SAR TEST REPORT

No. 2012SAR00010

For

TCT Mobile Limited

UMTS TriBand / GSM Quadband mobile phone

Model name: Cocktail A

Marketing name: one touch 995A

With

Hardware Version: PIO4

Software Version: 21S

IC: 9238A-0007

FCC ID: RAD214

Issued Date: 2012-02-29

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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Revision Version

Report Number	Revision	Date	Memo
2012SAR00010	00	2012/02/13	Initial creation of test report
2012SAR00010	01	2012/02/29	Add IC number and IC Standards

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 & Reflection:	< 0.012 W/kg

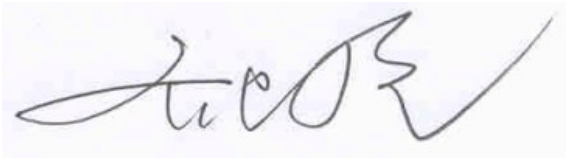
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	January 16, 2012
Testing End Date:	January 17, 2012

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 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for TCT Mobile Limited UMTS TriBand / GSM Quadband mobile phone Cocktail A / one touch 995A are as follows (with expanded uncertainty 18.2%)

Table 1: Max. SAR Measured (1g)

Band	Position	SAR 1g (W/Kg)
GSM 850	Head	0.398
	Body	1.26
GSM 1900	Head	0.483
	Body	0.881
WCDMA 850	Head	0.381
	Body	0.875
WCDMA 1900	Head	0.877
	Body	1.15

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-1999.

For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The measurement together with the test system set-up is described in chapter 7 of this test report. A detailed description of the equipment under test can be found in chapter 3 of this test report. The maximum SAR value is obtained at the case of **(Table 1),** and the values are**: 1.26 (1g).**

3 Client Information

3.1 Applicant Information

Company Name:	TCT Mobile Limited
Address /Post:	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P. R. China
Contact:	Gong Zhizhou
Email:	zhizhou.gong@jrdcom.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

3.2 Manufacturer Information

Company Name:	TCT Mobile Limited
Address /Post:	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P. R. China
Contact:	Gong Zhizhou
Email:	zhizhou.gong@jrdcom.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

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

4.1 About EUT

Description:	UMTS TriBand / GSM Quadband mobile phone
Model name:	Cocktail A
Marketing name:	one touch 995A
Operating mode(s):	GSM 850/900/1800/1900, WCDMA 850/1900/2100, BT, WiFi
Tested Tx Frequency:	825 – 848.8 MHz (GSM 850) 1850.2 – 1910 MHz (GSM 1900) 826.4 – 846.6 MHz (WCDMA 850) 1852.4 – 1907.6 MHz (WCDMA 1900)
GPRS Multislot Class:	12
GPRS capability Class:	B
EGPRS Multislot Class:	12
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Accessories/Body-worn configurations:	Headset
Hotspot mode:	Support simultaneous transmission of hotspot and voice(or data)
Form factor:	12.6cm×6.7cm

4.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	012906000002820	PIO4	21S

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

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	CAB31Y0006C1	/	BYD
AE2	Headset	CCB3160A11C1	/	Juwei
AE3	Headset	CCB3160A11C4	/	Meihao
AE4	Headset	CCB3001A15C1	/	Shunda
AE5	Headset	CCB3160A15C1	/	Juwei
AE6	Headset	CCB3160A15C4	/	Meihao
AE7	Headset	CCB3001A14C1	/	Shunda

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

Note: AE2 and AE5 are the same, so they can use the same results. AE3 and AE6 are also the same, so they can use the same results. AE4 and AE7 are the same, so they can use the same results.

5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

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.

5.2 Applicable Measurement Standards

IC RSS-102 ISSUE4: Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

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

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

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

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

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

KDB248227: SAR measurement procedures for 802.112abg transmitters.

6 Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dv}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

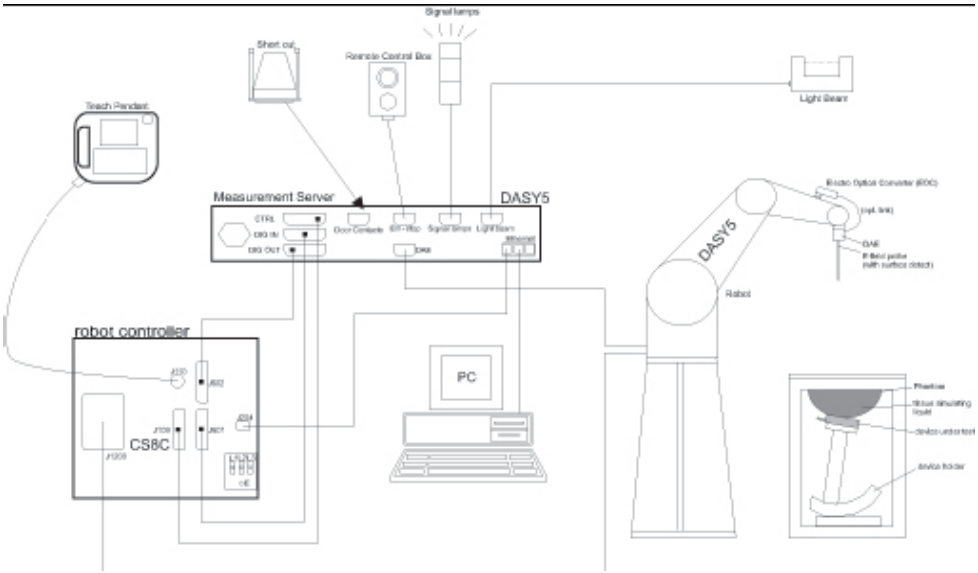
Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 SAR MEASUREMENT SETUP

7.1 Measurement Set-up

The Dasy4 or DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture 1 SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (Stäubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY4 or DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as
- warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

7.2 Dasy4 or DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY4 or DASY5 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3, EX3DV4
Frequency 10MHz — 6.0GHz(EX3DV4)
Range: 10MHz — 4GHz(ES3DV3)
Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity: ± 0.2 dB(30 MHz to 6 GHz) for EX3DV4
± 0.2 dB(30 MHz to 4 GHz) for ES3DV3
Dynamic Range: 10 mW/kg — 100W/kg
Probe Length: 330 mm
Probe Tip Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)
Tip-Center: 1 mm (2.0mm for ES3DV3)
Application: SAR Dosimetry Testing
Compliance tests of mobile phones
Dosimetry in strong gradient fields

Picture 2 Near-field Probe

Picture 3 E-field Probe

7.3 E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or other methodologies 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 until the three channels show the maximum reading. The power density readings equates to 1 mW/ cm^2.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The E-field in the medium correlates with the temperature rise in the 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.

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

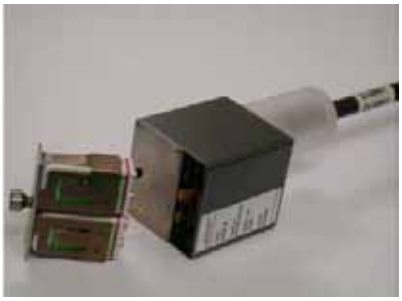
7.4 Other Test Equipment

7.4.1 Data Acquisition Electronics(DAE)

The data acquisition electronics consist 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 with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



Picture4: DAE

7.4.2 Robot

The SPEAG DASY system uses the high precision robots (DASY4: RX90XL; DASY5: RX160L) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Picture 5 DASY 4

Picture 6 DASY 5

7.4.3 Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (dasy4: 166 MHz, Intel Pentium; DASY5: 400 MHz, Intel Celeron), chipdisk (DASY4: 32 MB; DASY5: 128MB), RAM (DASY4: 64 MB, DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Picture 7 Server for DASY 4

Picture 8 Server for DASY 5

7.4.4 Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss

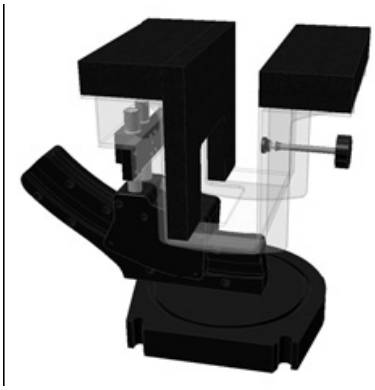
POM material having the following dielectric

parameters: relative permittivity ε =3 and loss tangent δ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture 9-1: Device Holder



Picture 9-2: Laptop Extension Kit

7.4.5 Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to

Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation

of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. 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. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

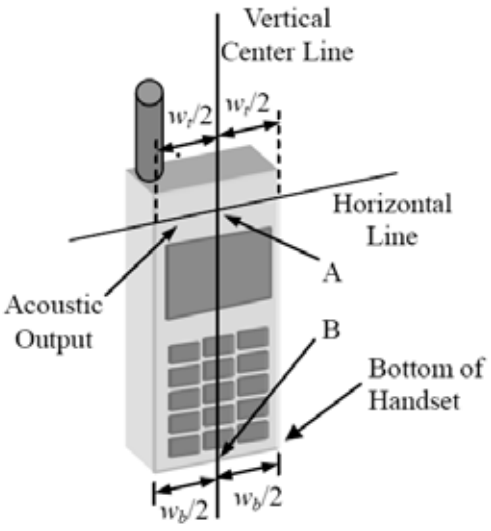
Shell Thickness: 2 ± 0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)
Available: Special

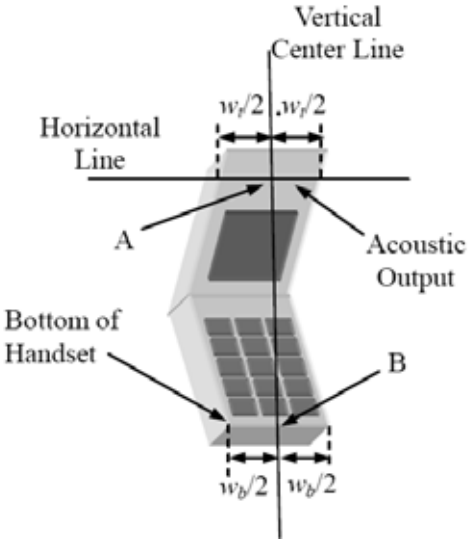
Picture 10: SAM Twin Phantom

8. Position of the wireless device in relation to the phantom

8.1 General considerations

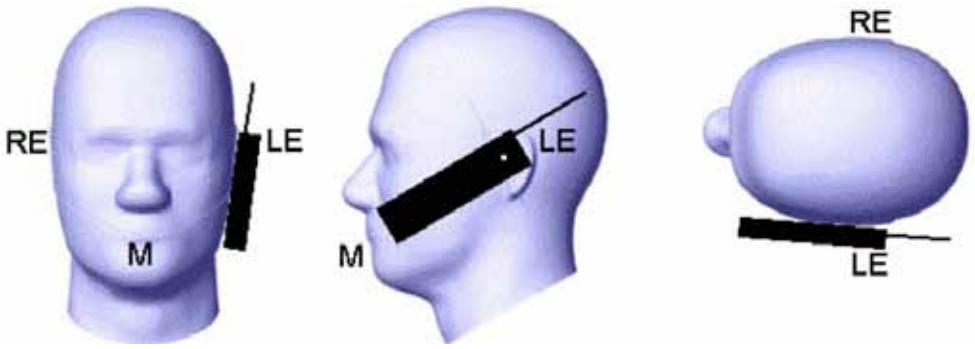
This standard specifies two handset test positions against the head phantom – the “cheek” position and the “tilt” position.



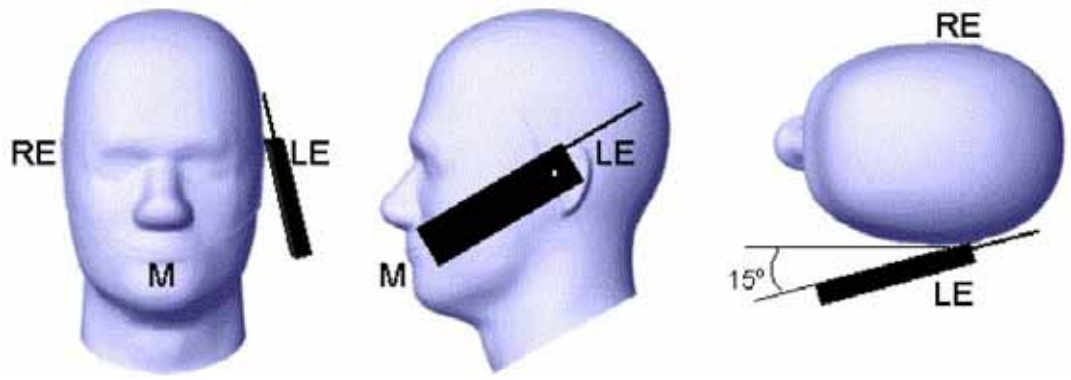


w_t	Width of the handset at the level of the acoustic
w_b	Width of the bottom of the handset
A	Midpoint of the width w_t of the handset at the level of the acoustic output
B	Midpoint of the width w_b of the bottom of the handset

Picture 11-a Typical “fixed” case handset **Picture 11-b Typical “clam-shell” case handset**



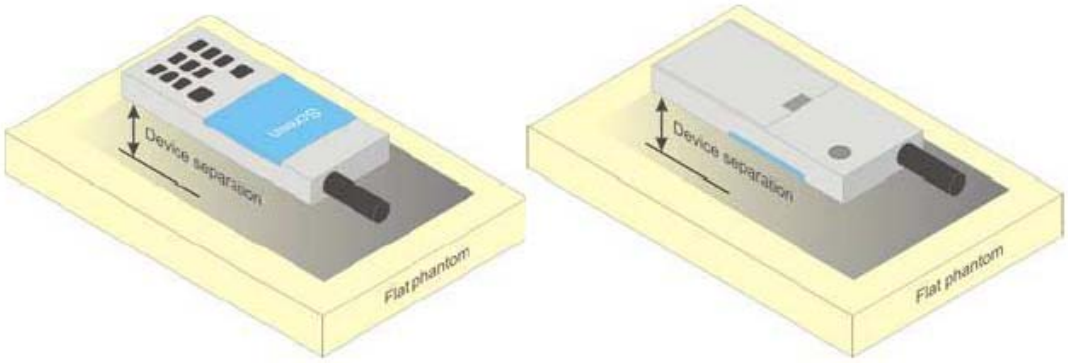
Picture 12 Cheek position of the wireless device on the left side of SAM



Picture 13 Tilt position of the wireless device on the left side of SAM

8.2 Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.

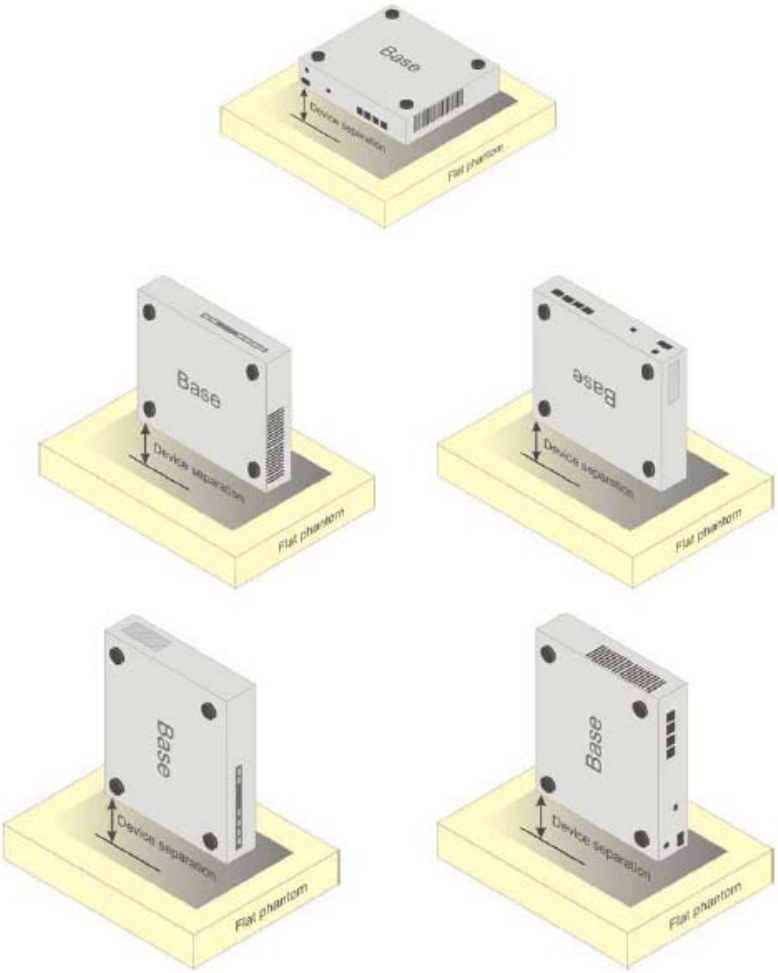


Picture 14 Test positions for body-worn devices

8.3 Desktop device

A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture 16 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture 15 Test positions for desktop devices

8.4 DUT Setup Photos

Picture 16-1: Specific Absorption Rate Test Layout

Picture 16-2: Left Hand Touch Cheek Position

Picture 16-3: Left Hand Tilt 15° Position

Picture 16-4: Right Hand Touch Cheek Position

Picture 16-5: Right Hand Tilt 15° Position

Test positions for body:

The Body SAR is tested at the following 6 test positions all with the distance =10mm between the EUT and the phantom bottom :

Picture 16-6: Forward Surface

Picture 16-7: Back Surface

Picture 16-7-1: Back Surface with Headset

Picture 16-8: Left Side

Picture 16-9: Right Side

Picture 16-10: Bottom Side

Picture 16-10-1: Bottom Side with Headset

9 Tissue Simulating Liquids

9.1 Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt 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 and IEC 62209.

Table 2. Composition of the Tissue Equivalent Matter

Frequency (MHz)	835 Head	835 Body	1900 Head	1900 Body
Ingredients (% by weight)				
Water	41.45	52.5	55.242	69.91
Sugar	56.0	45.0	\	\
Salt	1.45	1.4	0.306	0.13
Preventol	0.1	0.1	\	\
Cellulose	1.0	1.0	\	\
Clycol Monobutyl	\	\	44.452	29.96
Dielectric Parameters Target Value	ε=41.5 σ=0.90	ε=55.2 σ=0.97	ε=40.0 σ=1.40	ε=53.3 σ=1.52

Table 3. Targets for tissue simulating liquid

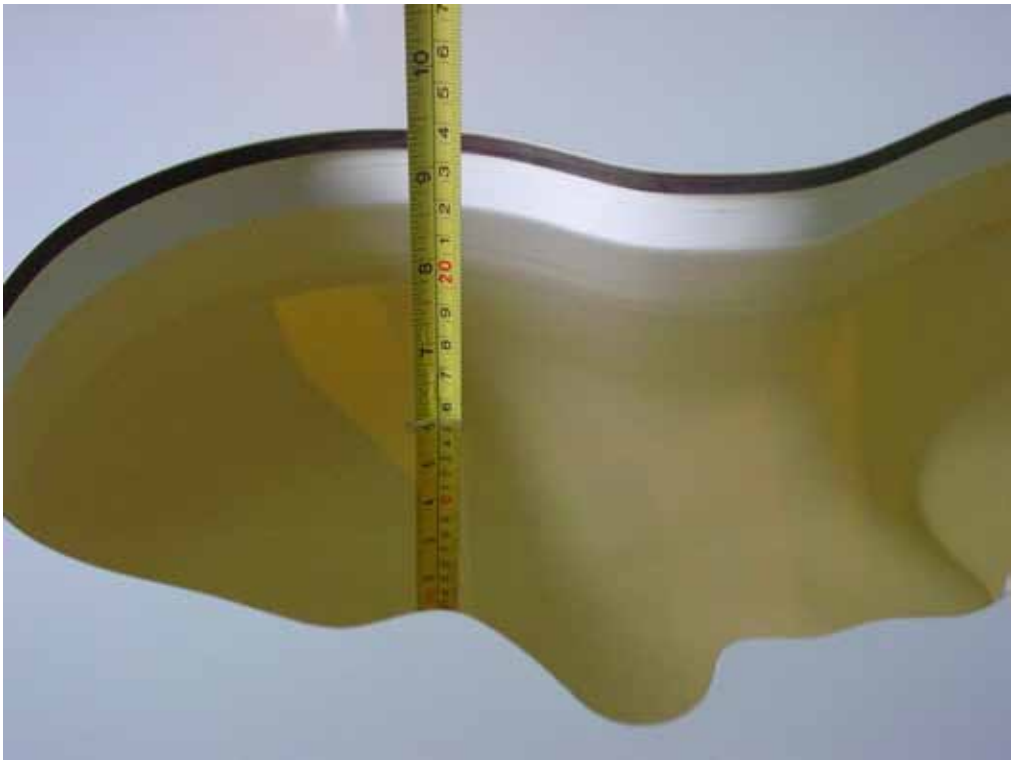
Frequency (MHz)	Liquid Type	Conductivity (σ)	± 5% Range	Permittivity (ε)	± 5% Range
835	**Head**	0.90	0.86～0.95	41.5	39.4～43.6
835	**Body**	0.97	0.92～1.02	55.2	52.4～58.0
1900	**Head**	1.40	1.33～1.47	40.0	38.0～42.0
1900	**Body**	1.52	1.44～1.60	53.3	50.6～56.0

9.2 Dielectric Performance

Table 4: Dielectric Performance of Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 38%.
Liquid temperature during the test: 22.5°C
Measurement Date : 835 MHz **January 16, 2012** 1900 MHz **January 17, 2012**

/	Type	Frequency	Permittivity ε	Conductivity σ (S/m)
Measurement value	Head	835 MHz	41.8	0.89
	Body	835 MHz	54.0	0.96
	Head	1900 MHz	40.7	1.39
	Body	1900 MHz	52.2	1.54



Picture 17-1: Liquid depth in the Head Phantom (850 MHz)

Picture 17-2 Liquid depth in the Flat Phantom (1900MHz)

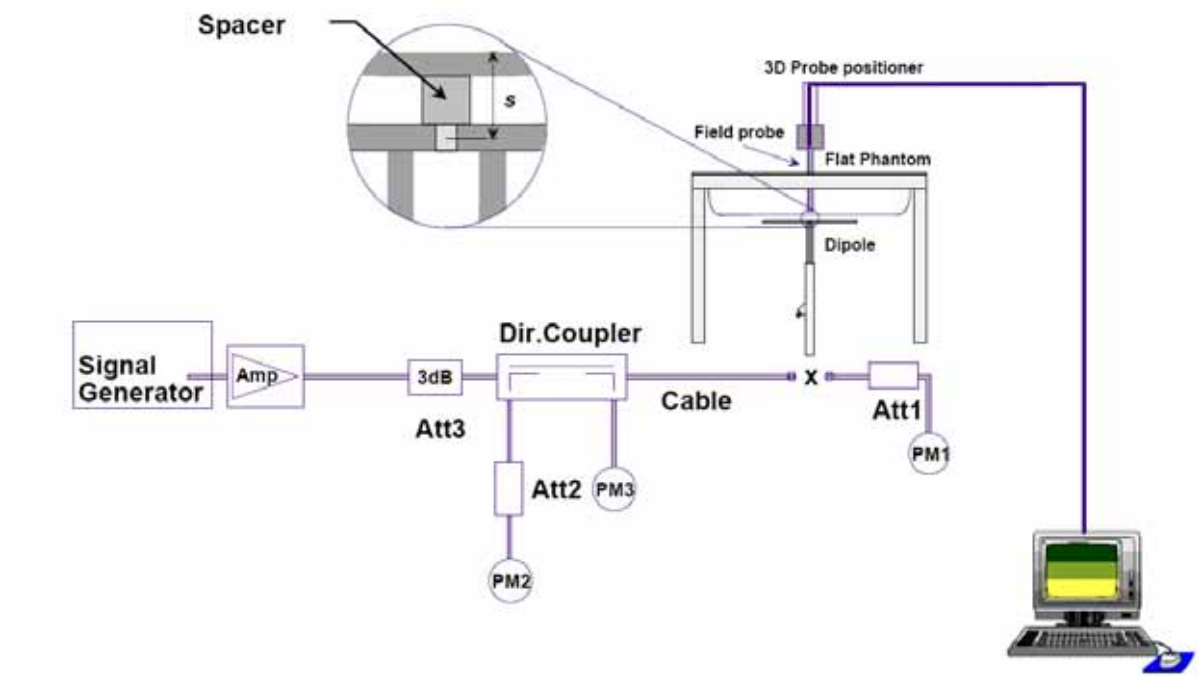
10 System Validation

10.1 System Validation

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performace check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

10.2 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 18 System Setup for System Evaluation

The output power on dipole port must be calibrated to 24 dBm (250mW) before dipole is connected.

Picture 19 Photo of Dipole Setup

Table 5: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **January 16, 2012** 1900 MHz **January 17, 2012**							
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	835 MHz	6.12	9.41	6.00	9.40	-1.96%	-0.11%
	1900 MHz	20.1	39.4	20.12	38.84	0.10%	-1.42%

Table 6: System Validation of Body

Measurement is made at temperature 23.0 °C and relative humidity 38%. Liquid temperature during the test: 22.5°C Measurement Date : 835 MHz **January 16, 2012** 1900 MHz **January 17, 2012**							
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	6.28	9.76	0.64%	1.99%
	1900 MHz	20.9	41.4	20.68	41.20	-1.05%	-0.48%

11 Measurement Procedures

11.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in Picture 21.

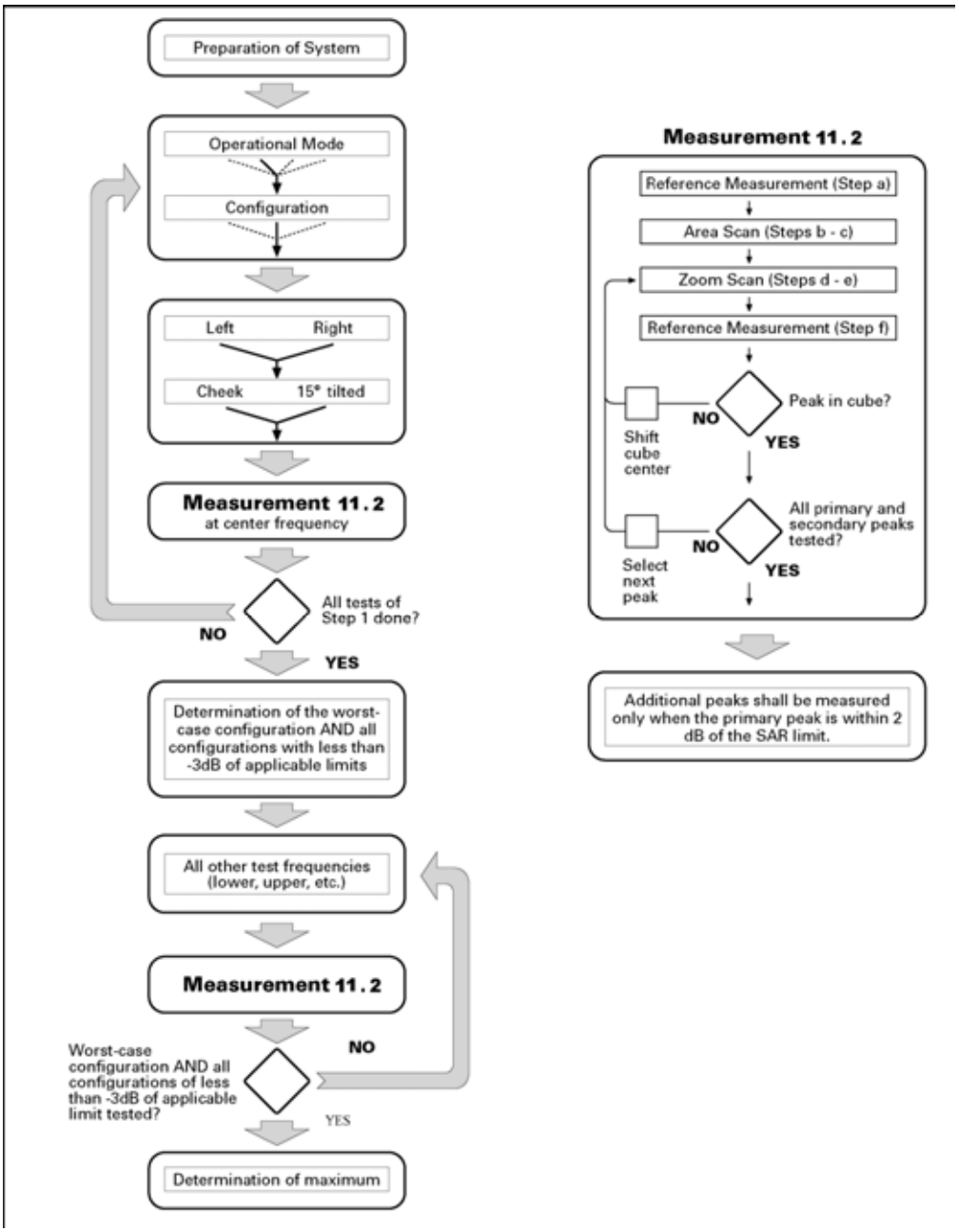
Step 1: The tests described in 11.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in Chapter 8),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., N_c > 3), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 11.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 20 Block diagram of the tests to be performed

11.2 Measurement procedure

The following procedure shall be performed for each of the test conditions (see Picture 22) described in 11.1:

a) Measure the local SAR at a test point within 8 mm or less in the normal direction from the inner surface of the phantom.

b) Measure the two-dimensional SAR distribution within the phantom (area scan procedure). The boundary of the measurement area shall not be closer than 20 mm from the phantom side walls. The distance between the measurement points should enable the detection of the location of local maximum with an accuracy of better than half the linear dimension of the tissue cube after interpolation. A maximum grip spacing of 20 mm for frequencies below 3 GHz and (60/f [GHz]) mm

for frequencies of 3GHz and greater is recommended. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and δ ln(2)/2 mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. The maximum variation of the sensor-phantom surface shall be ±1 mm for frequencies below 3 GHz and ±0.5 mm for frequencies of 3 GHz and greater. At all measurement points the angle of the probe with respect to the line normal to the surface should be less than 5°. If this cannot be achieved for a measurement distance to the phantom inner surface shorter than the probe diameter, additional uncertainty evaluation is needed.
c) From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that are not within the zoom-scan volume; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR limit. This is consistent with the 2 dB threshold already stated;
d) Measure the three-dimensional SAR distribution at the local maxima locations identified in step c). The horizontal grid step shall be (24 / f[GHz]) mm or less but not more than 8 mm. The minimum zoom size of 30 mm by 30 mm and 30 mm for frequencies below 3 GHz. For higher frequencies, the minimum zoom size of 22 mm by 22 mm and 22 mm. The grip step in the vertical direction shall be (8-f[GHz]) mm or less but not more than 5 mm, if uniform spacing is used. If variable spacing is used in the vertical direction, the maximum spacing between the two closest measured points to the phantom shell shall be (12 / f[GHz]) mm or less but not more than 4 mm, and the spacing between father points shall increase by an incremental factor not exceeding 1.5. When variable spacing is used, extrapolation routines shall be tested with the same spacing as used in measurements. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz and δ ln(2)/2 mm for frequencies of 3 GHz and greater, where δ is the plane wave skin depth and ln(x) is the natural logarithm. Separate grids shall be centered on each of the local SAR maxima found in step c). Uncertainties due to field distortion between the media boundary and the dielectric enclosure of the probe should also be minimized, which is achieved is the distance between the phantom surface and physical tip of the probe is larger than probe tip diameter. Other methods may utilize correction procedures for these boundary effects that enable high precision measurements closer than half the probe diameter. For all measurement points, the angle of the probe with respect to the flat phantom surface shall be less than 5°. If this cannot be achieved an additional uncertainty evaluation is needed.
e) Use post processing(e.g. interpolation and extrapolation) procedures to determine the local SAR values at the spatial resolution needed for mass averaging.

11.3 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & $DPDCH_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both

uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSDPA Data Devices

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.0	0.0	21	81

11.4 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 12 to Table 19 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

12 Conducted Output Power

12.1 GSM Measurement result

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 peak output power should be greater and within 5% than EMI measurement.

Table 7: The conducted power measurement results for GSM850/1900

GSM 850MHZ	**Conducted Power (dBm)**		
	Channel 251(848.8MHz)	**Channel 190(836.6MHz)**	**Channel 128(824.2MHz)**
	33.38	33.44	33.72
GSM 1900MHZ	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1800MHz)**	**Channel 512(1850.2MHz)**
	29.44	29.74	30.64

Table 8: The conducted power measurement results for GPRS and EGPRS

GSM 850	Measured Power (dBm)			calculation	Averaged Power (dBm)		
GPRS	**251**	**190**	**128**		**251**	**190**	**128**
1 Txslot	33.34	33.38	33.65	-9.03dB	24.31	24.35	24.62
2 Txslots	31.25	31.54	31.68	-6.02dB	25.23	25.52	25.66
3Txslots	29.24	29.44	29.66	-4.26dB	24.98	25.18	25.40
4 Txslots	28.53	28.61	29.08	-3.01dB	**25.52**	**25.60**	**26.07**
GSM 850	Measured Power (dBm)			calculation	Averaged Power (dBm)		
EGPRS	**251**	**190**	**128**		**251**	**190**	**128**
1 Txslot	33.34	33.54	33.73	-9.03dB	24.31	24.51	24.70
2 Txslots	31.27	31.52	31.66	-6.02dB	25.25	25.50	25.64
3Txslots	29.28	29.48	29.69	-4.26dB	25.02	25.22	25.43
4 Txslots	28.74	28.85	29.01	-3.01dB	**25.73**	**25.84**	**26.00**
PCS1900	Measured Power (dBm)			calculation	Averaged Power (dBm)		
GPRS	**810**	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.52	29.87	30.74	-9.03dB	20.49	20.84	21.71
2 Txslots	27.42	27.81	28.90	-6.02dB	**21.40**	**21.79**	**22.88**
3Txslots	25.64	26.04	26.98	-4.26dB	21.38	21.78	22.72
4 Txslots	24.31	24.78	25.66	-3.01dB	21.30	21.77	22.65
PCS1900	Measured Power (dBm)			calculation	Averaged Power (dBm)		
EGPRS	**810**	**661**	**512**		**810**	**661**	**512**
1 Txslot	29.53	29.93	30.92	-9.03dB	20.50	20.90	21.89
2 Txslots	27.60	28.02	29.11	-6.02dB	**21.58**	**22.00**	**23.09**
3Txslots	25.73	26.14	27.06	-4.26dB	21.47	21.88	22.80
4 Txslots	24.21	24.98	25.59	-3.01dB	21.20	21.97	22.58

NOTES:

1) Division Factors

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

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

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

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

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

According to the conducted power as above, the body measurements are performed with 4 Txslots for GSM850 and 2 Txslots for GSM1900.

12.2 WCDMA Measurement result

Table 9: The conducted Power for WCDMA850/1900

Item	band	FDDV result		
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)
WCDMA	\	21.62	21.43	21.51
HSUPA	1	20.18	20.12	20.52
	2	18.87	18.99	19.11
	3	19.51	19.38	18.81
	4	19.97	19.83	19.61
	5	20.55	20.69	20.76
Item	band	FDDII result		
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)
WCDMA	\	22.17	21.86	22.04
HSUPA	1	21.08	21.01	21.40
	2	19.76	19.65	20.08
	3	19.98	20.29	19.80
	4	20.23	20.74	20.25
	5	21.51	21.42	21.26

Note: HSUPA body SAR are not required, because maximum average output power of each RF channel with HSUPA active is not 1/4 dB higher than that measured without HSUPA and the maximum SAR for WCDMA850 and WCDMA1900 are not above 75% of the SAR limit.

12.3 Wi-Fi and BT Measurement result

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)	5.07	4.43	4.88

The average conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	13.21	13.06	12.75	12.27
6	13.52	13.22	12.85	12.48
11	13.06	12.99	12.63	12.43

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	12.64	12.27	11.96	11.34	10.90	10.02	9.36	9.17
6	12.89	12.36	11.83	11.30	10.81	10.07	9.48	9.00
11	12.90	12.01	11.73	11.37	10.76	10.25	9.31	9.11

802.11n（dBm）

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	12.32	11.67	11.19	10.66	9.92	9.31	9.13	8.79
6	11.80	11.28	10.51	10.06	9.60	8.80	8.69	8.38
11	12.32	11.75	11.27	10.75	10.07	9.31	9.12	8.90

The peak conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	16.14	16.48	17.92	19.26
6				19.28
11				19.31

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	21.21	21.19	20.92	20.83	21.30	21.06	21.23	21.20
6					21.48			
11					21.75			

802.11n（dBm）

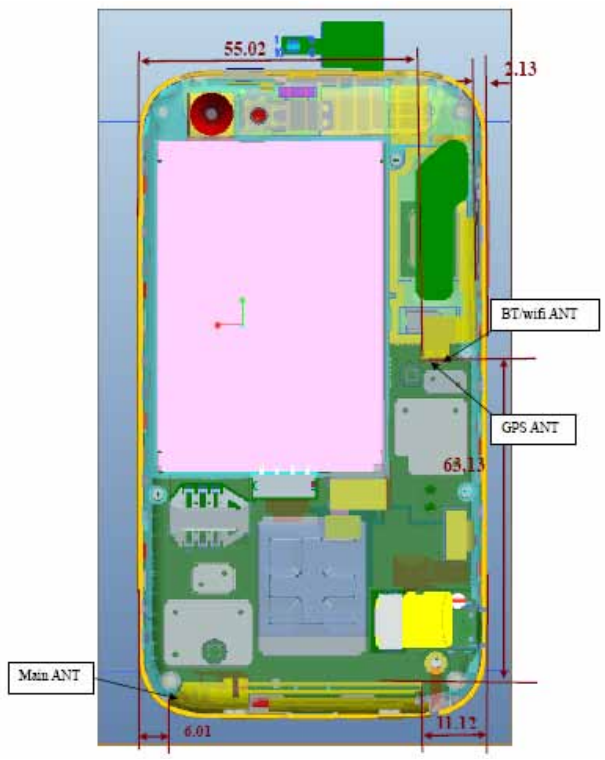
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	21.02	20.82	20.69	21.25	21.23	21.11	21.04	21.10
6				21.18				
11				21.35				

13 Simultaneous TX SAR Considerations

13.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the BT and WiFi can transmit simultaneous with other transmitters.

13.2 Transmit Antenna Separation Distances



Picture 21 Antenna Locations

13.3 Simultaneous Transmission for Cocktail A

Table 10: Summary of Transmitters

Band/Mode	F(GHz)	60/f power threshold (mW)	RF output power (mW)	Head SAR (W/kg)	Body SAR(W/kg)
GSM 850	0.835	71.86	2360.49	0.398	1.26
PCS 1900	1.9	31.58	1235.95	0.483	0.881
2.4GHz WLAN 802.11 b/g/n	2.45	24.5	22.49	\	\
Bluetooth	2.441	24.6	3.21	\	\

Table 11 SAR Evaluation Requirements for Multiple Transmitter Handsets

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	Routine evaluation required	SAR not required: Unlicensed only ○ when stand-alone 1-g SAR is not required and antenna is ≥ 5 cm from other antennas Licensed & Unlicensed ○ when the sum of the 1-g SAR is < 1.6 W/kg for all simultaneous transmitting antennas ○ when SAR to peak location separation ratio of simultaneous transmitting antenna pair is < 0.3 SAR required: Licensed & Unlicensed antenna pairs with SAR to peak location separation ratio ≥ 0.3; test is only required for the configuration that results in the highest SAR in stand-alone configuration for each wireless mode and exposure condition Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply
Unlicensed Transmitters	When there is no simultaneous transmission – ○ output ≤ 60/f: SAR not required ○ output > 60/f: stand-alone SAR required When there is simultaneous transmission – Stand-alone SAR not required when ○ output ≤ 2·P_{Ref} and antenna is ≥ 5.0 cm from other antennas ○ output ≤ P_{Ref} and antenna is ≥ 2.5 cm from other antennas ○ output ≤ P_{Ref} and antenna is < 2.5 cm from other antennas, each with either output power ≤ P_{Ref} or 1-g SAR < 1.2 W/kg Otherwise stand-alone SAR is required When stand-alone SAR is required ○ test SAR on highest output channel for each wireless mode and exposure condition ○ if SAR for highest output channel is > 50% of SAR limit, evaluate all channels according to normal procedures	

See below for simultaneous transmission logic table:

	GSM	Wi-Fi	BT
GSM		Yes	Yes
Wi-Fi	Yes		No
BT	Yes	No	

Since the output power of Bluetooth and WiFi are less than 60/f and the antenna is ＞ 5.0cm from other antennas, SAR evaluation is not required for the Bluetooth and Wi-Fi transmitter.

14 SAR Test Result

14.1 Summary of Measurement Results

Table 12: SAR Values (GSM 850 MHz Band - Head)

Frequency		Mode/Band	Side	Test Position	SAR(1g)	Power Drift(dB)
MHz	Ch.				(W/kg)	
848.8	251	GSM850	Left	Touch	0.397	-0.14
836.6	190	GSM850	Left	Touch	0.398	-0.11
824.2	128	GSM850	Left	Touch	0.387	-0.11
848.8	251	GSM850	Left	Tilt	0.231	-0.01
836.6	190	GSM850	Left	Tilt	0.244	0.0012
824.2	128	GSM850	Left	Tilt	0.246	-0.09
848.8	251	GSM850	Right	Touch	0.333	0.122
836.6	190	GSM850	Right	Touch	0.354	-0.008
824.2	128	GSM850	Right	Touch	0.363	-0.004
848.8	251	GSM850	Right	Tilt	0.231	0.11
836.6	190	GSM850	Right	Tilt	0.256	0.04
824.2	128	GSM850	Right	Tilt	0.269	-0.09

Table 13: SAR Values (GSM 850 MHz Band - Body)

Frequency		Mode/Band	Headset	Test Position	Spacing (mm)	SAR(1g)	Power Drift(dB)
MHz	Ch.					(W/kg)	
824.2	128	GPRS	\	Ground	10	1.26	0.18
824.2	128	GPRS	\	Phantom	10	0.858	0.19
824.2	128	GPRS	\	Left	10	1.05	-0.12
824.2	128	GPRS	\	Right	10	0.926	0.12
824.2	128	GPRS	\	Bottom	10	0.071	-0.04
848.8	251	GPRS	\	Ground	10	1.12	-0.10
836.6	190	GPRS	\	Ground	10	1.2	-0.18
848.8	251	GPRS	\	Phantom	10	0.812	-0.06
836.6	190	GPRS	\	Phantom	10	0.882	0.01
848.8	251	GPRS	\	Left	10	1.05	-0.0069
836.6	190	GPRS	\	Left	10	1.06	-0.03
848.8	251	GPRS	\	Right	10	0.912	0.10
836.6	190	GPRS	\	Right	10	0.987	-0.02
824.2	128	EGPRS	\	Ground	10	1.16	-0.10
824.2	128	Speech	CCB3160A11C1	Ground	10	0.841	-0.02
824.2	128	Speech	CCB3160A11C4	Ground	10	0.772	0.02
824.2	128	Speech	CCB3001A15C1	Ground	10	0.572	0.07

Table 14: SAR Values (GSM 1900 MHz Band - Head)

Frequency		Mode/Band	Side	Test Position	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.					
1909.8	810	GSM1900	Left	Touch	0.265	-0.19
1880	661	GSM1900	Left	Touch	0.228	-0.11
1850.2	512	GSM1900	Left	Touch	0.211	-0.08
1909.8	810	GSM1900	Left	Tilt	0.214	-0.08
1880	661	GSM1900	Left	Tilt	0.187	-0.05
1850.2	512	GSM1900	Left	Tilt	0.174	-0.03
1909.8	810	GSM1900	Right	Touch	0.483	-0.04
1880	661	GSM1900	Right	Touch	0.396	0.05
1850.2	512	GSM1900	Right	Touch	0.372	0.02
1909.8	810	GSM1900	Right	Tilt	0.219	-0.0091
1880	661	GSM1900	Right	Tilt	0.187	-0.04
1850.2	512	GSM1900	Right	Tilt	0.159	0.03

Table 15: SAR Values (GSM 1900 MHz Band - Body)

Frequency		Mode/Band	Headset	Test Position	Spacing (mm)	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.						
1850.2	512	GPRS	\	Ground	10	0.881	-0.10
1850.2	512	GPRS	\	Phantom	10	0.736	-0.01
1850.2	512	GPRS	\	Left	10	0.147	-0.02
1850.2	512	GPRS	\	Right	10	0.303	-0.06
1850.2	512	GPRS	\	Bottom	10	0.616	-0.15
1909.8	810	GPRS	\	Ground	10	0.476	-0.01
1880	661	GPRS	\	Ground	10	0.586	-0.06
1850.2	512	EGPRS	\	Ground	10	0.774	-0.04
1850.2	512	Speech	CCB3160A11C1	Ground	10	0.626	-0.08
1850.2	512	Speech	CCB3160A11C4	Ground	10	0.529	-0.04
1850.2	512	Speech	CCB3001A15C1	Ground	10	0.621	-0.18

Table 16: SAR Values (WCDMA 850 MHz Band - Head)

Frequency		Mode/Band	Side	Test Position	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.					
846.6	4233	WCDMA850	Left	Touch	0.381	-0.10
836.4	4182	WCDMA850	Left	Touch	0.269	-0.13
826.4	4132	WCDMA850	Left	Touch	0.317	0.06
846.6	4233	WCDMA850	Left	Tilt	0.208	0.02
836.4	4182	WCDMA850	Left	Tilt	0.156	0.03
826.4	4132	WCDMA850	Left	Tilt	0.186	0.04
846.6	4233	WCDMA850	Right	Touch	0.340	-0.12
836.4	4182	WCDMA850	Right	Touch	0.241	0.05
826.4	4132	WCDMA850	Right	Touch	0.285	0.08
846.6	4233	WCDMA850	Right	Tilt	0.233	-0.17
836.4	4182	WCDMA850	Right	Tilt	0.163	-0.06
826.4	4132	WCDMA850	Right	Tilt	0.196	-0.03

Table 17: SAR Values (WCDMA 850 MHz Band - Body)

Frequency		Mode/Band	Headset	Test Position	Spacing (mm)	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.						
846.6	4233	GPRS	\	Ground	10	0.861	0.0046
846.6	4233	GPRS	\	Phantom	10	0.628	-0.10
846.6	4233	GPRS	\	Left	10	0.712	0.0037
846.6	4233	GPRS	\	Right	10	0.703	-0.06
846.6	4233	GPRS	\	Bottom	10	0.057	0.06
836.4	4182	GPRS	\	Ground	10	0.821	0.02
826.4	4132	GPRS	\	Ground	10	0.875	0.02
826.4	4132	Speech	CCB3160A11C1	Ground	10	0.714	0.03
826.4	4132	Speech	CCB3160A11C4	Ground	10	0.639	0.11
826.4	4132	Speech	CCB3001A15C1	Ground	10	0.424	0.08

Table 18: SAR Values (WCDMA 1900 MHz Band - Head)

Frequency		Mode/Band	Side	Test Position	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.					
1907.6	9538	WCDMA1900	Left	Touch	0.470	-0.10
1880	9400	WCDMA1900	Left	Touch	0.477	0.03
1852.4	9262	WCDMA1900	Left	Touch	0.470	-0.0031
1907.6	9538	WCDMA1900	Left	Tilt	0.362	-0.03
1880	9400	WCDMA1900	Left	Tilt	0.366	0.02
1852.4	9262	WCDMA1900	Left	Tilt	0.340	0.12
1907.6	9538	WCDMA1900	Right	Touch	0.873	0.04
1880	9400	WCDMA1900	Right	Touch	0.877	-0.16
1852.4	9262	WCDMA1900	Right	Touch	0.875	-0.08
1907.6	9538	WCDMA1900	Right	Tilt	0.433	0.05
1880	9400	WCDMA1900	Right	Tilt	0.424	-0.04
1852.4	9262	WCDMA1900	Right	Tilt	0.380	-0.17

Table 19: SAR Values (WCDMA 1900 MHz Band - Body)

Frequency		Mode/Band	Headset	Test Position	Spacing (mm)	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.						
1907.6	9538	GPRS	\	Ground	10	0.854	0.02
1907.6	9538	GPRS	\	Phantom	10	0.834	-0.06
1907.6	9538	GPRS	\	Left	10	0.200	0.01
1907.6	9538	GPRS	\	Right	10	0.493	0.05
1907.6	9538	GPRS	\	Bottom	10	0.846	-0.02
1880	9400	GPRS	\	Ground	10	0.958	0.10
1852.4	9262	GPRS	\	Ground	10	1.15	-0.09
1880	9400	GPRS	\	Phantom	10	0.876	-0.10
1852.4	9262	GPRS	\	Phantom	10	0.972	0.07
1880	9400	GPRS	\	Bottom	10	0.869	-0.05
1852.4	9262	GPRS	\	Bottom	10	0.863	0.04
1852.4	9262	Speech	CCB3160A11C1	Ground	10	1.14	-0.08
1852.4	9262	Speech	CCB3160A11C4	Ground	10	0.962	0.06
1852.4	9262	Speech	CCB3001A15C1	Ground	10	1.04	0.12

15 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	∞
No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

continue								
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	

16 MAIN TEST INSTRUMENTS

Table 20: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	February 15, 2011	One year
02	Power meter	NRVD	102083	September 11, 2011	One year
03	Power sensor	NRV-Z5	100595		
04	Signal Generator	E4438C	MY49070393	November 12, 2011	One Year
05	Amplifier	VTL5400	0505	No Calibration Requested	
06	BTS	8960	MY48365192	November 17, 2011	One year
07	E-field Probe	SPEAG ES3DV3	3149	September 24, 2011	One year
08	DAE	SPEAG DAE4	771	November 20, 2011	One year
09	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Three years
10	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	Three years

END OF REPORT BODY

ANNEX A GRAPH RESULTS

850 Left Cheek High

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.426 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.557 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.4970
SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.302 mW/g
Maximum value of SAR (measured) = 0.418 mW/g

