



NO.: RZA2008-0082FCC

OET 65

TEST REPORT

Test name	Electromagnetic Field (Specific Absorption Rate)
Product	WCDMA/GPRS/GSM Mobile Phone with Bluetooth
Model	U1211
FCC ID	QISU1211
Client	Huawei Technologies Co., Ltd.

TA Technology (Shanghai) Co., Ltd.



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TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 3of 96

GENERAL SUMMARY

Product	WCDMA/GPRS/GSM Mobile Phone with Bluetooth	Model	U1211
Client	Huawei Technologies Co., Ltd.	Type of test	Entrusted
Manufacturer	Huawei Technologies Co., Ltd.	Arrival Date of sample	Jan.18 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	35264402000059-1-46		
Standard(s)	<p>EN 50360–2001: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.</p> <p>EN 50361–2001: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.</p> <p>ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz</p> <p>IEEE 1528–2003: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.</p> <p>OET Bulletin 65 (Edition 97-01) and Supplement C (Edition 01-01): Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits.</p> <p>IEC 62209-1: Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1: Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)</p>		
Conclusion	<p>Localized Specific Absorption Rate (SAR) of this portable wireless equipment has been measured in all cases requested by the relevant standards cited in Clause 6.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 6.1 of this test report.</p> <p>General Judgment: Pass</p> <p style="text-align: right;">(Stamp) </p> <p style="text-align: right;">Date of issue: Feb. 3rd, 2008</p>		
Comment	<p>TX Freq. Band: GSM1900 Max. Power: 1W</p> <p>The test result only responds to the measured sample.</p>		

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TABLE OF CONTENT

1	COMPETENCE AND WARRANTIES	6
2	GENERAL CONDITIONS	6
3	DESCRIPTION OF EUT	6
3.1	ADDRESSING INFORMATION RELATED TO EUT	6
3.2	CONSTITUENTS OF EUT	7
3.3	GENERAL DESCRIPTION	7
4	OPERATIONAL CONDITIONS DURING TEST	8
4.1	SCHEMATIC TEST CONFIGURATION	8
5	SAR MEASUREMENTS SYSTEM CONFIGURATION	9
5.1	SAR MEASUREMENT SET-UP	9
5.2	DASY4 E-FIELD PROBE SYSTEM	10
5.3	E-FIELD PROBE CALIBRATION	11
5.4	OTHER TEST EQUIPMENT	11
5.5	EQUIVALENT TISSUES	13
5.6	SYSTEM SPECIFICATIONS	13
6	CHARACTERISTICS OF THE TEST	14
6.1	APPLICABLE LIMIT REGULATIONS	14
6.2	APPLICABLE MEASUREMENT STANDARDS	14
7	LABORATORY ENVIRONMENT	14
8	CONDUCTED OUTPUT POWER MEASUREMENT	15
8.1	SUMMARY	15
8.2	POWER DRIFT	15
8.3	CONDUCTED POWER	15
8.3.1	MEASUREMENT METHODS	15
8.3.2	MEASUREMENT RESULT	15
9	TEST RESULTS	16
9.1	DIELECTRIC PERFORMANCE	16
9.2	SYSTEM VALIDATION	16
9.3	SUMMARY OF MEASUREMENT RESULTS	17
9.4	CONCLUSION	19
10	MEASUREMENT UNCERTAINTY	20
11	MAIN TEST INSTRUMENTS	21
12	TEST PERIOD	21
13	TEST LOCATION	21
ANNEX A:	MEASUREMENT PROCESS	22
ANNEX B:	TEST LAYOUT	23

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 5 of 96

ANNEX C: GRAPH RESULTS	24
ANNEX D: SYSTEM VALIDATION RESULTS	76
ANNEX E: PROBE CALIBRATION CERTIFICATE	77
ANNEX F: D1900V2 DIPOLE CALIBRATION CERTIFICATE.....	86
ANNEX G: THE EUT APPEARANCES AND TEST CONFIGURATION.....	92

1 COMPETENCE AND WARRANTIES

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

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

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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

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 7 of 96

3.2 Constituents of EUT

Table 3: Constituents of Samples

Description	Model	Serial Number	Manufacturer
WCDMA/GPRS/GSM Mobile Phone with Bluetooth	U1211	35264402000059-1-46	HUAWEI Technologies Co., Ltd.
Lithium Battery	HBC83S	FMT780725739Y	SCUD(Shenzhen) Electronics Co., Ltd.
AC/DC Adapter	TPCA-053065UY	TP16B2500263	TECH-POWER Electronics (Shenzhen) Co., Ltd.

Note:

The EUT appearances see ANNEX G.

3.3 General Description

Equipment Under Test (EUT) is a model of WCDMA/GPRS/GSM Mobile Phone with Bluetooth with internal antenna. It consists of Handset and normal options: Lithium Battery and AC/DC Adapter as Table 3. SAR is tested for GSM 1900. It has the GPRS and Bluetooth function, the GPRS class is 10.

The sample undergoing test was selected by the Client.

Components list please refer to documents of the manufacturer.

4 OPERATIONAL CONDITIONS DURING TEST

4.1 Schematic Test Configuration

A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 512, 661 and 810 respectively in the case of GSM 1900. The EUT is commanded to operate at maximum transmitting 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.

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 2000 system and SAR Measurement Software DASY4, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

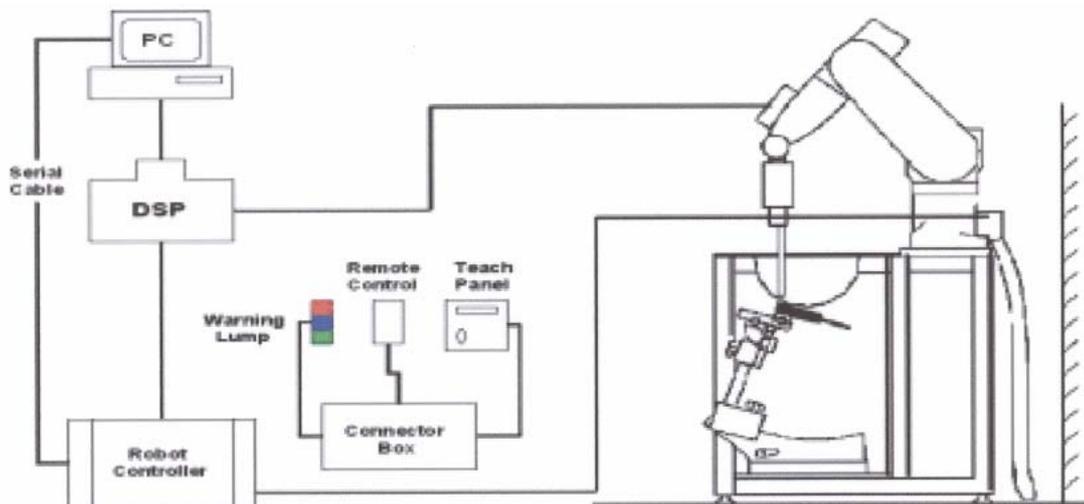


Figure1. SAR Lab Test Measurement Set-up

The DAE3 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 $\pm 0.25\text{dB}$.

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.g., glycol)
Calibration	In air from 10 MHz to 2.5 GHz In brain and muscle simulating tissue at frequencies of 450MHz, 900MHz and 1.8GHz (accuracy $\pm 8\%$) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.2 dB in brain tissue (rotation around probe axis) ± 0.4 dB in brain tissue (rotation normal probe axis)
Dynamic Range	5 μ W/g to > 100mW/g; Linearity: $\pm 0.2\text{dB}$
Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surface(ET3DV6 only)
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 3GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

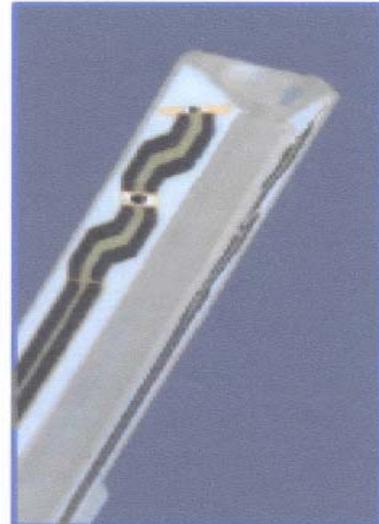


Figure2. ET3DV6 E-field Probe

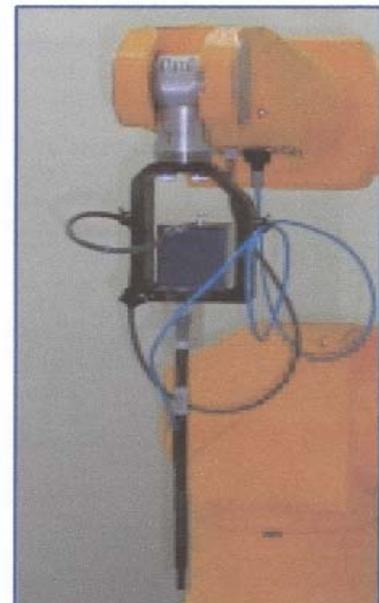


Figure3. ET3DV6 E-field probe

5.3 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/m³).

5.4 Other Test Equipment

5.4.1 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).



Figure4. Device Holder

5.4.2 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



Figure5. Generic Twin Phantom

5.5 Equivalent Tissues

The liquid used for the frequency range of 1800-2000 MHz consisted of water, salt, and Glycol monobutyl. 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)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 1900MHz
Water	69.91
Glycol	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz $\epsilon=53.3$ $\sigma=1.52$

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 2000

Data Converter

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

Software: DASY4 software

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

6 CHARACTERISTICS OF THE TEST

6.1 Applicable Limit Regulations

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

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

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

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

6.2 Applicable Measurement Standards

EN 50361–2001: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

It specifies the measurement method for demonstration of compliance with the SAR limits for such equipments.

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

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

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

7 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.	

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 15 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

8.3 Conducted Power

8.3.1 Measurement Methods

The EUT was set up for the maximum output power. The channel power was measured. These measurements were done at 3 channels 512,661 and 810 before SAR test and after SAR test.

8.3.2 Measurement result

Table 7: Conducted Power Measurement Results

GSM 1900	Conducted Power		
	Channel 512	Channel 661	Channel 810
Before Test (dBm)	29.20	29.32	29.16
After Test (dBm)	29.19	29.32	29.17
GSM 1900+GPRS	Conducted Power		
	Channel 512	Channel 661	Channel 810
Before Test (dBm)	29.20	29.32	29.16
After Test (dBm)	29.19	29.32	29.17

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	
1900 (Head)	Permittivity ϵ_r	40.00	41.12	2.80	%
	Conductivity σ	1.40	1.44	2.85	%

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	
1900 (Body)	Permittivity ϵ_r	53.30	52.87	1.07	%
	Conductivity σ	1.52	1.53	0.66	%

9.2 System Validation

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)		
		1900MHz	39.40		1.42		
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	1 g Average
	1900MHz	5.09	9.73	5.12	9.69	0.59%	-0.41%

Note:

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

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 17 of 96

9.3 Summary of Measurement Results

Table 11: SAR Values (Head, GSM 1900)

Liquid Temperature: 22.5°C			
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case Of Head	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Left hand, Touch cheek, High Frequency (See Figure7)	0.115	0.204	-0.179
Left hand, Touch cheek, Mid Frequency (See Figure9)	0.089	0.155	-0.118
Left hand, Touch cheek, Low Frequency (See Figure11)	0.070	0.121	-0.106
Left hand, Tilt 15 Degree, High Frequency (See Figure13)	0.141	0.245	-0.131
Left hand, Tilt 15 Degree, Mid Frequency (See Figure15)	0.105	0.182	0.002
Left hand, Tilt 15 Degree, Low Frequency (See Figure17)	0.083	0.144	-0.060
Right hand, Touch cheek, High Frequency (See Figure19)	0.132	0.257	-0.034
Right hand, Touch cheek, Mid Frequency (See Figure21)	0.100	0.193	-0.044
Right hand, Touch cheek, Low Frequency (See Figure23)	0.078	0.148	-0.117
Right hand, Tilt 15 Degree, High Frequency (See Figure25)	0.152	0.272	-0.071
Right hand, Tilt 15 Degree, Mid Frequency (See Figure27)	0.116	0.206	-0.064
Right hand, Tilt 15 Degree, Low Frequency (See Figure29)	0.087	0.153	-0.115

Table 12: SAR Values (Body, GSM 1900, Distance 15mm)

Liquid Temperature: 22.4°C			
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case Of Body	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Towards Ground, High Frequency (See Figure31)	0.242	0.379	-0.038
Towards Ground, Mid Frequency (See Figure33)	0.191	0.296	-0.019
Towards Ground, Low Frequency (See Figure35)	0.148	0.228	-0.010
Towards Phantom, High Frequency (See Figure37)	0.070	0.115	-0.120
Towards Phantom, Mid Frequency (See Figure39)	0.047	0.077	-0.072
Towards Phantom, Low Frequency (See Figure41)	0.032	0.053	-0.098

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 18 of 96

Table 13: SAR Values (Body, GPRS GSM 1900, Distance 15mm)

Liquid Temperature: 22.4°C			
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case Of Body	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Towards Ground, High Frequency (See Figure43)	0.492	0.783	-0.136
Towards Ground, Mid Frequency (See Figure45)	0.370	0.575	-0.039
Towards Ground, Low Frequency (See Figure47)	0.277	0.427	-0.091
Towards Phantom, High Frequency (See Figure49)	0.111	0.183	-0.048
Towards Phantom, Mid Frequency (See Figure51)	0.075	0.123	-0.023
Towards Phantom, Low Frequency (See Figure53)	0.053	0.086	-0.022

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

Table 14: SAR Values (Body with Earphone, GSM 1900, Distance 15mm)

Liquid Temperature: 22.4°C			
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case Of Body	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Towards Ground, High Frequency (See Figure55)	0.213	0.331	0.010

Table 15: SAR Values (Body with Bluetooth earphone, GSM 1900, Distance 15mm)

Liquid Temperature: 22.4°C			
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case Of Body	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Towards Ground, High Frequency (See Figure57)	0.248	0.404	-0.037

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 6.2 of this report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 6.1 of this test report.

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 20 of 96

10 MEASUREMENT UNCERTAINTY

No.	a	Type	c	d	e=f(d, k)	f	h=cxf / 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	

TA Technology (Shanghai) Co., Ltd.
Test Report

No. RZA2008-0082FCC

Page 21 of 96

11 MAIN TEST INSTRUMENTS

Table 16: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 15, 2007	One year
02	Dielectric Probe Kit	Agilent 85070E	US44020115	No Calibration Requested	
03	Power meter	Agilent E4417A	GB41291714	March 16, 2007	One year
04	Power sensor	Agilent 8481H	MY41091316	March 16, 2007	One year
05	Signal Generator	HP 8341B	2730A00804	September 15 2007	One year
06	Amplifier	IXA-020	0401	No Calibration Requested	
07	Validation Kit 1900MHz	SPEAG D1900V2	541	February 20, 2007	One year
08	BTS	E5515C	GB46490218	September 15 2007	One year
09	E-field Probe	ET3DV6	1737	February 20, 2007	One year
10	DAE	DAE3	452	September 6, 2007	One year

12 TEST PERIOD

The test is performed from Jan. 20th, 2008 to Jan. 30th, 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 20 mm x 20 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.

