信息产业部通信计量中心
Telecommunication Metrology Center of MII

Deutscher Akkreditierungs Rat

No. DAT-P-114/01-01

No. L0442

TEST REPORT

No. 2007EEE02040

FCCID	QISEG602
Test name	Electromagnetic Field (Specific Absorption Rate)
Product	HUAWEI EG602 GSM/GPRS/EDGE DataCard
Model	HUAWEI EG602
Client	HUAWEI Technologies Co., Ltd.
Type of test	Non Type approval

Telecommunication Metrology Center

of Ministry of Information Industry

信息产业部通信计量中心 检验报告专用章

Notes

1. . The test report shall be invalid if there is no “specified stamp for the test report” or the stamp of the test organization on it.
2. Copies of the test report shall be invalid if there is no “specified stamp for the test report” or the stamp of the test organization on it.
3. The test report shall be invalid if there are no signatures of the testing person, reviewing person and approving person on it.
4. The test report shall be invalid if it is altered.
5. Any demurral about the test shall be put forward to the testing organization within 15 days after the receiving of the test report.
6. This test report standalone dose not constitute or imply by its own an approval of the product by any Certification Authorities or Competent Bodies.
7. This report is only valid if complete, and test report shall not be reproduced except in full, without written approval of the laboratory.
8. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of Telecommunication Metrology Center of MII and the Accreditation Bodies, if it applies.

Address: No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China
(Telecommunication Metrology Center of MII)
Post code: 100083
Telephone: +86 10 62302041 Fax: +86 10 62304793
Web site: http://www.emcite.com
E-mail: welcome@emcite.com

TABLE OF CONTENT

Product name	HUAWEI EG602 GSM/GPRS/EDGE DataCard	Sample Model	HUAWEI EG602
Client	HUAWEI Technologies Co., Ltd.	Type of test	Non Type Approval
Factory	HUAWEI Technologies Co., Ltd.	Sampling arrival date	July 8th, 2007
Manufacturer	HUAWEI Technologies Co., Ltd.		
Sampling/ Sending sample	Sending sample	Sample sent by	Xie Yan
Sampling location	/	Sampling person	/
Sample quantity	1	Sample matrix	/
Series number of the Sample	356112010005307		
Manufacture date	/	Manufacture location	/
Test basis	**EN 50360–2001:** Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones. **EN 50361–2001**: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones. **ANSI C95.1–1999**: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. **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. **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. **IEC 62209-2 (Draft):** Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the Specific Absorption Rate (SAR)in the head and body for 30MHz to 6GHz Handheld and Body-Mounted Devices used in close proximity to the Body. **Vodafone SAR_Data_cards_V1.1:** Global Test Specification for Terminals for Performance Measurements –Performance TST- Specific Absorption Rate (SAR) for Data Cards and External Antennas.		
Test 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 5.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report. General Judgment: **Pass** (Stamp) **Date of issue: July 26th, 2007**		
Note	The test results relate only to the items tested of the sample(s).		

Approved by (Lu Minniu) **Deputy Director of the laboratory** **Reviewed by** (Qi Dianyuan) **Tested by** (Lin Jun)

1 COMPETENCE AND WARRANTIES

Telecommunication Metrology Center of Ministry of Information Industry is a test laboratory accredited by DAR (DATech) – Deutschen Akkreditierungs Rat (Deutsche Akkreditierungsstelle Technik) for the tests indicated in the Certificate No. **DAT-P-114/01-01**.

Telecommunication Metrology Center of Ministry of Information Industry is a test laboratory accredited by CNAL – China National Accreditation Committee for Laboratories, for the tests indicated in the Certificate No. **L0442**.

Telecommunication Metrology Center of Ministry of Information Industry is a test laboratory competent to carry out the tests described in this test report.

Telecommunication Metrology Center of Ministry of Information Industry 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 **Telecommunication Metrology Center of Ministry of Information Industry** at the time of execution of the test.

Telecommunication Metrology Center of Ministry of Information Industry is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test.

2 GENERAL CONDITIONS

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

2.2 This report standalone does not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities.

2.3 This document is only valid if complete; no partial reproduction can be made without written approval of Telecommunication Metrology Center of Ministry of Information Industry.

2.4 This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of Telecommunication Metrology Center of Ministry of Information Industry and the Accreditation Bodies, if it applies.

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, Shenzhen, Guangdong
City	Shenzhen
Postal Code	518129
Country	China
Telephone	0755-28780808
Fax	0755-28780808

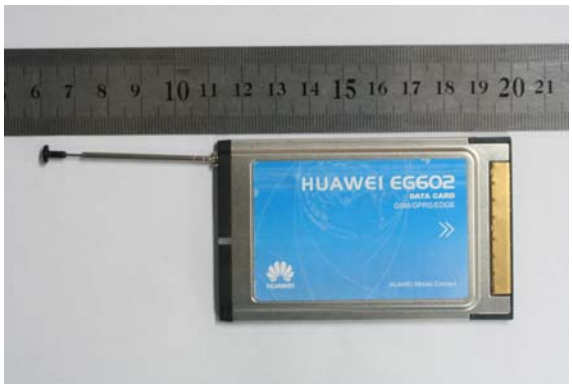
Table 2: Manufacturer

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

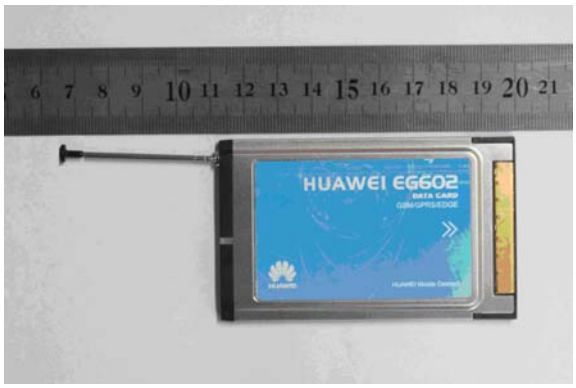
3.2 Constituents of EUT

Table 3: Constituents of Samples

Description	Model	Serial Number	Manufacturer
GSM/GPRS/EDGE DataCard	HUAWEI EG602	356112010005307	HUAWEI Technologies Co., Ltd.



Picture 1-a: EUT with antenna fully extended



Picture 1-b: EUT with antenna partly retracted

Picture 1-c: EUT with antenna inside

Picture 1: Constituents of the sample

3.3 General Description

Equipment Under Test (EUT) is a GSM/GPRS/EDGE DataCard, which has a retractable antenna. SAR is tested respectively for GSM 850MHz and PCS 1900MHz with 3 different Laptops.The EUT has GPRS function of class 12. When the antenna is inside the card, the SAR values are smaller than those with the antenna outside, so the tests are performed with the antenna outside (fully

extended as Picture 1-a and partly retracted as Picture 1-b).

The sample under 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

During SAR test of the EUT, it is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. For GSM 850 and 1900, a communication link is set up with a System Simulator (SS) by air link. The data card is commanded to operate at maximum transmitting power.

The EUT only has the data transfer function, but does not have the speech transfer function, the tests in the band of GSM 850MHz and 1900MHz are only performed in the mode of GPRS. And for the worst case, the EDGE function will be tested under the same condition.

Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink. According to 3GPP TS 51.010-1, the maximum power of the GSM 850 and PCS 1900 can do the power reduction for the multislot. The allowed power reduction in the multislot configuration is as followed:

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power, (dB)
1	0
2	0 to 3,0
3	1,8 to 4,8
4	3,0 to 6,0

For this EUT, the tests for GSM 850 GPRS and PCS 1900 GPRS band will be performed under the following 4 setups with one assistant laptop first at one test position:
1) using 1 timeslot in uplink with the power is 33 dBm for 850MHz and 30 dBm for 1900MHz
2) using 2 timeslots in uplink with the power reduced 2dB
3) using 3 timeslots in uplink with the power reduced 4dB
4) using 4 timeslots in uplink with the power reduced 6dB

After drawn the worst case, the tests will be continued to perform with the same EUT setup for the whole tests for 850 GPRS and 1900 GPRS with three laptops.

And according to the "2 dB rule" specified in the OET Bulletin 65 (Edition 97-01) and Supplement C(Edition 01-01), **" If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s)"**.

Then The Absolute Radio Frequency Channel Number (ARFCN) is firstly allocated to 190 and 661 respectively in the case of 850MHz and 1900MHz.

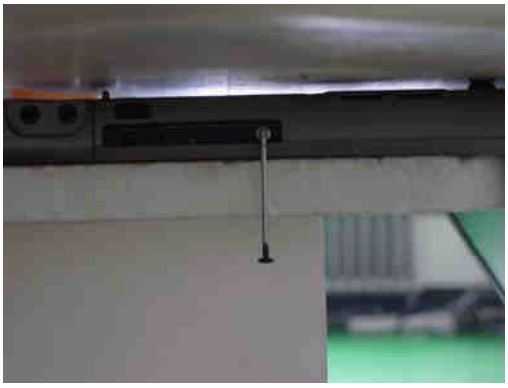
For each channel, the EUT is tested at the following 8 test positions:

- Test Position 1: The EUT is plugged in the PCMCIA slot of the portable computer. The back side of the computer is in direct contact against the bottom of the flat phantom. The antenna points to the right.（Picture 2-a1 is for antenna extended and Picture 2-a2 is for antenna retracted）
- Test Position 2: The EUT is plugged in the PCMCIA slot of the portable computer. The back side of the computer is in direct contact against the bottom of the flat phantom. The antenna points down.（Picture 2-b1 is for antenna extended and Picture 2-b2 is for antenna retracted）
- Test Position 3: The EUT is plugged in the PCMCIA slot of the portable computer. The back side of the computer is in direct contact against the bottom of the flat phantom. The antenna points to the left.（Picture 2-c1 is for antenna extended and Picture 2-c2 is for antenna retracted）
- Test Position 4: T The EUT is plugged in the PCMCIA slot of the portable computer. The back side of the computer is in direct contact against the bottom of the flat phantom. The antenna is parallel to the bottom and vertical to the EUT.（Picture 2-d1 is for antenna extended and Picture 2-d2 is for antenna retracted）
- Test Position 5: The EUT is plugged in the PCMCIA slot of the portable computer. The top of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the antenna of the EUT and the bottom of the flat phantom. The antenna is parallel to the keyboard of the laptop and pointing to the right.（Picture 2-e1 is for antenna extended and Picture 2-e2 is for antenna retracted）
- Test Position 6: The EUT is plugged in the PCMCIA slot of the portable computer. The top of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the antenna of the EUT and the bottom of the flat phantom. The antenna is vertical to the keyboard of the laptop and pointing to the keyboard side.（Picture 2-f1 is for antenna extended and Picture 2-f2 is for antenna retracted）
- Test Position 7: The EUT is plugged in the PCMCIA slot of the portable computer. The top of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the antenna of the EUT and the bottom of the flat phantom. The antenna is parallel to the keyboard of the laptop and pointing to the left.（Picture 2-g1 is for antenna extended and Picture 2-g2 is for antenna retracted）
- Test Position 8: The EUT is plugged in the PCMCIA slot of the portable computer. The top of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the antenna of the EUT and the bottom of the flat phantom. The antenna is vertical to the keyboard of the laptop and pointing to laptop backside.（Picture 2-h1 is for antenna extended and Picture 2-h2 is for antenna retracted）

Picture 2-a1: Test position 1 with antenna extended

Picture 2-a2: Test position 1 with antenna retracted

Picture 2-b1: Test position 2 with antenna extended



Picture 2-b2: Test position 2 with antenna retracted

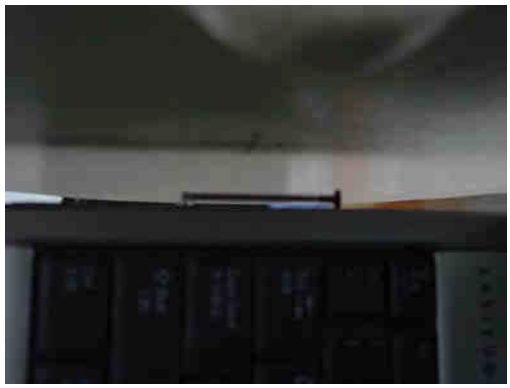
Picture 2-c1: Test position 3 with antenna extended

Picture 2-c2: Test position 3 with antenna retracted

Picture 2-d1: Test position 4 with antenna extended

Picture 2-d2: Test position 4 with antenna retracted

Picture 2-e1: Test position 5 with antenna extended



Picture 2-e2: Test position 5 with antenna retracted

Picture 2-f1: Test position 6 with antenna extended

Picture 2-f2: Test position 6 with antenna retracted

Picture 2-g1: Test position 7 with antenna extended

Picture 2-g2: Test position 7 with antenna retracted

Picture 2-h1: Test position 8 with antenna extended

Picture 2-h2: Test position 8 with antenna retracted

Picture 2: Test positions of EUTs

During the test of the datacard, three Laptops are used as the test assistant to help to setup communication, whose type are IBM T41 (See Picture 3-a and 3-b), Dell LATIDUE D600 (See Picture 3-c and 3-d), and HP compaq nc6130 ((See Picture 3-e and 3-f).

Picture 3-a: Close

Picture 3-b: Open

Picture 3-c: Close

Picture 3-d: Open

Picture 3-e: Close

Picture 3-f: Open

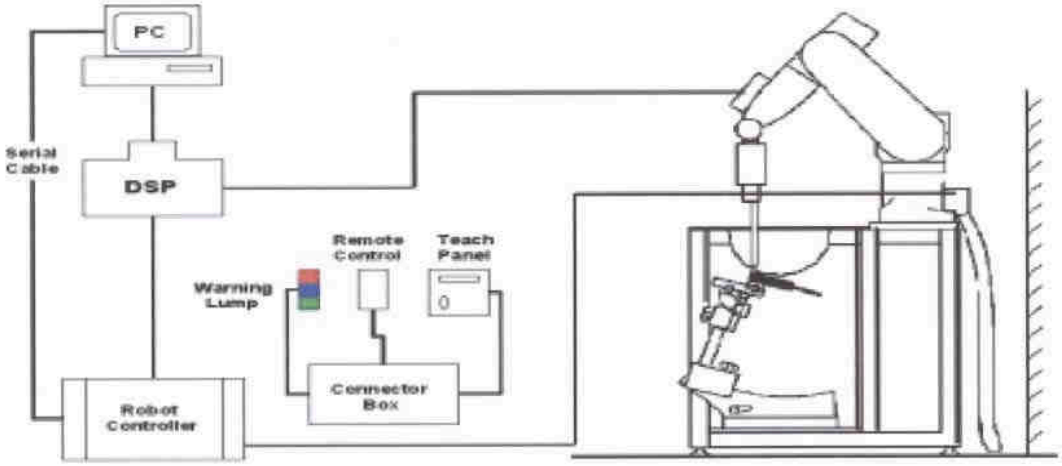
Picture 3: Three laptops as test assistants

4.2 SAR Measurement Set-up

These measurements were performed with the automated near-field scanning system DASY4 Professional from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot (working range greater than 0.9m), which positions the probes with a positional repeatability of better than ± 0.02mm. Special E- 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 Professional, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.



Picture 4: SAR Lab Test Measurement Set-up

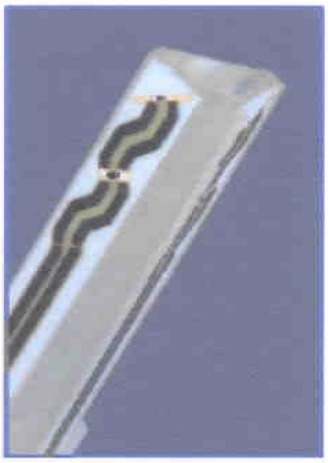
The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information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

4.3 Dasy4 E-field Probe System

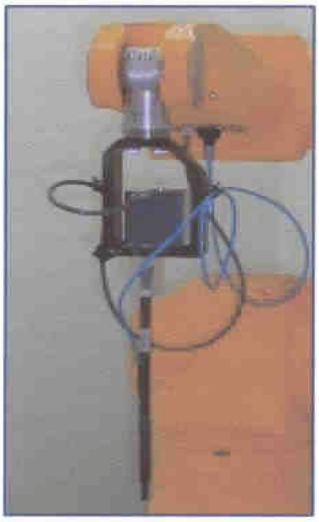
The SAR measurements were conducted with the dosimetric probe ET3DV6 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the standard procedure with an accuracy of better than ± 10%. The spherical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

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 450MHz, 900MHz and 1.8GHz (accuracy±8%) Calibration for other liquids and frequencies upon request
Frequency	l 0 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	5u W/g to > 100mW/g; Linearity: ±0.2dB
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



Picture 5: ET3DV6



Picvure 6: ET3DV6 E-field

4.4 E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent

thermistor-based temperature probe is used in conjunction with the E-field probe.

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

Where: Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

Or

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

Note: Please see Annex E to check the probe calibrate

Picture 7: Device Holder

4.5 Other Test Equipment

4.5.1 Device Holder for Transmitters

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

4.5.2 Phantom

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

Shell Thickness	2±0. l mm
Filling Volume	Approx. 20 liters
Dimensions	810 x l000 x 500 mm (H x L x W)
Available	Special

Picture 8: Generic Twin Phantom

4.6 Equivalent Tissues

The liquid used for the frequency range of 800-2000 MHz consisted of water, sugar, salt and

Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 4 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

Table 4. Composition of the Body Tissue Equivalent Matter

MIXTURE %	FREQUENCY 850MHz
Water	52.5
Sugar	45.0
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=850MHz ε=55.2 σ=0.97
MIXTURE %	FREQUENCY 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52

4.7 System Specifications

4.7.1 Robotic System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: RX90L
Repeatability: ±0.02 mm
No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Pentium III
Clock Speed: 800 MHz
Operating System: Windows 2000

Data Converter

Features: Signal Amplifier, multiplexer, A/D converter, and control logic
Software: DASY4 software
Connecting Lines: Optical downlink for data and status info.
Optical uplink for commands and clock

5 CHARACTERISTICS OF THE TEST

5.1 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.

5.2 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.

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

Vodafone SAR_Data_cards_V1.1: Global Test Specification for Terminals for Performance Measurements –Performance TST- Specific Absorption Rate (SAR) for Data Cards and External Antennas.

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

6 LABORATORY ENVIRONMENT

Table 5: The Ambient Conditions during EMF Test

Temperature	Min. = 15 °C, Max. = 30 °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 CONDUCTED OUTPUT POWER MEASUREMENT

7.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU-200) to ensure the maximum power transmission and proper modulation. This result contains conducted output power and ERP for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

7.2 Conducted Power

7.2.1 Measurement Methods

The EUT was set up for the maximum output power. The channel power was measured with Agilent Spectrum Analyzer E4440A. These measurements were done at 3 channels both before SAR test and after SAR test for each test band.

7.2.2 Measurement result

Table 6: Conducted Power Measurement Results

850MHz GPRS	**Conducted Power**		
	Channel 128 (824.2MHz)	**Channel 190 (836.6MHz)**	**Channel 251 (848.8MHz)**
Before test	32.64	32.45	32.30
After test	32.66	32.46	32.30
1900MHZ GPRS	**Conducted Power**		
	Channel 512 (1850.2MHz)	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
Before test	29.78	29.77	29.69
After test	29.74	29.75	29.65
850MHz EGPRS	**Conducted Power**		
	Channel 128 (824.2MHz)	**Channel 190 (836.6MHz)**	**Channel 251 (848.8MHz)**
Before test	25.18	26.11	26.20
After test	25.15	26.08	26.23
1900MHZ EGPRS	**Conducted Power**		
	Channel 512 (1850.2MHz)	**Channel 661 (1880MHz)**	**Channel 810 (1909.8MHz)**
Before test	25.35	25.46	25.48
After test	25.38	25.48	25.45

7.2.3 Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 9 to Table 24 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

8 TEST RESULTS

8.1 Dielectric Performance

Table 7: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.3 °C and relative humidity 49%. Liquid temperature during the test: 22.5°C			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	850 MHz	55.2	0.97
	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	850 MHz	54.1	1.01
	1900 MHz	52.1	1.51

8.2 System Validation

Table 8: System Validation

Measurement is made at temperature 23.3 °C, relative humidity 49%, input power 250 mW. Liquid temperature during the test: 22.5°C					
Liquid parameters		**Frequency**	**Permittivity ε**		**Conductivity σ (S/m)**
		835 MHz	41.7		0.88
		1900 MHz	39.2		1.45
Verification results	**Frequency**	**Target value (W/kg)**		**Measurement value (W/kg)**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**
	835 MHz	1.55	2.375	1.62	2.48
	1900 MHz	5.125	9.925	5.27	9.91

Note：Target Values used are one fourth of those in IEEE Std 1528-2003 (feeding power is normalized to 1 Watt), i.e. 250 mW is used as feeding power to the validation dipole (SPEAG using).

8.3 Summary of Measurement Results (850MHz GPRS)

Table 9: SAR Values (850 MHz GPRS for different timeslots in uplink antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 4,Mid frequency, **4** timeslots in uplink with **DELL** Laptop (See Figure 1)	0.392	0.591	-0.143
Flat Phantom, Test Position 4,Mid frequency, **3** timeslots in uplink with **DELL** Laptop (See Figure 3)	0.455	0.709	-0.016
Flat Phantom, Test Position 4,Mid frequency, **2** timeslots in uplink with **DELL** Laptop (See Figure 5)	0.489	0.738	-0.019
Flat Phantom, Test Position 4,Mid frequency, **1** timeslots in uplink with **DELL** Laptop (See Figure 7)	0.379	0.572	-0.044

Table 10: SAR Values (850 MHz GPRS with DELL Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 9)	0.118	0.182	0.106
Flat Phantom, Test Position 2, Mid frequency (See Figure 11)	0.099	0.148	-0.088
Flat Phantom, Test Position 3, Mid frequency (See Figure 13)	0.096	0.148	-0.029
Flat Phantom, Test Position 4, Mid frequency (See Figure 15)	0.489	0.738	-0.019
Flat Phantom, Test Position 5, Mid frequency (See Figure 17)	0.053	0.093	0.065
Flat Phantom, Test Position 6, Mid frequency (See Figure 19)	0.170	0.267	0.011
Flat Phantom, Test Position 7, Mid frequency (See Figure 21)	0.081	0.133	0.043
Flat Phantom, Test Position 8, Mid frequency (See Figure 23)	0.150	0.239	-0.002

Table 11: SAR Values (850 MHz GPRS with DELL Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 25)	0.093	0.145	-0.027
Flat Phantom, Test Position 2, Mid frequency (See Figure 27)	0.081	0.120	0.114
Flat Phantom, Test Position 3, Mid frequency (See Figure 29)	0.077	0.118	0.072
Flat Phantom, Test Position 4, Mid frequency (See Figure 31)	0.400	0.605	-0.006
Flat Phantom, Test Position 5, Mid frequency (See Figure 33)	0.042	0.073	0.081
Flat Phantom, Test Position 6, Mid frequency (See Figure 35)	0.135	0.211	-0.112
Flat Phantom, Test Position 7, Mid frequency (See Figure 37)	0.064	0.105	-0.003
Flat Phantom, Test Position 8, Mid frequency (See Figure 39)	0.102	0.161	-0.038

Table 12: SAR Values (850 MHz GPRS with HP Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 41)	0.306	0.535	-0.110
Flat Phantom, Test Position 2, Mid frequency (See Figure 43)	0.148	0.248	0.109
Flat Phantom, Test Position 3, Mid frequency (See Figure 45)	0.155	0.267	-0.001
Flat Phantom, Test Position 4, Top frequency (See Figure 47)	0.710	1.15	-0.023
Flat Phantom, Test Position 4, Mid frequency (See Figure 49)	0.683	1.11	0.063
Flat Phantom, Test Position 4, Bottom frequency (See Figure 51)	0.669	1.09	-0.125
Flat Phantom, Test Position 5, Mid frequency (See Figure 53)	0.152	0.240	-0.007
Flat Phantom, Test Position 6, Mid frequency (See Figure 55)	0.164	0.251	0.143
Flat Phantom, Test Position 7, Mid frequency (See Figure 57)	0.032	0.056	-0.087
Flat Phantom, Test Position 8, Mid frequency (See Figure 59)	0.206	0.318	-0.007

Table 13: SAR Values (850 MHz GPRS with HP Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 61)	0.266	0.461	0.007
Flat Phantom, Test Position 2, Mid frequency (See Figure 63)	0.119	0.200	0.105
Flat Phantom, Test Position 3, Mid frequency (See Figure 65)	0.128	0.219	0.055
Flat Phantom, Test Position 4, Mid frequency (See Figure 67)	0.547	0.900	0.029
Flat Phantom, Test Position 5, Mid frequency (See Figure 69)	0.108	0.170	0.200
Flat Phantom, Test Position 6, Mid frequency (See Figure 71)	0.116	0.176	-0.004
Flat Phantom, Test Position 7, Mid frequency (See Figure 73)	0.024	0.041	-0.125
Flat Phantom, Test Position 8, Mid frequency (See Figure 75)	0.146	0.224	0.029

Table 14: SAR Values (850 MHz GPRS with IBM Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 77)	0.095	0.157	0.021
Flat Phantom, Test Position 2, Mid frequency (See Figure 79)	0.106	0.171	0.003
Flat Phantom, Test Position 3, Mid frequency (See Figure 81)	0.121	0.204	0.037
Flat Phantom, Test Position 4, Top frequency (See Figure 83)	0.737	1.18	-0.053
Flat Phantom, Test Position 4, Mid frequency (See Figure 85)	0.741	1.18	0.087
Flat Phantom, Test Position 4, Bottom frequency (See Figure 87)	0.643	1.03	-0.032
Flat Phantom, Test Position 5, Mid frequency (See Figure 89)	0.091	0.148	-0.127
Flat Phantom, Test Position 6, Mid frequency (See Figure 91)	0.209	0.325	0.008
Flat Phantom, Test Position 7, Mid frequency (See Figure 93)	0.041	0.070	-0.046
Flat Phantom, Test Position 8, Mid frequency (See Figure 95)	0.183	0.290	-0.008

Table 15: SAR Values (850 MHz GPRS with IBM Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 97)	0.092	0.154	-0.064
Flat Phantom, Test Position 2, Mid frequency (See Figure 99)	0.083	0.134	0.008
Flat Phantom, Test Position 3, Mid frequency (See Figure 101)	0.097	0.163	-0.088
Flat Phantom, Test Position 4, Mid frequency (See Figure 103)	0.541	0.870	0.021
Flat Phantom, Test Position 5, Mid frequency (See Figure 105)	0.081	0.132	0.119
Flat Phantom, Test Position 6, Mid frequency (See Figure 107)	0.148	0.232	-0.200
Flat Phantom, Test Position 7, Mid frequency (See Figure 109)	0.029	0.049	0.168
Flat Phantom, Test Position 8, Mid frequency (See Figure 111)	0.121	0.190	0.200

8.4 Summary of Measurement Results (1900 MHz GPRS)

Table 16: SAR Values (1900 MHz GPRS for different timeslots in uplink -antenna unfolded)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 7,Mid frequency, **4** timeslots in uplink with **DELL** Laptop (See Figure 113)	0.301	0.583	-0.003
Flat Phantom, Test Position 7,Mid frequency, **3** timeslots in uplink with **DELL** Laptop (See Figure 115)	0.384	0.746	-0.023
Flat Phantom, Test Position 7,Mid frequency, **2** timeslots in uplink with **DELL** Laptop (See Figure 117)	0.434	0.843	0.004
Flat Phantom, Test Position 7,Mid frequency, **1** timeslots in uplink with **DELL** Laptop (See Figure 119)	0.312	0.606	-0.055

Table 17: SAR Values (1900 MHz GPRS with DELL Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 121)	0.116	0.224	-0.151
Flat Phantom, Test Position 2, Mid frequency (See Figure 123)	0.024	0.046	0.200
Flat Phantom, Test Position 3, Mid frequency (See Figure 125)	0.161	0.304	0.037
Flat Phantom, Test Position 4, Mid frequency (See Figure 127)	0.131	0.225	-0.098
Flat Phantom, Test Position 5, Mid frequency (See Figure 129)	0.171	0.321	0.078
Flat Phantom, Test Position 6, Mid frequency (See Figure 131)	0.280	0.502	0.059
Flat Phantom, Test Position 7, Mid frequency (See Figure 133)	0.223	0.424	-0.045
Flat Phantom, Test Position 8, Mid frequency (See Figure 135)	0.242	0.428	-0.010

Table 18: SAR Values (1900 MHz GPRS with DELL Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 1, Mid frequency (See Figure 137)	0.270	0.532	0.014
Flat Phantom, Test Position 2, Mid frequency (See Figure 139)	0.050	0.087	0.004
Flat Phantom, Test Position 3, Mid frequency (See Figure 141)	0.374	0.709	-0.079
Flat Phantom, Test Position 4, Mid frequency (See Figure 143)	0.183	0.313	0.094
Flat Phantom, Test Position 5, Mid frequency (See Figure 145)	0.324	0.609	0.066
Flat Phantom, Test Position 6, Mid frequency (See Figure 147)	0.337	0.617	-0.021
Flat Phantom, Test Position 7, Mid frequency (See Figure 149)	0.434	0.843	0.004
Flat Phantom, Test Position 8, Mid frequency (See Figure 151)	0.328	0.586	-0.105