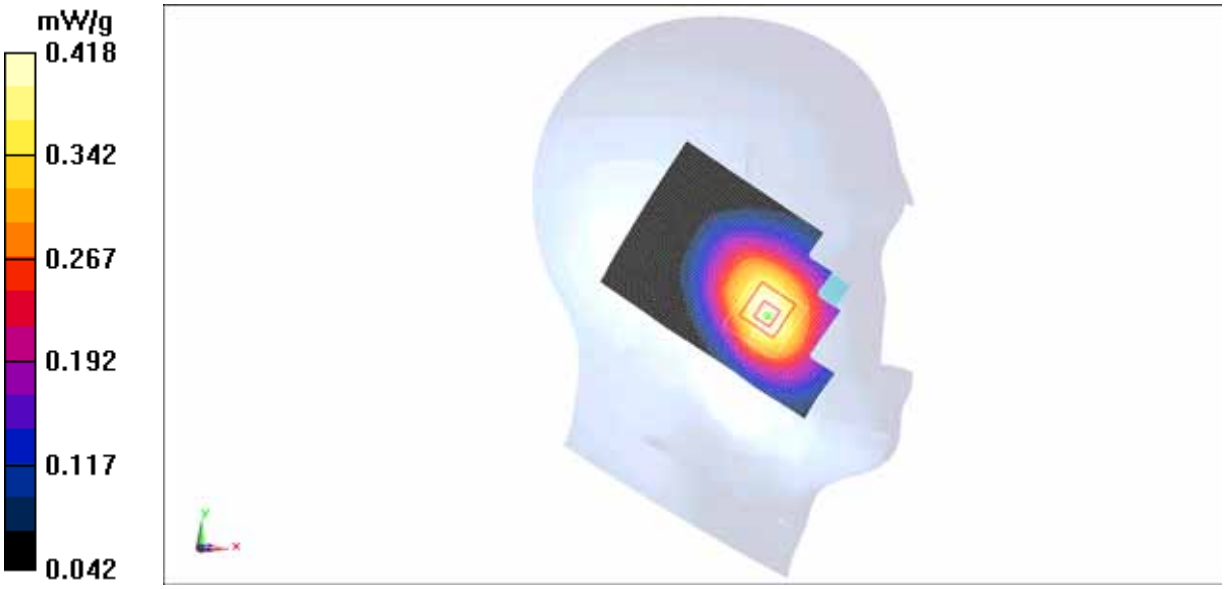


Fig. 1 850MHz CH251

850 Left Cheek Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.427 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.599 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.4970
SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.304 mW/g
Maximum value of SAR (measured) = 0.420 mW/g

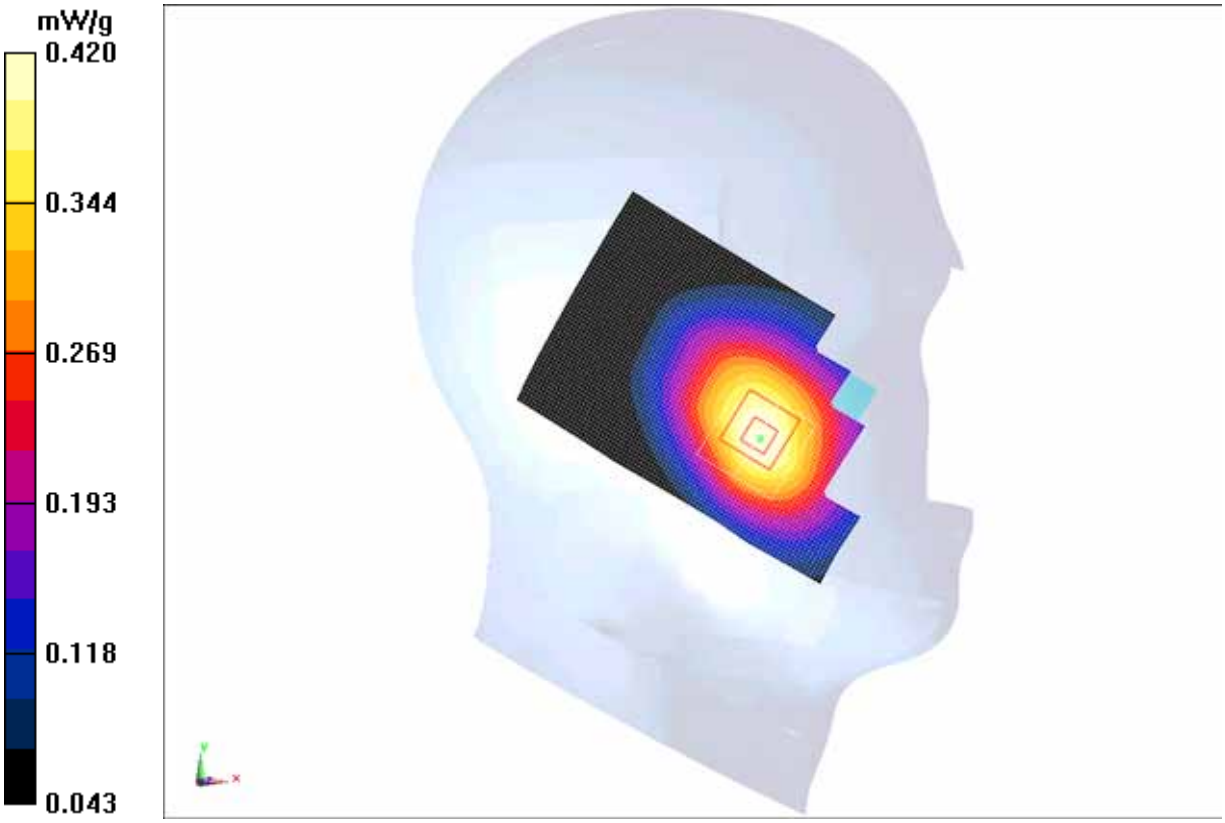


Fig. 2 850 MHz CH190

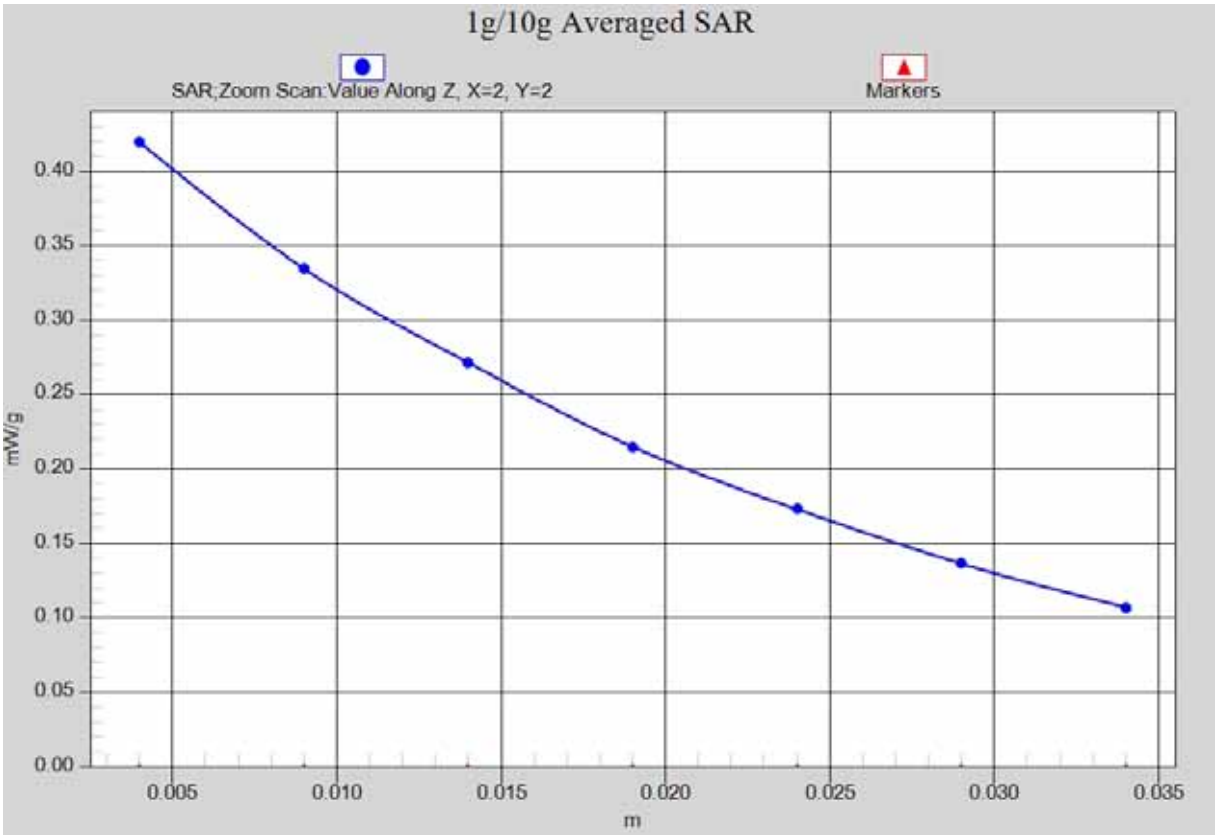


Fig. 2-1 Z-Scan at power reference point (850 MHz CH190)

850 Left Cheek Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (61x91x1): 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 = 6.739 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.4760
SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.297 mW/g
Maximum value of SAR (measured) = 0.406 mW/g

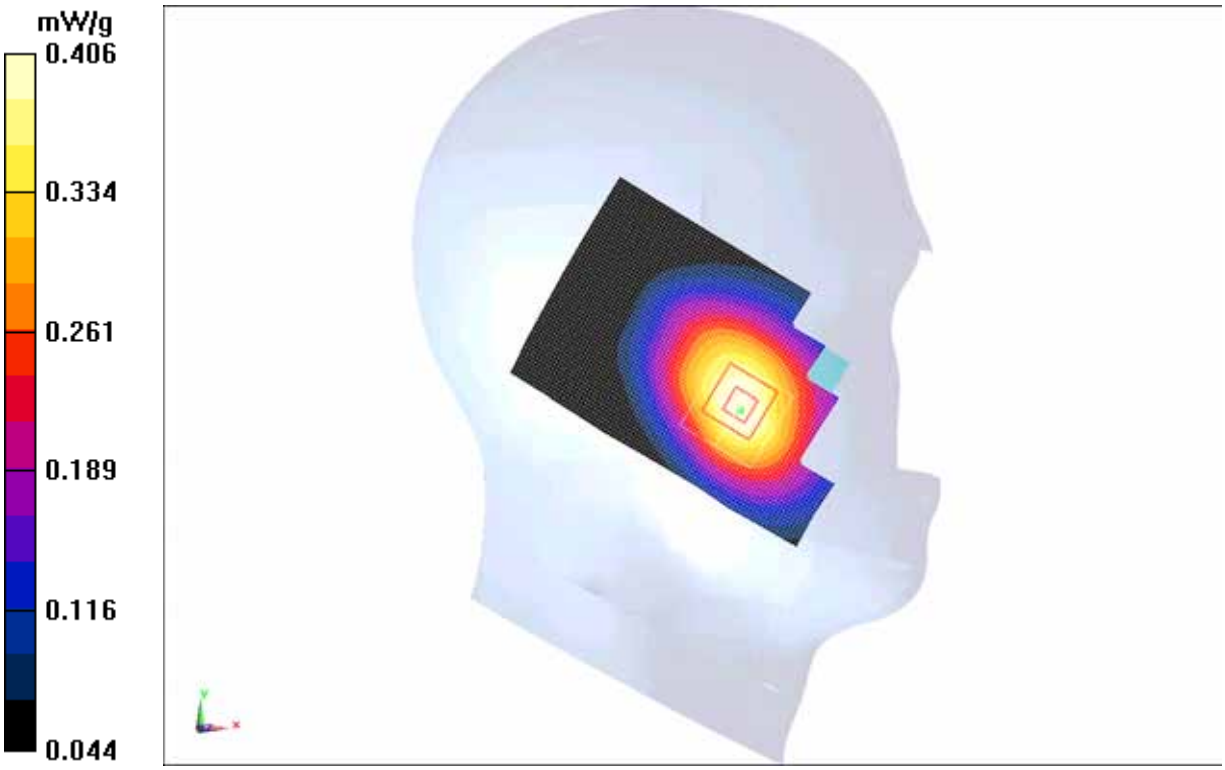


Fig. 3 850 MHz CH128

850 Left Tilt High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.242 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.616 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.2870
SAR(1 g) = 0.231 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.245 mW/g

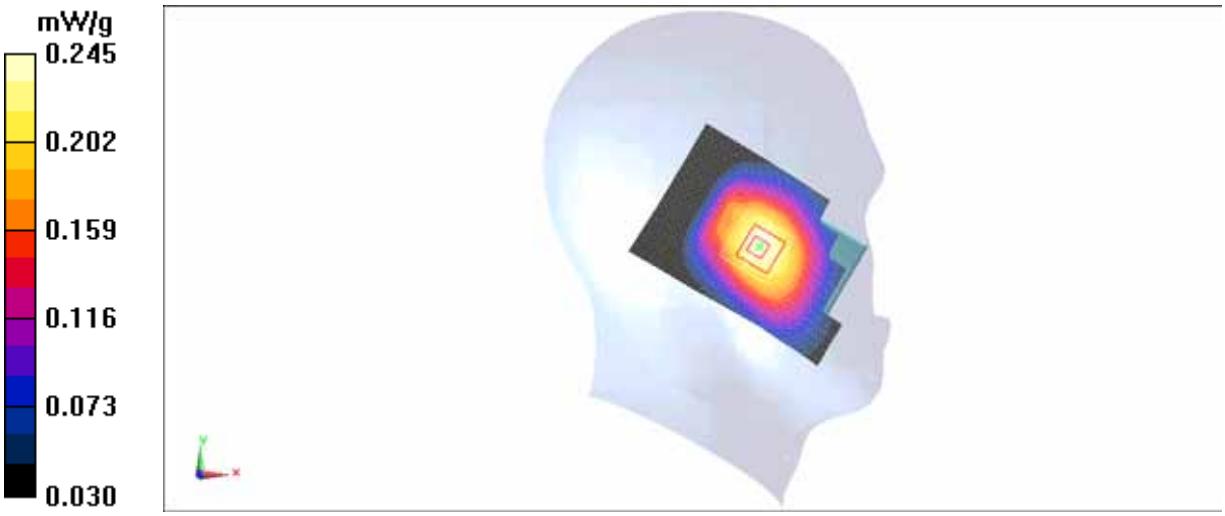


Fig.4 850 MHz CH251

850 Left Tilt Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.260 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.007 V/m; Power Drift = 0.0012 dB
Peak SAR (extrapolated) = 0.3000
SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.258 mW/g

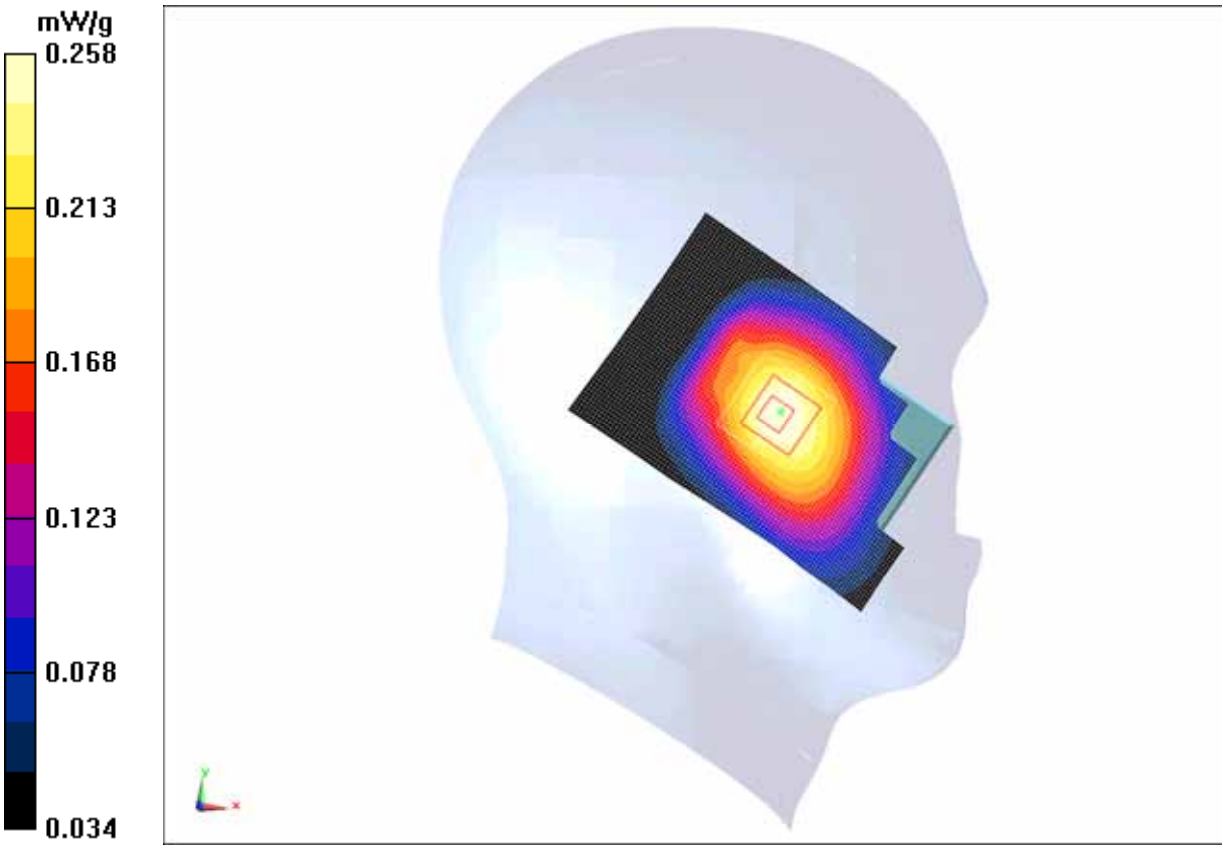


Fig.5 850 MHz CH190

850 Left Tilt Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Low/Area Scan (61x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.262 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.391 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.3020
SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.189 mW/g
Maximum value of SAR (measured) = 0.259 mW/g

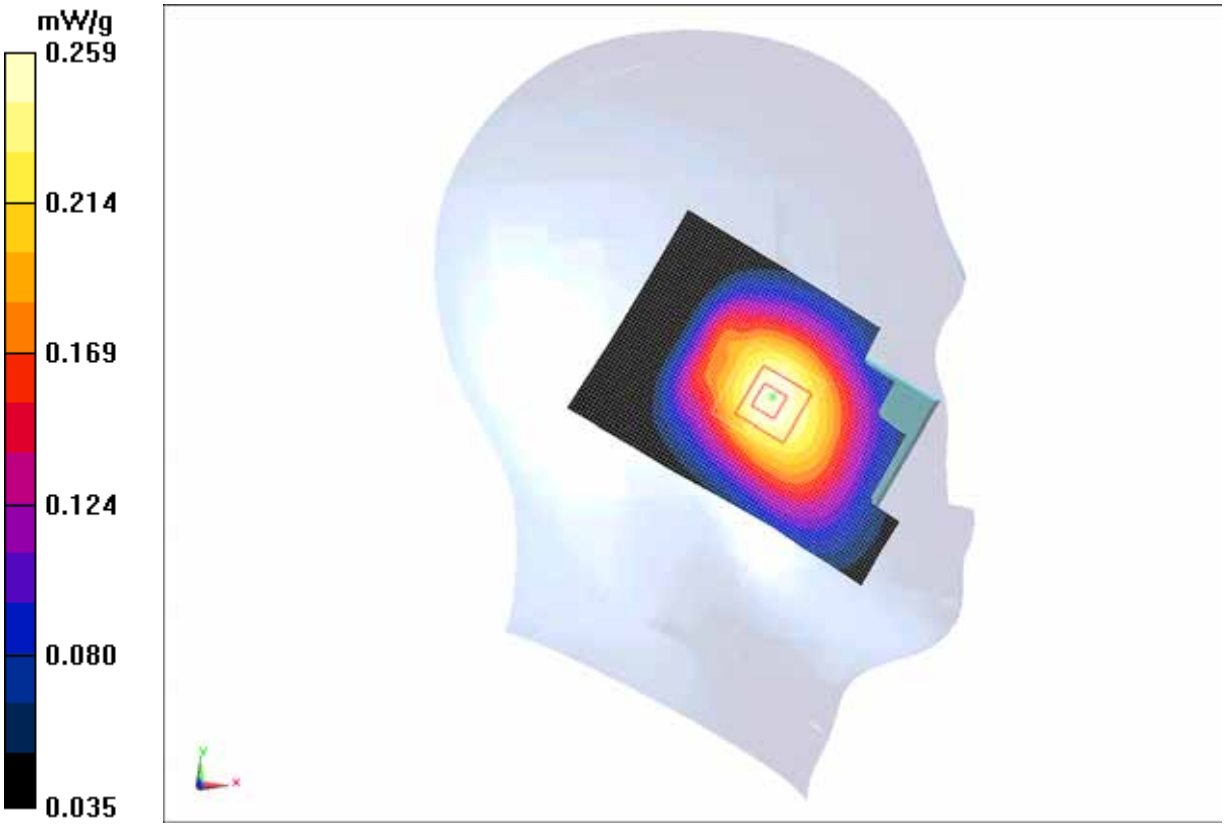


Fig. 6 850 MHz CH128

850 Right Cheek High

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.7; 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) = 0.355 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.595 V/m; Power Drift = 0.122 dB
Peak SAR (extrapolated) = 0.4140
SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.252 mW/g
Maximum value of SAR (measured) = 0.351 mW/g

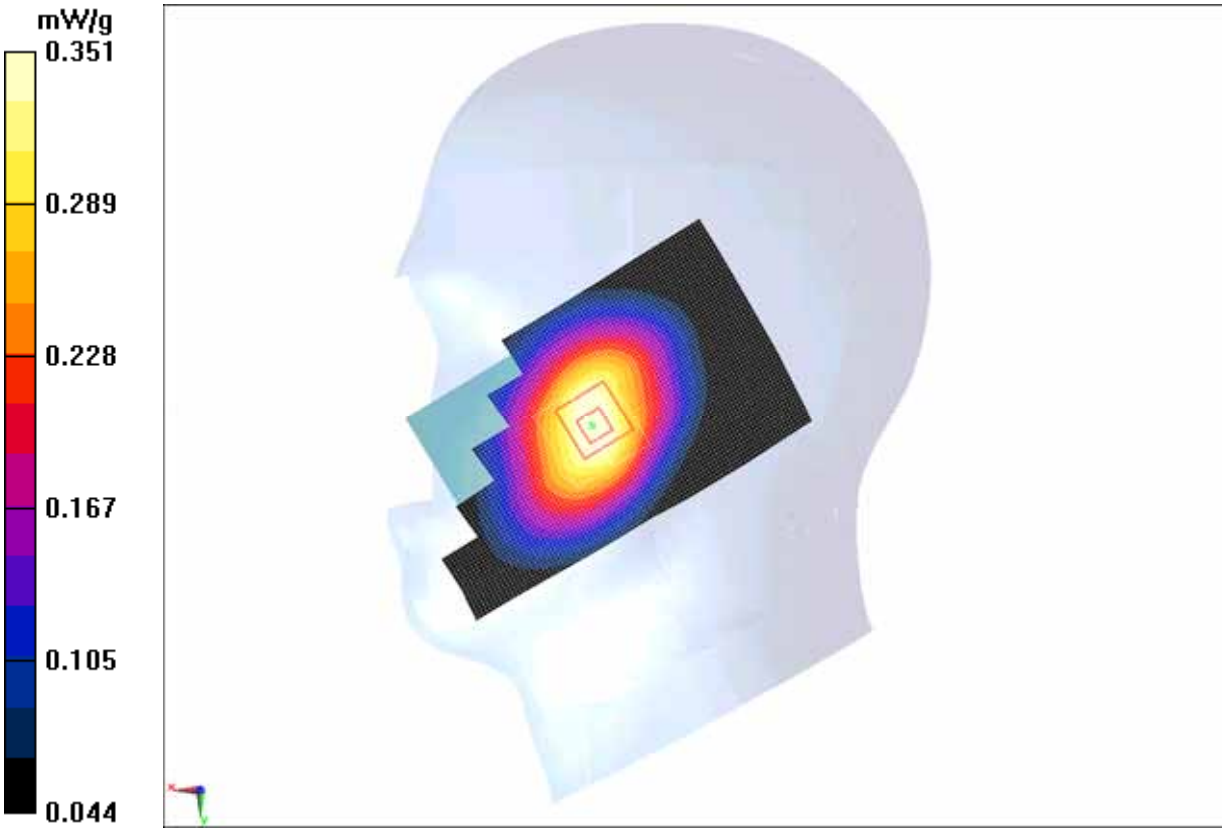


Fig. 7 850 MHz CH251

850 Right Cheek Middle

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.8; 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) = 0.376 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.172 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.4400
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 0.373 mW/g

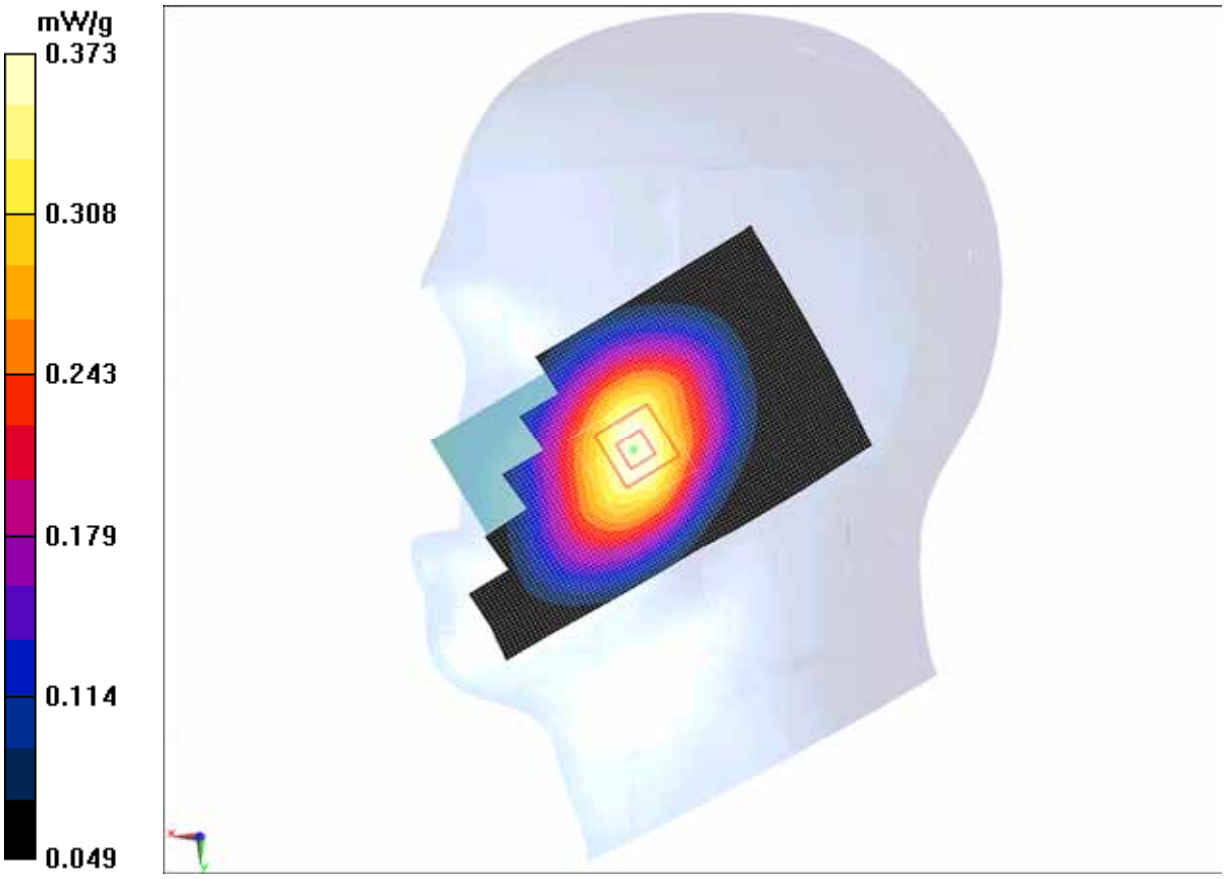


Fig. 8 850 MHz CH190

850 Right Cheek Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 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) = 0.386 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.405 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.4500
SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.277 mW/g
Maximum value of SAR (measured) = 0.382 mW/g

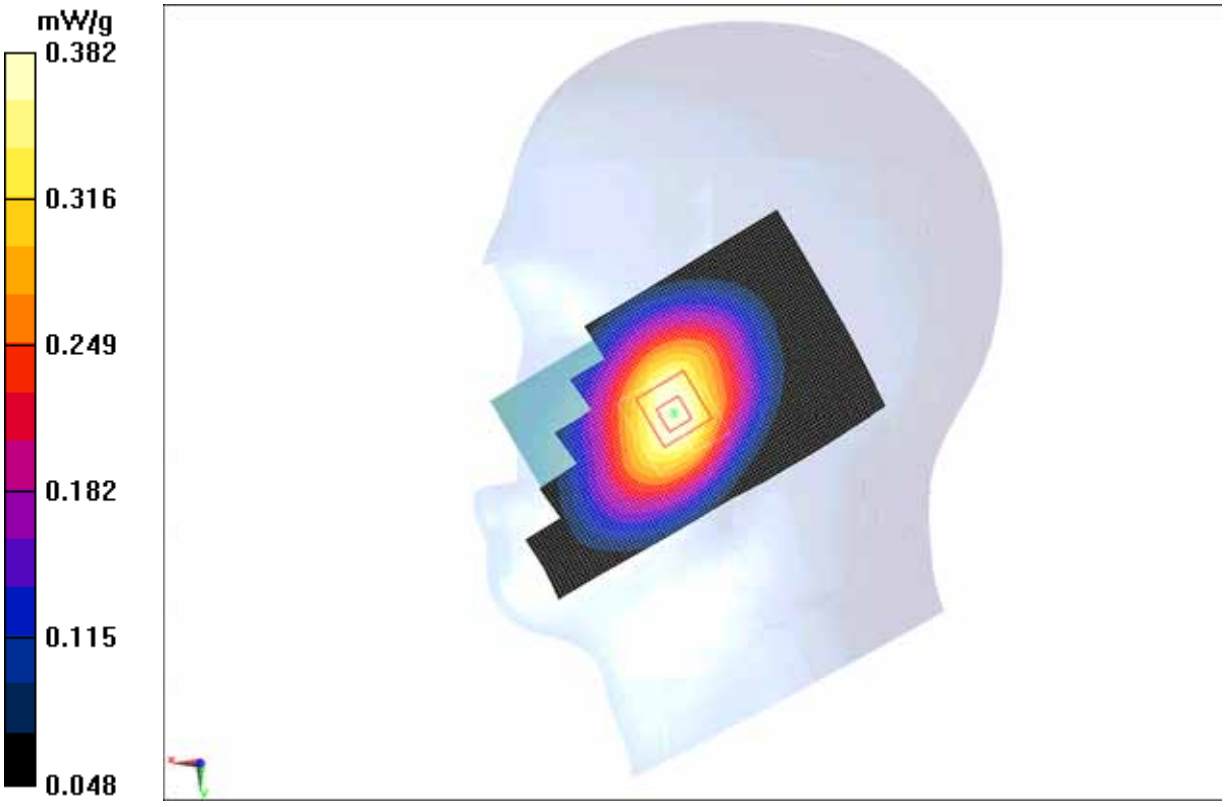


Fig. 9 850 MHz CH128

850 Right Tilt High

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.89 mho/m; εr = 41.7; 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) = 0.239 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.357 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.2840
SAR(1 g) = 0.231 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.243 mW/g

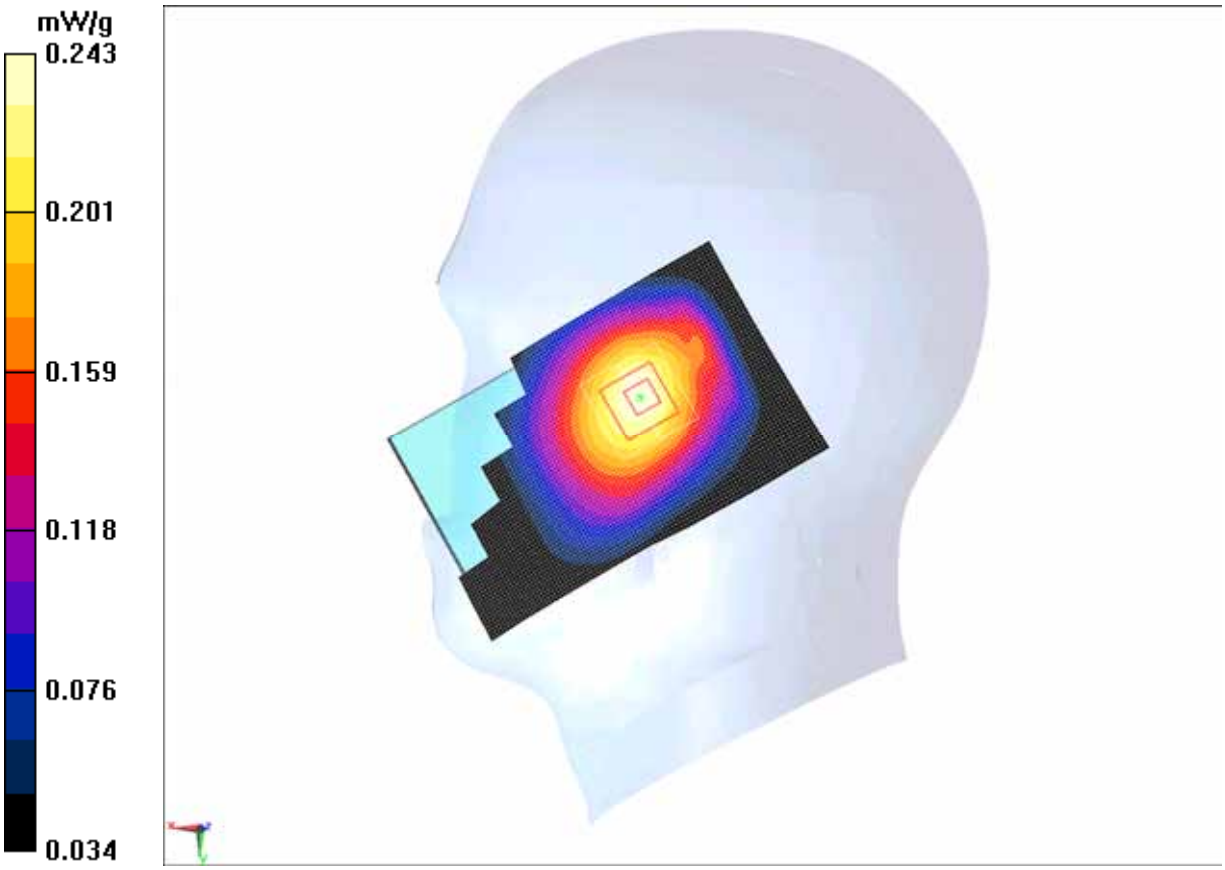


Fig.10 850 MHz CH251

850 Right Tilt Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 mho/m; εr = 41.8; 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) = 0.265 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.081 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.3120
SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.195 mW/g
Maximum value of SAR (measured) = 0.269 mW/g

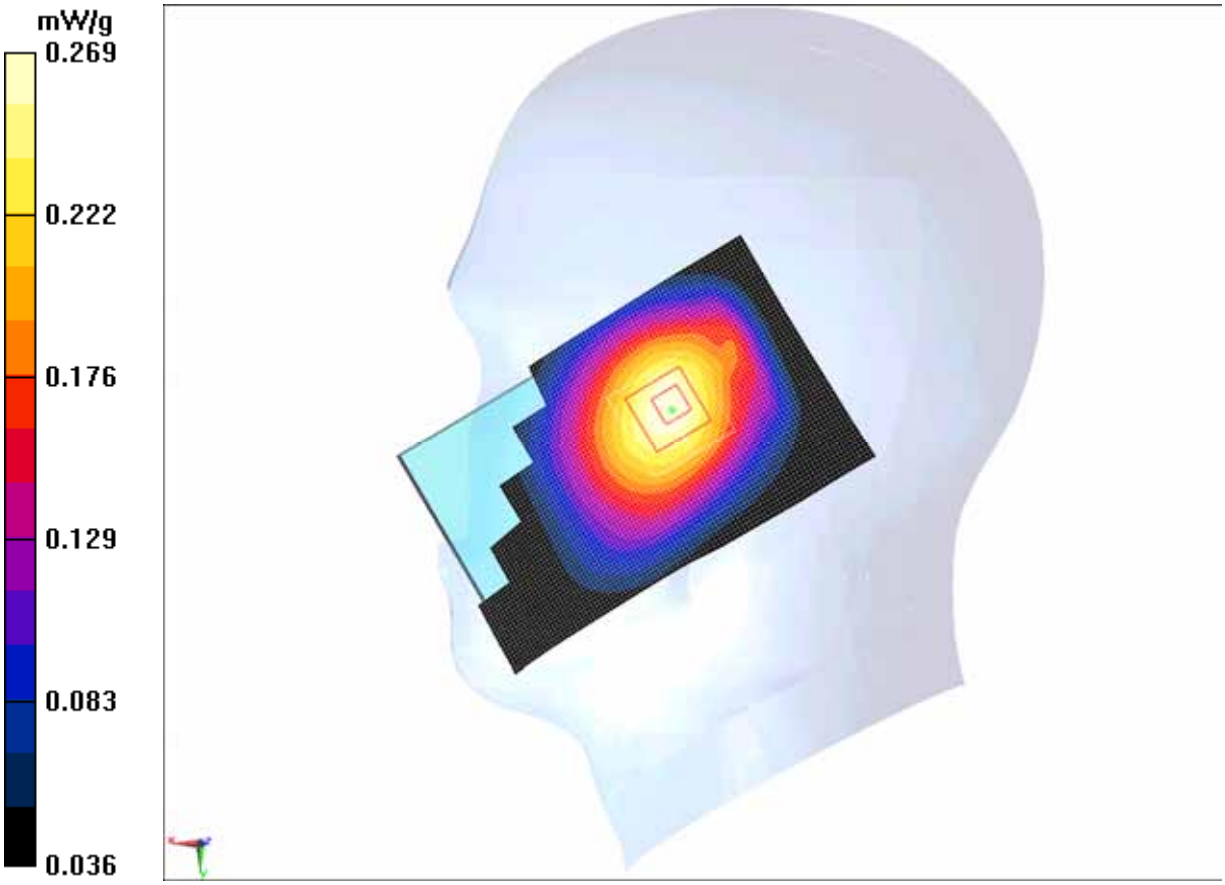


Fig.11 850 MHz CH190

850 Right Tilt Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 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) = 0.282 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.696 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.3270
SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.207 mW/g
Maximum value of SAR (measured) = 0.282 mW/g

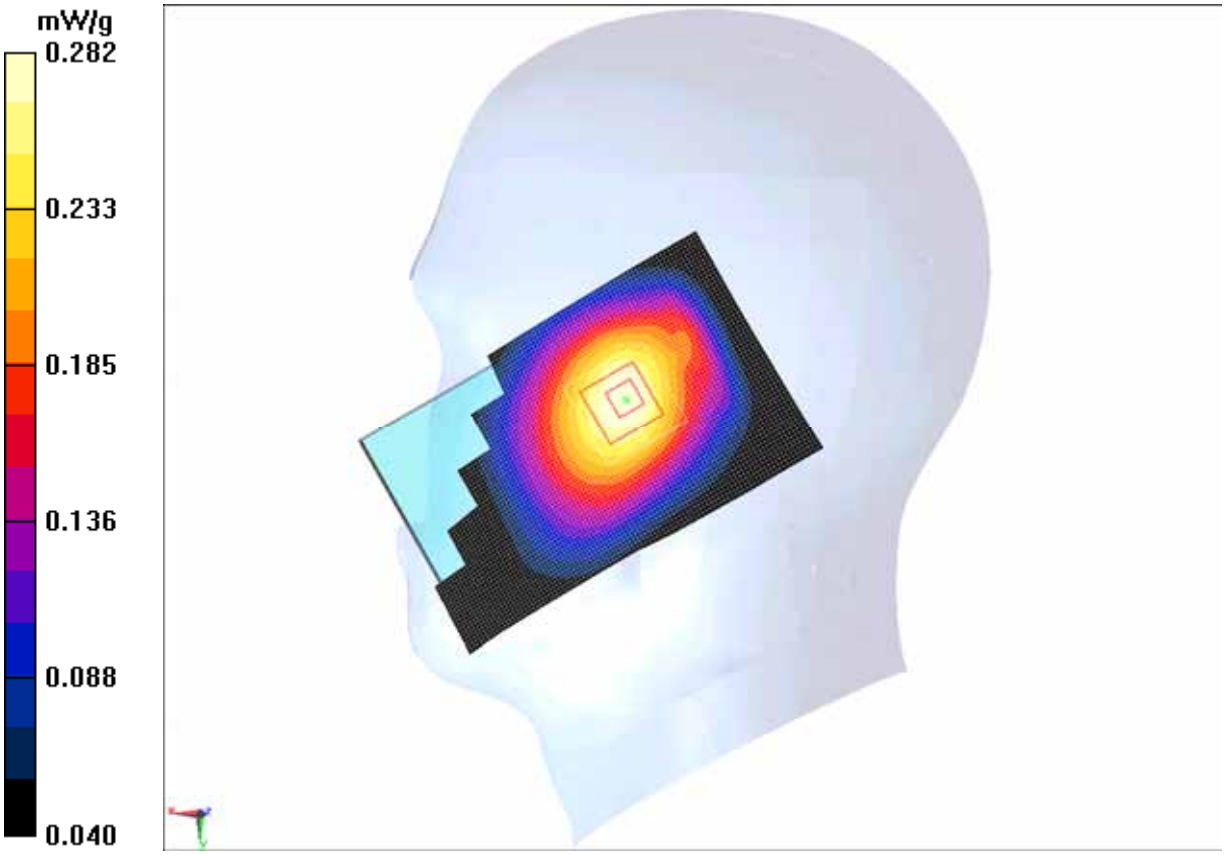


Fig. 12 850 MHz CH128

850 Body Towards Ground Low with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.363 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.037 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.5820
SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.946 mW/g
Maximum value of SAR (measured) = 1.323 mW/g

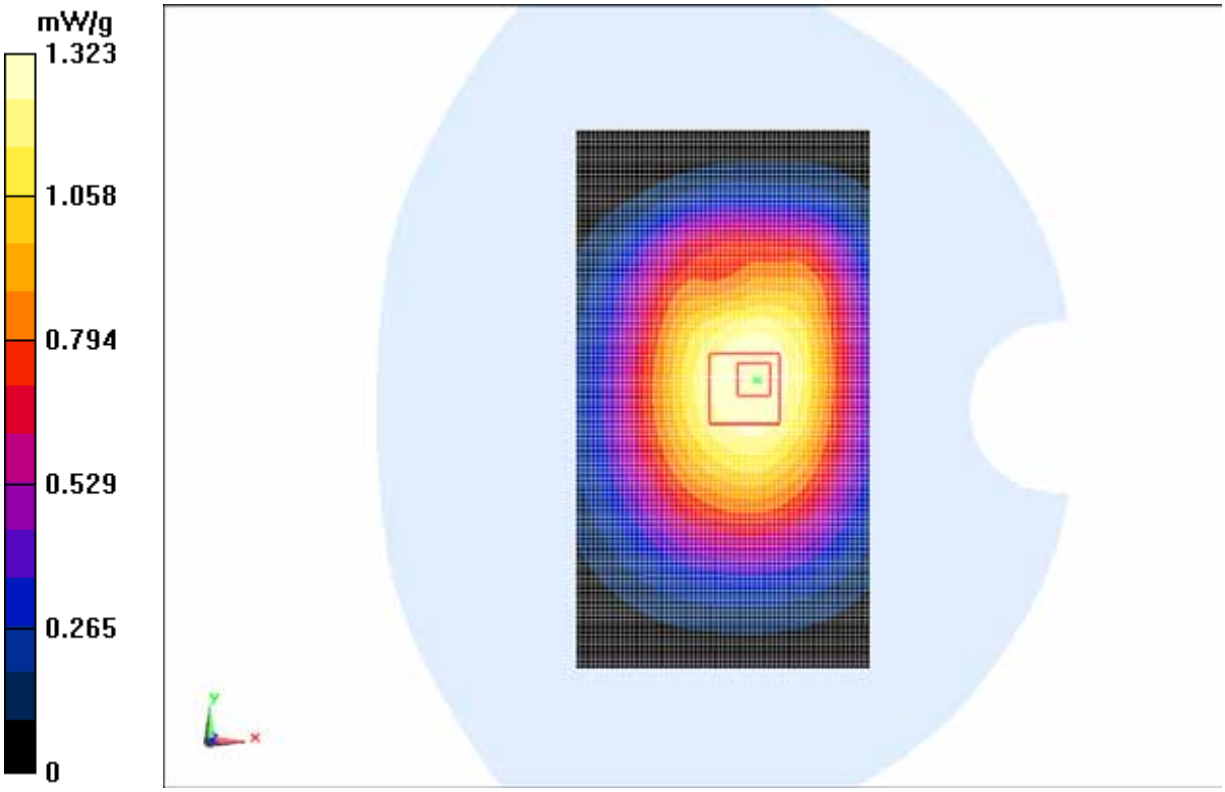


Fig. 13 850 MHz CH128

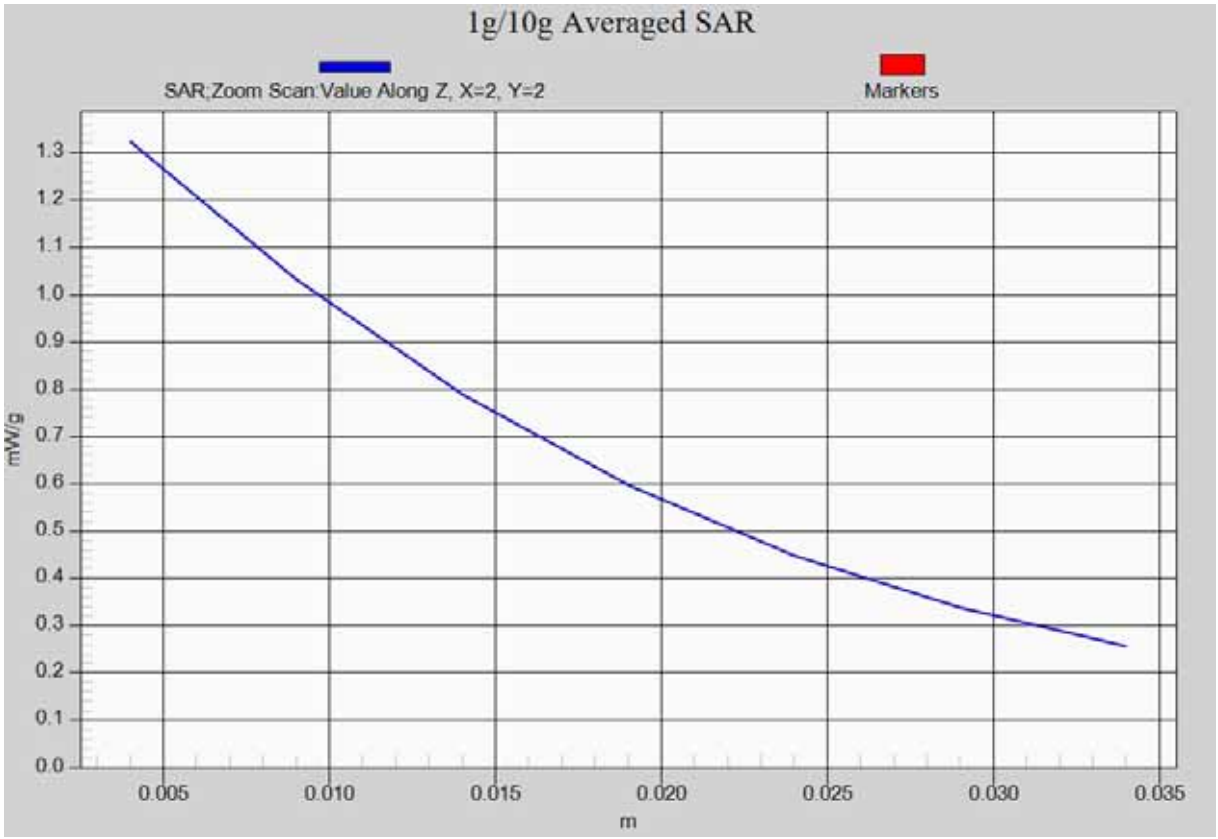


Fig. 13-1 Z-Scan at power reference point (850 MHz CH128)

850 Body Towards Phantom Low with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.920 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.154 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.0350
SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.663 mW/g
Maximum value of SAR (measured) = 0.893 mW/g

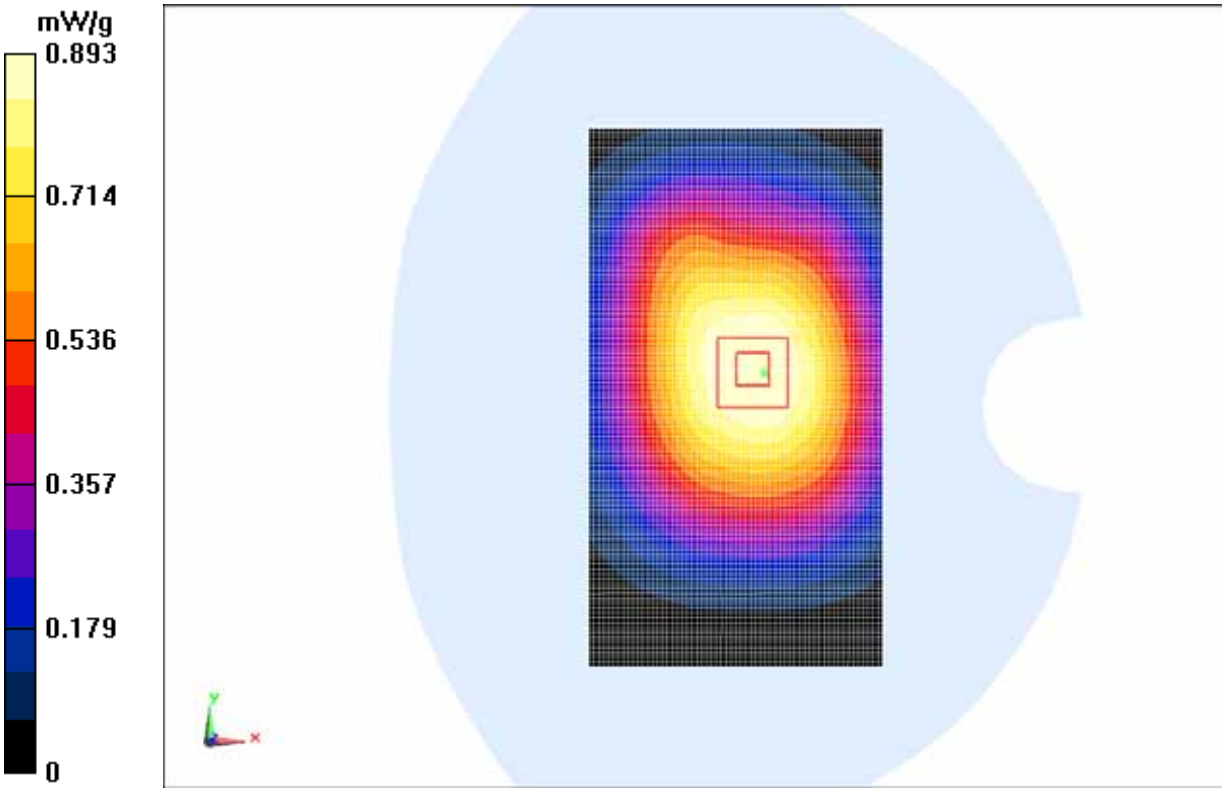


Fig. 14 850 MHz CH128

850 Body Left Side Low with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Left Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.138 mW/g

