SAR TEST REPORT

No. 2011EEB00656

For

Invengo Information Technology Co., Ltd.

Handheld RFID Reader

XC2900-F6C

With

WIFI&RFID module: AW-GH321&F6C_UHF_RFID

FCCID : TQ4XC2900-F6C

And

GPRS module: MC55I

FCCID : QIPMC55i

Issued Date: 2011-11-21

Deutscher Akkreditierungs Rat
DAR

***No.* DGA-PL-114/09-A0**

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

TMC Beijing, Telecommunication Metrology Center of MIIT
No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China 100191.
Tel:+86(0)10-62304633-2079, Fax:+86(0)10-62304793 Email:welcome@emcite.com. www.emcite.com

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1 Test Laboratory

1.1 Testing Location

Company Name: TMC Shenzhen, Telecommunication Metrology Center of MIIT
Address: No. 12building, Shangsha Innovation and Technology Park, Futian District, Shenzhen, P. R. China
Postal Code: 518048
Telephone: +86-755-33322000
Fax: +86-755-33322001

1.2 Testing Environment

Temperature: Min. = 18 °C, Max. = 25 °C
Relative humidity: Min. = 30%, Max. = 70%
Ground system resistance: < 0.5 Ω

Ambient noise is checked and found very low and in compliance with requirement of standards.
Reflection of surrounding objects is minimized and in compliance with requirement of standards.

1.3 Project Data

Project Leader: Zhou Yi
Test Engineer: Zhu Zhiqiang
Testing Start Date: November 4, 2011
Testing End Date: November 17, 2011

1.4 Signature

Zhu Zhiqiang
(Prepared this test report)

Zhou Yi
(Reviewed this test report)

Lu Minniu
Director of the laboratory
(Approved this test report)

2 Client Information

2.1 Applicant Information

Company Name:	Invengo Information Technology Co., Ltd.
Address /Post:	3/F, No. T2-B, High-tech Industrial Park South, Shenzhen 518057, China
City:	Shenzhen
Postal Code:	518000
Country:	China
Contact:	Shuangliang Yi
Email:	quality@invengo.cn
Telephone:	+86-0755-26525035
Fax:	+86-0755-26525035

2.2 Manufacturer Information

Company Name:	Invengo Information Technology Co., Ltd.
Address /Post:	Invengo RFID Industrial Park, Guangming Hi-Tech Zone, Tongguan Road, Guangming New District, Shenzhen, Guangdong 518100, PRC
City:	Shenzhen
Postal Code:	518000
Country:	China
Contact:	Shuangliang Yi
Email:	quality@invengo.cn
Telephone:	+86-0755-26525035
Fax:	+86-0755-26525035

3 Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1 About EUT

Description:	Handheld RFID Reader
Model Name:	XC2900-F6C
Frequency Band:	GSM850MHz; PCS 1900MHz; WIFI 2450MHz;RFID 900MHz
GPRS Class:	10

Picture 1: Constituents of the sample

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	/	V2.0	V2.0

*EUT ID: is used to identify the test sample in the lab internally.

4 CHARACTERISTICS OF THE TEST

4.1 Applicable Limit Regulations

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.

4.2 Applicable Measurement Standards

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.

KDB 447498 D01: Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies v03r02

KDB 248227: SAR Measurement Procedures for 802.11 a/b/g transmitter

KDB 648474 D01: SAR evaluation consideration for handset with multiple transmitters and antennas

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

5 OPERATIONAL CONDITIONS DURING TEST

5.1 Schematic Test Configuration

During SAR test of the EUT, it is in continuous emission Mode (Channel Allocated) at normal voltage condition and maximum transmitting power (See 5.1.2).

5.1.1 Test positions

The EUT is tested at the following 6 test positions all with the distance =0mm between the EUT and the phantom bottom:

- Test Position 1: The screen of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-1）
- Test Position 2: The handle of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-2）
- Test Position 3: The left side of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-3）
- Test Position 4: The right side of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-4）
- Test Position 5: The top side of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-4）
- Test Position 6: The bottom side of the EUT is tightly touched the bottom of the flat phantom.（Picture 2-4）

Picture 2-a: side definition

Picture 2-b: Test position 1 **Picture 2-c: Test position 2**

Picture 2-d: Test position 3

Picture 2-e: Test position 4

Picture 2-f: Test position 5

Picture 2-g: Test position 6

5.1.2 Power Measurement

The maximum average conducted output power is measured for the uplink burst in the different modulations. The same setup and device operating configurations used for SAR measurement are also used for the power measurements. Power is measured with a spectrum analyzer (model & specifics etc.) and the device is connected to the vector signal generator through a directional coupler.

GSM Frequency Band

Because the EUT has only data transfer function, the tests for GSM 850/1900 are performed in GPRS mode (The tests are performed for the case of the slots in uplink with the maximum averaged power). The tests are performed for GPRS at the highest output power channel frequency first for all the 6 test positions, and according to the 3 dB rule then set to the other channels if necessary.

To decide which time slot should be chosed to test in, average power should be caculated. The Averaged conducted power for GPRS 850/1900 is as follow:

GSM 850 GPRS	Measured Power (dBm)				Averaged Power (dBm)		
	Ch 251	Ch190	Ch128		Ch 251	Ch190	Ch128
1 Txslot	32.15	31.85	31.38	-9.03dB	23.12	22.82	22.35
2 Txslots	**32.10**	**31.82**	**31.33**	**-6.02dB**	26.08	25.8	25.31

GSM1900 GPRS	Measured Power (dBm)				Averaged Power (dBm)		
	Ch 810	Ch661	Ch512		Ch 810	Ch661	Ch512
1 Txslot	29.79	29.78	29.71	-9.03dB	20.76	20.75	20.68
2 Txslots	**29.72**	**29.70**	**29.65**	**-6.02dB**	23.7	23.68	23.63

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

WiFi 802.11b/g 2.45GHz band

SAR is not required for 802.11g channels since the output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels, and for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate. According to the following conducted power, the EUT should be tested for "802.11b 1Mbps" first, then the necessary configurations in "802.11g". A communication link is set up with the test mode software for WiFi mode test. The test mode software we used is 8686.exe for AW-GH321 with the version of V1.0 supported by company Haihua. For 802.11b, and 802.11g, the Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 6 and 11 respectively in the case of 2450 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. The tests are performed for WiFi at highest output channel for all the 6 test positions."When the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8W/Kg,where the transmission band corresponding to all channels is≤100 MHz,testing for the other channels is not required." So the test channels have been set first to the highest output channel and then others if necessary.

The conducted power for WiFi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	14.95	15.02	14.83	14.80
6	14.76	14.95	14.77	14.71
11	14.87	14.83	14.68	14.90

802.11g (dBm)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	13.82	13.89	13.78	13.68	13.56	13.67	13.59	13.26
6	14.10	13.85	13.76	13.69	13.52	13.59	13.68	13.24
11	14.05	13.98	13.78	13.65	13.59	13.46	13.56	13.10

RFID 900MHz band

A communication link is set up with the test mode software for RFID mode test. The test mode software we used is XC2900-F6C DEMO for F6C_UHF_RFID with the version of V1.2 supported by company Invengo. For RFID 900MHz, the Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 26 and 50 respectively in the case of 900 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. The tests are performed for RFID at highest output channel for all the 6 test positions."When the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8W/Kg,where the transmission band corresponding to all channels is≤100 MHz,testing for the other channels is not required." So the test channels have been set first to the highest output channel and then others if necessary.

The conducted power for WiFi is as following:

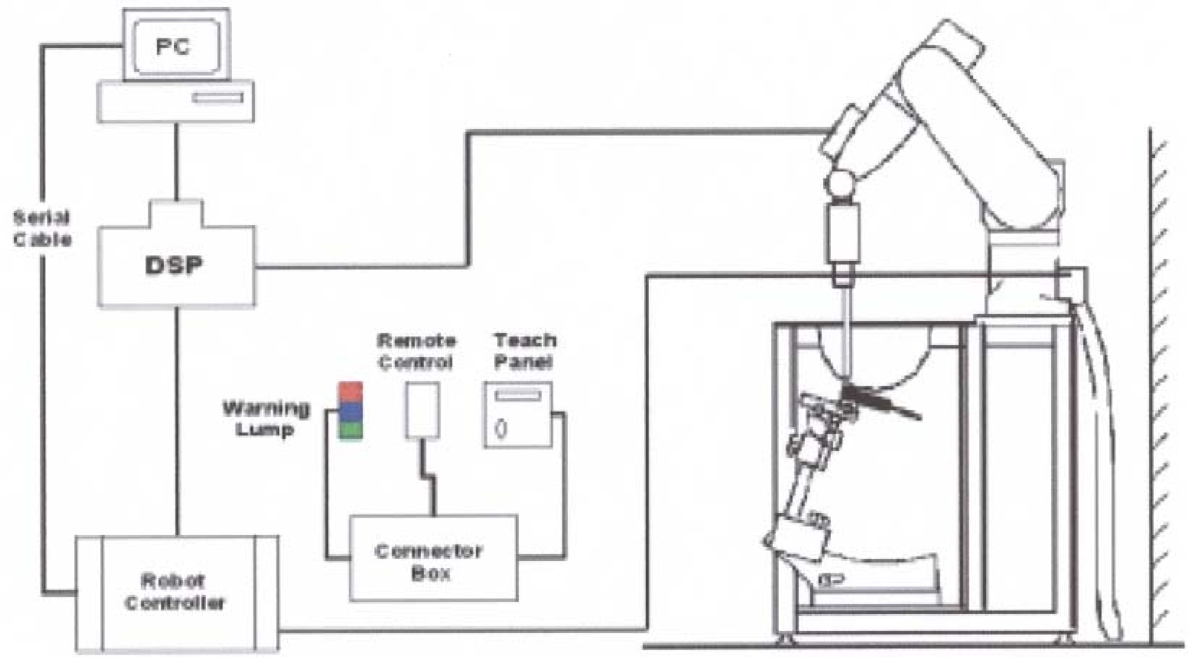
Channel	Frequence	Power(dBm)
1	902.75	26.52
26	915.25	26.35
50	927.25	26.49

If the stand-alone 1-g SAR for each antenna is low, or the sum of the 1-g SAR for all transmitters is well within the SAR limit where overlapping SAR distributions are limited, SAR evaluation for simultaneous transmission may be unnecessary.

5.2 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.

5.3 Dasy4 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. 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.

ES3DV3 Probe Specification

Picture 5: ES3DV3 E-field

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 2300 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)

Directivity	± 0.2 dB in HSL (rotation around probe axis)
	± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 μW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 20 mm)
	Tip diameter: 3.9 mm (Body: 12 mm)
	Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz
	Dosimetry in strong gradient fields
	Compliance tests of mobile phones

Picture6:EX3DV3 E-field probe

5.4 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).

Picture 7: Device Holder

5.5 Other Test Equipment

5.5.1 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 repeatable positioned according to the FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, and flat phantom).

5.5.2 Phantom

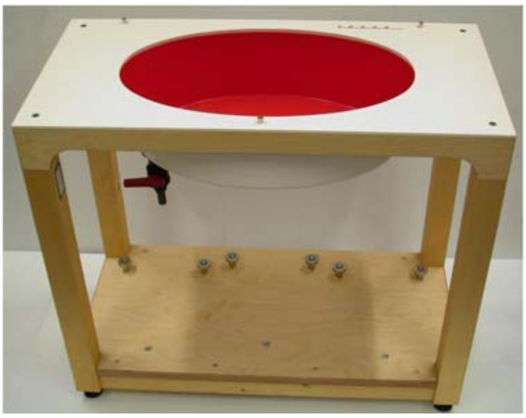
The ELI4 phantom is constructed of a fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6GHz. ELI4 is fully compatible with the latest standard IEC 62209-2 and all known tissue simulating liquids. 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: ELI4 Phantom

5.6 Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, Glycol monobutyl 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 1: Composition of the Body Tissue Equivalent Matter

MIXTURE %	FREQUENCY 850MHz&900MHz
Water	50.93
Sugar	45.61
Salt	1.09
Preventol	0.37
Cellulose	2.0
Dielectric Parameters Target Value	f=850MHz ε=55.2 σ=0.97
	f=900MHz ε=55.0 σ=1.05
MIXTURE %	FREQUENCY 1900MHz
Water	70.52

Glycol monobutyl	29.09
Salt	0.39
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52
MIXTURE %	FREQUENCY 2450MHz
Water	72.60
Glycol monobutyl	27.22
Salt	0.18
Dielectric Parameters Target Value	f=2450MHz ε=52.7 σ=1.95

5.7 System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: TX90XL

Repeatability: ±0.02 mm

No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Inter® Core™ CPU 6300

Clock Speed: 1.86GHz

Operating System: Windows XP

Data Converter

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

Software: DASY5 software

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

6 TEST RESULTS

6.1 Dielectric Performance

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 22.5 °C and relative humidity 68%.
Liquid temperature during the test: 22.5 °C
Measurement Date : 850MHz **November 17, 2011**

/	Frequency	Permittivity ε	Conductivity σ (S/m)
Target value	850 MHz	55.2	0.97
Measurement value (Average of 10 tests)	850 MHz	53.83	1.00

Measurement is made at temperature 22.5 °C and relative humidity 68%.
Liquid temperature during the test: 22.5 °C
Measurement Date : 900 MHz **November 17, 2011**

/	Frequency	Permittivity ε	Conductivity σ (S/m)
Target value	900 MHz	55.0	1.05
Measurement value (Average of 10 tests)	900 MHz	53.31	1.05

Measurement is made at temperature 22.0 °C and relative humidity 66%.
Liquid temperature during the test: 22.0 °C
Measurement Date : 1900 MHz **November 04, 2011**

/	Frequency	Permittivity ε	Conductivity σ (S/m)
Target value	1900 MHz	53.3	1.52
Measurement value (Average of 10 tests)	1900 MHz	52.76	1.58

Measurement is made at temperature 22.0 °C and relative humidity 68%.
Liquid temperature during the test: 22.0 °C
Measurement Date : 2450 MHz **November 07, 2011**

/	Frequency	Permittivity ε	Conductivity σ (S/m)
Target value	2450 MHz	52.7	1.95
Measurement value (Average of 10 tests)	2450 MHz	50.8	2.04

6.2 System Validation

Table 3: System Validation of Body

Measurement is made at temperature 22.5 °C and relative humidity 68%.
Liquid temperature during the test: 22.5 °C
Measurement Date : 850MHz **November 17, 2011**

Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		850 MHz		55.2		0.97	
	Actual Measurement value	850 MHz		53.83		1.00	
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	835 MHz	1.57	2.41	1.56	2.50	-0.64%	3.73%

Measurement is made at temperature 22.5 °C and relative humidity 68%.
Liquid temperature during the test: 22.5 °C
Measurement Date : 900 MHz **November 17, 2011**

Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		900 MHz		55.0		1.05	
	Actual Measurement value	900 MHz		53.31		1.05	
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	900 MHz	1.84	2.87	1.79	2.79	-2.72%	-2.79%

Measurement is made at temperature 22.0 °C and relative humidity 66%.
Liquid temperature during the test: 22.0 °C
Measurement Date : 1900 MHz **November 04, 2011**

Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		1900 MHz		53.3		1.52	
	Actual Measurement value	1900 MHz		52.76		1.58	
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	

