SAR TEST REPORT for FCC

No. 2010SAR00034

For

Sony Ericsson Mobile Communications(China) Co., Ltd.

GSM 850/900/1800/1900 and UMTS FDD1 phone

W20

With

Hardware Version: A

Software Version: R7BA084

SEMC ID: AAD-3880084-BV

Industry Canada ID: 4170B-A3880084

FCCID: PY7A3880084

Issued Date: 2010-5-11

Deutscher Akkreditierungs Rat DAR

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

Note:

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

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of MIIT

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

Tel:+86(0)10-62304633-2079, Fax:+86(0)10-62304793 Email:welcome@emcite.com. www.emcite.com

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1 Test Laboratory

1.1 Testing Location

Company Name:	TMC Beijing, Telecommunication Metrology Center of MIIT
Address:	No 52, Huayuan beilu, Haidian District, Beijing,P.R.China
Postal Code:	100191
Telephone:	+86-10-62304633
Fax:	+86-10-62304793

1.2 Testing Environment

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

Ambient noise is checked and found very low and in compliance with requirement of standards.

Reflection of surrounding objects is minimized and in compliance with requirement of standards.

1.3 Project Data

Project Leader:	Sun Qian
Test Engineer:	Lin Xiaojun
Testing Start Date:	May 7, 2010
Testing End Date:	May 8, 2010

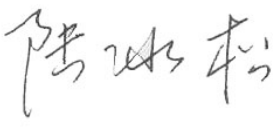
1.4 Signature

Lin Xiaojun

(Prepared this test report)

Sun Qian

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2 General Information

2.1 Statement of Compliance

The SAR values found for the AAD-3880084-BV Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the FCC rule, 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 and that positions the handset a minimum of 15mm from the body. 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 5 of this test report.

A detailed description of the equipment under test can be found in chapter 3 of this test report.

2.2 Applicant Information

Company Name:	Sony Ericsson Mobile Communications(China) Co., Ltd.
Address /Post:	1/F, China Digital Kingdom Building, No.1 North Road, Wangjing, Chaoyang District, Beijing, China
City:	Beijing
Postal Code:	/
Country:	China
Contact:	Ma, Gang
Email:	gang.song@sonyericsson.com
Telephone:	+86-10-58656312
Fax:	+86-10-58656750

2.3 Manufacturer Information

Company Name:	Sony Ericsson Mobile Communications AB
Address /Post:	Nya Vattentornet 22188 Lund Sweden
City:	Lund
Postal Code:	22188
Country:	Sweden
Contact:	Nordlof, Anders
Email:	Anders.Nordlof@sonyericsson.com
Telephone:	+46 46 193919
Fax:	+46 46 193295

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

3.1 About EUT

Description:	GSM 850/900/1800/1900 and UMTS FDD1 phone
Model:	W20
Operating mode(s):	GSM, PCS, Bluetooth
GPRS Multislot Class:	10
GPRS capability Class:	B
EGPRS Multislot Class:	10
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Accessories/Body-worn configurations:	Headset

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	BX901ERF0C	A	R7BA084

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

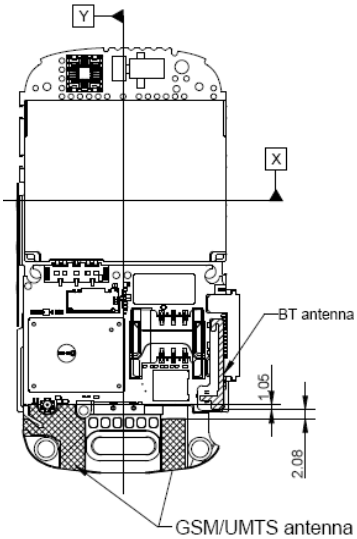
3.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Travel Adapter	CAA-0002001-BV	1408W4741533691000	Sony Ericsson
AE2	Battery	BST-39	012455ISMEXH	Sony Ericsson
AE3	Headset	CCA-0002013	/	Sony Ericsson

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

3.4 Antenna description

There are two antennae in the EUT, Main antenna and BT antenna.



Antenna dimension:

Max length: 35mm

Max width: 15mm

4 CHARACTERISTICS OF THE TEST

4.1 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.

4.2 Applicable Measurement Standards

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.

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

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

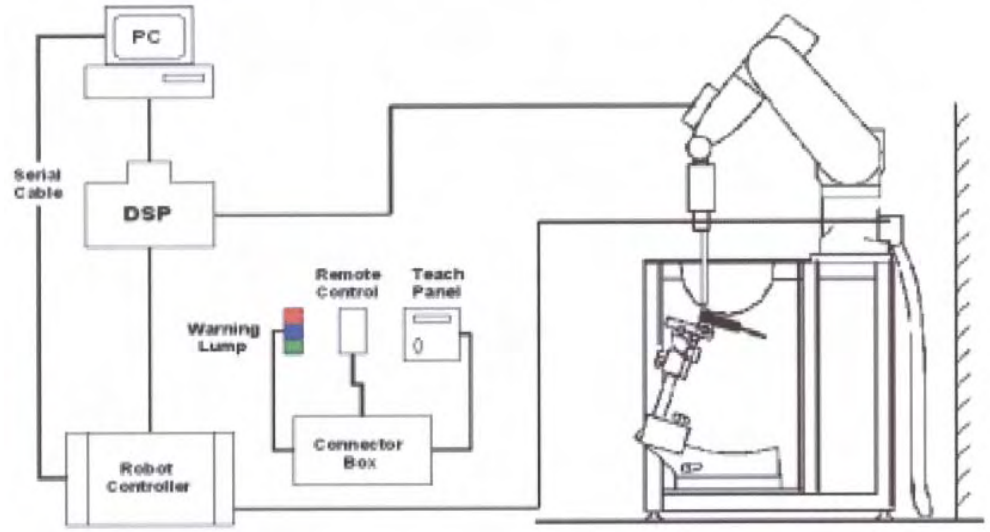
For the SAR tests at GSM 850 and PCS 1900, a communication link is set up with a System Simulator (SS) by air link. The EUT is commanded to operate at maximum transmitting power.

In order to determine the highest value of the peak spatial-average SAR of the EUT, it was tested at middle frequency (cheek and tilt, for both left and right sides of the SAM phantom). After found the worst case, perform the tests at the high and low frequencies. In addition, for all other conditions where the peak spatial-average SAR value determined is within 3 dB of the applicable SAR limit, all other test frequencies shall be tested as well.

5.2 SAR Measurement Set-up

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

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



Picture 1: SAR Lab Test Measurement Set-up

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

5.3 Dasy4 E-field Probe System

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

ES3DV3 Probe Specification

Construction	Symmetrical design with triangular core
	Interleaved sensors
	Built-in shielding against static charges
	PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 900 and HSL 1810 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

Picture 2: ES3DV3 E-field Probe

Picture3:ES3DV3 E-field probe

5.4 E-field Probe Calibration

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

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

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

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

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

Or

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

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

Picture 4: Device Holder

5.5 Other Test Equipment

5.5.1 Device Holder for Transmitters

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

5.5.2 Phantom

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

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

Picture 5: Generic Twin Phantom

5.6 Equivalent Tissues

The liquid used for the frequency range of 800-2000 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.

Table 1. Composition of the Head Tissue Equivalent Matter

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

Table 2. Composition of the Body Tissue Equivalent Matter

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

5.7 System Specifications

Specifications

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

Data Acquisition Electronic (DAE) System

Cell Controller

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

Data Converter

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

6 CONDUCTED OUTPUT POWER MEASUREMENT

6.1 Summary

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

6.2 Conducted Power

6.2.1 Measurement Methods

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

6.2.2 Measurement result

Table 3: Conducted Power Measurement Results

GSM 850MHz Speech	**Conducted Power (dBm)**		
	Channel 128 (824.2MHz)	**Channel 190 (836.6MHz)**	**Channel 251 (848.8MHz)**
	33.5	33.5	33.4
Max Power	33.5	33.5	33.5
GSM 850MHz GPRS	**Conducted Power (dBm)**		
	Channel 128 (824.2MHz)	**Channel 190 (836.6MHz)**	**Channel 251 (848.8MHz)**
	30.5	30.5	30.5
Max Power	30.5	30.5	30.5
GSM 850MHz EGPRS	**Conducted Power (dBm)**		
	Channel 128 (824.2MHz)	**Channel 190 (836.6MHz)**	**Channel 251 (848.8MHz**
	28.0	28.0	28.0
Max Power	28.0	28.0	28.0
GSM 1900MHz Speech	**Conducted Power (dBm)**		
	Channel 512 (1850.2MHz)	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
	30.5	30.5	30.5
Max Power	30.5	30.5	30.5
GSM 1900MHz GPRS	**Conducted Power (dBm)**		
	Channel 512 (1850.2MHz)	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
	27.4	27.4	27.5
Max Power	27.5	27.5	27.5

GSM 1900MHz EGPRS	Conducted Power (dBm)		
	Channel 512 (1850.2MHz)	Channel 661 (1880MHz)	Channel 810 (1909.8MHz)
	26.9	27.0	27.0
Max Power	27.0	27.0	27.0

6.2.3 Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 8 to Table 13 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

7 TEST RESULTS

7.1 Dielectric Performance

Table 4: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 39%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **May 7, 2010** 1900 MHz **May 8, 2010**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	850 MHz	41.5	0.90
	1900 MHz	40.0	1.40
Measurement value (Average of 10 tests)	850 MHz	39.7	0.90
	1900 MHz	40.7	1.39

Table 5: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 39%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **May 7, 2010** 1900 MHz **May 8, 2010**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	850 MHz	55.2	0.97
	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	850 MHz	54.8	0.97
	1900 MHz	52.3	1.57

7.2 System Validation

Table 6: System Validation of Head

Measurement is made at temperature 23.0 °C and relative humidity 39%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **May 7, 2010** 1900 MHz **May 8, 2010**				
Liquid parameters	Dipole calibration Target value	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
		835 MHz	39.9	0.88
		1900 MHz	38.9	1.38

	Actural Measurement value	835 MHz		39.8		0.88
		1900 MHz		40.7		1.39
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	835 MHz	1.54	2.38	1.52	2.32	-1.30%	-2.52%
	1900 MHz	5.05	9.91	4.93	9.84	-2.38%	-0.71%

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

Table 7: System Validation of Body

Measurement is made at temperature 23.0 °C and relative humidity 39%. Liquid temperature during the test: 22.5°C Measurement Date : 850 MHz **May 7, 2010** 1900 MHz **May 8, 2010**							
Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		835 MHz		54.5		0.97	
		1900 MHz		52.5		1.51	
	Actural Measurement value	835 MHz		54.9		0.95	
		1900 MHz		52.3		1.57	
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	1.57	2.41	1.53	2.34	-2.55%	-2.90%
	1900 MHz	5.24	10.4	5.10	10.2	-2.67%	-1.92%

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

7.3 Summary of Measurement Results

	Duty Cycle
Speech	**1 : 8.3**
GPRS/EGPRS	**1 : 4**

Table 8: SAR Values (Head, GSM 850 MHz Band) – Slide down

Limit of SAR (W/kg)	**1 g Average**	**Power Drift (dB)**
	1.6	
Test Case	**Measurement**	
	1 g Average	
Left hand, Touch cheek, Mid frequency (See Fig.1)	0.357	0.024
Left hand, Tilt 15 Degree, Mid frequency (See Fig.2)	0.225	-0.176

Right hand, Touch cheek, Mid frequency (See Fig.3)	0.346	-0.125
Right hand, Tilt 15 Degree, Mid frequency (See Fig.4)	0.246	-0.076

Table 9: SAR Values (Head, GSM 850 MHz Band) – Slide up

Limit of SAR (W/kg)	1 g Average	Power Drift (dB)
	1.6	
Test Case	Measurement	
	1 g Average	
Left hand, Touch cheek, High frequency (See Fig.5)	0.683	-0.018
Left hand, Touch cheek, Mid frequency (See Fig.6)	0.569	-0.183
Left hand, Touch cheek, Low frequency (See Fig.7)	0.433	-0.121
Left hand, Tilt 15 Degree, Mid frequency (See Fig.8)	0.286	-0.077
Right hand, Touch cheek, High frequency (See Fig.9)	0.629	-0.123
Right hand, Touch cheek, Mid frequency (See Fig.10)	0.508	-0.152
Right hand, Touch cheek, Low frequency (See Fig.11)	0.398	-0.049
Right hand, Tilt 15 Degree, Mid frequency (See Fig.12)	0.284	0.097

Table 10: SAR Values (Body, GSM 850 MHz Band) – Slide down

Limit of SAR (W/kg)	1 g Average	Power Drift (dB)
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average	
Body, Towards Ground, High frequency with GPRS (See Fig.13)	0.671	-0.177
Body, Towards Ground, Mid frequency with GPRS (See Fig.14)	0.551	-0.019
Body, Towards Ground, Low frequency with GPRS (See Fig.15)	0.431	0.036
Body, Towards Ground, High frequency with EGPRS (See Fig.16)	0.361	0.048
Body, Towards Ground, High frequency with Headset (See Fig.17)	0.480	0.030
Body, Towards Phantom, High frequency with GPRS (See Fig.18)	0.305	-0.139

Table 11: SAR Values (Head, GSM 1900 MHz Band) – Slide down

Limit of SAR (W/kg)	1 g Average	Power Drift (dB)
	1.6	
Test Case	Measurement	
	1 g Average	
Left hand, Touch cheek, High frequency (See Fig.19)	0.357	-0.017
Left hand, Touch cheek, Mid frequency (See Fig.20)	0.424	-0.073
Left hand, Touch cheek, Low frequency (See Fig.21)	0.328	0.018
Left hand, Tilt 15 Degree, Mid frequency (See Fig.22)	0.266	-0.024
Right hand, Touch cheek, High frequency (See Fig.23)	0.575	0.157
Right hand, Touch cheek, Mid frequency (See Fig.24)	0.601	-0.155
Right hand, Touch cheek, Low frequency (See Fig.25)	0.526	0.021
Right hand, Tilt 15 Degree, Mid frequency (See Fig.26)	0.219	-0.130

Table 12: SAR Values (Head, GSM 1900 MHz Band) – Slide up

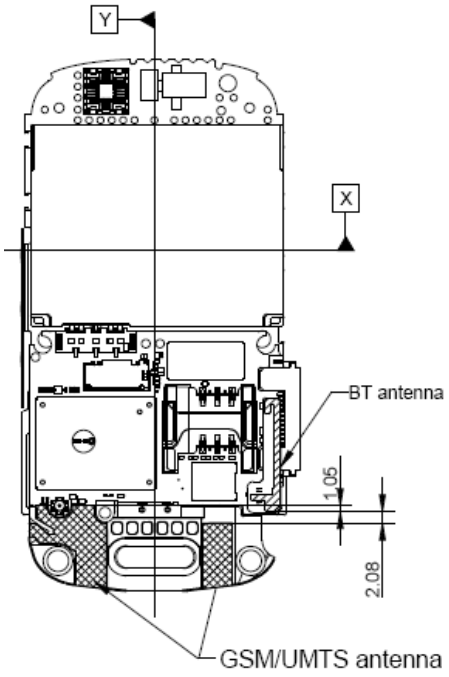
Limit of SAR (W/kg)	1 g Average	Power Drift (dB)
	1.6	
Test Case	Measurement	
	1 g Average	
Left hand, Touch cheek, Mid frequency (See Fig.27)	0.411	0.053
Left hand, Tilt 15 Degree, Mid frequency (See Fig.28)	0.220	0.072
Right hand, Touch cheek, Mid frequency (See Fig.29)	0.263	0.108
Right hand, Tilt 15 Degree, Mid frequency (See Fig.30)	0.241	0.047

Table 13: SAR Values (Body, GSM 1900 MHz Band) – Slide down

Limit of SAR (W/kg)	1 g Average	Power Drift (dB)
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average	
Body, Towards Ground, High frequency with GPRS (See Fig.31)	0.249	-0.156
Body, Towards Ground, Mid frequency with GPRS (See Fig.32)	0.262	0.032
Body, Towards Ground, Low frequency with GPRS (See Fig.33)	0.281	0.198
Body, Towards Ground, Low frequency with EGPRS (See Fig.34)	0.245	-0.026
Body, Towards Ground, Low frequency with Headset (See Fig.35)	0.276	-0.042
Body,Towards Phantom, Low frequency with GPRS (See Fig.36)	0.113	-0.033

7.4 Summary of Measurement Results (Bluetooth function)

The distance between BT antenna and GSM antenna is ＜ 2.5cm. The location of the antennas inside mobile phone is shown below:



The output power of BT antenna is 4.3mW. According to the SAR measurement results and the distance between the two antennas, we can draw the conclusion that: stand-alone SAR and simultaneous transmission SAR are not required for BT transmitter, because the all SAR measurement results of GSM transmitter are ＜1.2W/kg and BT antenna is ＜2.5cm from other antenna.