Left Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.302 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.4640
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.724 mW/g
Maximum value of SAR (measured) = 1.123 mW/g

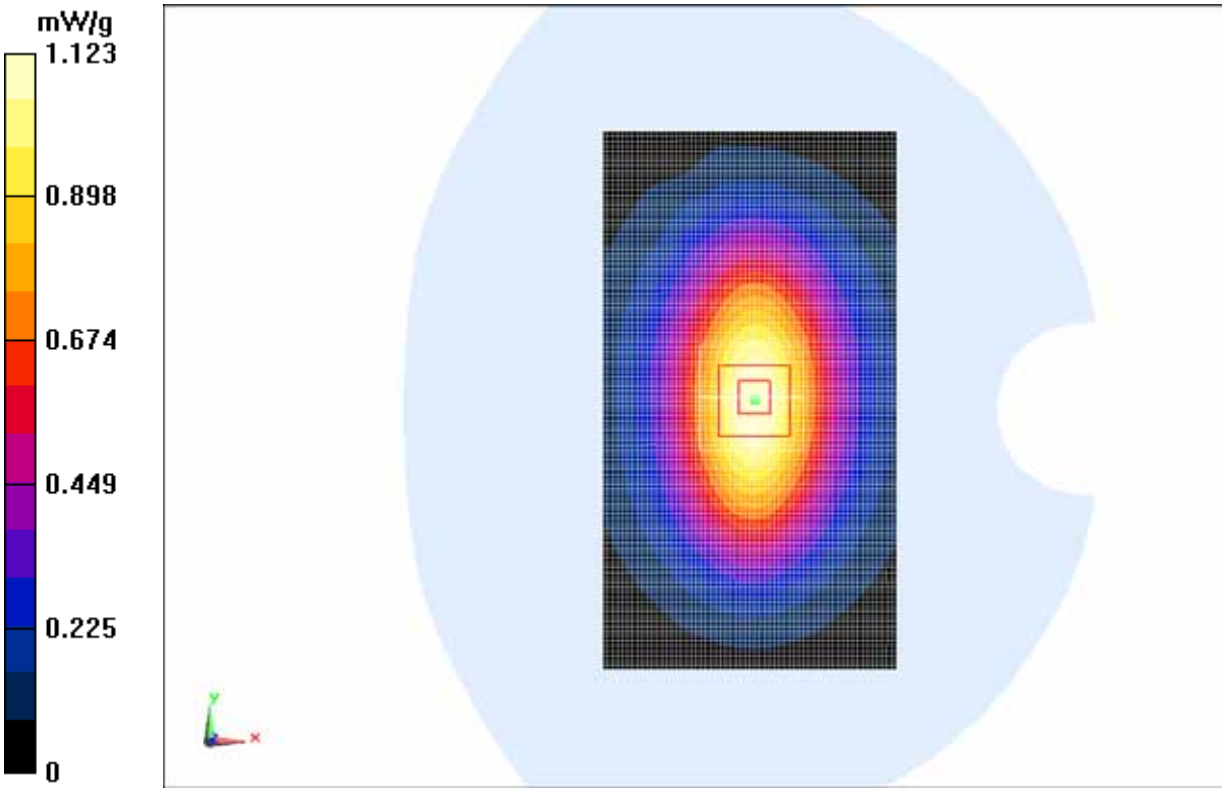


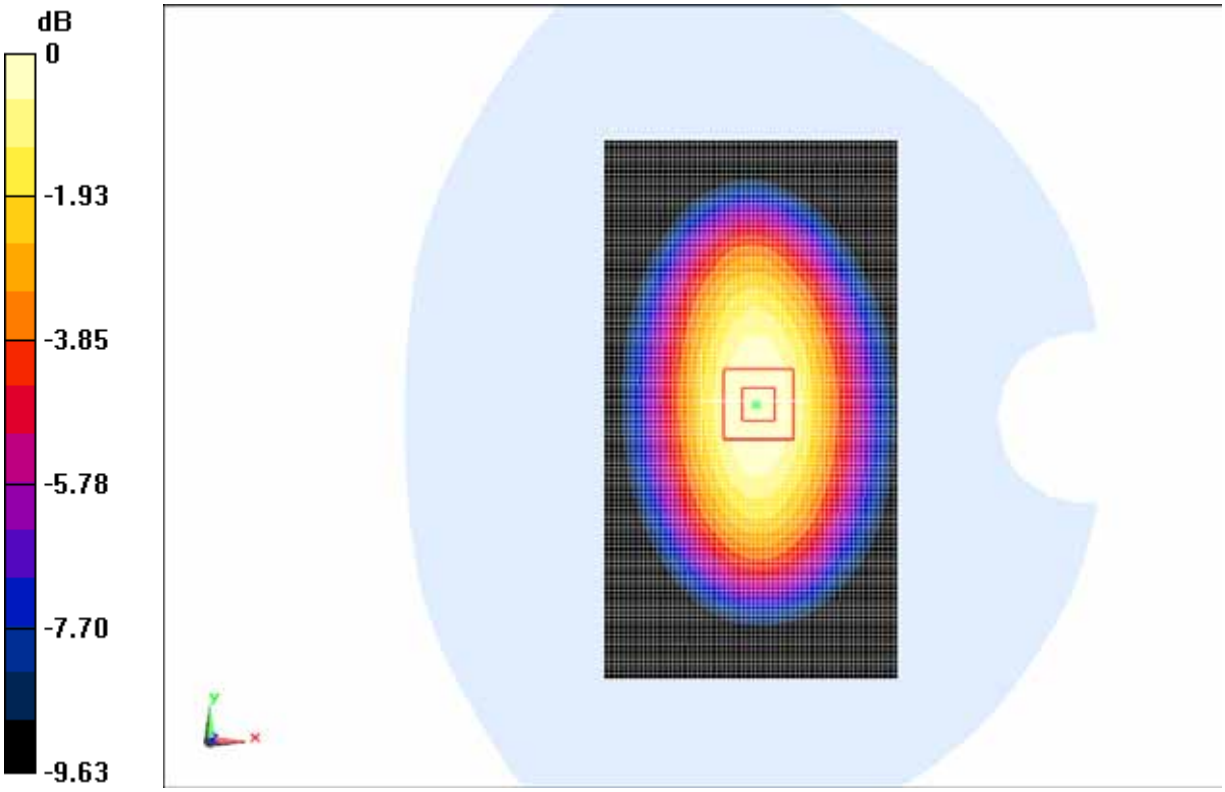
Fig. 15 850 MHz CH128

850 Body Right Side Low with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Right Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.014 mW/g

Right Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.461 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.2880
SAR(1 g) = 0.926 mW/g; SAR(10 g) = 0.639 mW/g
Maximum value of SAR (measured) = 0.983 mW/g



0 dB = 0.980mW/g = -0.18 dB mW/g

Fig. 16 850 MHz CH128

850 Body Bottom Side Low with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Bottom Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.078 mW/g

Bottom Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.107 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.1280
SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.081 mW/g

Bottom Side Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.107 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.1040
SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.073 mW/g

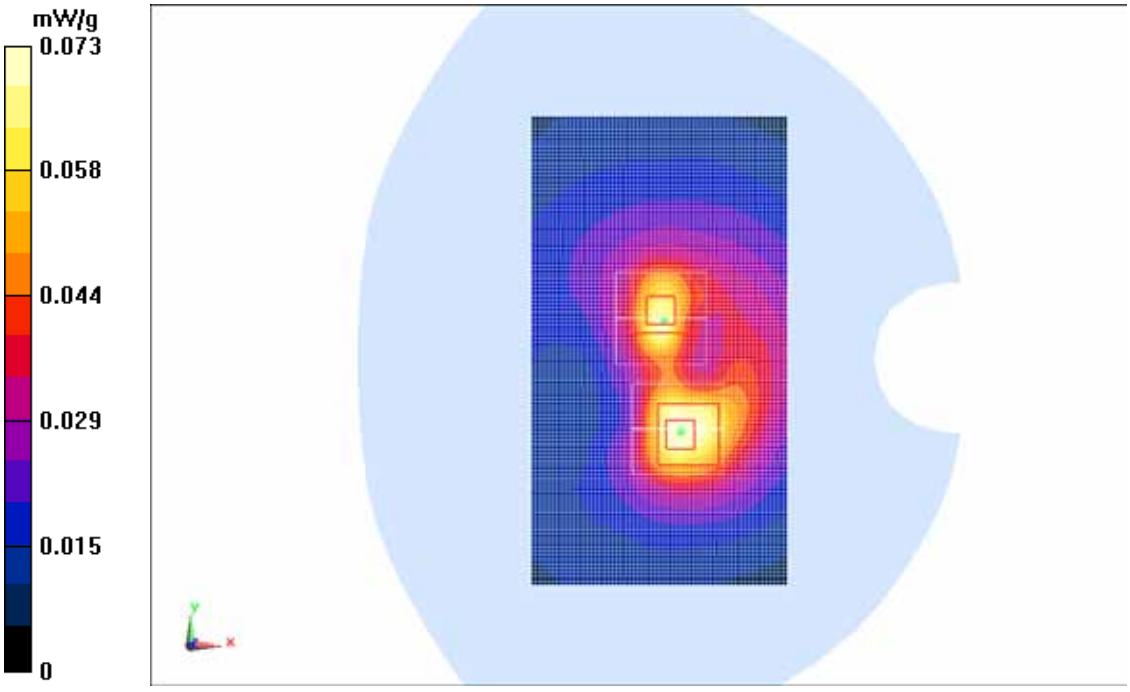


Fig. 17 850 MHz CH128

850 Body Towards Ground High with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.238 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.775 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.4170
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.837 mW/g
Maximum value of SAR (measured) = 1.178 mW/g

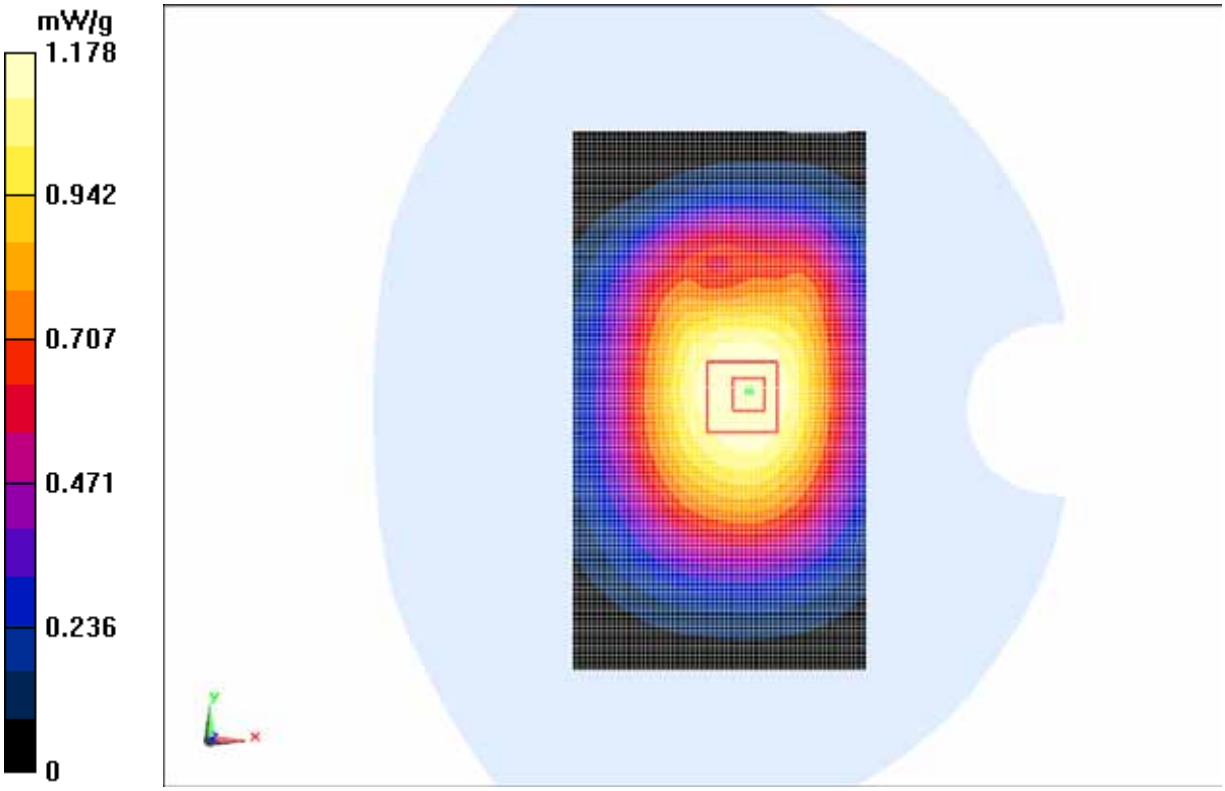


Fig. 18 850 MHz CH251

850 Body Towards Ground Middle with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.268 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.551 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.4880
SAR(1 g) = 1.2 mW/g; SAR(10 g) = 0.902 mW/g
Maximum value of SAR (measured) = 1.252 mW/g

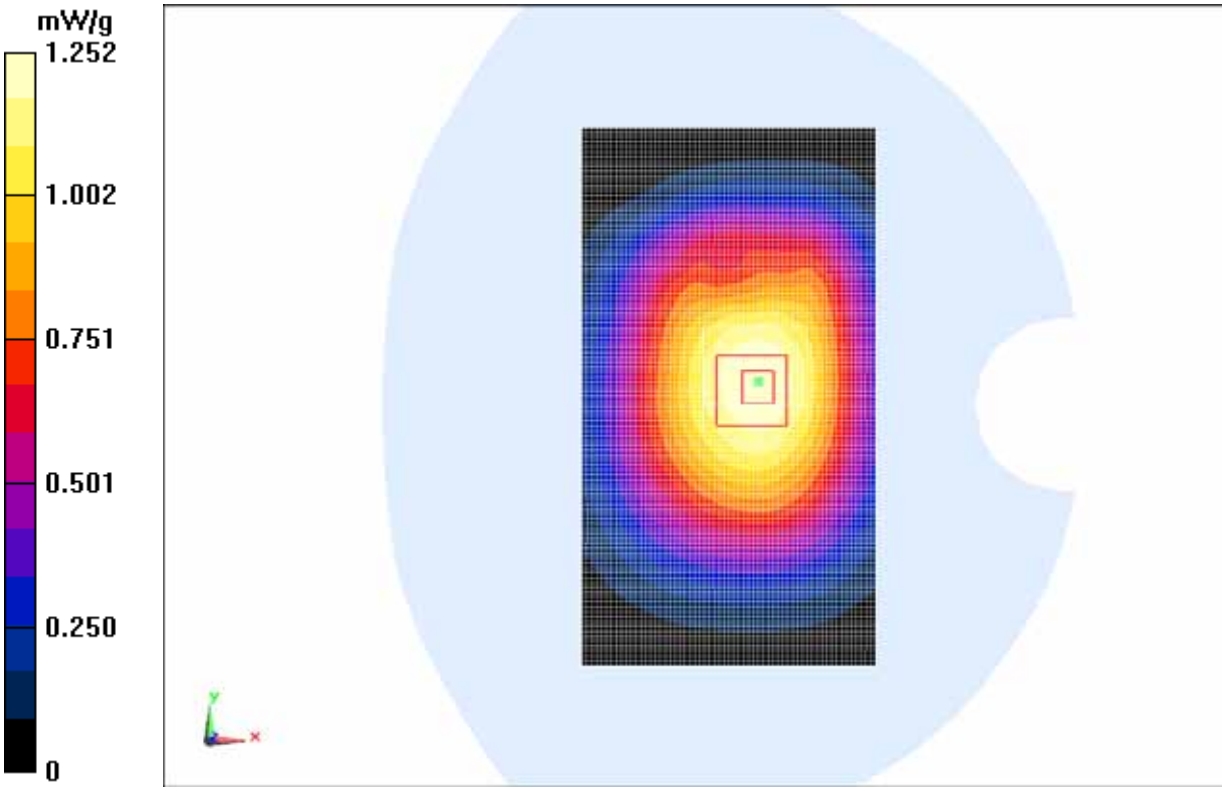


Fig. 19 850 MHz CH190

850 Body Towards Phantom High with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.863 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.835 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.9900
SAR(1 g) = 0.812 mW/g; SAR(10 g) = 0.624 mW/g
Maximum value of SAR (measured) = 0.850 mW/g

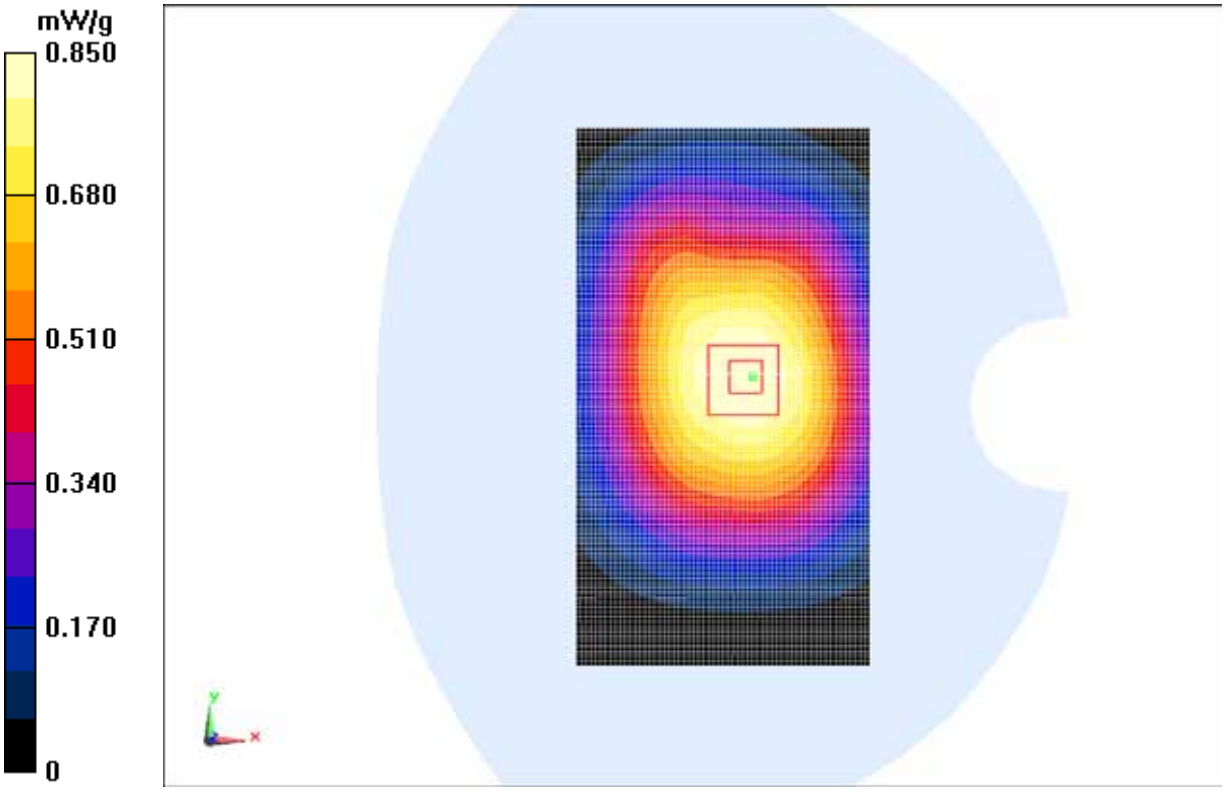


Fig. 20 850 MHz CH251

850 Body Towards Phantom Middle with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.915 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.892 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.0730
SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.676 mW/g
Maximum value of SAR (measured) = 0.921 mW/g

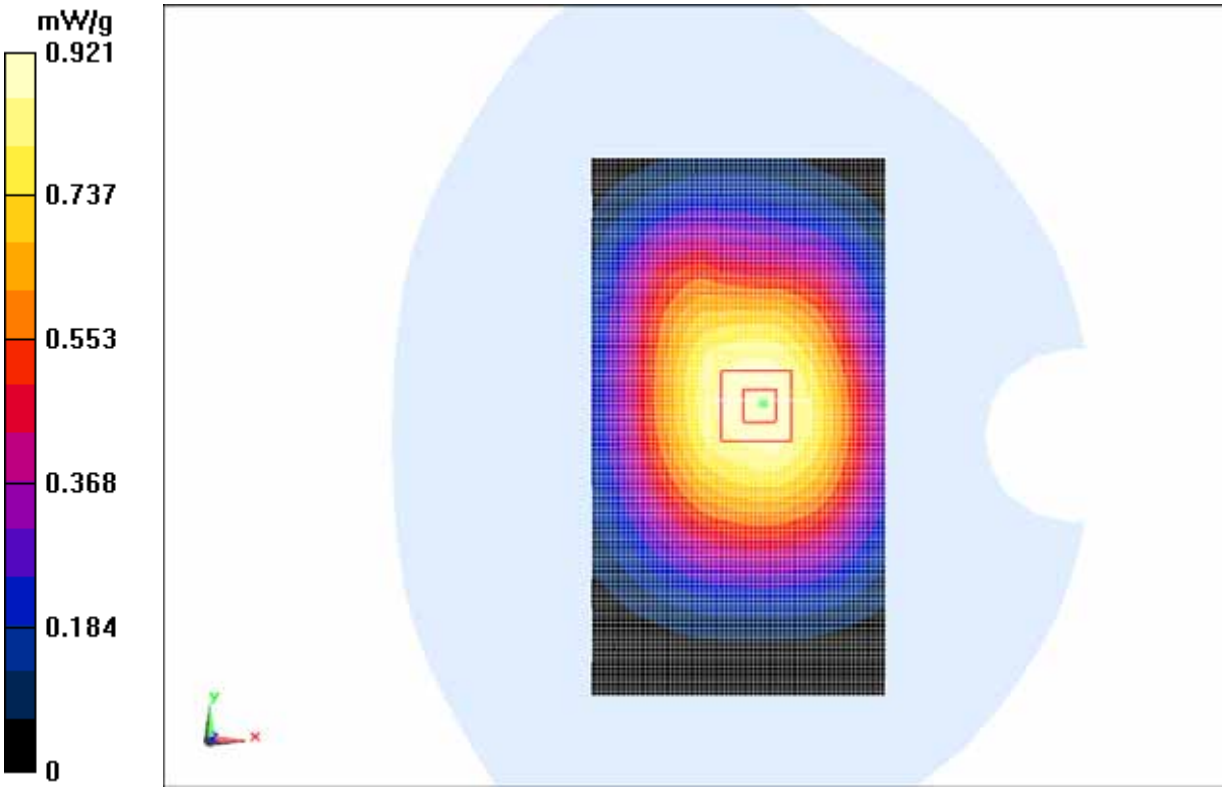


Fig. 21 850 MHz CH190

850 Body Left Side High with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Left Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.160 mW/g

Left Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.926 V/m; Power Drift = -0.0069 dB
Peak SAR (extrapolated) = 1.3870
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.714 mW/g
Maximum value of SAR (measured) = 1.129 mW/g

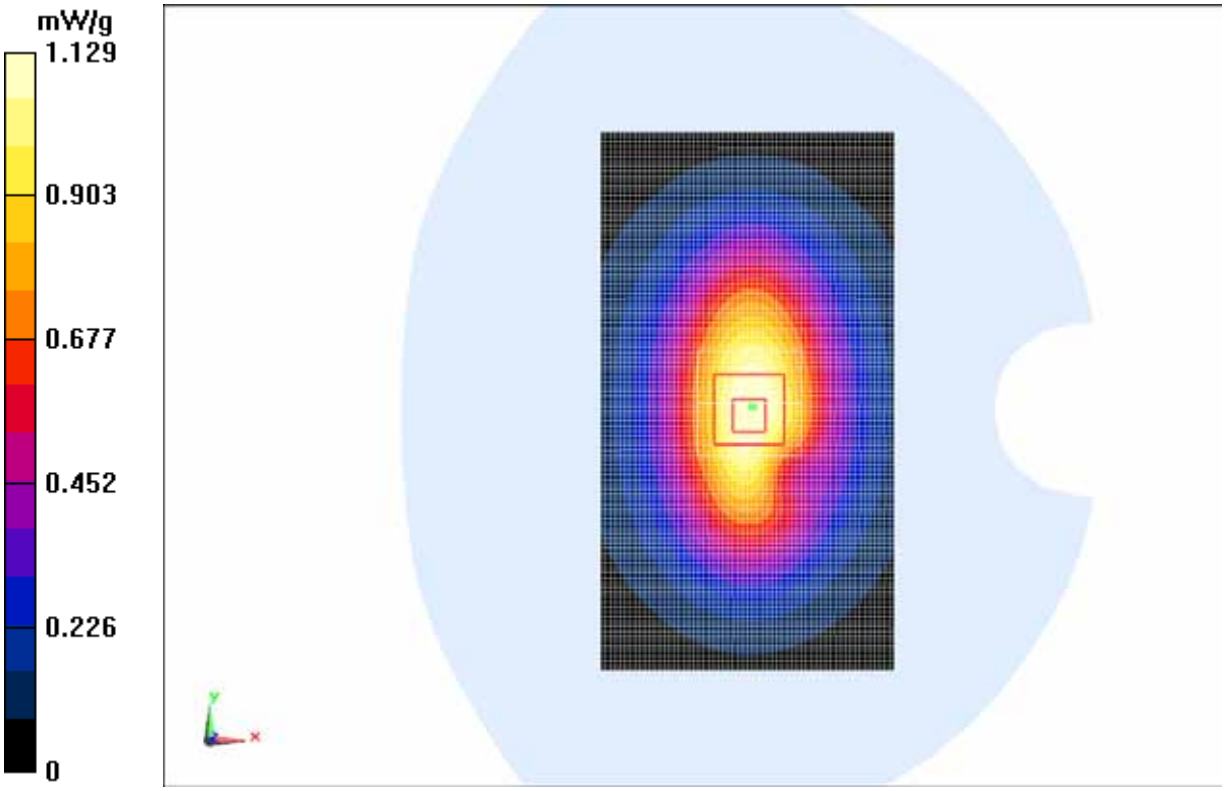


Fig. 22 850 MHz CH251

850 Body Left Side Middle with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Left Side Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.224 mW/g

Left Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.216 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.4890
SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.721 mW/g
Maximum value of SAR (measured) = 1.120 mW/g

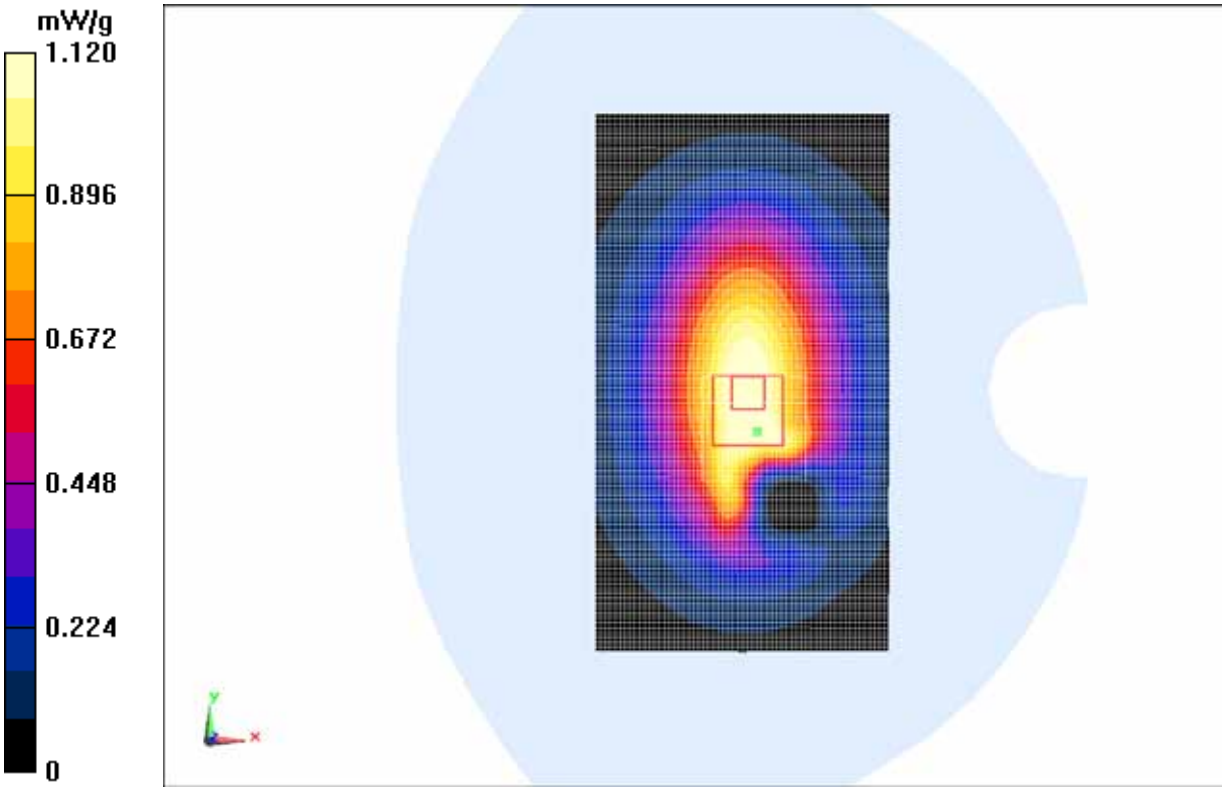


Fig. 23 850 MHz CH190

850 Body Right Side High with GPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.95 mho/m; εr = 54.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Right Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.023 mW/g

Right Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.625 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.2630
SAR(1 g) = 0.912 mW/g; SAR(10 g) = 0.632 mW/g
Maximum value of SAR (measured) = 0.970 mW/g

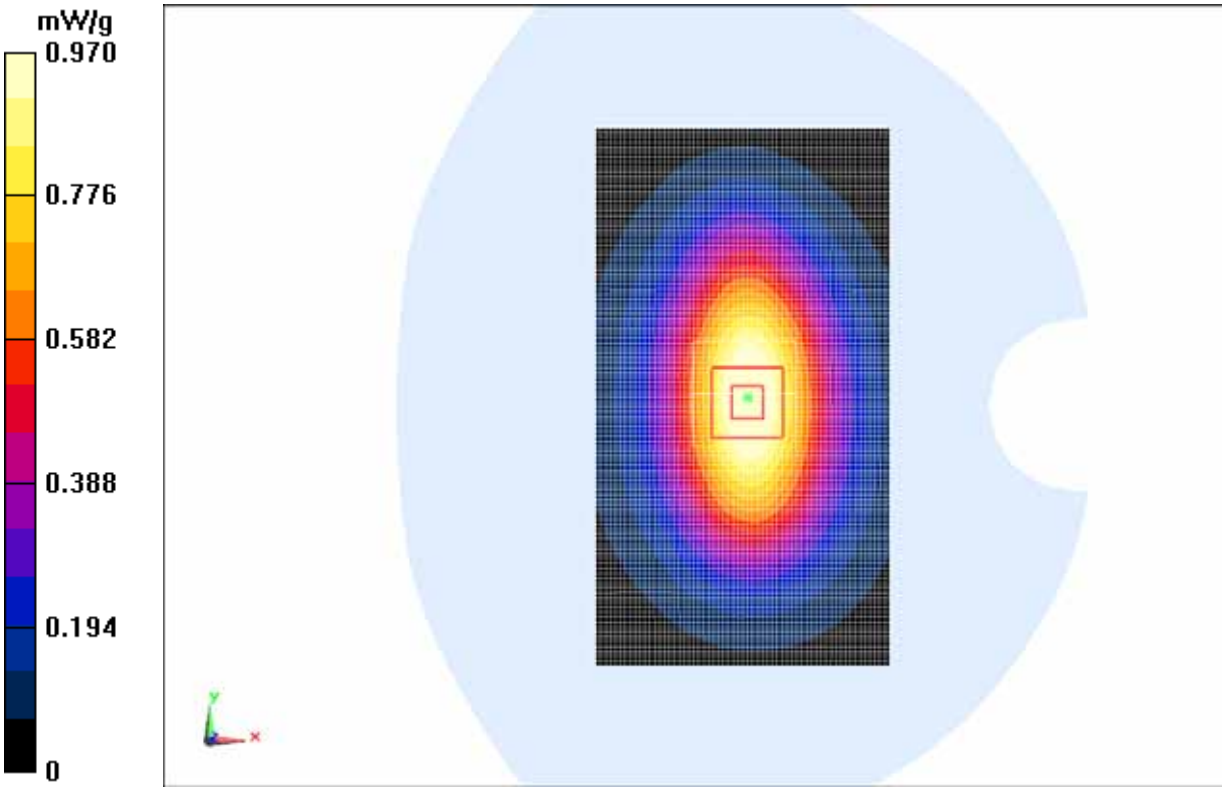


Fig. 24 850 MHz CH251

850 Body Right Side Middle with GPRS
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Right Side Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.053 mW/g

Right Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32.798 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.3700
SAR(1 g) = 0.987 mW/g; SAR(10 g) = 0.676 mW/g
Maximum value of SAR (measured) = 1.054 mW/g

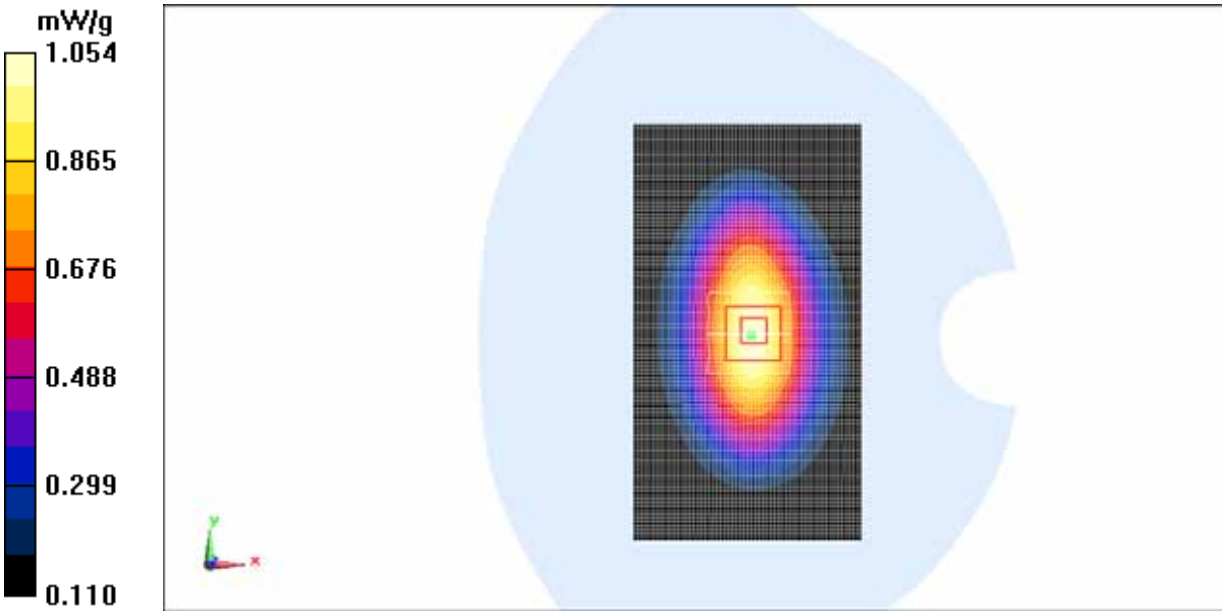


Fig. 25 850 MHz CH190

850 Body Towards Ground Low with EGPRS

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low EGPRS/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.237 mW/g

Toward Ground Low EGPRS/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.661 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.4640
SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.877 mW/g
Maximum value of SAR (measured) = 1.223 mW/g

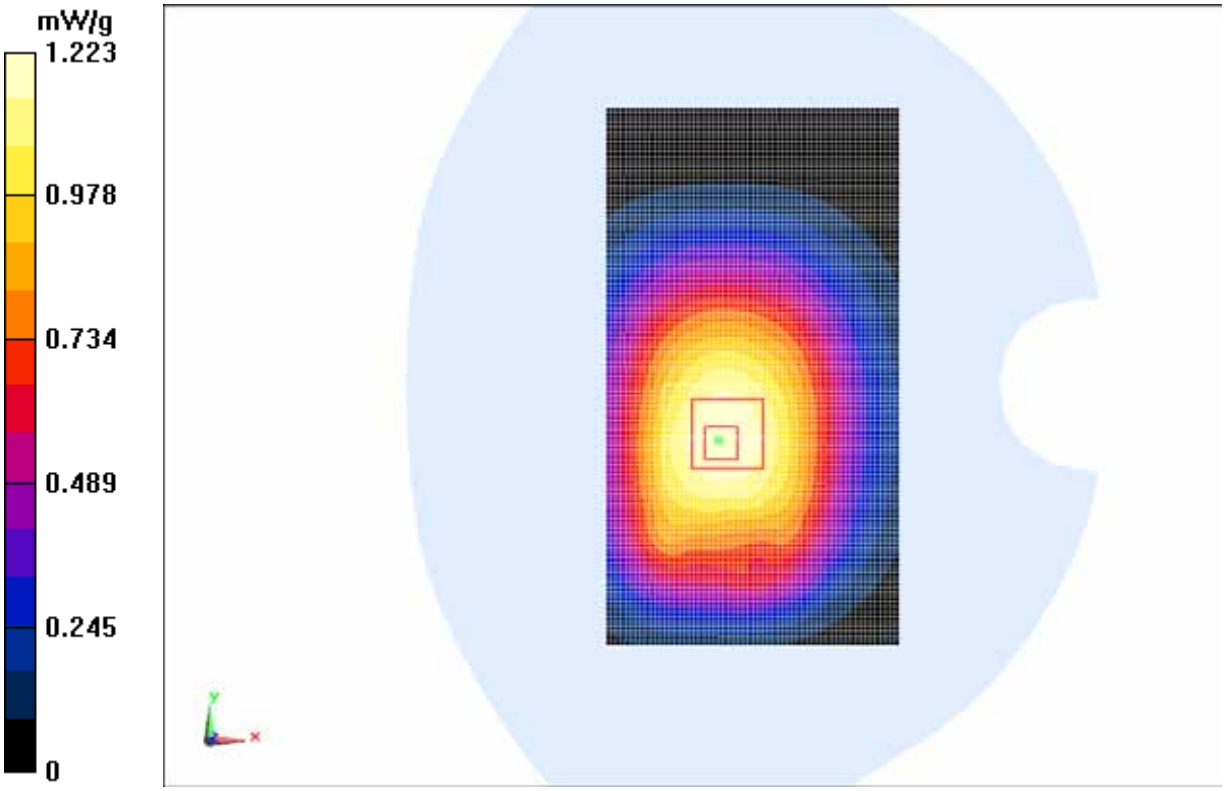


Fig. 26 850 MHz CH128

850 Body Towards Ground Low with Headset CCB3160A11C1
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.894 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.830 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.1070
SAR(1 g) = 0.841 mW/g; SAR(10 g) = 0.618 mW/g
Maximum value of SAR (measured) = 0.885 mW/g

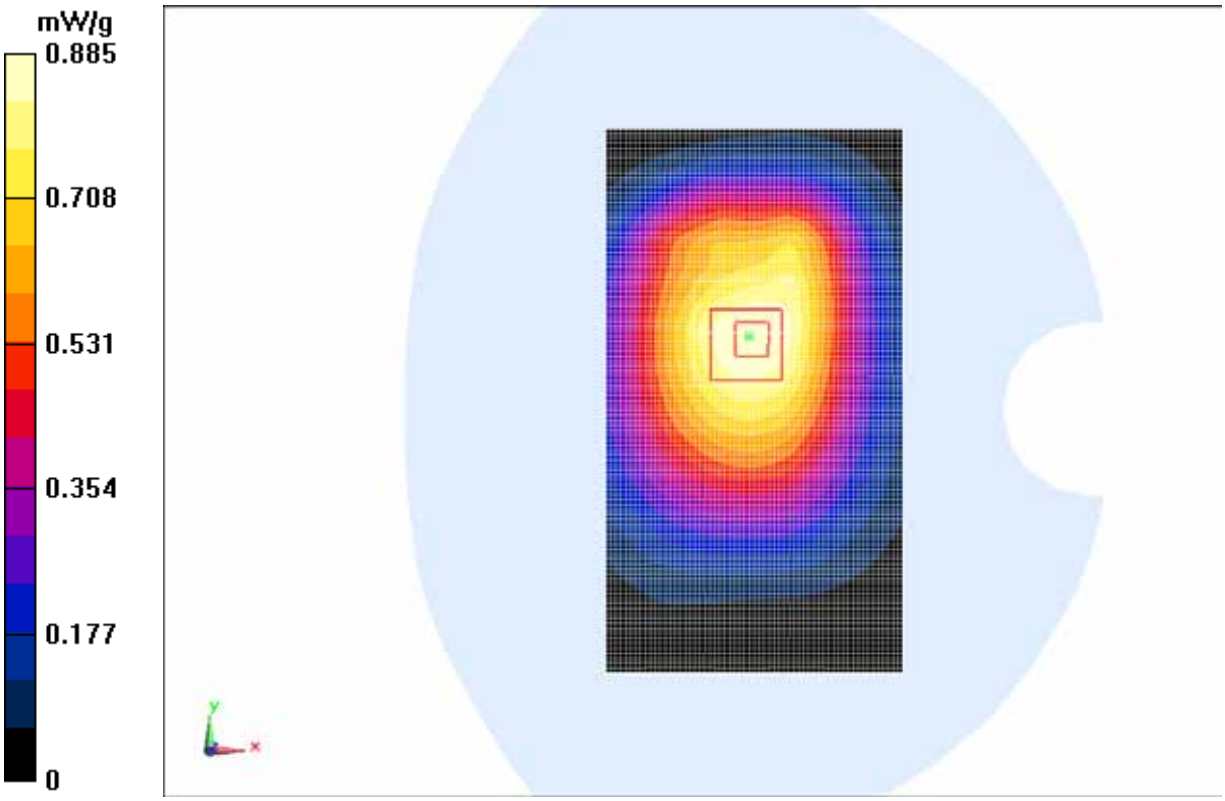


Fig. 27 850 MHz CH128

850 Body Towards Ground Low with Headset CCB3160A11C4
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.818 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.145 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.9980
SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.571 mW/g
Maximum value of SAR (measured) = 0.812 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.145 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.0190
SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.410 mW/g
Maximum value of SAR (measured) = 0.755 mW/g

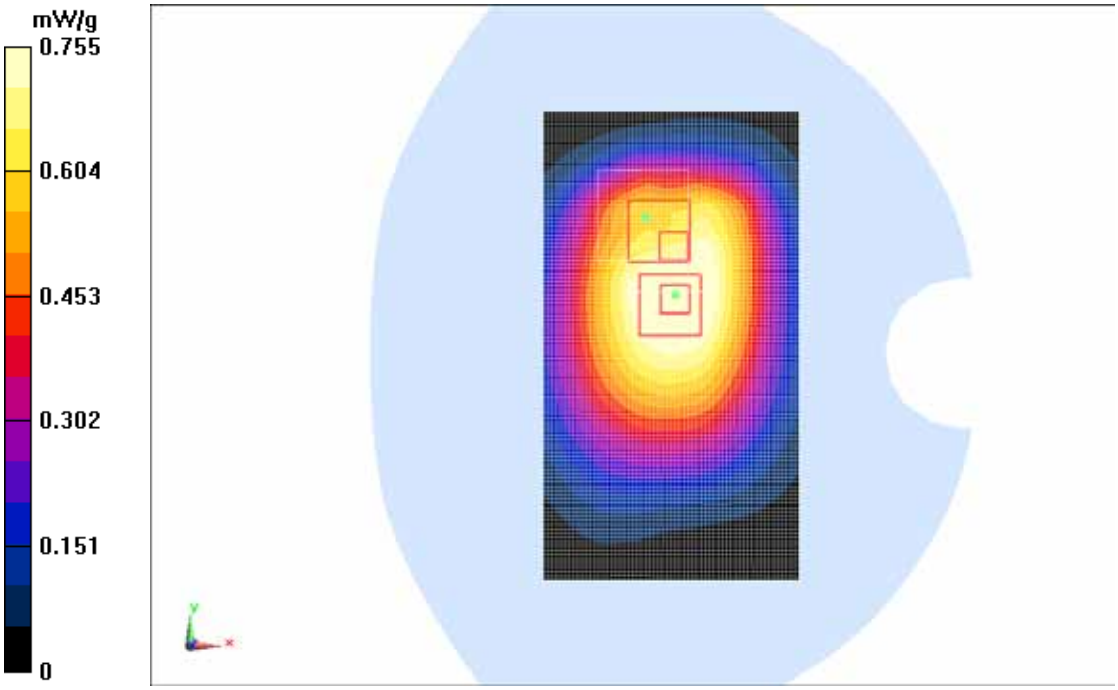


Fig. 28 850 MHz CH128

850 Body Towards Ground Low with Headset CCB3001A15C1
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 825 MHz; σ = 0.94 mho/m; εr = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.629 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.168 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.9490
SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.373 mW/g
Maximum value of SAR (measured) = 0.612 mW/g

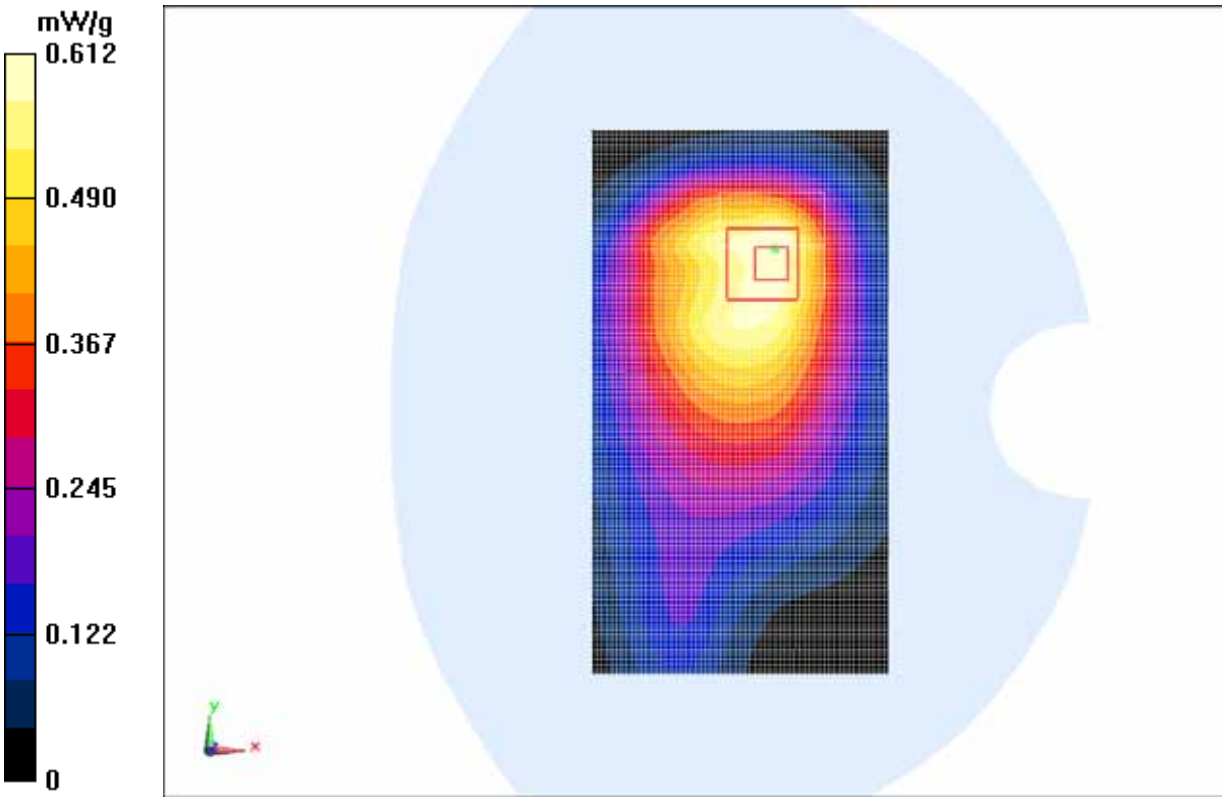


Fig. 29 850 MHz CH128

1900 Left Cheek High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.2; 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) = 0.295 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.231 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.4020
SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.164 mW/g
Maximum value of SAR (measured) = 0.287 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.231 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.3240
SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.143 mW/g
Maximum value of SAR (measured) = 0.242 mW/g

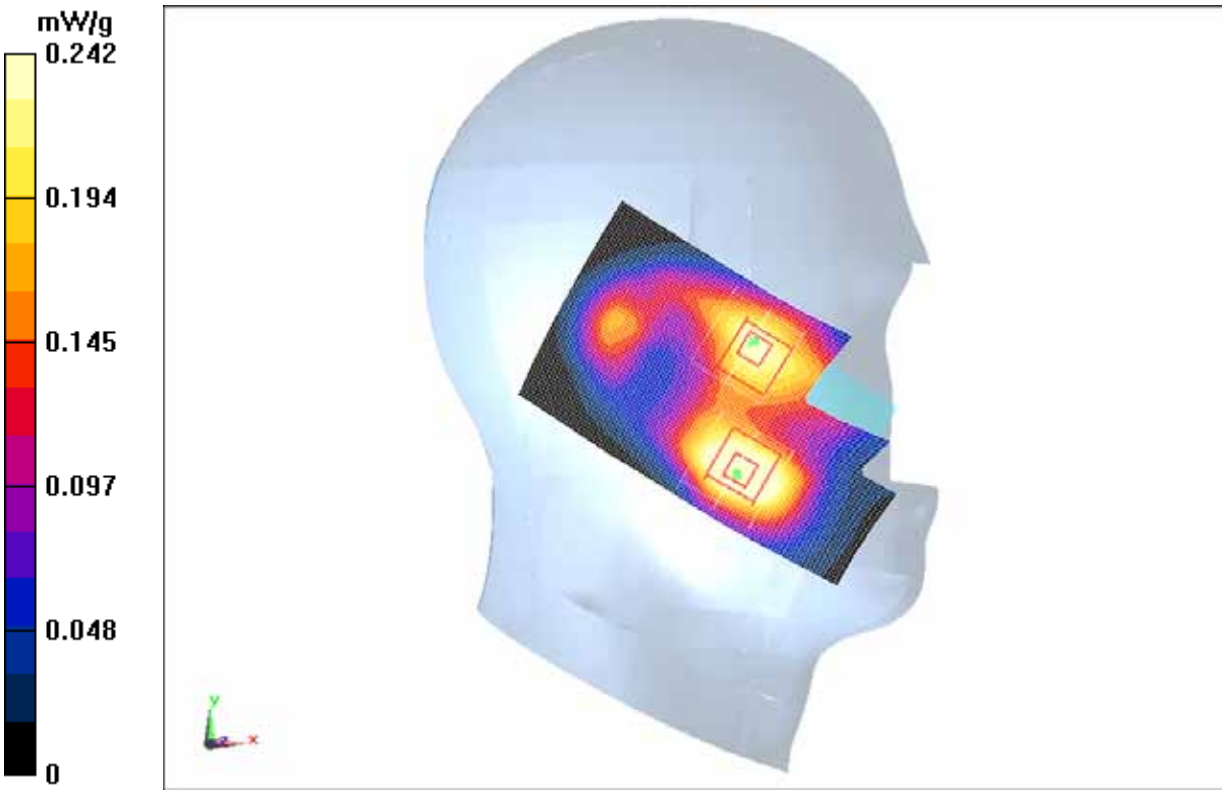


Fig. 30 1900 MHz CH810

1900 Left Cheek Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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) = 0.251 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.029 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.3460
SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.245 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.029 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.2610
SAR(1 g) = 0.181 mW/g; SAR(10 g) = 0.118 mW/g
Maximum value of SAR (measured) = 0.197 mW/g