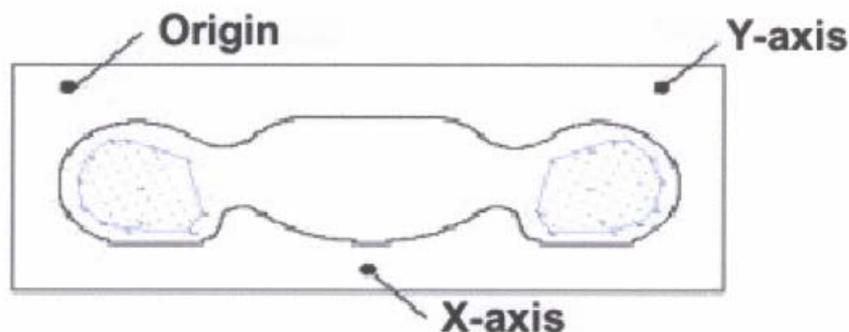


Figure 6 SAR Measurement Points in Area Scan

ANNEX B: TEST LAYOUT



Picture 1 Specific Absorption Rate Test Layout



Picture 2 Liquid depth in the Flat Phantom (GSM 1900)

ANNEX C: GRAPH RESULTS

GSM 1900 Left Cheek High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.253 mW/g

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

Reference Value = 9.53 V/m; Power Drift = -0.179 dB

Peak SAR (extrapolated) = 0.330 W/kg

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.224 mW/g

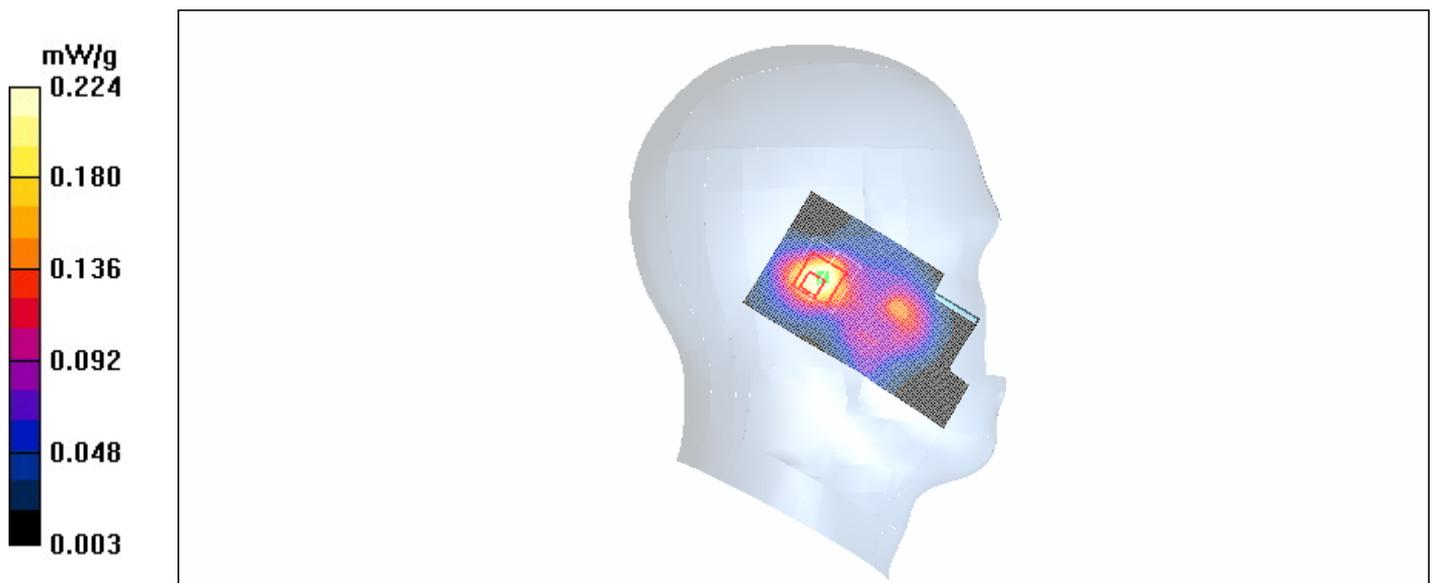


Figure 7 Left Hand Touch Cheek GSM 1900 Channel 810

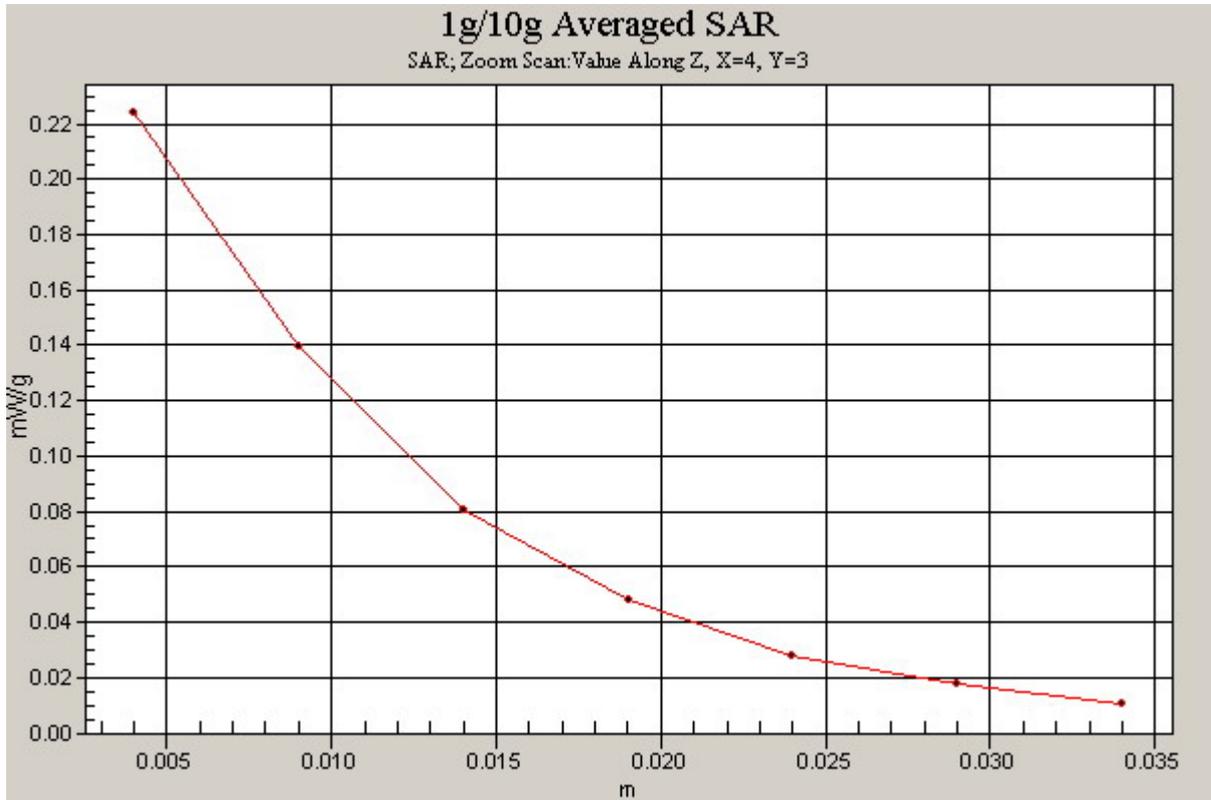


Figure 8 Z-Scan at power reference point (Left Hand Touch Cheek GSM 1900 Channel 810)

GSM 1900 Left Cheek Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.196 mW/g

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

Reference Value = 8.29 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 0.245 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.089 mW/g

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

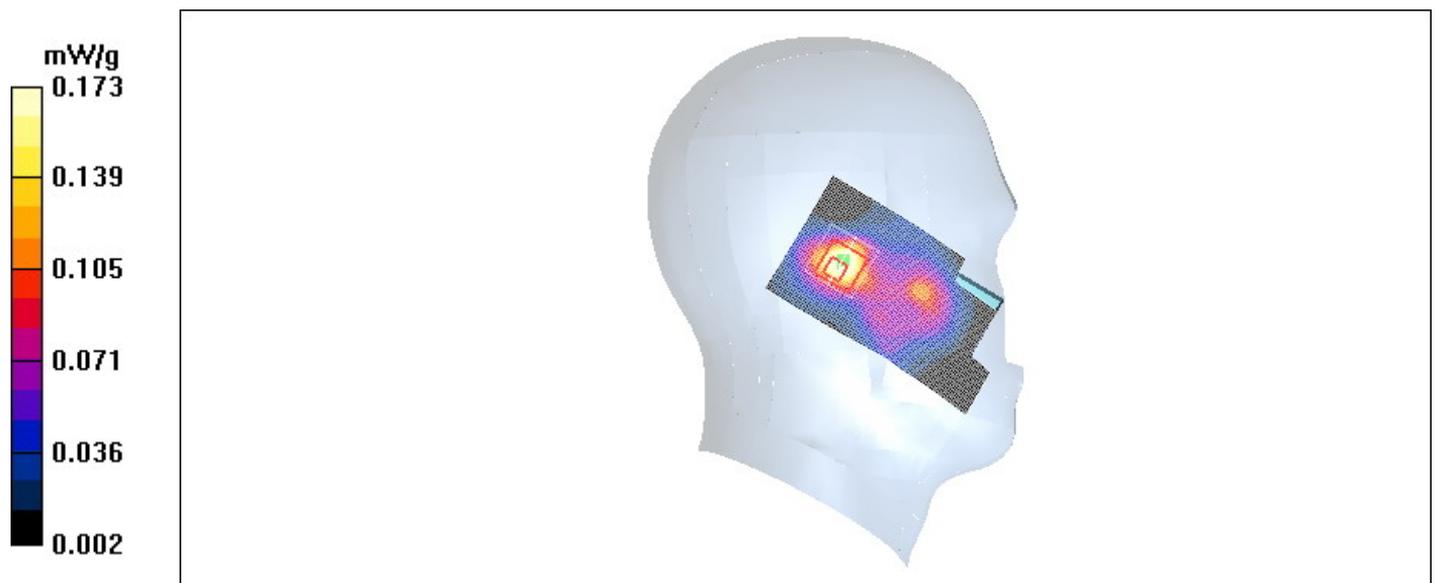


Figure 9 Left Hand Touch Cheek GSM 1900 Channel 661

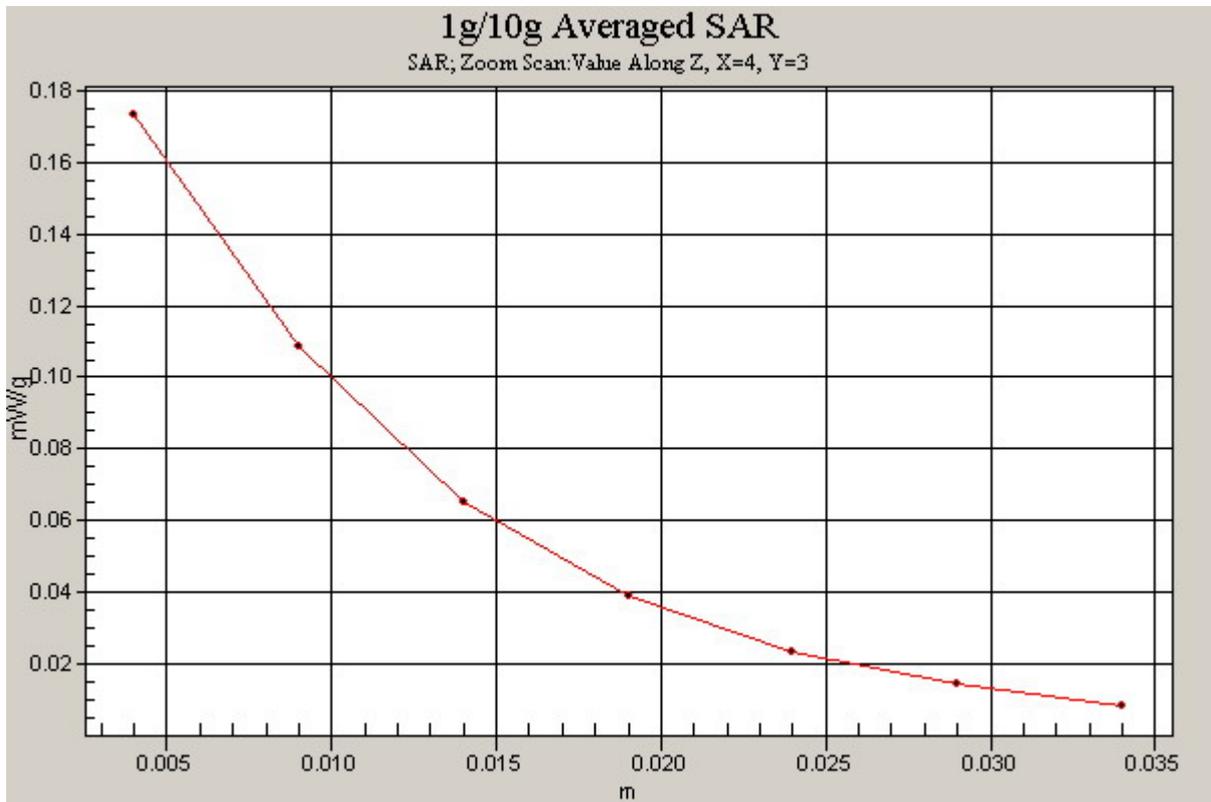


Figure 10 Z-Scan at power reference point (Left Hand Touch Cheek GSM 1900 Channel 661)

GSM 1900 Left Cheek Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.155 mW/g

