No.: RZA2009-0515

OET 65

TEST REPORT

Test name	Electromagnetic Field (Specific Absorption Rate)
Product	GSM Dual-band GPRS Digital Mobile Phone
Model	ZTE-G R830
FCC ID	Q78-GR830
Client	ZTE CORPORATION

TA Technology (Shanghai) Co., Ltd.

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GENERAL SUMMARY

Product	GSM Dual-band GPRS Digital Mobile Phone	**Model**	ZTE-G R830
Client	ZTE CORPORATION	**Type of test**	Entrusted
Manufacturer	ZTE CORPORATION	**Arrival Date of sample**	April 29th, 2009
Place of sampling	(Blank)	**Carrier of the samples**	Min Zhang
Quantity of the samples	One	**Date of product**	(Blank)
Base of the samples	(Blank)	**Items of test**	SAR
Series number	354744030000017		
Standard(s)	**IEEE Std 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: May 4th, 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

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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	ZTE-G R830	354744030000017	ZTE CORPORATION
Lithium Battery	Li3707T42P3h463848	30030812282066045	ZTE CORPORATION
AC/DC Adapter	STC-A22O50U8-C	100902052678617	ZTE CORPORATION

Note:
The EUT appearances see ANNEX H.

3.3. General Description

Equipment Under Test (EUT) is a model of GSM Dual-band GPRS Digital 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. The EUT have GPRS (class 12) function.

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）	
Modulation:	GMSK,	
GPRS multislot class:	12	
Maximum no. of timeslots in uplink:	4	
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
Power class	GSM 850: 4, tested with power level 5	
	GSM 1900: 1, tested with power level 0	
Test channel (Low –Middle –High)	128 -190 - 251 (GSM850) (tested) 512 - 661 – 810 (GSM1900) (tested)	
Hardware version:	g6jB	
Software version:	CE-CN-ZTE8-P103F2V1.0.0	
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) is allocated to 128, 190 and 251 in the case of GSM 850, allocated to 512, 661 and 810 in the case of GSM 1900. 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 GSM850 and GSM1900 are performed in the mode of speech transfer function and GPRS function function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink.

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.

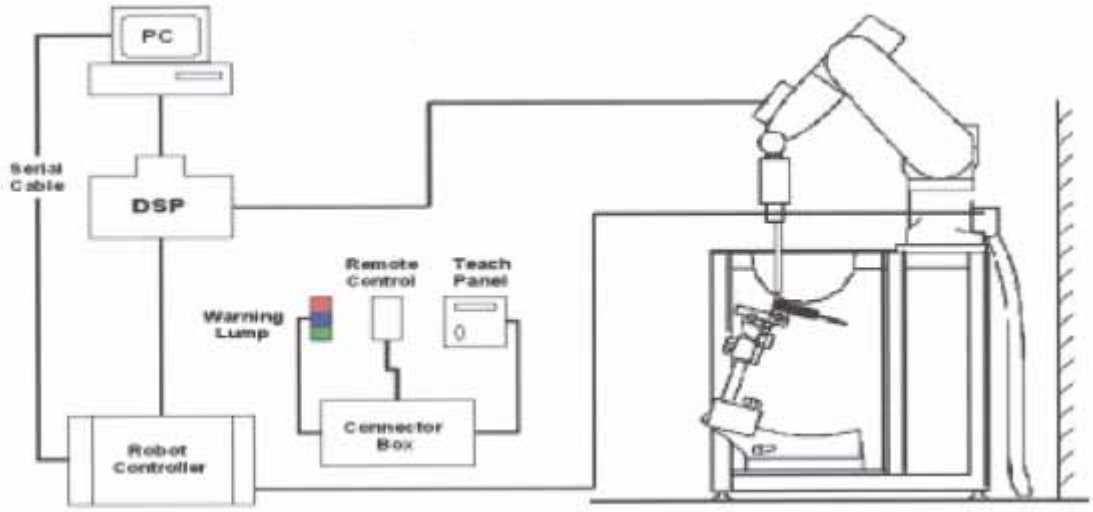

Figure 1. SAR Lab Test Measurement Set-up

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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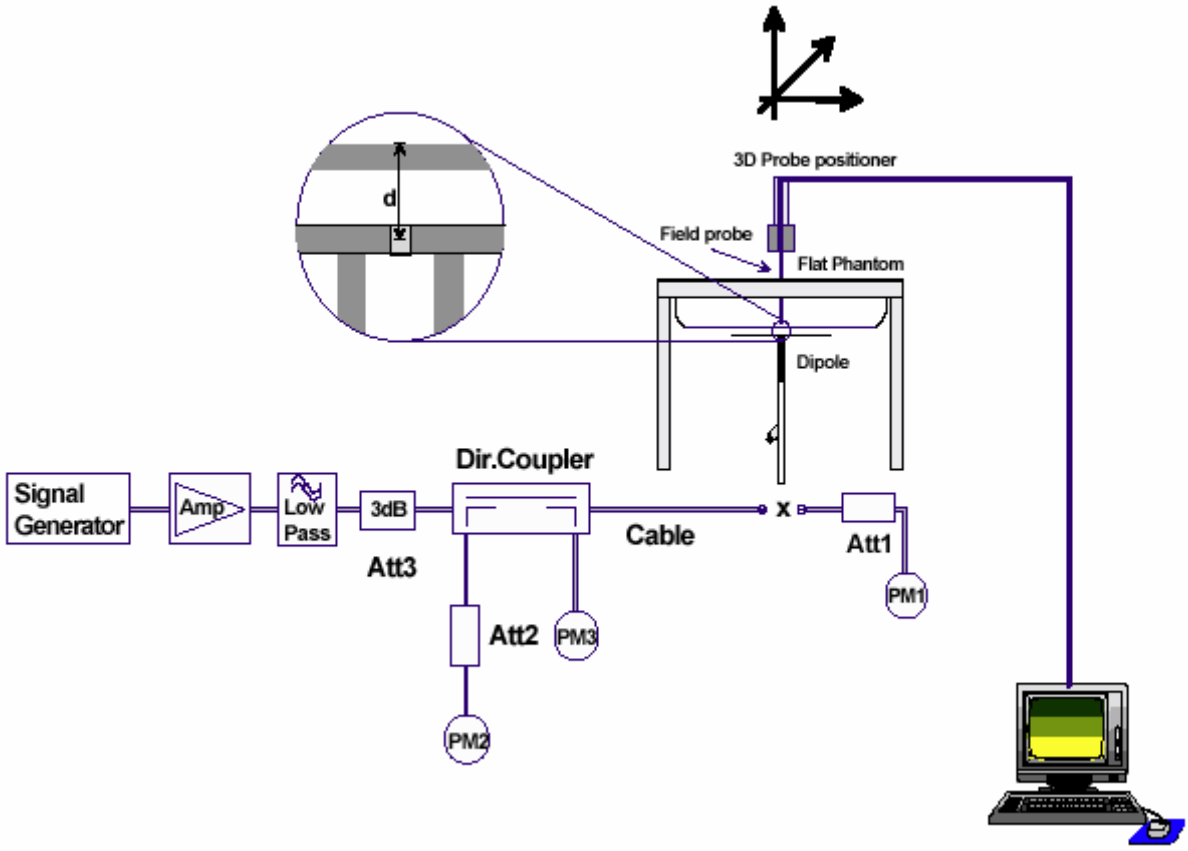


Figure 6. System Check Set-up

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

IEEE Std 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)	32.04	32.28	32.37
After Test (dBm)	32.03	32.27	32.36
GSM 850+GPRS	**Conducted Power**		
	Channel 128	Channel 190	Channel 251
	(824.2MHz)	(836.6MHz)	(848.8MHz)
Before Test (dBm)	32.05	32.28	32.38
After Test (dBm)	32.04	32.27	32.37
GSM 1900	**Conducted Power**		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	29.55	29.76	29.70
After Test (dBm)	29.54	29.75	29.71
GSM 1900+GPRS	**Conducted Power**		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	29.56	29.76	29.72
After Test (dBm)	29.55	29.75	29.71

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 2009-4-30	42.29	0.88	21.8
1900MHz (head)	Target value ±5% window	40.0 38 — 42	1.40 1.33 — 1.47	/
	Measurement value 2009-4-30	39.79	1.42	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 2009-4-30	55.07	1.02	21.8
1900MHz (body)	Target value ±5% window	53.3 50.64 — 55.97	1.52 1.44 — 1.60	/
	Measurement value 2009-4-30	52.1	1.51	21.9

9.2. System Check Results

Table 11: System Check for Head tissue simulant

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ε_r	σ(s/m)	℃
835MHz	Target value ±10% window	1.52 1.37--1.67	2.30 2.07--2.53	40.90	0.89	/
	Measurement value 2009-4-30	1.50	2.30	42.29	0.88	21.9
1900MHz	Target value ±10% window	5.06 4.55---5.57	9.84 8.86--10.82	38.8	1.47	/
	Measurement value 2009-4-30	5.09	9.74	39.79	1.42	22.1

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 (slide open)]

Liquid Temperature: 22.5℃					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Test Case Of Head		**Measurement Result(W/kg)**		**Power Drift (dB)**	
Different Test Position	**Channel**	**10 g Average**	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	High	0.280	0.404	-0.081	Figure 11
	Middle	0.262	0.385	-0.128	Figure 13
	Low	0.225	0.322	0.026	Figure 15
Left hand, Tilt 15 Degree	Middle	0.134(max.cube)	0.185(max.cube)	0.009	Figure 17
Right hand, Touch cheek	Middle	0.266	0.384	0.142	Figure 19
Right hand, Tilt 15 Degree	Middle	0.143	0.197	0.107	Figure 21
Test position of Body (Distance 15mm)					
Towards Ground	High	0.355	0.495	0.013	Figure 23
	Middle	0.356	0.496	0.028	Figure 25
	Low	0.342	0.477	0.014	Figure 27
Towards phantom	Middle	0.321	0.444	0.135	Figure 29
Worst case position of Body with Earphone (Distance 15mm)					
Towards Ground	Middle	0.242	0.336	0.084	Figure 31
Worst case position of Body with GPRS(4UP)(Distance 15mm)					
Towards Ground	Middle	0.991	1.380	0.012	Figure 33

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 of head.
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 limit (< 0.8W/kg), testing at the high and low channels is optional.
4. 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 13: SAR Values [GSM850 (slide close)]

Liquid Temperature: 22.5℃					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Test Case Of Head		**Measurement Result(W/kg)**		**Power Drift (dB)**	
Different Test Position	**Channel**	**10 g Average**	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	High	0.182	0.258	0.019	Figure 35
	Middle	0.178	0.248	-0.130	Figure 37
	Low	0.147	0.208	0.044	Figure 39
Left hand, Tilt 15 Degree	Middle	0.108(max.cube)	0.150(max.cube)	-0.134	Figure 41
Right hand, Touch cheek	Middle	0.173	0.261	-0.090	Figure 43
Right hand, Tilt 15 Degree	Middle	0.116(max.cube)	0.160(max.cube)	-0.102	Figure 45
Test position of Body (Distance 15mm)					
Towards Ground	High	0.205(max.cube)	0.295(max.cube)	-0.020	Figure 47
	Middle	0.187	0.268	0.089	Figure 49
	Low	0.167	0.240	0.081	Figure 51
Towards phantom	Middle	0.089	0.121	-0.056	Figure 53
Worst case position of Body with Earphone (Distance 15mm)					
Towards Ground	High	0.187	0.269	0.060	Figure 55
Worst case position of Body with GPRS(4UP)(Distance 15mm)					
Towards Ground	High	0.600	0.868	-0.055	Figure 57

Note: 1. Upper and lower frequencies were measured at the worst position of head.

2. 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 limit (< 0.8W/kg), testing at the high and low channels is optional.

3. 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 [GSM1900 (slide open)]

Liquid Temperature: 22.5℃					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Test Case Of Head		**Measurement Result(W/kg)**		**Power Drift (dB)**	
Different Test Position	**Channel**	**10 g Average**	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	High	0.170	0.285	0.135	Figure 59
	Middle	0.194	0.322	-0.057	Figure 61
	Low	0.186	0.306	-0.110	Figure 63
Left hand, Tilt 15 Degree	Middle	0.044	0.082	0.011	Figure 65
Right hand, Touch cheek	Middle	0.171	0.280	0.067	Figure 67
Right hand, Tilt 15 Degree	Middle	0.064	0.110	0.045	Figure 69
Test position of Body (Distance 15mm)					
Towards Ground	High	0.245	0.401	-0.012	Figure 71
	Middle	0.264	0.433	0.072	Figure 73
	Low	0.254	0.416	0.020	Figure 75
Towards phantom	Middle	0.158	0.253	-0.057	Figure 77
Worst case position of Body with Earphone (Distance 15mm)					
Towards Ground	Middle	0.213	0.351	0.019	Figure 79
Worst case position of Body with GPRS(4UP)(Distance 15mm)					
Towards Ground	Middle	0.800	1.320	0.144	Figure 81

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 of head.
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 limit (< 0.8W/kg), testing at the high and low channels is optional.

Table 15: SAR Values [GSM1900 (slide close)]

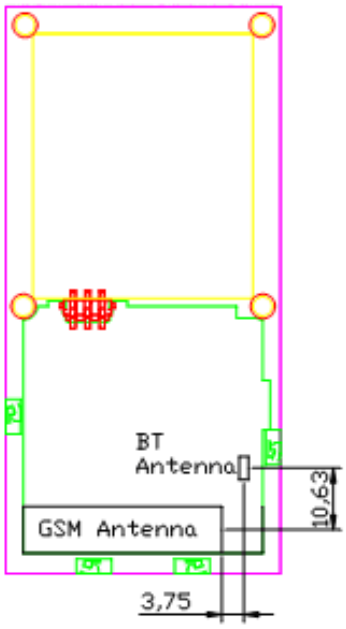
Liquid Temperature: 22.5℃					
Limit of SAR (W/kg)		**10 g Average**	**1 g Average**	**Power Drift (dB)**	**Graph Results**
		2.0	**1.6**	**± 0.21**	
Test Case Of Head		**Measurement Result(W/kg)**		**Power Drift (dB)**	
Different Test Position	**Channel**	**10 g Average**	**1 g Average**		
Test position of Head					
Left hand, Touch cheek	Middle	0.497	0.786	-0.039	Figure 83
Left hand, Tilt 15 Degree	Middle	0.129	0.225	0.137	Figure 85
Right hand, Touch cheek	High	0.477	0.817	0.072	Figure 87
	Middle	0.482	0.805	-0.011	Figure 89
	Low	0.539	0.923	-0.033	Figure 91
Right hand, Tilt 15 Degree	Middle	0.139	0.231	0.047	Figure 93
Test position of Body (Distance 15mm)					
Towards Ground	High	0.229	0.382	0.176	Figure 95
	Middle	0.245	0.410	-0.045	Figure 97
	Low	0.243	0.407	-0.140	Figure 99
Towards phantom	Middle	0.111(max.cube)	0.173(max.cube)	-0.043	Figure 101
Worst case position of Body with Earphone (Distance 15mm)					
Towards Ground	Middle	0.178	0.294	-0.196	Figure 103
Worst case position of Body with GPRS(4UP)(Distance 15mm)					
Towards Ground	Middle	0.620	1.030	-0.057	Figure 105

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 of head.
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 limit (< 0.8W/kg), testing at the high and low channels is optional.
4. 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).

9.3.1. 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)	-2.62	-2.30	-0.69

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 $\leq P_{Ref}$ and the GSM antenna is within 2.5cm

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

9.4. Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 7.2 of this report. Maximum localized SAR_{1g} are 0.923 W/kg (head) and 1.38W/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.	source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard ncertainty u_i' (%)	Degree of freedom V_{eff} or v_i
1	System repetivity	A	0.5	正态	1	1	0.5	9
Measurement system								
2	probe calibration	B	5.9	N	1	1	5.9	∞
3	axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	$\sqrt{0.5}$	1.9	∞
4	Hemispherical isotropy of the probe	B	9.4	R	$\sqrt{3}$	$\sqrt{0.5}$	3.9	∞
6	boundary effect	B	1.9	R	$\sqrt{3}$	1	1.1	∞
7	probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	System detection limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	readout Electronics	B	1.0	N	1	1	1.0	∞
10	response time	B	0	R	$\sqrt{3}$	1	0	∞
11	integration time	B	4.32	R	$\sqrt{3}$	1	2.5	∞
12	noise	B	0	R	$\sqrt{3}$	1	0	∞
13	RF Ambient Conditions	B	3	R	$\sqrt{3}$	1	1.73	∞
14	Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
15	Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
16	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
Test sample Related								
17	-Test Sample Positioning	A	2.9	N	1	1	2.9	5
18	-Device Holder Uncertainty	A	4.1	N	1	1	4.1	5
19	-Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	∞
Physical parameter								

20	-phantom	B	4.0	R	$\sqrt{3}$	1	2.3	∞
21	-liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.64	1.8	∞
22	-liquid conductivity (measurement uncertainty)	B	5.0	N	1	0.64	3.2	∞
23	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
24	-liquid permittivity (measurement uncertainty)	B	5.0	N	1	0.6	3.0	∞
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					12.0	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N		k=2	24.0	

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, 2008	One year
04	Power sensor	Agilent 8481H	MY41091316	March 14, 2008	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

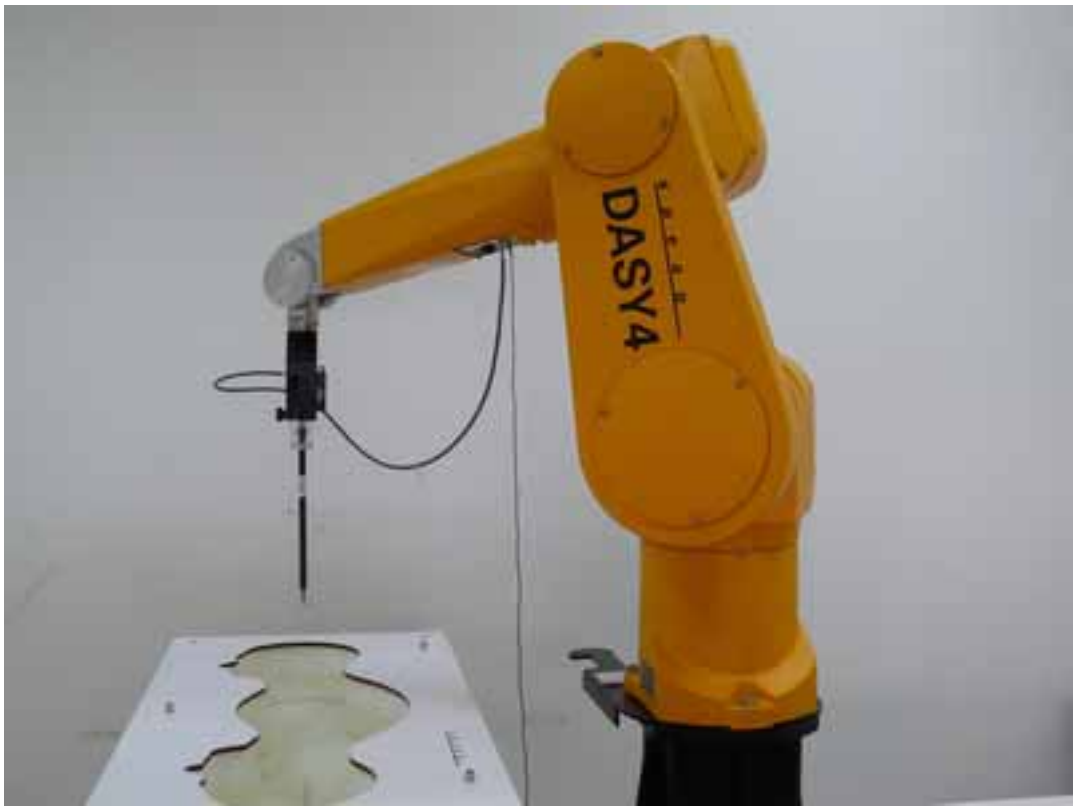
The test is performed from April 30, 2009 to May 1, 2009.

13. TEST LOCATION

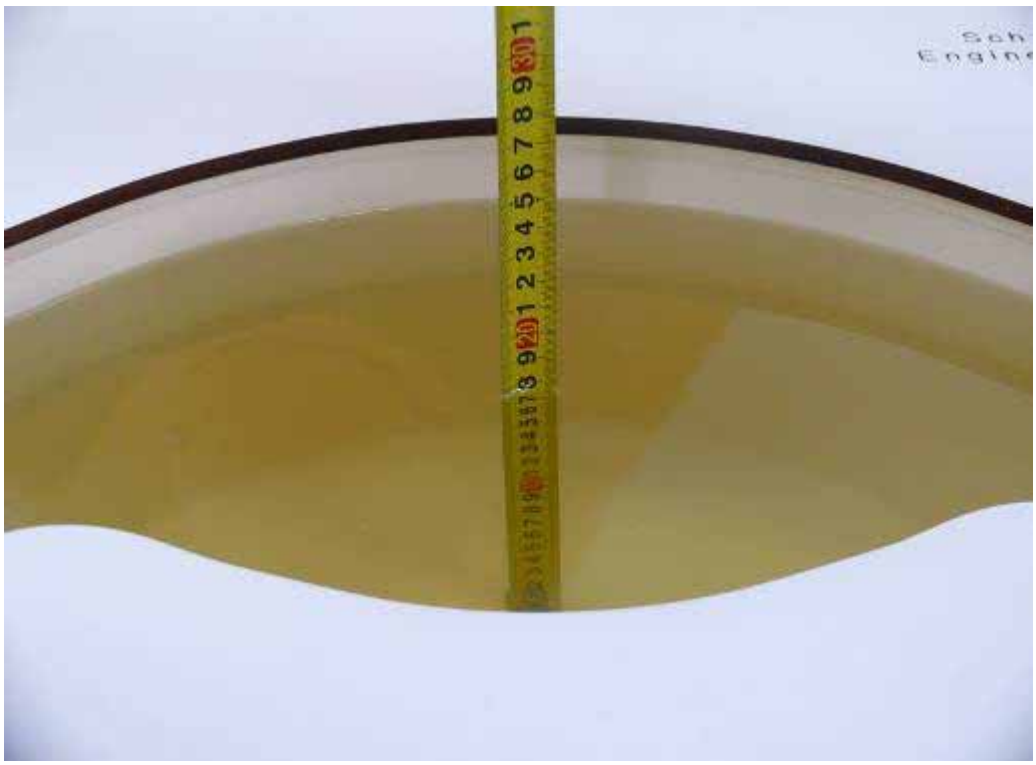
The test is performed at TA Technology (Shanghai) Co., Ltd.

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

ANNEX A： TEST LAYOUT

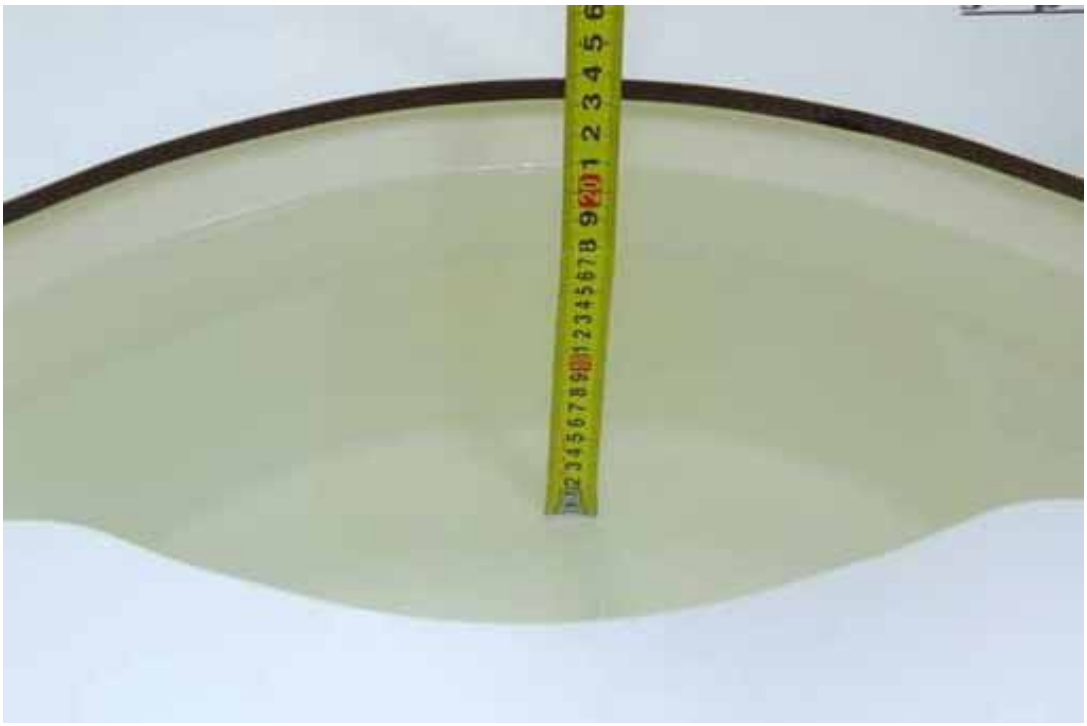


Picture 1: Specific Absorption Rate Test Layout



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

System Performance Check at 835 MHz

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

Date/Time: 4/30/2009 1:01:58 PM

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

Medium parameters used: f = 835 MHz; σ = 0.88 mho/m; ε_r = 42.29; ρ = 1000 kg/m^3

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

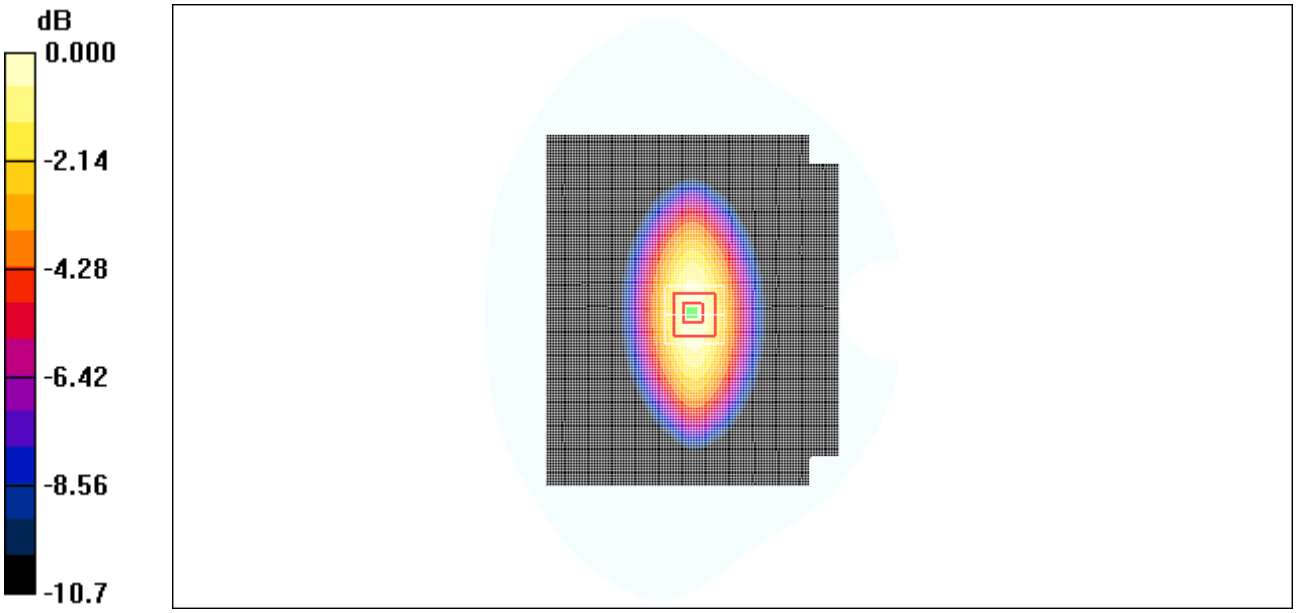
d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

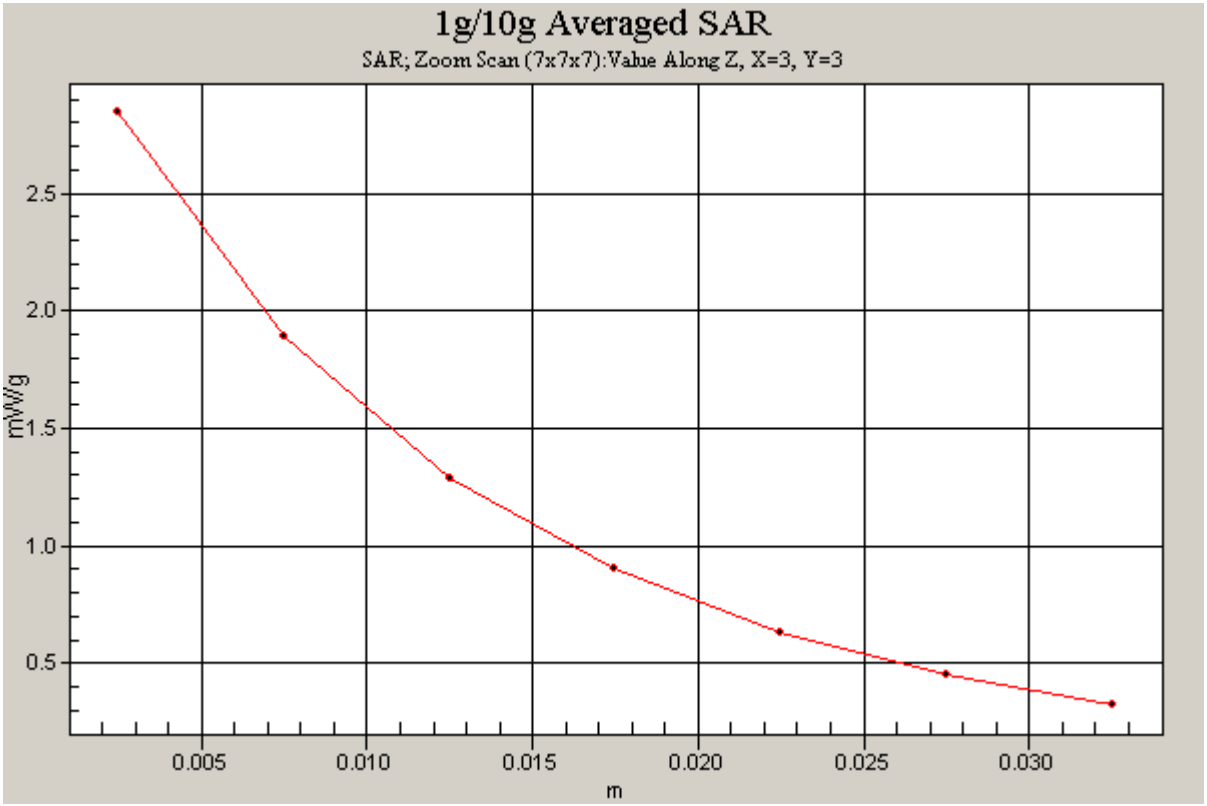


Figure 8 Z-Scan at power reference point (system check at 835 MHz dipole)

System Performance Check at 1900 MHz

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

Date/Time: 4/30/2009 1:05:58 AM

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

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

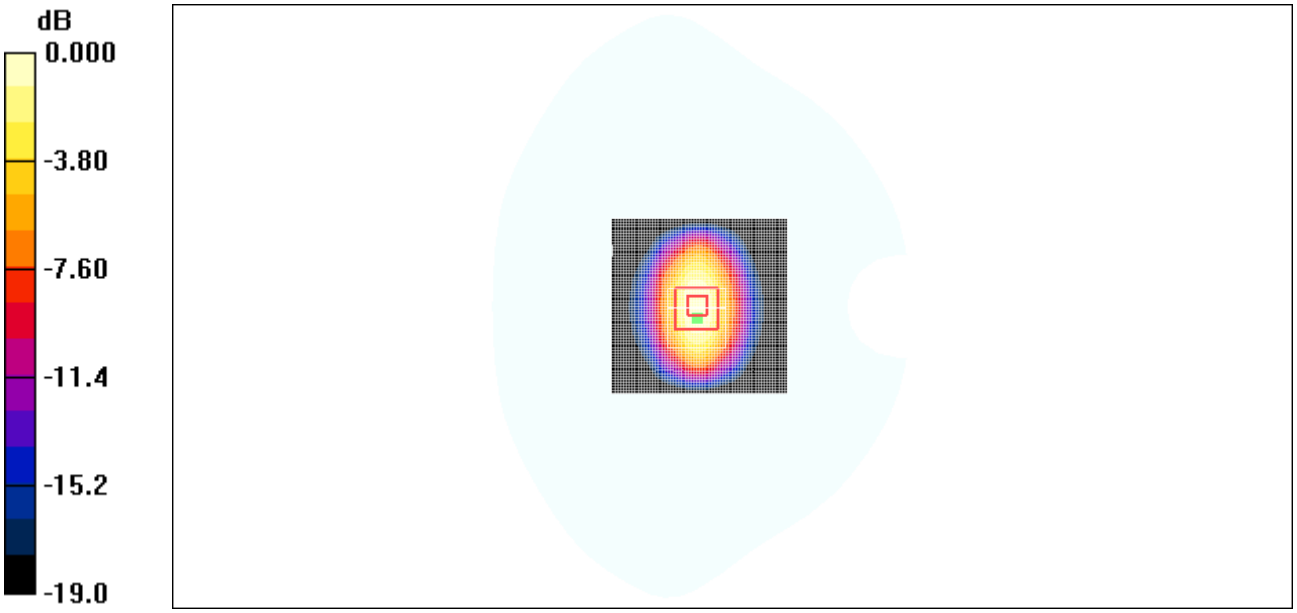
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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 9 System Performance Check 1900MHz 250mW

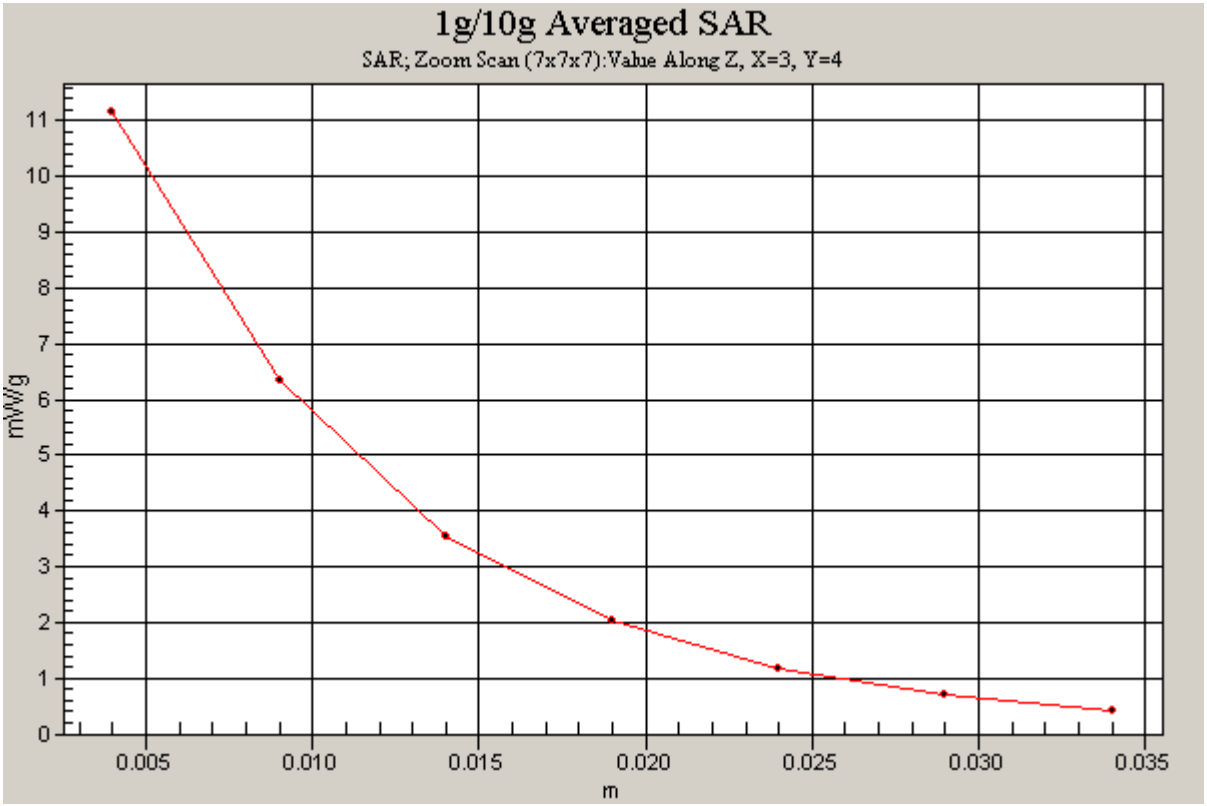


Figure 10 Z-Scan at power reference point (system check at 1900 MHz dipole)

ANNEX C： GRAPH RESULTS

GSM 850 Left Cheek slide open High

Date/Time: 5/1/2009 12:46:16 PM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.892 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.481 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.56 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 0.560 W/kg
SAR(1 g) = 0.404 mW/g; SAR(10 g) = 0.280 mW/g
Maximum value of SAR (measured) = 0.479 mW/g