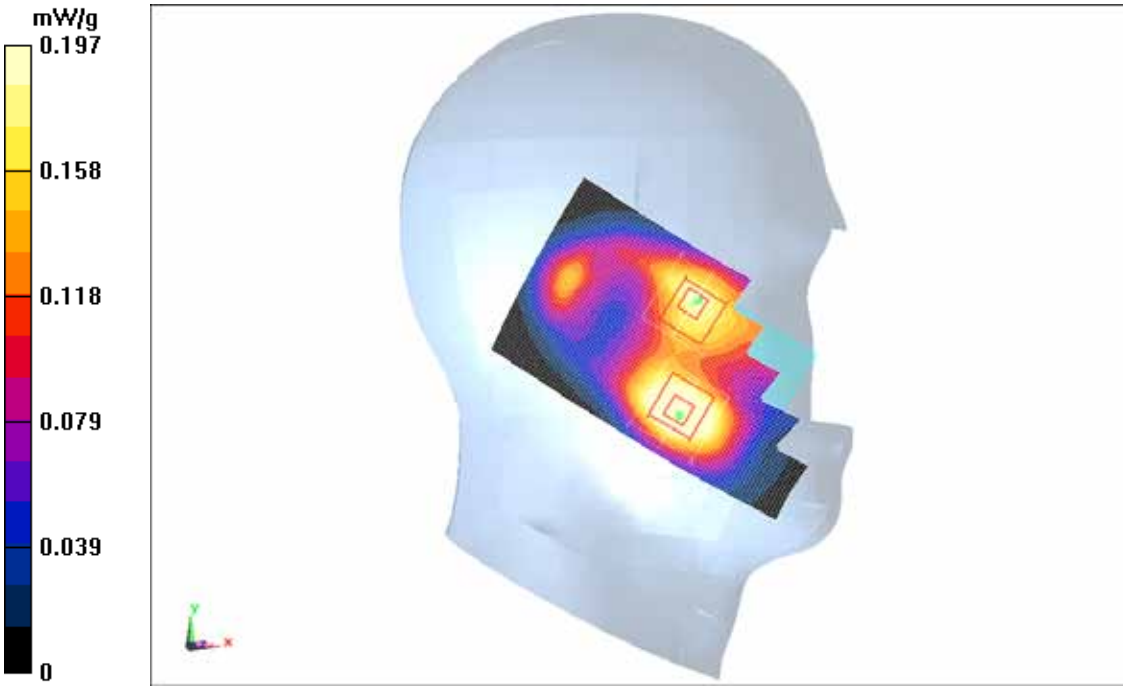


Fig. 31 1900 MHz CH661

1900 Left Cheek Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 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) = 0.228 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.618 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.3190
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.133 mW/g
Maximum value of SAR (measured) = 0.230 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.618 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.2360
SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.107 mW/g
Maximum value of SAR (measured) = 0.178 mW/g

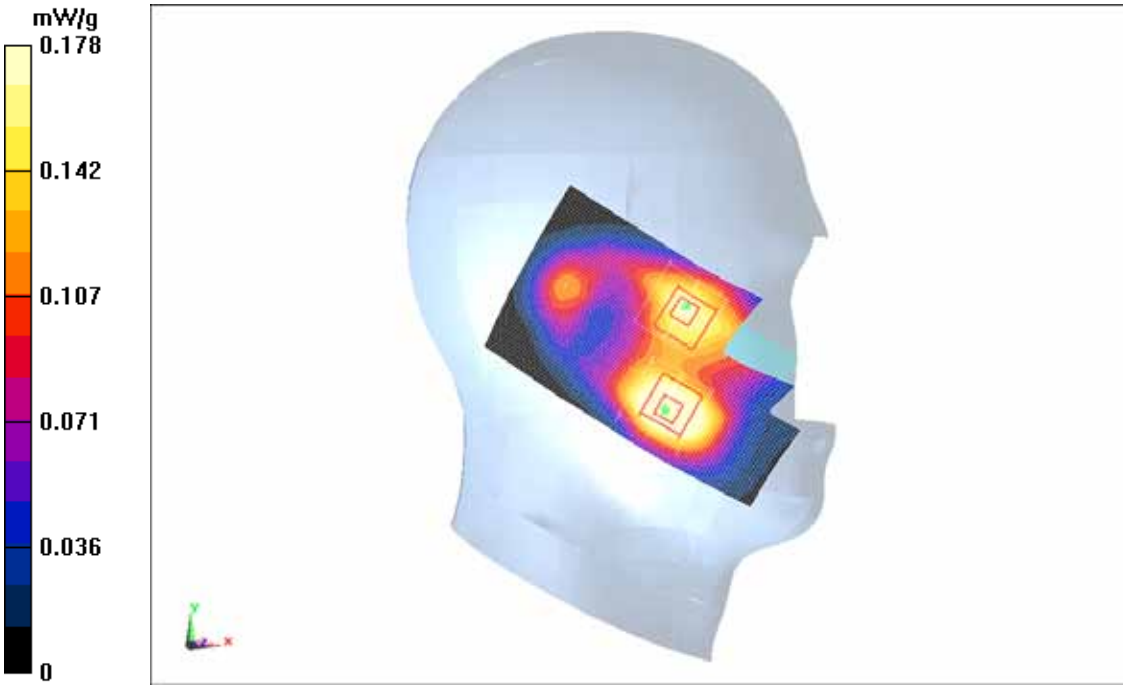


Fig. 32 1900 MHz CH512

1900 Left Tilt High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.2; 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) = 0.237 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.213 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.3570
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.118 mW/g
Maximum value of SAR (measured) = 0.235 mW/g

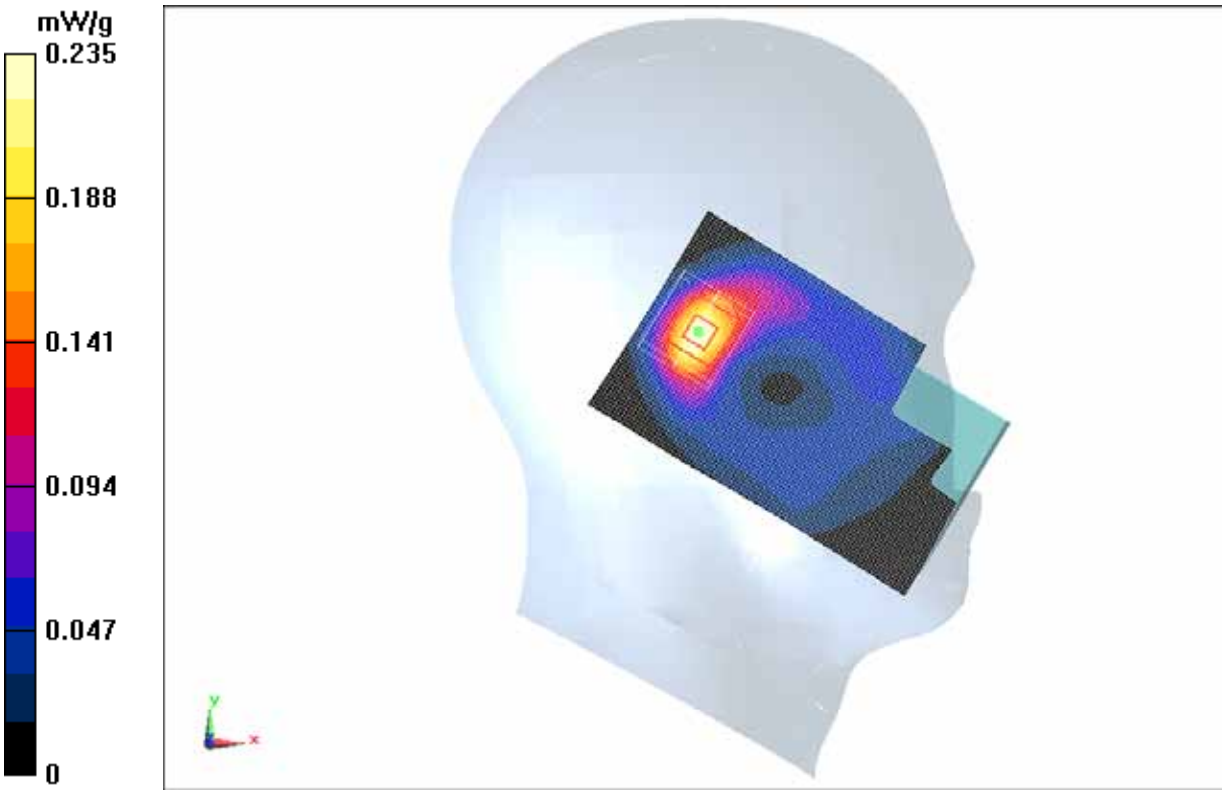


Fig.33 1900 MHz CH810

1900 Left Tilt Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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) = 0.203 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.480 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.3080
SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.104 mW/g
Maximum value of SAR (measured) = 0.205 mW/g

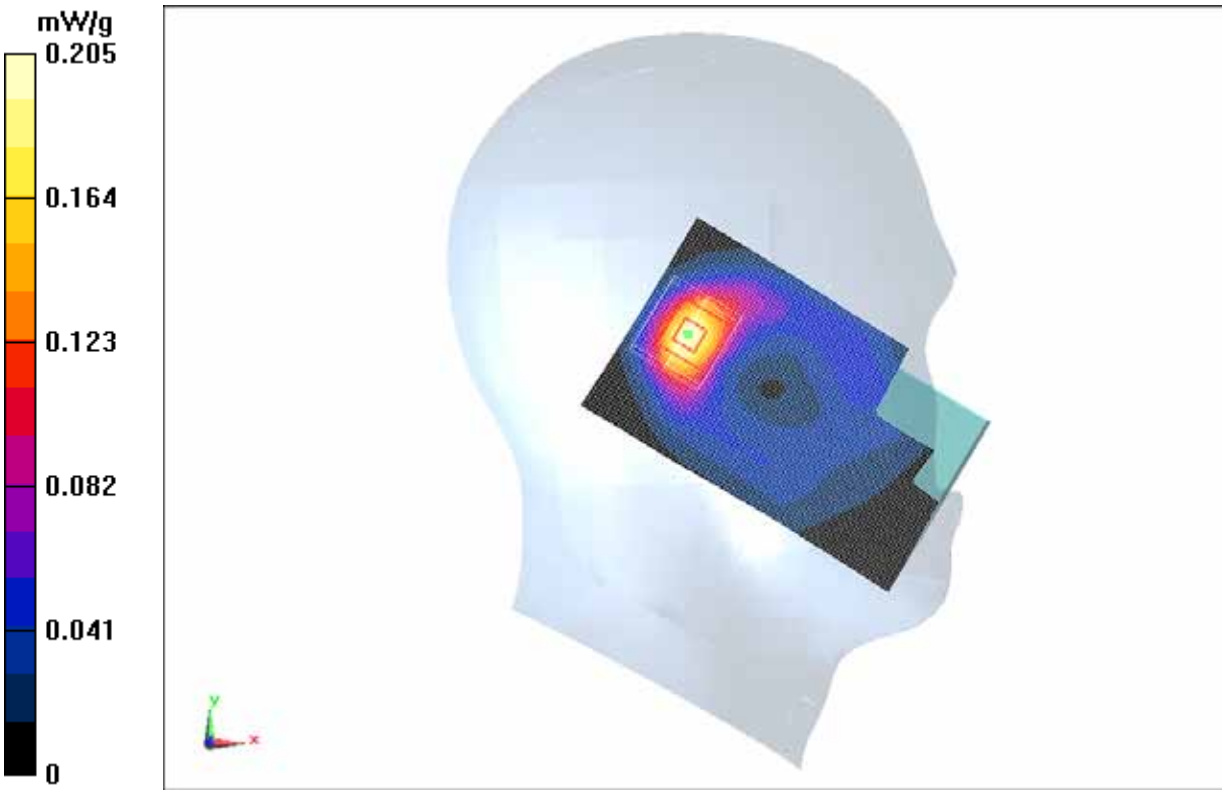


Fig. 34 1900 MHz CH661

1900 Left Tilt Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 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) = 0.194 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.157 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.2810
SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.100 mW/g
Maximum value of SAR (measured) = 0.195 mW/g

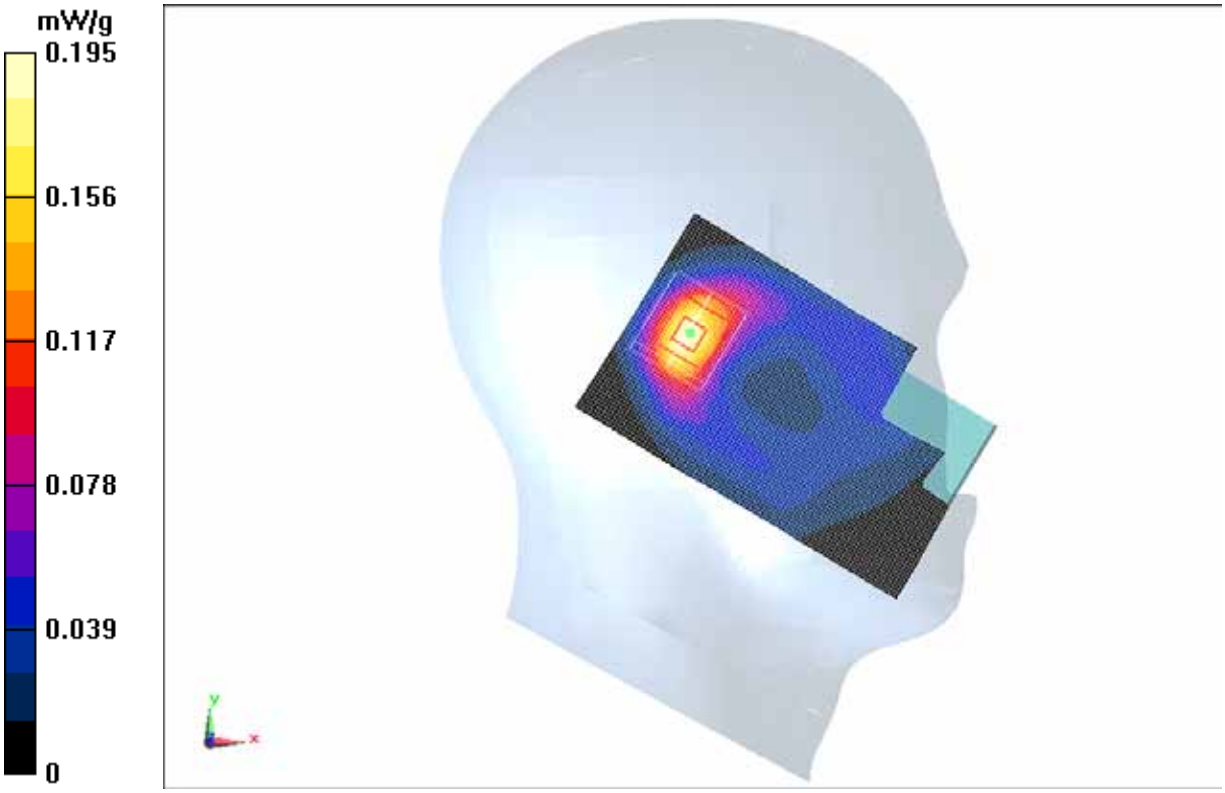


Fig. 35 1900 MHz CH512

1900 Right Cheek High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.2; 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) = 0.530 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.831 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.7140
SAR(1 g) = 0.483 mW/g; SAR(10 g) = 0.301 mW/g
Maximum value of SAR (measured) = 0.527 mW/g

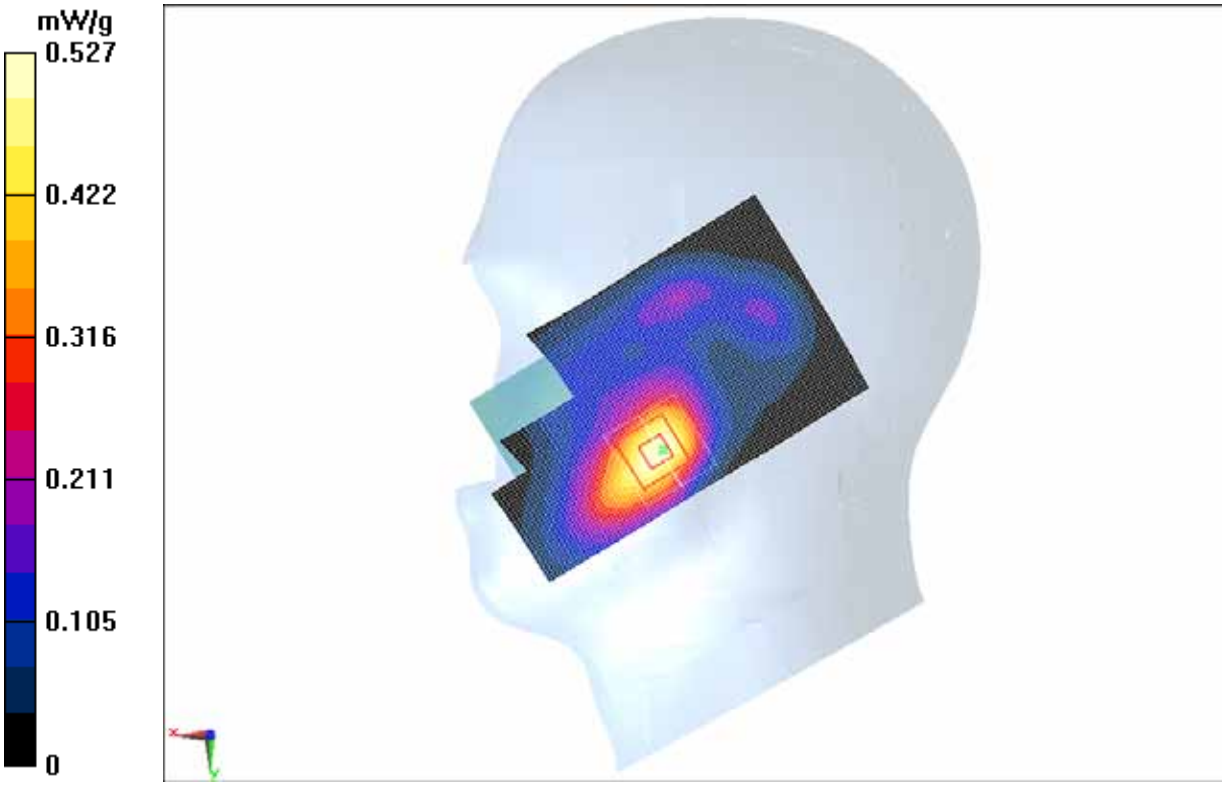


Fig. 36 1900 MHz CH810

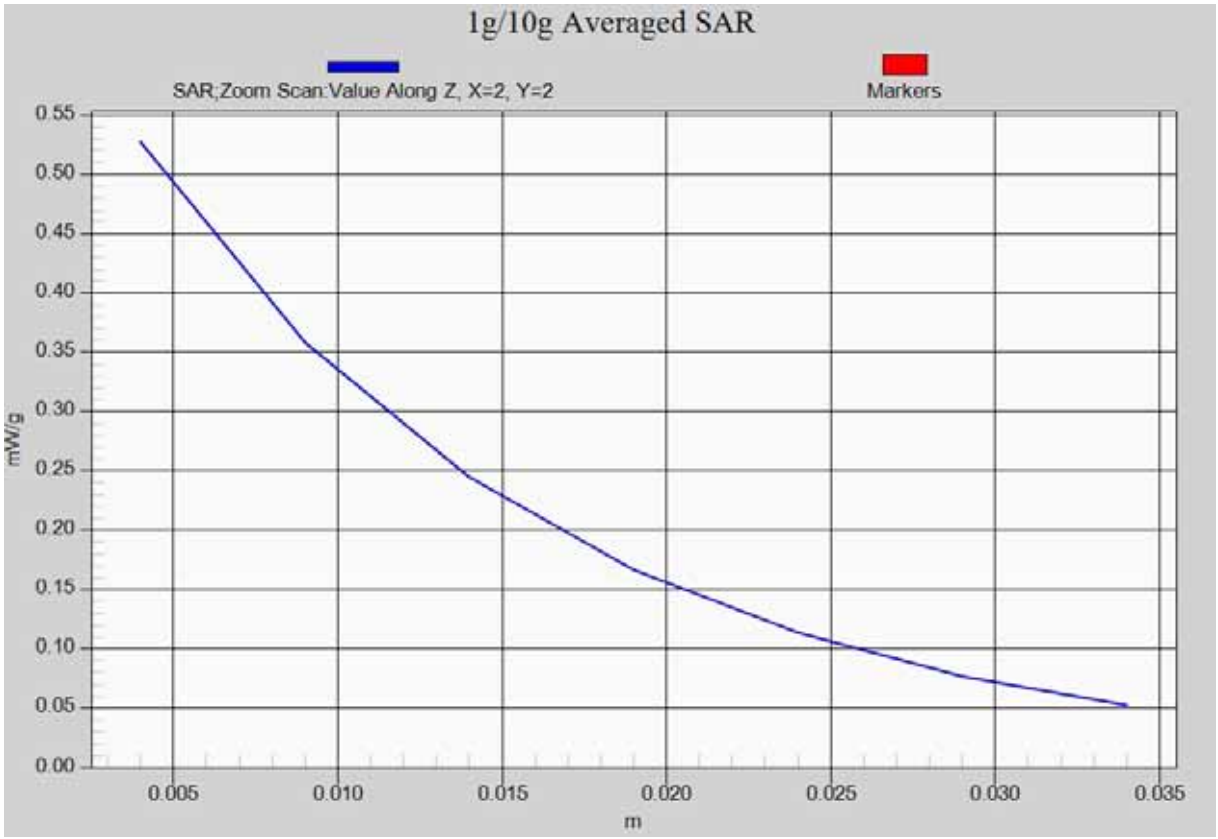


Fig. 36-1 Z-Scan at power reference point (1900 MHz CH810)

1900 Right Cheek Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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) = 0.438 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.453 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.5790
SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.251 mW/g
Maximum value of SAR (measured) = 0.431 mW/g

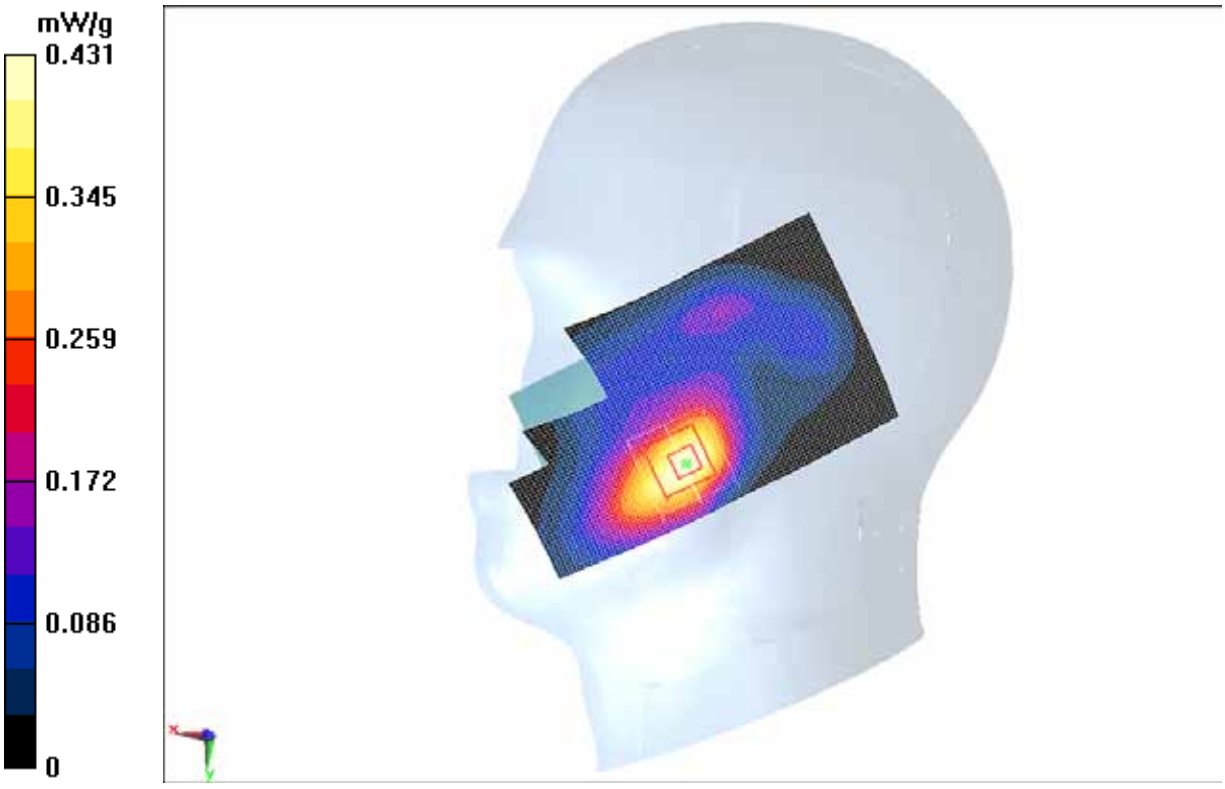


Fig. 37 1900 MHz CH661

1900 Right Cheek Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 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) = 0.406 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.914 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.5420
SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.238 mW/g
Maximum value of SAR (measured) = 0.404 mW/g

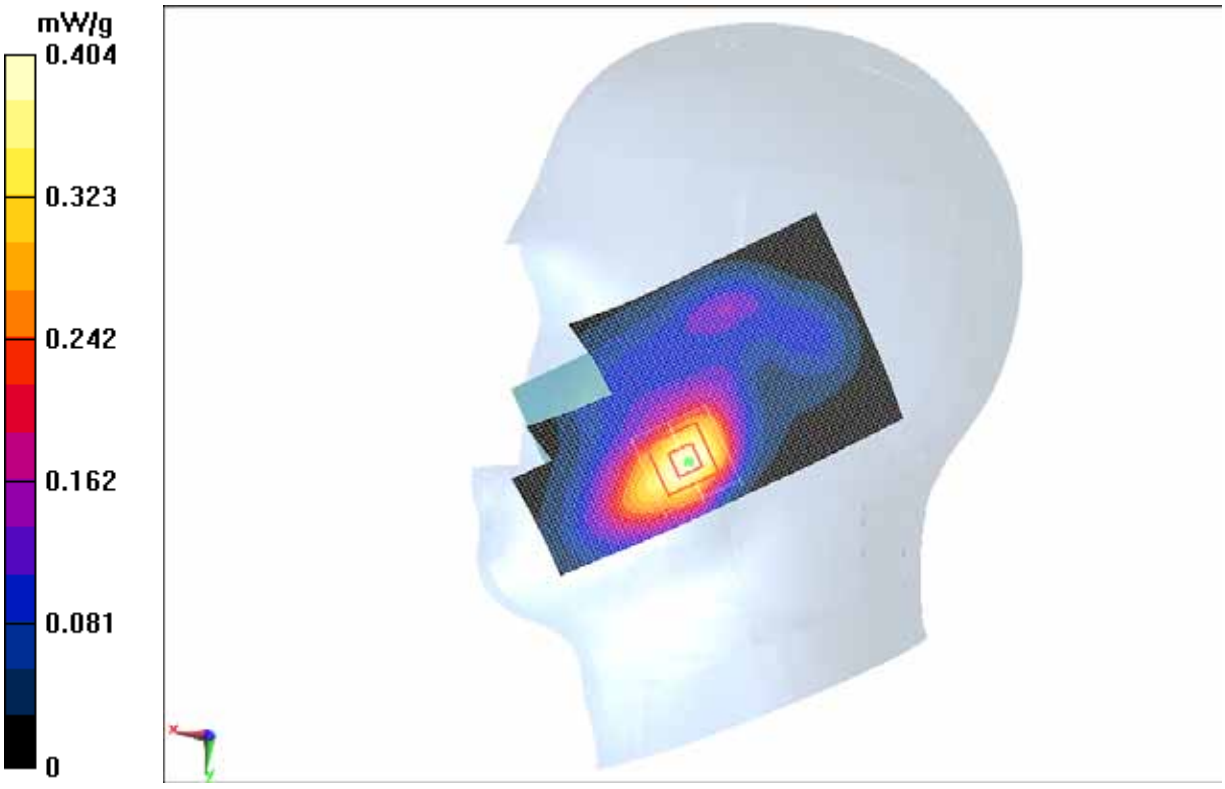


Fig. 38 1900 MHz CH512

1900 Right Tilt High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; εr = 40.2; 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) = 0.248 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.602 V/m; Power Drift = -0.0091 dB
Peak SAR (extrapolated) = 0.3630
SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.122 mW/g
Maximum value of SAR (measured) = 0.245 mW/g

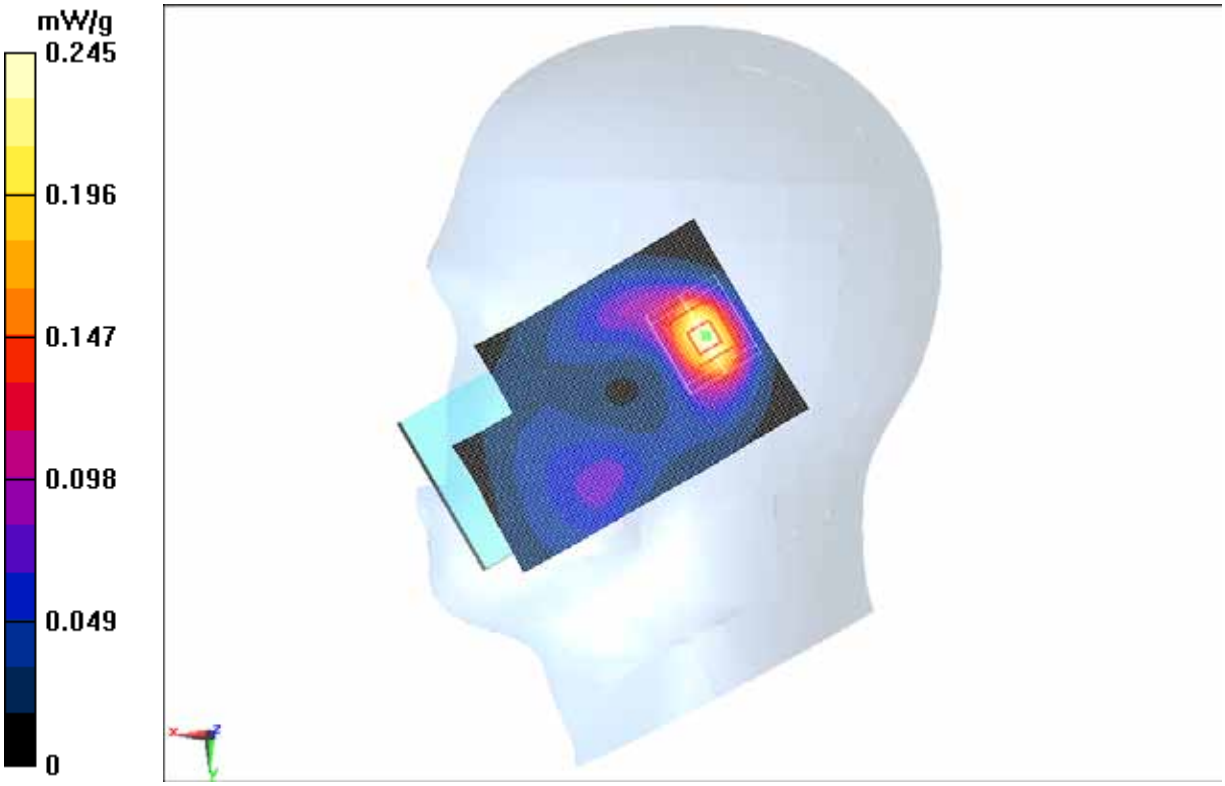


Fig. 39 1900 MHz CH810

1900 Right Tilt Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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) = 0.212 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.625 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.3080
SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.105 mW/g
Maximum value of SAR (measured) = 0.209 mW/g

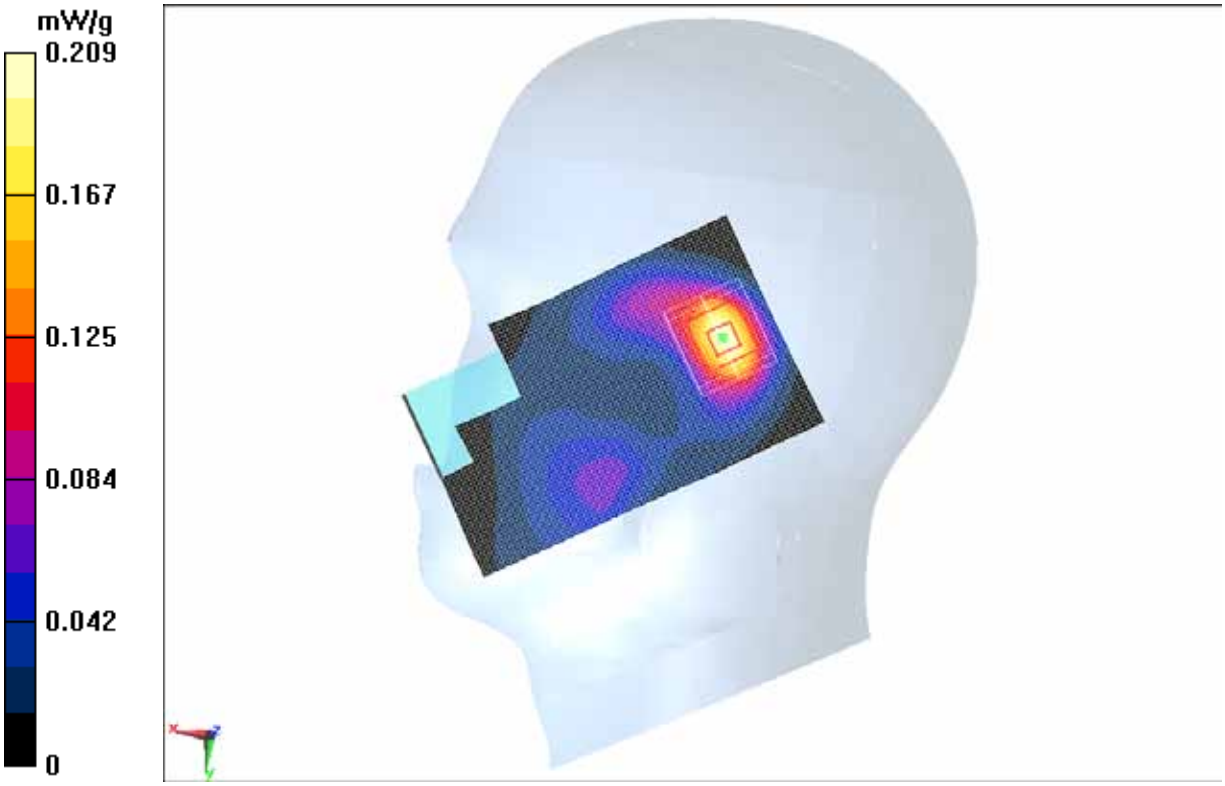


Fig.40 1900 MHz CH661

1900 Right Tilt Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 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) = 0.182 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.674 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.2590
SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.178 mW/g

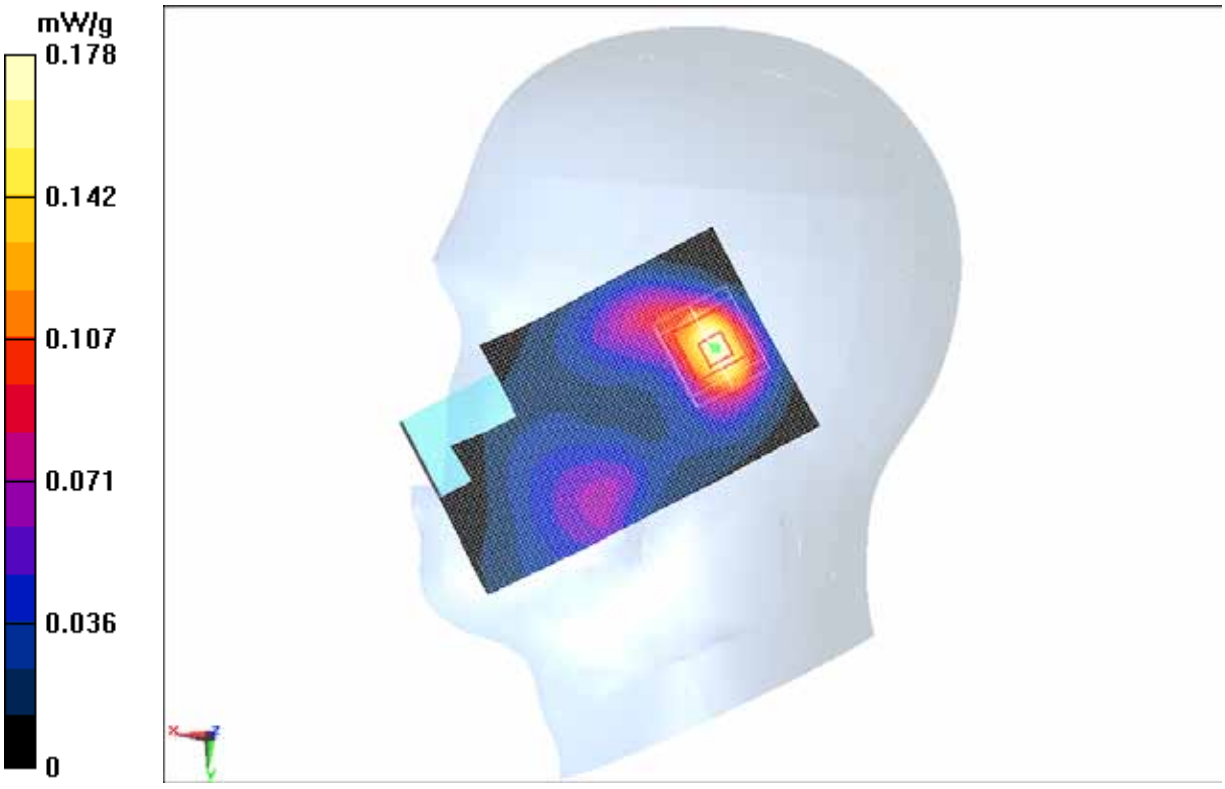


Fig.41 1900 MHz CH512

1900 Body Towards Ground Low with GPRS

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.888 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.583 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.5290
SAR(1 g) = 0.881 mW/g; SAR(10 g) = 0.504 mW/g
Maximum value of SAR (measured) = 0.984 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.583 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.0210
SAR(1 g) = 0.628 mW/g; SAR(10 g) = 0.381 mW/g
Maximum value of SAR (measured) = 0.686 mW/g

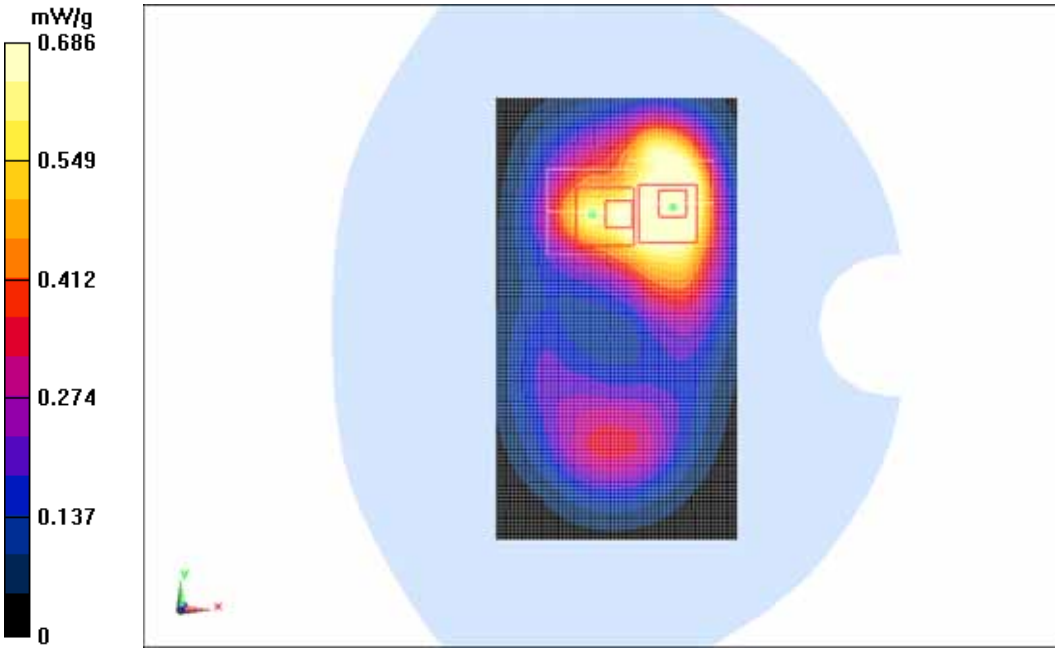


Fig. 42 1900 MHz CH512

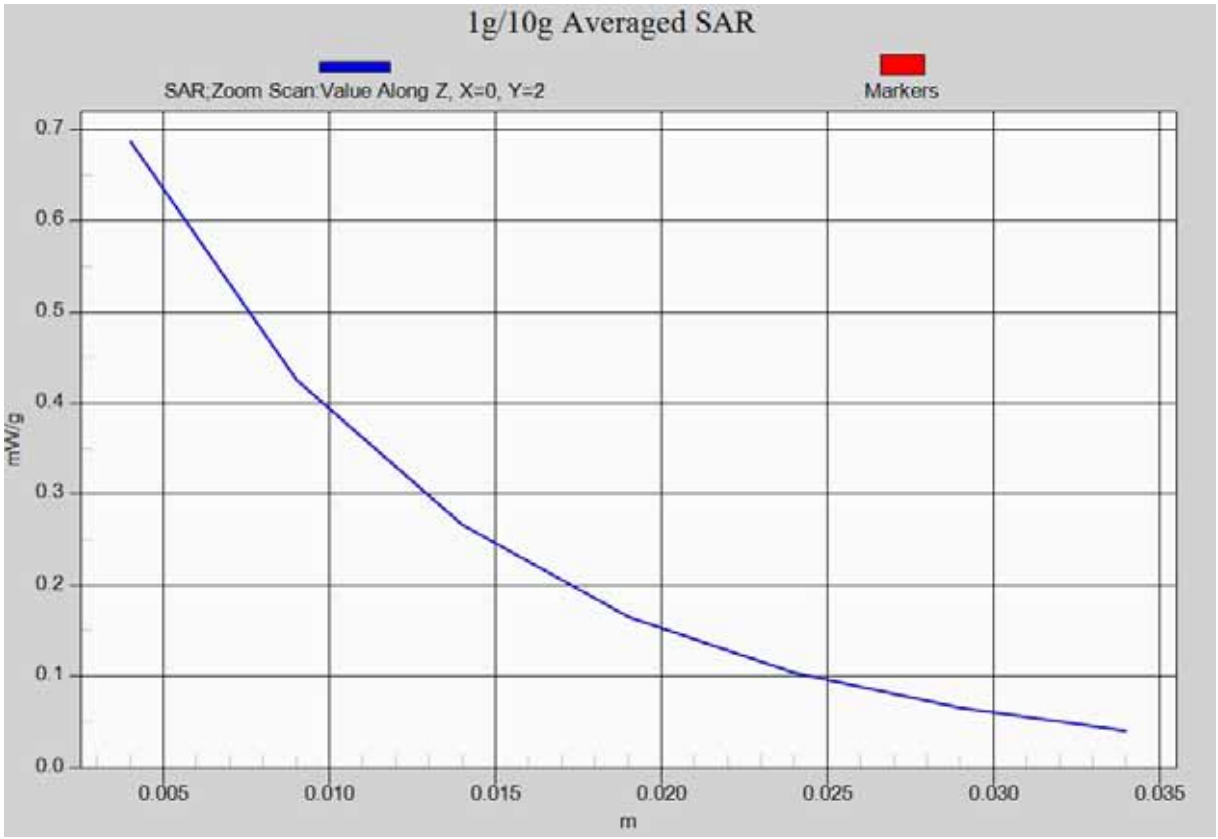


Fig. 42-1 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Phantom Low with GPRS
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Phantom Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.814 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.535 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.2080
SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.462 mW/g
Maximum value of SAR (measured) = 0.779 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.535 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.2620
SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.468 mW/g

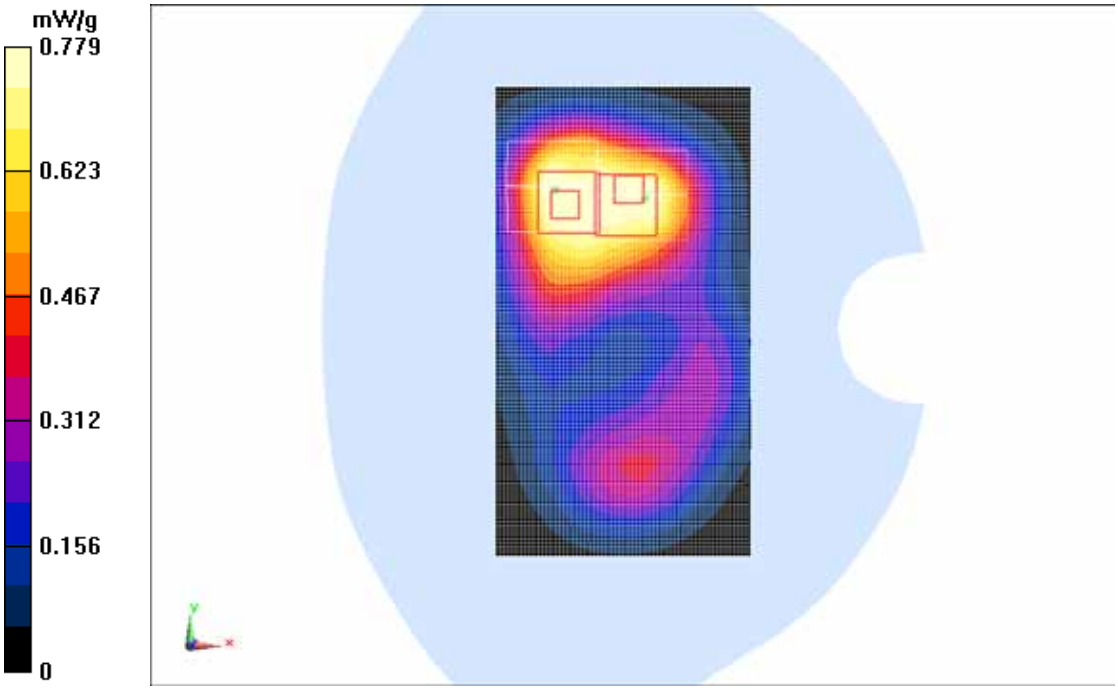


Fig. 43 1900 MHz CH512

1900 Body Left Side Low with GPRS
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Left Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.162 mW/g

Left Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.546 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.2410
SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.160 mW/g

Left Side Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.546 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.1820
SAR(1 g) = 0.116 mW/g; SAR(10 g) = 0.072 mW/g
Maximum value of SAR (measured) = 0.124 mW/g

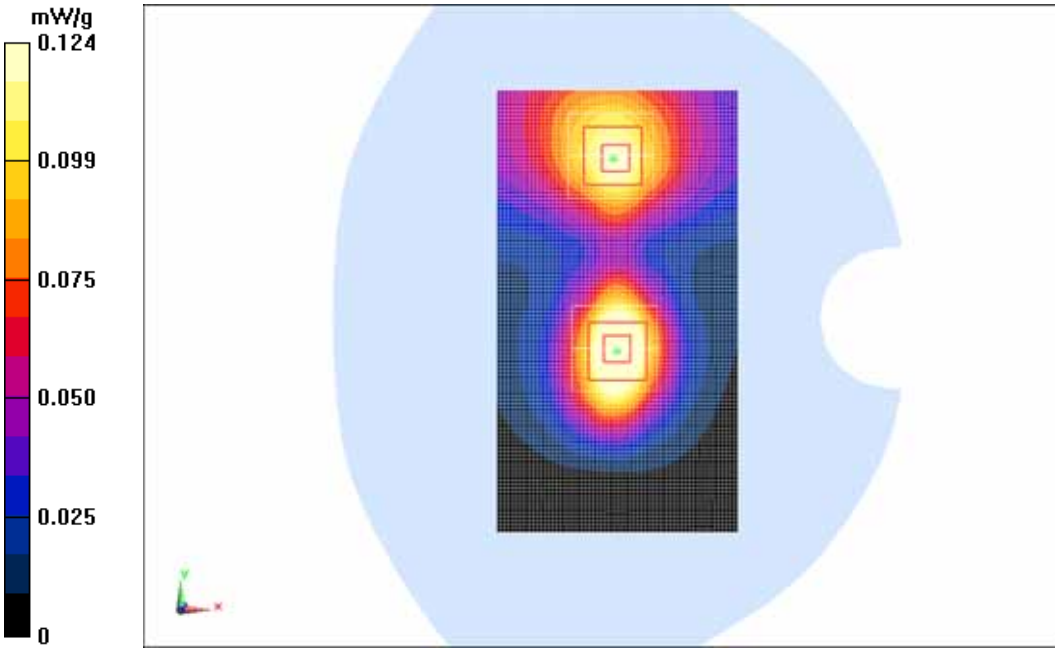


Fig. 44 1900 MHz CH512

1900 Body Right Side Low with GPRS
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Right Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.349 mW/g

