



No.: RZA2008-1098FCC



OET 65

TEST REPORT

Test name	Electromagnetic Field (Specific Absorption Rate)
Product	WCDMA/GPRS/GSM/EDGE Mobile Phone with Bluetooth
Model	U3307q
FCC ID	QISU3307Q
Client	Huawei Technologies Co., Ltd.

TA Technology (Shanghai) Co., Ltd.



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GENERAL SUMMARY

Product	WCDMA/GPRS/GSM/EDGE Mobile Phone with Bluetooth	Model	U3307q
Client	Huawei Technologies Co., Ltd.	Type of test	Entrusted
Manufacturer	Huawei Technologies Co., Ltd.	Arrival Date of sample	August 14 th , 2008
Place of sampling	(Blank)	Carrier of the samples	Yan Xie
Quantity of the samples	One	Date of product	(Blank)
Base of the samples	(Blank)	Items of test	SAR
Series number	J42AB10870800001		
Standard(s)	EN 50360–2001: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones. BS EN 62209-1:2006: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - 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) ANSI C95.1–2005: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. IEEE 1528–2003: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head Due to Wireless Communications Devices: Experimental Techniques. OET Bulletin 65 supplement C, published June 2001 including DA 02-1438, published June 2002: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits. Transition Period for the Phantom Requirements of Supplement C to OET Bulletin 65. IEC 62209-2 : Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 2: Procedure to determine the Specific Absorption Rate (SAR) in the head and body for 30MHz to 6GHz Handheld and Body-Mounted Devices used in close proximity to the body.		
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: September 2nd, 2008		
Comment	The test result only responds to the measured sample.		

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1. COMPETENCE AND WARRANTIES

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3. DESCRIPTION OF EUT

3.1. Addressing Information Related to EUT

Table 1: Applicant (The Client)

Name or Company	Huawei Technologies Co., Ltd.
Address/Post	Bantian, Longgang District
City	Shenzhen
Postal Code	518129
Country	P.R. China
Telephone	0755-28780808
Fax	0755-28780808

Table 2: Manufacturer

Name or Company	Huawei Technologies Co., Ltd.
Address/Post	Bantian, Longgang District
City	Shenzhen
Postal Code	518129
Country	P.R. China
Telephone	0755-28780808
Fax	0755-28780808

3.2. General Description

Equipment Under Test (EUT) is a model of WCDMA/GPRS/GSM/EDGE 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, GSM 1900 and WCDMA Band V. It has the GPRS and EGPRS functions, the GPRS and EGPRS class is 10.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

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3.3. Test item

Table 3: Test item of EUT

Device type :	portable device	
Exposure category:	uncontrolled environment / general population	
Device operating configurations :		
Operating mode(s):	GSM900;GSM1800; WCDMA Band I; GSM850; (tested) GSM1900; (tested) WCDMA Band V; (tested)	
Modulation:	GMSK, 8PSK, QPSK	
GPRS mobile station class :	A	
GPRS multislot class :	10	
EGPRS multislot class:	10	
Maximum no.of timeslots in uplink:	2	
Standard output power	(33dBm,2W)GSM850; (tested) (33dBm,2W)GSM900;(30dBm,1W)GSM1800; (30dBm,1W)GSM1900; (tested) (24dBm,0.25W)WCDMA Band I (24dBm,0.25W)WCDMA Band V (tested)	
Operating frequency range(s)	transmitter frequency range	receiver frequency range
GSM850: (tested)	824.2 MHz ~ 848.8 MHz	869.2 MHz ~ 893.8 MHz
GSM900:	880.2 MHz ~ 914.8 MHz	925.2 MHz ~ 959.8 MHz
GSM1800:	1710.2 MHz ~ 1784.8 MHz	1805.2 MHz ~ 1879.8 MHz
GSM1900: (tested)	1850.2 MHz ~ 19.9.8 MHz	1930.2 MHz ~ 1989.8 MHz
WCDMA Band I:	1922.4 MHz ~ 1977.6 MHz	2112.4 MHz ~ 2167.6 MHz
WCDMA Band V: (tested)	826.4 MHz ~ 846.6 MHz	871.4 MHz ~ 891.6 MHz
Power class	GSM 850: 4, tested with power level 5	
	GSM 900: 4, tested with power level 5	
	GSM 1800: 1, tested with power level 0	
	GSM 1900: 1, tested with power level 0	
	WCDMA Band I: 3, tested with maximum output power	
	WCDMA Band V: 3, tested with maximum output power	
Test channel (Low –Middle –High)	128-190-251 (GSM850) (tested) 975 -38 –124 (GSM900) 512 - 698 – 885 (GSM1800) 512 - 661 – 810 (GSM1900) (tested) 9612 -9750 -9888 (WCDMA Band I) 4132 -4182 -4233 (WCDMA Band V) (tested)	
Hardware version:	HD3U330M VER.B	
Software version:	U3307qV100R001C01B120	
Antenna type:	integrated antenna	

4. OPERATIONAL CONDITIONS DURING TEST

4.1. General description of test procedures

The EUT is tested using a E5515C communications tester as controller unit to set test channels and maximum output power to the EUT, as well as for measuring the conducted peak power. Test positions as described in ANNEX I are in accordance with the specified test standard. Conducted output power was measured using an integrated RF connector and attached RF cable.

To make the mobile emits maximum power; the output power of E5515C would be adjusted to minimum power with the sensitivity of the mobile station to build steady connection with mobile station. The power level control parameter "5" of GSM850, "0" of GSM1900, "All up" of WCDMA Band V. It means that requires mobile station to emit with maximum power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset 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 tests in the band of GSM 850 and GSM 1900 are performed in the mode of speech transfer function and GPRS/EGPRS. And since the GPRS/EGPRS class is 10 for this EUT, it has at most 2 timeslots in uplink.

4.3. WCDMA Test Configuration

4.3.1. Output power Verification

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

4.3.2. Head SAR Measurements

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

4.3.3. Body SAR Measurements

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

5. SAR MEASUREMENTS SYSTEM CONFIGURATION

5.1. SAR Measurement Set-up

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

A cell controller system contains the power supply, robot controller, teaches pendant (Joystick) and remote control, is used to drive the robot motors. The PC consists of the Micron Pentium III 800 MHz computer with Windows 2003 system and SAR Measurement Software DASY4, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, meCHanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

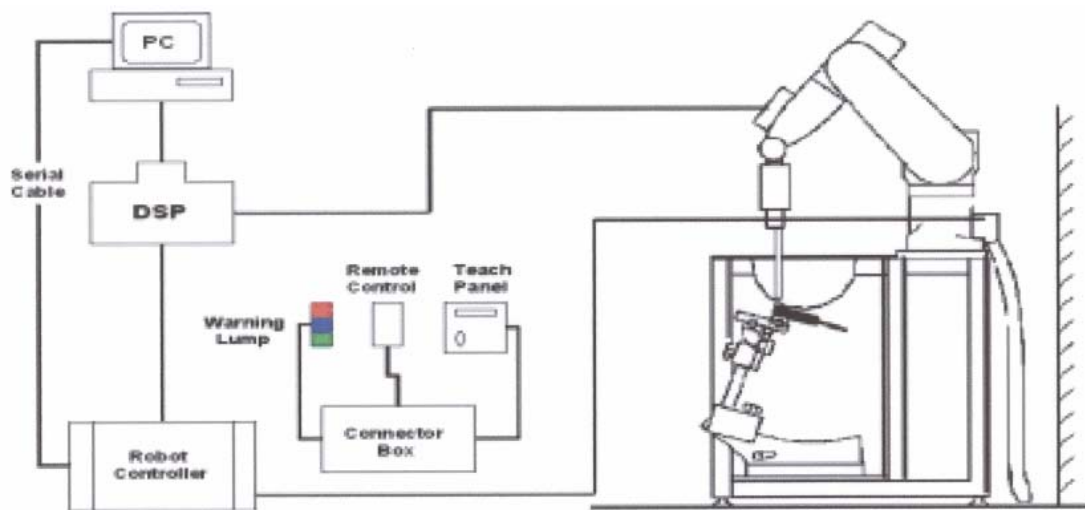


Figure 1. SAR Lab Test Measurement Set-up

The DAE4 consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

5.2. Dasy4 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ET3DV6 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the standard procedure with an accuracy of better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than $\pm 0.25\text{dB}$.

5.2.1. ET3DV6 Probe Specification

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection System (ET3DV6 only) Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.q., glycol)
Calibration	In air from 10 MHz to 2.5 GHz In brain and muscle simulating tissue at frequencies of 900MHz, 1750MHz, 1950MHz and 2450MHz (accuracy $\pm 8\%$) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to 2.5 GHz; Linearity: $\pm 0.2\text{ dB}$ (30 MHz to 2.5 GHz)
Directivity	$\pm 0.2\text{ dB}$ in brain tissue (rotation around probe axis) $\pm 0.4\text{ dB}$ in brain tissue (rotation around probe axis)
Dynamic Range	5u W/g to > 100mW/g; Linearity: $\pm 0.2\text{dB}$
Surface Detection	$\pm 0.2\text{ mm}$ repeatability in air and clear liquids over diffuse reflecting surface
Dimensions	Overall length: 330mm Tip length: 16mm Body diameter: 12mm Tip diameter: 6.8mm Distance from probe tip to dipole centers: 2.7mm
Application	General dosimetry up to 2.5GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

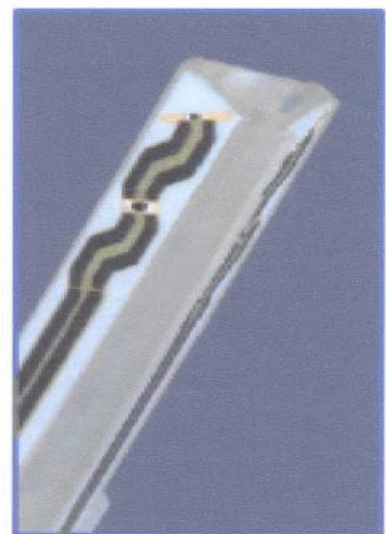


Figure 2.ET3DV6 E-field Probe



Figure 3. ET3DV6 E-field probe

5.2.2. E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than $\pm 0.25\text{dB}$. 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 below 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.

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

Where: Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

Or

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

5.3. Other Test Equipment

5.3.1. Device Holder for Transmitters

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



Figure 4. Device Holder

5.3.2. Phantom

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

Shell Thickness	2±0.1 mm
Filling Volume	Approx. 20 liters
Dimensions	810 x 1000 x 500 mm (H x L x W)
Available	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 $\pm 5\%$.
- 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 $\pm 0.1\text{mm}$). 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 $\pm 30^\circ$.)
- The "area scan" measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension. If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation.
- A "7x7x7 zoom scan" measures the field in a volume around the 2D peak SAR value acquired in the previous "coarse" scan. This is a fine 7x7 grid where the robot additionally moves the probe in 7 steps along the z-axis away from the bottom of the Phantom. Grid spacing for the cube measurement is 5mm in x and y-direction and 5 mm in z-direction. DASY4 is also able to perform repeated zoom scans if more than 1 peak is found during area scan.
- 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 2mm 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	$N_{ormi}, a_{i0}, a_{i1}, a_{i2}$
	- Conversion factor	$ConvF_i$
	- Diode compression point	Dcp_i
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

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

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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.

$$SAR = (E_{tot}^2 \cdot \sigma) / (\rho \cdot 1000)$$

with SAR = local specific absorption rate in mW/g

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

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

ρ = equivalent tissue density in g/cm³

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.

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

with P_{pwe} = equivalent power density of a plane wave in mW/cm²

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

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

5.6. System Specifications

5.6.1. Robotic System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: RX90L

Repeatability: ±0.02 mm

No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Pentium III

Clock Speed: 800 MHz

Operating System: Windows 2003

Data Converter

Features: Signal Amplifier, multiplexer, A/D converter, and control logic

Software: DASY4 software

Connecting Lines: Optical downlink for data and status info. Optical uplink for commands and clock.

5.7. System validation

System validation is performed by using a validation dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 1000 mW. To adjust this power a power meter is used. The power sensor is connected to the cable before the validation to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test.

Validation results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system ($\pm 10\%$).

System validation is performed regularly on all frequency bands where tests are performed with the DASY 4 system. Results are stored to have a long time overview of system performance and are shown in EN test reports at request.

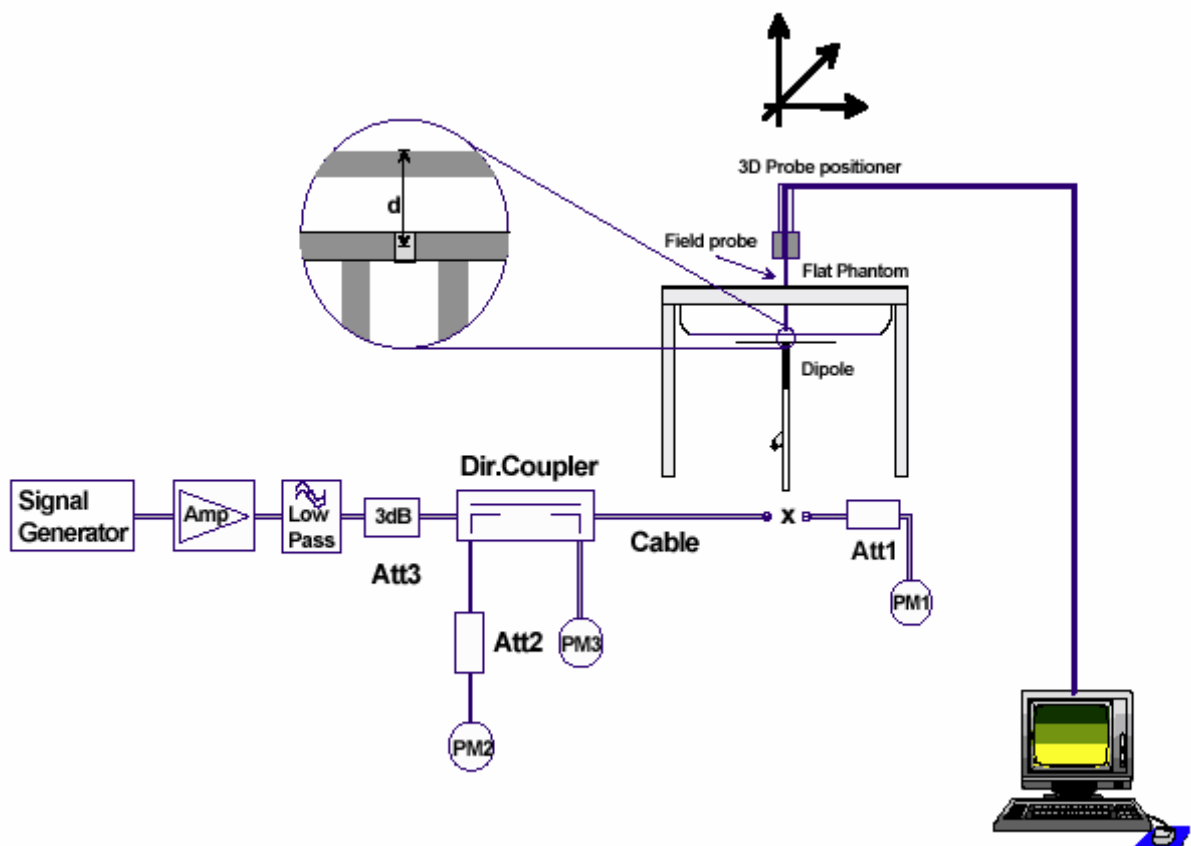


Figure 6. System validation Set-up

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5.8. Equivalent Tissues

The liquid used for the frequency range of 800-2000 MHz consisted of water, sugar, salt, Preventol, Glycol and Cellulose. The liquid has previously been proven to be suited for worst-case. The Table 4 and Table 5 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

Table 4: 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 $\epsilon=41.5$ $\sigma=0.9$

MIXTURE%	FREQUENCY(Brain)1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz $\epsilon=40.0$ $\sigma=1.40$

Table 5: 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 $\epsilon=55.2$ $\sigma=0.97$

MIXTURE%	FREQUENCY (Body) 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz $\epsilon=53.3$ $\sigma=1.52$

6. LABORATORY ENVIRONMENT

Table 6: 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

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

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

ANSI C95.1–2005: 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

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

IEEE 1528–2003: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human 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 62209-2: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 2: Procedure to determine the Specific Absorption Rate (SAR) in the head and body for 30MHz to 6GHz Handheld and Body-Mounted Devices used in close proximity to the body.

8. CONDUCTED OUTPUT POWER MEASUREMENT

8.1. Summary

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

8.2. Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 11 to Table 22 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 0.21dB.

8.3. Conducted Power

8.3.1. Measurement Methods

The EUT was set up for the maximum output power. The channel power was measured. The measurements were done both before and after SAR tests for each test band.

8.3.2. Measurement result

Table 7: Conducted Power Measurement Results

GSM 850	Conducted Power		
	Channel 128	Channel 190	Channel 251
	(824.2MHz)	(836.6MHz)	(848.8MHz)
Before Test (dBm)	33.02	33.16	33.20
After Test (dBm)	33.02	33.15	33.20
GSM 850+GPRS	Conducted Power		
	Channel 128	Channel 190	Channel 251
	(824.2MHz)	(836.6MHz)	(848.8MHz)
Before Test (dBm)	33.03	33.15	33.22
After Test (dBm)	33.02	33.15	33.21
GSM 1900	Conducted Power		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	29.17	29.01	29.15
After Test (dBm)	29.17	29.00	29.16

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GSM 1900+GPRS	Conducted Power		
	Channel 512	Channel 661	Channel 810
	(1850.2MHz)	(1880MHz)	(1909.8MHz)
Before Test (dBm)	29.18	29.00	29.17
After Test (dBm)	29.18	29.00	29.17
WCDMA Band V (12.2kbps RMC)	Conducted Power		
	Channel 4132	Channel 4182	Channel 4233
	(826.4MHz)	(836.6MHz)	(846.6MHz)
Before Test (dBm)	23.25	23.00	23.17
After Test (dBm)	23.25	23.00	23.17
WCDMA Band V (64kbps RMC)	Conducted Power		
	Channel 4132	Channel 4182	Channel 4233
	(826.4MHz)	(836.6MHz)	(846.6MHz)
Before Test (dBm)	23.26	23.01	23.17
After Test (dBm)	23.25	23.00	23.17
WCDMA Band V (144kbps RMC)	Conducted Power		
	Channel 4132	Channel 4182	Channel 4233
	(826.4MHz)	(836.6MHz)	(846.6MHz)
Before Test (dBm)	23.27	23.01	23.19
After Test (dBm)	23.26	23.02	23.19
WCDMA Band V (384kbps RMC)	Conducted Power		
	Channel 4132	Channel 4182	Channel 4233
	(826.4MHz)	(836.6MHz)	(846.6MHz)
Before Test (dBm)	23.25	23.03	23.17
After Test (dBm)	23.26	23.03	23.18

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9. TEST RESULTS

9.1. Dielectric Performance

Table 8: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 22.5 °C and relative humidity 51%. Liquid temperature during the test: 22.3°C				
Frequency (MHz)		Target value	Measurement value	Difference percentage
835 (Brain)	Permittivity ϵ_r	41.50	42.69	-2.87 %
	Conductivity σ	0.90	0.93	3.33 %
1900 (Brain)	Permittivity ϵ_r	40.00	40.18	0.45 %
	Conductivity σ	1.40	1.43	2.14 %

Table 9: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 22.5 °C and relative humidity 51%. Liquid temperature during the test: 22.3°C				
Frequency (MHz)		Target value	Measurement value	Difference percentage
835 (Body)	Permittivity ϵ_r	55.20	55.60	0.72 %
	Conductivity σ	0.97	1.01	4.12 %
1900 (Body)	Permittivity ϵ_r	53.30	52.09	-0.75 %
	Conductivity σ	1.52	1.50	-1.32 %

9.2. System Validation Results

Table 10: System Validation

Measurement is made at temperature 23.2 °C, relative humidity 50%, and input power 250 mW. Liquid temperature during the test: 22.3°C							
Liquid parameters	Frequency	Permittivity ϵ		Conductivity σ (S/m)			
	835MHz	42.69		0.93			
	1900MHz	40.18		1.43			
Verification results	Frequency	Target value (W/kg)		Measurement value (W/kg)		Difference percentage	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1g Average
	835MHz	1.56	2.43	1.53	2.34	-1.92%	-3.70%
	1900MHz	4.98	9.45	4.93	9.36	-1.00%	-0.95%

Note:

1. Target Values used derive from the SPEAG calibration certificate and 250 mW is used as feeding power to the validation dipole (SPEAG using).
2. The graph results see ANNEX D.

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9.3. Summary of Measurement Results

Table 11: SAR Values (GSM850, Head, 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)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Left hand, Touch cheek	High	0.768	1.140	-0.111	Figure 8
	Middle	0.760	1.130	-0.136	Figure 10
	Low	0.520	0.760	0.033	Figure 12
Left hand, Tilt 15 Degree	High	0.423	0.582	-0.063	Figure 14
	Middle	0.385	0.526	0.107	Figure 16
	Low	0.253	0.345	0.096	Figure 18
Right hand, Touch cheek	High	0.744	1.060	0.009	Figure 20
	Middle	0.737	1.040	-0.051	Figure 22
	Low	0.529	0.741	-0.017	Figure 24
Right hand, Tilt 15 Degree	High	0.441	0.609	-0.023	Figure 26
	Middle	0.408	0.559	0.012	Figure 28
	Low	0.272	0.371	0.022	Figure 30

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Table 12: SAR Values (GSM850, Body, Open, Distance 15mm)

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 Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.527	0.735	-0.062	Figure 32
	Middle	0.567	0.788	-0.017	Figure 34
	Low	0.542	0.753	-0.053	Figure 36
Towards Phantom	High	0.502	0.694	0.032	Figure 38
	Middle	0.536	0.736	-0.144	Figure 40
	Low	0.510	0.698	-0.051	Figure 42
Worst case position of Body with Earphone					
Towards Ground	Middle	0.481	0.664	-0.032	Figure 44
Worst case position of Body with Bluetooth Earphone					
Towards Ground	Middle	0.579	0.805	-0.014	Figure 46
Test Case of Body with GPRS(2 timeslots in uplink)					
Towards Ground	High	0.850	1.180	-0.191	Figure 48
	Middle	0.970	1.360	0.054	Figure 50
	Low	0.980	1.360	-0.076	Figure 52
Towards Phantom	High	0.904	1.260	-0.128	Figure 54
	Middle	0.986	1.360	-0.112	Figure 56
	Low	0.949	1.330	-0.176	Figure 58
Worst case position of GPRS with EGPRS					
Towards Phantom	Middle	0.260	0.357	-0.192	Figure 60

Note: 1. The value with blue color is the maximum SAR Value of each test band.

2. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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Table 13: SAR Values (GSM850, Head, Close)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Test Case Of Head		Measurement Result(W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Left hand, Touch cheek	High	0.139	0.197	-0.024	Figure 62
	Middle	0.177	0.250	0.061	Figure 64
	Low	0.136	0.200	-0.122	Figure 66
Left hand, Tilt 15 Degree	High	0.094	0.129	-0.067	Figure 68
	Middle	0.123	0.166	0.015	Figure 70
	Low	0.170	0.230	-0.129	Figure 72
Right hand, Touch cheek	High	0.116	0.155	-0.029	Figure 74
	Middle	0.156	0.208	-0.038	Figure 76
	Low	0.205	0.275	-0.128	Figure 78
Right hand, Tilt 15 Degree	High	0.093	0.126	-0.125	Figure 80
	Middle	0.128	0.173	-0.088	Figure 82
	Low	0.167	0.225	0.145	Figure 84

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Table 14: SAR Values (GSM850, Body, Close, Distance 15mm)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Test Case Of Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.140	0.222	-0.016	Figure 86
	Middle	0.188	0.294	0.072	Figure 88
	Low	0.258	0.399	0.034	Figure 90
Towards Phantom	High	0.066	0.090	0.097	Figure 92
	Middle	0.085	0.115	0.106	Figure 94
	Low	0.117	0.158	0.040	Figure 96
Worst case position of Body with Earphone					
Towards Ground	Low	0.258	0.402	-0.044	Figure 98
Worst case position of Body with Bluetooth Earphone					
Towards Ground	Low	0.257	0.391	-0.097	Figure 100
Test Case of Body with GPRS(2 timeslots in uplink)					
Towards Ground	High	0.290	0.449	-0.042	Figure 102
	Middle	0.404	0.620	-0.099	Figure 104
	Low	0.481	0.736	-0.144	Figure 106
Towards Phantom	High	0.117	0.158	0.061	Figure 108
	Middle	0.158	0.213	0.046	Figure 110
	Low	0.204	0.276	-0.055	Figure 112
Worst case position of GPRS with EGPRS					
Towards Ground	Low	0.126	0.192	-0.028	Figure 114

Note: 1. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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Table 15: SAR Values (GSM1900, Head, Open)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Test Case Of Head		Measurement Result(W/kg)		Power Drift	
		10 g Average	1 g Average	(dB)	
Different Test Position	Channel				
Left hand, Touch cheek	High	0.166	0.287	-0.172	Figure 116
	Middle	0.198	0.338	0.002	Figure 118
	Low	0.230	0.383	0.025	Figure 120
Left hand, Tilt 15 Degree	High	0.082	0.124	-0.074	Figure 122
	Middle	0.097	0.146	-0.036	Figure 124
	Low	0.108	0.163	-0.058	Figure 126
Right hand, Touch cheek	High	0.102	0.166	-0.038	Figure 128
	Middle	0.130	0.202	-0.028	Figure 130
	Low	0.158	0.248	0.037	Figure 132
Right hand, Tilt 15 Degree	High	0.095	0.154	-0.032	Figure 134
	Middle	0.107	0.170	-0.030	Figure 136
	Low	0.111	0.174	0.037	Figure 138

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Table 16: SAR Values (GSM1900, Body, Open, Distance 15mm)

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 Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.149	0.237	-0.095	Figure 140
	Middle	0.170	0.269	-0.046	Figure 142
	Low	0.223	0.351	-0.025	Figure 144
Towards Phantom	High	0.074	0.120	0.052	Figure 146
	Middle	0.089	0.138	-0.086	Figure 148
	Low	0.117	0.180	0.013	Figure 150
Worst case position of Body with Earphone					
Towards Ground	Low	0.175	0.281	-0.030	Figure 152
Worst case position of Body with Bluetooth Earphone					
Towards Ground	Low	0.220	0.348	0.020	Figure 154
Test Case of Body with GPRS(2 timeslots in uplink)					
Towards Ground	High	0.255	0.411	0.026	Figure 156
	Middle	0.277	0.475	0.017	Figure 158
	Low	0.336	0.529	-0.016	Figure 160
Towards Phantom	High	0.149	0.240	-0.040	Figure 162
	Middle	0.170	0.270	-0.018	Figure 164
	Low	0.228	0.348	-0.106	Figure 166
Worst case position of GPRS with EGPRS					
Towards Ground	Low	0.178	0.282	-0.078	Figure168

Note: 1. The value with blue color is the maximum SAR Value of each test band.

2. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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Table 17: SAR Values (GSM1900, Head, 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)	
		10 g Average	1 g Average	Power Drift (dB)	
Different Test Position	Channel				
Left hand, Touch cheek	High	0.100	0.152	0.006	Figure 170
	Middle	0.119	0.181	0.084	Figure 172
	Low	0.144	0.226	-0.144	Figure 174
Left hand, Tilt 15 Degree	High	0.070	0.109	-0.013	Figure 176
	Middle	0.073	0.112	0.000	Figure 178
	Low	0.079	0.120	0.050	Figure 180
Right hand, Touch cheek	High	0.088	0.158	0.022	Figure 182
	Middle	0.120	0.189	-0.009	Figure 184
	Low	0.142	0.226	-0.123	Figure 186
Right hand, Tilt 15 Degree	High	0.081	0.132	-0.015	Figure 188
	Middle	0.097	0.157	-0.021	Figure 190
	Low	0.110	0.176	0.001	Figure 192

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Table 18: SAR Values (GSM1900, Body, Close, Distance 15mm)

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 Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.117	0.214	0.054	Figure 194
	Middle	0.137	0.249	-0.118	Figure 196
	Low	0.164	0.298	0.029	Figure 198
Towards Phantom	High	0.034	0.055	-0.090	Figure 200
	Middle	0.038	0.060	-0.040	Figure 202
	Low	0.047	0.073	0.026	Figure 204
Worst case position of Body with Earphone					
Towards Ground	Low	0.210	0.392	-0.073	Figure 206
Worst case position of Body with Bluetooth Earphone					
Towards Ground	Low	0.151	0.272	-0.017	Figure 208
Test Case of Body with GPRS(2 timeslots in uplink)					
Towards Ground	High	0.169	0.305	-0.026	Figure 210
	Middle	0.206	0.366	-0.105	Figure 212
	Low	0.252	0.448	0.063	Figure 214
Towards Phantom	High	0.061	0.097	-0.024	Figure 216
	Middle	0.067	0.105	0.006	Figure 218
	Low	0.094	0.148	-0.158	Figure 220
Worst case position of GPRS with EGPRS					
Towards Ground	Low	0.175	0.330	-0.169	Figure 222

Note: 1. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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Table 19: SAR Values (WCDMA Band V, Head, 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)	
		10 g Average	1 g Average	Power Drift (dB)	
Different Test Position	Channel				
Left hand, Touch cheek	High	0.598	0.868	0.059	Figure 224
	Middle	0.594	0.849	-0.023	Figure 226
	Low	0.471	0.673	-0.148	Figure 228
Left hand, Tilt 15 Degree	High	0.334	0.460	0.002	Figure 230
	Middle	0.305	0.415	-0.096	Figure 232
	Low	0.226	0.308	0.032	Figure 234
Right hand, Touch cheek	High	0.601	0.880	0.001	Figure 236
	Middle	0.590	0.856	0.009	Figure 238
	Low	0.439	0.636	-0.012	Figure 240
Right hand, Tilt 15 Degree	High	0.333	0.458	-0.116	Figure 242
	Middle	0.319	0.436	-0.074	Figure 244
	Low	0.234	0.317	-0.029	Figure 246

Note: 1.The value with blue color is the maximum SAR Value of each test band.

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Table 20: SAR Values (WCDMA Band V, Body, Open, Distance 15mm)

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 Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.337	0.465	-0.014	Figure 248
	Middle	0.400	0.550	0.132	Figure 250
	Low	0.388	0.530	0.093	Figure 252
Towards Phantom	High	0.357	0.490	0.030	Figure 254
	Middle	0.410	0.561	0.047	Figure 256
	Low	0.405	0.555	0.088	Figure 258
Worst case position of Body with Earphone					
Towards Phantom	Middle	0.411	0.561	0.002	Figure 260
Worst case position of Body with Bluetooth Earphone					
Towards Phantom	Middle	0.426	0.585	0.069	Figure 262

Note: Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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Table 21: SAR Values (WCDMA Band V, Head, Close)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Test Case Of Head		Measurement Result(W/kg)		Power Drift (dB)	
		10 g Average	1 g Average	Power Drift (dB)	
Different Test Position	Channel				
Left hand, Touch cheek	High	0.078	0.110	0.183	Figure 264
	Middle	0.114	0.161	0.101	Figure 266
	Low	0.155	0.220	0.130	Figure 268
Left hand, Tilt 15 Degree	High	0.074	0.101	0.091	Figure 270
	Middle	0.110	0.149	0.061	Figure 272
	Low	0.143	0.192	0.007	Figure 274
Right hand, Touch cheek	High	0.093	0.124	-0.011	Figure 276
	Middle	0.142	0.191	0.138	Figure 278
	Low	0.210	0.281	0.194	Figure 280
Right hand, Tilt 15 Degree	High	0.080	0.108	-0.072	Figure 282
	Middle	0.120	0.162	-0.042	Figure 284
	Low	0.170	0.228	-0.029	Figure 286

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Table 22: SAR Values (WCDMA Band V, Body, Close, Distance 15mm)

Liquid Temperature: 22.5°C					
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Test Case Of Body		Measurement Result (W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Different Test Position	Channel				
Towards Ground	High	0.113	0.179	0.174	Figure 288
	Middle	0.170	0.260	0.034	Figure 290
	Low	0.253	0.388	0.006	Figure 292
Towards Phantom	High	0.037	0.053	-0.008	Figure 294
	Middle	0.065	0.089	0.077	Figure 296
	Low	0.097	0.130	-0.016	Figure 298
Worst case position of Body with Earphone					
Towards Ground	Low	0.278	0.439	0.029	Figure 300
Worst case position of Body with Bluetooth Earphone					
Towards Ground	Low	0.285	0.437	0.033	Figure 302

Note: 1. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

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 is below exposure limits specified in the relevant standards cited in Clause 7.1 of this test report.

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10. MEASUREMENT UNCERTAINTY

No.	a	Type	c	d	e=f(d, k)	f	h=c×f / e	k
	Uncertainty Component		Tol. (±%)	Prob. Dist	Div.	c ₁ (1g)	1g u (± %)	v ₁
1	System repetivity	A	0.5	N	1	1	0.5	9
	Measurement system							
2	Probe Calibration	B	5	N	2	1	2.5	∞
3	Axial isotropy	B	4.7	R	$\sqrt{3}$	(1-cp) _{1/2}	4.3	∞
4	Hemisphere Isotropy	B	9.4	R	$\sqrt{3}$	$\sqrt{C_P}$		∞
5	Boundary Effect	B	0.4	R	$\sqrt{3}$	1	0.23	∞
6	Linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
7	System Detection Limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
8	Readout Electronics	B	1.0	N	1	1	1.0	∞
9	RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞
10	Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
11	Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
12	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
	Test Sample Related							
13	Test Sample Positioning	A	4.9	N	1	1	4.9	N-1
14	Device Holder Uncertainty	A	6.1	N	1	1	6.1	N-1
15	Output Power Variation-SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	∞
	Phantom and Tissue Parameters							
16	Phantom Uncertainty(shape and thickness tolerances)	B	1.0	R	$\sqrt{3}$	1	0.6	∞
17	Liquid Conductivity-deviation from target values	B	5.0	R	$\sqrt{3}$	0.64	1.7	∞
18	Liquid Conductivity-measurement uncertainty	B	5.0	N	1	0.64	1.7	M
19	Liquid Permittivity-deviation from target values	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
20	Liquid Permittivity- measurement uncertainty	B	5.0	N	1	0.6	1.7	M
Combined Standard Uncertainty				RSS			11.25	
Expanded Uncertainty (95 % CONFIDENCE INTERVAL)				K=2			22.5	

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11. MAIN TEST INSTRUMENTS

Table 23: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 15, 2007	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 15, 2007	One year
06	Amplifier	IXA-020	0401	No Calibration Requested	
07	BTS	E5515C	GB46490218	September 15, 2007	One year
08	E-field Probe	ET3DV6	1531	January 29, 2008	One year
09	DAE	DAE4	452	July 21, 2008	One year
10	Validation Kit 835MHz	D835V2	443	December 9, 2007	One year
11	Validation Kit 1900MHz	D1900V2	5d018	March 21, 2008	One year

12. TEST PERIOD

The test is performed from August 27, 2008 to September 2, 2008.

13. TEST LOCATION

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

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

ANNEX A: MEASUREMENT PROCESS

The evaluation was performed with the following procedure:

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

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15 mm x 15 mm. Based on this data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Around this point, a volume of 32 mm x 32 mm x 34 mm was assessed by measuring 7 x 7 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

- a. The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
- b. The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x ~ y and z-directions). The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
- c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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

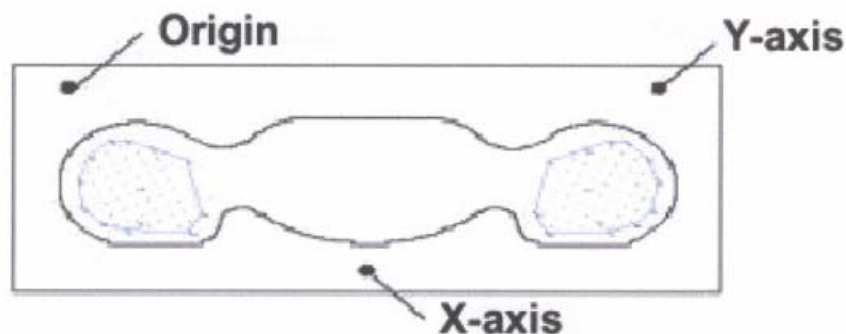
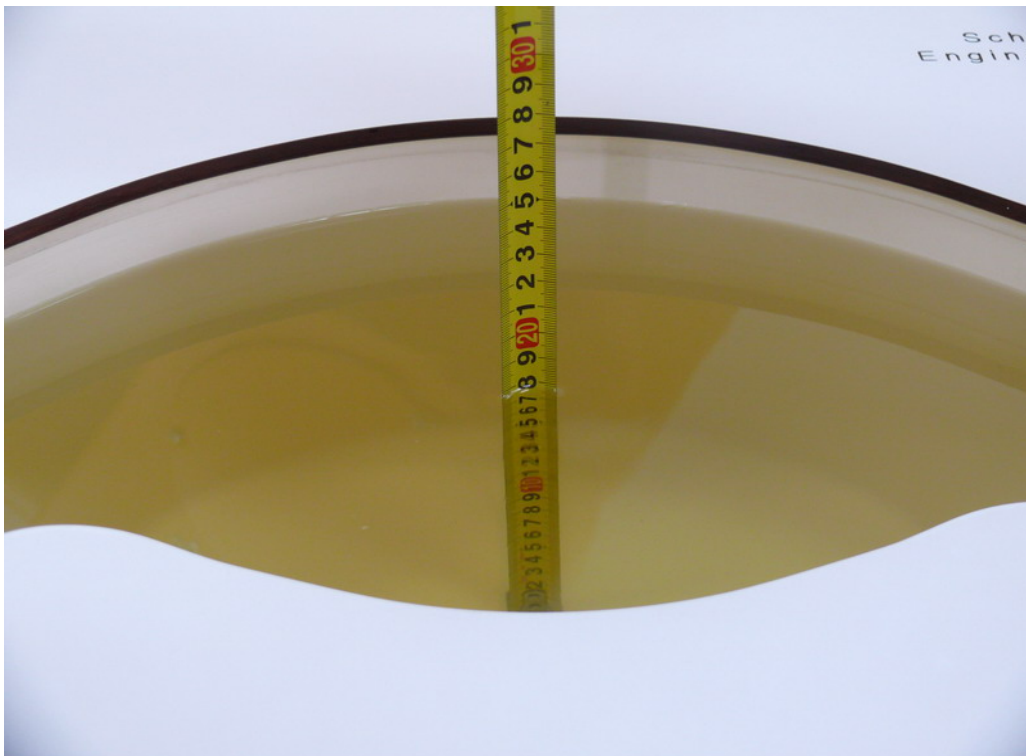


Figure 7 SAR Measurement Points in Area Scan

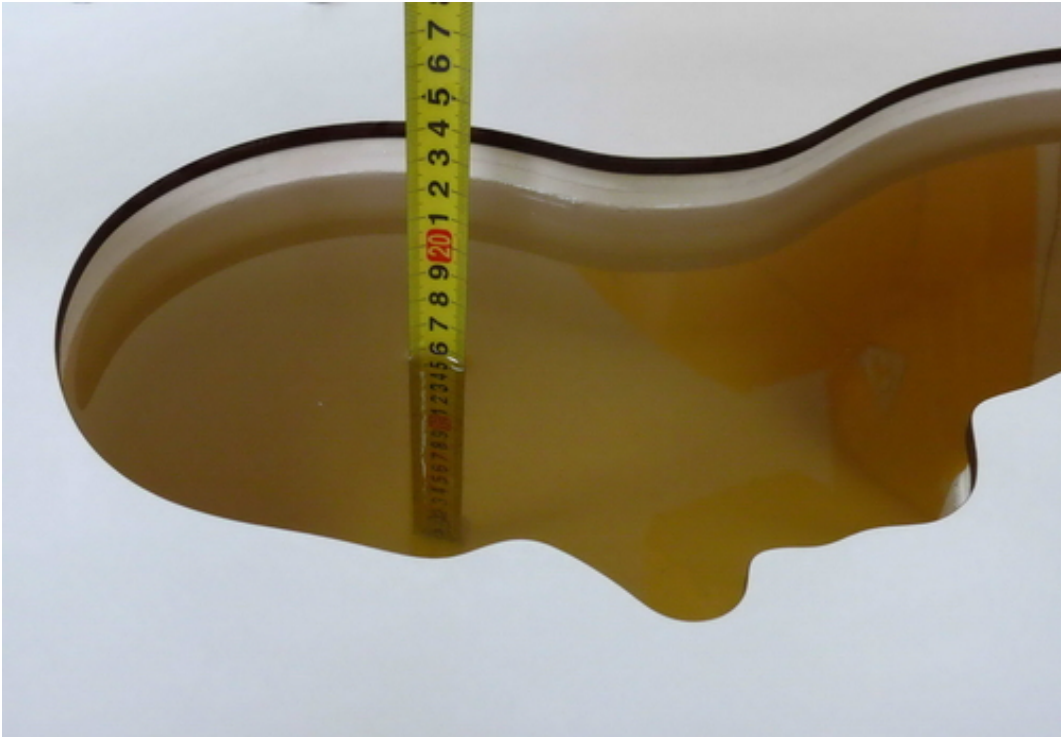
ANNEX B: TEST LAYOUT



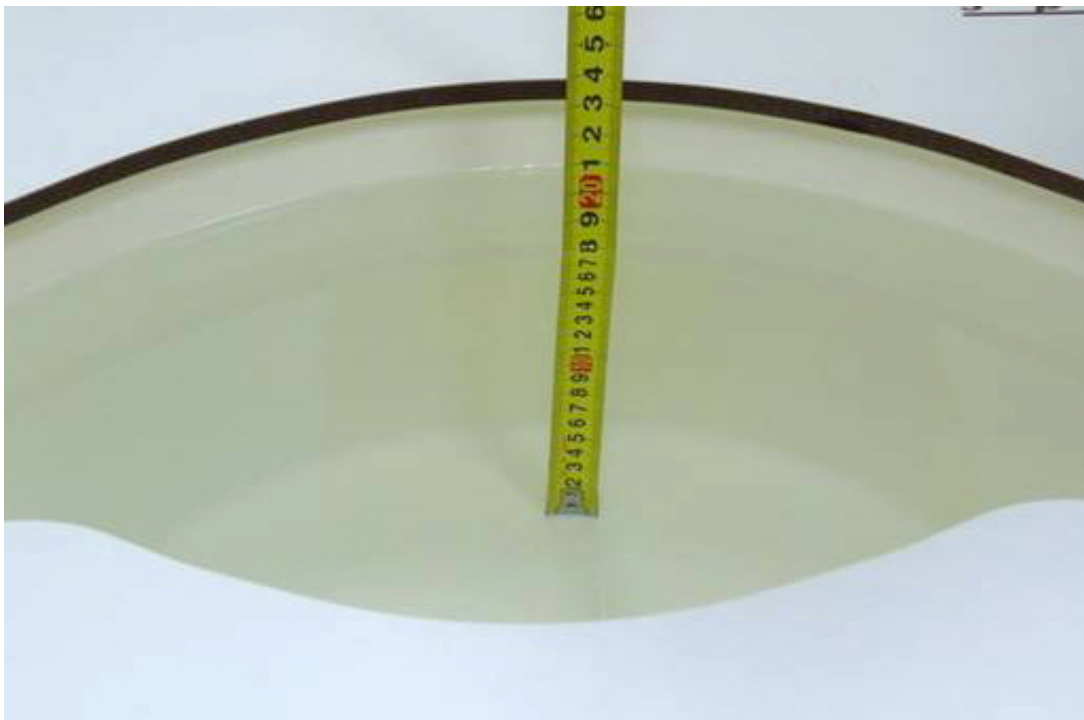
Picture 1: Specific Absorption Rate Test Layout



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 C: GRAPH RESULTS

GSM 850 Left Cheek High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.22 mW/g

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

Reference Value = 14.2 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.768 mW/g

Maximum value of SAR (measured) = 1.25 mW/g

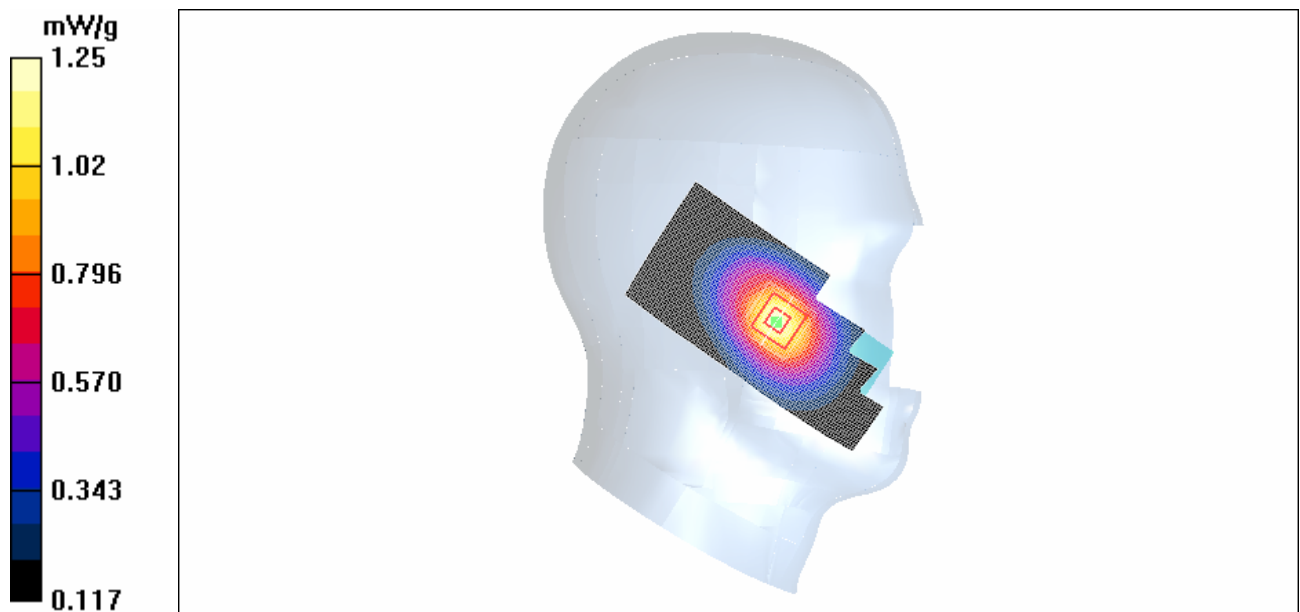


Figure 8 Left Hand Touch Cheek Open GSM 850 Channel 251

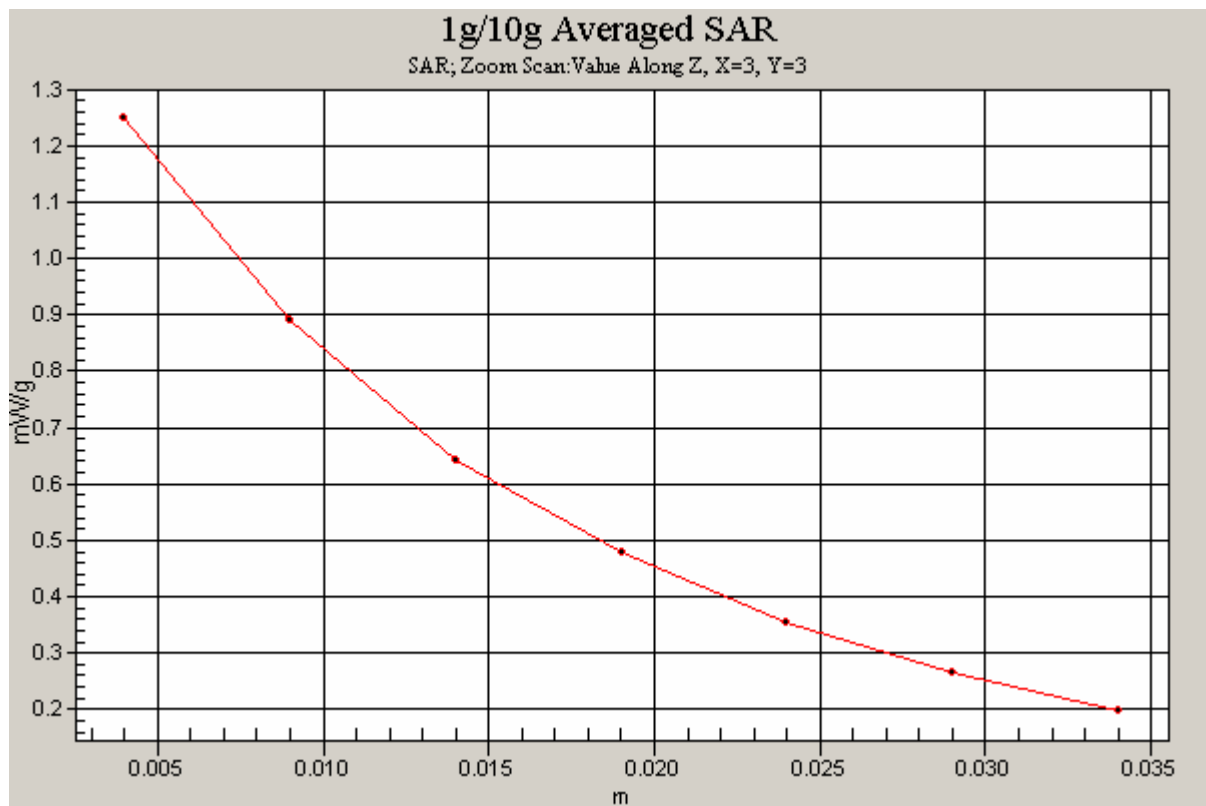


Figure 9 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 850 Channel 251)

GSM 850 Left Cheek Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.19 mW/g

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

Reference Value = 14.2 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.760 mW/g

Maximum value of SAR (measured) = 1.23 mW/g

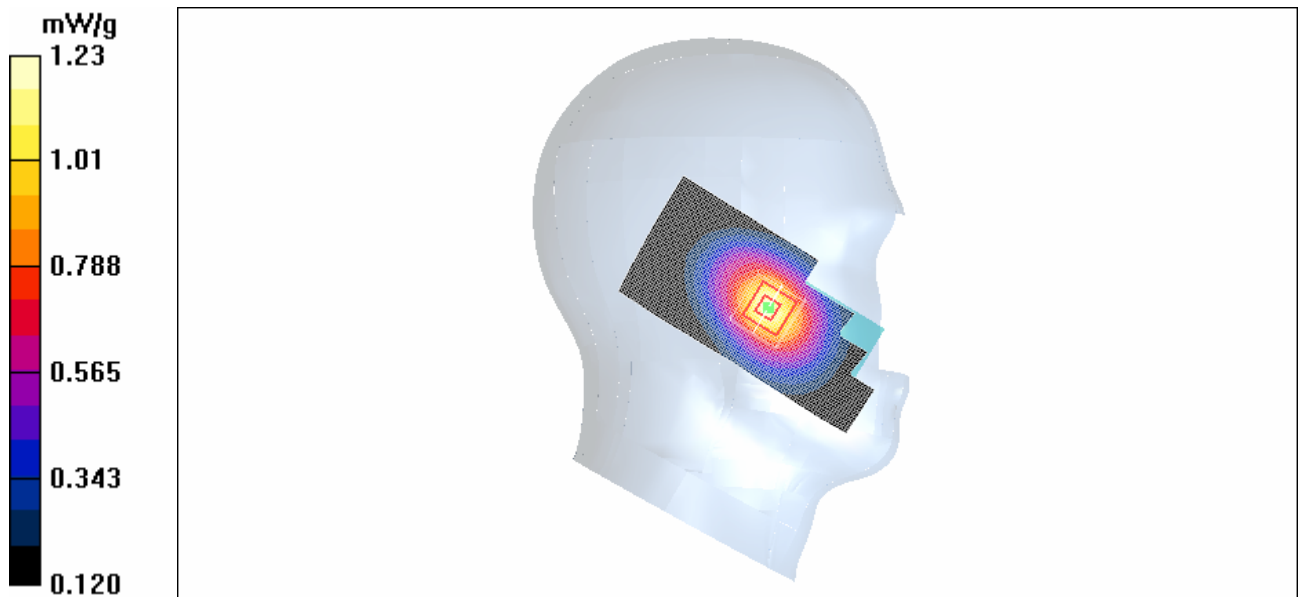


Figure 10 Left Hand Touch Cheek Open GSM 850 Channel 190

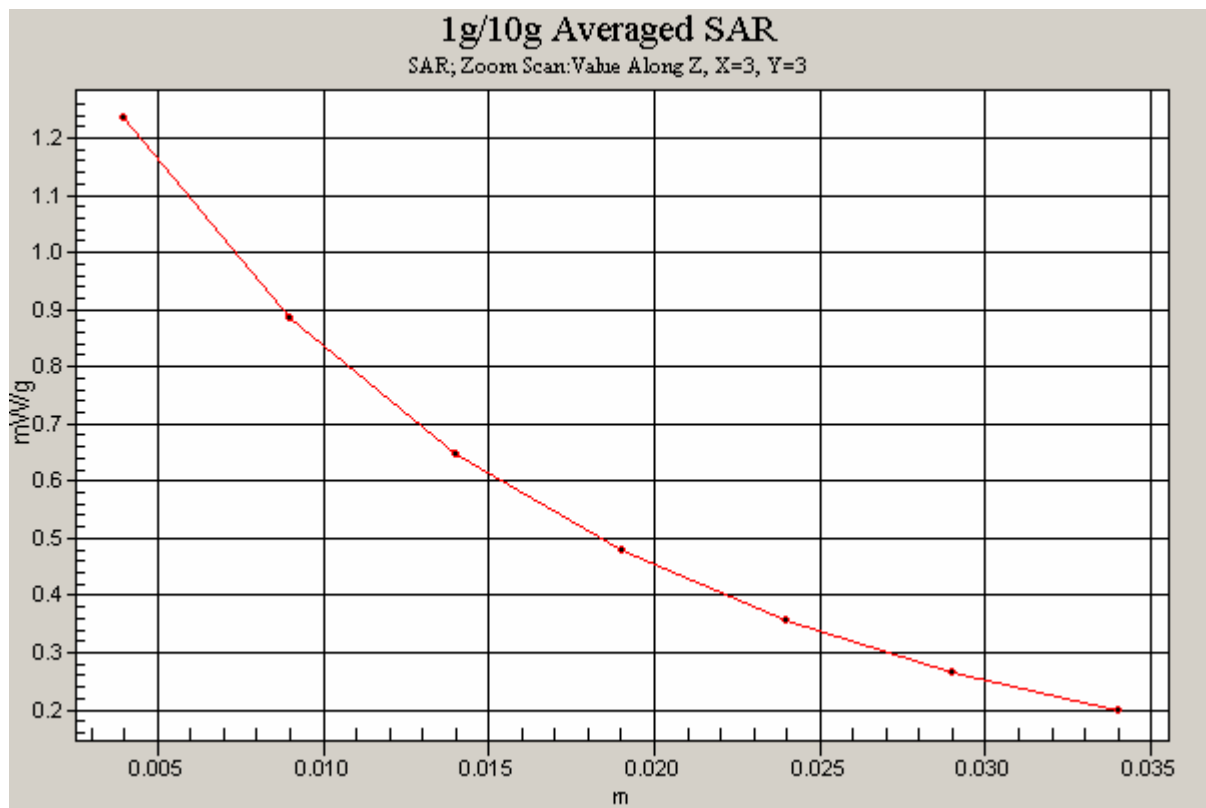


Figure 11 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 850 Channel 190)

GSM 850 Left Cheek Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.807 mW/g

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

Reference Value = 11.8 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.520 mW/g

Maximum value of SAR (measured) = 0.817 mW/g

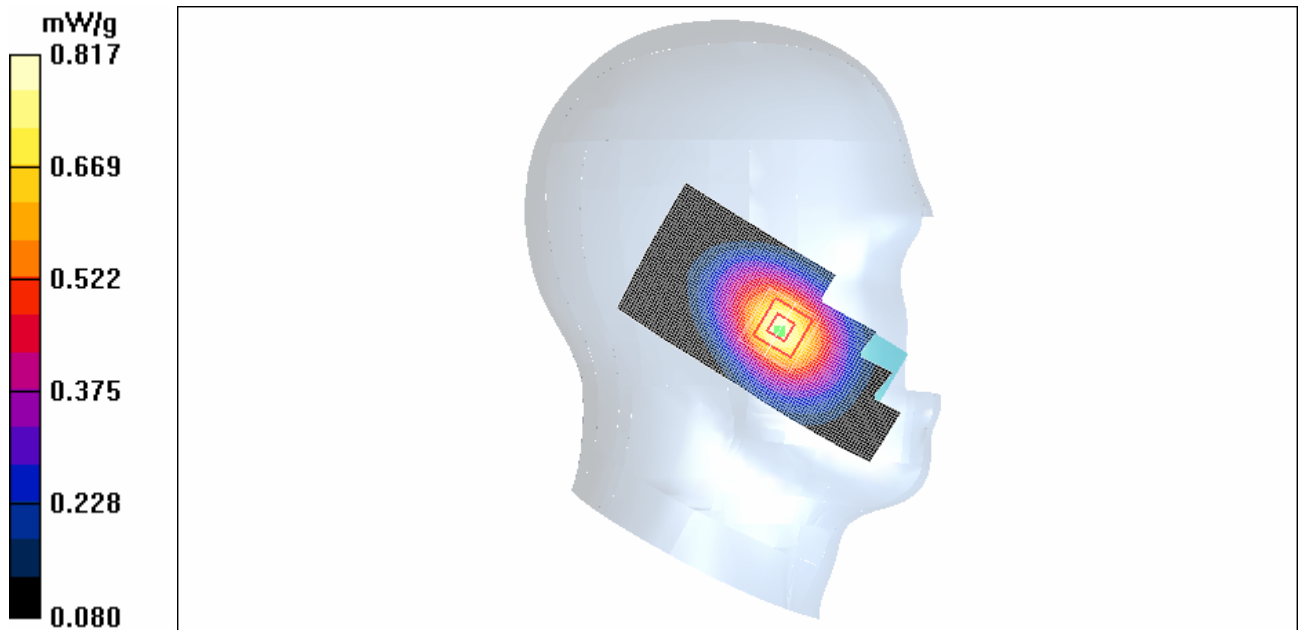


Figure 12 Left Hand Touch Cheek Open GSM 850 Channel 128

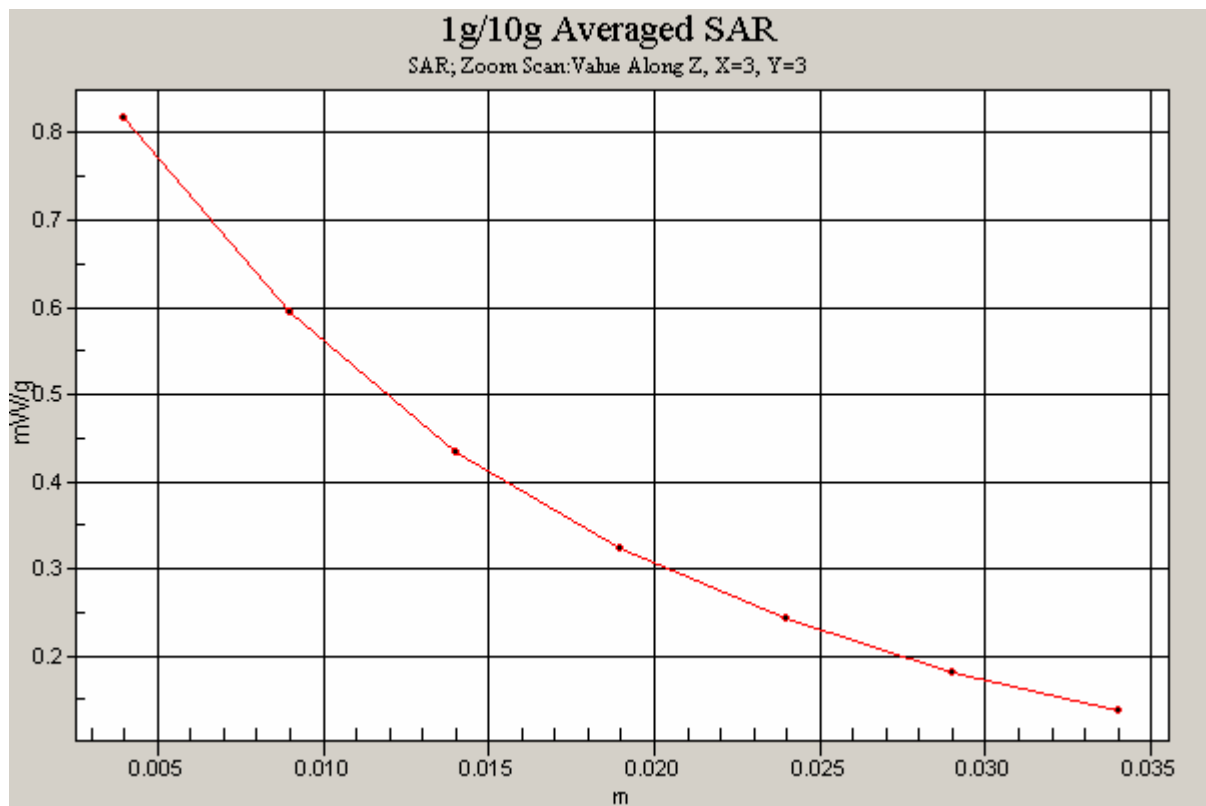


Figure 13 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 850 Channel 128)

GSM 850 Left Tilt High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.608 mW/g

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

Reference Value = 20.7 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.754 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 0.616 mW/g