Table 19: SAR Values (1900 MHz GPRS with HP Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 153)	0.136	0.252	-0.044
Flat Phantom, Test Position 2, Mid frequency (See Figure 155)	0.023	0.037	0.200
Flat Phantom, Test Position 3, Mid frequency (See Figure 157)	0.094	0.183	0.136
Flat Phantom, Test Position 4, Mid frequency (See Figure 159)	0.118	0.204	-0.023
Flat Phantom, Test Position 5, Mid frequency (See Figure 161)	0.161	0.299	-0.022
Flat Phantom, Test Position 6, Mid frequency (See Figure 163)	0.200	0.354	0.020
Flat Phantom, Test Position 7, Mid frequency (See Figure 165)	0.197	0.367	-0.123
Flat Phantom, Test Position 8, Mid frequency (See Figure 167)	0.170	0.304	-0.020

Table 20: SAR Values (1900 MHz GPRS with HP Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 169)	0.262	0.485	0.099
Flat Phantom, Test Position 2, Mid frequency (See Figure 171)	0.042	0.068	0.200
Flat Phantom, Test Position 3, Mid frequency (See Figure 173)	0.292	0.560	-0.011
Flat Phantom, Test Position 4, Mid frequency (See Figure 175)	0.169	0.293	-0.171
Flat Phantom, Test Position 5, Mid frequency (See Figure 177)	0.301	0.561	-0.007
Flat Phantom, Test Position 6, Mid frequency (See Figure 179)	0.240	0.427	-0.046
Flat Phantom, Test Position 7, Mid frequency (See Figure 181)	0.393	0.734	-0.061
Flat Phantom, Test Position 8, Mid frequency (See Figure 183)	0.206	0.366	-0.047

Table 21: SAR Values (1900 MHz GPRS with IBM Laptop-antenna extended)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 185)	0.069	0.133	0.115
Flat Phantom, Test Position 2, Mid frequency (See Figure 187)	0.025	0.043	-0.200
Flat Phantom, Test Position 3, Mid frequency (See Figure 189)	0.099	0.196	-0.071
Flat Phantom, Test Position 4, Mid frequency (See Figure 191)	0.171	0.292	-0.046
Flat Phantom, Test Position 5, Mid frequency (See Figure 193)	0.098	0.185	0.023
Flat Phantom, Test Position 6, Mid frequency (See Figure 195)	0.188	0.334	-0.035
Flat Phantom, Test Position 7, Mid frequency (See Figure 197)	0.178	0.332	-0.057
Flat Phantom, Test Position 8, Mid frequency (See Figure 199)	0.215	0.385	-0.032

Table 22: SAR Values (1900 MHz GPRS with IBM Laptop-antenna retracted)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		
	10 g Average	1 g Average	
Flat Phantom, Test Position 1, Mid frequency (See Figure 201)	0.081	0.159	0.016
Flat Phantom, Test Position 2, Mid frequency (See Figure 203)	0.048	0.082	-0.001
Flat Phantom, Test Position 3, Mid frequency (See Figure 205)	0.310	0.612	0.018
Flat Phantom, Test Position 4, Mid frequency (See Figure 207)	0.245	0.429	0.007
Flat Phantom, Test Position 5, Mid frequency (See Figure 209)	0.105	0.192	0.037
Flat Phantom, Test Position 6, Mid frequency (See Figure 211)	0.224	0.400	-0.041
Flat Phantom, Test Position 7, Mid frequency (See Figure 213)	0.347	0.649	-0.019
Flat Phantom, Test Position 8, Mid frequency (See Figure 215)	0.241	0.439	-0.016

8.5Summary of Measurement Results (850 MHz EGPRS)

Table 23: SAR Values (850 MHz EGPRS)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 4, Mid frequency, antenna extended with **DELL** Laptop (See Figure 217)	0.373	0.563	-0.068
Flat Phantom, Test Position 4, Mid frequency, antenna extended with **HP** Laptop (See Figure 219)	0.514	0.840	-0.023
Flat Phantom, Test Position 4 ,Mid frequency, antenna extended with **IBM** Laptop (See Figure 221)	0.516	0.820	-0.068

8.6 Summary of Measurement Results (1900 MHz EGPRS)

Table 24: SAR Values (1900 MHz EGPRS)

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	**Measurement Result (W/kg)**		
	10 g Average	**1 g Average**	
Flat Phantom, Test Position 7, Mid frequency, antenna retracted with **DELL** Laptop (See Figure 223)	0.519	0.998	-0.030
Flat Phantom, Test Position 7, Mid frequency, antenna retracted with **HP** Laptop (See Figure 225)	0.479	0.890	-0.074
Flat Phantom, Test Position 7 ,Mid frequency, antenna retracted with **IBM** Laptop (See Figure 227)	0.438	0.827	-0.154

8.7 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 5.2 of this report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.

9 Measurement Uncertainty

SN	a	Type	c	d	e = f(d,k)	f	h = c x f / e	k
	Uncertainty Component		Tol. (± %)	Prob. Dist.	Div.	c_i (1 g)	1 g u_i (±%)	v_i
1	System repetivity	A	0.5	N	1	1	0.5	9
	Measurement System							
2	Probe Calibration	B	5	N	2	1	2.5	∞
3	Axial Isotropy	B	4.7	R	√3	$(1\text{-cp})^{1/2}$	4.3	∞
4	Hemispherical Isotropy	B	9.4	R	√3	$\sqrt{c_p}$		∞
5	Boundary Effect	B	0.4	R	√3	1	0.23	∞
6	Linearity	B	4.7	R	√3	1	2.7	∞
7	System Detection Limits	B	1.0	R	√3	1	0.6	∞
8	Readout Electronics	B	1.0	N	1	1	1.0	∞
9	RF Ambient Conditions	B	3.0	R	√3	1	1.73	∞
10	Probe Positioner Mechanical Tolerance	B	0.4	R	√3	1	0.2	∞
11	Probe Positioning with respect to Phantom Shell	B	2.9	R	√3	1	1.7	∞
12	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	√3	1	2.3	∞
	Test sample Related							
13	Test Sample Positioning	A	4.9	N	1	1	4.9	N-1
14	Device Holder Uncertainty	A	6.1	N	1	1	6.1	N-1
15	Output Power Variation - SAR drift measurement	B	5.0	R	√3	1	2.9	∞
	Phantom and Tissue Parameters							
16	Phantom Uncertainty (shape and thickness tolerances)	B	1.0	R	√3	1	0.6	∞
17	Liquid Conductivity - deviation from target values	B	5.0	R	√3	0.64	1.7	∞
18	Liquid Conductivity - measurement uncertainty	B	5.0	N	1	0.64	1.7	M
19	Liquid Permittivity - deviation from target values	B	5.0	R	√3	0.6	1.7	∞
20	Liquid Permittivity - measurement uncertainty	B	5.0	N	1	0.6	1.7	M
	Combined Standard Uncertainty			RSS			11.25	
	Expanded Uncertainty (95% CONFIDENCE INTERVAL)			K=2			22.5	

10 MAIN TEST INSTRUMENTS

Table 25: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 30,2006	One year
02	Power meter	NRVD	101253	June 21, 2007	One year
03	Power sensor	NRV-Z5	100333		
04	Power sensor	NRV-Z6	100011	September 2, 2006	One year
05	Signal Generator	E4433B	US37230472	September 4, 2006	One Year
06	Amplifier	VTL5400	0505	No Calibration Requested	
07	BTS	CMU 200	105948	August 15, 2006	One year
08	E-field Probe	SPEAG ET3DV6	1736	December 1, 2006	One year
09	DAE	SPEAG DAE3	536	July 12, 2007	One year

10 TEST PERIOD

The test is performed from July 17th, 2007 to July 24th, 2007.

11 TEST LOCATION

The test is performed at Radio Communication & Electromagnetic Compatibility Laboratory of Telecommunication Metrology Center of Ministry of Information Industry of The People's Republic of China

END OF REPORT BODY

ANNEX A： MEASUREMENT PROCESS

The evaluation was performed with the following procedure:

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

Step 2: The SAR distribution at the exposed side of the phantom was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the flat phantom and the horizontal grid spacing was 10 mm x 10 mm. Based on this data, the area of the maximum absorption was determined by spline interpolation.

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

a. The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

b. The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x ~ y and z-directions). The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

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

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

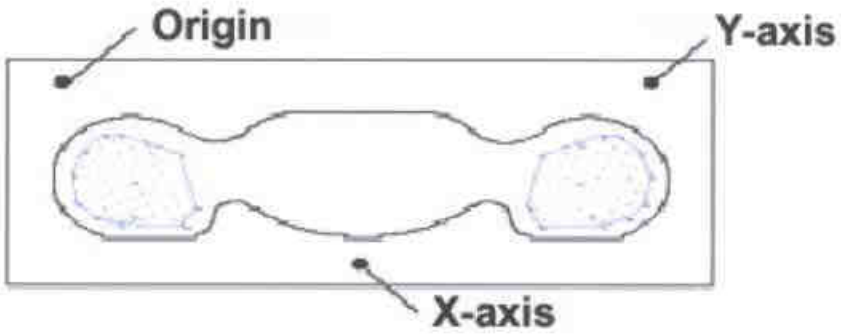
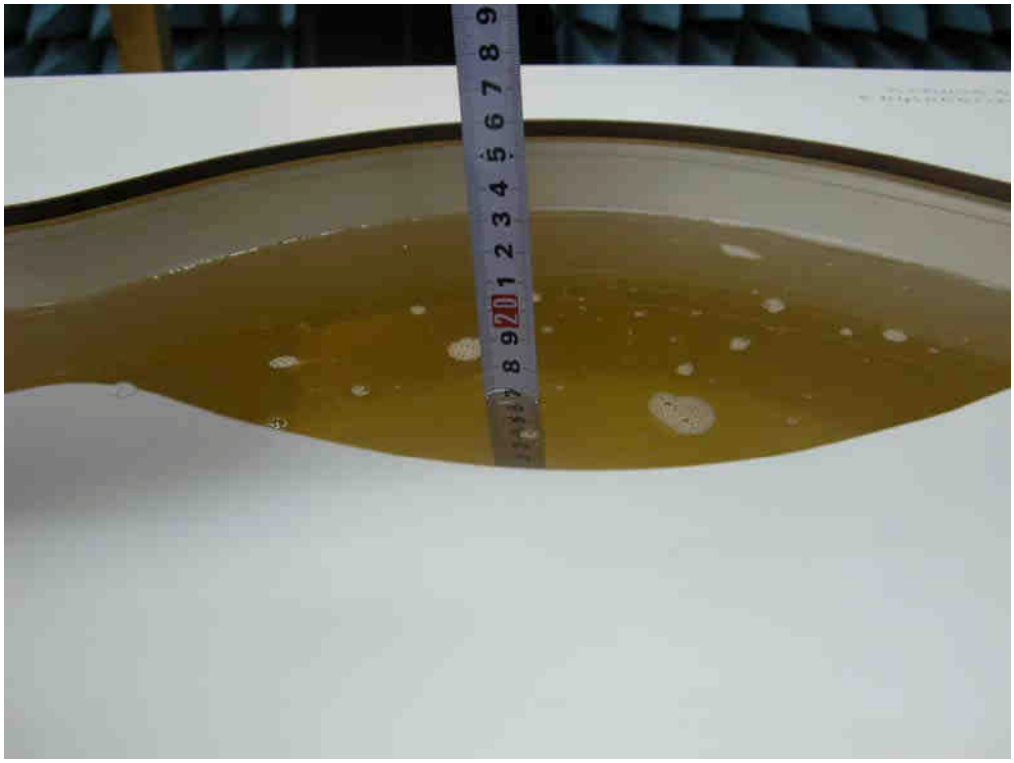


Figure A: SAR Measurement Points in Area Scan

ANNEX B： TEST LAYOUT

Picture B1: Specific Absorption Rate Test Layout



Picture B2: Liquid depth in the Flat Phantom (850 MHz)

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

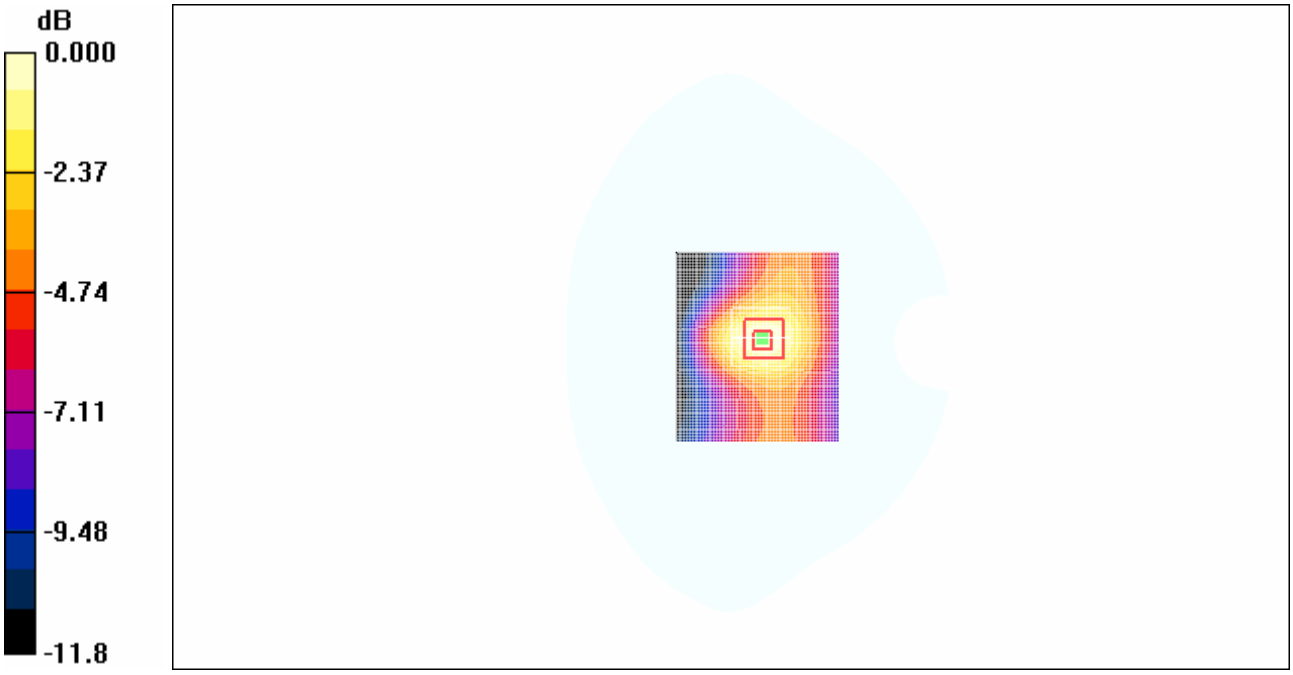
ANNEX C: GRAPH RESULTS

850MHz GPRS Test Position 4 with DELL Laptop-antenna extended (4 timeslots in uplink)

Electronics: DAE3 Sn536
Medium: 850 Body
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.648 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.3 V/m; Power Drift = -0.143 dB
Peak SAR (extrapolated) = 0.929 W/kg
SAR(1 g) = 0.591 mW/g; SAR(10 g) = 0.392 mW/g
Maximum value of SAR (measured) = 0.642 mW/g



0 dB = 0.642mW/g

Fig.1 850MHz GPRS CH190 with DELL Laptop (4 timeslots in uplink)

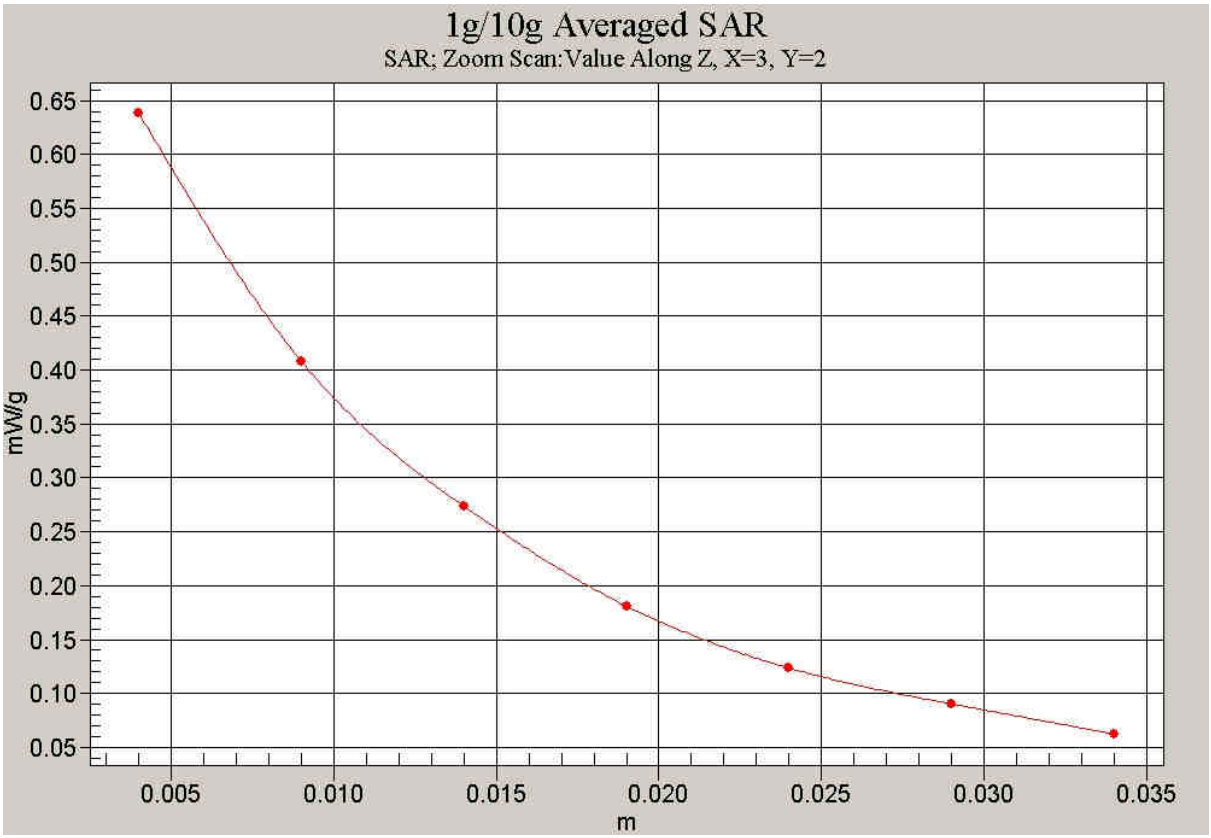


Fig.2 Z-Scan at power reference point (850MHz GPRS CH190 with DELL Laptop -4 timeslots in uplink)

850MHz GPRS Test Position 4 with DELL Laptop -antenna extended (3 timeslots in uplink)

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2.67

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.778 mW/g

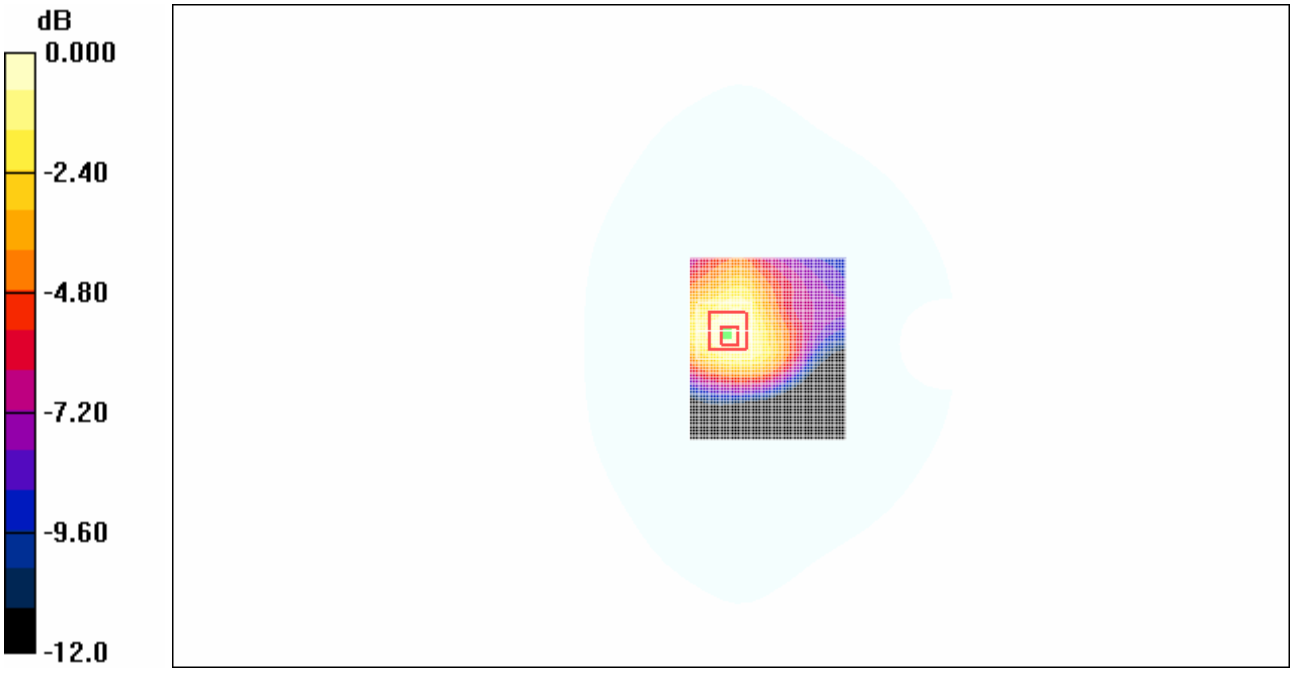
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 31.3 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.709 mW/g; SAR(10 g) = 0.455 mW/g

Maximum value of SAR (measured) = 0.762 mW/g



0 dB = 0.762mW/g

Fig.3 850MHz GPRS CH190 with DELL Laptop (3 timeslots in uplink)

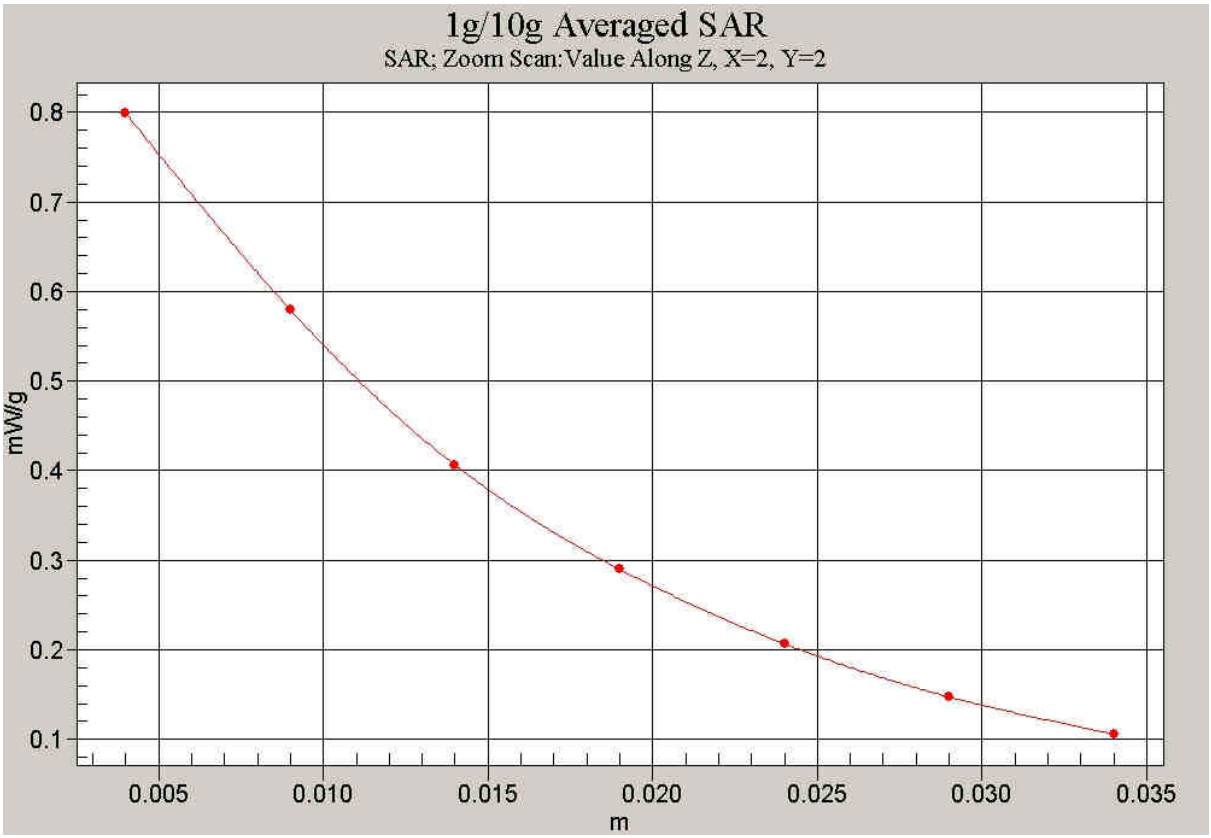


Fig.4 Z-Scan at power reference point (850MHz GPRS CH190 with DELI Laptop -3 timeslots in uplink)

850MHz GPRS Test Position 4 with DELL Laptop-antenna extended (2 timeslots in uplink)

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.799 mW/g

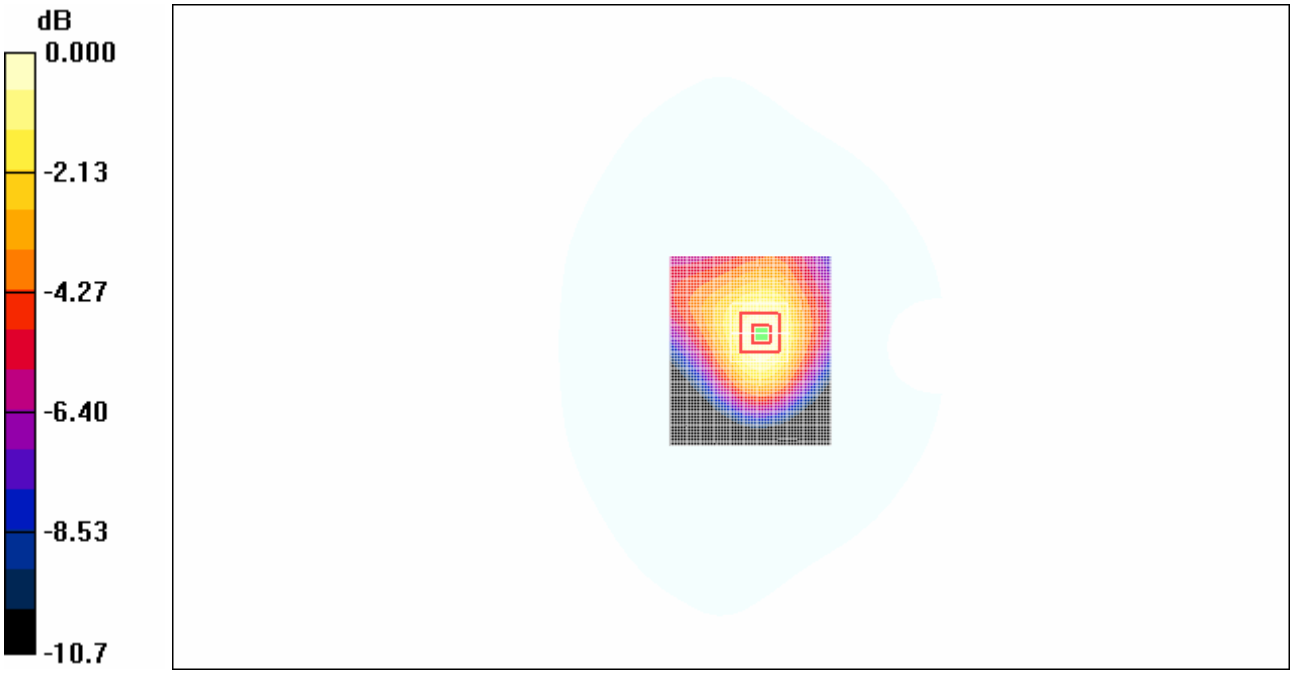
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.4 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.489 mW/g

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



0 dB = 0.796mW/g

Fig.5 850MHz GPRS CH190 with DELL Laptop (2 timeslots in uplink)

