No.: RZC2009-0348

OET 65

TEST REPORT

Test name	Electromagnetic Field (Specific Absorption Rate)
Product	WCDMA/GSM MOBILE PHONE
Model	F260
FCC ID	Q78-ZTEF260
Client	ZTE CORPORATION

TA Technology (Shanghai) Co., Ltd.

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GENERAL SUMMARY

Product	WCDMA/GSM MOBILE PHONE	**Model**	F260
Client	ZTE CORPORATION	**Type of test**	Entrusted
Manufacturer	ZTE CORPORATION	**Arrival Date of sample**	March 25th, 2009
Place of sampling	(Blank)	**Carrier of the samples**	Li Dezi
Quantity of the samples	One	**Date of product**	(Blank)
Base of the samples	(Blank)	**Items of test**	SAR
Series number	320290221940		
Standard(s)	**ANSI C95.1–2005:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. **IEEE 1528–2003:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head Due to Wireless Communications Devices: Experimental Techniques. **OET Bulletin 65 supplement C, published June 2001 including DA 02-1438, published June 2002:** Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits. Transition Period for the Phantom Requirements of Supplement C to OET Bulletin 65. **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 62209-2:2008(106/162/CDV):** Human exposure to radio frequency fields from handheld and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 2: Procedure to determine the Specific Absorption Rate (SAR)for wireless communication devices used in close proximity to the human body .(frequency rang of 30MHz to 6GHz)		
Conclusion	Localized Specific Absorption Rate (SAR) of this portable wireless equipment has been measured in all cases requested by the relevant standards cited in Clause 7.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 7.1 of this test report. General Judgment: **Pass** (Stamp) **Date of issue: April 8th, 2009**		
Comment	The test result only responds to the measured sample.		

Approved by Weizhong Yang **Revised by** Minbao Ling **Performed by** Jinchang Li

TABLE OF CONTENT

1. COMPETENCE AND WARRANTIES

TA Technology (Shanghai) Co., Ltd. is a test laboratory competent to carry out the tests described in this test report.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and teCHnical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

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2. GENERAL CONDITIONS

This report only refers to the item that has undergone the test.

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3. DESCRIPTION OF EUT

3.1. Addressing Information Related to EUT

Table 1: Applicant (The Client)

Name or Company	ZTE CORPORATION
Address/Post	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,Nanshan District,Shenzhen, Guangdong, 518057, P.R.China
City	Shenzhen
Postal Code	518057
Country	P.R.China
Telephone	021-68897541
Fax	021-50801070

Table 2: Manufacturer

Name or Company	ZTE CORPORATION
Address/Post	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,Nanshan District,Shenzhen, Guangdong, 518057, P.R.China
City	Shenzhen
Postal Code	518057
Country	P.R.China
Telephone	021-68897541
Fax	021-50801070

3.2. Constituents of EUT

Table 3: Constituents of Samples

Description	Model	Serial Number	Manufacturer
Handset	F260	320290221940	ZTE CORPORATION
Lithium Battery	Li3708T42P3h453756	10100712040328593	ZTE CORPORATION
AC/DC Adapter	STC-A22O50U8-A	100810131571581	ZTE CORPORATION

Note:
The EUT appearances see ANNEX H.

3.3. General Description

Equipment Under Test (EUT) is a model of WCDMA/GSM MOBILE PHONE with internal antenna. It consists of Handset, Lithium Battery and AC/DC Adapter The detail about Mobile phone, Lithium Battery and AC/DC Adapter is in Table 3. SAR is tested for GSM 850 and GSM 1900 WCDMA Band II and WCDMA Band V. The EUT have GPRS (class 10), EGPRS (class 10) functions.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

3.4. Test item

Table 4: Test item of EUT

device type :	portable device	
exposure category:	uncontrolled environment / general population	
device operating configurations :		
operating mode(s):	GSM850; （tested） GSM1900; （tested） WCDMA Band II; （tested） WCDMA Band V; （tested）	
Modulation:	GMSK, 8-PSK;	
GPRS mobile station class :	A	
GPRS multislot class :	10	
EGPRS multislot class:	10	
Maximum no. of timeslots in uplink:	2	
operating frequency range(s)	transmitter frequency range	receiver frequency range
GSM850: (tested)	824.2 MHz ~ 848.8 MHz	869.2 MHz ~ 893.8 MHz
GSM1900: (tested)	1850.2 MHz ~ 1909.8 MHz	1930.2 MHz ~ 1989.8 MHz
WCDMA Band II: (tested);	1852.4 MHz ~ 1907.6MHz	1932.4 MHz ~ 1987.6 MHz
WCDMA Band V: (tested)	826.4 MHz ~ 846.6 MHz	871.4 MHz ~ 891.6 MHz
Power class	GSM 850: 4, tested with power level 5	
	GSM 1900: 1, tested with power level 0	
	WCDMA Band II: 3, tested with maximum output power	
	WCDMA Band V: 3, tested with maximum output power	
Test channel (Low –Middle –High)	128-190-251 (GSM850) (tested) 512 - 661-810 (GSM1900) (tested) 9262- 9400 -9538 (WCDMA Band II) (tested) 4132 -4182 -4233 (WCDMA Band V) (tested)	
hardware version:	wm2B	
software version:	COM_CO_F260 V1.3-s	
antenna type:	integrated antenna	

4. OPERATIONAL CONDITIONS DURING TEST

4.1. General description of test procedures

A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) are allocated to 128, 190 and 251 in the case of GSM 850, allocated to 512, 661 and 810 in the case of GSM 1900, allocated to 9262, 9400 and 9538 in the case of WCDMA Band II, allocated to 4132, 4182 and 4233 in the case of WCDMA Band V. The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with E5515C, and the EUT is set to maximum output power by E5515C. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30 dB.

4.2. GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a System Simulator (SS) by air link. Using E5515C the power lever is set to”5” in head SAR and body SAR of GSM850, set to”0” in head SAR and body SAR of GSM1900, The test in the band of GSM 850 and 1900 are performed in the mode of speech transfer function, GPRS/EGPRS function.Since the GPRS/EGPRS class is 10 for this EUT, it has at most 2 timeslots in uplink.

4.3. WCDMA Test Configuration

4.3.1. Output power Verification

Maximum output power is verified on the High, Middle and Low channel according to the procedures described in section 5.2 of 3GPP TS 34. 121, using the appropriate RMC or AMR with TPC(transmit power control) set to all “1’s” for WCDMA/HSDPA or applying the required inner loop power control procedures to the maximum output power while HSUPA is active. Results for all applicable physical channel configuration (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) should be tabulated in the SAR report. All configuration that are not supported by the DUT or can not be measured due to technical or equipment limitations should be clearly identified.

4.3.2. Head SAR Measurements

SAR for head exposure configurations in voice mode is measured using a 12.2kbps RMC with TPC bits configured to all “1’s”. SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2kbps AMR is less than 1/4 dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2kbps AMR with a 3.4 kbps SRB(Signaling radio bearer) using the exposure configuration that results in the highest SAR in 12.2kbps RMC for that RF channel.

4.3.3. Body SAR Measurements

SAR for body exposure configurations in voice and data modes is measured using 12.2kbps RMC with TPC bits configured to all ”1’s”. SAR for other spreading codes and multiple DPDCHn, when supported by the DUT, are not required when the maximum average output of each RF channel, for each spreading code and DPDCHn configuration, are less than 1/4 dB higher than those measured in 12.2kbps RMC. Otherwise, SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure additional DPDCHn for a DUT using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

5. SAR MEASUREMENTS SYSTEM CONFIGURATION

5.1. SAR Measurement Set-up

The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY4 measurement server.
- The DASY4 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003
- DASY4 software and SEMCAD data evaluation software.
- Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.

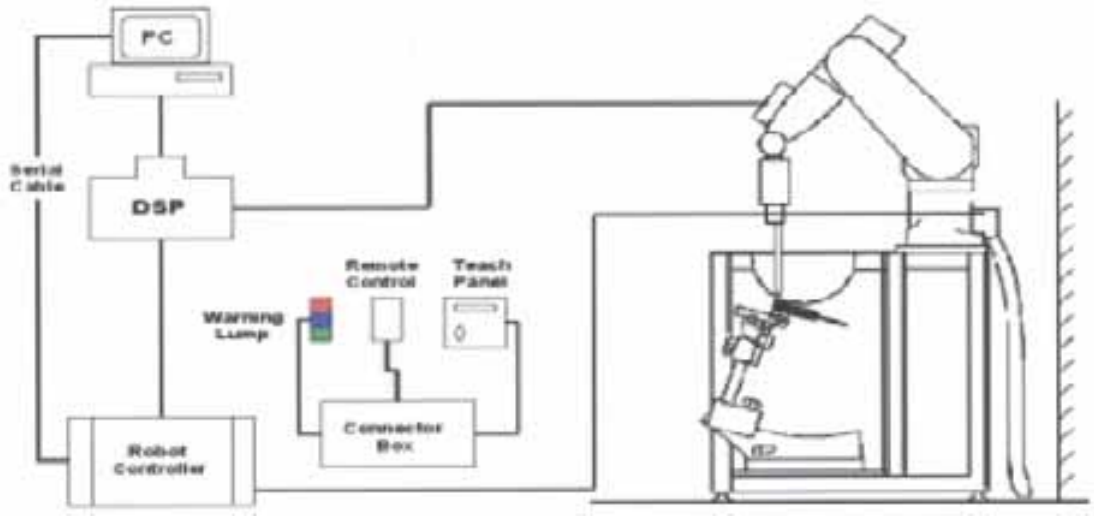

Figure 1. SAR Lab Test Measurement Set-up

5.2. Dasy4 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

5.2.1. EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core 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 1750 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 μW/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

Figure 2.EX3DV4 E-field Probe

Figure 3. EX3DV4 E-field probe

5.2.2. 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/m3).

5.3. Other Test Equipment

5.3.1. Device Holder for Transmitters

The DASY device holder is designed to cope with the die rent positions given in the standard.
It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.
The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity "=3 and loss tangent _=0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the inference of the clamp on the test results could thus be lowered.

Figure 4.Device Holder

5.3.2. Phantom

The Generic Twin Phantom is constructed of a fiberglass shell integrated in a wooden Figure. 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±0.1 mm
Filling Volume	Approx. 20 liters
Dimensions	810 x l000 x 500 mm (H x L x W)
Aailable	Special

Figure 5.Generic Twin Phantom

5.4. Scanning procedure

The DASY4 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The ”reference“ and ”drift“ measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. ± 5 %.

- The ”surface check“ measurement tests the optical surface detection system of the DASY4 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

- Area Scan

  The Area Scan is used as a fast scan in two dimensions to find the area of high field values

before running a detailed measurement around the hot spot.Before starting the area scan a grid spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged.
After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

- Zoom Scan
  Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x7 points within a cube whose base is centered around the maxima found in the preceding area scan.

- Spatial Peak Detection
  The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses.The DASY4 system allows evaluations that combine measured data and robot positions, such as:
  • maximum search
  • extrapolation
  • boundary correction
  • peak search for averaged SAR
  During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.
  Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space. They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation. For a grid using 7x7x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.
- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

5.5. Data Storage and Evaluation

5.5.1. Data Storage

The DASY4 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

5.5.2. Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Normi, ai_0, a_{i1}, a_{i2}
	- Conversion factor	$ConvF_i$
	- Diode compression point	Dcp_i
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	
	- Density	

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY4 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal,

the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot c f / d c p_i$$

With V_i = compensated signal of channel i (i = x, y, z)

U_i = input signal of channel i (i = x, y, z)

cf = crest factor of exciting field (DASY parameter)

dcp_i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With V_i = compensated signal of channel i (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
$[mV/(V/m)^2]$ for E-field Probes

$ConvF$ = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (E_{tot}^2 \cdot \ .) / (\quad \cdot 1000)$$

with ***SAR*** = local specific absorption rate in mW/g

$\boldsymbol{E_{tot}}$ = total field strength in V/m

σ = conductivity in [mho/m] or [Siemens/m]

ρ = equivalent tissue density in g/cm^3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad \boldsymbol{P_{pwe} = H_{tot}^2 \cdot 37.7}$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm^2

$\boldsymbol{E_{tot}}$ = total electric field strength in V/m

$\boldsymbol{H_{tot}}$ = total magnetic field strength in A/m

5.6. System check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the table 11.

System check results have to be equal or near the values determined during dipole calibration with the
relevant liquids and test system (±10 %).

System check is performed regularly on all frequency bands where tests are performed with the DASY 4 system.
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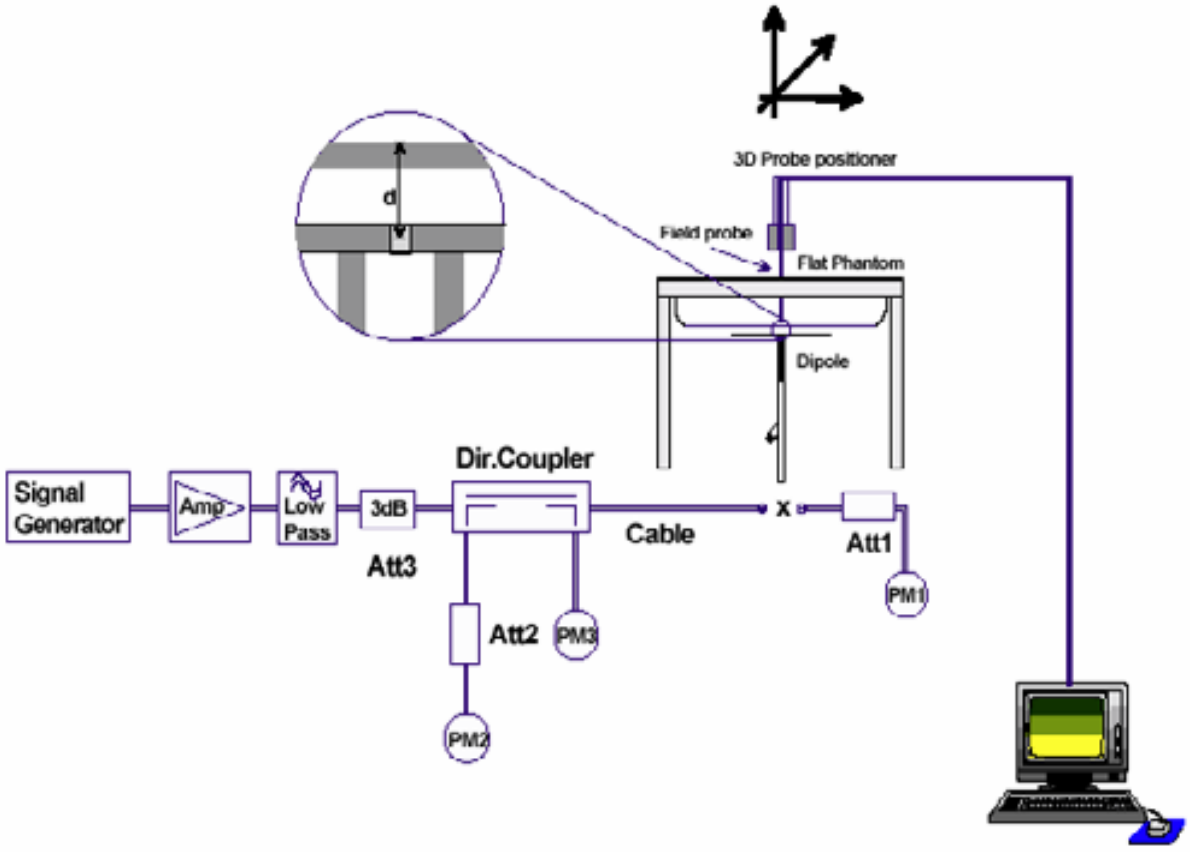


Figure 6. System Check Set-up

5.7. Equivalent Tissues

The liquid is consisted of water, salt, Glycol, Sugar, Preventol and Cellulose.The liquid has previously been proven to be suited for worst-case. The Table 5 and Table 6 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

Table 5: Composition of the Head Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Brain) 835MHz
Water	41.45
Sugar	56
Salt	1.45
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=41.5 σ=0.9

MIXTURE%	FREQUENCY(Brain)1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz ε=40.0 σ=1.40

Table 6: Composition of the Body Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Body)835MHz
Water	52.5
Sugar	45
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=55.2 σ=0.97

MIXTURE%	FREQUENCY (Body) 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52

6. LABORATORY ENVIRONMENT

Table 7: The Ambient Conditions during Test

Temperature	Min. = 20°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

7. CHARACTERISTICS OF THE TEST

7.1. Applicable Limit Regulations

ANSI C95.1–2005: 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.

7.2. Applicable Measurement Standards

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

OET Bulletin 65 supplement C, published June 2001 including DA 02-1438, published June 2002: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits. Transition Period for the Phantom Requirements of Supplement C to OET Bulletin 65.

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 62209-2:2008(106/162/CDV): Human exposure to radio frequency fields from handheld and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 2: Procedure to determine the Specific Absorption Rate (SAR)for wireless communication devices used in close proximity to the human body .(frequency rang of 30MHz to 6GHz)

8. CONDUCTED OUTPUT POWER MEASUREMENT

8.1. Summary

The DUT is tested using an E5515C communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power. Conducted output power was measured using an integrated RF connector and attached RF cable. This result contains conducted output power for the EUT.

8.2. Conducted Power Results

Table 8: Conducted Power Measurement Results

GSM 850	**Conducted Power**		
	Channel 128	Channel 190	Channel 251
	(824.2MHz)	(836.6MHz)	(848.8MHz)
Before Test (dBm)	32.52	31.94	31.56
After Test (dBm)	32.51	31.93	31.55
GSM 850+GPRS	**Conducted Power**		
	Channel 128	Channel 190	Channel 251
	(824.2MHz)	(836.6MHz)	(848.8MHz)
Before Test (dBm)	32.38	31.69	31.30
After Test (dBm)	32.38	31.69	31.30
GSM 1900	**Conducted Power**		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	28.81	28.79	28.62
After Test (dBm)	28.82	28.78	28.61
GSM 1900+GPRS	**Conducted Power**		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	28.60	28.64	28.48
After Test (dBm)	28.61	28.63	28.47
WCDMA BAND II (12.2kbps RMC)	**Conducted Power**		
	Channel 9262	**Channel 9400**	**Channel 9538**
	1852.4MHz	**1880MHz**	**1907.6MHz**
Before Test (dBm)	25.50	25.85	25.22
After Test (dBm)	25.51	25.84	25.21
WCDMA BAND II (64kbps RMC)	**Conducted Power**		
	Channel 9262	**Channel 9400**	**Channel 9538**
	1852.4MHz	**1880MHz**	**1907.6MHz**
Before Test (dBm)	25.52	25.86	25.21
After Test (dBm)	25.51	25.85	25.22

WCDMA BAND II (144kbps RMC)	Conducted Power		
	Channel 9262	Channel 9400	Channel 9538
	1852.4MHz	1880MHz	1907.6MHz
Before Test (dBm)	25.53	25.85	25.22
After Test (dBm)	25.51	25.84	25.21
WCDMA BAND II (384kbps RMC)	**Conducted Power**		
	Channel 9262	**Channel 9400**	**Channel 9538**
	1852.4MHz	**1880MHz**	**1907.6MHz**
Before Test (dBm)	25.54	25.84	25.23
After Test (dBm)	25.53	25.83	25.21
WCDMA BAND V (12.2kbps RMC)	**Conducted Power**		
	Channel 4132	**Channel 4182**	**Channel 4233**
	826.4MHz	**836.4MHz**	**846.6MHz**
Before Test (dBm)	25.51	25.38	25.64
After Test (dBm)	25.50	25.37	25.63
WCDMA BAND V (64kbps RMC)	**Conducted Power**		
	Channel 4132	**Channel 4182**	**Channel 4233**
	826.4MHz	**836.4MHz**	**846.6MHz**
Before Test (dBm)	25.53	25.37	25.63
After Test (dBm)	25.51	25.36	25.62
WCDMA BAND V (144kbps RMC)	**Conducted Power**		
	Channel 4132	**Channel 4182**	**Channel 4233**
	826.4MHz	**836.4MHz**	**846.6MHz**
Before Test (dBm)	25.53	25.37	25.63
After Test (dBm)	25.50	25.36	25.62
WCDMA BAND V (384kbps RMC)	**Conducted Power**		
	Channel 4132	**Channel 4182**	**Channel 4233**
	826.4MHz	**836.4MHz**	**846.6MHz**
Before Test (dBm)	25.54	25.37	25.65
After Test (dBm)	25.52	25.36	25.64

9. TEST RESULTS

9.1. Dielectric Performance

Table 9: Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp ℃
		ε_r	σ(s/m)	
835MHz (head)	Target value ±5% window	41.5 39.43 — 43.58	0.90 0.86 — 0.95	/
	Measurement value 2009-4-6	43.10	0.92	21.8
1900MHz (head)	Target value ±5% window	40.0 38 — 42	1.40 1.33 — 1.47	/
	Measurement value 2009-4-6	39.79	1.42	21.9
	Measurement value 2009-4-7	39.77	1.43	21.9

Table 10: Dielectric Performance of Body Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp ℃
		ε_r	σ(s/m)	
835MHz (body)	Target value ±5% window	55.20 52.44 — 57.96	0.97 0.92 — 1.02	/
	Measurement value 2009-3-29	55.62	0.98	21.5
1900MHz (body)	Target value ±5% window	53.3 50.64 — 55.97	1.52 1.44 — 1.60	/
	Measurement value 2009-4-1	52.10	1.51	21.8
	Measurement value 2009-4-7	52.08	1.52	21.6

9.2. System Checking Results

Table 11: System Checking for Head tissue simulant

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ε_r	σ(s/m)	℃
835MHz	Recommended result ±10% window	1.52 1.37--1.67	2.30 2.07--2.53	40.90	0.89	/
	Measurement value 2009-3-29	1.50	2.30	43.03	0.93	21.9
	Measurement value 2009-4-6	1.54	2.35	43.10	0.92	21.8
1900MHz	Recommended result ±10% window	5.06 4.55---5.57	9.84 8.86--10.82	38.80	1.47	/
	Measurement value 2009-4-1	5.09	9.74	39.79	1.42	22.1
	Measurement value 2009-4-6	5.14	9.65	39.79	1.42	21.9
	Measurement value 2009-4-7	4.95	9.42	39.77	1.43	21.9

Note：1. The graph results see ANNEX B.

2. Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

9.3. Summary of Measurement Results

Table 12: SAR Values (GSM850)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Different Test Position	**Channel**	**Measurement Result(W/kg)**		**Power Drift(dB)**	
		10 g Average	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	Middle	0.222	0.334	0.109	Figure 17
Left hand, Tilt 15 Degree	Middle	0.081	0.106	-0.086	Figure 19
Right hand, Touch cheek	High	0.289	0.398	-0.058	Figure 21
	Middle	0.260	0.356	-0.013	Figure 23
	Low	0.237	0.327	0.037	Figure 25
Right hand, Tilt 15 Degree	Middle	0.075	0.099	-0.049	Figure 27
Test position of Body (Distance 15mm)					
Towards Ground	High	0.135	0.190	0.131	Figure 29
	Middle	0.138	0.193	0.051	Figure 31
	Low	**0.141**	**0.197**	0.058	Figure 33
Worst case of Body with earphone (Distance 15mm)					
Towards Ground	Low	0.180	0.252	0.007	Figure 35
Worst case of Body with GPRS(Distance 15mm)					
Towards Ground	Low	0.259	0.363	0.036	Figure 37
Worst case of GPRS with EGPRS (Distance 15mm)					
Towards Ground	Low	0.046	0.063	0.116	Figure 39

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

Table 13: SAR Values (GSM1900)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Different Test Position	**Channel**	**Measurement Result(W/kg)**		**Power Drift(dB)**	
		10 g Average	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	Middle	0.223 (max.cube)	0.361 (max.cube)	0.132	Figure 41
Left hand, Tilt 15 Degree	Middle	0.033	0.054	0.078	Figure 43
Right hand, Touch cheek	High	0.233	0.431	0.005	Figure 45
	Middle	0.277	0.493	0.154	Figure 47
	Low	0.352	0.610	0.030	Figure 49
Right hand, Tilt 15 Degree	Middle	0.024	0.038	0.109	Figure 51
Test position of Body (Distance 15mm)					
Towards Ground	High	0.060 (max.cube)	0.101 (max.cube)	-0.024	Figure 53
	Middle	0.061 (max.cube)	0.102 (max.cube)	-0.070	Figure 55
	Low	**0.081** (max.cube)	**0.122** (max.cube)	0.150	Figure 57
Worst case of Body with earphone (Distance 15mm)					
Towards Ground	Low	0.067 (max.cube)	0.114 (max.cube)	0.030	Figure 59
Worst case of Body with GPRS(Distance 15mm)					
Towards Ground	Low	0.139 (max.cube)	0.212 (max.cube)	-0.031	Figure 61
Worst case of GPRS with EGPRS (Distance 15mm)					
Towards Ground	Low	0.045	0.074	0.096	Figure 63

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above; the value from the second assessed cube is given in the SAR distribution plots (See ANNEX C).

Table 14: SAR Values (WCDMA Band II)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift(dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Different Test Position	**Channel**	**Measurement Result(W/kg)**		**Power Drift(dB)**	
		10 g Average	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	Middle	0.432	0.689	0.167	Figure 65
Left hand, Tilt 15 Degree	Middle	0.059	0.097	0.053	Figure 67
Right hand, Touch cheek	High	0.530	0.950	0.137	Figure 69
	Middle	0.559	0.977	0.148	Figure 71
	Low	0.604	1.040	-0.194	Figure 73
Right hand, Tilt 15 Degree	Middle	0.044	0.069	-0.190	Figure 75
Test position of Body (Distance 15mm)					
Towards Ground	High	0.117 (max.cube)	0.199 (max.cube)	0.076	Figure 77
	Middle	0.102 (max.cube)	0.172 (max.cube)	0.058	Figure 79
	Low	0.110 (max.cube)	0.167 (max.cube)	-0.064	Figure 81
Worst case of Body with earphone (Distance 15mm)					
Towards Ground	Low	0.115	0.208	-0.112	Figure 83

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above; the value from the second assessed cube is given in the SAR distribution plots (See ANNEX C).

Table 15: SAR Values (WCDMA Band V)

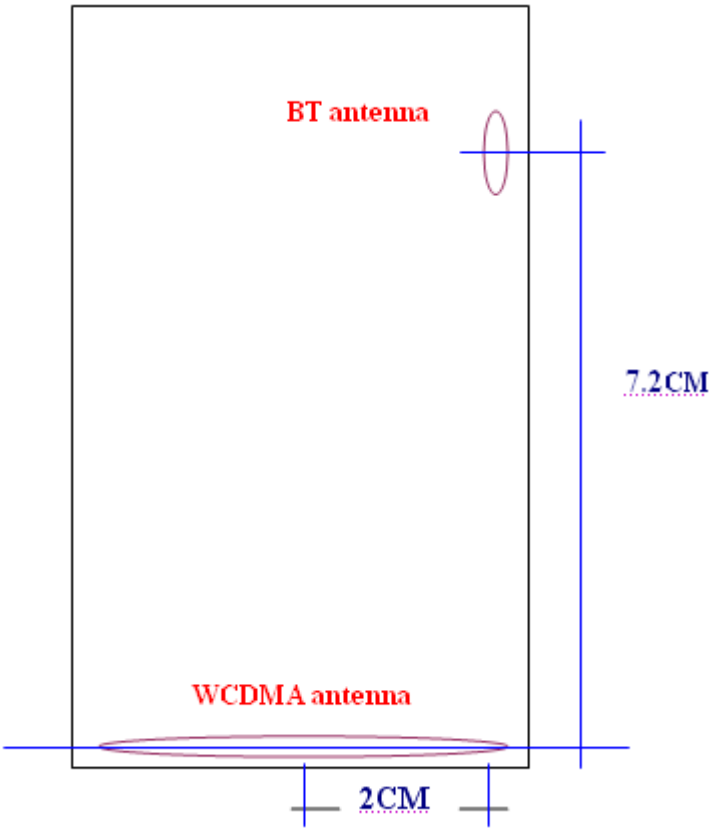
Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift(dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Different Test Position	**Channel**	**Measurement Result(W/kg)**		**Power Drift(dB)**	
		10 g Average	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	Middle	0.209	0.304	-0.063	Figure 85
Left hand, Tilt 15 Degree	Middle	0.096	0.126	0.012	Figure 87
Right hand, Touch cheek	High	0.267	0.362	-0.045	Figure 89
	Middle	0.238	0.333	0.188	Figure 91
	Low	0.293	0.396	-0.078	Figure 93
Right hand, Tilt 15 Degree	Middle	0.099 (max.cube)	0.131 (max.cube)	-0.146	Figure 95
Test position of Body (Distance 15mm)					
Towards Ground	High	0.100	0.142	-0.161	Figure 97
	Middle	0.119	0.164	-0.042	Figure 99
	Low	0.144	0.199	-0.021	Figure 101
Worst case of Body with earphone (Distance 15mm)					
Towards Ground	Low	0.128	0.179	-0.166	Figure 103

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above; the value from the second assessed cube is given in the SAR distribution plots (See ANNEX C).

9.4. Bluetooth function

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



The output power of BT antenna is as following:

Channel	Ch 0 2402 MHz	Ch 39 2441 Mhz	Ch 78 2480 MHz
Peak Conducted Output Power(dBm)	-0.24	-0.25	-0.56

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

So, because of the power and the distance, we didn't perform the standalone BT SAR tests,

9.5. 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 7.2 of this report. Maximum localized SAR_{1g} are 1.04 W/kg (head) and 0.363W/kg (body) that are below exposure limits specified in the relevant standards cited in Clause 7.1 of this test report.

10. MEASUREMENT UNCERTAINTY

No.	a	Type	c	d	e=f(d、k)	f	h=c×f／e	k
	Uncertainty Component		Tol. (±%)	Prob. Dist	Div.	c_1(1g)	1g u (± %)	v_1
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	$\sqrt{3}$	$(1\text{-}cp)^{1/2}$	4.3	∞
4	Hemisphere Isotropy	B	9.4	R	$\sqrt{3}$	$\sqrt{C_P}$		∞
5	Boundary Effect	B	0.4	R	$\sqrt{3}$	1	0.23	∞
6	Linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
7	System Detection Limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
8	Readout Electronics	B	1.0	N	1	1	1.0	∞
9	RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞
10	Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
11	Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
12	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	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	$\sqrt{3}$	1	2.9	∞
	Phantom and Tissue Parameters							
16	Phantom Uncertainty(shape and thickness tolerances)	B	1.0	R	$\sqrt{3}$	1	0.6	∞
17	Liquid Conductivity-deviation from target values	B	5.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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	

11. MAIN TEST INSTRUMENTS

Table 16: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 14, 2008	One year
02	Dielectric Probe Kit	Agilent 85070E	US44020115	No Calibration Requested	
03	Power meter	Agilent E4417A	GB41291714	March 14, 2009	One year
04	Power sensor	Agilent 8481H	MY41091316	March 14, 2009	One year
05	Signal Generator	HP 8341B	2730A00804	September 14, 2008	One year
06	Amplifier	IXA-020	0401	No Calibration Requested	
07	BTS	E5515C	GB46490218	September 14, 2008	One year
08	E-field Probe	EX3DV4	3660	September 3, 2008	One year
09	DAE	DAE4	452	November 18, 2008	One year
10	Validation Kit 835MHz	D835V2	4d020	July 21, 2008	One year
11	Validation Kit 1900MHz	D1900V2	5d060	July 22, 2008	One year

12. TEST PERIOD

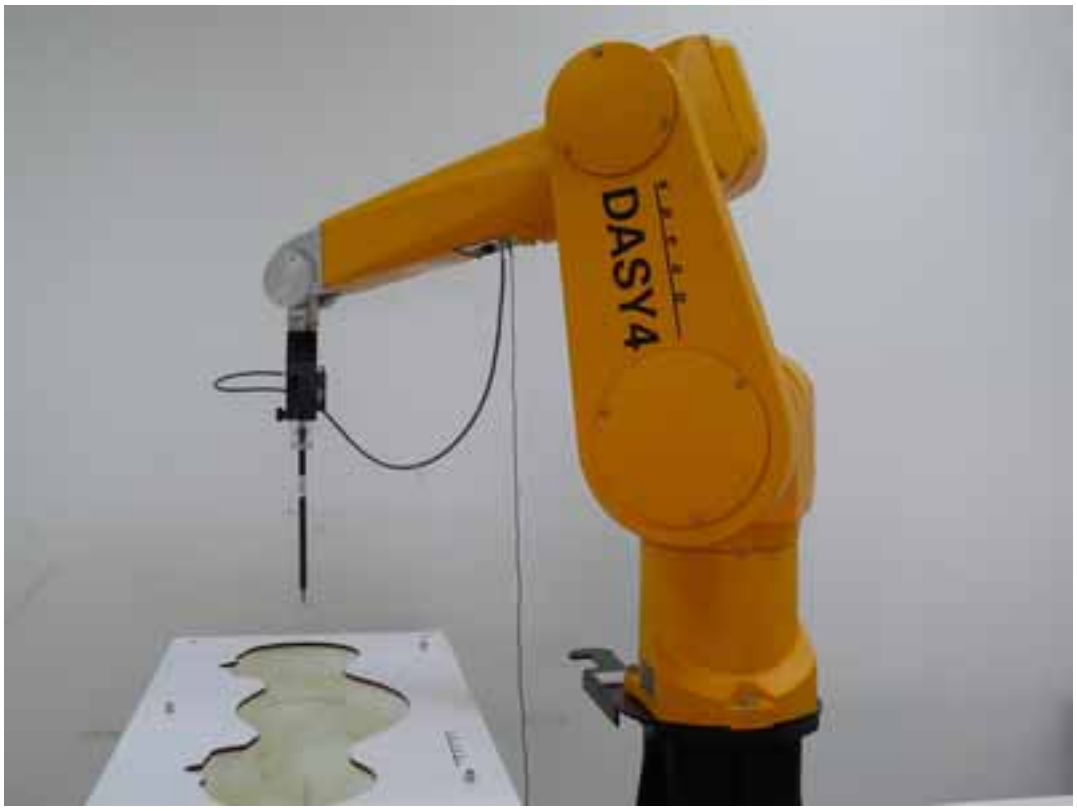
The test is performed from March 29 2009 to April 7, 2009.

13. TEST LOCATION

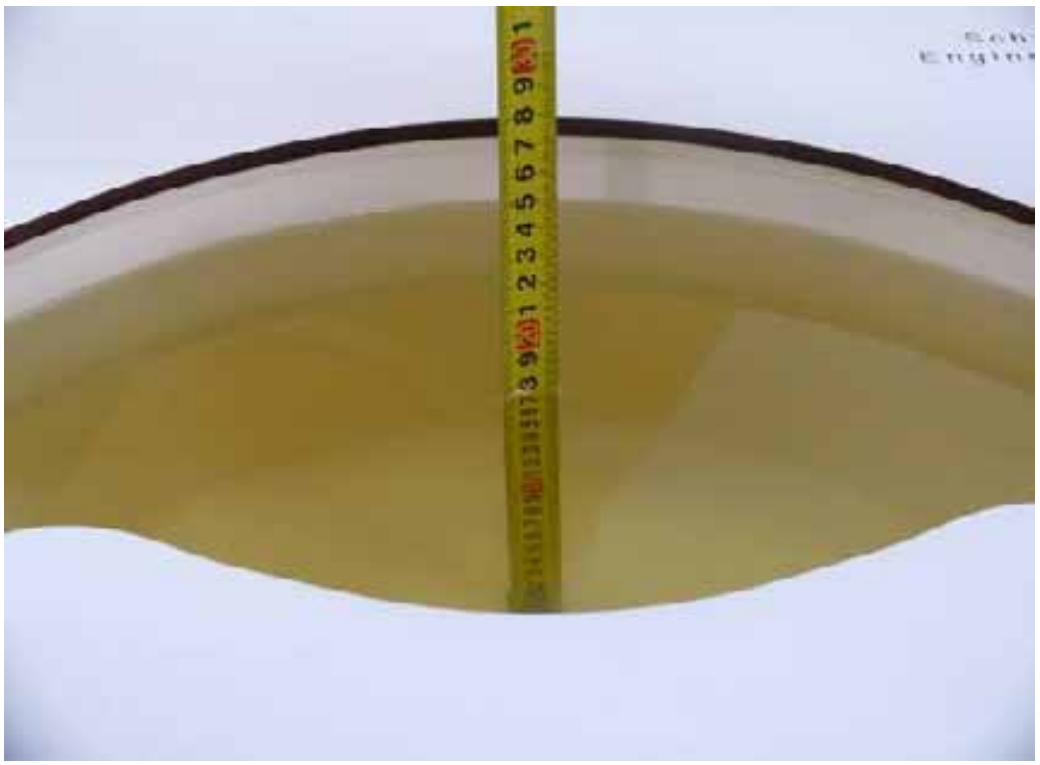
The test is performed at TA Technology (Shanghai) Co., Ltd.

*******END OF REPORT BODY*******

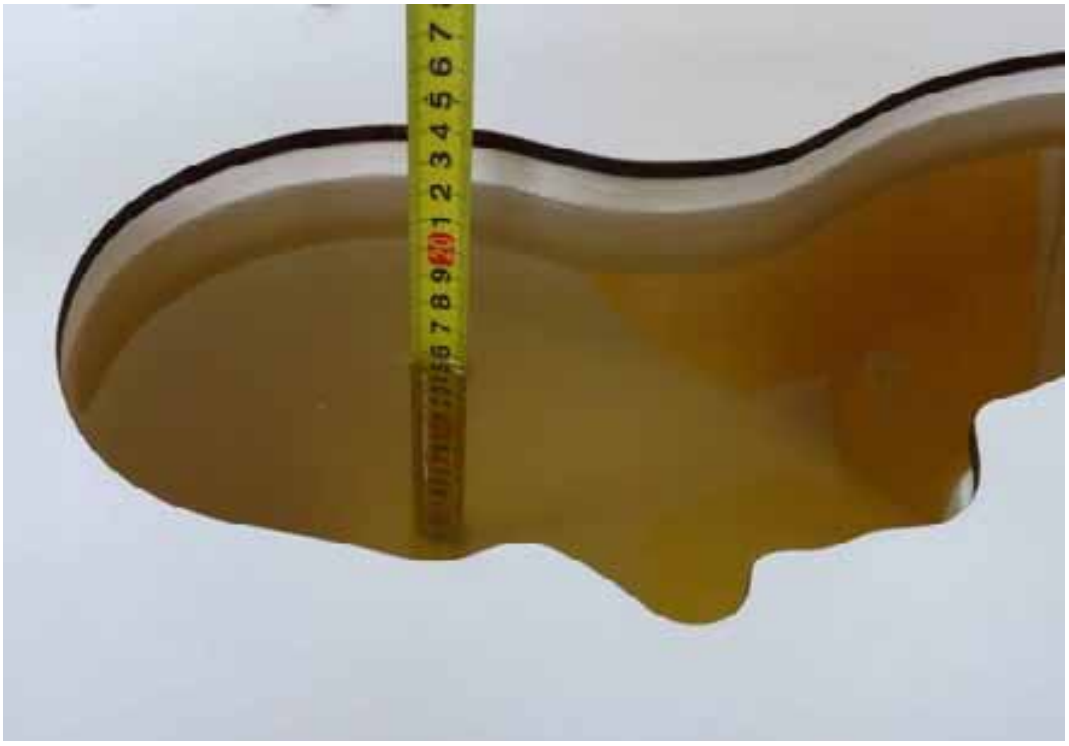
ANNEX A： TEST LAYOUT



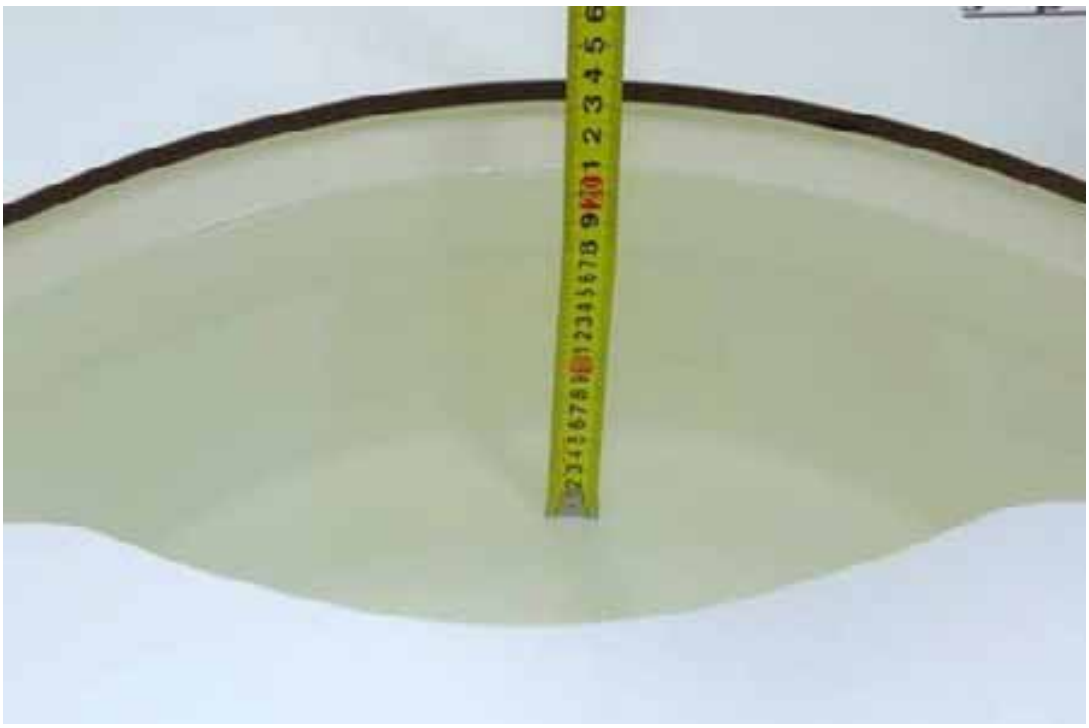
Picture 1: Specific Absorption Rate Test Layout



Picture 2: Liquid depth in the flat Phantom (835MHz)



Picture 3: Liquid depth in the head Phantom (835MHz)



Picture 4: Liquid depth in the flat Phantom (1900 MHz)

Picture 5: liquid depth in the head Phantom (1900 MHz)

ANNEX B： SYSTEM CHECK RESULTS

Date/Time: 3/29/2009 7:14:58 AM

System Performance Check at 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d020

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.93 mho/m; ε_r = 43.03; ρ = 1000 kg/m^3

Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C

Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19);

Electronics: DAE4 Sn452;

d=15mm, Pin=250mW/Area Scan (101x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.81 mW/g

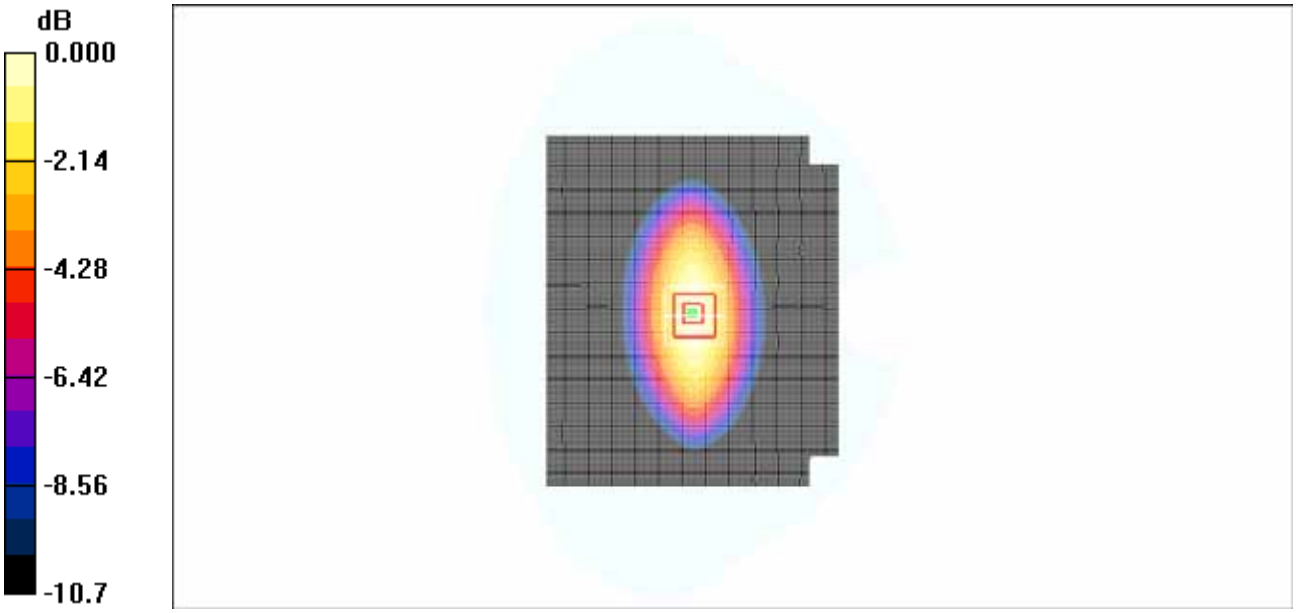
d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.8 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 3.50 W/kg

SAR(1 g) = 2.3 mW/g; SAR(10 g) = 1.5 mW/g

Maximum value of SAR (measured) = 2.83 mW/g



0 dB = 2.83mW/g

Figure 7 System Performance Check 835MHz 250mW

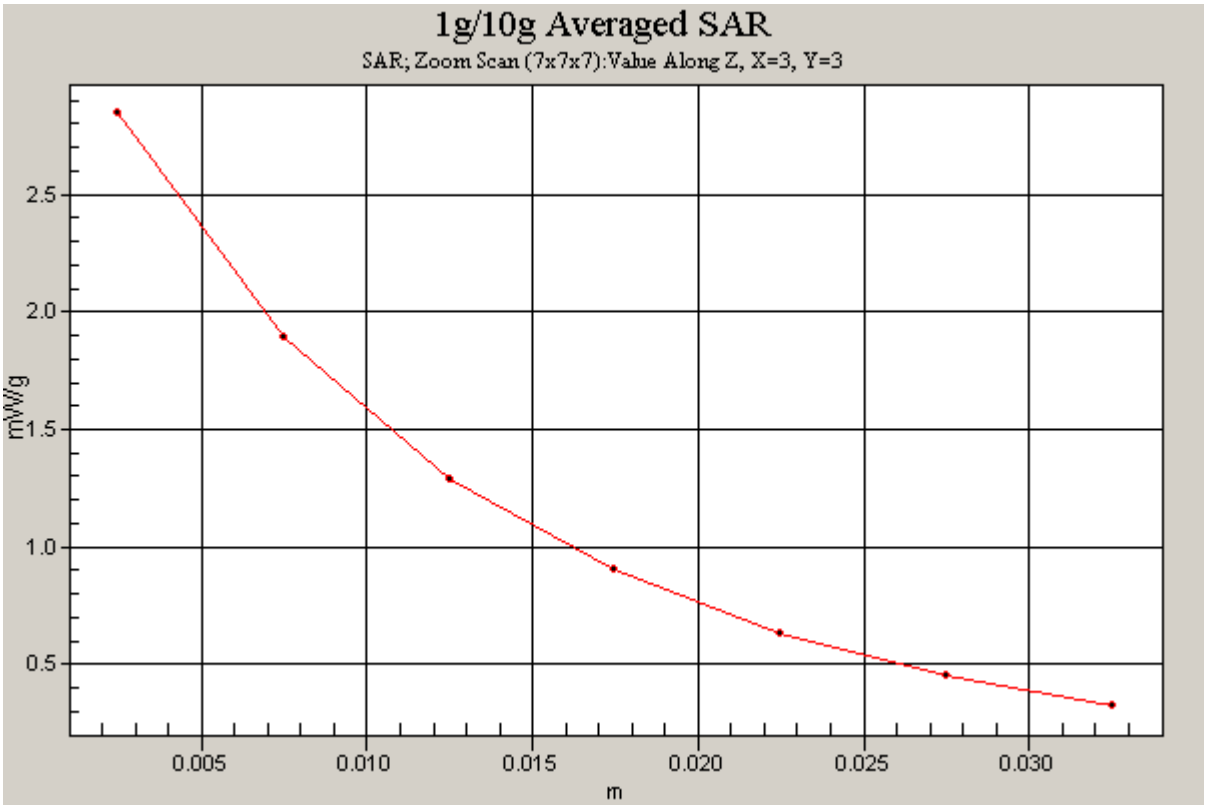


Figure 8 Z-Scan at power reference point (system check at 835 MHz dipole)

Date/Time: 4/6/2009 1:24:58 PM

System Performance Check at 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d020

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 43.10; ρ = 1000 kg/m^3

Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn536; Calibrated: 8/28/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=15mm, Pin=250mW/Area Scan (101x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.88 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.7 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.54 mW/g