7.5 Conclusion

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

The maximum SAR values are obtained at the case of **GSM 850 MHz Band, Head, Slide up, Left hand, Touch cheek, High frequency (Table 9)**, and the value are: **0.683(1g).**

8 Measurement Uncertainty

No.	Error source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard Uncertainty (%) u_i' (%)	Degree of freedom V_{eff} or v_i
1	System repeatability	A	0.5	N	1	1	0.5	9
	Measurement system							
2	－probe calibration	B	7	N	2	1	3.5	∞
3	－axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	0.5	4.3	∞
4	－hemisphere isotropy of the probe	B	9.4	R	$\sqrt{3}$			
5	－space resolution	B	0	R	$\sqrt{3}$	1	0	∞
6	－boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	∞
7	－probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	－detection limit	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	－readout electronics	B	1.0	N	1	1	1.0	∞
10	－RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞

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

9 MAIN TEST INSTRUMENTS

Table 14: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 29,2009	One year
02	Power meter	NRVD	101253	September 4, 2009	One year
03	Power sensor	NRV-Z5	100333		
04	Signal Generator	E4433B	US37230472	September 3, 2009	One Year
05	Amplifier	VTL5400	0505	No Calibration Requested	
06	BTS	CMU 200	113312	August 10, 2009	One year
07	E-field Probe	SPEAG ES3DV3	3149	September 25, 2009	One year
08	DAE	SPEAG DAE4	771	November 19, 2009	One year
09	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Two years
10	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	Two years

END OF REPORT BODY

ANNEX A MEASUREMENT PROCESS

The evaluation was performed with the following procedure:

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

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

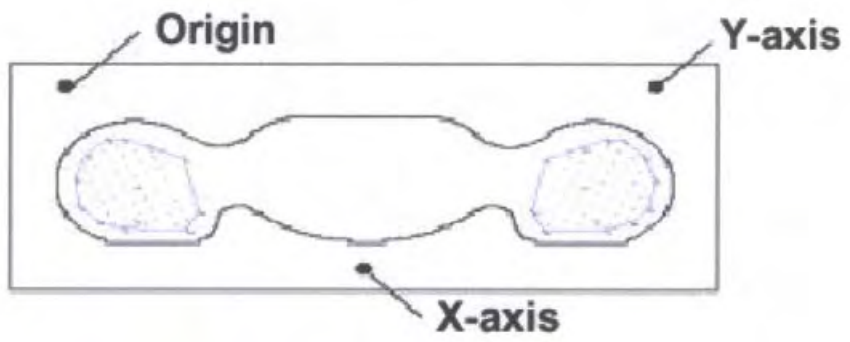
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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

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

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

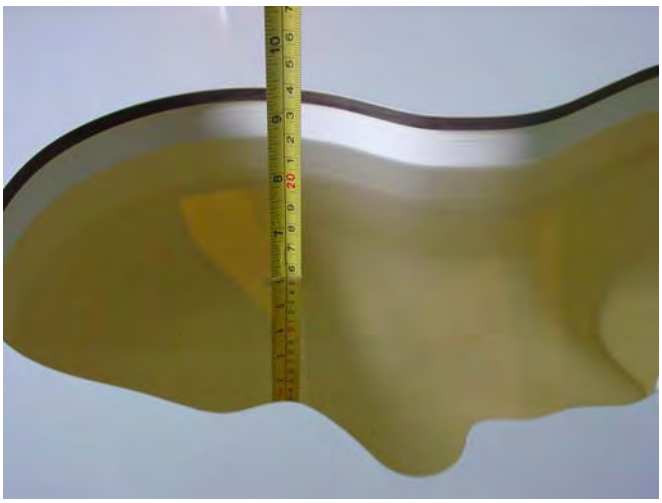
Step 4: Re-measurement the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation is repeated.



Picture A: SAR Measurement Points in Area Scan

ANNEX B TEST LAYOUT

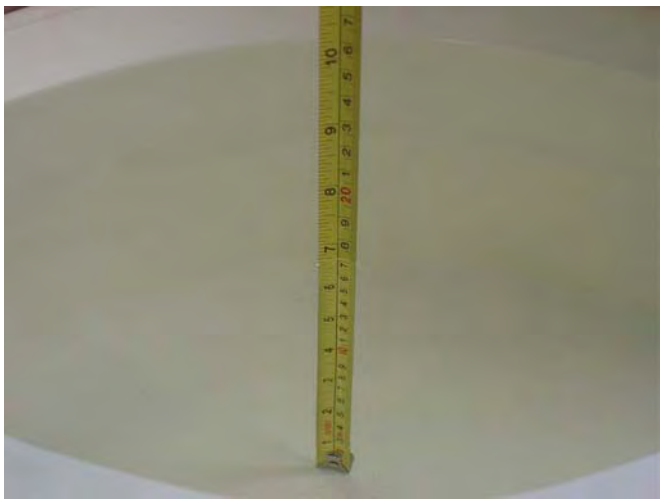
Picture B1: Specific Absorption Rate Test Layout



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

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

Picture B4: Liquid depth in the Flat Phantom (850 MHz Body)



Picture B5: Liquid depth in the Flat Phantom (1900MHz Body)

ANNEX C GRAPH RESULTS

850 Left Cheek Middle – Slide down

Date/Time: 2010-5-7 8:10:21
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.377 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.89 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 0.427 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.271 mW/g
Maximum value of SAR (measured) = 0.374 mW/g

0 dB = 0.374mW/g

Fig. 1 850 MHz CH190 – Slide down

850 Left Tilt Middle – Slide down

Date/Time: 2010-5-7 8:24:37
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.243 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.3 V/m; Power Drift = -0.176 dB
Peak SAR (extrapolated) = 0.282 W/kg
SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.169 mW/g
Maximum value of SAR (measured) = 0.238 mW/g

0 dB = 0.238mW/g

Fig. 2 850 MHz CH190 – Slide down

850 Right Cheek Middle – Slide down

Date/Time: 2010-5-7 9:37:11
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.375 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.62 V/m; Power Drift = -0.125 dB
Peak SAR (extrapolated) = 0.469 W/kg
SAR(1 g) = 0.346 mW/g; SAR(10 g) = 0.257 mW/g
Maximum value of SAR (measured) = 0.363 mW/g

0 dB = 0.363mW/g

Fig. 3 850 MHz CH190 – Slide down

850 Right Tilt Middle – Slide down

Date/Time: 2010-5-7 9:51:26
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.261 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 0.309 W/kg
SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.183 mW/g
Maximum value of SAR (measured) = 0.261 mW/g

0 dB = 0.261mW/g

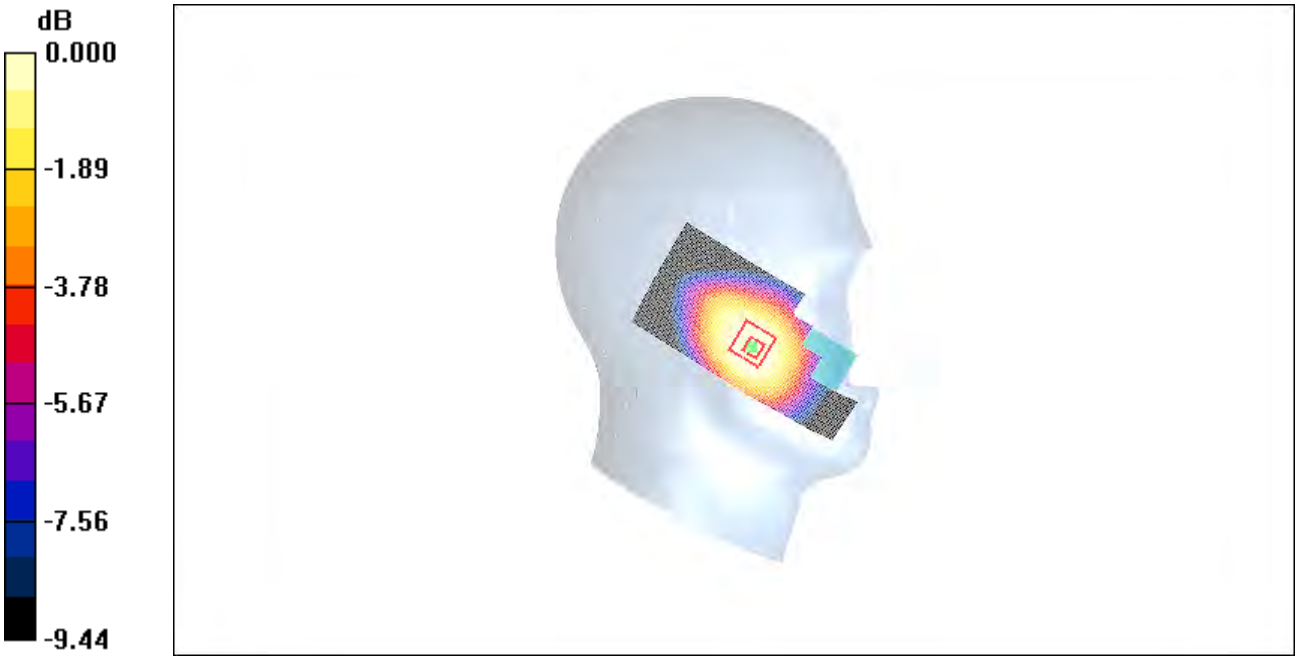
Fig. 4 850 MHz CH190 – Slide down

850 Left Cheek High – Slide up

Date/Time: 2010-5-7 9:07:32
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 39.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.740 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.513 mW/g
Maximum value of SAR (measured) = 0.712 mW/g



0 dB = 0.712mW/g

Fig. 5 850MHz CH251 – Slide up

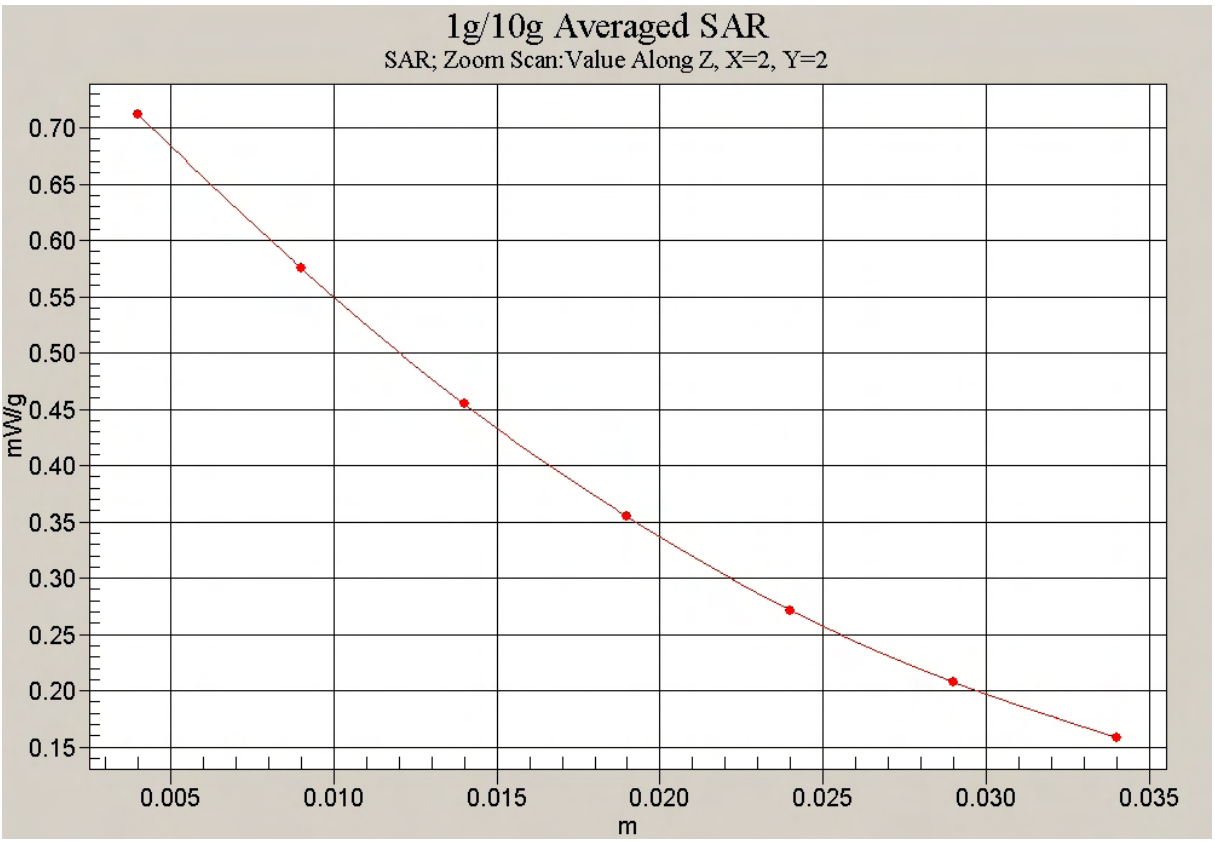


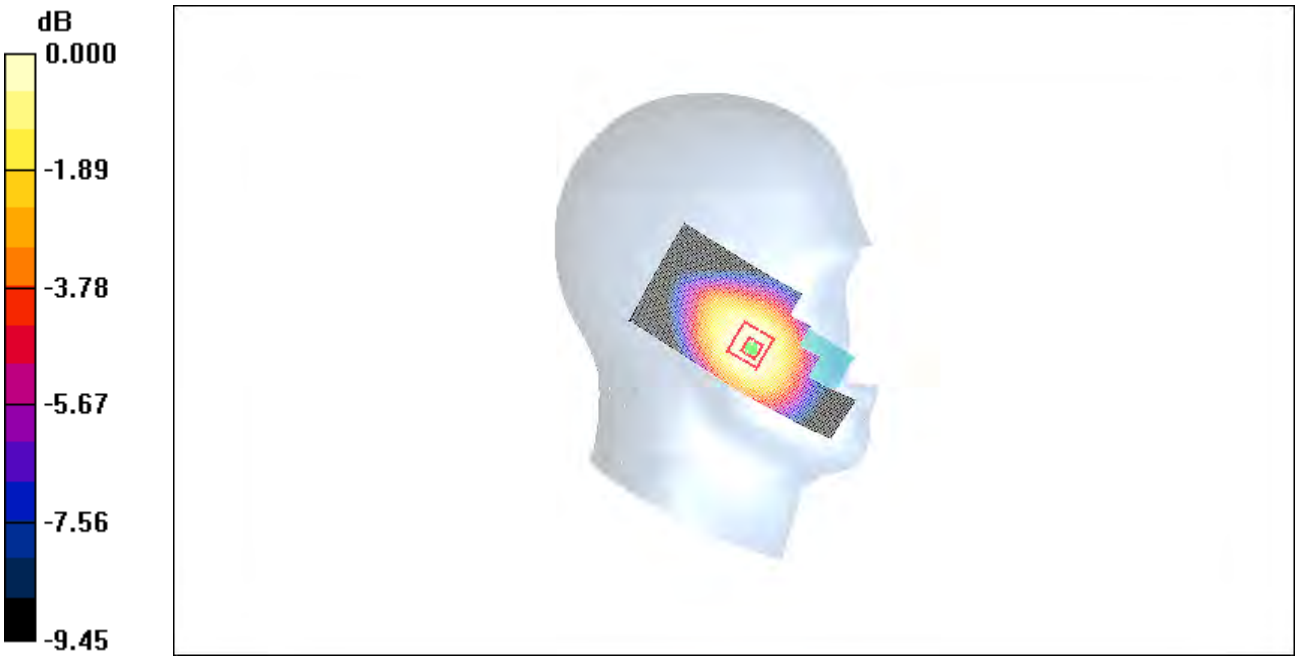
Fig.5-1 Z-Scan at power reference point (850 MHz CH251) – Slide down