		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	1900 MHz	5.24	10.4	5.19	10.4	-0.95%	0
Measurement is made at temperature 22.0 °C and relative humidity 68%. Liquid temperature during the test: 22.0 °C Measurement Date : 2450 MHz **November 07, 2011**							
Liquid parameters	Dipole calibration Target value	**Frequency**		**Permittivity ε**		**Conductivity σ (S/m)**	
		2450 MHz		52.7		1.95	
	Actual Measurement value	2450 MHz		50.8		2.04	
Verification results	**Frequency**	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**	
		10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**
	2450 MHz	5.98	12.9	5.78	12.8	-3.34%	-0.78%

Note：Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

6.3 Summary of Measurement Results

Table 4: SAR Values (GSM 850 MHz GPRS-2 Txslots)

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, Low frequency (See Figure 1)	0.00208	0.00279	0.182
Flat Phantom, Test Position 2 Low frequency (See Figure 2)	0.00113	0.00175	0.15
Flat Phantom, Test Position 3, Low frequency (See Figure 3)	**0.025**	**0.040**	0.194
Flat Phantom, Test Position 4, Low frequency (See Figure 4)	0.00209	0.00326	0.109
Flat Phantom, Test Position 5, Low frequency (See Figure 5)	0.0015	0.00209	0.135
Flat Phantom, Test Position 6, High frequency (See Figure 6)	0.00112	0.0016	0.13

Table 5: SAR Values (GSM 1900 MHz GPRS-2 Txslots)

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, Low frequency (See Figure 7)	0.024	0.044	0.172
Flat Phantom, Test Position 2 Low frequency (See Figure 8)	0.013	0.020	0.102
Flat Phantom, Test Position 3, Low frequency (See Figure 9)	0.052	0.084	0.107
Flat Phantom, Test Position 4, Low frequency (See Figure 10)	0.041	0.073	-0.00476
Flat Phantom, Test Position 5, Low frequency (See Figure 11)	**0.052**	**0.088**	0.172
Flat Phantom, Test Position 6, High frequency (See Figure 12)	0.041	0.066	0.126

Table 6: SAR Values (802.11b_2450MHz)

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, Low frequency (See Figure 13)	3.05e-005	0.000228	0.050
Flat Phantom, Test Position 2 Low frequency (See Figure 14)	0.00392	0.00702	0.18
Flat Phantom, Test Position 3, Low frequency (See Figure 15)	**0.025**	**0.047**	0.16
Flat Phantom, Test Position 4, Low frequency (See Figure 16)	0.00139	0.00288	0.162
Flat Phantom, Test Position 5, Low frequency (See Figure 17)	0.00137	0.00194	-0.106
Flat Phantom, Test Position 6, High frequency (See Figure 18)	5.92e-005	0.00031	-0.191

Table 7: SAR Values (RFID 900MHz)

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, Low frequency (See Figure 19)	0.024	0.031	-0.064
Flat Phantom, Test Position 2 Low frequency (See Figure 20)	**0.216**	**0.328**	-0.140
Flat Phantom, Test Position 3, Low frequency (See Figure 21)	0.080	0.111	0.133
Flat Phantom, Test Position 4, Low frequency (See Figure 22)	0.097	0.136	0.113

Flat Phantom, Test Position 5, Low frequency (See Figure 23)	0.155	0.212	-0.151
Flat Phantom, Test Position 6, High frequency (See Figure 24)	0.027	0.040	0.127

6.4 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 4.2 of this report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 4.1 of this test report.

The maximum SAR values are obtained at the case of **RFID 900 MHz _Position 2, Low frequency (Table 7)**, and the value is: **0.216W/kg (10g), 0.328 W/kg (1g).**

7 Measurement Uncertainty

SN	Error source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard Uncertainty (%) u_i' (%)	Degree of freedom V_{eff} or v_i
1	System repetivity	A	0.3	N	1	1	0.3	9
	Measurement system							
2	—probe calibration	B	7	N	2	1	3.5	∞
3	—axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	0.5	4.3	∞
4	— hemisphere isotropy of the probe	B	9.4	R	$\sqrt{3}$	$\sqrt{0.5}$		
5	—probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
6	—detection limit	B	1.0	R	$\sqrt{3}$	1	0.6	∞
7	—boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	∞
8	—Response time	B	0	R	$\sqrt{3}$	1	0	∞
9	— RF ambient conditions –noise	B	0	R	$\sqrt{3}$	1	0	∞
10	—Integration time	B	5.0	R	$\sqrt{3}$	1	2.9	∞
	Mechanism restrict							
11	—Scan system	B	0.4	R	$\sqrt{3}$	1	0.2	∞

12	—phantom shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
13	— matching between probe and phantom references	B	2.9	R	$\sqrt{3}$	1	1.7	∞
14	—position of the DUT	A	4.9	N	1	1	4.9	5
	physical parameters							
15	—liquid density	B	0	R	$\sqrt{3}$	1	0	∞
16	— liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.5	2.9	∞
17	— liquid conductivity(measurement error)	A	0.23	N	1	1	0.23	9
17	— liquid permittivity(deviation from target)	B	5.0	R	$\sqrt{3}$	0.5	2.9	∞
18	— liquid permittivity(measurement error)	A	0.46	N	1	1	0.46	9
19	— liquid conductivity(measurement error)	B	5.0	R	$\sqrt{3}$	1	2.9	∞
20	-drifts in output power of the phone, probe, temperature and humidity	B	3.0	R	$\sqrt{3}$	1	1.7	∞
21	-RF ambientconditions –reflections	B	0	R	$\sqrt{3}$	1	0	∞
	post-processing							
22	-SAR interpolation and extrapolation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$		/			11.2	83.4
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2		22.4	$u_e = 2u_c$

8 MAIN TEST INSTRUMENTS

Table 8: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent E5071C	MY46103759	January 17,2011	One year
02	Dielectric Probe kit	85070E	MY44300317	No Calibration Requested	
03	Power meter	NRVD	101253	March 9, 2011	One year
04	Power sensor	NRV-Z5	100333		
05	Signal Generator	Agilent E4438C	MY45095825	January 17,2011	One Year
06	Amplifier	VTL5400	0404	No Calibration Requested	
07	BTS	Agilent E5515C	GB47460389	September 21,2011	One year
08	E-field Probe	SPEAG ES3DV3	3151	April 27,2011	One year
09	DAE	SPEAG DAE4	786	November 22,2010	One year
10	Dipole Validation Kit	SPEAG D835V2	443	February 26,2010	Two year
11	Dipole Validation Kit	SPEAG D1900V2	541	February 26,2010	Two year
12	Dipole Validation Kit	SPEAG D900V2	1d054	December 7,2009	Two year
13	Dipole Validation Kit	SPEAG D2450V2	853	September 27,2010	Two year

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.

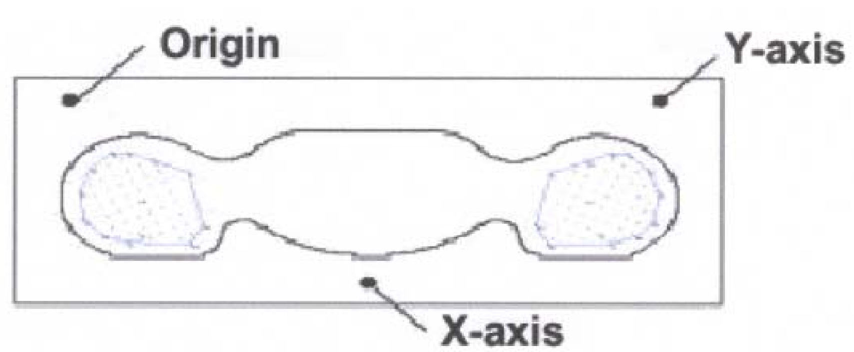
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

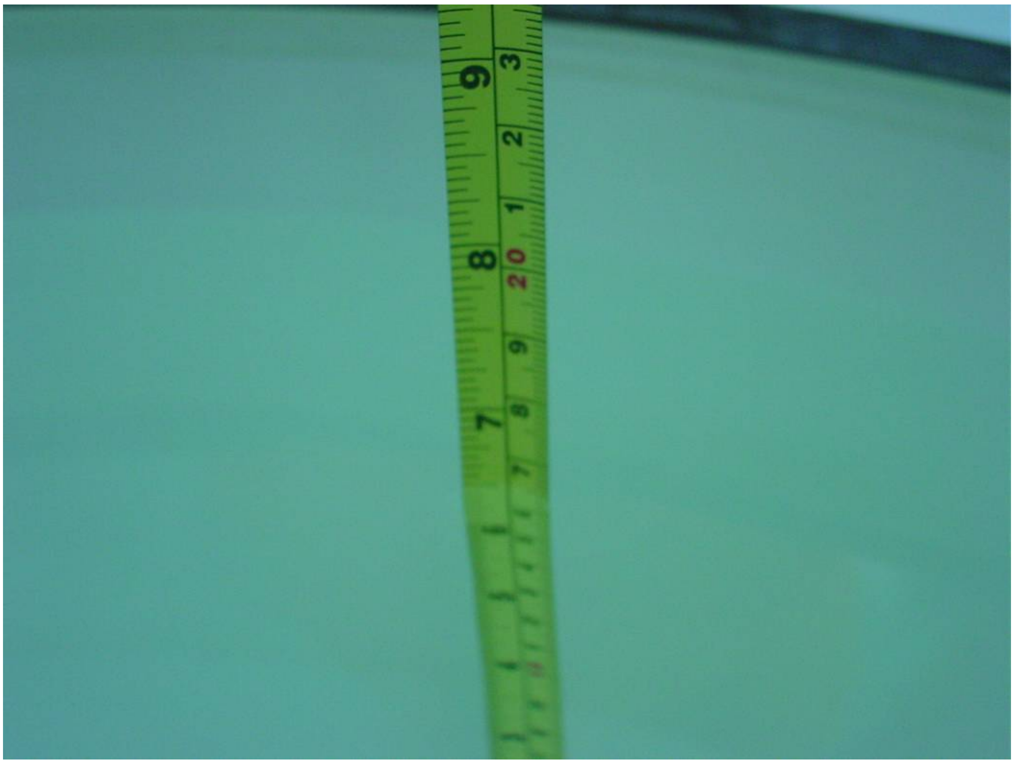
Step 4: Re-measurement the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation is repeated.



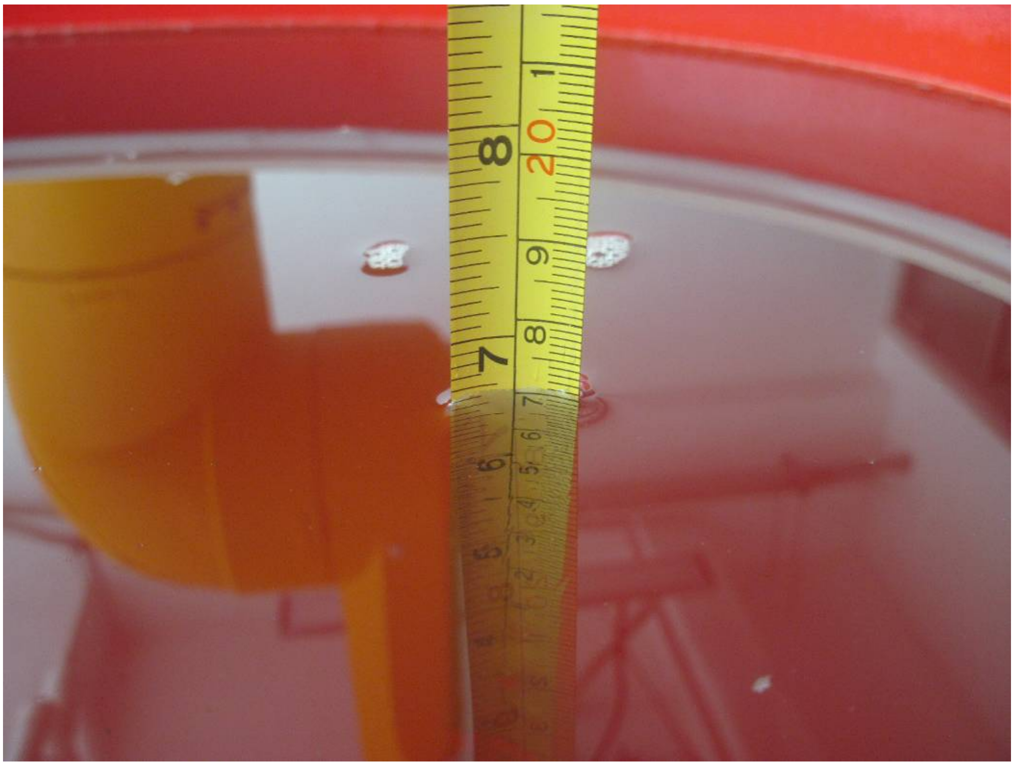
Picture A: SAR Measurement Points in Area Scan

ANNEX B TEST LAYOUT

Picture B1: Specific Absorption Rate Test Layout



Picture B2 Liquid depth in the Flat Phantom (1900MHz)



Picture B3: Liquid depth in the Flat Phantom (850&900 MHz)

Picture B4 Liquid depth in the Flat Phantom (2450MHz)

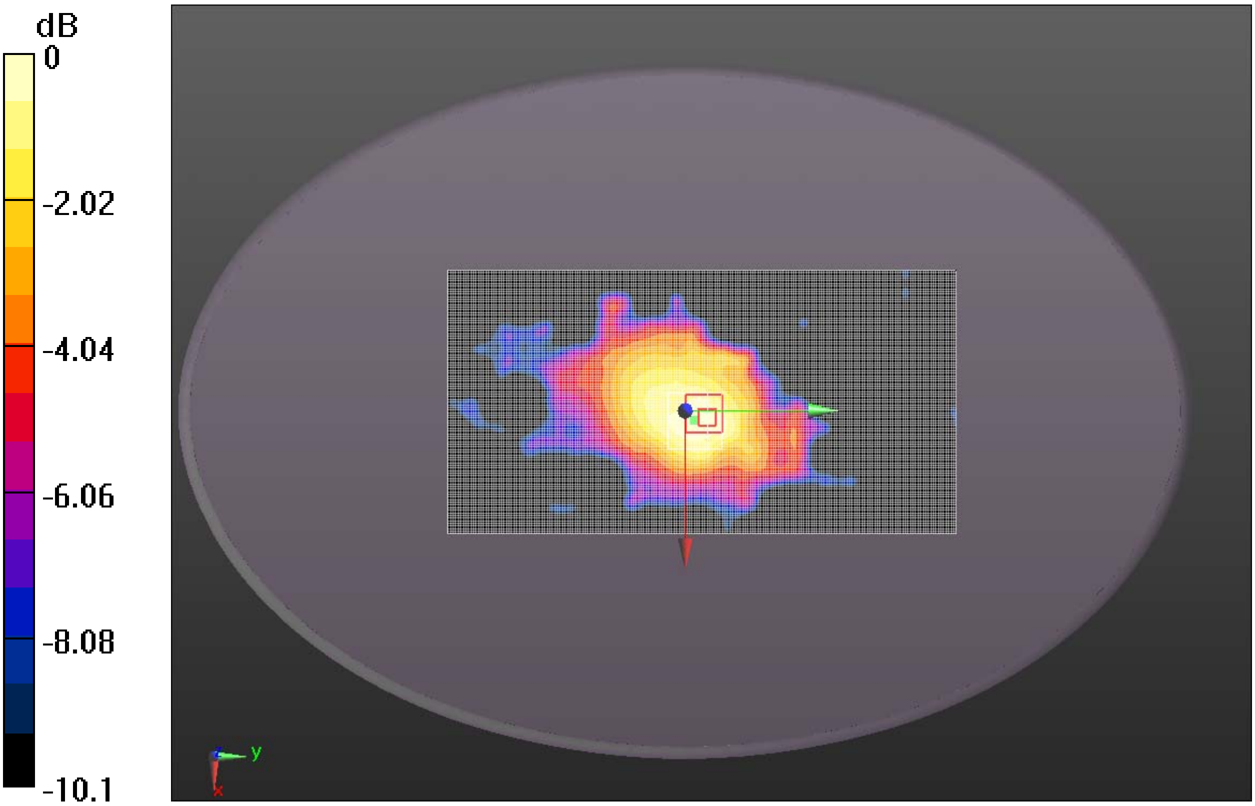
ANNEX C GRAPH RESULTS

GSM 850 Test Position 1 High with GPRS

Date/Time: 11/17/2011 7:16:41 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature:22.0℃
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 1_Channel High /Area Scan (101x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00283 mW/g

