SAR TEST REPORT

No. 2009EEE00547

For

HUAWEI Technologies Co., Ltd.

WCDMA/GPRS/GSM/EDGE Mobile Phone with Bluetooth

V735/Vodafone 735/U1260

With

Hardware Version: HD2U125M VER.C

Software Version: V735V100R001C02B708

FCCID: QISV735

Issued Date: 2009-02-18

Deutscher Akkreditierungs Rat

No. **DAT-P-114/01-01**

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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 Ministry of Information Industry

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TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	TMC Beijing, Telecommunication Metrology Center of MII
Address:	No 52, Huayuan beilu, Haidian District, Beijing,P.R.China
Postal Code:	100083
Telephone:	+86-10-62303288
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:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	Jan 22, 2009
Testing End Date:	Jan 22, 2009

1.4 Signature

Lin Xiaojun
(Prepared this test report)

Qi Dianyuan
(Reviewed this test report)

Lu Bingsong
Deputy Director of the laboratory
(Approved this test report)

2 Client Information

2.1 Applicant Information

Company Name:	HUAWEI Technologies Co., Ltd.
Address /Post:	Bantian, Longgang District, Shenzhen, Guangdong
City:	Shenzhen
Postal Code:	518129
Country:	China
Telephone:	010－82836505/010-82836728
Fax:	010－82836567

2.2 Manufacturer Information

Company Name:	HUAWEI Technologies Co., Ltd.
Address /Post:	Bantian, Longgang District, Shenzhen, Guangdong
City:	Shenzhen
Postal Code:	518129
Country:	China
Telephone:	010－82836505/010-82836728
Fax:	010－82836567

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

3.1 About EUT

Description:	WCDMA/GPRS/GSM/EDGE Mobile Phone with Bluetooth
Model:	V735/Vodafone 735/U1260
Test Frequency Band:	GSM 1900
GPRS Class:	10

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	JS2AB108C0900073	HD2U125M Ver.C	V735V100R001C02B708

*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	AC/DCAdapter	HS-050040E5	BYA8A1507113	HUAWEI technologies Co., Ltd
AE2	AC/DCAdapter	HS-050040A6	XQH8C2201777	HUAWEI technologies Co., Ltd
AE3	Battery	HB4A1H	YAC8A08HI3786040	Shenzhen FMT Co., Ltd.

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

4 CHARACTERISTICS OF THE TEST

4.1 Applicable Limit Regulations

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

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

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

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

4.2 Applicable Measurement Standards

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

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

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

IEC 62209-1: 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)

IEC 62209-2 (Draft): Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the Specific Absorption Rate (SAR)in the head and body for 30MHz to 6GHz Handheld and Body-Mounted Devices used in close proximity to the Body.

They specify the measurement method for demonstration of compliance with the SAR limits for such equipments.

5 OPERATIONAL CONDITIONS DURING TEST

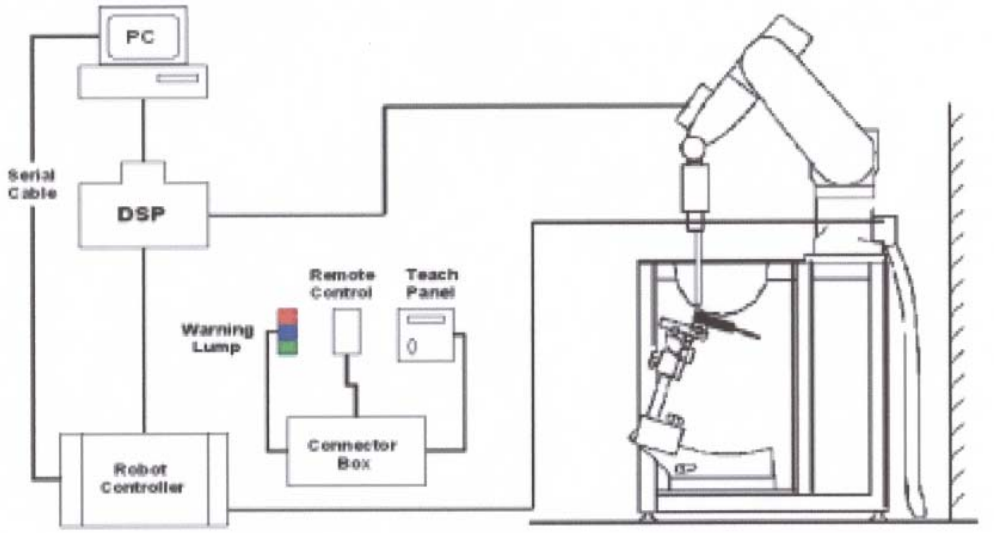
5.1 Schematic Test Configuration

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

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 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 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

5.7.1 Robotic 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 and ERP 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

	Conducted Power		
GSM 1900MHZ	**Channel 512 (1850.2MHz)**	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
Before Test (dBm)	29.3	29.40	29.4
After Test (dBm)	29.3	29.38	29.37
GSM 1900MHZ GPRS	**Channel 512 (1850.2MHz)**	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
Before Test (dBm)	29.33	29.34	29.28
After Test (dBm)	29.31	29.3	29.25
GSM 1900MHZ EGPRS	**Channel 512 (1850.2MHz)**	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
Before Test (dBm)	25.11	25.20	25.09
After Test (dBm)	25.1	25.18	25.06

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 7 to Table 9 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 23.3 °C and relative humidity 49%. Liquid temperature during the test: 22.5°C Measurement Date : 1900 MHz **Jan 22,2009**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	1900 MHz	40.0	1.40
Measurement value (Average of 10 tests)	1900 MHz	39.2	1.42

Table 5: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.3 °C and relative humidity 49%. Liquid temperature during the test: 22.5°C Measurement Date : 1900 MHz **Jan 22,2009**			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	1900 MHz	52.3	1.56

7.2 System Validation

Table 6: System Validation

Measurement is made at temperature 23.3 °C, relative humidity 49%, input power 250 mW. Liquid temperature during the test: 22.5°C Measurement Date : 1900 MHz **Jan 22,2009**							
Liquid parameters	**Dipole calibration Target value**	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		1900 MHz		38.9		1.38	
	Actural Measurement value	1900 MHz		39.2		1.42	
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**
	1900 MHz	5.09	9.73	5.27	9.91	3.54%	1.9%

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 (GSM1900)

Table 7: SAR Values (Head, GSM 1900 MHz Band)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, Top frequency(See Fig.1)	0.347	0.581	-0.153
Left hand, Touch cheek, Mid frequency(See Fig.3)	0.379	0.634	-0.081
Left hand, Touch cheek, Bottom frequency(See Fig.5)	0.396	0.660	0.142
Left hand, Tilt 15 Degree, Top frequency(See Fig.7)	0.169	0.294	0.023
Left hand, Tilt 15 Degree, Mid frequency(See Fig.9)	0.184	0.320	-0.070
Left hand, Tilt 15 Degree, Bottom frequency(See Fig.11)	0.192	0.333	0.053
Right hand, Touch cheek, Top frequency(See Fig.13)	0.443	0.798	0.180
Right hand, Touch cheek, Mid frequency(See Fig.15)	0.480	0.856	0.191
Right hand, Touch cheek, Bottom frequency(See Fig.17)	0.482	0.866	0.110
Right hand, Tilt 15 Degree, Top frequency(See Fig.19)	0.143	0.236	-0.004
Right hand, Tilt 15 Degree, Mid frequency(See Fig.21)	0.154	0.252	-0.005
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.23)	0.161	0.261	0.049

Table 8: SAR Values (Body, GSM 1900 MHz Band)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Body, Towards Ground, Top frequency with GPRS(See Fig.25)	0.322	0.548	0.088
Body, Towards Ground, Mid frequency with GPRS (See Fig.27)	0.369	0.635	0.014
Body, Towards Ground, Bottom frequency with GPRS (See Fig.29)	0.396	0.683	-0.012
Body, Towards Phantom, Top frequency with GPRS (See Fig.31)	0.180	0.305	-0.098
Body, Towards Phantom, Mid frequency with GPRS (See Fig.33)	0.198	0.336	0.013
Body, Towards Phantom, Bottom frequency with GPRS (See Fig.35)	0.200	0.340	0.093
Body, Towards Ground, Bottom frequency with SPEECH CASE (See Fig.37)	0.211	0.364	-0.001
Body, Towards Ground, Bottom frequency with EGPRS (See Fig.39)	0.171	0.295	0.014

7.4 Conclusion

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

The maximum SAR values are obtained at the case of **GSM 1900 Head, Right hand, Touch cheek, Bottom frequency (Table 7)**, and the value are: **0.482(10g), 0.866(1g)**

8 Measurement Uncertainty

SN	a	Type	c	d	e = f(d,k)	f	h = c x f / e	k
	Uncertainty Component		Tol. (± %)	Prob. Dist.	Div.	c_i (1 g)	1 g u_i (±%)	v_i
1	System repetivity	A	0.5	N	1	1	0.5	9
	Measurement System							
2	Probe Calibration	B	5	N	2	1	2.5	∞
3	Axial Isotropy	B	4.7	R	√3	$(1\text{-cp})^{1/2}$	4.3	∞
4	Hemispherical Isotropy	B	9.4	R	√3	$\sqrt{c_p}$		∞
5	Boundary Effect	B	0.4	R	√3	1	0.23	∞
6	Linearity	B	4.7	R	√3	1	2.7	∞
7	System Detection Limits	B	1.0	R	√3	1	0.6	∞
8	Readout Electronics	B	1.0	N	1	1	1.0	∞
9	RF Ambient Conditions	B	3.0	R	√3	1	1.73	∞
10	Probe Positioner Mechanical Tolerance	B	0.4	R	√3	1	0.2	∞
11	Probe Positioning with respect to Phantom Shell	B	2.9	R	√3	1	1.7	∞
12	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	√3	1	2.3	∞
	Test sample Related							
13	Test Sample Positioning	A	4.9	N	1	1	4.9	N-1
14	Device Holder Uncertainty	A	6.1	N	1	1	6.1	N-1
15	Output Power Variation - SAR drift measurement	B	5.0	R	√3	1	2.9	∞
	Phantom and Tissue Parameters							
16	Phantom Uncertainty (shape and thickness tolerances)	B	1.0	R	√3	1	0.6	∞

17	Liquid Conductivity - deviation from target values	B	5.0	R	√3	0.64	1.7	∞
18	Liquid Conductivity - measurement uncertainty	B	5.0	N	1	0.64	1.7	M
19	Liquid Permittivity - deviation from target values	B	5.0	R	√3	0.6	1.7	∞
20	Liquid Permittivity - measurement uncertainty	B	5.0	N	1	0.6	1.7	M
	Combined Standard Uncertainty			RSS			11.25	
	Expanded Uncertainty (95% CONFIDENCE INTERVAL)			K=2			22.5	

9 MAIN TEST INSTRUMENTS

Table 9: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 30,2008	One year
02	Power meter	NRVD	101253	June 20, 2008	One year
03	Power sensor	NRV-Z5	100333		
04	Power sensor	NRV-Z6	100011	September 2, 2008	One year
05	Signal Generator	E4433B	US37230472	September 4, 2008	One Year
06	Amplifier	VTL5400	0505	No Calibration Requested	
07	BTS	CMU 200	105948	August 15, 2008	One year
08	E-field Probe	SPEAG ES3DV3	3149	October 1, 2008	One year
09	DAE	SPEAG DAE4	771	November 20, 2008	One year
10	Dipole Validation Kit	SPEAG D1900V2	541	February 20, 2007	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.

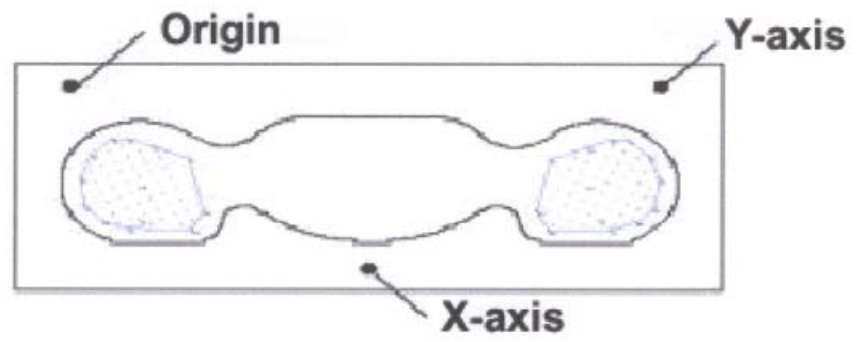
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

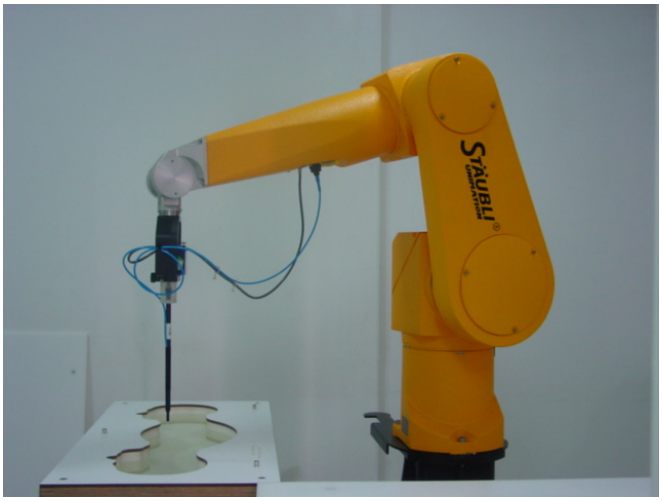
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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 (1900MHz Head)

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

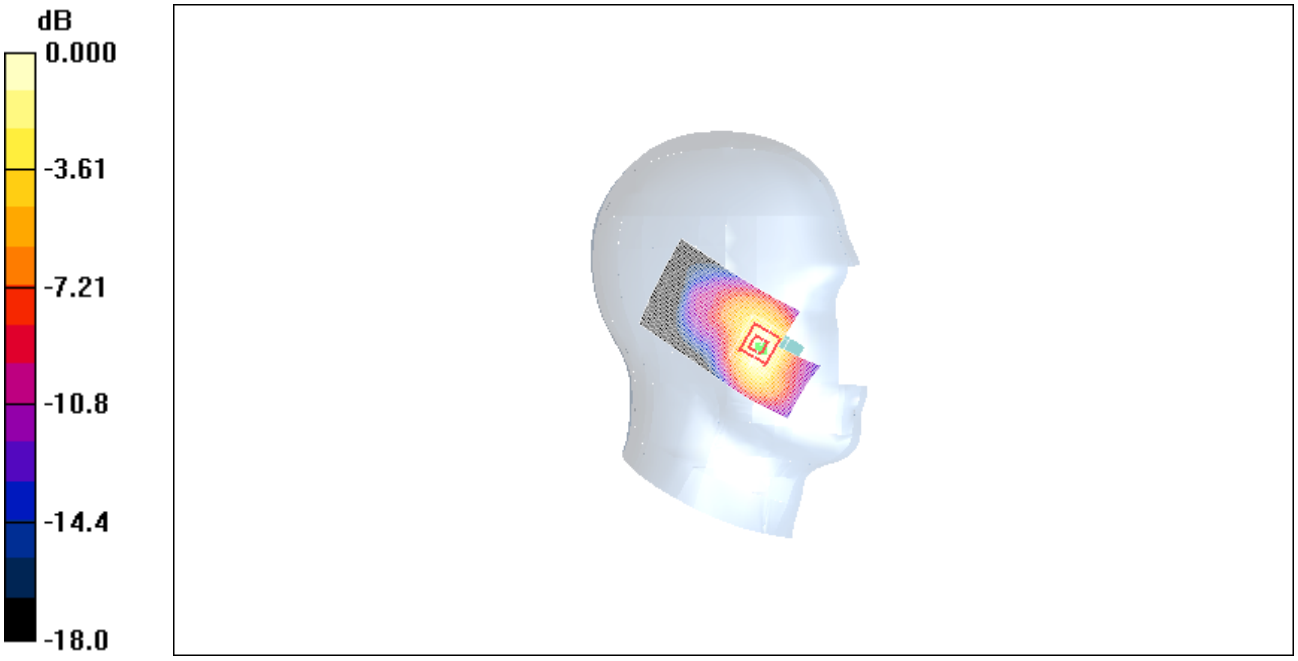
ANNEX C GRAPH RESULTS

1900 Left Cheek High

Date/Time: 2009-1-22 10:00:32
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.645 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.21 V/m; Power Drift = -0.153 dB
Peak SAR (extrapolated) = 0.847 W/kg
SAR(1 g) = 0.581 mW/g; SAR(10 g) = 0.347 mW/g
Maximum value of SAR (measured) = 0.614 mW/g



