92	9.32	-0.33%	-0.96%
	1900 MHz	20.1	39.4	19.72	38.96	-1.89%	-1.12%

Note： The forward power is 250mW. Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

Table 7: System Validation of Body

Measurement is made at temperature 23.0 °C and relative humidity 37%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **March 8, 2011** 1900 MHz **March 9, 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		53.8		1.00	
		1900 MHz		52.3		1.56	
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	6.2	9.48	-0.64%	-0.94%
	1900 MHz	20.9	41.4	21	41.2	0.48%	-0.48%

Note： The forward power is 250mW. Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

8.3 Summary of Measurement Results

Table 8: SAR Values (GSM 850MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency (See Fig.1)	0.421	0.595	-0.123
Left hand, Touch cheek, Mid frequency (See Fig.2)	0.367	0.518	0.018
Left hand, Touch cheek, Bottom frequency (See Fig.3)	0.310	0.435	0.022
Left hand, Tilt 15 Degree, Top frequency (See Fig.4)	0.262	0.353	-0.068
Left hand, Tilt 15 Degree, Mid frequency (See Fig.5)	0.247	0.329	-0.105
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.6)	0.221	0.293	-0.028
Right hand, Touch cheek, Top frequency (See Fig.7)	0.386	0.546	-0.040
Right hand, Touch cheek, Mid frequency (See Fig.8)	0.351	0.493	-0.186
Right hand, Touch cheek, Bottom frequency (See Fig.9)	0.281	0.396	0.009
Right hand, Tilt 15 Degree, Top frequency (See Fig.10)	0.310	0.419	0.104
Right hand, Tilt 15 Degree, Mid frequency (See Fig.11)	0.279	0.376	0.005
Right hand, Tilt 15 Degree, Bottom frequency (See Fig.12)	0.223	0.299	0.017

Table 9: SAR Values (PCS 1900MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency (See Fig.13)	0.354	0.588	-0.137
Left hand, Touch cheek, Mid frequency (See Fig.14)	0.293	0.493	0.015
Left hand, Touch cheek, Bottom frequency (See Fig.15)	0.229	0.373	0.044
Left hand, Tilt 15 Degree, Top frequency (See Fig.16)	0.126	0.214	-0.002
Left hand, Tilt 15 Degree, Mid frequency (See Fig.17)	0.102	0.171	-0.012
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.18)	0.083	0.135	0.016
Right hand, Touch cheek, Top frequency (See Fig.19)	0.433	0.745	-0.044
Right hand, Touch cheek, Mid frequency (See Fig.20)	0.363	0.619	0.038
Right hand, Touch cheek, Bottom frequency (See Fig.21)	0.329	0.554	-0.178
Right hand, Tilt 15 Degree, Top frequency (See Fig.22)	0.153	0.267	-0.014
Right hand, Tilt 15 Degree, Mid frequency (See Fig.23)	0.122	0.212	-0.015
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.24)	0.101	0.175	0.124

Table 10: SAR Values (CDMA 835MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency (See Fig.25)	0.338	0.472	-0.135
Left hand, Touch cheek, Mid frequency (See Fig.26)	0.453	0.634	-0.102
Left hand, Touch cheek, Bottom frequency (See Fig.27)	0.356	0.497	-0.124
Left hand, Tilt 15 Degree, Top frequency (See Fig.28)	0.233	0.312	-0.083
Left hand, Tilt 15 Degree, Mid frequency (See Fig.29)	0.335	0.448	-0.018
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.30)	0.269	0.357	-0.063
Right hand, Touch cheek, Top frequency (See Fig.31)	0.283	0.401	-0.179
Right hand, Touch cheek, Mid frequency (See Fig.32)	0.398	0.560	0.025
Right hand, Touch cheek, Bottom frequency (See Fig.33)	0.300	0.422	0.075
Right hand, Tilt 15 Degree, Top frequency (See Fig.34)	0.231	0.313	-0.139
Right hand, Tilt 15 Degree, Mid frequency (See Fig.35)	0.334	0.450	0.006
Right hand, Tilt 15 Degree, Bottom frequency (See Fig.36)	0.261	0.350	-0.018

Table 11: SAR Values (CDMA 1900MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency (See Fig.37)	0.510	0.858	-0.135
Left hand, Touch cheek, Mid frequency (See Fig.38)	0.560	0.927	0.019
Left hand, Touch cheek, Bottom frequency (See Fig.39)	0.541	0.887	0.027
Left hand, Tilt 15 Degree, Top frequency (See Fig.40)	0.181	0.304	0.029
Left hand, Tilt 15 Degree, Mid frequency (See Fig.41)	0.227	0.378	0.035
Left hand, Tilt 15 Degree, Bottom frequency (See Fig.42)	0.210	0.345	0.019
Right hand, Touch cheek, Top frequency (See Fig.43)	0.583	0.967	-0.192
Right hand, Touch cheek, Mid frequency (See Fig.44)	0.714	1.16	-0.028
Right hand, Touch cheek, Bottom frequency (See Fig.45)	0.734	1.19	0.036
Right hand, Tilt 15 Degree, Top frequency (See Fig.46)	0.203	0.345	0.077
Right hand, Tilt 15 Degree, Mid frequency (See Fig.47)	0.233	0.388	0.028
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.48)	0.347	0.213	0.080

Table 12: 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	
Body, Towards Ground, Top frequency with GPRS (See Fig.49)	0.531	0.757	-0.174
Body, Towards Ground, Mid frequency with GPRS (See Fig.50)	0.454	0.639	-0.182
Body, Towards Ground, Bottom frequency with GPRS (See Fig.51)	0.365	0.517	-0.013
Body, Towards Phantom, Top frequency with GPRS (See Fig.52)	0.304	0.413	-0.055
Body, Towards Phantom, Mid frequency with GPRS (See Fig.53)	0.279	0.383	-0.095
Body, Towards Phantom, Bottom frequency with GPRS (See Fig.54)	0.244	0.335	0.177
Body, Towards Ground, Top frequency with EGPRS (See Fig.55)	0.833	1.15	0.160
Body, Towards Ground, Mid frequency with EGPRS (See Fig.56)	0.664	0.910	-0.143
Body, Towards Ground, Bottom frequency with EGPRS (See Fig.57)	0.523	0.719	0.150
Body, Towards Phantom, Top frequency with EGPRS (See Fig.58)	0.342	0.459	-0.021
Body, Towards Phantom, Mid frequency with EGPRS (See Fig.59)	0.342	0.459	-0.048
Body, Towards Phantom, Bottom frequency with EGPRS(See Fig.60)	0.332	0.447	-0.036

Table 13: 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	
Body, Towards Ground, Top frequency with GPRS (See Fig.61)	0.313	0.550	0.000
Body, Towards Ground, Mid frequency with GPRS (See Fig.62)	0.281	0.499	-0.097
Body, Towards Ground, Bottom frequency with GPRS (See Fig.63)	0.253	0.453	-0.046
Body, Towards Phantom, Top frequency with GPRS (See Fig.64)	0.222	0.363	-0.112
Body, Towards Phantom, Mid frequency with GPRS (See Fig.65)	0.171	0.280	-0.099
Body, Towards Phantom, Bottom frequency with GPRS (See Fig.66)	0.132	0.215	0.085
Body, Towards Ground, Top frequency with EGPRS (See Fig.67)	0.391	0.695	-0.130
Body, Towards Ground, Mid frequency with EGPRS (See Fig.68)	0.323	0.580	-0.167
Body, Towards Ground, Bottom frequency with EGPRS (See Fig.69)	0.298	0.543	-0.018

Body, Towards Phantom, Top frequency with EGPRS (See Fig.70)	0.225	0.366	-0.013
Body, Towards Phantom, Mid frequency with EGPRS (See Fig.71)	0.174	0.294	-0.027
Body, Towards Phantom, Bottom frequency with EGPRS(See Fig.72)	0.158	0.257	-0.188

Table 14: SAR Values (CDMA 835MHz-Body)

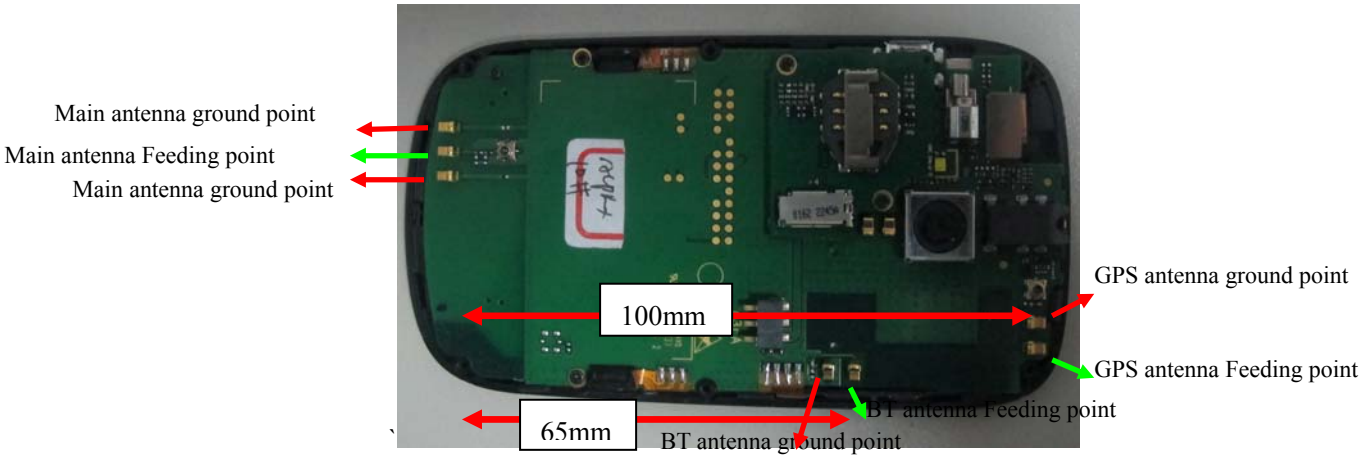
Limit of SAR (W/kg)	**10 g Average**	**1g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Body, Towards Ground, Top frequency (See Fig.73)	0.495	0.678	-0.078
Body, Towards Ground, Mid frequency (See Fig.74)	0.570	0.781	-0.032
Body, Towards Ground, Bottom frequency (See Fig.75)	0.403	0.551	0.029
Body, Towards Phantom, Top frequency (See Fig.76)	0.295	0.399	-0.128
Body, Towards Phantom, Mid frequency (See Fig.77)	0.373	0.505	0.030
Body, Towards Phantom, Bottom frequency (See Fig.78)	0.257	0.346	0.071

Table 15: SAR Values (CDMA 1900MHz-Body)

Limit of SAR (W/kg)	**10 g Average**	**1g Average**	**Power Drift (dB)**
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Body, Towards Ground, Top frequency (See Fig.79)	0.385	0.678	-0.195
Body, Towards Ground, Mid frequency (See Fig.80)	0.444	0.790	0.010
Body, Towards Ground, Bottom frequency (See Fig.81)	0.459	0.820	0.010
Body, Towards Phantom, Top frequency (See Fig.82)	0.192	0.317	0.019
Body, Towards Phantom, Mid frequency (See Fig.83)	0.253	0.416	-0.043
Body, Towards Phantom, Bottom frequency (See Fig.84)	0.249	0.408	0.026

8.4 Summary of Measurement Results (Bluetooth function)

The distance between BT antenna and GSM 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)	-0.99	-0.47	0.81

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 ≤$2P_{Ref}$ and its antenna is ＞5cm from other antenna

Note: Power thresholds (P_{Ref}) is derived from multiples of 0.5×60/$f_{(GHz)}$, that is 12mW (10.79dBm) for BT frequency.

8.5 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 **CDMA 1900 Head, Right hand, Touch cheek, Bottom frequency (Table 11)**, and the value are: **0.734(10g), 1.19(1g).**

9 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	

10 MAIN TEST INSTRUMENTS

Table 16: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 4,2010	One year
02	Power meter	NRVD	102083	September 11, 2010	One year
03	Power sensor	NRV-Z5	100542		
04	Signal Generator	E4438C	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.

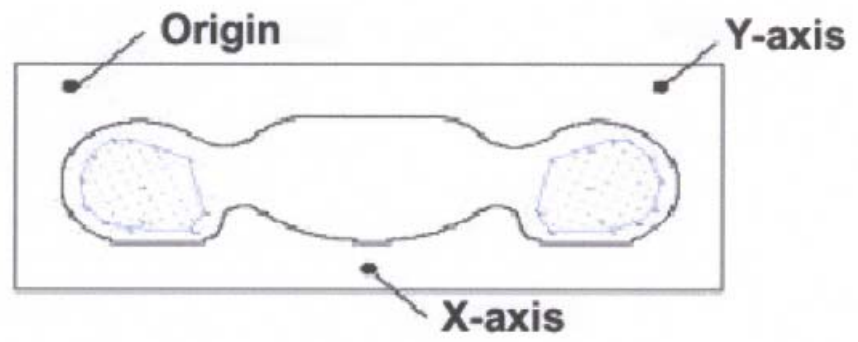
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

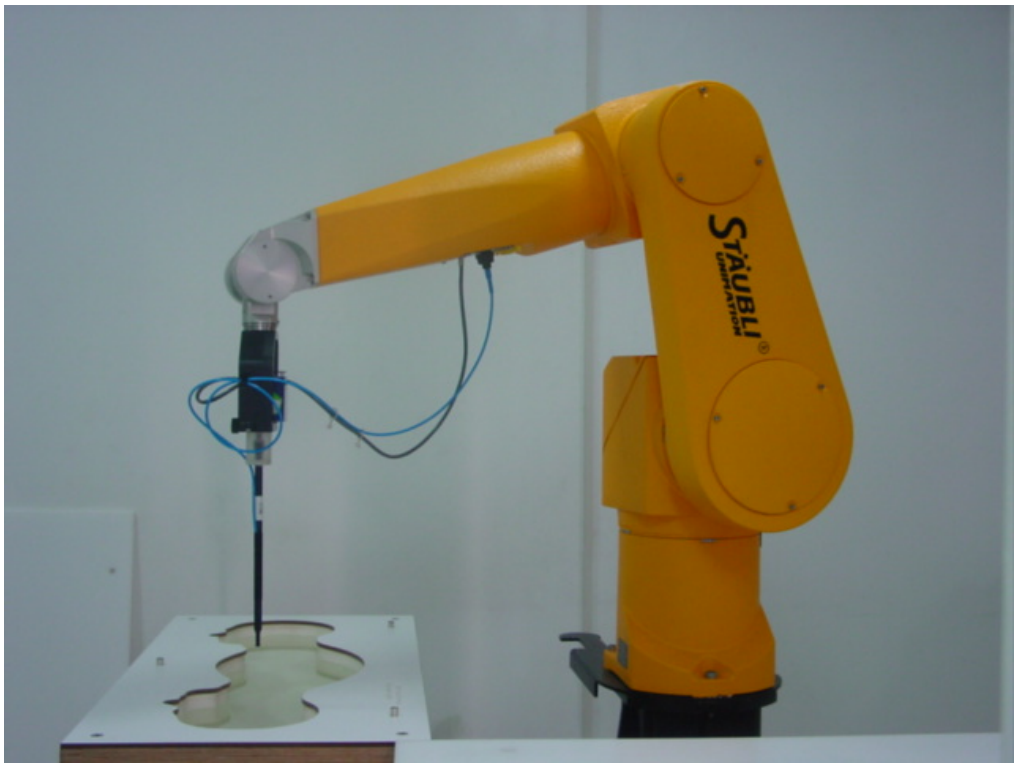
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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.