Test Position 1_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.48 V/m; Power Drift = 0.182 dB
Peak SAR (extrapolated) = 0.00374 W/kg
SAR(1 g) = 0.00279 mW/g; SAR(10 g) = 0.00208 mW/g
Maximum value of SAR (measured) = 0.00296 mW/g



0 dB = 0.00296mW/g

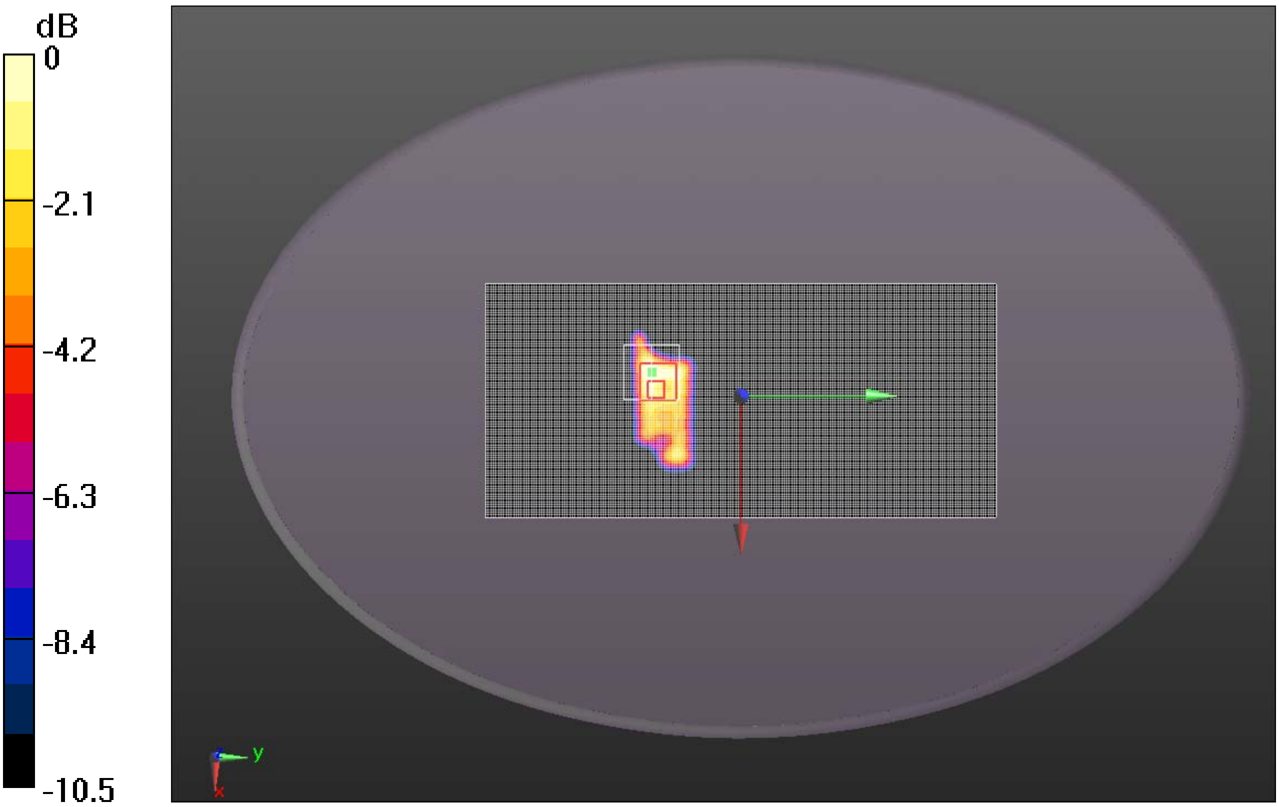
Fig.1 GPRS 850MHz CH251 Test Position 1

GSM 850 Test Position 2 High with GPRS

Date/Time: 11/17/2011 5:17:07 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 2_Channel High /Area Scan (91x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00267 mW/g

Test Position 2_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.2 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.00211 W/kg
SAR(1 g) = 0.00175 mW/g; SAR(10 g) = 0.00113 mW/g
Maximum value of SAR (measured) = 0.002 mW/g



0 dB = 0.002mW/g

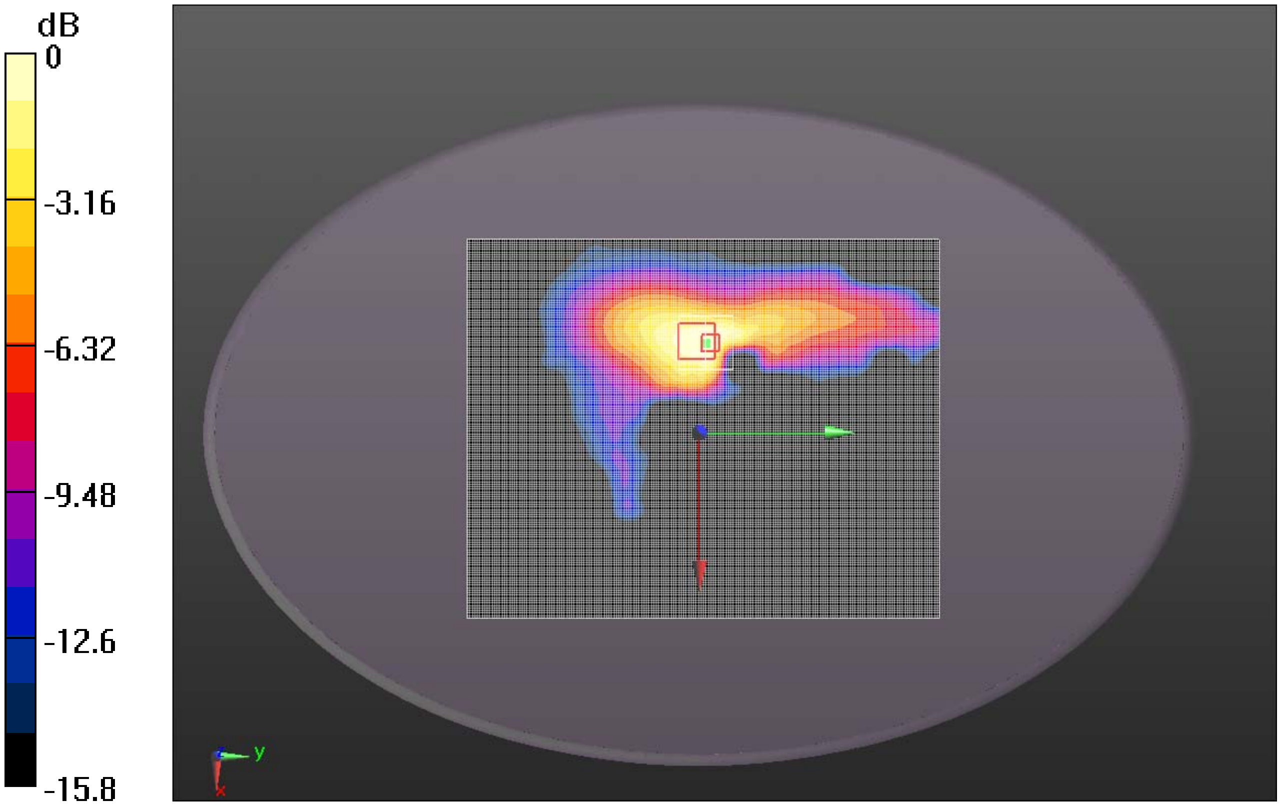
Fig.2 GPRS 850MHz CH251 Test Position 2

GSM 850 Test Position 3 High with GPRS

Date/Time: 11/17/2011 3:52:58 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m³
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 3_Channel High /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.052 mW/g

Test Position 3_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.812 V/m; Power Drift = 0.194 dB
Peak SAR (extrapolated) = 0.073 W/kg
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.043 mW/g



0 dB = 0.043mW/g

Fig.3 GPRS 850MHz CH251 Test Position 3

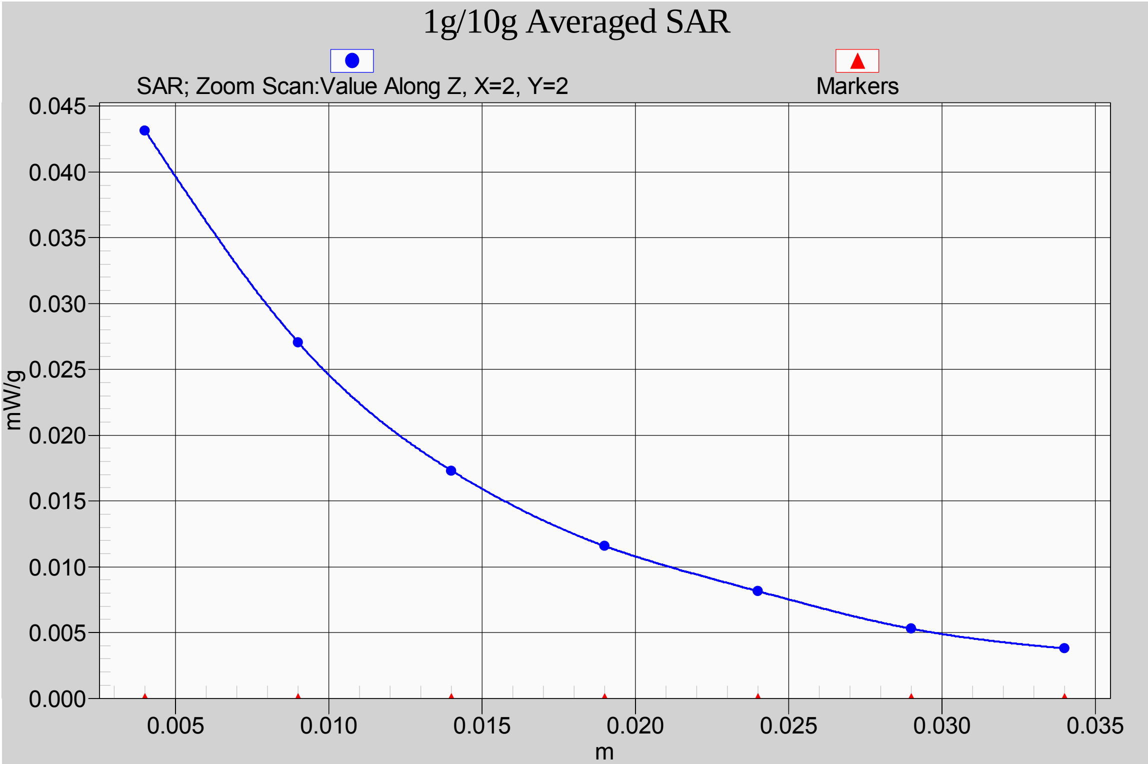


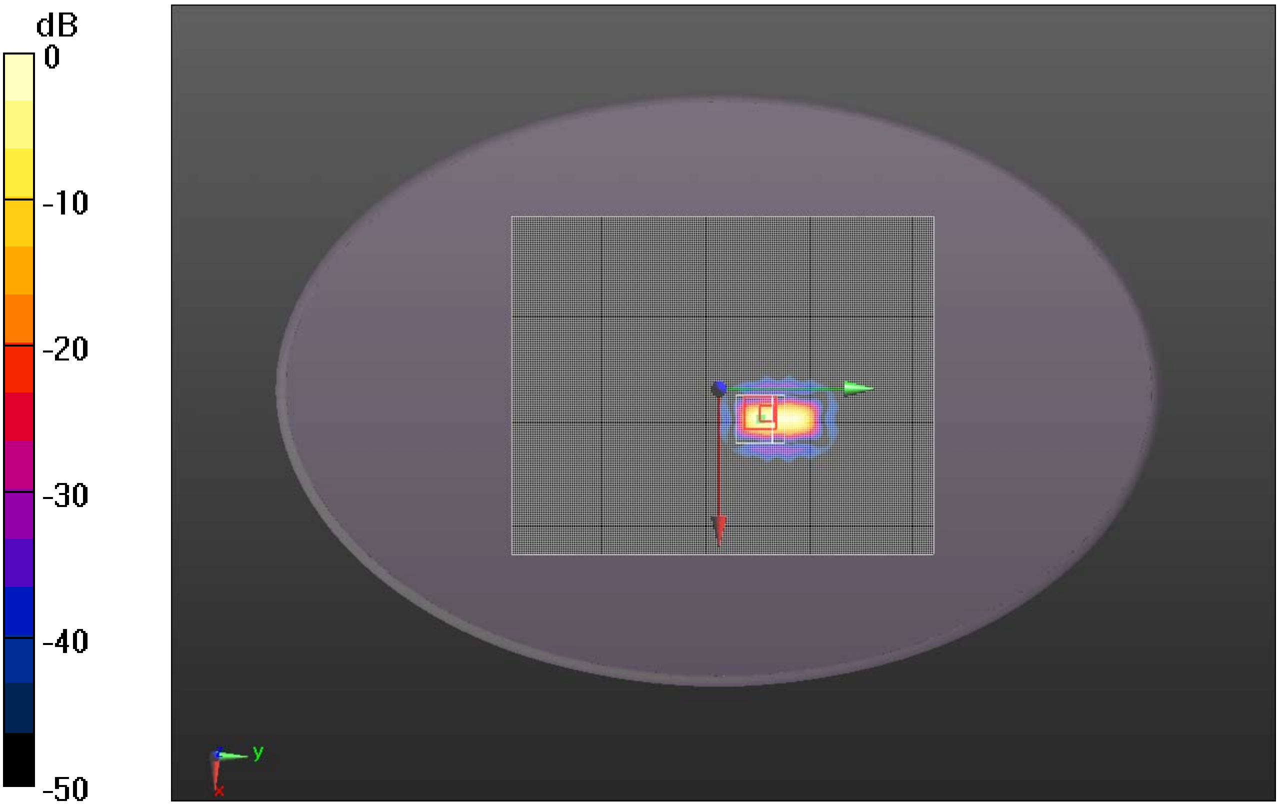
Fig.3-1 Z-Scan at power reference point (GSM 850MHz CH251 Test Position 3)

GSM 850 Test Position 4 High with GPRS

Date/Time: 11/17/2011 4:33:21 PM,
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 4_Channel High /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00299 mW/g

Test Position 4_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.23 V/m; Power Drift = 0.109 dB
Peak SAR (extrapolated) = 0.00454 W/kg
SAR(1 g) = 0.00326 mW/g; SAR(10 g) = 0.00209 mW/g
Maximum value of SAR (measured) = 0.0035 mW/g