Right Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.413 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.4980
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.335 mW/g

Right Side Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.413 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.3320
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.133 mW/g
Maximum value of SAR (measured) = 0.253 mW/g

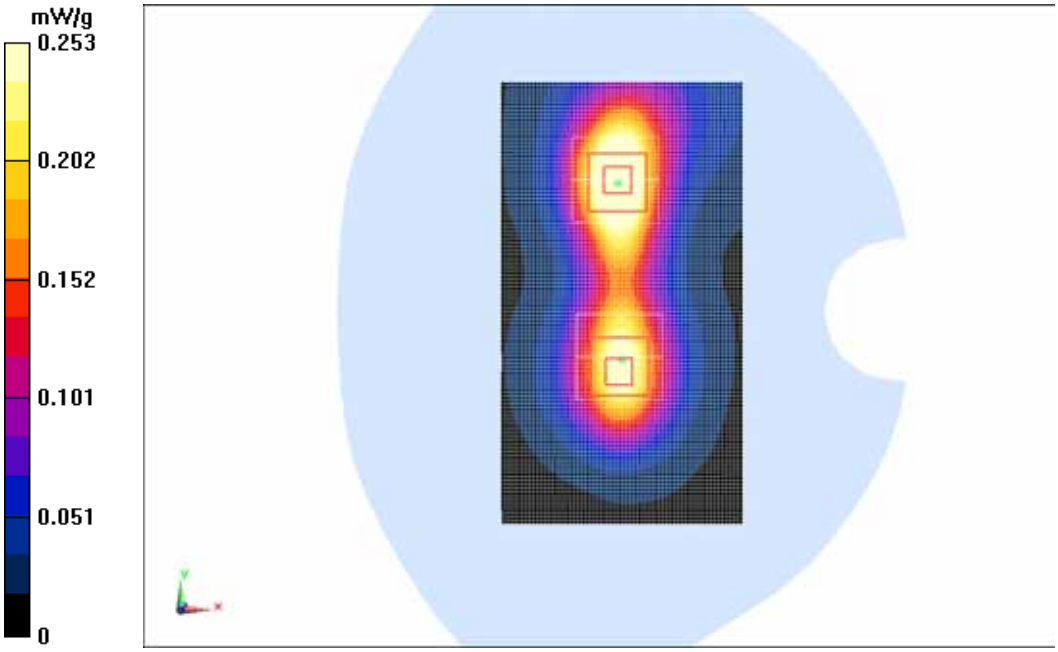


Fig. 45 1900 MHz CH512

1900 Body Bottom Side Low with GPRS

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Bottom Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.709 mW/g

Bottom Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.312 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.0250
SAR(1 g) = 0.616 mW/g; SAR(10 g) = 0.335 mW/g
Maximum value of SAR (measured) = 0.720 mW/g

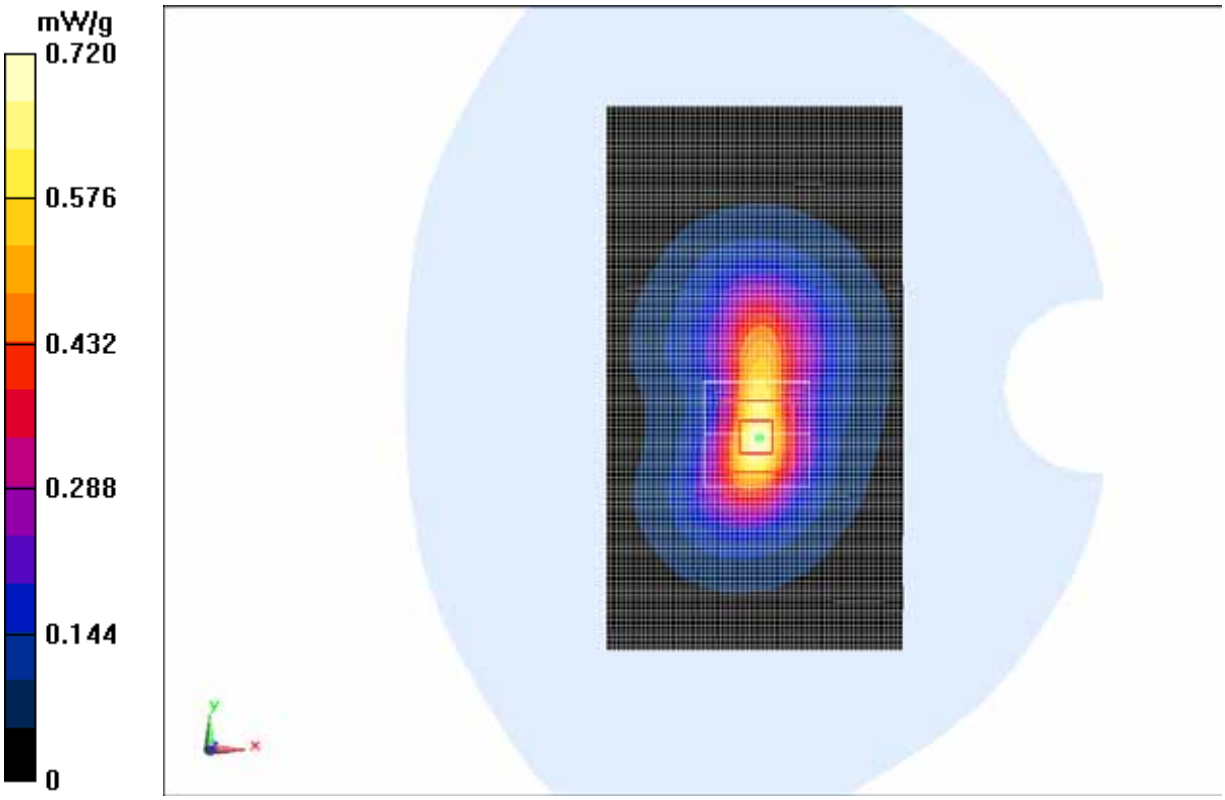


Fig. 46 1900 MHz CH512

1900 Body Towards Ground High with GPRS

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.54 mho/m; εr = 52.2; 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 (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.485 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.290 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.9020
SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.253 mW/g
Maximum value of SAR (measured) = 0.529 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.290 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.8590
SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.270 mW/g

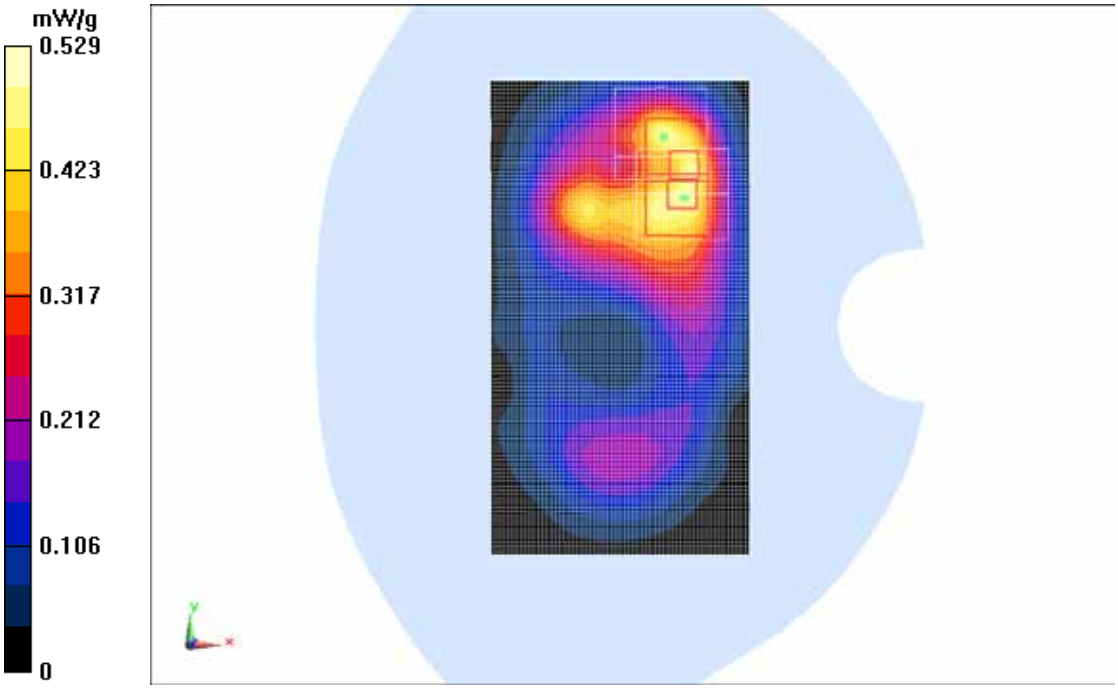


Fig. 47 1900 MHz CH810

1900 Body Towards Ground Middle with GPRS
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.588 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.834 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.0440
SAR(1 g) = 0.586 mW/g; SAR(10 g) = 0.333 mW/g
Maximum value of SAR (measured) = 0.640 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.834 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.0690
SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.277 mW/g
Maximum value of SAR (measured) = 0.622 mW/g

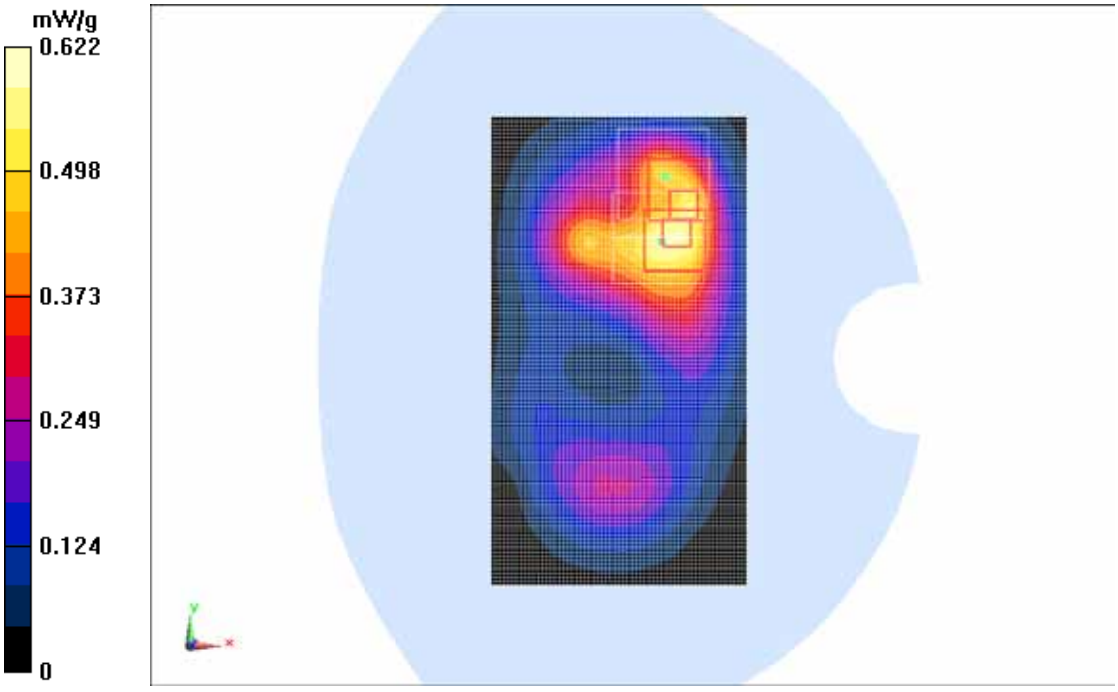


Fig. 48 1900 MHz CH661

1900 Body Towards Ground Low with EGPRS

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.859 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.832 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.3420
SAR(1 g) = 0.774 mW/g; SAR(10 g) = 0.449 mW/g
Maximum value of SAR (measured) = 0.856 mW/g

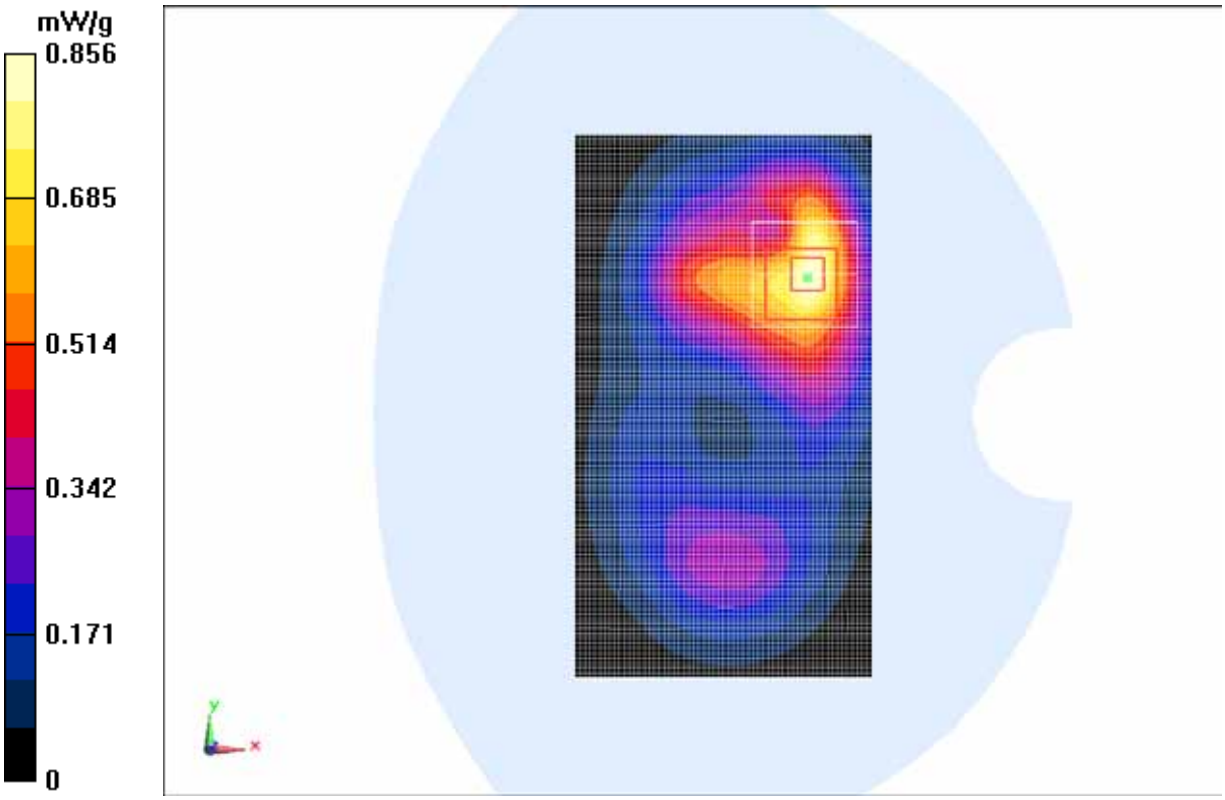


Fig. 49 1900 MHz CH512

1900 Body Towards Ground Low with Headset CCB3160A11C1
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.641 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.990 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.1140
SAR(1 g) = 0.626 mW/g; SAR(10 g) = 0.351 mW/g
Maximum value of SAR (measured) = 0.694 mW/g

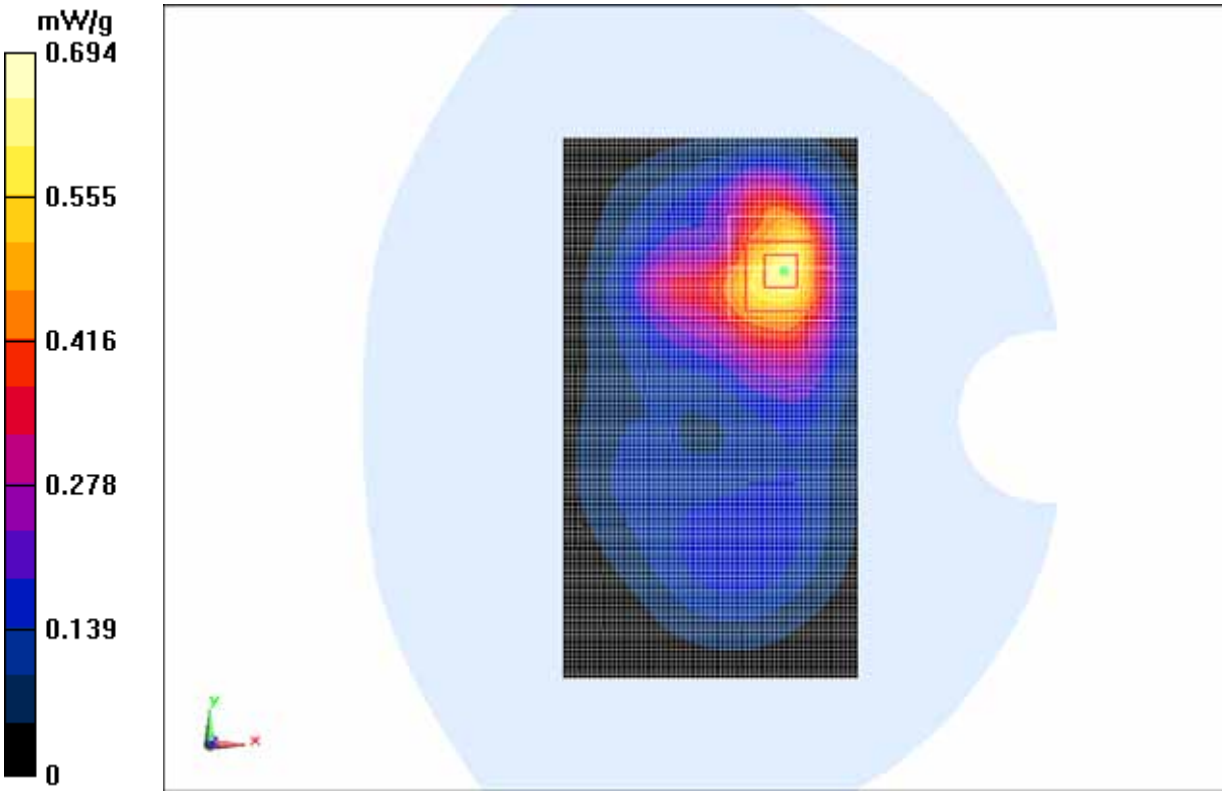


Fig. 50 1900 MHz CH512

1900 Body Towards Ground Low with Headset CCB3160A11C4
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.587 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.777 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.9430
SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.297 mW/g
Maximum value of SAR (measured) = 0.584 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.777 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.7240
SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.458 mW/g

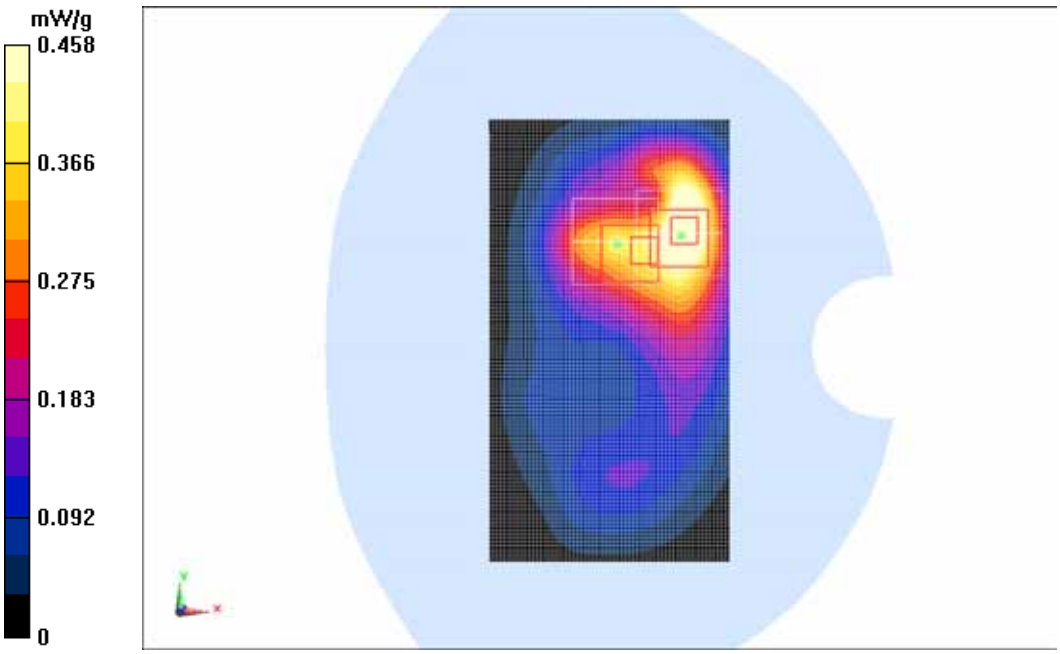


Fig. 51 1900 MHz CH512

1900 Body Towards Ground Low with Headset CCB3001A15C1
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.672 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.180 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.0860
SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.349 mW/g
Maximum value of SAR (measured) = 0.683 mW/g

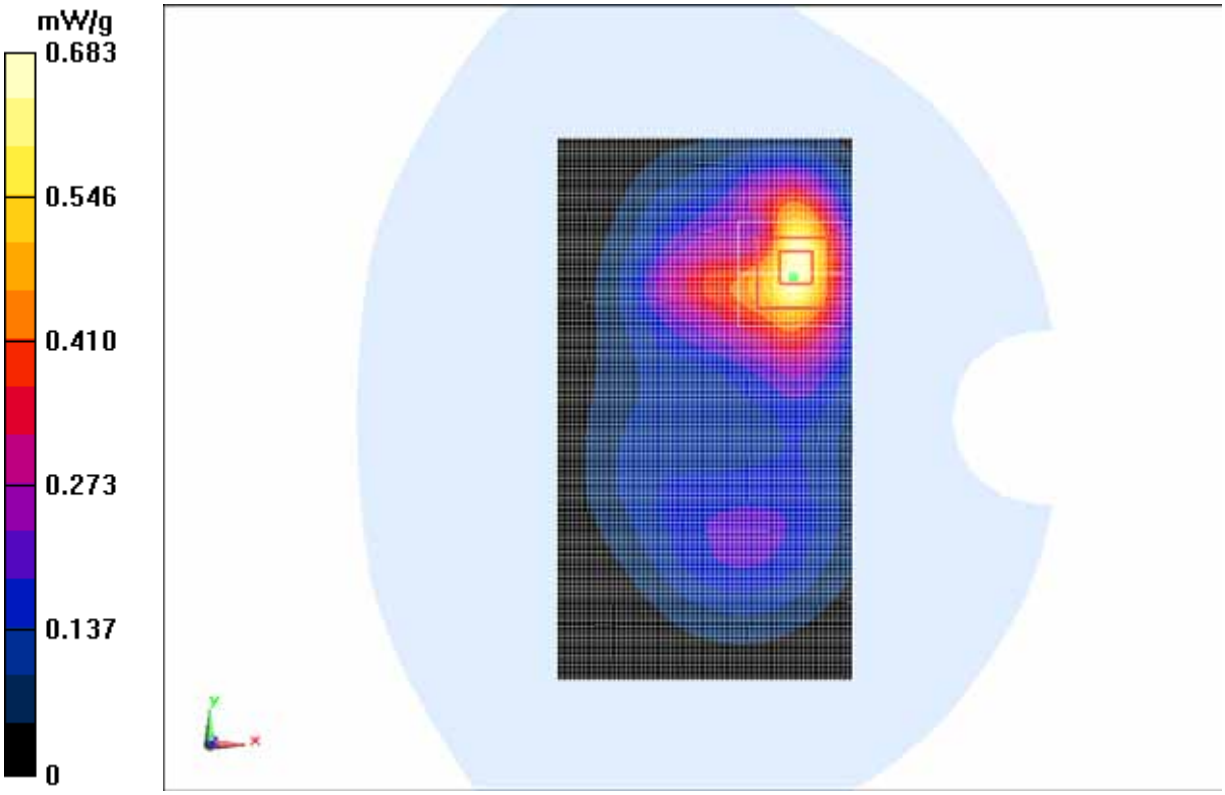


Fig. 52 1900 MHz CH512

WCDMA 850 Left Cheek High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x101x1): 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 = 6.071 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.4820
SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.287 mW/g
Maximum value of SAR (measured) = 0.397 mW/g

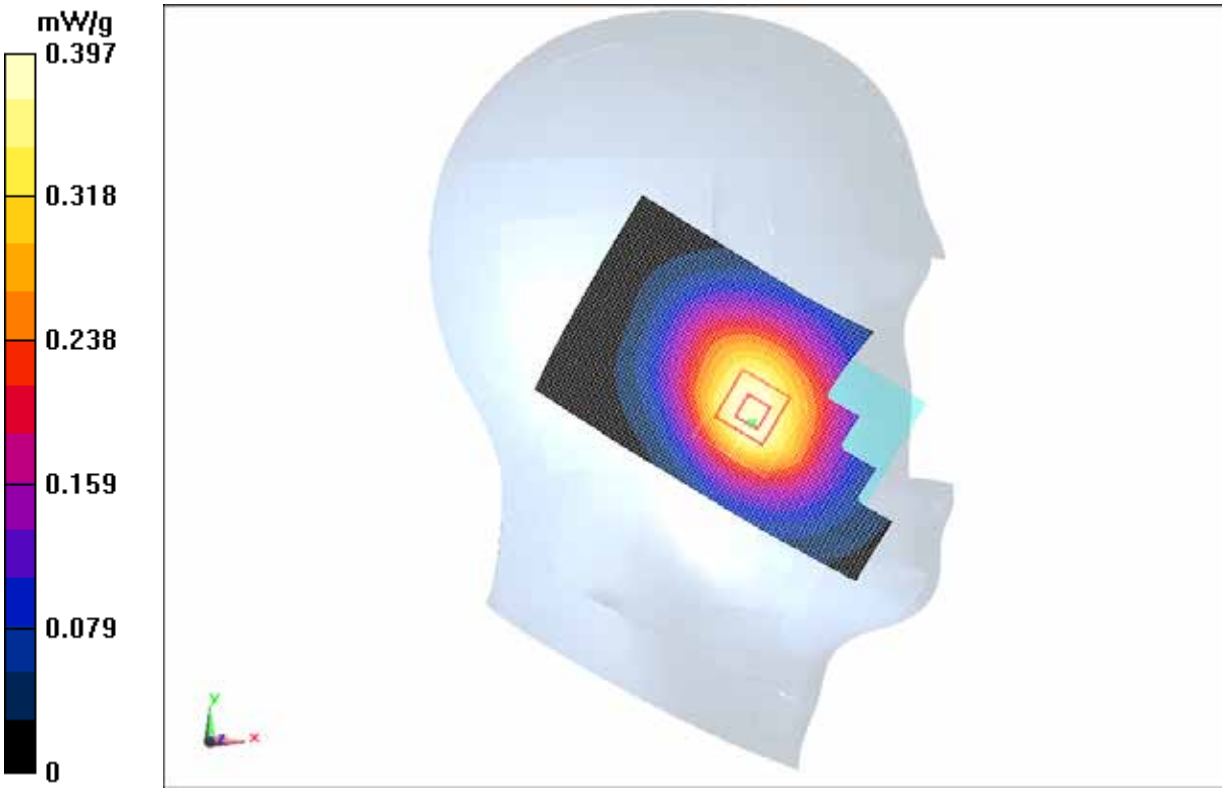


Fig. 53 850MHz CH4233

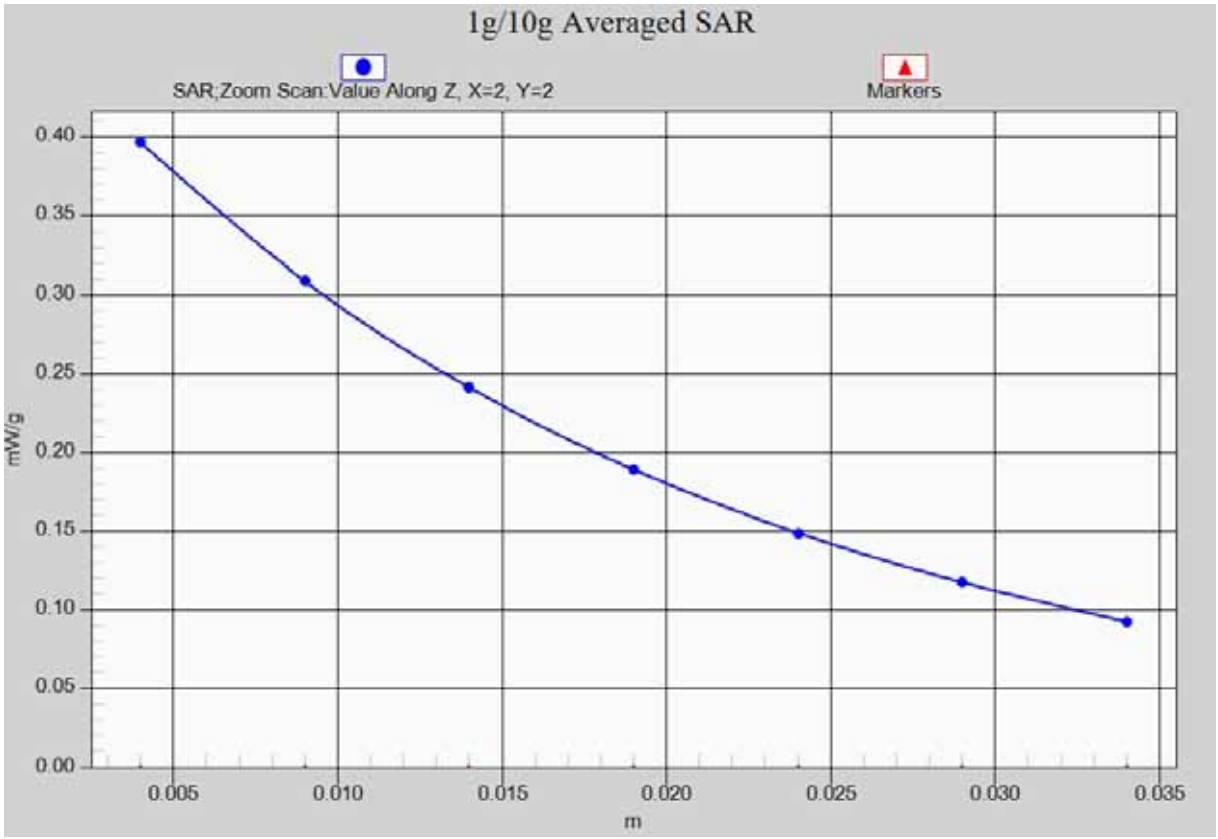


Fig. 53-1 Z-Scan at power reference point (850 MHz CH4233)

WCDMA 850 Left Cheek Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.281 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.786 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.3420
SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.203 mW/g
Maximum value of SAR (measured) = 0.283 mW/g

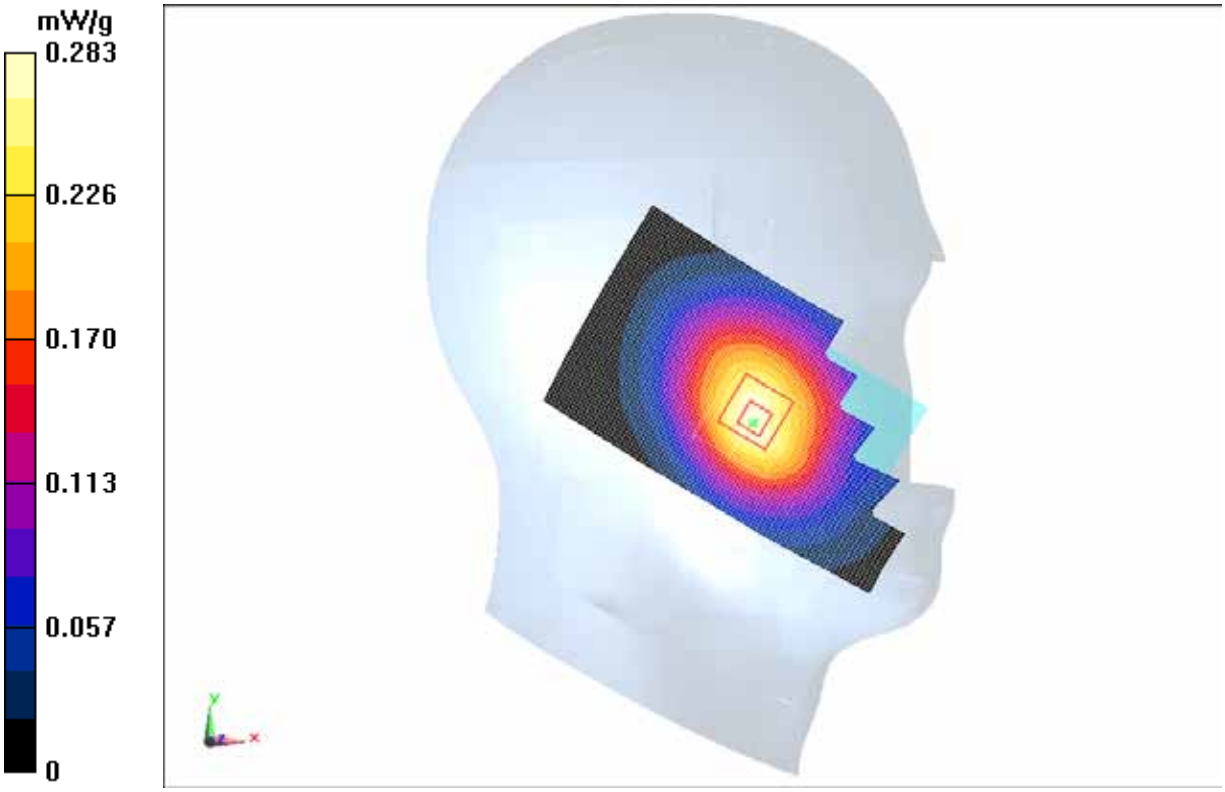


Fig. 54 850 MHz CH4182

WCDMA 850 Left Cheek Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 42.0; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.328 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.931 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.4050
SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.239 mW/g
Maximum value of SAR (measured) = 0.332 mW/g

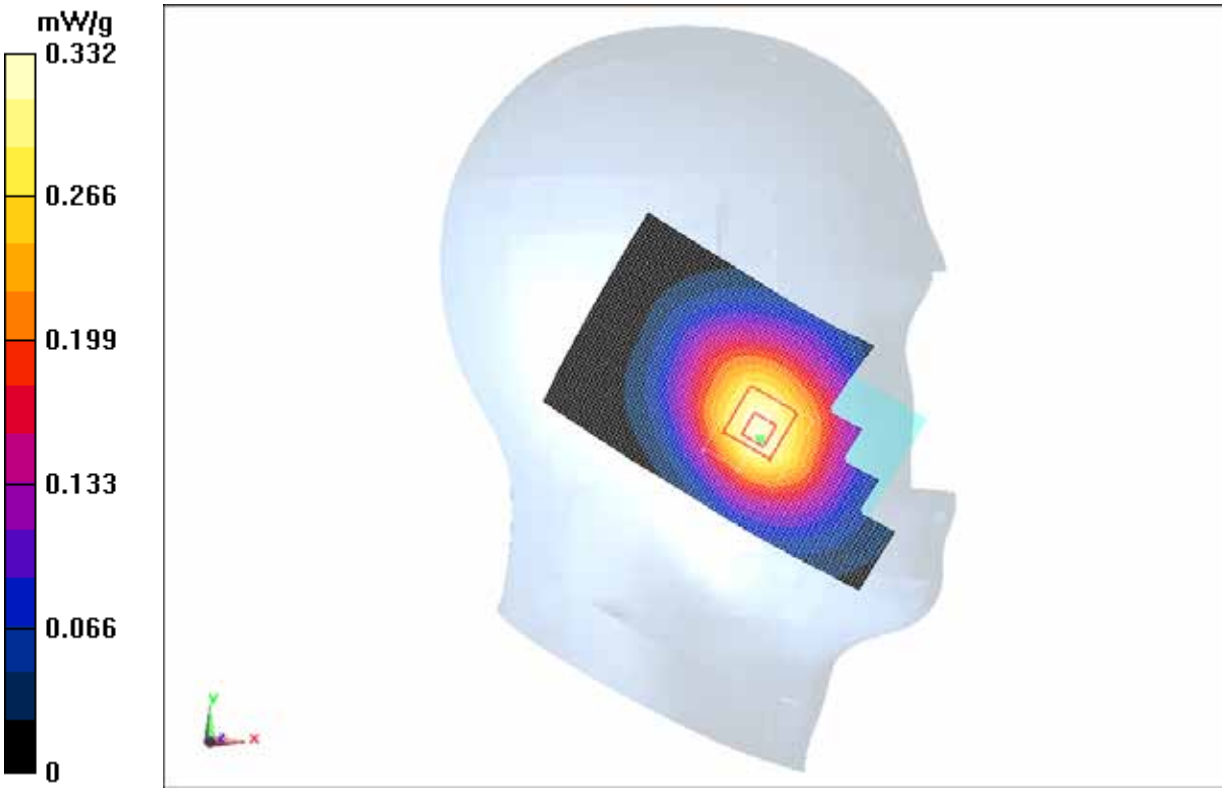


Fig. 55 850 MHz CH4132

WCDMA 850 Left Tilt High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x101x1): 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 = 8.240 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.2510
SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.161 mW/g
Maximum value of SAR (measured) = 0.218 mW/g

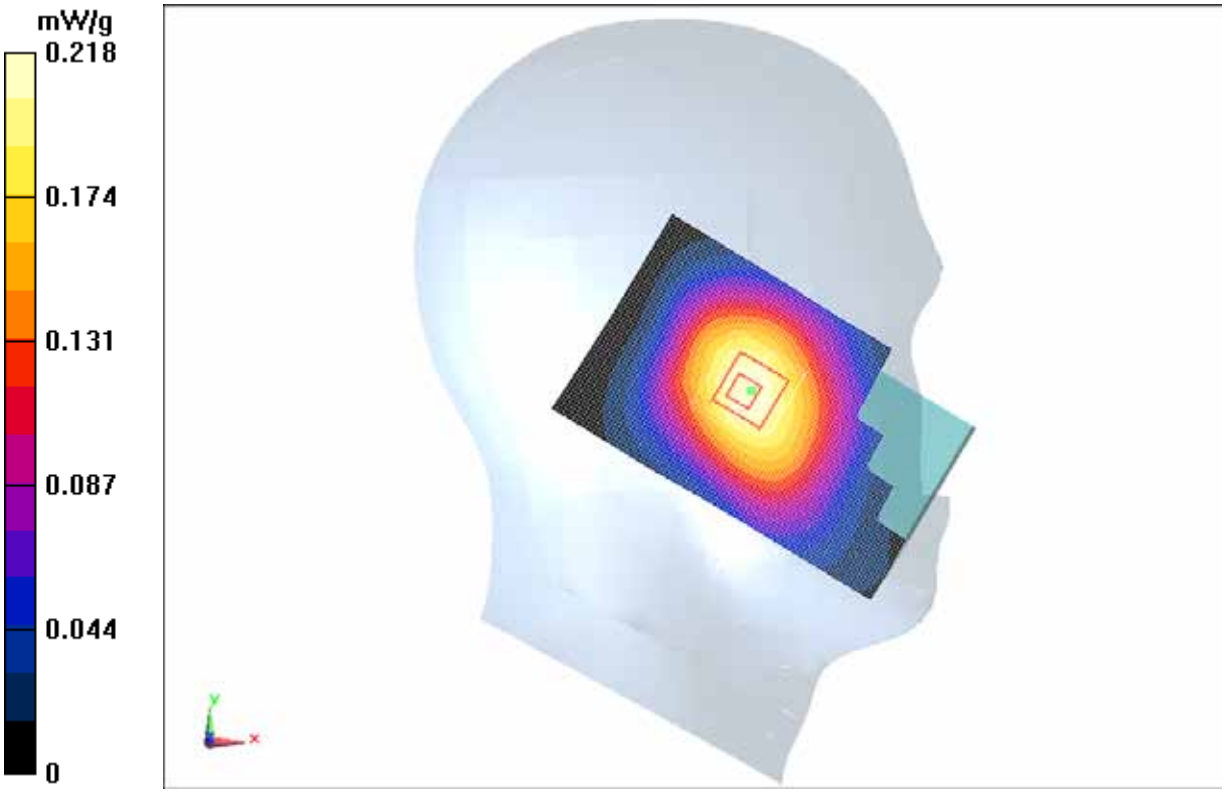


Fig.56 850 MHz CH4233

WCDMA 850 Left Tilt Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.161 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.167 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.1880
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.120 mW/g
Maximum value of SAR (measured) = 0.163 mW/g

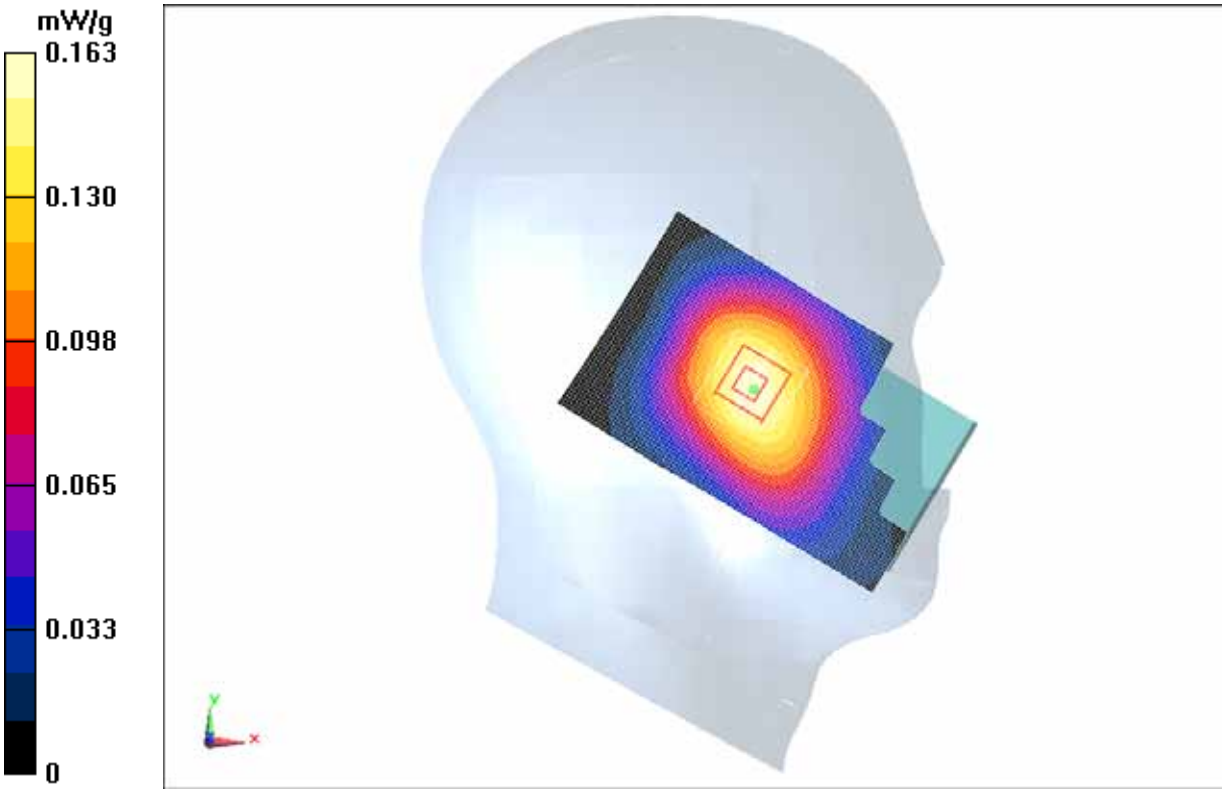


Fig.57 850 MHz CH4182

WCDMA 850 Left Tilt Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 42.0; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.195 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.935 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.2260
SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.144 mW/g
Maximum value of SAR (measured) = 0.196 mW/g

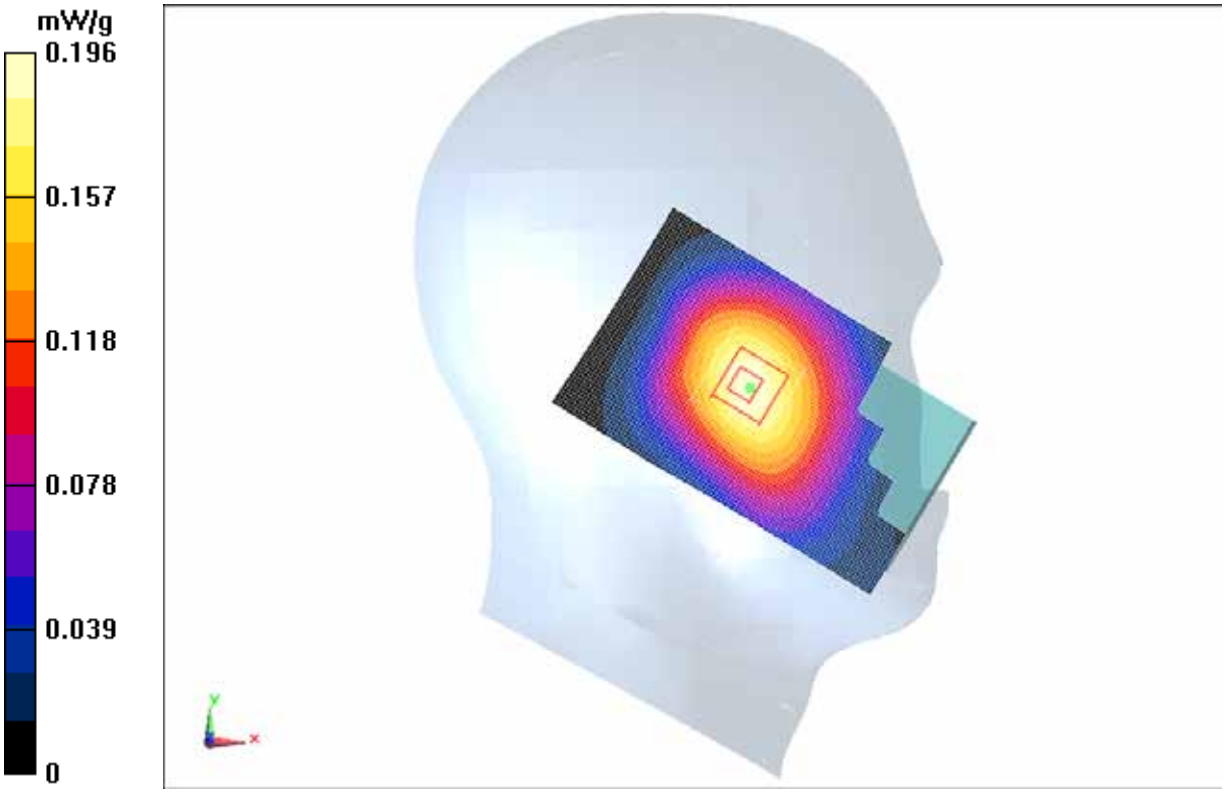


Fig. 58 850 MHz CH4132

WCDMA 850 Right Cheek High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.359 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.138 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.4150
SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.262 mW/g
Maximum value of SAR (measured) = 0.356 mW/g

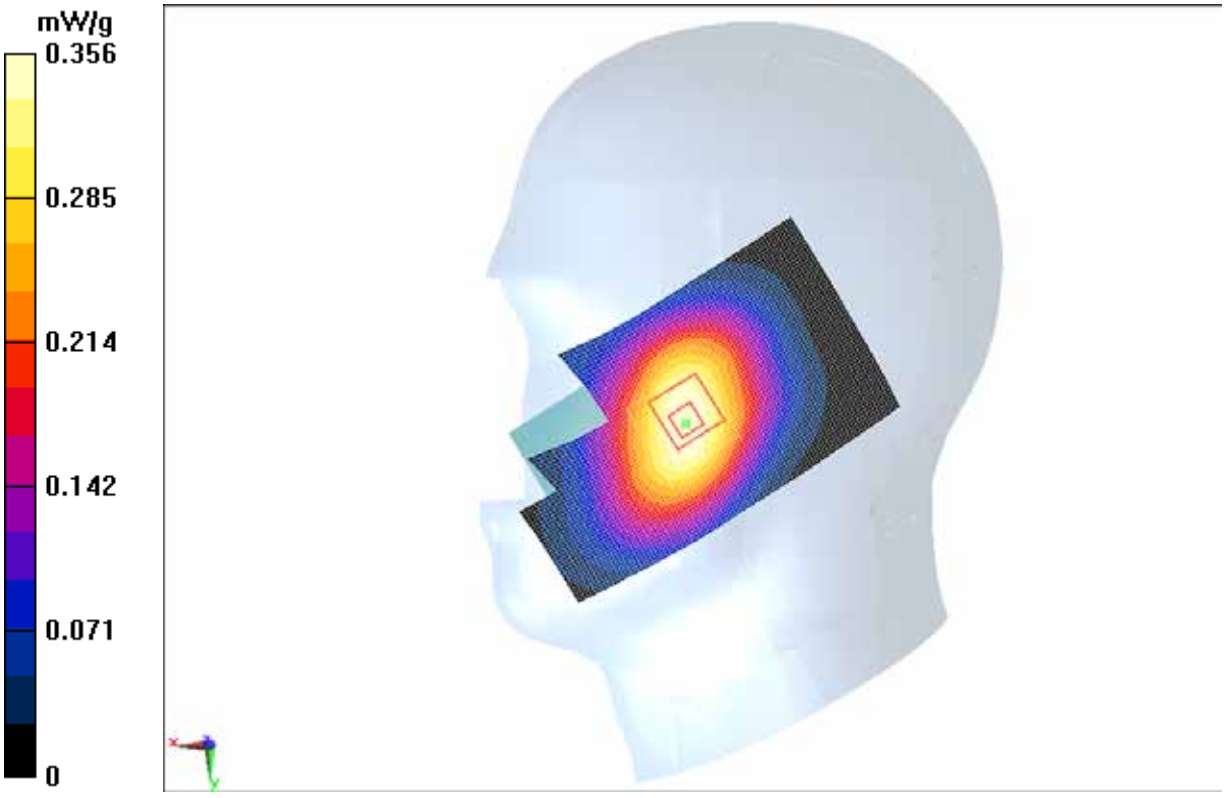


Fig. 59 850 MHz CH4233

WCDMA 850 Right Cheek Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.249 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.075 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.2960
SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.185 mW/g
Maximum value of SAR (measured) = 0.251 mW/g

