Deutscher Akkreditierungs Rat

No. DAT-P-114/01-01

CNAL

No. L0442

TEST REPORT

No. 2006E01943

FCCID	QISEC360
Test name	Electromagnetic Field (Specific Absorption Rate)
Product	CDMA EV-DO Rev A 800M/1900M Data Card
Model	EC360
Client	HUAWEI Technologies Co., Ltd.
Type of test	Non Type approval

Telecommunication Metrology Center

of Ministry of Information Industry

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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

1 COMPETENCE AND WARRANTIES 5

2 GENERAL CONDITIONS 5

3 DESCRIPTION OF EUT 5

3.1 ADDRESSING INFORMATION RELATED TO EUT 5
3.2 CONSTITUENTS OF EUT 6
3.3 GENERAL DESCRIPTION 6

4 OPERATIONAL CONDITIONS DURING TEST 7

4.1 SCHEMATIC TEST CONFIGURATION 7
4.2 TEST POSITIONS 8
4.3 SAR MEASUREMENT SET-UP 11
4.4 DASY4 E-FIELD PROBE SYSTEM 12
4.5 E-FIELD PROBE CALIBRATION 13
4.6 OTHER TEST EQUIPMENT 14
4.7 EQUIVALENT TISSUES 14
4.8 SYSTEM SPECIFICATIONS 15

5 CHARACTERISTICS OF THE TEST 15

5.1 APPLICABLE LIMIT REGULATIONS 15
5.2 APPLICABLE MEASUREMENT STANDARDS 15

6 LABORATORY ENVIRONMENT 16

7 CONDUCTED OUTPUT POWER MEASUREMENT 16

7.1 SUMMARY 16
7.2 CONDUCTED POWER 16

8 TEST RESULTS 17

8.1 DIELECTRIC PERFORMANCE 17
8.2 SYSTEM VALIDATION 17
8.3 SUMMARY OF MEASUREMENT RESULTS 18
8.4 CONCLUSION 23

9 MEASUREMENT UNCERTAINTY 24

10 MAIN TEST INSTRUMENTS 25

11 TEST PERIOD 25

12 TEST LOCATION 25

ANNEX A： MEASUREMENT PROCESS 26

ANNEX B： TEST LAYOUT 27

ANNEX C: GRAPH RESULTS 28

ANNEX D: SYSTEM VALIDATION RESULTS 148

ANNEX E: PROBE CALIBRATION CERTIFICATE 150

Product name	CDMA EV-DO Rev A 800M/1900M Data Card	Sample Model	EC360
Client	HUAWEITechnologies Co., Ltd.	Type of test	Non Type Approval
Factory	HUAWEI Technologies Co., Ltd.	Sampling arrival date	November 10th, 2006
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	/		
Manufacture date	/	Manufacture location	China, Shenzhen
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. **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. **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.		
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: November 21th, 2006**		
Note	The test results relate only to the items tested of the sample(s).		

Approved by (Lu Bingsong) **Deputy Director of the laborator** **Reviewed by** (Qi Dianyuan) **Tested by** (Sun Qian)

1 COMPETENCE AND WARRANTIES

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

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

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	\

3.2 Constituents of EUT

Table 3: Constituents of Samples

Description	Model	Serial Number	Manufacturer
EV-DO REV.A EV-DO Rev A 800M/1900M Data Card	EC360	\	HUAWEI Technologies Co., Ltd.

Picture 1-a: Front side of the EUT (antenna folded)

Picture 1-b: Back Side of the EUT (antenna unfolded)

Picture 1-c: Back Side of the datacard

Picture 1: Constituents of the sample

3.3 General Description

Equipment Under Test (EUT) is a EV-DO REV.A EV-DO Rev A 800M/1900M Data Card. SAR is tested respectively for EV-DO Rev.A 800MHz and 1900MHz with 3 different Laptops as the test assistant equipments. The EUT has a folding antenna. So all the test cases are performed for the EUT both with antenna folded and unfolded.

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. A communication air link is set up with Agilent 8960, and a call is established. At the same time, the RF power is monitored by instruments. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1013, 384 and 777 in the case of EV-DO Rev.A 800 MHz, and 25, 600 and 1175 in the case of EV-DO Rev.A 1900 MHz. The EUT is commanded to operate at maximum transmitting power.

SAR is measured using FETAP/RETAP for Rev. A device. The EUT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations. FETAP is configured with a Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. EUT power control should be in All Bits Up conditions.

The following is the detailed configurations on Agilent 8960 according to “C.S0033-A_v1.0” to setup the EUT for maximum RF output power:

For each channel we configure all of the open loop parameters to their maximum settings. For EV-DO REV.A 800MHz we set BC0 -81dB, and for EV-DO REV.A 1900MHz we set BC1 -84dB. Then the sector is connected to the EUT’s antenna connector. Set up a Test Application session using one of the Physical Layer Subtype. Open a connection. For Subtype 0/1 Physical Layer, configure the Test Application RTAP so that the Reverse Data Channel rate corresponds to 153.6kbps. For Subtype 2 Physical Layer, configure the Test application RETAP so that the Reverse Data Channel payload size corresponds to 4096 bits with Termination Target of 16 slots. Configure the Test Application FETAP (for Subtype 2 Physical Layer) so that the Forward Traffic Channel data rate corresponds to the 2-slot version of 307.2kbps, and the ACK Channel is transmitted at all the slots. Set the power value $\hat{I}_{or}$ to -60dBm. Then set the RF offset to -30dBm, connect the test equipment to the EUT, choose the “Digital average power” option, send continuously “0” power control bits to EUT by using “all up”. Then the EUT can emit with maximum power.

Maximum output power is verified on the High, Middle and Low channels for each test band according to procedures in section 4.3.4 of 3GPP2 C.S0033-A for Rev. A. And maximum output power for both Subtype 0/1 and Subtype 2 Physical Layer configurations are both measured. (See Table 4 to check the measurement results)

Table 4: Maximum RF Output power Measurement Results for EV-DO Rev. A

	Output Power		
	Channel 1013 (824.7MHz)	**Channel 384 (836.52MHz)**	**Channel 777 (848.31MHz)**
Subtype 0/1 Physical Layer (dBm)	23.45	24.16	23.82
Subtype 2 Physical Layer (dBm)	23.07	23.08	23.05
	Output Power		
	Channel 25 (1851.25MHz)	**Channel 600 (1880MHz)**	**Channel 1175 (1908.75MHz)**
Subtype 0/1 Physical Layer (dBm)	23.52	23.56	23.62
Subtype 2 Physical Layer (dBm)	23.47	23.01	23.24

According to measurement results above, SAR for Subtype 2 Physical layer configurations is not required for Rev. A, because the maximum average output of each RF channels are less than those measured in Subtype 0/1 Physical layer configurations.

4.2 Test Positions

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)"**.Test channels have been set first to the middle and then to low and high if necessary.

For each channel, the datacard is tested at the following 5 test positions both with the antenna folded and unfolded:

- Test Position 1: The EUT is plugged in the PCMCIA slot of the portable computer. The front side of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the surface of the front side of the EUT and the bottom of the flat phantom.（Picture 2-a）
- Test Position 2: The EUT is plugged in the PCMCIA slot of the portable computer. The back side of the EUT is directed to the bottom of the flat phantom. The portable computer is tightly touched the bottom of the flat phantom. (Picture 2-b）
- Test Position 3: The EUT is plugged in the PCMCIA slot of the portable computer. The flank side of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the surface of the flank side of the EUT and the bottom of the flat phantom (PCMCIA extended card needed).（Picture 2-c）
- Test Position 4: The same as Mode 3 except for testing the other side of the flank.（Picture 2-d）

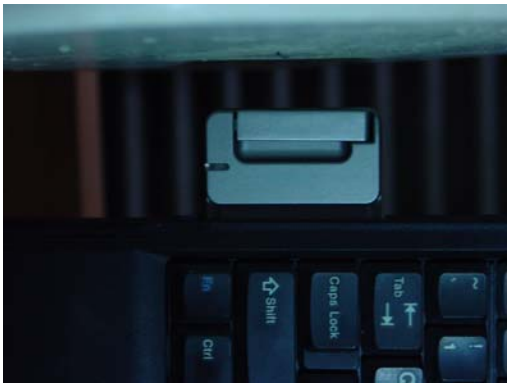
- Test Position 5: The EUT is plugged in the PCMCIA slot of the portable computer. The top of the EUT is directed to the bottom of the flat phantom. The separation distance is 1.5cm between the top of the EUT and the bottom of the flat phantom. (Picture 2-e）

Picture 2-a: Test position 1 (left: antenna folded / right: antenna unfolded)

Picture 2-b: Test position 2 (left: antenna folded / right: antenna unfolded)

Picture 2-c: Test position 3 (left: antenna folded / right: antenna unfolded)

Picture 2-d: Test position 4 (left: antenna folded / right: antenna unfolded)



Picture 2-e: Test position 5 (left: antenna folded / right: antenna unfolded)

Picture 2: Test positions of EUT

During the test, three Laptops are used as the test assistant to help to setup communication, whose type are Dell LATIDUE D600 (See Picture 3-a and 3-b), and HP compaq nc6000 (See Picture 3-c and 3-d), IBM T22 (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

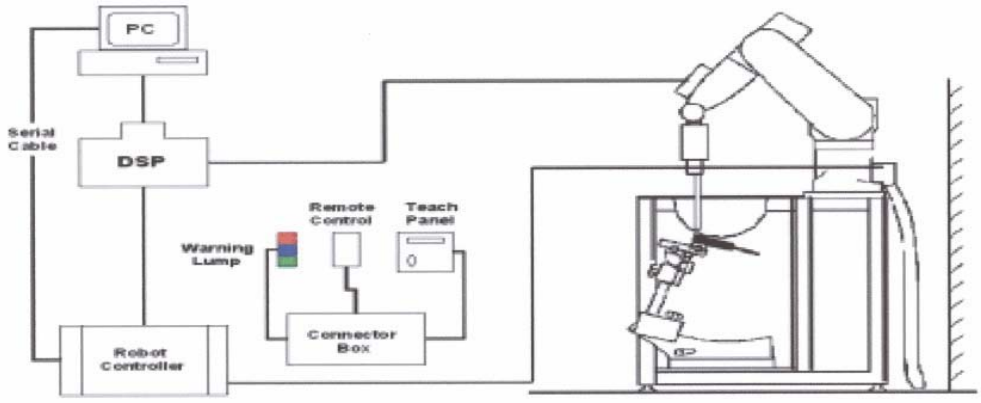
Picture 3-f: Open

Picture 3: Three laptops as test assistants

4.3 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

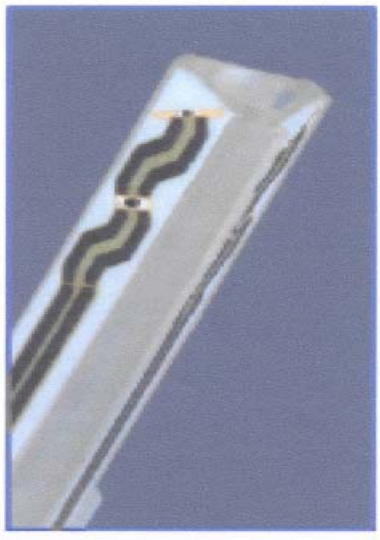
The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information 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.

4.4 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	I 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)



Picture 5: ET3DV6 E-field Probe

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

Picvure 6: ET3DV6 E-field

4.5 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 calibration certificate.

Picture 7: Device Holder

4.6 Other Test Equipment

4.6.1 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).

4.6.2 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

4.7 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 5 and 6 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

Table 5. Composition of the Body Tissue Equivalent Matter

MIXTURE %	FREQUENCY 835MHz
Water	52.5
Sugar	45.0
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=55.2 σ=0.97

Table 6. Composition of the Body Tissue Equivalent Matter

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

4.8 System Specifications

4.8.1 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.

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

6 LABORATORY ENVIRONMENT

Table 7: 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 Aglient Communication tester (8960) 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.

7.2.2 Measurement result

Table 8: Conducted Power Measurement Results for EV-DO REV.A

	Conducted Power		
	Channel 1013 (824.7MHz)	**Channel 384 (836.52MHz)**	**Channel 777 (848.31MHz)**
Before SAR Test (dBm)	23.5	24.1	23.9
After SAR Test (dBm)	23.6	24.2	23.7
	Conducted Power		
	Channel 25 (1851.25MHz)	**Channel 600 (1880MHz)**	**Channel 1175 (1908.75MHz)**
Before SAR Test (dBm)	23.5	23.6	23.7
After SAR Test (dBm)	23.4	23.4	23.8

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 11 to Table 22 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 9: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.3 ℃ and relative humidity 49%. Liquid temperature during the test: 22.5℃			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	55.2	0.97
	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	835 MHz	54.6	0.95
	1900 MHz	51.5	1.57

8.2 System Validation

Table 10: System Validation

Measurement is made at temperature 23.3 ℃, relative humidity 49%, input power 250 mW. Liquid temperature during the test: 22.3℃					
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

Table 11: SAR Values (EV-DO REV.A 800 with DELL Laptop-antenna folded)

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 1)	0.037	0.055	-0.166
Flat Phantom, Test Position 2, Mid frequency (See Figure 3)	0.095	0.135	-0.200
Flat Phantom, Test Position 3, Mid frequency (See Figure 5)	0.0028	0.0074	-0.185
Flat Phantom, Test Position 4, Mid frequency (See Figure 7)	0.026	0.038	-0.108
Flat Phantom, Test Position 5, Mid frequency (See Figure 9)	0.213	0.310	-0.023

Table 12: SAR Values (EV-DO REV.A 800 with DELL Laptop-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 1, Mid frequency (See Figure 11)	0.049	0.066	-0.127
Flat Phantom, Test Position 2, Mid frequency (See Figure 13)	0.216	0.328	0.041
Flat Phantom, Test Position 3, Mid frequency (See Figure 15)	0.058	0.078	-0.158
Flat Phantom, Test Position 4, Mid frequency (See Figure 17)	0.174	0.256	-0.172
Flat Phantom, Test Position 5, Mid frequency (See Figure 19)	0.00768	0.014	-0.152

Table 13: SAR Values (EV-DO REV.A 800 with HP Laptop-antenna folded)

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 21)	0.043	0.063	-0.077
Flat Phantom, Test Position 2, Mid frequency (See Figure 23)	0.065	0.094	-0.090
Flat Phantom, Test Position 3, Mid frequency (See Figure 25)	0.00144	0.00314	0.200
Flat Phantom, Test Position 4, Mid frequency (See Figure 27)	0.033	0.048	0.119
Flat Phantom, Test Position 5, Mid frequency (See Figure 29)	0.00454	0.011	0.183

Table 14: SAR Values (EV-DO REV.A 800 with HP Laptop-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 1, Mid frequency (See Figure 31)	0.052	0.070	-0.163
Flat Phantom, Test Position 2, Mid frequency (See Figure 33)	0.168	0.268	-0.047
Flat Phantom, Test Position 3, Mid frequency (See Figure 35)	0.048	0.066	0.104
Flat Phantom, Test Position 4, Mid frequency (See Figure 37)	0.159	0.229	-0.147
Flat Phantom, Test Position 5, Mid frequency (See Figure 39)	0.152	0.222	0.104

Table 15: SAR Values (EV-DO REV.A 800 with IBM Laptop-antenna folded)

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)	0.046	0.066	-0.137
Flat Phantom, Test Position 2, Mid frequency (See Figure 43)	0.123	0.179	-0.095
Flat Phantom, Test Position 3, Mid frequency (See Figure 45)	0.00129	0.00672	-0.191
Flat Phantom, Test Position 4, Mid frequency (See Figure 47)	0.011	0.015	-0.112
Flat Phantom, Test Position 5, Mid frequency (See Figure 49)	0.015	0.021	0.147

Table 16: SAR Values (EV-DO REV.A 800 with IBM Laptop-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 1, Mid frequency (See Figure 51)	0.028	0.037	-0.126
Flat Phantom, Test Position 2, Mid frequency (See Figure 53)	0.154	0.237	0.158
Flat Phantom, Test Position 3, Mid frequency (See Figure 55)	0.042	0.056	0.148
Flat Phantom, Test Position 4, Mid frequency (See Figure 57)	0.149	0.227	-0.092
Flat Phantom, Test Position 5, Mid frequency (See Figure 59)	0.128	0.192	0.046

Table 17: SAR Values (EV-DO REV.A 1900 with DELL Laptop-antenna folded)

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)	0.398	0.658	-0.107
Flat Phantom, Test Position 2, Mid frequency (See Figure 63)	0.633	0.996	0.019
Flat Phantom, Test Position 3, Mid frequency (See Figure 65)	0.047	0.074	-0.027
Flat Phantom, Test Position 4, Mid frequency (See Figure 67)	0.183	0.323	-0.119
Flat Phantom, Test Position 5, Mid frequency (See Figure 69)	0.513	0.900	0.094

Table 18: SAR Values (EV-DO REV.A 1900 with DELL Laptop-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 1, Mid frequency (See Figure 71)	0.042	0.061	-0.001
Flat Phantom, Test Position 2, Mid frequency (See Figure 73)	0.461	0.724	-0.103
Flat Phantom, Test Position 3, Mid frequency (See Figure 75)	0.089	0.153	0.023
Flat Phantom, Test Position 4, Mid frequency (See Figure 77)	0.434	0.722	-0.137
Flat Phantom, Test Position 5, Mid frequency (See Figure 79)	0.462	0.780	-0.125

Table 19: SAR Values (EV-DO REV.A 1900 with HP Laptop-antenna folded)

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 81)	0.283	0.482	0.058
Flat Phantom, Test Position 2, Mid frequency (See Figure 83)	0.522	0.869	-0.064
Flat Phantom, Test Position 3, Mid frequency (See Figure 85)	0.060	0.096	-0.200
Flat Phantom, Test Position 4, Mid frequency (See Figure 87)	0.176	0.291	-0.175
Flat Phantom, Test Position 5, Mid frequency (See Figure 89)	0.408	0.697	-0.022

Table 20: SAR Values (EV-DO REV.A 1900 with HP Laptop-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 1, Mid frequency (See Figure 91)	0.053	0.078	0.157
Flat Phantom, Test Position 2, Mid frequency (See Figure 93)	0.337	0.561	0.176
Flat Phantom, Test Position 3, Mid frequency (See Figure 95)	0.105	0.177	0.082
Flat Phantom, Test Position 4, Mid frequency (See Figure 97)	0.358	0.577	-0.129
Flat Phantom, Test Position 5, Mid frequency (See Figure 99)	0.482	0.819	-0.175

Table 21: SAR Values (EV-DO REV.A 1900 with IBM Laptop-antenna folded)

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 101)	0.387	0.656	-0.019
Flat Phantom, Test Position 2, Mid frequency (See Figure 103)	0.599	0.983	0.015
Flat Phantom, Test Position 3, Mid frequency (See Figure10 5)	0.048	0.072	0.079
Flat Phantom, Test Position 4, Mid frequency (See Figure 107)	0.258	0.405	-0.022
Flat Phantom, Test Position 5, Mid frequency (See Figure 109)	0.504	0.837	0.027

Table 22: SAR Values (EV-DO REV.A 1900 with IBM Laptop-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 1, Mid frequency (See Figure 111)	0.067	0.099	-0.183
Flat Phantom, Test Position 2, Mid frequency (See Figure 113)	0.476	0.803	-0.042
Flat Phantom, Test Position 3, Mid frequency (See Figure 115)	0.077	0.128	-0.014
Flat Phantom, Test Position 4, Mid frequency (See Figure 117)	0.558	0.870	-0.087
Flat Phantom, Test Position 5, Mid frequency (See Figure 119)	0.434	0.731	-0.019

8.4 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 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 23: 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 20, 2006	One year
03	Power sensor	NRV-Z5	100333		
04	Power sensor	NRV-Z6	100011	September 3, 2006	One year
05	Signal Generator	E4433B	US37230472	September 5, 2006	One Year
06	Amplifier	VTL5400	0505	No Calibration Requested	
07	BTS	Aglient 8960	MY40001467	August 15,2006	One year
08	E-field Probe	SPEAG ET3DV6	1736	November 25, 2005	One year
09	DAE	SPEAG DAE3	536	July 11, 2006	One year

11 TEST PERIOD

The test is performed from November 13th, 2006 to November14th, 2006.

12 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.

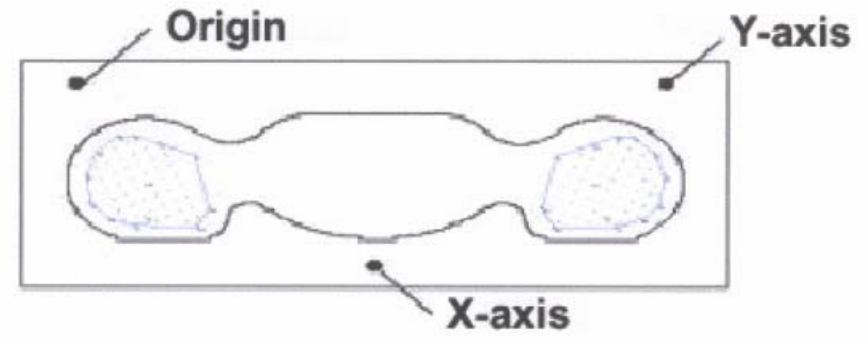


Figure A: SAR Measurement Points in Area Scan

ANNEX B： TEST LAYOUT

Picture B1: Specific Absorption Rate Test Layout

Picture B2 Liquid depth in the Flat Phantom

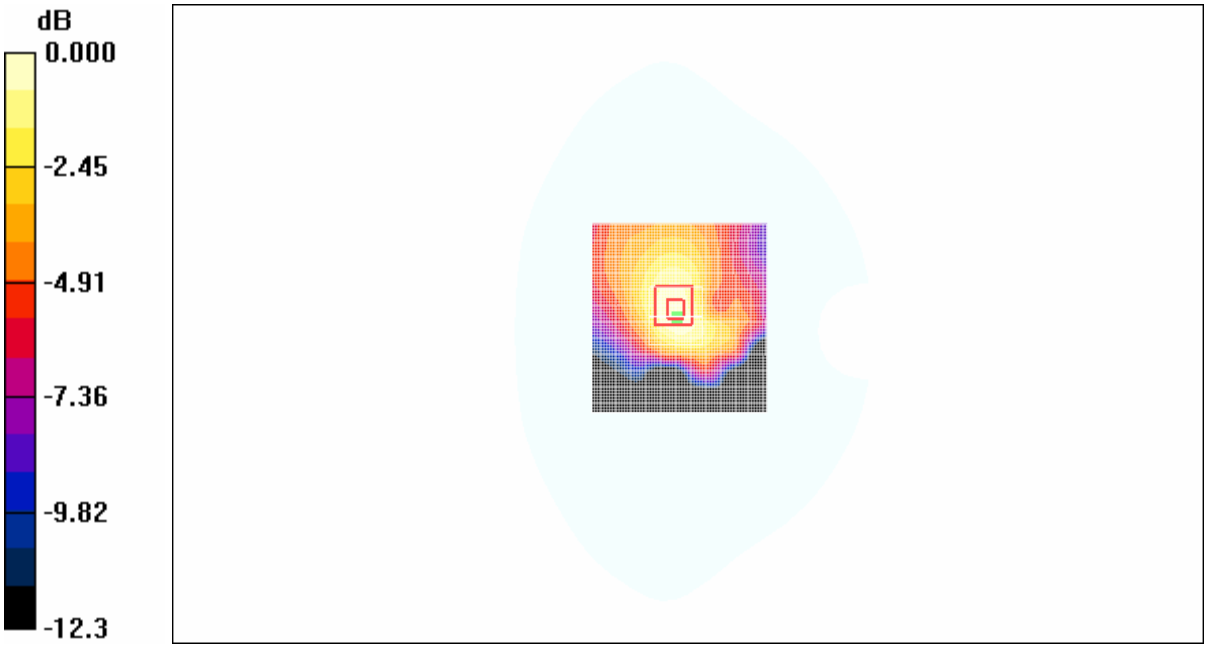
ANNEX C: GRAPH RESULTS

EV-DO REV.A 800 Test Position 1 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 15:48:25
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.060 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.95 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.076 W/kg
SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.037 mW/g
Maximum value of SAR (measured) = 0.059 mW/g



0 dB = 0.059mW/g

Fig. 1 EV-DO REV.A 800 CH384 Test Position 1-antenna folded

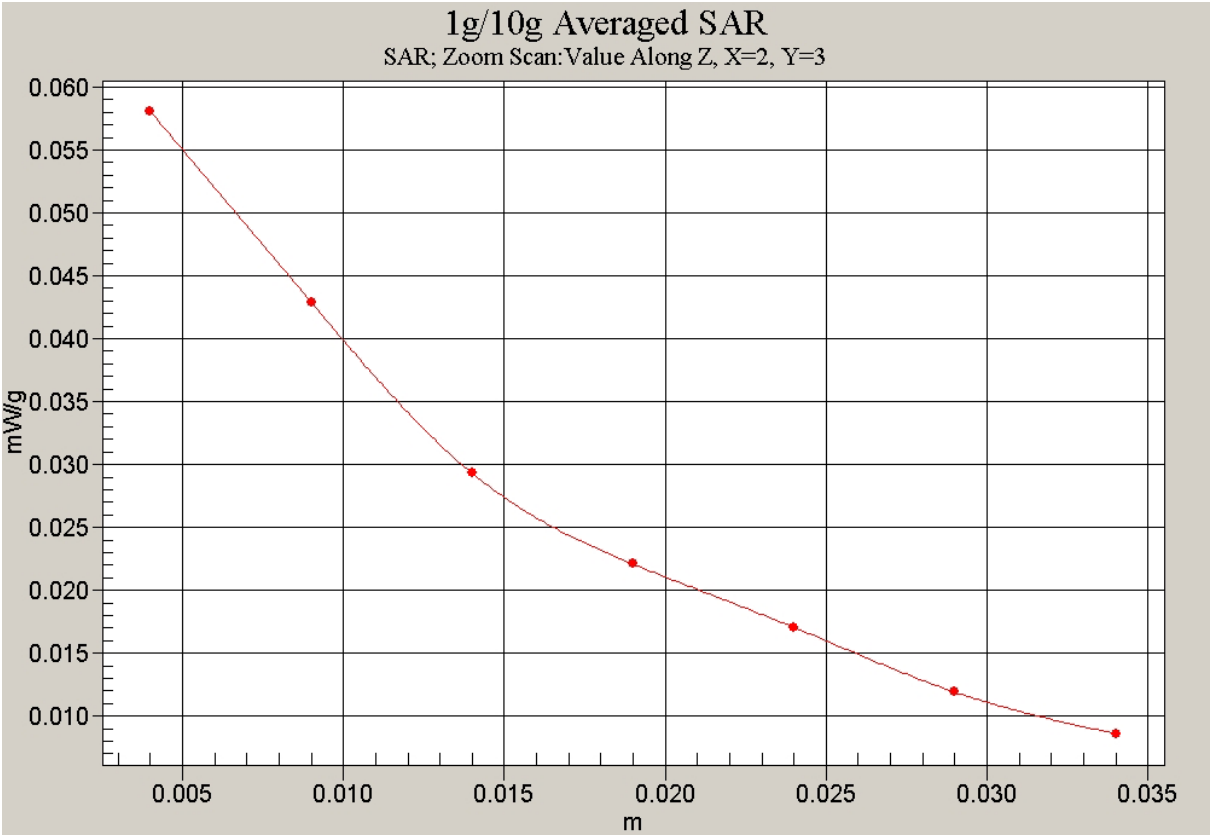


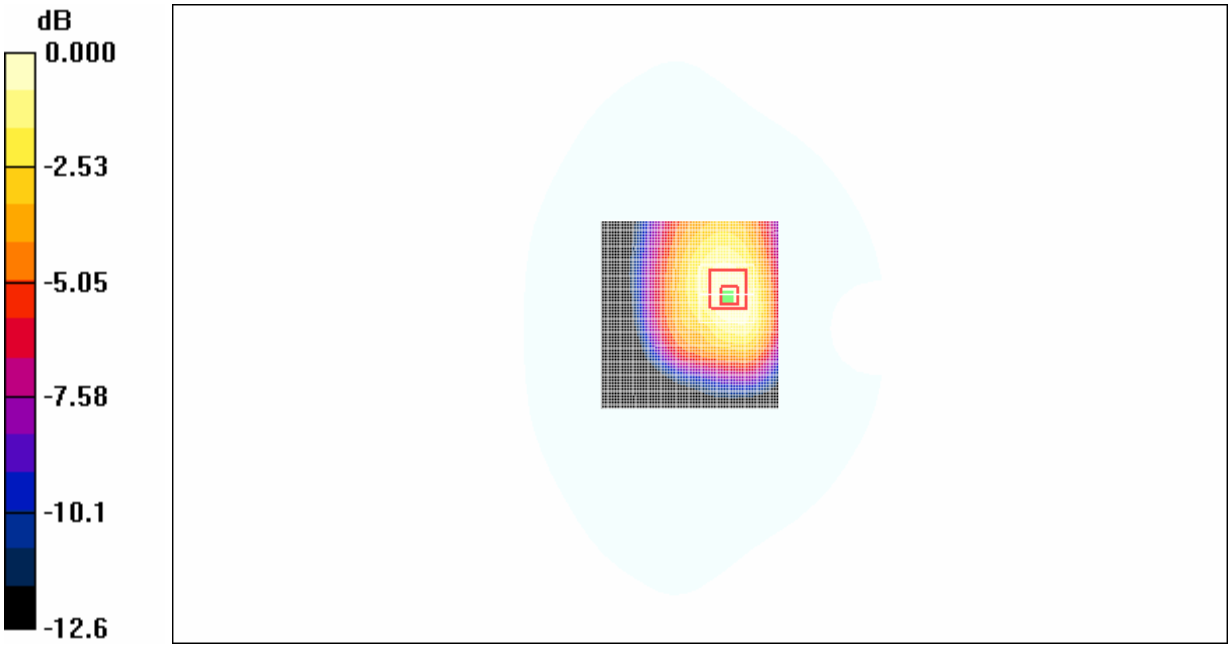
Fig.2 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna folded)

EV-DO REV.A 800 Test Position 2 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 16:22:40
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.156 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.91 V/m; Power Drift = -0.200 dB
Peak SAR (extrapolated) = 0.174 W/kg
SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.095 mW/g
Maximum value of SAR (measured) = 0.145 mW/g