Maximum value of SAR (measured) = 2.87 mW/g

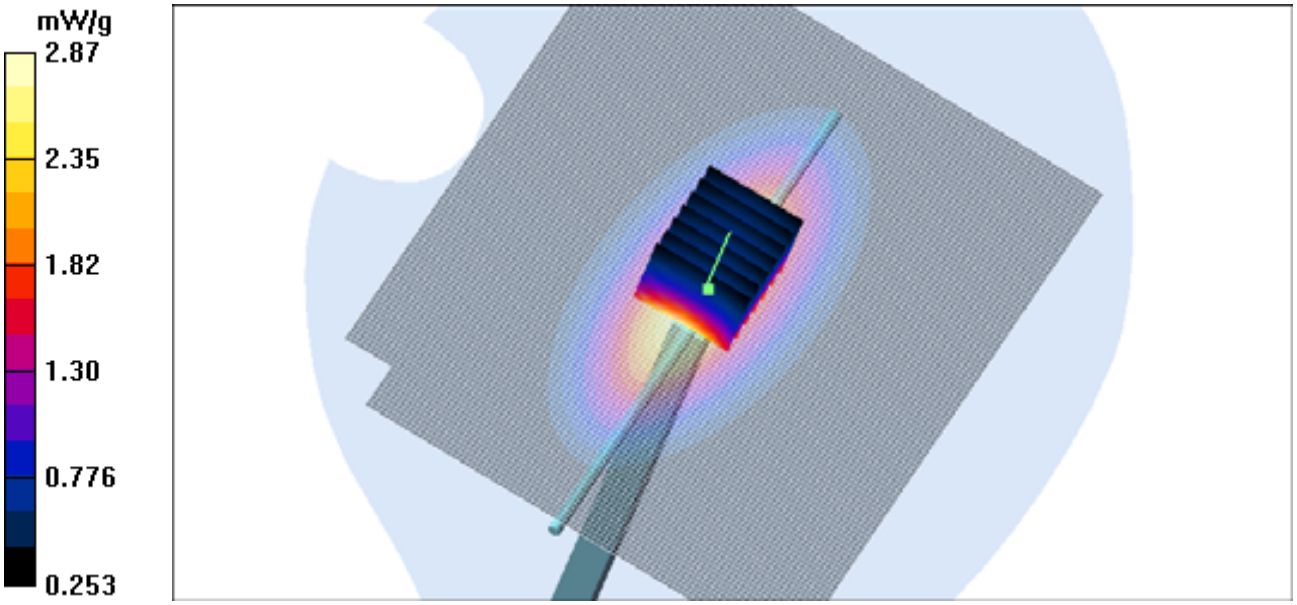


Figure 9 System Performance Check 835MHz 250mW

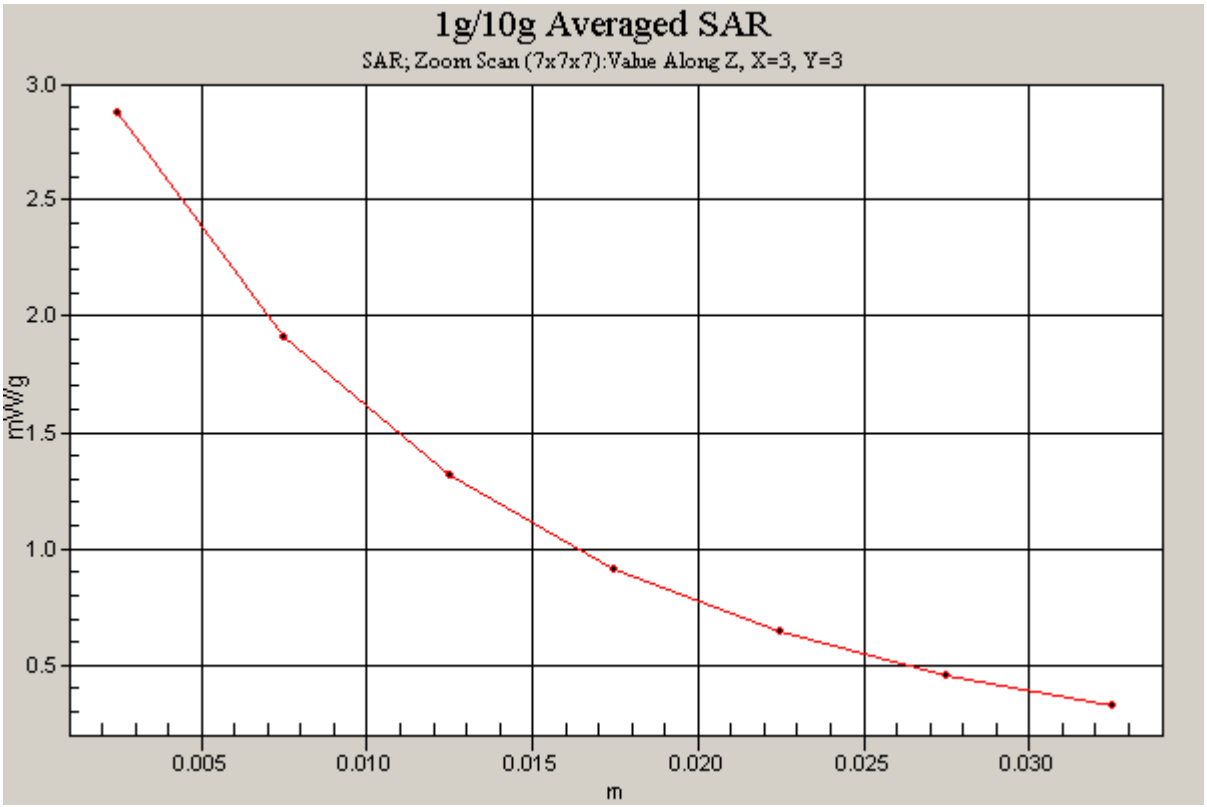


Figure 10 Z-Scan at power reference point (system check at 835 MHz dipole)

Date/Time: 4/1/2009 1:07:58 AM

System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d060

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.79; ρ = 1000 kg/m^3

Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C

Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35);

Electronics: DAE4 Sn452;

d=10mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.4 mW/g

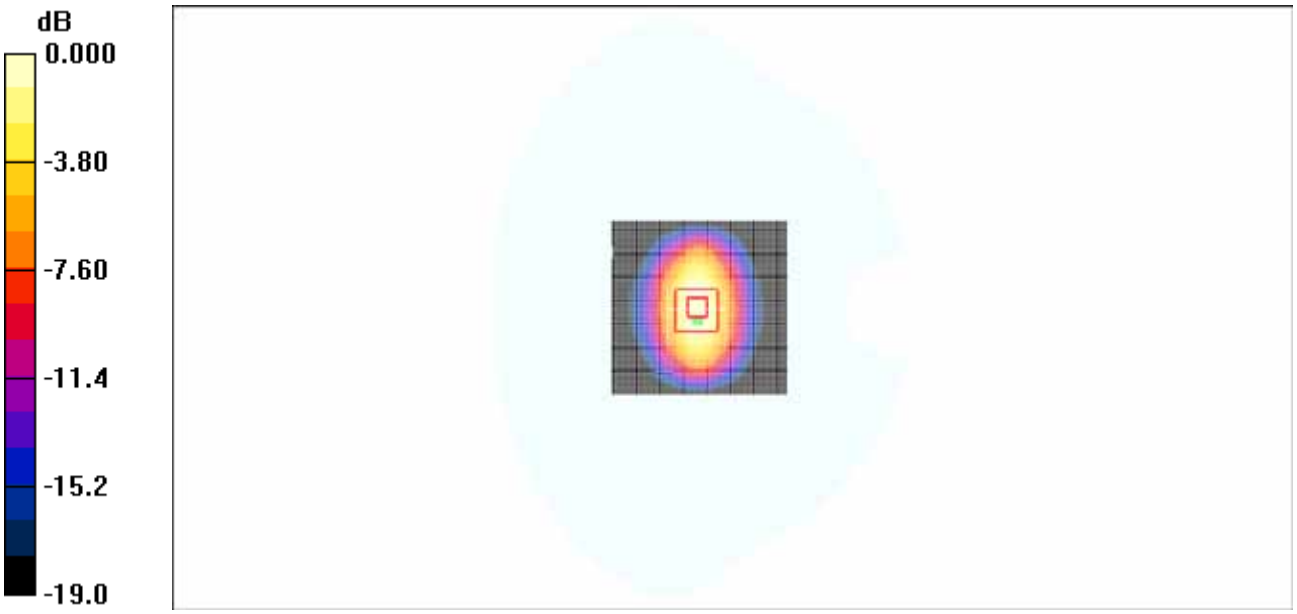
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.1 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 16.9 W/kg

SAR(1 g) = 9.74 mW/g; SAR(10 g) = 5.09 mW/g

Maximum value of SAR (measured) = 11.1 mW/g



0 dB = 11.1mW/g

Figure 11 System Performance Check 1900MHz 250mW

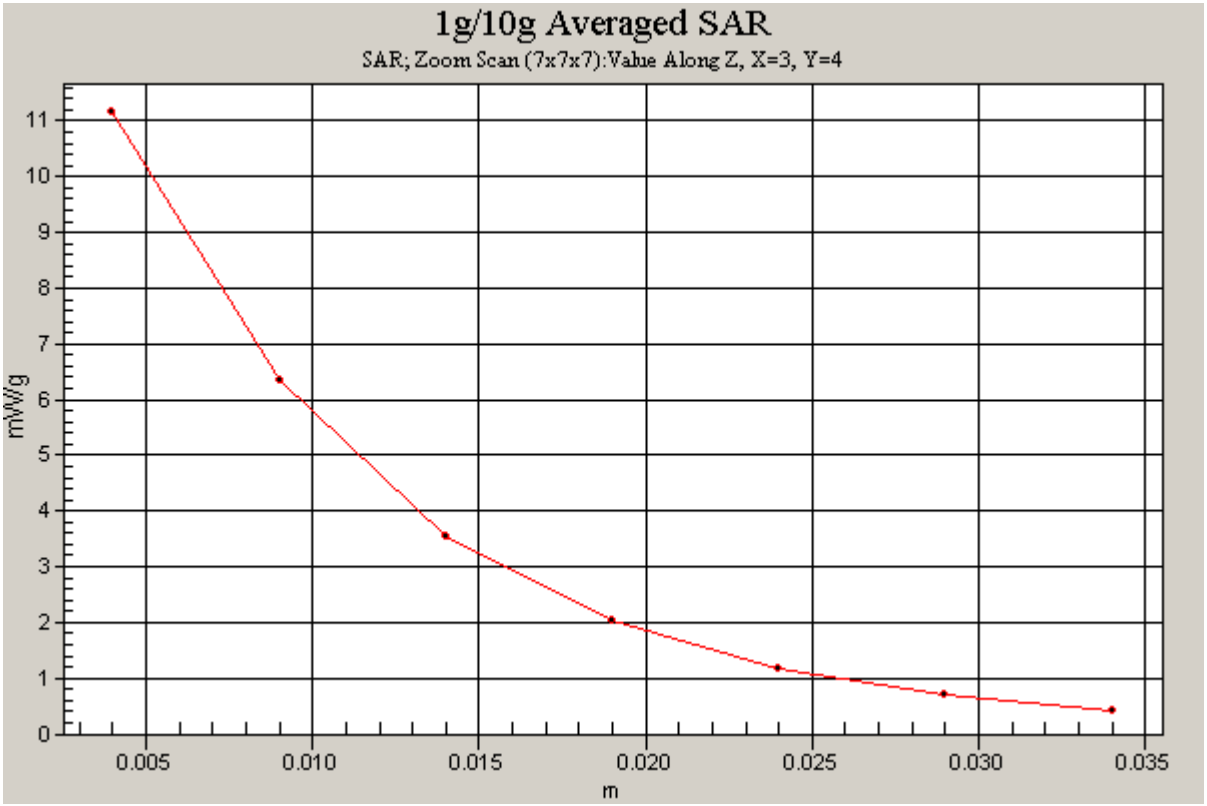


Figure 12 Z-Scan at power reference point (system check at 1900 MHz dipole)

Date/Time: 4/6/2009 1:15:58 PM

System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d060

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.79; ρ = 1000 kg/m^3

Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C

Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35);

Electronics: DAE4 Sn452;

d=10mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.4 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.3 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 9.65 mW/g; SAR(10 g) = 5.14 mW/g

Maximum value of SAR (measured) = 11.1 mW/g

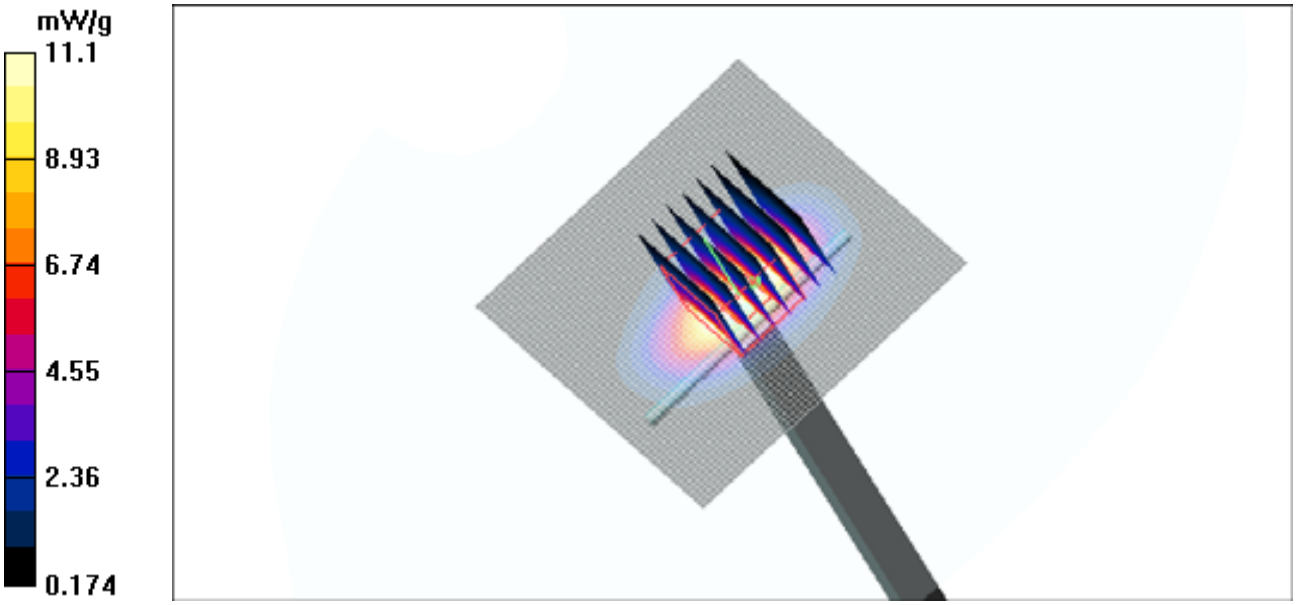


Figure 13 System Performance Check 1900MHz 250mW

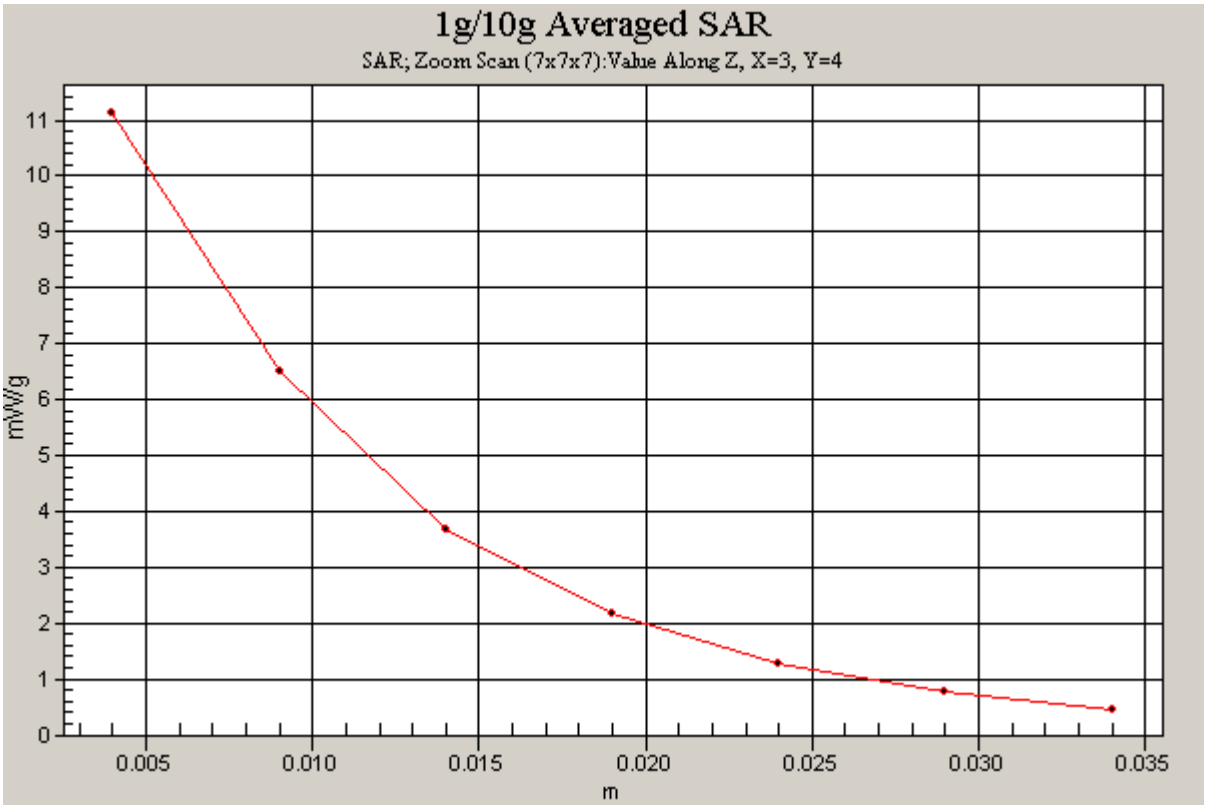


Figure 14 Z-Scan at power reference point (system check at 1900 MHz dipole)

Date/Time: 4/7/2009 2:36:58 AM

System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d060

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.43 mho/m; ε_r = 39.77; ρ = 1000 kg/m^3

Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C

Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35);

Electronics: DAE4 Sn452;

d=10mm, Pin=250mW/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.2 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.3 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 16.1 W/kg

SAR(1 g) = 9.42 mW/g; SAR(10 g) = 4.95 mW/g

Maximum value of SAR (measured) = 10.8 mW/g

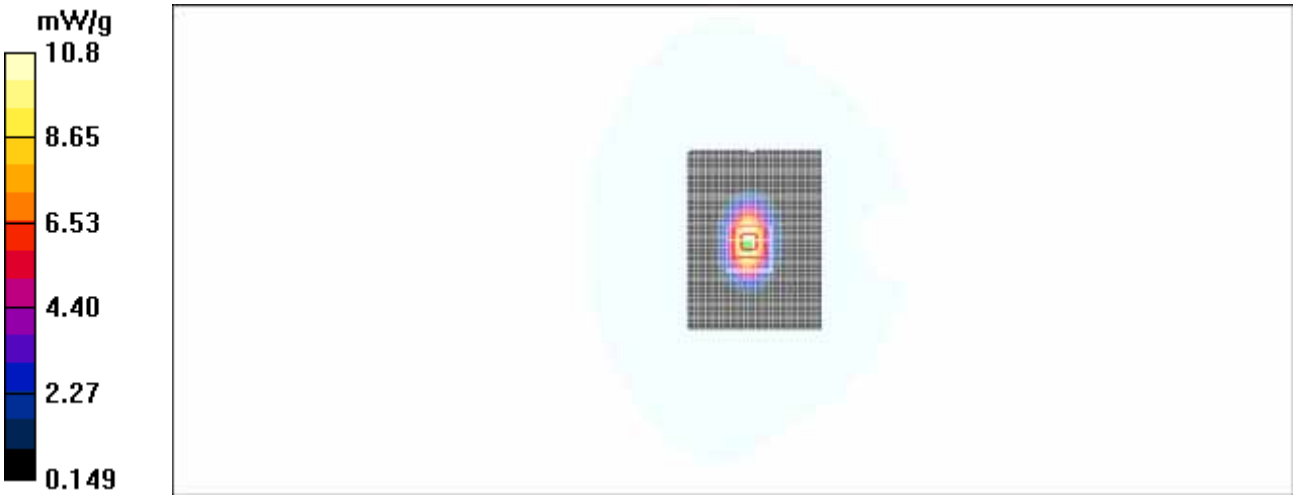


Figure 15 System Performance Check 1900MHz 250mW

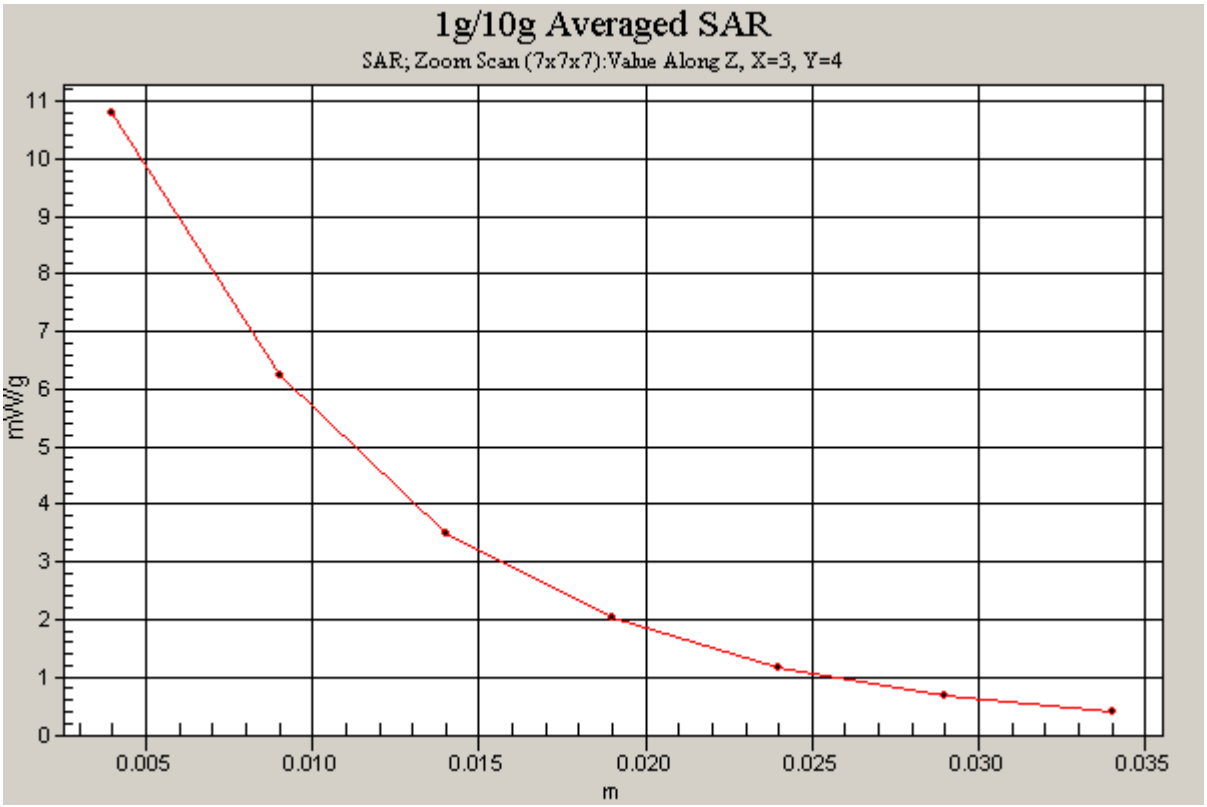


Figure 16 Z-Scan at power reference point (system check at 1900 MHz dipole)

ANNEX C： GRAPH RESULTS

Date/Time: 4/6/2009 9:08:34 PM

GSM 850 Left Cheek Middle

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.935 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.391 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 = 0.109 dB
Peak SAR (extrapolated) = 0.506 W/kg
SAR(1 g) = 0.334 mW/g; SAR(10 g) = 0.222 mW/g
Maximum value of SAR (measured) = 0.406 mW/g

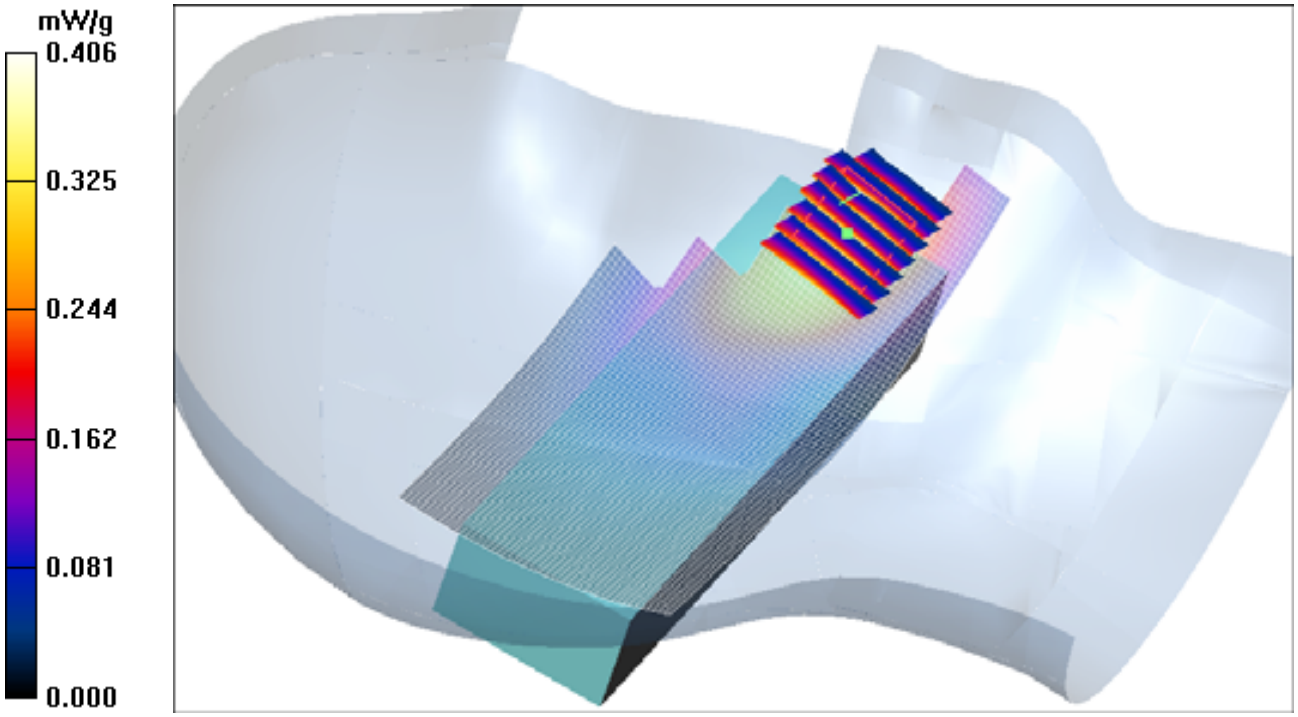


Figure 17 Left Hand Touch Cheek GSM 850 Channel 190

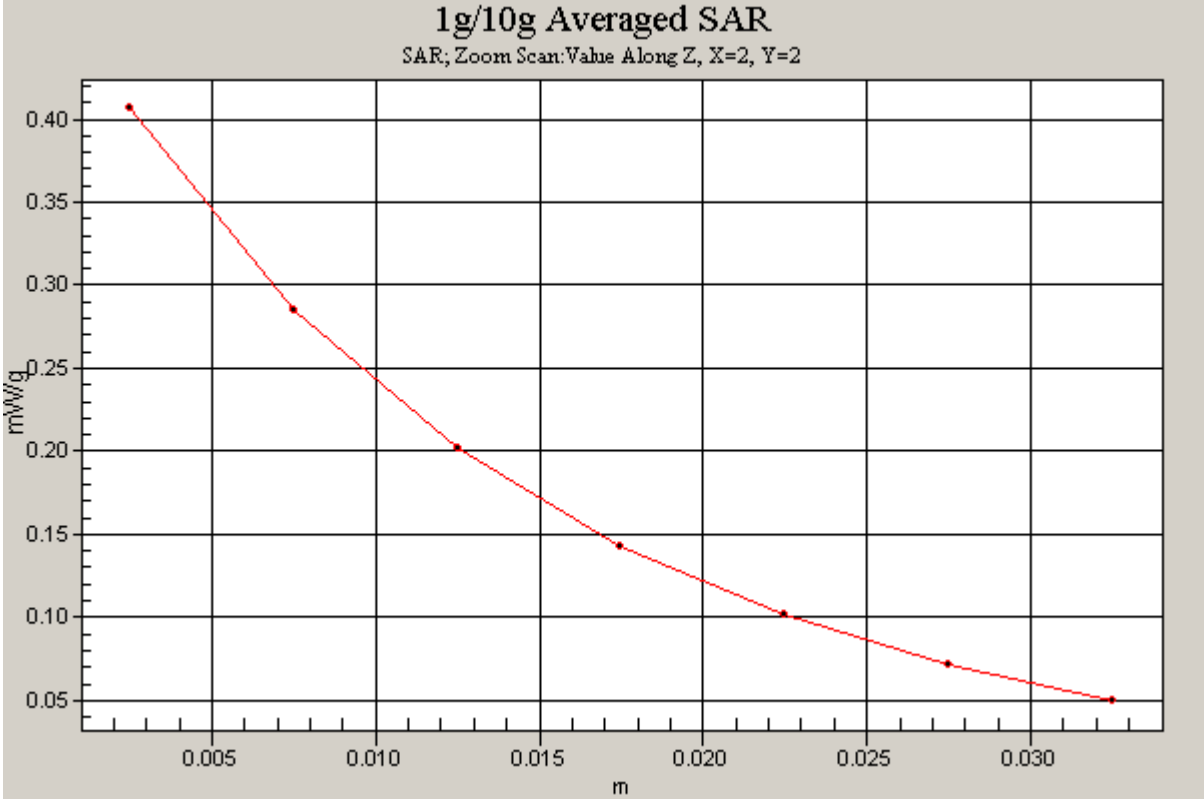


Figure 18 Z-Scan at power reference point (Left Hand Touch Cheek GSM 850 Channel 190)

Date/Time: 4/6/2009 9:29:51 PM

GSM 850 Left Tilt Middle

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.935 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.122 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.28 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.136 W/kg
SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.119 mW/g

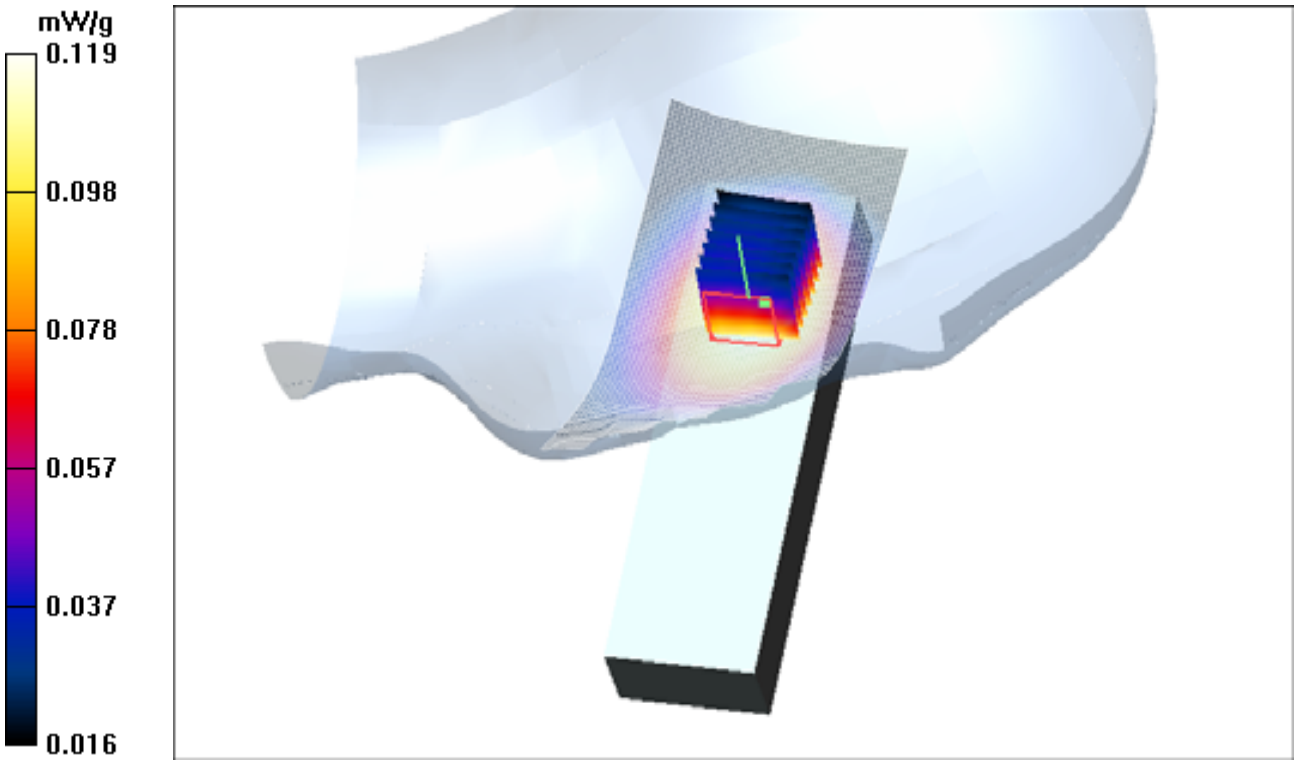


Figure 19 Left Hand Tilt 15°Open GSM 850 Channel 190

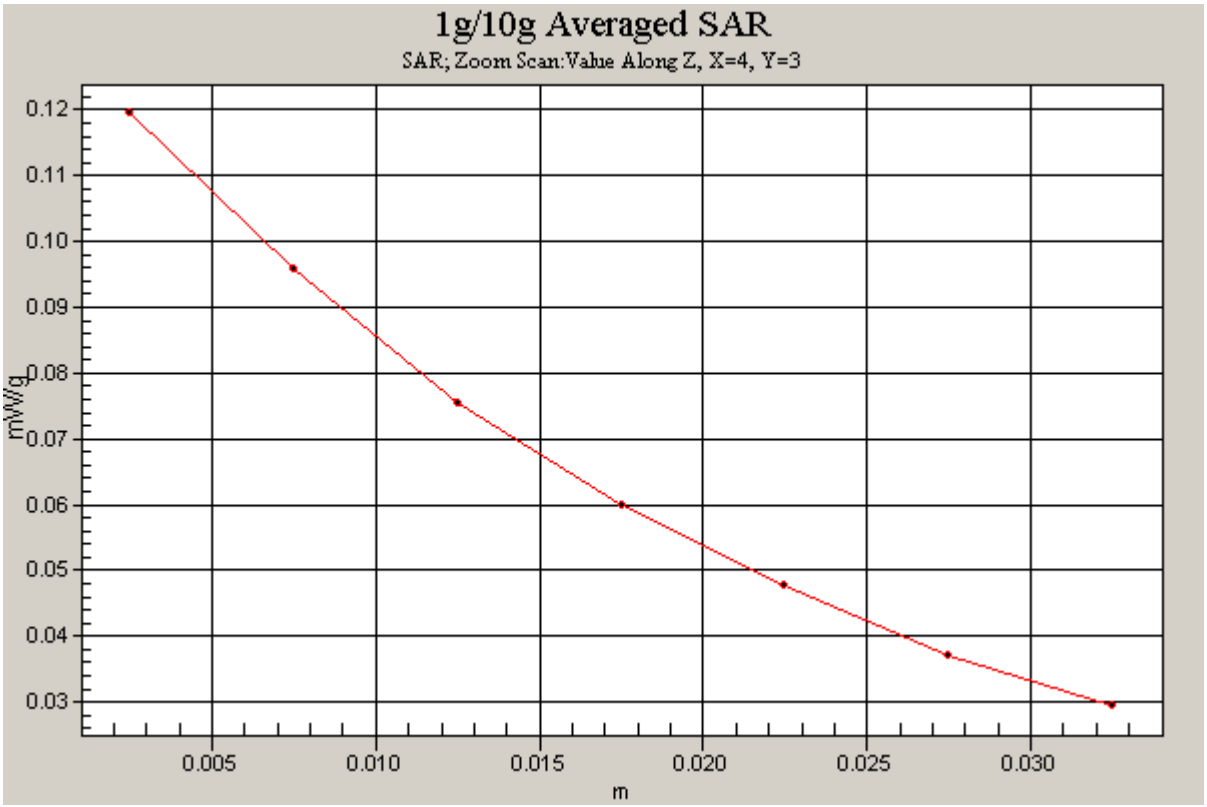


Figure 20 Z-Scan at power reference point (Left Hand Tilt 15°Open GSM 850 Channel 190)

Date/Time: 4/6/2009 10:21:42 PM

GSM 850 Right Cheek High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.946 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.456 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.54 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 0.609 W/kg
SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.289 mW/g
Maximum value of SAR (measured) = 0.493 mW/g

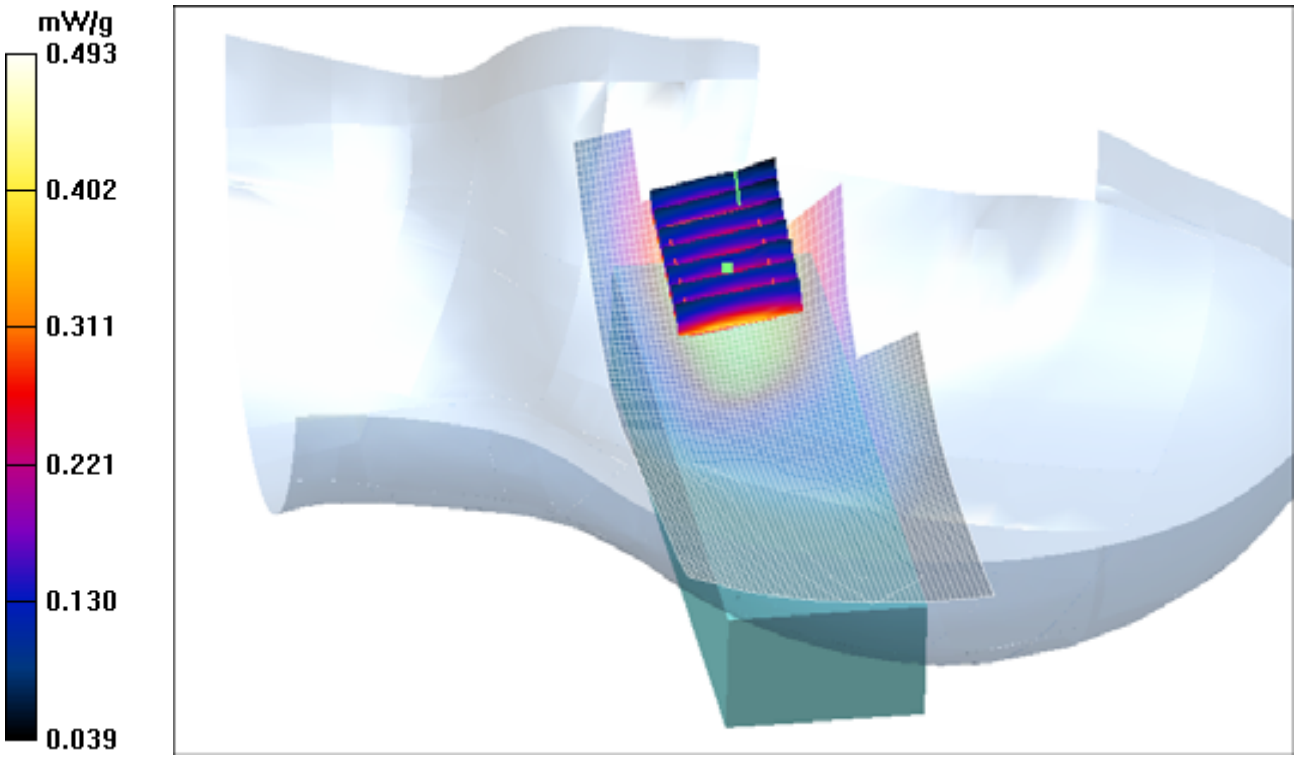


Figure 21 Right Hand Touch Cheek GSM 850 Channel 251

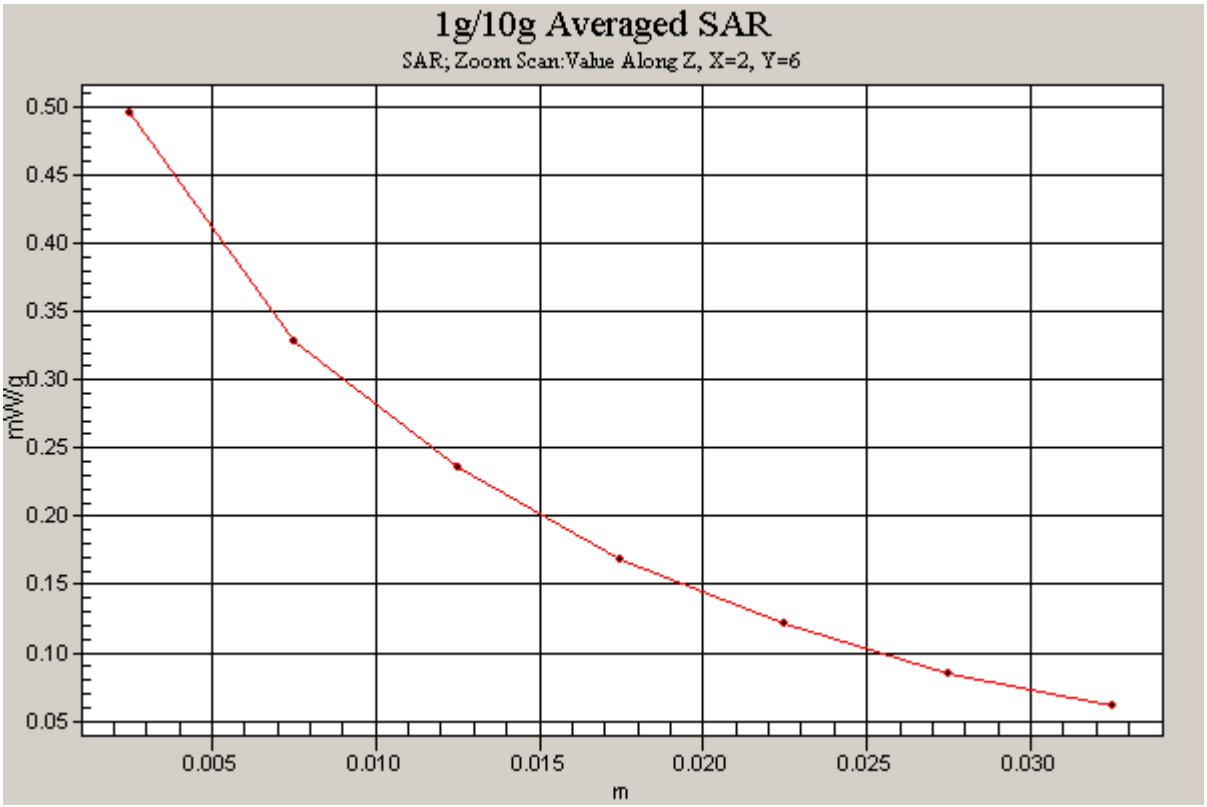


Figure 22 Z-Scan at power reference point (Right Hand Touch Cheek GSM 850 Channel 251)

Date/Time: 4/6/2009 9:51:17 PM

GSM 850 Right Cheek Middle

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.935 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.437 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.01 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 0.522 W/kg
SAR(1 g) = 0.356 mW/g; SAR(10 g) = 0.260 mW/g
Maximum value of SAR (measured) = 0.433 mW/g

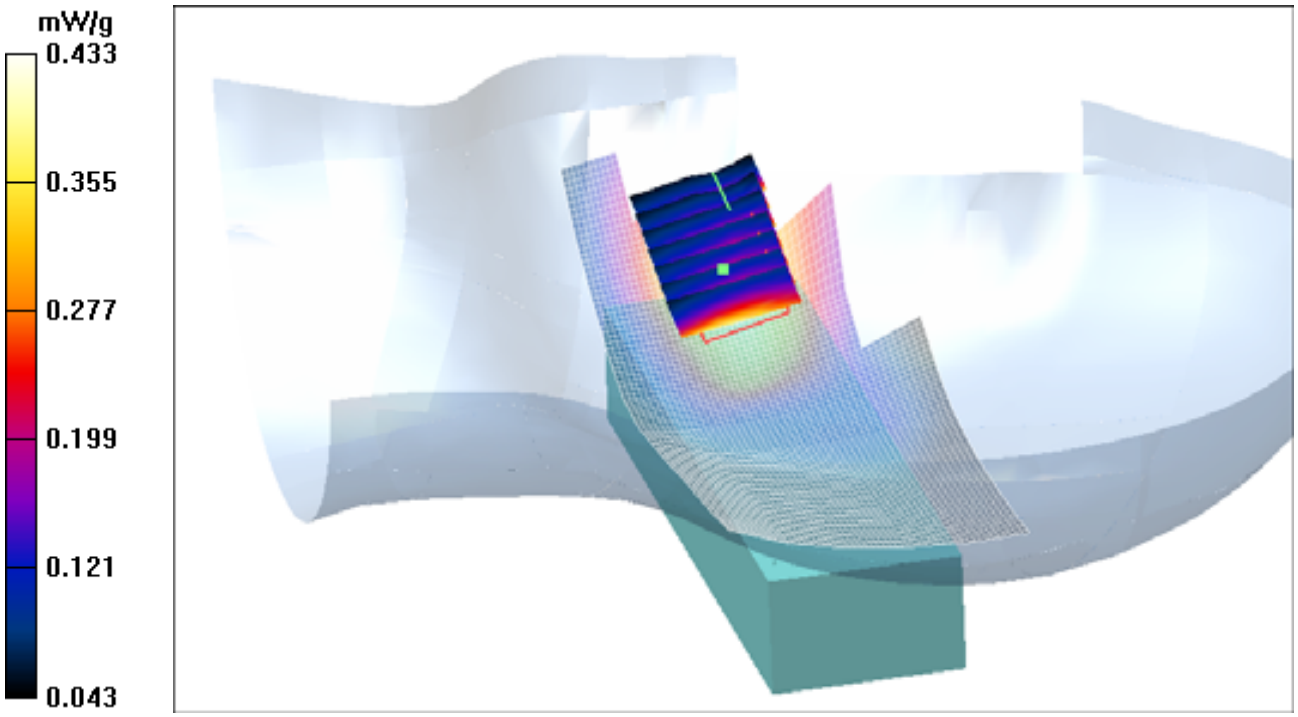


Figure 23 Right Hand Touch Cheek GSM 850 Channel 190

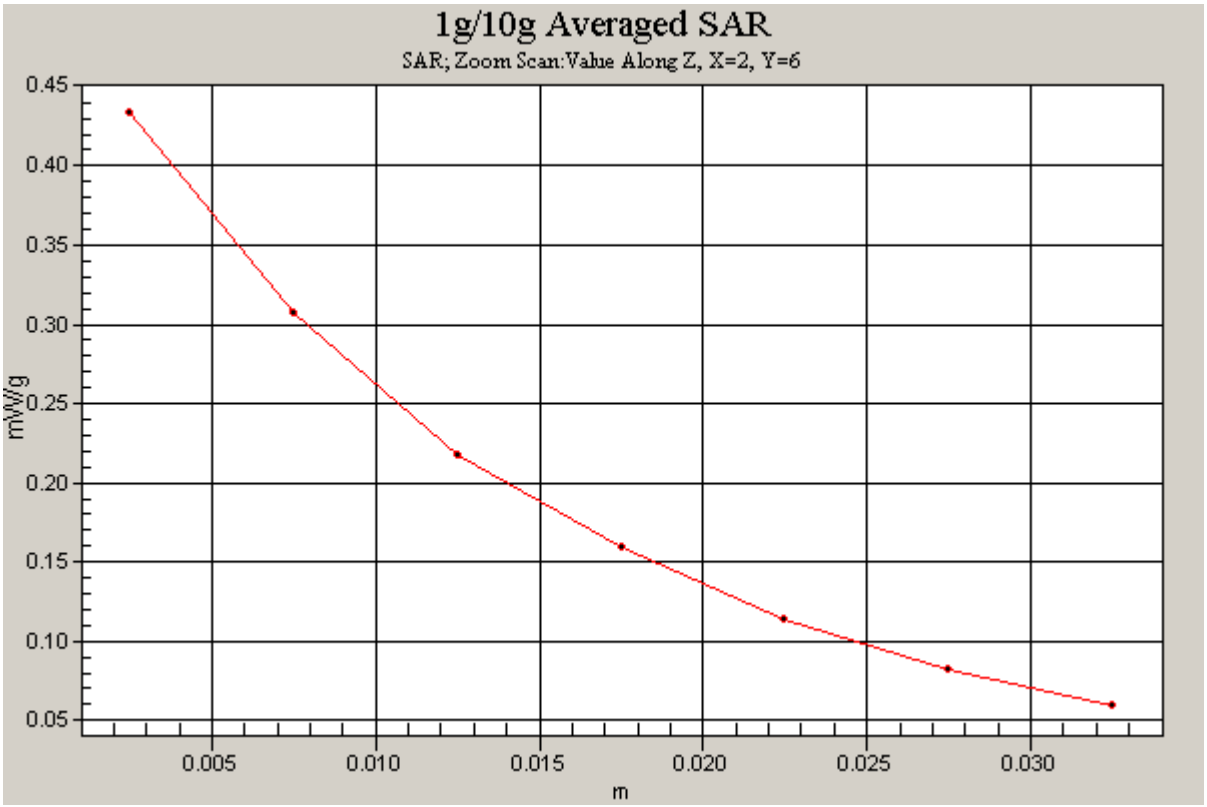


Figure 24 Z-Scan at power reference point (Right Hand Touch Cheek GSM 850 Channel 190)