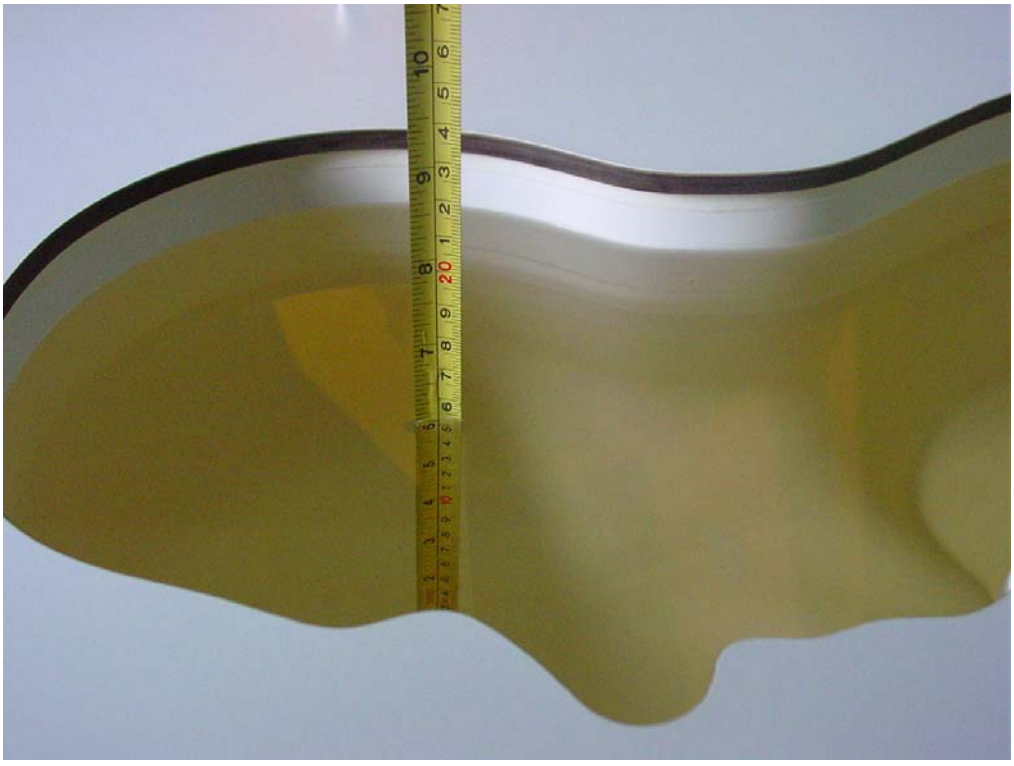


Picture A: SAR Measurement Points in Area Scan

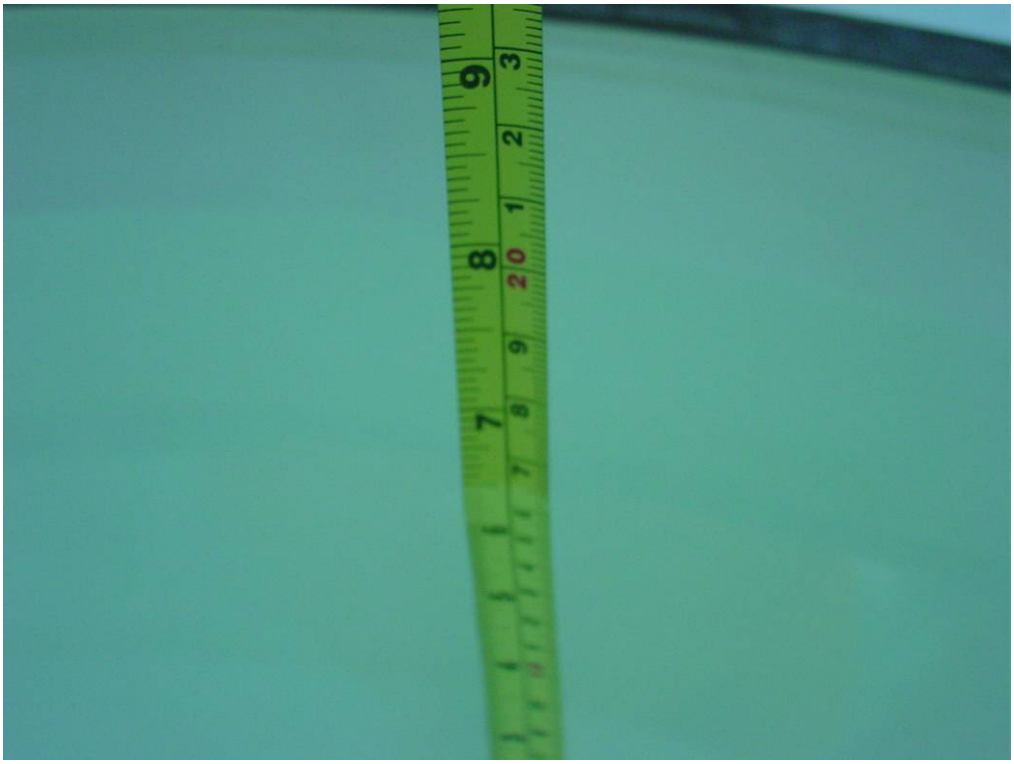
ANNEX B TEST LAYOUT



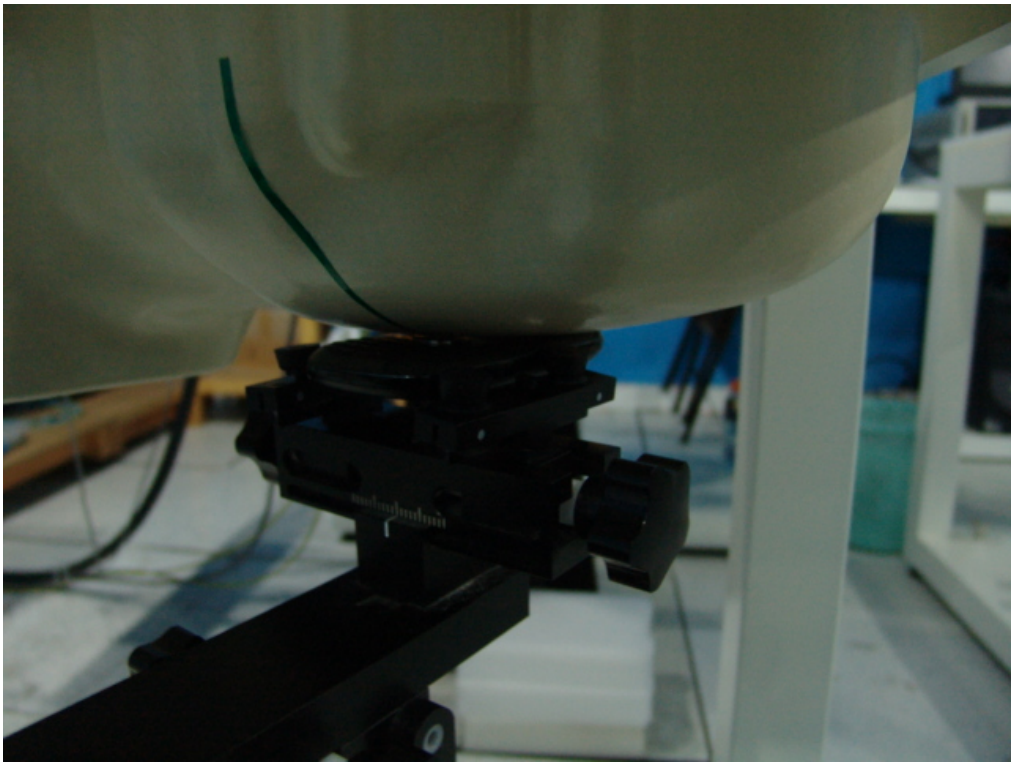
Picture B1: Specific Absorption Rate Test Layout



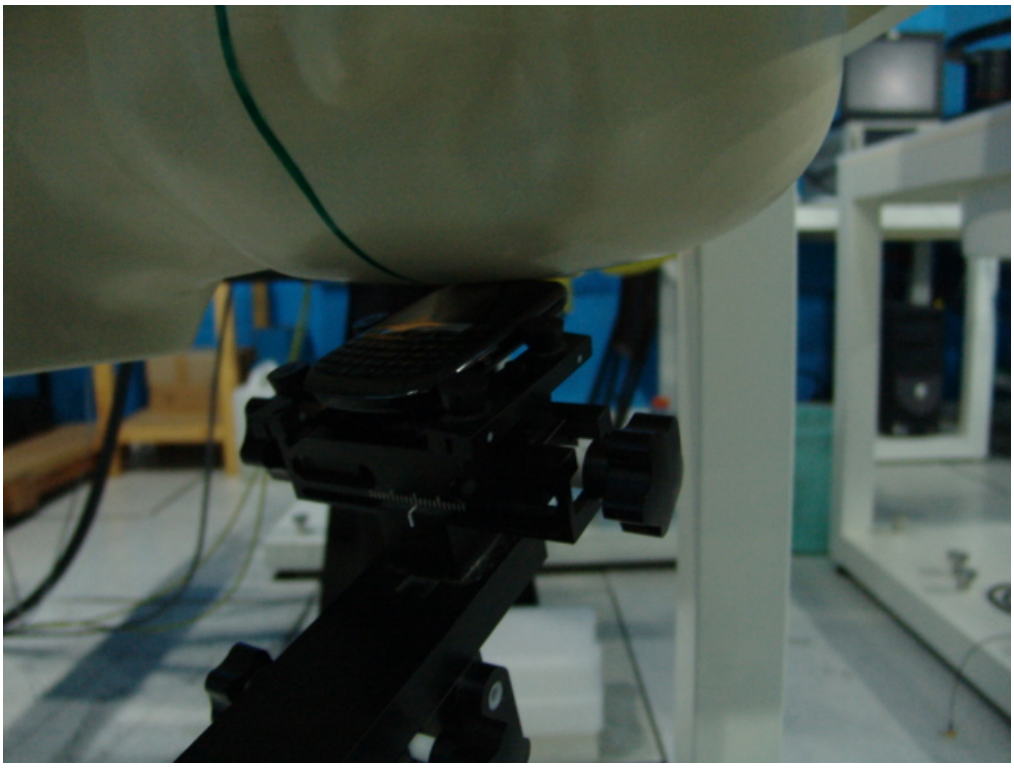
Picture B2: Liquid depth in the Flat Phantom (850 MHz)



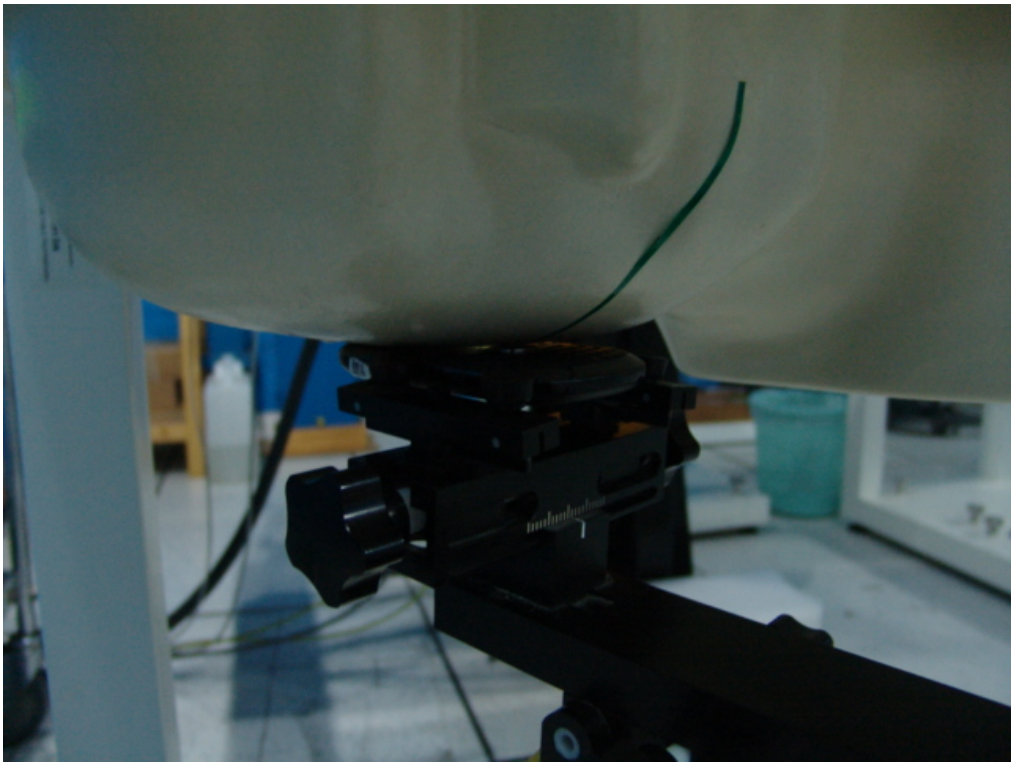
Picture B3 Liquid depth in the Flat Phantom (1900MHz)



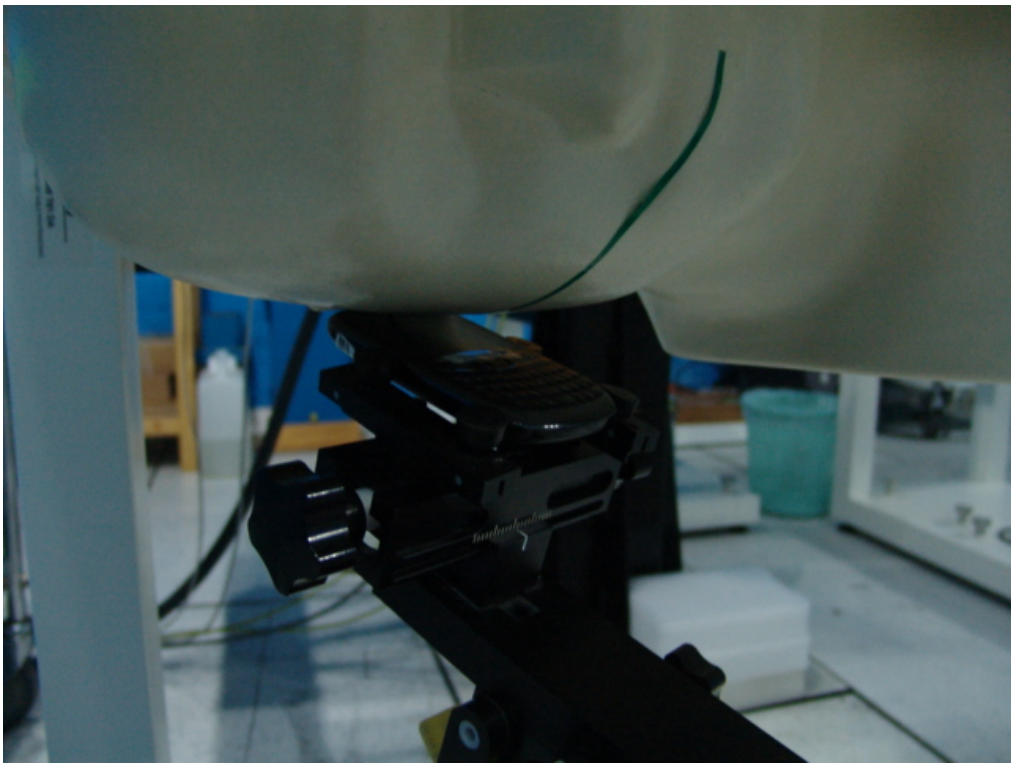
Picture B4: Left Hand Touch Cheek Position