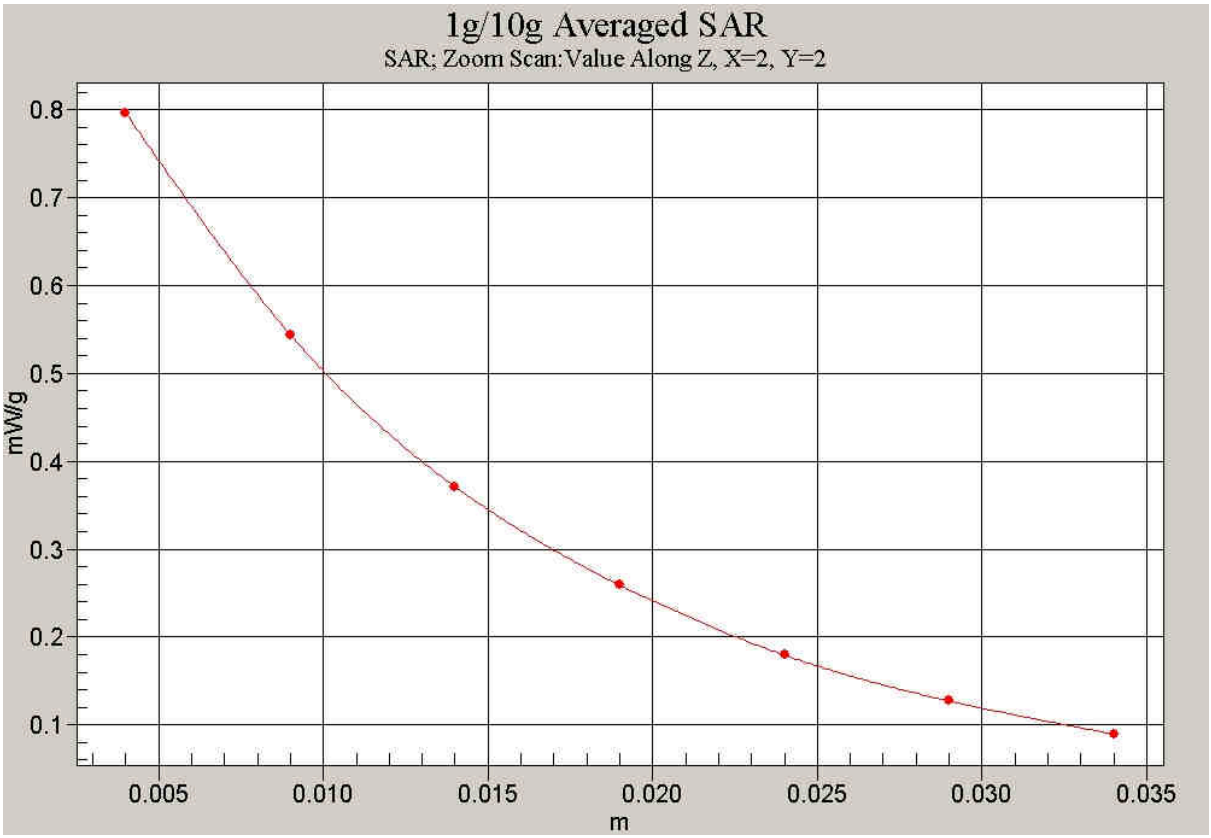


Fig.6 Z-Scan at power reference point
(850MHz GPRS CH190 with DELL Laptop -2 timeslots in uplink)

850MHz GPRS Test Position 4 with DELL Laptop-antenna extended (1 timeslot in uplink)

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:8

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.633 mW/g

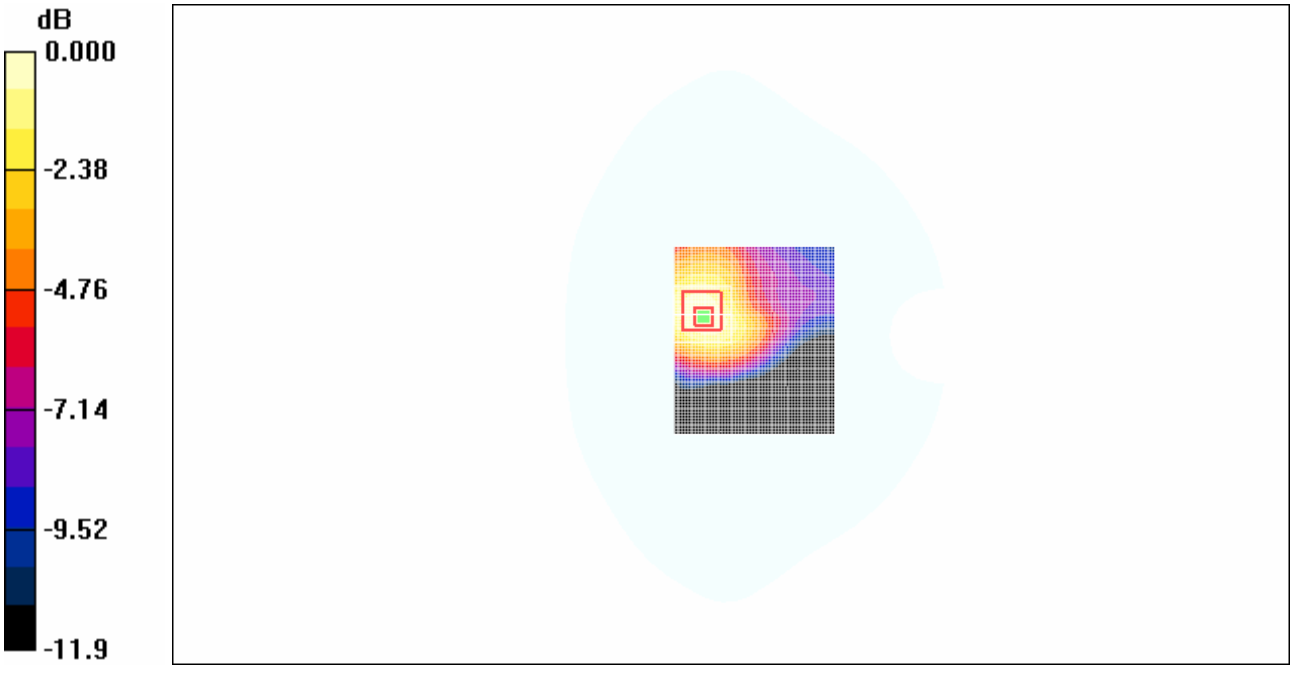
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.46 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.872 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.379 mW/g

Maximum value of SAR (measured) = 0.621 mW/g



0 dB = 0.621mW/g

Fig.7 850MHz GPRS CH190 with DELL Laptop (1 timeslot in uplink)

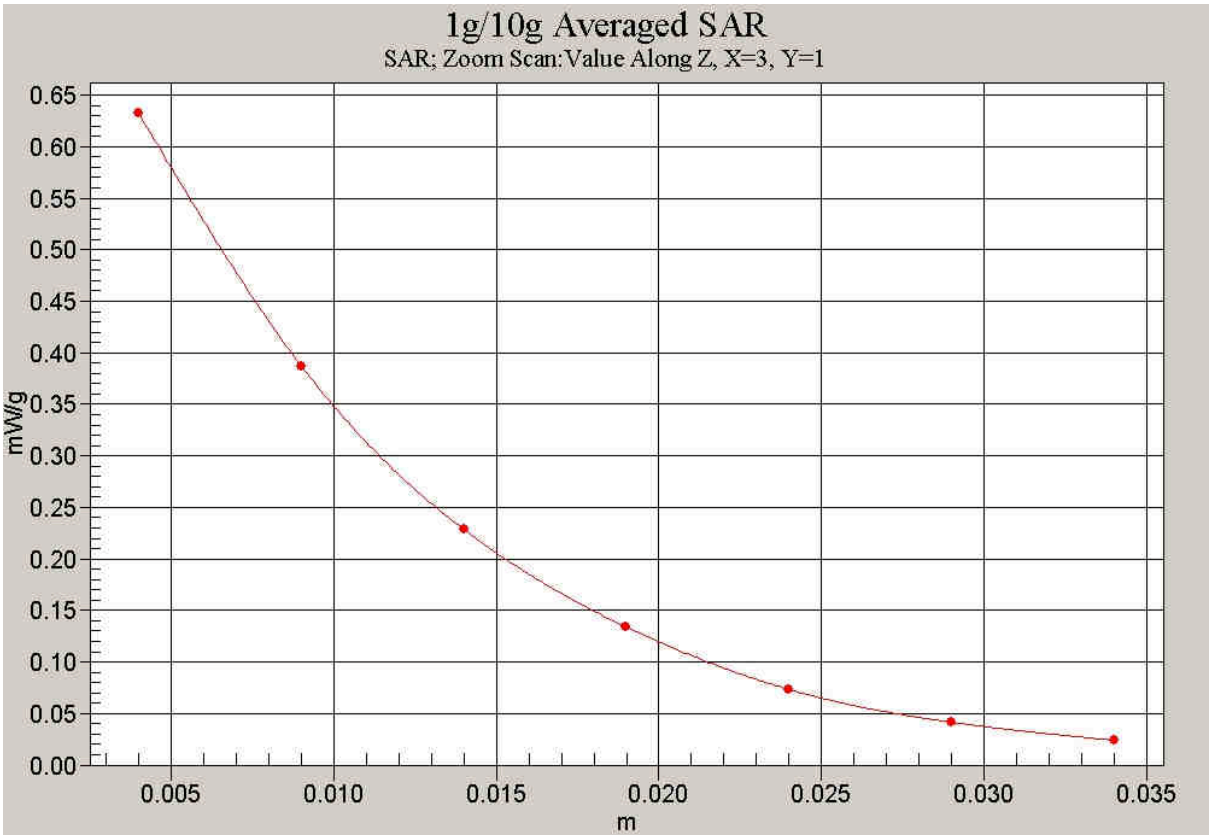


Fig.8 Z-Scan at power reference point
(850MHz GPRS CH190 with DELL Laptop -1 timeslot in uplink)

850MHz GPRS Test Position 1 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.198 mW/g

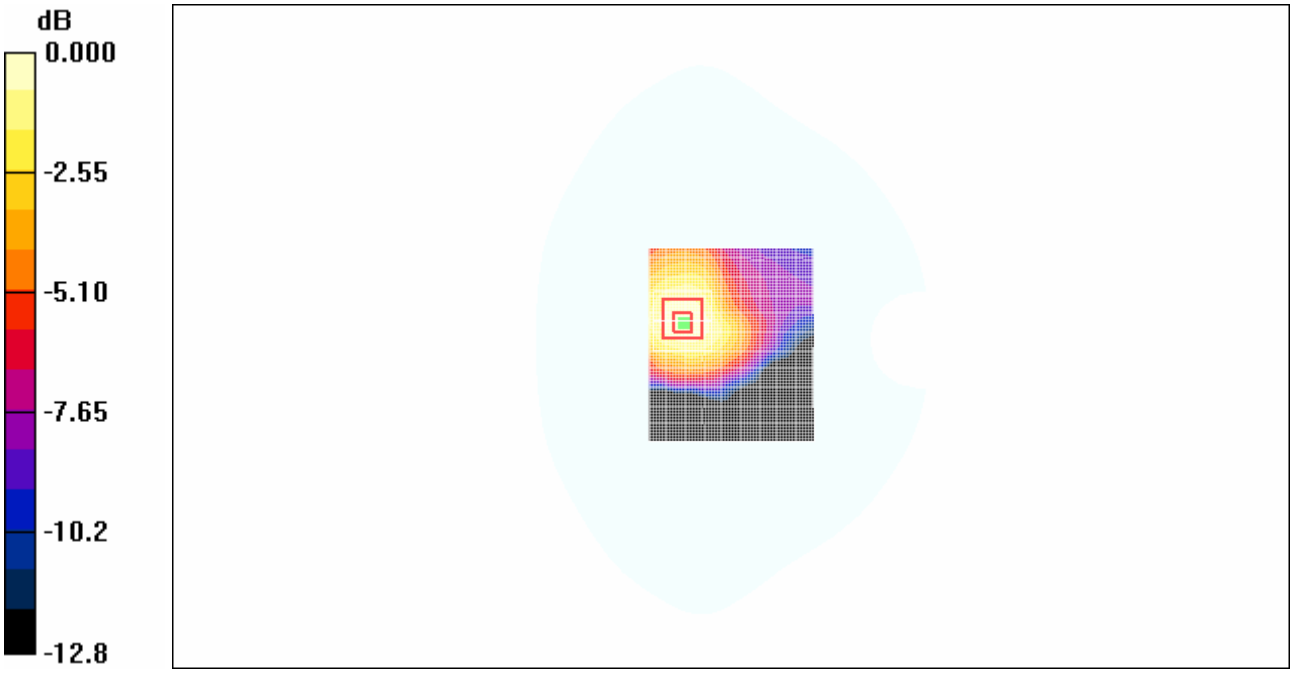
Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.285 W/kg

SAR(1 g) = 0.182 mW/g; SAR(10 g) = 0.118 mW/g

Maximum value of SAR (measured) = 0.194 mW/g



0 dB = 0.194mW/g

Fig.9 850MHz GPRS CH190 Test Position 1

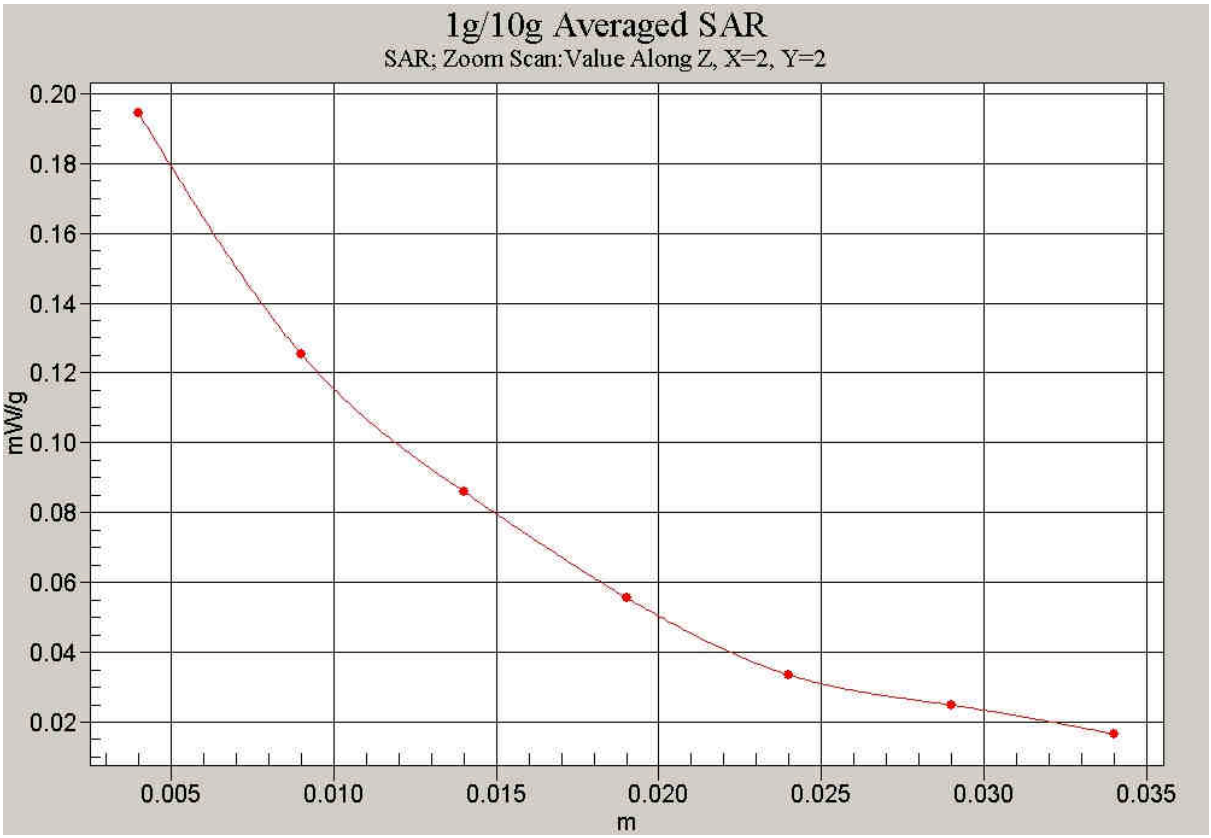


Fig.10 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 1)

850 GPRS Test Position 2 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.161 mW/g

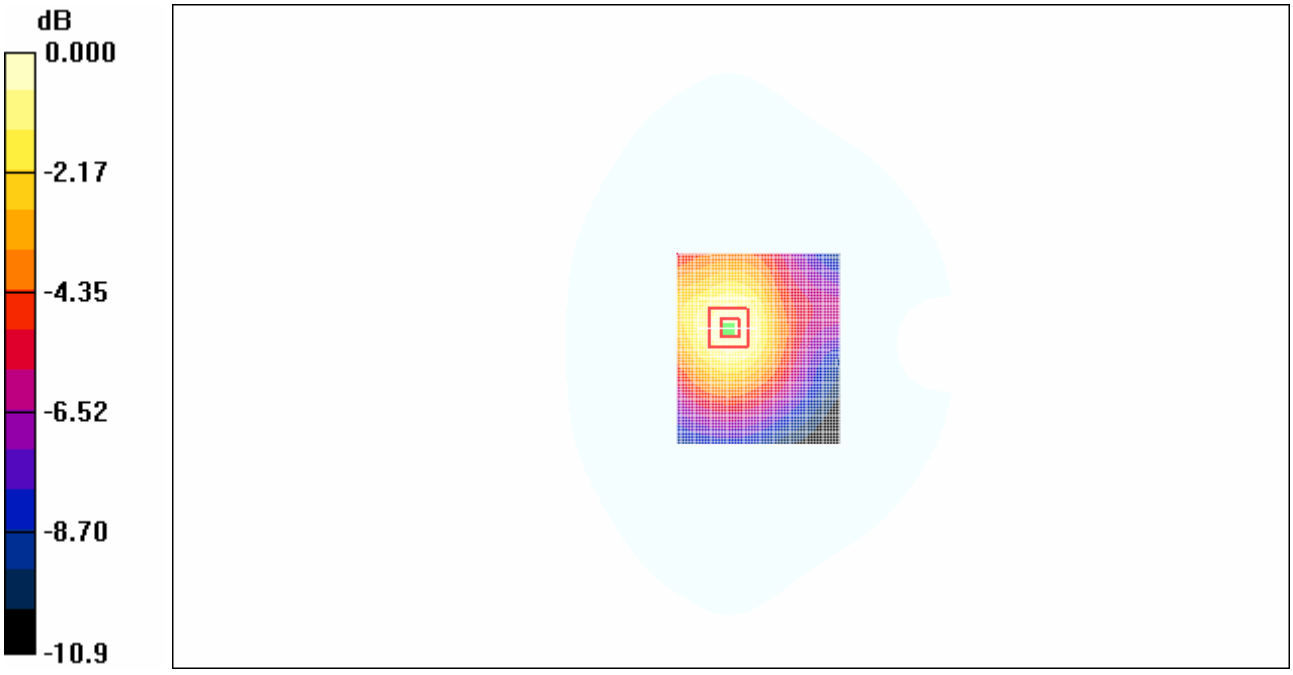
Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.209 W/kg

SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g

Fig.11 850MHz GPRS CH190 Test Position 2

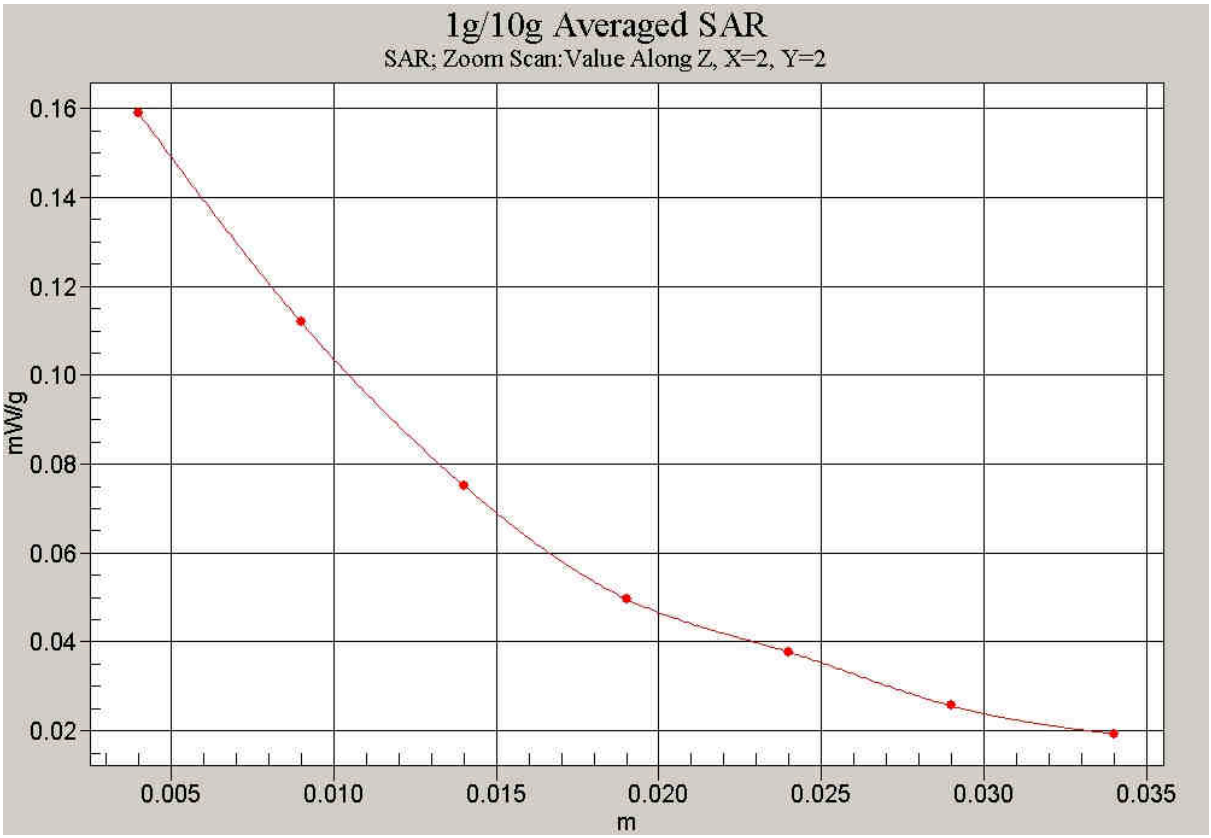


Fig.12 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 2)

850 GPRS Test Position 3 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.164 mW/g

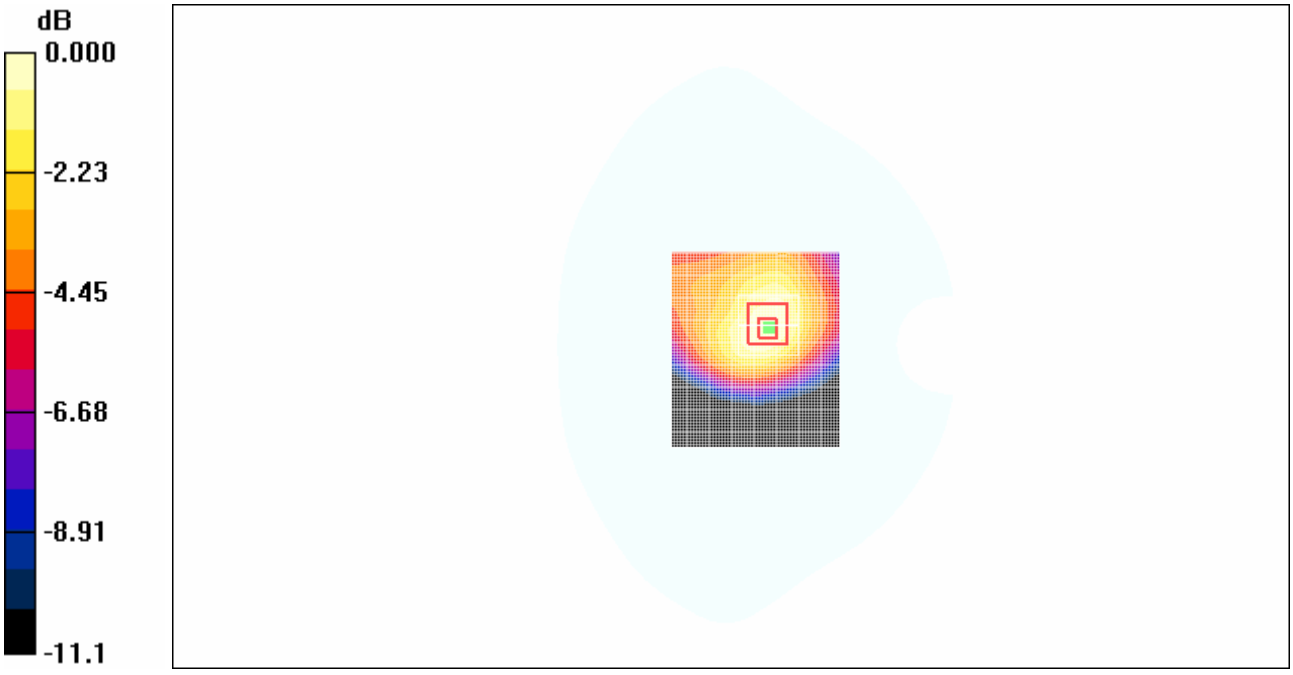
Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.5 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.096 mW/g

Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g

Fig.13 850MHz GPRS CH190 Test Position 3

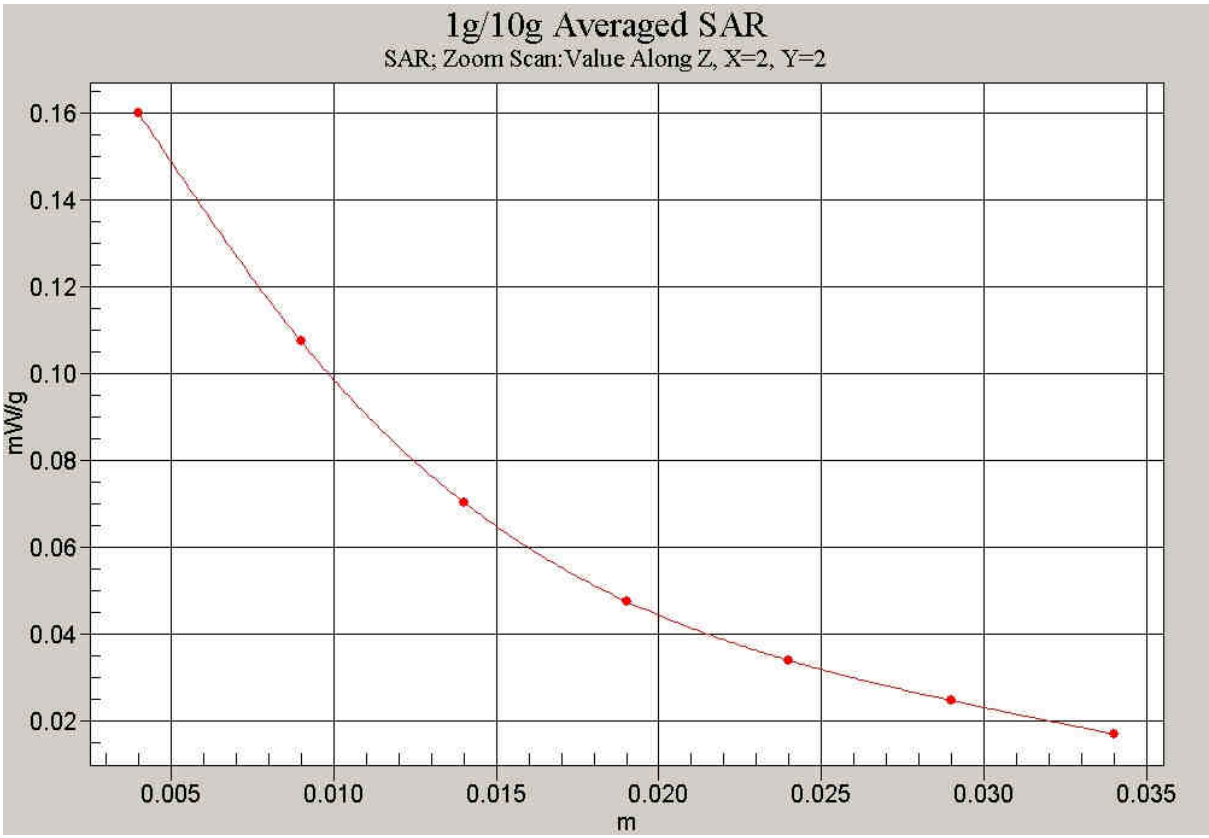


Fig.14 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 3)

850MHz GPRS Test Position 4 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.799 mW/g