Date/Time: 4/6/2009 10:45:47 PM

GSM 850 Right Cheek Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.915 mho/m; ε_r = 43.2; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.367 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.46 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 0.525 W/kg
SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.237 mW/g
Maximum value of SAR (measured) = 0.415 mW/g

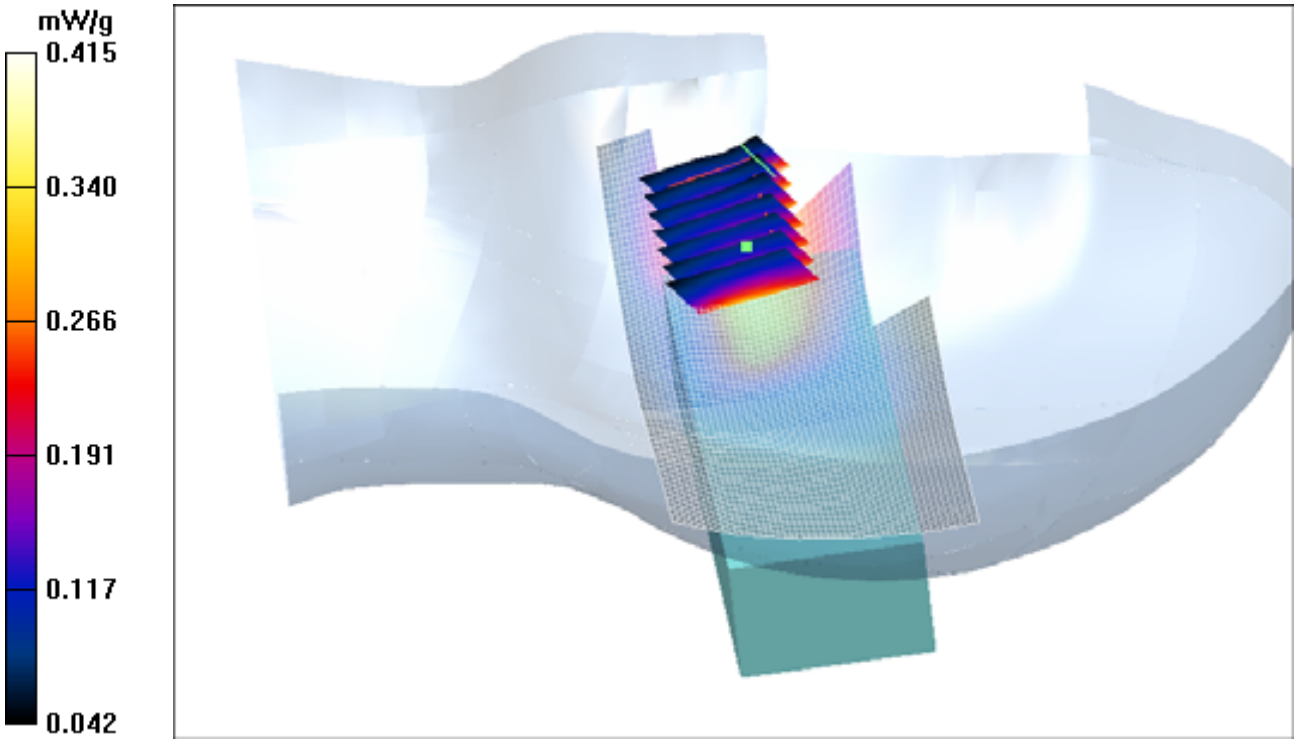


Figure 25 Right Hand Touch Cheek GSM 850 Channel 128

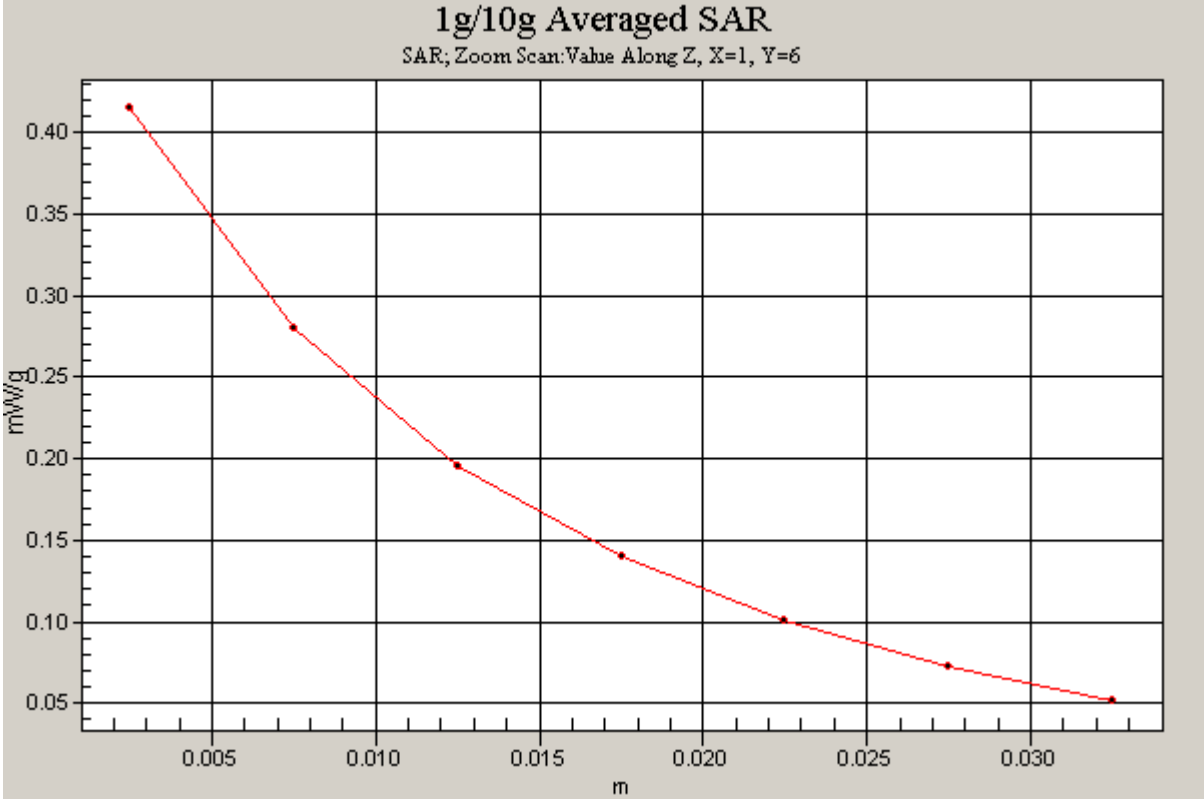


Figure 26 Z-Scan at power reference point (Right Hand Touch Cheek GSM 850 Channel 128)

Date/Time: 4/6/2009 11:24:21 PM

GSM 850 Right Tilt Middle

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.935 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.112 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.27 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.126 W/kg
SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.075 mW/g
Maximum value of SAR (measured) = 0.112 mW/g

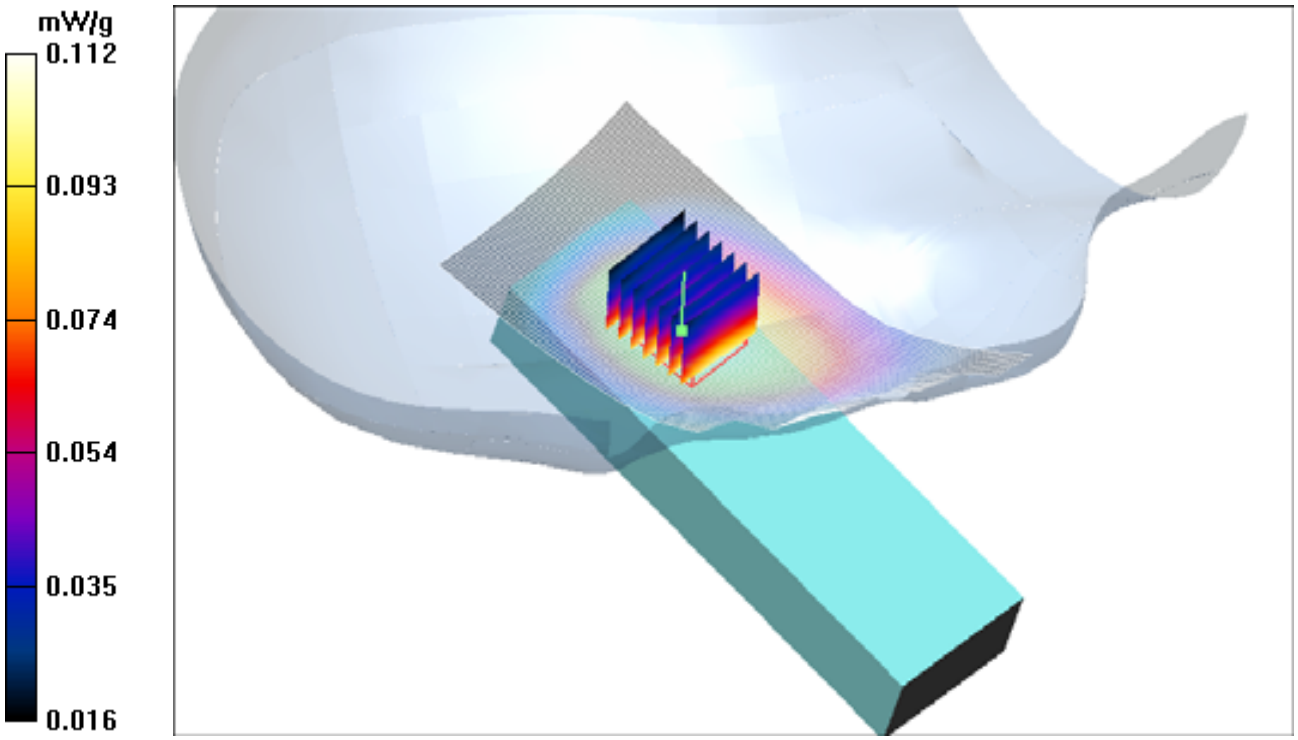


Figure 27 Right Hand Tilt 15°Open GSM 850 Channel 190

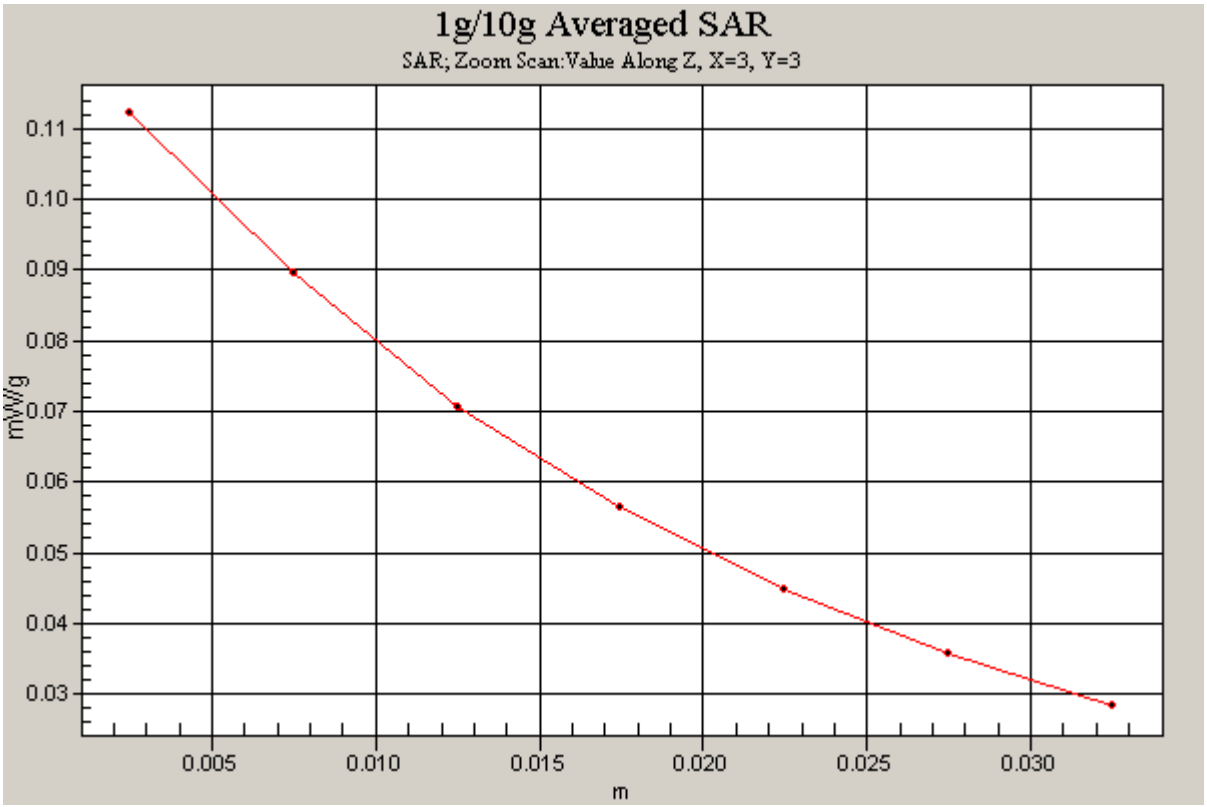


Figure 28 Z-Scan at power reference point (Right Hand Tilt 15°Open GSM 850 Channel 190)

Date/Time: 3/29/2009 8:44:37 AM

GSM 850 Towards Ground High

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.998 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.221 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.190 mW/g; SAR(10 g) = 0.135 mW/g
Maximum value of SAR (measured) = 0.220 mW/g

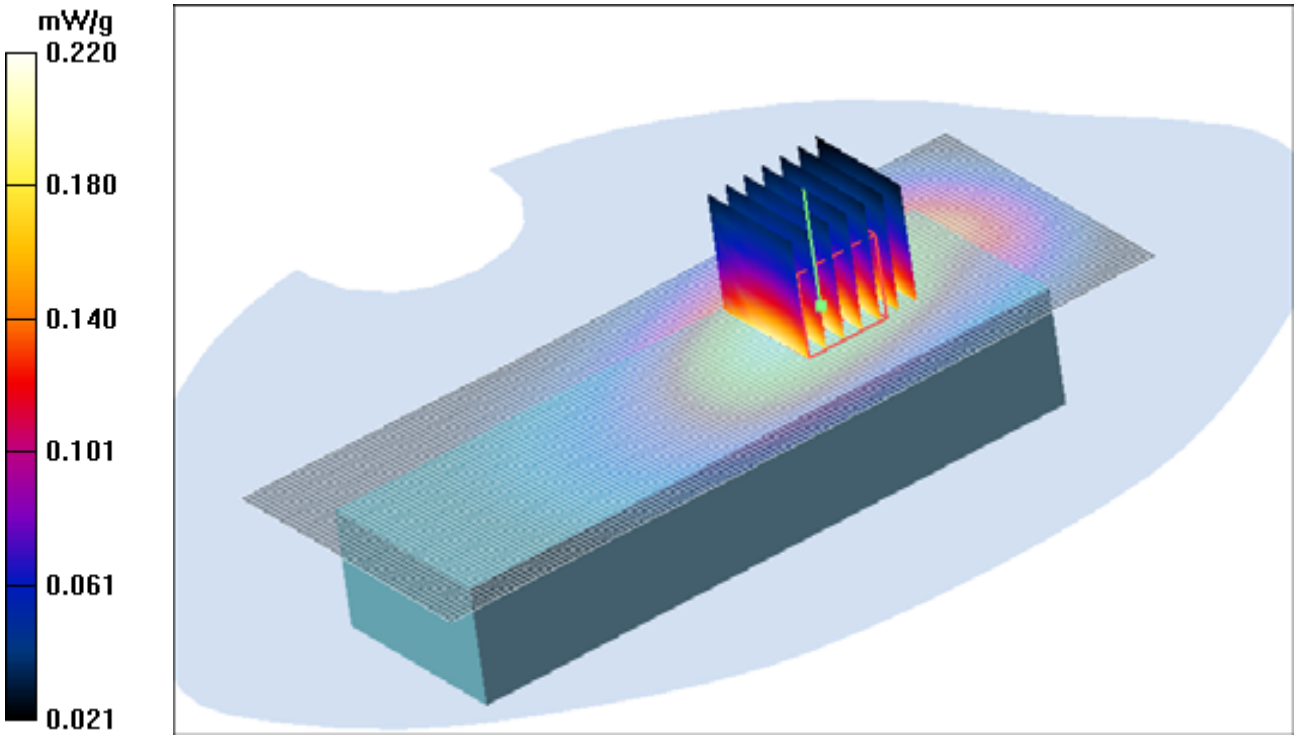


Figure 29 Body, Towards Ground, GSM 850 Channel 251

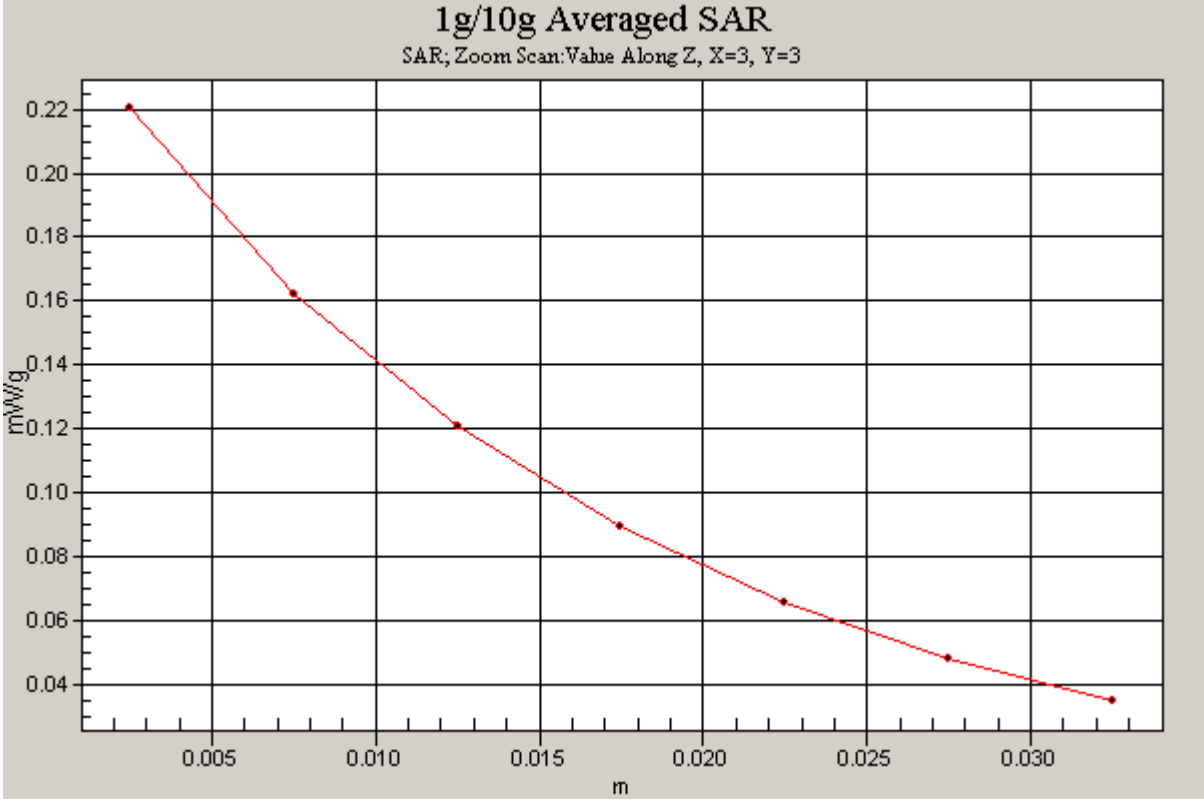


Figure 30 Z-Scan at power reference point (Body, Towards Ground, GSM 850 Channel 251)

Date/Time: 3/29/2009 8:24:59 AM

GSM 850 Towards Ground Middle

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.986 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.225 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.261 W/kg
SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.138 mW/g
Maximum value of SAR (measured) = 0.224 mW/g

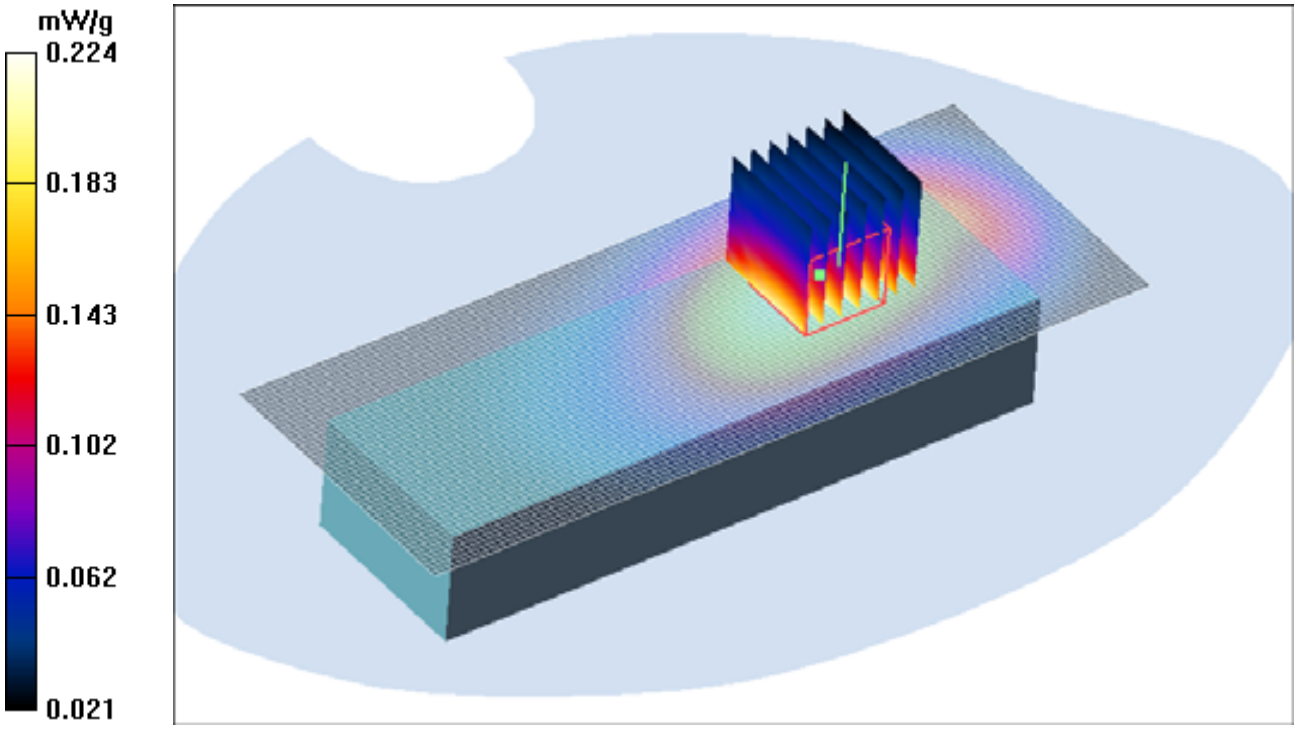


Figure 31 Body, Towards Ground, GSM 850 Channel 190

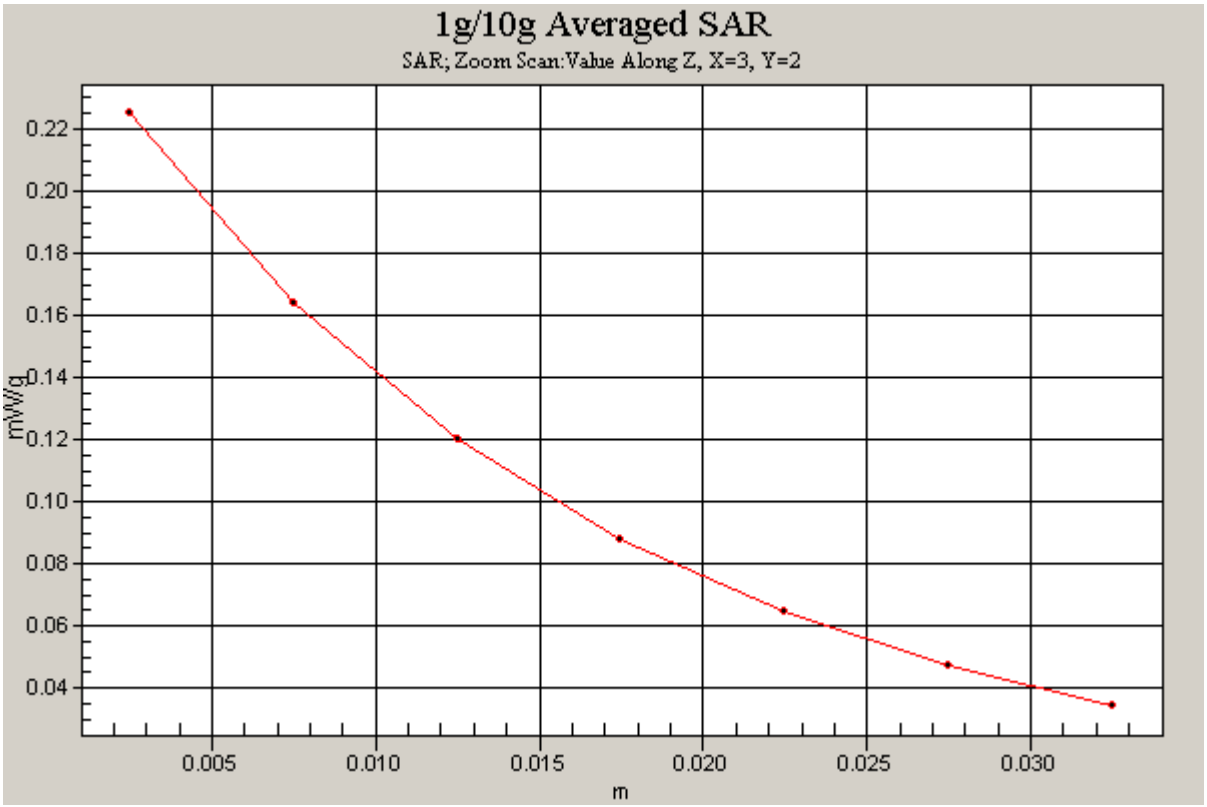


Figure 32 Z-Scan at power reference point (Body, Towards Ground, GSM 850 Channel 190)

Date/Time: 3/29/2009 9:04:15 AM

GSM 850 Towards Ground Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.972 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.228 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = 0.058 dB
Peak SAR (extrapolated) = 0.269 W/kg
SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.141 mW/g
Maximum value of SAR (measured) = 0.230 mW/g

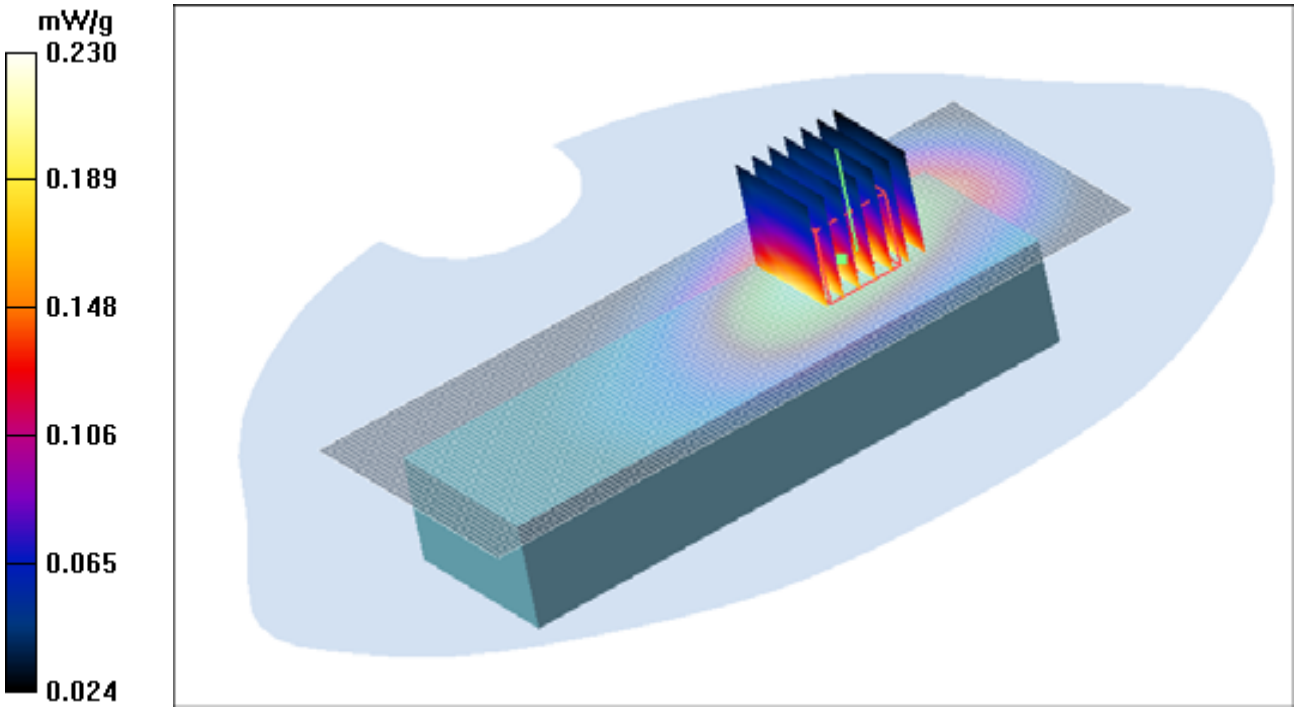


Figure 33 Body, Towards Ground, GSM 850 Channel 128

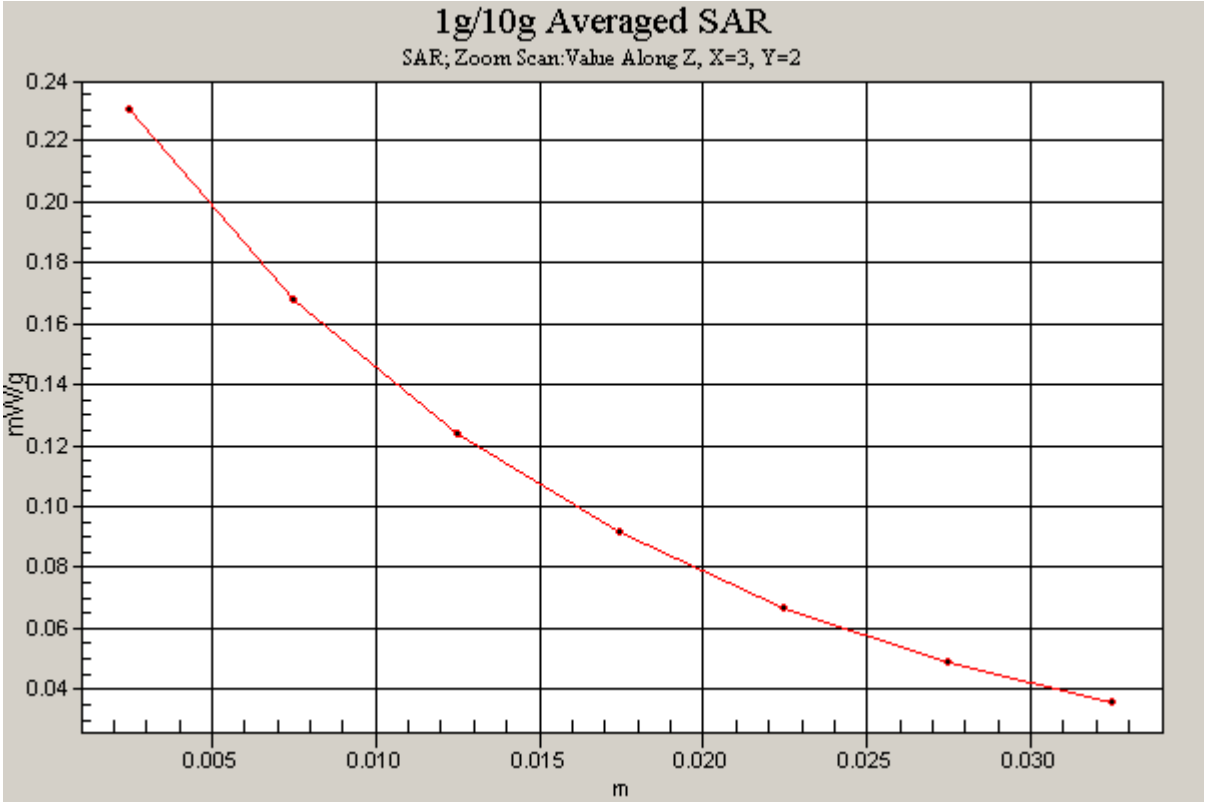


Figure 34 Z-Scan at power reference point (Body, Towards Ground, GSM 850 Channel 128)

Date/Time: 3/29/2009 9:24:44 AM

GSM 850 Earphone Towards Ground Low

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.972 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.301 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.2 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.291 mW/g

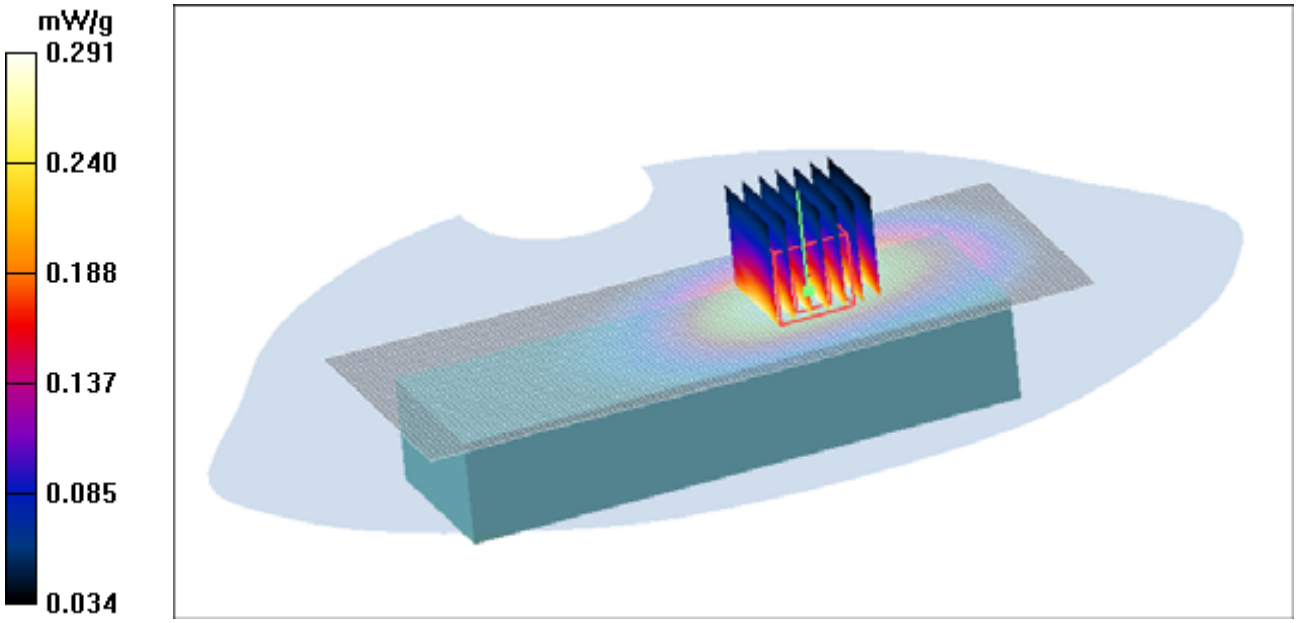


Figure 35 Body with Earphone, Towards Ground, GSM 850, Channel 128

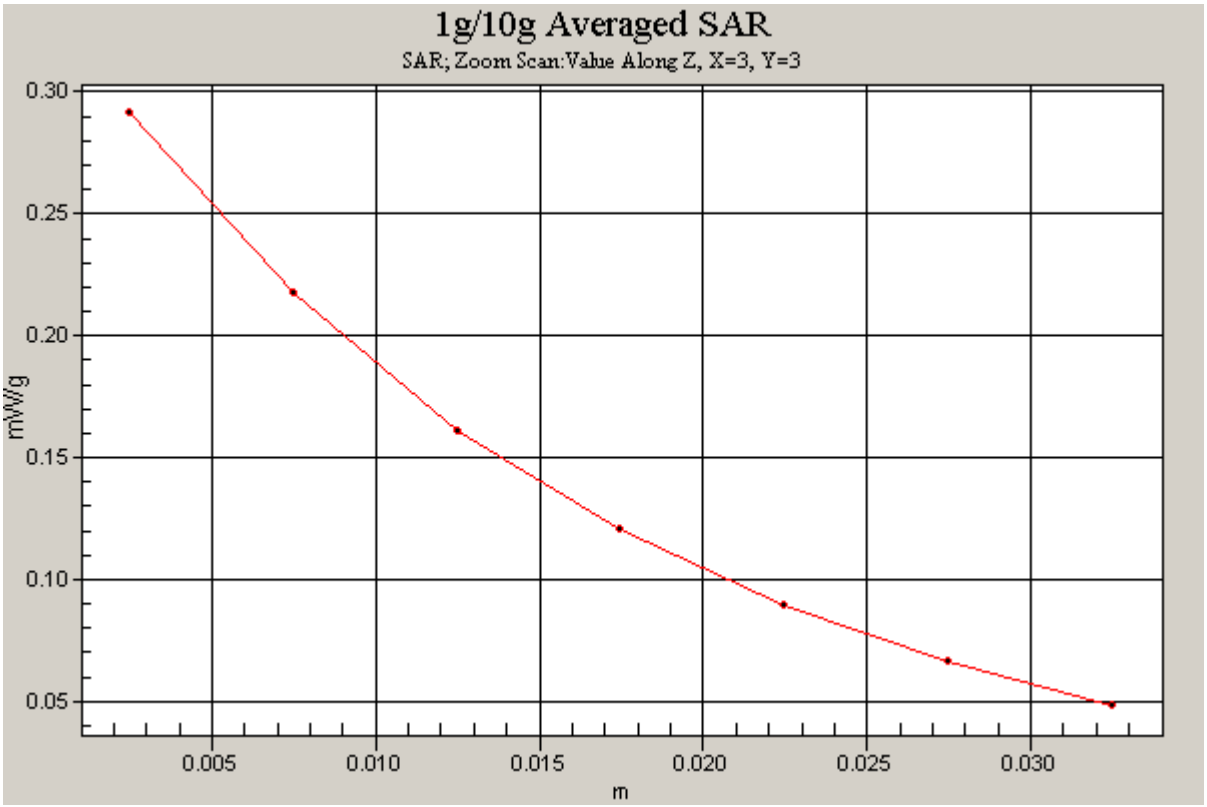


Figure 36 Z-Scan at power reference point (Body with Earphone, Towards Ground, GSM 850, Channel 128)

Date/Time: 3/29/2009 9:49:58 AM

GSM 850 GPRS Towards Ground Low

Communication System: GSM850 + GPRS(2Up); Frequency: 824.2 MHz;Duty Cycle: 1:4
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.972 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.433 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.493 W/kg
SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.259 mW/g
Maximum value of SAR (measured) = 0.425 mW/g

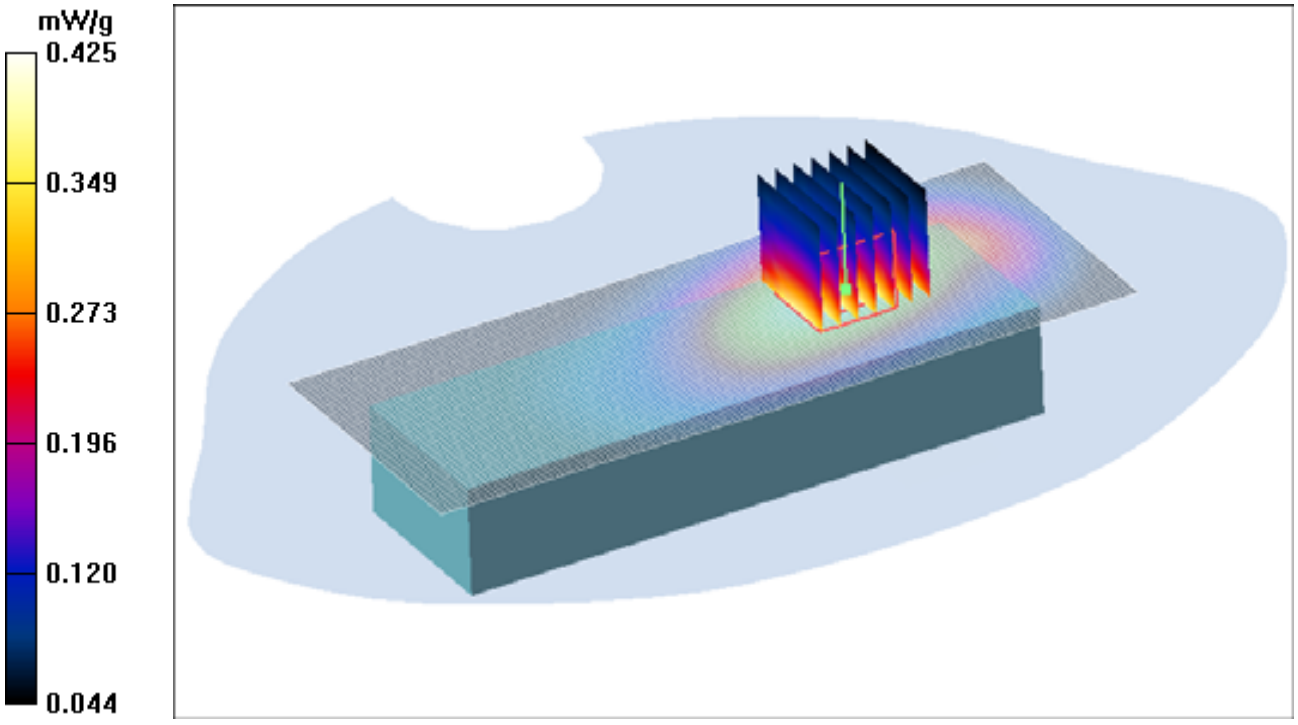


Figure 37 Body, Towards Ground, GSM 850 GPRS Channel 128

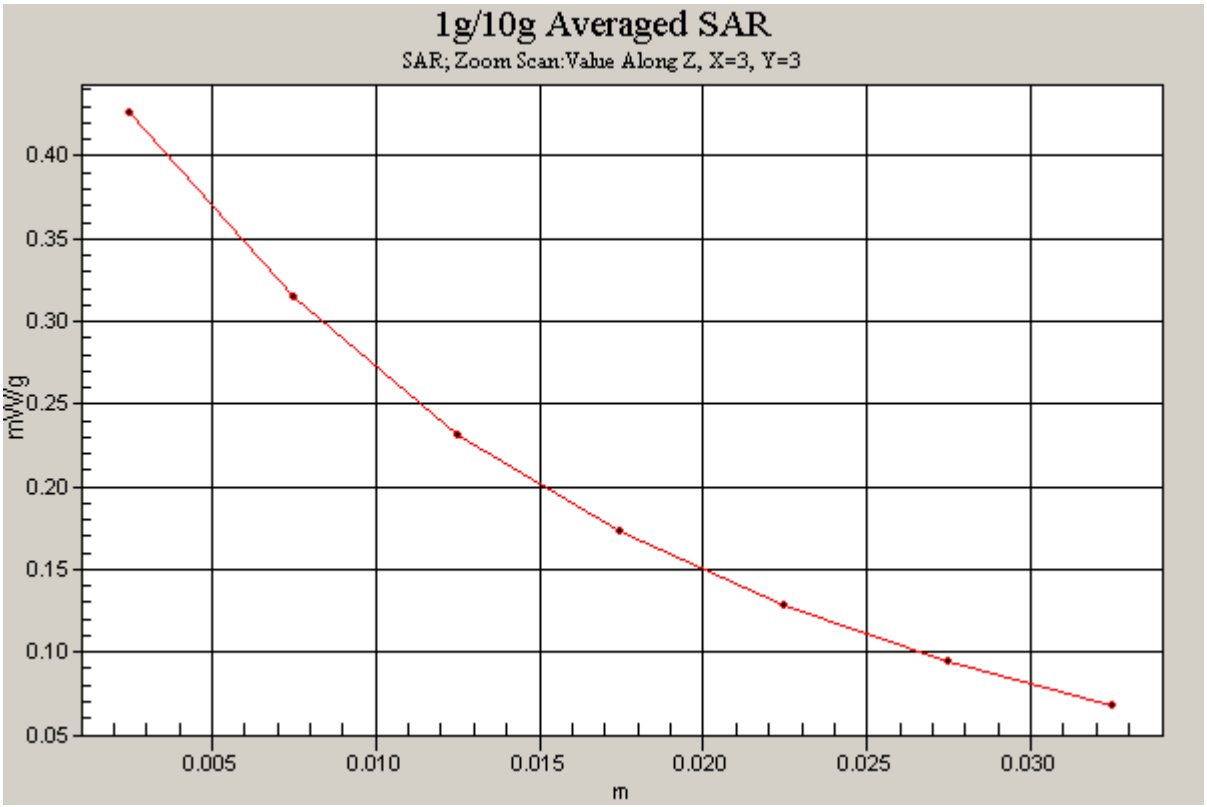


Figure 38 Z-Scan at power reference point (Body, Towards Ground, GSM 850 GPRS Channel 128)

Date/Time: 3/29/2009 8:04:39 AM

GSM 850 EGPRS Towards Phantom Low

Communication System: GSM850 + EGPRS(2Up); Frequency: 824.2 MHz;Duty Cycle: 1:4
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.972 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.8°C Liqiud Temperature: 21.5°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.070 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.42 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.046 mW/g
Maximum value of SAR (measured) = 0.072 mW/g