0 dB = 0.0035mW/g

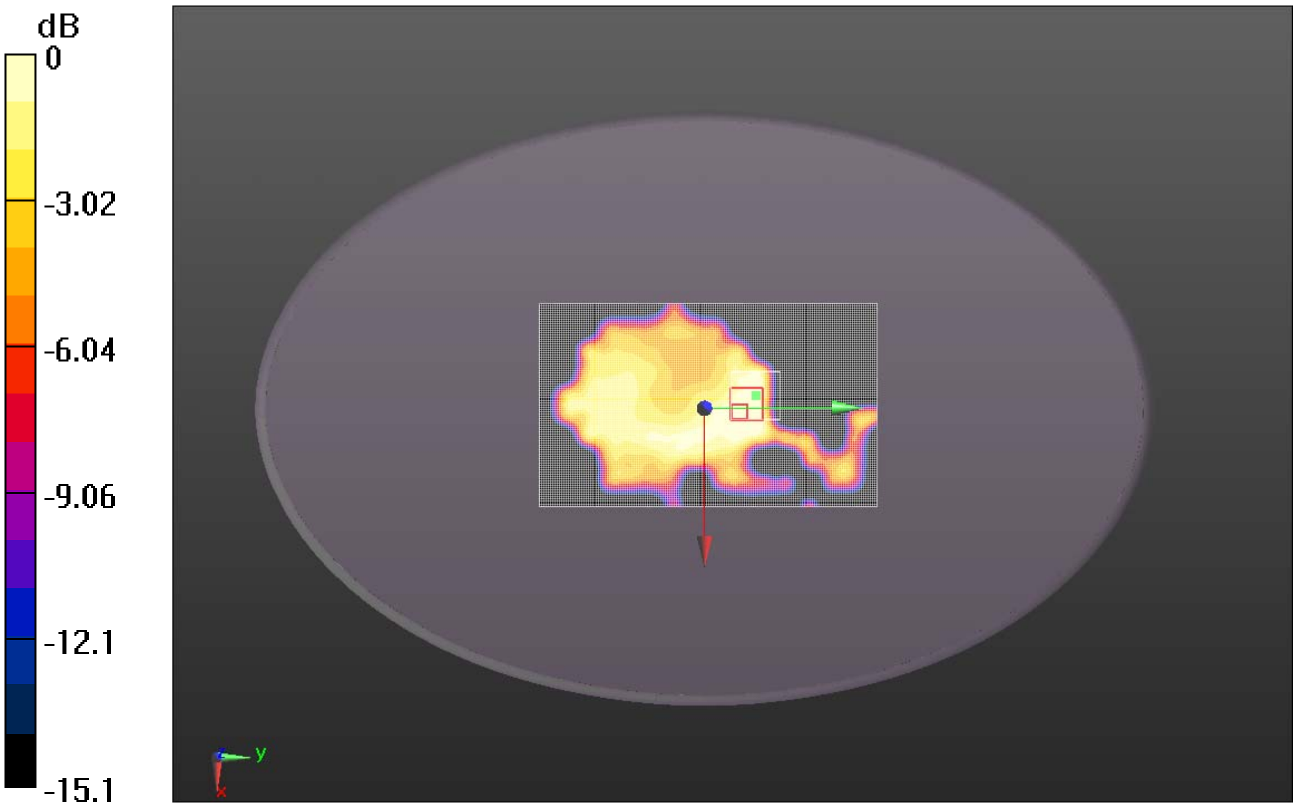
Fig.4 GPRS 850MHz CH251 Test Position 4

GSM 850 Test Position 5 High with GPRS

Date/Time: 11/17/2011 8:13:21 PM,
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Ambient Temperature: 22.0°C Liquid Temperature: 22.0°C
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 5_Channel High /Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00307 mW/g

Test Position 5_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.37 V/m; Power Drift = 0.135 dB
Peak SAR (extrapolated) = 0.00282 W/kg
SAR(1 g) = 0.00209 mW/g; SAR(10 g) = 0.0015 mW/g
Maximum value of SAR (measured) = 0.0024 mW/g



0 dB = 0.0024mW/g

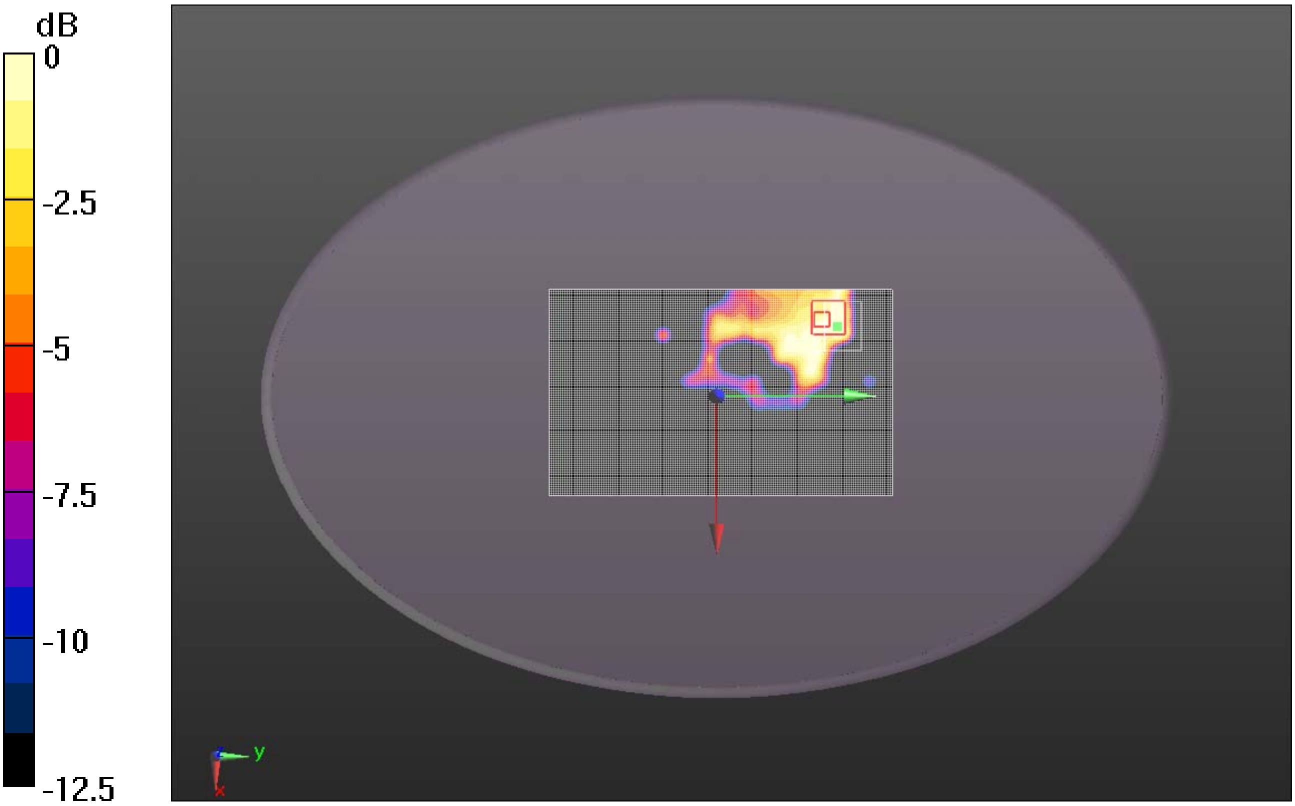
Fig.5 GPRS 850MHz CH251 Test Position 5

GSM 850 Test Position 6 High with GPRS

Date/Time: 11/17/2011 6:18:08 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 848.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 6_Channel High /Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00318 mW/g

Test Position 6_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.543 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.00197 W/kg
SAR(1 g) = 0.0016 mW/g; SAR(10 g) = 0.00112 mW/g
Maximum value of SAR (measured) = 0.00181 mW/g



0 dB = 0.00181mW/g

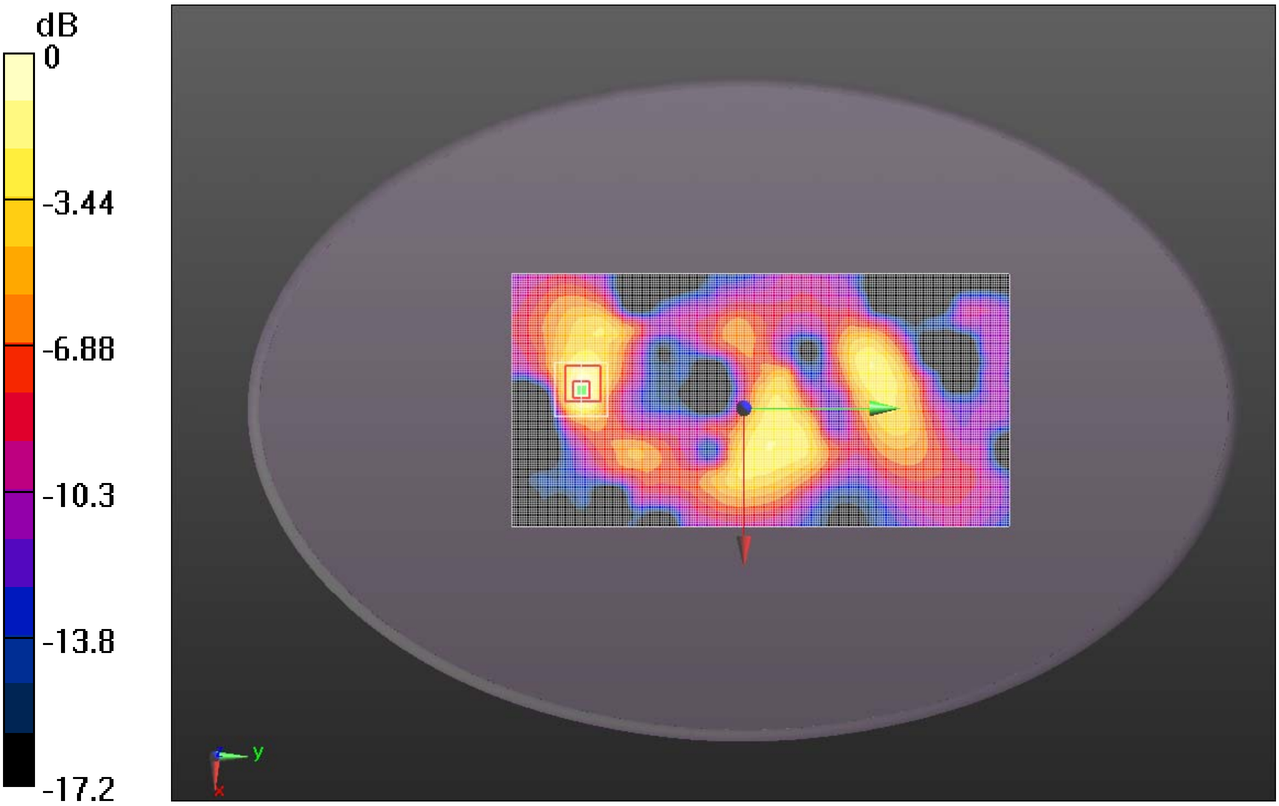
Fig.6 GPRS 850MHz CH251 Test Position 6

GSM 1900 Test Position 1 High with GPRS

Date/Time: 11/4/2011 2:26:53 PM
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.53 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 1_Channel High /Area Scan (101x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.050 mW/g

Test Position 1_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.19 V/m; Power Drift = 0.472 dB
Peak SAR (extrapolated) = 0.078 W/kg
SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.051 mW/g



0 dB = 0.051mW/g

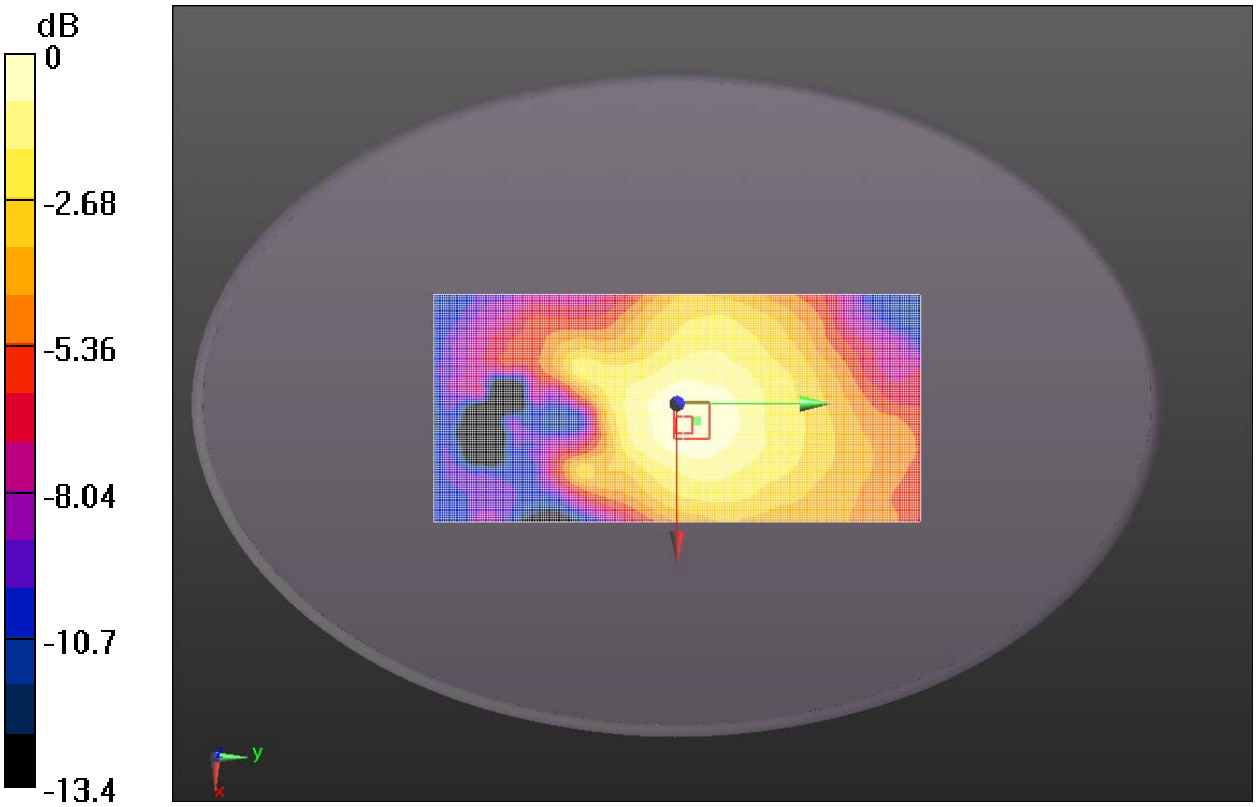
Fig.7 GPRS 1900MHz CH810 Test Position 1

GSM 1900 Test Position 2 High with GPRS

Date/Time: 11/4/2011 10:00:02 AM
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 2_Channel High /Area Scan (91x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.021 mW/g

Test Position 2_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.51 V/m; Power Drift = 0.102 dB
Peak SAR (extrapolated) = 0.029 W/kg
SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.013 mW/g
Maximum value of SAR (measured) = 0.021 mW/g