0 dB = 0.614mW/g

Fig. 1 1900 MHz CH810

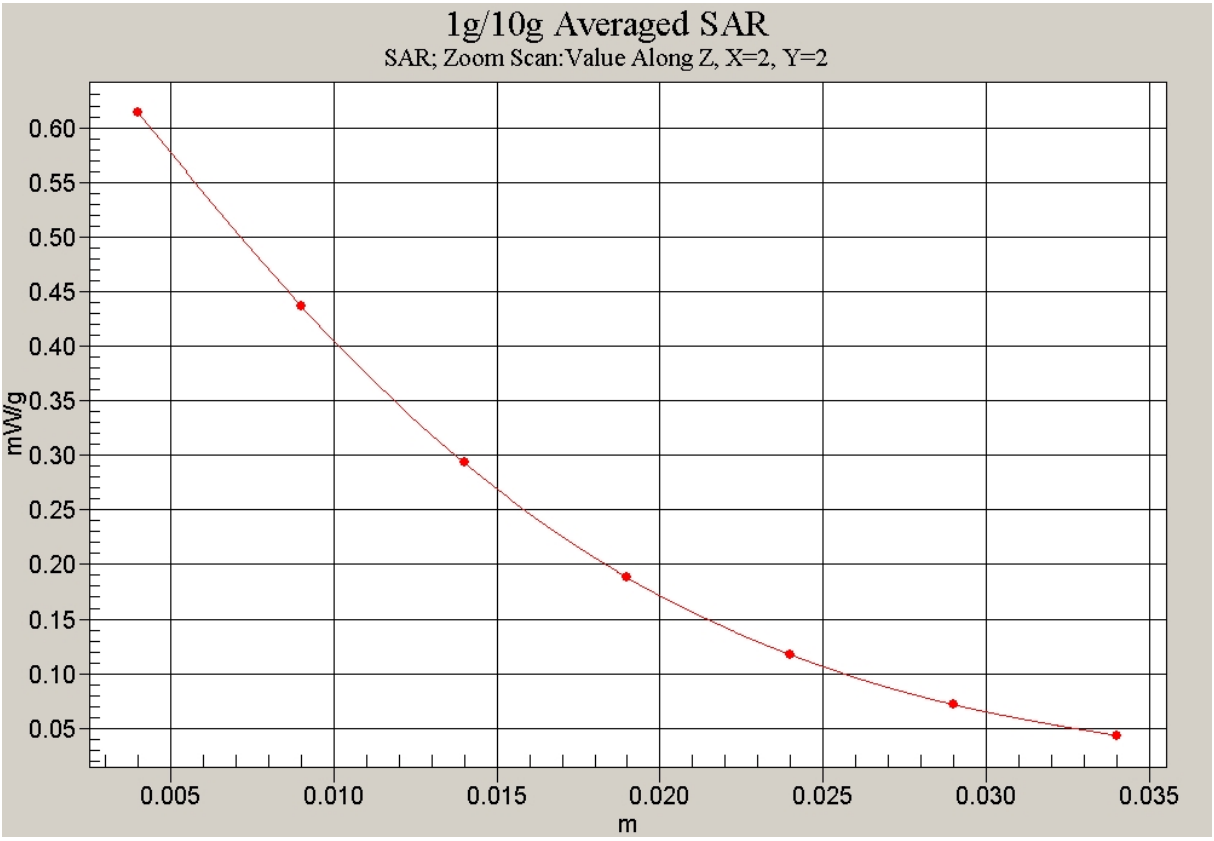
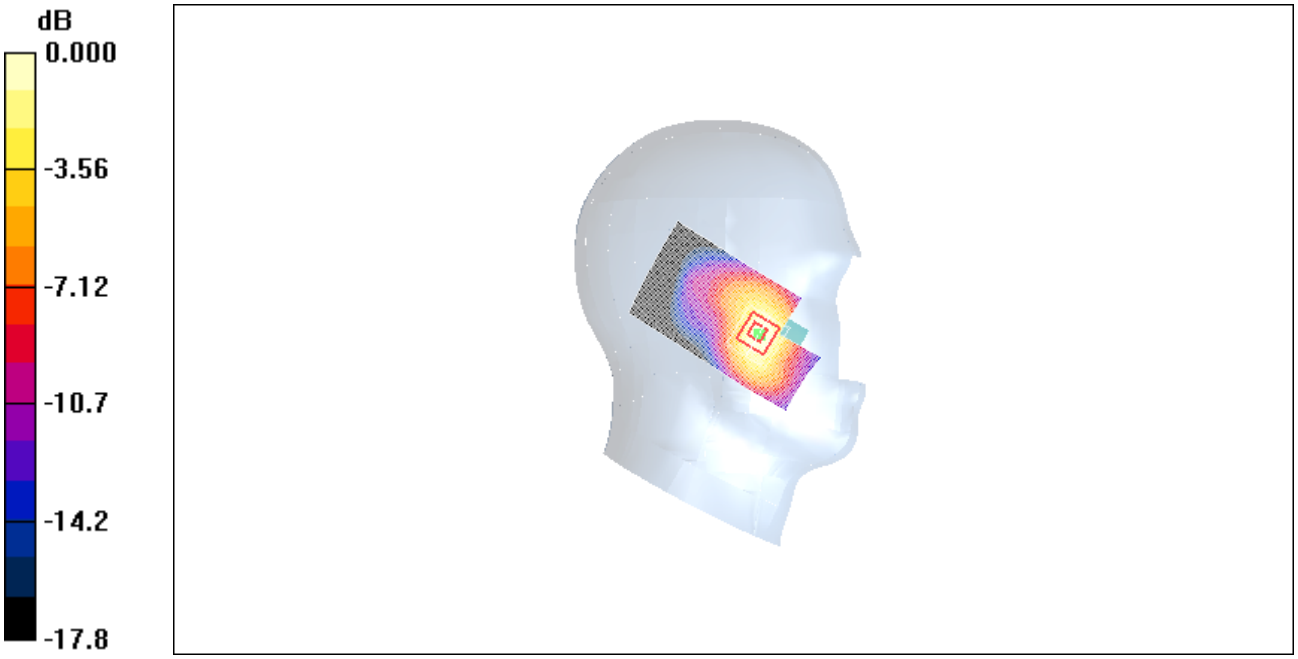


Fig.2 Z-Scan at power reference point (1900 MHz CH810)

1900 Left Cheek Middle
Date/Time: 2009-1-22 10:13:55
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.701 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.43 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 0.916 W/kg
SAR(1 g) = 0.634 mW/g; SAR(10 g) = 0.379 mW/g
Maximum value of SAR (measured) = 0.679 mW/g



0 dB = 0.679mW/g

Fig. 3 1900 MHz CH661

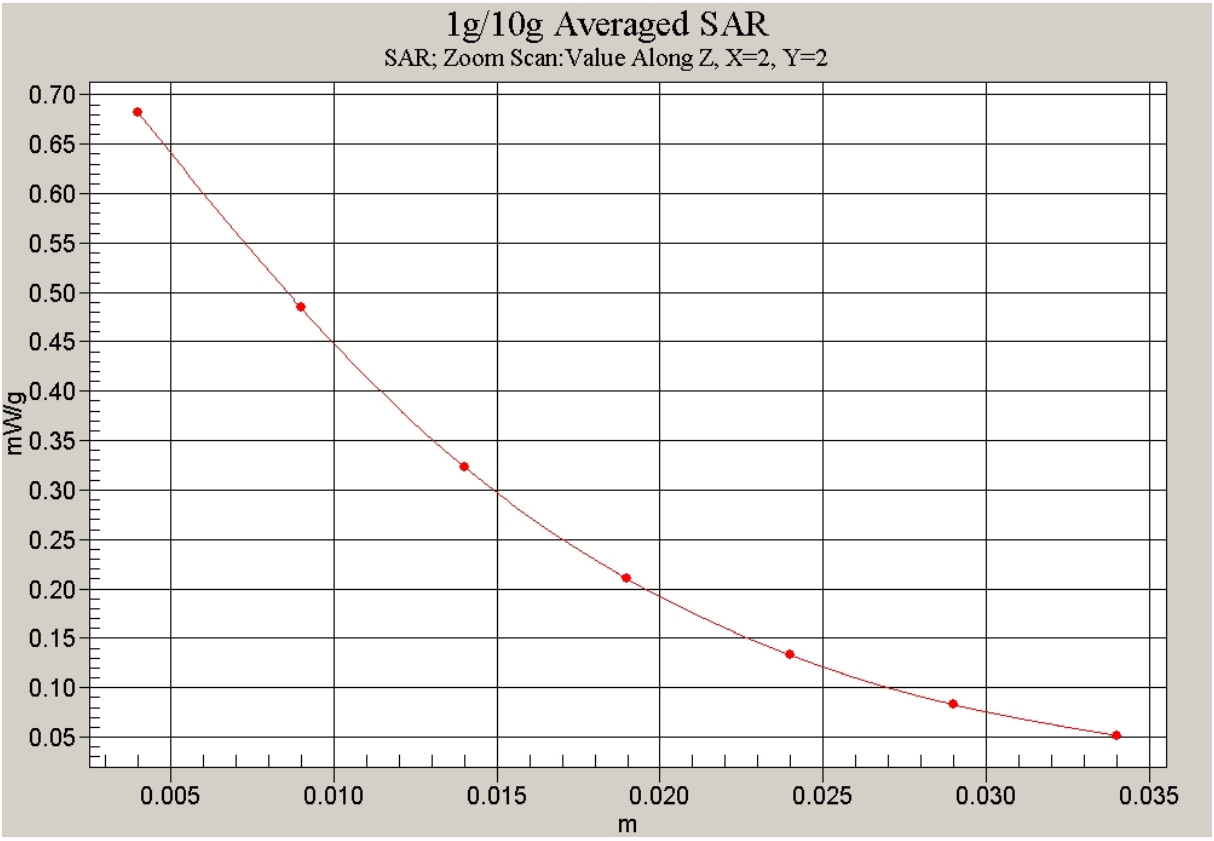
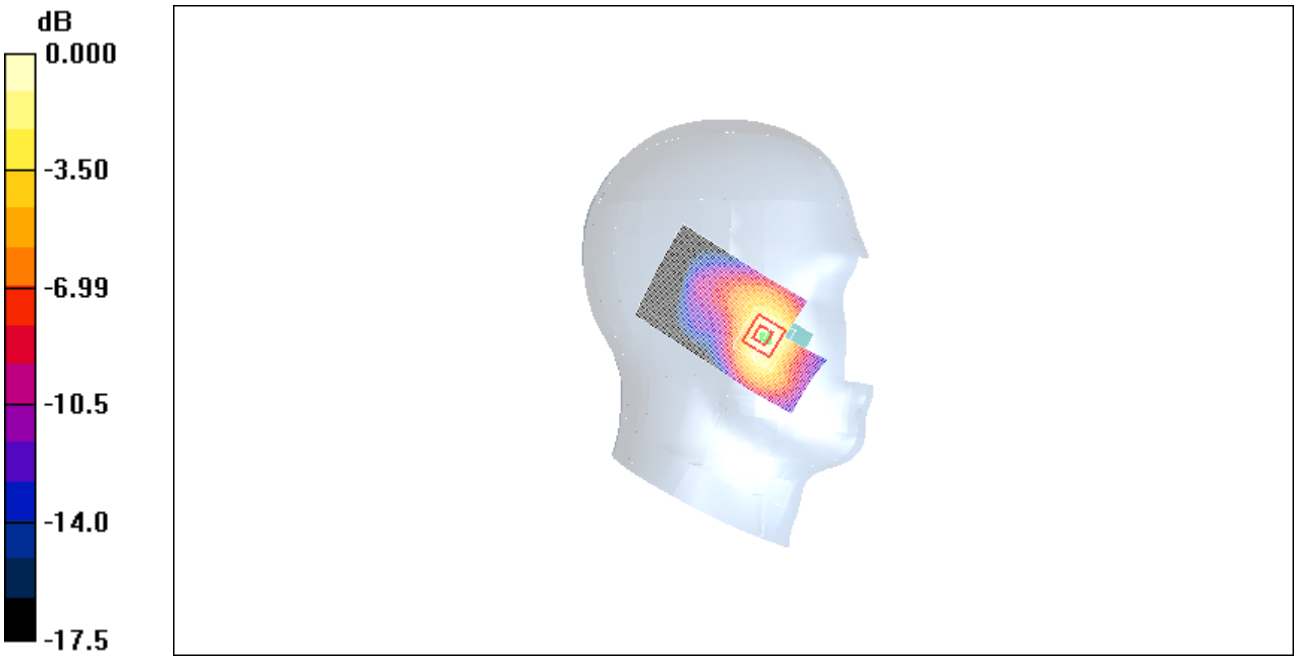


Fig. 4 Z-Scan at power reference point (1900 MHz CH661)

1900 Left Cheek Low
Date/Time: 2009-1-22 10:27:08
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.734 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.62 V/m; Power Drift = 0.142 dB
Peak SAR (extrapolated) = 0.950 W/kg
SAR(1 g) = 0.660 mW/g; SAR(10 g) = 0.396 mW/g
Maximum value of SAR (measured) = 0.708 mW/g



0 dB = 0.708mW/g

Fig. 5 1900 MHz CH512

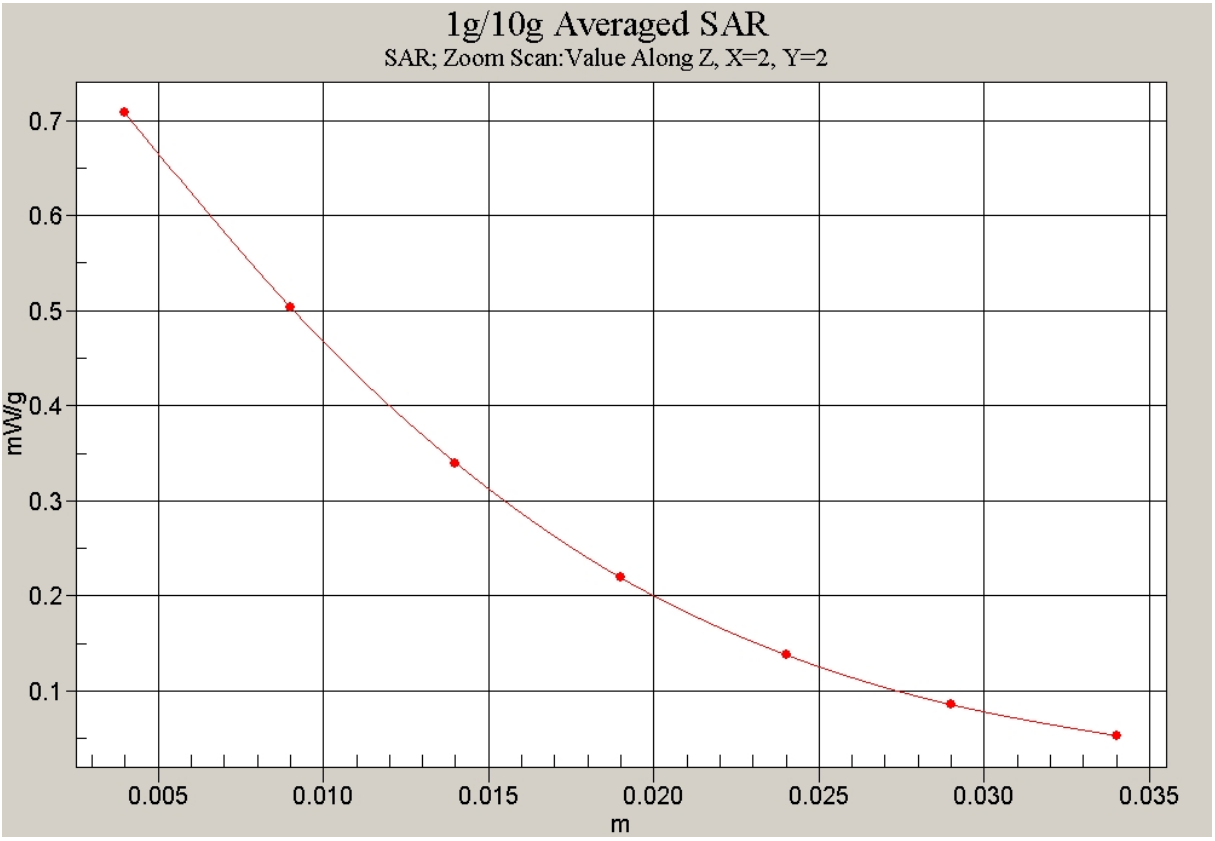


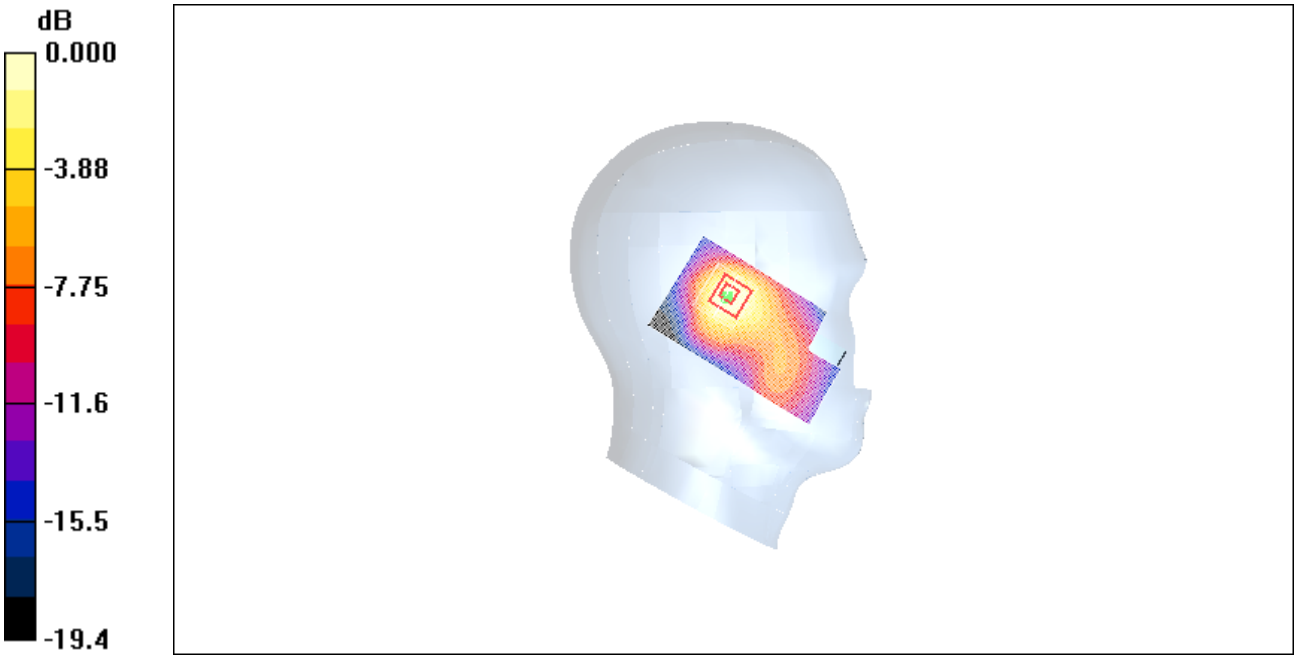
Fig. 6 Z-Scan at power reference point (1900 MHz CH512)

1900 Left Tilt High

Date/Time: 2009-1-22 11:06:31
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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)

Tilt High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.355 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.477 W/kg
SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.169 mW/g
Maximum value of SAR (measured) = 0.304 mW/g