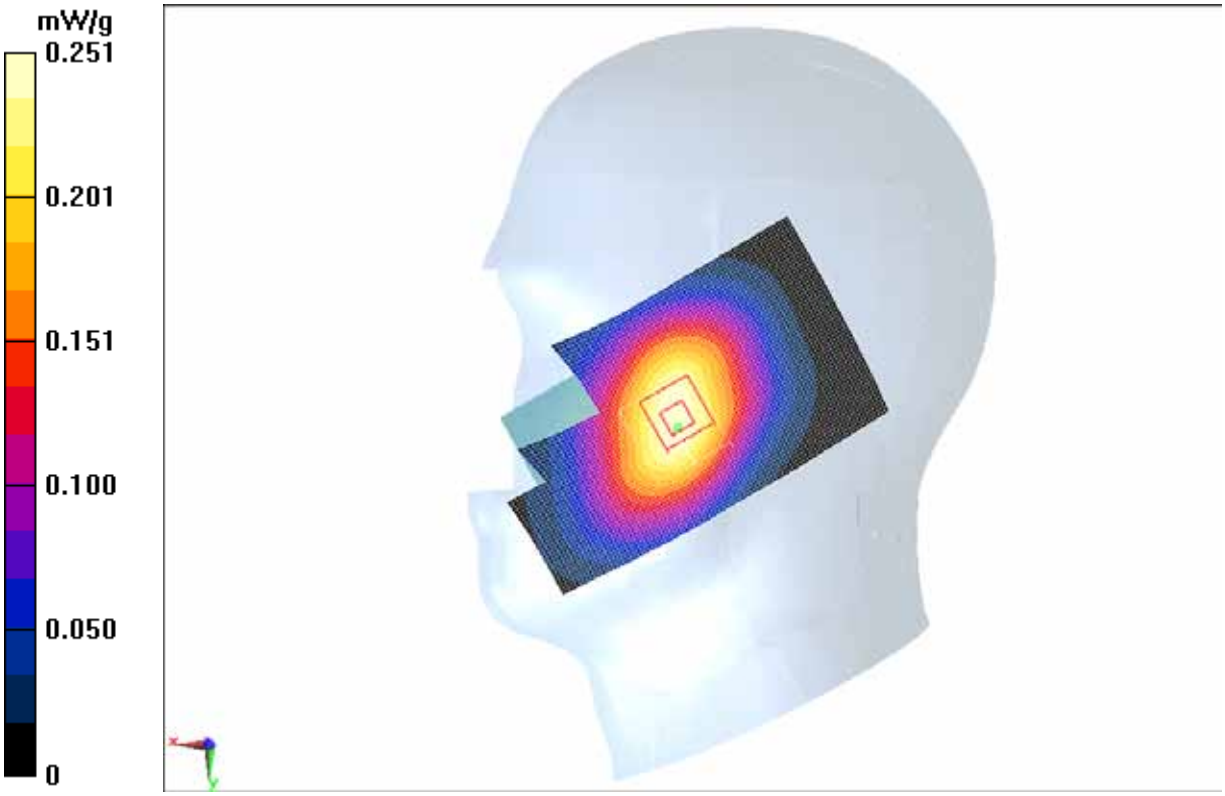


Fig. 60 850 MHz CH4182

WCDMA 850 Right Cheek Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 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) = 0.298 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.667 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.3500
SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.296 mW/g

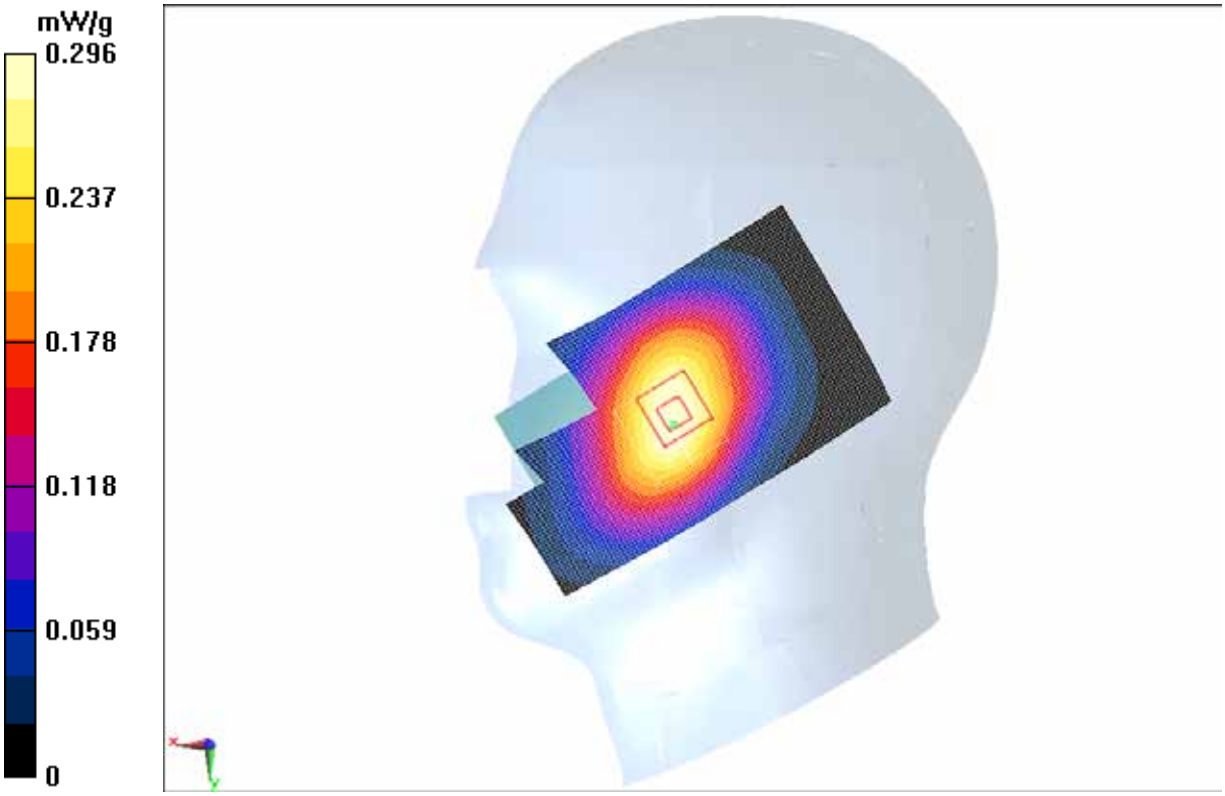


Fig. 61 850 MHz CH4132

WCDMA 850 Right Tilt High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.89 mho/m; εr = 41.7; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.247 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.964 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.2860
SAR(1 g) = 0.233 mW/g; SAR(10 g) = 0.177 mW/g
Maximum value of SAR (measured) = 0.245 mW/g

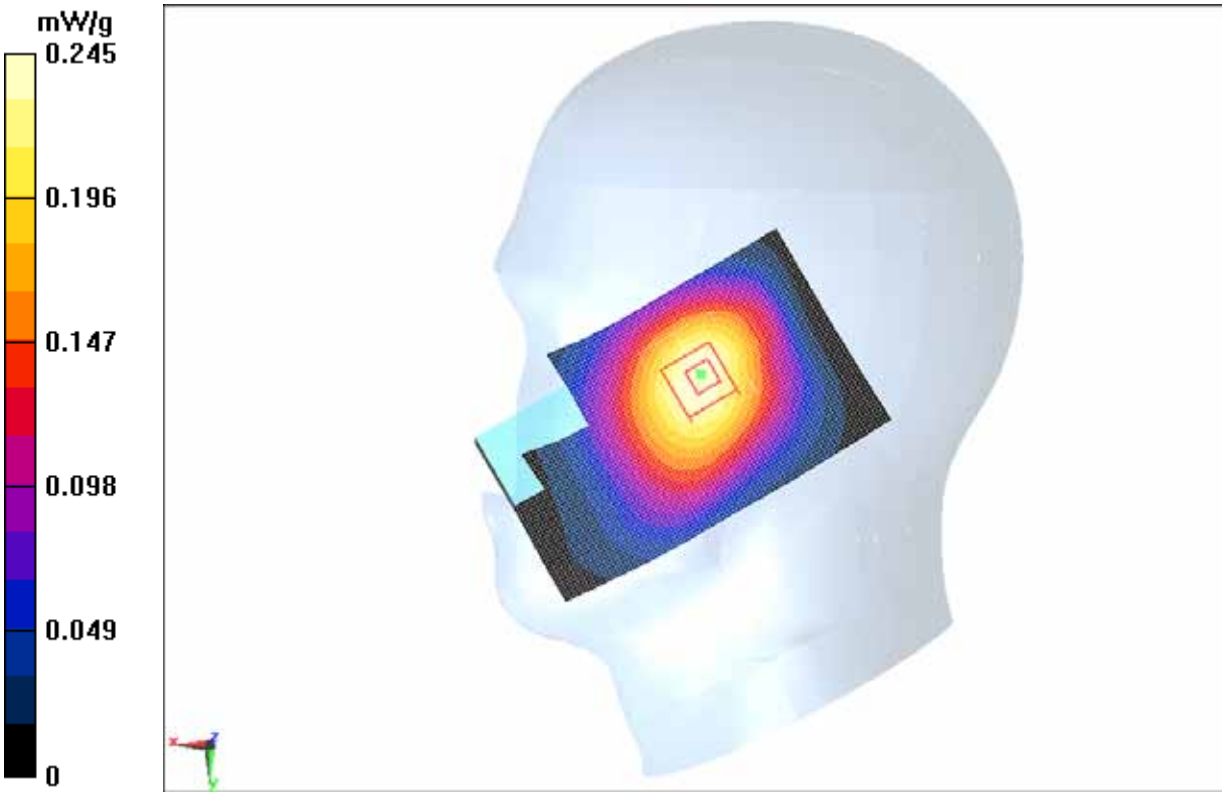


Fig.62 850 MHz CH4233

WCDMA 850 Right Tilt Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.89 mho/m; εr = 41.8; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.169 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.359 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.1990
SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.125 mW/g
Maximum value of SAR (measured) = 0.171 mW/g

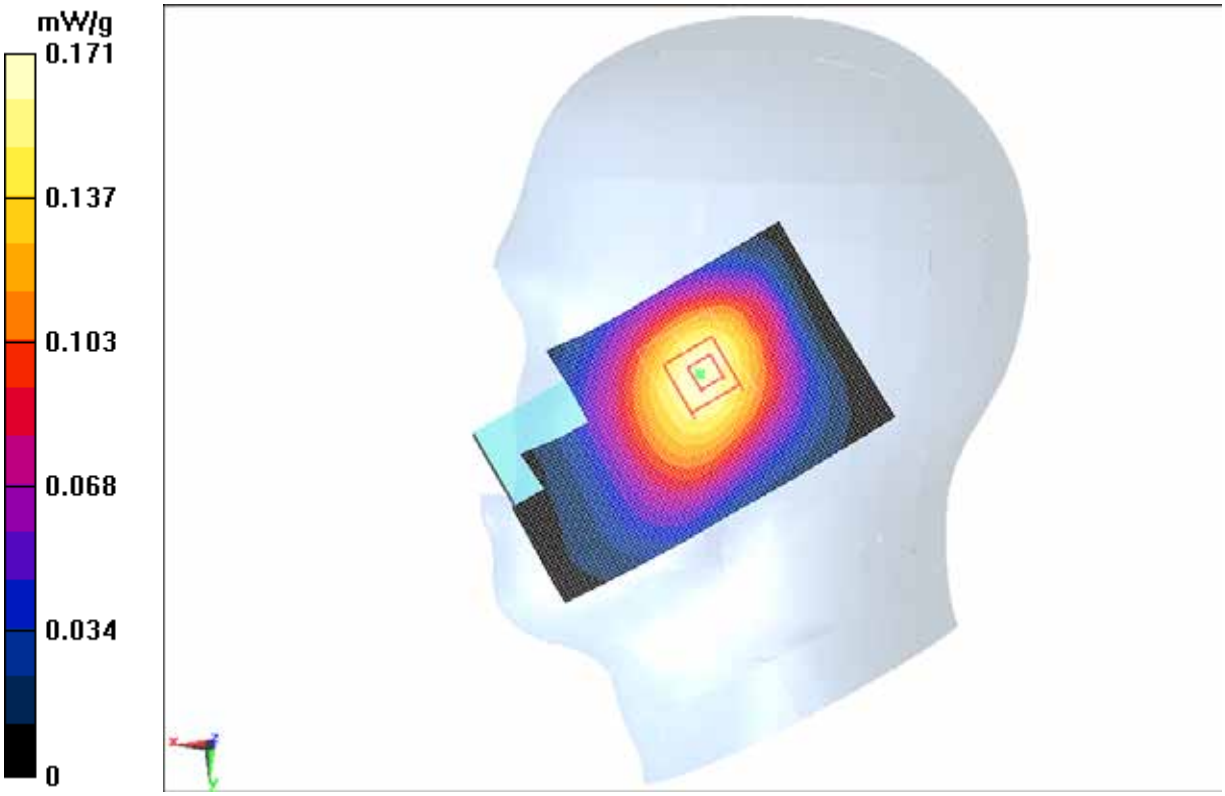


Fig.63 850 MHz CH4182

WCDMA 850 Right Tilt Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.87 mho/m; εr = 42.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 826.4 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) = 0.202 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.311 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.2370
SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.150 mW/g
Maximum value of SAR (measured) = 0.205 mW/g

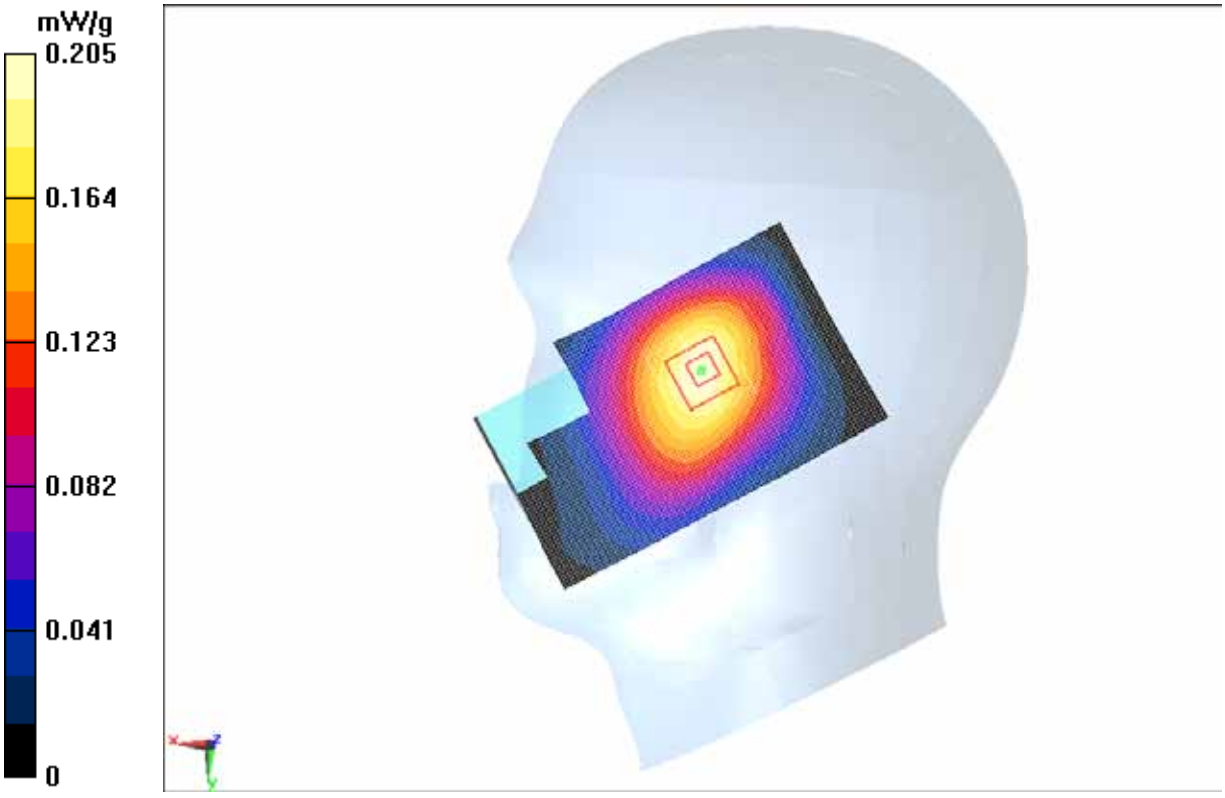


Fig. 64 850 MHz CH4132

WCDMA 850 Body Towards Ground High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.95 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.914 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.086 V/m; Power Drift = 0.0046 dB
Peak SAR (extrapolated) = 1.1140
SAR(1 g) = 0.861 mW/g; SAR(10 g) = 0.641 mW/g
Maximum value of SAR (measured) = 0.914 mW/g

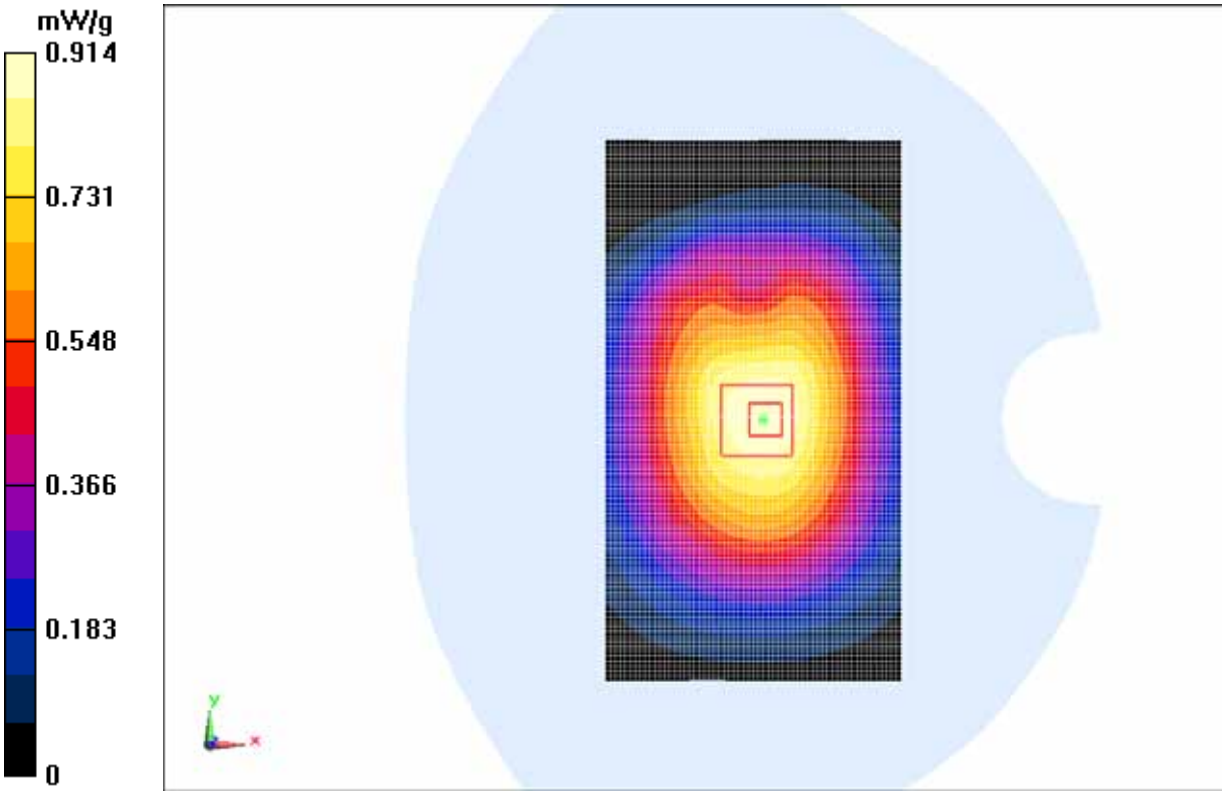


Fig. 65 850 MHz CH4233

WCDMA 850 Body Towards Phantom High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.95 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.664 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.976 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.7900
SAR(1 g) = 0.628 mW/g; SAR(10 g) = 0.476 mW/g
Maximum value of SAR (measured) = 0.660 mW/g

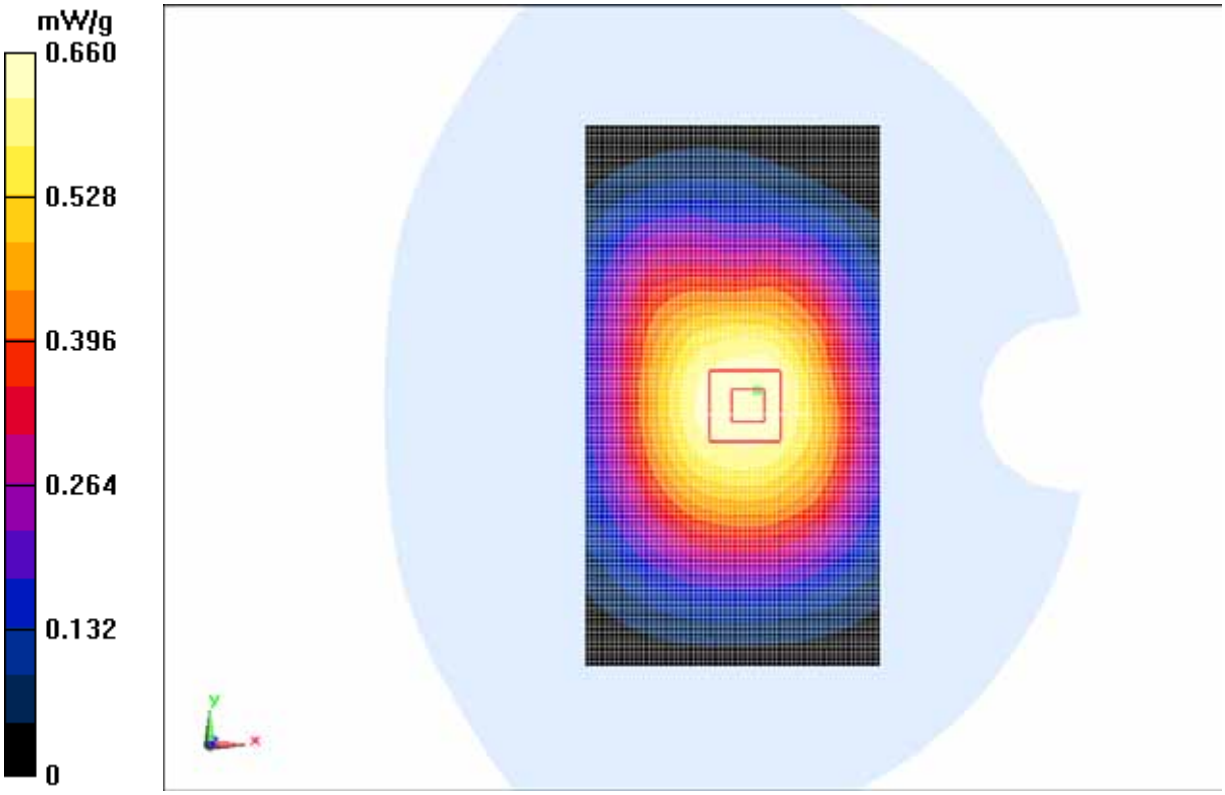


Fig. 66 850 MHz CH4233

WCDMA 850 Body Left Side High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.95 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Left Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.781 mW/g

Left Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.582 V/m; Power Drift = 0.0037 dB
Peak SAR (extrapolated) = 0.9750
SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.490 mW/g
Maximum value of SAR (measured) = 0.761 mW/g

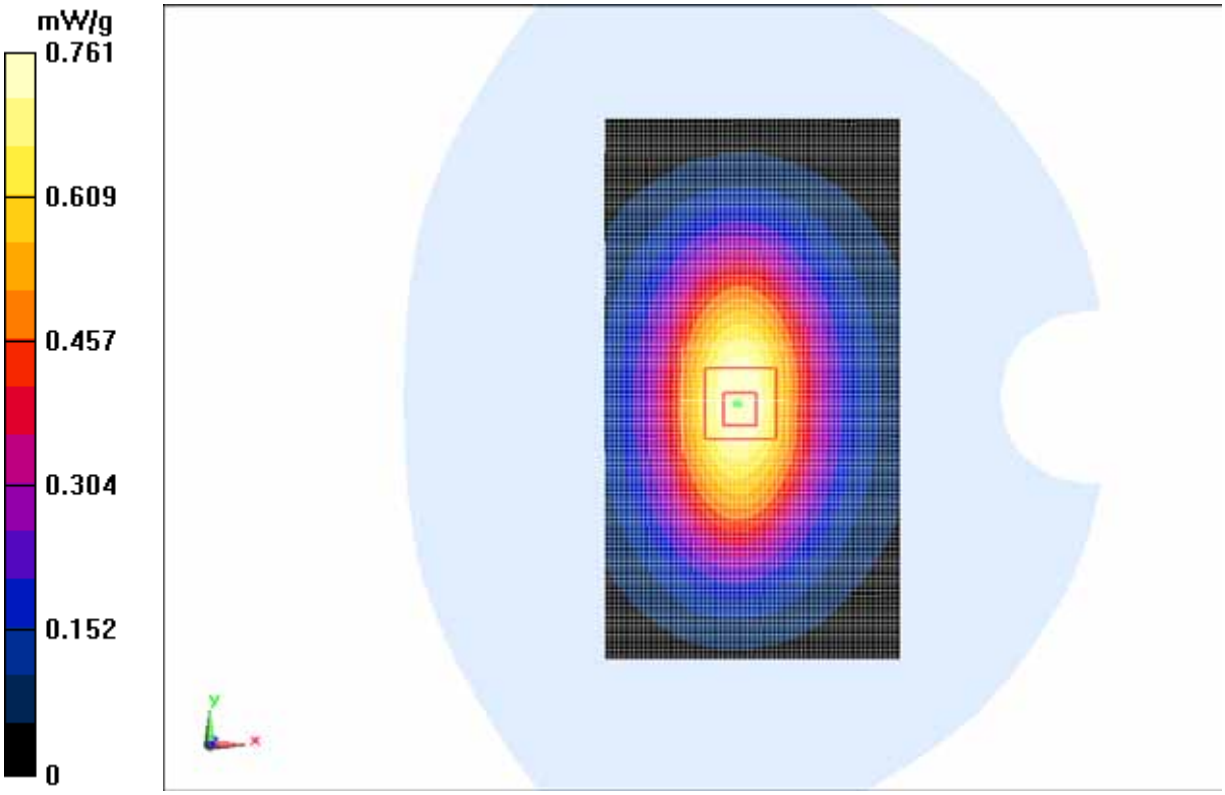


Fig. 67 850 MHz CH4233

WCDMA 850 Body Right Side High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.95 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Right Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.756 mW/g

Right Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.448 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.9880
SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.479 mW/g
Maximum value of SAR (measured) = 0.747 mW/g

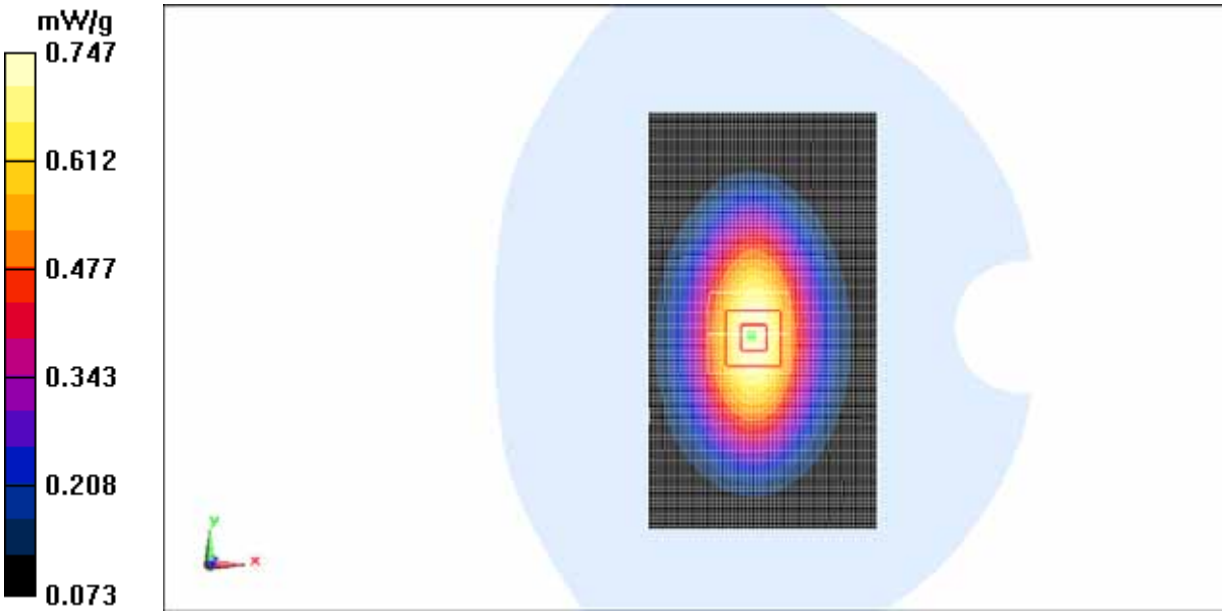


Fig. 68 850 MHz CH4233

WCDMA 850 Body Bottom Side High
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.95 mho/m; εr = 54.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Bottom Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.061 mW/g

Bottom Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.007 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.1000
SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.062 mW/g

Bottom Side High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.007 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.1180
SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.030 mW/g
Maximum value of SAR (measured) = 0.058 mW/g

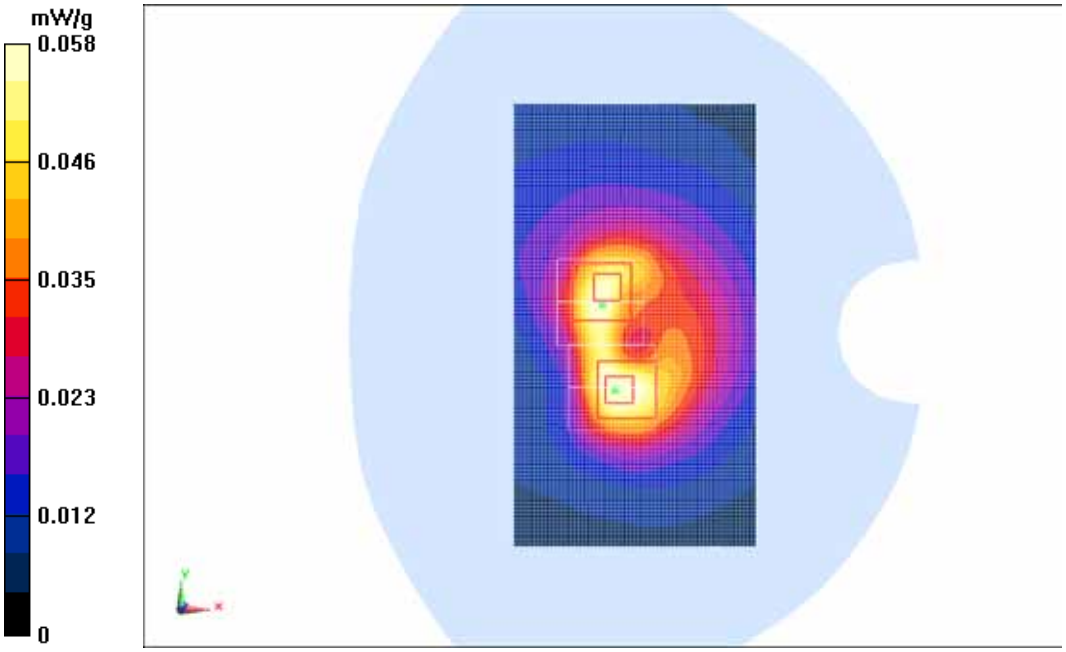


Fig. 69 850 MHz CH4233

WCDMA 850 Body Towards Ground Middle
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.96 mho/m; εr = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0 °C Liquid Temperature: 22.5°C
Communication System: WCDMA 850 Frequency: 836.4 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.865 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.641 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.0320
SAR(1 g) = 0.821 mW/g; SAR(10 g) = 0.616 mW/g
Maximum value of SAR (measured) = 0.863 mW/g

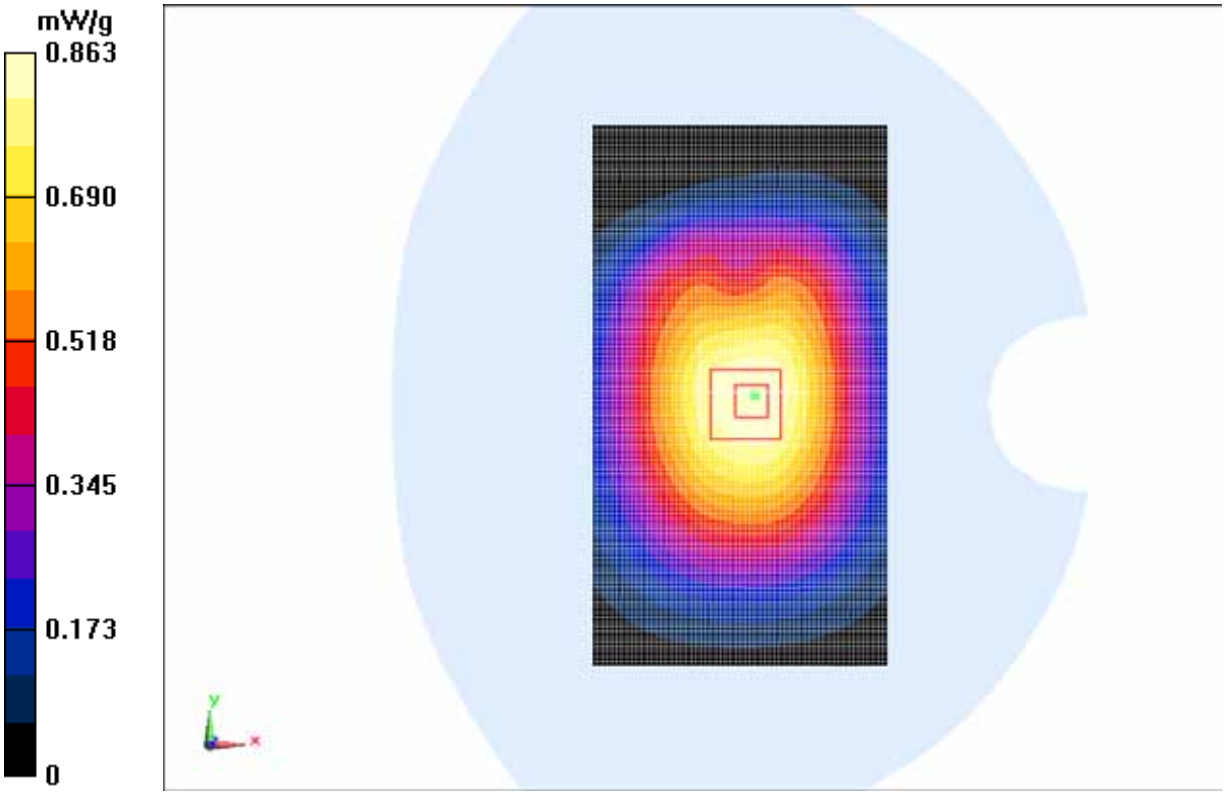


Fig. 70 850 MHz CH4182

WCDMA 850 Body Towards Ground Low
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.95 mho/m; εr = 55.3; 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(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.930 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.727 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.1030
SAR(1 g) = 0.875 mW/g; SAR(10 g) = 0.657 mW/g
Maximum value of SAR (measured) = 0.917 mW/g

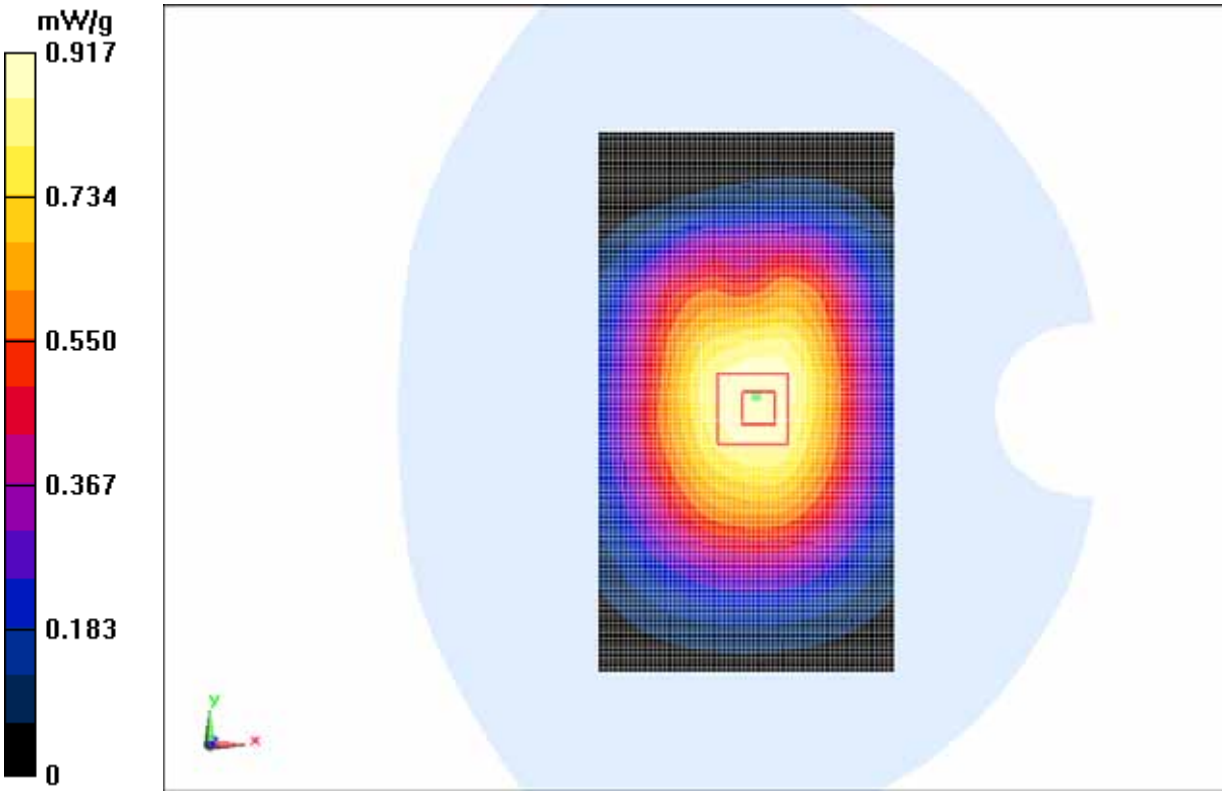


Fig. 71 850 MHz CH4132

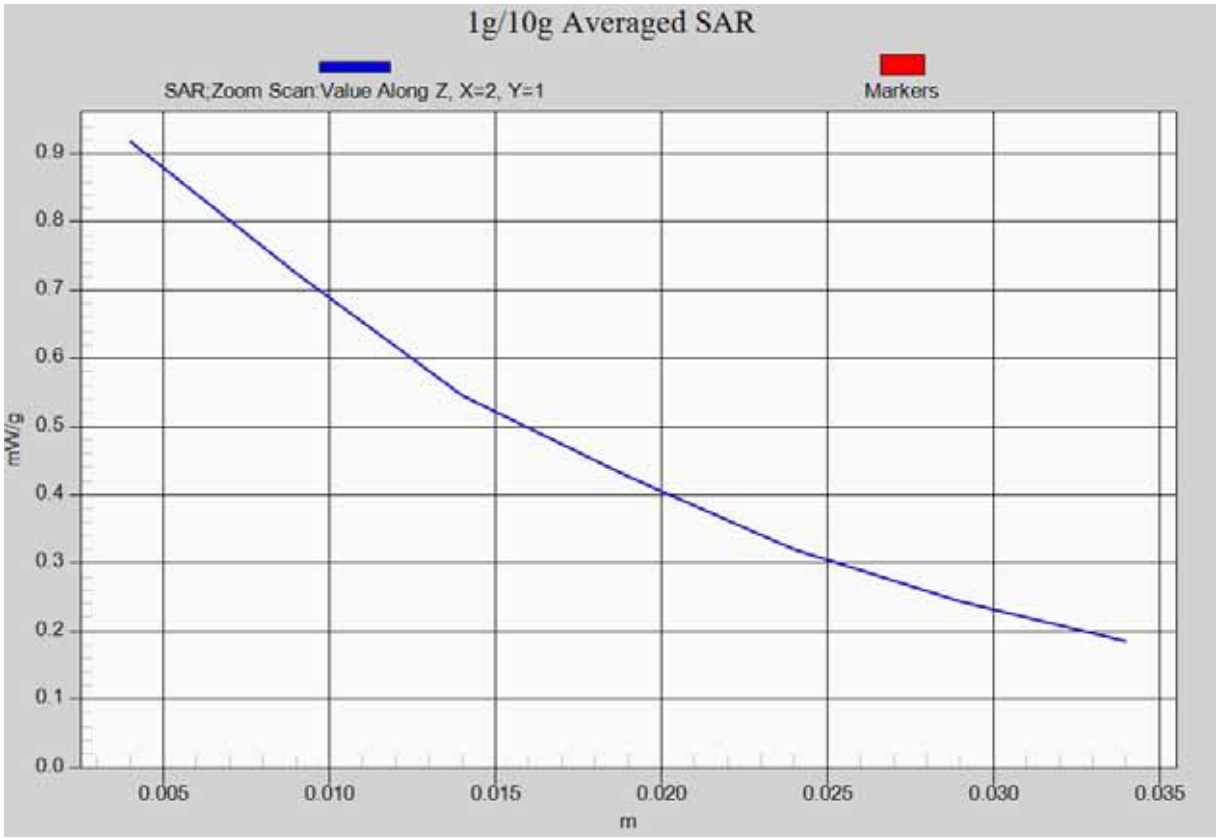


Fig. 71-1 Z-Scan at power reference point (850 MHz CH4132)

WCDMA 850 Body Towards Ground Low with Headset CCB3160A11C1
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.95 mho/m; εr = 55.3; 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(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.750 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.223 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.9250
SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.531 mW/g
Maximum value of SAR (measured) = 0.754 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.223 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.9130
SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.368 mW/g
Maximum value of SAR (measured) = 0.685 mW/g

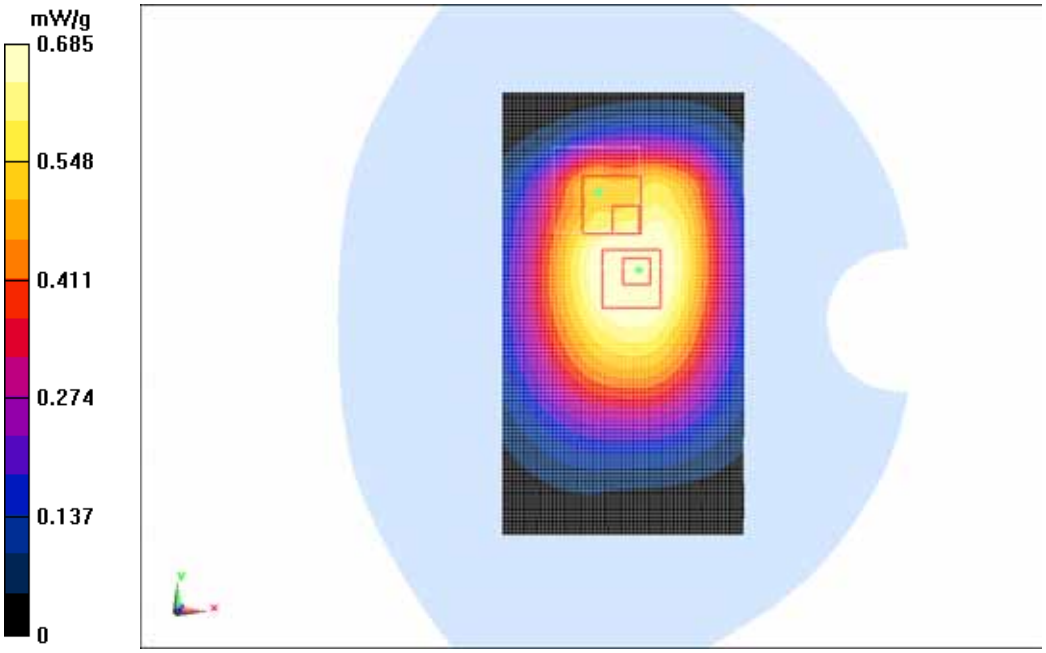


Fig. 72 850 MHz CH4132

WCDMA 850 Body Towards Ground Low with Headset CCB3160A11C4
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.95 mho/m; εr = 55.3; 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(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.672 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.499 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.8290
SAR(1 g) = 0.639 mW/g; SAR(10 g) = 0.472 mW/g
Maximum value of SAR (measured) = 0.675 mW/g

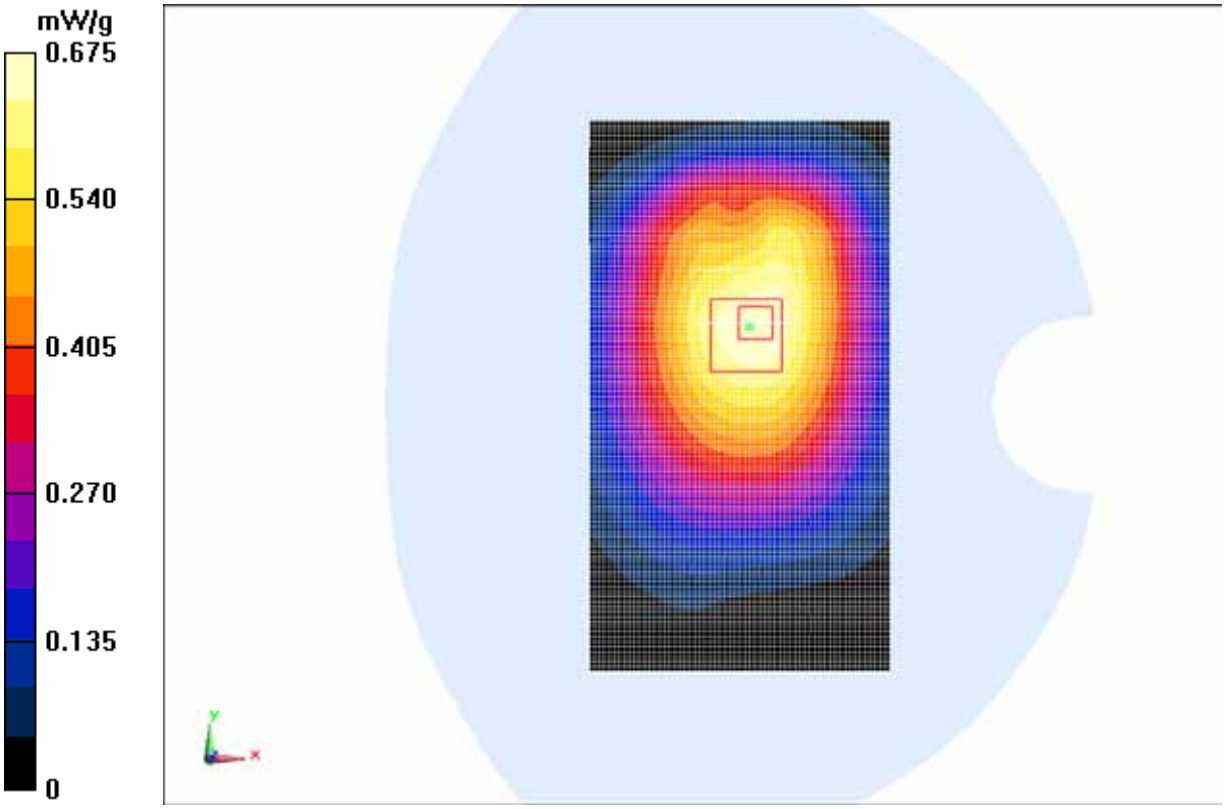


Fig. 73 850 MHz CH4132

WCDMA 850 Body Towards Ground Low with Headset CCB3001A15C1
Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.95 mho/m; εr = 55.3; 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(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.474 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.554 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.7090
SAR(1 g) = 0.424 mW/g; SAR(10 g) = 0.272 mW/g
Maximum value of SAR (measured) = 0.456 mW/g

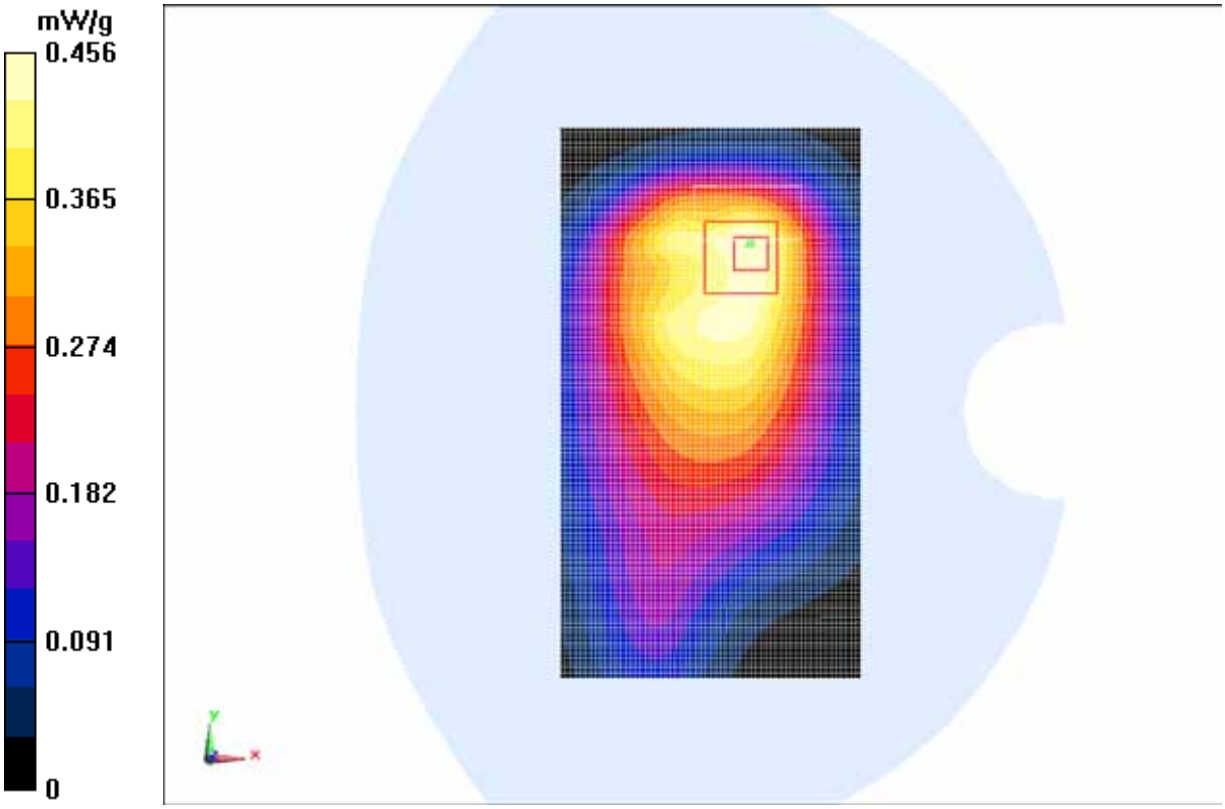


Fig. 74 850 MHz CH4132

WCDMA 1900 Left Cheek High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.41 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.507 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.637 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.7210
SAR(1 g) = 0.470 mW/g; SAR(10 g) = 0.295 mW/g
Maximum value of SAR (measured) = 0.513 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.637 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.5330
SAR(1 g) = 0.360 mW/g; SAR(10 g) = 0.231 mW/g
Maximum value of SAR (measured) = 0.393 mW/g