0 dB = 0.145mW/g

Fig. 3 EV-DO REV.A 800 CH384 Test Position 2-antenna folded

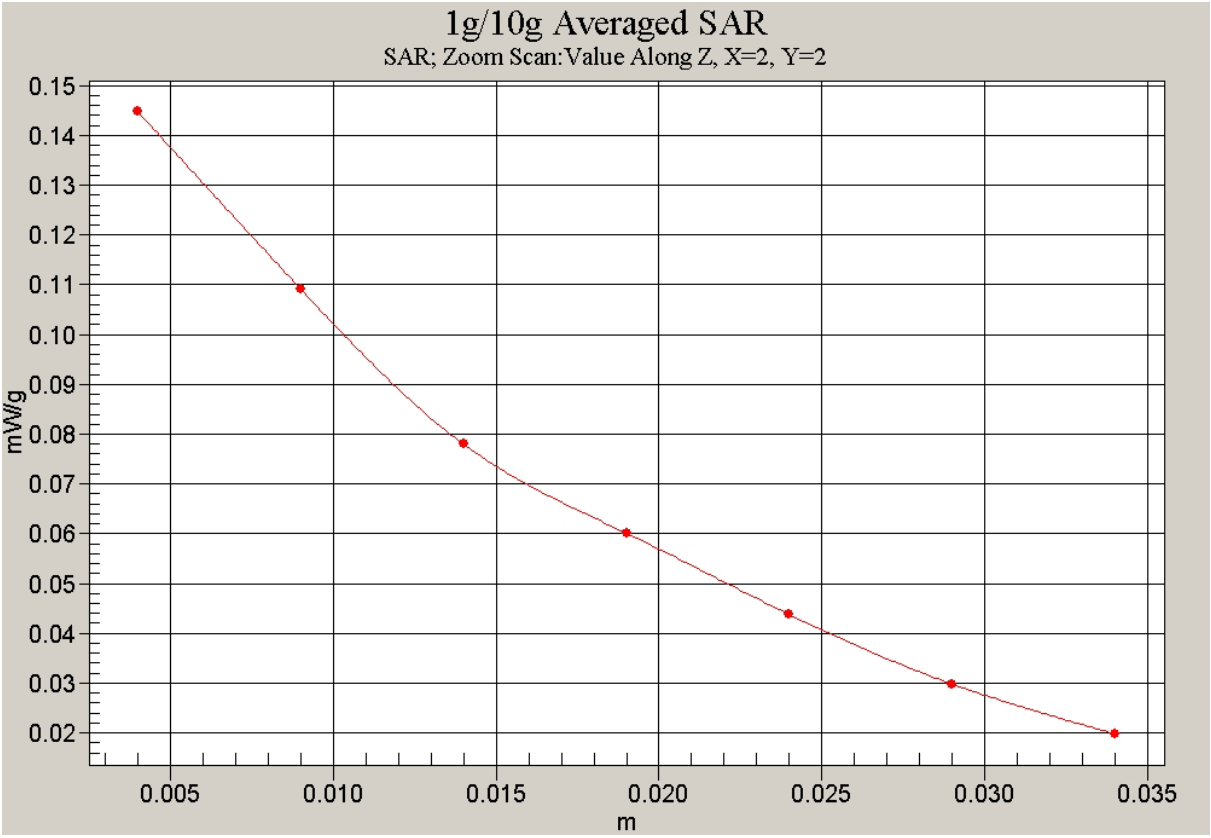


Fig.4 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 2-antenna folded)

EV-DO REV.A 800 Test Position 3 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 17:03:05
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.012 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.974 V/m; Power Drift = -0.185 dB
Peak SAR (extrapolated) = 0.025 W/kg
SAR(1 g) = 0.0074 mW/g; SAR(10 g) = 0.0028 mW/g
Maximum value of SAR (measured) = 0.012 mW/g

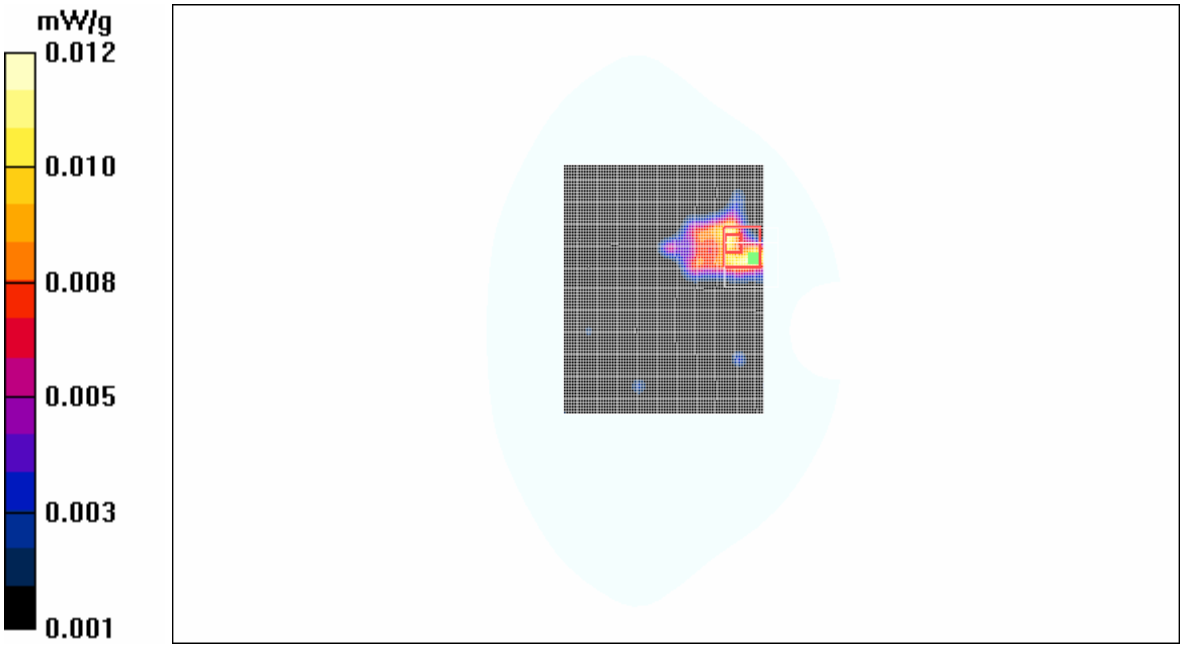


Fig. 5 EV-DO REV.A 800 CH384 Test Position 3-antenna folded

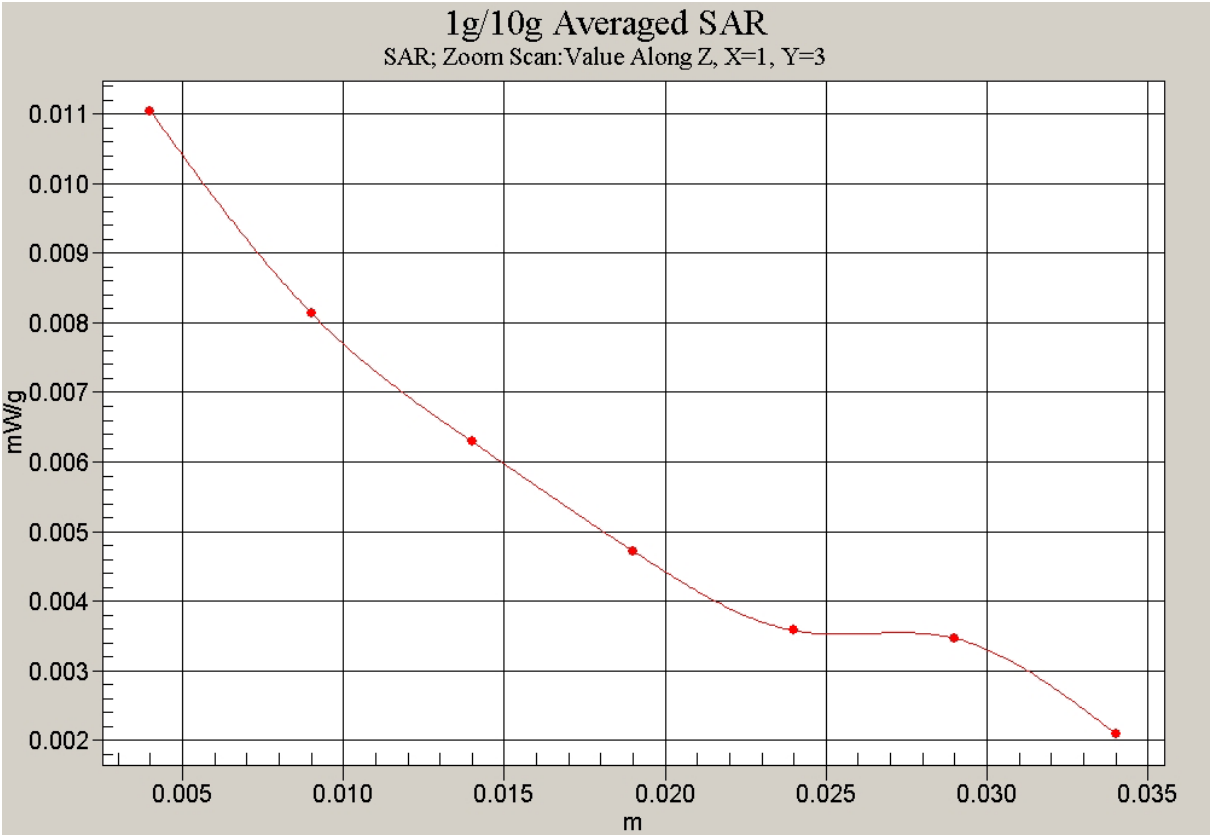


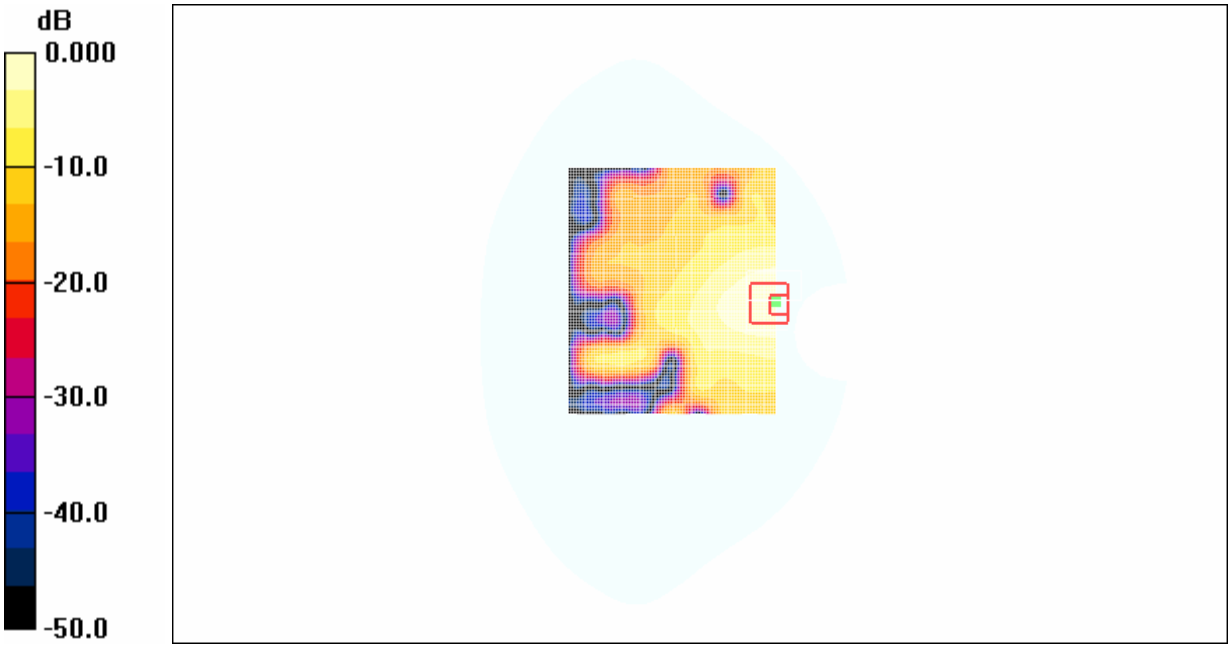
Fig.6 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna folded)

EV-DO REV.A 800 Test Position 4 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 18:09:40
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.039 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.15 V/m; Power Drift = -0.108 dB
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.026 mW/g
Maximum value of SAR (measured) = 0.045 mW/g



0 dB = 0.045mW/g

Fig. 7 EV-DO REV.A 800 CH384 Test Position 4-antenna folded

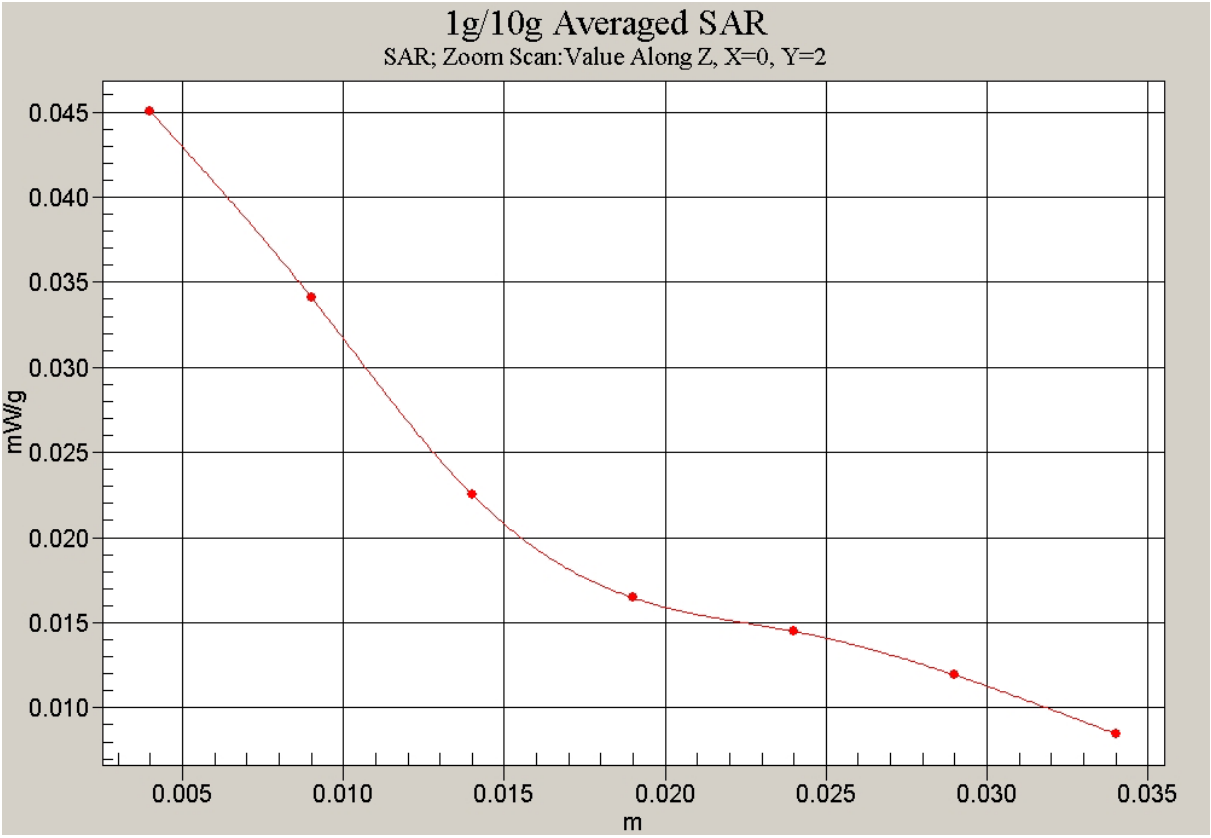


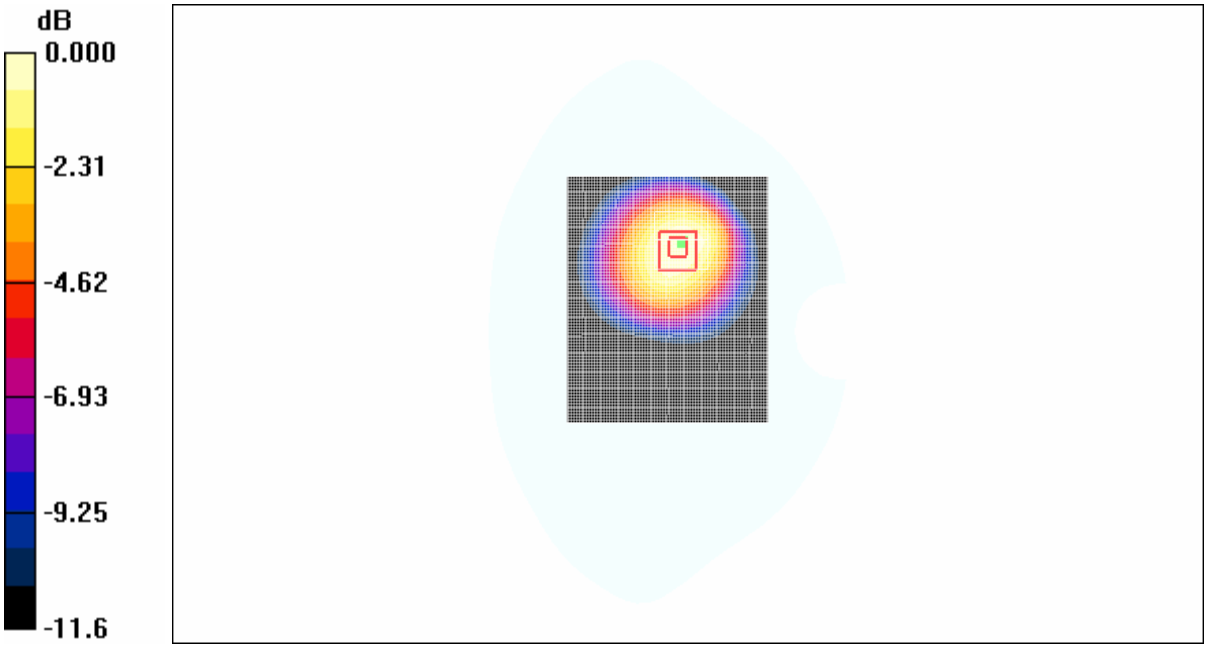
Fig.8 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 4-antenna folded)

EV-DO REV.A 800 Test Position 5 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 18:57:13
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.338 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.85 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.435 W/kg
SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.327 mW/g



0 dB = 0.327mW/g

Fig. 9 EV-DO REV.A 800 CH384 Test Position 5-antenna folded

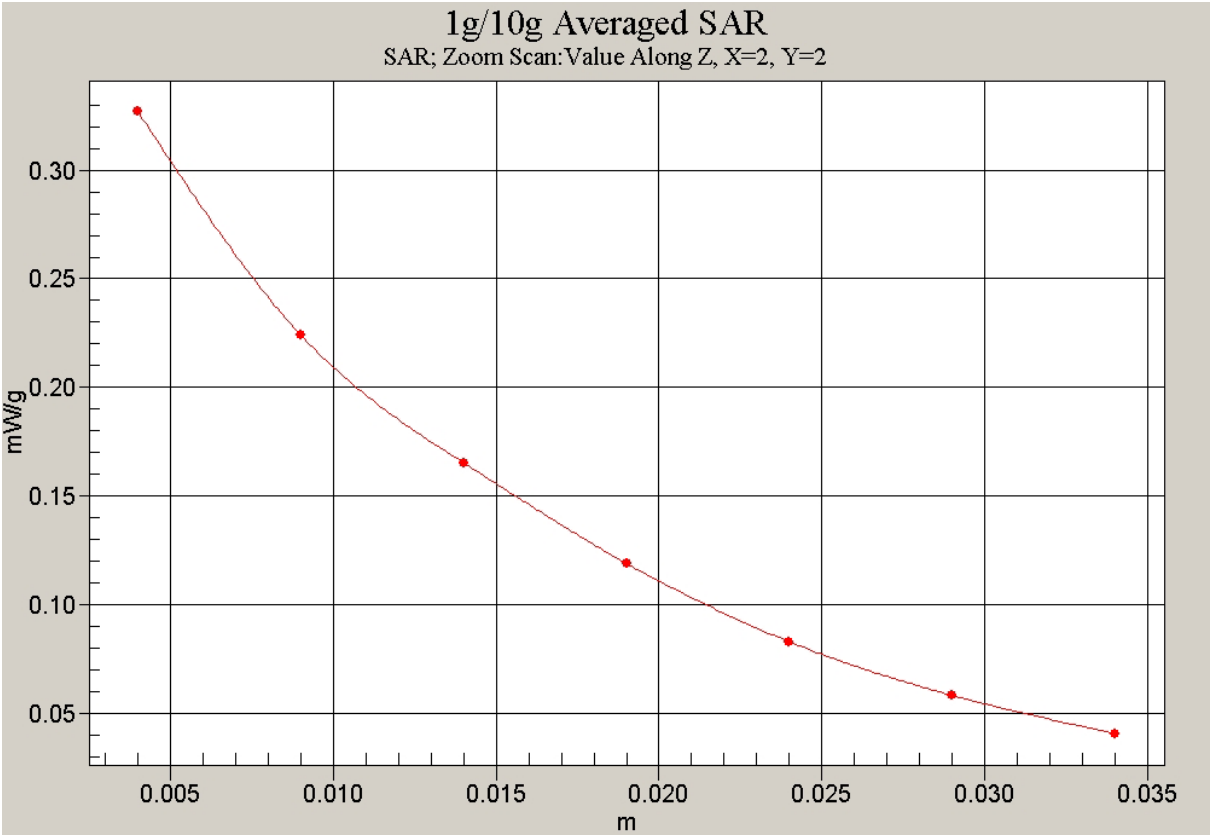


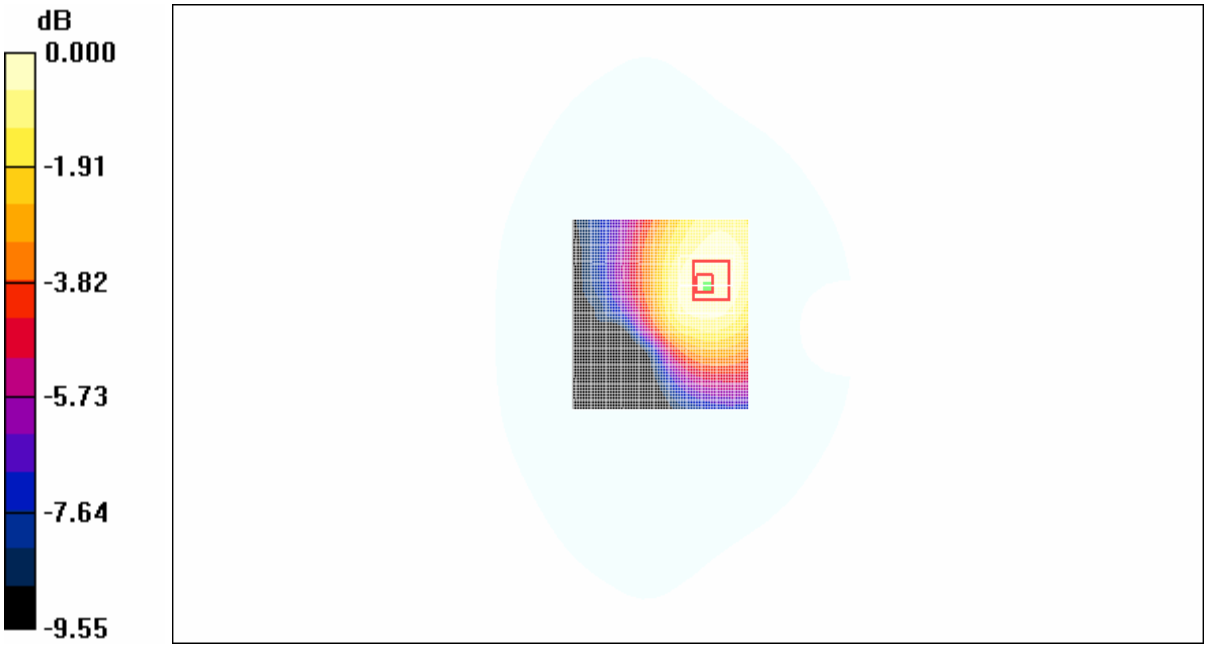
Fig.10 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 5-antenna folded)

EV-DO REV.A 800 Test Position 1 with DELL Laptop-antenna unfolded

Date/Time: 2006-11-13 15:34:04
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.072 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.81 V/m; Power Drift = -0.127 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.049 mW/g
Maximum value of SAR (measured) = 0.070 mW/g



0 dB = 0.070mW/g

Fig. 11 EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded

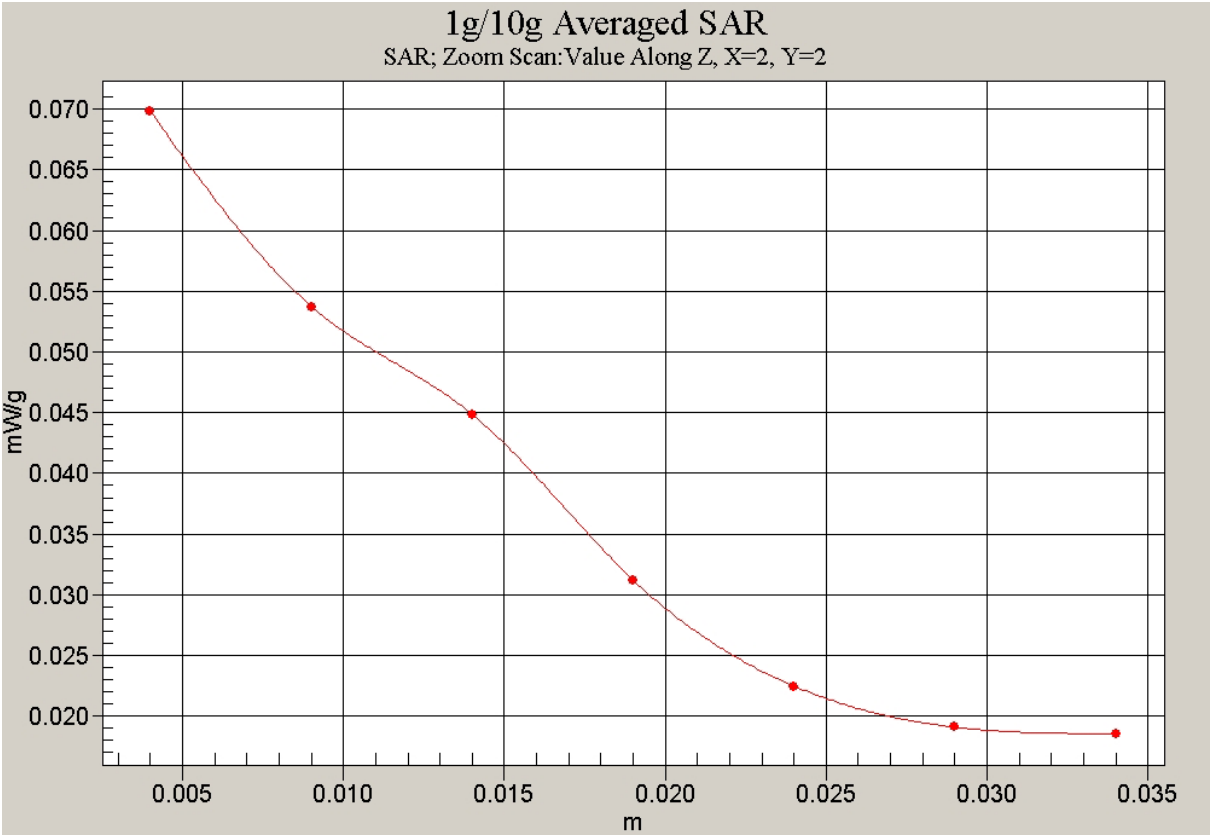


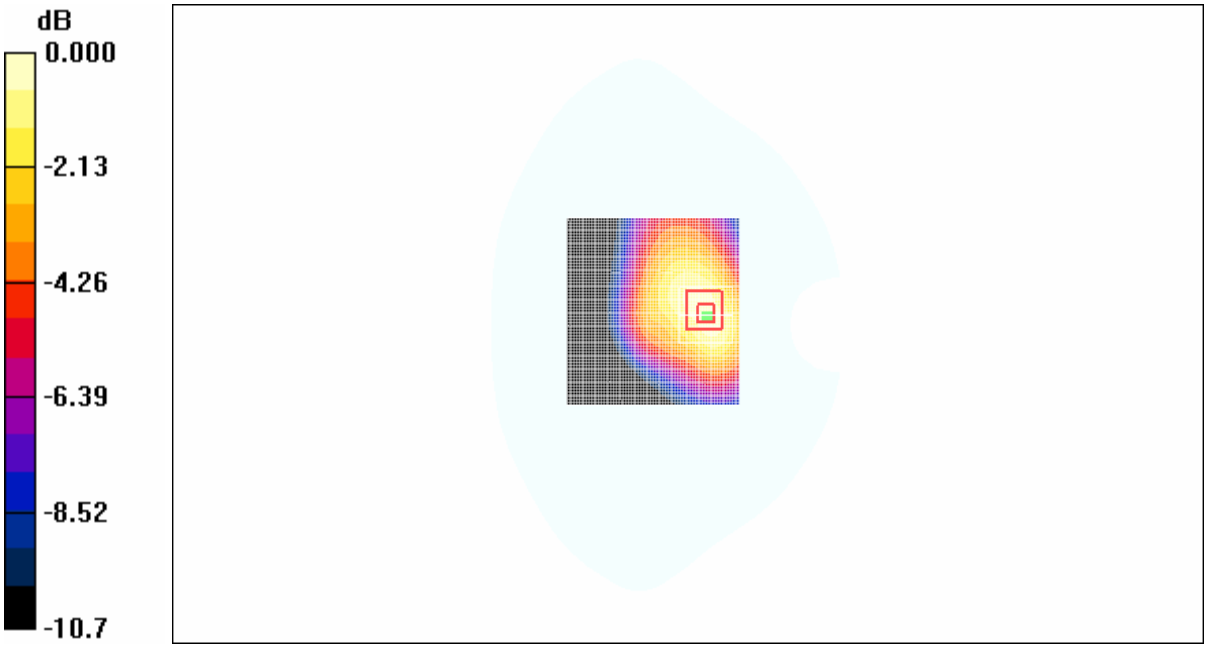
Fig.12 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded)

EV-DO REV.A 800 Test Position 2 with DELL Laptop-antenna folded

Date/Time: 2006-11-13 16:09:33
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.348 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.4 V/m; Power Drift = 0.041 dB
Peak SAR (extrapolated) = 0.479 W/kg
SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.216 mW/g
Maximum value of SAR (measured) = 0.354 mW/g