0 dB = 0.304mW/g

Fig.7 1900 MHz CH810

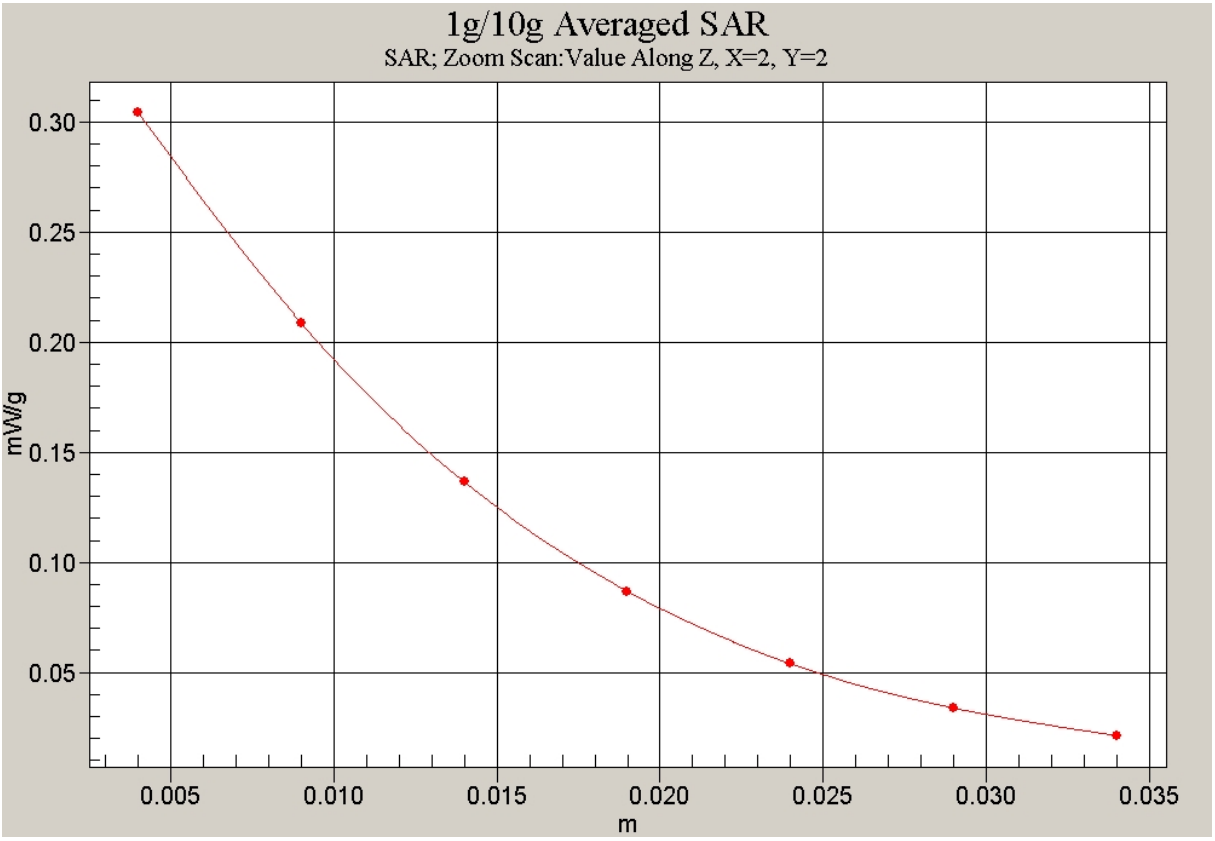
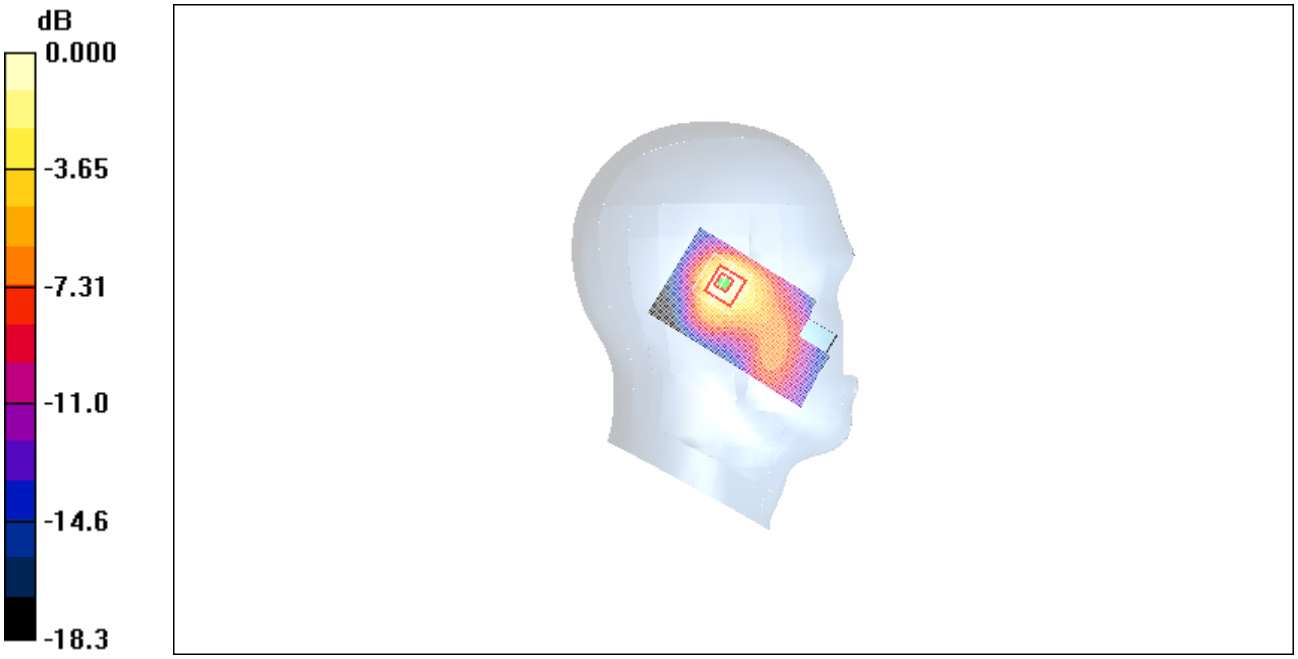


Fig. 8 Z-Scan at power reference point (1900 MHz CH810)

1900 Left Tilt Middle
Date/Time: 2009-1-22 10:53:40
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.389 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 0.519 W/kg
SAR(1 g) = 0.320 mW/g; SAR(10 g) = 0.184 mW/g
Maximum value of SAR (measured) = 0.342 mW/g



0 dB = 0.342mW/g

Fig.9 1900 MHz CH661

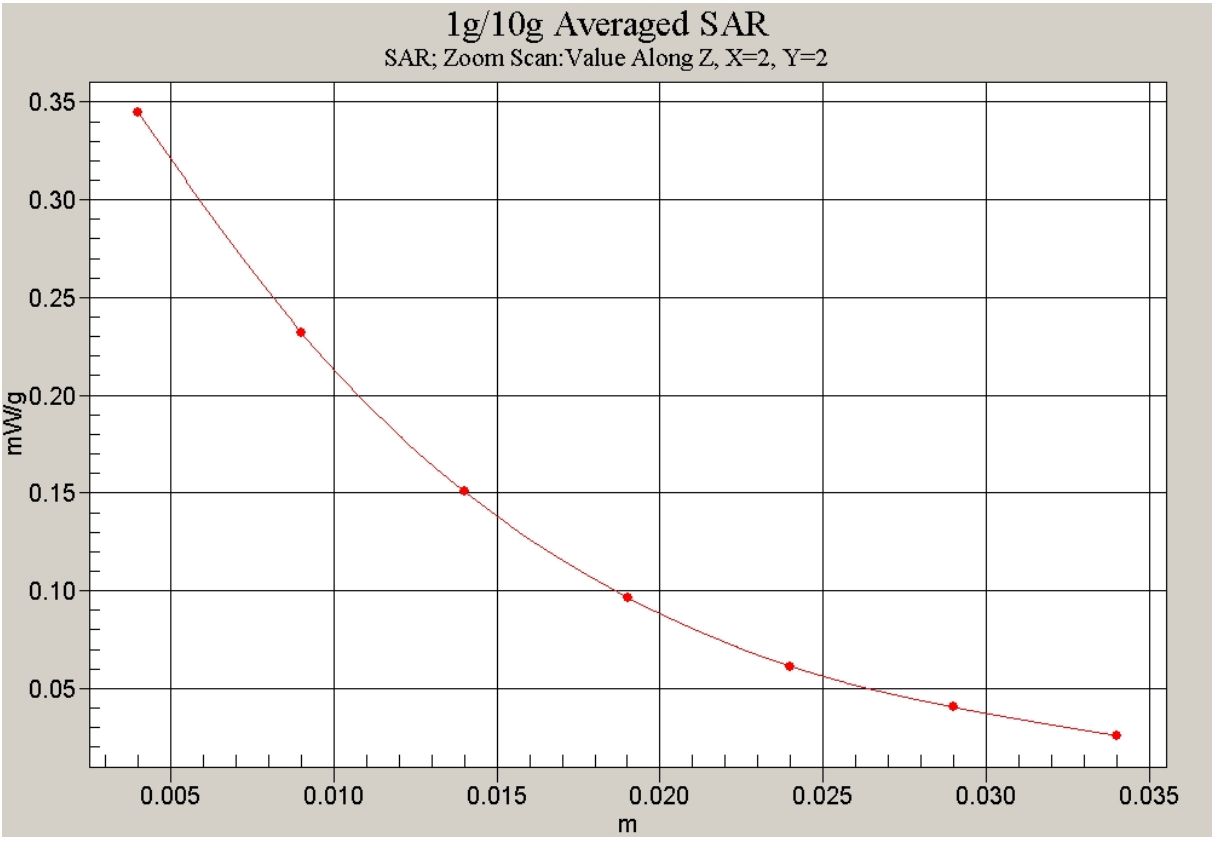
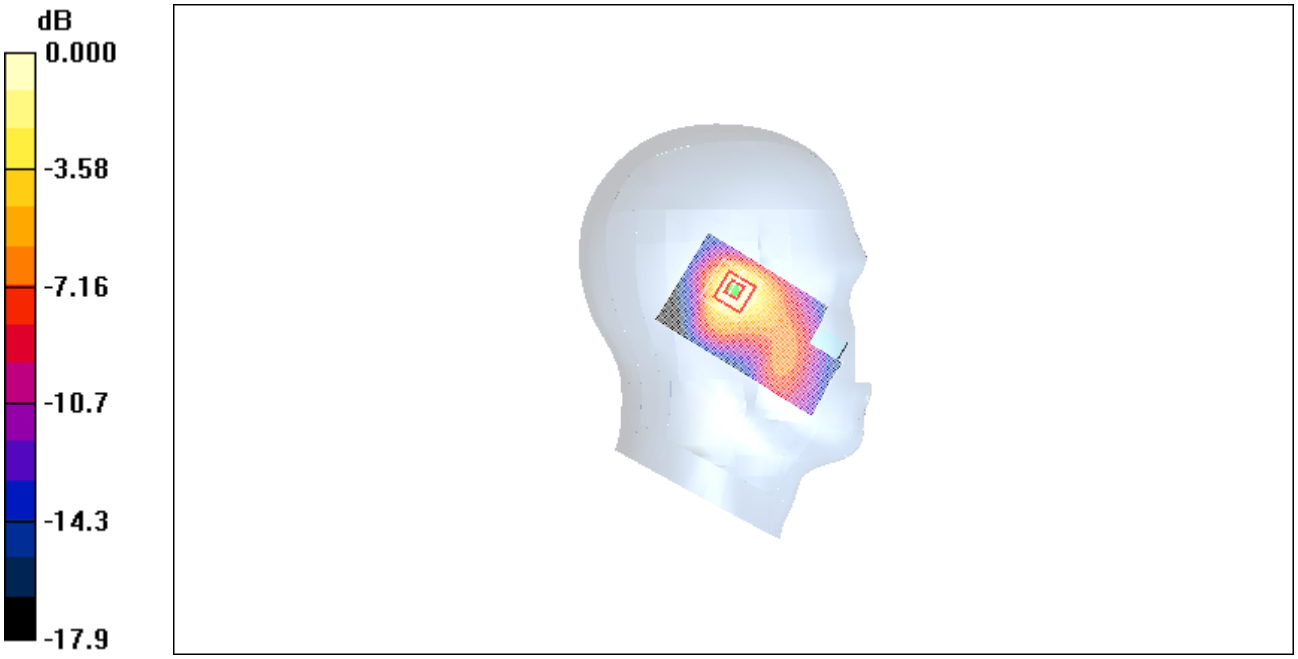


Fig. 10 Z-Scan at power reference point (1900 MHz CH661)

1900 Left Tilt Low
Date/Time: 2009-1-22 10:40:45
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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)

Tilt Low/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.408 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 0.540 W/kg
SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.192 mW/g
Maximum value of SAR (measured) = 0.358 mW/g



0 dB = 0.358mW/g

Fig. 11 1900 MHz CH512

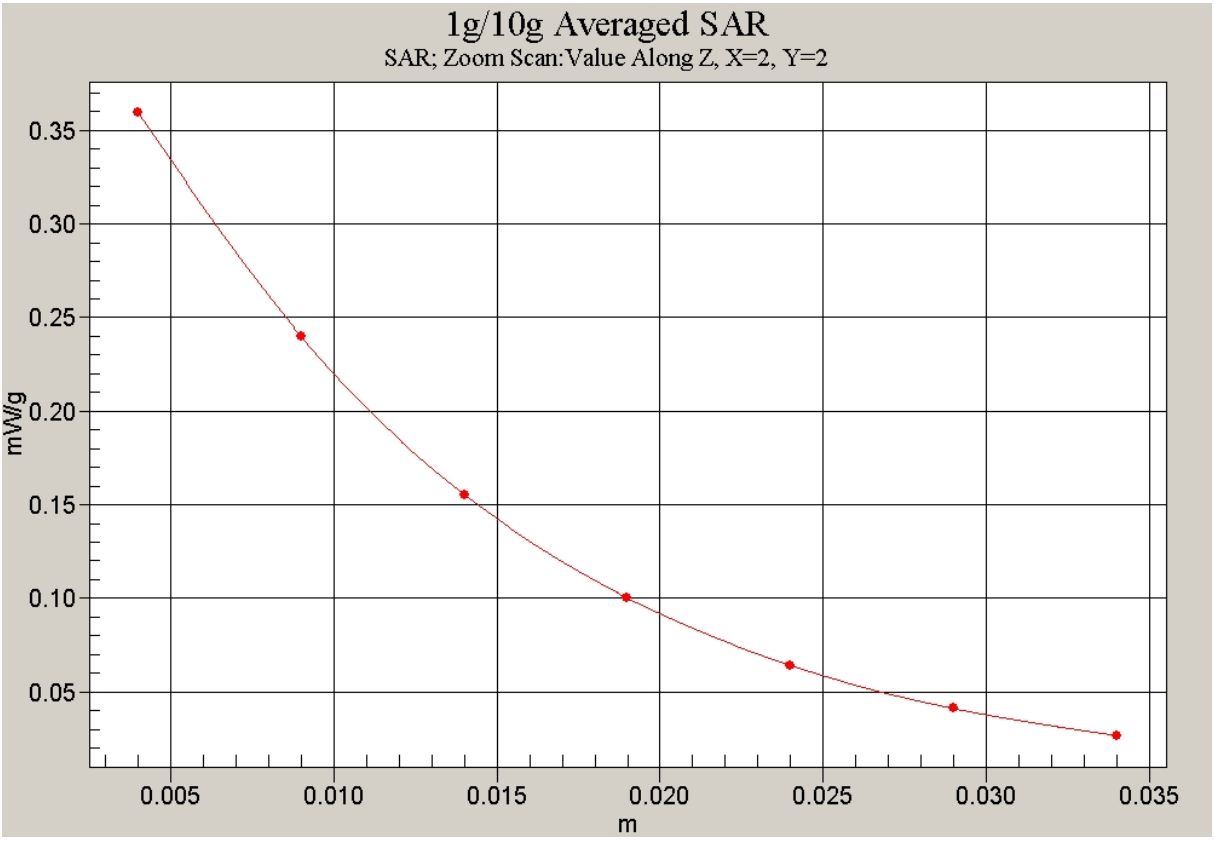
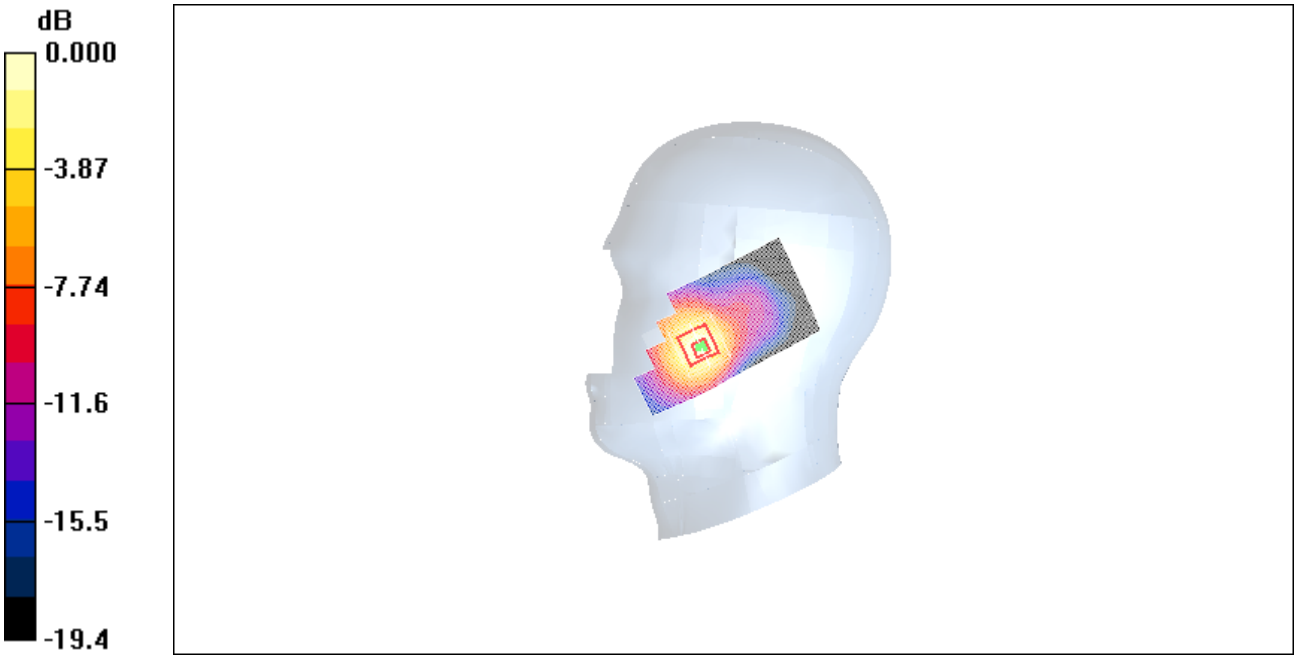