850 Left Cheek Middle – Slide up

Date/Time: 2010-5-7 8:39:02
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.609 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.57 V/m; Power Drift = -0.183 dB
Peak SAR (extrapolated) = 0.698 W/kg
SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.599 mW/g



0 dB = 0.599mW/g

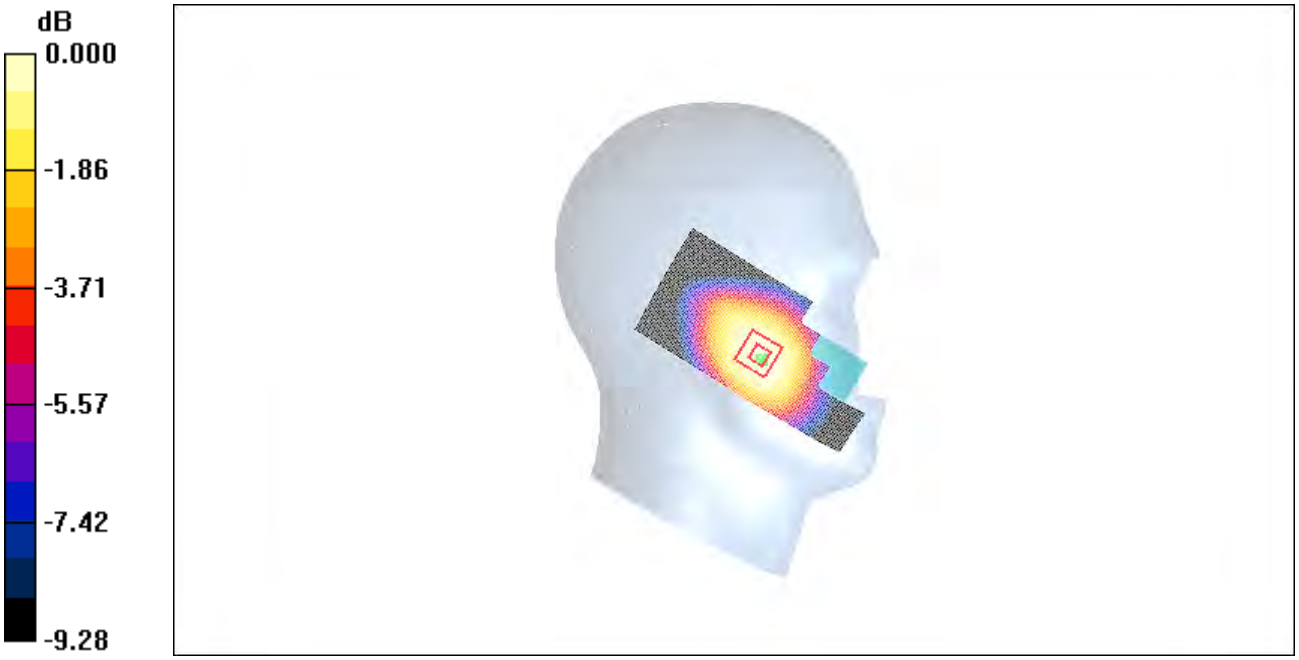
Fig. 6 850 MHz CH190 – Slide up

850 Left Cheek Low – Slide up

Date/Time: 2010-5-7 9:21:50
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used: f = 825 MHz; σ = 0.876 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.461 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.36 V/m; Power Drift = -0.121 dB
Peak SAR (extrapolated) = 0.535 W/kg
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.326 mW/g
Maximum value of SAR (measured) = 0.453 mW/g



0 dB = 0.453mW/g

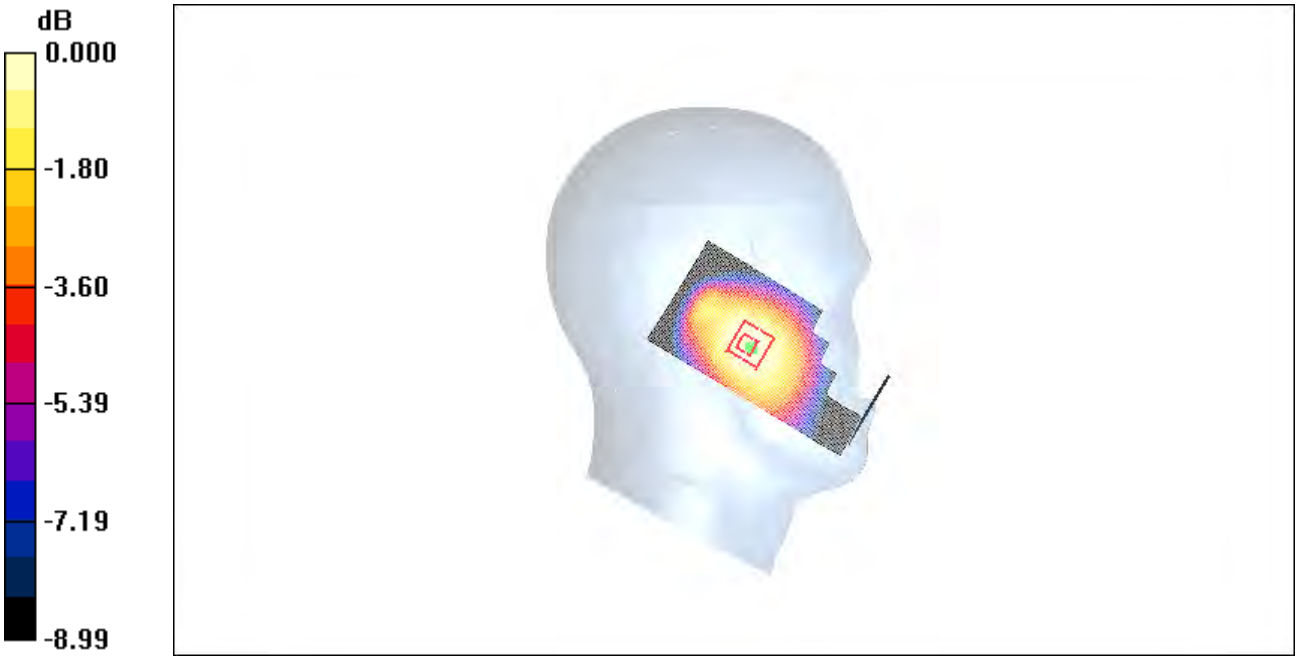
Fig. 7 850 MHz CH128 – Slide up

850 Left Tilt Middle – Slide up

Date/Time: 2010-5-7 8:53:19
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.298 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.077 dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.286 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.302 mW/g



0 dB = 0.302mW/g

Fig. 8 850 MHz CH190 – Slide up

850 Right Cheek High – Slide up

Date/Time: 2010-5-7 10:34:38
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.90 mho/m; εr = 39.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.667 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.96 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 0.794 W/kg
SAR(1 g) = 0.629 mW/g; SAR(10 g) = 0.466 mW/g
Maximum value of SAR (measured) = 0.663 mW/g

0 dB = 0.663mW/g

Fig. 9 850MHz CH251 – Slide up

850 Right Cheek Middle – Slide up

Date/Time: 2010-5-7 10:06:05
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.547 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.17 V/m; Power Drift = -0.152 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.379 mW/g
Maximum value of SAR (measured) = 0.535 mW/g

0 dB = 0.535mW/g

Fig. 10 850 MHz CH190 – Slide up

850 Right Cheek Low – Slide up

Date/Time: 2010-5-7 10:48:56
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used: f = 825 MHz; σ = 0.876 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Cheek Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.423 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.16 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.511 W/kg
SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.298 mW/g
Maximum value of SAR (measured) = 0.419 mW/g

0 dB = 0.419mW/g

Fig. 11 850 MHz CH128 – Slide up

850 Right Tilt Middle – Slide up

Date/Time: 2010-5-7 10:20:18
Electronics: DAE4 Sn771
Medium: 850 HEAD
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.888 mho/m; εr = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.299 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.7 V/m; Power Drift = 0.097 dB
Peak SAR (extrapolated) = 0.353 W/kg
SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.300 mW/g

0 dB = 0.300mW/g

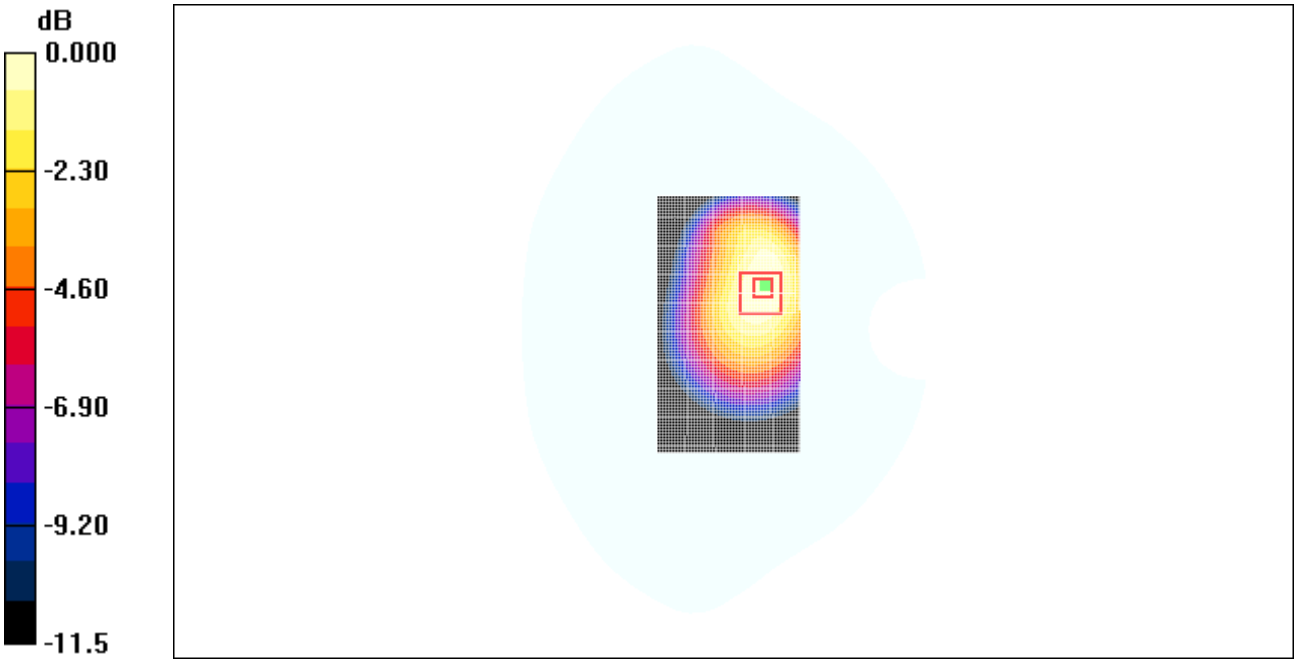
Fig. 12 850 MHz CH190 – Slide up

850 Body Towards Ground High with GPRS – Slide down

Date/Time: 2010-5-7 13:46:10
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.97 mho/m; εr = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.748 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.0 V/m; Power Drift = -0.177 dB
Peak SAR (extrapolated) = 0.992 W/kg
SAR(1 g) = 0.671 mW/g; SAR(10 g) = 0.448 mW/g
Maximum value of SAR (measured) = 0.706 mW/g



0 dB = 0.706mW/g

Fig. 13 850 MHz CH251 – Slide down

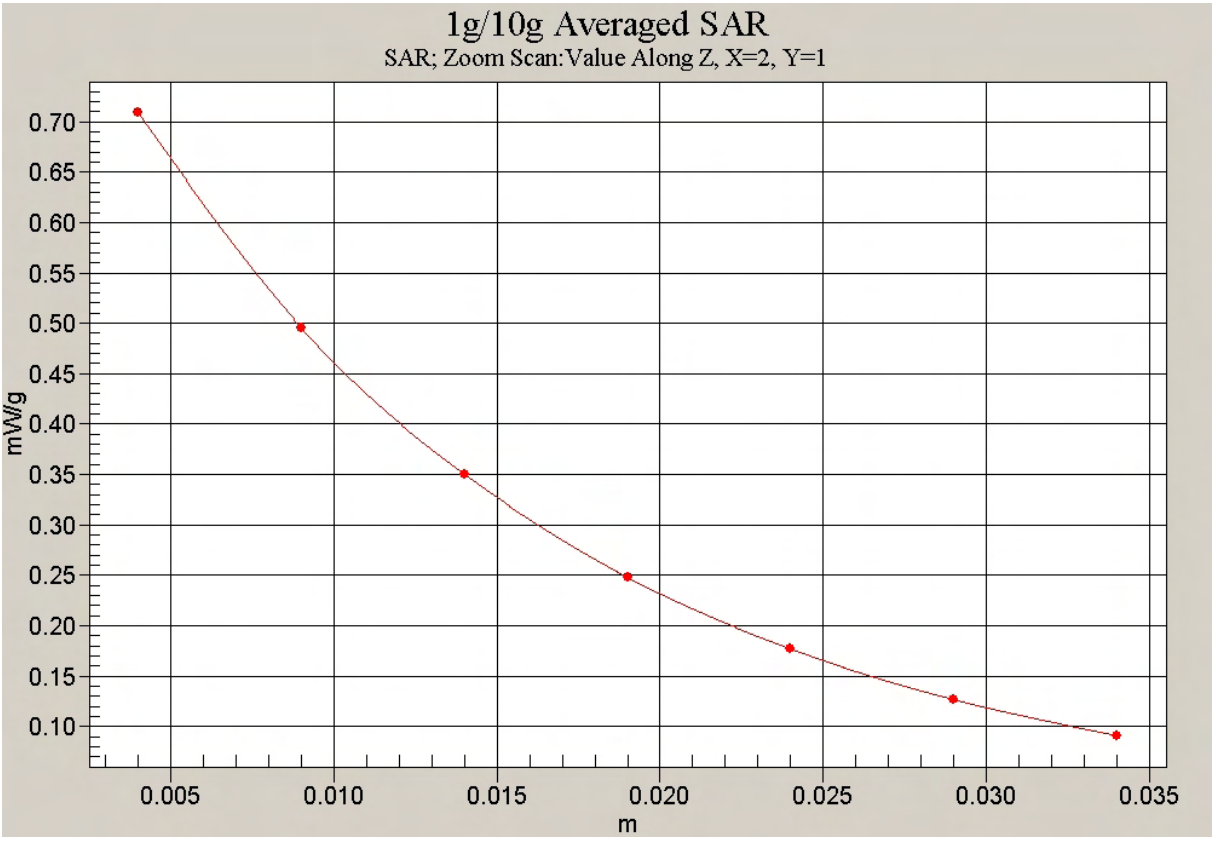


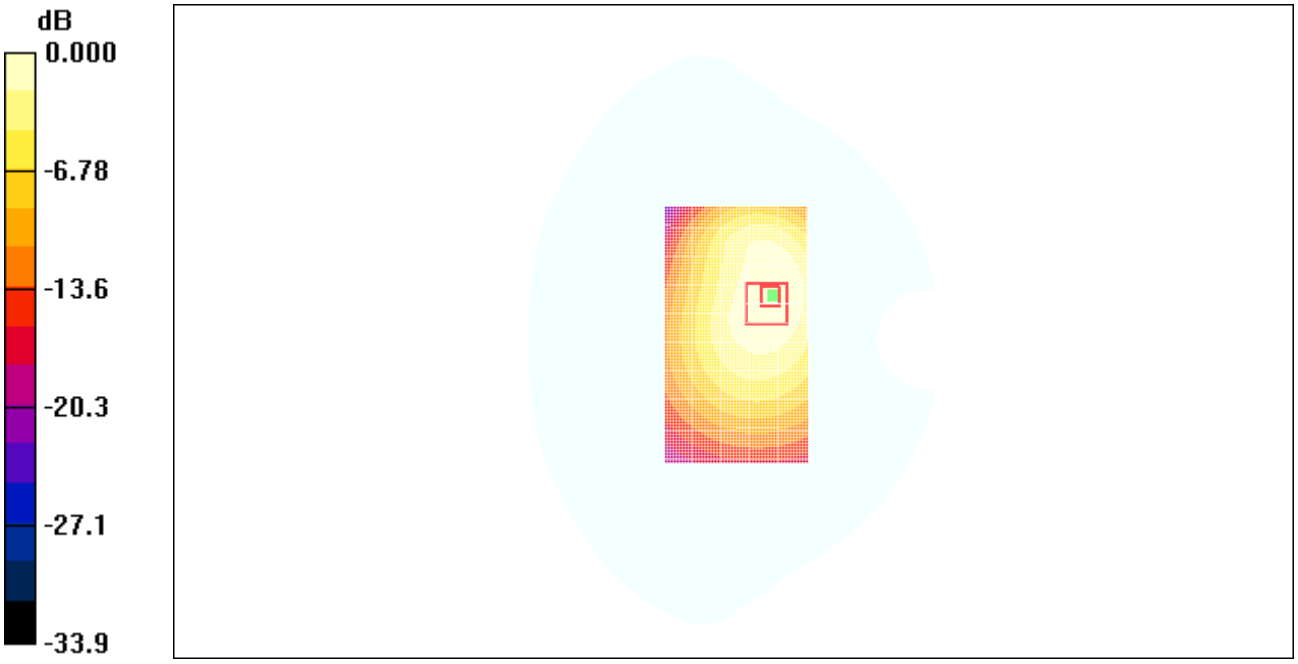
Fig. 13-1 Z-Scan at power reference point (850 MHz CH251) – Slide down