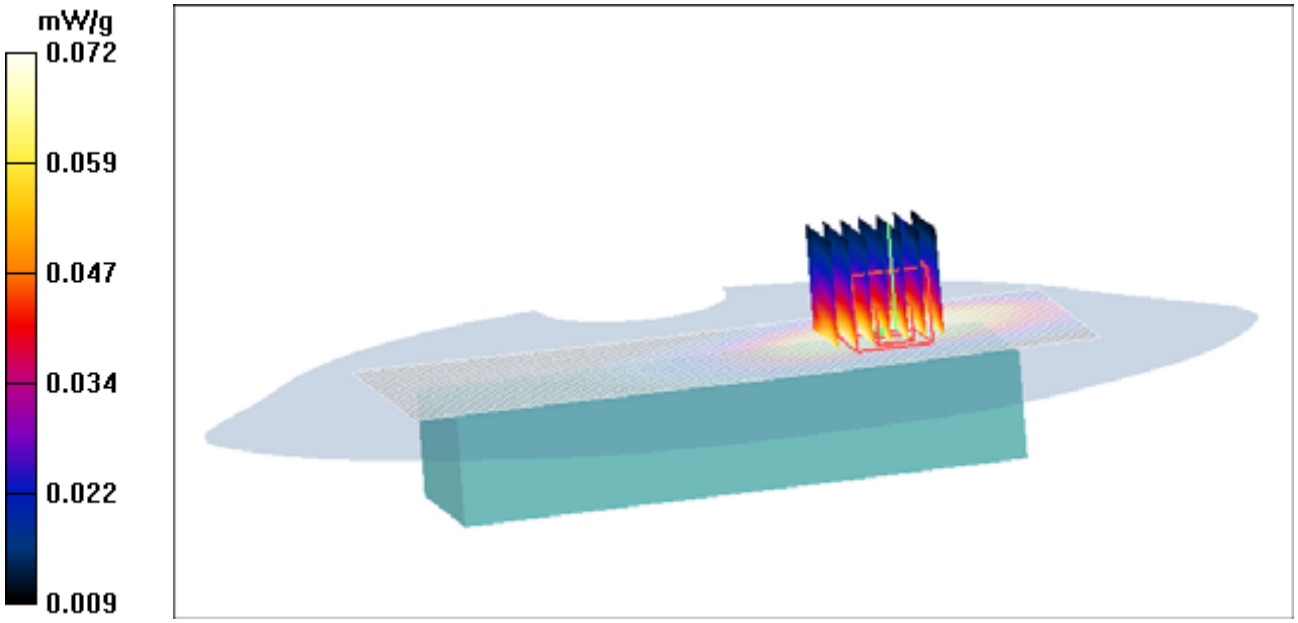


Figure 39 Body, Towards Phantom, GSM 850 EGPRS Channel 128

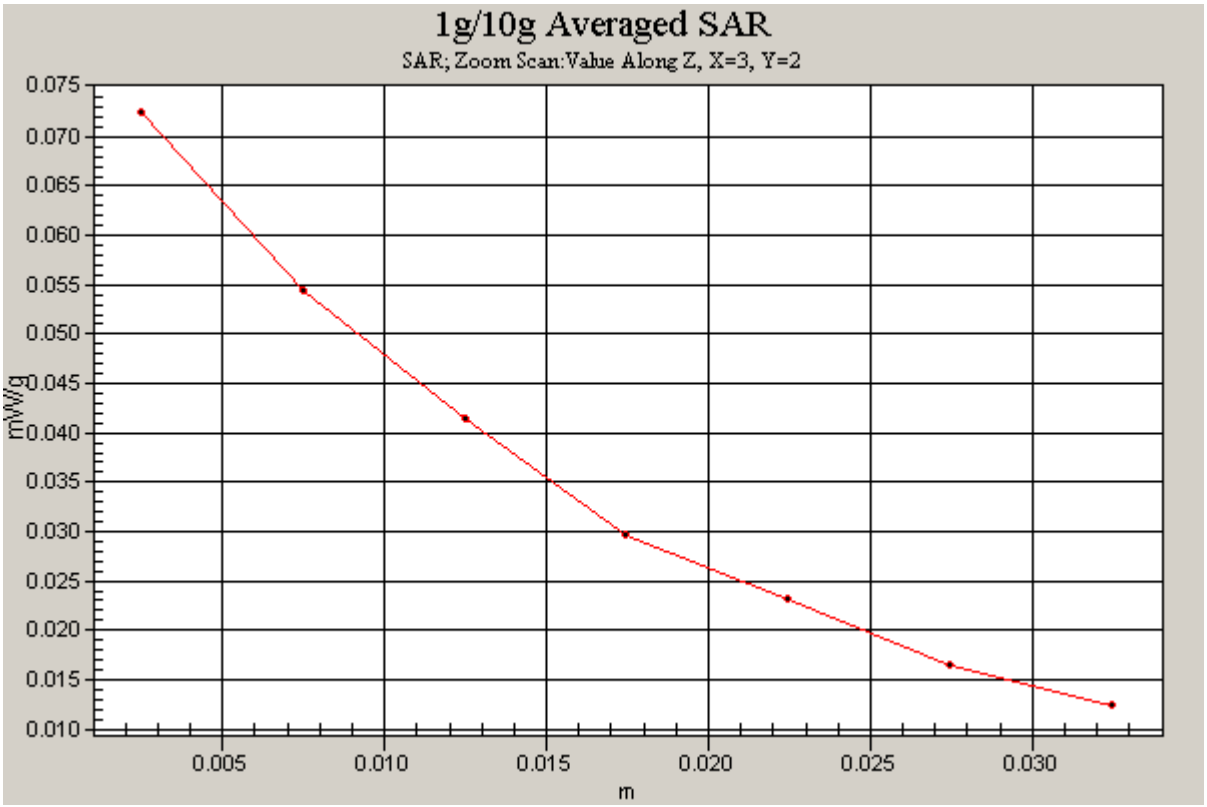


Figure 40 Z-Scan at power reference point (Body, Towards Phantom, GSM 850 EGPRS Channel 190)

Date/Time: 4/6/2009 2:47:28 PM

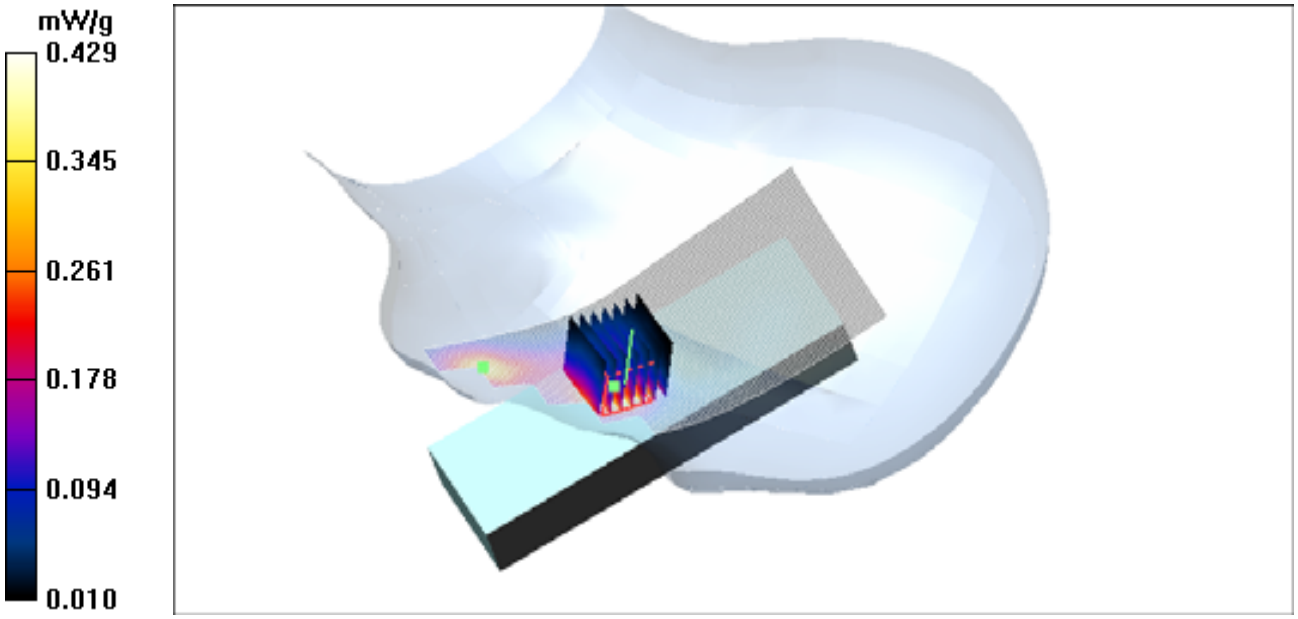
GSM 1900 Left Cheek Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.455 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.13 V/m; Power Drift = 0.132 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.429 mW/g



Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.455 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.13 V/m; Power Drift = 0.132 dB
Peak SAR (extrapolated) = 0.465 W/kg
SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.342 mW/g

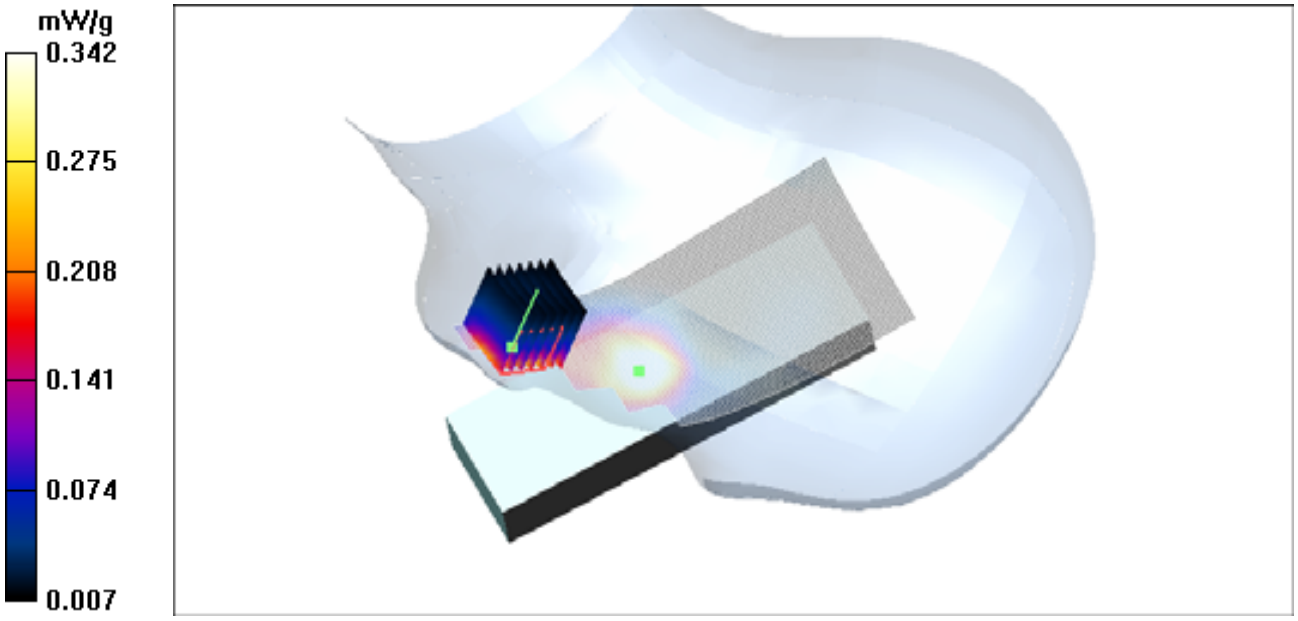
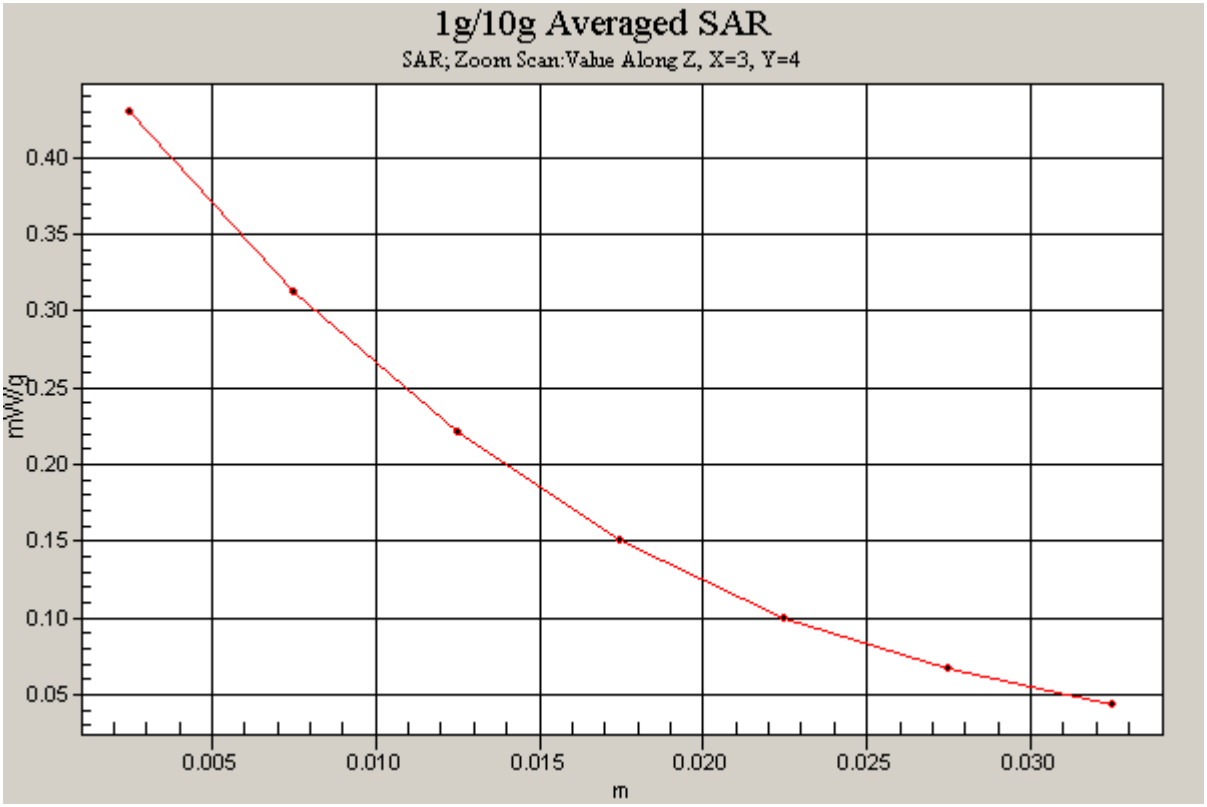


Figure 41 Left Hand Touch Cheek GSM 1900 Channel 661



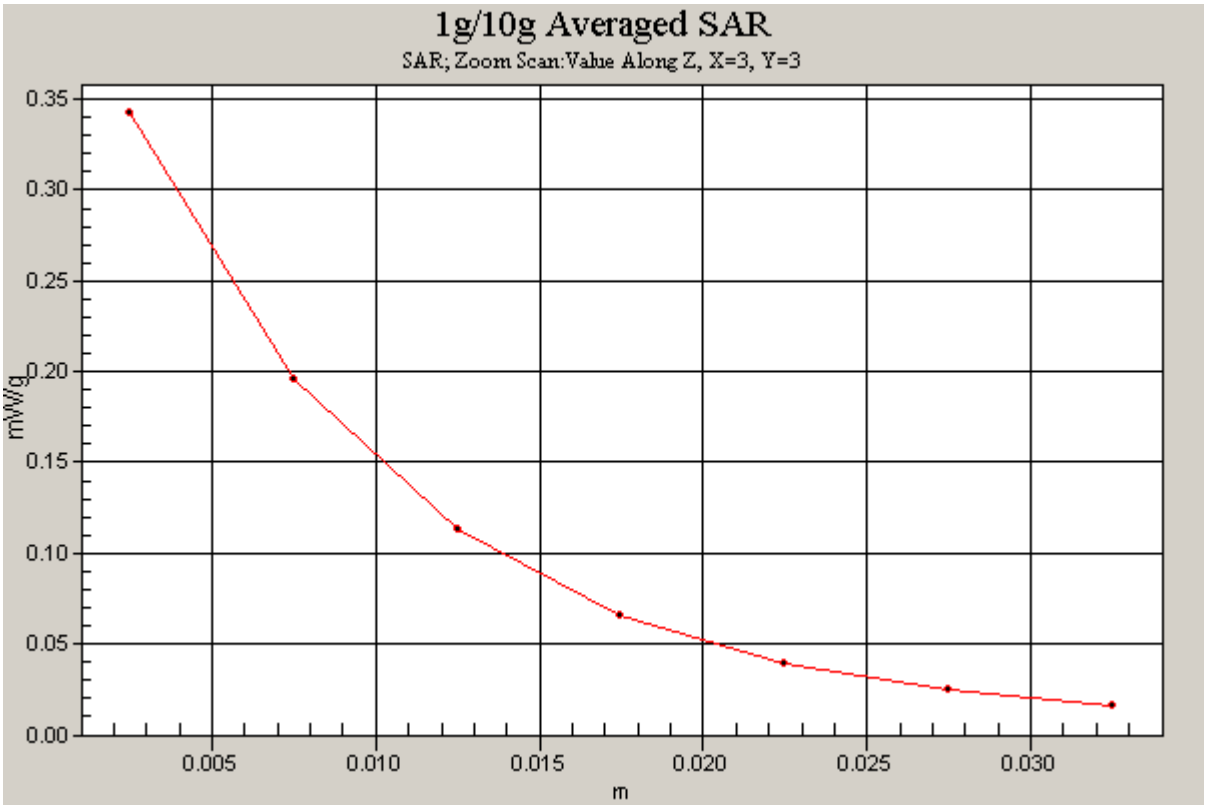


Figure 42 Z-Scan at power reference point (Left Hand Touch Cheek GSM 1900 Channel 661)

Date/Time: 4/6/2009 3:20:47 PM

GSM 1900 Left Tilt Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.071 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.33 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.086 W/kg
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.067 mW/g

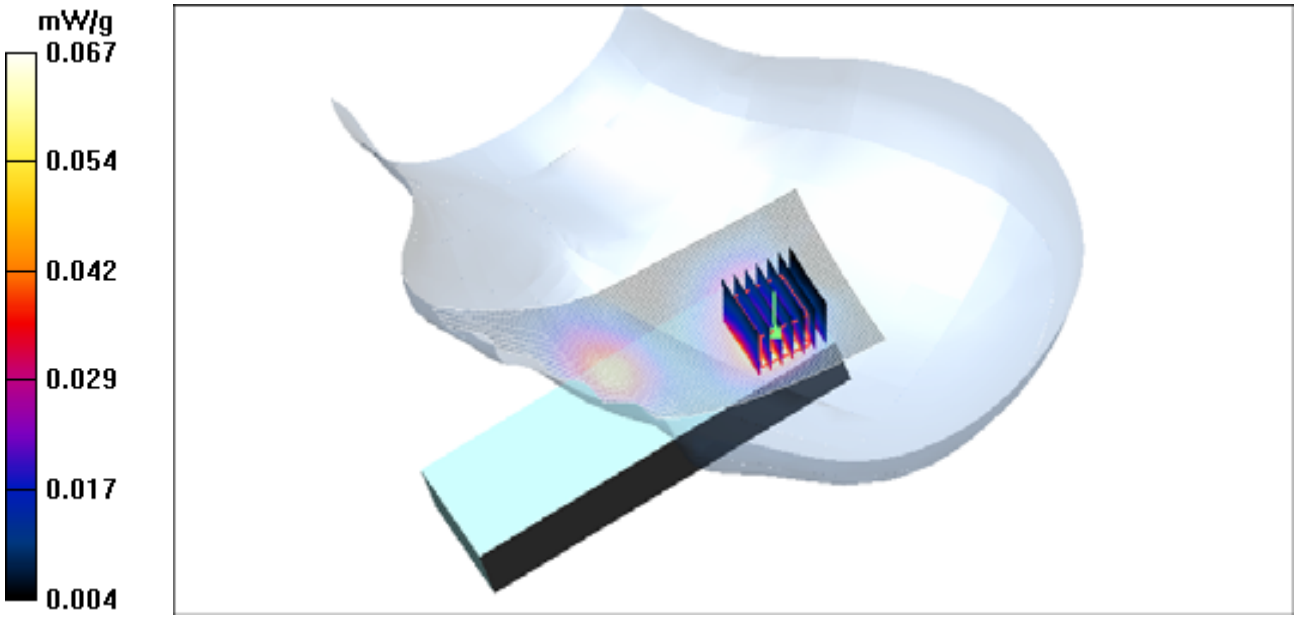


Figure 43 Left Hand Tilt 15°Open GSM 1900 Channel 661

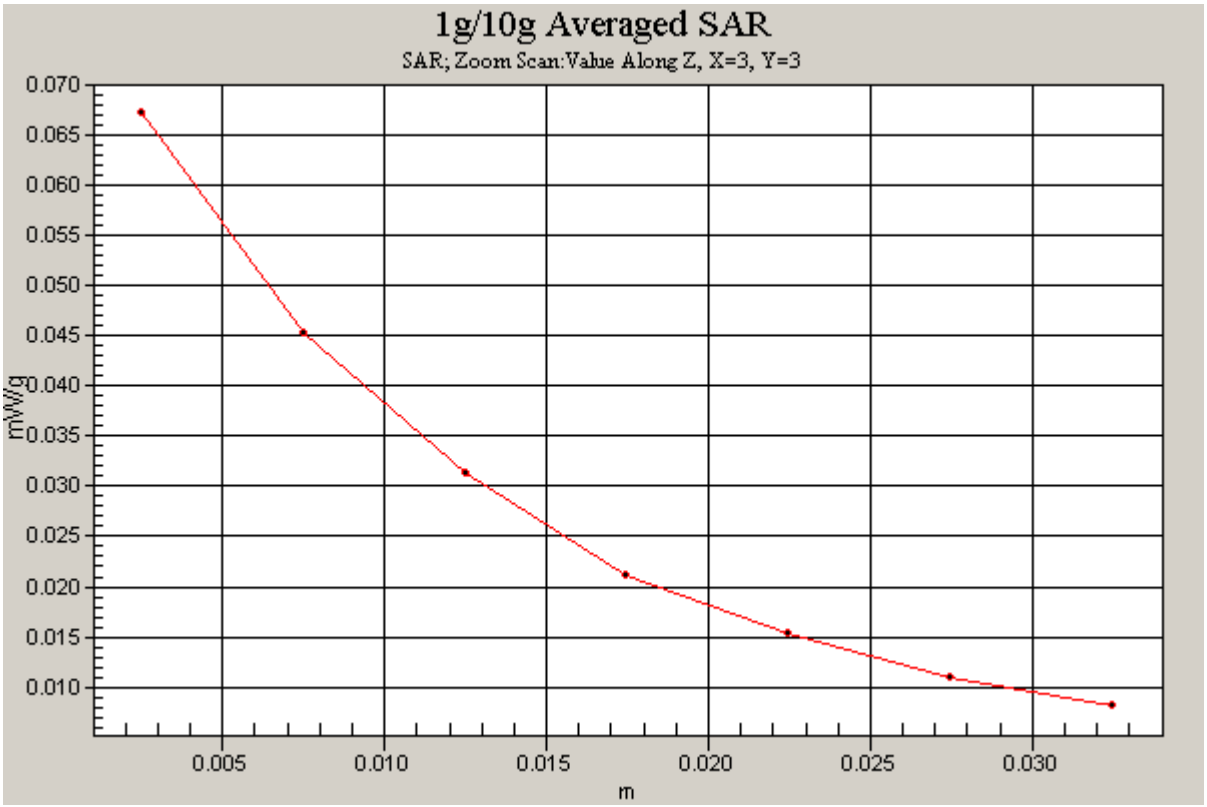


Figure 44 Z-Scan at power reference point (Left Hand Tilt 15°Open GSM 1900 Channel 661)

Date/Time: 4/6/2009 4:10:23 PM

GSM 1900 Right Cheek High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1910 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.545 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.70 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.694 W/kg
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.233 mW/g
Maximum value of SAR (measured) = 0.549 mW/g

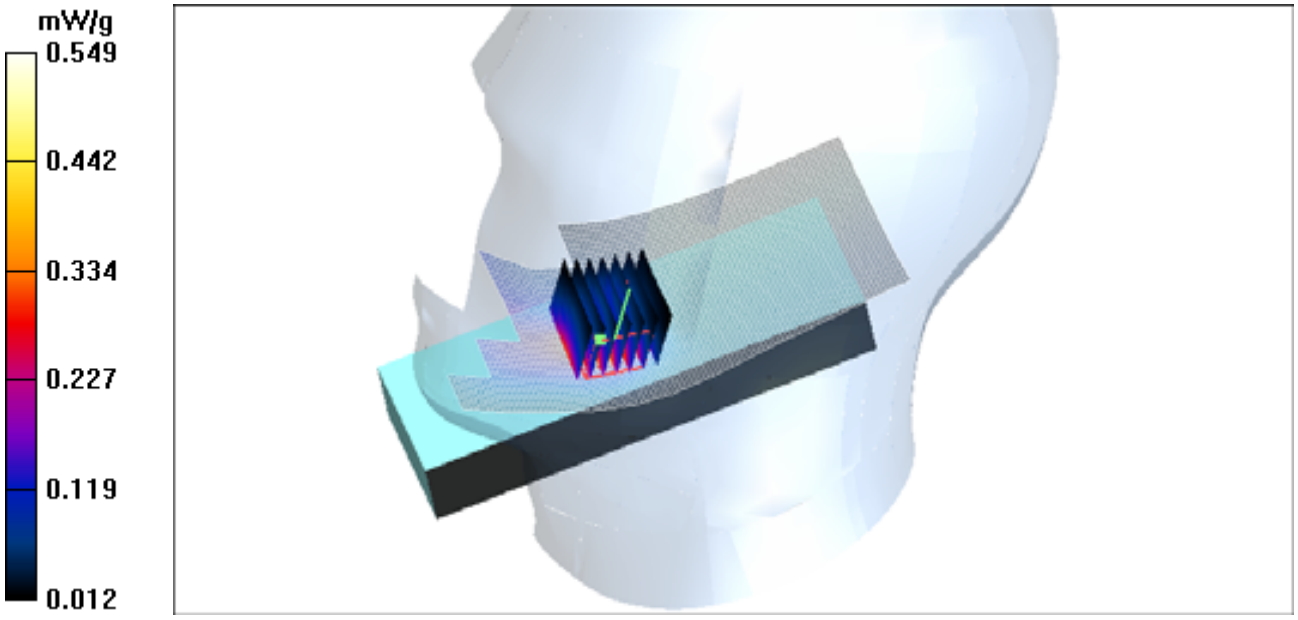


Figure 45 Right Hand Touch Cheek GSM 1900 Channel 810

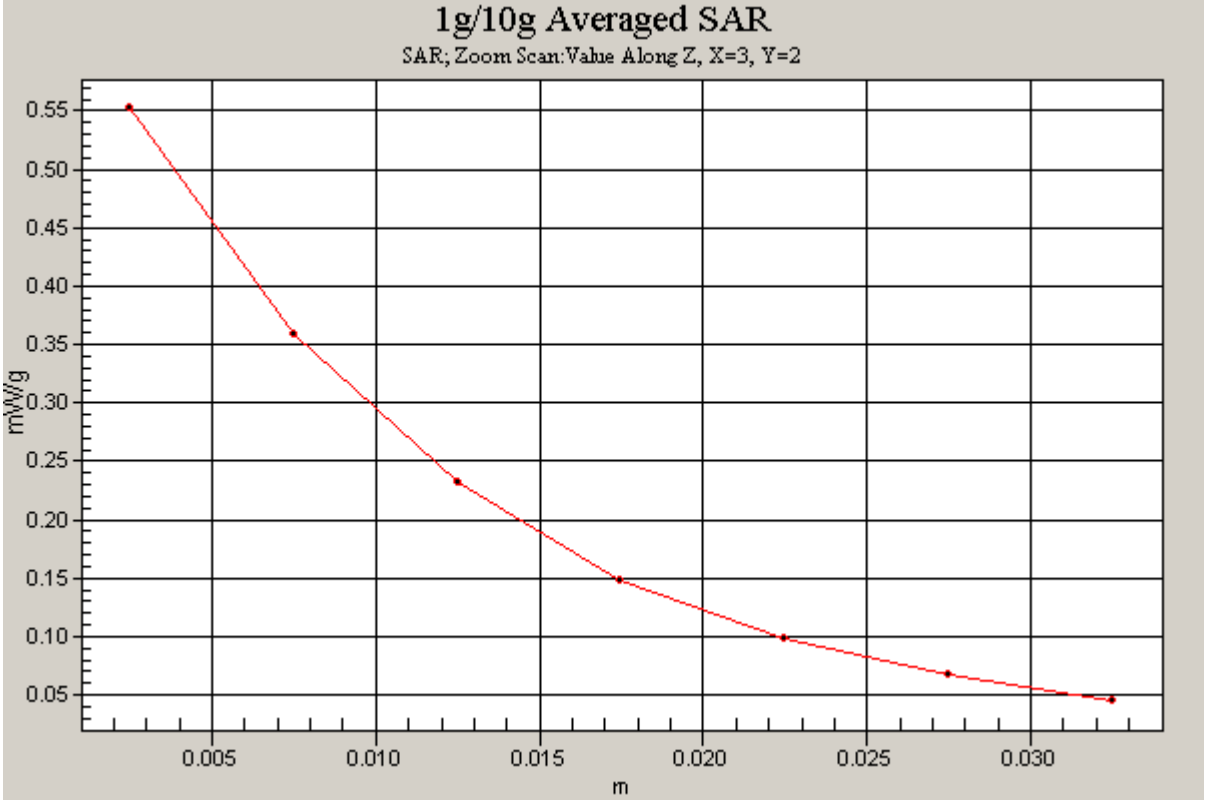


Figure 46 Z-Scan at power reference point (Right Hand Touch Cheek GSM 1900 Channel 810)

Date/Time: 4/6/2009 3:49:08 PM

GSM 1900 Right Cheek Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.632 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.86 V/m; Power Drift = 0.154 dB
Peak SAR (extrapolated) = 0.777 W/kg
SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.277 mW/g
Maximum value of SAR (measured) = 0.627 mW/g

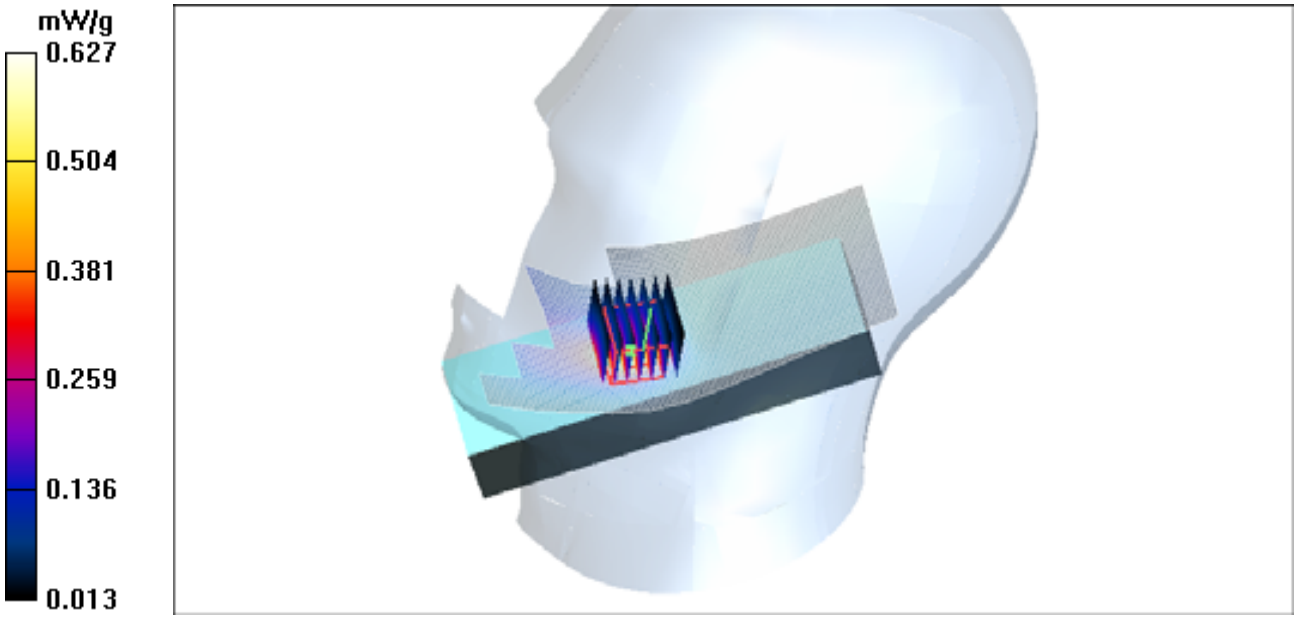


Figure 47 Right Hand Touch Cheek GSM 1900 Channel 661

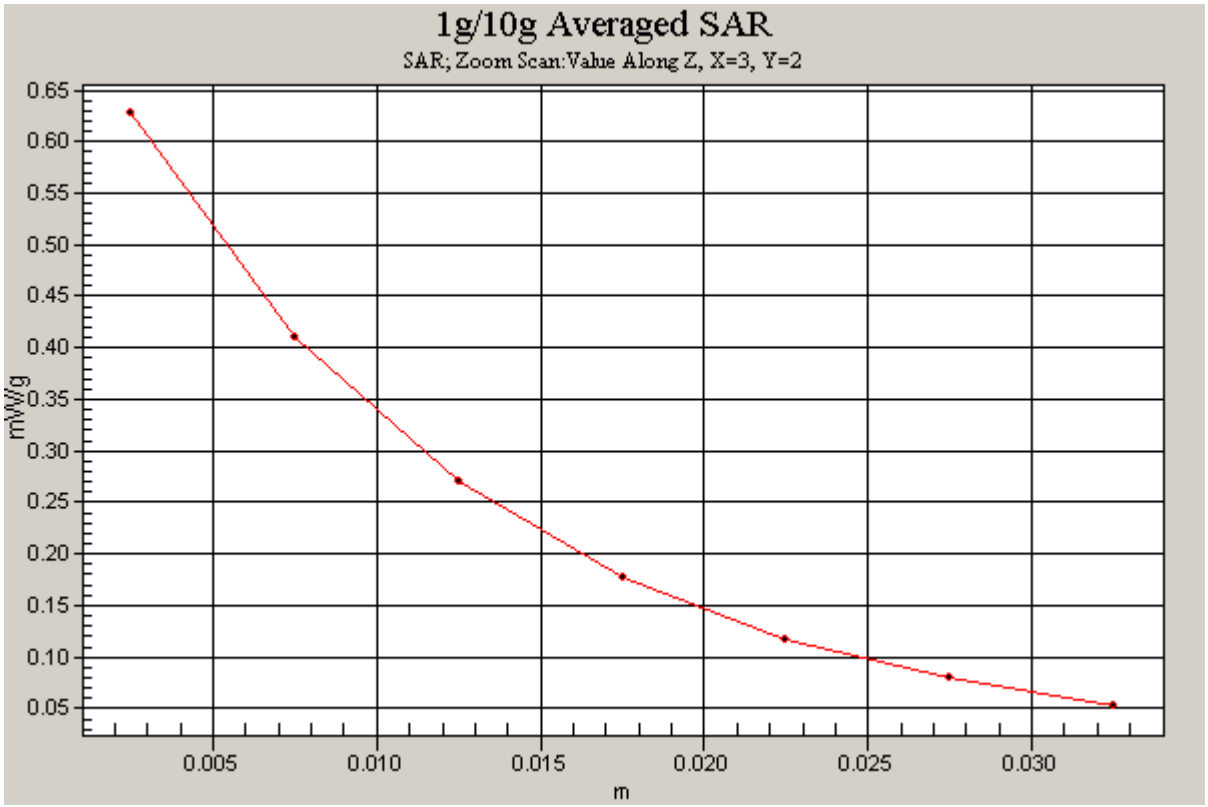


Figure 48 Z-Scan at power reference point (Right Hand Touch Cheek GSM 1900 Channel 661)

Date/Time: 4/6/2009 4:30:28 PM

GSM 1900 Right Cheek Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.37 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.812 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.10 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.610 mW/g; SAR(10 g) = 0.352 mW/g
Maximum value of SAR (measured) = 0.757 mW/g

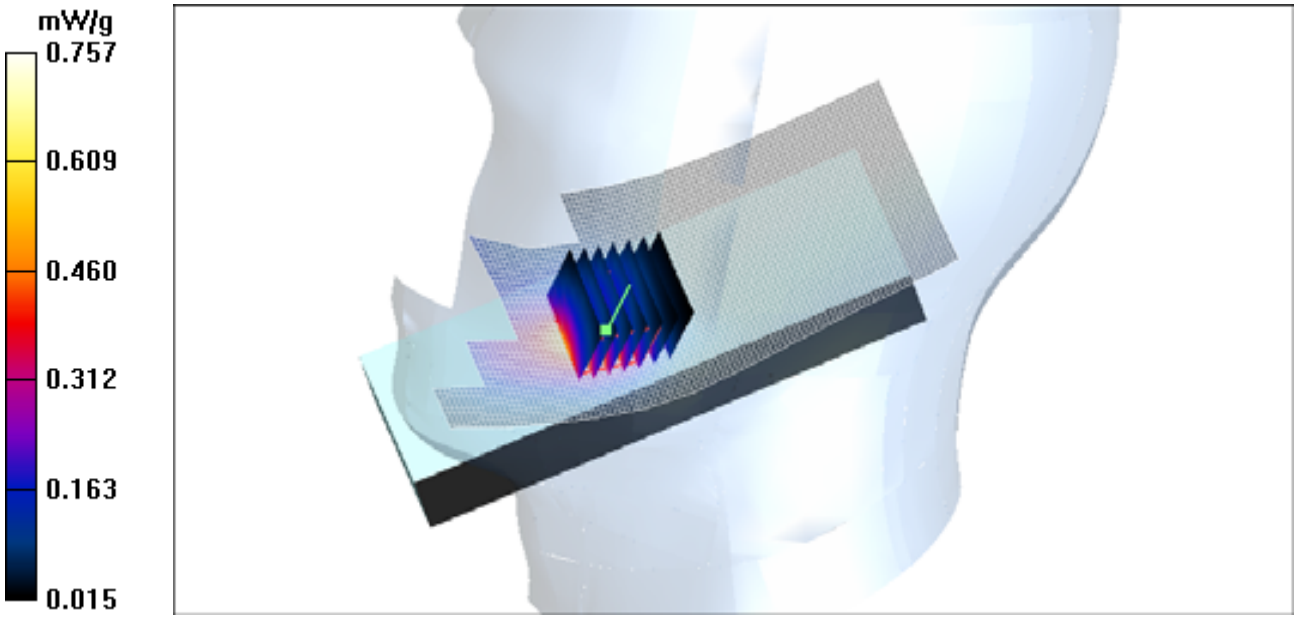


Figure 49 Right Hand Touch Cheek GSM 1900 Channel 512

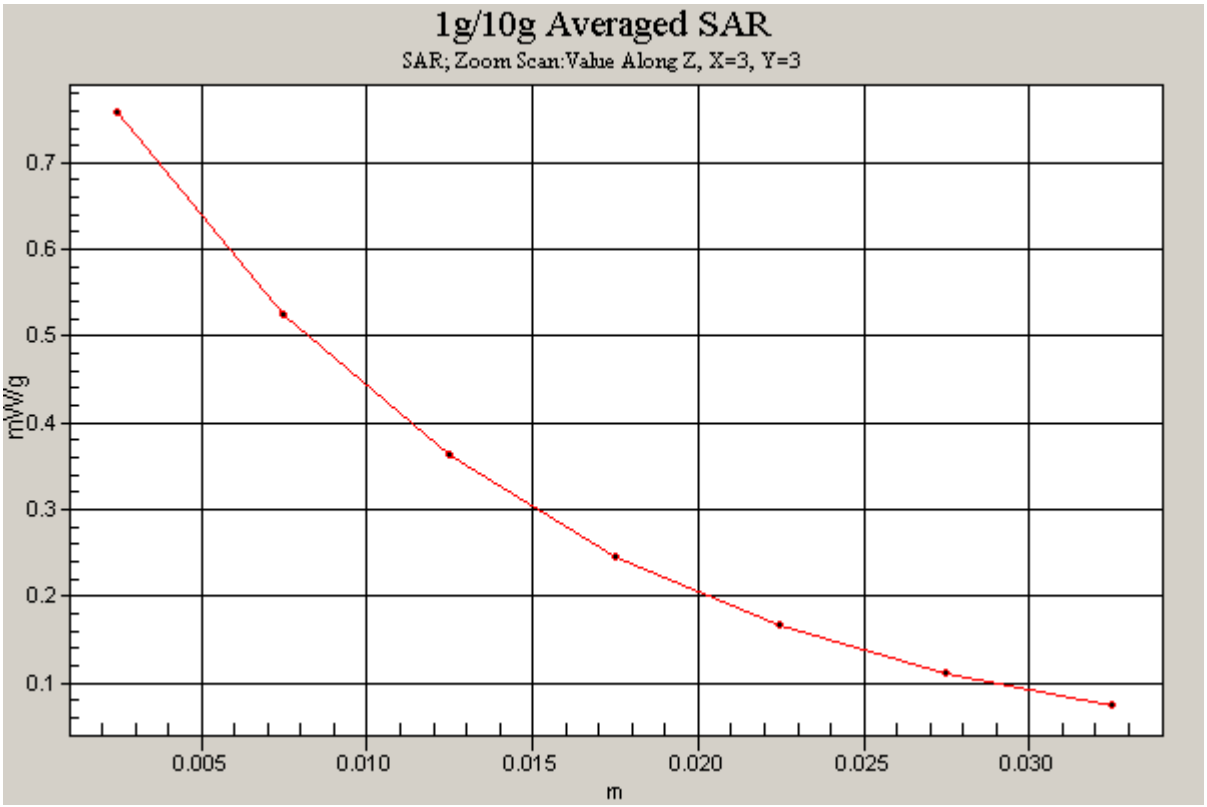


Figure 50 Z-Scan at power reference point (Right Hand Touch Cheek GSM 1900 Channel 512)

Date/Time: 4/6/2009 4:52:42 PM

GSM 1900 Right Tilt Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.057 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.05 V/m; Power Drift = 0.109 dB
Peak SAR (extrapolated) = 0.059 W/kg
SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.048 mW/g

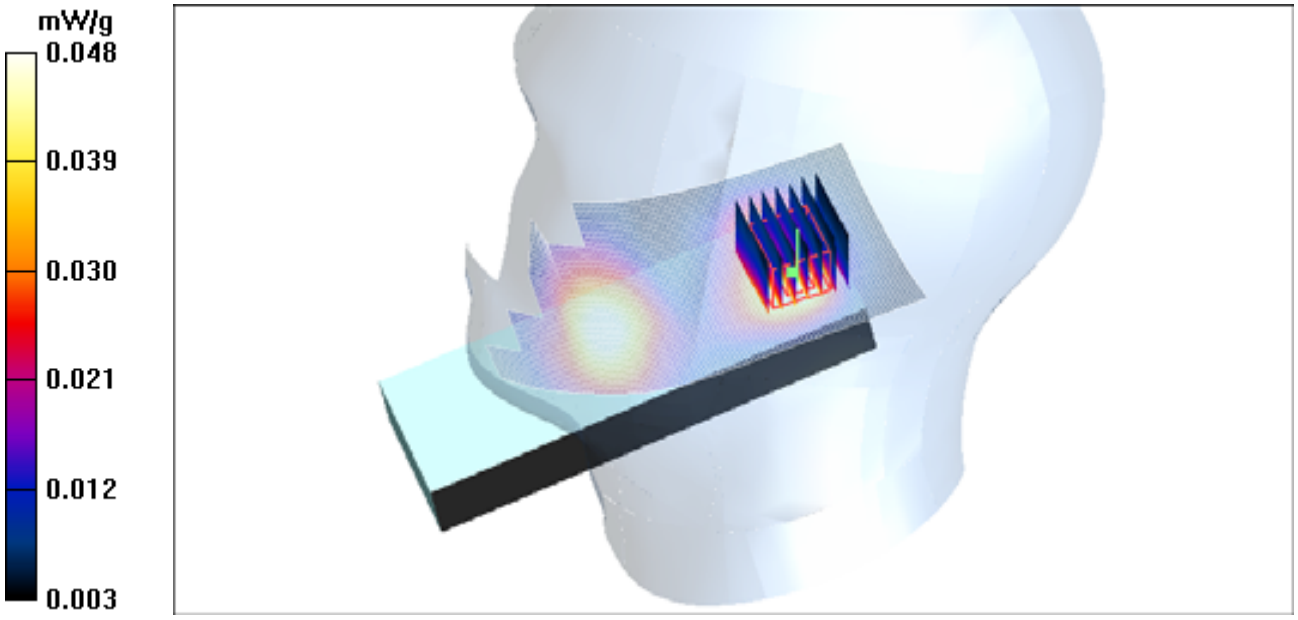


Figure 51 Right Hand Tilt 15° GSM 1900 Channel 661

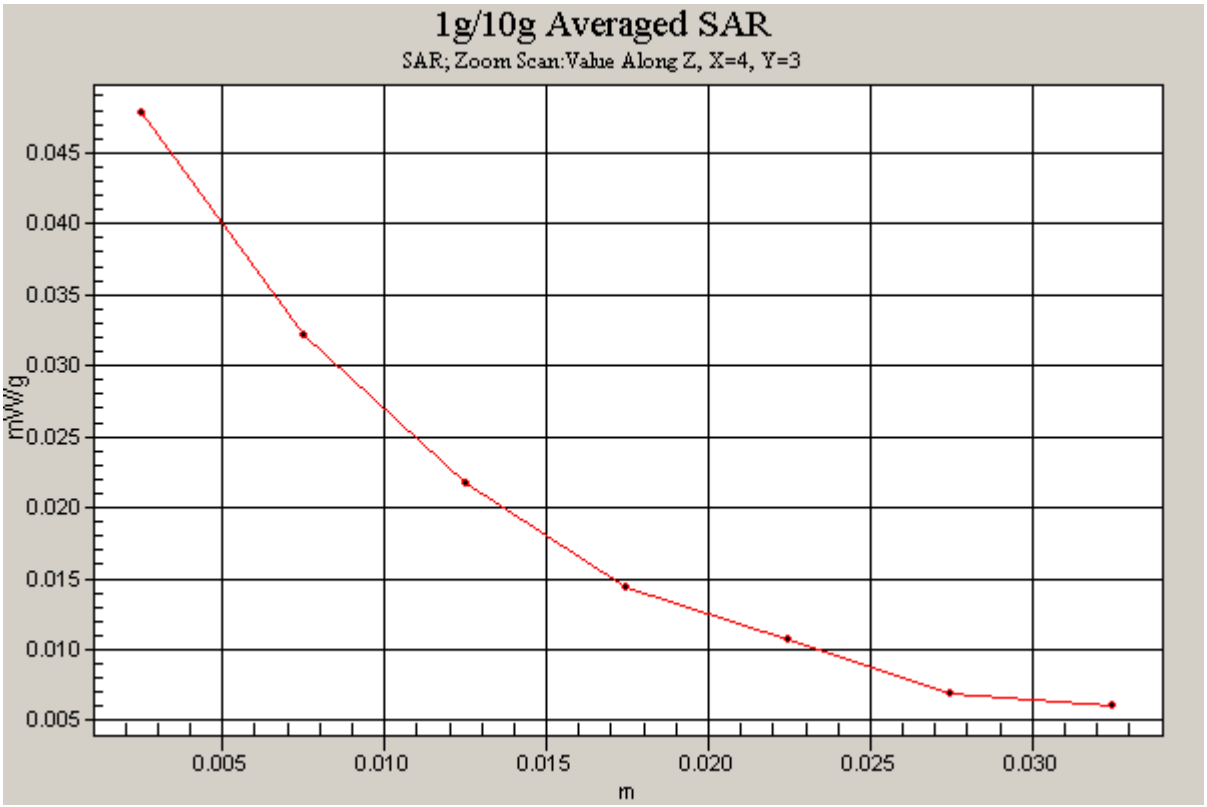


Figure 52 Z-Scan at power reference point (Right Hand Tilt 15° GSM 1900 Channel 661)

Date/Time: 4/1/2009 2:05:59 AM

GSM 1900 Towards Ground High

Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1910 MHz; σ = 1.52 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.134 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.81 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.165 W/kg
SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.060 mW/g
Maximum value of SAR (measured) = 0.128 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.81 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 0.119 W/kg
SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.097 mW/g