Fig. 12 Z-Scan at power reference point (1900 MHz CH512)

1900 Right Cheek High
Date/Time: 2009-1-22 13:20:55
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.914 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.05 V/m; Power Drift = 0.180 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.798 mW/g; SAR(10 g) = 0.443 mW/g
Maximum value of SAR (measured) = 0.889 mW/g



0 dB = 0.889mW/g

Fig. 13 1900 MHz CH810

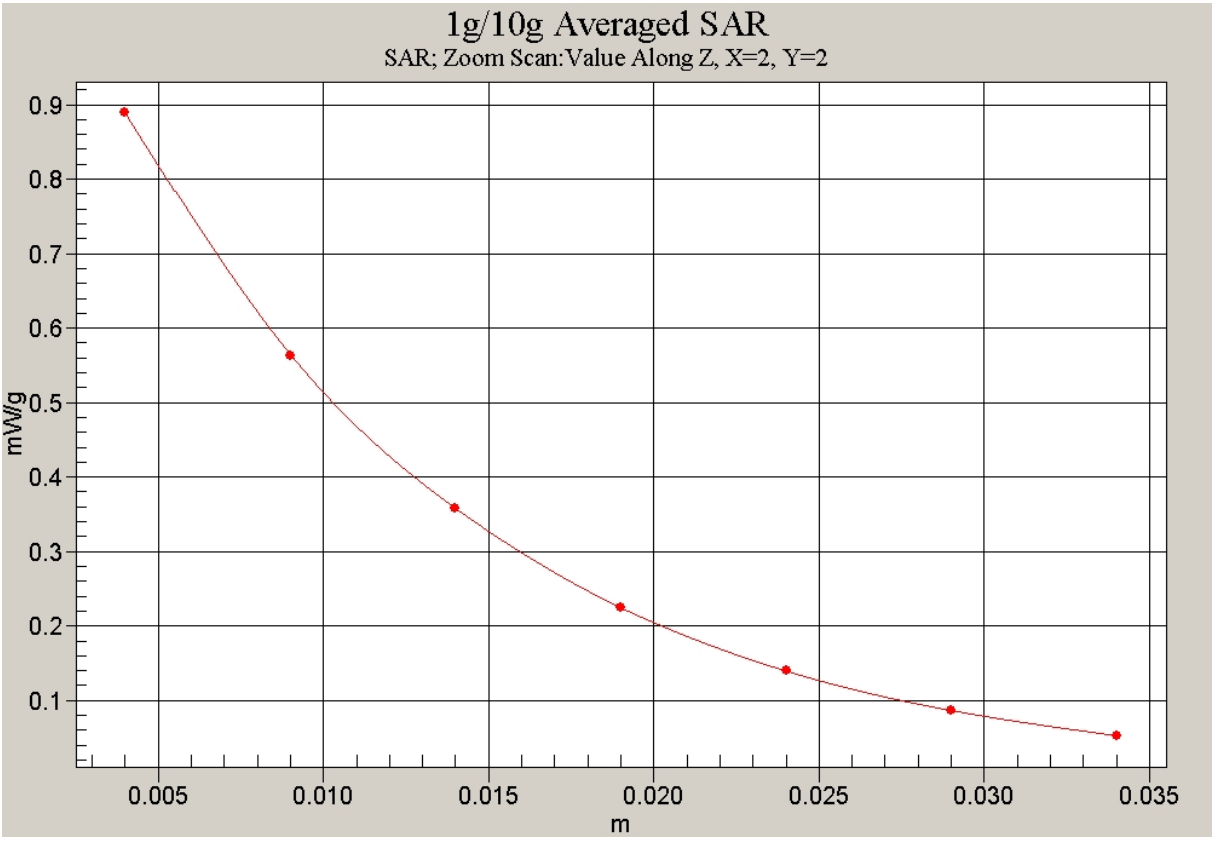
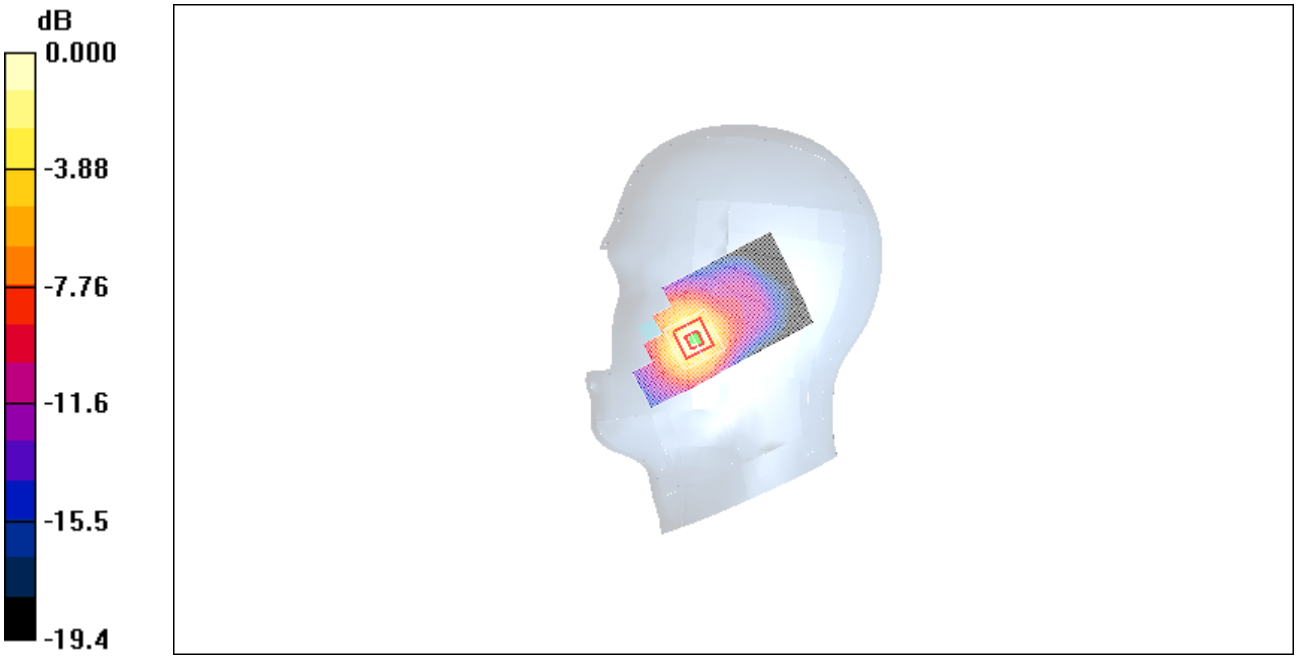


Fig. 14 Z-Scan at power reference point (1900 MHz CH810)

1900 Right Cheek Middle
Date/Time: 2009-1-22 13:35:13
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.980 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.50 V/m; Power Drift = 0.191 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.480 mW/g
Maximum value of SAR (measured) = 0.953 mW/g



0 dB = 0.953mW/g

Fig. 15 1900 MHz CH661

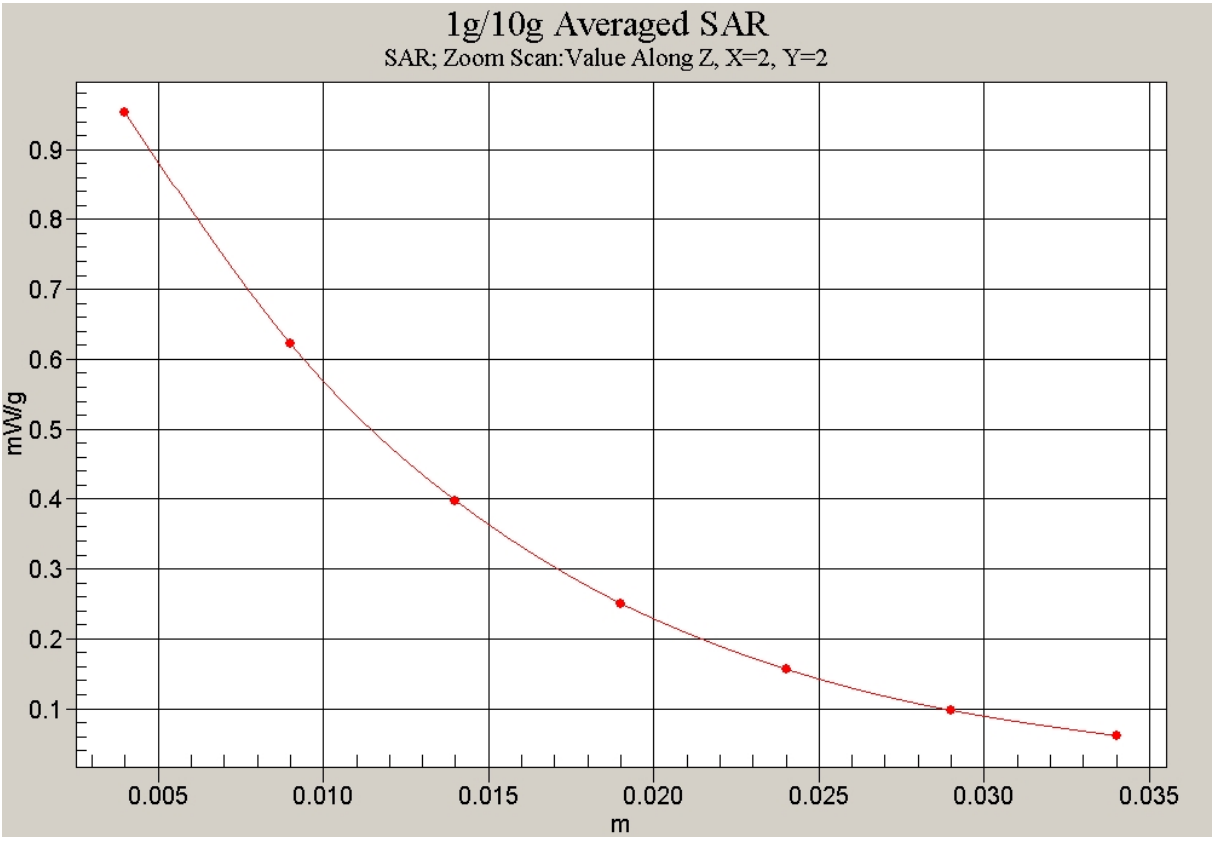
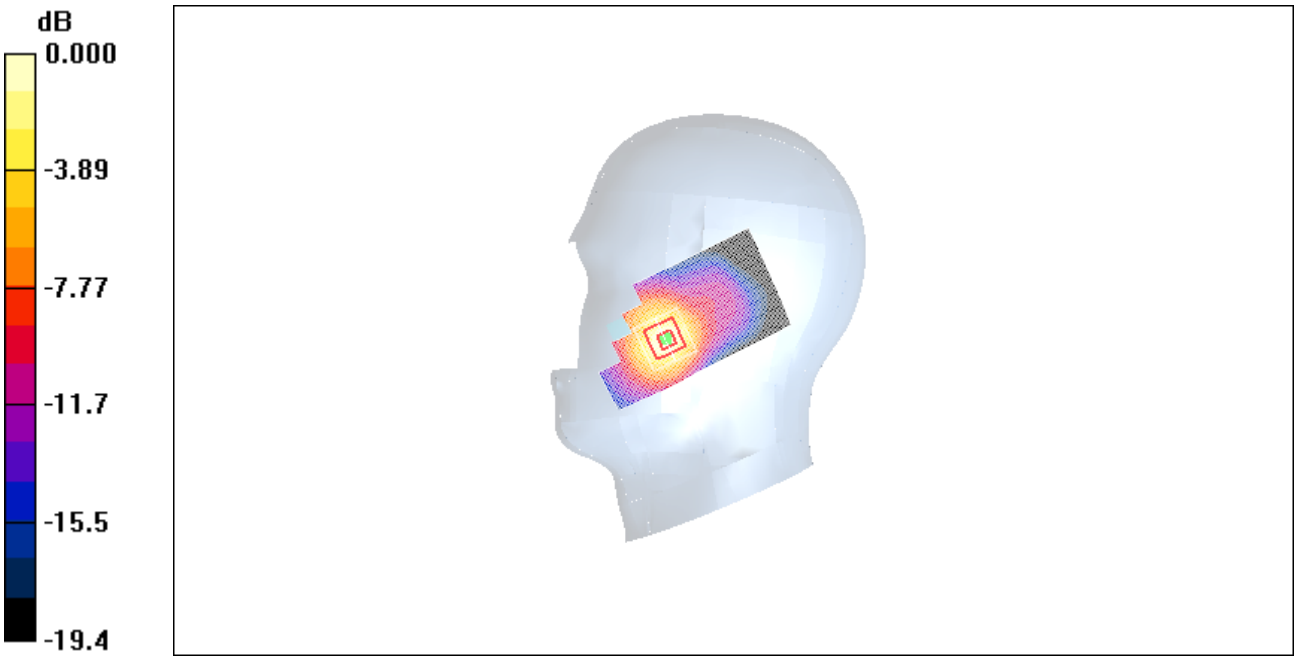


Fig.16 Z-Scan at power reference point (1900 MHz CH661)

1900 Right Cheek Low
Date/Time: 2009-1-22 13:48:31
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.969 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.57 V/m; Power Drift = 0.110 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.866 mW/g; SAR(10 g) = 0.482 mW/g
Maximum value of SAR (measured) = 0.959 mW/g



0 dB = 0.959mW/g

Fig. 17 1900 MHz CH512

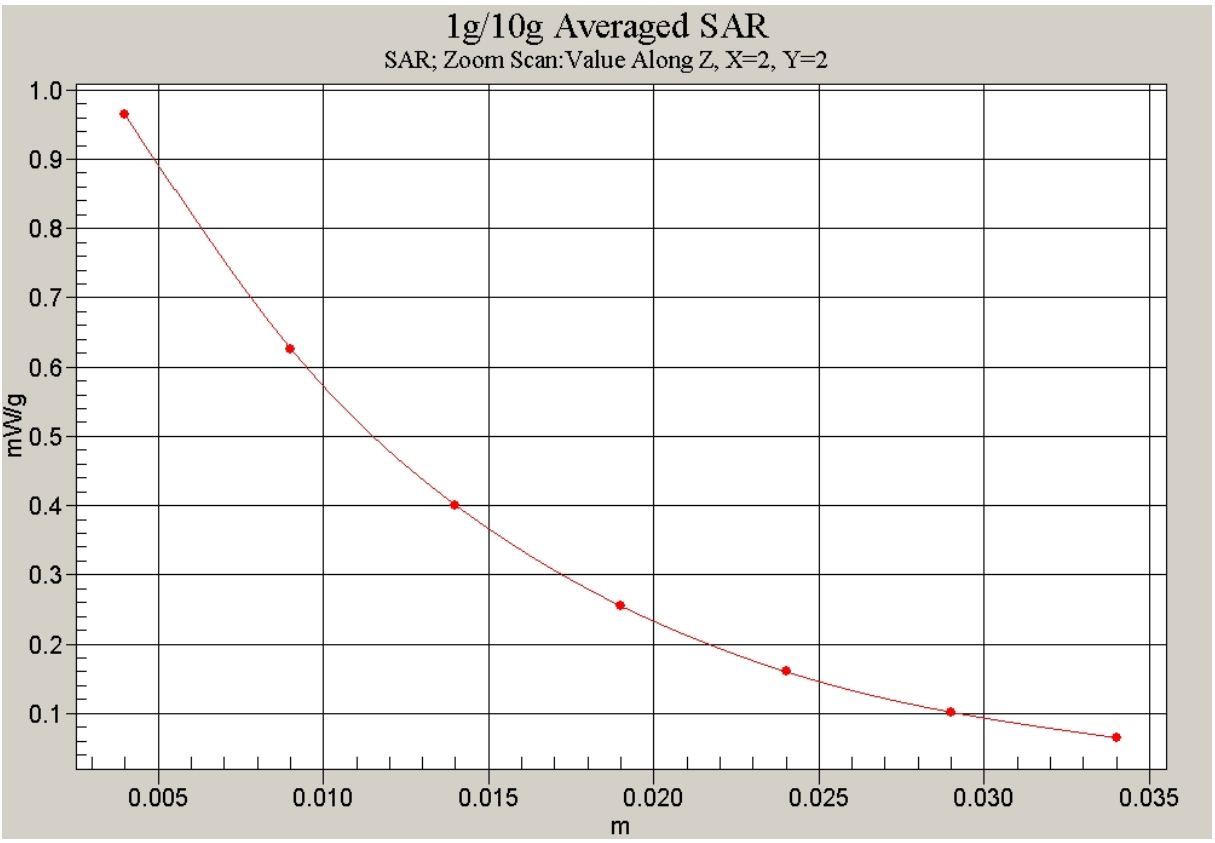


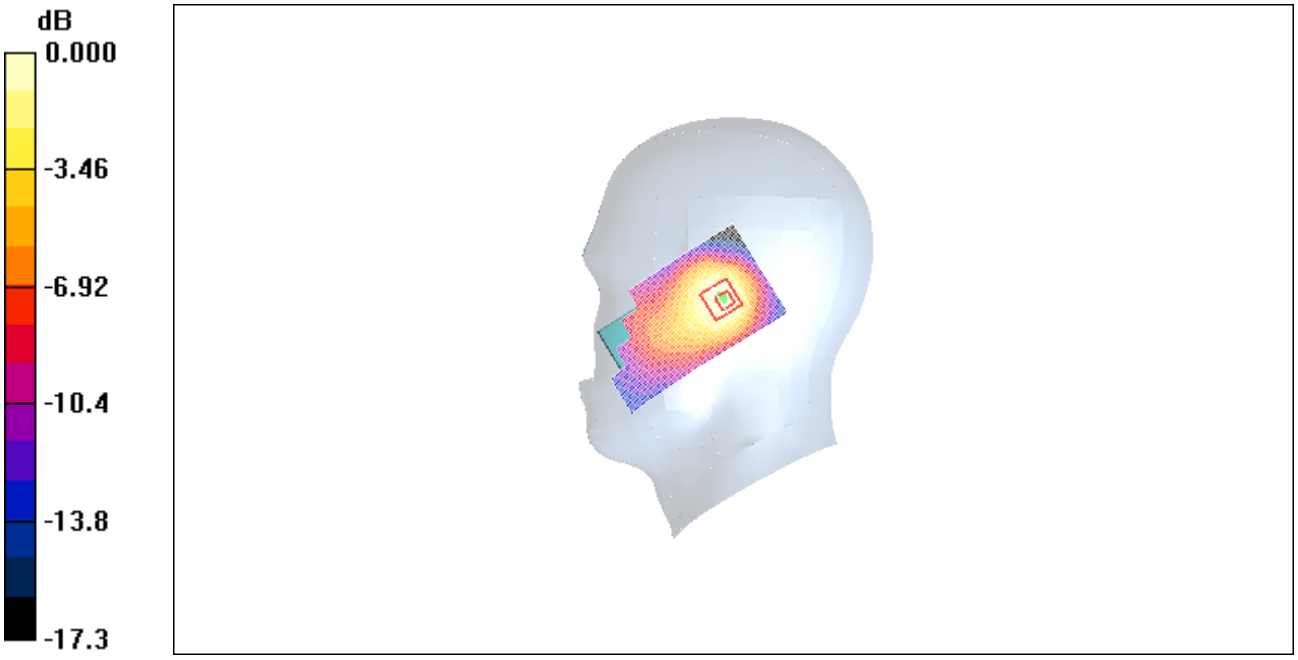
Fig. 18 Z-Scan at power reference point (1900 MHz CH512)