850 Body Towards Ground Middle with GPRS – Slide down

Date/Time: 2010-5-7 14:01:33
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.96 mho/m; εr = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Middle/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.596 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.5 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.816 W/kg
SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.367 mW/g
Maximum value of SAR (measured) = 0.583 mW/g



0 dB = 0.583mW/g

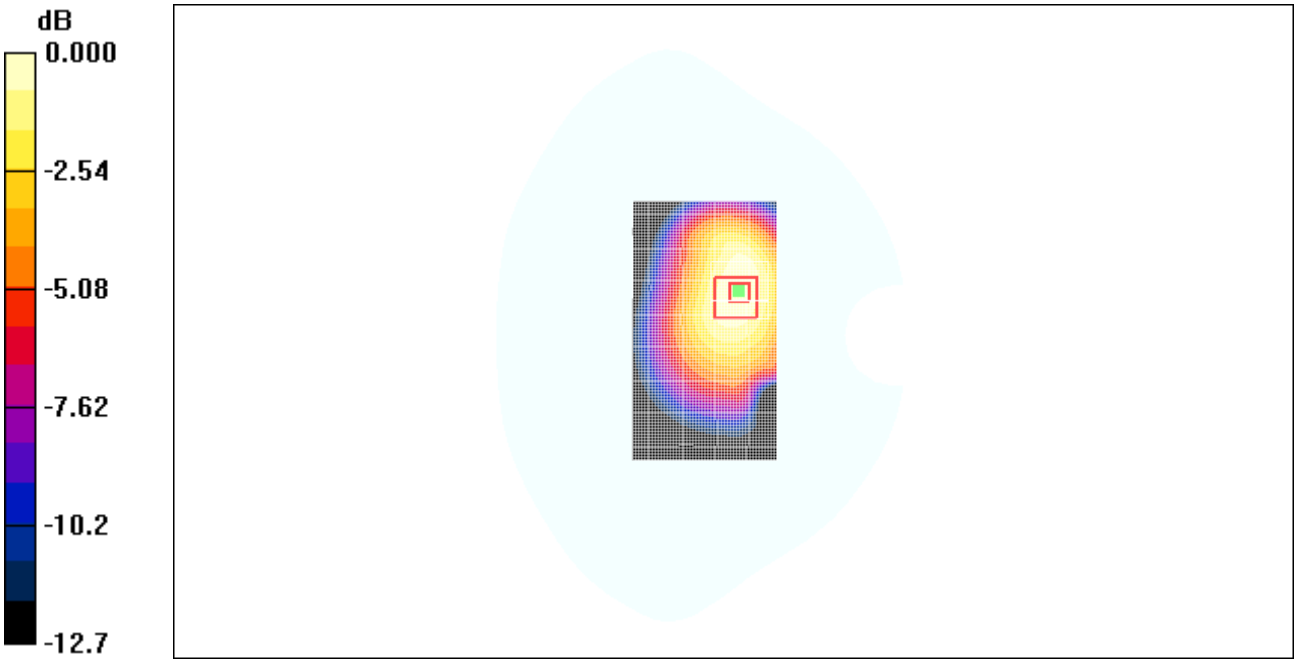
Fig. 14 850 MHz CH190 – Slide down

850 Body Towards Ground Low with GPRS – Slide down

Date/Time: 2010-5-7 14:16:52
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 825 MHz; σ = 0.943 mho/m; εr = 55.0; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground Low/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.462 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.3 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.632 W/kg
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.289 mW/g
Maximum value of SAR (measured) = 0.446 mW/g



0 dB = 0.446mW/g

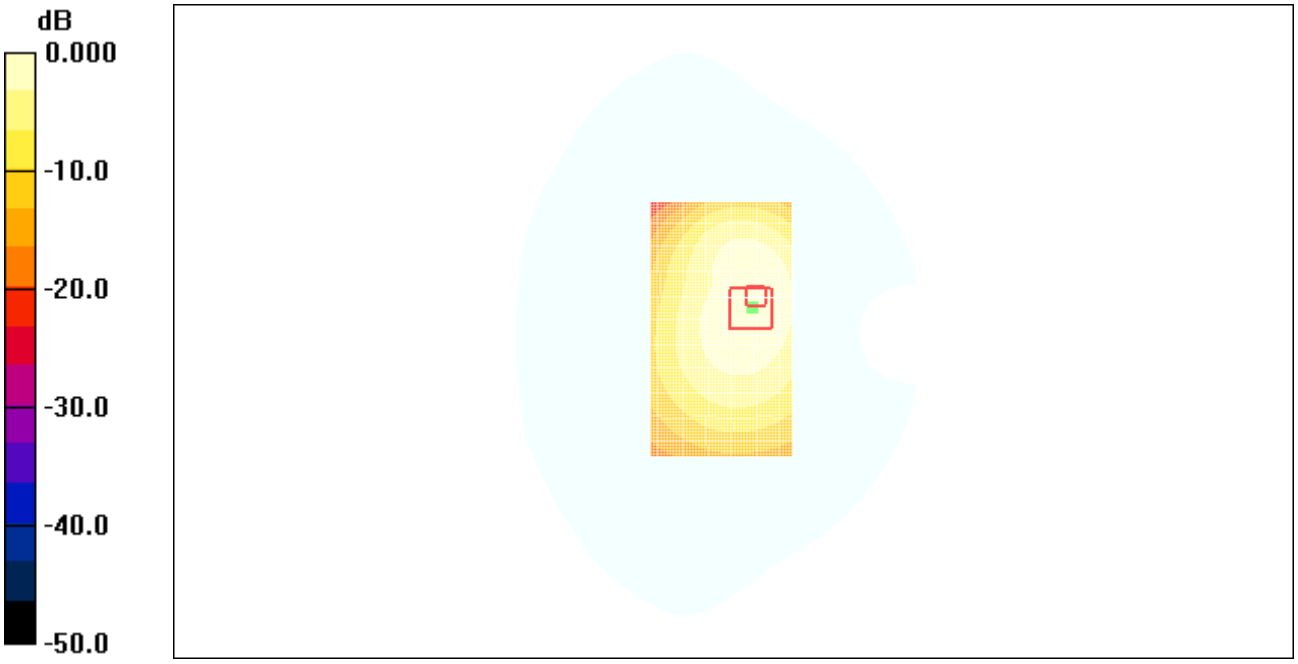
Fig. 15 850 MHz CH128 – Slide down

850 Body Towards Ground High with EGPRS – Slide down

Date/Time: 2010-5-7 14:33:13
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.97 mho/m; εr = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.379 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.0 V/m; Power Drift = 0.048 dB
Peak SAR (extrapolated) = 0.758 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.241 mW/g
Maximum value of SAR (measured) = 0.373 mW/g



0 dB = 0.373mW/g

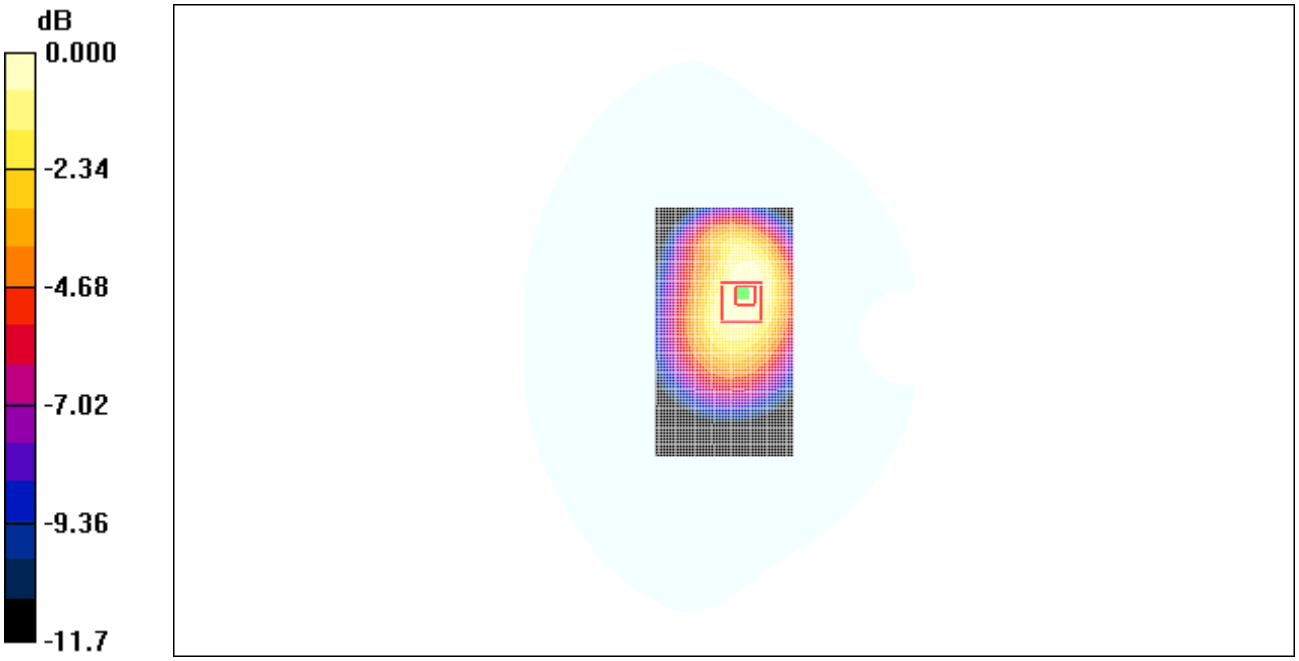
Fig. 16 850 MHz CH251 – Slide down

850 Body Towards Ground High with Headset – Slide down

Date/Time: 2010-5-7 14:50:27
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.97 mho/m; εr = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Ground High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.507 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.713 W/kg
SAR(1 g) = 0.480 mW/g; SAR(10 g) = 0.318 mW/g
Maximum value of SAR (measured) = 0.501 mW/g



0 dB = 0.501mW/g

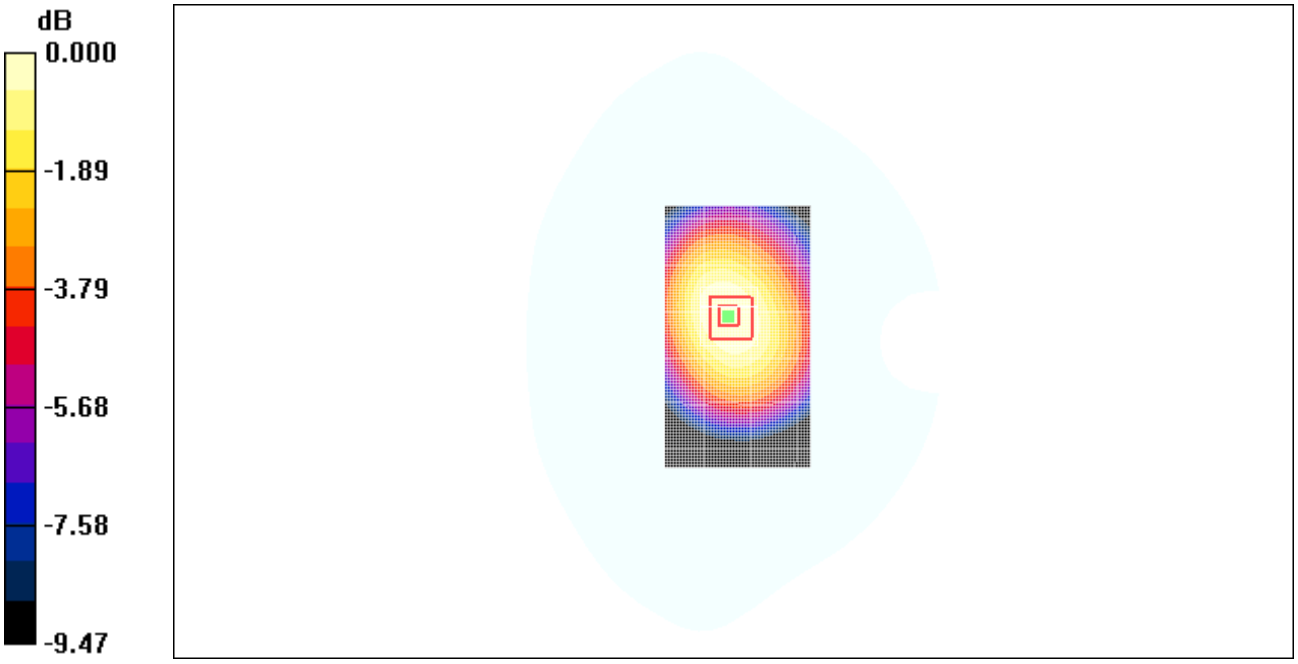
Fig. 17 850 MHz CH251 – Slide down

850 Body Towards Phantom High with GPRS – Slide down

Date/Time: 2010-5-7 15:08:12
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.97 mho/m; εr = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:4
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

Toward Phantom High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.326 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.6 V/m; Power Drift = -0.139 dB
Peak SAR (extrapolated) = 0.396 W/kg
SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 0.315 mW/g