0 dB = 0.354mW/g

Fig. 13 EV-DO REV.A 800 CH384 Test Position 2-antenna unfolded

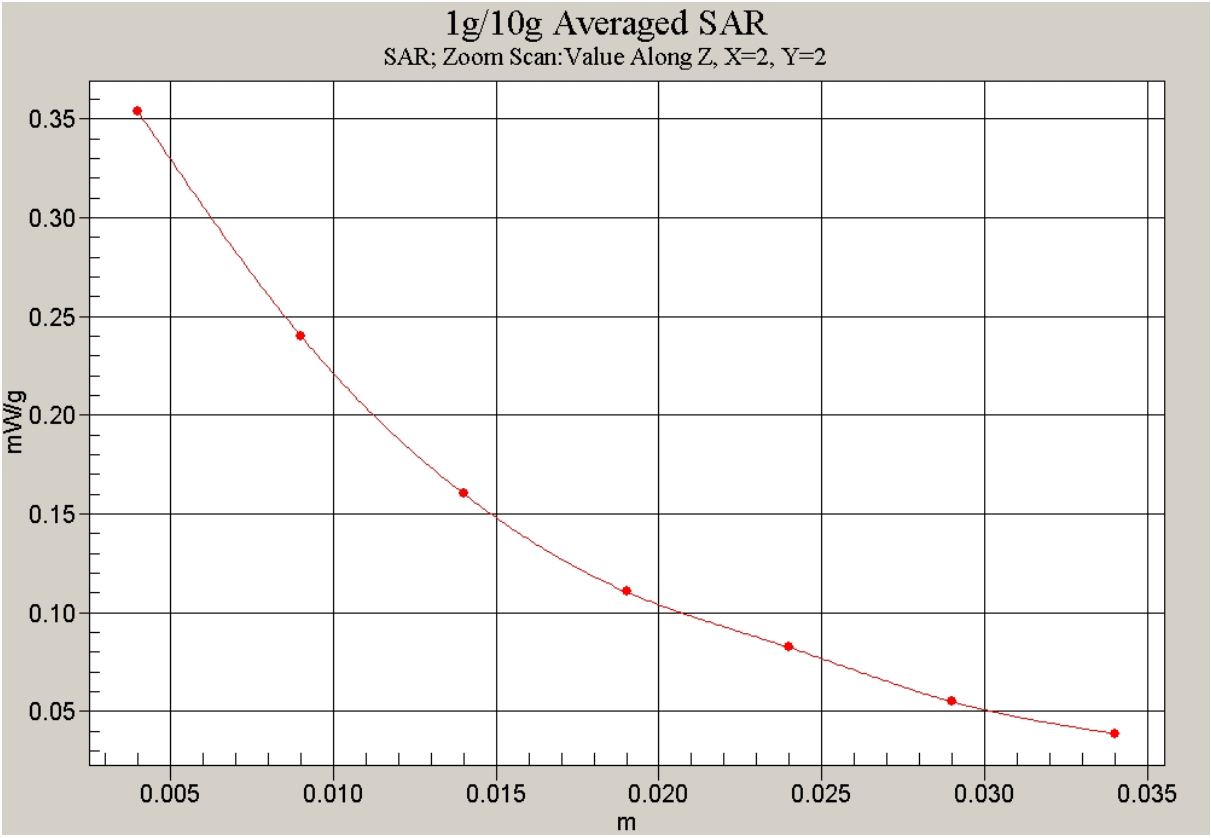


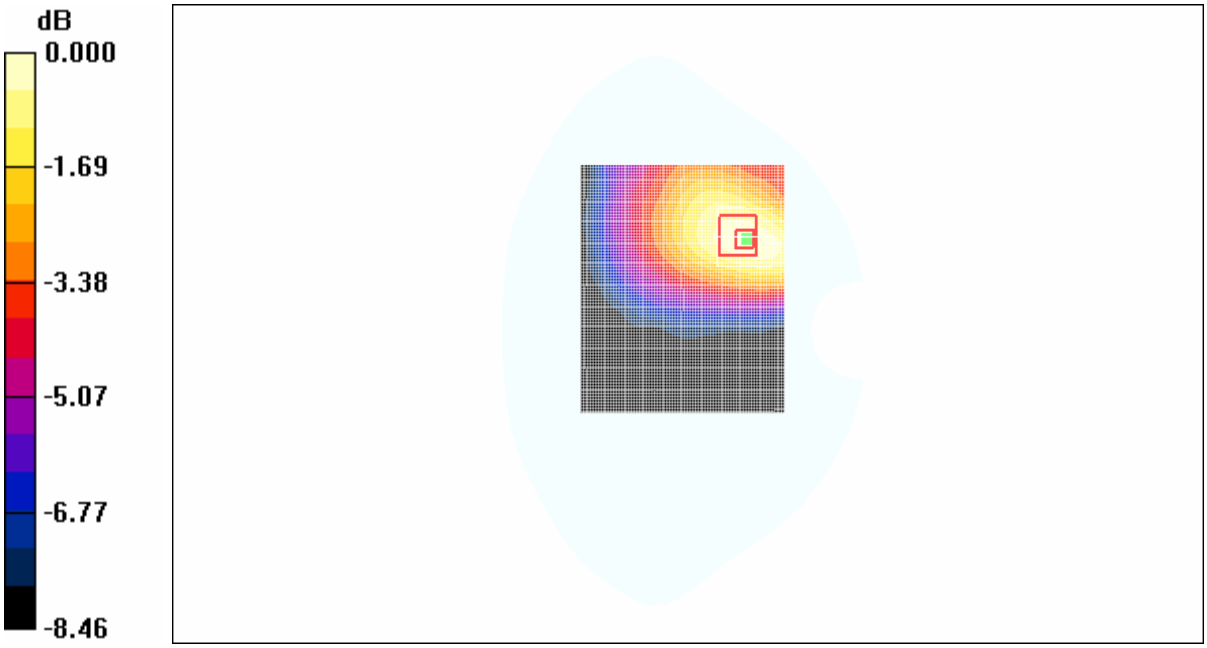
Fig.14 Z-Scan at power reference point
(EV-DO REV.A 800CH384 Test Position 2-antenna unfolded)

EV-DO REV.A 800 Test Position 3 with DELL Laptop-antenna unfolded

Date/Time: 2006-11-13 16:41:04
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.081 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.15 V/m; Power Drift = -0.158 dB
Peak SAR (extrapolated) = 0.095 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.058 mW/g
Maximum value of SAR (measured) = 0.082 mW/g



0 dB = 0.082mW/g

Fig. 15 EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded

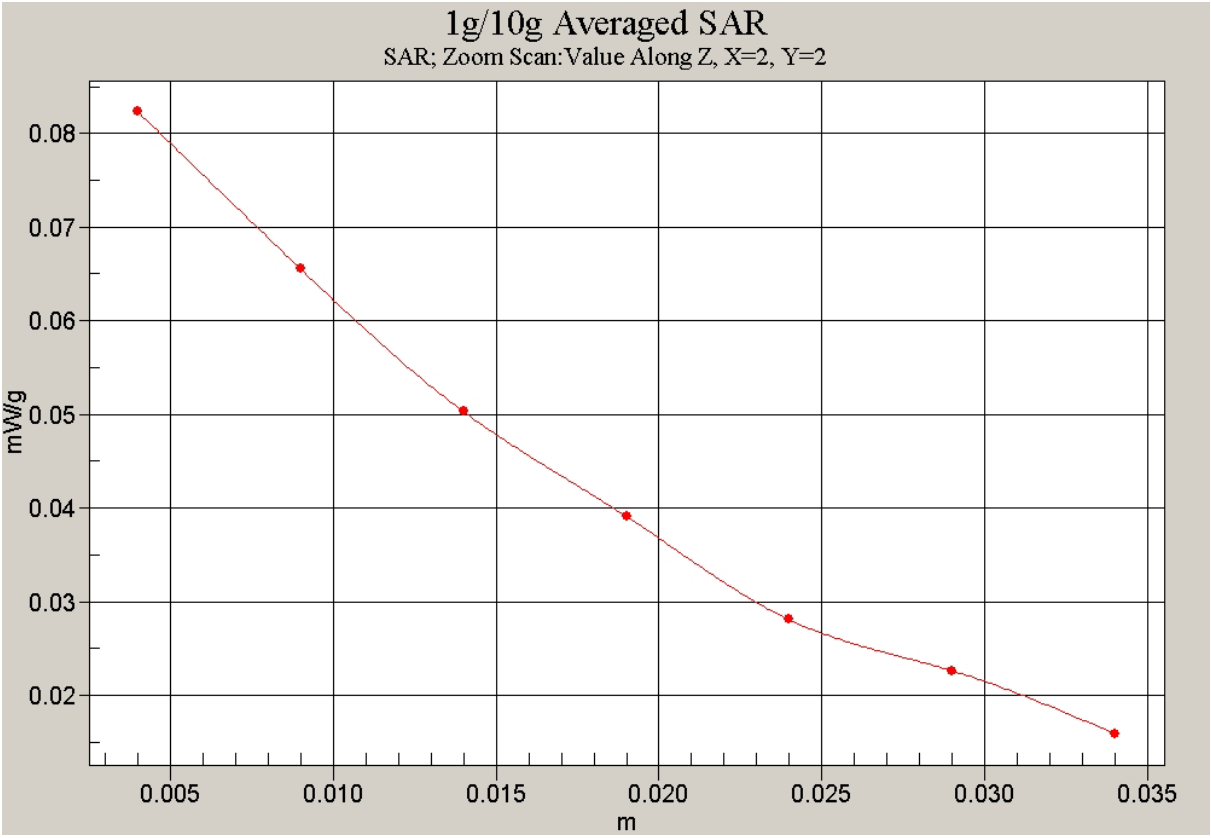


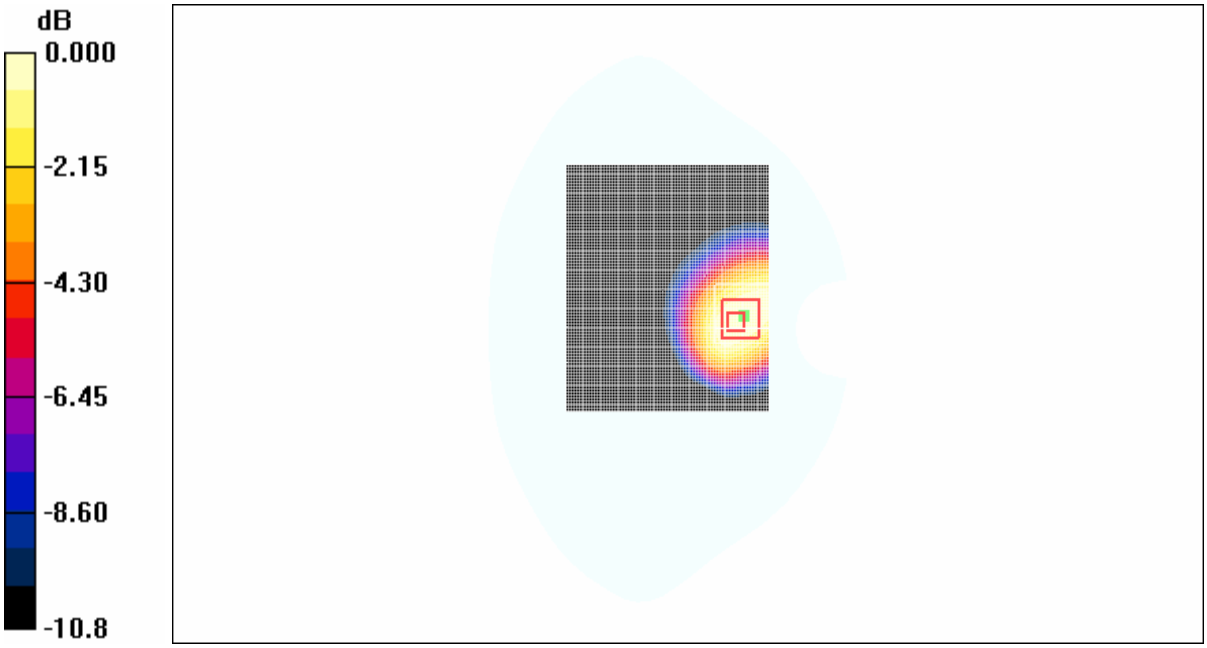
Fig.16 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded)

EV-DO REV.A 800 Test Position 4 with DELL Laptop-antenna unfolded

Date/Time: 2006-11-13 17:53:05
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.279 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.95 V/m; Power Drift = -0.172 dB
Peak SAR (extrapolated) = 0.364 W/kg
SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.174 mW/g
Maximum value of SAR (measured) = 0.271 mW/g



0 dB = 0.271mW/g

Fig. 17 EV-DO REV.A 800 CH384 Test Position 4-antenna unfolded

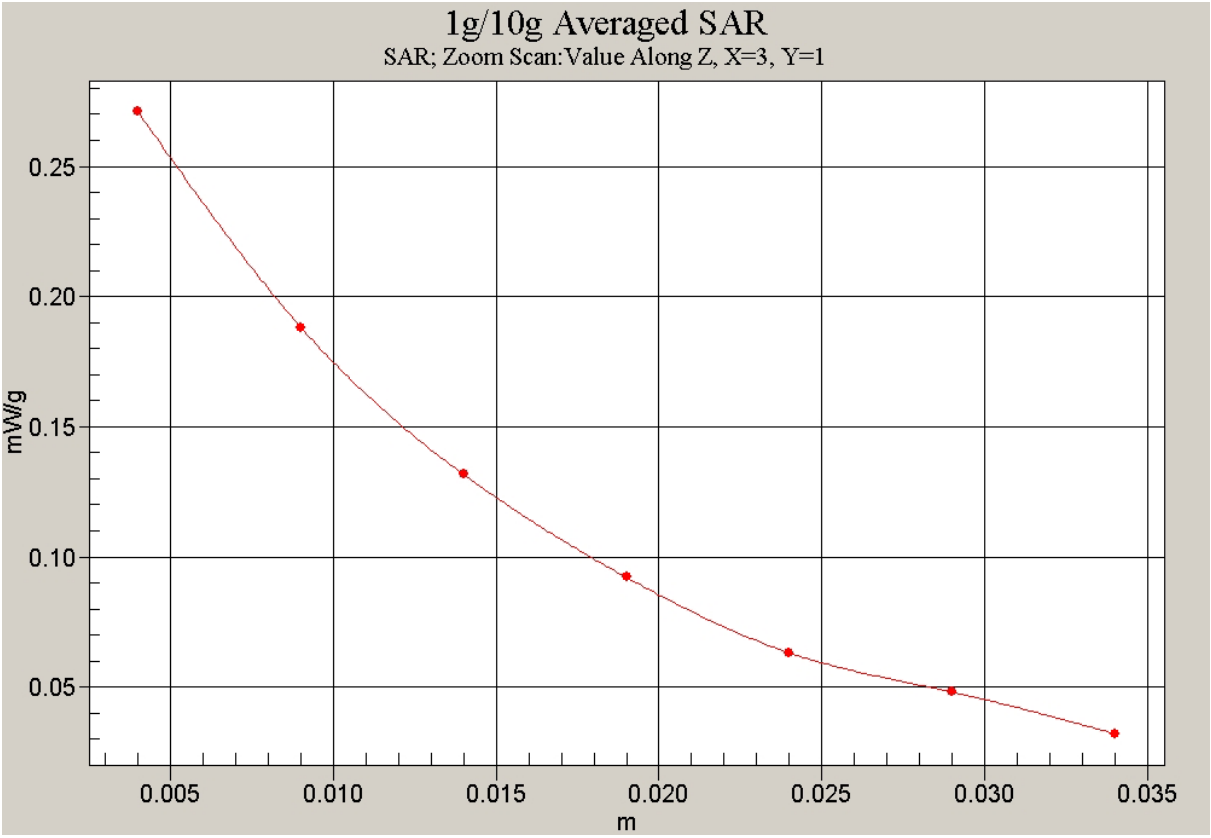


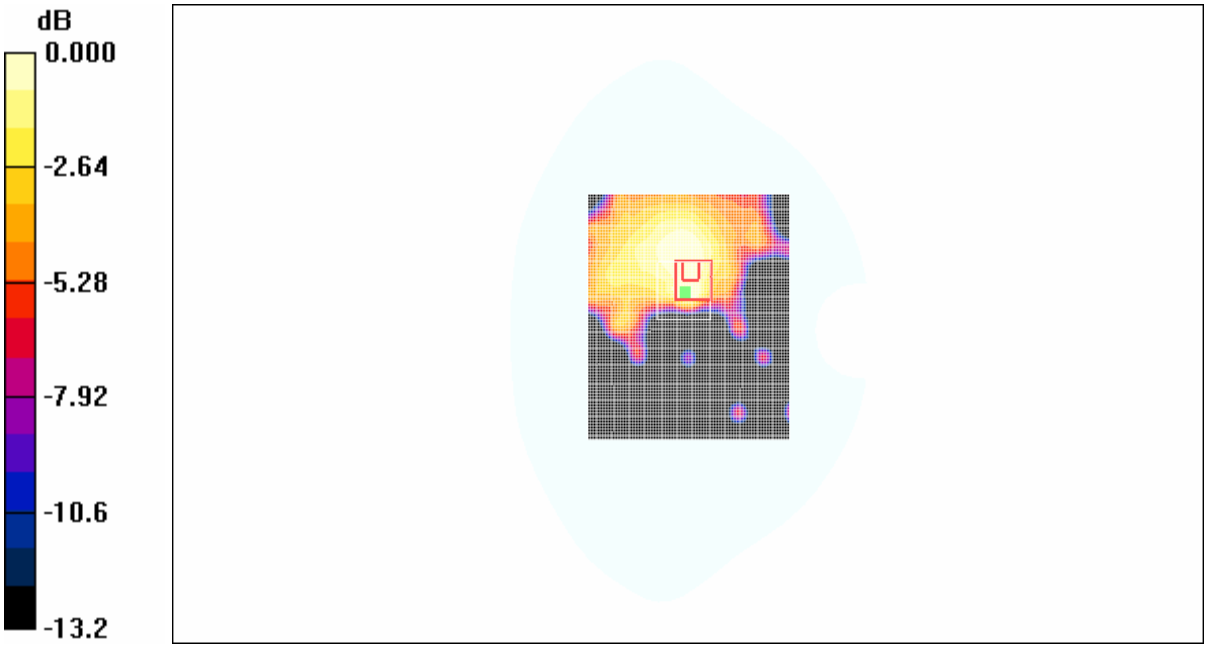
Fig.18 Z-Scan at power reference point
(EV-DO REV.A 800CH384 Test Position 4-antenna unfolded)

EV-DO REV.A 800 Test Position 5 with DELL Laptop-antenna unfolded

Date/Time: 2006-11-13 18:38:05
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3^{o}C Liqiud Temperature: 22.5^{o}C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.019 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.48 V/m; Power Drift = -0.152 dB
Peak SAR (extrapolated) = 0.038 W/kg
SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00768 mW/g
Maximum value of SAR (measured) = 0.015 mW/g



0 dB = 0.015mW/g

Fig. 19 EV-DO REV.A 800 CH384 Test Position 5-antenna unfolded

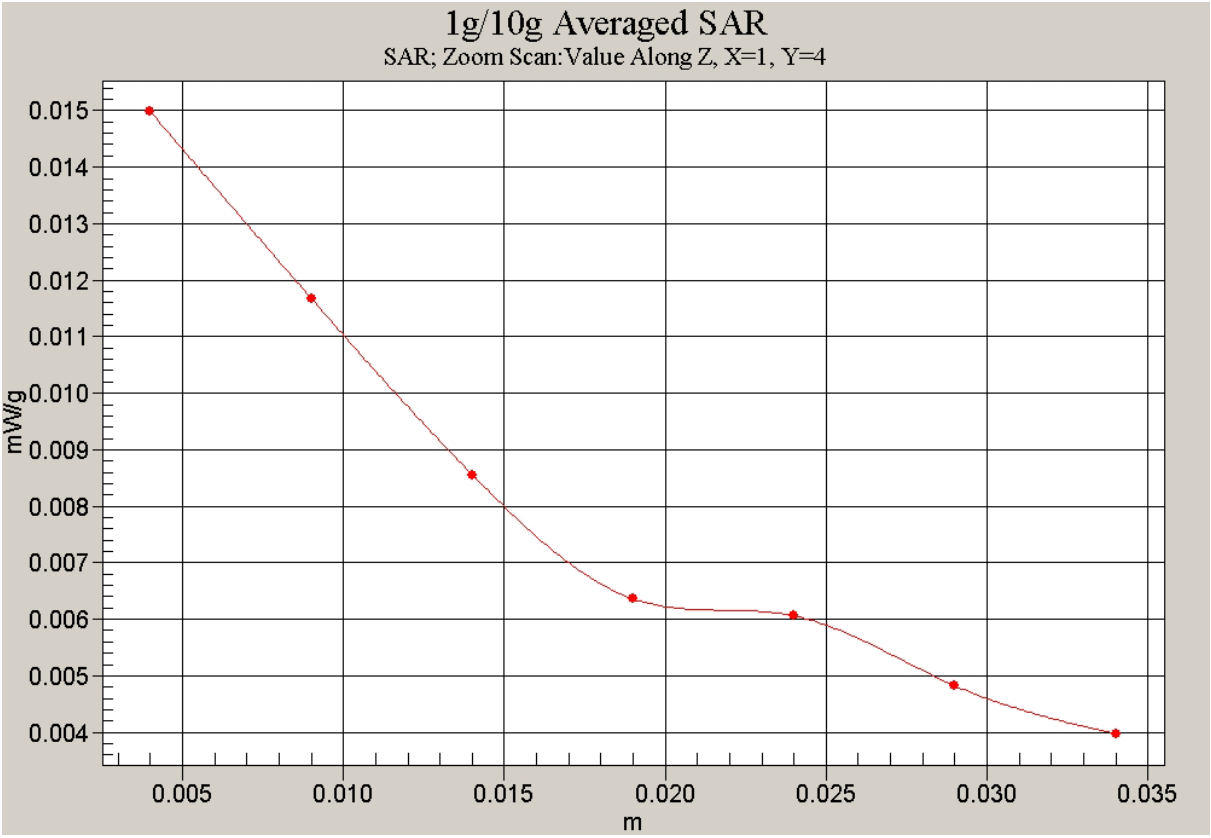


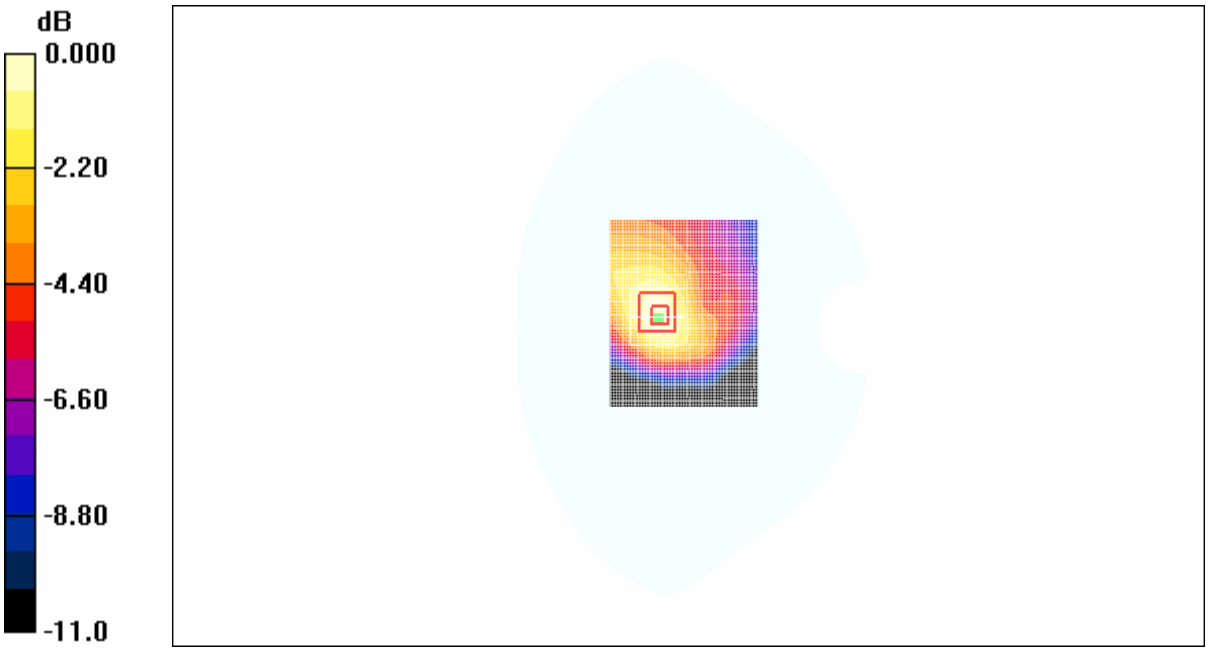
Fig.20 Z-Scan at power reference point
(EV-DO REV.A 800CH384 Test Position 5-antenna unfolded)

EV-DO REV.A 800 Test Position 1 with HP Laptop-antenna folded

Date/Time: 2006-11-13 9:01:56
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
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) = 0.070 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.21 V/m; Power Drift = -0.077 dB
Peak SAR (extrapolated) = 0.083 W/kg
SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.043 mW/g
Maximum value of SAR (measured) = 0.068 mW/g



0 dB = 0.068mW/g

Fig. 21 EV-DO REV.A 800 CH384 Test Position 1-antenna folded

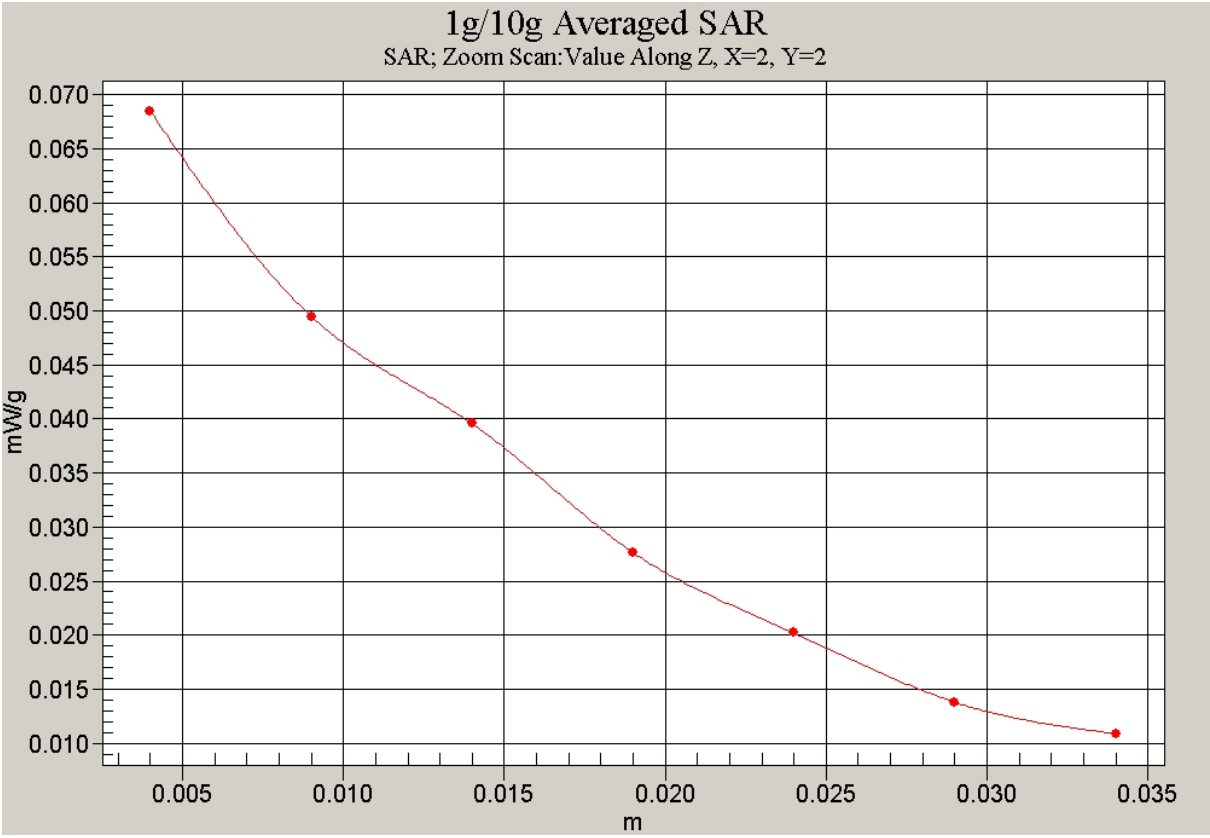


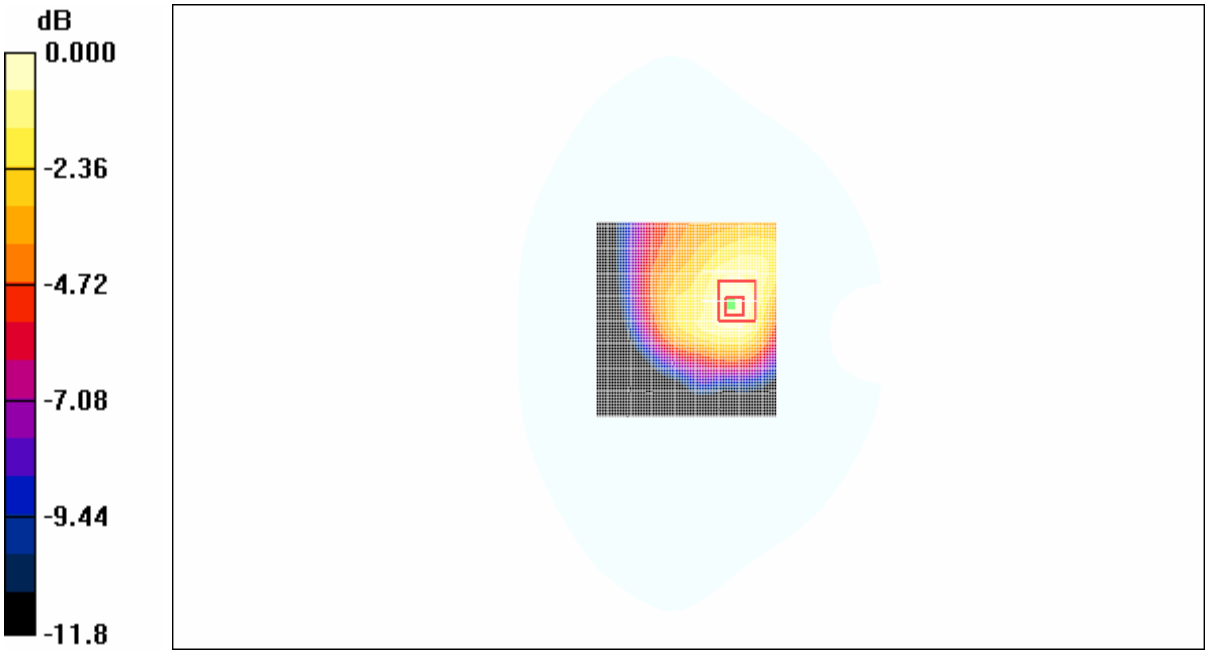
Fig.22 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna folded)

EV-DO REV.A 800 Test Position 2 with HP Laptop-antenna folded

Date/Time: 2006-11-13 10:42:54
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.100 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.31 V/m; Power Drift = -0.090 dB
Peak SAR (extrapolated) = 0.126 W/kg
SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.100 mW/g