1900 Right Tilt High
Date/Time: 2009-1-22 14:03:02
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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)

Tilt High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.321 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.004 dB
Peak SAR (extrapolated) = 0.361 W/kg
SAR(1 g) = 0.236 mW/g; SAR(10 g) = 0.143 mW/g
Maximum value of SAR (measured) = 0.245 mW/g



0 dB = 0.245mW/g

Fig. 19 1900 MHz CH810

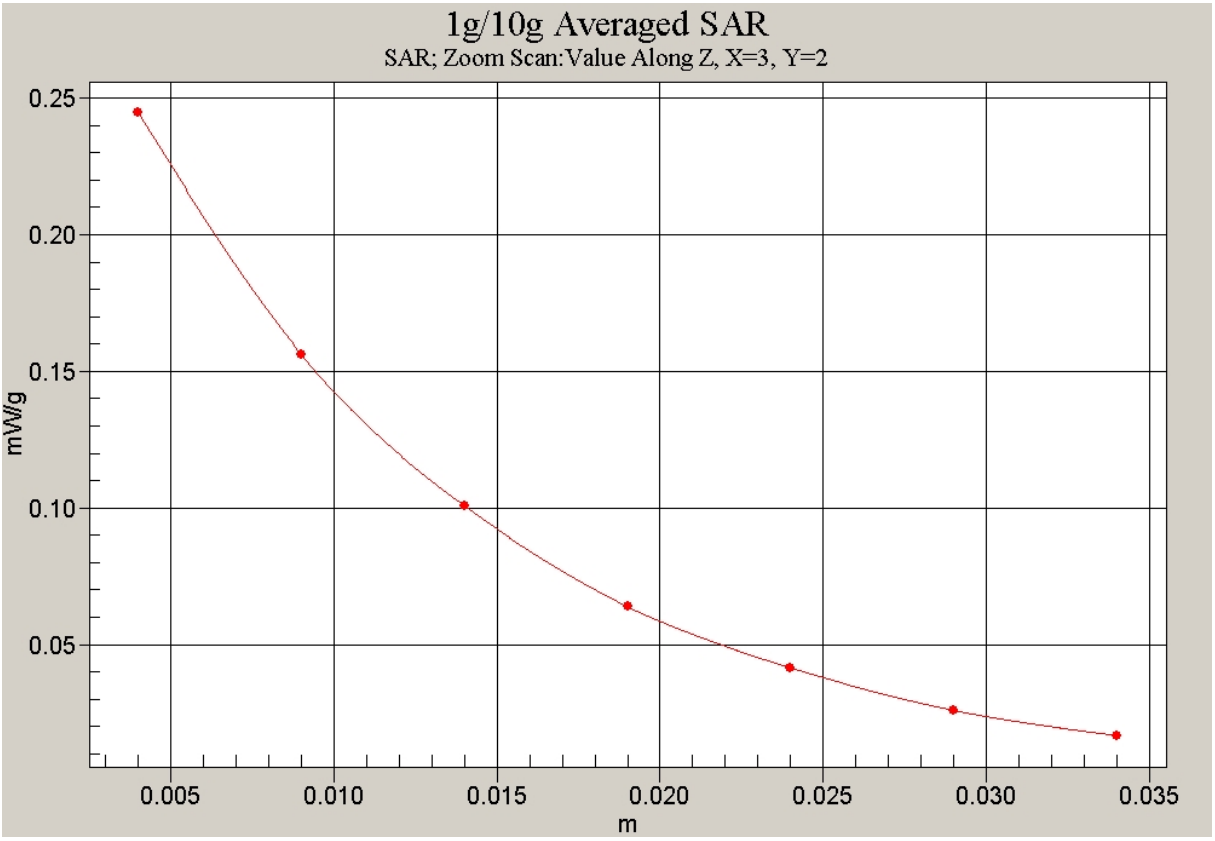
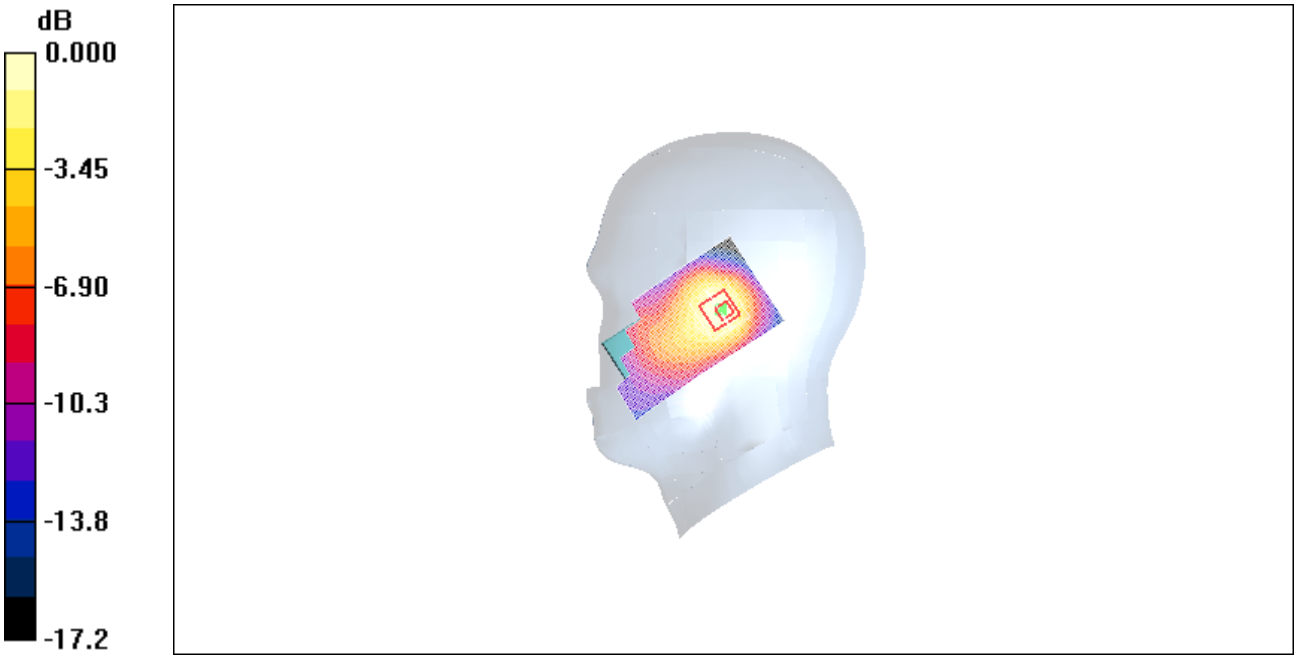


Fig. 20 Z-Scan at power reference point (1900 MHz CH810)

1900 Right Tilt Middle
Date/Time: 2009-1-22 14:16:10
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.308 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.386 W/kg
SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 0.263 mW/g



0 dB = 0.263mW/g

Fig.21 1900 MHz CH661

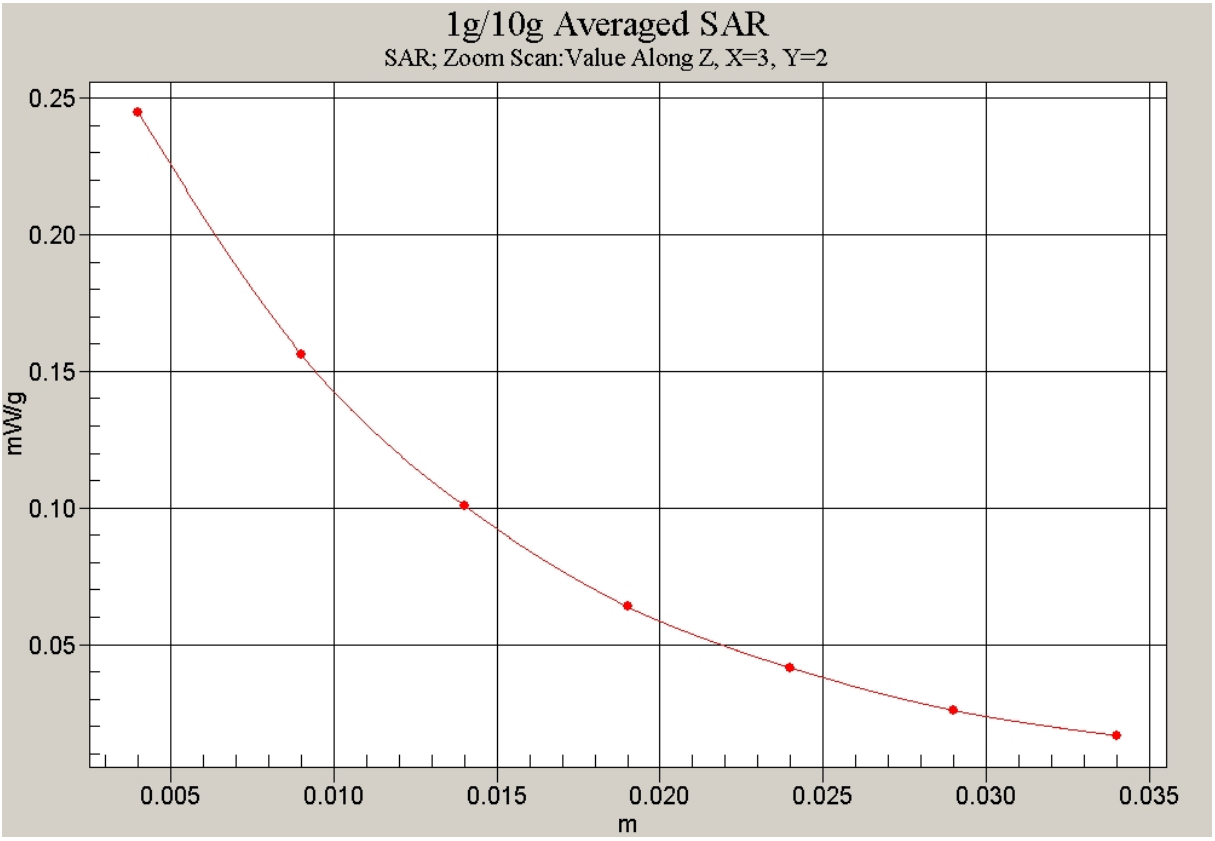
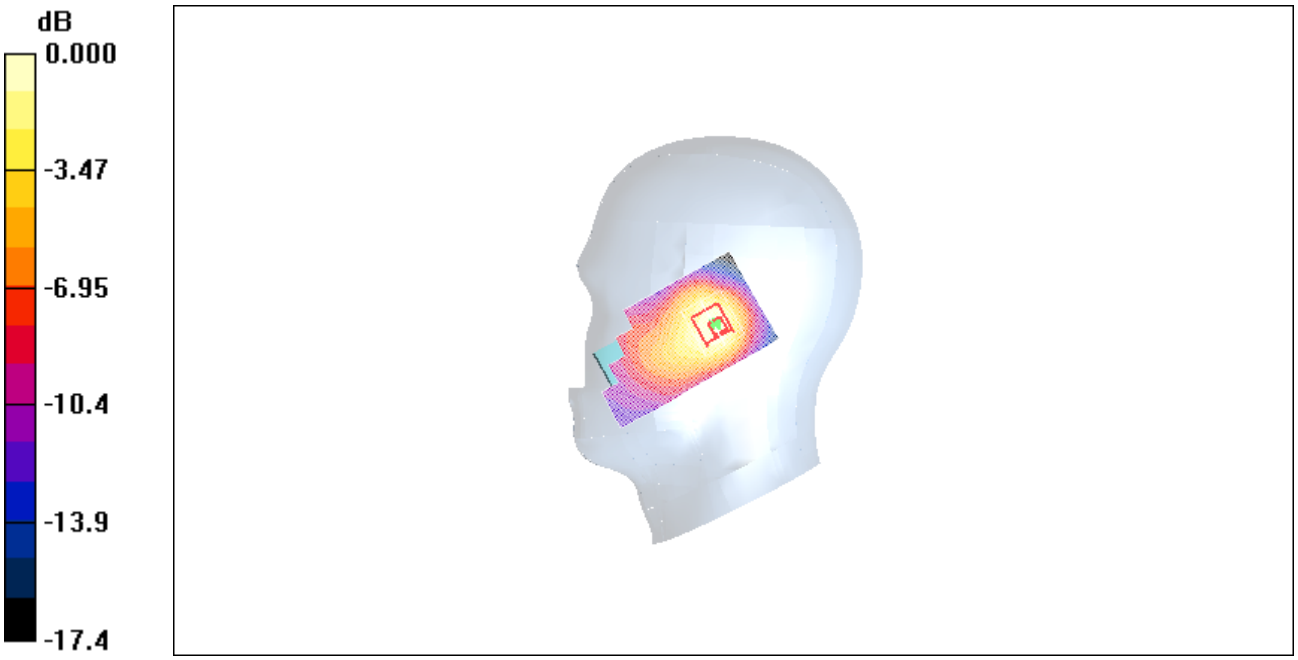


Fig. 22 Z-Scan at power reference point (1900 MHz CH661)

1900 Right Tilt Low
Date/Time: 2009-1-22 14:29:28
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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)

Tilt Low/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.286 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.161 mW/g
Maximum value of SAR (measured) = 0.275 mW/g



0 dB = 0.275mW/g

Fig.23 1900 MHz CH661

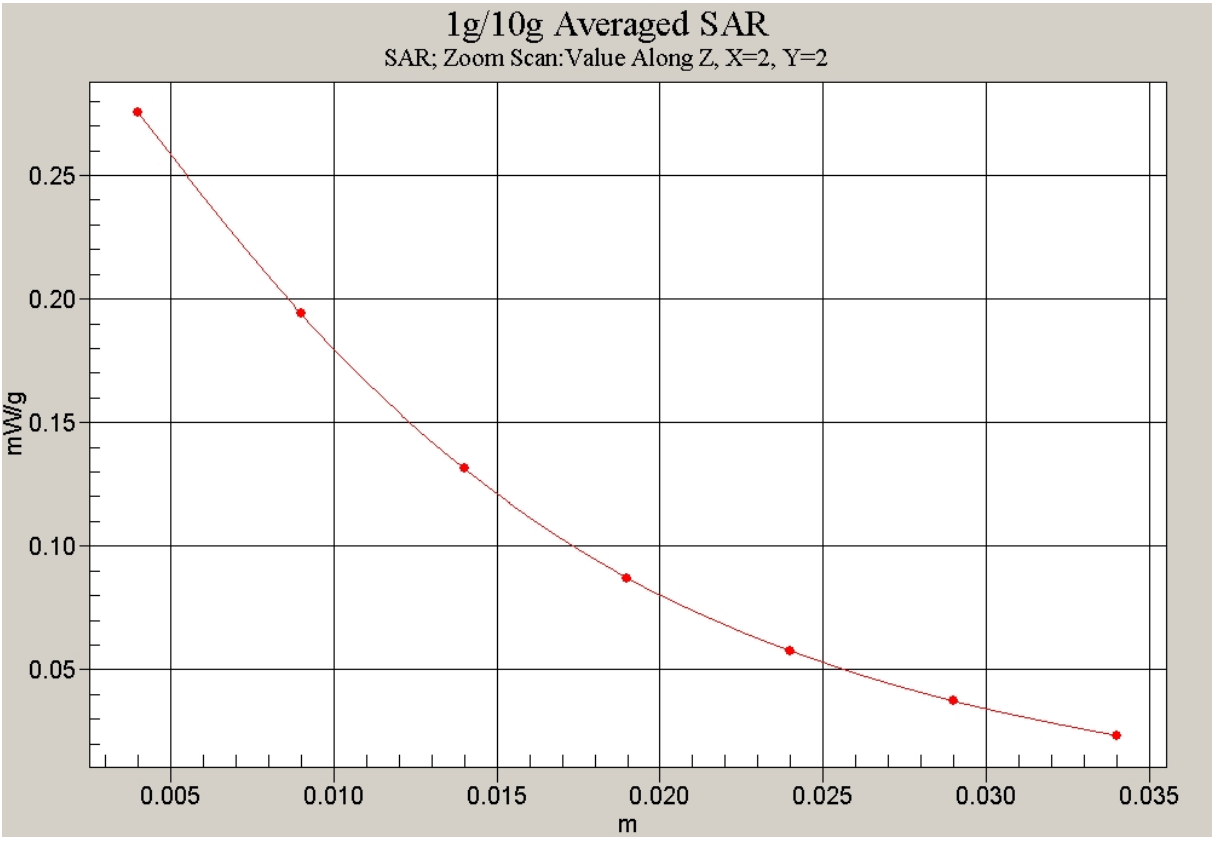


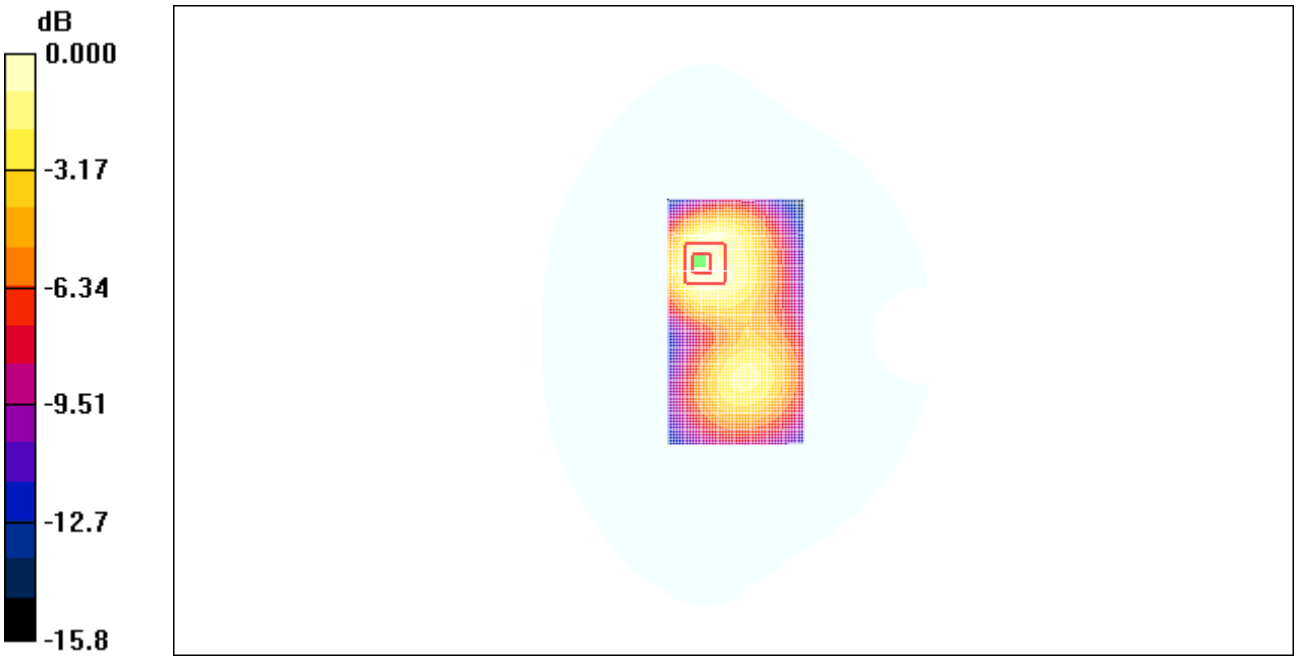
Fig.24 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Ground High with GPRS