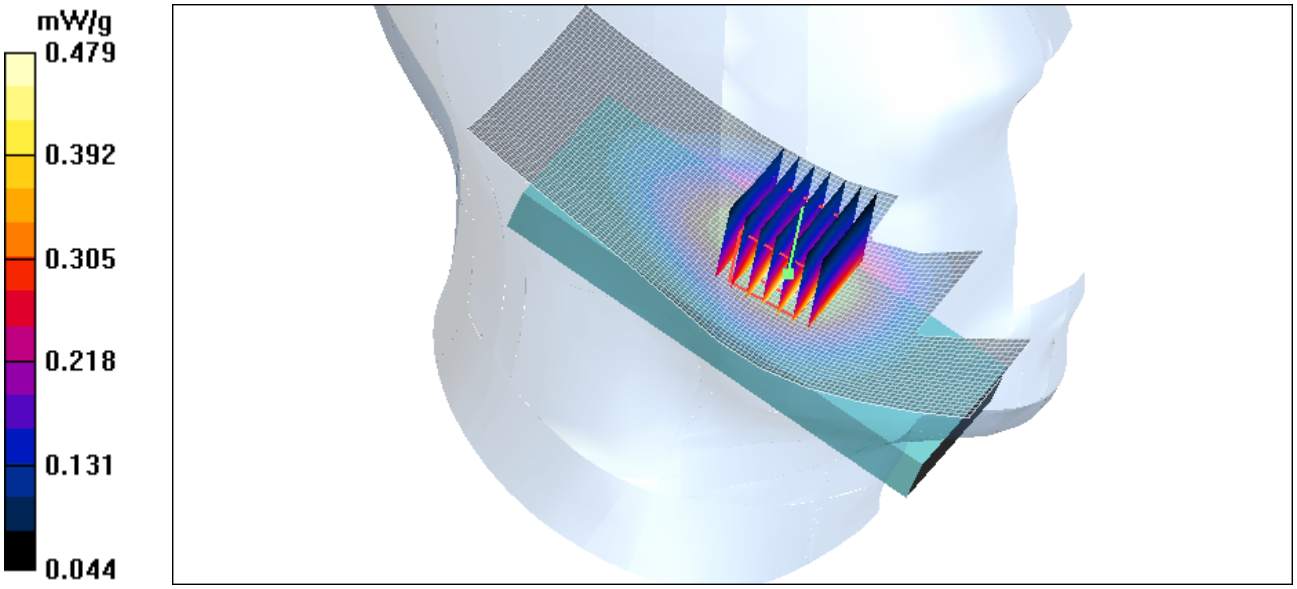


Figure 11 Left Hand Touch Cheek slide open GSM 850 Channel 251

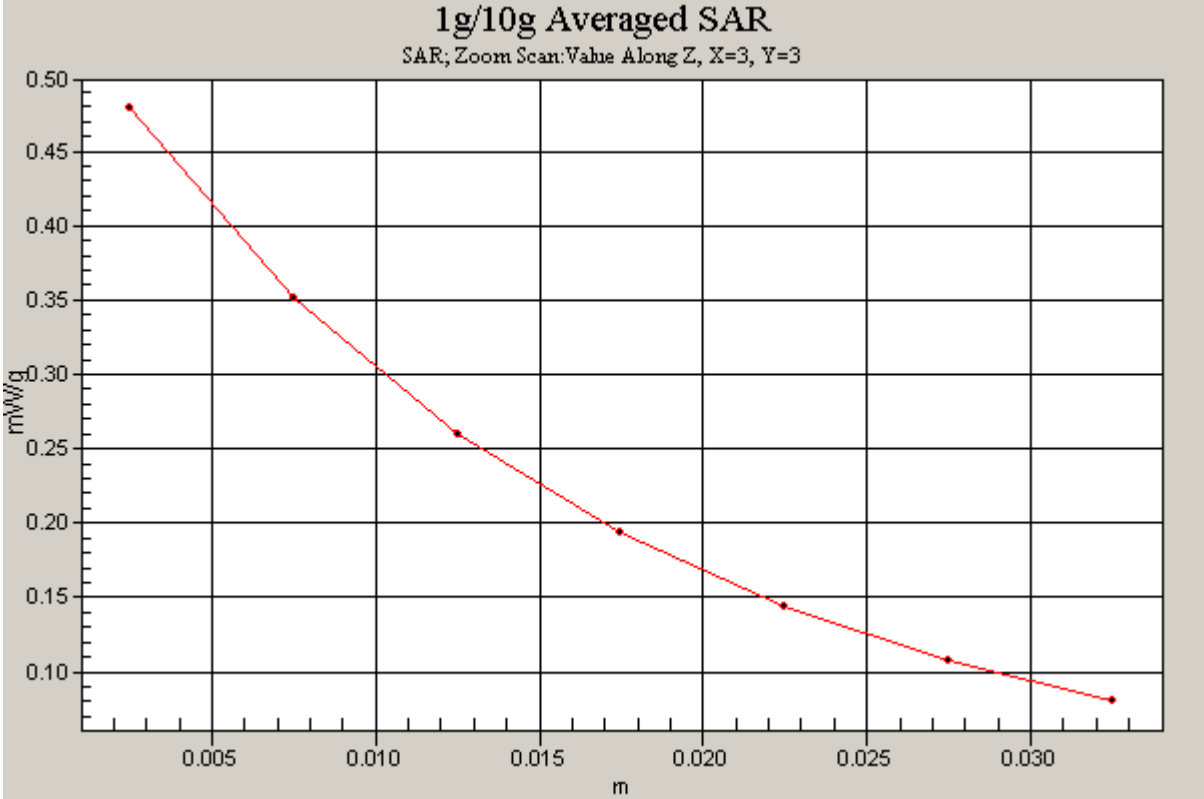


Figure 12 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 850 Channel 251)

GSM 850 Left Cheek Slide open Middle

Date/Time: 5/1/2009 7:09:11 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.440 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.23 V/m; Power Drift = -0.128 dB
Peak SAR (extrapolated) = 0.547 W/kg
SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.262 mW/g
Maximum value of SAR (measured) = 0.459 mW/g

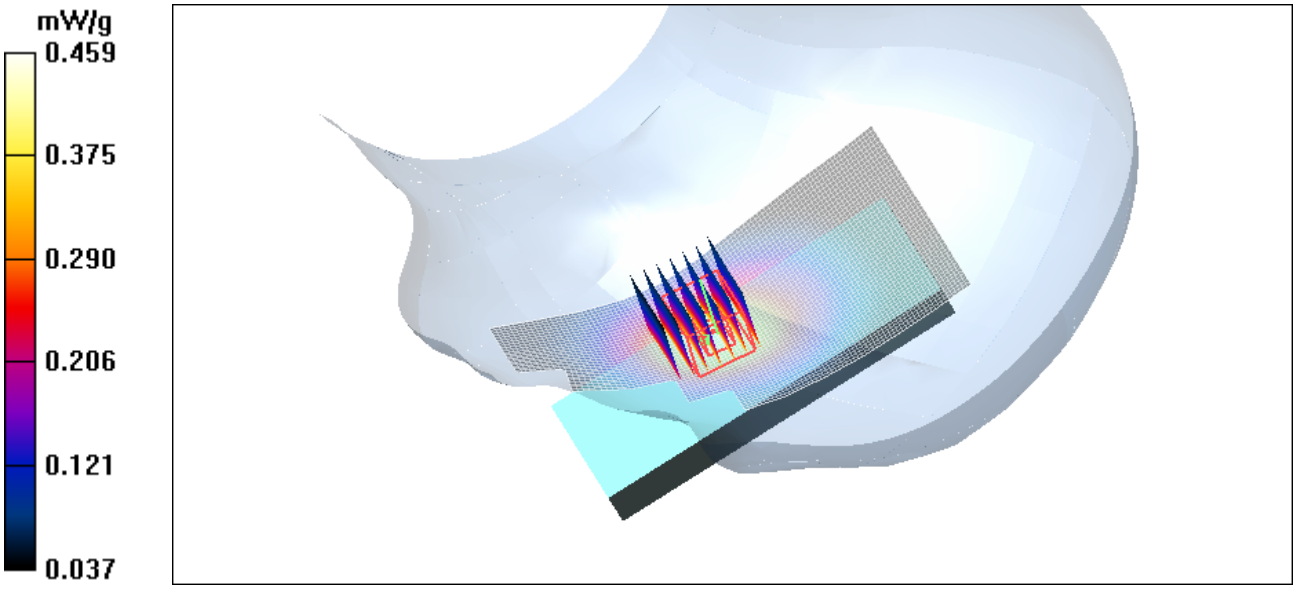


Figure 13 Left Hand Touch Cheek slide open GSM 850 Channel 190

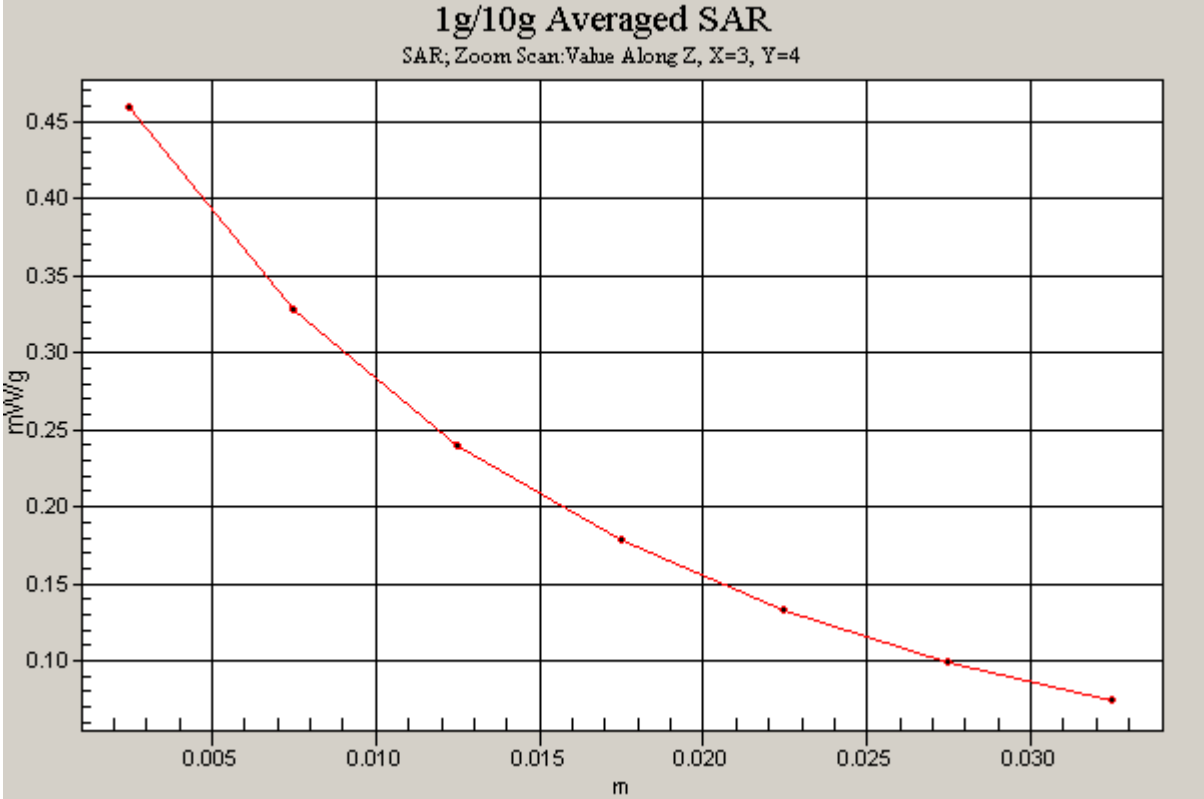


Figure 14 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 850 Channel 190)

GSM 850 Left Cheek slide open Low

Date/Time: 5/1/2009 1:08:19 PM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 42.5; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.382 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.76 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 0.438 W/kg
SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.225 mW/g
Maximum value of SAR (measured) = 0.378 mW/g

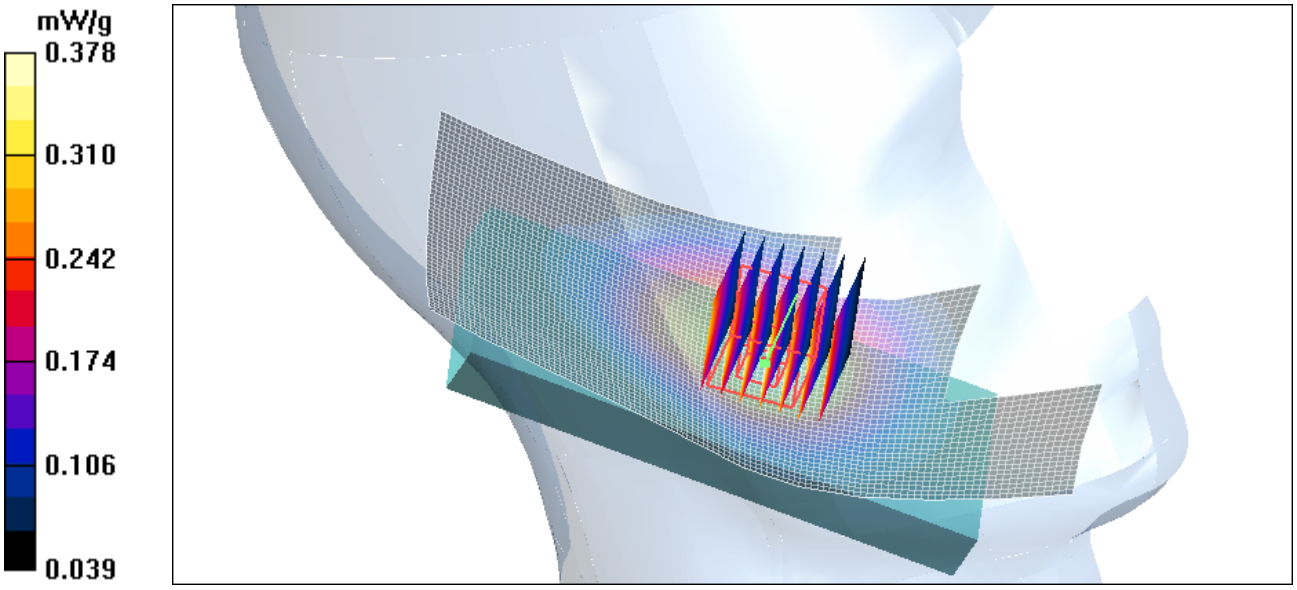


Figure 15 Left Hand Touch Cheek slide open GSM 850 Channel 128

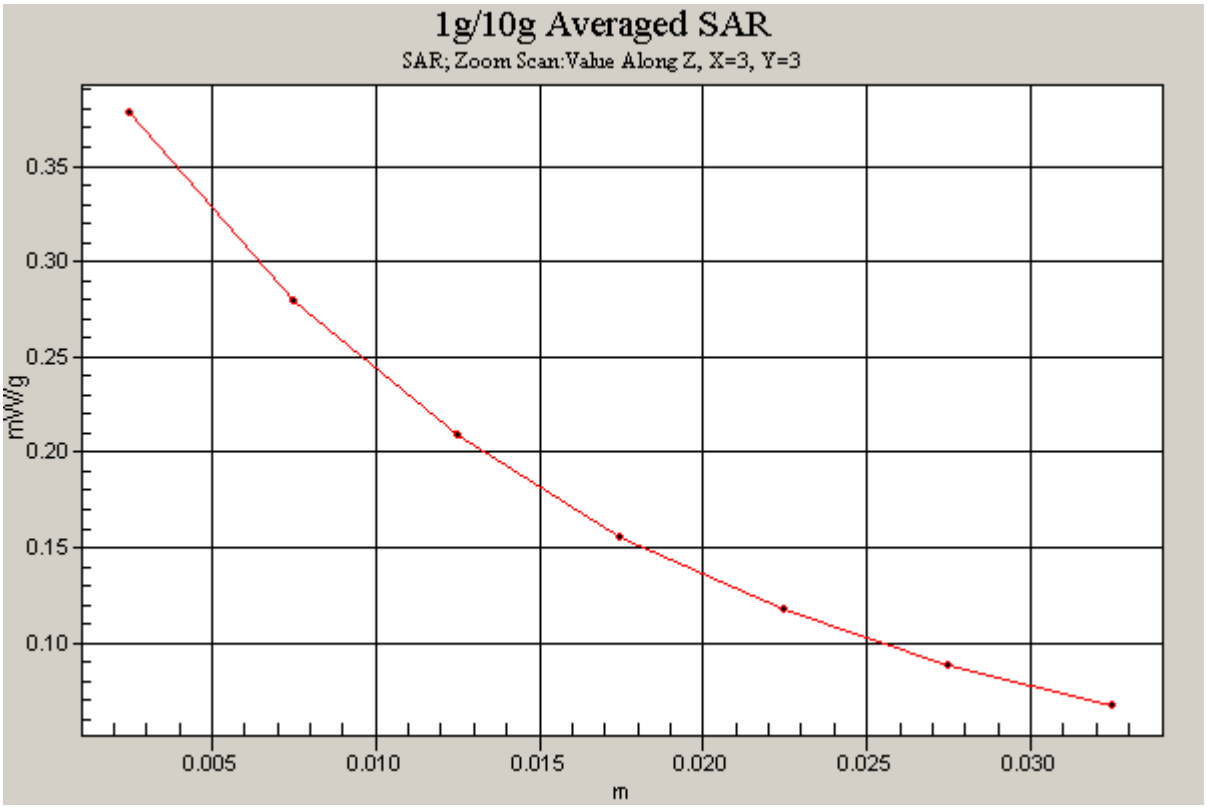


Figure 16 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 850 Channel 128)

GSM 850 Left Tilt slide open Middle

Date/Time: 5/1/2009 1:33:18 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Tilt Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.212 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.134 mW/g
Maximum value of SAR (measured) = 0.213 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.216 W/kg
SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.093 mW/g
Maximum value of SAR (measured) = 0.188 mW/g

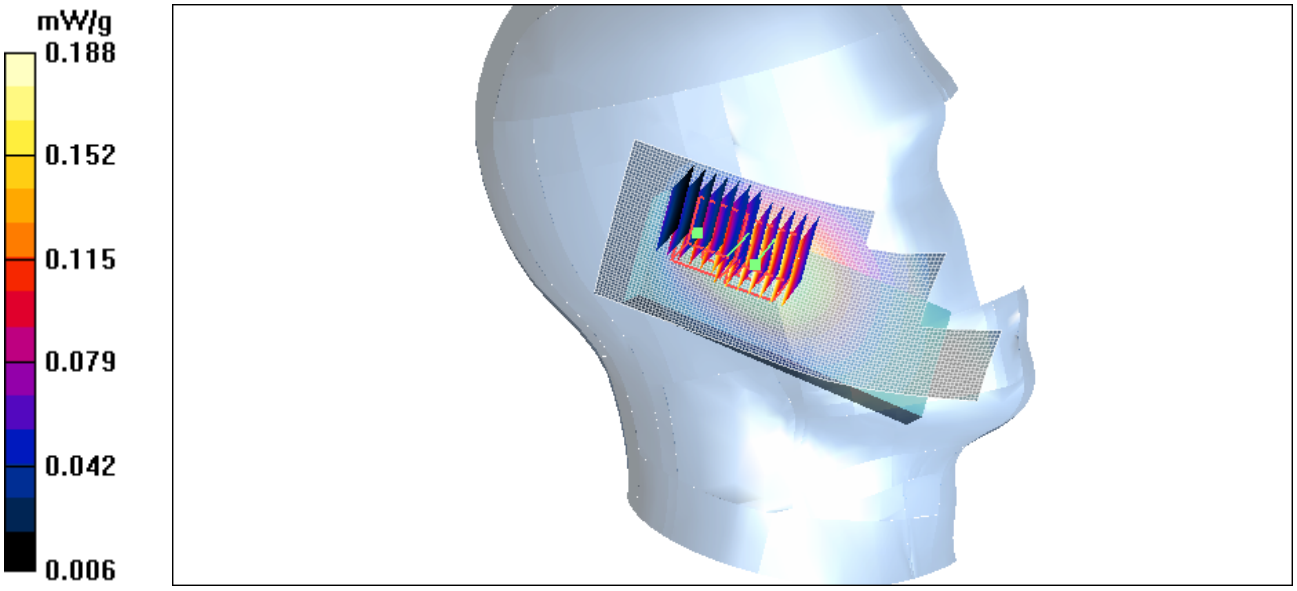
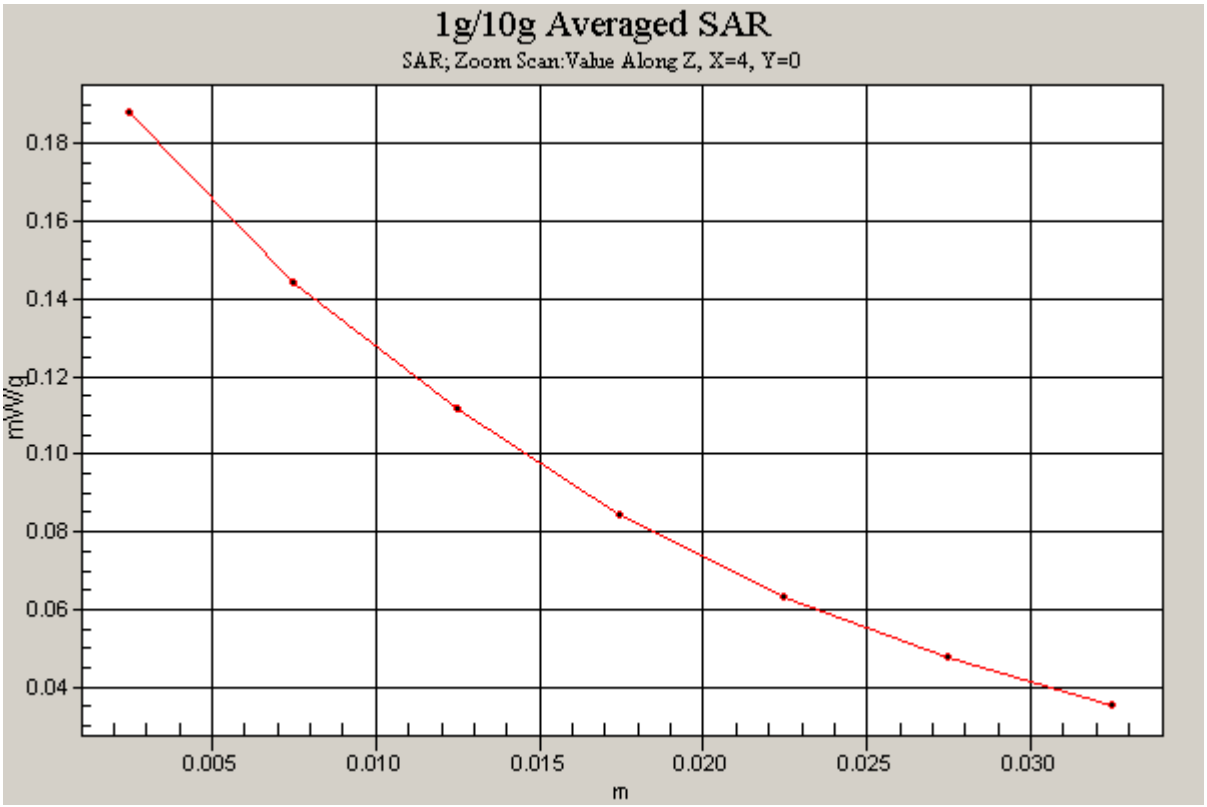


Figure 17 Left Hand Tilt 15° slide open GSM 850 Channel 190



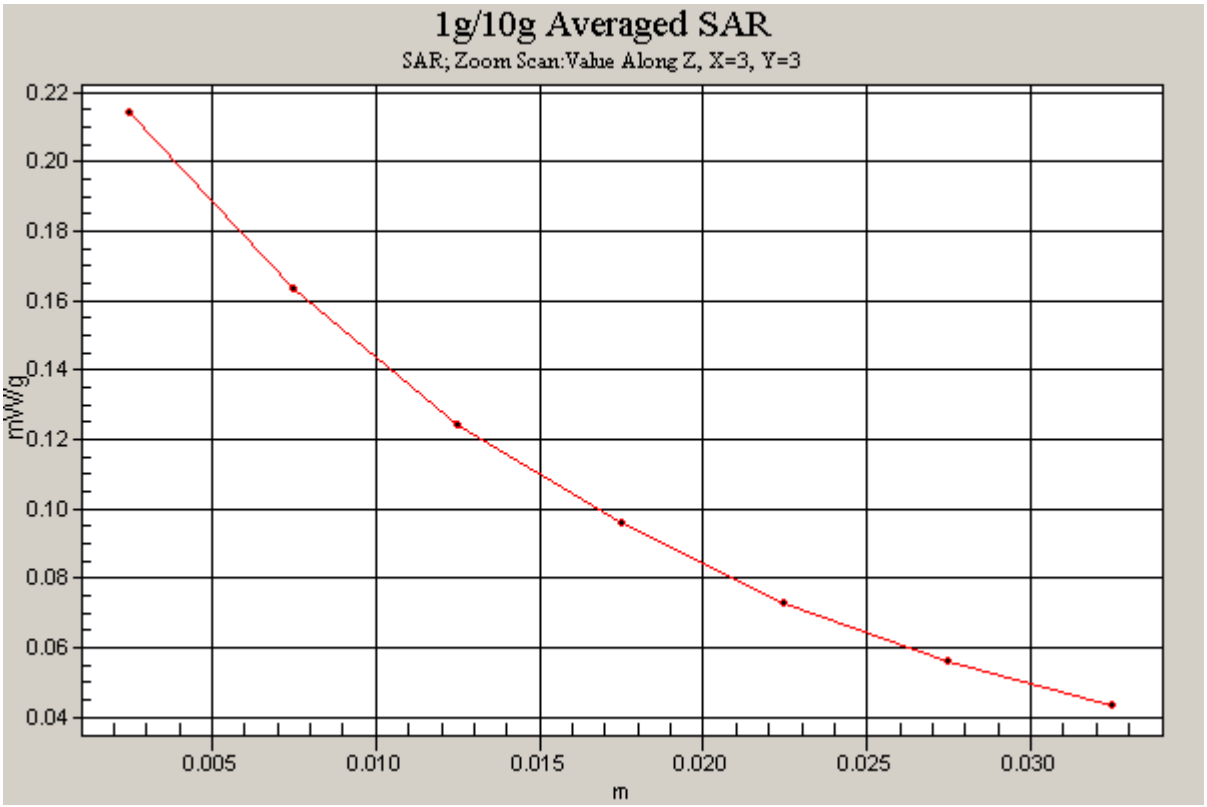


Figure 18 Z-Scan at power reference point (Left Hand Tilt 15° slide open GSM 850 Channel 190)

GSM 850 Right Cheek slide open Middle

Date/Time: 5/1/2009 7:54:22 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.446 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.32 V/m; Power Drift = 0.142 dB
Peak SAR (extrapolated) = 0.530 W/kg
SAR(1 g) = 0.384 mW/g; SAR(10 g) = 0.266 mW/g
Maximum value of SAR (measured) = 0.458 mW/g

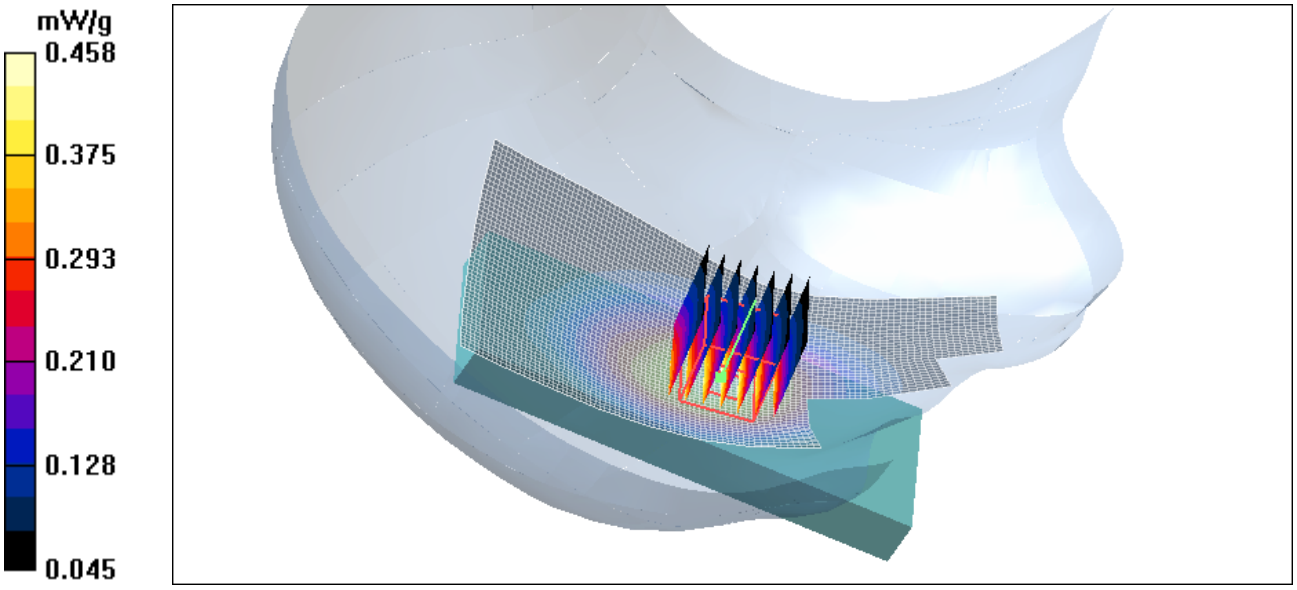


Figure 19 Right Hand Touch Cheek slide open GSM 850 Channel 190

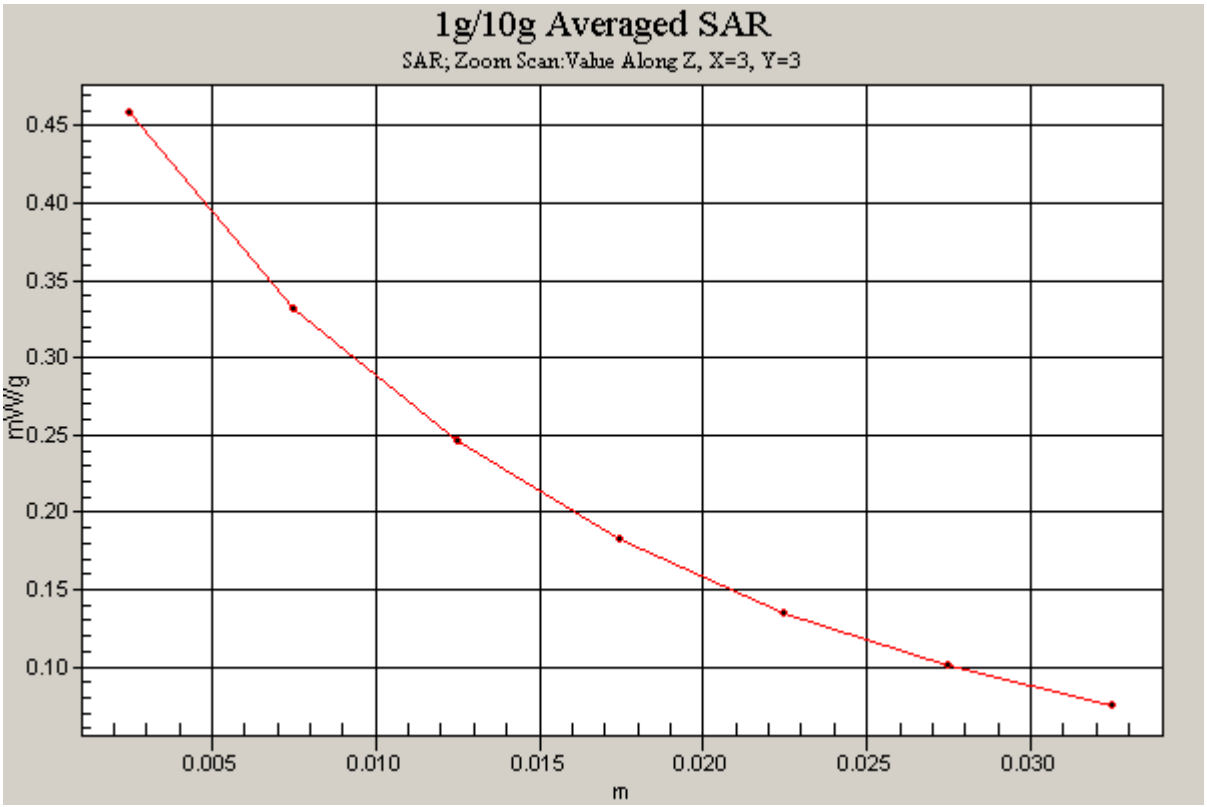


Figure 20 Z-Scan at power reference point (Right Hand Touch Cheek slide open GSM 850 Channel 190)

GSM 850 Right Tilt Slide open Middle

Date/Time: 5/1/2009 10:48:40 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Tilt Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.229 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 0.256 W/kg
SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.143 mW/g
Maximum value of SAR (measured) = 0.224 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 0.181 W/kg
SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.075 mW/g
Maximum value of SAR (measured) = 0.164 mW/g

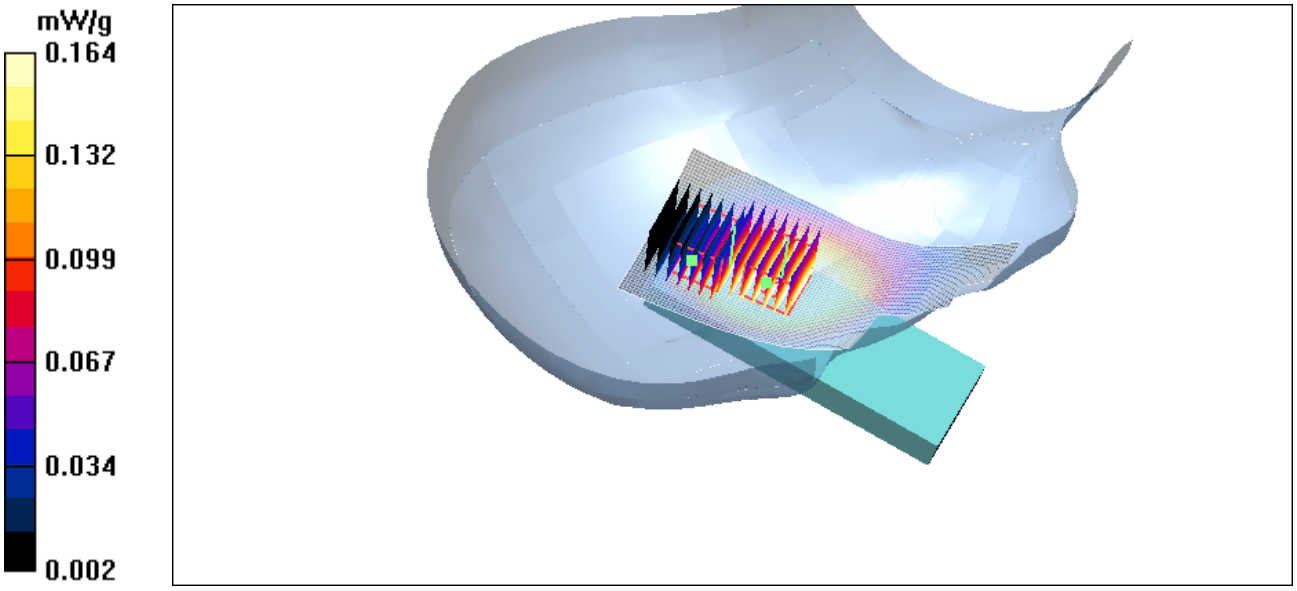
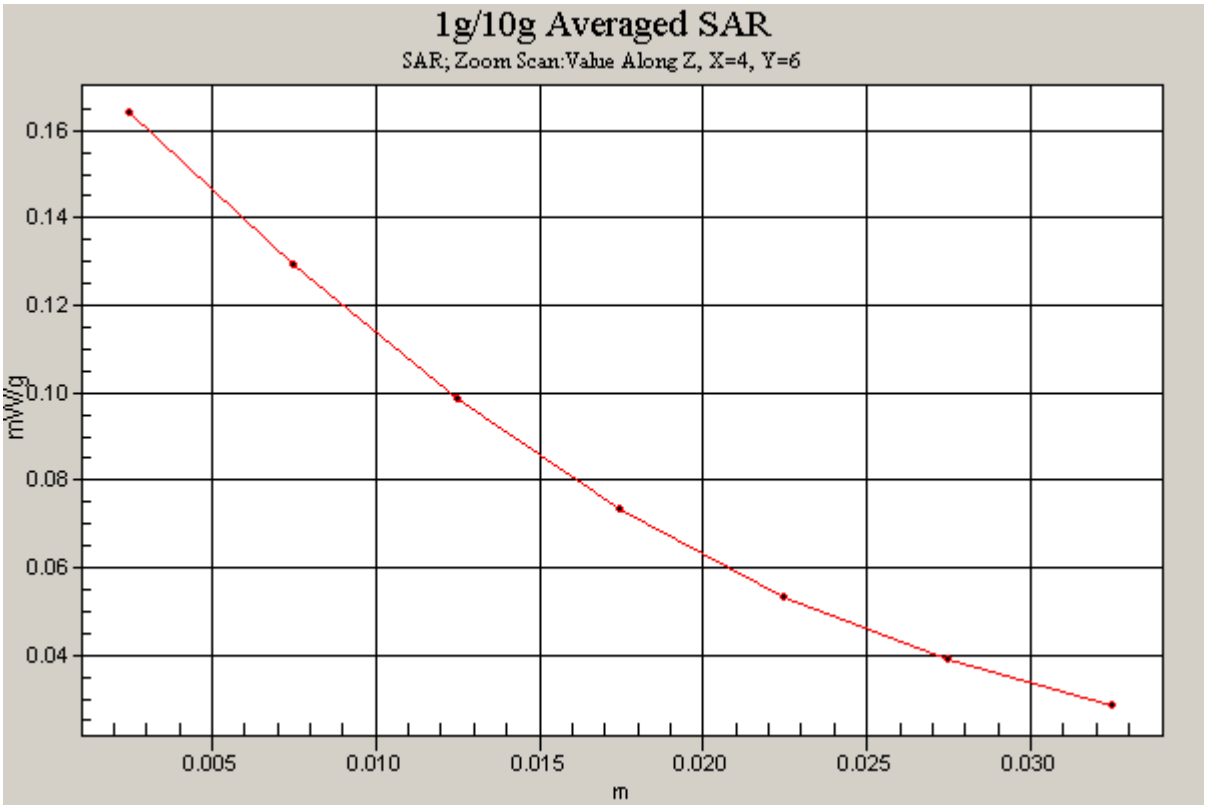