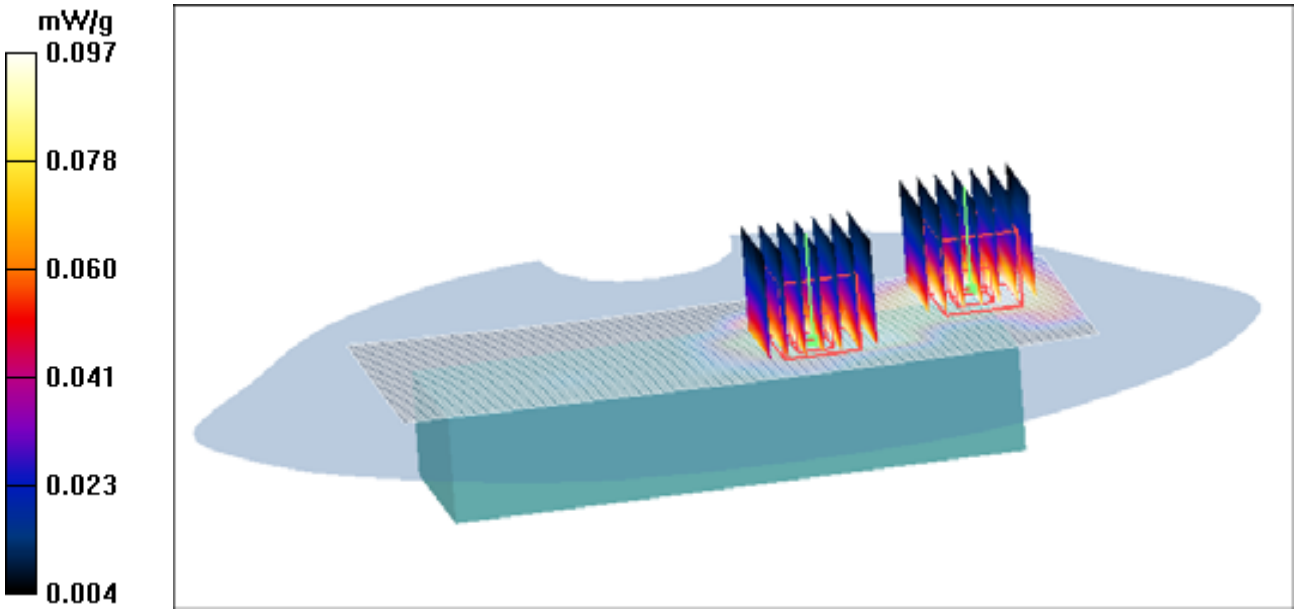
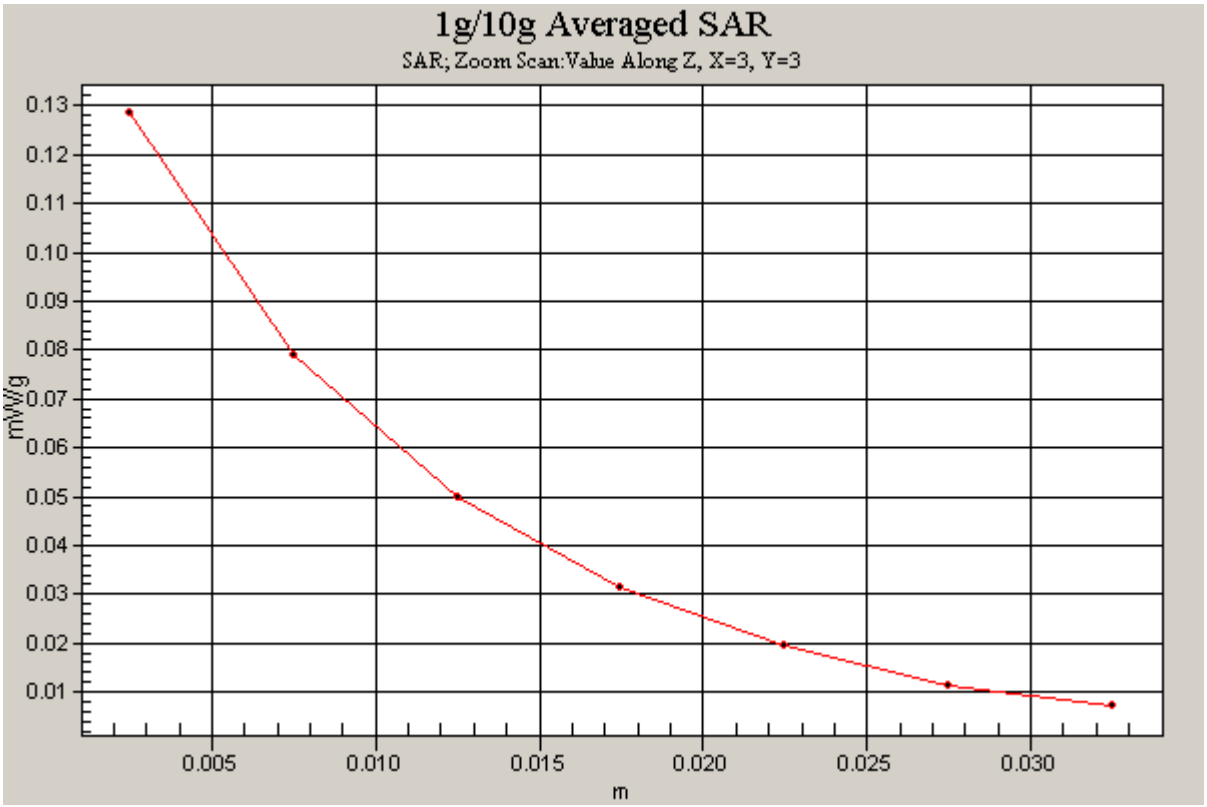


Figure 53 Body, Towards Ground, GSM 1900 Channel 810



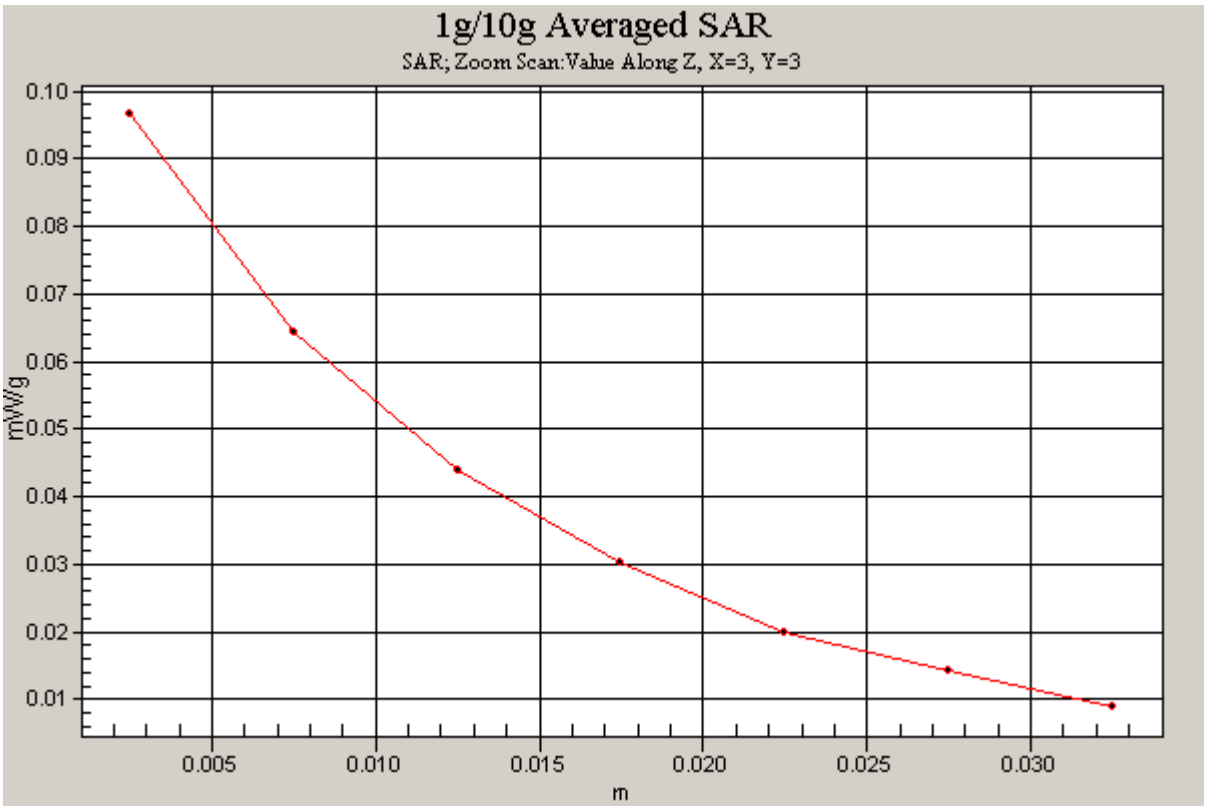


Figure 54 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 810)

Date/Time: 4/1/2009 2:38:15 AM

GSM 1900 Towards Ground Middle

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.49 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.127 mW/g
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.87 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 0.164 W/kg
SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.061 mW/g
Maximum value of SAR (measured) = 0.129 mW/g
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.87 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 0.142 W/kg
SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.063 mW/g
Maximum value of SAR (measured) = 0.116 mW/g

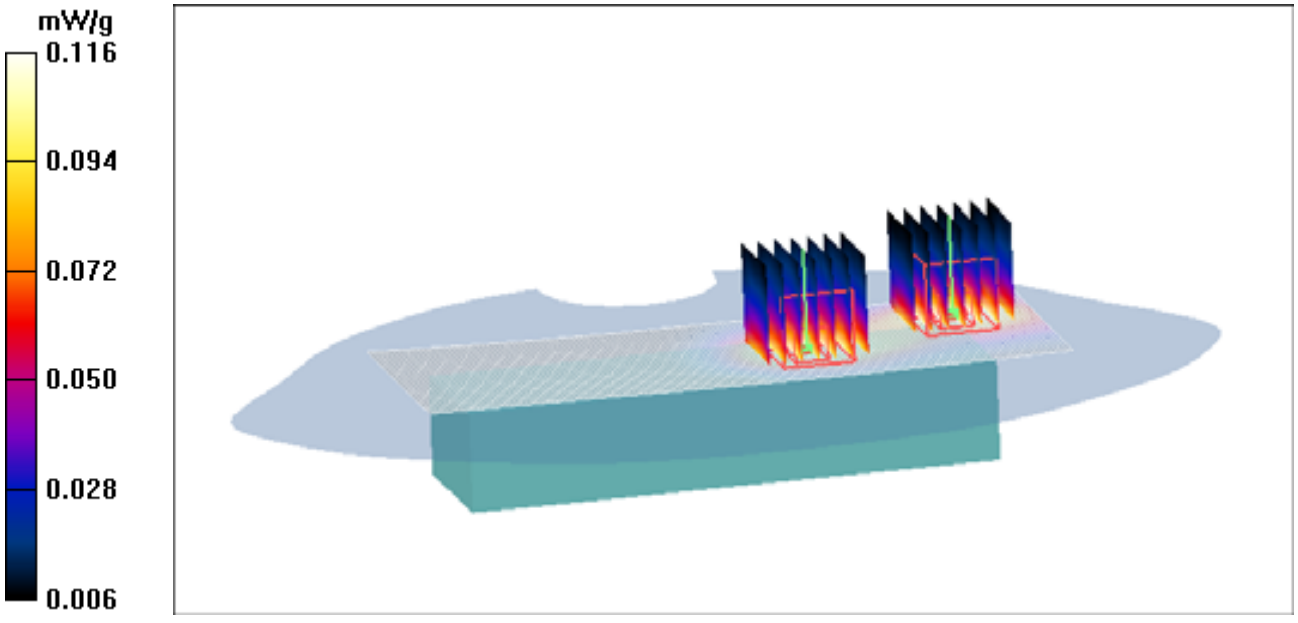
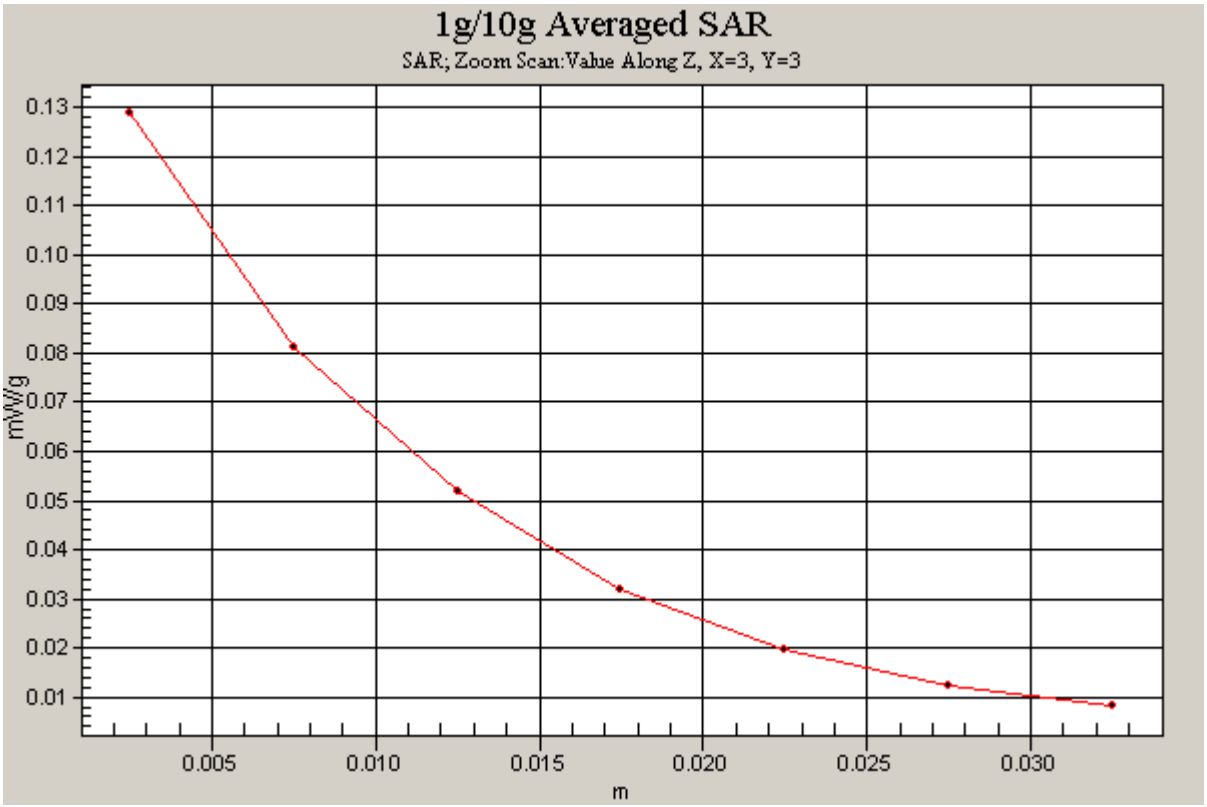


Figure 55 Body, Towards Ground, GSM 1900 Channel 661



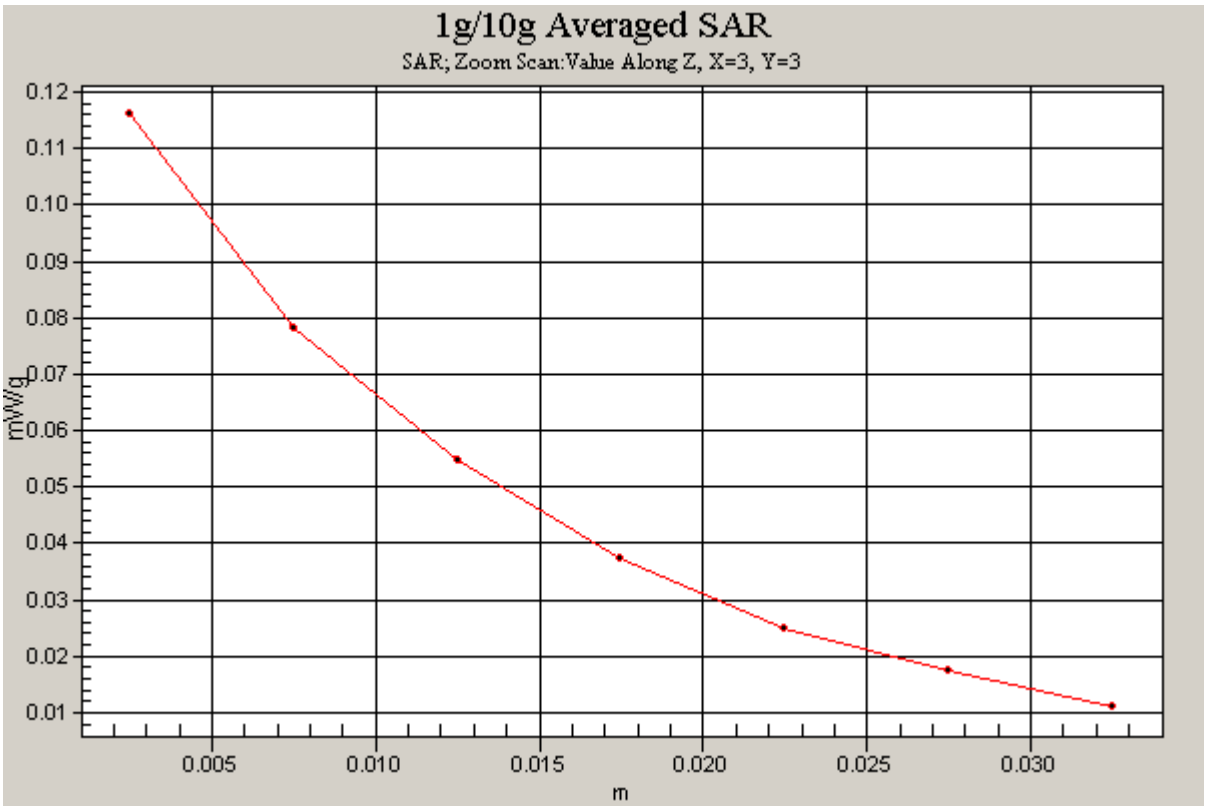


Figure 56 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 661)

Date/Time: 4/1/2009 3:39:36 AM

GSM 1900 Towards Ground Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.45 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.152 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.23 V/m; Power Drift = 0.150 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.122 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.146 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.23 V/m; Power Drift = 0.150 dB
Peak SAR (extrapolated) = 0.188 W/kg
SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.069 mW/g

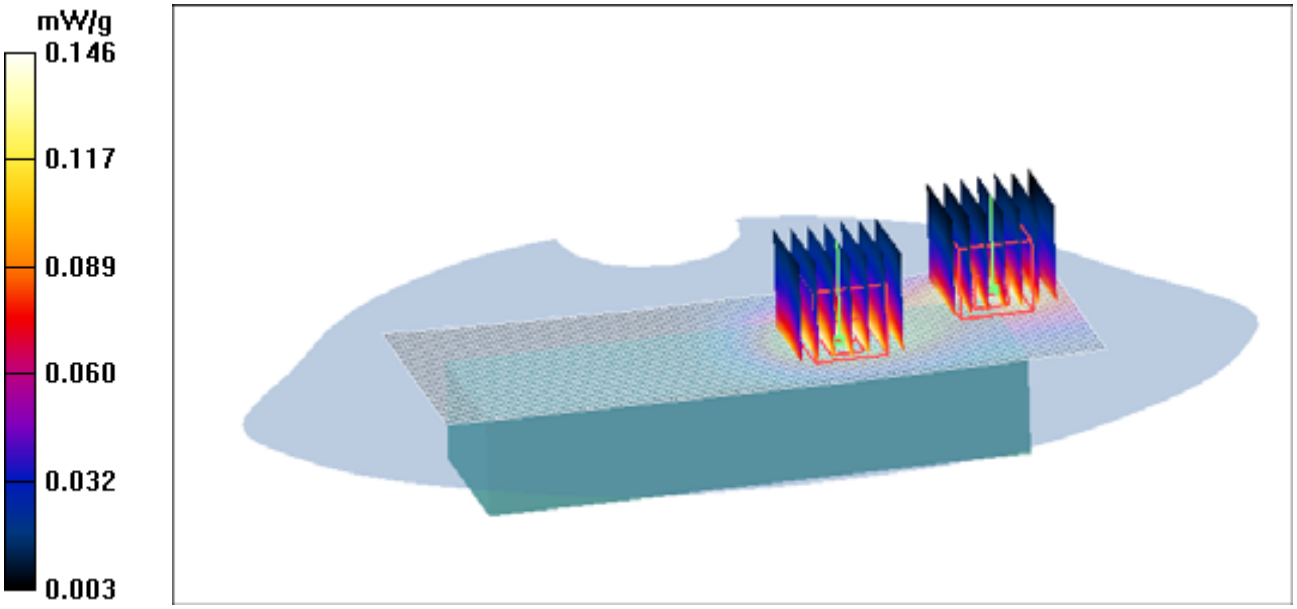
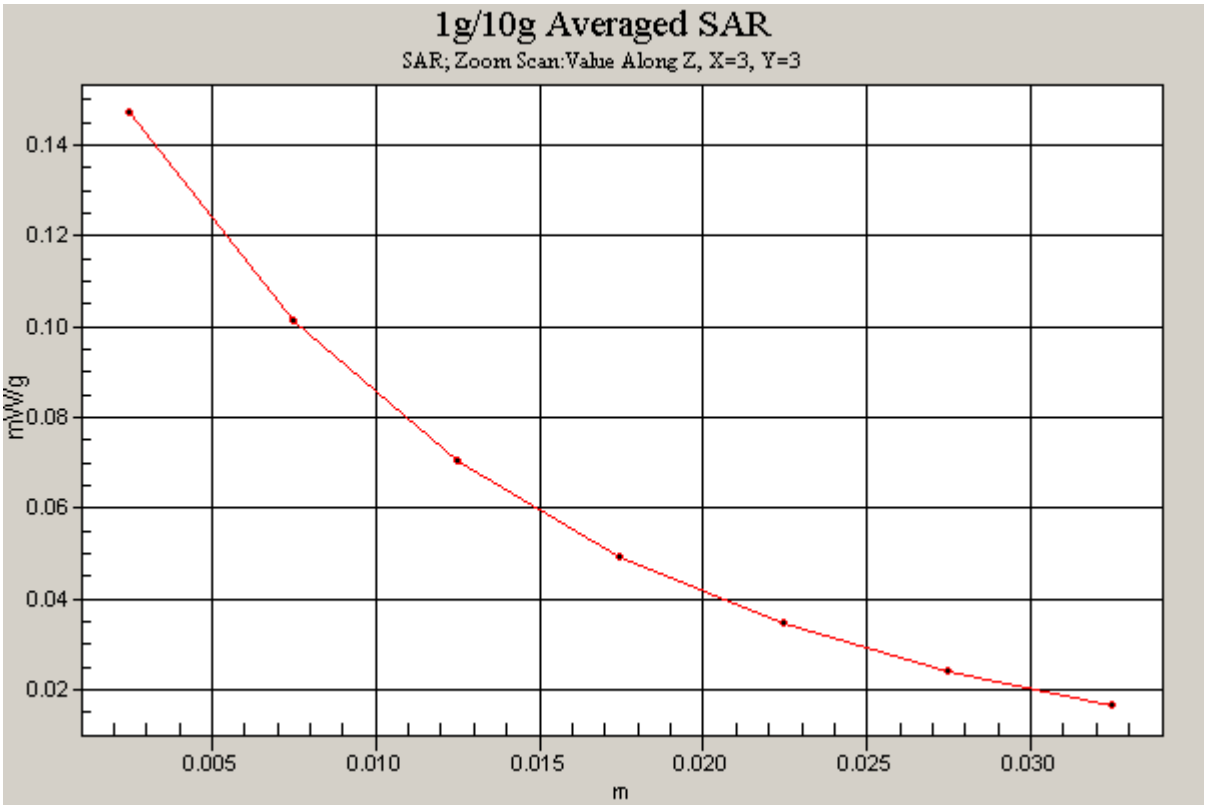


Figure 57 Body, Towards Ground, GSM 1900 Channel 512



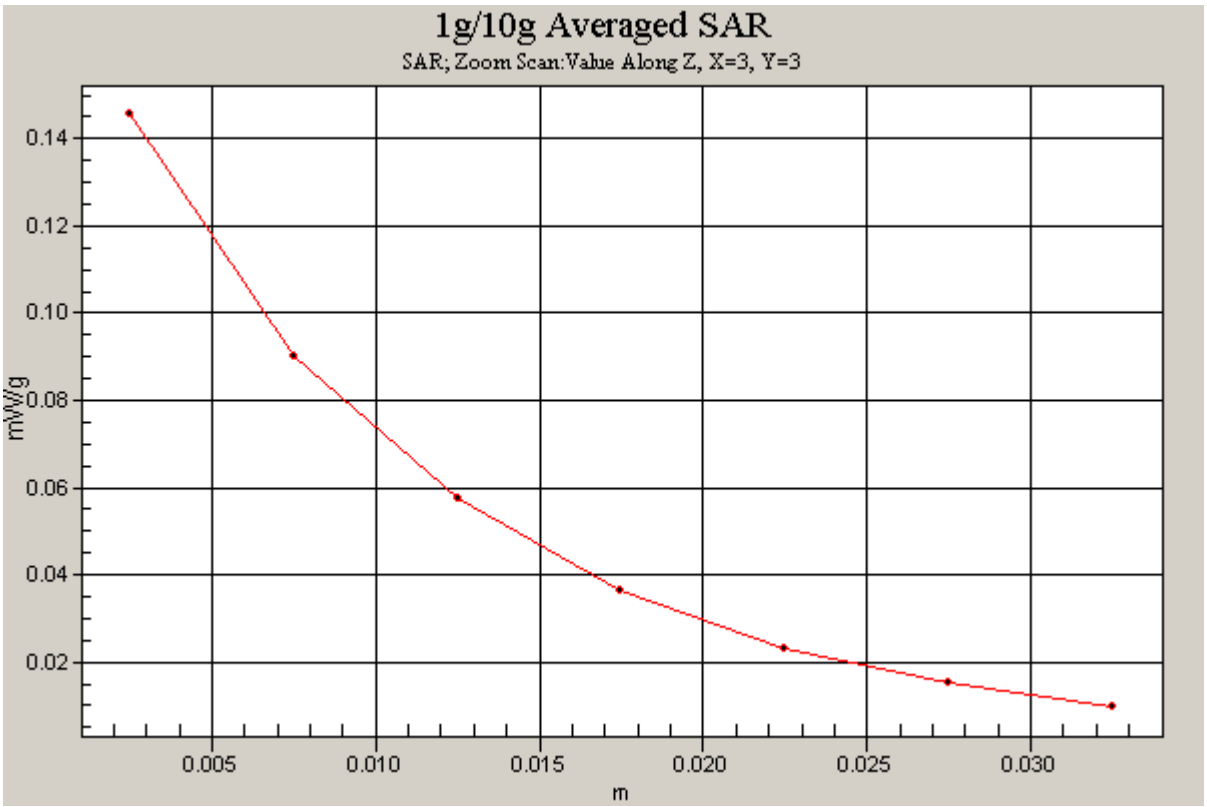


Figure 58 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 512)

Date/Time: 4/1/2009 4:16:52 AM

GSM 1900 Earphone Towards Ground Low

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.45 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.136 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.96 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.185 W/kg
SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.067 mW/g
Maximum value of SAR (measured) = 0.143 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.96 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.066 mW/g
Maximum value of SAR (measured) = 0.121 mW/g

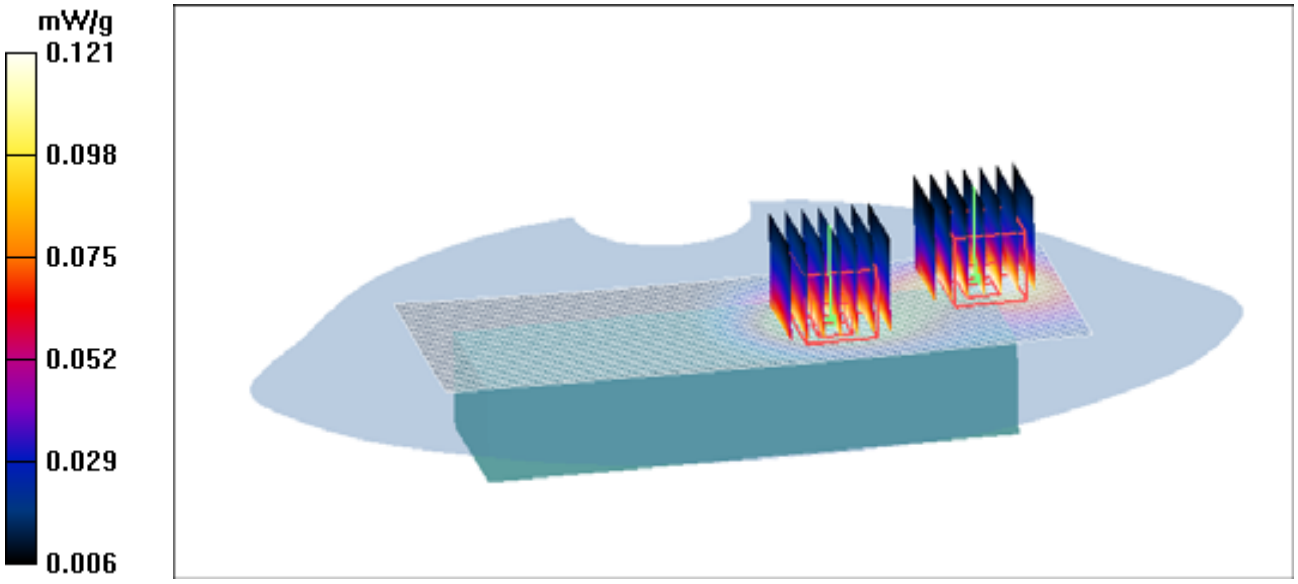
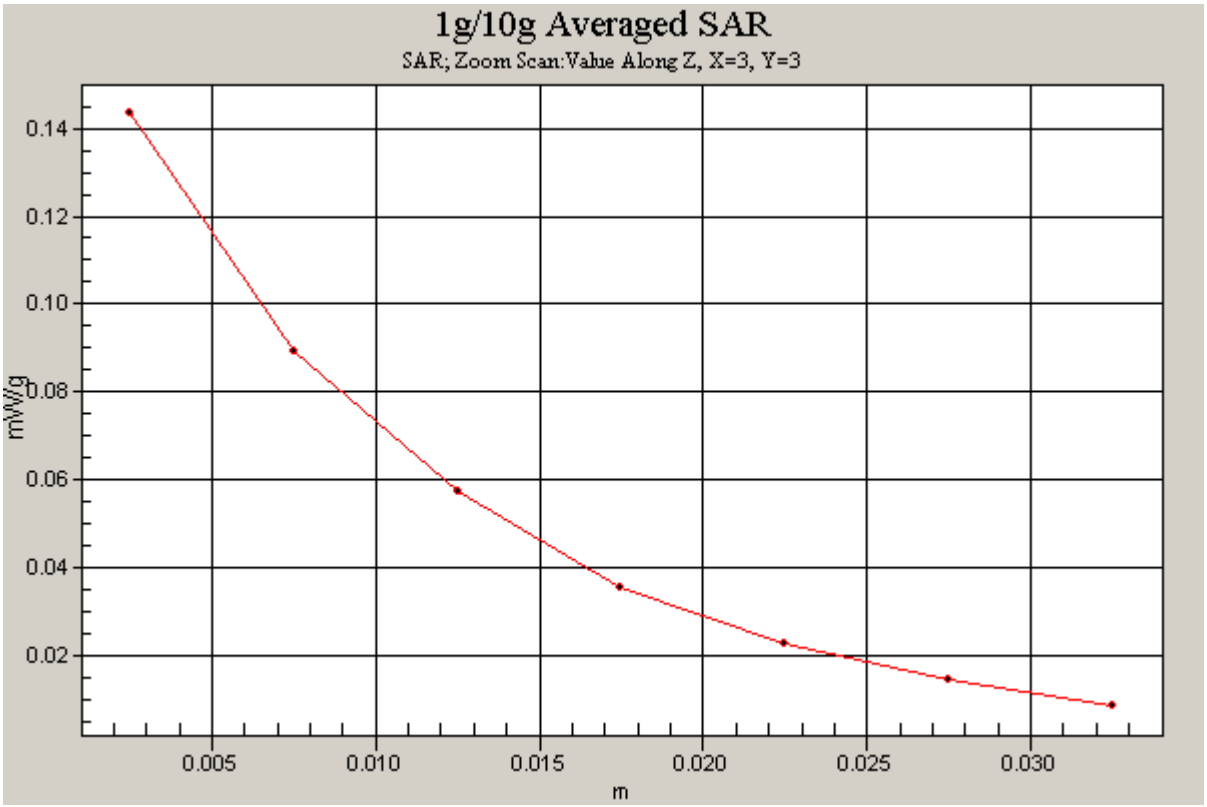


Figure 59 Body with Earphone, Towards Ground, GSM 1900, Channel 512



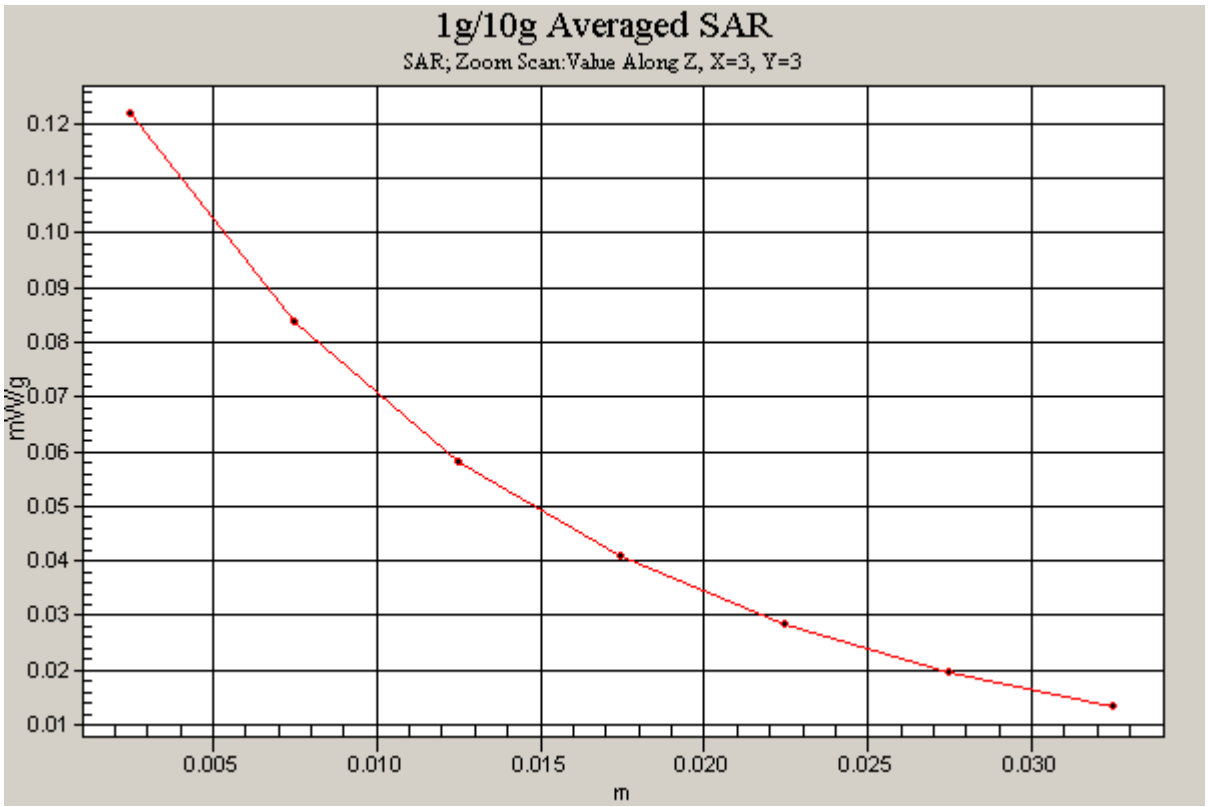


Figure 60 Z-Scan at power reference point (Body with Earphone, Towards Ground, GSM 1900, Channel 512)

Date/Time: 4/1/2009 5:22:07 AM

GSM 1900 GPRS Towards Ground Low

Communication System: PCS 1900+GPRS(2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.45 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.272 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.30 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 0.310 W/kg
SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.139 mW/g
Maximum value of SAR (measured) = 0.254 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.30 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 0.332 W/kg
SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.123 mW/g
Maximum value of SAR (measured) = 0.260 mW/g

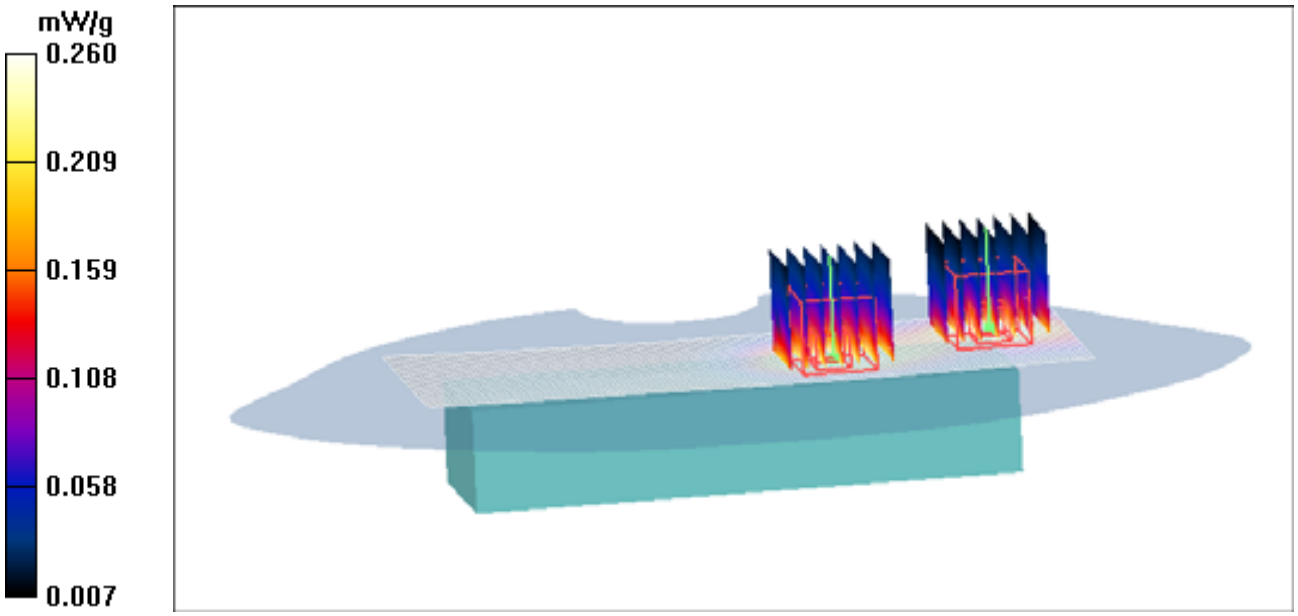
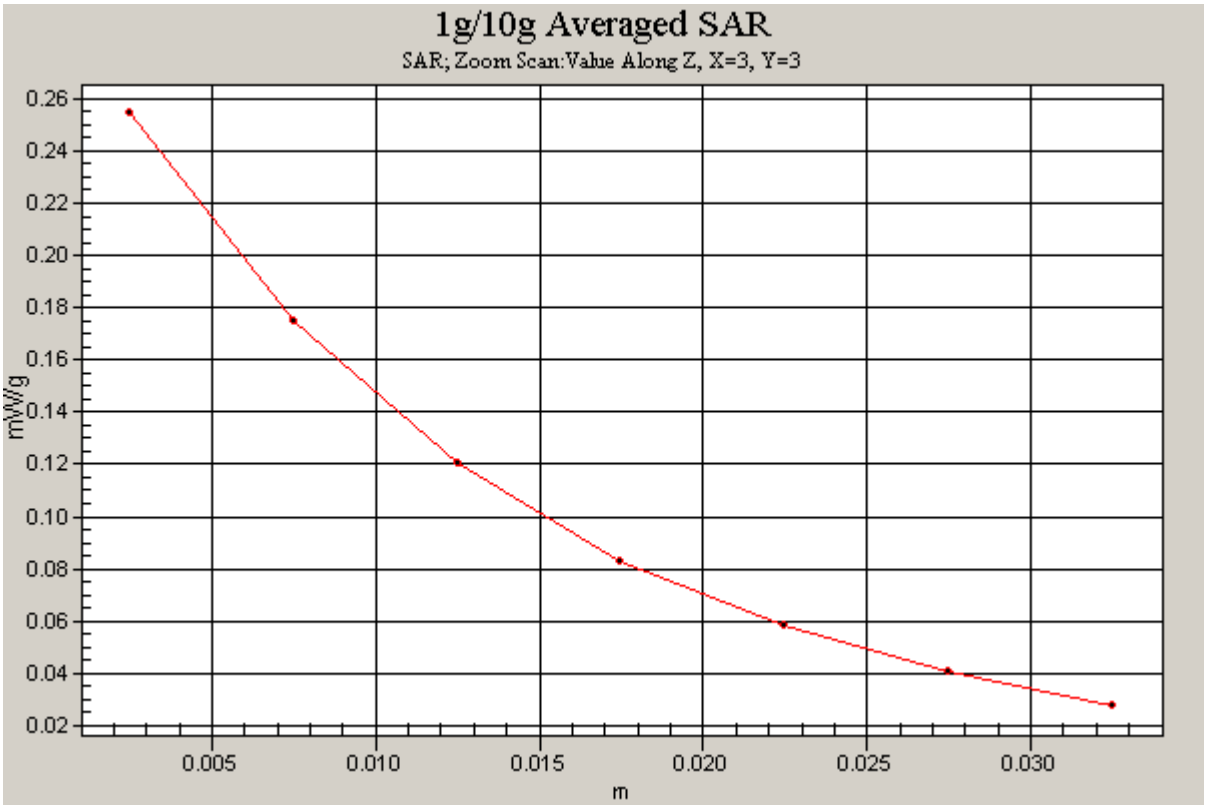


Figure 61 Body, Towards Ground, GSM 1900 GPRS, Channel 512



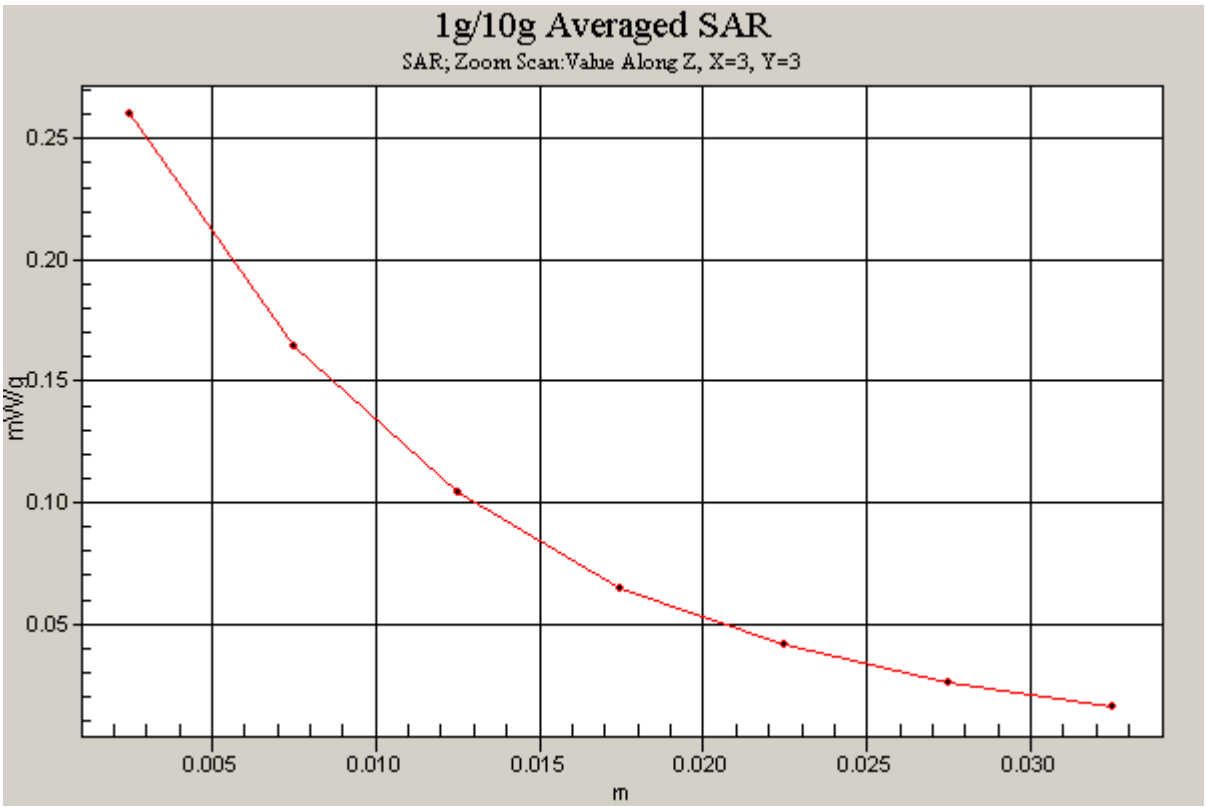


Figure 62 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 GPRS, Channel 512)

Date/Time: 4/1/2009 5:55:21 AM

GSM 1900 EGPRS Towards Ground Low

Communication System: PCS 1900+EGPRS(2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.45 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.092 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.82 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 0.119 W/kg
SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.045 mW/g
Maximum value of SAR (measured) = 0.095 mW/g

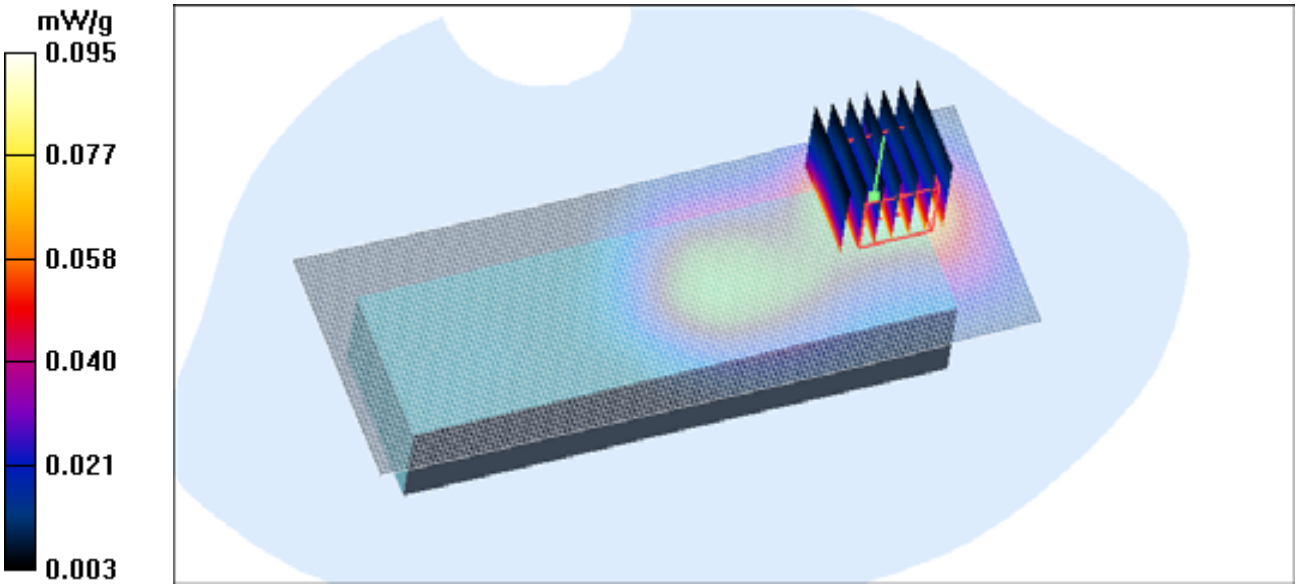


Figure 63 Body, Towards Ground, GSM 1900 EGPRS Channel 512

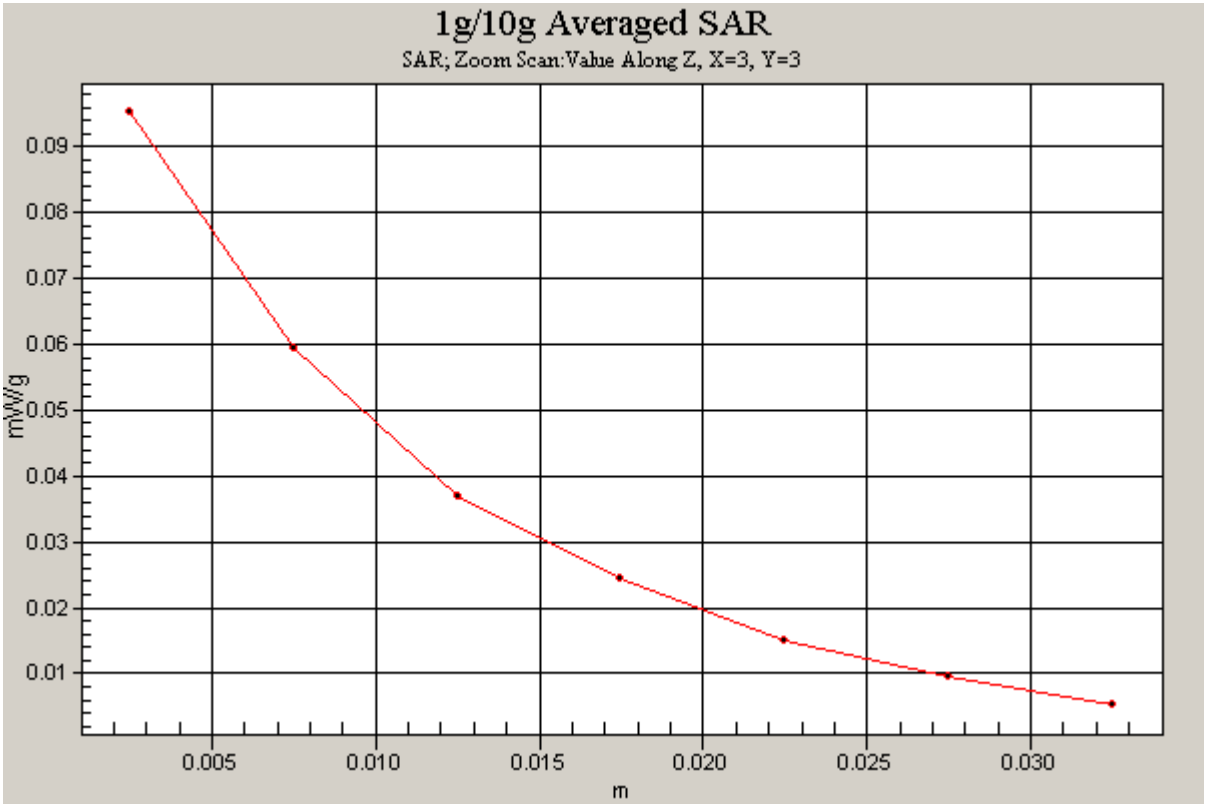


Figure 64 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 EGPRS Channel 512)