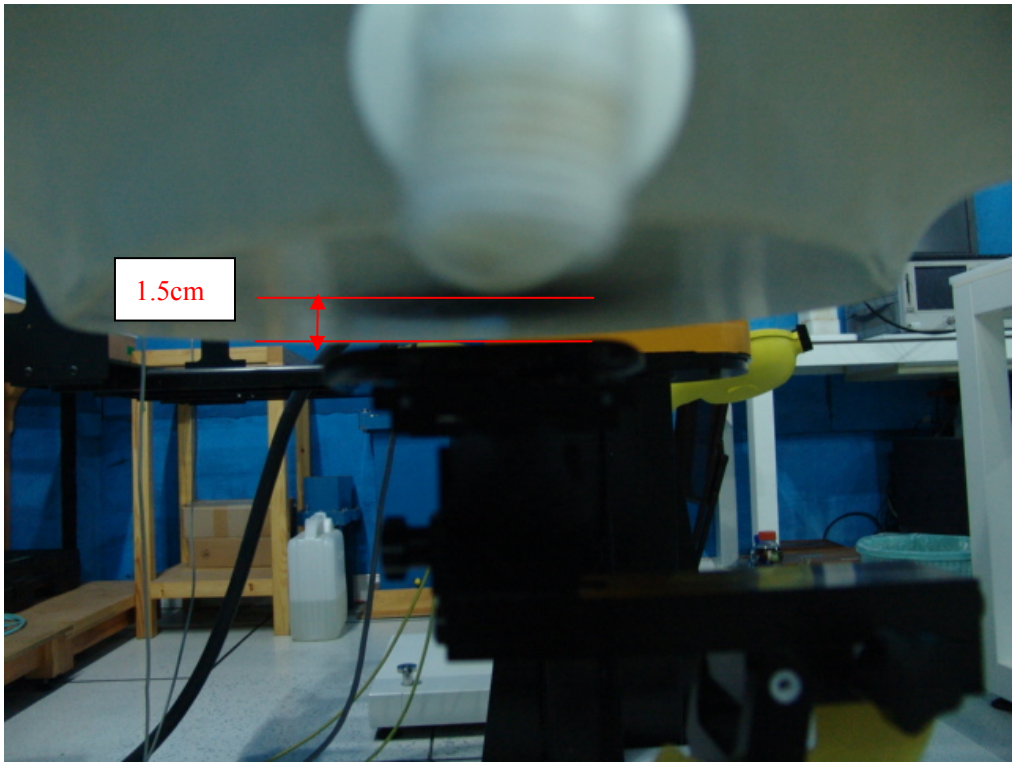
Picture B5: Left Hand Tilt 15° Position



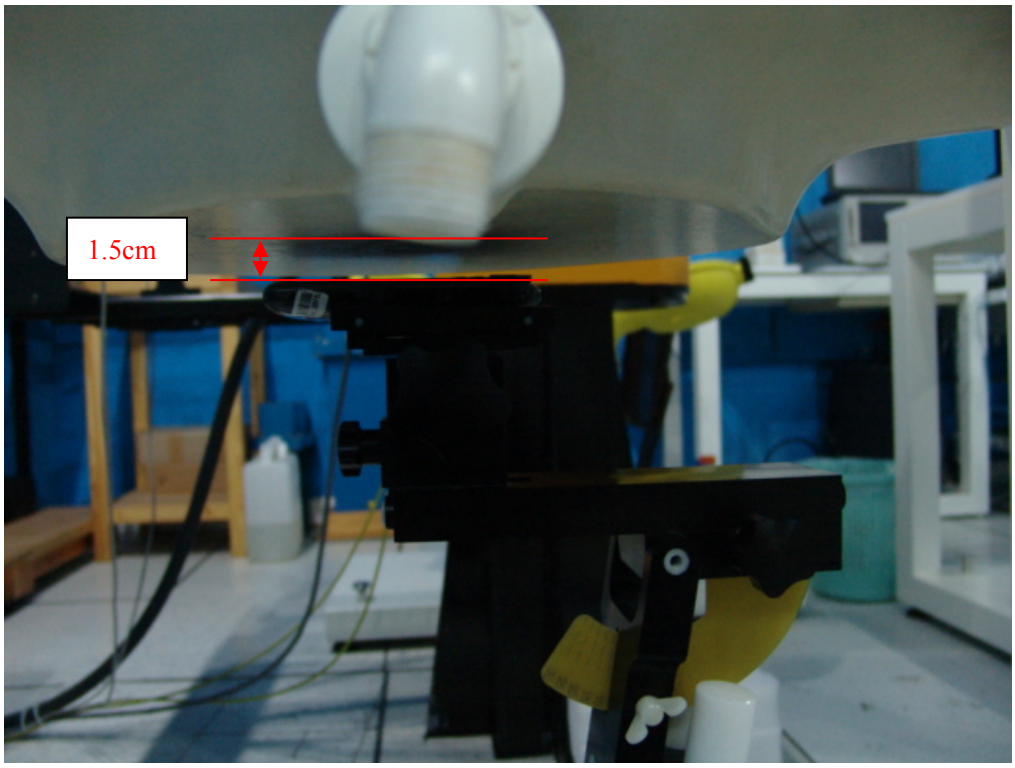
Picture B6: Right Hand Touch Cheek Position



Picture B7: Right Hand Tilt 15° Position



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



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

ANNEX C GRAPH RESULTS

850 Left Cheek High

Date/Time: 2011-3-8 8:06:44
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.938 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.634 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.42 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 0.776 W/kg
SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.421 mW/g
Maximum value of SAR (measured) = 0.629 mW/g

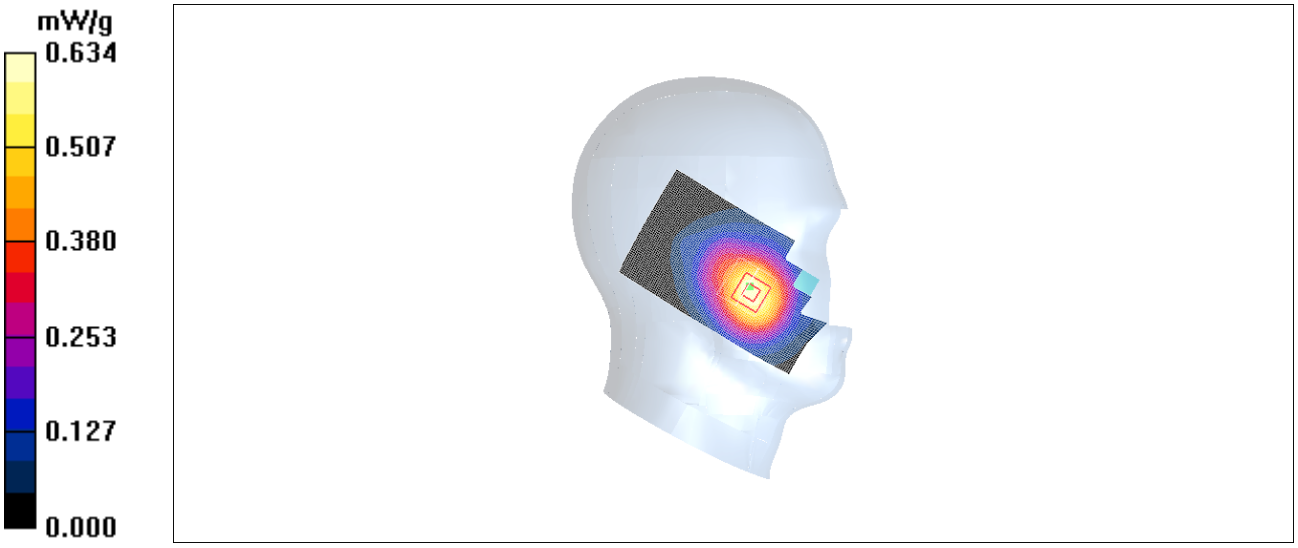


Fig. 1 850MHz CH251

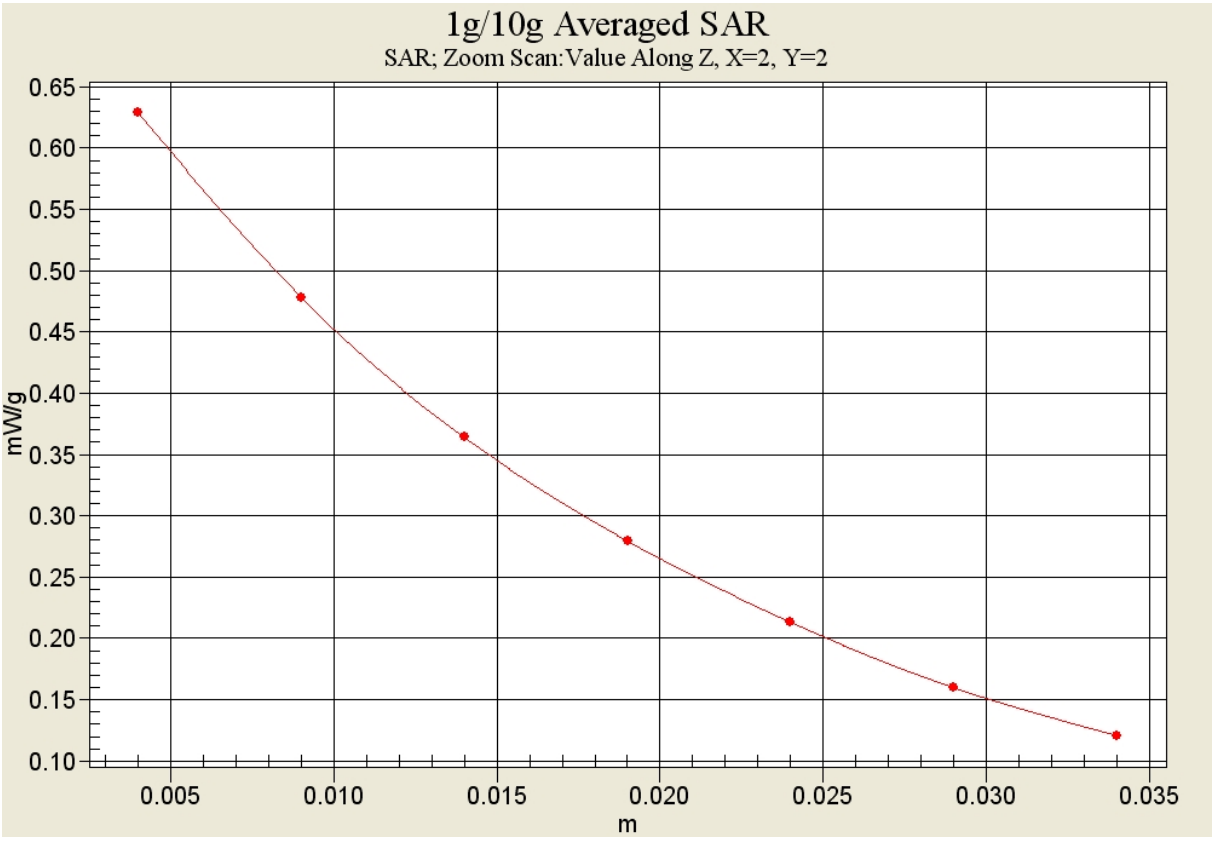


Fig. 1-1 Z-Scan at power reference point (850 MHz CH251)

850 Left Cheek Middle

Date/Time: 2011-3-8 8:21:02
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.548 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.61 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.678 W/kg
SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.367 mW/g
Maximum value of SAR (measured) = 0.549 mW/g

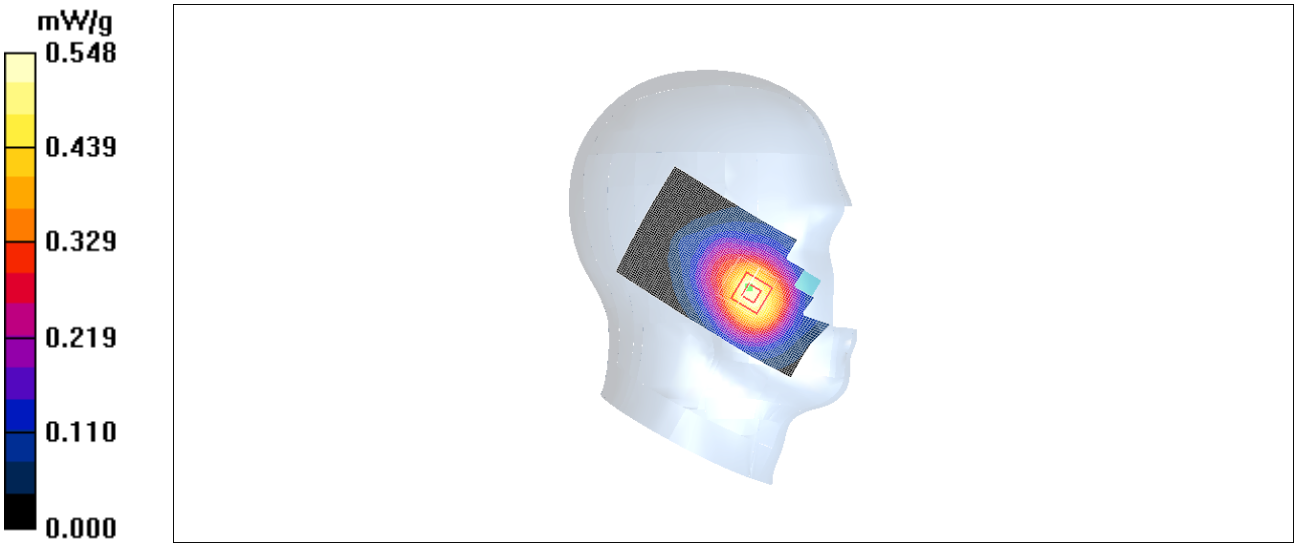


Fig. 2 850 MHz CH190

850 Left Cheek Low

Date/Time: 2011-3-8 8:35:23
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.458 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.96 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.572 W/kg
SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.310 mW/g
Maximum value of SAR (measured) = 0.460 mW/g

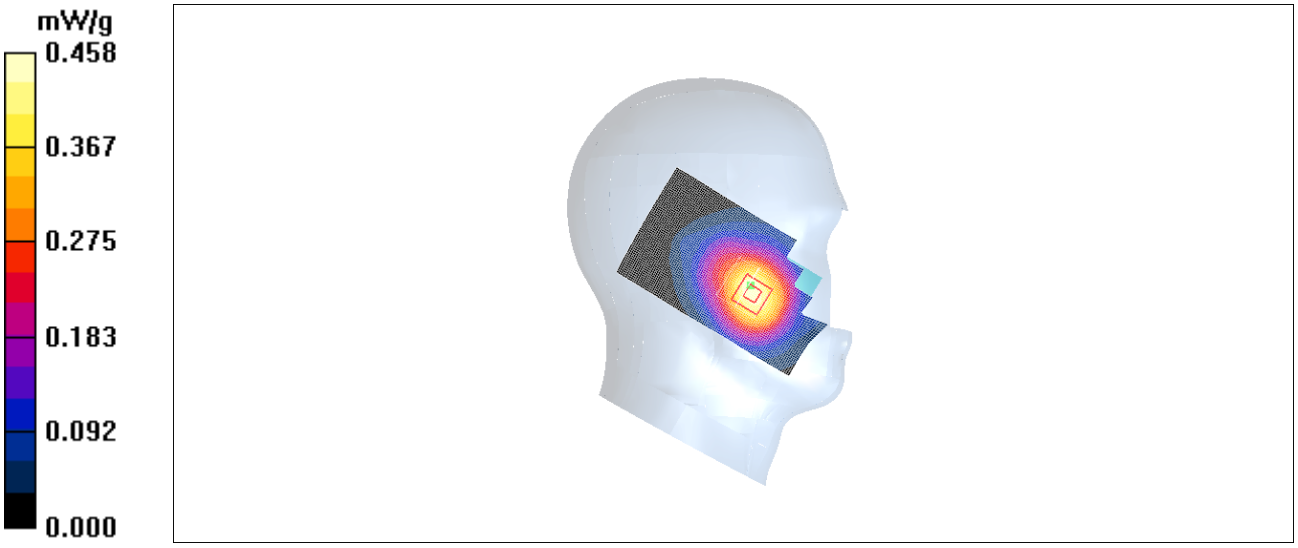


Fig. 3 850 MHz CH128

850 Left Tilt High

Date/Time: 2011-3-8 8:49:57
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.938 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.370 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.3 V/m; Power Drift = -0.068 dB
Peak SAR (extrapolated) = 0.444 W/kg
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.262 mW/g
Maximum value of SAR (measured) = 0.372 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.3 V/m; Power Drift = -0.068 dB
Peak SAR (extrapolated) = 0.329 W/kg
SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.264 mW/g