Figure 21 Right Hand Tilt 15° slide open GSM 850 Channel 190



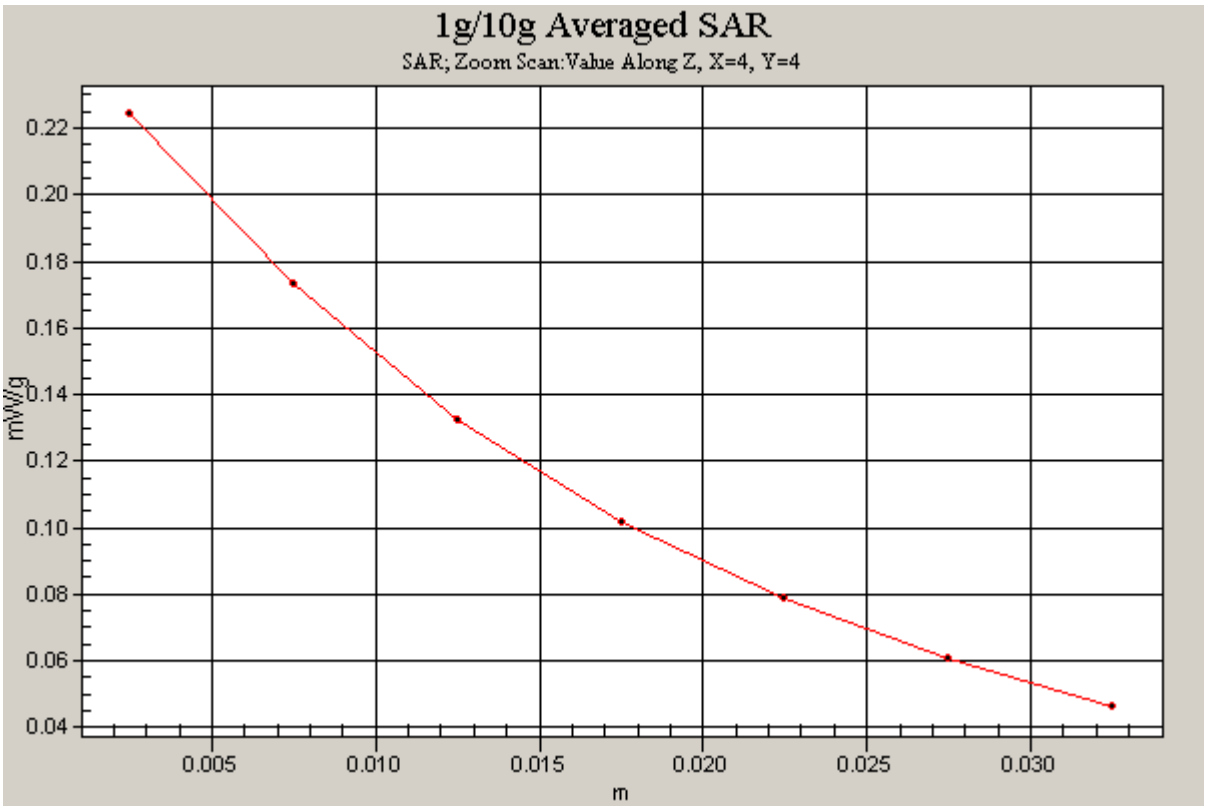


Figure 22 Z-Scan at power reference point (Right Hand Tilt 15° slide open GSM 850 Channel 190)

GSM 850 Towards Ground slide open High

Date/Time: 4/30/2009 7:13:08 PM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 1.03 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.573 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.7 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.669 W/kg
SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.355 mW/g
Maximum value of SAR (measured) = 0.572 mW/g

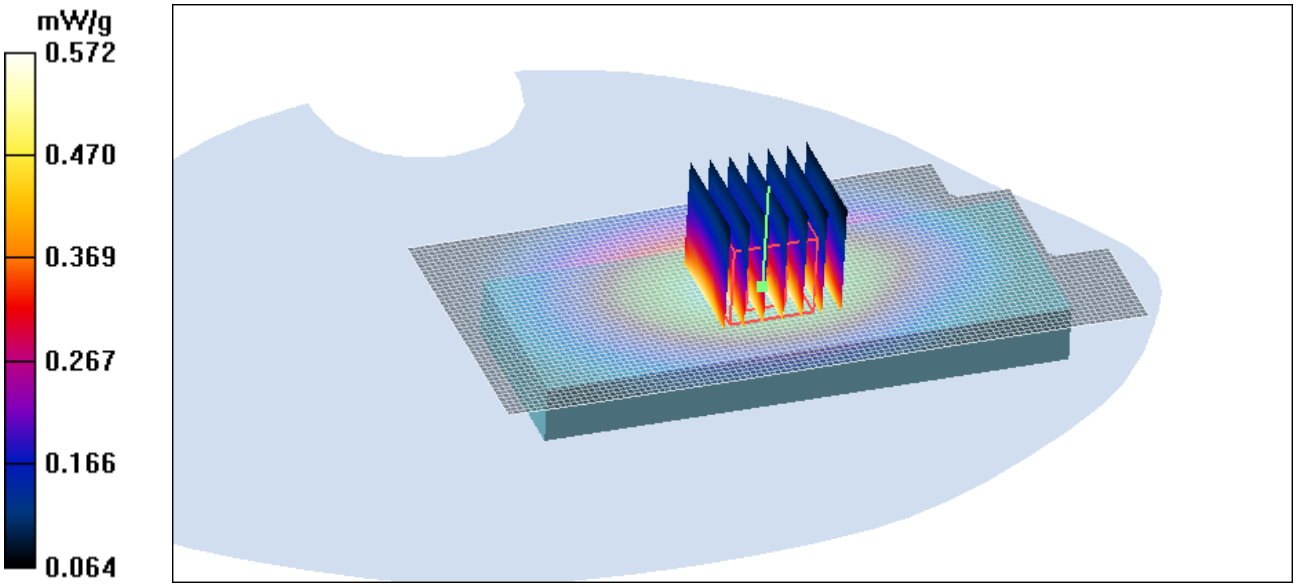


Figure 23 Body, Towards Ground slide open, GSM 850 Channel 251

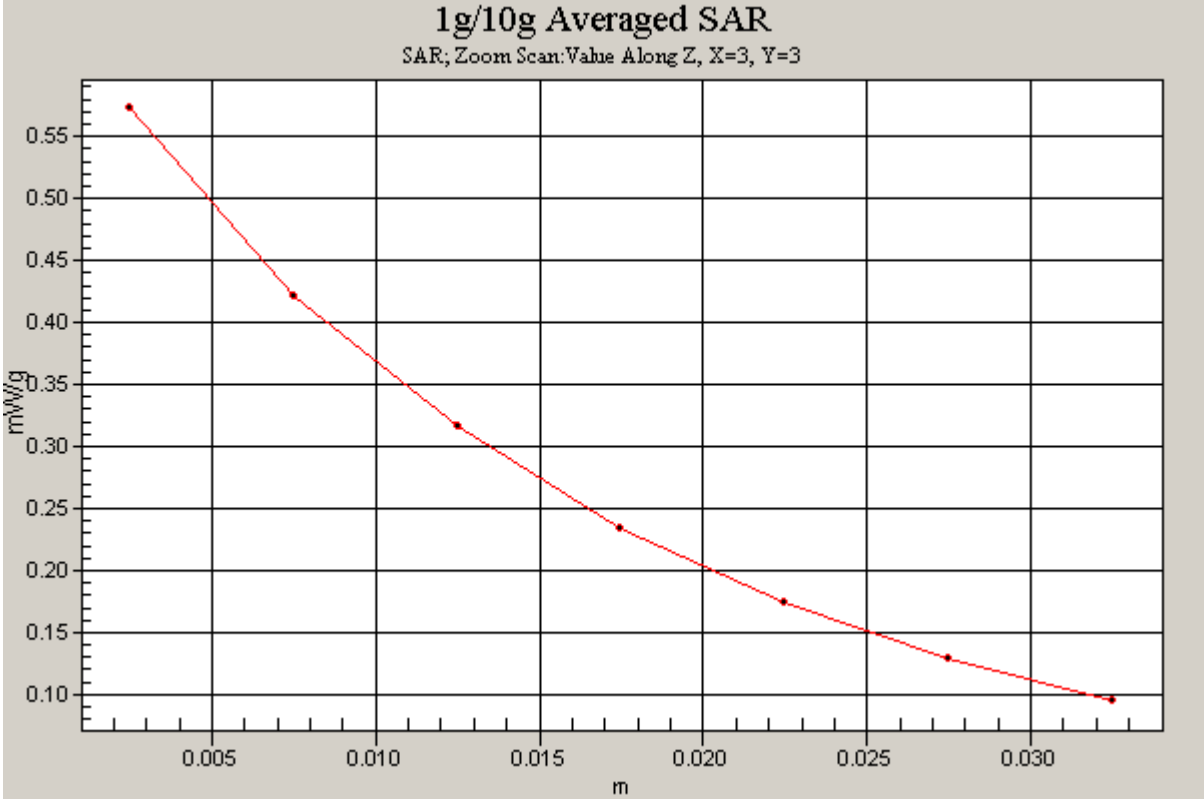


Figure 24 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 850 Channel 251)

GSM 850 Towards Ground slide open Middle

Date/Time: 4/30/2009 6:54:46 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.573 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.5 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 0.666 W/kg
SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.356 mW/g
Maximum value of SAR (measured) = 0.572 mW/g

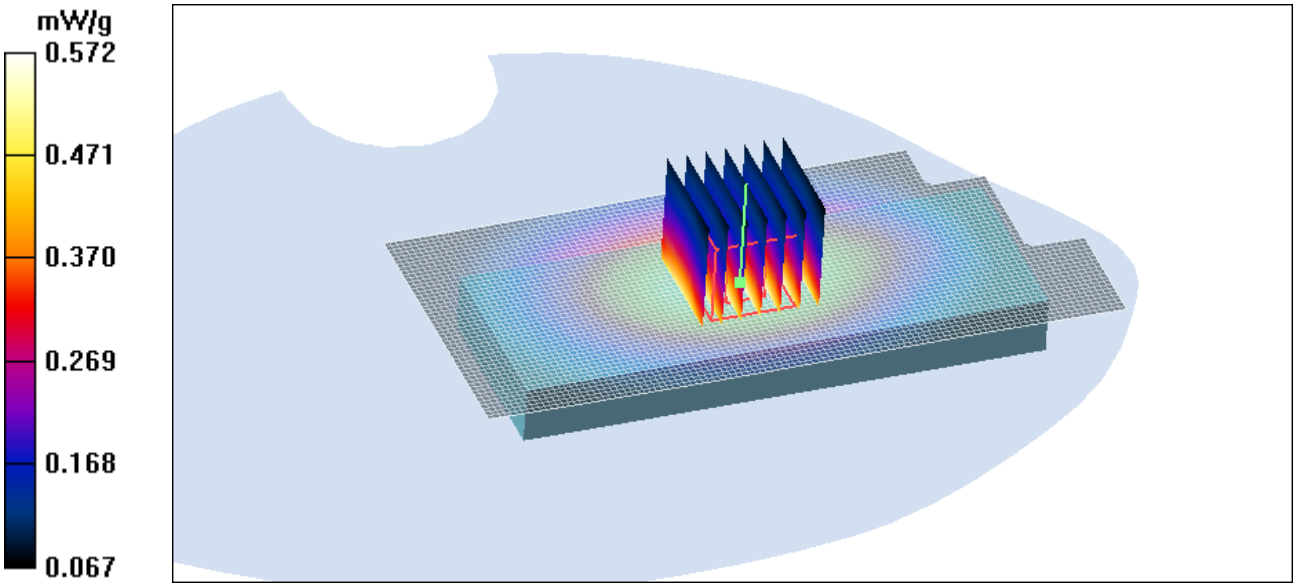


Figure 25 Body, Towards Ground slide open, GSM 850 Channel 190

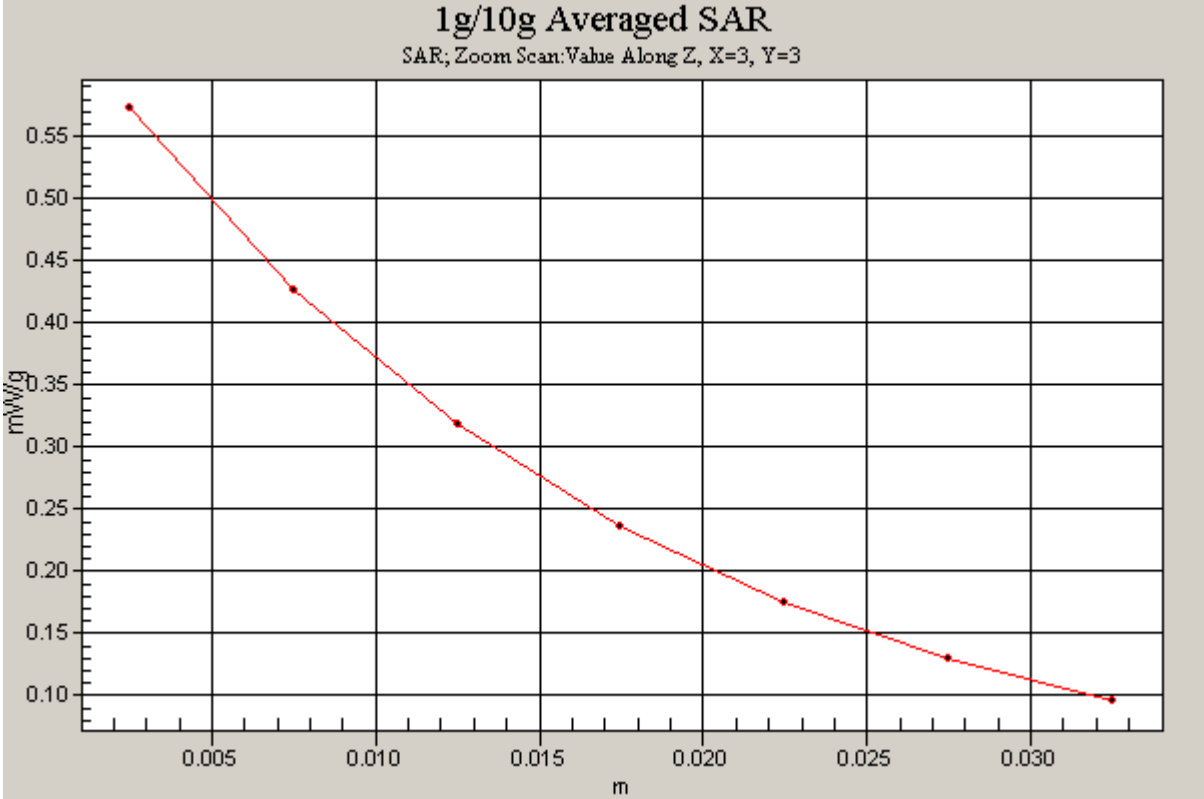


Figure 26 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 850 Channel 190)

GSM 850 Towards Ground slide open Low

Date/Time: 4/30/2009 7:31:29 PM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 55.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.549 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.477 mW/g; SAR(10 g) = 0.342 mW/g
Maximum value of SAR (measured) = 0.551 mW/g

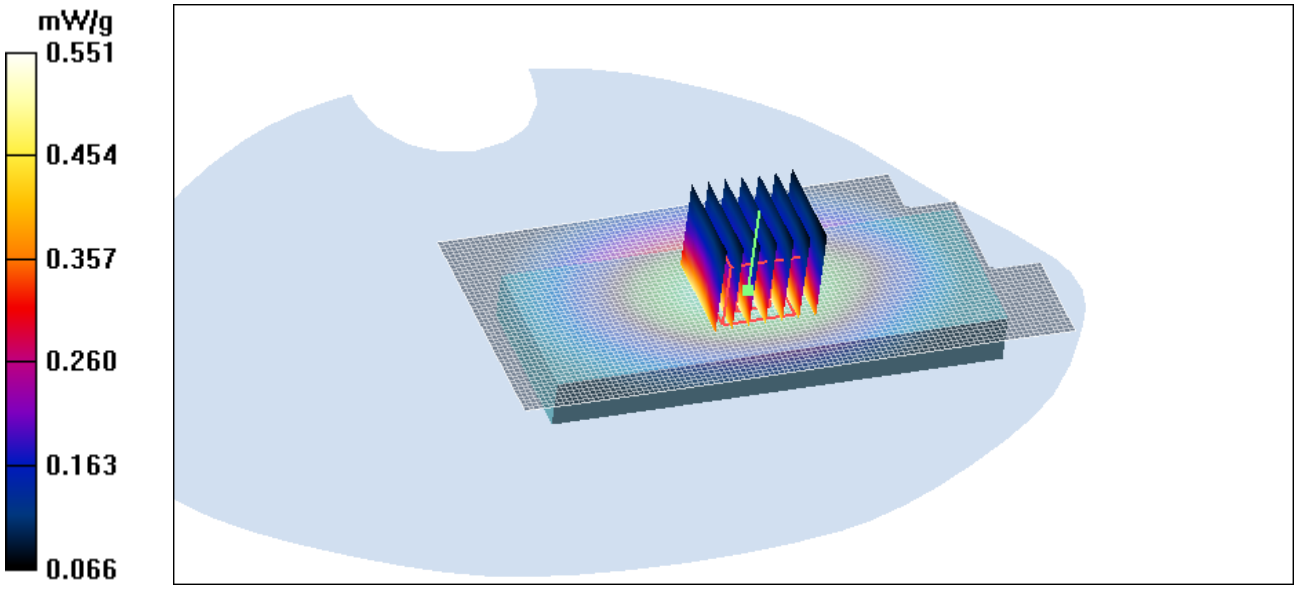


Figure 27 Body, Towards Ground slide open, GSM 850 Channel 128

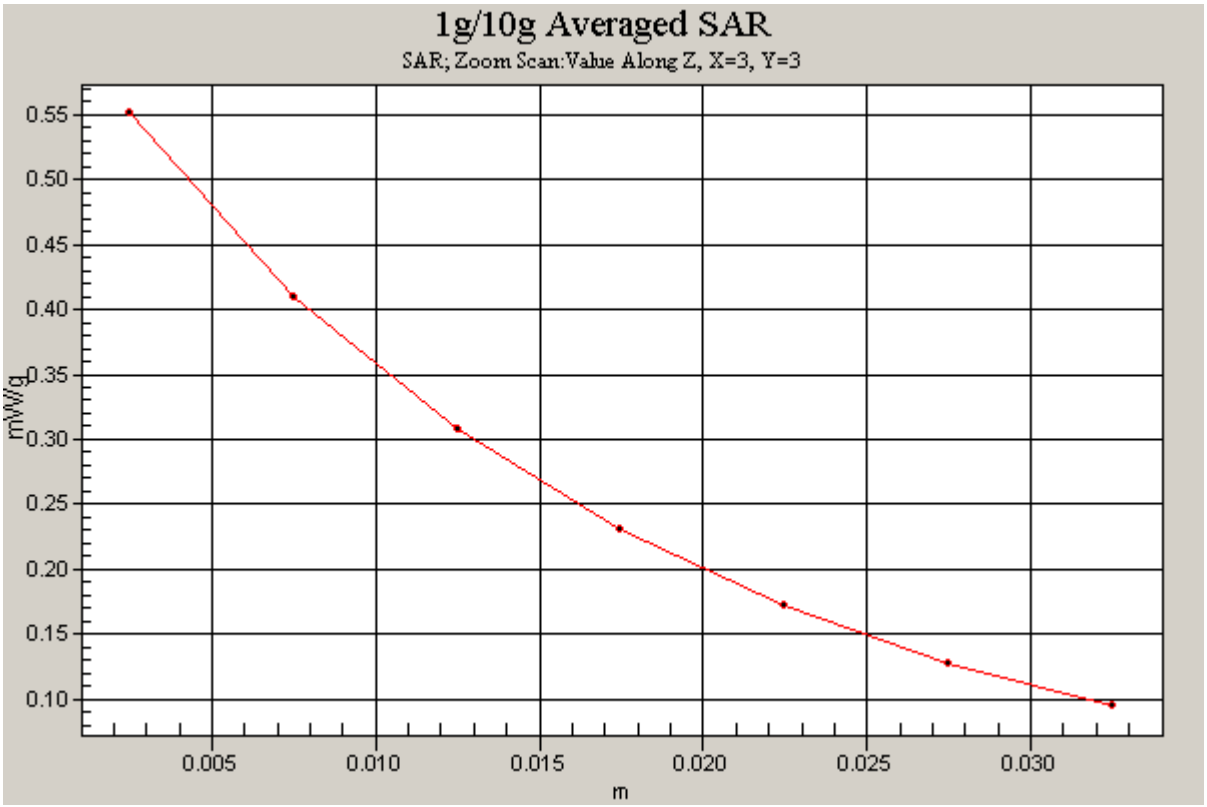


Figure 28 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 850 Channel 128)

GSM 850 towards Phantom Slide open Middle

Date/Time: 4/30/2009 6:33:49 PM

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3

Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.505 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.135 dB

Peak SAR (extrapolated) = 0.596 W/kg

SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.321 mW/g

Maximum value of SAR (measured) = 0.514 mW/g

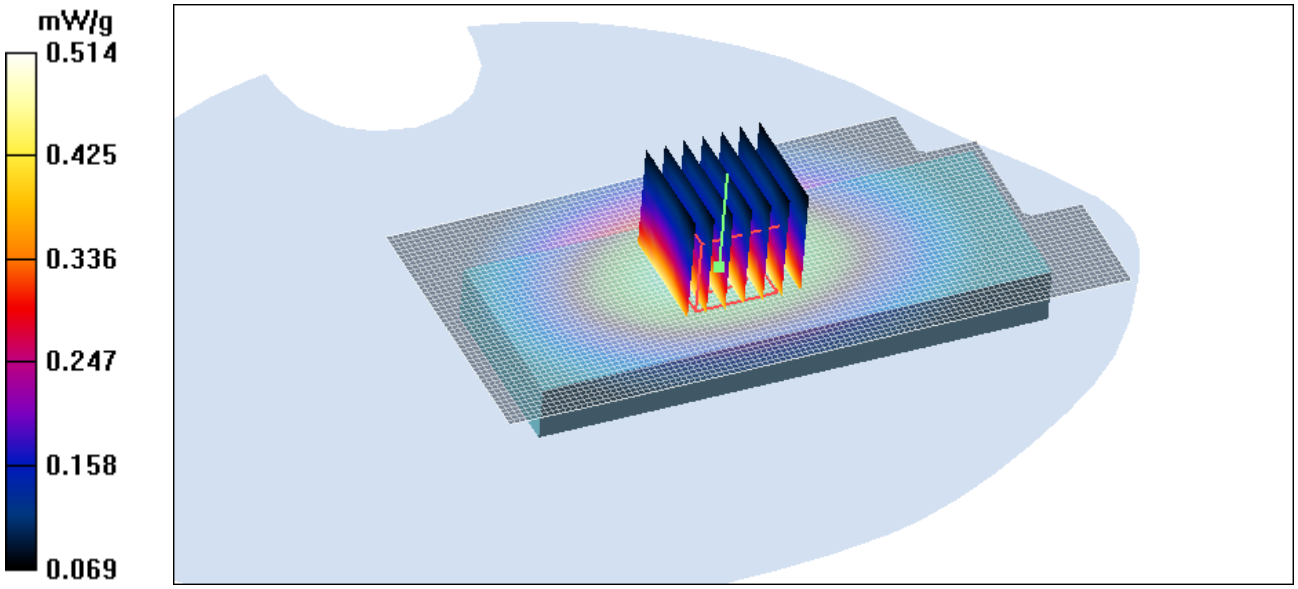


Figure 29 Body, Towards Phantom slide open, GSM 850, Channel 190

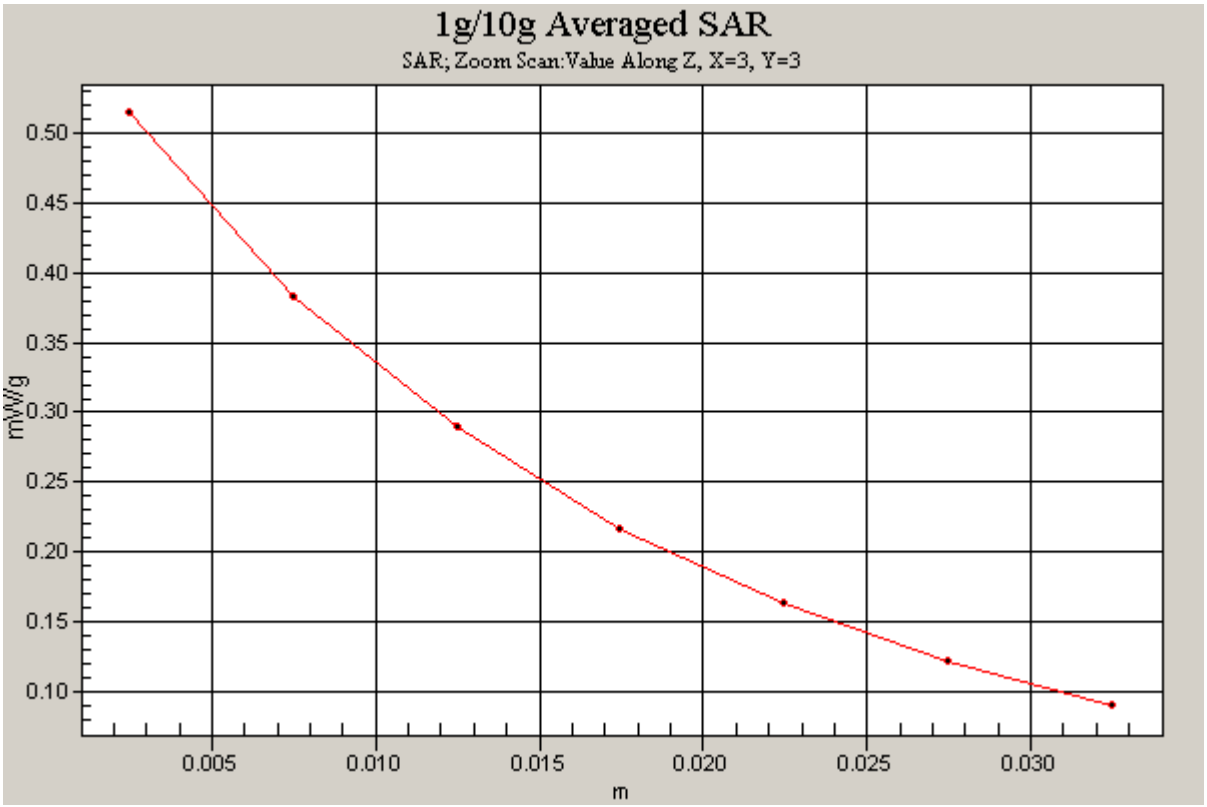


Figure 30 Z-Scan at power reference point (Body, Towards Phantom slide open, GSM 850, Channel 190)

GSM 850 Towards Ground slide open with Earphone Middle

Date/Time: 4/30/2009 7:53:14 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.386 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.98 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.450 W/kg
SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.242 mW/g
Maximum value of SAR (measured) = 0.389 mW/g

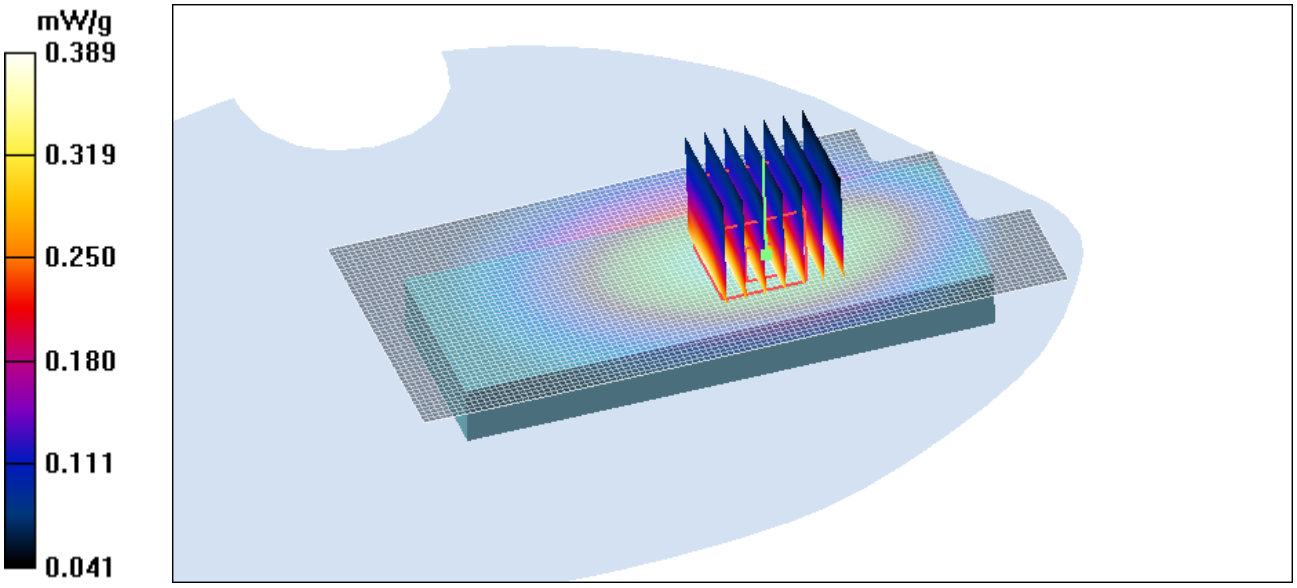


Figure 31 Body with Earphone, Towards Ground slide open, GSM 850 Channel 190

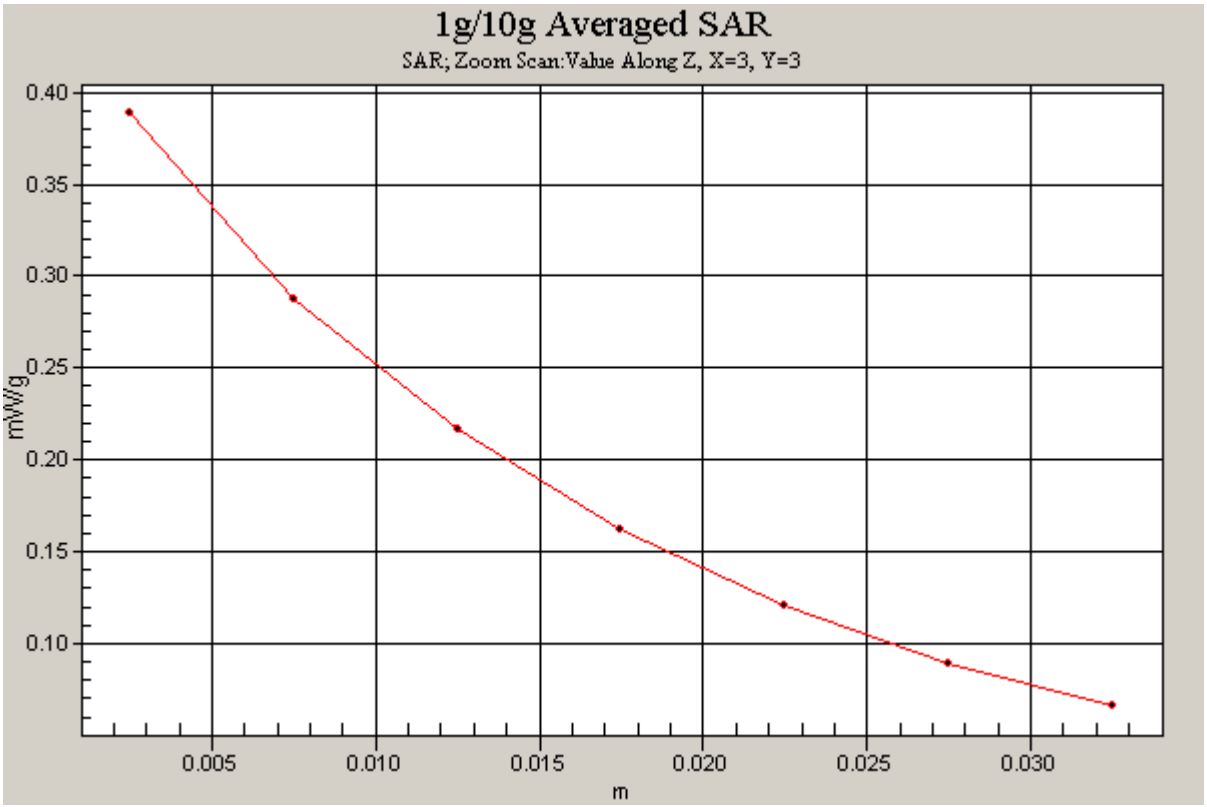


Figure 32 Z-Scan at power reference point (Body with Earphone, Towards Ground slide open, GSM 850 Channel 190)

GSM 850 GPRS (4UP) Towards Ground slide open Middle

Date/Time: 4/30/2009 6:13:46 PM
Communication System: GSM 850+GPRS(4Up); Frequency: 836.6 MHz;Duty Cycle: 1:2
Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.60 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.8 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 1.84 W/kg
SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.991 mW/g
Maximum value of SAR (measured) = 1.60 mW/g

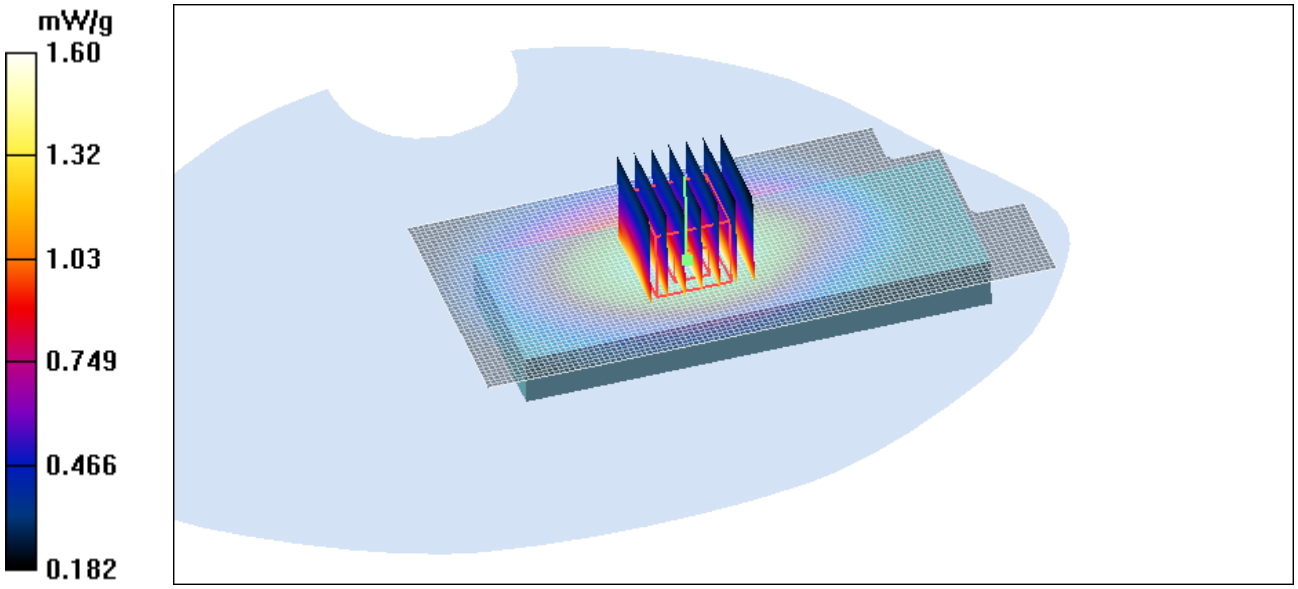


Figure 33 Body, Towards Ground slide open, GSM 850 GPRS(4UP), Channel 190

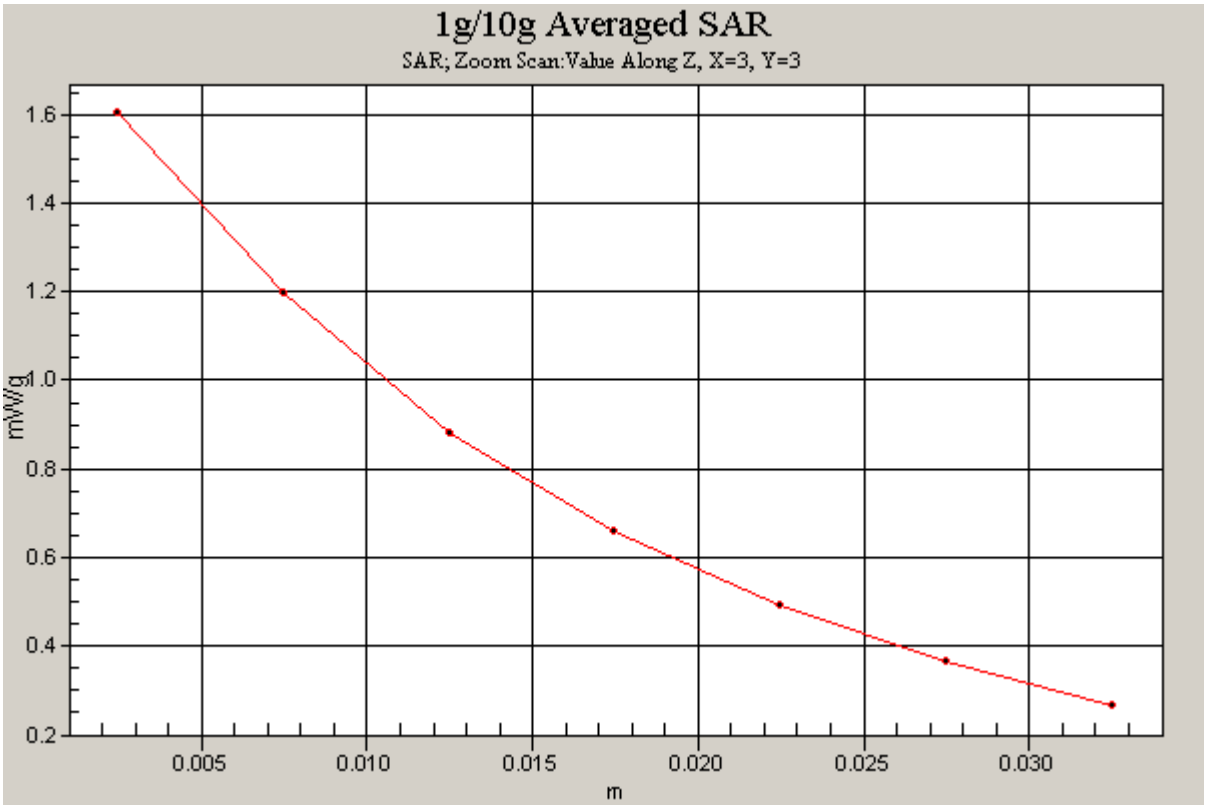


Figure 34 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 850 GPRS(4UP), Channel 190)