0 dB = 0.100mW/g

Fig. 23 EV-DO REV.A 800 CH384 Test Position 2-antenna folded

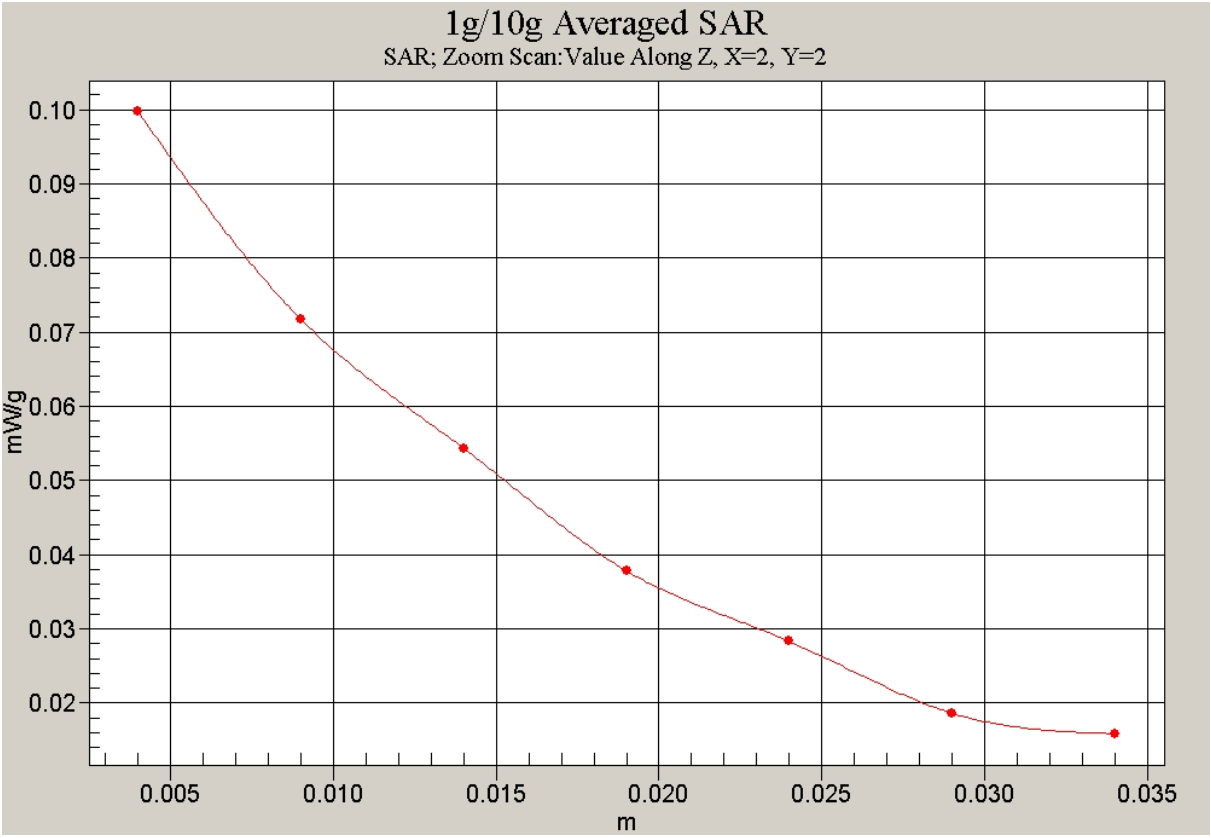


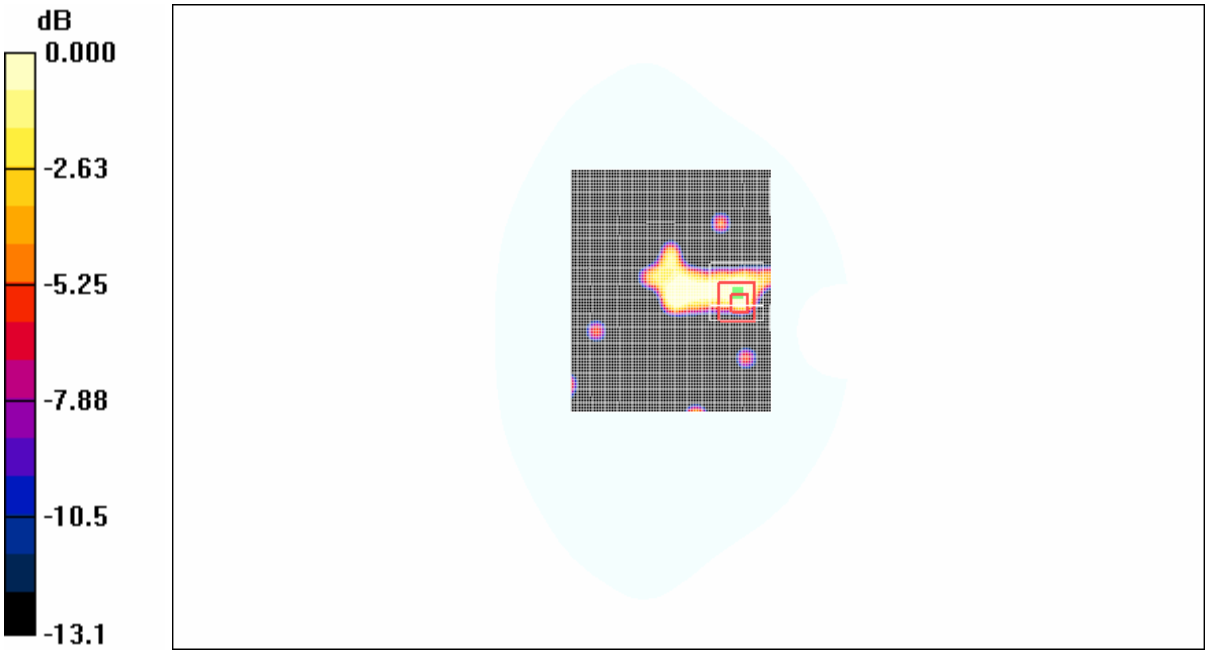
Fig.24 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 2-antenna folded)

EV-DO REV.A 800 Test Position 3 with HP Laptop-antenna folded

Date/Time: 2006-11-13 13:56:12
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.027 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.39 V/m; Power Drift = 0.200 dB
Peak SAR (extrapolated) = 0.018 W/kg
SAR(1 g) = 0.00314 mW/g; SAR(10 g) = 0.00144 mW/g
Maximum value of SAR (measured) = 0.010 mW/g



0 dB = 0.010mW/g

Fig.25 EV-DO REV.A 800 CH384 Test Position 3-antenna folded

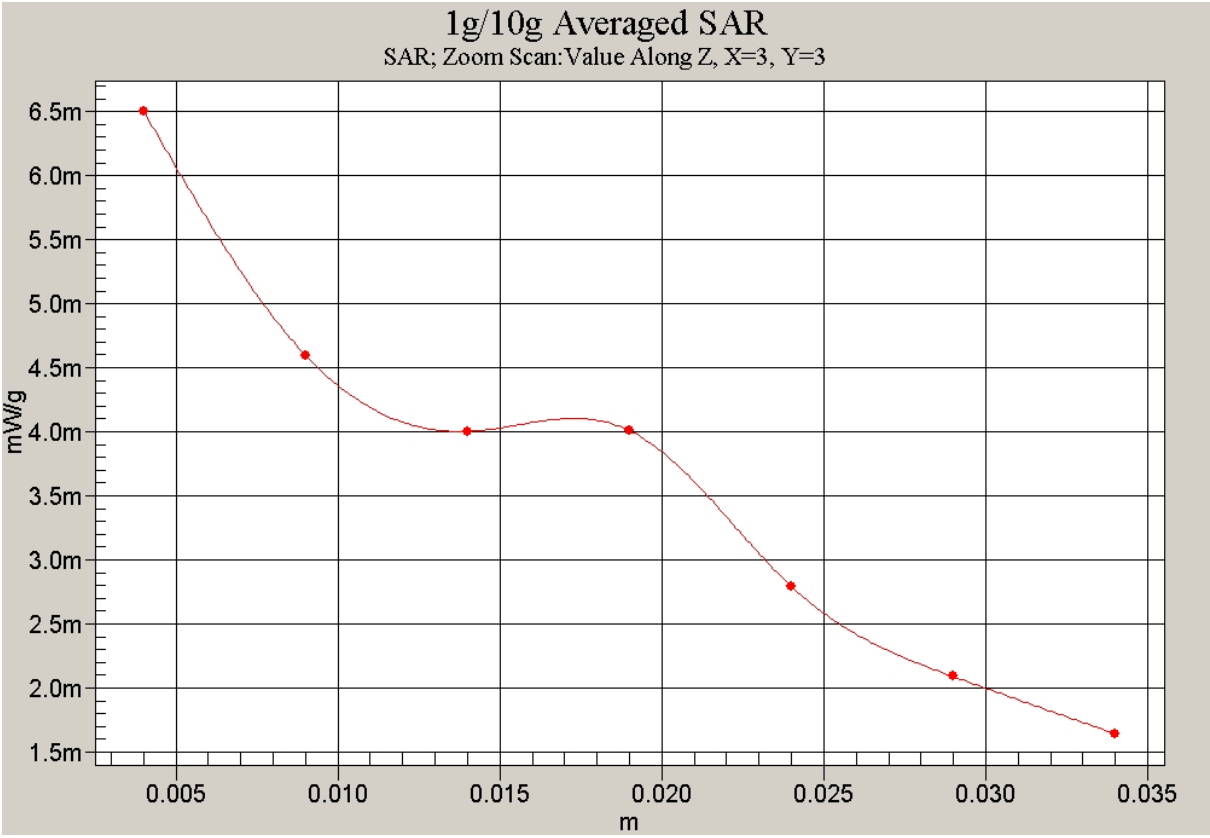


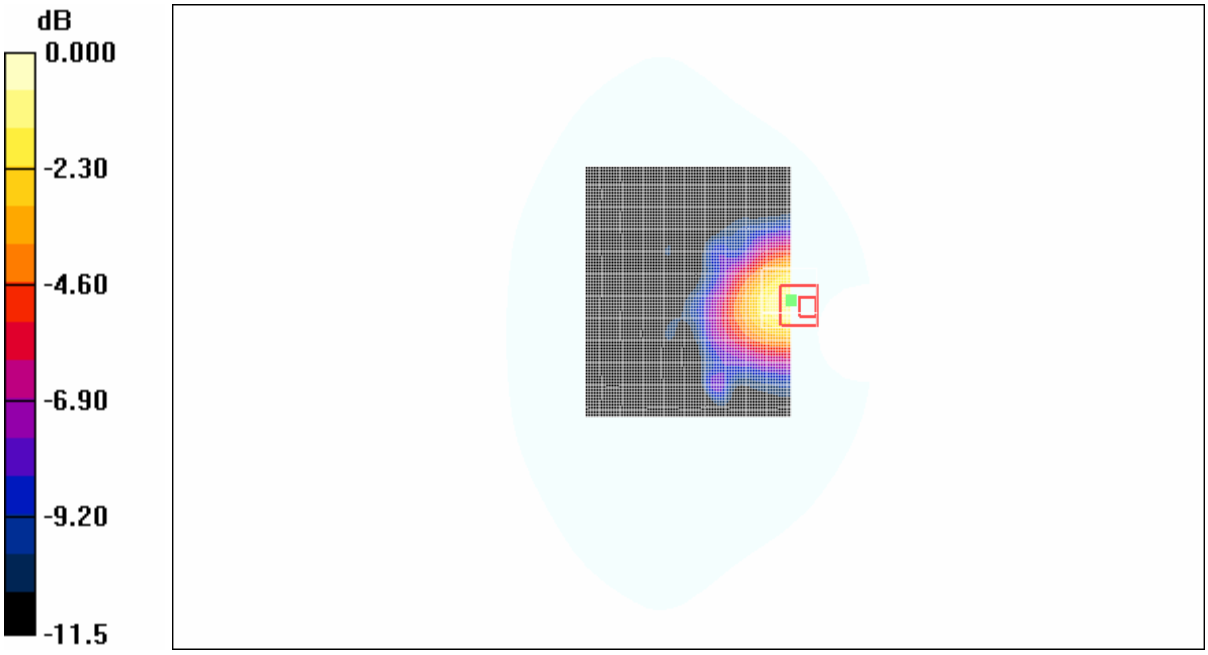
Fig.26 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna folded)

EV-DO REV.A 800 Test Position 4 with HP Laptop-antenna folded

Date/Time: 2006-11-13 14:50:43
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.047 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.16 V/m; Power Drift = 0.119 dB
Peak SAR (extrapolated) = 0.076 W/kg
SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.056 mW/g



0 dB = 0.056mW/g

Fig. 27 EV-DO REV.A 800 CH384 Test Position 4-antenna folded

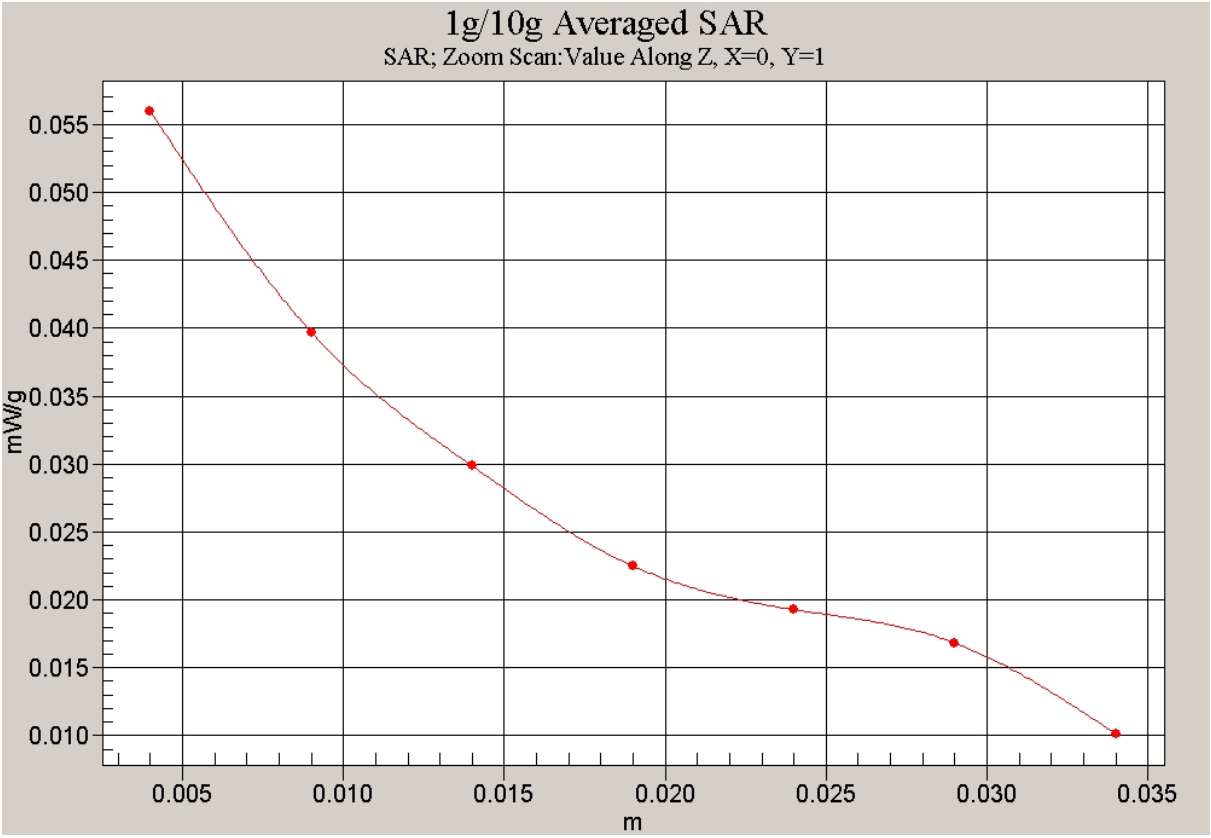


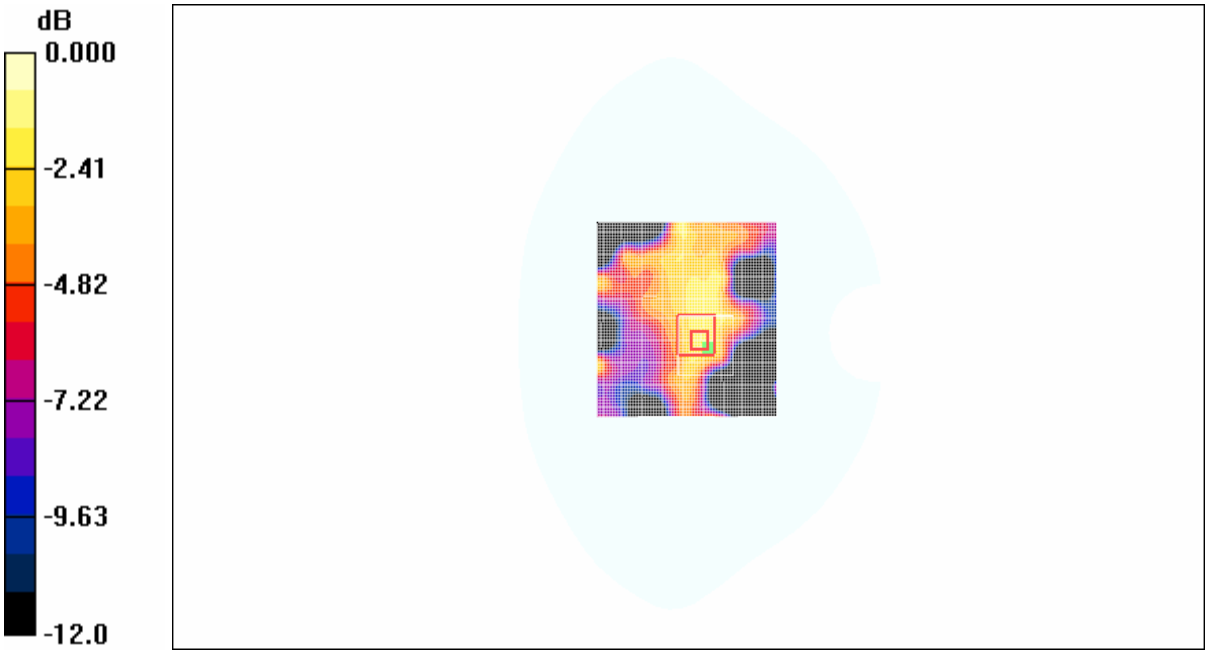
Fig.28 Z-Scan at power reference point
(EV-DO REV.A 800CH384 Test Position 4-antenna folded)

EV-DO REV.A 800 Test Position 5 with HP Laptop-antenna folded

Date/Time: 2006-11-13 11:14:44
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.010 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.10 V/m; Power Drift = 0.183 dB
Peak SAR (extrapolated) = 0.054 W/kg
SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00454 mW/g
Maximum value of SAR (measured) = 0.014 mW/g



0 dB = 0.014mW/g

Fig. 29 EV-DO REV.A 800 CH384 Test Position 5-antenna folded

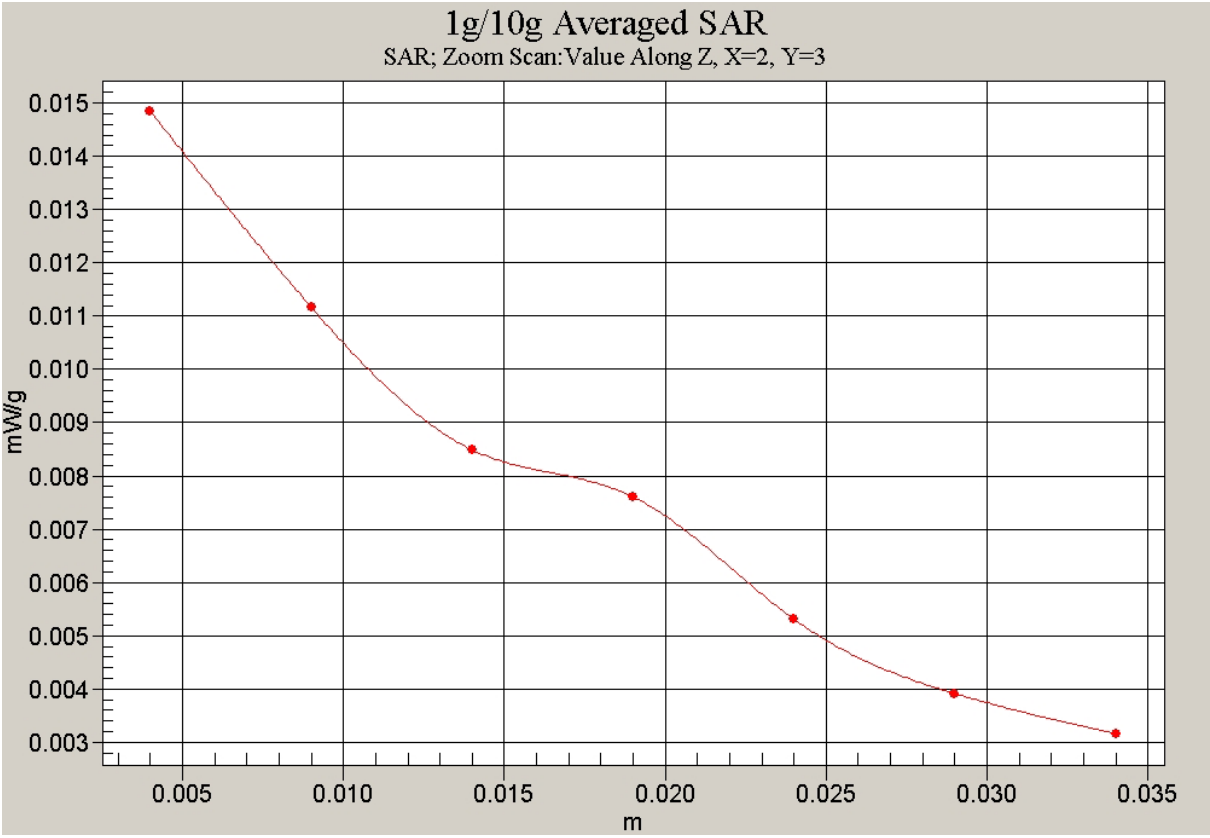


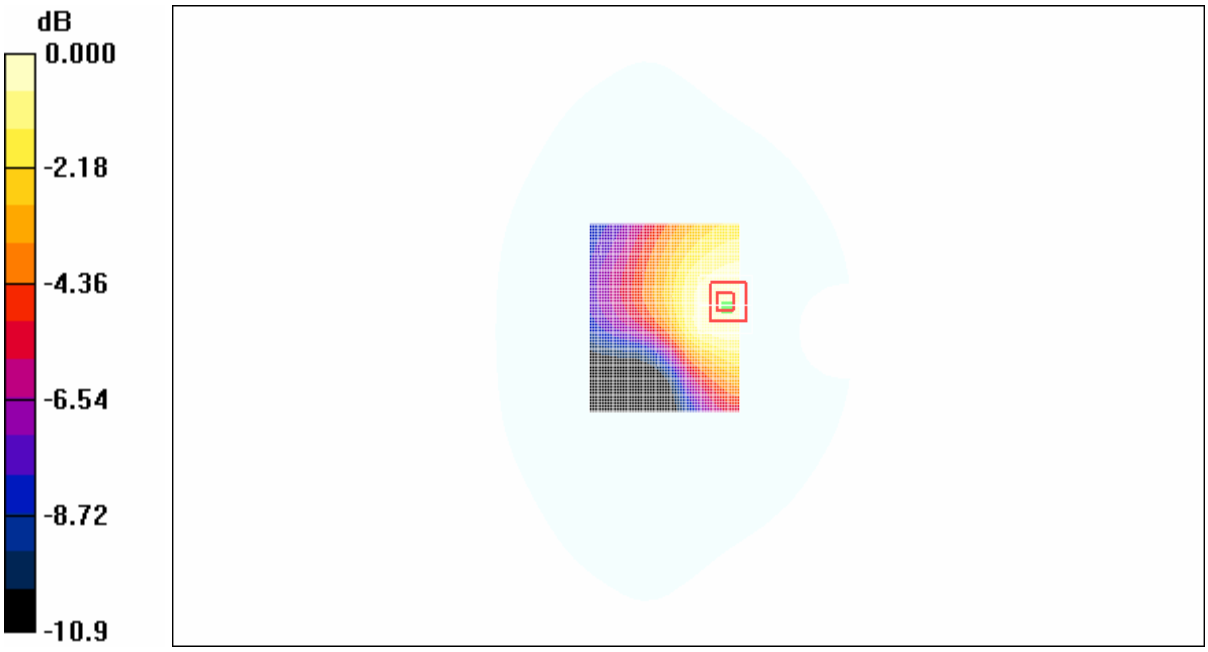
Fig.30 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 5-antenna folded)

EV-DO REV.A 800 Test Position 1 with HP Laptop-antenna unfolded

Date/Time: 2006-11-13 8:47:17
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
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) = 0.075 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.49 V/m; Power Drift = -0.163 dB
Peak SAR (extrapolated) = 0.091 W/kg
SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.074 mW/g



0 dB = 0.074mW/g

Fig. 31 EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded

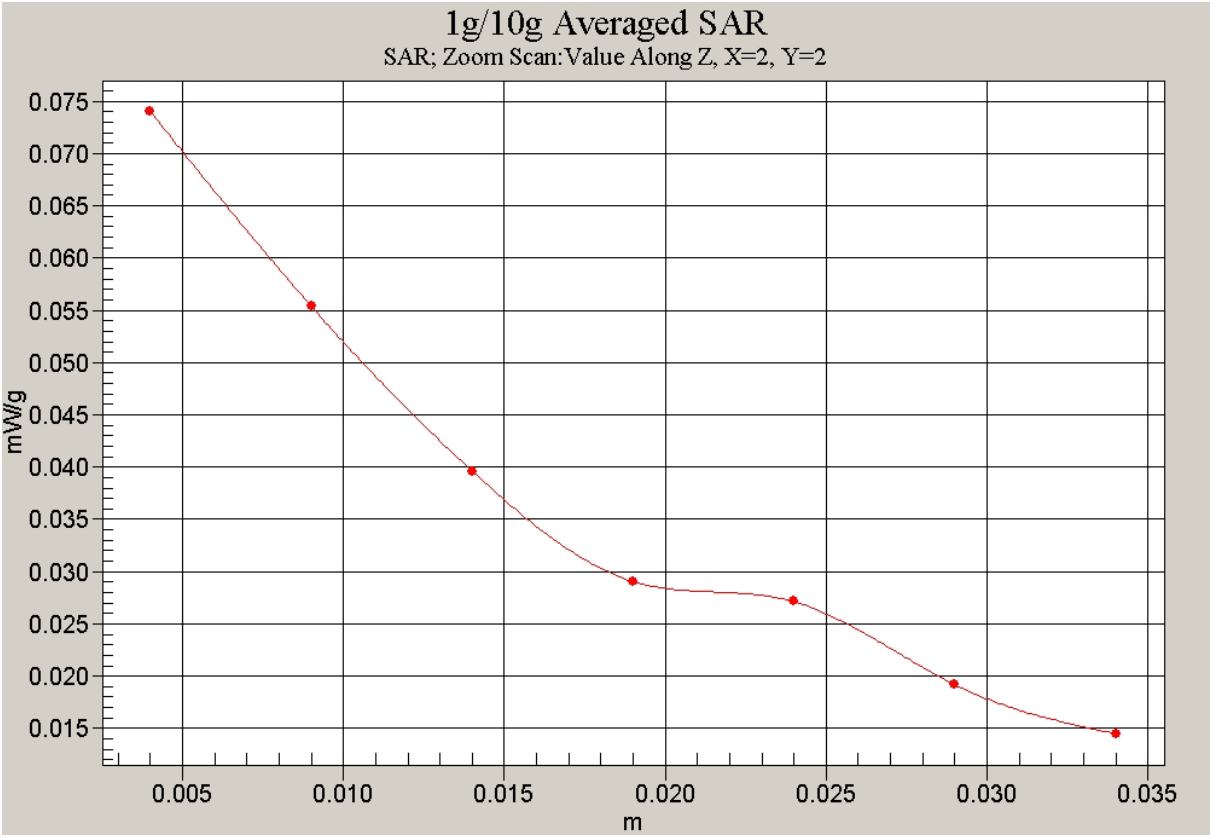


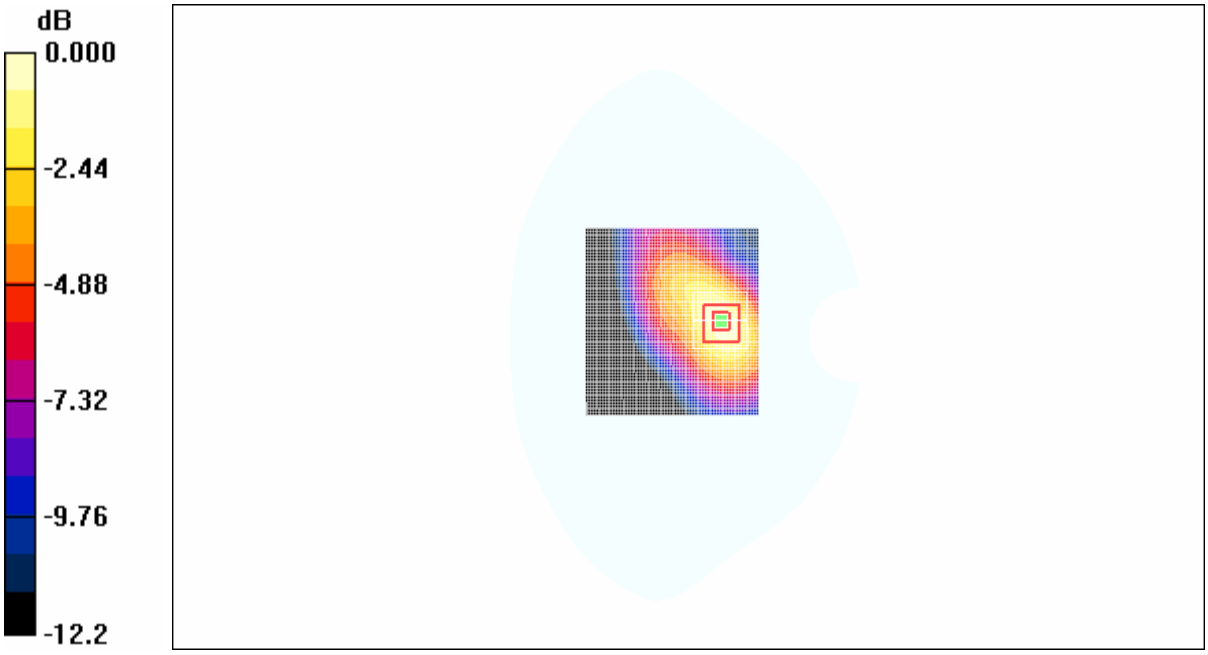
Fig.32 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded)

EV-DO REV.A 800 Test Position 2 with HP Laptop-antenna folded

Date/Time: 2006-11-13 10:28:19
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.290 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.047 dB
Peak SAR (extrapolated) = 0.404 W/kg
SAR(1 g) = 0.268 mW/g; SAR(10 g) = 0.168 mW/g
Maximum value of SAR (measured) = 0.294 mW/g