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

Reference Value = 7.30 V/m; Power Drift = -0.106 dB

Peak SAR (extrapolated) = 0.186 W/kg

SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.134 mW/g

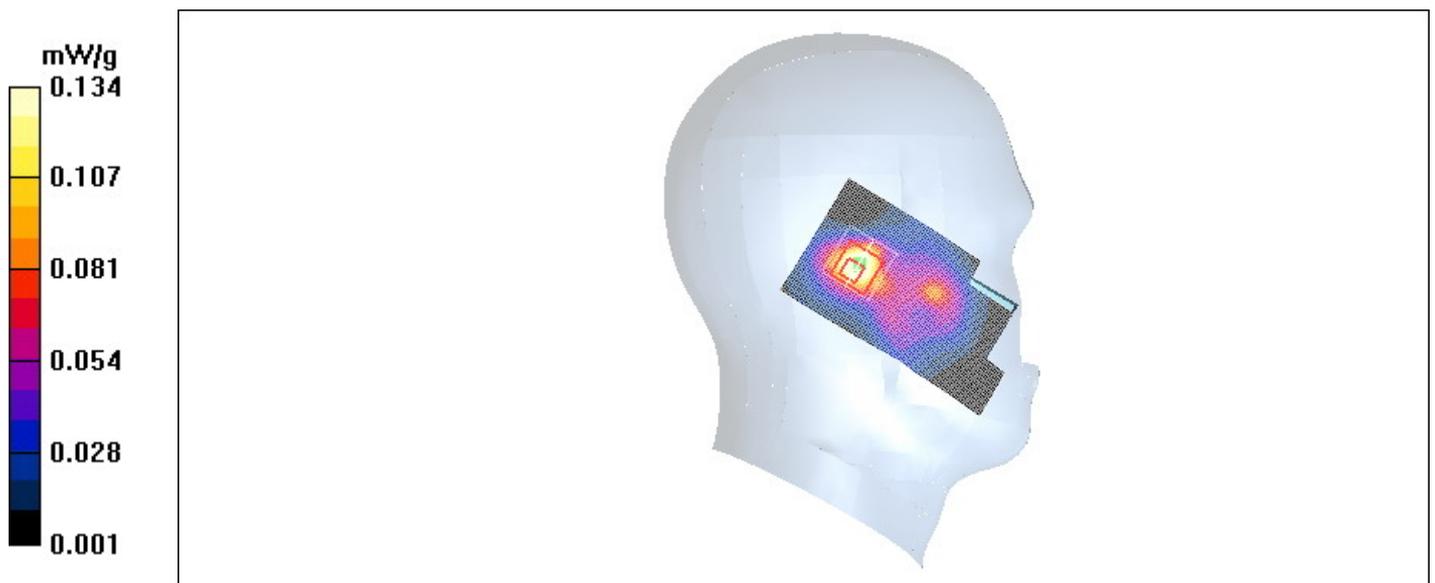


Figure 11 Left Hand Touch Cheek GSM 1900 Channel 512

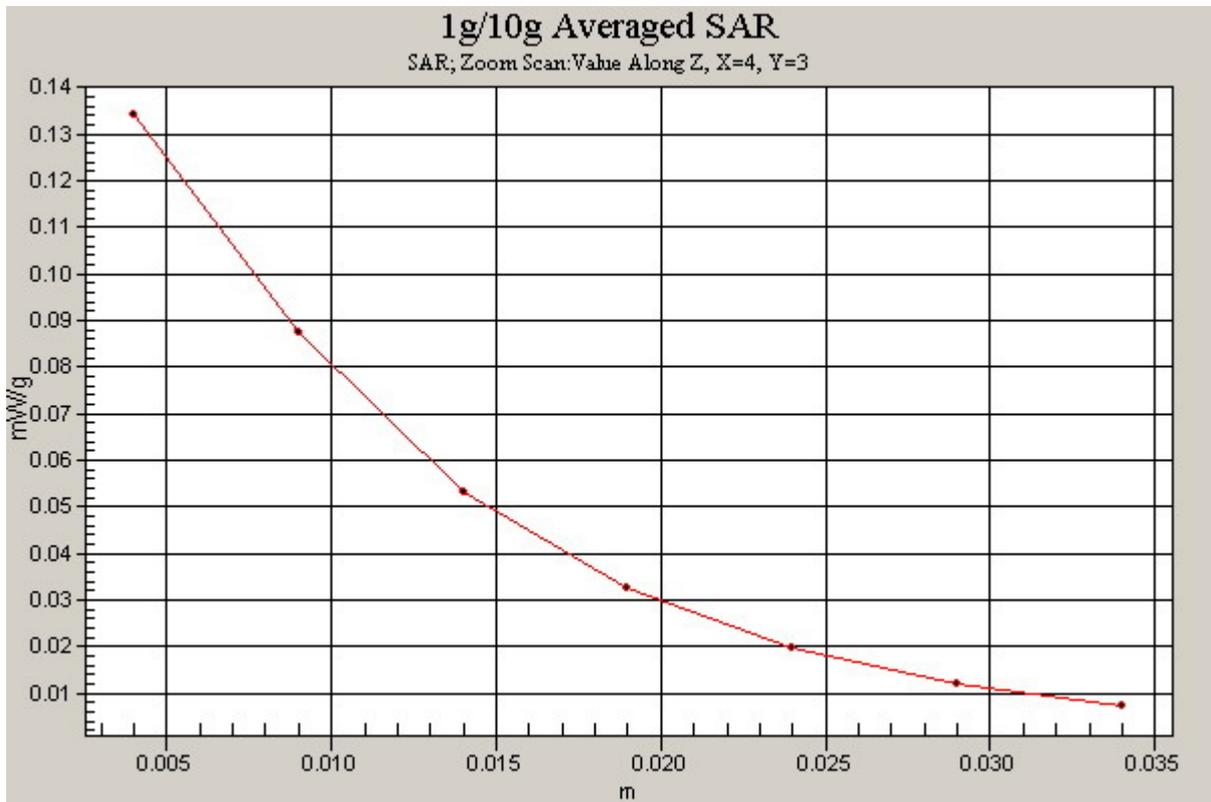


Figure 12 Z-Scan at power reference point (Left Hand Touch Cheek GSM 1900 Channel 512)

GSM 1900 Left Tilt High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.312 mW/g

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

Reference Value = 12.3 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.245 mW/g; SAR(10 g) = 0.141 mW/g

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

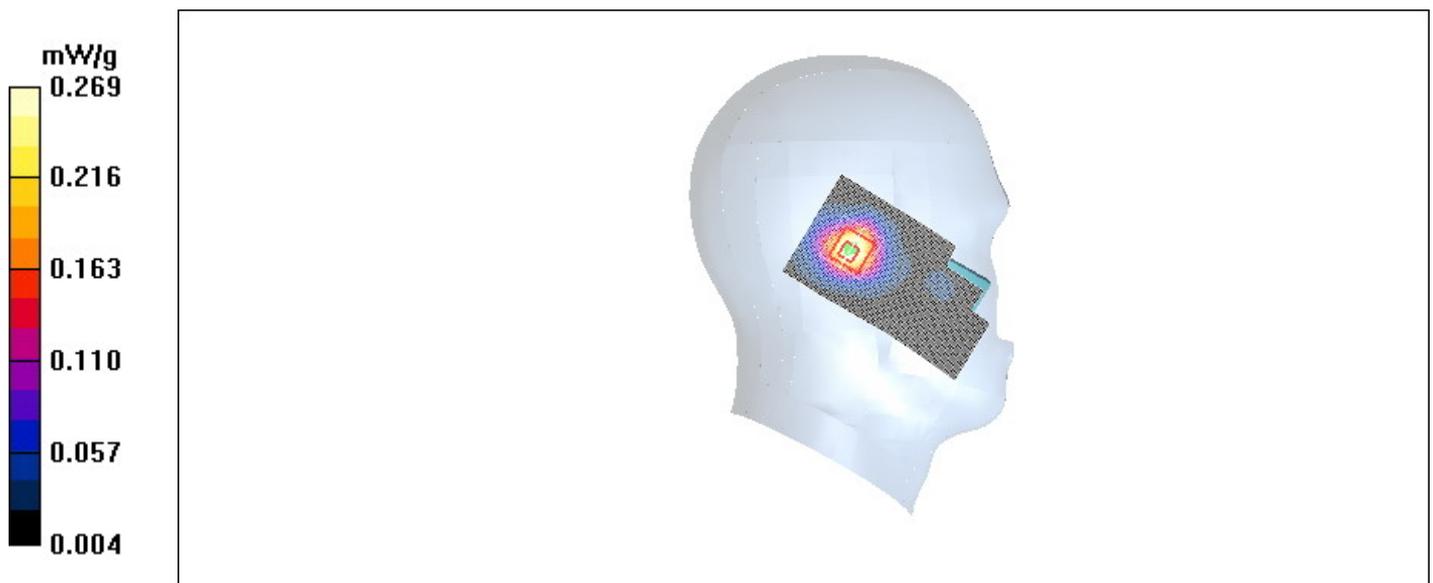


Figure 13 Left Hand Tilt 15°GSM 1900 Channel 810

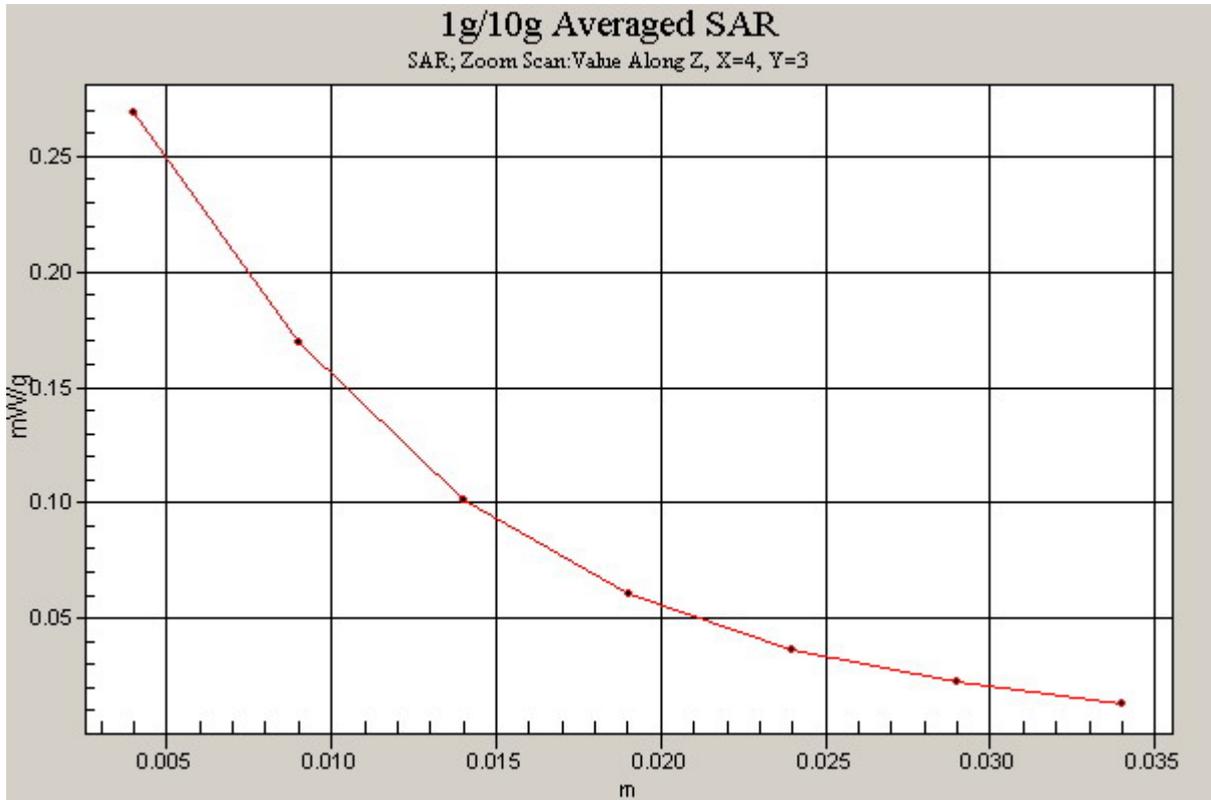


Figure 14 Z-Scan at power reference point (Left Hand Tilt 15° GSM 1900 Channel 810)

GSM 1900 Left Tilt Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.228 mW/g

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

Reference Value = 10.6 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.278 W/kg

SAR(1 g) = 0.182 mW/g; SAR(10 g) = 0.105 mW/g

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

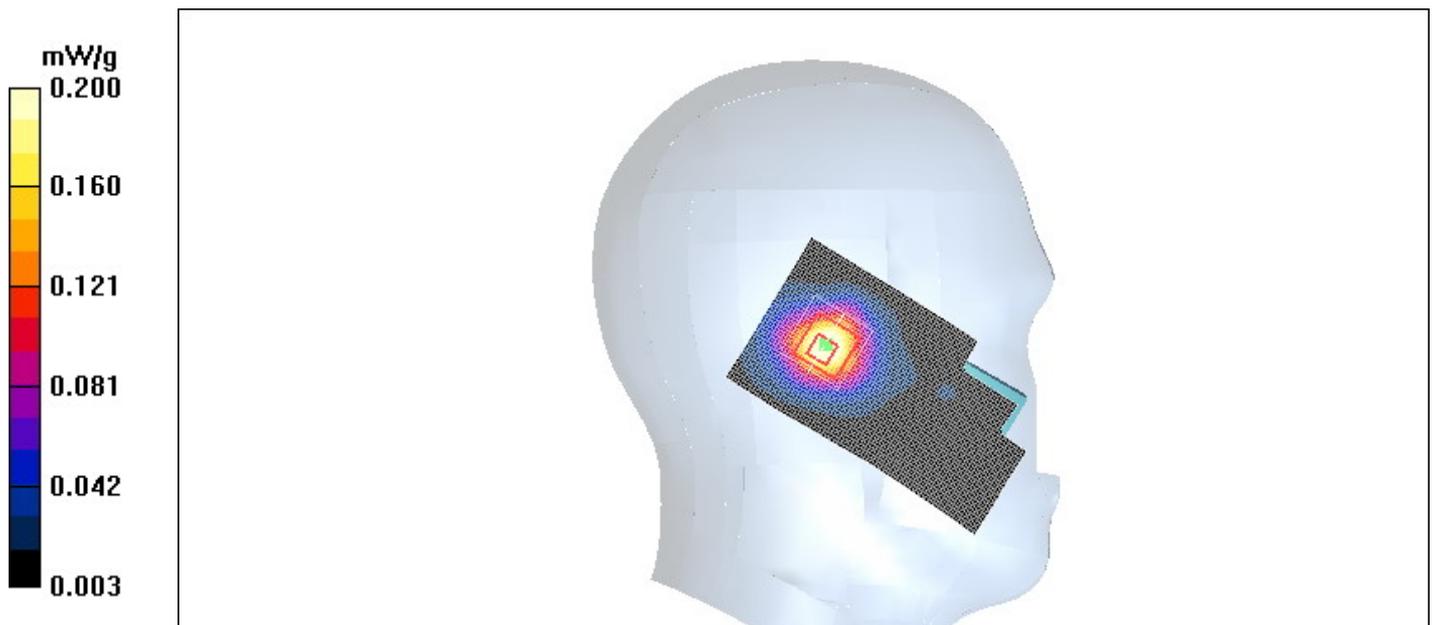


Figure 15 Left Hand Tilt 15° GSM 1900 Channel 661

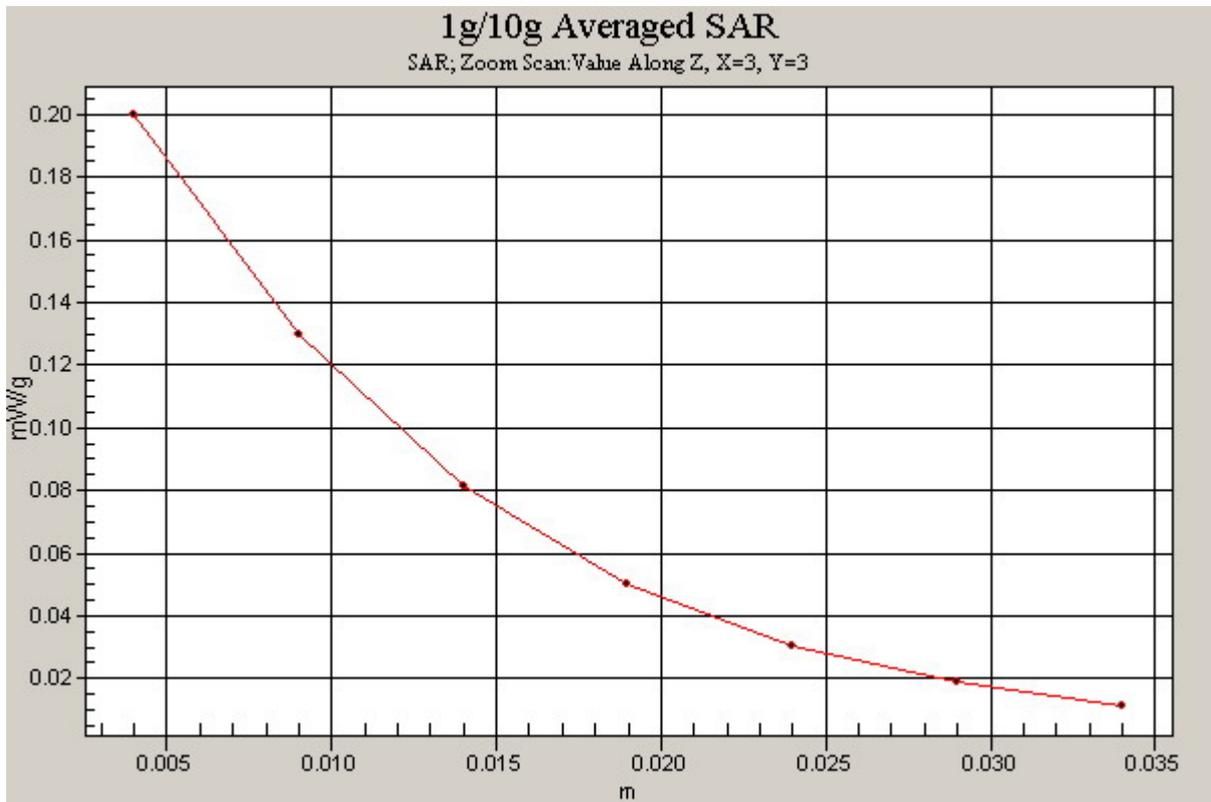


Figure 16 Z-Scan at power reference point (Left Hand Tilt 15° GSM 1900 Channel 661)

GSM 1900 Left Tilt Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

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

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

Reference Value = 9.37 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.221 W/kg

SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.083 mW/g

Maximum value of SAR (measured) = 0.160 mW/g

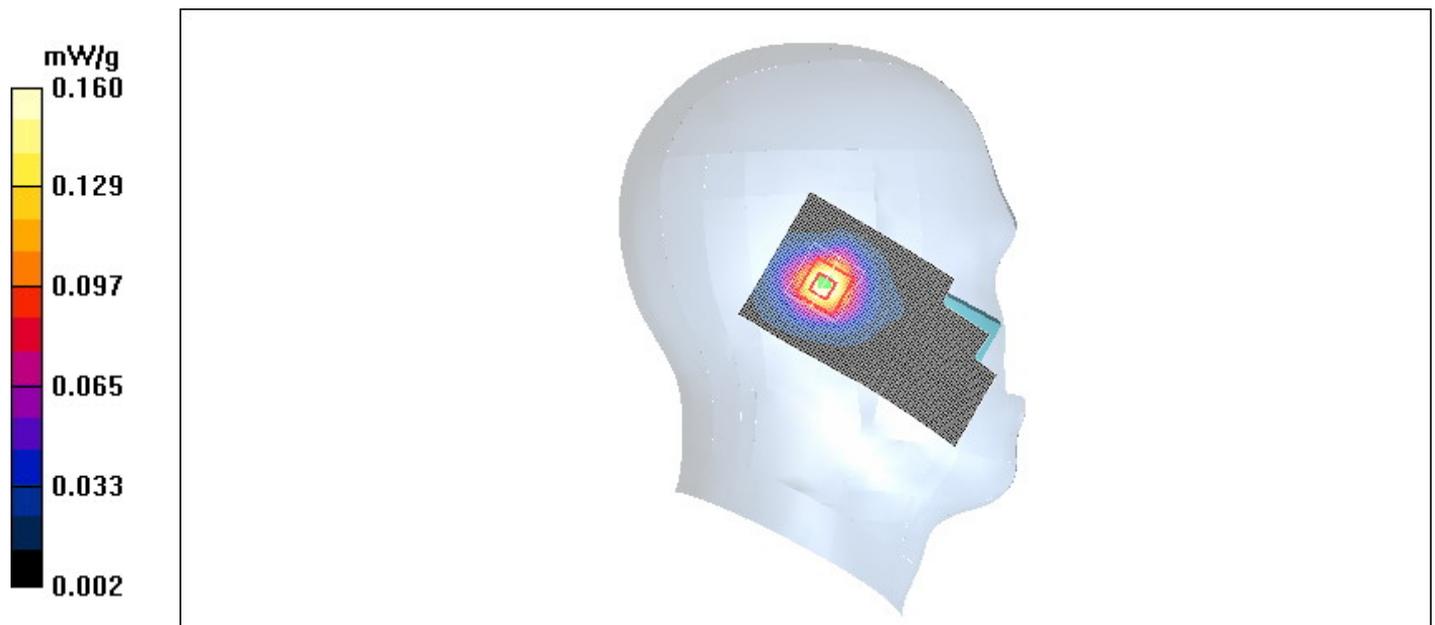


Figure 17 Left Hand Tilt 15° GSM 1900 Channel 512

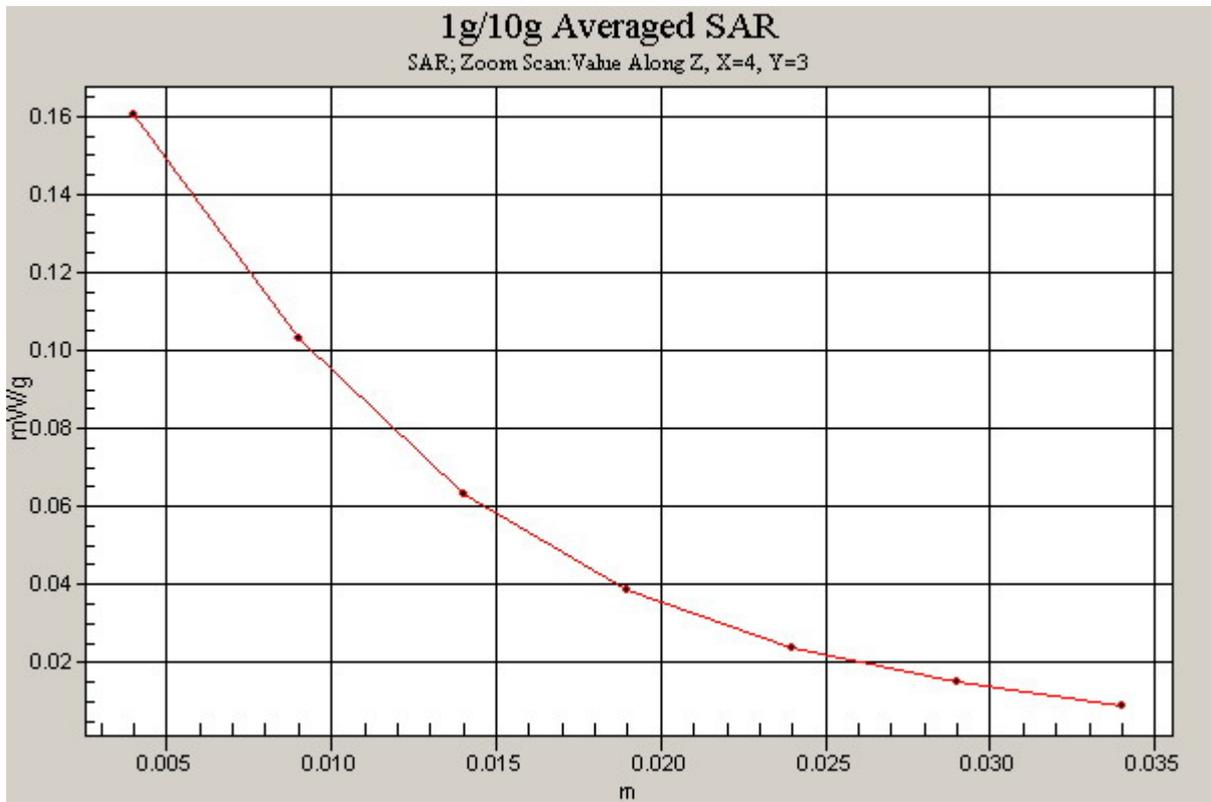


Figure 18 Z-Scan at power reference point (Left Hand Tilt 15° GSM 1900 Channel 512)

GSM 1900 Right Cheek High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.293 mW/g

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

Reference Value = 7.99 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.132 mW/g

Maximum value of SAR (measured) = 0.294 mW/g

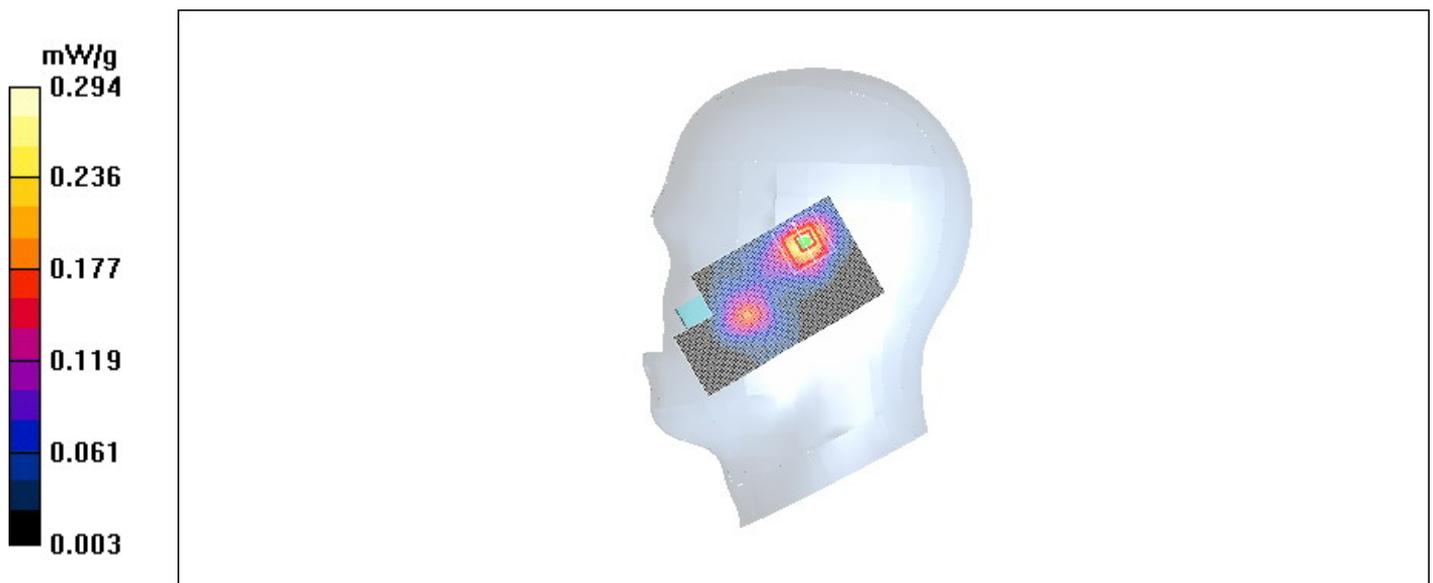


Figure 19 Right Hand touch cheek GSM 1900 Channel 810

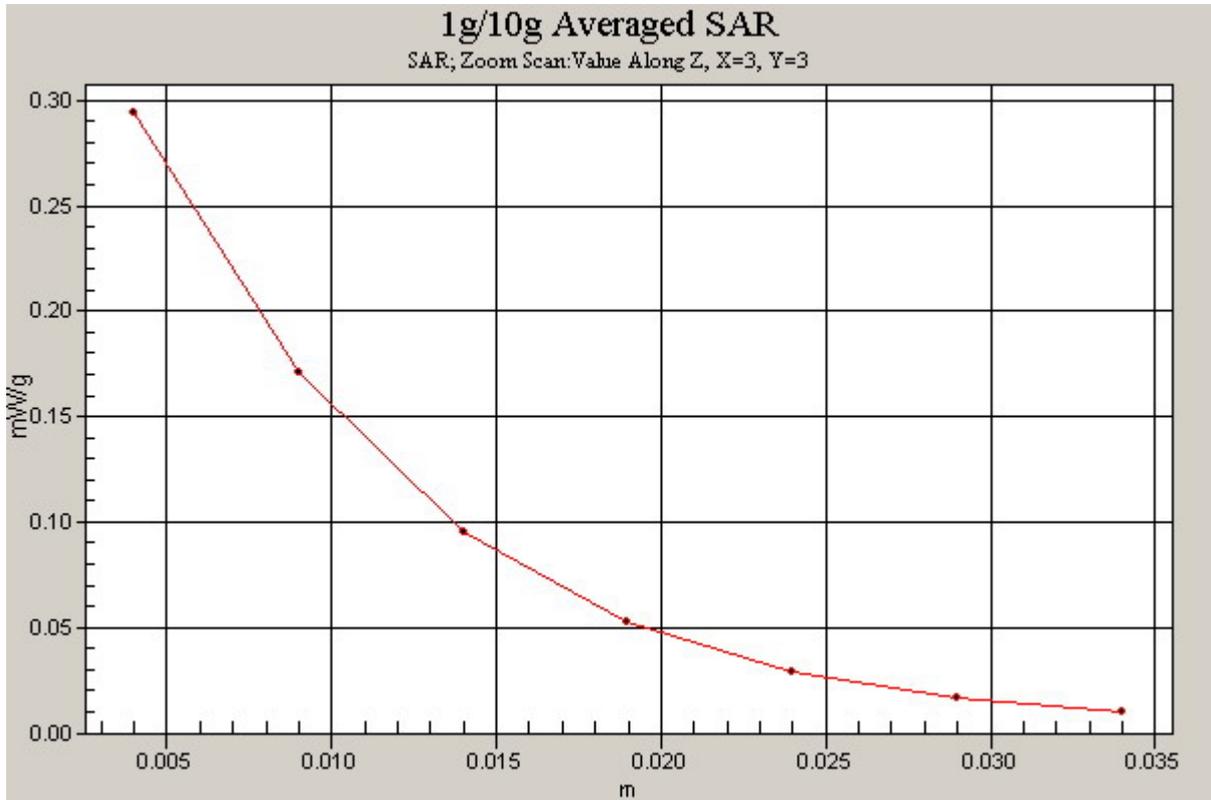


Figure 20 Z-Scan at power reference point (Right Hand touch cheek GSM 1900 Channel 810)

GSM 1900 Right Cheek Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

Cheek Middle/Area Scan (51x91x1): 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 = 7.14 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.100 mW/g

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

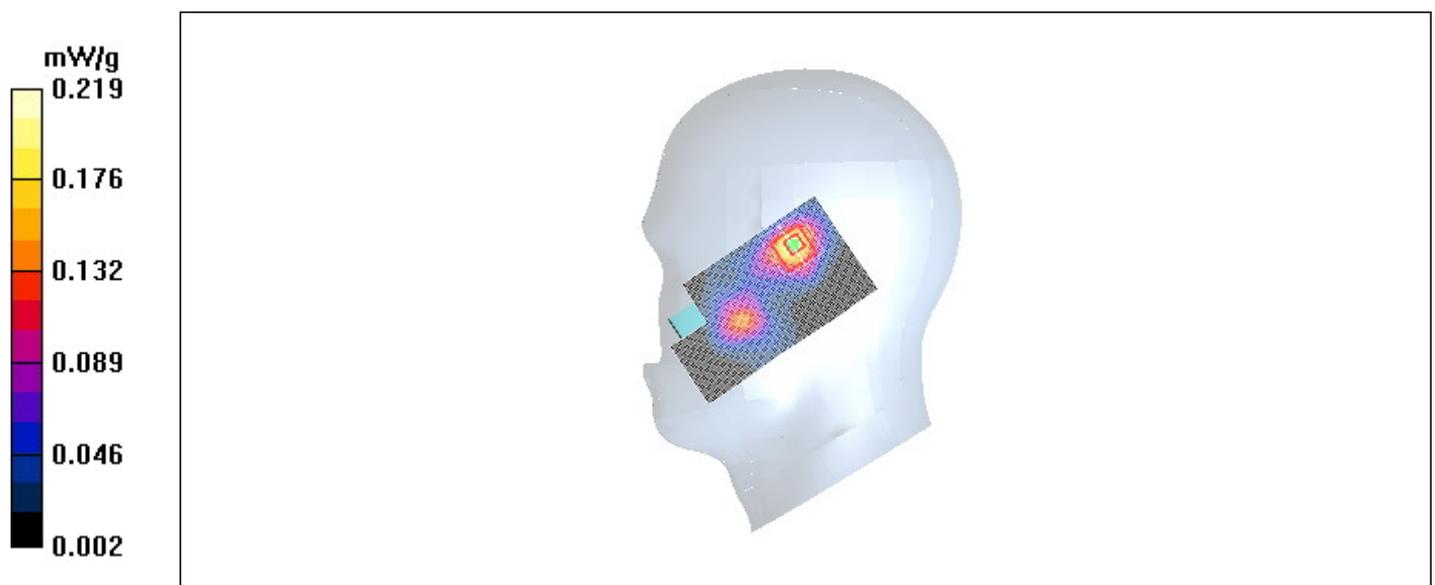


Figure 21 Right Hand touch cheek GSM 1900 Channel 661

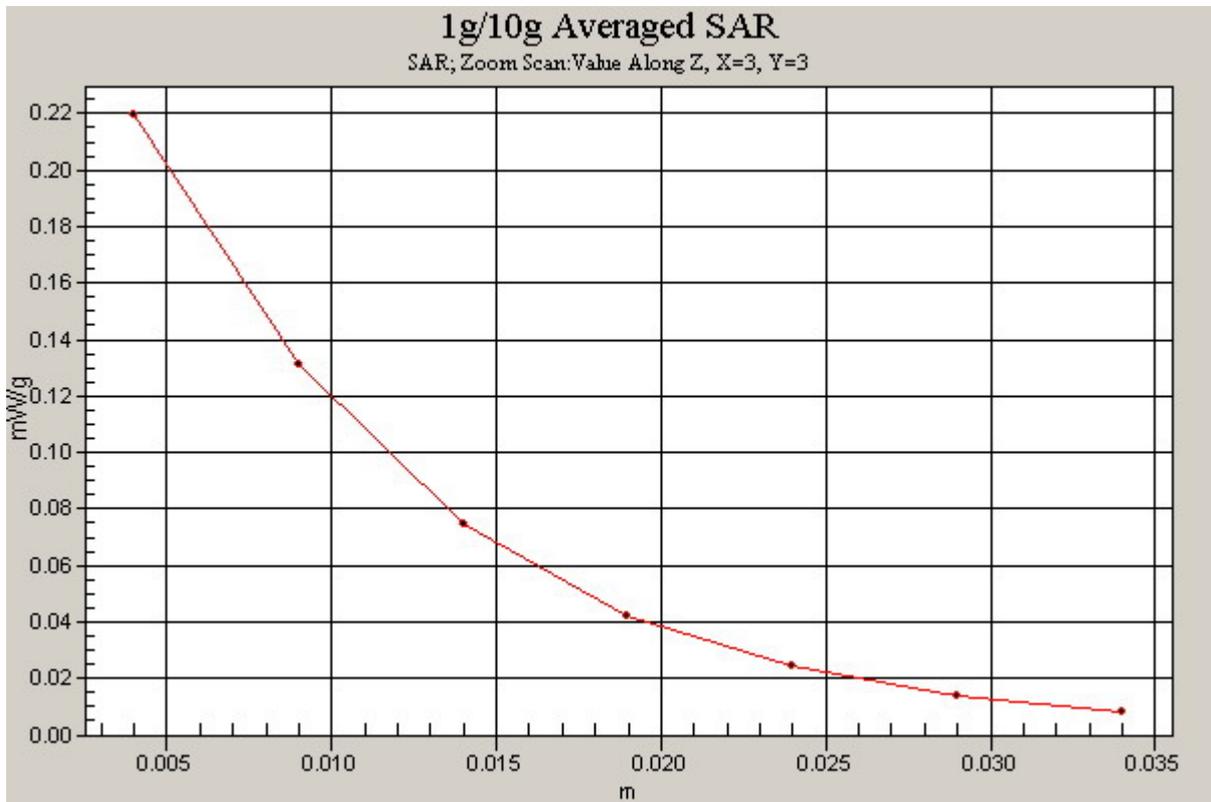


Figure 22 Z-Scan at power reference point (Right Hand touch cheek GSM 1900 Channel 661)