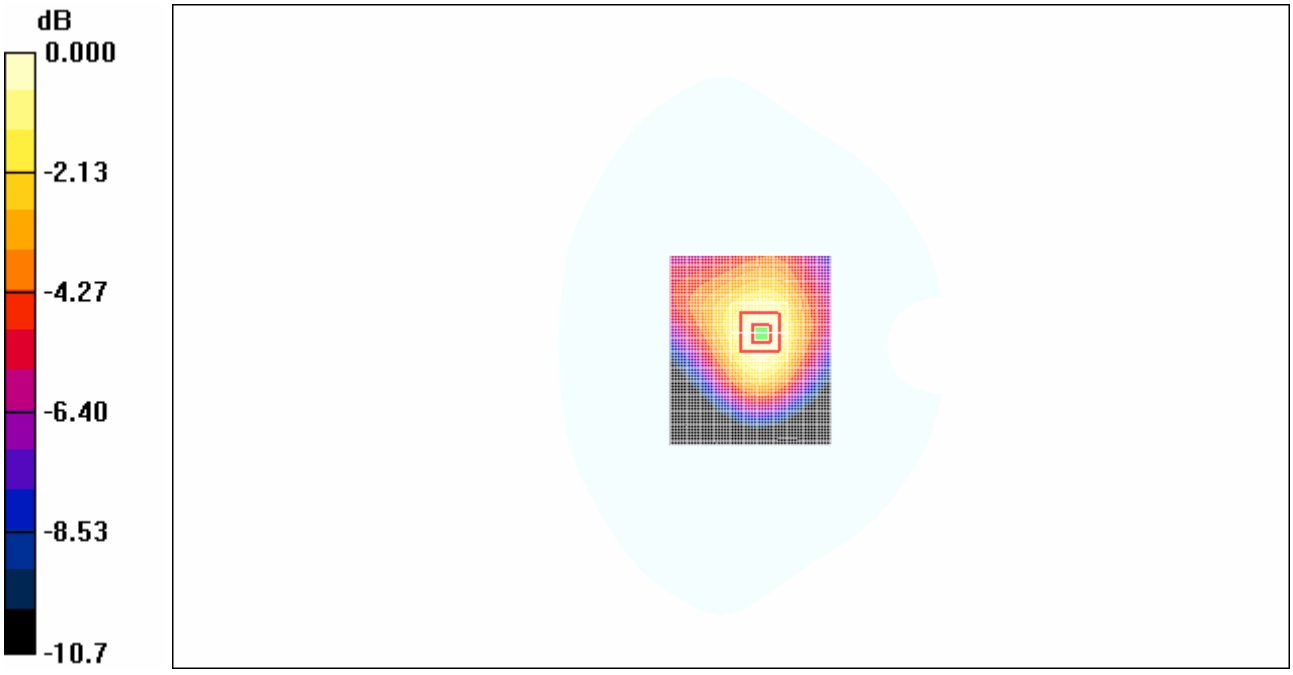
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.4 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.489 mW/g

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



0 dB = 0.796mW/g

Fig.15 850MHz GPRS CH190 Test Position 4

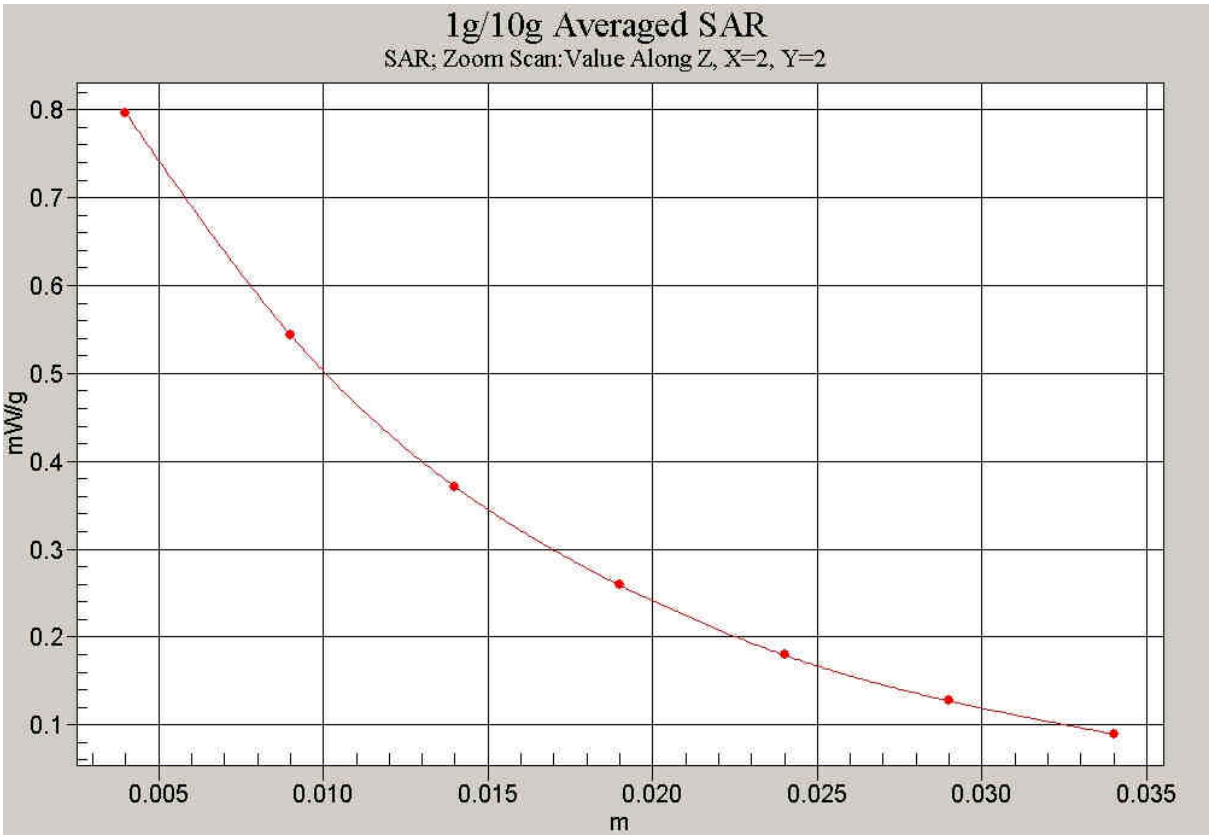


Fig.16 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 4)

850 GPRS Test Position 5 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.105 mW/g

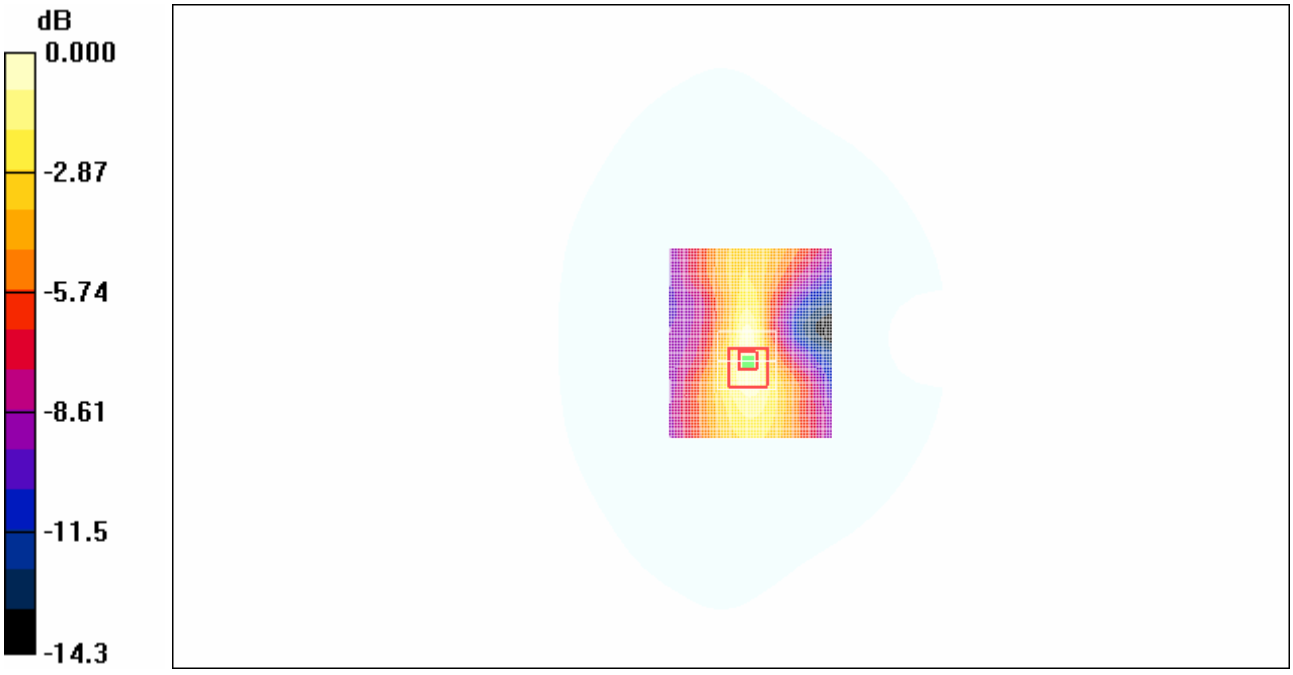
Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.69 V/m; Power Drift = 0.065 dB

Peak SAR (extrapolated) = 0.171 W/kg

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.053 mW/g

Maximum value of SAR (measured) = 0.102 mW/g



0 dB = 0.102mW/g

Fig.17 850MHz CH190 GPRS Test Position 5

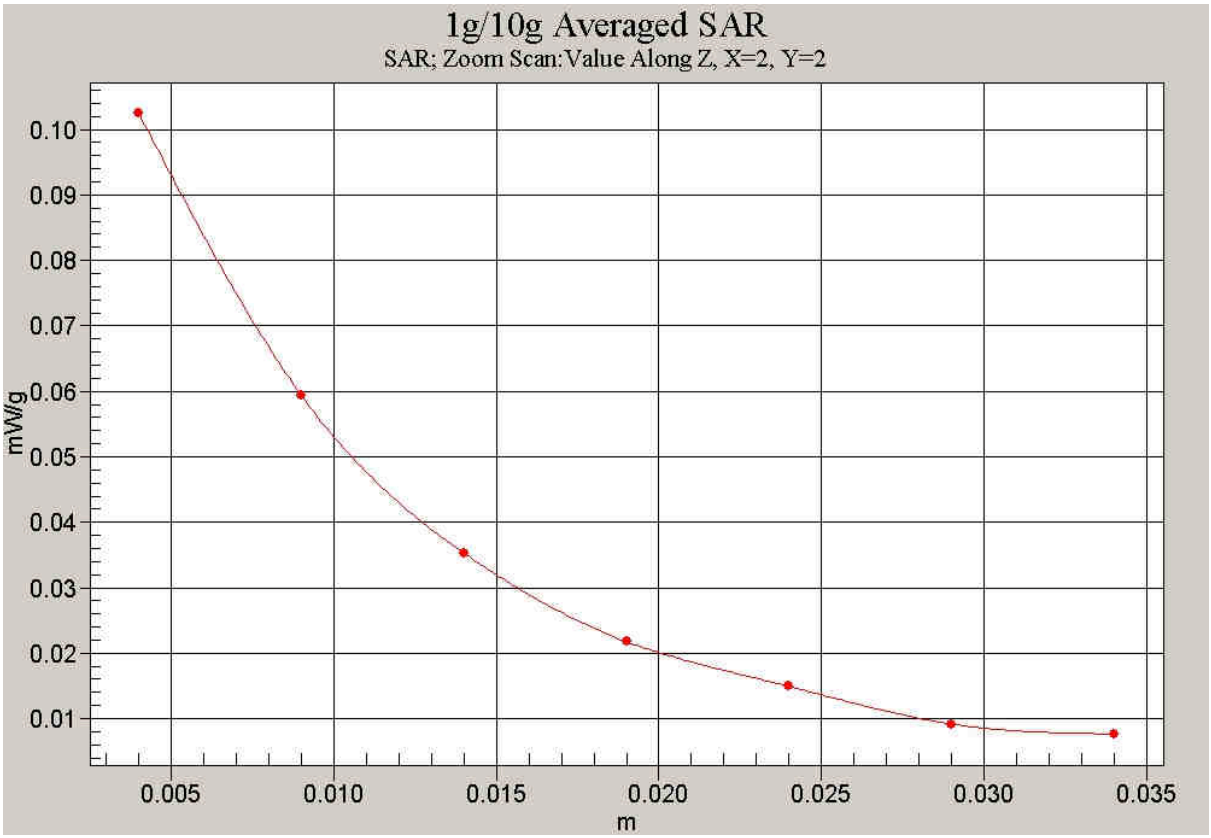


Fig.18 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 5)

850 GPRS Test Position 6 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 6/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

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

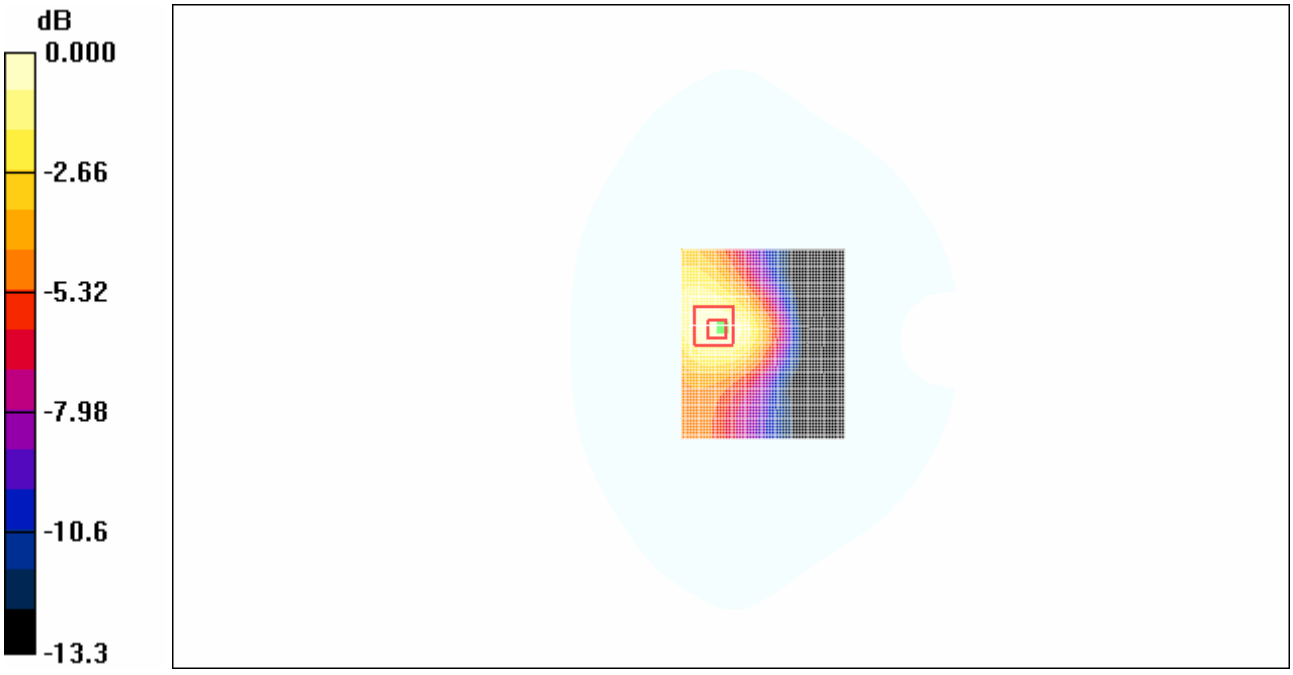
Test Position 6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 0.436 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.285 mW/g



0 dB = 0.285mW/g

Fig.19 850MHz GPRS CH190 Test Position 6

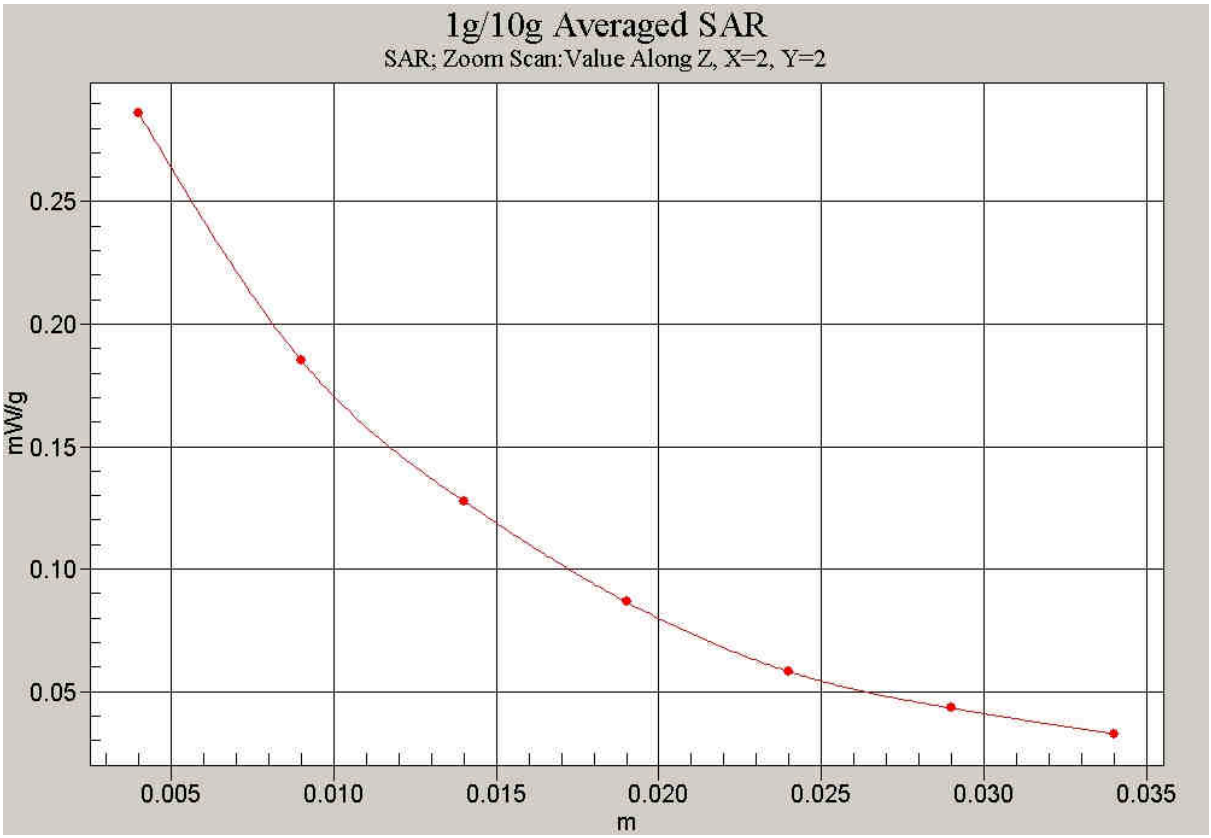


Fig.20 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 6)

850MHz GPRS Test Position 7 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 7/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.144 mW/g

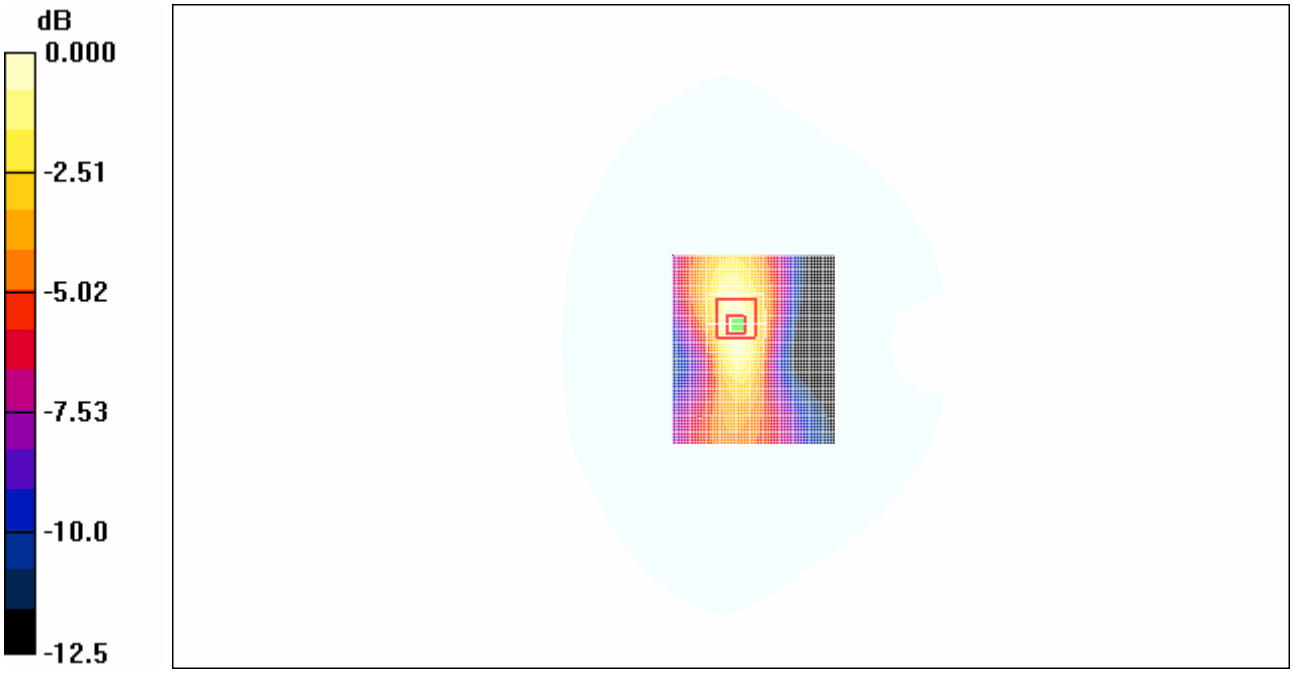
Test Position 7/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.88 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.081 mW/g

Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146mW/g

Fig.21 850MHz GPRS CH190 Test Position 7

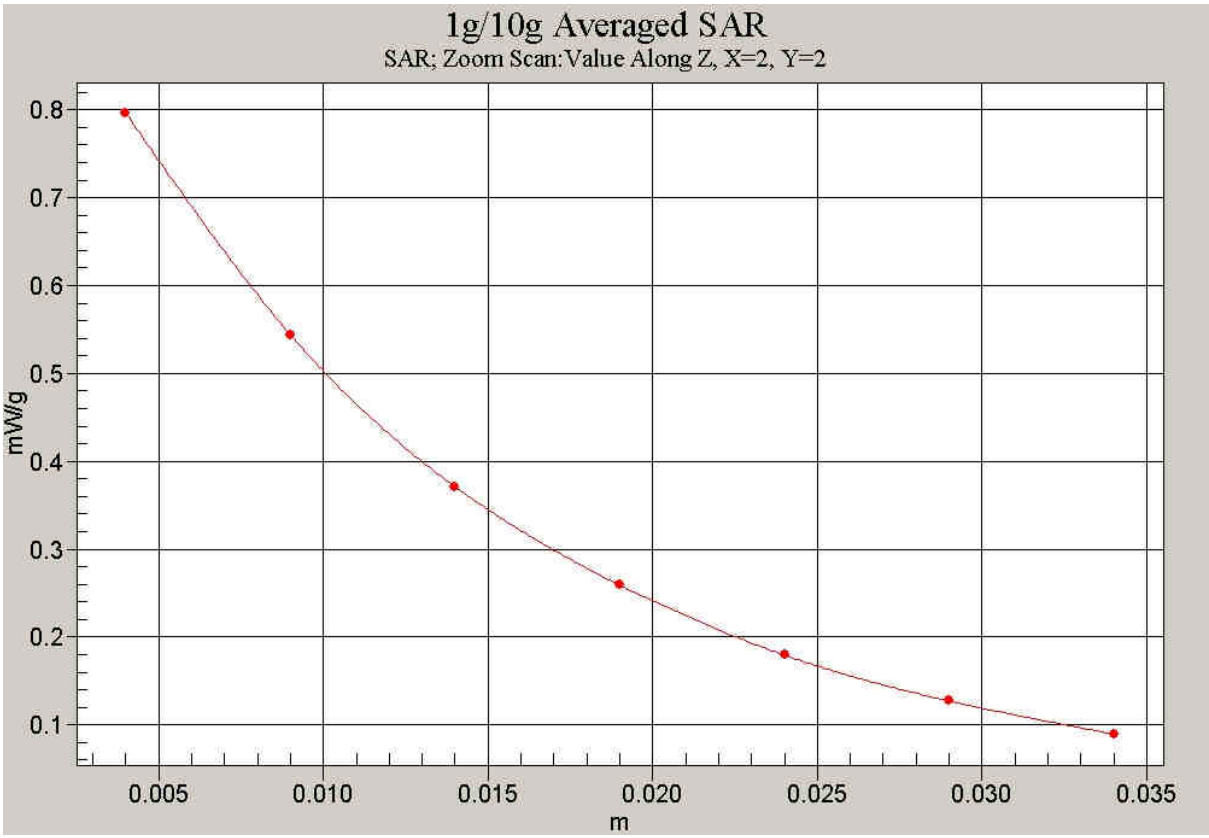


Fig.22 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 7)

850 GPRS Test Position 8 with DELL Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 8/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.254 mW/g

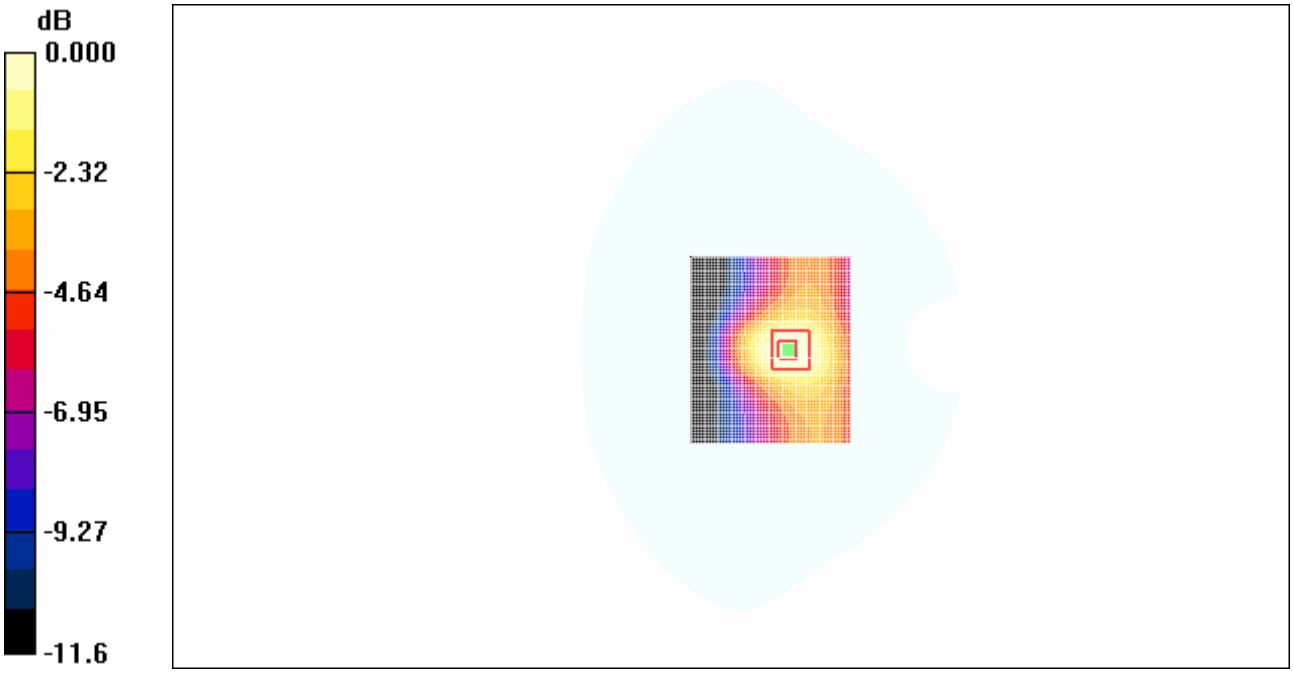
Test Position 8/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.376 W/kg

SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.150 mW/g

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



0 dB = 0.240mW/g

Fig.23 850MHz CH190 GPRS Test Position 8

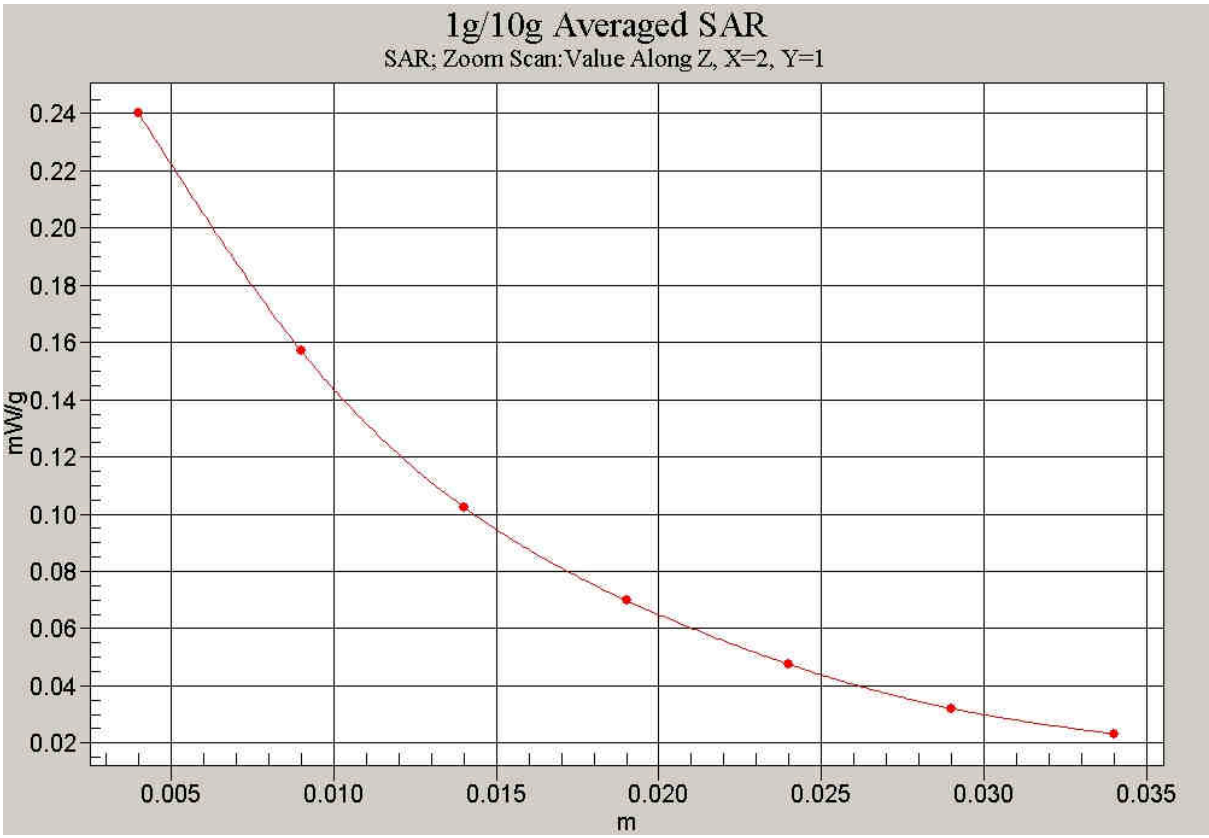


Fig.24 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 5)

850 GPRS Test Position 1 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

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

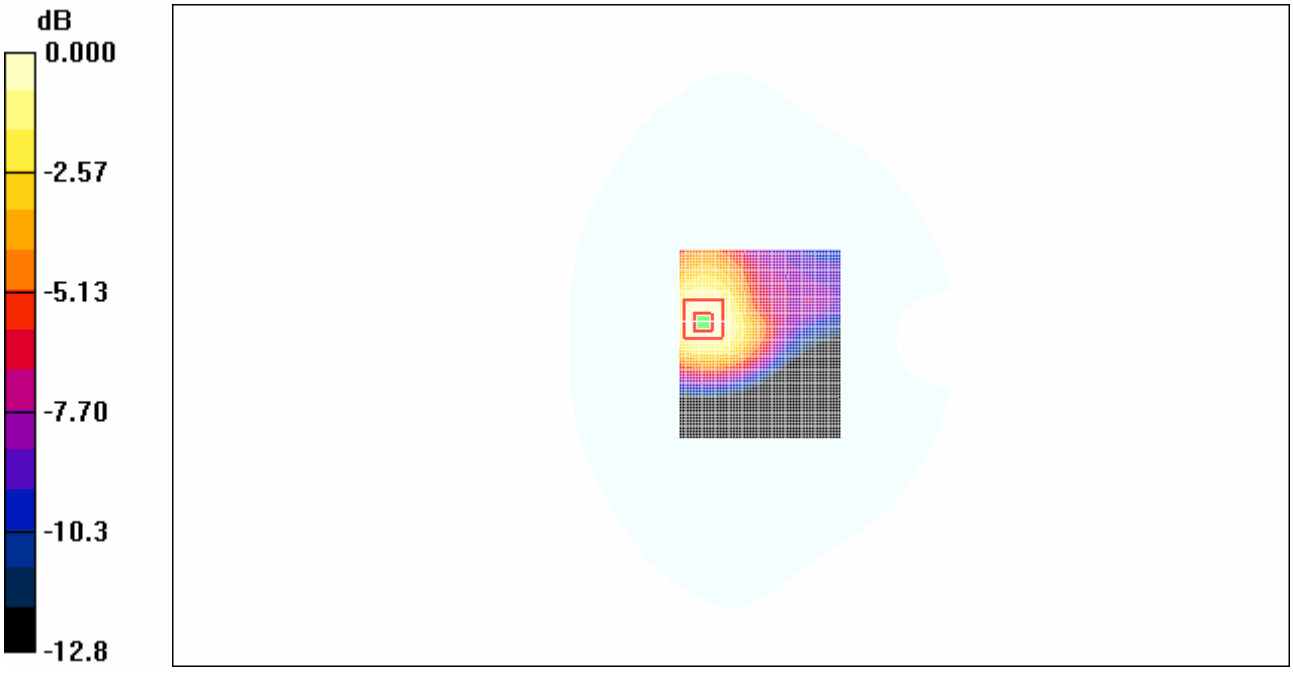
Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.63 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.226 W/kg

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g

Fig.25 850MHz GPRS CH190 Test Position 1

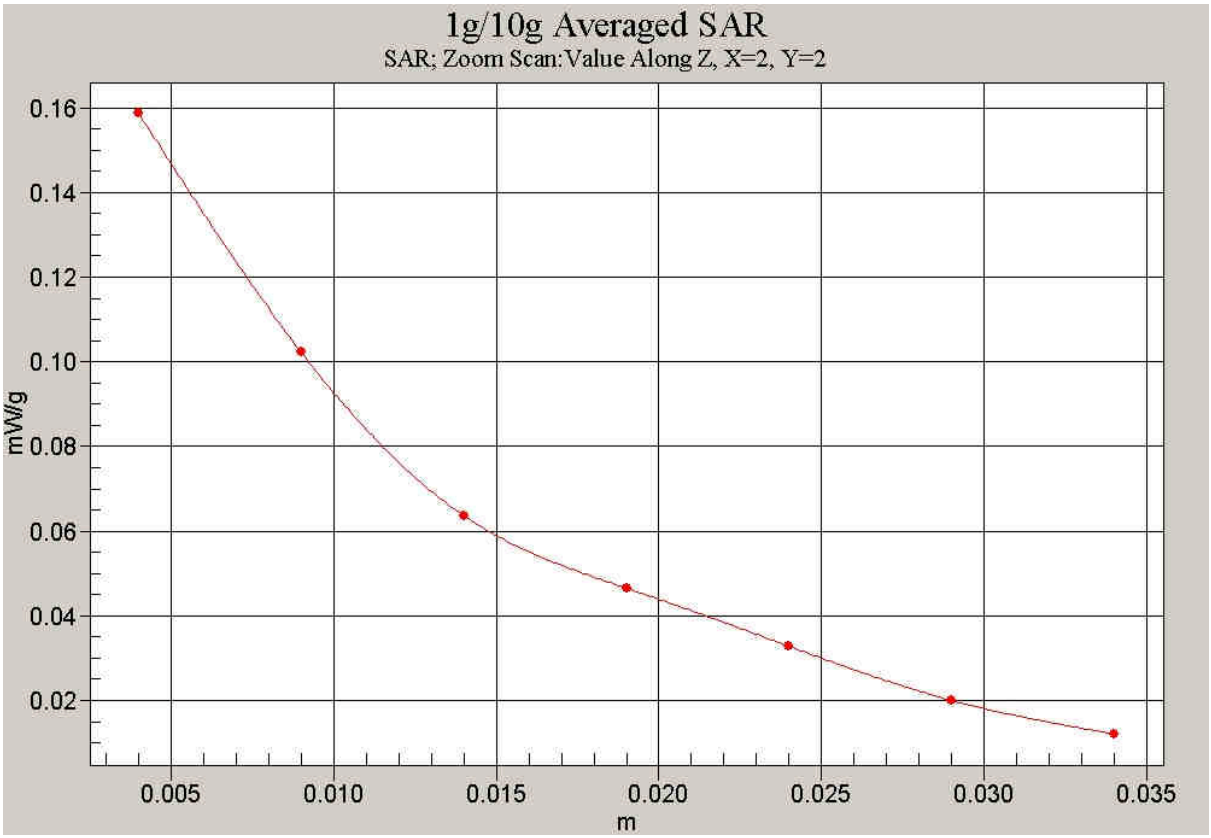


Fig.26 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 1)

850 GPRS Test Position 2 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.129 mW/g

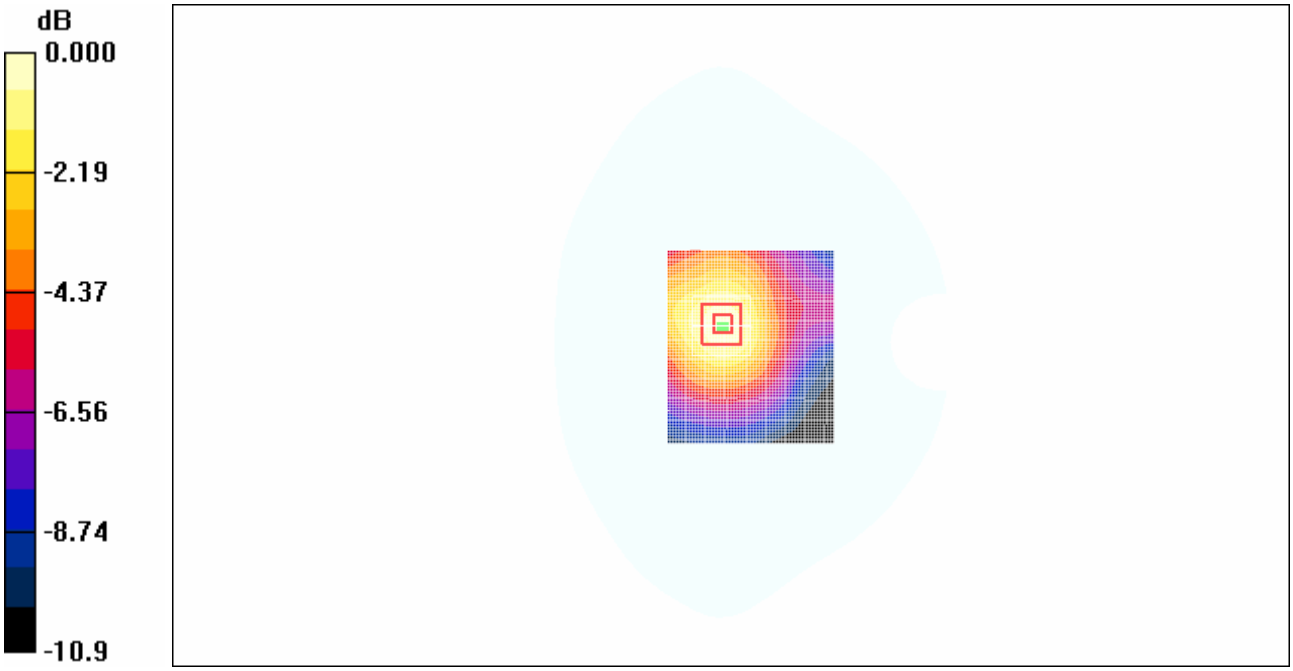
Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.53 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.081 mW/g

Maximum value of SAR (measured) = 0.130 mW/g



0 dB = 0.130mW/g

Fig.27 850MHz GPRS CH190 Test Position 2

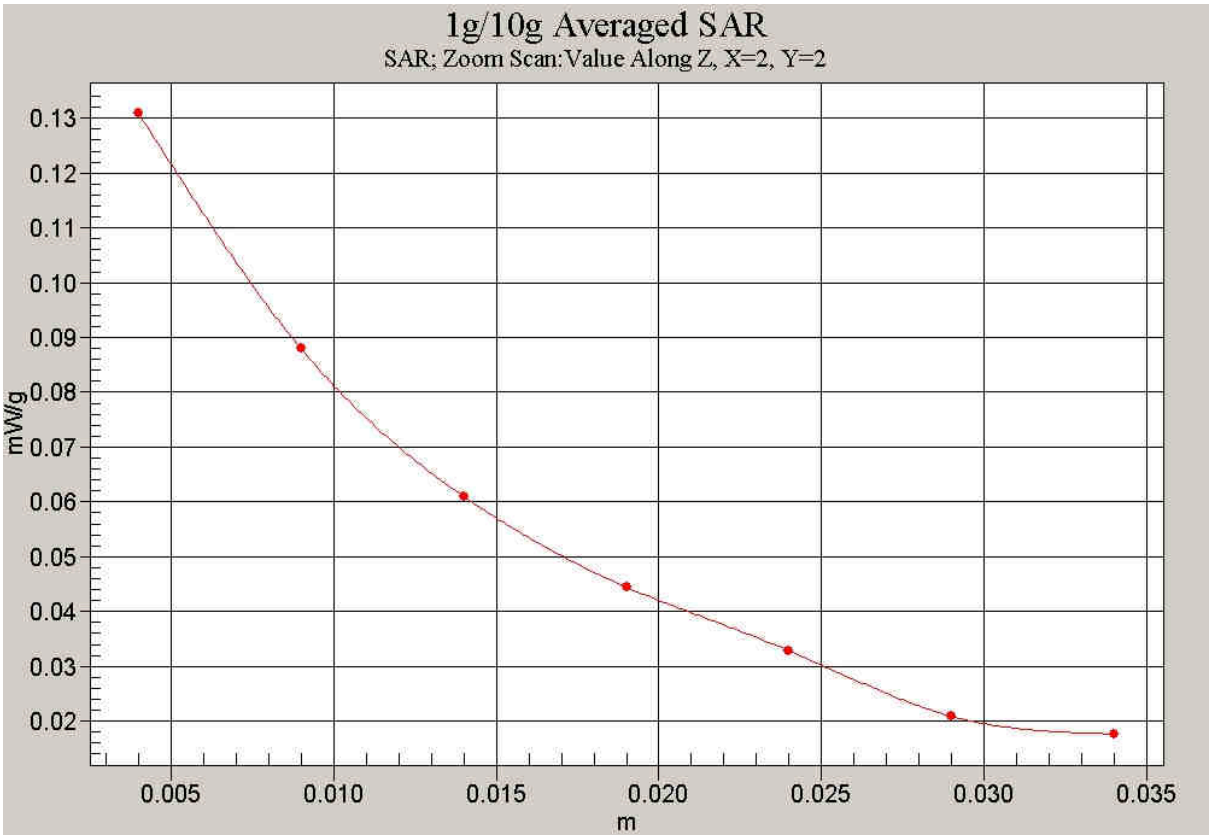


Fig.28 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 2)

850 GPRS Test Position 3 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.128 mW/g

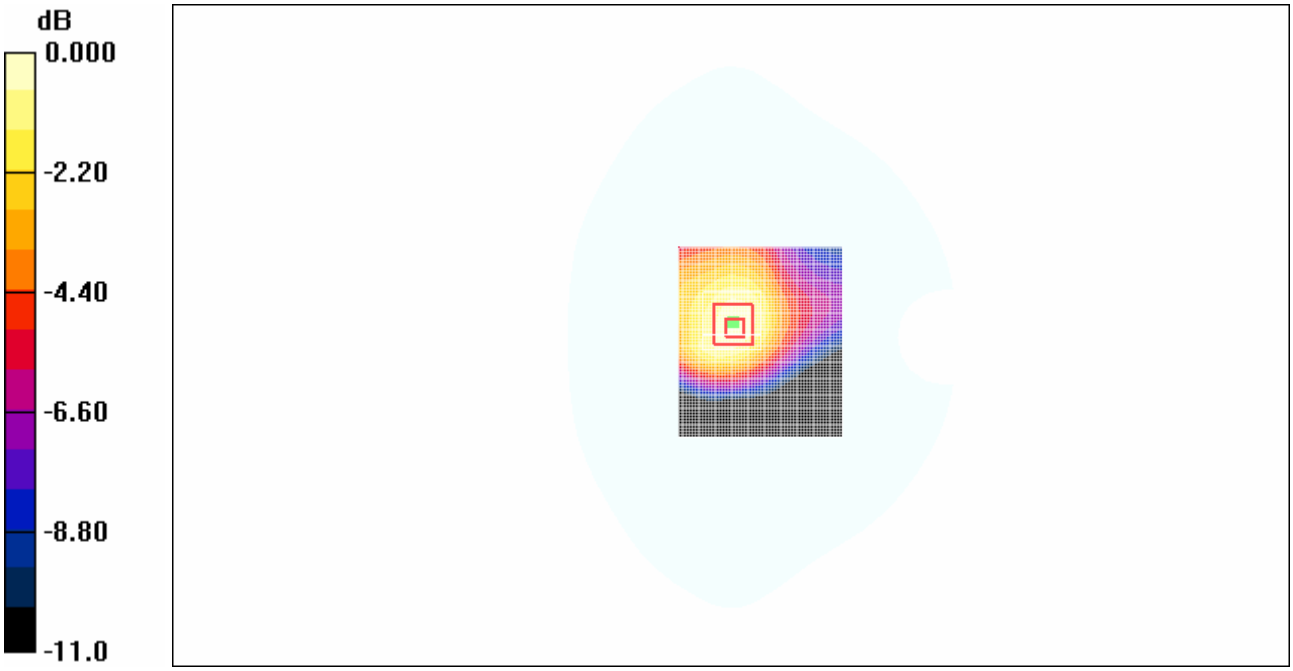
Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.38 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.077 mW/g

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



0 dB = 0.127mW/g

Fig.29 850MHz GPRS CH190 Test Position 3

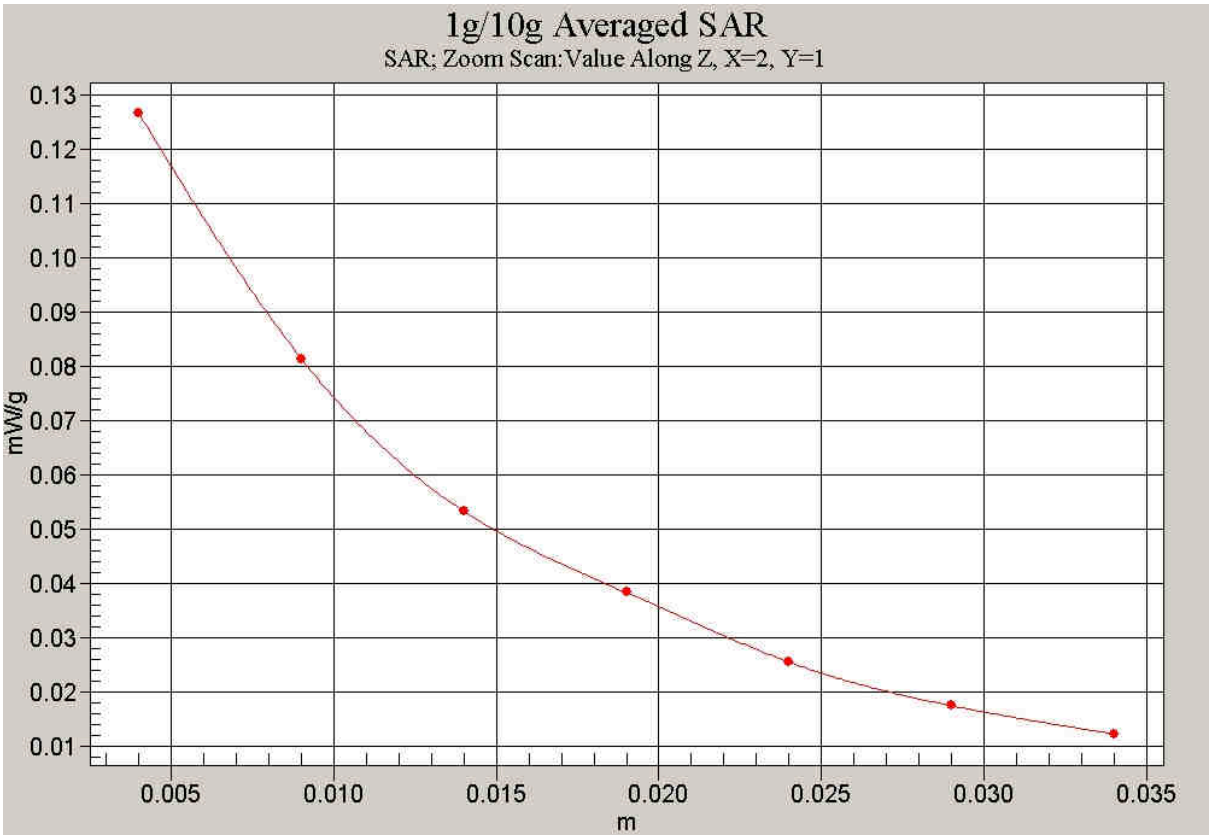


Fig.30 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 3)

850 GPRS Test Position 4 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.656 mW/g

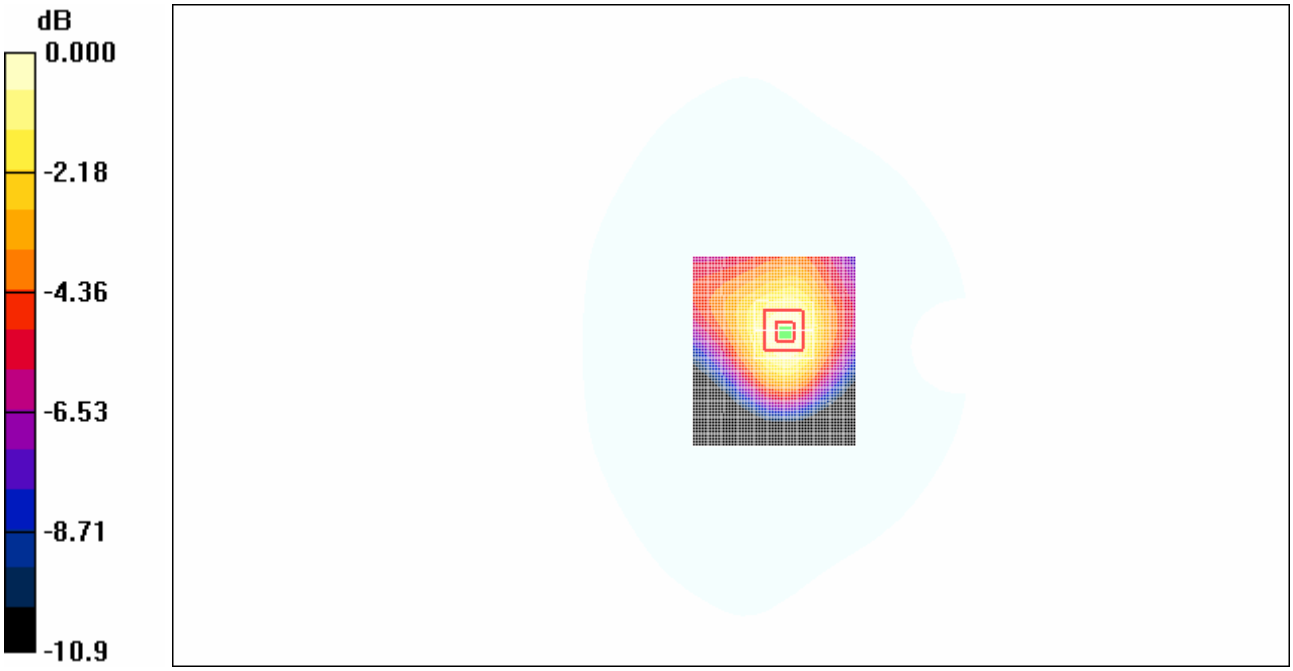
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.7 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.868 W/kg

SAR(1 g) = 0.605 mW/g; SAR(10 g) = 0.400 mW/g

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



0 dB = 0.651mW/g

Fig.31 850MHz GPRS CH190 Test Position 4

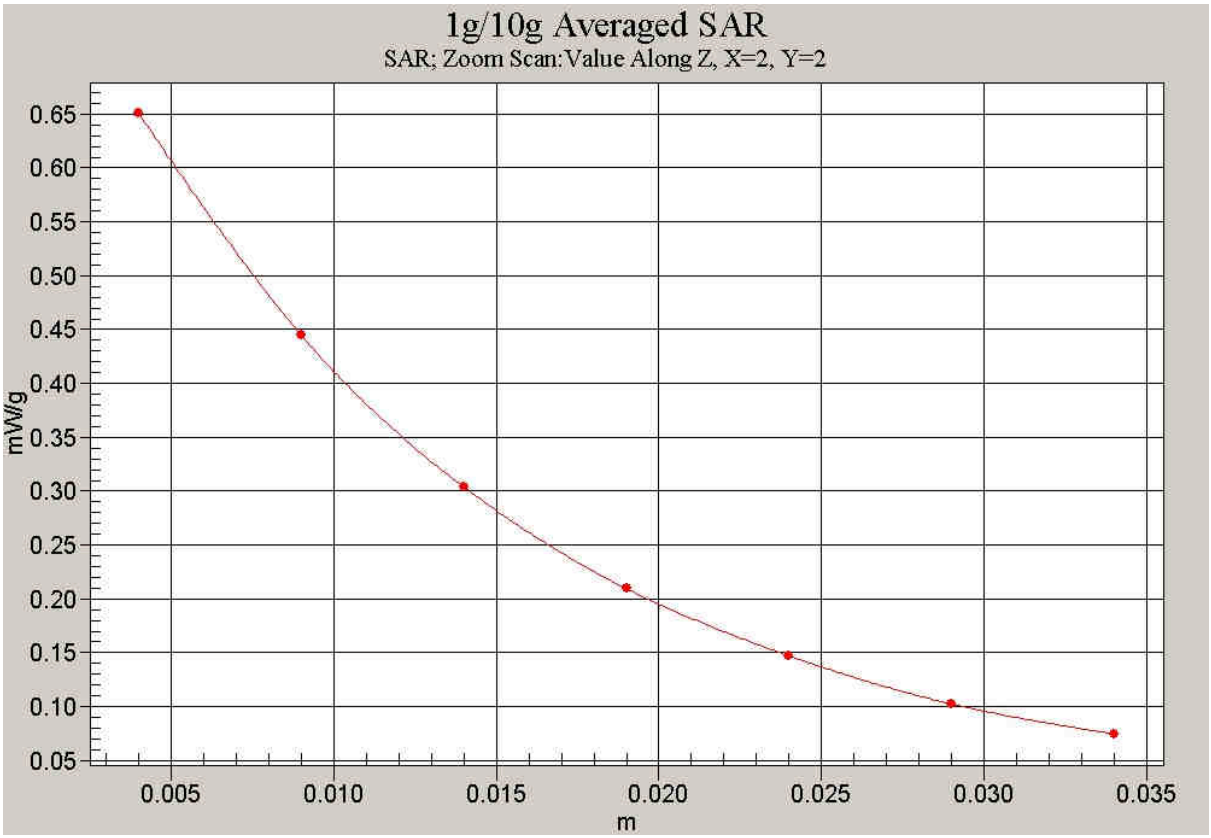


Fig.32 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 4)

850 GPRS Test Position 5 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.085 mW/g

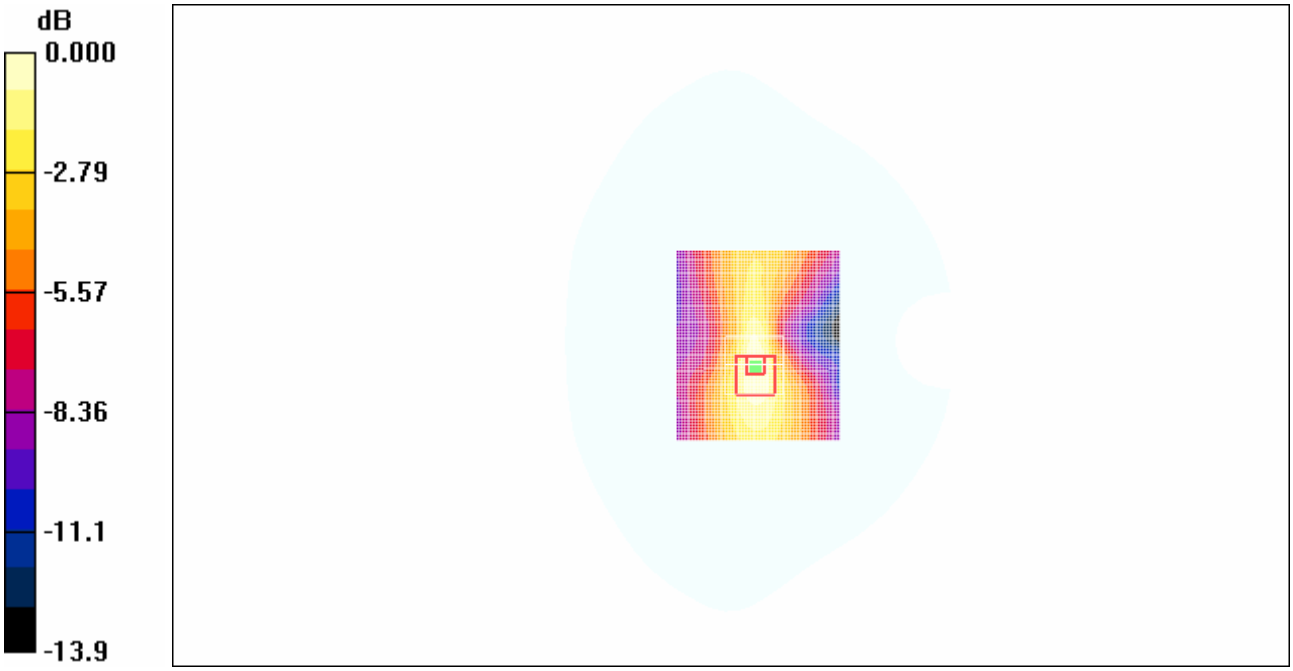
Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.47 V/m; Power Drift = 0.081 dB