0 dB = 0.294mW/g

Fig. 33 EV-DO REV.A 800 CH384 Test Position 2-antenna unfolded

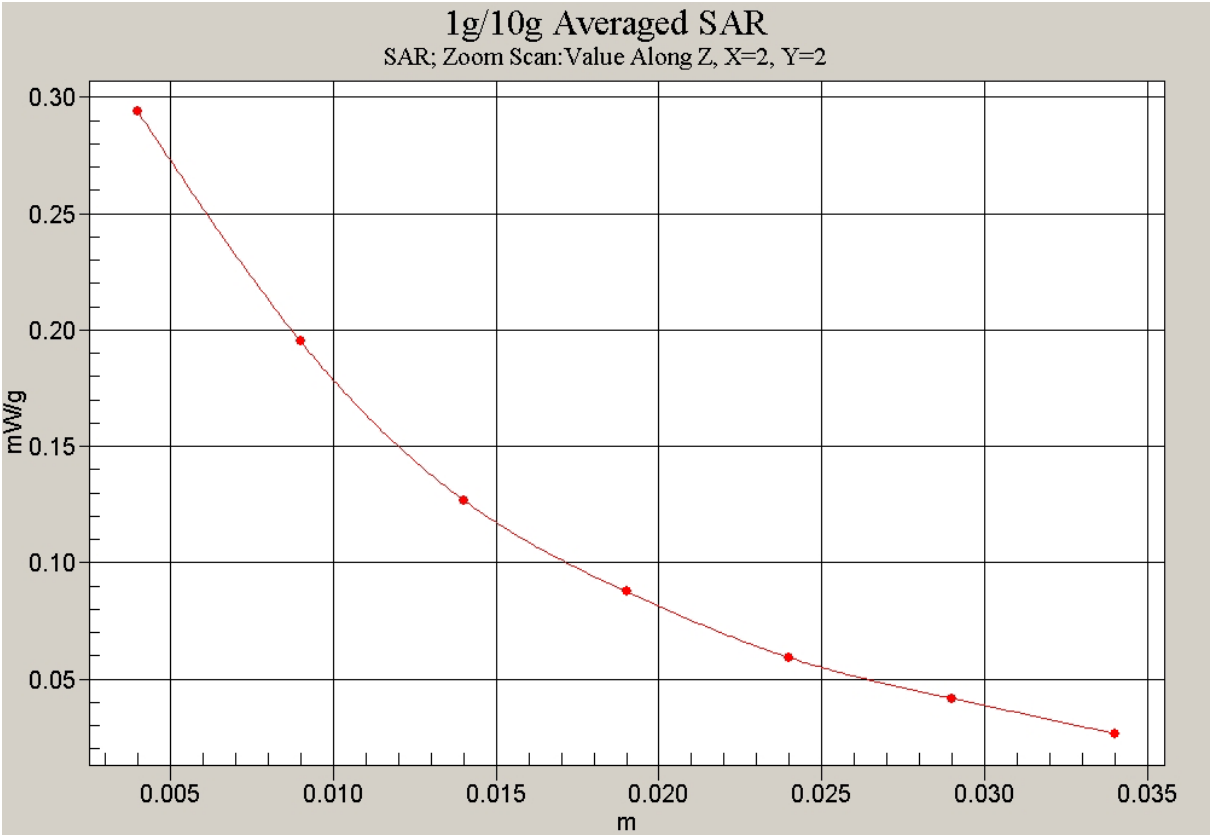


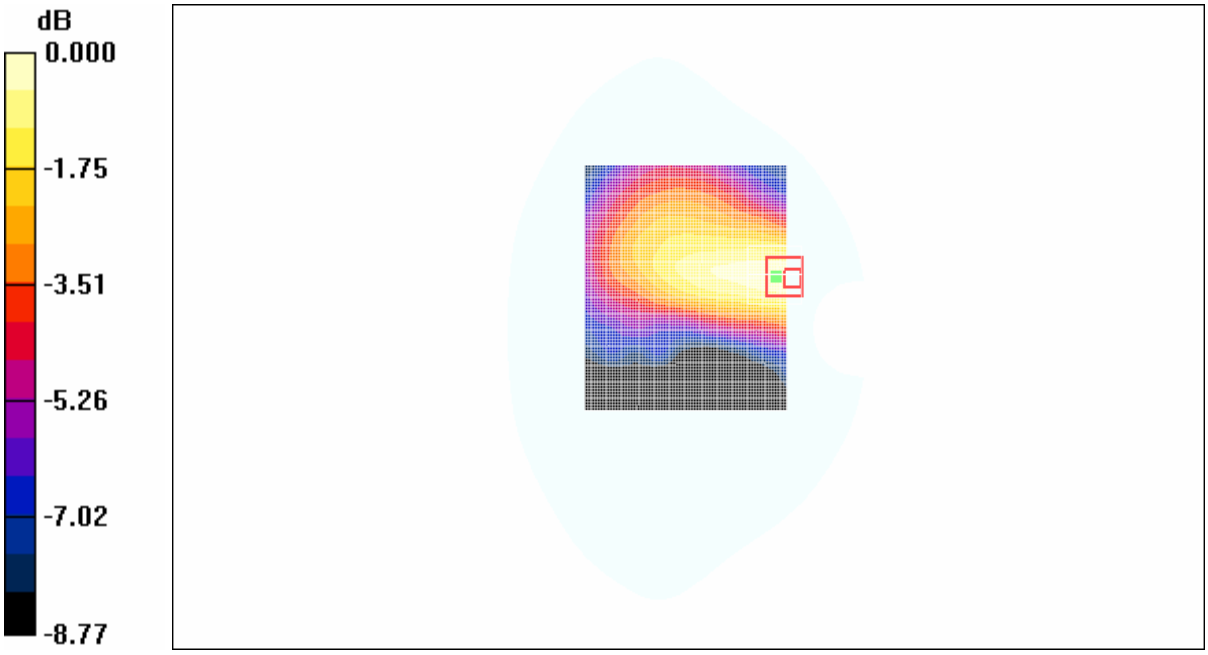
Fig.34 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 2-antenna unfolded)

EV-DO REV.A 800 Test Position 3 with HP Laptop-antenna unfolded

Date/Time: 2006-11-13 13:38:36
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.069 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.35 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 0.091 W/kg
SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.048 mW/g
Maximum value of SAR (measured) = 0.072 mW/g



0 dB = 0.072mW/g

Fig. 35 EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded

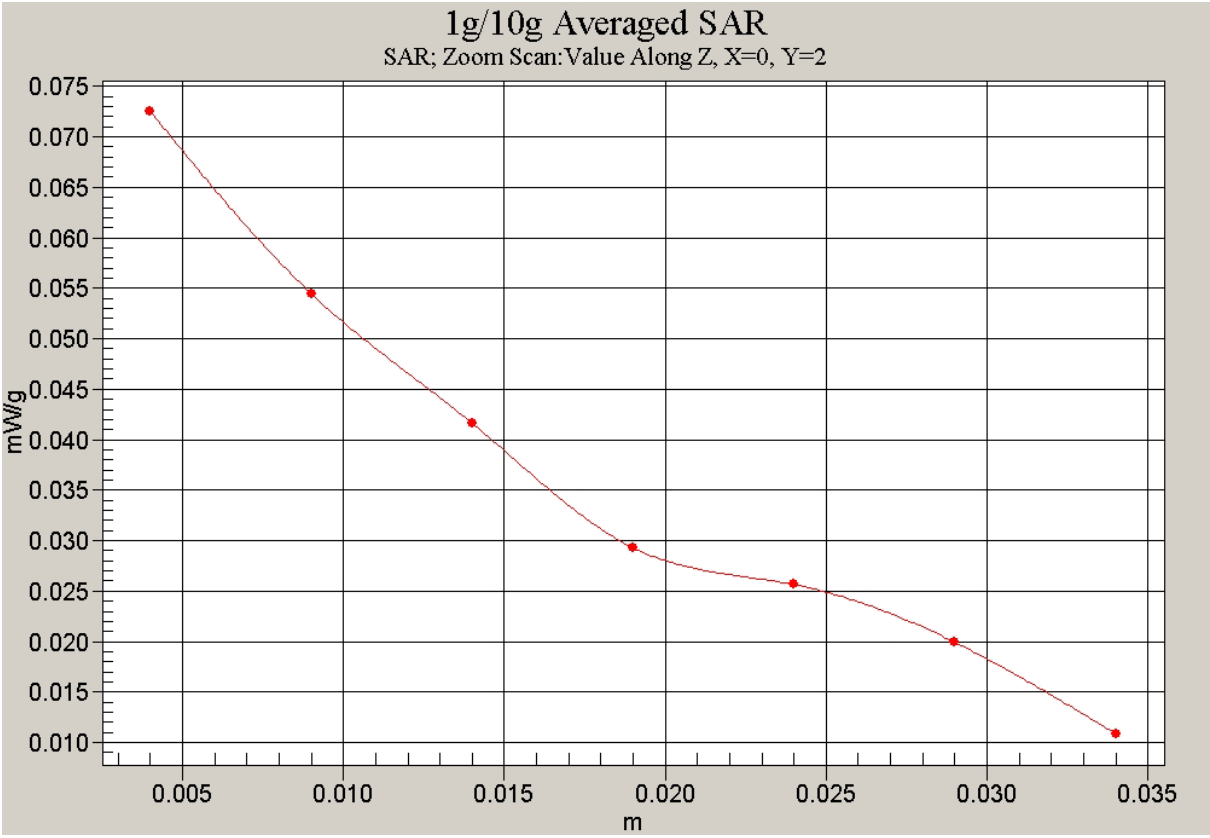


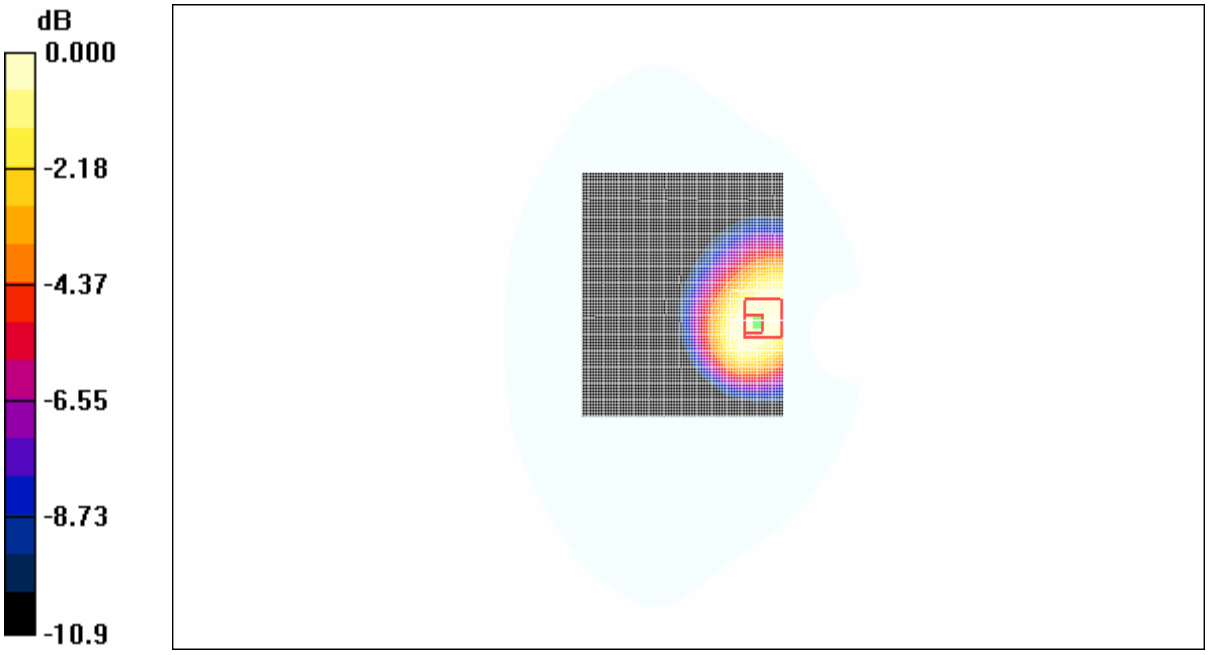
Fig.36 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded)

EV-DO REV.A 800 Test Position 4 with HP Laptop-antenna unfolded

Date/Time: 2006-11-13 14:35:03
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.259 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.44 V/m; Power Drift = -0.147 dB
Peak SAR (extrapolated) = 0.325 W/kg
SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.159 mW/g
Maximum value of SAR (measured) = 0.242 mW/g



0 dB = 0.242mW/g

Fig. 37 EV-DO REV.A 800 CH384 Test Position 4-antenna unfolded

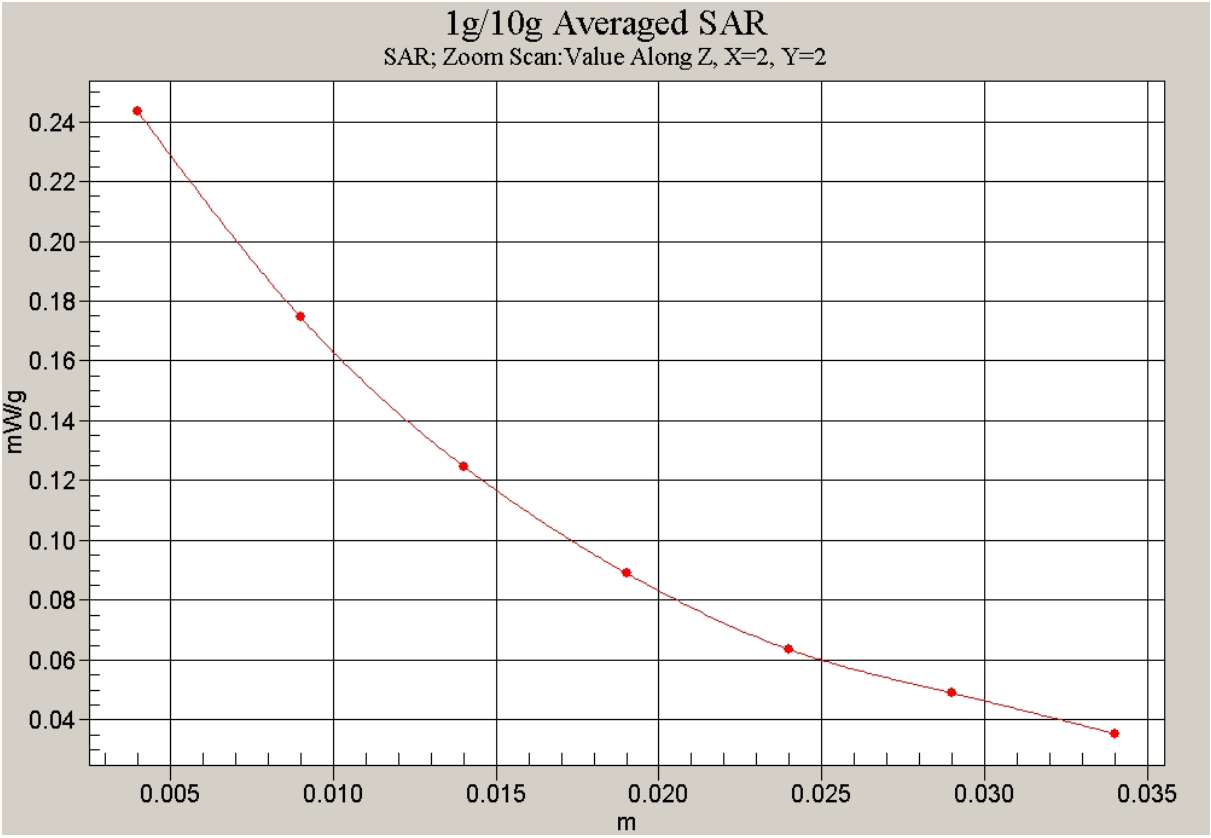


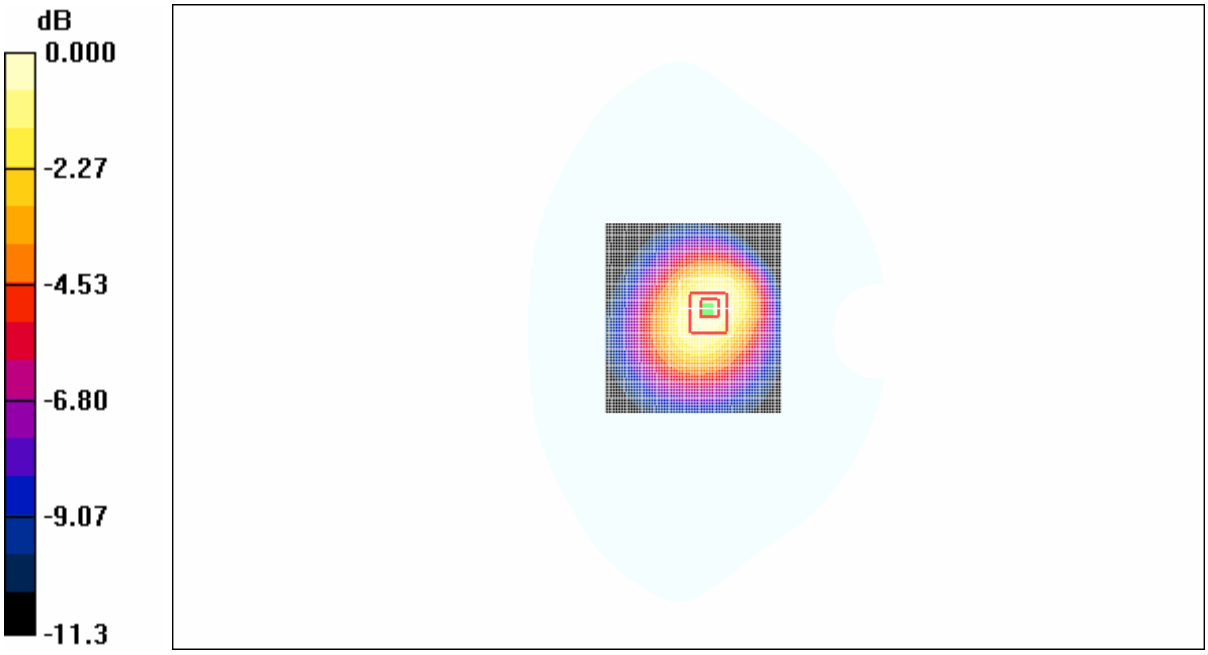
Fig.38 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 4-antenna unfolded)

EV-DO REV.A 800 Test Position 5 with HP Laptop-antenna unfolded

Date/Time: 2006-11-13 11:01:54
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.240 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.0 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 0.309 W/kg
SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.152 mW/g
Maximum value of SAR (measured) = 0.237 mW/g



0 dB = 0.237mW/g

Fig. 39 EV-DO REV.A 800 CH384 Test Position 5-antenna unfolded

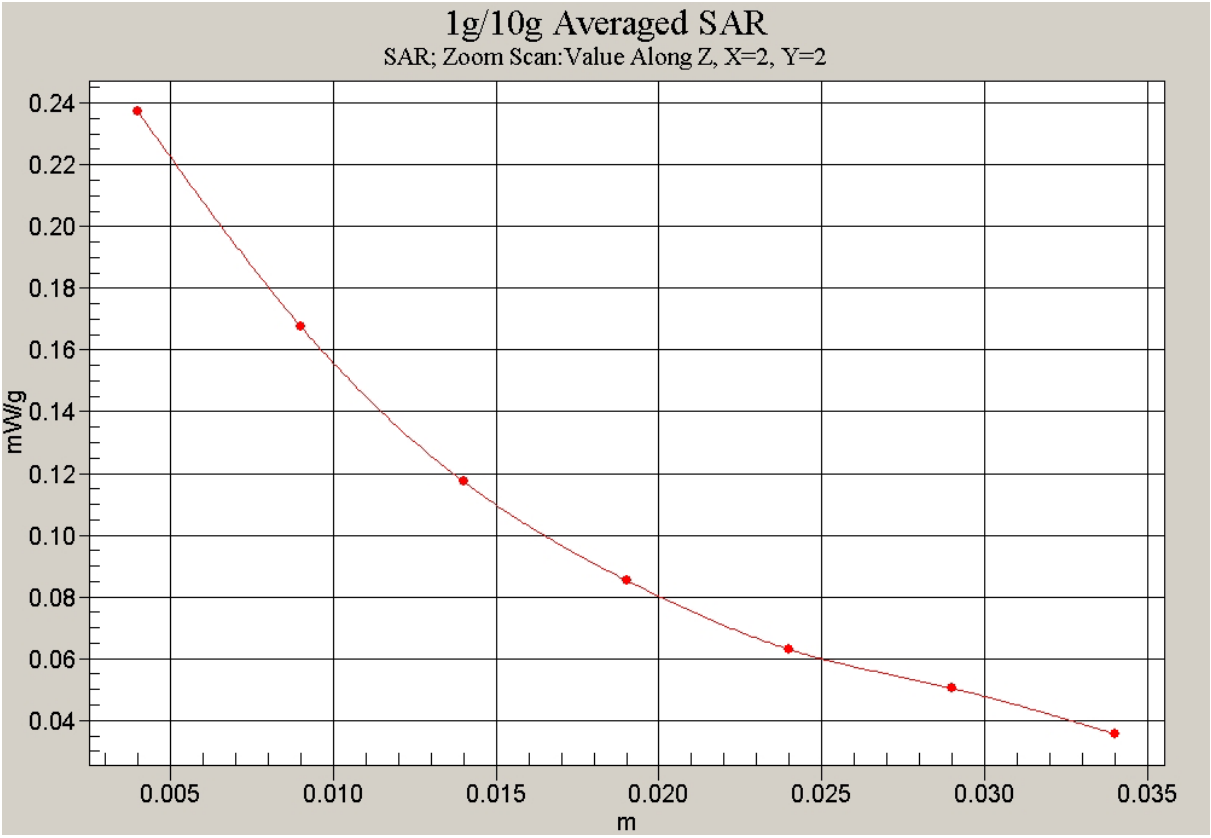


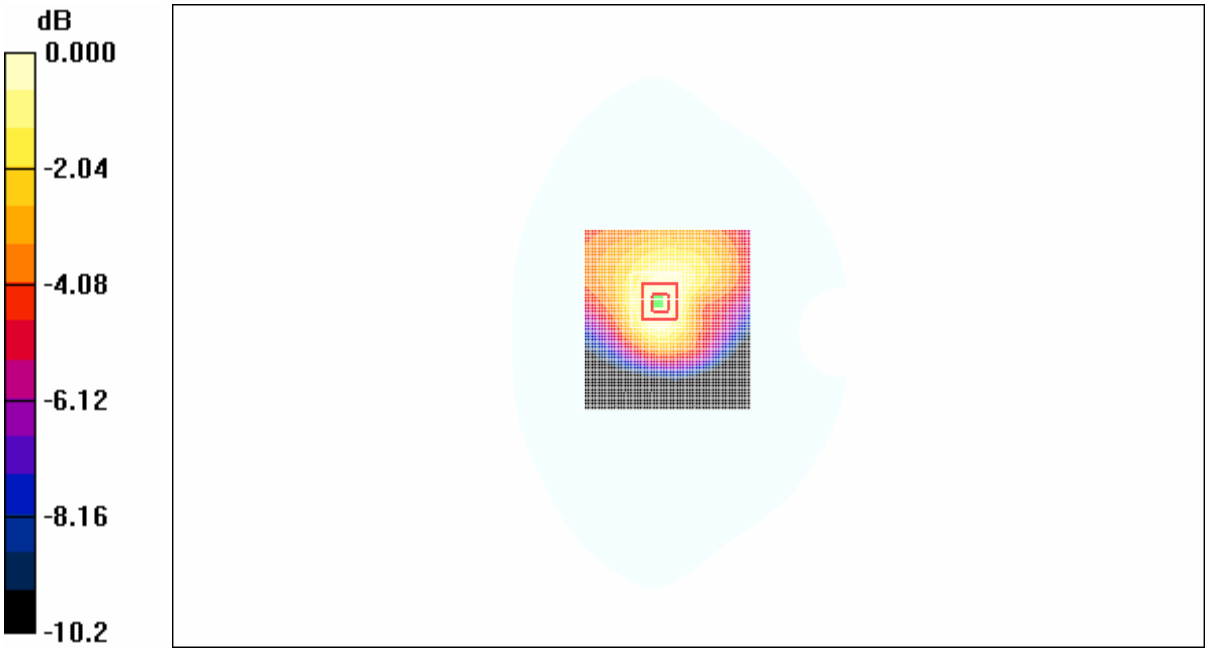
Fig.40 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 5-antenna unfolded)

EV-DO REV.A 800 Test Position 1 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 19:08:24
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.071 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.12 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 0.083 W/kg
SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.046 mW/g
Maximum value of SAR (measured) = 0.069 mW/g



0 dB = 0.069mW/g

Fig. 41 EV-DO REV.A 800 CH384 Test Position 1-antenna folded

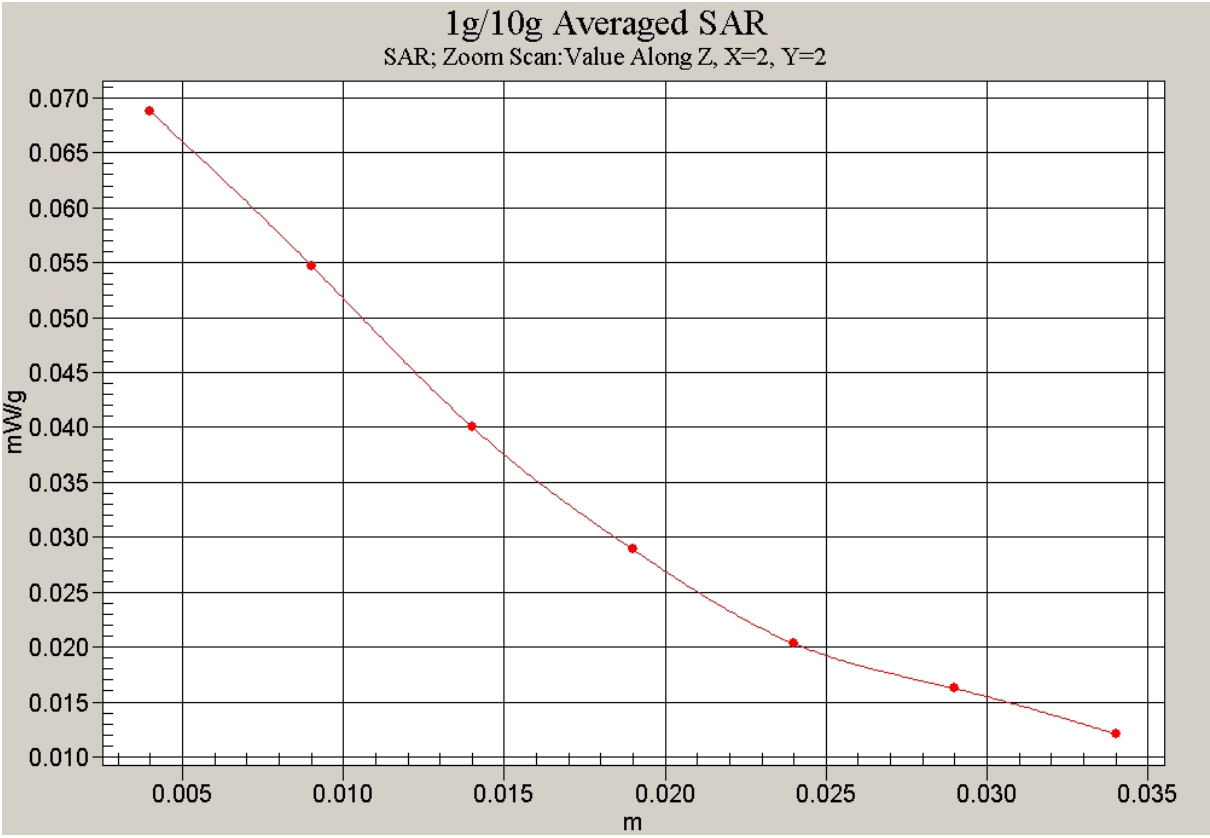


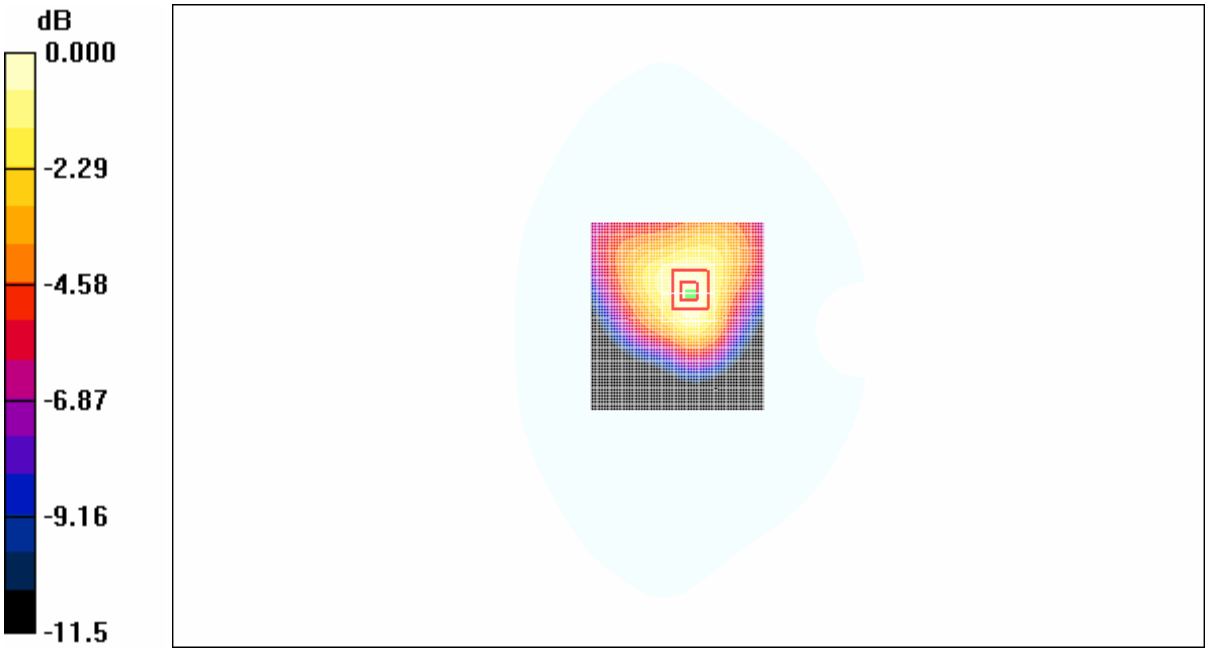
Fig.42 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna folded)

EV-DO REV.A 800 Test Position 2 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 19:59:50
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.198 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = -0.095 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.123 mW/g
Maximum value of SAR (measured) = 0.193 mW/g