Date/Time: 2009-1-22 15:56:35
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.57 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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) = 0.636 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.938 W/kg
SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.568 mW/g



0 dB = 0.568mW/g

Fig. 25 1900 MHz CH810

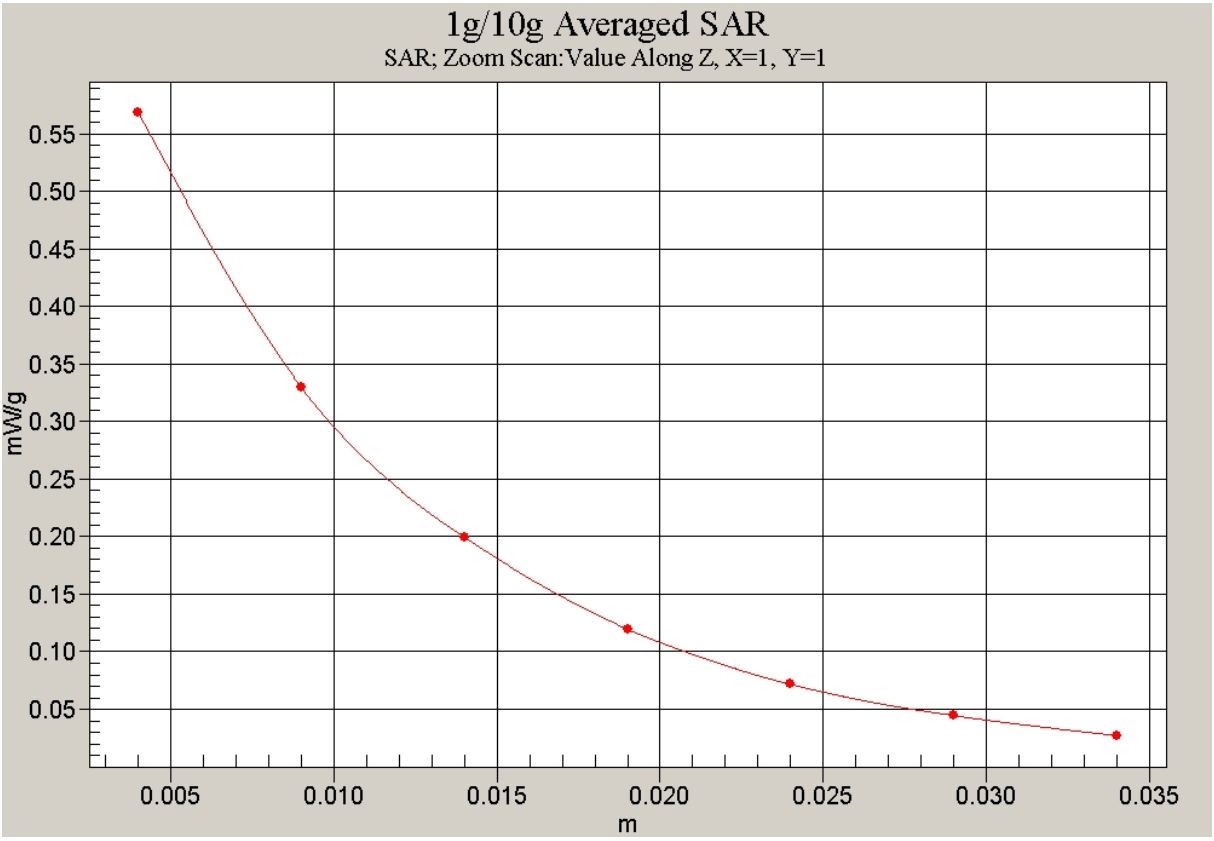


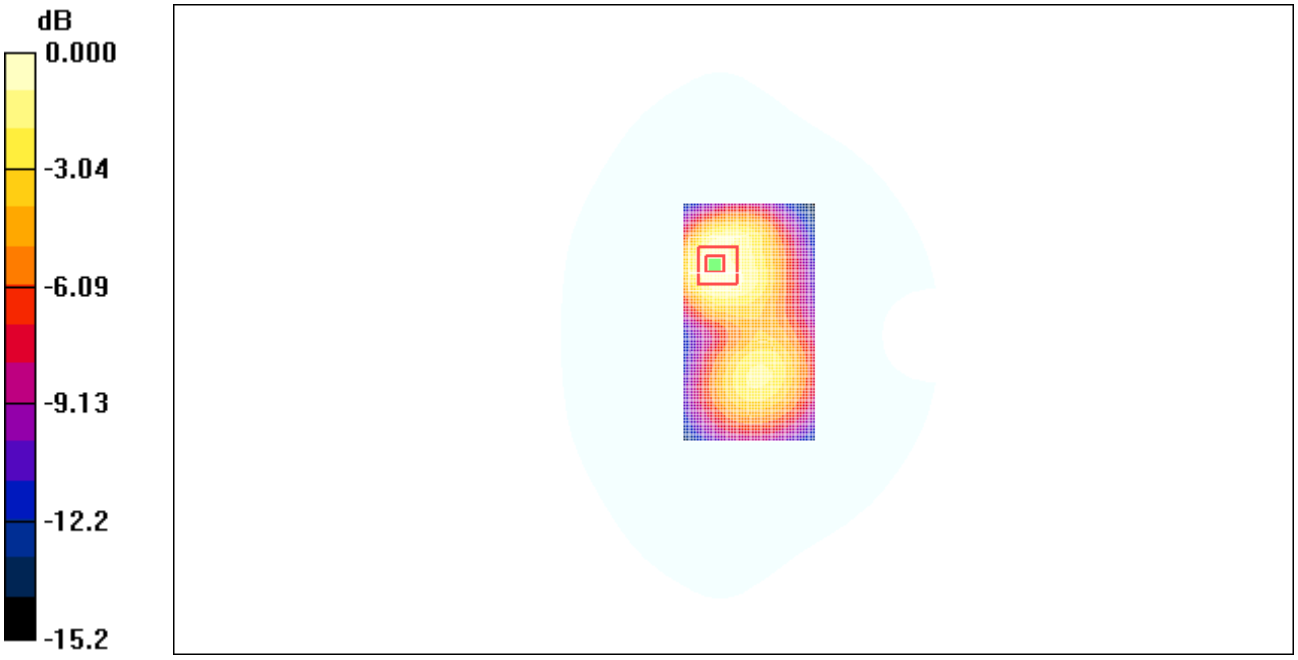
Fig. 26 Z-Scan at power reference point (1900 MHz CH810)

1900 Body Towards Ground Middle with GPRS

Date/Time: 2009-1-22 16:07:13
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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) = 0.738 mW/g

Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.4 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.635 mW/g; SAR(10 g) = 0.369 mW/g
Maximum value of SAR (measured) = 0.645 mW/g



0 dB = 0.645mW/g

Fig. 27 1900 MHz CH661

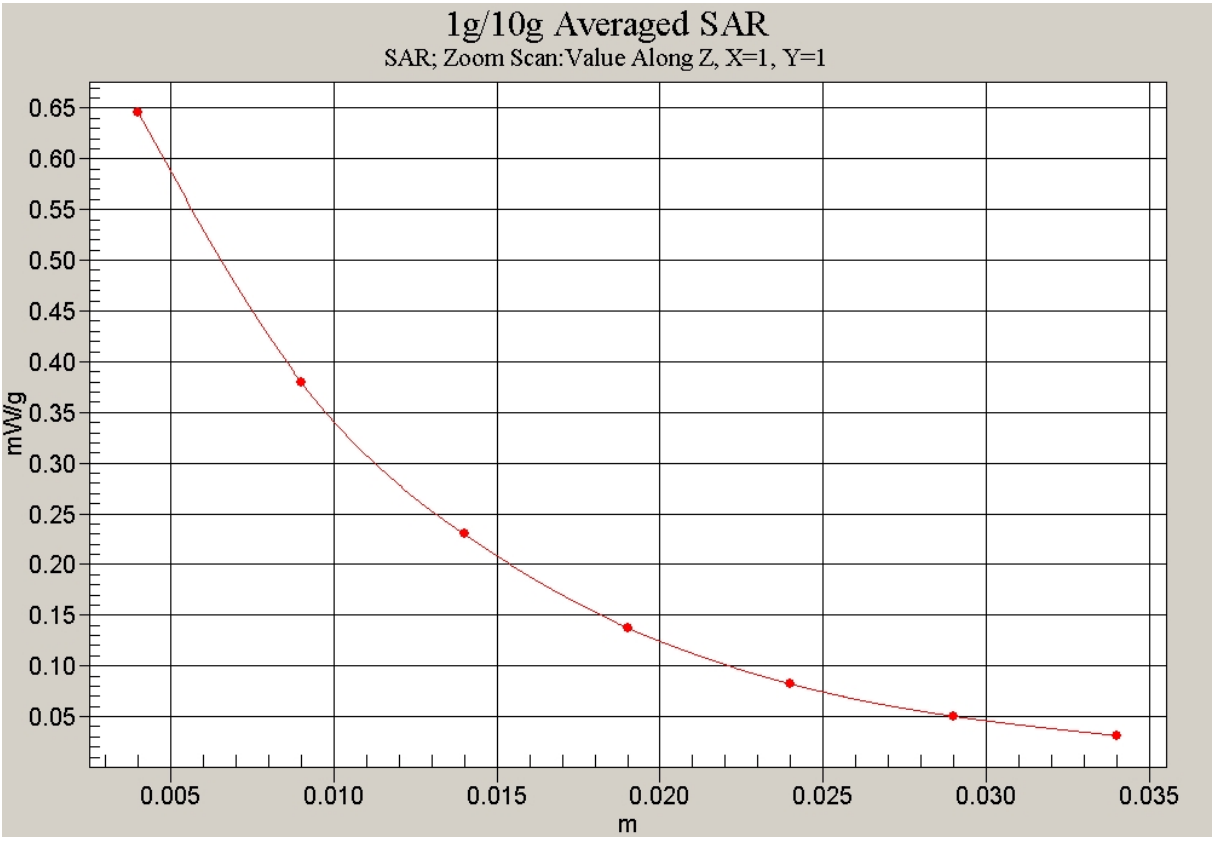


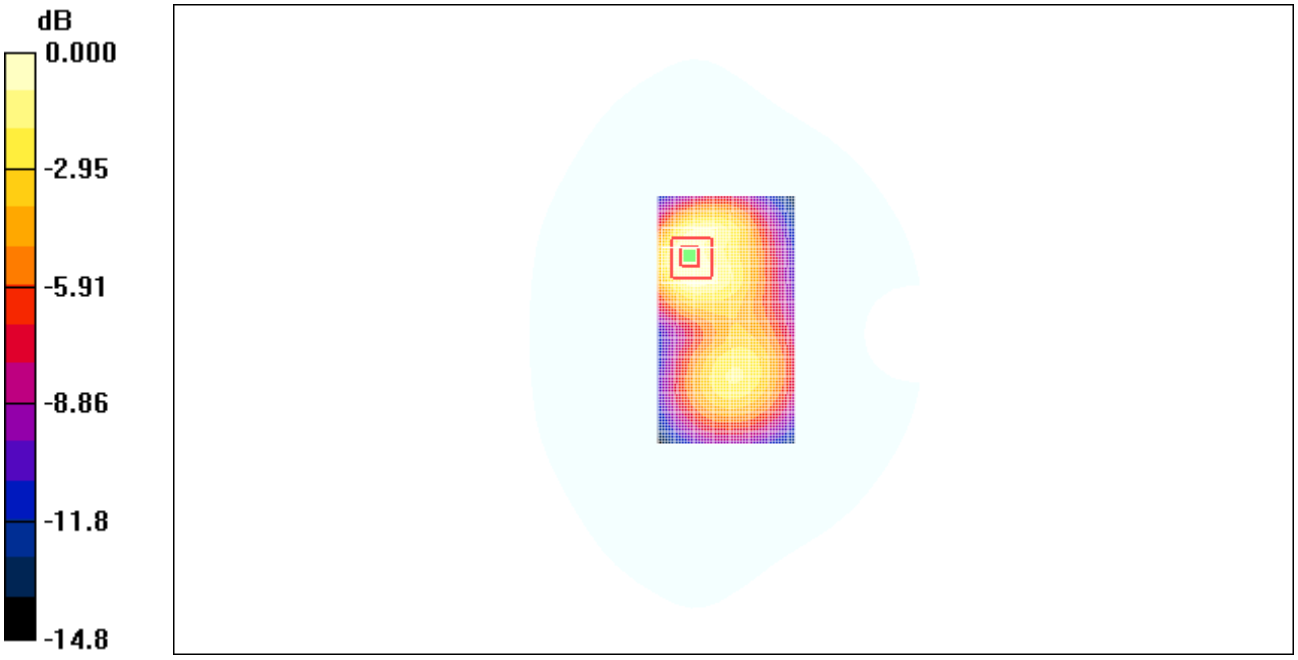
Fig. 28 Z-Scan at power reference point (1900 MHz CH661)

1900 Body Towards Ground Low with GPRS

Date/Time: 2009-1-22 16:17:53
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.52 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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) = 0.785 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.396 mW/g
Maximum value of SAR (measured) = 0.681 mW/g