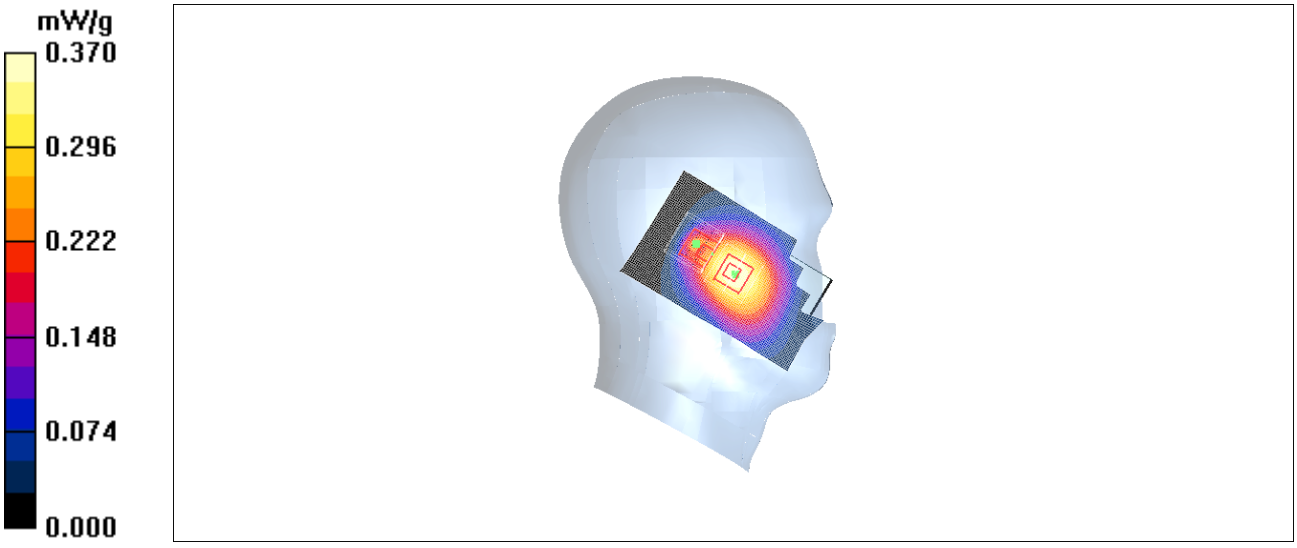


Fig.4 850 MHz CH251

850 Left Tilt Middle

Date/Time: 2011-3-8 9:04:16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.349 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.9 V/m; Power Drift = -0.105 dB
Peak SAR (extrapolated) = 0.414 W/kg
SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.247 mW/g
Maximum value of SAR (measured) = 0.345 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.9 V/m; Power Drift = -0.105 dB
Peak SAR (extrapolated) = 0.310 W/kg
SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.137 mW/g
Maximum value of SAR (measured) = 0.252 mW/g

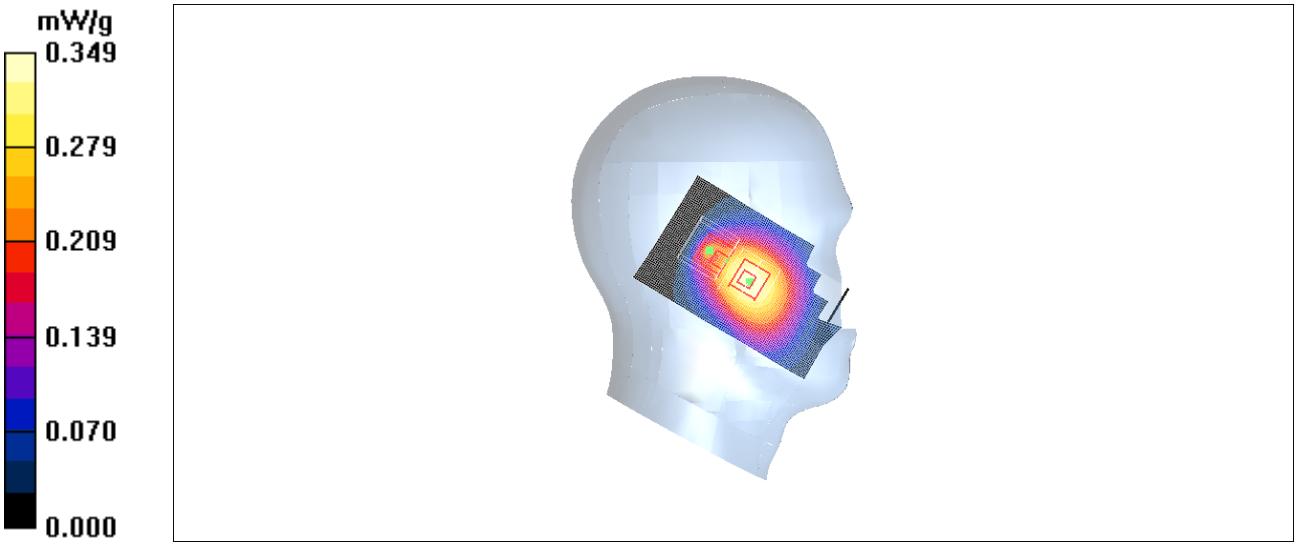


Fig.5 850 MHz CH190

850 Left Tilt Low

Date/Time: 2011-3-8 9:18:35
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.307 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.365 W/kg
SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 0.308 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.227 mW/g

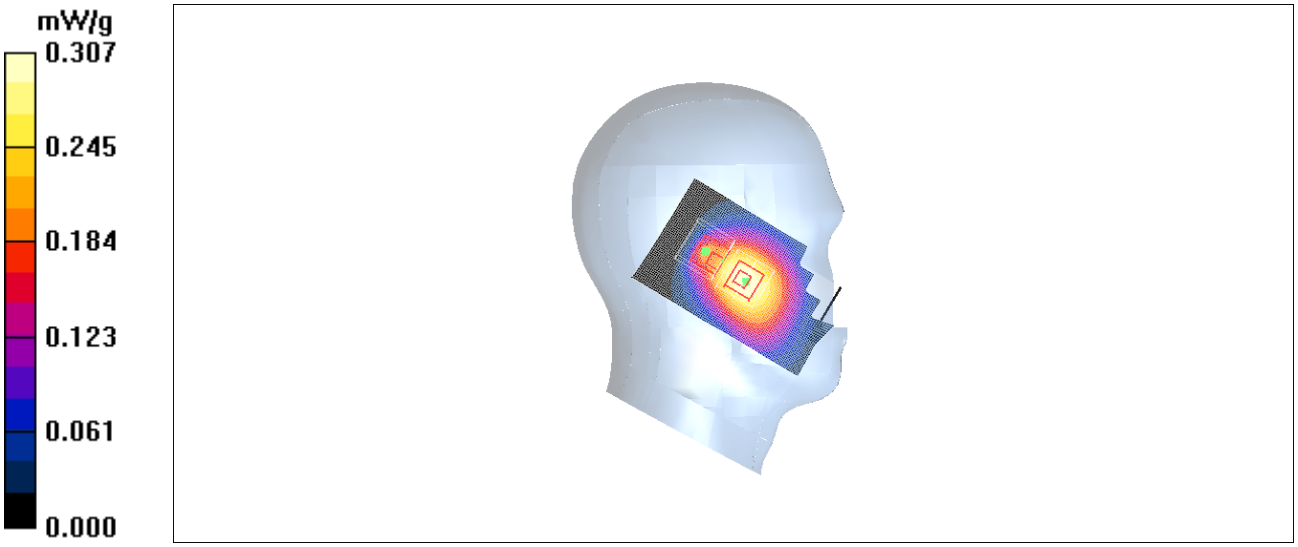


Fig. 6 850 MHz CH128

850 Right Cheek High

Date/Time: 2011-3-8 9:33:01
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.938 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.575 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 0.727 W/kg
SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.386 mW/g
Maximum value of SAR (measured) = 0.579 mW/g

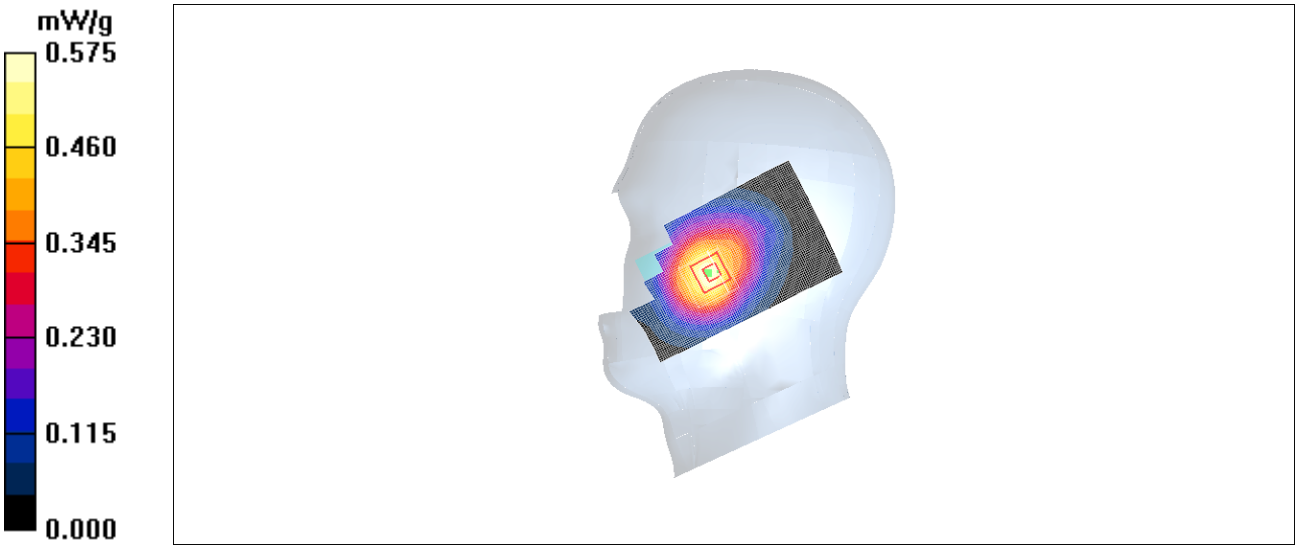


Fig. 7 850 MHz CH251

850 Right Cheek Middle

Date/Time: 2011-3-8 9:47:24
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.529 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.81 V/m; Power Drift = -0.186 dB
Peak SAR (extrapolated) = 0.650 W/kg
SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.351 mW/g
Maximum value of SAR (measured) = 0.516 mW/g

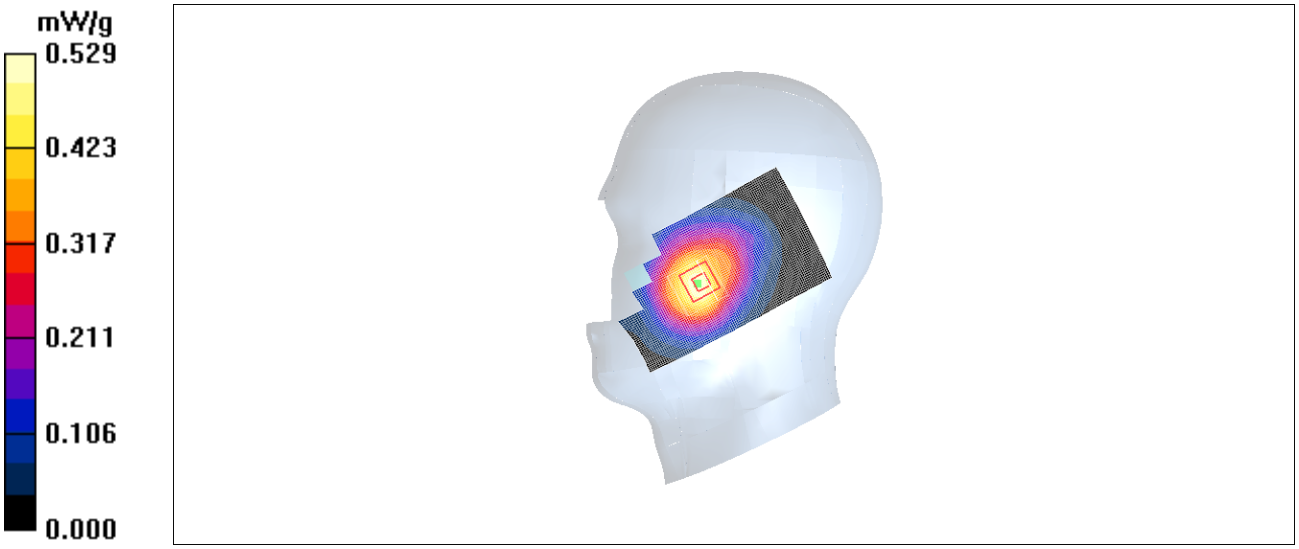


Fig. 8 850 MHz CH190

850 Right Cheek Low

Date/Time: 2011-3-8 10:01:46
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.416 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.77 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.532 W/kg
SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.281 mW/g
Maximum value of SAR (measured) = 0.417 mW/g

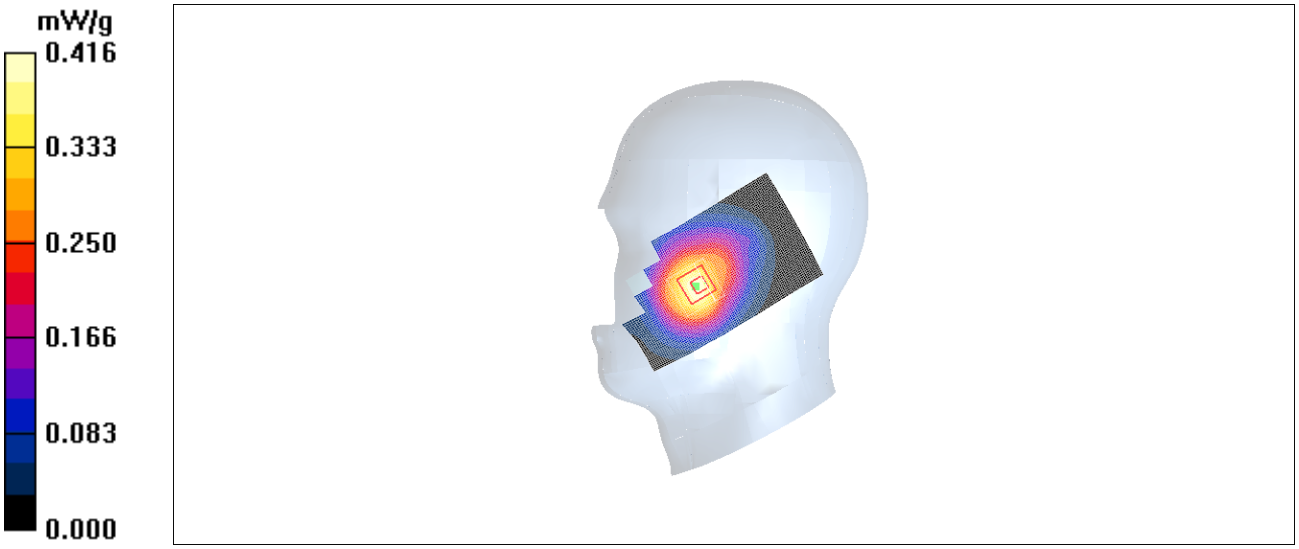


Fig. 9 850 MHz CH128

850 Right Tilt High

Date/Time: 2011-3-8 10:16:07
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.938 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.453 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 0.541 W/kg
SAR(1 g) = 0.419 mW/g; SAR(10 g) = 0.310 mW/g
Maximum value of SAR (measured) = 0.437 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 0.577 W/kg
SAR(1 g) = 0.380 mW/g; SAR(10 g) = 0.257 mW/g
Maximum value of SAR (measured) = 0.451 mW/g