GSM 1900 Right Cheek Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

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

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

Reference Value = 6.60 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.246 W/kg

SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.078 mW/g

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

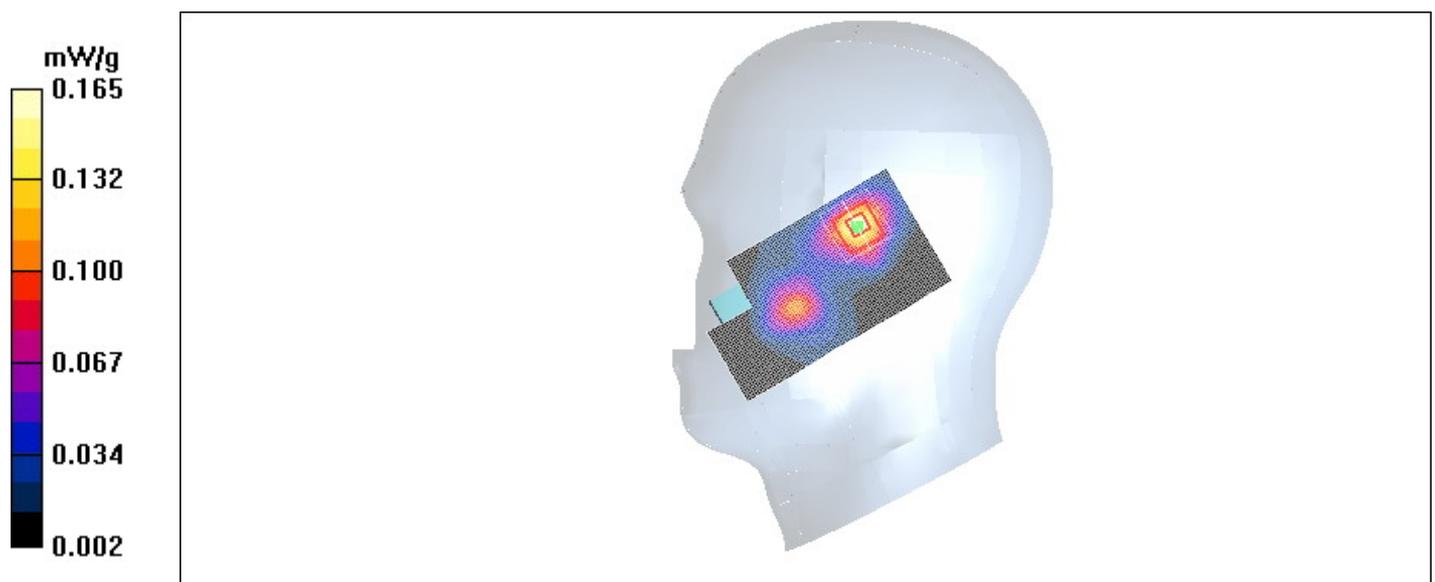


Figure 23 Right Hand touch cheek GSM 1900 Channel 512

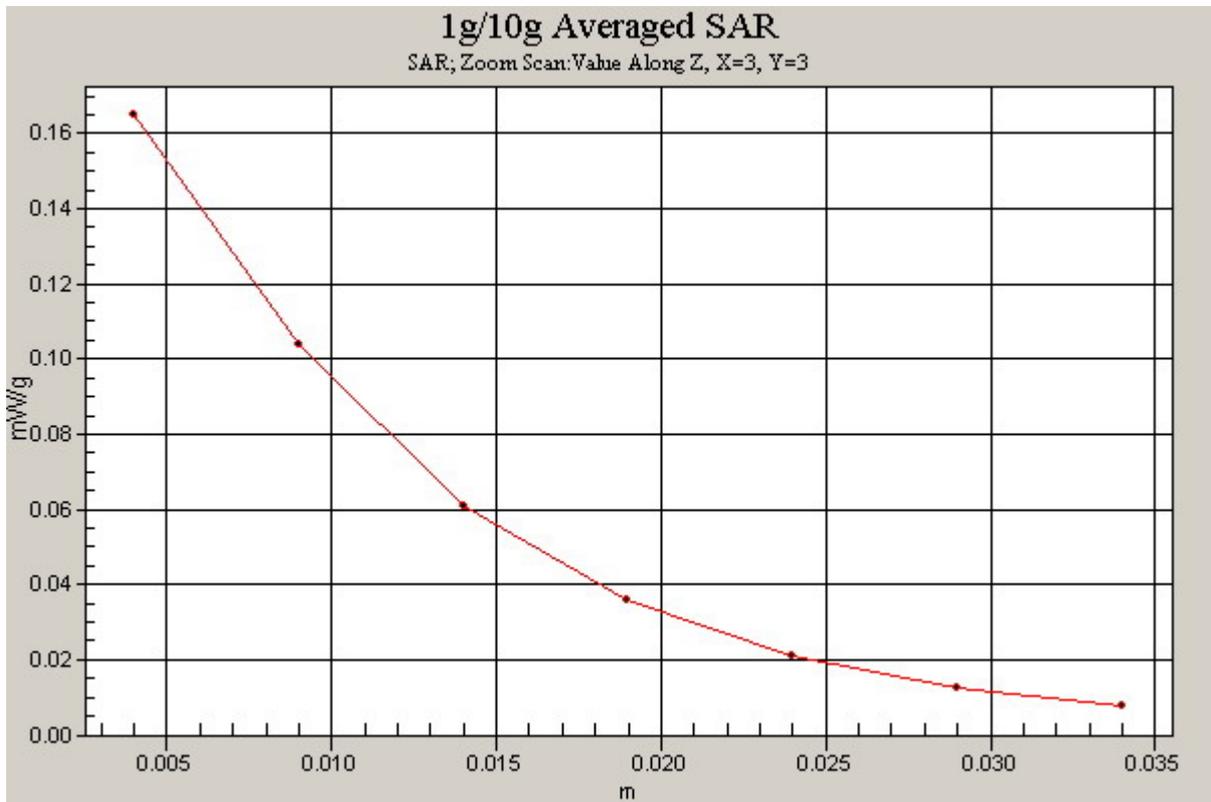


Figure 24 Z-Scan at power reference point (Right Hand touch cheek GSM 1900 Channel 512)

GSM 1900 Right Tilt High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.331 mW/g

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

Reference Value = 11.5 V/m; Power Drift = -0.071 dB

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.301 mW/g

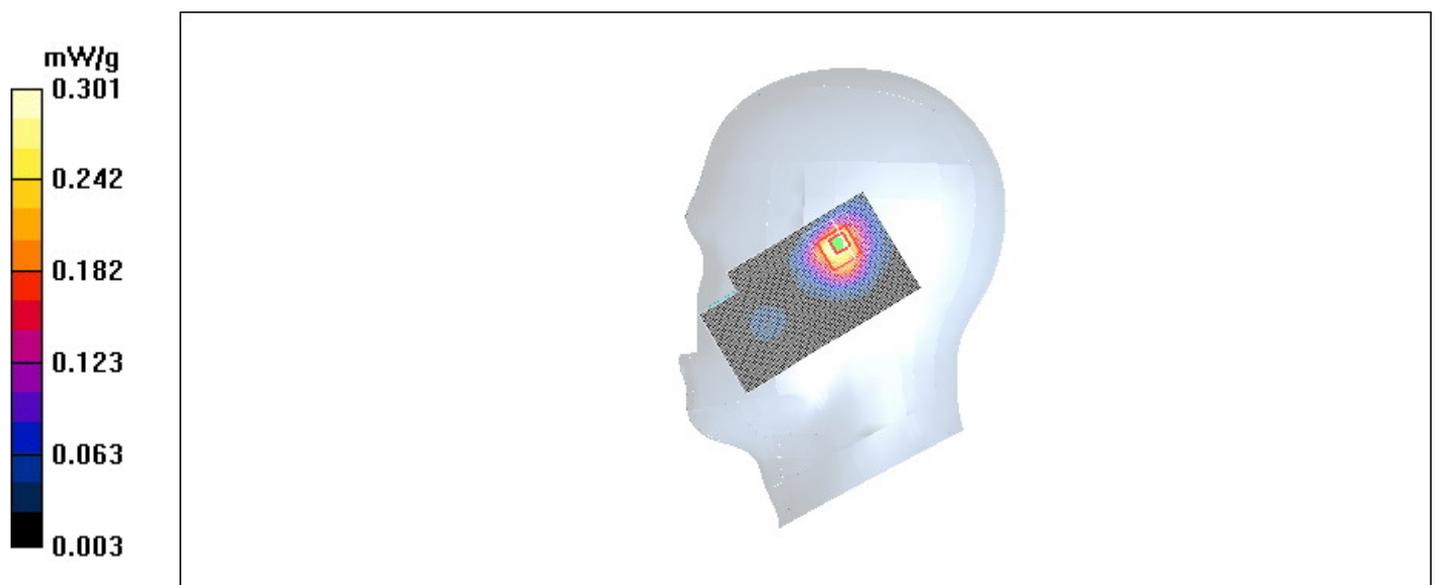


Figure 25 Right Hand Tilt 15°GSM 1900 Channel 810

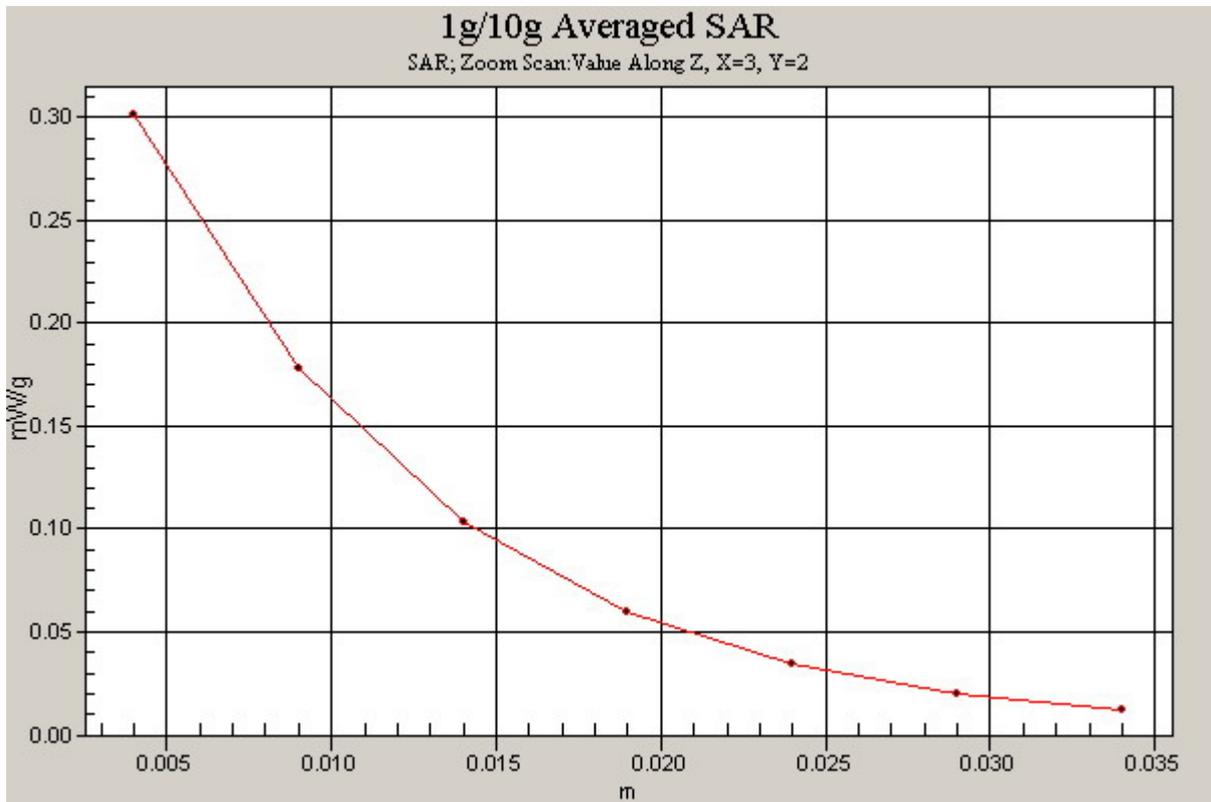


Figure 26 Z-Scan at power reference point (Right Hand Tilt 15° GSM 1900 Channel 810)

GSM 1900 Right Tilt Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

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

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

Reference Value = 10.2 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.343 W/kg

SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.228 mW/g

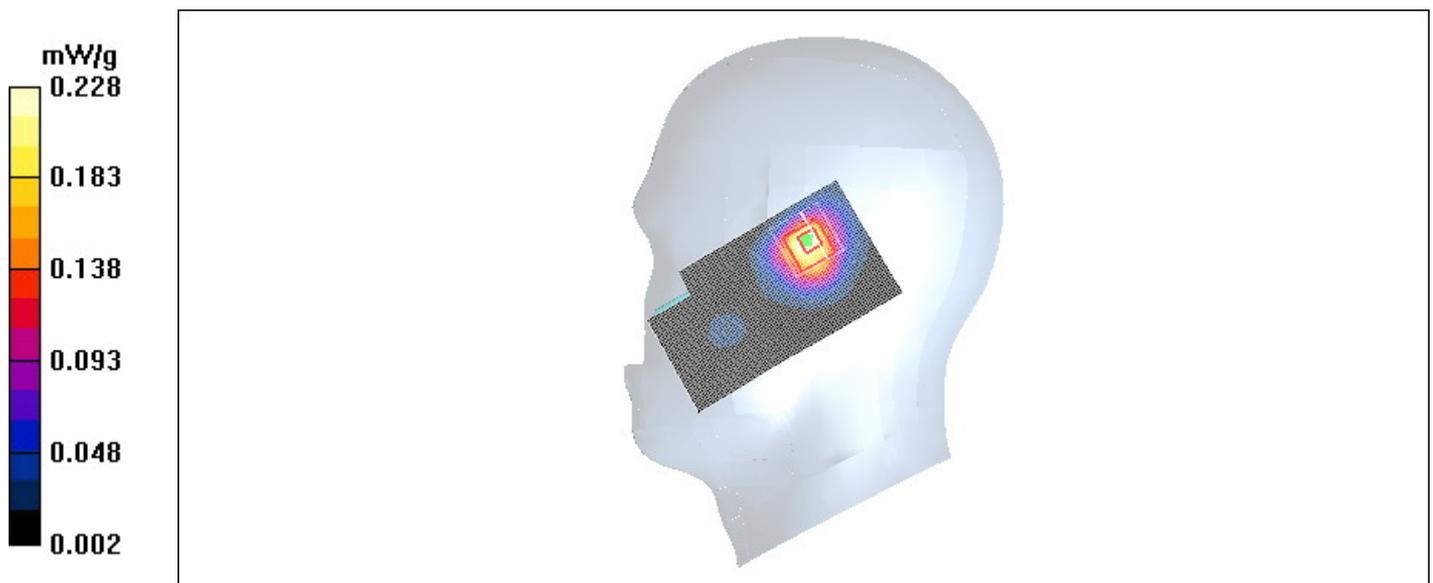


Figure 27 Right Hand Tilt 15°GSM 1900 Channel 661

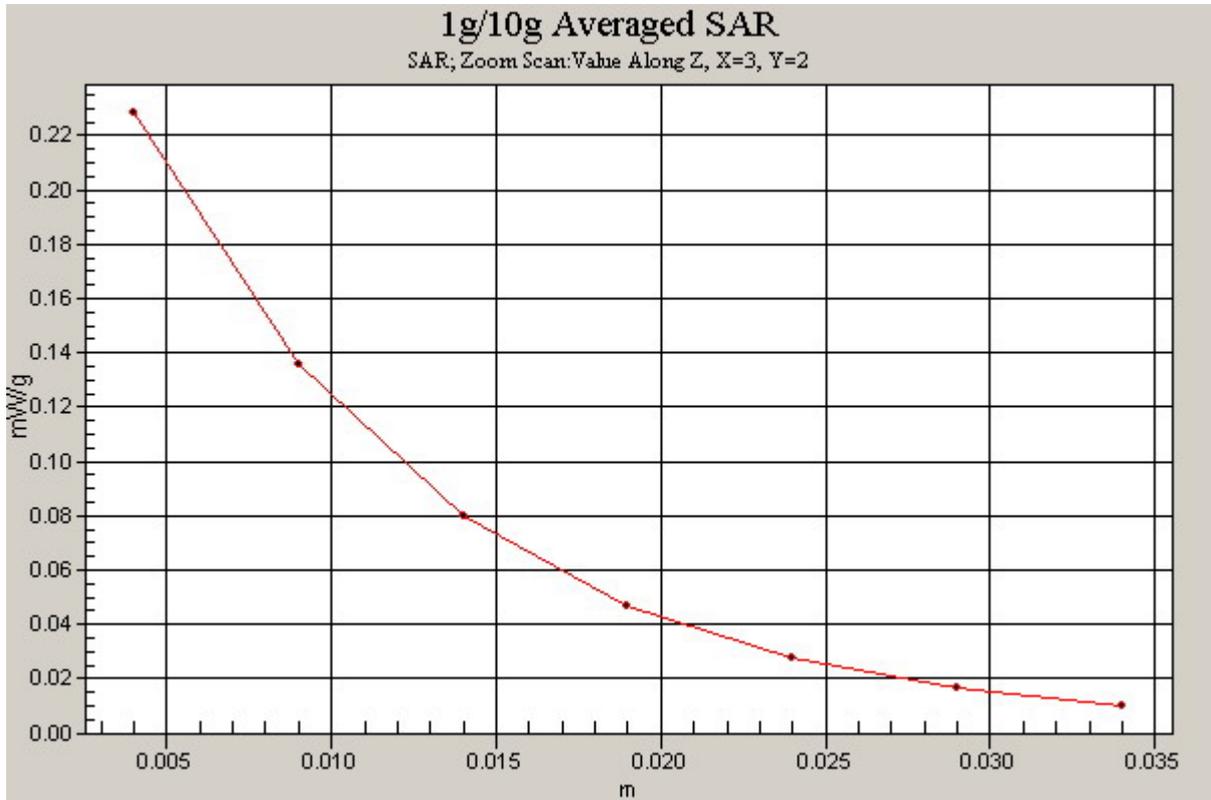


Figure 28 Z-Scan at power reference point (Right Hand Tilt 15° GSM 1900 Channel 661)

GSM 1900 Right Tilt Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.180 mW/g

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

Reference Value = 9.59 V/m; Power Drift = -0.115 dB

Peak SAR (extrapolated) = 0.249 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.087 mW/g

Maximum value of SAR (measured) = 0.168 mW/g

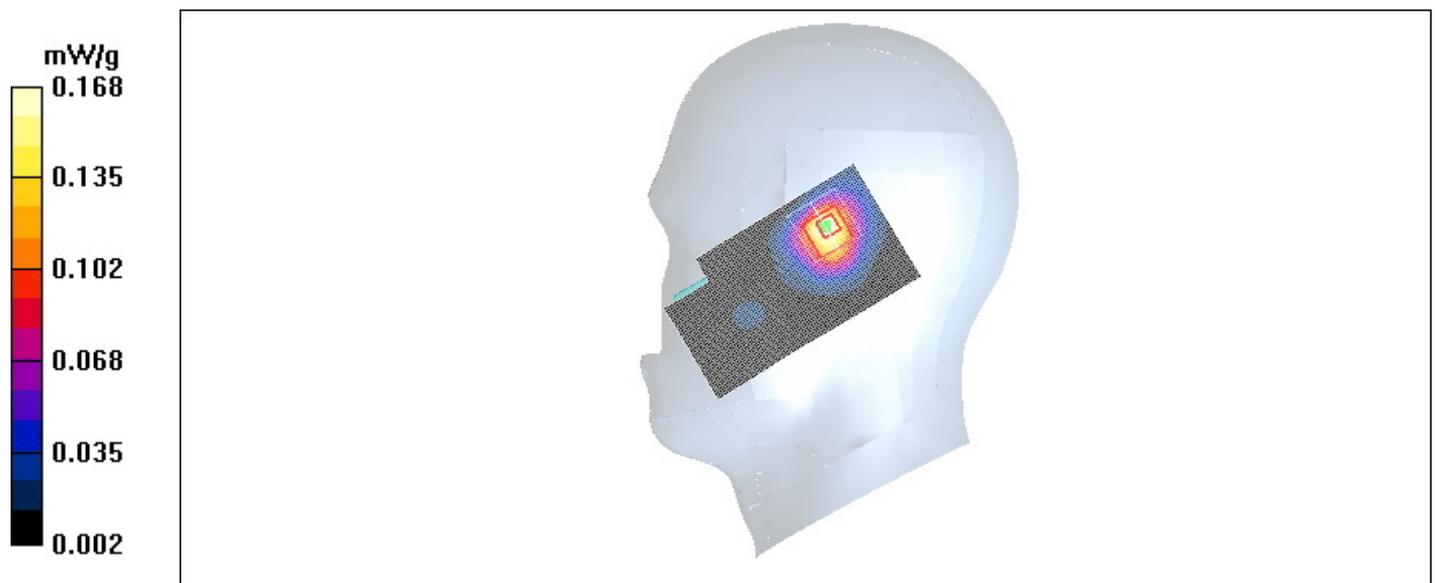


Figure 29 Right Hand Tilt 15°GSM 1900 Channel 512

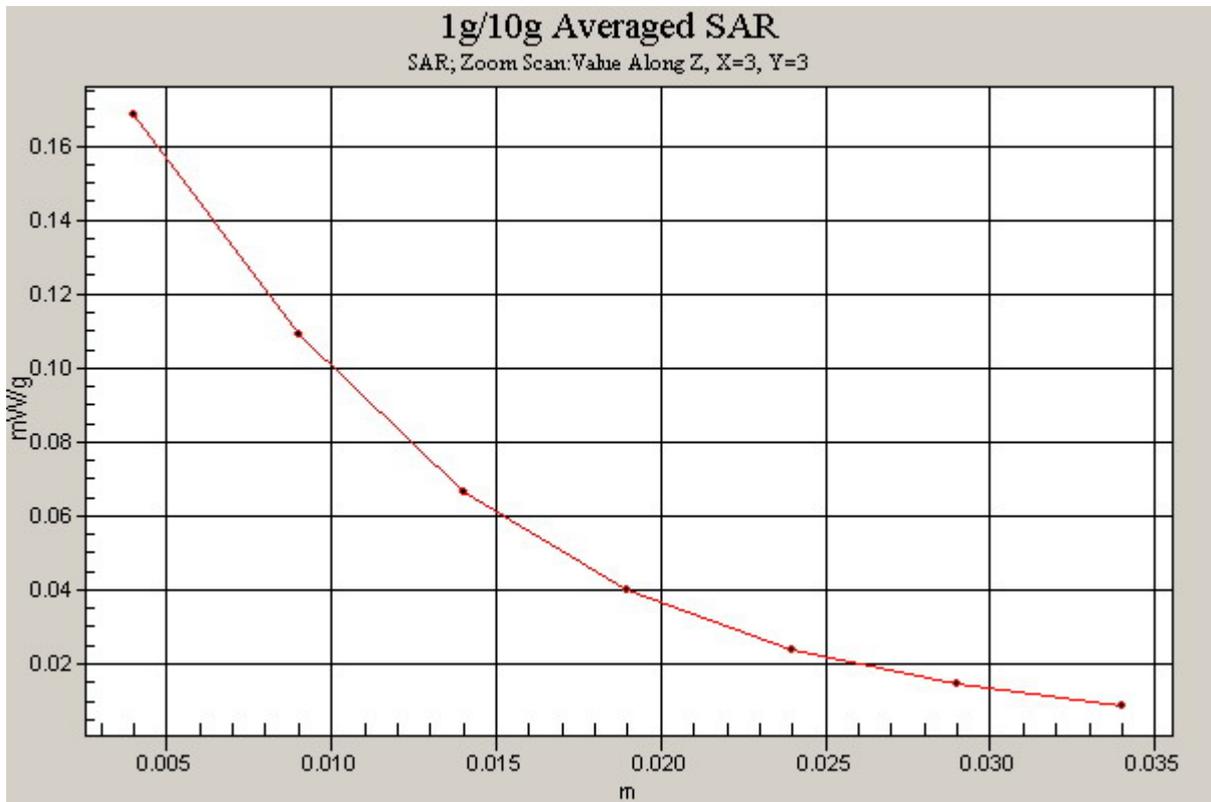


Figure 30 Z-Scan at power reference point (Right Hand Tilt 15° GSM 1900 Channel 512)

GSM 1900 Towards ground High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

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

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

Reference Value = 14.7 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.563 W/kg

SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.409 mW/g

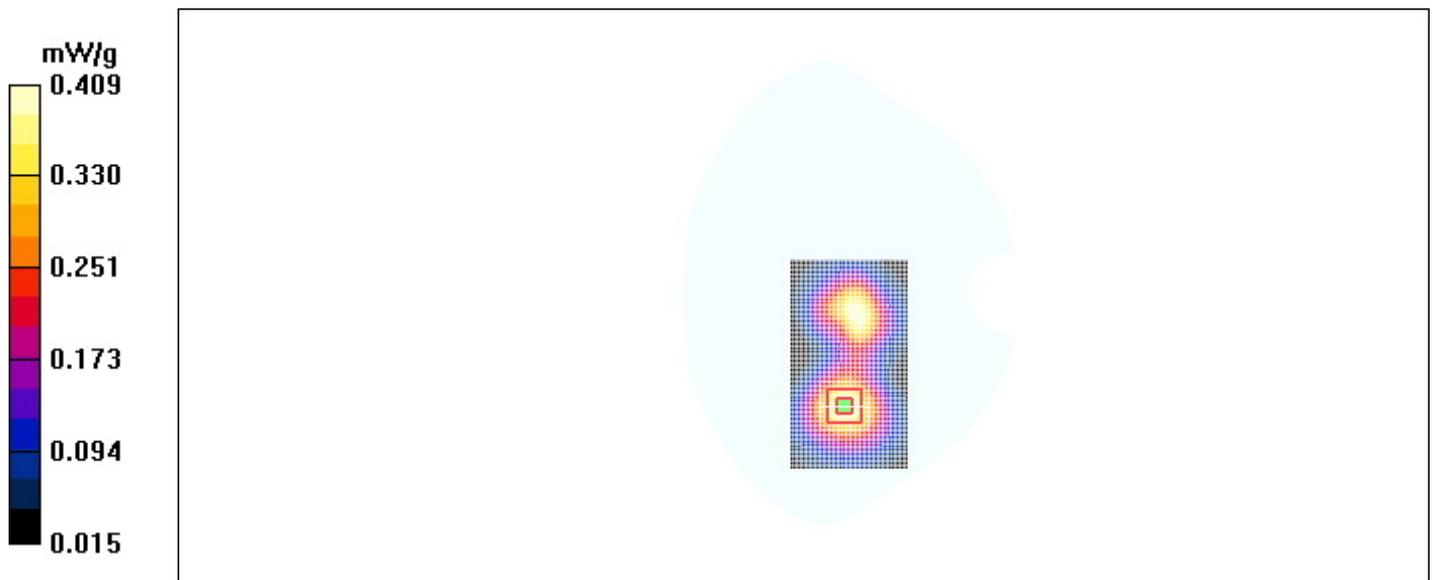


Figure 31 Body, towards ground, GSM 1900 Channel 810

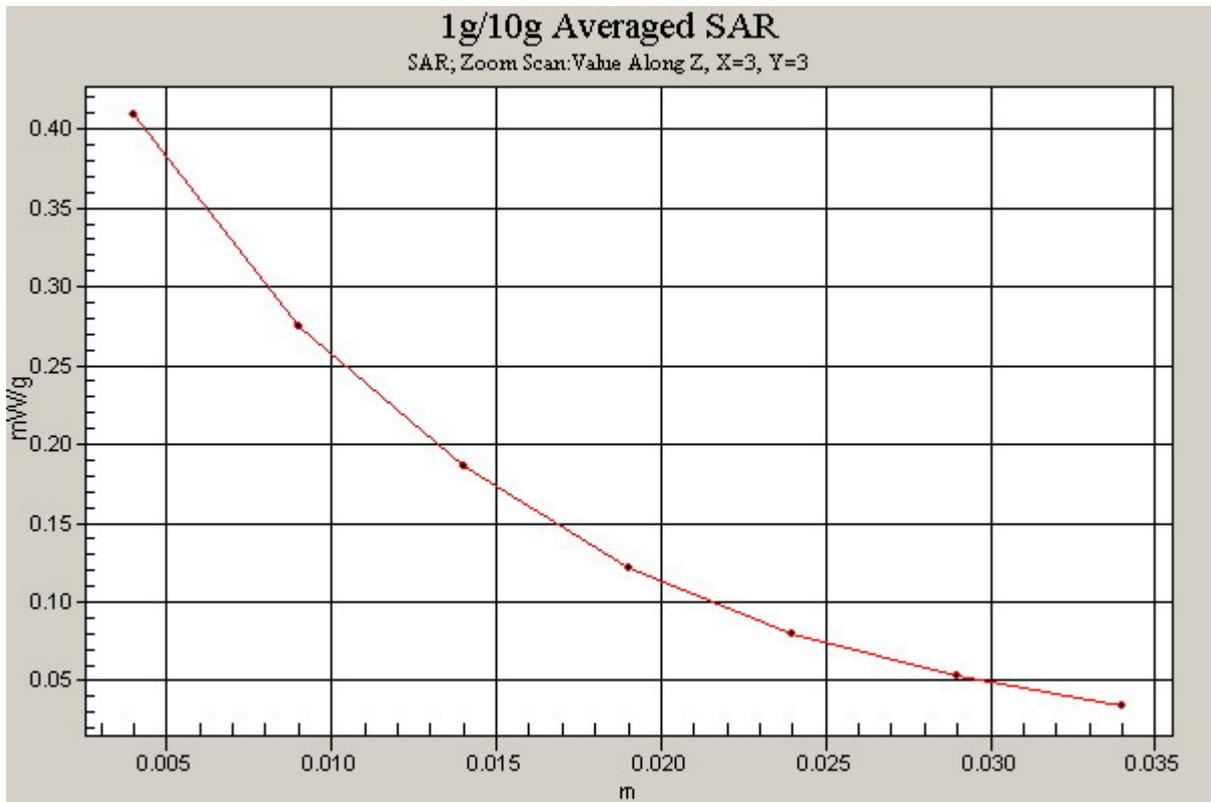


Figure 32 Z-Scan at power reference point (Body, towards ground, GSM 1900 Channel 810)

GSM 1900 Towards ground Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.328 mW/g

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

Reference Value = 13.0 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.191 mW/g