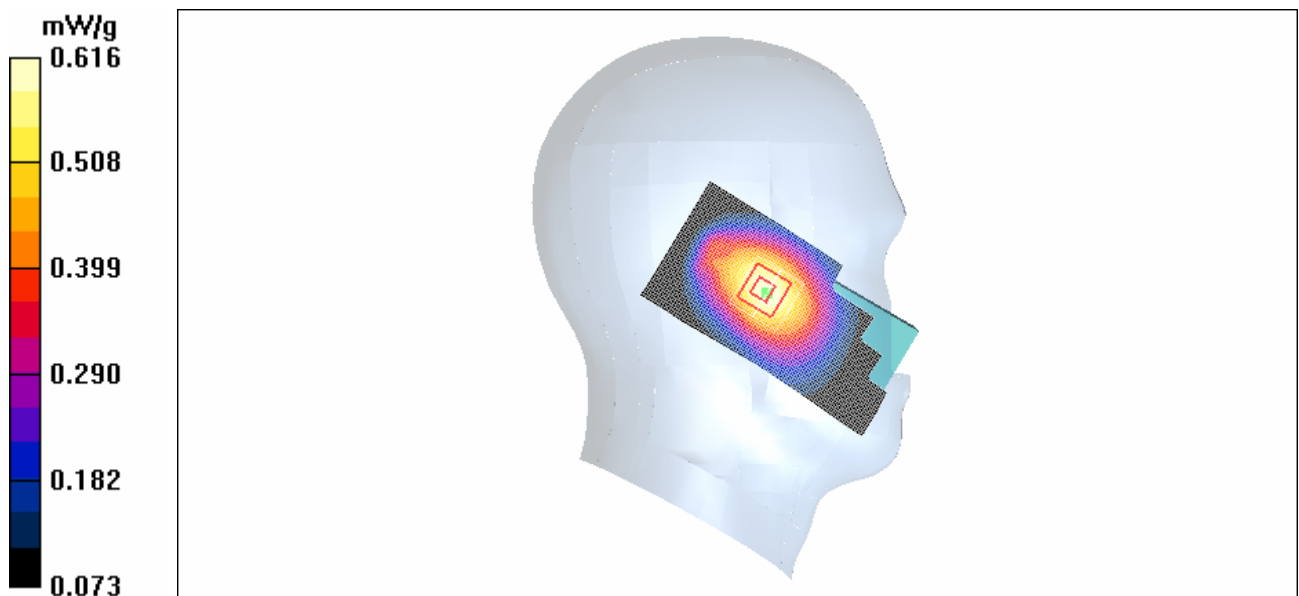


Figure 14 Left Hand Tilt 15° Open GSM 850 Channel 251

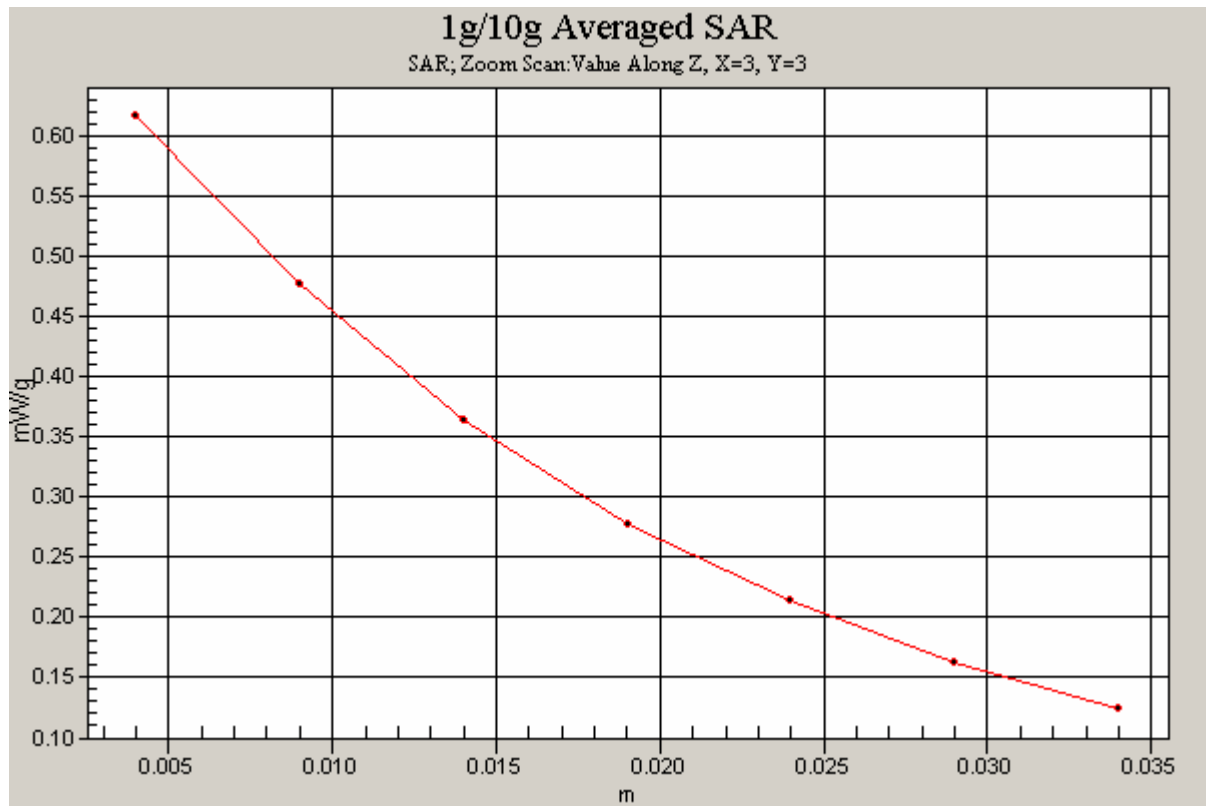


Figure 15 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 850 Channel 251)

GSM 850 Left Tilt Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.540 mW/g

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

Reference Value = 19.8 V/m; Power Drift = 0.107 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.553 mW/g

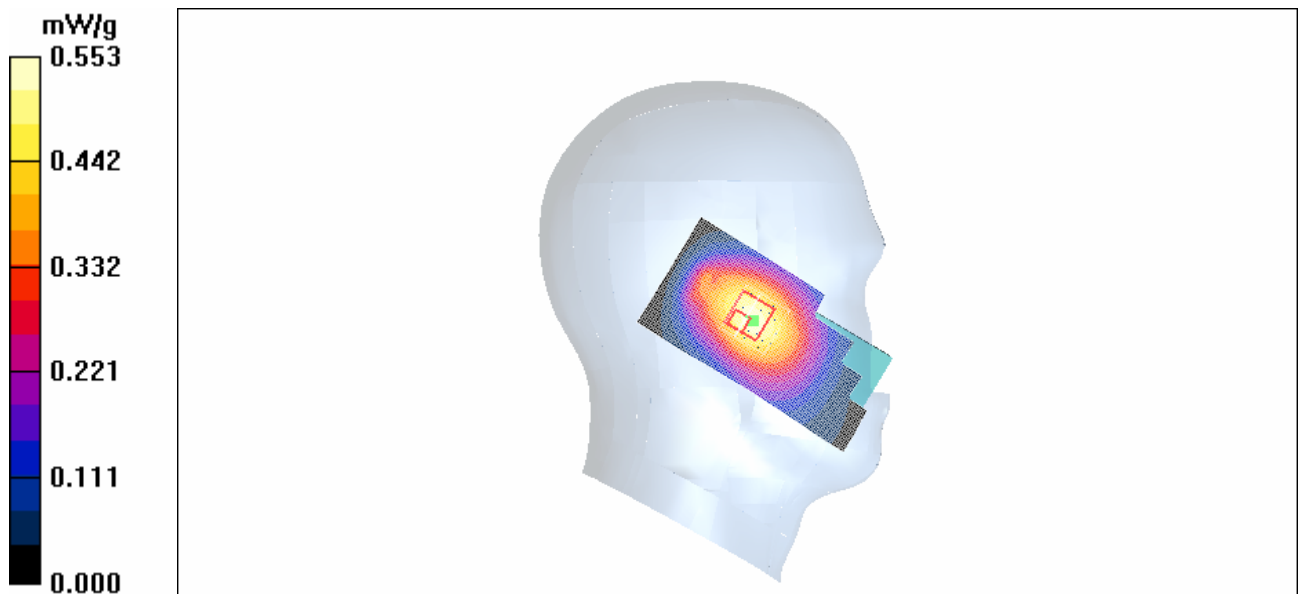


Figure 16 Left Hand Tilt 15° Open GSM 850 Channel 190

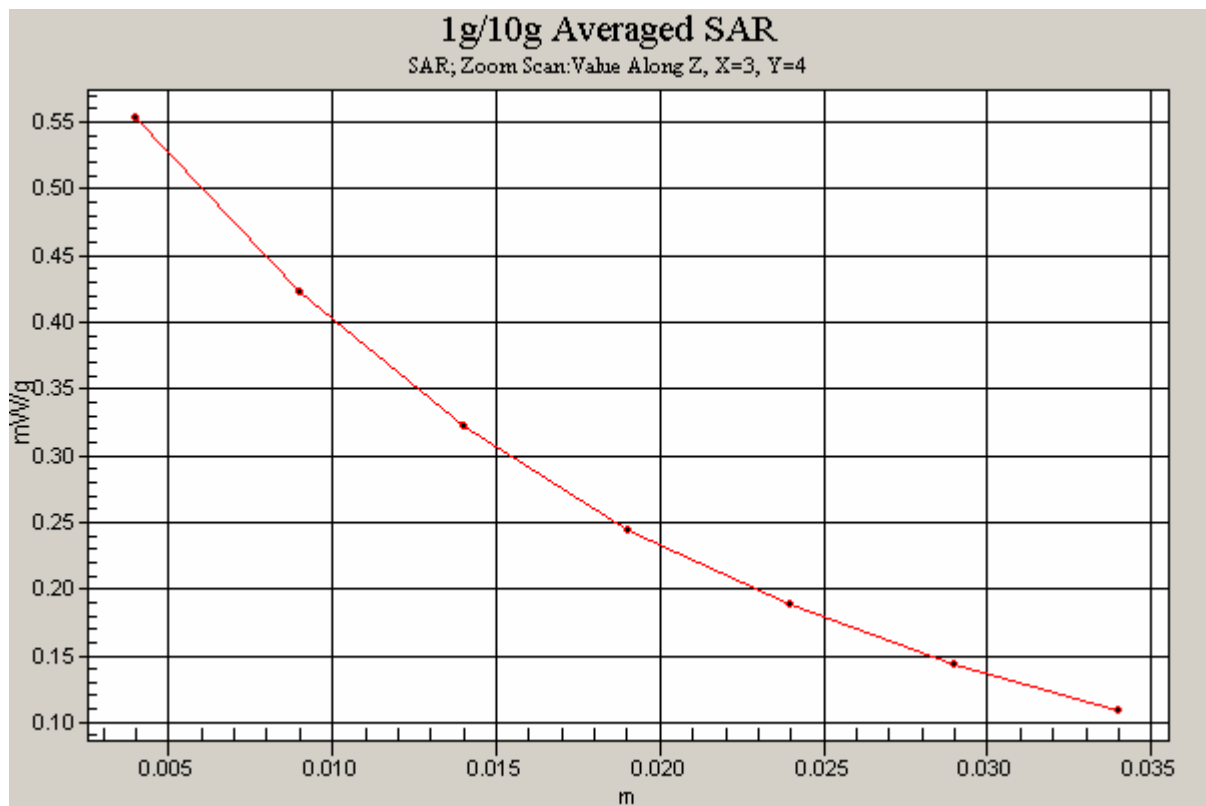


Figure 17 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 850 Channel 190)

GSM 850 Left Tilt Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x111x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.355 mW/g

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

Reference Value = 16.1 V/m; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 0.442 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.253 mW/g

Maximum value of SAR (measured) = 0.366 mW/g

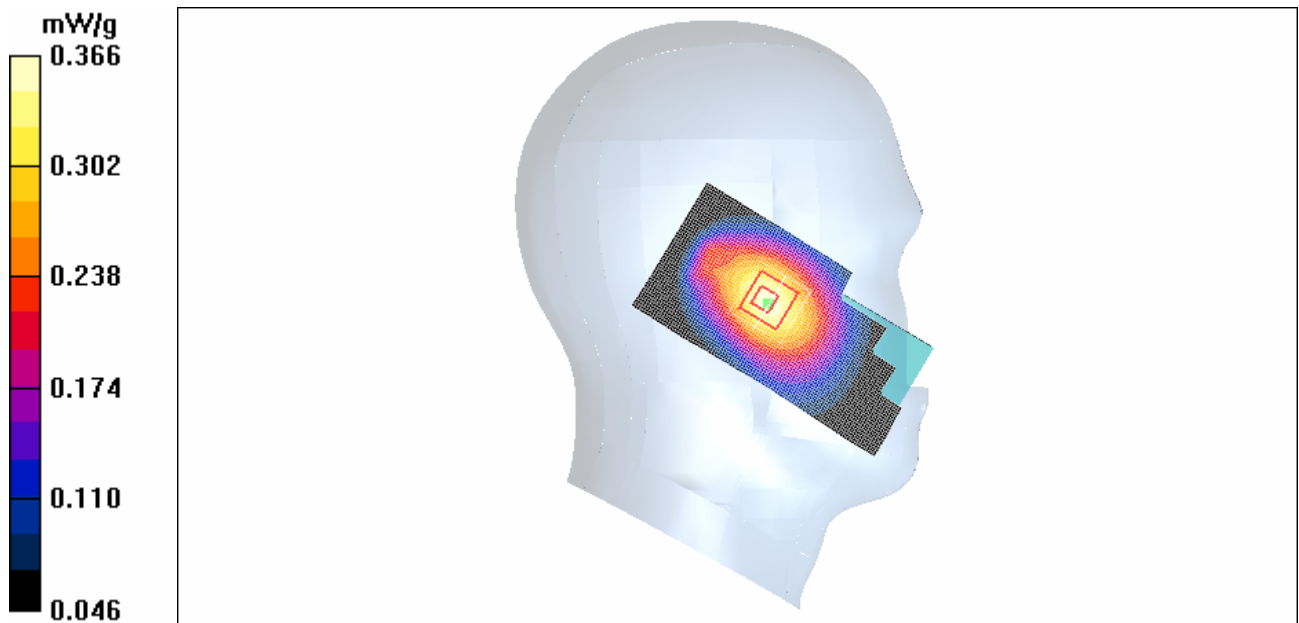


Figure 18 Left Hand Tilt 15° Open GSM 850 Channel 128

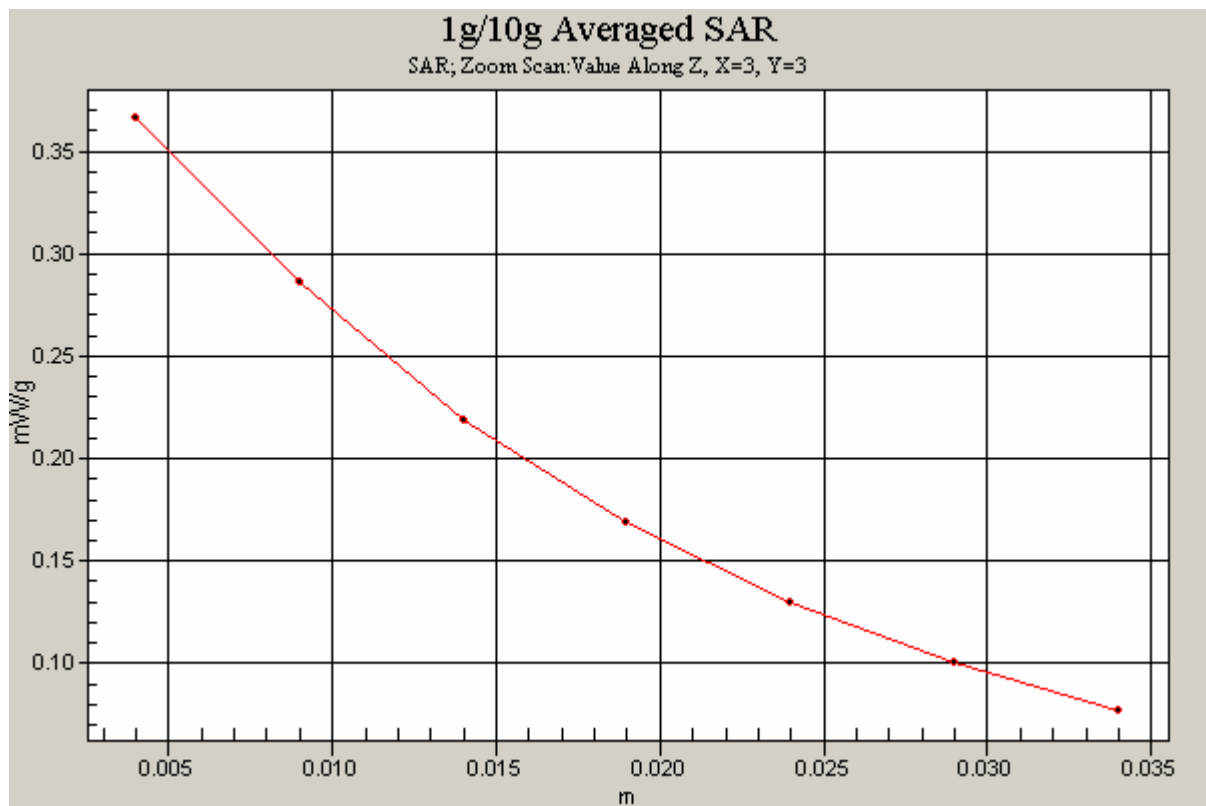


Figure 19 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 850 Channel 128)

GSM 850 Right Cheek High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.11 mW/g

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

Reference Value = 13.0 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.744 mW/g

Maximum value of SAR (measured) = 1.13 mW/g

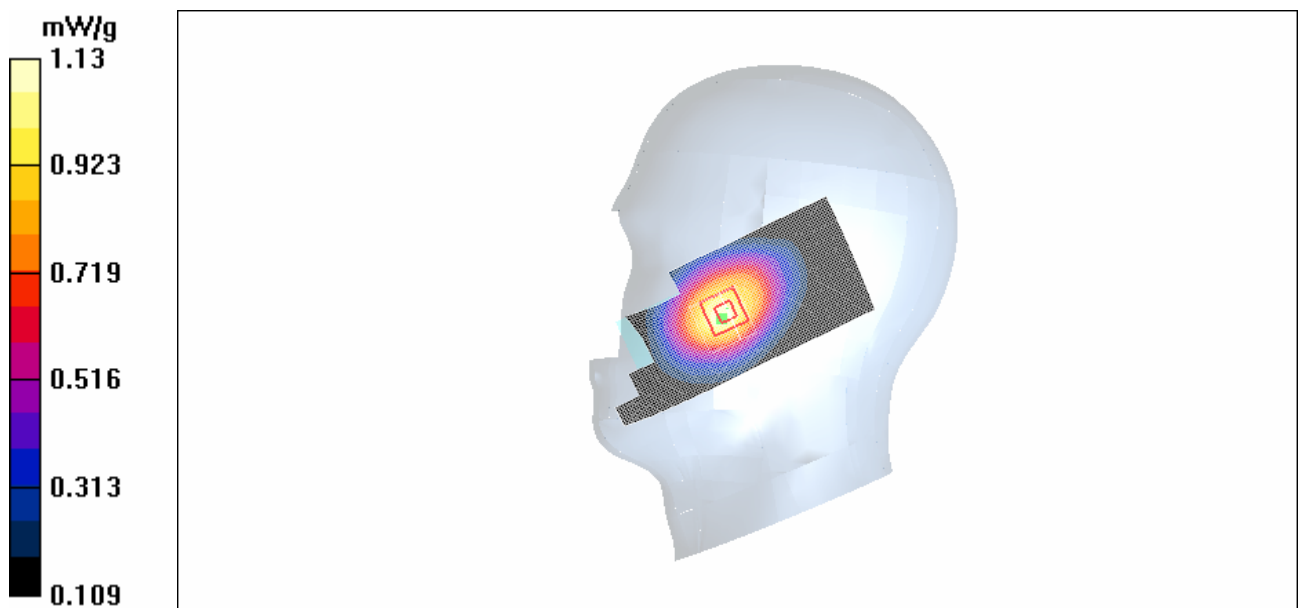


Figure 20 Right Hand Touch Cheek Open GSM 850 Channel 251

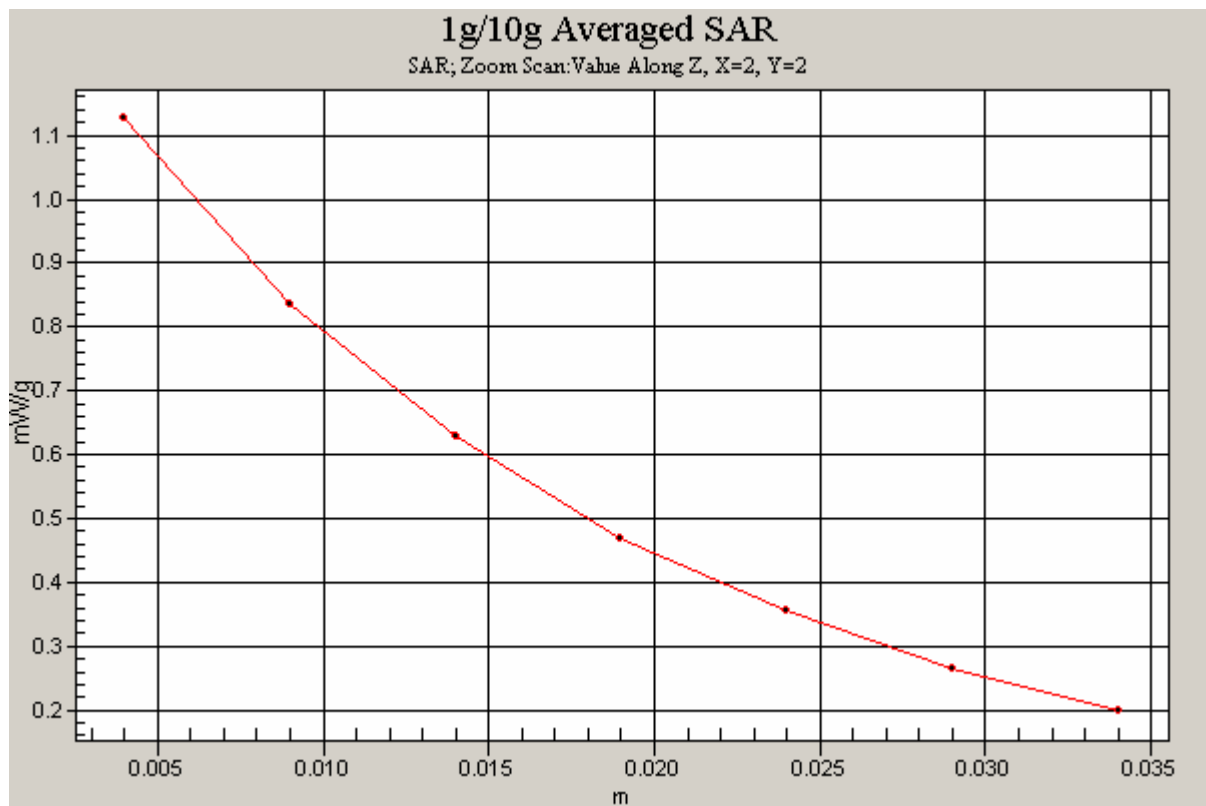


Figure 21 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 850 Channel 251)

GSM 850 Right Cheek Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.11 mW/g

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

Reference Value = 13.2 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.737 mW/g

Maximum value of SAR (measured) = 1.11 mW/g

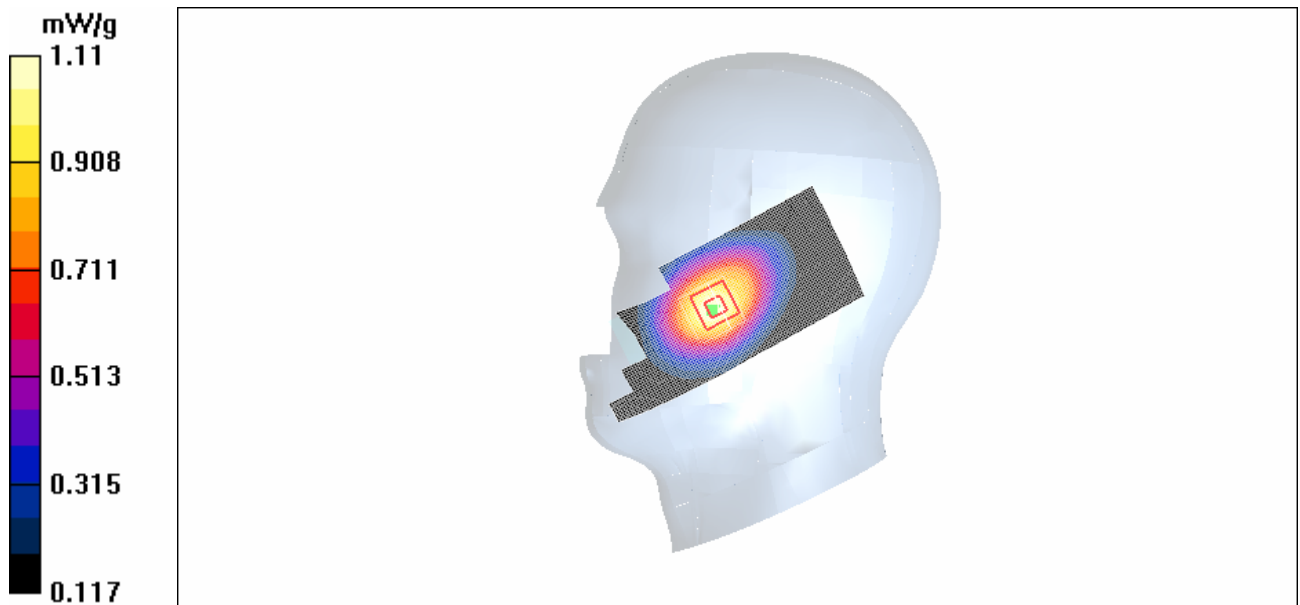


Figure 22 Right Hand Touch Cheek Open GSM 850 Channel 190

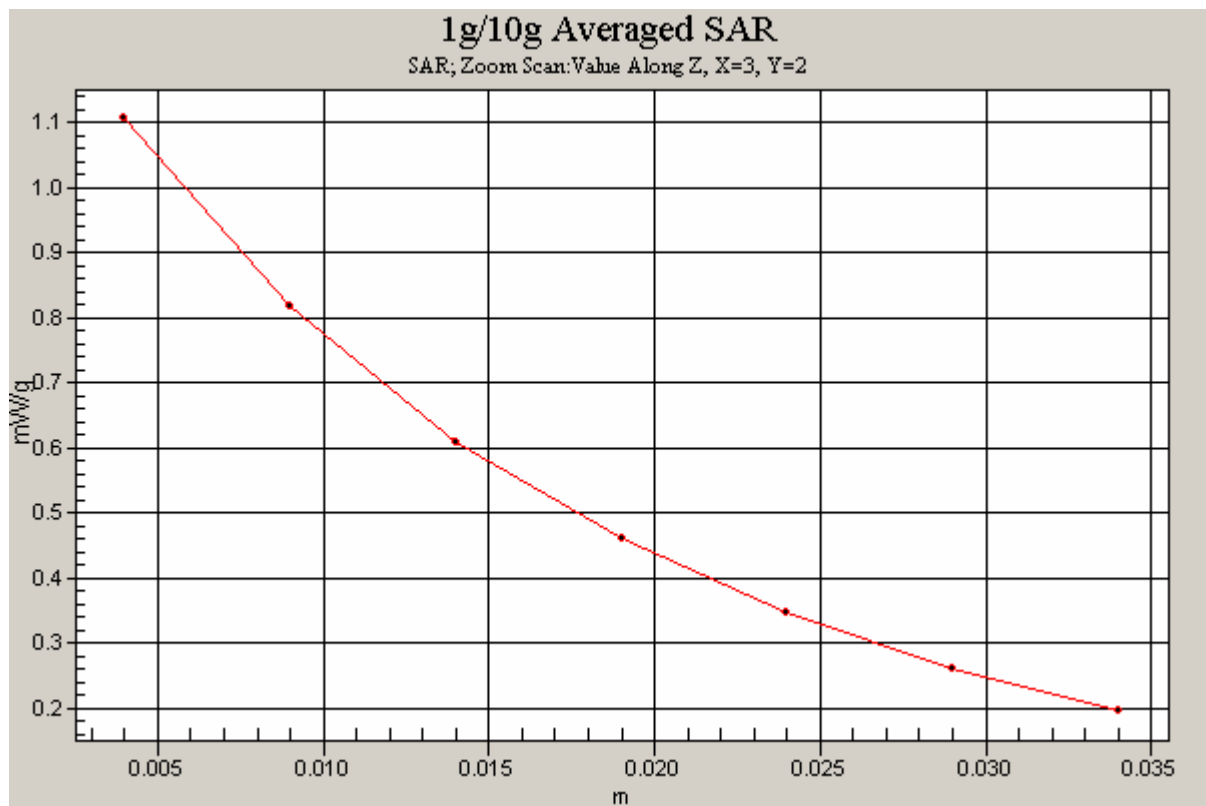


Figure 23 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 850 Channel 190)

GSM 850 Right Cheek Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.780 mW/g

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

Reference Value = 11.3 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.982 W/kg

SAR(1 g) = 0.741 mW/g; SAR(10 g) = 0.529 mW/g

Maximum value of SAR (measured) = 0.787 mW/g

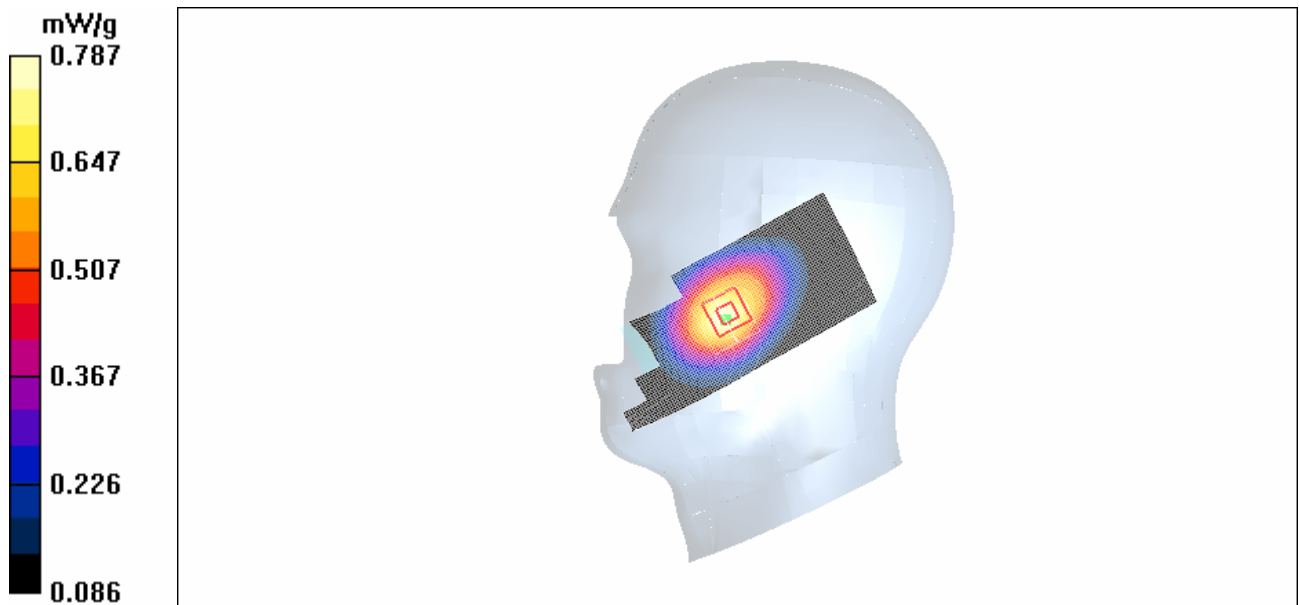


Figure 24 Right Hand Touch Cheek Open GSM 850 Channel 128

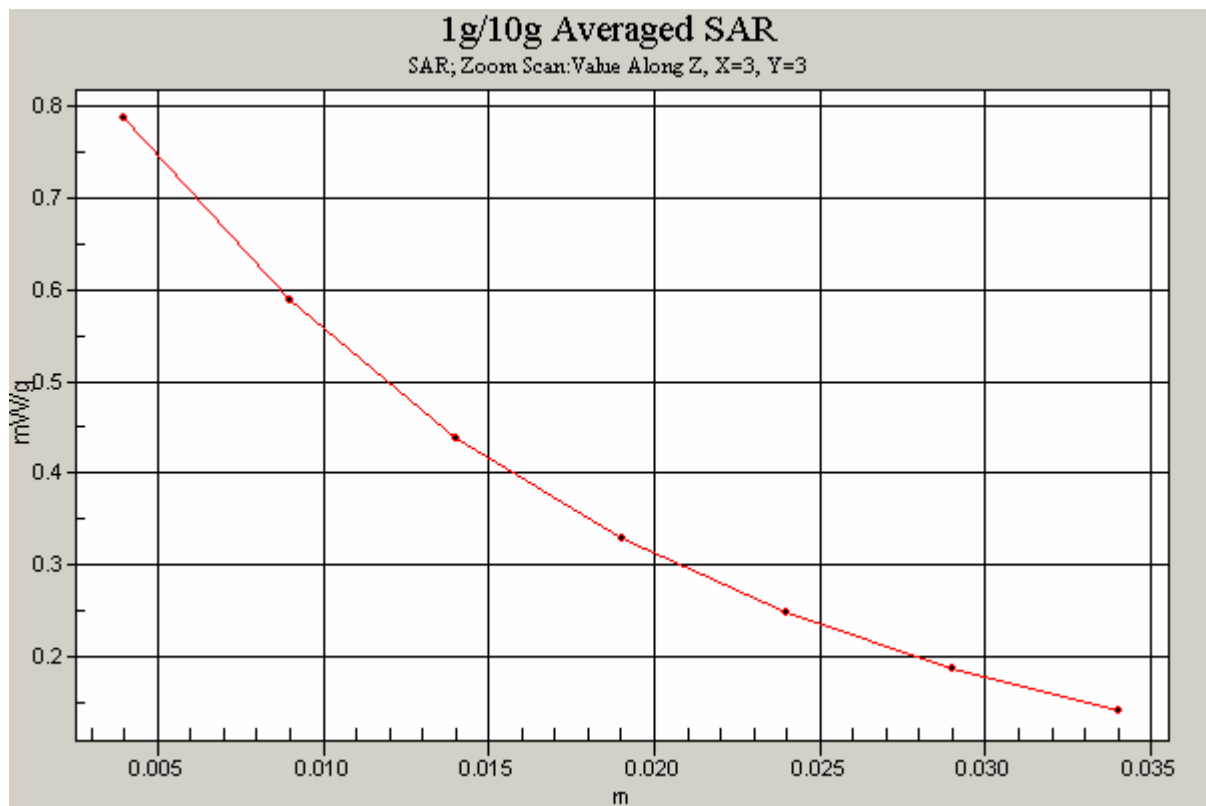


Figure 25 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 850 Channel 128)

GSM 850 Right Tilt High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.652 mW/g

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

Reference Value = 20.6 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.785 W/kg

SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.441 mW/g

Maximum value of SAR (measured) = 0.651 mW/g

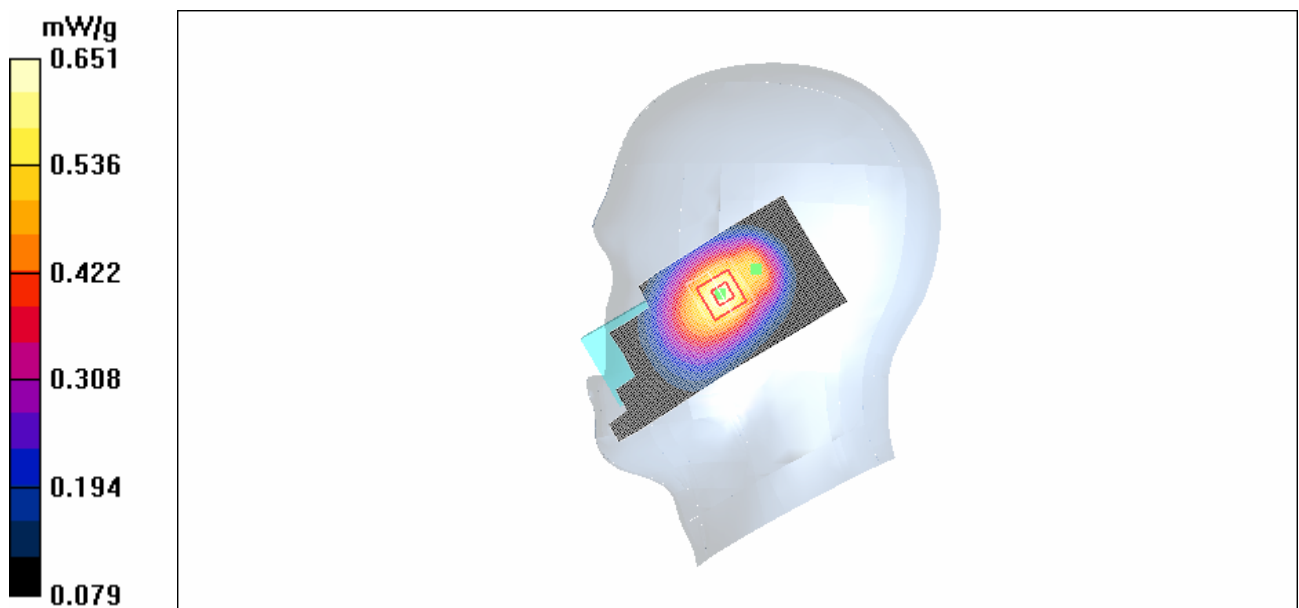


Figure 26 Right Hand Tilt 15° Open GSM 850 Channel 251

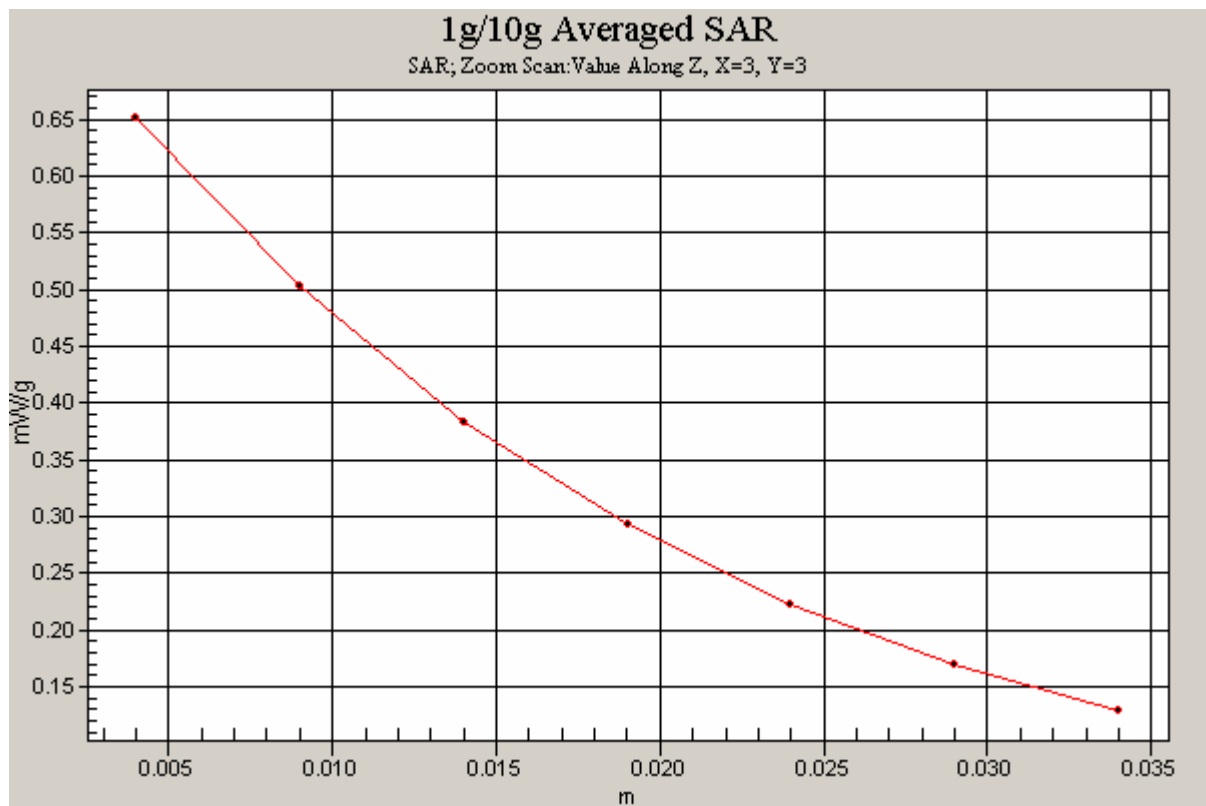


Figure 27 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 850 Channel 251)

GSM 850 Right Tilt Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.596 mW/g

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

Reference Value = 20.0 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.716 W/kg

SAR(1 g) = 0.559 mW/g; SAR(10 g) = 0.408 mW/g

Maximum value of SAR (measured) = 0.593 mW/g

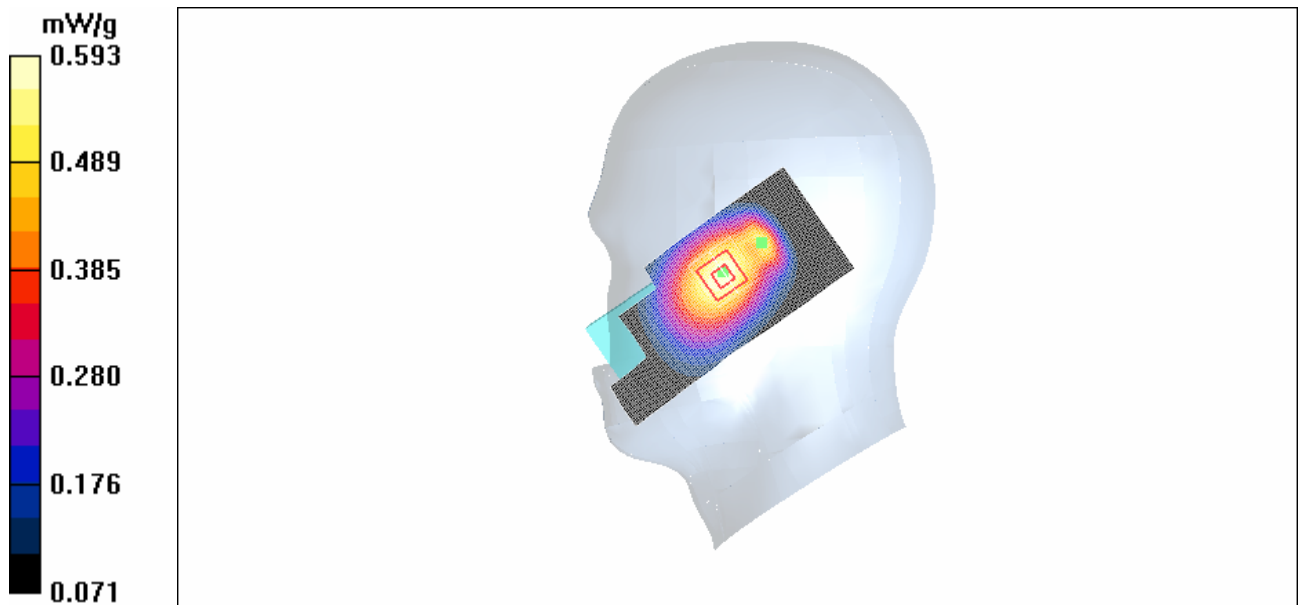


Figure 28 Right Hand Tilt 15° Open GSM 850 Channel 190

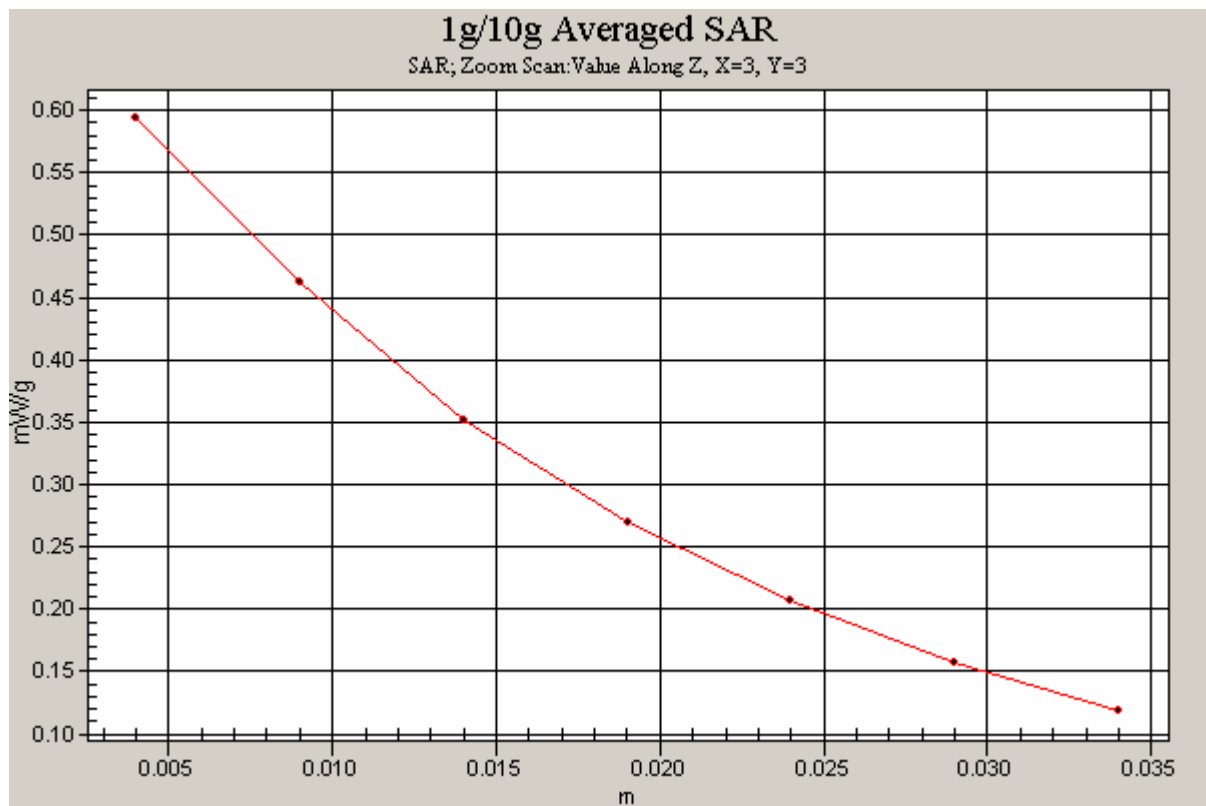


Figure 29 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 850 Channel 190)

GSM 850 Right Tilt Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.394 mW/g

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

Reference Value = 16.4 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.272 mW/g

Maximum value of SAR (measured) = 0.392 mW/g

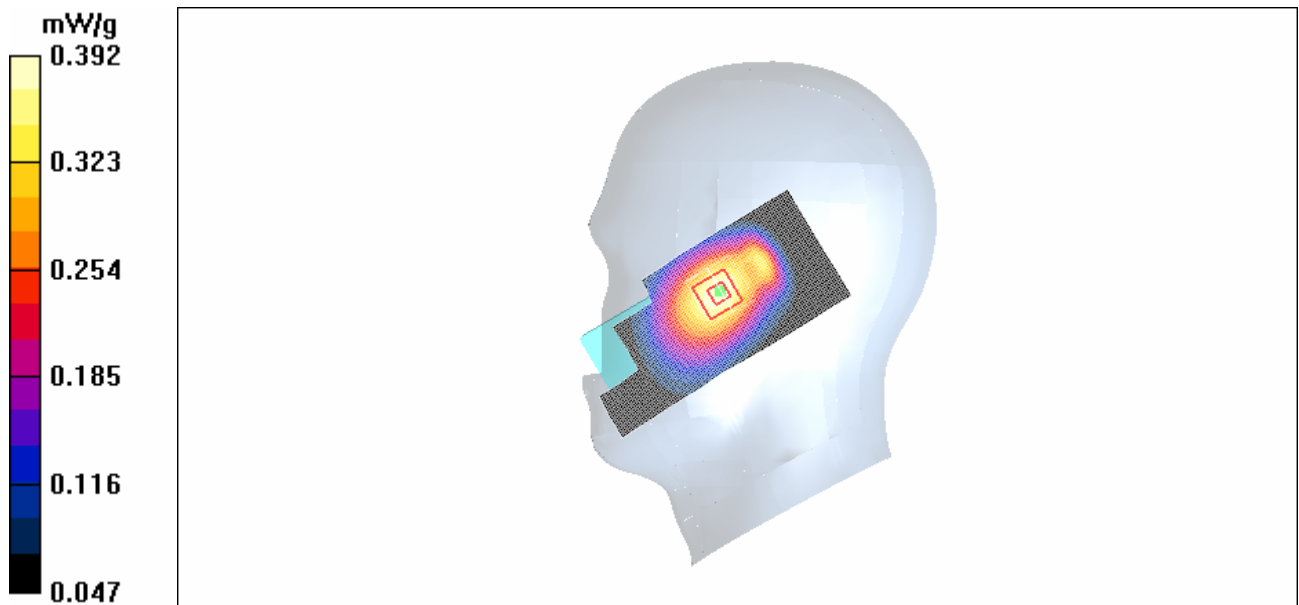


Figure 30 Right Hand Tilt 15° Open GSM 850 Channel 128

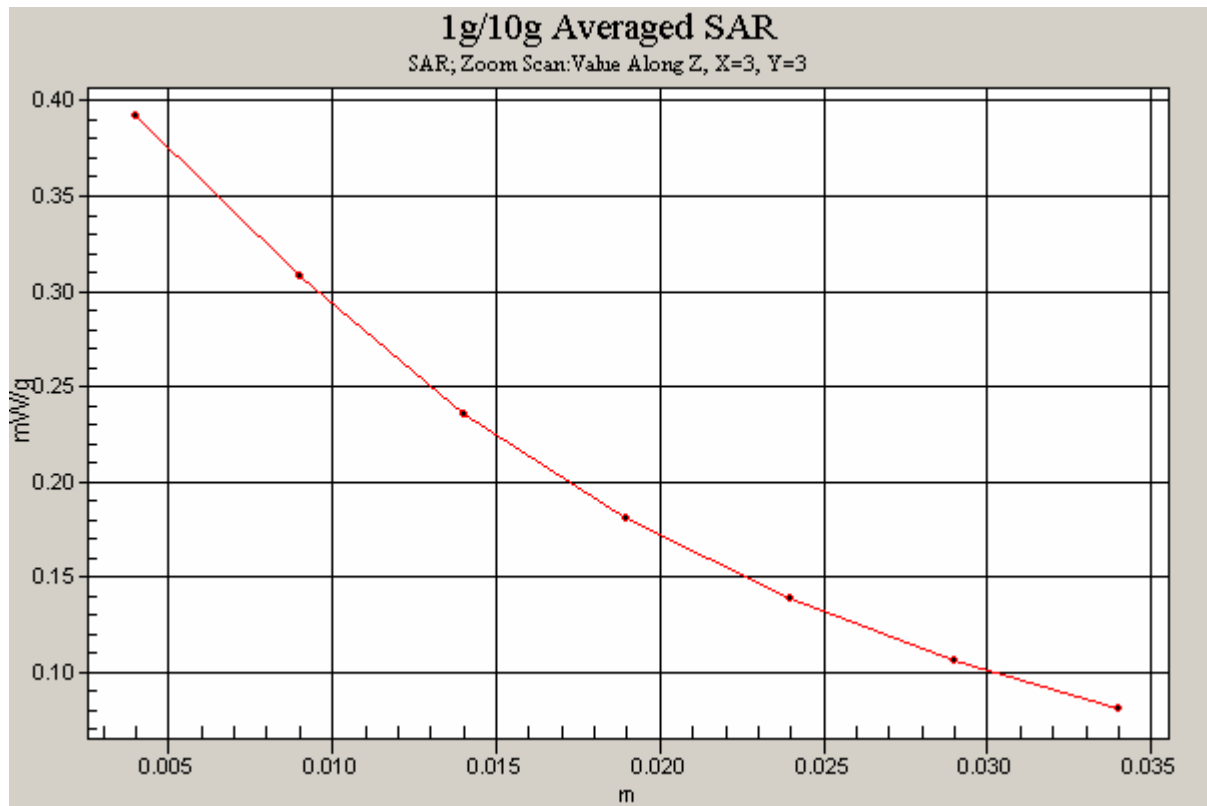


Figure 31 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 850 Channel 128)

GSM 850 Towards Ground High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.780 mW/g

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

Reference Value = 12.1 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 0.946 W/kg

SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.527 mW/g

Maximum value of SAR (measured) = 0.785 mW/g

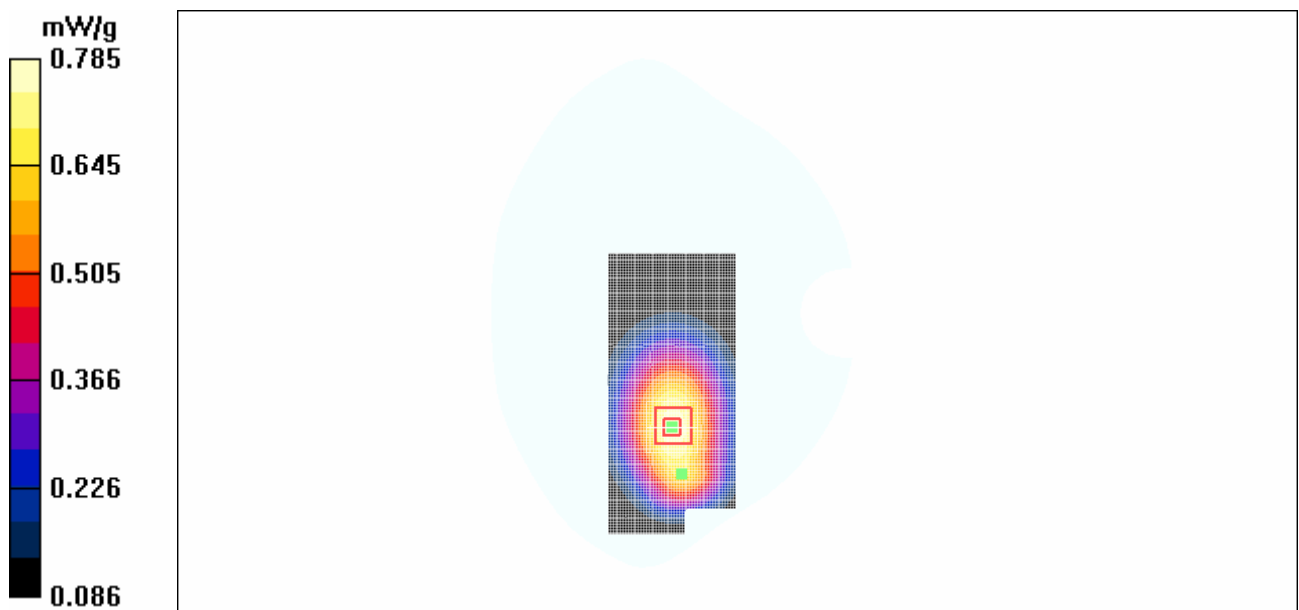


Figure 32 Body, Towards Ground, Open GSM 850 Channel 251

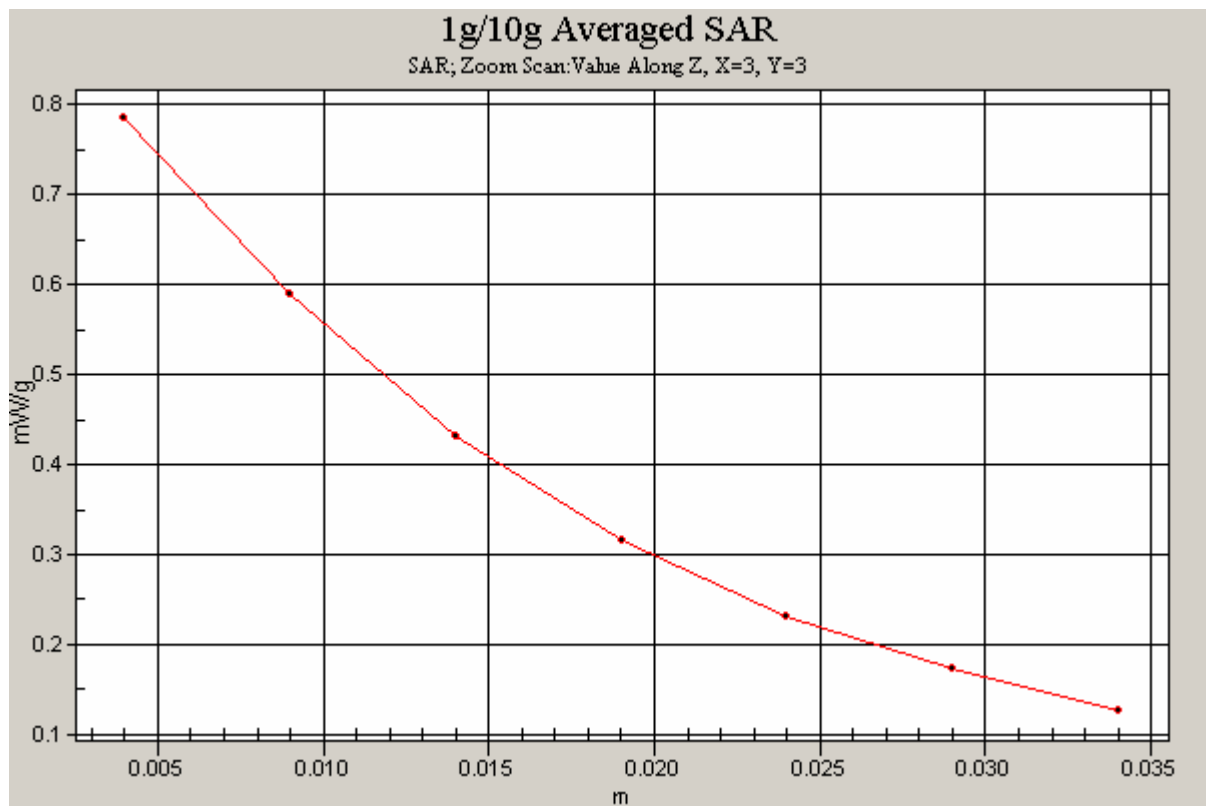


Figure 33 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 Channel 251)

GSM 850 Towards Ground Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.834 mW/g

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

Reference Value = 12.4 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.788 mW/g; SAR(10 g) = 0.567 mW/g

Maximum value of SAR (measured) = 0.840 mW/g

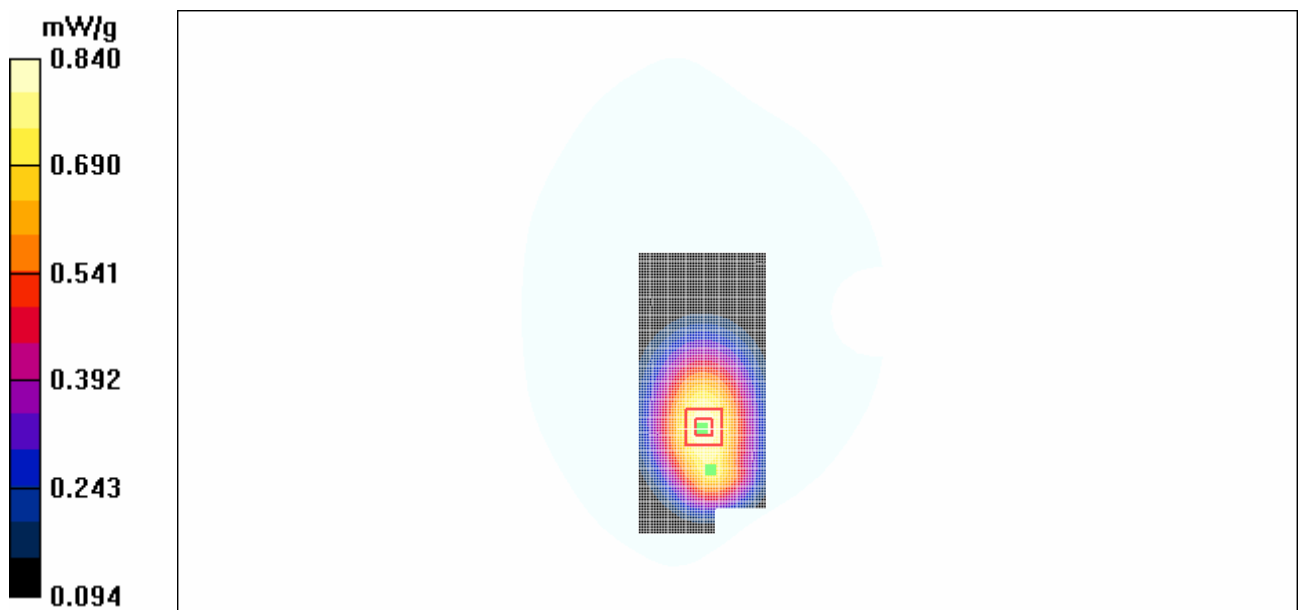


Figure 34 Body, Towards Ground, Open GSM 850 Channel 190

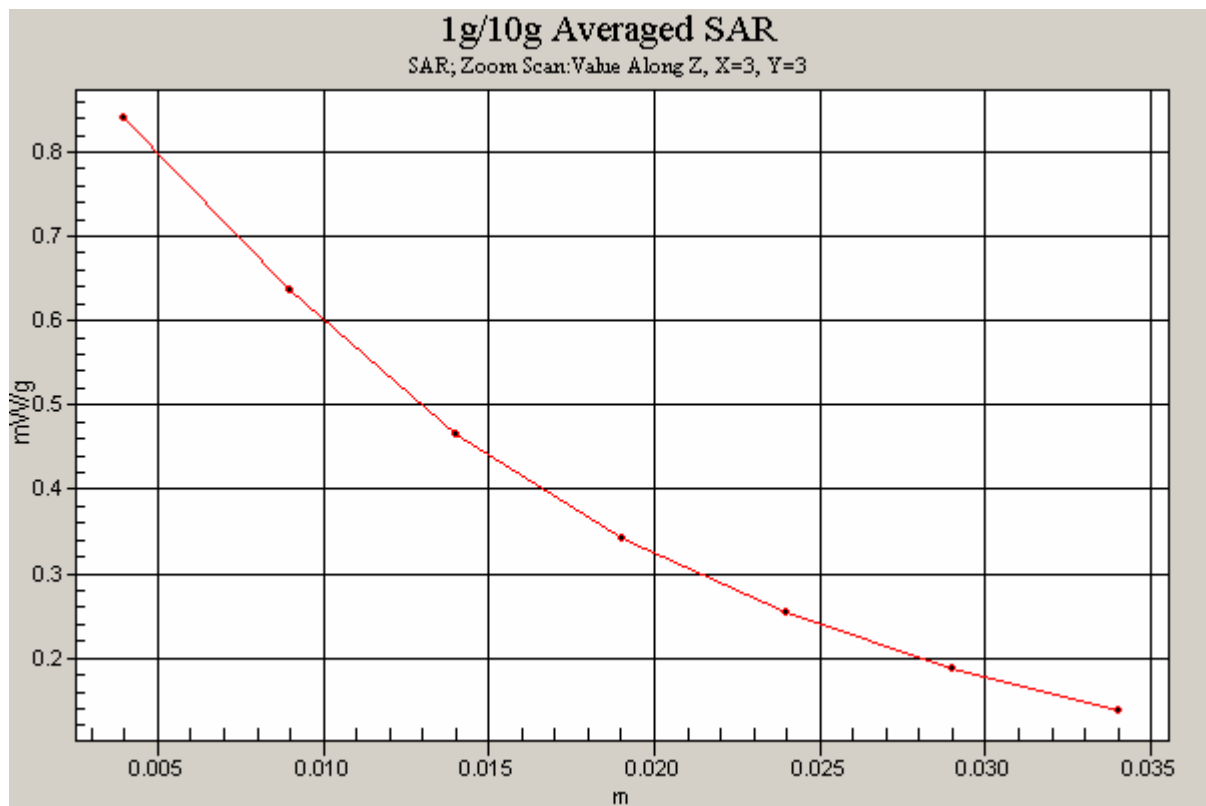


Figure 35 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 Channel 190)

GSM 850 Towards Ground Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.796 mW/g

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

Reference Value = 11.4 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.753 mW/g; SAR(10 g) = 0.542 mW/g