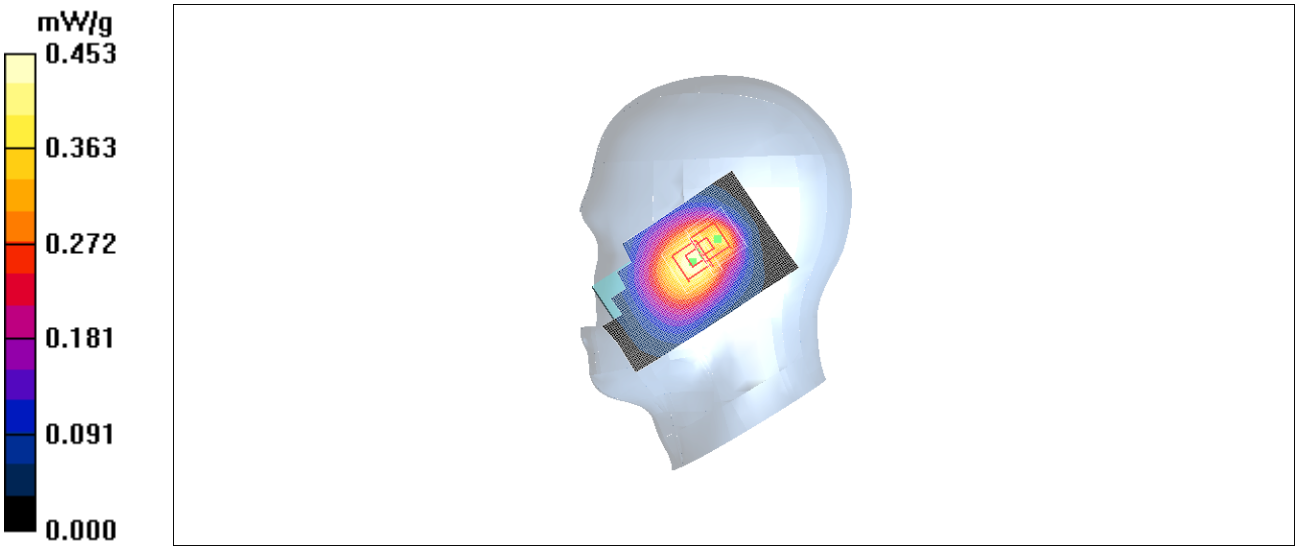


Fig.10 850 MHz CH251

850 Right Tilt Middle

Date/Time: 2011-3-8 10:30:25
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.392 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.3 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.476 W/kg
SAR(1 g) = 0.376 mW/g; SAR(10 g) = 0.279 mW/g
Maximum value of SAR (measured) = 0.395 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.3 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.451 W/kg
SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.371 mW/g

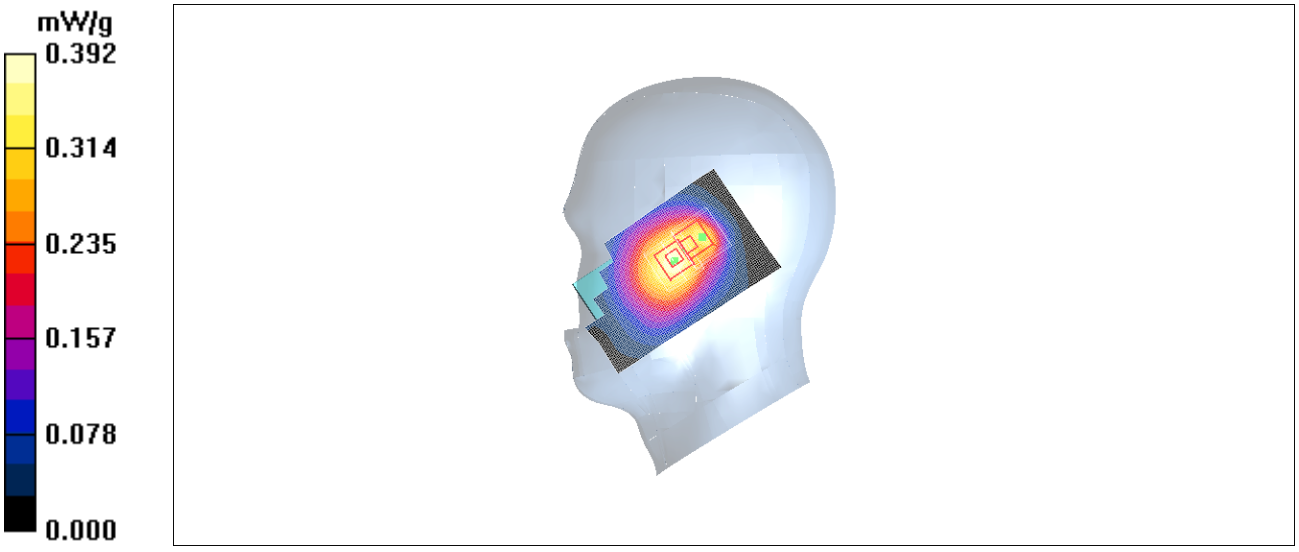


Fig.11 850 MHz CH190

850 Right Tilt Low
Date/Time: 2011-3-8 10:44:49
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.318 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.377 W/kg
SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.315 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.370 W/kg
SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.179 mW/g
Maximum value of SAR (measured) = 0.300 mW/g

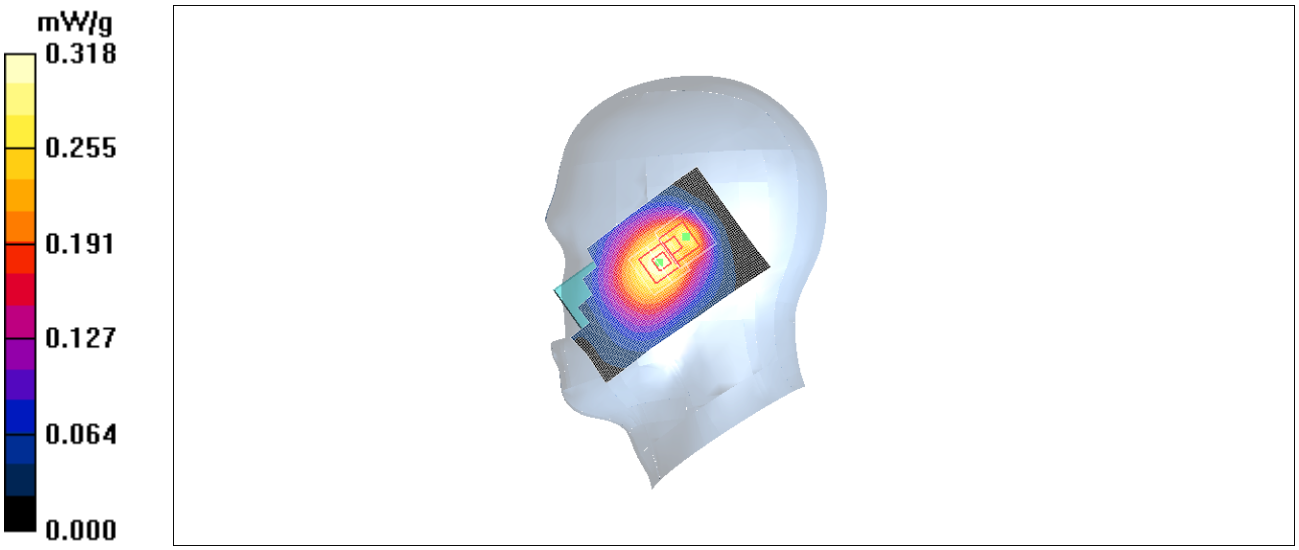


Fig. 12 850 MHz CH128

1900 Left Cheek High
Date/Time: 2011-3-9 8:08:13
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.4 mho/m; εr = 38.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.665 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.91 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 0.907 W/kg
SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.354 mW/g
Maximum value of SAR (measured) = 0.639 mW/g

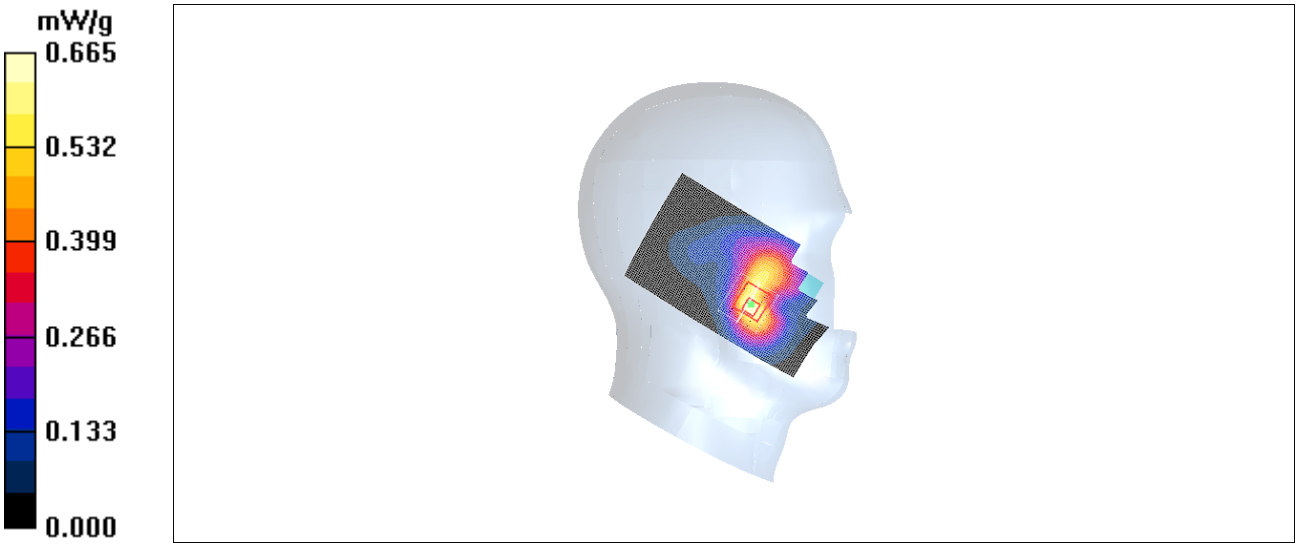


Fig. 13 1900 MHz CH810

1900 Left Cheek Middle

Date/Time: 2011-3-9 8:22:30
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 38.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.556 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.76 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 0.759 W/kg
SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.293 mW/g
Maximum value of SAR (measured) = 0.536 mW/g

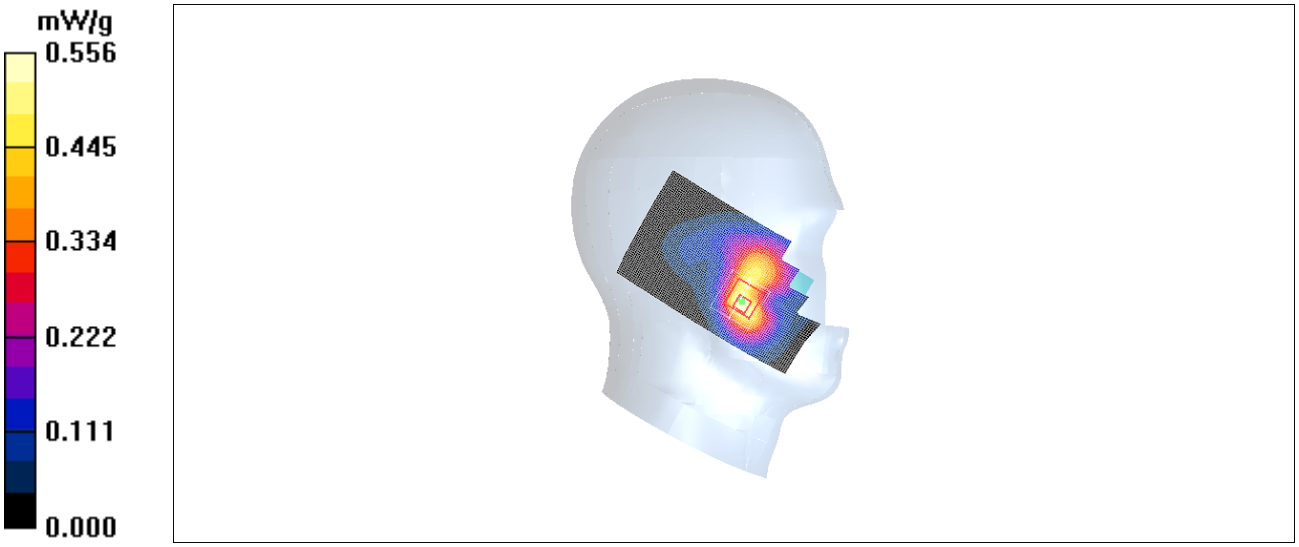


Fig. 14 1900 MHz CH661

1900 Left Cheek Low

Date/Time: 2011-3-9 8:36:51
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 38.9; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.411 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.23 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.558 W/kg
SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.229 mW/g
Maximum value of SAR (measured) = 0.407 mW/g

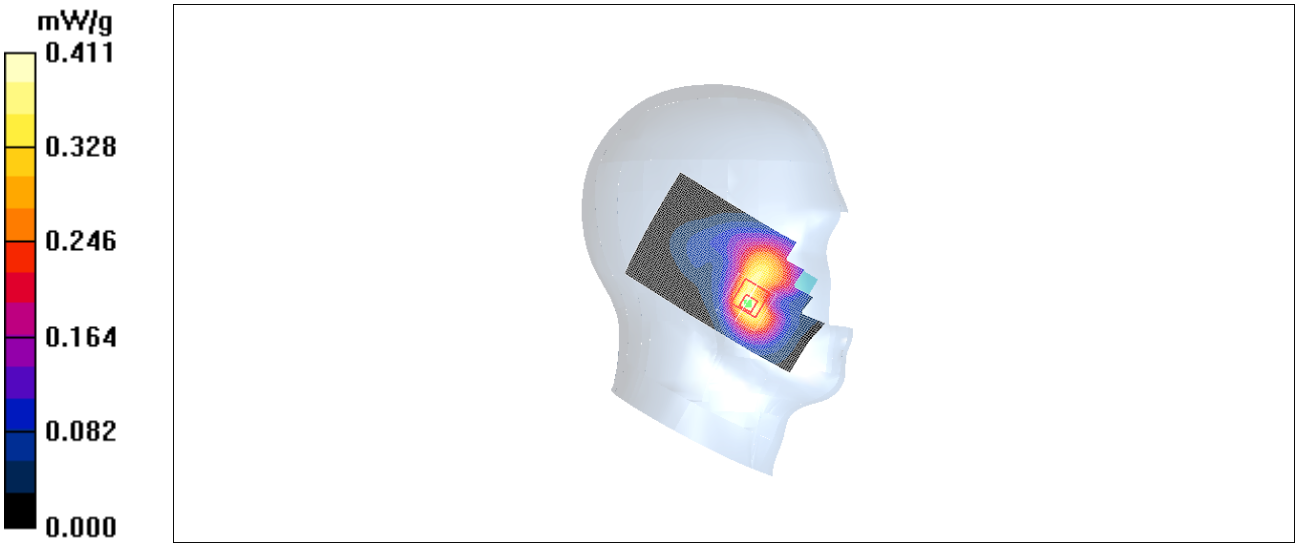


Fig. 15 1900 MHz CH512

1900 Left Tilt High

Date/Time: 2011-3-9 8:51:11
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.4 mho/m; εr = 38.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.230 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.230 mW/g