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

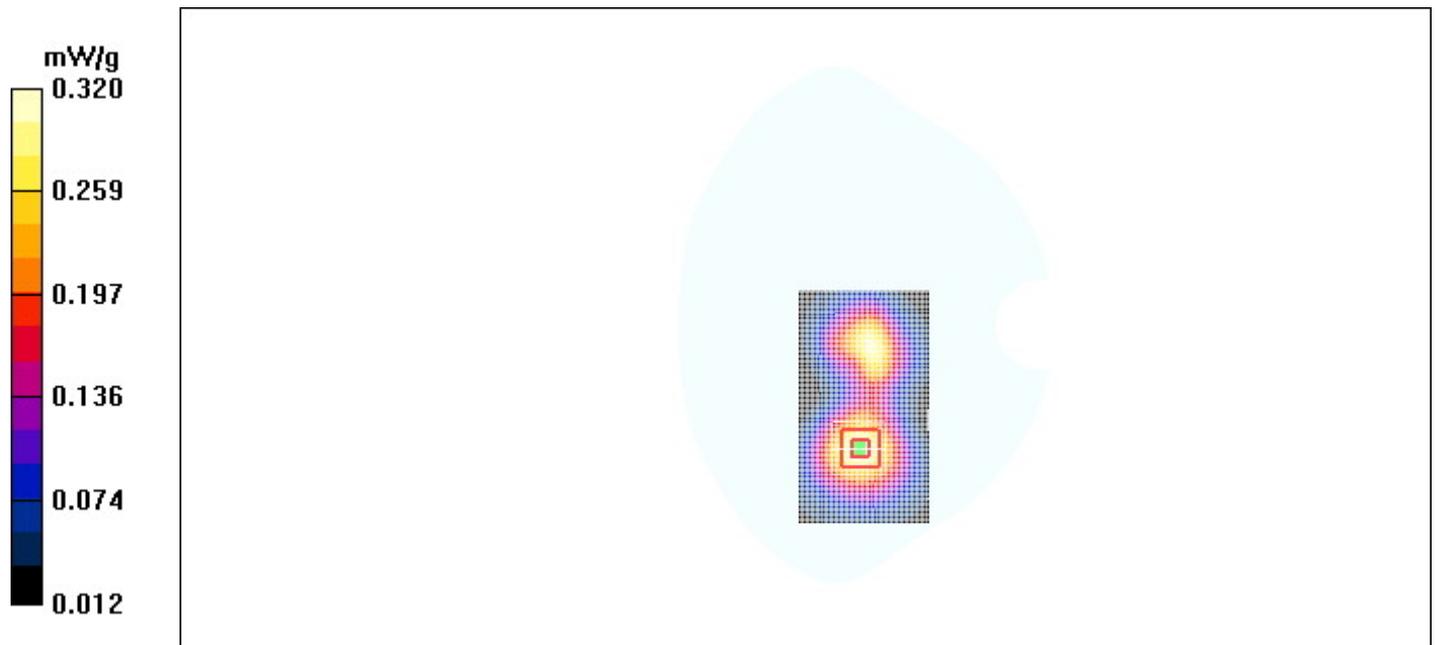


Figure 33 Body, Towards ground, GSM 1900 Channel 661



Figure 34 Z-Scan at power reference point (Body, Towards ground, GSM 1900 Channel 661)

GSM 1900 Towards ground Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.253 mW/g

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

Reference Value = 11.5 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.332 W/kg

SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.245 mW/g

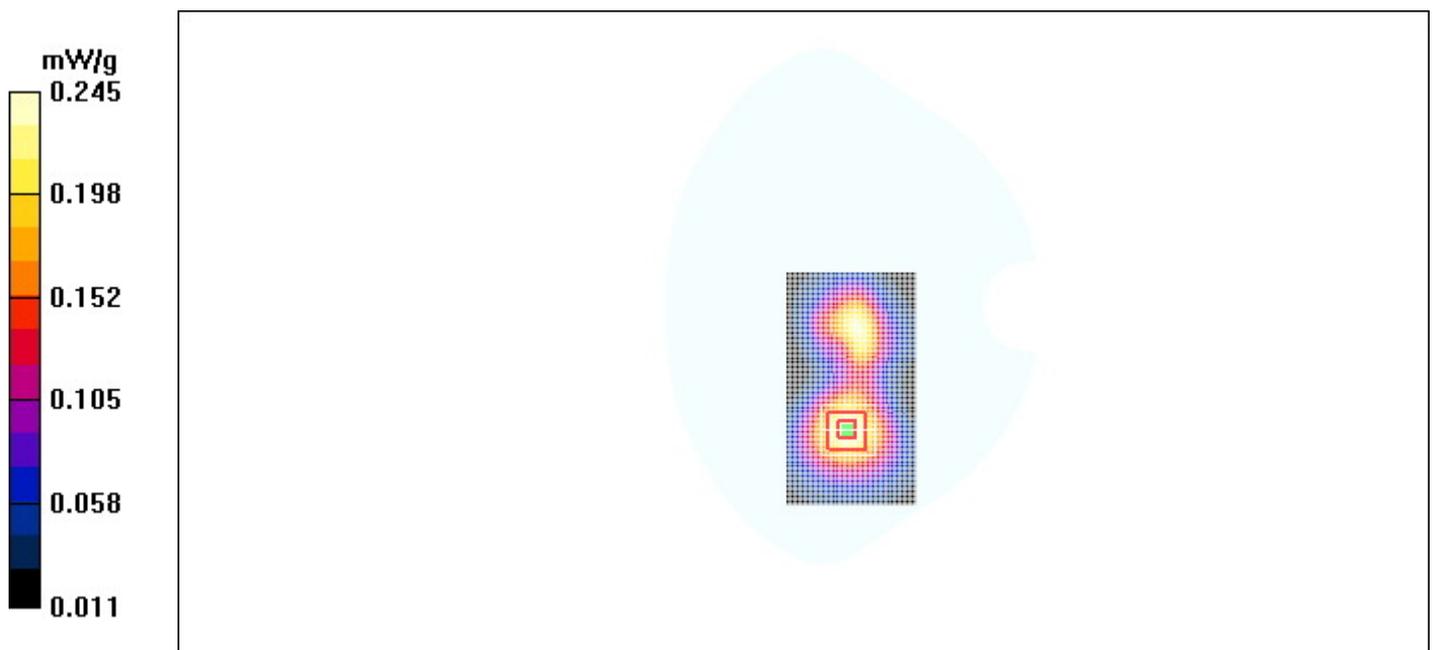


Figure 35 Body, Towards ground, GSM 1900 Channel 512

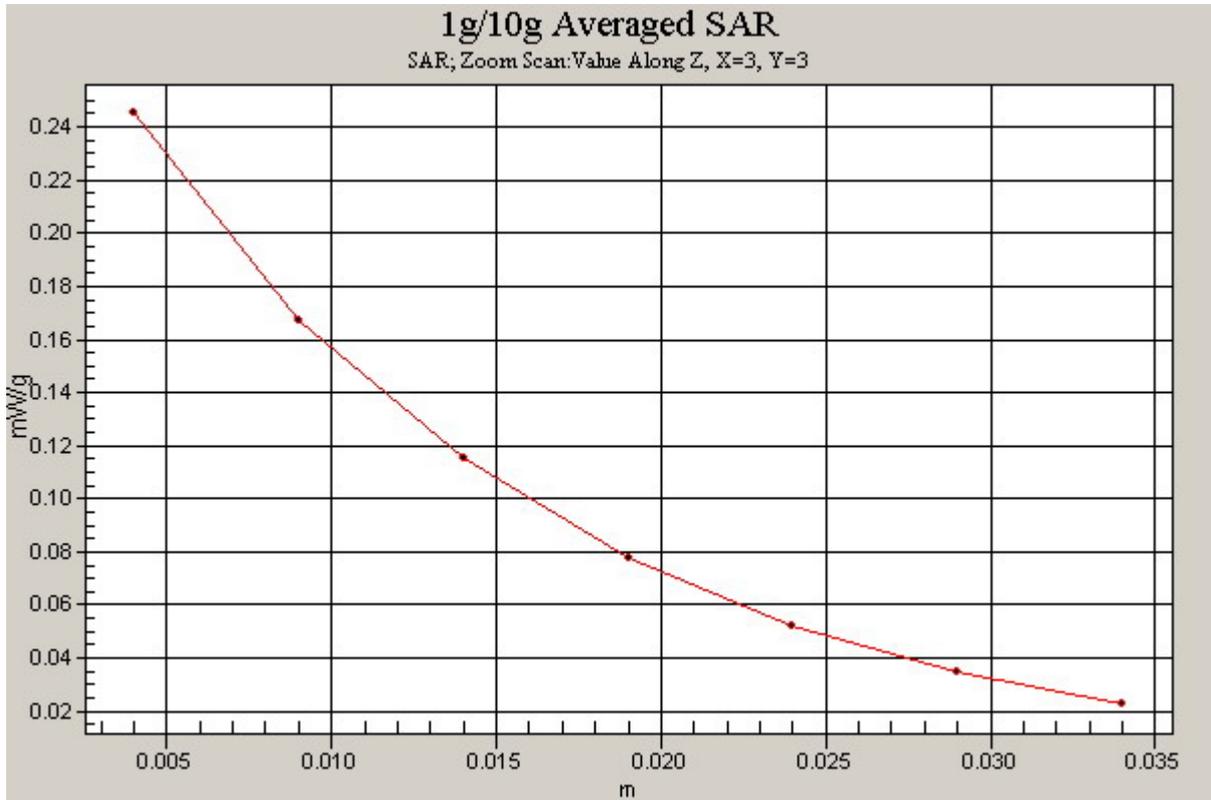


Figure 36 Z-Scan at power reference point (Body, Towards ground, GSM 1900 Channel 512)

GSM 1900 Towards Phantom High

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

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.127 mW/g

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

Reference Value = 8.69 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.175 W/kg

SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.124 mW/g

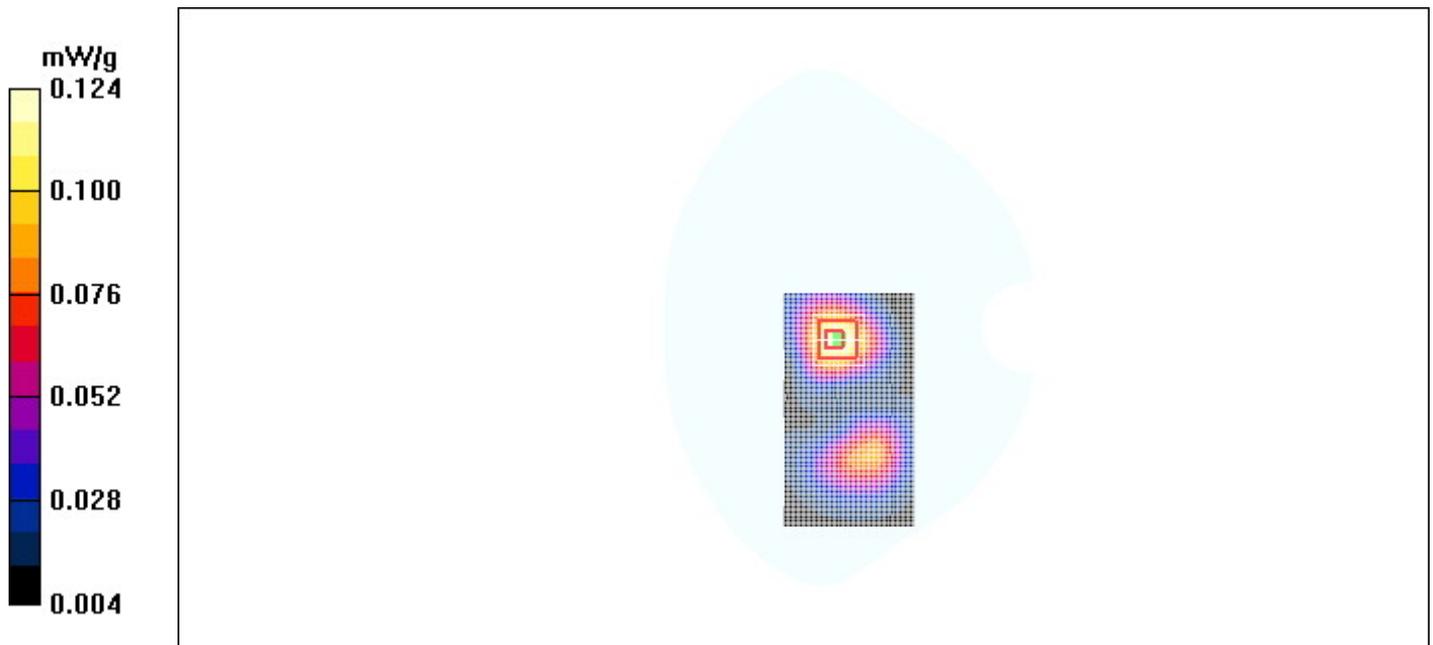


Figure 37 Body, Towards phantom, GSM 1900 Channel 810

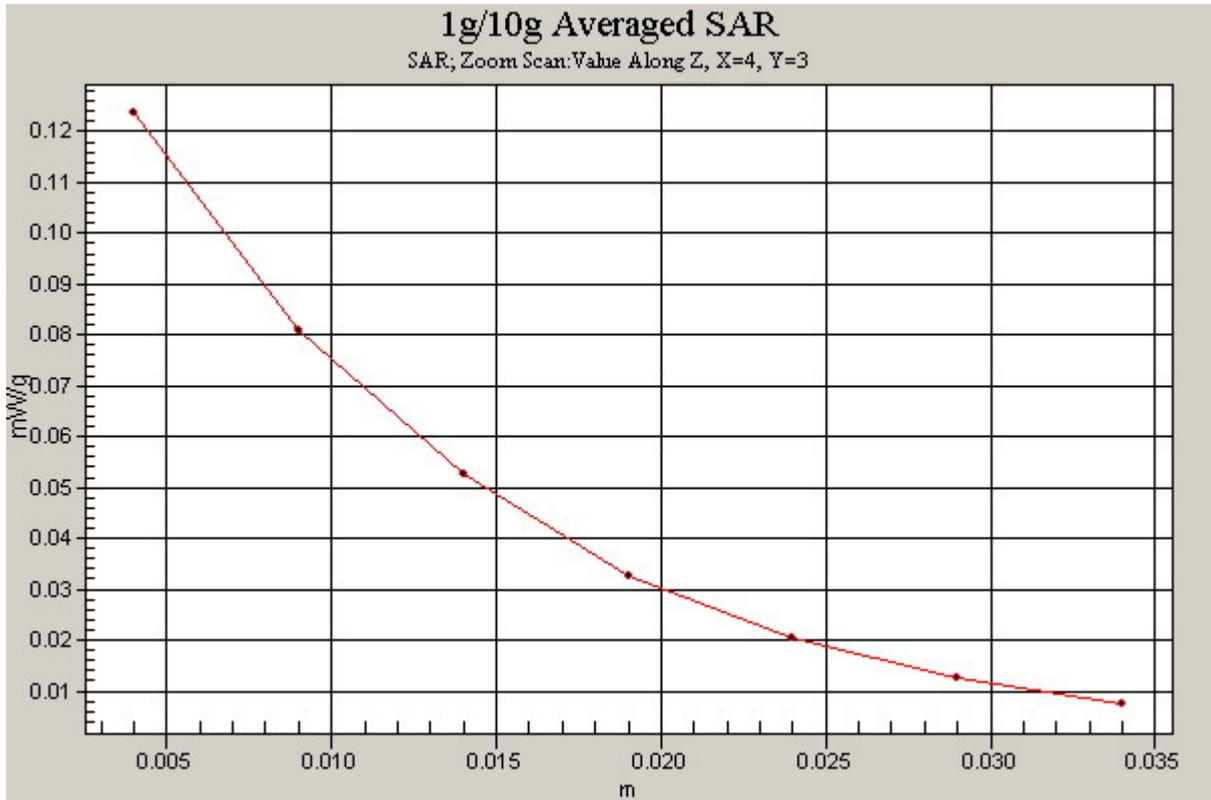


Figure 38 Z-Scan at power reference point (Body, Towards phantom, GSM 1900 Channel 810)