Peak SAR (extrapolated) = 0.142 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.081 mW/g



0 dB = 0.081mW/g

Fig.33 850MHz CH190 GPRS Test Position 5

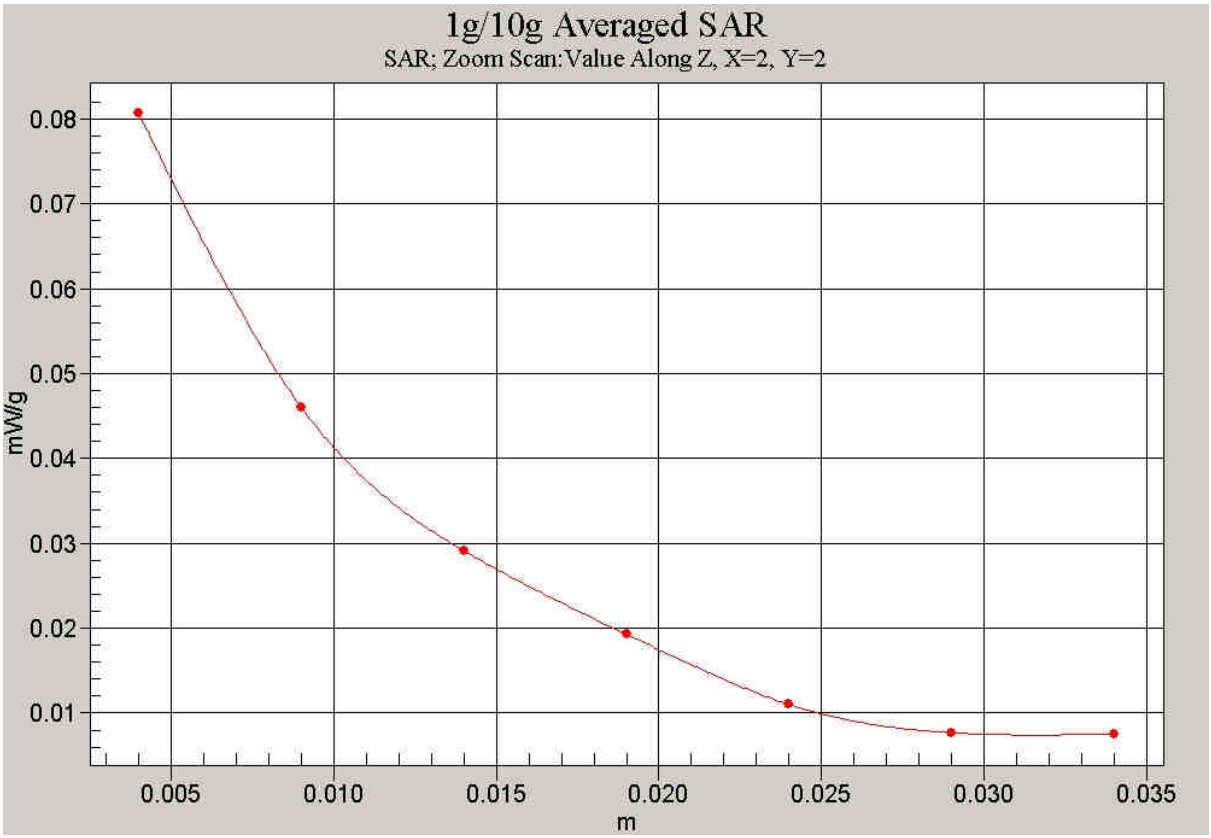


Fig.34 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 5)

850 GPRS Test Position 6 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 6/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.229 mW/g

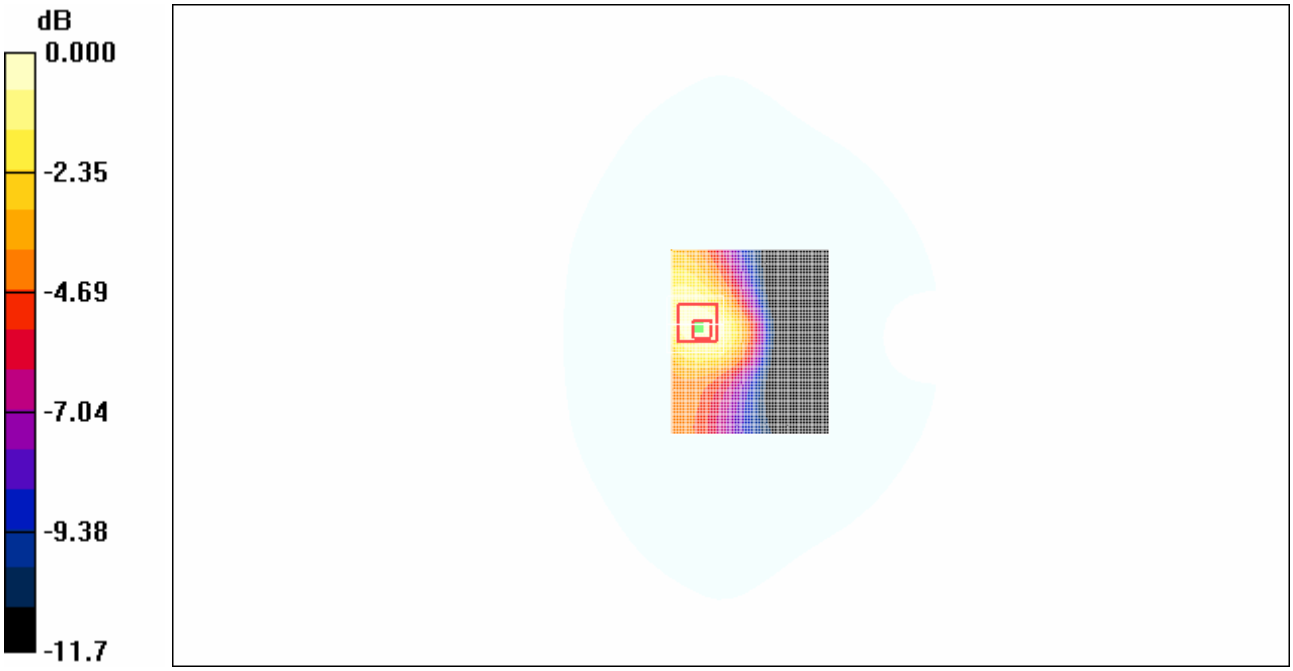
Test Position 6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.22 V/m; Power Drift = -0.112 dB

Peak SAR (extrapolated) = 0.339 W/kg

SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.225 mW/g



0 dB = 0.225mW/g

Fig.35 850MHz GPRS CH190 Test Position 6

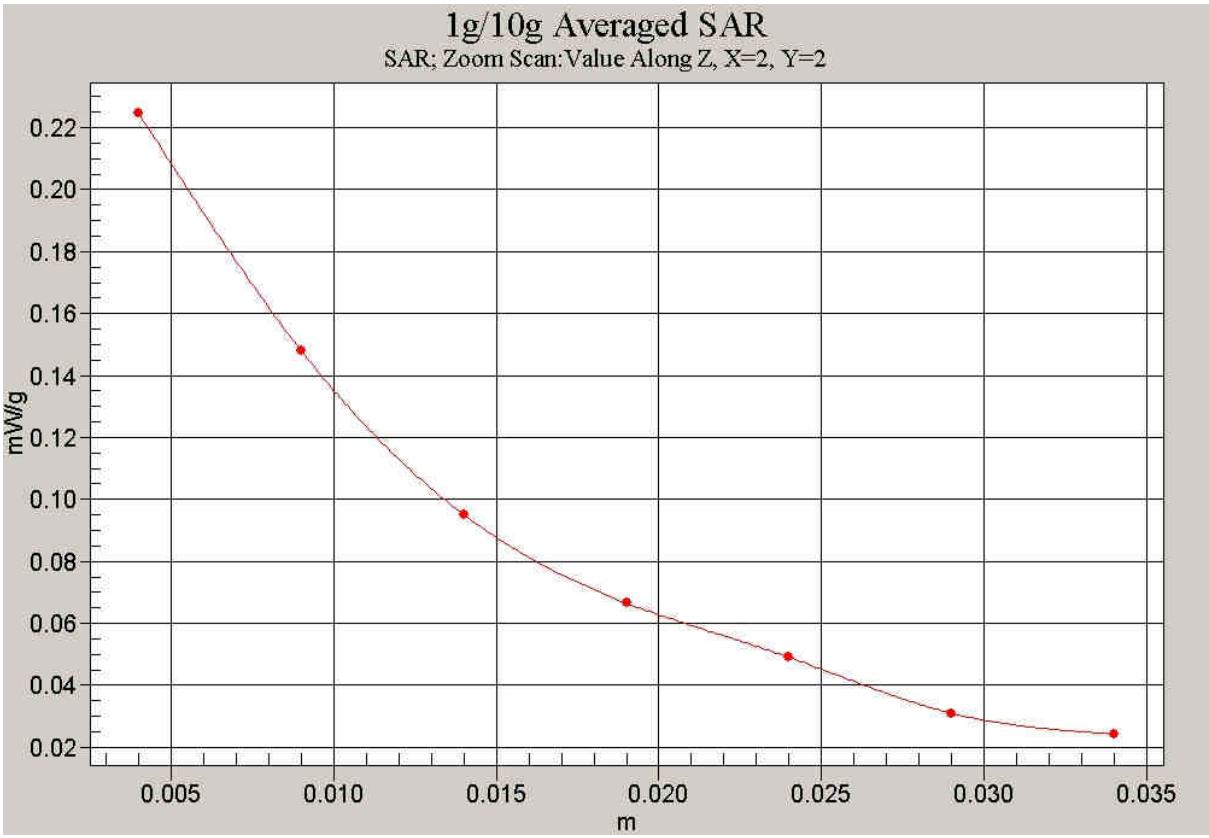


Fig.36 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 6)

850 GPRS Test Position 7 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 7/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.113 mW/g

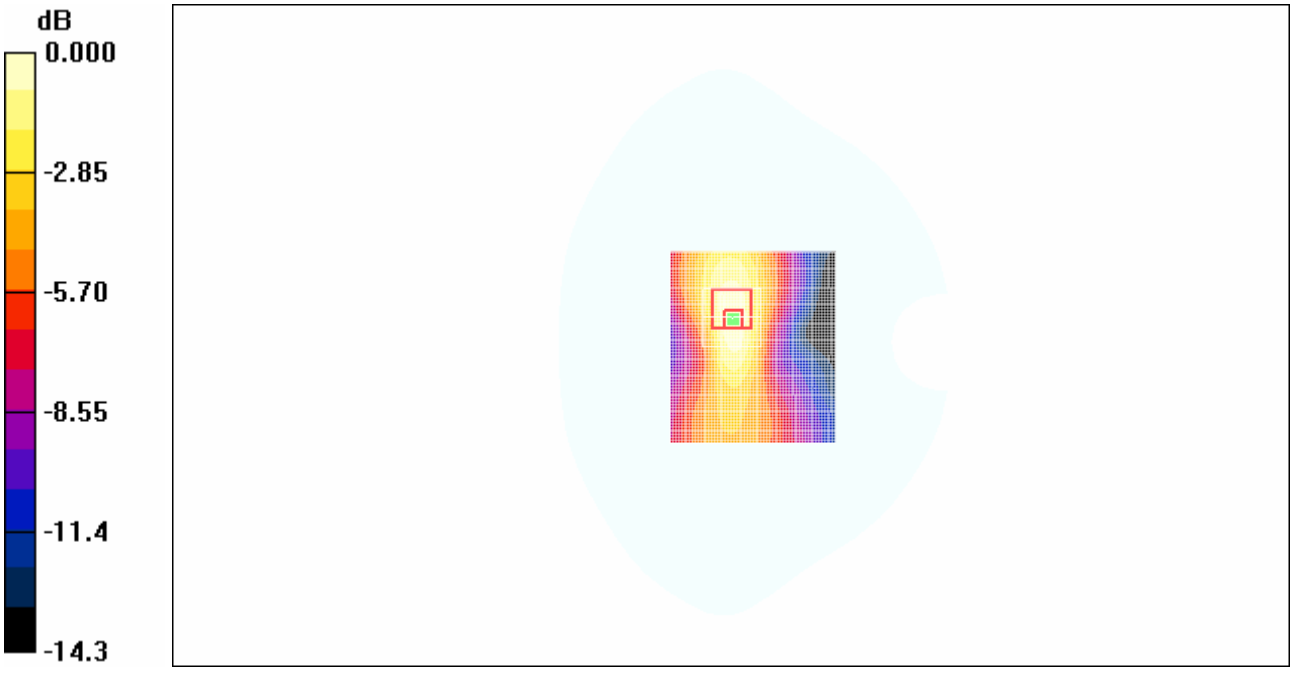
Test Position 7/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.19 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.174 W/kg

SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.064 mW/g

Maximum value of SAR (measured) = 0.116 mW/g



0 dB = 0.116mW/g

Fig.37 850MHz GPRS CH190 Test Position 7

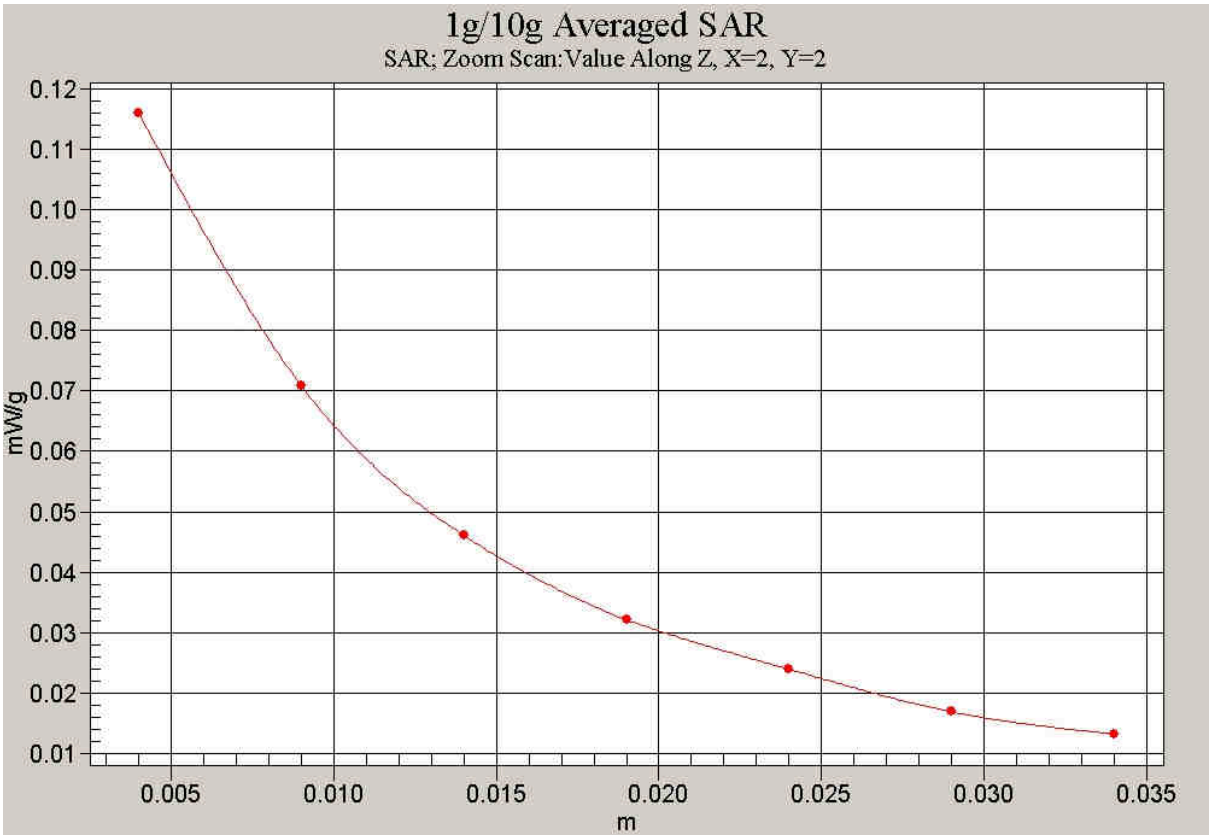


Fig.38 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 7)

850 GPRS Test Position 8 with DELL Laptop-antenna retracted

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 8/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.170 mW/g

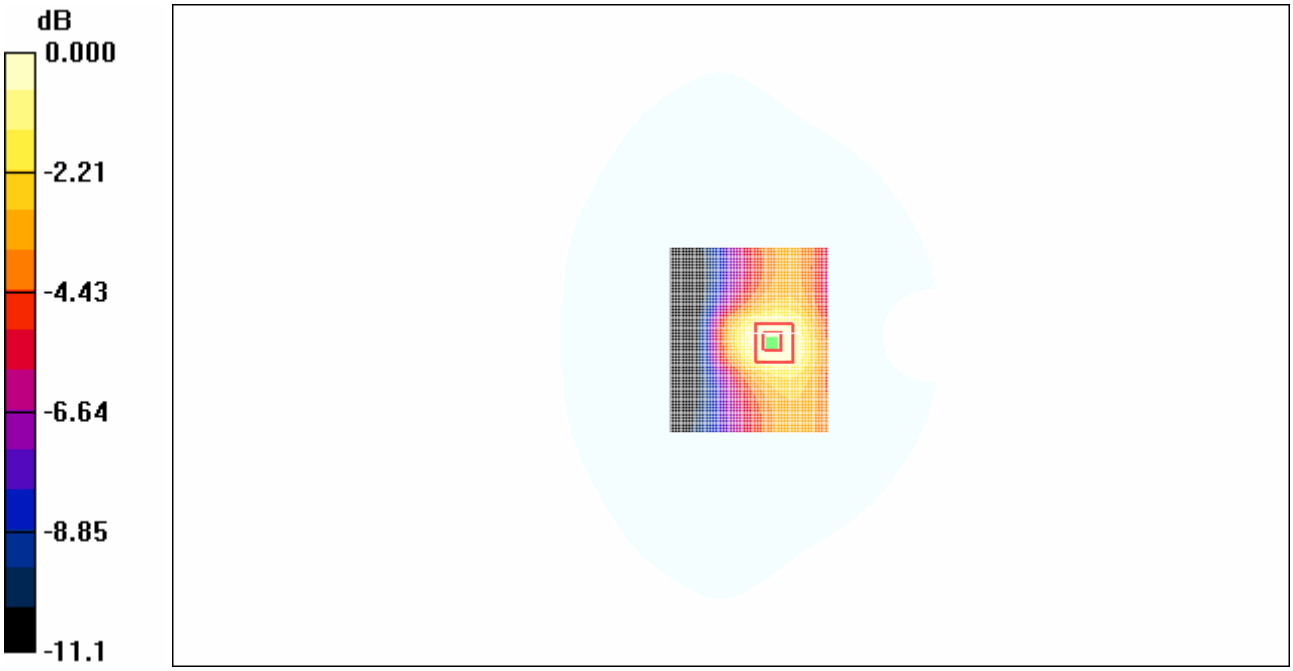
Test Position 8/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.251 W/kg

SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.102 mW/g

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



0 dB = 0.165mW/g

Fig.39 850MHz CH190 GPRS Test Position 8

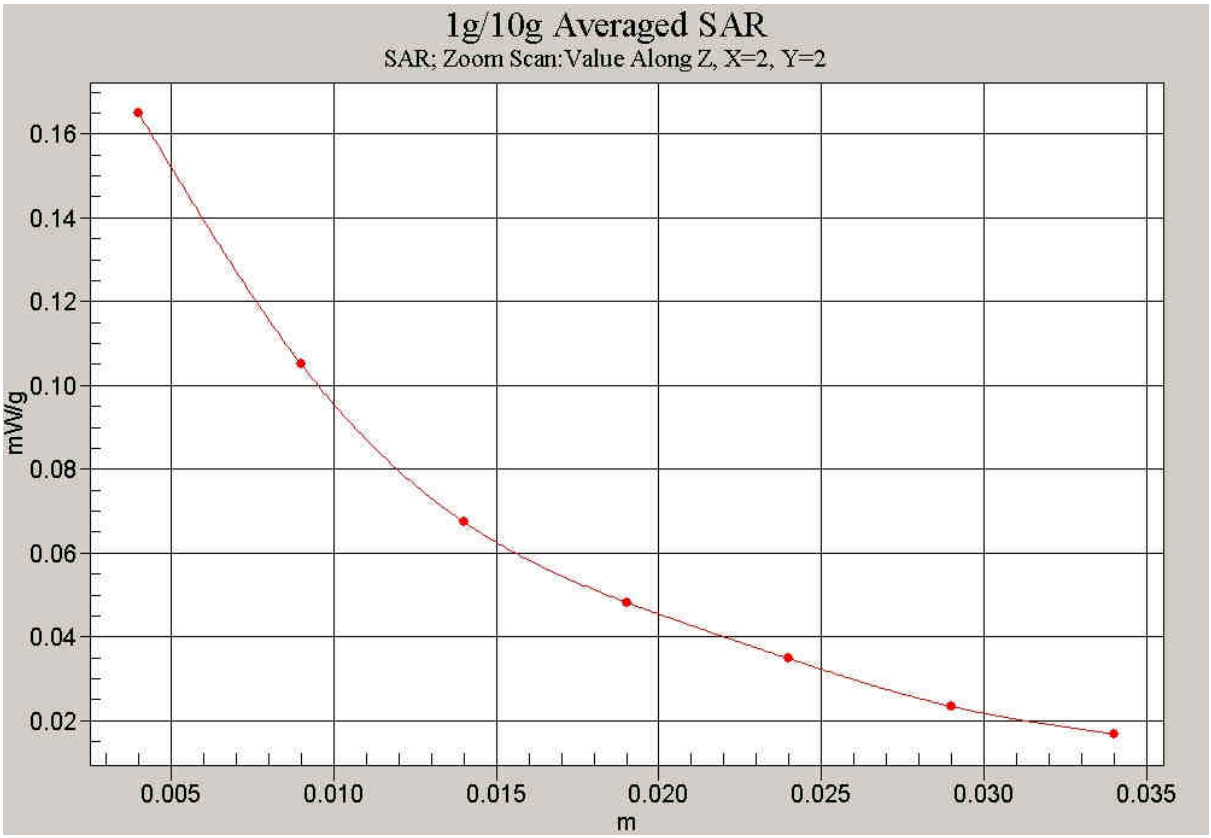


Fig.40 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 8)

850 GPRS Test Position 1 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.588 mW/g

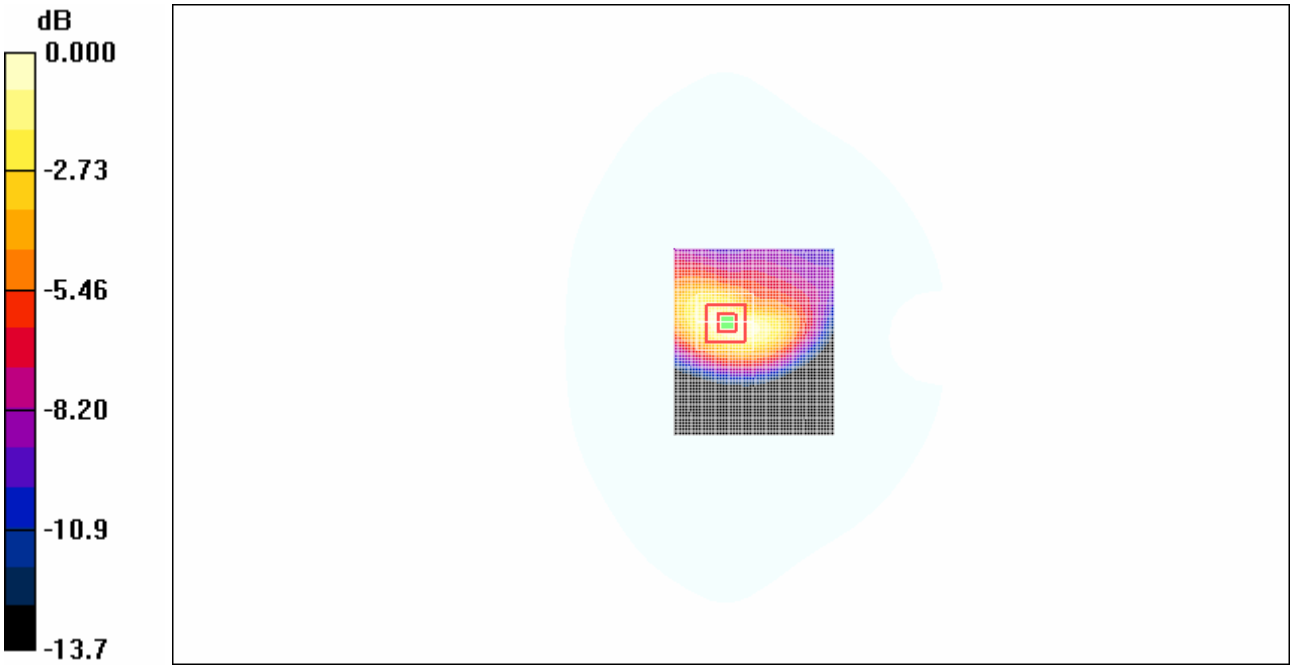
Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.5 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 0.938 W/kg

SAR(1 g) = 0.535 mW/g; SAR(10 g) = 0.306 mW/g

Maximum value of SAR (measured) = 0.594 mW/g



0 dB = 0.594mW/g

Fig.41 850MHz GPRS CH190 Test Position 1

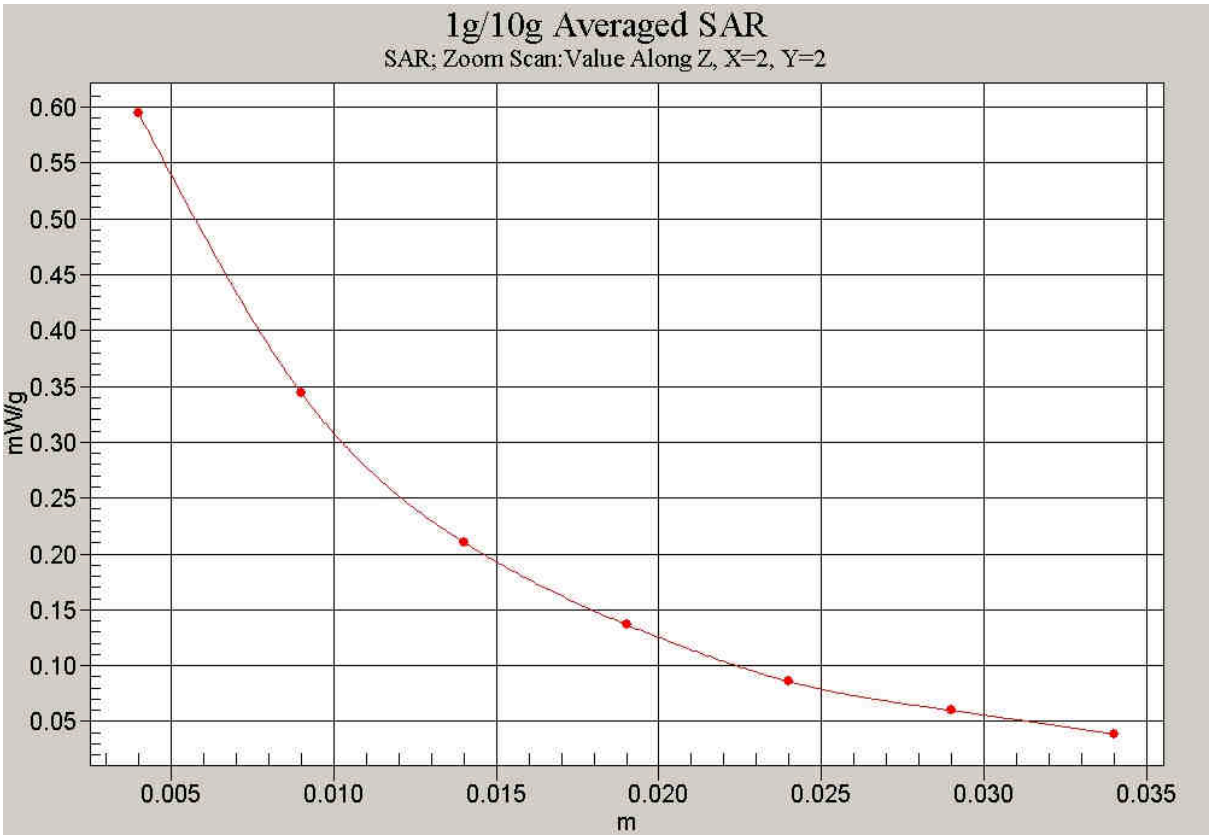


Fig.42 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 1)