Date/Time: 4/6/2009 8:40:57 PM

WCDMA Band II Left Cheek Middle

Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.890 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.64 V/m; Power Drift = 0.167 dB
Peak SAR (extrapolated) = 0.962 W/kg
SAR(1 g) = 0.689 mW/g; SAR(10 g) = 0.432 mW/g
Maximum value of SAR (measured) = 0.811 mW/g

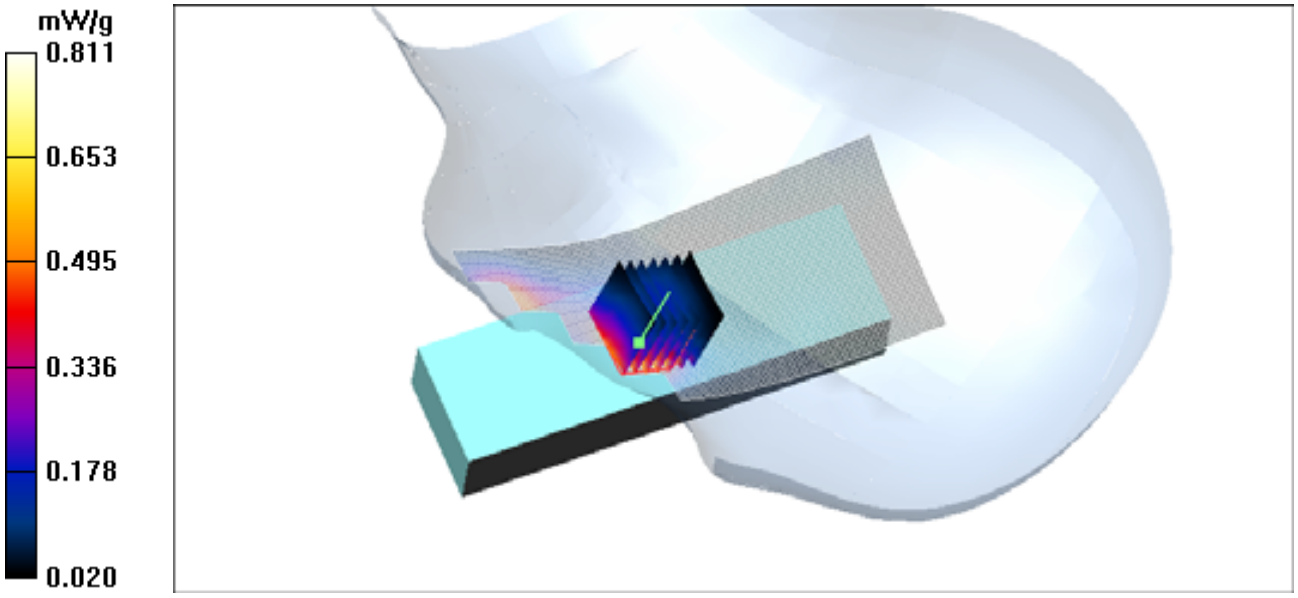


Figure 65 Left Hand Touch Cheek WCDMA Band II Channel 9400

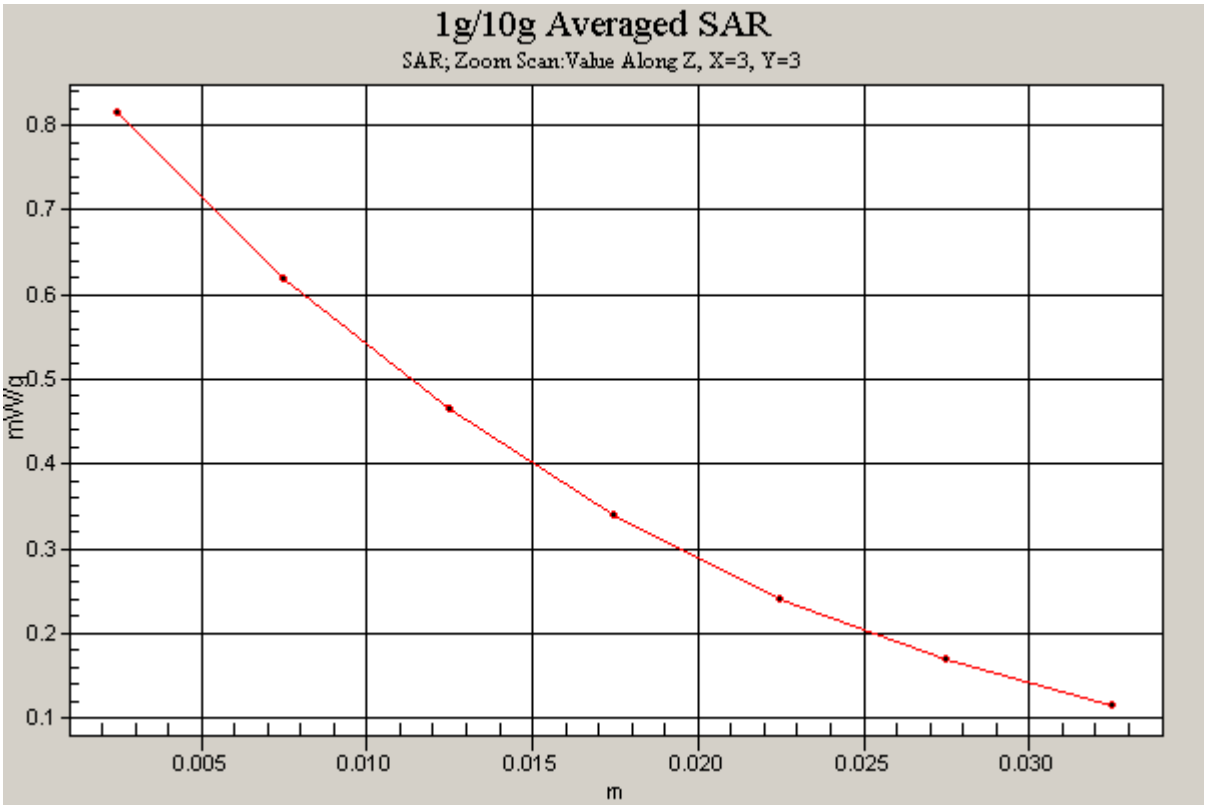


Figure 66 Z-Scan at power reference point (Left Hand Touch Cheek WCDMA Band II Channel 9400)

Date/Time: 4/6/2009 6:14:50 PM

WCDMA Band II Left Tilt Middle

Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.134 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.38 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 0.152 W/kg
SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.120 mW/g

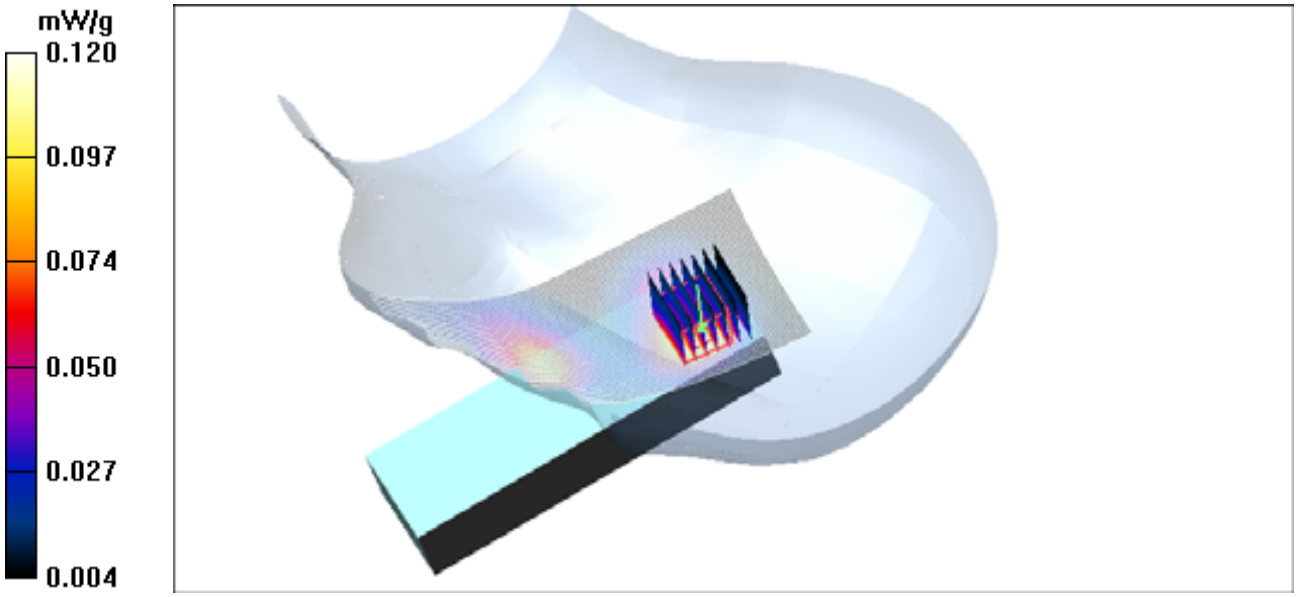


Figure 67 Left Hand Tilt 15°Open WCDMA Band II Channel 9400

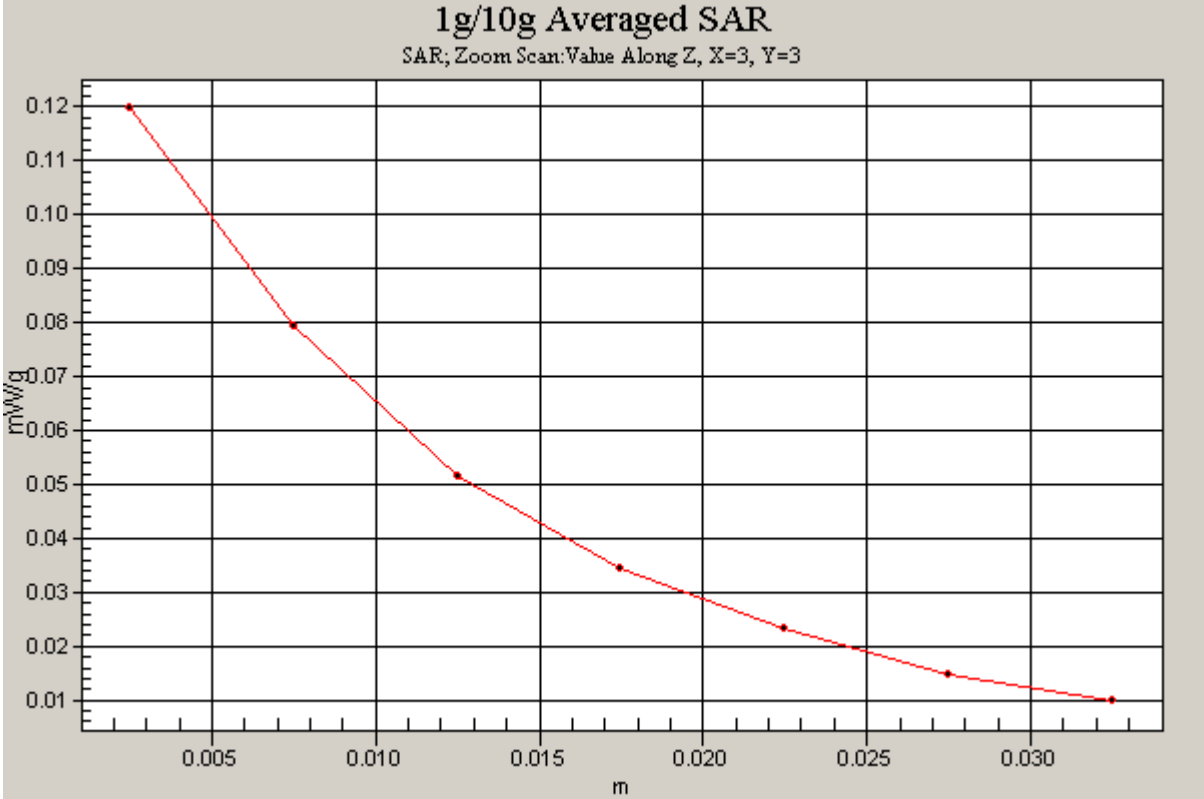


Figure 68 Z-Scan at power reference point (Left Hand Tilt 15°Open WCDMA Band II Channel 9400)

Date/Time: 4/6/2009 7:33:59 PM

WCDMA Band II Right Cheek High

Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.26 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.25 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.950 mW/g; SAR(10 g) = 0.530 mW/g
Maximum value of SAR (measured) = 1.20 mW/g

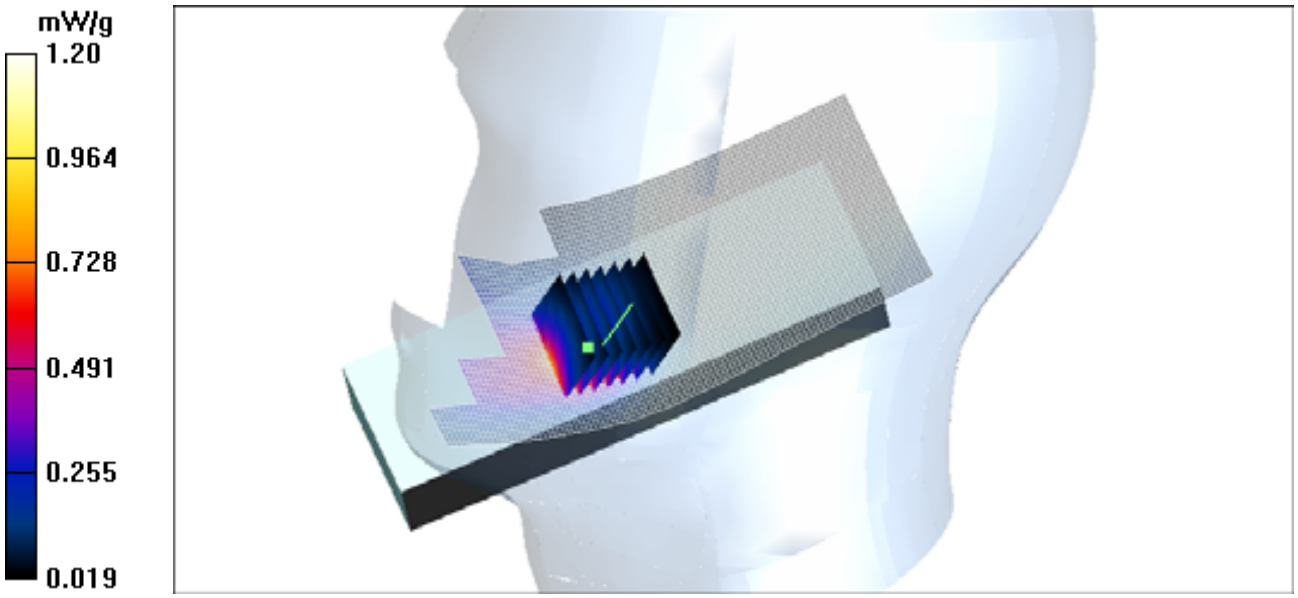


Figure 69 Right Hand Touch Cheek WCDMA Band II Channel 9538

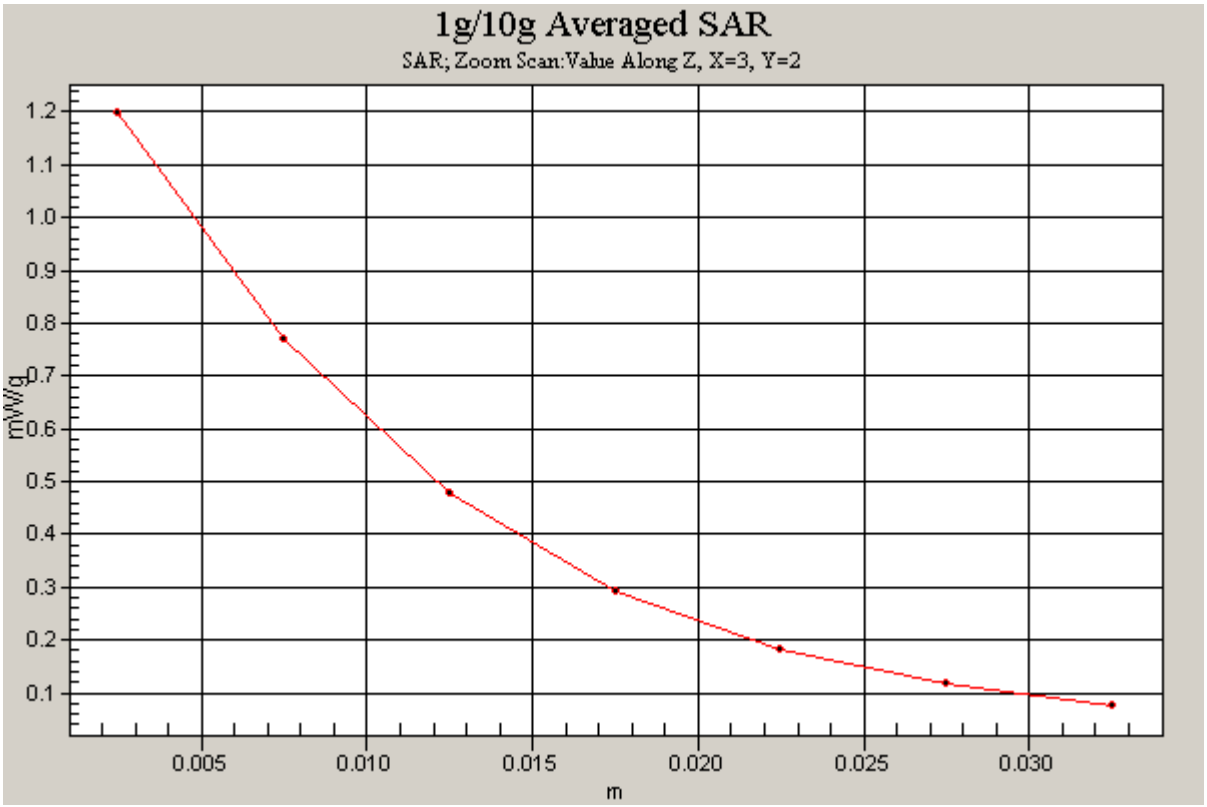


Figure 70 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band II Channel 9538)

Date/Time: 4/6/2009 7:13:50 PM

WCDMA Band II Right Cheek Middle

Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.27 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.10 V/m; Power Drift = 0.148 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.559 mW/g
Maximum value of SAR (measured) = 1.23 mW/g

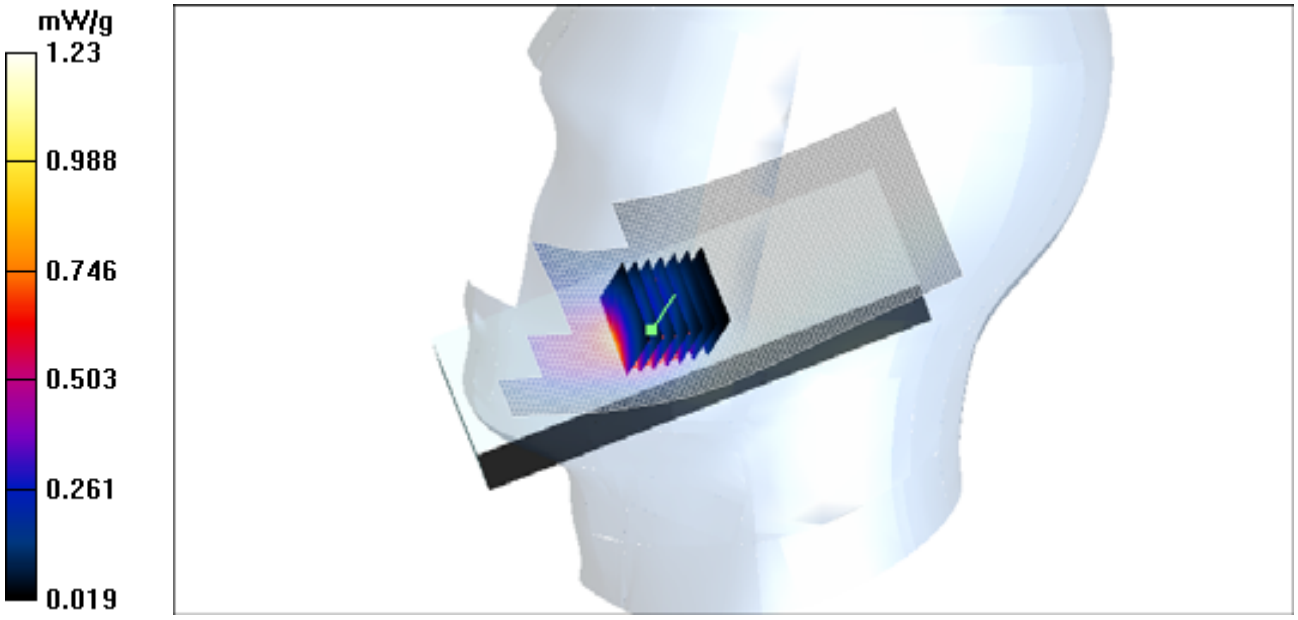


Figure 71 Right Hand Touch Cheek WCDMA Band II Channel 9400

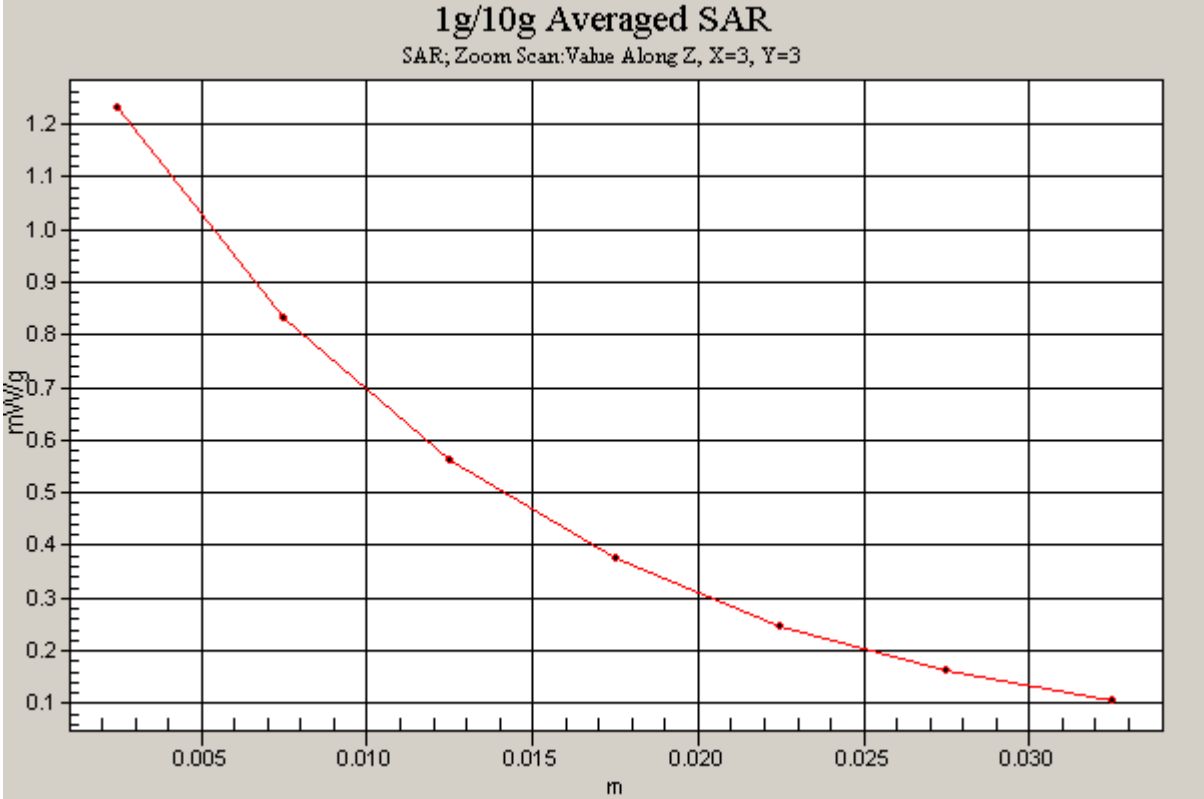


Figure 72 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band II Channel 9400)

Date/Time: 4/6/2009 7:54:11 PM

WCDMA Band II Right Cheek Low

Communication System: WCDMA Band II; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.38 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.37 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.44 V/m; Power Drift = -0.194 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.604 mW/g
Maximum value of SAR (measured) = 1.28 mW/g

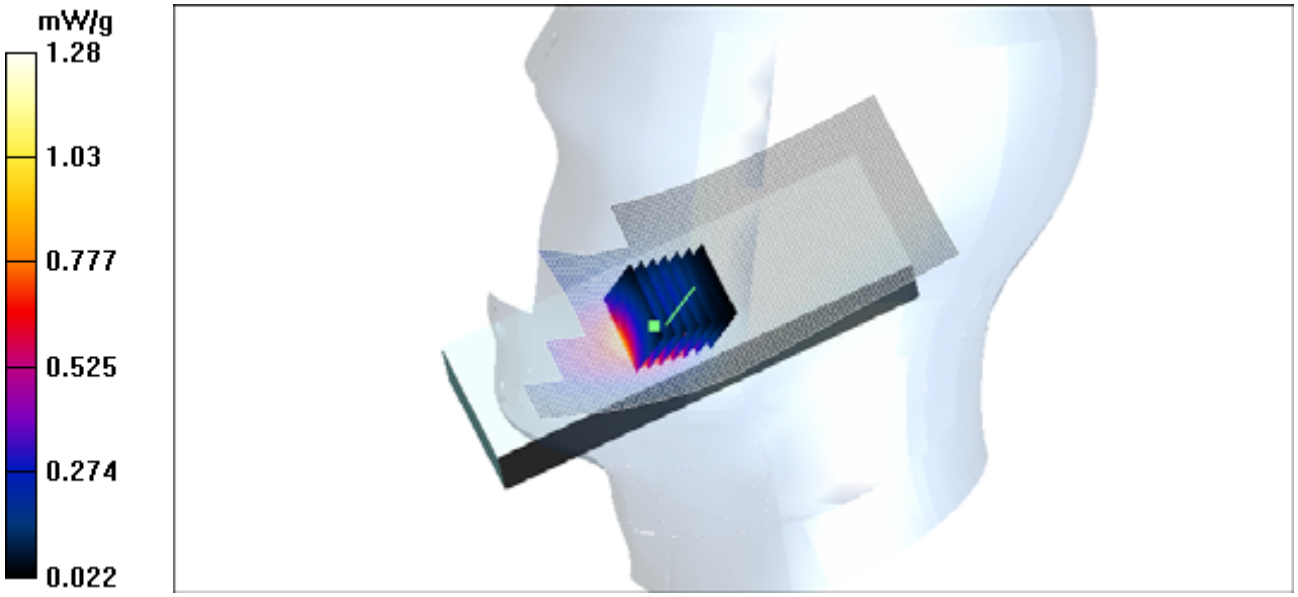


Figure 73 Right Hand Touch Cheek WCDMA Band II Channel 9262

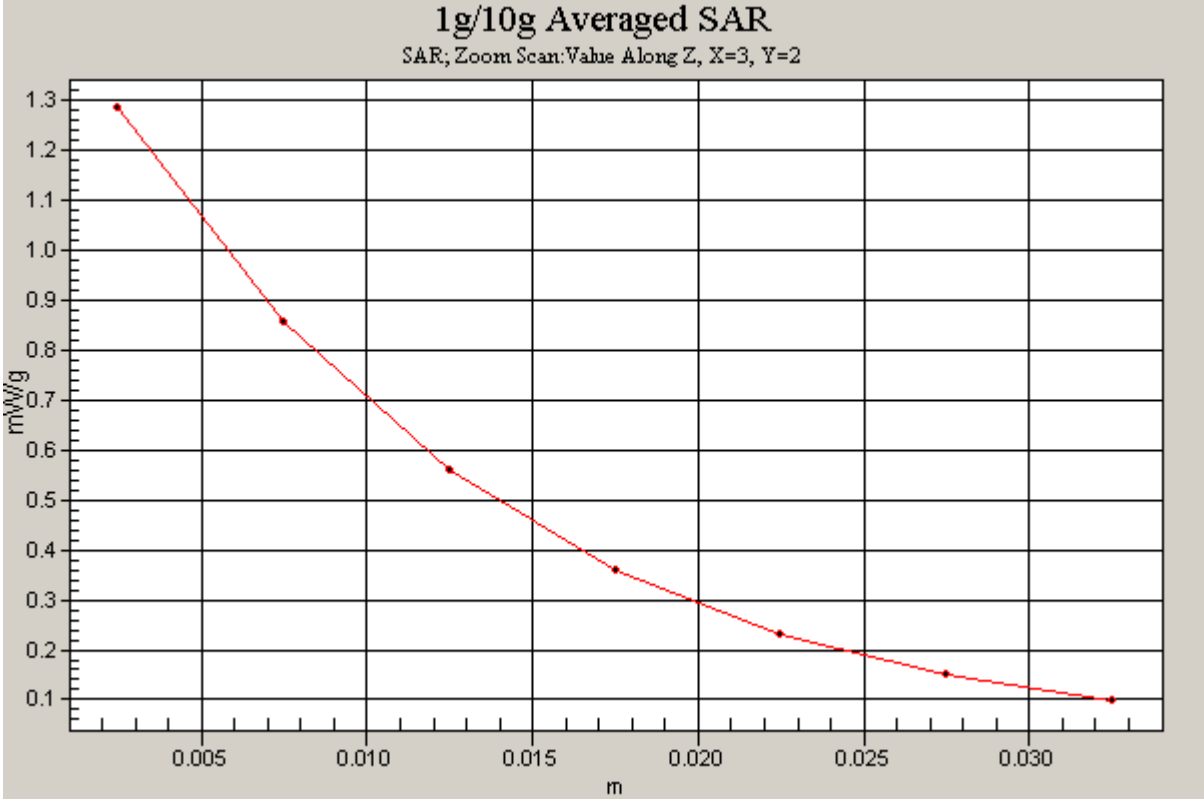


Figure 74 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band II Channel 9262)

Date/Time: 4/6/2009 8:17:00 PM

WCDMA Band II Right Tilt Middle

Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.35, 7.35, 7.35); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.100 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.75 V/m; Power Drift = -0.190 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.044 mW/g
Maximum value of SAR (measured) = 0.085 mW/g

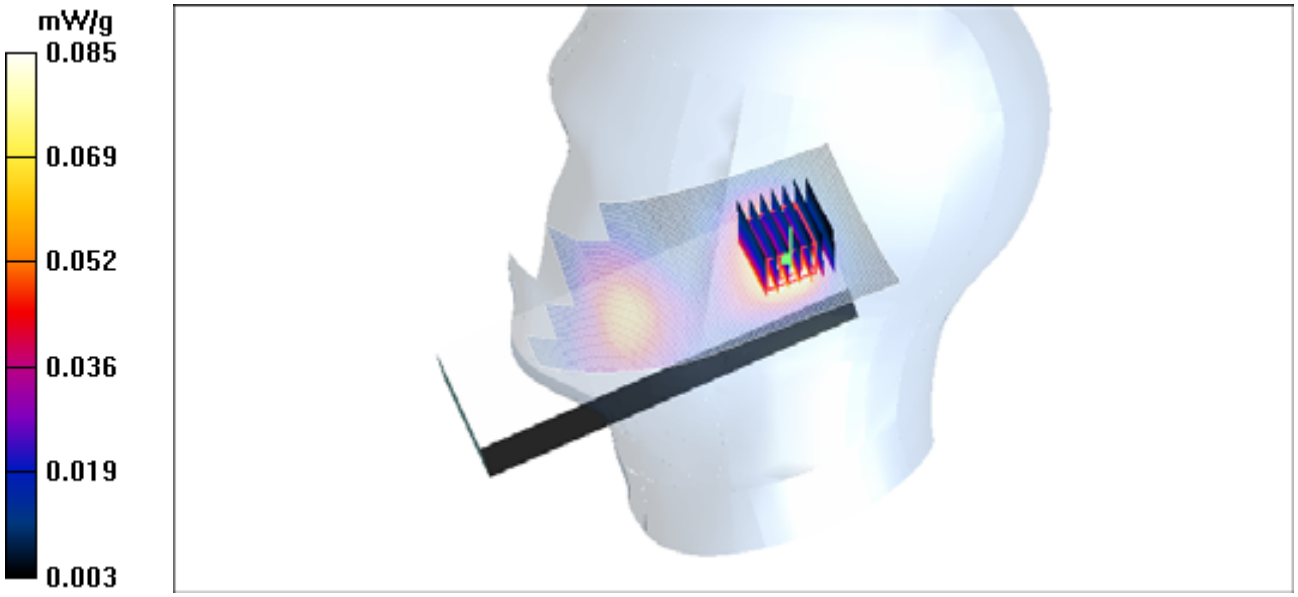


Figure 75 Right Hand Tilt 15°Open WCDMA Band II Channel 9400

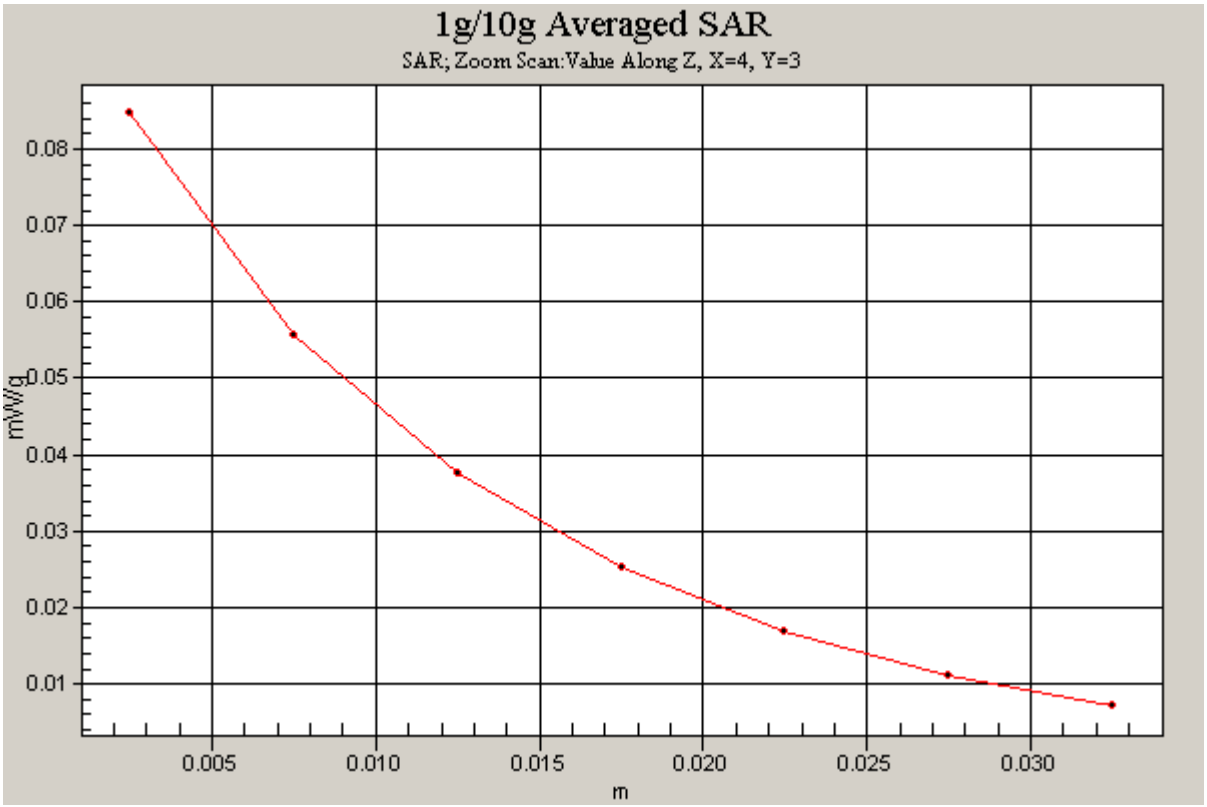


Figure 76 Z-Scan at power reference point (Right Hand Tilt 15°Open WCDMA Band II Channel 9400)

Date/Time: 3/29/2009 7:09:01 AM

WCDMA Band II Towards Ground High

Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.51 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:21.7°C Liqiud Temperature: 21.4°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.256 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.13 V/m; Power Drift = 0.076 dB
Peak SAR (extrapolated) = 0.322 W/kg
SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.117 mW/g
Maximum value of SAR (measured) = 0.251 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.13 V/m; Power Drift = 0.076 dB
Peak SAR (extrapolated) = 0.238 W/kg
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.194 mW/g

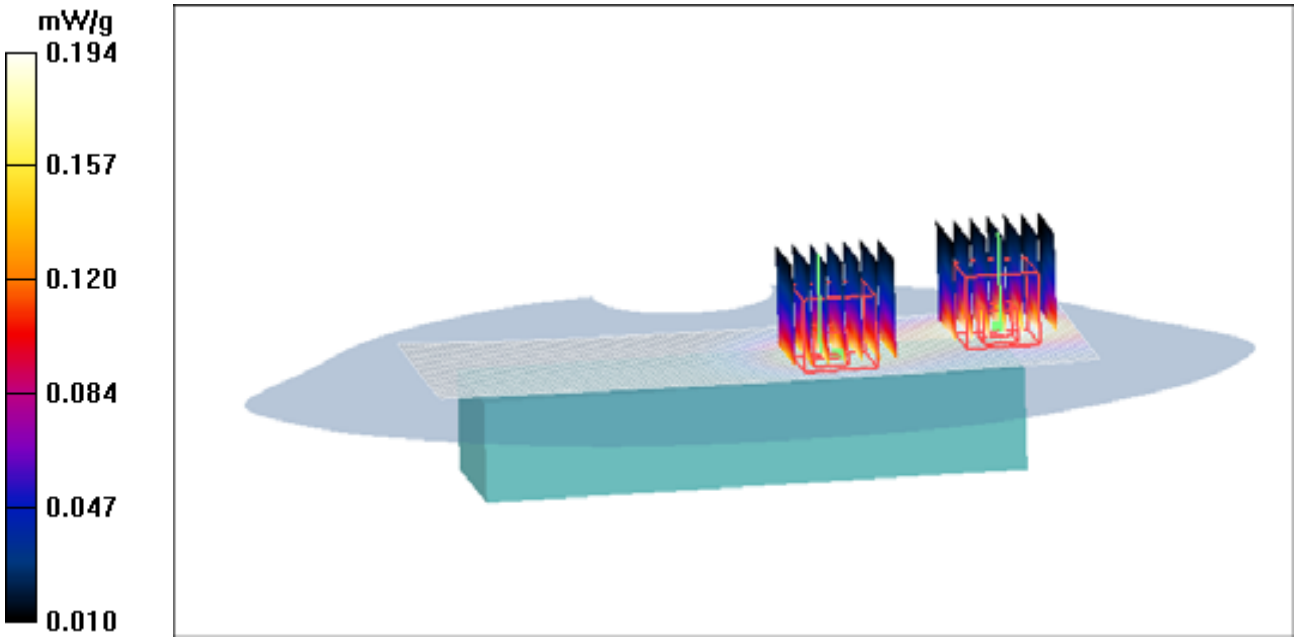
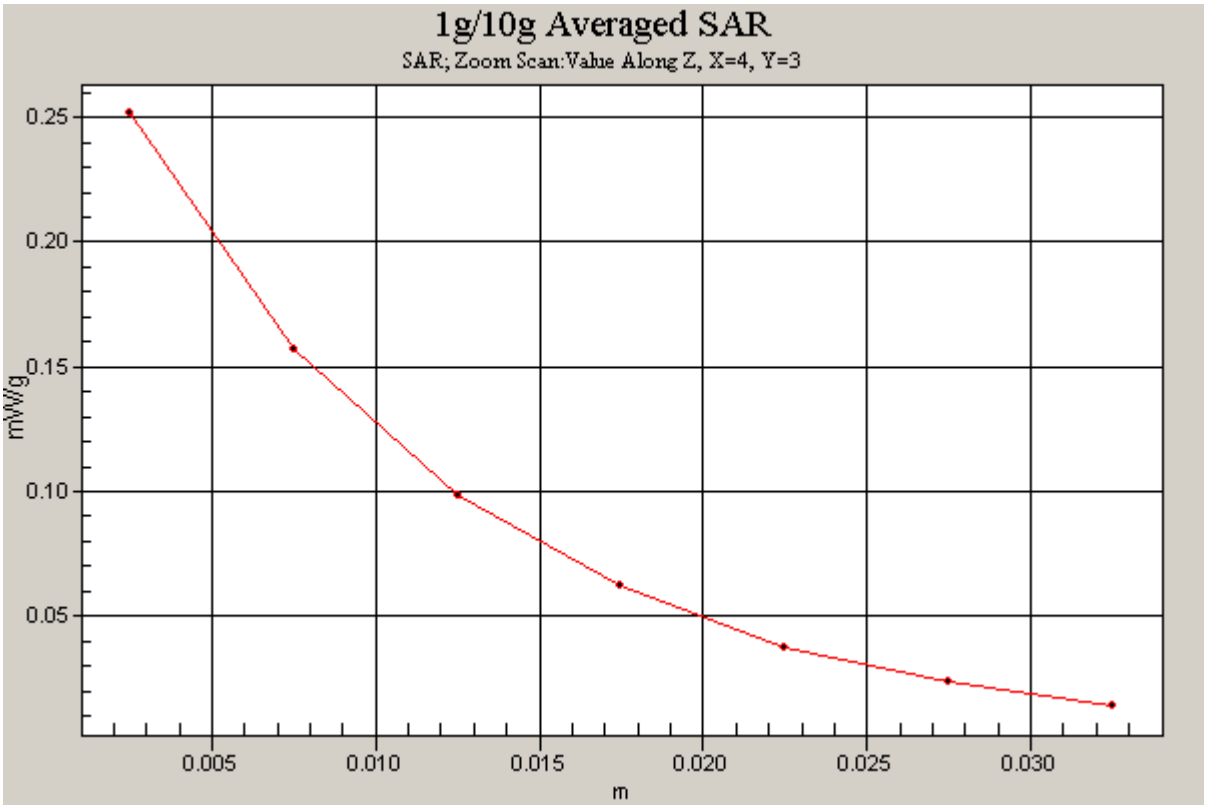


Figure 77 Body, Towards Ground, WCDMA Band II Channel 9538



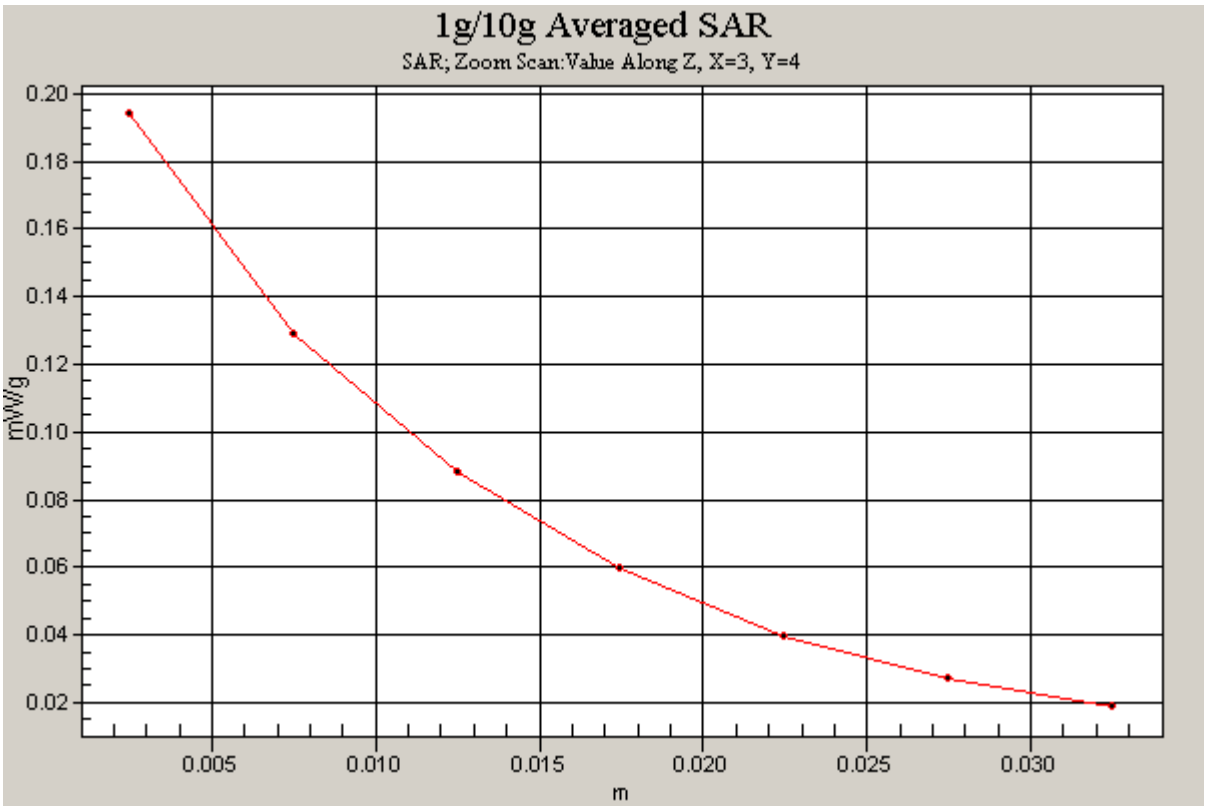


Figure 78 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band II Channel 9538)

Date/Time: 3/29/2009 6:36:41 AM

WCDMA Band II Towards Ground Middle

Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.49 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.212 mW/g
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.03 V/m; Power Drift = 0.058 dB
Peak SAR (extrapolated) = 0.274 W/kg
SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.102 mW/g
Maximum value of SAR (measured) = 0.214 mW/g
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.03 V/m; Power Drift = 0.058 dB
Peak SAR (extrapolated) = 0.231 W/kg
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.189 mW/g

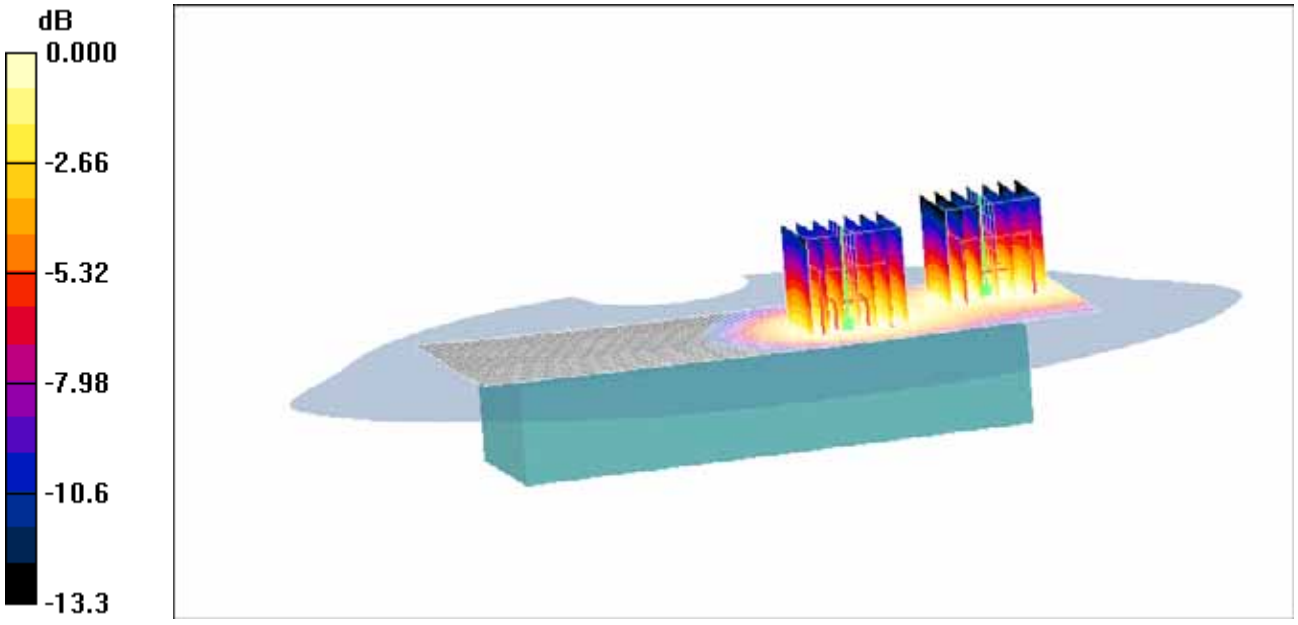
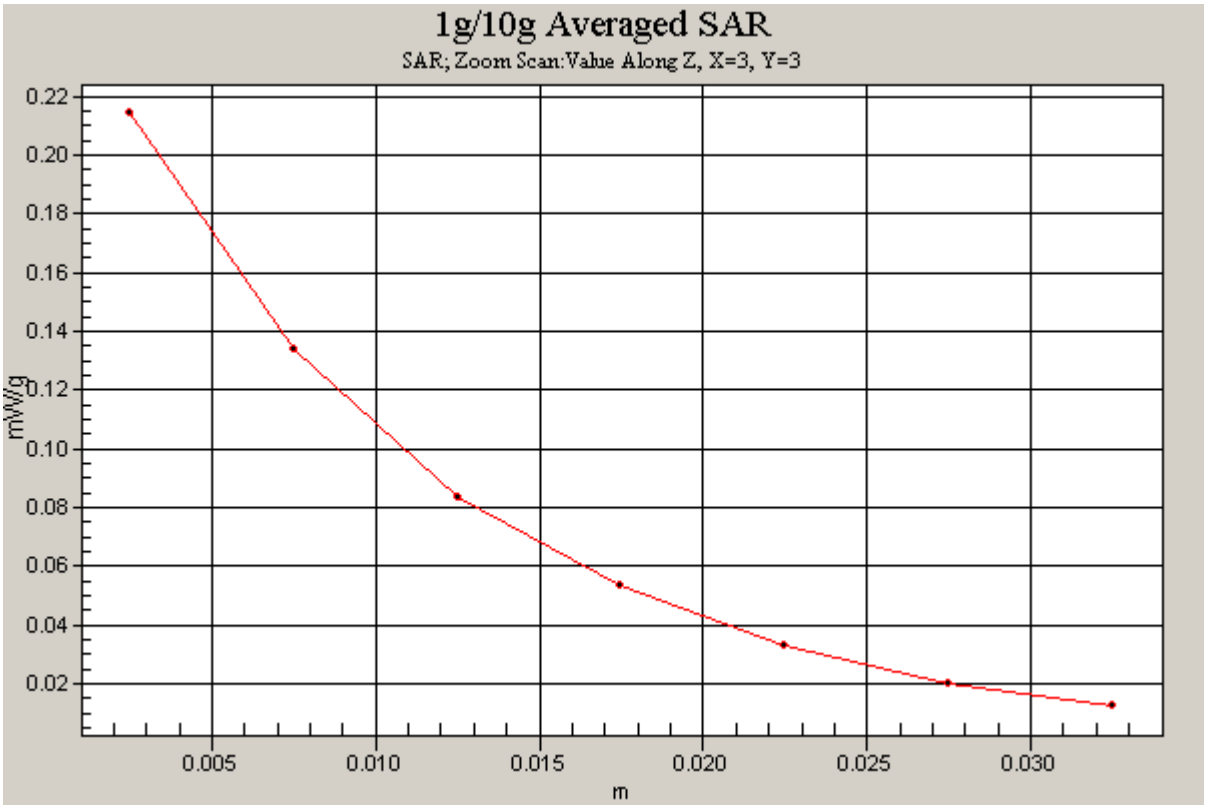