0 dB = 0.681mW/g

Fig. 29 1900 MHz CH512

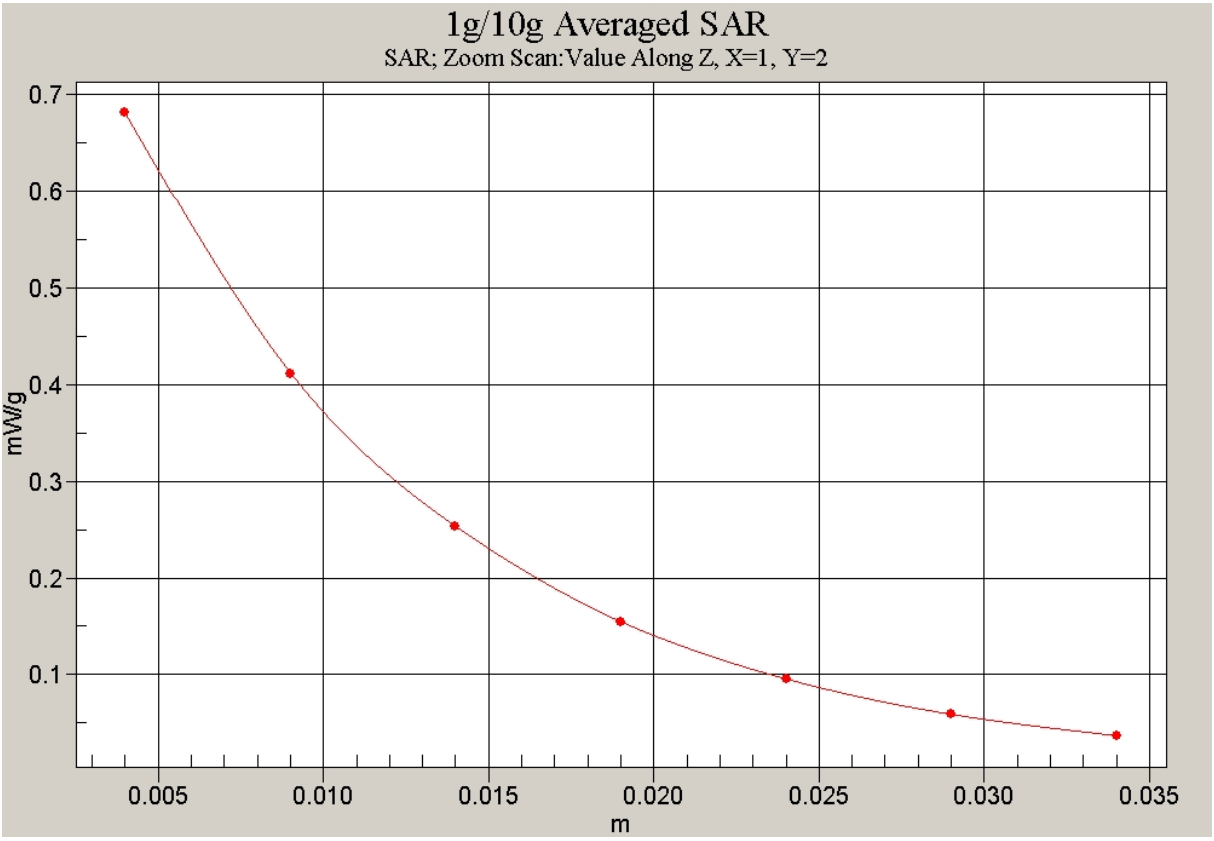


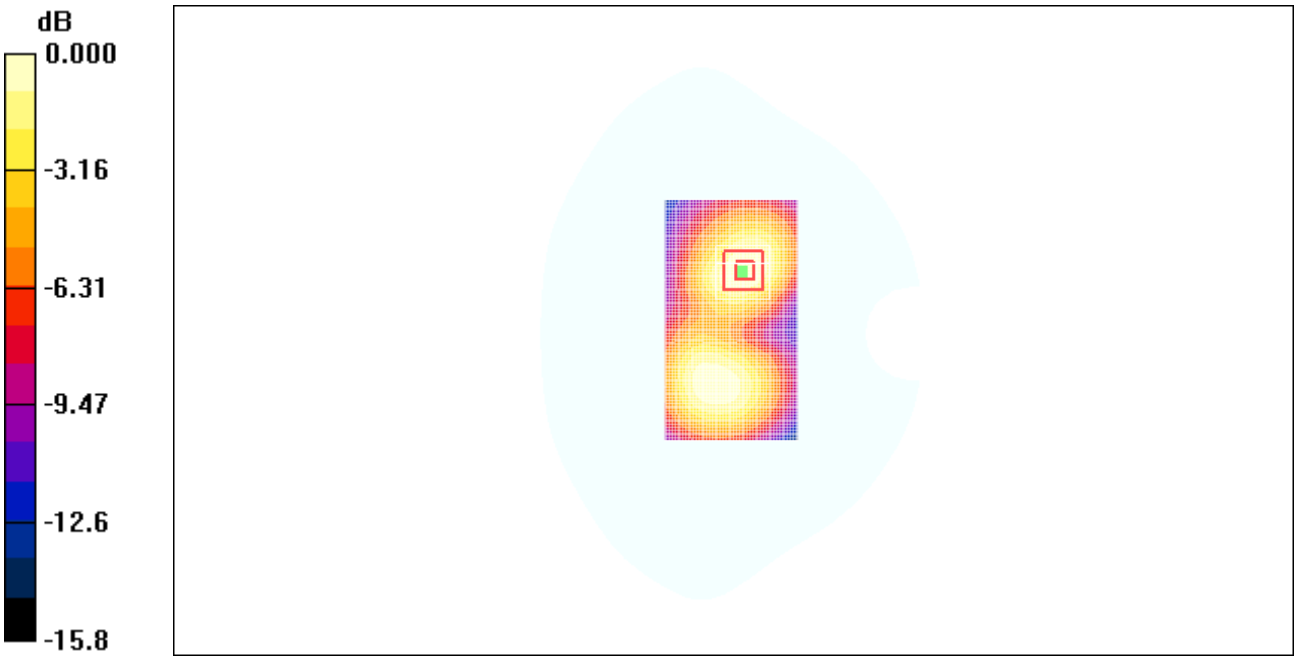
Fig. 30 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Phantom High with GPRS

Date/Time: 2009-1-22 15:23:38
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1910 MHz; σ = 1.57 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 Phantom High/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.343 mW/g

Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.99 V/m; Power Drift = -0.098 dB
Peak SAR (extrapolated) = 0.505 W/kg
SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.320 mW/g



0 dB = 0.320mW/g

Fig. 31 1900 MHz CH810

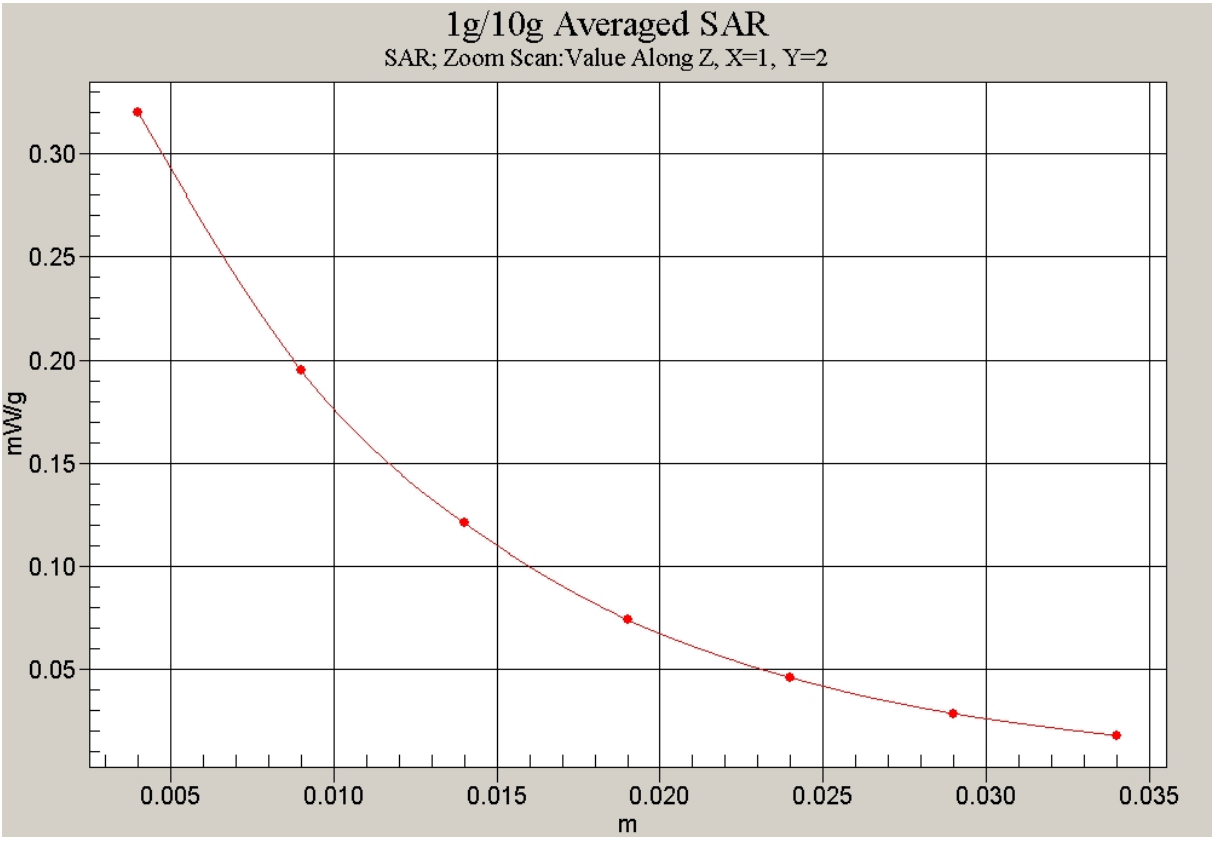


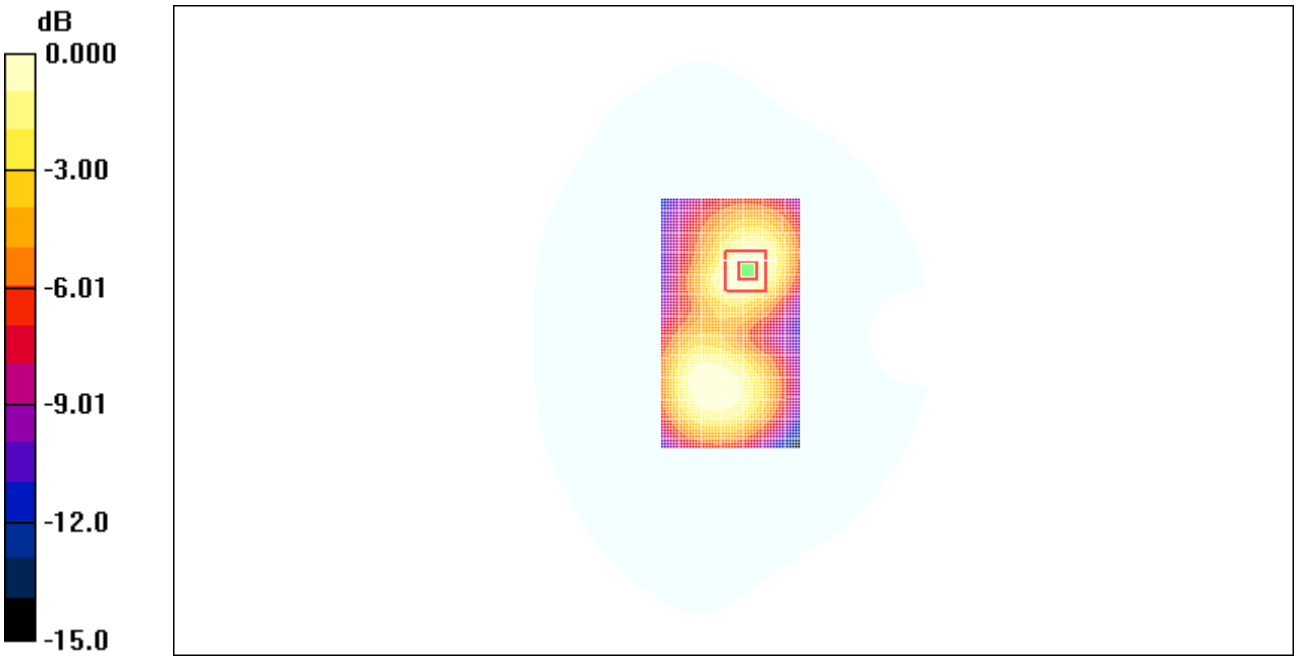
Fig. 32 Z-Scan at power reference point (1900 MHz CH810)

1900 Body Towards Phantom Middle with GPRS

Date/Time: 2009-1-22 15:34:15
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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 Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.378 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.02 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.553 W/kg
SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.198 mW/g
Maximum value of SAR (measured) = 0.342 mW/g



0 dB = 0.342mW/g

Fig. 33 1900 MHz CH661

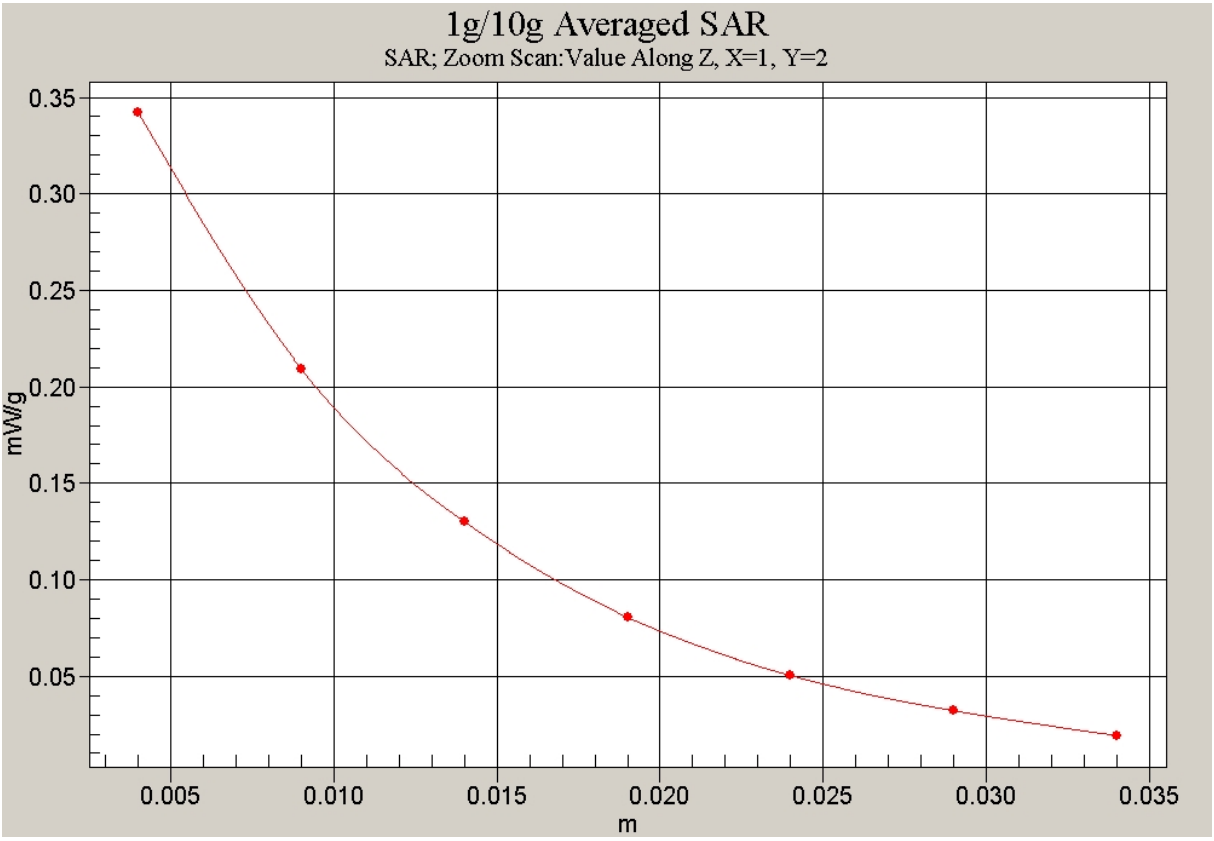


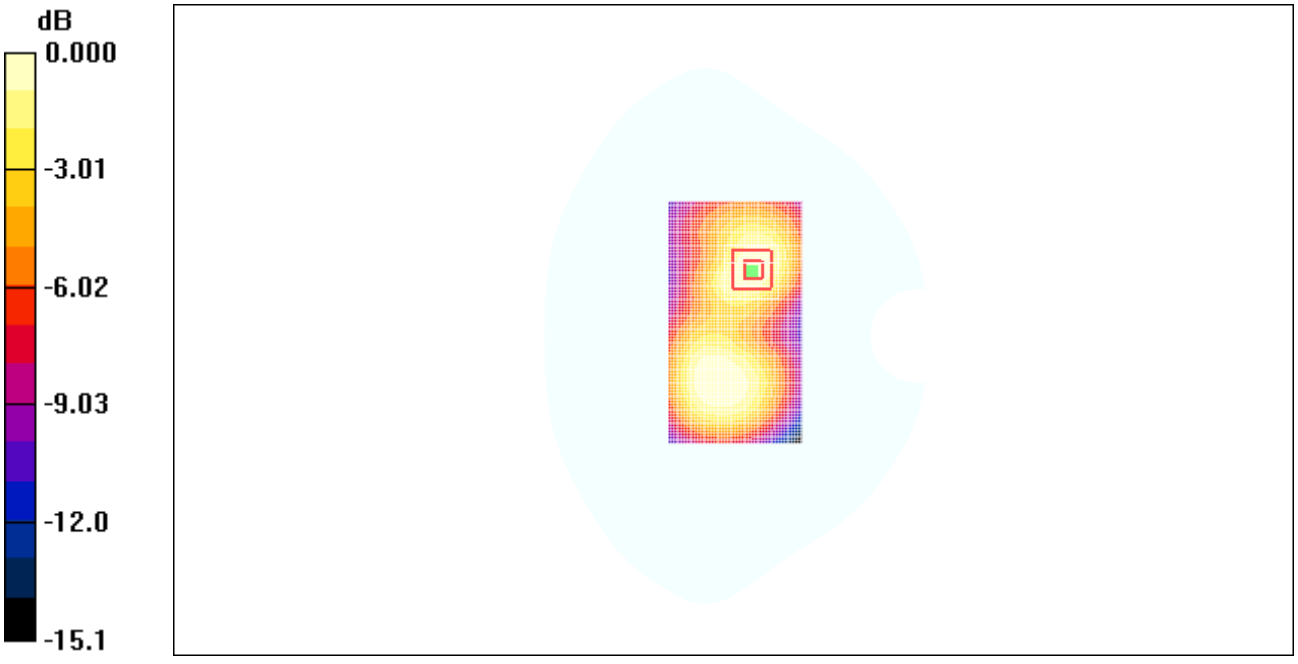
Fig. 34 Z-Scan at power reference point (1900 MHz CH661)

1900 Body Towards Phantom Low with GPRS

Date/Time: 2009-1-22 15:45:10
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.52 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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) = 0.372 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = 0.093 dB
Peak SAR (extrapolated) = 0.570 W/kg
SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 0.356 mW/g