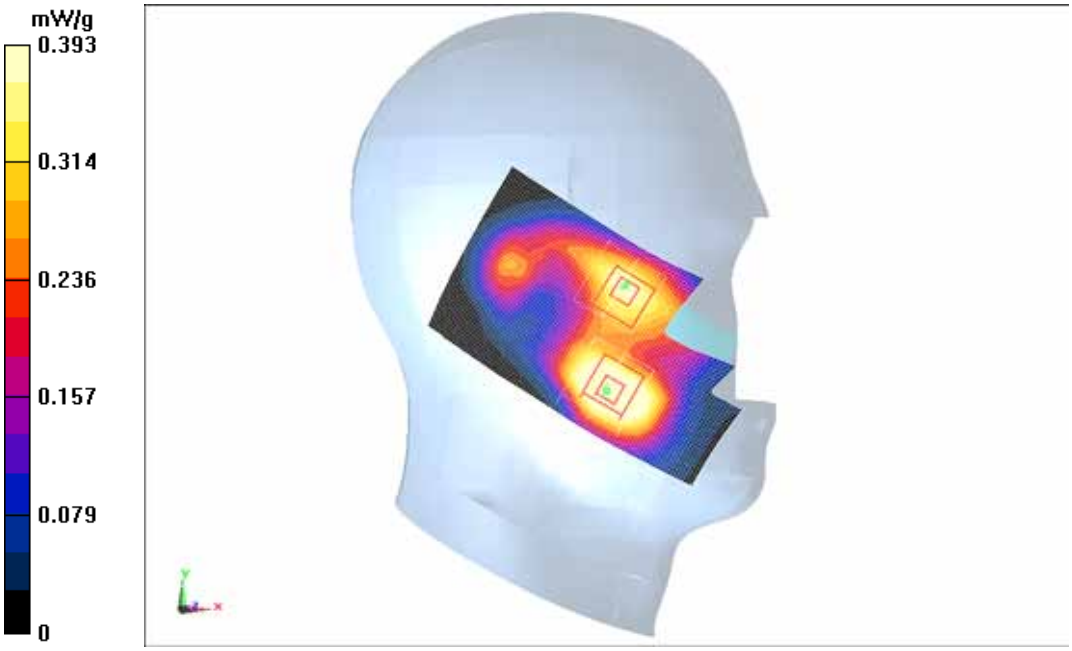


Fig. 75 1900 MHz CH9538

WCDMA 1900 Left Cheek Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.509 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.411 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.7080
SAR(1 g) = 0.477 mW/g; SAR(10 g) = 0.300 mW/g
Maximum value of SAR (measured) = 0.523 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.411 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.5230
SAR(1 g) = 0.360 mW/g; SAR(10 g) = 0.234 mW/g
Maximum value of SAR (measured) = 0.396 mW/g

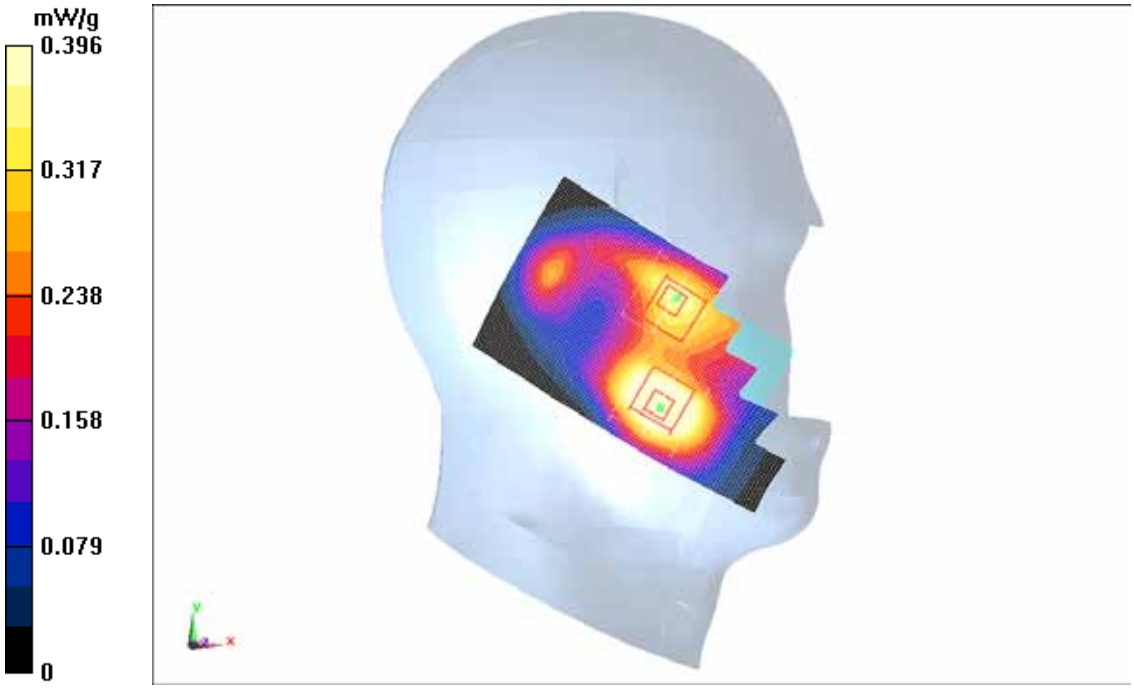


Fig. 76 1900 MHz CH9400

WCDMA 1900 Left Cheek Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.35 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.501 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.165 V/m; Power Drift = -0.0031 dB
Peak SAR (extrapolated) = 0.6940
SAR(1 g) = 0.470 mW/g; SAR(10 g) = 0.300 mW/g
Maximum value of SAR (measured) = 0.507 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.165 V/m; Power Drift = -0.0031 dB
Peak SAR (extrapolated) = 0.4860
SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.225 mW/g
Maximum value of SAR (measured) = 0.372 mW/g

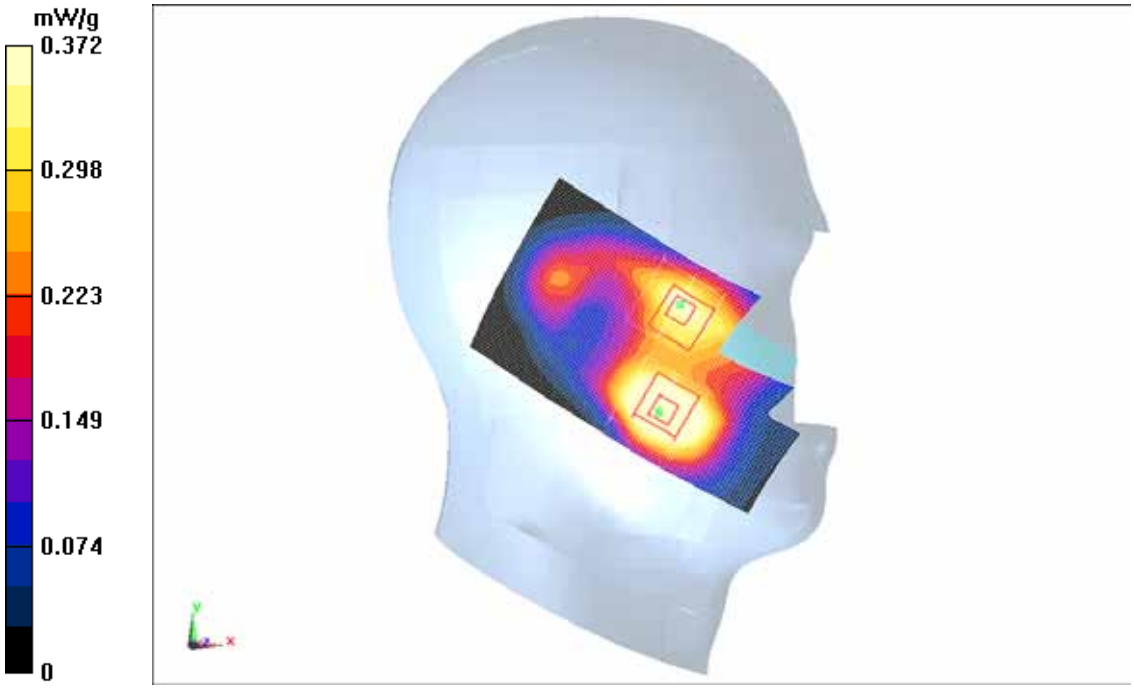


Fig. 77 1900 MHz CH9262

WCDMA 1900 Left Tilt High

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.41 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.395 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.914 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.6110
SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.199 mW/g
Maximum value of SAR (measured) = 0.402 mW/g

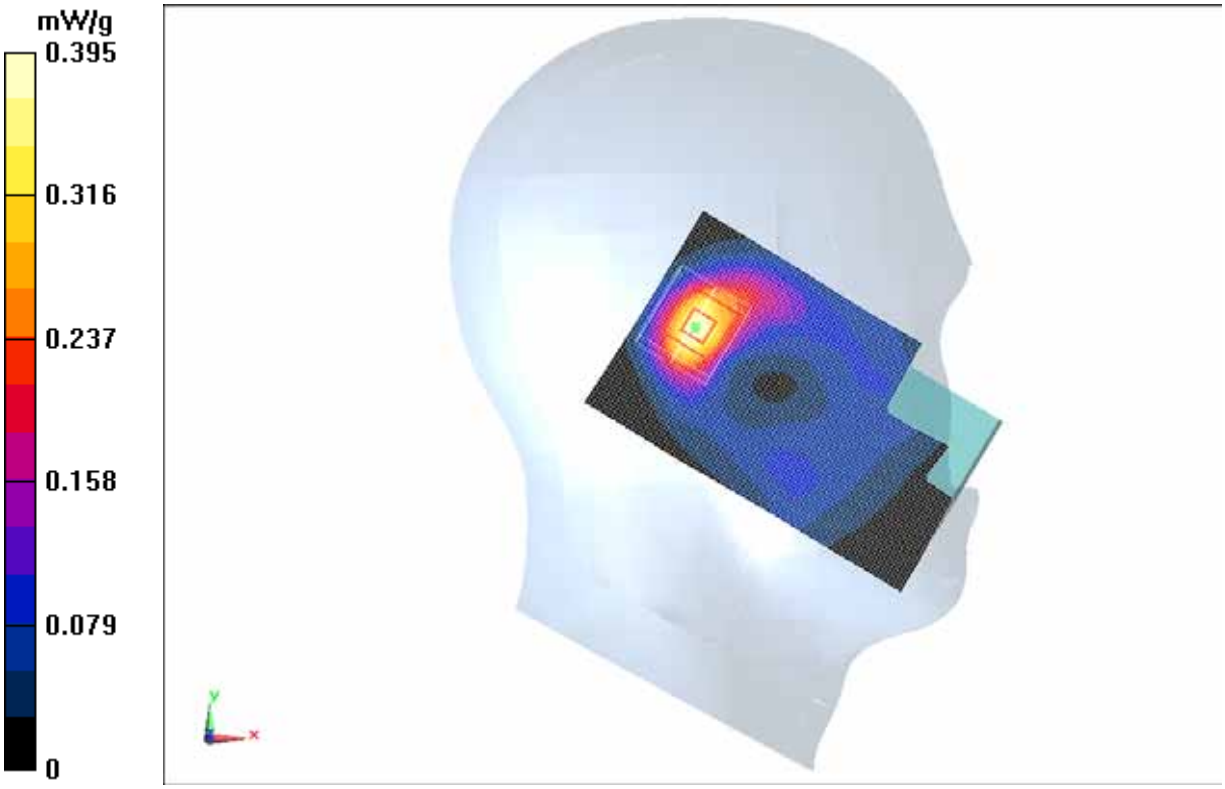


Fig.78 1900 MHz CH9538

WCDMA 1900 Left Tilt Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.393 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.205 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.5980
SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.204 mW/g
Maximum value of SAR (measured) = 0.405 mW/g

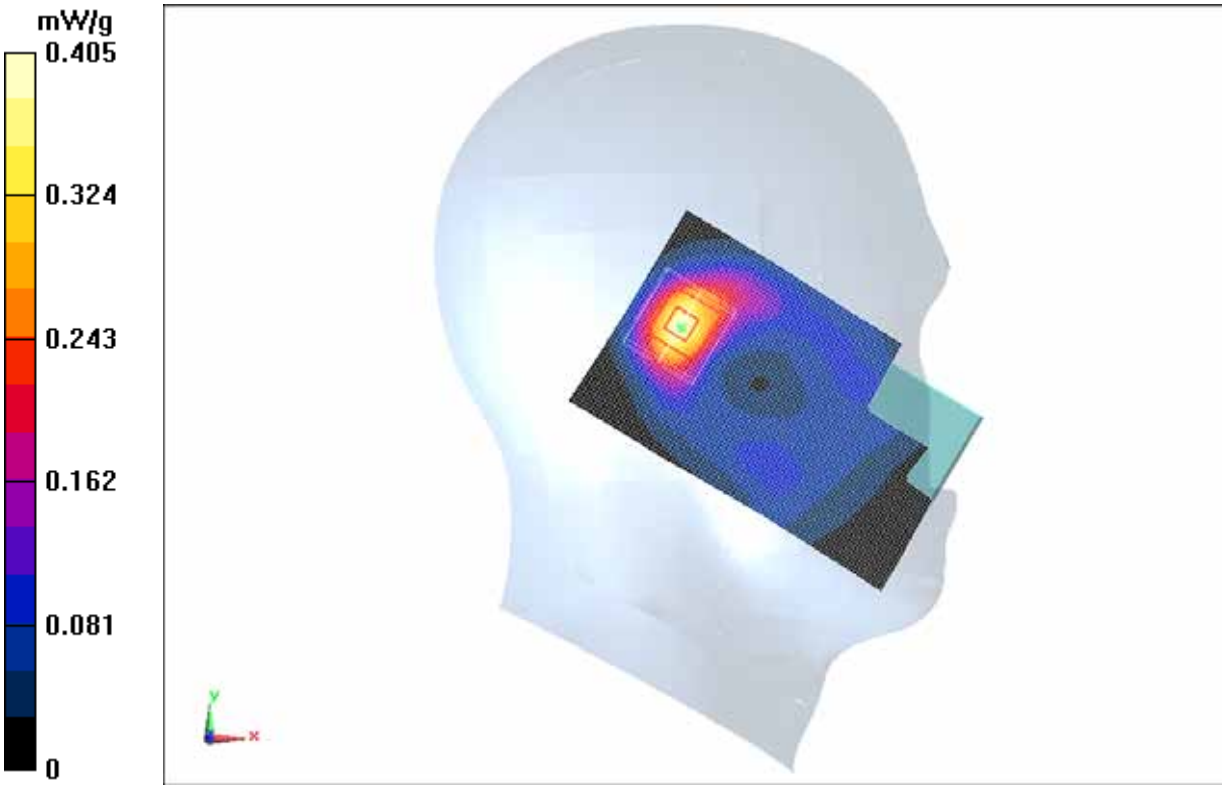


Fig. 79 1900 MHz CH9400

WCDMA 1900 Left Tilt Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.35 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.359 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.436 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.5500
SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.192 mW/g
Maximum value of SAR (measured) = 0.382 mW/g

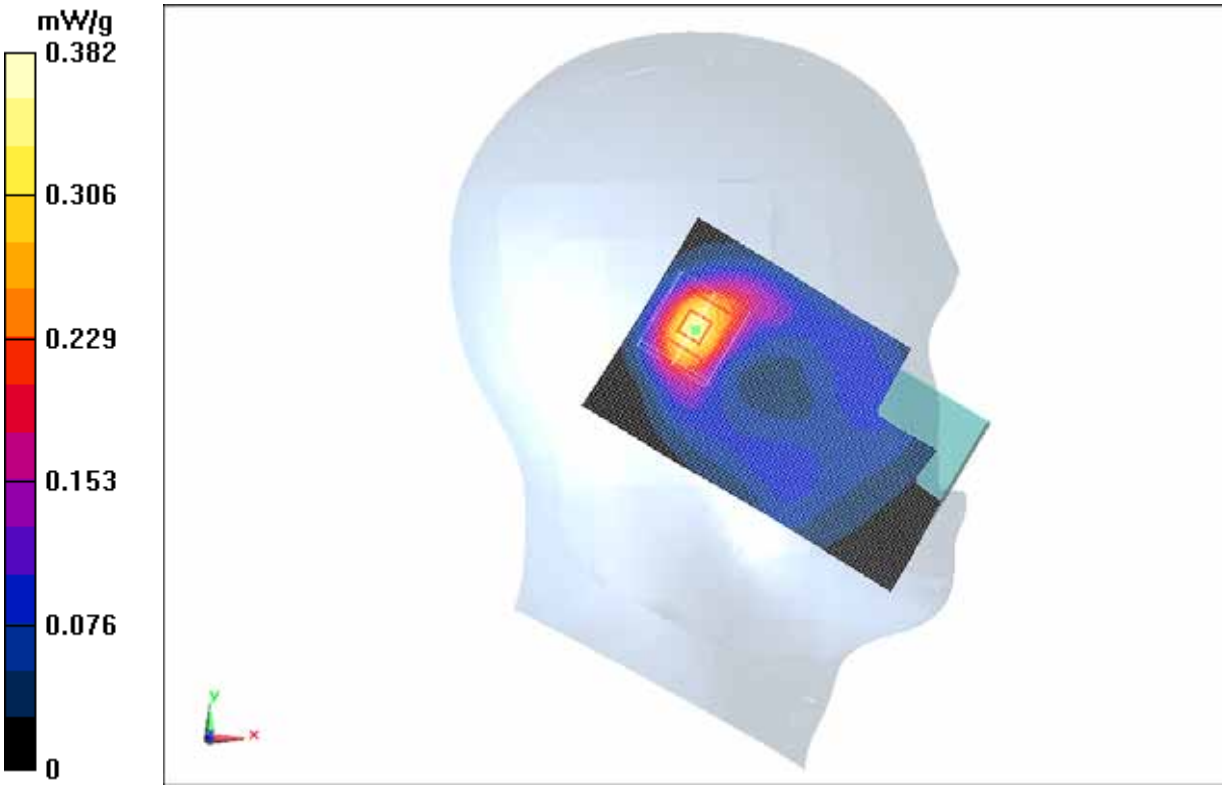


Fig. 80 1900 MHz CH9262

WCDMA 1900 Right Cheek High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.41 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.946 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.621 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.2790
SAR(1 g) = 0.873 mW/g; SAR(10 g) = 0.549 mW/g
Maximum value of SAR (measured) = 0.945 mW/g

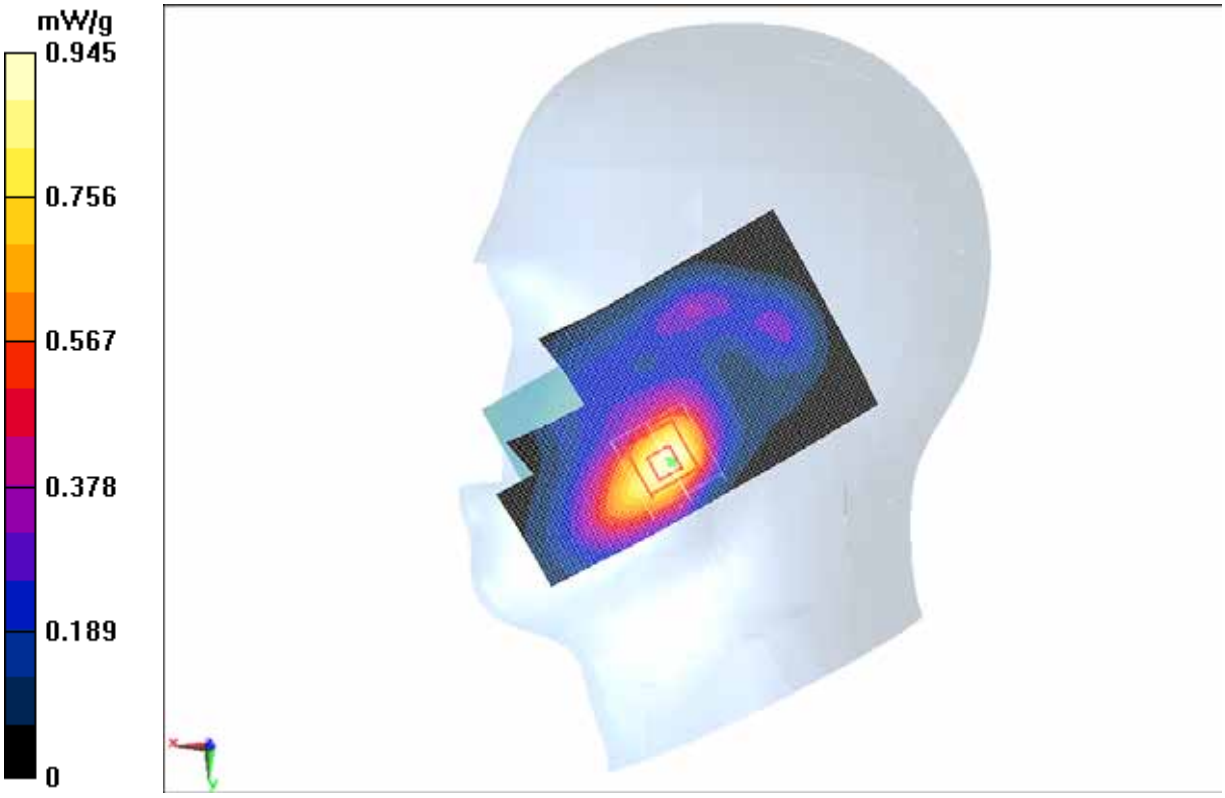


Fig. 81 1900 MHz CH9538

WCDMA 1900 Right Cheek Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.978 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.632 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.2770
SAR(1 g) = 0.877 mW/g; SAR(10 g) = 0.555 mW/g
Maximum value of SAR (measured) = 0.938 mW/g

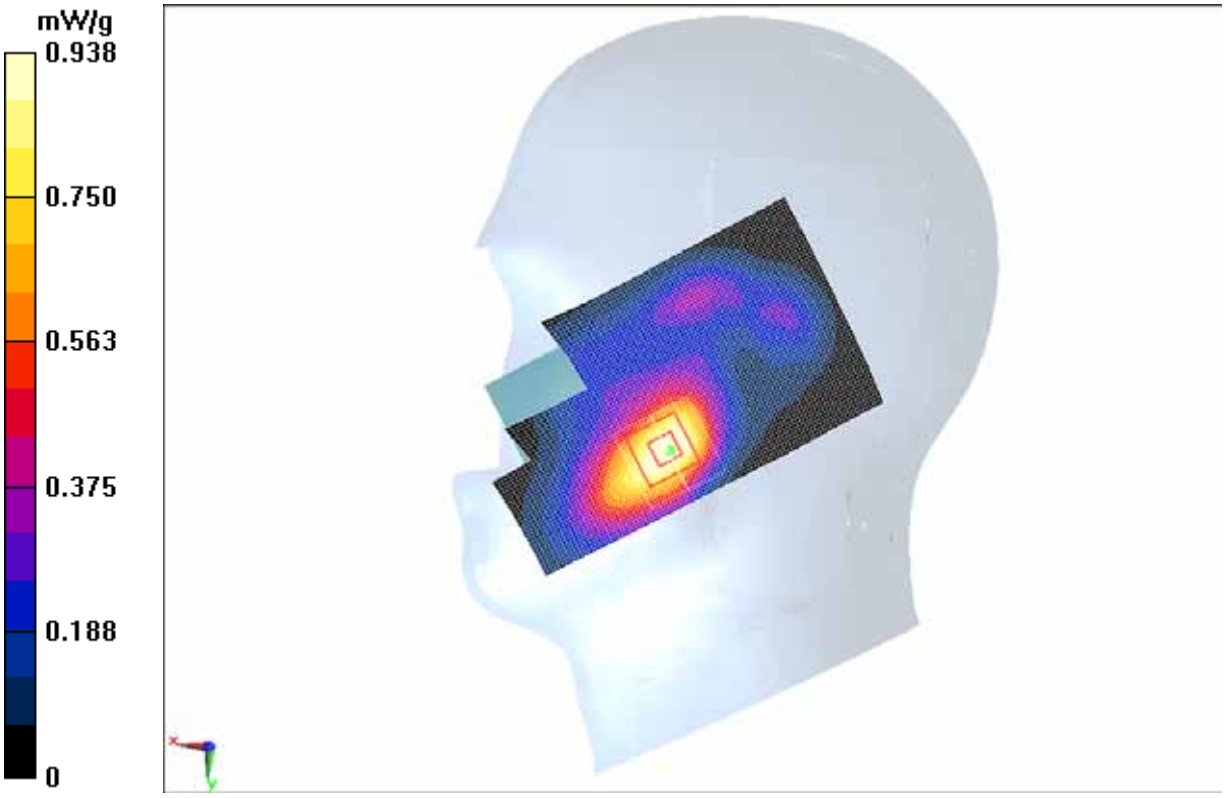


Fig. 82 1900 MHz CH9400

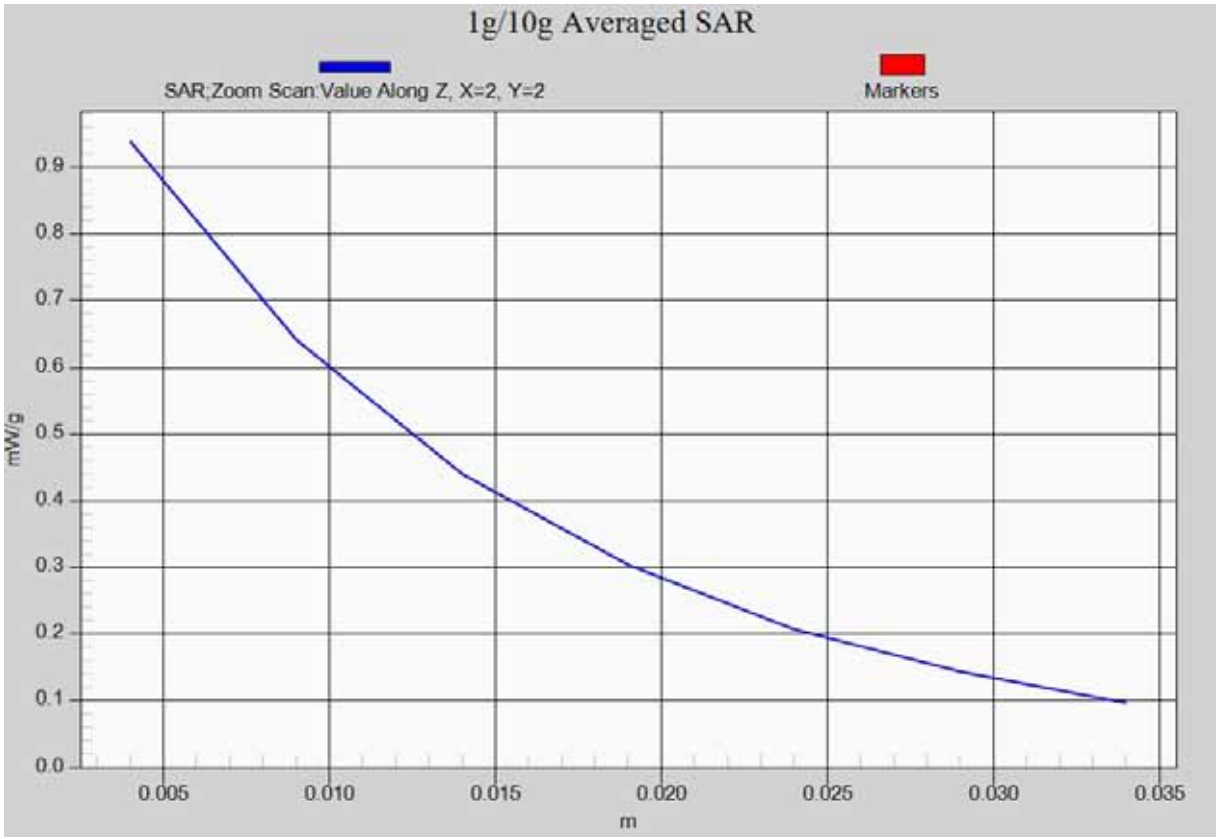


Fig. 82-1 Z-Scan at power reference point (1900 MHz CH9400)

WCDMA 1900 Right Cheek Low

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.35 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.952 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.991 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.2620
SAR(1 g) = 0.875 mW/g; SAR(10 g) = 0.559 mW/g
Maximum value of SAR (measured) = 0.937 mW/g

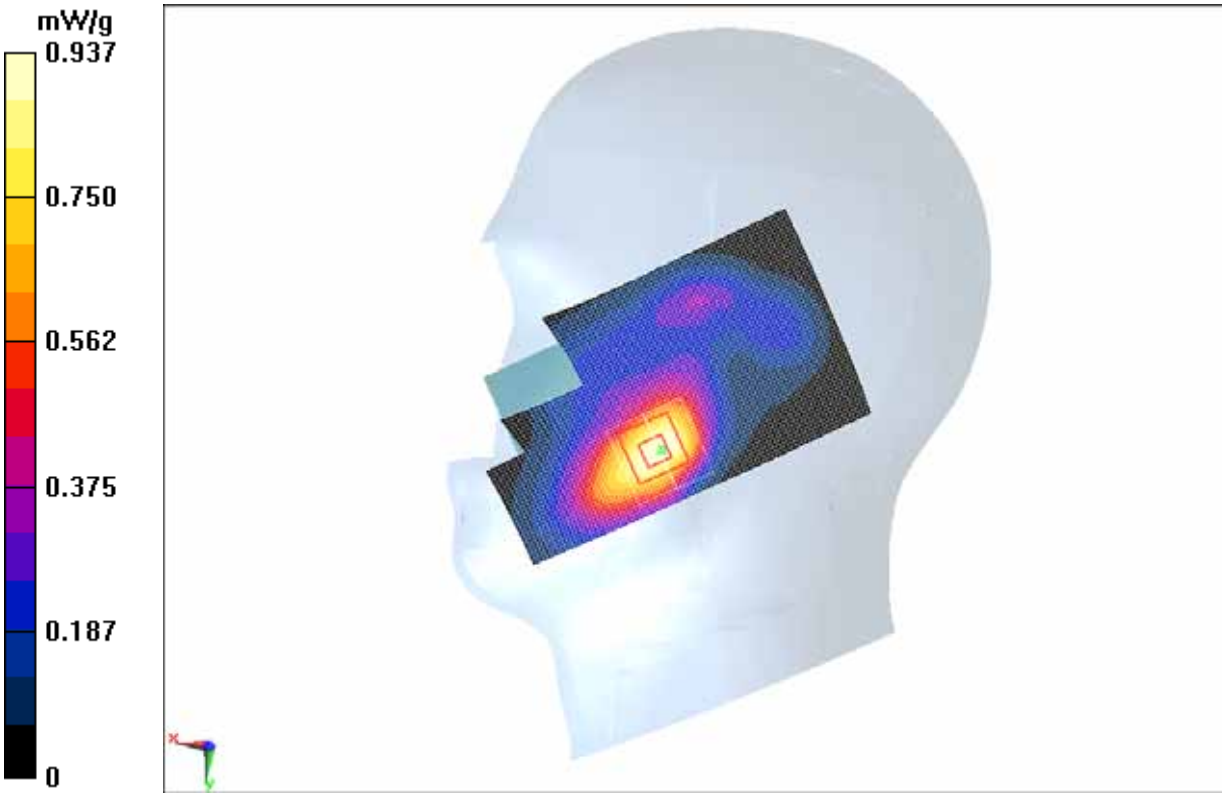


Fig. 83 1900 MHz CH9262

WCDMA 1900 Right Tilt High

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.41 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) = 0.476 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.733 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.7200
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.240 mW/g
Maximum value of SAR (measured) = 0.487 mW/g

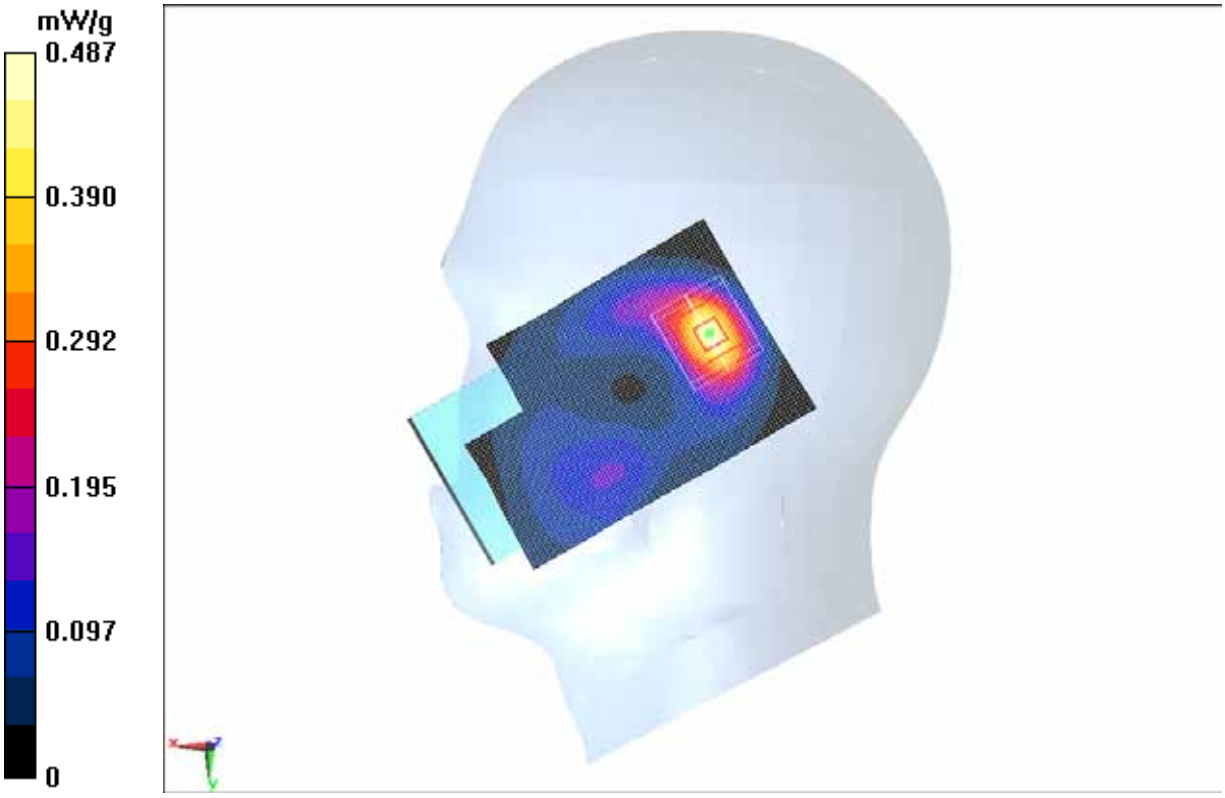


Fig. 84 1900 MHz CH9538

WCDMA 1900 Right Tilt Middle

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; εr = 40.6; 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.476 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.730 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.6880
SAR(1 g) = 0.424 mW/g; SAR(10 g) = 0.239 mW/g
Maximum value of SAR (measured) = 0.478 mW/g

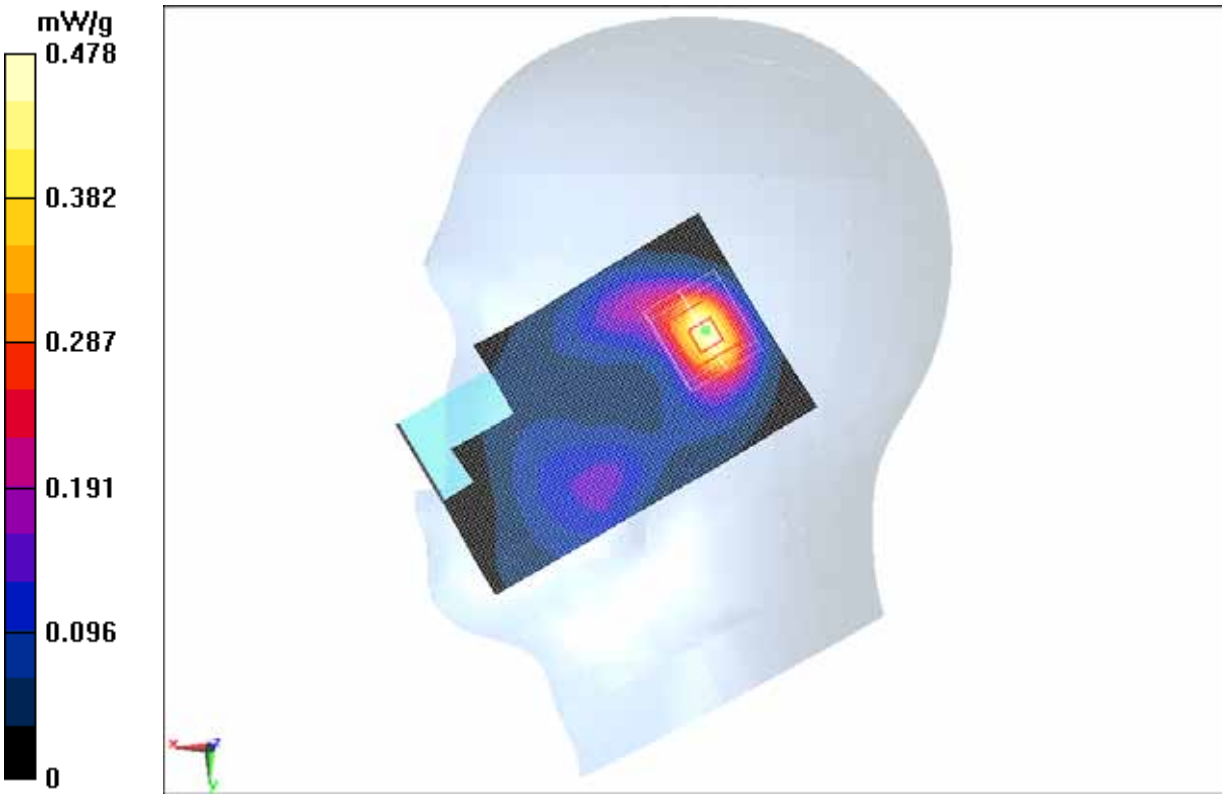


Fig.85 1900 MHz CH9400

WCDMA 1900 Right Tilt Low

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.35 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 (61x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.446 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.775 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.6120
SAR(1 g) = 0.380 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 0.426 mW/g

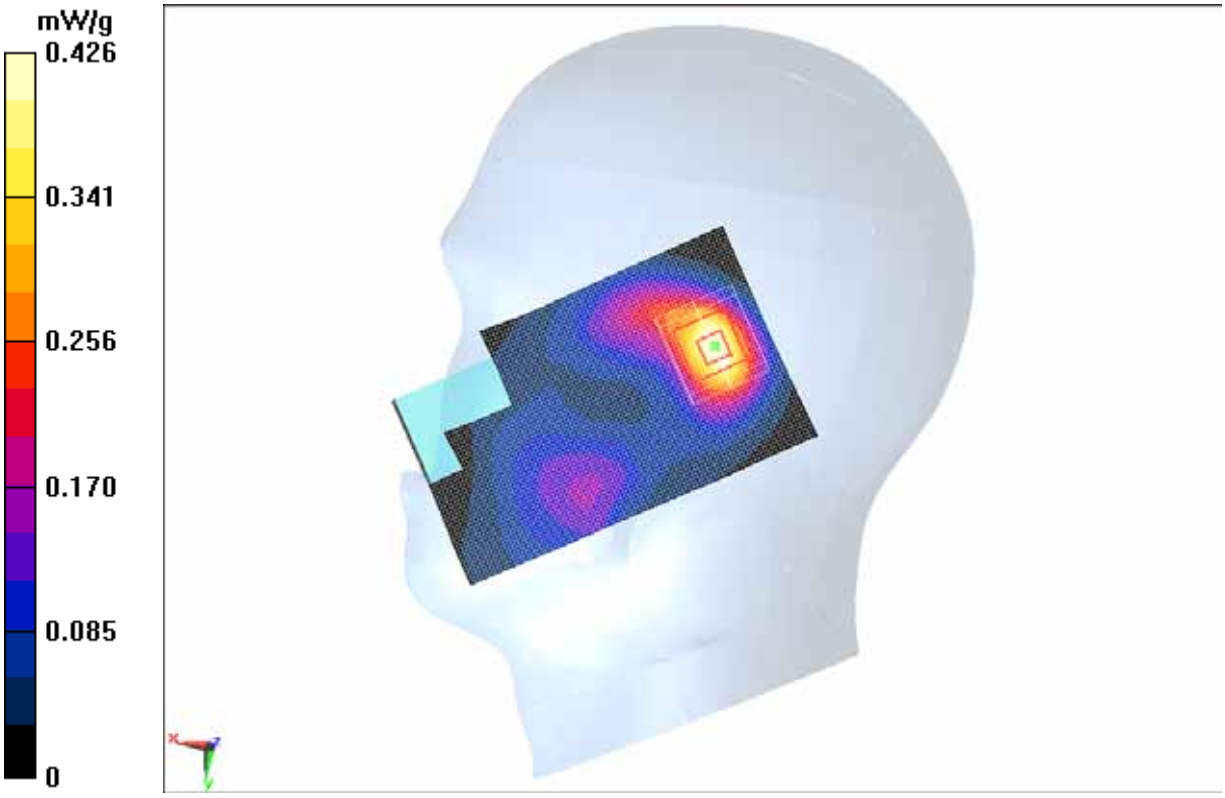


Fig.86 1900 MHz CH9262

WCDMA 1900 Body Towards Ground High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.54 mho/m; εr = 52.2; 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(4.68, 4.68, 4.68)

Toward Ground High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.965 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.044 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.5630
SAR(1 g) = 0.854 mW/g; SAR(10 g) = 0.474 mW/g
Maximum value of SAR (measured) = 0.957 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.044 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.2570
SAR(1 g) = 0.699 mW/g; SAR(10 g) = 0.414 mW/g
Maximum value of SAR (measured) = 0.773 mW/g

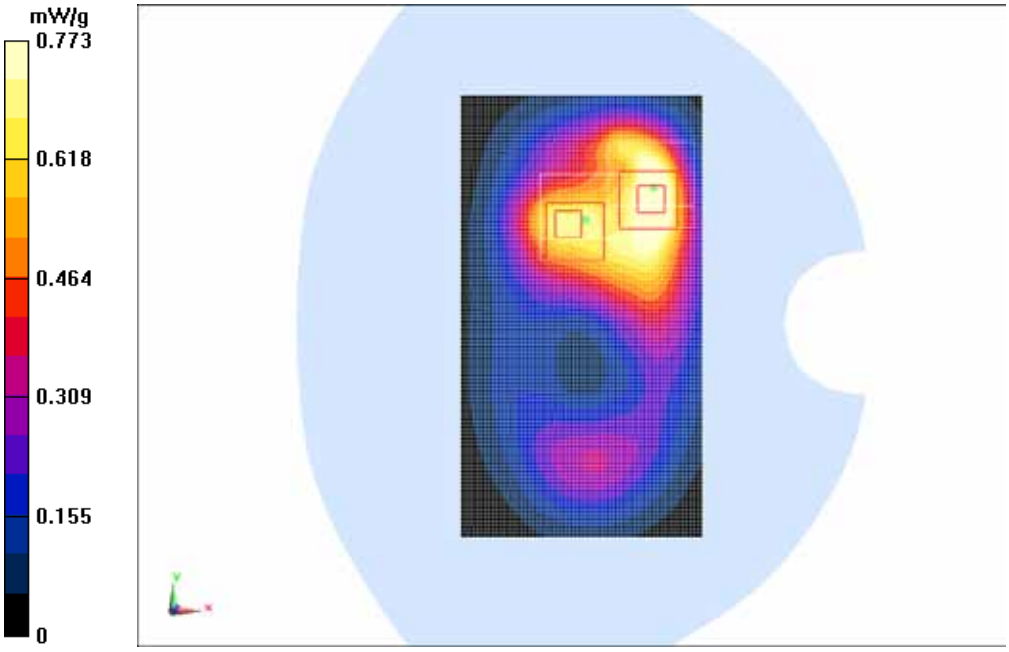


Fig. 87 1900 MHz CH9538

WCDMA 1900 Body Towards Phantom High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.54 mho/m; εr = 52.2; 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(4.68, 4.68, 4.68)

Toward Phantom High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.960 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.197 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.3830
SAR(1 g) = 0.802 mW/g; SAR(10 g) = 0.480 mW/g
Maximum value of SAR (measured) = 0.844 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.197 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.3340
SAR(1 g) = 0.834 mW/g; SAR(10 g) = 0.520 mW/g
Maximum value of SAR (measured) = 0.900 mW/g

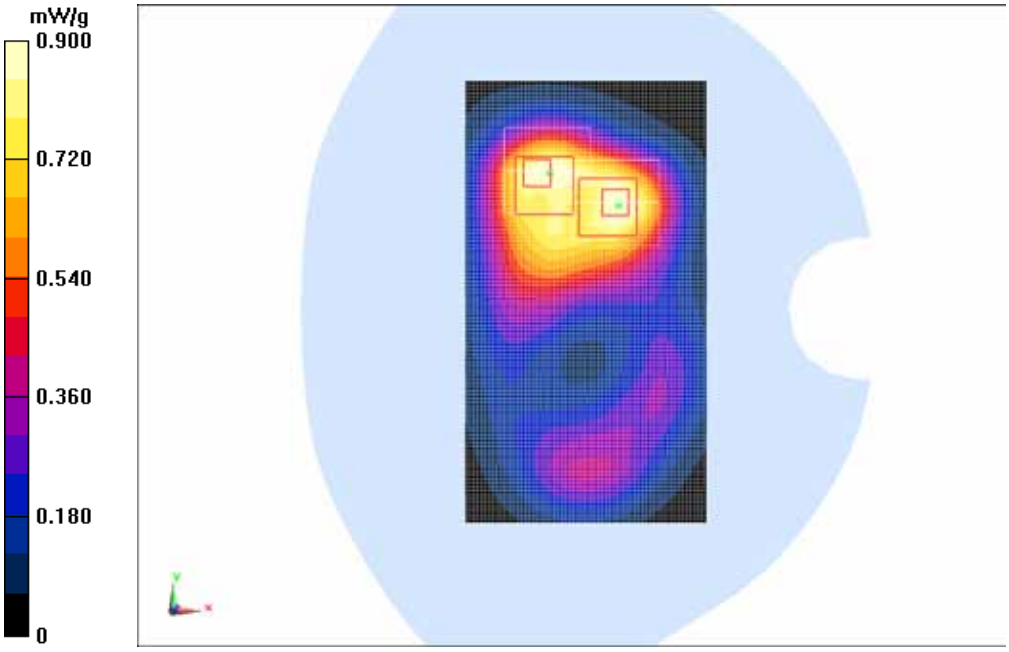


Fig. 88 1900 MHz CH9538

WCDMA 1900 Body Left Side High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.54 mho/m; εr = 52.2; 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(4.68, 4.68, 4.68)

Left Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.218 mW/g

Left Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.958 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.3220
SAR(1 g) = 0.200 mW/g; SAR(10 g) = 0.123 mW/g
Maximum value of SAR (measured) = 0.214 mW/g

Left Side High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.958 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.3140
SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.112 mW/g
Maximum value of SAR (measured) = 0.208 mW/g

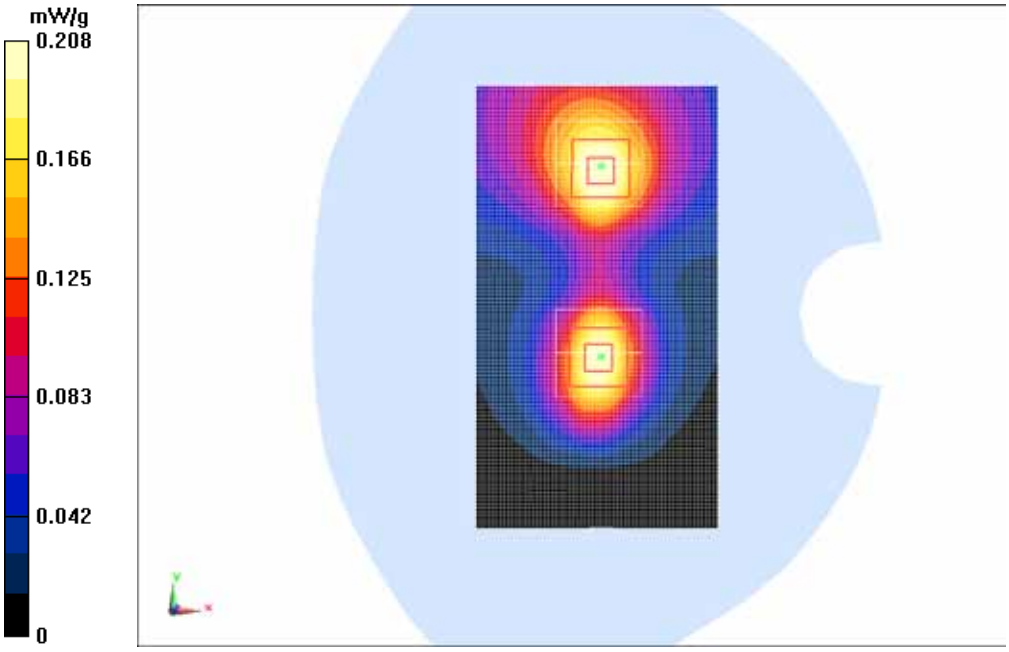


Fig. 89 1900 MHz CH9538

WCDMA 1900 Body Right Side High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.54 mho/m; εr = 52.2; 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(4.68, 4.68, 4.68)

Right Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.554 mW/g

Right Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.492 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.8250
SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.286 mW/g
Maximum value of SAR (measured) = 0.534 mW/g

Right Side High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.492 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.6000
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.405 mW/g