0 dB = 0.021mW/g

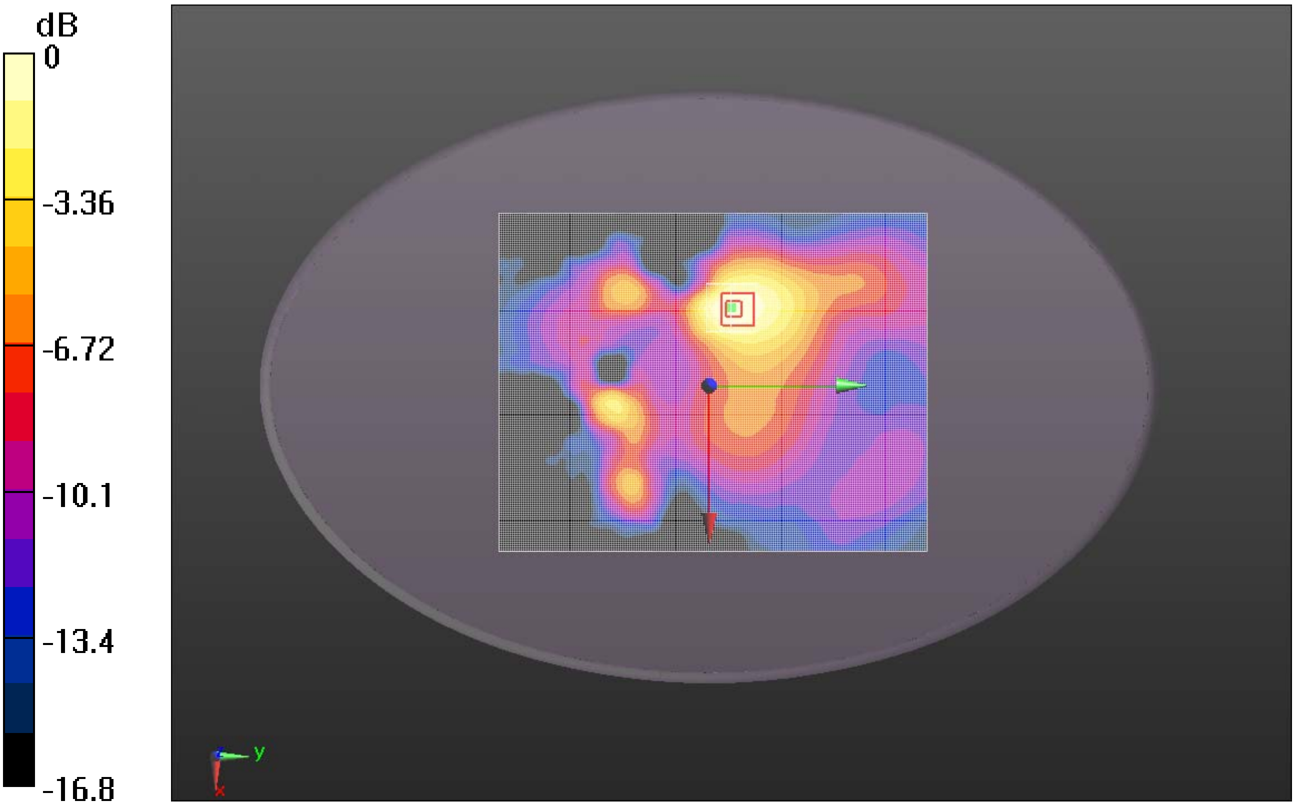
Fig.8 GPRS 1900MHz CH810 Test Position 2

GSM 1900 Test Position 3 High with GPRS

Date/Time: 11/4/2011 4:24:36 PM
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 3_Channel High /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.094 mW/g

Test Position 3_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.08 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.084 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.090 mW/g



0 dB = 0.090mW/g

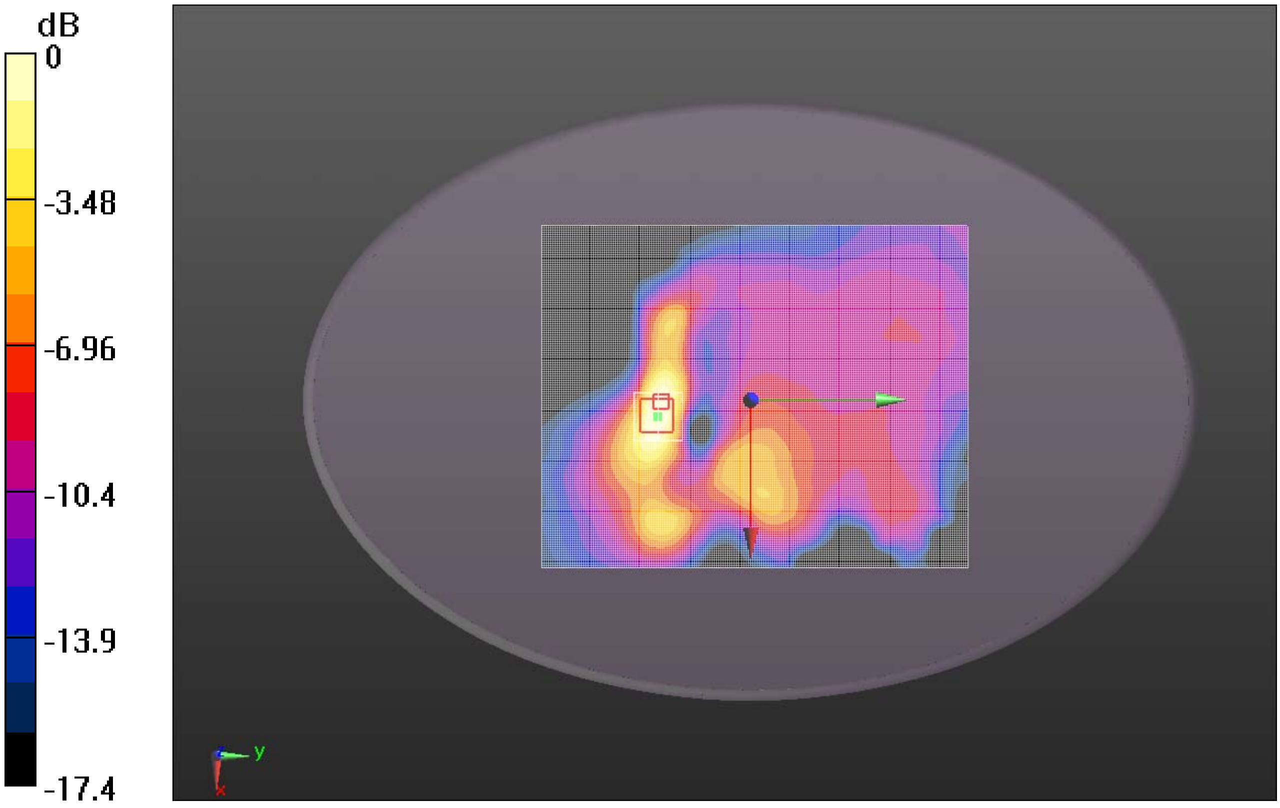
Fig.9 GPRS 1900MHz CH810 Test Position 3

GSM 1900 Test Position 4 High with GPRS

Date/Time: 11/4/2011 3:04:09 PM
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 4_Channel High /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.091 mW/g

Test Position 4_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.75 V/m; Power Drift = -0.00476 dB
Peak SAR (extrapolated) = 0.120 W/kg
SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.084 mW/g



0 dB = 0.084mW/g

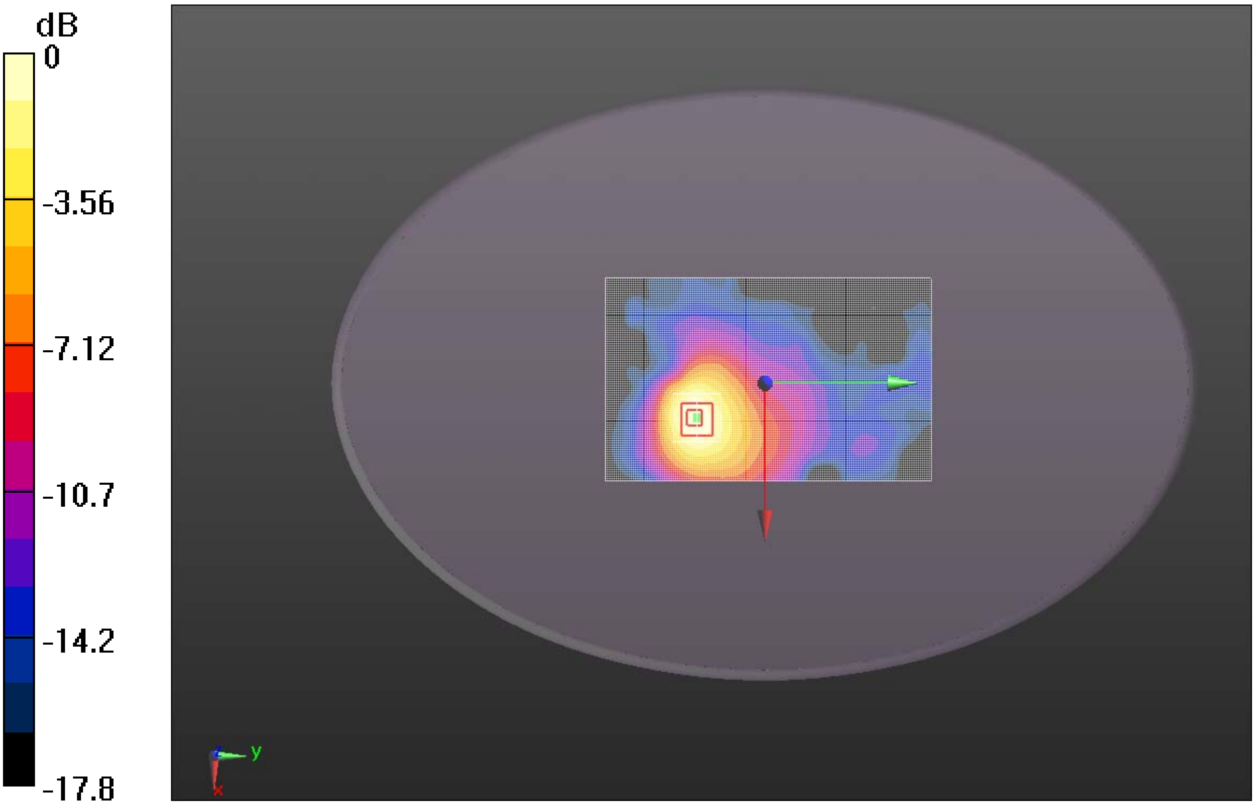
Fig.10 GPRS 1900MHz CH810 Test Position 4

GSM 1900 Test Position 5 High with GPRS

Date/Time: 11/4/2011 10:32:04 AM
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 5_Channel High /Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.099 mW/g

Test Position 5_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.53 V/m; Power Drift = 0.172 dB
Peak SAR (extrapolated) = 0.146 W/kg
SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.095 mW/g



0 dB = 0.095mW/g

Fig.11 GPRS 1900MHz CH810 Test Position 5

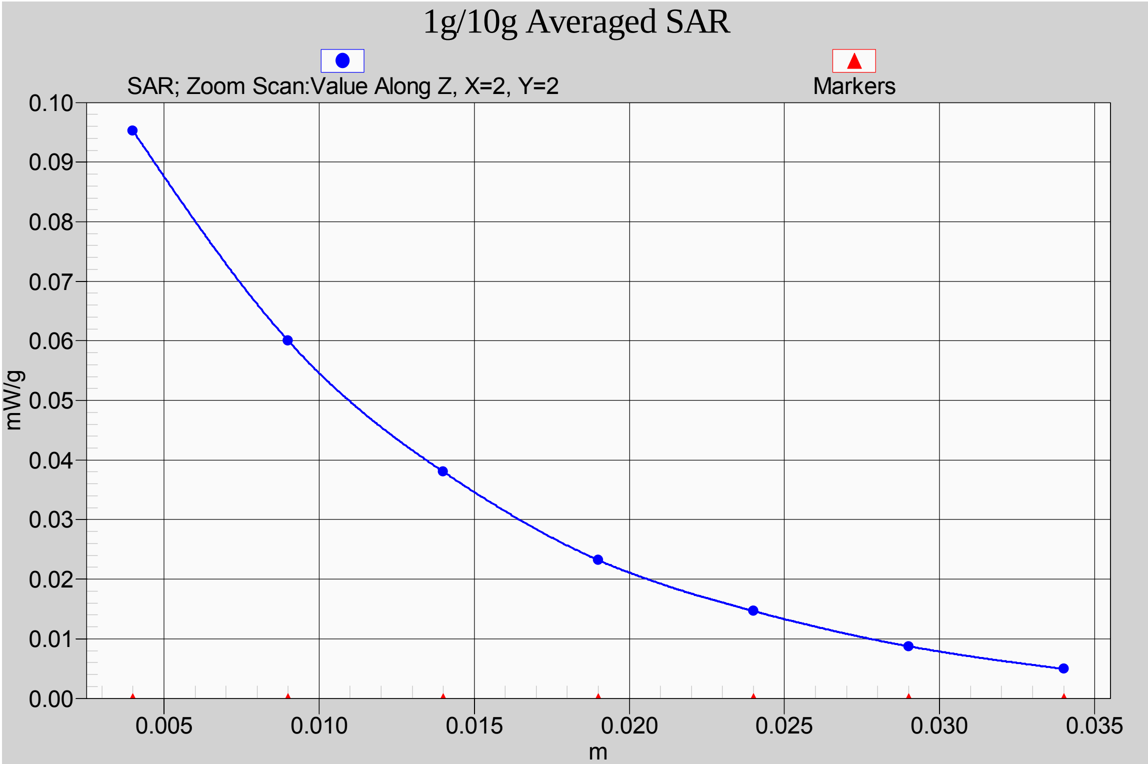


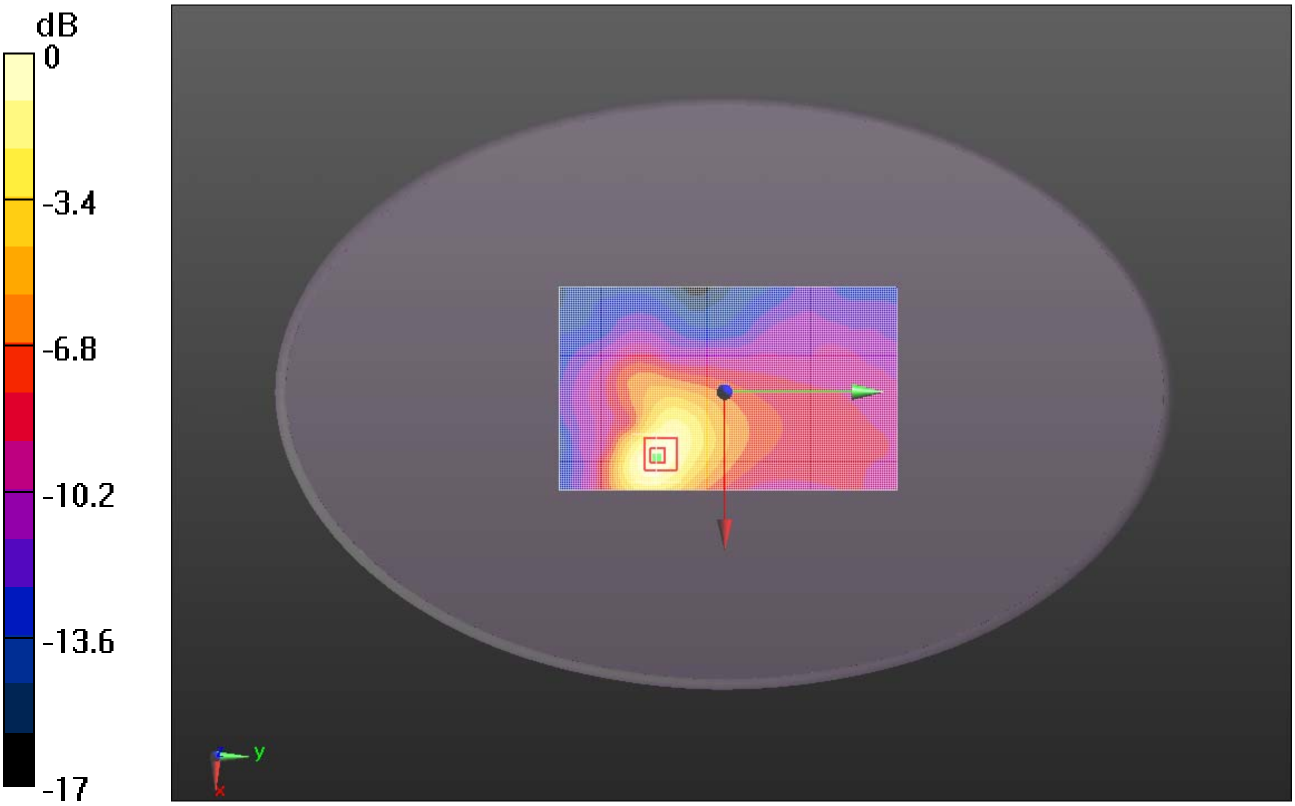
Fig.11-1 Z-Scan at power reference point (GSM 1900MHz CH810 Test Position 5)