GSM 850 Left Cheek slide close High

Date/Time: 5/1/2009 6:44:30 AM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.892 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.287 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.16 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 0.355 W/kg
SAR(1 g) = 0.258 mW/g; SAR(10 g) = 0.182 mW/g
Maximum value of SAR (measured) = 0.297 mW/g

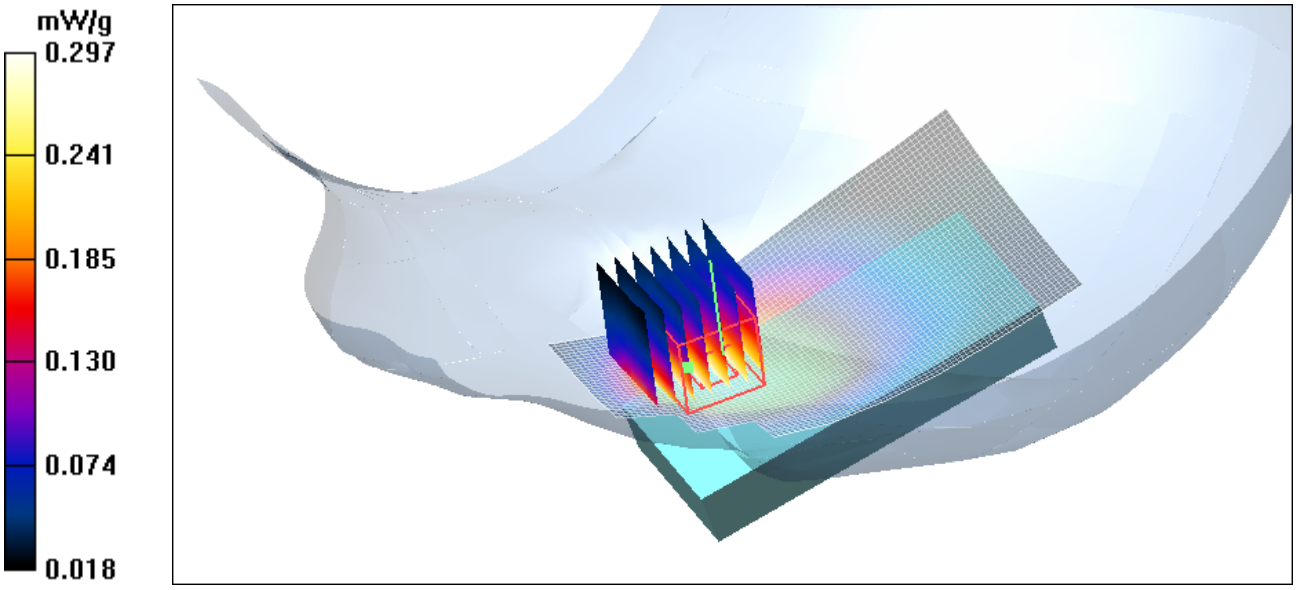


Figure 35 Left Hand Touch Cheek slide close GSM 850 Channel 251

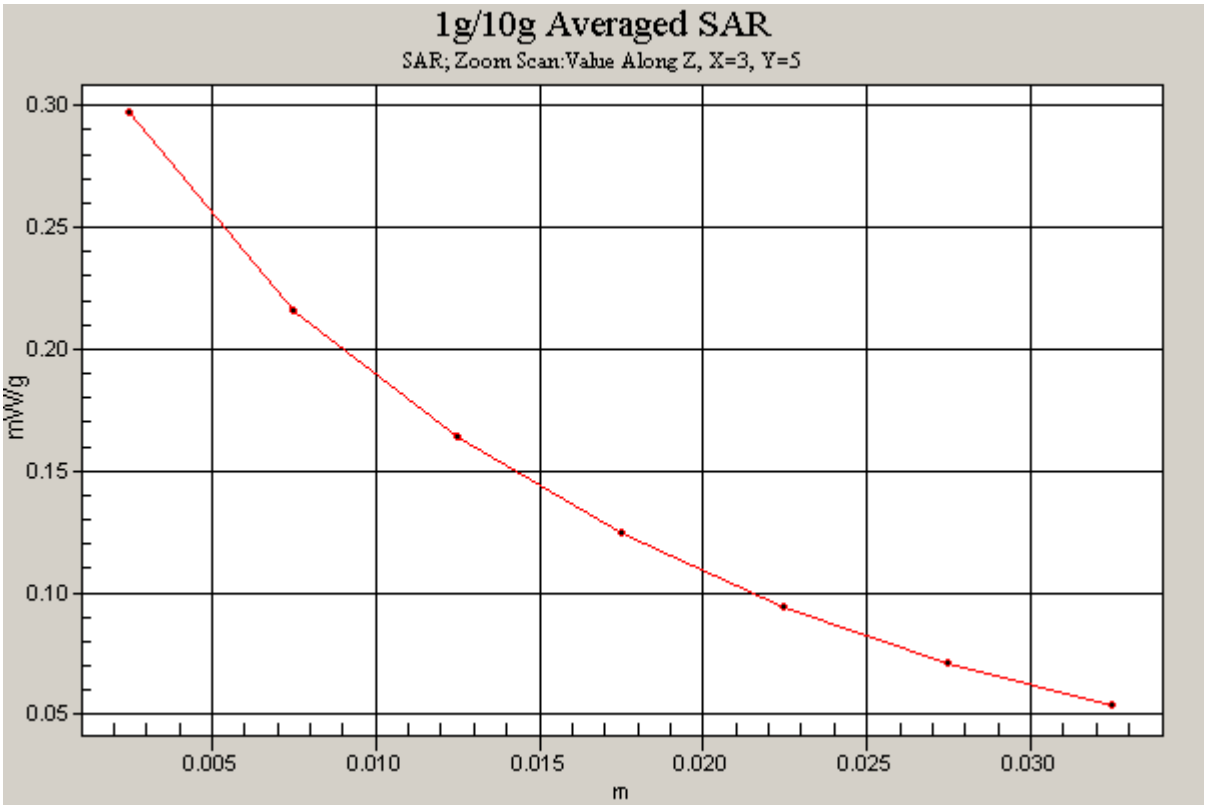


Figure 36 Z-Scan at power reference point (Left Hand Touch Cheek slide close GSM 850 Channel 251)

GSM 850 Left Cheek slide close Middle

Date/Time: 5/1/2009 4:44:38 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.304 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.50 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 0.334 W/kg
SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.178 mW/g
Maximum value of SAR (measured) = 0.283 mW/g

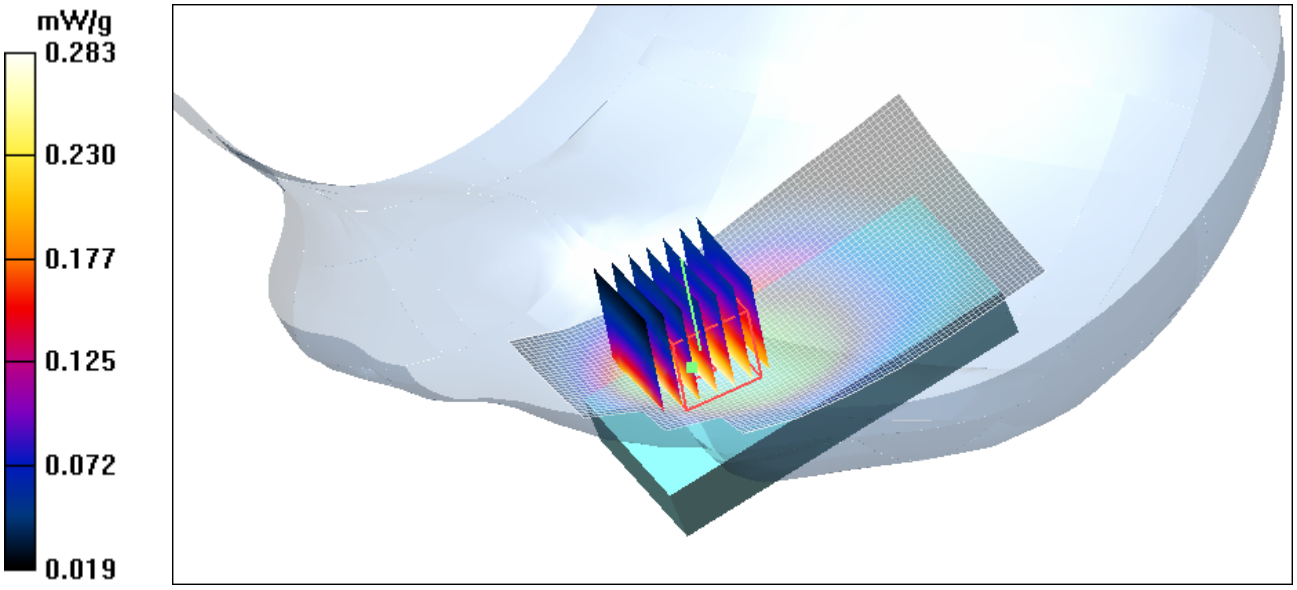


Figure 37 Left Hand Touch Cheek slide close GSM 850 Channel 190

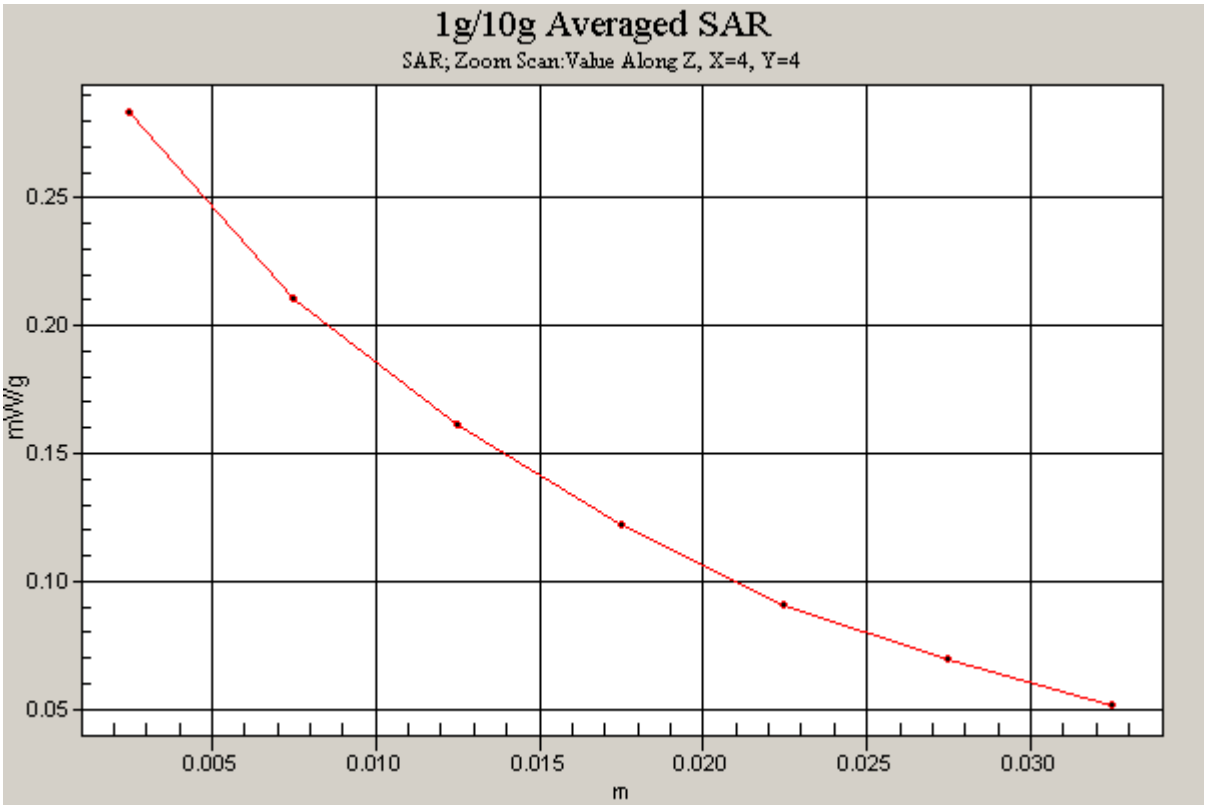


Figure 38 Z-Scan at power reference point (Left Hand Touch Cheek slide close GSM 850 Channel 190)

GSM 850 Left Cheek slide close Low

Date/Time: 5/1/2009 6:25:28 AM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 42.5; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.233 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.78 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.241 mW/g

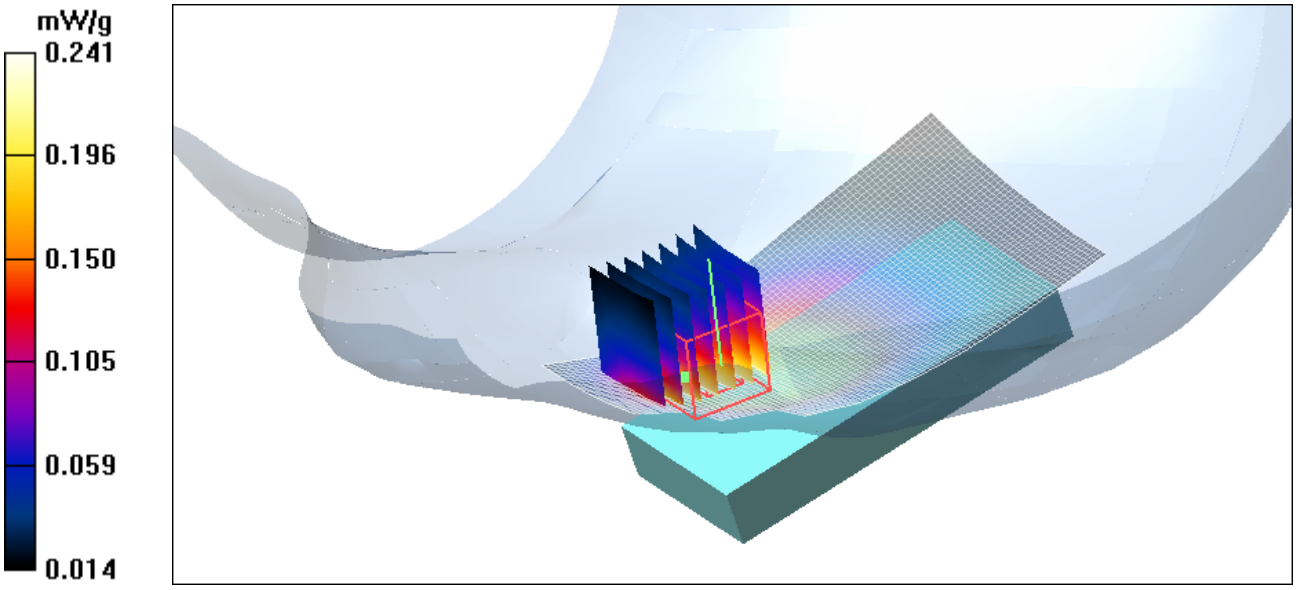


Figure 39 Left Hand Touch Cheek slide close GSM 850 Channel 128

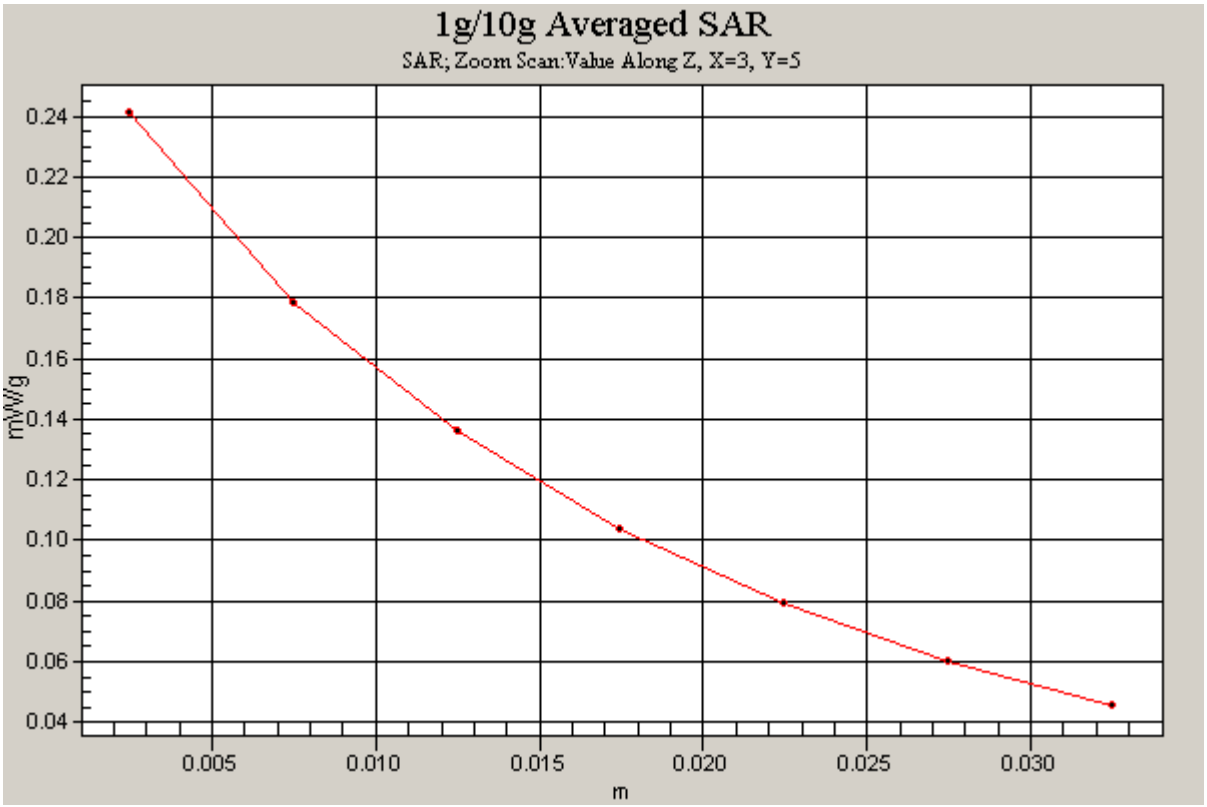


Figure 40 Z-Scan at power reference point (Left Hand Touch Cheek slide close GSM 850 Channel 128)

GSM 850 Left Tilt Slide close Middle

Date/Time: 5/1/2009 5:03:02 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.169 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.134 dB
Peak SAR (extrapolated) = 0.201 W/kg
SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.108 mW/g
Maximum value of SAR (measured) = 0.173 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.134 dB
Peak SAR (extrapolated) = 0.166 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.147 mW/g

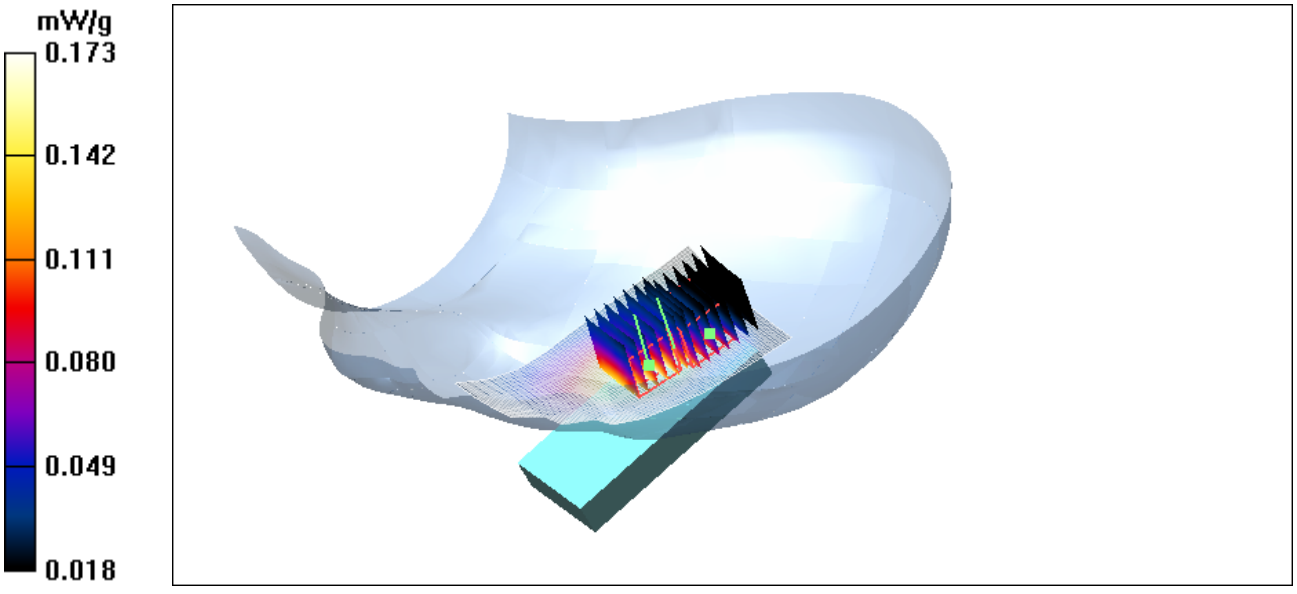
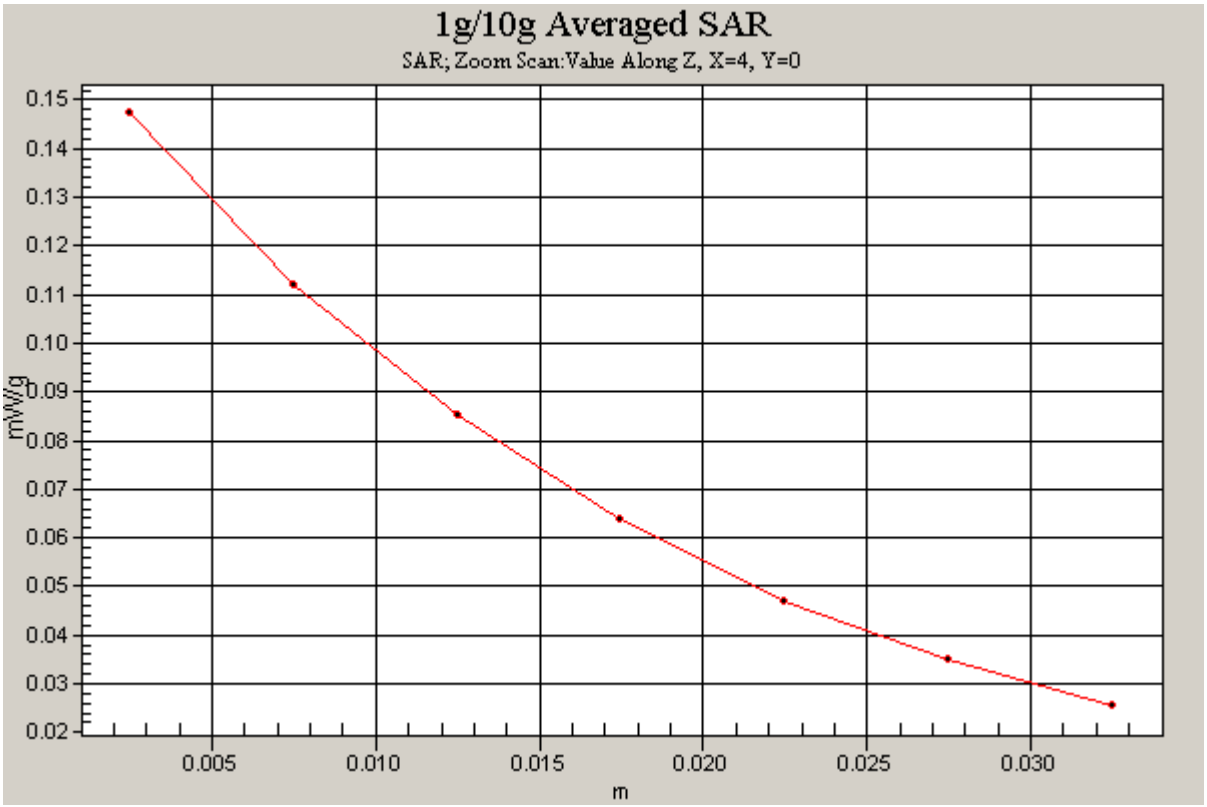


Figure 41 Left Hand Tilt 15° slide close GSM 850 Channel 190



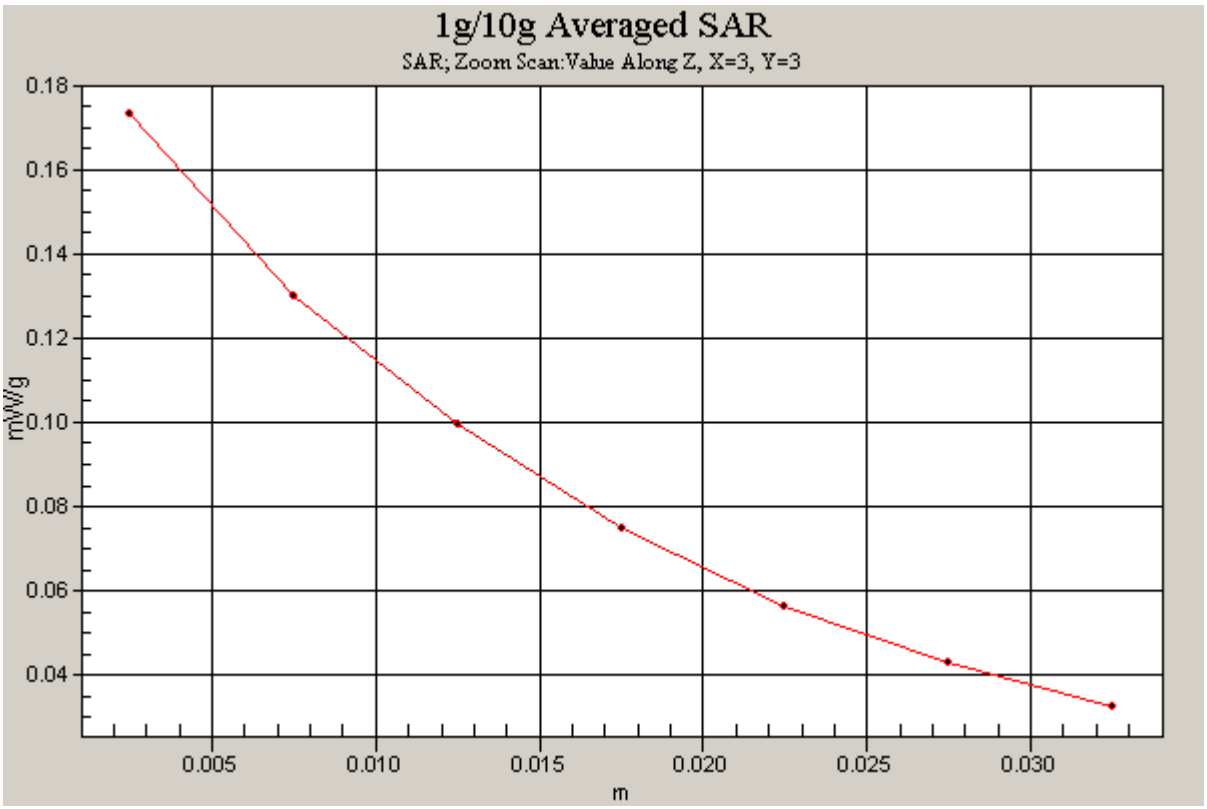


Figure 42 Z-Scan at power reference point (Left Hand Tilt 15° slide close GSM 850 Channel 190)

GSM 850 Right Cheek slide close Middle

Date/Time: 5/1/2009 5:34:41 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.292 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.44 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.173 mW/g
Maximum value of SAR (measured) = 0.328 mW/g

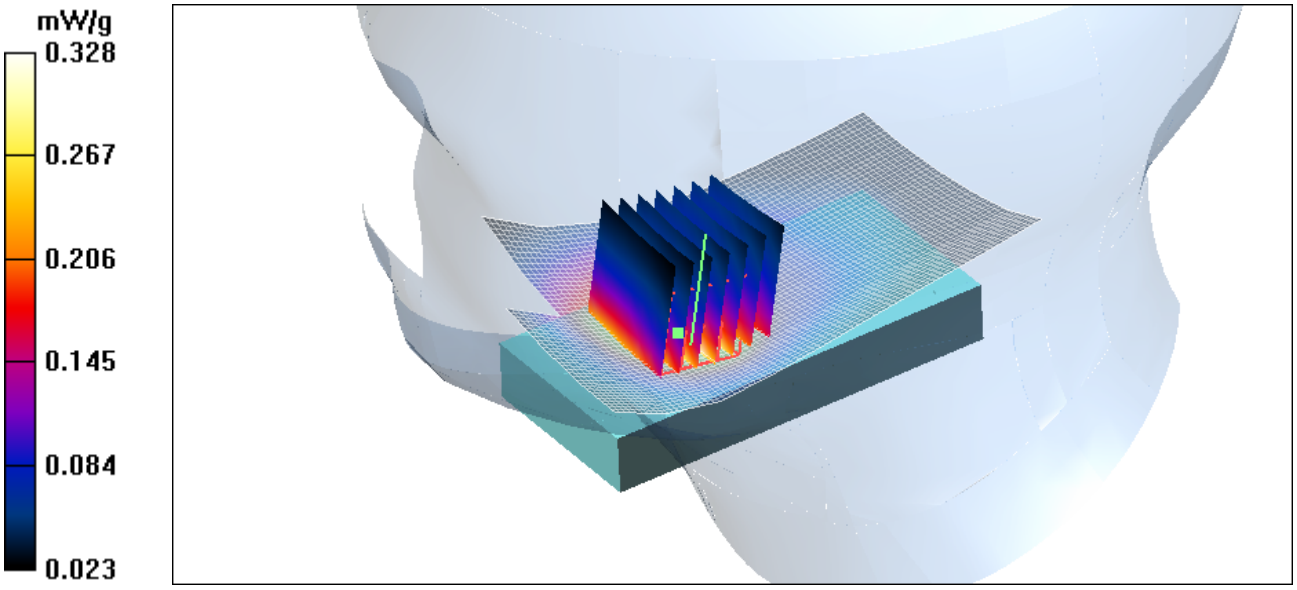


Figure 43 Right Hand Touch Cheek slide close GSM 850 Channel 190

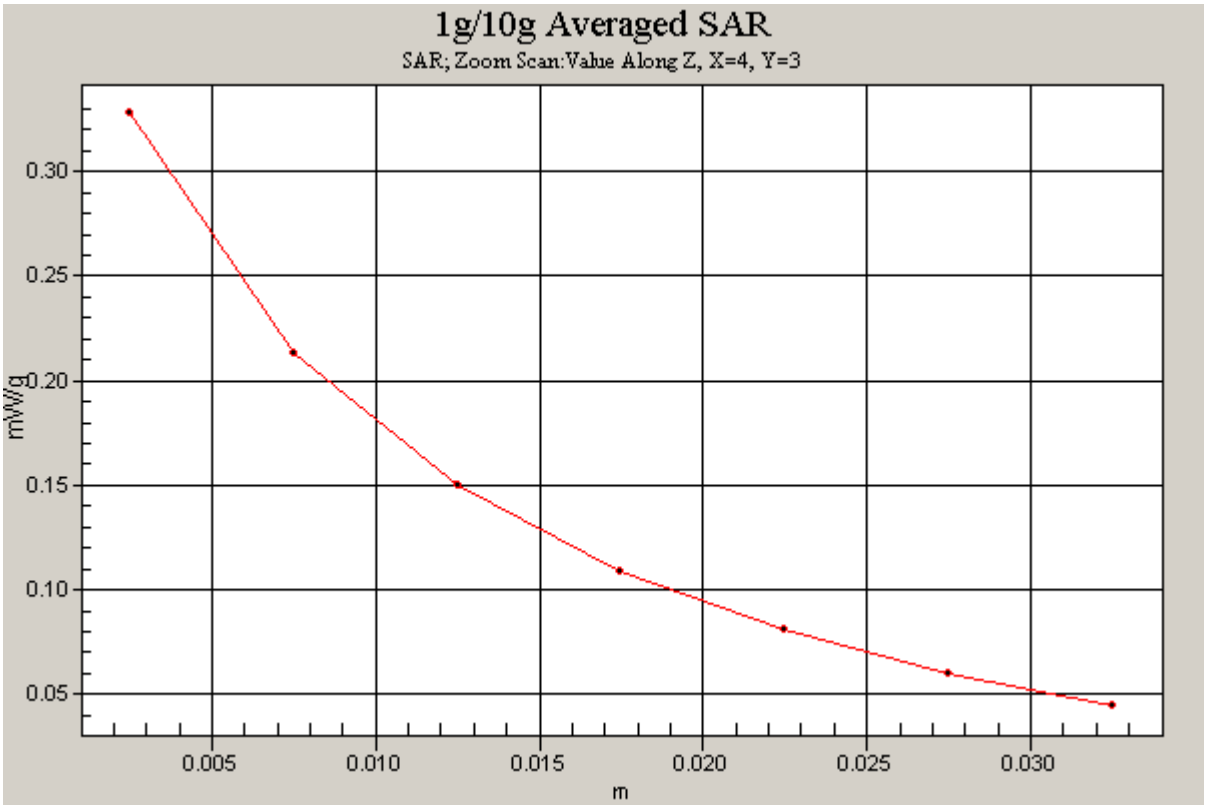


Figure 44 Z-Scan at power reference point (Right Hand Touch Cheek slide close GSM 850 Channel 190)

GSM 850 Right Tilt Slide close Middle

Date/Time: 5/1/2009 5:54:15 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.184 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.116 mW/g
Maximum value of SAR (measured) = 0.184 mW/g
Tilt Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.076 mW/g
Maximum value of SAR (measured) = 0.157 mW/g

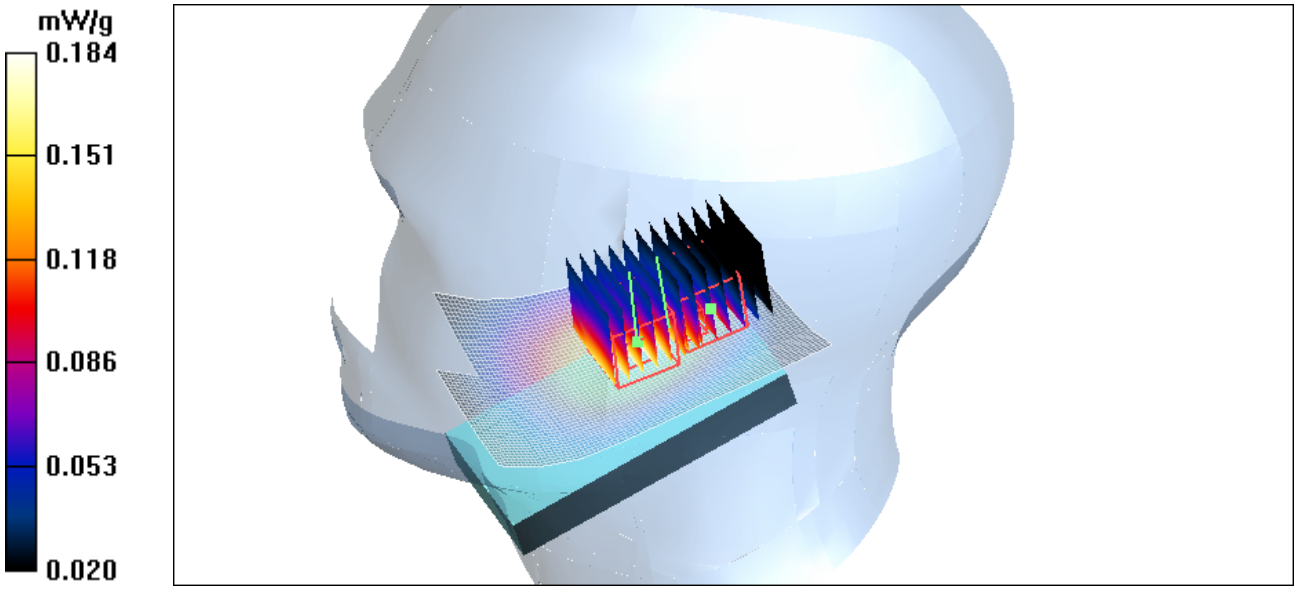
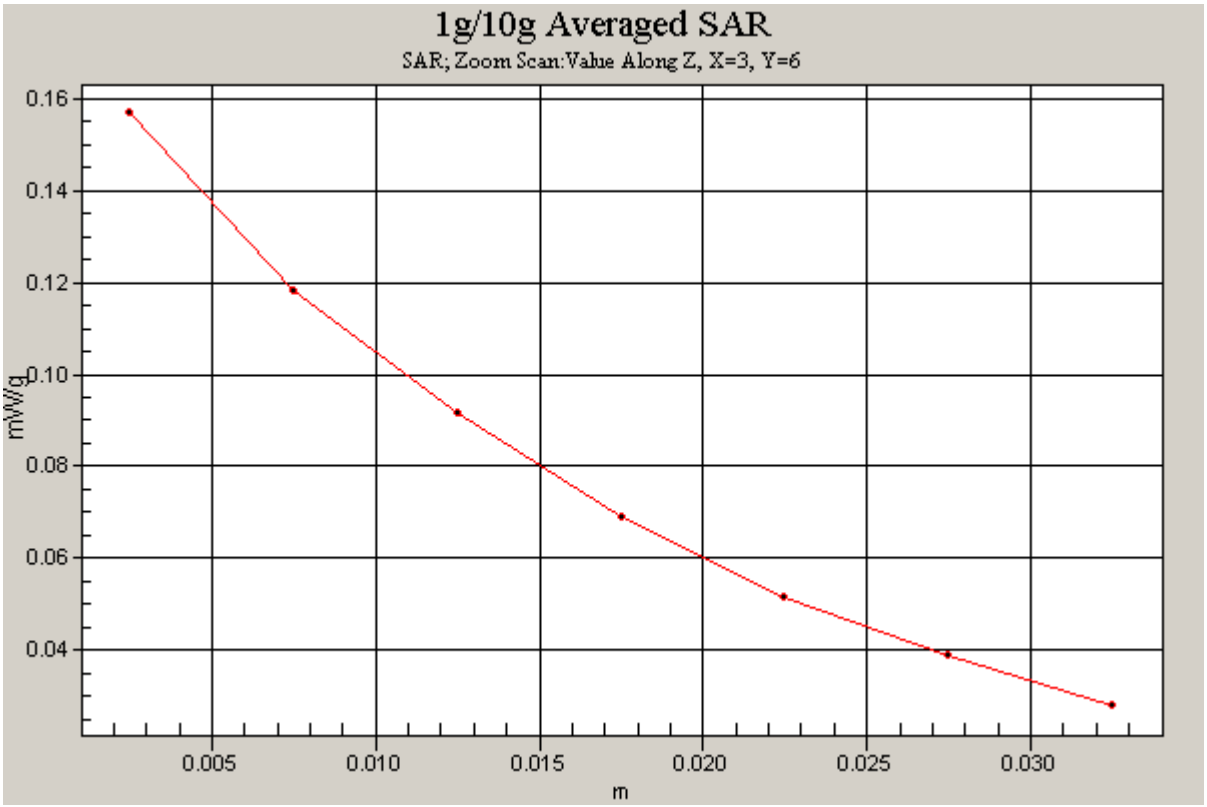