Figure 79 Body, Towards Ground, WCDMA Band II Channel 9400



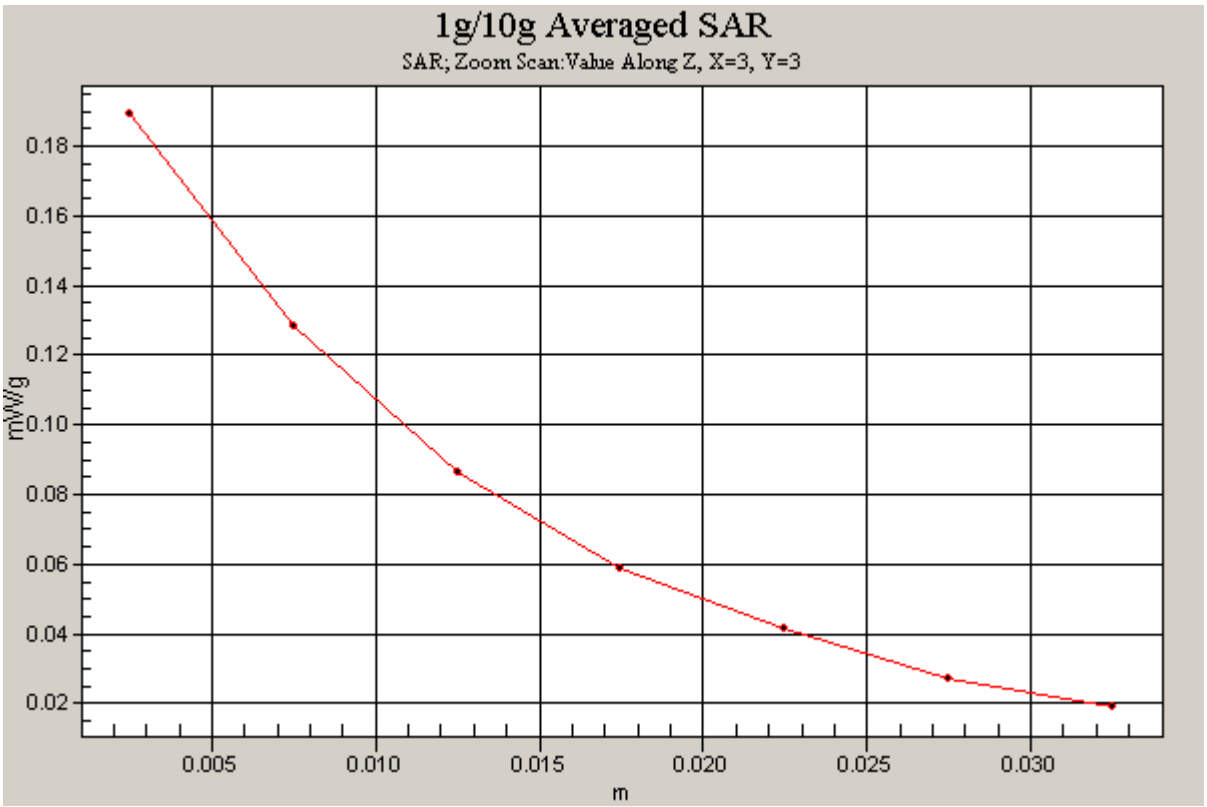


Figure 80 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band II Channel 9400)

Date/Time: 3/29/2009 7:45:08 AM

WCDMA Band II Towards Ground Low

Communication System: WCDMA Band II; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.45 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.219 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.47 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 0.246 W/kg
SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.110 mW/g
Maximum value of SAR (measured) = 0.200 mW/g
Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.47 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.093 mW/g
Maximum value of SAR (measured) = 0.196 mW/g

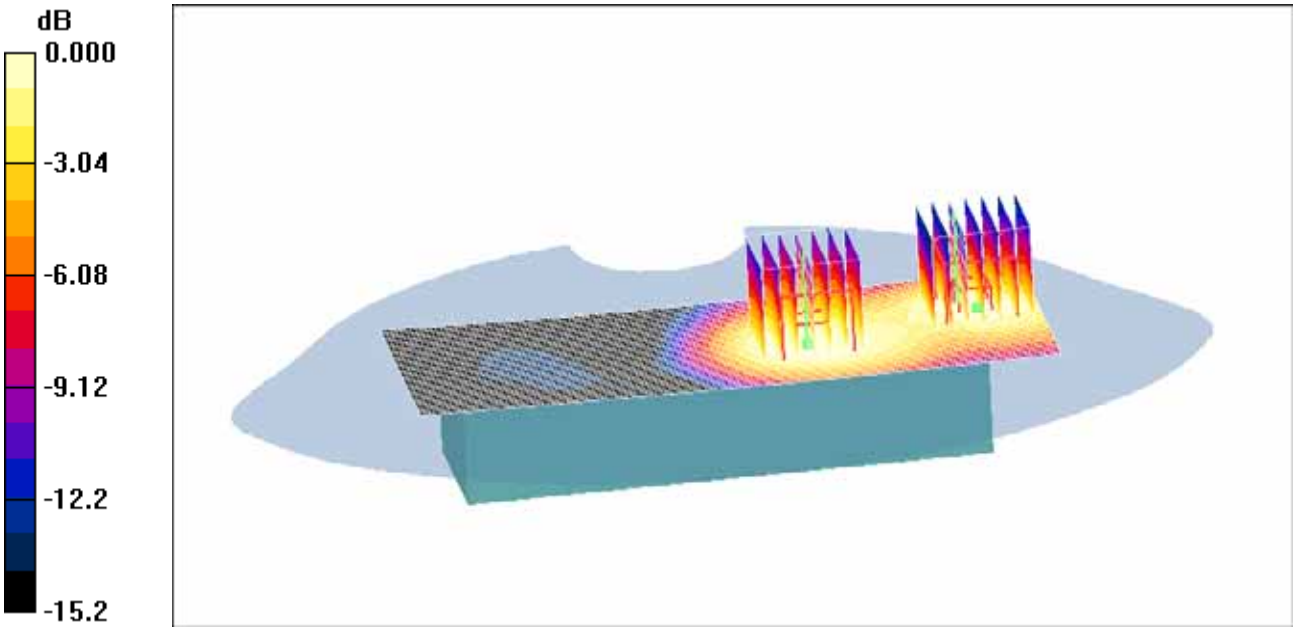
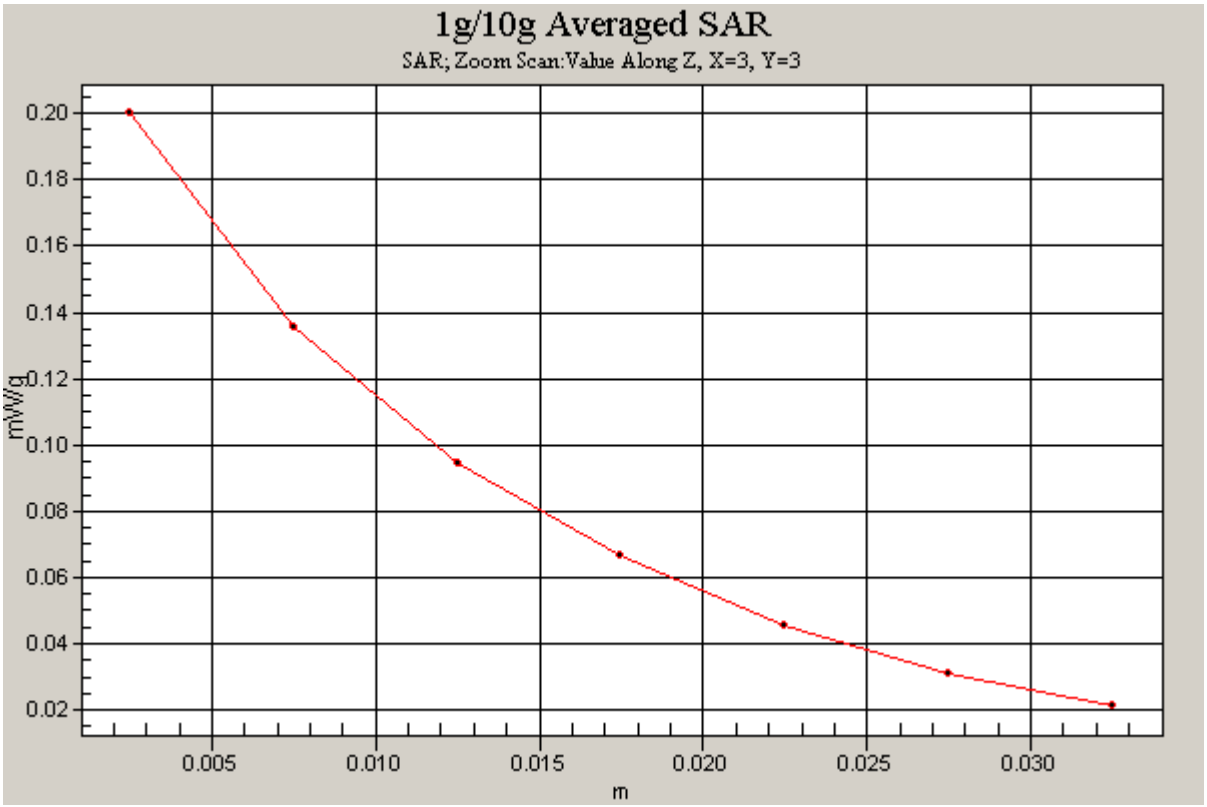


Figure 81 Body, Towards Ground, WCDMA Band II Channel 9262



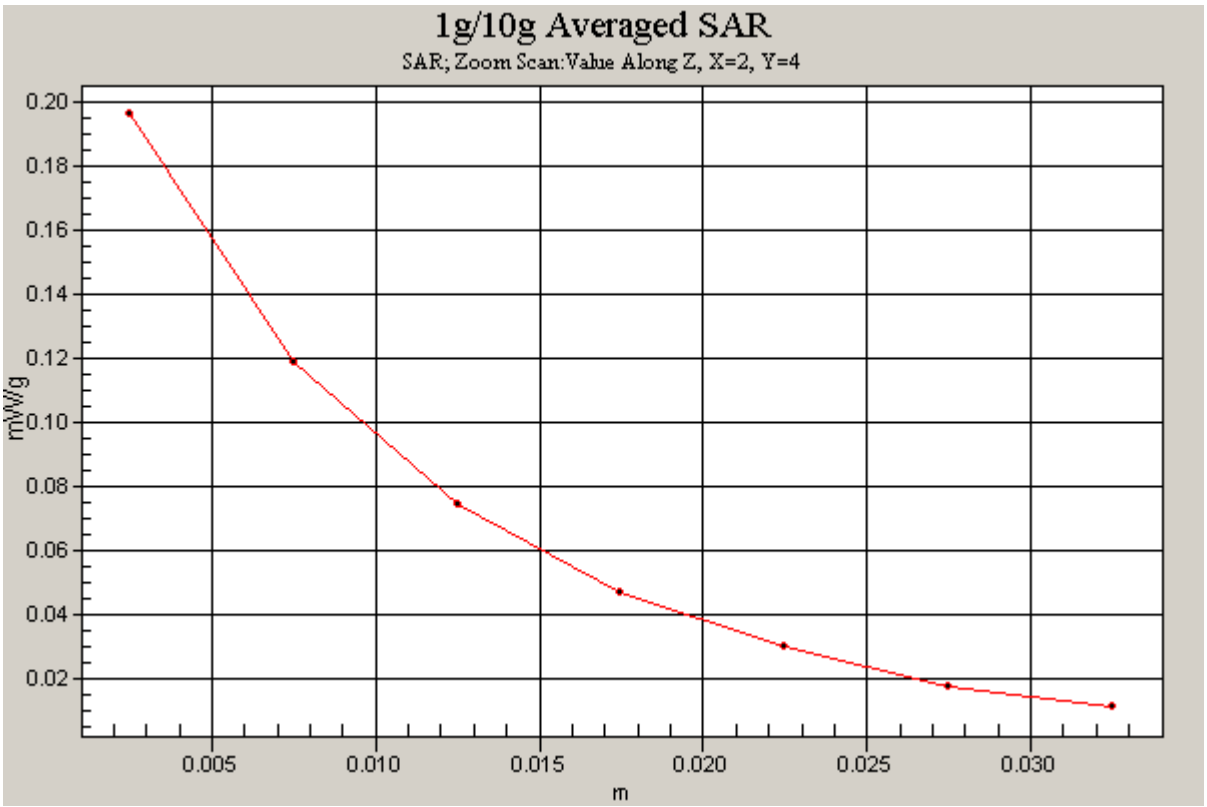


Figure 82 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band II Channel 9262)

Date/Time: 3/29/2009 10:32:24 AM

WCDMA Band II Earphone Towards Ground Low

Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.51 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(7.45, 7.45, 7.45); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.267 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.29 V/m; Power Drift = -0.112 dB
Peak SAR (extrapolated) = 0.323 W/kg
SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.115 mW/g
Maximum value of SAR (measured) = 0.257 mW/g

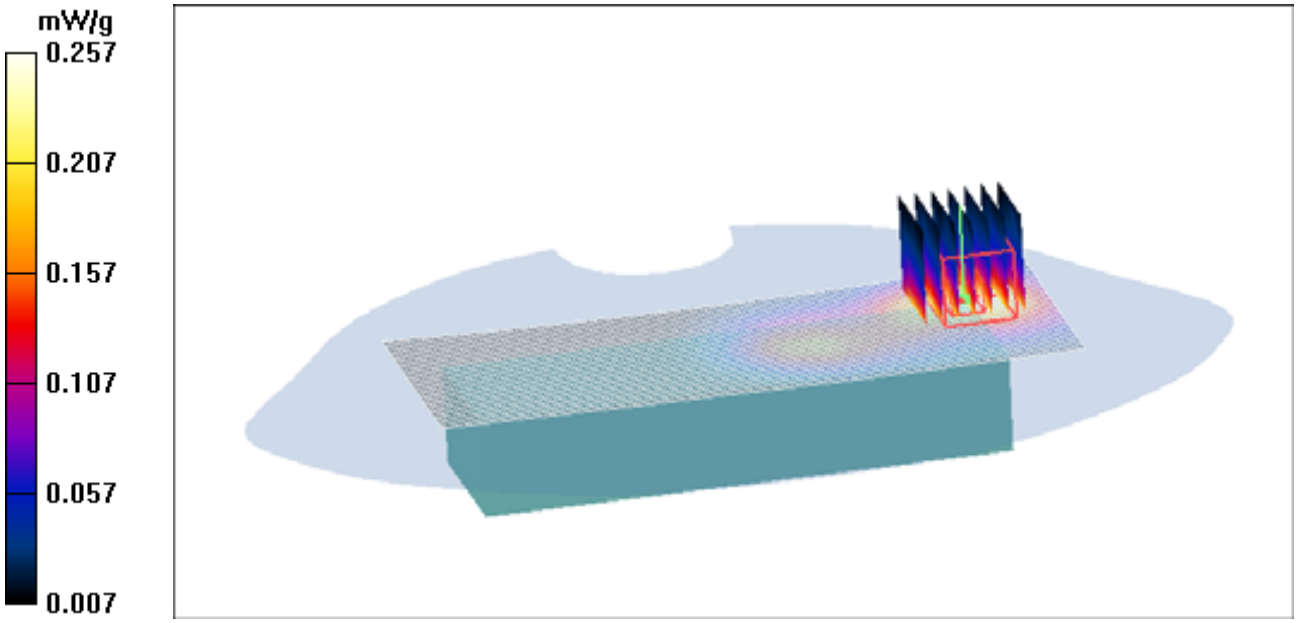


Figure 83 Body with Earphone, Towards Ground, WCDMA Band II, Channel 9400

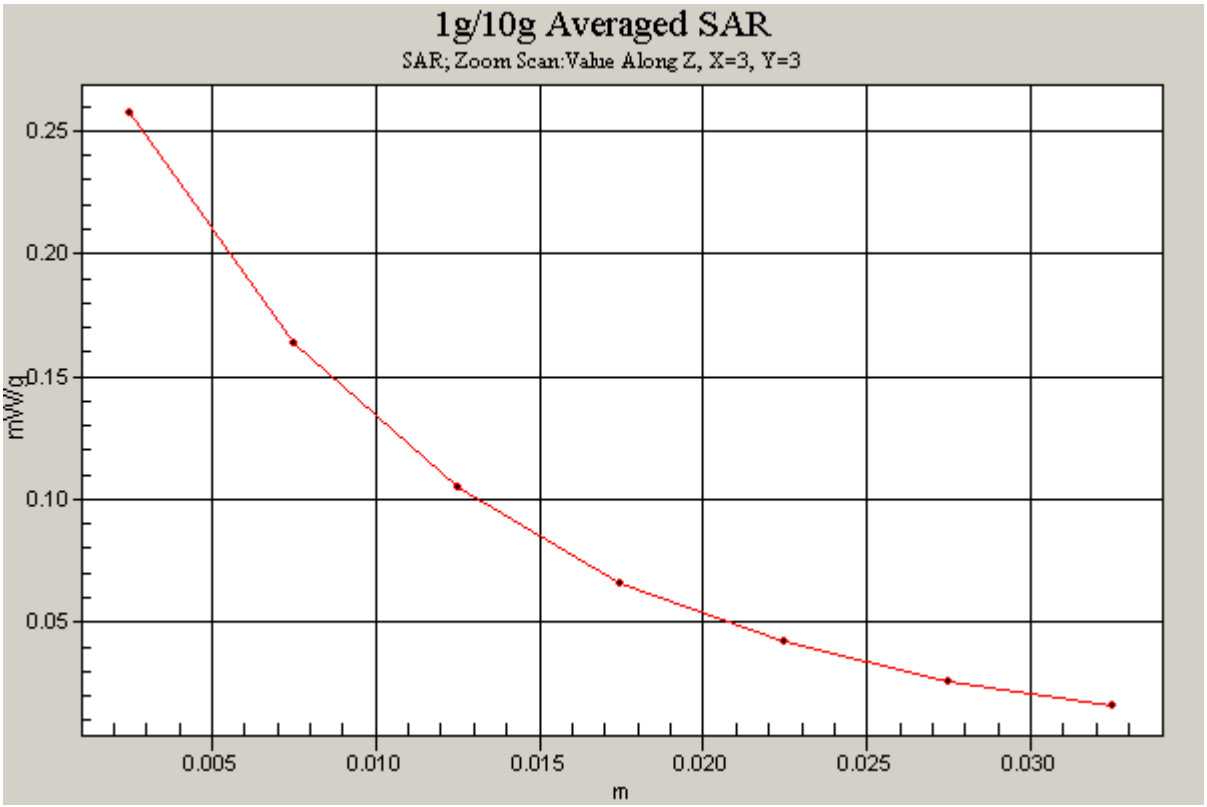


Figure 84 Z-Scan at power reference point (Body with Earphone, Towards Ground, WCDMA Band II, Channel 9400)

Date/Time: 4/7/2009 3:55:40 AM

WCDMA Band V Left Cheek Middle

Communication System: WCDMA Band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.934 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.362 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.13 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 0.493 W/kg
SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.209 mW/g
Maximum value of SAR (measured) = 0.399 mW/g

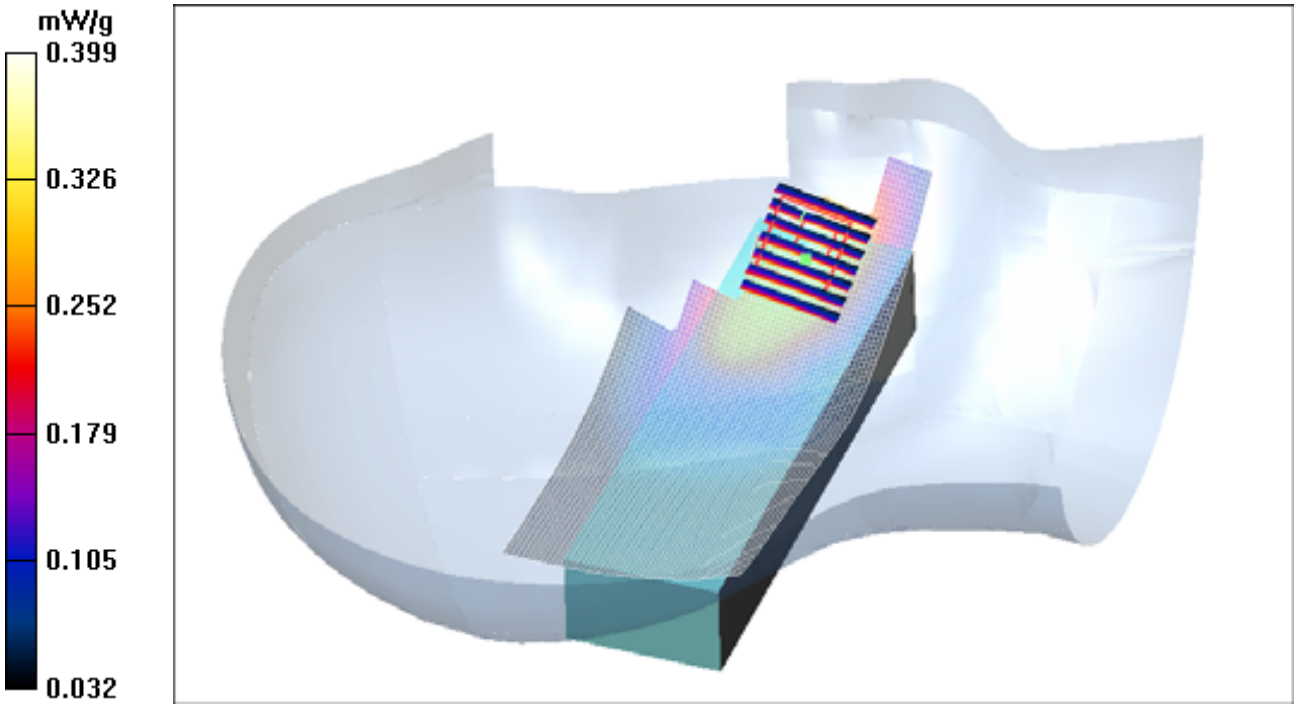


Figure 85 Left Hand Touch Cheek WCDMA Band V Channel 4182

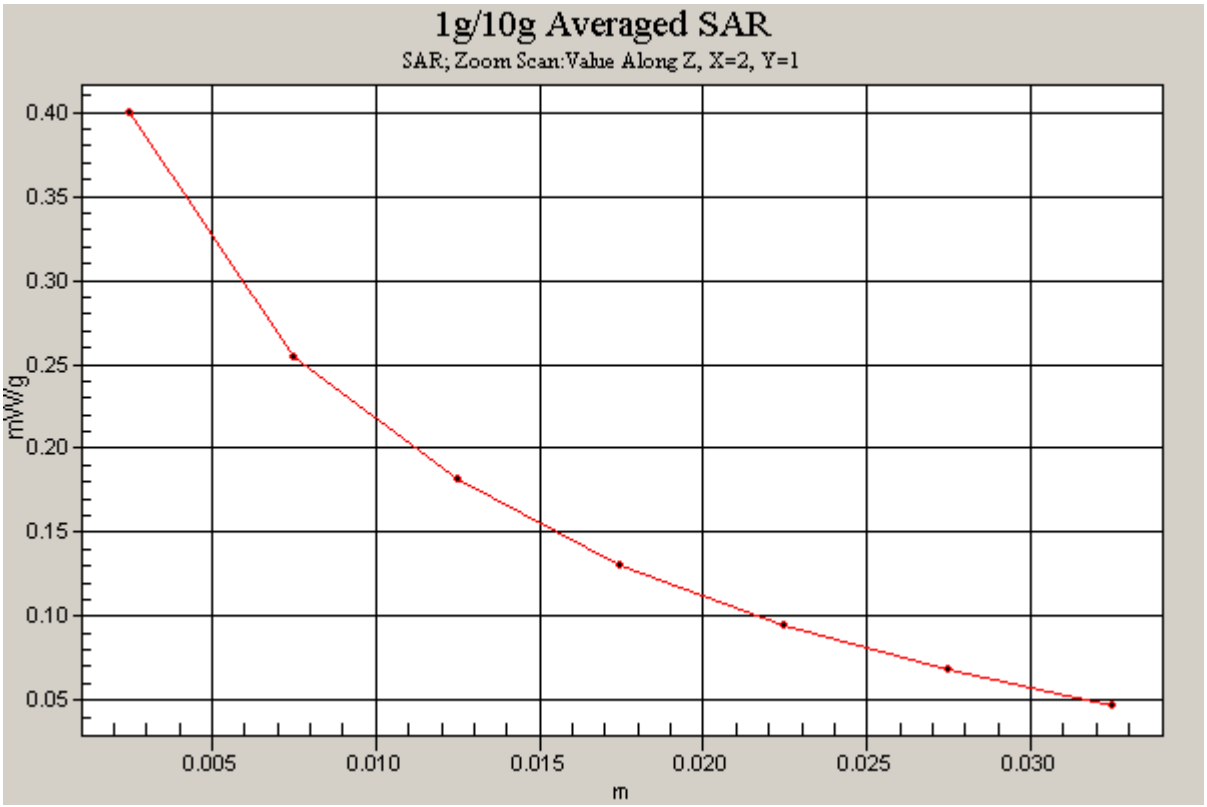


Figure 86 Z-Scan at power reference point (Left Hand Touch Cheek WCDMA Band V Channel 4182)

Date/Time: 4/7/2009 4:16:45 AM

WCDMA Band V Left Tilt Middle

Communication System: WCDMA Band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.934 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Left Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.143 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.02 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.160 W/kg
SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.096 mW/g
Maximum value of SAR (measured) = 0.144 mW/g

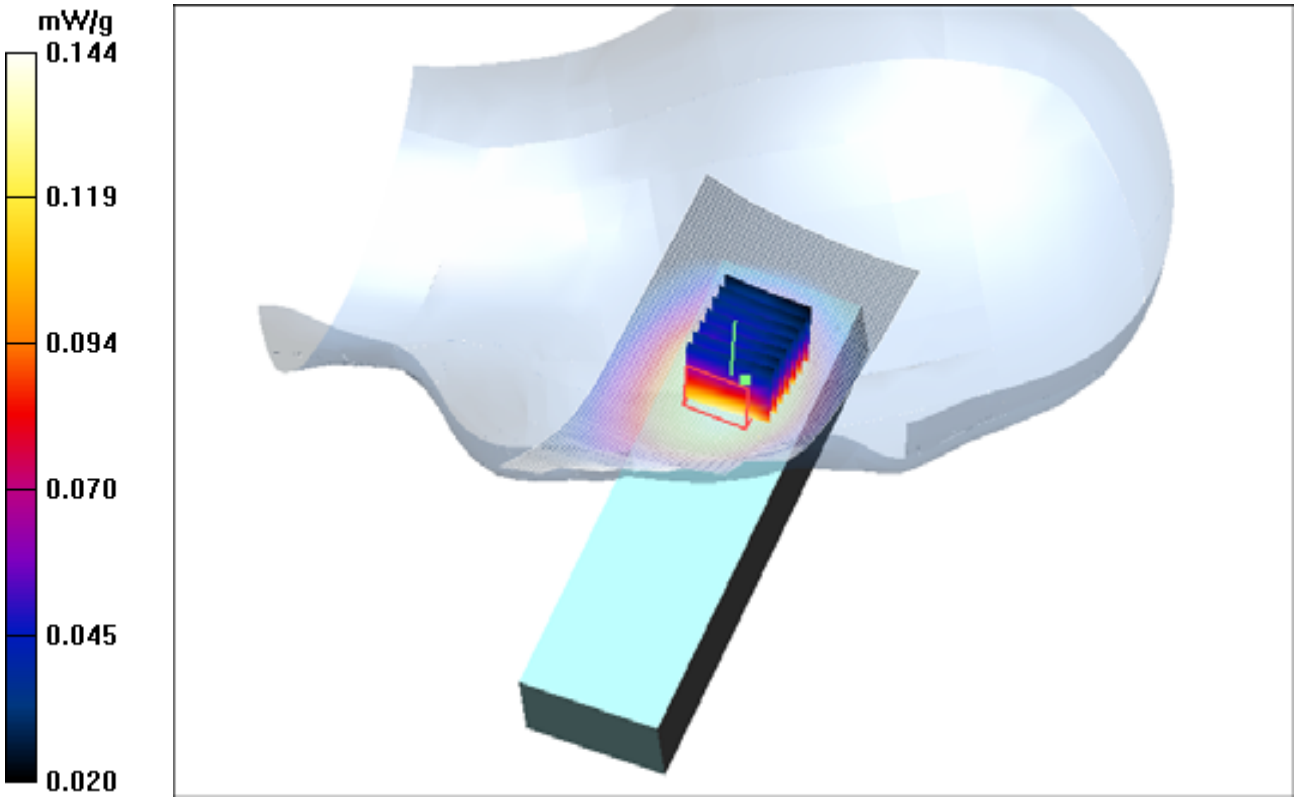


Figure 87 Left Hand Tilt 15° WCDMA Band V Channel 4182

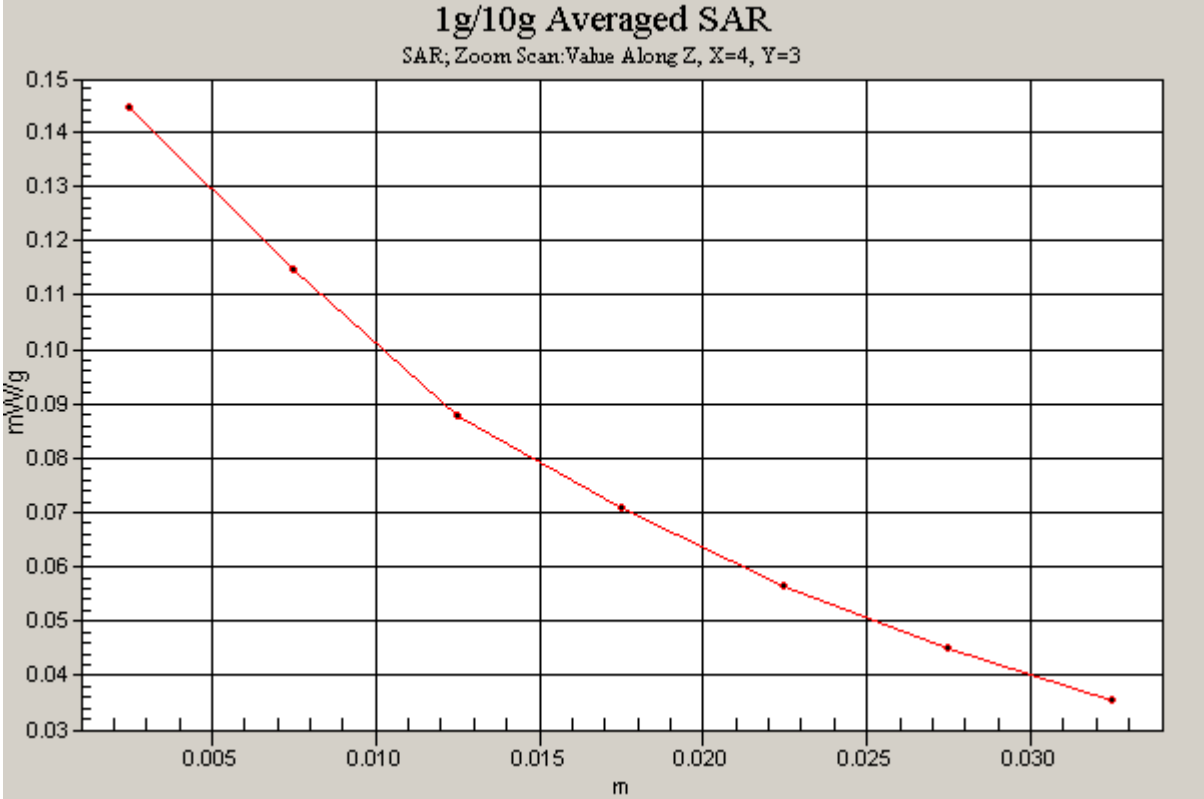


Figure 88 Z-Scan at power reference point (Left Hand Tilt 15° WCDMA Band V Channel 4182)

Date/Time: 4/7/2009 4:39:18 AM

WCDMA Band V Right Cheek High

Communication System: WCDMA Band V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 847 MHz; σ = 0.944 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.416 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.57 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.559 W/kg
SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.267 mW/g
Maximum value of SAR (measured) = 0.451 mW/g

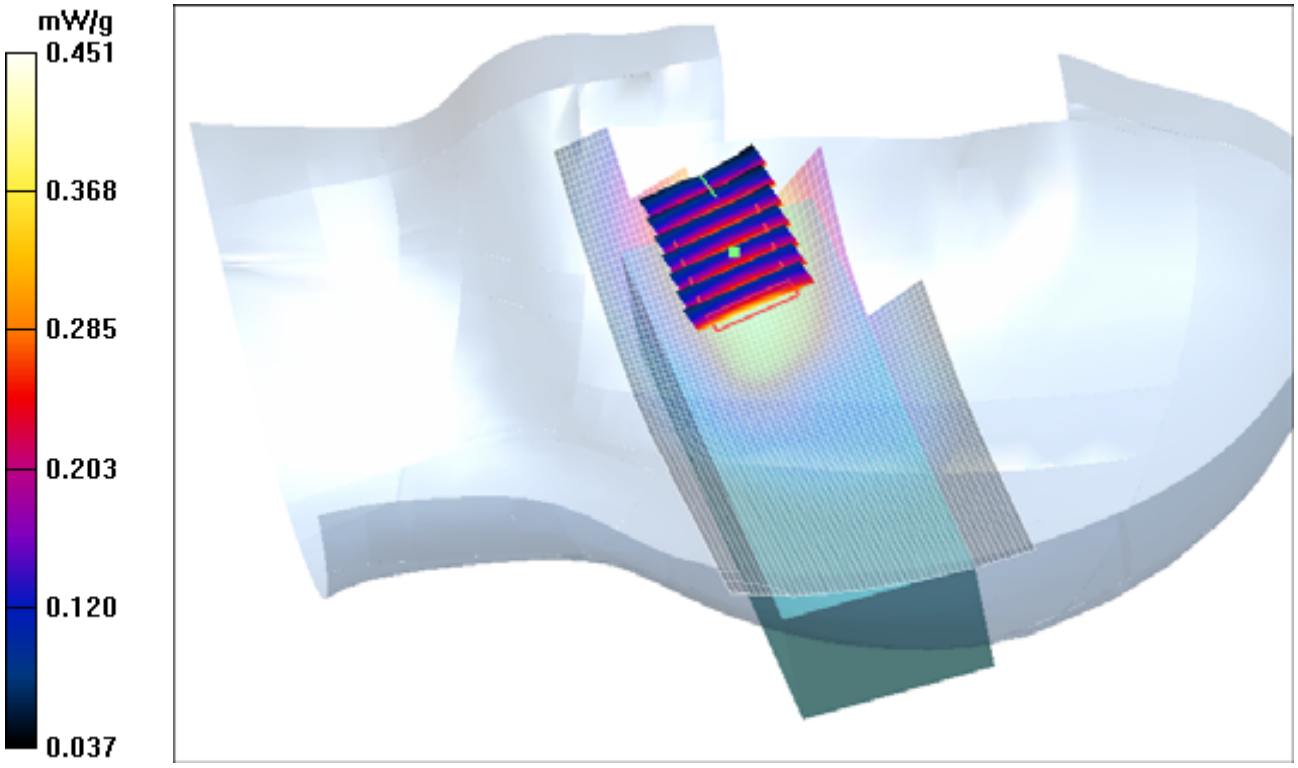


Figure 89 Right Hand Touch Cheek WCDMA Band V Channel 4233

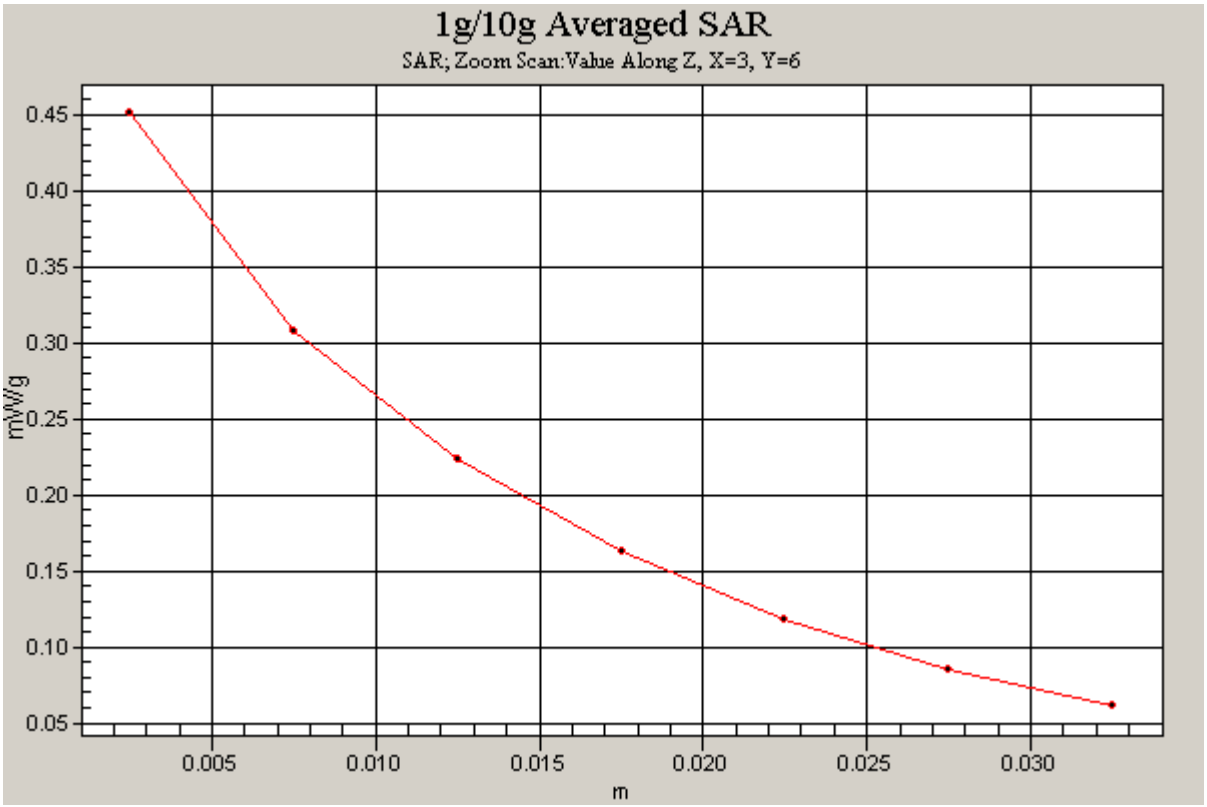


Figure 90 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4233)

Date/Time: 4/7/2009 12:15:51 AM

WCDMA Band V Right Cheek Middle

Communication System: WCDMA Band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.934 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.403 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.38 V/m; Power Drift = 0.188 dB
Peak SAR (extrapolated) = 0.540 W/kg
SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.238 mW/g
Maximum value of SAR (measured) = 0.405 mW/g

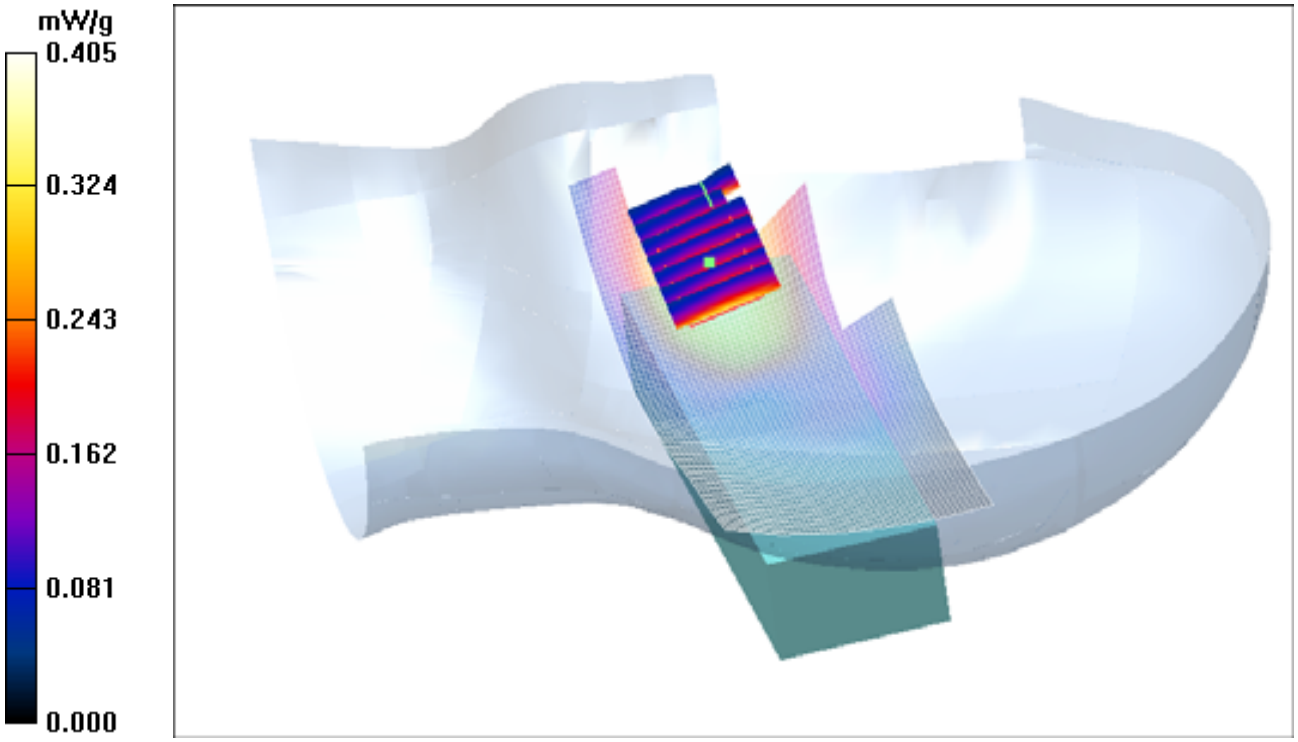


Figure 91 Right Hand Touch Cheek WCDMA Band V Channel 4182

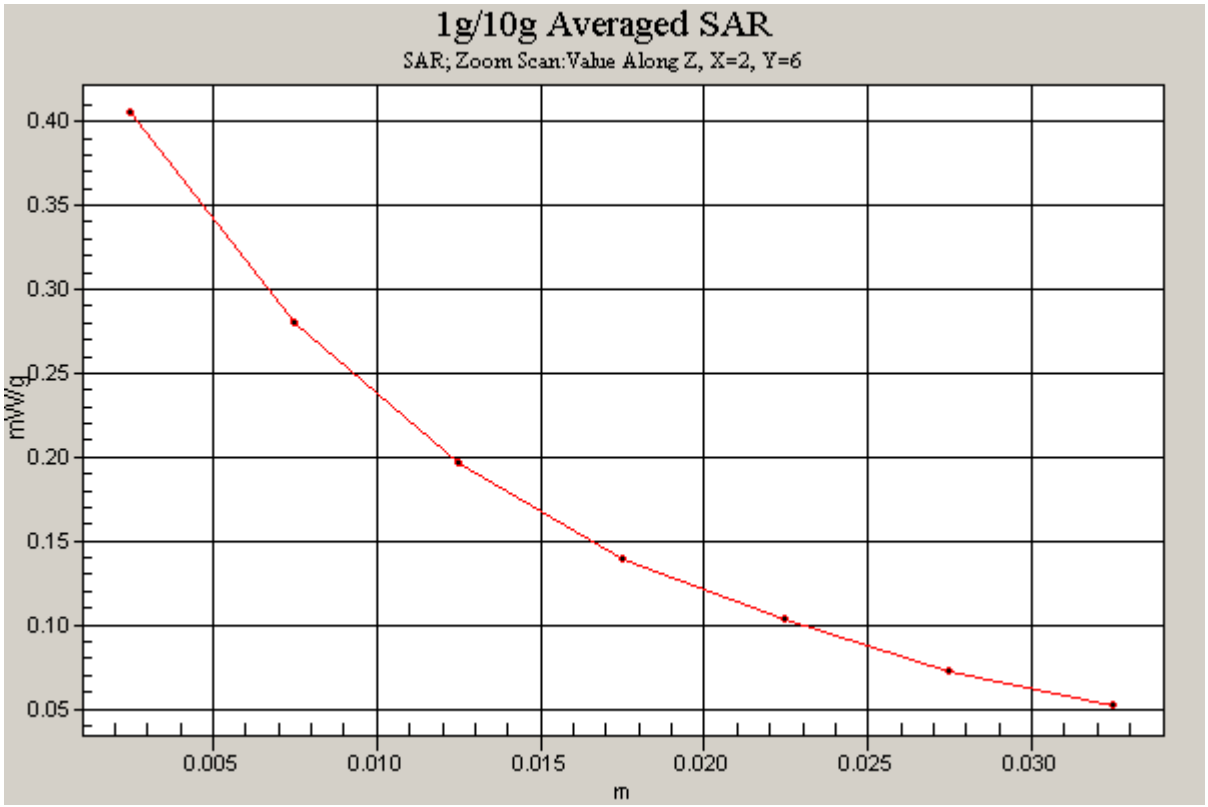


Figure 92 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4182)

Date/Time: 4/7/2009 5:08:42 AM

WCDMA Band V Right Cheek Low

Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.92 mho/m; ε_r = 43.2; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.487 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.54 V/m; Power Drift = -0.078 dB
Peak SAR (extrapolated) = 0.588 W/kg
SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.293 mW/g
Maximum value of SAR (measured) = 0.485 mW/g