850 GPRS Test Position 2 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.263 mW/g

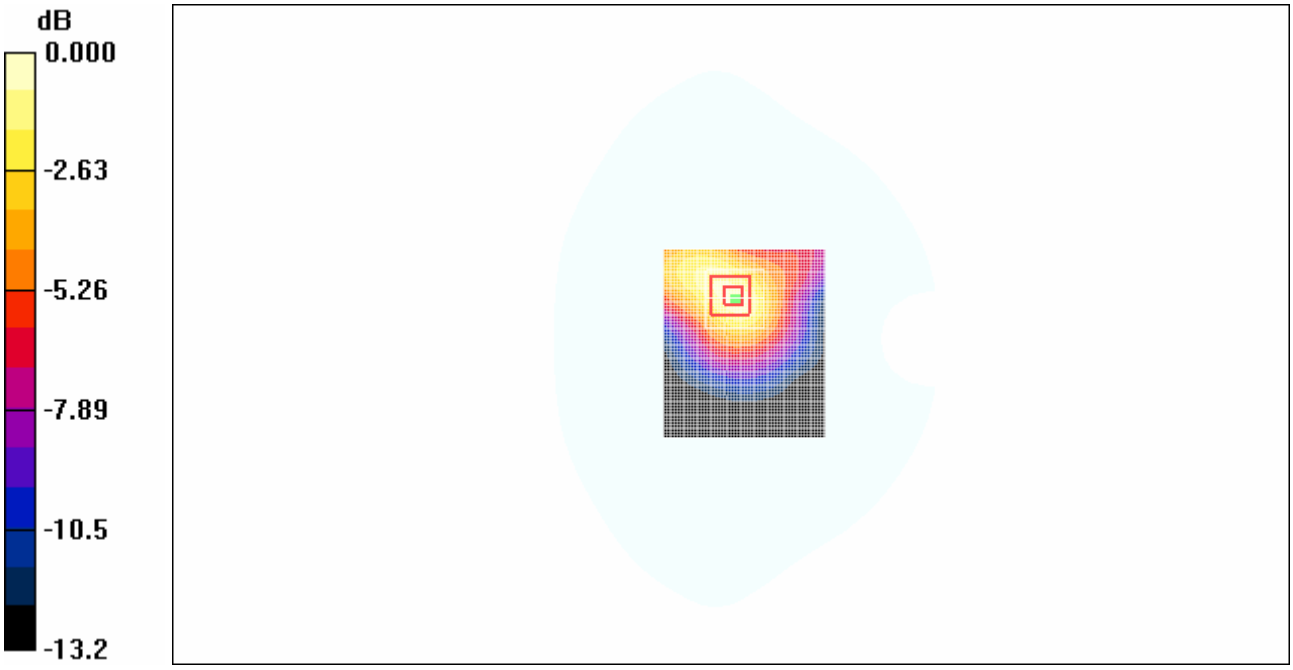
Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.3 V/m; Power Drift = 0.109 dB

Peak SAR (extrapolated) = 0.419 W/kg

SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.273 mW/g



0 dB = 0.273mW/g

Fig.43 850MHz GPRS CH190 Test Position 2

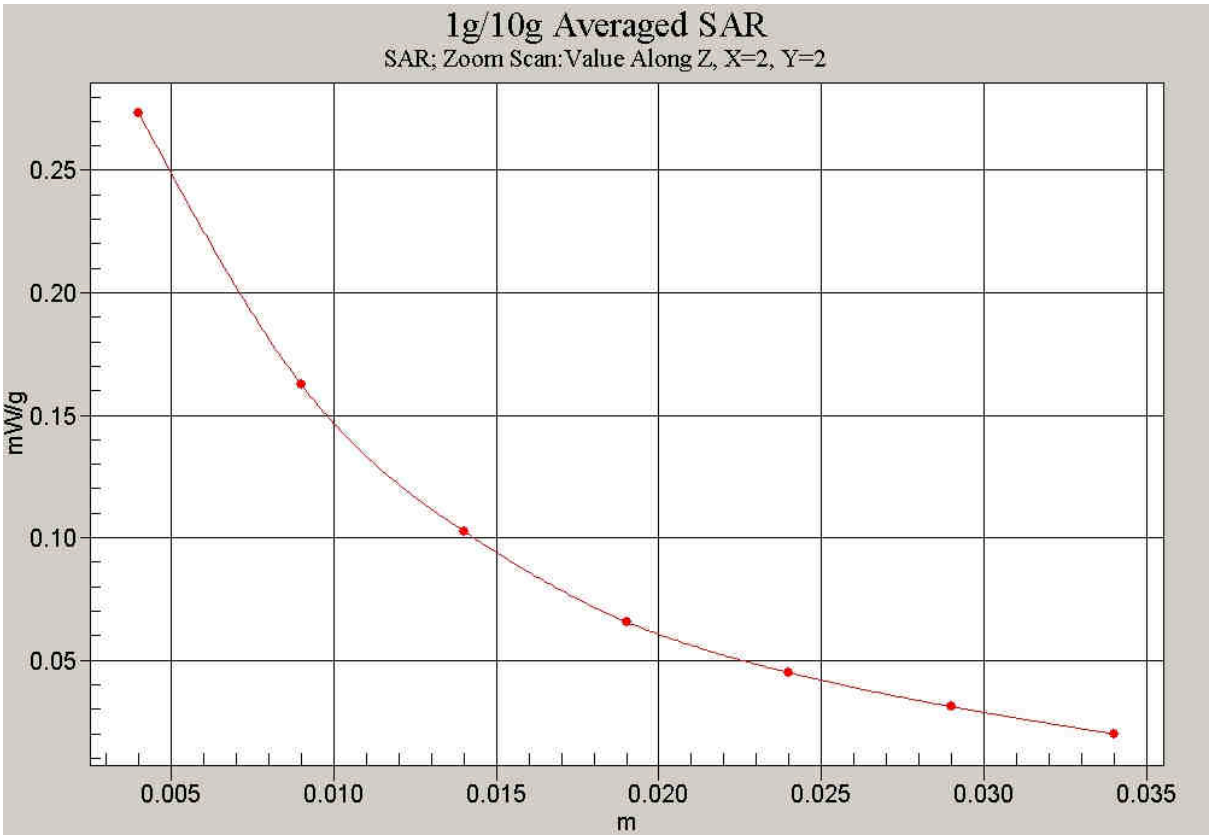


Fig.44 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 2)

850 GPRS Test Position 3 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.314 mW/g

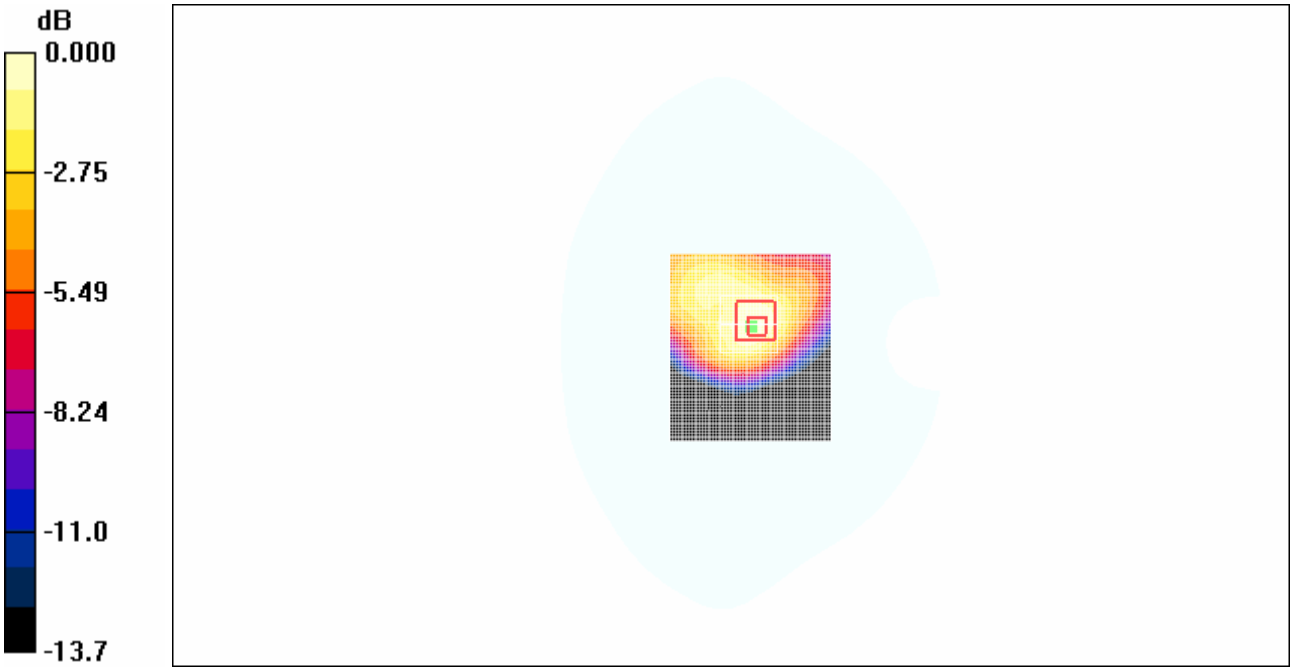
Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.2 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.489 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.287 mW/g



0 dB = 0.287mW/g

Fig.45 850MHz GPRS CH190 Test Position 3

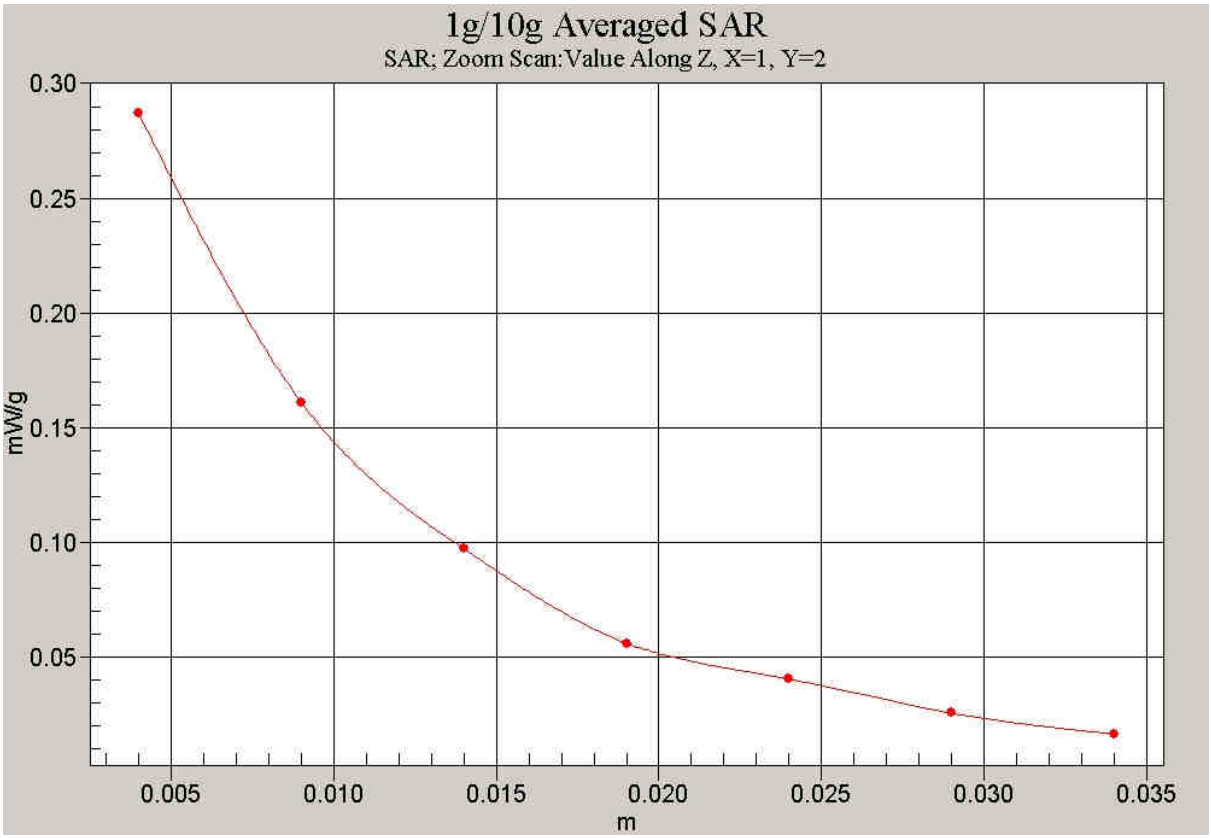


Fig.46 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 3)

850 GPRS Test Position 4 High with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 848.8 MHz; σ = 1.02 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4 High/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.28 mW/g

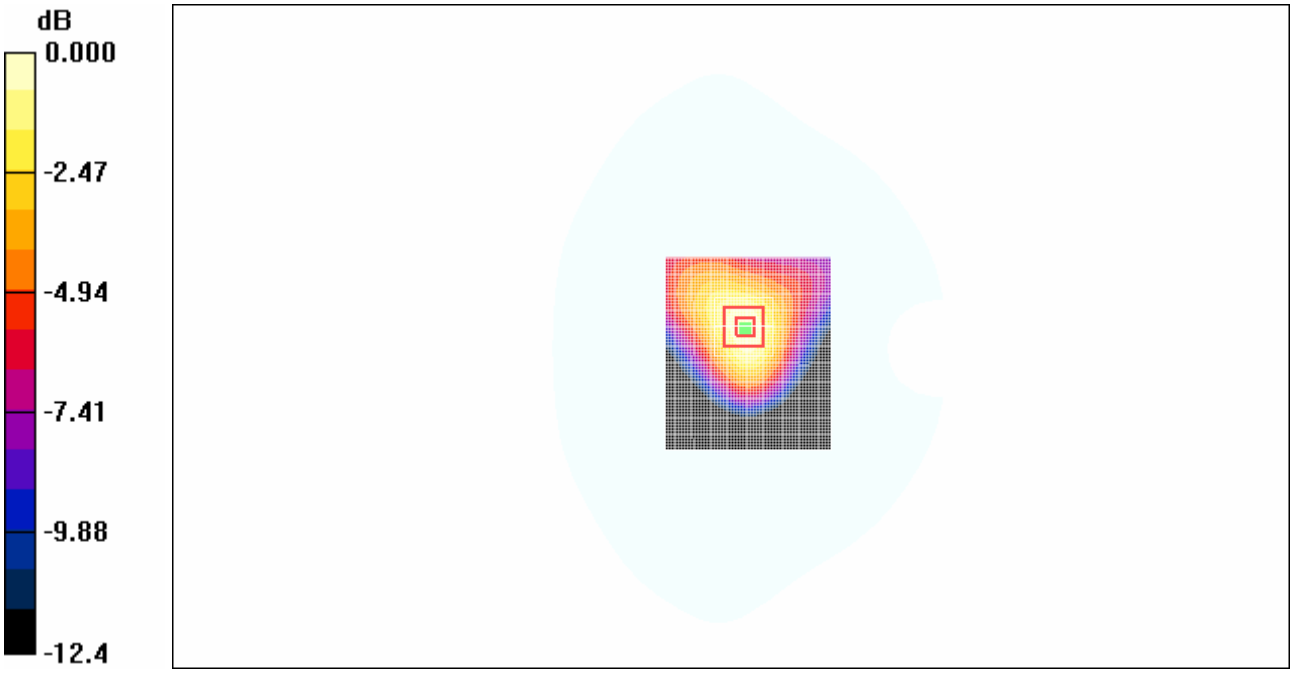
Test Position 4 High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.3 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.710 mW/g

Maximum value of SAR (measured) = 1.26 mW/g



0 dB = 1.26mW/g

Fig.47 850MHz GPRS CH251Test Position 4

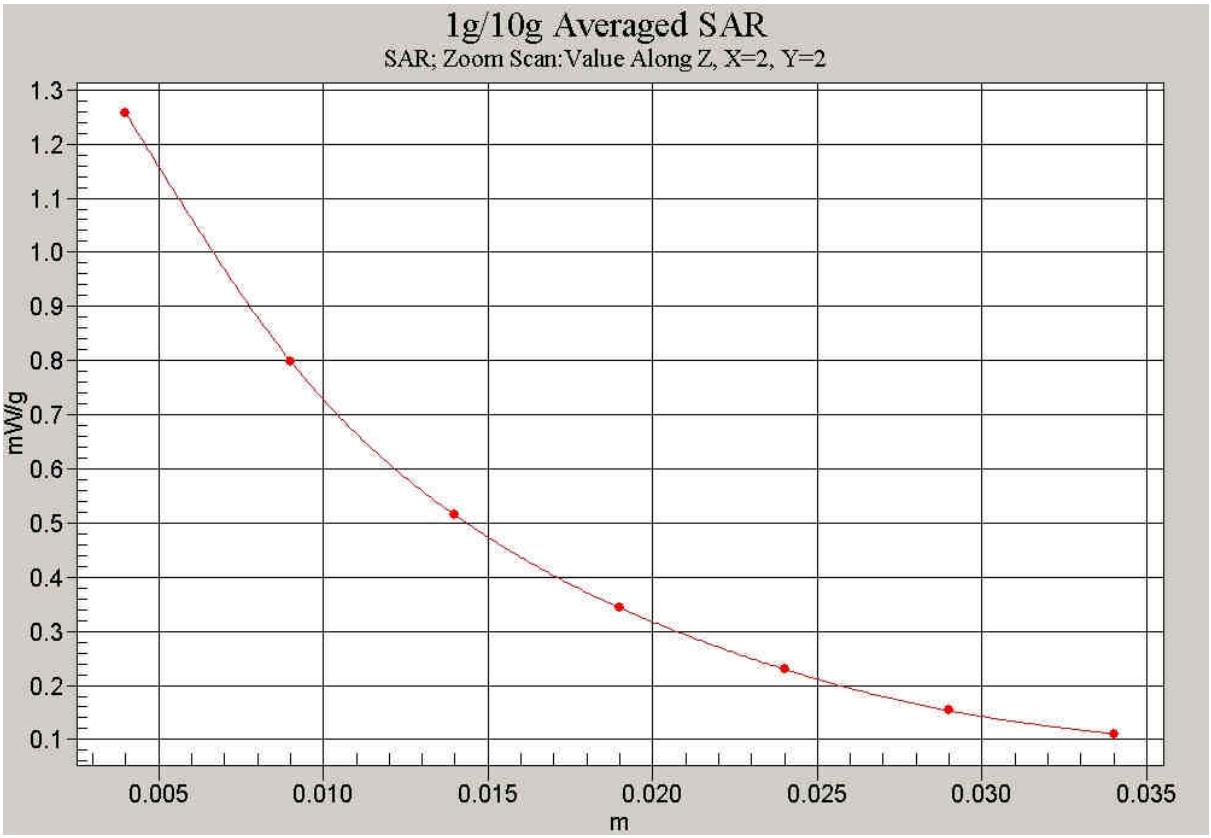


Fig.48 Z-Scan at power reference point (850 MHz GPRS CH251 Test Position 4)

850 GPRS Test Position 4 Middle with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

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

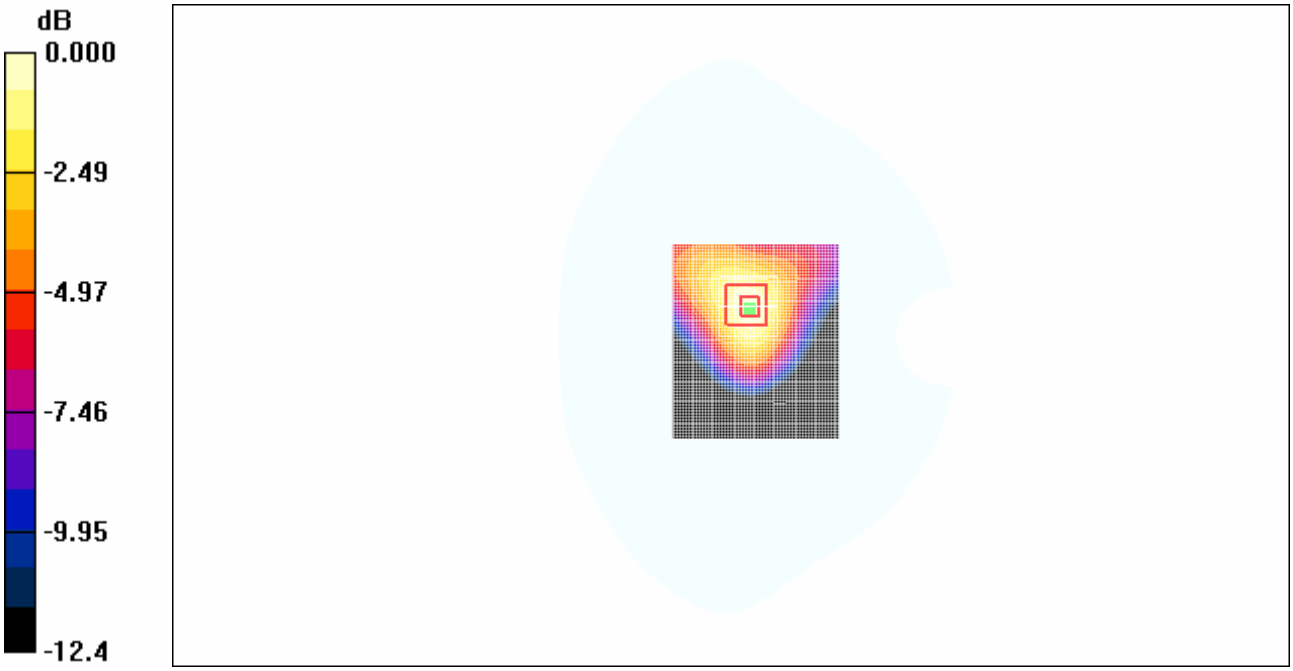
Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.7 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.683 mW/g

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



0 dB = 1.22mW/g

Fig.49 850MHz CH190 GPRS Test Position 4

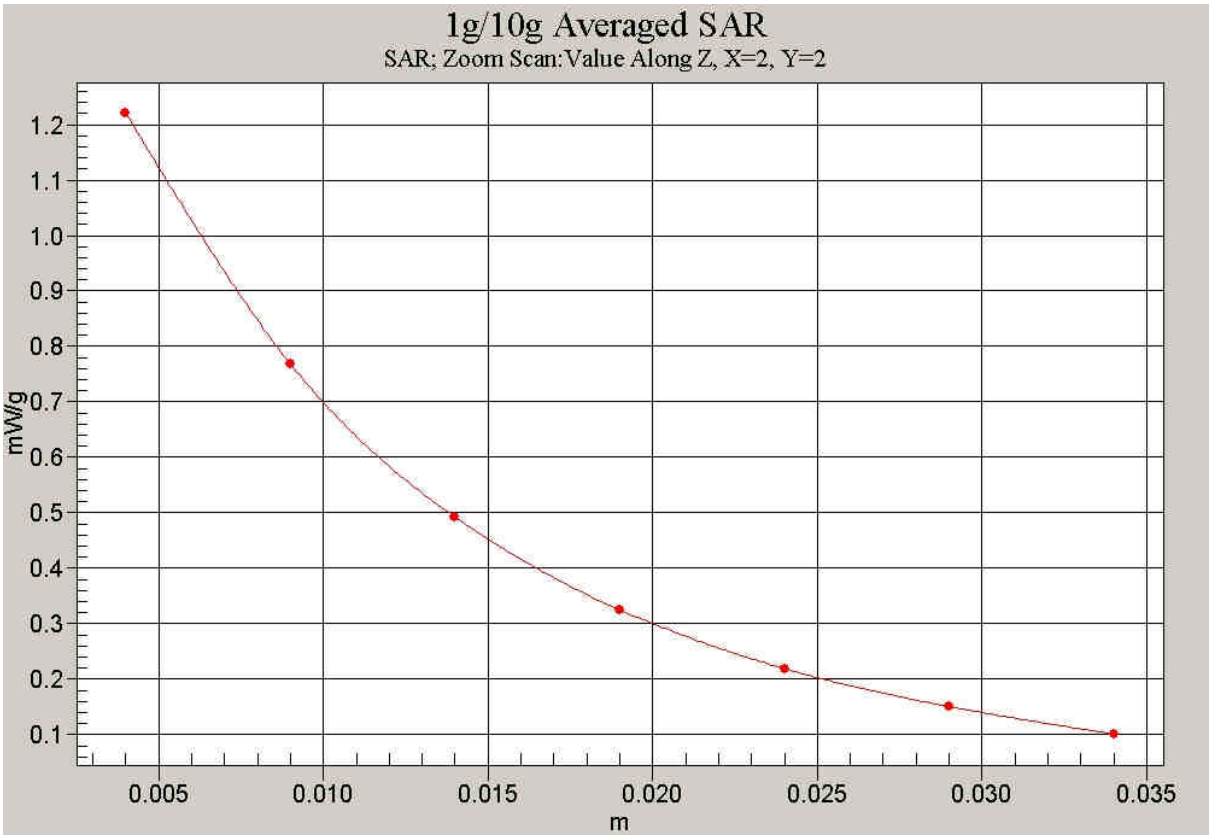


Fig.50 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 4)

850 GPRS Test Position 4 Low with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used: f = 825 MHz; σ = 1 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4 Low/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.20 mW/g

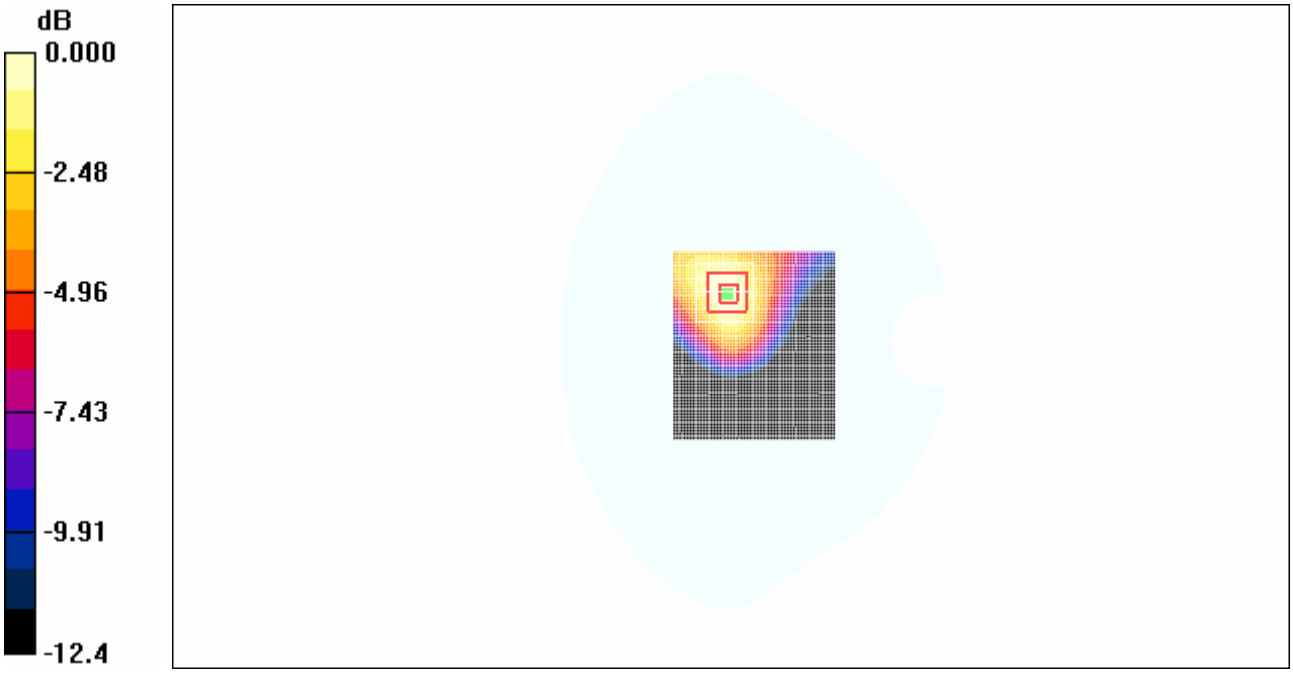
Test Position 4 Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.3 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.669 mW/g

Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

Fig.51 850MHz CH128 GPRS Test Position 4

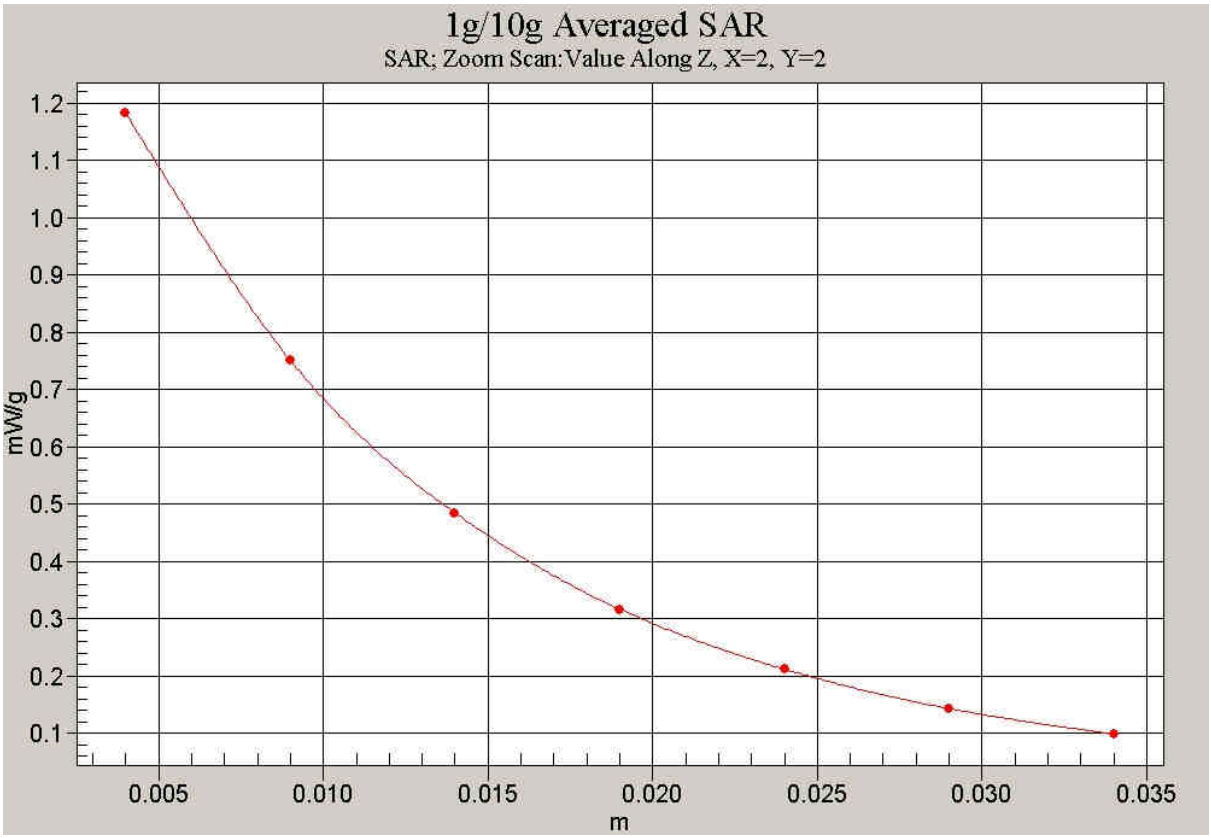


Fig.52 Z-Scan at power reference point (850 MHz GPRS CH128 Test Position 4)

850 GPRS Test Position 5 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.259 mW/g

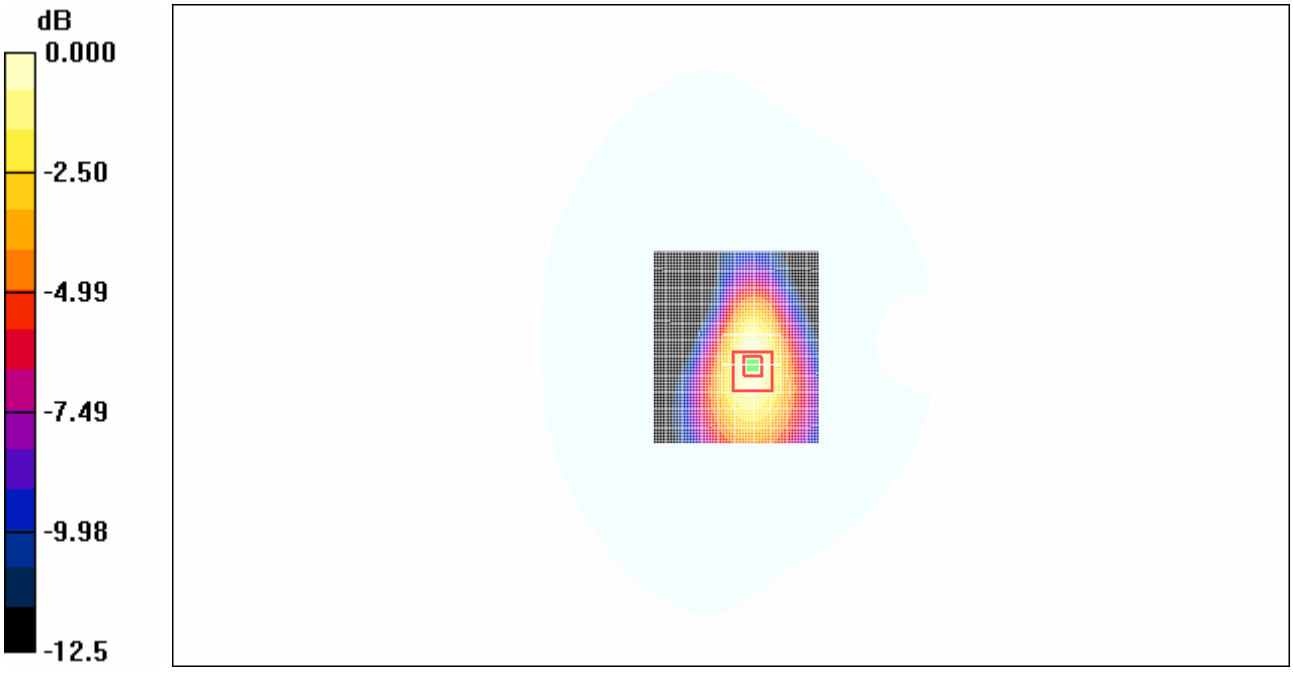
Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 0.375 W/kg

SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.152 mW/g

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



0 dB = 0.261mW/g

Fig.53 850MHz CH190 GPRS Test Position 5

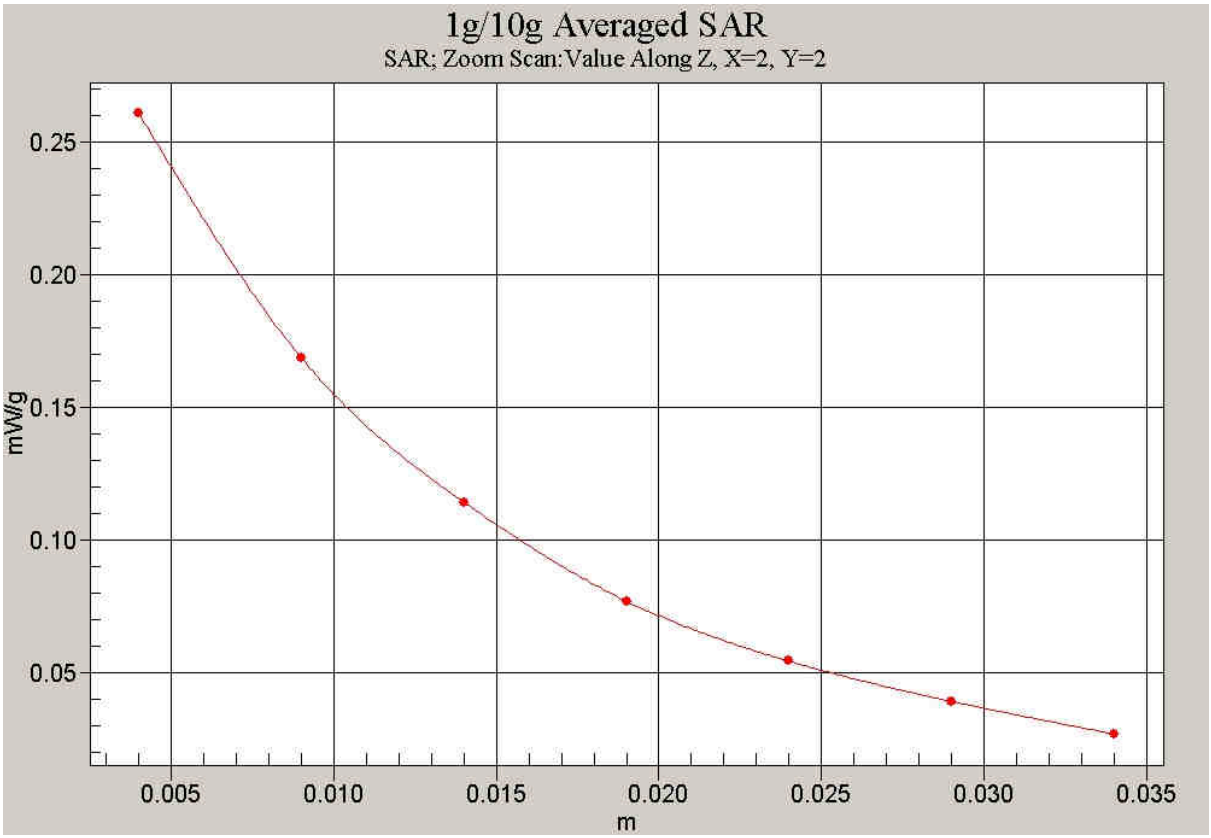


Fig.54 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 5)

850 GPRS Test Position 6 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 6/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.270 mW/g

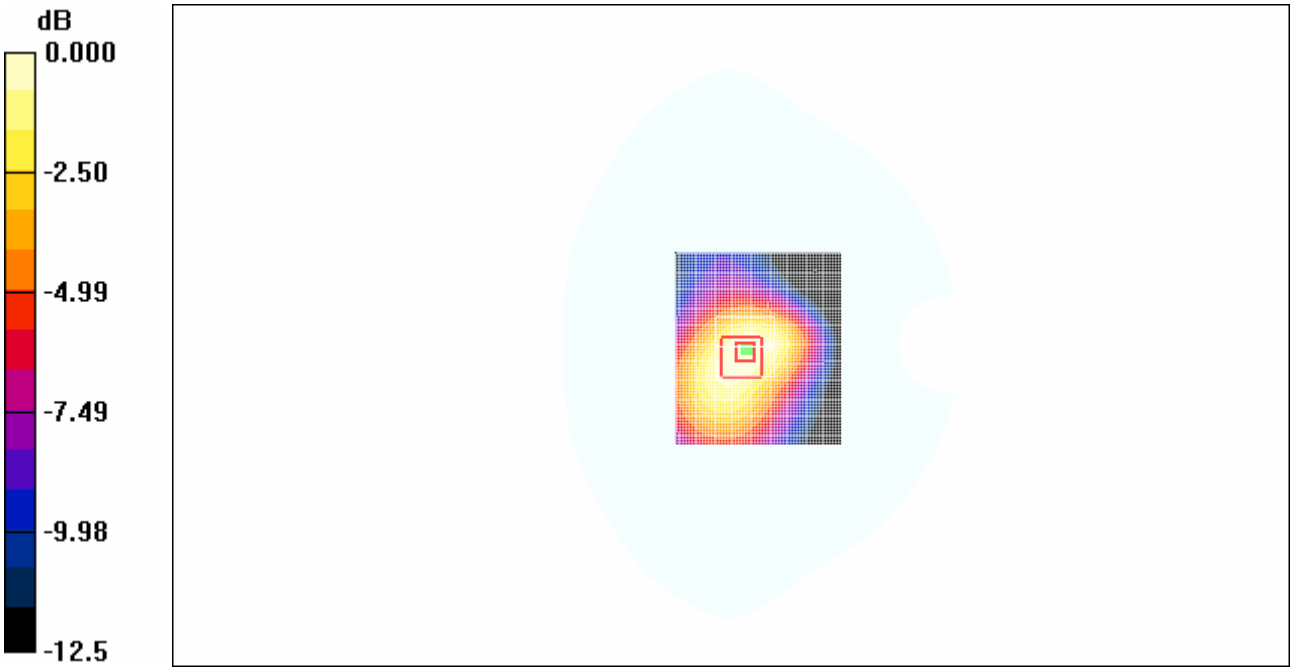
Test Position 6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = 0.143 dB

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.251 mW/g; SAR(10 g) = 0.164 mW/g

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



0 dB = 0.269mW/g

Fig.55 850MHz CH190 GPRS Test Position 6

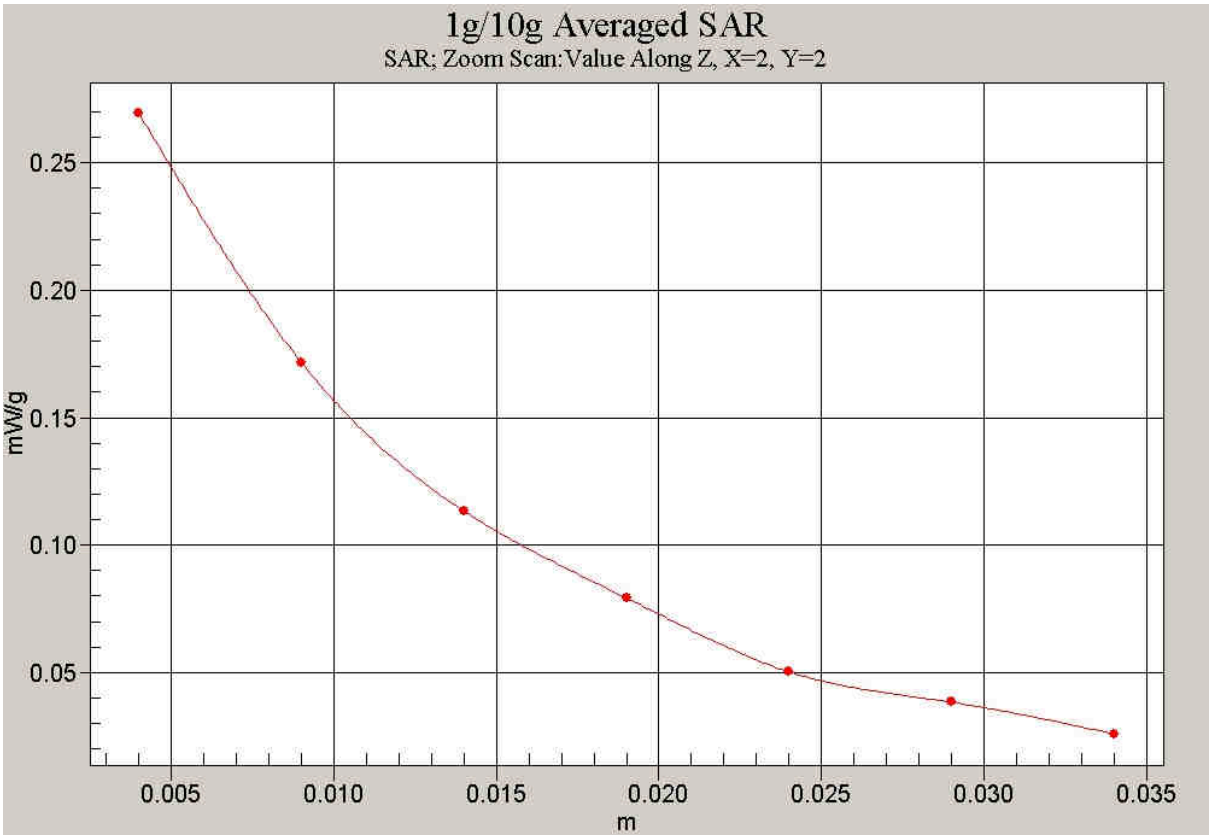


Fig.56 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 6)

850 GPRS Test Position 7 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 7/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.068 mW/g

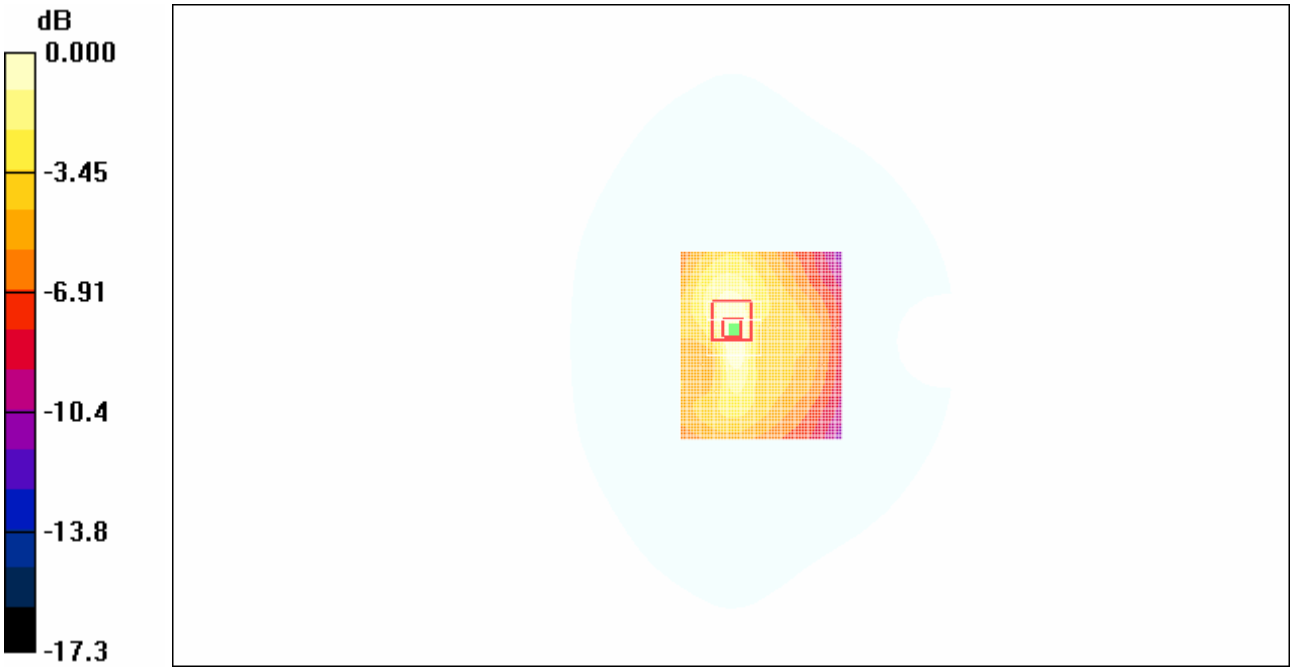
Test Position 7/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.90 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 0.108 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.032 mW/g

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



0 dB = 0.058mW/g

Fig.57 850MHz CH190 GPRS Test Position 7

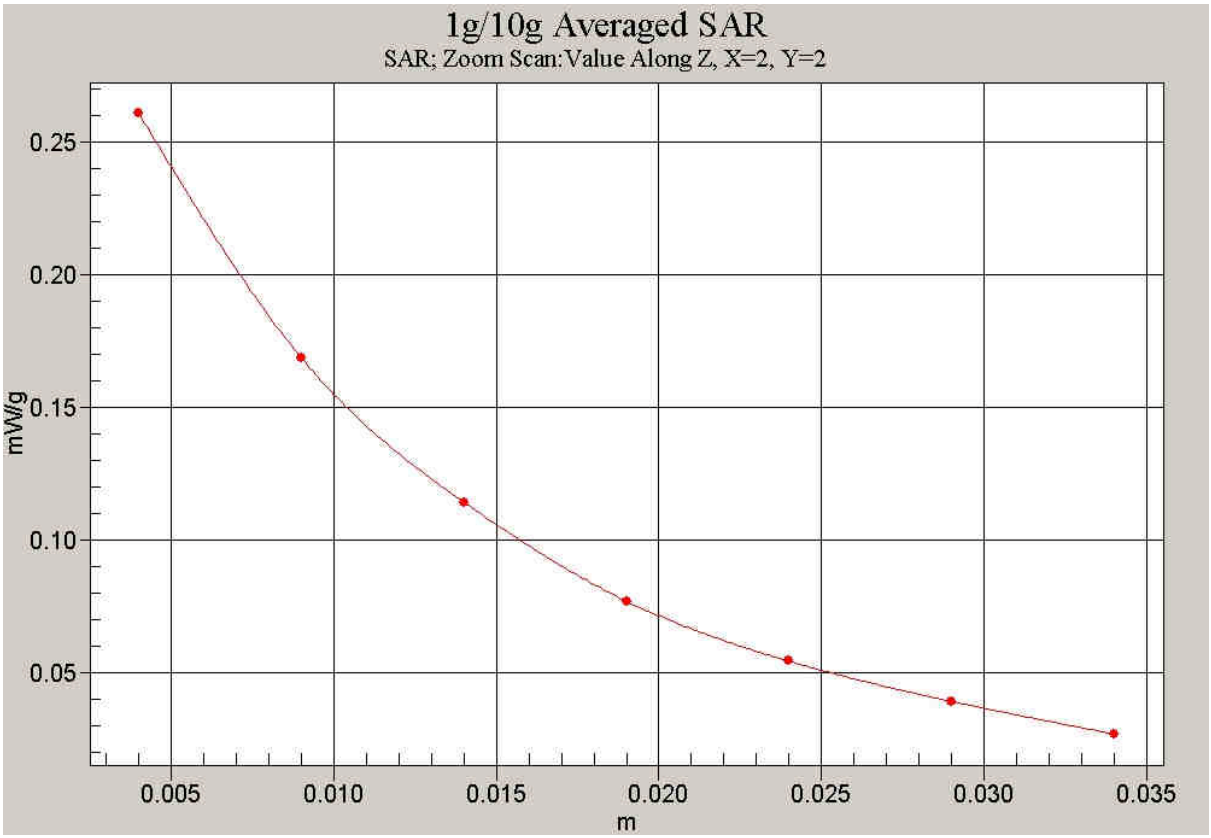


Fig.58 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 7)

850 GPRS Test Position 8 with HP Laptop-antenna extended

Electronics: DAE3 Sn536

Medium: 850 Body

Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.2; ρ = 1000 kg/m^3

Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 8/Area Scan (61x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.336 mW/g

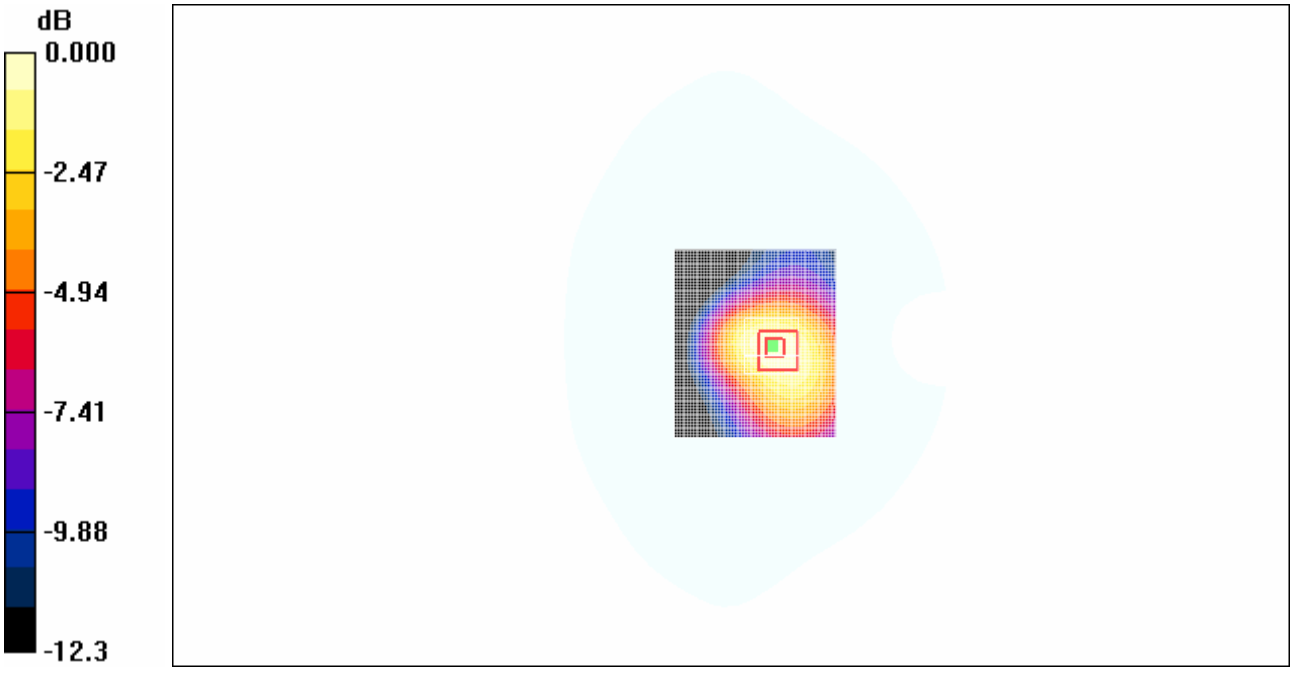
Test Position 8/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.4 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.206 mW/g

Maximum value of SAR (measured) = 0.333 mW/g



0 dB = 0.333mW/g

Fig.59 850MHz CH190 GPRS Test Position 8

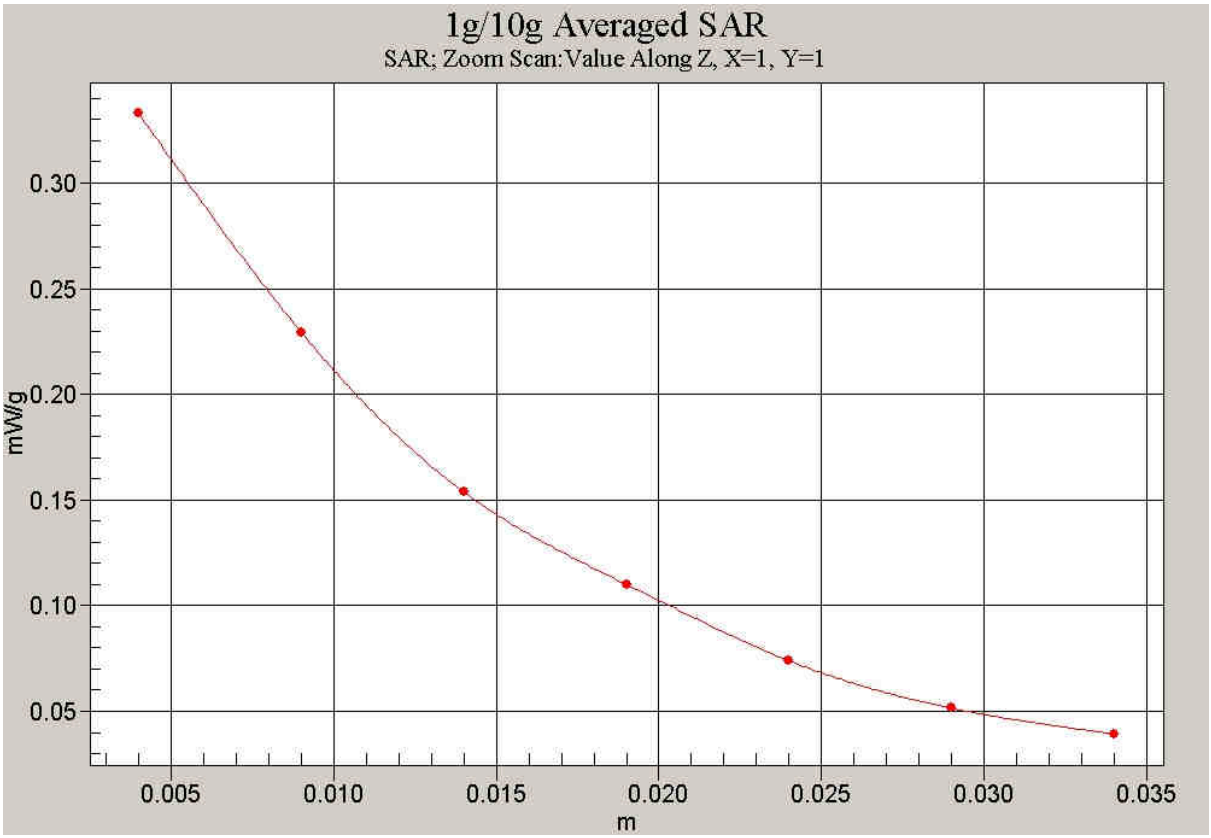


Fig.60 Z-Scan at power reference point (850 MHz GPRS CH190 Test Position 8)