GSM 1900 Test Position 6 High with GPRS

Date/Time: 11/4/2011 10:57:01 AM,
Electronics: DAE4 Sn786
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: 2 slot GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4.16006
Probe: ES3DV3 - SN3151 ConvF (4.87, 4.87, 4.87)

Test Position 6_Channel High/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.070 mW/g

Test Position 6_Channel High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.02 V/m; Power Drift = 0.126 dB
Peak SAR (extrapolated) = 0.100 W/kg
SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.071 mW/g



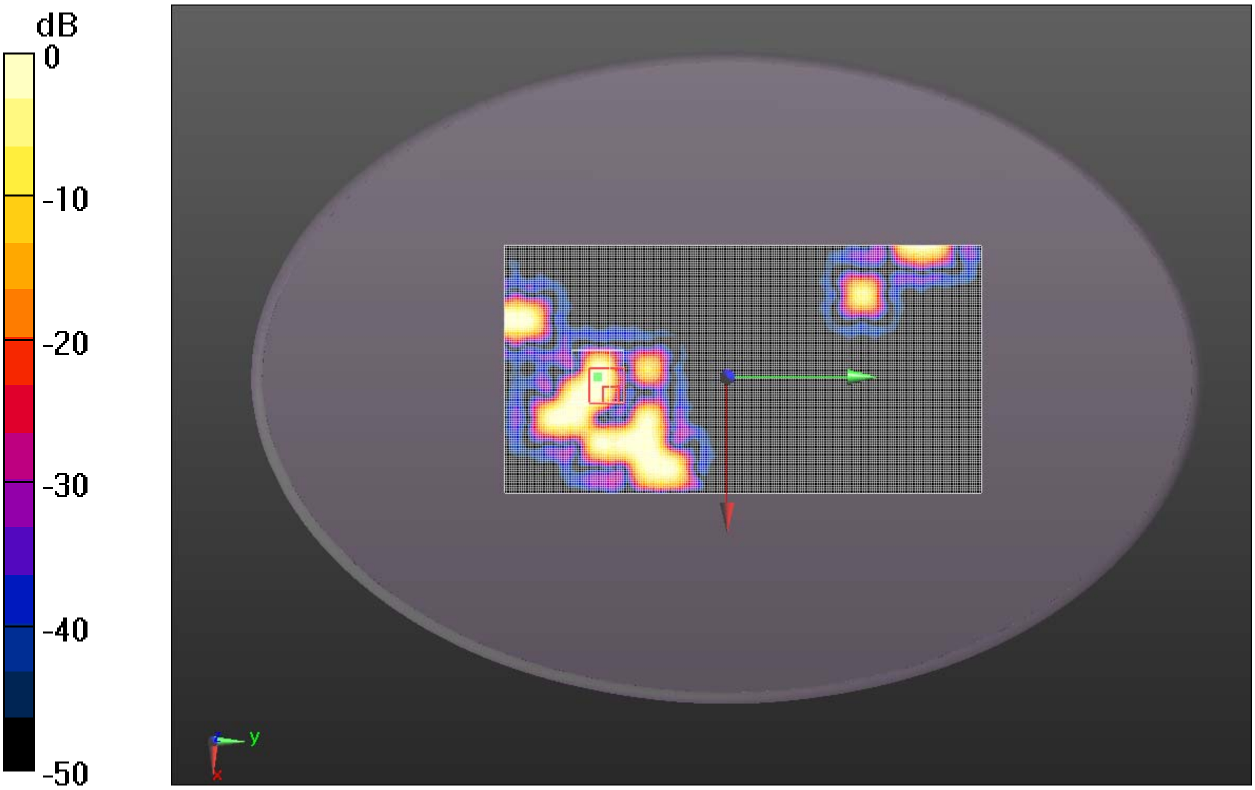
0 dB = 0.071mW/g

Fig.12 GPRS 1900MHz CH810 Test Position 6

WiFi 802.11b_Test Position 1_Channel Low
Date/Time: 11/7/2011 2:26:53 PM
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 1_Channel Low /Area Scan (101x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00295 mW/g

Test Position 1_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.465 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 0.00362 W/kg
SAR(1 g) = 0.000228 mW/g; SAR(10 g) = 3.05e-005 mW/g
Maximum value of SAR (measured) = 0.00177 mW/g



0 dB = 0.00177mW/g

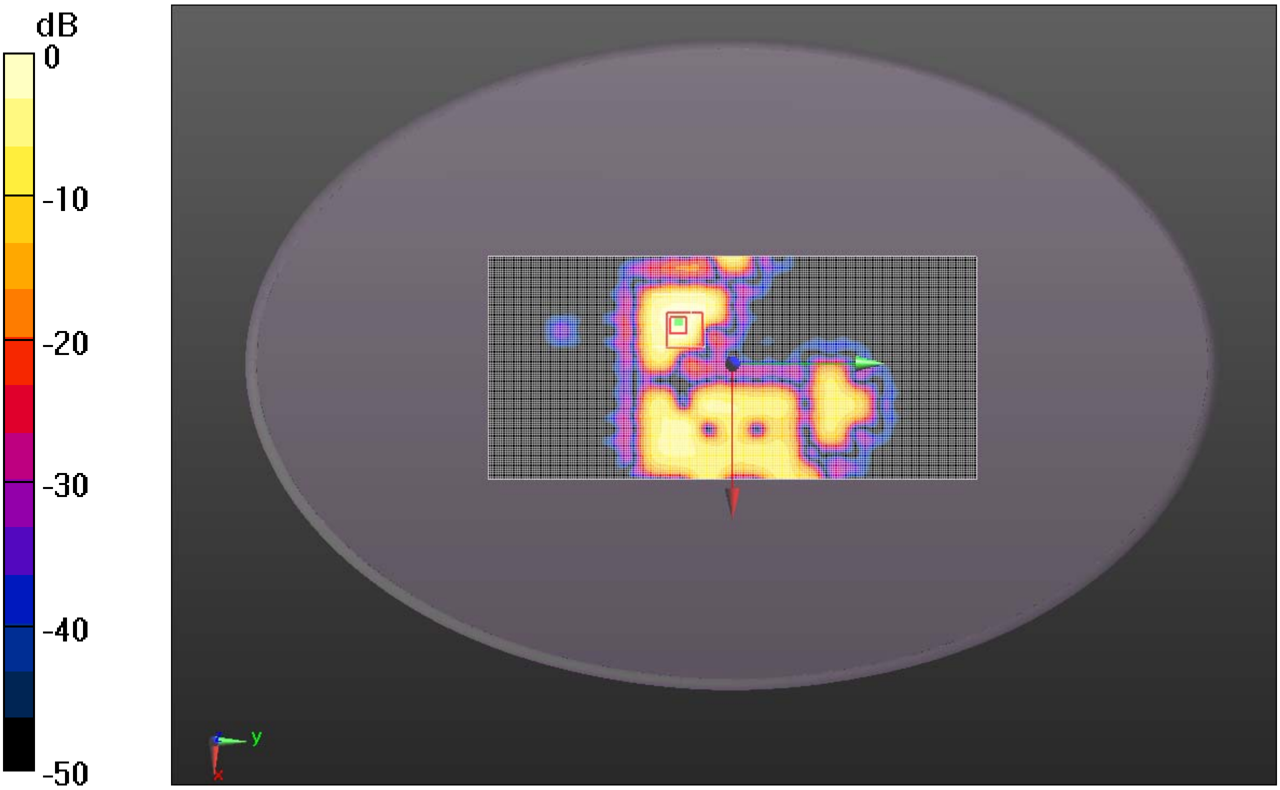
Fig.13 2450MHz CH1 Test Position 1-WiFi 802.11b 1Mbps

WiFi 802.11b_Test Position 2_Channel Low

Date/Time: 11/7/2011 2:59:03 PM,
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 2_Channel Low /Area Scan (91x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00667 mW/g

Test Position 2_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.29 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.013 W/kg
SAR(1 g) = 0.00702 mW/g; SAR(10 g) = 0.00392 mW/g
Maximum value of SAR (measured) = 0.00796 mW/g



0 dB = 0.00796mW/g

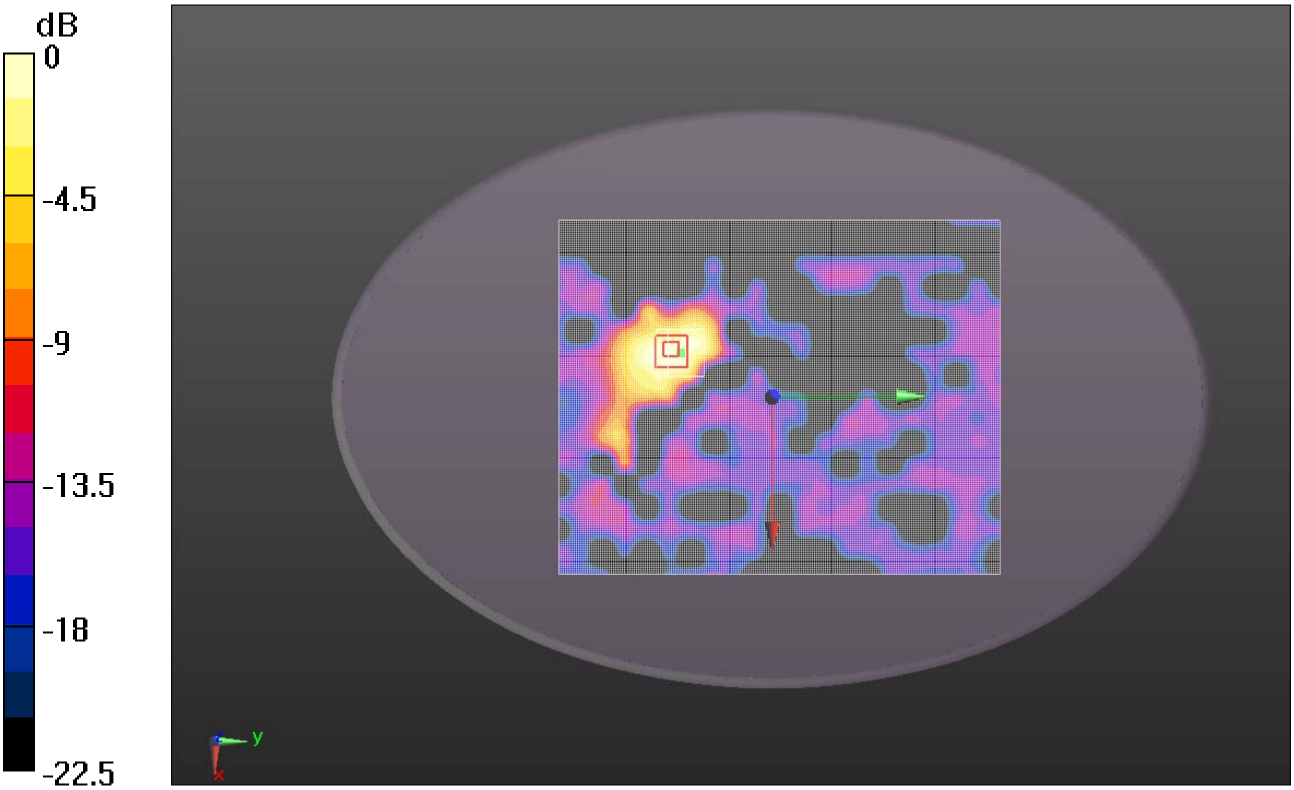
Fig.14 2450MHz CH1 Test Position 3-WiFi 802.11b 1Mbps

WiFi 802.11b_Test Position 3_Channel Low

Date/Time: 11/7/2011 4:36:30 PM
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 3_Channel Low /Area Scan (161x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.051 mW/g

Test Position 3_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.402 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.087 W/kg
SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