Maximum value of SAR (measured) = 0.797 mW/g

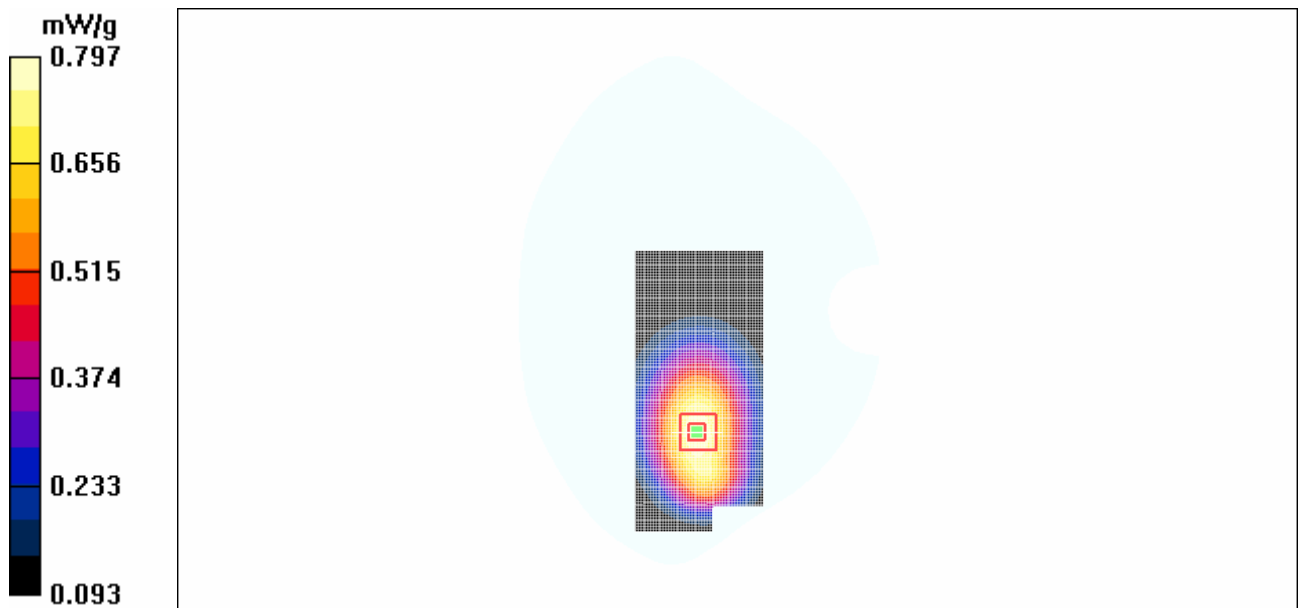


Figure 36 Body, Towards Ground, Open GSM 850 Channel 128

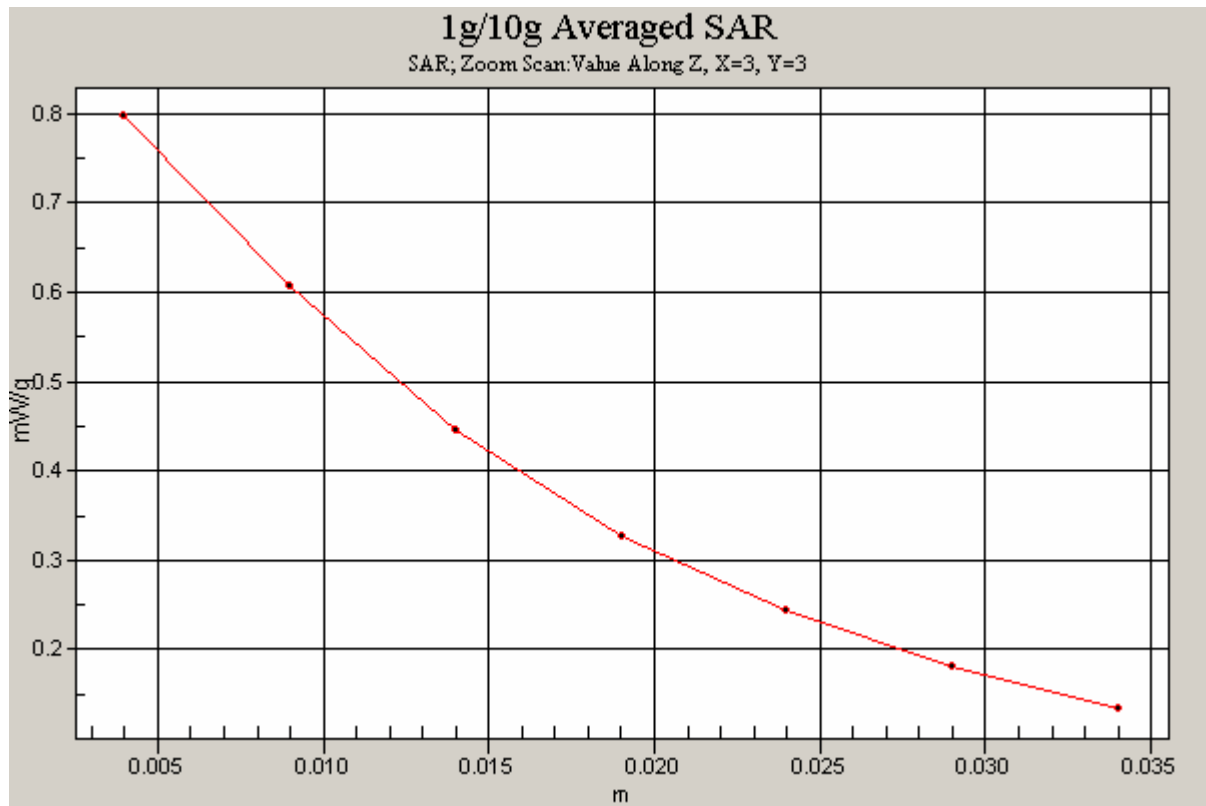


Figure 37 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 Channel 128)

GSM 850 Towards Phantom High Open

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.734 mW/g

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

Reference Value = 12.4 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.891 W/kg

SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.502 mW/g

Maximum value of SAR (measured) = 0.741 mW/g

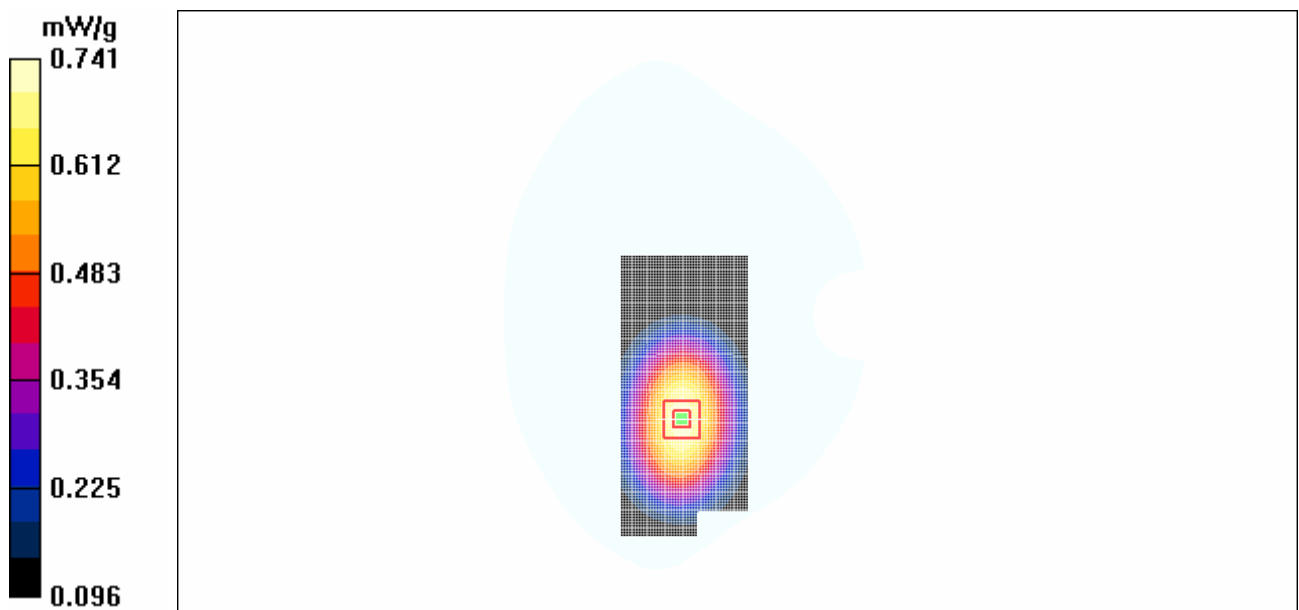


Figure 38 Body, Towards Phantom, Open GSM 850 Channel 251

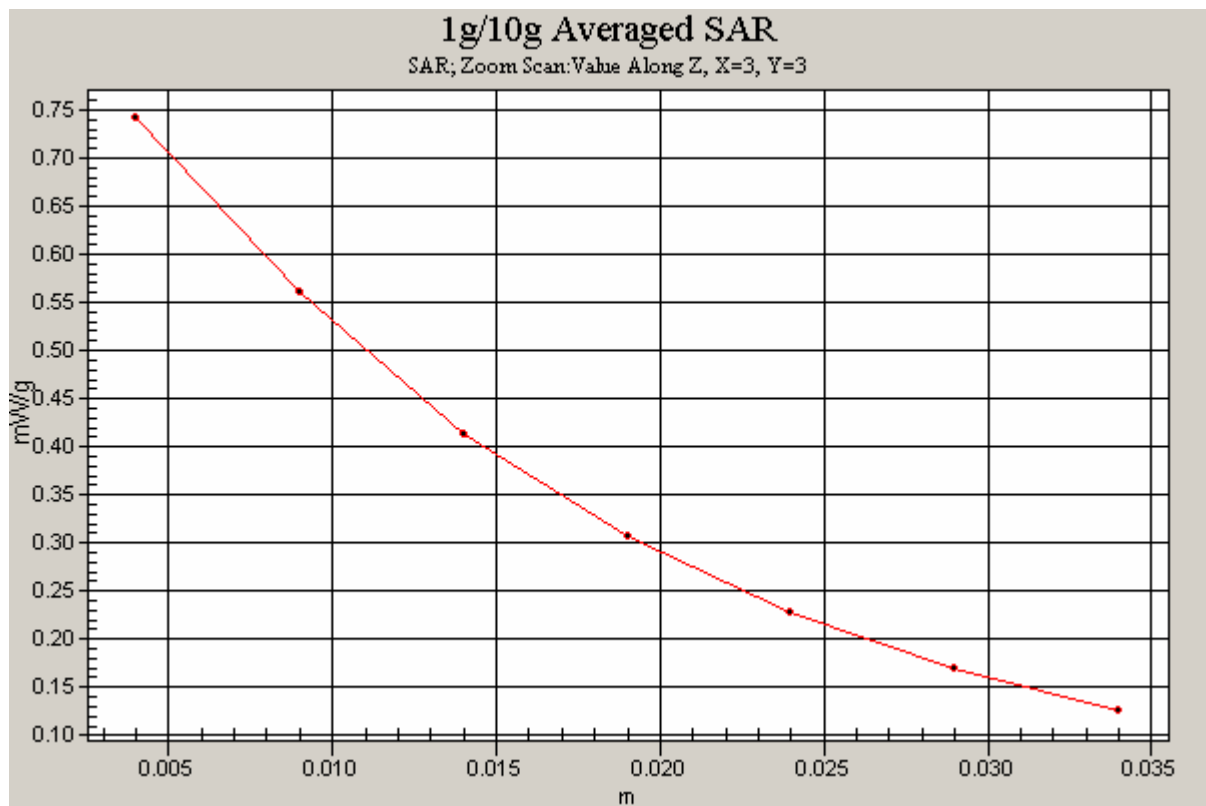


Figure 39 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 Channel 251)

GSM 850 Towards Phantom Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.795 mW/g

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

Reference Value = 12.8 V/m; Power Drift = -0.144 dB

Peak SAR (extrapolated) = 0.938 W/kg

SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.536 mW/g

Maximum value of SAR (measured) = 0.782 mW/g

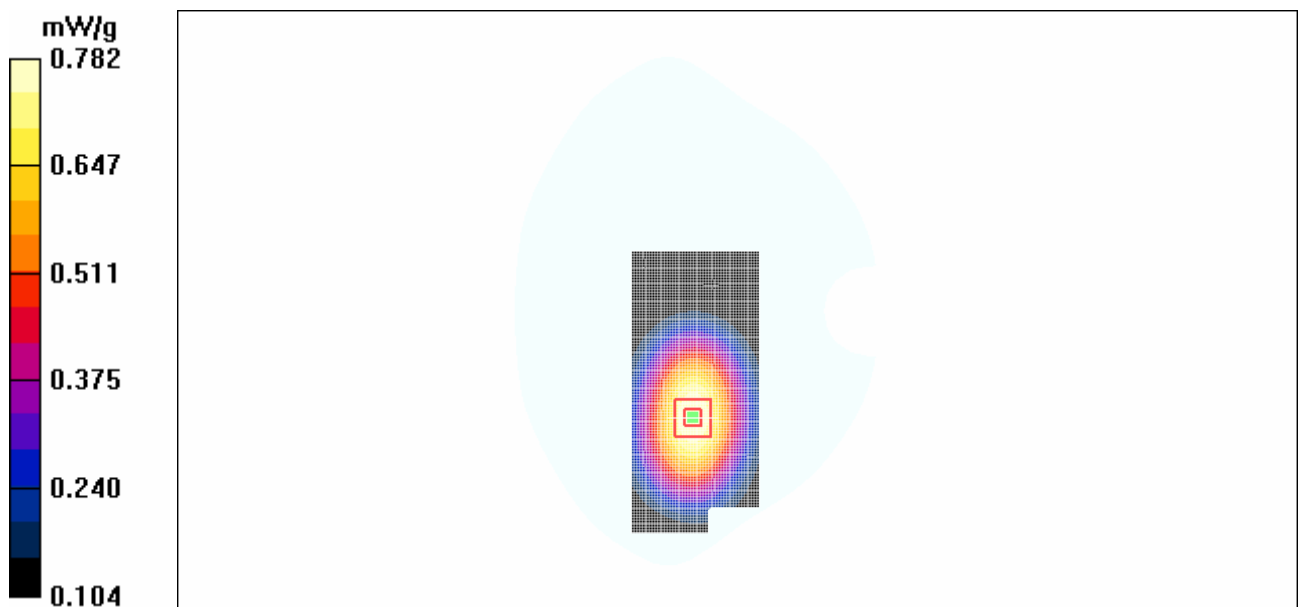


Figure 40 Body, Towards Phantom, Open GSM 850 Channel 190

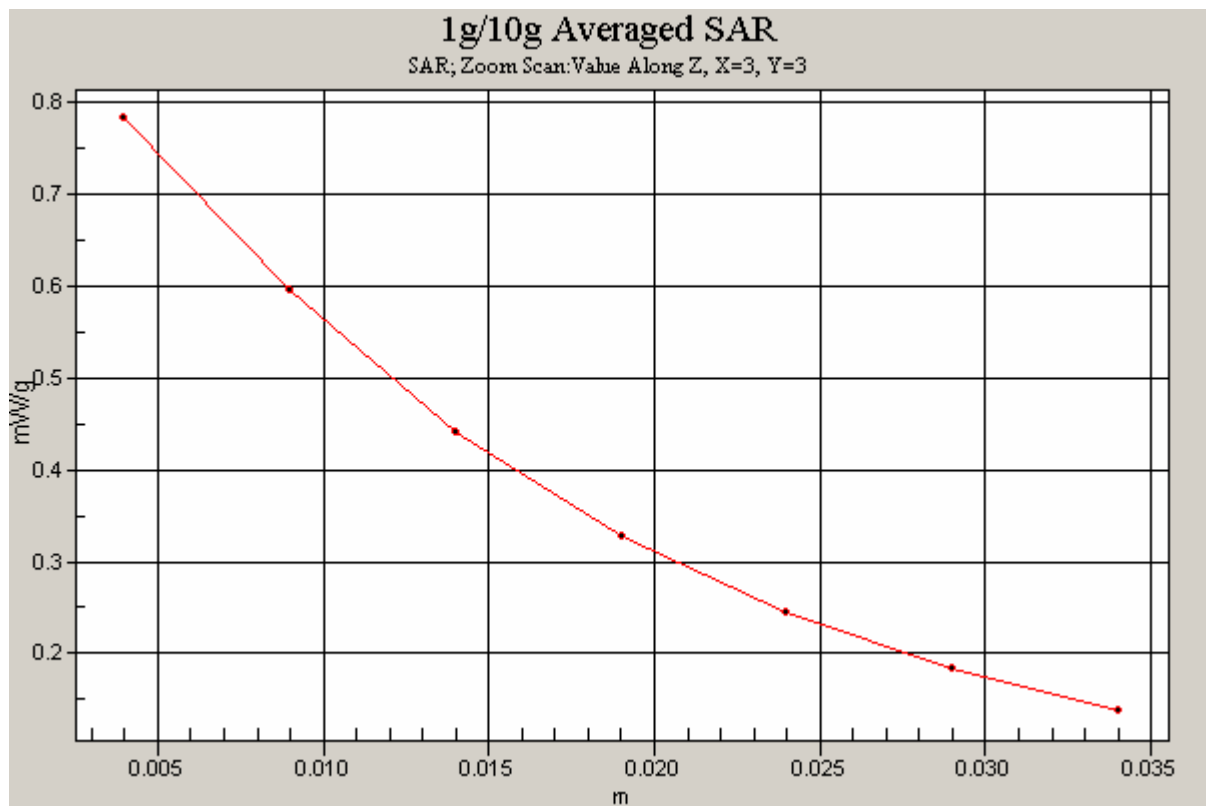


Figure 41 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 Channel 190)

GSM 850 Towards Phantom Low Open

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.730 mW/g

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

Reference Value = 12.4 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.881 W/kg

SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.510 mW/g

Maximum value of SAR (measured) = 0.738 mW/g

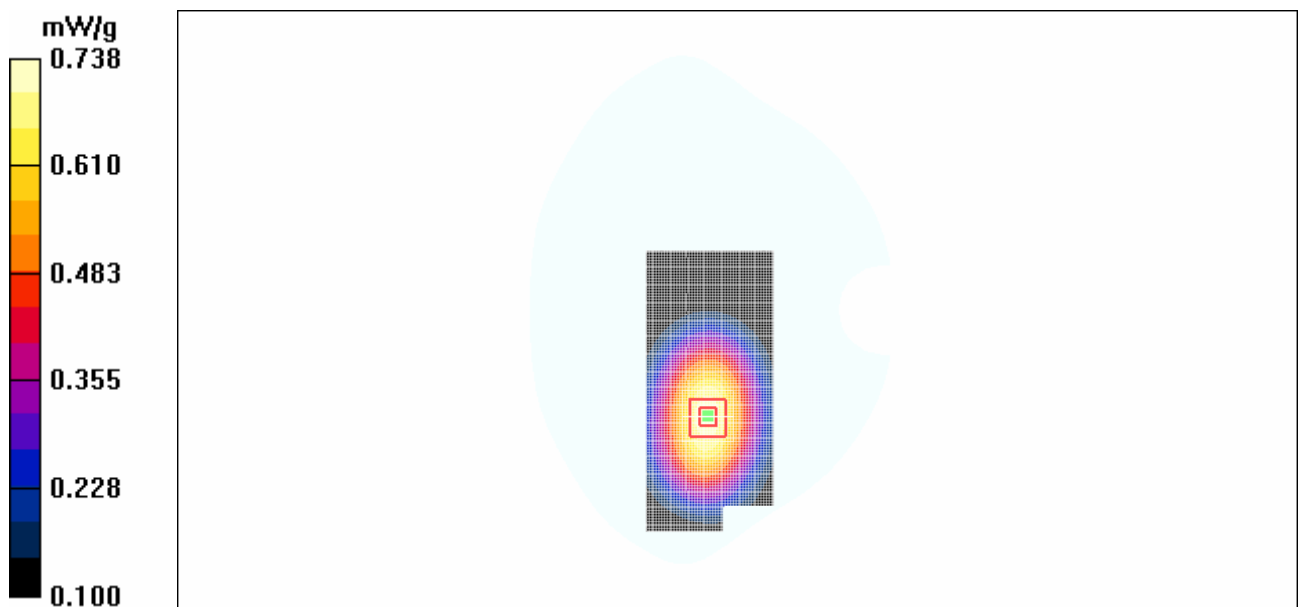


Figure 42 Body, Towards Phantom, Open GSM 850 Channel 128

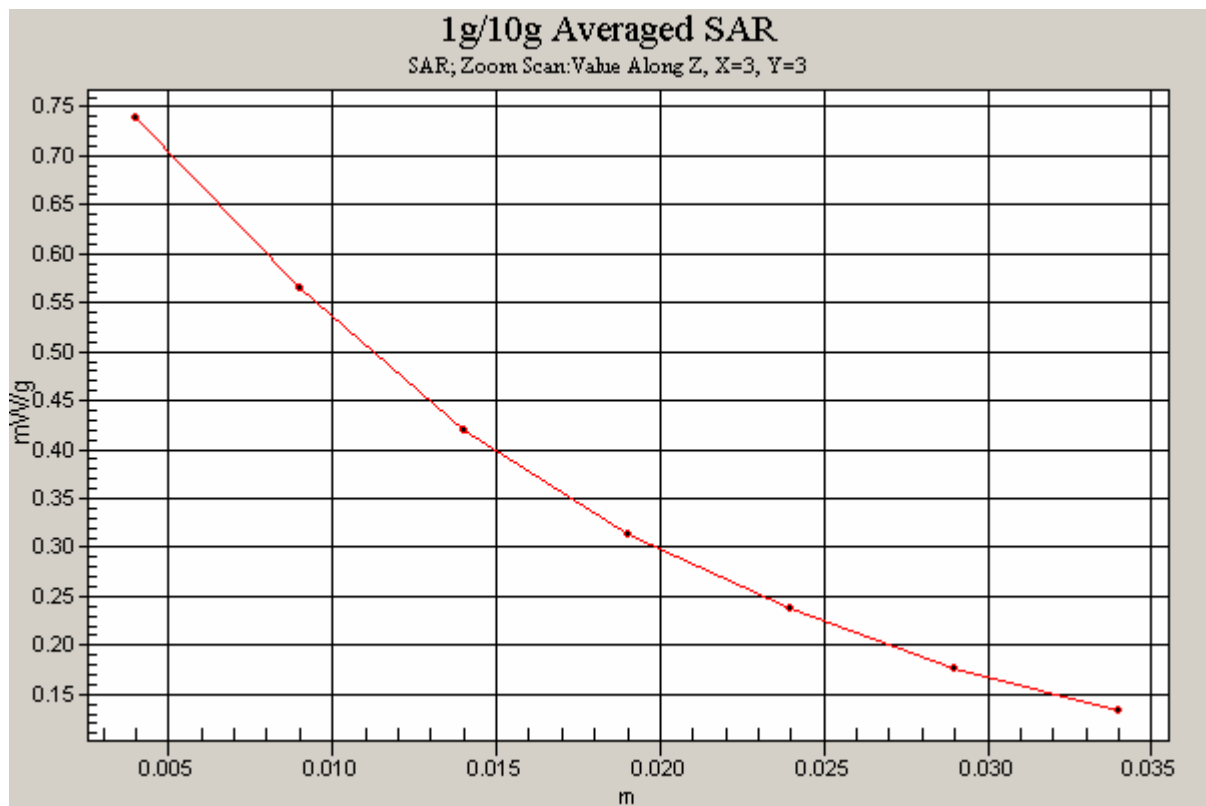


Figure 43 Z-Scan at power reference point (Body with Earphone, Towards Ground, Open GSM 850, Channel 128)

GSM 850 Earphone Towards Ground Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.701 mW/g

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

Reference Value = 12.9 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.844 W/kg

SAR(1 g) = 0.664 mW/g; SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.708 mW/g

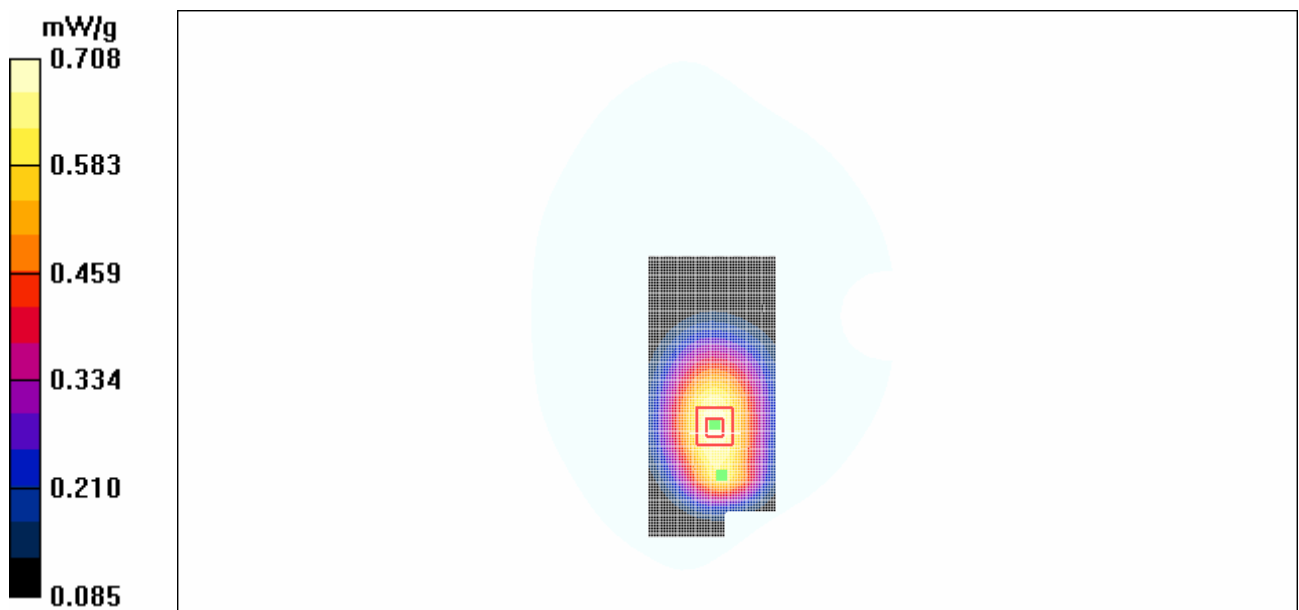


Figure 44 Body with Earphone, Towards Ground, Open GSM 850, Channel 190

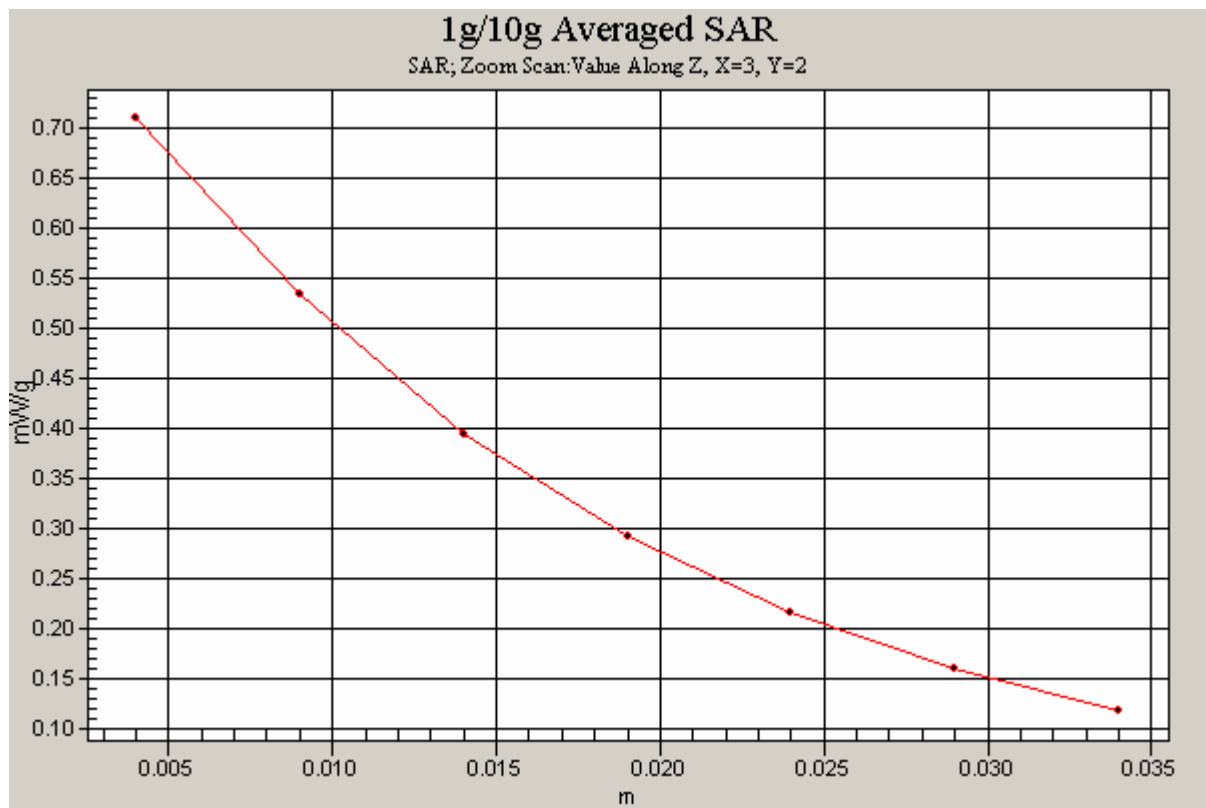


Figure 45 Z-Scan at power reference point (Body with Earphone, Towards Ground, Open GSM 850, Channel 190)

GSM 850 Bluetooth Earphone Towards Ground Middle Open

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.860 mW/g

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

Reference Value = 13.6 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.805 mW/g; SAR(10 g) = 0.579 mW/g

Maximum value of SAR (measured) = 0.861 mW/g

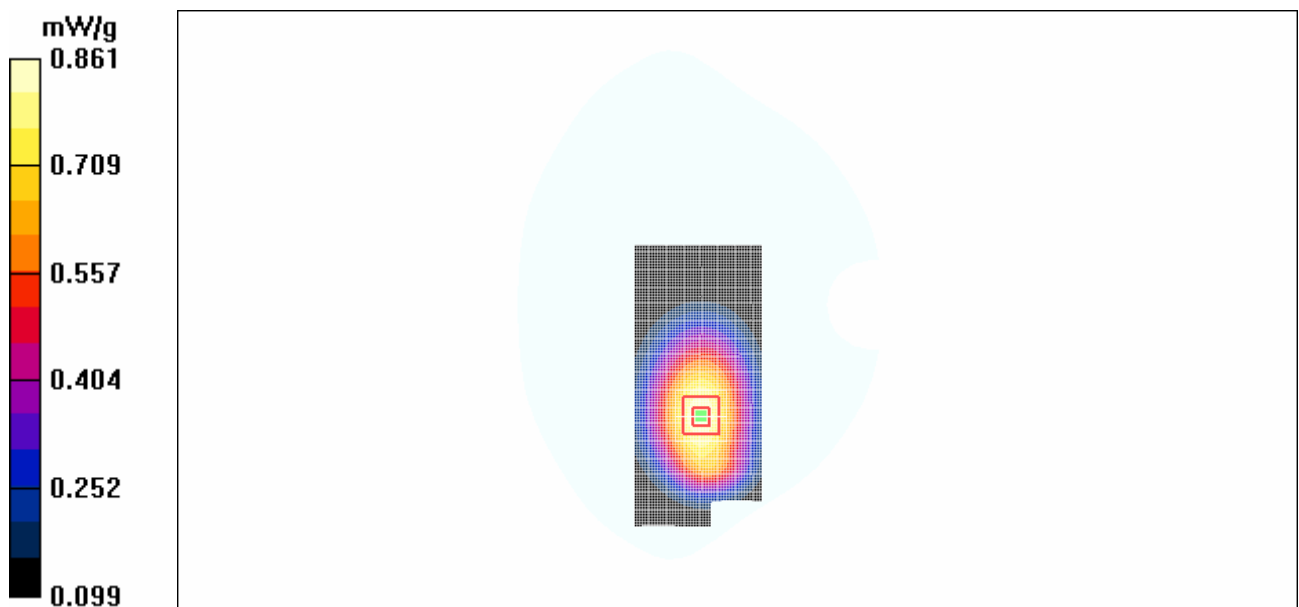


Figure 46 Body with Bluetooth earphone, Towards Ground, Open GSM 850, Channel 190

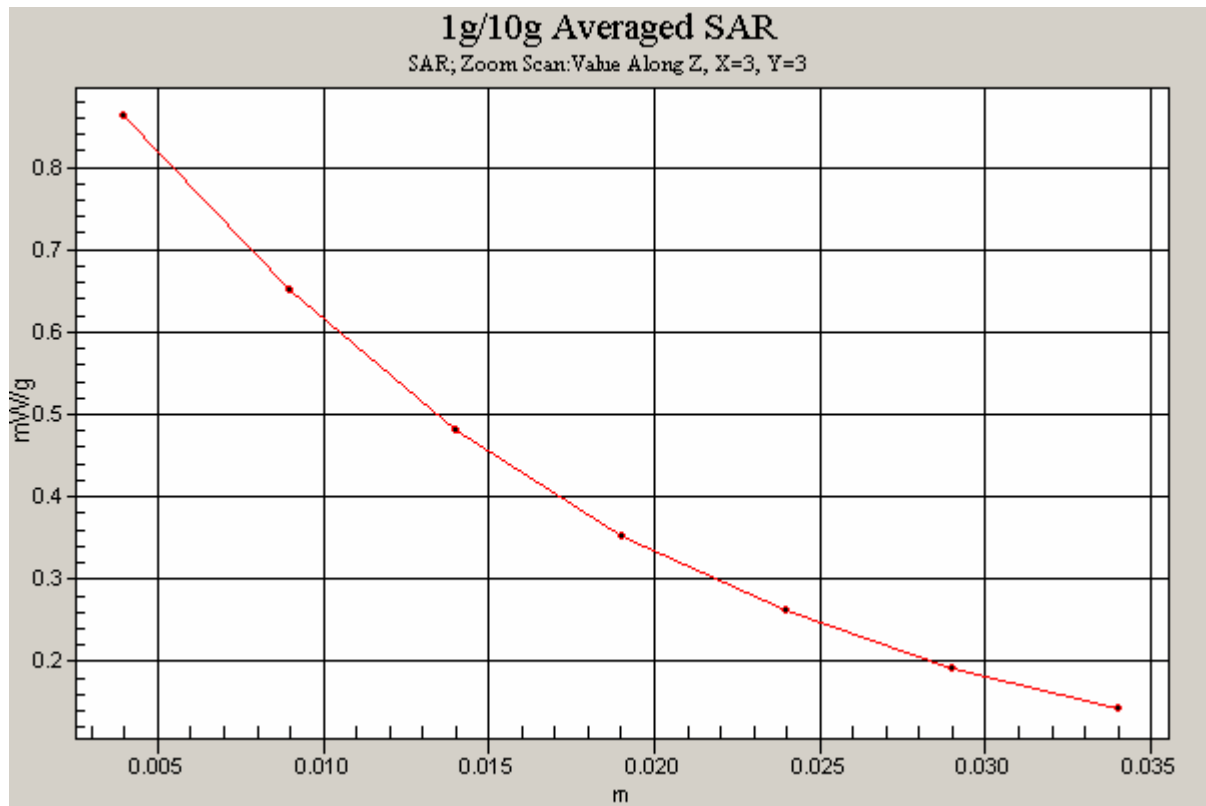


Figure 47 Z-Scan at power reference point (Body with Bluetooth earphone, Towards Ground, Open GSM 850, Channel 190)

GSM 850 GPRS Towards Ground High Open

Communication System: GSM850 + GPRS(2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.27 mW/g

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

Reference Value = 18.3 V/m; Power Drift = -0.191 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.850 mW/g

Maximum value of SAR (measured) = 1.24 mW/g

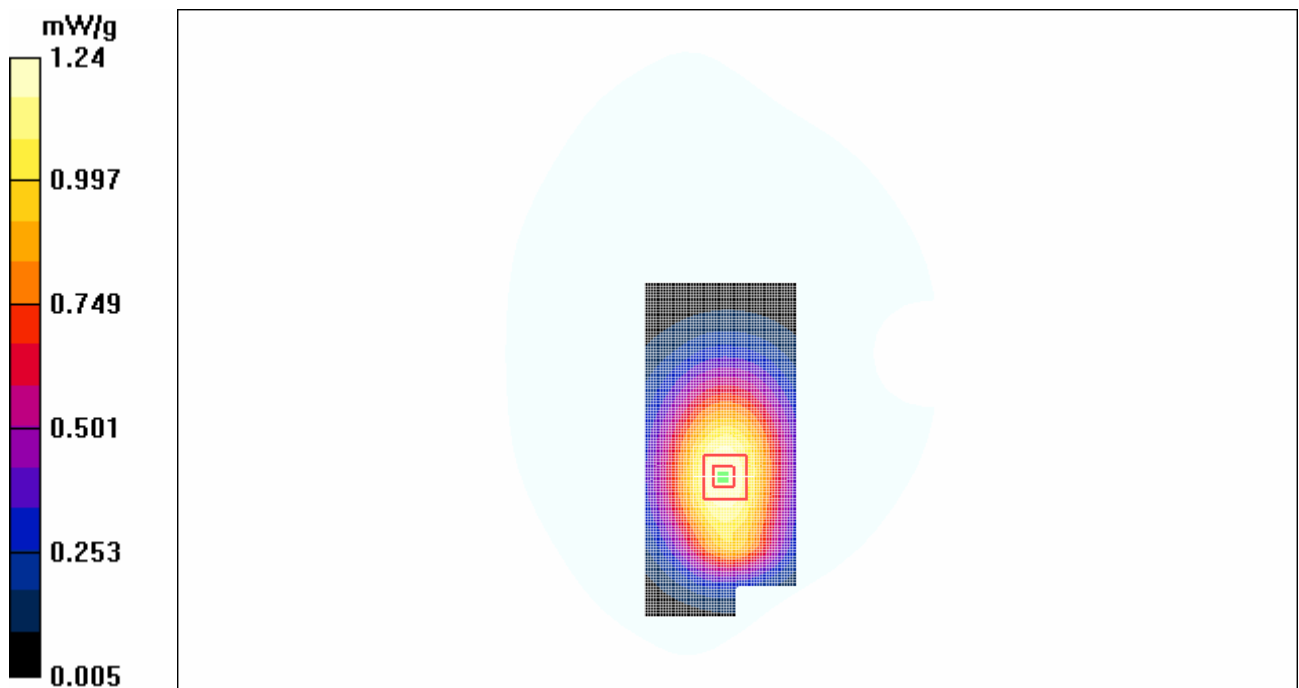


Figure 48 Body, Towards Ground, Open GSM 850 GPRS, Channel 251

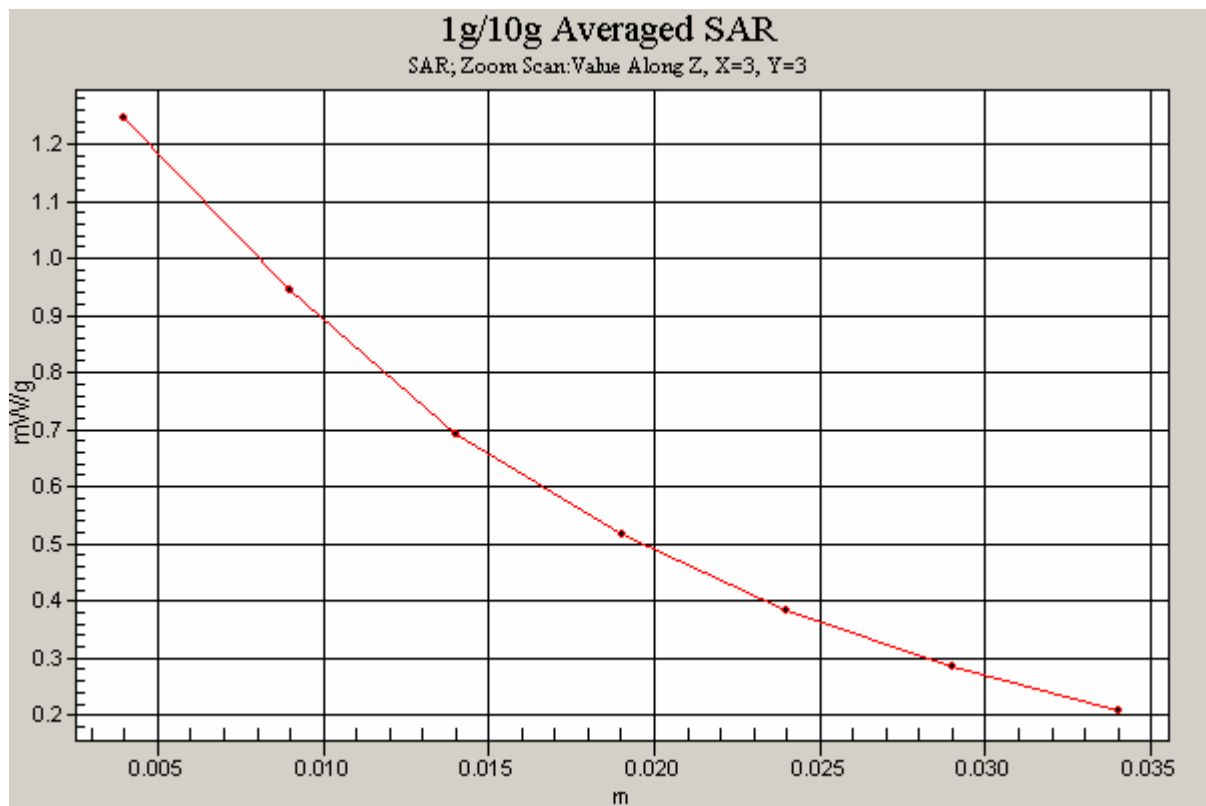


Figure 49 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 GPRS, Channel 251)

GSM 850 GPRS Towards Ground Middle Open

Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Middle/Area Scan (51x111x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.42 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.4 V/m ; Power Drift = 0.054 dB

Peak SAR (extrapolated) = 3.16 W/kg

SAR(1 g) = 1.36 mW/g ; SAR(10 g) = 0.970 mW/g

Maximum value of SAR (measured) = 1.42 mW/g

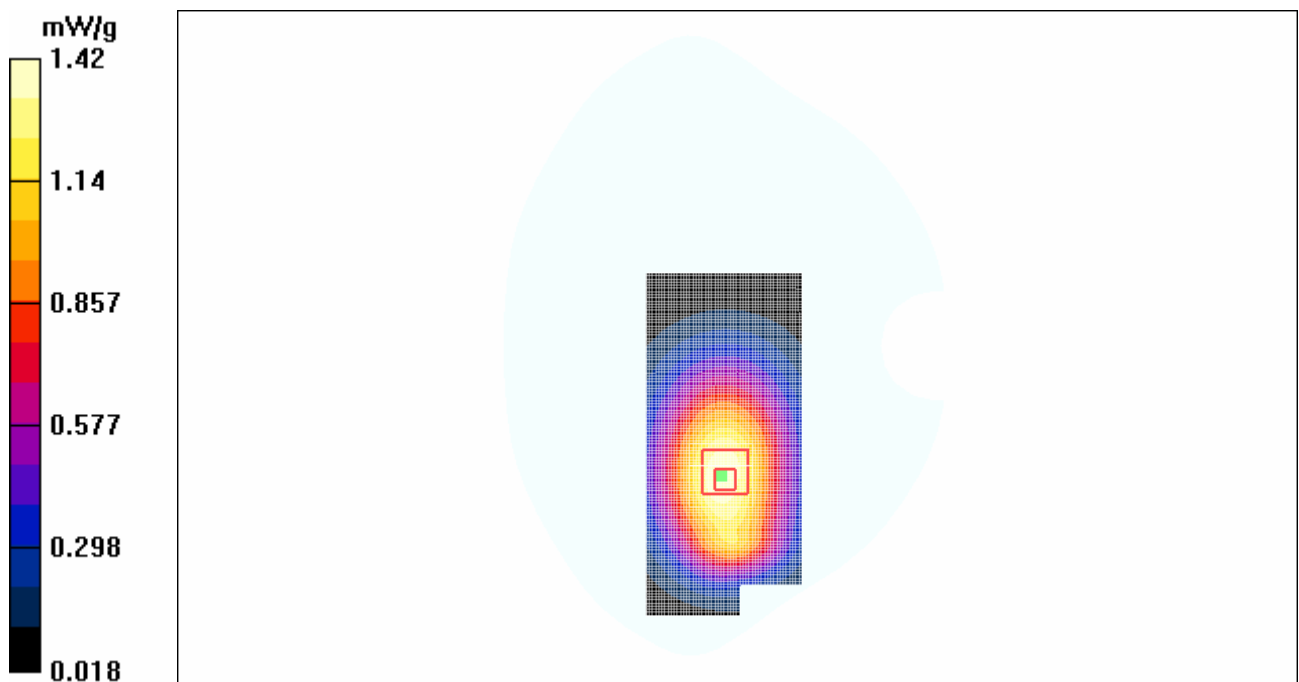


Figure 50 Body, Towards Ground, Open GSM 850 GPRS Channel 190

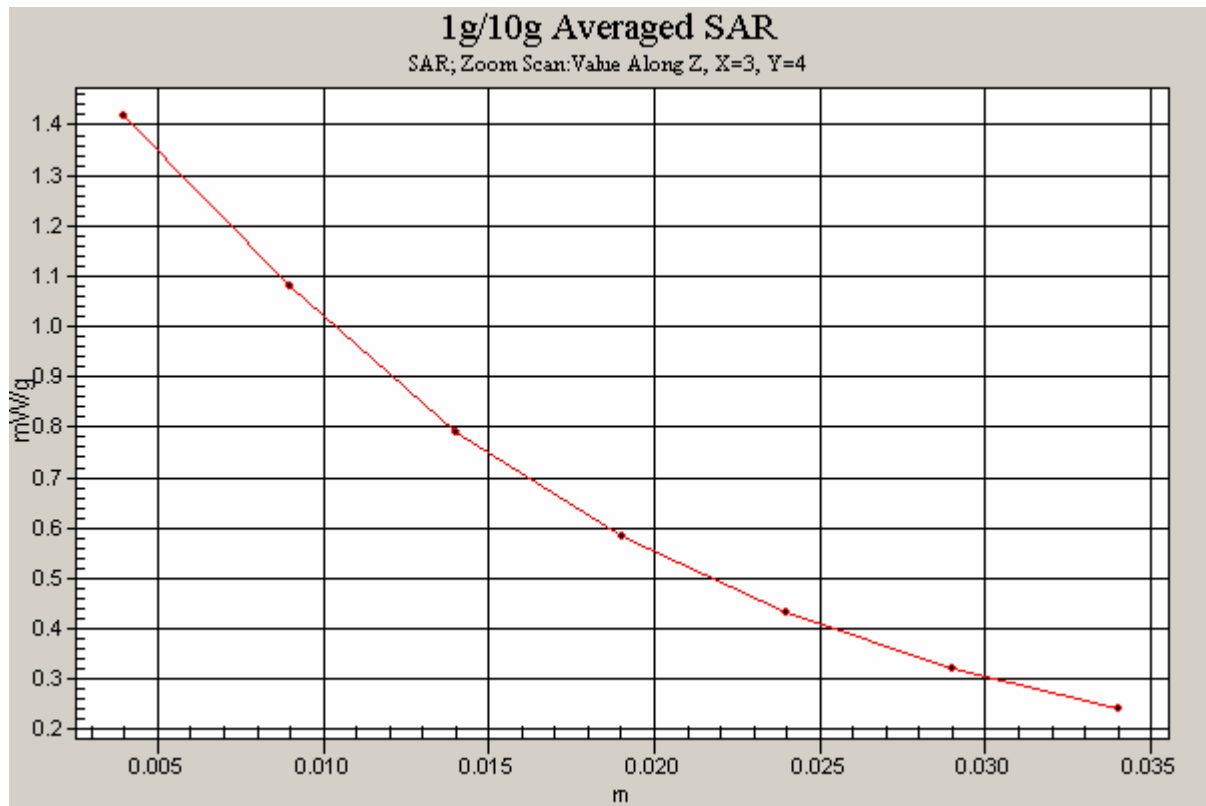


Figure 51 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 GPRS Channel 190)

GSM 850 GPRS Towards Ground Low Open

Communication System: GSM850 + GPRS(2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.45 mW/g

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

Reference Value = 18.5 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.980 mW/g

Maximum value of SAR (measured) = 1.44 mW/g

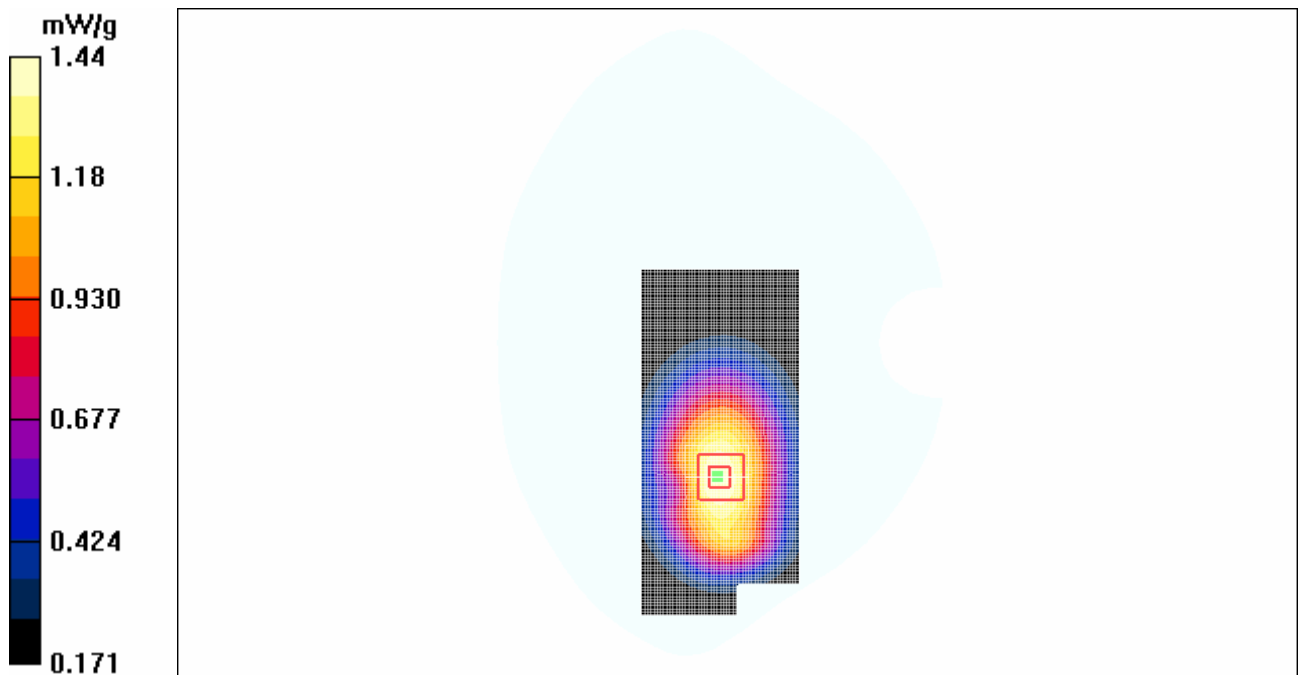


Figure 52 Body, Towards Ground, Open GSM 850 GPRS Channel 128

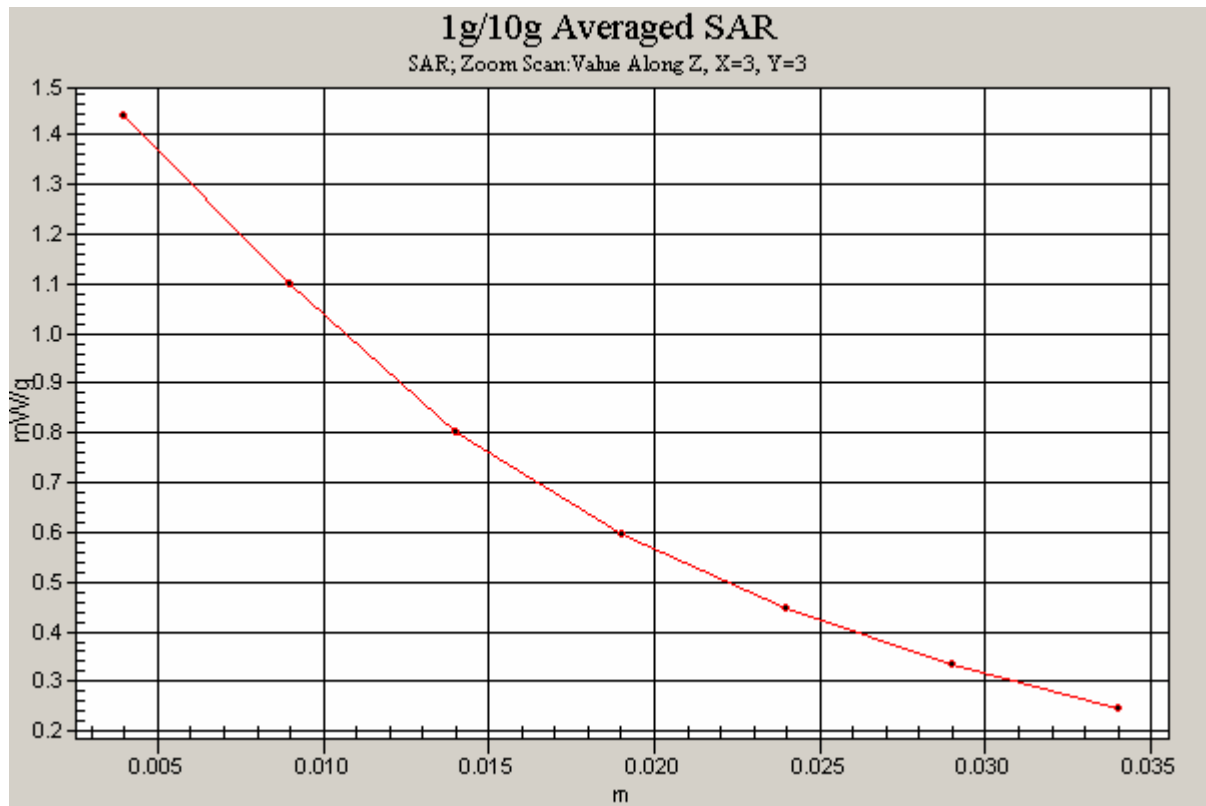


Figure 53 Z-Scan at power reference point (Body, Towards Ground, Open GSM 850 GPRS Channel 128)

GSM 850 GPRS Towards Phantom High Open

Communication System: GSM850 + GPRS(2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.33 mW/g

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

Reference Value = 16.5 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.904 mW/g

Maximum value of SAR (measured) = 1.34 mW/g

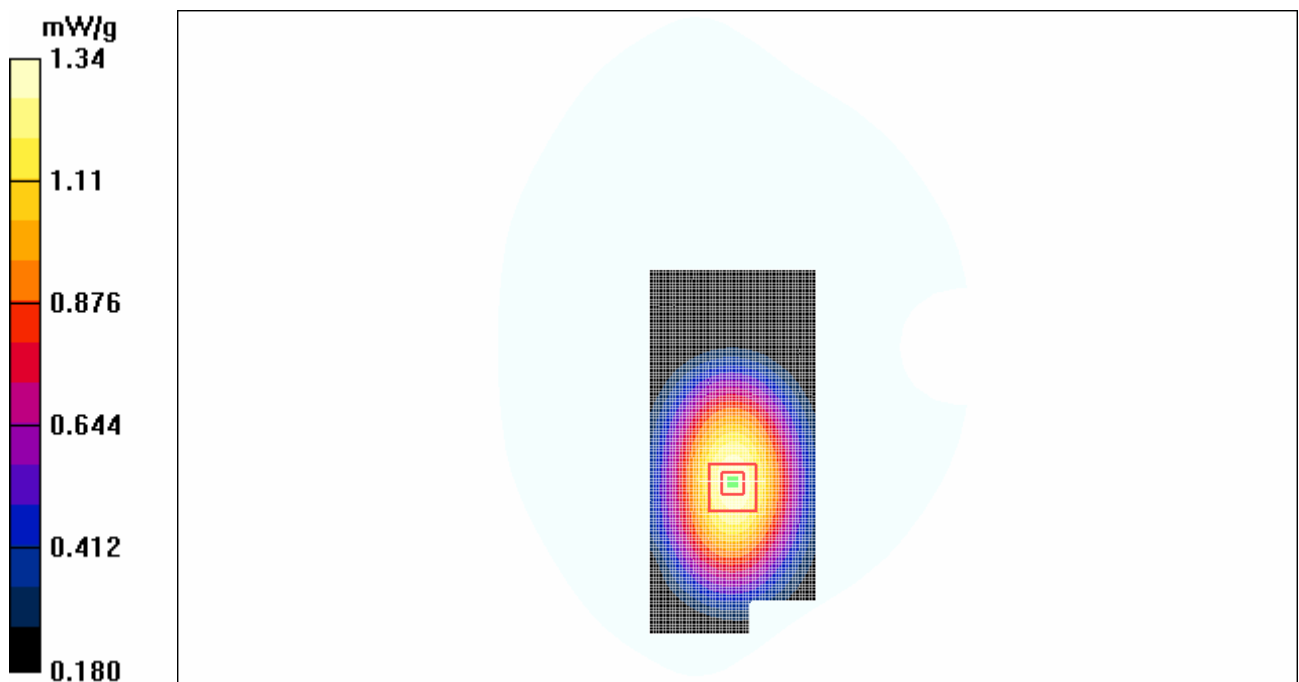


Figure 54 Body, Towards Phantom, Open GSM 850 GPRS, Channel 251

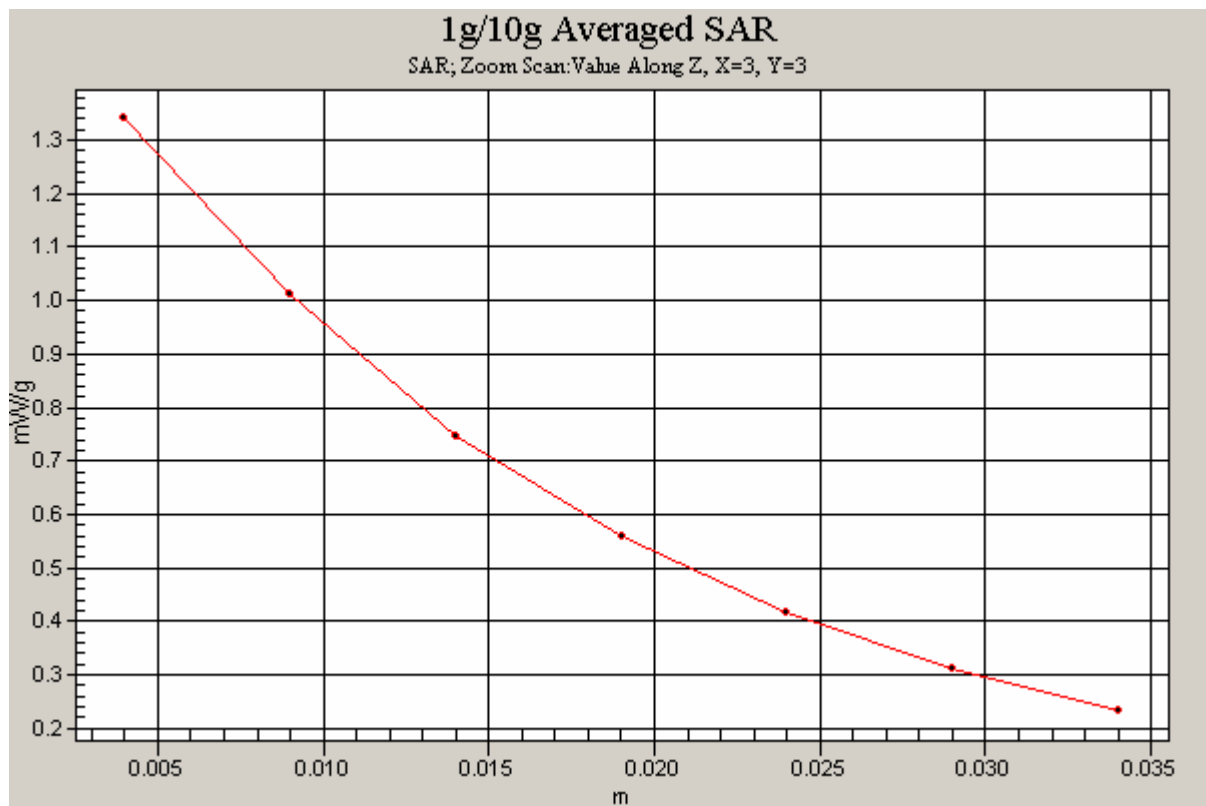


Figure 55 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 GPRS, Channel 251)

GSM 850 GPRS Towards Phantom Middle Open

Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.45 mW/g

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

Reference Value = 17.3 V/m; Power Drift = -0.112 dB

Peak SAR (extrapolated) = 1.74 W/kg

SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.986 mW/g

Maximum value of SAR (measured) = 1.44 mW/g

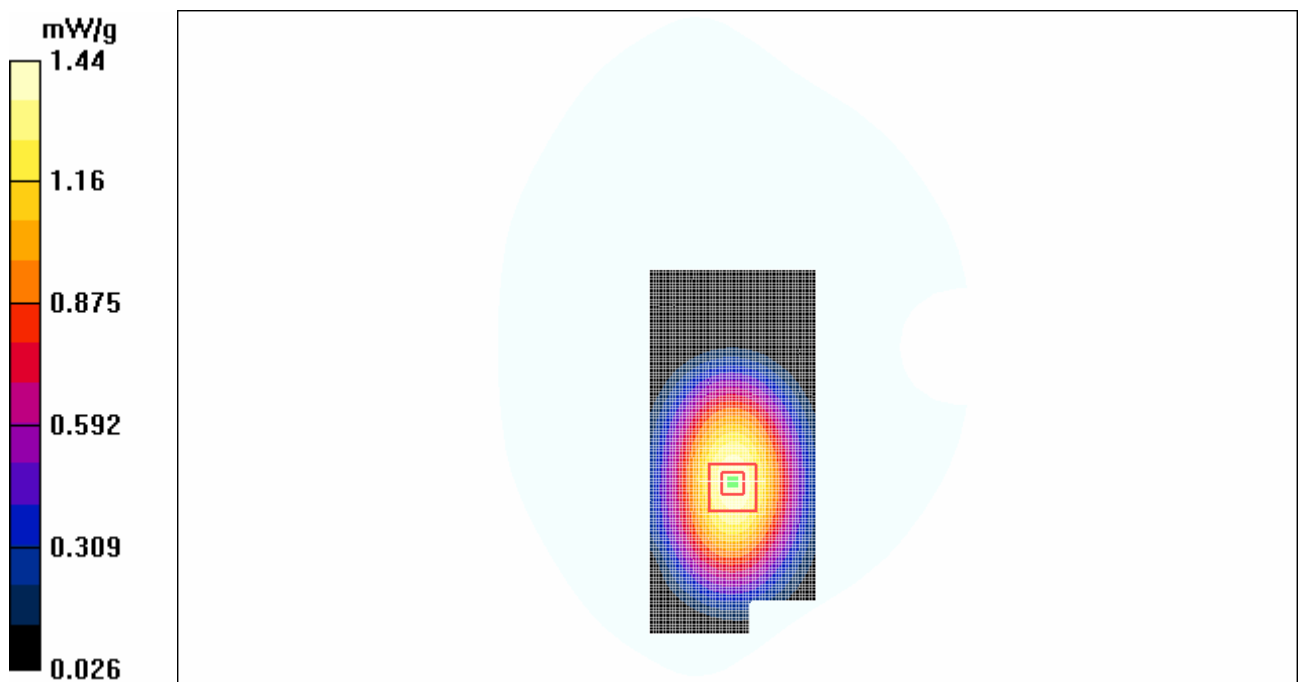


Figure 56 Body, Towards Phantom, Open GSM 850 GPRS Channel 190

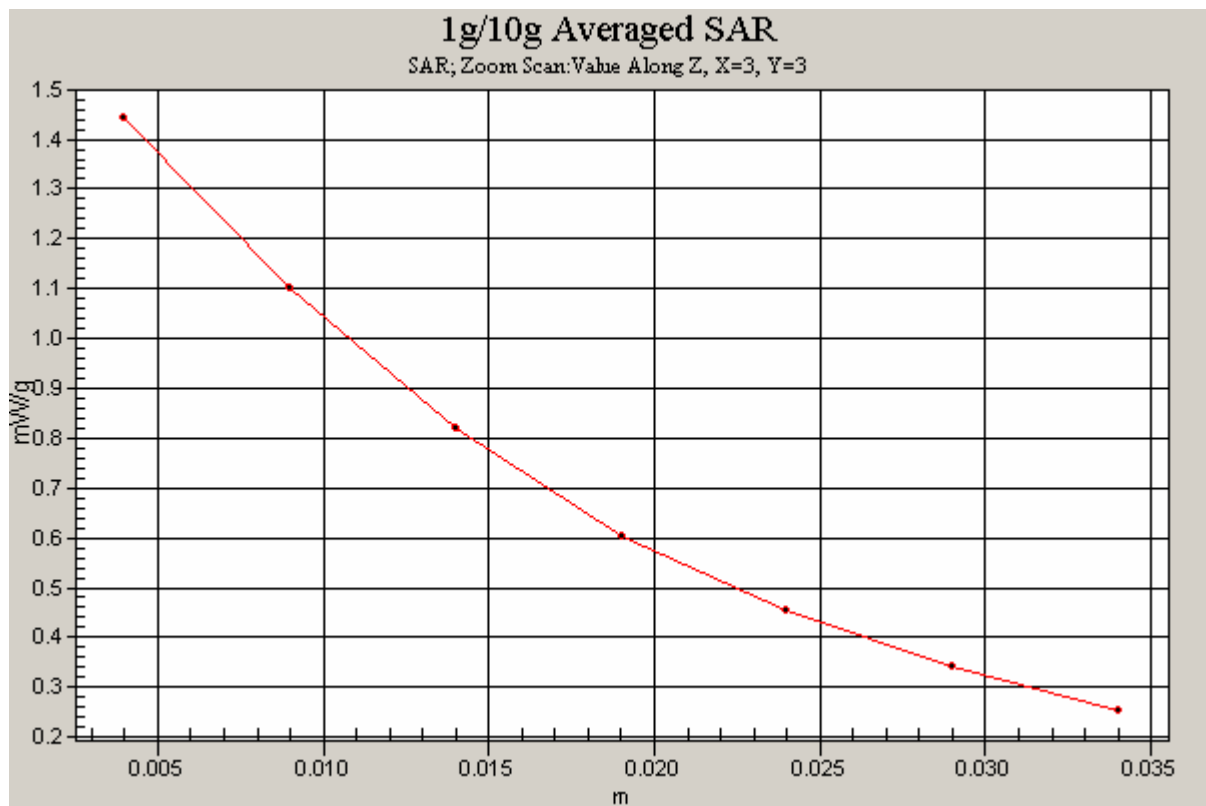


Figure 57 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 GPRS Channel 190)