Figure 45 Right Hand Tilt 15° slide close GSM 850 Channel 190



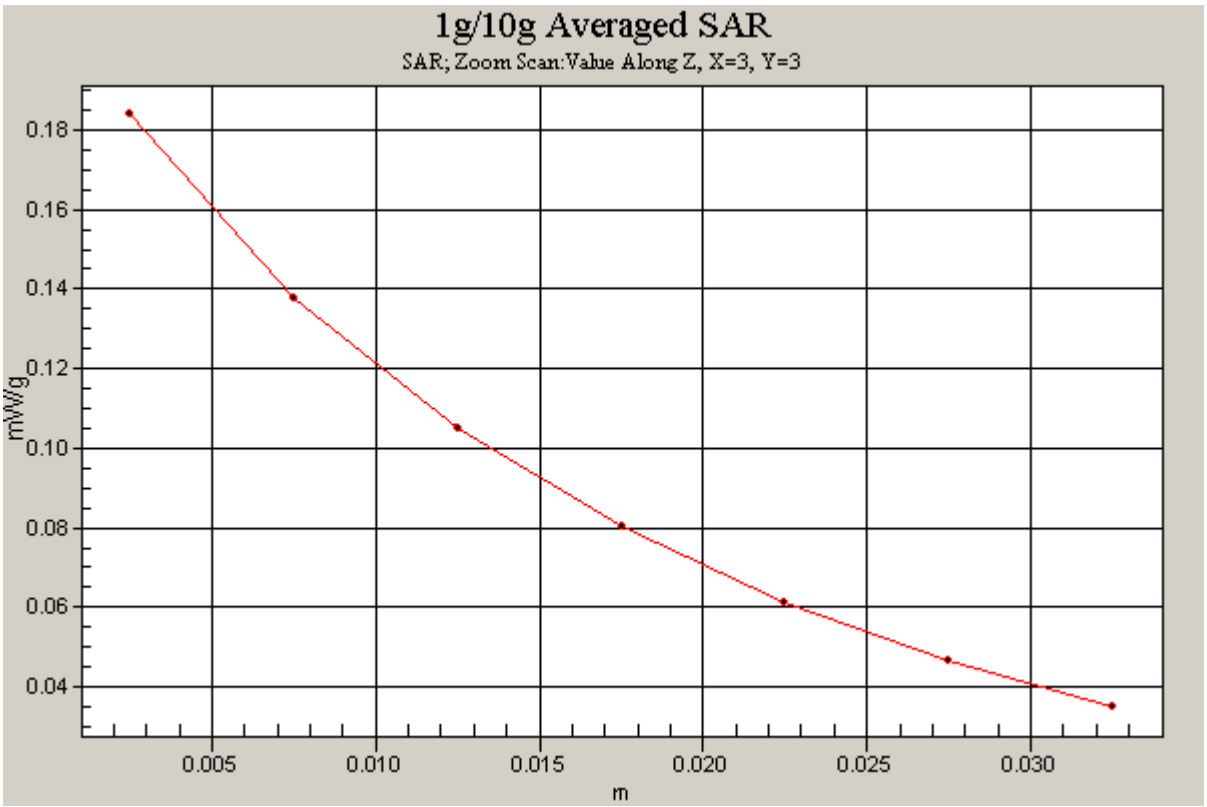


Figure 46 Z-Scan at power reference point (Right Hand Tilt 15° slide close GSM 850 Channel 190)

GSM 850 Towards Ground slide close High

Date/Time: 5/1/2009 3:01:44 PM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 1.03 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.348 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.20 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.413 W/kg
SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.205 mW/g
Maximum value of SAR (measured) = 0.346 mW/g
Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.20 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.409 W/kg
SAR(1 g) = 0.277 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.341 mW/g

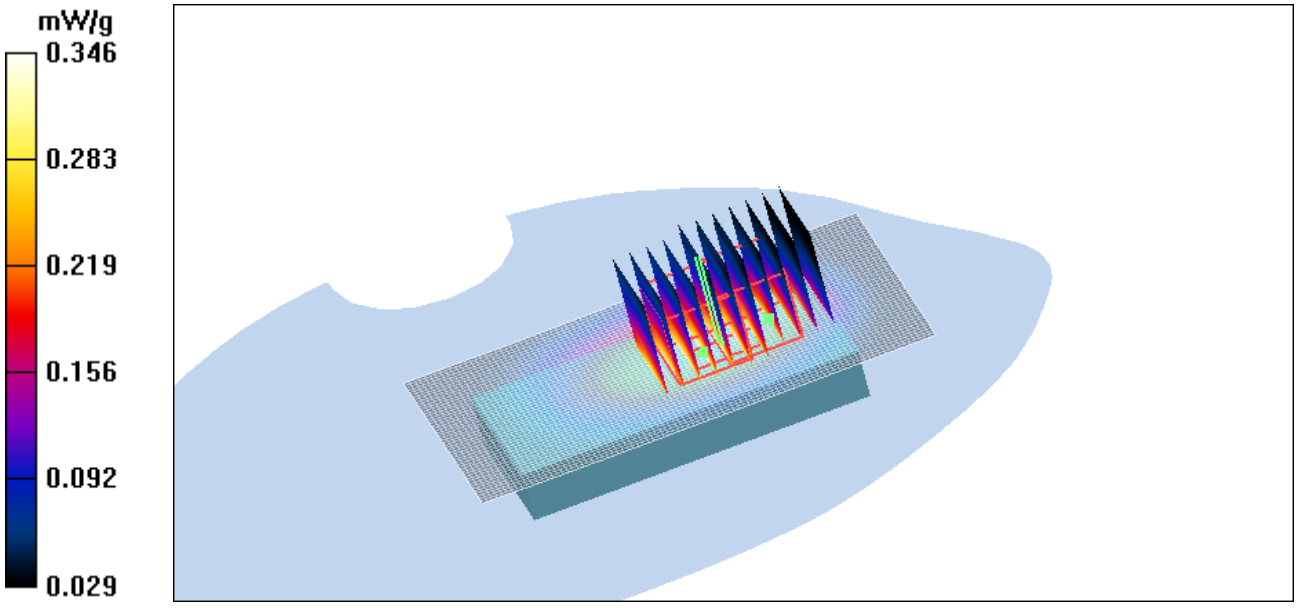
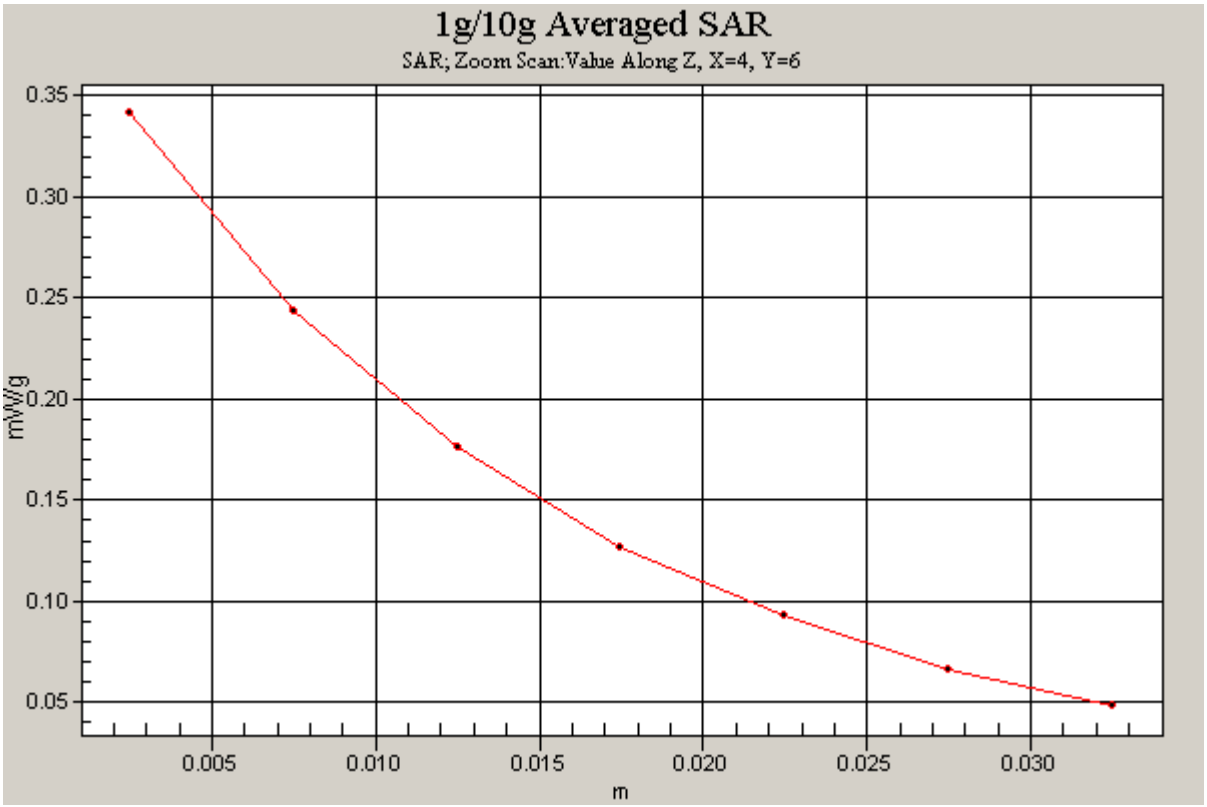


Figure 47 Body, Towards Ground slide close, GSM 850 Channel 251



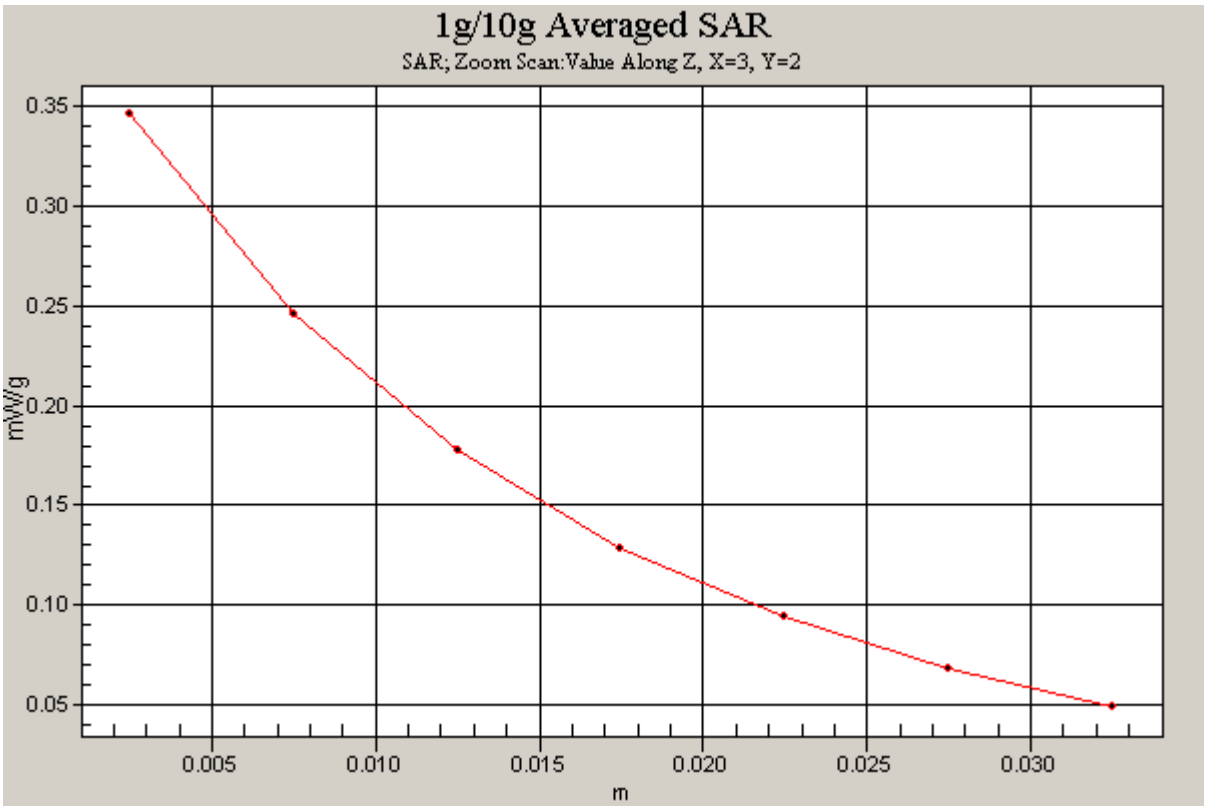


Figure 48 Z-Scan at power reference point (Body, Towards Ground slide close, GSM 850 Channel 251)

GSM 850 Towards Ground slide close Middle

Date/Time: 5/1/2009 2:44:20 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.315 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.75 V/m; Power Drift = 0.089 dB
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.268 mW/g; SAR(10 g) = 0.187 mW/g
Maximum value of SAR (measured) = 0.315 mW/g

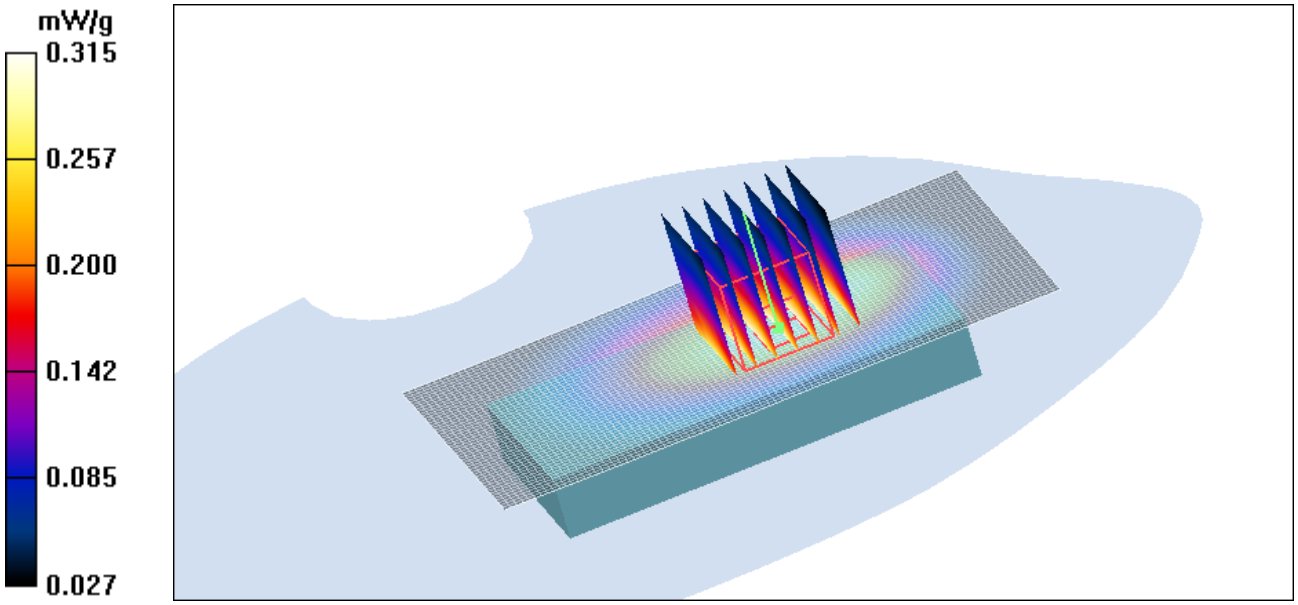


Figure 49 Body, Towards Ground slide close, GSM 850 Channel 190

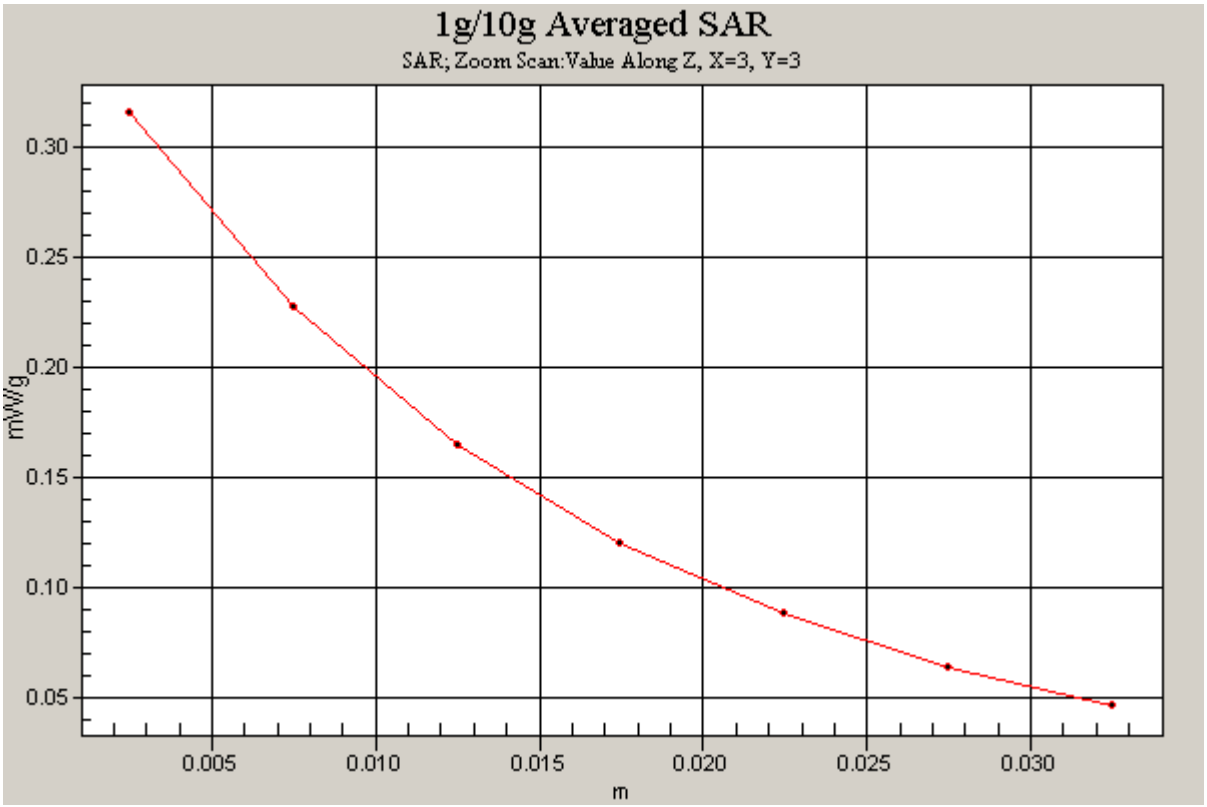


Figure 50 Z-Scan at power reference point (Body, Towards Ground slide close, GSM 850 Channel 190)

GSM 850 Towards Ground slide close Low

Date/Time: 5/1/2009 3:30:37 PM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 55.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.282 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.27 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 0.335 W/kg
SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.167 mW/g
Maximum value of SAR (measured) = 0.283 mW/g

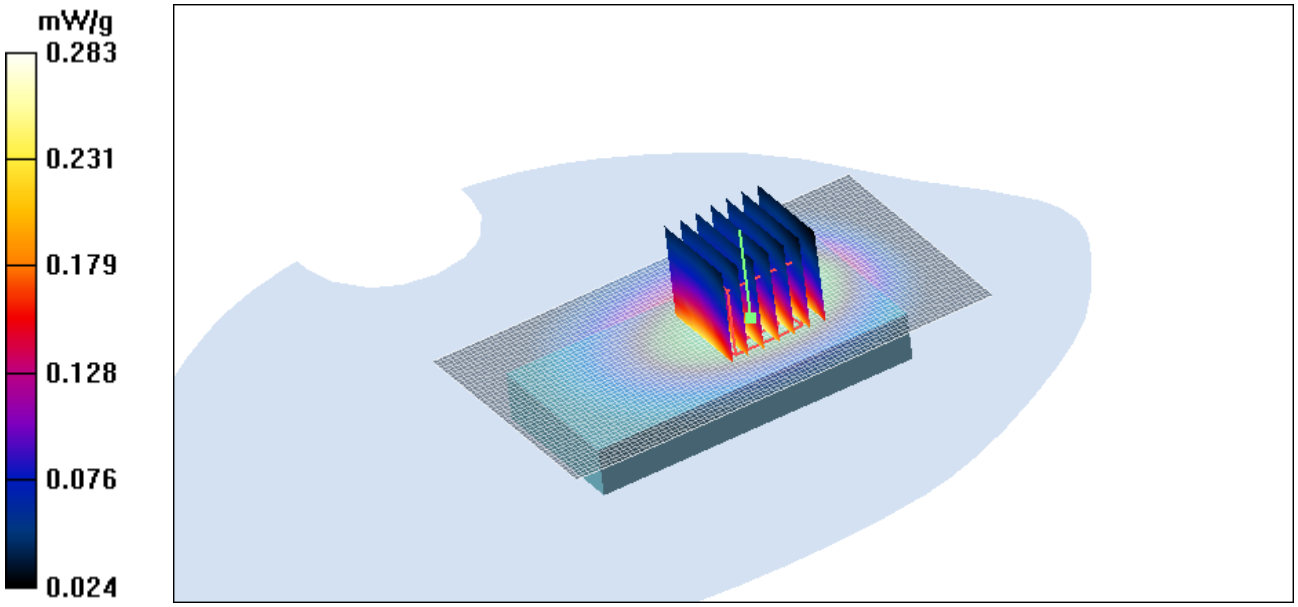


Figure 51 Body, Towards Ground slide close, GSM 850 Channel 128

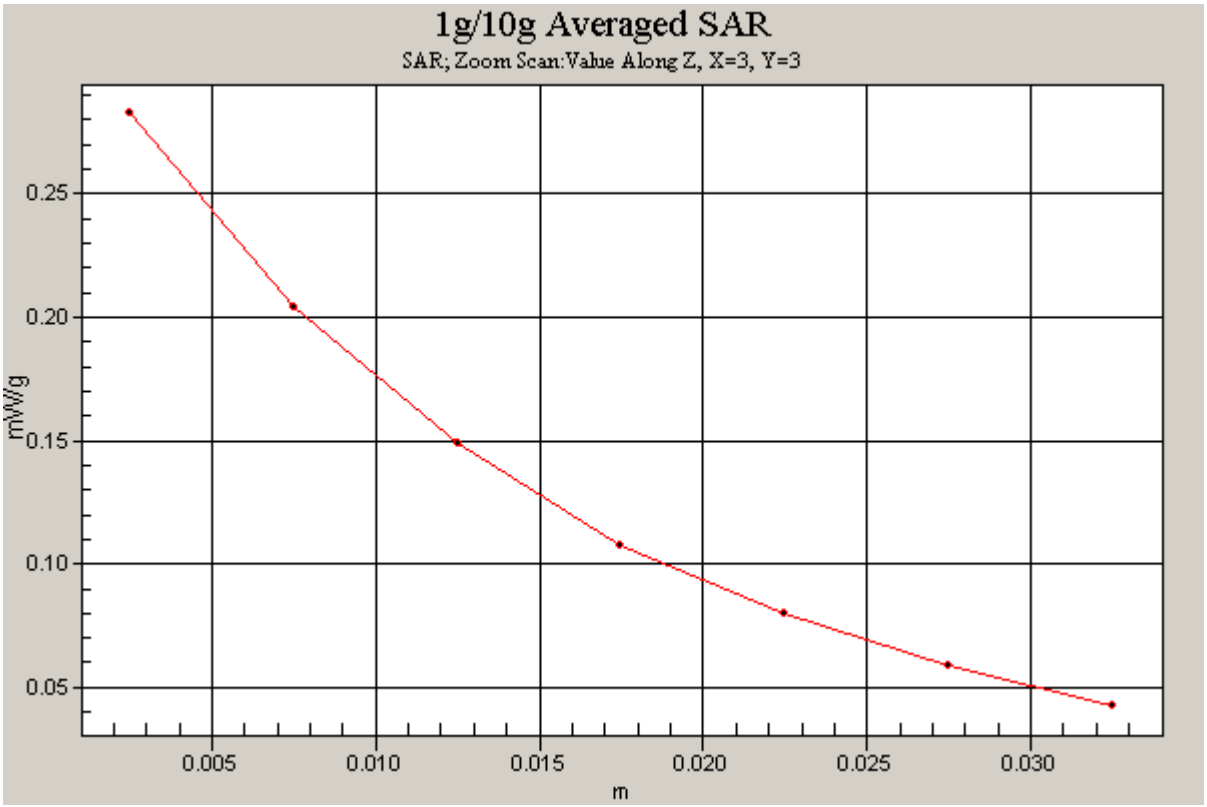


Figure 52 Z-Scan at power reference point (Body, Towards Ground slide close, GSM 850 Channel 128)

GSM 850 towards Phantom Slide close Middle

Date/Time: 5/1/2009 2:25:24 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.141 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.87 V/m; Power Drift = -0.056 dB
Peak SAR (extrapolated) = 0.162 W/kg
SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.089 mW/g
Maximum value of SAR (measured) = 0.140 mW/g

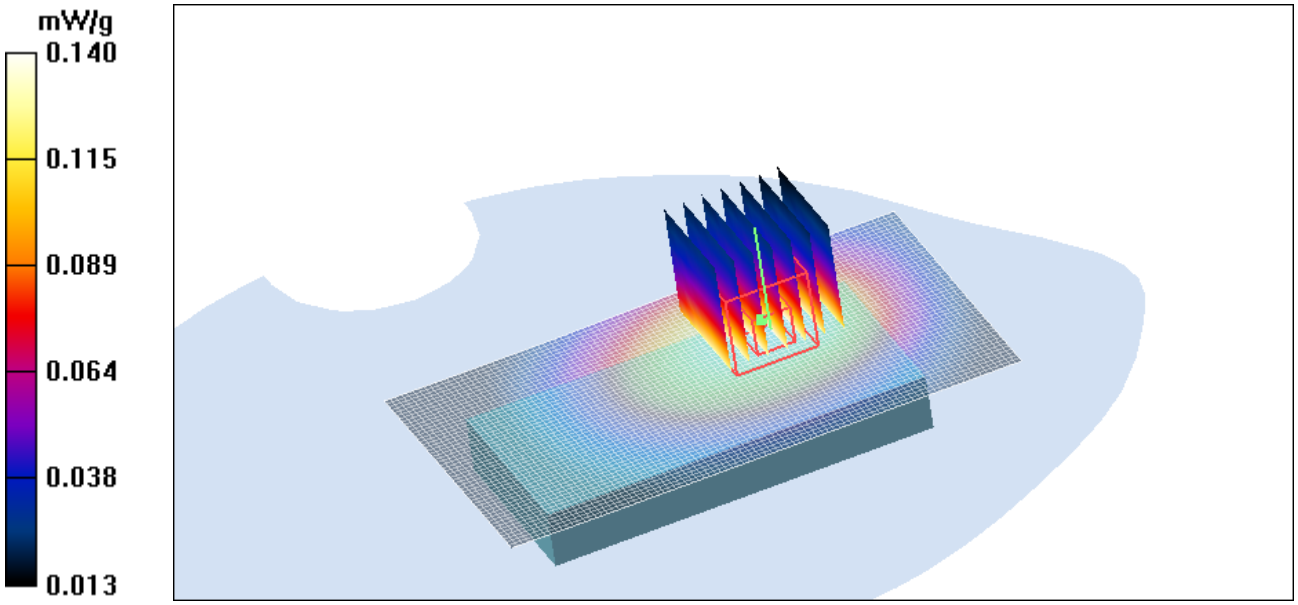


Figure 53 Body, Towards Phantom slide close, GSM 850, Channel 190

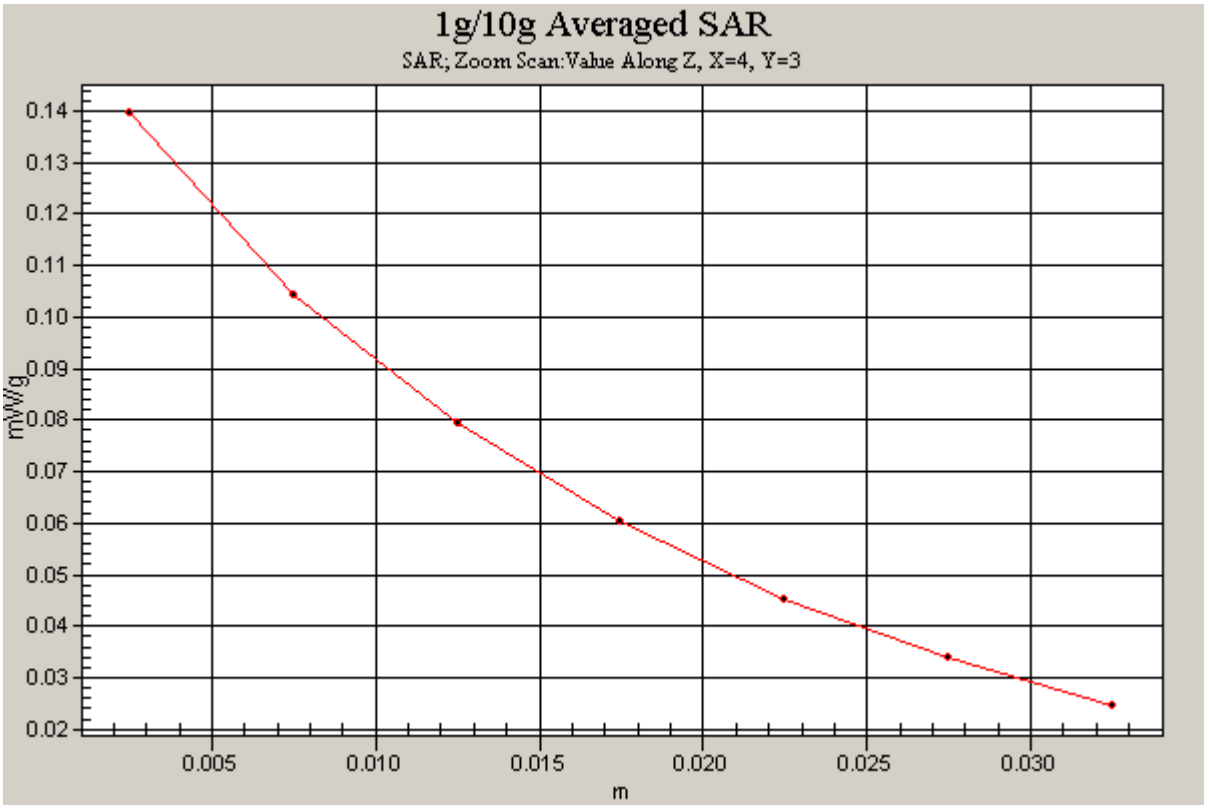


Figure 54 Z-Scan at power reference point (Body, Towards Phantom slide close, GSM 850, Channel 190)

GSM 850 Towards Ground slide close with Earphone High

Date/Time: 5/1/2009 3:50:49 PM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 1.03 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.313 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.96 V/m; Power Drift = 0.060 dB
Peak SAR (extrapolated) = 0.376 W/kg
SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.187 mW/g
Maximum value of SAR (measured) = 0.316 mW/g

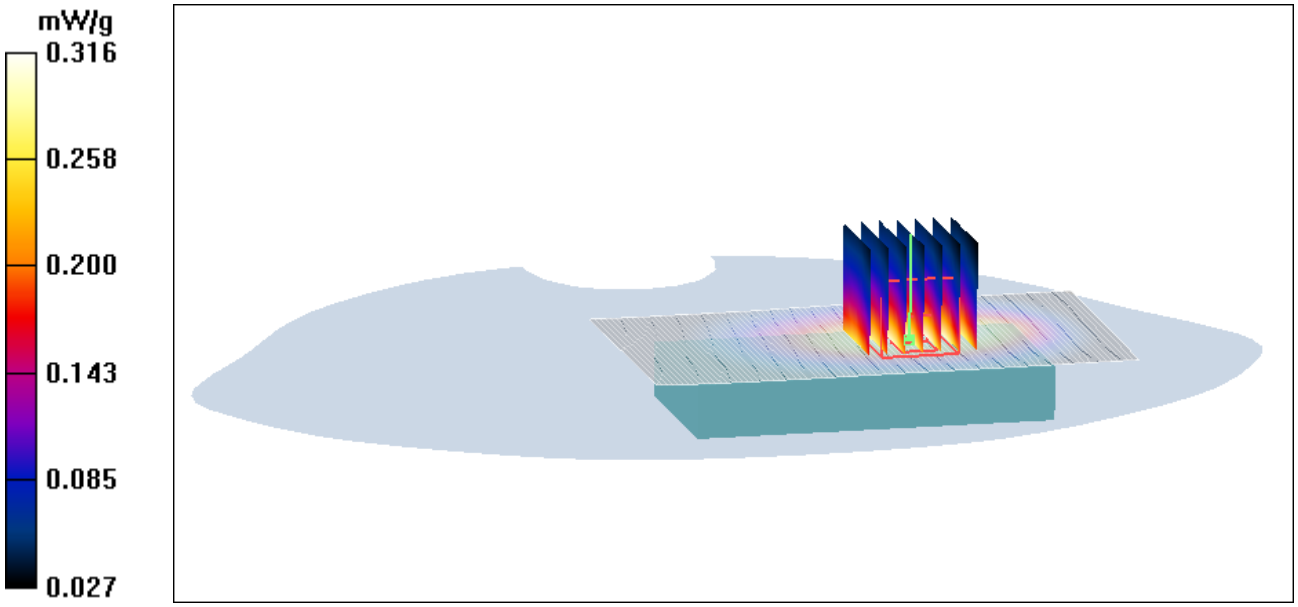


Figure 55 Body with Earphone, Towards Ground slide close, GSM 850 Channel 251

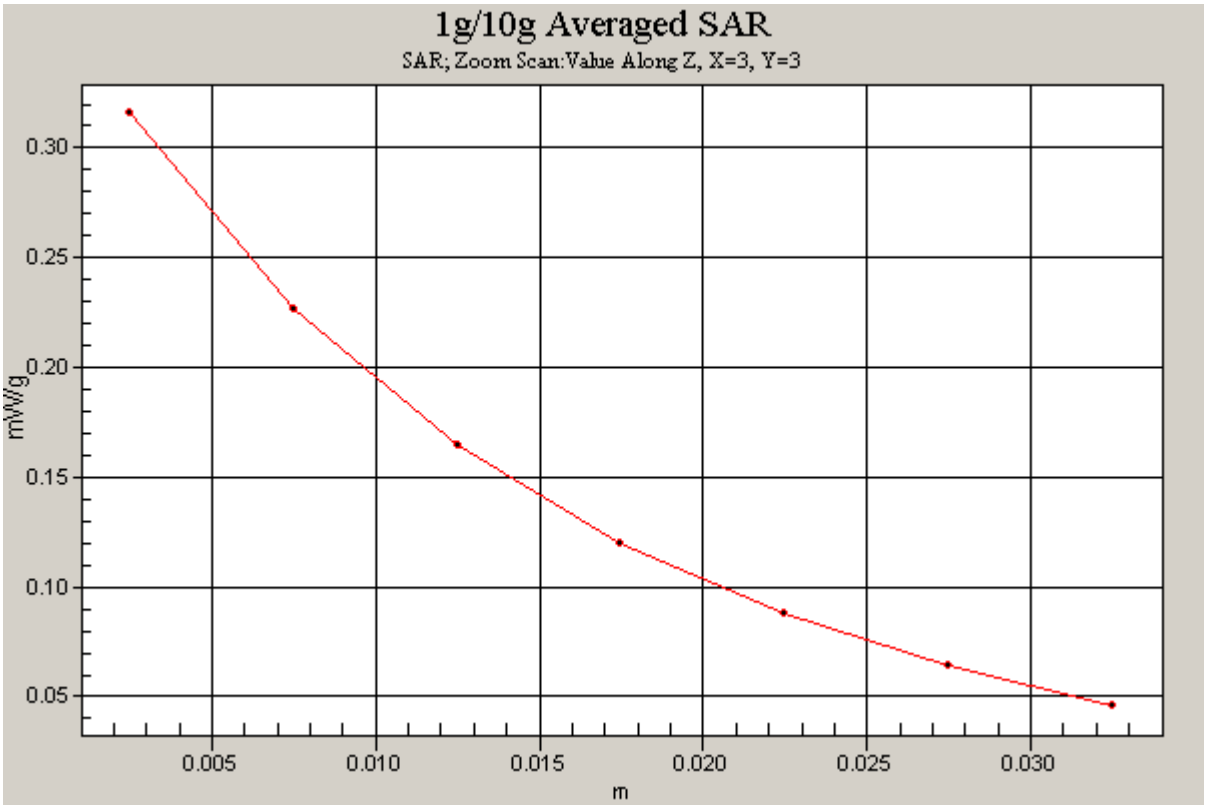


Figure 56 Z-Scan at power reference point (Body with Earphone, Towards Ground slide close, GSM 850 Channel 251)

GSM 850 GPRS (4UP) Towards Ground slide close High

Date/Time: 5/1/2009 4:43:56 PM
Communication System: GSM 850+GPRS(4Up); Frequency: 848.8 MHz;Duty Cycle: 1:2
Medium parameters used: f = 849 MHz; σ = 1.03 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.868 mW/g; SAR(10 g) = 0.600 mW/g
Maximum value of SAR (measured) = 1.03 mW/g