Fig.15 2450MHz CH1 Test Position 3-WiFi 802.11b 1Mbps

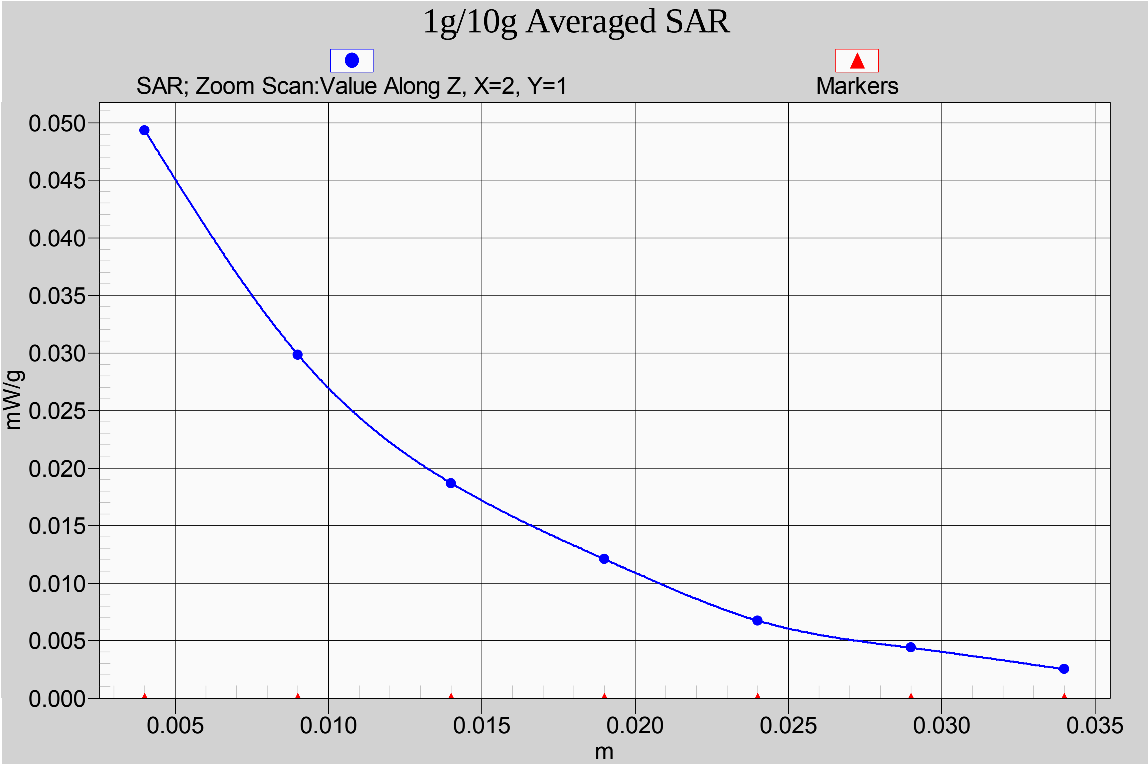


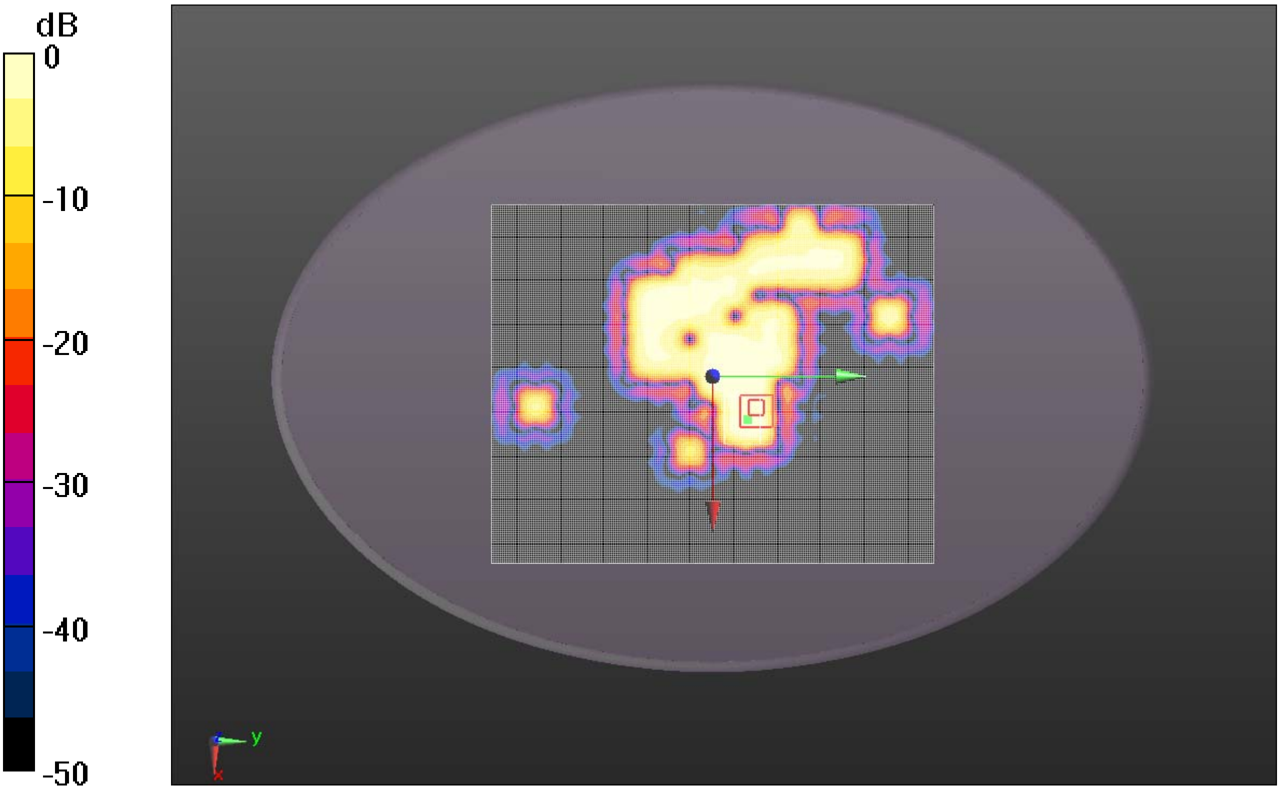
Fig.15-1 Z-Scan at power reference point (802.11b 2450MHz CH1 Test Position 3)

WiFi 802.11b_Test Position 4_Channel Low

Date/Time: 11/7/2011 11:33:50 AM
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 4_Channel Low /Area Scan (161x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00387 mW/g

Test Position 4_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.947 V/m; Power Drift = 0.162 dB
Peak SAR (extrapolated) = 0.00513 W/kg
SAR(1 g) = 0.00288 mW/g; SAR(10 g) = 0.00139 mW/g
Maximum value of SAR (measured) = 0.00343 mW/g



0 dB = 0.00343mW/g

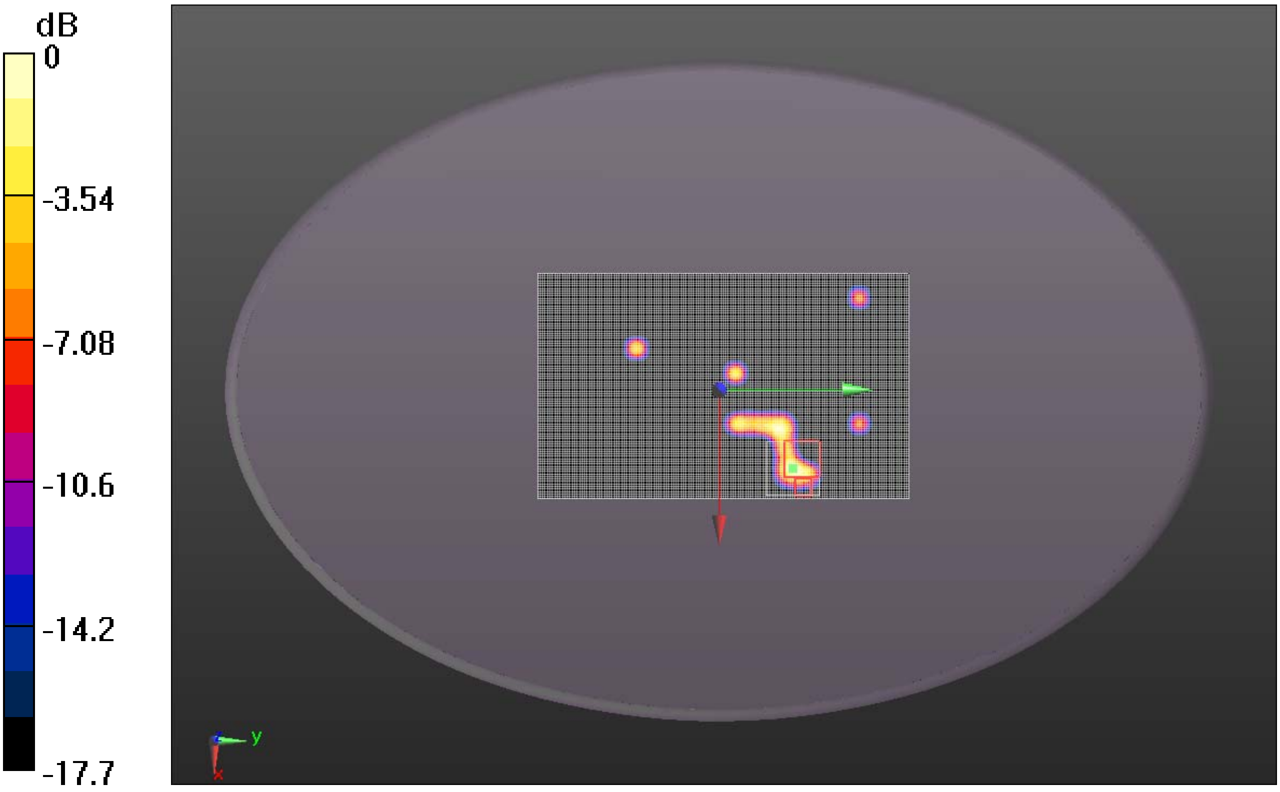
Fig.16 2450MHz CH1 Test Position 4-WiFi 802.11b 1Mbps

WiFi 802.11b_Test Position 5_Channel Low

Date/Time: 11/7/2011 11:07:12 AM
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃ Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 5_Channel Low /Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.00316 mW/g

Test Position 5_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.602 V/m; Power Drift = -0.106 dB
Peak SAR (extrapolated) = 0.00332 W/kg
SAR(1 g) = 0.00194 mW/g; SAR(10 g) = 0.00137 mW/g
Maximum value of SAR (measured) = 0.00332 mW/g



0 dB = 0.00332mW/g

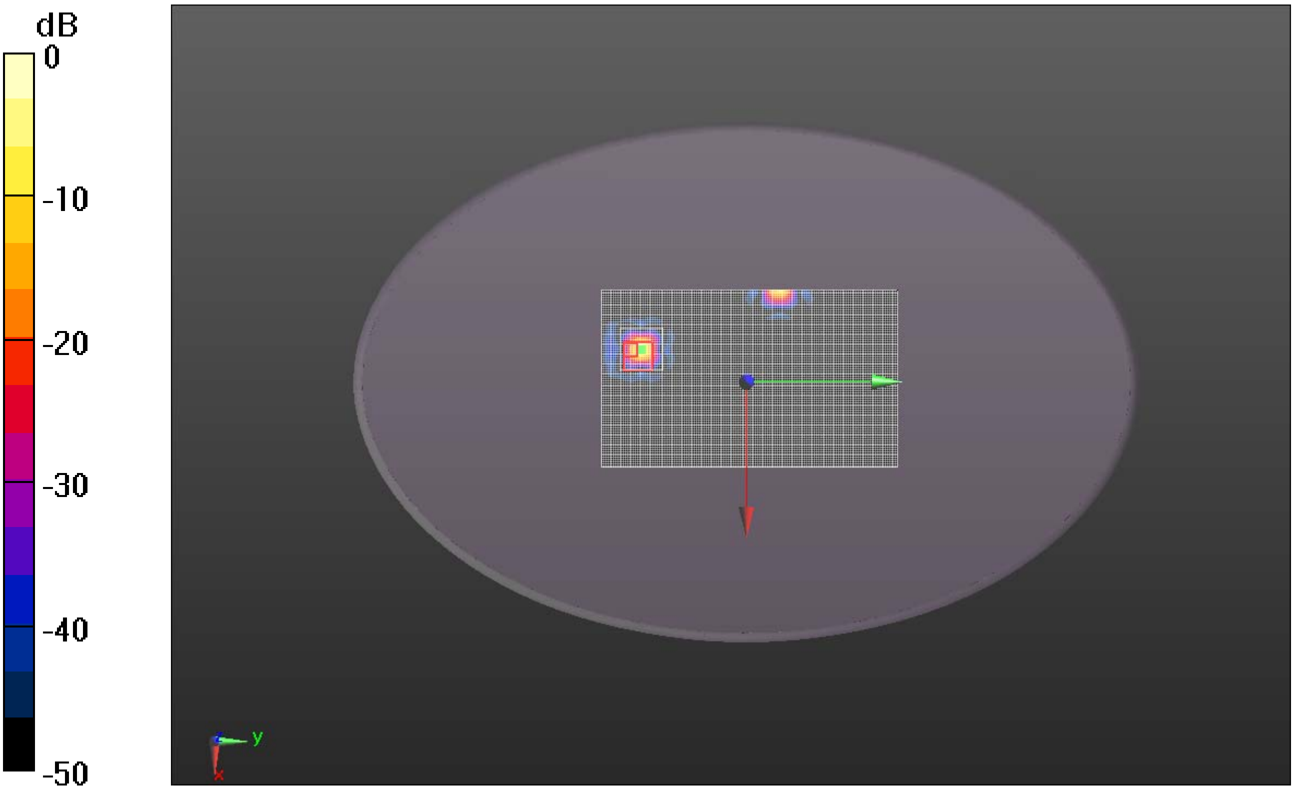
Fig.17 2450MHz CH1 Test Position 5-WiFi 802.11b 1Mbps

WiFi 802.11b_Test Position 6_Channel Low

Date/Time: 11/7/2011 3:28:29 PM
Electronics: DAE4 Sn786
Medium: Body 2450
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.99 mho/m; ε_r = 50.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.0℃　　　Liquid Temperature: 22.0℃
Communication System: WiFi 802.11 b Frequency: 2412 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (3.72, 3.72, 3.72)

Test Position 6_Channel Low /Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.000522 mW/g

Test Position 6_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.291 V/m; Power Drift = -0.0191 dB
Peak SAR (extrapolated) = 0.00169 W/kg
SAR(1 g) = 0.00031 mW/g; SAR(10 g) = 5.92e-005 mW/g
Maximum value of SAR (measured) = 0.00113 mW/g



0 dB = 0.00113mW/g

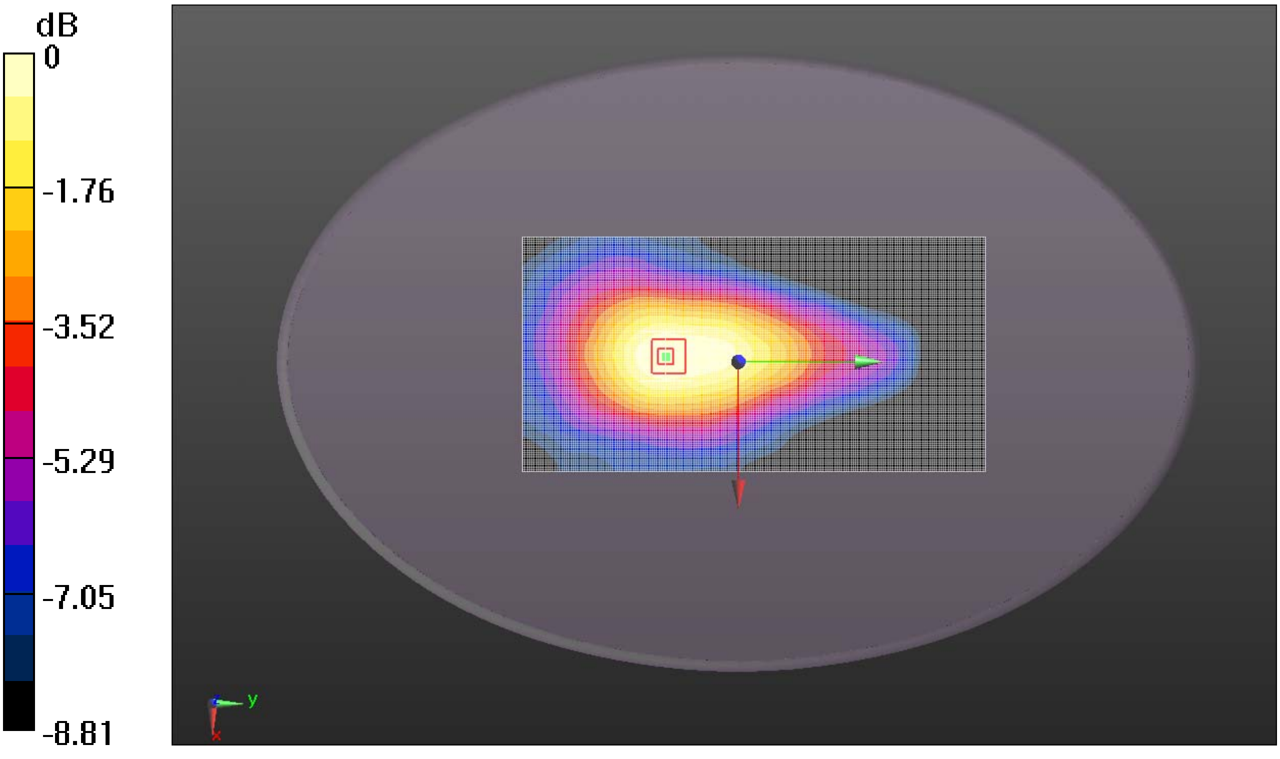
Fig.18 2450MHz CH1 Test Position 6-WiFi 802.11b 1Mbps