GSM 850 GPRS Towards Phantom Low Open

Communication System: GSM850 + GPRS(2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 1.41 mW/g

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

Reference Value = 20.7 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.949 mW/g

Maximum value of SAR (measured) = 1.41 mW/g

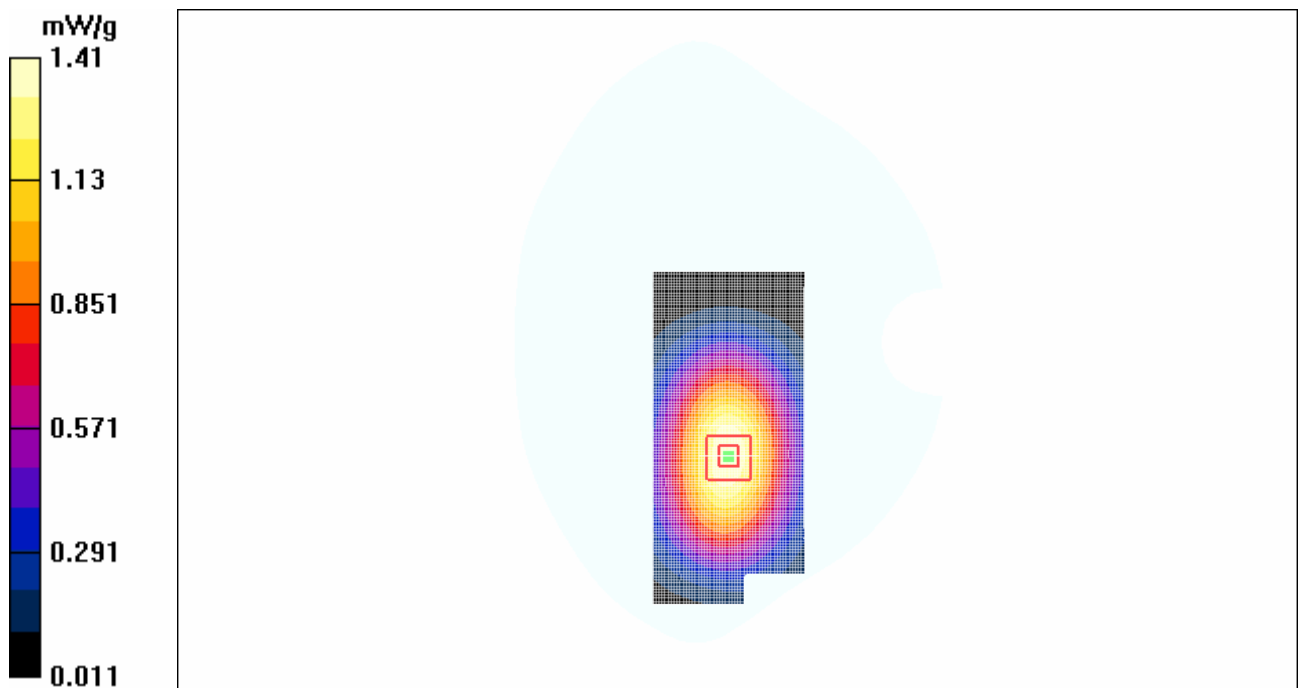


Figure 58 Body, Towards Phantom, Open GSM 850 GPRS Channel 128

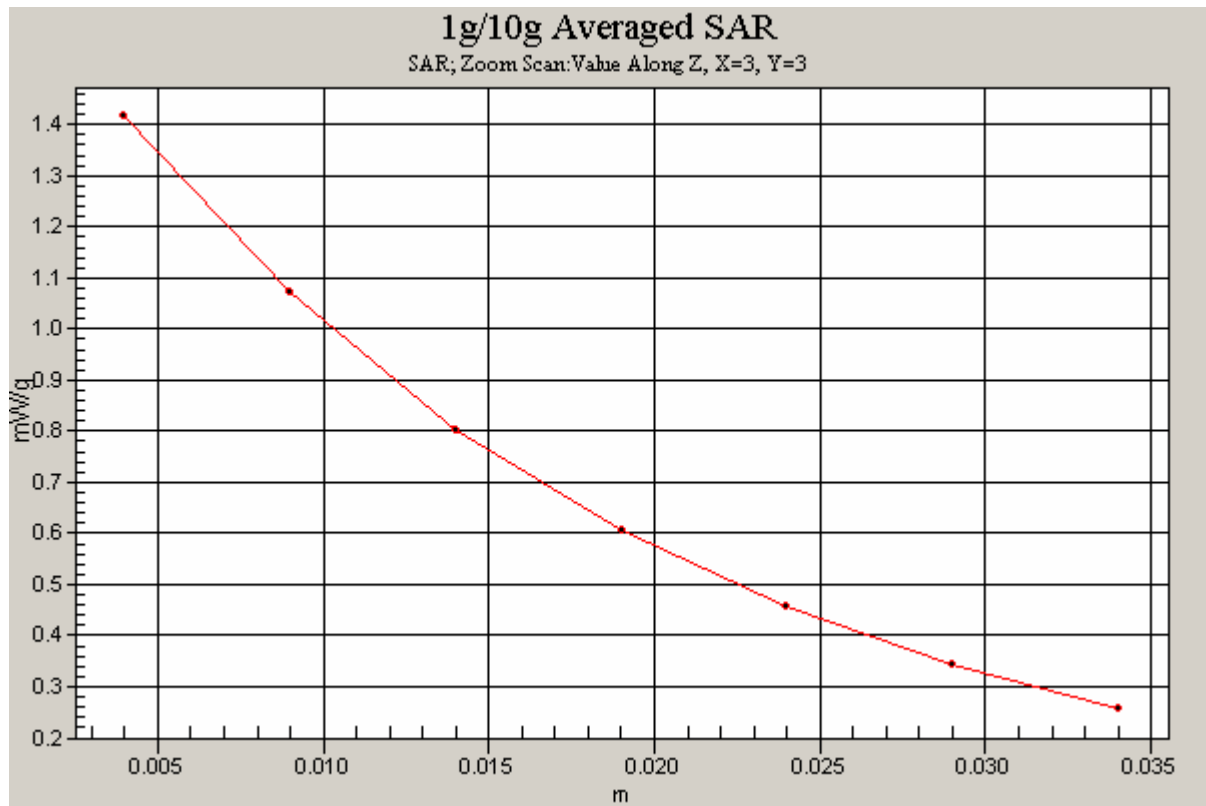


Figure 59 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 GPRS Channel 128)

GSM 850 EGPRS Towards Phantom Middle Open

Communication System: GSM850 + EGPRS(2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 837$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.368 mW/g

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

Reference Value = 8.70 V/m; Power Drift = -0.192 dB

Peak SAR (extrapolated) = 0.456 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.260 mW/g

Maximum value of SAR (measured) = 0.380 mW/g

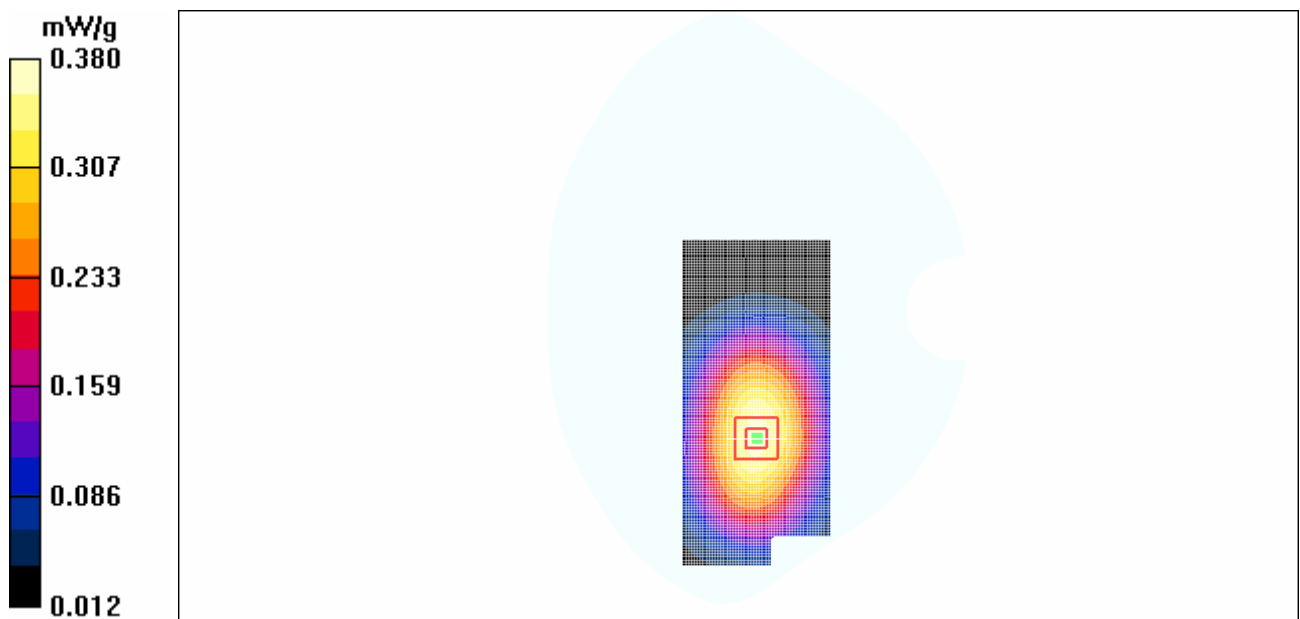


Figure 60 Body, Towards Phantom, Open GSM 850 EGPRS Channel 190

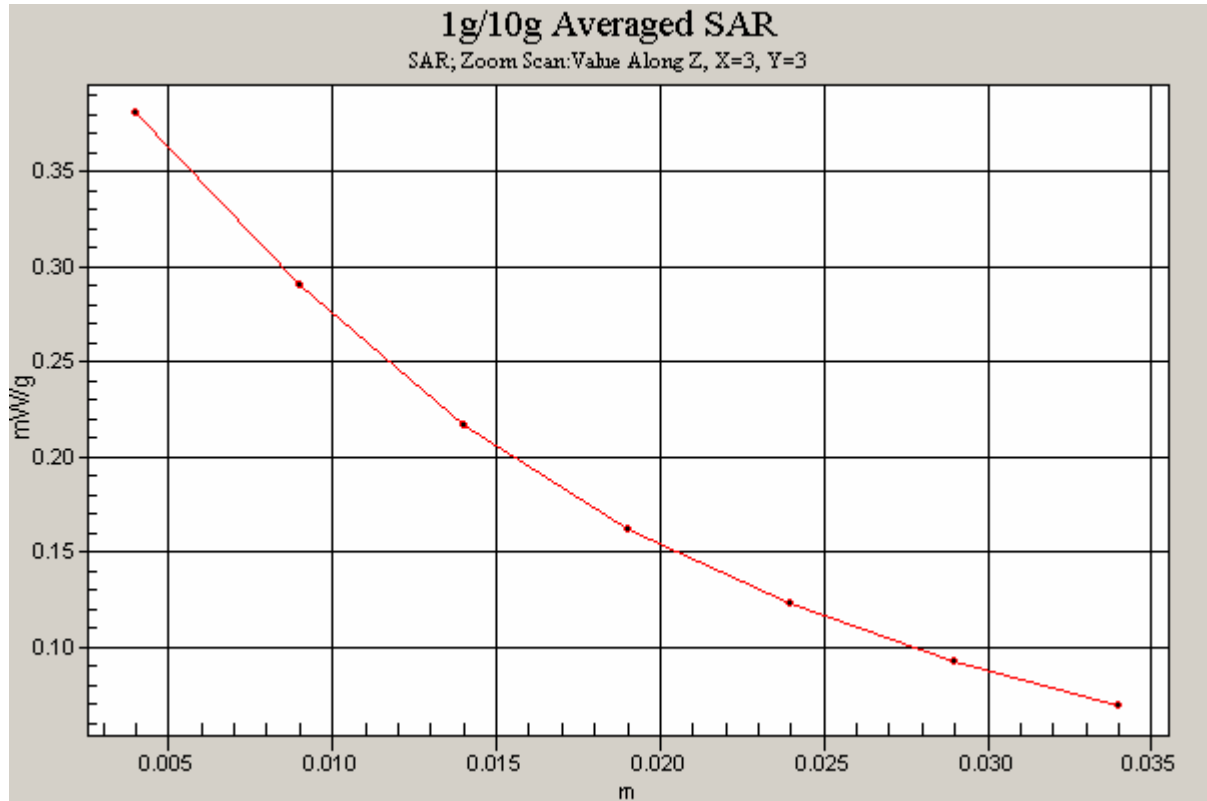


Figure 61 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 850 EGPRS Channel 190)

GSM 850 Left Cheek High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.212 mW/g

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

Reference Value = 5.95 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.275 W/kg

SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.139 mW/g

Maximum value of SAR (measured) = 0.209 mW/g

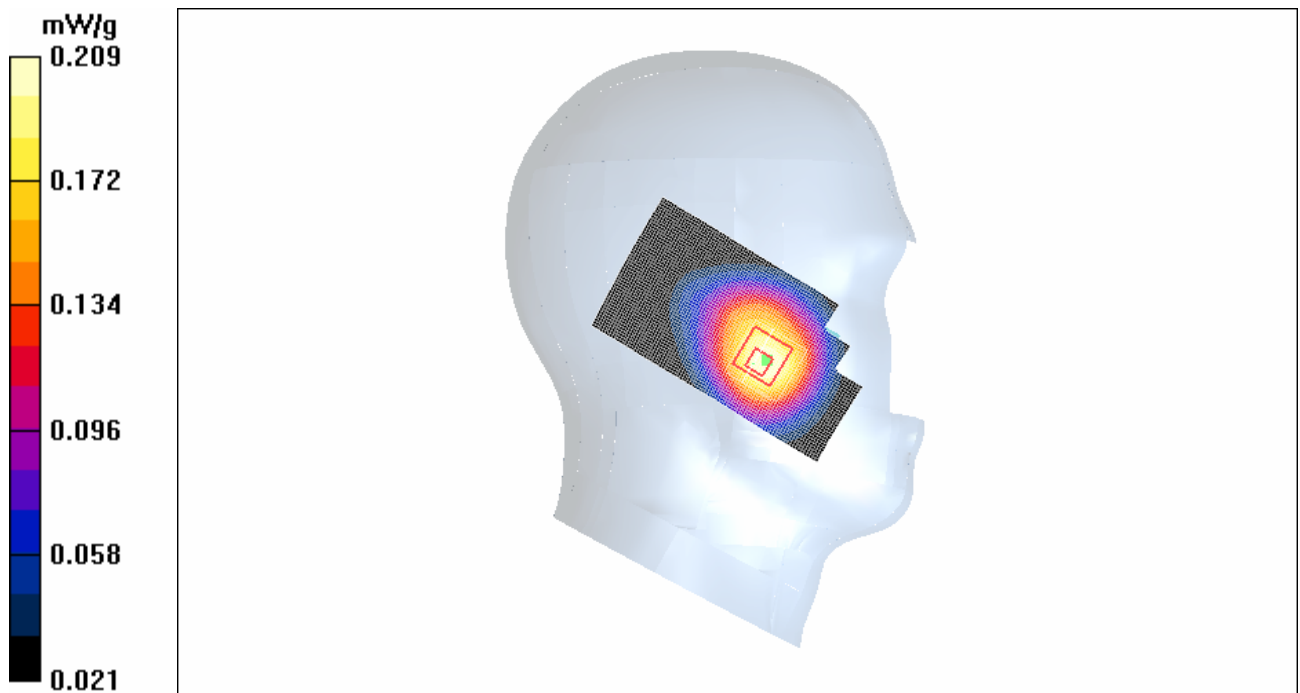


Figure 62 Left Hand Touch Cheek Close GSM 850 Channel 251

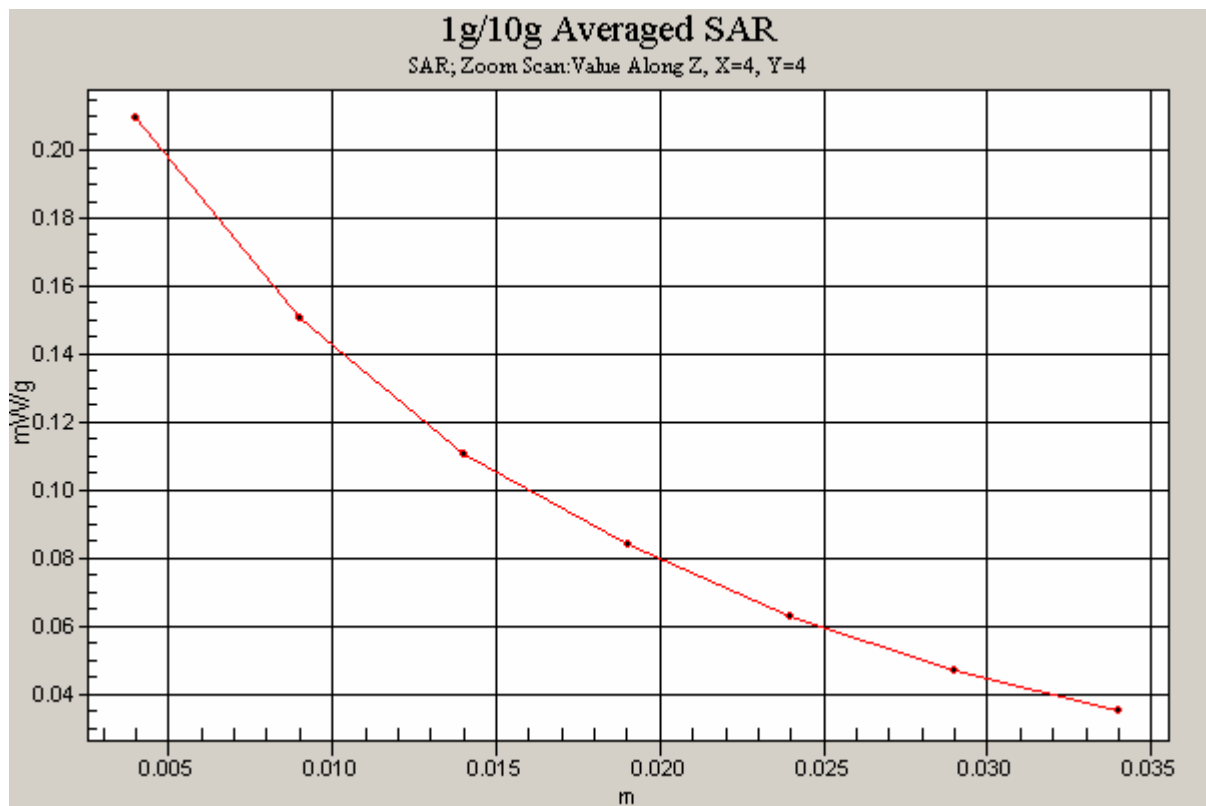


Figure 63 Z-Scan at power reference point (Left Hand Touch Cheek Close GSM 850 Channel 251)

GSM 850 Left Cheek Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.261 mW/g

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

Reference Value = 6.78 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 0.353 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.267 mW/g

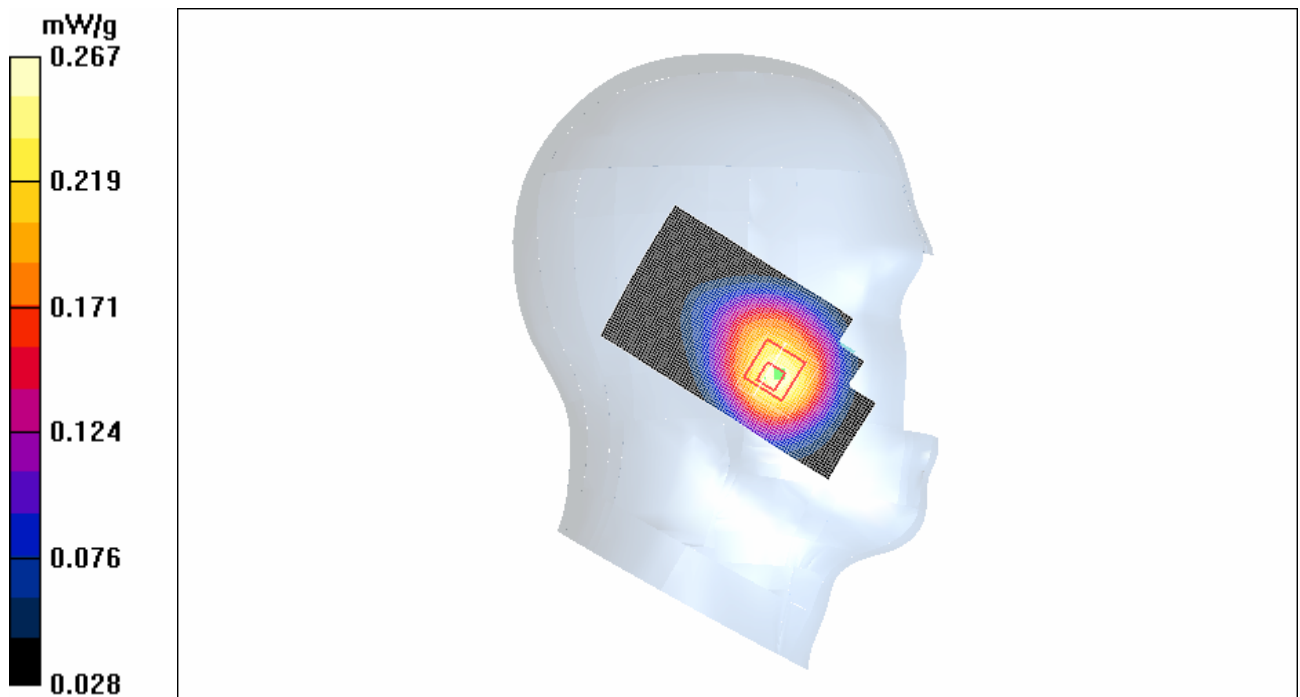


Figure 64 Left Hand Touch Cheek Close GSM 850 Channel 190

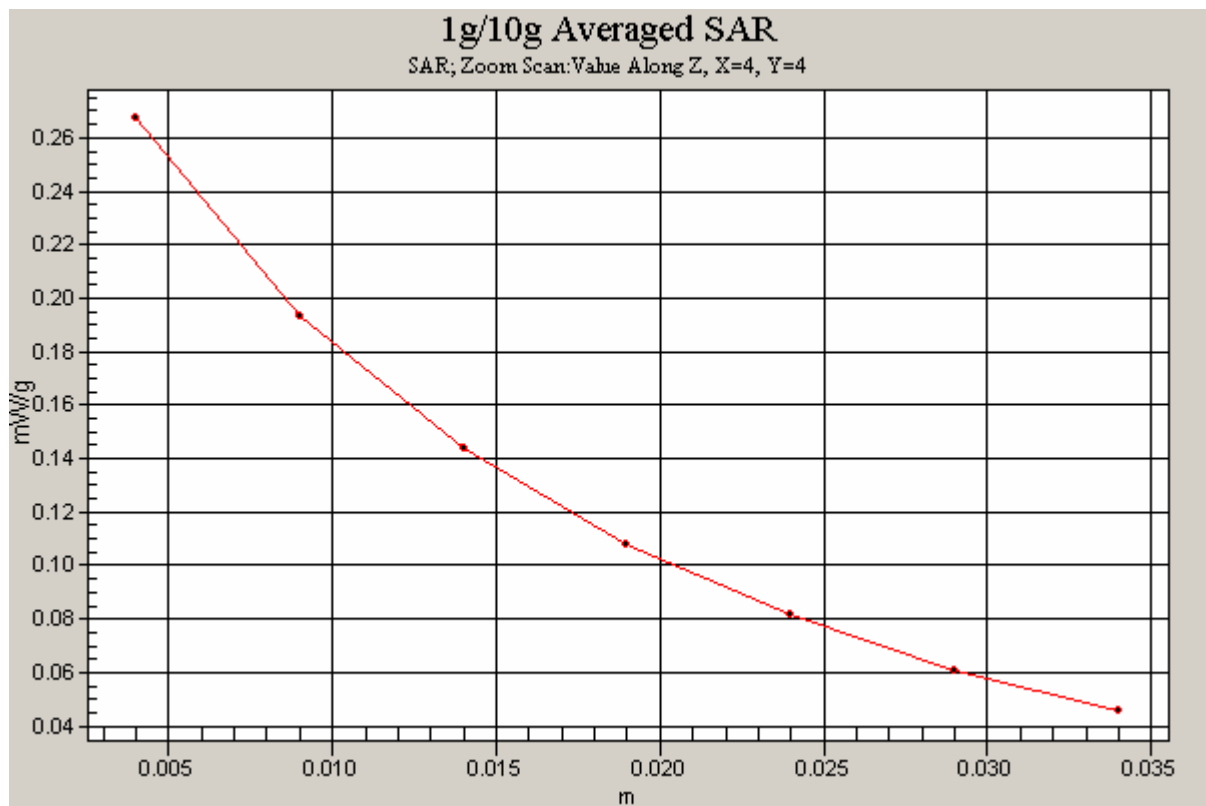


Figure 65 Z-Scan at power reference point (Left Hand Touch Cheek Close GSM 850 Channel 190)

GSM 850 Left Cheek Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.202 mW/g

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

Reference Value = 6.46 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.297 W/kg

SAR(1 g) = 0.200 mW/g; SAR(10 g) = 0.136 mW/g

Maximum value of SAR (measured) = 0.217 mW/g

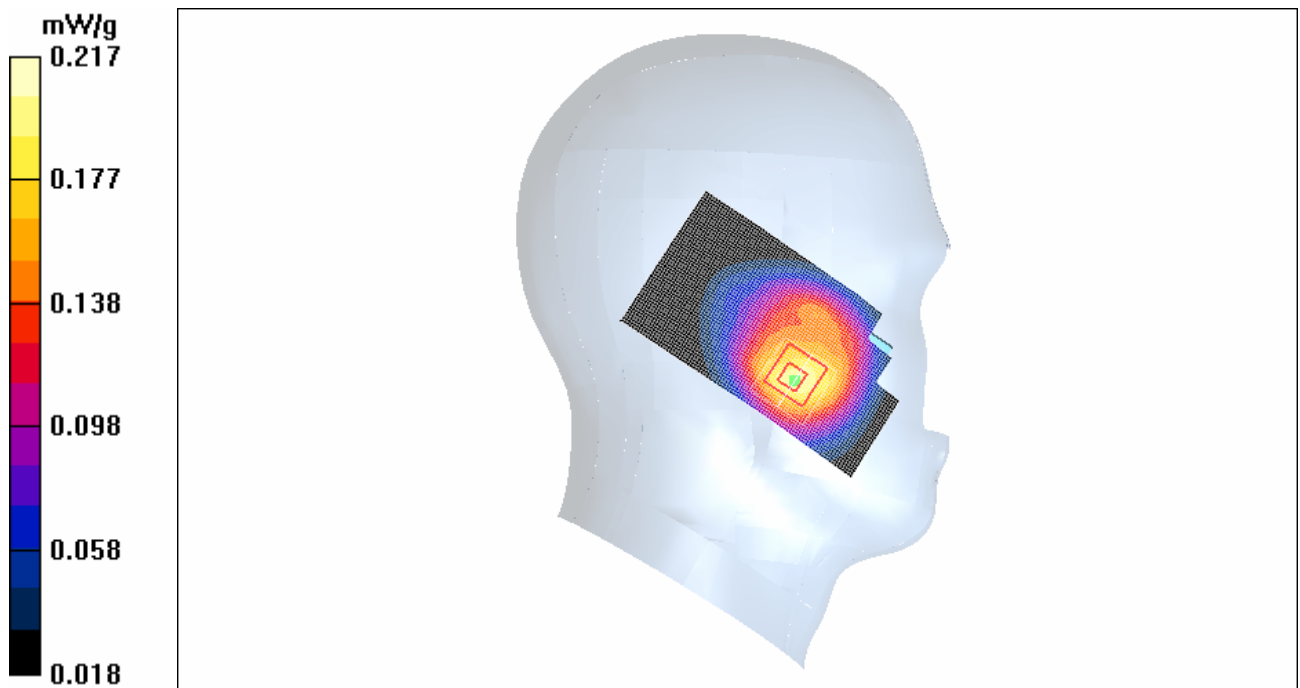


Figure 66 Left Hand Touch Cheek Close GSM 850 Channel 128

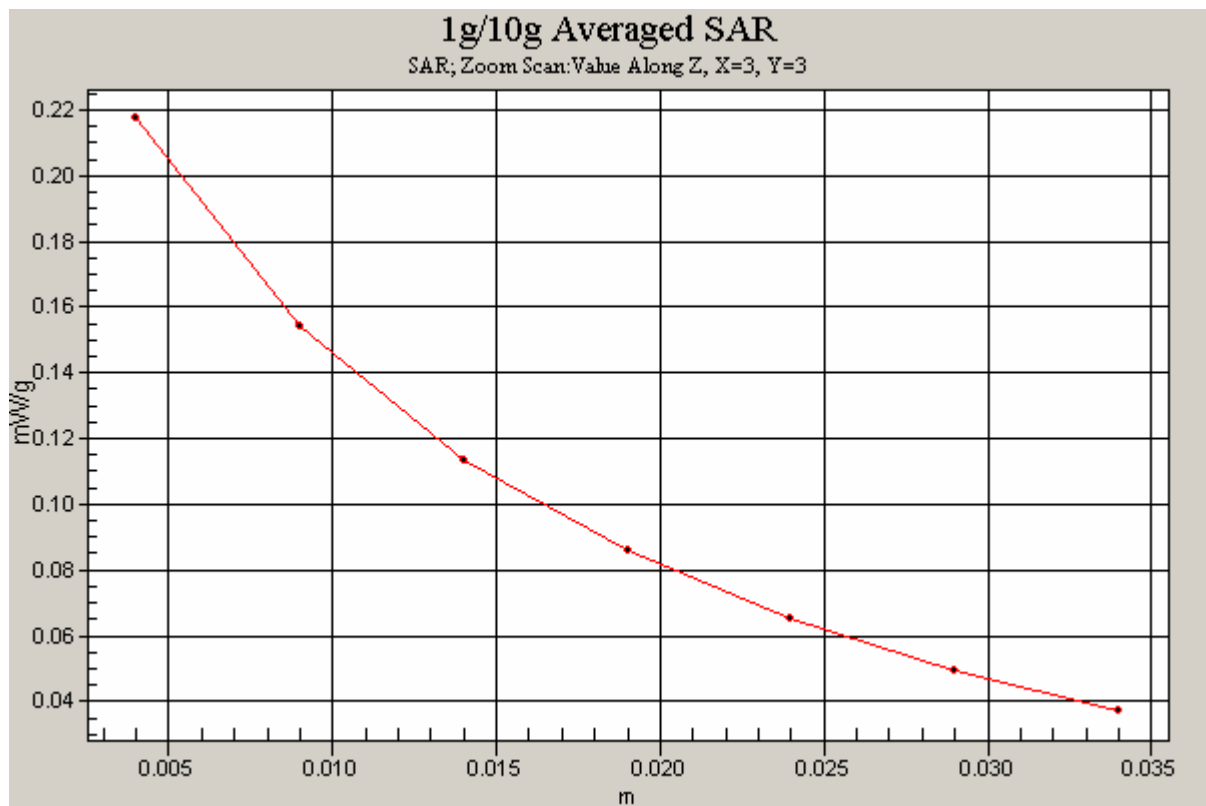


Figure 67 Z-Scan at power reference point (Left Hand Touch Cheek Close GSM 850 Channel 128)

GSM 850 Left Tilt High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.138 mW/g

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

Reference Value = 9.75 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.094 mW/g

Maximum value of SAR (measured) = 0.137 mW/g

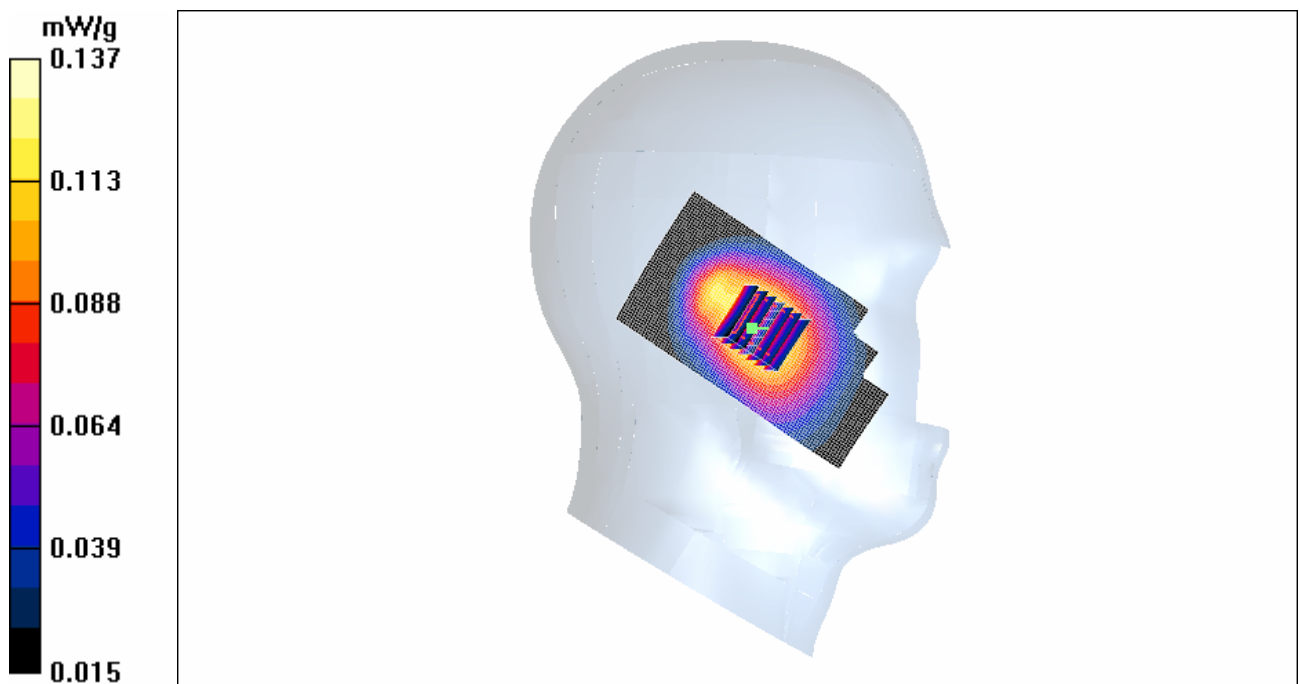


Figure 68 Left Hand Tilt 15° Close GSM 850 Channel 251

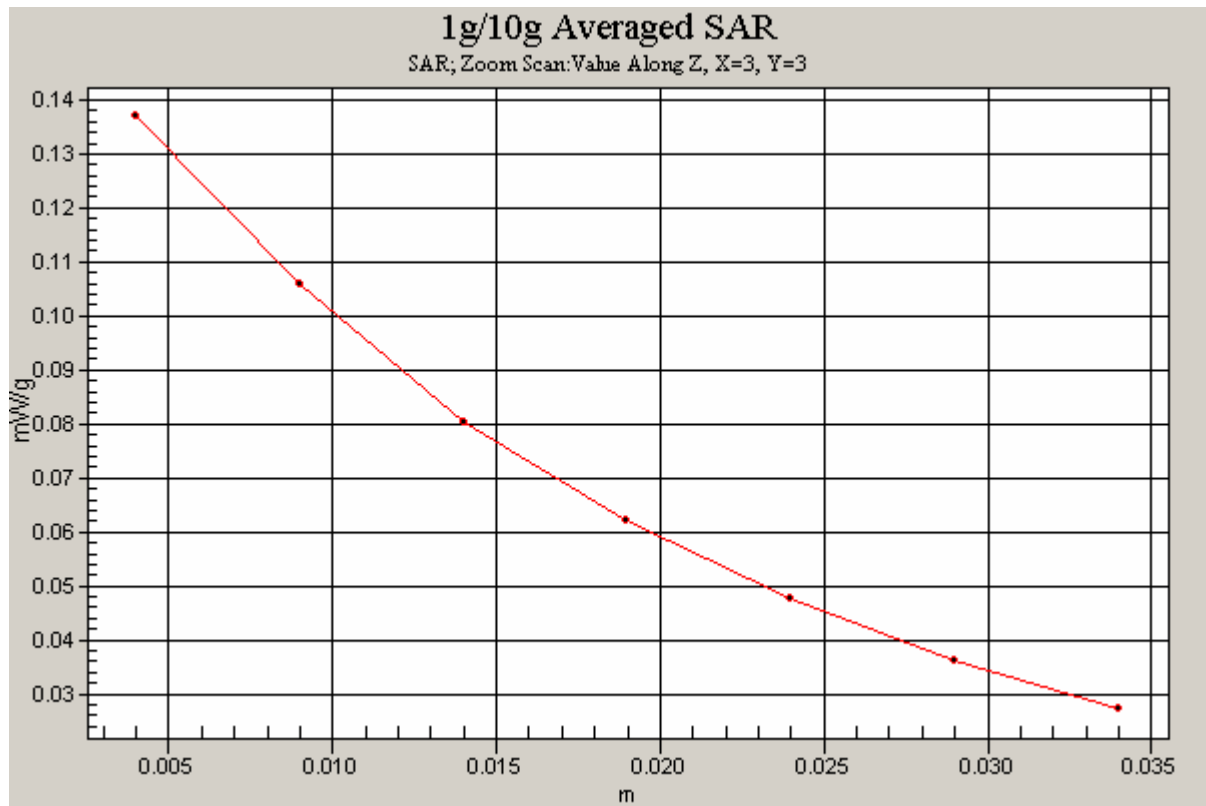


Figure 69 Z-Scan at power reference point (Left Hand Tilt 15°Close GSM 850 Channel 251)

GSM 850 Left Tilt Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.178 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 = 0.015 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.123 mW/g

Maximum value of SAR (measured) = 0.177 mW/g

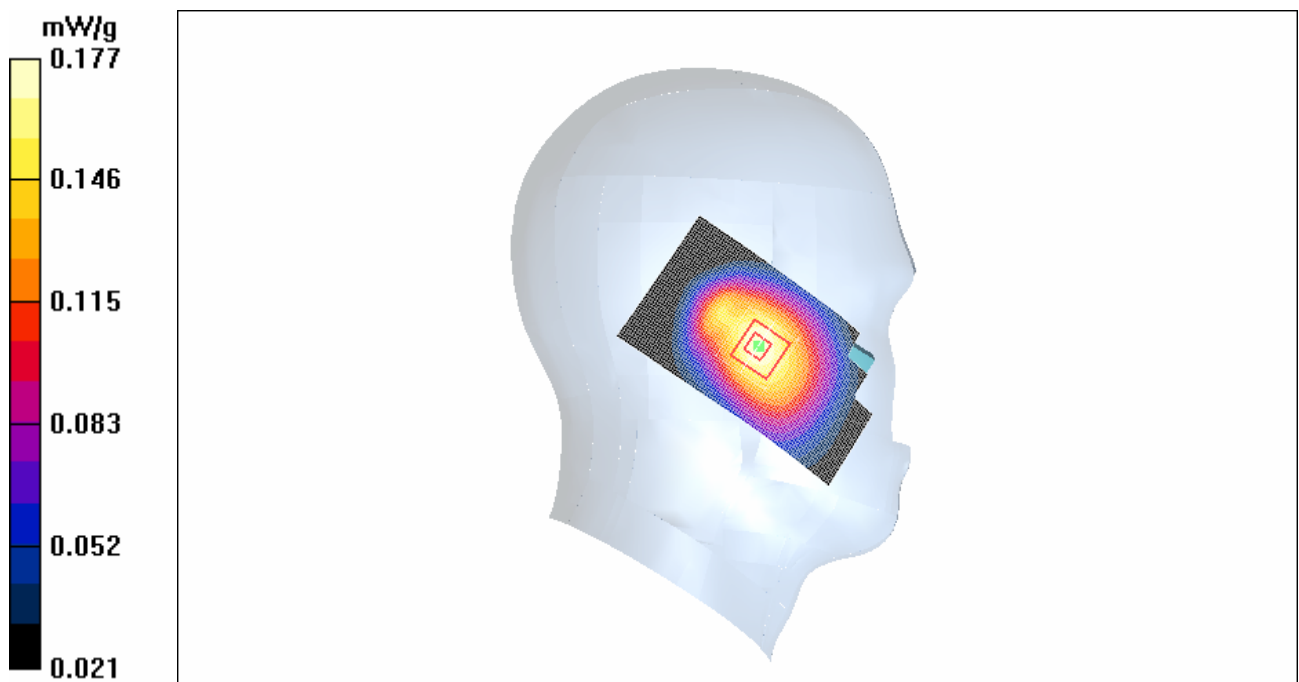


Figure 70 Left Hand Tilt 15° Close GSM 850 Channel 190

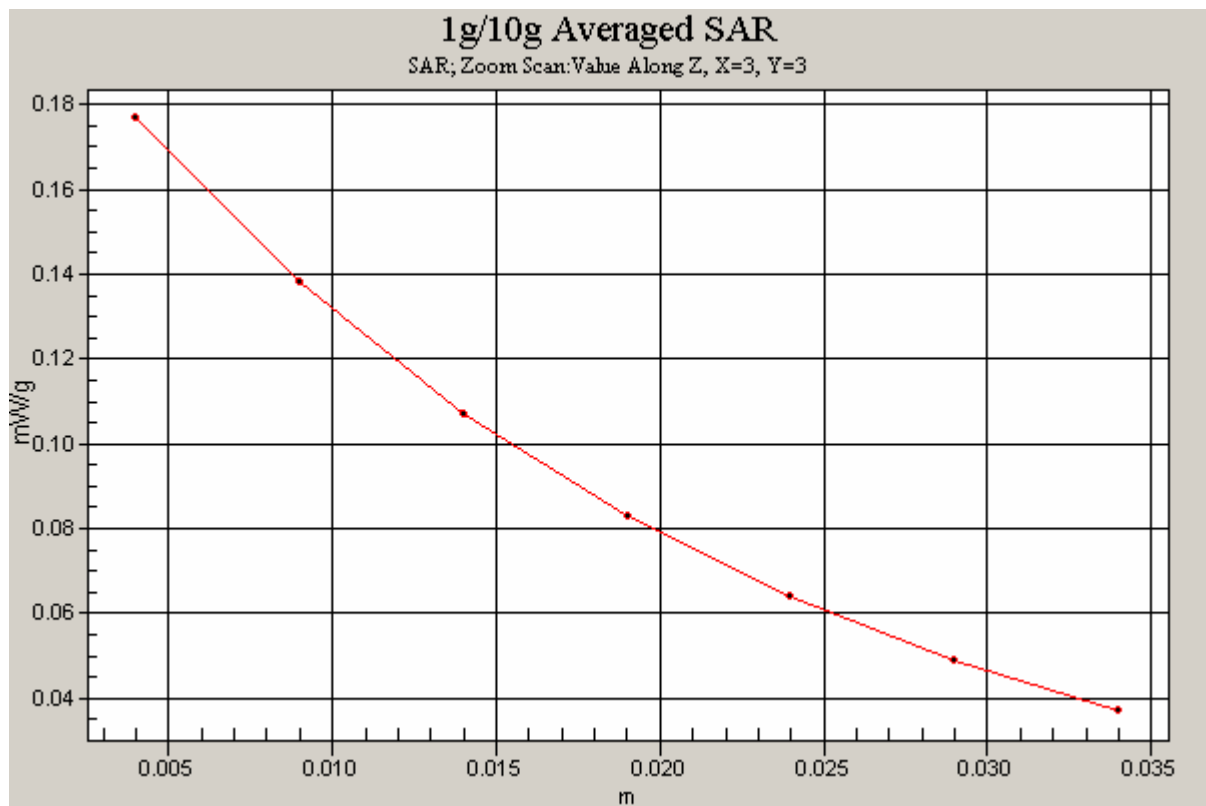


Figure 71 Z-Scan at power reference point (Left Hand Tilt 15° Close GSM 850 Channel 190)

GSM 850 Left Tilt Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.248 mW/g

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

Reference Value = 13.3 V/m; Power Drift = -0.129 dB

Peak SAR (extrapolated) = 0.297 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.244 mW/g

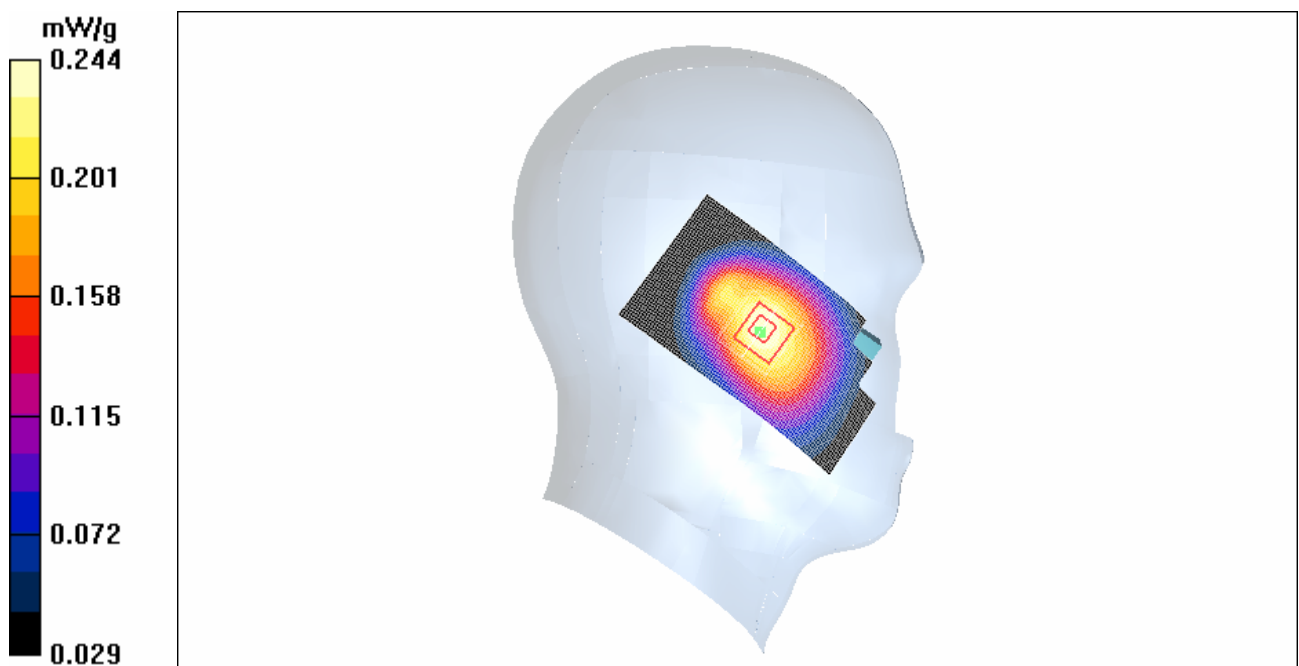


Figure 72 Left Hand Tilt 15° Close GSM 850 Channel 128

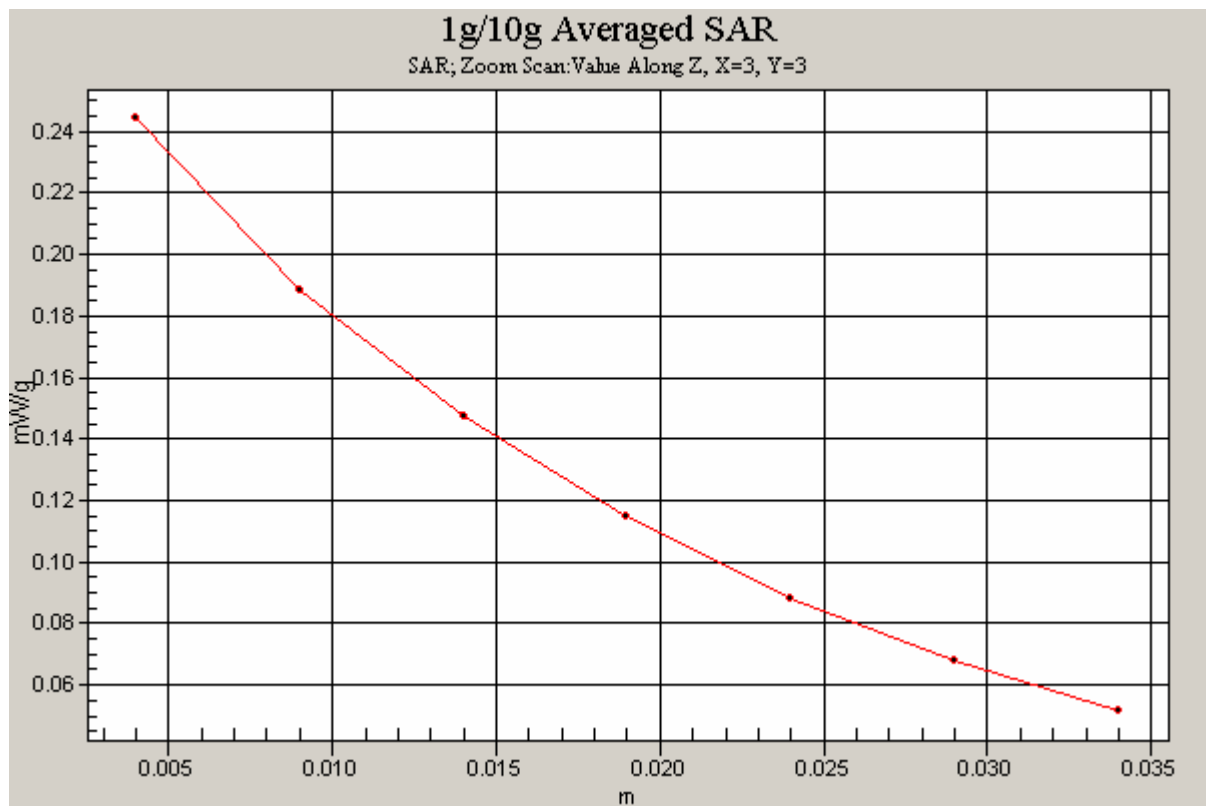


Figure 73 Z-Scan at power reference point (Left Hand Tilt 15° Close GSM 850 Channel 128)

GSM 850 Right Cheek High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.171 mW/g

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

Reference Value = 5.31 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.163 mW/g

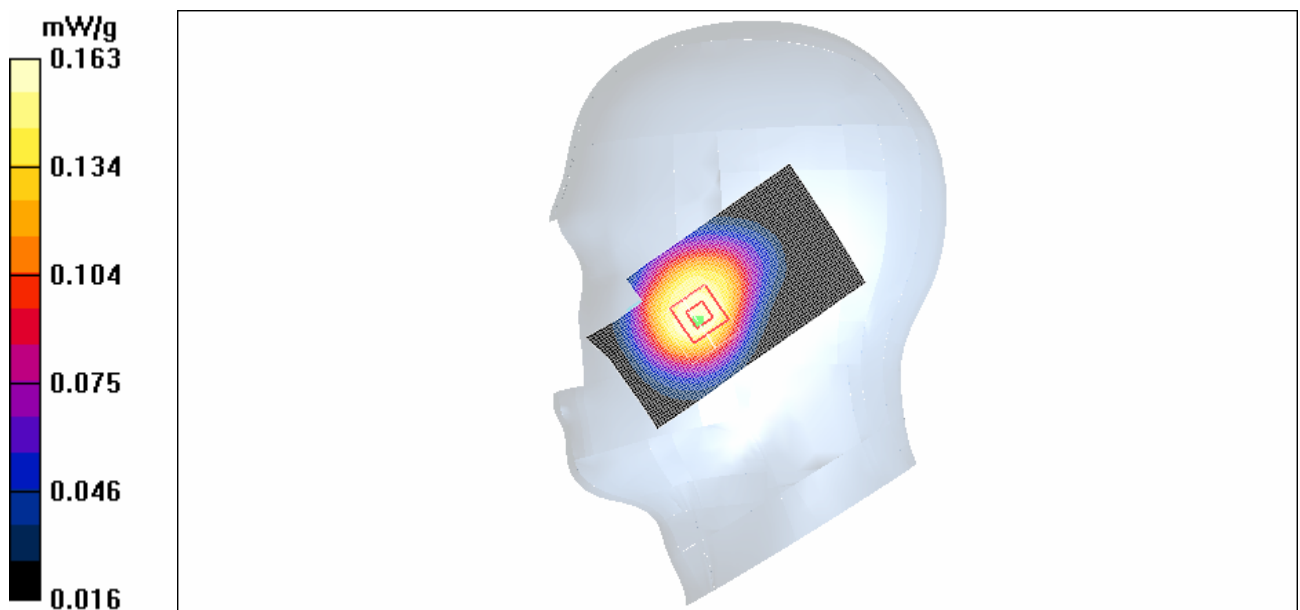


Figure 74 Right Hand Touch Cheek Close GSM 850 Channel 251

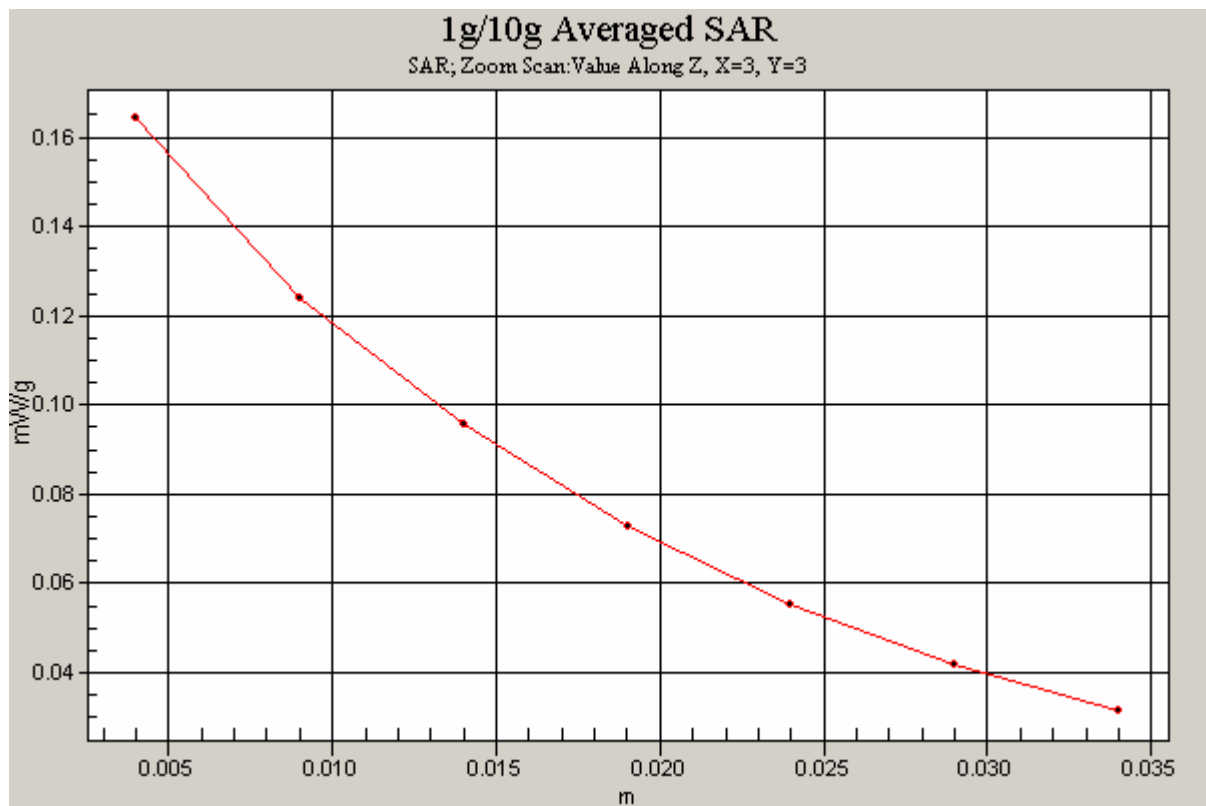


Figure 75 Z-Scan at power reference point (Right Hand Touch Cheek Close GSM 850 Channel 251)

GSM 850 Right Cheek Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.227 mW/g

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

Reference Value = 6.54 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.218 mW/g



Figure 76 Right Hand Touch Cheek Close GSM 850 Channel 190

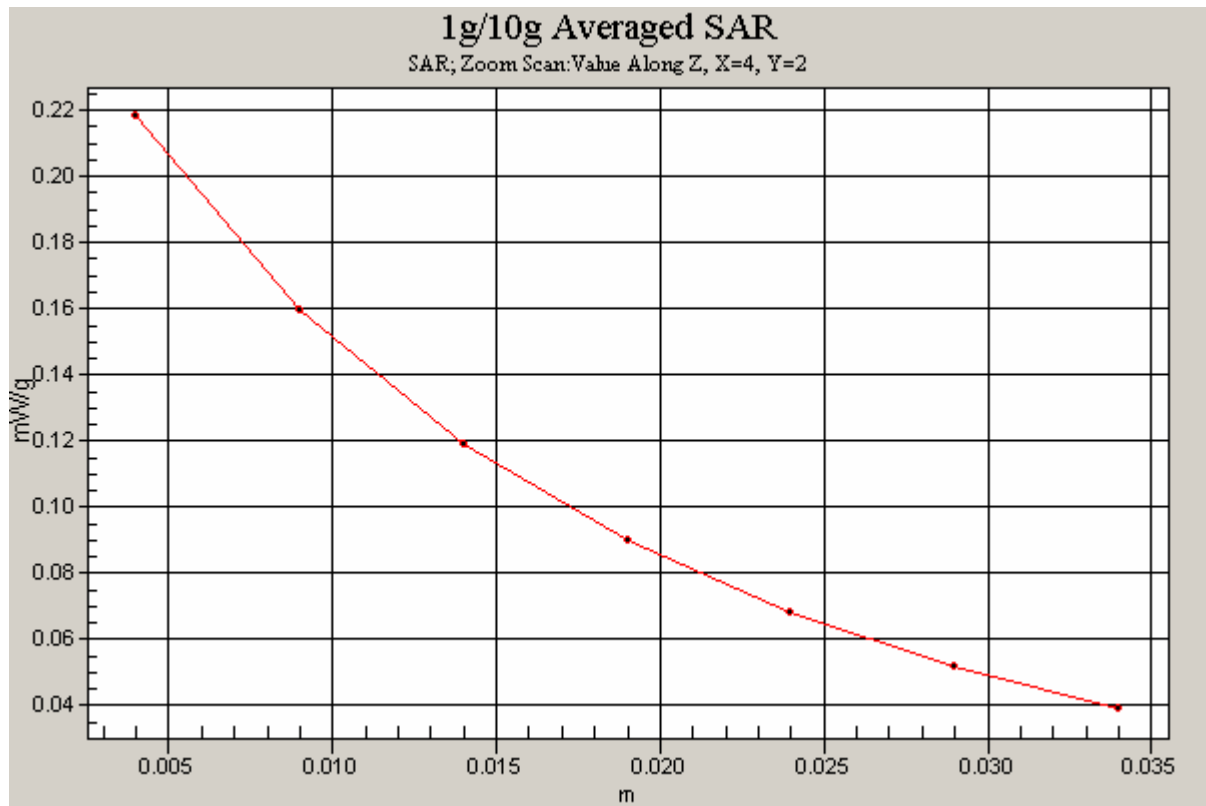


Figure 77 Z-Scan at power reference point (Right Hand Touch Cheek Close GSM 850 Channel 190)

GSM 850 Right Cheek Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.296 mW/g

Cheek Low/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) = 0.372 W/kg

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.289 mW/g

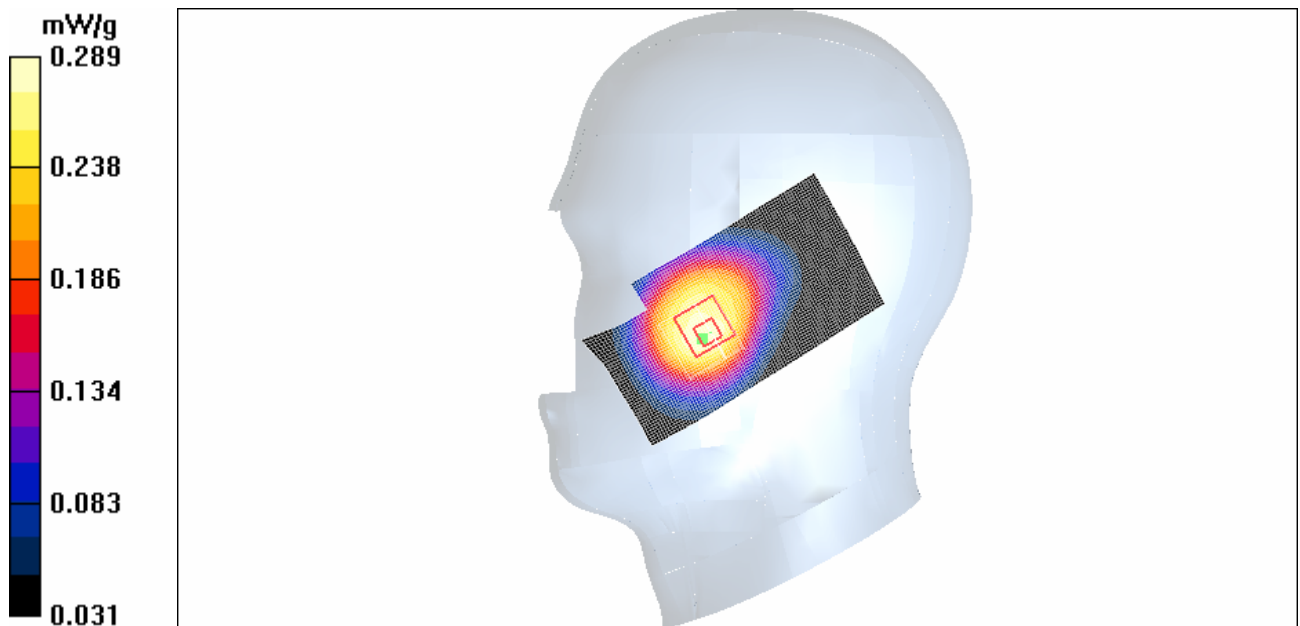


Figure 78 Right Hand Touch Cheek Close GSM 850 Channel 128

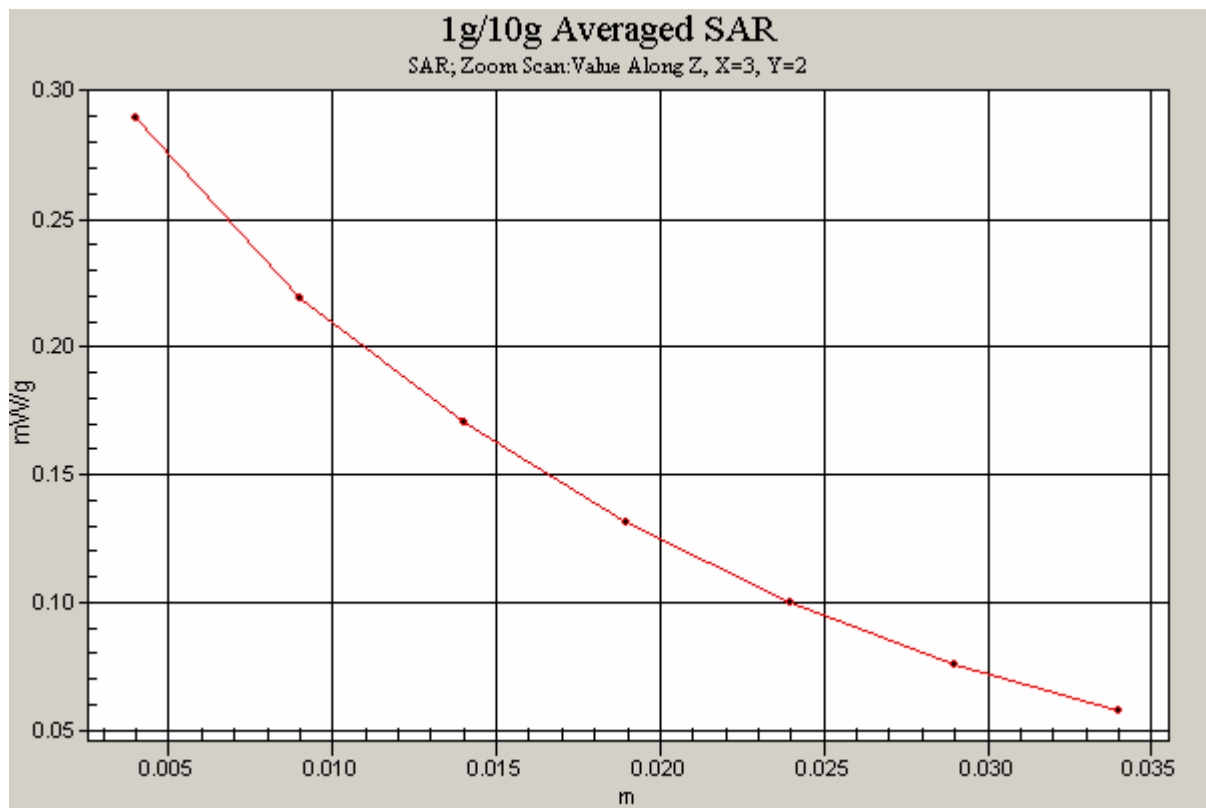


Figure 79 Z-Scan at power reference point (Right Hand Touch Cheek Close GSM 850 Channel 128)