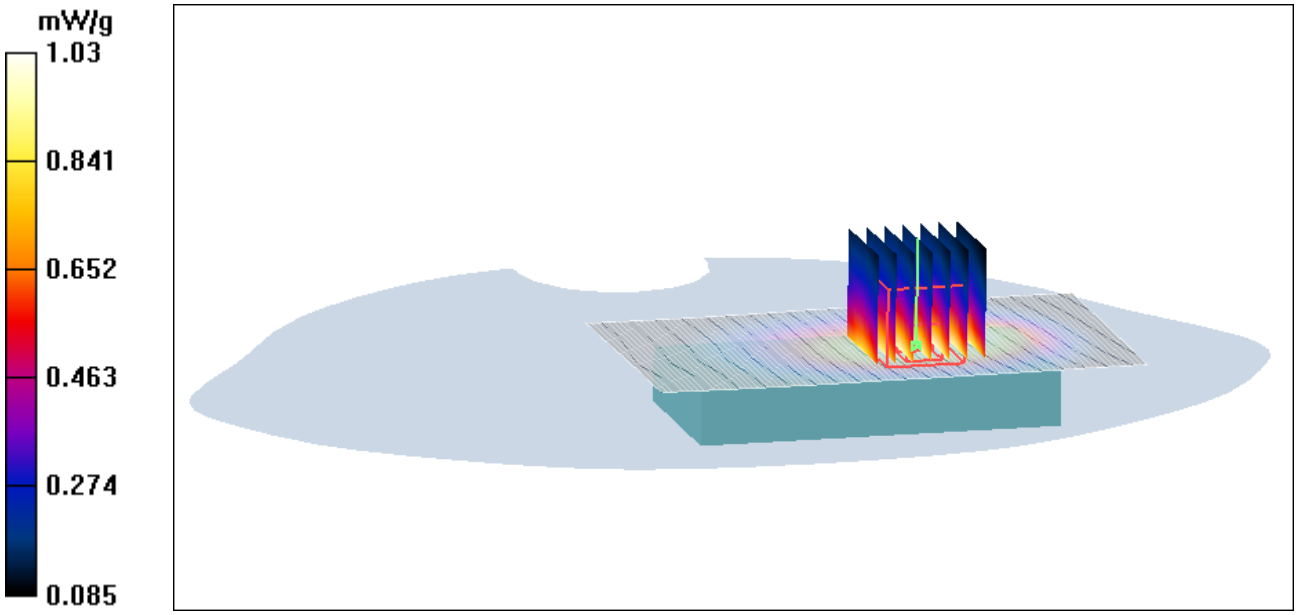


Figure 57 Body, Towards Ground slide close, GSM 850 GPRS(4UP), Channel 251

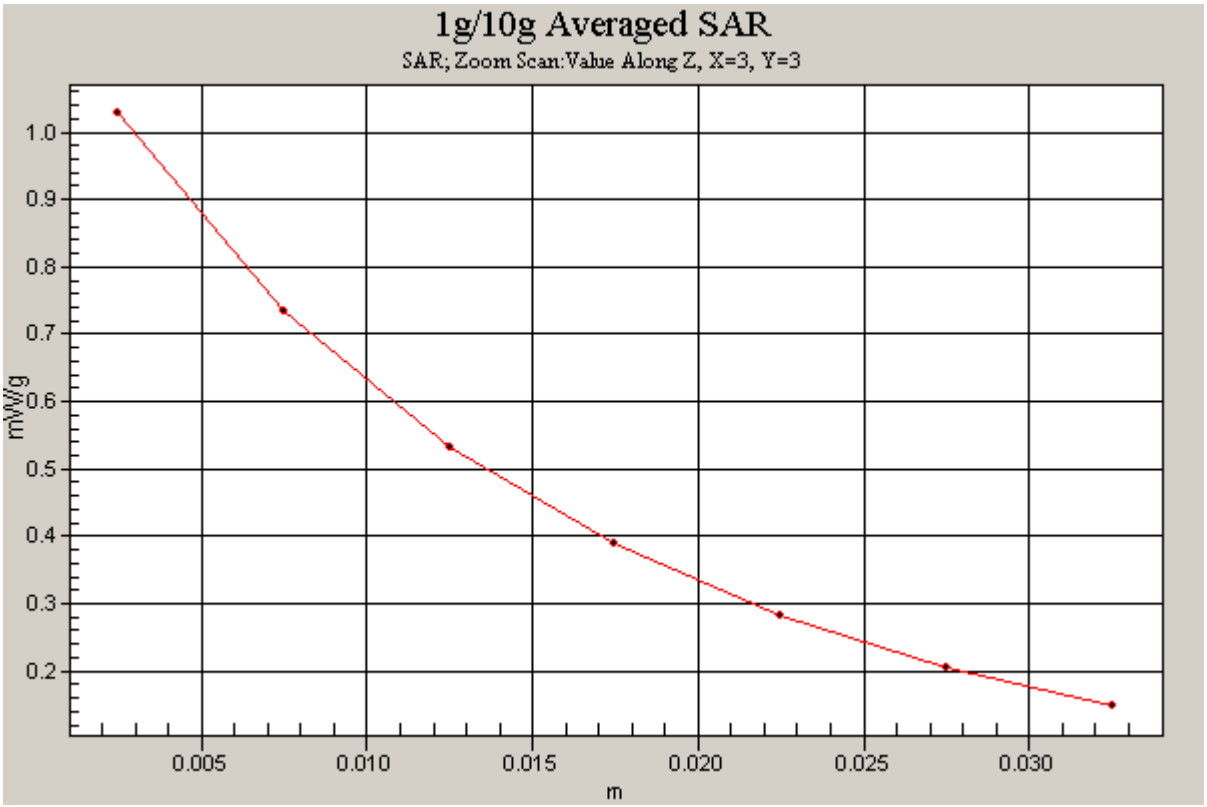


Figure 58 Z-Scan at power reference point (Body, Towards Ground slide close, GSM 850 GPRS(4UP), Channel 251)

GSM 1900 Left Cheek slide open High

Date/Time: 4/30/2009 10:45:26 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.333 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.91 V/m; Power Drift = 0.135 dB
Peak SAR (extrapolated) = 0.426 W/kg
SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.170 mW/g
Maximum value of SAR (measured) = 0.348 mW/g

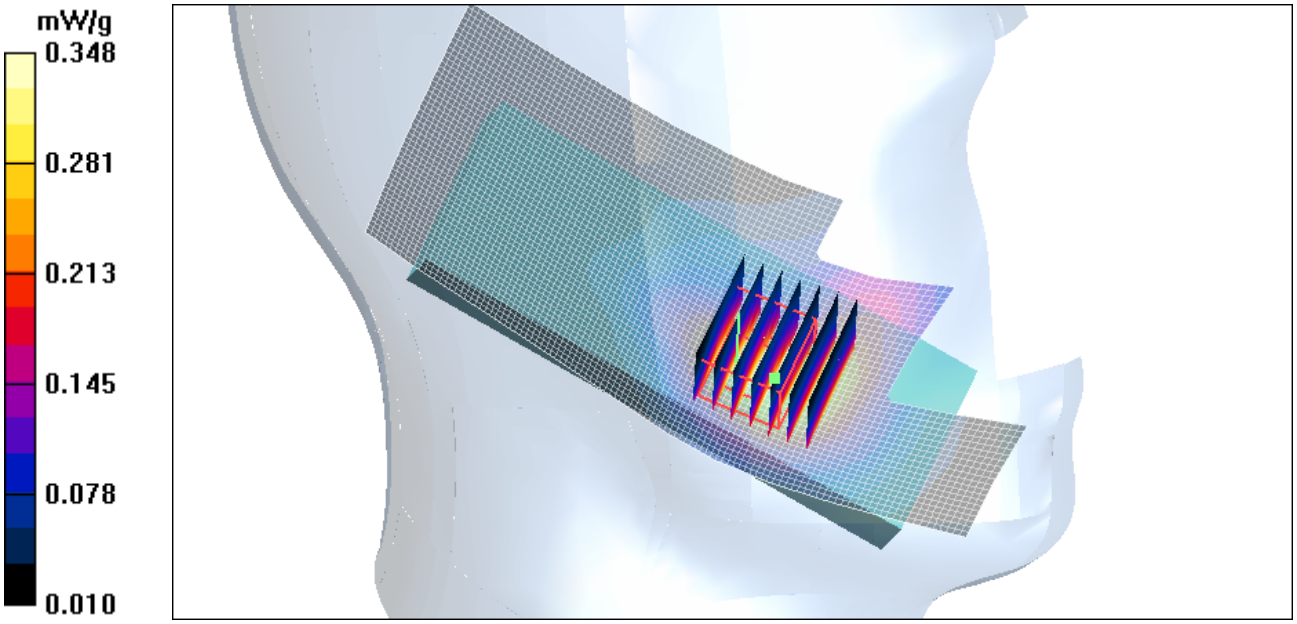


Figure 59 Left Hand Touch Cheek slide open GSM 1900 Channel 810

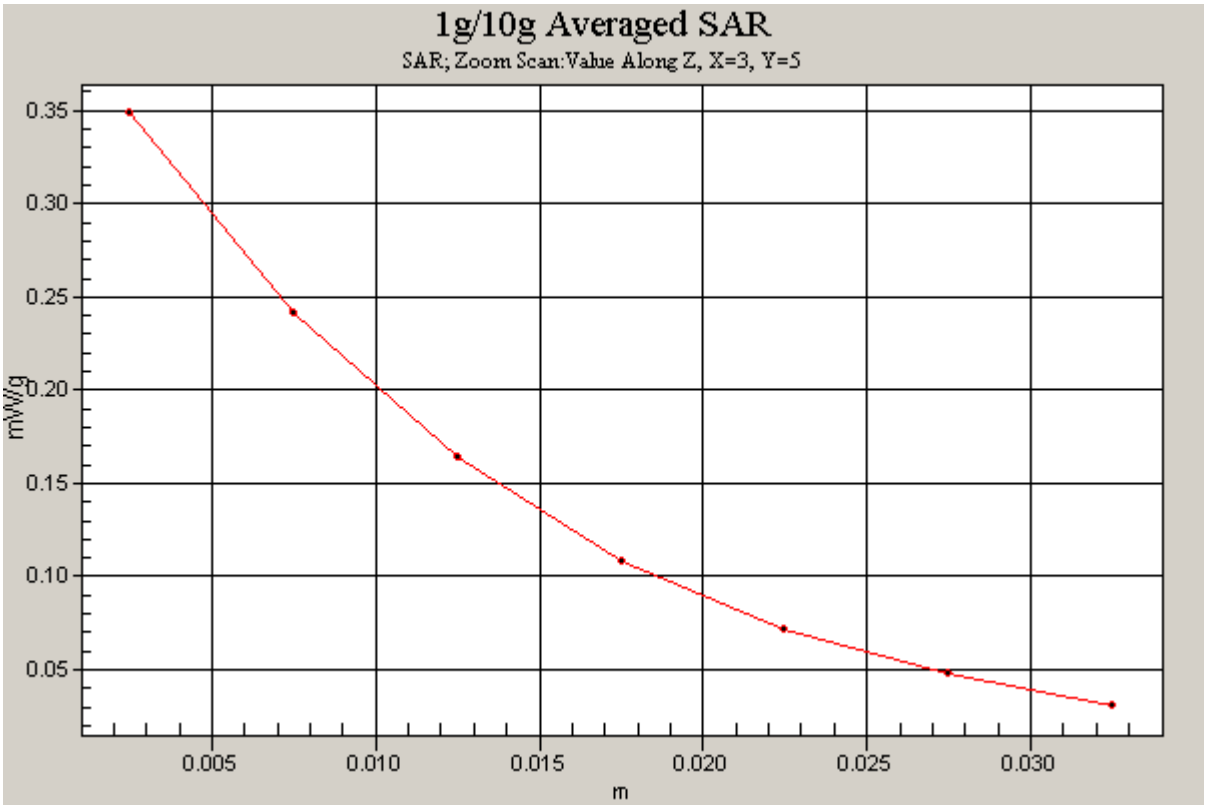


Figure 60 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 1900 Channel 810)

GSM 1900 Left Cheek slide open Middle

Date/Time: 4/30/2009 10:24:47 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.386 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.98 V/m; Power Drift = -0.057 dB
Peak SAR (extrapolated) = 0.478 W/kg
SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.194 mW/g
Maximum value of SAR (measured) = 0.389 mW/g

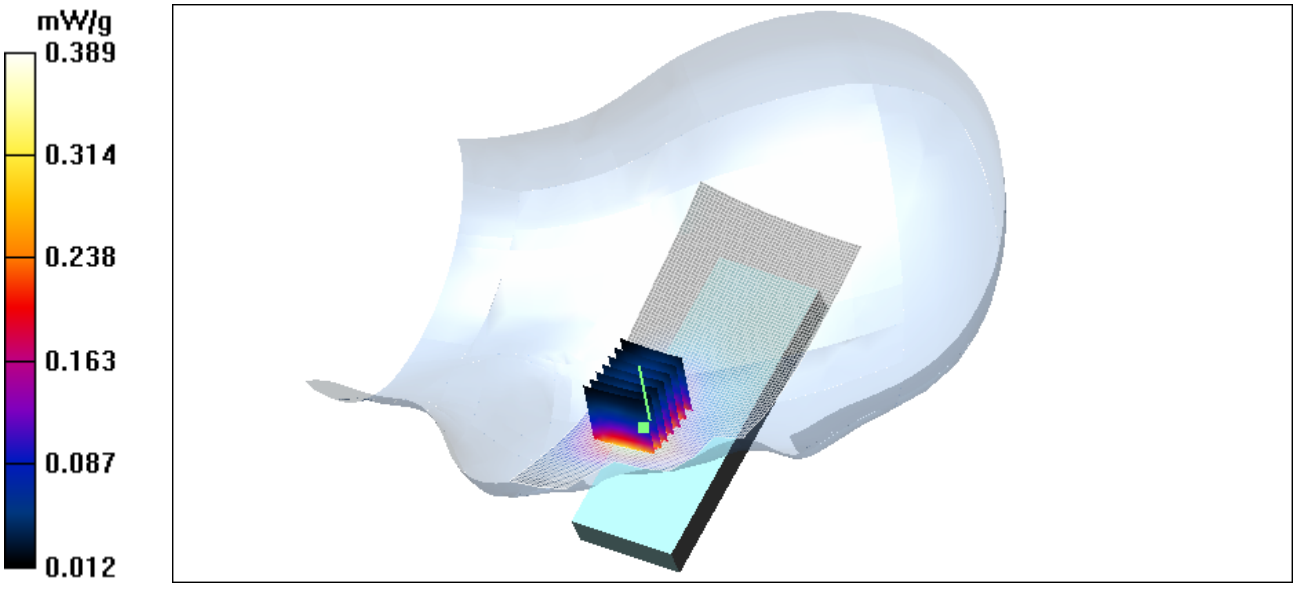


Figure 61 Left Hand Touch Cheek slide open GSM 1900 Channel 661

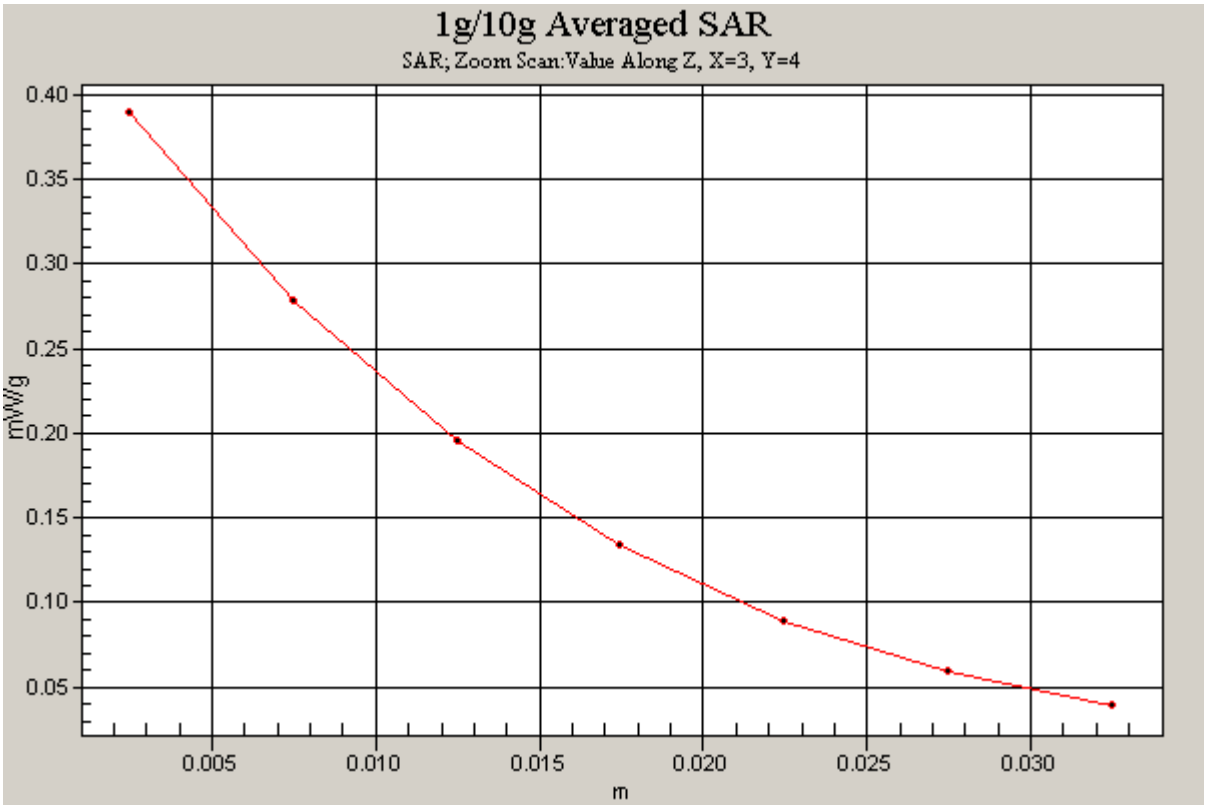


Figure 62 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 1900 Channel 661)

GSM 1900 Left Cheek slide open Low

Date/Time: 4/30/2009 11:06:00 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.379 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.91 V/m; Power Drift = -0.110 dB
Peak SAR (extrapolated) = 0.450 W/kg
SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.186 mW/g
Maximum value of SAR (measured) = 0.368 mW/g

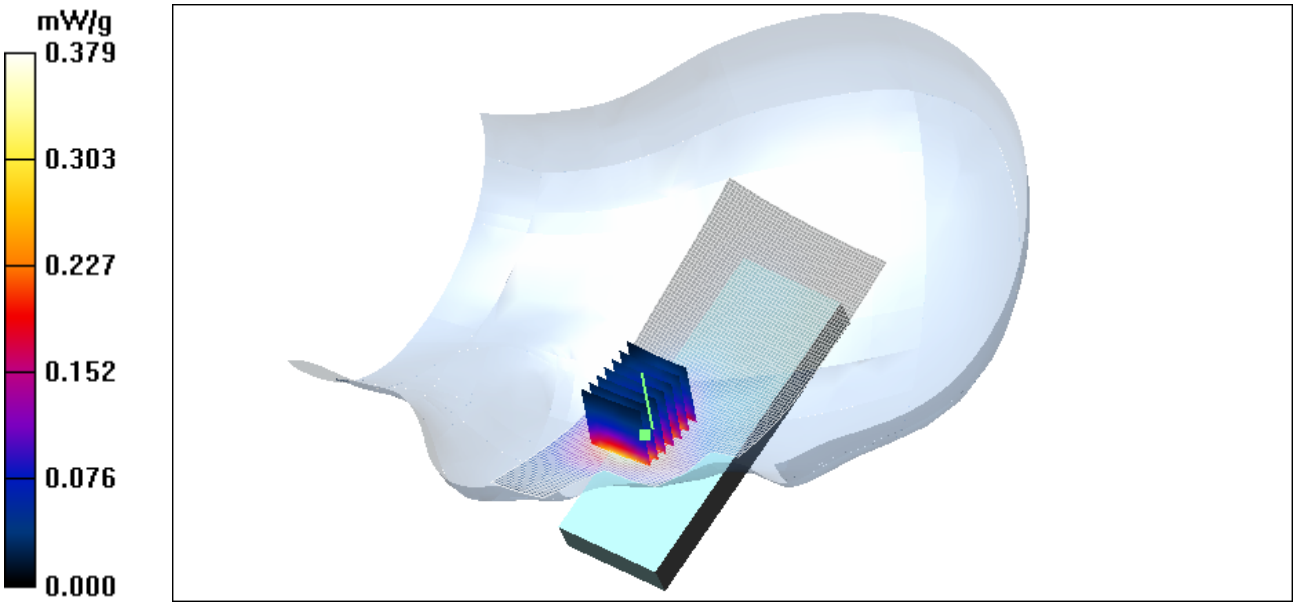


Figure 63 Left Hand Touch Cheek slide open GSM 1900 Channel 512

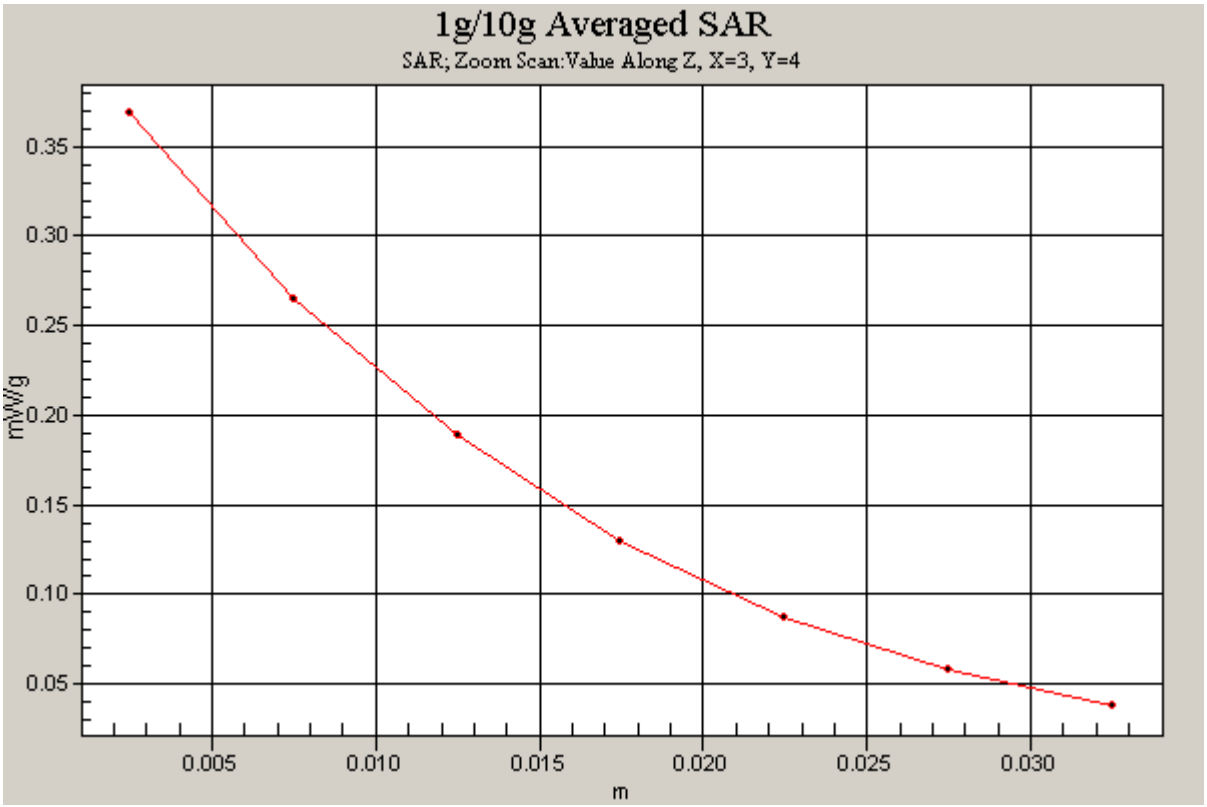


Figure 64 Z-Scan at power reference point (Left Hand Touch Cheek slide open GSM 1900 Channel 512)

GSM 1900 Left Tilt Slide open Middle

Date/Time: 4/30/2009 11:26:22 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.114 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.39 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.132 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.047 mW/g
Maximum value of SAR (measured) = 0.103 mW/g

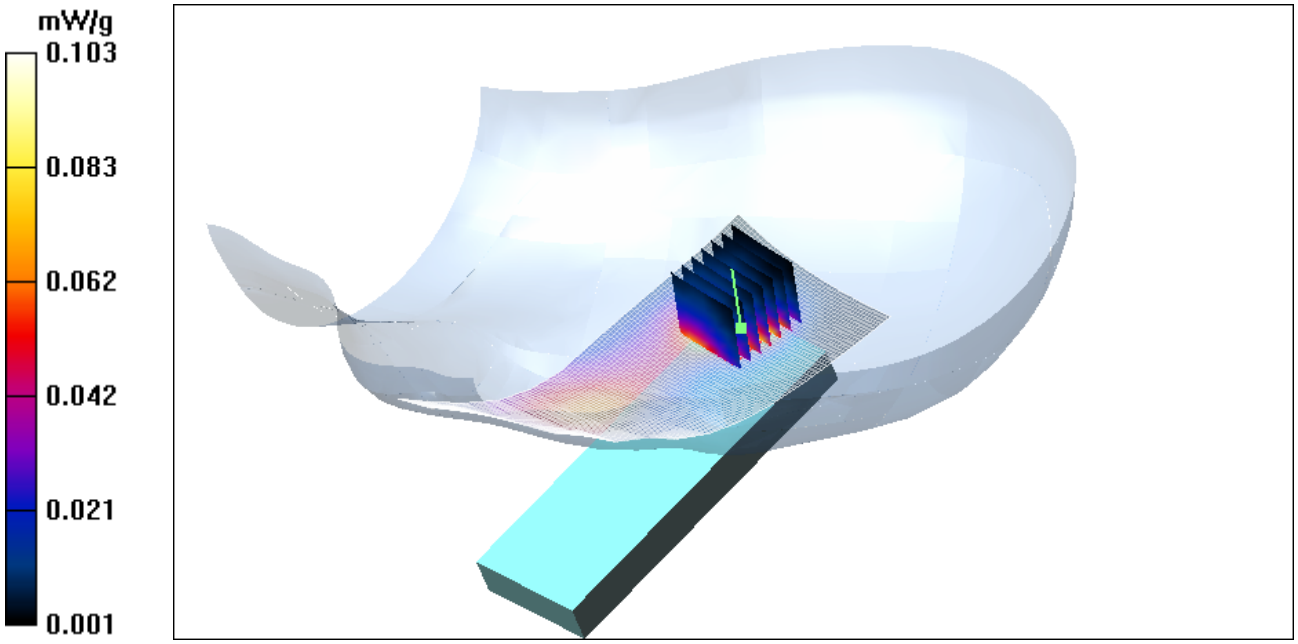


Figure 65 Left Hand Tilt 15° slide open GSM 1900 Channel 661

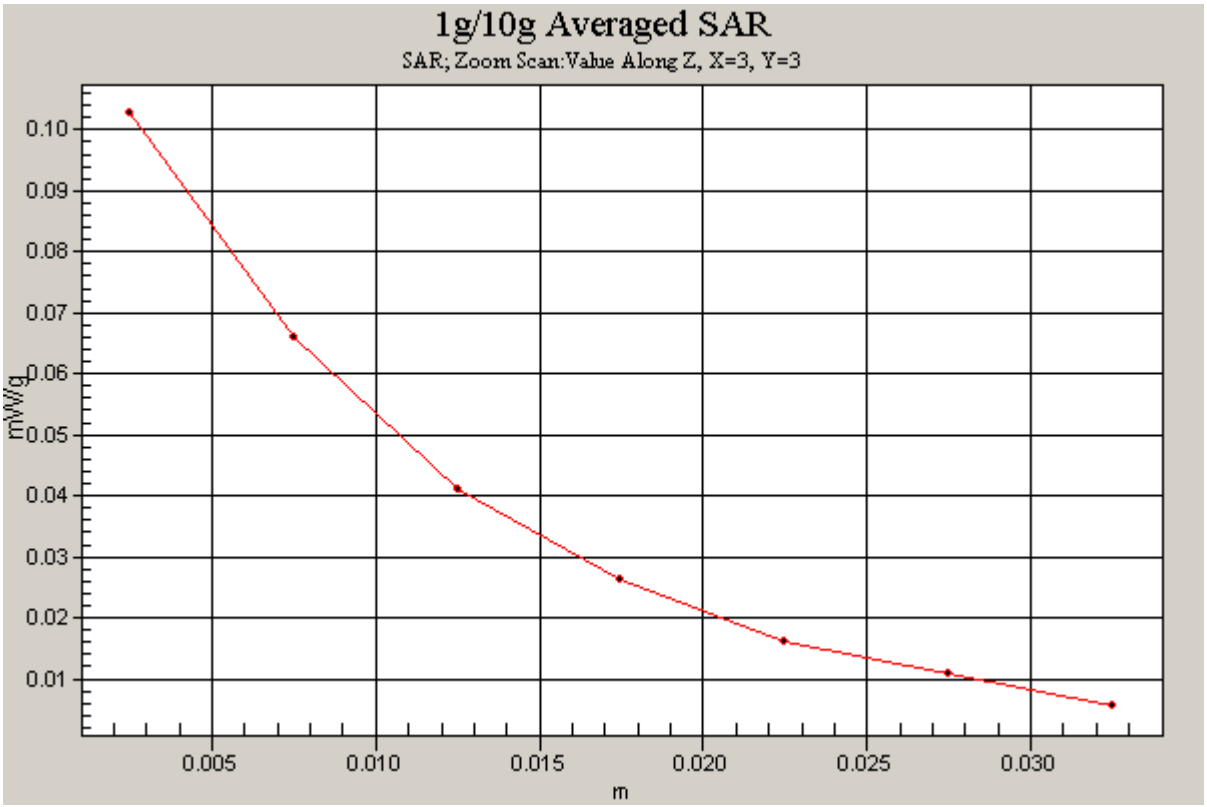


Figure 66 Z-Scan at power reference point (Left Hand Tilt 15° slide open GSM 1900 Channel 661)

GSM 1900 Right Cheek slide open Middle

Date/Time: 4/30/2009 8:20:28 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.312 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.30 V/m; Power Drift = 0.067 dB
Peak SAR (extrapolated) = 0.410 W/kg
SAR(1 g) = 0.280 mW/g; SAR(10 g) = 0.171 mW/g
Maximum value of SAR (measured) = 0.336 mW/g

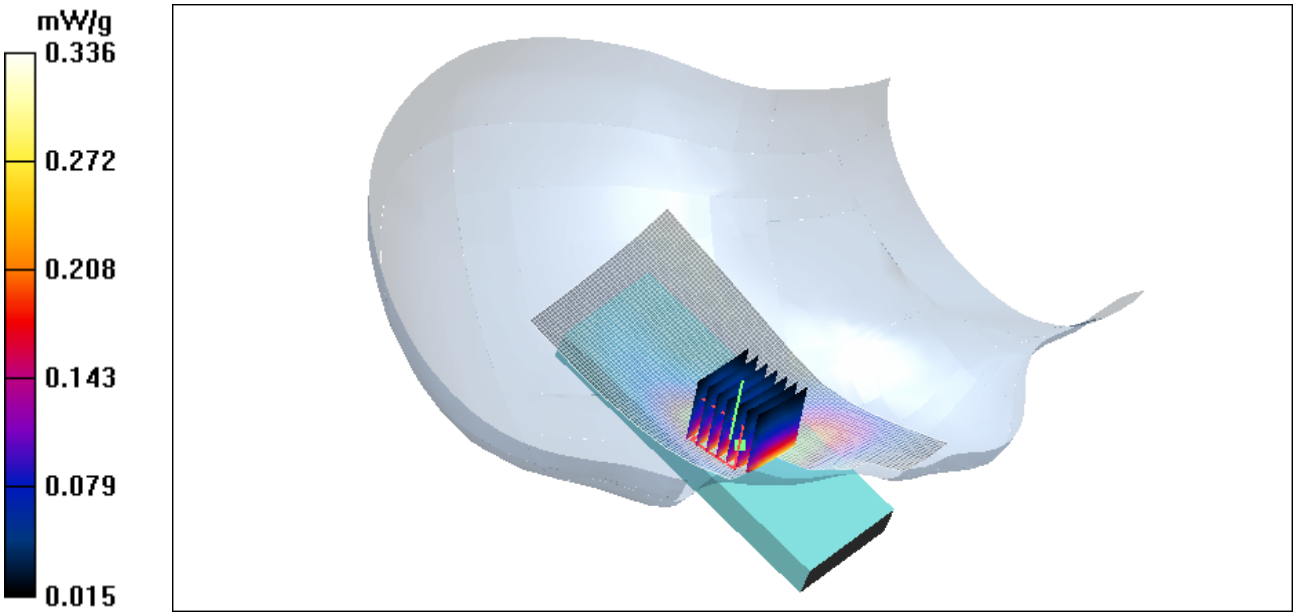


Figure 67 Right Hand Touch Cheek slide open GSM 1900 Channel 661

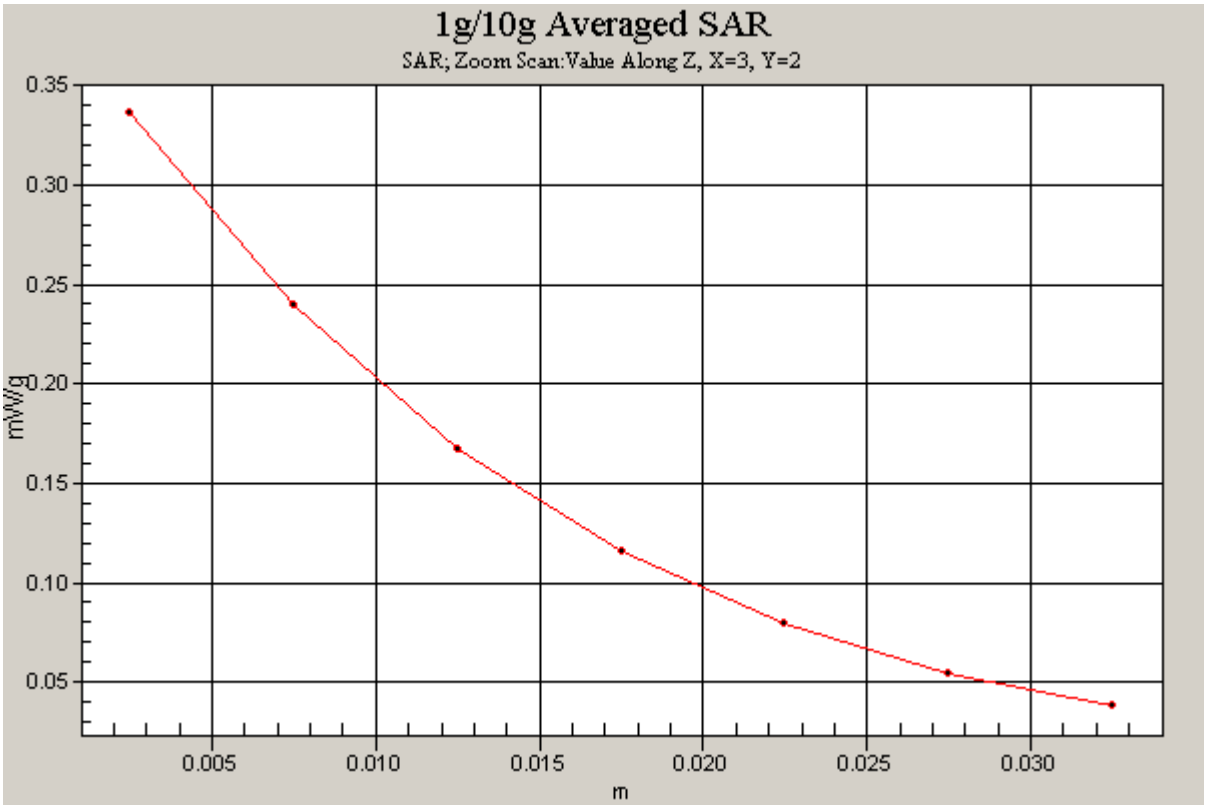


Figure 68 Z-Scan at power reference point (Right Hand Touch Cheek slide open GSM 1900 Channel 661)

GSM 1900 Right Tilt Slide open Middle

Date/Time: 4/30/2009 8:40:25 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.148 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.89 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 0.171 W/kg
SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.136 mW/g