RFID 900MHz_Test Position 1_Channel Low

Date/Time: 11/17/2011 1:56:11 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 902.75 MHz; σ = 1.06 mho/m; ε_r = 53.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.5℃ Liquid Temperature: 22.5℃
Communication System: RFID Frequency: 902.75 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 1_Channel Low /Area Scan (101x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.034 mW/g

Test Position 1_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.33 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 0.040 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.033 mW/g



0 dB = 0.033mW/g

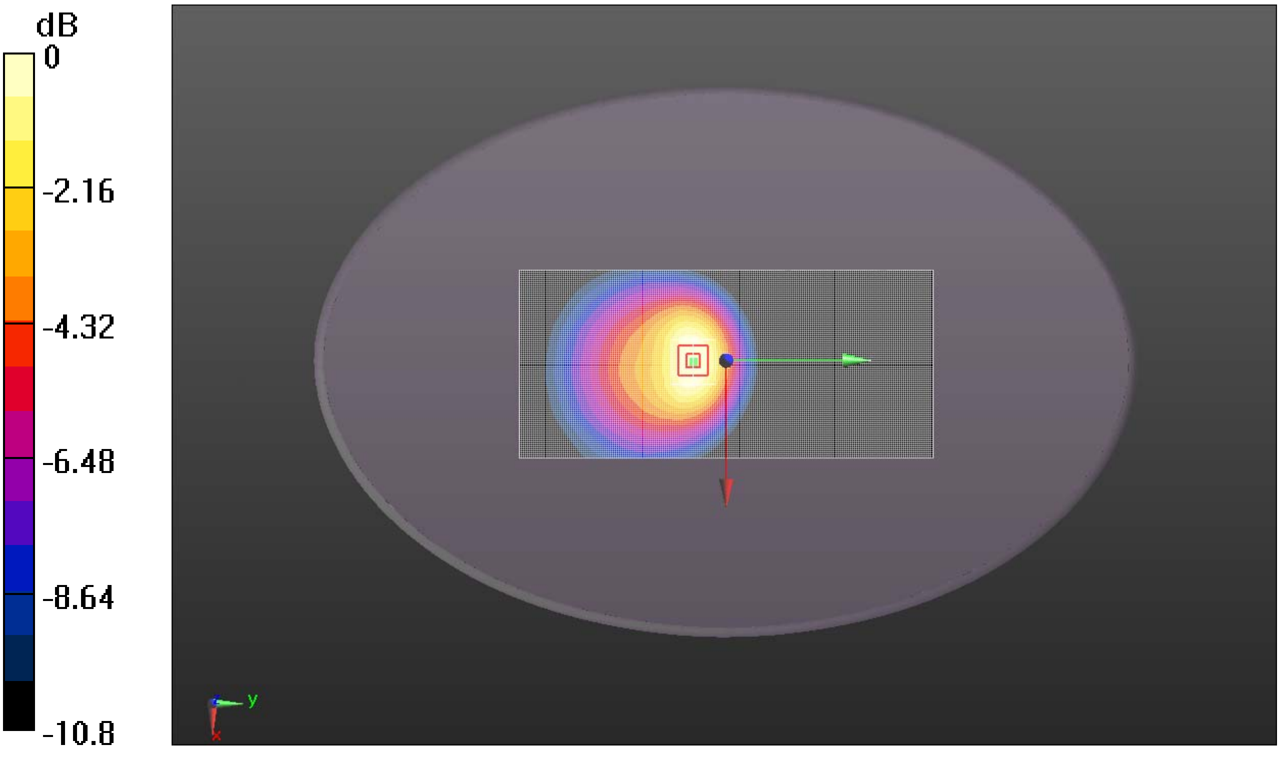
Fig.19 RFID 900MHz CH1 Test Position 1

RFID 900MHz_Test Position 2_Channel Low

Date/Time: 11/17/2011 2:48:56 PM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 902.75 MHz; σ = 1.06 mho/m; ε_r = 53.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.5℃ Liquid Temperature: 22.5℃
Communication System: RFID Frequency: 902.75 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 2_Channel Low /Area Scan (91x201x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.378 mW/g

Test Position 2_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.140 dB
Peak SAR (extrapolated) = 0.487 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.20 RFID 900MHz CH1 Test Position 2

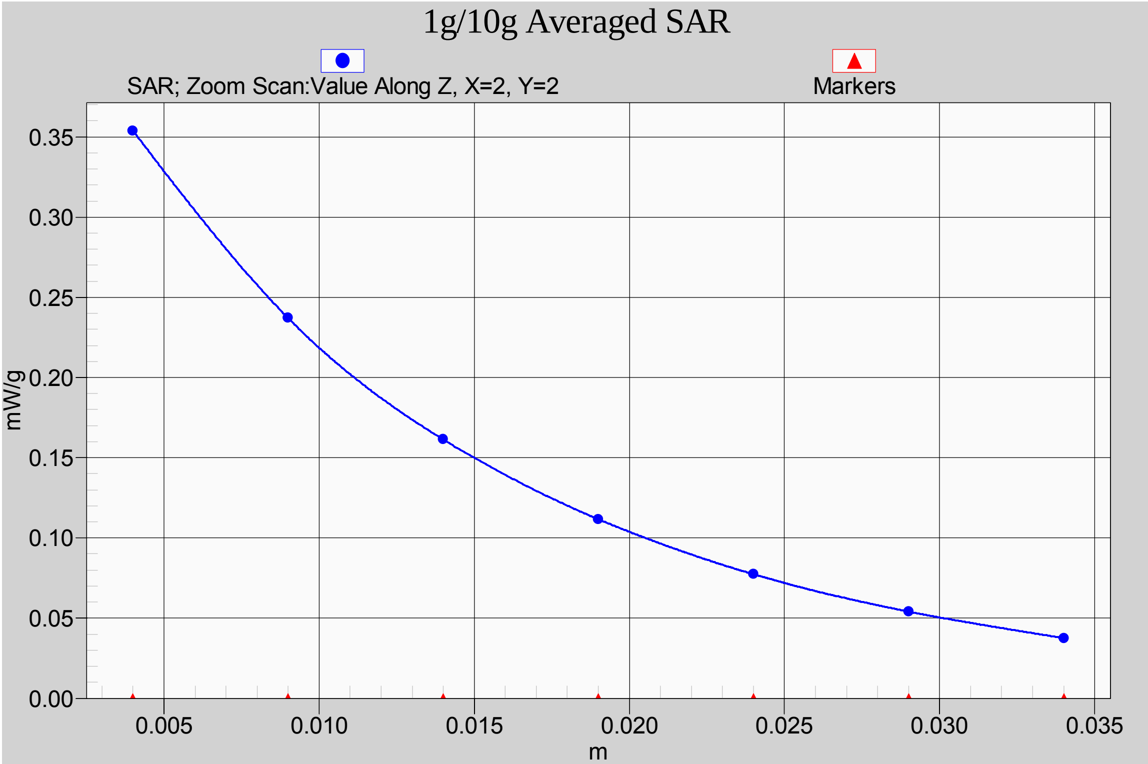


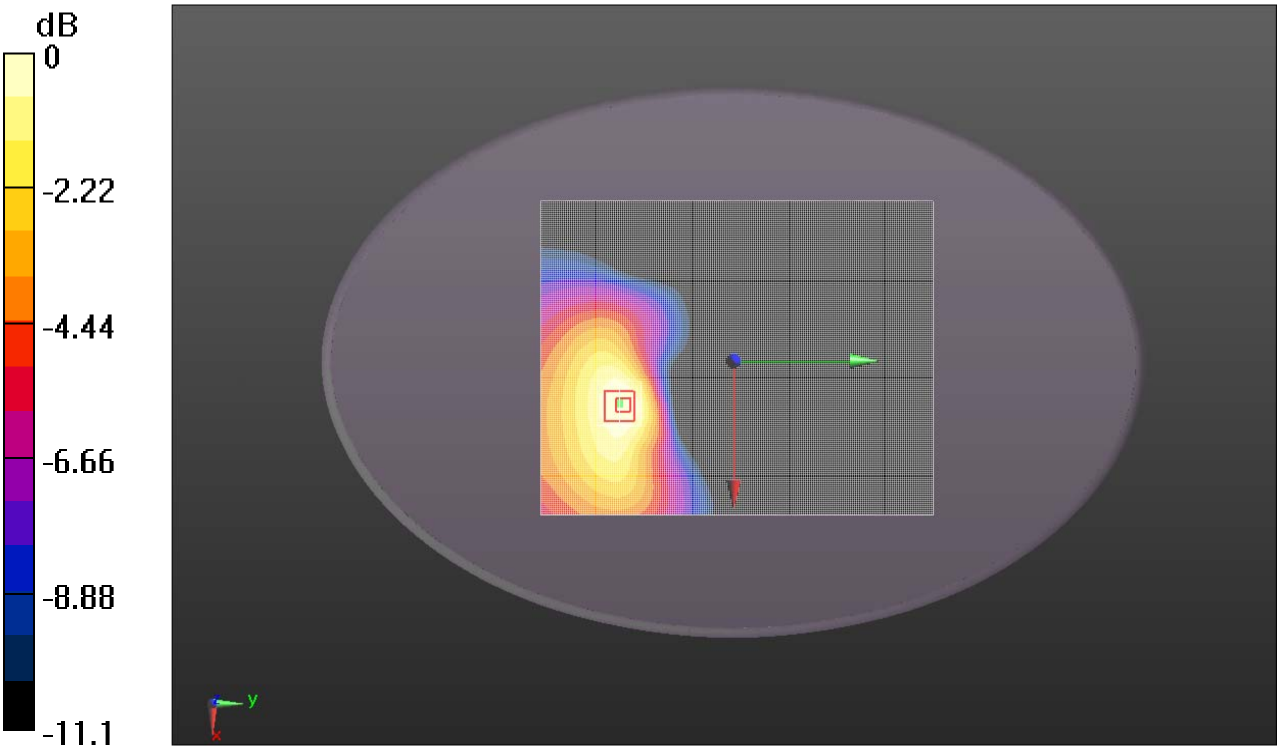
Fig.20-1 Z-Scan at power reference point (RFID 900MHz CH1 Test Position 2)

RFID 900MHz_Test Position 3_Channel Low

Date/Time: 11/17/2011 8:31:28 AM
Electronics: DAE4 Sn786
Medium: Body 900
Medium parameters used (interpolated): f = 902.75 MHz; σ = 1.06 mho/m; ε_r = 53.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C Liquid Temperature: 22.5°C
Communication System: RFID Frequency: 902.75 MHz Duty Cycle: 1:1
Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 3_Channel Low /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.120 mW/g

Test Position 3_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.67 V/m; Power Drift = 0.133 dB
Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.111 mW/g; SAR(10 g) = 0.080 mW/g
Maximum value of SAR (measured) = 0.116 mW/g



0 dB = 0.116mW/g

Fig.21 RFID 900MHz CH1 Test Position 3

RFID 900MHz_Test Position 4_Channel Low

Date/Time: 11/17/2011 9:12:34 PM

Electronics: DAE4 Sn786

Medium: Body 900

Medium parameters used (interpolated): f = 902.75 MHz; σ = 1.06 mho/m; ε_r = 53.3; ρ = 1000 kg/m^3

Ambient Temperature: 22.5℃ Liquid Temperature: 22.5℃

Communication System: RFID Frequency: 902.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3151 ConvF (6.02, 6.02, 6.02)

Test Position 4_Channel Low /Area Scan (151x191x1): Measurement grid: dx=10mm, dy=10mm

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

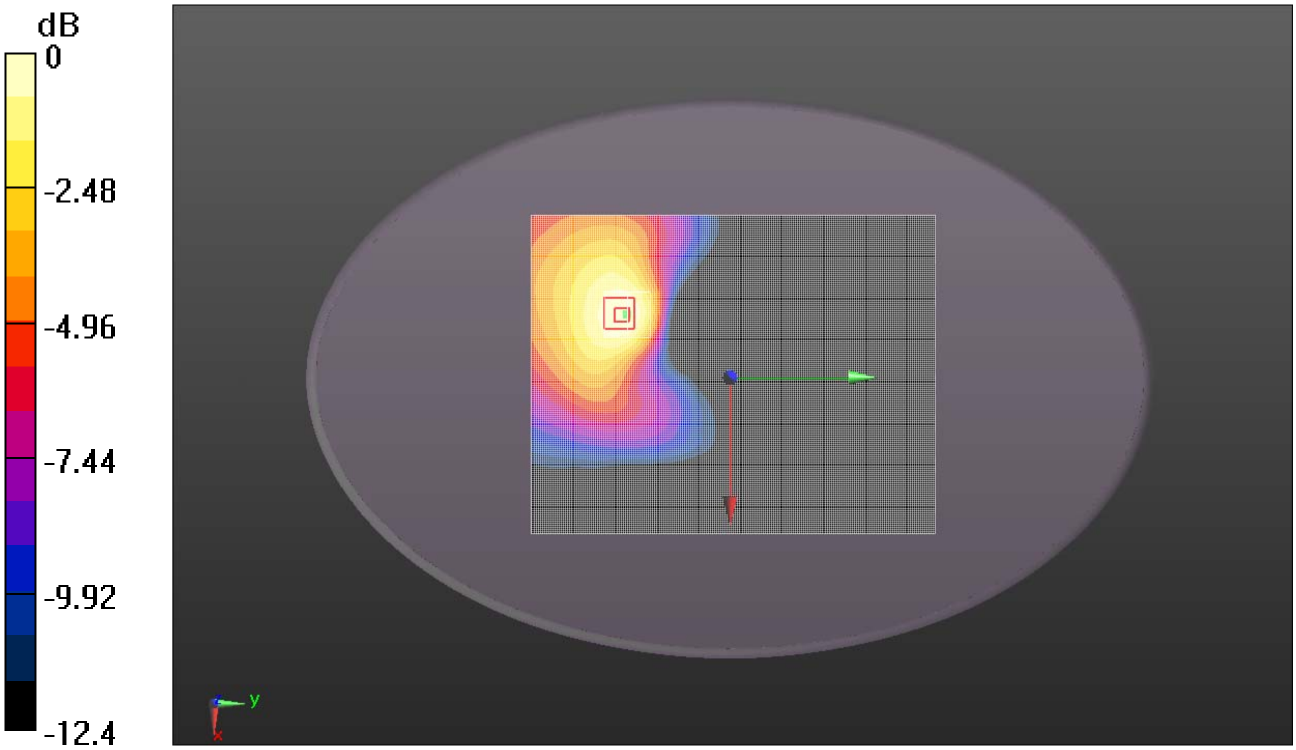
Test Position 4_Channel Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.95 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.183 W/kg

SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.143 mW/g



0 dB = 0.143mW/g

Fig.22 RFID 900MHz CH1 Test Position 4