GSM 850 Right Tilt High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.136 mW/g

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

Reference Value = 9.63 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.135 mW/g

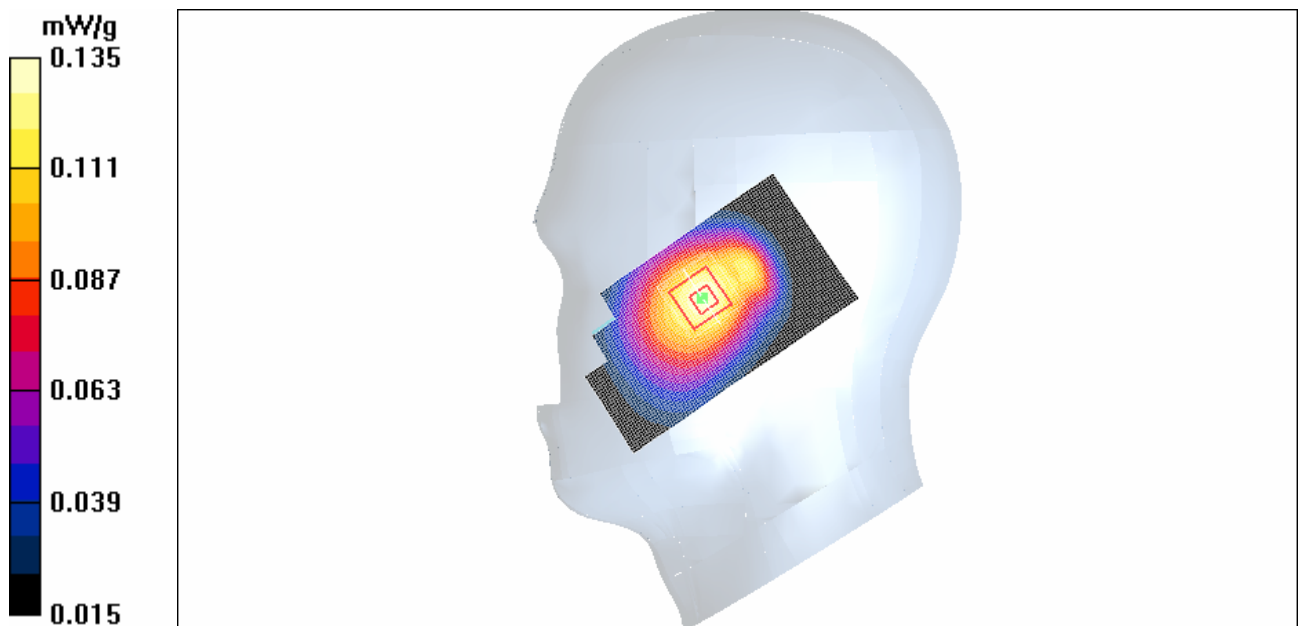


Figure 80 Right Hand Tilt 15° Close GSM 850 Channel 251

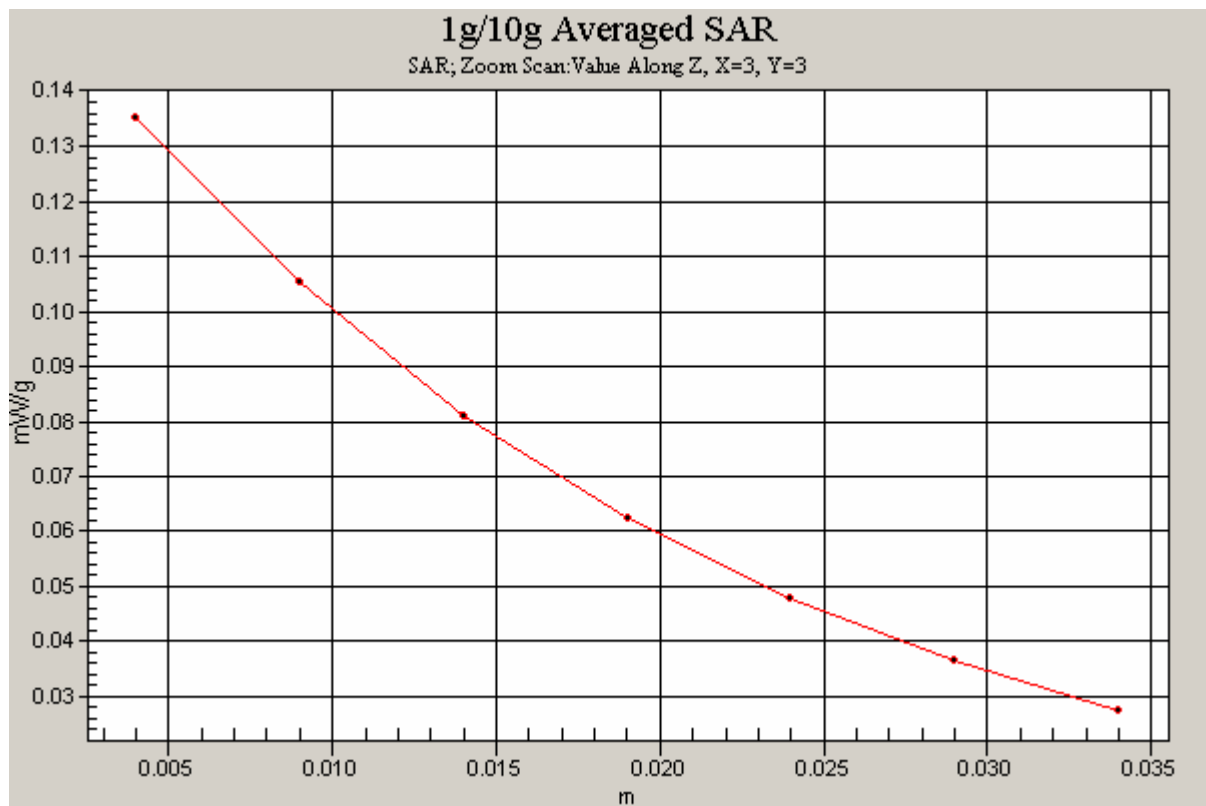


Figure 81 Z-Scan at power reference point (Right Hand Tilt 15° Close GSM 850 Channel 251)

GSM 850 Right Tilt Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.185 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 = -0.088 dB

Peak SAR (extrapolated) = 0.216 W/kg

SAR(1 g) = 0.173 mW/g; SAR(10 g) = 0.128 mW/g

Maximum value of SAR (measured) = 0.184 mW/g

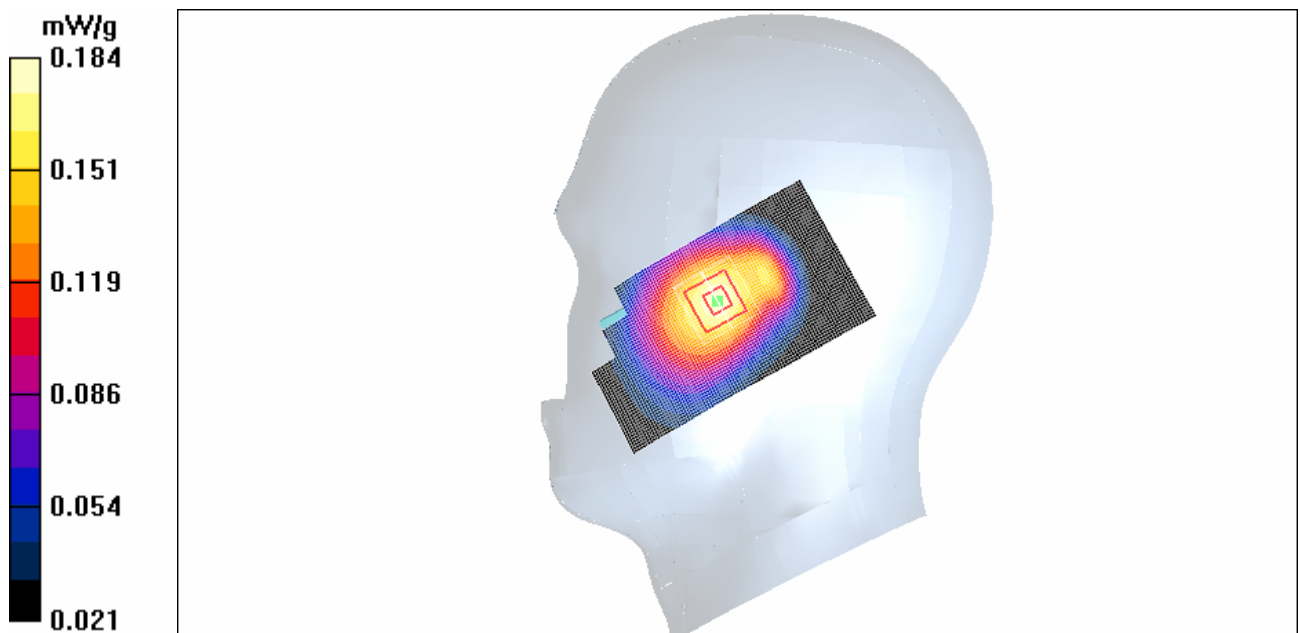


Figure 82 Right Hand Tilt 15° Close GSM 850 Channel 190

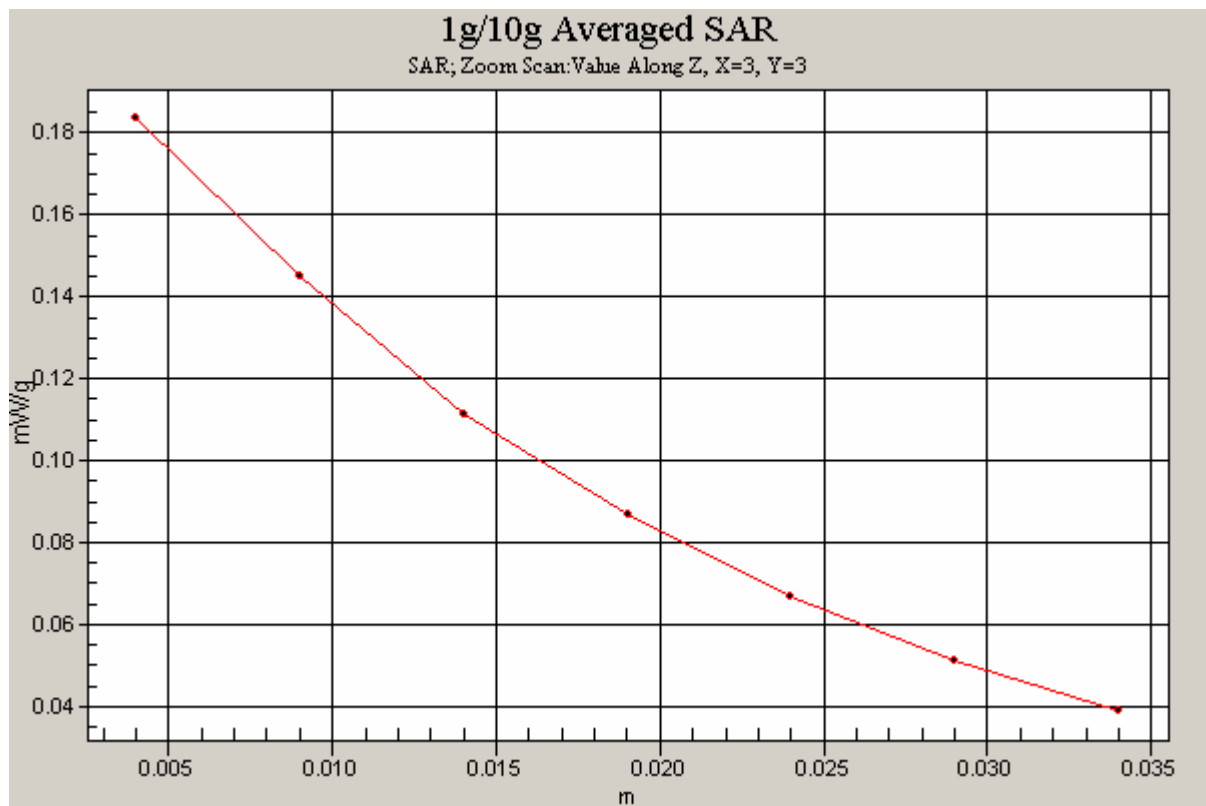


Figure 83 Z-Scan at power reference point (Right Hand Tilt 15° Close GSM 850 Channel 190)

GSM 850 Right Tilt Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.85, 6.85, 6.85);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.240 mW/g

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

Reference Value = 13.0 V/m; Power Drift = 0.145 dB

Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.167 mW/g

Maximum value of SAR (measured) = 0.238 mW/g

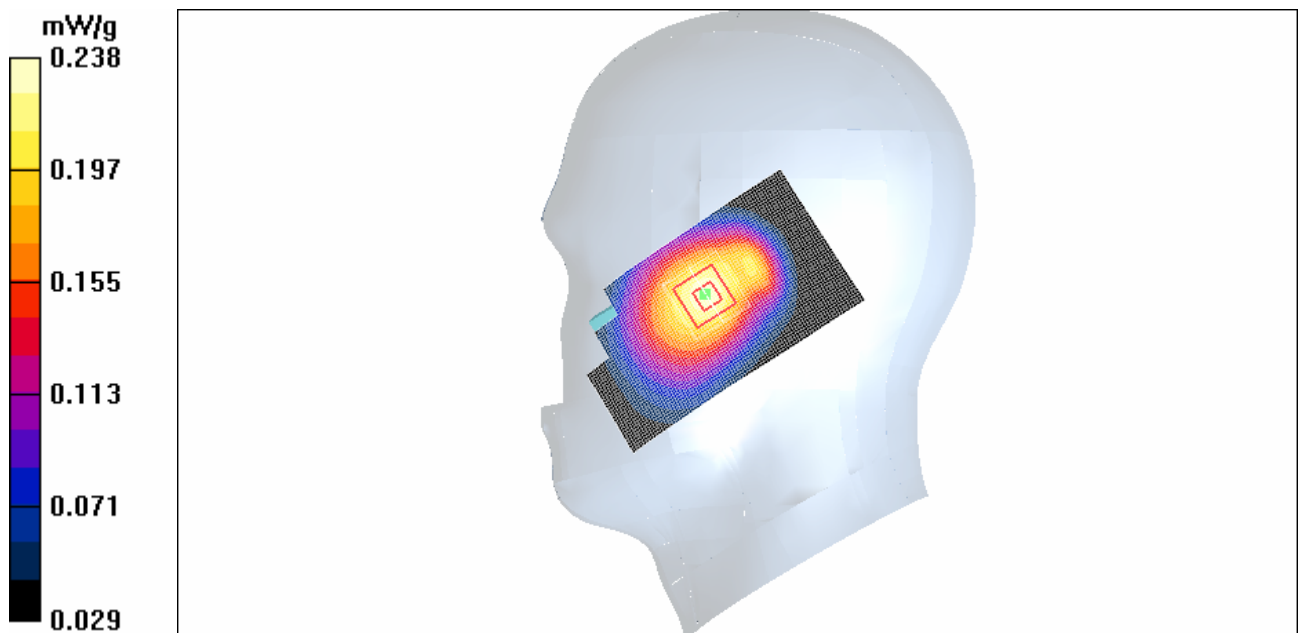


Figure 84 Right Hand Tilt 15° Close GSM 850 Channel 128

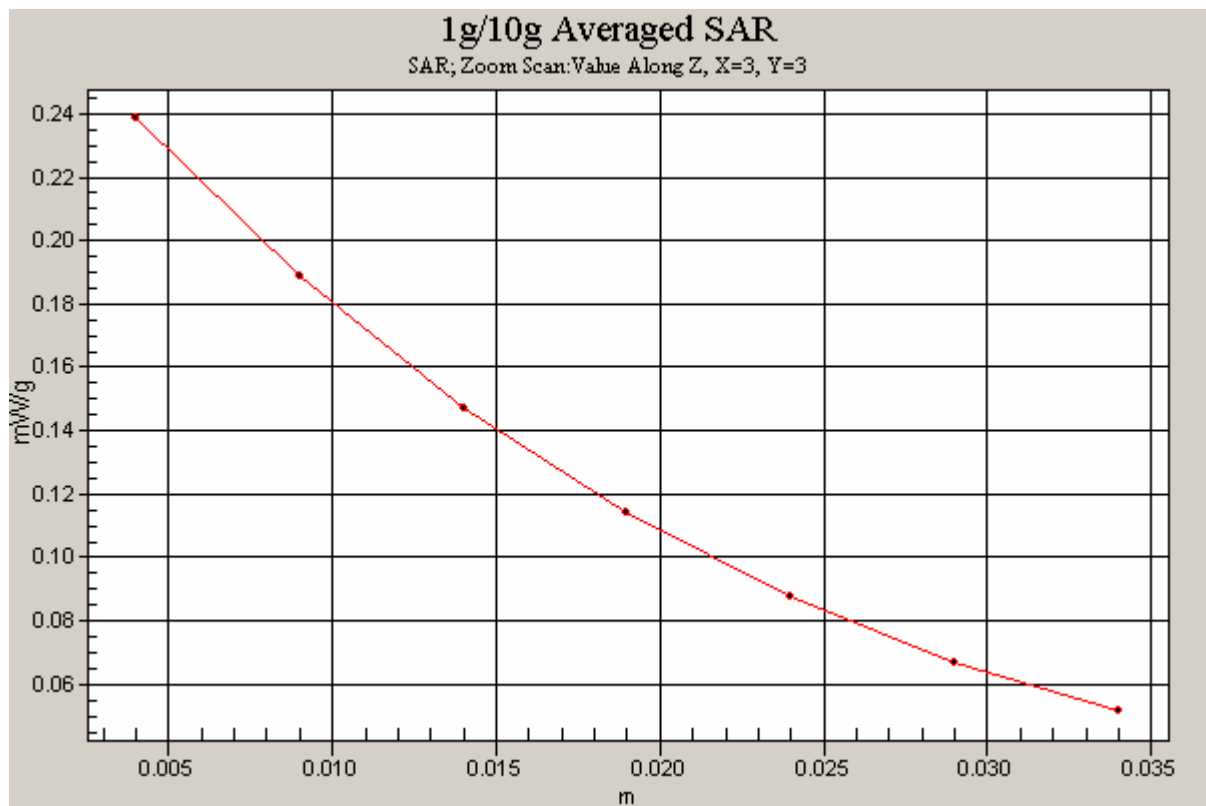


Figure 85 Z-Scan at power reference point (Right Hand Tilt 15° Close GSM 850 Channel 128)

GSM 850 Towards Ground High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground High/Area Scan (71x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.248 mW/g

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

Reference Value = 6.07 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.243 mW/g

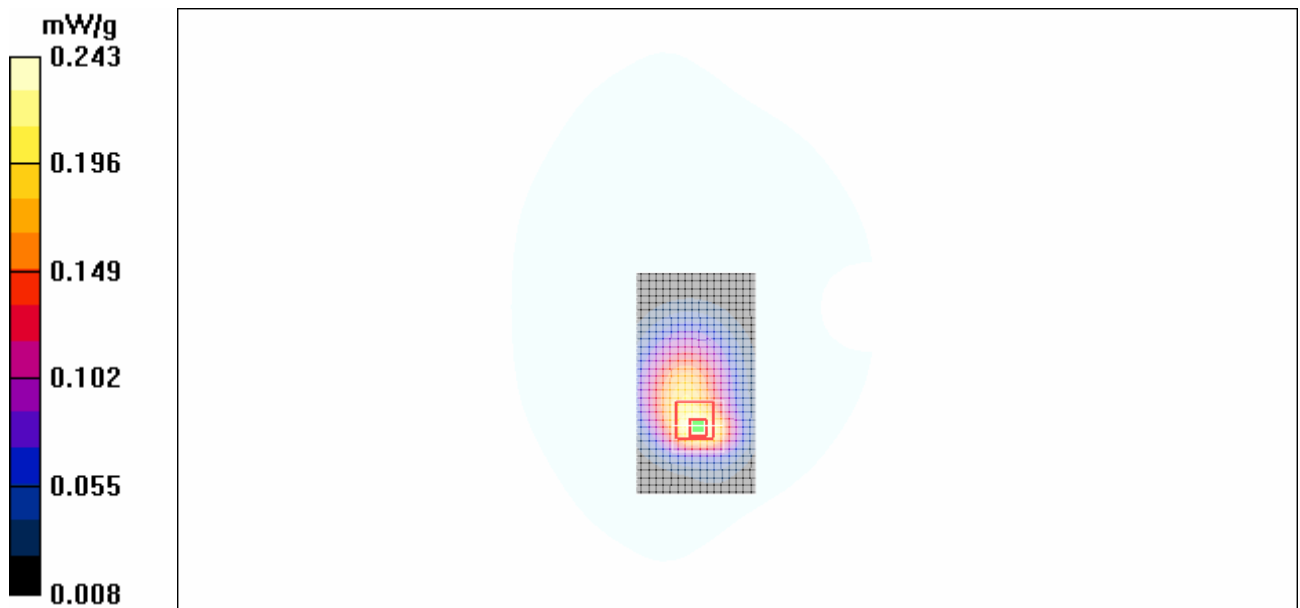


Figure 86 Body, Towards Ground, Close GSM 850 Channel 251

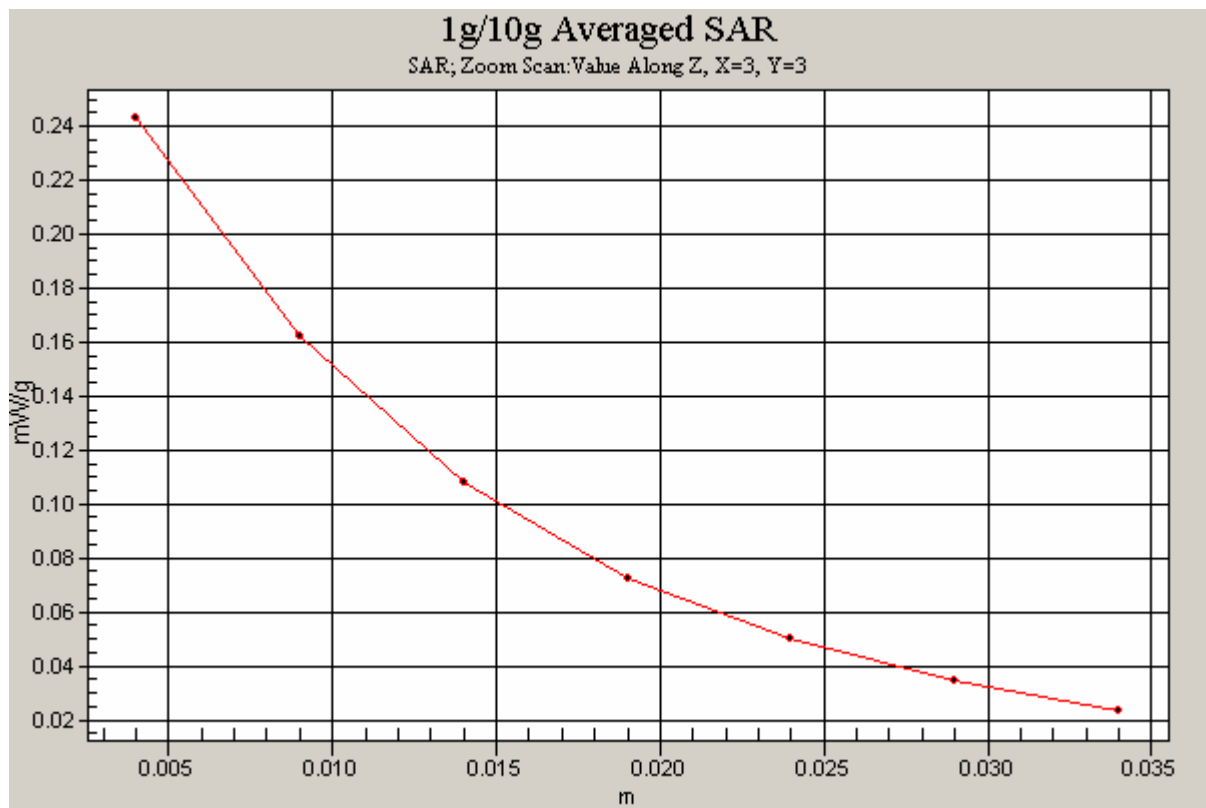


Figure 87 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 Channel 251)

GSM 850 Towards Ground Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Middle/Area Scan (71x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.324 mW/g

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

Reference Value = 6.95 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.320 mW/g

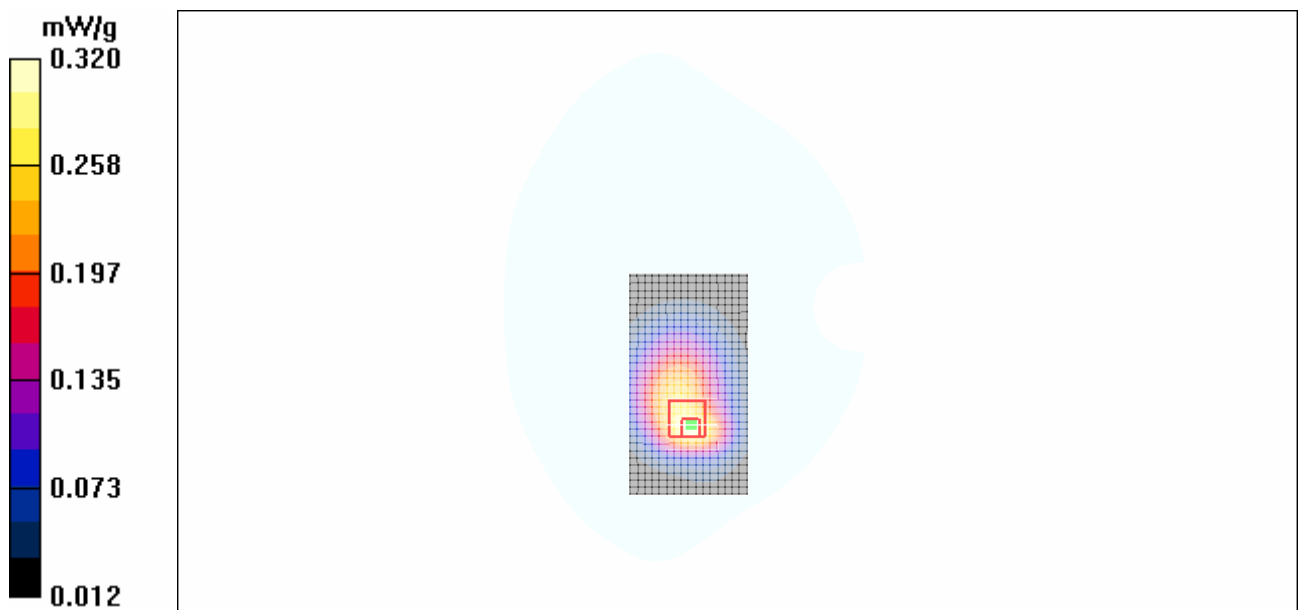


Figure 88 Body, Towards Ground, Close GSM 850 Channel 190

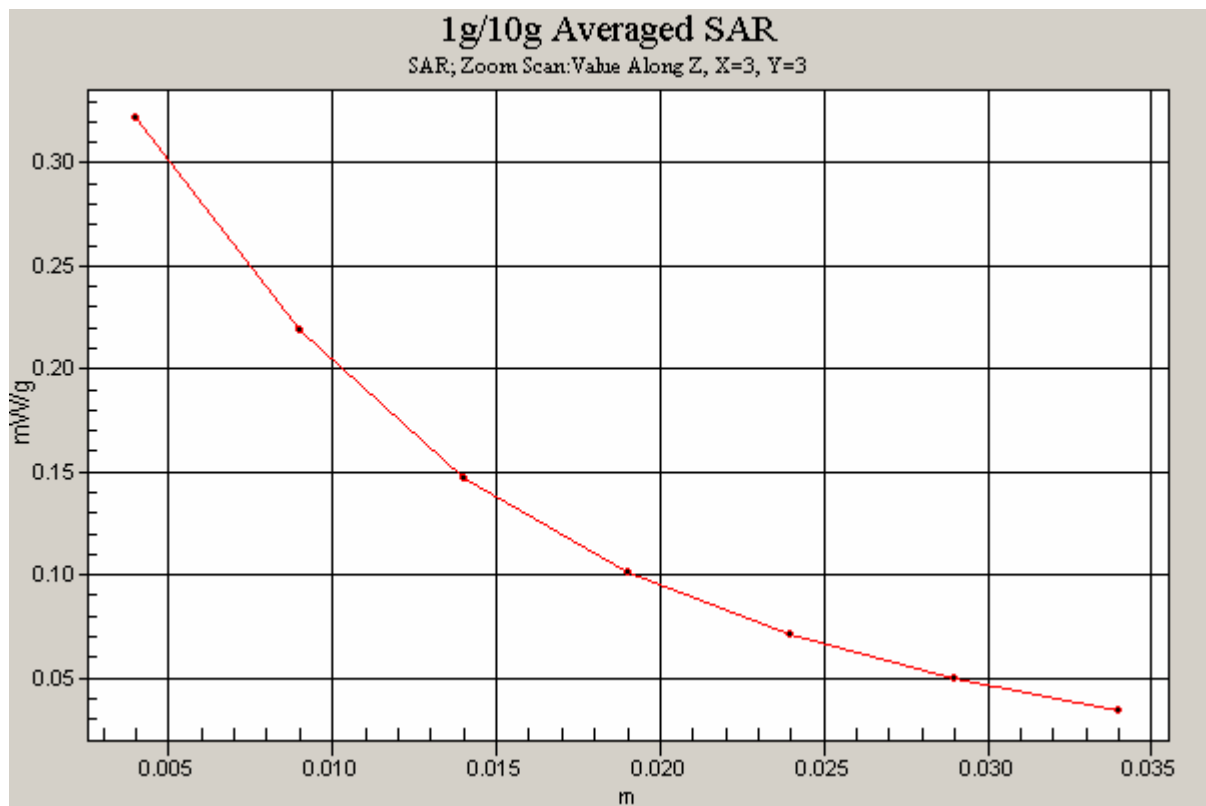


Figure 89 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 Channel 190)

GSM 850 Towards Ground Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (71x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.440 mW/g

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

Reference Value = 8.11 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.619 W/kg

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.258 mW/g

Maximum value of SAR (measured) = 0.431 mW/g

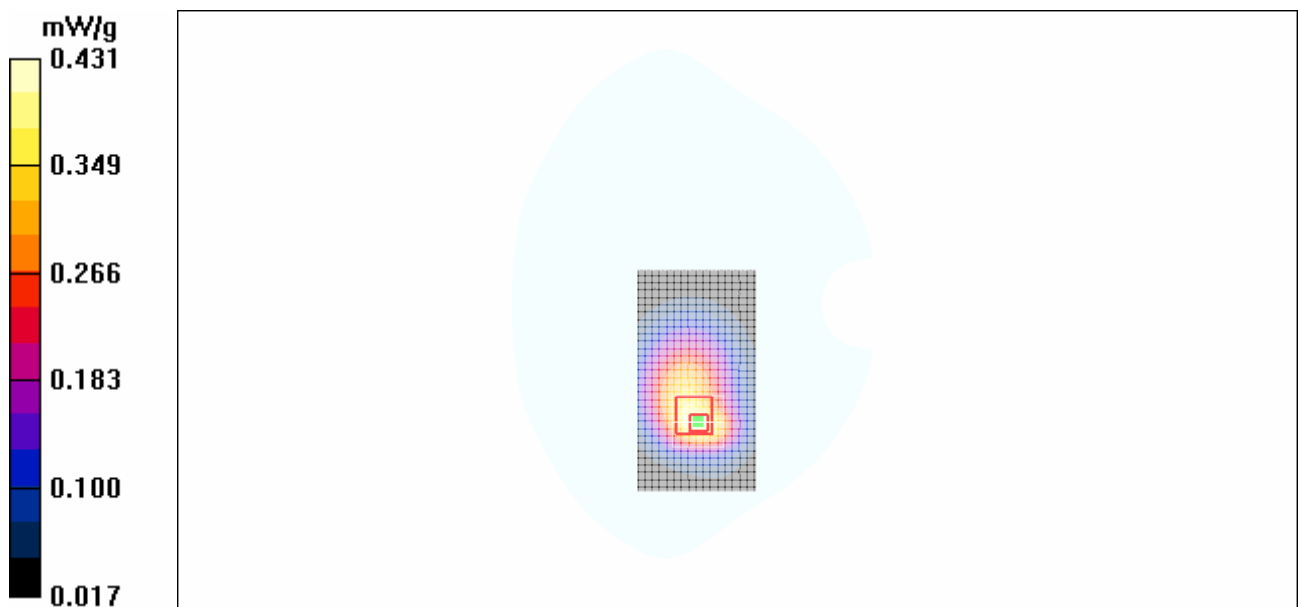


Figure 90 Body, Towards Ground, Close GSM 850 Channel 128

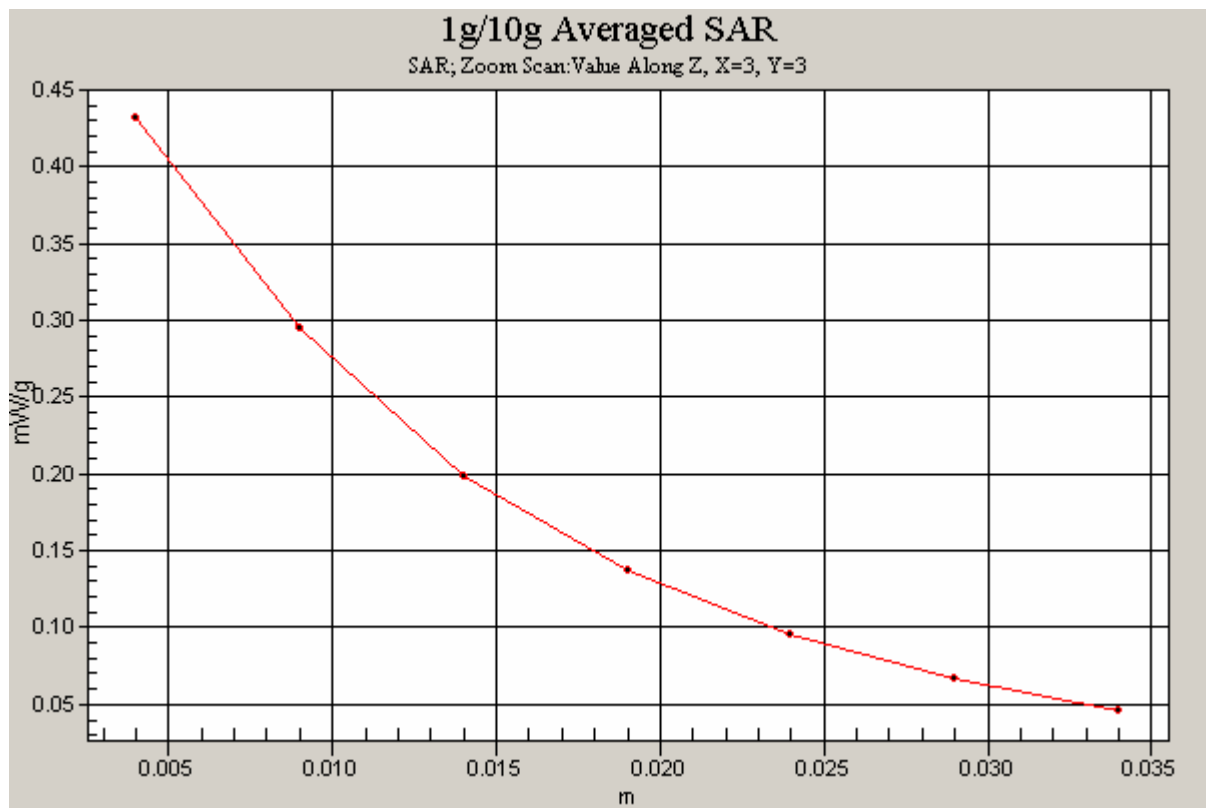


Figure 91 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 Channel 128)

GSM 850 Towards Phantom High Close

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.096 mW/g

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

Reference Value = 4.56 V/m; Power Drift = 0.097 dB

Peak SAR (extrapolated) = 0.112 W/kg

SAR(1 g) = 0.090 mW/g; SAR(10 g) = 0.066 mW/g

Maximum value of SAR (measured) = 0.094 mW/g

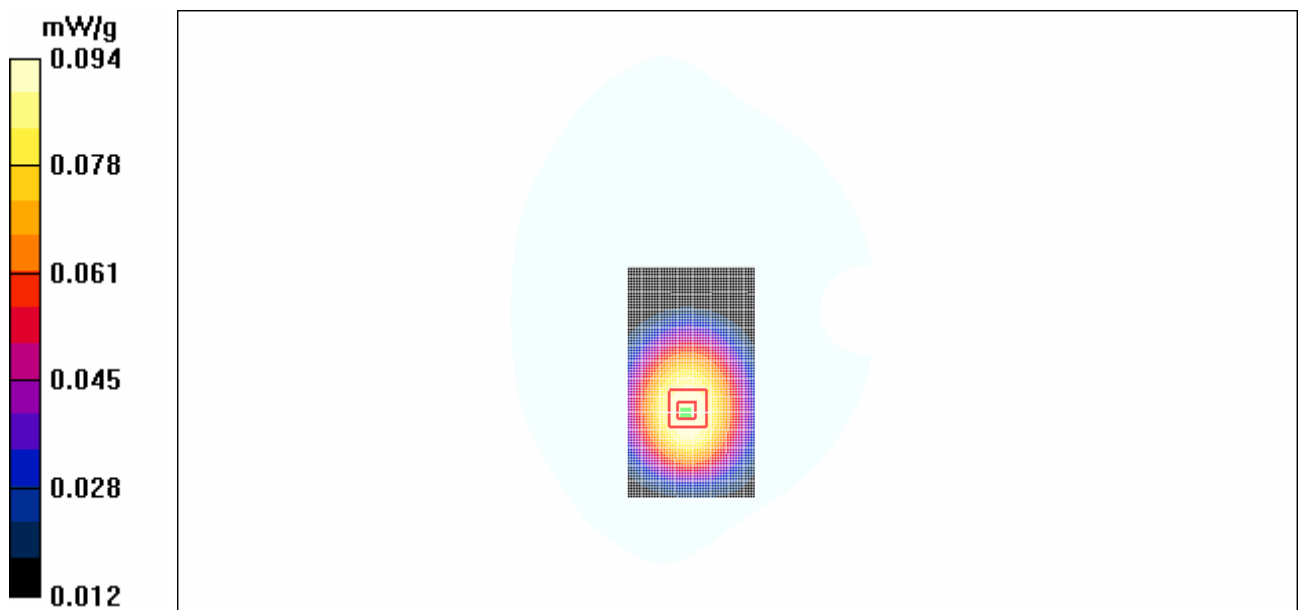


Figure 92 Body, Towards Phantom, Close GSM 850 Channel 251

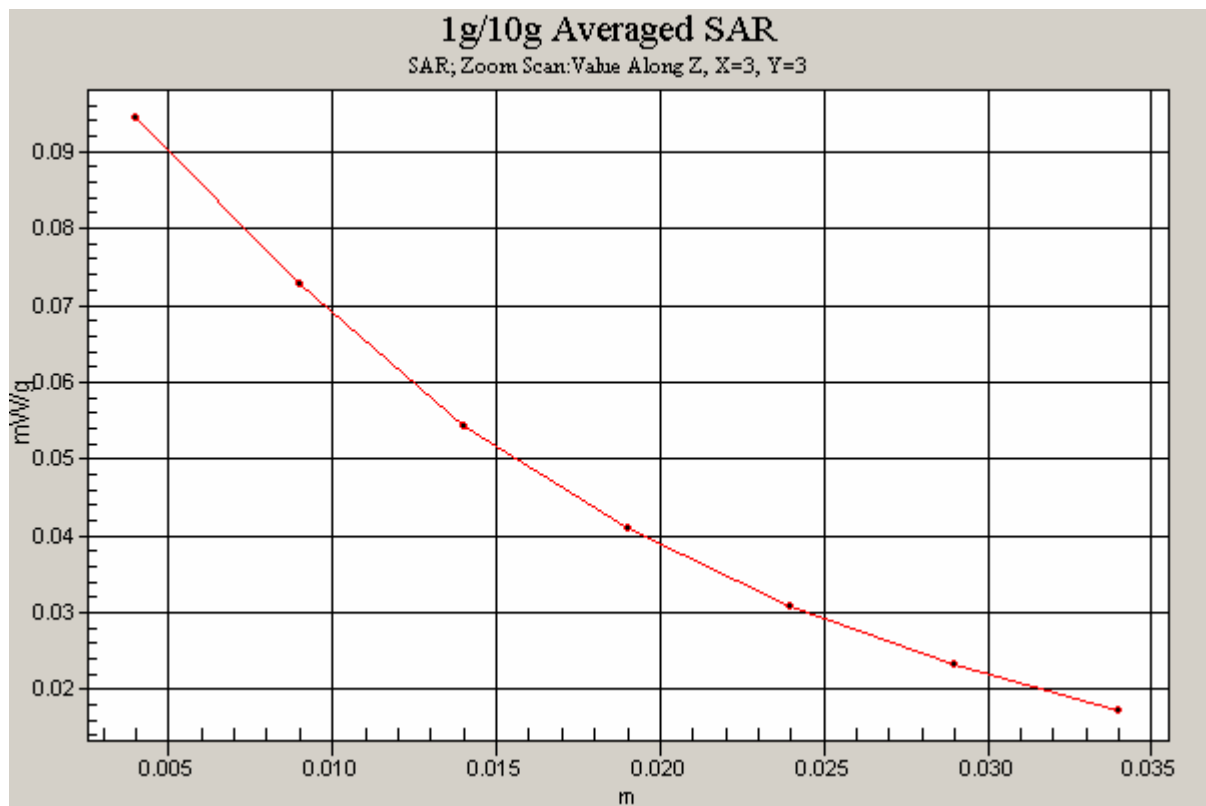


Figure 93 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 Channel 251)

GSM 850 Towards Phantom Middle Close

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

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.120 mW/g

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

Reference Value = 5.21 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.143 W/kg

SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.122 mW/g

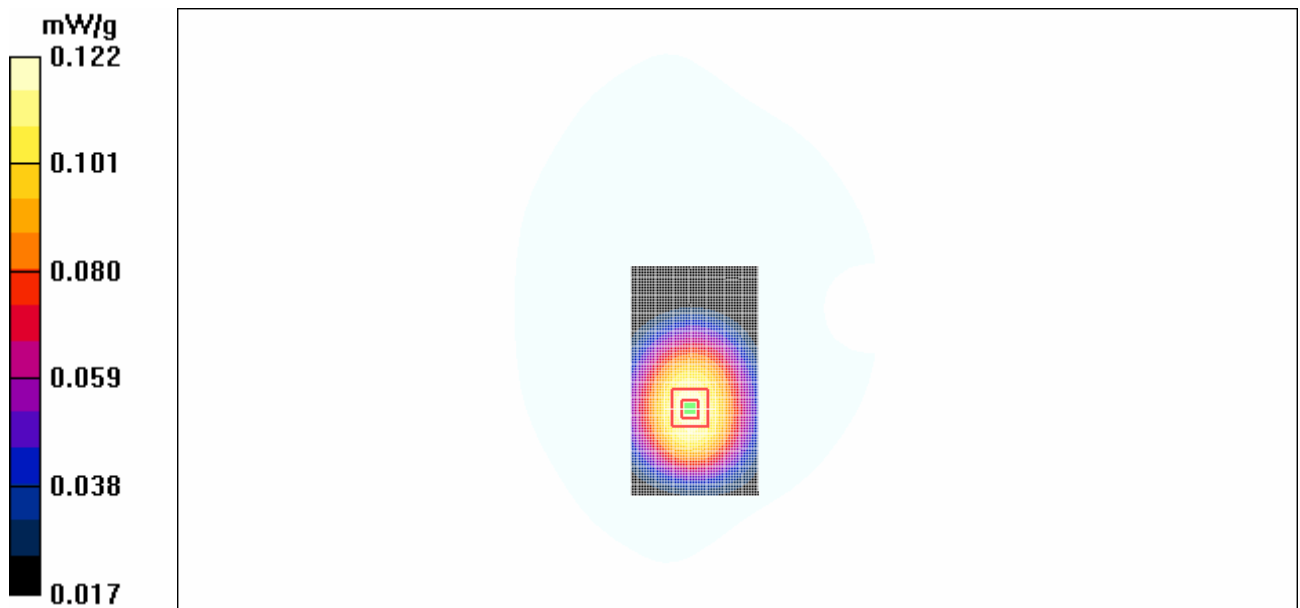


Figure 94 Body, Towards Phantom, Close GSM 850 Channel 190

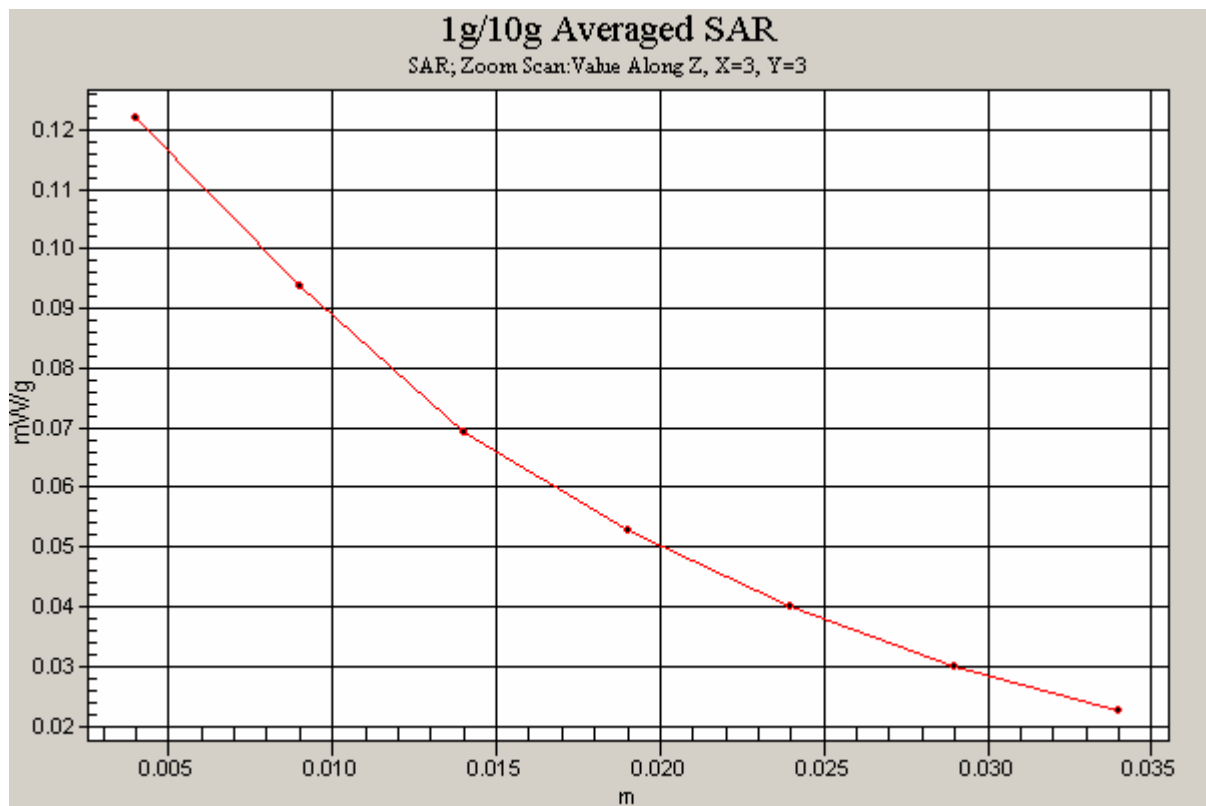


Figure 95 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 Channel 190)

GSM 850 Towards Phantom Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.165 mW/g

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

Reference Value = 6.15 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.167 mW/g

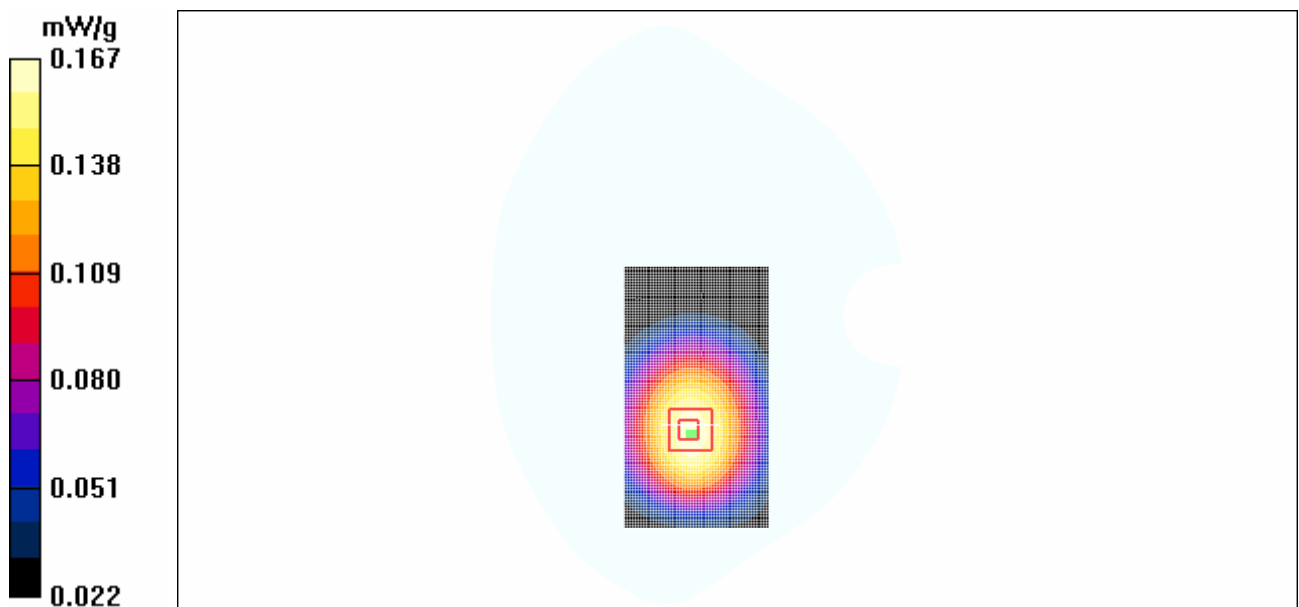


Figure 96 Body, Towards Phantom, Close GSM 850 Channel 128

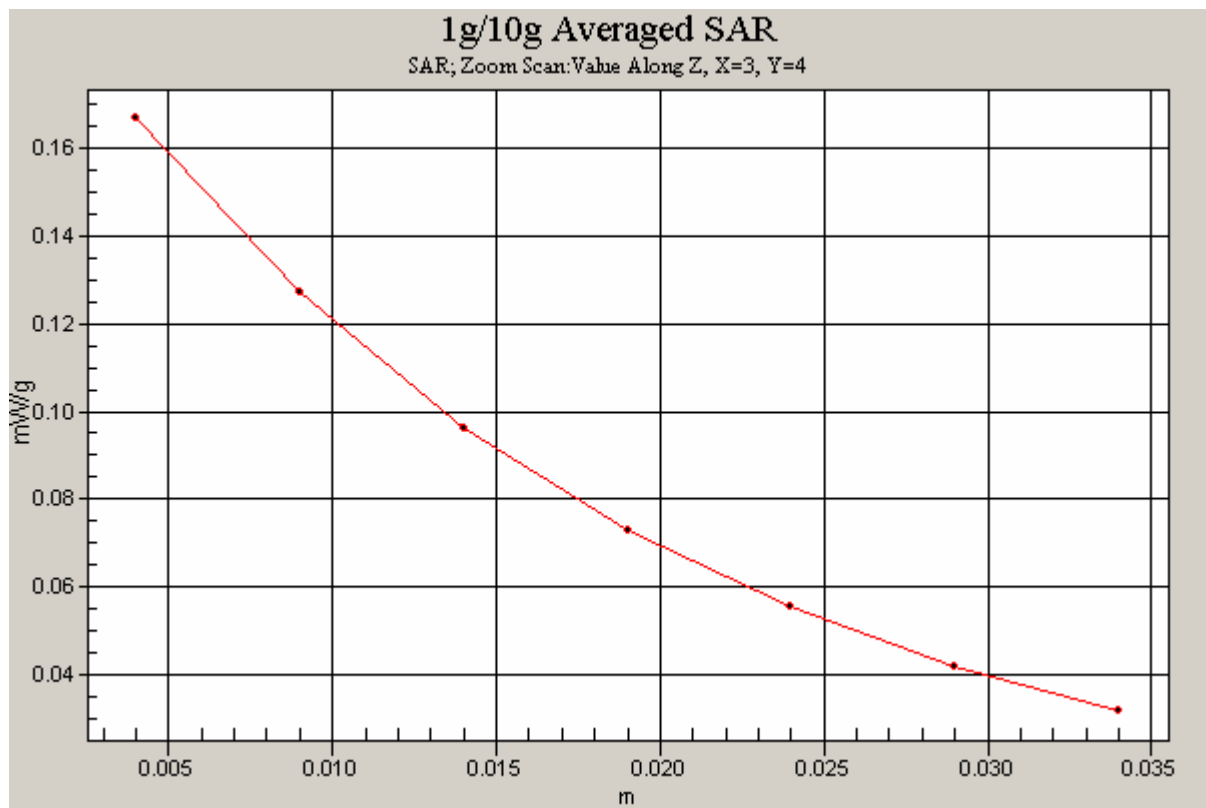


Figure 97 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 Channel 128)

GSM 850 Earphone Towards Ground Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.454 mW/g

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

Reference Value = 7.31 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.626 W/kg

SAR(1 g) = 0.402 mW/g; SAR(10 g) = 0.258 mW/g

Maximum value of SAR (measured) = 0.443 mW/g

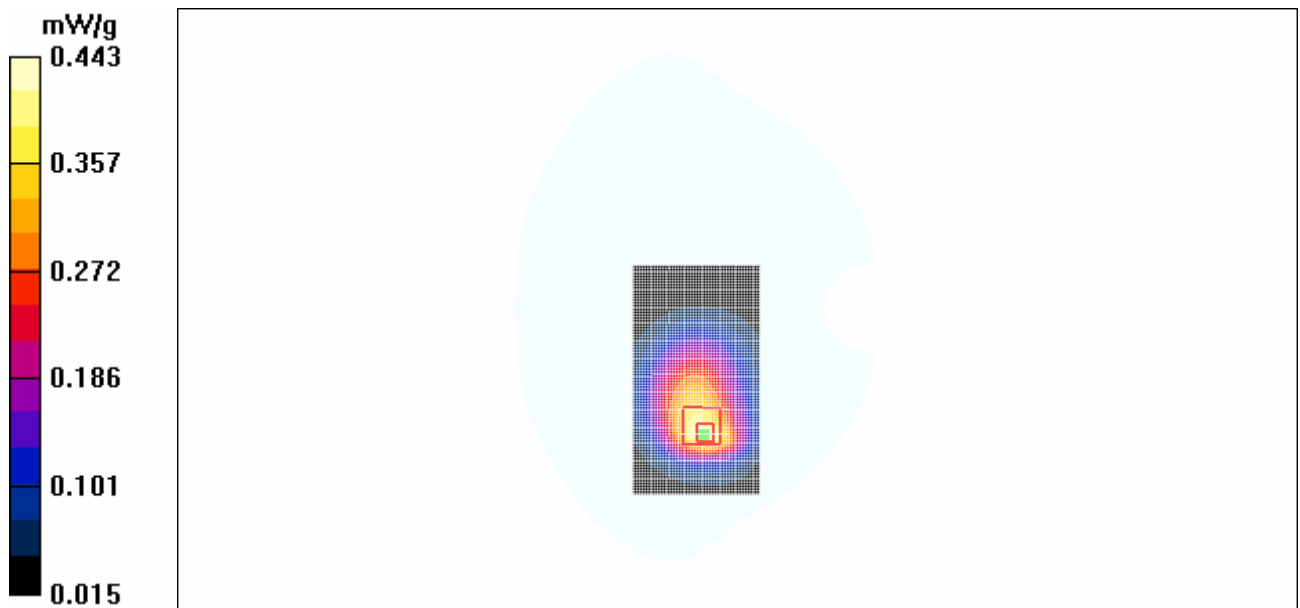


Figure 98 Body with Earphone, Towards Ground, Close GSM 850, Channel 128

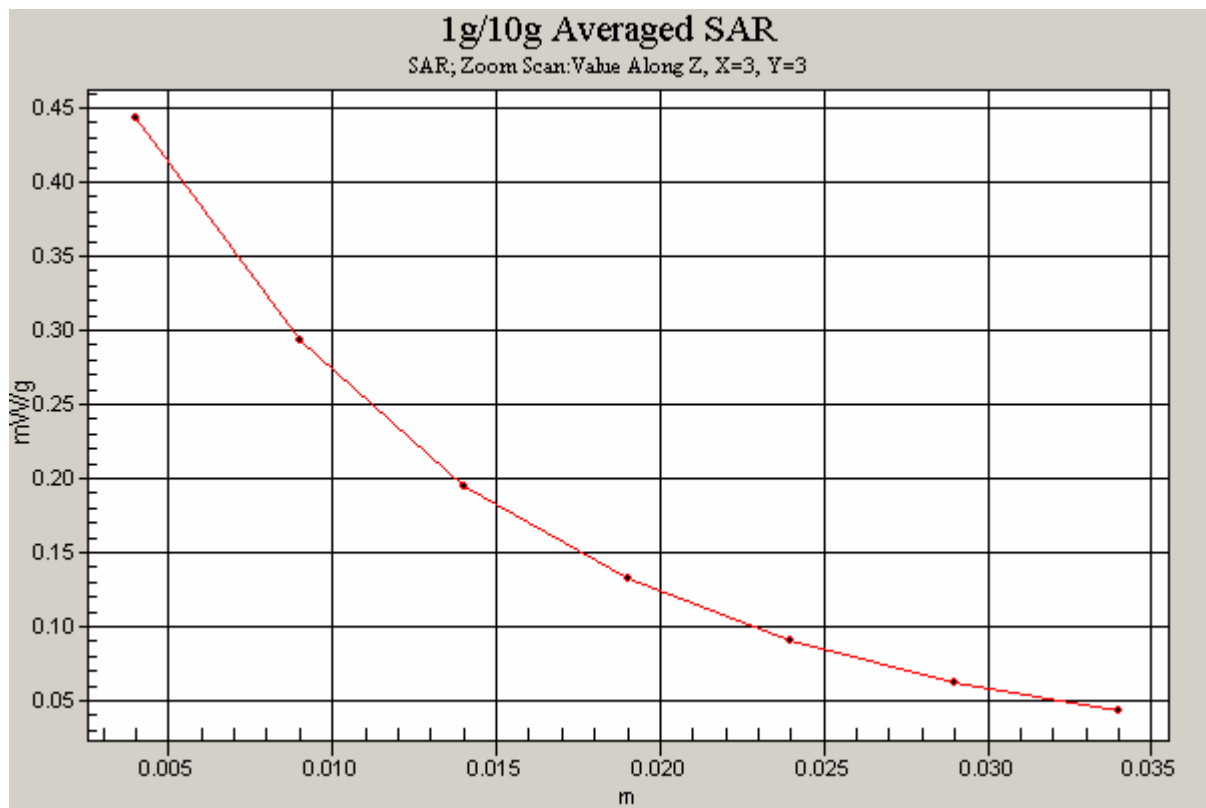


Figure 99 Z-Scan at power reference point (Body with Earphone, Towards Ground, Close GSM 850, Channel 128)

GSM 850 Bluetooth Earphone Towards Ground Low Close

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (71x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.424 mW/g

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

Reference Value = 7.37 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 0.586 W/kg

SAR(1 g) = 0.391 mW/g; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 0.422 mW/g

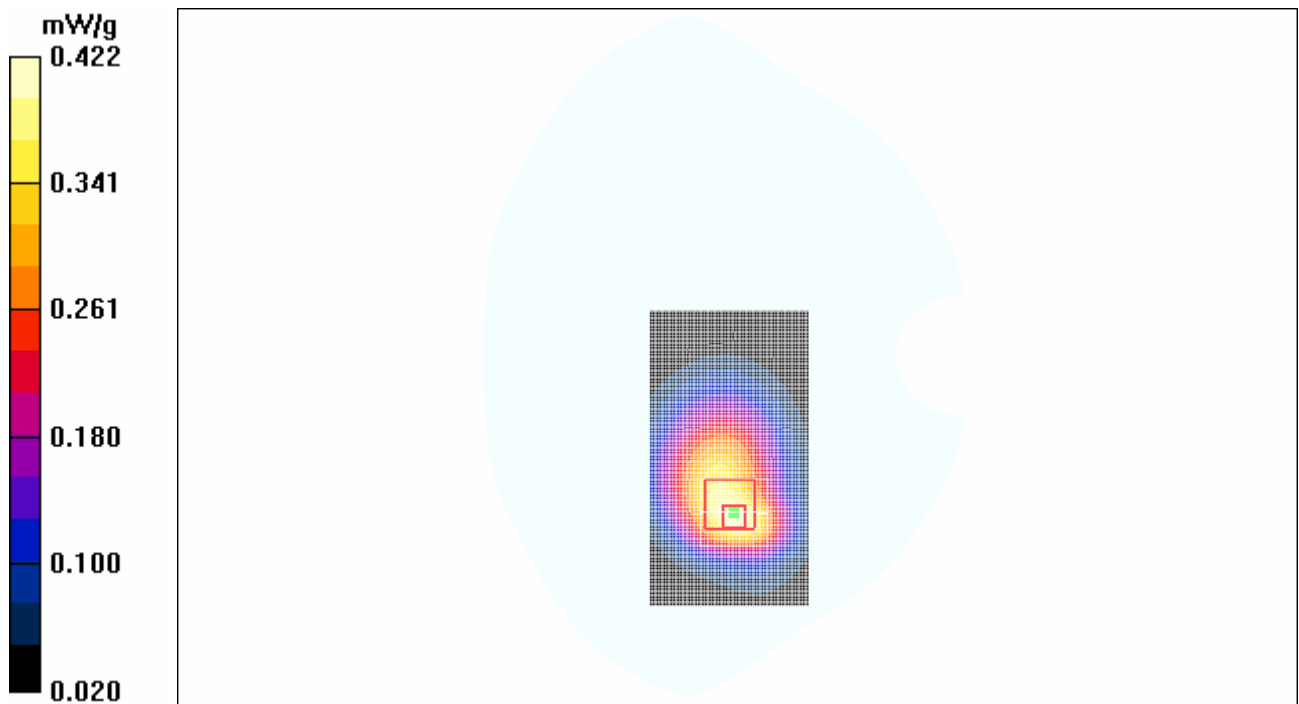


Figure 100 Body with Bluetooth earphone, Towards Ground, Close GSM 850, Channel 128