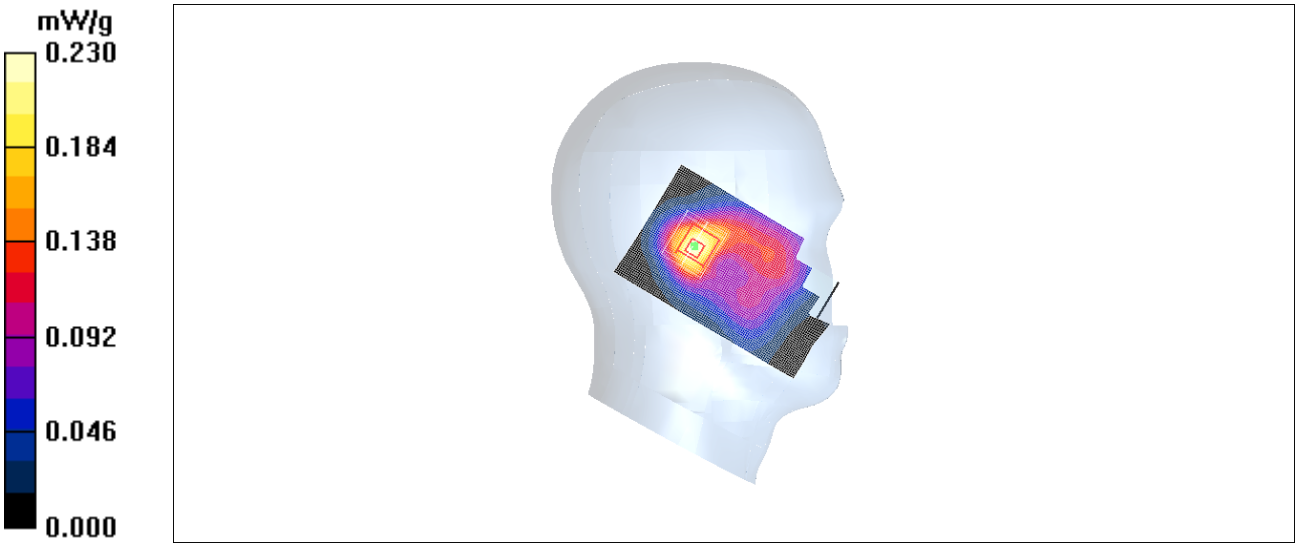


Fig.16 1900 MHz CH810

1900 Left Tilt Middle
Date/Time: 2011-3-9 9:05:35
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 38.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.186 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.8 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.102 mW/g
Maximum value of SAR (measured) = 0.181 mW/g

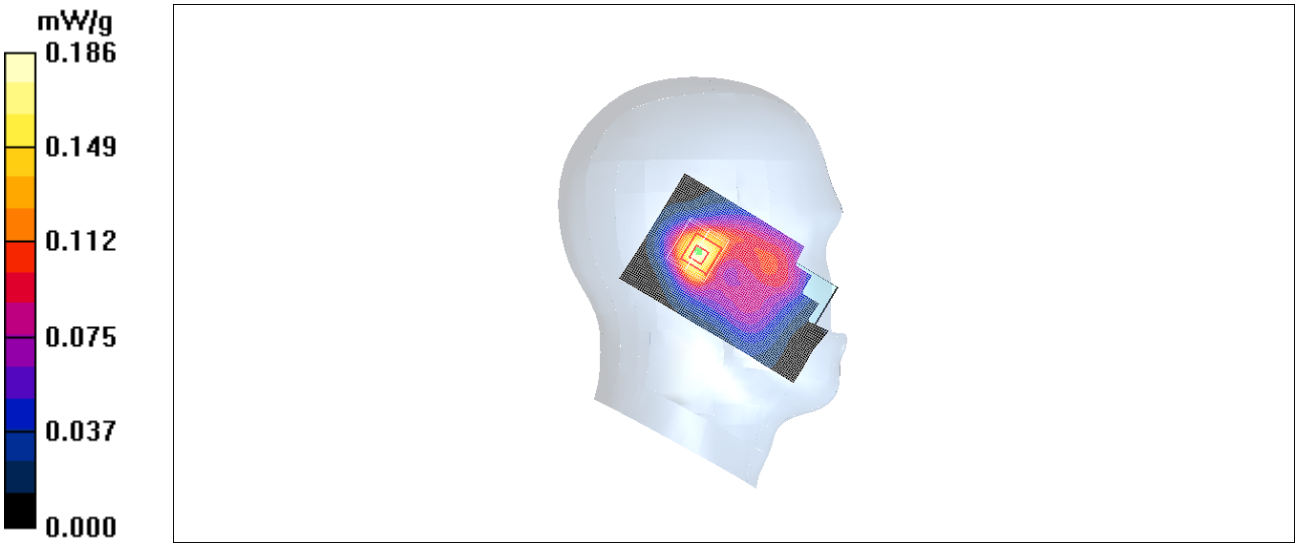


Fig. 17 1900 MHz CH661

1900 Left Tilt Low

Date/Time: 2011-3-9 9:19:57
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 38.9; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.145 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.63 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.083 mW/g
Maximum value of SAR (measured) = 0.144 mW/g

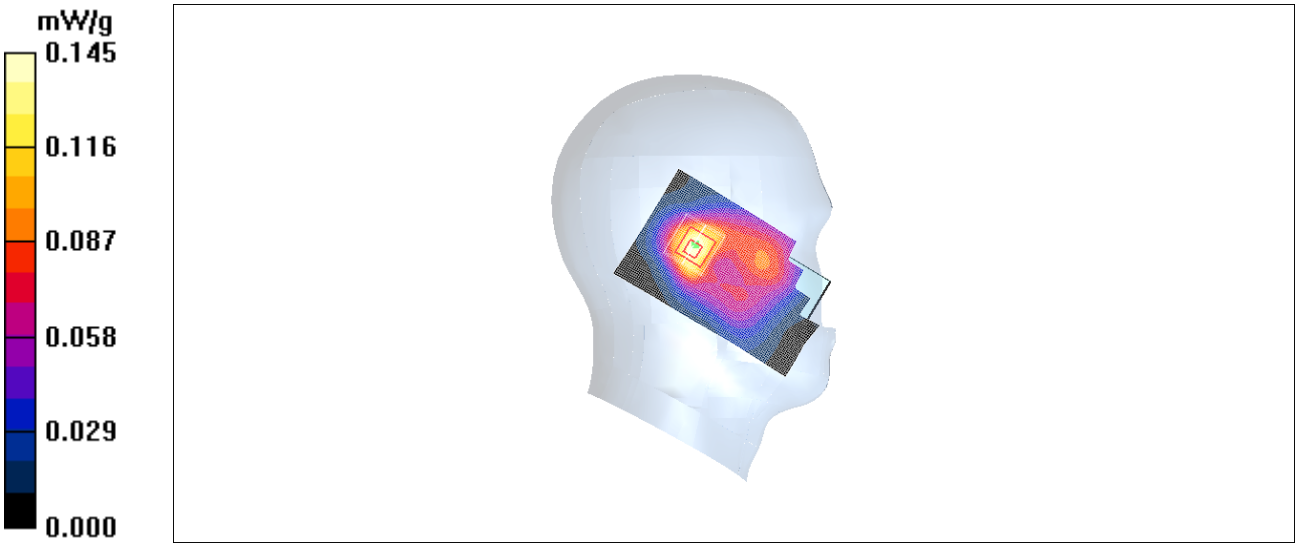


Fig. 18 1900 MHz CH512

1900 Right Cheek High

Date/Time: 2011-3-9 9:34:28
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.4 mho/m; εr = 38.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.804 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.17 V/m; Power Drift = -0.044 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.433 mW/g
Maximum value of SAR (measured) = 0.822 mW/g

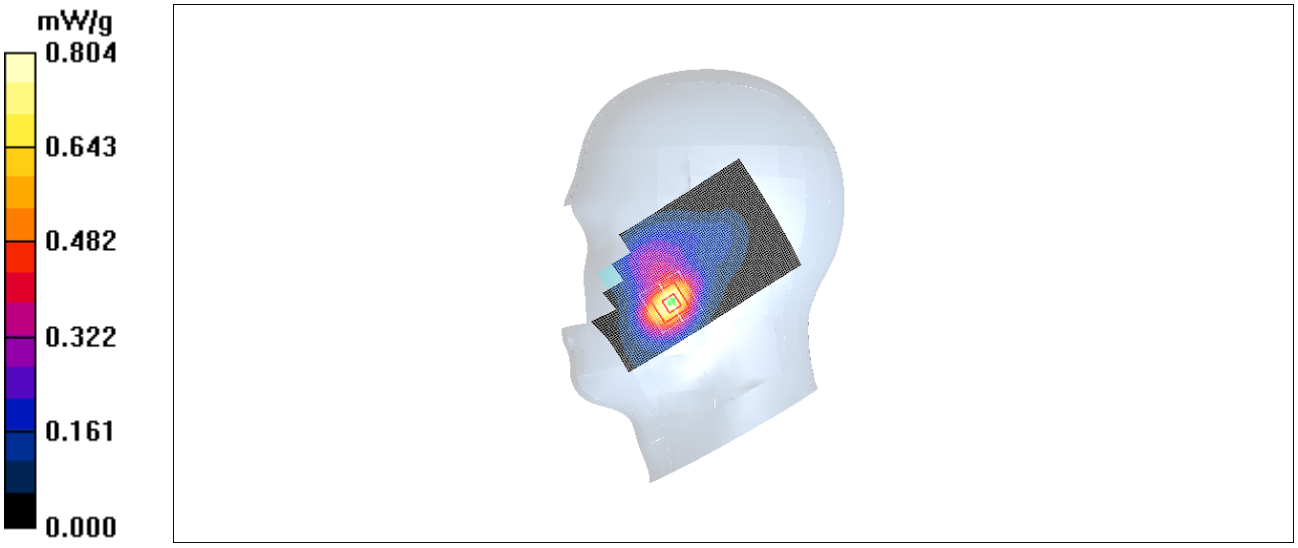


Fig. 19 1900 MHz CH810

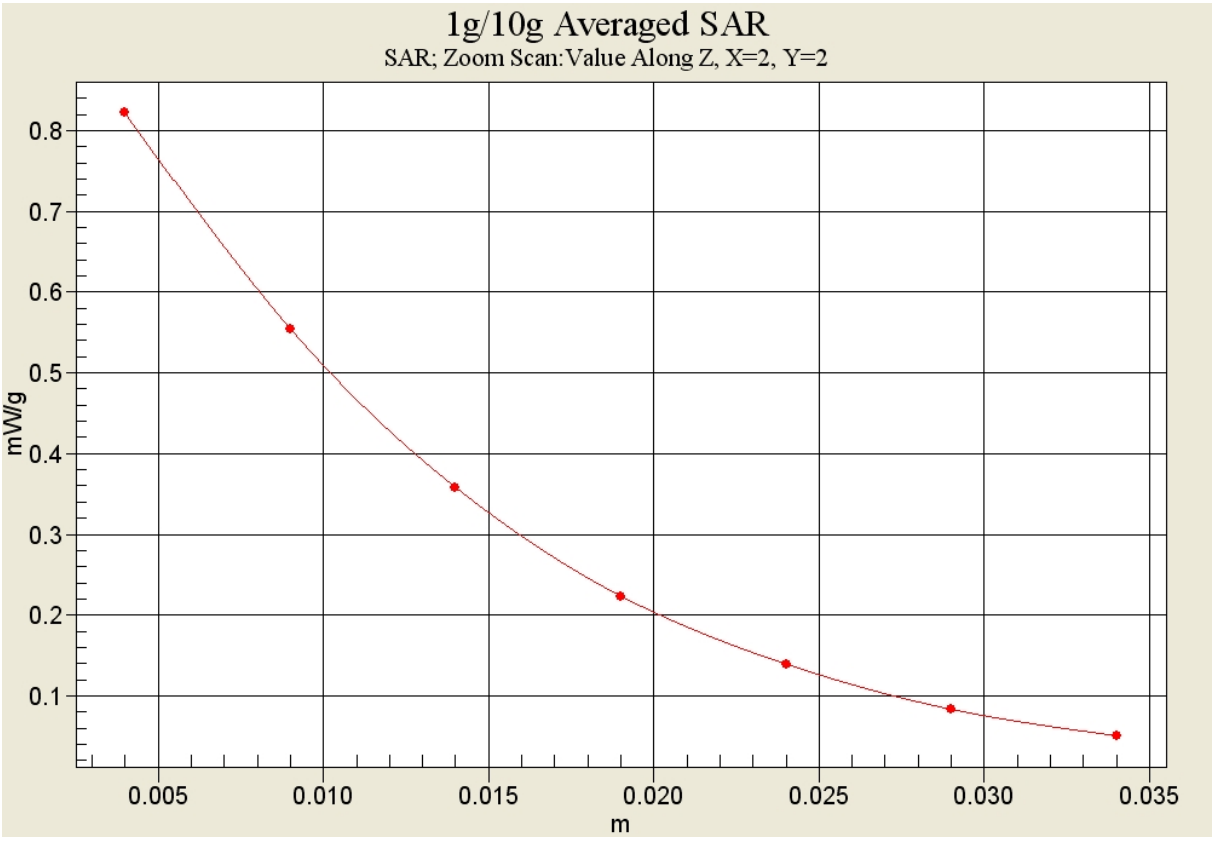


Fig. 19-1 Z-Scan at power reference point (1900 MHz CH810)

1900 Right Cheek Middle
Date/Time: 2011-3-9 9:48:47
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 38.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.668 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.14 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.938 W/kg
SAR(1 g) = 0.619 mW/g; SAR(10 g) = 0.363 mW/g
Maximum value of SAR (measured) = 0.682 mW/g

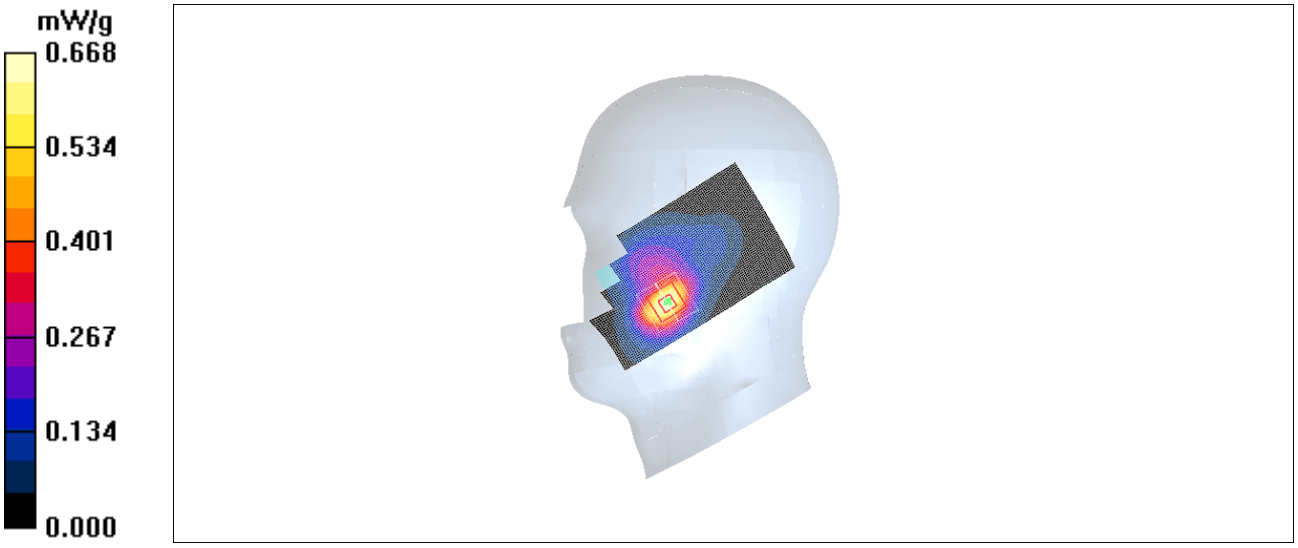


Fig. 20 1900 MHz CH661

1900 Right Cheek Low

Date/Time: 2011-3-9 10:03:09
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 38.9; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.610 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.38 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 0.818 W/kg
SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.329 mW/g
Maximum value of SAR (measured) = 0.614 mW/g