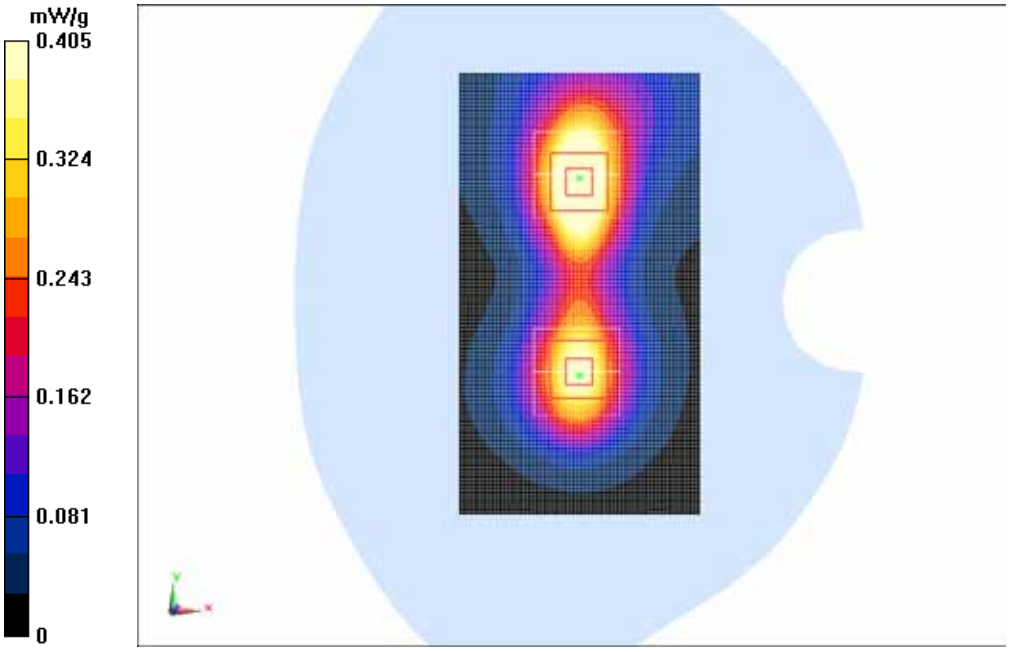


Fig. 90 1900 MHz CH9538

WCDMA 1900 Body Bottom Side High
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.54 mho/m; εr = 52.2; 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(4.68, 4.68, 4.68)

Bottom Side High/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.959 mW/g

Bottom Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.713 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.5610
SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.436 mW/g
Maximum value of SAR (measured) = 0.970 mW/g

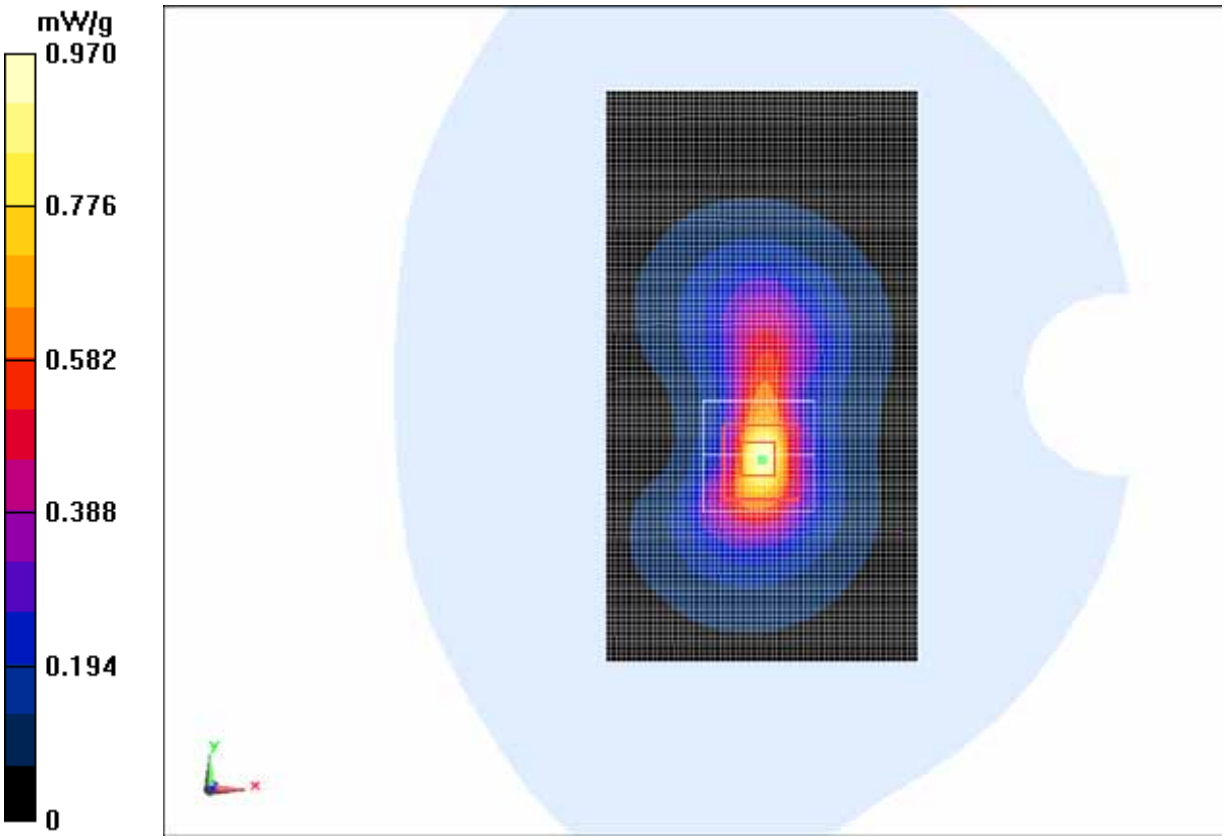


Fig. 91 1900 MHz CH9538

WCDMA 1900 Body Towards Ground Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; εr = 52.3; 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(4.68, 4.68, 4.68)

Toward Ground Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.053 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.023 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.7090
SAR(1 g) = 0.958 mW/g; SAR(10 g) = 0.543 mW/g
Maximum value of SAR (measured) = 1.064 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.023 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.4780
SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.448 mW/g
Maximum value of SAR (measured) = 0.909 mW/g

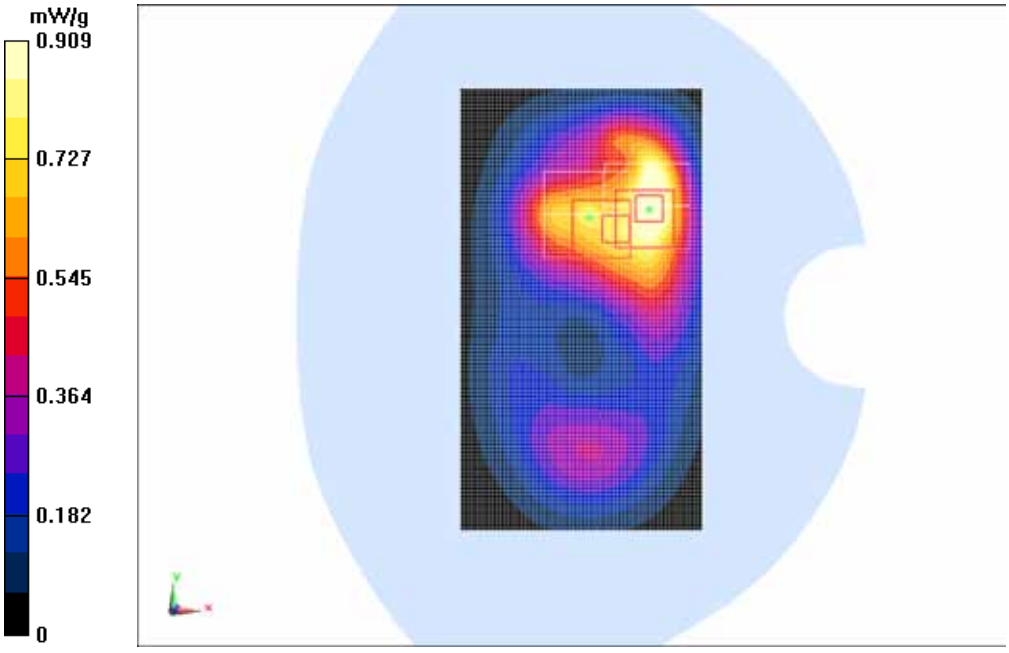


Fig. 92 1900 MHz CH9400

WCDMA 1900 Body Towards Ground Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.283 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.896 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.0130
SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.661 mW/g
Maximum value of SAR (measured) = 1.278 mW/g

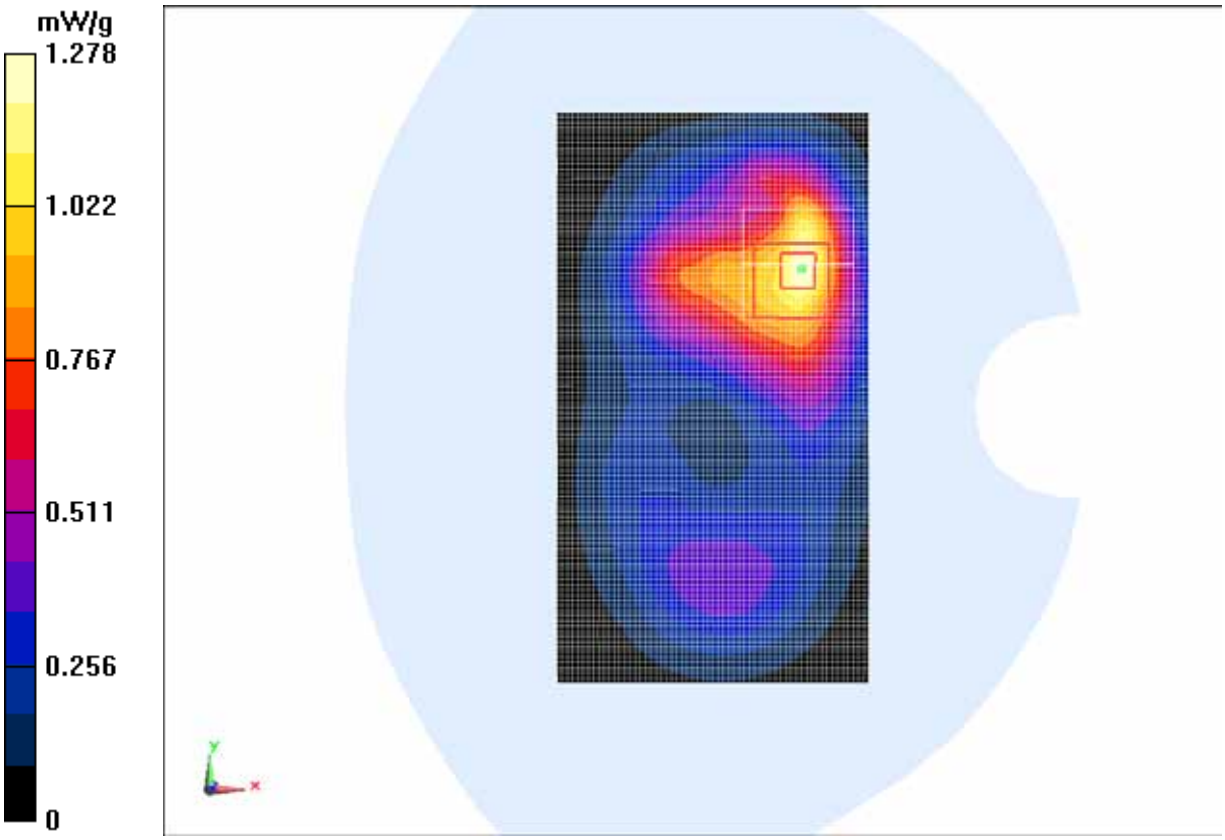


Fig. 93 1900 MHz CH9262

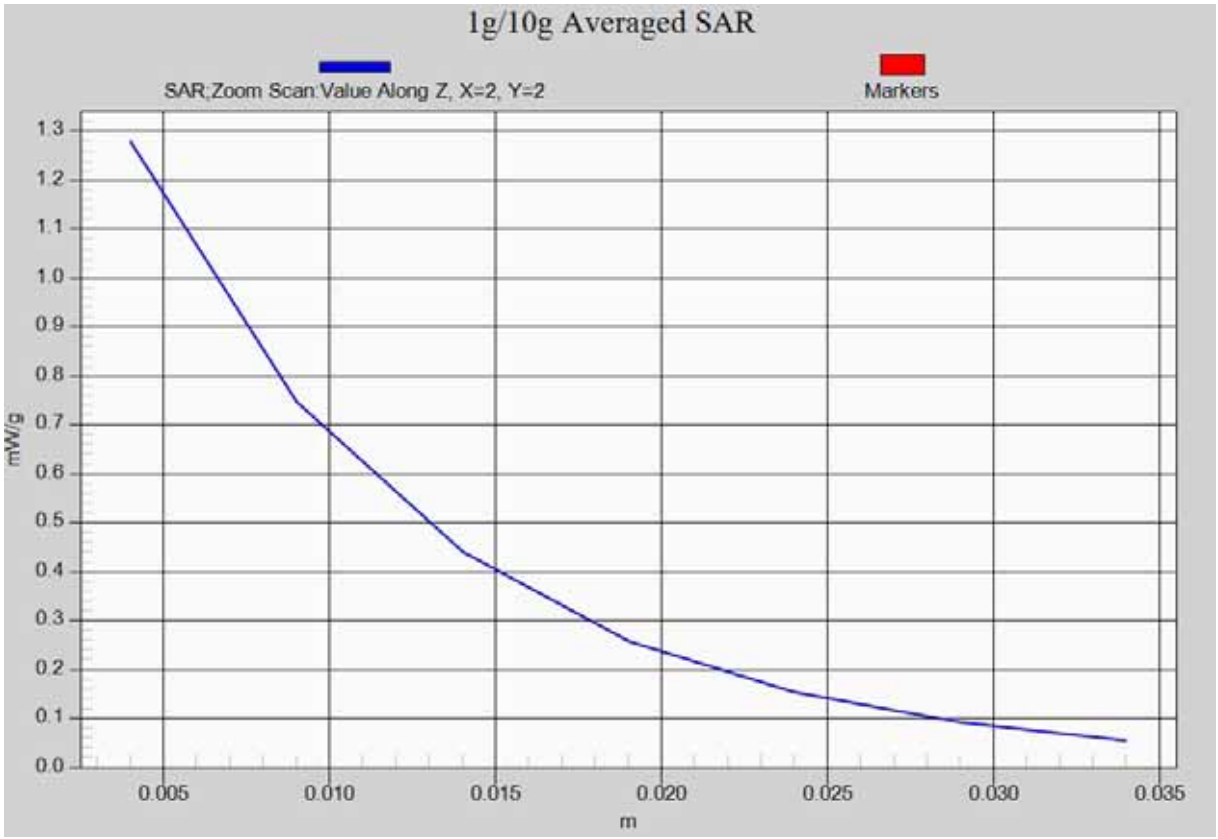


Fig. 93-1 Z-Scan at power reference point (1900 MHz CH9262)

WCDMA 1900 Body Towards Phantom Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; εr = 52.3; 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(4.68, 4.68, 4.68)

Toward Phantom Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.006 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.429 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.4770
SAR(1 g) = 0.875 mW/g; SAR(10 g) = 0.530 mW/g
Maximum value of SAR (measured) = 0.952 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.429 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.3910
SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.551 mW/g
Maximum value of SAR (measured) = 0.948 mW/g

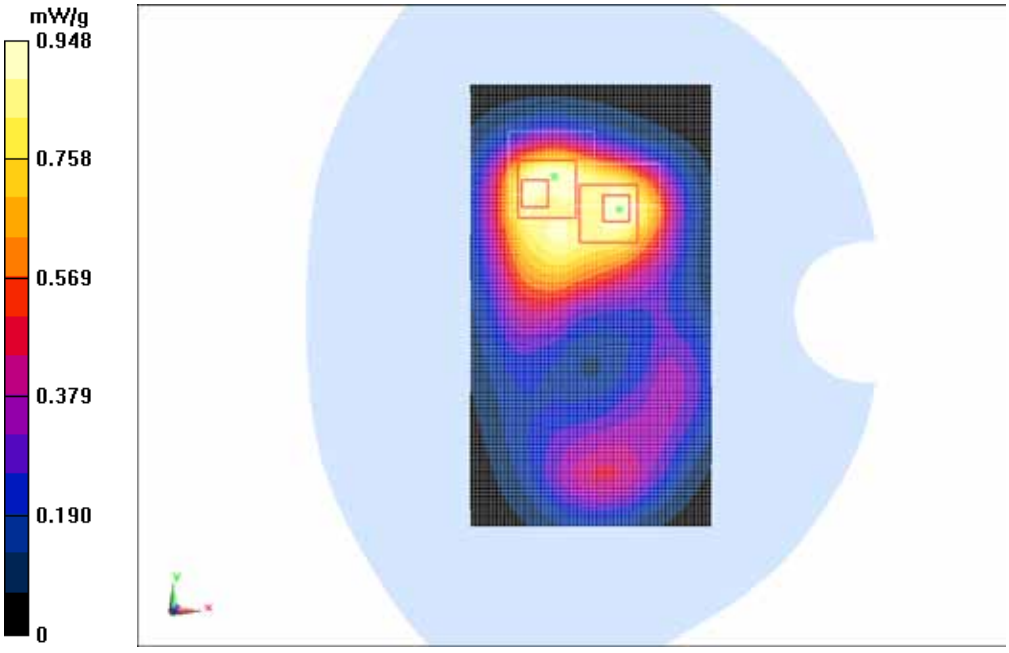


Fig. 94 1900 MHz CH9400

WCDMA 1900 Body Towards Phantom Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Phantom Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.109 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.257 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.6020
SAR(1 g) = 0.967 mW/g; SAR(10 g) = 0.599 mW/g
Maximum value of SAR (measured) = 1.033 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.257 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.5290
SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.622 mW/g
Maximum value of SAR (measured) = 1.046 mW/g

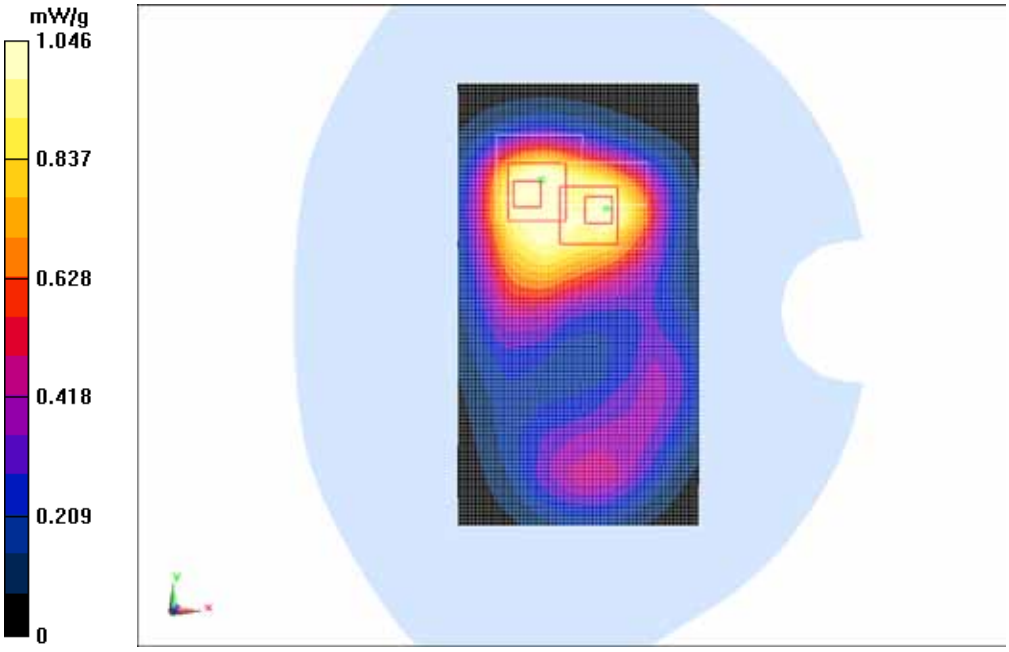


Fig. 95 1900 MHz CH9262

WCDMA 1900 Body Bottom Side Middle
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; εr = 52.3; 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(4.68, 4.68, 4.68)

Bottom Side Middle/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.971 mW/g

Bottom Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.611 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.5990
SAR(1 g) = 0.869 mW/g; SAR(10 g) = 0.452 mW/g
Maximum value of SAR (measured) = 0.985 mW/g

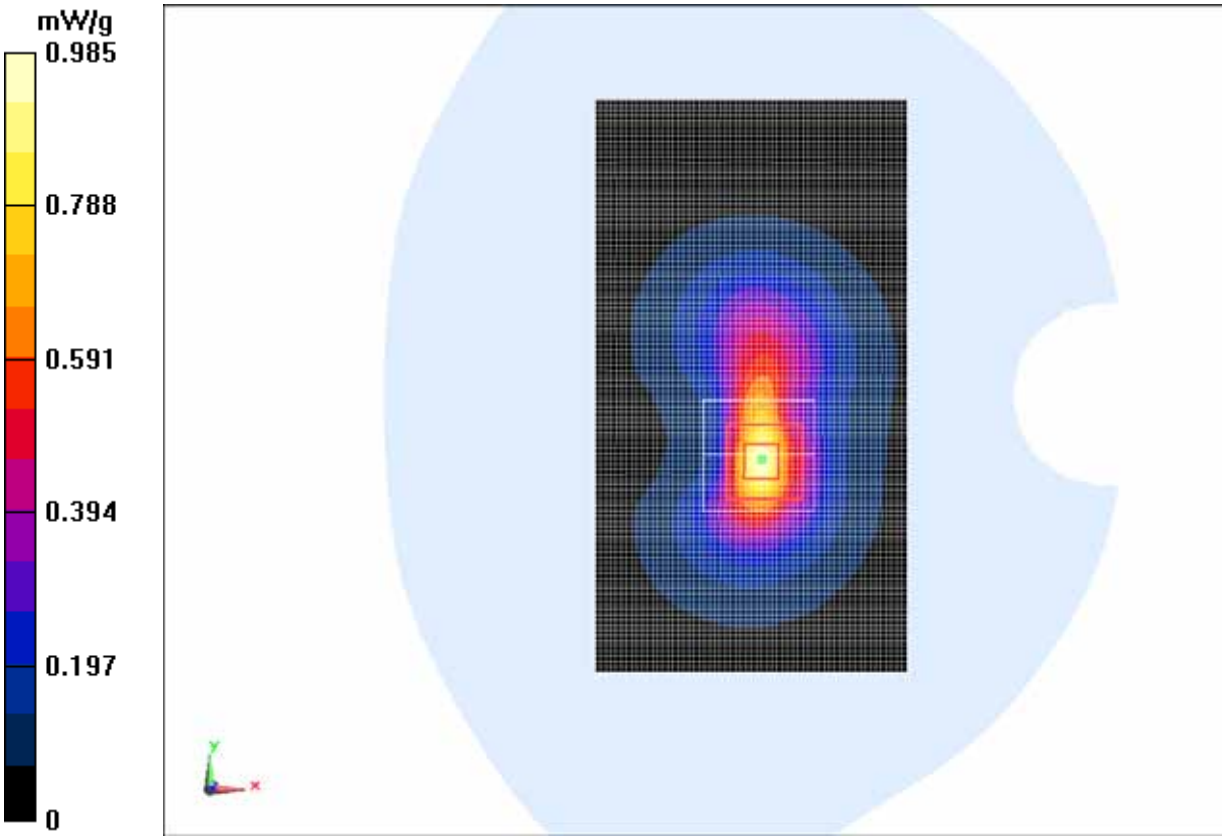


Fig. 96 1900 MHz CH9400

WCDMA 1900 Body Bottom Side Low
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Bottom Side Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.977 mW/g

Bottom Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.460 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.5620
SAR(1 g) = 0.863 mW/g; SAR(10 g) = 0.456 mW/g
Maximum value of SAR (measured) = 0.976 mW/g

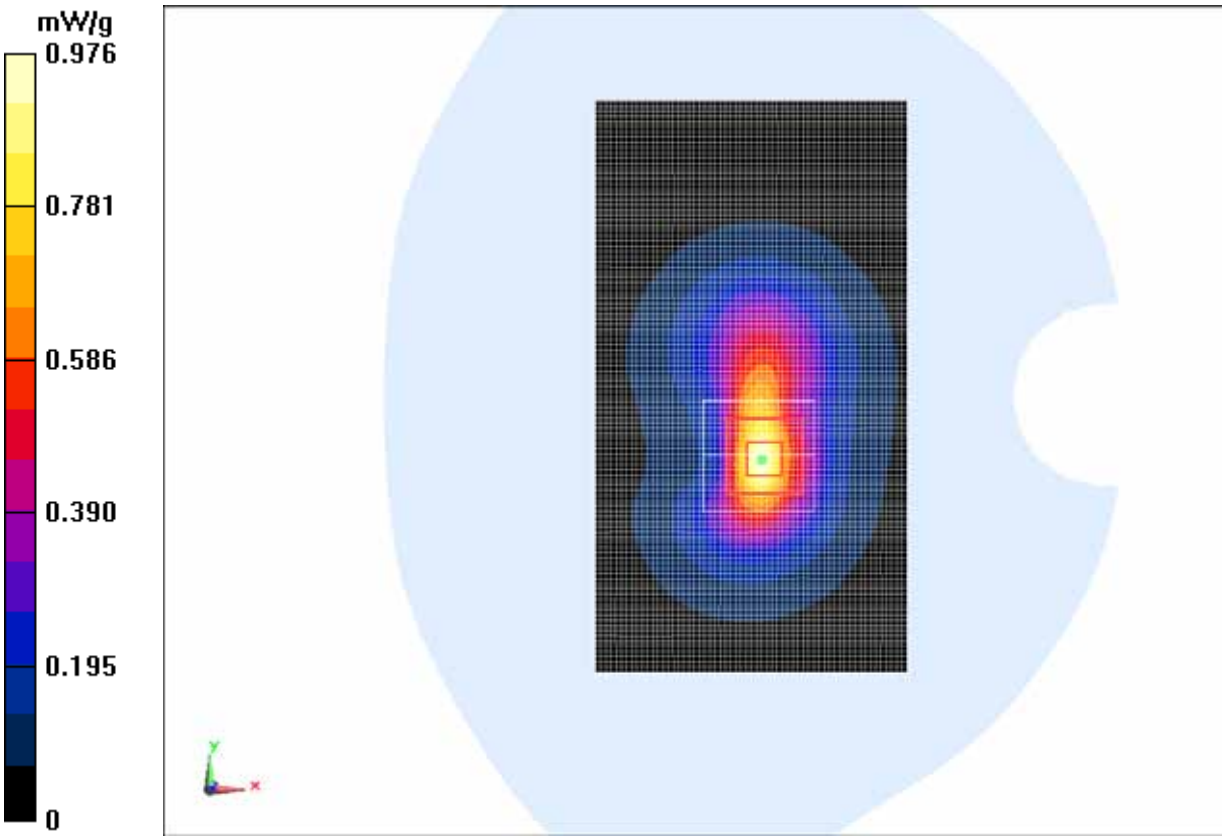


Fig. 97 1900 MHz CH9262

WCDMA 1900 Body Towards Ground Low with Headset CCB3160A11C1
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.191 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.538 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.9870
SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.648 mW/g
Maximum value of SAR (measured) = 1.261 mW/g

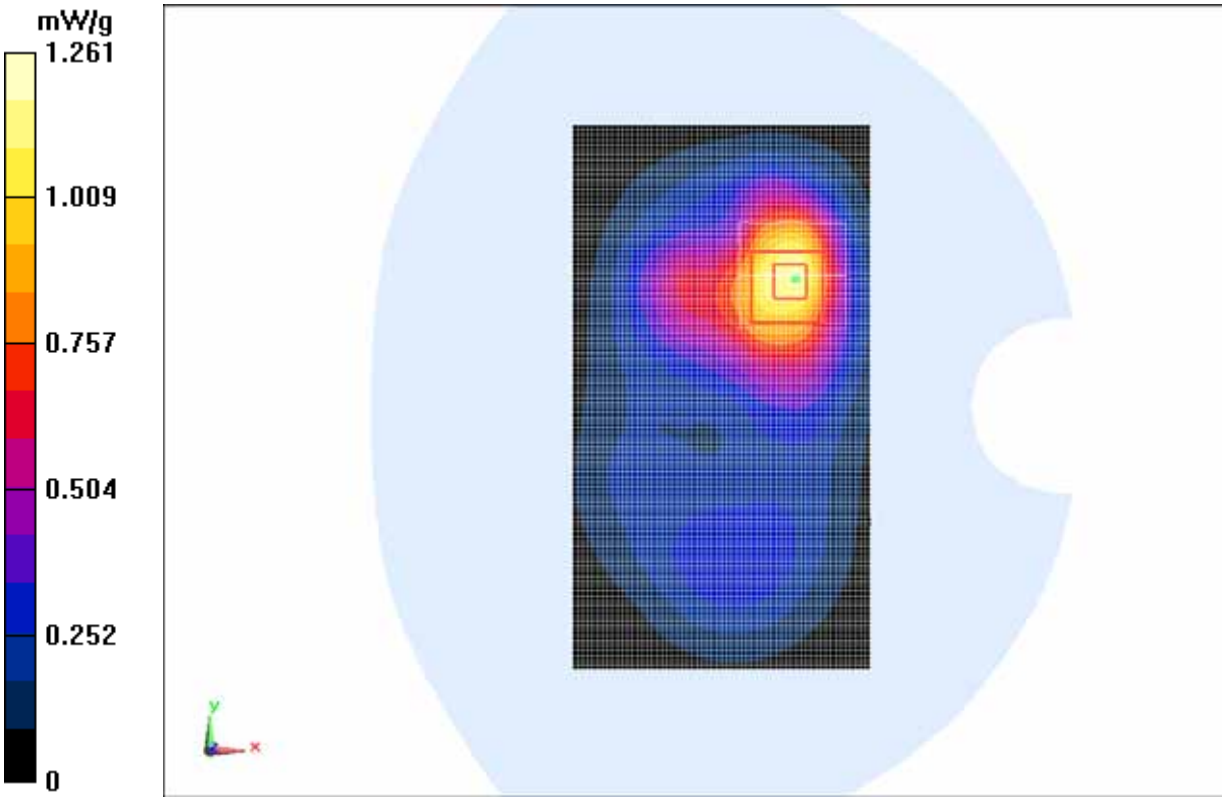


Fig. 98 1900 MHz CH9262

WCDMA 1900 Body Towards Ground Low with Headset CCB3160A11C4
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.994 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.570 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.6910
SAR(1 g) = 0.962 mW/g; SAR(10 g) = 0.540 mW/g
Maximum value of SAR (measured) = 1.059 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.570 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.0240
SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.398 mW/g
Maximum value of SAR (measured) = 0.687 mW/g

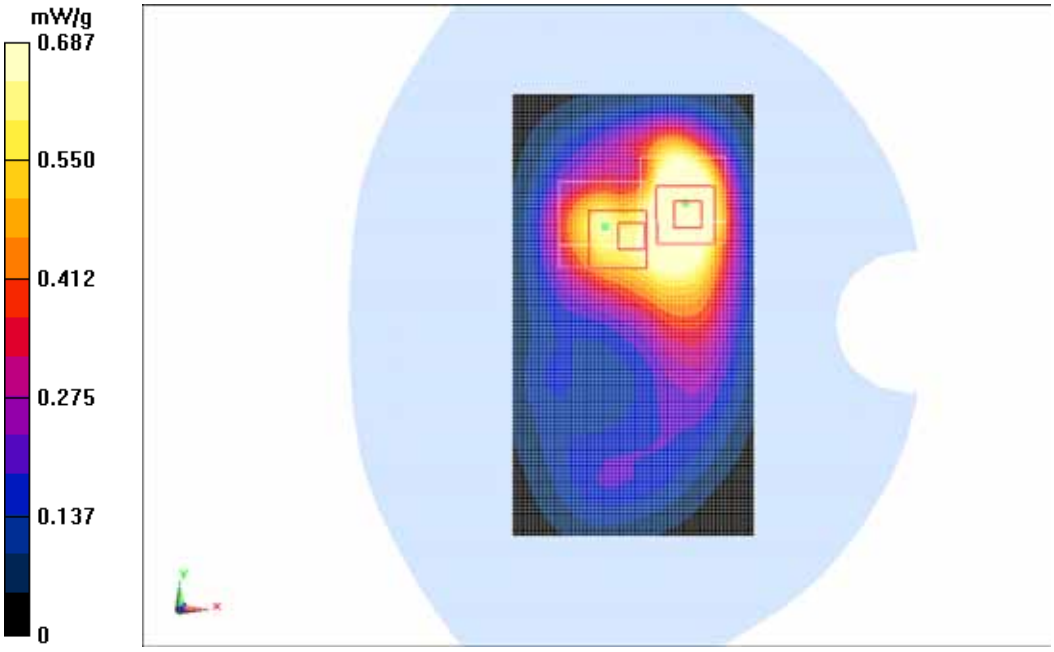


Fig. 99 1900 MHz CH9262

WCDMA 1900 Body Towards Ground Low with Headset CCB3001A15C1
Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.50 mho/m; εr = 52.4; 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(4.68, 4.68, 4.68)

Toward Ground Low/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.201 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.432 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.7910
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.599 mW/g
Maximum value of SAR (measured) = 1.133 mW/g

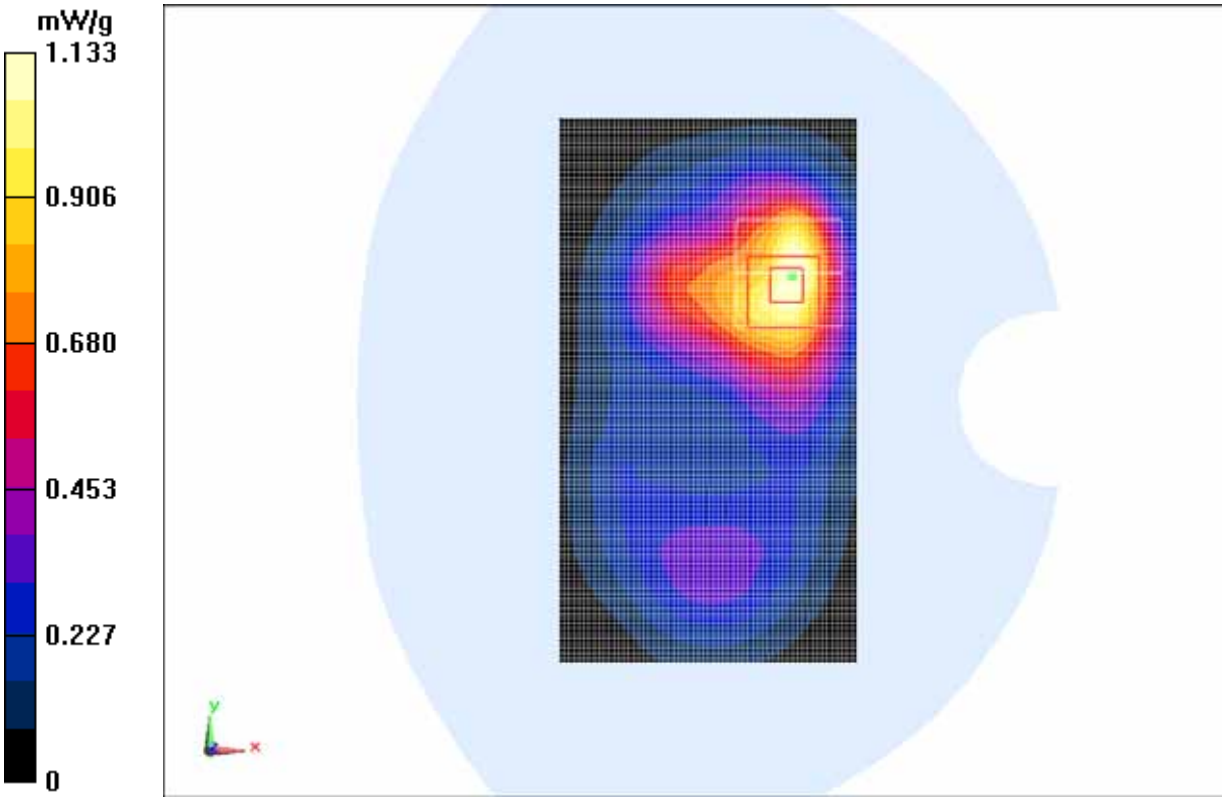


Fig. 100 1900 MHz CH9262

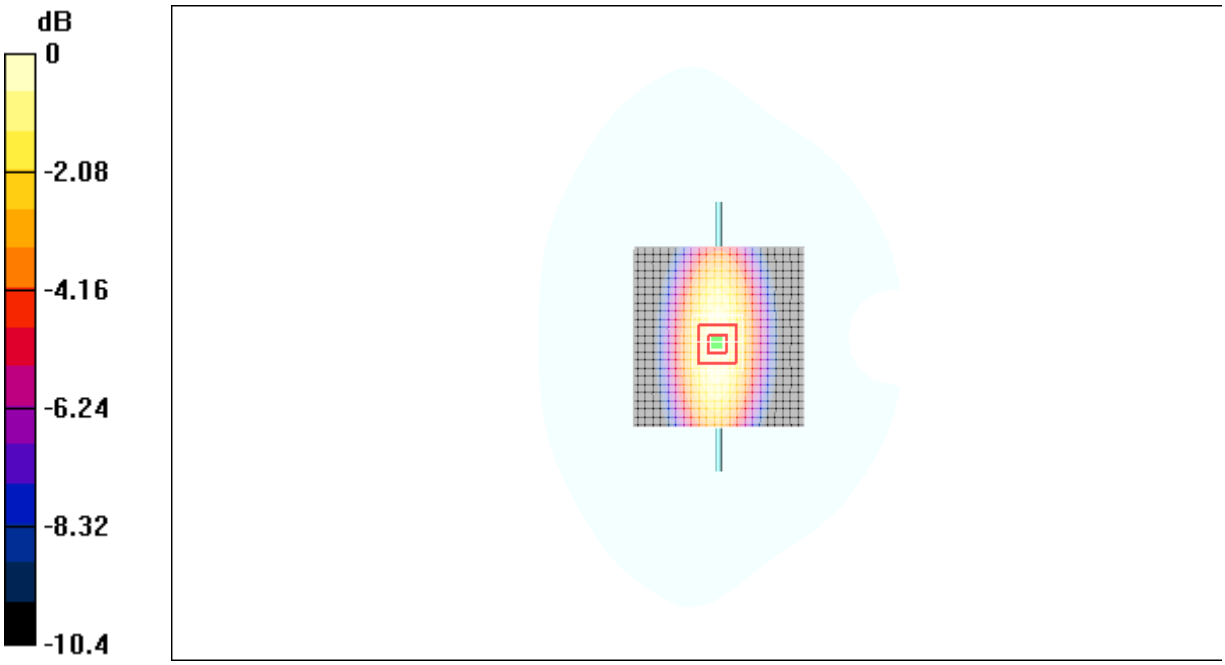
ANNEX B SYSTEM VALIDATION RESULTS

835MHz

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Head 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

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

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.3 V/m; Power Drift = 0.098 dB
Peak SAR (extrapolated) = 3.40 W/kg
SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.50 mW/g
Maximum value of SAR (measured) = 2.51 mW/g



0 dB = 2.51mW/g

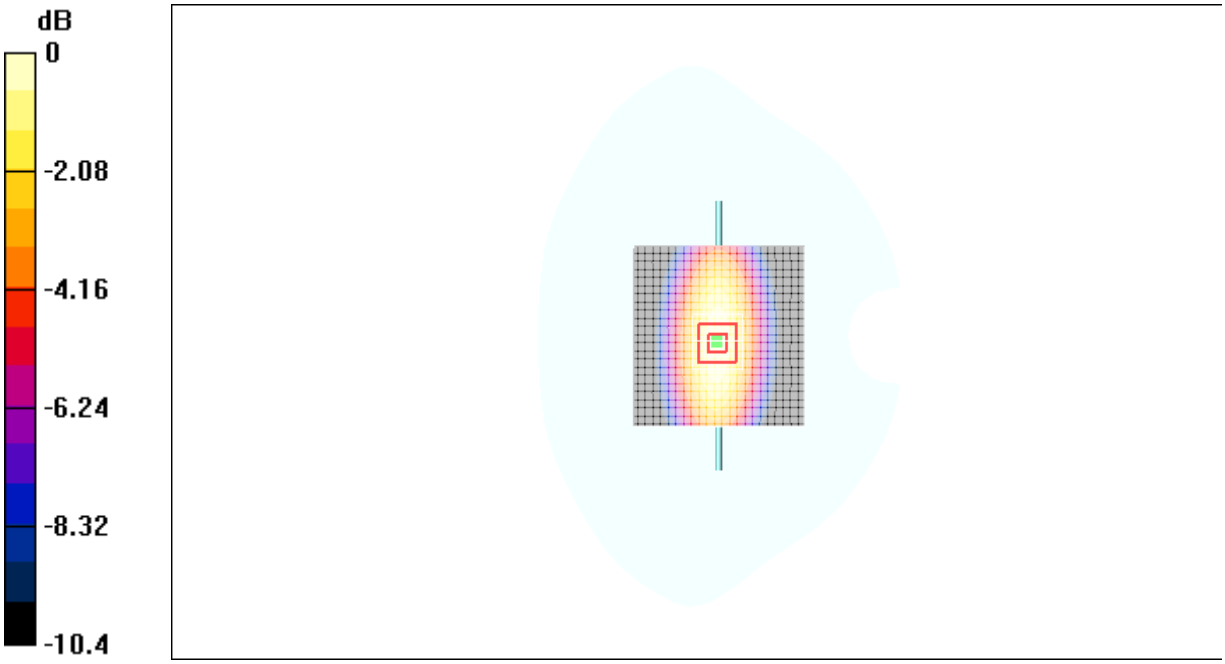
Fig.101 validation 835MHz 250mW

835MHz

Date: 2012-1-16
Electronics: DAE4 Sn771
Medium: Body 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.96 mho/m; ε_r = 54.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

System Validation /Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.56 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.5 V/m; Power Drift = -0.125 dB
Peak SAR (extrapolated) = 3.39 W/kg
SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.57 mW/g
Maximum value of SAR (measured) = 2.51 mW/g



0 dB = 2.51mW/g

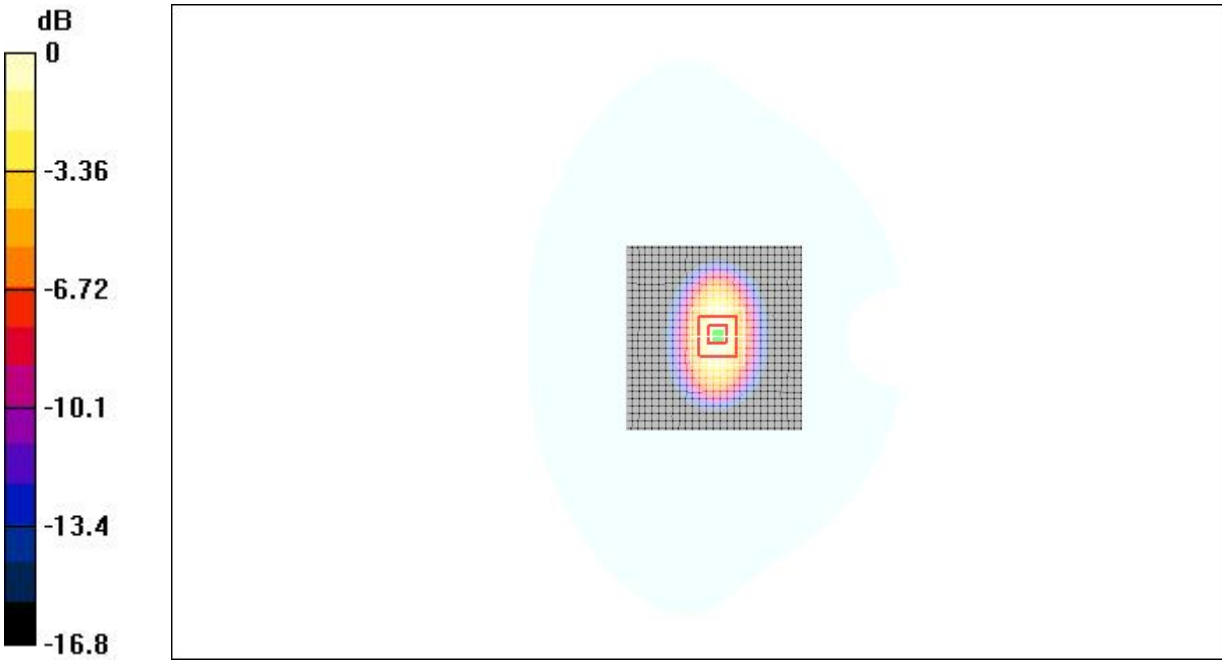
Fig.102 validation 835MHz 250mW

1900MHz

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.39 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 11.2 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.3 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 9.71 mW/g; SAR(10 g) = 5.03 mW/g
Maximum value of SAR (measured) = 10.2 mW/g



0 dB = 10.2mW/g

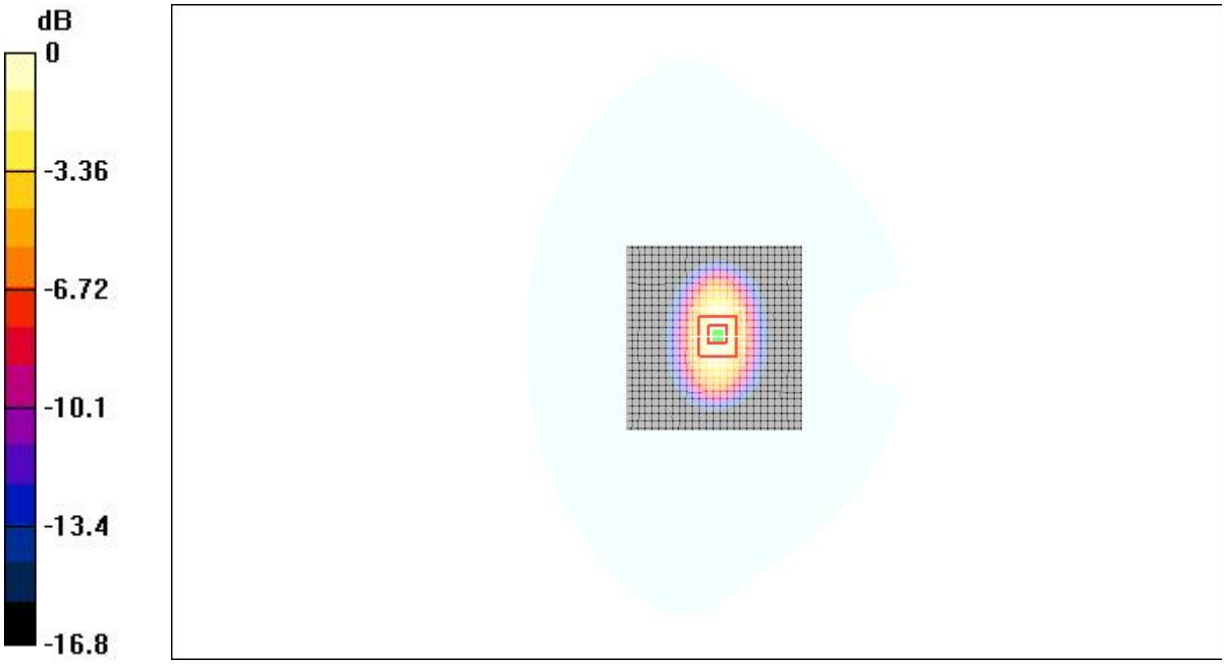
Fig.103 validation 1900MHz 250mW

1900MHz

Date: 2012-1-17
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.54 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 11.4 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.4 V/m; Power Drift = 0.077 dB
Peak SAR (extrapolated) = 15.4 W/kg
SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.17 mW/g
Maximum value of SAR (measured) = 10.9 mW/g



0 dB = 10.9mW/g

Fig.104 validation 1900MHz 250mW

ANNEX C PROBE CALIBRATION CERTIFICATE

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

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

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

Accreditation No.: SCS 108

Client TMC China Certificate No: ES3DV3-3149_Sep11

CALIBRATION CERTIFICATE

Object	ES3DV3-SN: 3149
Calibration procedure(s)	QA CAL-01.v6 Calibration procedure for dosimetric E-field probes
Calibration date:	September 24, 2011
Condition of the calibrated item	In Tolerance

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID#	Cal Data (Calibrated by, Certification NO.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-May-11 (METAS, NO. 251-00388)	May-12
Power sensor E4412A	MY41495277	5-May-11 (METAS, NO. 251-00388)	May-12
Reference 3 dB Attenuator	SN:S5054 (3c)	11-Aug-11 (METAS, NO. 251-00403)	Aug-12
Reference 20 dB Attenuator	SN:S5086 (20b)	3-May-11 (METAS, NO. 251-00389)	May-12
Reference 30 dB Attenuator	SN:S5129 (30b)	11-Aug-11 (METAS, NO. 251-00404)	Aug-12
DAE4	SN:617	10-Jun-11 (SPEAG, NO.DAE4-907_Jun11)	Jun-12
Reference Probe ES3DV2	SN: 3013	12-Jan-11 (SPEAG, NO. ES3-3013_Jan11)	Jan-12

Secondary Standards	ID#	Check Data (in house)	Scheduled Calibration
RF generator HP8648C	US3642U01700	4-Aug-99(SPEAG, in house check Oct-10)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01(SPEAG, in house check Nov-10)	In house check: Nov-11

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

Issued: September 24, 2011

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

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

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

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

Accreditation No.: SCS 108

Glossary:

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

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

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

Probe ES3DV3

SN: 3149

Manufactured: June 12, 2007

Calibrated: September 24, 2011

Calibrated for DASY/EASY System

(Note: non-compatible with DASY2 system!)

DASY/EASY – Parameters of Probe: ES3DV3 - SN:3149

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μ V/(V/m)^2)^A	1.14	1.23	1.29	±10.1%
DCP (mV)^B	94	95	91	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300.0	±1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2,which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

DASY/EASY – Parameters of Probe: ES3DV3 - SN:3149

Calibration Parameter Determined in Head Tissue Simulating Media

f[MHz] [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
850	41.5	0.90	6.56	6.56	6.56	0.91	1.13	±12.0%
900	41.5	0.97	6.34	6.34	6.34	0.83	1.26	±12.0%
1800	40.0	1.40	5.18	5.18	5.18	0.69	1.47	±12.0%
1900	40.0	1.40	5.03	5.03	5.03	0.72	1.38	±12.0%
2100	39.8	1.49	4.58	4.58	4.58	0.66	1.34	±12.0%
2450	39.2	1.80	4.35	4.35	4.35	0.67	1.36	±12.0%

[C] Frequency validity of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.