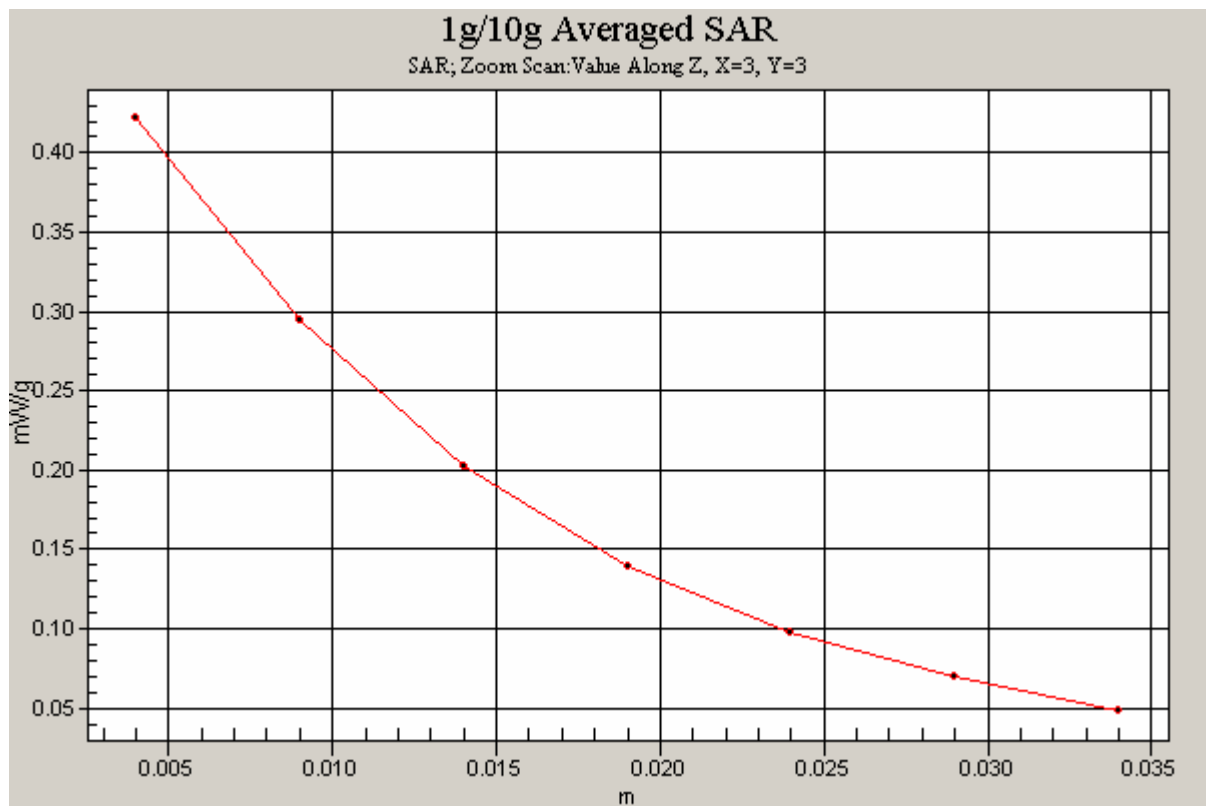


Figure 101 Z-Scan at power reference point (Body with Bluetooth earphone, Towards Ground, Close GSM 850, Channel 128)

GSM 850 GPRS Towards Ground High Close

Communication System: GSM850 + GPRS(2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.525 mW/g

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

Reference Value = 7.83 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.290 mW/g

Maximum value of SAR (measured) = 0.492 mW/g

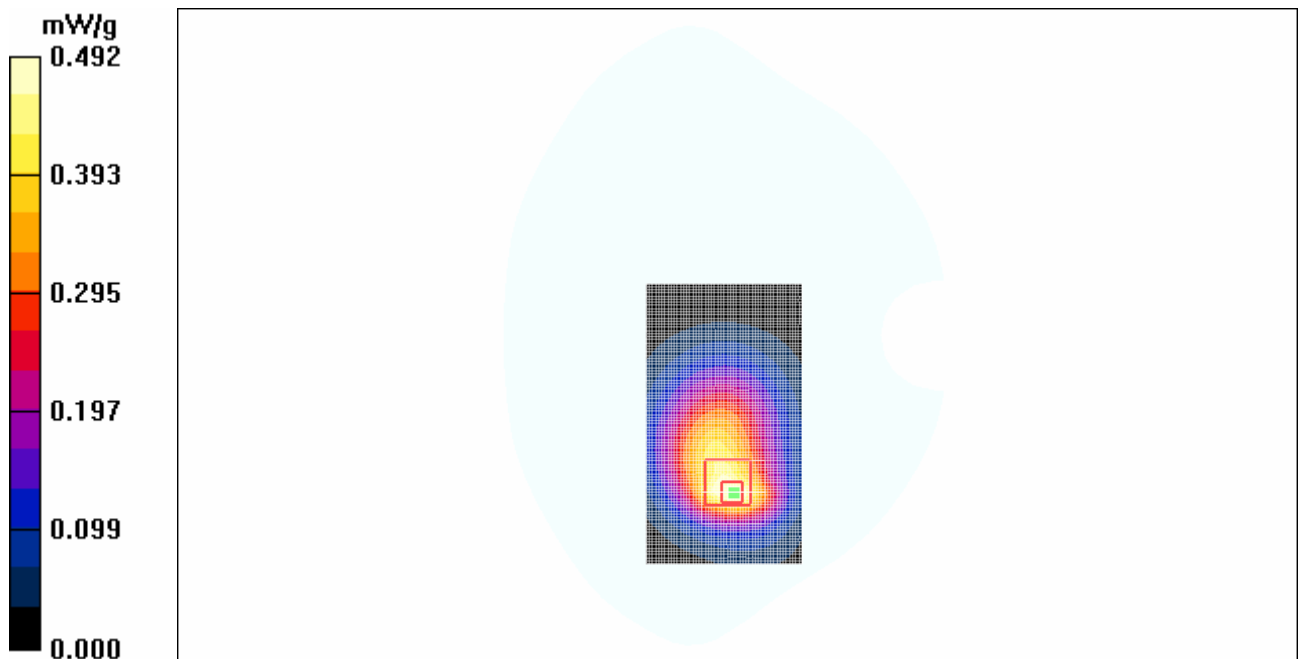


Figure 102 Body, Towards Ground, Close GSM 850 GPRS, Channel 251

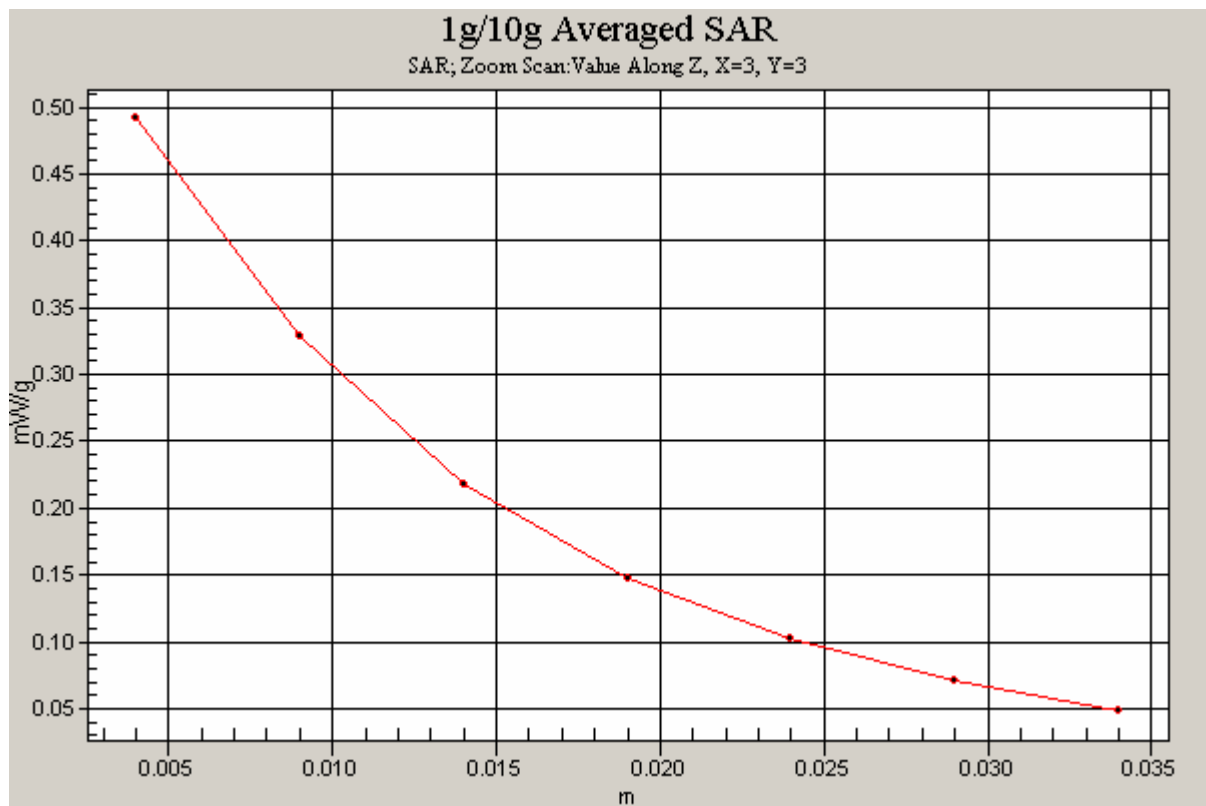


Figure 103 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 GPRS, Channel 251)

GSM 850 GPRS Towards Ground Middle Close

Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.718 mW/g

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

Reference Value = 9.28 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.620 mW/g; SAR(10 g) = 0.404 mW/g

Maximum value of SAR (measured) = 0.674 mW/g

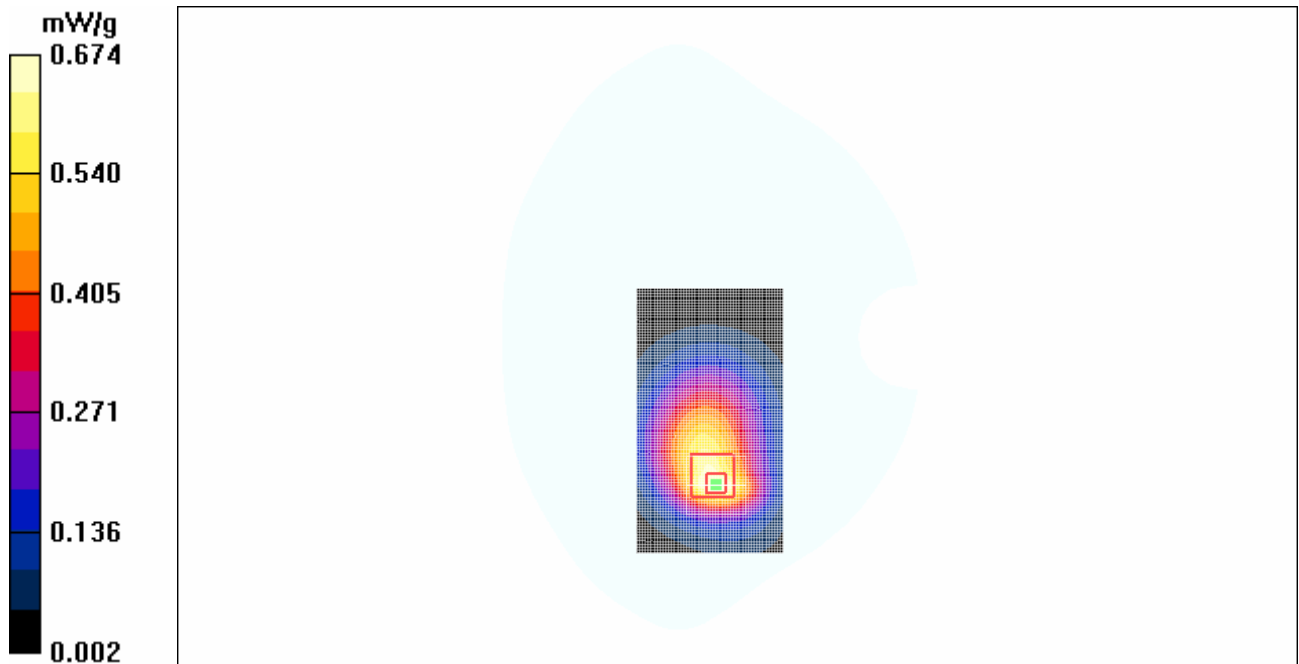


Figure 104 Body, Towards Ground, Close GSM 850 GPRS Channel 190

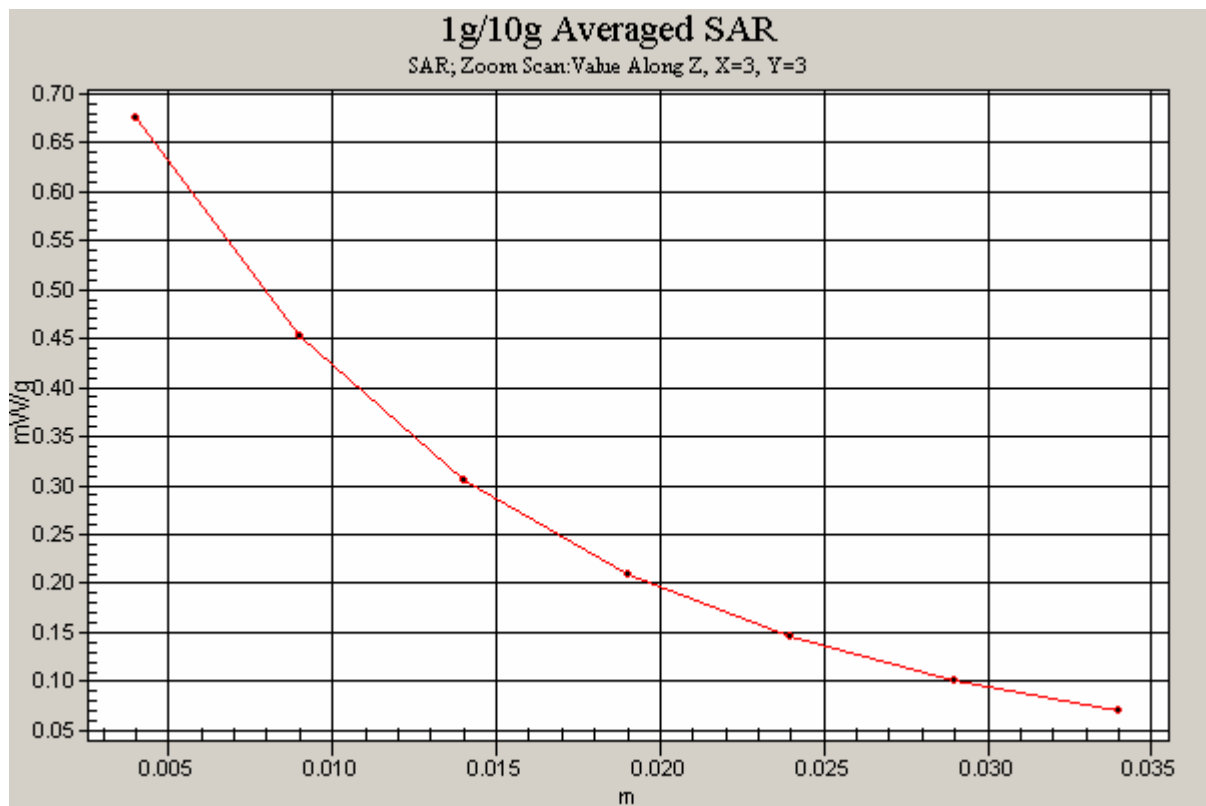


Figure 105 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 GPRS Channel 190)

GSM 850 GPRS Towards Ground Low Close

Communication System: GSM850 + GPRS(2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (71x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.815 mW/g

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

Reference Value = 9.86 V/m; Power Drift = -0.144 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.798 mW/g

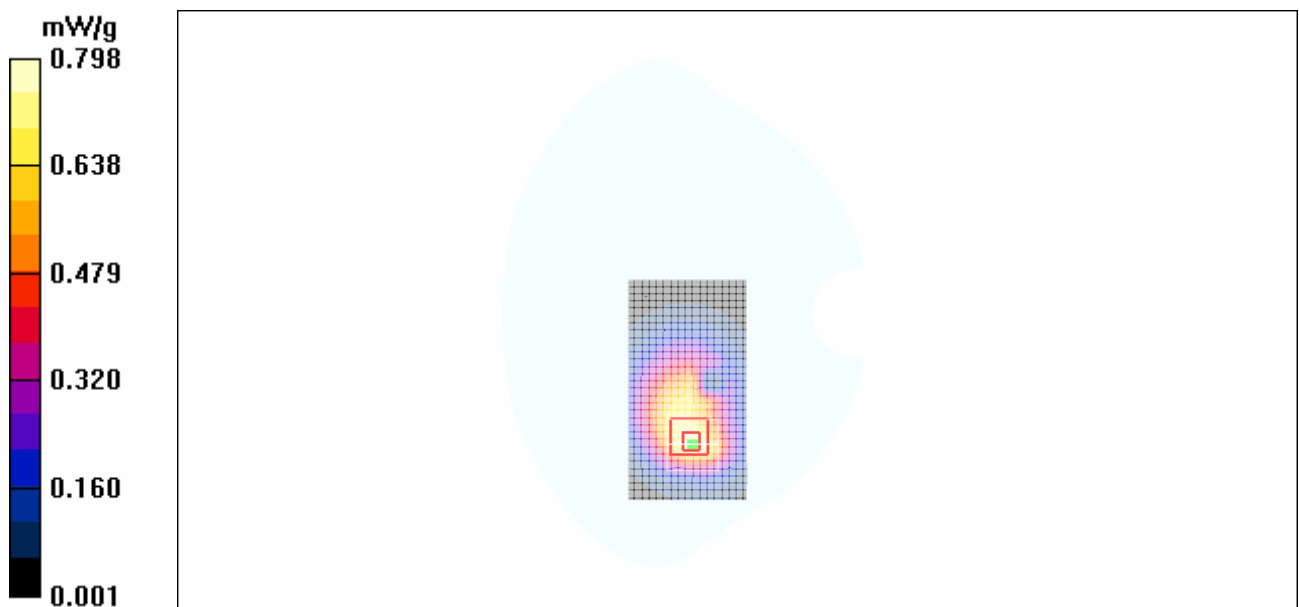


Figure 106 Body, Towards Ground, Close GSM 850 GPRS Channel 128

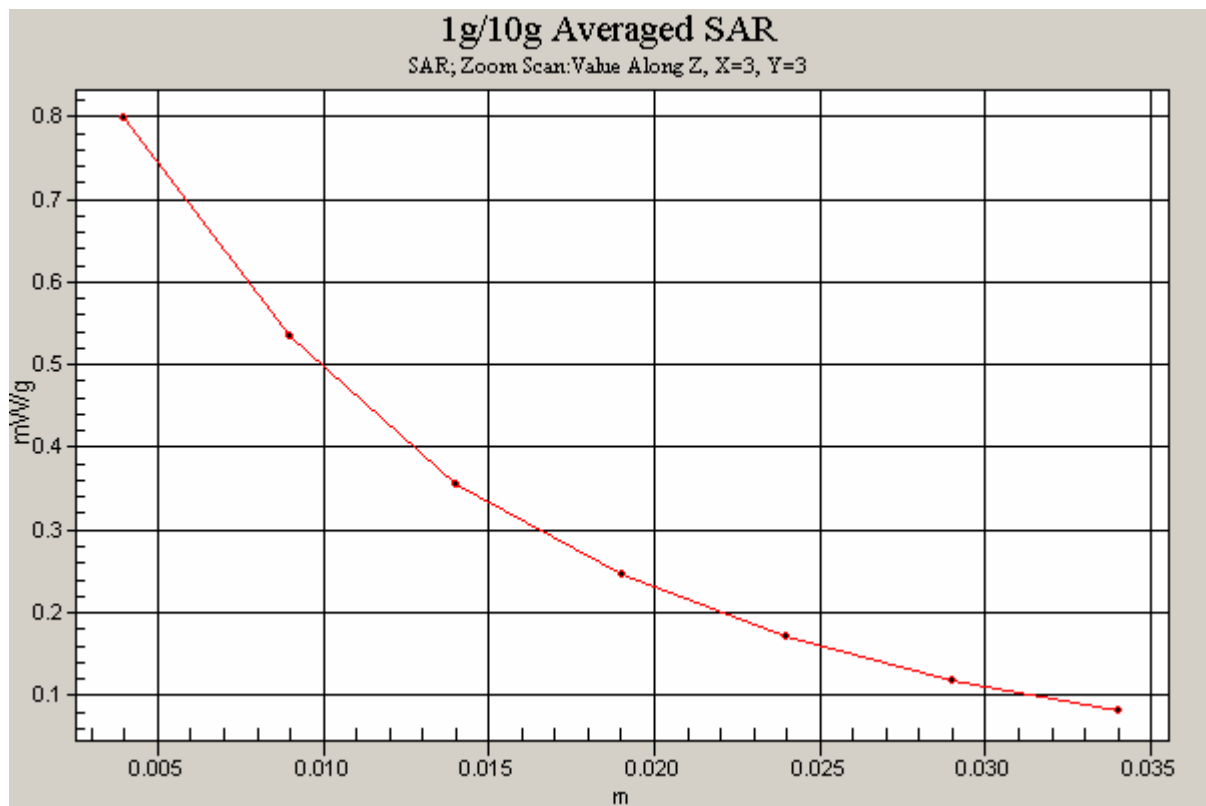


Figure 107 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 GPRS Channel 128)

GSM 850 GPRS Towards Phantom High Close

Communication System: GSM850 + GPRS(2Up); Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.173 mW/g

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

Reference Value = 6.36 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.166 mW/g

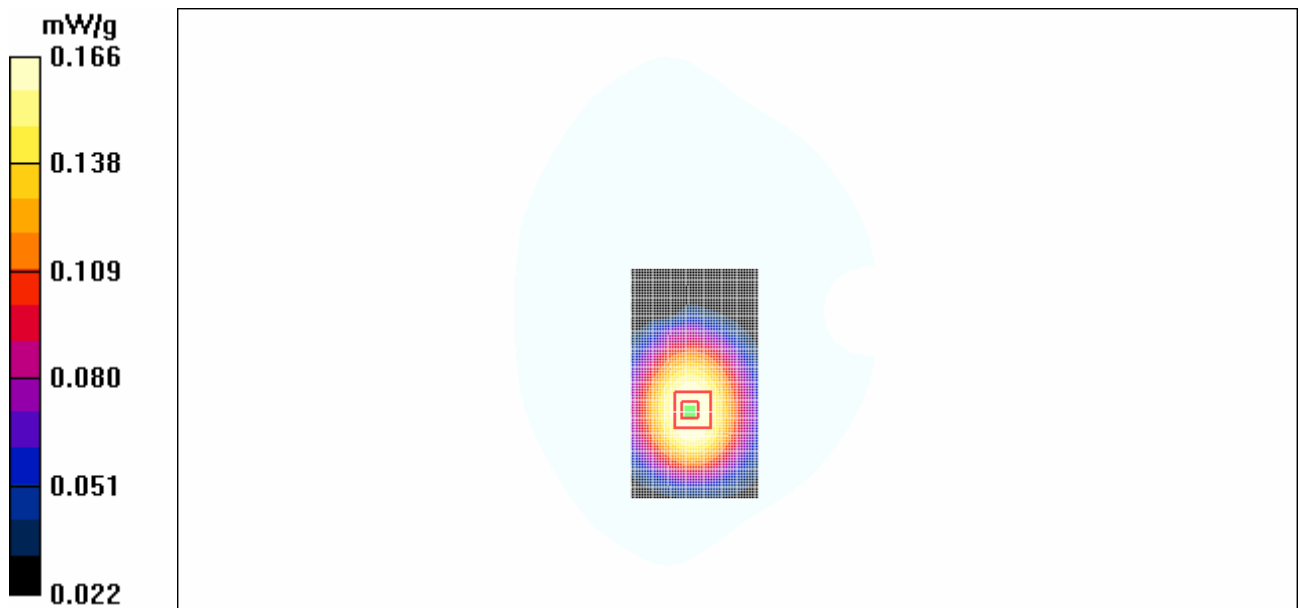


Figure 108 Body, Towards Phantom, Close GSM 850 GPRS, Channel 251

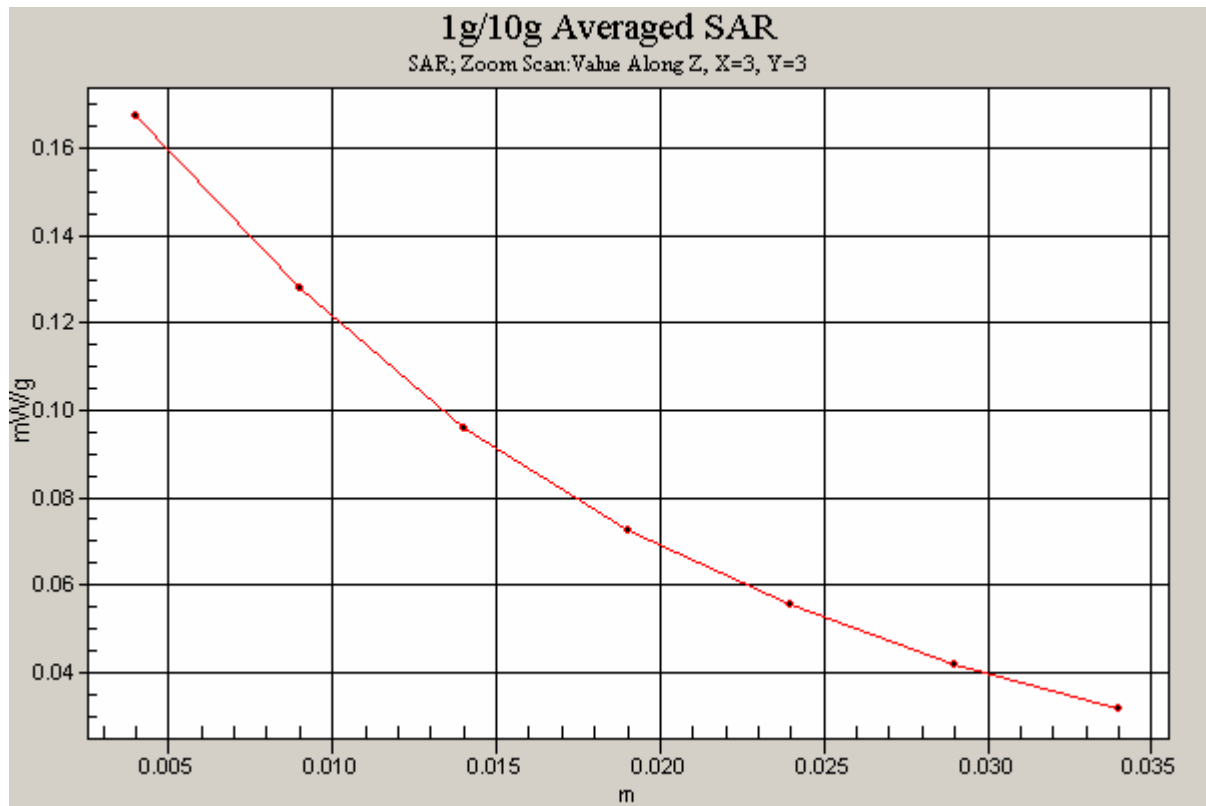


Figure 109 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 GPRS, Channel 251)

GSM 850 GPRS Towards Phantom Middle Close

Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 837$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.223 mW/g

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

Reference Value = 7.08 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 0.270 W/kg

SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.158 mW/g

Maximum value of SAR (measured) = 0.226 mW/g

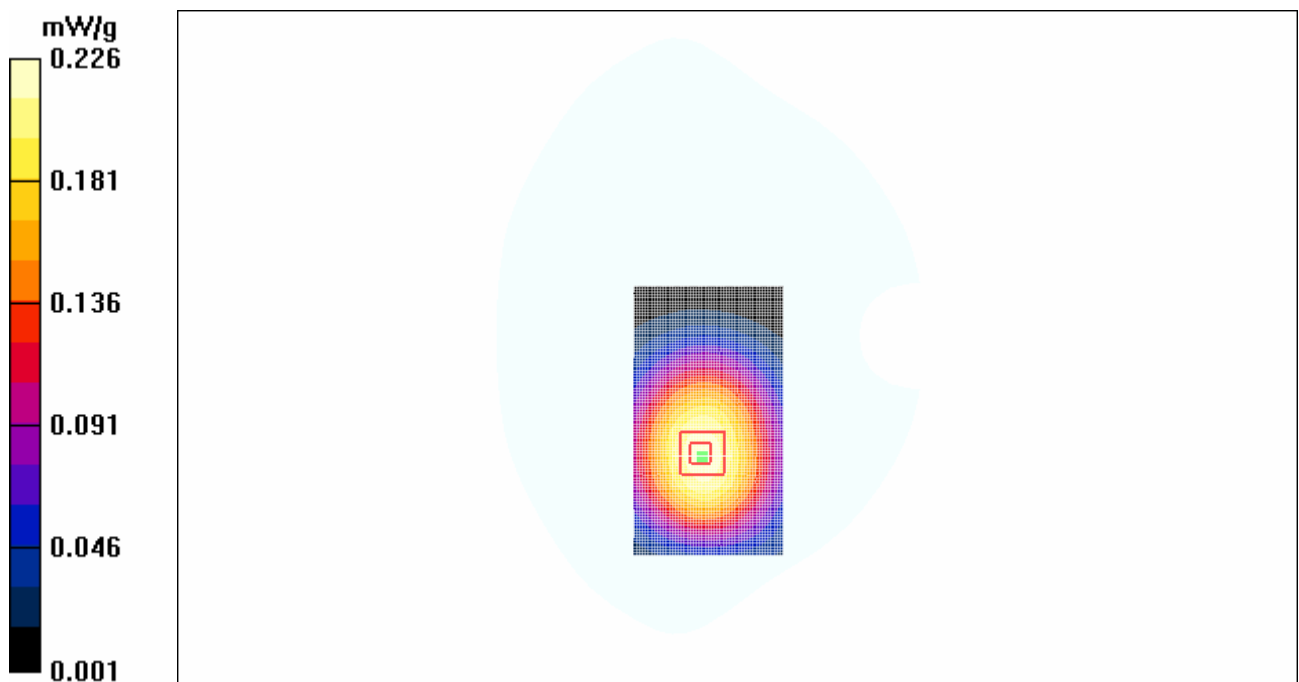


Figure 110 Body, Towards Phantom, Close GSM 850 GPRS Channel 190

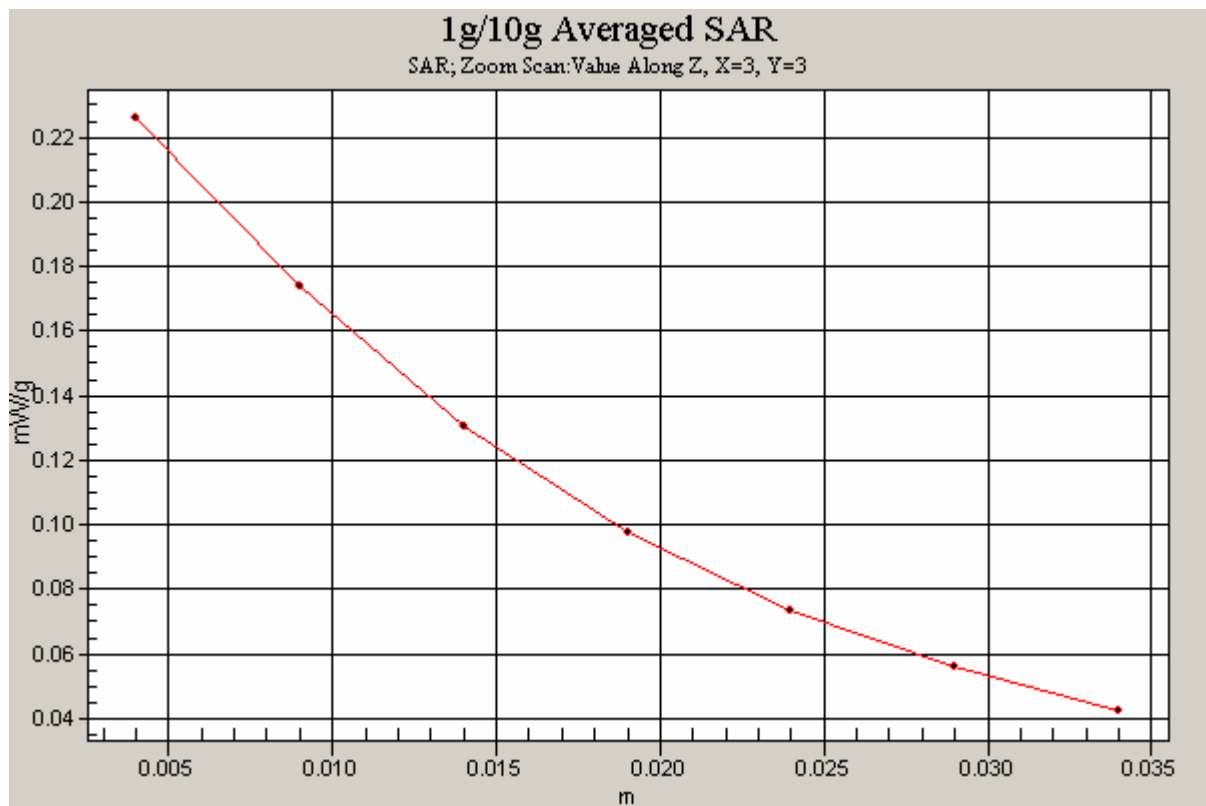


Figure 111 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 GPRS Channel 190)

GSM 850 GPRS Towards Phantom Low Close

Communication System: GSM850 + GPRS(2Up); Frequency: 824.2 MHz;Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Phantom Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.290 mW/g

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

Reference Value = 8.12 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 0.350 W/kg

SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.290 mW/g

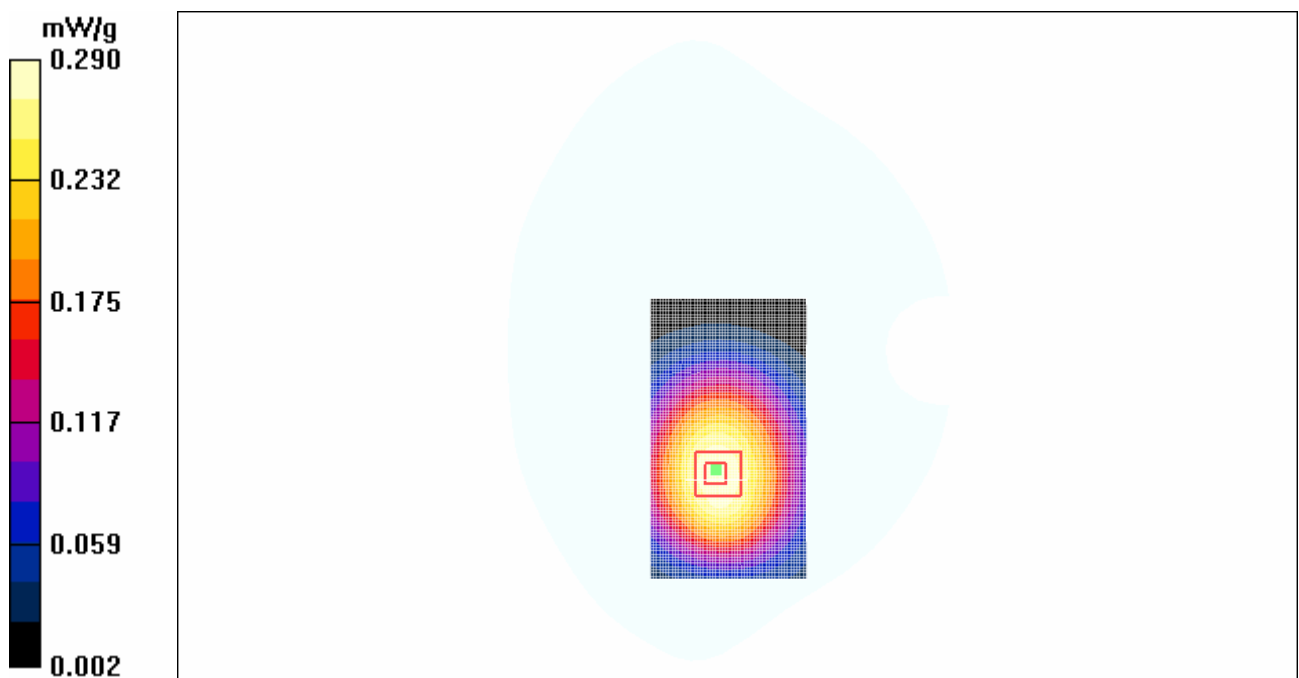


Figure 112 Body, Towards Phantom, Close GSM 850 GPRS Channel 128

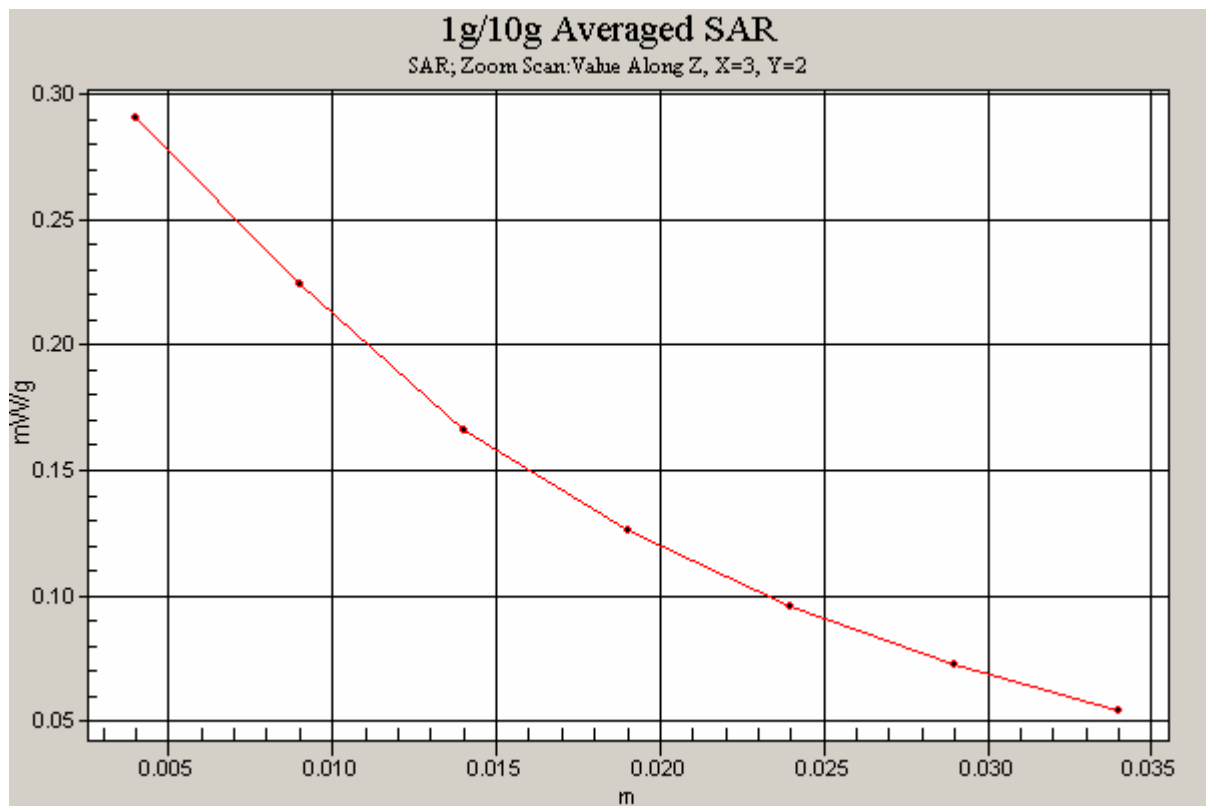


Figure 113 Z-Scan at power reference point (Body, Towards Phantom, Close GSM 850 GPRS Channel 128)

GSM 850 EGPRS Towards Ground Low Close

Communication System: GSM850 + EGPRS(2Up); Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN7531; ConvF(6.52, 6.52, 6.52);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.213 mW/g

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

Reference Value = 5.40 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.126 mW/g

Maximum value of SAR (measured) = 0.208 mW/g

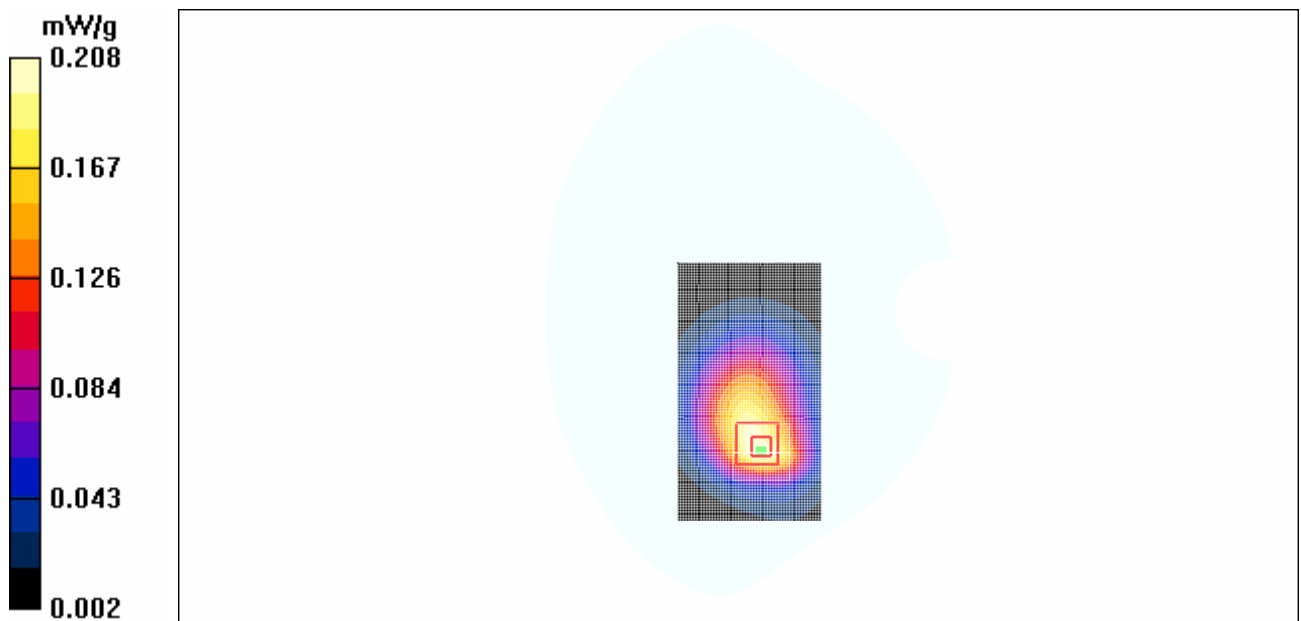


Figure 114 Body, Towards Ground, Close GSM 850 EGPRS Channel 128

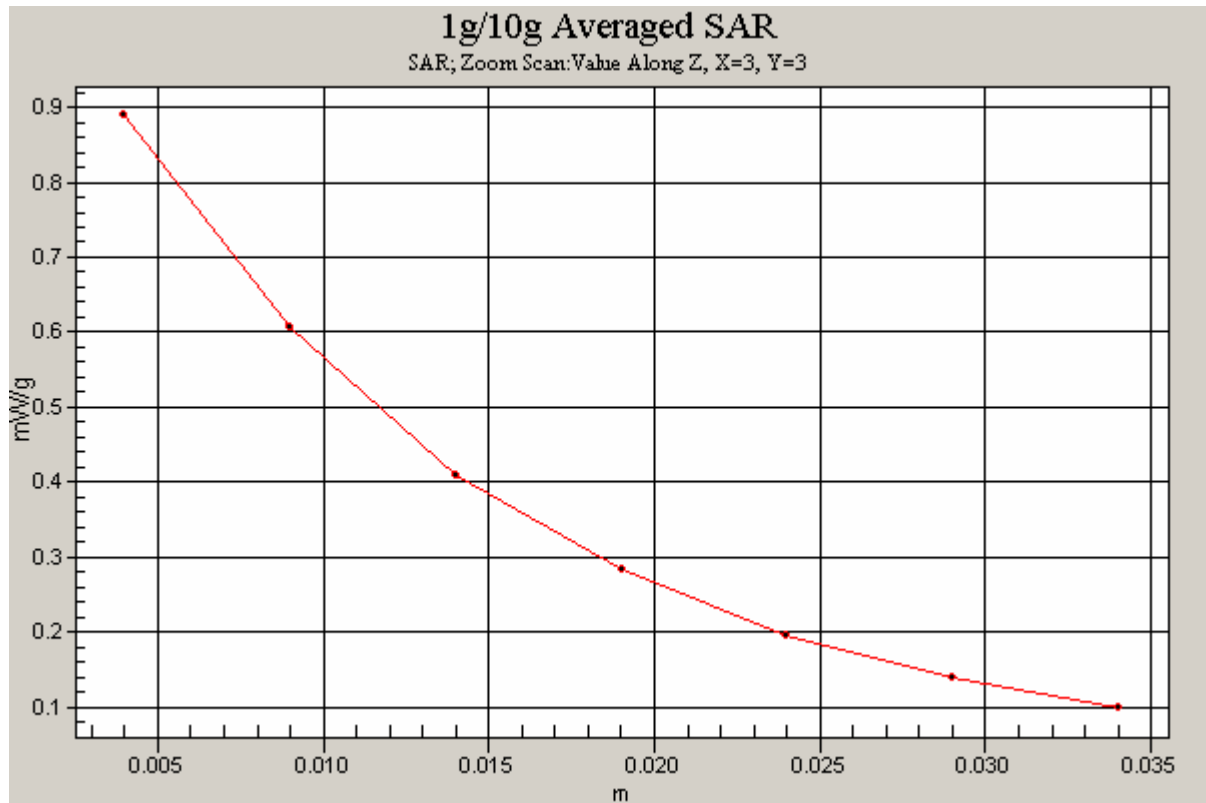


Figure 115 Z-Scan at power reference point (Body, Towards Ground, Close GSM 850 EGPRS Channel 128)

GSM 1900 Left Cheek High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.317 mW/g

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

Reference Value = 4.56 V/m; Power Drift = -0.172 dB

Peak SAR (extrapolated) = 0.443 W/kg

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.323 mW/g

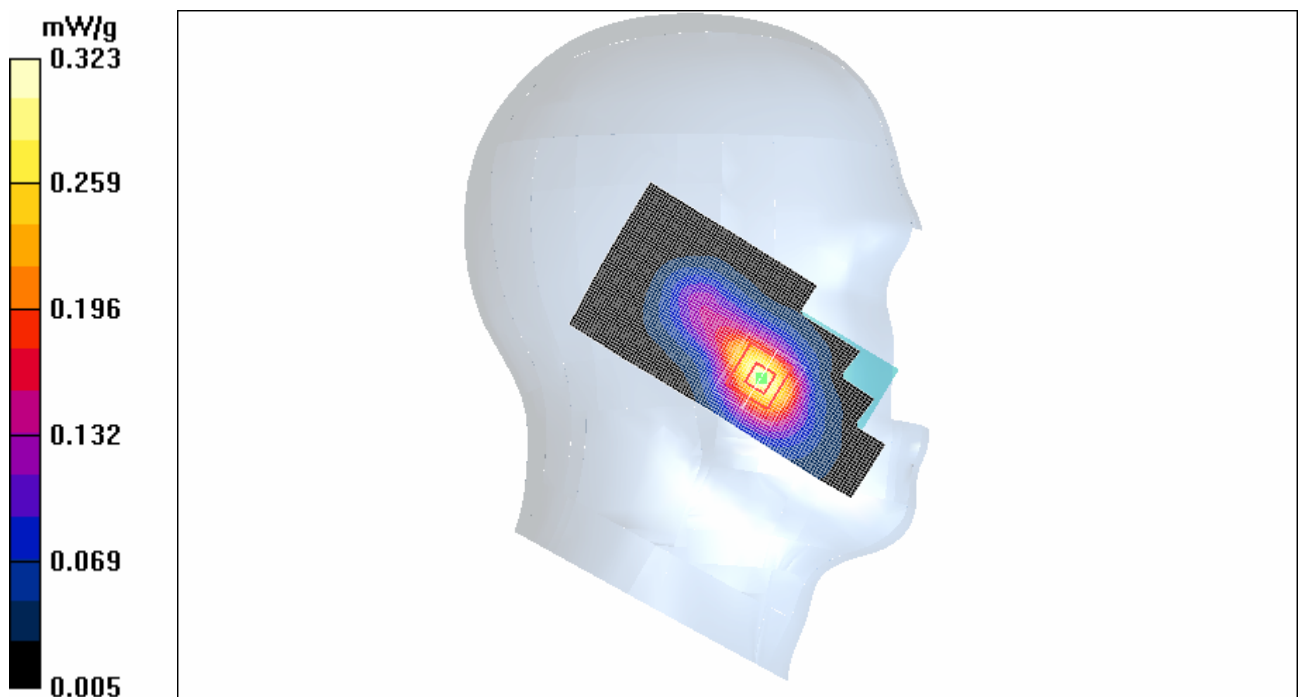


Figure 116 Left Hand Touch Cheek Open GSM 1900 Channel 810

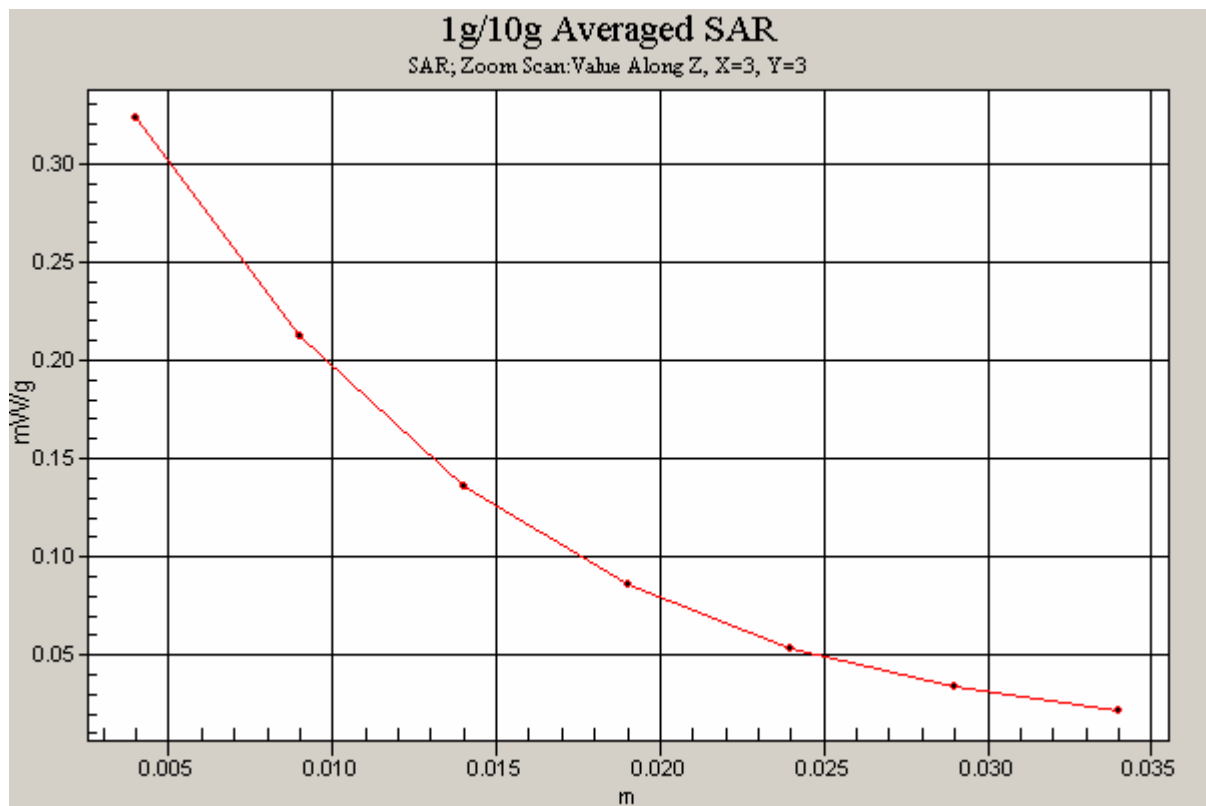


Figure 117 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 1900 Channel 810)

GSM 1900 Left Cheek Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.368 mW/g

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

Reference Value = 4.91 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.519 W/kg

SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.378 mW/g

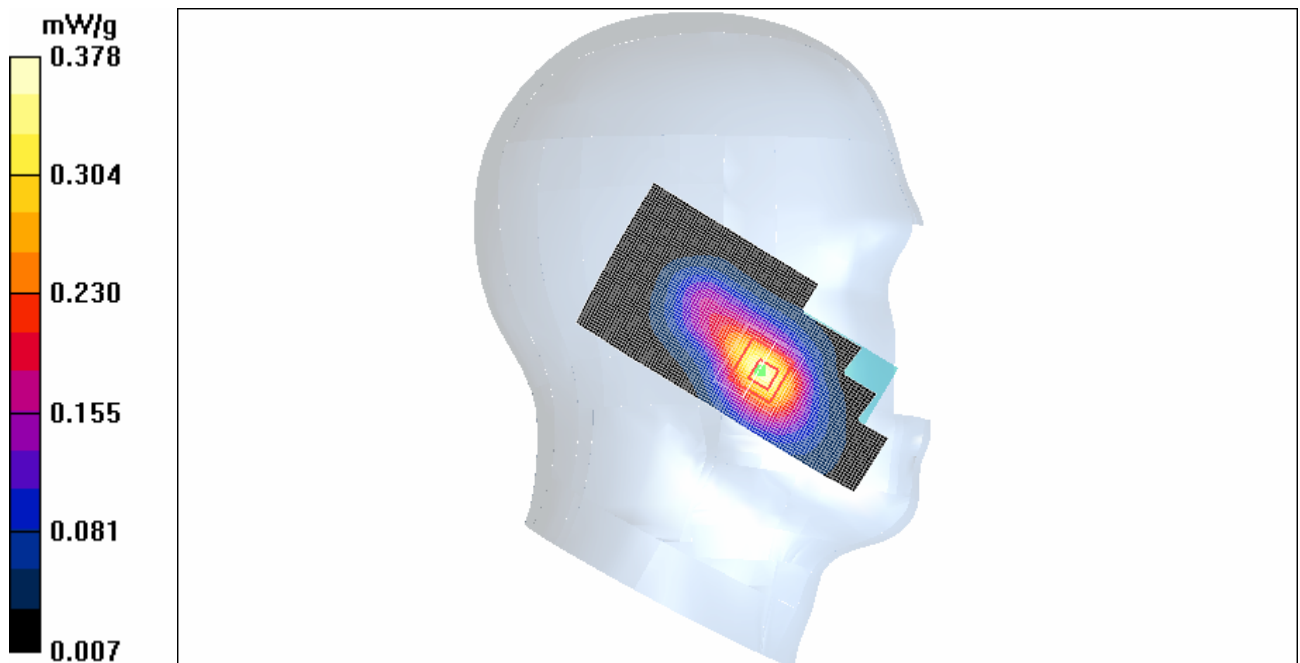


Figure 118 Left Hand Touch Cheek Open GSM 1900 Channel 661

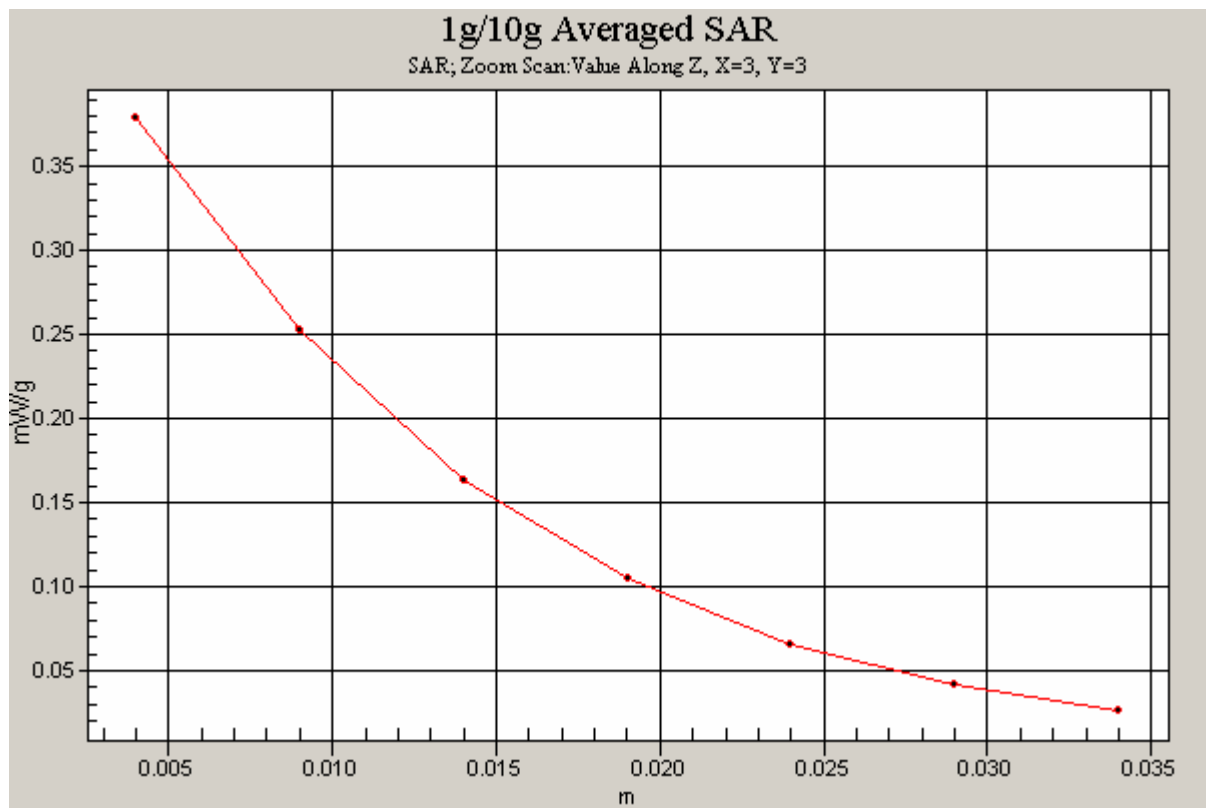


Figure 119 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 1900 Channel 661)

GSM 1900 Left Cheek Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.425 mW/g

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

Reference Value = 5.36 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.587 W/kg

SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.230 mW/g

Maximum value of SAR (measured) = 0.420 mW/g

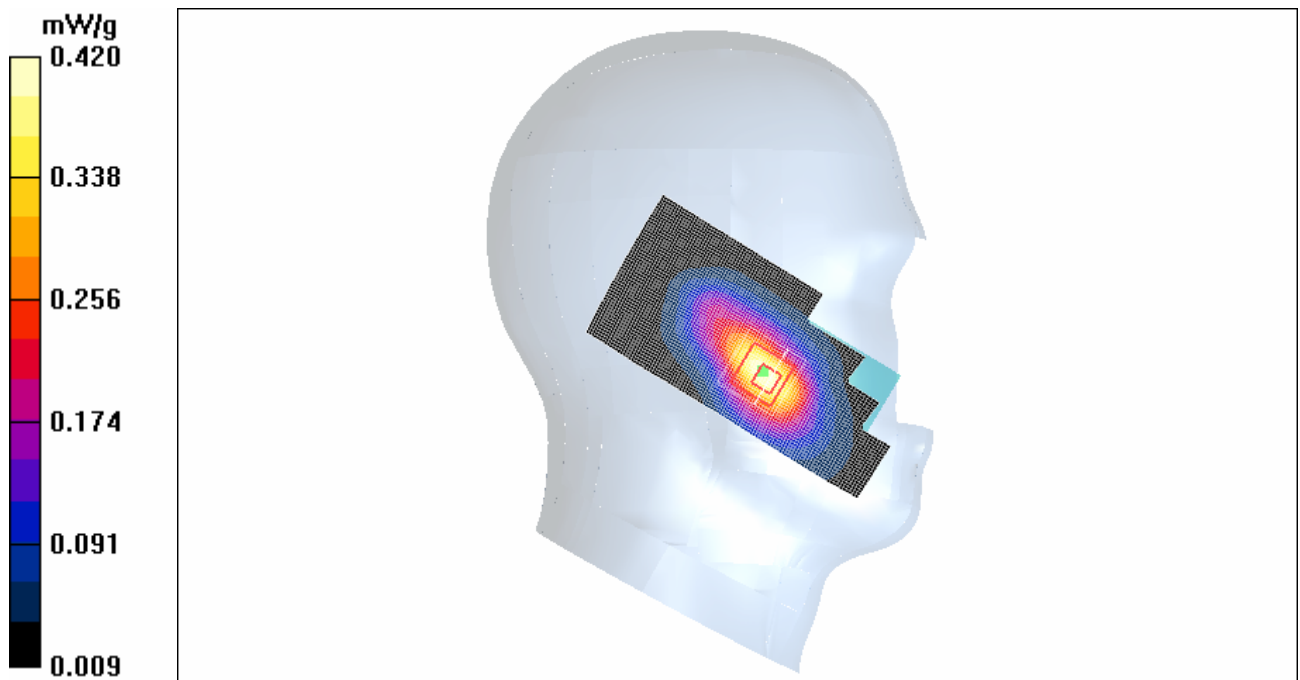


Figure 120 Left Hand Touch Cheek Open GSM 1900 Channel 512

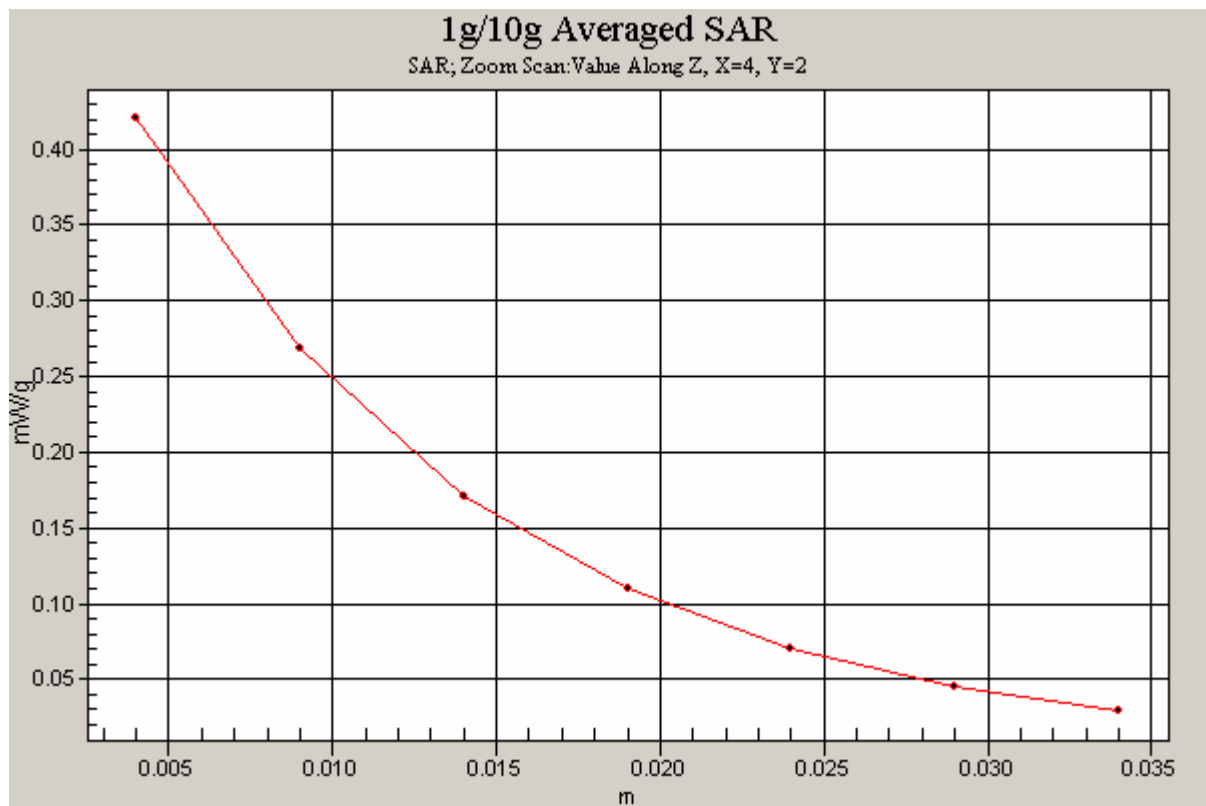


Figure 121 Z-Scan at power reference point (Left Hand Touch Cheek Open GSM 1900 Channel 512)