0 dB = 0.193mW/g

Fig. 43 EV-DO REV.A 800 CH384 Test Position 2-antenna folded

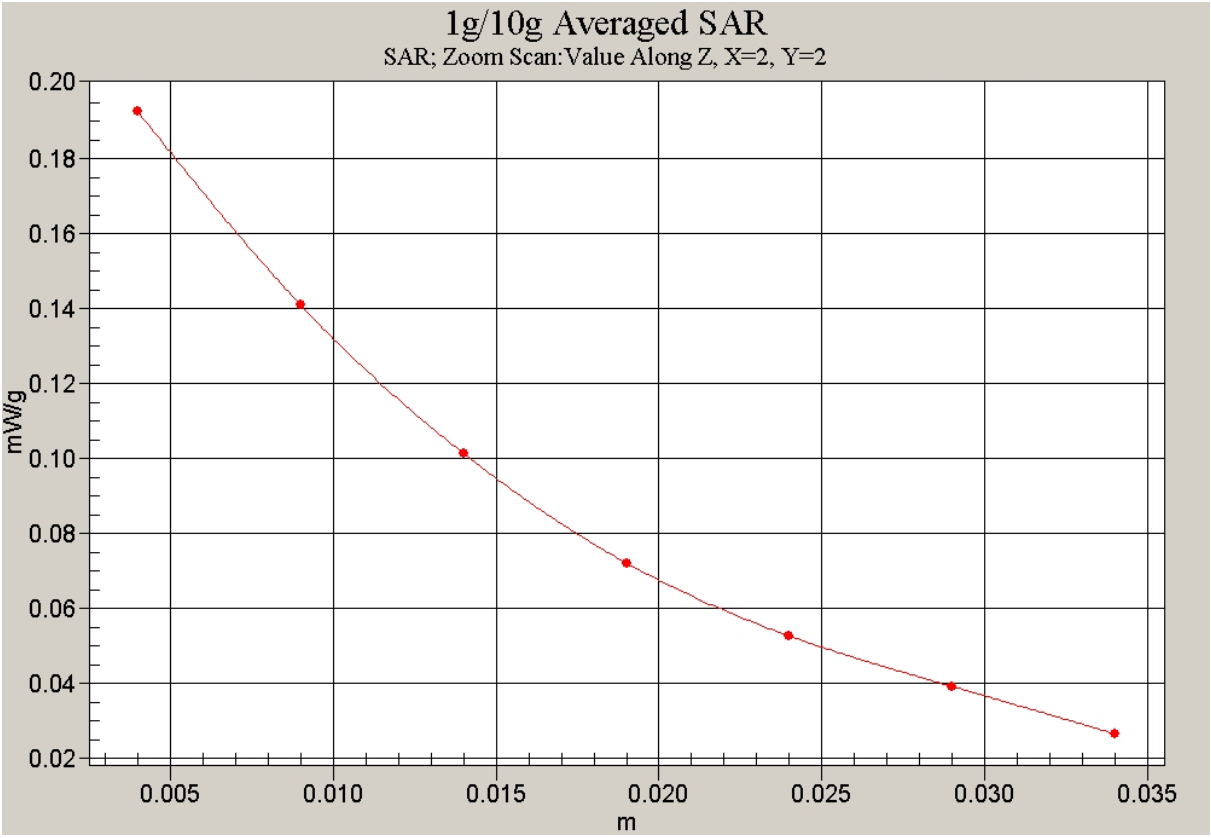


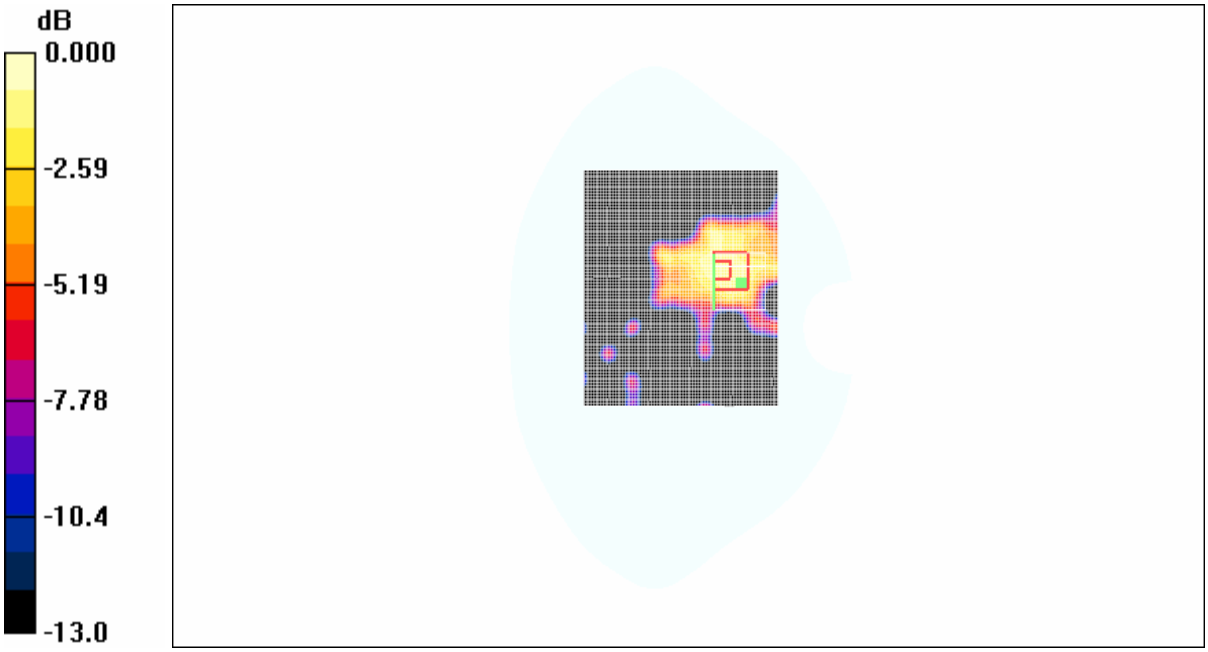
Fig.44 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 2-antenna folded)

EV-DO REV.A 800 Test Position 3 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 20:39:58
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.009 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.08 V/m; Power Drift = -0.191 dB
Peak SAR (extrapolated) = 0.016 W/kg
SAR(1 g) = 0.00672 mW/g; SAR(10 g) = 0.00129 mW/g
Maximum value of SAR (measured) = 0.011 mW/g



0 dB = 0.011mW/g

Fig. 45 EV-DO REV.A 800 CH384 Test Position 3-antenna folded

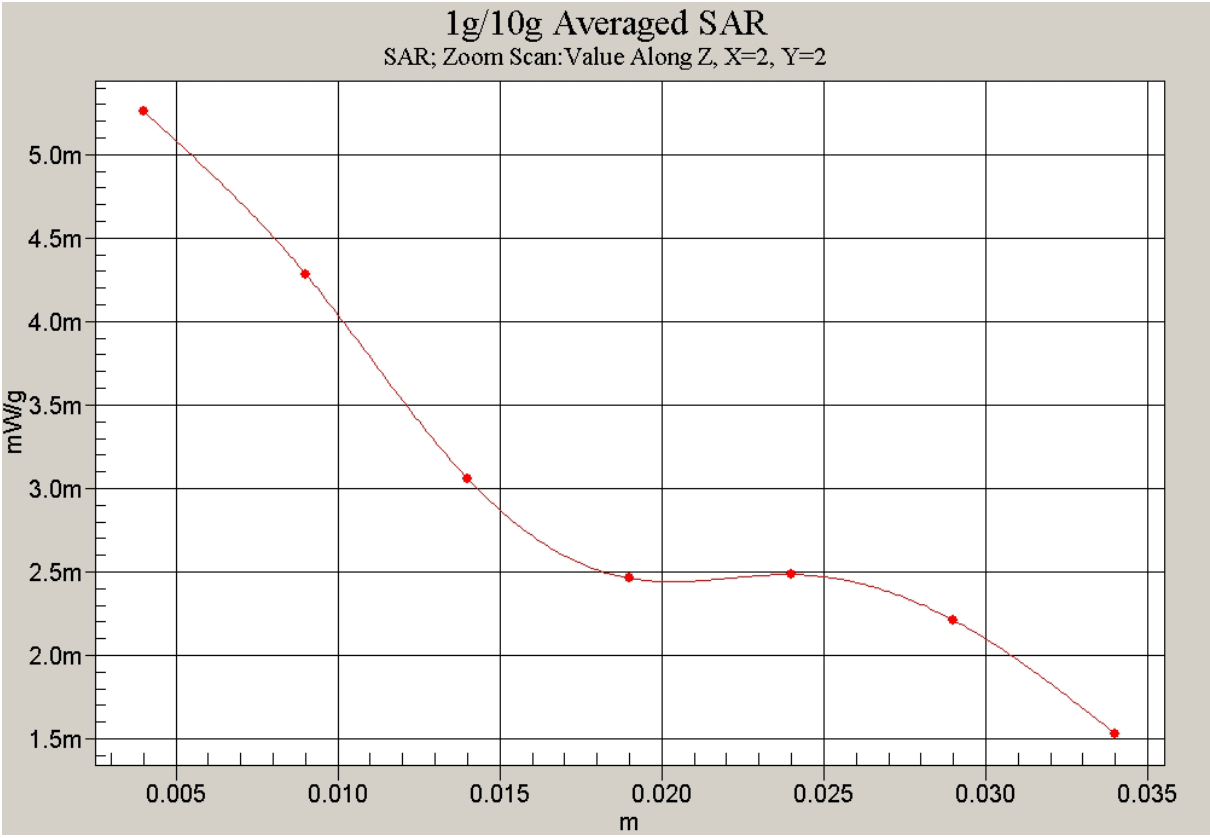


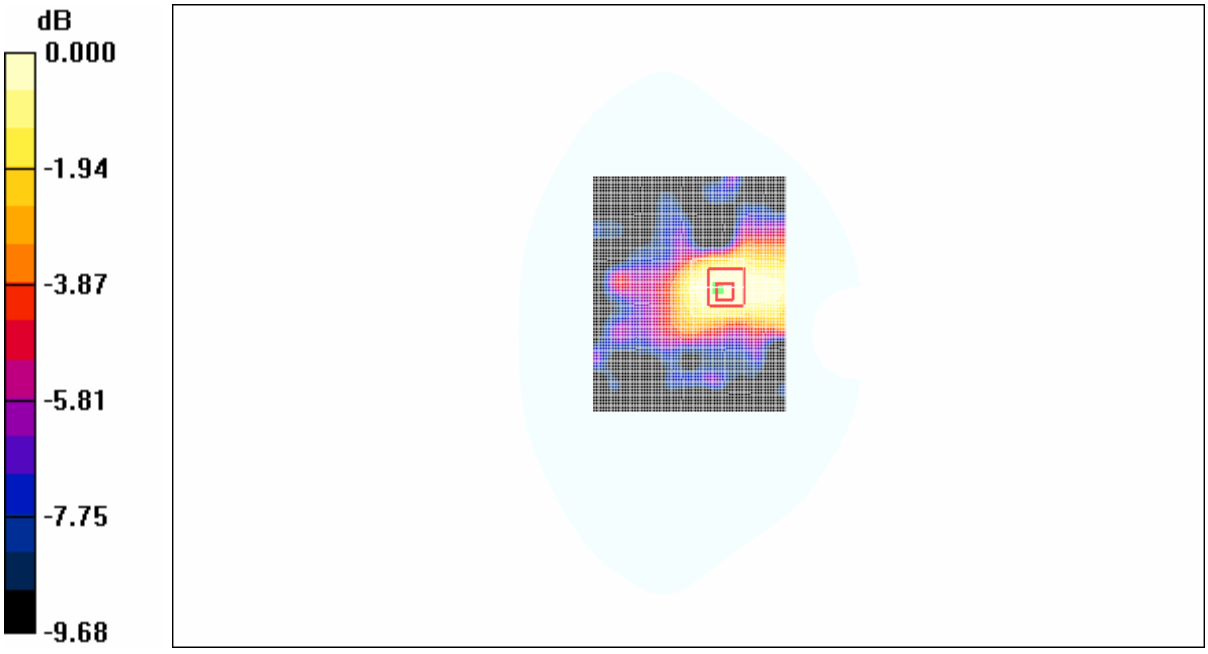
Fig.46 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna folded)

EV-DO REV.A 800 Test Position 4 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 21:17:23
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.018 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.72 V/m; Power Drift = -0.112 dB
Peak SAR (extrapolated) = 0.020 W/kg
SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.017 mW/g



0 dB = 0.017mW/g

Fig. 47 EV-DO REV.A 800 CH384 Test Position 4-antenna folded

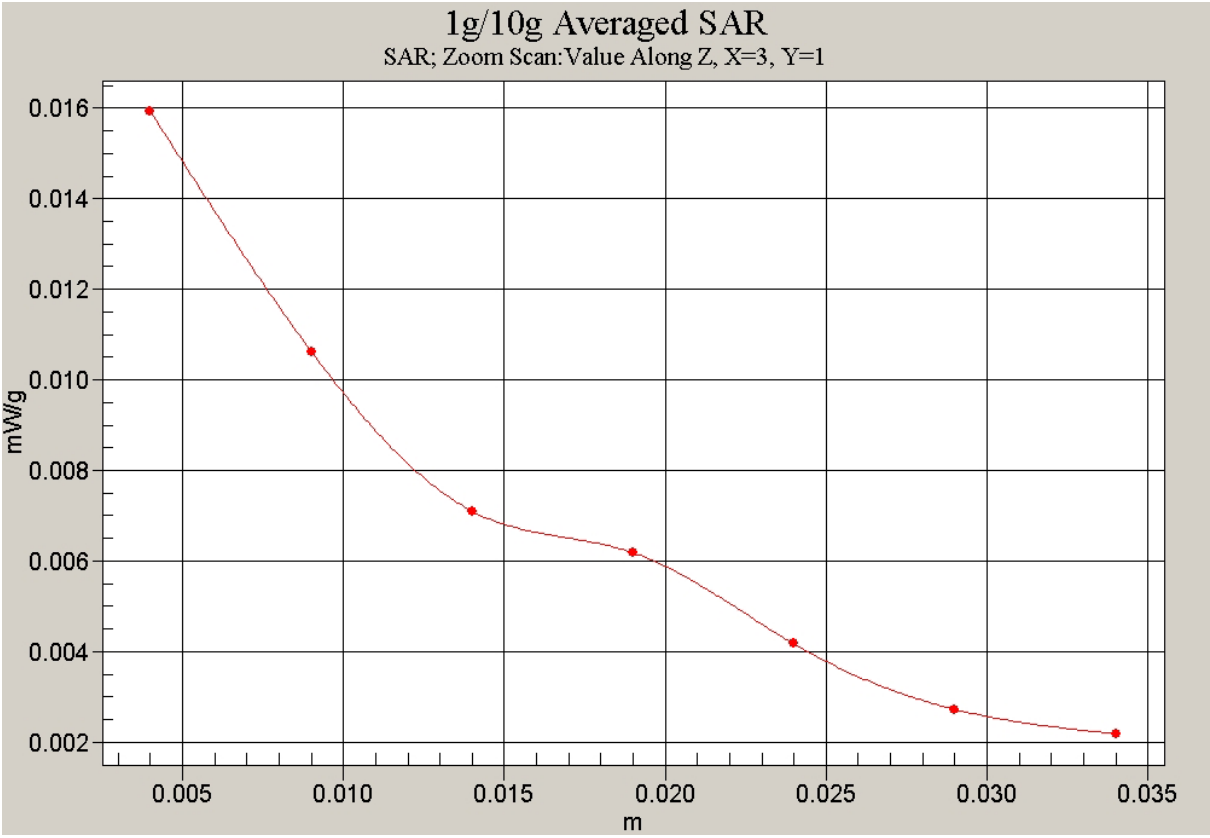


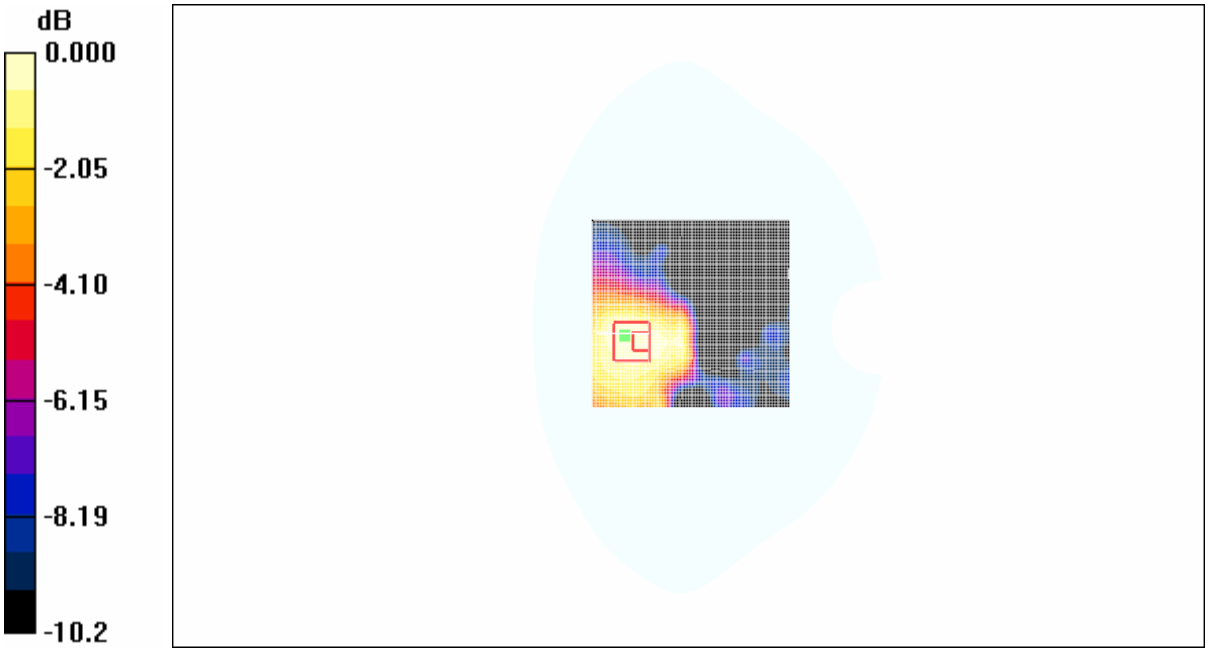
Fig.48 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 4-antenna folded)

EV-DO REV.A 800 Test Position 5 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 22:03:01
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (81x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.024 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.92 V/m; Power Drift = 0.147 dB
Peak SAR (extrapolated) = 0.027 W/kg
SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.023 mW/g



0 dB = 0.023mW/g

Fig. 49 EV-DO REV.A 800 CH384 Test Position 5-antenna folded

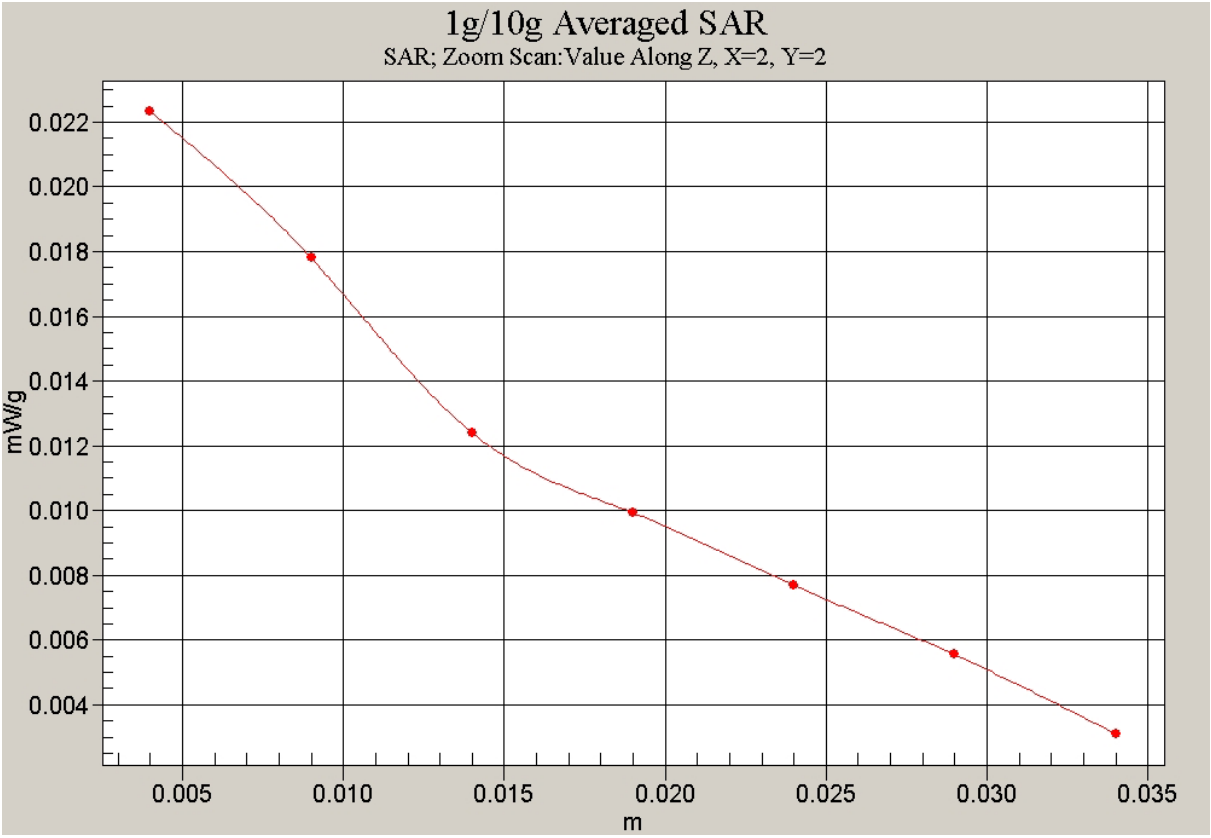


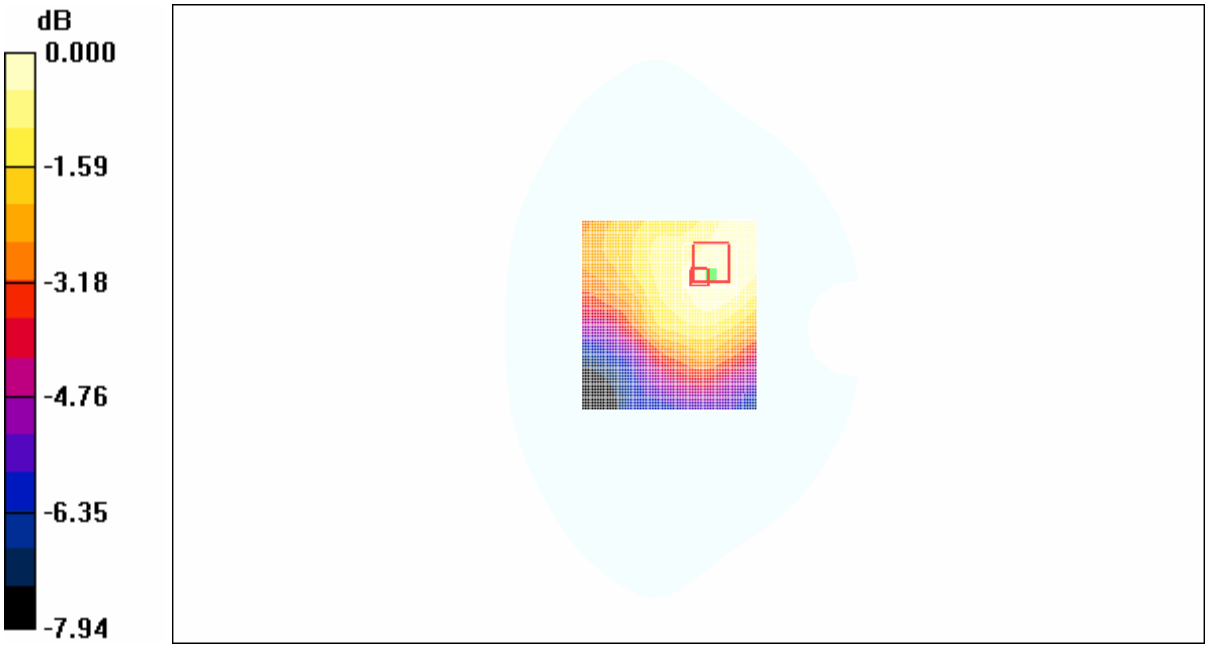
Fig.50 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 5-antenna folded)

EV-DO REV.A 800 Test Position 1 with IBM Laptop-antenna unfolded

Date/Time: 2006-11-13 18:54:47
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.040 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.69 V/m; Power Drift = -0.126 dB
Peak SAR (extrapolated) = 0.048 W/kg
SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.028 mW/g
Maximum value of SAR (measured) = 0.039 mW/g



0 dB = 0.039mW/g

Fig. 51 EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded

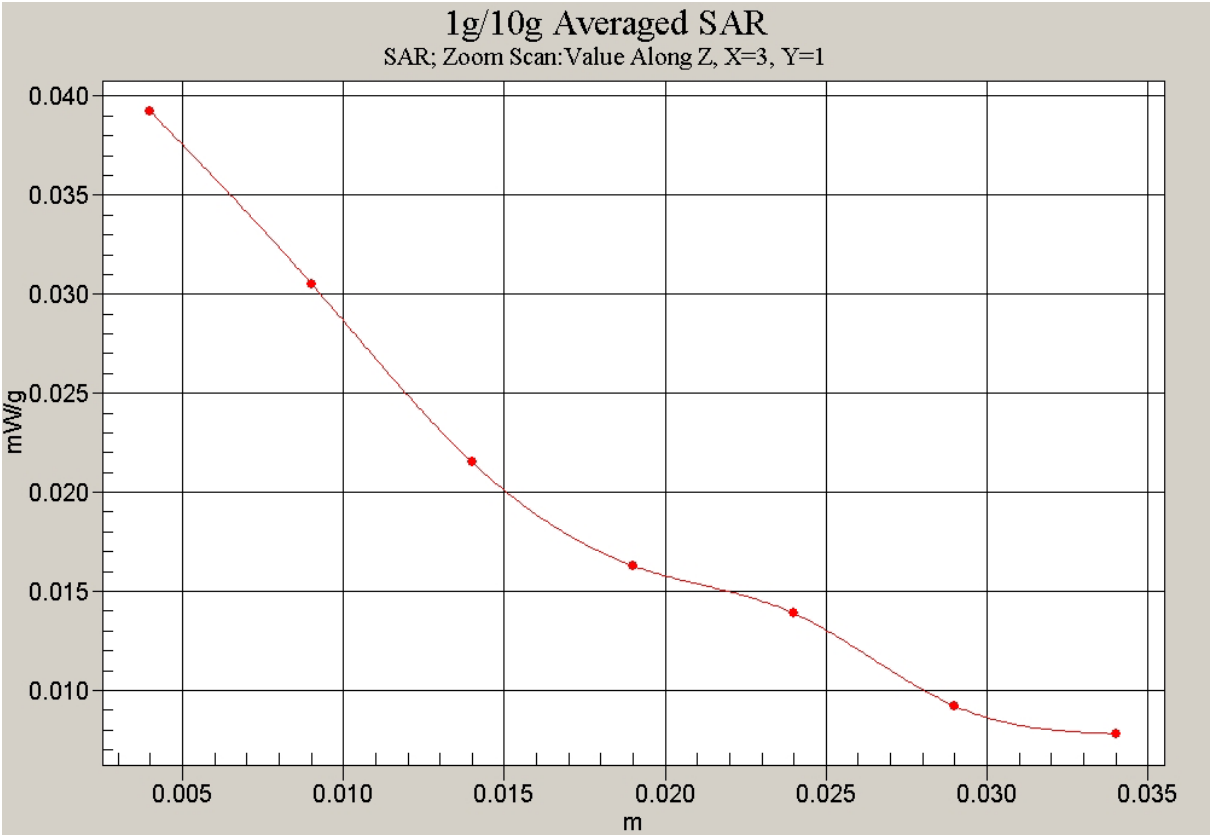


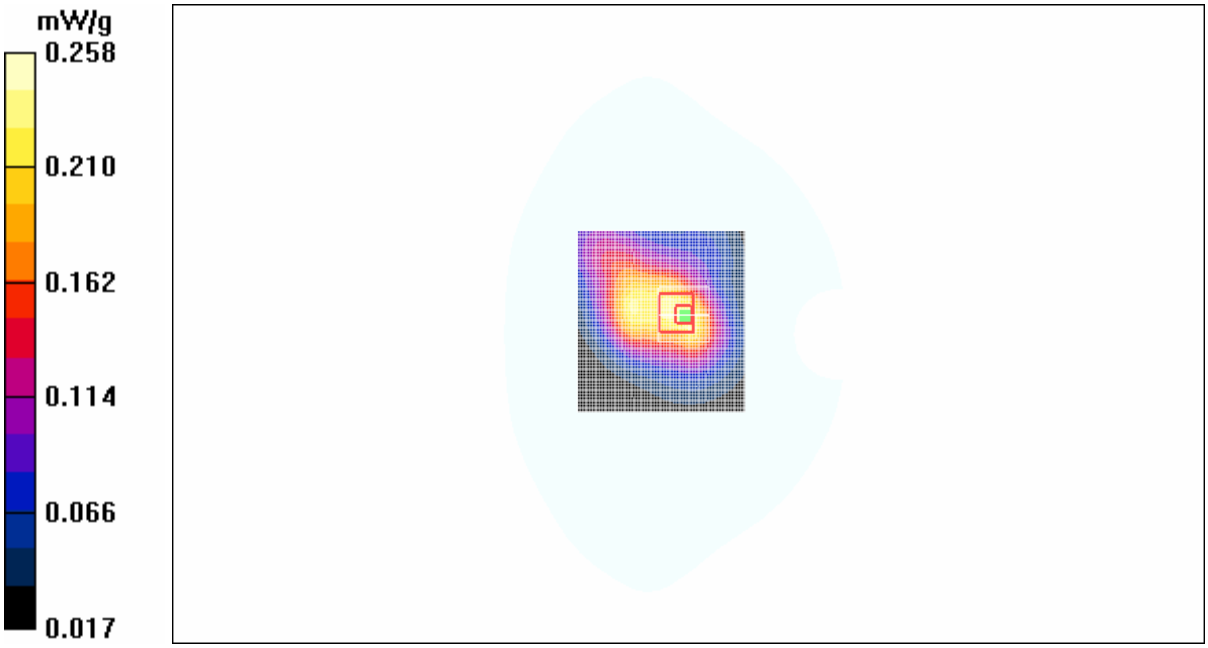
Fig.52 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 1-antenna unfolded)

EV-DO REV.A 800 Test Position 2 with IBM Laptop-antenna folded

Date/Time: 2006-11-13 19:46:35
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.242 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.2 V/m; Power Drift = 0.158 dB
Peak SAR (extrapolated) = 0.359 W/kg
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 0.258 mW/g