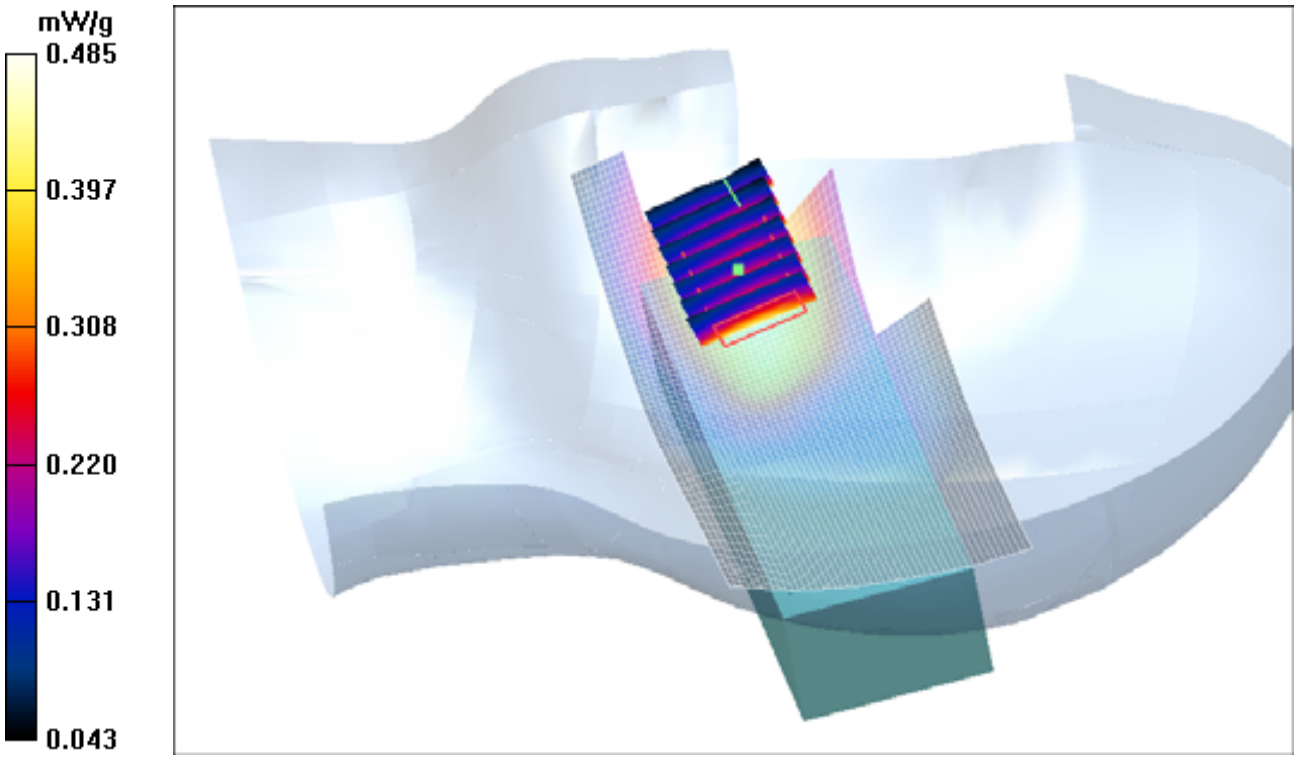


Figure 93 Right Hand Touch Cheek WCDMA Band V Channel 4132

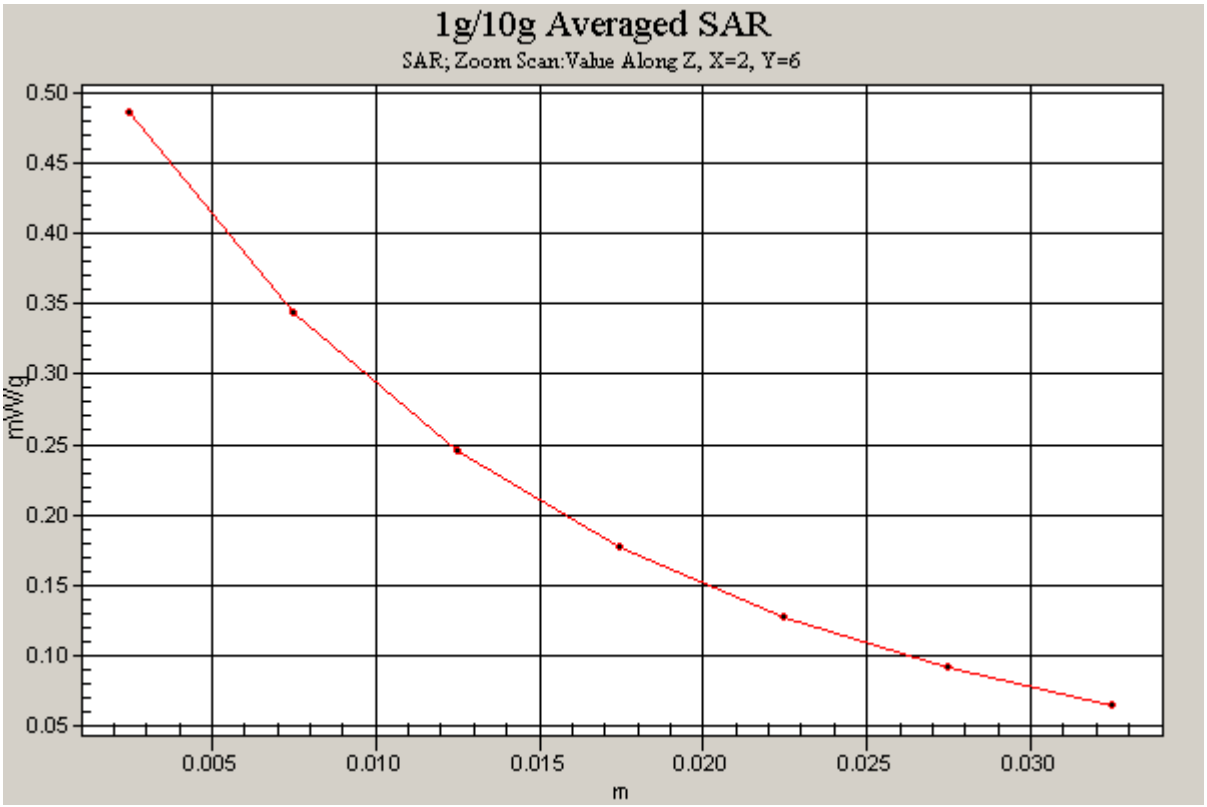


Figure 94 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4132)

Date/Time: 4/7/2009 12:51:57 AM

WCDMA Band V Right Tilt Middle

Communication System: WCDMA Band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.934 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Right Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.19, 9.19, 9.19); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.145 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.28 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 0.167 W/kg
SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.147 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.28 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 0.156 W/kg
SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.070 mW/g
Maximum value of SAR (measured) = 0.139 mW/g

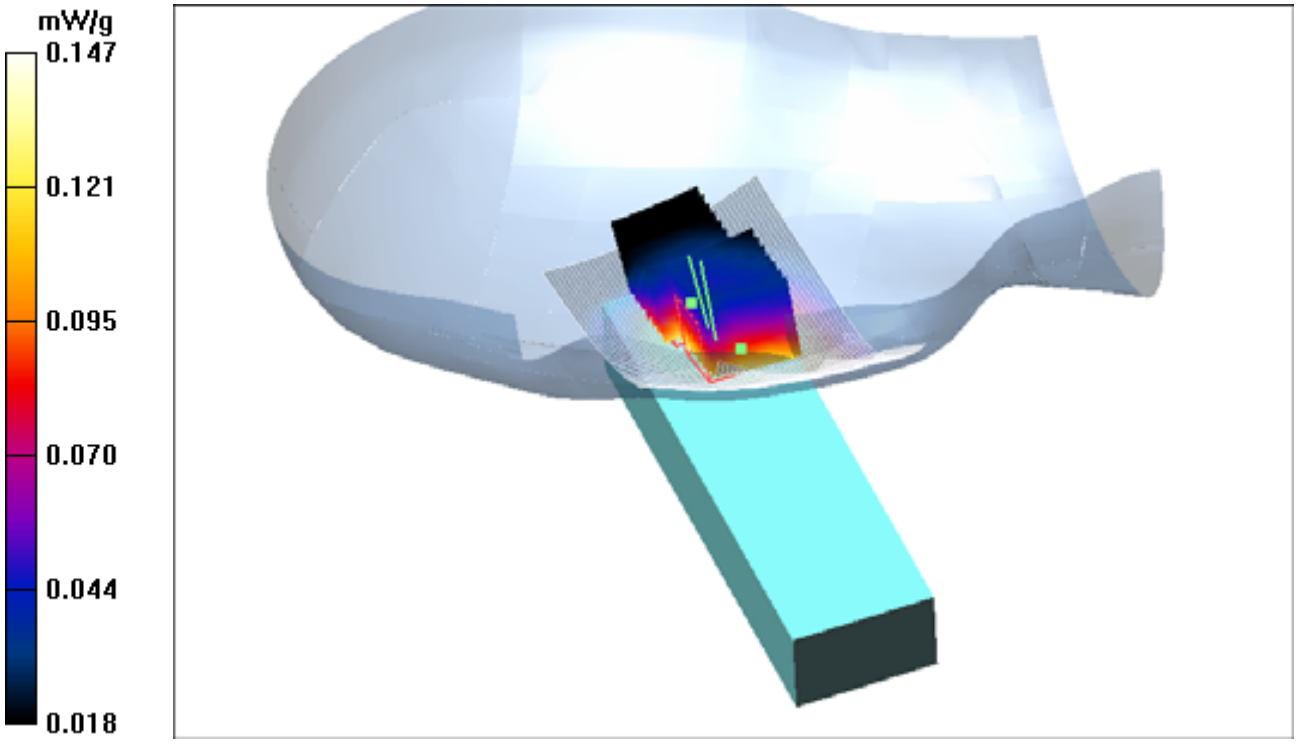
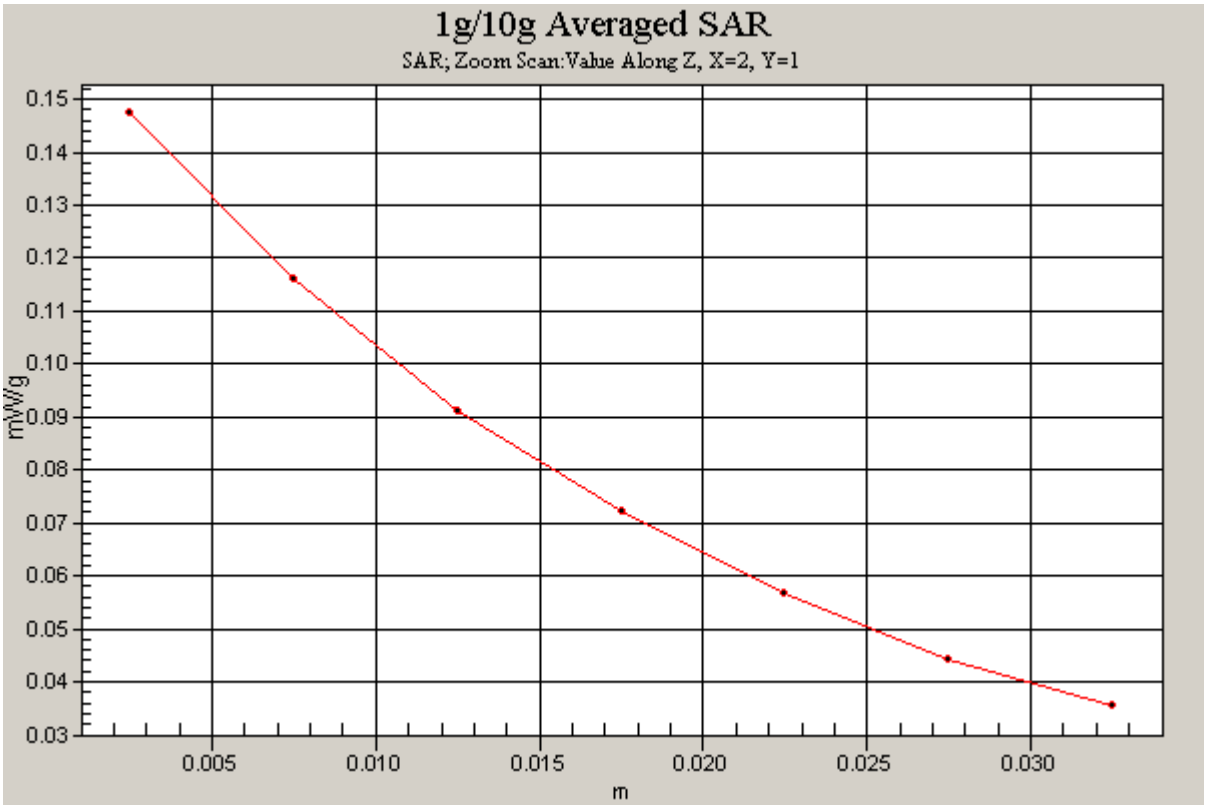


Figure 95 Right Hand Tilt 15° WCDMA Band V Channel 4182



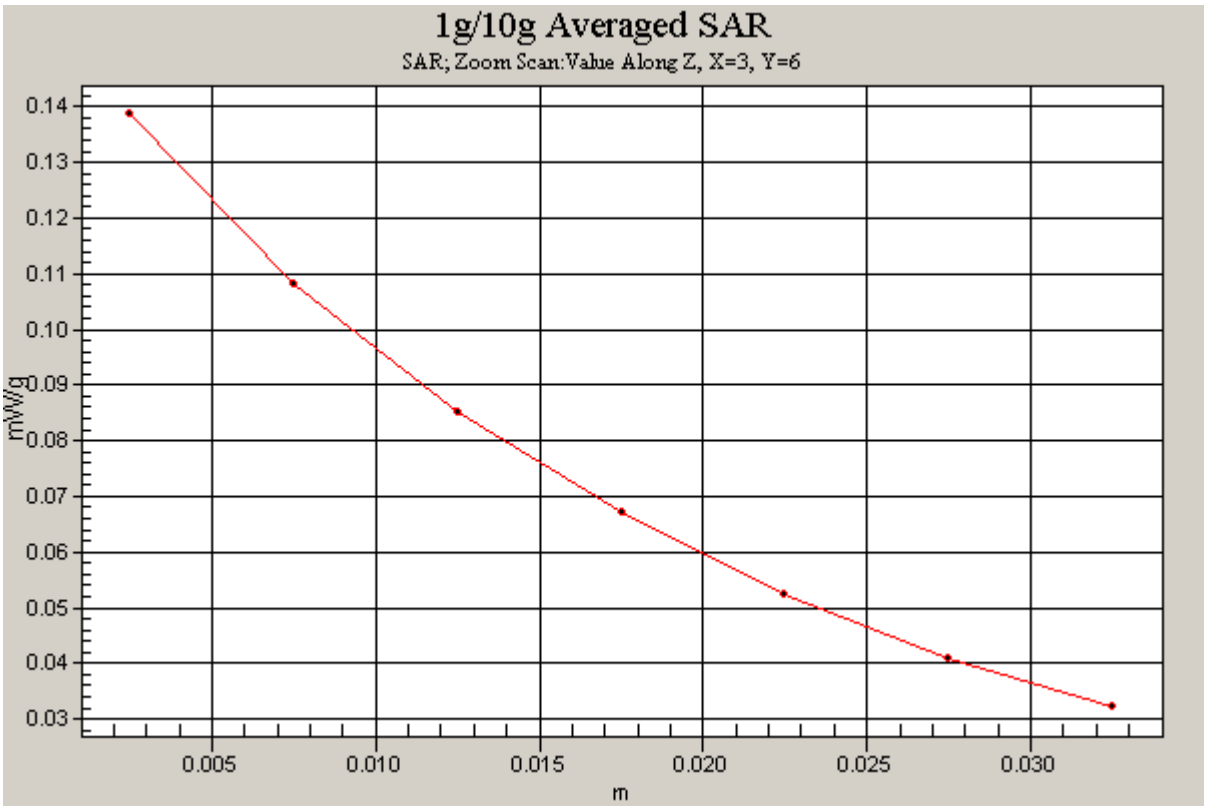


Figure 96 Z-Scan at power reference point (Right Hand Tilt 15° WCDMA Band V Channel 4182)

Date/Time: 4/7/2009 7:09:53 AM

WCDMA Band V Towards Ground High

Communication System: WCDMA Band V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 847 MHz; σ = 0.997 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground High/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.174 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.19 V/m; Power Drift = -0.161 dB
Peak SAR (extrapolated) = 0.197 W/kg
SAR(1 g) = 0.142 mW/g; SAR(10 g) = 0.100 mW/g
Maximum value of SAR (measured) = 0.167 mW/g

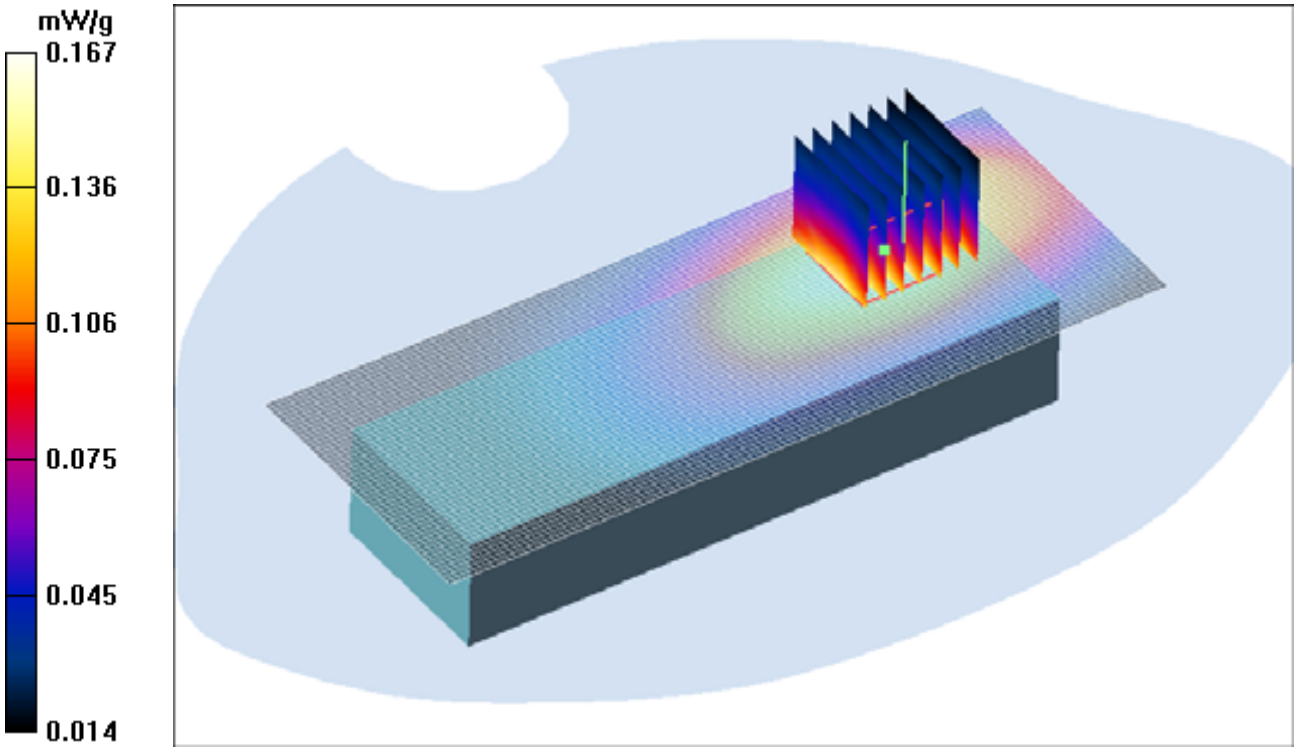


Figure 97 Body, Towards Ground, WCDMA Band V Channel 4233

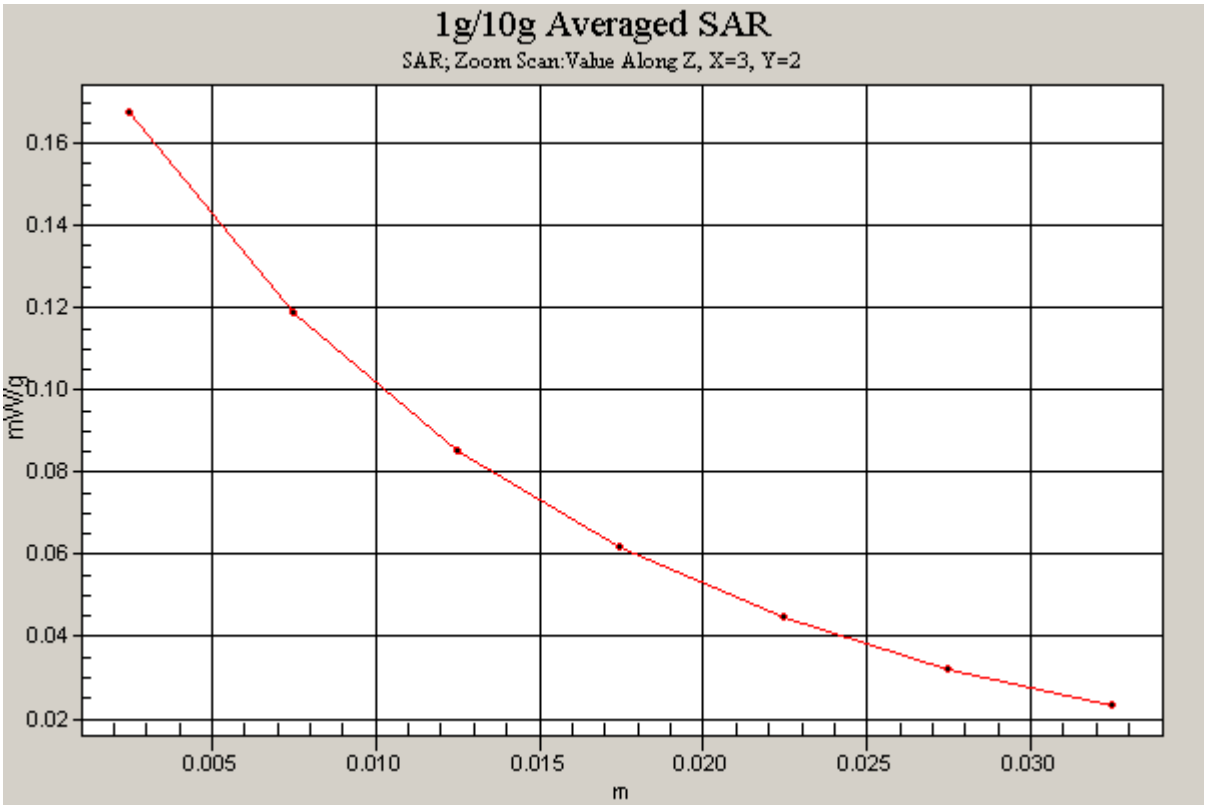


Figure 98 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4233)

Date/Time: 4/7/2009 6:46:30 AM

WCDMA Band V Towards Ground Middle

Communication System: WCDMA Band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.986 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Middle/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.191 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.30 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.232 W/kg
SAR(1 g) = 0.164 mW/g; SAR(10 g) = 0.119 mW/g
Maximum value of SAR (measured) = 0.196 mW/g

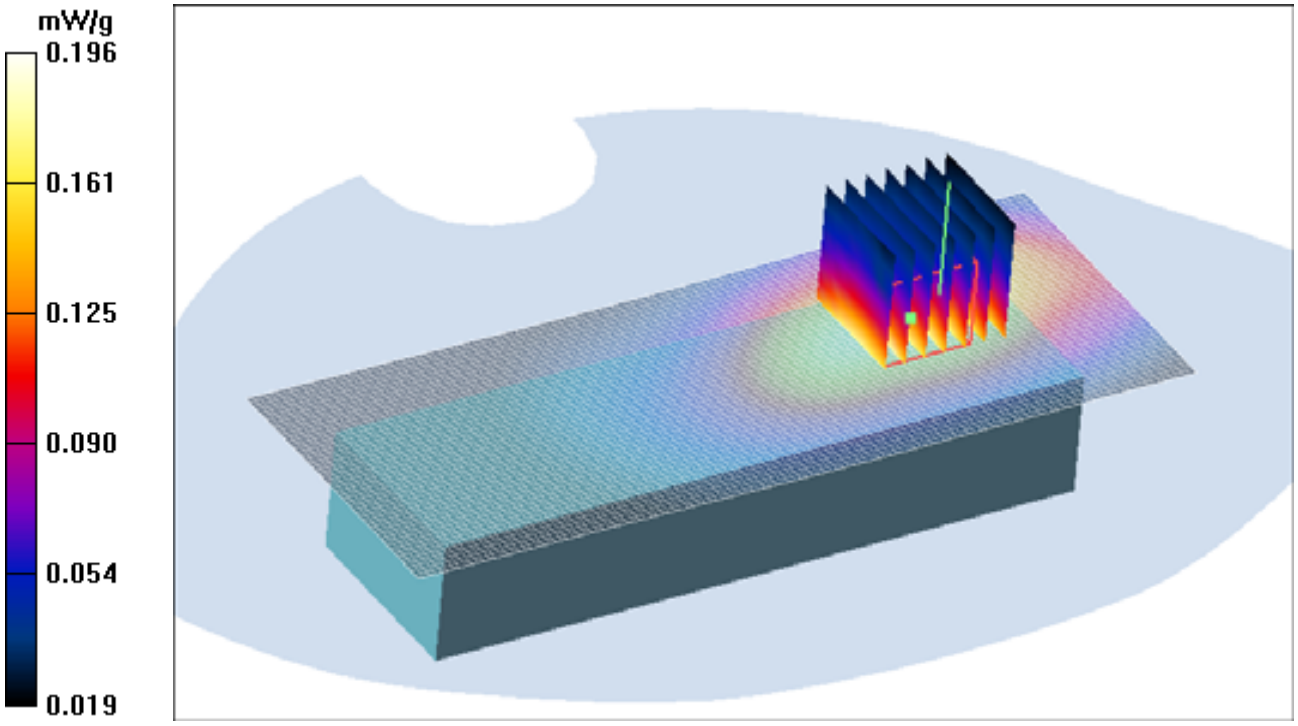


Figure 99 Body, Towards Ground, WCDMA Band V Channel 4182

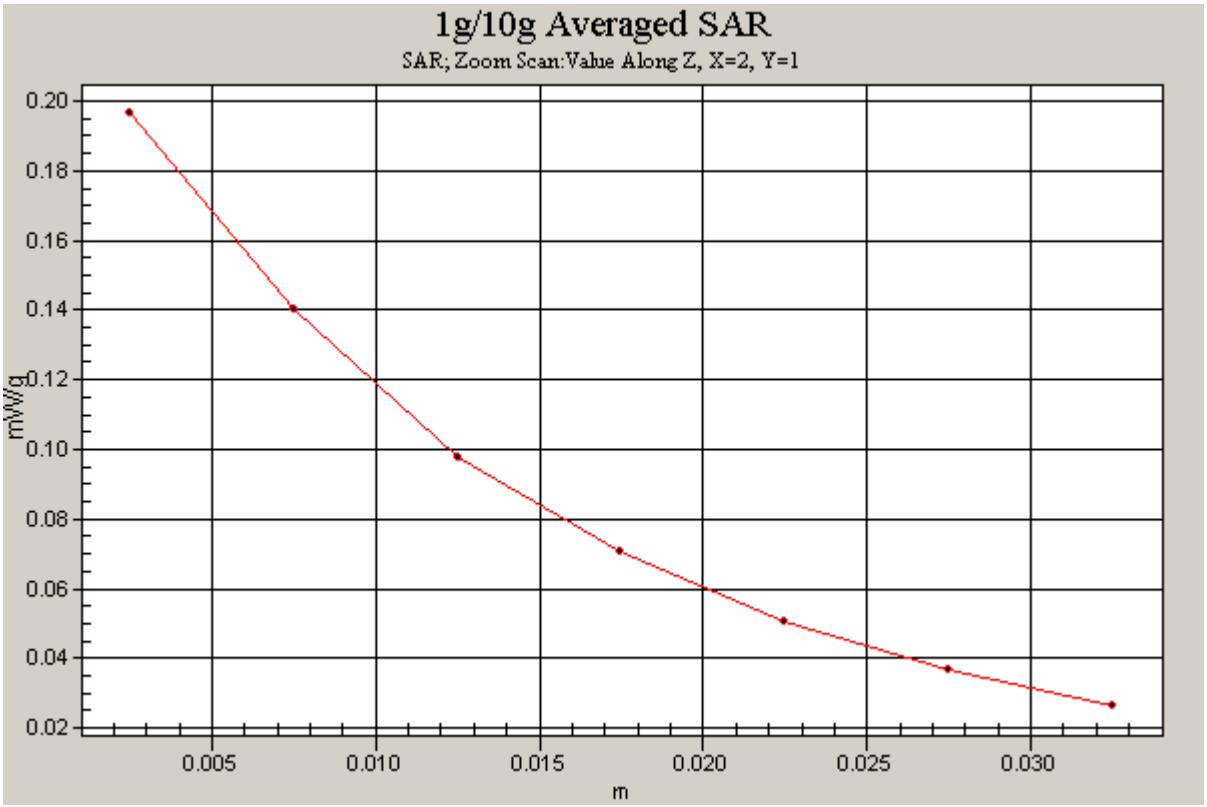


Figure 100 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4182)

Date/Time: 4/7/2009 6:26:20 AM

WCDMA Band V Towards Ground Low

Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.976 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.244 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.267 W/kg
SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.144 mW/g
Maximum value of SAR (measured) = 0.230 mW/g

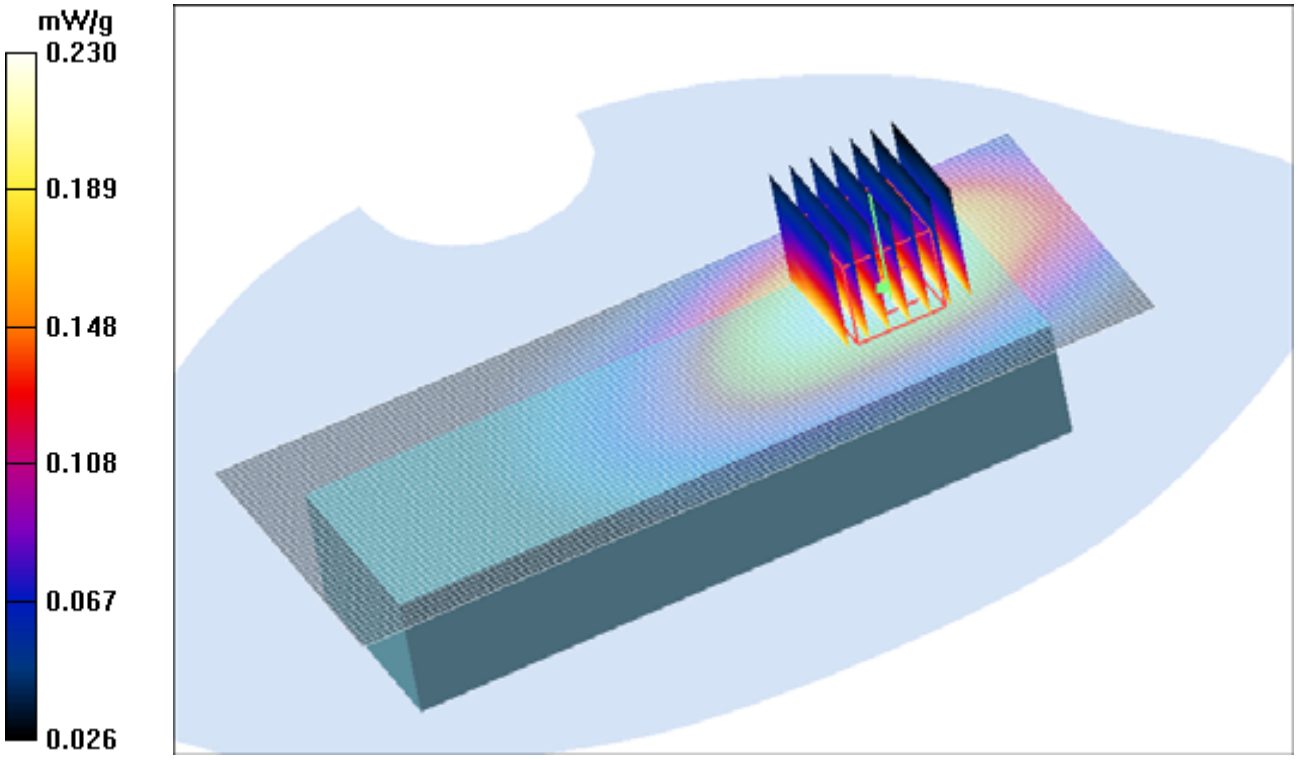


Figure 101 Body, Towards Ground, WCDMA Band V Channel 4132

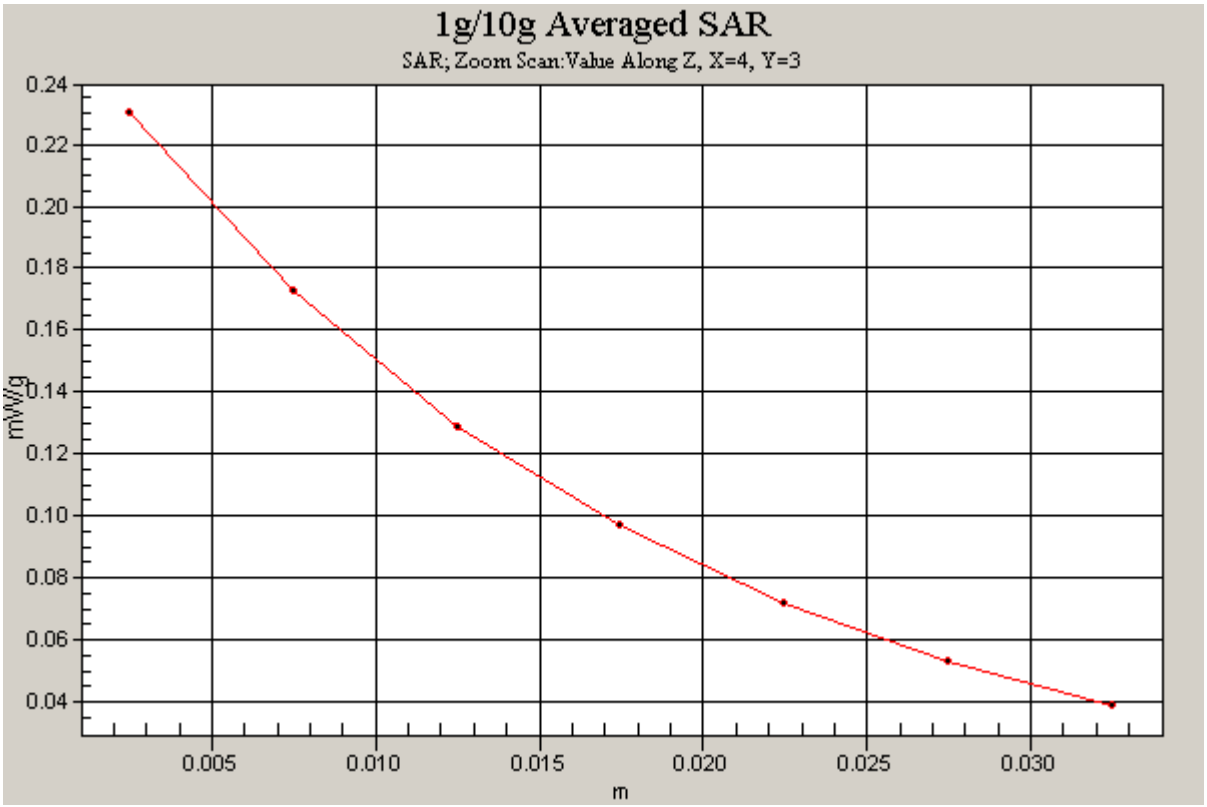


Figure 102 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4132)

Date/Time: 4/7/2009 7:40:22 AM

WCDMA Band V Earphone Towards Ground Low

Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.976 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Ambient Temperature:21.9°C Liqiud Temperature: 21.6°C
Phantom section: Flat Section
DASY4 Configuration:

- Probe: EX3DV4 - SN3660; ConvF(9.1, 9.1, 9.1); Calibrated: 9/3/2008
- Electronics: DAE4 Sn452; Calibrated: 11/18/2008
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Towards Ground Low/Area Scan (51x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.210 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.289 W/kg
SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.128 mW/g
Maximum value of SAR (measured) = 0.238 mW/g

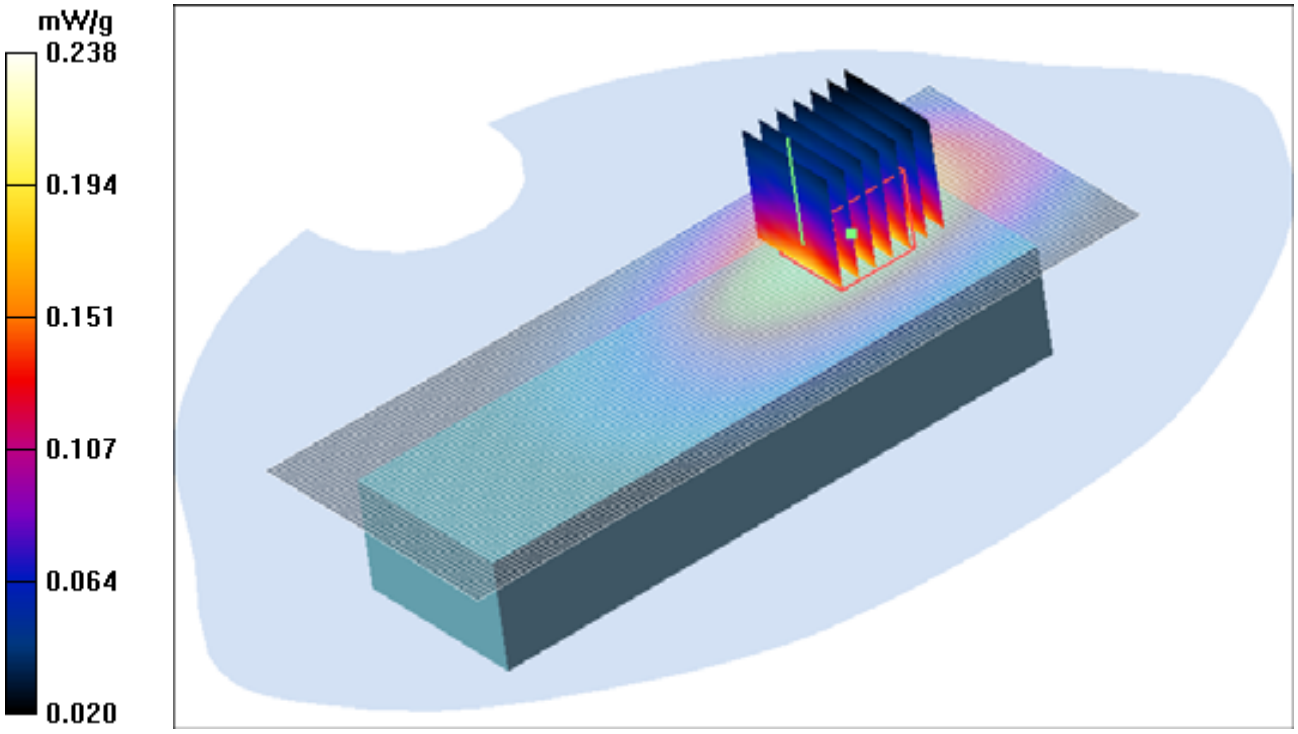


Figure 103 Body with Earphone, Towards Ground, WCDMA Band V, Channel 4132

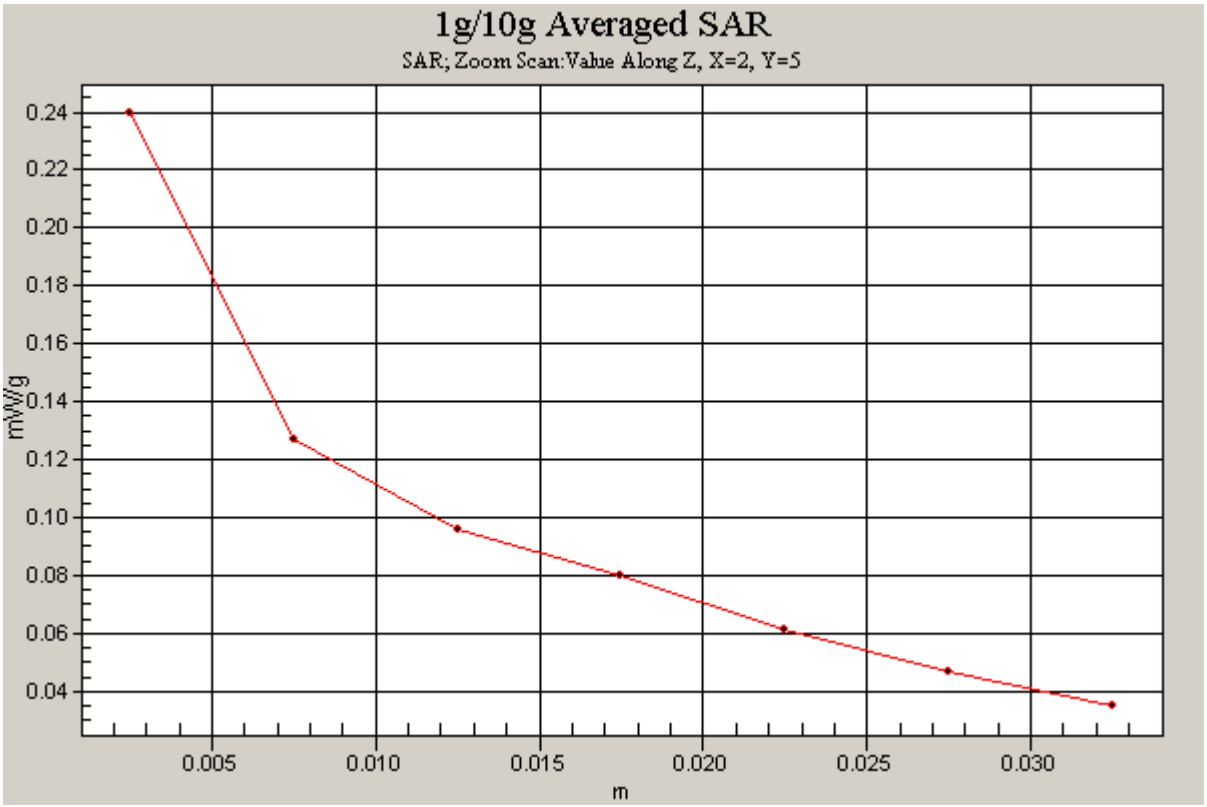


Figure 104 Z-Scan at power reference point (Body with Earphone, Towards Ground, WCDMA Band V, Channel 4132)

ANNEX D： PROBE CALIBRATION CERTIFICATE

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

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

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

Accreditation No.: SCS 108

Client TA (Auden)

Certificate No: EX3-3660_Sep08

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3660
Calibration procedure(s)	QA CAL-01.v6 and QA CAL-23.v3 Calibration procedure for dosimetric E-field probes
Calibration date:	September 3, 2008
Condition of the calibrated item	In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-08 (No. 217-00788)	Apr-09
Power sensor E4412A	MY41495277	1-Apr-08 (No. 217-00788)	Apr-09
Power sensor E4412A	MY41498087	1-Apr-08 (No. 217-00788)	Apr-09
Reference 3 dB Attenuator	SN: S5054 (3c)	1-Jul-08 (No. 217-00905)	Jul-09
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-08 (No. 217-00787)	Apr-09
Reference 30 dB Attenuator	SN: S5129 (30b)	1-Jul-08 (No. 217-00906)	Jul-09
Reference Probe ES3DV2	SN: 3013	2 Jan-08 (No. ES3-3013_Jan08)	Jan-09
DAE4	SN: 660	3 Sep-07 (No. DAE4-660_Sep07)	Sep-08

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-07)	In house check: Oct-08

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Fin Bomholt	R&D Director	

Issued: September 3, 2008

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

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

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

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

Accreditation No.: SCS 108

Glossary:

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

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

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

Probe EX3DV4

SN:3660

Manufactured: April 29, 2008
Calibrated: September 3, 2008

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

EX3DV4 SN:3660 September 3, 2008

DASY - Parameters of Probe: EX3DV4 SN:3660

Sensitivity in Free Space[A]

Diode Compression[B]

NormX	**0.44** ± 10.1%	μV/(V/m)²	DCP X	**88** mV
NormY	**0.42** ± 10.1%	μV/(V/m)²	DCP Y	**85** mV
NormZ	**0.45** ± 10.1%	μV/(V/m)²	DCP Z	**89** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR_{be} [%]	Without Correction Algorithm	0.5	5.2
SAR_{be} [%]	With Correction Algorithm	0.4	0.1

TSL **1750 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR_{be} [%]	Without Correction Algorithm	7.6	3.8
SAR_{be} [%]	With Correction Algorithm	0.2	0.1

Sensor Offset

Probe Tip to Sensor Center	**1.0** mm

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

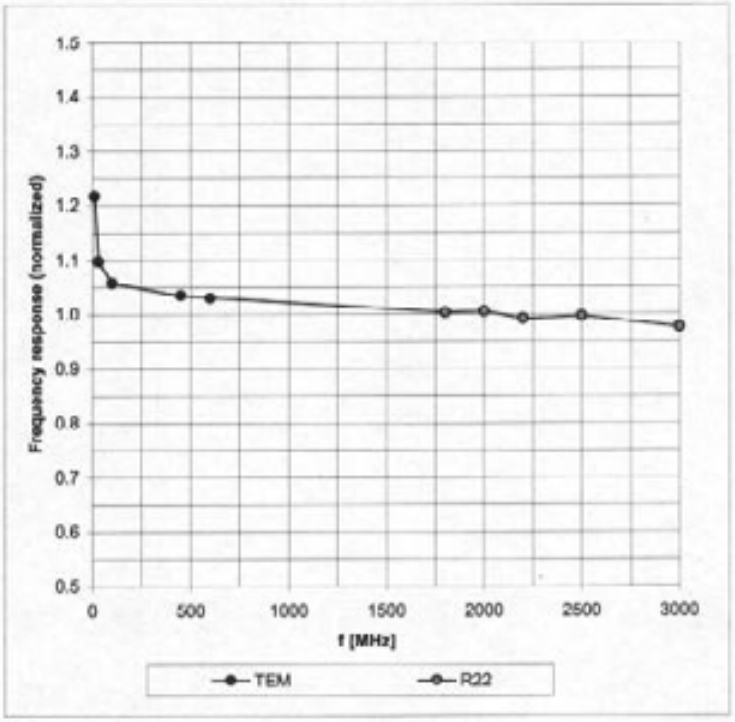
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

EX3DV4 SN:3660 September 3, 2008

Frequency Response of E-Field

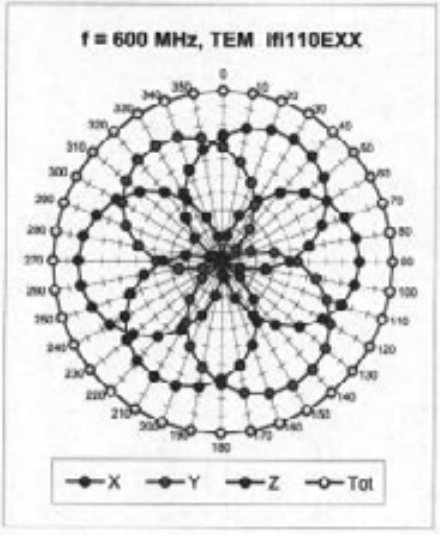
(TEM-Cell:ifi110 EXX, Waveguide: R22)

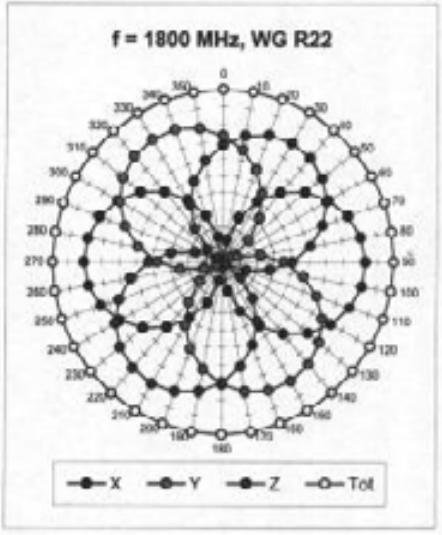


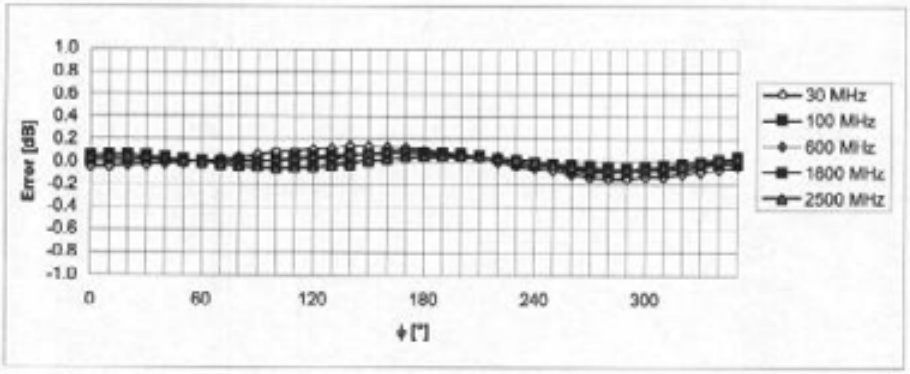
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

EX3DV4 SN:3660 September 3, 2008

Receiving Pattern (ϕ), ϑ = 0°







Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)