GSM 1900 Left Tilt High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.156 mW/g

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

Reference Value = 8.29 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.166 W/kg

SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.133 mW/g

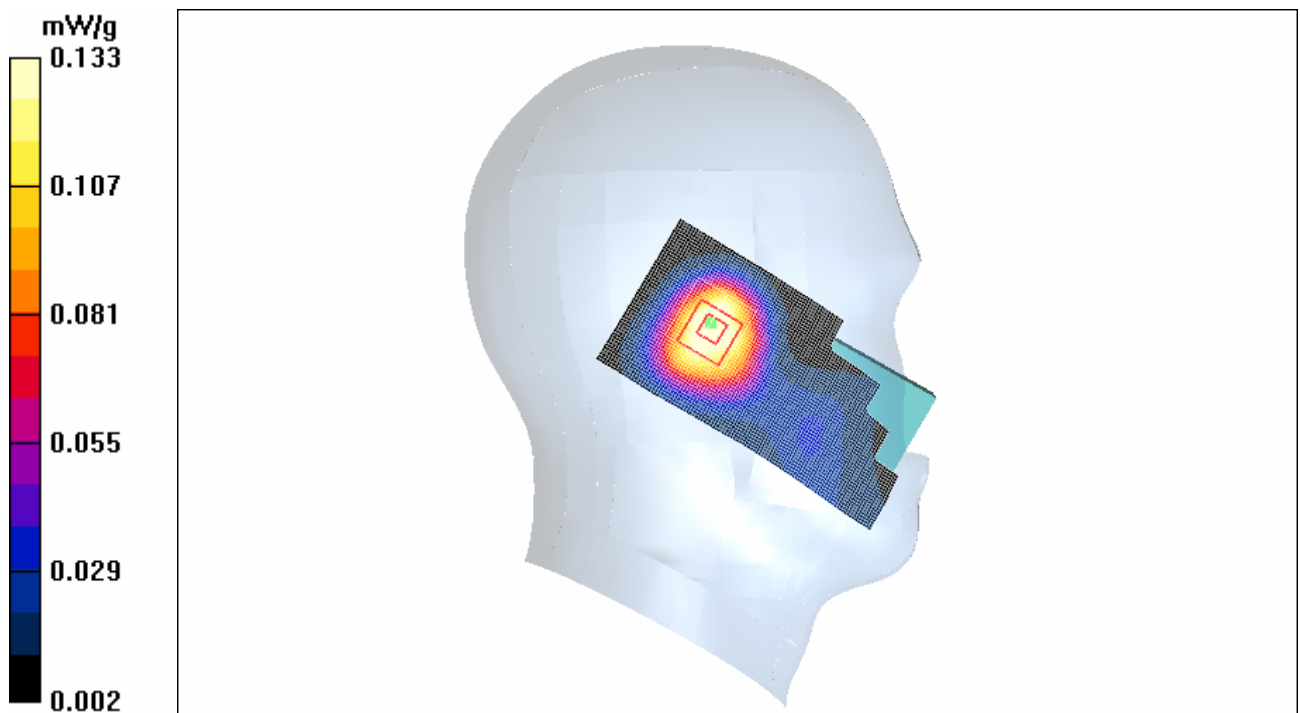


Figure 122 Left Hand Tilt 15° Open GSM 1900 Channel 810

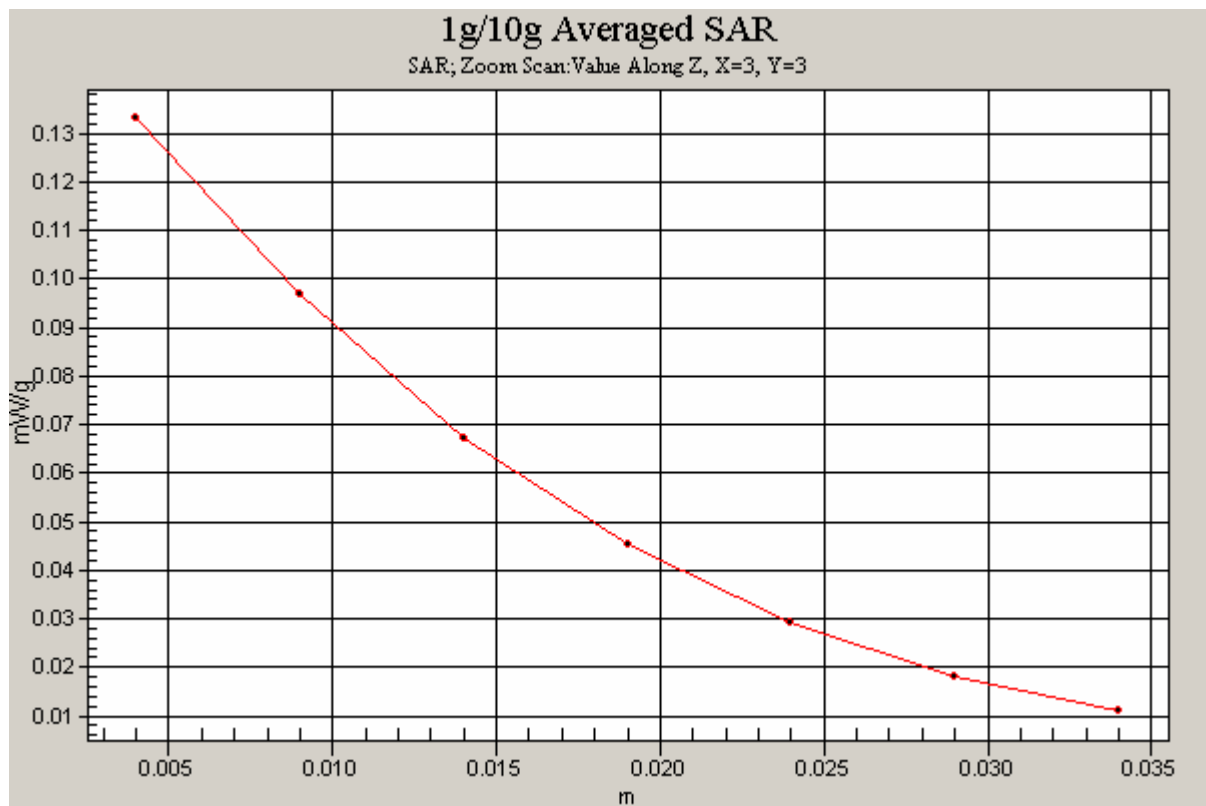


Figure 123 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 1900 Channel 810)

GSM 1900 Left Tilt Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.179 mW/g

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

Reference Value = 9.02 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 0.193 W/kg

SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.157 mW/g

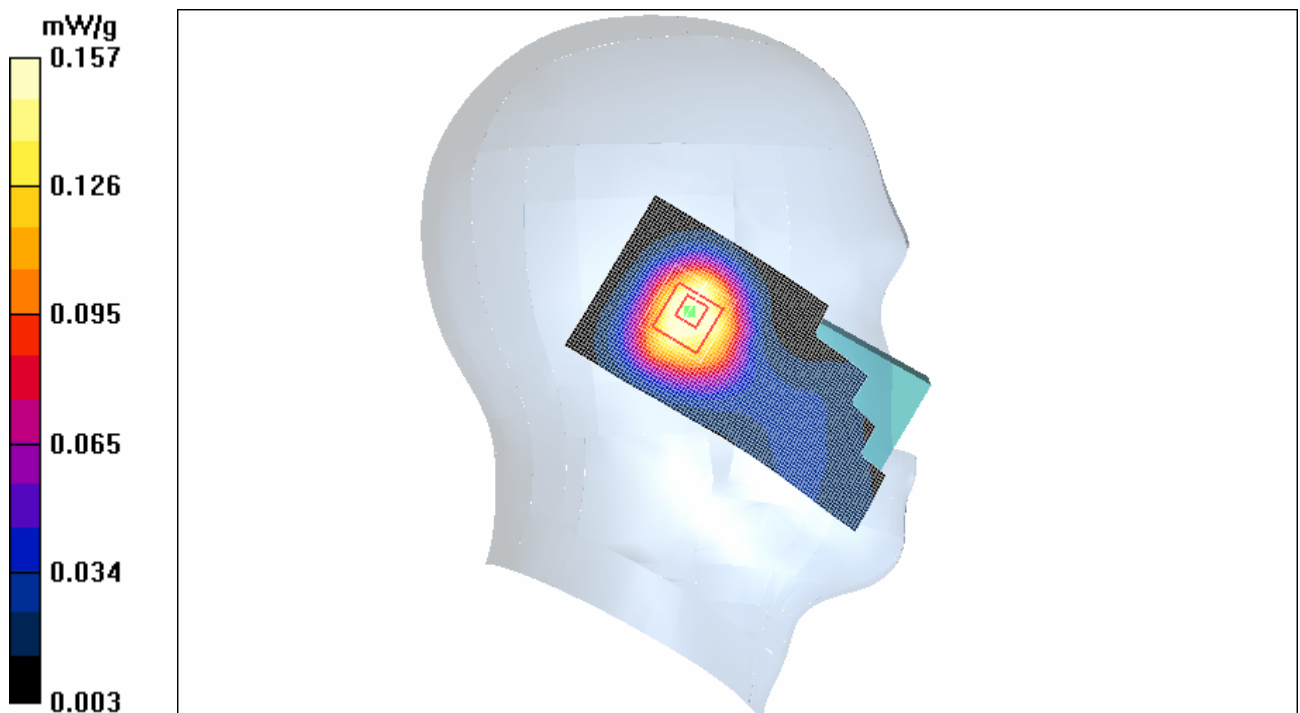


Figure 124 Left Hand Tilt 15° Open GSM 1900 Channel 661

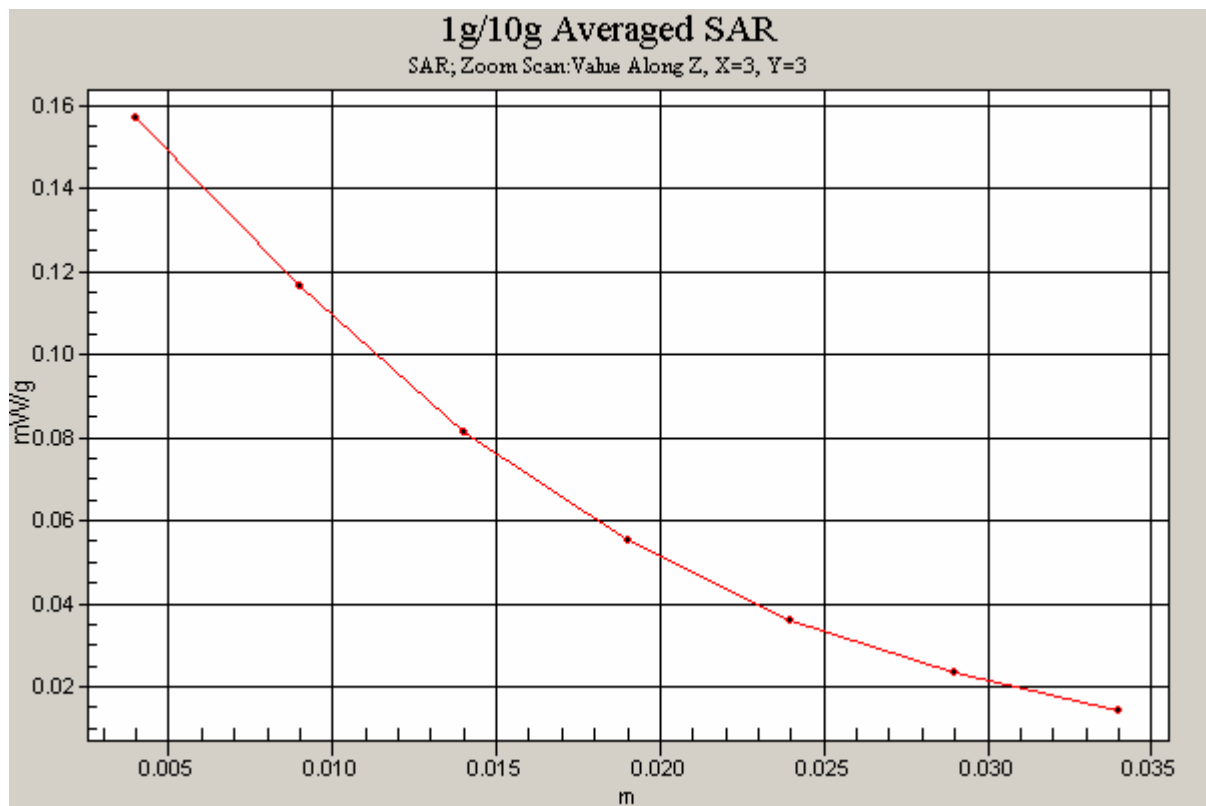


Figure 125 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 1900 Channel 661)

GSM 1900 Left Tilt Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.197 mW/g

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

Reference Value = 9.87 V/m; Power Drift = -0.058 dB

Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 0.175 mW/g

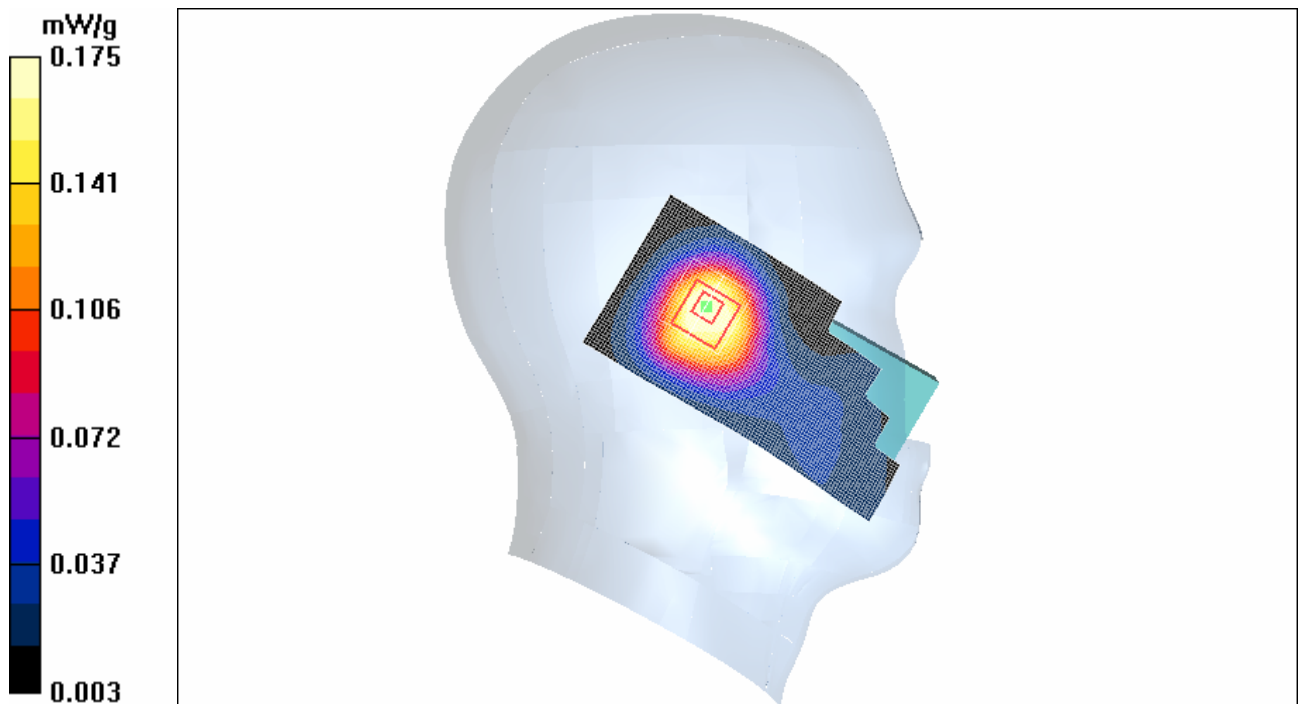


Figure 126 Left Hand Tilt 15° Open GSM 1900 Channel 512

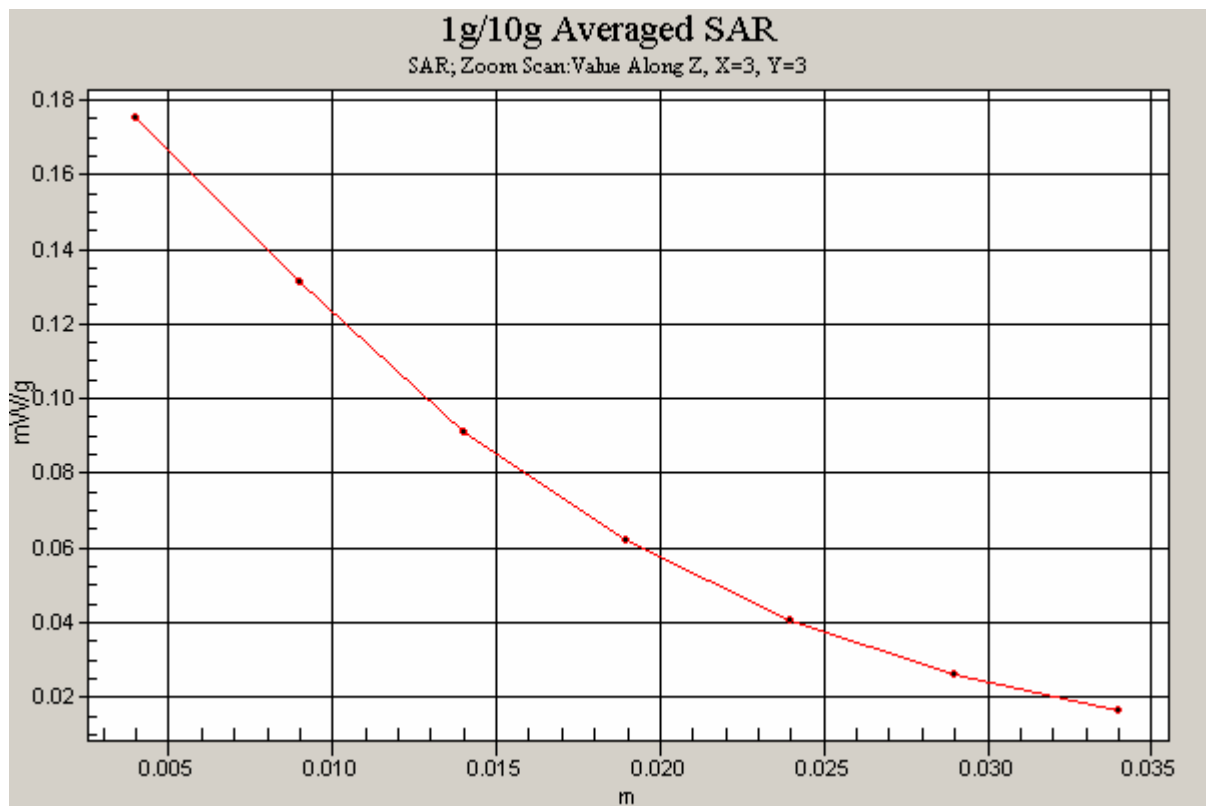


Figure 127 Z-Scan at power reference point (Left Hand Tilt 15° Open GSM 1900 Channel 512)

GSM 1900 Right Cheek High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Cheek High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.175 mW/g

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

Reference Value = 4.79 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.102 mW/g

Maximum value of SAR (measured) = 0.183 mW/g

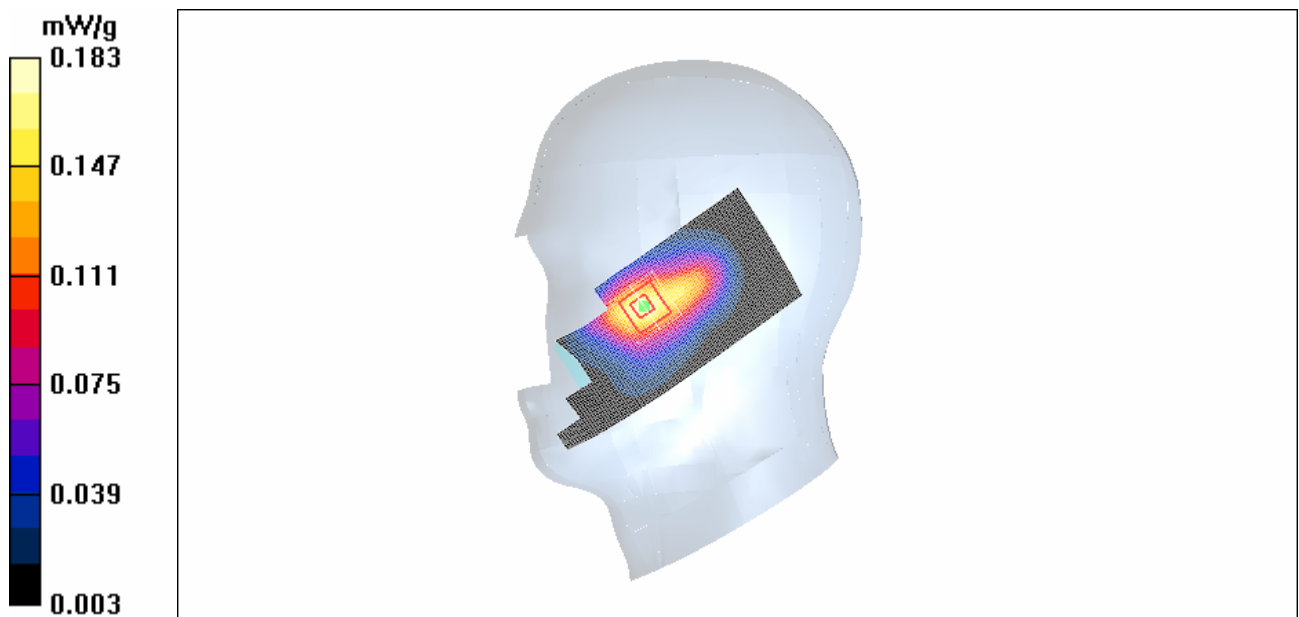


Figure 128 Right Hand Touch Cheek Open GSM 1900 Channel 810

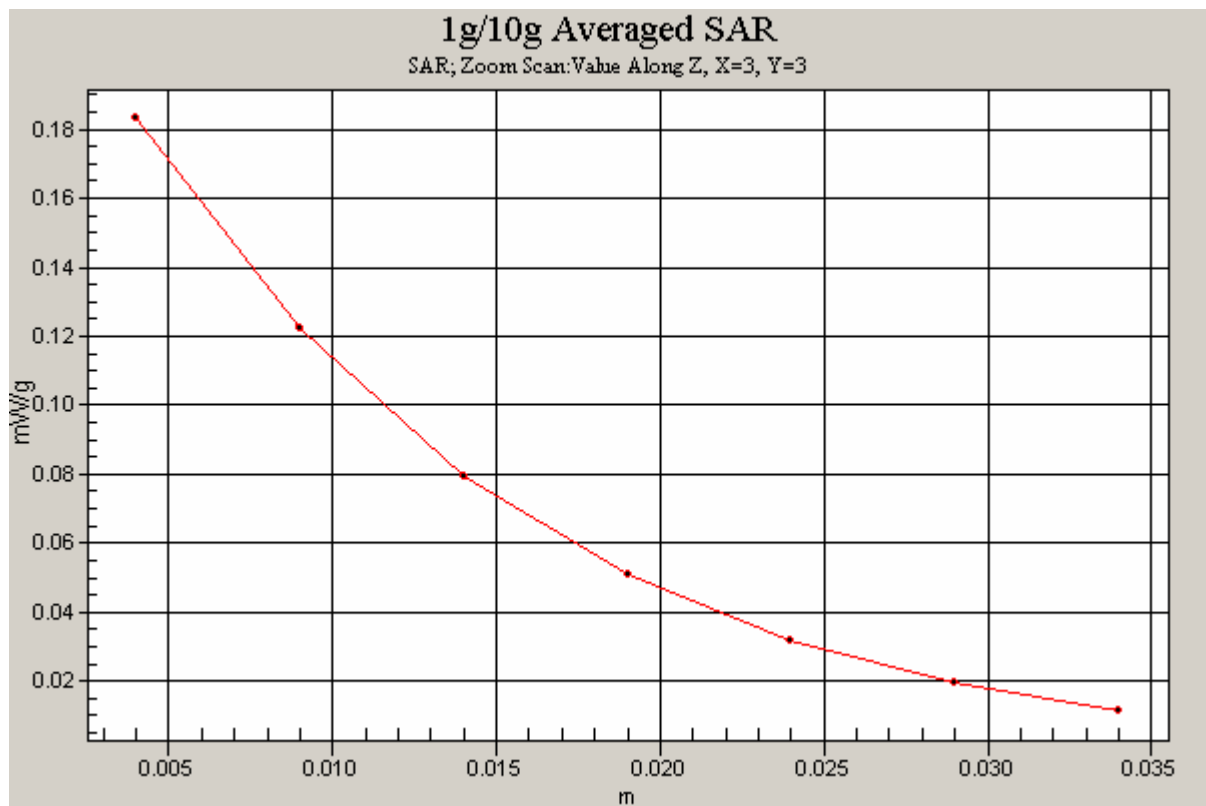


Figure 129 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 1900 Channel 810)

GSM 1900 Right Cheek Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.220 mW/g

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

Reference Value = 4.99 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.288 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.219 mW/g

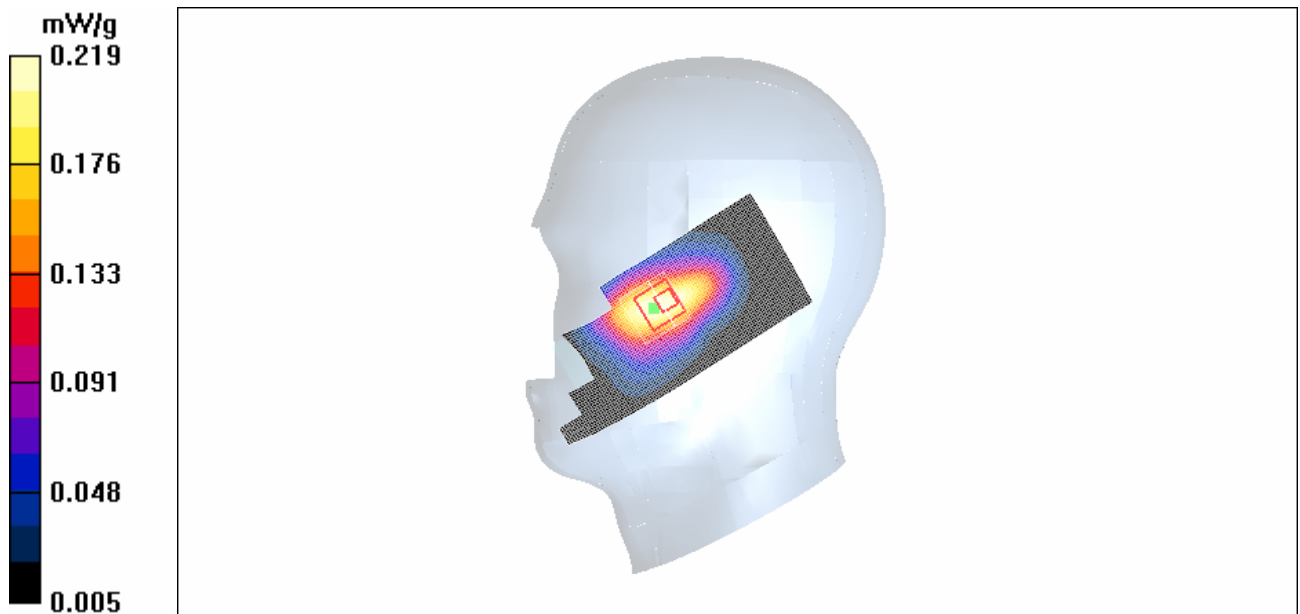


Figure 130 Right Hand Touch Cheek Open GSM 1900 Channel 661

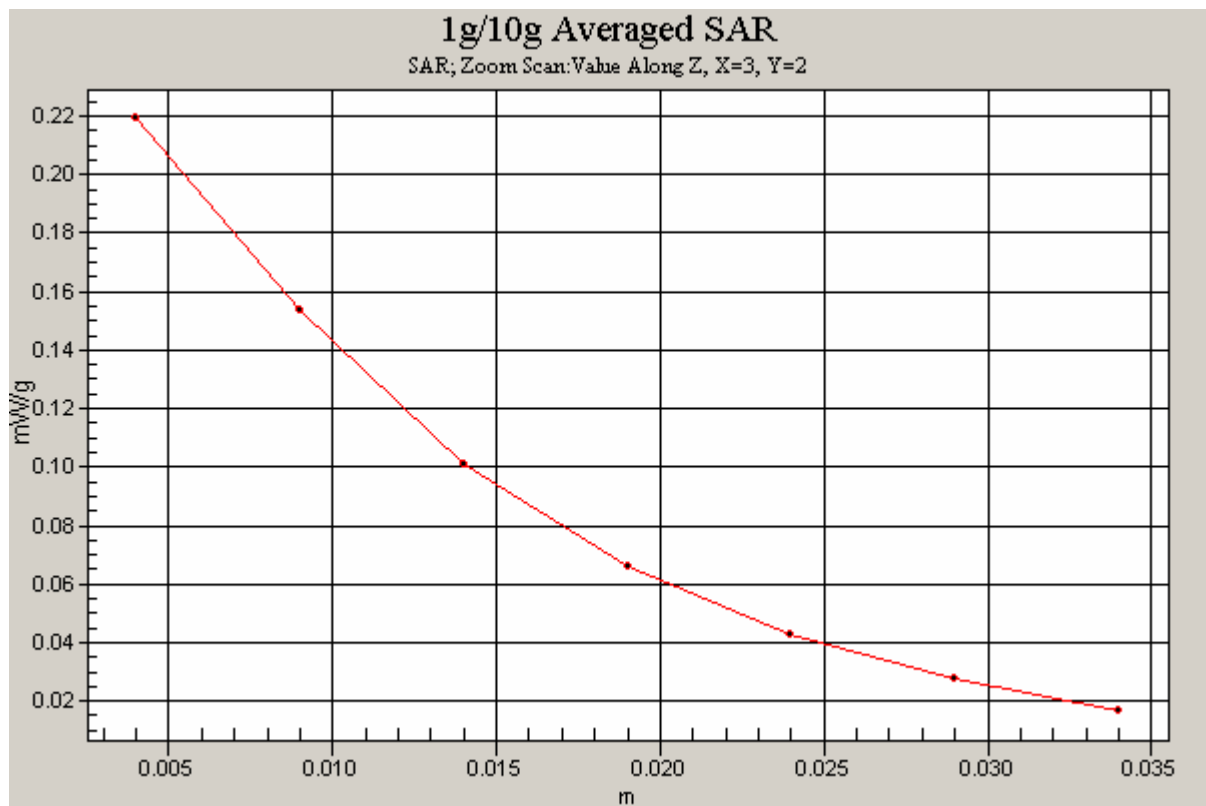


Figure 131 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 1900 Channel 661)

GSM 1900 Right Cheek Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Cheek Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.266 mW/g

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

Reference Value = 5.09 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.158 mW/g

Maximum value of SAR (measured) = 0.269 mW/g

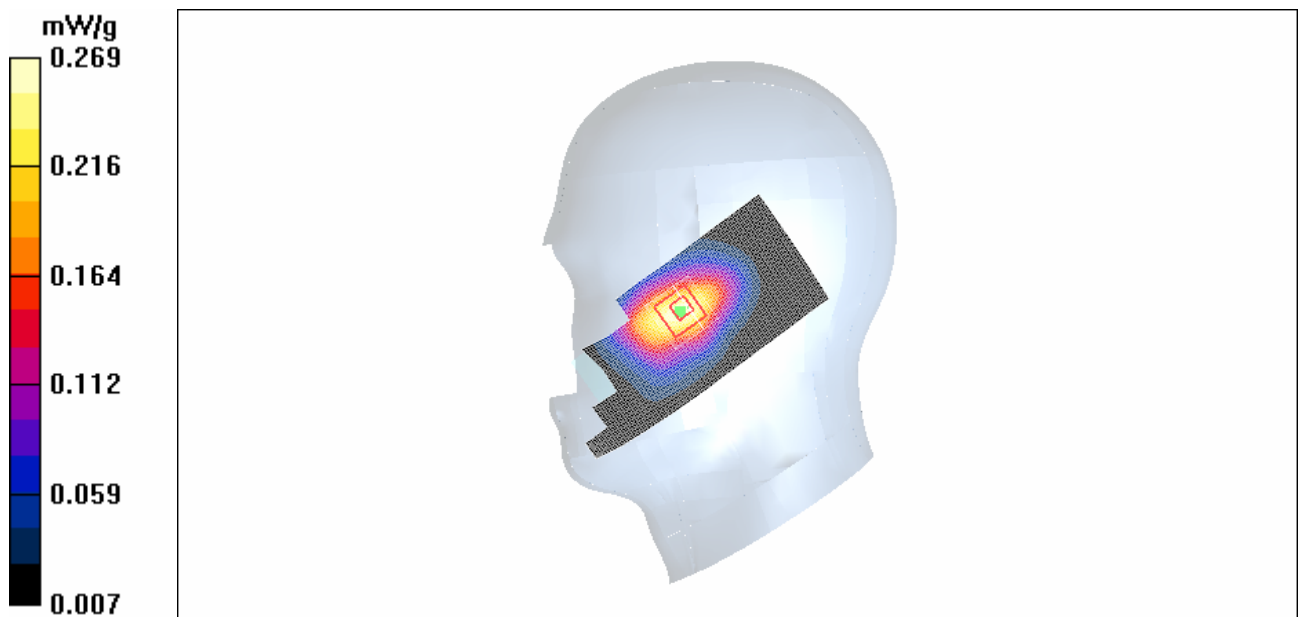


Figure 132 Right Hand Touch Cheek Open GSM 1900 Channel 512

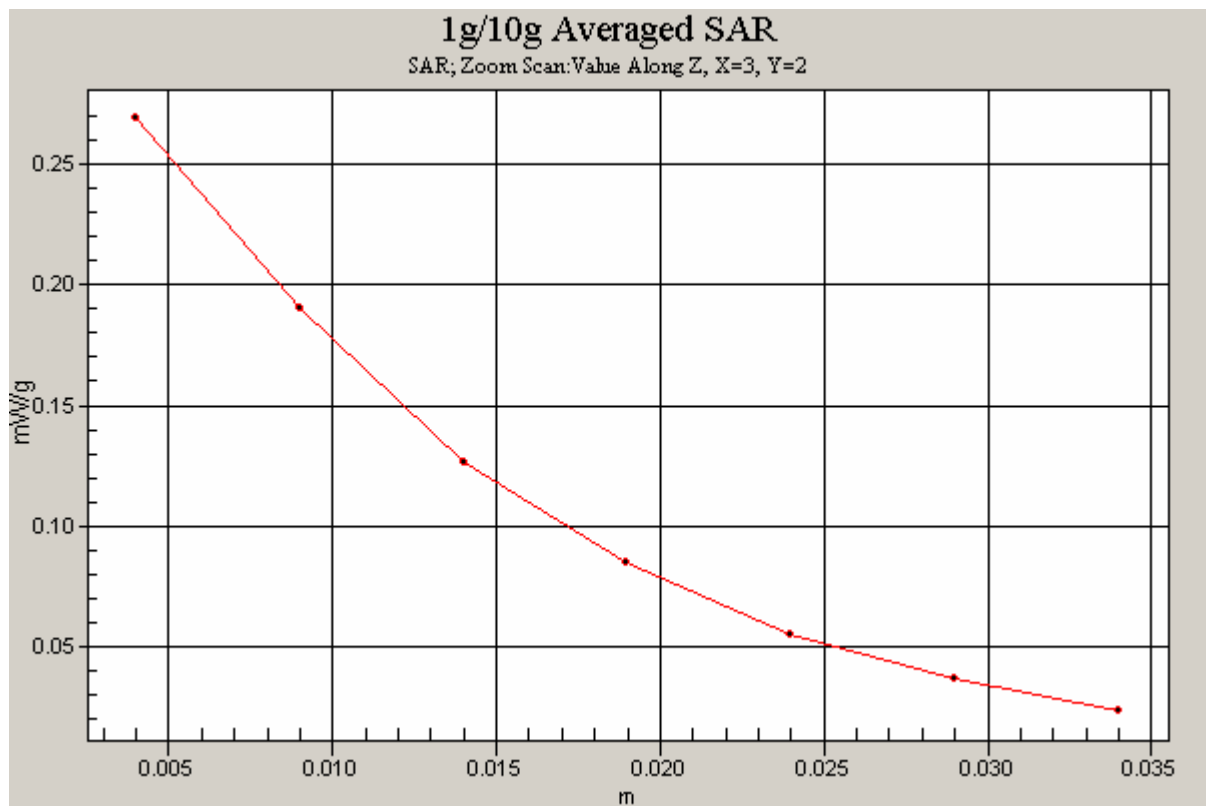


Figure 133 Z-Scan at power reference point (Right Hand Touch Cheek Open GSM 1900 Channel 512)

GSM 1900 Right Tilt High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Tilt High/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.184 mW/g

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

Reference Value = 8.73 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.228 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.095 mW/g

Maximum value of SAR (measured) = 0.166 mW/g



Figure 134 Right Hand Tilt 15° Open GSM 1900 Channel 810

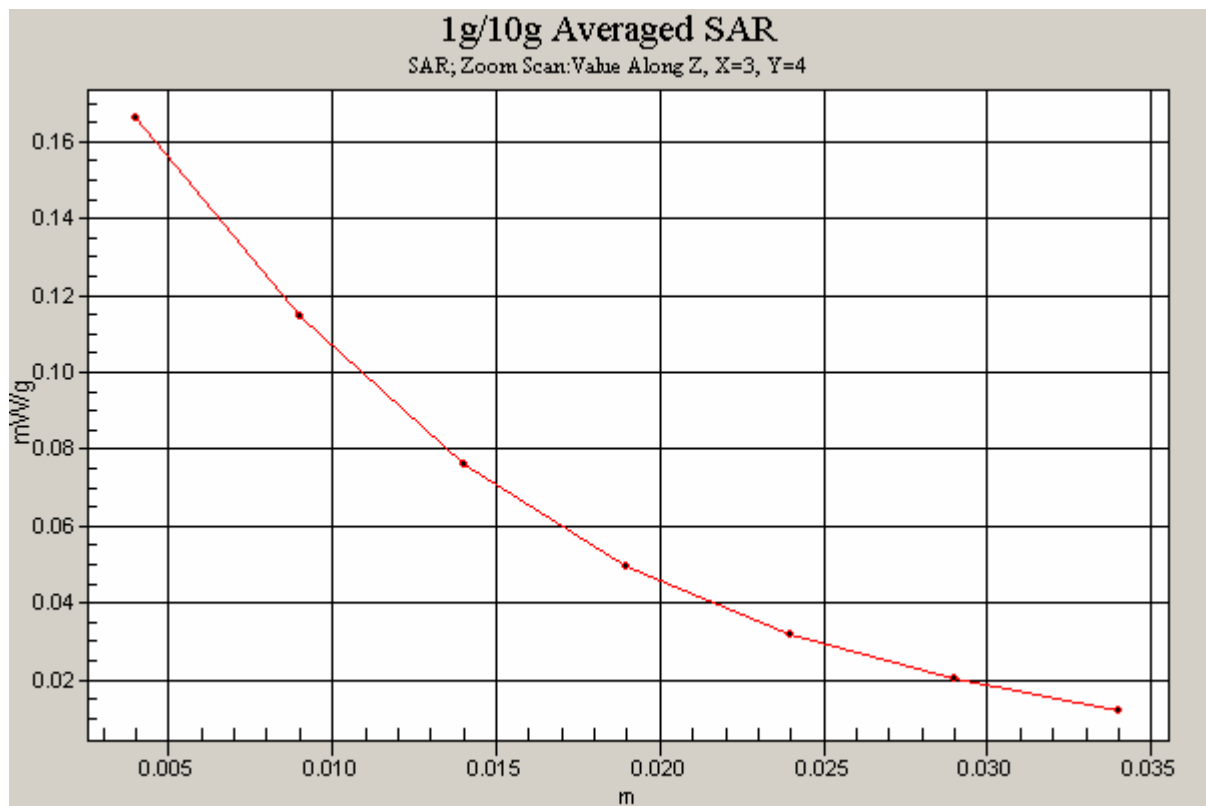


Figure 135 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 1900 Channel 810)

GSM 1900 Right Tilt Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.200 mW/g

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

Reference Value = 9.50 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.250 W/kg

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.184 mW/g

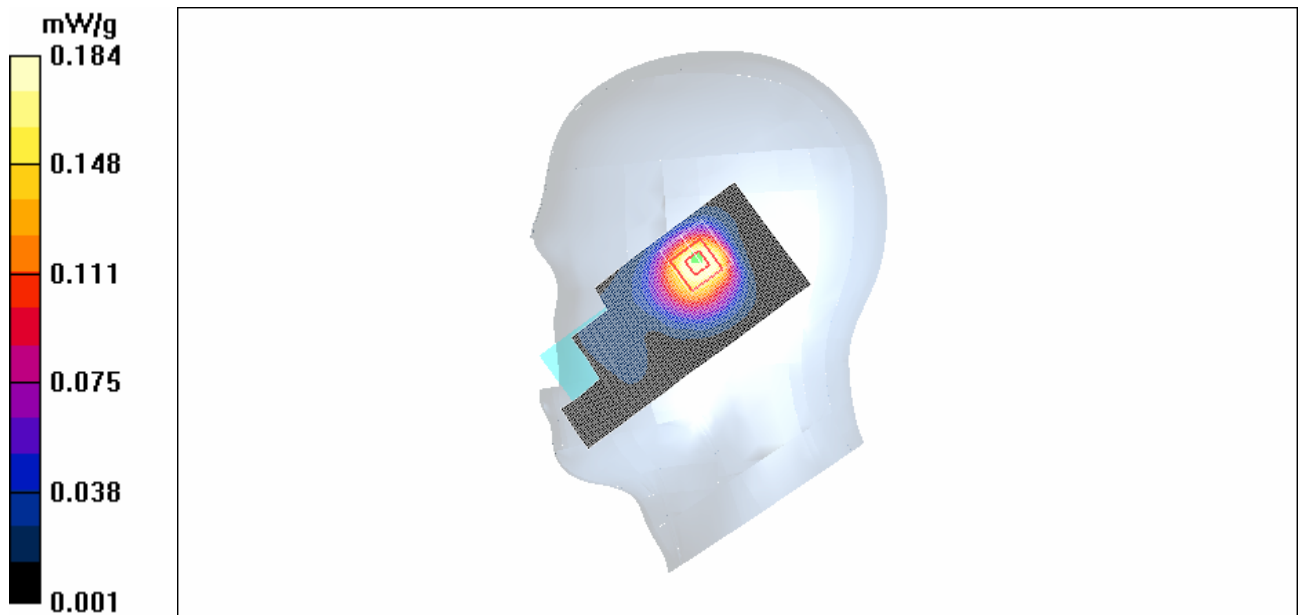


Figure 136 Right Hand Tilt 15° Open GSM 1900 Channel 661

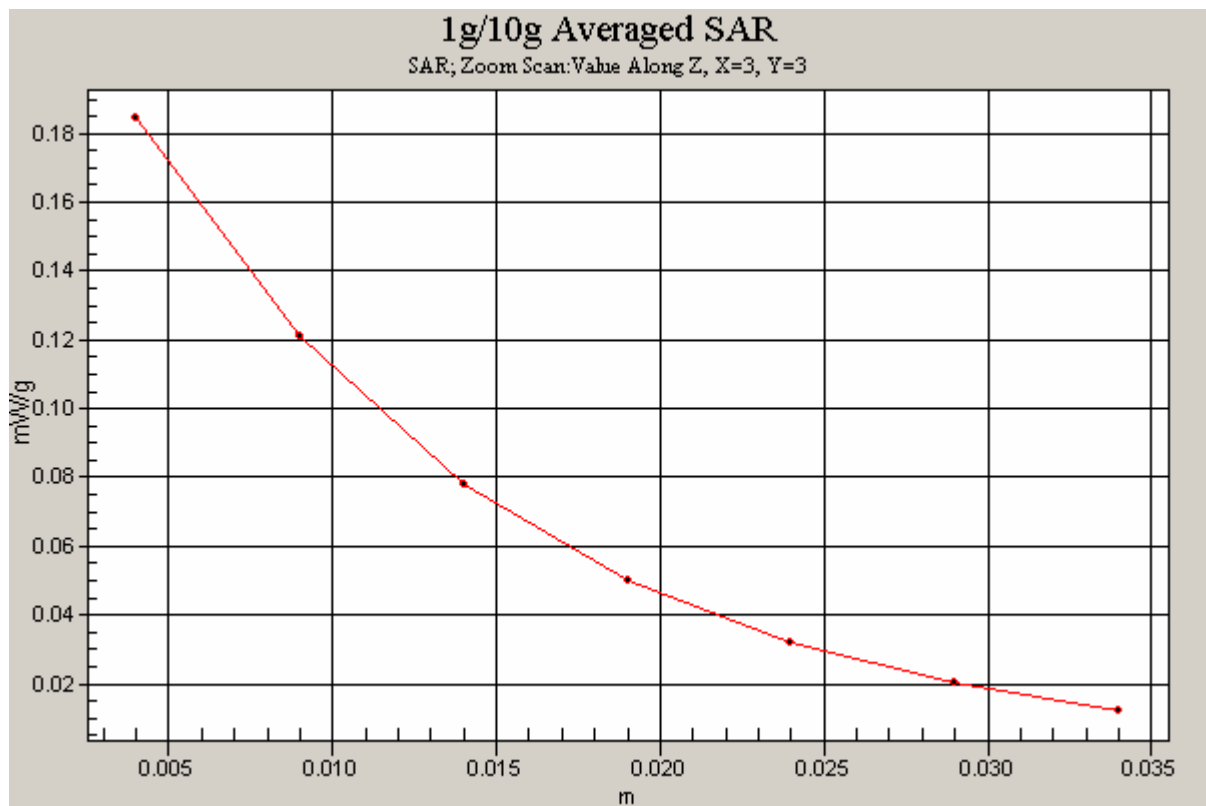


Figure 137 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 1900 Channel 661)

GSM 1900 Right Tilt Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(5.15, 5.15, 5.15);

Electronics: DAE4 Sn452;

Tilt Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.203 mW/g

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

Reference Value = 9.97 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.248 W/kg

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.190 mW/g

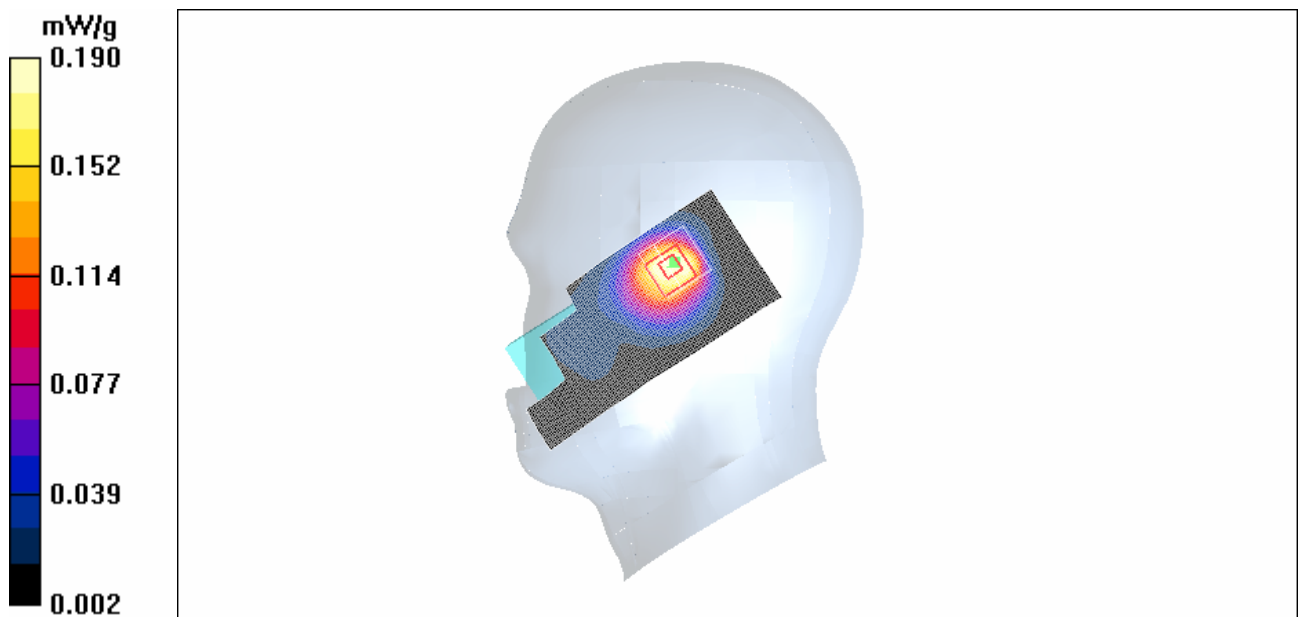


Figure 138 Right Hand Tilt 15° Open GSM 1900 Channel 512

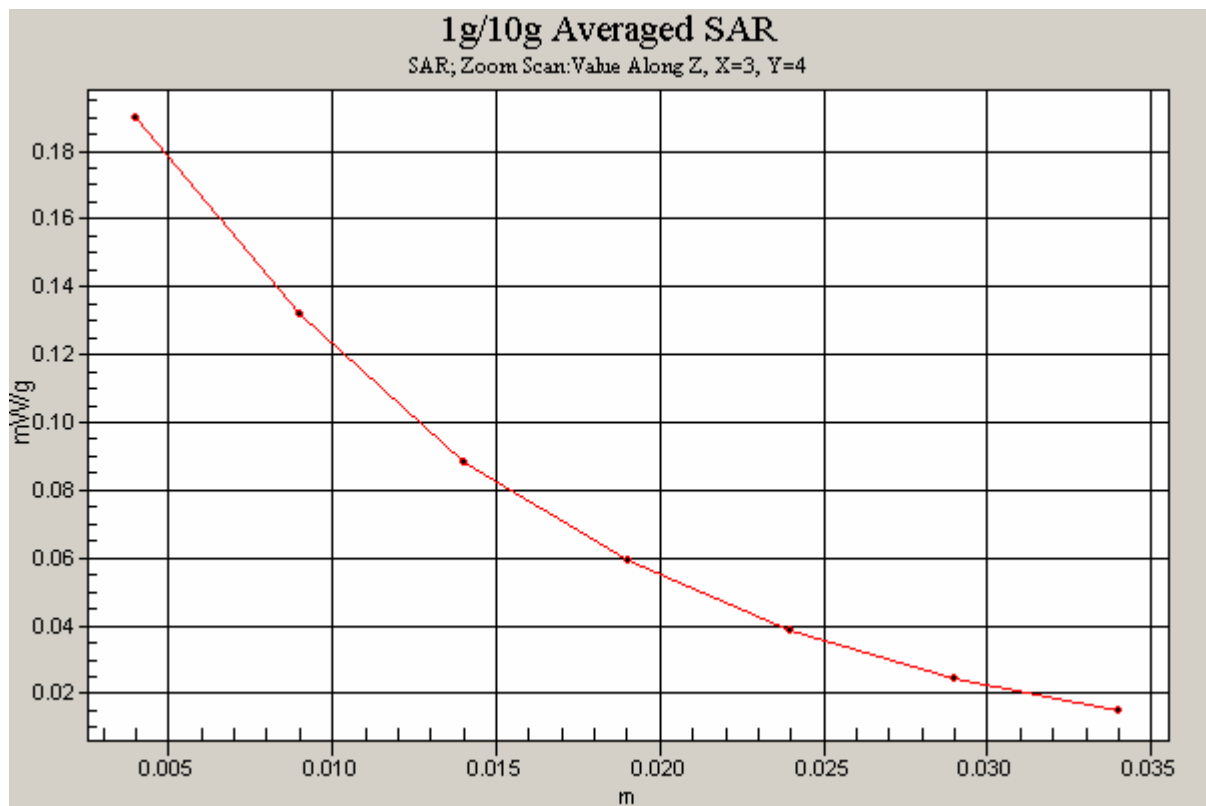


Figure 139 Z-Scan at power reference point (Right Hand Tilt 15° Open GSM 1900 Channel 512)

GSM 1900 Towards Ground High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.259 mW/g

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

Reference Value = 7.05 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 0.348 W/kg

SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.255 mW/g

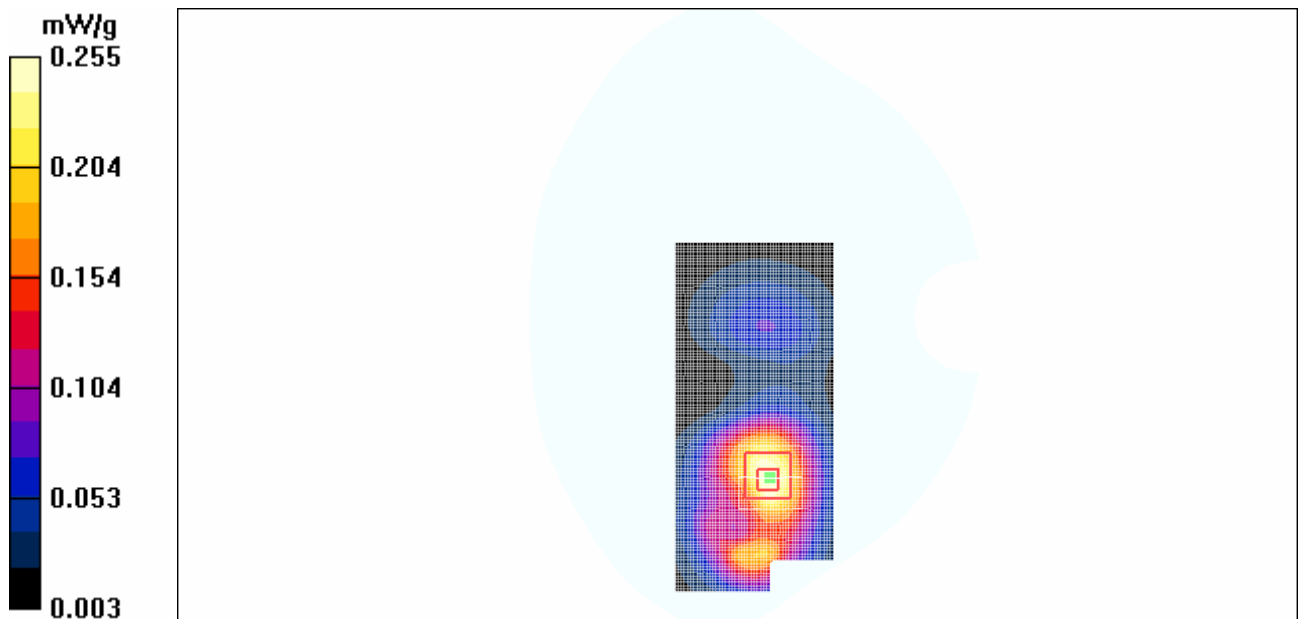


Figure 140 Body, Towards Ground, Open GSM 1900 Channel 810

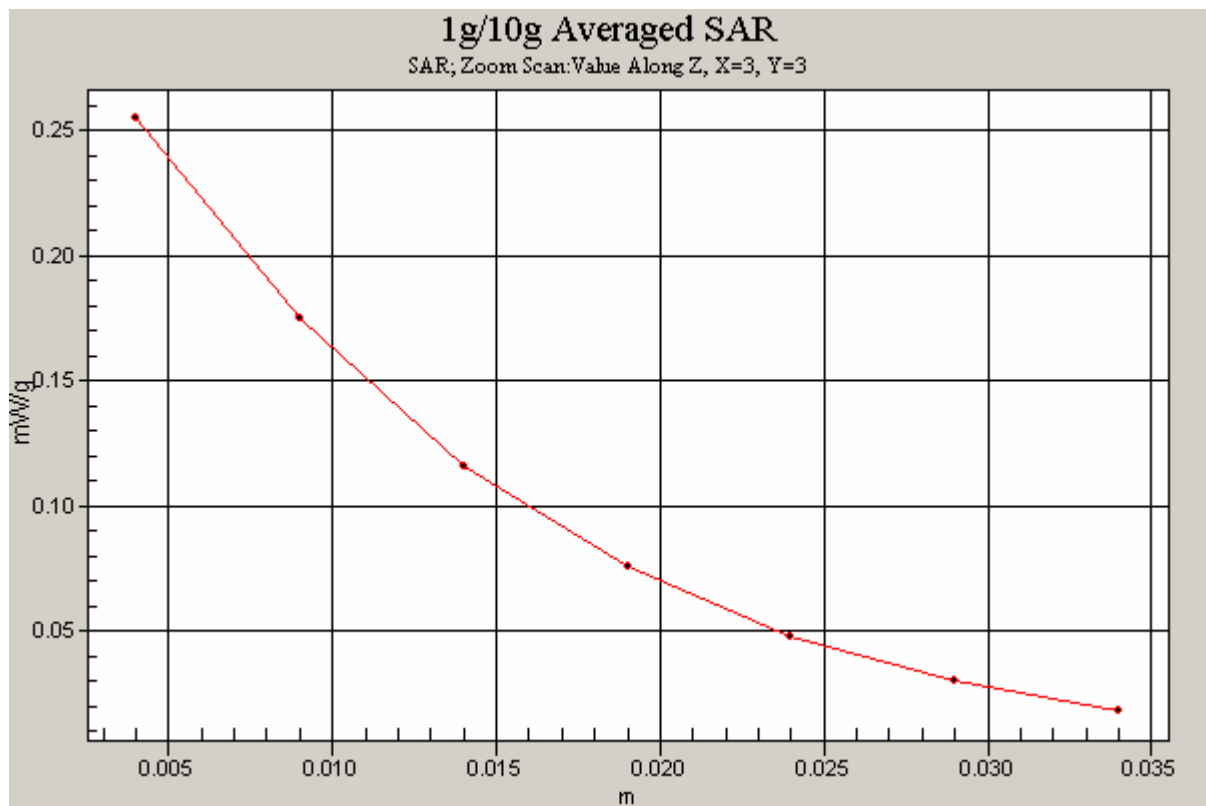


Figure 141 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 Channel 810)

GSM 1900 Towards Ground Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.292 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 = -0.046 dB

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.290 mW/g

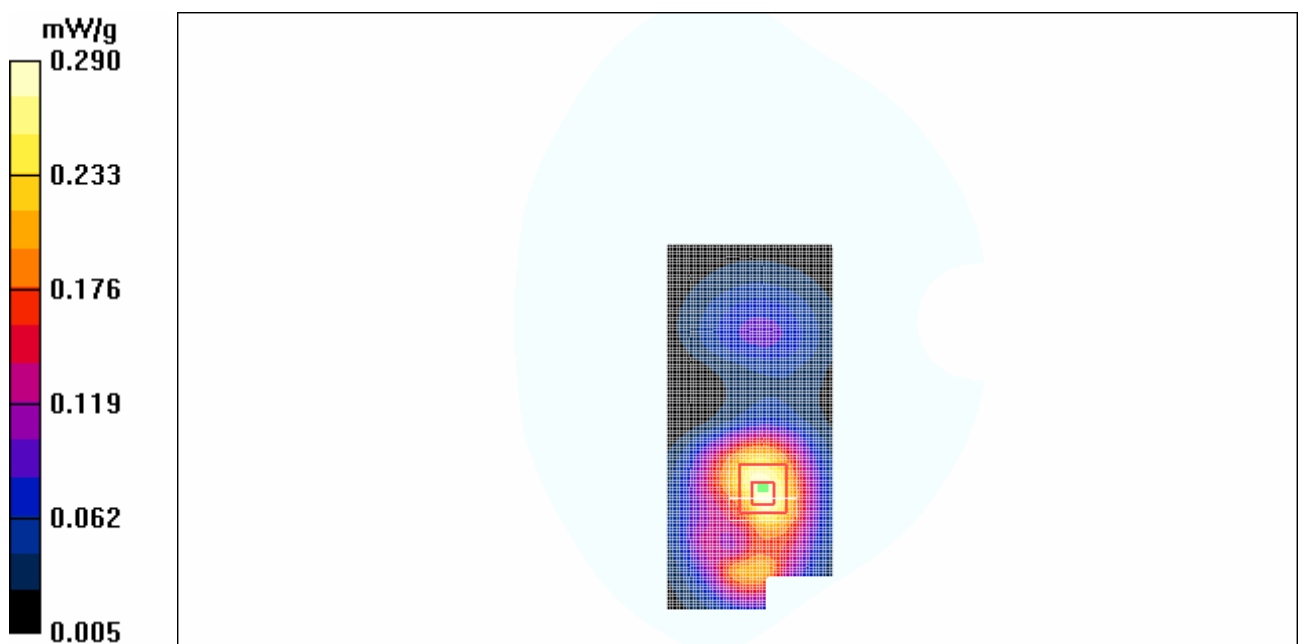


Figure 142 Body, Towards Ground, Open GSM 1900 Channel 661

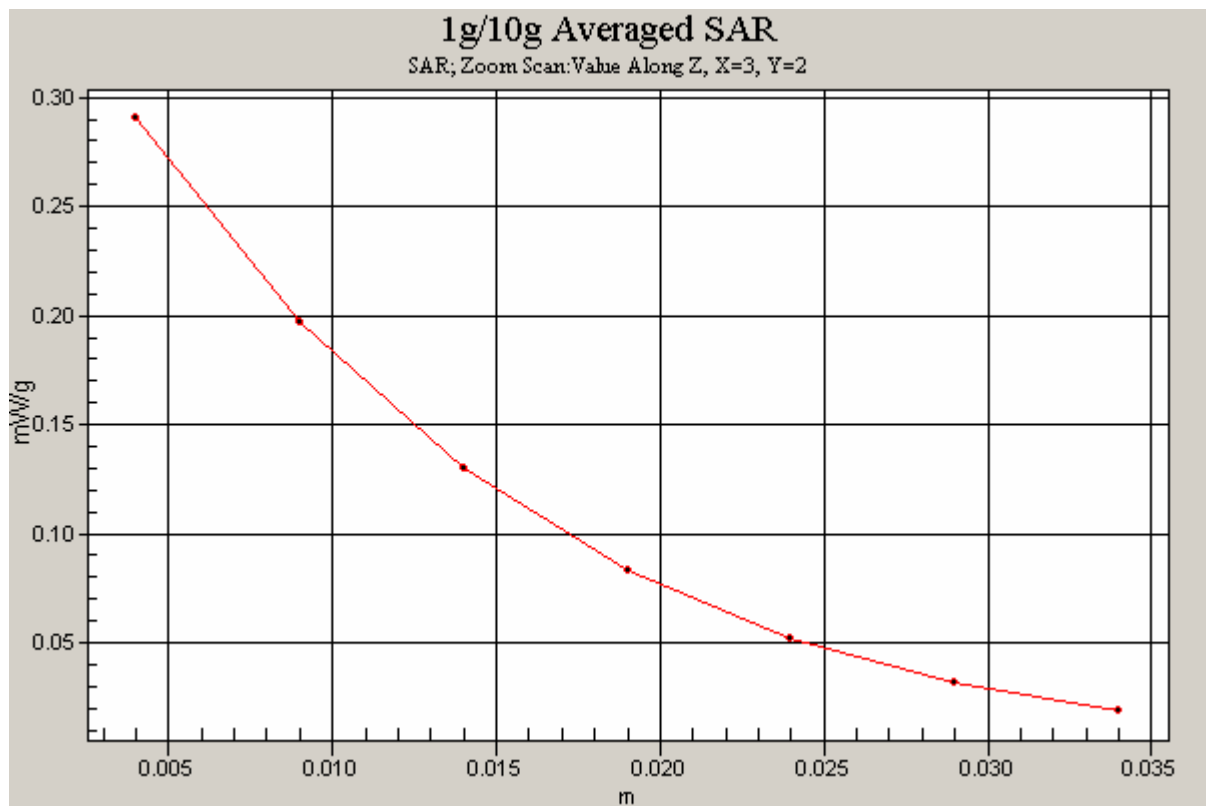


Figure 143 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 Channel 661)