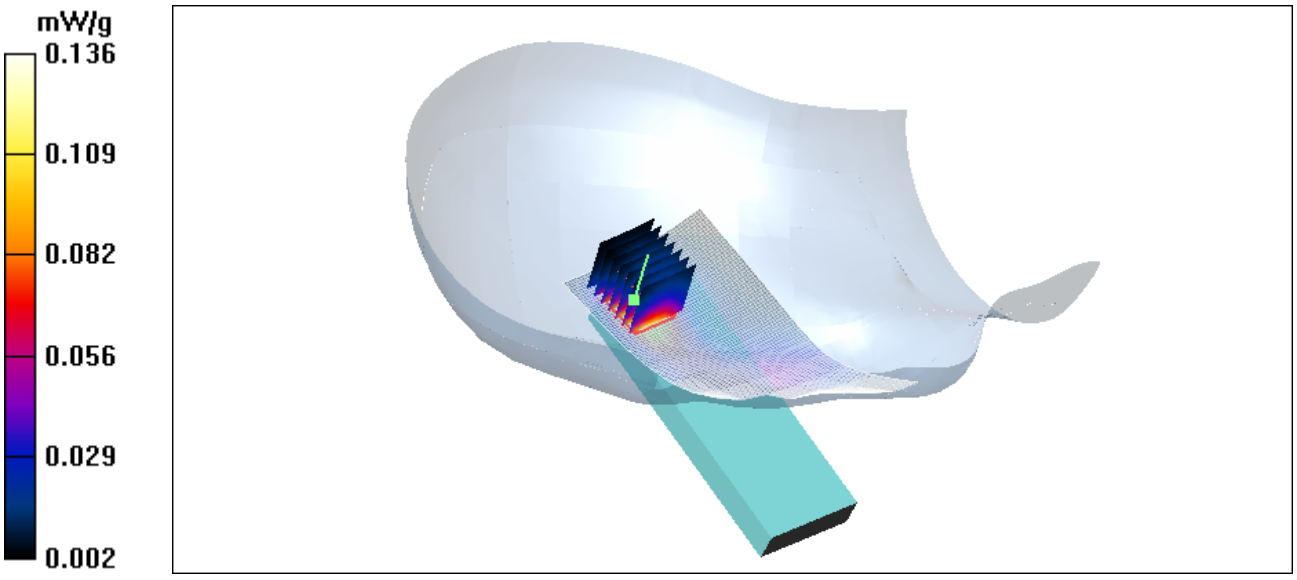


Figure 69 Right Hand Tilt 15° slide open GSM 1900 Channel 661

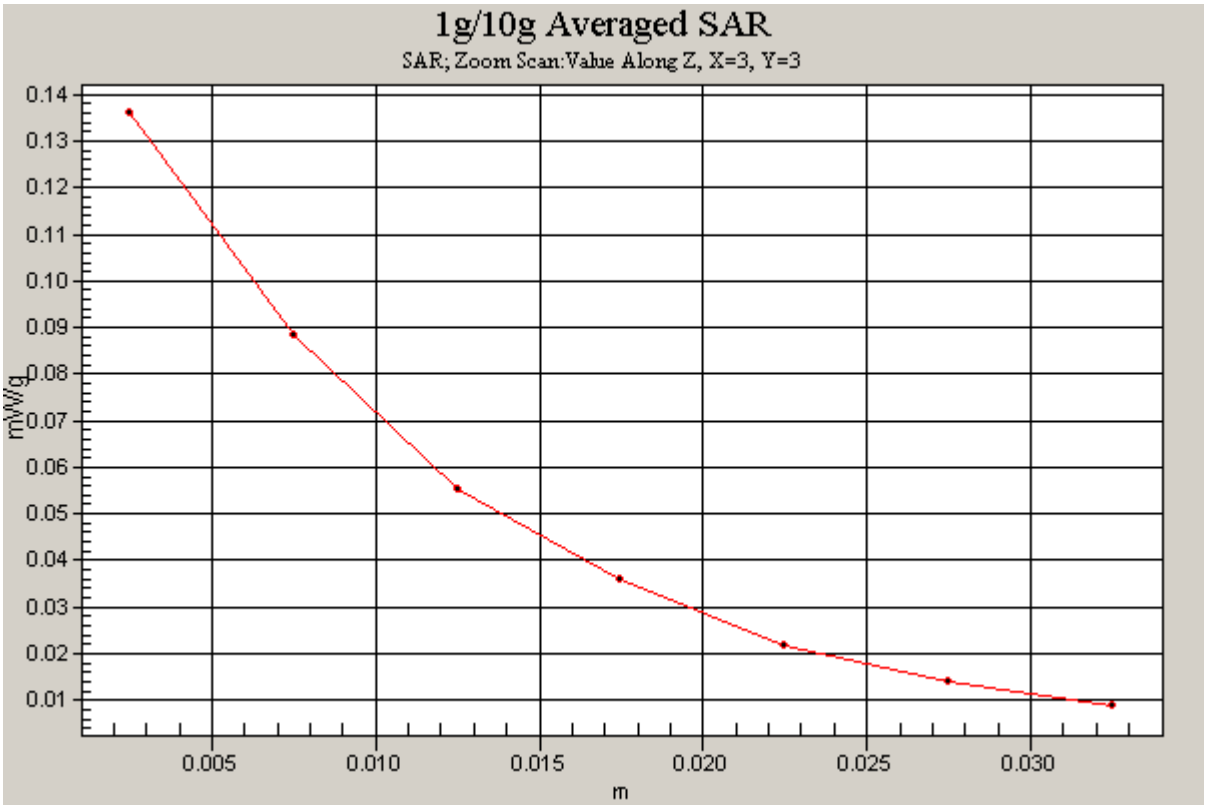


Figure 70 Z-Scan at power reference point (Right Hand Tilt 15° slide open GSM 1900 Channel 661)

GSM 1900 Towards Ground slide open High

Date/Time: 4/30/2009 5:12:41 AM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.501 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.09 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 0.648 W/kg
SAR(1 g) = 0.401 mW/g; SAR(10 g) = 0.245 mW/g
Maximum value of SAR (measured) = 0.505 mW/g

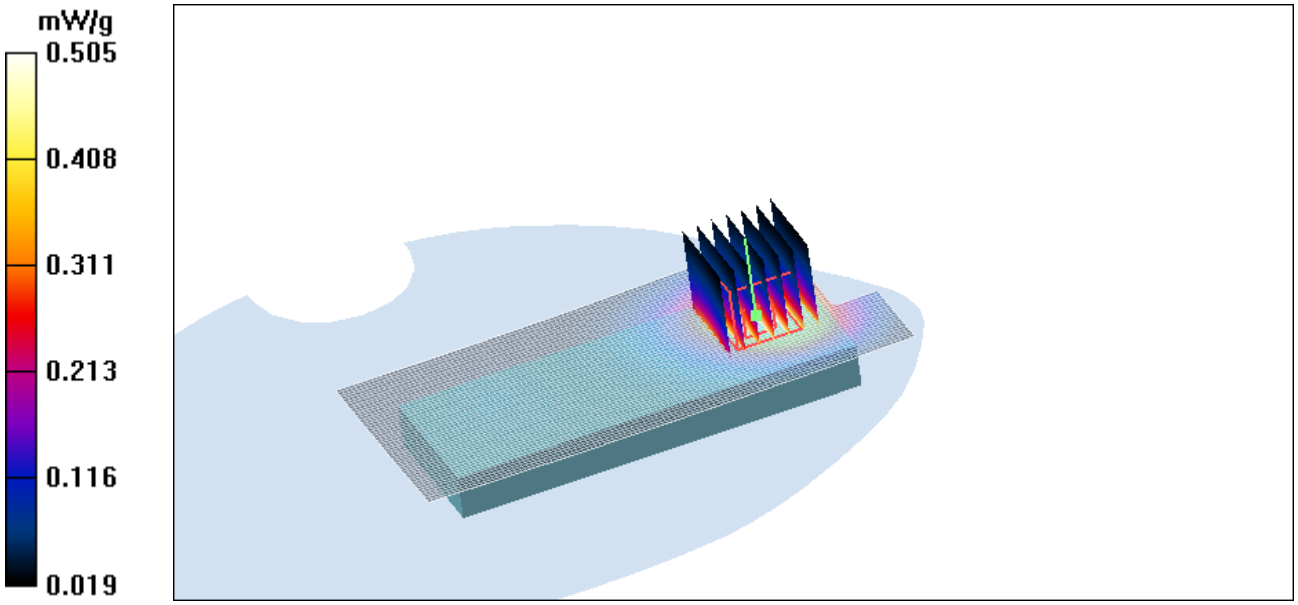


Figure 71 Body, Towards Ground slide open, GSM 1900 Channel 810

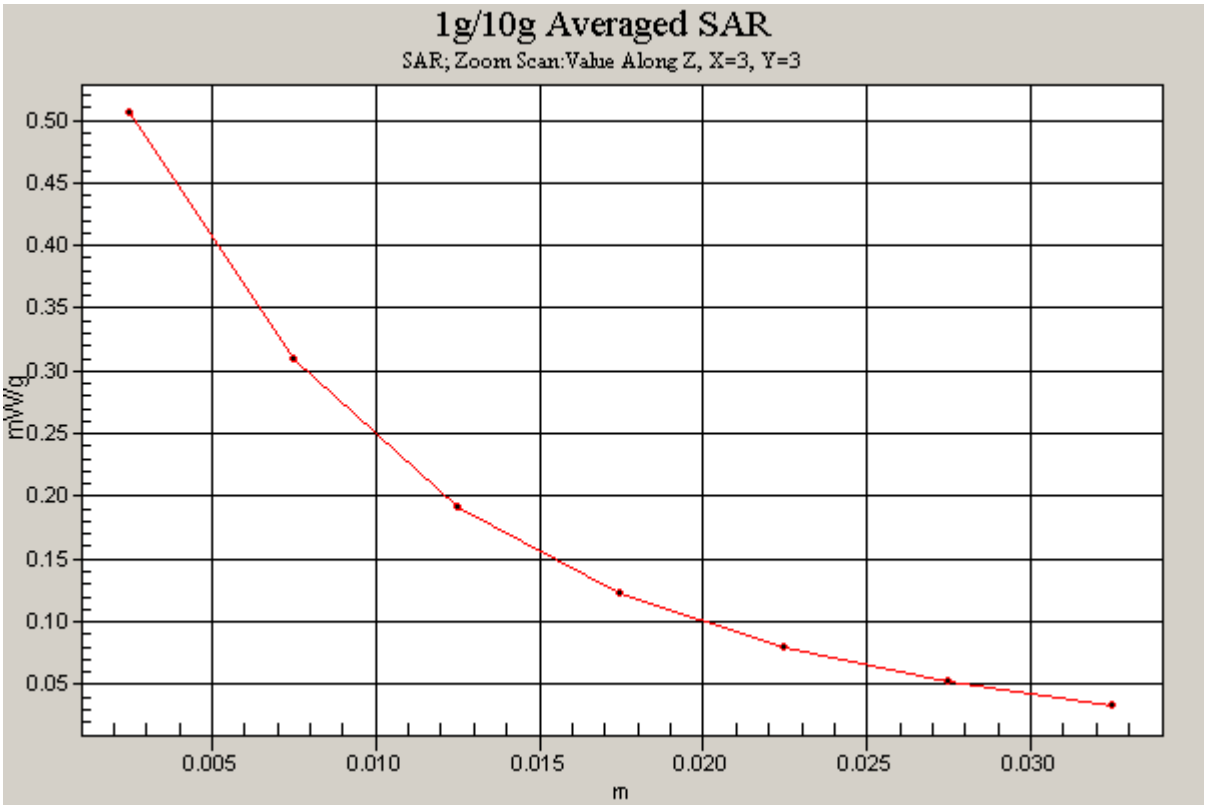


Figure 72 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 1900 Channel 810)

GSM 1900 Towards Ground slide open Middle

Date/Time: 4/30/2009 4:34:40 AM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.535 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.31 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 0.697 W/kg
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.264 mW/g
Maximum value of SAR (measured) = 0.543 mW/g

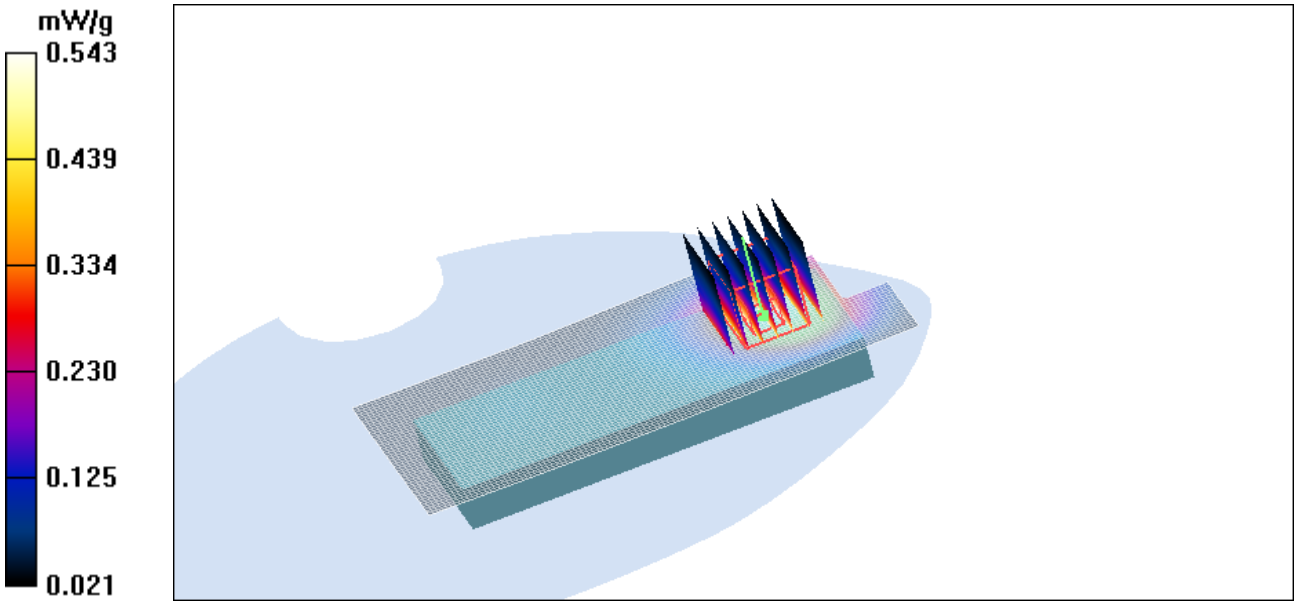


Figure 73 Body, Towards Ground slide open, GSM 1900 Channel 661

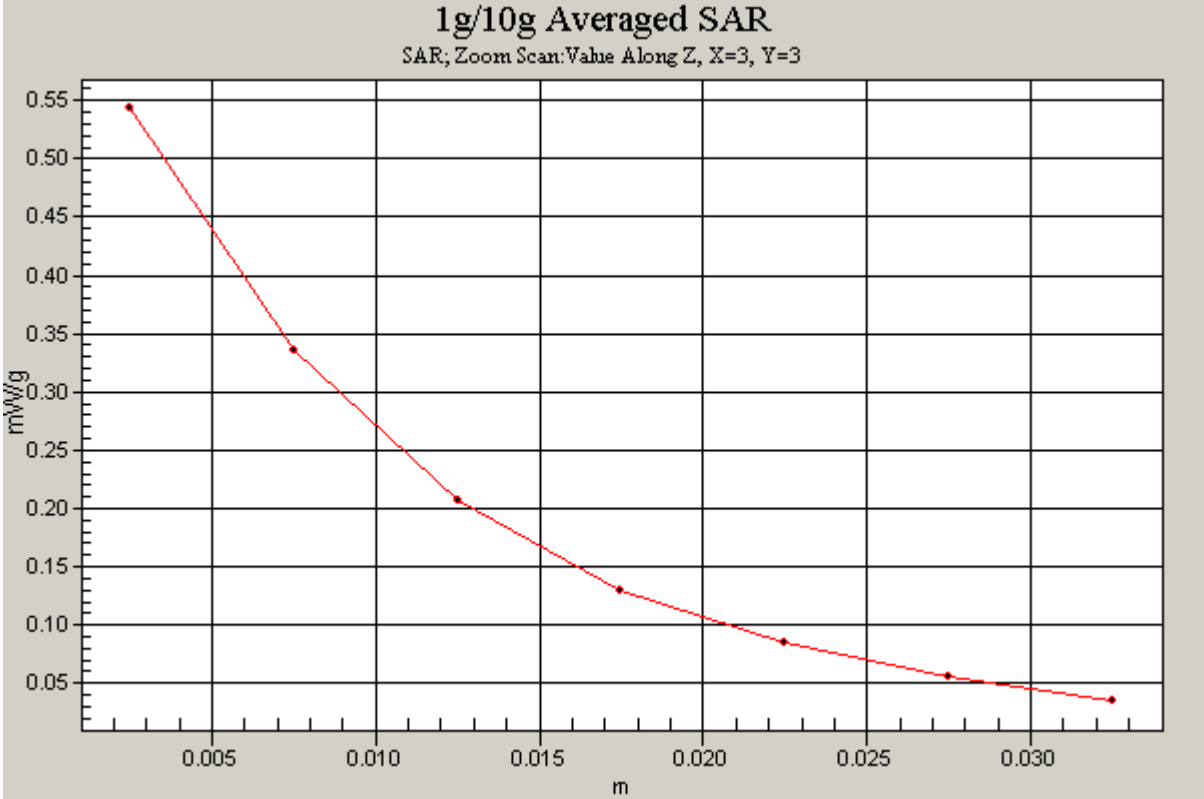


Figure 74 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 1900 Channel 661)

GSM 1900 Towards Ground slide open Low

Date/Time: 4/30/2009 4:53:43 AM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.509 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.25 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.667 W/kg
SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.254 mW/g
Maximum value of SAR (measured) = 0.521 mW/g

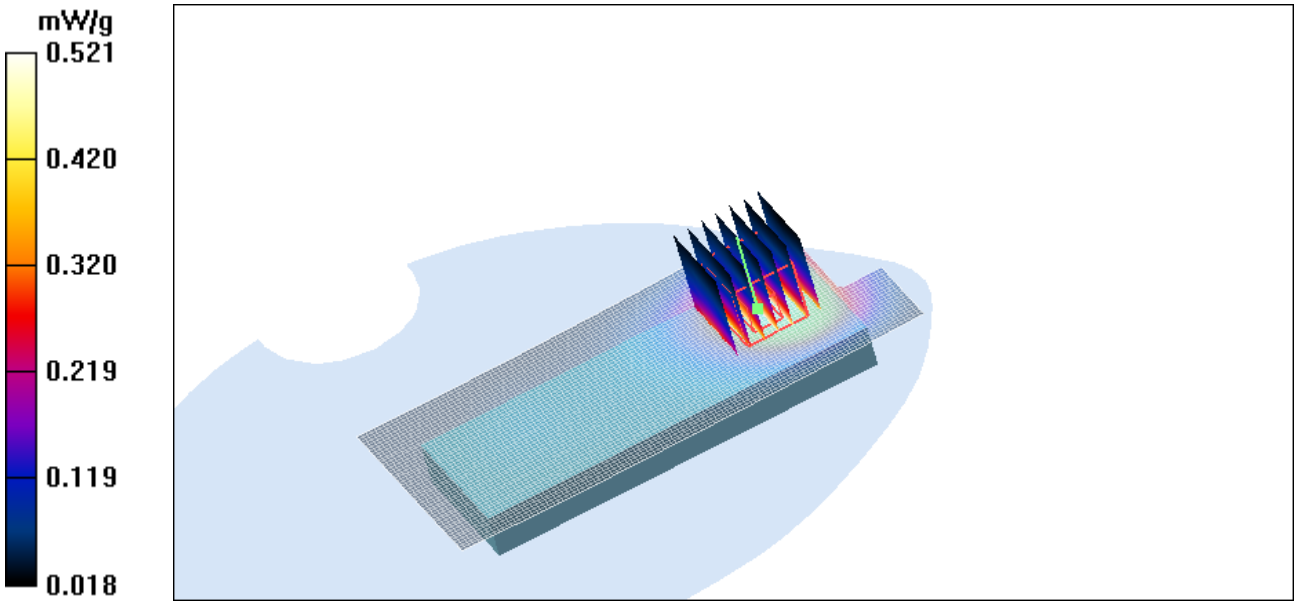


Figure 75 Body, Towards Ground slide open, GSM 1900 Channel 512

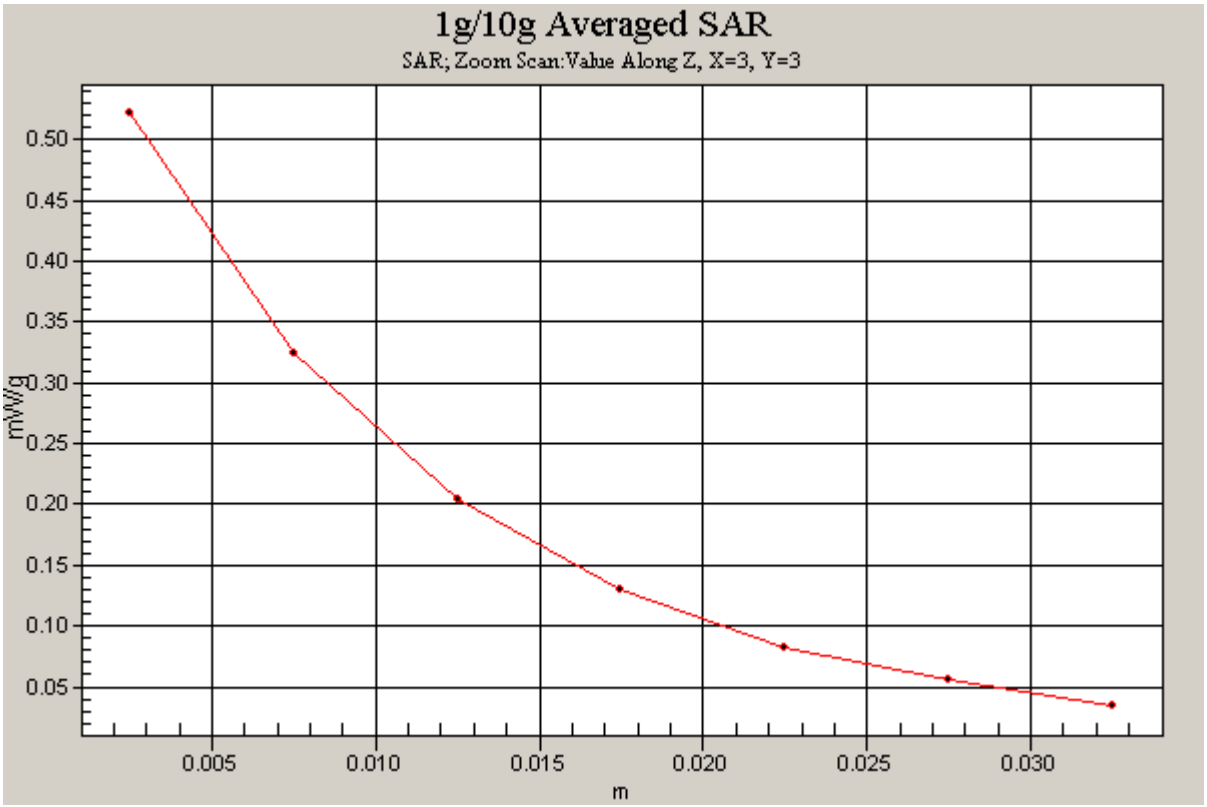


Figure 76 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 1900 Channel 512)

GSM 1900 Towards Phantom Slide open Middle

Date/Time: 4/30/2009 4:14:44 AM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.316 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.23 V/m; Power Drift = -0.057 dB
Peak SAR (extrapolated) = 0.396 W/kg
SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.158 mW/g
Maximum value of SAR (measured) = 0.313 mW/g

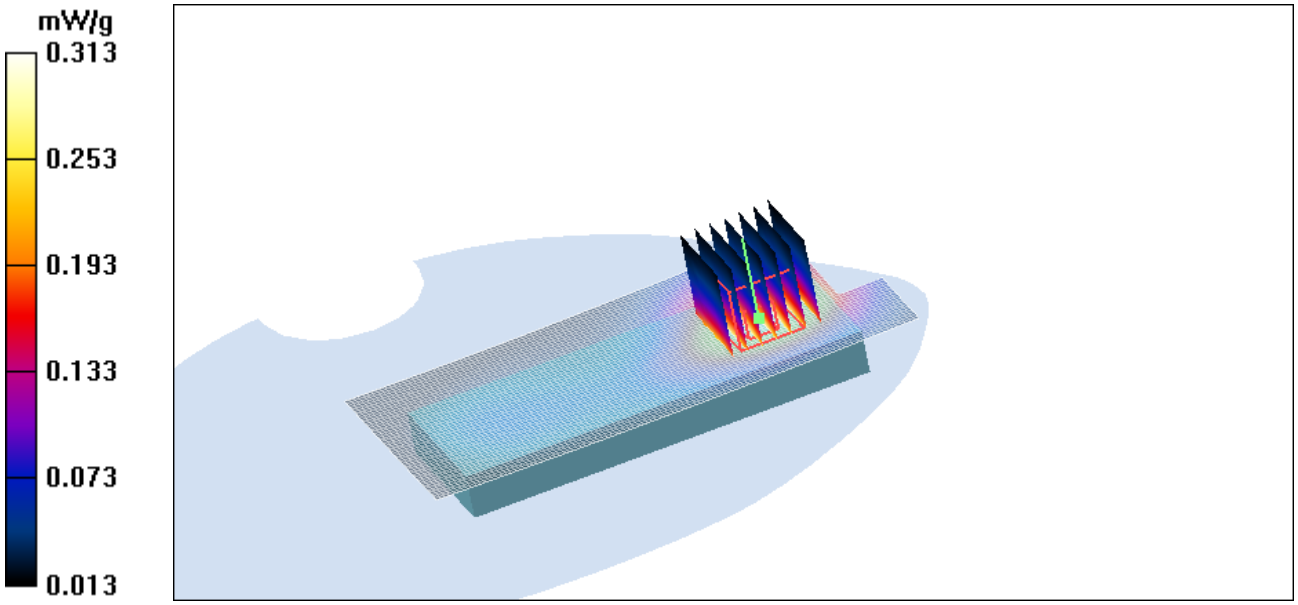


Figure 77 Body, Towards Phantom slide open, GSM 1900 Channel 661

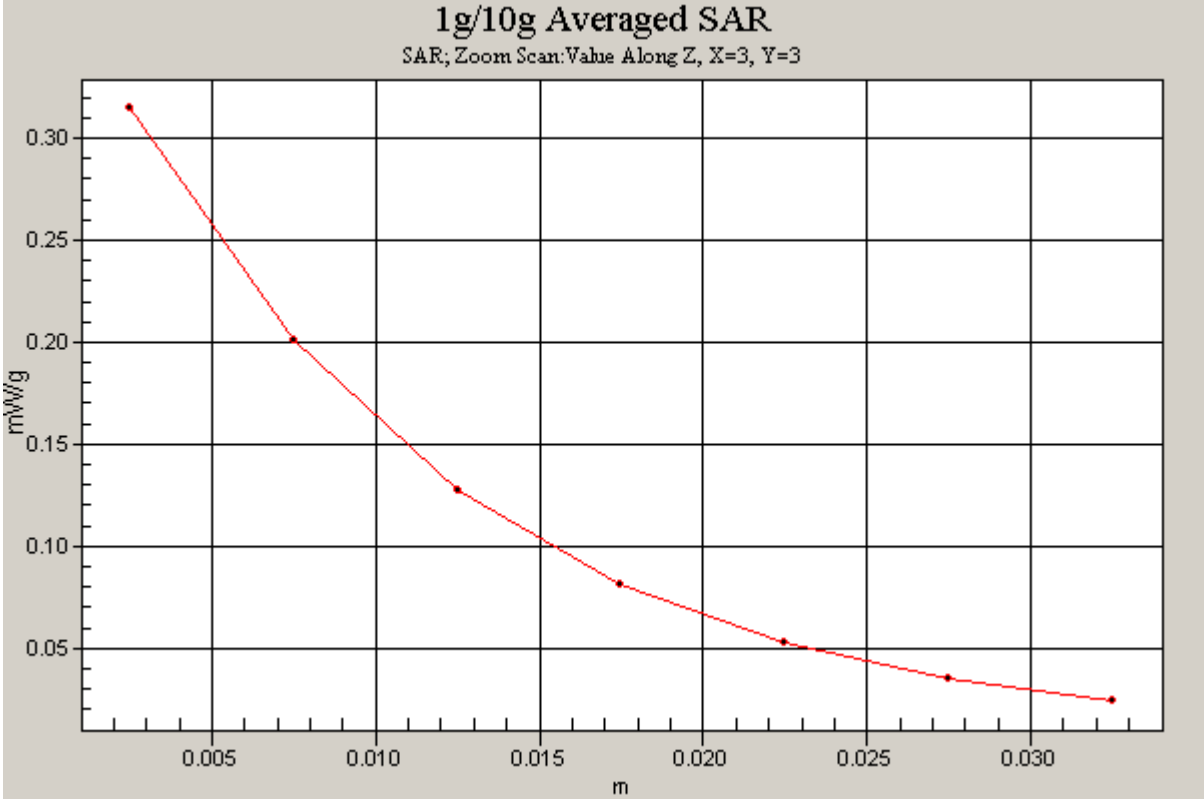


Figure 78 Z-Scan at power reference point (Body, Towards Phantom slide open, GSM 1900 Channel 661)

GSM 1900 Towards Ground slide open with Earphone Middle

Date/Time: 4/30/2009 5:35:31 AM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.439 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 0.548 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.432 mW/g

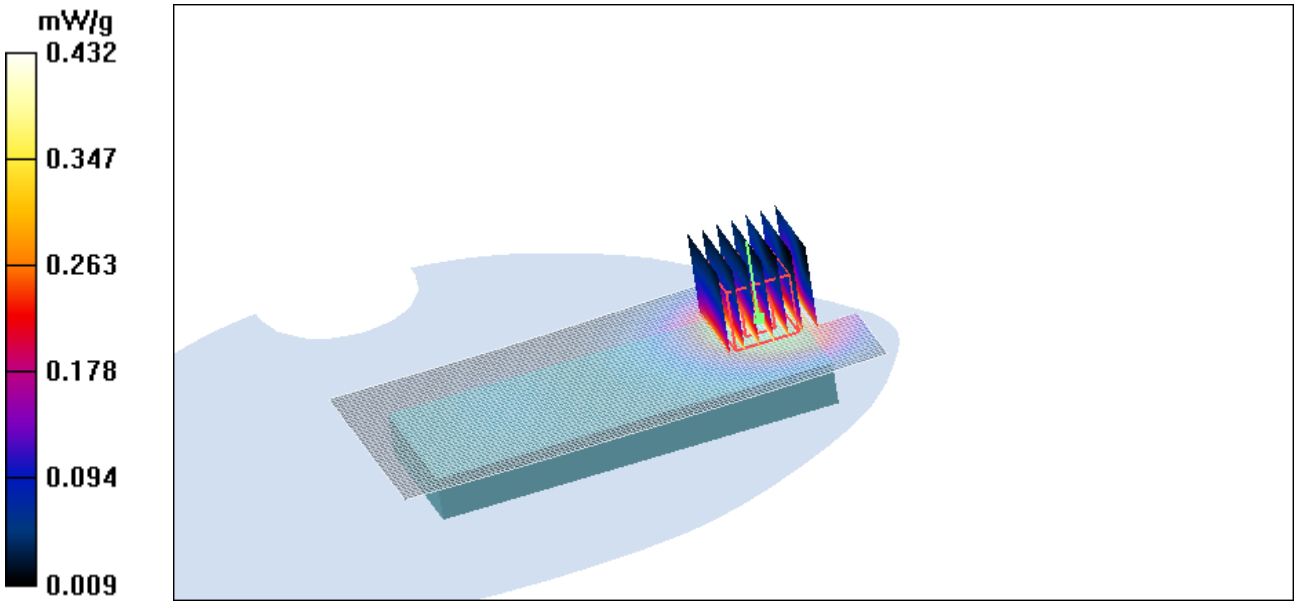


Figure 79 Body with Earphone, Towards Ground slide open, GSM 1900 Channel 661

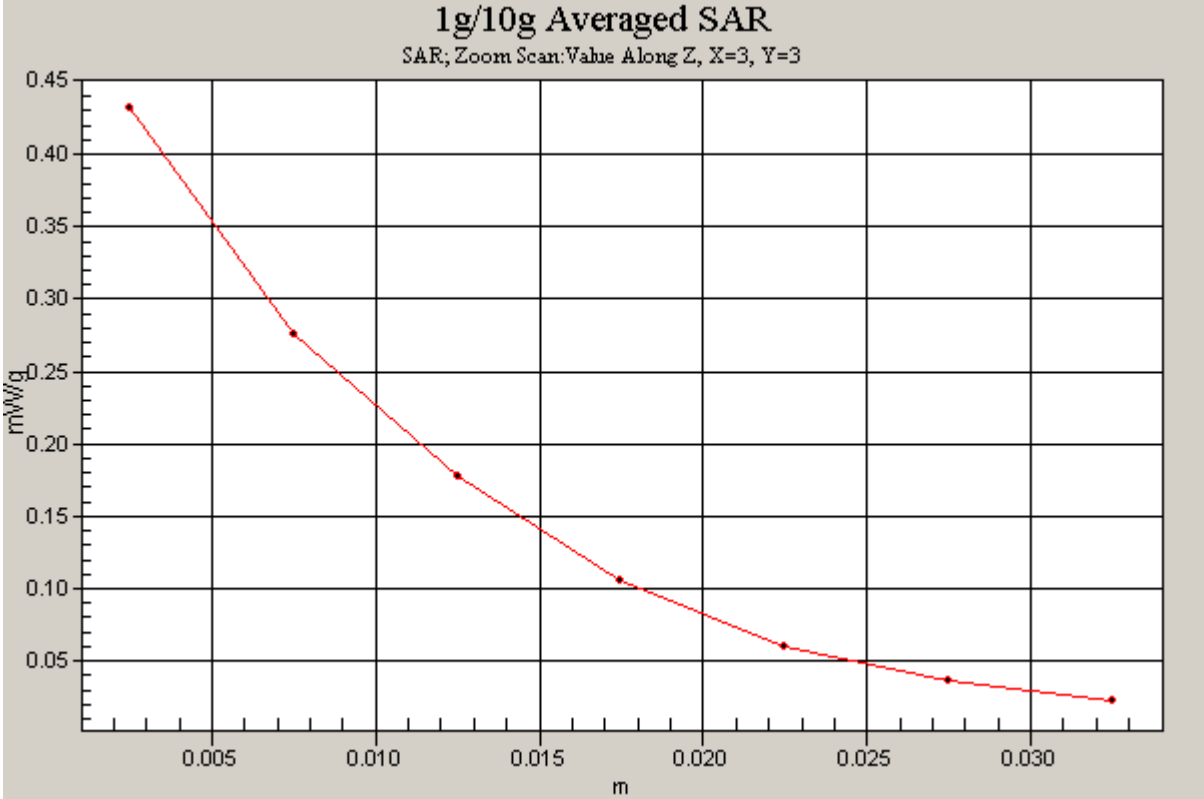


Figure 80 Z-Scan at power reference point (Body with Earphone, Towards Ground slide open, GSM 1900 Channel 661)

GSM 1900 GPRS(4UP) Towards Ground slide open Middle

Date/Time: 4/30/2009 11:41:16 AM
Communication System: GSM 1900+GPRS(4Up); Frequency: 1880 MHz;Duty Cycle: 1:2
Medium parameters used: f = 1880 MHz; σ = 1.49 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.67 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.25 V/m; Power Drift = 0.144 dB
Peak SAR (extrapolated) = 2.10 W/kg
SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.800 mW/g
Maximum value of SAR (measured) = 1.64 mW/g

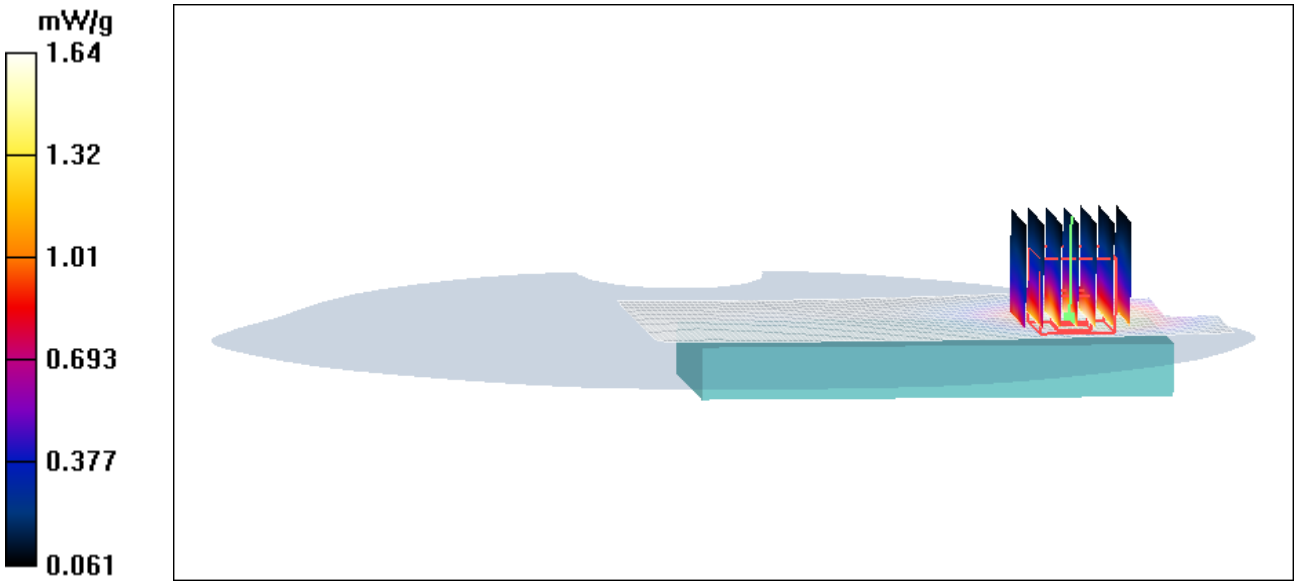


Figure 81 Body, Towards Ground slide open, GSM 1900 GPRS(4UP), Channel 661

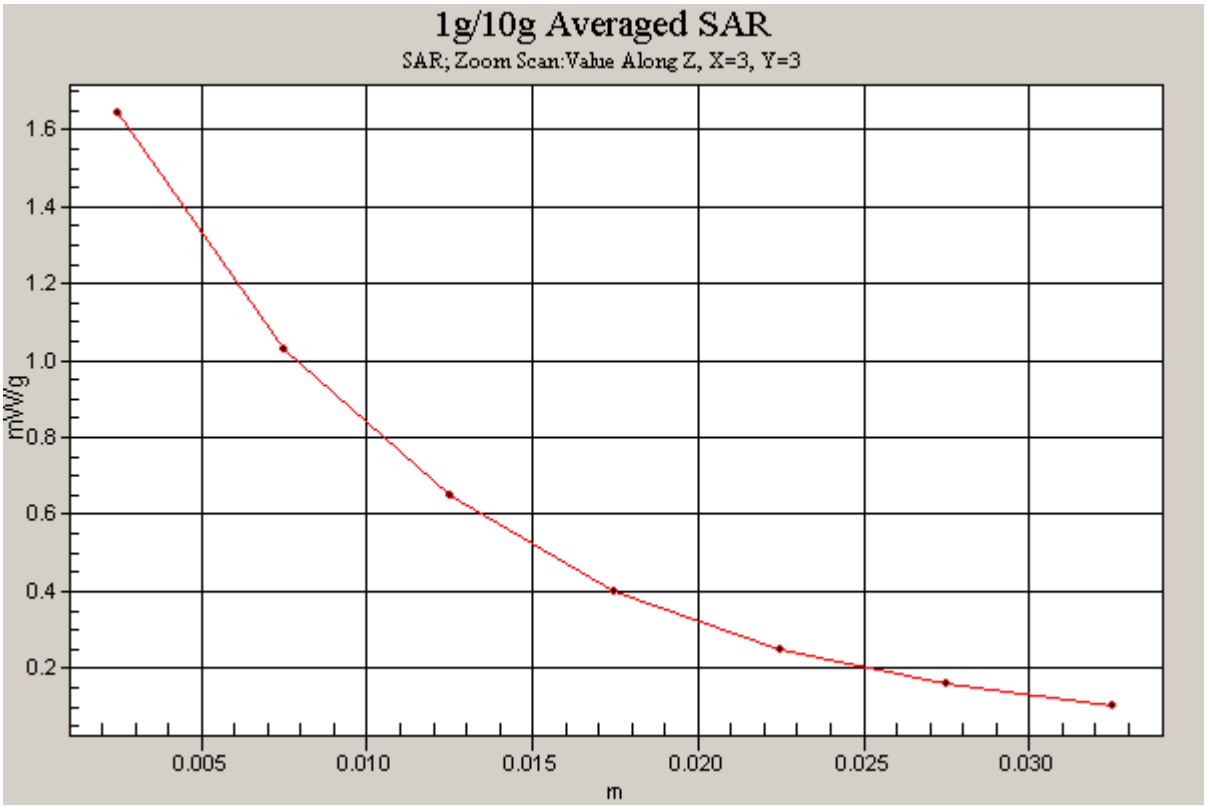


Figure 82 Z-Scan at power reference point (Body, Towards Ground slide open, GSM 1900 GPRS(4UP), Channel 661)