0 dB = 0.315mW/g

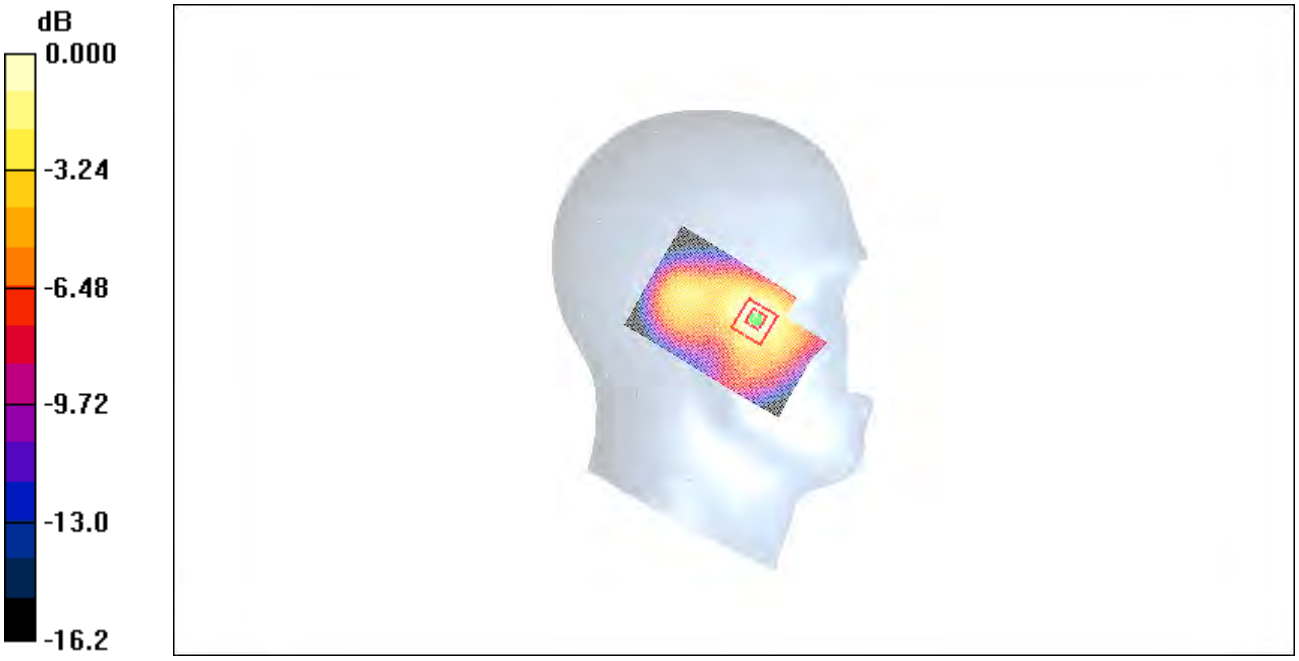
Fig. 18 850 MHz CH251 – Slide down

1900 Left Cheek High – Slide down

Date/Time: 2010-5-8 9:09:42
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0^{o}C Liqiud Temperature: 22.5^{o}C
Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.382 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.574 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.208 mW/g
Maximum value of SAR (measured) = 0.387 mW/g



0 dB = 0.387mW/g

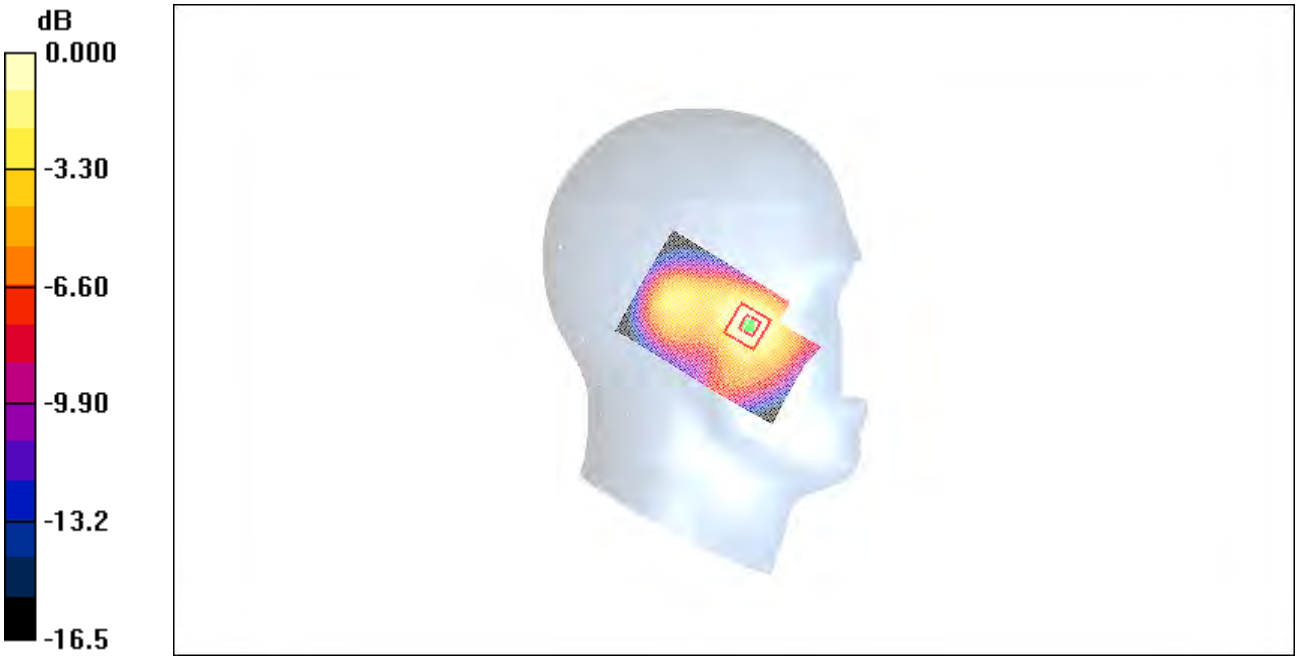
Fig. 19 1900 MHz CH810 – Slide down

1900 Left Cheek Middle – Slide down

Date/Time: 2010-5-8 8:11:23
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.457 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = -0.073 dB
Peak SAR (extrapolated) = 0.668 W/kg
SAR(1 g) = 0.424 mW/g; SAR(10 g) = 0.250 mW/g
Maximum value of SAR (measured) = 0.460 mW/g



0 dB = 0.460mW/g

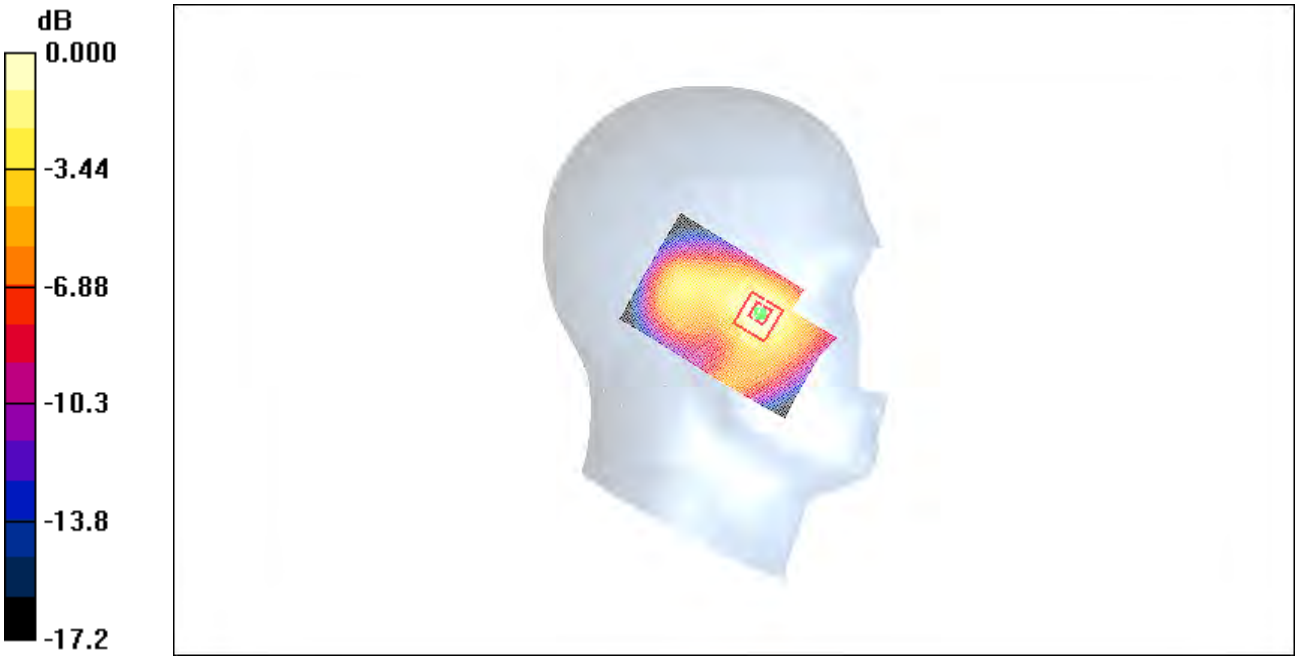
Fig. 20 1900 MHz CH661 – Slide down

1900 Left Cheek Low – Silde down

Date/Time: 2010-5-8 9:23:59
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.345 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.513 W/kg
SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.195 mW/g
Maximum value of SAR (measured) = 0.356 mW/g



0 dB = 0.356mW/g

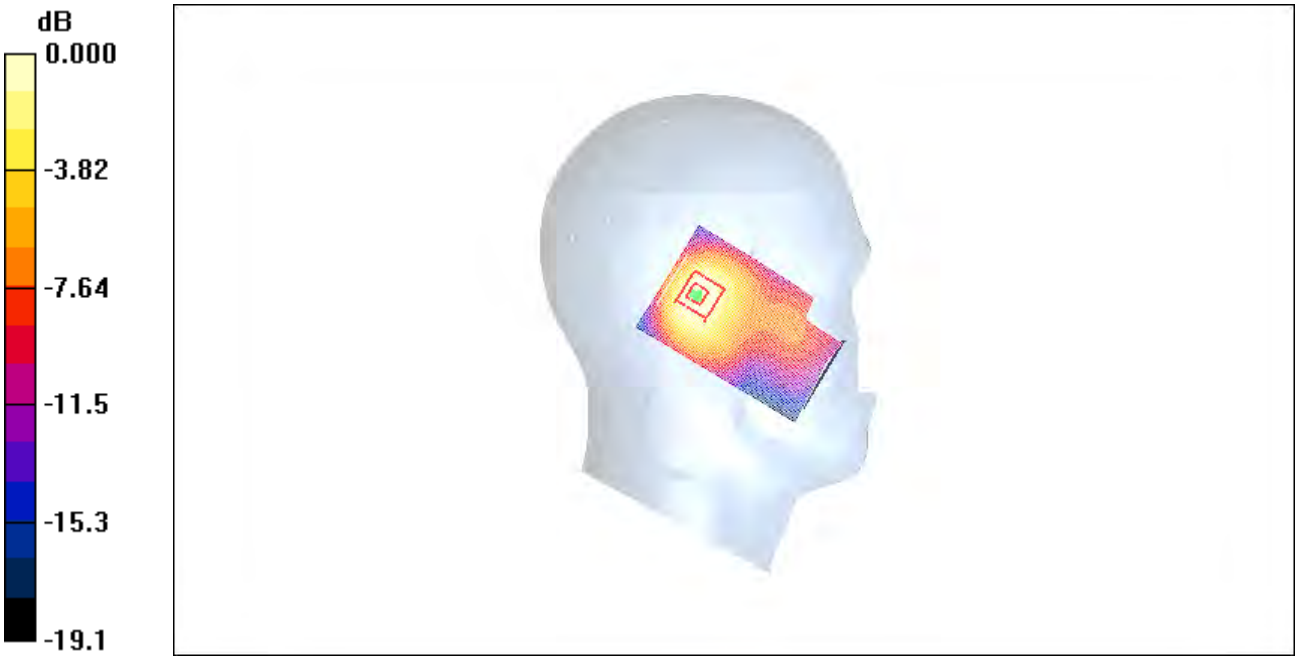
Fig. 21 1900 MHz CH512 – Slide down

1900 Left Tilt Middle – Slide down

Date/Time: 2010-5-8 8:25:40
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.315 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.7 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.410 W/kg
SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.159 mW/g
Maximum value of SAR (measured) = 0.290 mW/g



0 dB = 0.290mW/g

Fig. 22 1900 MHz CH661 – Slide down

1900 Right Cheek High – Slide down

Date/Time: 2010-5-8 10:37:03
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.40 mho/m; εr = 40.6; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek High/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.657 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.23 V/m; Power Drift = 0.157 dB
Peak SAR (extrapolated) = 0.969 W/kg
SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.313 mW/g
Maximum value of SAR (measured) = 0.634 mW/g

0 dB = 0.634mW/g

Fig. 23 1900 MHz CH810 – Slide down

1900 Right Cheek Middle – Slide down

Date/Time: 2010-5-8 9:39:14
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.696 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.91 V/m; Power Drift = -0.155 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.329 mW/g
Maximum value of SAR (measured) = 0.674 mW/g

0 dB = 0.674mW/g

Fig. 24 1900 MHz CH661 – Slide down

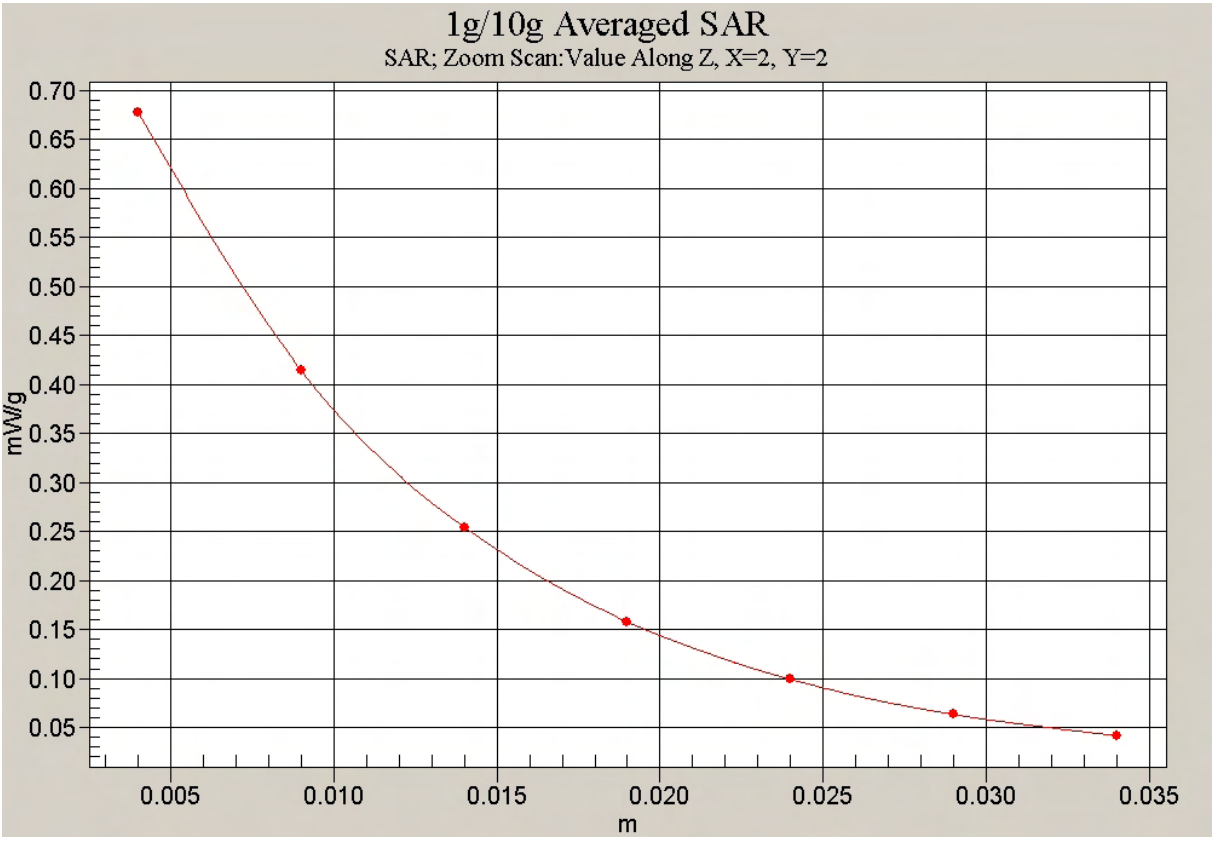


Fig. 24-1 Z-Scan at power reference point (1900 MHz CH661) – Slide down

1900 Right Cheek Low – Silde down

Date/Time: 2010-5-8 10:51:19
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.35 mho/m; εr = 40.8; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.602 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.26 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.880 W/kg
SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.290 mW/g
Maximum value of SAR (measured) = 0.587 mW/g