GSM 1900 Towards Ground Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.377 mW/g

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

Reference Value = 7.68 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 0.376 mW/g

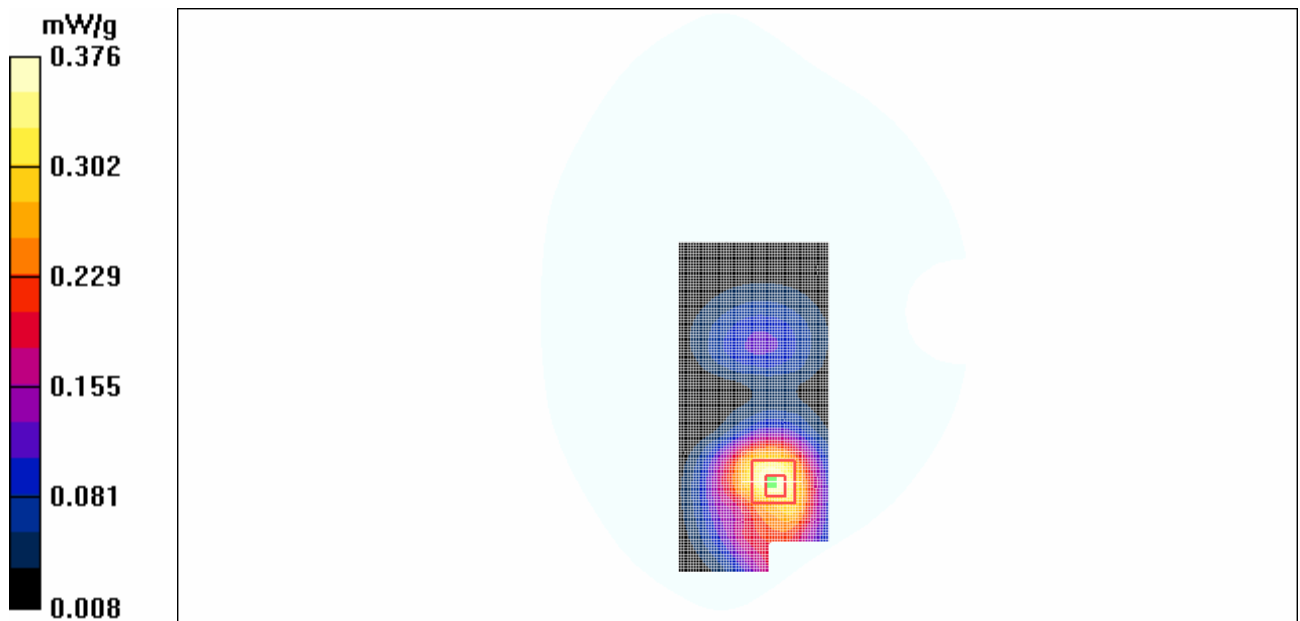


Figure 144 Body, Towards Ground, Open GSM 1900 Channel 512

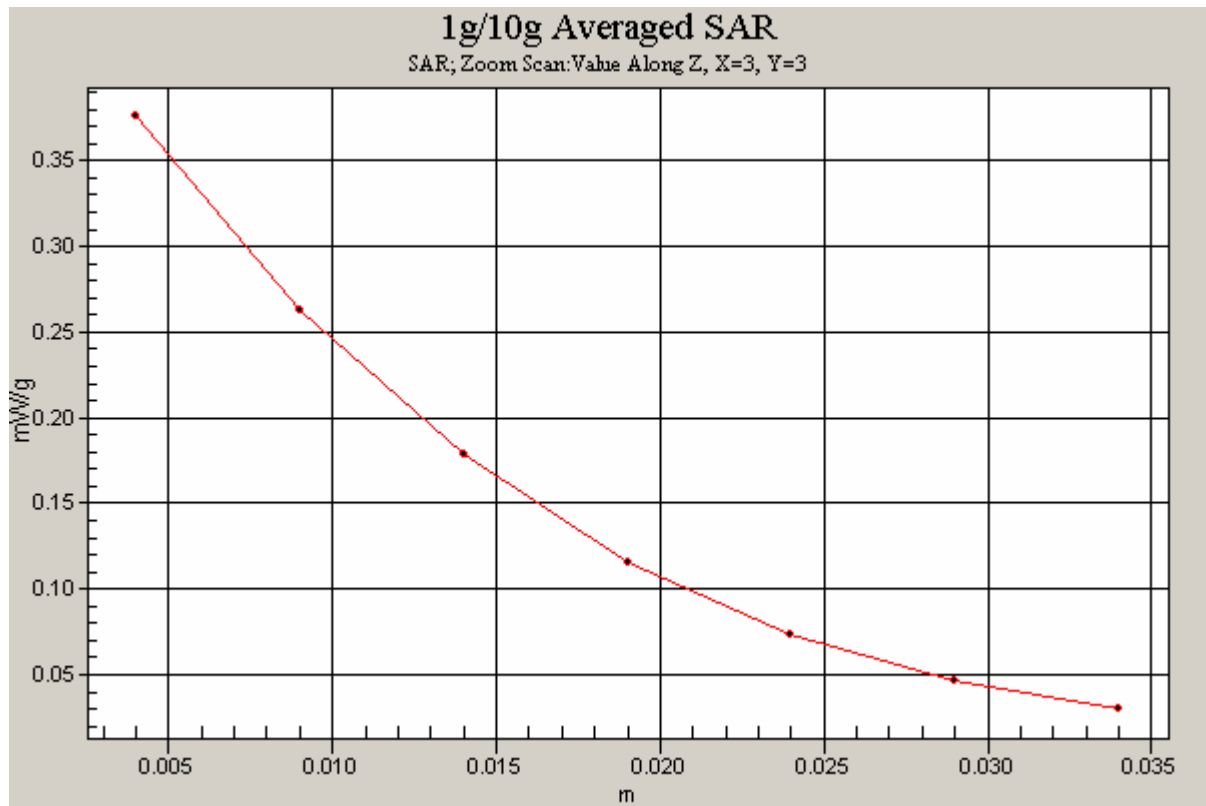


Figure 145 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 Channel 512)

GSM 1900 Towards Phantom High Open

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.130 mW/g

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

Reference Value = 7.46 V/m; Power Drift = 0.052 dB

Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.074 mW/g

Maximum value of SAR (measured) = 0.130 mW/g

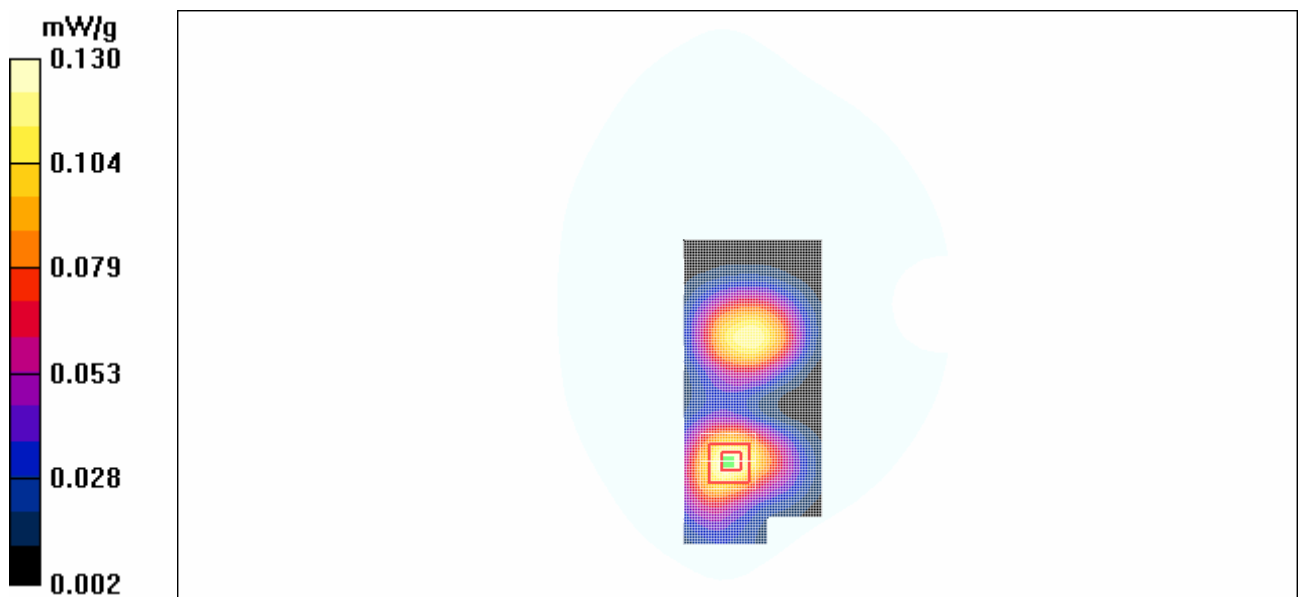


Figure 146 Body, Towards Phantom, Open GSM 1900 Channel 810

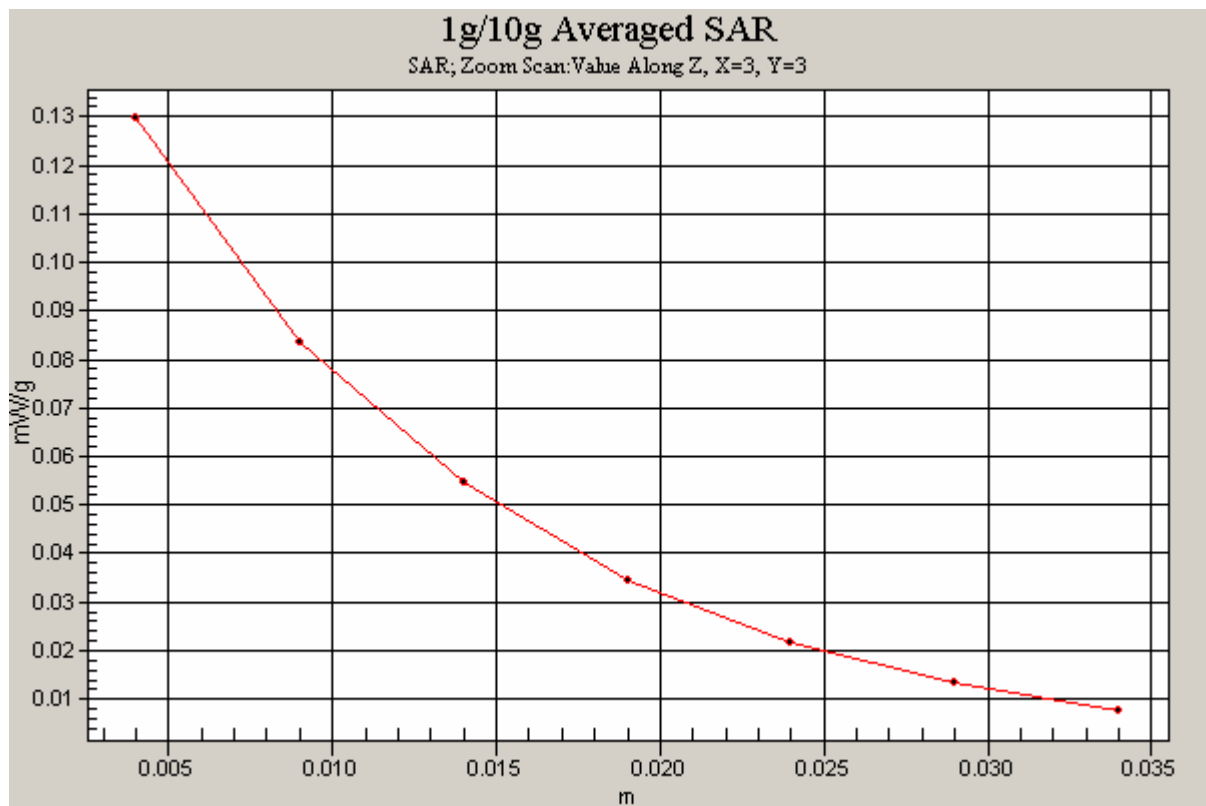


Figure 147 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 1900 Channel 810)

GSM 1900 Towards Phantom Middle Open

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.154 mW/g

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

Reference Value = 8.47 V/m; Power Drift = -0.086 dB

Peak SAR (extrapolated) = 0.203 W/kg

SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.089 mW/g

Maximum value of SAR (measured) = 0.148 mW/g

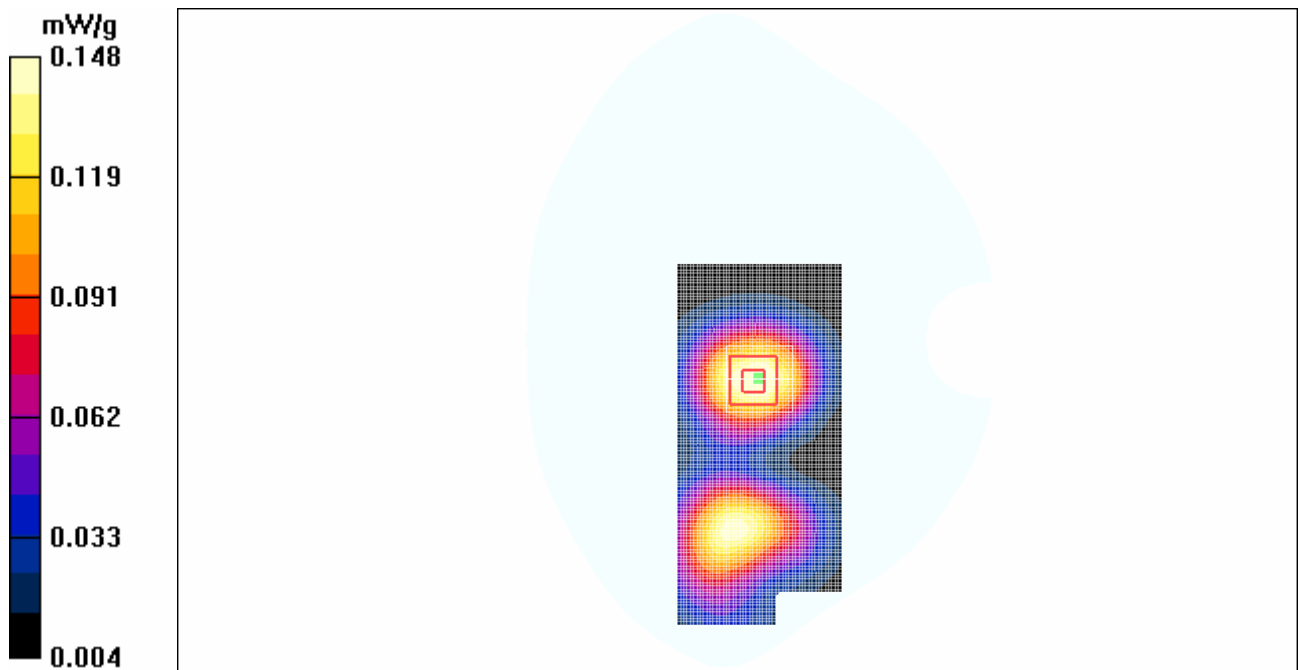


Figure 148 Body, Towards Phantom, Open GSM 1900 Channel 661

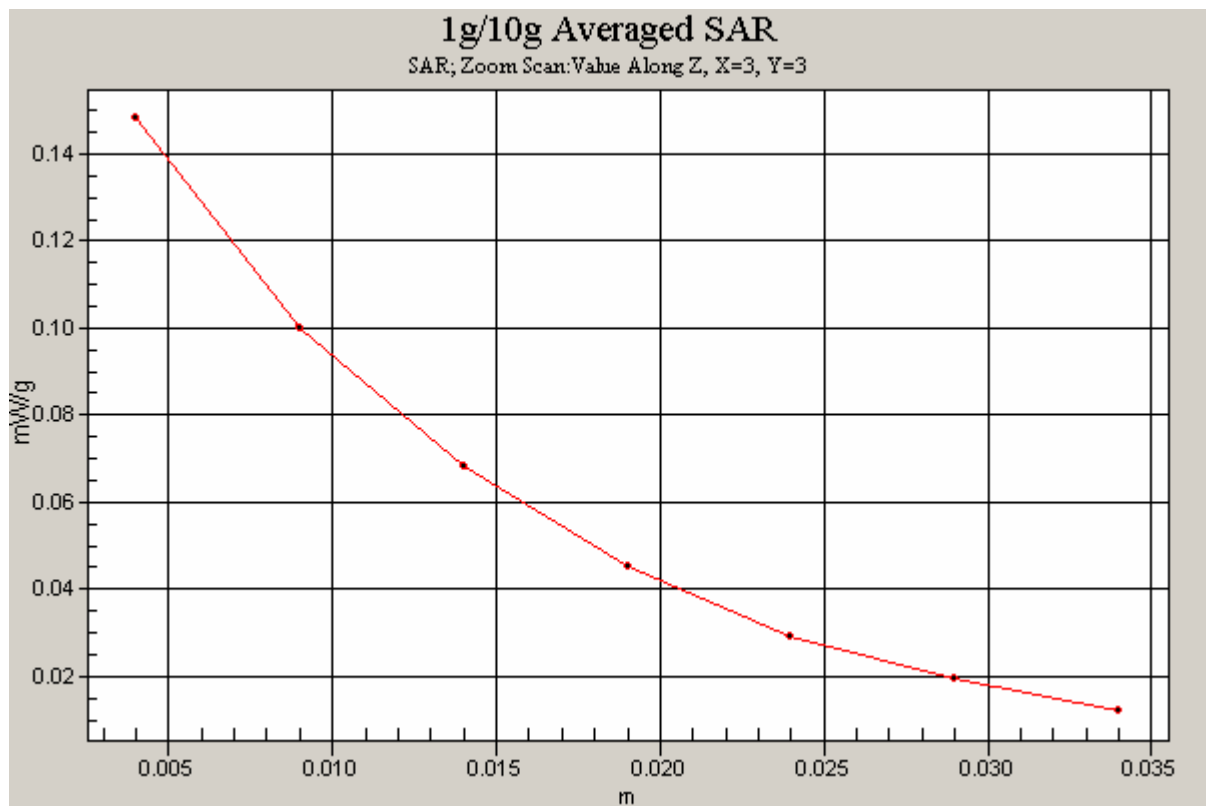


Figure 149 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 1900 Channel 661)

GSM 1900 Towards Phantom Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.199 mW/g

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

Reference Value = 8.08 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 0.263 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.193 mW/g

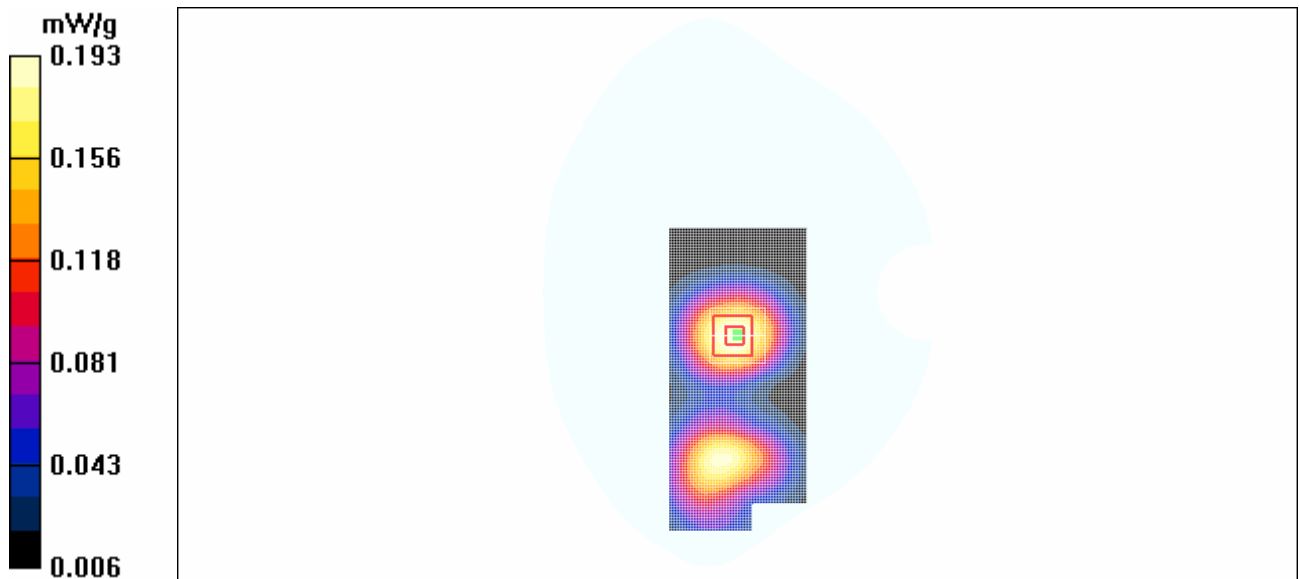


Figure 150 Body, Towards Phantom, Open GSM 1900 Channel 512

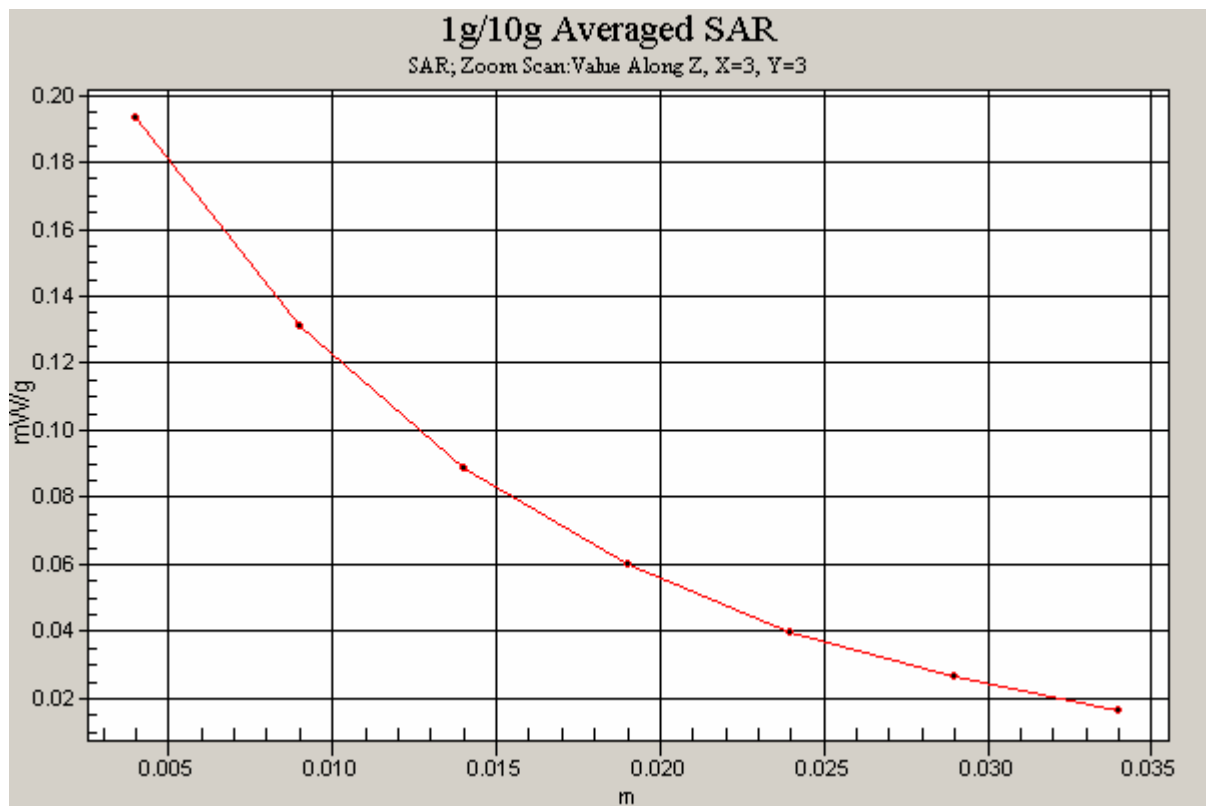


Figure 151 Z-Scan at power reference point (Body with Earphone, Towards Ground, Open GSM 1900, Channel 512)

GSM 1900 Earphone Towards Ground Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

Towards Ground Low/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm.

Maximum value of SAR (interpolated) = 0.301 mW/g

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

Reference Value = 7.12 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.405 W/kg

SAR(1 g) = 0.281 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.304 mW/g

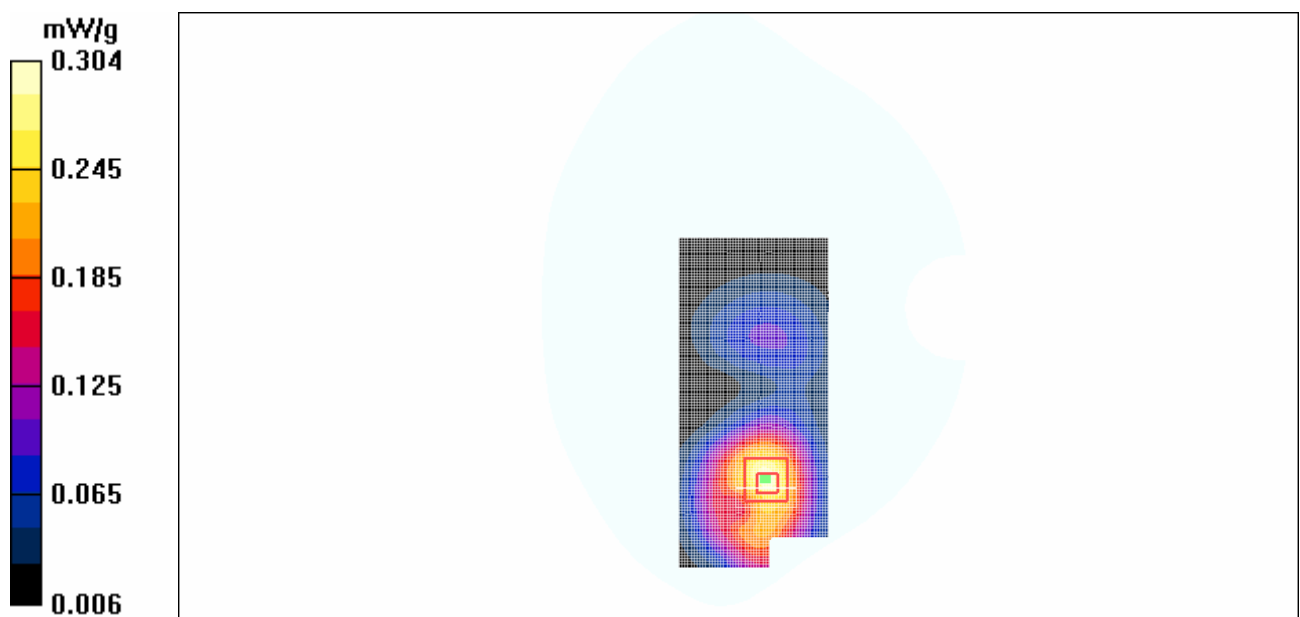


Figure 152 Body with Earphone, Towards Ground, Open GSM 1900, Channel 512

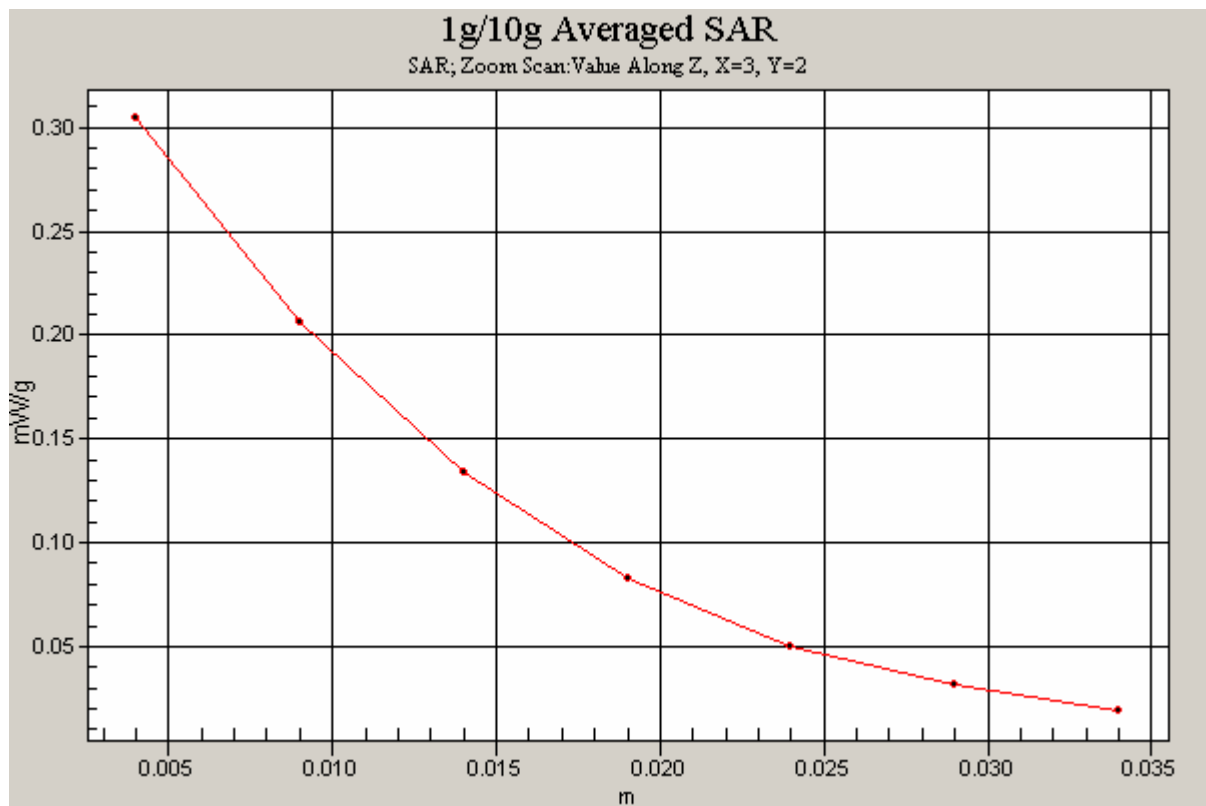


Figure 153 Z-Scan at power reference point (Body with Earphone, Towards Ground, Open GSM 1900, Channel 512)

GSM 1900 Bluetooth Earphone Towards Ground Low Open

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³ :

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.377 mW/g

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

Reference Value = 7.82 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.220 mW/g

Maximum value of SAR (measured) = 0.377 mW/g

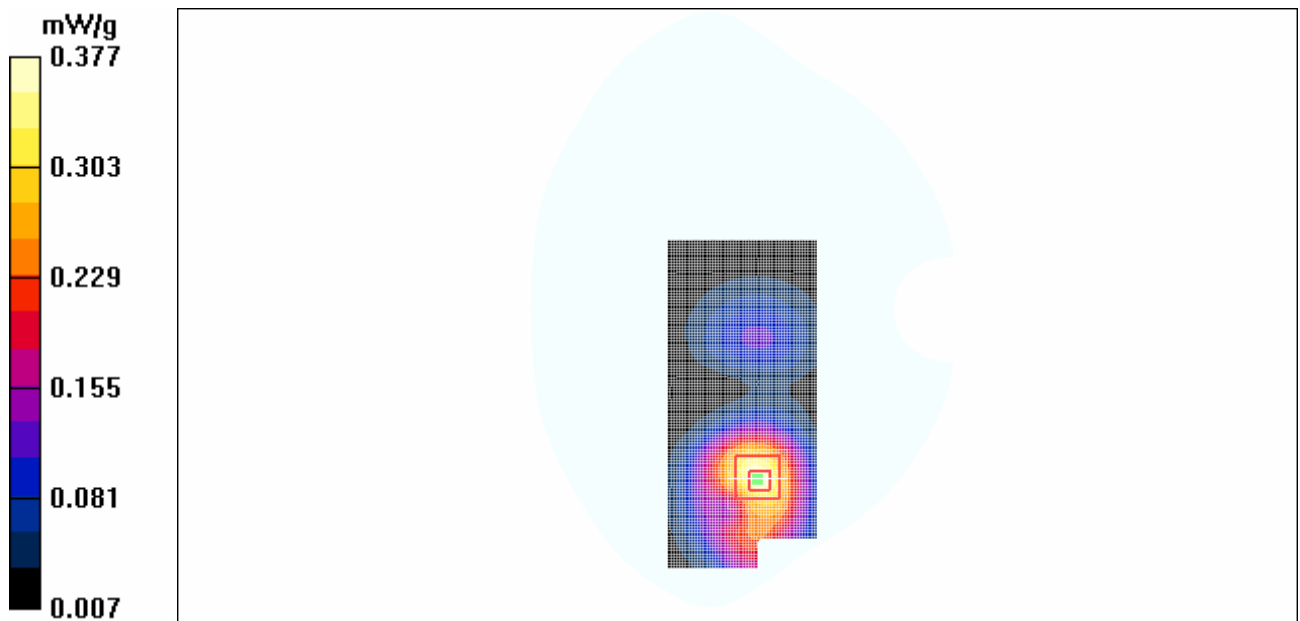


Figure 154 Body with Bluetooth earphone, Towards Ground, Open GSM 1900, Channel 512

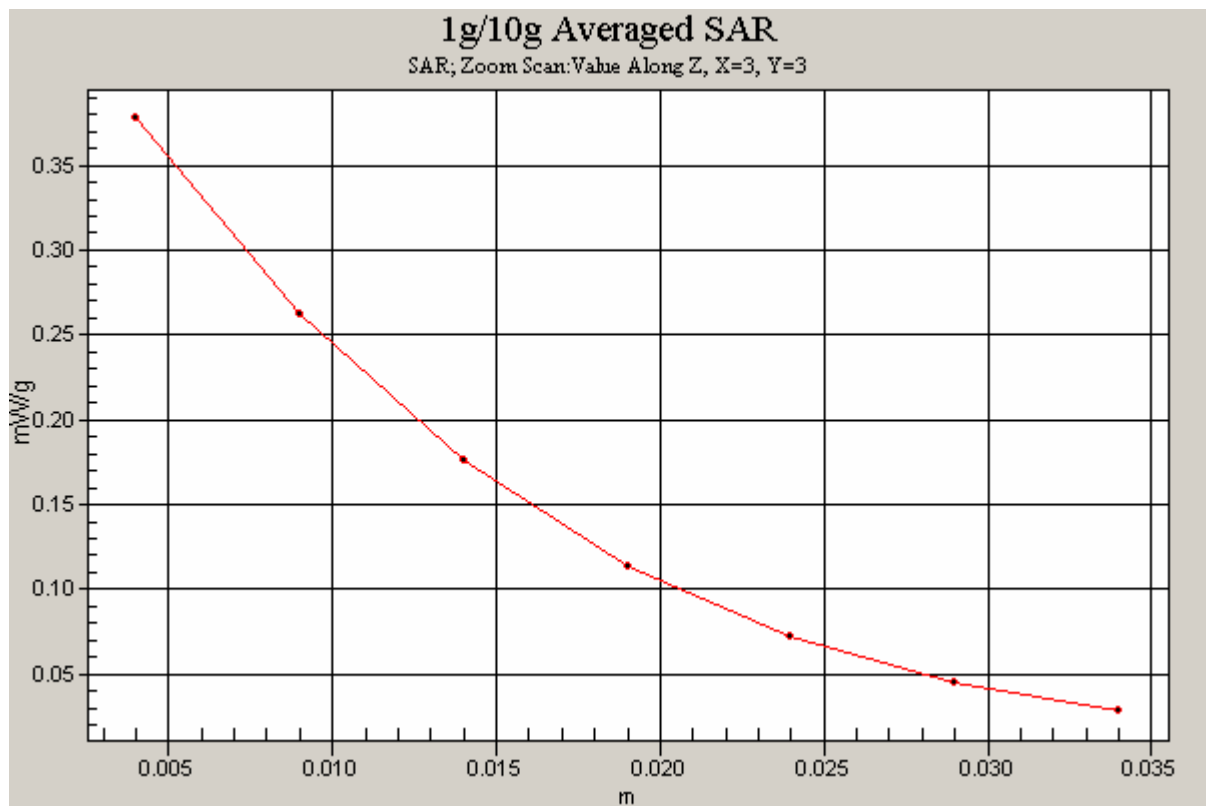


Figure 155 Z-Scan at power reference point (Body with Bluetooth earphone, Towards Ground, Open GSM 1900, Channel 512)

GSM 1900 GPRS Towards Ground High Open

Communication System: GSM 1900+GPRS(2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.443 mW/g

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

Reference Value = 8.81 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.602 W/kg

SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.255 mW/g

Maximum value of SAR (measured) = 0.444 mW/g

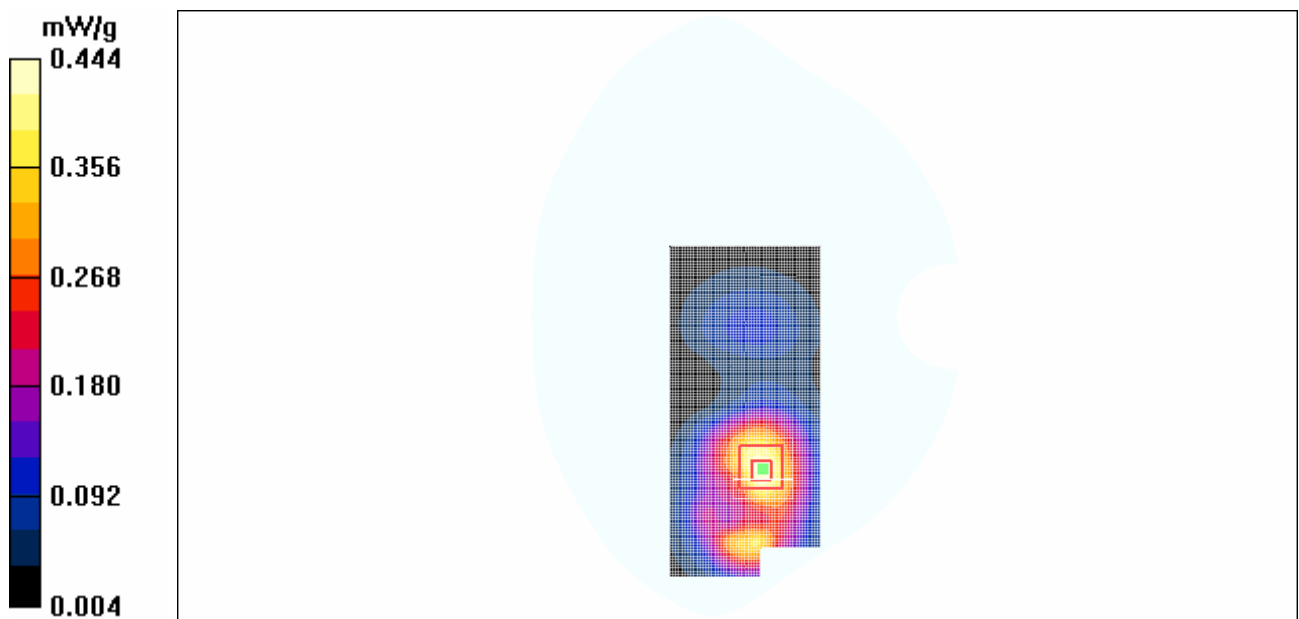


Figure 156 Body, Towards Ground, Open GSM 1900 GPRS, Channel 810

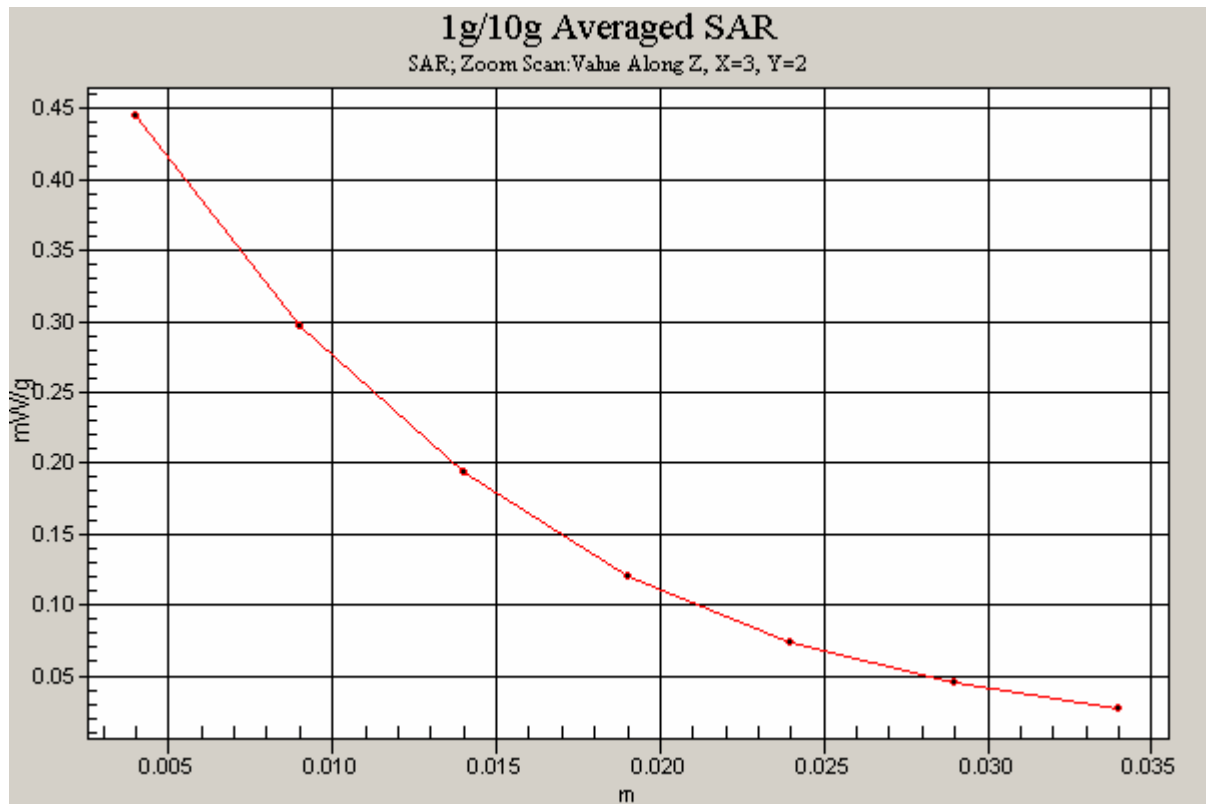


Figure 157 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 GPRS, Channel 810)

GSM 1900 GPRS Towards Ground Middle Open

Communication System: GSM 1900+GPRS(2Up); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.517 mW/g

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

Reference Value = 10.1 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 0.751 W/kg

SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.277 mW/g

Maximum value of SAR (measured) = 0.517 mW/g

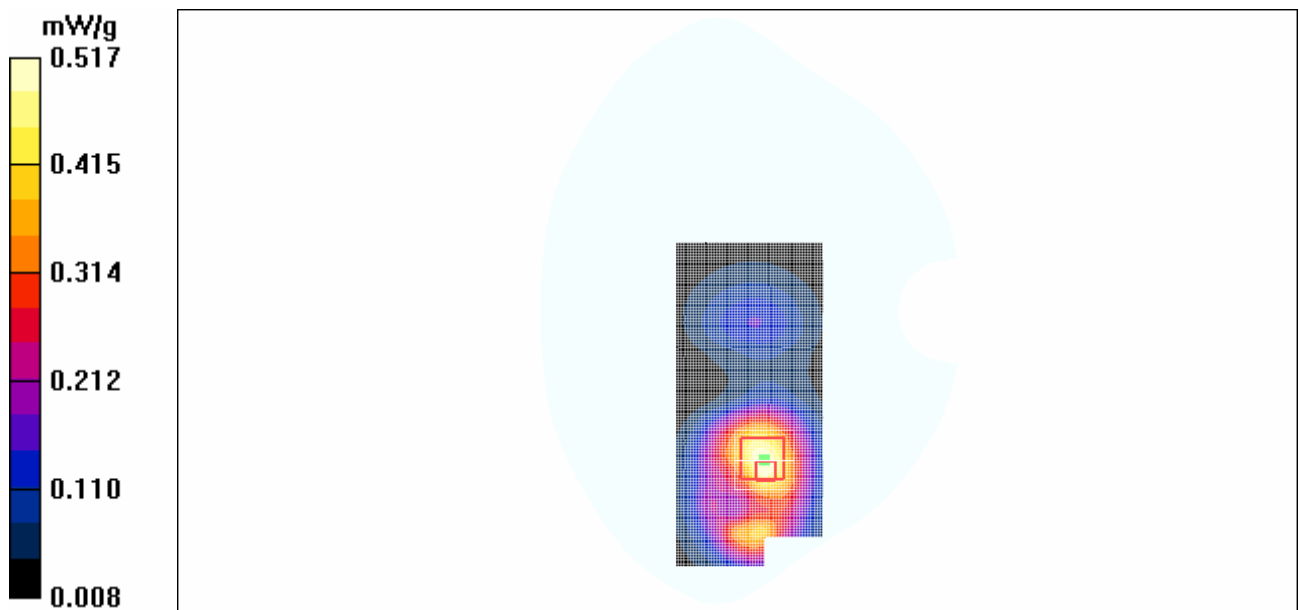


Figure 158 Body, Towards Ground, Open GSM 1900 GPRS Channel 661

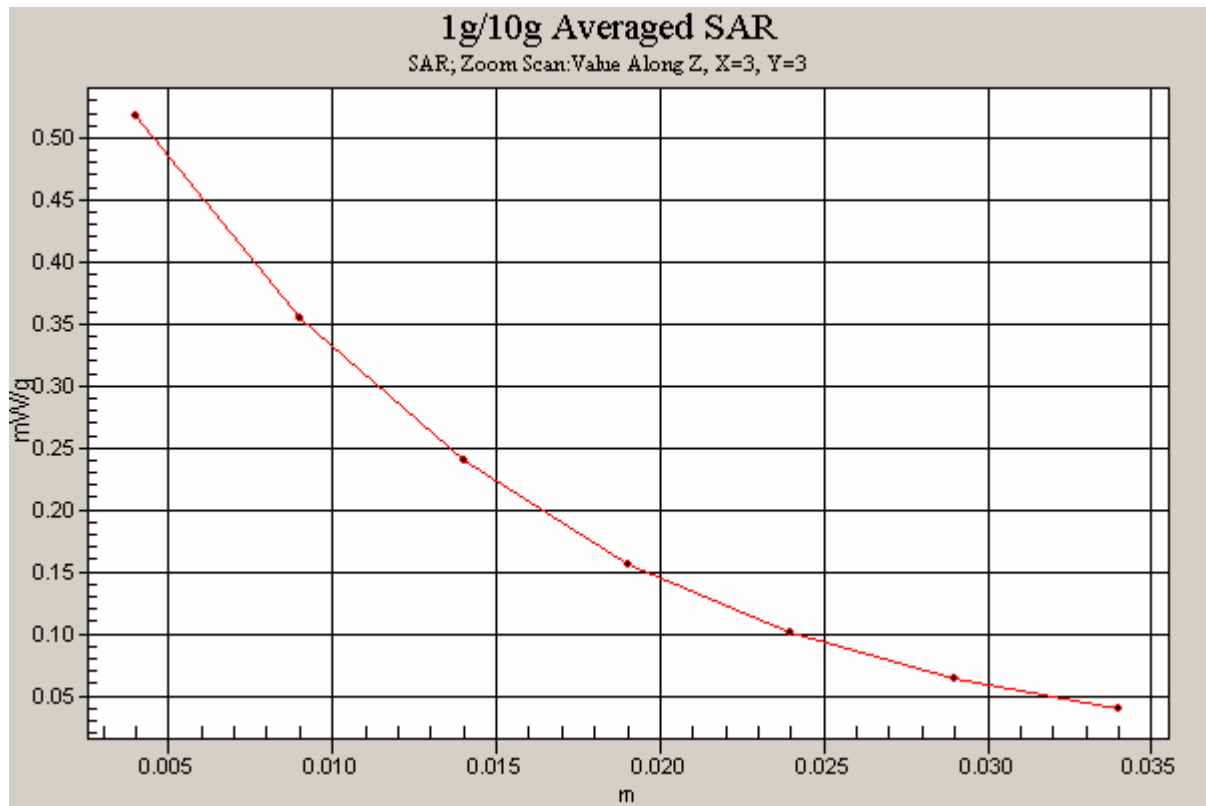


Figure 159 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 GPRS Channel 661)

GSM 1900 GPRS Towards Ground Low Open

Communication System: GSM 1900+GPRS(2Up); Frequency: 1850.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.575 mW/g

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

Reference Value = 11.1 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.760 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.336 mW/g

Maximum value of SAR (measured) = 0.572 mW/g

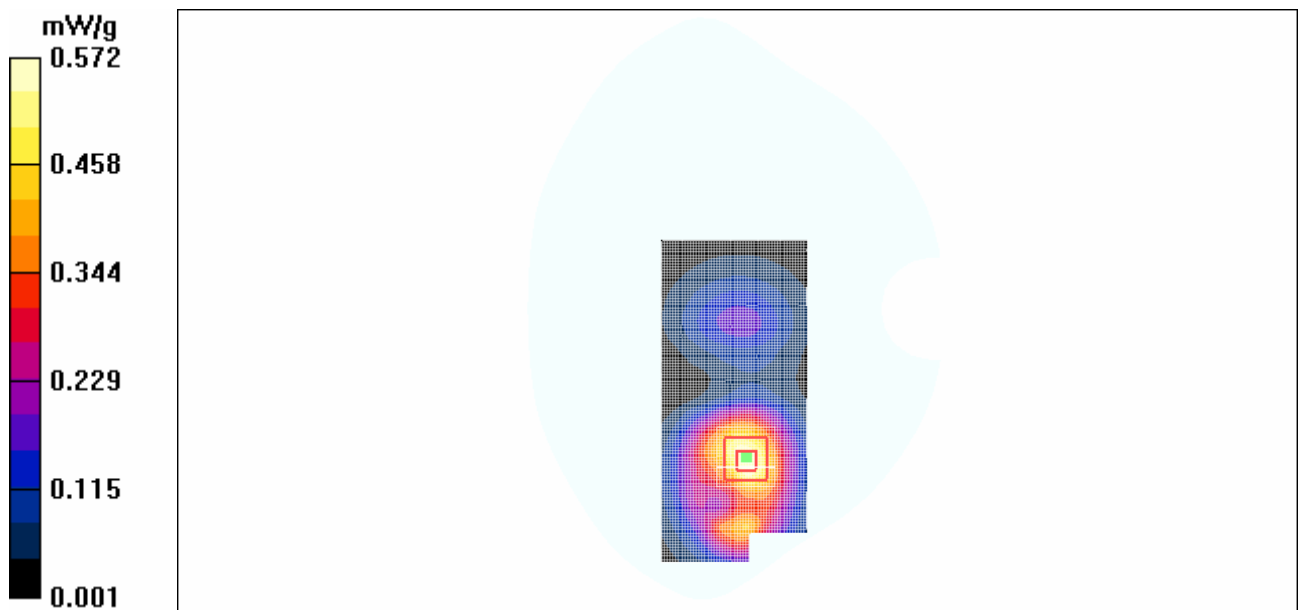


Figure 160 Body, Towards Ground, Open GSM 1900 GPRS Channel 512

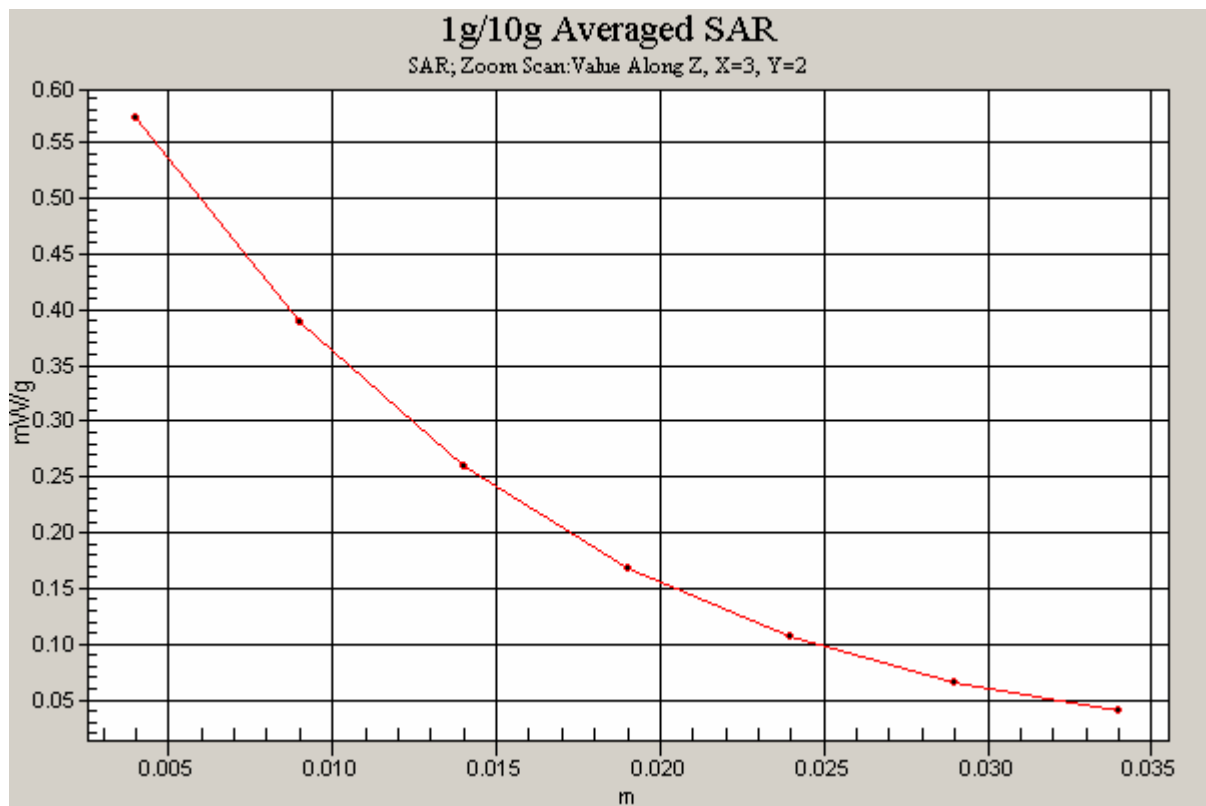


Figure 161 Z-Scan at power reference point (Body, Towards Ground, Open GSM 1900 GPRS Channel 512)

GSM 1900 GPRS Towards Phantom High Open

Communication System: GSM 1900+GPRS(2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.264 mW/g

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

Reference Value = 8.84 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.261 mW/g

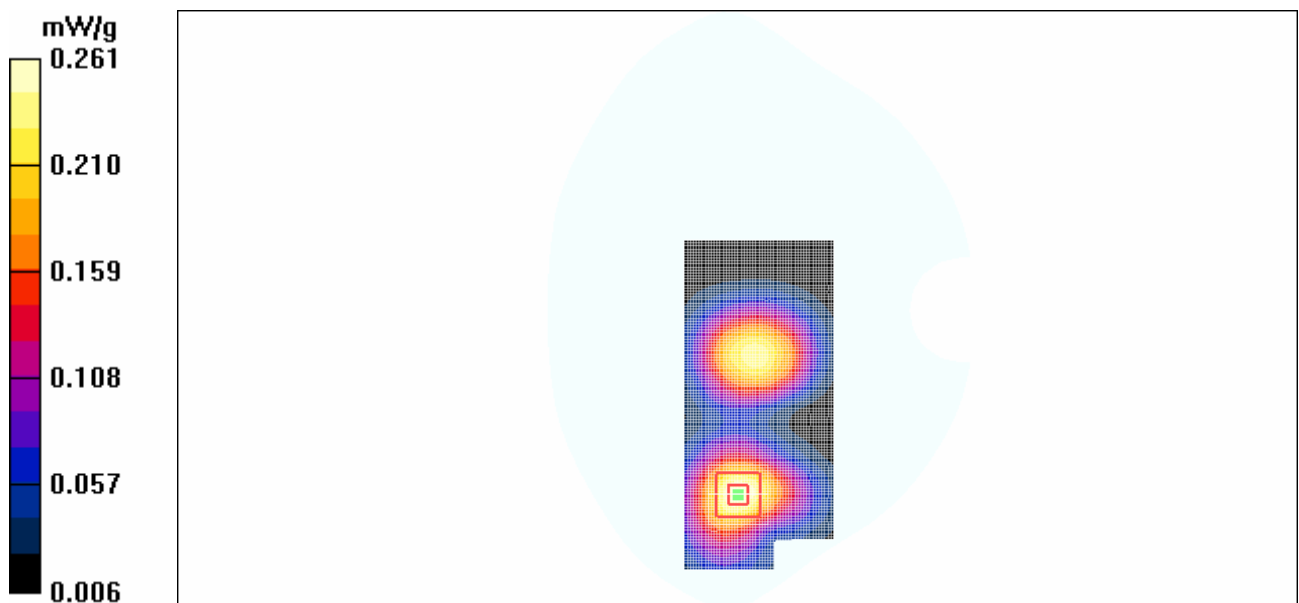


Figure 162 Body, Towards Phantom, Open GSM 1900 GPRS, Channel 810

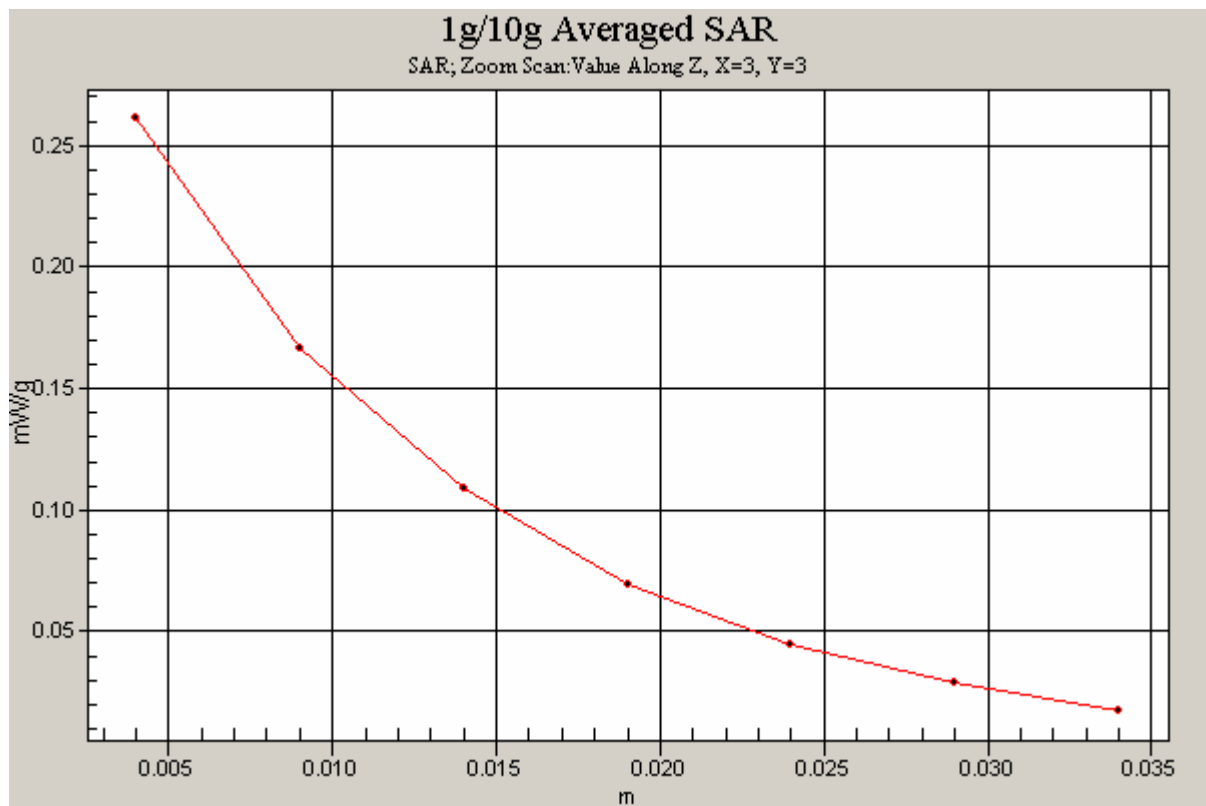


Figure 163 Z-Scan at power reference point (Body, Towards Phantom, Open GSM 1900 GPRS, Channel 810)

GSM 1900 GPRS Towards Phantom Middle Open

Communication System: GSM 1900+GPRS(2Up); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1531; ConvF(4.64, 4.64, 4.64);

Electronics: DAE4 Sn452;

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

Maximum value of SAR (interpolated) = 0.312 mW/g

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

Reference Value = 10.1 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.429 W/kg

SAR(1 g) = 0.270 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.300 mW/g

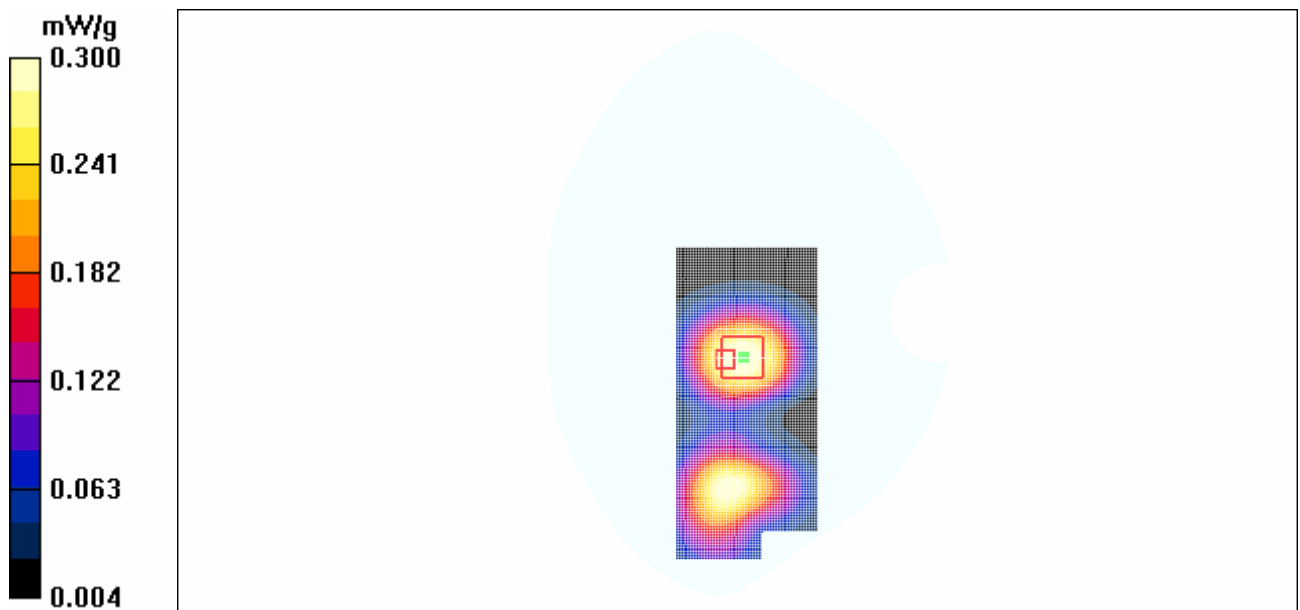


Figure 164 Body, Towards Phantom, Open GSM 1900 GPRS Channel 661