GSM 1900 Left Cheek slide close Middle

Date/Time: 4/30/2009 9:41:59 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.996 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.92 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.786 mW/g; SAR(10 g) = 0.497 mW/g
Maximum value of SAR (measured) = 0.971 mW/g

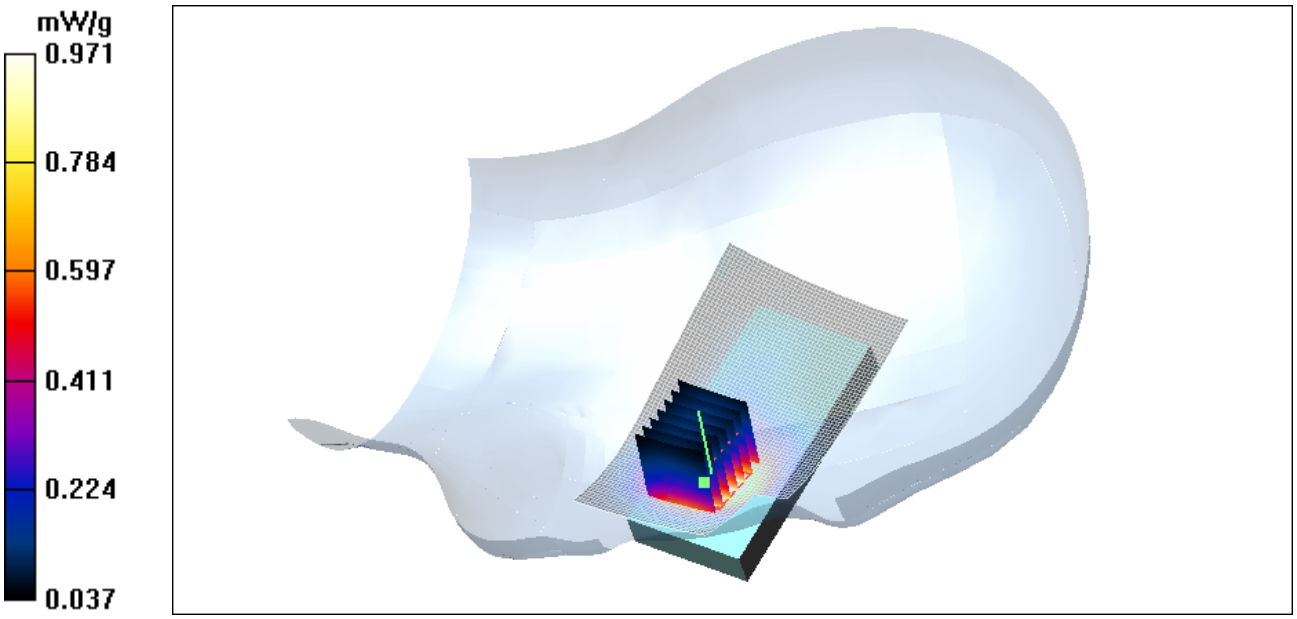


Figure 83 Left Hand Touch Cheek slide close GSM 1900 Channel 661

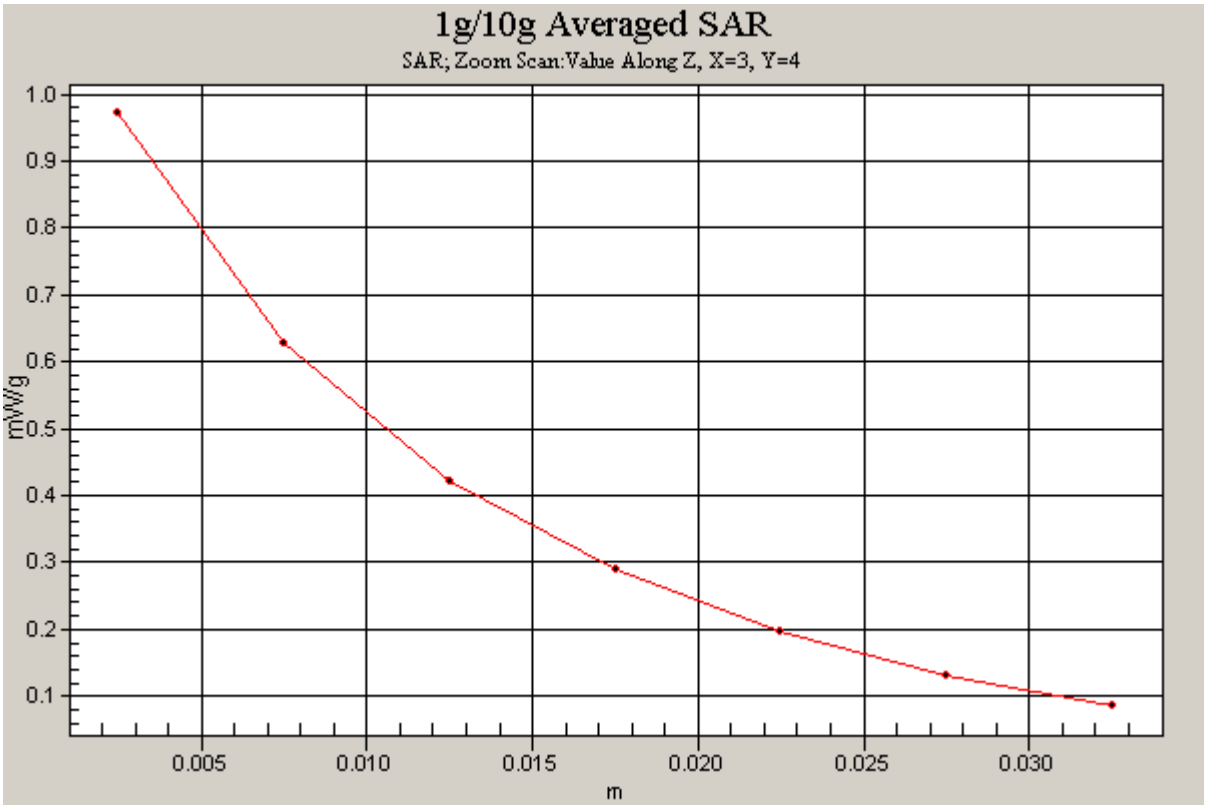


Figure 84 Z-Scan at power reference point (Left Hand Touch Cheek slide close GSM 1900 Channel 661)

GSM 1900 Left Tilt Slide close Middle

Date/Time: 4/30/2009 10:02:15 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.255 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 0.368 W/kg
SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.129 mW/g
Maximum value of SAR (measured) = 0.282 mW/g

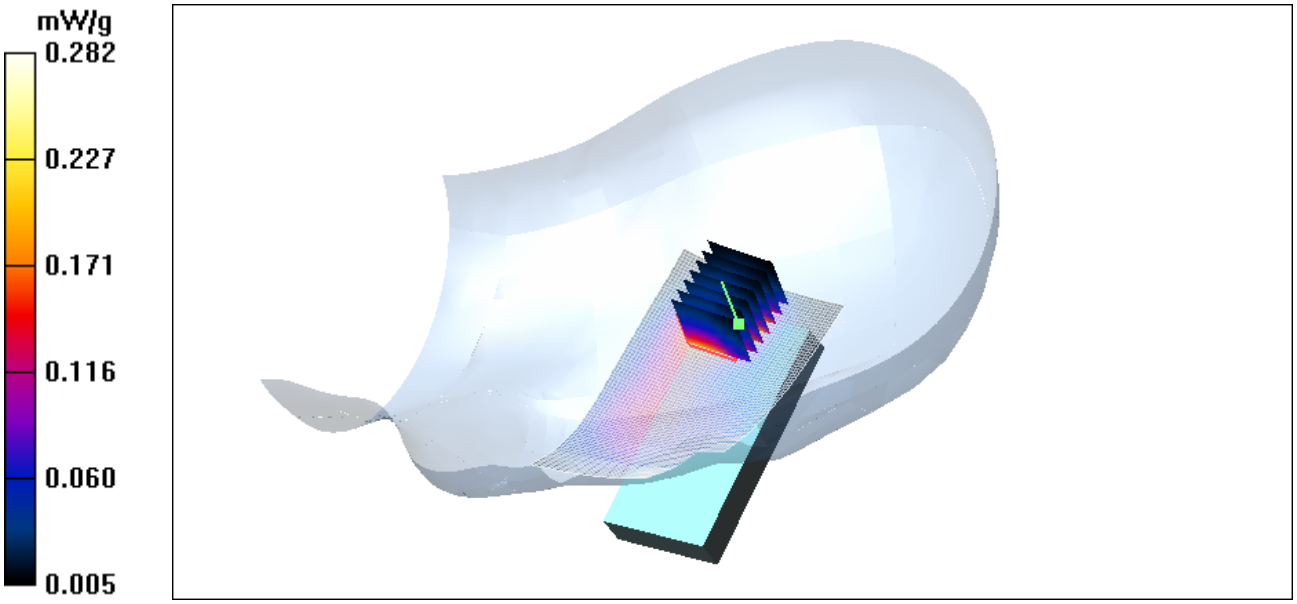


Figure 85 Left Hand Tilt 15° slide close GSM 1900 Channel 661

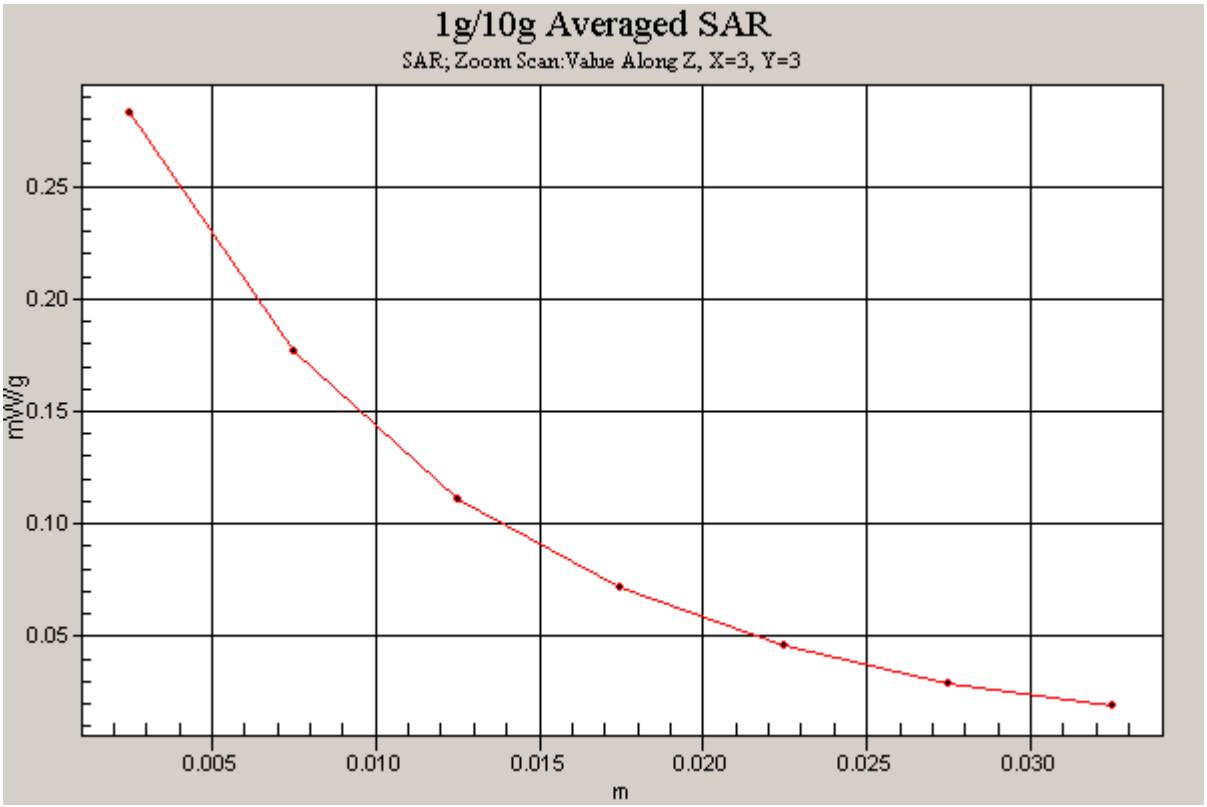


Figure 86 Z-Scan at power reference point (Left Hand Tilt 15° slide close GSM 1900 Channel 661)

GSM 1900 Right Cheek slide close High

Date/Time: 4/30/2009 2:07:07 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.948 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.42 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.817 mW/g; SAR(10 g) = 0.477 mW/g
Maximum value of SAR (measured) = 1.08 mW/g

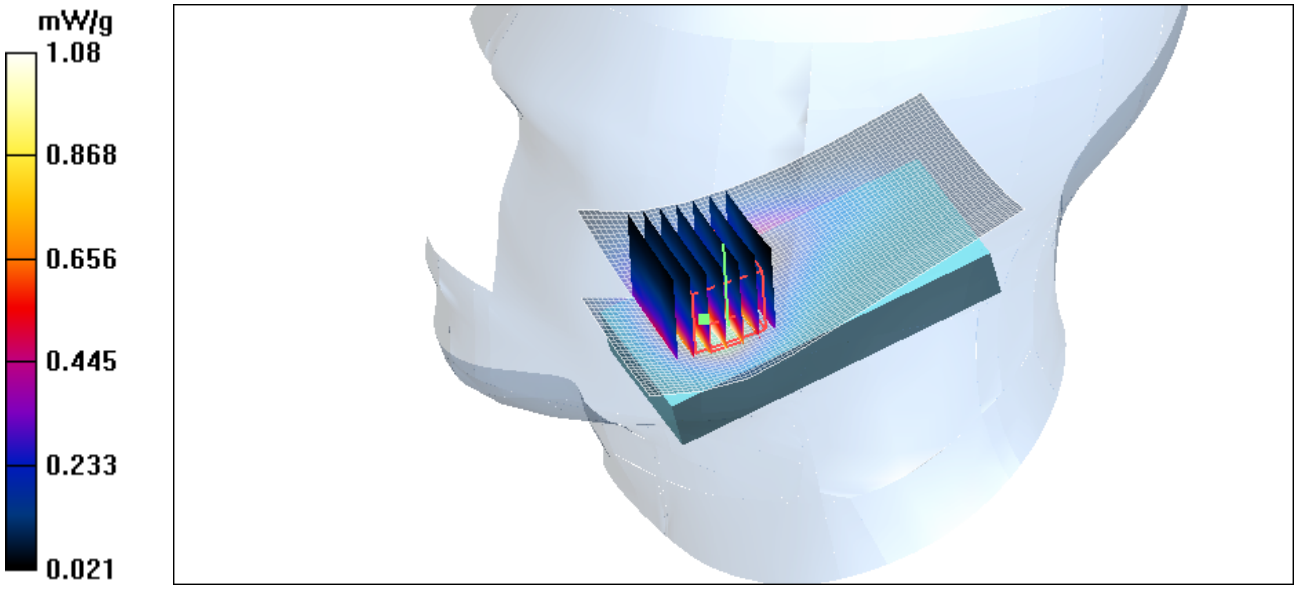


Figure 87 Right Hand Touch Cheek slide close GSM 1900 Channel 810

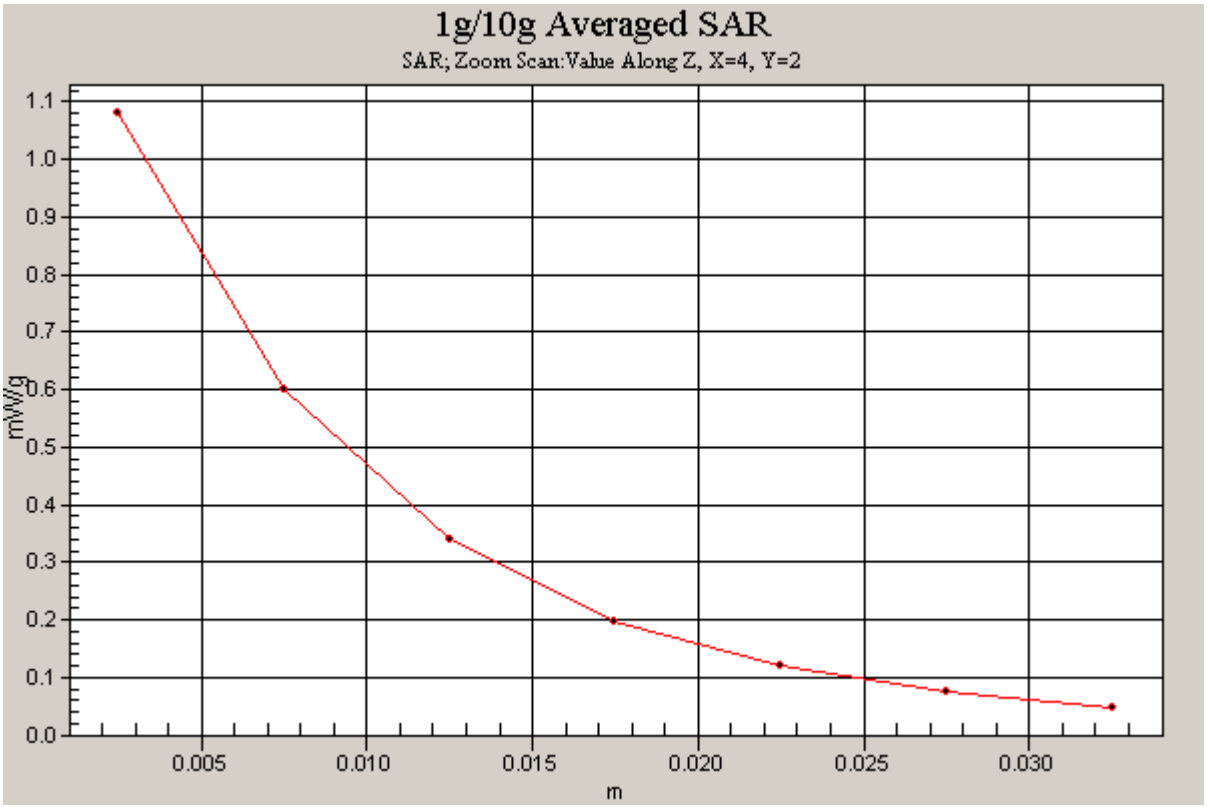


Figure 88 Z-Scan at power reference point (Right Hand Touch Cheek slide close GSM 1900 Channel 810)

GSM 1900 Right Cheek slide close Middle

Date/Time: 4/30/2009 9:02:29 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.928 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.19 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.805 mW/g; SAR(10 g) = 0.482 mW/g
Maximum value of SAR (measured) = 1.06 mW/g

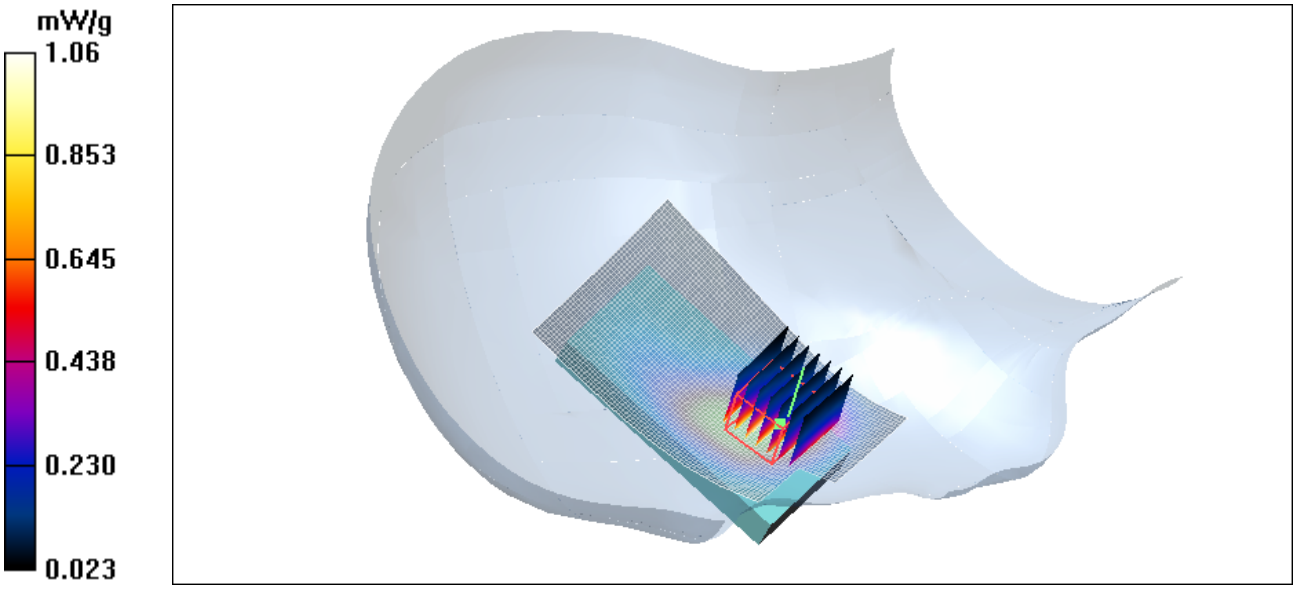


Figure 89 Right Hand Touch Cheek slide close GSM 1900 Channel 661

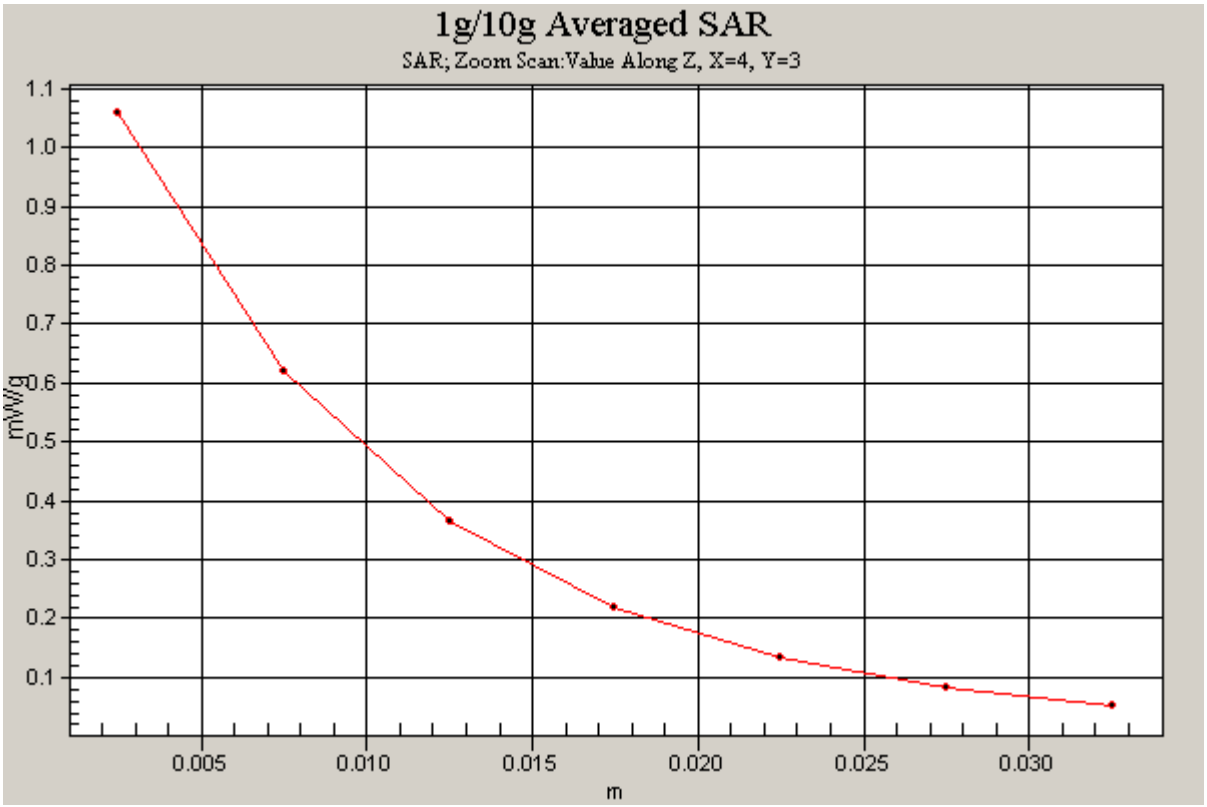


Figure 90 Z-Scan at power reference point (Right Hand Touch Cheek slide close GSM 1900 Channel 661)

GSM 1900 Right Cheek slide close Low

Date/Time: 4/30/2009 2:25:38 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.09 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.30 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.923 mW/g; SAR(10 g) = 0.539 mW/g
Maximum value of SAR (measured) = 1.20 mW/g

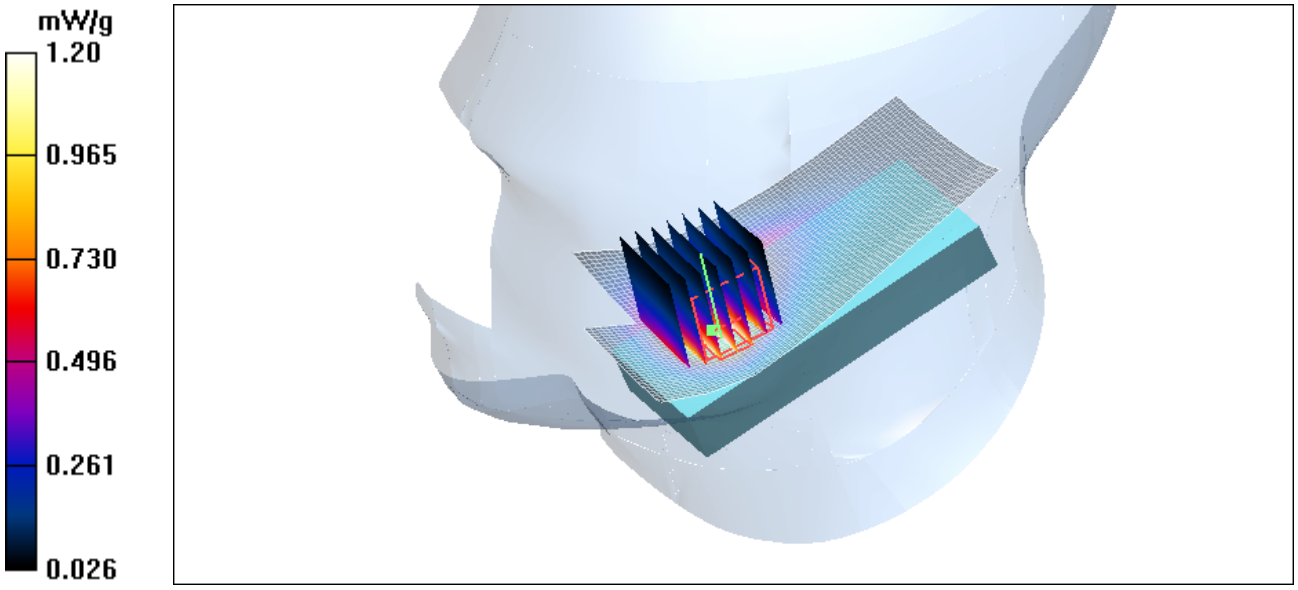


Figure 91 Right Hand Touch Cheek slide close GSM 1900 Channel 512

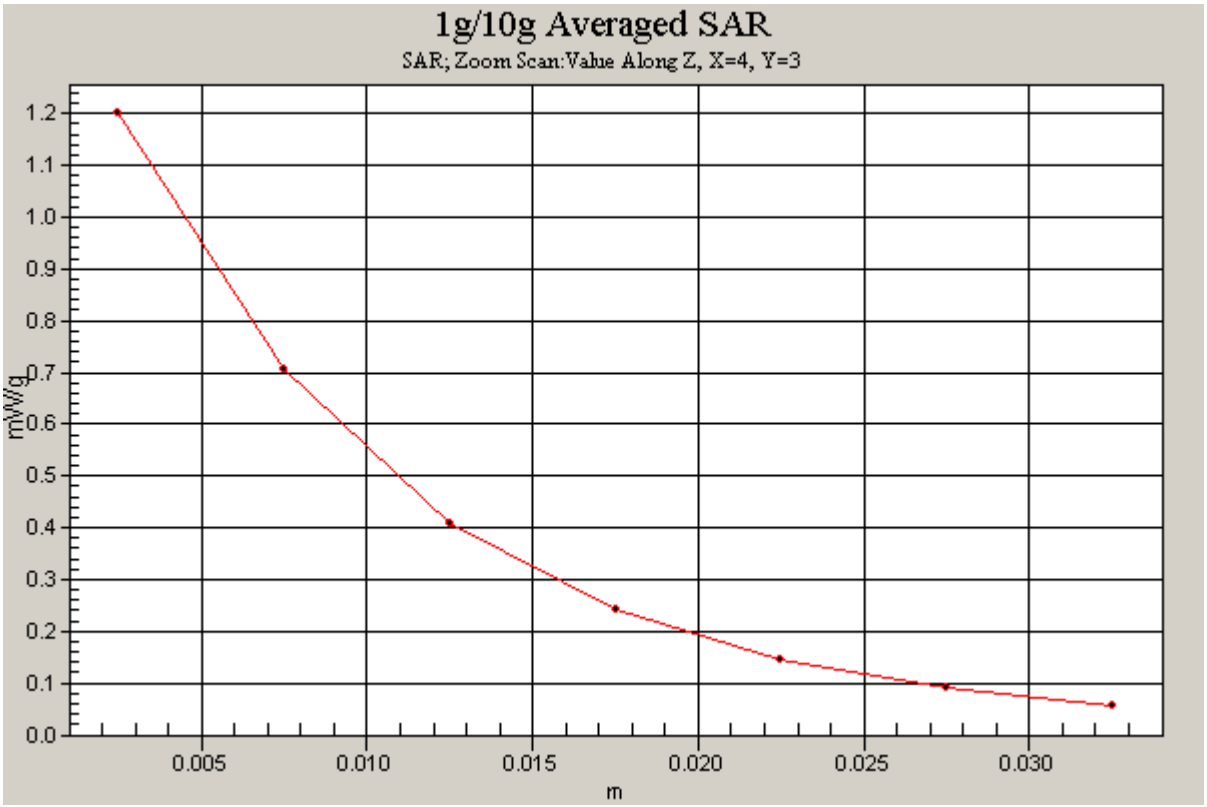


Figure 92 Z-Scan at power reference point (Right Hand Touch Cheek slide close GSM 1900 Channel 512)

GSM 1900 Right Tilt Slide close Middle

Date/Time: 4/30/2009 9:21:28 PM
Communication System: GSM 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:22.3 °C Liqiud Temperature: 21.5°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 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.307 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.231 mW/g; SAR(10 g) = 0.139 mW/g
Maximum value of SAR (measured) = 0.284 mW/g

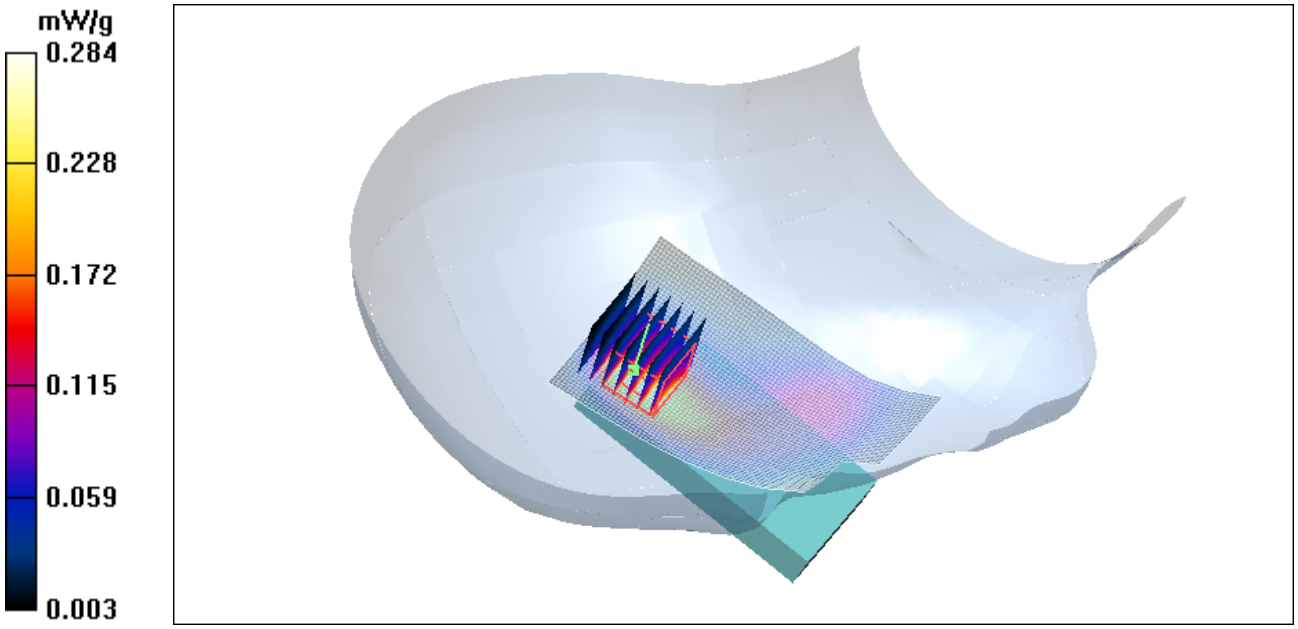


Figure 93 Right Hand Tilt 15° slide close GSM 1900 Channel 661

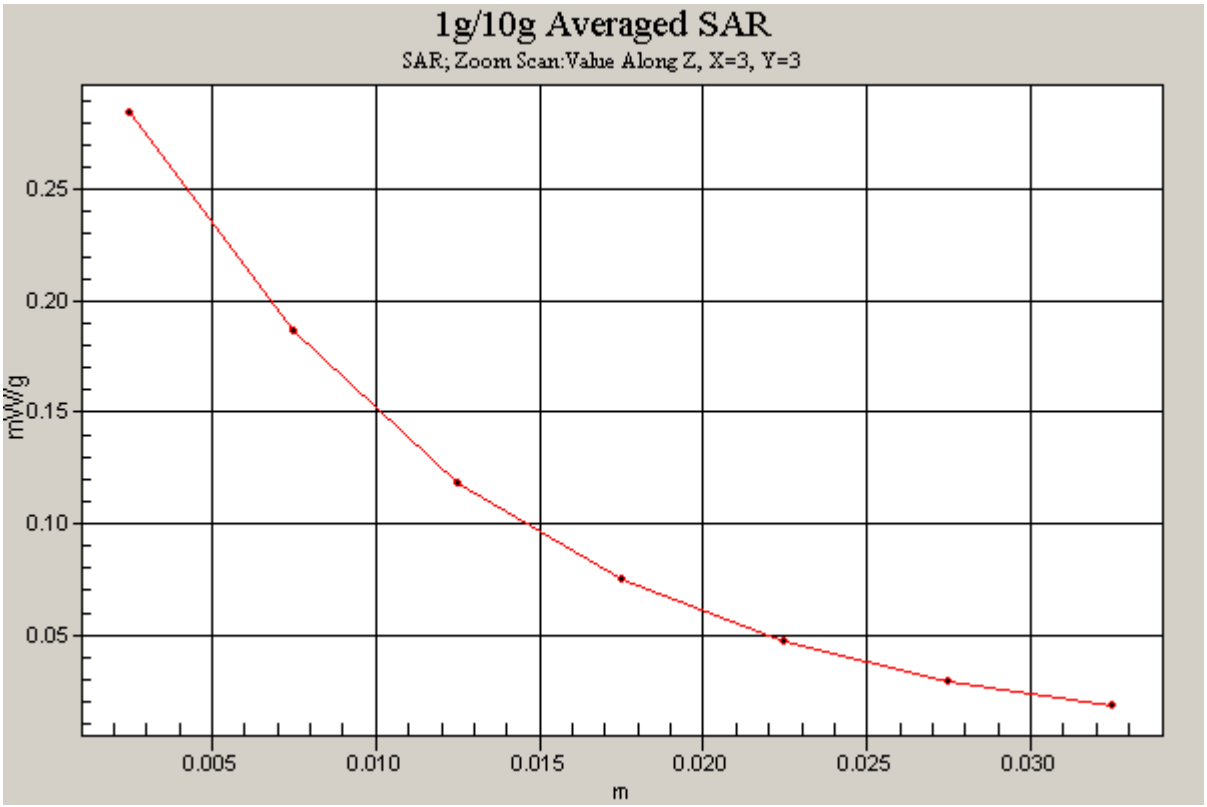


Figure 94 Z-Scan at power reference point (Right Hand Tilt 15° slide close GSM 1900 Channel 661)