0 dB = 0.258 mW/g

Fig. 53 EV-DO REV.A 800 CH384 Test Position 2-antenna unfolded

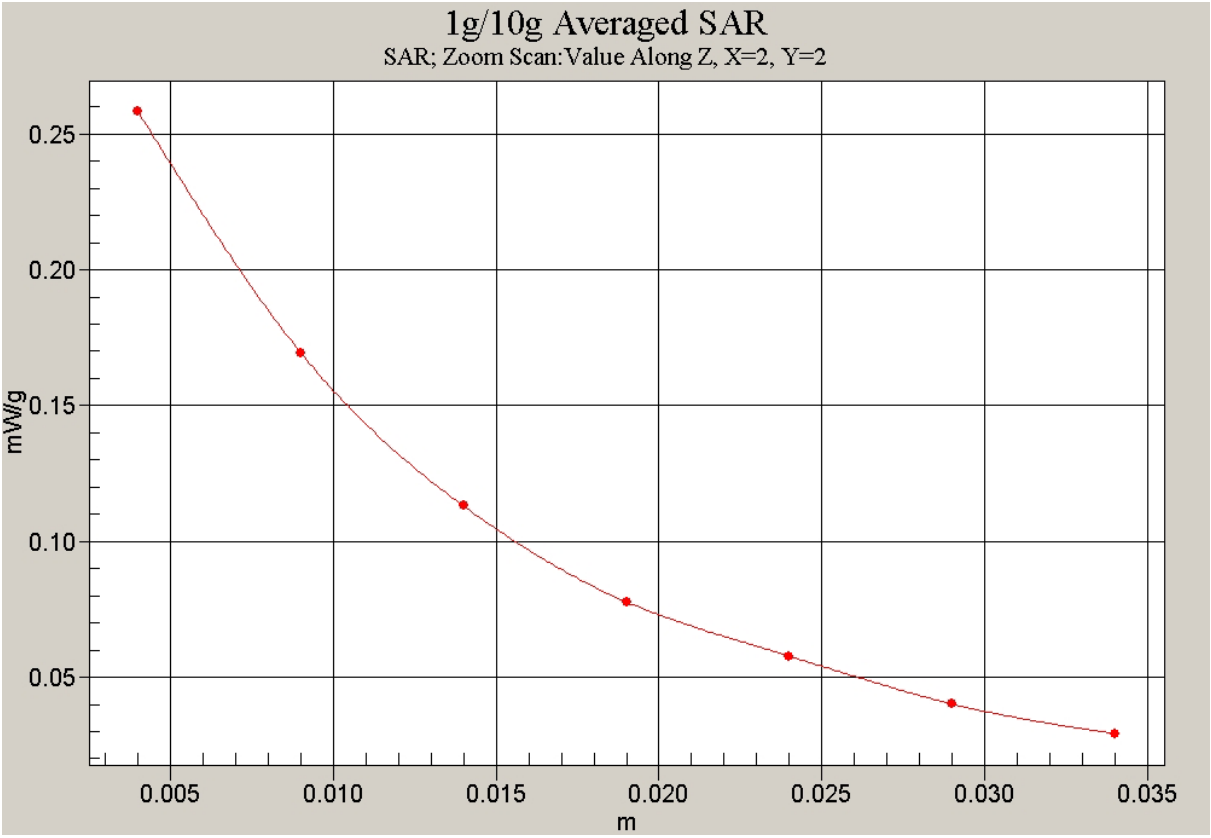


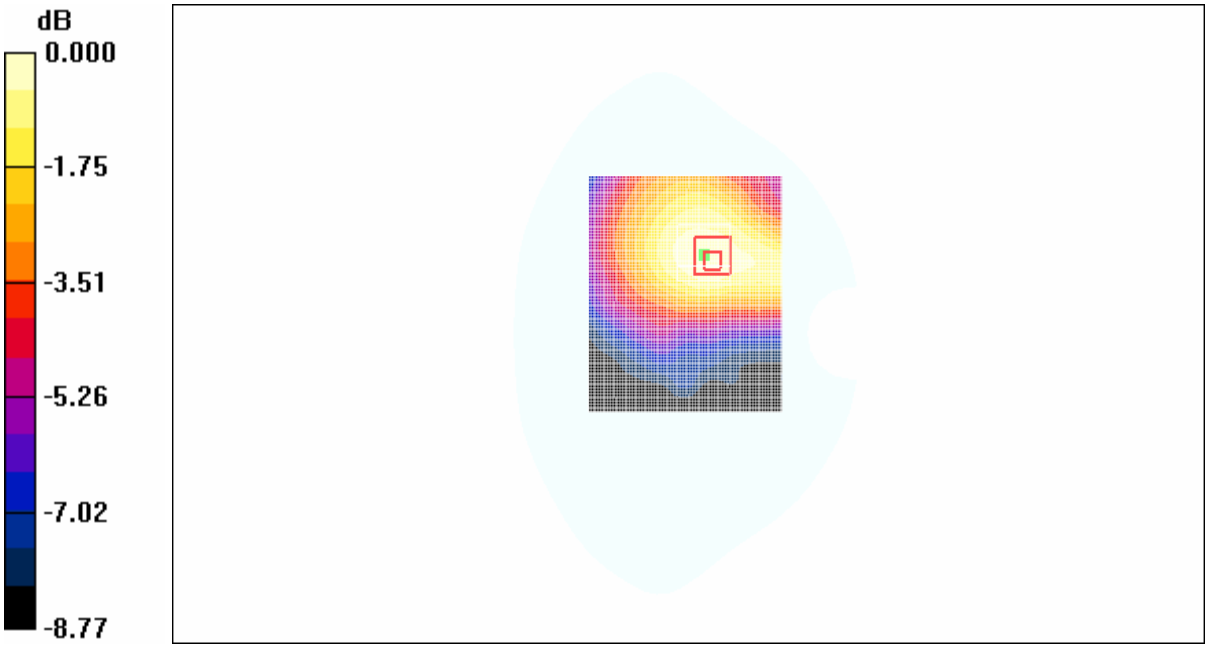
Fig.54 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 2-antenna unfolded)

EV-DO REV.A 800 Test Position 3 with IBM Laptop-antenna unfolded

Date/Time: 2006-11-13 20:24:24
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.059 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.14 V/m; Power Drift = 0.148 dB
Peak SAR (extrapolated) = 0.077 W/kg
SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.042 mW/g
Maximum value of SAR (measured) = 0.059 mW/g



0 dB = 0.059mW/g

Fig. 55 EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded

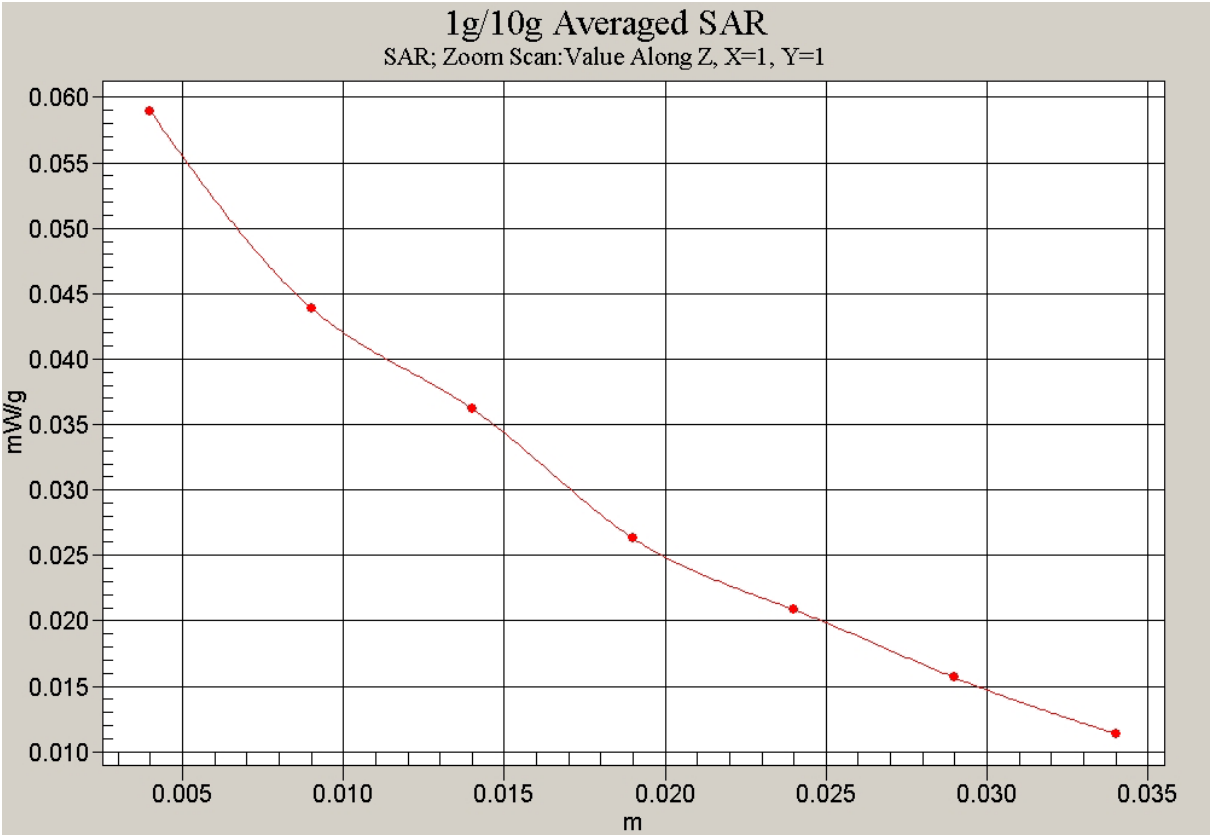


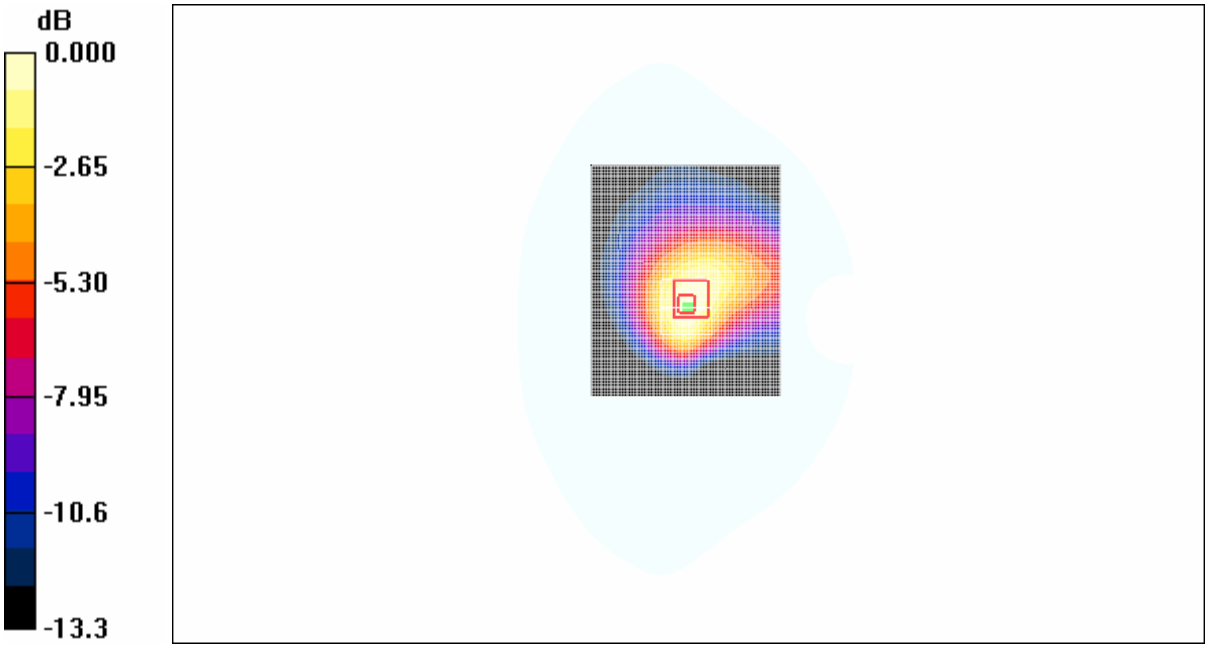
Fig.56 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 3-antenna unfolded)

EV-DO REV.A 800 Test Position 4 with IBM Laptop-antenna unfolded

Date/Time: 2006-11-13 21:01:49
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.265 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.0 V/m; Power Drift = -0.092 dB
Peak SAR (extrapolated) = 0.338 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.149 mW/g
Maximum value of SAR (measured) = 0.246 mW/g



0 dB = 0.246mW/g

Fig. 57 EV-DO REV.A 800 CH384 Test Position 4-antenna unfolded

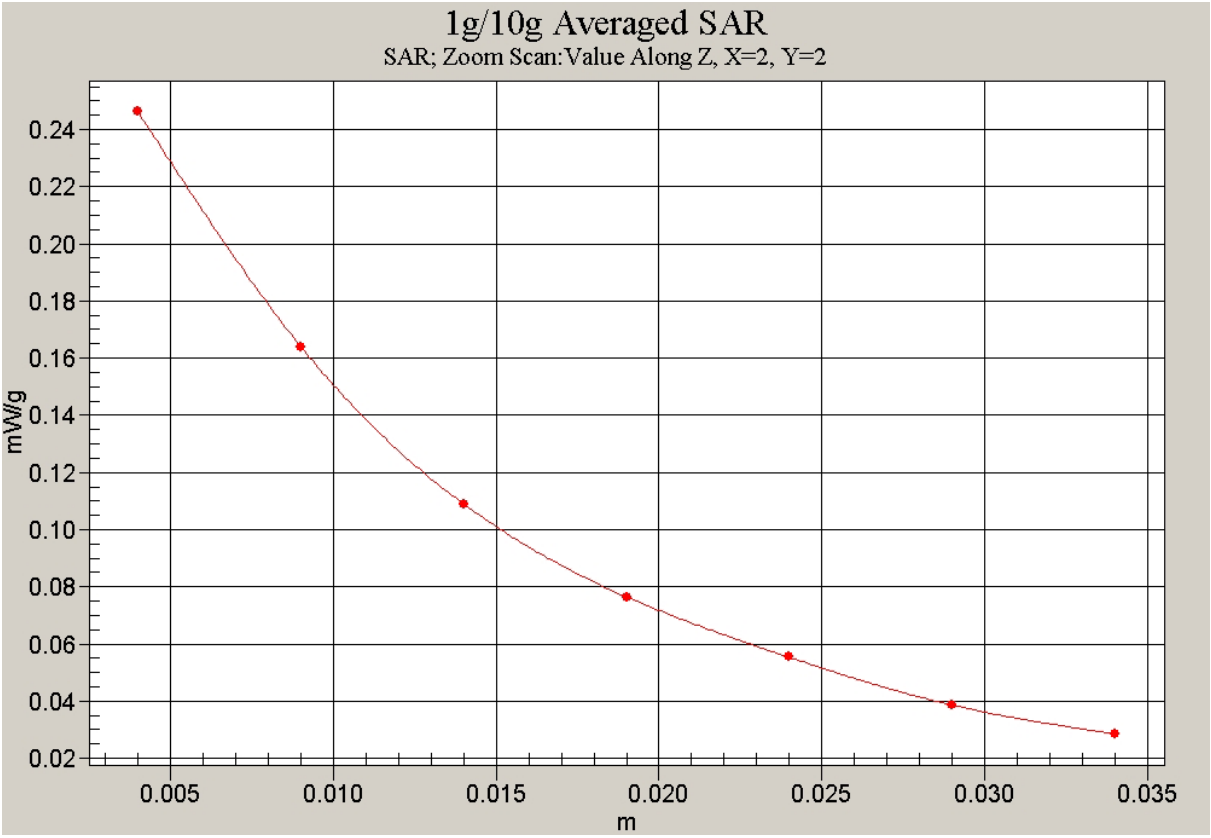


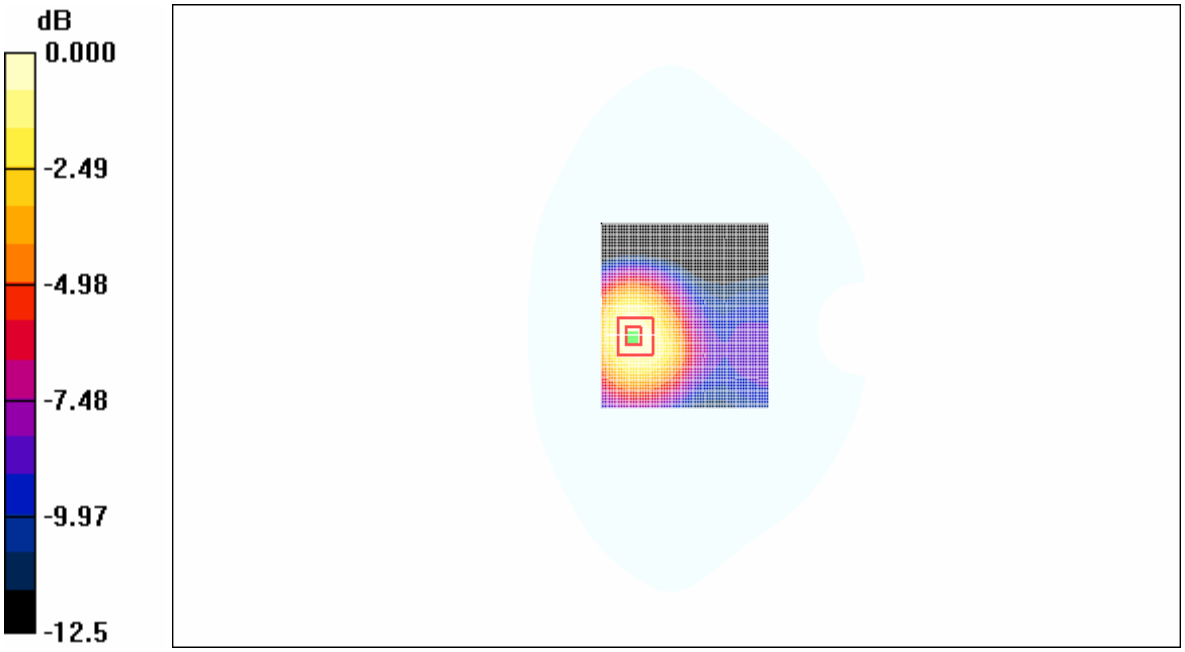
Fig.58 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 4-antenna unfolded)

EV-DO REV.A 800 Test Position 5 with IBM Laptop-antenna unfolded

Date/Time: 2006-11-13 21:48:26
Electronics: DAE3 Sn536
Medium: 835 Body
Medium parameters used (interpolated):σ = 0.95 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(6.45, 6.45, 6.45)

Test Position 5/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.209 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.20 V/m; Power Drift = 0.046 dB
Peak SAR (extrapolated) = 0.274 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.128 mW/g
Maximum value of SAR (measured) = 0.207 mW/g



0 dB = 0.207mW/g

Fig. 59 EV-DO REV.A 800 CH384 Test Position 5-antenna unfolded

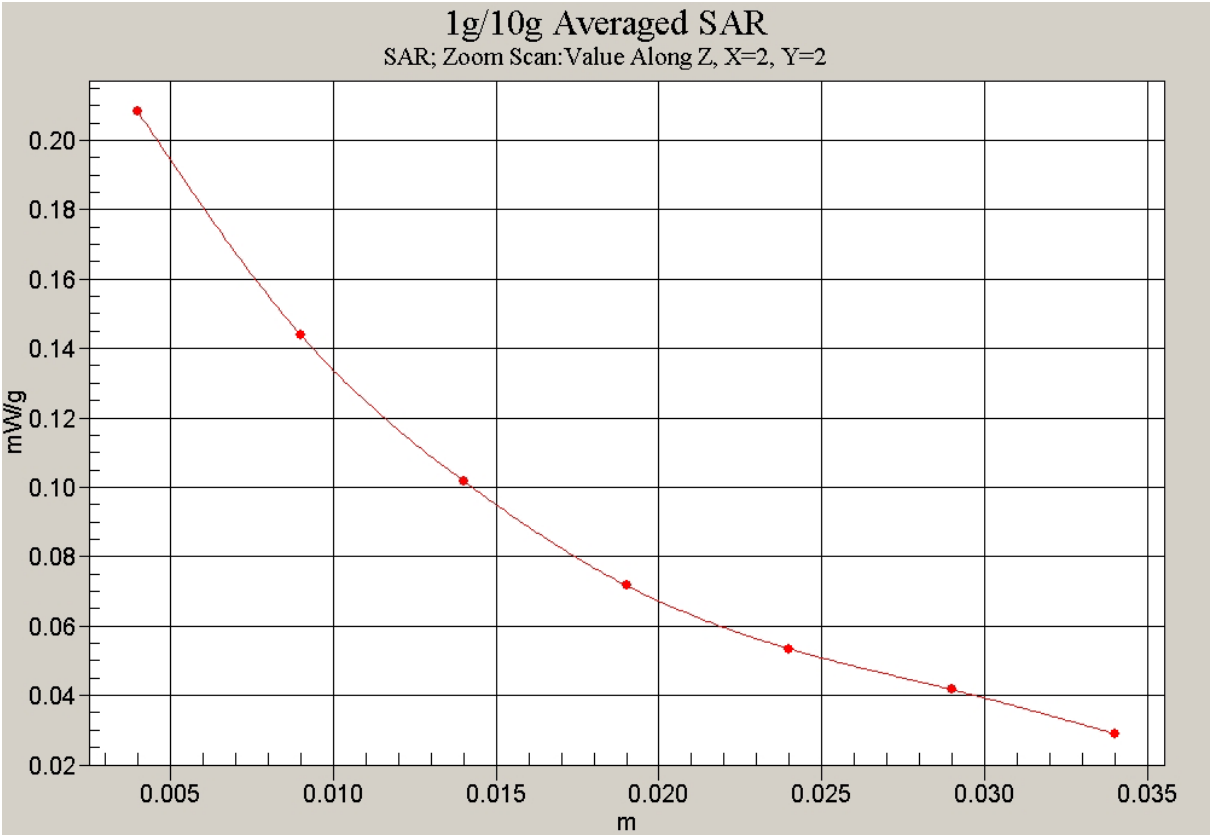


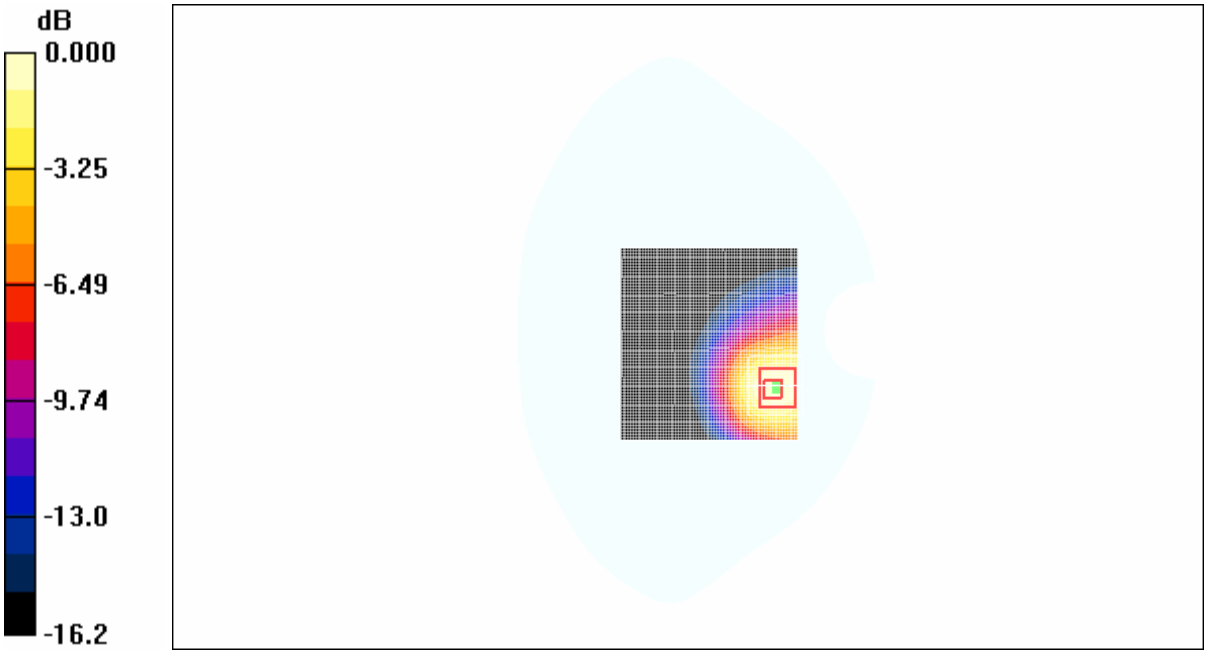
Fig.60 Z-Scan at power reference point
(EV-DO REV.A 800 CH384 Test Position 5-antenna unfolded)

EV-DO REV.A 1900 Test Position 1 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 18:18:54
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.747 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.65 V/m; Power Drift = -0.107 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.658 mW/g; SAR(10 g) = 0.398 mW/g
Maximum value of SAR (measured) = 0.709 mW/g



0 dB = 0.709mW/g

Fig.61 EV-DO REV.A 1900 CH600 Test Position 1-antenna folded

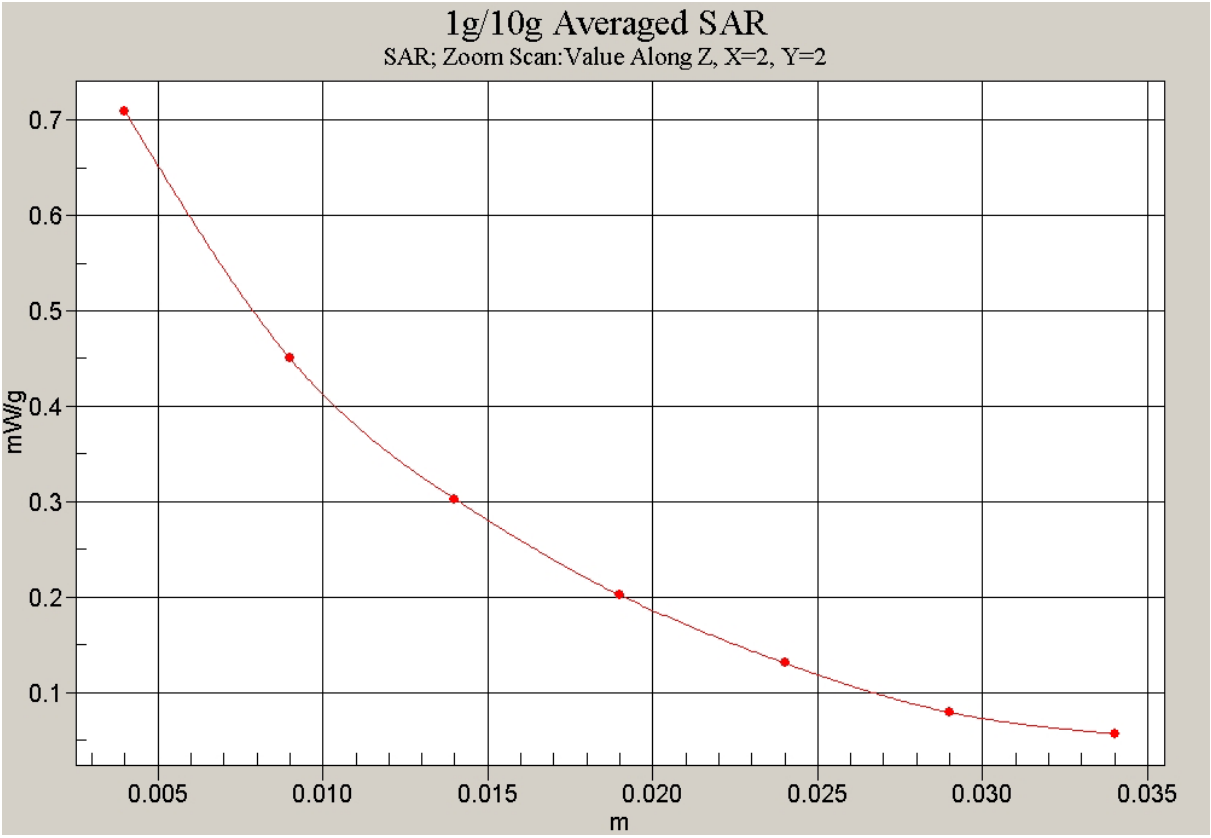


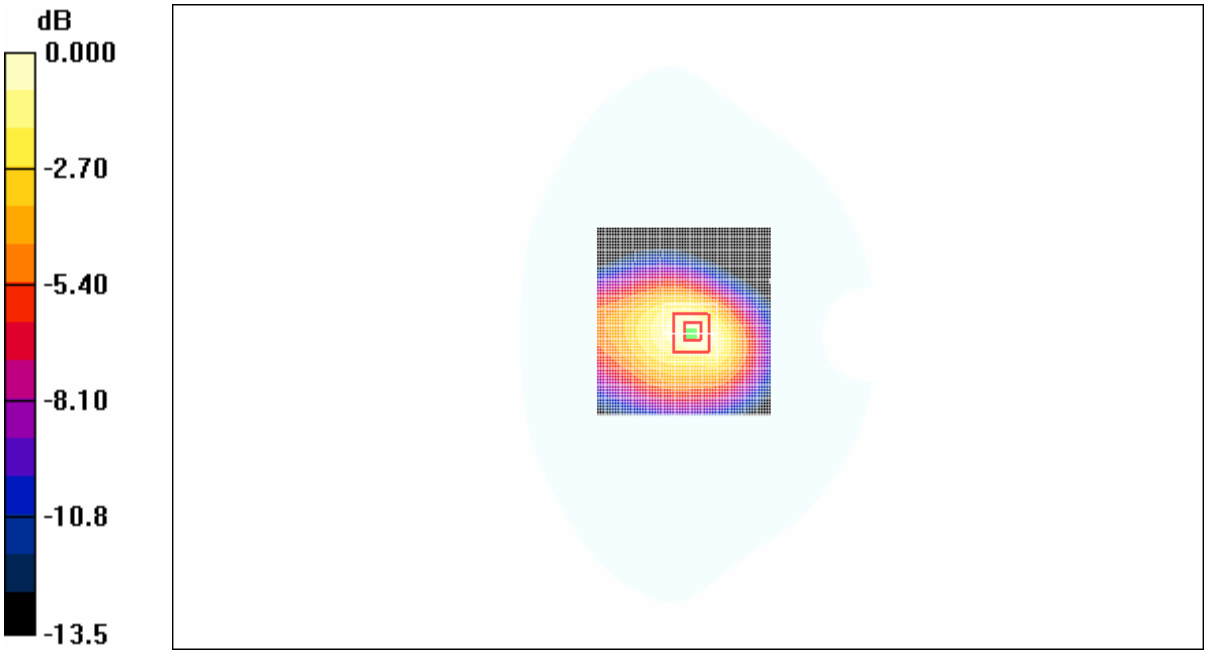
Fig.62 Z-Scan at power reference point
(EV-DO REV.A 1900CH600 Test Position 1-antenna folded)

EV-DO REV.A 1900 Test Position 2 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 19:05:13
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.3 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.996 mW/g; SAR(10 g) = 0.633 mW/g
Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g