0 dB = 0.587mW/g

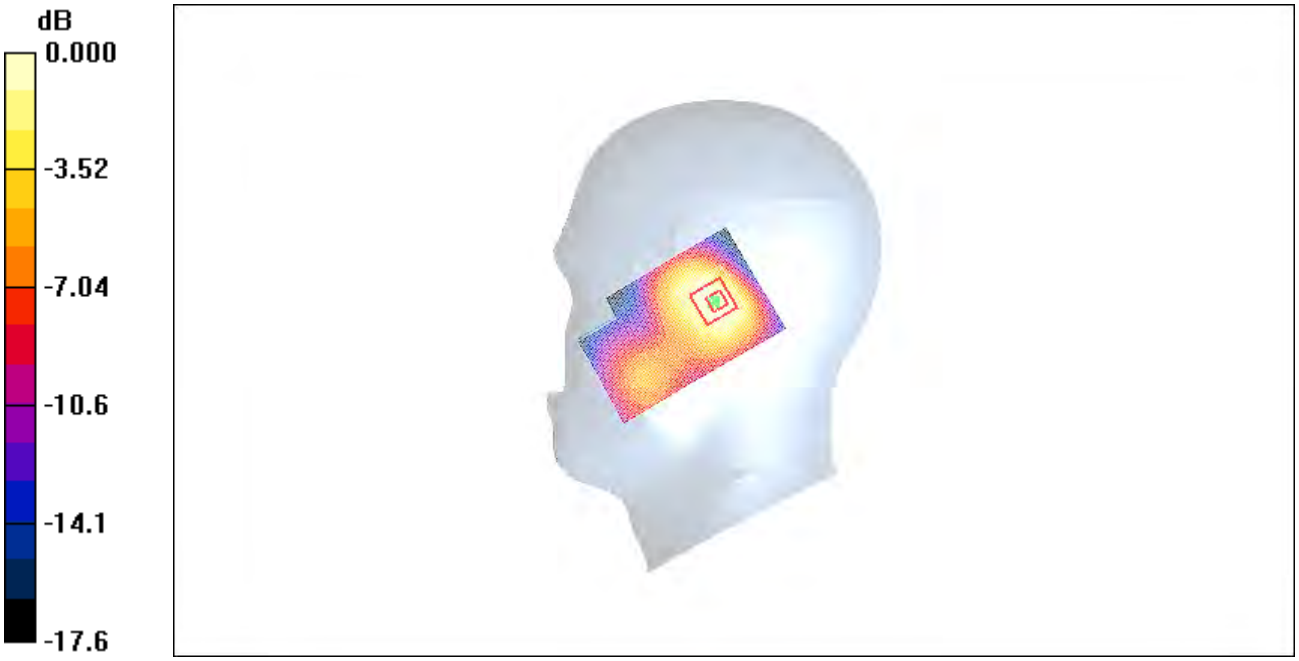
Fig. 25 1900 MHz CH512 – Slide down

1900 Right Tilt Middle – Slide down

Date/Time: 2010-5-8 9:53:27
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.252 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 0.327 W/kg
SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.136 mW/g
Maximum value of SAR (measured) = 0.230 mW/g



0 dB = 0.230mW/g

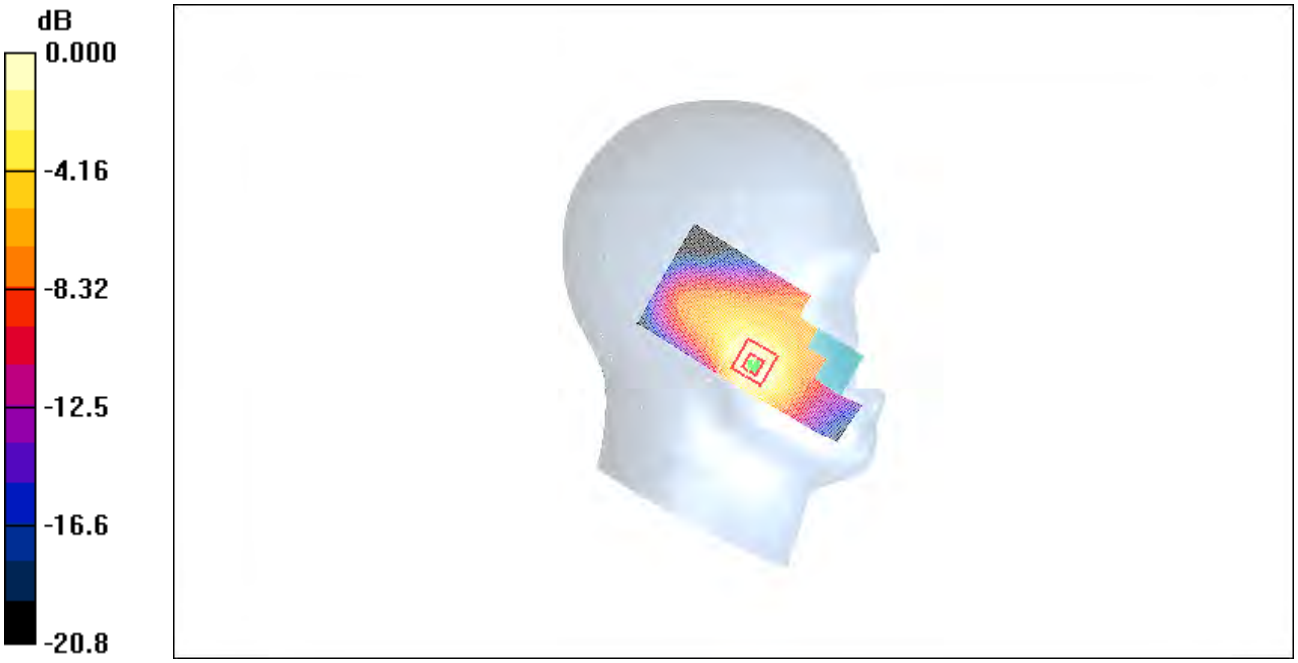
Fig.26 1900 MHz CH661 – Slide down

1900 Left Cheek Middle – Slide up

Date/Time: 2010-5-8 8:40:01
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

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

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.27 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 0.622 W/kg
SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.246 mW/g
Maximum value of SAR (measured) = 0.453 mW/g



0 dB = 0.453mW/g

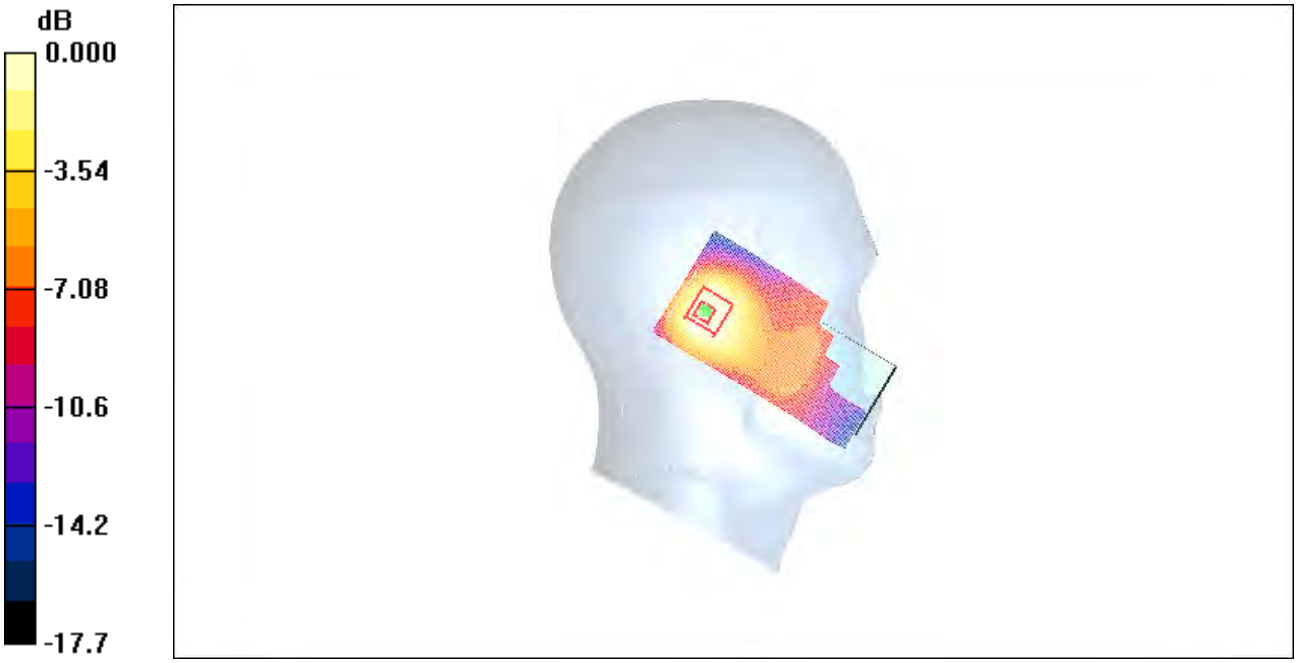
Fig. 27 1900 MHz CH661 – Slide up

1900 Left Tilt Middle – Slide up

Date/Time: 2010-5-8 8:54:18
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0^{o}C Liqiud Temperature: 22.5^{o}C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.274 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 0.315 W/kg
SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.235 mW/g



0 dB = 0.235mW/g

Fig. 28 1900 MHz CH661 – Slide up

1900 Right Cheek Middle – Slide up

Date/Time: 2010-5-8 10:08:07
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Cheek Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.271 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.15 V/m; Power Drift = 0.108 dB
Peak SAR (extrapolated) = 0.386 W/kg
SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.168 mW/g
Maximum value of SAR (measured) = 0.275 mW/g

0 dB = 0.275mW/g

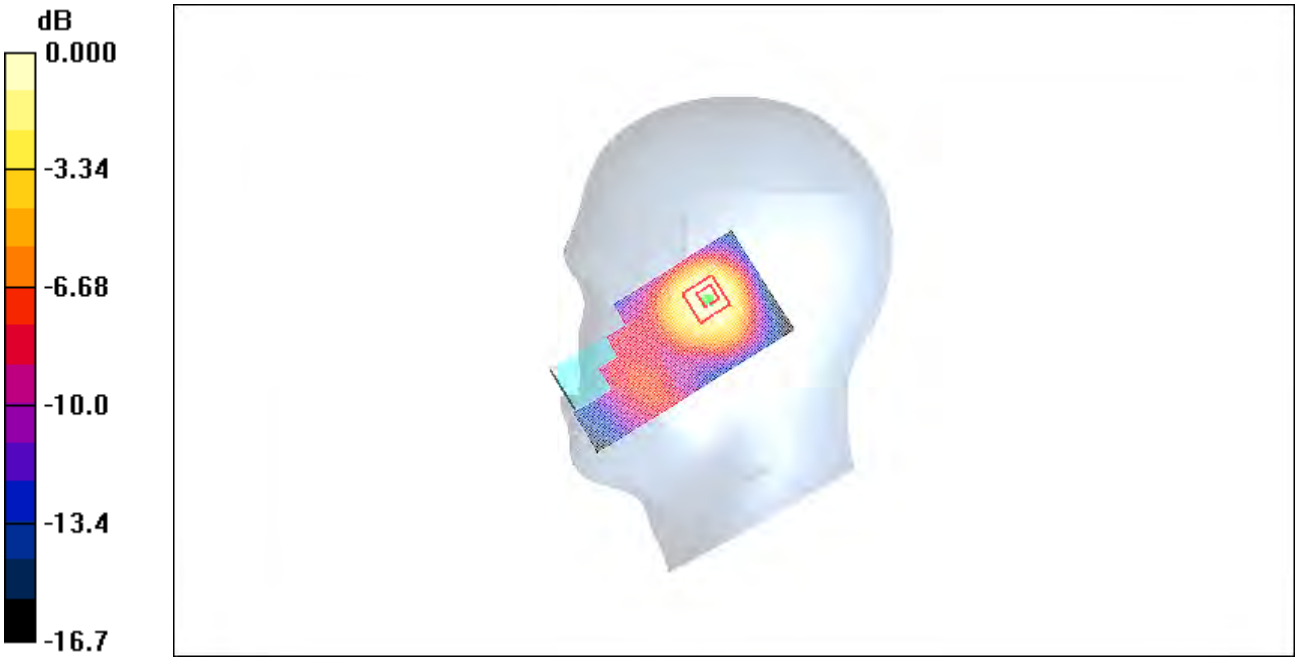
Fig. 29 1900 MHz CH661 – Slide up

1900 Right Tilt Middle – Slide up

Date/Time: 2010-5-8 10:22:21
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; εr = 40.7; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

Tilt Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.284 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.44 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.360 W/kg
SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.148 mW/g
Maximum value of SAR (measured) = 0.255 mW/g



0 dB = 0.255mW/g

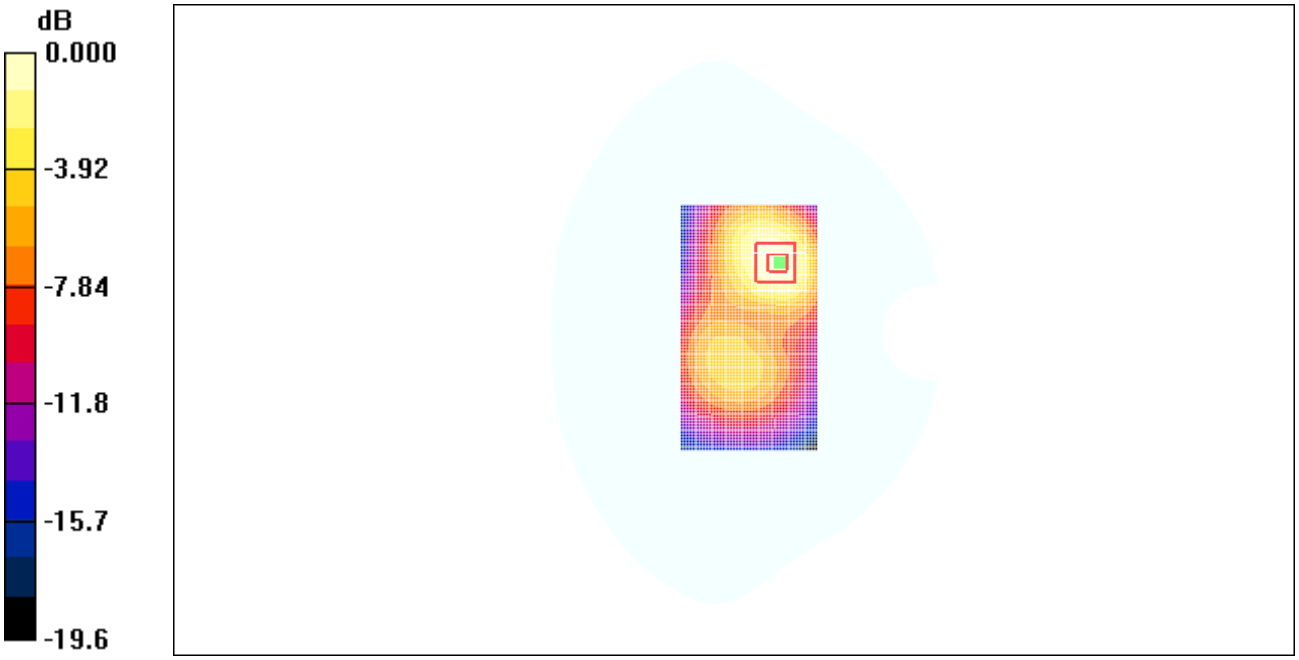
Fig.30 1900 MHz CH661 – Slide up

1900 Body Towards Ground High with GPRS – Slide down

Date/Time: 2010-5-7 13:57:05
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; εr = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.281 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.44 V/m; Power Drift = -0.156 dB
Peak SAR (extrapolated) = 0.442 W/kg
SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.251 mW/g