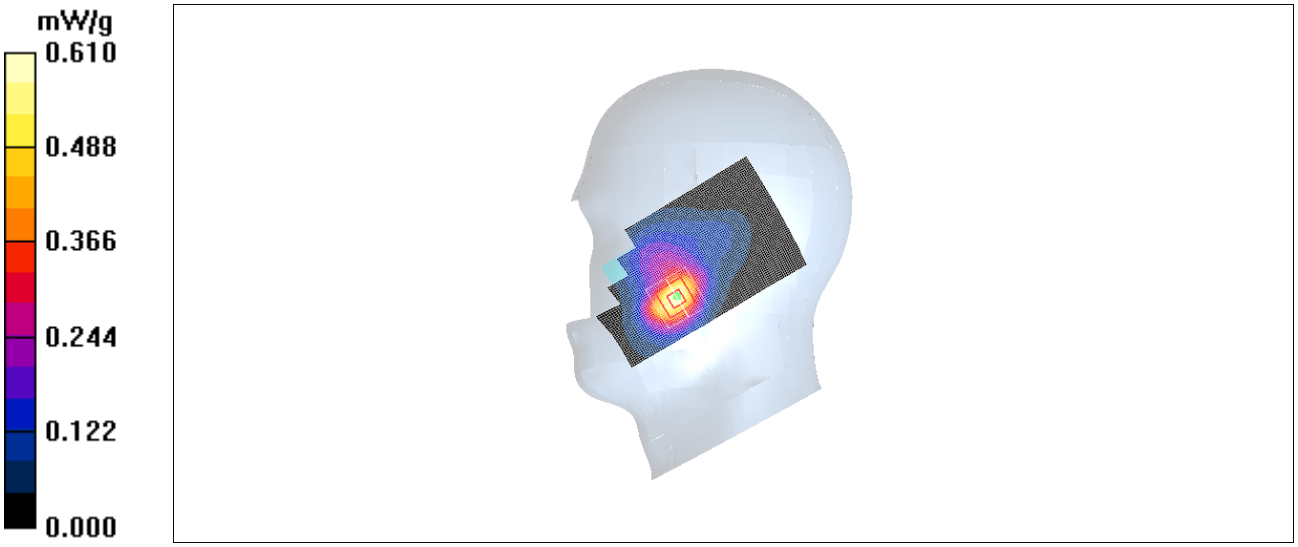


Fig. 21 1900 MHz CH512

1900 Right Tilt High

Date/Time: 2011-3-9 10:17:31
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.4 mho/m; εr = 38.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.301 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.457 W/kg
SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.153 mW/g
Maximum value of SAR (measured) = 0.293 mW/g

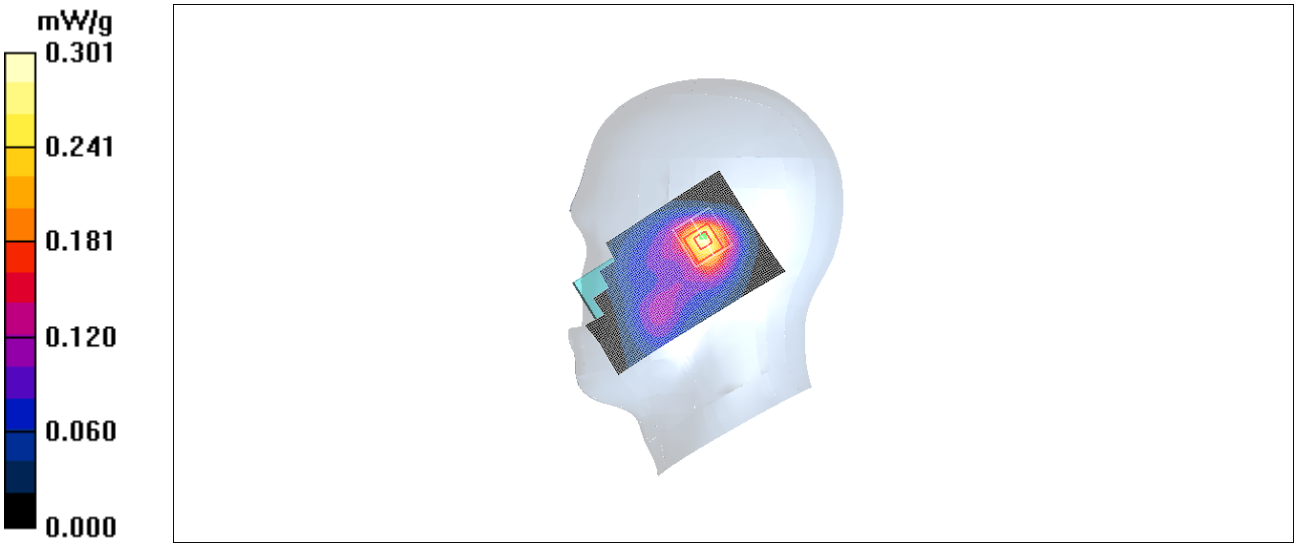


Fig. 22 1900 MHz CH810

1900 Right Tilt Middle
Date/Time: 2011-3-9 10:31:55
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 38.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.240 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 = -0.015 dB
Peak SAR (extrapolated) = 0.359 W/kg
SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.122 mW/g
Maximum value of SAR (measured) = 0.236 mW/g

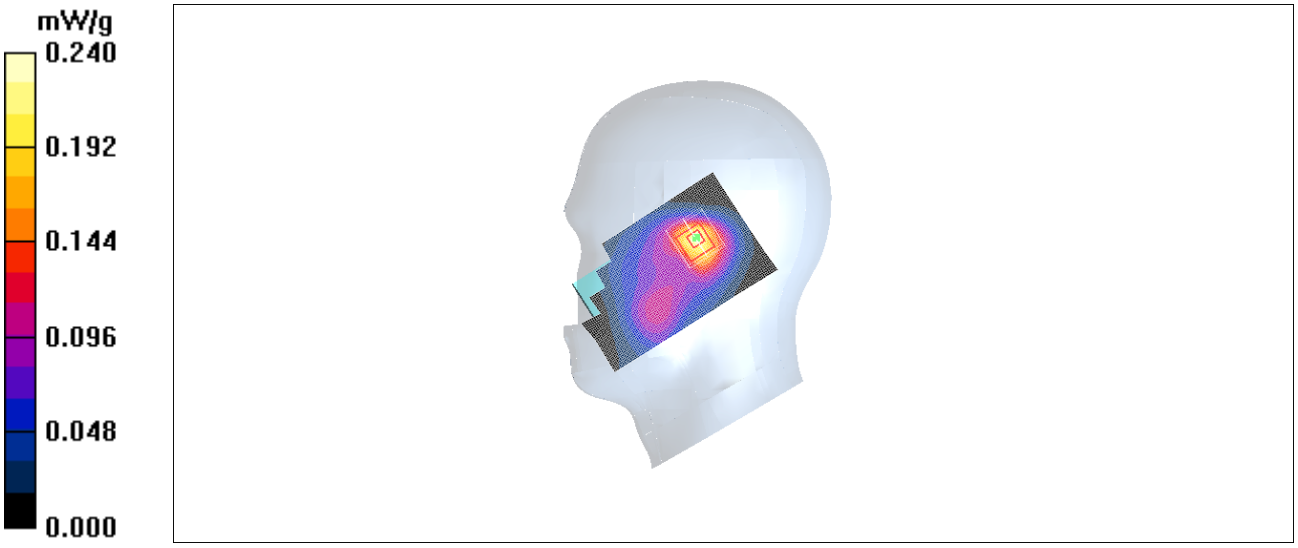


Fig.23 1900 MHz CH661

1900 Right Tilt Low

Date/Time: 2011-3-9 10:46:17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 38.9; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.197 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 = 0.124 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.192 mW/g

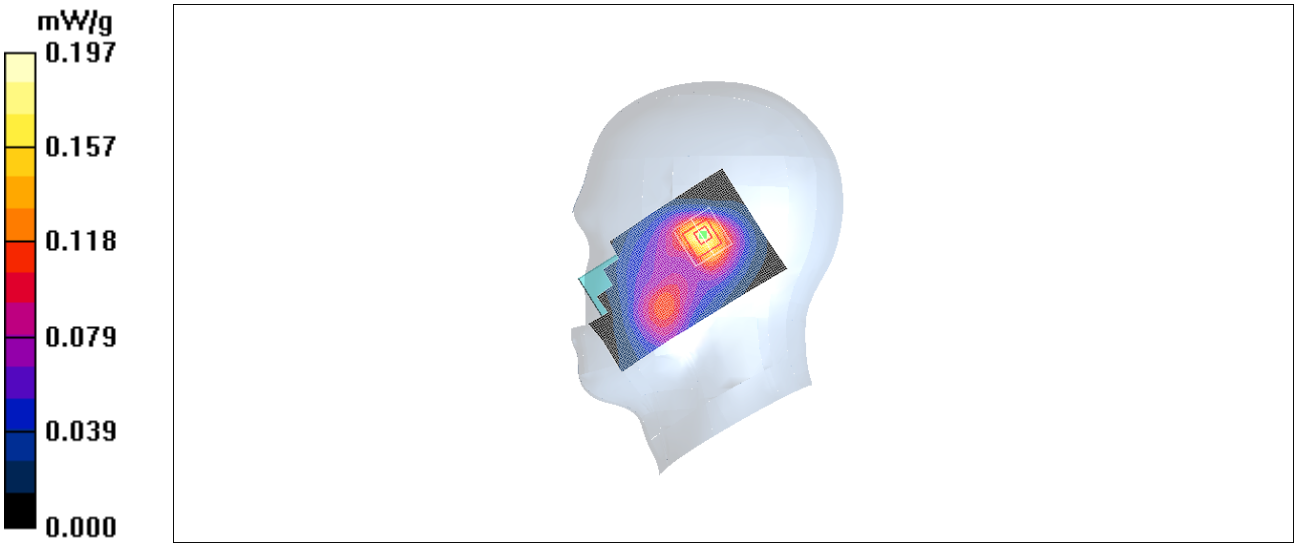


Fig.24 1900 MHz CH512

CDMA 835 Left Cheek High

Date/Time: 2011-3-8 11:09:27
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.31 MHz; σ = 0.937 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.505 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.93 V/m; Power Drift = -0.135 dB
Peak SAR (extrapolated) = 0.614 W/kg
SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.338 mW/g
Maximum value of SAR (measured) = 0.500 mW/g

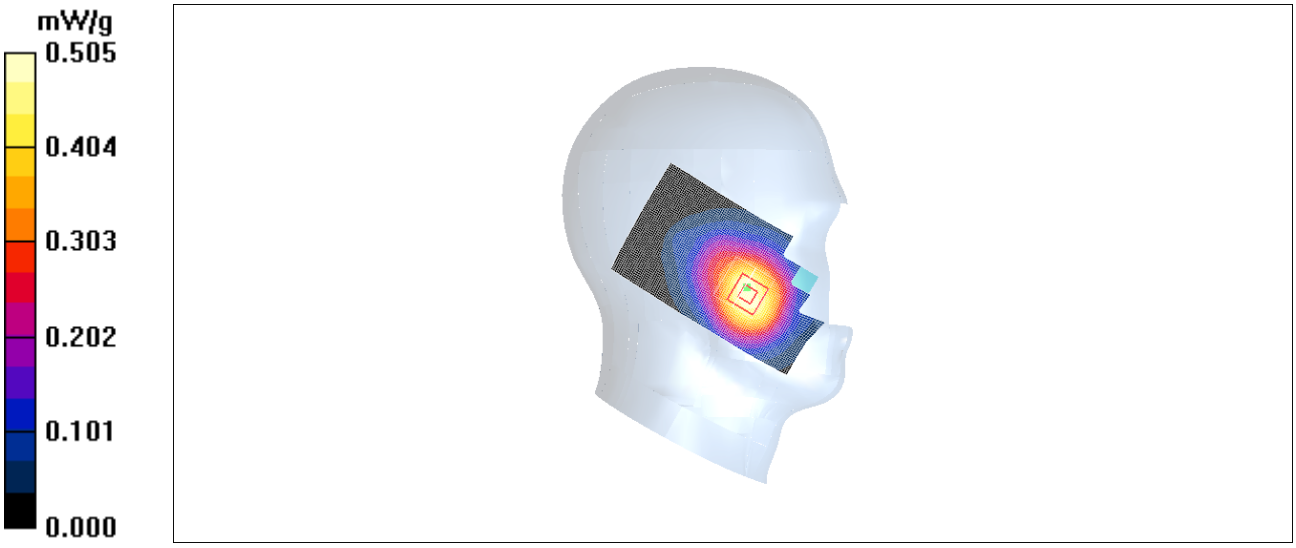


Fig. 25 CDMA 835MHz CH777

CDMA 835 Left Cheek Middle

Date/Time: 2011-3-8 11:23:50
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.52 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.650 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.84 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.815 W/kg
SAR(1 g) = 0.634 mW/g; SAR(10 g) = 0.453 mW/g
Maximum value of SAR (measured) = 0.677 mW/g