0 dB = 0.356mW/g

Fig. 35 1900 MHz CH512

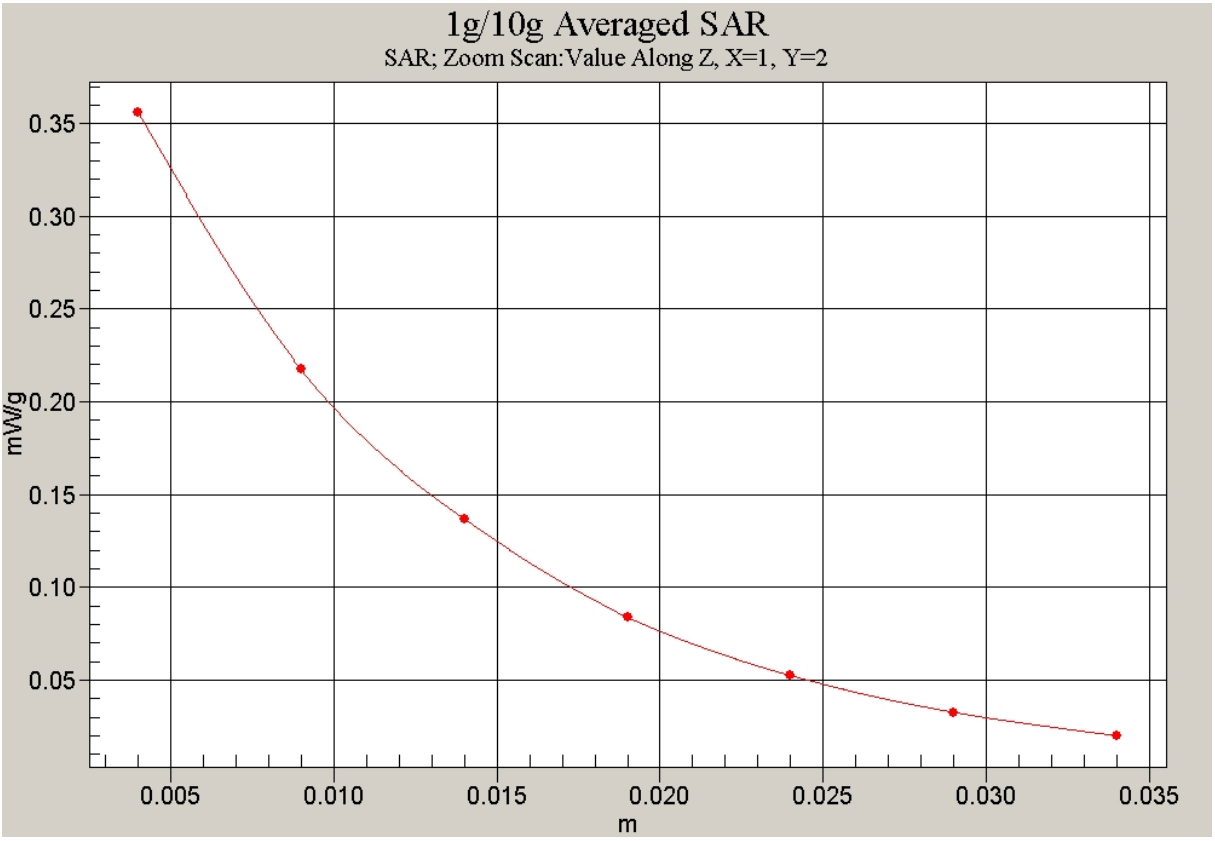


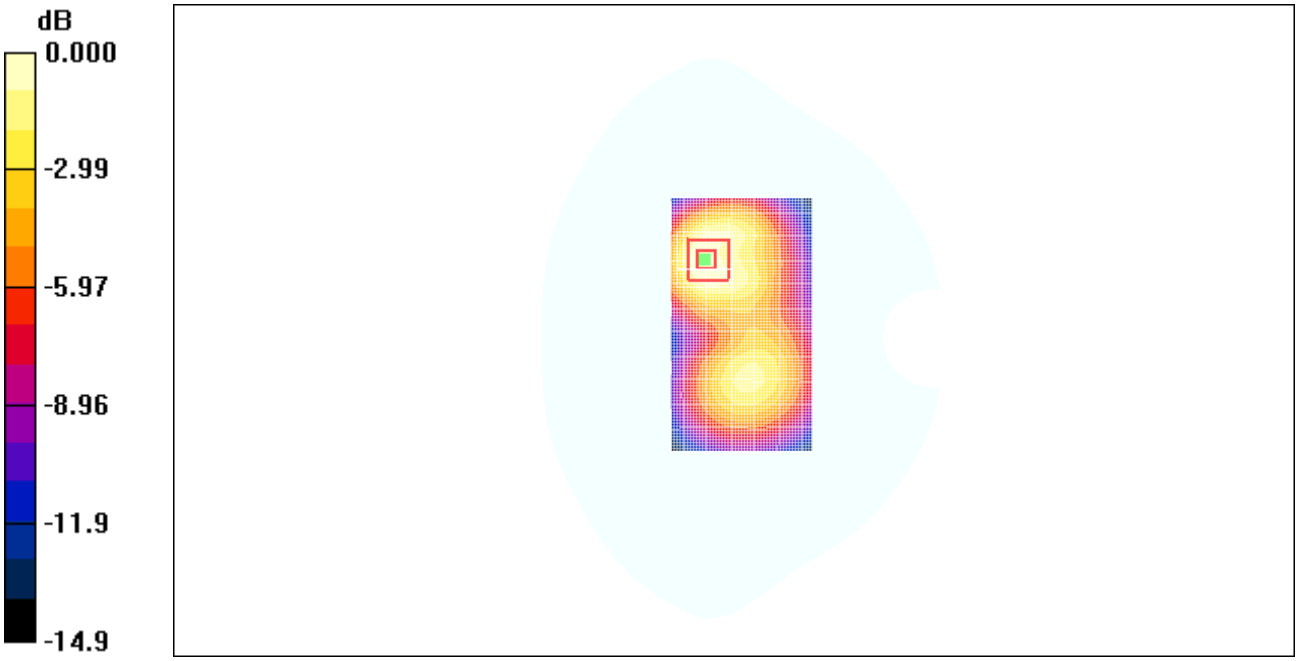
Fig. 36 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Ground Low with SPEECH CASE

Date/Time: 2009-1-22 17:48:41
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.52 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: GSM 1900MHz new 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) = 0.414 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.87 V/m; Power Drift = -0.001 dB
Peak SAR (extrapolated) = 0.618 W/kg
SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.211 mW/g
Maximum value of SAR (measured) = 0.374 mW/g



0 dB = 0.374mW/g

Fig.37 1900 MHz CH512

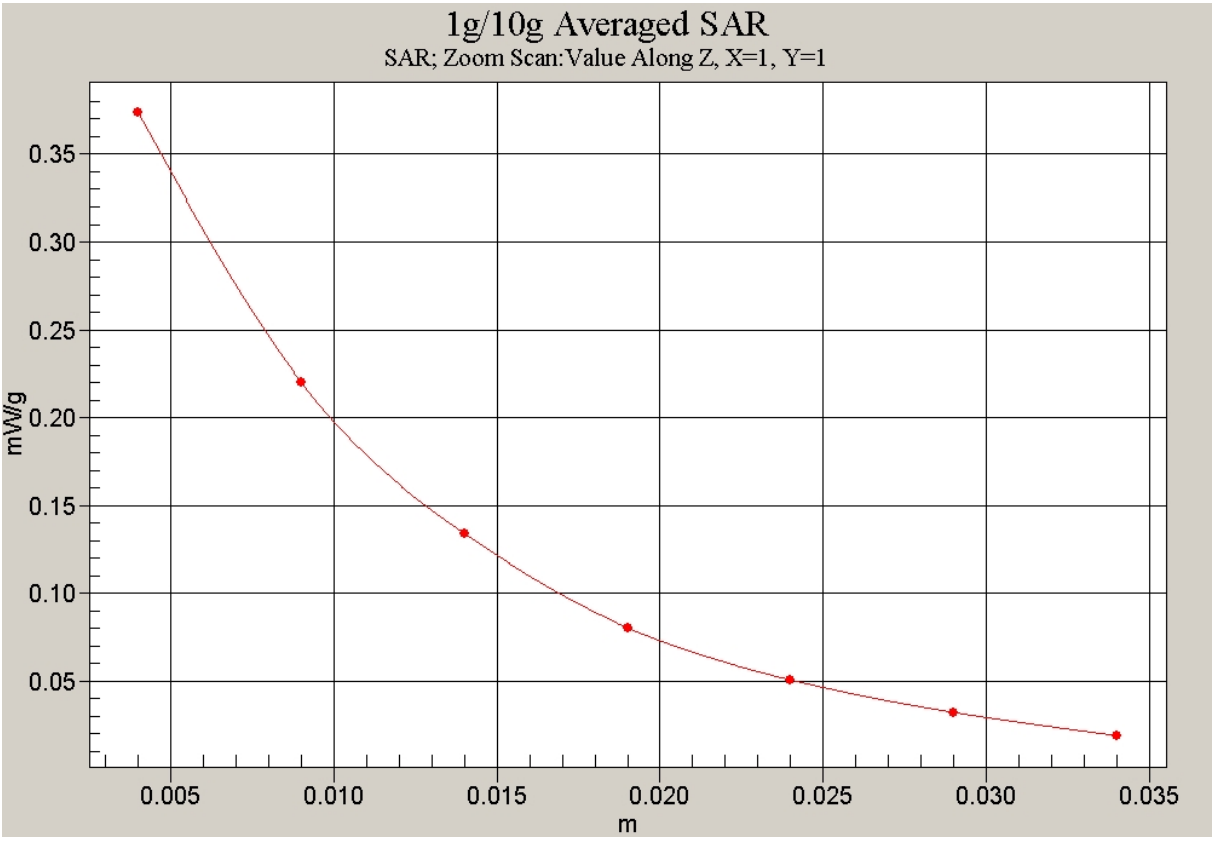


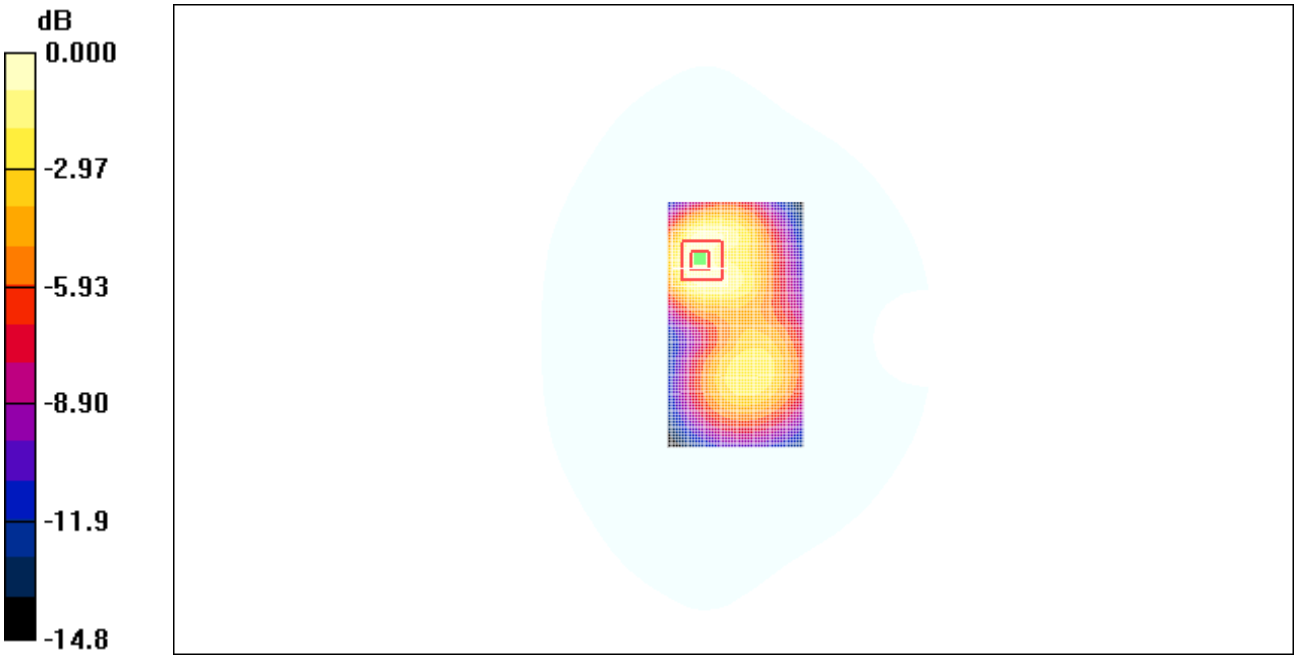
Fig. 38 Z-Scan at power reference point (1900 MHz CH512)

1900 Body Towards Ground Low with EGPRS

Date/Time: 2009-1-22 17:31:49
Electronics: DAE4 Sn771
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.52 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Ambient Temperature:23.3°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) = 0.337 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.65 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 0.503 W/kg
SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.171 mW/g
Maximum value of SAR (measured) = 0.297 mW/g



0 dB = 0.297mW/g

Fig.39 1900 MHz CH512

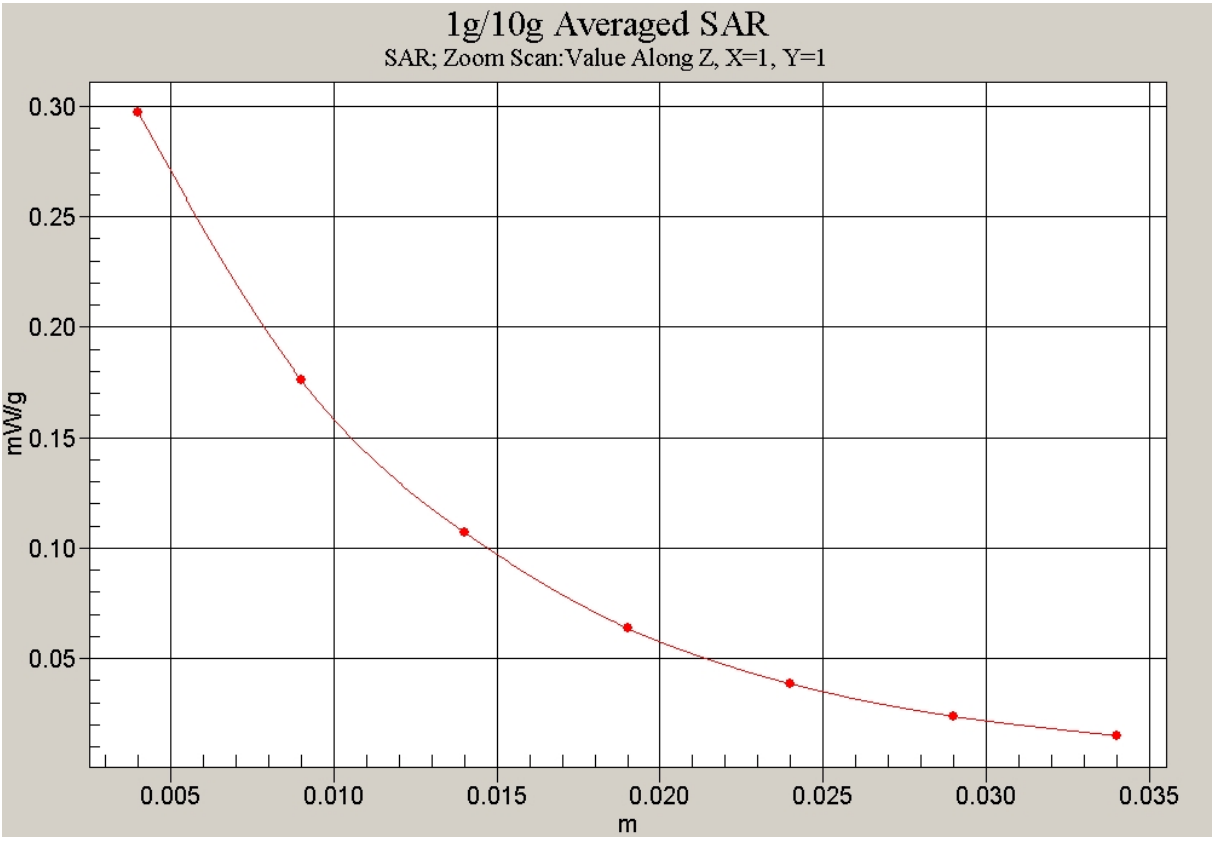


Fig. 40 Z-Scan at power reference point (1900 MHz CH512)

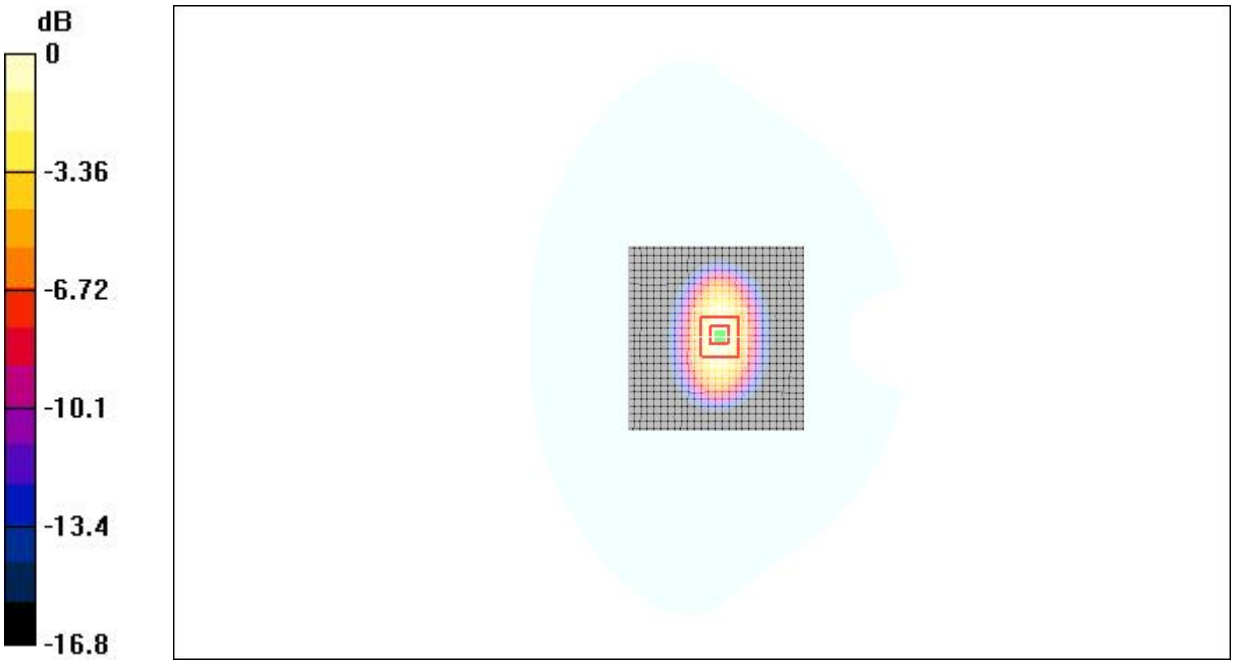
ANNEX D SYSTEM VALIDATION RESULTS

1900MHz

Date/Time: 2009-01-22 7:02:19
Electronics: DAE4 Sn771
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud 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 = 92.1 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 16.9 W/kg
SAR(1 g) = 9.91 mW/g; SAR(10 g) = 5.27 mW/g
Maximum value of SAR (measured) = 11.3 mW/g



0 dB = 11.3mW/g

Fig.41 validation 1900MHz 250mW