GSM 1900 Towards Phantom Middle

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.088 mW/g

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

Reference Value = 7.24 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.115 W/kg

SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.083 mW/g

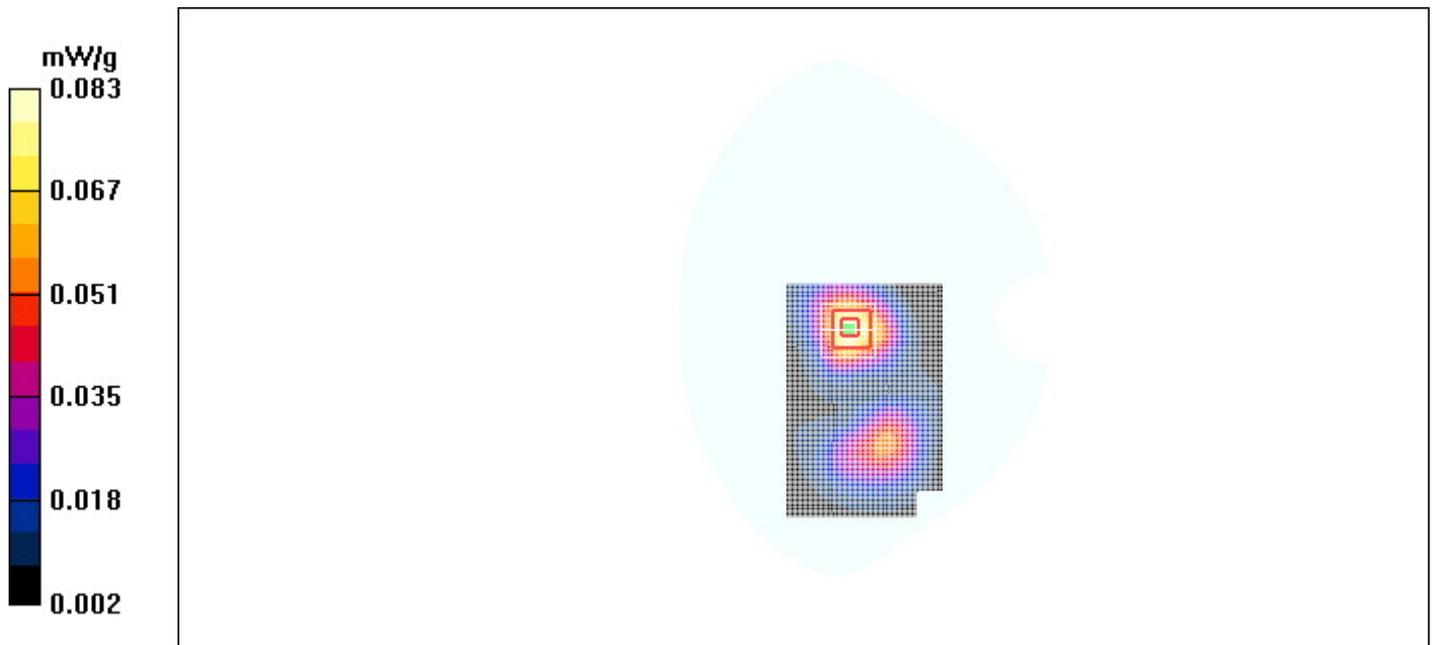


Figure 39 Body, Towards phantom, GSM 1900 Channel 661

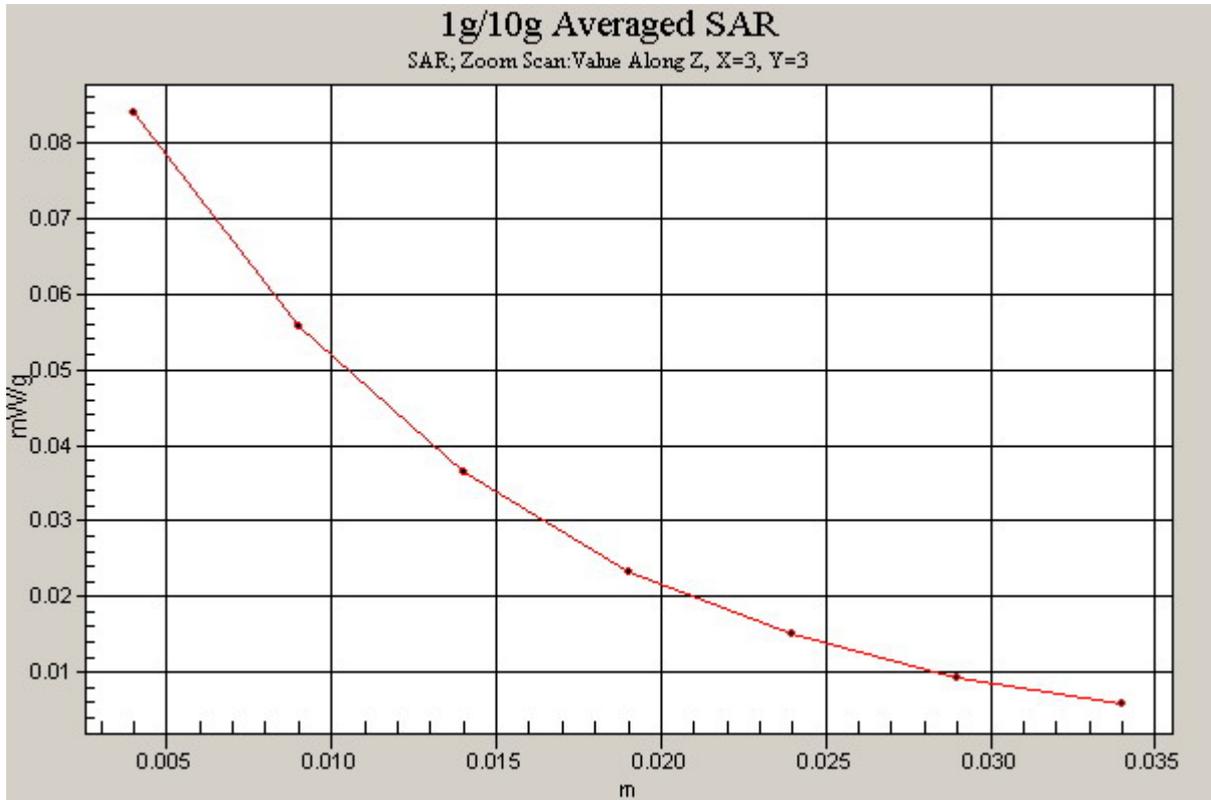


Figure 40 Z-Scan at power reference point (Body, Towards phantom, GSM 1900 Channel 661)

GSM 1900 Towards Phantom Low

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

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.059 mW/g

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

Reference Value = 6.06 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 0.079 W/kg

SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.032 mW/g

Maximum value of SAR (measured) = 0.058 mW/g

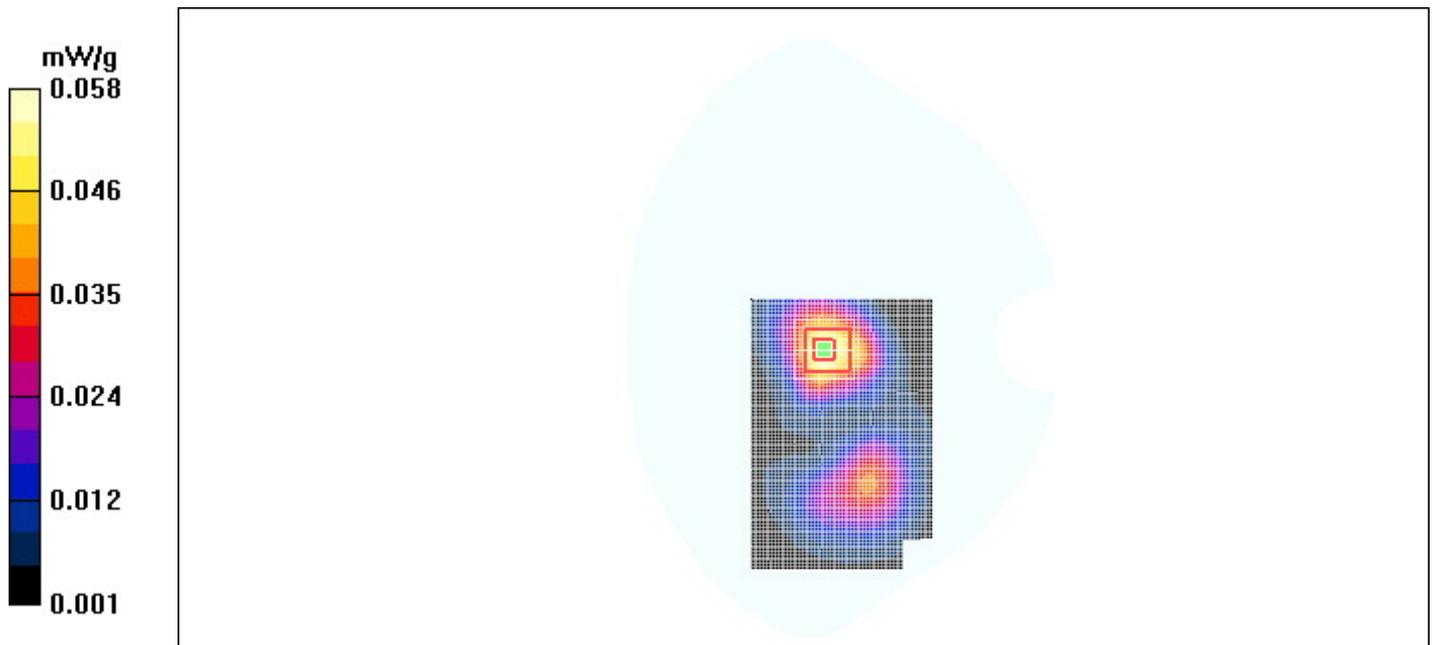


Figure 41 Body, Towards phantom, GSM 1900 Channel 512

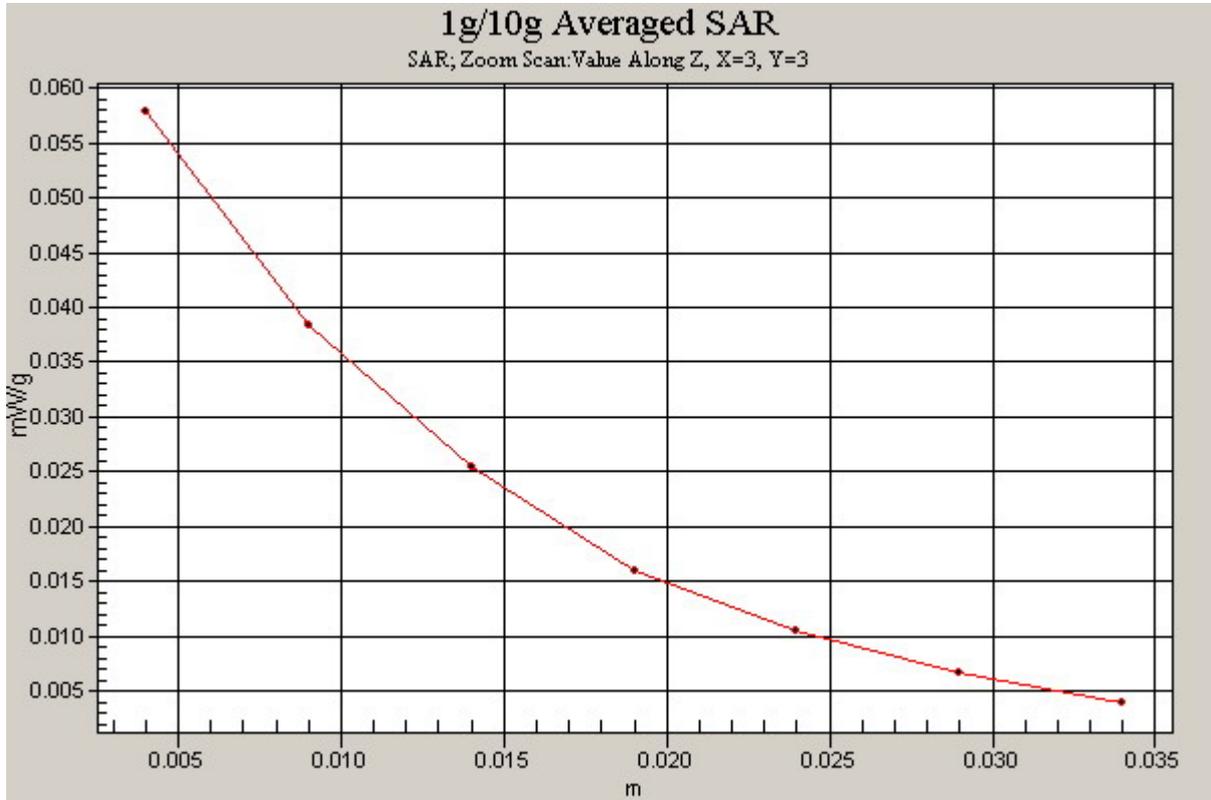


Figure 42 Z-Scan at power reference point (Body, Towards phantom, GSM 1900 Channel 512)

GSM 1900 GPRS Towards ground High

Communication System: GSM 1900+GPRS(2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

Electronics: DAE3 Sn452;

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

Maximum value of SAR (interpolated) = 0.864 mW/g

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

Reference Value = 19.5 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 2.99 W/kg

SAR(1 g) = 0.783 mW/g; SAR(10 g) = 0.492 mW/g

Maximum value of SAR (measured) = 0.829 mW/g

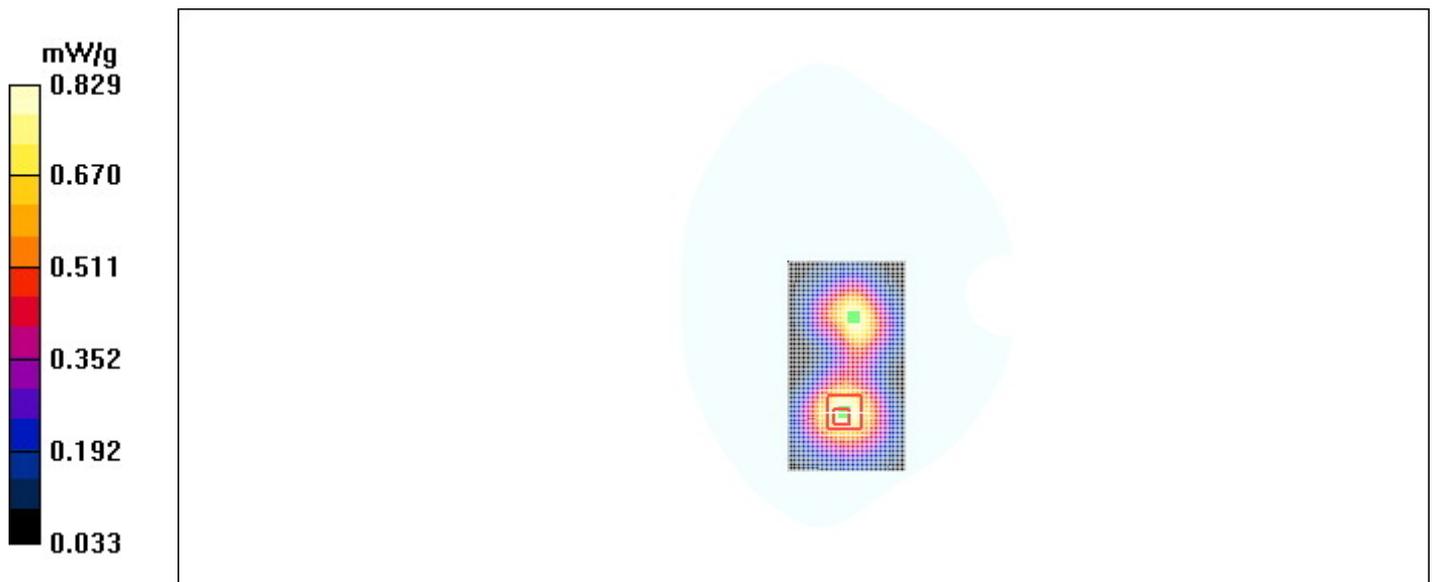


Figure 43 Body, Towards ground, GPRS GSM 1900 Channel 810