Fig. 63 EV-DO REV.A 1900 CH600 Test Position 2-antenna folded

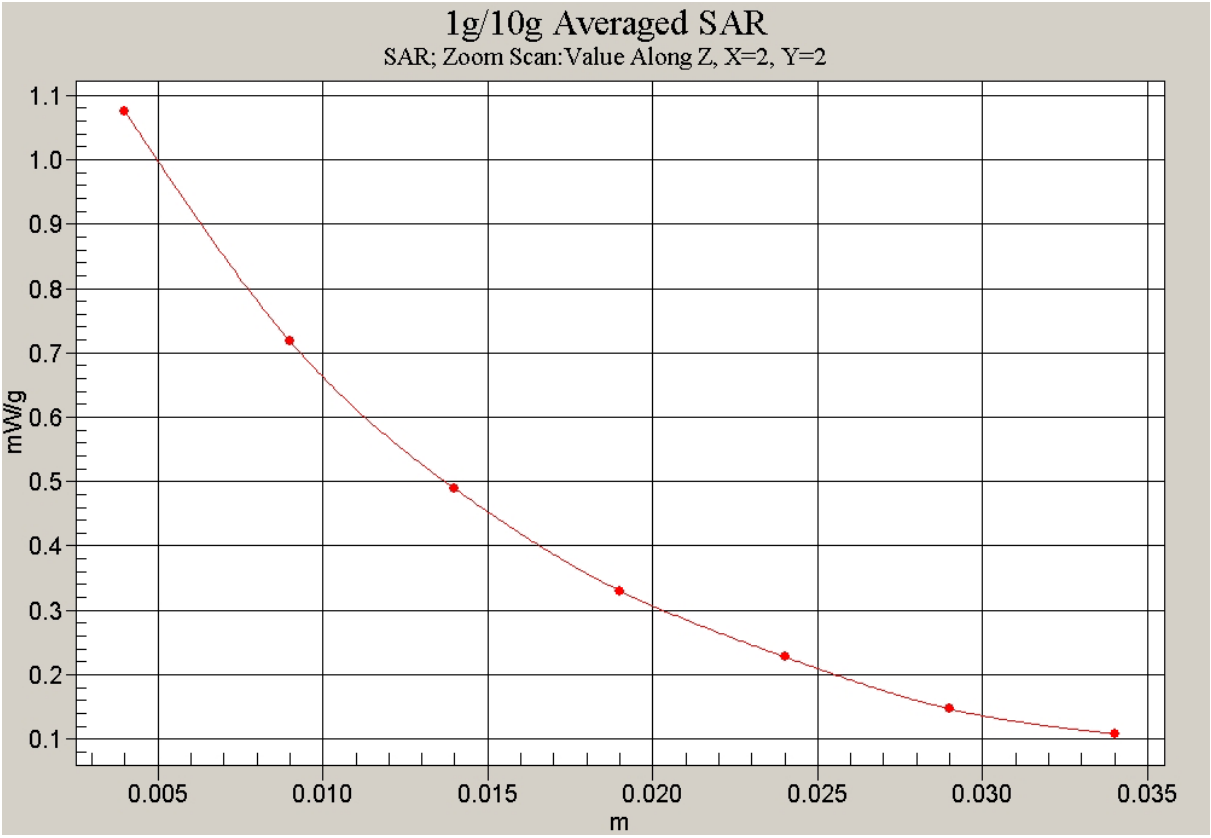


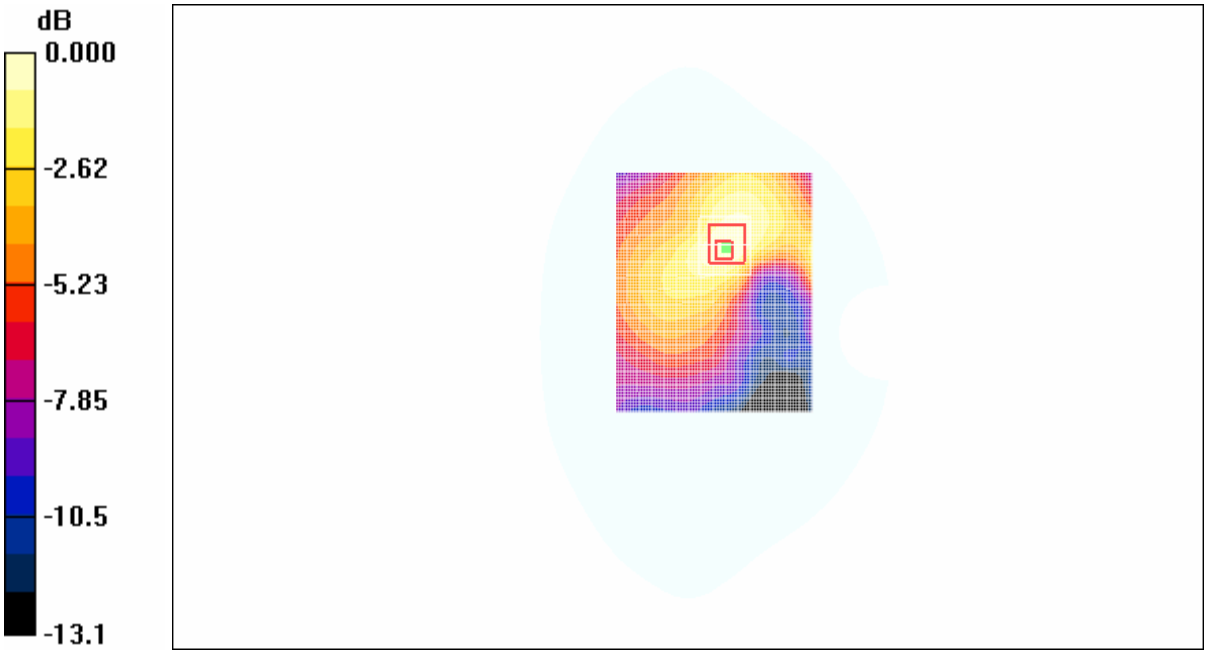
Fig.64 Z-Scan at power reference point
(EV-DO REV.A 1900 CH600 Test Position 2-antenna folded)

EV-DO REV.A 1900 Test Position 3 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 17:20:10
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 3/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.083 mW/g

Test Position 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.21 V/m; Power Drift = -0.027 dB
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.047 mW/g
Maximum value of SAR (measured) = 0.077 mW/g



0 dB = 0.077mW/g

Fig.65 EV-DO REV.A 1900 CH600 Test Position 3-antenna folded

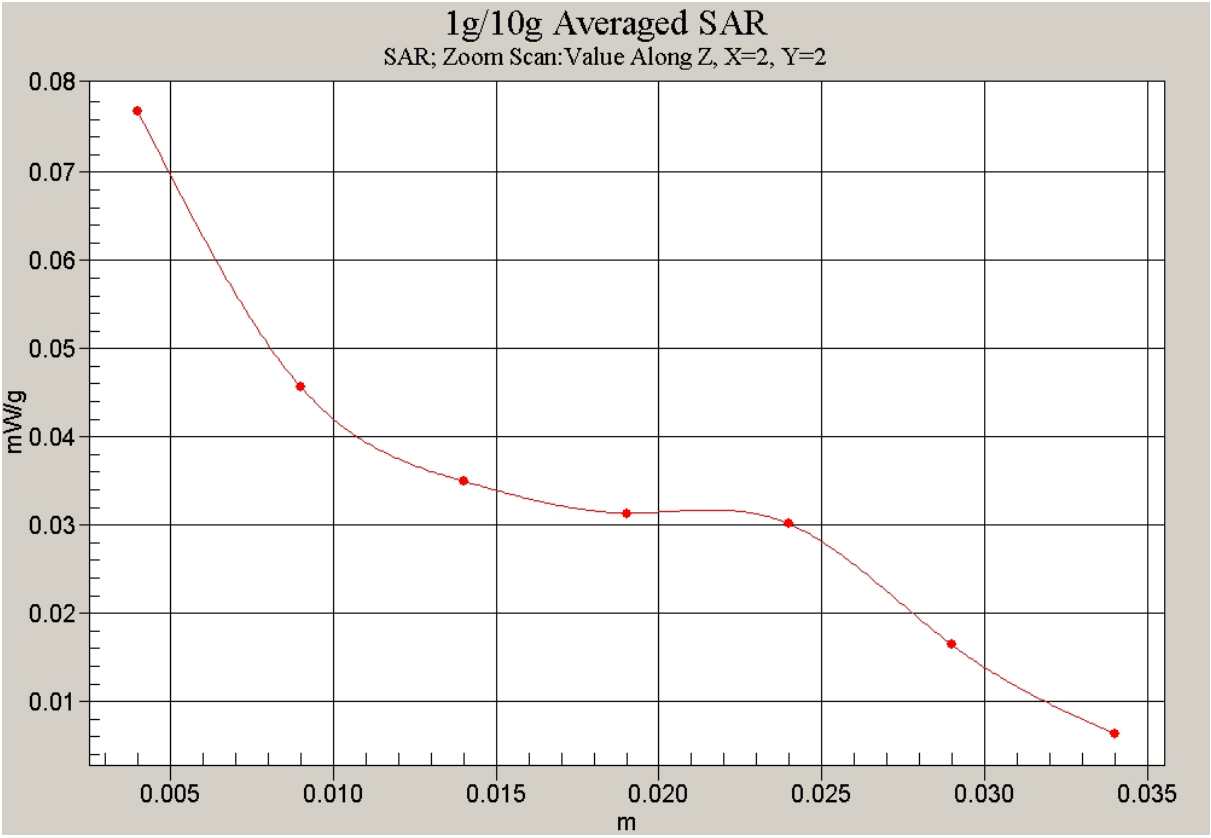


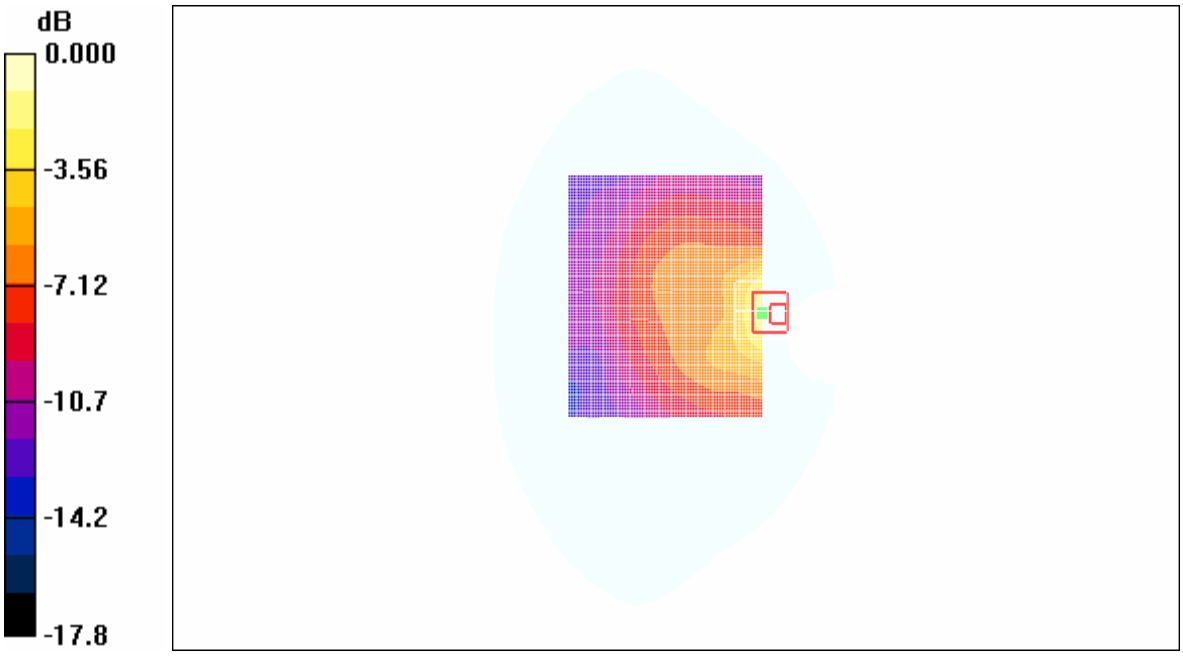
Fig.66 Z-Scan at power reference point
(EV-DO REV.A 1900 CH600 Test Position 3-antenna folded)

EV-DO REV.A 1900 Test Position 4 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 16:59:50
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 4/Area Scan (81x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.279 mW/g

Test Position 4/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.13 V/m; Power Drift = -0.119 dB
Peak SAR (extrapolated) = 0.605 W/kg
SAR(1 g) = 0.323 mW/g; SAR(10 g) = 0.183 mW/g
Maximum value of SAR (measured) = 0.361 mW/g



0 dB = 0.361mW/g

Fig.67 EV-DO REV.A 1900 CH600 Test Position 4-antenna folded

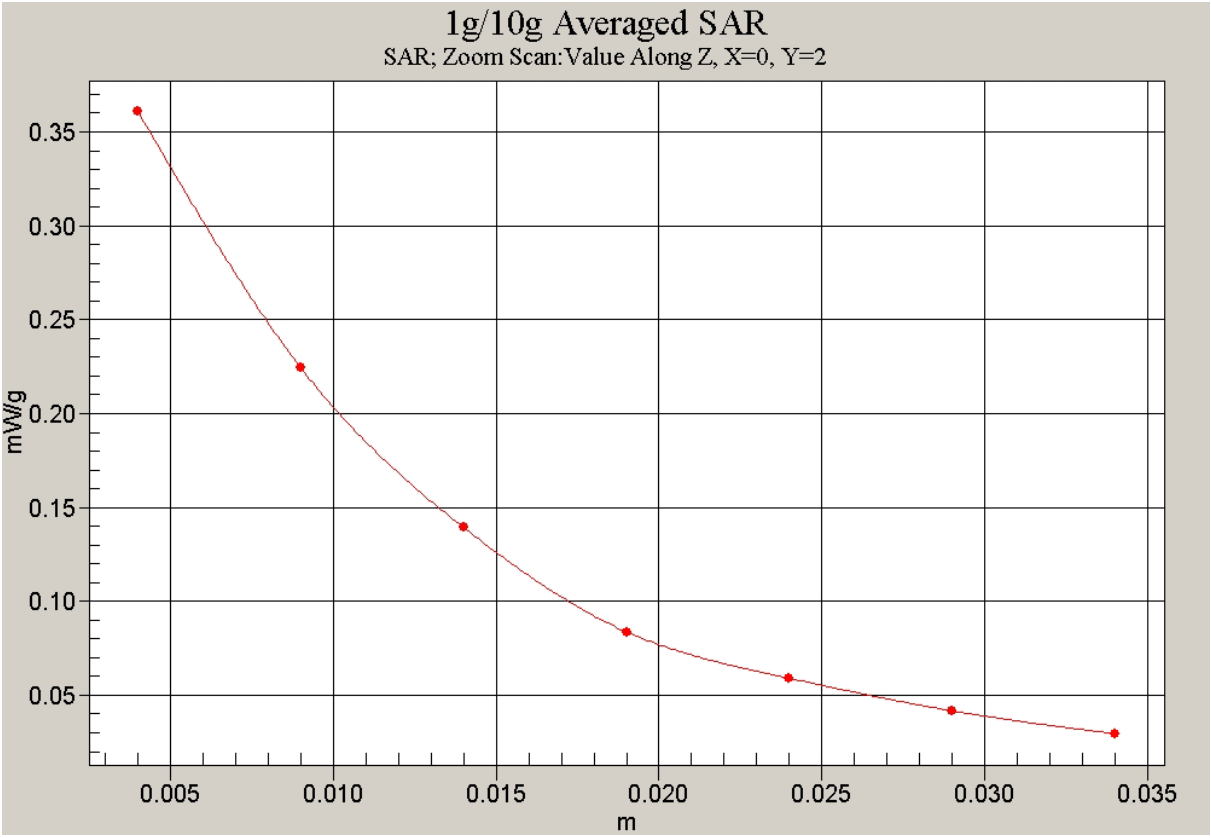


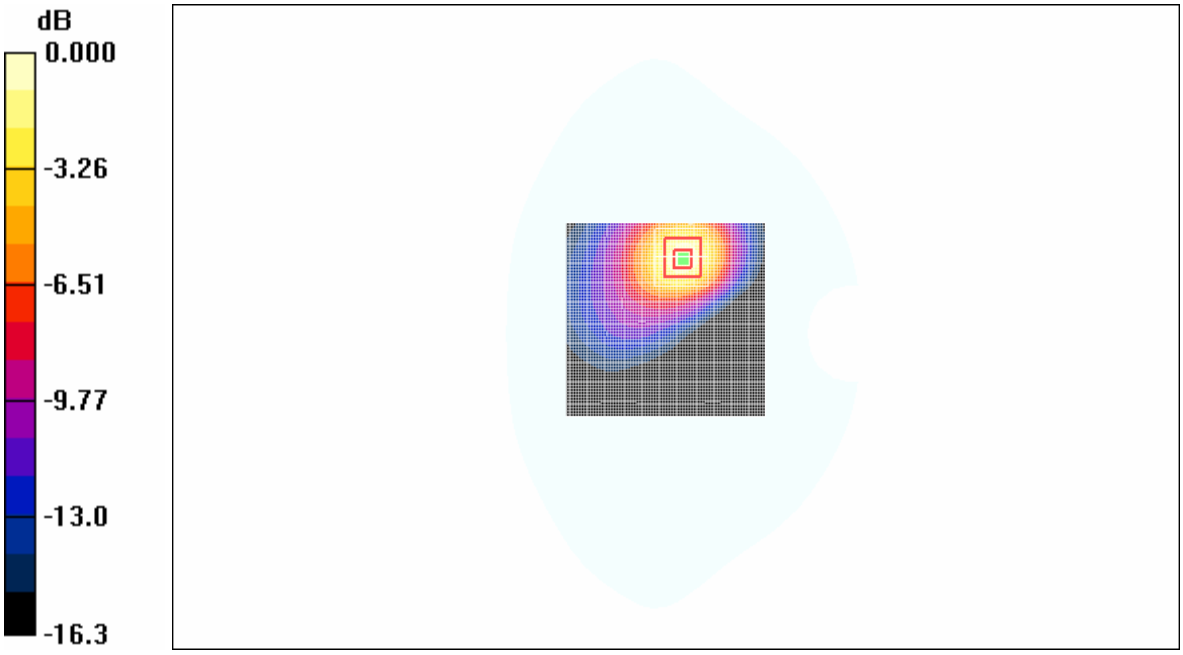
Fig.68 Z-Scan at power reference point
(EV-DO REV.A 1900 CH600 Test Position 4-antenna folded)

EV-DO REV.A 1900 Test Position 5 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 19:57:11
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 5/Area Scan (81x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.975 mW/g

Test Position 5/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.04 V/m; Power Drift = 0.094 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.900 mW/g; SAR(10 g) = 0.513 mW/g
Maximum value of SAR (measured) = 0.988 mW/g



0 dB = 0.988mW/g

Fig. 69 EV-DO REV.A 1900 CH600 Test Position 5-antenna folded

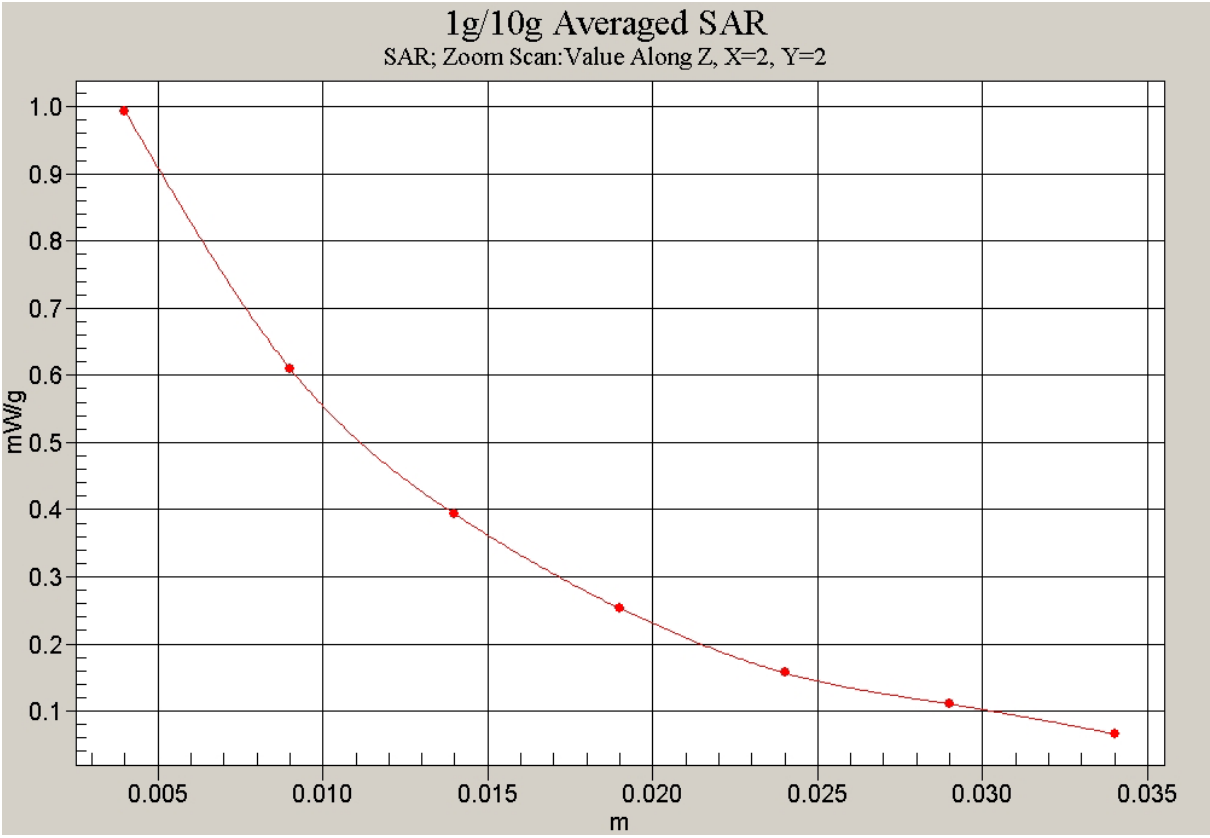


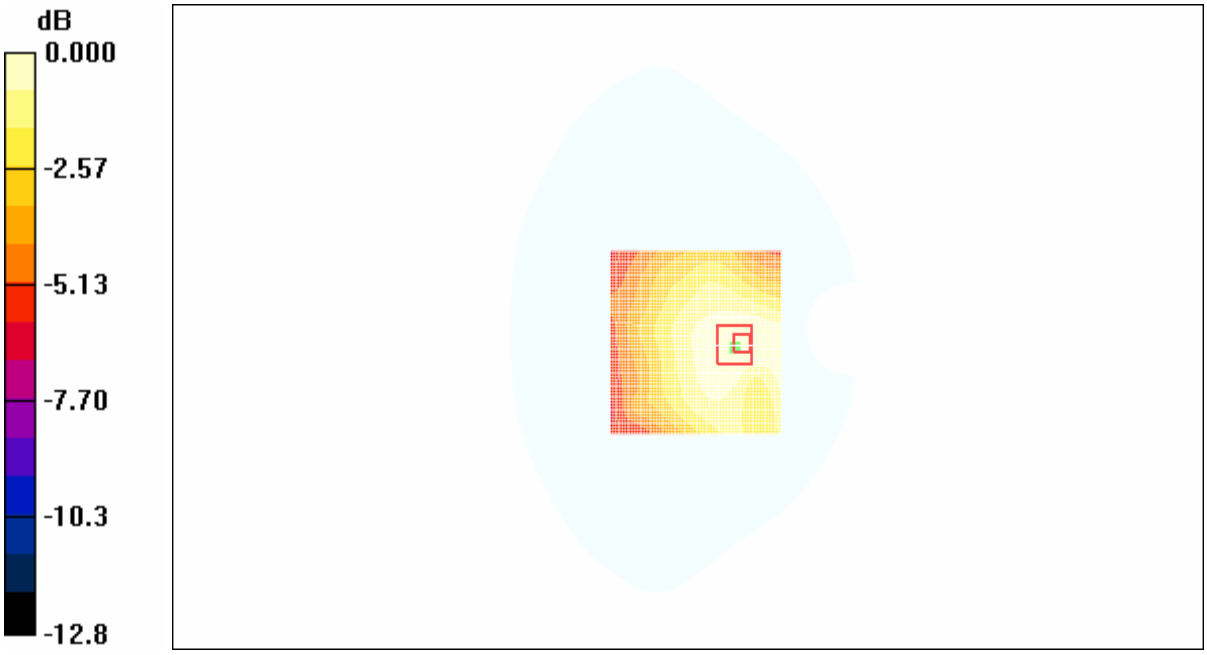
Fig.70 Z-Scan at power reference point
(EV-DO REV.A 1900 CH600 Test Position 5-antenna folded)

EV-DO REV.A 1900 Test Position 1 with DELL Laptop-antenna unfolded

Date/Time: 2006-11-14 18:34:56
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 1/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.067 mW/g

Test Position 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.71 V/m; Power Drift = -0.001 dB
Peak SAR (extrapolated) = 0.093 W/kg
SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.042 mW/g
Maximum value of SAR (measured) = 0.064 mW/g



0 dB = 0.064mW/g

Fig. 71 EV-DO REV.A 1900 CH600 Test Position 1-antenna unfolded

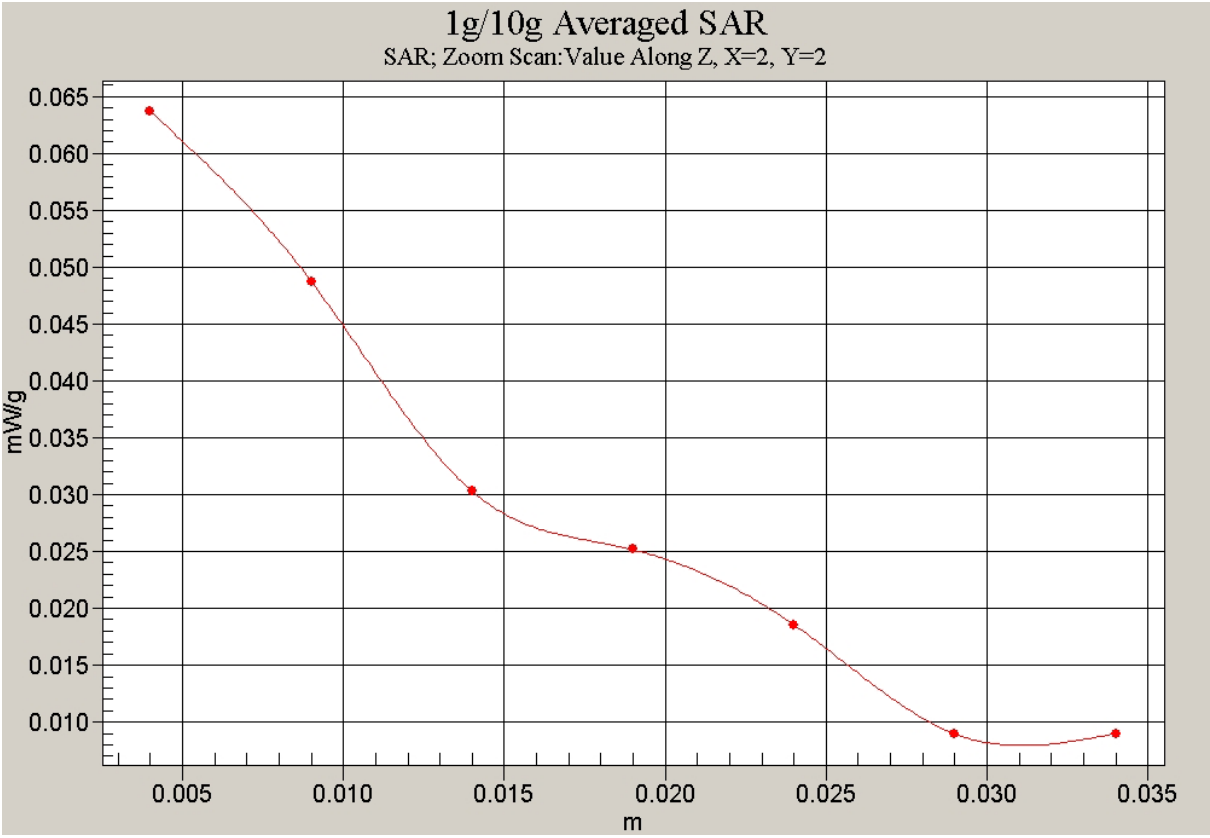


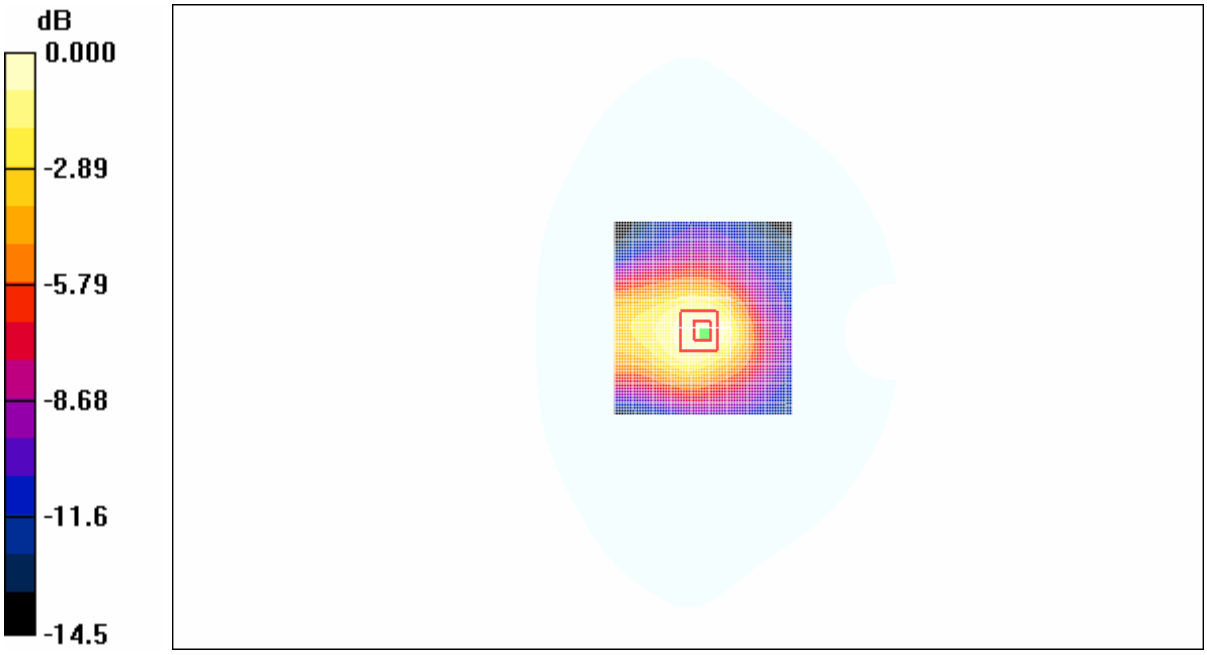
Fig.72 Z-Scan at power reference point
(EV-DO REV.A 1900 CH600 Test Position 1-antenna unfolded)

EV-DO REV.A 1900 Test Position 2 with DELL Laptop-antenna folded

Date/Time: 2006-11-14 19:23:27
Electronics: DAE3 Sn536
Medium: 1900 Body
Medium parameters used (interpolated): σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Ambient Temperature:23.3°C Liqiud Temperature: 22.5°C
Communication System: 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1
Probe: ET3DV6 - SN1736 ConvF(4.88, 4.88, 4.88)

Test Position 2/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.850 mW/g

Test Position 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.0 V/m; Power Drift = -0.103 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.461 mW/g
Maximum value of SAR (measured) = 0.770 mW/g



0 dB = 0.770mW/g

Fig. 73 EV-DO REV.A 1900 CH600 Test Position 2-antenna unfolded