0 dB = 0.251mW/g

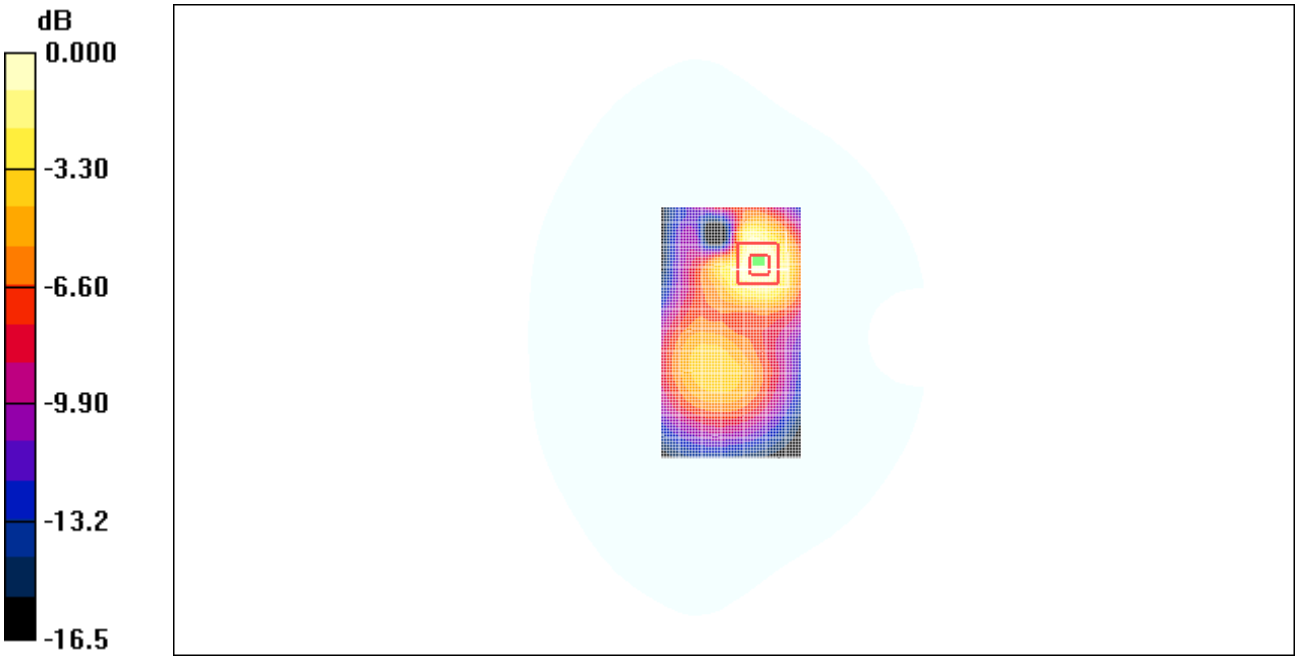
Fig. 31 1900 MHz CH810 – Slide down

1900 Body Towards Ground Middle with GPRS – Slide down

Date/Time: 2010-5-7 14:12:26
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.330 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.01 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 0.453 W/kg
SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.146 mW/g
Maximum value of SAR (measured) = 0.269 mW/g



0 dB = 0.269mW/g

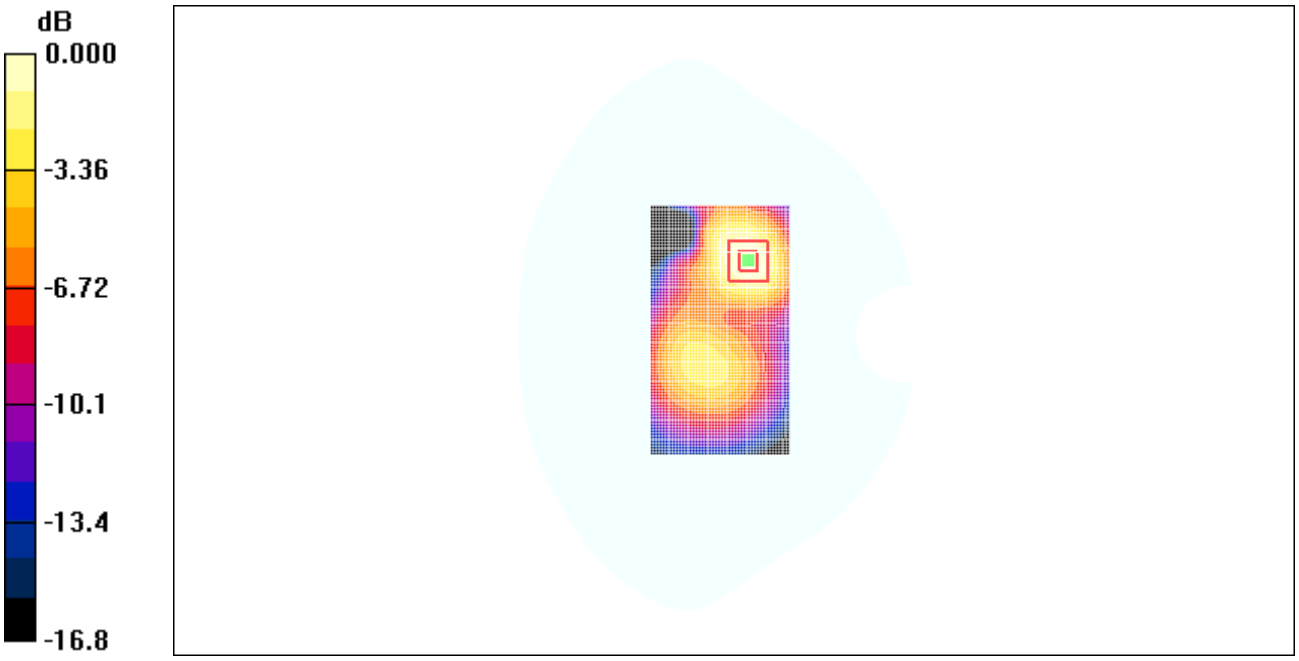
Fig. 32 1900 MHz CH661 – Slide down

1900 Body Towards Ground Low with GPRS – Slide down

Date/Time: 2010-5-7 14:27:45
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.53 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.309 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.85 V/m; Power Drift = 0.198 dB
Peak SAR (extrapolated) = 0.491 W/kg
SAR(1 g) = 0.281 mW/g; SAR(10 g) = 0.155 mW/g
Maximum value of SAR (measured) = 0.274 mW/g



0 dB = 0.274mW/g

Fig. 33 1900 MHz CH512 – Slide down

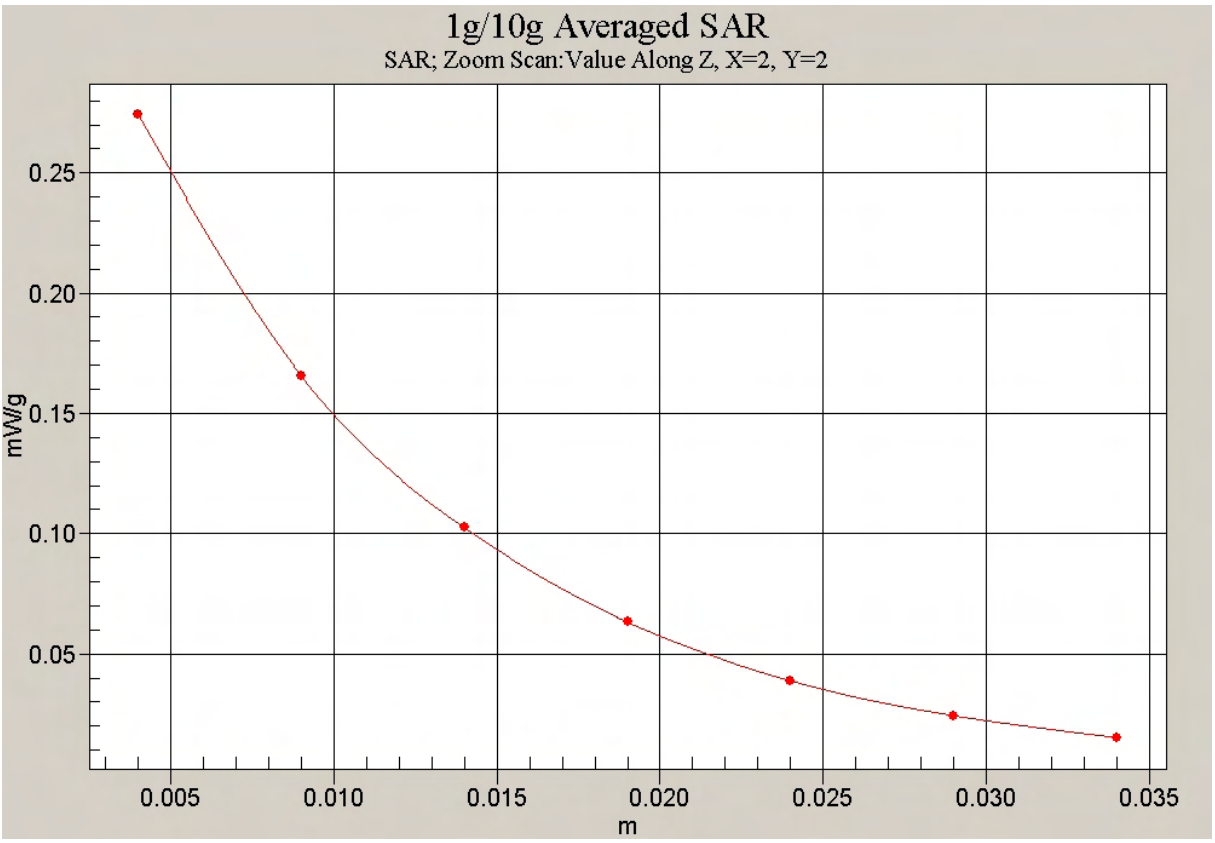


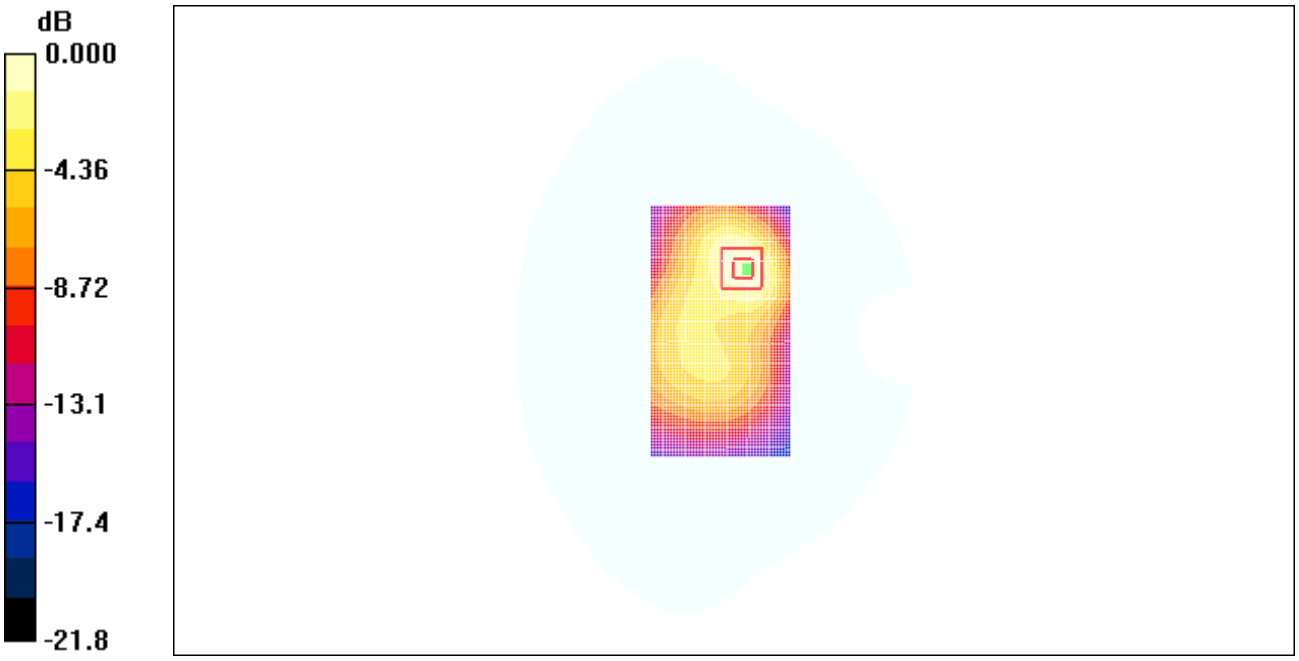
Fig. 33-1 Z-Scan at power reference point (1900 MHz CH512) – Slide down

1900 Body Towards Ground Low with EGPRS – Slide down

Date/Time: 2010-5-7 14:44:28
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.53 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.270 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.04 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.429 W/kg
SAR(1 g) = 0.245 mW/g; SAR(10 g) = 0.137 mW/g
Maximum value of SAR (measured) = 0.260 mW/g



0 dB = 0.260mW/g

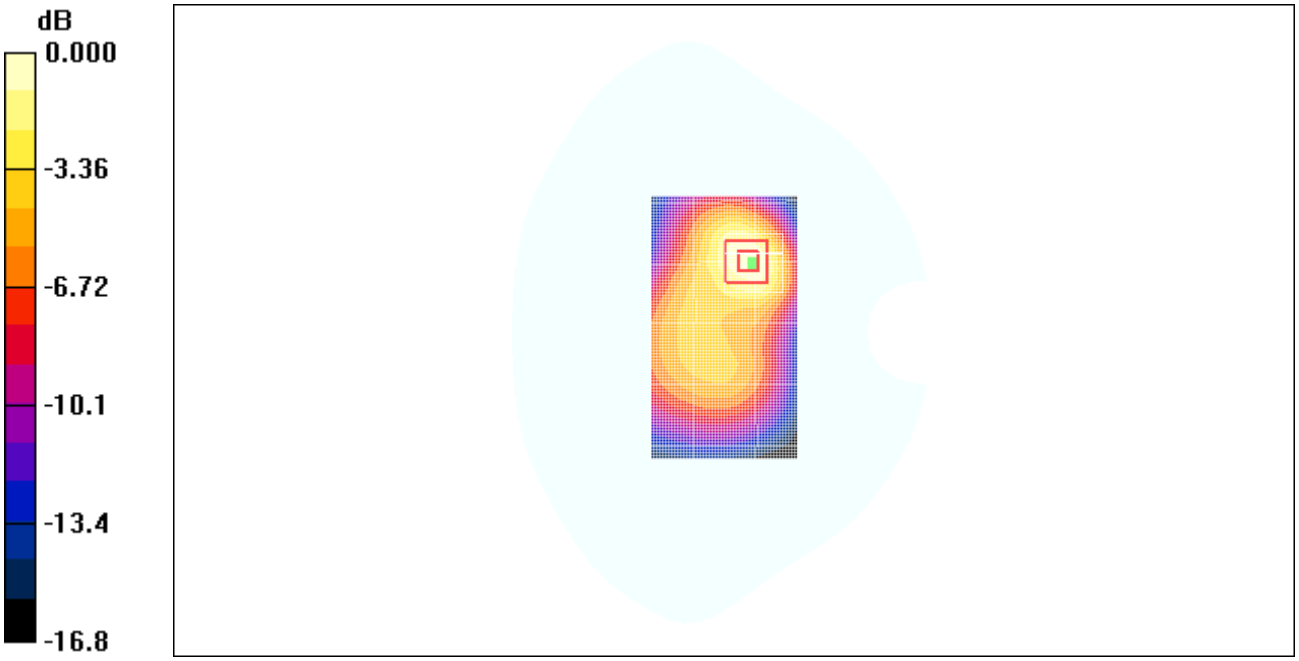
Fig. 34 1900 MHz CH512 – Slide down

1900 Body Towards Ground Low with Headset – Slide down

Date/Time: 2010-5-7 15:01:34
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.53 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.301 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.44 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.487 W/kg
SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 0.290 mW/g