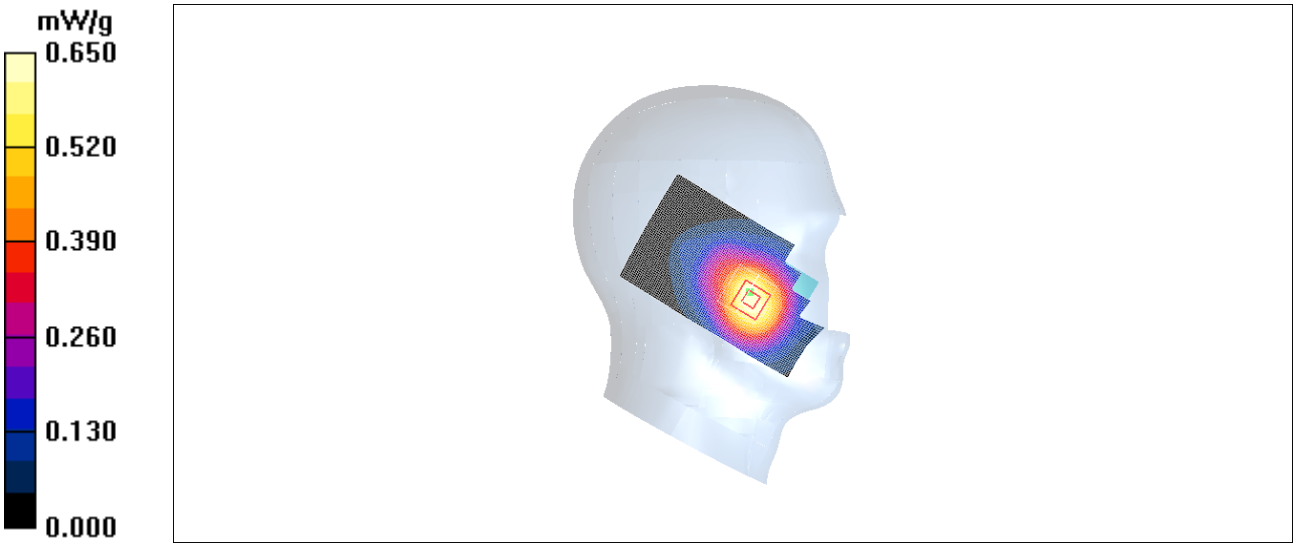


Fig.26 CDMA 835MHz CH384

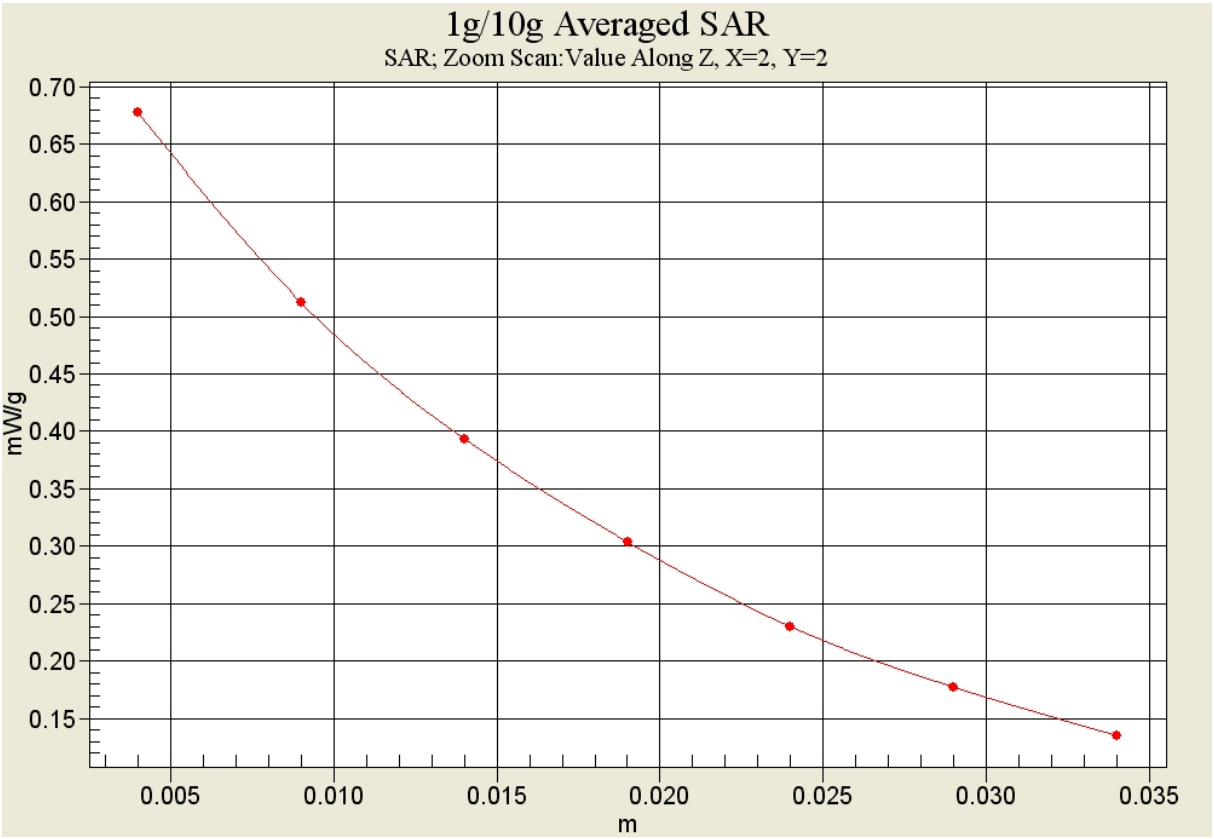


Fig. 26-1 Z-Scan at power reference point (CDMA 835 MHz CH384)

CDMA 835 Left Cheek Low
Date/Time: 2011-3-8 11:38:09
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.516 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.67 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 0.646 W/kg
SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.356 mW/g
Maximum value of SAR (measured) = 0.528 mW/g

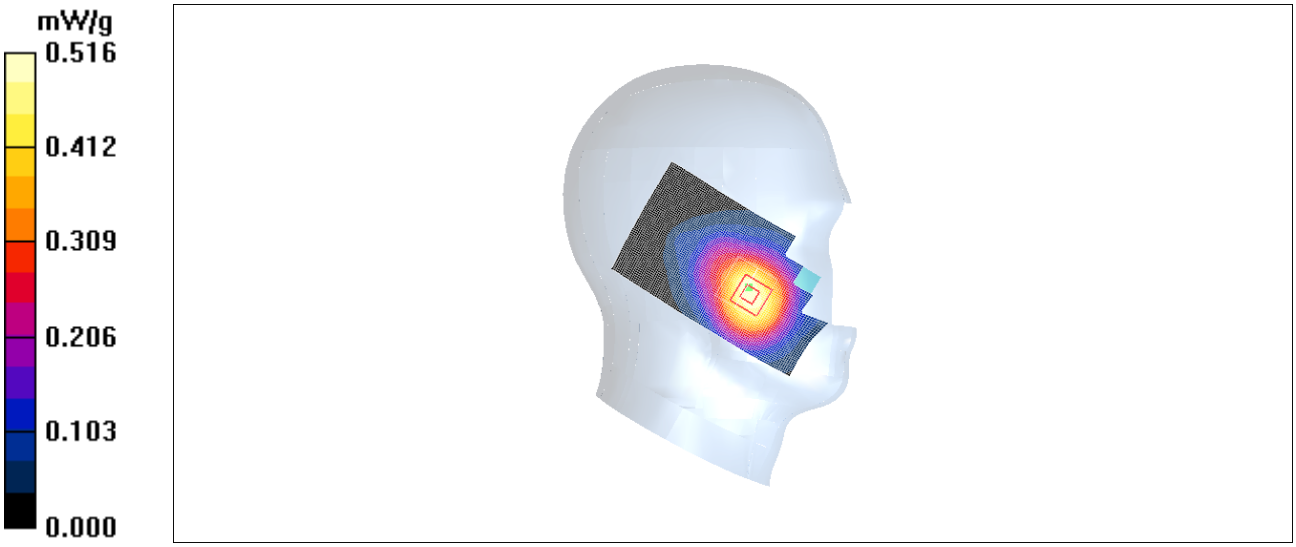


Fig. 27 CDMA 835MHz CH1013

CDMA 835 Left Tilt High

Date/Time: 2011-3-8 11:52:44
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.31 MHz; σ = 0.937 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.329 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = -0.083 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.233 mW/g
Maximum value of SAR (measured) = 0.330 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = -0.083 dB
Peak SAR (extrapolated) = 0.310 W/kg
SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.131 mW/g
Maximum value of SAR (measured) = 0.238 mW/g

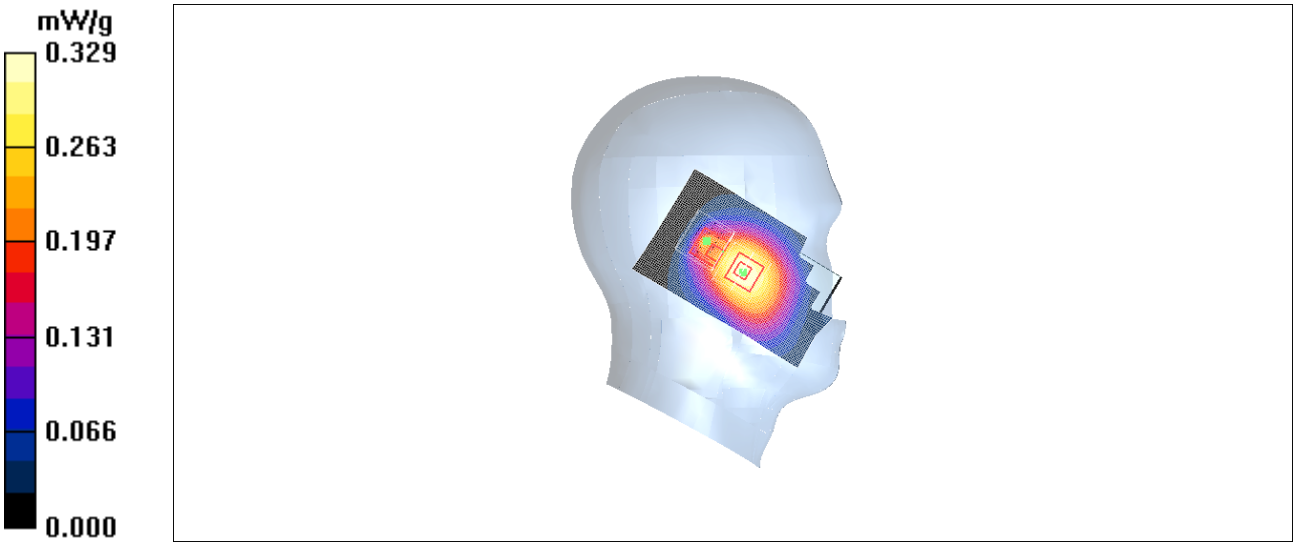


Fig. 28 CDMA 835MHz CH777

CDMA 835 Left Tilt Middle

Date/Time: 2011-3-8 12:07:06
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 836.52 MHz; σ = 0.928 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.463 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.571 W/kg
SAR(1 g) = 0.448 mW/g; SAR(10 g) = 0.335 mW/g
Maximum value of SAR (measured) = 0.475 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.452 W/kg
SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.191 mW/g
Maximum value of SAR (measured) = 0.343 mW/g

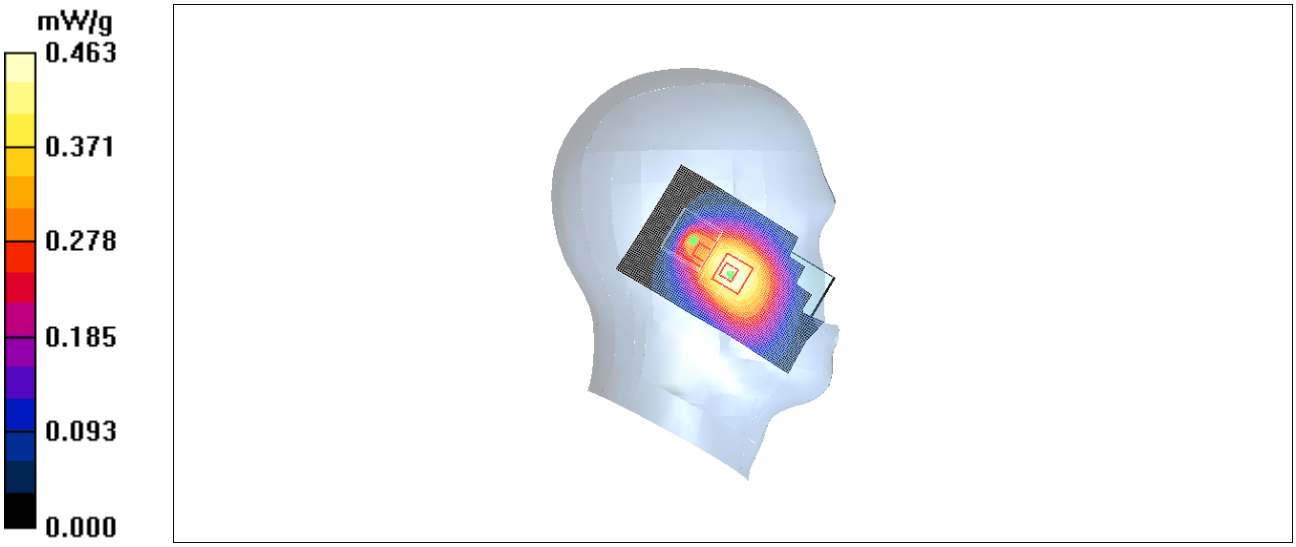


Fig.29 CDMA 835MHz CH384

CDMA 835 Left Tilt Low
Date/Time: 2011-3-8 12:21:25
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 825 MHz; σ = 0.916 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.376 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 0.445 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 0.374 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 0.361 W/kg
SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.155 mW/g
Maximum value of SAR (measured) = 0.279 mW/g

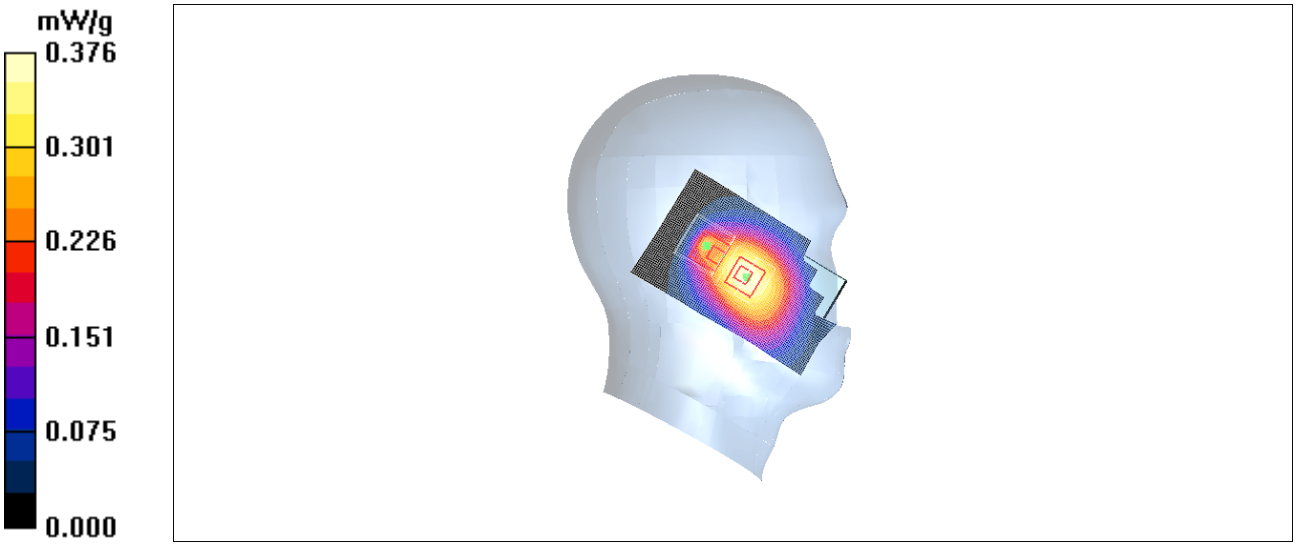


Fig. 30 CDMA 835MHz CH1013

CDMA 835 Right Cheek High

Date/Time: 2011-3-8 12:36:04
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.31 MHz; σ = 0.937 mho/m; εr = 41.9; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liquid Temperature: 22.5°C
Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.428 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.72 V/m; Power Drift = -0.179 dB
Peak SAR (extrapolated) = 0.532 W/kg
SAR(1 g) = 0.401 mW/g; SAR(10 g) = 0.283 mW/g
Maximum value of SAR (measured) = 0.423 mW/g

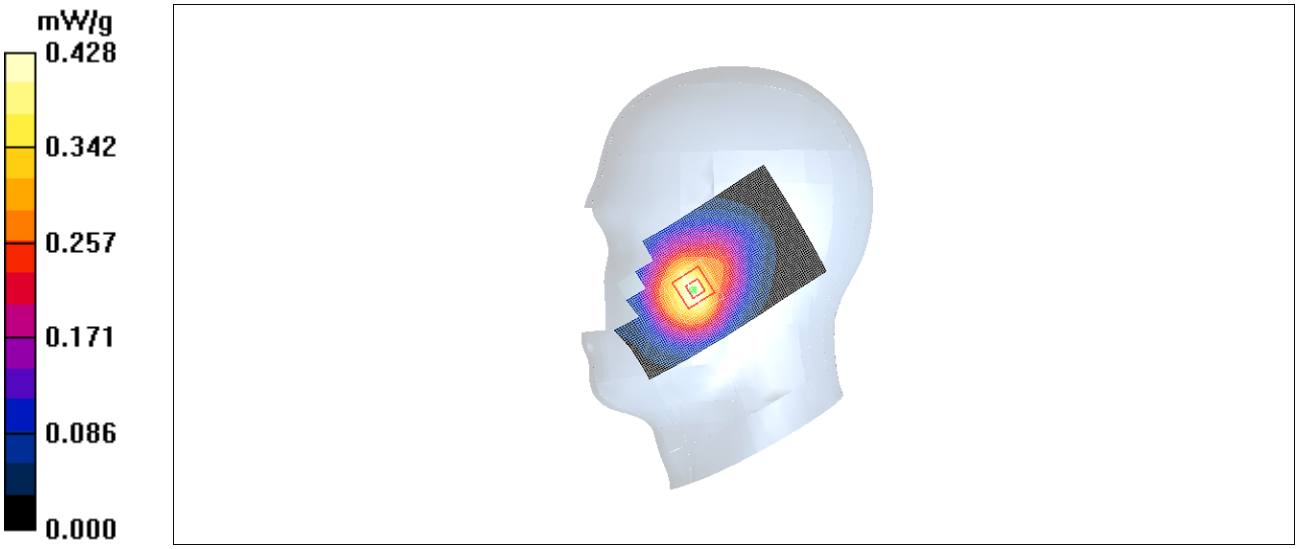


Fig. 31 CDMA 835MHz CH777