0 dB = 0.290mW/g

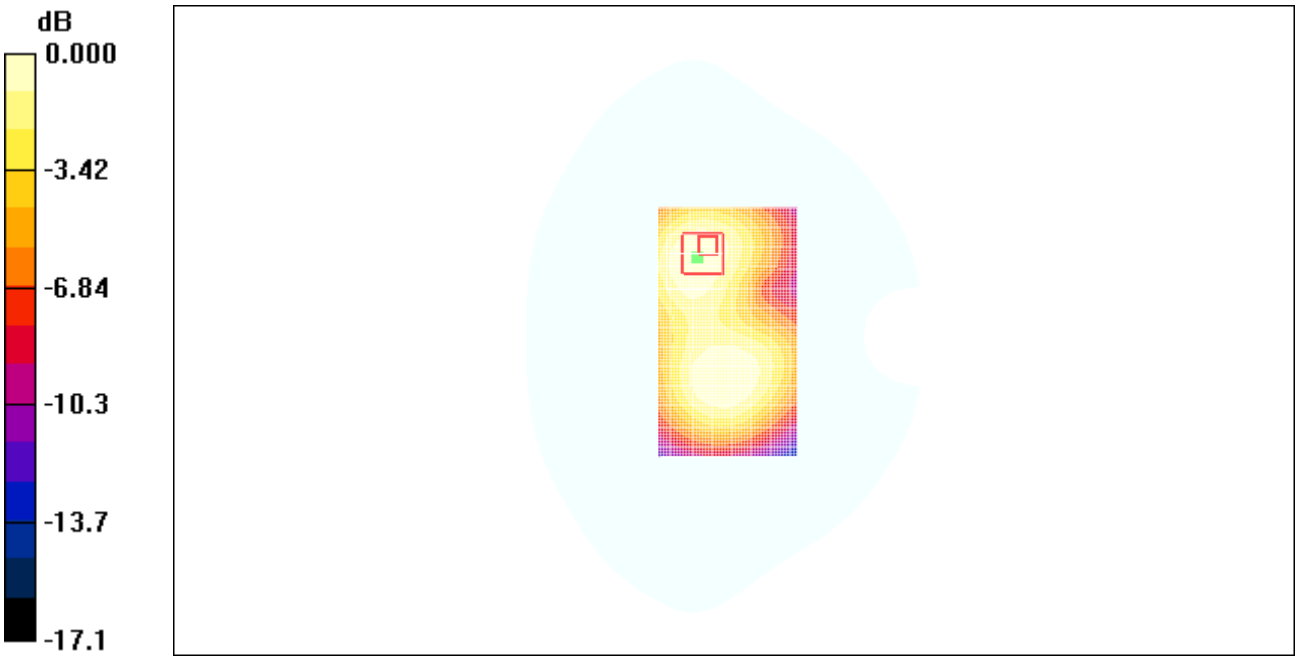
Fig. 35 1900 MHz CH512 – Slide down

1900 Body Towards Phantom Low with GPRS – Slide down

Date/Time: 2010-5-7 15:19:06
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.53 mho/m; εr = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liqiud 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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.128 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.48 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 0.182 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.121 mW/g



0 dB = 0.121mW/g

Fig.36 1900 MHz CH512 – Slide down

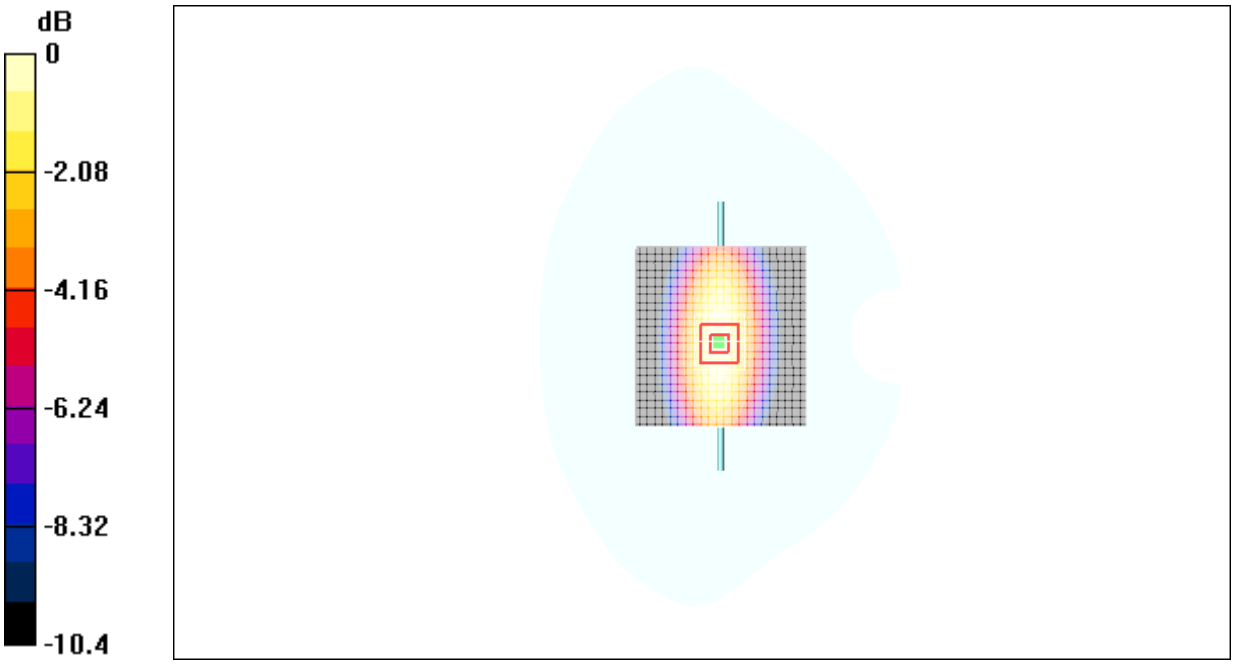
ANNEX D SYSTEM VALIDATION RESULTS

835MHz

Date/Time: 2010-5-7 7:22:13
Electronics: DAE4 Sn771
Medium: Head 850
Medium parameters used: f = 835 MHz; σ = 0.88 mho/m; ε_r = 39.8; 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) = 2.55 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.5 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 3.40 W/kg
SAR(1 g) = 2.32 mW/g; SAR(10 g) = 1.52 mW/g
Maximum value of SAR (measured) = 2.46 mW/g



0 dB = 2.46mW/g

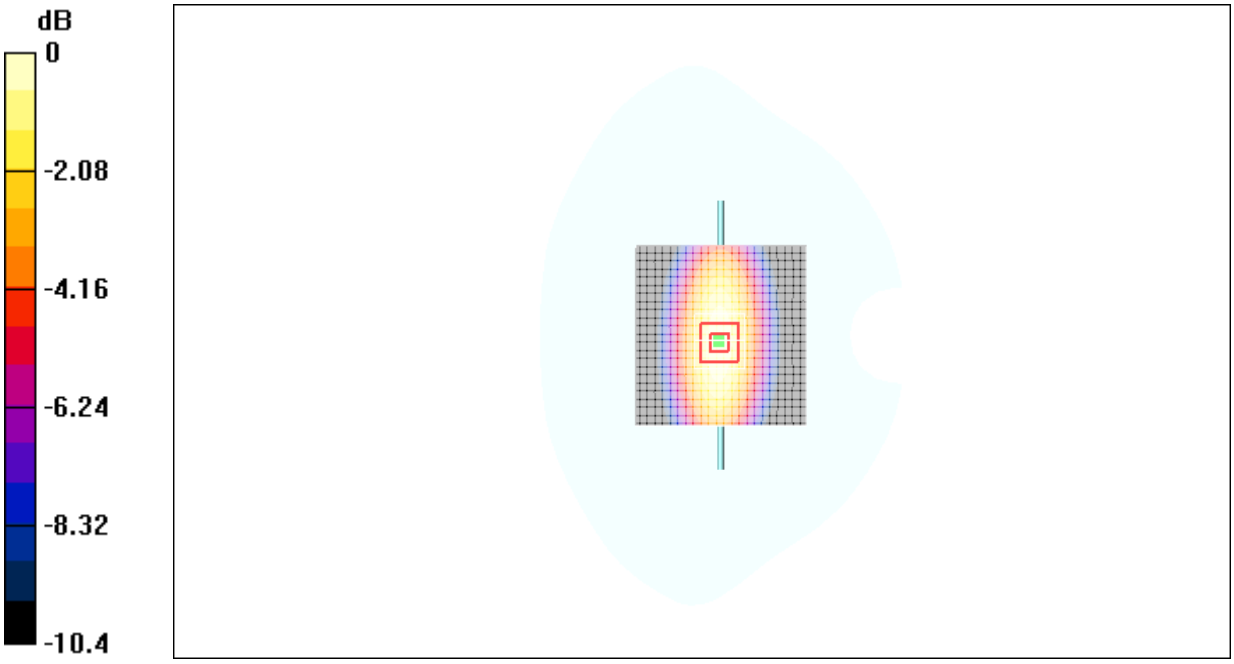
Fig.37 validation 835MHz 250mW

835MHz

Date/Time: 2010-5-7 13:17:24
Electronics: DAE4 Sn771
Medium: 850 Body
Medium parameters used: f = 835 MHz; σ = 0.95 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

System Validation /Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.52 mW/g

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.3 V/m; Power Drift = -0.048 dB
Peak SAR (extrapolated) = 3.35 W/kg
SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.53 mW/g
Maximum value of SAR (measured) = 2.41 mW/g



0 dB = 2.41mW/g

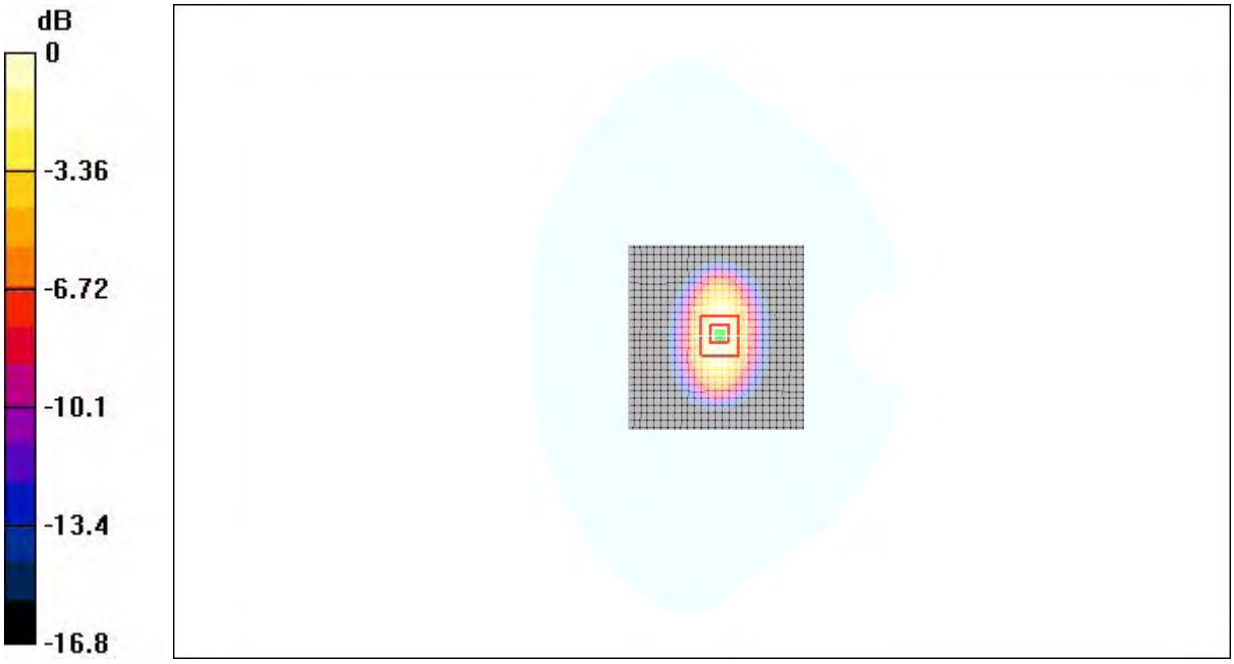
Fig.38 validation 835MHz 250mW

1900MHz

Date/Time: 2010-5-8 7:28:15
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) = 11.4 mW/g

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.7 V/m; Power Drift = -0.061 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 9.84 mW/g; SAR(10 g) = 4.93 mW/g
Maximum value of SAR (measured) = 10.5 mW/g



0 dB = 10.5mW/g

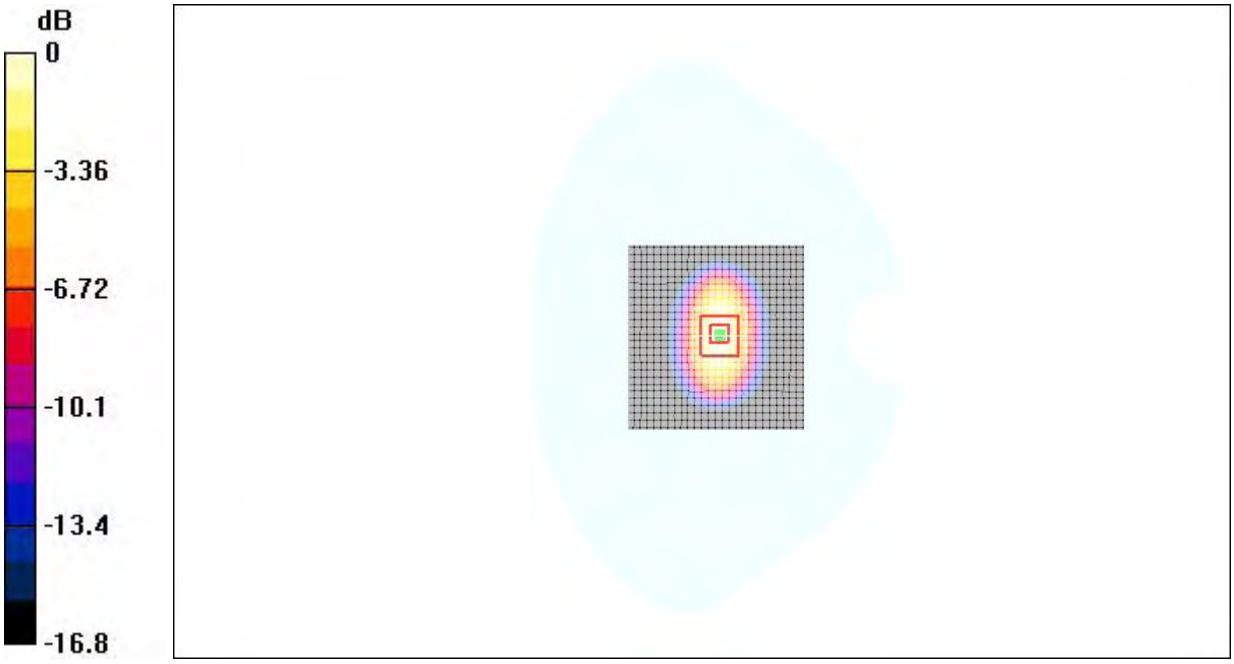
Fig.39 validation 1900MHz 250mW

1900MHz

Date/Time: 2010-5-7 13:23:44
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.57 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.0°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

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

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.8 V/m; Power Drift = 0.070 dB
Peak SAR (extrapolated) = 16.2 W/kg
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.10 mW/g
Maximum value of SAR (measured) = 10.7 mW/g



0 dB = 10.7mW/g

Fig.40 validation 1900MHz 250mW

Calibration certificate and Test positions are described in the additional document:

Appendix to test report no. 2010SAR00034

Calibration certificate and Test positions